



**RIDUTTORI A VITE SENZA FINE**

**Worm gearboxes**

**IT**

**EN**

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## **Motitali®: Affidabilità ad ogni rotazione**

La nostra azienda nasce da una esperienza pluridecennale nel settore dei riduttori. Questo ci dà la convinzione di potere offrire dei prodotti di qualità con un servizio di alto livello in un mercato sempre più competitivo.

### **Motoriduttori Serie NMG Affidabilità e Flessibilità**

I motoriduttori della Serie NMG rappresentano la soluzione ideale per applicazioni che richiedono affidabilità, durata e massima efficienza. Progettati con la consapevolezza delle esigenze del mercato e delle applicazioni, i nostri motoriduttori sono in grado di offrire prestazioni superiori in una vasta gamma di settori industriali.

#### **Caratteristiche Tecniche:**

- Coppia di uscita: da 20 Nm a 1300 Nm
- Potenza: da 0.09 kW a 11 kW (a 1400rpm)
- Rapporti di riduzione: da 5:1 a 100:1
- Configurazioni: Vite senza fine, con precoppia, combinati

#### **Vantaggi:**

- Modularità e flessibilità: la vasta gamma di rapporti di riduzione e configurazioni disponibili permette una perfetta adattabilità a qualsiasi tipo di applicazione.
- Manutenzione ridotta: i componenti di alta qualità e l'assemblaggio preciso e una lubrificazione di qualità assicurano una lunga durata del prodotto con minimi interventi di manutenzione.
- Robustezza: grazie alla compatta progettazione delle casse e ai materiali utilizzati, i nostri motoriduttori garantiscono una trasmissione di potenza ottimale in uno spazio ridotto.

#### **Applicazioni**

Ideali per l'uso in molteplici settori industriali come l'industria ceramica e del vetro, l'automazione industriale, il packaging, il trasporto materiali, il settore della logistica e molte altre applicazioni che richiedono movimenti continuativi e affidabili.

Per maggiori informazioni sui nostri prodotti e per scoprire come possono migliorare la vostra efficienza operativa, visitate il nostro sito web [motitali.com](http://motitali.com) o contattate il nostro team di esperti.

## **Motitali®: Reliability at every rotation**

*Our company was born from decades of experience in the field of gearboxes. This gives us the conviction that we can offer quality products with a high level of service in an increasingly competitive market.*

### **NMG Series Gearmotors Reliability and Flexibility**

*The gearmotors of the NMG Series are the ideal solution for applications that require reliability, durability and maximum efficiency. Designed with an awareness of market and application needs, our gearmotors are capable of delivering superior performance in a wide range of industries.*

#### **Technical features:**

- Output torque: 20 Nm to 1300 Nm
- Power: 0.09 kW to 11 kW (at 1400rpm)
- Reduction ratios: 5:1 to 100:1
- Configurations: Worm gear, pre-torque, combined

#### **Advantages:**

- *Modularity and flexibility: the wide range of reduction ratios and configurations available allows perfect adaptability to any type of application.*
- *Low maintenance: high-quality components and precise assembly and quality lubrication ensure a long product life with minimal maintenance.*
- *Robustness: thanks to the compact design of the casings and the materials used, our gearmotors ensure optimal power transmission in a small space.*

#### **Applications**

*Ideal for use in multiple industrial sectors such as the ceramic and glass industry, industrial automation, packaging, material transport, logistics and many other applications that require continuous and reliable movements*

*To learn more about our products and to find out how they can improve your operational efficiency, visit our [motitali.com](http://motitali.com) website or contact our team of experts.*

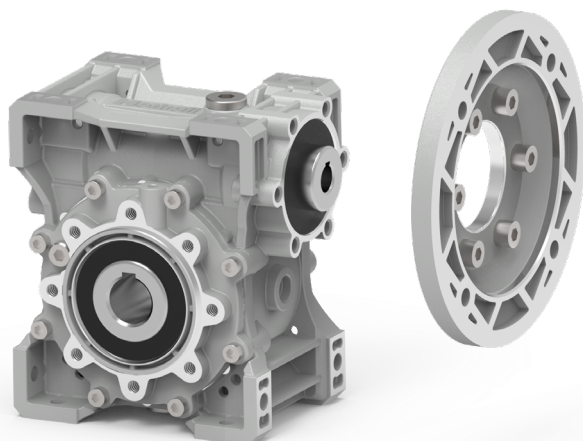


## Riduttori a vite senza fine

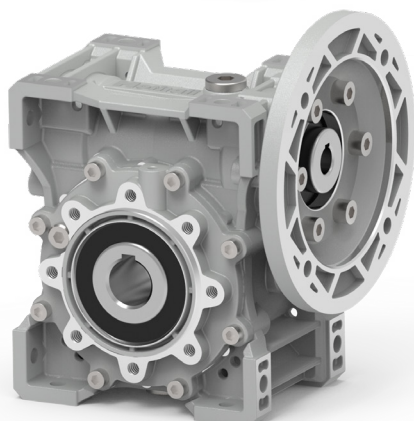
La gamma dei riduttori a vite senza fine Motitali si compone di 10 taglie dall'interasse 25 al 150. Rapporti da 5 a 100 per motori da taglia 56 a 160.

## Worm gearboxes

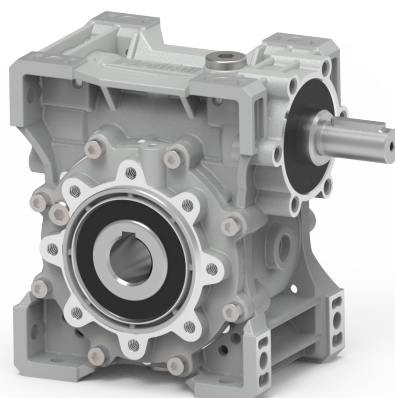
The range of Motitali worm gearboxes consists of 10 sizes from the centre distance of 25 to 150. Ratios from 5 to 100 for engines from size 56 to 160.



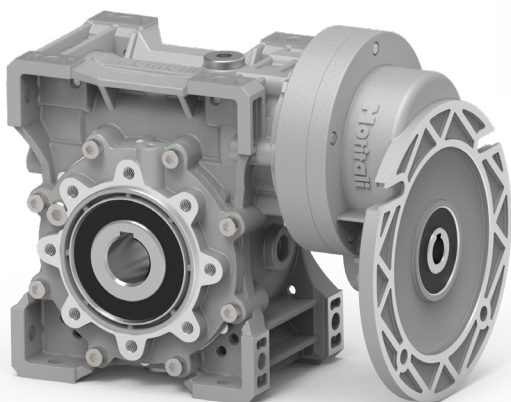
NMG...



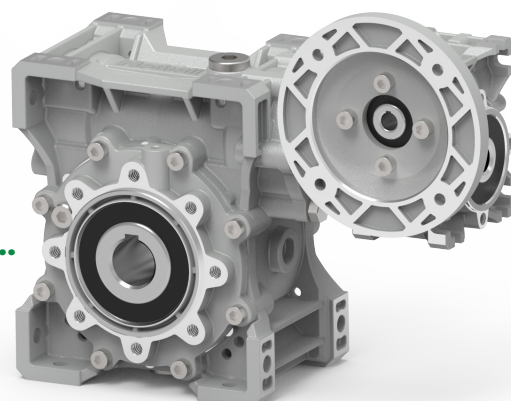
NG...



NMGP...



NMGD...

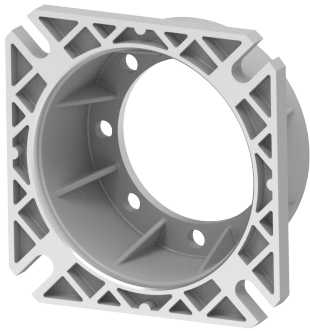


## Riduttori a vite senza fine

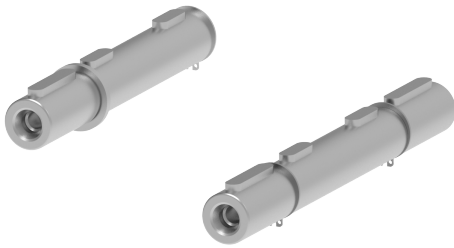
Molteplici accessori disponibili così da rendere versatile l'utilizzo dei riduttori.

Di seguito gli accessori maggiormente utilizzati:

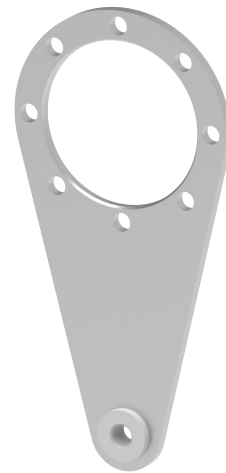
- Flangia laterale
- Braccio di reazione
- Albero lento (semplice e doppio)
- Coperchio di protezione albero cavo



Flangia uscita  
*Output flange*



Albero uscita  
*Output shaft*



Braccio di reazione  
*torque arm*



Coperchio di protezione albero cavo  
*Cover hollow shaft protection*

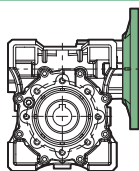
## Worm gearboxes

Multiple accessories available to make the use of gearboxes versatile.

Here are the most commonly used accessories:

- Side flange
- Torque arm
- Slow shaft (single and double)
- Hollow shaft protection cover

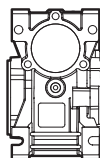
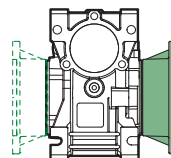

**RIDUTTORE A VITE SENZA FINE / WORM GEARBOXES**
**NMG 030 P 10 63 B5 U - ...**
**NMG**

 TIPO DI RIDUTTORE  
TYPE OF GEAR REDUCER

**030**

 GRANDEZZA  
SIZE

**25, 30, 40, 50, 63, 75, 90, 110, 130, 150**
**P**

 VERSIONE  
VERSION

**P**

**FA  
FB  
FC  
FD  
FE**
**2**

**1  
(std)**
**10**

 RAPPORTO DI RIDUZIONE  
REDUCTION RATIO

**5, 7.5, 10, 15, 20, 25, 30, 40, 50, 63, 80, 100**
**63**

 PREDISPOSIZIONE  
ATTACCO MOTORE  
MOTOR COUPLING

**56, 63, 71, 80, 90, 100, 112, 132**

**B5**

 FORMA COSTRUTTIVA  
STRUCTURAL SHAPE

**B5, B14**
**U**

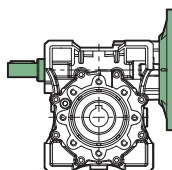
 POSIZIONE  
DI MONTAGGIO  
ASSEMBLY POSITION

**U\*, B3, B6, B7, B8, V5, V6**
**19**

 Dalla gr. 25 alla 63 NMG forniti in  
posizione U (Universale)  
From size 25 to 63 NMG are  
supplied in position U (Universal)

**-**

 SECONDA ENTRATA  
ADDITIONAL INPUT

**B**

 Disponibile solo da gr. 30 a 150  
Available only from size 30 to 150

 ACCESSORI  
ACCESSORIES

**AS**

**AD**

 Braccio di reazione  
torque arm

**BR**


## Designazione

## Designation

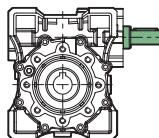


## RIDUTTORE A VITE SENZA FINE / WORM GEARBOXES

**NG 030 P 10 U - ...**

**NG**

TIPO DI RIDUTTORE  
TYPE OF GEAR REDUCER

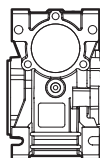
**030**

GRANDEZZA  
SIZE

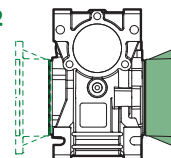
**30, 40, 50, 63, 75, 90, 110, 130, 150**

**P**

VERSIONE  
VERSION

**P**

**FA  
FB  
FC  
FD  
FE**

**2**

**1  
(std)**

**10**

RAPPORTO DI RIDUZIONE  
REDUCTION RATIO

**5, 7.5, 10, 15, 20, 25, 30, 40, 50, 63, 80, 100**

**U**

POSIZIONE  
DI MONTAGGIO  
ASSEMBLY POSITION

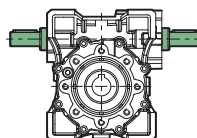
**U\*, B3, B6, B7, B8, V5, V6**

**19**

Dalla gr. 25 alla 63 NMG forniti in  
posizione U (Universale)  
From size 25 to 63 NMG are  
supplied in position U (Universal)

**-**

SECONDA ENTRATA  
ADDITIONAL INPUT

**B**

Disponibile solo da gr. 30 a 150  
Available only from size 30 to 150

ACCESSORI  
ACCESSORIES

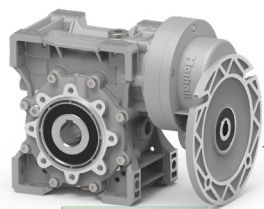
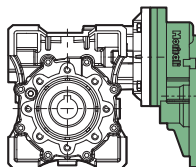
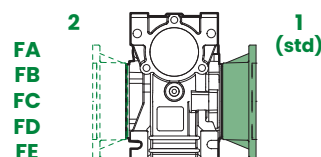
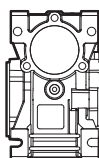
**....**

Albero uscita  
Output shaft

**AS****AD**

Braccio di reazione  
torque arm

**BR**


**RIDUTTORI A VITE SENZA FINE CON PRECOPPIA / HELICAL WORM GEARBOXES**
**NMGP 071 / 050 P 75 71 B5 U ...**
**NMGP**
**TIPO DI RIDUTTORE**  
*TYPE OF GEAR REDUCER*

**071**
**GRANDEZZA PRECOPPIA**  
*SIZE PRE STAGE*
**063, 071, 080, 090**
**050**
**GRANDEZZA RIDUTTORE**  
*SIZE GEARBOX*
**040, 050, 063, 075, 090, 110, 130**
**P**
**VERSIONE**  
*VERSION*
**P**

**75**
**RAPPORTO DI RIDUZIONE**  
*REDUCTION RATIO*
**61.2, 73.5, 75, 88.2, 90, 98,  
117.5, 120, 122.5, 147, 150, 176.4, 180, 235.2, 240, 294, 300**
**71**
**PREDISPOSIZIONE**  
**ATTACCO MOTORE**  
*MOTOR COUPLING*
**63, 71, 80, 90**

**B5**
**FORMA COSTRUTTIVA**  
*STRUCTURAL SHAPE*
**B5**
**U**
**POSIZIONE**  
**DI MONTAGGIO**  
*ASSEMBLY POSITION*
**U\*, B3, B6, B7, B8, V5, V6**

Dalla gr. 25 alla 63 NMG forniti in  
posizione U (Universale)  
From size 25 to 63 NMG are  
supplied in position U (Universal)

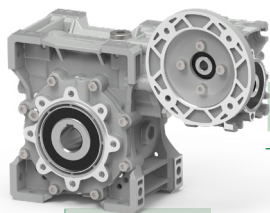
**....**
**ACCESSORI**  
*ACCESSORIES*
**Albero uscita**  
*Output shaft*

**AS**

**AD**
**Braccio di reazione**  
*torque arm*
**BR**


## Designazione

## Designation



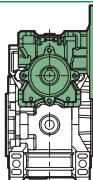
### RIDUTTORI COMBINATI A VITE SENZA FINE / COMBINATION WORM GEARBOXES

**NMGD 040 / 090 P 200 63 B5 ADO U ...**

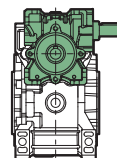
**NMGD**

TIPO DI RIDUTTORE  
TYPE OF GEAR REDUCER

**NMGD**



**NGD**



**040**

GRANDEZZA RIDUTTORE  
ENTRATA  
SIZE INPUT GEARBOX

**025, 030, 040, 050, 063**

Grandezza 25 solo per NMGD  
Size 25 only for NMGD

**090**

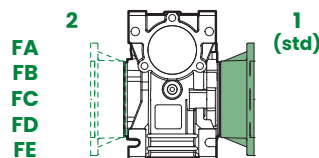
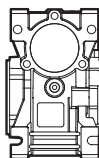
GRANDEZZA RIDUTTORE  
USCITA  
SIZE OUTPUT GEARBOX

**030, 040, 050, 063, 075, 090, 110, 130**

**P**

VERSIONE  
VERSION

**P**



**200**

RAPPORTO DI RIDUZIONE  
REDUCTION RATIO

**100, 150, 200, 250, 300, 400, 500, 600, 750, 900,  
1200, 1500, 1800, 2400, 3000, 4000, 4800, 5000**

**63**

PREDISPOSIZIONE  
ATTACCO MOTORE  
MOTOR COUPLING

**56, 63, 71, 80, 90**

Solo per NMGD  
Only for NMGD



**B5**

FORMA COSTRUTTIVA  
STRUCTURAL SHAPE

**B5, B14**

Solo per NMGD  
Only for NMGD

**ADO**

ESECUZIONE  
VERSION

**A01, A02, A03, A04, B01, B02, B03, B04**

19

**U**

POSIZIONE  
DI MONTAGGIO  
ASSEMBLY POSITION

**U\*, B3, B6, B7, B8, V5, V6**

19

Dalla gr. 25 alla 63 NMG forniti in  
posizione U (Universale)  
From size 25 to 63 NMG are  
supplied in position U (Universal)

ACCESSORI  
ACCESSORIES



**AS**

**AD**

Braccio di reazione  
torque arm



**BR**

## Simbologia

## Symbols

| Simbolo / Symbol           | Descrizione                           | Description                  |
|----------------------------|---------------------------------------|------------------------------|
| $Fr_1$ [N]                 | Carico radiale ammissibile in entrata | Permitted input radial load  |
| $Fa_1$ [N]                 | Carico assiale ammissibile in entrata | Permitted input axial load   |
| $Fr_2$ [N]                 | Carico radiale ammissibile in uscita  | Permitted output radial load |
| $Fa_2$ [N]                 | Carico assiale ammissibile in uscita  | Permitted output axial load  |
| $fs$                       | Fattore di servizio                   | Service factor               |
| $i$                        | Rapporto di riduzione                 | Ratio                        |
| $Mm_2$ [Nm]                | Coppia massima in uscita              | Max output torque            |
| $Mn_2$ [Nm]                | Coppia trasmessa                      | Output torque                |
| $Mr_2$ [Nm]                | Coppia richiesta                      | Required torque              |
| $n_1$ [min <sup>-1</sup> ] | Velocità in ingresso                  | Input speed                  |
| $n_2$ [min <sup>-1</sup> ] | Velocità in uscita                    | Output speed                 |
| $Pm_1$ [kW]                | Potenza massima in entrata            | Max input power              |
| $Pm_2$ [kW]                | Potenza massima in uscita             | Max output power             |
| $P_1$ [kW]                 | Potenza in entrata                    | Input power                  |
| $Pn_1$ [kW]                | Potenza nominale in entrata           | Nominal input power          |
| $Rd$                       | Rendimento dinamico                   | Dynamic efficiency           |
| $Rs$                       | Rendimento statico                    | Static efficiency            |

## Selezione

## Selection

La selezione del riduttore a vite senza fine deve essere eseguita tenendo in considerazione le caratteristiche dei singoli prodotti e le condizioni di funzionamento.

The selection of the worm gearbox must be carried out taking into account the characteristics of the individual products and the operating conditions.

Velocità in uscita

$n_2$  (min<sup>-1</sup>)

Output speed

Rappresenta la velocità di rotazione in uscita al riduttore vite senza fine.

It represents the rotational speed at the output of the worm gearbox.

Velocità in entrata

$n_1$  (min<sup>-1</sup>)

Input speed

Rappresenta la velocità di rotazione in entrata al riduttore vite senza fine. Il valore di  $n_1$  dipende dal tipo di motorizzazione scelta.

Nelle tabelle dati tecnici sono indicati valori unificati di  $n_1$ , in caso di applicazioni con velocità differenti si prega di contattare il servizio tecnico Motitali.

It represents the rotational speed at the input to the worm gearbox. The value of  $n_1$  depends on the type of engine chosen.

Unified values of  $n_1$  are indicated in the technical data tables, in case of applications with different speeds please contact the Motitali technical service.

Rapporto di riduzione

$i$

Reduction ratio

È definito dalla seguente relazione:

It is defined by the following report:

$$i = \frac{n_1}{n_2}$$



## Selezione

## Selection

Potenza nominale in entrata

**P<sub>n1</sub> (kW)**

Nominal input power

Rappresenta la potenza nominale applicata in ingresso al riduttore erogata dal motore utilizzato.

*It represents the nominal power applied to the input to the gearbox delivered by the motor used.*

Potenza in entrata

**P<sub>1</sub> (kW)**

Input power

Rappresenta la potenza applicata in ingresso al riduttore.  
Nel caso del motoriduttore  $P_1 = P_{n1}$

*It represents the power applied at the input to the gearbox.  
In the case of the gearmotor  $P_1 = P_{n1}$*

Rendimento dinamico

**Rd**

Dynamics efficiency

È definito dal rapporto tra la potenza in uscita  $P_2$  e quella applicata in entrata al riduttore  $P_1$ .  
Le prestazioni dei riduttori riportate nel presente catalogo sono state determinate considerando un valore di Rd raggiunto successivamente alla fase di rodaggio.

*is defined by the ratio between the output power  $P_2$  and the power applied to the input power to the gearbox  $P_1$ .  
The gearbox efficiency indicated in this catalogue has been determined by considering an Rd value reached after the running-in phase.*

Rendimento dinamico

**Rs**

Dynamics efficiency

Rappresenta il rendimento statico presente in fase di avviamento.  
Nel caso di applicazioni in cui non si raggiunge il funzionamento a regime, ad esempio sollevamenti, le prestazioni del riduttore in uscita devono essere declassate secondo Rs.

*Represents the static efficiency present in the starter phase.  
In the case of applications where steady-state operation is not achieved, e.g. lifting, the output gearbox performance must be downgraded according to Rs.*

| <b>n<sub>1</sub> = 1400 (min<sup>-1</sup>)</b> |           | <b>i 5</b> | <b>i 7.5</b> | <b>i 10</b> | <b>i 15</b> | <b>i 20</b> | <b>i 25</b> | <b>i 30</b> | <b>i 40</b> | <b>i 50</b> | <b>i 60</b> | <b>i 80</b> | <b>i 100</b> |
|------------------------------------------------|-----------|------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| <b>025</b>                                     | <b>Rd</b> | 0.86       | 0.84         | 0.82        | 0.78        | 0.74        | -           | 0.66        | 0.61        | 0.57        | 0.54        | -           | -            |
|                                                | <b>Rs</b> | 0.71       | 0.70         | 0.67        | 0.60        | 0.55        | -           | 0.46        | 0.41        | 0.36        | 0.34        | -           | -            |
| <b>030</b>                                     | <b>Rd</b> | 0.86       | 0.84         | 0.81        | 0.76        | 0.72        | 0.67        | 0.64        | 0.58        | 0.54        | 0.50        | 0.44        | -            |
|                                                | <b>Rs</b> | 0.71       | 0.66         | 0.62        | 0.54        | 0.50        | 0.43        | 0.39        | 0.35        | 0.31        | 0.27        | 0.23        | -            |
| <b>040</b>                                     | <b>Rd</b> | 0.88       | 0.86         | 0.85        | 0.81        | 0.77        | 0.74        | 0.69        | 0.64        | 0.61        | 0.57        | 0.51        | 0.47         |
|                                                | <b>Rs</b> | 0.72       | 0.69         | 0.65        | 0.58        | 0.53        | 0.5         | 0.44        | 0.4         | 0.36        | 0.32        | 0.28        | 0.24         |
| <b>050</b>                                     | <b>Rd</b> | 0.87       | 0.86         | 0.84        | 0.8         | 0.77        | 0.74        | 0.7         | 0.65        | 0.61        | 0.57        | 0.51        | 0.49         |
|                                                | <b>Rs</b> | 0.73       | 0.69         | 0.65        | 0.58        | 0.54        | 0.5         | 0.44        | 0.39        | 0.35        | 0.32        | 0.27        | 0.23         |
| <b>063</b>                                     | <b>Rd</b> | -          | 0.87         | 0.86        | 0.82        | 0.8         | 0.77        | 0.73        | 0.69        | 0.65        | 0.61        | 0.56        | 0.5          |
|                                                | <b>Rs</b> | -          | 0.7          | 0.65        | 0.59        | 0.54        | 0.5         | 0.45        | 0.4         | 0.36        | 0.33        | 0.28        | 0.24         |
| <b>075</b>                                     | <b>Rd</b> | -          | 0.88         | 0.87        | 0.84        | 0.81        | 0.79        | 0.75        | 0.71        | 0.68        | 0.64        | 0.59        | 0.54         |
|                                                | <b>Rs</b> | -          | 0.7          | 0.67        | 0.6         | 0.57        | 0.52        | 0.46        | 0.42        | 0.38        | 0.35        | 0.29        | 0.26         |
| <b>090</b>                                     | <b>Rd</b> | -          | 0.89         | 0.88        | 0.85        | 0.83        | 0.81        | 0.77        | 0.74        | 0.71        | 0.68        | 0.62        | 0.58         |
|                                                | <b>Rs</b> | -          | 0.72         | 0.69        | 0.63        | 0.59        | 0.55        | 0.49        | 0.45        | 0.41        | 0.38        | 0.32        | 0.28         |
| <b>110</b>                                     | <b>Rd</b> | -          | 0.89         | 0.88        | 0.85        | 0.84        | 0.83        | 0.78        | 0.77        | 0.74        | 0.71        | 0.66        | 0.62         |
|                                                | <b>Rs</b> | -          | 0.71         | 0.68        | 0.62        | 0.61        | 0.58        | 0.48        | 0.48        | 0.44        | 0.41        | 0.36        | 0.32         |
| <b>130</b>                                     | <b>Rd</b> | -          | 0.9          | 0.88        | 0.86        | 0.85        | 0.83        | 0.79        | 0.77        | 0.74        | 0.71        | 0.67        | 0.63         |
|                                                | <b>Rs</b> | -          | 0.71         | 0.68        | 0.62        | 0.6         | 0.57        | 0.49        | 0.46        | 0.43        | 0.39        | 0.34        | 0.3          |
| <b>150</b>                                     | <b>Rd</b> | -          | 0.91         | 0.9         | 0.88        | 0.86        | 0.84        | 0.83        | 0.78        | 0.76        | 0.73        | 0.68        | 0.64         |
|                                                | <b>Rs</b> | -          | 0.73         | 0.71        | 0.66        | 0.6         | 0.57        | 0.54        | 0.45        | 0.42        | 0.39        | 0.33        | 0.29         |



## Selezione

## Selection

Coppia trasmessa

**M<sub>2</sub>** (Nm)

Output torque

Rappresenta la coppia in uscita trasmessa dal riduttore.  
Si determina attraverso la relazione seguente:

*It represents the output torque transmitted by the gearbox.  
It is determined through the following report:*

$$M_2 = \frac{9550 \cdot P_1 \cdot R_d}{n_2}$$

Coppia massima in uscita

**Mm<sub>2</sub>** (Nm)

Max output torque

Rappresenta la coppia in uscita massima che è in grado di trasmettere il riduttore considerando un funzionamento corrispondente ad un fattore di servizio fs=1, carico continuo uniforme e riferito ad un determinato valore di velocità n<sub>r</sub>.

*It represents the maximum output torque that the gearbox is able to transmit considering an operation corresponding to a service factor fs=1, uniform continuous load and referred to a given speed value n<sub>r</sub>.*

Mm<sub>2</sub> corrisponde ai valori di coppia trasmessa dal riduttore, nella configurazione con albero sporgente in ingresso, determinabile secondo la relazione seguente:

*Mm<sub>2</sub> corresponds to the torque values transmitted by the gearbox, in the configuration with an inlet protruding shaft, which can be determined according to the following report:*

$$Mm_2 = M_2 \cdot fs$$

Coppia richiesta

**Mr<sub>2</sub>** (Nm)

Required torque

Rappresenta la coppia in uscita dal riduttore richiesta dall'applicazione e deve essere calcolato in funzione dei dati dell'applicazione stessa oppure essere comunque un valore noto.

*It represents the torque output of the gearbox required by the application and must be calculated according to the data of the application itself or be a known value.*

Potenza massima in entrata

**Pm<sub>1</sub>** (kW)

Max input power

Rappresenta la massima potenza applicabile in ingresso al riduttore considerando un funzionamento corrispondente ad un fattore di servizio fs=1, carico continuo uniforme e riferito ad un determinato valore di velocità n<sub>r</sub>.

*It represents the maximum power that can be applied to the input of the gearbox considering an operation corresponding to a service factor fs=1, uniform continuous load and referred to a given speed value n<sub>r</sub>.*

Pm<sub>1</sub> corrisponde al valore di potenza massima trasmessa dal riduttore nella configurazione con albero sporgente in ingresso.

*Pm<sub>1</sub> corresponds to the maximum power value transmitted by the gearbox in the configuration with an inlet protruding shaft.*

Potenza massima in uscita

**Pm<sub>2</sub>** (kW)

Max output power

Rappresenta la massima potenza trasmessa in uscita dal riduttore.  
Si determina tramite le relazioni seguenti:

*It represents the maximum power transmitted at the output of the gearbox.  
It is determined by the following reports:*

$$Pm_2 = \frac{Mm_2 \cdot n_2}{9550}$$

$$Pm_2 = Pm_1 \cdot R_d$$

## Selezione

## Selection

Fattore di servizio

$M_2$  (Nm)

Service factor

È un valore che fornisce l'indicazione di quanto sia necessario sovradimensionare un determinato riduttore per garantirne la durata richiesta e resistenza agli urti, in funzione delle condizioni di funzionamento.

I valori dei fattori di servizio sono indicati nella tabella seguente in funzione della tipologia di carico (A-B-C), dal numero di avviamenti all'ora e dalla durata del funzionamento (h/gg).

Il valore del fattore di servizio così individuato deve essere confrontato con il valore del fattore di servizio garantito dal riduttore scelto per l'applicazione (indicato nelle tabelle dati tecnici). Quest'ultimo deve essere uguale o superiore rispetto a quello individuato consultando la tabella seguente.

I valori riportati in tabella si riferiscono a riduttori azionati con motore elettrico. Nel caso di utilizzo di motore autofrenante è necessario considerare un numero di avviamenti doppio rispetto a quello effettivamente richiesto dall'applicazione.

It is a value that provides an indication of how necessary it is to oversize a given gearbox to ensure its required life and impact resistance, depending on the operating conditions.

The values of the service factors are shown in the following table depending on the type of load (A-B-C), the number of starts per hour and the duration of operation (h/d).

The value of the service factor thus identified must be compared with the value of the service factor guaranteed by the gearbox chosen for the application (indicated in the technical data tables). The latter must be equal to or higher than the one identified by consulting the table below.

The values shown in the table refer to gearboxes driven by an electric motor. In the case of the use of a self-braking motor, it is necessary to consider a double number of start-ups than actually required by the application.

| Classe di carico<br>Load class                              | h/gg<br>hours/day | N. AVVIAMENTI/ORA / N. START-UP/HOUR |     |     |     |     |     |     |     |     |
|-------------------------------------------------------------|-------------------|--------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
|                                                             |                   | 2                                    | 4   | 8   | 16  | 32  | 63  | 125 | 250 | 500 |
| <b>A</b><br>Carico uniforme<br>Uniform load                 | 4                 | 0.8                                  | 0.8 | 0.9 | 0.9 | 1.0 | 1.1 | 1.1 | 1.2 | 1.2 |
|                                                             | 8                 | 1.0                                  | 1.0 | 1.1 | 1.1 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
|                                                             | 16                | 1.3                                  | 1.3 | 1.3 | 1.3 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
|                                                             | 24                | 1.5                                  | 1.5 | 1.5 | 1.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Classe di carico<br>Load class                              | h/gg<br>hours/day | N. AVVIAMENTI/ORA / N. START-UP/HOUR |     |     |     |     |     |     |     |     |
|                                                             |                   | 2                                    | 4   | 8   | 16  | 32  | 63  | 125 | 250 | 500 |
| <b>B</b><br>Carico con urti moderati<br>Moderate shock load | 4                 | 1.0                                  | 1.0 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
|                                                             | 8                 | 1.3                                  | 1.3 | 1.3 | 1.3 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
|                                                             | 16                | 1.5                                  | 1.5 | 1.5 | 1.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
|                                                             | 24                | 1.8                                  | 1.8 | 1.8 | 1.8 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| Classe di carico<br>Load class                              | h/gg<br>hours/day | N. AVVIAMENTI/ORA / N. START-UP/HOUR |     |     |     |     |     |     |     |     |
|                                                             |                   | 2                                    | 4   | 8   | 16  | 32  | 63  | 125 | 250 | 500 |
| <b>C</b><br>Carico con urti forti<br>Heavy shock load       | 4                 | 1.3                                  | 1.3 | 1.3 | 1.3 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
|                                                             | 8                 | 1.5                                  | 1.5 | 1.5 | 1.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
|                                                             | 16                | 1.8                                  | 1.8 | 1.8 | 1.8 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
|                                                             | 24                | 2.2                                  | 2.2 | 2.2 | 2.2 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |

## Irreversibilità

Il concetto di irreversibilità è legato al valore del rendimento (dinamico e statico). L'irreversibilità del riduttore vite senza fine rappresenta l'impossibilità di porre in rotazione l'albero entrata del riduttore tramite l'applicazione di una coppia applicata all'albero uscita.

Il grado di irreversibilità aumenta tanto è più è elevata la difficoltà con cui si realizza la rotazione sopra descritta.

ed è proporzionale all'aumentare del rapporto di riduzione e al valore del rendimento.

L'irreversibilità di un riduttore dipende da più fattori legati al funzionamento (es. lubrificazione, tipo di carico applicato, temperatura, ecc). Nel caso di un'applicazione in cui è richiesto un non ritorno del carico è comunque necessario prevedere l'uso di un altro dispositivo frenante esterno perché il vite senza fine non è in grado di garantire da solo l'assoluta assenza di movimento.

### Irreversibilità statica

Rappresenta la resistenza alla rotazione derivante dall'albero uscita senza però annullare possibili rotazioni lente in cui il carico sia fonte di vibrazioni o ne venga sottoposto.

Nella tabella seguente sono riportati i vari gradi di irreversibilità statica strettamente legati ai valori di  $R_s$ .

| $R_s$            | Irreversibilità statica       | Static irreversibility   |
|------------------|-------------------------------|--------------------------|
| <b>&gt; 0.55</b> | Reversibilità statica         | Static reversibility     |
| <b>0.5 - 0.6</b> | Reversibilità statica incerta | Low static reversibility |
| <b>&lt; 0.4</b>  | Irreversibilità statica       | Static irreversibility   |

### Irreversibilità dinamica

Rappresenta la capacità di sostenere il carico in caso di arresto o assenza dell'azione motrice.

La presenza di eventuali vibrazioni, il particolare tipo di applicazione ne compromettono l'ottenimento.

Nella tabella seguente sono riportati i vari gradi di irreversibilità dinamica strettamente legati ai valori di  $R_d$ .

| $R_d$            | Irreversibilità dinamica       | Dynamic irreversibility      |
|------------------|--------------------------------|------------------------------|
| <b>&gt; 0.6</b>  | Reversibilità dinamica         | Dynamic reversibility        |
| <b>0.5 - 0.6</b> | Reversibilità dinamica incerta | Low dynamic reversibility    |
| <b>0.4 - 0.5</b> | Buona irreversibilità dinamica | Good dynamic irreversibility |
| <b>&lt; 0.4</b>  | Irreversibilità dinamica       | Dynamic irreversibility      |

## Irreversibility

The concept of irreversibility is linked to the efficiency value (dynamic and static). The irreversibility of the worm gearbox represents the impossibility of rotating the input shaft of the gearbox by applying a torque applied to the output shaft.

The degree of irreversibility increases the higher the difficulty with which the rotation described above is carried out.

and is proportional to the increase in the reduction ratio and the efficiency value.

The irreversibility of a gearbox depends on several factors related to operation (e.g. lubrication, type of load applied, temperature, etc.). In the case of an application in which a non-return of the load is required, it is still necessary to provide for the use of another external braking device because the worm screw is not able to guarantee the absolute absence of movement on its own.

### Static irreversibility

It represents the resistance to rotation deriving from the output shaft without however cancelling possible slow rotations in which the load is a source of vibrations or is subjected to them.

The following table shows the various degrees of static irreversibility closely related to the values of  $R_s$ .

### Dynamic irreversibility

It represents the ability to support the load in the event of a stop or absence of the driving action.

The presence of any vibrations, the particular type of application compromise its struggle.

The following table shows the various degrees of dynamic irreversibility closely related to the values of  $R_d$ .

## Carichi radiali

## Radial loads

L'applicazione sull'albero entrata od uscita del riduttore di un qualsiasi tipo di organo di trasmissione (es. ingranaggio, puleggia ecc.) determina delle forze radiali ( $Fr_1$  su albero entrata,  $Fr_2$  su albero uscita) che, se non considerate, possono portare al danneggiamento del riduttore stesso.

Il carico radiale esterno  $Fr$  agente sull'albero del riduttore è determinabile tramite la relazione:

$$Fr = \frac{2000 \cdot M \cdot v}{D}$$

in cui:

$D$  (mm) = diametro primitivo dell'organo di trasmissione

$v$  = coefficiente dipendente da tipo di trasmissione

$v = 1.1$  ruota per ingranaggio

$v = 1.4$  ruota per catena

$v = 1.5 - 2.5$  puleggia per cinghia a V

The application of any type of transmission component (e.g. gear, pulley, etc.) on the input or output shaft of the gearbox determines radial forces ( $Fr_1$  on the input shaft,  $Fr_2$  on the output shaft) which, if not considered, can lead to damage to the gearbox itself.

The external radial load  $Fr$  acting on the gearbox shaft can be determined by means of the report:

where:

$D$  (mm) = primitive diameter of the drive component

$v$  = coefficient depending on transmission type

$v = 1.1$  wheel per gear

$v = 1.4$  wheel per chain

$v = 1.5 - 2.5$  V-belt pulley

Il valore del carico radiale ricavato dalla relazione precedente è da confrontare con i valori di  $Fr_1$  (se albero entrata) o  $Fr_2$  (se albero uscita) indicati nelle tabelle dati tecnici del riduttore.

The radial load value obtained from the previous report is to be compared with the values of  $Fr_1$  (if input shaft) or  $Fr_2$  (if output shaft) indicated in the technical data tables of the gearbox.

Devono essere verificate le seguenti relazioni:

$$Fr < Fr_1$$

$$Fr < Fr_2$$

Si noti come i valori di  $Fr_1$  ed  $Fr_2$  riportati nelle tabelle dati tecnici sono riferiti a carichi agenti sulla mezzzeria dell'albero sporgente.

Nel caso in cui il carico sia applicato in una posizione diversa dalla mezzzeria, è necessario verificare l'applicazione tramite le relazioni indicate nei paragrafi seguenti.

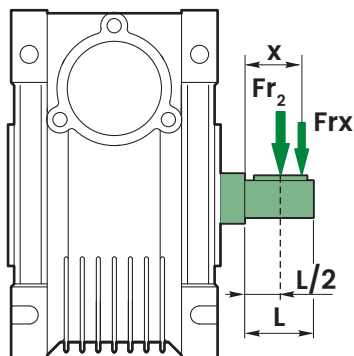
Note that the values of  $Fr_1$  and  $Fr_2$  reported in the technical data tables refer to loads acting on the centreline of the protruding shaft.

In the event that the load is applied in a position other than the centreline, it is necessary to verify the application using the reports indicated in the following paragraphs.

### Carichi radiali uscita

### $Fr_2$ (N)

### Output radial loads



| NMG             | 025  | 030  | 040  | 050  | 063  | 075  | 090  | 110   | 130   | 150   |
|-----------------|------|------|------|------|------|------|------|-------|-------|-------|
| a (mm)          | 50   | 65   | 84   | 101  | 120  | 131  | 162  | 176   | 188   | 215   |
| b (mm)          | 38   | 50   | 64   | 76   | 95   | 101  | 122  | 136   | 148   | 174   |
| $Fr_{2max}$ (N) | 1350 | 1830 | 3490 | 4840 | 6270 | 7380 | 8180 | 12000 | 13500 | 18000 |

$$Fr_x = \frac{Fr_2 \cdot a}{(b + x)} < Fr_{2max}$$

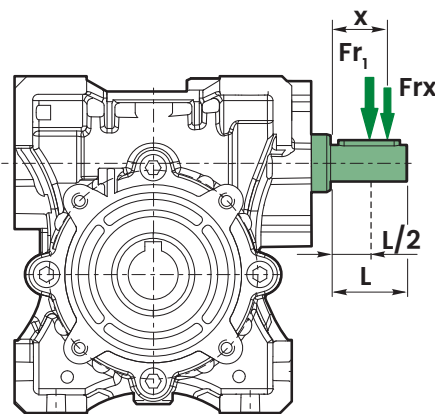
$a, b$  = valori riportati nella tabella  
 $a, b$  = values given in the table

$$Fr < Fr_x$$

### Carichi radiali entrata

### $Fr_1$ (N)

### Input radial loads



| NG              | 030 | 040  | 050 | 063 | 075 | 090  | 110  | 130  | 150  |
|-----------------|-----|------|-----|-----|-----|------|------|------|------|
| a (mm)          | 86  | 106  | 129 | 159 | 192 | 227  | 266  | 314  | 350  |
| b (mm)          | 76  | 94.5 | 114 | 139 | 167 | 202  | 236  | 274  | 310  |
| $Fr_{1max}$ (N) | 210 | 350  | 490 | 700 | 980 | 1270 | 1700 | 2100 | 2800 |

$$Fr_x = \frac{Fr_1 \cdot a}{(b + x)} < Fr_{1max}$$

$a, b$  = valori riportati nella tabella  
 $a, b$  = values given in the table

$$Fr < Fr_x$$

## Carichi assiali

In alcuni casi, in funzione del tipo di applicazione, insieme al carico radiale può agire anche una forza  $F_a$  assialmente sull'albero ( $F_{a1}$  nel caso di albero entrata,  $F_{a2}$  nel caso di albero uscita).

Il carico assiale massimo applicabile sull'albero rispetta le seguenti relazioni:

$$F_{a1} = F_{r1} \cdot 0.2$$

$$F_{a2} = F_{r2} \cdot 0.2$$

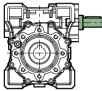
## Scelta del riduttore

Stabilita la velocità in entrata al riduttore  $n_1$ , consultando le tabelle dei dati tecnici dei riduttori riferite a  $n_1 = 500 / 900 / 1400 / 2800 \text{ (min}^{-1}\text{)}$

si selezionerà il riduttore che, in corrispondenza di un rapporto di riduzione prossimo a quello calcolato, garantisca una coppia:

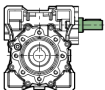
$$Mm_2 \geq Mr_2 \cdot fs$$

### Dati tecnici riduttore

| n1 = 2800 min <sup>-1</sup> |                |                 |      |  NG |      |      |      |      |      |      |      |      |
|-----------------------------|----------------|-----------------|------|--------------------------------------------------------------------------------------|------|------|------|------|------|------|------|------|
| i                           | n <sub>2</sub> |                 |      | 030                                                                                  | 040  | 050  | 063  | 075  | 090  | 110  | 130  | 150  |
| 5                           | 560            | Mm <sub>2</sub> | [Nm] | 10                                                                                   | 26   | 44   | -    | -    | -    | -    | -    | -    |
|                             |                | Pm <sub>1</sub> | [kW] | 0.66                                                                                 | 1.6  | 2.9  | -    | -    | -    | -    | -    | -    |
|                             |                | Rd              |      | 0.88                                                                                 | 0.87 | 0.88 | -    | -    | -    | -    | -    | -    |
|                             |                | Fr <sub>2</sub> | [N]  | 450                                                                                  | 900  | 1200 | -    | -    | -    | -    | -    | -    |
|                             |                | Fr <sub>1</sub> | [N]  | 90                                                                                   | 170  | 240  | -    | -    | -    | -    | -    | -    |
| 7.5                         | 373.3          | Mm <sub>2</sub> | [Nm] | 13                                                                                   | 29   | 53   | 95   | 133  | 214  | 399  | 530  | 857  |
|                             |                | Pm <sub>1</sub> | [kW] | 0.59                                                                                 | 1.2  | 2.3  | 4.1  | 5.8  | 9.2  | 17.1 | 22.7 | 36.4 |
|                             |                | Rd              |      | 0.85                                                                                 | 0.86 | 0.87 | 0.87 | 0.88 | 0.88 | 0.88 | 0.89 | 0.9  |
|                             |                | Fr <sub>2</sub> | [N]  | 542                                                                                  | 1044 | 1433 | 1873 | 2210 | 2446 | 3090 | 4042 | 5526 |
|                             |                | Fr <sub>1</sub> | [N]  | 125                                                                                  | 233  | 324  | 395  | 560  | 715  | 950  | 1190 | 1550 |
|                             |                | Mm <sub>2</sub> | [Nm] | 13                                                                                   | 30   | 55   | 99   | 148  | 240  | 446  | 592  | 908  |

### Gearbox technical data

### Dati tecnici riduttore

| n1 = 1400 min <sup>-1</sup> |                |                      |  |      |      |      |      |      |      |      |      |
|-----------------------------|----------------|----------------------|-------------------------------------------------------------------------------------|------|------|------|------|------|------|------|------|
|                             |                |                      | NG                                                                                  |      |      |      |      |      |      |      |      |
| i                           | n <sub>2</sub> |                      | 030                                                                                 | 040  | 050  | 063  | 075  | 090  | 110  | 130  | 150  |
| 5                           | 280            | Mm <sub>2</sub> [Nm] | 18                                                                                  | 35   | 63   | -    | -    | -    | -    | -    | -    |
|                             |                | Pm <sub>1</sub> [kW] | 0.62                                                                                | 1.1  | 2.0  | -    | -    | -    | -    | -    | -    |
|                             |                | Rd                   | 0.86                                                                                | 0.88 | 0.87 | -    | -    | -    | -    | -    | -    |
|                             |                | Fr <sub>2</sub> [N]  | 597                                                                                 | 1149 | 1577 | -    | -    | -    | -    | -    | -    |
|                             |                | Fr <sub>1</sub> [N]  | 150                                                                                 | 250  | 350  | -    | -    | -    | -    | -    | -    |
| 7.5                         | 186.7          | Mm <sub>2</sub> [Nm] | 18                                                                                  | 41   | 72   | 131  | 189  | 296  | 563  | 765  | 1224 |
|                             |                | Pm <sub>1</sub> [kW] | 0.41                                                                                | 0.9  | 1.6  | 2.9  | 4.2  | 6.5  | 12.3 | 16.6 | 26.3 |
|                             |                | Rd                   | 0.84                                                                                | 0.86 | 0.87 | 0.87 | 0.88 | 0.89 | 0.89 | 0.9  | 0.91 |
|                             |                | Fr <sub>2</sub> [N]  | 683                                                                                 | 1315 | 1805 | 2359 | 2785 | 3081 | 3893 | 5092 | 6962 |
|                             |                | Fr <sub>1</sub> [N]  | 150                                                                                 | 294  | 401  | 500  | 700  | 900  | 1200 | 1500 | 1950 |
|                             |                | Mm <sub>2</sub> [Nm] | 18                                                                                  | 41   | 72   | 132  | 190  | 316  | 610  | 836  | 1265 |

### Gearbox technical data

## Scelta del motoriduttore

Nota la potenza motore  $P$  (kW) da applicare in ingresso al riduttore e richiesta dall'applicazione, consultare le tabelle dei dati tecnici motoriduttori.

### Dati tecnici motoriduttore

| <b>Pn<sub>1</sub></b>                                     | <b>n<sub>2</sub></b>     | <b>i</b>     | <b>Mn<sub>2</sub></b> | <b>fs</b>  | <b>Fr<sub>2</sub></b> |  |  |  |  |  |
|-----------------------------------------------------------|--------------------------|--------------|-----------------------|------------|-----------------------|---------------------------------------------------------------------------------------|--|--|--|--|
| [kW]                                                      | [min <sup>-1</sup> ]     |              | [Nm]                  |            | [N]                   |                                                                                       |  |  |  |  |
| <b>0.06</b>                                               |                          |              |                       |            |                       |                                                                                       |  |  |  |  |
| <b>56A4</b><br>(n <sub>1</sub> = 1400 min <sup>-1</sup> ) | <b>0.4</b><br><b>0.4</b> | 3200<br>4000 | 306<br>285            | 0.2<br>0.1 | 3490<br>3490          | <b>NMGD030/040</b>                                                                    |  |  |  |  |

## Selection of gearmotor

Note the motor power  $P$  (kW) to be applied at the input to the gearbox and required by the application, please refer to the tables of the gearmotor technical data.

### Gearmotors technical data

## Scelta del motoriduttore

Se invece è nota la coppia richiesta in uscita dall'applicazione  $M_{r2}$ , è necessario determinare la potenza motore  $P$  utilizzando la formula:

$$P = \frac{M_{r2} \cdot n_2}{9550 \cdot R_d}$$

dove  $n_2$  è il numero di giri richiesti in uscita al motoriduttore ed  $R_d$  è il rendimento dinamico riportato nella relativa tabella.

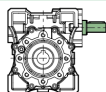
## Selection of gearmotor

If, on the other hand, the torque required at the output of the  $M_{r2}$  application is known, it is necessary to determine the motor power  $P$  using the formula:

where  $n_2$  is the number of revolutions required at the output of the gearmotor and  $R_d$  is the dynamic efficiency shown in the relevant table.

### Dati tecnici riduttore

**$n_1 = 2800 \text{ min}^{-1}$**



**NG**

| i          | $n_2$ |               | 030  | 040  | 050  | 063  | 075  | 090  | 110  | 130  | 150  |
|------------|-------|---------------|------|------|------|------|------|------|------|------|------|
| <b>5</b>   | 560   | $M_{m2}$ [Nm] | 10   | 26   | 44   | -    | -    | -    | -    | -    | -    |
|            |       | $P_{m1}$ [kW] | 0.66 | 1.6  | 2.9  | -    | -    | -    | -    | -    | -    |
|            |       | $R_d$         | 0.88 | 0.87 | 0.88 | -    | -    | -    | -    | -    | -    |
|            |       | $F_{r2}$ [N]  | 450  | 900  | 1200 | -    | -    | -    | -    | -    | -    |
|            |       | $F_{r1}$ [N]  | 90   | 170  | 240  | -    | -    | -    | -    | -    | -    |
| <b>7.5</b> | 373.3 | $M_{m2}$ [Nm] | 13   | 29   | 53   | 95   | 133  | 214  | 399  | 530  | 857  |
|            |       | $P_{m1}$ [kW] | 0.59 | 1.2  | 2.3  | 4.1  | 5.8  | 9.2  | 17.1 | 22.7 | 36.4 |
|            |       | $R_d$         | 0.85 | 0.86 | 0.87 | 0.87 | 0.88 | 0.88 | 0.88 | 0.89 | 0.9  |
|            |       | $F_{r2}$ [N]  | 542  | 1044 | 1433 | 1873 | 2210 | 2446 | 3090 | 4042 | 5526 |
|            |       | $F_{r1}$ [N]  | 125  | 233  | 324  | 395  | 560  | 715  | 950  | 1190 | 1550 |

### Gearbox technical data

Consultando le tabelle dei dati tecnici dei motoriduttori, individuare la motorizzazione in cui  $P_{m1}$  risulti essere maggiore o uguale alla potenza  $P$  precedentemente determinata.

Riferendosi ad una velocità  $n_2$  che meglio approssima quella desiderata, individuare la motorizzazione in cui il fattore di servizio  $f_s$  indicato sia maggiore o uguale a quello indicato nella tabella relativa.

By consulting the tables of the technical data of the gearmotors, identify the motor in which  $P_{m1}$  is greater than or equal to the power  $P$  previously determined.

Referring to a speed  $n_2$  that best approximates the desired one, identify the engine in which the service factor  $f_s$  indicated is greater than or equal to that indicated in the relative table.

| Classe di carico<br>Load class              | h/gg<br>hours/day | N. AVVIAMENTI/ORA / N. START-UP/HOUR |     |     |     |     |     |     |     |     |
|---------------------------------------------|-------------------|--------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
|                                             |                   | 2                                    | 4   | 8   | 16  | 32  | 63  | 125 | 250 | 500 |
| <b>A</b><br>Carico uniforme<br>Uniform load | 4                 | 0.8                                  | 0.8 | 0.9 | 0.9 | 1.0 | 1.1 | 1.1 | 1.2 | 1.2 |
|                                             | 8                 | 1.0                                  | 1.0 | 1.1 | 1.1 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
|                                             | 16                | 1.3                                  | 1.3 | 1.3 | 1.3 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
|                                             | 24                | 1.5                                  | 1.5 | 1.5 | 1.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |
| Classe di carico<br>Load class              | h/gg<br>hours/day | N. AVVIAMENTI/ORA / N. START-UP/HOUR |     |     |     |     |     |     |     |     |
|                                             |                   | 2                                    | 4   | 8   | 16  | 32  | 63  | 125 | 250 | 500 |
| <b>B</b><br>Carico con urti moderati        | 4                 | 1.0                                  | 1.0 | 1.0 | 1.0 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
|                                             | 8                 | 1.3                                  | 1.3 | 1.3 | 1.3 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
|                                             | 16                | 1.5                                  | 1.5 | 1.5 | 1.5 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 |

### ESEMPIO:

Dati applicazione:

$P = 0.06 \text{ kW}$

$f_s = 1.8$

$n_2 = 6 \text{ (min}^{-1}\text{)}$

Motoriduttore selezionato:

NMGD 030/050  $i=250$

$P_{m1} = 0.06 \text{ kW}$

$f_s = 2$

### EXAMPLE:

Application data:

$P = 0.06 \text{ kW}$

$f_s = 1.8$

$n_2 = 6 \text{ (min}^{-1}\text{)}$

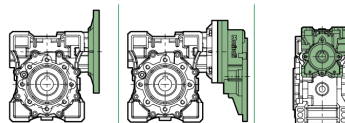
Selected gearmotor:

NMGD 030/050  $i=250$

$P_{m1} = 0.06 \text{ kW}$

$f_s = 2$

| $P_{n1}$<br>[kW]                                 | $n_2$<br>[min <sup>-1</sup> ] | i    | $M_{n2}$<br>[Nm] | $f_s$ | $F_{r2}$<br>[N] |  |                    |
|--------------------------------------------------|-------------------------------|------|------------------|-------|-----------------|--|--------------------|
| <b>0.06</b>                                      |                               |      |                  |       |                 |  |                    |
| <b>56A4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>0.4</b>                    | 3200 | 306              | 0.2   | 3490            |  | <b>NMGD030/040</b> |
|                                                  | <b>0.4</b>                    | 4000 | 285              | 0.1   | 3490            |  |                    |
|                                                  | <b>0.3</b>                    | 5000 | 345              | 0.1   | 3490            |  |                    |
|                                                  | <b>7</b>                      | 200  | 48               | 2.6   | 4788            |  | <b>NMGD030/050</b> |
|                                                  | <b>5.6</b>                    | 250  | 56               | 2     | 4840            |  |                    |
|                                                  | <b>4.7</b>                    | 300  | 62               | 2.4   | 4840            |  |                    |



## Verniciatura

Tutti i riduttori della gamma Motitali sono verniciati a polveri epossidiche in colore grigio RAL 7040 / 7042, ad esclusione delle parti lavorate per consentire appoggi di fissaggio ed accoppiamenti.

## Painting

*All the reducers in the Motitali range are painted with epoxy powders in RAL 7040 / 7042 grey, with the exception of the machined parts to allow fastening supports and couplings.*

## Temperatura

Tutti i riduttori della gamma Motitali sono predisposti per operare fino ad una temperatura massima continuativa raggiunta all'interno del riduttore di +85°C.

Per temperature operative continuative maggiori di + 85°C, si prega di contattare Motitali.  
La temperatura minima a cui i riduttori possono operare è pari -5°C.

In caso di utilizzo dei riduttori in ambiente di lavoro con temperatura <-5 °C o > +40°C, contattare Motitali.

## Temperature

*All the reducers in the Motitali range are designed to operate up to a maximum continuous temperature of +85°C inside the reducer.*

*For continuous operating temperatures greater than +85°C, please contact Motitali.  
The minimum temperature at which the gearboxes can operate is -5°C.*

*If the reducers are used in a working environment with a temperature <-5 °C or > +40 °C, contact Motitali.*

## Targhetta

## Plate

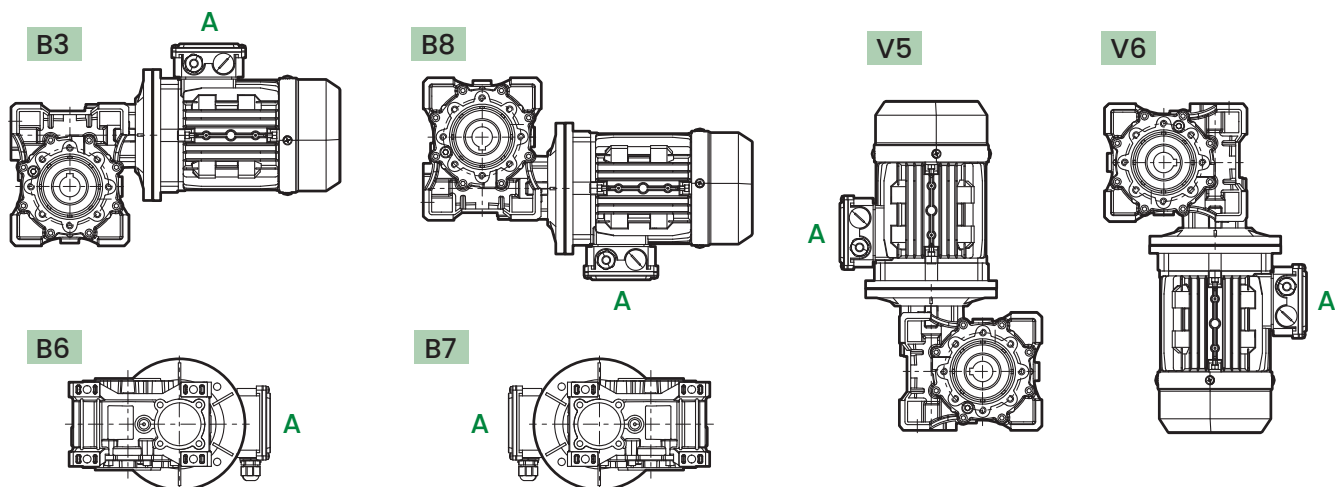
|                                                                                     |  |                                                                                     |                                                                |
|-------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------|----------------------------------------------------------------|
|  |  |  | Qr Code                                                        |
| <b>MODEL</b> _____                                                                  |  |                                                                                     | Tipo di riduttore<br>Gearbox type                              |
| <b>RATIO</b> _____ <b>PAM</b> _____                                                 |  |                                                                                     | Rapporto di riduzione<br>Nominal ratio                         |
| <b>SHAFT DIAMETER</b> _____                                                         |  |                                                                                     | Predisposizione IEC<br>IEC Pre-arrangements                    |
| <b>No.</b> _____                                                                    |  |                                                                                     | Diametro albero cavo uscita<br>Diameter of hollow output shaft |
|                                                                                     |  |                                                                                     | Numero di serie<br>Serial number                               |



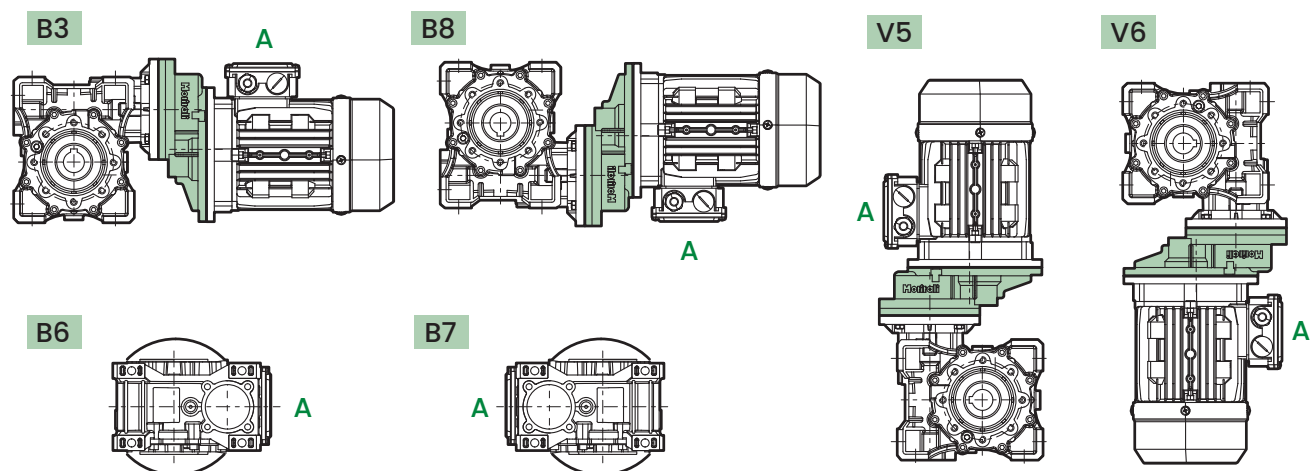
## Posizioni di montaggio

## Mounting positions

### NMG - NG



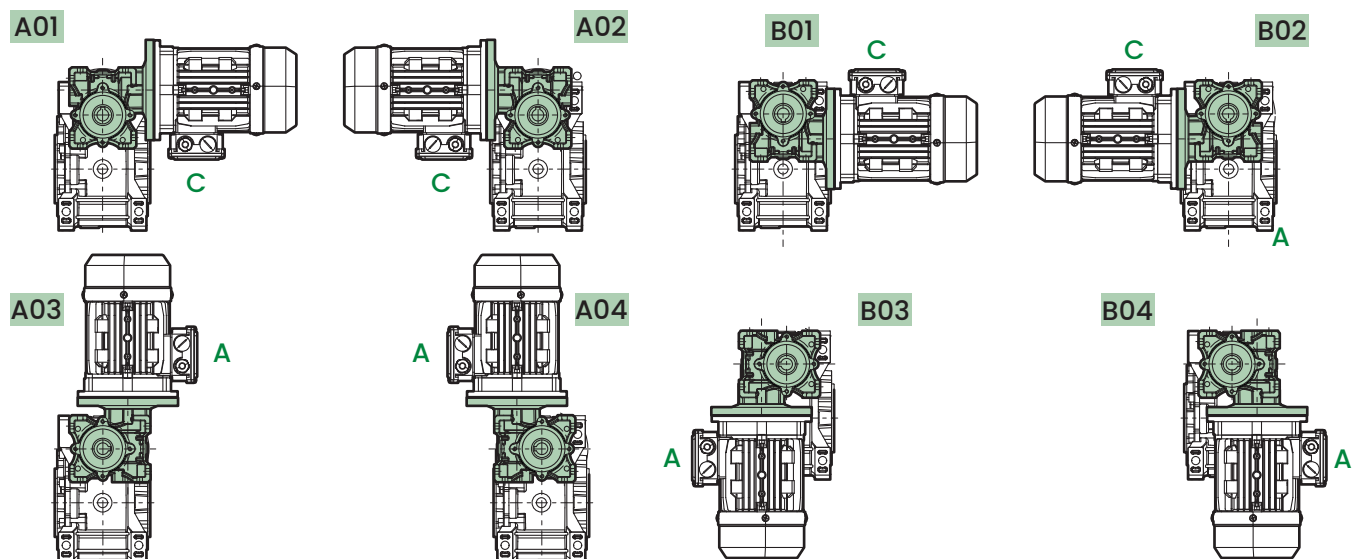
### NMGP



### Versioni riduttori combinati

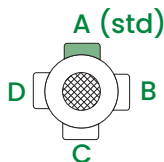
### Versions of combination gearbox

### NMGD - NGD



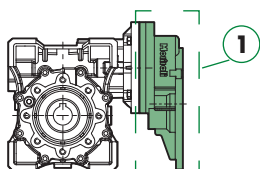
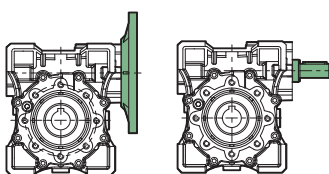
## Posizione morsetteria

Negli schemi di montaggio dei motoriduttori precedentemente riportati è indicata anche la posizione standard (A) della morsetteria motore. Lo schema seguente rappresenta le possibilità disponibili. In caso di particolari necessità è necessario specificare in fase d'ordine la posizione desiderata (A, B, C o D) della morsetteria.



## Lubrificazione

Tutti i riduttori Motitali vengono forniti completi di lubrificante. Inoltre, dalla grandezza 25 fino alla 90 i riduttori sono lubrificati con olio sintetico, non necessitano di manutenzione e sono prive di tappi. Dalla grandezza 110 alla 150 i riduttori sono lubrificati con olio minerale e vengono forniti completi di olio lubrificante nella quantità prevista in posizione di montaggio B3. In caso di posizione di montaggio diversa dalla B3, il cliente deve adattare la quantità di olio alla posizione di montaggio (v. tabella seguente). In tale tabella sono riportate le quantità indicative di lubrificante contenute nei singoli riduttori in funzione delle posizioni di montaggio.



|         | 025  | 030  | 040  | 050  | 063  | 075  | 090 | 110                                                  | 130 | 150 |
|---------|------|------|------|------|------|------|-----|------------------------------------------------------|-----|-----|
| B3      | 0.02 | 0.04 | 0.08 | 0.15 | 0.33 | 0.55 | 1   | 3.0                                                  | 4.0 | 5.5 |
| B8      |      |      |      |      |      |      |     | 2.2                                                  | 3.3 | 4.8 |
| B6 - B7 |      |      |      |      |      |      |     | 2.5                                                  | 3.5 | 5.0 |
| V5      |      |      |      |      |      |      |     | Contattare ufficio tecnico<br>Contact technical dep. |     |     |
| V6      |      |      |      |      |      |      |     |                                                      |     |     |

|   | 063  | 071  | 080  | 090  |
|---|------|------|------|------|
| 1 | 0.05 | 0.07 | 0.15 | 0.15 |

È inoltre necessario al momento della messa in opera del riduttore, sostituire il tappo di carico, fornito chiuso per motivi di trasporto, con quello di sfiato fornito a corredo del riduttore stesso. La mancata installazione del tappo di sfiato può portare ad un malfunzionamento del riduttore e a possibili perdite di lubrificante. Sarà inoltre cura del cliente installare i tappi di livello e di scarico nella corretta collocazione per la specifica posizione di montaggio adottata. Per le grandezze dalla 110 alla 150, successivamente alla fase di rodaggio (circa 300 ore di funzionamento) si consiglia la sostituzione dell'olio. Nelle sostituzioni o nei rabbocchi, ricordarsi sempre di verificare che il lubrificante abbia raggiunto il livello corretto guardando nella spia trasparente del tappo di livello (il corretto livello è in mezz'ora).

In the assembly diagrams of the gearmotors above, the standard position (A) of the motor terminal block is also indicated. The following diagram represents the available possibilities: In case of special needs, it is necessary to specify the desired position (A, B, C or D) of the terminal block when ordering.

## Positions of terminal box

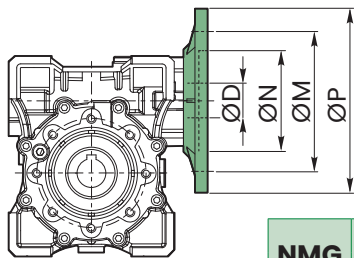
All Motitali reducers are supplied complete with lubricant. In addition, from size 25 to 90, the gearboxes are lubricated with synthetic oil, are maintenance-free and have no plugs. From size 110 to 150, the gearboxes are lubricated with mineral oil and are supplied complete with lubricating oil in the quantity provided in assembly position B3. In the case of an assembly position other than B3, the customer must adjust the amount of oil to the assembly position (see table below). This table shows the indicative quantities of lubricant contained in the individual gearboxes according to the assembly positions.

It is also necessary, at the time of installation of the gearbox, to replace the filler cap, supplied closed for transport reasons, with the vent cap supplied with the gearbox itself. Failure to install the vent cap may lead to a malfunction of the gearbox and possible lubricant leakage. It will also be the customer's responsibility to install the level and drain plugs in the correct location for the specific assembly position adopted. For sizes 110 to 150, an oil change is recommended after the running-in phase (approx. 300 hours of operation). When replacing or topping up, always remember to check that the lubricant has reached the correct level by looking at the transparent indicator light on the level cap (the correct level is in the centreline).

| NMG / NG                                   | 025, 030, 040, 050, 063, 075, 090 | 110, 130, 150               |
|--------------------------------------------|-----------------------------------|-----------------------------|
| Tipo di lubrificante / Type of lubricant   | Olio sintetico / Synthetic oil    | Olio minerale / Mineral oil |
| Temperatura Ambiente / Ambient temperature | -25 ° / +50 °C                    | -5 ° / +40 °C               |
| ISO                                        | VG 320                            | VG 220                      |
| MOBIL                                      | SHC 632                           | MOBILGEAR 630               |
| BP                                         | ENERGOL SGXP320                   | ENERGOL GRXP 220            |
| SHELL                                      | TIVELA OIL S 320                  | OMALA OIL 220               |
| CASTROL                                    | ALPHA SYNT PG320                  | ALPHA MAX 220               |

## Predisposizioni IEC - NMG

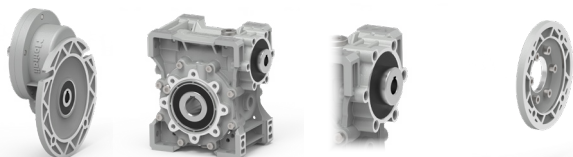
## NMG - IEC Pre-arrangements



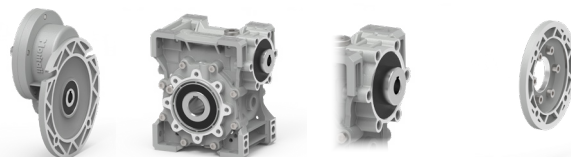
| NMG        | IEC        | ØN  | ØM  | ØP  | ØD  |       |      |      |      |      |      |      |      |      |      |       |
|------------|------------|-----|-----|-----|-----|-------|------|------|------|------|------|------|------|------|------|-------|
|            |            |     |     |     | i 5 | i 7.5 | i 10 | i 15 | i 20 | i 25 | i 30 | i 40 | i 50 | i 60 | i 80 | i 100 |
| <b>025</b> | 56B14      | 50  | 65  | 80  | 9   | 9     | 9    | 9    | 9    | 9    | 9    | 9    | 9    | 9    | -    | -     |
| <b>030</b> | 63B5       | 95  | 115 | 140 | 11  | 11    | 11   | 11   | 11   | 11   | 11   | 11   | 11   | -    | -    | -     |
|            | 63B14      | 60  | 75  | 90  |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 56B5       | 80  | 100 | 120 | 9   | 9     | 9    | 9    | 9    | 9    | 9    | 9    | 9    | 9    | 9    | -     |
|            | 56B14      | 50  | 65  | 80  |     |       |      |      |      |      |      |      |      |      |      |       |
| <b>040</b> | 71B5       | 110 | 130 | 160 | 14  | 14    | 14   | 14   | 14   | 14   | 14   | 14   | -    | -    | -    | -     |
|            | 71B14      | 70  | 85  | 105 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 63B5       | 95  | 115 | 140 | 11  | 11    | 11   | 11   | 11   | 11   | 11   | 11   | 11   | 11   | 11   | 11    |
|            | 63B14      | 60  | 75  | 90  |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 56B5       | 80  | 100 | 120 | -   | -     | -    | -    | -    | -    | -    | -    | 9    | 9    | 9    | 9     |
|            |            |     |     |     |     |       |      |      |      |      |      |      |      |      |      |       |
| <b>050</b> | 80B5       | 130 | 165 | 200 | 19  | 19    | 19   | 19   | 19   | 19   | 19   | 19   | -    | -    | -    | -     |
|            | 80B14      | 80  | 100 | 120 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 71B5       | 110 | 130 | 160 | 14  | 14    | 14   | 14   | 14   | 14   | 14   | 14   | 14   | 14   | 14   | 14    |
|            | 71B14      | 70  | 85  | 105 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 63B5       | 95  | 115 | 140 | -   | -     | -    | -    | -    | -    | -    | 11   | 11   | 11   | 11   | 11    |
|            |            |     |     |     |     |       |      |      |      |      |      |      |      |      |      |       |
| <b>063</b> | 90B5       | 130 | 165 | 200 | -   | 24    | 24   | 24   | 24   | 24   | 24   | 24   | 24   | -    | -    | -     |
|            | 90B14      | 95  | 115 | 140 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 80B5       | 130 | 165 | 200 | -   | 19    | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19   | -     |
|            | 80B14      | 80  | 100 | 120 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 71B5       | 110 | 130 | 160 | -   | 14    | 14   | 14   | 14   | 14   | 14   | 14   | 14   | 14   | 14   | 14    |
|            | 71B14      | 70  | 85  | 105 |     |       |      |      |      |      |      |      |      |      |      |       |
| <b>075</b> | 100/112B5  | 180 | 215 | 250 | -   | 28    | 28   | 28   | 28   | 28   | 28   | -    | -    | -    | -    | -     |
|            | 100/112B14 | 110 | 130 | 160 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 90B5       | 130 | 165 | 200 | -   | 24    | 24   | 24   | 24   | 24   | 24   | 24   | 24   | 24   | -    | -     |
|            | 90B14      | 95  | 115 | 140 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 80B5       | 130 | 165 | 200 | -   | 19    | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19    |
|            | 80B14      | 80  | 100 | 120 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 71B5       | 110 | 130 | 160 | -   | 14    | 14   | 14   | 14   | 14   | 14   | 14   | 14   | 14   | 14   | 14    |
|            |            |     |     |     |     |       |      |      |      |      |      |      |      |      |      |       |
| <b>090</b> | 100/112B5  | 180 | 215 | 250 | -   | 28    | 28   | 28   | 28   | 28   | 28   | -    | -    | -    | -    | -     |
|            | 100/112B14 | 110 | 130 | 160 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 90B5       | 130 | 165 | 200 | -   | 24    | 24   | 24   | 24   | 24   | 24   | 24   | 24   | 24   | 24   | -     |
|            | 90B14      | 95  | 115 | 140 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 80B5       | 130 | 165 | 200 | -   | 19    | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19    |
|            | 80B14      | 80  | 100 | 120 |     |       |      |      |      |      |      |      |      |      |      |       |
| <b>110</b> | 132B5      | 230 | 265 | 300 | -   | 38    | 38   | 38   | 38   | 38   | 38   | 38   | -    | -    | -    | -     |
|            | 132 B14    | 130 | 165 | 200 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 100/112B5  | 180 | 215 | 250 | -   | 28    | 28   | 28   | 28   | 28   | 28   | 28   | 28   | 28   | -    | -     |
|            | 100/112B14 | 110 | 130 | 160 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 90B5       | 130 | 165 | 200 | -   | 24    | 24   | 24   | 24   | 24   | 24   | 24   | 24   | 24   | 24   | 24    |
|            | 90B14      | 95  | 115 | 140 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 80B5       | 130 | 165 | 200 | -   | 19    | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19   | 19    |
|            |            |     |     |     |     |       |      |      |      |      |      |      |      |      |      |       |
| <b>130</b> | 132B5      | 230 | 265 | 300 | -   | 38    | 38   | 38   | 38   | 38   | 38   | 38   | -    | -    | -    | -     |
|            | 132 B14    | 130 | 165 | 200 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 100/112B5  | 180 | 215 | 250 | -   | -     | -    | -    | -    | 28   | 28   | 28   | 28   | 28   | 28   | 28    |
|            | 100/112B14 | 110 | 130 | 160 |     |       |      |      |      |      |      |      |      |      |      |       |
|            | 90B5       | 130 | 165 | 200 | -   | -     | -    | -    | -    | -    | -    | -    | -    | -    | 24   | 24    |
| <b>150</b> | 160B5      | 250 | 300 | 350 | -   | 42    | 42   | 42   | 42   | 42   | -    | -    | -    | -    | -    | -     |
|            | 132B5      | 230 | 265 | 300 | -   | -     | -    | -    | 38   | 38   | 38   | 38   | 38   | 38   | -    | -     |
|            | 100/112B5  | 180 | 215 | 250 | -   | -     | -    | -    | -    | -    | -    | -    | 28   | 28   | 28   | 28    |

## Predisposizioni IEC - NMGP

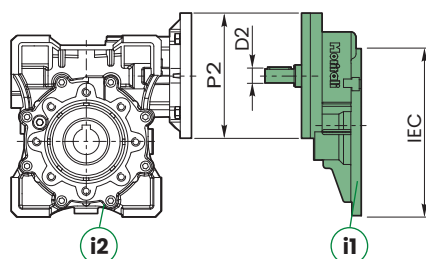
## NMGP - IEC Pre-arrangements



| gr. precoppia<br>Helic worm size | gr. riduttore<br>gearbox size | Ø entrata ridut.<br>consigliato<br>Ø input gearb.<br>recommended | Flangia entrata<br>da utilizzare<br>Input flange<br>to use |
|----------------------------------|-------------------------------|------------------------------------------------------------------|------------------------------------------------------------|
| KPR 63                           | 40                            | 14                                                               | 71 B14<br>(Ø105)                                           |
|                                  | 50                            |                                                                  |                                                            |
| KPR 71                           | 50                            | 19                                                               | 80 B14<br>(Ø120)                                           |
|                                  | 63                            |                                                                  |                                                            |
|                                  | 75                            |                                                                  |                                                            |



| gr. precoppia<br>Helic worm size | gr. riduttore<br>gearbox size | Ø entrata ridut.<br>consigliato<br>Ø input gearb.<br>recommended | Flangia entrata<br>da utilizzare<br>Input flange<br>to use |
|----------------------------------|-------------------------------|------------------------------------------------------------------|------------------------------------------------------------|
| KPR 80                           | 75                            | 24                                                               | 100/112 B14<br>(Ø160)                                      |
|                                  | 90                            |                                                                  |                                                            |
|                                  | 110                           |                                                                  |                                                            |
| KPR 90                           | 90                            | 28                                                               | 100/112 B14<br>(Ø160)                                      |
|                                  | 110                           |                                                                  |                                                            |
|                                  | 130                           |                                                                  |                                                            |



$i = i1 \times i2$

|        | IEC   | P2  | D2        |
|--------|-------|-----|-----------|
| KPR 63 | 63 B5 | 105 | 11<br>14* |
| KPR 71 | 71 B5 | 120 | 14<br>19* |

\*Diametro consigliato

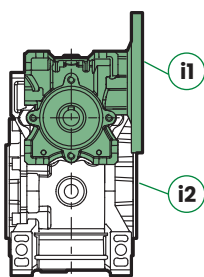
|        | IEC   | P2  | D2        |
|--------|-------|-----|-----------|
| KPR 80 | 80 B5 | 160 | 19<br>24* |
| KPR 90 | 90 B5 | 160 | 24<br>28* |

\*Diameter recommended

|                   |     | Grandezza precoppia / Size pre-stage |             |           |             |
|-------------------|-----|--------------------------------------|-------------|-----------|-------------|
|                   |     | KPR 063                              | KPR 071     | KPR 080   | KPR 090     |
|                   |     | $i1 = 2.94$                          | $i1 = 2.94$ | $i1 = 3$  | $i1 = 2.45$ |
| NMGP<br>063 / 040 | 25  | $i = 73.5$                           |             |           |             |
|                   | 30  | $i = 88.2$                           |             |           |             |
|                   | 40  | $i = 117.6$                          |             |           |             |
|                   | 50  | $i = 147$                            |             |           |             |
|                   | 60  | $i = 176.4$                          |             |           |             |
|                   | 80  | $i = 235.2$                          |             |           |             |
|                   | 100 | $i = 294$                            |             |           |             |
| NMGP<br>... / 050 | 25  |                                      | $i = 73.5$  |           |             |
|                   | 30  |                                      | $i = 88.2$  |           |             |
|                   | 40  | $i = 117.6$                          | $i = 117.6$ |           |             |
|                   | 50  | $i = 147$                            | $i = 147$   |           |             |
|                   | 60  | $i = 176.4$                          | $i = 176.4$ |           |             |
|                   | 80  | $i = 235.2$                          | $i = 235.2$ |           |             |
|                   | 100 | $i = 294$                            |             |           |             |
| NMGP<br>071 / 063 | 40  |                                      | $i = 117.6$ |           |             |
|                   | 50  |                                      | $i = 147$   |           |             |
|                   | 60  |                                      | $i = 176.4$ |           |             |
|                   | 80  |                                      | $i = 235.2$ |           |             |
|                   | 100 |                                      | $i = 294$   |           |             |
| NMGP<br>... / 075 | 25  |                                      |             | $i = 75$  |             |
|                   | 30  |                                      |             | $i = 90$  |             |
|                   | 40  |                                      |             | $i = 120$ |             |
|                   | 50  |                                      | $i = 147$   | $i = 150$ |             |
|                   | 60  |                                      | $i = 176.4$ | $i = 180$ |             |
|                   | 80  |                                      | $i = 235.2$ | $i = 240$ |             |
|                   | 100 |                                      | $i = 294$   | $i = 300$ |             |
| NMGP<br>... / 090 | 25  |                                      |             |           | $i = 61.2$  |
|                   | 30  |                                      |             |           | $i = 73.5$  |
|                   | 40  |                                      |             | $i = 120$ | $i = 98$    |
|                   | 50  |                                      |             | $i = 150$ | $i = 122.5$ |
|                   | 60  |                                      |             | $i = 180$ | $i = 147$   |
|                   | 80  |                                      |             | $i = 240$ |             |
|                   | 100 |                                      |             | $i = 300$ |             |
| NMGP<br>... / 110 | 25  |                                      |             |           | $i = 61.2$  |
|                   | 30  |                                      |             |           | $i = 73.5$  |
|                   | 40  |                                      |             |           | $i = 98$    |
|                   | 50  |                                      |             |           | $i = 122.5$ |
|                   | 60  |                                      |             |           | $i = 147$   |
|                   | 80  |                                      |             | $i = 240$ | $i = 196$   |
|                   | 100 |                                      |             | $i = 300$ | $i = 245$   |
| NMGP<br>090 / 130 | 80  |                                      |             |           | $i = 196$   |
|                   | 100 |                                      |             |           | $i = 245$   |

## Predisposizioni IEC - NMGD

## NMGD - IEC Pre-arrangements

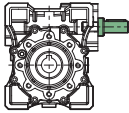


$$i = i1 \times i2$$

| NMGD                   | i    | IEC            | i1 | i2 |
|------------------------|------|----------------|----|----|
| 025 / 030              | 100  | 56             | 10 | 10 |
|                        | 150  |                | 10 | 15 |
|                        | 200  |                | 10 | 20 |
|                        | 250  |                | 10 | 25 |
|                        | 300  |                | 10 | 30 |
|                        | 400  |                | 20 | 20 |
|                        | 500  |                | 20 | 25 |
|                        | 600  |                | 20 | 30 |
|                        | 750  |                | 30 | 25 |
|                        | 900  |                | 30 | 30 |
|                        | 1200 |                | 40 | 30 |
|                        | 1500 |                | 50 | 30 |
|                        | 1800 |                | 60 | 30 |
|                        | 2400 |                | 60 | 40 |
|                        | 3000 |                | 60 | 50 |
| 025 / 040              | 100  | 56             | 10 | 10 |
|                        | 150  |                | 10 | 15 |
|                        | 200  |                | 10 | 20 |
|                        | 250  |                | 10 | 25 |
|                        | 300  |                | 10 | 30 |
|                        | 400  |                | 10 | 40 |
|                        | 500  |                | 20 | 25 |
|                        | 600  |                | 20 | 30 |
|                        | 750  |                | 25 | 30 |
|                        | 900  |                | 30 | 30 |
|                        | 1200 |                | 40 | 30 |
|                        | 1500 |                | 50 | 30 |
|                        | 1800 |                | 60 | 30 |
|                        | 2400 |                | 60 | 40 |
|                        | 3000 |                | 60 | 50 |
| 030 / 040              | 100  | 56<br>63       | 10 | 10 |
|                        | 150  |                | 10 | 15 |
|                        | 200  |                | 10 | 20 |
|                        | 250  |                | 10 | 25 |
|                        | 300  |                | 10 | 30 |
|                        | 400  |                | 10 | 40 |
|                        | 500  |                | 20 | 25 |
|                        | 600  |                | 20 | 30 |
|                        | 750  |                | 30 | 25 |
|                        | 900  |                | 30 | 30 |
|                        | 1200 |                | 40 | 30 |
|                        | 1500 |                | 50 | 30 |
|                        | 1800 |                | 60 | 30 |
|                        | 2400 |                | 60 | 40 |
|                        | 3200 |                | 80 | 40 |
| 030 / 050              | 100  | 56<br>63       | 10 | 10 |
|                        | 150  |                | 10 | 15 |
|                        | 200  |                | 10 | 20 |
|                        | 250  |                | 10 | 25 |
|                        | 300  |                | 10 | 30 |
|                        | 400  |                | 10 | 40 |
|                        | 500  |                | 10 | 50 |
|                        | 600  |                | 20 | 30 |
|                        | 750  |                | 25 | 30 |
|                        | 900  |                | 30 | 30 |
|                        | 1200 |                | 40 | 30 |
|                        | 1500 |                | 50 | 30 |
|                        | 1800 |                | 60 | 30 |
|                        | 2400 |                | 60 | 40 |
|                        | 3000 |                | 60 | 50 |
| 030 / 063              | 100  | 56<br>63       | 10 | 10 |
|                        | 150  |                | 10 | 15 |
|                        | 200  |                | 10 | 20 |
|                        | 250  |                | 10 | 25 |
|                        | 300  |                | 10 | 30 |
|                        | 400  |                | 10 | 40 |
|                        | 500  |                | 10 | 50 |
|                        | 600  |                | 20 | 30 |
|                        | 750  |                | 25 | 30 |
|                        | 900  |                | 30 | 30 |
|                        | 1200 |                | 40 | 30 |
|                        | 1500 |                | 50 | 30 |
|                        | 1800 |                | 60 | 30 |
|                        | 2400 |                | 60 | 40 |
|                        | 3000 |                | 60 | 50 |
| 040 / 075<br>040 / 090 | 100  | 63             | 10 | 10 |
|                        | 150  |                | 10 | 15 |
|                        | 200  |                | 10 | 20 |
|                        | 250  |                | 10 | 25 |
|                        | 300  |                | 10 | 30 |
|                        | 400  |                | 10 | 40 |
|                        | 500  |                | 10 | 50 |
|                        | 600  |                | 20 | 30 |
|                        | 750  |                | 25 | 30 |
|                        | 900  |                | 30 | 30 |
|                        | 1200 |                | 40 | 30 |
|                        | 1500 |                | 50 | 30 |
|                        | 1800 |                | 60 | 30 |
|                        | 2400 |                | 60 | 40 |
|                        | 3000 |                | 60 | 50 |
| 050 / 110              | 100  | 63<br>71<br>80 | 10 | 10 |
|                        | 150  |                | 10 | 15 |
|                        | 200  |                | 10 | 20 |
|                        | 250  |                | 10 | 25 |
|                        | 300  |                | 10 | 30 |
|                        | 400  |                | 10 | 40 |
|                        | 500  |                | 20 | 25 |
|                        | 600  |                | 20 | 30 |
|                        | 750  |                | 25 | 30 |
|                        | 900  |                | 30 | 30 |
|                        | 1200 |                | 40 | 30 |
|                        | 1500 |                | 50 | 30 |
|                        | 1800 |                | 60 | 30 |
|                        | 2400 |                | 60 | 40 |
|                        | 3000 |                | 60 | 50 |
| 063 / 130<br>063 / 150 | 100  | 71<br>80<br>90 | 10 | 10 |
|                        | 150  |                | 10 | 15 |
|                        | 200  |                | 10 | 20 |
|                        | 250  |                | 10 | 25 |
|                        | 300  |                | 10 | 30 |
|                        | 400  |                | 10 | 40 |
|                        | 500  |                | 10 | 50 |
|                        | 600  |                | 20 | 30 |
|                        | 750  |                | 25 | 30 |
|                        | 900  |                | 30 | 30 |
|                        | 1200 |                | 40 | 30 |
|                        | 1500 |                | 50 | 30 |
|                        | 1800 |                | 60 | 30 |
|                        | 2400 |                | 60 | 40 |
|                        | 3000 |                | 60 | 50 |
| 063 / 150              | 100  | 71<br>80<br>90 | 10 | 10 |
|                        | 150  |                | 10 | 15 |
|                        | 200  |                | 10 | 20 |
|                        | 250  |                | 10 | 25 |
|                        | 300  |                | 10 | 30 |
|                        | 400  |                | 10 | 40 |
|                        | 500  |                | 10 | 50 |
|                        | 600  |                | 20 | 30 |
|                        | 750  |                | 25 | 30 |
|                        | 900  |                | 30 | 30 |
|                        | 1200 |                | 40 | 30 |
|                        | 1500 |                | 50 | 30 |
|                        | 1800 |                | 60 | 30 |
|                        | 2400 |                | 60 | 40 |
|                        | 3000 |                | 60 | 50 |

# Dati tecnici riduttore

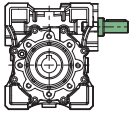
# Gearbox technical data

| $n_1 = 2800 \text{ min}^{-1}$ |       |             |  <b>NG</b> |      |      |      |      |      |      |      |       |
|-------------------------------|-------|-------------|---------------------------------------------------------------------------------------------|------|------|------|------|------|------|------|-------|
| i                             | $n_2$ |             | 030                                                                                         | 040  | 050  | 063  | 075  | 090  | 110  | 130  | 150   |
| 5                             | 560   | $Mm_2$ [Nm] | 10                                                                                          | 26   | 44   | -    | -    | -    | -    | -    | -     |
|                               |       | $Pm_1$ [kW] | 0.66                                                                                        | 1.6  | 2.9  | -    | -    | -    | -    | -    | -     |
|                               |       | Rd          | 0.88                                                                                        | 0.87 | 0.88 | -    | -    | -    | -    | -    | -     |
|                               |       | $Fr_2$ [N]  | 450                                                                                         | 900  | 1200 | -    | -    | -    | -    | -    | -     |
|                               |       | $Fr_1$ [N]  | 90                                                                                          | 170  | 240  | -    | -    | -    | -    | -    | -     |
| 7.5                           | 373.3 | $Mm_2$ [Nm] | 13                                                                                          | 29   | 53   | 95   | 133  | 214  | 399  | 530  | 857   |
|                               |       | $Pm_1$ [kW] | 0.59                                                                                        | 1.2  | 2.3  | 4.1  | 5.8  | 9.2  | 17.1 | 22.7 | 36.4  |
|                               |       | Rd          | 0.85                                                                                        | 0.86 | 0.87 | 0.87 | 0.88 | 0.88 | 0.88 | 0.89 | 0.9   |
|                               |       | $Fr_2$ [N]  | 542                                                                                         | 1044 | 1433 | 1873 | 2210 | 2446 | 3090 | 4042 | 5526  |
|                               |       | $Fr_1$ [N]  | 125                                                                                         | 233  | 324  | 395  | 560  | 715  | 950  | 1190 | 1550  |
| 10                            | 280   | $Mm_2$ [Nm] | 13                                                                                          | 30   | 55   | 99   | 148  | 240  | 446  | 592  | 908   |
|                               |       | $Pm_1$ [kW] | 0.46                                                                                        | 1.0  | 1.8  | 3.3  | 4.9  | 7.9  | 14.5 | 19.3 | 29.0  |
|                               |       | Rd          | 0.83                                                                                        | 0.85 | 0.85 | 0.86 | 0.87 | 0.87 | 0.87 | 0.88 | 0.89  |
|                               |       | $Fr_2$ [N]  | 597                                                                                         | 1149 | 1577 | 2061 | 2433 | 2692 | 3401 | 4449 | 6082  |
|                               |       | $Fr_1$ [N]  | 140                                                                                         | 272  | 378  | 463  | 703  | 900  | 1194 | 1493 | 1848  |
| 15                            | 186.7 | $Mm_2$ [Nm] | 13                                                                                          | 32   | 58   | 105  | 153  | 275  | 499  | 683  | 928   |
|                               |       | $Pm_1$ [kW] | 0.33                                                                                        | 0.7  | 1.3  | 2.3  | 3.5  | 6.1  | 11.1 | 15.0 | 20.2  |
|                               |       | Rd          | 0.8                                                                                         | 0.81 | 0.83 | 0.83 | 0.84 | 0.85 | 0.85 | 0.86 | 0.87  |
|                               |       | $Fr_2$ [N]  | 683                                                                                         | 1315 | 1805 | 2389 | 2785 | 3081 | 3893 | 5092 | 6962  |
|                               |       | $Fr_1$ [N]  | 140                                                                                         | 291  | 399  | 492  | 727  | 1034 | 1337 | 1725 | 1889  |
| 20                            | 140   | $Mm_2$ [Nm] | 12                                                                                          | 30   | 54   | 102  | 163  | 265  | 493  | 673  | 1000  |
|                               |       | $Pm_1$ [kW] | 0.23                                                                                        | 0.5  | 1.0  | 1.7  | 2.9  | 4.5  | 8.3  | 11.2 | 16.3  |
|                               |       | Rd          | 0.75                                                                                        | 0.79 | 0.8  | 0.82 | 0.83 | 0.83 | 0.84 | 0.85 | 0.86  |
|                               |       | $Fr_2$ [N]  | 752                                                                                         | 1447 | 1987 | 2597 | 3065 | 3391 | 4285 | 5605 | 7663  |
|                               |       | $Fr_1$ [N]  | 146                                                                                         | 204  | 417  | 538  | 872  | 1120 | 1485 | 1912 | 2289  |
| 25                            | 112   | $Mm_2$ [Nm] | 16                                                                                          | 29   | 52   | 94   | 153  | 255  | 516  | 683  | 908   |
|                               |       | $Pm_1$ [kW] | 0.27                                                                                        | 0.4  | 0.8  | 1.3  | 2.1  | 3.5  | 7.0  | 9.3  | 12.1  |
|                               |       | Rd          | 0.74                                                                                        | 0.75 | 0.77 | 0.8  | 0.81 | 0.82 | 0.83 | 0.84 | 0.85  |
|                               |       | $Fr_2$ [N]  | 810                                                                                         | 1559 | 2140 | 2797 | 3302 | 3653 | 4616 | 6038 | 8254  |
|                               |       | $Fr_1$ [N]  | 210                                                                                         | 236  | 482  | 593  | 980  | 1270 | 1700 | 2100 | 2494  |
| 30                            | 93.3  | $Mm_2$ [Nm] | 15                                                                                          | 35   | 65   | 122  | 173  | 316  | 563  | 785  | 938   |
|                               |       | $Pm_1$ [kW] | 0.21                                                                                        | 0.4  | 0.8  | 1.5  | 2.1  | 3.8  | 6.6  | 9.2  | 10.5  |
|                               |       | Rd          | 0.7                                                                                         | 0.72 | 0.74 | 0.76 | 0.77 | 0.78 | 0.79 | 0.8  | 0.81  |
|                               |       | $Fr_2$ [N]  | 861                                                                                         | 1657 | 2274 | 2973 | 3509 | 3882 | 4905 | 6416 | 8771  |
|                               |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490  | 700  | 980  | 1270 | 1700 | 2100 | 2800  |
| 40                            | 70    | $Mm_2$ [Nm] | 14                                                                                          | 32   | 60   | 110  | 168  | 281  | 540  | 745  | 1224  |
|                               |       | $Pm_1$ [kW] | 0.16                                                                                        | 0.3  | 0.6  | 1.1  | 1.6  | 2.7  | 4.9  | 6.6  | 10.7  |
|                               |       | Rd          | 0.64                                                                                        | 0.69 | 0.71 | 0.73 | 0.74 | 0.76 | 0.77 | 0.79 | 0.8   |
|                               |       | $Fr_2$ [N]  | 948                                                                                         | 1824 | 2503 | 3272 | 3862 | 4273 | 5399 | 7062 | 9654  |
|                               |       | $Fr_1$ [N]  | 127                                                                                         | 350  | 490  | 700  | 980  | 1270 | 1700 | 2100 | 2800  |
| 50                            | 56    | $Mm_2$ [Nm] | 13                                                                                          | 31   | 54   | 102  | 153  | 270  | 505  | 714  | 1122  |
|                               |       | $Pm_1$ [kW] | 0.12                                                                                        | 0.3  | 0.5  | 0.8  | 1.2  | 2.0  | 3.8  | 5.2  | 8.2   |
|                               |       | Rd          | 0.61                                                                                        | 0.64 | 0.67 | 0.69 | 0.72 | 0.73 | 0.75 | 0.77 | 0.78  |
|                               |       | $Fr_2$ [N]  | 1021                                                                                        | 1964 | 2696 | 3524 | 4160 | 4603 | 5816 | 7607 | 10400 |
|                               |       | $Fr_1$ [N]  | 128                                                                                         | 350  | 490  | 700  | 980  | 1270 | 1700 | 2100 | 2800  |
| 60                            | 46.7  | $Mm_2$ [Nm] | 12                                                                                          | 29   | 51   | 97   | 148  | 250  | 482  | 653  | 1010  |
|                               |       | $Pm_1$ [kW] | 0.10                                                                                        | 0.2  | 0.4  | 0.7  | 1.0  | 1.6  | 3.1  | 4.1  | 6.2   |
|                               |       | Rd          | 0.56                                                                                        | 0.6  | 0.63 | 0.66 | 0.68 | 0.7  | 0.72 | 0.74 | 0.75  |
|                               |       | $Fr_2$ [N]  | 1085                                                                                        | 2087 | 2865 | 3745 | 4421 | 4891 | 6181 | 8084 | 11051 |
|                               |       | $Fr_1$ [N]  | 126                                                                                         | 350  | 490  | 700  | 980  | 1270 | 1700 | 2100 | 2800  |
| 80                            | 35    | $Mm_2$ [Nm] | 11                                                                                          | 26   | 46   | 87   | 133  | 230  | 407  | 602  | 938   |
|                               |       | $Pm_1$ [kW] | 0.08                                                                                        | 0.2  | 0.3  | 0.5  | 0.7  | 1.2  | 2.0  | 3.0  | 4.6   |
|                               |       | Rd          | 0.53                                                                                        | 0.57 | 0.6  | 0.63 | 0.65 | 0.67 | 0.69 | 0.72 | 0.73  |
|                               |       | $Fr_2$ [N]  | 1194                                                                                        | 2298 | 3153 | 4122 | 4865 | 5383 | 6803 | 8897 | 12163 |
|                               |       | $Fr_1$ [N]  | 130                                                                                         | 350  | 490  | 700  | 980  | 1270 | 1700 | 2100 | 2800  |
| 100                           | 28    | $Mm_2$ [Nm] | -                                                                                           | 23   | 41   | 75   | 122  | 204  | 375  | 530  | 826   |
|                               |       | $Pm_1$ [kW] | -                                                                                           | 0.1  | 0.2  | 0.4  | 0.6  | 0.9  | 1.5  | 2.2  | 3.4   |
|                               |       | Rd          | -                                                                                           | 0.54 | 0.57 | 0.59 | 0.61 | 0.63 | 0.65 | 0.69 | 0.7   |
|                               |       | $Fr_2$ [N]  | -                                                                                           | 2475 | 3397 | 4440 | 5241 | 5799 | 7328 | 9584 | 13103 |
|                               |       | $Fr_1$ [N]  | -                                                                                           | 350  | 490  | 700  | 980  | 1270 | 1700 | 2100 | 2800  |



# Dati tecnici riduttore

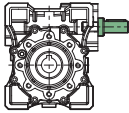
# Gearbox technical data

| $n_1 = 1400 \text{ min}^{-1}$ |       |             |  NG |      |      |      |      |       |      |       |       |
|-------------------------------|-------|-------------|--------------------------------------------------------------------------------------|------|------|------|------|-------|------|-------|-------|
| i                             | $n_2$ |             | 030                                                                                  | 040  | 050  | 063  | 075  | 090   | 110  | 130   | 150   |
| 5                             | 280   | $Mm_2$ [Nm] | 18                                                                                   | 35   | 63   | -    | -    | -     | -    | -     | -     |
|                               |       | $Pm_1$ [kW] | 0.62                                                                                 | 1.1  | 2.0  | -    | -    | -     | -    | -     | -     |
|                               |       | Rd          | 0.86                                                                                 | 0.88 | 0.87 | -    | -    | -     | -    | -     | -     |
|                               |       | $Fr_2$ [N]  | 597                                                                                  | 1149 | 1577 | -    | -    | -     | -    | -     | -     |
|                               |       | $Fr_1$ [N]  | 150                                                                                  | 250  | 350  | -    | -    | -     | -    | -     | -     |
| 7.5                           | 186.7 | $Mm_2$ [Nm] | 18                                                                                   | 41   | 72   | 131  | 189  | 296   | 563  | 765   | 1224  |
|                               |       | $Pm_1$ [kW] | 0.41                                                                                 | 0.9  | 1.6  | 2.9  | 4.2  | 6.5   | 12.3 | 16.6  | 26.3  |
|                               |       | Rd          | 0.84                                                                                 | 0.86 | 0.87 | 0.87 | 0.88 | 0.89  | 0.89 | 0.9   | 0.91  |
|                               |       | $Fr_2$ [N]  | 683                                                                                  | 1315 | 1805 | 2359 | 2785 | 3081  | 3893 | 5092  | 6962  |
|                               |       | $Fr_1$ [N]  | 150                                                                                  | 294  | 401  | 500  | 700  | 900   | 1200 | 1500  | 1950  |
| 10                            | 140   | $Mm_2$ [Nm] | 18                                                                                   | 41   | 73   | 133  | 199  | 316   | 610  | 836   | 1265  |
|                               |       | $Pm_1$ [kW] | 0.31                                                                                 | 0.7  | 1.2  | 2.2  | 3.4  | 5.3   | 10.2 | 13.8  | 20.6  |
|                               |       | Rd          | 0.81                                                                                 | 0.85 | 0.84 | 0.86 | 0.87 | 0.88  | 0.88 | 0.88  | 0.9   |
|                               |       | $Fr_2$ [N]  | 752                                                                                  | 1447 | 1987 | 2597 | 3065 | 3391  | 4285 | 5605  | 7663  |
|                               |       | $Fr_1$ [N]  | 169                                                                                  | 331  | 490  | 615  | 851  | 1082  | 1463 | 1845  | 2267  |
| 15                            | 93.3  | $Mm_2$ [Nm] | 18                                                                                   | 41   | 75   | 143  | 204  | 367   | 669  | 938   | 1275  |
|                               |       | $Pm_1$ [kW] | 0.20                                                                                 | 0.5  | 0.9  | 1.7  | 2.3  | 4.2   | 7.7  | 10.5  | 14.2  |
|                               |       | Rd          | 0.76                                                                                 | 0.81 | 0.8  | 0.82 | 0.84 | 0.85  | 0.85 | 0.86  | 0.88  |
|                               |       | $Fr_2$ [N]  | 861                                                                                  | 1657 | 2274 | 2973 | 3509 | 3882  | 4905 | 6416  | 8771  |
|                               |       | $Fr_1$ [N]  | 169                                                                                  | 331  | 490  | 615  | 851  | 1257  | 1604 | 2070  | 2285  |
| 20                            | 70    | $Mm_2$ [Nm] | 18                                                                                   | 40   | 74   | 138  | 214  | 362   | 657  | 928   | 1326  |
|                               |       | $Pm_1$ [kW] | 0.20                                                                                 | 0.4  | 0.7  | 1.2  | 1.9  | 3.2   | 5.7  | 8.0   | 11.2  |
|                               |       | Rd          | 0.72                                                                                 | 0.77 | 0.77 | 0.8  | 0.81 | 0.83  | 0.84 | 0.85  | 0.86  |
|                               |       | $Fr_2$ [N]  | 948                                                                                  | 1824 | 2503 | 3272 | 3862 | 4273  | 5399 | 7062  | 9654  |
|                               |       | $Fr_1$ [N]  | 190                                                                                  | 350  | 490  | 667  | 980  | 1270  | 1700 | 2100  | 2674  |
| 25                            | 56    | $Mm_2$ [Nm] | 21                                                                                   | 39   | 71   | 133  | 204  | 347   | 693  | 949   | 1224  |
|                               |       | $Pm_1$ [kW] | 0.20                                                                                 | 0.3  | 0.5  | 1.0  | 1.5  | 2.6   | 4.9  | 6.6   | 8.5   |
|                               |       | Rd          | 0.73                                                                                 | 0.74 | 0.74 | 0.77 | 0.79 | 0.81  | 0.83 | 0.83  | 0.84  |
|                               |       | $Fr_2$ [N]  | 1021                                                                                 | 1964 | 2696 | 3524 | 4160 | 4603  | 5816 | 7607  | 10400 |
|                               |       | $Fr_1$ [N]  | 210                                                                                  | 350  | 490  | 700  | 980  | 1270  | 1700 | 2100  | 2800  |
| 30                            | 46.7  | $Mm_2$ [Nm] | 20                                                                                   | 46   | 86   | 163  | 235  | 418   | 740  | 1061  | 1224  |
|                               |       | $Pm_1$ [kW] | 0.20                                                                                 | 0.3  | 0.6  | 1.1  | 1.5  | 2.7   | 4.6  | 6.5   | 7.1   |
|                               |       | Rd          | 0.64                                                                                 | 0.69 | 0.7  | 0.73 | 0.75 | 0.77  | 0.78 | 0.79  | 0.83  |
|                               |       | $Fr_2$ [N]  | 1085                                                                                 | 2087 | 2865 | 3745 | 4421 | 4891  | 6181 | 8084  | 11051 |
|                               |       | $Fr_1$ [N]  | 210                                                                                  | 350  | 490  | 700  | 980  | 1270  | 1700 | 2100  | 2800  |
| 40                            | 35    | $Mm_2$ [Nm] | 18                                                                                   | 42   | 78   | 148  | 224  | 367   | 716  | 1071  | 1581  |
|                               |       | $Pm_1$ [kW] | 0.10                                                                                 | 0.2  | 0.4  | 0.8  | 1.1  | 1.8   | 3.4  | 5.0   | 7.3   |
|                               |       | Rd          | 0.58                                                                                 | 0.64 | 0.65 | 0.69 | 0.71 | 0.74  | 0.77 | 0.77  | 0.78  |
|                               |       | $Fr_2$ [N]  | 1194                                                                                 | 2298 | 3153 | 4122 | 4865 | 5383  | 6803 | 8897  | 12163 |
|                               |       | $Fr_1$ [N]  | 210                                                                                  | 350  | 490  | 700  | 980  | 1270  | 1700 | 2100  | 2800  |
| 50                            | 28    | $Mm_2$ [Nm] | 17                                                                                   | 40   | 74   | 138  | 214  | 347   | 673  | 1000  | 1428  |
|                               |       | $Pm_1$ [kW] | 0.10                                                                                 | 0.2  | 0.3  | 0.6  | 0.9  | 1.4   | 2.7  | 3.9   | 5.4   |
|                               |       | Rd          | 0.54                                                                                 | 0.61 | 0.61 | 0.65 | 0.68 | 0.71  | 0.74 | 0.74  | 0.76  |
|                               |       | $Fr_2$ [N]  | 1286                                                                                 | 2485 | 3397 | 4440 | 5241 | 5799  | 7328 | 9584  | 13103 |
|                               |       | $Fr_1$ [N]  | 210                                                                                  | 350  | 490  | 700  | 980  | 1270  | 1700 | 2100  | 2800  |
| 60                            | 23.3  | $Mm_2$ [Nm] | 16                                                                                   | 37   | 69   | 133  | 204  | 326   | 628  | 918   | 1285  |
|                               |       | $Pm_1$ [kW] | 0.10                                                                                 | 0.2  | 0.3  | 0.5  | 0.8  | 1.1   | 2.1  | 3.1   | 4.3   |
|                               |       | Rd          | 50                                                                                   | 0.57 | 0.57 | 0.61 | 0.64 | 0.668 | 0.71 | 0.71  | 0.73  |
|                               |       | $Fr_2$ [N]  | 1367                                                                                 | 2630 | 3610 | 4719 | 5569 | 6163  | 7787 | 10185 | 13924 |
|                               |       | $Fr_1$ [N]  | 210                                                                                  | 350  | 490  | 700  | 980  | 1270  | 1700 | 2100  | 2800  |
| 80                            | 17.5  | $Mm_2$ [Nm] | 13                                                                                   | 34   | 66   | 124  | 194  | 291   | 525  | 857   | 1173  |
|                               |       | $Pm_1$ [kW] | 0.10                                                                                 | 0.1  | 0.2  | 0.4  | 0.6  | 0.8   | 1.4  | 2.3   | 3.2   |
|                               |       | Rd          | 0.44                                                                                 | 0.51 | 0.51 | 0.56 | 0.59 | 0.62  | 0.66 | 0.67  | 0.68  |
|                               |       | $Fr_2$ [N]  | 1504                                                                                 | 2895 | 3973 | 5193 | 6130 | 6783  | 8571 | 11210 | 15325 |
|                               |       | $Fr_1$ [N]  | 210                                                                                  | 350  | 490  | 700  | 980  | 1270  | 1700 | 2100  | 2800  |
| 100                           | 14    | $Mm_2$ [Nm] | -                                                                                    | 30   | 56   | 120  | 184  | 275   | 493  | 755   | 1020  |
|                               |       | $Pm_1$ [kW] | -                                                                                    | 0.1  | 0.2  | 0.3  | 0.5  | 0.7   | 1.1  | 1.7   | 2.3   |
|                               |       | Rd          | -                                                                                    | 0.47 | 0.49 | 0.5  | 0.54 | 0.58  | 0.62 | 0.63  | 0.64  |
|                               |       | $Fr_2$ [N]  | -                                                                                    | 3118 | 4280 | 5595 | 6603 | 7306  | 9232 | 12076 | 16508 |
|                               |       | $Fr_1$ [N]  | -                                                                                    | 350  | 490  | 700  | 980  | 1270  | 1700 | 2100  | 2800  |



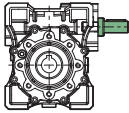
# Dati tecnici riduttore

# Gearbox technical data

| $n_1 = 900 \text{ min}^{-1}$ |       |             |  <b>NG</b> |      |      |      |       |      |       |       |       |
|------------------------------|-------|-------------|---------------------------------------------------------------------------------------------|------|------|------|-------|------|-------|-------|-------|
| i                            | $n_2$ |             | 030                                                                                         | 040  | 050  | 063  | 075   | 090  | 110   | 130   | 150   |
| 5                            | 180   | $Mm_2$ [Nm] | 20                                                                                          | 45   | 77   | -    | -     | -    | -     | -     | -     |
|                              |       | $Pm_1$ [kW] | 0.45                                                                                        | 0.9  | 1.6  | -    | -     | -    | -     | -     | -     |
|                              |       | Rd          | 0.84                                                                                        | 0.84 | 0.84 | -    | -     | -    | -     | -     | -     |
|                              |       | $Fr_2$ [N]  | 692                                                                                         | 1331 | 1827 | -    | -     | -    | -     | -     | -     |
|                              |       | $Fr_1$ [N]  | 175                                                                                         | 290  | 400  | -    | -     | -    | -     | -     | -     |
| 7.5                          | 120   | $Mm_2$ [Nm] | 20                                                                                          | 45   | 86   | 154  | 219   | 347  | 663   | 898   | 1428  |
|                              |       | $Pm_1$ [kW] | 0.31                                                                                        | 0.7  | 1.2  | 2.2  | 3.2   | 5.0  | 9.5   | 12.6  | 20.0  |
|                              |       | Rd          | 0.81                                                                                        | 0.82 | 0.83 | 0.84 | 0.85  | 0.85 | 0.86  | 0.87  | 0.88  |
|                              |       | $Fr_2$ [N]  | 792                                                                                         | 1524 | 2091 | 2734 | 32227 | 3570 | 4511  | 5901  | 8067  |
|                              |       | $Fr_1$ [N]  | 175                                                                                         | 319  | 448  | 580  | 810   | 1040 | 1390  | 1740  | 2270  |
| 10                           | 90    | $Mm_2$ [Nm] | 20                                                                                          | 45   | 86   | 156  | 235   | 377  | 727   | 979   | 1510  |
|                              |       | $Pm_1$ [kW] | 0.24                                                                                        | 0.5  | 1.0  | 1.7  | 2.7   | 4.2  | 7.9   | 10.6  | 16.0  |
|                              |       | Rd          | 0.79                                                                                        | 0.8  | 0.81 | 0.82 | 0.83  | 0.84 | 0.85  | 0.86  | 0.87  |
|                              |       | $Fr_2$ [N]  | 871                                                                                         | 1677 | 2302 | 3009 | 3551  | 3929 | 4956  | 6494  | 8878  |
|                              |       | $Fr_1$ [N]  | 197                                                                                         | 350  | 490  | 661  | 975   | 1270 | 1700  | 2100  | 2700  |
| 15                           | 60    | $Mm_2$ [Nm] | 20                                                                                          | 46   | 86   | 158  | 240   | 428  | 774   | 1081  | 1479  |
|                              |       | $Pm_1$ [kW] | 0.17                                                                                        | 0.4  | 0.7  | 1.2  | 1.8   | 3.3  | 5.8   | 8.0   | 10.7  |
|                              |       | Rd          | 0.74                                                                                        | 0.75 | 0.77 | 0.78 | 0.8   | 0.81 | 0.82  | 0.83  | 0.84  |
|                              |       | $Fr_2$ [N]  | 997                                                                                         | 1920 | 2635 | 3444 | 4065  | 4498 | 5684  | 7434  | 10163 |
|                              |       | $Fr_1$ [N]  | 197                                                                                         | 350  | 490  | 670  | 980   | 1270 | 1700  | 2100  | 2645  |
| 20                           | 45    | $Mm_2$ [Nm] | 20                                                                                          | 45   | 79   | 151  | 240   | 398  | 740   | 1061  | 1530  |
|                              |       | $Pm_1$ [kW] | 0.13                                                                                        | 0.3  | 0.5  | 0.9  | 1.4   | 2.3  | 4.2   | 6.0   | 8.5   |
|                              |       | Rd          | 0.68                                                                                        | 0.73 | 0.74 | 0.77 | 0.77  | 0.78 | 0.8   | 0.81  | 0.82  |
|                              |       | $Fr_2$ [N]  | 1098                                                                                        | 2113 | 2900 | 3791 | 4474  | 4951 | 6256  | 8182  | 11186 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490  | 700  | 980   | 1270 | 1700  | 2100  | 2800  |
| 25                           | 36    | $Mm_2$ [Nm] | 23                                                                                          | 44   | 77   | 140  | 219   | 377  | 774   | 1071  | 1408  |
|                              |       | $Pm_1$ [kW] | 0.14                                                                                        | 0.2  | 0.4  | 0.7  | 1.1   | 1.8  | 3.6   | 5.0   | 6.3   |
|                              |       | Rd          | 0.66                                                                                        | 0.68 | 0.7  | 0.73 | 0.75  | 0.76 | 0.78  | 0.8   | 0.81  |
|                              |       | $Fr_2$ [N]  | 1183                                                                                        | 2276 | 3124 | 4084 | 4820  | 5333 | 6739  | 8814  | 12050 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490  | 700  | 980   | 1270 | 1700  | 2100  | 2800  |
| 30                           | 30    | $Mm_2$ [Nm] | 21                                                                                          | 50   | 92   | 179  | 265   | 469  | 857   | 1193  | 1428  |
|                              |       | $Pm_1$ [kW] | 0.11                                                                                        | 0.2  | 0.4  | 0.8  | 1.2   | 1.9  | 3.6   | 4.9   | 5.5   |
|                              |       | Rd          | 0.62                                                                                        | 0.64 | 0.66 | 0.69 | 0.7   | 0.72 | 0.73  | 0.74  | 0.75  |
|                              |       | $Fr_2$ [N]  | 1257                                                                                        | 2419 | 3320 | 4339 | 5122  | 5667 | 7161  | 9366  | 12805 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490  | 700  | 980   | 1270 | 1700  | 2100  | 2800  |
| 40                           | 22.5  | $Mm_2$ [Nm] | 20                                                                                          | 46   | 84   | 163  | 245   | 418  | 810   | 1122  | 1836  |
|                              |       | $Pm_1$ [kW] | 0.09                                                                                        | 0.2  | 0.3  | 0.6  | 0.9   | 1.4  | 2.6   | 3.6   | 5.7   |
|                              |       | Rd          | 0.54                                                                                        | 0.6  | 0.62 | 0.65 | 0.66  | 0.68 | 0.7   | 0.71  | 0.72  |
|                              |       | $Fr_2$ [N]  | 1383                                                                                        | 2662 | 3654 | 4776 | 5637  | 6238 | 7882  | 10309 | 14094 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490  | 700  | 980   | 1270 | 1700  | 2100  | 2800  |
| 50                           | 18    | $Mm_2$ [Nm] | 18                                                                                          | 43   | 79   | 148  | 224   | 398  | 763   | 1071  | 1632  |
|                              |       | $Pm_1$ [kW] | 0.07                                                                                        | 0.1  | 0.3  | 0.5  | 0.7   | 1.1  | 2.0   | 2.9   | 4.2   |
|                              |       | Rd          | 0.51                                                                                        | 0.54 | 0.58 | 0.6  | 0.63  | 0.65 | 0.67  | 0.68  | 0.69  |
|                              |       | $Fr_2$ [N]  | 1490                                                                                        | 2868 | 3936 | 5145 | 6073  | 6719 | 8491  | 11105 | 15182 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490  | 700  | 980   | 1270 | 1700  | 2100  | 2800  |
| 60                           | 15    | $Mm_2$ [Nm] | 17                                                                                          | 40   | 73   | 141  | 214   | 357  | 696   | 959   | 1469  |
|                              |       | $Pm_1$ [kW] | 0.06                                                                                        | 0.1  | 0.2  | 0.4  | 0.6   | 0.9  | 1.6   | 2.1   | 3.3   |
|                              |       | Rd          | 0.47                                                                                        | 0.5  | 0.53 | 0.56 | 0.58  | 0.61 | 0.63  | 0.66  | 0.67  |
|                              |       | $Fr_2$ [N]  | 583                                                                                         | 3047 | 4183 | 5467 | 6453  | 7140 | 9023  | 11801 | 16133 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490  | 700  | 980   | 1270 | 1700  | 2100  | 2800  |
| 80                           | 11.3  | $Mm_2$ [Nm] | 15                                                                                          | 36   | 69   | 131  | 204   | 321  | 578   | 877   | 1326  |
|                              |       | $Pm_1$ [kW] | 0.04                                                                                        | 0.1  | 0.2  | 0.3  | 0.4   | 0.6  | 1.1   | 1.6   | 2.3   |
|                              |       | Rd          | 0.43                                                                                        | 0.47 | 0.5  | 0.53 | 0.55  | 0.58 | 0.6   | 0.63  | 0.64  |
|                              |       | $Fr_2$ [N]  | 1743                                                                                        | 3354 | 4604 | 6018 | 7103  | 7859 | 9931  | 12989 | 17757 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490  | 700  | 980   | 1270 | 1700  | 2100  | 2800  |
| 100                          | 9     | $Mm_2$ [Nm] | -                                                                                           | 33   | 57   | 126  | 194   | 286  | 525   | 796   | 1173  |
|                              |       | $Pm_1$ [kW] | -                                                                                           | 0.1  | 0.1  | 0.3  | 0.4   | 0.5  | 0.8   | 1.2   | 1.8   |
|                              |       | Rd          | -                                                                                           | 0.44 | 0.46 | 0.49 | 0.51  | 0.53 | 0.56  | 0.59  | 0.6   |
|                              |       | $Fr_2$ [N]  | -                                                                                           | 3490 | 4840 | 6270 | 7380  | 8180 | 10320 | 13500 | 18000 |
|                              |       | $Fr_1$ [N]  | -                                                                                           | 350  | 490  | 700  | 980   | 1270 | 1700  | 2100  | 2800  |

# Dati tecnici riduttore

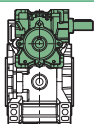
# Gearbox technical data

| $n_1 = 500 \text{ min}^{-1}$ |       |             |  <b>NG</b> |      |       |      |      |      |       |       |       |
|------------------------------|-------|-------------|---------------------------------------------------------------------------------------------|------|-------|------|------|------|-------|-------|-------|
| i                            | $n_2$ |             | 030                                                                                         | 040  | 050   | 063  | 075  | 090  | 110   | 130   | 150   |
| 5                            | 100   | $Mm_2$ [Nm] | 20                                                                                          | 45   | 77    | -    | -    | -    | -     | -     | -     |
|                              |       | $Pm_1$ [kW] | 0.24                                                                                        | 0.5  | 0.9   | -    | -    | -    | -     | -     | -     |
|                              |       | Rd          | 0.82                                                                                        | 0.82 | 0.83  | -    | -    | -    | -     | -     | -     |
|                              |       | $Fr_2$ [N]  | 692                                                                                         | 1331 | 1827  | -    | -    | -    | -     | -     | -     |
|                              |       | $Fr_1$ [N]  | 175                                                                                         | 290  | 400   | -    | -    | -    | -     | -     | -     |
| 7.5                          | 66.7  | $Mm_2$ [Nm] | 24                                                                                          | 55   | 105   | 188  | 265  | 418  | 810   | 1102  | 1734  |
|                              |       | $Pm_1$ [kW] | 0.21                                                                                        | 0.5  | 0.9   | 1.5  | 2.2  | 3.4  | 6.5   | 8.9   | 13.8  |
|                              |       | Rd          | 0.79                                                                                        | 0.8  | 0.81  | 0.82 | 0.83 | 0.83 | 0.84  | 0.85  | 0.86  |
|                              |       | $Fr_2$ [N]  | 963                                                                                         | 1853 | 2544  | 3325 | 3925 | 4343 | 5488  | 7178  | 9812  |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490   | 700  | 980  | 1270 | 1700  | 2100  | 2800  |
| 10                           | 50    | $Mm_2$ [Nm] | 24                                                                                          | 55   | 105   | 189  | 275  | 444  | 868   | 1183  | 1816  |
|                              |       | $Pm_1$ [kW] | 0.16                                                                                        | 0.4  | 0.7   | 1.2  | 1.7  | 2.8  | 5.3   | 7.2   | 10.9  |
|                              |       | Rd          | 0.76                                                                                        | 0.78 | 0.8   | 0.8  | 0.81 | 0.82 | 0.83  | 0.83  | 0.84  |
|                              |       | $Fr_2$ [N]  | 1060                                                                                        | 2040 | 2800  | 3660 | 4320 | 4780 | 6040  | 7900  | 10800 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490   | 700  | 980  | 1270 | 1700  | 2100  | 2800  |
| 15                           | 33    | $Mm_2$ [Nm] | 24                                                                                          | 56   | 105   | 191  | 286  | 500  | 927   | 1326  | 1765  |
|                              |       | $Pm_1$ [kW] | 0.12                                                                                        | 0.3  | 0.5   | 0.9  | 1.3  | 2.1  | 4.0   | 5.6   | 7.3   |
|                              |       | Rd          | 0.71                                                                                        | 0.72 | 0.74  | 0.75 | 0.77 | 0.78 | 0.79  | 0.8   | 0.81  |
|                              |       | $Fr_2$ [N]  | 1213                                                                                        | 2335 | 32005 | 4190 | 4945 | 5472 | 6914  | 9043  | 12363 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490   | 700  | 980  | 1270 | 1700  | 2100  | 2800  |
| 20                           | 752   | $Mm_2$ [Nm] | 23                                                                                          | 53   | 95    | 182  | 291  | 479  | 880   | 1255  | 1856  |
|                              |       | $Pm_1$ [kW] | 0.09                                                                                        | 0.2  | 0.3   | 0.6  | 1.0  | 1.6  | 2.9   | 4.1   | 5.9   |
|                              |       | Rd          | 0.65                                                                                        | 0.69 | 0.71  | 0.73 | 0.74 | 0.75 | 0.77  | 0.78  | 0.79  |
|                              |       | $Fr_2$ [N]  | 1336                                                                                        | 2570 | 3528  | 4611 | 5443 | 6022 | 7610  | 9953  | 13607 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490   | 700  | 980  | 1270 | 1700  | 2100  | 2800  |
| 25                           | 20    | $Mm_2$ [Nm] | 30                                                                                          | 50   | 93    | 167  | 291  | 449  | 927   | 1224  | 1663  |
|                              |       | $Pm_1$ [kW] | 0.10                                                                                        | 0.2  | 0.3   | 0.5  | 1.0  | 1.2  | 2.4   | 3.3   | 4.4   |
|                              |       | Rd          | 0.61                                                                                        | 0.64 | 0.67  | 0.7  | 0.71 | 0.73 | 0.75  | 0.77  | 0.78  |
|                              |       | $Fr_2$ [N]  | 1439                                                                                        | 2769 | 3800  | 4967 | 5443 | 6487 | 8198  | 10722 | 14658 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490   | 700  | 980  | 1270 | 1700  | 2100  | 2800  |
| 30                           | 16.7  | $Mm_2$ [Nm] | 27                                                                                          | 59   | 110   | 204  | 306  | 561  | 1020  | 1428  | 1703  |
|                              |       | $Pm_1$ [kW] | 0.08                                                                                        | 0.2  | 0.3   | 0.5  | 0.8  | 1.4  | 2.4   | 3.5   | 3.8   |
|                              |       | Rd          | 0.58                                                                                        | 0.6  | 0.62  | 0.64 | 0.66 | 0.67 | 0.69  | 0.71  | 0.72  |
|                              |       | $Fr_2$ [N]  | 1529                                                                                        | 2942 | 4038  | 5279 | 6231 | 6894 | 8711  | 11394 | 15576 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490   | 700  | 980  | 1270 | 1700  | 2100  | 2800  |
| 40                           | 12.5  | $Mm_2$ [Nm] | 23                                                                                          | 54   | 100   | 189  | 286  | 490  | 951   | 1326  | 2162  |
|                              |       | $Pm_1$ [kW] | 0.06                                                                                        | 0.1  | 0.2   | 0.4  | 0.6  | 1.0  | 1.7   | 2.4   | 3.5   |
|                              |       | Rd          | 0.5                                                                                         | 0.56 | 0.58  | 0.61 | 0.62 | 0.64 | 0.66  | 0.68  | 0.69  |
|                              |       | $Fr_2$ [N]  | 1683                                                                                        | 3238 | 4445  | 5810 | 6858 | 7588 | 9588  | 12540 | 17144 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490   | 700  | 980  | 1270 | 1700  | 2100  | 2800  |
| 50                           | 10    | $Mm_2$ [Nm] | 21                                                                                          | 50   | 93    | 176  | 255  | 459  | 898   | 1244  | 1907  |
|                              |       | $Pm_1$ [kW] | 0.05                                                                                        | 0.1  | 0.2   | 0.3  | 0.4  | 0.8  | 1.4   | 1.9   | 2.9   |
|                              |       | Rd          | 0.47                                                                                        | 0.5  | 0.53  | 0.55 | 0.58 | 0.61 | 0.63  | 0.65  | 0.66  |
|                              |       | $Fr_2$ [N]  | 1813                                                                                        | 3488 | 4788  | 6259 | 7380 | 8174 | 10320 | 13500 | 18000 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490   | 700  | 980  | 1270 | 1700  | 2100  | 2800  |
| 60                           | 8.3   | $Mm_2$ [Nm] | 19                                                                                          | 47   | 85    | 163  | 245  | 408  | 797   | 1091  | 1714  |
|                              |       | $Pm_1$ [kW] | 0.04                                                                                        | 0.1  | 0.1   | 0.3  | 0.4  | 0.6  | 1.1   | 1.5   | 2.3   |
|                              |       | Rd          | 0.43                                                                                        | 0.45 | 0.49  | 0.51 | 0.54 | 0.56 | 0.58  | 0.62  | 0.63  |
|                              |       | $Fr_2$ [N]  | 1830                                                                                        | 3490 | 4840  | 6270 | 7380 | 8180 | 10320 | 13500 | 18000 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490   | 700  | 980  | 1270 | 1700  | 2100  | 2800  |
| 80                           | 6.3   | $Mm_2$ [Nm] | 17                                                                                          | 41   | 77    | 140  | 219  | 372  | 675   | 989   | 1561  |
|                              |       | $Pm_1$ [kW] | 0.03                                                                                        | 0.1  | 0.1   | 0.2  | 0.3  | 0.5  | 0.8   | 1.1   | 1.7   |
|                              |       | Rd          | 0.39                                                                                        | 0.43 | 0.45  | 0.49 | 0.51 | 0.53 | 0.55  | 0.58  | 0.59  |
|                              |       | $Fr_2$ [N]  | 1830                                                                                        | 3490 | 4840  | 3270 | 7380 | 8180 | 10320 | 13500 | 18000 |
|                              |       | $Fr_1$ [N]  | 210                                                                                         | 350  | 490   | 700  | 980  | 1270 | 1700  | 2100  | 2800  |
| 100                          | 5     | $Mm_2$ [Nm] | -                                                                                           | 37   | 66    | 131  | 214  | 337  | 611   | 877   | 1377  |
|                              |       | $Pm_1$ [kW] | -                                                                                           | 0.1  | 0.1   | 0.2  | 0.2  | 0.4  | 0.6   | 0.8   | 1.3   |
|                              |       | Rd          | -                                                                                           | 0.4  | 0.42  | 0.44 | 0.46 | 0.48 | 0.51  | 0.54  | 0.55  |
|                              |       | $Fr_2$ [N]  | -                                                                                           | 3490 | 4840  | 6270 | 7380 | 8180 | 10320 | 13500 | 18000 |
|                              |       | $Fr_1$ [N]  | -                                                                                           | 350  | 490   | 700  | 980  | 1270 | 1700  | 2100  | 2800  |

# Dati tecnici riduttori combinati

# Combination gearbox technical data

$n_1 = 2800 \text{ min}^{-1}$



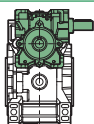
NGD

| i   | n <sub>2</sub> |                      | 030/040 | 030/050 | 030/063 | 040/075                   | 040/090 | 050/110 | 063/130                   | 063/150 |
|-----|----------------|----------------------|---------|---------|---------|---------------------------|---------|---------|---------------------------|---------|
| 100 | 28             | Mm <sub>2</sub> [Nm] | 72      | 105     | 105     | a richiesta<br>on request |         |         |                           |         |
|     |                | Pm <sub>1</sub> [kW] | 0.32    | 0.45    | 0.45    |                           |         |         |                           |         |
|     |                | Fr <sub>2</sub> [N]  | 2769    | 3800    | 4967    |                           |         |         |                           |         |
|     |                | Fr <sub>1</sub> [N]  | 140     | 140     | 140     |                           |         |         |                           |         |
| 150 | 18.7           | Mm <sub>2</sub> [Nm] | 73      | 138     | 147     | a richiesta<br>on request |         |         |                           |         |
|     |                | Pm <sub>1</sub> [kW] | 0.22    | 0.43    | 0.45    |                           |         |         |                           |         |
|     |                | Fr <sub>2</sub> [N]  | 3169    | 4350    | 5686    |                           |         |         |                           |         |
|     |                | Fr <sub>1</sub> [N]  | 140     | 140     | 140     |                           |         |         |                           |         |
| 200 | 14             | Mm <sub>2</sub> [Nm] | 66      | 122     | 186     | 343                       | 497     | 849     | a richiesta<br>on request |         |
|     |                | Pm <sub>1</sub> [kW] | 0.16    | 0.31    | 0.45    | 0.66                      | 0.95    | 1.82    |                           |         |
|     |                | Fr <sub>2</sub> [N]  | 3488    | 4788    | 6259    | 5904                      | 6540    | 10320   |                           |         |
|     |                | Fr <sub>1</sub> [N]  | 140     | 140     | 140     | 350                       | 350     | 378     |                           |         |
| 250 | 11.2           | Mm <sub>2</sub> [Nm] | 62      | 112     | 222     | 310                       | 459     | 1033    | 1561                      | 1901    |
|     |                | Pm <sub>1</sub> [kW] | 0.13    | 0.23    | 0.45    | 0.54                      | 0.72    | 1.82    | 2.74                      | 3.34    |
|     |                | Fr <sub>2</sub> [N]  | 3490    | 4840    | 6270    | 6640                      | 7360    | 10320   | 13500                     | 18000   |
|     |                | Fr <sub>1</sub> [N]  | 140     | 140     | 140     | 350                       | 350     | 378     | 471                       | 471     |
| 300 | 9.3            | Mm <sub>2</sub> [Nm] | 74      | 148     | 260     | 322                       | 510     | 1107    | 1795                      | 1712    |
|     |                | Pm <sub>1</sub> [kW] | 0.14    | 0.28    | 0.52    | 0.63                      | 0.94    | 1.82    | 2.90                      | 2.50    |
|     |                | Fr <sub>2</sub> [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |                | Fr <sub>1</sub> [N]  | 140     | 140     | 125     | 350                       | 350     | 378     | 471                       | 516     |
| 400 | 7              | Mm <sub>2</sub> [Nm] | 66      | 126     | 260     | 298                       | 510     | 1209    | 1683                      | 2676    |
|     |                | Pm <sub>1</sub> [kW] | 0.10    | 0.20    | 0.40    | 0.46                      | 0.75    | 1.53    | 21.32                     | 3.34    |
|     |                | Fr <sub>2</sub> [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |                | Fr <sub>1</sub> [N]  | 140     | 140     | 140     | 350                       | 350     | 378     | 471                       | 471     |
| 500 | 5.6            | Mm <sub>2</sub> [Nm] | 62      | 122     | 241     | 264                       | 468     | 1014    | 1581                      | 2377    |
|     |                | Pm <sub>1</sub> [kW] | 0.07    | 0.16    | 337.62  | 0.35                      | 0.58    | 0.96    | 1.68                      | 2.53    |
|     |                | Fr <sub>2</sub> [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |                | Fr <sub>1</sub> [N]  | 146     | 140     | 140     | 350                       | 350     | 417     | 471                       | 471     |
| 600 | 4.7            | Mm <sub>2</sub> [Nm] | 74      | 148     | 224     | 322                       | 510     | 1086    | 1795                      | 2723    |
|     |                | Pm <sub>1</sub> [kW] | 0.08    | 0.15    | 0.22    | 0.35                      | 0.52    | 0.96    | 1.52                      | 2.32    |
|     |                | Fr <sub>2</sub> [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |                | Fr <sub>1</sub> [N]  | 146     | 146     | 146     | 350                       | 350     | 417     | 556                       | 516     |
| 750 | 3.7            | Mm <sub>2</sub> [Nm] | 74      | 148     | 276     | 322                       | 468     | 1046    | 1795                      | 2377    |
|     |                | Pm <sub>1</sub> [kW] | 0.06    | 0.13    | 0.23    | 0.32                      | 0.42    | 0.75    | 1.24                      | 1.72    |
|     |                | Fr <sub>2</sub> [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |                | Fr <sub>1</sub> [N]  | 210     | 210     | 210     | 350                       | 350     | 482     | 613                       | 516     |

# Dati tecnici riduttori combinati

# Combination gearbox technical data

$n_1 = 2800 \text{ min}^{-1}$



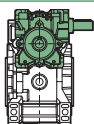
NGD

| i    | $n_2$ |             | 030/040 | 030/050                   | 030/063 | 040/075 | 040/090 | 050/110 | 063/130 | 063/150                   |
|------|-------|-------------|---------|---------------------------|---------|---------|---------|---------|---------|---------------------------|
| 900  | 3.1   | $Mm_2$ [Nm] | 74      | 148                       | 276     | 322     | 422     | 1290    | 1795    | 2142                      |
|      |       | $Pm_1$ [kW] | 0.06    | 0.11                      | 0.20    | 0.29    | 0.35    | 0.82    | 1.09    | 1.21                      |
|      |       | $Fr_2$ [N]  | 3490    | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210     | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 1200 | 2.3   | $Mm_2$ [Nm] | 74      | 148                       | 261     | 316     | 510     | 1210    | 1795    | 2723                      |
|      |       | $Pm_1$ [kW] | 0.05    | 0.09                      | 0.15    | 0.22    | 0.34    | 0.59    | 0.85    | 1.28                      |
|      |       | $Fr_2$ [N]  | 3490    | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 127     | 127                       | 127     | 350     | 350     | 490     | 700     | 700                       |
| 1500 | 1.9   | $Mm_2$ [Nm] | 74      | 148                       | 243     | 342     | 468     | 1086    | 1795    | a richiesta<br>on request |
|      |       | $Pm_1$ [kW] | 0.04    | 0.07                      | 0.12    | 0.21    | 0.27    | 0.45    | 0.71    |                           |
|      |       | $Fr_2$ [N]  | 3490    | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   |                           |
|      |       | $Fr_1$ [N]  | 128     | 128                       | 128     | 350     | 350     | 490     | 700     |                           |
| 1800 | 1.6   | $Mm_2$ [Nm] | 74      | 148                       | 224     | 342     | 422     | 1025    | 1795    | 2142                      |
|      |       | $Pm_1$ [kW] | 0.03    | 0.07                      | 0.10    | 0.19    | 0.21    | 0.37    | 0.62    | 0.69                      |
|      |       | $Fr_2$ [N]  | 3490    | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 126     | 126                       | 126     | 350     | 350     | 490     | 700     | 700                       |
| 2400 | 1.2   | $Mm_2$ [Nm] | 66      | 126                       | 260     | 316     | 510     | 1209    | 1683    | 2662                      |
|      |       | $Pm_1$ [kW] | 0.03    | 0.05                      | 0.09    | 0.14    | 0.20    | 0.34    | 0.46    | 0.71                      |
|      |       | $Fr_2$ [N]  | 3490    | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 126     | 126                       | 126     | 350     | 350     | 490     | 700     | 700                       |
| 3000 | 0.9   | $Mm_2$ [Nm] | -1      | 122                       | 241     | 288     | 468     | 1122    | 1581    | 2377                      |
|      |       | $Pm_1$ [kW] | 0.00    | 0.04                      | 0.08    | 0.11    | 0.16    | 0.27    | 0.36    | 0.54                      |
|      |       | $Fr_2$ [N]  | 0       | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 0       | 126                       | 126     | 350     | 350     | 490     | 700     | 700                       |
| 3200 | 0.9   | $Mm_2$ [Nm] | 61      | a richiesta<br>on request |         |         |         |         |         |                           |
|      |       | $Pm_1$ [kW] | 0.02    |                           |         |         |         |         |         |                           |
|      |       | $Fr_2$ [N]  | 3490    |                           |         |         |         |         |         |                           |
|      |       | $Fr_1$ [N]  | 126     |                           |         |         |         |         |         |                           |
| 4000 | 0.7   | $Mm_2$ [Nm] | 49      | 84                        | 241     | 224     | 385     | 1122    | 1581    | 2377                      |
|      |       | $Pm_1$ [kW] | 0.01    | 0.02                      | 0.06    | 0.07    | 0.11    | 0.21    | 0.29    | 0.44                      |
|      |       | $Fr_2$ [N]  | 3490    | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 128     | 128                       | 130     | 350     | 350     | 490     | 700     | 700                       |
| 5000 | 0.6   | $Mm_2$ [Nm] | 44      | 81                        | 153     | 206     | 343     | 1122    | 1581    | 2377                      |
|      |       | $Pm_1$ [kW] | 0.01    | 0.02                      | 0.04    | 0.05    | 0.08    | 0.18    | 0.26    | 0.38                      |
|      |       | $Fr_2$ [N]  | 3490    | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 128     | 128                       | 128     | 350     | 350     | 490     | 700     | 700                       |

# Dati tecnici riduttori combinati

# Combination gearbox technical data

$n_1 = 1400 \text{ min}^{-1}$



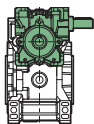
NGD

| i   | $n_2$ |             | 030/040 | 030/050 | 030/063 | 040/075                   | 040/090 | 050/110 | 063/130                   | 063/150 |
|-----|-------|-------------|---------|---------|---------|---------------------------|---------|---------|---------------------------|---------|
| 100 | 14    | $Mm_2$ [Nm] | 72      | 140     | 153     | a richiesta<br>on request |         |         |                           |         |
|     |       | $Pm_1$ [kW] | 0.16    | 0.32    | 0.35    |                           |         |         |                           |         |
|     |       | $Fr_2$ [N]  | 2769    | 3800    | 4967    |                           |         |         |                           |         |
|     |       | $Fr_1$ [N]  | 169     | 169     | 169     |                           |         |         |                           |         |
| 150 | 9.3   | $Mm_2$ [Nm] | 73      | 138     | 215     | a richiesta<br>on request |         |         |                           |         |
|     |       | $Pm_1$ [kW] | 0.12    | 0.22    | 0.35    |                           |         |         |                           |         |
|     |       | $Fr_2$ [N]  | 3169    | 4350    | 5686    |                           |         |         |                           |         |
|     |       | $Fr_1$ [N]  | 169     | 169     | 169     |                           |         |         |                           |         |
| 200 | 7     | $Mm_2$ [Nm] | 66      | 122     | 258     | 428                       | 620     | 1162    | a richiesta<br>on request |         |
|     |       | $Pm_1$ [kW] | 0.08    | 0.15    | 0.33    | 0.51                      | 0.71    | 1.28    |                           |         |
|     |       | $Fr_2$ [N]  | 3488    | 4788    | 6259    | 5904                      | 6540    | 10320   |                           |         |
|     |       | $Fr_1$ [N]  | 169     | 169     | 169     | 350                       | 350     | 490     |                           |         |
| 250 | 5.6   | $Mm_2$ [Nm] | 62      | 112     | 236     | 388                       | 575     | 1196    | 1561                      | 2091    |
|     |       | $Pm_1$ [kW] | 0.07    | 0.12    | 0.24    | 0.41                      | 0.55    | 1.07    | 1.40                      | 1.88    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 6640                      | 7360    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 169     | 169     | 169     | 350                       | 350     | 490     | 595                       | 595     |
| 300 | 4.7   | $Mm_2$ [Nm] | 74      | 148     | 260     | 398                       | 622     | 1290    | 1795                      | 2358    |
|     |       | $Pm_1$ [kW] | 0.07    | 0.14    | 0.27    | 0.39                      | 0.57    | 1.08    | 1.48                      | 1.79    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 169     | 150     | 350                       | 350     | 490     | 595                       | 660     |
| 400 | 3.5   | $Mm_2$ [Nm] | 66      | 126     | 260     | 367                       | 622     | 1209    | 1683                      | 2723    |
|     |       | $Pm_1$ [kW] | 0.06    | 0.10    | 0.20    | 0.29                      | 0.46    | 0.79    | 1.09                      | 1.73    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 169     | 169     | 350                       | 350     | 490     | 595                       | 595     |
| 500 | 2.8   | $Mm_2$ [Nm] | 62      | 122     | 241     | 326                       | 571     | 1196    | 1581                      | 2377    |
|     |       | $Pm_1$ [kW] | 0.04    | 0.08    | 0.16    | 0.21                      | 0.36    | 0.58    | 0.86                      | 1.30    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 169     | 169320  | 350                       | 350     | 490     | 595                       | 595     |
| 600 | 2.3   | $Mm_2$ [Nm] | 74      | 148     | 276     | 398                       | 622     | 1290    | 1795                      | 2723    |
|     |       | $Pm_1$ [kW] | 0.05    | 0.08    | 0.15    | 0.21                      | 0.32    | 0.59    | 0.79                      | 1.20    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 180     | 180     | 350                       | 350     | 490     | 700                       | 660     |
| 750 | 1.9   | $Mm_2$ [Nm] | 74      | 148     | 276     | 398                       | 571     | 1290    | 1795                      | 2377    |
|     |       | $Pm_1$ [kW] | 0.04    | 0.07    | 0.13    | 0.19                      | 0.26    | 0.49    | 0.65                      | 0.89    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     | 350                       | 350     | 490     | 700                       | 660     |

# Dati tecnici riduttori combinati

# Combination gearbox technical data

$n_1 = 1400 \text{ min}^{-1}$



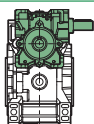
NGD

| i    | $n_2$ |             | 030/040                   | 030/050                   | 030/063 | 040/075 | 040/090 | 050/110 | 063/130 | 063/150                   |
|------|-------|-------------|---------------------------|---------------------------|---------|---------|---------|---------|---------|---------------------------|
| 900  | 1.6   | $Mm_2$ [Nm] | 74                        | 148                       | 276     | 398     | 515     | 1290    | 1795    | 2142                      |
|      |       | $Pm_1$ [kW] | 0.04                      | 0.06                      | 0.11    | 0.17    | 0.21    | 0.43    | 0.57    | 0.63                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 1200 | 1.2   | $Mm_2$ [Nm] | 66                        | 148                       | 276     | 367     | 622     | 1290    | 1795    | 2723                      |
|      |       | $Pm_1$ [kW] | 0.03                      | 0.05                      | 0.09    | 0.13    | 0.20    | 0.35    | 0.46    | 0.67                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 1500 | 0.9   | $Mm_2$ [Nm] | 74                        | 148                       | 276     | 398     | 571     | 1290    | 1795    | a richiesta<br>on request |
|      |       | $Pm_1$ [kW] | 0.03                      | 0.04                      | 0.08    | 0.12    | 0.16    | 0.30    | 0.39    |                           |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   |                           |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     |                           |
| 1800 | 0.8   | $Mm_2$ [Nm] | 74                        | 148                       | 276     | 398     | 515     | 1290    | 1795    | 2142                      |
|      |       | $Pm_1$ [kW] | 0.02                      | 0.04                      | 0.07    | 0.11    | 0.13    | 0.27    | 0.34    | 0.38                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 2400 | 0.6   | $Mm_2$ [Nm] | 66                        | 126                       | 260     | 367     | 622     | 1209    | 1683    | 2723                      |
|      |       | $Pm_1$ [kW] | 0.02                      | 0.03                      | 0.05    | 0.08    | 0.12    | 0.19    | 0.26    | 0.40                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 3000 | 0.5   | $Mm_2$ [Nm] | a richiesta<br>on request | 122                       | 241     | 326     | 571     | 1122    | 1581    | 2377                      |
|      |       | $Pm_1$ [kW] |                           | 0.02                      | 0.04    | 0.06    | 0.10    | 0.14    | 0.19    | 0.30                      |
|      |       | $Fr_2$ [N]  |                           | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  |                           | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 3200 | 0.5   | $Mm_2$ [Nm] | 61                        | a richiesta<br>on request |         |         |         |         |         |                           |
|      |       | $Pm_1$ [kW] | 0.01                      |                           |         |         |         |         |         |                           |
|      |       | $Fr_2$ [N]  | 3490                      |                           |         |         |         |         |         |                           |
|      |       | $Fr_1$ [N]  | 210                       |                           |         |         |         |         |         |                           |
| 4000 | 0.4   | $Mm_2$ [Nm] | 49                        | 84                        | 241     | 255     | 469     | 1122    | 1581    | 2377                      |
|      |       | $Pm_1$ [kW] | 0.01                      | 0.01                      | 0.04    | 0.04    | 0.07    | 0.12    | 0.16    | 0.24                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 5000 | 0.3   | $Mm_2$ [Nm] | 44                        | 81                        | 153     | 235     | 418     | 1122    | 1581    | 2377                      |
|      |       | $Pm_1$ [kW] | 0.01                      | 0.01                      | 0.02    | 0.03    | 0.05    | 0.10    | 0.14    | 0.21                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |

# Dati tecnici riduttori combinati

# Combination gearbox technical data

**$n_1 = 900 \text{ min}^{-1}$**



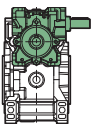
**NGD**

| i   | $n_2$ |             | 030/040 | 030/050 | 030/063 | 040/075                   | 040/090 | 050/110 | 063/130                   | 063/150 |
|-----|-------|-------------|---------|---------|---------|---------------------------|---------|---------|---------------------------|---------|
| 100 | 9     | $Mm_2$ [Nm] | 72      | 140     | 169     | a richiesta<br>on request |         |         |                           |         |
|     |       | $Pm_1$ [kW] | 0.11    | 0.20    | 0.24    |                           |         |         |                           |         |
|     |       | $Fr_2$ [N]  | 2769    | 3800    | 4967    |                           |         |         |                           |         |
|     |       | $Fr_1$ [N]  | 197     | 197     | 197     |                           |         |         |                           |         |
| 150 | 6     | $Mm_2$ [Nm] | 73      | 138     | 238     | a richiesta<br>on request |         |         |                           |         |
|     |       | $Pm_1$ [kW] | 0.08    | 0.14    | 0.24    |                           |         |         |                           |         |
|     |       | $Fr_2$ [N]  | 3169    | 4350    | 5686    |                           |         |         |                           |         |
|     |       | $Fr_1$ [N]  | 197     | 197     | 197     |                           |         |         |                           |         |
| 200 | 4.5   | $Mm_2$ [Nm] | 66      | 122     | 258     | 428                       | 620     | 1162    | a richiesta<br>on request |         |
|     |       | $Pm_1$ [kW] | 0.05    | 0.10    | 0.21    | 0.34                      | 0.47    | 0.84    |                           |         |
|     |       | $Fr_2$ [N]  | 3488    | 4788    | 6259    | 5904                      | 6540    | 10320   |                           |         |
|     |       | $Fr_1$ [N]  | 197     | 197     | 197     | 350                       | 350     | 490     |                           |         |
| 250 | 3.6   | $Mm_2$ [Nm] | 62      | 112     | 236     | 388                       | 575     | 1196    | 1561                      | 2091    |
|     |       | $Pm_1$ [kW] | 0.04    | 0.08    | 0.16    | 0.27                      | 0.36    | 0.70    | 0.92                      | 1.23    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 6640                      | 7360    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 197     | 197     | 197     | 350                       | 350     | 490     | 661                       | 661     |
| 300 | 3     | $Mm_2$ [Nm] | 74      | 148     | 260     | 458                       | 703     | 1290    | 1795                      | 2387    |
|     |       | $Pm_1$ [kW] | 0.05    | 0.09    | 0.17    | 0.29                      | 0.42    | 0.71    | 0.98                      | 1.18    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 197     | 197     | 175     | 350                       | 350     | 490     | 661                       | 700     |
| 400 | 2.3   | $Mm_2$ [Nm] | 66      | 126     | 260     | 422                       | 703     | 1209    | 1683                      | 2723    |
|     |       | $Pm_1$ [kW] | 0.04    | 0.07    | 0.13    | 0.21                      | 0.34    | 0.52    | 0.71                      | 1.14    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 197     | 197     | 197     | 350                       | 350     | 490     | 661                       | 661     |
| 500 | 1.8   | $Mm_2$ [Nm] | 62      | 122     | 241     | 375                       | 646     | 1196    | 1581                      | 2377    |
|     |       | $Pm_1$ [kW] | 0.02    | 0.06    | 0.11    | 0.16                      | 0.26    | 0.39    | 0.56                      | 0.85    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 197     | 197     | 350                       | 350     | 490     | 661                       | 661     |
| 600 | 1.5   | $Mm_2$ [Nm] | 74      | 148     | 276     | 458                       | 703     | 1290    | 1795                      | 2723    |
|     |       | $Pm_1$ [kW] | 0.03    | 0.05    | 0.10    | 0.16                      | 0.23    | 0.40    | 0.53                      | 0.79    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     | 350                       | 350     | 490     | 700                       | 700     |
| 750 | 1.2   | $Mm_2$ [Nm] | 74      | 148     | 276     | 458                       | 646     | 1290    | 1795                      | 2377    |
|     |       | $Pm_1$ [kW] | 0.02    | 0.05    | 0.09    | 0.14                      | 0.18    | 0.33    | 0.44                      | 0.59    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     | 350                       | 350     | 490     | 700                       | 700     |



# Dati tecnici riduttori combinati

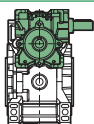
# Combination gearbox technical data

| $n_1 = 900 \text{ min}^{-1}$ |       |             | <br>NGD |                           |         |         |         |         |         |                           |
|------------------------------|-------|-------------|------------------------------------------------------------------------------------------|---------------------------|---------|---------|---------|---------|---------|---------------------------|
| i                            | $n_2$ |             | 030/040                                                                                  | 030/050                   | 030/063 | 040/075 | 040/090 | 050/110 | 063/130 | 063/150                   |
| 900                          | 1     | $Mm_2$ [Nm] | 74                                                                                       | 148                       | 276     | 458     | 582     | 1290    | 1795    | 2142                      |
|                              |       | $Pm_1$ [kW] | 0.02                                                                                     | 0.04                      | 0.08    | 0.13    | 0.15    | 0.30    | 0.39    | 0.43                      |
|                              |       | $Fr_2$ [N]  | 3490                                                                                     | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|                              |       | $Fr_1$ [N]  | 210                                                                                      | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 1200                         | 0.8   | $Mm_2$ [Nm] | 74                                                                                       | 148                       | 276     | 422     | 703     | 1290    | 1795    | 2723                      |
|                              |       | $Pm_1$ [kW] | 0.02                                                                                     | 0.03                      | 0.06    | 0.10    | 0.15    | 0.23    | 0.32    | 0.46                      |
|                              |       | $Fr_2$ [N]  | 3490                                                                                     | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|                              |       | $Fr_1$ [N]  | 210                                                                                      | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 1500                         | 0.6   | $Mm_2$ [Nm] | 74                                                                                       | 148                       | 276     | 458     | 646     | 1290    | 1795    | a richiesta<br>on request |
|                              |       | $Pm_1$ [kW] | 0.01                                                                                     | 0.03                      | 0.05    | 0.09    | 0.12    | 0.20    | 0.27    |                           |
|                              |       | $Fr_2$ [N]  | 3490                                                                                     | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   |                           |
|                              |       | $Fr_1$ [N]  | 210                                                                                      | 210                       | 210     | 350     | 350     | 490     | 700     |                           |
| 1800                         | 0.5   | $Mm_2$ [Nm] | 74                                                                                       | 148                       | 276     | 458     | 582     | 1290    | 1795    | 2142                      |
|                              |       | $Pm_1$ [kW] | 0.01                                                                                     | 0.03                      | 0.05    | 0.08    | 0.09    | 0.18    | 0.23    | 0.27                      |
|                              |       | $Fr_2$ [N]  | 3490                                                                                     | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|                              |       | $Fr_1$ [N]  | 210                                                                                      | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 2400                         | 0.4   | $Mm_2$ [Nm] | 66                                                                                       | 126                       | 260     | 422     | 703     | 1209    | 1683    | 2723                      |
|                              |       | $Pm_1$ [kW] | 0.01                                                                                     | 0.02                      | 0.04    | 0.06    | 0.09    | 0.13    | 0.17    | 0.28                      |
|                              |       | $Fr_2$ [N]  | 3490                                                                                     | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|                              |       | $Fr_1$ [N]  | 210                                                                                      | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 3000                         | 0.3   | $Mm_2$ [Nm] | a richiesta<br>on request                                                                | 122                       | 241     | 375     | 646     | 1122    | 1581    | 2377                      |
|                              |       | $Pm_1$ [kW] |                                                                                          | 0.02                      | 0.03    | 0.04    | 0.07    | 0.10    | 0.13    | 0.20                      |
|                              |       | $Fr_2$ [N]  |                                                                                          | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|                              |       | $Fr_1$ [N]  |                                                                                          | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 3200                         | 0.3   | $Mm_2$ [Nm] | 61                                                                                       | a richiesta<br>on request |         |         |         |         |         |                           |
|                              |       | $Pm_1$ [kW] | 0.01                                                                                     |                           |         |         |         |         |         |                           |
|                              |       | $Fr_2$ [N]  | 3490                                                                                     |                           |         |         |         |         |         |                           |
|                              |       | $Fr_1$ [N]  | 210                                                                                      |                           |         |         |         |         |         |                           |
| 4000                         | 0.2   | $Mm_2$ [Nm] | 49                                                                                       | 84                        | 241     | 294     | 530     | 1122    | 1581    | 2377                      |
|                              |       | $Pm_1$ [kW] | 0.01                                                                                     | 0.01                      | 0.03    | 0.03    | 0.05    | 0.08    | 0.11    | 0.17                      |
|                              |       | $Fr_2$ [N]  | 3490                                                                                     | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|                              |       | $Fr_1$ [N]  | 210                                                                                      | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 5000                         | 0.2   | $Mm_2$ [Nm] | 44                                                                                       | 81                        | 153     | 270     | 472     | 1122    | 1581    | 2377                      |
|                              |       | $Pm_1$ [kW] | 0.01                                                                                     | 0.01                      | 0.01    | 0.02    | 0.04    | 0.07    | 0.10    | 0.15                      |
|                              |       | $Fr_2$ [N]  | 3490                                                                                     | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|                              |       | $Fr_1$ [N]  | 210                                                                                      | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |

# Dati tecnici riduttori combinati

# Combination gearbox technical data

$n_1 = 500 \text{ min}^{-1}$



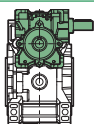
NGD

| i   | $n_2$ |             | 030/040 | 030/050 | 030/063 | 040/075                   | 040/090 | 050/110 | 063/130                   | 063/150 |
|-----|-------|-------------|---------|---------|---------|---------------------------|---------|---------|---------------------------|---------|
| 100 | 5     | $Mm_2$ [Nm] | 72      | 140     | 202     | a richiesta<br>on request |         |         |                           |         |
|     |       | $Pm_1$ [kW] | 0.06    | 0.12    | 0.17    |                           |         |         |                           |         |
|     |       | $Fr_2$ [N]  | 2769    | 3800    | 4967    |                           |         |         |                           |         |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     |                           |         |         |                           |         |
| 150 | 3.3   | $Mm_2$ [Nm] | 73      | 138     | 265     | a richiesta<br>on request |         |         |                           |         |
|     |       | $Pm_1$ [kW] | 0.04    | 0.06    | 0.16    |                           |         |         |                           |         |
|     |       | $Fr_2$ [N]  | 3169    | 4350    | 5686    |                           |         |         |                           |         |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     |                           |         |         |                           |         |
| 200 | 2.5   | $Mm_2$ [Nm] | 66      | 122     | 258     | 428                       | 620     | 1162    | a richiesta<br>on request |         |
|     |       | $Pm_1$ [kW] | 0.03    | 0.06    | 0.12    | 0.18                      | 0.28    | 0.48    |                           |         |
|     |       | $Fr_2$ [N]  | 3488    | 4788    | 6259    | 5904                      | 6540    | 10320   |                           |         |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     | 350                       | 350     | 490     |                           |         |
| 250 | 2     | $Mm_2$ [Nm] | 62      | 112     | 236     | 388                       | 575     | 1196    | 1561                      | 2091    |
|     |       | $Pm_1$ [kW] | 0.03    | 0.05    | 0.09    | 0.18                      | 0.20    | 0.41    | 0.53                      | 0.71    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 6640                      | 7360    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     | 350                       | 350     | 490     | 700                       | 700     |
| 300 | 1.7   | $Mm_2$ [Nm] | 74      | 148     | 260     | 458                       | 703     | 1290    | 1795                      | 2387    |
|     |       | $Pm_1$ [kW] | 0.03    | 0.05    | 0.08    | 0.16                      | 0.23    | 0.41    | 0.56                      | 0.69    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     | 350                       | 350     | 490     | 700                       | 700     |
| 400 | 1.3   | $Mm_2$ [Nm] | 66      | 126     | 260     | 422                       | 703     | 1209    | 1683                      | 2723    |
|     |       | $Pm_1$ [kW] | 0.02    | 0.04    | 0.08    | 0.13                      | 0.17    | 0.30    | 0.42                      | 0.66    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     | 350                       | 350     | 490     | 700                       | 700     |
| 500 | 1     | $Mm_2$ [Nm] | 62      | 122     | 241     | 375                       | 646     | 1196    | 1581                      | 2377    |
|     |       | $Pm_1$ [kW] | 0.01    | 0.03    | 0.06    | 0.09                      | 0.13    | 0.20    | 0.30                      | 0.43    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     | 350                       | 350     | 490     | 700                       | 700     |
| 600 | 0.8   | $Mm_2$ [Nm] | 74      | 148     | 276     | 458                       | 703     | 1290    | 1795                      | 2723    |
|     |       | $Pm_1$ [kW] | 0.01    | 0.02    | 0.06    | 0.09                      | 0.12    | 0.21    | 0.28                      | 0.39    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     | 350                       | 350     | 490     | 700                       | 700     |
| 750 | 0.7   | $Mm_2$ [Nm] | 74      | 148     | 276     | 458                       | 646     | 1290    | 1795                      | 2377    |
|     |       | $Pm_1$ [kW] | 0.01    | 0.02    | 0.05    | 0.08                      | 0.10    | 0.17    | 0.22                      | 0.31    |
|     |       | $Fr_2$ [N]  | 3490    | 4840    | 6270    | 7380                      | 8180    | 10320   | 13500                     | 18000   |
|     |       | $Fr_1$ [N]  | 210     | 210     | 210     | 350                       | 350     | 490     | 700                       | 700     |

# Dati tecnici riduttori combinati

# Combination gearbox technical data

$n_1 = 500 \text{ min}^{-1}$

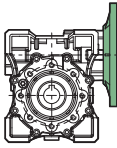
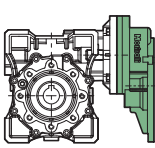
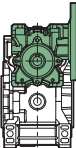


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| i    | $n_2$ |             | 030/040                   | 030/050                   | 030/063 | 040/075 | 040/090 | 050/110 | 063/130 | 063/150                   |
|------|-------|-------------|---------------------------|---------------------------|---------|---------|---------|---------|---------|---------------------------|
| 900  | 0.56  | $Mm_2$ [Nm] | 74                        | 148                       | 276     | 458     | 582     | 1290    | 1795    | 2142                      |
|      |       | $Pm_1$ [kW] | 0.01                      | 0.02                      | 0.04    | 0.07    | 0.08    | 0.16    | 0.20    | 0.24                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 3350    | 490     | 700     | 700                       |
| 1200 | 0.42  | $Mm_2$ [Nm] | 74                        | 148                       | 276     | 422     | 703     | 1290    | 1795    | 2723                      |
|      |       | $Pm_1$ [kW] | 0.01                      | 0.02                      | 0.04    | 0.06    | 0.08    | 0.13    | 0.16    | 0.24                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 1500 | 0.33  | $Mm_2$ [Nm] | 74                        | 148                       | 276     | 458     | 646     | 1290    | 1795    | a richiesta<br>on request |
|      |       | $Pm_1$ [kW] | 0.01                      | 0.02                      | 0.03    | 0.05    | 0.07    | 0.12    | 0.14    |                           |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   |                           |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     |                           |
| 1800 | 0.28  | $Mm_2$ [Nm] | 74                        | 148                       | 276     | 458     | 582     | 1290    | 1795    | 2142                      |
|      |       | $Pm_1$ [kW] | 0.01                      | 0.02                      | 0.03    | 0.05    | 0.05    | 0.10    | 0.12    | 0.14                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 2400 | 0.21  | $Mm_2$ [Nm] | 66                        | 126                       | 260     | 422     | 703     | 1209    | 1683    | 2723                      |
|      |       | $Pm_1$ [kW] | 0.01                      | 0.02                      | 0.02    | 0.03    | 0.05    | 0.07    | 0.09    | 0.15                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 3000 | 0.17  | $Mm_2$ [Nm] | a richiesta<br>on request | 122                       | 241     | 375     | 646     | 1122    | 1581    | 2377                      |
|      |       | $Pm_1$ [kW] |                           | 0.01                      | 0.02    | 0.02    | 0.04    | 0.06    | 0.07    | 0.12                      |
|      |       | $Fr_2$ [N]  |                           | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  |                           | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 3200 | 0.16  | $Mm_2$ [Nm] | 61                        | a richiesta<br>on request |         |         |         |         |         |                           |
|      |       | $Pm_1$ [kW] | 0.01                      |                           |         |         |         |         |         |                           |
|      |       | $Fr_2$ [N]  | 3490                      |                           |         |         |         |         |         |                           |
|      |       | $Fr_1$ [N]  | 210                       |                           |         |         |         |         |         |                           |
| 4000 | 0.12  | $Mm_2$ [Nm] | 49                        | 84                        | 241     | 294     | 530     | 1122    | 1581    | 2377                      |
|      |       | $Pm_1$ [kW] | 0.01                      | 0.01                      | 0.01    | 0.02    | 0.03    | 0.05    | 0.06    | 0.09                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |
| 5000 | 0.10  | $Mm_2$ [Nm] | 44                        | 81                        | 153     | 270     | 472     | 1122    | 1581    | 2377                      |
|      |       | $Pm_1$ [kW] | 0.01                      | 0.01                      | 0.01    | 0.01    | 0.02    | 0.04    | 0.06    | 0.08                      |
|      |       | $Fr_2$ [N]  | 3490                      | 4840                      | 6270    | 7380    | 8180    | 10320   | 13500   | 18000                     |
|      |       | $Fr_1$ [N]  | 210                       | 210                       | 210     | 350     | 350     | 490     | 700     | 700                       |

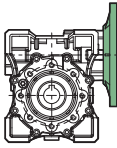
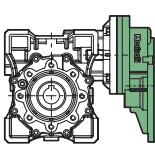
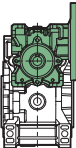
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$<br>[kW]                                   | $n_2$<br>[min <sup>-1</sup> ] | $i$  | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|--------------------------------------------------|-------------------------------|------|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>0.06</b>                                      |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>56A4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>280</b>                    | 5    | 1.8            | 6.2  | 439           | <b>NMG025</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>187</b>                    | 7.5  | 2.7            | 4.2  | 503           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>140</b>                    | 10   | 3.5            | 3.5  | 553           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>93</b>                     | 15   | 5              | 2.5  | 633           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 20   | 6.2            | 2    | 697           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 30   | 8.4            | 1.6  | 798           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 40   | 10             | 1.3  | 878           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 50   | 12             | 0.9  | 946           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60   | 14             | 0.7  | 1006          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>280</b>                    | 5    | 1.8            | 10.1 | 597           | <b>NMG030</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>187</b>                    | 7.5  | 2.7            | 6.9  | 683           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>140</b>                    | 10   | 3.5            | 5.4  | 752           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>93</b>                     | 15   | 4.8            | 3.8  | 861           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 20   | 6.1            | 3    | 948           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 25   | 7.1            | 3    | 1021          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 30   | 8.2            | 2.5  | 1085          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 40   | 9.9            | 1.9  | 1194          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 50   | 11             | 1.5  | 1286          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60   | 13             | 1.3  | 1367          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 80   | 14             | 0.9  | 1504          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 50   | 13             | 3.3  | 2475          | <b>NMG040</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60   | 14             | 2.6  | 2630          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 80   | 17             | 1.9  | 2895          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100  | 20             | 1.5  | 3118          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100  | 26             | 1.3  | 1620          |                                                                                     |                                                                                     | <b>NMGD025/030</b>                                                                  |
|                                                  | <b>9.3</b>                    | 150  | 33             | 0.9  | 1830          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 42             | 0.7  | 1830          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 45             | 0.8  | 1830          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 60             | 1.2  | 3490          |                                                                                     |                                                                                     | <b>NMGD025/040</b>                                                                  |
|                                                  | <b>3.5</b>                    | 400  | 72             | 0.9  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 84             | 0.7  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 103            | 0.6  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 118            | 0.5  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 146            | 0.5  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 174            | 0.4  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 201            | 0.3  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 221            | 0.3  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 273            | 0.2  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.5</b>                    | 3000 | 330            | 0.2  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.4</b>                    | 4000 | 300            | 0.1  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.3</b>                    | 5000 | 363            | 0.1  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100  | 27             | 2.7  | 2769          |                                                                                     |                                                                                     | <b>NMGD030/040</b>                                                                  |
|                                                  | <b>9.3</b>                    | 150  | 38             | 1.9  | 3169          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 48             | 1.4  | 3488          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 56             | 1.1  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 58             | 1.3  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 71             | 0.9  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 98             | 0.6  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 106            | 0.7  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 123            | 0.6  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 142            | 0.5  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 169            | 0.4  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 200            | 0.4  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 222            | 0.3  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 266            | 0.2  | 3490          |                                                                                     |                                                                                     |                                                                                     |

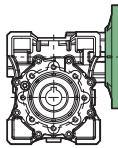
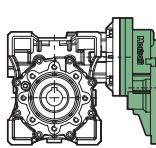
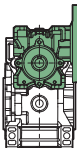
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## Gearmotors technical data

| $Pn_1$<br>[kW]                                   | $n_2$<br>[min <sup>-1</sup> ] | $i$  | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|--------------------------------------------------|-------------------------------|------|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>0.06</b>                                      |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>56A4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>0.4</b>                    | 3200 | 306            | 0.2  | 3490          |                                                                                     |                                                                                     | <b>NMGD030/040</b>                                                                  |
|                                                  | <b>0.4</b>                    | 4000 | 285            | 0.1  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.3</b>                    | 5000 | 345            | 0.1  | 3490          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 48             | 2.6  | 4788          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 56             | 2    | 4840          |                                                                                     |                                                                                     | <b>NMGD030/050</b>                                                                  |
|                                                  | <b>4.7</b>                    | 300  | 62             | 2.4  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 74             | 1.7  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 87             | 1.4  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 111            | 1.3  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 130            | 1.1  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 144            | 1    | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 172            | 0.7  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 203            | 0.7  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 226            | 0.7  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 271            | 0.5  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.5</b>                    | 3000 | 313            | 0.4  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.4</b>                    | 4000 | 294            | 0.3  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.3</b>                    | 4800 | 317            | 0.3  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 78             | 3.4  | 6270          |                                                                                     |                                                                                     | <b>NMGD030/063</b>                                                                  |
|                                                  | <b>2.8</b>                    | 500  | 90             | 2.7  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 113            | 2.4  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 132            | 2.1  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 151            | 1.8  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 184            | 1.5  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 208            | 1.1  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 230            | 0.9  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 282            | 0.8  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.5</b>                    | 3000 | 325            | 0.7  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.4</b>                    | 4000 | 312            | 0.6  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.3</b>                    | 5000 | 367            | 0.4  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 104            | 1.3  | 3800          |                                                                                     |                                                                                     | <b>NMGD040/050</b>                                                                  |
|                                                  | <b>1.6</b>                    | 900  | 162            | 0.9  | 4350          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 241            | 1.1  | 6270          |                                                                                     |                                                                                     | <b>NMGD040/063</b>                                                                  |
|                                                  | <b>0.8</b>                    | 1800 | 270            | 1    | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 332            | 0.8  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 253            | 1.8  | 7380          |                                                                                     |                                                                                     | <b>NMGD040/075</b>                                                                  |
|                                                  | <b>0.8</b>                    | 1800 | 284            | 1.6  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 337            | 1.1  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.5</b>                    | 3000 | 385            | 0.8  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.4</b>                    | 4000 | 362            | 0.7  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.3</b>                    | 5000 | 427            | 0.5  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 264            | 2.7  | 8180          |                                                                                     |                                                                                     | <b>NMGD040/090</b>                                                                  |
|                                                  | <b>0.8</b>                    | 1800 | 297            | 2.4  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 366            | 1.7  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.5</b>                    | 3000 | 414            | 1.4  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.4</b>                    | 4000 | 372            | 1.3  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.3</b>                    | 5000 | 440            | 1    | 8180          |                                                                                     |                                                                                     |                                                                                     |
| <b>56B6</b><br>( $n_1 = 900 \text{ min}^{-1}$ )  | <b>180</b>                    | 5    | 2.8            | 4.8  | 509           | <b>NMG025</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>120</b>                    | 7.5  | 4.1            | 3.2  | 583           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>90</b>                     | 10   | 5.3            | 2.7  | 641           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>60</b>                     | 15   | 7.5            | 1.9  | 734           |                                                                                     |                                                                                     |                                                                                     |

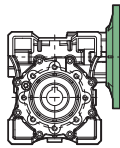
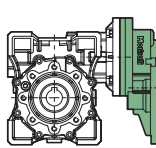
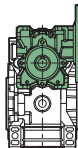
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$                                 | $n_2$                                  | $i$ | $Mn_2$ | $fs$ | $Fr_2$ |  |  |  |  |
|----------------------------------------|----------------------------------------|-----|--------|------|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
| [kW]                                   | [min <sup>-1</sup> ]                   |     | [Nm]   |      | [N]    |                                                                                     |                                                                                     |                                                                                     |  |
| 0.06                                   |                                        |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
| 56B6<br>( $n_1=900\text{ min}^{-1}$ )  | 45                                     | 20  | 9.5    | 1.4  | 808    | NMG025                                                                              |                                                                                     |                                                                                     |  |
|                                        | 30                                     | 30  | 12     | 1.2  | 925    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 23                                     | 40  | 15     | 0.9  | 1018   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 18                                     | 50  | 18     | 0.7  | 1096   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 15                                     | 60  | 18     | 0.9  | 1583   | NMG030                                                                              |                                                                                     |                                                                                     |  |
|                                        | 18                                     | 50  | 18     | 2.3  | 2868   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 15                                     | 60  | 21     | 1.9  | 3047   | NMG040                                                                              |                                                                                     |                                                                                     |  |
|                                        | 11                                     | 80  | 24     | 1.4  | 3354   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 9                                      | 100 | 28     | 1.2  | 3490   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        |                                        |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
|                                        |                                        |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
|                                        |                                        |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
|                                        |                                        |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
|                                        |                                        |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
|                                        |                                        |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
| 0.09                                   |                                        |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
| 56A2<br>( $n_1=2800\text{ min}^{-1}$ ) | 373                                    | 7.5 | 2      | 3.9  | 399    | NMG025                                                                              |                                                                                     |                                                                                     |  |
|                                        | 280                                    | 10  | 2.7    | 3.4  | 439    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 187                                    | 15  | 3.9    | 2.4  | 503    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 140                                    | 20  | 5      | 1.8  | 553    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 112                                    | 25  | 6      | 1.5  | 590    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 93                                     | 30  | 6.8    | 1.3  | 633    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 70                                     | 40  | 8.7    | 1.1  | 697    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 56                                     | 50  | 10     | 0.9  | 751    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 47                                     | 60  | 11     | 0.7  | 798    | NMG030                                                                              |                                                                                     |                                                                                     |  |
|                                        | 373                                    | 7.5 | 2      | 6.5  | 542    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 280                                    | 10  | 2.7    | 5    | 597    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 187                                    | 15  | 3.8    | 3.5  | 683    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 140                                    | 20  | 4.8    | 2.5  | 752    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 112                                    | 25  | 5.6    | 2.9  | 810    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 93                                     | 30  | 6.5    | 2.3  | 861    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 70                                     | 40  | 8.2    | 1.8  | 948    |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 56                                     | 50  | 9.6    | 1.4  | 1021   | NMG040                                                                              |                                                                                     |                                                                                     |  |
|                                        | 47                                     | 60  | 10     | 1.1  | 1085   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 35                                     | 80  | 13     | 0.9  | 1194   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 56                                     | 50  | 11     | 2.8  | 1964   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 47                                     | 60  | 12     | 2.3  | 2087   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 35                                     | 80  | 15     | 1.7  | 2298   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 28                                     | 100 | 17     | 1.4  | 2475   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 28                                     | 100 | 18     | 1.6  | 1286   |                                                                                     |                                                                                     | NMGD025/030                                                                         |  |
|                                        | 19                                     | 150 | 26     | 1.1  | 1472   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 14                                     | 200 | 32     | 0.9  | 1620   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        |                                        |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 28                                     | 100 | 40     | 1.8  | 2769   |                                                                                     |                                                                                     | NMGD025/040                                                                         |  |
|                                        | 19                                     | 150 | 55     | 1.2  | 3488   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 9                                      | 300 | 44     | 1.6  | 3490   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 14                                     | 200 | 71     | 0.9  | 3488   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 7                                      | 400 | 53     | 1.2  | 3490   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 11                                     | 250 | 85     | 0.7  | 3490   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 6                                      | 500 | 72     | 0.8  | 3490   |                                                                                     |                                                                                     |                                                                                     |  |
|                                        |                                        |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
|                                        | 56B4<br>( $n_1=1400\text{ min}^{-1}$ ) | 280 | 5      | 2.8  | 4.1    | 439                                                                                 | NMG025                                                                              |                                                                                     |  |
|                                        |                                        | 187 | 7.5    | 4    | 2.8    | 503                                                                                 |                                                                                     |                                                                                     |  |
|                                        |                                        | 140 | 10     | 5.2  | 2.4    | 553                                                                                 |                                                                                     |                                                                                     |  |
|                                        |                                        | 93  | 15     | 7.4  | 1.6    | 633                                                                                 |                                                                                     |                                                                                     |  |
|                                        |                                        | 70  | 20     | 9.4  | 1.3    | 697                                                                                 |                                                                                     |                                                                                     |  |
|                                        |                                        | 47  | 30     | 12   | 1.1    | 798                                                                                 |                                                                                     |                                                                                     |  |
|                                        |                                        | 35  | 40     | 15   | 0.9    | 878                                                                                 |                                                                                     |                                                                                     |  |
|                                        |                                        |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |

## Dati tecnici motoriduttore

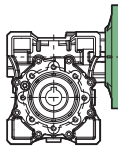
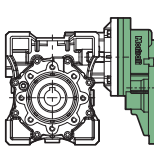
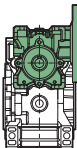
## Gearmotors technical data

| $Pn_1$                                 | $n_2$                | i    | $Mn_2$ | fs  | $Fr_2$ |  |  |  |             |
|----------------------------------------|----------------------|------|--------|-----|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------|
| [kW]                                   | [min <sup>-1</sup> ] |      | [Nm]   |     | [N]    |                                                                                    |                                                                                     |                                                                                     |             |
| 0.09                                   |                      |      |        |     |        |                                                                                    |                                                                                     |                                                                                     |             |
| 56B4<br>( $n_1=1400\text{ min}^{-1}$ ) | 280                  | 5    | 2.8    | 6.7 | 597    | NMG030                                                                             |                                                                                     |                                                                                     |             |
|                                        | 187                  | 7.5  | 4      | 4.6 | 683    |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 140                  | 10   | 5.1    | 3.6 | 752    |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 93                   | 15   | 7.2    | 2.5 | 861    |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 70                   | 20   | 9.2    | 2   | 948    |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 56                   | 25   | 10     | 2   | 1021   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 47                   | 30   | 12     | 1.7 | 1085   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 35                   | 40   | 14     | 1.2 | 1194   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 28                   | 50   | 17     | 1   | 1286   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 23                   | 60   | 19     | 0.9 | 1367   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 28                   | 50   | 19     | 2   | 2475   | NMG040                                                                             |                                                                                     |                                                                                     |             |
|                                        | 23                   | 60   | 21     | 1.7 | 2630   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 18                   | 80   | 27     | 1.3 | 2895   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 14                   | 100  | 30     | 1   | 3118   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 14                   | 100  | 39     | 0.8 | 1620   |                                                                                    |                                                                                     |                                                                                     | NMGD025/030 |
|                                        | 9.3                  | 150  | 50     | 0.6 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 7                    | 200  | 63     | 0.5 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 5.6                  | 250  | 67     | 0.5 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 4.7                  | 300  | 77     | 0.4 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 3.5                  | 400  | 109    | 0.3 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 2.8                  | 500  | 117    | 0.3 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 2.3                  | 600  | 138    | 0.2 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 1.9                  | 750  | 154    | 0.2 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 1.6                  | 900  | 182    | 0.2 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 1.2                  | 1200 | 216    | 0.1 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 0.9                  | 1500 | 252    | 0.1 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 0.8                  | 1800 | 310    | 0.1 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 0.6                  | 2400 | 347    | 0.1 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 0.5                  | 3000 | 413    | 0.1 | 1830   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 14                   | 100  | 40     | 1.8 | 2769   | NMGD030/040                                                                        |                                                                                     |                                                                                     |             |
|                                        | 9.3                  | 150  | 57     | 1.3 | 3169   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 7                    | 200  | 71     | 0.9 | 3488   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 5.6                  | 250  | 85     | 0.7 | 3490   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 4.7                  | 300  | 90     | 0.8 | 3490   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 14                   | 100  | 41     | 3.4 | 3800   | NMGD030/050                                                                        |                                                                                     |                                                                                     |             |
|                                        | 9.3                  | 150  | 57     | 2.4 | 4350   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 7                    | 200  | 71     | 1.7 | 4788   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 5.6                  | 250  | 85     | 1.3 | 4840   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 4.7                  | 300  | 94     | 1.6 | 4840   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 3.5                  | 400  | 109    | 1.2 | 4840   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 2.8                  | 500  | 125    | 1   | 4840   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 2.3                  | 600  | 162    | 0.9 | 4840   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 1.9                  | 750  | 189    | 0.8 | 4840   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 1.6                  | 900  | 216    | 0.7 | 4840   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 5.6                  | 250  | 87     | 2.7 | 6270   | NMGD030/063                                                                        |                                                                                     |                                                                                     |             |
|                                        | 4.7                  | 300  | 90     | 2.9 | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 3.5                  | 400  | 116    | 2.2 | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 2.8                  | 500  | 135    | 1.8 | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 2.3                  | 600  | 169    | 1.6 | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 1.9                  | 750  | 198    | 1.4 | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 1.6                  | 900  | 204    | 1   | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 1.2                  | 1200 | 268    | 0.9 | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 0.9                  | 1500 | 311    | 0.7 | 6270   |                                                                                    |                                                                                     |                                                                                     |             |



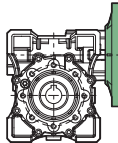
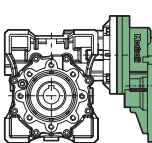
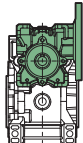
## Dati tecnici motoriduttore

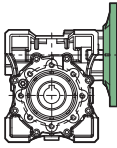
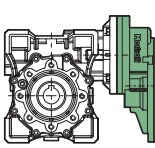
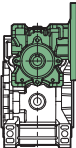
## Gearmotors technical data

| $Pn_1$<br>[kW]                         | $n_2$<br>[min <sup>-1</sup> ] | $i$   | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |        |
|----------------------------------------|-------------------------------|-------|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|
| 0.09                                   |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |        |
| 56B4<br>( $n_1=1400\text{ min}^{-1}$ ) | 2.8                           | 500   | 156            | 0.9  | 3800          |                                                                                     |                                                                                     | NMGD040/050                                                                         |        |
|                                        | 0.9                           | 1500  | 361            | 0.8  | 6270          |                                                                                     |                                                                                     | NMGD040/063                                                                         |        |
|                                        | 0.9                           | 1500  | 367            | 1.1  | 7380          |                                                                                     |                                                                                     | NMGD040/075                                                                         |        |
|                                        | 0.8                           | 1800  | 412            | 1    | 7380          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 0.6                           | 2400  | 506            | 0.7  | 7380          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 0.5                           | 3000  | 621            | 0.9  | 8180          |                                                                                     |                                                                                     | NMGD040/090                                                                         |        |
| 0.4                                    | 4000                          | 559   | 0.8            | 8180 |               |                                                                                     |                                                                                     |                                                                                     |        |
| 63A6<br>( $n_1=900\text{ min}^{-1}$ )  | 180                           | 5     | 4.2            | 4.9  | 692           | NMG030                                                                              |                                                                                     |                                                                                     |        |
|                                        | 120                           | 7.5   | 6              | 3.4  | 792           |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 90                            | 10    | 7.8            | 2.6  | 871           |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 60                            | 15    | 11             | 1.9  | 997           |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 45                            | 20    | 13             | 1.5  | 1098          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 36                            | 25    | 15             | 1.5  | 1183          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 30                            | 30    | 17             | 1.2  | 1257          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 23                            | 40    | 21             | 1    | 1383          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 18                            | 50    | 24             | 0.7  | 1490          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 45                            | 20    | 15             | 3.3  | 1964          | NMG040                                                                              |                                                                                     |                                                                                     |        |
|                                        | 36                            | 25    | 17             | 2.6  | 2087          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 30                            | 30    | 19             | 2.6  | 2419          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 23                            | 40    | 24             | 1.9  | 2662          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 18                            | 50    | 28             | 1.5  | 2868          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 15                            | 60    | 32             | 1.3  | 3047          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 11                            | 80    | 38             | 1    | 3354          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 9                             | 100   | 42             | 0.8  | 3490          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 18                            | 50    | 30             | 2.8  | 3936          |                                                                                     |                                                                                     |                                                                                     | NMG050 |
|                                        | 15                            | 60    | 33             | 2.3  | 4183          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 11                            | 80    | 38             | 1.8  | 4604          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 9                             | 100   | 43             | 1.3  | 4840          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 12                            | 73.5  | 48             | 1.3  | 3283          | NMGP063/040                                                                         |                                                                                     |                                                                                     |        |
|                                        | 10                            | 88.2  | 52             | 1.4  | 3488          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 7.7                           | 117.6 | 63             | 1.1  | 3490          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 6.1                           | 147   | 73             | 0.8  | 3490          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 5.1                           | 176.4 | 81             | 0.7  | 3490          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 7.5                           | 117.6 | 65             | 2    | 4840          | NMGP063/050                                                                         |                                                                                     |                                                                                     |        |
|                                        | 6.1                           | 147   | 74             | 1.6  | 4840          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 5.1                           | 176.4 | 83             | 1.3  | 4840          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 3.8                           | 235.2 | 96             | 0.9  | 4840          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 3                             | 294   | 108            | 0.7  | 4840          |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 3.8                           | 235.2 | 101            | 1.7  | 6270          | NMGP063/063                                                                         |                                                                                     |                                                                                     |        |
|                                        | 3                             | 294   | 111            | 1.4  | 6270          |                                                                                     |                                                                                     |                                                                                     |        |
| 0.12                                   |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |        |
| 56B2<br>( $n_1=2800\text{ min}^{-1}$ ) | 373                           | 7.5   | 2.8            | 3    | 399           | NMG025                                                                              |                                                                                     |                                                                                     |        |
|                                        | 280                           | 10    | 3.6            | 2.6  | 439           |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 187                           | 15    | 5.2            | 1.8  | 503           |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 140                           | 20    | 6.6            | 1.4  | 553           |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 112                           | 25    | 8.1            | 1.1  | 590           |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 93                            | 30    | 9.2            | 1    | 633           |                                                                                     |                                                                                     |                                                                                     |        |
|                                        | 70                            | 40    | 11             | 0.8  | 697           |                                                                                     |                                                                                     |                                                                                     |        |

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## Gearmotors technical data

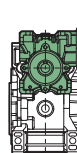
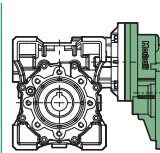
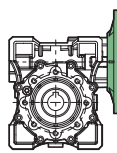
| $Pn_1$                                 | $n_2$                                  | i     | $Mn_2$ | fs  | $Fr_2$ |  |  |  |     |        |  |  |
|----------------------------------------|----------------------------------------|-------|--------|-----|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----|--------|--|--|
| [kW]                                   | [min <sup>-1</sup> ]                   |       | [Nm]   |     | [N]    |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 0.12                                   |                                        |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 56B2<br>( $n_1=2800\text{ min}^{-1}$ ) | 187                                    | 15    | 5.1    | 2.6 | 683    | NMG030                                                                              |                                                                                     |                                                                                     |     |        |  |  |
|                                        | 140                                    | 20    | 6.1    | 1.9 | 752    |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
|                                        | 112                                    | 25    | 8.2    | 2.1 | 810    |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
|                                        | 93                                     | 30    | 9.2    | 1.7 | 861    |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
|                                        | 70                                     | 40    | 11     | 1.3 | 948    |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
|                                        | 56                                     | 50    | 13     | 1   | 1021   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
|                                        | 47                                     | 60    | 14     | 0.8 | 1085   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
|                                        | 56                                     | 50    | 14     | 2.1 | 1964   | NMG040                                                                              |                                                                                     |                                                                                     |     |        |  |  |
|                                        | 47                                     | 60    | 16     | 1.7 | 2087   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
|                                        | 35                                     | 80    | 20     | 1.3 | 2298   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
|                                        | 28                                     | 100   | 23     | 1   | 2475   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
|                                        |                                        |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
|                                        | 63A4<br>( $n_1=1400\text{ min}^{-1}$ ) | 280   | 5      | 3.7 | 5.1    |                                                                                     |                                                                                     |                                                                                     | 597 | NMG030 |  |  |
|                                        |                                        | 187   | 7.5    | 5.3 | 3.4    |                                                                                     |                                                                                     |                                                                                     | 683 |        |  |  |
| 140                                    |                                        | 10    | 6.8    | 2.7 | 752    |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 93                                     |                                        | 15    | 9.7    | 1.9 | 861    |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 70                                     |                                        | 20    | 12     | 1.5 | 948    |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 56                                     |                                        | 25    | 14     | 1.5 | 1021   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 47                                     |                                        | 30    | 16     | 1.3 | 1085   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 35                                     |                                        | 40    | 19     | 0.9 | 1194   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 28                                     |                                        | 50    | 23     | 0.8 | 1286   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 70                                     |                                        | 20    | 13     | 3.3 | 1824   | NMG040                                                                              |                                                                                     |                                                                                     |     |        |  |  |
| 56                                     |                                        | 25    | 16     | 2.5 | 1964   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 47                                     |                                        | 30    | 17     | 2.6 | 2087   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 35                                     |                                        | 40    | 21     | 1.9 | 2298   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 28                                     |                                        | 50    | 26     | 1.5 | 2475   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 23                                     |                                        | 60    | 29     | 1.3 | 2630   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 18                                     |                                        | 80    | 35     | 1   | 2895   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 14                                     |                                        | 100   | 39     | 0.8 | 3118   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 28                                     |                                        | 50    | 27     | 2.9 | 3397   | NMG050                                                                              |                                                                                     |                                                                                     |     |        |  |  |
| 23                                     |                                        | 60    | 30     | 2.3 | 3610   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 18                                     |                                        | 80    | 36     | 1.9 | 3973   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 14                                     |                                        | 100   | 41     | 1.4 | 4280   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 19                                     |                                        | 73.5  | 43     | 1.2 | 2833   |                                                                                     | NMGP063/040                                                                         |                                                                                     |     |        |  |  |
| 16                                     |                                        | 88.2  | 47     | 1.2 | 3011   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 12                                     |                                        | 117.6 | 58     | 0.9 | 3314   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 9.5                                    |                                        | 147   | 67     | 0.7 | 3490   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 7.9                                    |                                        | 176.4 | 75     | 0.6 | 3490   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 12                                     |                                        | 117.6 | 59     | 1.8 | 4548   | NMGP063/050                                                                         |                                                                                     |                                                                                     |     |        |  |  |
| 9.5                                    |                                        | 147   | 69     | 1.3 | 4840   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 8                                      |                                        | 176.4 | 77     | 1.1 | 4840   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 5.8                                    |                                        | 235.2 | 90     | 0.8 | 4840   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 4.8                                    |                                        | 294   | 100    | 0.7 | 4840   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 6                                      |                                        | 235.2 | 94     | 1.5 | 6270   |                                                                                     | NMGP063/063                                                                         |                                                                                     |     |        |  |  |
| 4.8                                    |                                        | 294   | 105    | 1.2 | 6270   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 14                                     |                                        | 100   | 53     | 1.4 | 2769   |                                                                                     |                                                                                     | NMGD030/040                                                                         |     |        |  |  |
| 9.3                                    |                                        | 150   | 75     | 1   | 3169   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 14                                     |                                        | 100   | 55     | 2.6 | 3800   | NMGD030/050                                                                         |                                                                                     |                                                                                     |     |        |  |  |
| 9.3                                    |                                        | 150   | 75     | 1.8 | 4350   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |
| 7                                      |                                        | 200   | 96     | 1.3 | 4788   |                                                                                     |                                                                                     |                                                                                     |     |        |  |  |

| $Pn_1$<br>[kW]                                   | $n_2$<br>[min <sup>-1</sup> ] | $i$  | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|--------------------------------------------------|-------------------------------|------|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>0.12</b>                                      |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>63A4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>5.6</b>                    | 250  | 112            | 1    | 4840          |                                                                                     |                                                                                     | <b>NMGD030/050</b>                                                                  |
|                                                  | <b>4.7</b>                    | 300  | 121            | 1.2  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 145            | 0.9  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 167            | 0.7  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100  | 55             | 2.8  | 4967          |                                                                                     |                                                                                     | <b>NMGD030/063</b>                                                                  |
|                                                  | <b>9.3</b>                    | 150  | 77             | 2.8  | 5686          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 97             | 2.7  | 6259          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 116            | 2    | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 119            | 2.2  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 155            | 1.7  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 174            | 1.3  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 212            | 1.1  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 246            | 0.9  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 303            | 0.9  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 367            | 0.8  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100  | 56             | 2.5  | 3800          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150  | 78             | 1.8  | 4350          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 98             | 1.2  | 4788          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 115            | 1    | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 128            | 1.2  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 153            | 0.8  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150  | 79             | 3.4  | 5686          |                                                                                     |                                                                                     | <b>NMGD040/063</b>                                                                  |
|                                                  | <b>7</b>                      | 200  | 99             | 2.6  | 6259          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 119            | 2    | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 130            | 2.1  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 159            | 1.6  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 221            | 1.1  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 242            | 1.1  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 291            | 1    | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 325            | 0.8  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 122            | 3.2  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 137            | 3.3  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 167            | 2.5  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 192            | 2    | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 253            | 1.8  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 305            | 1.5  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 332            | 1.2  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 407            | 0.9  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 505            | 0.9  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 567            | 0.8  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 206            | 2.8  | 8180          |                                                                                     |                                                                                     | <b>NMGD040/090</b>                                                                  |
|                                                  | <b>2.3</b>                    | 600  | 265            | 2.7  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 319            | 2.2  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 357            | 2    | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 443            | 1.6  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 528            | 1.4  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 558            | 0.9  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 709            | 0.9  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 457            | 1.6  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 538            | 1.3  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 604            | 1.2  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 746            | 0.8  | 8180          |                                                                                     |                                                                                     |                                                                                     |

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| $Pn_1$ | $n_2$                | $i$ | $Mn_2$ | $fs$ | $Fr_2$ |  |  |  |
|--------|----------------------|-----|--------|------|--------|--|--|--|
| [kW]   | [min <sup>-1</sup> ] |     | [Nm]   |      | [N]    |  |  |  |



### 0.12

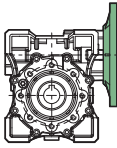
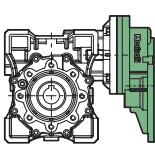
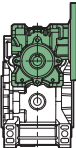
|                                                          |            |       |     |     |       |                    |  |                    |                    |
|----------------------------------------------------------|------------|-------|-----|-----|-------|--------------------|--|--------------------|--------------------|
| <b>63A4</b><br>(n <sub>1</sub> =1400 min <sup>-1</sup> ) | <b>1.2</b> | 1200  | 457 | 2.8 | 10320 |                    |  | <b>NMGD050/110</b> |                    |
|                                                          | <b>0.9</b> | 1500  | 538 | 2.4 | 10320 |                    |  |                    |                    |
|                                                          | <b>0.8</b> | 1800  | 604 | 2.1 | 10320 |                    |  |                    |                    |
|                                                          | <b>0.6</b> | 2400  | 781 | 1.5 | 10320 |                    |  |                    |                    |
|                                                          | <b>0.5</b> | 3000  | 902 | 1.2 | 10320 |                    |  |                    |                    |
|                                                          | <b>0.4</b> | 4000  | 800 | 1   | 10320 |                    |  |                    |                    |
|                                                          | <b>0.3</b> | 5000  | 947 | 0.8 | 10320 |                    |  |                    |                    |
| <b>63B6</b><br>(n <sub>1</sub> =900 min <sup>-1</sup> )  | <b>180</b> | 5     | 5.5 | 3.7 | 692   | <b>NMG030</b>      |  |                    |                    |
|                                                          | <b>120</b> | 7.5   | 8.1 | 2.5 | 792   |                    |  |                    |                    |
|                                                          | <b>90</b>  | 10    | 10  | 2   | 871   |                    |  |                    |                    |
|                                                          | <b>60</b>  | 15    | 14  | 1.4 | 997   |                    |  |                    |                    |
|                                                          | <b>45</b>  | 20    | 18  | 1.1 | 1098  |                    |  |                    |                    |
|                                                          | <b>36</b>  | 25    | 20  | 1.1 | 1183  |                    |  |                    |                    |
|                                                          | <b>30</b>  | 30    | 23  | 0.9 | 1257  |                    |  |                    |                    |
|                                                          | <b>23</b>  | 40    | 30  | 0.7 | 1383  |                    |  |                    |                    |
|                                                          | <b>60</b>  | 15    | 15  | 3.3 | 1920  | <b>NMG040</b>      |  |                    |                    |
|                                                          | <b>45</b>  | 20    | 19  | 2.5 | 2113  |                    |  |                    |                    |
|                                                          | <b>36</b>  | 25    | 23  | 1.9 | 2276  |                    |  |                    |                    |
|                                                          | <b>30</b>  | 30    | 26  | 1.9 | 2419  |                    |  |                    |                    |
|                                                          | <b>23</b>  | 40    | 33  | 1.4 | 2662  |                    |  |                    |                    |
|                                                          | <b>18</b>  | 50    | 37  | 1.2 | 2868  |                    |  |                    |                    |
|                                                          | <b>15</b>  | 60    | 42  | 0.9 | 3047  |                    |  |                    |                    |
|                                                          | <b>11</b>  | 80    | 51  | 0.7 | 3354  |                    |  |                    |                    |
|                                                          | <b>23</b>  | 40    | 33  | 2.6 | 3654  | <b>NMG050</b>      |  |                    |                    |
|                                                          | <b>18</b>  | 50    | 39  | 2   | 3936  |                    |  |                    |                    |
|                                                          | <b>15</b>  | 60    | 43  | 1.7 | 4183  |                    |  |                    |                    |
|                                                          | <b>11</b>  | 80    | 51  | 1.4 | 4604  |                    |  |                    |                    |
|                                                          | <b>9</b>   | 100   | 57  | 1   | 4840  |                    |  |                    |                    |
|                                                          | <b>12</b>  | 73.5  | 64  | 1.7 | 4506  |                    |  |                    | <b>NMGP063/050</b> |
|                                                          | <b>10</b>  | 88.2  | 71  | 2.1 | 4788  |                    |  |                    |                    |
|                                                          | <b>7.7</b> | 117.6 | 86  | 1.5 | 4840  |                    |  |                    |                    |
|                                                          | <b>6.1</b> | 147   | 99  | 1.2 | 4840  |                    |  |                    |                    |
|                                                          | <b>5.1</b> | 176.4 | 110 | 1   | 4840  |                    |  |                    |                    |
|                                                          | <b>3.8</b> | 235.2 | 128 | 0.7 | 4840  |                    |  |                    |                    |
|                                                          | <b>6.1</b> | 147   | 103 | 2.1 | 6270  | <b>NMGP063/063</b> |  |                    |                    |
|                                                          | <b>5.1</b> | 176.4 | 114 | 1.8 | 6270  |                    |  |                    |                    |
|                                                          | <b>3.8</b> | 235.2 | 134 | 1.3 | 6270  |                    |  |                    |                    |
|                                                          | <b>3.1</b> | 294   | 148 | 1   | 6270  |                    |  |                    |                    |

### 0.18

|                                                  |            |     |     |     |     |               |  |  |
|--------------------------------------------------|------------|-----|-----|-----|-----|---------------|--|--|
| <b>63A2</b><br>( $n_1 = 2800 \text{ min}^{-1}$ ) | <b>373</b> | 7.5 | 4.1 | 3.2 | 542 | <b>NMG030</b> |  |  |
|                                                  | <b>280</b> | 10  | 5.3 | 2.5 | 597 |               |  |  |
|                                                  | <b>187</b> | 15  | 7.5 | 1.8 | 683 |               |  |  |
|                                                  | <b>140</b> | 20  | 9.7 | 1.3 | 752 |               |  |  |
|                                                  | <b>112</b> | 25  | 11  | 1.4 | 810 |               |  |  |
|                                                  | <b>93</b>  | 30  | 13  | 1.2 | 861 |               |  |  |
|                                                  | <b>70</b>  | 40  | 16  | 0.9 | 948 |               |  |  |

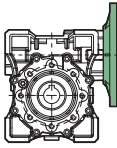
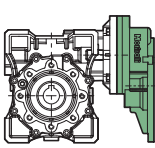
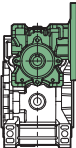
## Dati tecnici motoriduttore

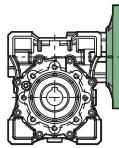
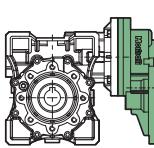
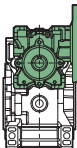
## Gearmotors technical data

| $Pn_1$<br>[kW]                                   | $n_2$<br>[min <sup>-1</sup> ] | $i$   | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|--------------------------------------------------|-------------------------------|-------|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>0.18</b>                                      |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>63A2</b><br>( $n_1 = 2800 \text{ min}^{-1}$ ) | <b>140</b>                    | 20    | 10             | 2.8  | 1447          | <b>NMG040</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>112</b>                    | 25    | 12             | 2.3  | 1559          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>93</b>                     | 30    | 14             | 2.5  | 1657          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 40    | 17             | 1.8  | 1824          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 50    | 21             | 1.4  | 1964          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 60    | 24             | 1.2  | 2087          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 80    | 30             | 0.8  | 2298          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 40    | 18             | 3.2  | 2503          | <b>NMG050</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 50    | 21             | 2.5  | 2696          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 60    | 24             | 2.1  | 2865          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 80    | 31             | 1.5  | 3153          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 100   | 35             | 1.2  | 3397          |                                                                                     |                                                                                     |                                                                                     |
| <b>63B4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>280</b>                    | 5     | 5.4            | 3.4  | 597           | <b>NMG030</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>187</b>                    | 7.5   | 8              | 2.3  | 683           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>140</b>                    | 10    | 10             | 1.8  | 752           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>93</b>                     | 15    | 14             | 1.3  | 861           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 20    | 18             | 1    | 948           |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 25    | 21             | 1    | 1021          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 30    | 24             | 0.8  | 1085          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>93</b>                     | 15    | 15             | 2.9  | 1657          | <b>NMG040</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 20    | 19             | 2    | 1824          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 25    | 23             | 1.7  | 1964          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 30    | 27             | 1.7  | 2087          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 40    | 33             | 1.3  | 2298          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 50    | 39             | 1    | 2475          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60    | 44             | 0.8  | 2630          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 40    | 34             | 2.3  | 3153          | <b>NMG050</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 50    | 40             | 1.9  | 3397          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60    | 44             | 1.6  | 3610          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 80    | 53             | 1.2  | 3973          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100   | 61             | 0.9  | 4280          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>19</b>                     | 73.5  | 65             | 0.8  | 2833          |                                                                                     | <b>NMGP063/040</b>                                                                  |                                                                                     |
|                                                  | <b>16</b>                     | 88.2  | 71             | 0.8  | 3011          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>12</b>                     | 117.6 | 87             | 0.6  | 3314          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>12</b>                     | 117.6 | 89             | 1.1  | 4548          | <b>NMGP063/050</b>                                                                  |                                                                                     |                                                                                     |
|                                                  | <b>9.5</b>                    | 147   | 103            | 0.9  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7.9</b>                    | 176.4 | 115            | 0.7  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.8</b>                    | 235.2 | 136            | 0.6  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100   | 80             | 0.9  | 2769          |                                                                                     |                                                                                     | <b>NMGD030/040</b>                                                                  |
|                                                  | <b>14</b>                     | 100   | 83             | 1.7  | 3800          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150   | 114            | 1.2  | 4350          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200   | 144            | 0.9  | 4788          |                                                                                     |                                                                                     | <b>NMGD030/050</b>                                                                  |
|                                                  | <b>4.7</b>                    | 300   | 187            | 0.8  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100   | 83             | 1.9  | 4967          |                                                                                     |                                                                                     | <b>NMGD030/063</b>                                                                  |
|                                                  | <b>9.3</b>                    | 150   | 115            | 1.9  | 5686          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200   | 146            | 1.8  | 6259          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250   | 174            | 1.4  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300   | 179            | 1.5  | 6270          |                                                                                     |                                                                                     |                                                                                     |

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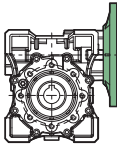
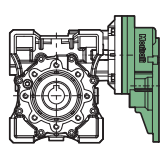
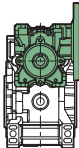
## Gearmotors technical data

| $Pn_1$<br>[kW]                                   | $n_2$<br>[min <sup>-1</sup> ] | $i$  | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|--------------------------------------------------|-------------------------------|------|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>0.18</b>                                      |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>63B4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>3.5</b>                    | 400  | 226            | 1    | 6270          |                                                                                     |                                                                                     | <b>NMGD030/063</b>                                                                  |
|                                                  | <b>2.8</b>                    | 500  | 262            | 0.8  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 340            | 0.8  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100  | 84             | 1.7  | 3800          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150  | 116            | 1.2  | 4350          |                                                                                     |                                                                                     | <b>NMGD040/050</b>                                                                  |
|                                                  | <b>7</b>                      | 200  | 147            | 0.8  | 4788          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 192            | 0.8  | 4840          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100  | 84             | 3.1  | 4967          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150  | 118            | 2.2  | 5686          |                                                                                     |                                                                                     | <b>NMGD040/063</b>                                                                  |
|                                                  | <b>7</b>                      | 200  | 149            | 1.7  | 6259          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 179            | 1.3  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 195            | 1.4  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 239            | 1.1  | 6270          |                                                                                     |                                                                                     | <b>NMGD040/075</b>                                                                  |
|                                                  | <b>2.8</b>                    | 500  | 332            | 0.7  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 362            | 0.8  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 153            | 2.8  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 184            | 2.1  | 7380          |                                                                                     |                                                                                     | <b>NMGD040/090</b>                                                                  |
|                                                  | <b>4.7</b>                    | 300  | 204            | 2.2  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 251            | 1.7  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 288            | 1.3  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 369            | 1.1  | 7380          |                                                                                     |                                                                                     | <b>NMGD040/110</b>                                                                  |
|                                                  | <b>1.9</b>                    | 750  | 444            | 0.9  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 497            | 0.8  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 634            | 0.7  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 192            | 3    | 8180          |                                                                                     |                                                                                     | <b>NMGD050/110</b>                                                                  |
|                                                  | <b>4.7</b>                    | 300  | 214            | 3.3  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 264            | 2.4  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 309            | 1.9  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 398            | 1.8  | 8180          |                                                                                     |                                                                                     | <b>NMG040</b>                                                                       |
|                                                  | <b>1.9</b>                    | 750  | 478            | 1.5  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 537            | 1.3  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 642            | 1    | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 750            | 0.8  | 8180          |                                                                                     |                                                                                     | <b>NMG050</b>                                                                       |
|                                                  | <b>0.8</b>                    | 1800 | 891            | 0.8  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 684            | 1    | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 806            | 0.9  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 906            | 0.8  | 8180          |                                                                                     |                                                                                     | <b>NMG050</b>                                                                       |
|                                                  | <b>1.2</b>                    | 1200 | 684            | 1.9  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 806            | 1.6  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 878            | 1.5  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 1135           | 1.1  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.5</b>                    | 3000 | 1397           | 0.8  | 10320         |                                                                                     |                                                                                     |                                                                                     |
| <b>71A6</b><br>( $n_1 = 900 \text{ min}^{-1}$ )  | <b>90</b>                     | 10   | 16             | 3    | 1677          | <b>NMG040</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>60</b>                     | 15   | 23             | 2.2  | 1920          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>45</b>                     | 20   | 30             | 1.5  | 2113          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>36</b>                     | 25   | 35             | 1.3  | 2276          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>30</b>                     | 30   | 39             | 1.3  | 2419          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 40   | 48             | 1    | 2662          | <b>NMG050</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>45</b>                     | 20   | 30             | 2.8  | 2900          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>36</b>                     | 25   | 36             | 2.1  | 3124          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>30</b>                     | 30   | 41             | 2.4  | 3320          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 40   | 50             | 1.8  | 3654          |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |

| $Pn_1$                                 | $n_2$                                  | i     | $Mn_2$ | fs   | $Fr_2$ |  |  |  |             |
|----------------------------------------|----------------------------------------|-------|--------|------|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------|
| [kW]                                   | [min <sup>-1</sup> ]                   |       | [Nm]   |      | [N]    |                                                                                    |                                                                                     |                                                                                     |             |
| 0.18                                   |                                        |       |        |      |        |                                                                                    |                                                                                     |                                                                                     |             |
| 71A6<br>( $n_1=900\text{ min}^{-1}$ )  | 18                                     | 50    | 57     | 1.4  | 3936   | NMG050                                                                             |                                                                                     |                                                                                     |             |
|                                        | 15                                     | 60    | 64     | 1.1  | 4183   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 11                                     | 80    | 77     | 0.90 | 4604   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 23                                     | 40    | 51     | 3.4  | 4776   | NMG063                                                                             |                                                                                     |                                                                                     |             |
|                                        | 18                                     | 50    | 60     | 2.7  | 5145   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 15                                     | 60    | 67     | 2.1  | 5467   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 11                                     | 80    | 81     | 1.6  | 6018   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 9                                      | 100   | 92     | 1.4  | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 15                                     | 60    | 67     | 2.1  | 5467   | NMG075                                                                             |                                                                                     |                                                                                     |             |
|                                        | 11                                     | 80    | 81     | 1.6  | 6018   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 9                                      | 100   | 92     | 1.4  | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 12                                     | 73.5  | 97     | 1.2  | 4506   | NMGP071/050                                                                        |                                                                                     |                                                                                     |             |
|                                        | 10                                     | 88.2  | 107    | 1.4  | 4788   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 7.7                                    | 117.6 | 129    | 1    | 4840   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 6                                      | 147   | 151    | 0.8  |        |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 7.7                                    | 117.6 | 134    | 1.8  | 6270   | NMGP071/063                                                                        |                                                                                     |                                                                                     |             |
|                                        | 6.1                                    | 147   | 155    | 1.4  | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 5.1                                    | 176.4 | 171    | 1.2  | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 3.8                                    | 235.2 | 201    | 0.9  | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 3.1                                    | 294   | 222    | 0.7  | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 5.1                                    | 176.4 | 183    | 1.7  | 7380   | NMGP071/075                                                                        |                                                                                     |                                                                                     |             |
|                                        | 3.8                                    | 235.2 | 215    | 1.2  | 7380   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 3.1                                    | 294   | 240    | 1    | 7380   |                                                                                    |                                                                                     |                                                                                     |             |
| 0.25                                   |                                        |       |        |      |        |                                                                                    |                                                                                     |                                                                                     |             |
| 63B2<br>( $n_1=2800\text{ min}^{-1}$ ) | 373                                    | 7.5   | 5.7    | 2.3  | 542    | NMG030                                                                             |                                                                                     |                                                                                     |             |
|                                        | 280                                    | 10    | 7.3    | 1.8  | 597    |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 187                                    | 15    | 10     | 1.3  | 683    |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 140                                    | 20    | 13     | 0.9  | 752    |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 112                                    | 25    | 15     | 1    | 810    |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 93                                     | 30    | 18     | 0.8  | 861    |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 187                                    | 15    | 11     | 2.9  | 1315   | NMG040                                                                             |                                                                                     |                                                                                     |             |
|                                        | 140                                    | 20    | 14     | 2    | 1447   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 112                                    | 25    | 17     | 1.6  | 1559   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 93                                     | 30    | 20     | 1.7  | 1657   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 70                                     | 40    | 26     | 1.2  | 1824   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 70                                     | 40    | 26     | 2.3  | 2503   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 56                                     | 50    | 30     | 1    | 1964   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 56                                     | 50    | 31     | 1.8  | 2696   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 47                                     | 60    | 35     | 0.8  | 2087   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 47                                     | 60    | 35     | 1.5  | 2865   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 35                                     | 80    | 43     | 1.1  | 3153   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 28                                     | 100   | 49     | 0.8  | 3397   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 7                                      | 400   | 153    | 1.4  | 6270   |                                                                                    |                                                                                     |                                                                                     | NMGD030/063 |
|                                        | 5.6                                    | 500   | 179    | 1.2  | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 71A4<br>( $n_1=1400\text{ min}^{-1}$ ) | 280   | 5      | 8.2  | 4.5    | 1149                                                                               | NMG040                                                                              |                                                                                     |             |
|                                        |                                        | 187   | 7.5    | 11   | 3.6    | 1315                                                                               |                                                                                     |                                                                                     |             |
|                                        |                                        | 140   | 10     | 14   | 2.8    | 1447                                                                               |                                                                                     |                                                                                     |             |
| 93                                     |                                        | 15    | 21     | 1.9  | 1657   |                                                                                    |                                                                                     |                                                                                     |             |
| 70                                     |                                        | 20    | 28     | 1.5  | 1824   |                                                                                    |                                                                                     |                                                                                     |             |

## Dati tecnici motoriduttore

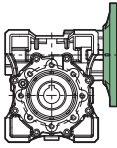
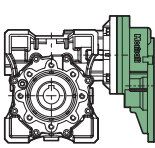
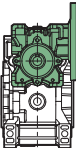
## Gearmotors technical data

| $Pn_1$<br>[kW]                                   | $n_2$<br>[min <sup>-1</sup> ] | $i$   | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|--------------------------------------------------|-------------------------------|-------|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>0.25</b>                                      |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>71A4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>56</b>                     | 25    | 33             | 1.2  | 1964          | <b>NMG040</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 30    | 37             | 1.3  | 2087          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 40    | 45             | 0.9  | 2298          |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 20    | 28             | 2.7  | 2503          | <b>NMG050</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 25    | 33             | 2.2  | 2696          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 30    | 38             | 2.3  | 2865          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 40    | 47             | 1.7  | 3153          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 50    | 55             | 1.4  | 3397          | <b>NMG063</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60    | 61             | 1.1  | 3610          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 80    | 73             | 0.9  | 3973          |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 40    | 49             | 3.1  | 4122          | <b>NMG075</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 50    | 57             | 2.4  | 4440          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60    | 64             | 2    | 4719          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 80    | 80             | 1.6  | 5193          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100   | 89             | 1.4  | 5595          | <b>NMGP071/050</b>                                                                  |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60    | 69             | 3.2  | 5569          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 80    | 84             | 2.3  | 6130          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100   | 96             | 1.9  | 6603          | <b>NMGP071/063</b>                                                                  |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>19</b>                     | 73.5  | 90             | 1    | 3889          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>16</b>                     | 88.2  | 100            | 1.1  | 4132          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>12</b>                     | 117.6 | 123            | 0.8  | 4548          | <b>NMGP071/075</b>                                                                  |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>12</b>                     | 117.6 | 128            | 1.5  | 5945          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.5</b>                    | 147   | 146            | 1.2  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7.9</b>                    | 176.4 | 166            | 1    | 6270          | <b>NMGD040/050</b>                                                                  |                                                                                     |                                                                                     |
|                                                  | <b>6</b>                      | 235.2 | 196            | 0.7  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.8</b>                    | 294   | 219            | 0.6  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.5</b>                    | 147   | 154            | 1.7  | 7380          | <b>NMGD040/063</b>                                                                  |                                                                                     |                                                                                     |
|                                                  | <b>7.9</b>                    | 176.4 | 175            | 1.4  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>6</b>                      | 235.2 | 205            | 1.1  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.8</b>                    | 294   | 235            | 0.9  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100   | 117            | 1.2  | 3800          | <b>NMGD040/075</b>                                                                  |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150   | 162            | 0.9  | 4350          |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100   | 117            | 2.2  | 4967          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150   | 164            | 1.6  | 5686          | <b>NMGD040/090</b>                                                                  |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200   | 207            | 1.2  | 6259          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250   | 248            | 1    | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300   | 270            | 1    | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400   | 332            | 0.8  | 6270          |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100   | 118            | 3    | 5863          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150   | 168            | 2.6  | 6712          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200   | 213            | 2    | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250   | 255            | 1.5  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300   | 284            | 1.6  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400   | 343            | 1.1  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500   | 392            | 0.8  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600   | 527            | 0.9  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750   | 634            | 0.7  | 7380          |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100   | 121            | 3    | 6487          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150   | 173            | 3    | 7426          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200   | 221            | 2.8  | 8174          |                                                                                     |                                                                                     |                                                                                     |



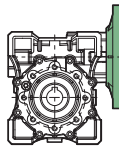
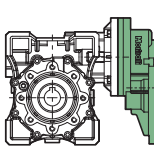
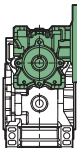
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$<br>[kW]                                   | $n_2$<br>[min <sup>-1</sup> ] | $i$  | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|--------------------------------------------------|-------------------------------|------|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>0.25</b>                                      |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>71A4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>5.6</b>                    | 250  | 266            | 2.2  | 8180          |                                                                                     |                                                                                     | <b>NMGD040/090</b>                                                                  |
|                                                  | <b>4.7</b>                    | 300  | 297            | 2.4  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 366            | 1.7  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 428            | 1.3  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 522            | 1.2  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 610            | 0.9  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 680            | 0.8  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 923            | 0.8  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 227            | 2.7  | 8174          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 272            | 2.1  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 304            | 2.3  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 375            | 1.7  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 501            | 1.2  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 559            | 1.3  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 673            | 1.1  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 766            | 0.9  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 951            | 0.8  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 394            | 3.1  | 10320         |                                                                                     |                                                                                     | <b>NMGD050/110</b>                                                                  |
|                                                  | <b>2.8</b>                    | 500  | 522            | 2.3  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 559            | 2.3  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 673            | 1.9  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 766            | 1.7  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 962            | 1.3  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 1085           | 1.2  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 1219           | 1.1  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 1710           | 0.7  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 394            | 3.1  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 534            | 2.2  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 573            | 2.3  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 691            | 1.9  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 786            | 1.6  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 992            | 1.3  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 1171           | 1.1  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 1322           | 1    | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 1710           | 0.7  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 469            | 3.4  | 13500         |                                                                                     |                                                                                     | <b>NMGD063/130</b>                                                                  |
|                                                  | <b>2.3</b>                    | 600  | 582            | 3.1  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 701            | 2.6  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 799            | 2.2  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 1008           | 1.8  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 1188           | 1.5  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 1341           | 1.3  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 1656           | 1    | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.5</b>                    | 3000 | 1974           | 0.8  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.4</b>                    | 4000 | 2087           | 0.6  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.3</b>                    | 5000 | 2479           | 0.5  | 13500         |                                                                                     |                                                                                     | <b>NMGD063/150</b>                                                                  |
|                                                  | <b>1.9</b>                    | 750  | 679            | 3.5  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 857            | 2.5  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 1033           | 2.6  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 1223           | 1.8  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 1475           | 1.8  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.5</b>                    | 3000 | 1747           | 1.4  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.4</b>                    | 4000 | 2067           | 0.9  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.3</b>                    | 5000 | 2296           | 0.7  | 18000         |                                                                                     |                                                                                     |                                                                                     |

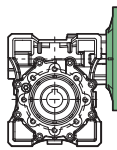
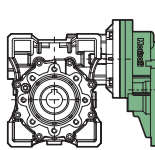
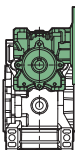
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$                                 | $n_2$                | i     | $Mn_2$ | fs  | $Fr_2$ |  |  |  |             |
|----------------------------------------|----------------------|-------|--------|-----|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------|
| [kW]                                   | [min <sup>-1</sup> ] |       | [Nm]   |     | [N]    |                                                                                    |                                                                                     |                                                                                     |             |
| 0.25                                   |                      |       |        |     |        |                                                                                    |                                                                                     |                                                                                     |             |
| 71B6<br>( $n_1=900\text{ min}^{-1}$ )  | 180                  | 5     | 12     | 3.5 | 1331   | NMG040                                                                             |                                                                                     |                                                                                     |             |
|                                        | 120                  | 7.5   | 17     | 2.6 | 1524   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 90                   | 10    | 22     | 2   | 1677   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 60                   | 15    | 32     | 1.4 | 1920   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 45                   | 20    | 41     | 1.1 | 2113   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 36                   | 25    | 49     | 0.9 | 2276   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 30                   | 30    | 54     | 0.9 | 2419   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 23                   | 40    | 68     | 0.7 | 2662   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 60                   | 15    | 33     | 2.9 | 2635   | NMG050                                                                             |                                                                                     |                                                                                     |             |
|                                        | 45                   | 20    | 41     | 1.9 | 2900   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 36                   | 25    | 49     | 1.5 | 3124   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 30                   | 30    | 55     | 1.7 | 3320   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 23                   | 40    | 68     | 1.2 | 3654   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 18                   | 50    | 80     | 1   | 3936   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 15                   | 60    | 90     | 0.8 | 4183   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 36                   | 25    | 51     | 3   | 4084   |                                                                                    |                                                                                     |                                                                                     | NMG063      |
|                                        | 30                   | 30    | 58     | 3.1 | 4339   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 23                   | 40    | 71     | 2.4 | 4776   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 18                   | 50    | 83     | 1.8 | 5145   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 15                   | 60    | 94     | 1.5 | 5467   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 11                   | 80    | 112    | 1.2 | 6018   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 9                    | 100   | 128    | 1   | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 18                   | 50    | 87     | 3   | 6073   | NMG075                                                                             |                                                                                     |                                                                                     |             |
|                                        | 15                   | 60    | 101    | 2.5 | 6453   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 11                   | 80    | 119    | 1.7 | 7103   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 9                    | 100   | 136    | 1.4 | 7380   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 7.7                  | 117.6 | 185    | 1.3 | 6270   |                                                                                    |                                                                                     |                                                                                     | NMGP071/063 |
|                                        | 6.1                  | 147   | 215    | 1   | 6270   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 7.7                  | 117.6 | 195    | 1.9 | 7380   |                                                                                    |                                                                                     |                                                                                     | NMGP071/075 |
|                                        | 6.1                  | 147   | 223    | 1.5 | 7380   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 5.1                  | 176.4 | 253    | 1.2 | 7380   |                                                                                    |                                                                                     |                                                                                     |             |
| 0.37                                   |                      |       |        |     |        |                                                                                    |                                                                                     |                                                                                     |             |
| 71A2<br>( $n_1=2800\text{ min}^{-1}$ ) | 373                  | 7.5   | 8.5    | 3.4 | 1044   | NMG040                                                                             |                                                                                     |                                                                                     |             |
|                                        | 280                  | 10    | 11     | 2.6 | 1149   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 187                  | 15    | 16     | 1.9 | 1315   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 140                  | 20    | 20     | 1.4 | 1447   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 112                  | 25    | 26     | 1.1 | 1559   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 93                   | 30    | 30     | 1.2 | 1657   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 70                   | 40    | 38     | 0.8 | 1824   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 112                  | 25    | 26     | 2   | 2140   | NMG050                                                                             |                                                                                     |                                                                                     |             |
|                                        | 93                   | 30    | 30     | 2.2 | 2274   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 70                   | 40    | 38     | 1.6 | 2503   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 56                   | 50    | 45     | 1.2 | 2696   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 47                   | 60    | 51     | 1   | 2865   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 35                   | 80    | 63     | 0.7 | 3153   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 70                   | 40    | 39     | 2.9 | 3272   |                                                                                    |                                                                                     |                                                                                     | NMG063      |
|                                        | 56                   | 50    | 46     | 2.3 | 3524   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 47                   | 60    | 53     | 1.9 | 3745   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 35                   | 80    | 66     | 1.4 | 4122   |                                                                                    |                                                                                     |                                                                                     |             |
|                                        | 28                   | 100   | 75     | 1.1 | 4440   |                                                                                    |                                                                                     |                                                                                     |             |

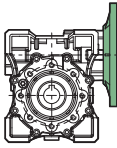
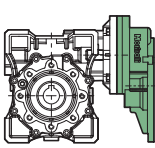
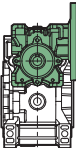
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$                                           | $n_2$                | i     | $Mn_2$ | fs  | $Fr_2$ |  |  |  |                    |
|--------------------------------------------------|----------------------|-------|--------|-----|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------|
| [kW]                                             | [min <sup>-1</sup> ] |       | [Nm]   |     | [N]    |                                                                                    |                                                                                     |                                                                                     |                    |
| 0.37                                             |                      |       |        |     |        |                                                                                    |                                                                                     |                                                                                     |                    |
| <b>71A2</b><br>( $n_1 = 2800 \text{ min}^{-1}$ ) | <b>56</b>            | 50    | 48     | 3.5 | 4160   | <b>NMG075</b>                                                                      |                                                                                     | <b>NMGD030/063</b>                                                                  |                    |
|                                                  | <b>47</b>            | 60    | 56     | 2.9 | 4421   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>35</b>            | 80    | 69     | 2.1 | 4865   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>28</b>            | 100   | 80     | 1.7 | 5241   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>9.3</b>           | 300   | 186    | 1.3 | 6270   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>7</b>             | 400   | 226    | 1   | 6270   |                                                                                    |                                                                                     |                                                                                     |                    |
| <b>71B4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>280</b>           | 5     | 11     | 3   | 1149   | <b>NMG040</b>                                                                      |                                                                                     |                                                                                     |                    |
|                                                  | <b>187</b>           | 7.5   | 16     | 2.4 | 1315   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>140</b>           | 10    | 21     | 1.9 | 1447   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>93</b>            | 15    | 32     | 1.3 | 1657   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>70</b>            | 20    | 40     | 1   | 1824   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>56</b>            | 25    | 48     | 0.8 | 1964   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>47</b>            | 30    | 54     | 0.8 | 2087   | <b>NMG050</b>                                                                      |                                                                                     |                                                                                     |                    |
|                                                  | <b>140</b>           | 10    | 22     | 3.3 | 1987   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>93</b>            | 15    | 32     | 2.4 | 2274   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>70</b>            | 20    | 41     | 1.8 | 2503   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>56</b>            | 25    | 49     | 1.5 | 2696   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>47</b>            | 30    | 56     | 1.5 | 2865   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>35</b>            | 40    | 69     | 1.1 | 3153   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>28</b>            | 50    | 82     | 0.9 | 3397   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>23</b>            | 60    | 91     | 0.8 | 3610   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>56</b>            | 25    | 51     | 2.7 | 3524   |                                                                                    |                                                                                     |                                                                                     | <b>NMG063</b>      |
|                                                  | <b>47</b>            | 30    | 58     | 2.8 | 3745   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>35</b>            | 40    | 72     | 2.1 | 4122   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>28</b>            | 50    | 85     | 1.6 | 4440   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>23</b>            | 60    | 96     | 1.4 | 4719   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>18</b>            | 80    | 117    | 1.1 | 5193   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>14</b>            | 100   | 132    | 0.9 | 5595   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>35</b>            | 40    | 75     | 3.3 | 4865   | <b>NMG075</b>                                                                      |                                                                                     |                                                                                     |                    |
|                                                  | <b>28</b>            | 50    | 90     | 2.5 | 5241   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>23</b>            | 60    | 100    | 2.0 | 5569   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>18</b>            | 80    | 123    | 1.6 | 6130   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>14</b>            | 100   | 142    | 1.3 | 6603   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>12</b>            | 117.6 | 189    | 1   | 5945   |                                                                                    |                                                                                     |                                                                                     | <b>NMGP071/063</b> |
|                                                  | <b>9.5</b>           | 147   | 216    | 0.8 | 6270   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>9.5</b>           | 147   | 227    | 1.1 | 7380   |                                                                                    |                                                                                     |                                                                                     | <b>NMGP071/075</b> |
|                                                  | <b>7.9</b>           | 176.4 | 259    | 0.9 | 7380   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>14</b>            | 100   | 172    | 0.8 | 3800   |                                                                                    |                                                                                     |                                                                                     | <b>NMGD040/050</b> |
|                                                  | <b>14</b>            | 100   | 172    | 1.5 | 4967   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>9.3</b>           | 150   | 243    | 1.1 | 5686   | <b>NMGD040/063</b>                                                                 |                                                                                     |                                                                                     |                    |
|                                                  | <b>7</b>             | 200   | 306    | 0.8 | 6259   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>14</b>            | 100   | 175    | 2.1 | 5863   | <b>NMGD040/075</b>                                                                 |                                                                                     |                                                                                     |                    |
|                                                  | <b>9.3</b>           | 150   | 250    | 1.7 | 6712   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>7</b>             | 200   | 315    | 1.4 | 7380   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>5.6</b>           | 250   | 377    | 1   | 7380   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>4.7</b>           | 300   | 413    | 1   | 7380   |                                                                                    |                                                                                     |                                                                                     |                    |
|                                                  | <b>3.5</b>           | 400   | 508    | 0.7 | 7380   |                                                                                    |                                                                                     |                                                                                     |                    |

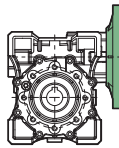
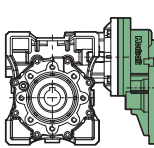
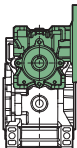
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$<br>[kW]                                   | $n_2$<br>[min <sup>-1</sup> ] | $i$  | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|--------------------------------------------------|-------------------------------|------|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>0.37</b>                                      |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>71B4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>14</b>                     | 100  | 180            | 2.1  | 6487          |                                                                                     |                                                                                     | <b>NMGD040/090</b>                                                                  |
|                                                  | <b>9.3</b>                    | 150  | 256            | 2.1  | 7426          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 328            | 1.9  | 8174          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 394            | 1.5  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 410            | 1.5  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 533            | 1.2  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 623            | 0.9  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 772            | 0.8  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100  | 184            | 3.3  | 6487          |                                                                                     |                                                                                     | <b>NMGD050/090</b>                                                                  |
|                                                  | <b>9.3</b>                    | 150  | 262            | 2.6  | 7426          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 336            | 1.9  | 8174          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 403            | 1.4  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 450            | 1.6  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 556            | 1.1  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 742            | 0.8  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 828            | 0.9  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 997            | 0.7  | 8180          |                                                                                     |                                                                                     | <b>NMGD050/110</b>                                                                  |
|                                                  | <b>7</b>                      | 200  | 345            | 3.4  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 420            | 2.8  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 450            | 2.9  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 582            | 2.1  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 772            | 1.5  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 828            | 1.6  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 969            | 1.3  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 1101           | 1.2  | 10320         |                                                                                     |                                                                                     | <b>NMGD063/110</b>                                                                  |
|                                                  | <b>1.2</b>                    | 1200 | 1424           | 0.8  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 1655           | 0.8  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 345            | 3.4  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 420            | 2.8  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 450            | 2.9  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 582            | 2.1  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 792            | 1.5  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 849            | 1.5  | 10320         |                                                                                     |                                                                                     | <b>NMGD063/130</b>                                                                  |
|                                                  | <b>1.9</b>                    | 750  | 1022           | 1.3  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 1164           | 1.1  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 1470           | 0.9  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 1733           | 0.7  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 582            | 2.9  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 695            | 2.3  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 861            | 2.1  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 1037           | 1.7  | 13500         |                                                                                     |                                                                                     | <b>NMGD063/150</b>                                                                  |
|                                                  | <b>1.6</b>                    | 900  | 1181           | 1.5  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 1491           | 1.2  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.9</b>                    | 1500 | 1707           | 1.1  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 1925           | 0.9  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 695            | 3.4  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 857            | 3.2  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 1006           | 2.4  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 1269           | 1.7  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 1529           | 1.8  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.8</b>                    | 1800 | 1811           | 1.2  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.6</b>                    | 2400 | 2184           | 1.2  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>0.5</b>                    | 3000 | 2586           | 0.9  | 18000         |                                                                                     |                                                                                     |                                                                                     |

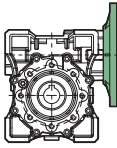
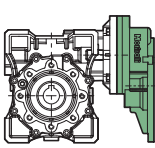
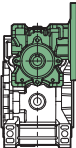
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## Gearmotors technical data

| $Pn_1$                                    | $n_2$                | $i$ | $Mn_2$ | $fs$ | $Fr_2$ |  |  |  |
|-------------------------------------------|----------------------|-----|--------|------|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| [kW]                                      | [min <sup>-1</sup> ] |     | [Nm]   |      | [N]    |                                                                                    |                                                                                     |                                                                                     |
| 0.37                                      |                      |     |        |      |        |                                                                                    |                                                                                     |                                                                                     |
| 80A6<br>( $n_1 = 900 \text{ min}^{-1}$ )  | 180                  | 5   | 17     | 4.3  | 1827   | NMG050                                                                             |                                                                                     |                                                                                     |
|                                           | 120                  | 7.5 | 26     | 3.3  | 2091   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 90                   | 10  | 34     | 2.5  | 2302   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 60                   | 15  | 48     | 1.8  | 2635   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 45                   | 20  | 61     | 1.3  | 2900   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 36                   | 25  | 73     | 1    | 3124   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 30                   | 30  | 82     | 1.1  | 3320   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 45                   | 20  | 61     | 2.4  | 3791   | NMG063                                                                             |                                                                                     |                                                                                     |
|                                           | 36                   | 25  | 75     | 1.9  | 4084   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 30                   | 30  | 84     | 2.1  | 4339   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 23                   | 40  | 104    | 1.6  | 4776   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 18                   | 50  | 122    | 1.2  | 5145   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 15                   | 60  | 140    | 1    | 5467   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 11                   | 80  | 170    | 0.8  | 6018   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 36                   | 25  | 79     | 3.1  | 4820   | NMG075                                                                             |                                                                                     |                                                                                     |
|                                           | 30                   | 30  | 89     | 3.3  | 5122   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 23                   | 40  | 110    | 2.6  | 5637   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 18                   | 50  | 129    | 1.8  | 6073   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 15                   | 60  | 147    | 1.5  | 6453   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 11                   | 80  | 176    | 1.2  | 7103   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 9                    | 100 | 200    | 1    | 7380   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 18                   | 50  | 139    | 3.2  | 6719   | NMG090                                                                             |                                                                                     |                                                                                     |
|                                           | 15                   | 60  | 156    | 2.5  | 7140   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 11                   | 80  | 189    | 1.7  | 7859   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 9                    | 100 | 216    | 1.3  | 8180   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 11                   | 80  | 205    | 2.8  | 9931   | NMG110                                                                             |                                                                                     |                                                                                     |
|                                           | 9                    | 100 | 237    | 2.2  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                           | 12                   | 75  | 210    | 1.6  | 6952   |                                                                                    | NMGP080/075                                                                         |                                                                                     |
|                                           | 10                   | 90  | 265    | 1.7  | 7380   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 7.5                  | 120 | 289    | 1.3  | 7380   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 6                    | 150 | 330    | 1    | 7380   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 6                    | 150 | 354    | 1.6  | 8180   | NMGP080/090                                                                        |                                                                                     |                                                                                     |
|                                           | 5                    | 180 | 397    | 1.3  | 8180   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 3.8                  | 240 | 480    | 1.0  | 8180   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 3.8                  | 240 | 519    | 1.6  | 10320  |                                                                                    | NMGP080/110                                                                         |                                                                                     |
|                                           | 3                    | 300 | 589    | 1.3  | 10320  |                                                                                    |                                                                                     |                                                                                     |
| 0.55                                      |                      |     |        |      |        |                                                                                    |                                                                                     |                                                                                     |
| 71B2<br>( $n_1 = 2800 \text{ min}^{-1}$ ) | 373                  | 7.5 | 12     | 2.3  | 1044   | NMG040                                                                             |                                                                                     |                                                                                     |
|                                           | 280                  | 10  | 16     | 1.8  | 1149   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 187                  | 15  | 24     | 1.3  | 1315   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 140                  | 20  | 31     | 1    | 1447   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 112                  | 25  | 38     | 0.8  | 1559   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 93                   | 30  | 44     | 0.8  | 1657   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 280                  | 10  | 17     | 3.2  | 1577   | NMG050                                                                             |                                                                                     |                                                                                     |
|                                           | 187                  | 15  | 24     | 2.4  | 18.5   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 140                  | 20  | 32     | 1.7  | 1987   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 112                  | 25  | 39     | 1.4  | 2140   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 93                   | 30  | 44     | 1.5  | 2274   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 70                   | 40  | 56     | 1.1  | 2503   |                                                                                    |                                                                                     |                                                                                     |
|                                           | 56                   | 50  | 66     | 0.8  | 2696   |                                                                                    |                                                                                     |                                                                                     |
|                                           |                      |     |        |      |        |                                                                                    |                                                                                     |                                                                                     |
|                                           |                      |     |        |      |        |                                                                                    |                                                                                     |                                                                                     |
|                                           |                      |     |        |      |        |                                                                                    |                                                                                     |                                                                                     |
|                                           |                      |     |        |      |        |                                                                                    |                                                                                     |                                                                                     |
|                                           |                      |     |        |      |        |                                                                                    |                                                                                     |                                                                                     |
|                                           |                      |     |        |      |        |                                                                                    |                                                                                     |                                                                                     |
|                                           |                      |     |        |      |        |                                                                                    |                                                                                     |                                                                                     |
|                                           |                      |     |        |      |        |                                                                                    |                                                                                     |                                                                                     |

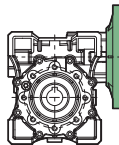
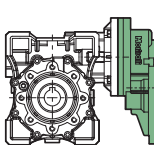
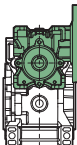
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$<br>[kW]                                   | $n_2$<br>[min <sup>-1</sup> ] | $i$ | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|--------------------------------------------------|-------------------------------|-----|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>0.55</b>                                      |                               |     |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>71B2</b><br>( $n_1 = 2800 \text{ min}^{-1}$ ) | <b>47</b>                     | 60  | 75             | 0.7  | 2865          | <b>NMG050</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>140</b>                    | 20  | 33             | 3.3  | 2597          | <b>NMG063</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>112</b>                    | 25  | 40             | 2.5  | 2797          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>93</b>                     | 30  | 45             | 2.7  | 2973          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 40  | 57             | 1.9  | 3272          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 50  | 69             | 1.5  | 3524          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 60  | 80             | 1.2  | 3745          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 80  | 98             | 0.9  | 4122          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 100 | 113            | 0.7  | 4440          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 40  | 60             | 3.1  | 3862          | <b>NMG075</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 50  | 71             | 2.3  | 4160          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 60  | 83             | 2    | 4421          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 80  | 101            | 1.3  | 4865          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 100 | 118            | 1    | 5241          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 300 | 311            | 2    | 8180          |                                                                                     |                                                                                     | <b>NMGD040/090</b>                                                                  |
|                                                  | <b>7</b>                      | 400 | 383            | 1.5  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 500 | 450            | 1.2  | 8180          |                                                                                     |                                                                                     |                                                                                     |
| <b>80A4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>280</b>                    | 5   | 17             | 3.7  | 1577          | <b>NMG050</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>187</b>                    | 7.5 | 26             | 2.9  | 1805          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>140</b>                    | 10  | 33             | 2.2  | 1987          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>93</b>                     | 15  | 47             | 1.6  | 2274          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 20  | 60             | 1.2  | 2503          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 25  | 72             | 1    | 2696          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 30  | 83             | 1    | 2865          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>93</b>                     | 15  | 48             | 3.2  | 2973          | <b>NMG063</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 20  | 62             | 2.2  | 3272          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 25  | 74             | 1.8  | 3524          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 30  | 85             | 1.9  | 3745          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 40  | 107            | 1.4  | 4122          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 50  | 126            | 1.1  | 4440          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60  | 143            | 0.9  | 4719          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 25  | 78             | 2.8  | 4160          | <b>NMG075</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 30  | 89             | 2.9  | 4421          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 40  | 110            | 2    | 4865          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 50  | 132            | 1.6  | 5241          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60  | 149            | 1.4  | 5569          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 80  | 184            | 1.1  | 6130          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100 | 210            | 0.9  | 6603          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 40  | 116            | 3.5  | 5383          | <b>NMG090</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 50  | 140            | 2.7  | 5799          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60  | 161            | 2.2  | 6163          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 80  | 193            | 1.5  | 6783          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100 | 225            | 1.2  | 7306          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 80  | 205            | 2.6  | 8571          | <b>NMG110</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100 | 241            | 2    | 9232          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>19</b>                     | 75  | 209            | 1.2  | 6000          |                                                                                     | <b>NMGP080/075</b>                                                                  |                                                                                     |
|                                                  | <b>16</b>                     | 90  | 235            | 1.3  | 6375          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>12</b>                     | 120 | 290            | 1    | 7017          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150 | 339            | 0.8  | 7380          |                                                                                     |                                                                                     |                                                                                     |

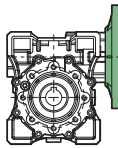
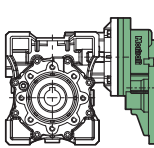
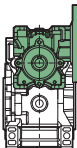
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## Gearmotors technical data

| $Pn_1$                                 | $n_2$                                 | $i$  | $Mn_2$ | $fs$ | $Fr_2$ |  |  |  |
|----------------------------------------|---------------------------------------|------|--------|------|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| [kW]                                   | [min <sup>-1</sup> ]                  |      | [Nm]   |      | [N]    |                                                                                    |                                                                                     |                                                                                     |
| 0.55                                   |                                       |      |        |      |        |                                                                                    |                                                                                     |                                                                                     |
| 80A4<br>( $n_1=1400\text{ min}^{-1}$ ) | 12                                    | 120  | 303    | 1.6  | 7764   |                                                                                    | NMGP080/090                                                                         |                                                                                     |
|                                        | 9.3                                   | 150  | 362    | 1.3  | 8180   |                                                                                    |                                                                                     |                                                                                     |
|                                        | 7.8                                   | 180  | 406    | 1    | 8180   |                                                                                    |                                                                                     |                                                                                     |
|                                        | 5.8                                   | 240  | 523    | 1.3  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 4.7                                   | 300  | 609    | 1    | 10320  |                                                                                    | NMGP080/110                                                                         |                                                                                     |
|                                        | 14                                    | 100  | 273    | 2.2  | 6487   |                                                                                    |                                                                                     |                                                                                     |
|                                        | 9.3                                   | 150  | 390    | 1.7  | 7426   |                                                                                    |                                                                                     |                                                                                     |
|                                        | 7                                     | 200  | 500    | 1.2  | 8174   |                                                                                    |                                                                                     |                                                                                     |
|                                        | 5.6                                   | 250  | 600    | 1    | 8180   |                                                                                    |                                                                                     |                                                                                     |
|                                        | 4.7                                   | 300  | 669    | 1.1  | 8180   |                                                                                    |                                                                                     |                                                                                     |
|                                        | 3.5                                   | 400  | 825    | 0.8  | 8180   |                                                                                    |                                                                                     |                                                                                     |
|                                        | 14                                    | 100  | 273    | 2.4  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 9.3                                   | 150  | 395    | 2.4  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 7                                     | 200  | 513    | 2.3  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 5.6                                   | 250  | 624    | 1.9  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 4.7                                   | 300  | 652    | 2    | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 3.5                                   | 400  | 843    | 1.4  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 2.8                                   | 500  | 1004   | 1.1  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 2.3                                   | 600  | 1205   | 1    | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 1.9                                   | 750  | 1439   | 0.9  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 1.6                                   | 900  | 1684   | 0.8  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 9.3                                   | 150  | 395    | 3.1  | 9384   |                                                                                    |                                                                                     |                                                                                     |
|                                        | 7                                     | 200  | 513    | 2.3  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 5.6                                   | 250  | 624    | 1.9  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 4.7                                   | 300  | 669    | 1.9  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 3.5                                   | 400  | 866    | 1.4  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 2.8                                   | 500  | 1177   | 1    | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 2.3                                   | 600  | 1262   | 1    | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 1.9                                   | 750  | 1519   | 0.8  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 1.6                                   | 900  | 1731   | 0.7  | 10320  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 7                                     | 200  | 513    | 3.2  | 13500  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 5.6                                   | 250  | 624    | 2.5  | 13500  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 4.7                                   | 300  | 679    | 2.6  | 13500  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 3.5                                   | 400  | 866    | 1.9  | 13500  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 2.8                                   | 500  | 1016   | 1.6  | 13500  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 1.9                                   | 750  | 1500   | 1.2  | 13500  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 1.2                                   | 1200 | 2175   | 0.8  | 13500  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 0.8                                   | 1800 | 2691   | 0.8  | 18000  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 0.6                                   | 2400 | 3246   | 0.8  | 18000  |                                                                                    |                                                                                     |                                                                                     |
|                                        | 80B6<br>( $n_1=900\text{ min}^{-1}$ ) | 120  | 7.5    | 39   | 2.2    |                                                                                    | 2091                                                                                | NMG050                                                                              |
| 90                                     |                                       | 10   | 50     | 1.7  | 2302   |                                                                                    |                                                                                     |                                                                                     |
| 60                                     |                                       | 15   | 70     | 1.2  | 2635   |                                                                                    |                                                                                     |                                                                                     |
| 45                                     |                                       | 20   | 91     | 0.9  | 2900   |                                                                                    |                                                                                     |                                                                                     |
| 90                                     |                                       | 10   | 51     | 3.1  | 3009   | NMG063                                                                             |                                                                                     |                                                                                     |
| 60                                     |                                       | 15   | 72     | 2.2  | 3444   |                                                                                    |                                                                                     |                                                                                     |
| 45                                     |                                       | 20   | 92     | 1.6  | 3791   |                                                                                    |                                                                                     |                                                                                     |
| 36                                     |                                       | 25   | 111    | 1.3  | 4084   |                                                                                    |                                                                                     |                                                                                     |
| 30                                     |                                       | 30   | 125    | 1.4  | 4339   |                                                                                    |                                                                                     |                                                                                     |
| 23                                     |                                       | 40   | 155    | 1.1  | 4776   |                                                                                    |                                                                                     |                                                                                     |
| 18                                     |                                       | 50   | 185    | 0.9  | 5145   |                                                                                    |                                                                                     |                                                                                     |
| 15                                     |                                       | 60   | 211    | 0.7  | 5467   |                                                                                    |                                                                                     |                                                                                     |

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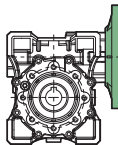
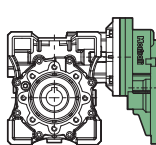
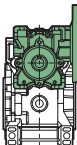
## Gearmotors technical data

| $Pn_1$                                 | $n_2$                | $i$ | $Mn_2$ | $fs$ | $Fr_2$ |  |  |  |        |  |  |
|----------------------------------------|----------------------|-----|--------|------|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|--|--|
| [kW]                                   | [min <sup>-1</sup> ] |     | [Nm]   |      | [N]    |                                                                                     |                                                                                     |                                                                                     |        |  |  |
| 0.55                                   |                      |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |        |  |  |
| 80B6<br>( $n_1=900\text{ min}^{-1}$ )  | 45                   | 20  | 95     | 2.9  | 4474   | NMG075                                                                              |                                                                                     |                                                                                     |        |  |  |
|                                        | 36                   | 25  | 126    | 2.1  | 4820   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 30                   | 30  | 131    | 2    | 5122   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 23                   | 40  | 162    | 1.5  | 5637   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 18                   | 50  | 191    | 1.2  | 6073   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 15                   | 60  | 218    | 1    | 6453   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 11                   | 80  | 267    | 0.8  | 7103   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 36                   | 25  | 119    | 3.5  | 5333   | NMG090                                                                              |                                                                                     |                                                                                     |        |  |  |
|                                        | 23                   | 40  | 171    | 2.7  | 6238   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 18                   | 50  | 202    | 2    | 6719   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 15                   | 60  | 228    | 1.6  | 7140   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 11                   | 80  | 281    | 1.1  | 7859   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 9                    | 100 | 321    | 0.9  | 8180   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 15                   | 60  | 247    | 2.8  | 9023   |                                                                                     |                                                                                     |                                                                                     | NMG110 |  |  |
|                                        | 11                   | 80  | 300    | 1.9  | 9931   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 9                    | 100 | 345    | 1.5  | 10320  |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 12                   | 75  | 312    | 1.1  | 6952   | NMGP080/075                                                                         |                                                                                     |                                                                                     |        |  |  |
|                                        | 10                   | 90  | 348    | 1.1  | 7380   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 7.5                  | 120 | 450    | 1.4  | 8180   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 6                    | 150 | 526    | 1.1  | 8180   | NMGP080/090                                                                         |                                                                                     |                                                                                     |        |  |  |
|                                        | 5                    | 180 | 590    | 0.9  | 8180   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 3.8                  | 240 | 771    | 1.1  | 10320  | NMGP080/110                                                                         |                                                                                     |                                                                                     |        |  |  |
|                                        |                      |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |        |  |  |
| 0.75                                   |                      |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |        |  |  |
| 80A2<br>( $n_1=2800\text{ min}^{-1}$ ) | 373                  | 7.5 | 17     | 3    | 1433   | NMG050                                                                              |                                                                                     |                                                                                     |        |  |  |
|                                        | 280                  | 10  | 22     | 2.4  | 1577   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 187                  | 15  | 32     | 1.7  | 1805   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 140                  | 20  | 42     | 1.3  | 1987   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 112                  | 25  | 50     | 1    | 2140   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 93                   | 30  | 57     | 1.1  | 2274   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 187                  | 15  | 34     | 3.3  | 2359   | NMG063                                                                              |                                                                                     |                                                                                     |        |  |  |
|                                        | 140                  | 20  | 44     | 2.3  | 2597   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 112                  | 25  | 53     | 1.8  | 2797   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 93                   | 30  | 61     | 2    | 2973   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 70                   | 40  | 79     | 1.4  | 3272   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 56                   | 50  | 94     | 1.1  | 3524   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 47                   | 60  | 108    | 0.9  | 3745   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 112                  | 25  | 55     | 2.9  | 3302   | NMG075                                                                              |                                                                                     |                                                                                     |        |  |  |
|                                        | 93                   | 30  | 63     | 3    | 3509   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 70                   | 40  | 82     | 2.3  | 3862   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 56                   | 50  | 98     | 1.7  | 4160   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 47                   | 60  | 109    | 1.3  | 4421   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 35                   | 80  | 138    | 1    | 4865   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 28                   | 100 | 162    | 0.8  | 5241   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 70                   | 40  | 84     | 3.4  | 4273   | NMG090                                                                              |                                                                                     |                                                                                     |        |  |  |
|                                        | 56                   | 50  | 101    | 2.7  | 4603   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 47                   | 60  | 117    | 2.1  | 4891   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 35                   | 80  | 146    | 1.6  | 5383   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        | 28                   | 100 | 172    | 1.2  | 5799   |                                                                                     |                                                                                     |                                                                                     |        |  |  |
|                                        |                      |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |        |  |  |



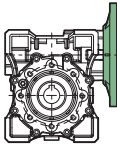
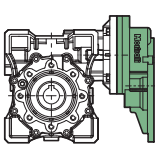
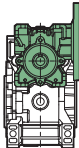
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$<br>[kW]                            | $n_2$<br>[min <sup>-1</sup> ] | i   | $Mn_2$<br>[Nm] | fs  | $Fr_2$<br>[N] |  |  |  |
|-------------------------------------------|-------------------------------|-----|----------------|-----|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| 0.75                                      |                               |     |                |     |               |                                                                                     |                                                                                     |                                                                                     |
| 80A2<br>( $n_1$ =2800 min <sup>-1</sup> ) | 35                            | 80  | 155            | 2.6 | 6803          | NMG110                                                                              |                                                                                     | NMGD040/090                                                                         |
|                                           | 28                            | 100 | 183            | 2.1 | 7328          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 7                             | 400 | 522            | 1.1 | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 5.6                           | 500 | 613            | 0.9 | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 9.3                           | 300 | 432            | 2.8 | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                           | 7                             | 400 | 564            | 2.1 | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                           | 5.6                           | 500 | 653            | 1.6 | 10320         |                                                                                     |                                                                                     | NMGD050/110                                                                         |
| 80B4<br>( $n_1$ =1400 min <sup>-1</sup> ) | 280                           | 5   | 23             | 2.7 | 1577          | NMG050                                                                              |                                                                                     |                                                                                     |
|                                           | 187                           | 7.5 | 35             | 2.1 | 1805          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 140                           | 10  | 45             | 1.6 | 1987          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 93                            | 15  | 64             | 1.2 | 2274          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 70                            | 20  | 83             | 0.9 | 2503          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 56                            | 25  | 101            | 0.7 | 2696          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 47                            | 30  | 114            | 0.8 | 2865          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 140                           | 10  | 46             | 3   | 2567          | NMG063                                                                              |                                                                                     |                                                                                     |
|                                           | 93                            | 15  | 65             | 2.2 | 2973          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 70                            | 20  | 85             | 1.6 | 3272          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 56                            | 25  | 102            | 1.3 | 3524          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 47                            | 30  | 116            | 1.4 | 3745          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 35                            | 40  | 146            | 1   | 4122          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 28                            | 50  | 174            | 0.8 | 4440          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 93                            | 15  | 67             | 3.5 | 3509          | NMG075                                                                              |                                                                                     |                                                                                     |
|                                           | 70                            | 20  | 87             | 2.8 | 3862          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 56                            | 25  | 104            | 2   | 4160          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 47                            | 30  | 119            | 2   | 4421          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 35                            | 40  | 150            | 1.5 | 4865          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 28                            | 50  | 181            | 1.2 | 5241          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 23                            | 60  | 204            | 1   | 5569          | NMG090                                                                              |                                                                                     |                                                                                     |
|                                           | 18                            | 80  | 255            | 0.8 | 6130          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 35                            | 40  | 159            | 3   | 5383          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 28                            | 50  | 188            | 1.8 | 5800          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 23                            | 60  | 216            | 1.5 | 6163          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 18                            | 80  | 263            | 1.1 | 6783          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 14                            | 100 | 308            | 0.9 | 7306          | NMG110                                                                              |                                                                                     |                                                                                     |
|                                           | 28                            | 50  | 198            | 3.4 | 7328          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 23                            | 60  | 232            | 2.7 | 7787          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 18                            | 80  | 279            | 1.9 | 8571          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 14                            | 100 | 328            | 1.5 | 9232          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 19                            | 75  | 286            | 0.9 | 6000          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 16                            | 90  | 319            | 1   | 6375          | NMGP080/075                                                                         |                                                                                     |                                                                                     |
|                                           | 12                            | 120 | 413            | 1.2 | 7764          | NMGP080/090                                                                         |                                                                                     |                                                                                     |
|                                           | 9.3                           | 150 | 493            | 0.9 | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 7.8                           | 180 | 554            | 0.7 | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 5.8                           | 240 | 714            | 0.9 | 10320         | NMGP080/110                                                                         |                                                                                     |                                                                                     |
|                                           | 14                            | 100 | 372            | 1.6 | 6487          | NMGD050/090                                                                         |                                                                                     |                                                                                     |
|                                           | 9.3                           | 150 | 531            | 1.3 | 7426          |                                                                                     |                                                                                     |                                                                                     |
|                                           | 7                             | 200 | 681            | 0.9 | 8174          |                                                                                     |                                                                                     |                                                                                     |

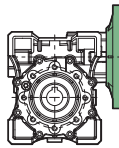
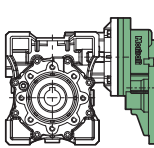
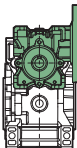
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$<br>[kW]                                   | $n_2$<br>[min <sup>-1</sup> ] | $i$  | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|--------------------------------------------------|-------------------------------|------|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>0.75</b>                                      |                               |      |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>80B4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>5.6</b>                    | 250  | 817            | 0.7  | 8180          |                                                                                     |                                                                                     | <b>NMGD050/090</b>                                                                  |
|                                                  | <b>4.7</b>                    | 300  | 913            | 0.8  | 8180          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100  | 372            | 1.8  | 8198          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150  | 538            | 1.8  | 9384          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 699            | 1.7  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 852            | 1.4  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 888            | 1.5  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 1149           | 1.1  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 1566           | 0.8  | 10320         |                                                                                     |                                                                                     | <b>NMGD050/110</b>                                                                  |
|                                                  | <b>2.3</b>                    | 600  | 1678           | 0.8  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100  | 372            | 3    | 8198          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150  | 538            | 2.3  | 9384          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 699            | 1.7  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 852            | 1.4  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 913            | 1.4  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 1180           | 1    | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 1604           | 0.7  | 10320         |                                                                                     |                                                                                     | <b>NMGD063/110</b>                                                                  |
|                                                  | <b>2.3</b>                    | 600  | 1720           | 0.8  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>14</b>                     | 100  | 376            | 3    | 10722         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.3</b>                    | 150  | 531            | 3    | 12274         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 699            | 2.3  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 852            | 1.8  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 926            | 1.9  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 1180           | 1.4  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.8</b>                    | 500  | 1385           | 1.1  | 13500         |                                                                                     |                                                                                     | <b>NMGD063/130</b>                                                                  |
|                                                  | <b>2.3</b>                    | 600  | 1664           | 1    | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 2045           | 0.9  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 2329           | 0.8  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7</b>                      | 200  | 699            | 3    | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 250  | 852            | 2.5  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>4.7</b>                    | 300  | 1013           | 2.3  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>3.5</b>                    | 400  | 1199           | 2.3  | 18000         |                                                                                     |                                                                                     | <b>NMGD063/150</b>                                                                  |
|                                                  | <b>2.8</b>                    | 500  | 1317           | 1.8  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>2.3</b>                    | 600  | 1560           | 1.7  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.9</b>                    | 750  | 1819           | 1.3  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.6</b>                    | 900  | 2259           | 0.9  | 18000         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>1.2</b>                    | 1200 | 2734           | 1    | 18000         |                                                                                     |                                                                                     |                                                                                     |
| <b>90S6</b><br>( $n_1 = 900 \text{ min}^{-1}$ )  | <b>120</b>                    | 7.5  | 53             | 2.9  | 2734          | <b>NMG063</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>90</b>                     | 10   | 69             | 2.3  | 3009          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>60</b>                     | 15   | 99             | 1.6  | 3444          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>45</b>                     | 20   | 125            | 1.2  | 3791          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>36</b>                     | 25   | 152            | 0.9  | 4084          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>30</b>                     | 30   | 170            | 1    | 4339          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 40   | 214            | 0.8  | 4776          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>60</b>                     | 15   | 100            | 2.4  | 4065          | <b>NMG075</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>45</b>                     | 20   | 129            | 1.9  | 4474          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>36</b>                     | 25   | 156            | 1.4  | 4820          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>30</b>                     | 30   | 177            | 1.5  | 5122          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 40   | 220            | 1.1  | 5637          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 50   | 260            | 1    | 6073          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>15</b>                     | 60   | 302            | 0.8  | 6453          |                                                                                     |                                                                                     |                                                                                     |

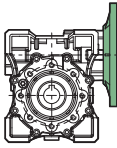
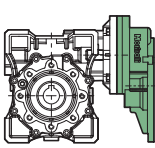
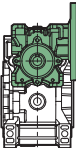
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## Gearmotors technical data

| $Pn_1$                                   | $n_2$                                     | i     | $Mn_2$ | fs  | $Fr_2$ |  |  |  |        |  |  |
|------------------------------------------|-------------------------------------------|-------|--------|-----|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|--|--|
| [kW]                                     | [min <sup>-1</sup> ]                      |       | [Nm]   |     | [N]    |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 0.75                                     |                                           |       |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 90S6<br>( $n_1 = 900 \text{ min}^{-1}$ ) | 30                                        | 30    | 183    | 2.6 | 5667   | NMG090                                                                             |                                                                                     |                                                                                     |        |  |  |
|                                          | 23                                        | 40    | 231    | 1.8 | 6238   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 18                                        | 50    | 276    | 1.4 | 6719   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 15                                        | 60    | 312    | 1.1 | 7140   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 23                                        | 40    | 244    | 3.3 | 9931   | NMG110                                                                             |                                                                                     |                                                                                     |        |  |  |
|                                          | 18                                        | 50    | 293    | 2.6 | 10320  |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 15                                        | 60    | 332    | 2.1 | 9023   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 11                                        | 80    | 409    | 1.4 | 9931   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 9                                         | 100   | 471    | 1.1 | 10320  |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 11                                        | 80    | 415    | 2.1 | 12989  | NMG130                                                                             |                                                                                     |                                                                                     |        |  |  |
|                                          | 9                                         | 100   | 479    | 1.7 | 13500  |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 12                                        | 73.5  | 401    | 3.2 | 9614   | NMGP090/110                                                                        |                                                                                     |                                                                                     |        |  |  |
|                                          | 9.2                                       | 98    | 518    | 2.3 | 10320  |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 7.3                                       | 122.5 | 619    | 1.8 | 10320  |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 6.1                                       | 147   | 696    | 1.5 | 10320  |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 4.6                                       | 196   | 849    | 1.0 | 10320  |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 3.7                                       | 245   | 963    | 1.2 | 13500  | NMGP090/130                                                                        |                                                                                     |                                                                                     |        |  |  |
|                                          | 1.10                                      |       |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |  |  |
|                                          | 80B2<br>( $n_1 = 2800 \text{ min}^{-1}$ ) | 373   | 7.5    | 26  | 2.1    | 1433                                                                               |                                                                                     |                                                                                     | NMG050 |  |  |
|                                          |                                           | 280   | 10     | 34  | 1.7    | 1577                                                                               |                                                                                     |                                                                                     |        |  |  |
|                                          |                                           | 187   | 15     | 49  | 1.2    | 1805                                                                               |                                                                                     |                                                                                     |        |  |  |
| 140                                      |                                           | 20    | 63     | 0.9 | 1987   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 93                                       |                                           | 30    | 89     | 0.7 | 2274   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 280                                      |                                           | 10    | 34     | 3   | 2061   | NMG063                                                                             |                                                                                     |                                                                                     |        |  |  |
| 187                                      |                                           | 15    | 47     | 2.1 | 2359   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 140                                      |                                           | 20    | 61     | 1.6 | 2597   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 112                                      |                                           | 25    | 73     | 1.2 | 2797   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 93                                       |                                           | 30    | 84     | 1.4 | 2973   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 70                                       |                                           | 40    | 106    | 1   | 3272   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 187                                      |                                           | 15    | 51     | 3.3 | 2785   | NMG075                                                                             |                                                                                     |                                                                                     |        |  |  |
| 140                                      |                                           | 20    | 66     | 2.7 | 3065   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 112                                      |                                           | 25    | 79     | 2   | 3302   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 93                                       |                                           | 30    | 91     | 1.9 | 3509   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 70                                       |                                           | 40    | 116    | 1.4 | 3862   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 56                                       |                                           | 50    | 140    | 1.1 | 4160   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 47                                       |                                           | 60    | 161    | 0.9 | 4421   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 35                                       |                                           | 80    | 205    | 0.7 | 4865   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 112                                      |                                           | 25    | 83     | 3.1 | 3653   | NMG090                                                                             |                                                                                     |                                                                                     |        |  |  |
| 93                                       |                                           | 30    | 95     | 3.3 | 3882   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 70                                       |                                           | 40    | 122    | 2.3 | 4273   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 56                                       |                                           | 50    | 148    | 1.8 | 4603   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 47                                       |                                           | 60    | 172    | 1.5 | 4891   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 35                                       |                                           | 80    | 214    | 1.1 | 5383   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 28                                       |                                           | 100   | 253    | 0.8 | 5799   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 56                                       |                                           | 50    | 153    | 3.3 | 5816   | NMG110                                                                             |                                                                                     |                                                                                     |        |  |  |
| 47                                       |                                           | 60    | 180    | 2.7 | 6181   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 35                                       |                                           | 80    | 226    | 1.8 | 6803   |                                                                                    |                                                                                     |                                                                                     |        |  |  |
| 28                                       |                                           | 100   | 268    | 1.4 | 7328   |                                                                                    |                                                                                     |                                                                                     |        |  |  |

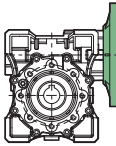
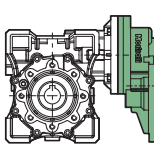
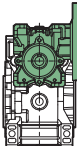
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## Gearmotors technical data

| $Pn_1$<br>[kW]                                   | $n_2$<br>[min <sup>-1</sup> ] | $i$   | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|--------------------------------------------------|-------------------------------|-------|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>1.10</b>                                      |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>80B2</b><br>( $n_1 = 2800 \text{ min}^{-1}$ ) | <b>9.3</b>                    | 300   | 633            | 1.9  | 10320         |                                                                                     |                                                                                     | <b>NMGD050/110</b>                                                                  |
|                                                  | <b>7</b>                      | 400   | 826            | 1.4  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>5.6</b>                    | 500   | 957            | 1.1  | 10320         |                                                                                     |                                                                                     |                                                                                     |
| <b>90L6</b><br>( $n_1 = 900 \text{ min}^{-1}$ )  | <b>120</b>                    | 7.5   | 78             | 2    | 2734          | <b>NMG063</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>90</b>                     | 10    | 101            | 1.5  | 3009          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>60</b>                     | 15    | 145            | 1.1  | 3444          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>45</b>                     | 20    | 184            | 0.8  | 3791          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>120</b>                    | 7.5   | 79             | 2.8  | 3227          | <b>NMG075</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>90</b>                     | 10    | 102            | 2.3  | 3551          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>60</b>                     | 15    | 147            | 1.6  | 4065          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>45</b>                     | 20    | 188            | 1.3  | 4474          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>36</b>                     | 25    | 230            | 1    | 4820          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>30</b>                     | 30    | 261            | 1    | 5122          | <b>NMG090</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 40    | 328            | 0.9  | 5637          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>60</b>                     | 15    | 152            | 3.1  | 4498          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>45</b>                     | 20    | 199            | 2.2  | 4951          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>36</b>                     | 25    | 236            | 1.6  | 5333          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>30</b>                     | 30    | 268            | 1.8  | 5667          | <b>NMG110</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 40    | 338            | 1.2  | 6238          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 50    | 405            | 1    | 6719          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>15</b>                     | 60    | 457            | 0.8  | 7140          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>36</b>                     | 25    | 244            | 3.2  | 6739          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>30</b>                     | 30    | 275            | 3.1  | 7161          | <b>NMG130</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 40    | 352            | 2.3  | 7882          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>18</b>                     | 50    | 422            | 1.8  | 8491          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>15</b>                     | 60    | 486            | 1.4  | 9023          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>11</b>                     | 80    | 600            | 1    | 9931          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>11</b>                     | 80    | 610            | 1.4  | 12989         | <b>NMG130</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>9</b>                      | 100   | 700            | 1.1  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>12</b>                     | 73.5  | 588            | 2.2  | 9614          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>9.2</b>                    | 98    | 761            | 1.6  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>7.3</b>                    | 122.5 | 908            | 1.2  | 10320         |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>6.1</b>                    | 147   | 1020           | 1    | 10320         |                                                                                     |                                                                                     |                                                                                     |
| <b>90S4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>187</b>                    | 7.5   | 51             | 2.6  | 2359          | <b>NMG063</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>140</b>                    | 10    | 66             | 2    | 2597          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>93</b>                     | 15    | 95             | 1.5  | 2973          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 20    | 124            | 1.1  | 3272          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 25    | 149            | 0.9  | 3524          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 30    | 170            | 1    | 3745          | <b>NMG075</b>                                                                       |                                                                                     |                                                                                     |
|                                                  | <b>140</b>                    | 10    | 67             | 3    | 3065          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>93</b>                     | 15    | 98             | 2.1  | 3509          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>70</b>                     | 20    | 125            | 1.7  | 3862          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>56</b>                     | 25    | 153            | 1.3  | 4160          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>47</b>                     | 30    | 174            | 1.3  | 4421          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>35</b>                     | 40    | 220            | 1    | 4865          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>28</b>                     | 50    | 268            | 0.9  | 5241          |                                                                                     |                                                                                     |                                                                                     |
|                                                  | <b>23</b>                     | 60    | 303            | 0.7  | 5569          |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |
|                                                  |                               |       |                |      |               |                                                                                     |                                                                                     |                                                                                     |

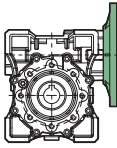
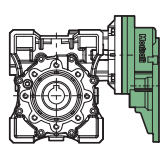
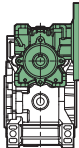
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| $Pn_1$                                  | $n_2$                | i     | $Mn_2$ | fs  | $Fr_2$ |  |  |  |             |  |
|-----------------------------------------|----------------------|-------|--------|-----|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------|--|
| [kW]                                    | [min <sup>-1</sup> ] |       | [Nm]   |     | [N]    |                                                                                     |                                                                                     |                                                                                     |             |  |
| 1.10                                    |                      |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |             |  |
| 90S4<br>( $n_1=1400\text{ min}^{-1}$ )  | 70                   | 20    | 131    | 3.1 | 4273   | NMG090                                                                              |                                                                                     |                                                                                     |             |  |
|                                         | 56                   | 25    | 159    | 2.4 | 4603   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 47                   | 30    | 182    | 2.4 | 4891   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 35                   | 40    | 230    | 1.6 | 5383   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 28                   | 50    | 275    | 1.3 | 5799   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 23                   | 60    | 317    | 1   | 6163   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 18                   | 80    | 392    | 1   | 6783   | NMG110                                                                              |                                                                                     |                                                                                     |             |  |
|                                         | 35                   | 40    | 242    | 3   | 6803   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 28                   | 50    | 287    | 2.3 | 7328   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 23                   | 60    | 330    | 1.9 | 7787   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 18                   | 80    | 410    | 1.3 | 8571   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 14                   | 100   | 482    | 1   | 9232   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 18                   | 80    | 416    | 2.1 | 11210  | NMG130                                                                              |                                                                                     |                                                                                     | NMGP090/110 |  |
|                                         | 14                   | 100   | 490    | 1.5 | 12076  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 19                   | 73.50 | 400    | 2.5 | 8298   | NMGP090/130                                                                         |                                                                                     |                                                                                     |             |  |
|                                         | 14                   | 98    | 518    | 1.8 | 9133   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 11                   | 122.5 | 611    | 1.5 | 9838   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 9.5                  | 147   | 700    | 1.1 | 10320  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 7.1                  | 196   | 845    | 0.8 | 10320  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 5.7                  | 245   | 981    | 0.9 | 13500  | NMGD063/110                                                                         |                                                                                     |                                                                                     |             |  |
|                                         | 14                   | 100   | 546    | 2.1 | 8198   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 9.3                  | 150   | 789    | 1.5 | 9384   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 7                    | 200   | 1025   | 1.1 | 10320  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 5.6                  | 250   | 1248   | 1   | 10320  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 4.7                  | 300   | 1338   | 1   | 10320  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 14                   | 100   | 553    | 2.1 | 10722  |                                                                                     |                                                                                     |                                                                                     | NMGD063/130 |  |
|                                         | 9.3                  | 150   | 779    | 2.1 | 12274  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 7                    | 200   | 1025   | 1.6 | 13500  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 5.6                  | 250   | 1248   | 1.2 | 13500  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 4.7                  | 300   | 1338   | 1.3 | 13500  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 3.5                  | 400   | 1704   | 1   | 13500  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 2.8                  | 500   | 2031   | 0.8 | 13500  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 2.3                  | 600   | 2560   | 0.7 | 13500  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 9.3                  | 150   | 768    | 3.1 | 18000  | NMGD063/150                                                                         |                                                                                     |                                                                                     |             |  |
|                                         | 7                    | 200   | 985    | 2.4 | 18000  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 5.6                  | 250   | 1199   | 1.7 | 18000  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 4.7                  | 300   | 1391   | 1.7 | 18000  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 3.5                  | 400   | 1651   | 1.6 | 18000  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 2.8                  | 500   | 1931   | 1.2 | 18000  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 2.3                  | 600   | 2287   | 1.2 | 18000  |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 1.9                  | 750   | 2668   | 0.9 | 18000  |                                                                                     |                                                                                     |                                                                                     |             |  |
| 1.50                                    |                      |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |             |  |
| 100LA6<br>( $n_1=900\text{ min}^{-1}$ ) | 120                  | 7.5   | 107    | 2   | 3227   |                                                                                     |                                                                                     | NMG075                                                                              |             |  |
|                                         | 90                   | 10    | 140    | 1.7 | 3551   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 60                   | 15    | 200    | 1.2 | 4065   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 45                   | 20    | 260    | 1.1 | 4474   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 36                   | 25    | 317    | 0.8 | 4820   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 30                   | 30    | 361    | 0.8 | 5122   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 90                   | 10    | 141    | 2.7 | 3929   | NMG090                                                                              |                                                                                     |                                                                                     |             |  |
|                                         | 60                   | 15    | 205    | 2.1 | 4498   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         | 45                   | 20    | 263    | 1.5 | 4951   |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         |                      |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         |                      |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         |                      |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         |                      |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         |                      |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         |                      |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         |                      |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         |                      |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |             |  |
|                                         |                      |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |             |  |

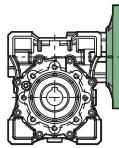
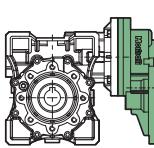
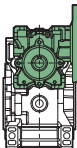
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$<br>[kW]                                    | $n_2$<br>[min <sup>-1</sup> ] | $i$ | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|---------------------------------------------------|-------------------------------|-----|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>1.50</b>                                       |                               |     |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>100LA6</b><br>( $n_1 = 900 \text{ min}^{-1}$ ) | <b>36</b>                     | 25  | 320            | 1.2  | 5333          | <b>NMG090</b>                                                                       |                                                                                     |                                                                                     |
|                                                   | <b>30</b>                     | 30  | 365            | 1.3  | 5667          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>23</b>                     | 40  | 468            | 1    | 6238          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>45</b>                     | 20  | 269            | 2.7  | 6256          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>36</b>                     | 25  | 328            | 2.4  | 6739          | <b>NMG110</b>                                                                       |                                                                                     |                                                                                     |
|                                                   | <b>30</b>                     | 30  | 370            | 2.3  | 7161          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>23</b>                     | 40  | 480            | 1.7  | 7882          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>18</b>                     | 50  | 576            | 1.3  | 8491          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>15</b>                     | 60  | 662            | 1.1  | 9023          | <b>NMG130</b>                                                                       |                                                                                     |                                                                                     |
|                                                   | <b>36</b>                     | 25  | 337            | 3.2  | 8814          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>30</b>                     | 30  | 385            | 3.1  | 9366          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>23</b>                     | 40  | 488            | 2.3  | 10309         |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>18</b>                     | 50  | 584            | 1.8  | 11105         |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>15</b>                     | 60  | 672            | 1.4  | 11801         |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>11</b>                     | 80  | 831            | 1.1  | 12989         |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>9</b>                      | 100 | 974            | 0.8  | 13500         |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>18</b>                     | 50  | 601            | 2.7  | 15182         | <b>NMG150</b>                                                                       |                                                                                     |                                                                                     |
|                                                   | <b>15</b>                     | 60  | 692            | 2.1  | 16133         |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>11</b>                     | 80  | 858            | 1.5  | 17757         |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>9</b>                      | 100 | 990            | 1.2  | 18000         |                                                                                     |                                                                                     |                                                                                     |
| <b>80C2</b><br>( $n_1 = 2800 \text{ min}^{-1}$ )  | <b>373</b>                    | 7.5 | 35             | 1.5  | 1433          | <b>NMG050</b>                                                                       |                                                                                     |                                                                                     |
|                                                   | <b>280</b>                    | 10  | 46             | 1.2  | 1577          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>187</b>                    | 15  | 66             | 0.9  | 1805          |                                                                                     |                                                                                     |                                                                                     |
| <b>90L4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ )  | <b>187</b>                    | 7.5 | 69             | 1.9  | 2359          | <b>NMG063</b>                                                                       |                                                                                     |                                                                                     |
|                                                   | <b>140</b>                    | 10  | 91             | 1.5  | 2597          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>93</b>                     | 15  | 130            | 1.1  | 2973          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>70</b>                     | 20  | 169            | 0.8  | 3272          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>187</b>                    | 7.5 | 69             | 2.7  | 2785          | <b>NMG075</b>                                                                       |                                                                                     |                                                                                     |
|                                                   | <b>140</b>                    | 10  | 92             | 2.2  | 3065          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>93</b>                     | 15  | 133            | 1.5  | 3509          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>70</b>                     | 20  | 171            | 1.3  | 3862          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>56</b>                     | 25  | 209            | 1    | 4160          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>47</b>                     | 30  | 238            | 1    | 4421          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>35</b>                     | 40  | 305            | 0.8  | 4865          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>93</b>                     | 15  | 137            | 3    | 3882          | <b>NMG090</b>                                                                       |                                                                                     |                                                                                     |
|                                                   | <b>70</b>                     | 20  | 175            | 2.1  | 4273          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>56</b>                     | 25  | 214            | 1.6  | 4603          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>47</b>                     | 30  | 244            | 1.7  | 4891          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>35</b>                     | 40  | 313            | 1.2  | 5383          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>28</b>                     | 50  | 375            | 0.9  | 5799          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>23</b>                     | 60  | 432            | 0.8  | 6163          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>56</b>                     | 25  | 222            | 3.1  | 5816          | <b>NMG110</b>                                                                       |                                                                                     |                                                                                     |
|                                                   | <b>47</b>                     | 30  | 251            | 3    | 6181          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>35</b>                     | 40  | 325            | 2.2  | 6803          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>28</b>                     | 50  | 392            | 1.7  | 7328          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>23</b>                     | 60  | 451            | 1.4  | 7787          | <b>NMG130</b>                                                                       |                                                                                     |                                                                                     |
|                                                   | <b>18</b>                     | 80  | 559            | 0.9  | 8571          |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>18</b>                     | 80  | 568            | 1.5  | 11210         |                                                                                     |                                                                                     |                                                                                     |
|                                                   | <b>14</b>                     | 100 | 668            | 1.1  | 12076         |                                                                                     |                                                                                     |                                                                                     |

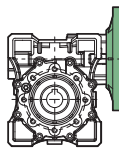
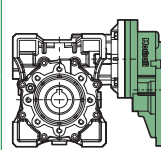
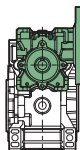
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$                                    | $n_2$                | i     | $Mn_2$ | fs    | $Fr_2$ |  |  |  |             |             |
|-------------------------------------------|----------------------|-------|--------|-------|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------|-------------|
| [kW]                                      | [min <sup>-1</sup> ] |       | [Nm]   |       | [N]    |                                                                                    |                                                                                     |                                                                                     |             |             |
| 1.50                                      |                      |       |        |       |        |                                                                                    |                                                                                     |                                                                                     |             |             |
| 90L4<br>( $n_1$ =1400 min <sup>-1</sup> ) | 19                   | 73.5  | 546    | 1.9   | 8298   |                                                                                    | NMGP090/110                                                                         |                                                                                     |             |             |
|                                           | 14                   | 98    | 707    | 1.3   | 9133   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 11                   | 122.5 | 833    | 1.1   | 9838   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 9.5                  | 147   | 955    | 0.8   | 10320  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           |                      |       |        |       |        |                                                                                    |                                                                                     |                                                                                     | NMGP090/130 | NMGD063/110 |
|                                           | 7.1                  | 196   | 1172   | 0.8   | 13500  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 5.7                  | 245   | 981    | 0.9   | 13500  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 14                   | 100   | 745    | 1.5   | 8198   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 9.3                  | 150   | 1076   | 1.1   | 9384   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 7                    | 200   | 1398   | 0.8   | 10320  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 5.6                  | 250   | 1702   | 0.7   | 10320  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 4.7                  | 300   | 1825   | 0.7   | 10320  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           |                      |       |        |       |        |                                                                                    | NMGD063/130                                                                         |                                                                                     |             |             |
|                                           | 14                   | 100   | 754    | 1.5   | 10722  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 9.3                  | 150   | 1063   | 1.5   | 12274  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 7                    | 200   | 1398   | 1.2   | 13500  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 5.6                  | 250   | 1702   | 0.9   | 13500  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 4.7                  | 300   | 1825   | 1     | 13500  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 3.5                  | 400   | 2325   | 0.7   | 13500  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           |                      |       |        |       |        |                                                                                    |                                                                                     | NMGD063/150                                                                         |             |             |
|                                           | 9.3                  | 150   | 1047   | 2.3   | 18000  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 7                    | 200   | 1343   | 1.8   | 18000  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 5.6                  | 250   | 1634   | 1.3   | 18000  |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 4.7                  | 300   | 1897   | 1.3   | 18000  |                                                                                    |                                                                                     |                                                                                     |             |             |
| 3.5                                       | 400                  | 2252  | 1.2    | 18000 |        |                                                                                    |                                                                                     |                                                                                     |             |             |
| 2.8                                       | 500                  | 2634  | 0.9    | 18000 |        |                                                                                    |                                                                                     |                                                                                     |             |             |
| 2.3                                       | 600                  | 3118  | 0.9    | 18000 |        |                                                                                    |                                                                                     |                                                                                     |             |             |
| 90S2<br>( $n_1$ =2800 min <sup>-1</sup> ) | 373                  | 7.5   | 36     | 2.7   | 1873   | NMG063                                                                             |                                                                                     |                                                                                     |             |             |
|                                           | 280                  | 10    | 46     | 2.2   | 2061   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 187                  | 15    | 67     | 1.6   | 2359   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 140                  | 20    | 88     | 1.2   | 2597   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 112                  | 25    | 107    | 0.9   | 2797   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 93                   | 30    | 122    | 1     | 2973   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 70                   | 40    | 159    | 0.7   | 3272   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 280                  | 10    | 46     | 3.2   | 2433   | NMG075                                                                             |                                                                                     |                                                                                     |             |             |
|                                           | 187                  | 15    | 67     | 2.3   | 2785   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 140                  | 20    | 88     | 1.9   | 3065   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 112                  | 25    | 107    | 1.4   | 3302   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 93                   | 30    | 123    | 1.4   | 3509   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 70                   | 40    | 159    | 1.1   | 3862   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 56                   | 50    | 191    | 1.3   | 4160   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 47                   | 60    | 219    | 1.1   | 4421   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 140                  | 20    | 92     | 2.9   | 3391   | NMG090                                                                             |                                                                                     |                                                                                     |             |             |
|                                           | 112                  | 25    | 112    | 2.3   | 3653   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 93                   | 30    | 130    | 2.4   | 3882   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 70                   | 40    | 167    | 1.7   | 4273   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 56                   | 50    | 201    | 1.3   | 4603   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 47                   | 60    | 232    | 1.1   | 4891   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 35                   | 80    | 293    | 0.8   | 5383   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 70                   | 40    | 173    | 3.1   | 5399   | NMG110                                                                             |                                                                                     |                                                                                     |             |             |
|                                           | 56                   | 50    | 209    | 2.4   | 5816   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 47                   | 60    | 241    | 2     | 6181   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 35                   | 80    | 305    | 1.3   | 6803   |                                                                                    |                                                                                     |                                                                                     |             |             |
|                                           | 28                   | 100   | 365    | 1     | 7328   |                                                                                    |                                                                                     |                                                                                     |             |             |

## Dati tecnici motoriduttore

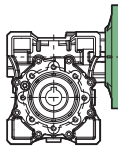
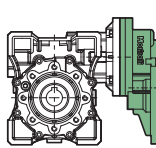
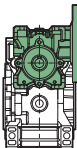
## Gearmotors technical data

| $Pn_1$                                   | $n_2$                                  | i   | $Mn_2$ | fs  | $Fr_2$ |  |  |  |        |        |  |  |
|------------------------------------------|----------------------------------------|-----|--------|-----|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|--------|--|--|
| [kW]                                     | [min <sup>-1</sup> ]                   |     | [Nm]   |     | [N]    |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
| 1.50                                     |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
| 90S2<br>( $n_1=2800\text{ min}^{-1}$ )   | 9.3                                    | 300 | 864    | 1.4 | 10320  |                                                                                    |                                                                                     | NMGD050/110                                                                         |        |        |  |  |
|                                          | 7                                      | 400 | 1127   | 1   | 10320  |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 5.6                                    | 500 | 1305   | 0.8 | 10320  |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 9.3                                    | 300 | 896    | 1.9 | 13500  |                                                                                    |                                                                                     | NMGD063/130                                                                         |        |        |  |  |
|                                          | 7                                      | 400 | 1127   | 1.4 | 13500  |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 5.6                                    | 500 | 1331   | 1.1 | 13500  |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
| 2.20                                     |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
| 100LA4<br>( $n_1=1400\text{ min}^{-1}$ ) | 187                                    | 7.5 | 102    | 1.8 | 2785   | NMG075                                                                             |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 140                                    | 10  | 135    | 1.5 | 3065   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 93                                     | 15  | 195    | 1   | 3509   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 70                                     | 20  | 254    | 0.9 | 3862   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 56                                     | 25  | 310    | 0.7 | 4160   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 47                                     | 30  | 354    | 0.7 | 4421   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 187                                    | 7.5 | 103    | 2.9 | 3081   | NMG090                                                                             |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 140                                    | 10  | 137    | 2.3 | 3391   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 93                                     | 15  | 198    | 1.9 | 3882   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 70                                     | 20  | 257    | 1.4 | 4273   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 56                                     | 25  | 314    | 1.1 | 4603   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 47                                     | 30  | 358    | 1.2 | 4891   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 35                                     | 40  | 465    | 0.9 | 5383   | NMG110                                                                             |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 93                                     | 15  | 200    | 3.3 | 4905   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 70                                     | 20  | 260    | 2.5 | 5399   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 56                                     | 25  | 321    | 2.2 | 5816   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 47                                     | 30  | 363    | 2   | 6181   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 35                                     | 40  | 477    | 1.5 | 6803   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 28                                     | 50  | 574    | 1.2 | 7328   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 23                                     | 60  | 661    | 1.0 | 7787   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 56                                     | 25  | 325    | 2.9 | 7607   |                                                                                    |                                                                                     |                                                                                     | NMG130 |        |  |  |
|                                          | 47                                     | 30  | 372    | 2.9 | 8084   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 35                                     | 40  | 477    | 2.2 | 8897   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 28                                     | 50  | 574    | 1.7 | 9584   |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 23                                     | 60  | 661    | 1.4 | 10185  |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 18                                     | 80  | 832    | 1   | 11210  |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 14                                     | 100 | 996    | 1   | 12076  |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 28                                     | 50  | 581    | 2.5 | 13103  | NMG150                                                                             |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 23                                     | 60  | 670    | 1.9 | 13924  |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 18                                     | 80  | 832    | 1.4 | 15325  |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 14                                     | 100 | 979    | 1   | 16508  |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          | 112M6<br>( $n_1=900\text{ min}^{-1}$ ) | 120 | 7,5    | 157 | 1.4    |                                                                                    |                                                                                     |                                                                                     | 3227   | NMG075 |  |  |
|                                          |                                        | 90  | 10     | 205 | 1.1    | 3551                                                                               |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        | 60  | 15     | 297 | 0.9    | 4065                                                                               |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        | 45  | 20     | 381 | 0.7    | 4474                                                                               |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        | 120 | 7.5    | 159 | 2.2    | 3570                                                                               |                                                                                     |                                                                                     | NMG090 |        |  |  |
|                                          |                                        | 90  | 10     | 207 | 1.8    | 3929                                                                               |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        | 60  | 15     | 300 | 1.4    | 4498                                                                               |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        | 45  | 20     | 386 | 1      | 4951                                                                               |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        | 36  | 25     | 443 | 0.9    | 5333                                                                               |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        | 30  | 30     | 504 | 0.9    | 5667                                                                               |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |
|                                          |                                        |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |        |        |  |  |



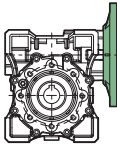
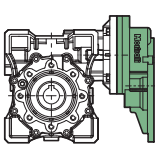
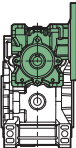
## Dati tecnici motoriduttore

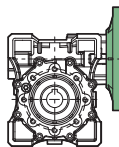
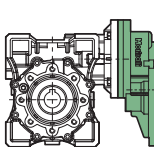
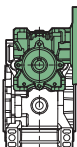
## Gearmotors technical data

| $Pn_1$                                     | $n_2$                                      | i     | $Mn_2$ | fs  | $Fr_2$ |  |  |  |        |
|--------------------------------------------|--------------------------------------------|-------|--------|-----|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|
| [kW]                                       | [min <sup>-1</sup> ]                       |       | [Nm]   |     | [N]    |                                                                                     |                                                                                     |                                                                                     |        |
| 2.20                                       |                                            |       |        |     |        |                                                                                     |                                                                                     |                                                                                     |        |
| 112M6<br>( $n_1$ = 900 min <sup>-1</sup> ) | 90                                         | 10    | 209    | 3.5 | 4965   | NMG110                                                                              |                                                                                     |                                                                                     |        |
|                                            | 60                                         | 15    | 304    | 2.6 | 5684   |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 45                                         | 20    | 396    | 1.9 | 6256   |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 36                                         | 25    | 482    | 1.6 | 6739   |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 30                                         | 30    | 543    | 1.6 | 7161   |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 23                                         | 40    | 715    | 1.1 | 7882   |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 18                                         | 50    | 858    | 0.9 | 8491   |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 15                                         | 60    | 986    | 0.7 | 9023   |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 36                                         | 25    | 489    | 2.2 | 8814   | NMG130                                                                              |                                                                                     |                                                                                     |        |
|                                            | 30                                         | 30    | 557    | 2.1 | 9366   |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 23                                         | 40    | 714    | 1.6 | 10309  |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 18                                         | 50    | 857    | 1.2 | 11105  |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 15                                         | 60    | 985    | 1   | 11801  |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 11                                         | 80    | 1238   | 0.7 | 12898  |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 18                                         | 50    | 881    | 1.9 | 15182  | NMG150                                                                              |                                                                                     |                                                                                     |        |
|                                            | 15                                         | 60    | 1015   | 1.4 | 16133  |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 11                                         | 80    | 1258   | 1.1 | 17757  |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 9                                          | 100   | 1454   | 0.8 | 18000  |                                                                                     |                                                                                     |                                                                                     |        |
|                                            | 90L2<br>( $n_1$ = 2800 min <sup>-1</sup> ) | 373   | 7.5    | 52  | 1.8    |                                                                                     |                                                                                     |                                                                                     | 1873   |
|                                            |                                            | 280   | 10     | 67  | 1.5    | 2061                                                                                |                                                                                     |                                                                                     |        |
|                                            |                                            | 187   | 15     | 99  | 1.1    | 2359                                                                                |                                                                                     |                                                                                     |        |
|                                            |                                            | 140   | 20     | 131 | 0.8    | 2597                                                                                |                                                                                     |                                                                                     | NMG075 |
|                                            |                                            | 373   | 7.5    | 51  | 2.6    | 2210                                                                                |                                                                                     |                                                                                     |        |
|                                            |                                            | 280   | 10     | 67  | 2.2    | 2433                                                                                |                                                                                     |                                                                                     |        |
| 187                                        |                                            | 15    | 99     | 1.5 | 2785   |                                                                                     |                                                                                     |                                                                                     |        |
| 140                                        |                                            | 20    | 129    | 1.3 | 3065   |                                                                                     |                                                                                     |                                                                                     |        |
| 112                                        |                                            | 25    | 157    | 1   | 3302   |                                                                                     |                                                                                     |                                                                                     |        |
| 93                                         |                                            | 30    | 182    | 1   | 3509   |                                                                                     |                                                                                     |                                                                                     |        |
| 70                                         |                                            | 40    | 239    | 0.8 | 3862   |                                                                                     |                                                                                     |                                                                                     |        |
| 280                                        |                                            | 10    | 69     | 3.5 | 2692   | NMG090                                                                              |                                                                                     |                                                                                     |        |
| 187                                        |                                            | 15    | 102    | 2.7 | 3081   |                                                                                     |                                                                                     |                                                                                     |        |
| 140                                        |                                            | 20    | 132    | 2   | 3391   |                                                                                     |                                                                                     |                                                                                     |        |
| 112                                        |                                            | 25    | 162    | 1.6 | 3653   |                                                                                     |                                                                                     |                                                                                     |        |
| 93                                         |                                            | 30    | 189    | 1.7 | 3882   |                                                                                     |                                                                                     |                                                                                     |        |
| 70                                         |                                            | 40    | 242    | 1.2 | 4273   |                                                                                     |                                                                                     |                                                                                     |        |
| 56                                         |                                            | 50    | 295    | 0.9 | 4603   |                                                                                     |                                                                                     |                                                                                     |        |
| 112                                        |                                            | 25    | 164    | 3.1 | 4616   | NMG110                                                                              |                                                                                     |                                                                                     |        |
| 93                                         |                                            | 30    | 191    | 3   | 4905   |                                                                                     |                                                                                     |                                                                                     |        |
| 70                                         |                                            | 40    | 248    | 2.2 | 5399   |                                                                                     |                                                                                     |                                                                                     |        |
| 56                                         |                                            | 50    | 302    | 1.7 | 5816   |                                                                                     |                                                                                     |                                                                                     |        |
| 47                                         |                                            | 60    | 354    | 1.4 | 6181   |                                                                                     |                                                                                     |                                                                                     |        |
| 35                                         |                                            | 80    | 453    | 0.9 | 6803   |                                                                                     |                                                                                     |                                                                                     |        |
| 28                                         |                                            | 100   | 536    | 0.7 | 7328   |                                                                                     |                                                                                     |                                                                                     |        |
| 35                                         |                                            | 80    | 453    | 1.3 | 8897   | NMG130                                                                              |                                                                                     |                                                                                     |        |
| 28                                         |                                            | 100   | 536    | 1   | 9584   |                                                                                     |                                                                                     |                                                                                     |        |
| 39                                         |                                            | 73.5  | 406    | 2.1 | 6586   |                                                                                     | NMGP090/110                                                                         |                                                                                     |        |
| 29                                         |                                            | 98    | 526    | 1.5 | 7249   |                                                                                     |                                                                                     |                                                                                     |        |
| 23                                         |                                            | 122.5 | 629    | 1.2 | 7809   |                                                                                     |                                                                                     |                                                                                     |        |

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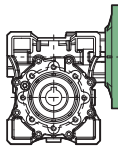
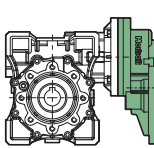
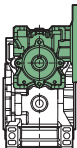
## Gearmotors technical data

| $Pn_1$<br>[kW]                                     | $n_2$<br>[min <sup>-1</sup> ] | $i$ | $Mn_2$<br>[Nm] | $fs$ | $Fr_2$<br>[N] |  |  |  |
|----------------------------------------------------|-------------------------------|-----|----------------|------|---------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>3.00</b>                                        |                               |     |                |      |               |                                                                                     |                                                                                     |                                                                                     |
| <b>100LA2</b><br>( $n_1 = 2800 \text{ min}^{-1}$ ) | <b>373</b>                    | 7.5 | 69             | 1.9  | 2210          | <b>NMG075</b>                                                                       |                                                                                     |                                                                                     |
|                                                    | <b>280</b>                    | 10  | 92             | 1.6  | 2433          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>187</b>                    | 15  | 138            | 1.2  | 2785          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>140</b>                    | 20  | 180            | 1    | 3065          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>112</b>                    | 25  | 219            | 0.7  | 3302          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>93</b>                     | 30  | 254            | 0.7  | 3509          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>373</b>                    | 7.5 | 71             | 3    | 2446          | <b>NMG090</b>                                                                       |                                                                                     |                                                                                     |
|                                                    | <b>280</b>                    | 10  | 94             | 2.6  | 2692          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>187</b>                    | 15  | 140            | 2    | 3081          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>140</b>                    | 20  | 184            | 1.4  | 3391          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>112</b>                    | 25  | 224            | 1.1  | 3653          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>93</b>                     | 30  | 260            | 1.2  | 3882          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>70</b>                     | 40  | 335            | 0.8  | 4273          | <b>NMG110</b>                                                                       |                                                                                     |                                                                                     |
|                                                    | <b>140</b>                    | 20  | 186            | 2.7  | 4285          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>112</b>                    | 25  | 230            | 2.2  | 4616          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>93</b>                     | 30  | 263            | 2.1  | 4905          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>70</b>                     | 40  | 347            | 1.6  | 5399          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>56</b>                     | 50  | 417            | 1.2  | 5816          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>47</b>                     | 60  | 489            | 1    | 6181          |                                                                                     |                                                                                     |                                                                                     |
| <b>100LB4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>187</b>                    | 7.5 | 140            | 1.4  | 2785          | <b>NMG075</b>                                                                       |                                                                                     |                                                                                     |
|                                                    | <b>140</b>                    | 10  | 184            | 1.1  | 3065          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>93</b>                     | 15  | 266            | 0.8  | 3509          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>187</b>                    | 7.5 | 141            | 2.1  | 3081          | <b>NMG090</b>                                                                       |                                                                                     |                                                                                     |
|                                                    | <b>140</b>                    | 10  | 186            | 1.7  | 3391          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>93</b>                     | 15  | 269            | 1.4  | 3882          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>70</b>                     | 20  | 351            | 1    | 4273          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>56</b>                     | 25  | 428            | 0.8  | 4603          | <b>NMG110</b>                                                                       |                                                                                     |                                                                                     |
|                                                    | <b>47</b>                     | 30  | 489            | 0.9  | 4891          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>140</b>                    | 10  | 186            | 3.3  | 4285          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>93</b>                     | 15  | 269            | 2.5  | 4905          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>70</b>                     | 20  | 355            | 1.9  | 5399          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>56</b>                     | 25  | 439            | 1.6  | 5816          | <b>NMG130</b>                                                                       |                                                                                     |                                                                                     |
|                                                    | <b>47</b>                     | 30  | 495            | 1.5  | 6181          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>35</b>                     | 40  | 651            | 1.1  | 6803          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>28</b>                     | 50  | 782            | 0.9  | 7328          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>56</b>                     | 25  | 439            | 2.2  | 7607          | <b>NMG150</b>                                                                       |                                                                                     |                                                                                     |
|                                                    | <b>47</b>                     | 30  | 501            | 2.1  | 8084          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>35</b>                     | 40  | 651            | 1.6  | 8897          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>28</b>                     | 50  | 782            | 1.3  | 9584          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>23</b>                     | 60  | 902            | 1    | 10185         | <b>NMG110</b>                                                                       |                                                                                     |                                                                                     |
|                                                    | <b>18</b>                     | 80  | 1135           | 0.8  | 11210         |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>28</b>                     | 50  | 794            | 1.8  | 13103         |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>23</b>                     | 60  | 914            | 1.4  | 13924         |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>18</b>                     | 80  | 1135           | 1    | 15325         |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>14</b>                     | 100 | 1336           | 0.8  | 16508         |                                                                                     |                                                                                     |                                                                                     |
| <b>132S6</b><br>( $n_1 = 900 \text{ min}^{-1}$ )   | <b>120</b>                    | 7.5 | 216            | 3.1  | 4511          | <b>NMG110</b>                                                                       |                                                                                     |                                                                                     |
|                                                    | <b>90</b>                     | 10  | 286            | 2.5  | 4965          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>60</b>                     | 15  | 414            | 1.9  | 5684          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>45</b>                     | 20  | 539            | 1.4  | 6256          |                                                                                     |                                                                                     |                                                                                     |
|                                                    | <b>36</b>                     | 25  | 666            | 1.2  | 6739          |                                                                                     |                                                                                     |                                                                                     |

| $Pn_1$                                  | $n_2$                | i   | $Mn_2$ | fs  | $Fr_2$ |  |  |  |
|-----------------------------------------|----------------------|-----|--------|-----|--------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| [kW]                                    | [min <sup>-1</sup> ] |     | [Nm]   |     | [N]    |                                                                                    |                                                                                     |                                                                                     |
| 3.00                                    |                      |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |
| 132S6<br>( $n_1=900\text{ min}^{-1}$ )  | 30                   | 30  | 751    | 1.1 | 7161   | NMG110                                                                             |                                                                                     |                                                                                     |
|                                         | 23                   | 40  | 974    | 0.8 | 7882   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 90                   | 10  | 286    | 3.4 | 6494   | NMG130                                                                             |                                                                                     |                                                                                     |
|                                         | 60                   | 15  | 414    | 2.6 | 7434   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 45                   | 20  | 546    | 1.9 | 8182   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 36                   | 25  | 666    | 1.6 | 8814   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 30                   | 30  | 760    | 1.6 | 9366   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 23                   | 40  | 974    | 1.2 | 10309  | NMG150                                                                             |                                                                                     |                                                                                     |
|                                         | 45                   | 20  | 552    | 2.8 | 11186  |                                                                                    |                                                                                     |                                                                                     |
|                                         | 36                   | 25  | 682    | 2.1 | 12050  |                                                                                    |                                                                                     |                                                                                     |
|                                         | 30                   | 30  | 799    | 1.8 | 12805  |                                                                                    |                                                                                     |                                                                                     |
|                                         | 23                   | 40  | 987    | 1.9 | 14094  |                                                                                    |                                                                                     |                                                                                     |
|                                         | 18                   | 50  | 1202   | 1.4 | 15182  |                                                                                    |                                                                                     |                                                                                     |
|                                         | 15                   | 60  | 1384   | 1.1 | 16133  |                                                                                    |                                                                                     |                                                                                     |
| 4.00                                    |                      |     |        |     |        |                                                                                    |                                                                                     |                                                                                     |
| 112M2<br>( $n_1=2800\text{ min}^{-1}$ ) | 373                  | 7.5 | 93     | 1.4 | 2210   | NMG075                                                                             |                                                                                     |                                                                                     |
|                                         | 280                  | 10  | 122    | 1.2 | 2433   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 187                  | 15  | 184    | 0.9 | 2785   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 140                  | 20  | 240    | 0.7 | 3065   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 373                  | 7.5 | 95     | 2.3 | 2446   | NMG090                                                                             |                                                                                     |                                                                                     |
|                                         | 280                  | 10  | 125    | 1.9 | 2692   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 187                  | 15  | 186    | 1.5 | 3081   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 140                  | 20  | 245    | 1.1 | 3391   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 112                  | 25  | 299    | 0.9 | 3653   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 93                   | 30  | 347    | 0.9 | 3882   |                                                                                    |                                                                                     |                                                                                     |
| 112M4<br>( $n_1=1400\text{ min}^{-1}$ ) | 187                  | 7.5 | 184    | 1   | 2785   | NMG075                                                                             |                                                                                     |                                                                                     |
|                                         | 140                  | 10  | 242    | 0.8 | 3065   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 187                  | 7.5 | 188    | 1.6 | 3081   | NMG090                                                                             |                                                                                     |                                                                                     |
|                                         | 140                  | 10  | 248    | 1.3 | 3391   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 93                   | 15  | 359    | 1   | 3882   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 70                   | 20  | 467    | 0.8 | 4273   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 187                  | 7.5 | 181    | 3.1 | 3893   | NMG110                                                                             |                                                                                     |                                                                                     |
|                                         | 140                  | 10  | 248    | 2.5 | 4285   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 93                   | 15  | 359    | 1.9 | 4905   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 70                   | 20  | 473    | 1.4 | 5399   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 56                   | 25  | 584    | 1.2 | 5816   | NMG130                                                                             |                                                                                     |                                                                                     |
|                                         | 47                   | 30  | 660    | 1.1 | 6181   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 35                   | 40  | 880    | 0.8 | 6803   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 56                   | 25  | 584    | 1.6 | 7607   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 47                   | 30  | 668    | 1.6 | 8084   | NMG150                                                                             |                                                                                     |                                                                                     |
|                                         | 35                   | 40  | 868    | 1.2 | 8897   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 28                   | 50  | 1043   | 1   | 9584   |                                                                                    |                                                                                     |                                                                                     |
|                                         | 23                   | 60  | 1203   | 0.8 | 10185  |                                                                                    |                                                                                     |                                                                                     |
|                                         | 28                   | 50  | 1058   | 1.4 | 13103  | NMG150                                                                             |                                                                                     |                                                                                     |
|                                         | 23                   | 60  | 1219   | 1.1 | 13924  |                                                                                    |                                                                                     |                                                                                     |
|                                         | 18                   | 80  | 1514   | 0.8 | 15325  |                                                                                    |                                                                                     |                                                                                     |

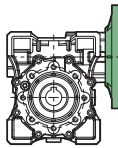
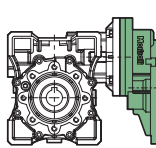
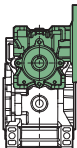
## Dati tecnici motoriduttore

## Gearmotors technical data

| $Pn_1$                                  | $n_2$                                    | $i$ | $Mn_2$ | $fs$ | $Fr_2$ |  |  |  |  |
|-----------------------------------------|------------------------------------------|-----|--------|------|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
| [kW]                                    | [min <sup>-1</sup> ]                     |     | [Nm]   |      | [N]    |                                                                                     |                                                                                     |                                                                                     |  |
| 4.00                                    |                                          |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
| 132MA6<br>( $n_1=900\text{ min}^{-1}$ ) | 120                                      | 7.5 | 273    | 2.4  | 4511   | NMG110                                                                              |                                                                                     |                                                                                     |  |
|                                         | 90                                       | 10  | 381    | 1.9  | 4965   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 60                                       | 15  | 552    | 1.4  | 5684   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 36                                       | 25  | 592    | 1.2  | 5816   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 30                                       | 30  | 668    | 1.1  | 6181   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 23                                       | 40  | 880    | 0.8  | 6803   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 120                                      | 7.5 | 293    | 3.1  | 5901   | NMG130                                                                              |                                                                                     |                                                                                     |  |
|                                         | 90                                       | 10  | 381    | 2.6  | 6494   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 60                                       | 15  | 552    | 2    | 7434   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 45                                       | 20  | 727    | 1.5  | 8182   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 36                                       | 25  | 887    | 1.2  | 8814   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 30                                       | 30  | 1026   | 1.2  | 9366   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 23                                       | 40  | 1317   | 0.9  | 10309  | NMG150                                                                              |                                                                                     |                                                                                     |  |
|                                         | 45                                       | 20  | 736    | 2.1  | 11186  |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 36                                       | 25  | 910    | 1.5  | 12050  |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 30                                       | 30  | 1066   | 1.3  | 12805  |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 23                                       | 40  | 1317   | 1.4  | 14094  |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 18                                       | 50  | 1602   | 1    | 15182  |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 15                                       | 60  | 1845   | 0.8  | 16133  |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 5.50                                     |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
| 132S4<br>( $n_1=1400\text{ min}^{-1}$ ) | 187                                      | 7.5 | 258    | 2.2  | 3893   | NMG110                                                                              |                                                                                     |                                                                                     |  |
|                                         | 140                                      | 10  | 341    | 1.8  | 4285   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 93                                       | 15  | 494    | 1.4  | 4905   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 70                                       | 20  | 651    | 1    | 5399   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 56                                       | 25  | 814    | 0.9  | 5816   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 47                                       | 30  | 919    | 0.8  | 6181   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 140                                      | 10  | 341    | 2.5  | 5605   | NMG130                                                                              |                                                                                     |                                                                                     |  |
|                                         | 93                                       | 15  | 500    | 1.9  | 6416   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 70                                       | 20  | 658    | 1.4  | 7062   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 56                                       | 25  | 804    | 1.2  | 7607   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 47                                       | 30  | 918    | 1.2  | 8084   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 35                                       | 40  | 1194   | 0.9  | 8897   |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 70                                       | 20  | 658    | 2    | 9654   | NMG150                                                                              |                                                                                     |                                                                                     |  |
|                                         | 56                                       | 25  | 804    | 1.5  | 10400  |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 47                                       | 30  | 953    | 1.3  | 11051  |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 35                                       | 40  | 1194   | 1.3  | 12163  |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 28                                       | 50  | 1455   | 1    | 13103  |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 23                                       | 60  | 1676   | 0.8  | 13924  |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 7.50                                     |     |        |      |        |                                                                                     |                                                                                     |                                                                                     |  |
|                                         | 132MA4<br>( $n_1=1400\text{ min}^{-1}$ ) | 187 | 7.5    | 352  | 1.6    | 3893                                                                                | NMG110                                                                              |                                                                                     |  |
| 140                                     |                                          | 10  | 464    | 1.3  | 4285   |                                                                                     |                                                                                     |                                                                                     |  |
| 93                                      |                                          | 15  | 673    | 1    | 4905   |                                                                                     |                                                                                     |                                                                                     |  |
| 70                                      |                                          | 20  | 898    | 0.7  | 5399   |                                                                                     |                                                                                     |                                                                                     |  |
| 187                                     |                                          | 7.5 | 356    | 2.1  | 5092   | NMG130                                                                              |                                                                                     |                                                                                     |  |
| 140                                     |                                          | 10  | 464    | 1.8  | 5605   |                                                                                     |                                                                                     |                                                                                     |  |
| 93                                      |                                          | 15  | 681    | 1.4  | 6416   |                                                                                     |                                                                                     |                                                                                     |  |
| 70                                      |                                          | 20  | 898    | 1.0  | 7062   |                                                                                     |                                                                                     |                                                                                     |  |
| 56                                      |                                          | 25  | 1095   | 0.9  | 7607   |                                                                                     |                                                                                     |                                                                                     |  |
| 47                                      |                                          | 30  | 1253   | 0.8  | 8084   |                                                                                     |                                                                                     |                                                                                     |  |
| 35                                      |                                          | 40  | 1628   | 0.7  | 8897   |                                                                                     |                                                                                     |                                                                                     |  |

## Dati tecnici motoriduttore

## Gearmotors technical data

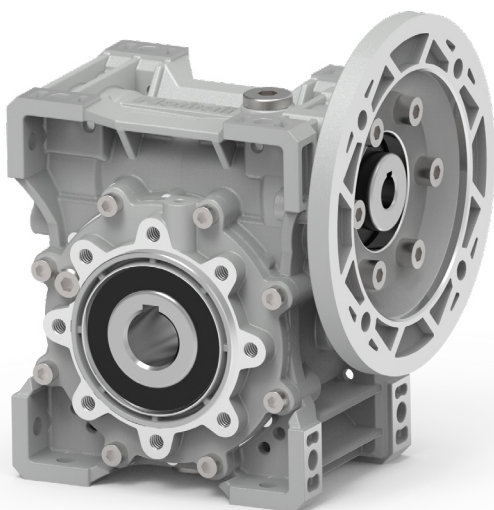
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|--------|----------------------|-----|--------|------|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| [kW]   | [min <sup>-1</sup> ] |     | [Nm]   |      | [N]    |                                                                                     |                                                                                     |                                                                                     |

|                                                    |           |    |      |     |       |               |  |  |
|----------------------------------------------------|-----------|----|------|-----|-------|---------------|--|--|
| 7.50                                               |           |    |      |     |       |               |  |  |
| <b>132MA4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>70</b> | 20 | 898  | 1.5 | 9654  | <b>NMG150</b> |  |  |
|                                                    | <b>56</b> | 25 | 1095 | 1.1 | 10400 |               |  |  |
|                                                    | <b>47</b> | 30 | 1299 | 0.9 | 11051 |               |  |  |
|                                                    | <b>35</b> | 40 | 1628 | 1   | 12163 |               |  |  |
|                                                    | <b>28</b> | 50 | 2010 | 0.7 | 13103 |               |  |  |

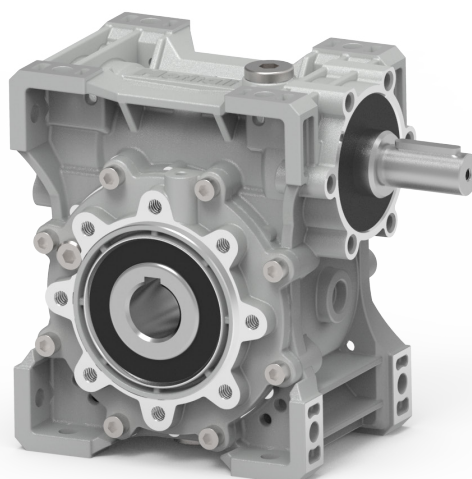
|                                                   |            |     |      |     |       |               |  |  |
|---------------------------------------------------|------------|-----|------|-----|-------|---------------|--|--|
| 11.00                                             |            |     |      |     |       |               |  |  |
| <b>160M4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>187</b> | 7.5 | 522  | 2.3 | 6962  | <b>NMG150</b> |  |  |
|                                                   | <b>140</b> | 10  | 689  | 1.8 | 7663  |               |  |  |
|                                                   | <b>93</b>  | 15  | 1010 | 1.3 | 8771  |               |  |  |
|                                                   | <b>70</b>  | 20  | 1317 | 1.0 | 9654  |               |  |  |
|                                                   | <b>56</b>  | 25  | 1608 | 0.8 | 10400 |               |  |  |

|                                                   |            |     |      |     |      |               |  |  |
|---------------------------------------------------|------------|-----|------|-----|------|---------------|--|--|
| 15.00                                             |            |     |      |     |      |               |  |  |
| <b>160L4</b><br>( $n_1 = 1400 \text{ min}^{-1}$ ) | <b>187</b> | 7.5 | 712  | 1.7 | 6962 | <b>NMG150</b> |  |  |
|                                                   | <b>140</b> | 10  | 939  | 1.3 | 7663 |               |  |  |
|                                                   | <b>93</b>  | 15  | 1378 | 0.9 | 8771 |               |  |  |
|                                                   | <b>70</b>  | 20  | 1795 | 0.7 | 9654 |               |  |  |

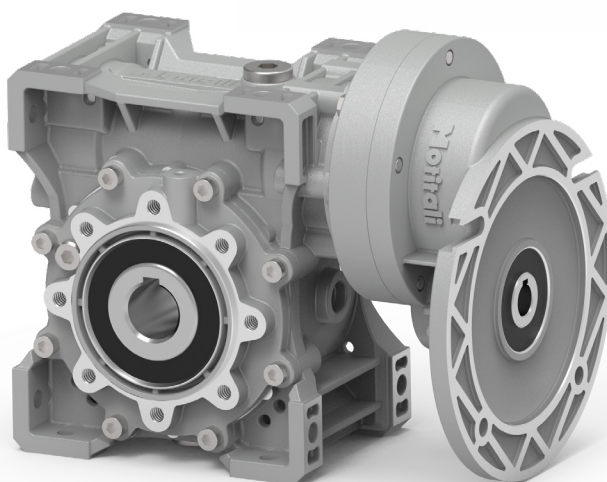
**NMG...**



**NG...**

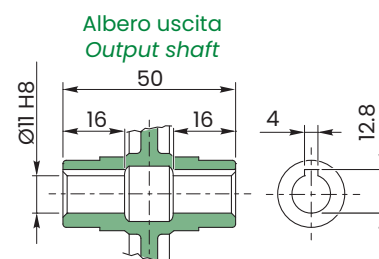
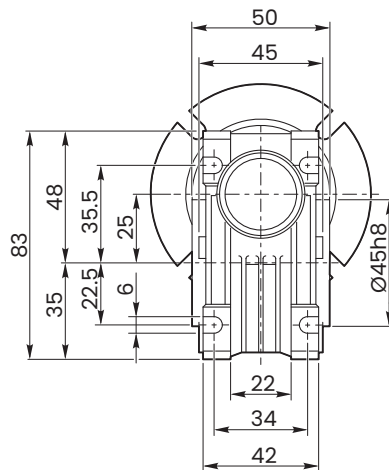
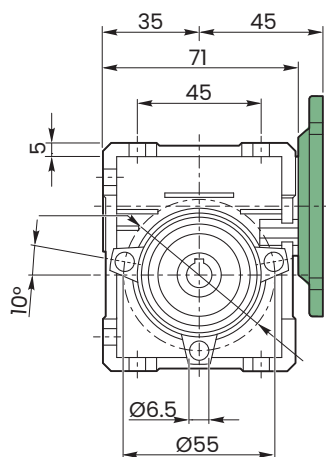


**NMGP...**

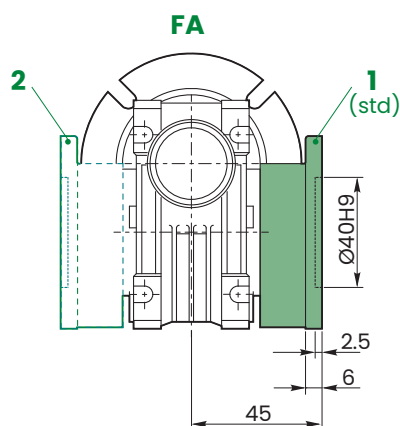
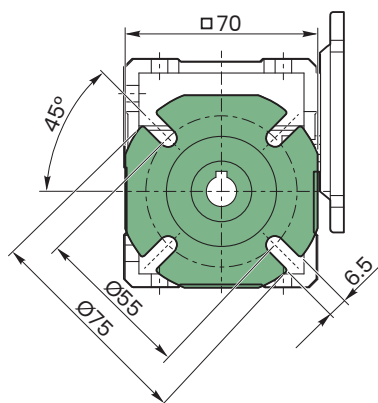


# 025

## NMG 025 P..



## NMG 025 FA

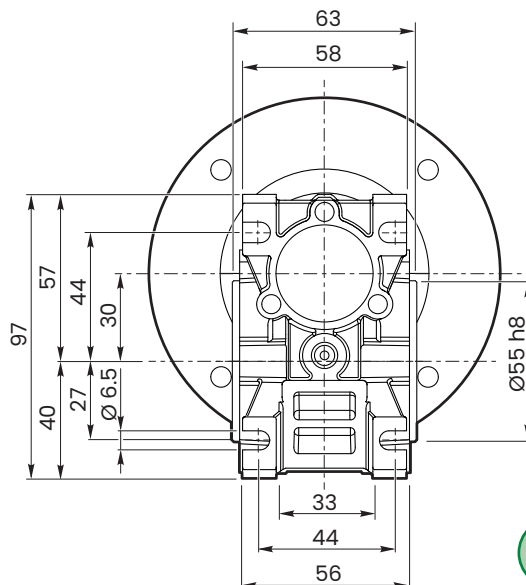
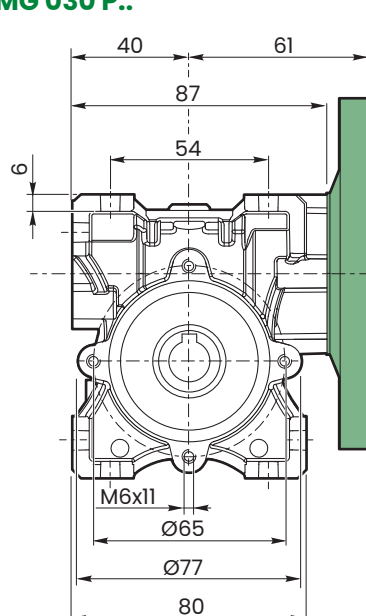


## Dimensioni

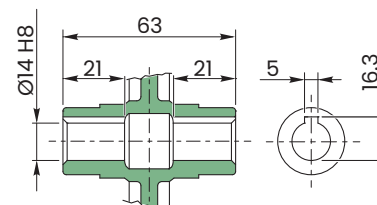
## Dimensions

# 030

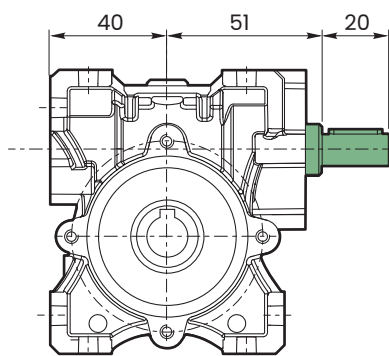
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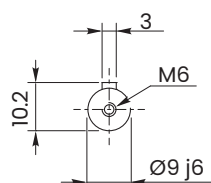
Albero uscita  
Output shaft



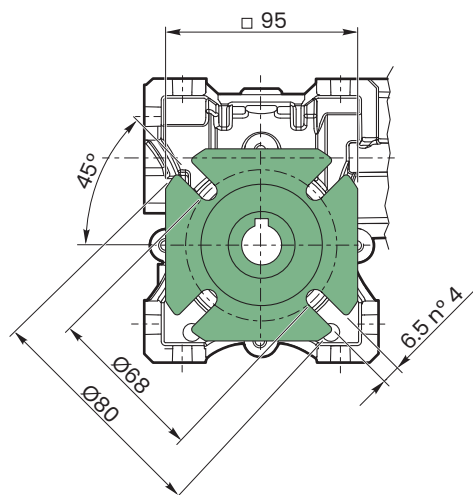
### NG 030 P..



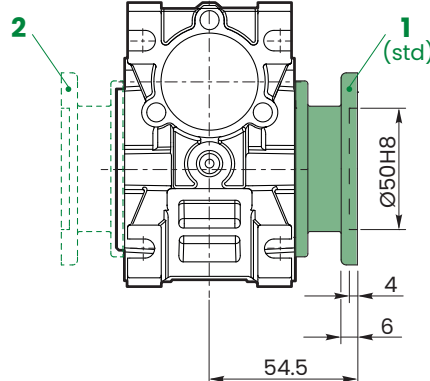
Albero entrata  
Input shaft



### NMG 030 FA



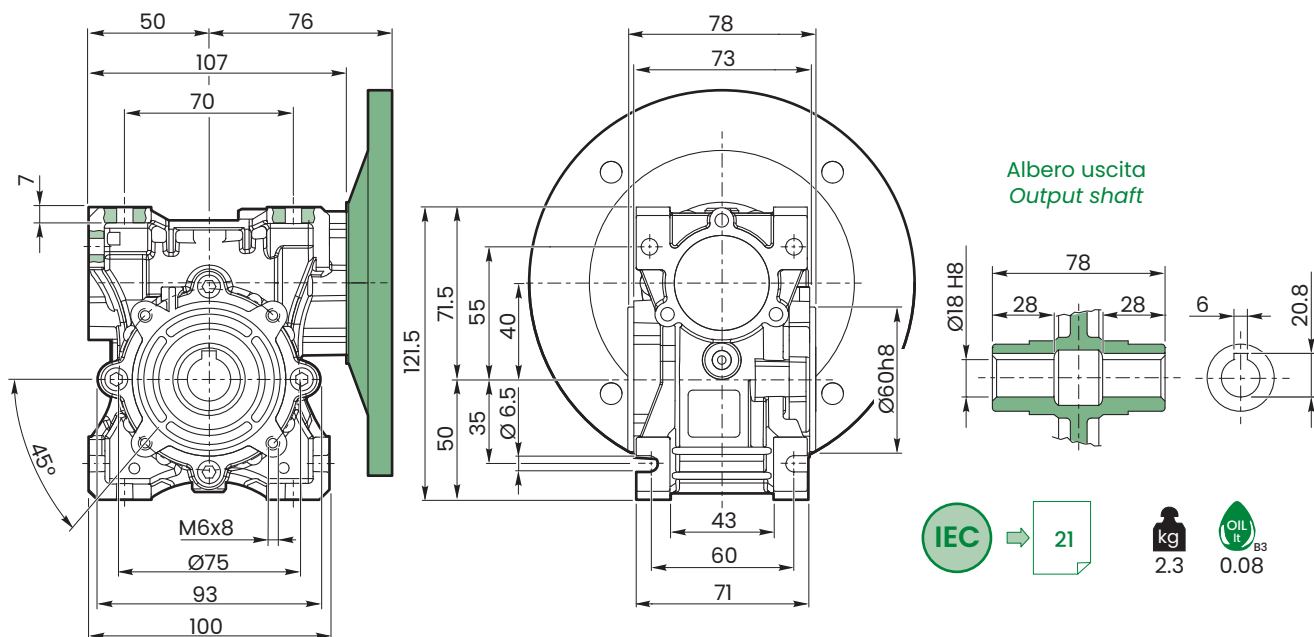
FA





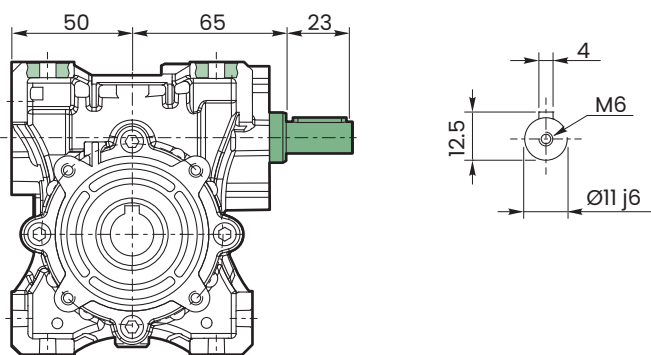
# 040

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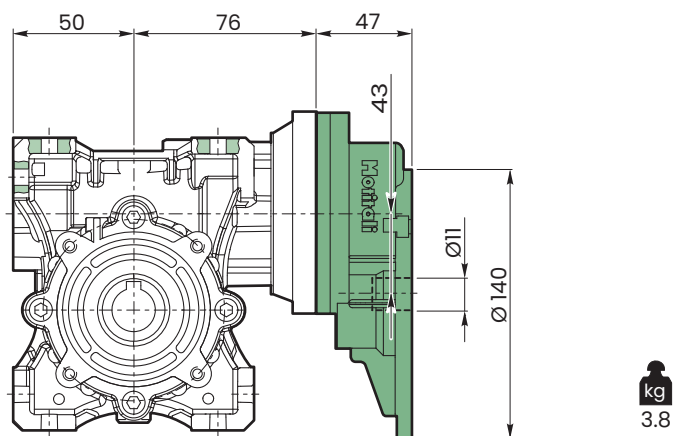


## NG 040 P..

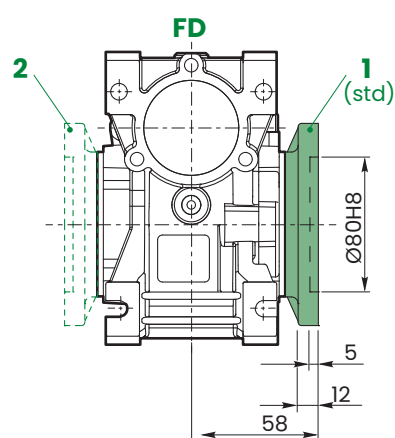
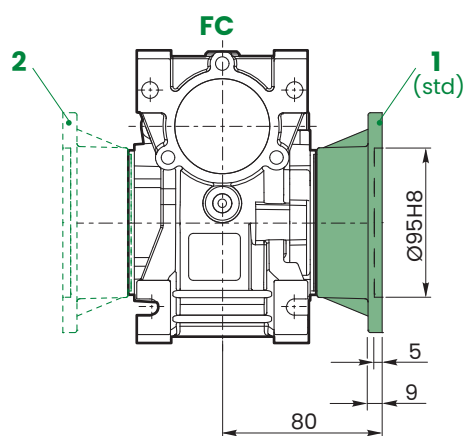
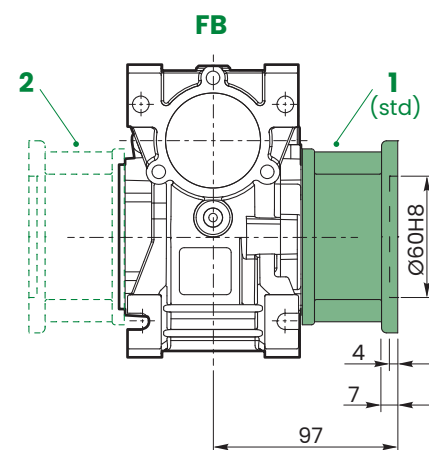
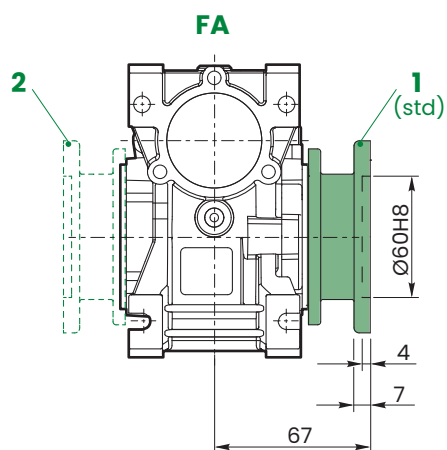
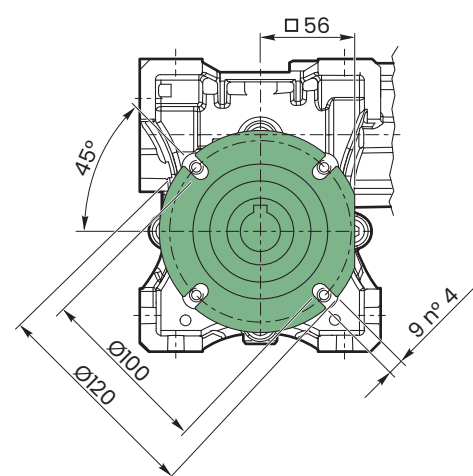
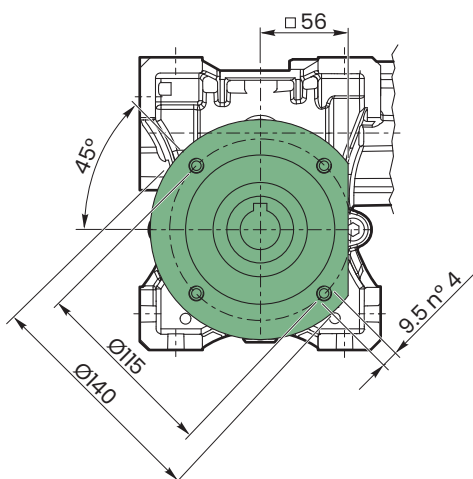
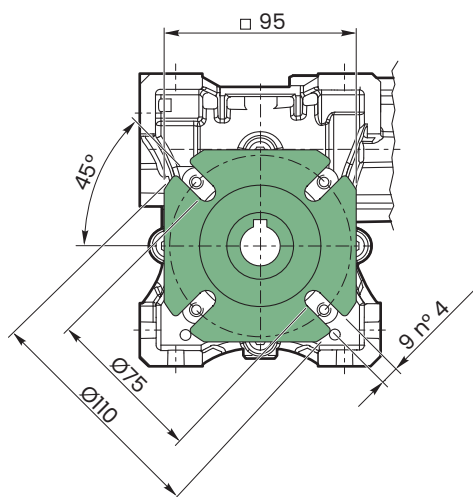
### Albero entrata Input shaft



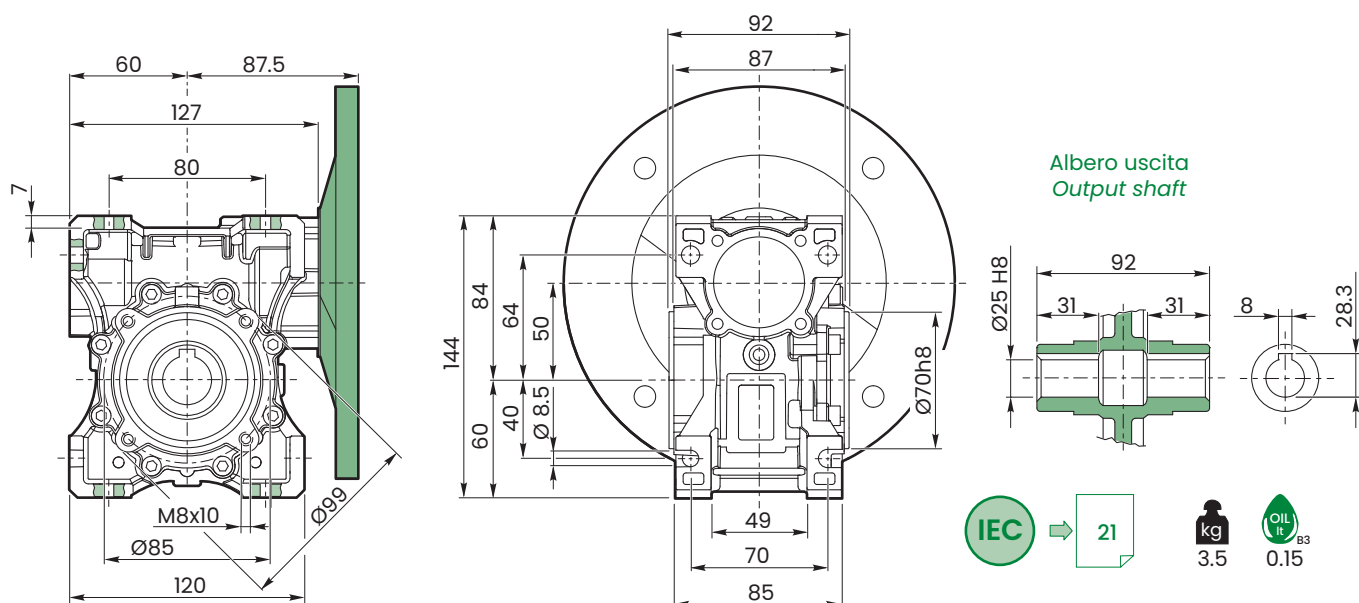
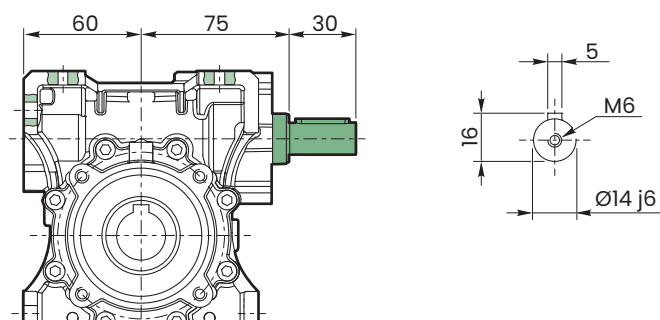
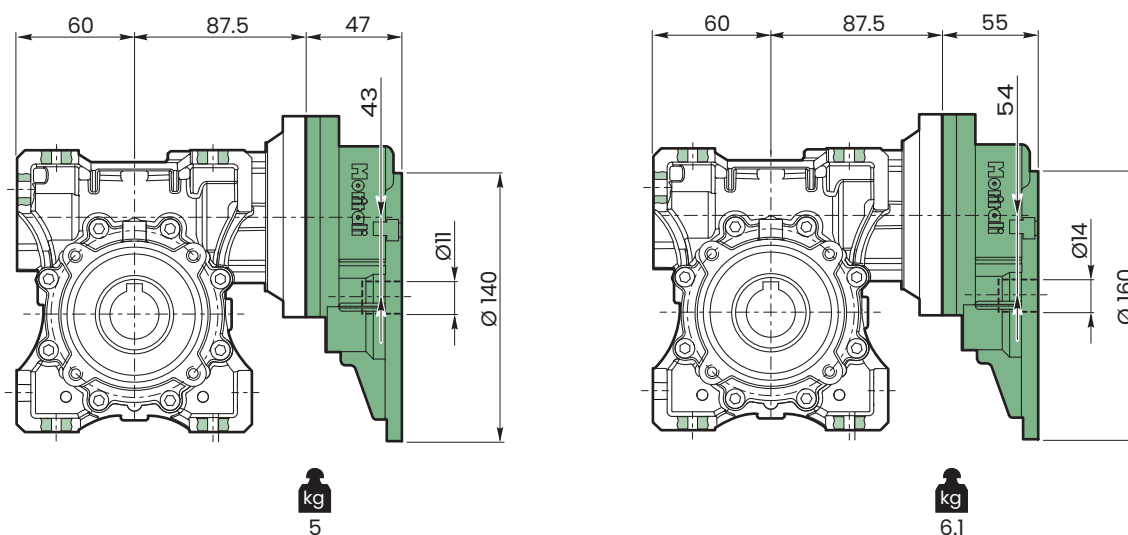
## NMGP 063 / 040 P..



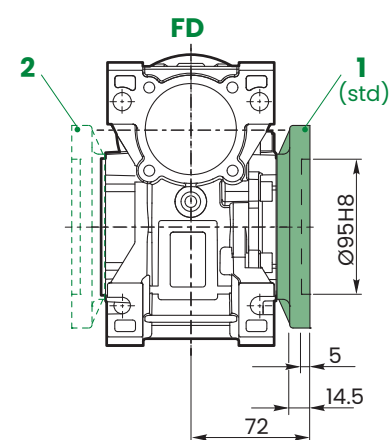
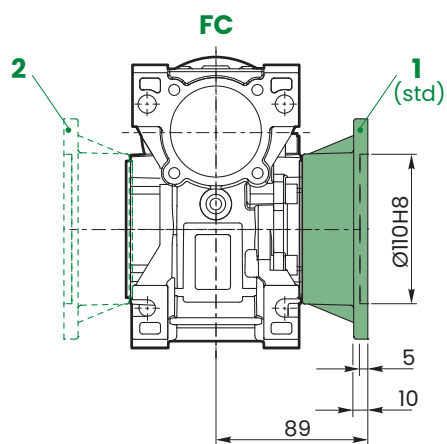
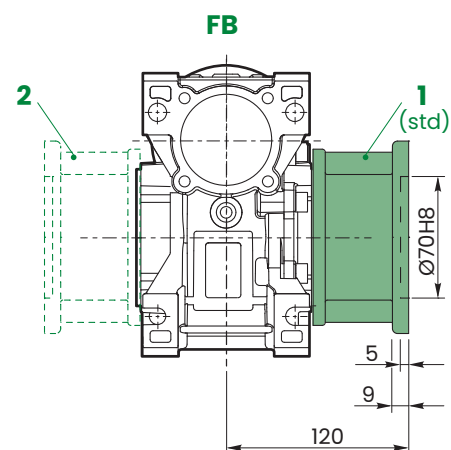
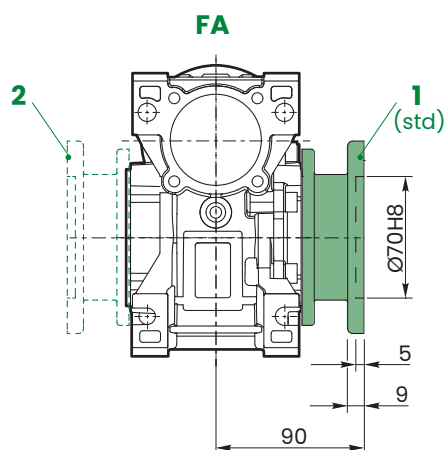
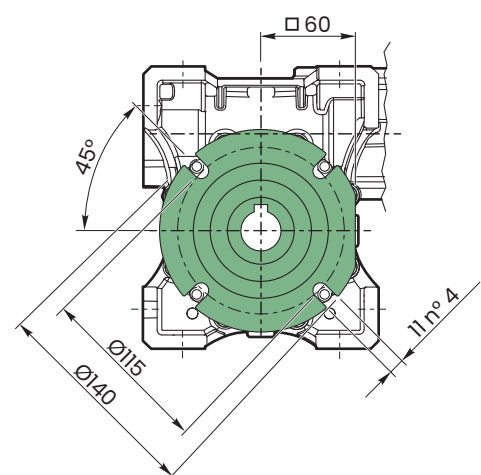
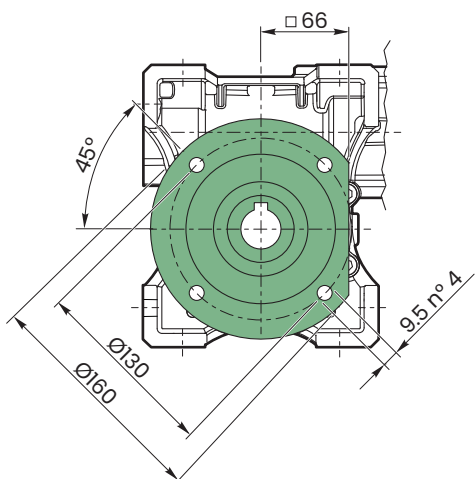
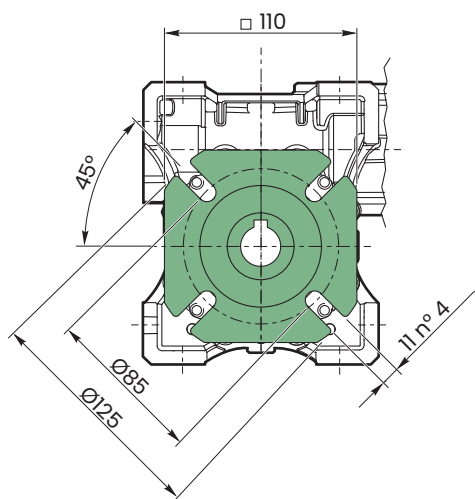
N..G 040 F..



# 050

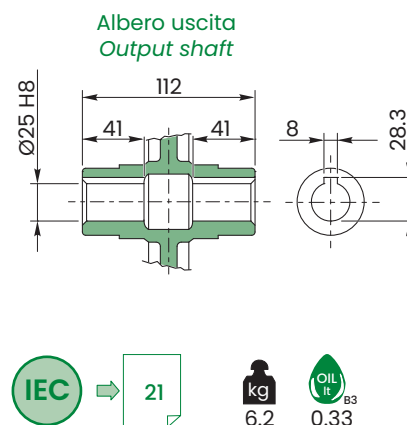
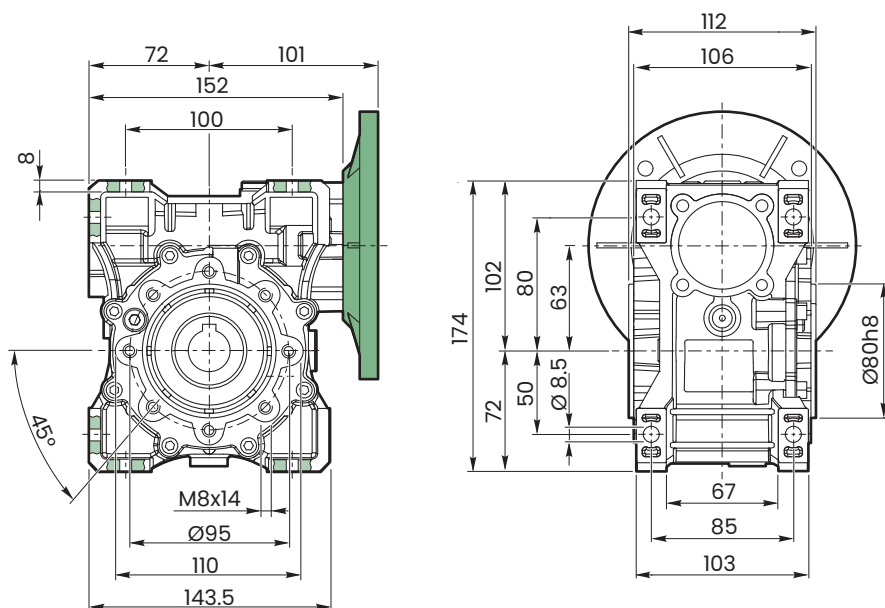
**NMG 050 P..**

**NG 050 P..**
**Albero entrata Input shaft**

**NMGP 063 / 050 P..**
**NMGP 071 / 050 P..**


N..G 050 F..

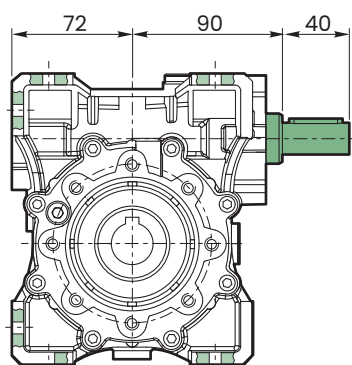


# 063

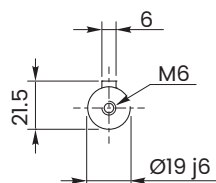
## NMG 063 P..



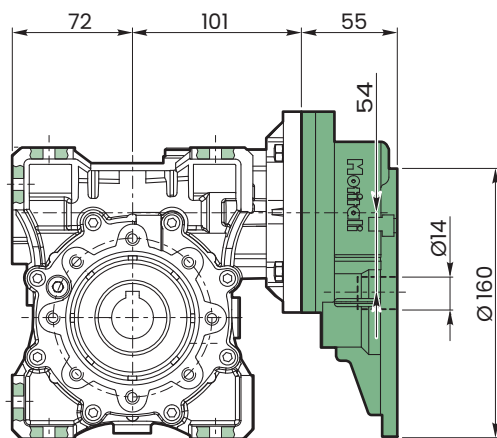
## NG 063 P..



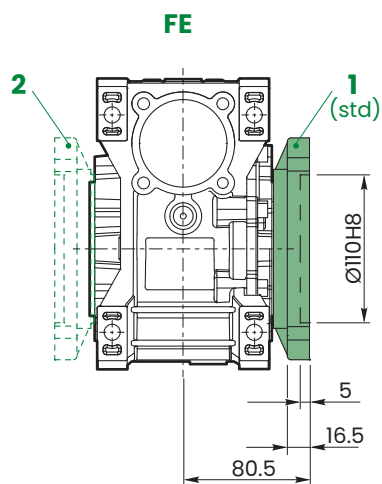
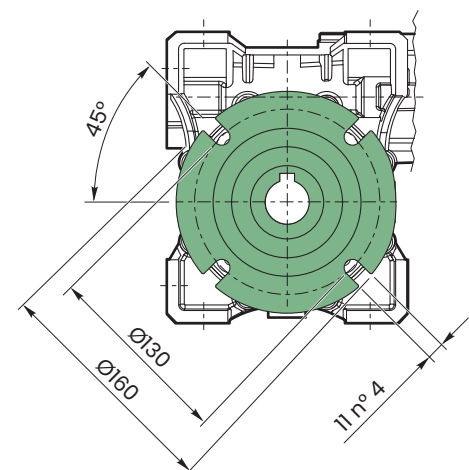
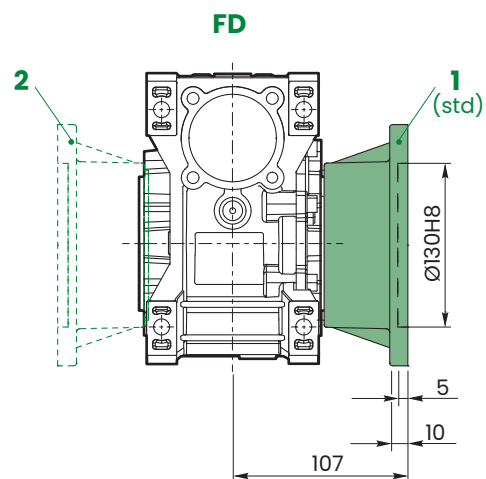
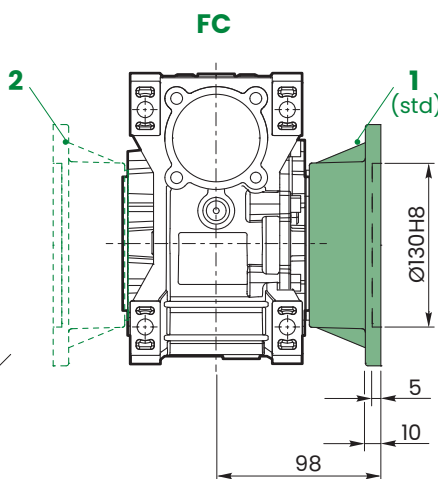
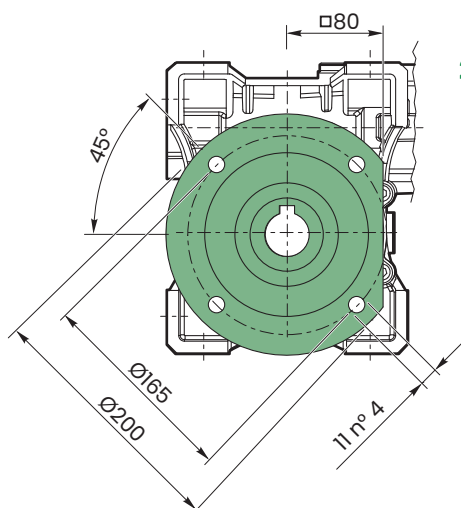
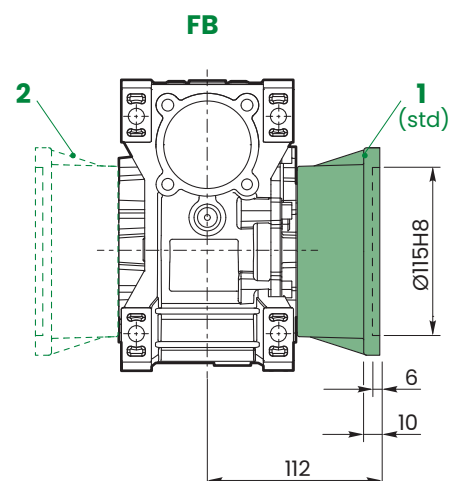
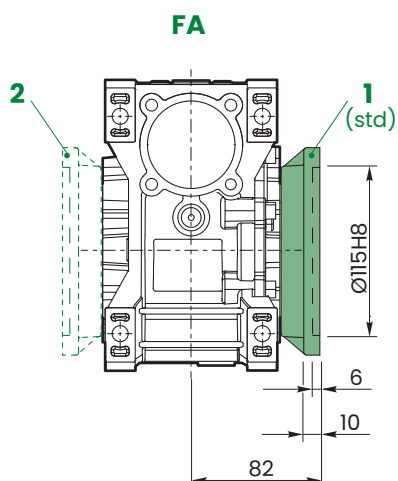
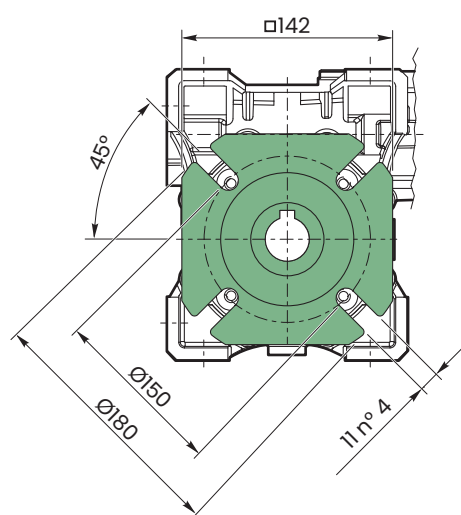
### Albero entrata Input shaft



## NMGP 071 / 063 P..

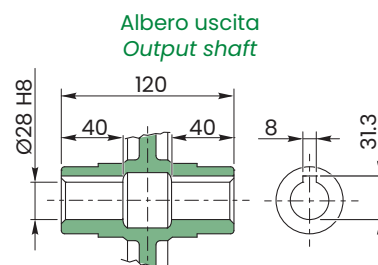
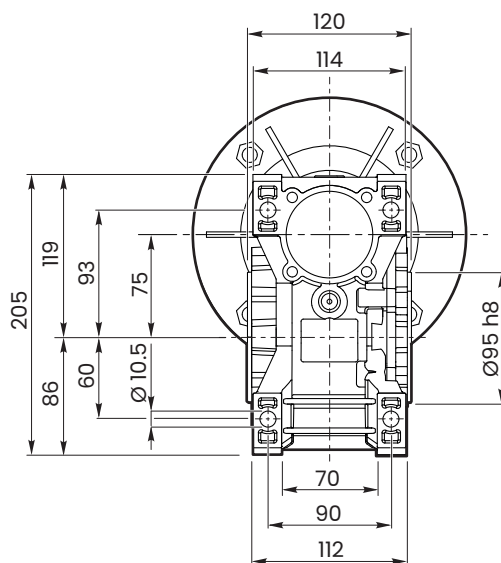
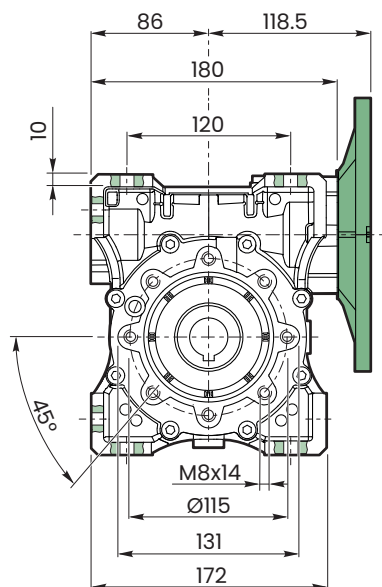


N..G 063 F..

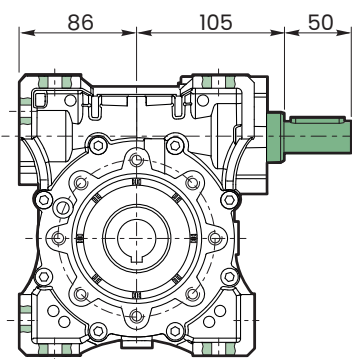


# 075

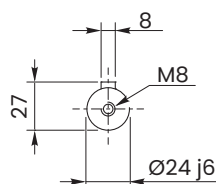
## NMG 075 P..



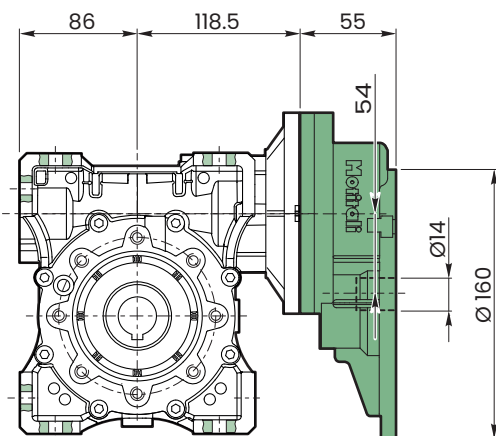
## NG 075 P..



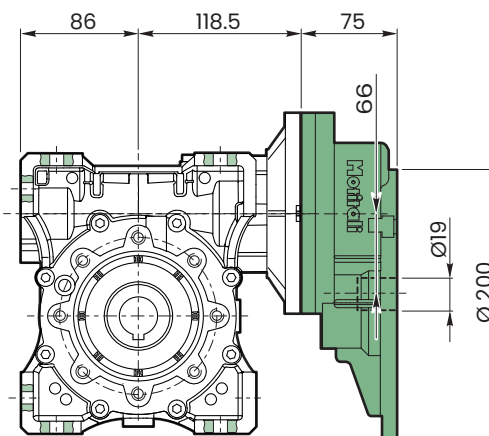
### Albero entrata Input shaft



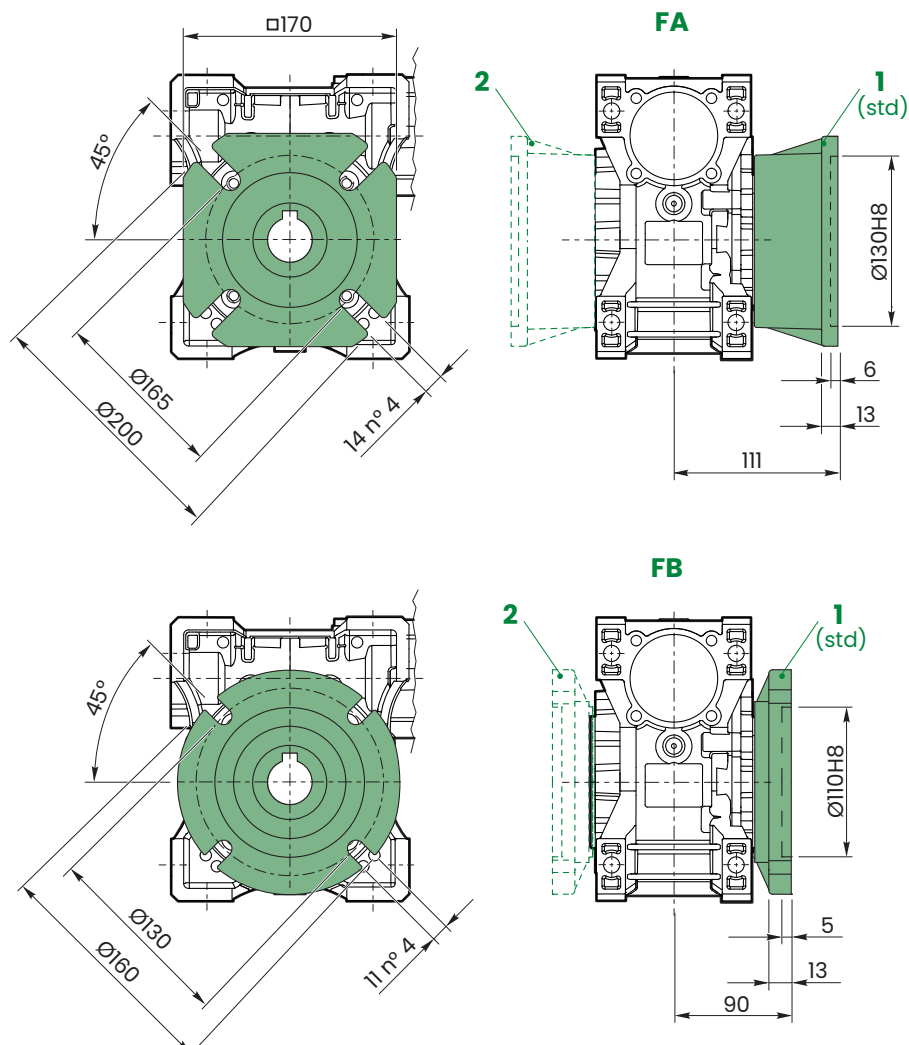
## NMGP 071 / 075 P..



## NMGP 080 / 075 P..



N..G 075 F..



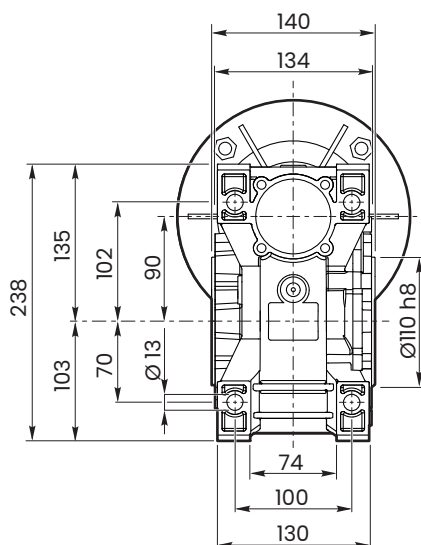
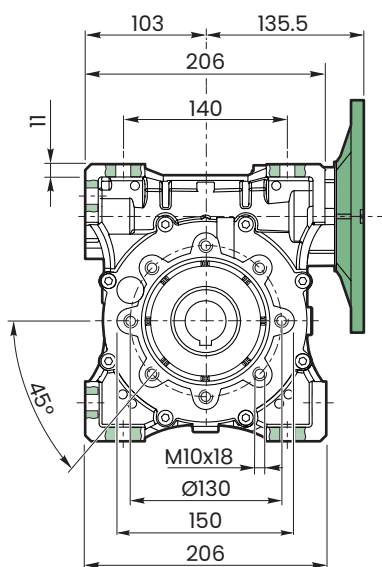


## Dimensioni

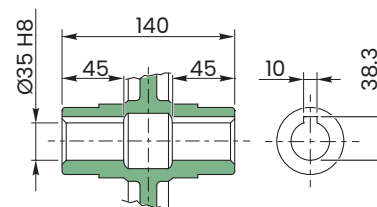
## Dimensions

# 090

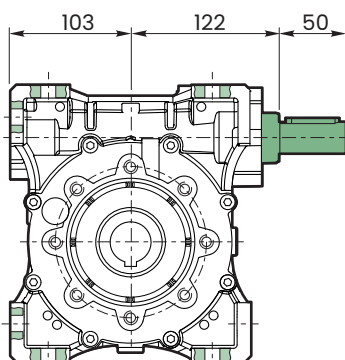
### NMG 090 P..



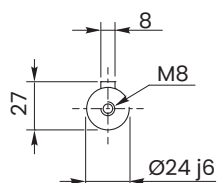
Albero uscita  
Output shaft



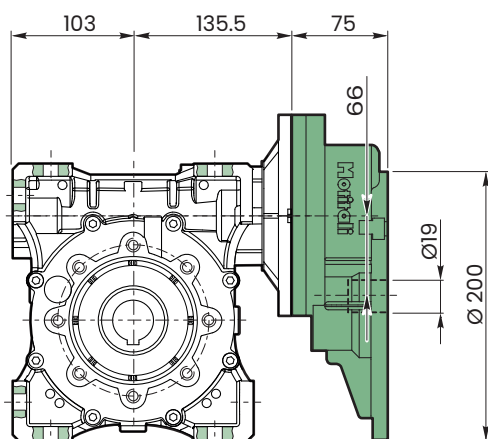
### NG 090 P..



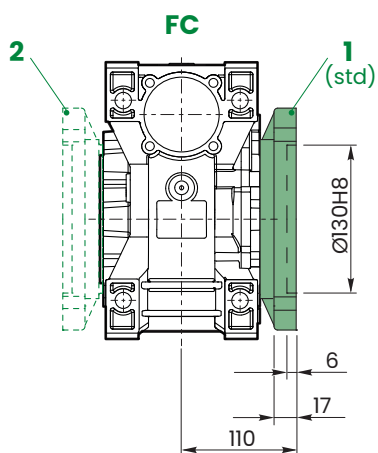
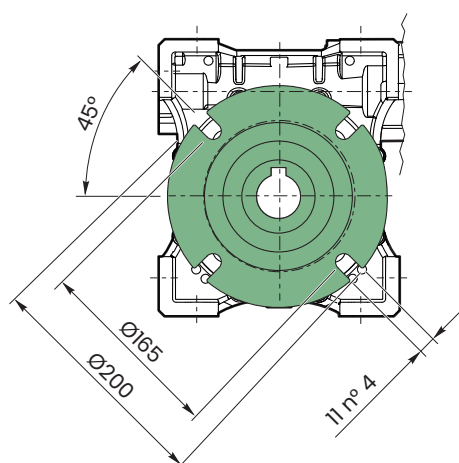
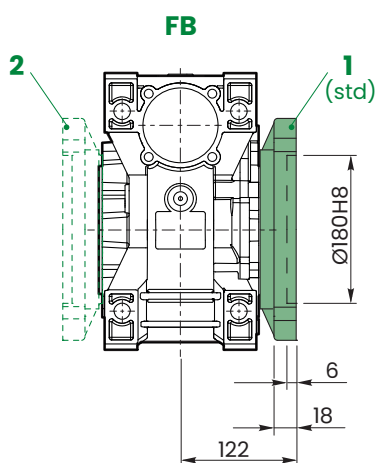
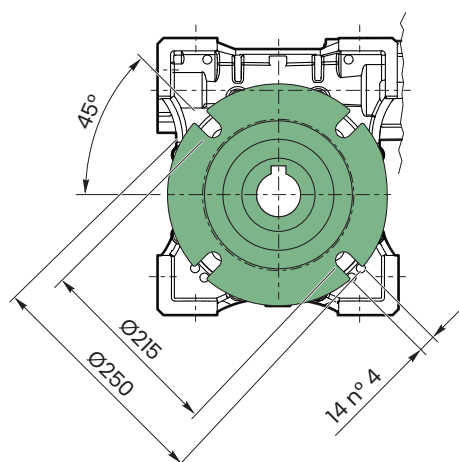
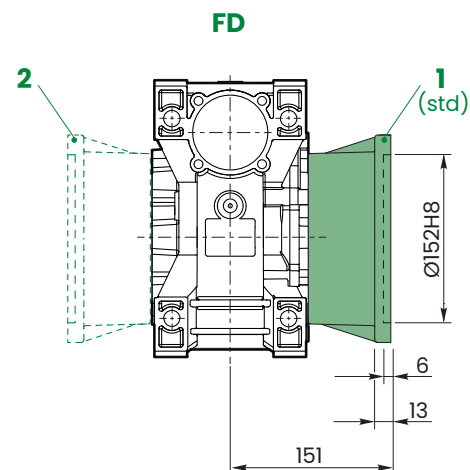
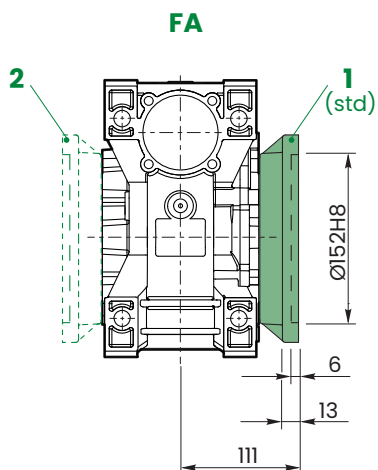
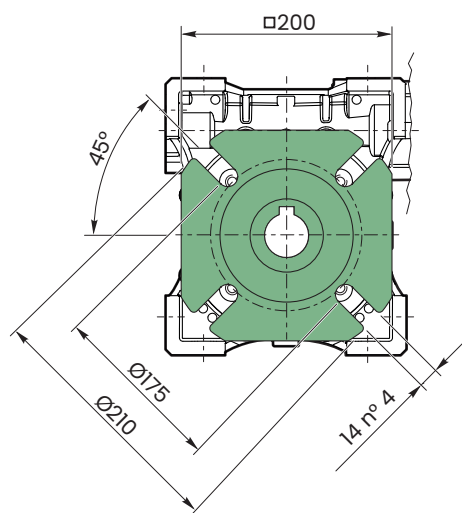
Albero entrata  
Input shaft



### NMGP 080 / 090 P..



N..G 090 F..

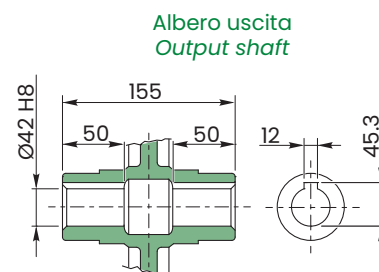
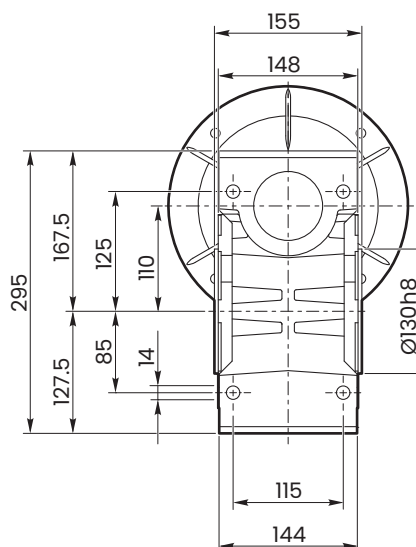
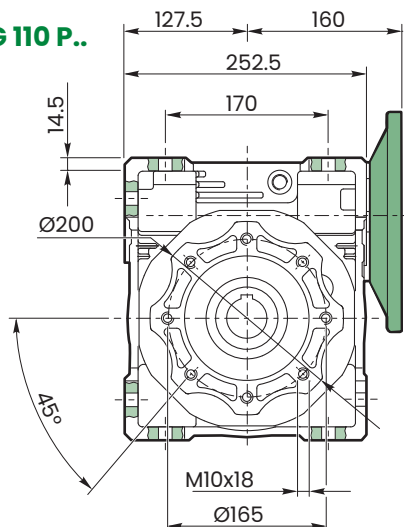


## Dimensioni

## Dimensions

# 110

### NMG 110 P..



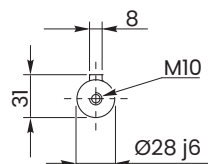
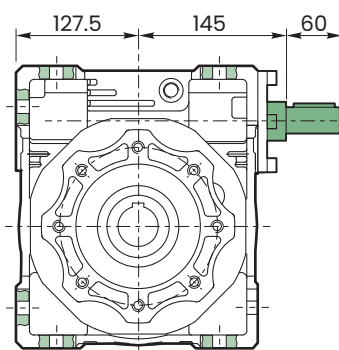
Albero uscita  
Output shaft



kg  
35

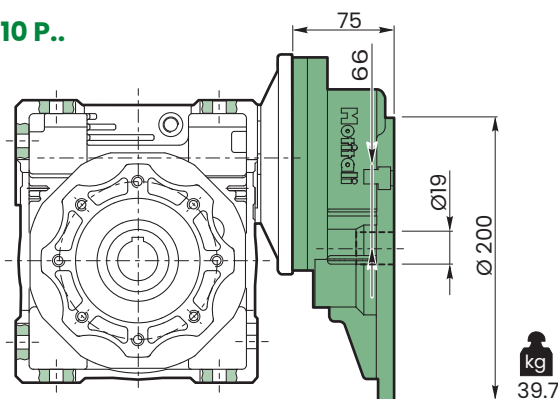
OIL  
FF. B3  
3.0

### NG 110 P..

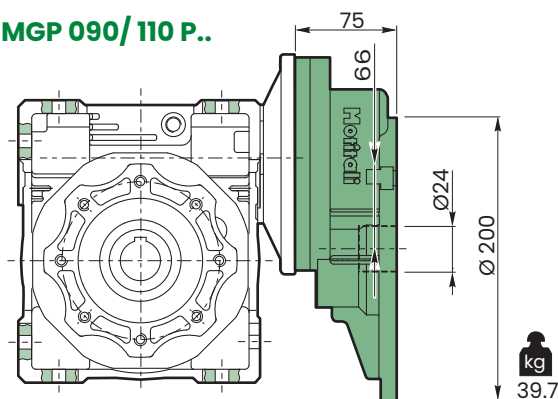


Albero entrata  
Input shaft

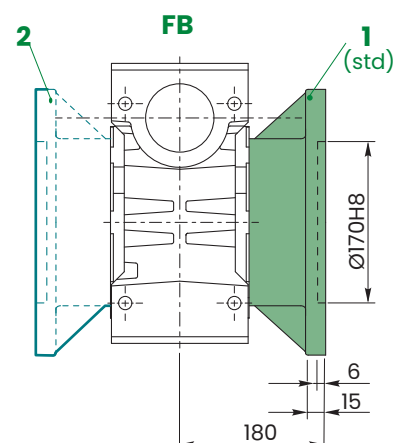
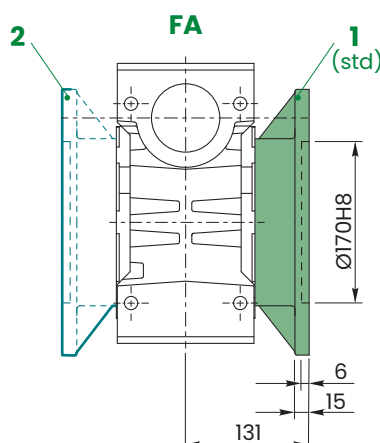
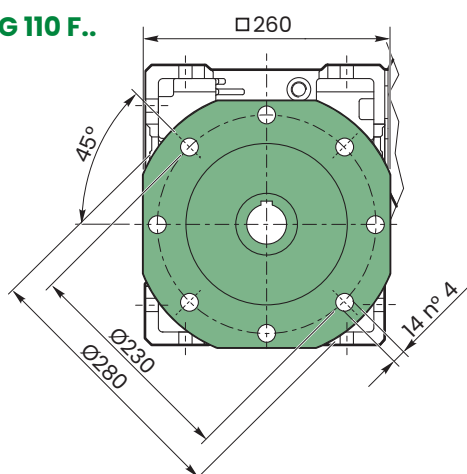
### NMGP 080/ 110 P..



### NMGP 090/ 110 P..



### N..G 110 F..

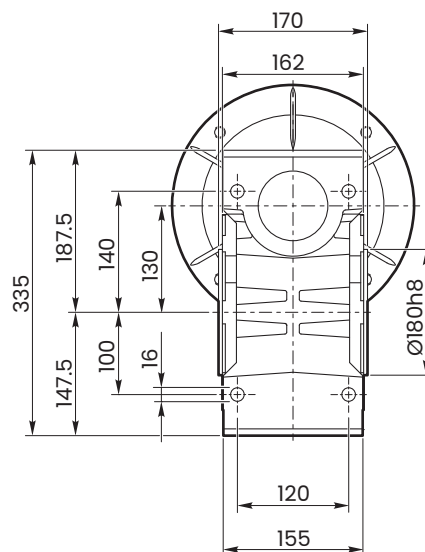
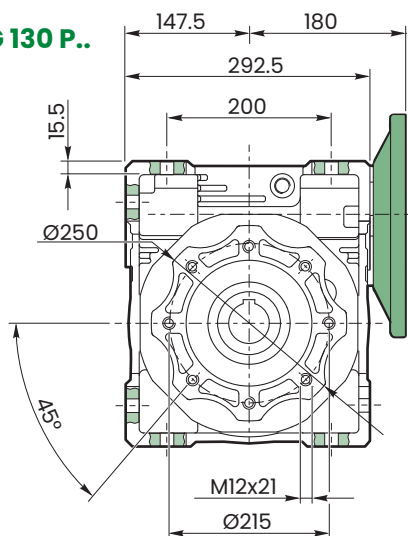


## Dimensioni

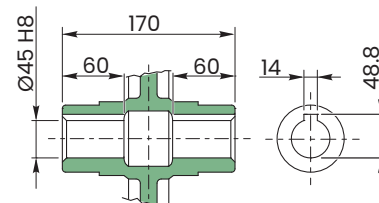
## Dimensions

# 130

### NMG 130 P..



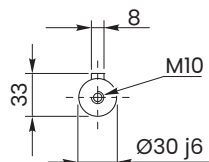
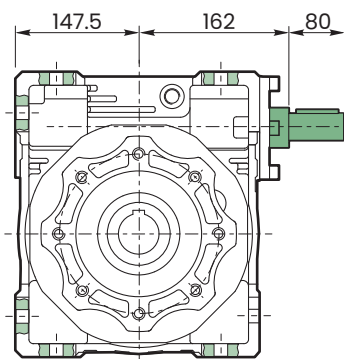
Albero uscita  
Output shaft



kg  
48

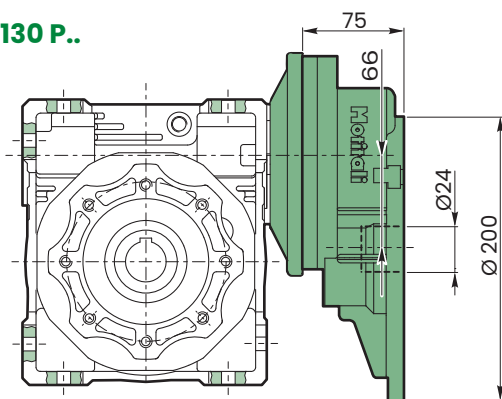
OIL  
IT  
B3  
4.0

### NG 130 P..



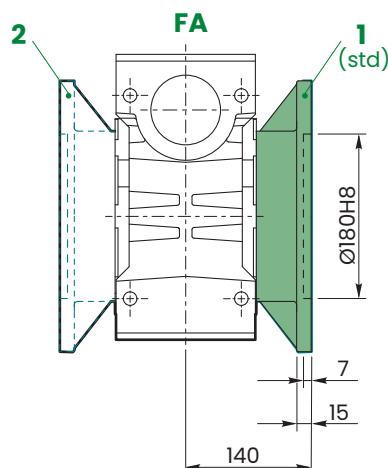
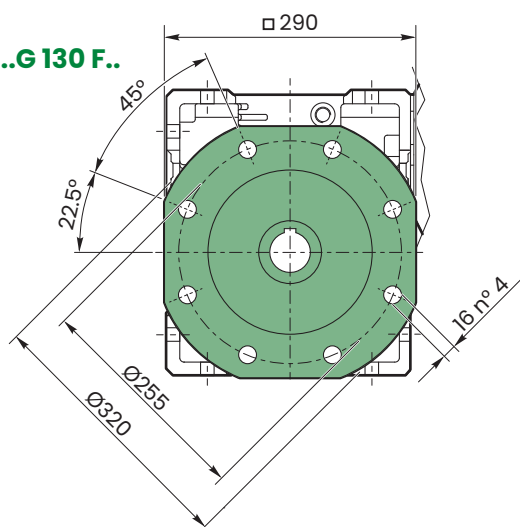
Albero entrata  
Input shaft

### NMGP 090 / 130 P..

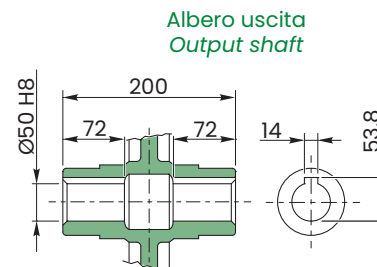
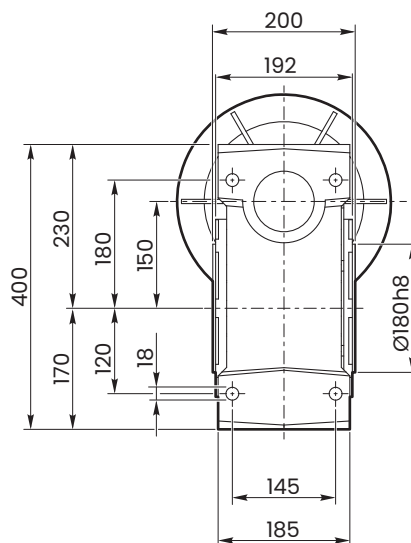
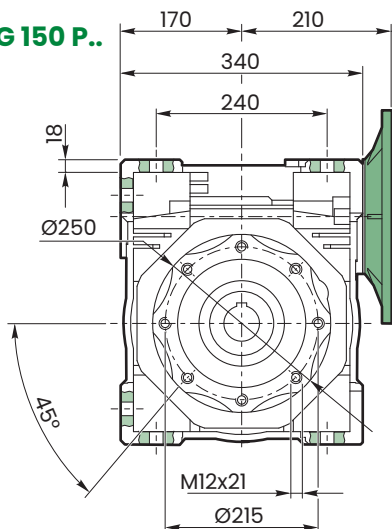


kg  
52.7

### N..G 130 F..

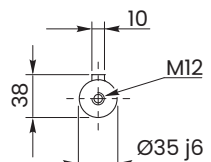
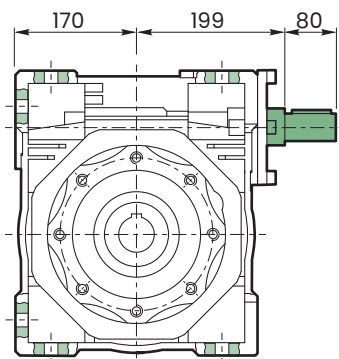
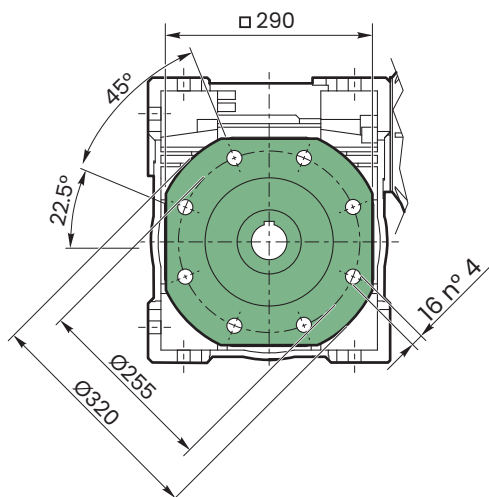
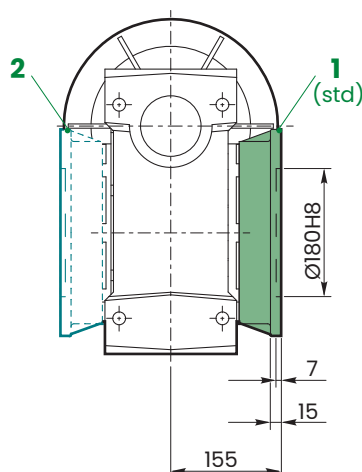


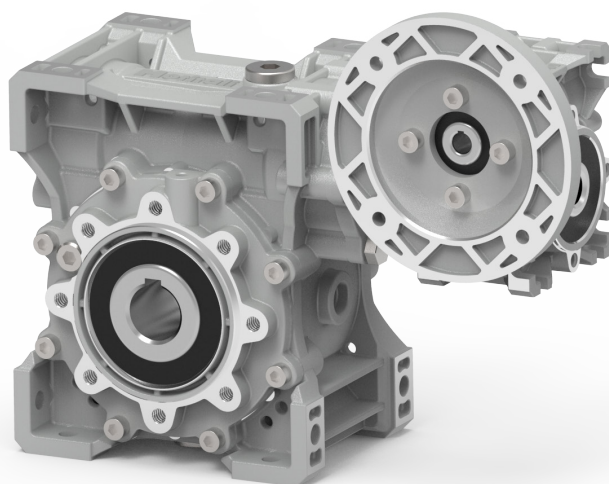
# 150

**NMG 150 P..**


kg  
84

OIL  
5.5

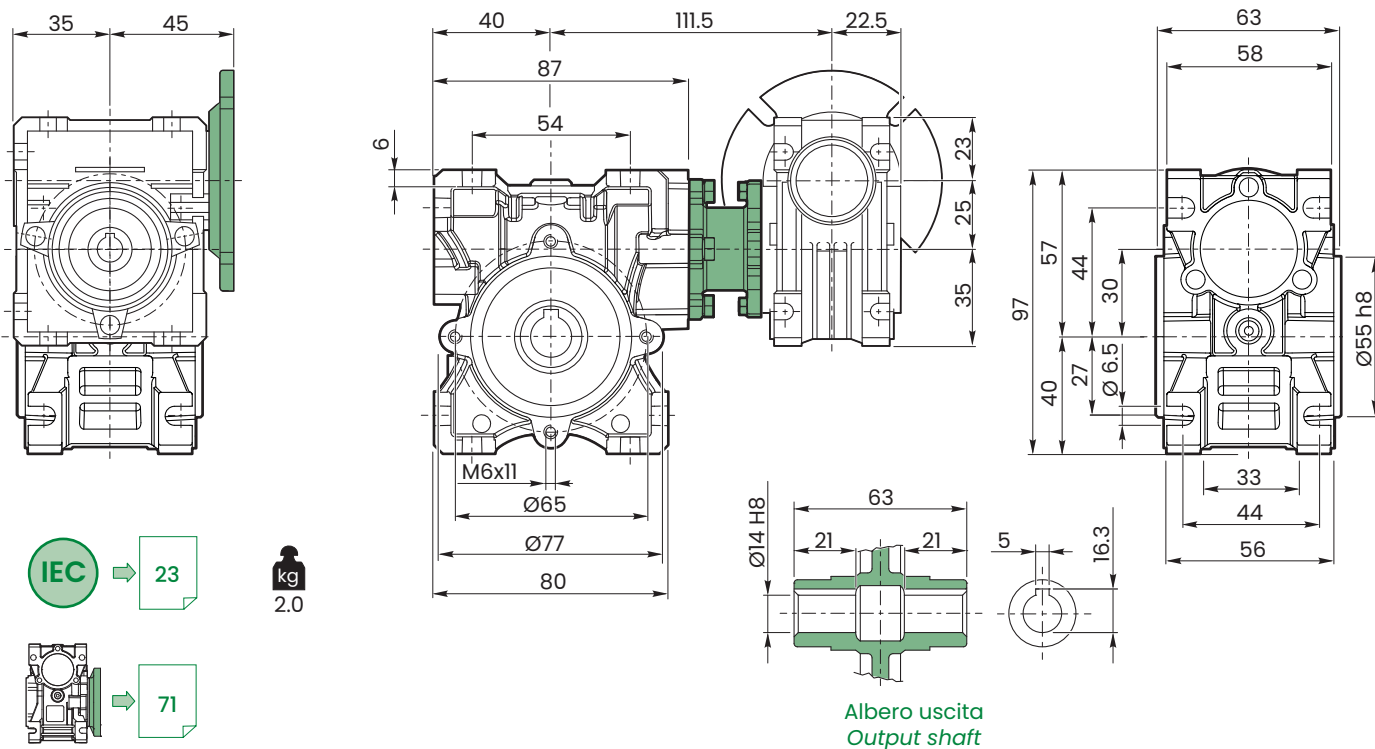
**NG 150 P..**

**N..G 150 F..**

**FA**




NMGD...

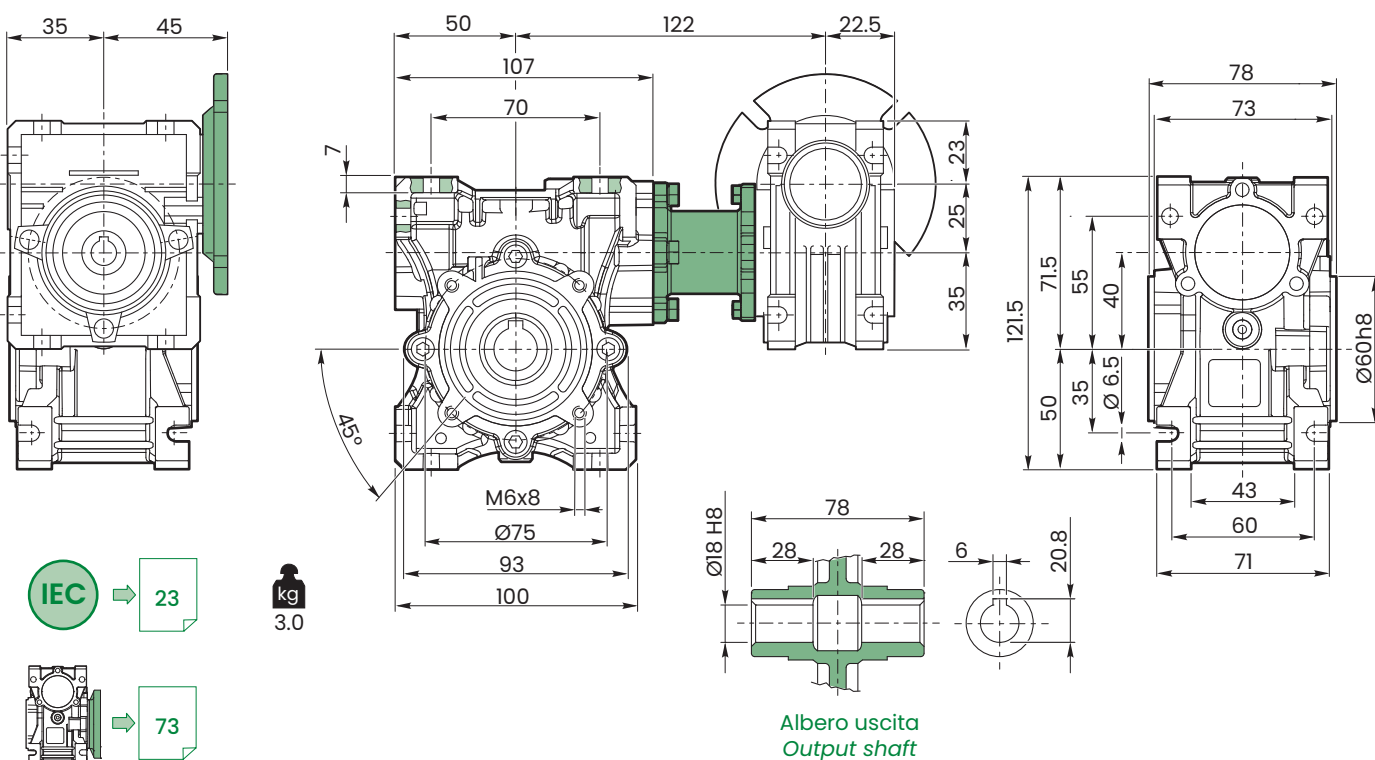
# 025/030

## NMGD 025/030



# 025/040

## NMGD 025/040

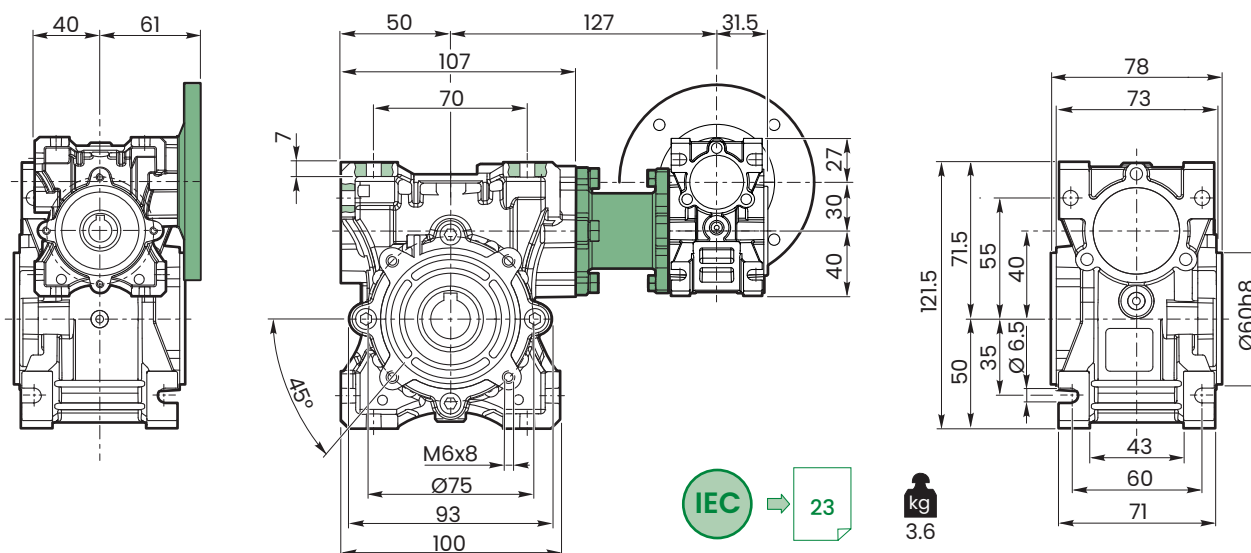


## Dimensioni

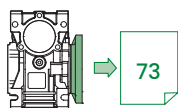
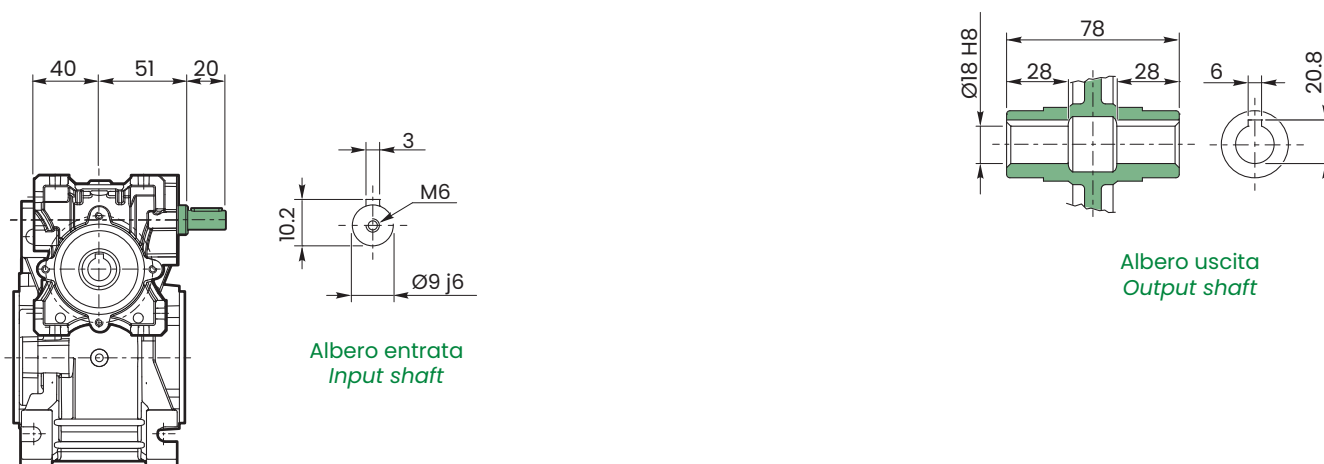
## Dimensions

# 030/040

### NMGD 030/040



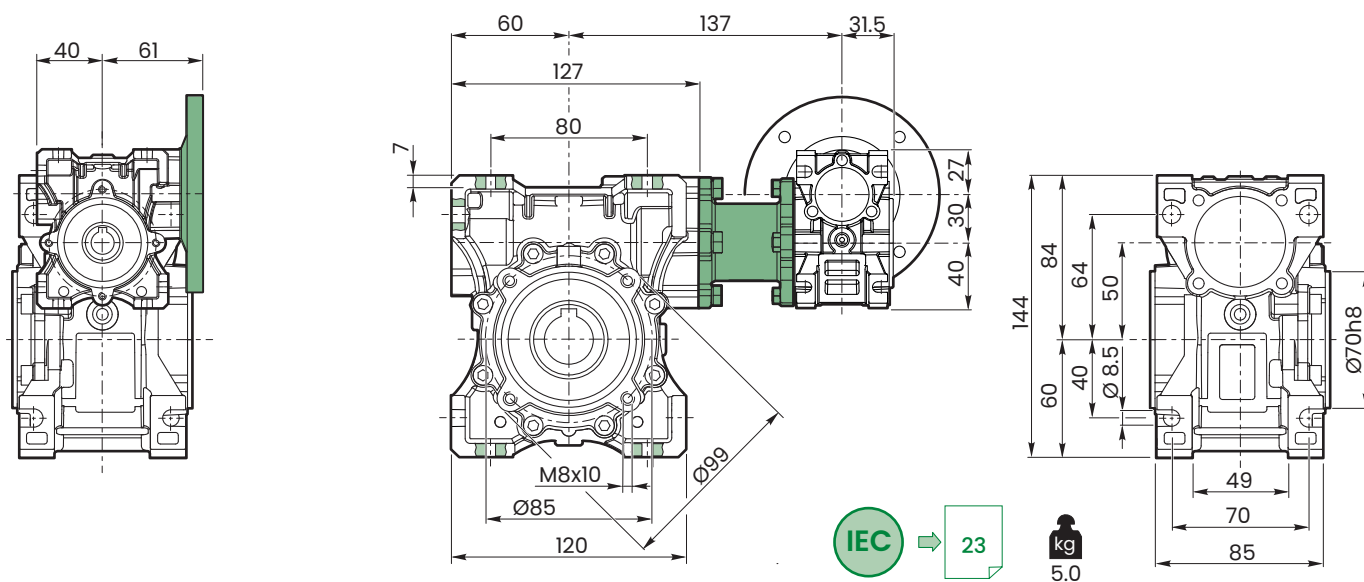
### NGD 030/040



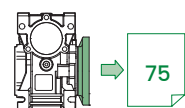
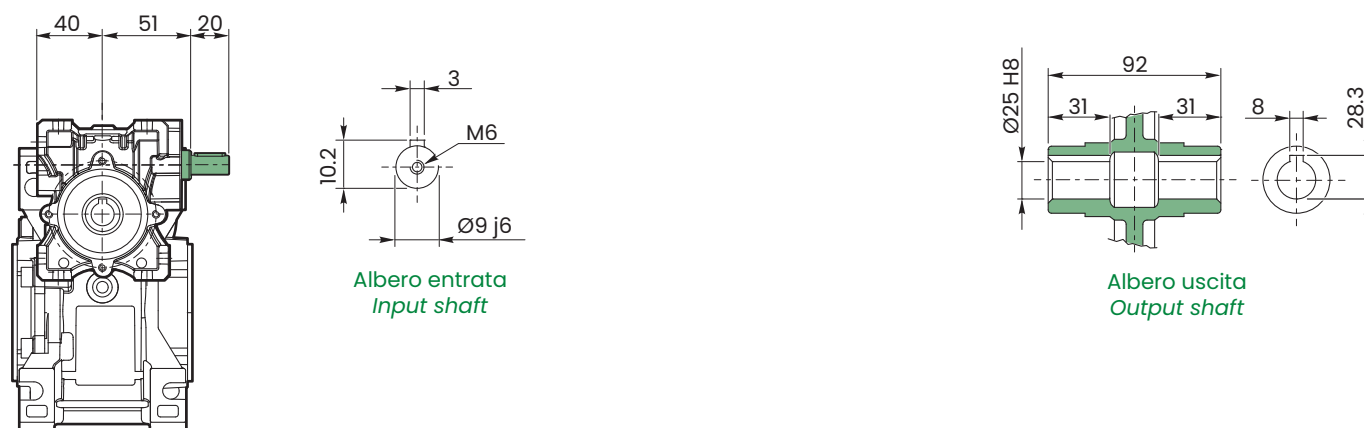


# 030/050

## NMGD 030/050

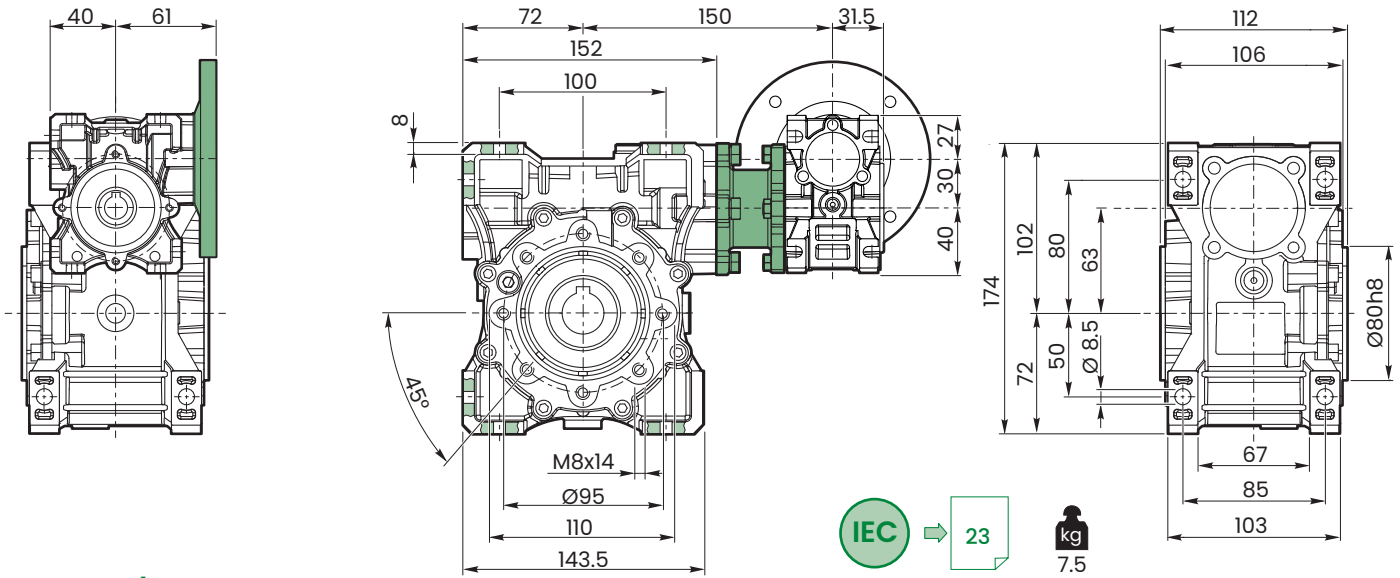


## NGD 030/050

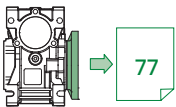


030/063

**NMGD 030/063**

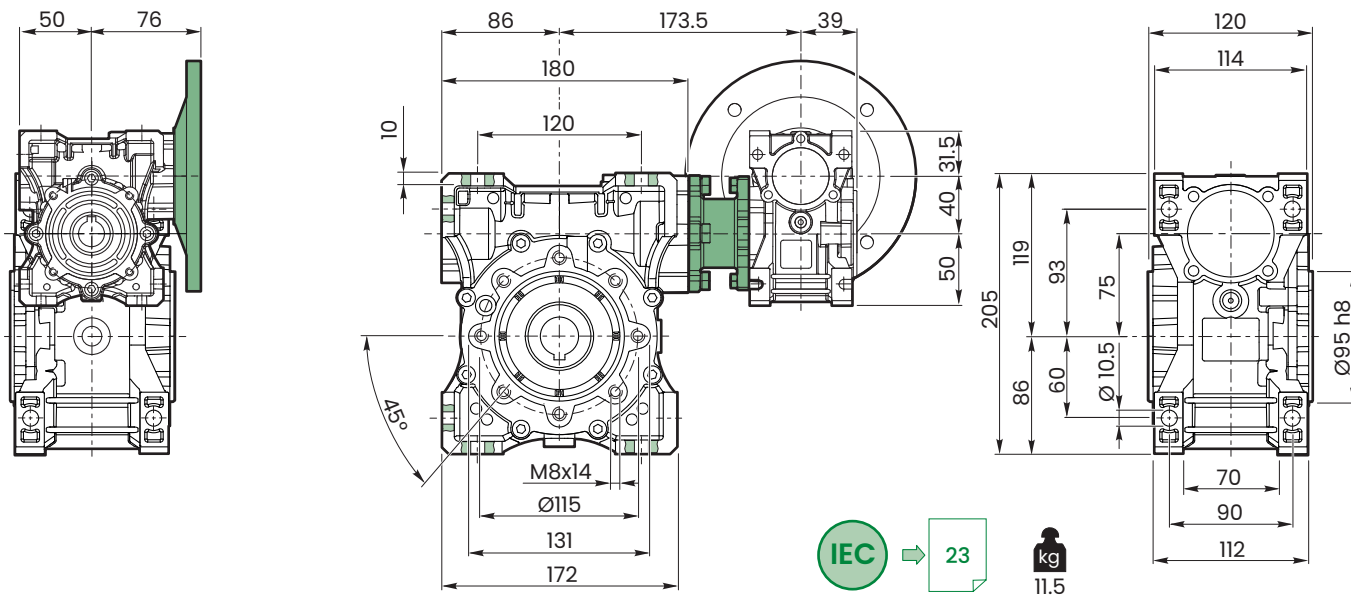


**NGD 030/063**

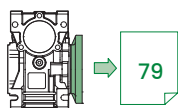


**040/075**

**NMGD 040/075**



**NGD 040/075**

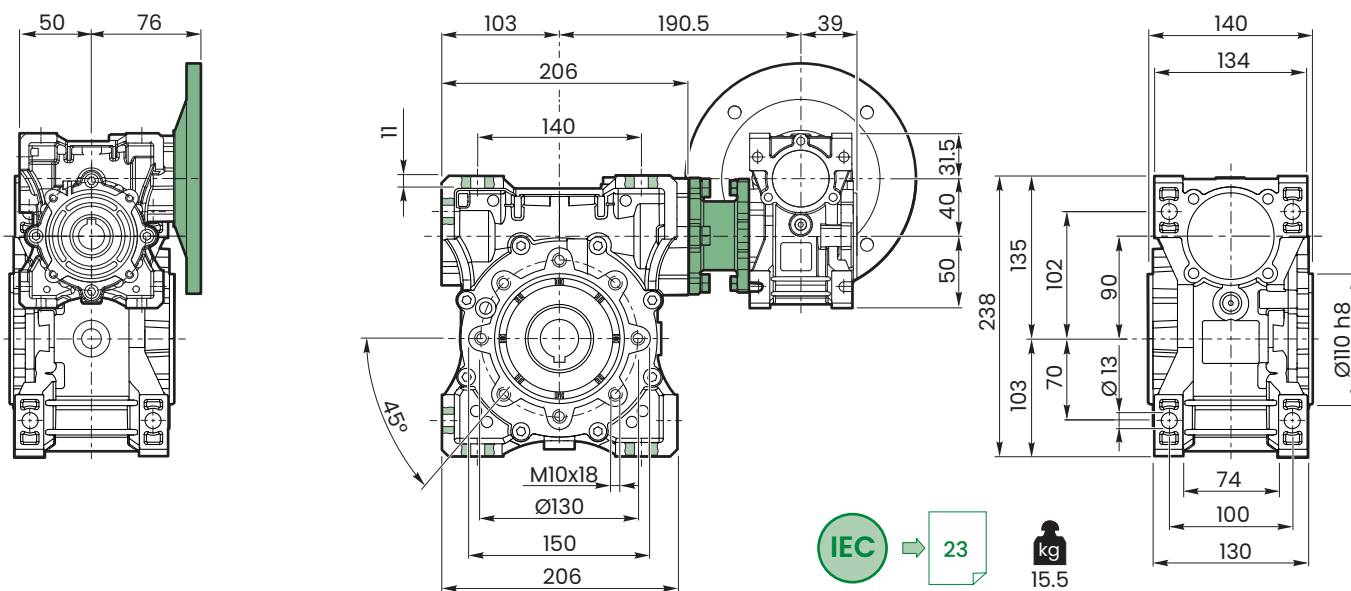


## Dimensioni

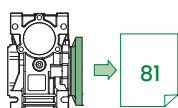
## Dimensions

# 040/090

### NMGD 040/090

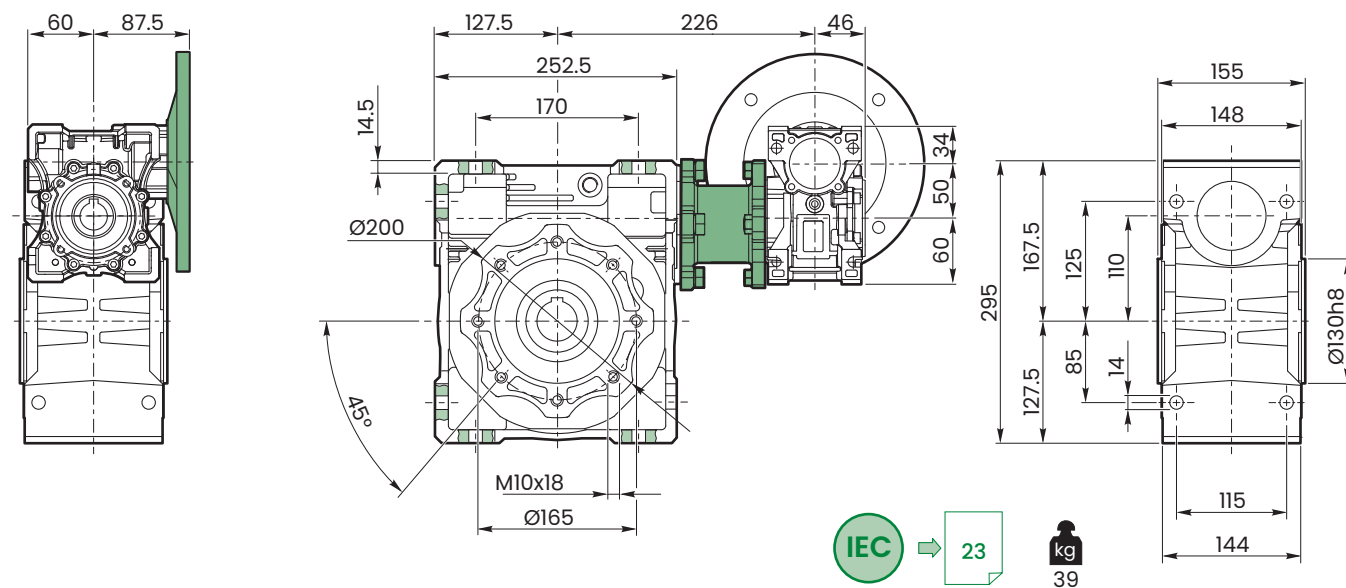


### NGD 040/090

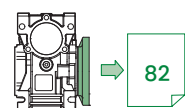


# 050/110

## NMGD 050/110



## NGD 050/110

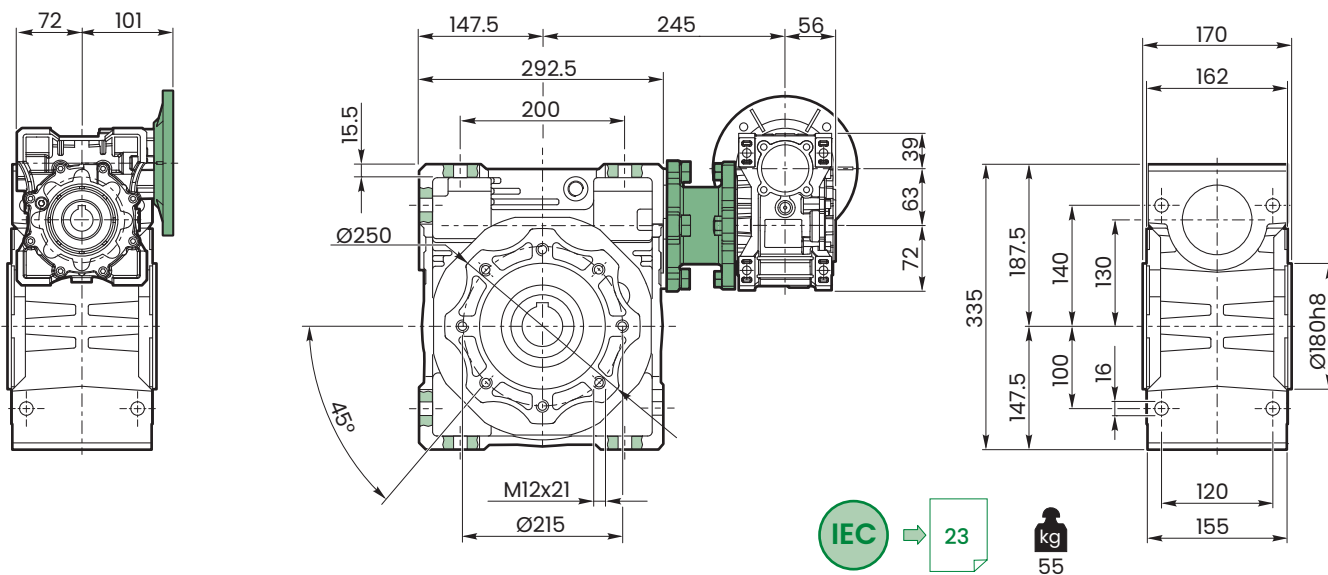


## Dimensioni

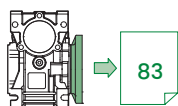
## Dimensions

# 063/130

### NMGD 063/130

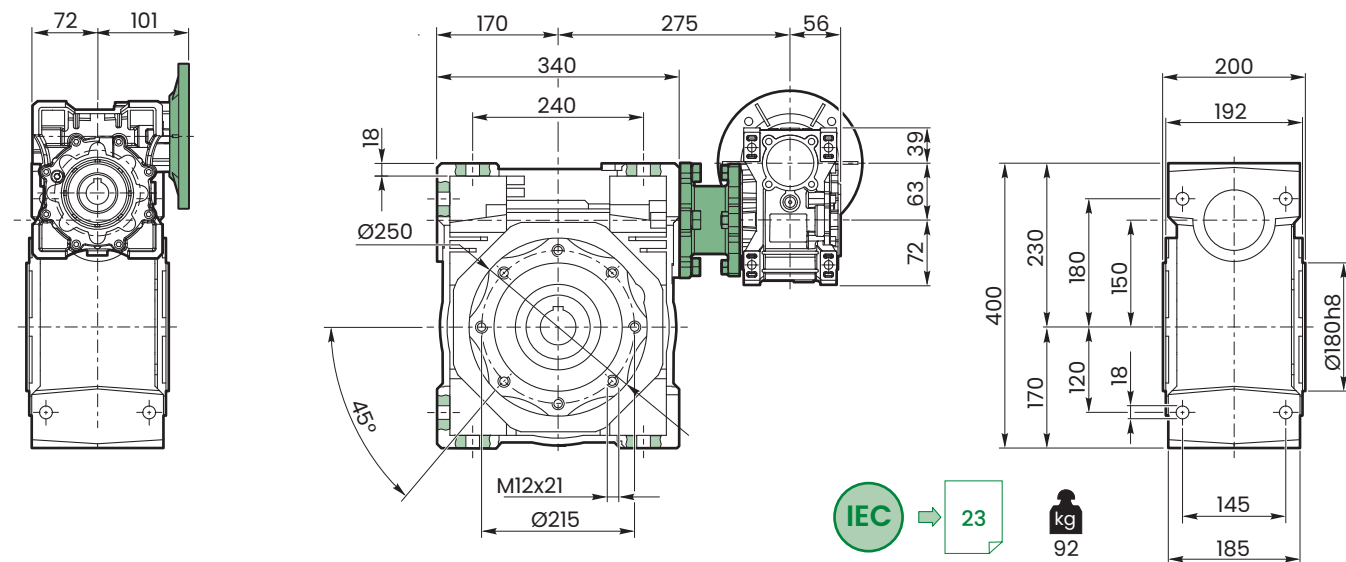


### NGD 063/130

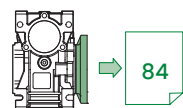
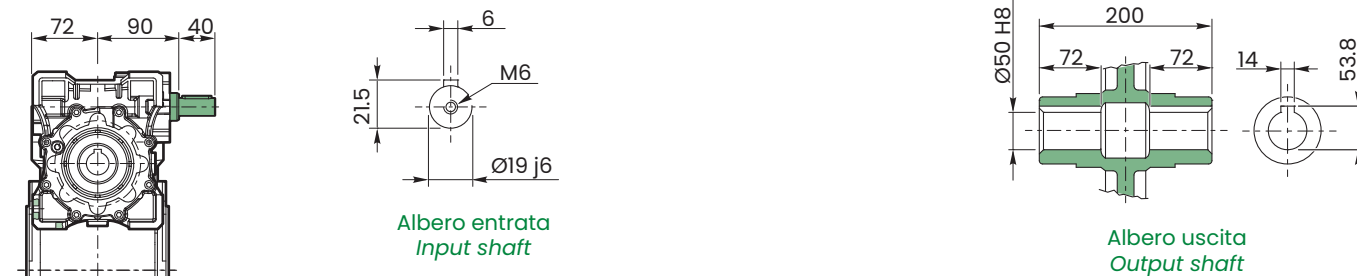


063/150

**NMGD 063/150**



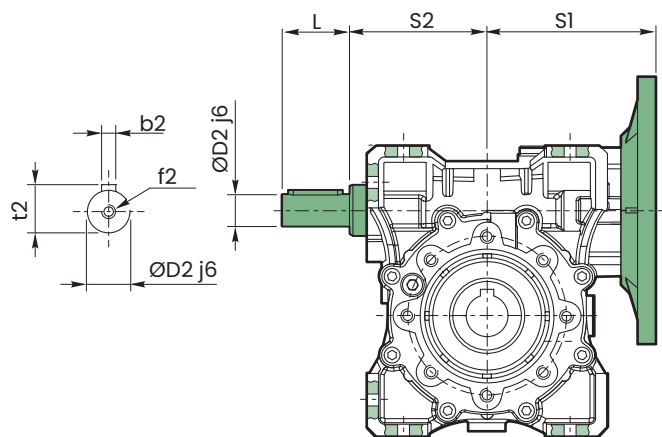
**NGD 063/150**



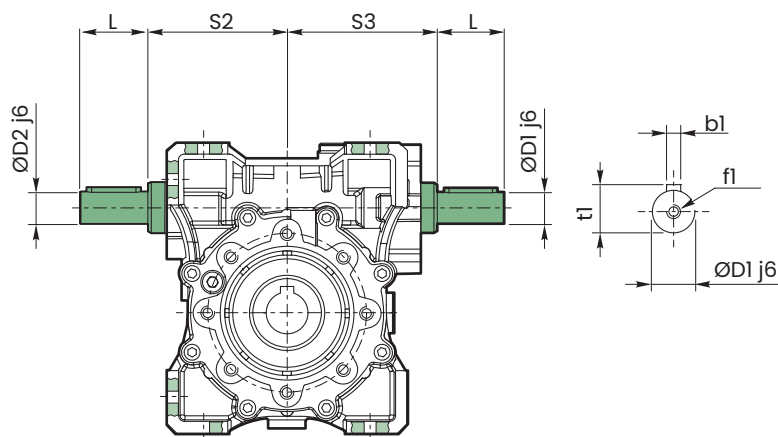
## Entrata supplementare

## Addition input

### NMG..



### NG..



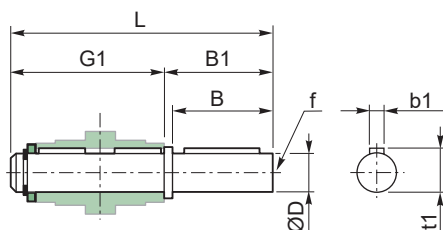
| NMG / NG     | 030  | 040  | 050  | 063  | 075   | 090   | 110 | 130 | 150 |
|--------------|------|------|------|------|-------|-------|-----|-----|-----|
| <b>L</b>     | 20   | 23   | 30   | 40   | 50    | 50    | 60  | 80  | 80  |
| <b>D1 j6</b> | 9    | 11   | 14   | 19   | 24    | 24    | 28  | 30  | 35  |
| <b>D2 j6</b> |      |      |      |      |       |       |     |     |     |
| <b>S1</b>    | 61   | 76   | 87.5 | 101  | 118.5 | 135.5 | 160 | 180 | 210 |
| <b>S2</b>    | 45   | 53   | 63   | 75   | 90    | 108   | 135 | 153 | 177 |
| <b>S3</b>    | 51   | 65   | 75   | 90   | 105   | 122   | 145 | 169 | 199 |
| <b>b1</b>    | 3    | 4    | 5    | 6    | 8     | 8     | 8   | 8   | 10  |
| <b>b2</b>    |      |      |      |      |       |       |     |     |     |
| <b>f1</b>    | -    | -    | M6   | M6   | M8    | M8    | M10 | M10 | M12 |
| <b>f2</b>    |      |      |      |      |       |       |     |     |     |
| <b>t1</b>    | 10.2 | 12.5 | 16   | 21.5 | 27    | 27    | 31  | 33  | 38  |
| <b>t2</b>    |      |      |      |      |       |       |     |     |     |

## Accessori

## Accessories

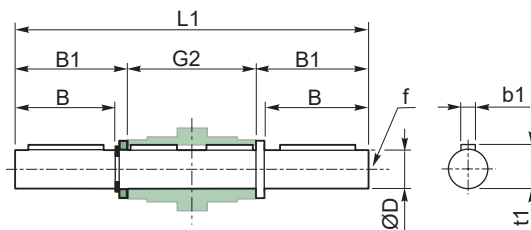
### AS

Albero lento semplice / Single output shaft



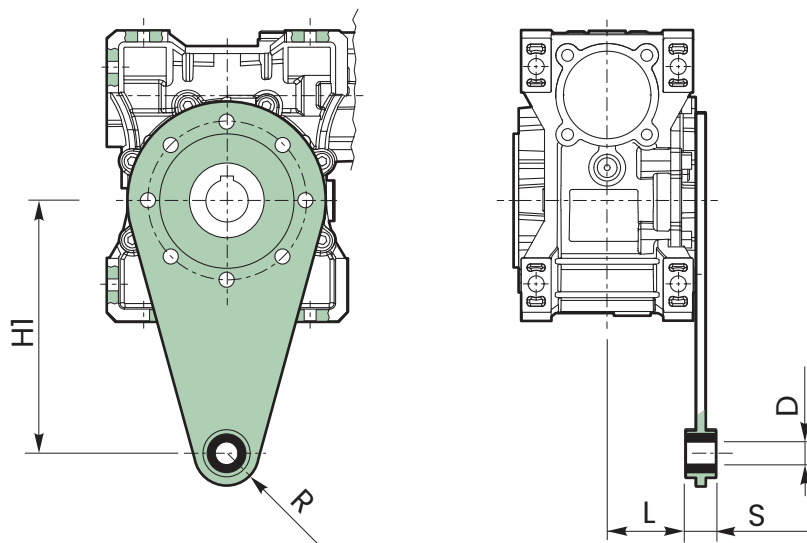
### AD

Albero lento doppio / Double output shaft

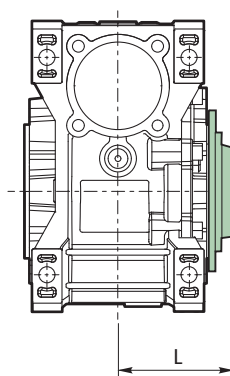


| NMG / NG  | 025   | 030   | 040   | 050   | 063   | 075   | 090   | 110   | 130   | 150   |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>ØD</b> | 11 g6 | 14 h6 | 18 h6 | 25 h6 | 25 h6 | 28 h6 | 35 h6 | 42 h6 | 45 h6 | 50 h6 |
| <b>B</b>  | 23    | 30    | 40    | 50    | 50    | 60    | 80    | 80    | 80    | 82    |
| <b>B1</b> | 25.5  | 32.5  | 43    | 53.5  | 53.5  | 63.5  | 84.5  | 84.5  | 85    | 87    |
| <b>G1</b> | 50    | 63    | 78    | 92    | 112   | 120   | 140   | 155   | 170   | 200   |
| <b>L</b>  | 81    | 102   | 128   | 153   | 173   | 192   | 234   | 249   | 265   | 297   |
| <b>L1</b> | 101   | 128   | 164   | 199   | 219   | 247   | 309   | 324   | 340   | 374   |
| <b>f</b>  | -     | M6    | M6    | M10   | M10   | M10   | M12   | M16   | M16   | M16   |
| <b>b1</b> | 4     | 5     | 6     | 8     | 8     | 8     | 10    | 12    | 14    | 14    |
| <b>t1</b> | 12.5  | 16    | 20.5  | 28    | 28    | 31    | 38    | 45    | 48.5  | 53.5  |



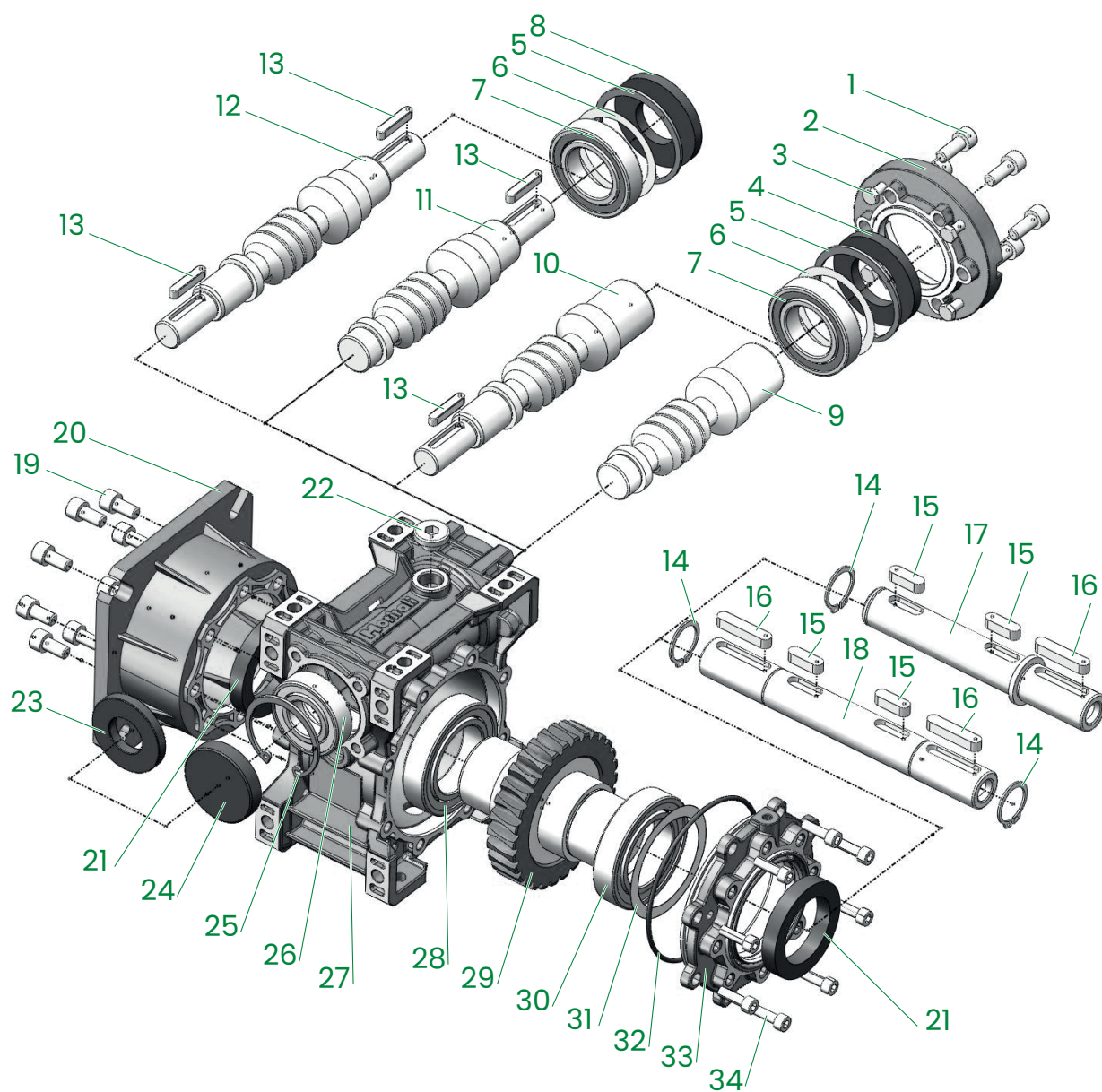
**BR**
**Braccio di reazione / Torque arm**


| NMG / NG  | 025  | 030 | 040  | 050  | 063 | 075  | 090  | 110 | 130 | 150 |
|-----------|------|-----|------|------|-----|------|------|-----|-----|-----|
| <b>H1</b> | 70   | 85  | 100  | 100  | 150 | 200  | 200  | 250 | 250 | 250 |
| <b>S</b>  | 14   | 14  | 14   | 14   | 14  | 25   | 25   | 30  | 30  | 30  |
| <b>L</b>  | 17.5 | 24  | 31.5 | 38.5 | 49  | 47.5 | 57.5 | 62  | 69  | 84  |
| <b>ØD</b> | 8    | 8   | 10   | 10   | 10  | 20   | 20   | 25  | 25  | 25  |
| <b>R</b>  | 15   | 15  | 18   | 18   | 18  | 30   | 30   | 35  | 35  | 35  |

**CC**
**Coperchio protezione albero cavo / Cover hollow shaft protection**


| NMG / NG | 025 | 030 | 040 | 050 | 063 | 075 | 090 | 110 | 130 | 150 |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>L</b> | -   | 42  | 50  | 58  | 69  | 74  | 86  | 94  | 102 | 113 |





## Lista parti di ricambio

## Spare parts list

| n° | Denominazione                       | Part name                         |
|----|-------------------------------------|-----------------------------------|
| 1  | Vite                                | Screw                             |
| 2  | Flangia ingresso                    | Input flange                      |
| 3  | Vite                                | Screw                             |
| 4  | Parolio                             | Oil seal                          |
| 5  | Anello seeger                       | Elastic retaining ring for shaft  |
| 6  | Anello rasamento                    | Adjust spacer                     |
| 7  | Cuscinetto                          | Bearing                           |
| 8  | Paraolio                            | Oil seal                          |
| 9  | Vite senza fine per PAM             | Hole input worm                   |
| 10 | Vite senza fine per PAM bisporgente | Hole input worm with second shaft |
| 11 | Vite senza fine ECE                 | Shaft input worm                  |
| 12 | Vite senza fine ECE bisporgente     | Shaft input and shaft output worm |
| 13 | Linguetta                           | Key                               |
| 14 | Anello seeger                       | Elastic retaining ring for shaft  |
| 15 | Linguetta                           | Key                               |
| 16 | Linguetta                           | Key                               |
| 17 | Albero di uscita singolo            | Albero di uscita singolo          |
| 18 | Albero di uscita doppio             | Double output shaft               |
| 19 | Vite                                | Screw                             |
| 20 | Flangia di uscita                   | Output flange                     |
| 21 | Paraolio                            | Oil seal                          |
| 22 | Tappo dell'olio                     | Oil plug                          |
| 23 | Paraolio                            | Oil seal                          |
| 24 | Tappo RCA                           | Oil seal cover                    |
| 25 | Anello seeger                       | Elastic retaining ring for shaft  |
| 26 | Cuscinetto                          | Bearing                           |
| 27 | Cassa                               | Casing                            |
| 28 | Cuscinetto                          | Bearing                           |
| 29 | Corona                              | Worm wheel                        |
| 30 | Cuscinetto                          | Bearing                           |
| 31 | Anello rasamento                    | Adjust spacer                     |
| 32 | O-ring                              | O-ring                            |
| 33 | Flangia pendolare                   | Cover                             |
| 34 | Vite                                | Screw                             |



## Motori elettrici

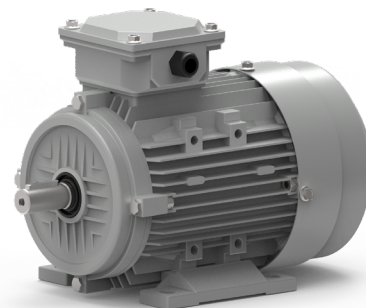
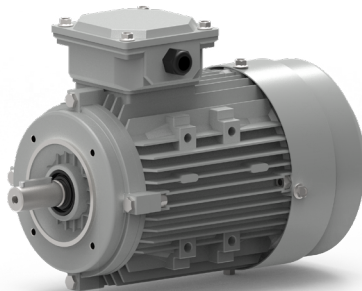
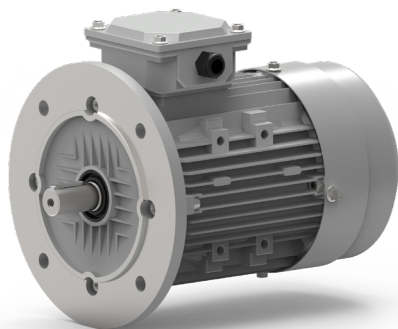
La gamma dei motori elettrici Motitali è disponibile nelle taglie da 56 a 160 con cassa in alluminio, nelle esecuzioni B3-B14-B5.

Classe di efficienza IE1 per tutte le taglie, IE2 per potenze da 0,12kw a 0,55kw, IE3 a partire da 0,75 kw.

## Electric motors

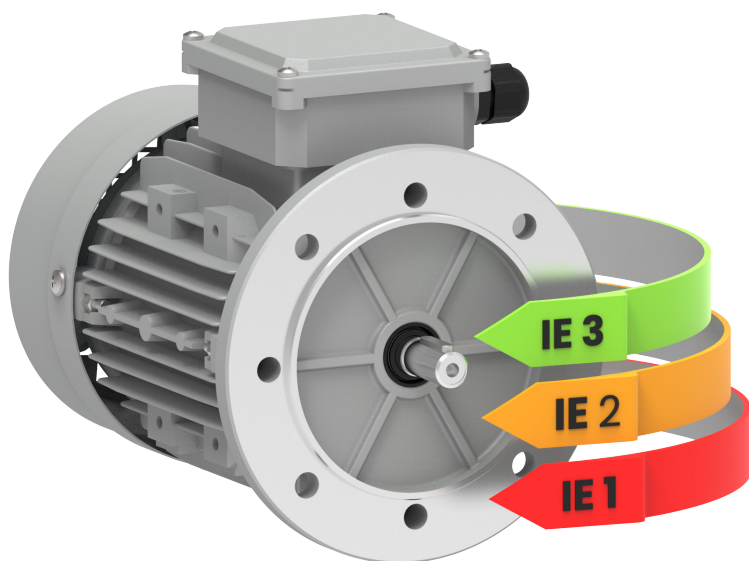
*The range of Motitali electric motors is available in sizes from 56 to 160 with aluminum case, in B3-B14-B5 executions.*

*Efficiency class IE1 for all sizes, IE2 for powers from 0.12kw to 0.55kw, IE3 from 0.75kw and above.*



- Materiale di alta qualità per un'elevata affidabilità.
- Ridotta manutenzione e gestione
- Versatilità d'impiego
- 2 / 4 / 6 poli

- High quality material for high reliability.
- Low maintenance
- Versatility of use
- 2 / 4 / 6 poles

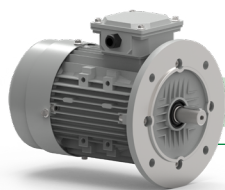


| P [kW] | IE1 | IE2 | IE3 |
|--------|-----|-----|-----|
| 0.06   | ✓   |     |     |
| 0.09   | ✓   | ✓   |     |
| 0.12   | ✓   | ✓   |     |
| 0.18   | ✓   | ✓   |     |
| 0.25   | ✓   | ✓   |     |
| 0.37   | ✓   | ✓   |     |
| 0.55   | ✓   | ✓   |     |
| 0.75   | ✓   |     | ✓   |
| 1.1    | ✓   |     | ✓   |
| 1.5    | ✓   |     | ✓   |
| 2.2    | ✓   |     | ✓   |
| 3      | ✓   |     | ✓   |
| 4      | ✓   |     | ✓   |
| 5.5    | ✓   |     | ✓   |
| 7.5    | ✓   |     | ✓   |
| 11     | ✓   |     | ✓   |
| 15     | ✓   |     | ✓   |



## Designazione

## Designation



### MOTORI / MOTORS

**T 1 04 071 037 B5**

|            |                                       |                                                    |
|------------|---------------------------------------|----------------------------------------------------|
| <b>T</b>   | MOTORE TRIFASE<br>THREE PHASE MOTOR   | <b>T</b>                                           |
| <b>1</b>   | CLASSE ENERGETICA<br>EFFICIENCY CLASS | <b>1 (IE1), 2 (IE2), 3 (IE3)</b>                   |
| <b>04</b>  | POLI<br>POLES                         | <b>2, 4, 6</b>                                     |
| <b>071</b> | GRANDEZZA<br>SIZE                     | <b>056, 063, 071, 080, 090, 100, 112, 132, 160</b> |
| <b>037</b> | POTENZA<br>POWER                      | <b>v. tabelle<br/>see tables</b>                   |
| <b>B5</b>  | FORMA COSTRUTTIVA<br>VERSION          | <b>B5, B4 (B14), B3</b>                            |

## Simbologia

## Symbols

| Simbolo / Symbol | Descrizione                    | Description            |
|------------------|--------------------------------|------------------------|
| $I_n$ [A]        | Corrente nominale              | Nominal current        |
| $I_s$ [A]        | Corrente di spunto             | Starting current       |
| $M_n$ [Nm]       | Coppia nominale                | Nominal torque         |
| $M_s$ [Nm]       | Coppia di spunto               | Starting torque        |
| $M_{MAX}$ [Nm]   | Coppia massima                 | Maximum torque         |
| $n_n$ [rpm]      | Velocità di rotazione nominale | Nominal rotation speed |
| $\cos \varphi$   | Fattore di potenza             | Power factor           |
| $P_n$ [kW]       | Potenza nominale in entrata    | Nominal input power    |
| $\eta$           | Rendimento                     | Efficiency             |



## Dati tecnici

## Technical data

### 2 poli 2 poles

|              |         | $P_n$ |      | $I$          | $n_n$ | $\eta$ |      |      | $\cos \varphi$ | $M_n$ | $M_s / M_n$ | $I_s / I_n$ | $M_{MAX} / M_n$ |
|--------------|---------|-------|------|--------------|-------|--------|------|------|----------------|-------|-------------|-------------|-----------------|
|              |         | [kW]  | [Hp] | [A]<br>400 V | [rpm] | 100%   | 75%  | 50%  |                | [Nm]  |             |             |                 |
| IE1 (S3-75%) | 56A-2   | 0.09  | 0.12 | 0.41         | 2700  | 45.0   | 45.0 | 44.1 | 0.70           | 0.32  | 2.1         | 5.2         | 2.2             |
|              | 56B-2   | 0.12  | 0.18 | 0.53         | 2700  | 45.0   | 45.0 | 44.1 | 0.72           | 0.42  | 2.1         | 5.2         | 2.2             |
|              | 63A-2   | 0.18  | 0.25 | 0.62         | 2720  | 52.8   | 52.8 | 51.7 | 0.80           | 0.63  | 2.3         | 5.5         | 2.2             |
|              | 63B-2   | 0.25  | 0.37 | 0.77         | 2720  | 58.2   | 58.2 | 57.0 | 0.81           | 0.88  | 2.3         | 5.5         | 2.2             |
|              | 63C-2   | 0.37  | 0.5  | 1.06         | 2720  | 60.3   | 60.3 | 58.1 | 0.81           | 1.23  | 2.3         | -           | -               |
|              | 71A-2   | 0.37  | 0.5  | 1.04         | 2740  | 63.9   | 63.9 | 62.6 | 0.81           | 1.29  | 2.3         | 6.1         | 2.2             |
|              | 71B-2   | 0.55  | 0.75 | 1.41         | 2740  | 69.0   | 69.0 | 67.6 | 0.82           | 1.92  | 2.3         | 6.1         | 2.3             |
|              | 71C-2   | 0.75  | 1    | 1.93         | 2740  | 72.6   | 72.6 | 68.4 | 0.82           | 1.92  | 2.45        | -           | -               |
|              | 80A-2   | 0.75  | 1    | 1.81         | 2840  | 72.1   | 72.1 | 70.7 | 0.83           | 2.52  | 2.2         | 6.1         | 2.3             |
|              | 80B-2   | 1.1   | 1.5  | 2.52         | 2840  | 75.0   | 75.0 | 73.5 | 0.84           | 3.70  | 2.2         | 6.9         | 2.3             |
|              | 80C-2   | 1.5   | 2    | 3.20         | 2840  | 75.0   | 75.0 | 73.5 | 0.84           | 5.01  | 2.2         | 6.9         | 2.3             |
|              | 90S-2   | 1.5   | 2    | 3.33         | 2840  | 77.2   | 77.2 | 75.7 | 0.84           | 5.04  | 2.2         | 7.0         | 2.3             |
|              | 90L-2   | 2.2   | 3    | 4.68         | 2840  | 79.7   | 79.7 | 78.1 | 0.85           | 7.40  | 2.2         | 7.0         | 2.3             |
|              | 100LA-2 | 3     | 4    | 6.11         | 2860  | 81.5   | 81.5 | 79.9 | 0.87           | 10.02 | 2.2         | 7.5         | 2.3             |
|              | 112M-2  | 4     | 5.5  | 7.89         | 2880  | 83.1   | 83.1 | 81.4 | 0.88           | 13.3  | 2.2         | 7.5         | 2.3             |
|              | 132SA-2 | 5.5   | 7.5  | 10.93        | 2900  | 84.7   | 84.7 | 83.0 | 0.86           | 18.1  | 2.2         | 7.5         | 2.3             |
|              | 132MA-2 | 7.5   | 10   | 14.35        | 2900  | 86.0   | 86.0 | 84.3 | 0.88           | 24.7  | 2.2         | 7.5         | 2.3             |
|              | 160M-2  | 11    | 15   | 20.33        | 2930  | 87.6   | 87.6 | 85.8 | 0.89           | 35.9  | 2.2         | 7.5         | 2.3             |
|              | 160L-2  | 15    | 20   | 27.46        | 2930  | 88.7   | 88.7 | 86.9 | 0.89           | 48.9  | 2.2         | 7.5         | 2.3             |
| IE2          | 56B-2   | 0.12  | 0.18 | 0.45         | 2720  | 53.6   | 53.6 | 52.5 | 0.72           | 0.42  | 2.1         | 5.2         | 2.2             |
|              | 63A-2   | 0.18  | 0.25 | 0.54         | 2725  | 60.4   | 60.4 | 59.2 | 0.80           | 0.63  | 2.2         | 5.5         | 2.2             |
|              | 63B-2   | 0.25  | 0.37 | 0.68         | 2725  | 64.8   | 64.8 | 63.5 | 0.81           | 0.88  | 2.2         | 5.5         | 2.2             |
|              | 63C-2   | 0.37  | 0.5  | 0.72         | 2725  | 71.0   | -    | -    | 0.81           | 1.3   | 2.2         | 5.5         | 2.2             |
|              | 71A-2   | 0.37  | 0.5  | 0.95         | 2745  | 69.5   | 69.5 | 68.1 | 0.81           | 1.29  | 2.2         | 6.1         | 2.2             |
|              | 71B-2   | 0.55  | 0.75 | 1.31         | 2745  | 74.1   | 74.1 | 72.6 | 0.82           | 1.91  | 2.3         | 6.1         | 2.3             |
| IE3          | 80A-2   | 0.75  | 1    | 1.63         | 2880  | 80.7   | 80.7 | 79.1 | 0.82           | 2.49  | 2.3         | 7.0         | 2.3             |
|              | 80B-2   | 1.1   | 1.5  | 2.31         | 2880  | 82.7   | 82.7 | 81.0 | 0.83           | 3.65  | 2.2         | 7.3         | 2.3             |
|              | 90S-2   | 1.5   | 2    | 3.06         | 2895  | 84.2   | 84.2 | 82.5 | 0.84           | 4.95  | 2.2         | 7.6         | 2.3             |
|              | 90L-2   | 2.2   | 3    | 4.35         | 2895  | 85.9   | 85.9 | 84.2 | 0.85           | 7.26  | 2.2         | 7.6         | 2.3             |
|              | 100LA-2 | 3     | 4    | 5.72         | 2895  | 87.1   | 87.1 | 85.4 | 0.87           | 9.90  | 2.2         | 7.8         | 2.3             |
|              | 112M-2  | 4     | 5.5  | 7.45         | 2905  | 88.1   | 88.1 | 86.3 | 0.88           | 13.1  | 2.2         | 8.3         | 2.3             |
|              | 132SA-2 | 5.5   | 7.5  | 10.07        | 2930  | 89.2   | 89.2 | 87.4 | 0.88           | 17.9  | 2.0         | 8.3         | 2.3             |
|              | 132SB-2 | 7.5   | 10   | 13.68        | 2930  | 90.1   | 90.1 | 88.3 | 0.88           | 24.4  | 2.0         | 7.9         | 2.3             |
|              | 160M-2  | 11    | 15   | 19.57        | 2945  | 91.2   | 91.2 | 89.4 | 0.89           | 35.7  | 2.0         | 8.1         | 2.3             |
|              | 160L-2  | 15    | 20   | 26.51        | 2945  | 91.9   | 91.9 | 90.1 | 0.89           | 48.6  | 2.0         | 8.1         | 2.3             |





## Dati tecnici

## Technical data

### 4 poli 4 poles

|              |         | $P_n$ |      | $I$          | $n_n$ | $\eta$ |      |      | $\cos \varphi$ | $M_n$ | $M_s / M_n$ | $I_s / I_n$ | $M_{MAX} / M_n$ |
|--------------|---------|-------|------|--------------|-------|--------|------|------|----------------|-------|-------------|-------------|-----------------|
|              |         | [kW]  | [Hp] | [A]<br>400 V | [rpm] | 100%   | 75%  | 50%  |                | [Nm]  |             |             |                 |
| IE1 (S3-75%) | 56A-4   | 0.06  | 0.09 | 0.28         | 1325  | 54.0   | 54.0 | 52.9 | 0.58           | 0.43  | 2.0         | 4.0         | 2.1             |
|              | 56B-4   | 0.09  | 0.12 | 0.38         | 1325  | 56.0   | 56.0 | 54.9 | 0.61           | 0.65  | 2.0         | 4.0         | 2.1             |
|              | 63A-4   | 0.12  | 0.18 | 0.48         | 1330  | 50.0   | 50.0 | 49.0 | 0.72           | 0.87  | 2.1         | 4.4         | 2.2             |
|              | 63B-4   | 0.18  | 0.25 | 0.63         | 1330  | 57.0   | 57.0 | 55.9 | 0.73           | 1.31  | 2.1         | 4.4         | 2.2             |
|              | 63C-4   | 0.25  | 0.37 | 0.82         | 1330  | 61.5   | 61.5 | 59.5 | 0.74           | 1.75  | 2.1         | -           | -               |
|              | 71A-4   | 0.25  | 0.37 | 0.79         | 1330  | 61.5   | 61.5 | 60.3 | 0.74           | 1.80  | 2.1         | 5.2         | 2.2             |
|              | 71B-4   | 0.37  | 0.5  | 1.08         | 1330  | 66.0   | 66.0 | 64.7 | 0.75           | 2.66  | 2.1         | 5.2         | 2.2             |
|              | 71C-4   | 0.55  | 0.75 | 1.52         | 1350  | 67.0   | 67.0 | 65.0 | 0.75           | 3.8   | 2.1         | -           | -               |
|              | 80A-4   | 0.55  | 0.75 | 1.51         | 1390  | 70.0   | 70.0 | 68.6 | 0.75           | 3.78  | 2.4         | 5.2         | 2.3             |
|              | 80B-4   | 0.75  | 1    | 1.98         | 1390  | 72.1   | 72.1 | 70.7 | 0.76           | 5.15  | 2.3         | 6.0         | 2.3             |
|              | 80C-4   | 1.1   | 1.5  | 2.48         | 1390  | 84.3   | 84.3 | 81.6 | 0.76           | 7.4   | 2.3         | -           | -               |
|              | 90S-4   | 1.1   | 1.5  | 2.75         | 1390  | 75.0   | 75.0 | 73.5 | 0.77           | 7.56  | 2.3         | 6.0         | 2.3             |
|              | 90L-4   | 1.5   | 2    | 3.64         | 1390  | 77.2   | 77.2 | 75.7 | 0.77           | 10.3  | 2.3         | 6.0         | 2.3             |
|              | 90M-4   | 2.2   | 3    | 4.40         | 1390  | 78.3   | 78.3 | 77.6 | 0.77           | 14.9  | 2.3         | -           | -               |
|              | 100LA-4 | 2.2   | 3    | 4.92         | 1390  | 79.7   | 79.7 | 78.1 | 0.81           | 15.1  | 2.3         | 7.0         | 2.3             |
|              | 100LB-4 | 3     | 4    | 6.48         | 1410  | 81.5   | 81.5 | 79.9 | 0.82           | 20.3  | 2.3         | 7.0         | 2.3             |
|              | 100LC-4 | 4     | 5.5  | 9.60         | 1410  | 82.0   | 82.0 | 79.0 | 0.82           | 25.8  | 2.3         | -           | -               |
|              | 112M-4  | 4     | 5.5  | 8.47         | 1410  | 83.1   | 83.1 | 81.4 | 0.82           | 27.1  | 2.3         | 7.0         | 2.3             |
|              | 112L-4  | 5.5   | 7.5  | 12.30        | 1410  | 83.1   | 83.1 | 81.4 | 0.82           | 36.9  | 2.3         | 7.0         | 2.3             |
|              | 132S-4  | 5.5   | 7.5  | 11.31        | 1435  | 84.7   | 84.7 | 83.0 | 0.83           | 36.6  | 2.3         | 7.0         | 2.3             |
|              | 132M-4  | 7.5   | 10   | 15.01        | 1440  | 86.0   | 86.0 | 84.3 | 0.84           | 49.7  | 2.3         | 7.0         | 2.3             |
|              | 132MC-4 | 11    | 15   | 25.20        | 1440  | 86.0   | 86.0 | 84.3 | 0.84           | 49.7  | 2.3         | 7.0         | 2.3             |
|              | 160M-4  | 11    | 15   | 21.57        | 1440  | 87.6   | 87.6 | 85.8 | 0.84           | 73.0  | 2.2         | 7.0         | 2.3             |
|              | 160L-4  | 15    | 20   | 28.69        | 1460  | 88.7   | 88.7 | 86.9 | 0.85           | 98.1  | 2.2         | 7.5         | 2.3             |
| IE2          | 63A-4   | 0.12  | 0.18 | 0.41         | 1315  | 59.1   | 59.1 | 57.9 | 0.72           | 0.87  | 2.1         | 4.4         | 2.2             |
|              | 63B-4   | 0.18  | 0.25 | 0.55         | 1315  | 64.7   | 64.7 | 63.4 | 0.73           | 1.31  | 2.1         | 4.4         | 2.2             |
|              | 63C-4   | 0.25  | 0.37 | 0.68         | 1315  | 66.7   | -    | -    | 0.74           | 1.77  | 2.1         | 4.4         | 2.2             |
|              | 71A-4   | 0.25  | 0.37 | 0.71         | 1335  | 68.5   | 68.5 | 67.1 | 0.74           | 1.79  | 2.1         | 5.2         | 2.2             |
|              | 71B-4   | 0.37  | 0.5  | 0.98         | 1335  | 72.7   | 72.7 | 71.2 | 0.75           | 2.65  | 2.1         | 5.2         | 2.2             |
|              | 71C-4   | 0.55  | 0.75 | 1.25         | 1335  | 75.0   | -    | -    | 0.75           | 3.81  | 2.1         | 5.2         | 2.2             |
|              | 80A-4   | 0.55  | 0.75 | 1.38         | 1400  | 77.1   | 77.1 | 75.6 | 0.75           | 3.75  | 2.3         | 5.2         | 2.3             |
| IE3          | 80B-4   | 0.75  | 1    | 1.75         | 1420  | 82.5   | 82.5 | 80.9 | 0.75           | 5.04  | 2.3         | 6.6         | 2.3             |
|              | 80C-4   | 1.1   | 1.5  | 2.1          | 1420  | 83.0   | -    | -    | 0.76           | 7.20  | 2.3         | 6.6         | 2.3             |
|              | 90S-4   | 1.1   | 1.5  | 2.48         | 1445  | 84.1   | 84.1 | 82.4 | 0.76           | 7.27  | 2.3         | 6.8         | 2.3             |
|              | 90L-4   | 1.5   | 2    | 3.30         | 1445  | 85.3   | 85.3 | 83.6 | 0.77           | 9.91  | 2.3         | 7.0         | 2.3             |
|              | 90LC-4  | 2.2   | 2    | 4.25         | 1445  | 86.0   | -    | -    | 0.79           | 14.6  | 2.3         | 7.0         | 2.3             |
|              | 100LA-4 | 2.2   | 3    | 4.52         | 1450  | 86.7   | 86.7 | 85.0 | 0.81           | 14.6  | 2.3         | 7.6         | 2.3             |
|              | 100LB-4 | 3     | 4    | 6.02         | 1450  | 87.7   | 87.7 | 85.9 | 0.82           | 20    | 2.3         | 7.6         | 2.3             |
|              | 112M-4  | 4     | 5.5  | 7.95         | 1450  | 88.6   | 88.6 | 86.8 | 0.82           | 26.5  | 2.2         | 7.8         | 2.3             |
|              | 132S-4  | 5.5   | 7.5  | 10.64        | 1460  | 89.6   | 89.6 | 87.8 | 0.83           | 36    | 2.0         | 7.9         | 2.3             |
|              | 132M-4  | 7.5   | 10   | 14.25        | 1460  | 90.4   | 90.4 | 88.6 | 0.84           | 49.1  | 2.0         | 7.5         | 2.3             |
|              | 160M-4  | 11    | 15   | 20.43        | 1465  | 91.4   | 91.4 | 89.6 | 0.85           | 71.7  | 2.2         | 7.7         | 2.3             |
|              | 160L-4  | 15    | 20   | 27.36        | 1465  | 92.1   | 92.1 | 90.3 | 0.86           | 97.8  | 2.2         | 7.8         | 2.3             |



## Dati tecnici

## Technical data

### 6 poli 6 poles

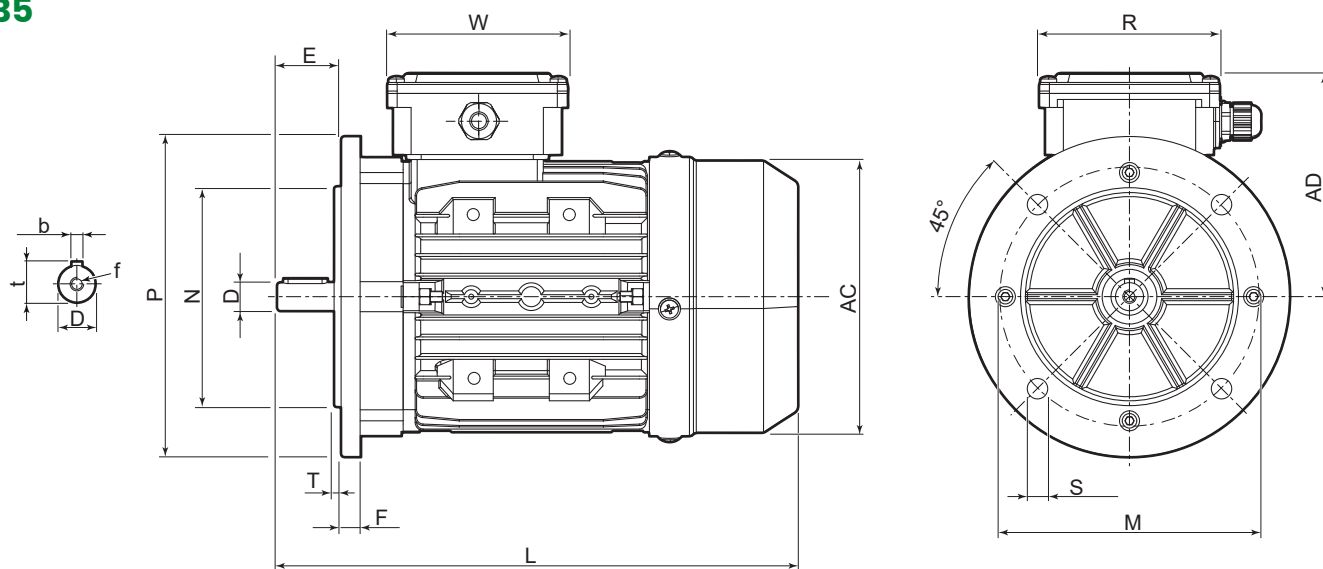
|              |         | $P_n$ |      | $I$          | $n_n$ | $\eta$ |      |      | $\cos \varphi$ | $M_n$ | $M_s / M_n$ | $I_s / I_n$ | $M_{MAX} / M_n$ |
|--------------|---------|-------|------|--------------|-------|--------|------|------|----------------|-------|-------------|-------------|-----------------|
|              |         | [kW]  | [Hp] | [A]<br>400 V |       | 100%   | 75%  | 50%  |                |       |             |             |                 |
| IE1 (s3-75%) | 63A-6   | 0.09  | 0.12 | 0.49         | 840   | 44.0   | 44.0 | 43.1 | 0.6            | 1.02  | 1.8         | 3.5         | 1.9             |
|              | 63B-6   | 0.12  | 0.18 | 0.75         | 850   | 38.3   | 38.3 | 37.5 | 0.6            | 1.35  | 1.8         | 3.5         | 1.9             |
|              | 71A-6   | 0.18  | 0.25 | 0.86         | 850   | 45.5   | 45.5 | 44.6 | 0.66           | 2.02  | 1.9         | 4.0         | 2.0             |
|              | 71B-6   | 0.25  | 0.37 | 1.02         | 850   | 52.1   | 52.1 | 51.1 | 0.68           | 2.81  | 1.9         | 4.0         | 2.0             |
|              | 80A-6   | 0.37  | 0.5  | 1.28         | 885   | 59.7   | 59.7 | 58.5 | 0.70           | 3.99  | 1.9         | 4.7         | 2.0             |
|              | 80B-6   | 0.55  | 0.75 | 1.67         | 885   | 65.8   | 65.8 | 64.5 | 0.72           | 5.94  | 1.9         | 4.7         | 2.1             |
|              | 90S-6   | 0.75  | 1    | 2.15         | 910   | 70.0   | 70.0 | 68.6 | 0.72           | 7.87  | 2.0         | 5.3         | 2.1             |
|              | 90L-6   | 1.1   | 1.5  | 3.02         | 910   | 72.9   | 72.9 | 71.4 | 0.72           | 11.5  | 2.0         | 5.5         | 2.1             |
|              | 100L-6  | 1.5   | 2    | 3.84         | 920   | 75.2   | 75.2 | 73.7 | 0.75           | 15.6  | 2.0         | 5.5         | 2.1             |
|              | 112M-6  | 2.2   | 3    | 5.38         | 935   | 77.7   | 77.7 | 76.1 | 0.76           | 22.5  | 2.0         | 6.5         | 2.1             |
|              | 132S-6  | 3     | 4    | 7.14         | 960   | 79.7   | 79.7 | 78.1 | 0.76           | 29.8  | 2.1         | 6.5         | 2.1             |
|              | 132A-6  | 4     | 5.5  | 9.33         | 960   | 81.4   | 81.4 | 79.8 | 0.76           | 39.8  | 2.1         | 6.5         | 2.1             |
|              | 132B-6  | 5.5   | 7.5  | 12.45        | 960   | 83.1   | 83.1 | 81.4 | 0.77           | 54.7  | 2.1         | 6.5         | 2.1             |
|              | 160M-6  | 7.5   | 10   | 16.34        | 970   | 84.7   | 84.7 | 83.0 | 0.78           | 73.8  | 2.0         | 6.5         | 2.1             |
|              | 160L-6  | 11    | 15   | 23.56        | 970   | 86.4   | 86.4 | 84.7 | 0.78           | 108.3 | 2.0         | 6.5         | 2.1             |
| IE2          | 63B-6   | 0.12  | 0.18 | 0.57         | 850   | 50.6   | 50.6 | 49.6 | 0.60           | 1.35  | 2.0         | 4.0         | 2.1             |
|              | 71A-6   | 0.18  | 0.25 | 0.69         | 850   | 56.6   | 56.6 | 55.5 | 0.66           | 2.0   | 2.0         | 4.0         | 2.1             |
|              | 71B-6   | 0.25  | 0.37 | 0.86         | 850   | 61.6   | 61.6 | 60.4 | 0.68           | 2.8   | 2.0         | 4.0         | 2.1             |
|              | 80A-6   | 0.37  | 0.5  | 1.13         | 885   | 67.6   | 67.6 | 66.2 | 0.70           | 4.0   | 2.0         | 4.7         | 2.1             |
|              | 80B-6   | 0.55  | 0.75 | 1.51         | 885   | 73.1   | 73.1 | 71.6 | 0.72           | 5.9   | 2.0         | 4.7         | 2.1             |
| IE3          | 90S-6   | 0.75  | 1    | 1.93         | 935   | 78.9   | 78.9 | 77.3 | 0.71           | 7.66  | 2.0         | 6.0         | 2.1             |
|              | 90L-6   | 1.1   | 1.5  | 2.69         | 945   | 81.0   | 81.0 | 79.4 | 0.73           | 11.1  | 2.0         | 6.0         | 2.1             |
|              | 100L-6  | 1.5   | 2    | 3.59         | 949   | 82.5   | 82.5 | 80.9 | 0.73           | 15.1  | 2.0         | 6.5         | 2.1             |
|              | 112M-6  | 2.2   | 3    | 5.09         | 955   | 84.3   | 84.3 | 82.6 | 0.74           | 22    | 2.0         | 6.6         | 2.1             |
|              | 132S-6  | 3     | 4    | 6.84         | 968   | 85.6   | 85.6 | 83.9 | 0.74           | 29.6  | 2.0         | 6.8         | 2.1             |
|              | 132MA-6 | 4     | 5.5  | 8.99         | 968   | 86.8   | 86.8 | 85.1 | 0.74           | 39.5  | 2.0         | 6.8         | 2.1             |
|              | 132MB-6 | 5.5   | 7.5  | 12           | 968   | 88.0   | 88.0 | 86.2 | 0.75           | 54.3  | 2.0         | 7.0         | 2.1             |
|              | 160M-6  | 7.5   | 10   | 15.39        | 970   | 89.1   | 89.1 | 87.3 | 0.79           | 73.8  | 2.0         | 7.0         | 2.1             |
|              | 160L-6  | 11    | 15   | 22           | 970   | 90.3   | 90.3 | 88.5 | 0.80           | 108.3 | 2.0         | 7.2         | 2.1             |



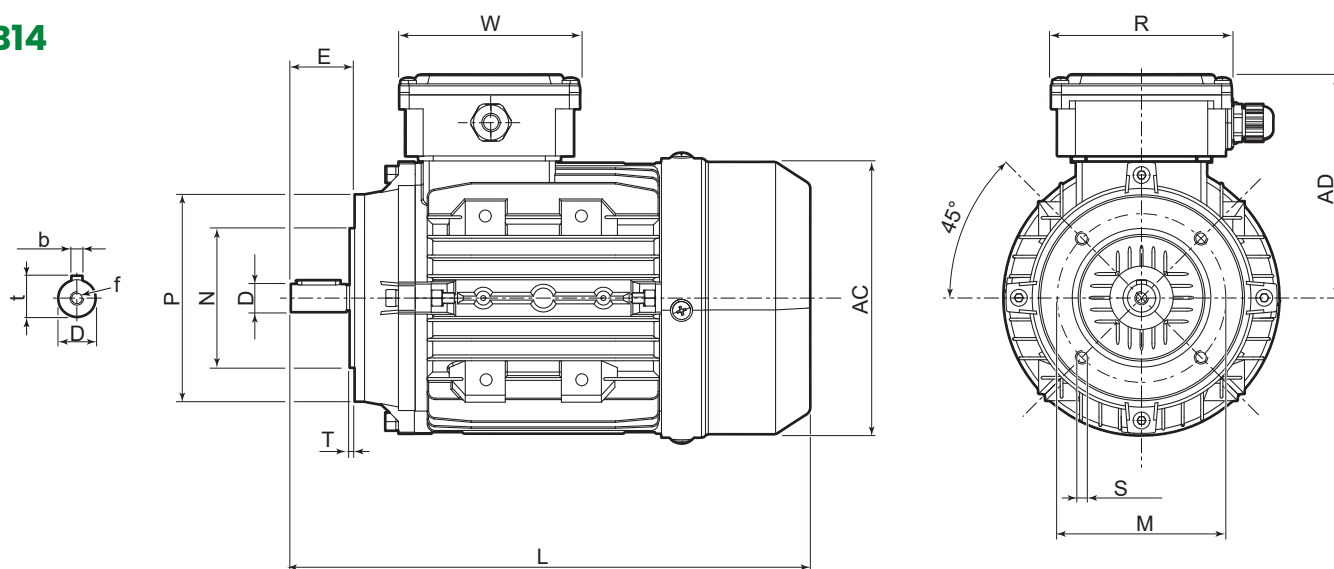
## Dimensioni

## Dimensions

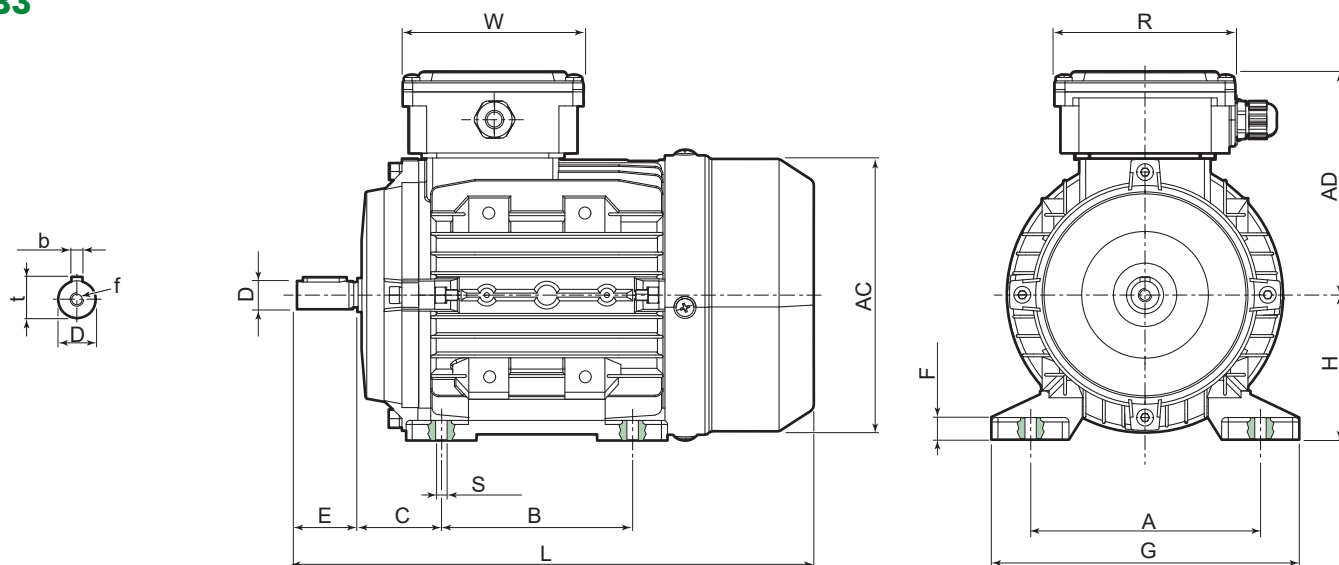
### B5



### B14



### B3





## Dimensioni

## Dimensions

|               | Albero / Shaft |     |    |        |      | B5   |      |      |     |     | Motore / Motor |     |         |       |       |
|---------------|----------------|-----|----|--------|------|------|------|------|-----|-----|----------------|-----|---------|-------|-------|
|               | D              | E   | b  | f      | t    | M    | N    | P    | T   | S   | AC             | AD  | L       | R     | W     |
| <b>56</b>     | Ø9             | 20  | 3  | M4x12  | 10.2 | Ø100 | Ø80  | Ø120 | 3   | Ø7  | 113            | 96  | 199     | 86    | 86    |
| <b>63</b>     | Ø11            | 23  | 4  | M4x12  | 12.5 | Ø115 | Ø95  | Ø140 | 3   | Ø10 | 120            | 102 | 217     | 101   | 101   |
| <b>71</b>     | Ø14            | 30  | 5  | M5x12  | 16   | Ø130 | Ø110 | Ø160 | 3.5 | Ø10 | 136            | 109 | 245     | 101   | 101   |
| <b>80</b>     | Ø19            | 40  | 6  | M6x16  | 21.5 | Ø165 | Ø130 | Ø200 | 3.5 | Ø12 | 157            | 129 | 290     | 101   | 101   |
| <b>90S</b>    | Ø24            | 50  | 8  | M8x19  | 27   | Ø165 | Ø130 | Ø200 | 3.5 | Ø12 | 175            | 140 | 325     | 109   | 109   |
| <b>90L/M</b>  | Ø24            | 50  | 8  | M8x19  | 27   | Ø165 | Ø130 | Ø200 | 3.5 | Ø12 | 175            | 140 | 350     | 109   | 109   |
| <b>100</b>    | Ø28            | 60  | 8  | M10x22 | 31   | Ø215 | Ø180 | Ø250 | 4   | Ø15 | 198            | 156 | 398     | 109   | 109   |
| <b>112</b>    | Ø28            | 60  | 8  | M10x22 | 31   | Ø215 | Ø180 | Ø250 | 4   | Ø15 | 225            | 176 | 394     | 117.5 | 117.5 |
| <b>132S</b>   | Ø38            | 80  | 10 | M12x28 | 41   | Ø265 | Ø230 | Ø300 | 4   | Ø15 | 258            | 188 | 475     | 117.5 | 117.5 |
| <b>132M</b>   | Ø38            | 80  | 10 | M12x28 | 41   | Ø265 | Ø230 | Ø300 | 4   | Ø15 | 315            | 188 | 513     | 117.5 | 117.5 |
| <b>160M/L</b> | Ø42            | 110 | 12 | M16x36 | 45   | Ø300 | Ø250 | Ø350 | 5   | Ø19 | 315            | 242 | 609/653 | 167   | 167   |

|               | Albero / Shaft |     |    |        |      | B14  |      |      |     |     | Motore / Motor |     |         |       |       |
|---------------|----------------|-----|----|--------|------|------|------|------|-----|-----|----------------|-----|---------|-------|-------|
|               | D              | E   | b  | f      | t    | M    | N    | P    | T   | S   | AC             | AD  | L       | R     | W     |
| <b>56</b>     | Ø9             | 20  | 3  | M4x12  | 10.2 | Ø50  | Ø65  | Ø80  | 2.5 | M5  | 113            | 96  | 199     | 86    | 86    |
| <b>63</b>     | Ø11            | 23  | 4  | M4x12  | 12.5 | Ø60  | Ø75  | Ø90  | 2.5 | M5  | 120            | 102 | 217     | 101   | 101   |
| <b>71</b>     | Ø14            | 30  | 5  | M5x12  | 16   | Ø70  | Ø85  | Ø105 | 2.5 | M6  | 136            | 109 | 245     | 101   | 101   |
| <b>80</b>     | Ø19            | 40  | 6  | M6x16  | 21.5 | Ø80  | Ø100 | Ø120 | 3   | M6  | 157            | 129 | 290     | 101   | 101   |
| <b>90S</b>    | Ø24            | 50  | 8  | M8x19  | 27   | Ø95  | Ø115 | Ø140 | 3   | M8  | 175            | 140 | 325     | 109   | 109   |
| <b>90L/M</b>  | Ø24            | 50  | 8  | M8x19  | 27   | Ø95  | Ø115 | Ø140 | 3   | M8  | 175            | 140 | 350     | 109   | 109   |
| <b>100</b>    | Ø28            | 60  | 8  | M10x22 | 31   | Ø110 | Ø130 | Ø160 | 3.5 | M8  | 198            | 156 | 398     | 109   | 109   |
| <b>112</b>    | Ø28            | 60  | 8  | M10x22 | 31   | Ø110 | Ø130 | Ø160 | 3.5 | M8  | 225            | 176 | 394     | 117.5 | 117.5 |
| <b>132S</b>   | Ø38            | 80  | 10 | M12x28 | 41   | Ø130 | Ø165 | Ø200 | 4   | M10 | 258            | 188 | 475     | 117.5 | 117.5 |
| <b>132M</b>   | Ø38            | 80  | 10 | M12x28 | 41   | Ø130 | Ø165 | Ø200 | 4   | M10 | 315            | 188 | 513     | 117.5 | 117.5 |
| <b>160M/L</b> | Ø42            | 110 | 12 | M16x36 | 45   | Ø180 | Ø215 | Ø250 | 4   | M12 | 315            | 242 | 609/653 | 167   | 167   |

|               | Albero / Shaft |     |    |        |      | B3  |         |     |     |     |    |         | Motore / Motor |     |         |       |       |
|---------------|----------------|-----|----|--------|------|-----|---------|-----|-----|-----|----|---------|----------------|-----|---------|-------|-------|
|               | D              | E   | b  | f      | t    | A   | B       | C   | G   | H   | F  | S       | AC             | AD  | L       | R     | W     |
| <b>56</b>     | Ø9             | 20  | 3  | M4x12  | 10.2 | 90  | 71      | 36  | 111 | 56  | 7  | 5.8x8.3 | 113            | 96  | 199     | 86    | 86    |
| <b>63</b>     | Ø11            | 23  | 4  | M4x12  | 12.5 | 100 | 80      | 40  | 123 | 63  | 7  | 7x9.5   | 120            | 102 | 217     | 101   | 101   |
| <b>71</b>     | Ø14            | 30  | 5  | M5x12  | 16   | 112 | 90      | 45  | 138 | 71  | 8  | 7x11    | 136            | 109 | 245     | 101   | 101   |
| <b>80</b>     | Ø19            | 40  | 6  | M6x16  | 21.5 | 125 | 100     | 50  | 157 | 80  | 8  | 10x14   | 157            | 129 | 290     | 101   | 101   |
| <b>90S</b>    | Ø24            | 50  | 8  | M8x19  | 27   | 140 | 100     | 56  | 173 | 90  | 10 | 10x14   | 175            | 140 | 325     | 109   | 109   |
| <b>90L/M</b>  | Ø24            | 50  | 8  | M8x19  | 27   | 140 | 125     | 56  | 173 | 90  | 10 | 10x14   | 175            | 140 | 350     | 109   | 109   |
| <b>100</b>    | Ø28            | 60  | 8  | M10x22 | 31   | 160 | 140     | 63  | 196 | 100 | 11 | 12x16   | 198            | 156 | 398     | 109   | 109   |
| <b>112</b>    | Ø28            | 60  | 8  | M10x22 | 31   | 190 | 140     | 70  | 227 | 112 | 12 | 12x16   | 225            | 176 | 427     | 117.5 | 117.5 |
| <b>132S</b>   | Ø38            | 80  | 10 | M12x28 | 41   | 216 | 140     | 89  | 262 | 132 | 15 | 12x16   | 258            | 188 | 445     | 117.5 | 117.5 |
| <b>132M</b>   | Ø38            | 80  | 10 | M12x28 | 41   | 216 | 178     | 89  | 262 | 132 | 15 | 12x16   | 315            | 188 | 483     | 117.5 | 117.5 |
| <b>160M/L</b> | Ø42            | 110 | 12 | M16x36 | 45   | 254 | 210/254 | 108 | 304 | 160 | 18 | 15x18   | 315            | 242 | 589/633 | 167   | 167   |



## Protezione

I motori Motitali sono progettati ed assemblati secondo le norme IEC60034-5 e IEC60529 relativamente al grado di protezione contro contatti accidentali e/o eventuale entrata di corpi estranei solidi e/o liquidi.

I tipi di protezione sono identificati dalla sigla "IP" seguita da due cifre che ne determinano le caratteristiche come da tabella sotto riportata.

I motori Motitali standard sono IP55.

## Protection

Motitali motors are designed and assembled according to the IEC60034-5 and IEC60529 standards rules, regarding the degree of protection against accidental contact and/or possible entry of solid and/or liquid foreign objects.

The types of protection are identified by the abbreviation "IP" followed by a two digits number to determine their characteristics as shown in the table here below.

Standard Motitali motors are IP55.

# IP 55

| Protezione contro i corpi solidi<br><i>Protection against foreign bodies</i> |                                                                                                                                      | Protezione contro i liquidi<br><i>Protection against liquid</i> |                                                                                                                                                |
|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| IP                                                                           | Definizione / Description                                                                                                            | IP                                                              | Definizione / Description                                                                                                                      |
| 0                                                                            | Non protetto<br><i>No protection</i>                                                                                                 | 0                                                               | Non protetto<br><i>No protection</i>                                                                                                           |
| 1                                                                            | Protetto contro i corpi solidi superiori a 50 mm<br><i>Protection against solid foreign bodies of thickness greater than 50 mm</i>   | 1                                                               | Protetto contro la caduta verticale di gocce d'acqua<br><i>Protection against vertical drops of water</i>                                      |
| 2                                                                            | Protetto contro i corpi solidi superiori a 12 mm<br><i>Protection against solid foreign bodies of thickness greater than 12 mm</i>   | 2                                                               | Protetto contro le cadute d'acqua a pioggia fino a 15° dalla verticale<br><i>Protection against sprinkle water until 15° from the vertical</i> |
| 3                                                                            | Protetto contro i corpi solidi superiori a 2.5 mm<br><i>Protection against solid foreign bodies of thickness greater than 2.5 mm</i> | 3                                                               | Protetto contro le cadute d'acqua a pioggia fino a 60° dalla verticale<br><i>Protection against sprinkle water until 60° from the vertical</i> |
| 4                                                                            | Protetto contro i corpi solidi superiori a 1 mm<br><i>Protection against solid foreign bodies of thickness greater than 1 mm</i>     | 4                                                               | Protetto contro i getti d'acqua provenienti da tutte le direzioni<br><i>Protection against jets of water from any directions</i>               |
| 5                                                                            | Protetto contro le polveri<br><i>Protection against ingress of dust</i>                                                              | 5                                                               | Protetto contro i getti d'acqua con lancia da tutte le direzioni<br><i>Protection against water projected by a nozzle from any directions</i>  |
| 6                                                                            | Totalmente protetto contro le polveri<br><i>Complete protection against ingress of dust</i>                                          | 6                                                               | Protetto contro le proiezioni d'acqua simili a onde marine<br><i>Protection against water projections similar to sea waves</i>                 |
|                                                                              |                                                                                                                                      | 7                                                               | Protetto contro gli effetti dell'immersione<br><i>Protection against the effects of immersion</i>                                              |
|                                                                              |                                                                                                                                      | 8                                                               | Protetto contro immersione/sommersione prolungata<br><i>Protection against prolonged immersion/submersion</i>                                  |

## Tipo di servizio

## Type of service

I dati tecnici motori indicati in questo catalogo sono riferite al servizio continuo S1 secondo quanto stabilito dalla normativa CEI EN 60034-1.  
A richiesta possono essere forniti motori per servizio intermittente S2 (30 o 60 min) ed S3.

The technical data of the motors indicated in this catalog refers to the continuous service S1 according to the CEI EN 60034-1 standard.  
On request we can be supplied motors for intermittent service S2 (30 or 60 min) and S3.

|           | Servizio<br>Duty Service                                       | Descrizione<br>Description                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>S1</b> | Servizio continuo<br>Continuous duty                           | Funzionamento del motore a carico costante e di durata sufficiente a raggiungere l'equilibrio termico.<br><br><i>Constant load motor operation for a sufficient time to reach thermal balance</i>                                                                                                                                                                                                                                                     |
| <b>S2</b> | Servizio di durata limitata<br>Limited duration Duty           | Funzionamento del motore a carico costante per un periodo di tempo limitato non sufficiente a raggiungere l'equilibrio termico, seguito da un periodo di riposo tale da riportare il motore a temperatura ambiente.<br><br><i>Constant load motor operation for a certain period of time, less than that required to reach thermal balance, followed by a rest period, long enough to restore equality between ambient and the motor temperature.</i> |
| <b>S3</b> | Servizio intermittente periodico<br>Periodic intermittent Duty | Funzionamento del motore secondo un ciclo che prevede un periodo di tempo a carico costante ed un periodo di riposo.<br><br><i>Sequence of identical operating cycles, each including a period of operation at constant load and one at rest.</i>                                                                                                                                                                                                     |

## Classi di isolamento

## Insulation class

I motori Motitali sono realizzati nel rispetto della normativa IEC 60085 garantendo la classe d'isolamento F.

Motitali motors are manufactured in compliance with the IEC 60085 standard, guaranteeing insulation Class. F.

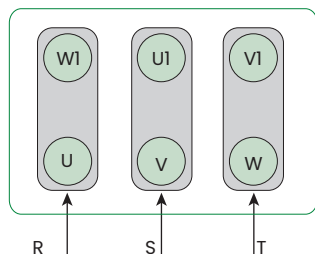


## Collegamenti motori elettrici

### 230 V

400 V > 3kW

#### Collegamento triangolo Triangle connection

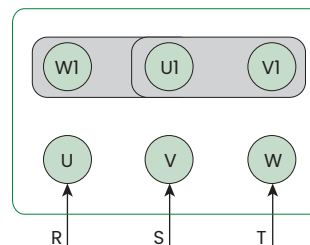


## Electric motor connections

### 400 V

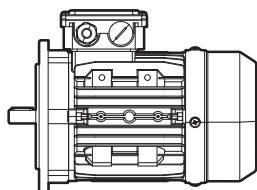
690 V > 3kW

#### Collegamento stella Star connection

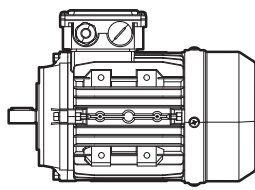


## Posizioni di montaggio

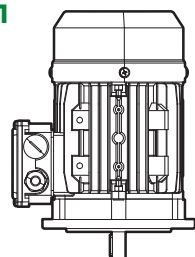
### B5



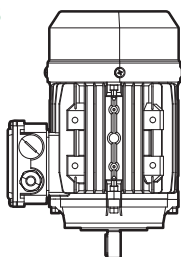
### B14



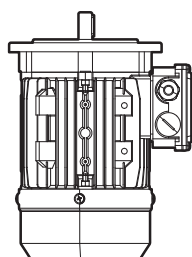
### V1



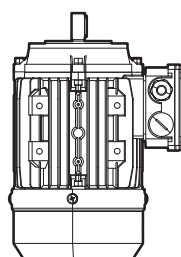
### V18



### V3

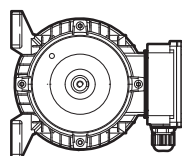


### V19

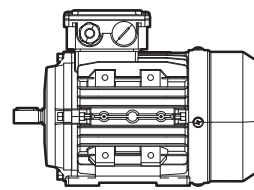


## Mounting positions

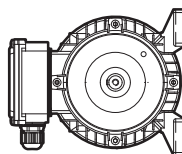
### B6



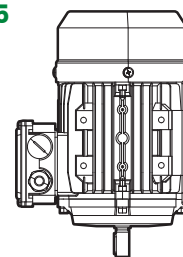
### B3



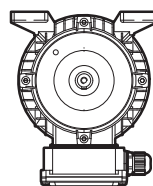
### B7



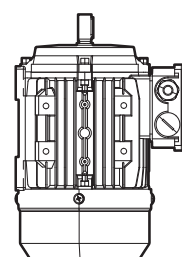
### V5



### B8



### V6





## Variatori di velocità

La gamma dei variatori di velocità Motitali è da utilizzare in applicazioni dove è richiesta la possibilità di regolare la velocità di rotazione all'uscita dal riduttore a cui il variatore è accoppiato.

- Trasmissione epicicloidale a rapporto variabile
  - Predisposizione per attacco diretto su riduttore
  - Facilità di impiego
  - Semplice regolazione della velocità di rotazione
  - Predisposizione per attacco piedi
  - Riduzione dei costi
- 
- Coppia di uscita: da 1.5 Nm a 64 Nm
  - Potenza: da 0.18 kW a 4.0 kW (a 1400rpm)
  - Rapporti di riduzione: da 1.6:1 a 7.4:1
  - Cassa in alluminio pressofuso per MVD 002, 005, 010 e 020 ghisa per MVD 030 e 050.

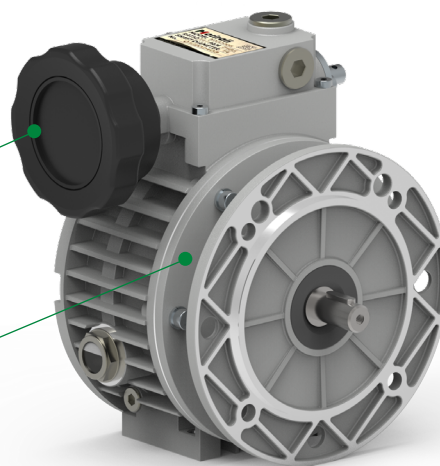
## Speed variators

*The range of Motitali Mechanical variators is normally used in applications where the rotation speed adjustment at the output of the gearbox is required.*

- Variable ratio epicyclic transmission
  - Settled for direct connection
  - Easy use
  - Simple rotation speed adjustment
  - Predisposition for foot attachment
  - Cost reduction
- 
- Output torque: 1.5 Nm to 64 Nm
  - Power: 0.18 kW to 4.0 kW (at 1400rpm)
  - Reduction ratios: 1.6:1 to 7.4:1
  - Die-cast aluminum case for size MVD 002, 005, 010 and 020 cast iron for MVD 030 and 050.

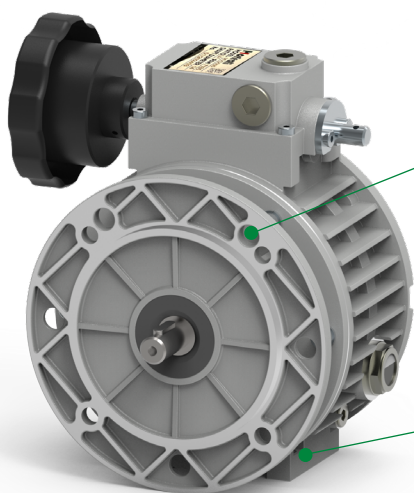
Semplice regolazione della velocità di rotazione  
*Simple rotation speed adjustment*

Trasmissione epicicloidale a rapporto variabile  
*Variable ratio epicyclic transmission*



Predisposizione per attacco diretto su riduttore  
*Settled for direct connection*

Predisposizione per attacco piedi B3 <sup>(1)</sup>  
*Prearrangement for B3 foot attachment <sup>(1)</sup>*

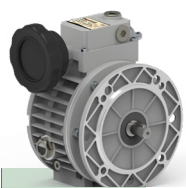






## Designazione

## Designation



### VARIATORI DI VELOCITA' / SPEED VARIATORS

**MVD**

**05**

**071B5**

**MVD**

TIPO DI VARIATORE  
TYPE OF SPEED VARIATORS

**05**

GRANDEZZA  
SIZE

**02, 05, 10, 20, 30, 50**

**071B5**

ATTACCO MOTORE IEC  
IEC MOTOR ADAPTOR

**063B5, 071B5, 080B5,  
090B5, 100B5**

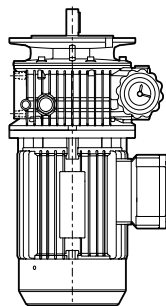
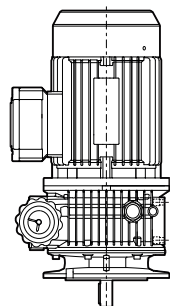
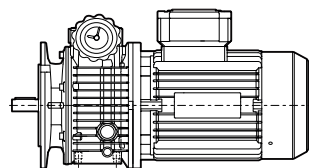
## Posizioni di montaggio

## Mounting positions

**B5**

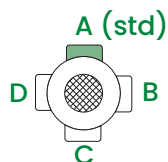
**V1**

**V3**



Q.tà olio in litri  
Oil quantity in litres

|                     | <b>B5</b> | <b>V1</b> | <b>V3</b> |
|---------------------|-----------|-----------|-----------|
| <b>MVD 02 063B5</b> | 0.13      | 0.3       | 0.2       |
| <b>MVD 05 071B5</b> | 0.15      | 0.4       | 0.25      |
| <b>MVD 10 080B5</b> | 0.33      | 0.8       | 0.45      |
| <b>MVD 20 090B5</b> | 0.8       | 1.4       | 1         |
| <b>MVD 30 100B5</b> | 1.2       | 2.1       | 1.2       |
| <b>MVD 50 100B5</b> | 1.2       | 2.1       | 1.2       |



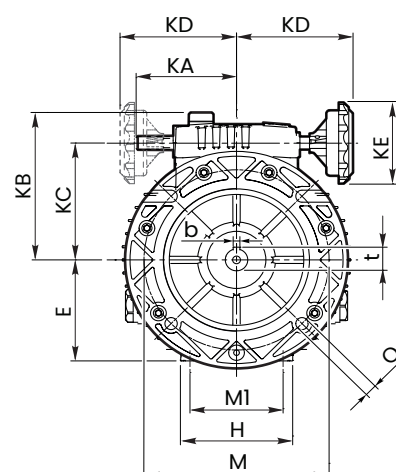
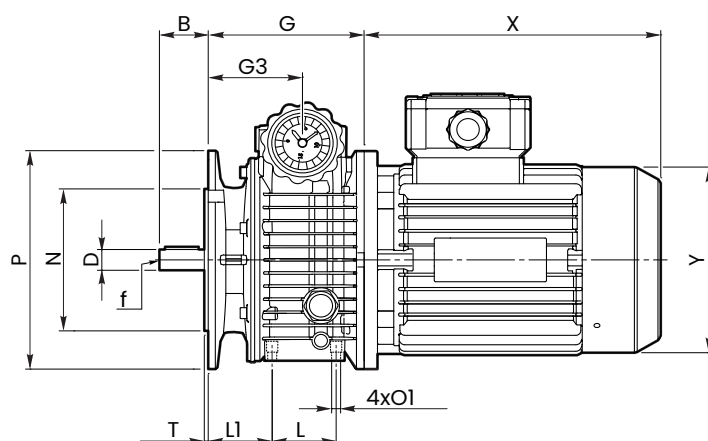
## Dati tecnici

## Technical data

| <b><math>n_1 = 1400</math><br/>(min<sup>-1</sup>)</b> | <b><math>P_1</math><br/>(kW)</b> | <b><math>i</math></b> | <b>Attacco motore IEC<br/>IEC motor adaptor</b> | <b><math>n_2</math> max<br/>(min<sup>-1</sup>)</b> | <b><math>n_2</math> min<br/>(min<sup>-1</sup>)</b> | <b><math>M_2</math> min<br/>(Nm)</b> | <b><math>M_2</math> max<br/>(Nm)</b> |
|-------------------------------------------------------|----------------------------------|-----------------------|-------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------|--------------------------------------|
| <b>MVD 02 063B5</b>                                   | 0.18                             | 1.6 - 8.2             | 63 B5                                           | 880                                                | 170                                                | 1.5                                  | 3                                    |
|                                                       | 0.25                             |                       |                                                 |                                                    |                                                    | 2                                    | 3                                    |
| <b>MVD 05 071B5</b>                                   | 0.37                             | 1.4 - 7.4             | 71 B5                                           | 1000                                               | 190                                                | 3                                    | 6                                    |
|                                                       | 0.55                             |                       |                                                 |                                                    |                                                    | 4.5                                  | 6                                    |
| <b>MVD 10 080B5</b>                                   | 0.75                             | 1.4 - 7.4             | 80 B5                                           | 1000                                               | 190                                                | 6                                    | 12                                   |
| <b>MVD 20 090B5</b>                                   | 1.1                              | 1.4 - 7.4             | 90 B5                                           | 1000                                               | 190                                                | 9                                    | 18                                   |
|                                                       | 1.5                              |                       |                                                 |                                                    |                                                    | 12                                   | 24                                   |
| <b>MVD 30 100B5</b>                                   | 2.2                              | 1.4 - 7.4             | 100 B5                                          | 1000                                               | 190                                                | 18                                   | 36                                   |
|                                                       | 3.0                              |                       |                                                 |                                                    |                                                    | 24                                   | 48                                   |
| <b>MVD 50 100B5</b>                                   | 4.0                              | 1.4 - 7.4             | 100 B5                                          | 1000                                               | 190                                                | 32                                   | 64                                   |

## Dimensioni

## Dimensions



|                     | B  | D<br>j6 | G     | G3    | E   | H   | L  | LI   | M   | M1 | N   | O  | O1 | P   | T   | KA    | KB  | KC  | KD  | KE  | b | t    | f  | kg  |
|---------------------|----|---------|-------|-------|-----|-----|----|------|-----|----|-----|----|----|-----|-----|-------|-----|-----|-----|-----|---|------|----|-----|
| <b>MVD 02 063B5</b> | 23 | 11      | 111.5 | 64    | 70  | 72  | 50 | 46   | 115 | 60 | 95  | 9  | M6 | 140 | 3.5 | 75    | 113 | 78  | 113 | 70  | 4 | 12.5 | M5 | 3.4 |
| <b>MVD 05 071B5</b> | 30 | 14      | 108   | 71.5  | 80  | 90  | 40 | 51.5 | 130 | 11 | 110 | 9  | M8 | 160 | 3.5 | 75    | 125 | 91  | 113 | 70  | 5 | 16   | M5 | 4.7 |
| <b>MVD 10 080B5</b> | 40 | 19      | 143.5 | 87.5  | 100 | 98  | 58 | 62   | 165 | 84 | 130 | 11 | M8 | 200 | 3.5 | 82.5  | 142 | 107 | 120 | 85  | 6 | 21.5 | M6 | 7.8 |
| <b>MVD 20 090B5</b> | 50 | 24      | 174   | 106.5 | 111 | 230 | -  | -    | 165 | -  | 130 | 11 | -  | 200 | 3.5 | 108.5 | 148 | 127 | 140 | 85  | 8 | 27   | M8 | 14  |
| <b>MVD 30 100B5</b> | 60 | 28      | 222   | 131   | 136 | 265 | -  | -    | 215 | -  | 180 | 15 | -  | 250 | 4   | 131   | 181 | 158 | 150 | 120 | 8 | 31   | M8 | 55  |
| <b>MVD 50 100B5</b> | 60 | 28      | 222   | 131   | 136 | 265 | -  | -    | 215 | -  | 180 | 15 | -  | 250 | 4   | 131   | 181 | 158 | 150 | 120 | 8 | 31   | M8 | 57  |

I valori X e Y dipendono dal motore utilizzato

The values X and Y depend on the electric motor used.

## Condizioni generali di vendita

### 1. ORDINI.

Motitali srl. accetta unicamente ordini scritti.

Invitiamo ad utilizzare i ns. codici articolo e ad inviare gli ordini a mezzo fax o e-mail.

Una volta iniziata la lavorazione o l'imballo dei pezzi non vengono accettati annullamenti o riduzioni dell'ordine – salvo accordi con il nostro personale interno.

Per eventuali prodotti speciali realizzati su specifica del cliente, una volta inviato l'ordine e ricevuta la relativa conferma d'ordine non sarà più accettata nessuna modifica o annullamento previo accordo con il ns. ufficio commerciale.

### 2. PREZZI.

I prezzi vengono concordati in fase di offerta o fanno riferimento al listino generale. Motitali srl si riserva la facoltà di modificare le proprie quotazioni, ove ciò si rendesse necessario come conseguenza di mutate condizioni di mercato e di produzione.

### 3. DIVIETO DI CESSIONE.

Gli obblighi e i diritti del Cliente non possono essere ceduti a terzi senza la previa autorizzazione di Motitali srl

### 4. TERMINI E MODALITÀ DI PAGAMENTO.

I termini e le modalità di pagamento devono essere preventivamente concordati con il nostro ufficio vendite. Non sono consentiti arrotondamenti o trattenute sugli importi dovuti se non autorizzati dall'ufficio vendite. L'insolvenza di R.I.B.A. e ogni ritardato pagamento genera l'addebito di spese e di interessi di mora fino al massimo previsto dalla legge. Le commissioni della banca estera relative ai pagamenti sono a carico dell'ordinante.

### 5. RISERVA DI PROPRIETÀ.

La merce viene venduta con riserva di proprietà, fino al pagamento dell'intero prezzo, compresi eventuali interessi e accessori.

Il rilascio di cambiali ed eventuali loro rinnovi, anche parziali, da parte del Cliente, non può considerarsi estinzione, né quale novazione né quale pagamento definitivo del prezzo, se non a buon fine delle cambiali stesse; analogamente, il rilascio di cambiali non può pregiudicare la riserva di proprietà.

Nonostante quanto precede, il rischio di perdita, perimento o danneggiamento viene trasferito al Cliente in sede di consegna in conformità con quanto previsto negli art. 6 e 8 delle presenti condizioni.

### 6. TERMINI DI CONSEGNA.

I termini di consegna delle forniture devono essere concordati ad ogni ordine. In caso di difficoltà nell'approvvigionamento dei materiali o comunque in tutti i casi di forza maggiore, i termini di consegna possono subire variazioni senza pregiudicare la validità dell'ordine. Nel caso di prodotti realizzati su specifica, il Cliente è in ogni caso tenuto al ritiro del materiale ordinato. E' in ogni caso esclusa la responsabilità della Motitali srl per danni da mancata o ridotta produzione, nonché per danni indiretti e consequenziali, derivanti nel ritardo nella consegna dei prodotti ordinati.

### 7. IMBALLO.

Motitali srl addebita in fattura l'imballo dei propri prodotti al prezzo di costo.

## General sales terms

### 1. ORDERS.

*Motitali srl. only accepts written orders.*

*We urge you to use our item numbers and to send orders by fax or e-mail.*

*Once the processing or packaging of the pieces has begun, no cancellations or reductions of the order are accepted – unless agreed with our internal staff.*

*For any special products made to the customer's specifications, once the order has been sent and the relative order confirmation has been received, no changes or cancellations will be accepted by prior agreement with our sales office.*

### 2. PRICES.

*Prices are agreed upon at the time of the offer or refer to the general price list. Motitali srl reserves the right to modify its quotations, should this become necessary as a consequence of changed market and production conditions.*

### 3. PROHIBITION OF TRANSFER.

*The Client's obligations and rights may not be transferred to third parties without the prior authorization of Motitali srl*

### 4. TERMS AND METHODS OF PAYMENT.

*The terms and methods of payment must be agreed in advance with our sales department. Rounding or withholding is not permitted on amounts due unless authorised by the sales department. The insolvency of a bank receipt and any late payment will result in the debit of late payment fees and interest up to the maximum provided for by law. Foreign bank's fees for payments are the responsibility of the payer.*

### 5. RETENTION OF TITLE.

*The goods are sold with reservation of title, until the full price is paid, including any interest and accessories.*

*The issuing of bills of exchange and any renewals thereof, even partial, by the Customer, cannot be considered as extinction, novation or final payment of the price, unless the bills of exchange themselves are successful; similarly, the issuing of bills of exchange cannot prejudice the retention of title.*

*Notwithstanding the foregoing, the risk of loss, failure or damage is transferred to the Client at the time of delivery in accordance with the provisions of art. 6 and 8 of these conditions.*

### 6. DELIVERY TERMS.

*The delivery terms of the supplies must be agreed with each order. In the event of difficulties in the procurement of materials or in any case in all cases of force majeure, the delivery terms may be subject to change without affecting the validity of the order. In the case of custom-made products, the Customer is in any case required to collect the ordered material. In any case, Motitali srl is not liable for damages due to loss or reduced production, as well as for indirect and consequential damages, resulting from the delay in the delivery of the products ordered.*

### 7. PACKAGING.

*Motitali srl charges the packaging of its products at cost price on the invoice.*

## Condizioni generali di vendita

### 8. TRASPORTO.

Le condizioni di trasporto devono essere concordate tra Motitali srl e il Cliente. La merce viaggia a rischio e pericolo del committente, salvo le responsabilità del vettore ai sensi dell'Art. 1693 cc.

### 9. RECLAMI.

Eventuali reclami e contestazioni sulla merce consegnata devono essere segnalati per iscritto entro 10 giorni lavorativi dal ricevimento della merce. Il trattamento da adottare per i singoli pezzi riconosciuti difettosi – compresi gli eventuali oneri economici –, e la decisione sull'intera fornitura, devono essere sempre concordate. In particolare, non si accetta l'addebito di costi di riparazione sostenuti direttamente dal Cliente, se non preventivamente autorizzati dal nostro personale interno. La presenza di materiale contestato all'interno di una fornitura non giustifica in alcun modo un ritardato o mancato pagamento dell'intera fattura relativa alla fornitura stessa.

### 10. GARANZIA.

E' garantita la riparazione o la sostituzione dei soli pezzi riconosciuti difettosi da Motitali srl, per le modalità di reso si rimanda alle modalità sotto precisate.

La garanzia decade per prodotti usati in maniera difforme rispetto alle indicazioni fornite.

La garanzia altresì decade per prodotti modificati, riparati, smontati anche parzialmente, oppure che siano stati conservati, installati, lubrificati o mantenuti in maniera errata o negligente.

La verifica della compatibilità delle applicazioni e della correttezza degli accoppiamenti meccanici e dei collegamenti elettrici è di pertinenza e responsabilità del compratore.

La garanzia non copre i materiali e le parti per loro natura soggette a deterioramento come ad esempio le perdite di lubrificante causate da normale usura degli anelli di tenuta presenti nei riduttori.

Motitali srl non assume alcuna responsabilità ed esclude il riconoscimento di qualunque tipo di indennizzo per danni che si dovessero verificare nell'impiego dei prodotti venduti, siano essi difettosi o meno. La responsabilità correlata all'applicazione di prodotti forniti è considerata in carico esclusivamente all'utilizzatore anche nei casi in cui l'applicazione sia stata consigliata da personale di Motitali srl

Viene infine declinata ogni responsabilità nella fornitura di particolari speciali richiesti dal cliente e coperti da eventuale brevetto, nello specifico si solleva Motitali srl dalla responsabilità di verificare l'esistenza di eventuali brevetti.

### 11. RESI.

Motitali srl accetta esclusivamente i resi preventivamente autorizzati dall'Ufficio Commerciale. L'autorizzazione viene comunicata al Cliente in forma scritta e dopo preventivo accordo con il cliente stesso; questo documento deve essere citato nella documentazione di consegna della merce (fattura o documento di trasporto).

Possono essere accettati resi solamente se autorizzati dall'ufficio commerciale o qualità di Motitali srl alla condizione che la merce resa sia integra, non lavorata od utilizzata dal Cliente; in caso contrario, sarà restituita al mittente con spese a Suo carico.

Gli imballi della merce resa devono essere idonei onde evitare danneggiamenti durante il trasporto. Non si accettano resi di merce priva di imballi originali Motitali srl ove previsti. Motitali srl si riserva il diritto di addebitare un importo pari al 30% del prezzo originario di vendita a copertura dei costi di movimentazione e stoccaggio delle merci e la restituzione deve essere effettuata in porto franco.

## General sales terms

### 8. TRANSPORT.

*The conditions of carriage must be agreed between Motitali srl and the Client. The goods travel at the risk of the customer, except for the carrier's responsibilities pursuant to Art. 1693 of the Italian Civil Code.*

### 9. COMPLAINTS.

*Any complaints and disputes about the delivered goods must be reported in writing within 10 working days of receipt of the goods. The treatment to be adopted for the individual parts recognised as defective – including any economic costs – and the decision on the entire supply, must always be agreed. In particular, we do not accept the charge of repair costs incurred directly by the Customer, unless previously authorised by our internal staff. The presence of disputed material within a supply does not in any way justify a delay or non-payment of the entire invoice relating to the supply itself.*

### 10. WARRANTY.

*Only the parts recognized as defective by Motitali srl can be repaired or replaced, for the return procedures, please refer to the methods specified below.*

*The warranty is void for products used in a manner that does not conform to the indications provided.*

*The warranty is also void for products that have been modified, repaired, disassembled, even partially, or that have been stored, installed, lubricated or maintained in an incorrect or negligent manner.*

*The verification of the compatibility of the applications and the correctness of the mechanical couplings and electrical connections is the responsibility of the buyer.*

*The warranty does not cover materials and parts that are inherently subject to deterioration, such as lubricant leakage caused by normal wear and tear of the sealing rings in the gearboxes.*

*Motitali srl does not assume any responsibility and excludes the recognition of any type of compensation for damages that may occur in the use of the products sold, whether defective or not. The responsibility related to the application of the products supplied is considered to be the sole responsibility of the user, even in cases where the application has been recommended by Motitali srl personnel*

*Lastly, any responsibility is declined in the supply of special parts requested by the customer and covered by any patent; specifically, Motitali srl is relieved of the responsibility of verifying the existence of any patents.*

### 11. RETURNS.

*Motitali srl only accepts returns previously authorized by the Sales Department. The authorization is communicated to the Client in writing and after prior agreement with the Client; this document must be mentioned in the delivery documentation of the goods (invoice or transport document).*

*Returns can be accepted only if authorized by the sales or quality department of Motitali srl on the condition that the returned goods are intact, not processed or used by the Customer; otherwise, it will be returned to the sender at their expense.*

*The packaging of the returned goods must be suitable in order to avoid damage during transport. We do not accept returns of goods without original Motitali srl packaging where provided. Motitali srl reserves the right to charge an amount equal to 30% of the original sale price to cover the costs of handling and storage of the goods and the return must be made carriage paid.*

## Condizioni generali di vendita

## General sales terms

### 12. LEGGE APPLICABILE.

Qualsiasi rapporto derivante, disciplinato o comunque collegato alle presenti condizioni generali sarà sottoposto esclusivamente alla legge italiana.

### 13. FORO COMPETENTE.

Per qualsiasi controversia in materia di esecuzione, interpretazione o risoluzione di un qualsiasi rapporto derivante, disciplinato o comunque collegato alle presenti condizioni generali, sarà competente in via esclusiva il foro di Modena, salva la facoltà di Motitali srl di convenire il Cliente presso il foro territorialmente competente per il luogo in cui il medesimo Cliente ha la propria sede.

### 12. GOVERNING LAW.

*Any relationship deriving, governed by or in any way connected to these general conditions will be subject exclusively to Italian law.*

### 13. JURISDICTION.

*For any dispute regarding the execution, interpretation or termination of any relationship deriving, governed or in any way connected to these general conditions, the Court of Modena shall have exclusive jurisdiction, without prejudice to the right of Motitali srl to sue the Client at the court territorially competent for the place where the same Customer has its registered office.*



## Sede centrale

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Via Campania 16/A,  
CAP 41051 Montale di Castelnovo Rangone  
Modena, Italy  
[www.motitali.com](http://www.motitali.com)



RIDUTTORI A VITE SENZA FINE  
WORM GEARBOXES

CV 10/25