





RIDUTTORI A VITE SENZA FINE
Worm gearboxes



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Motion in Italy

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 www.motech.com o contattate il nostro team di esperti.

Motion in Italy

*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.

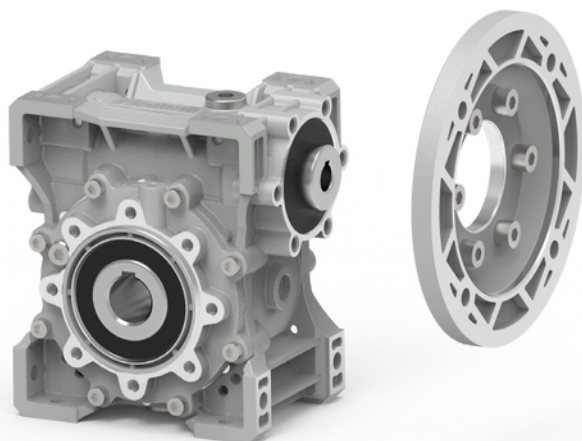
Applications Ideal for use in multiple industrial sectors such as the ceramic and glass industry, industrial automation, packaging, material transport, logistics and many other applications that require continuous and reliable movements. To learn more about our products and to find out how they can improve your operational efficiency, visit our www.motech.com website or contact our team of experts.

Riduttori a vite senza fine

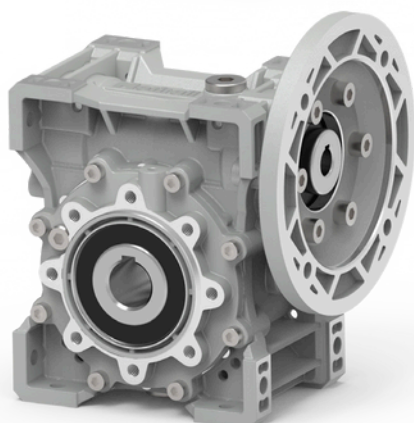
La gamma dei riduttori a vite senza fine si compone di 10 taglie dall'interasse 25 al 150. Rapporti da 5 a 100 per motori da taglia 56 a 160.

Worm gearboxes

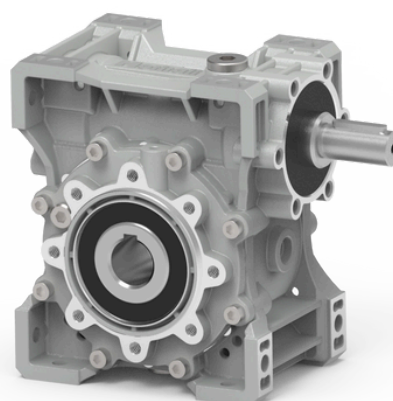
The range of worm gearboxes consists of 10 sizes from the centre distance of 25 to 150. Ratios from 5 to 100 for engines from size 56 to 160.



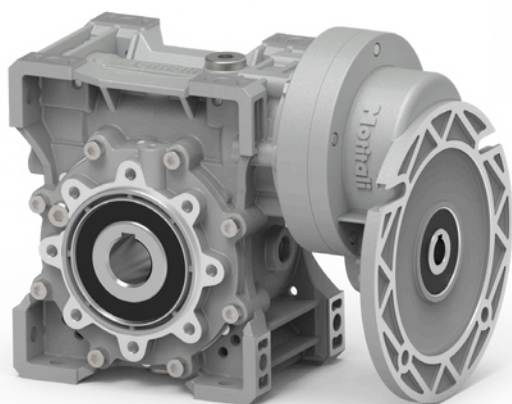
NMG...



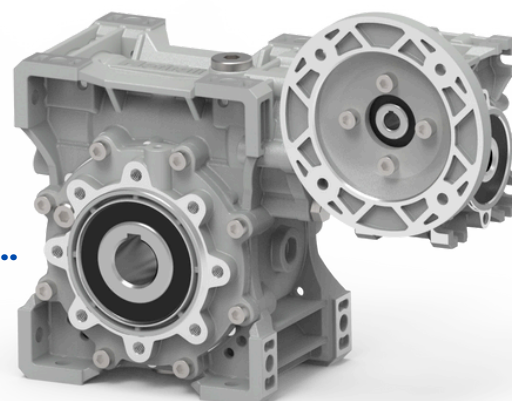
NG...



NMGP...



NMGD...

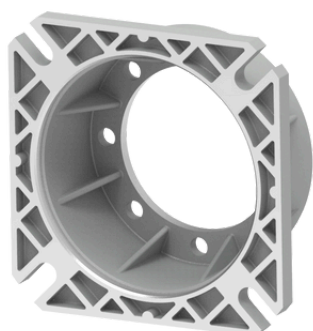


Riduttori a vite senza fine

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

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



Braccio di reazione
torque arm



Coperchio di protezione albero cavo
Cover hollow shaft protection

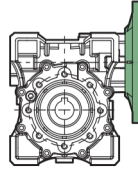


RIDUTTORE A VITE SENZA FINE / WORM GEARBOXES

NMG 030 P 10 63 B5 U - ...

NMG

TIPO DI RIDUTTORE
TYPE OF GEAR REDUCER



030

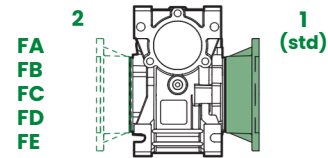
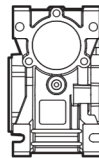
GRANDEZZA
SIZE

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

P

VERSIONE
VERSION

P



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

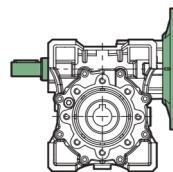


Dalla gr. 25 alla 63 NMG forniti in posizione U (Universale)
From size 25 to 63 NMG are supplied in position U (Universal)

-

SECONDA ENTRATA
ADDITIONAL INPUT

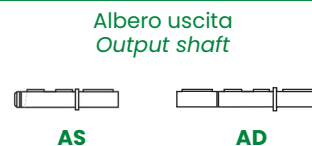
B



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

...

ACCESSORI
ACCESSORIES

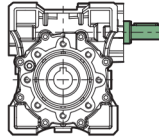


Albero uscita
Output shaft

Braccio di reazione
torque arm



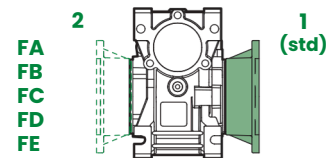
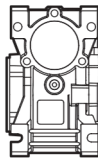

RIDUTTORE A VITE SENZA FINE / WORM GEARBOXES
NG 030 P 10 U - ...
NG

 TIPO DI RIDUTTORE
 TYPE OF GEAR REDUCER

030

 GRANDEZZA
 SIZE

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

 VERSIONE
 VERSION

P

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

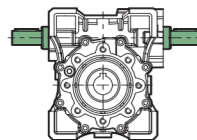
U*, B3, B6, B7, B8, V5, V6

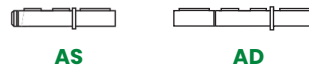
19

 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

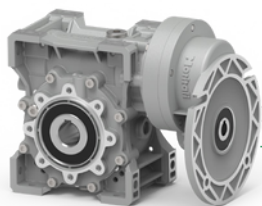
B

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

 ACCESSORI
 ACCESSORIES

AS
AD

 Albero uscita
 Output shaft

 Braccio di reazione
 torque arm

BR

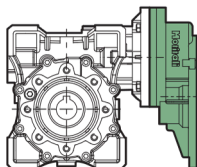



RIDUTTORI A VITE SENZA FINE CON PRECOPPIA / HELICAL WORM GEARBOXES

NMGP071/050 P 75 71 B5 U ...

NMGP

TIPO DI RIDUTTORE
TYPE OF GEAR REDUCER



071

GRANDEZZA PRECOPPIA
SIZE PRE STAGE

063, 071, 080, 090

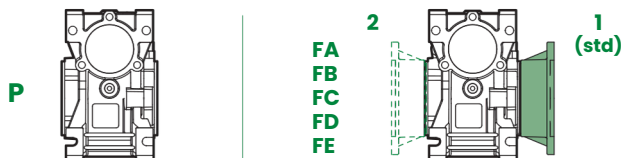
050

GRANDEZZA RIDUTTORE
SIZE GEARBOX

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

P

VERSIONE
VERSION



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

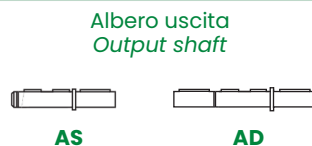
U*, B3, B6, B7, B8, V5, V6



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

...

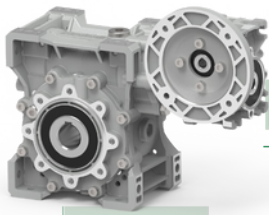
ACCESSORI
ACCESSORIES

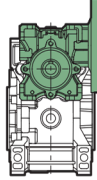
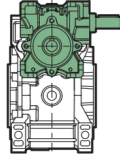
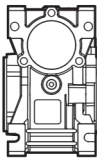








Albero uscita
Output shaft

Braccio di reazione
torque arm




RIDUTTORI COMBINATI A VITE SENZA FINE / COMBINATION WORM GEARBOXES
NMGD040 /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		2 FA FB FD FE	1 (std)
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			
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	

Simbolo / Symbol	Descrizione	Description
Fr1 [N]	Carico radiale ammissibile in entrata	Permitted input radial load
Fa1 [N]	Carico assiale ammissibile in entrata	Permitted input axial load
Fr2 [N]	Carico radiale ammissibile in uscita	Permitted output radial load
Fa2 [N]	Carico assiale ammissibile in uscita	Permitted output axial load
fs	Fattore di servizio	Service factor
i	Rapporto di riduzione	Ratio
Mm2 [Nm]	Coppia massima in uscita	Max output torque
Mn2 [Nm]	Coppia trasmessa	Output torque
Mr2 [Nm]	Coppia richiesta	Required torque
n₂¹ [min ⁻¹]	Velocità in ingresso	Input speed
n [min ⁻¹]	Velocità in uscita	Output speed
Pm1 [kW]	Potenza massima in entrata	Max input power
Pm2 [kW]	Potenza massima in uscita	Max output power
P1 [kW]	Potenza in entrata	Input power
Pn1 [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

n₂(min⁻¹)

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

n₁(min⁻¹)

Input speed

Rappresenta la velocità di rotazione in entrata al riduttore vite senza fine. Il valore di n₁ dipende dal tipo di motorizzazione scelta.

It represents the rotational speed at the input to the worm gearbox. The value of n₁ depends on the type of engine chosen.

Nelle tabelle dati tecnici sono indicati valori unificati di n₁, in caso di applicazioni con velocità differenti si prega di contattare il servizio tecnico

Unified values of n₁ are indicated in the technical data tables, in case of applications with different speeds please contact the 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

Pn1(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

P1(kw)

Input power

Rappresenta la potenza applicata in ingresso al riduttore. Nel caso del motoriduttore P1 = Pn1

It represents the power applied at the input to the gearbox. In the case of the gearmotor P1 = Pn1

Rendimento dinamico

Rd

Dynamics efficiency

è definito dal rapporto tra la potenza in uscita P2 e quella applicata in entrata al riduttore P1. 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 P2 and the power applied to the input power to the gearbox P1. 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.

n1 = 1400 (min-)		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
025	Rd	0.86	0.84	0.82	0.78	0.74	-	0.66	0.61	0.57	0.54	-	-
	Rs	0.71	0.70	0.67	0.60	0.55	-	0.46	0.41	0.36	0.34	-	-
030	Rd	0.86	0.84	0.81	0.76	0.72	0.67	0.64	0.58	0.54	0.50	0.44	-
	Rs	0.71	0.66	0.62	0.54	0.50	0.43	0.39	0.35	0.31	0.27	0.23	-
040	Rd	0.88	0.86	0.85	0.81	0.77	0.74	0.69	0.64	0.61	0.57	0.51	0.47
	Rs	0.72	0.69	0.65	0.58	0.53	0.5	0.44	0.4	0.36	0.32	0.28	0.24
050	Rd	0.87	0.86	0.84	0.8	0.77	0.74	0.7	0.65	0.61	0.57	0.51	0.49
	Rs	0.73	0.69	0.65	0.58	0.54	0.5	0.44	0.39	0.35	0.32	0.27	0.23
063	Rd	-	0.87	0.86	0.82	0.8	0.77	0.73	0.69	0.65	0.61	0.56	0.5
	Rs	-	0.7	0.65	0.59	0.54	0.5	0.45	0.4	0.36	0.33	0.28	0.24
075	Rd	-	0.88	0.87	0.84	0.81	0.79	0.75	0.71	0.68	0.64	0.59	0.54
	Rs	-	0.7	0.67	0.6	0.57	0.52	0.46	0.42	0.38	0.35	0.29	0.26
090	Rd	-	0.89	0.88	0.85	0.83	0.81	0.77	0.74	0.71	0.68	0.62	0.58
	Rs	-	0.72	0.69	0.63	0.59	0.55	0.49	0.45	0.41	0.38	0.32	0.28
110	Rd	-	0.89	0.88	0.85	0.84	0.83	0.78	0.77	0.74	0.71	0.66	0.62
	Rs	-	0.71	0.68	0.62	0.61	0.58	0.48	0.48	0.44	0.41	0.36	0.32
130	Rd	-	0.9	0.88	0.86	0.85	0.83	0.79	0.77	0.74	0.71	0.67	0.63
	Rs	-	0.71	0.68	0.62	0.6	0.57	0.49	0.46	0.43	0.39	0.34	0.3
150	Rd	-	0.91	0.9	0.88	0.86	0.84	0.83	0.78	0.76	0.73	0.68	0.64
	Rs	-	0.73	0.71	0.66	0.6	0.57	0.54	0.45	0.42	0.39	0.33	0.29

Coppia trasmessa

M2(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:*

$$M2 = \frac{9550 P R d}{n2}$$

Coppia massima in uscita

Mm2(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 $f_s=1$, carico continuo uniforme e riferito ad un determinato valore di velocità $n1$.

It represents the maximum output torque that the gearbox is able to transmit considering an operation corresponding to a service factor $f_s=1$, uniform continuous load and referred to a given speed value $n1$.

Mm2 corrisponde ai valori di coppia trasmessa dal riduttore, nella configurazione con albero sporgente in ingresso, determinabile secondo la relazione seguente:

Mm2 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:

$$Mm2 = M2 f_s$$

Coppia richiesta

Mr2(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

Pm1(kW)

Max input power

Rappresenta la massima potenza applicabile in ingresso al riduttore considerando un funzionamento corrispondente ad un fattore di servizio $f_s=1$, carico continuo uniforme e riferito ad un determinato valore di velocità $n1$.

It represents the maximum power that can be applied to the input of the gearbox considering an operation corresponding to a service factor $f_s=1$, uniform continuous load and referred to a given speed value $n1$.

Pm1 corrisponde al valore di potenza massima trasmessa dal riduttore nella configurazione con albero sporgente in ingresso.

Pm1 corresponds to the maximum power value transmitted by the gearbox in the configuration with an inlet protruding shaft.

Potenza massima in uscita

Pm2(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:*

$$Pm_2 = \frac{Mm2 n2}{9550}$$

$$Pm2 = Pm1 R_d$$

Fattore di servizio

M2(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 Load class	h/gg hours/day	N. AVVIAMENTI/ORA / N. START-UP/HOUR								
		2	4	8	16	32	63	125	250	500
A Carico uniforme 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
B Carico con urti moderati 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
C Carico con urti forti 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

Irreversibility

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 perchè il vite senza fine non è in grado di garantire da solo l'assoluta assenza di movimento.

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.

Irreversibilità statica

Static irreversibility

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 .

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 .

R_s	Irreversibilità statica	Static irreversibility
> 0.55	Reversibilità statica	Static reversibility
0.5 - 0.6	Reversibilità statica incerta	Low static reversibility
< 0.4	Irreversibilità statica	Static irreversibility

Irreversibilità dinamica

Dinamic irreversibility

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 .

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 .

R_d	Irreversibilità dinamica	Dynamic irreversibility
> 0.6	Reversibilità dinamica	Dynamic reversibility
0.5 - 0.6	Reversibilità dinamica incerta	Low dynamic reversibility
0.4 - 0.5	Buona irreversibilità dinamica	Good dynamic irreversibility
< 0.4	Irreversibilità dinamica	Dynamic irreversibility

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 ($Fr1$ su albero entrata, $Fr2$ 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:

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 ($Fr1$ on the input shaft, $Fr2$ 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:

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

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

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 $Fr1$ (se albero entrata) o $Fr2$ (se albero uscita) indicati nelle tabelle dati tecnici del riduttore. Devono essere verificate le seguenti relazioni:

The radial load value obtained from the previous report is to be compared with the values of $Fr1$ (if input shaft) or $Fr2$ (if output shaft) indicated in the technical data tables of the gearbox. The following reports must be verified:

$$Fr < Fr1$$

$$Fr < Fr2$$

Si noti come i valori di $Fr1$ ed $Fr2$ riportati nelle tabelle dati tecnici sono riferiti a carichi agenti sulla mezzeria dell'albero sporgente.

Note that the values of $Fr1$ and $Fr2$ reported in the technical data tables refer to loads acting on the centreline of the protruding shaft.

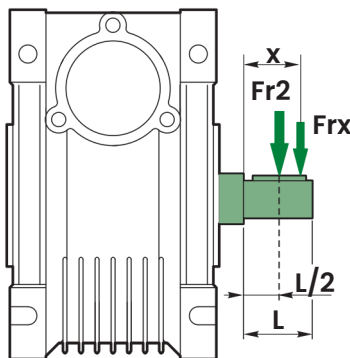
Nel caso in cui il carico sia applicato in una posizione diversa dalla mezzeria, è necessario verificare l'applicazione tramite le relazioni indicate nei paragrafi seguenti.

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

Fr2(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
Fr2max (N)	1350	1830	3490	4840	6270	7380	8180	12000	13500	18000

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

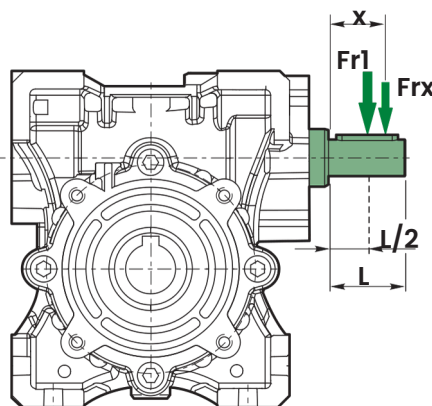
a, b = valori riportati nella tabella
 a, b = values given in the table

$$Fr < Fr_x$$

Carichi radiali entrata

Fr1(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
Fr2max (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:

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

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

Scelta del riduttore

Stabilita la velocità in entrata al riduttore n_1 , consultando le tabelle dei dati tecnici dei riduttori riferite a

$n_1 = 50 / 900 / 1400 / 2800 \text{ (min)}^{-1}$

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

$$M_{m2} \geq M_{r2} f_s$$

Axial loads

In some cases, depending on the type of application, a force F_a axially on the shaft can also act together with the radial load (F_{a1} in the case of an input shaft, F_{a2} in the case of an output shaft).
The maximum axial load that can be applied on the shaft complies with the following reports:

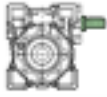
Selection of gearbox

Once the inlet speed of the gearbox n_1 has been established, by consulting the tables of the technical data of the gearboxes referred to

$n_1 = 500 / 900 / 1400 / 2800 \text{ (min)}^{-1}$
Select the gearbox that, in correspondence with a reduction ratio close to the one calculated, guarantees a torque:


Dati tecnici riduttore

Gearbox technical data

$n_1 = 2800 \text{ min}^{-1}$											
			NG								
i	n_2		030	040	050	063	075	090	110	130	150
5	560	M_{m2} [Nm]	30	26	44	-	-	-	-	-	-
		P_{m1} [kW]	0.88	1.6	2.9	-	-	-	-	-	-
		Rd	0.88	0.87	0.88	-	-	-	-	-	-
		F_{r2} [N]	450	900	1200	-	-	-	-	-	-
		F_{t1} [N]	90	170	240	-	-	-	-	-	-
7.5	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
		Rd	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_{t1} [N]	125	233	324	395	560	715	950	1190	1550
		M_{m1} [Nm]	13	30	55	99	148	240	446	592	908

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	M_{m2} [Nm]	18	35	63	-	-	-	-	-	-
		P_{m1} [kW]	0.62	1.1	2.0	-	-	-	-	-	-
		Rd	0.86	0.88	0.87	-	-	-	-	-	-
		F_{r2} [N]	507	1149	1577	-	-	-	-	-	-
		F_{t1} [N]	150	250	350	-	-	-	-	-	-
7.5	186.7	M_{m2} [Nm]	18	41	72	131	189	295	563	765	1224
		P_{m1} [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
		F_{r2} [N]	683	1315	1805	2359	2785	3081	3893	5092	6962
		F_{t1} [N]	150	294	401	500	700	900	1200	1500	1950

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.

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.

Dati tecnici motoriduttore

Gearmotors technical data

P_{n1}	n_2	i	M_{n2}	f_s	F_{r2}			
[kW]	[min ⁻¹]		[Nm]		[N]			
0.06								
56A4	0.4	3200	306	0.2	3490	NMG030/040		
<small>$f_n = 1400 \text{ min}^{-1}$</small>	<small>0.4</small>	<small>3200</small>	<small>306</small>	<small>0.1</small>	<small>3490</small>			

Scelta del motoriduttore

Se invece è nota la coppia richiesta in uscita dall'applicazione Mr_2 , è necessario determinare la potenza motore P utilizzando la formula:

$$P = \frac{Mr_2 n_2}{9550 Rd}$$

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

Selection of gearmotor

If, on the other hand, the torque required at the output of the Mr_2 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 Rd is the dynamic efficiency shown in the relevant table.

Dati tecnici riduttore				Gearbox technical data									
$n_1 = 2800 \text{ min}^{-1}$				NG									
i	n_2			030	040	050	063	075	090	110	130	150	
5	560	Mm_2	[Nm]	10	26	44	-	-	-	-	-	-	
		Pm_2	[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_2	[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	0.88	0.89	0.9
		Fr_2	[N]	542	1044	1433	1873	2210	2445	3090	4042	5525	
		Fr_1	[N]	125	233	324	395	560	795	950	1190	1550	

Consultando le tabelle dei dati tecnici dei motoriduttori, individuare la motorizzazione in cui Pn_1 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 fs 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 Pn_1 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 fs indicated is greater than or equal to that indicated in the relative table.

Classe di carico Load class	h/gg hours/day	N. AVVIAMENTI/ORA / N. START-UP/HOUR									
		2	4	8	16	32	63	125	250	500	
A Carico uniforme 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	
B	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	2.1	2.1	2.1	2.1	2.1	

ESEMPIO:

Dati applicazione:

$P = 0.06 \text{ kW}$

$fs = 1.8$

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

Motoriduttore selezionato:

NMGD 030/050 $i=250$

$Pn_1 = 0.06 \text{ kW}$

$fs = 2$

EXAMPLE:

Application data:

$P = 0.06 \text{ kW}$

$fs = 1.8$

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

Selected gearmotor:

NMGD 030/050 $i=250$

$Pn_1 = 0.06 \text{ kW}$

$fs = 2$

Pn_1	n_2	i	Mn_2	fs	Fr_2		
[kW]	[min ⁻¹]		[Nm]		[N]		
0.06							
56A4 $(n_1 = 1400 \text{ min}^{-1})$	0.4	3200	306	0.2	3490	NMGD030/040	
	0.4	4000	285	0.1	3490		
	0.3	5000	345	0.1	3490		
	7	200	48	2.6	4788		NMGD030/050
	5.6	250	58	2	4840		
	4.7	300	82	2.4	4840		

Verniciatura

Tutti i riduttori della gamma 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 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

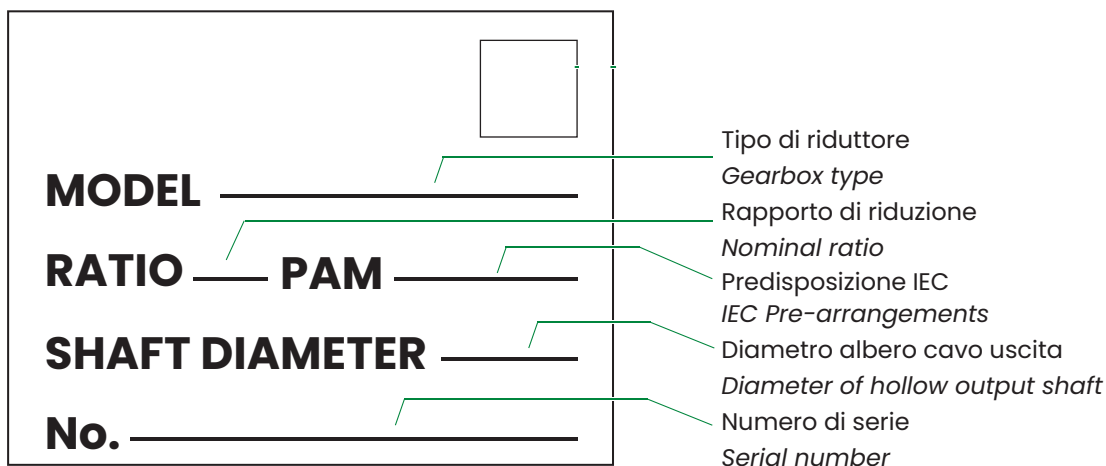
Tutti i riduttori della gamma sono predisposti per operare fino ad una temperatura massima continuativa raggiunta all'interno del riduttore di +85°C. Per temperature operative continuative maggiori di + 85°C, si prega di contattarci. La temperatura minima a cui i riduttori possono operare è pari -5°C. In caso di utilizzo dei riduttori in ambiente di lavoro con temperatura <-5 °C o > +40°C, contattare

Temperature

All the reducers in the 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 . 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

Targhetta

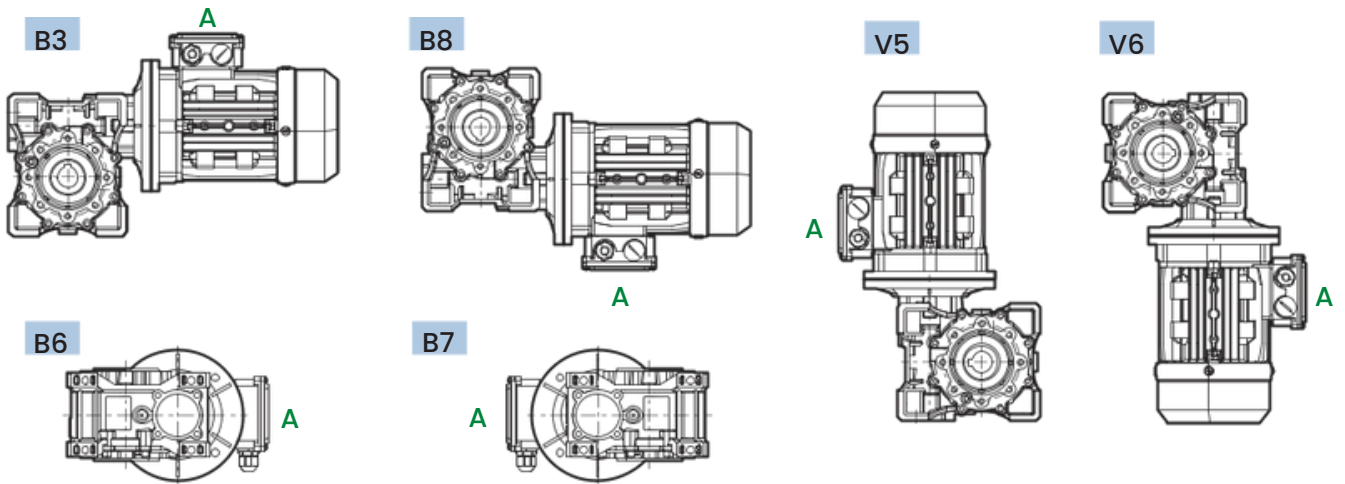
Plate



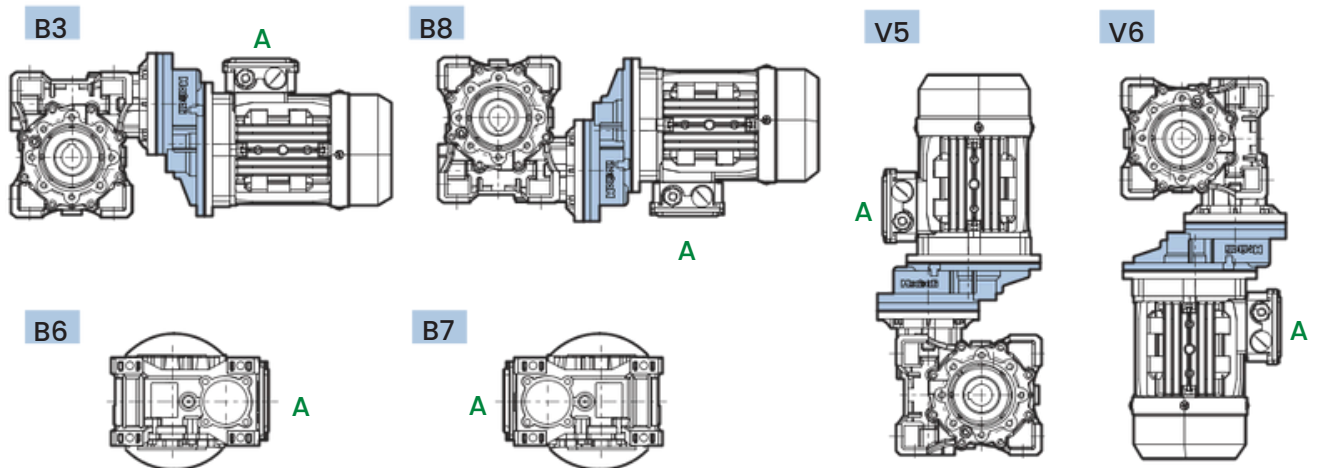
Posizioni di montaggio

Mounting positions

NMG - NG



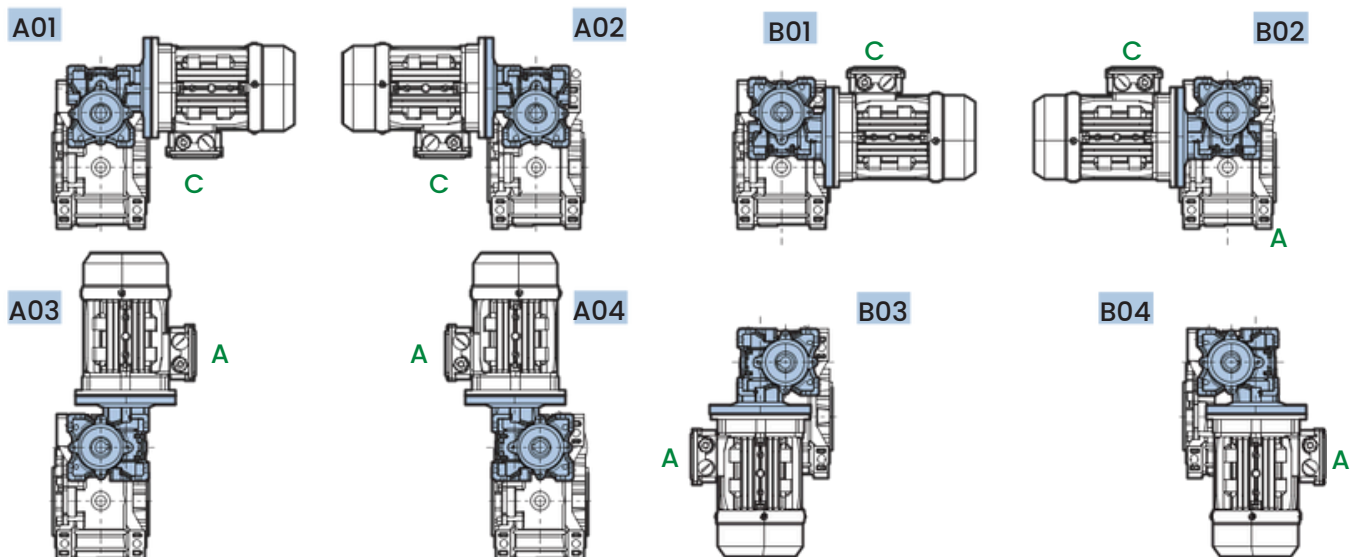
NMGP



Versioni riduttori combinati

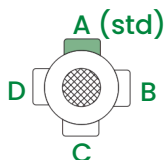
Versions of combination gearbox

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

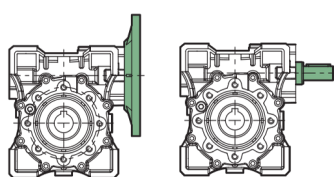
Tutti i riduttori vengono forniti completi di lubrificante. Inoltre, dalla grandezza 25 fino alla 90 i riduttori sono lubrificati con olio sintetico, non necessitano di manutenzione e sono privi di tappi. Dalla grandezza 110 alla 150 i riduttori sono lubrificati con olio minerale e vengono forniti completi 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.

Positions of terminal box

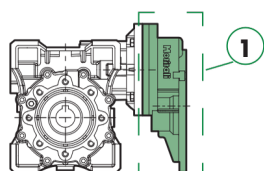
In the assembly diagrams of the gearmotors above, the standard position (A) of the motor terminal block is also indicated. The following diagram represents the available possibilities: In case of special needs, it is necessary to specify the desired position (A, B, C or D) of the terminal block when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

Lubrication

All 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.



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

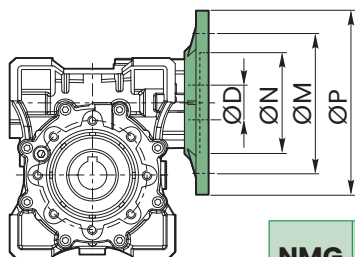


	063	071	080	090
1	0.05	0.07	0.15	0.15

E' 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 mezzzeria).

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).

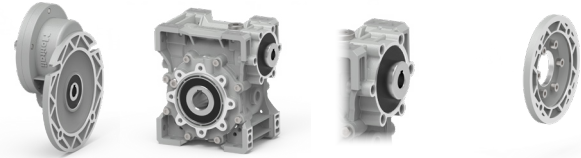
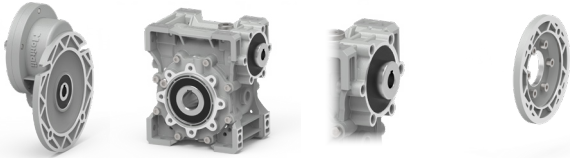
NMG / NG	025, 030, 040, 050, 063, 075, 090	110, 130, 150
Tipo di lubrificante / Type of lubricant	Olio sintetico / Synthetic oil	Olio minerale / Mineral oil
Temperatura Ambiente / Ambient temperature	-25 ° / +50 °C	-5 ° / +40 °C
ISO	VG 320	VG 220
MOBIL	SHC 632	MOBILGEAR 630
BP	ENERGOL SGXP320	ENERGOL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



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
025	56B14	50	65	80	9	9	9	9	9	9	9	9	9	9	-	-
030	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												
040	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
050	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
063	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
075	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	-	-	-
	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
090	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												
110	132B5	230	265	300	-	38	38	38	38	38	38	-	-	-	-	-
	132 B14	130	165	200												
	100/112B5	180	215	250	-	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
130	132B5	230	265	300	-	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
150	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

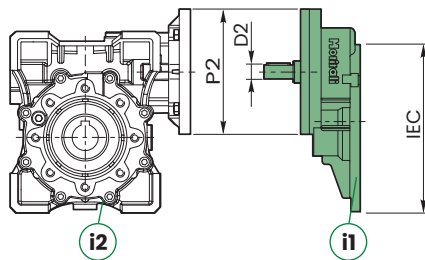
Predisposizioni IEC - NMGP

NMGP - IEC Pre-arrangements



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

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



	IEC	P2	D2
KPR 63	63 B5	105	11
			14*
KPR 71	71 B5	120	14
			19*

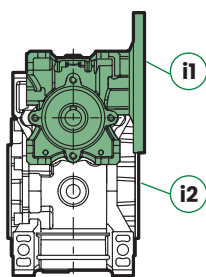
*Diametro consigliato

	IEC	P2	D2
KPR 80	80 B5	160	19
			24*
KPR 90	90 B5	160	24
			28*

*Diameter recommended

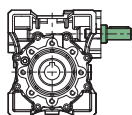
$i = i1 \times i2$

		Grandezza precoppia / Size pre-stage			
		KPR 063	KPR 071	KPR 080	KPR 090
		$i1 = 2.94$	$i1 = 2.94$	$i1 = 3$	$i1 = 2.45$
	$i2$				
NMGP 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 ... / 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 071 / 063	40		$i = 117.6$		
	50		$i = 147$		
	60		$i = 176.4$		
	80		$i = 235.2$		
	100		$i = 294$		
NMGP ... / 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 ... / 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 ... / 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 090 / 130	80				$i = 196$
	100				$i = 245$

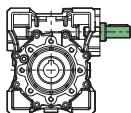


$$i = i1 \times i2$$

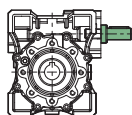
NMGD	i	IEC	i1	i2	NMGD	i	IEC	i1	i2
025 / 030	100	56	10	10	030 / 063	100	56 63	10	10
	150		10	15		150		10	15
	200		10	20		200		10	20
	250		10	25		250		10	25
	300		10	30		300		10	30
	400		20	20		400		10	40
	500		20	25		500		10	50
	600		20	30		600		20	30
	750		30	25		750		25	30
	900		30	30		900		30	30
	1200		40	30		1200		40	30
	1500		50	30		1500		50	30
	1800		60	30		1800		60	30
	2400		60	40		2400		60	40
3000	60	50	3000	60	50				
025 / 040	100	56	10	10	040 / 075 040 / 090	4000	63	50	80
	150		10	15		5000		50	100
	200		10	20		200		10	20
	250		10	25		250		10	25
	300		10	30		300		10	30
	400		10	40		400		10	40
	500		20	25		500		10	50
	600		20	30		600		20	30
	750		25	30		750		25	30
	900		30	30		900		30	30
	1200		40	30		1200		40	30
	1500		50	30		1500		50	30
	1800		60	30		1800		60	30
	2400		60	40		2400		60	40
3000	60	50	3000	60	50				
4000	50	80	4000	80	50				
5000	50	100	5000	100	50				
030 / 040	100	56 63	10	10	050 / 110	100	63 71 80	10	10
	150		10	15		150		10	15
	200		10	20		200		10	20
	250		10	25		250		10	25
	300		10	30		300		10	30
	400		10	40		400		10	40
	500		20	25		500		20	25
	600		20	30		600		20	30
	750		30	25		750		25	30
	900		30	30		900		30	30
	1200		40	30		1200		40	30
	1500		50	30		1500		50	30
	1800		60	30		1800		60	30
	2400		60	40		2400		60	40
3200	80	40	3000	60	50				
4000	50	80	4000	80	50				
5000	50	100	5000	100	50				
030 / 050	100	56 63	10	10	063 / 130 063 / 150	250	71 80 90	10	25
	150		10	15		300		10	30
	200		10	20		400		10	40
	250		10	25		500		10	50
	300		10	30		600		20	30
	400		10	40		750		25	30
	500		10	50		900		30	30
	600		20	30		1200		40	30
	750		25	30		1500		50	30
	900		30	30		1800		60	30
	1200		40	30		2400		60	40
	1500		50	30		3000		60	50
	1800		60	30		4000		80	50
	2400		60	40		5000		100	50
3000	60	50							
4000	50	80							
4800	60	80							

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

NG

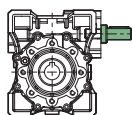
i	n_2		030	040	050	063	075	090	110	130	150	
5	560	Mm_2 [Nm]	10	26	44	-	-	-	-	-	-	
		Pm_1 [kW]	0.66	1.6	2.9	-	-	-	-	-	-	
		Rd	0.88	0.87	0.88	-	-	-	-	-	-	
		Fr_2 [N]	450	900	1200	-	-	-	-	-	-	
		Fr_1 [N]	90	170	240	-	-	-	-	-	-	
7.5	373.3	Mm_2 [Nm]	13	29	53	95	133	214	399	530	857	
		Pm_1 [kW]	0.59	1.2	2.3	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	0.88	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	0.87	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	0.85	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

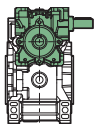
i	n_2		030	040	050	063	075	090	110	130	150
5	280	Mm_2 [Nm]	18	35	63	-	-	-	-	-	-
		Pm_1 [kW]	0.62	1.1	2.0	-	-	-	-	-	-
		Rd	0.86	0.88	0.87	-	-	-	-	-	-
		Fr_2 [N]	597	1149	1577	-	-	-	-	-	-
		Fr_1 [N]	150	250	350	-	-	-	-	-	-
7.5	186.7	Mm_2 [Nm]	18	41	72	131	189	296	563	765	1224
		Pm_1 [kW]	0.41	0.9	1.6	2.9	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

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

NG

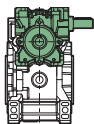
i	n_2		030	040	050	063	075	090	110	130	150
5	180	Mm_2 [Nm]	20	45	77	-	-	-	-	-	-
		Pm_1 [kW]	0.45	0.9	1.6	-	-	-	-	-	-
		Rd	0.84	0.84	0.84	-	-	-	-	-	-
		Fr_2 [N]	692	1331	1827	-	-	-	-	-	-
		Fr_1 [N]	175	290	400	-	-	-	-	-	-
7.5	120	Mm_2 [Nm]	20	45	86	154	219	347	663	898	1428
		Pm_1 [kW]	0.31	0.7	1.2	2.2	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

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

NG

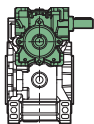
i	n_2		030	040	050	063	075	090	110	130	150
5	100	Mm_2 [Nm]	20	45	77	-	-	-	-	-	-
		Pm_1 [kW]	0.24	0.5	0.9	-	-	-	-	-	-
		Rd	0.82	0.82	0.83	-	-	-	-	-	-
		Fr_2 [N]	692	1331	1827	-	-	-	-	-	-
		Fr_1 [N]	175	290	400	-	-	-	-	-	-
7.5	66.7	Mm_2 [Nm]	24	55	105	188	265	418	810	1102	1734
		Pm_1 [kW]	0.21	0.5	0.9	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	6270	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

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

NGD

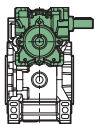
i	n_2		030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
100	28	Mm_2 [Nm]	72	105	105	a richiesta on request				
		Pm_1 [kW]	0.32	0.45	0.45					
		Fr_2 [N]	2769	3800	4967					
		Fr_1 [N]	140	140	140					
150	18.7	Mm_2 [Nm]	73	138	147	a richiesta on request				
		Pm_1 [kW]	0.22	0.43	0.45					
		Fr_2 [N]	3169	4350	5686					
		Fr_1 [N]	140	140	140					
200	14	Mm_2 [Nm]	66	122	186	343	497	849	a richiesta on request	
		Pm_1 [kW]	0.16	0.31	0.45	0.66	0.95	1.82		
		Fr_2 [N]	3488	4788	6259	5904	6540	10320		
		Fr_1 [N]	140	140	140	350	350	378		
250	11.2	Mm_2 [Nm]	62	112	222	310	459	1033	1561	1901
		Pm_1 [kW]	0.13	0.23	0.45	0.54	0.72	1.82	2.74	3.34
		Fr_2 [N]	3490	4840	6270	6640	7360	10320	13500	18000
		Fr_1 [N]	140	140	140	350	350	378	471	471
300	9.3	Mm_2 [Nm]	74	148	260	322	510	1107	1795	1712
		Pm_1 [kW]	0.14	0.28	0.52	0.63	0.94	1.82	2.90	2.50
		Fr_2 [N]	3490	4840	6270	7380	8180	10320	13500	18000
		Fr_1 [N]	140	140	125	350	350	378	471	516
400	7	Mm_2 [Nm]	66	126	260	298	510	1209	1683	2676
		Pm_1 [kW]	0.10	0.20	0.40	0.46	0.75	1.53	21.32	3.34
		Fr_2 [N]	3490	4840	6270	7380	8180	10320	13500	18000
		Fr_1 [N]	140	140	140	350	350	378	471	471
500	5.6	Mm_2 [Nm]	62	122	241	264	468	1014	1581	2377
		Pm_1 [kW]	0.07	0.16	337.62	0.35	0.58	0.96	1.68	2.53
		Fr_2 [N]	3490	4840	6270	7380	8180	10320	13500	18000
		Fr_1 [N]	146	140	140	350	350	417	471	471
600	4.7	Mm_2 [Nm]	74	148	224	322	510	1086	1795	2723
		Pm_1 [kW]	0.08	0.15	0.22	0.35	0.52	0.96	1.52	2.32
		Fr_2 [N]	3490	4840	6270	7380	8180	10320	13500	18000
		Fr_1 [N]	146	146	146	350	350	417	556	516
750	3.7	Mm_2 [Nm]	74	148	276	322	468	1046	1795	2377
		Pm_1 [kW]	0.06	0.13	0.23	0.32	0.42	0.75	1.24	1.72
		Fr_2 [N]	3490	4840	6270	7380	8180	10320	13500	18000
		Fr_1 [N]	210	210	210	350	350	482	613	516

Dati tecnici riduttori combinati
Combination gearbox technical data
 $n_1 = 2800 \text{ min}^{-1}$

NGD

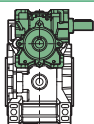
i	n_2		030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
900	3.1	Mm_2 [Nm]	74	148	276	322	422	1290	1795	2142
		Pm_1 [kW]	0.06	0.11	0.20	0.29	0.35	0.82	1.09	1.21
		Fr_2 [N]	3490	4840	6270	7380	8180	10320	13500	18000
		Fr_1 [N]	210	210	210	350	350	490	700	700
1200	2.3	Mm_2 [Nm]	74	148	261	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 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 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

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

NGD

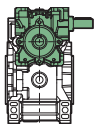
i	n_2		030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
100	14	Mm_2 [Nm]	72	140	153	a richiesta on request				
		Pm_1 [kW]	0.16	0.32	0.35					
		Fr_2 [N]	2769	3800	4967					
		Fr_1 [N]	169	169	169					
150	9.3	Mm_2 [Nm]	73	138	215	a richiesta on request				
		Pm_1 [kW]	0.12	0.22	0.35					
		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 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

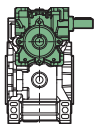
i	n_2		030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
900	1.6	Mm_2 [Nm]	74	148	276	398	515	1290	1795	2142
		Pm_1 [kW]	0.04	0.06	0.11	0.17	0.21	0.43	0.57	0.63
		Fr_2 [N]	3490	4840	6270	7380	8180	10320	13500	18000
		Fr_1 [N]	210	210	210	350	350	490	700	700
1200	1.2	Mm_2 [Nm]	66	148	276	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 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 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 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

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

NGD

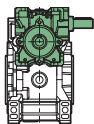
i	n_2		030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
100	9	Mm_2 [Nm]	72	140	169	a richiesta on request				
		Pm_1 [kW]	0.11	0.20	0.24					
		Fr_2 [N]	2769	3800	4967					
		Fr_1 [N]	197	197	197					
150	6	Mm_2 [Nm]	73	138	238	a richiesta on request				
		Pm_1 [kW]	0.08	0.14	0.24					
		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 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
 $n_1 = 900 \text{ min}^{-1}$

NGD

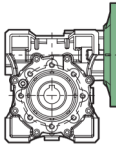
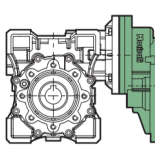
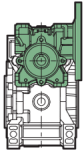
i	n_2		030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
900	1	Mm ₂ [Nm]	74	148	276	458	582	1290	1795	2142
		Pm ₁ [kW]	0.02	0.04	0.08	0.13	0.15	0.30	0.39	0.43
		Fr ₂ [N]	3490	4840	6270	7380	8180	10320	13500	18000
		Fr ₁ [N]	210	210	210	350	350	490	700	700
1200	0.8	Mm ₂ [Nm]	74	148	276	422	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	<i>a richiesta on request</i>
		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]	<i>a richiesta on request</i>	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	<i>a richiesta on request</i>						
		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

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

NGD

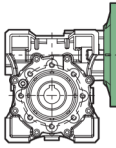
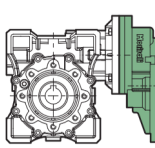
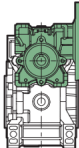
i	n_2		030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
100	5	Mm_2 [Nm]	72	140	202	a richiesta on request				
		Pm_1 [kW]	0.06	0.12	0.17					
		Fr_2 [N]	2769	3800	4967					
		Fr_1 [N]	210	210	210					
150	3.3	Mm_2 [Nm]	73	138	265	a richiesta on request				
		Pm_1 [kW]	0.04	0.06	0.16					
		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 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

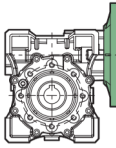
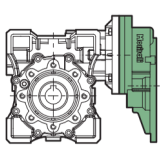
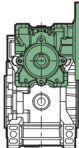
Dati tecnici riduttori combinati
Combination gearbox technical data
 $n_1 = 500 \text{ min}^{-1}$

NGD

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 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 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 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

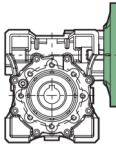
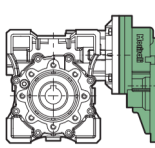
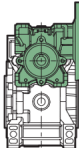
Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
0.06									
56A4 ($n_1 = 1400 \text{ min}^{-1}$)	280	5	1.8	6.2	439	NMG025			
	187	7.5	2.7	4.2	503				
	140	10	3.5	3.5	553				
	93	15	5	2.5	633				
	70	20	6.2	2	697				
	47	30	8.4	1.6	798				
	35	40	10	1.3	878				
	28	50	12	0.9	946				
	23	60	14	0.7	1006				
	280	5	1.8	10.1	597		NMG030		
	187	7.5	2.7	6.9	683				
	140	10	3.5	5.4	752				
	93	15	4.8	3.8	861				
	70	20	6.1	3	948				
	56	25	7.1	3	1021				
	47	30	8.2	2.5	1085				
	35	40	9.9	1.9	1194				
	28	50	11	1.5	1286				
	23	60	13	1.3	1367				
	18	80	14	0.9	1504	NMG040			
	28	50	13	3.3	2475				
	23	60	14	2.6	2630				
	18	80	17	1.9	2895				
	14	100	20	1.5	3118				
	14	100	26	1.3	1620			NMGD025/030	
	9.3	150	33	0.9	1830				
	7	200	42	0.7	1830				
	5.6	250	45	0.8	1830				
	4.7	300	60	1.2	3490				NMGD025/040
	3.5	400	72	0.9	3490				
	2.8	500	84	0.7	3490				
	2.3	600	103	0.6	3490				
	1.9	750	118	0.5	3490				
	1.6	900	146	0.5	3490				
	1.2	1200	174	0.4	3490				
	0.9	1500	201	0.3	3490				
	0.8	1800	221	0.3	3490				
	0.6	2400	273	0.2	3490				
	0.5	3000	330	0.2	3490		NMGD030/040		
	0.4	4000	300	0.1	3490				
0.3	5000	363	0.1	3490					
14	100	27	2.7	2769					
9.3	150	38	1.9	3169					
7	200	48	1.4	3488					
5.6	250	56	1.1	3490					
4.7	300	58	1.3	3490					
3.5	400	71	0.9	3490					
2.8	500	98	0.6	3490					
2.3	600	106	0.7	3490					
1.9	750	123	0.6	3490					
1.6	900	142	0.5	3490					
1.2	1200	169	0.4	3490					
0.9	1500	200	0.4	3490					
0.8	1800	222	0.3	3490					
0.6	2400	266	0.2	3490					

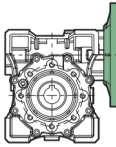
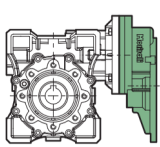
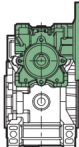
Dati tecnici motoriduttore
Gearmotors technical data

Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]			
0.06								
56A4 ($n_1 = 1400 \text{ min}^{-1}$)	0.4	3200	306	0.2	3490			NMGD030/040
	0.4	4000	285	0.1	3490			
	0.3	5000	345	0.1	3490			
	7	200	48	2.6	4788			NMGD030/050
	5.6	250	56	2	4840			
	4.7	300	62	2.4	4840			
	3.5	400	74	1.7	4840			
	2.8	500	87	1.4	4840			
	2.3	600	111	1.3	4840			
	1.9	750	130	1.1	4840			
	1.6	900	144	1	4840			
	1.2	1200	172	0.7	4840			
	0.9	1500	203	0.7	4840			
	0.8	1800	226	0.7	4840			
	0.6	2400	271	0.5	4840			
	0.5	3000	313	0.4	4840			
	0.4	4000	294	0.3	4840			
	0.3	4800	317	0.3	4840			
	3.5	400	78	3.4	6270			NMGD030/063
	2.8	500	90	2.7	6270			
	2.3	600	113	2.4	6270			
	1.9	750	132	2.1	6270			
	1.6	900	151	1.8	6270			
	1.2	1200	184	1.5	6270			
	0.9	1500	208	1.1	6270			
	0.8	1800	230	0.9	6270			
	0.6	2400	282	0.8	6270			
	0.5	3000	325	0.7	6270			
	0.4	4000	312	0.6	6270			
	0.3	5000	367	0.4	6270			
	2.8	500	104	1.3	3800			NMGD040/050
	1.6	900	162	0.9	4350			
	0.9	1500	241	1.1	6270			NMGD040/063
0.8	1800	270	1	6270				
0.6	2400	332	0.8	6270				
0.9	1500	253	1.8	7380			NMGD040/075	
0.8	1800	284	1.6	7380				
0.6	2400	337	1.1	7380				
0.5	3000	385	0.8	7380				
0.4	4000	362	0.7	7380				
0.3	5000	427	0.5	7380				
0.9	1500	264	2.7	8180			NMGD040/090	
0.8	1800	297	2.4	8180				
0.6	2400	366	1.7	8180				
0.5	3000	414	1.4	8180				
0.4	4000	372	1.3	8180				
0.3	5000	440	1	8180				
56B6 ($n_1 = 900 \text{ min}^{-1}$)	180	5	2.8	4.8	509	NMG025		
	120	7.5	4.1	3.2	583			
	90	10	5.3	2.7	641			
	60	15	7.5	1.9	734			

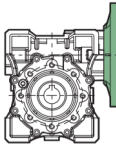
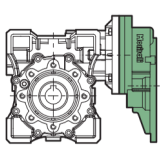
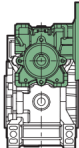
Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]						
0.06											
56B6 (n ₁ =900 min-1)	45	20	9.5	1.4	808	NMG025					
	30	30	12	1.2	925						
	23	40	15	0.9	1018						
	18	50	18	0.7	1096	NMG030 NMG040					
	15	60	18	0.9	1583						
	18	50	18	2.3	2868						
	15	60	21	1.9	3047						
	11	80	24	1.4	3354						
	9	100	28	1.2	3490						
0.09											
56A2 (n ₁ =2800 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						
	373	7.5	2	6.5	542		NMG030				
	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						
	47	60	10	1.1	1085						
	35	80	13	0.9	1194	NMG040					
	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						
	14	100	40	1.8	2769						
	9.3	150	55	1.2	3488						
	9.3	300	44	1.6	3490						
	7	200	71	0.9	3488						
7	400	53	1.2	3490							
5.6	250	85	0.7	3490							
5.6	500	72	0.8	3490							
56B4 (n ₁ =1400 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						
	NMGD025/040										

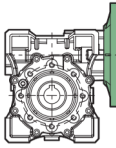
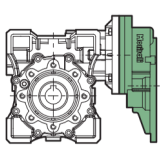
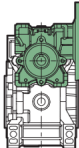
Dati tecnici motoriduttore
Gearmotors technical data

Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
0.09									
56B4 ($n_1=1400 \text{ min}^{-1}$)	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		NMG040		
	28	50	19	2	2475				
	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		NMGD030/050		
4.7	300	90	0.8	3490					
14	100	41	3.4	3800					
9.3	150	57	2.4	4350		NMGD030/063			
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					
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					

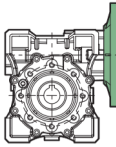
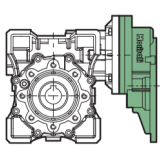
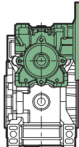
Pn1 [kW]	n2 [min ⁻¹]	i	Mn2 [Nm]	fs	Fr2 [N]			
0.09								
56B4 (n ₁ =1400 min ⁻¹)	2.8	500	156	0.9	3800			NMGD040/050 NMGD040/063 NMGD040/075
	0.9	1500	361	0.8	6270			
	0.9	1500	367	1.1	7380			
	0.8	1800	412	1	7380			
	0.6	2400	506	0.7	7380			
	0.5	3000	621	0.9	8180			NMGD040/090
	0.4	4000	559	0.8	8180			
63A6 (n ₁ =900 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	NMG040		
	45	20	15	3.3	1964			
	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	NMG050		
	9	100	42	0.8	3490			
	18	50	30	2.8	3936			
	15	60	33	2.3	4183			
	11	80	38	1.8	4604			
	9	100	43	1.3	4840			
	12	73.3	48	1.3	3283			NMGP063/040
	10	88	52	1.4	3488			
	7.7	117.3	63	1.1	3490			
	6.1	146.7	73	0.8	3490			
	5.1	176	81	0.7	3490			
	7.5	117.2	65	2	4840		NMGP063/050	
	6.1	146.7	74	1.6	4840			
	5.1	176	83	1.3	4840			
	3.8	234.6	96	0.9	4840			
	3	293.3	108	0.7	4840			
3.8	234.6	101	1.7	6270		NMGP063/063		
3	293.3	111	1.4	6270				
0.12								
56B2 (n ₁ =2800 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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Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]										
0.12															
56B2 (n ₁ =2800 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 (n ₁ =1400 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		73.3	43	1.2	2833	NMGP063/040									
16		88	47	1.2	3011										
12		117.3	58	0.9	3314										
9.5		146.7	67	0.7	3490	NMGP063/050									
7.9		176	75	0.6	3490										
12		117.2	59	1.8	4548										
9.5		146.7	69	1.3	4840										
8		176	77	1.1	4840										
5.8		234.6	90	0.8	4840										
4.8		293.3	100	0.7	4840										
6	234.6	94	1.5	6270	NMGP063/063										
4.8	293.3	105	1.2	6270											
14	100	53	1.4	2769											
9.3	150	75	1	3169		NMGD030/040									
14	100	55	2.6	3800											
9.3	150	75	1.8	4350											
7	200	96	1.3	4788											
							NMGD030/050								

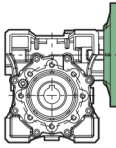
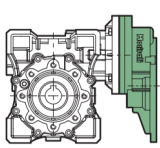
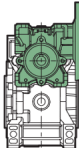
Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]			
0.12								
63A4 ($n_1=1400$ min-1)	5.6	250	112	1	4840			NMGD030/050
	4.7	300	121	1.2	4840			
	3.5	400	145	0.9	4840			
	2.8	500	167	0.7	4840			
	14	100	55	2.8	4967			NMGD030/063
	9.3	150	77	2.8	5686			
	7	200	97	2.7	6259			
	5.6	250	116	2	6270			
	4.7	300	119	2.2	6270			
	3.5	400	155	1.7	6270			
	2.8	500	174	1.3	6270			
	2.3	600	212	1.1	6270			
	1.9	750	246	0.9	6270			
	1.6	900	303	0.9	6270			
	1.2	1200	367	0.8	6270			
	14	100	56	2.5	3800			NMGD040/050
	9.3	150	78	1.8	4350			
	7	200	98	1.2	4788			
	5.6	250	115	1	4840			
	4.7	300	128	1.2	4840			
3.5	400	153	0.8	4840				
9.3	150	79	3.4	5686			NMGD040/063	
7	200	99	2.6	6259				
5.6	250	119	2	6270				
4.7	300	130	2.1	6270				
3.5	400	159	1.6	6270				
2.8	500	221	1.1	6270				
2.3	600	242	1.1	6270				
1.9	750	291	1	6270				
1.6	900	325	0.8	6270				
5.6	250	122	3.2	7380				
4.7	300	137	3.3	7380			NMGD040/075	
3.5	400	167	2.5	7380				
2.8	500	192	2	7380				
2.3	600	253	1.8	7380				
1.9	750	305	1.5	7380				
1.6	900	332	1.2	7380				
1.2	1200	407	0.9	7380				
0.9	1500	505	0.9	7380				
0.8	1800	567	0.8	7380				
2.8	500	206	2.8	8180				
2.3	600	265	2.7	8180			NMGD040/090	
1.9	750	319	2.2	8180				
1.6	900	357	2	8180				
1.2	1200	443	1.6	8180				
0.9	1500	528	1.4	8180				
0.8	1800	558	0.9	8180				
0.6	2400	709	0.9	8180				
1.2	1200	457	1.6	8180				
0.9	1500	538	1.3	8180				
0.8	1800	604	1.2	8180				
0.6	2400	746	0.8	8180				

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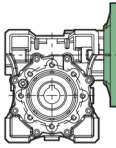
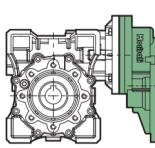
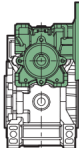
Pn1 [kW]	n2 [min ⁻¹]	i	Mn2 [Nm]	fs	Fr2 [N]			
0.12								
63A4 (n ₁ =1400 min ⁻¹)	1.2	1200	457	2.8	10320			NMGD050/110
	0.9	1500	538	2.4	10320			
	0.8	1800	604	2.1	10320			
	0.6	2400	781	1.5	10320			
	0.5	3000	902	1.2	10320			
	0.4	4000	800	1	10320			
	0.3	5000	947	0.8	10320			
63A6 (n ₁ =900 min ⁻¹)	12	73.3	63	1	3283		NMGP063/040	
	10	88	69	1.1	3488			
	7.7	117.3	85	0.8	3490			
63B6 (n ₁ =900 min ⁻¹)	180	5	5.5	3.7	692	NMG030		
	120	7.5	8.1	2.5	792			
	90	10	10	2	871			
	60	15	14	1.4	997			
	45	20	18	1.1	1098			
	36	25	20	1.1	1183			
	30	30	23	0.9	1257			
	23	40	30	0.7	1383			
	60	15	15	3.3	1920	NMG040		
	45	20	19	2.5	2113			
	36	25	23	1.9	2276			
	30	30	26	1.9	2419			
	23	40	33	1.4	2662			
	18	50	37	1.2	2868			
	15	60	42	0.9	3047			
	11	80	51	0.7	3354			
	23	40	33	2.6	3654	NMG050		
	18	50	39	2	3936			
	15	60	43	1.7	4183			
	11	80	51	1.4	4604			
	9	100	57	1	4840			
	12	73.3	64	1.7	4506			NMGP063/050
	10	88	71	2.1	4788			
	7.7	117.3	86	1.5	4840			
	6.1	146.7	99	1.2	4840			
	5.1	176	110	1	4840			
	3.8	234.6	128	0.7	4840			
	6.1	146.7	103	2.1	6270		NMGP063/063	
5.1	176	114	1.8	6270				
3.8	234.6	134	1.3	6270				
3.1	293.3	148	1	6270				

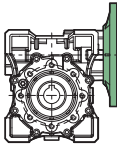
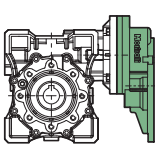
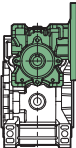
0.18

63A2 (n ₁ =2800 min ⁻¹)	373	7.5	4.1	3.2	542	NMG030	
	280	10	5.3	2.5	597		
	187	15	7.5	1.8	683		
	140	20	9.7	1.3	752		
	112	25	11	1.4	810		
	93	30	13	1.2	861		
	70	40	16	0.9	948		

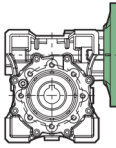
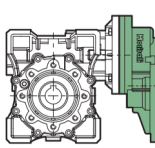
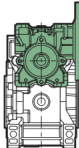
Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]						
0.18											
63A2 ($n_1=2800$ min-1)	140	20	10	2.8	1447	NMG040					
	112	25	12	2.3	1559						
	93	30	14	2.5	1657						
	70	40	17	1.8	1824						
	56	50	21	1.4	1964						
	47	60	24	1.2	2087						
	63B4 ($n_1=1400$ min-1)	35	80	30	0.8	2298	NMG050				
		70	40	18	3.2	2503					
		56	50	21	2.5	2696					
		47	60	24	2.1	2865					
		35	80	31	1.5	3153					
		28	100	35	1.2	3397					
		63B4 ($n_1=1400$ min-1)	280	5	5.4	3.4		597	NMG030		
			187	7.5	8	2.3		683			
140	10		10	1.8	752						
93	15		14	1.3	861						
70	20		18	1	948						
56	25		21	1	1021						
47	30		24	0.8	1085						
93	15		15	2.9	1657	NMG040					
70	20		19	2	1824						
56	25		23	1.7	1964						
47	30		27	1.7	2087						
35	40		33	1.3	2298						
28	50		39	1	2475						
23	60		44	0.8	2630						
35	40		34	2.3	3153		NMG050				
28	50		40	1.9	3397						
23	60		44	1.6	3610						
18	80		53	1.2	3973						
14	100		61	0.9	4280						
19	73.3		65	0.8	2833						
16	88		71	0.8	3011	NMGP063/040					
12	117.3		87	0.6	3314						
12	117.3		89	1.1	4548	NMGP063/050					
9.5	146.7		103	0.9	4840						
7.9	176		115	0.7	4840						
5.8	234.6		136	0.6	4840						
14	100		80	0.9	2769						
14	100		83	1.7	3800						
9.3	150		114	1.2	4350						
7	200		144	0.9	4788						
4.7	300	187	0.8	4840							
14	100	83	1.9	4967							
9.3	150	115	1.9	5686							
7	200	146	1.8	6259							
5.6	250	174	1.4	6270							
4.7	300	179	1.5	6270							
							NMGD030/040 NMGD030/050				
								NMGD030/063			

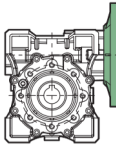
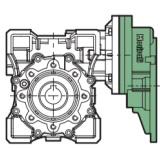
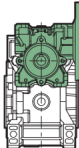
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Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]			
0.18								
63B4 ($n_1=1400$ min-1)	3.5	400	226	1	6270			NMGD030/063
	2.8	500	262	0.8	6270			
	2.3	600	340	0.8	6270			
	14	100	84	1.7	3800			NMGD040/050
	9.3	150	116	1.2	4350			
	7	200	147	0.8	4788			
	4.7	300	192	0.8	4840			
	14	100	84	3.1	4967			NMGD040/063
	9.3	150	118	2.2	5686			
	7	200	149	1.7	6259			
	5.6	250	179	1.3	6270			
	4.7	300	195	1.4	6270			
	3.5	400	239	1.1	6270			
	2.8	500	332	0.7	6270			
	2.3	600	362	0.8	6270			
	7	200	153	2.8	7380			NMGD040/075
	5.6	250	184	2.1	7380			
	4.7	300	204	2.2	7380			
	3.5	400	251	1.7	7380			
	2.8	500	288	1.3	7380			
	2.3	600	369	1.1	7380			
	1.9	750	444	0.9	7380			
	1.6	900	497	0.8	7380			
	1.2	1200	634	0.7	7380			
	5.6	250	192	3	8180			NMGD040/090
	4.7	300	214	3.3	8180			
	3.5	400	264	2.4	8180			
	2.8	500	309	1.9	8180			
	2.3	600	398	1.8	8180			
	1.9	750	478	1.5	8180			
	1.6	900	537	1.3	8180			
	1.2	1200	642	1	8180			
	0.9	1500	750	0.8	8180			
0.8	1800	891	0.8	8180				
1.2	1200	684	1	8180				
0.9	1500	806	0.9	8180				
0.8	1800	906	0.8	8180				
1.2	1200	684	1.9	10320			NMGD050/110	
0.9	1500	806	1.6	10320				
0.8	1800	878	1.5	10320				
0.6	2400	1135	1.1	10320				
0.5	3000	1397	0.8	10320				
71A6 ($n_1=900$ min-1)	90	10	16	3	1677	NMG040		
	60	15	23	2.2	1920			
	45	20	30	1.5	2113			
	36	25	35	1.3	2276			
	30	30	39	1.3	2419			
	23	40	48	1	2662	NMG050		
	45	20	30	2.8	2900			
	36	25	36	2.1	3124			
	30	30	41	2.4	3320			
	23	40	50	1.8	3654			

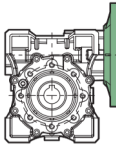
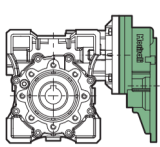
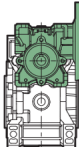
Pn_1 [kW]	n_2 [min ⁻¹]	i	Mn_2 [Nm]	fs	Fr_2 [N]					
0.18										
71A6 ($n_1 = 900 \text{ min}^{-1}$)	18	50	57	1.4	3936	NMG050				
	15	60	64	1.1	4183					
	11	80	77	0.90	4604					
		23	40	51	3.4	4776	NMG063			
		18	50	60	2.7	5145				
		15	60	67	2.1	5467				
		11	80	81	1.6	6018				
		9	100	92	1.4	6270				
		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 ($n_1 = 2800 \text{ min}^{-1}$)	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	NMG040			
		187	15	11	2.9	1315				
		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 ($n_1 = 1400 \text{ min}^{-1}$)	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					

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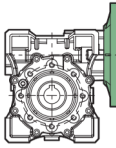
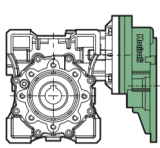
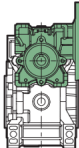
Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
0.25									
71A4 ($n_1=1400$ min-1)	56	25	33	1.2	1964	NMG040			
	47	30	37	1.3	2087				
	35	40	45	0.9	2298				
	70	20	28	2.7	2503		NMG050		
	56	25	33	2.2	2696				
	47	30	38	2.3	2865				
	35	40	47	1.7	3153				
	28	50	55	1.4	3397				
	23	60	61	1.1	3610				
	18	80	73	0.9	3973				
	35	40	49	3.1	4122	NMG063			
	28	50	57	2.4	4440				
	23	60	64	2	4719				
	18	80	80	1.6	5193				
	14	100	89	1.4	5595				
	23	60	69	3.2	5569	NMG075			
	18	80	84	2.3	6130				
	14	100	96	1.9	6603				
	19	73.5	90	1	3889			NMGP071/050	
	16	88.2	100	1.1	4132				
	12	117.6	123	0.8	4548				
	12	117.6	128	1.5	5945				
	9.5	147	146	1.2	6270				
	7.9	176.4	166	1	6270				
	6	235.2	196	0.7	6270				
	4.8	294	219	0.6	6270				
	9.5	147	154	1.7	7380				
	7.9	176.4	175	1.4	7380				
	6	235.2	205	1.1	7380				
	4.8	294	235	0.9	7380				
	14	100	117	1.2	3800				
	9.3	150	162	0.9	4350				
	14	100	117	2.2	4967				
	9.3	150	164	1.6	5686				
	7	200	207	1.2	6259				
	5.6	250	248	1	6270				
	4.7	300	270	1	6270				
	3.5	400	332	0.8	6270				
	14	100	118	3	5863				
	9.3	150	168	2.6	6712				
7	200	213	2	7380					
5.6	250	255	1.5	7380					
4.7	300	284	1.6	7380					
3.5	400	343	1.1	7380					
2.8	500	392	0.8	7380					
2.3	600	527	0.9	7380					
1.9	750	634	0.7	7380					
14	100	121	3	6487					
9.3	150	173	3	7426					
7	200	221	2.8	8174					
								NMGD040/050	
								NMGD040/063	
								NMGD040/075	
								NMGD040/090	

Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
0.25									
71A4 ($n_1=1400$ min-1)	5.6	250	266	2.2	8180				NMGD040/090
	4.7	300	297	2.4	8180				
	3.5	400	366	1.7	8180				
	2.8	500	428	1.3	8180				
	2.3	600	522	1.2	8180				
	1.9	750	610	0.9	8180				
	1.6	900	680	0.8	8180				
	1.2	1200	923	0.8	8180				
	7	200	227	2.7	8174				
	5.6	250	272	2.1	8180				
	4.7	300	304	2.3	8180				
	3.5	400	375	1.7	8180				
	2.8	500	501	1.2	8180				
	2.3	600	559	1.3	8180				
	1.9	750	673	1.1	8180				
	1.6	900	766	0.9	8180				
	1.2	1200	951	0.8	8180				
	3.5	400	394	3.1	10320			NMGD050/110	
	2.8	500	522	2.3	10320				
	2.3	600	559	2.3	10320				
1.9	750	673	1.9	10320					
1.6	900	766	1.7	10320					
1.2	1200	962	1.3	10320					
0.9	1500	1085	1.2	10320					
0.8	1800	1219	1.1	10320					
0.6	2400	1710	0.7	10320					
3.5	400	394	3.1	10320					
2.8	500	534	2.2	10320					
2.3	600	573	2.3	10320					
1.9	750	691	1.9	10320					
1.6	900	786	1.6	10320					
1.2	1200	992	1.3	10320					
0.9	1500	1171	1.1	10320					
0.8	1800	1322	1	10320					
0.6	2400	1710	0.7	10320			NMGD063/130		
2.8	500	469	3.4	13500					
2.3	600	582	3.1	13500					
1.9	750	701	2.6	13500					
1.6	900	799	2.2	13500					
1.2	1200	1008	1.8	13500					
0.9	1500	1188	1.5	13500					
0.8	1800	1341	1.3	13500					
0.6	2400	1656	1	13500					
0.5	3000	1974	0.8	13500					
0.4	4000	2087	0.6	13500					
0.3	5000	2479	0.5	13500			NMGD063/150		
1.9	750	679	3.5	18000					
1.6	900	857	2.5	18000					
1.2	1200	1033	2.6	18000					
0.8	1800	1223	1.8	18000					
0.6	2400	1475	1.8	18000					
0.5	3000	1747	1.4	18000					
0.4	4000	2067	0.9	18000					
0.3	5000	2296	0.7	18000					

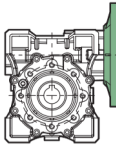
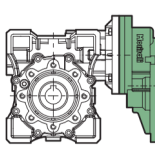
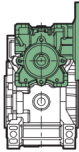
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Gearmotors technical data

Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]			
0.25								
71B6 ($n_1=900$ 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	NMG050		
	60	15	33	2.9	2635			
	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	NMG063		
	15	60	90	0.8	4183			
	36	25	51	3	4084			
	30	30	58	3.1	4339			
	23	40	71	2.4	4776			
	18	50	83	1.8	5145			
	15	60	94	1.5	5467	NMG075		
	11	80	112	1.2	6018			
	9	100	128	1	6270			
	18	50	87	3	6073			
	15	60	101	2.5	6453			
	11	80	119	1.7	7103			
	9	100	136	1.4	7380	NMGP071/063 NMGP071/075		
7.7	117.6	185	1.3	6270				
6.1	147	215	1	6270				
7.7	117.6	195	1.9	7380				
6.1	147	223	1.5	7380				
5.1	176.4	253	1.2	7380				

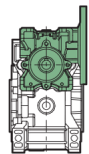
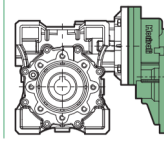
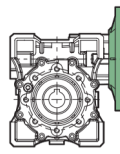
0.37								
71A2 ($n_1=2800$ min-1)	373	7.5	8.5	3.4	1044	NMG040		
	280	10	11	2.6	1149			
	187	15	16	1.9	1315			
	140	20	20	1.4	1447			
	112	25	26	1.1	1559			
	93	30	30	1.2	1657			
	70	40	38	0.8	1824	NMG050		
	112	25	26	2	2140			
	93	30	30	2.2	2274			
	70	40	38	1.6	2503			
	56	50	45	1.2	2696			
	47	60	51	1	2865			
	35	80	63	0.7	3153	NMG063		
	70	40	39	2.9	3272			
	56	50	46	2.3	3524			
	47	60	53	1.9	3745			
	35	80	66	1.4	4122			
	28	100	75	1.1	4440			

Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
0.37									
71A2 (n ₁ =2800 min ⁻¹)	56	50	48	3.5	4160	NMG075			NMGD030/063
	47	60	56	2.9	4421				
	35	80	69	2.1	4865				
	28	100	80	1.7	5241				
	9.3	300	186	1.3	6270				
	7	400	226	1	6270				
71B4 (n ₁ =1400 min ⁻¹)	280	5	11	3	1149	NMG040			NMGD040/050 NMGD040/063 NMGD040/075
	187	7.5	16	2.4	1315				
	140	10	21	1.9	1447				
	93	15	32	1.3	1657				
	70	20	40	1	1824				
	56	25	48	0.8	1964				
	47	30	54	0.8	2087	NMG050			
	140	10	22	3.3	1987				
	93	15	32	2.4	2274				
	70	20	41	1.8	2503				
	56	25	49	1.5	2696				
	47	30	56	1.5	2865				
	35	40	69	1.1	3153	NMG063			
	28	50	82	0.9	3397				
	23	60	91	0.8	3610				
	56	25	51	2.7	3524				
	47	30	58	2.8	3745				
	35	40	72	2.1	4122				
	28	50	85	1.6	4440	NMG075			
	23	60	96	1.4	4719				
	18	80	117	1.1	5193				
	14	100	132	0.9	5595				
	35	40	75	3.3	4865				
	28	50	90	2.5	5241				
	23	60	100	2.0	5569	NMGP071/063			
	18	80	123	1.6	6130				
	14	100	142	1.3	6603				
	12	117.6	189	1	5945				
	9.5	147	216	0.8	6270				
	9.5	147	227	1.1	7380				
	7.9	176.4	259	0.9	7380	NMGP071/075			
	14	100	172	0.8	3800				
	14	100	172	1.5	4967				
	9.3	150	243	1.1	5686				
	7	200	306	0.8	6259				
	14	100	175	2.1	5863				
9.3	150	250	1.7	6712	NMGD040/075				
7	200	315	1.4	7380					
5.6	250	377	1	7380					
4.7	300	413	1	7380					
3.5	400	508	0.7	7380					

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Gearmotors technical data

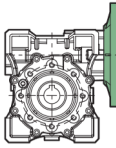
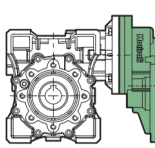
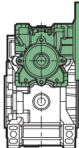
Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
0.37									
71B4 ($n_1=1400$ min-1)	14	100	180	2.1	6487			NMGD040/090	
	9.3	150	256	2.1	7426				
	7	200	328	1.9	8174				
	5.6	250	394	1.5	8180				
	4.7	300	410	1.5	8180				
	3.5	400	533	1.2	8180				
	2.8	500	623	0.9	8180				
	2.3	600	772	0.8	8180				
	14	100	184	3.3	6487				NMGD050/090
	9.3	150	262	2.6	7426				
	7	200	336	1.9	8174				
	5.6	250	403	1.4	8180				
	4.7	300	450	1.6	8180				
	3.5	400	556	1.1	8180				
	2.8	500	742	0.8	8180				
	2.3	600	828	0.9	8180				
	1.9	750	997	0.7	8180			NMGD050/110	
	7	200	345	3.4	10320				
	5.6	250	420	2.8	10320				
	4.7	300	450	2.9	10320				
3.5	400	582	2.1	10320					
2.8	500	772	1.5	10320					
2.3	600	828	1.6	10320					
1.9	750	969	1.3	10320					
1.6	900	1101	1.2	10320					
1.2	1200	1424	0.8	10320			NMGD063/110		
0.9	1500	1655	0.8	10320					
7	200	345	3.4	10320					
5.6	250	420	2.8	10320					
4.7	300	450	2.9	10320					
3.5	400	582	2.1	10320					
2.8	500	792	1.5	10320					
2.3	600	849	1.5	10320					
1.9	750	1022	1.3	10320					
1.6	900	1164	1.1	10320				NMGD063/130	
1.2	1200	1470	0.9	10320					
0.9	1500	1733	0.7	10320					
3.5	400	582	2.9	13500					
2.8	500	695	2.3	13500					
2.3	600	861	2.1	13500					
1.9	750	1037	1.7	13500					
1.6	900	1181	1.5	13500					
1.2	1200	1491	1.2	13500					
0.9	1500	1707	1.1	13500			NMGD063/150		
0.8	1800	1925	0.9	13500					
2.8	500	695	3.4	18000					
2.3	600	857	3.2	18000					
1.9	750	1006	2.4	18000					
1.6	900	1269	1.7	18000					
1.2	1200	1529	1.8	18000					
0.8	1800	1811	1.2	18000					
0.6	2400	2184	1.2	18000					
0.5	3000	2586	0.9	18000					

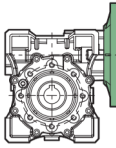
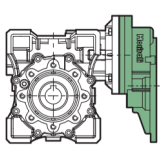
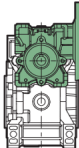
Pn1	n2	i	Mn2	fs	Fr2			
[kW]	[min ⁻¹]		[Nm]		[N]			
0.37								
80A6 (n ₁ =900 min ⁻¹)	180	5	17	4.3	1827	NMG050		
	120	7.5	26	3.3	2091			
	90	10	34	2.5	2302			
	60	15	48	1.8	2635			
	45	20	61	1.3	2900			
	36	25	73	1	3124			
	30	30	82	1.1	3320	NMG063		
	45	20	61	2.4	3791			
	36	25	75	1.9	4084			
	30	30	84	2.1	4339			
	23	40	104	1.6	4776			
	18	50	122	1.2	5145			
	15	60	140	1	5467	NMG075		
	11	80	170	0.8	6018			
	36	25	79	3.1	4820			
	30	30	89	3.3	5122			
	23	40	110	2.6	5637			
	18	50	129	1.8	6073			
	15	60	147	1.5	6453	NMG090		
	11	80	176	1.2	7103			
	9	100	200	1	7380			
	18	50	139	3.2	6719			
	15	60	156	2.5	7140			
	11	80	189	1.7	7859			
	9	100	216	1.3	8180	NMG110		
	11	80	205	2.8	9931			
	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				



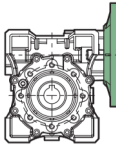
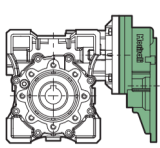
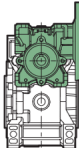
0.55								
71B2 (n ₁ =2800 min ⁻¹)	373	7.5	12	2.3	1044	NMG040		
	280	10	16	1.8	1149			
	187	15	24	1.3	1315			
	140	20	31	1	1447			
	112	25	38	0.8	1559			
	93	30	44	0.8	1657	NMG050		
	280	10	17	3.2	1577			
	187	15	24	2.4	18.5			
	140	20	32	1.7	1987			
	112	25	39	1.4	2140			
	93	30	44	1.5	2274			
	70	40	56	1.1	2503			
	56	50	66	0.8	2696			

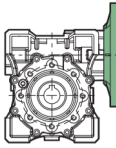
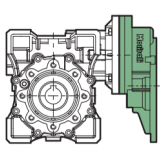
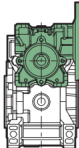
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Gearmotors technical data

Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
0.55									
71B2 ($n_1=2800$ min-1)	47	60	75	0.7	2865	NMG050			NMGD040/090
	140	20	33	3.3	2597				
	112	25	40	2.5	2797				
	93	30	45	2.7	2973				
	70	40	57	1.9	3272				
	56	50	69	1.5	3524				
	47	60	80	1.2	3745				
	35	80	98	0.9	4122				
	28	100	113	0.7	4440				
	70	40	60	3.1	3862	NMG075			
	56	50	71	2.3	4160				
	47	60	83	2	4421				
	35	80	101	1.3	4865				
	28	100	118	1	5241				
	9.3	300	311	2	8180				
	7	400	383	1.5	8180				
	5.6	500	450	1.2	8180				
80A4 ($n_1=1400$ min-1)	280	5	17	3.7	1577	NMG050			
	187	7.5	26	2.9	1805				
	140	10	33	2.2	1987				
	93	15	47	1.6	2274				
	70	20	60	1.2	2503				
	56	25	72	1	2696				
	47	30	83	1	2865	NMG063			
	93	15	48	3.2	2973				
	70	20	62	2.2	3272				
	56	25	74	1.8	3524				
	47	30	85	1.9	3745				
	35	40	107	1.4	4122				
	28	50	126	1.1	4440	NMG075			
	23	60	143	0.9	4719				
	56	25	78	2.8	4160				
	47	30	89	2.9	4421				
	35	40	110	2	4865				
	28	50	132	1.6	5241				
	23	60	149	1.4	5569				
	18	80	184	1.1	6130				
	14	100	210	0.9	6603				
	35	40	116	3.5	5383	NMG090			
	28	50	140	2.7	5799				
	23	60	161	2.2	6163				
	18	80	193	1.5	6783				
	14	100	225	1.2	7306				
	18	80	205	2.6	8571				
	14	100	241	2	9232	NMG110			
	19	75	209	1.2	6000				
	16	90	235	1.3	6375				
12	120	290	1	7017					
9.3	150	339	0.8	7380					

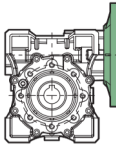
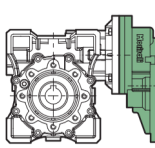
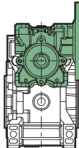
Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]								
0.55													
80A4 ($n_1=1400$ min-1)	12	120	303	1.6	7764				NMGP080/090				
	9.3	150	362	1.3	8180								
	7.8	180	406	1	8180								
	5.8	240	523	1.3	10320					NMGP080/110			
	4.7	300	609	1	10320								
	14	100	273	2.2	6487								
	9.3	150	390	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 ($n_1=900$ 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								
	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								
													NMG063

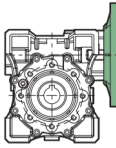
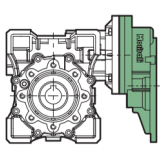
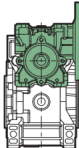
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Pn1 [kW]	n2 [min ⁻¹]	i	Mn2 [Nm]	fs	Fr2 [N]			
0.55								
80B6 (n ₁ =900 min ⁻¹)	45	20	95	2.9	4474	NMG075		
	36	25	126	2.1	4820			
	30	30	131	2	5122			
	23	40	162	1.5	5637			
	18	50	191	1.2	6073			
	15	60	218	1	6453			
	11	80	267	0.8	7103	NMG090		
	36	25	119	3.5	5333			
	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	NMG110		
	15	60	247	2.8	9023			
	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 (n ₁ =2800 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	NMG063		
	93	30	57	1.1	2274			
	187	15	34	3.3	2359			
	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	NMG075		
	112	25	55	2.9	3302			
	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		NMG090	
	70	40	84	3.4	4273			
	56	50	101	2.7	4603			
	47	60	117	2.1	4891			
	35	80	146	1.6	5383			
	28	100	172	1.2	5799			

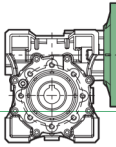
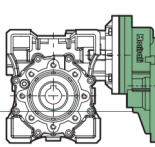
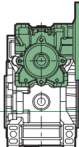
Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
0.75									
80A2 (n ₁ =2800 min-1)	35	80	155	2.6	6803	NMG110			NMGD040/090 NMGD050/110
	28	100	183	2.1	7328				
	7	400	522	1.1	8180				
	5.6	500	613	0.9	8180				
	9.3	300	432	2.8	10320				
	7	400	564	2.1	10320				
	5.6	500	653	1.6	10320				
80B4 (n ₁ =1400 min-1)	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	NMG063			
	70	20	83	0.9	2503				
	56	25	101	0.7	2696				
	47	30	114	0.8	2865				
	140	10	46	3	2567				
	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	6130	255	80	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				
	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		NMG110		
	16	90	319	1	6375				
12	120	413	1.2	7764					
9.3	150	493	0.9	8180					
7.8	180	554	0.7	8180					
5.8	240	714	0.9	10320					
14	100	372	1.6	6487					
9.3	150	531	1.3	7426					
7	200	681	0.9	8174					
								NMGP080/075	
								NMGP080/090	
								NMGP080/110	
								NMGD050/090	

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Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]					
0.75										
80B4 ($n_1=1400$ min-1)	5.6	250	817	0.7	8180				NMGD050/090	
	4.7	300	913	0.8	8180					
	14	100	372	1.8	8198					
	9.3	150	538	1.8	9384					NMGD050/110
	7	200	699	1.7	10320					
	5.6	250	852	1.4	10320					
	4.7	300	888	1.5	10320					
	3.5	400	1149	1.1	10320					
	2.8	500	1566	0.8	10320					
	2.3	600	1678	0.8	10320					NMGD063/110
	14	100	372	3	8198					
	9.3	150	538	2.3	9384					
	7	200	699	1.7	10320					
	5.6	250	852	1.4	10320					
	4.7	300	913	1.4	10320					
	3.5	400	1180	1	10320					NMGD063/130
	2.8	500	1604	0.7	10320					
	2.3	600	1720	0.8	10320					
	14	100	376	3	10722					
	9.3	150	531	3	12274					
	7	200	699	2.3	13500					
	5.6	250	852	1.8	13500					NMGD063/150
	4.7	300	926	1.9	13500					
	3.5	400	1180	1.4	13500					
	2.8	500	1385	1.1	13500					
	2.3	600	1664	1	13500					
	1.9	750	2045	0.9	13500					
	1.6	900	2329	0.8	13500					NMG063
	7	200	699	3	18000					
	5.6	250	852	2.5	18000					
4.7	300	1013	2.3	18000						
3.5	400	1199	2.3	18000						
2.8	500	1317	1.8	18000						
2.3	600	1560	1.7	18000						
1.9	750	1819	1.3	18000						
1.6	900	2259	0.9	18000						
1.2	1200	2734	1	18000						
90S6 ($n_1=900$ min-1)	120	7.5	53	2.9	2734	NMG075				
	90	10	69	2.3	3009					
	60	15	99	1.6	3444					
	45	20	125	1.2	3791					
	36	25	152	0.9	4084					
	30	30	170	1	4339					
	23	40	214	0.8	4776					
	60	15	100	2.4	4065	NMG063				
	45	20	129	1.9	4474					
	36	25	156	1.4	4820					
	30	30	177	1.5	5122					
	23	40	220	1.1	5637					
	18	50	260	1	6073					
	15	60	302	0.8	6453					

Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
0.75									
90S6 (n ₁ =900 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	NMG110			
	23	40	244	3.3	9931				
	18	50	293	2.6	10320				
	15	60	332	2.1	9023	NMG130			
	11	80	409	1.4	9931				
	9	100	471	1.1	10320				
	11	80	415	2.1	12989	NMGP090/110			
	9	100	479	1.7	13500				
	12	73.5	401	3.2	9614				
	9.2	98	518	2.3	10320	NMGP090/130			
	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				
	1.10								
	80B2 (n ₁ =2800 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	NMG063			
93		30	89	0.7	2274				
280		10	34	3	2061				
187		15	47	2.1	2359	NMG075			
140		20	61	1.6	2597				
112		25	73	1.2	2797				
93		30	84	1.4	2973	NMG090			
70		40	106	1	3272				
187		15	51	3.3	2785				
140		20	66	2.7	3065	NMG110			
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				
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				
47		60	180	2.7	6181				
35		80	226	1.8	6803				
28		100	268	1.4	7328				

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Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]			
80B2 ($n_1=2800$ min-1)	9.3	300	633	1.9	10320			NMGD050/110
	7	400	826	1.4	10320			
	5.6	500	957	1.1	10320			
90L6 ($n_1=900$ min-1)	120	7.5	78	2	2734	NMG063		
	90	10	101	1.5	3009			
	60	15	145	1.1	3444			
	45	20	184	0.8	3791	NMG075		
	120	7.5	79	2.8	3227			
	90	10	102	2.3	3551			
	60	15	147	1.6	4065	NMG090		
	45	20	188	1.3	4474			
	36	25	230	1	4820			
	30	30	261	1	5122	NMG090		
	23	40	328	0.9	5637			
	60	15	152	3.1	4498			
	45	20	199	2.2	4951	NMG110		
	36	25	236	1.6	5333			
	30	30	268	1.8	5667			
	23	40	338	1.2	6238	NMG110		
	18	50	405	1	6719			
	15	60	457	0.8	7140			
	36	25	244	3.2	6739	NMG110		
	30	30	275	3.1	7161			
	23	40	352	2.3	7882			
18	50	422	1.8	8491	NMG130			
15	60	486	1.4	9023				
11	80	600	1	9931				
11	80	610	1.4	12989	NMG130			
9	100	700	1.1	13500				
12	73.5	588	2.2	9614				
9.2	98	761	1.6	10320	NMG130		NMG090/110	
7.3	122.5	908	1.2	10320				
6.1	147	1020	1	10320				
90S4 ($n_1=1400$ min-1)	187	7.5	51	2.6	2359	NMG063		
	140	10	66	2	2597			
	93	15	95	1.5	2973			
	70	20	124	1.1	3272	NMG063		
	56	25	149	0.9	3524			
	47	30	170	1	3745			
	140	10	67	3	3065	NMG075		
	93	15	98	2.1	3509			
	70	20	125	1.7	3862			
	56	25	153	1.3	4160	NMG075		
	47	30	174	1.3	4421			
	35	40	220	1	4865			
	28	50	268	0.9	5241	NMG075		
	23	60	303	0.7	5569			

Pn1	n2	i	Mn2	fs	Fr2			
[kW]	[min ⁻¹]		[Nm]		[N]			

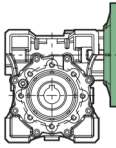
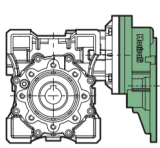
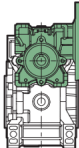
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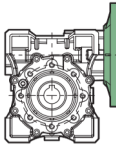
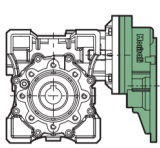
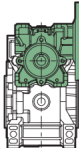
90S4 (n ₁ =1400 min ⁻¹)	70	20	131	3.1	4273	NMG090			
	56	25	159	2.4	4603				
	47	30	182	2.4	4891				
	35	40	230	1.6	5383				
	28	50	275	1.3	5799				
	23	60	317	1	6163				
	18	80	392	1	6783	NMG110			
	35	40	242	3	6803				
	28	50	287	2.3	7328				
	23	60	330	1.9	7787				
	18	80	410	1.3	8571				
	14	100	482	1	9232		NMG130		
	18	80	416	2.1	11210				
	14	100	490	1.5	12076				
	19	73.50	400	2.5	8298	NMG090/110			
	14	98	518	1.8	9133				
	11	122.5	611	1.5	9838				
	9.5	147	700	1.1	10320	NMG090/130			
	7.1	196	845	0.8	10320				
	5.7	245	981	0.9	13500				
	14	100	546	2.1	8198			NMGD063/110	
	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

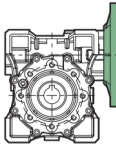
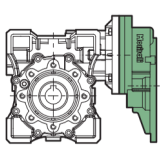
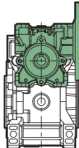
100LA6 (n ₁ =900 min ⁻¹)	120	7.5	107	2	3227	NMG075		
	90	10	140	1.7	3551			
	60	15	200	1.2	4065			
	45	20	260	1.1	4474			
	36	25	317	0.8	4820			
	30	30	361	0.8	5122			
	90	10	141	2.7	3929	NMG090		
	60	15	205	2.1	4498			
	45	20	263	1.5	4951			

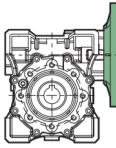
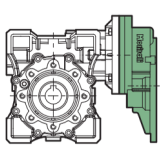
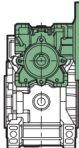
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Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
1.50									
100LA6 ($n_1=900$ min-1)	36	25	320	1.2	5333	NMG090			
	30	30	365	1.3	5667				
	23	40	468	1	6238				
	45	20	269	2.7	6256		NMG110		
	36	25	328	2.4	6739				
	30	30	370	2.3	7161				
	23	40	480	1.7	7882				
	18	50	576	1.3	8491				
	15	60	662	1.1	9023	NMG130			
	36	25	337	3.2	8814				
	30	30	385	3.1	9366				
	23	40	488	2.3	10309				
	18	50	584	1.8	11105				
	15	60	672	1.4	11801				
	11	80	831	1.1	12989	NMG150			
	9	100	974	0.8	13500				
18	50	601	2.7	15182					
15	60	692	2.1	16133					
11	80	858	1.5	17757					
9	100	990	1.2	18000					
80C2 ($n_1=2800$ min-1)	373	7.5	35	1.5	1433	NMG050			
	280	10	46	1.2	1577				
	187	15	66	0.9	1805				
90L4 ($n_1=1400$ min-1)	187	7.5	69	1.9	2359	NMG063			
	140	10	91	1.5	2597				
	93	15	130	1.1	2973				
	70	20	169	0.8	3272		NMG075		
	187	7.5	69	2.7	2785				
	140	10	92	2.2	3065				
	93	15	133	1.5	3509				
	70	20	171	1.3	3862	NMG090			
	56	25	209	1	4160				
	47	30	238	1	4421				
	35	40	305	0.8	4865				
	93	15	137	3	3882	NMG110			
	70	20	175	2.1	4273				
	56	25	214	1.6	4603				
	47	30	244	1.7	4891				
	35	40	313	1.2	5383	NMG130			
	28	50	375	0.9	5799				
	23	60	432	0.8	6163				
	56	25	222	3.1	5816				
	47	30	251	3	6181				
	35	40	325	2.2	6803				
	28	50	392	1.7	7328				
	23	60	451	1.4	7787				
	18	80	559	0.9	8571				
	18	80	568	1.5	11210				
	14	100	668	1.1	12076				

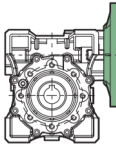
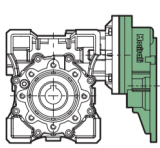
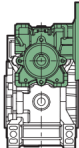
Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
1.50									
90L4 ($n_1=1400$ min-1)	19	73.5	546	1.9	8298		NMGP090/110		
	14	98	707	1.3	9133				
	11	122.5	833	1.1	9838				
	9.5	147	955	0.8	10320				
	7.1	196	1172	0.8	13500				
	5.7	245	981	0.9	13500				
	14	100	745	1.5	8198				NMGP090/130
	9.3	150	1076	1.1	9384				
	7	200	1398	0.8	10320				
	5.6	250	1702	0.7	10320				
	4.7	300	1825	0.7	10320				
	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	NMGD063/110			
	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 ($n_1=2800$ min-1)	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				

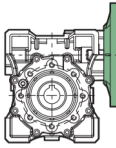
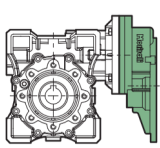
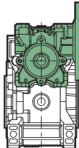
Dati tecnici motoriduttore
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Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
1.50									
90S2 ($n_1=2800$ min-1)	9.3	300	864	1.4	10320			NMGD050/110	
	7	400	1127	1	10320				
	5.6	500	1305	0.8	10320			NMGD063/130	
	9.3	300	896	1.9	13500				
	7	400	1127	1.4	13500				
	5.6	500	1331	1.1	13500				
2.20									
100LA4 ($n_1=1400$ 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				
	30	40	465	0.9	5383				
	93	15	200	3.3	4905	NMG110			
	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 ($n_1=900$ min-1)									
112M6 ($n_1=900$ 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				
	45	30	543	0.9	5667				
	36	25	476	0.9	5333				

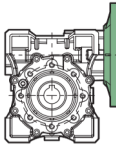
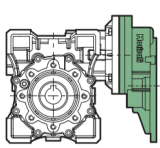
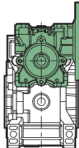
Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]			
2.20								
112M6 ($n_1=900$ min-1)	90	10	209	3.5	4965	NMG110		
	60	15	304	2.6	5684			
	45	20	396	1.9	6256			
	36	25	482	1.6	6739			
	30	30	543	1.6	7161			
	23	40	715	1.1	7882			
	18	50	858	0.9	8491			
	15	60	986	0.7	9023	NMG130		
	36	25	489	2.2	8814			
	30	30	557	2.1	9366			
	23	40	714	1.6	10309			
	18	50	857	1.2	11105			
	15	60	985	1	11801	NMG150		
	11	80	1238	0.7	12898			
	18	50	881	1.9	15182			
	15	60	1015	1.4	16133			
	11	80	1258	1.1	17757			
	9	100	1454	0.8	18000			
90L2 ($n_1=2800$ min-1)	373	7.5	52	1.8	1873	NMG063		
	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	NMG090		
	93	30	182	1	3509			
	70	40	239	0.8	3862			
	280	10	69	3.5	2692			
	187	15	102	2.7	3081			
	140	20	132	2	3391	NMG110		
	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	NMG130		
	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	NMG130		
	28	100	536	0.7	7328			
	35	80	453	1.3	8897			
	28	100	536	1	9584			
	39	73.5	406	2.1	6586			NMG090/110
	29	98	526	1.5	7249			
	23	122.5	629	1.2	7809			

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Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]				
3.00									
100LA2 ($n_1=2800$ min-1)	373	7.5	69	1.9	2210	NMG075			
	280	10	92	1.6	2433				
	187	15	138	1.2	2785				
	140	20	180	1	3065				
	112	25	219	0.7	3302				
	93	30	254	0.7	3509		NMG090		
	373	7.5	71	3	2446				
	280	10	94	2.6	2692				
	187	15	140	2	3081				
	140	20	184	1.4	3391				
	112	25	224	1.1	3653	NMG110			
	93	30	260	1.2	3882				
	70	40	335	0.8	4273				
	140	20	186	2.7	4285				
	112	25	230	2.2	4616				
	93	30	263	2.1	4905				
	70	40	347	1.6	5399				
	56	50	417	1.2	5816				
	47	60	489	1	6181				
100LB4 ($n_1=1400$ min-1)	187	7.5	140	1.4	2785	NMG075			
	140	10	184	1.1	3065				
	93	15	266	0.8	3509		NMG090		
	187	7.5	141	2.1	3081				
	140	10	186	1.7	3391				
	93	15	269	1.4	3882	NMG110			
	70	20	351	1	4273				
	56	25	428	0.8	4603				
	47	30	489	0.9	4891		NMG110		
	140	10	186	3.3	4285				
	93	15	269	2.5	4905				
	70	20	355	1.9	5399	NMG130			
	56	25	439	1.6	5816				
	47	30	495	1.5	6181				
	35	40	651	1.1	6803		NMG130		
	28	50	782	0.9	7328				
	56	25	439	2.2	7607	NMG150			
	47	30	501	2.1	8084				
	35	40	651	1.6	8897				
	28	50	782	1.3	9584		NMG150		
	23	60	902	1	10185				
	18	80	1135	0.8	11210	NMG150			
	28	50	794	1.8	13103				
	23	60	914	1.4	13924		NMG110		
	18	80	1135	1	15325				
	14	100	1336	0.8	16508				
		120	7.5	216	3.1	4511		NMG110	
		90	10	286	2.5	4965			
	60	15	414	1.9	5684				
	45	20	539	1.4	6256				
	36	25	666	1.2	6739				
132S6 ($n_1=900$ min-1)									

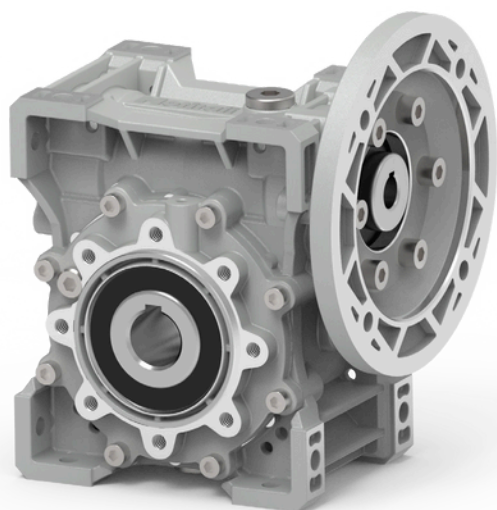
Pn1 [kW]	n2 [min ⁻¹]	i	Mn2 [Nm]	fs	Fr2 [N]				
3.00									
132S6 (n ₁ =900 min ⁻¹)	30	30	751	1.1	7161	NMG110			
	23	40	974	0.8	7882		NMG130		
	90	10	286	3.4	6494				
	60	15	414	2.6	7434				
	45	20	546	1.9	8182				
	36	25	666	1.6	8814				
	30	30	760	1.6	9366				
	23	40	974	1.2	10309	NMG150			
	45	20	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 (n ₁ =2800 min ⁻¹)	373	7.5	93	1.4	2210	NMG075			
	280	10	122	1.2	2433				
	187	15	184	0.9	2785	NMG090			
	140	20	240	0.7	3065				
	373	7.5	95	2.3	2446				
	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 (n ₁ =1400 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	NMG110			
187		8	188	3.0	3893				
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				
35		40	868	1.2	8897		NMG150		
28		50	1043	1	9584				
23		60	1203	0.8	10185				
28		50	1058	1.4	13103				
23		60	1219	1.1	13924				
18		80	1514	0.8	15325				

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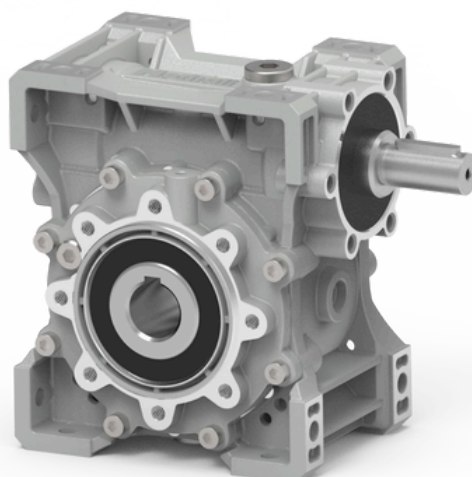
Pn1 [kW]	n2 [min-1]	i	Mn2 [Nm]	fs	Fr2 [N]					
4.00										
132MA6 ($n_1=900$ min ⁻¹)	120	7.5	289	2.3	4511	NMG110				
	90	10	381	1.9	4965					
	60	15	552	1.4	5684					
	56	25	592	1.2	5816					
	47	30	668	1.1	6181					
	35	40	880	0.8	6803					
	120	7.5	293	3.1	5901	NMG130				
		90	10	381	2.6		6494			
		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			
		45	20	736	2.1		11186	NMG150		
		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 ($n_1=1400$ 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 ($n_1=1400$ 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			

Pn1 [kW]	n2 [min ⁻¹]	i	Mn2 [Nm]	fs	Fr2 [N]			
7.50								
132MA4 (n ₁ =1400 min ⁻¹)	70	20	898	1.5	9654	NMG150		
	56	25	1095	1.1	10400			
	47	30	1299	0.9	11051			
	35	40	1628	1	12163			
	28	50	2010	0.7	13103			
11.00								
160M4 (n ₁ =1400 min ⁻¹)	187	7.5	522	2.3	6962	NMG150		
	140	10	689	1.8	7663			
	93	15	1010	1.3	8771			
	70	20	1317	1.0	9654			
	56	25	1608	0.8	10400			
15.00								
160L4 (n ₁ =1400 min ⁻¹)	187	7.5	712	1.7	6962	NMG150		
	140	10	939	1.3	7663			
	93	15	1378	0.9	8771			
	70	20	1795	0.7	9654			

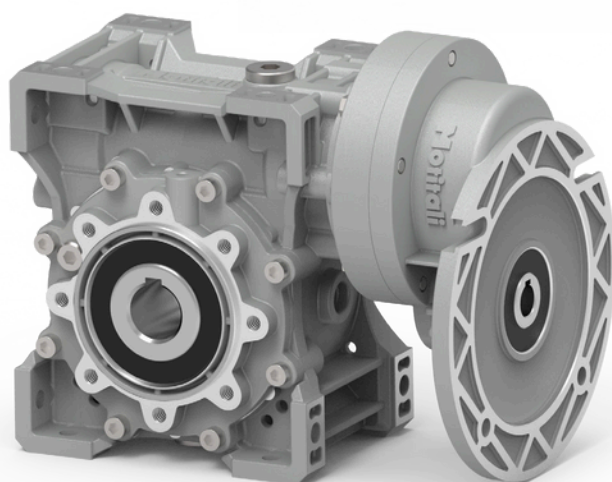
NMG...



NG...

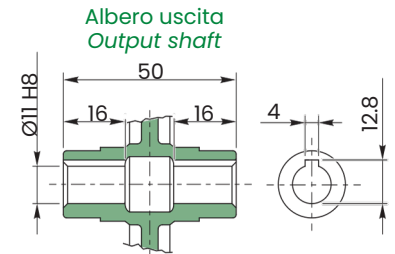
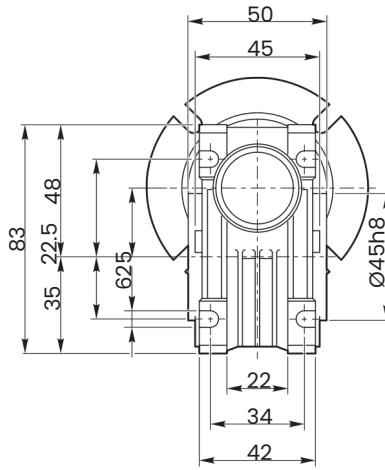
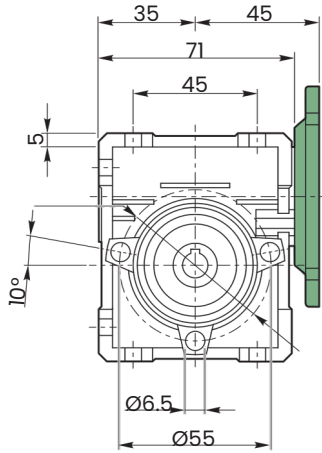


NMGP...

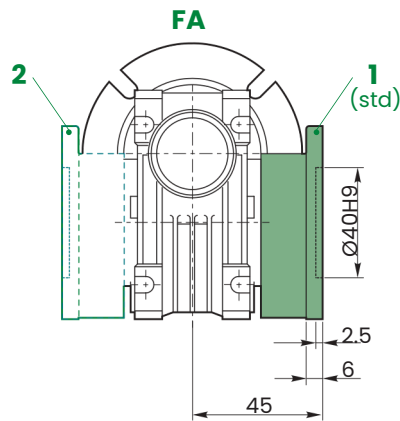
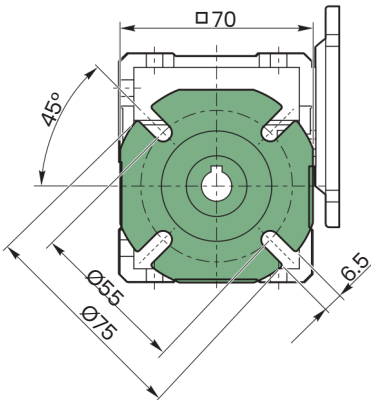


025

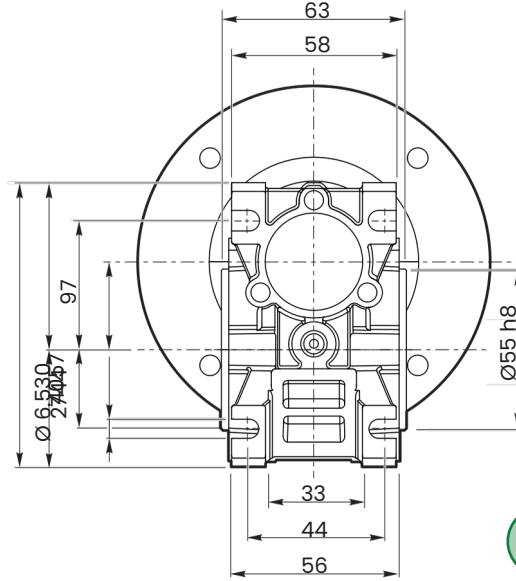
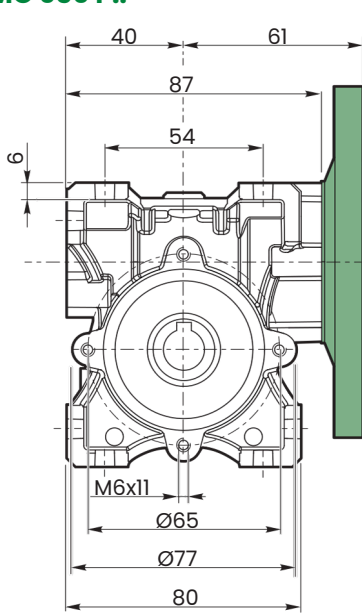
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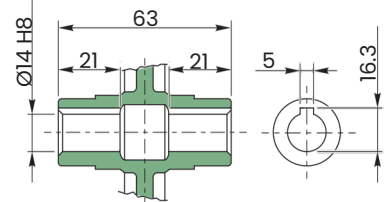
NMG 025 FA



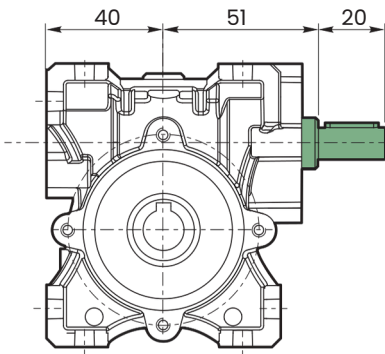
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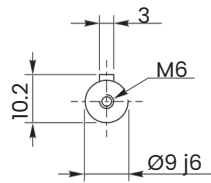
Albero uscita
Output shaft



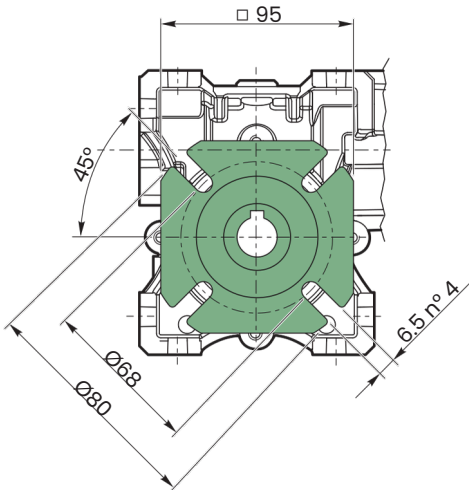
NG 030 P..



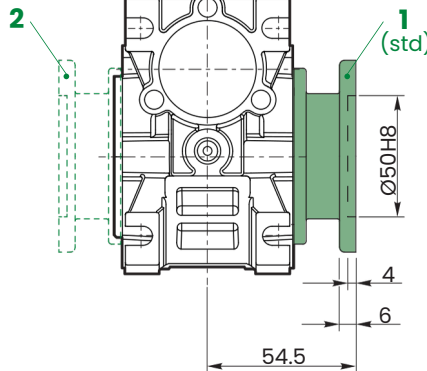
Albero entrata
Input shaft



NMG 030 FA

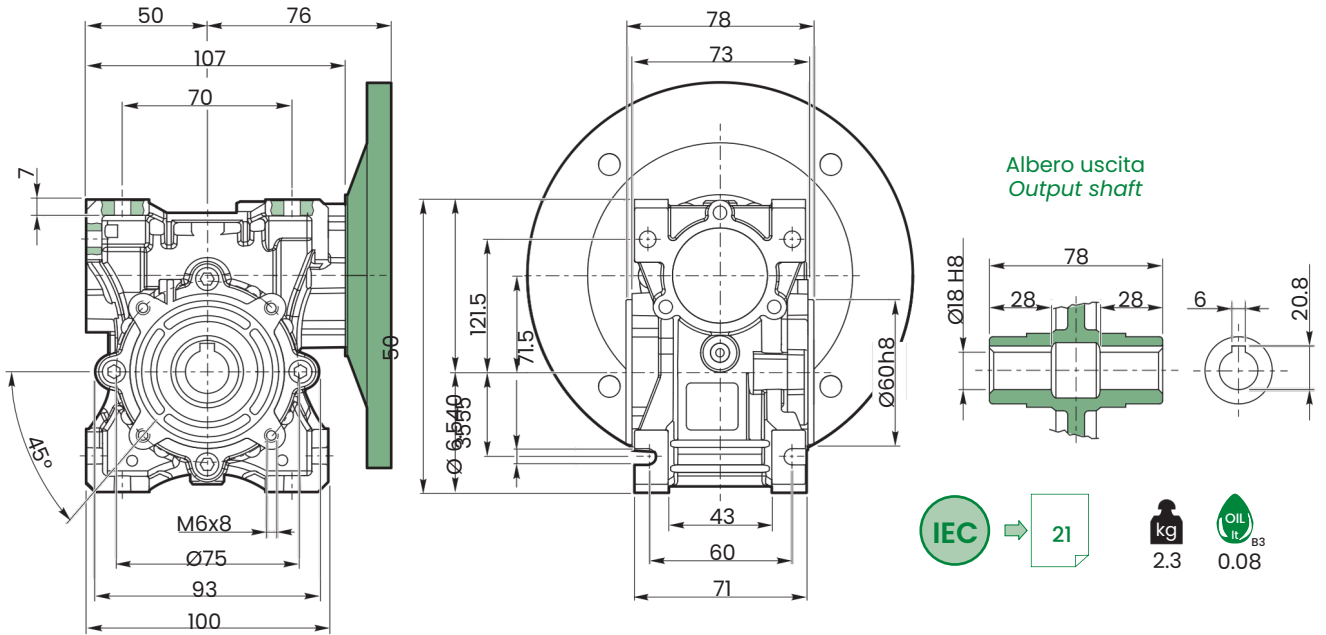


FA



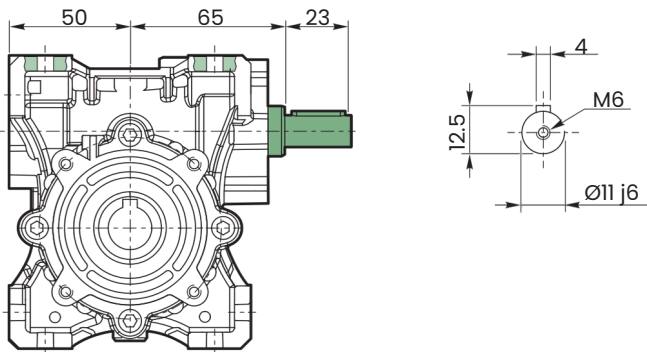
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NMG 040 P..

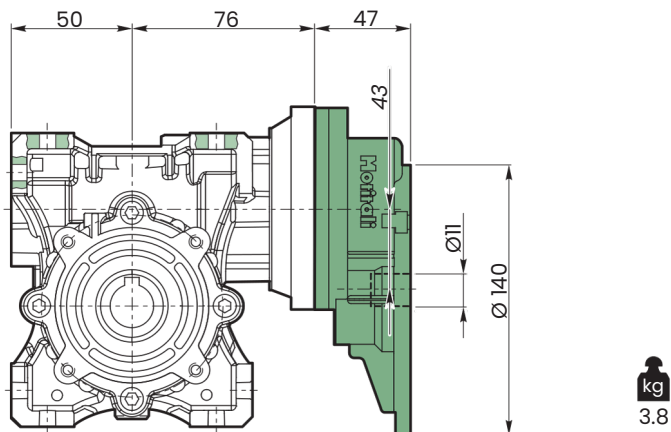


NG 040 P..

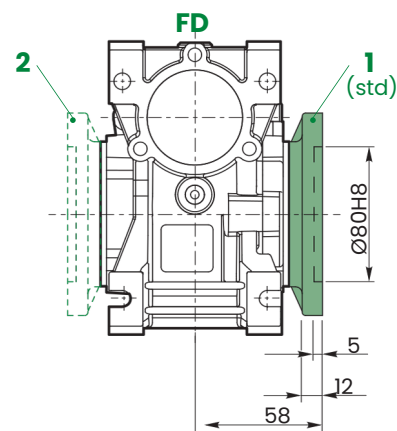
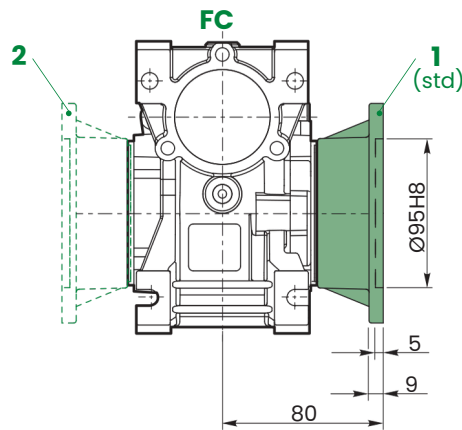
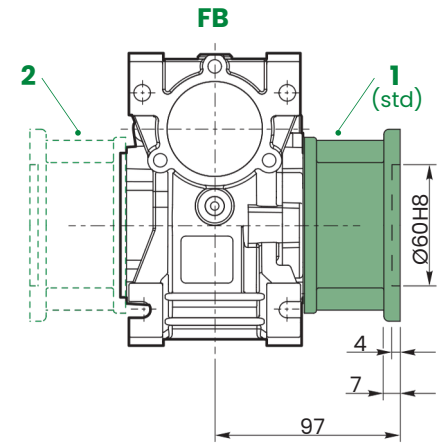
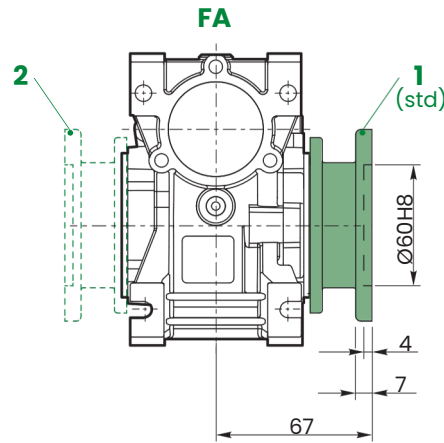
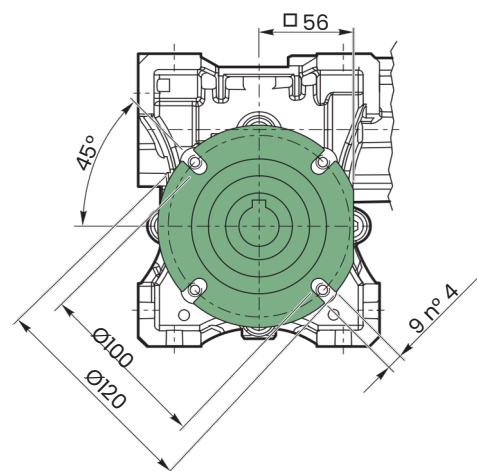
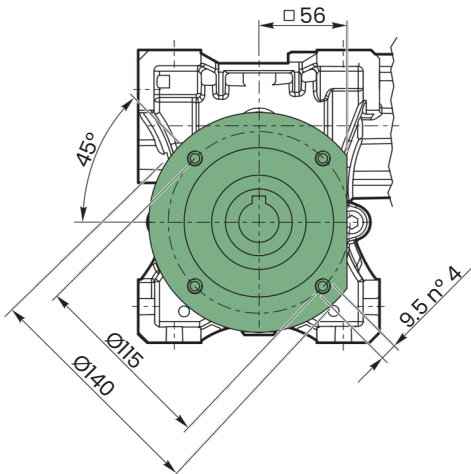
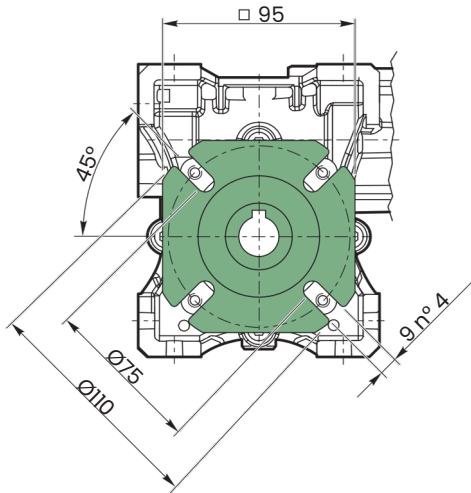
Albero entrata
Input shaft



NMGP 063 / 040 P..

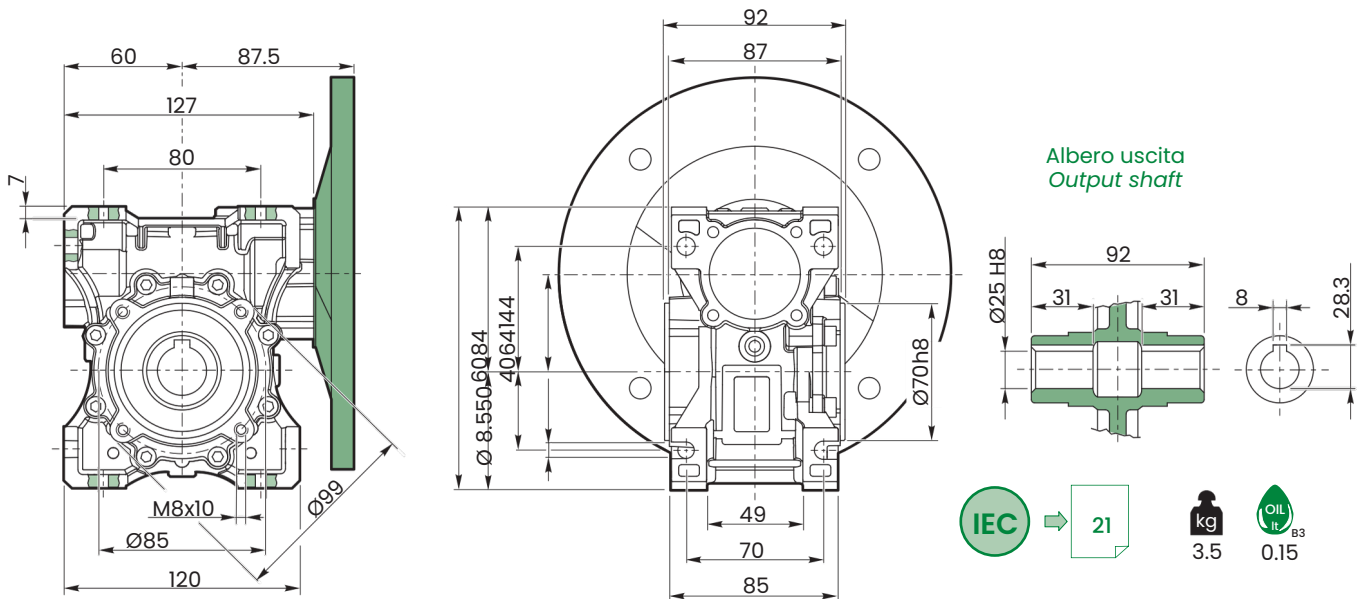


N..G 040 F..



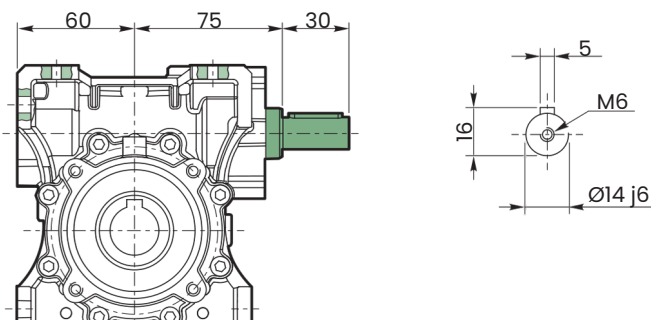
050

NMG 050 P..

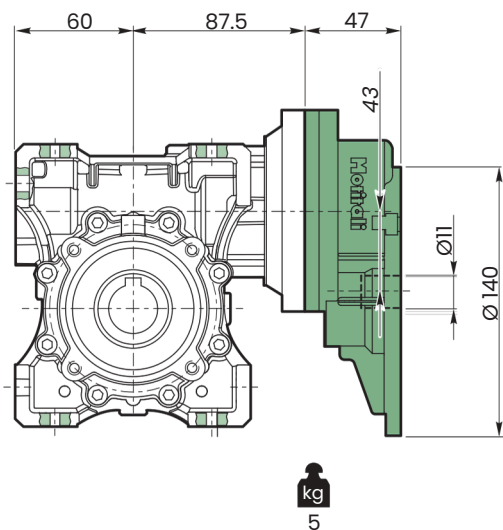


NG 050 P..

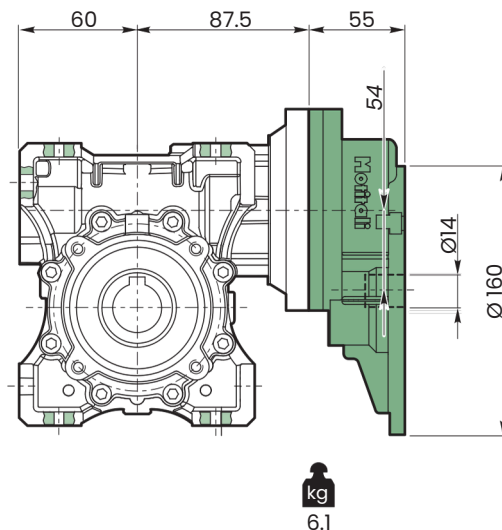
Albero entrata
Input shaft



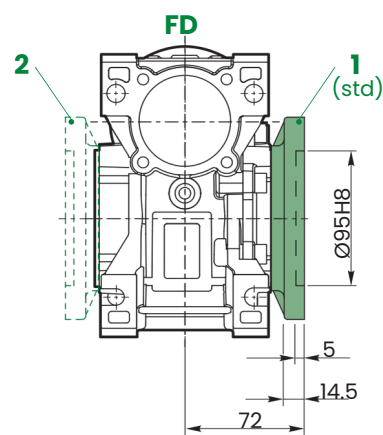
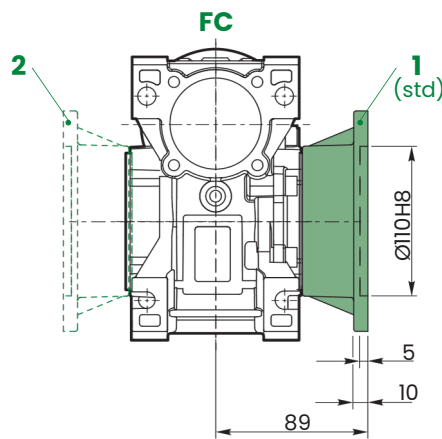
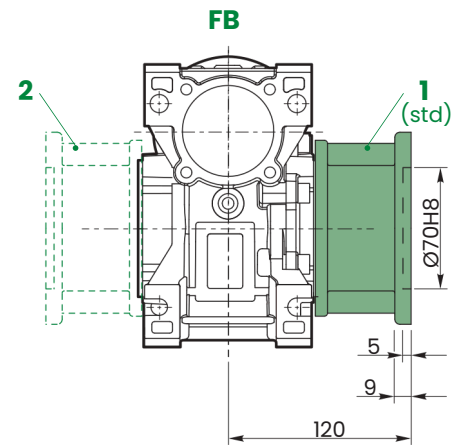
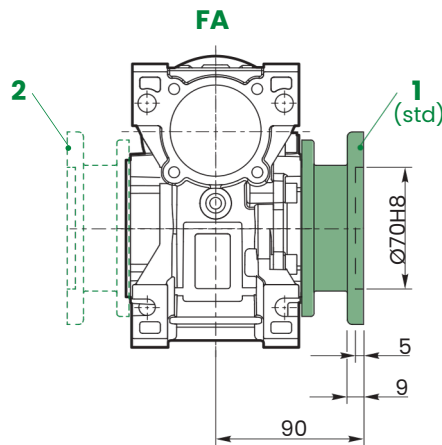
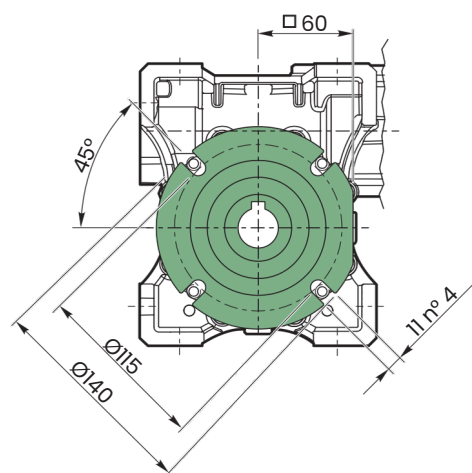
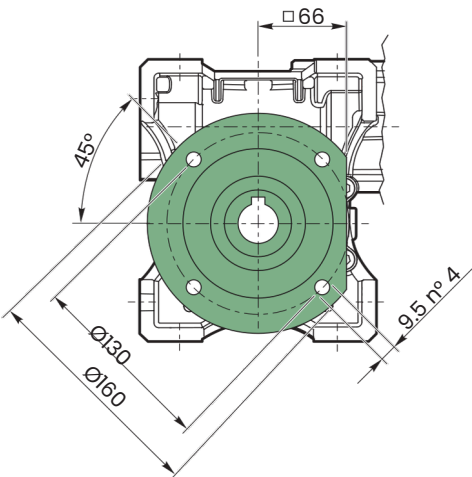
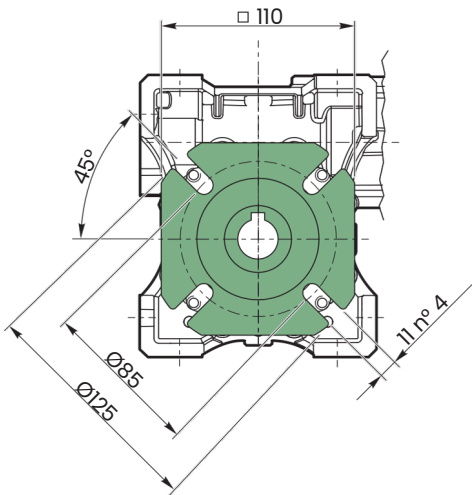
NMGP 063 / 050 P..



NMGP 071 / 050 P..

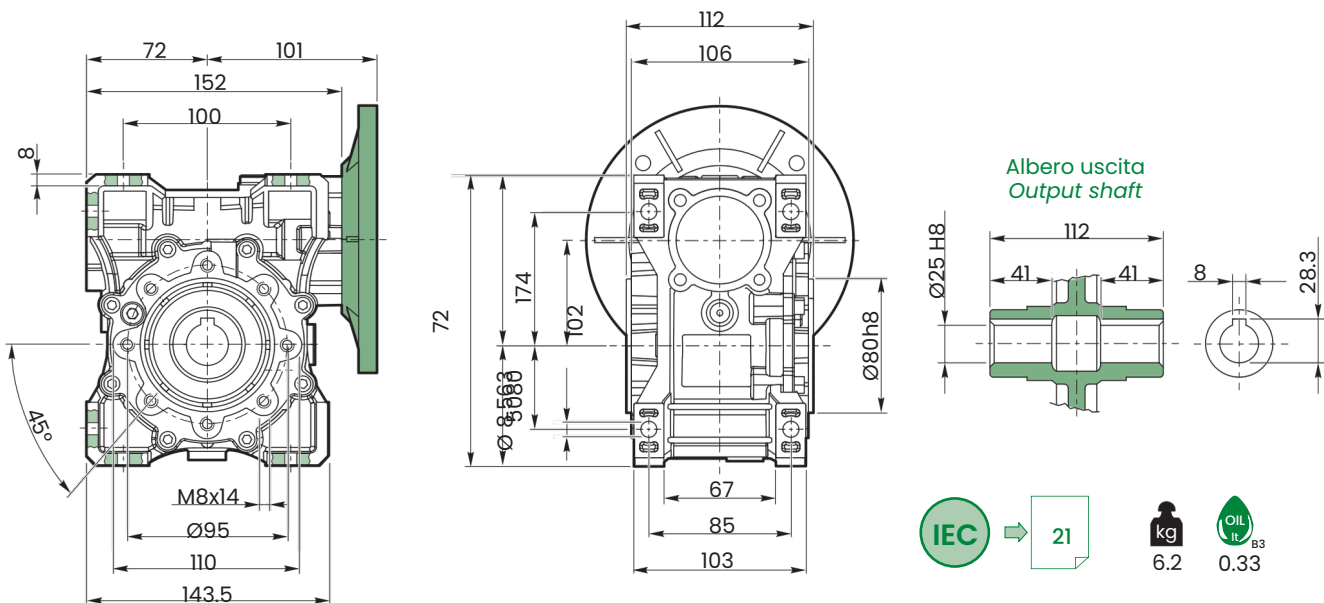


N..G 050 F..

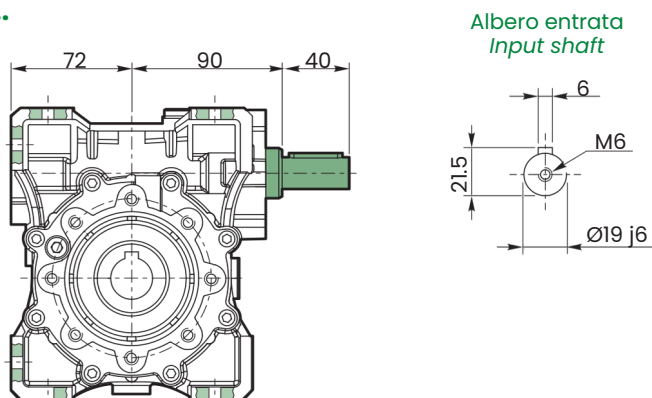


063

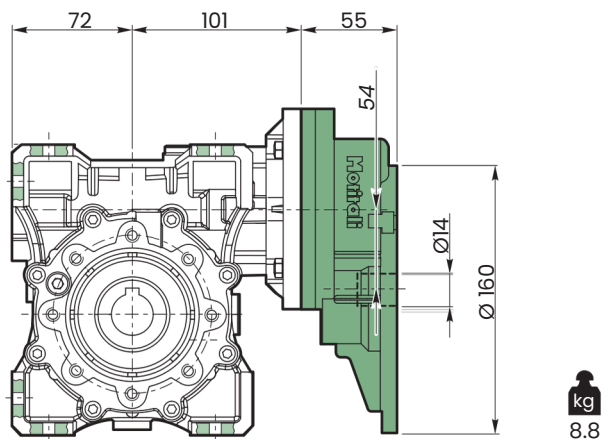
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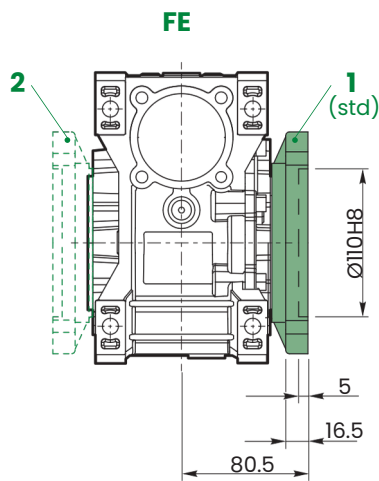
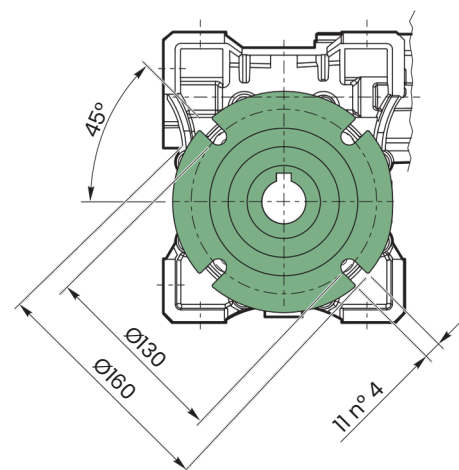
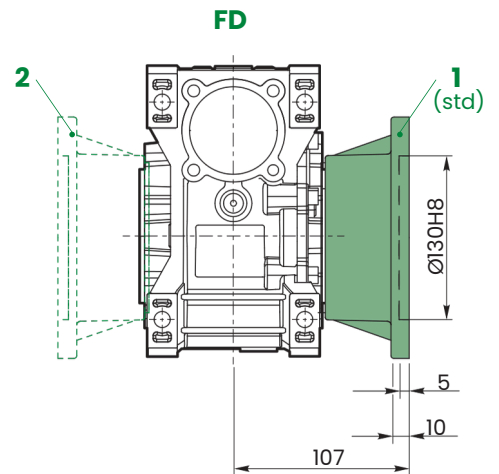
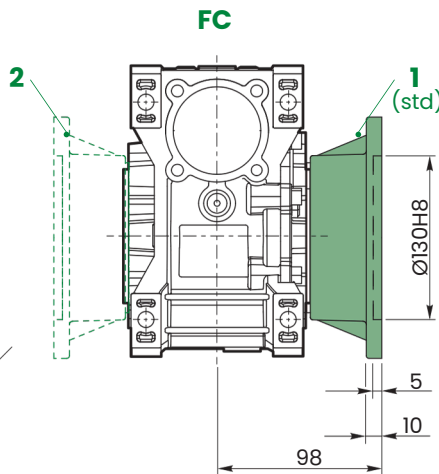
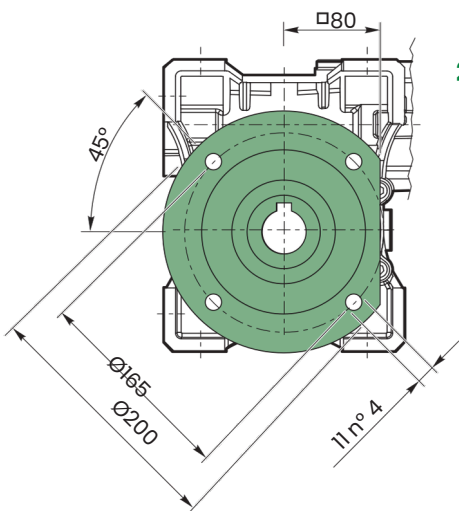
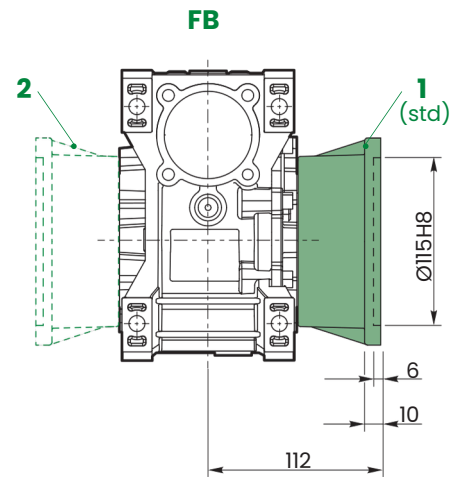
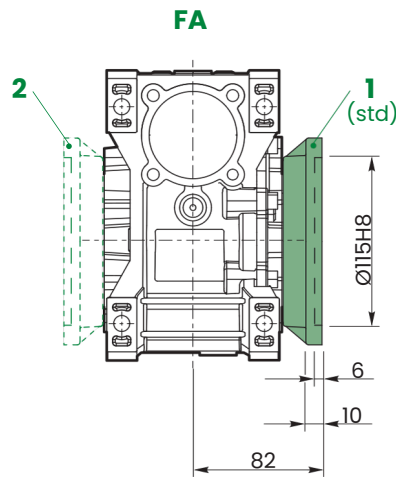
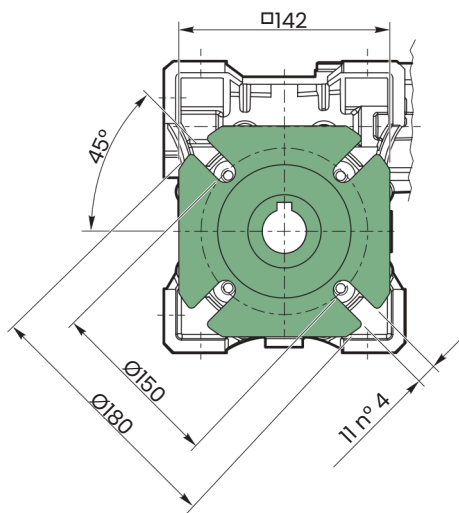
NG 063 P..



NMGP 071 / 063 P..

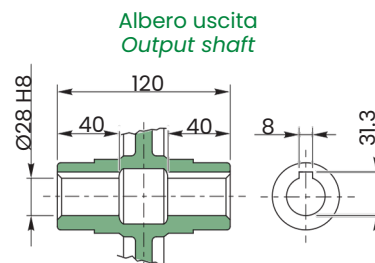
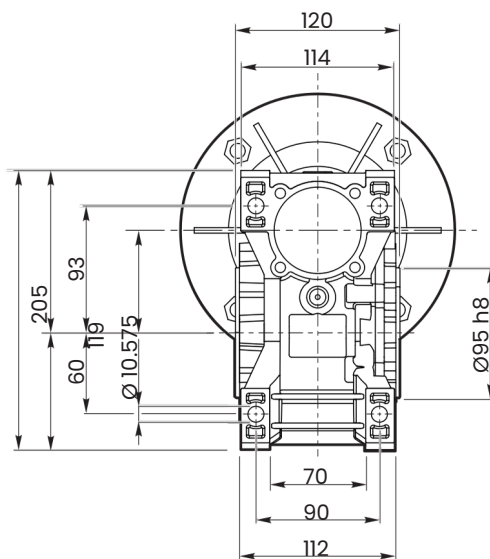
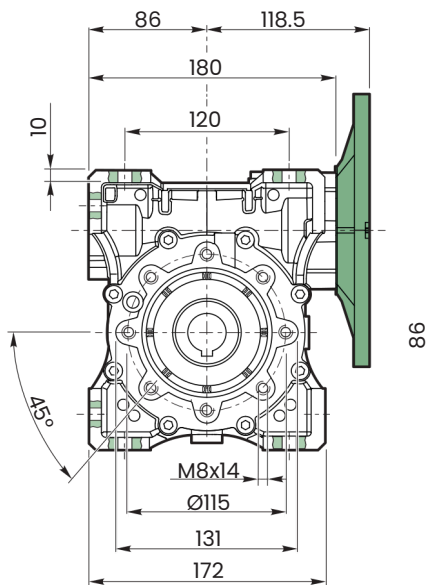


N..G 063 F..

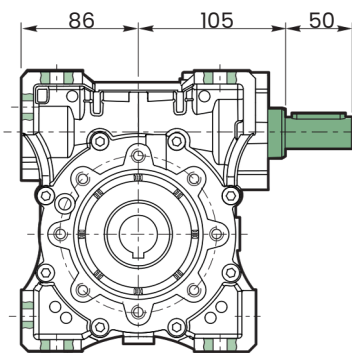


075

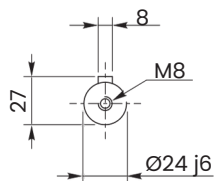
NMG 075 P..



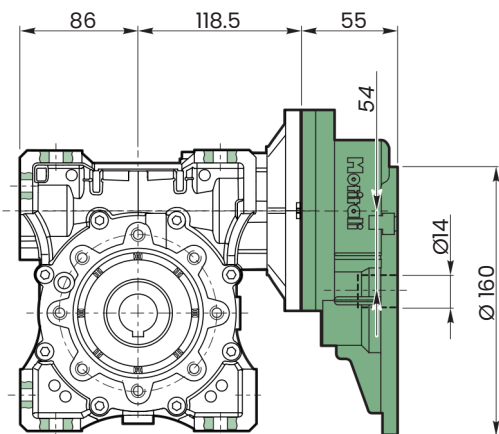
NG 075 P..



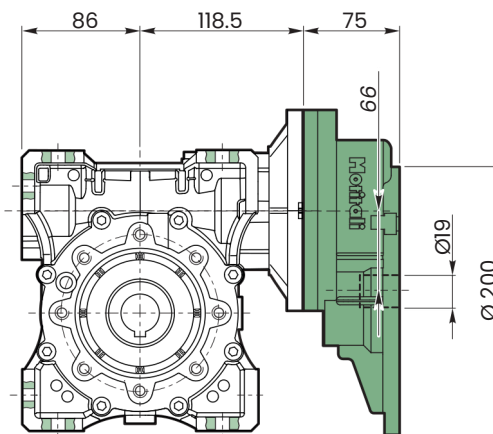
Albero entrata
Input shaft



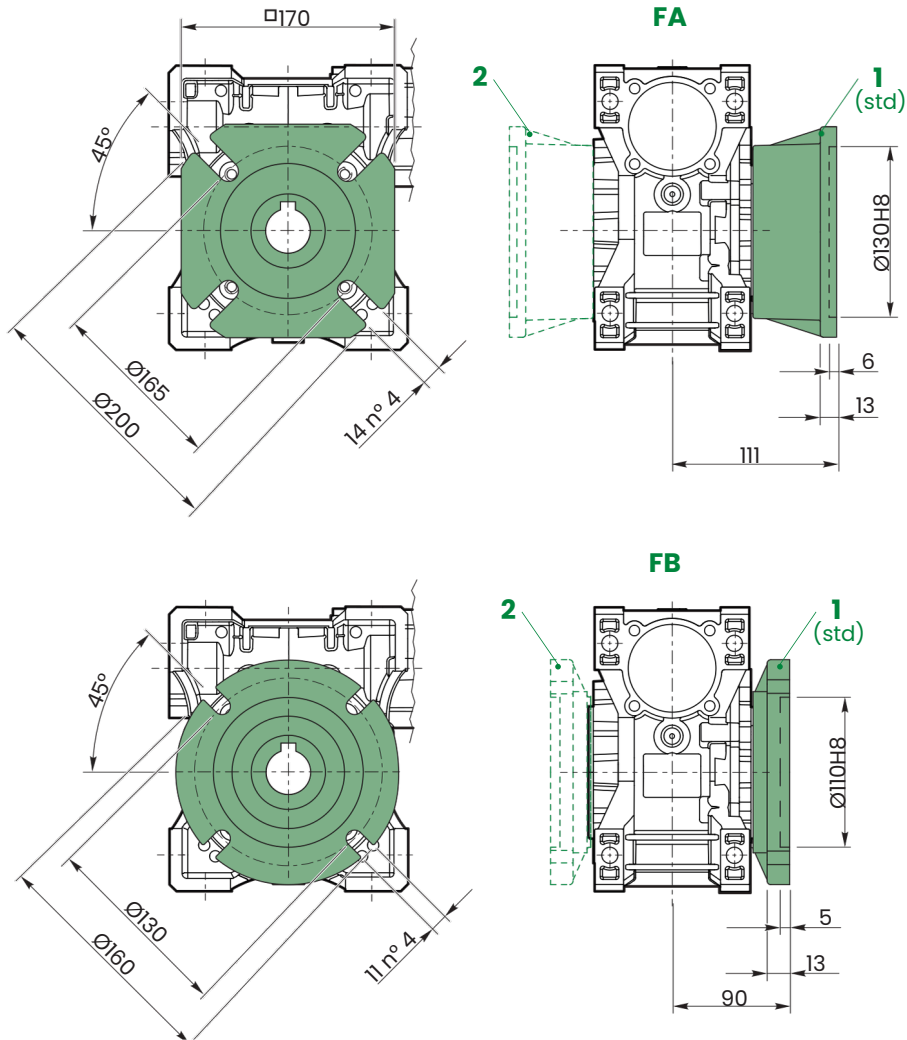
NMGP 071 / 075 P..



NMGP 080 / 075 P..

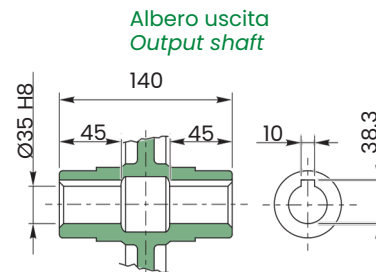
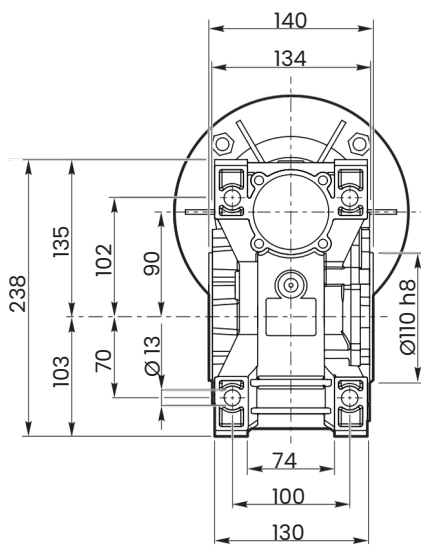
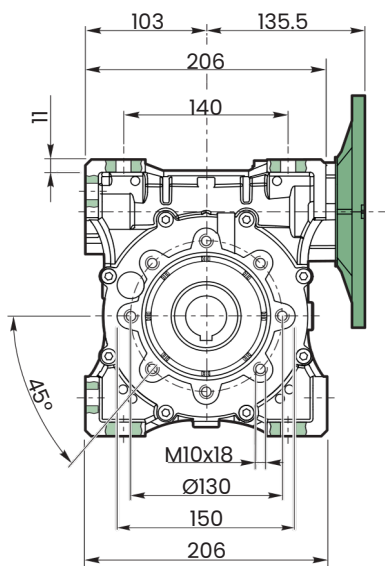


N..G 075 F..



090

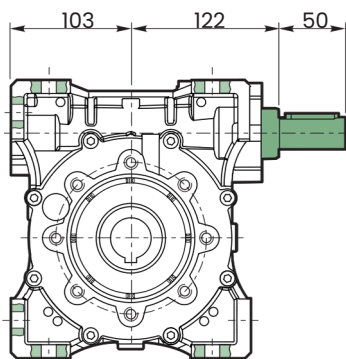
NMG 090 P..



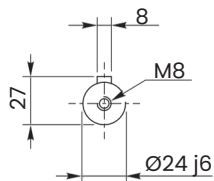
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1.0

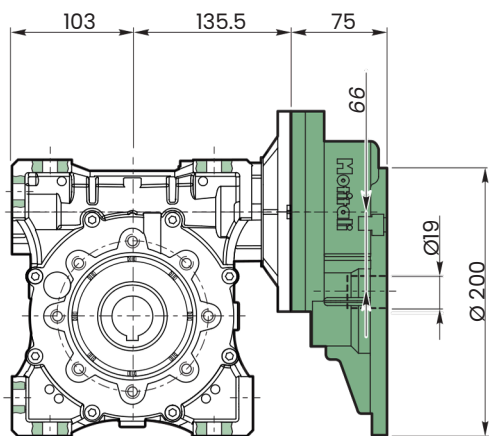
NG 090 P..



Albero entrata
Input shaft

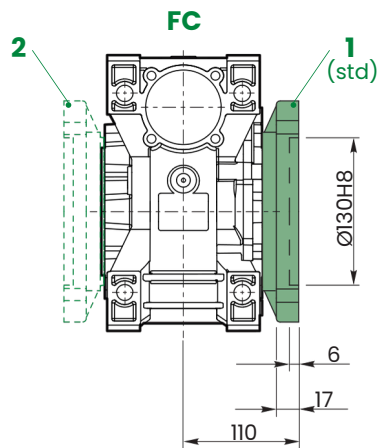
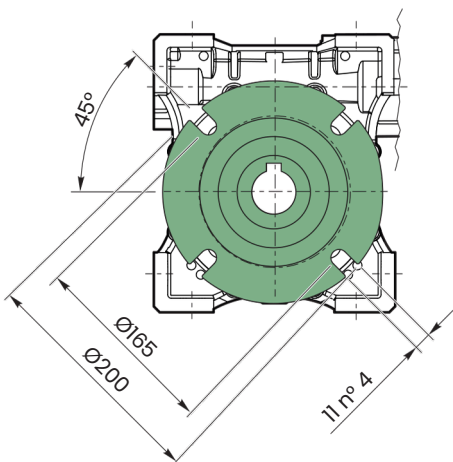
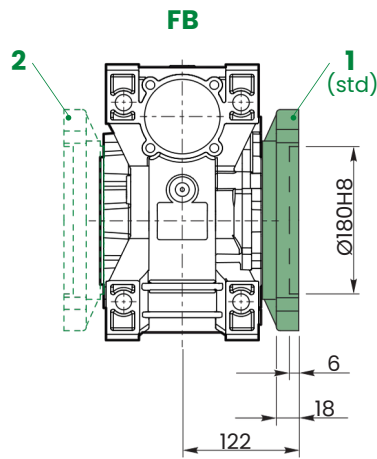
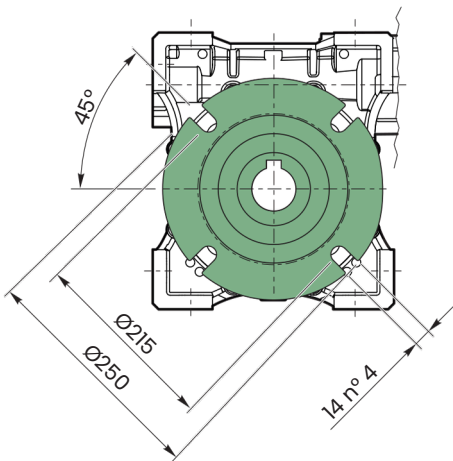
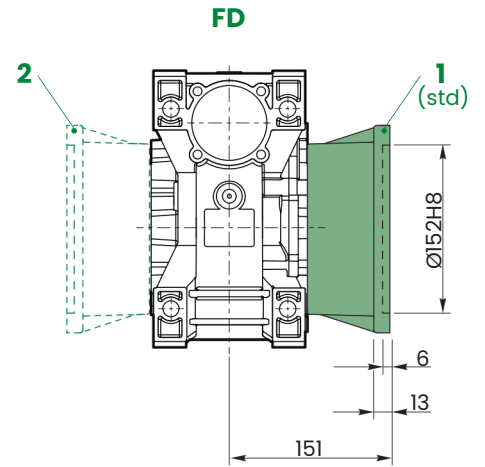
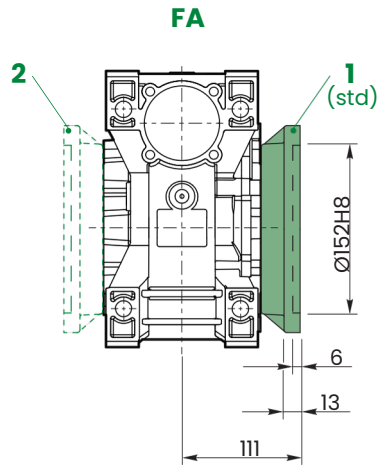
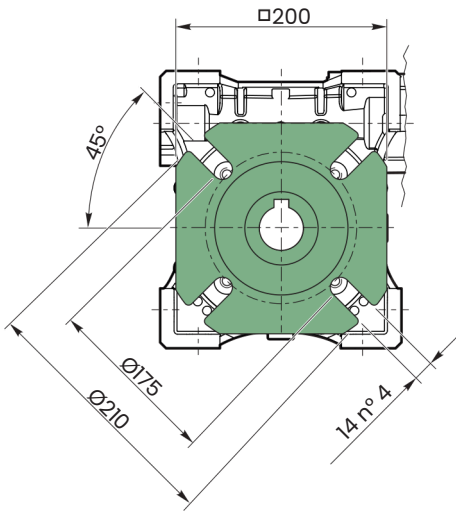


NMGP 080 / 090 P..



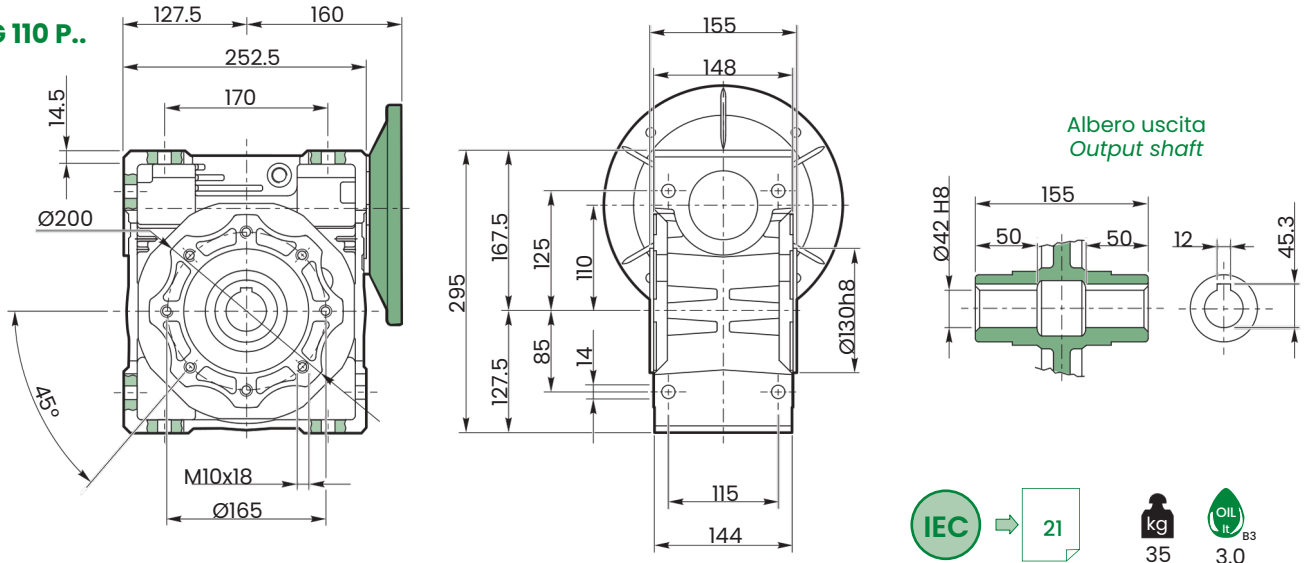
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N..G 090 F..

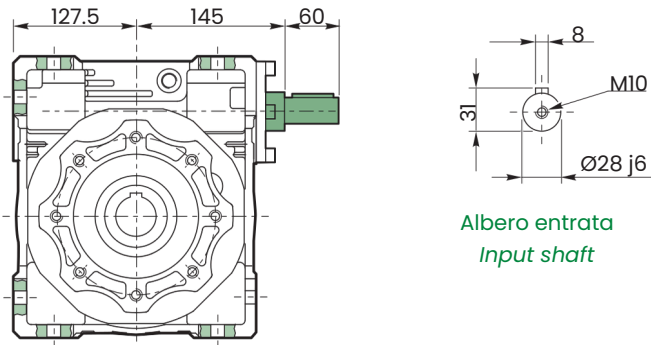


110

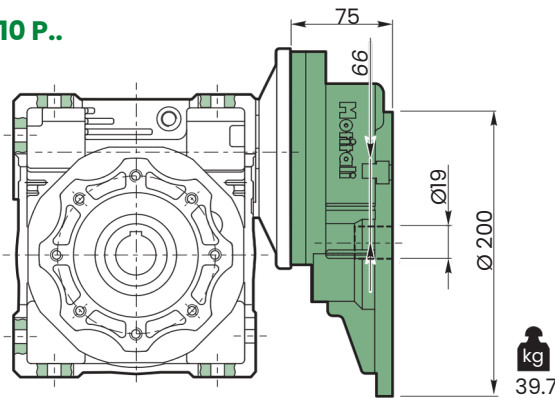
NMG 110 P..



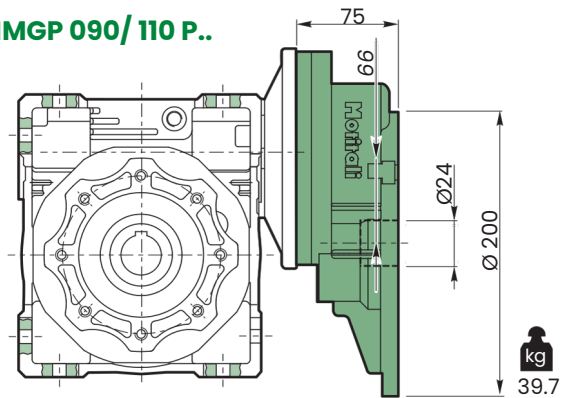
NG 110 P..



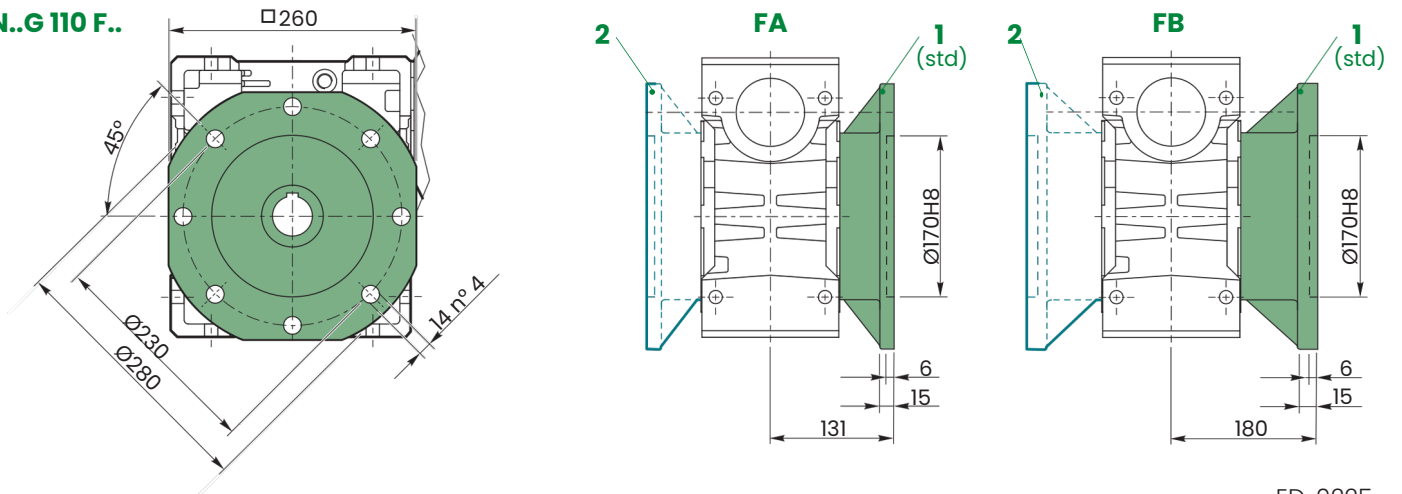
NMGP 080/110 P..



NMGP 090/110 P..



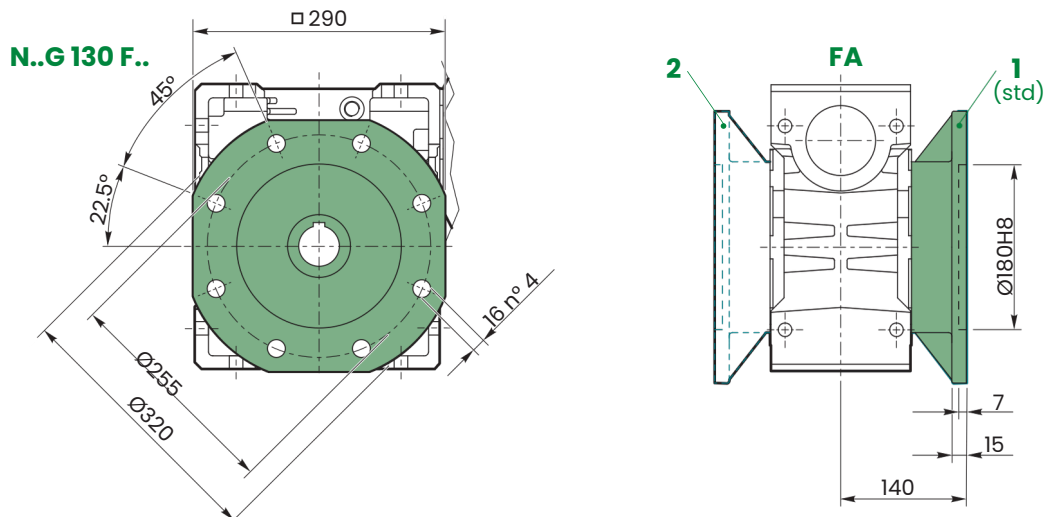
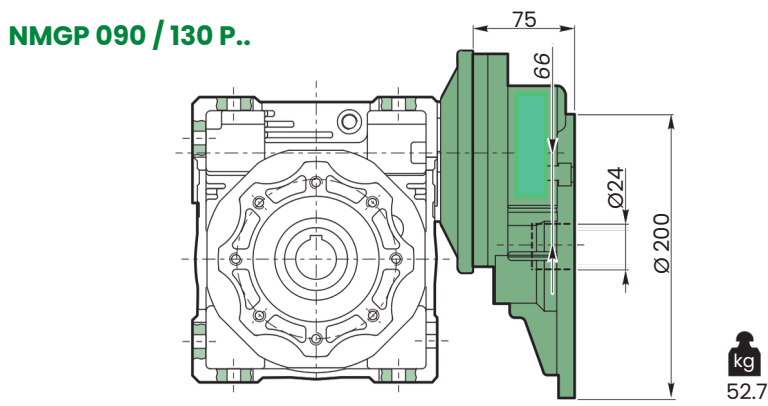
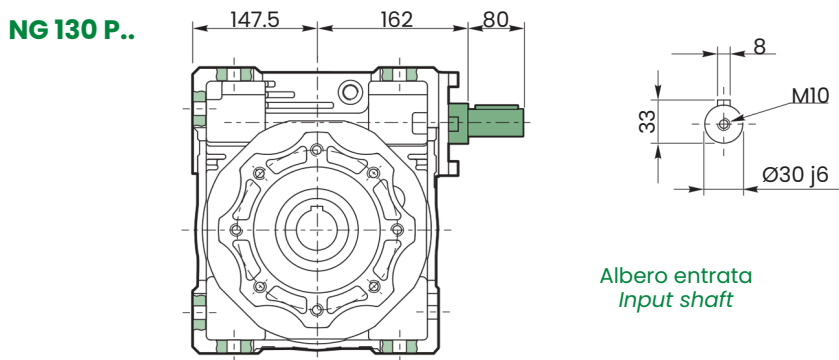
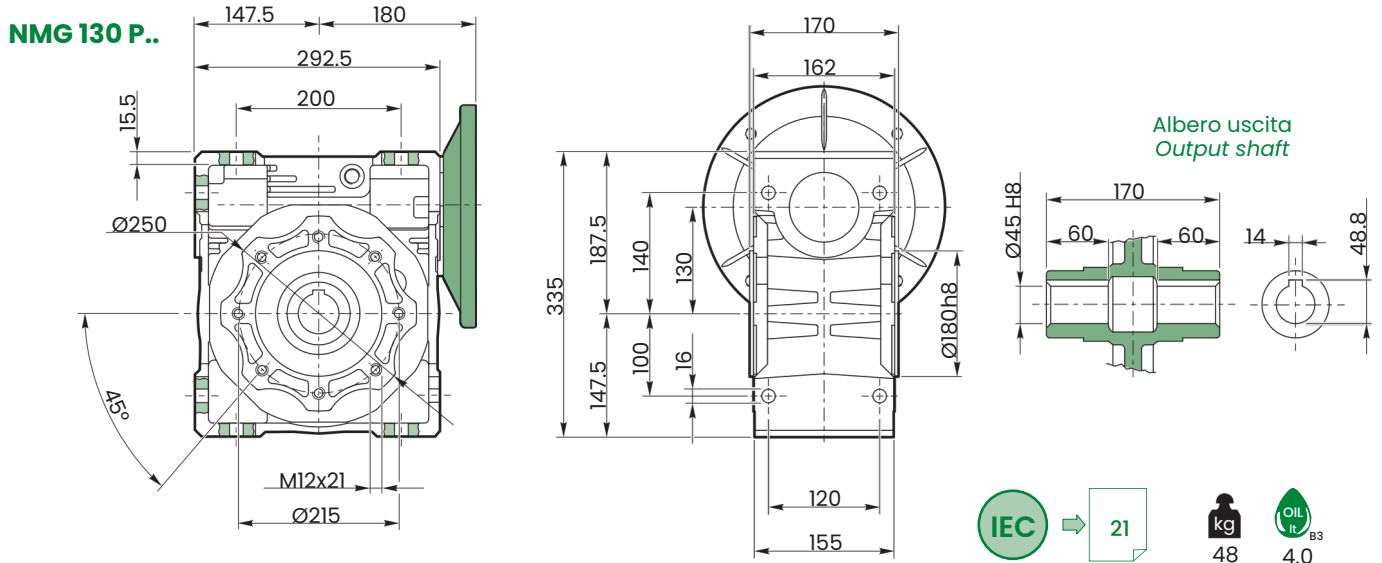
N..G 110 F..



Dimensioni

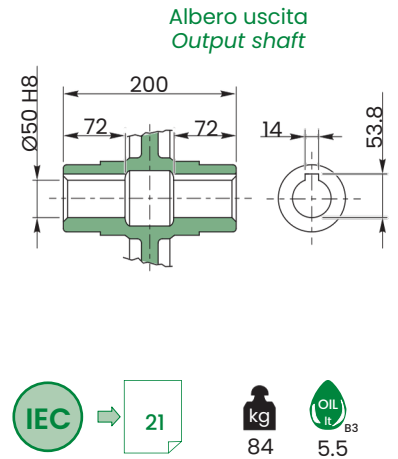
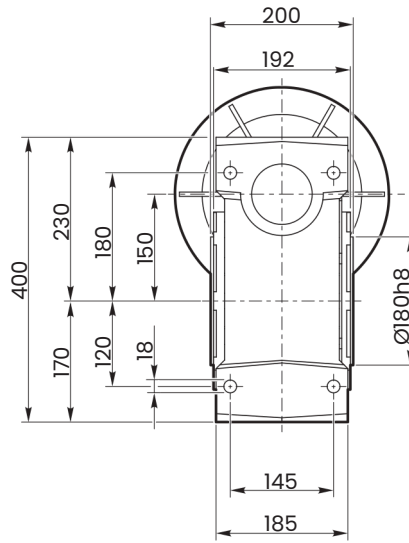
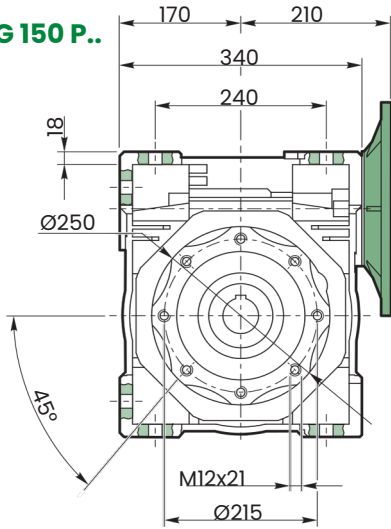
Dimensions

130

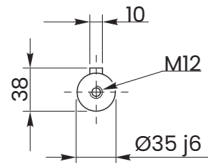
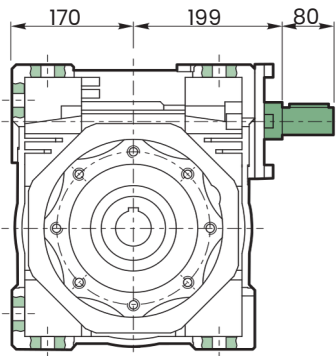


150

NMG 150 P..

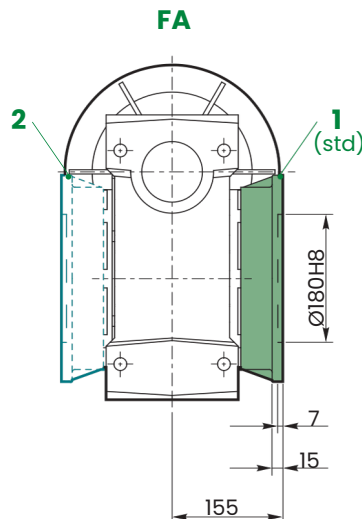
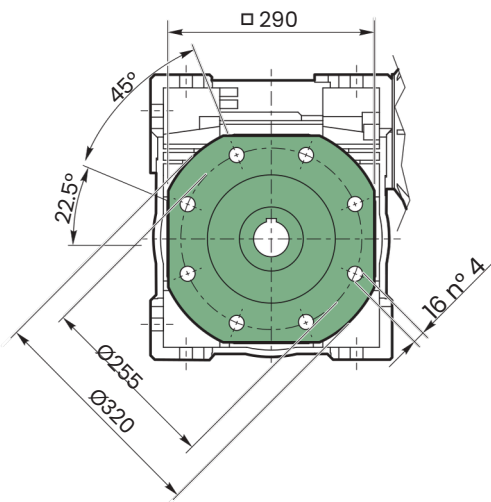


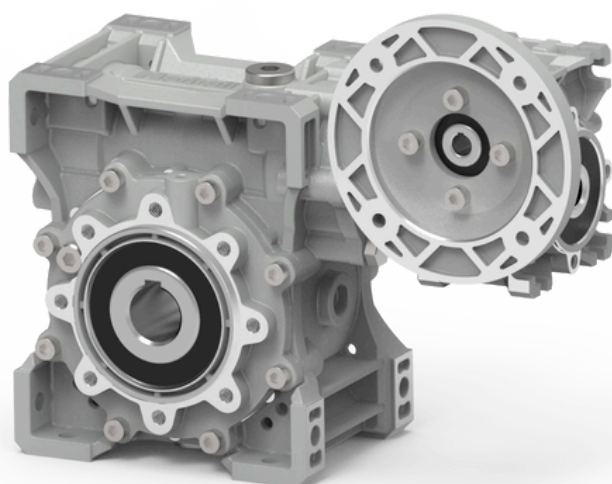
NG 150 P..



Albero entrata
Input shaft

N..G 150 F..

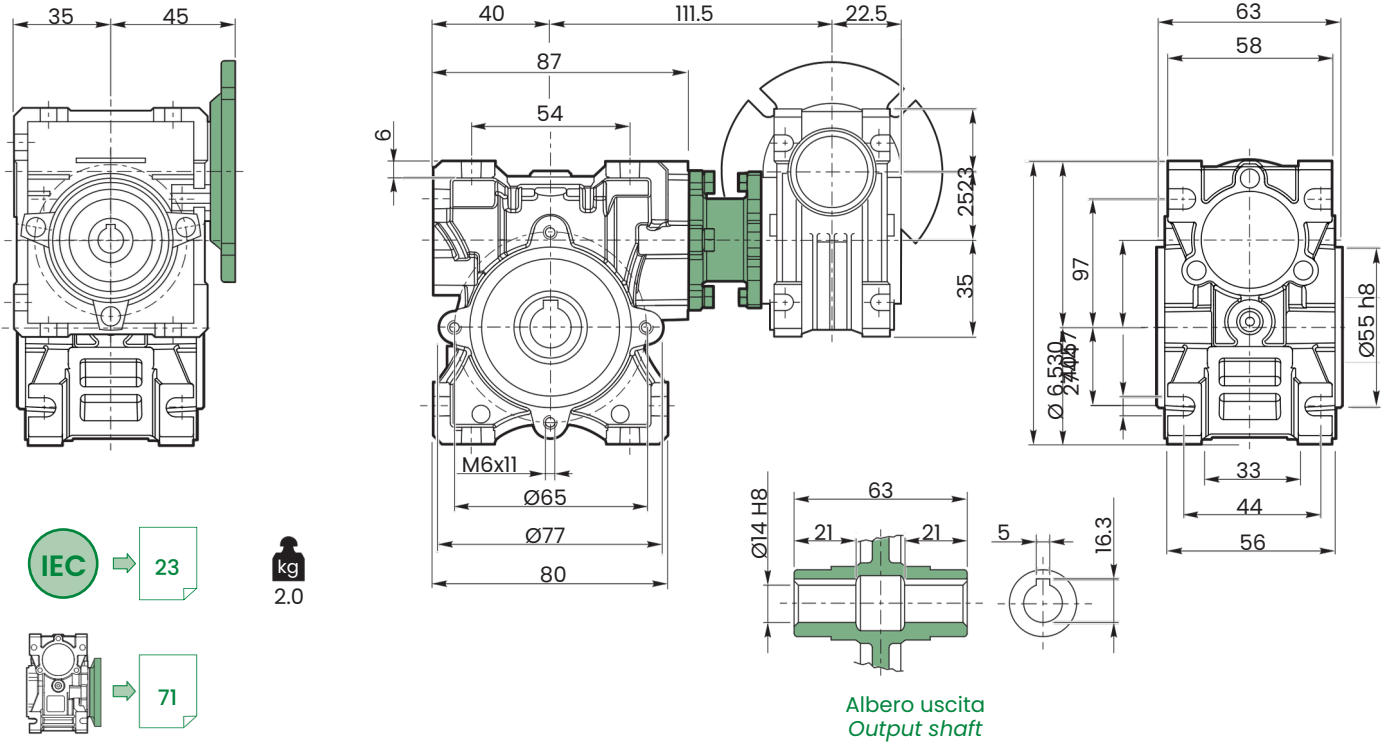




NMGD...

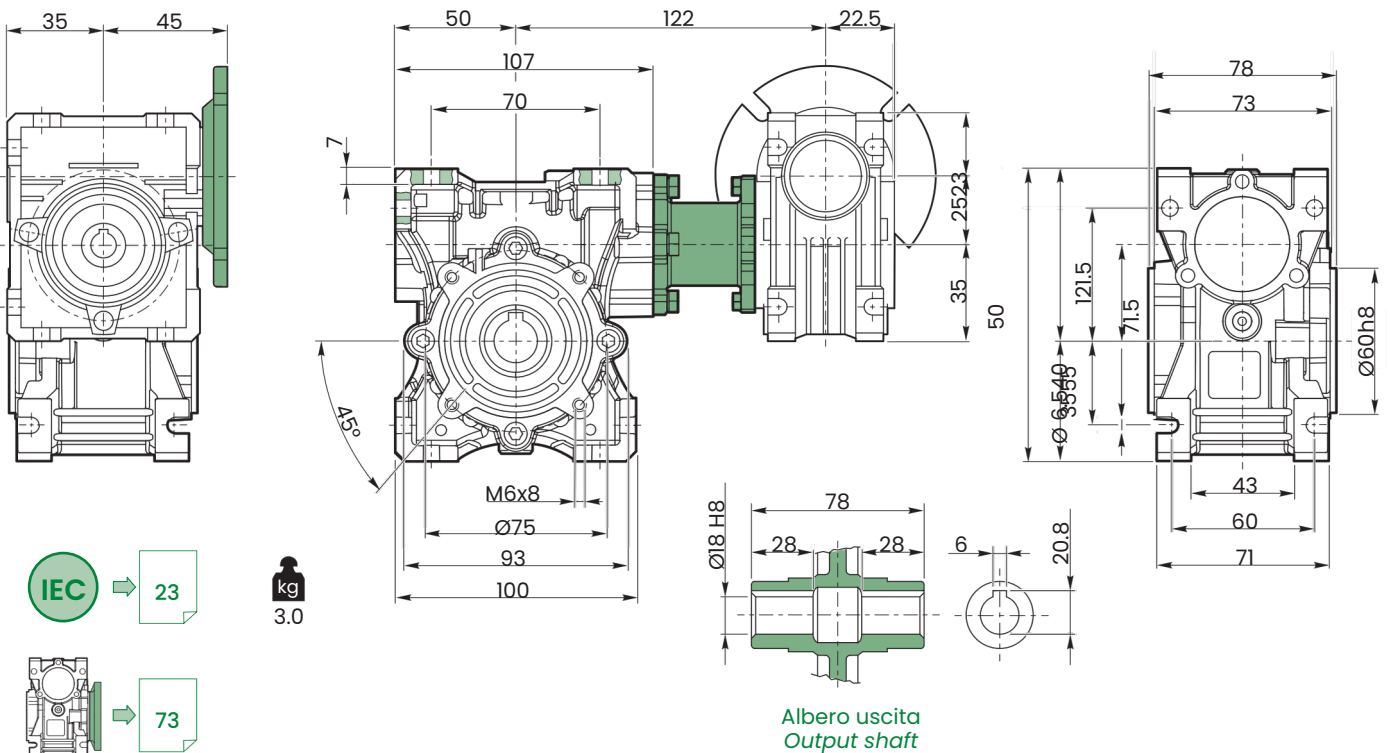
025/030

NMGD 025/030



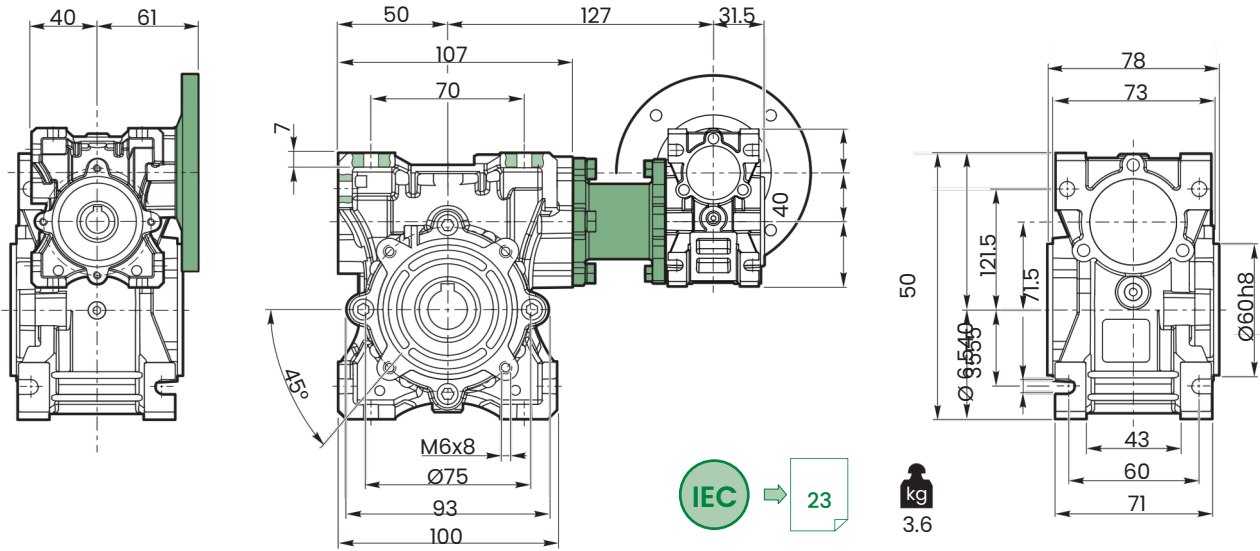
025/040

NMGD 025/040

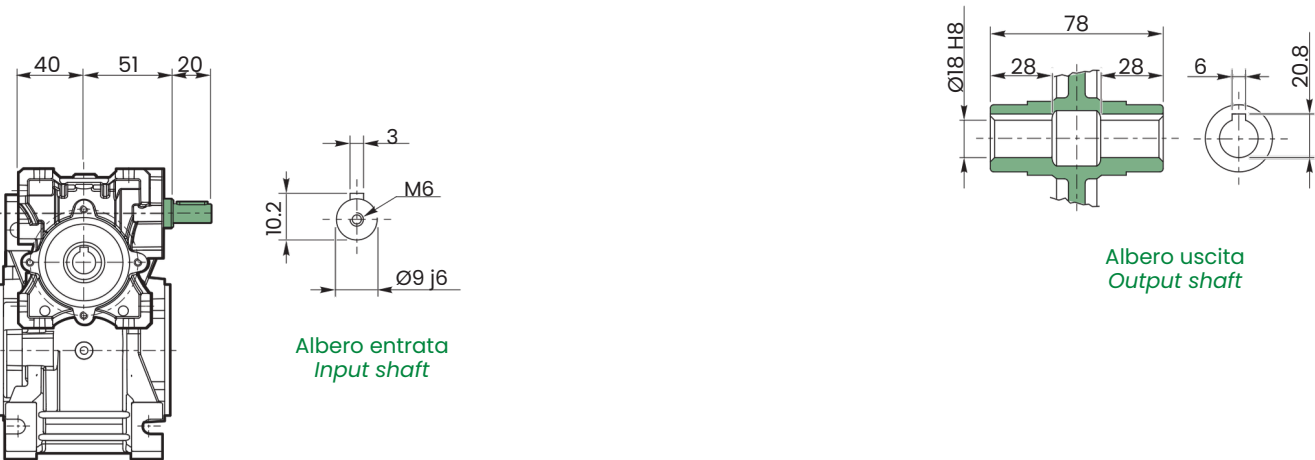


030/040

NMGD 030/040

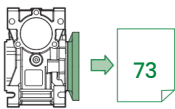


NGD 030/040



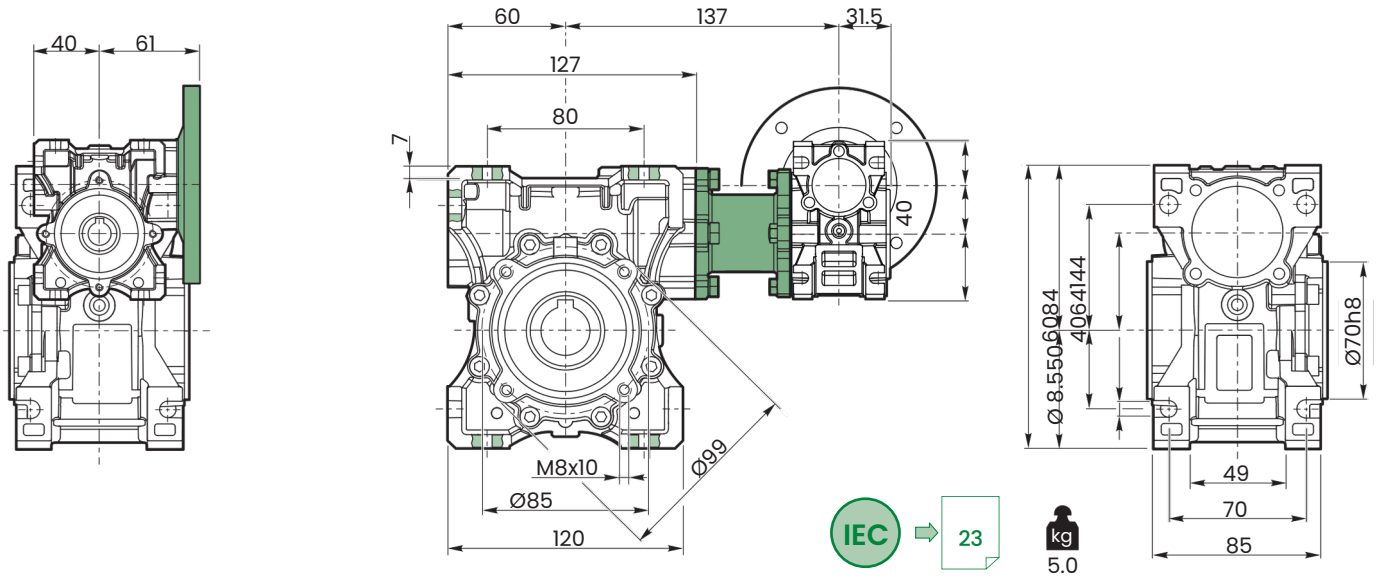
Albero entrata
Input shaft

Albero uscita
Output shaft

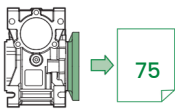
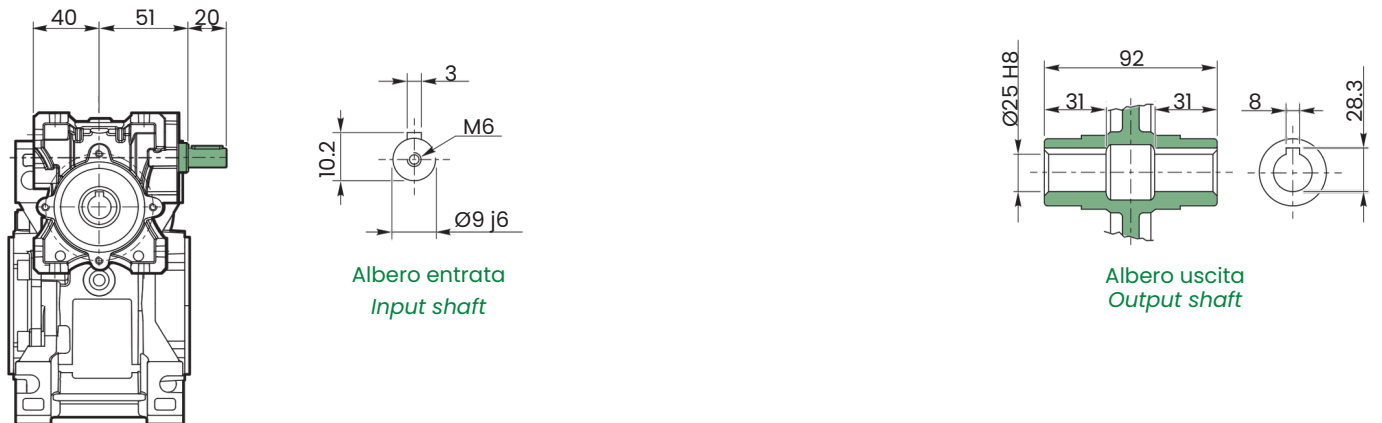


030/050

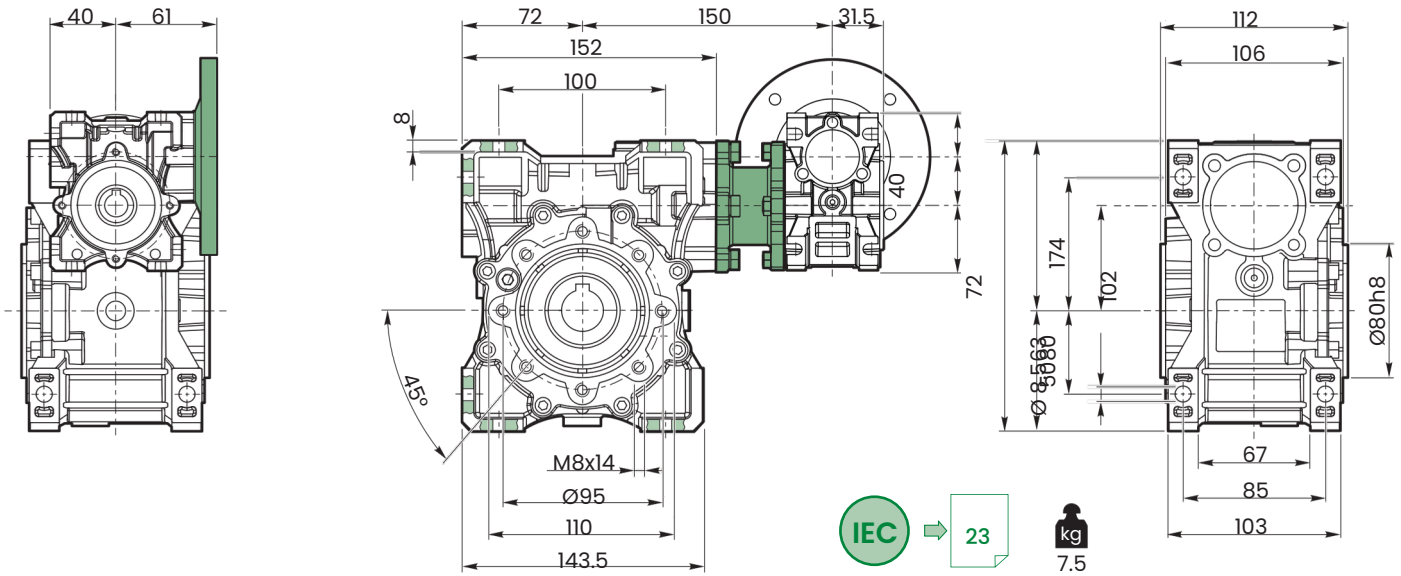
NMGD 030/050



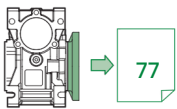
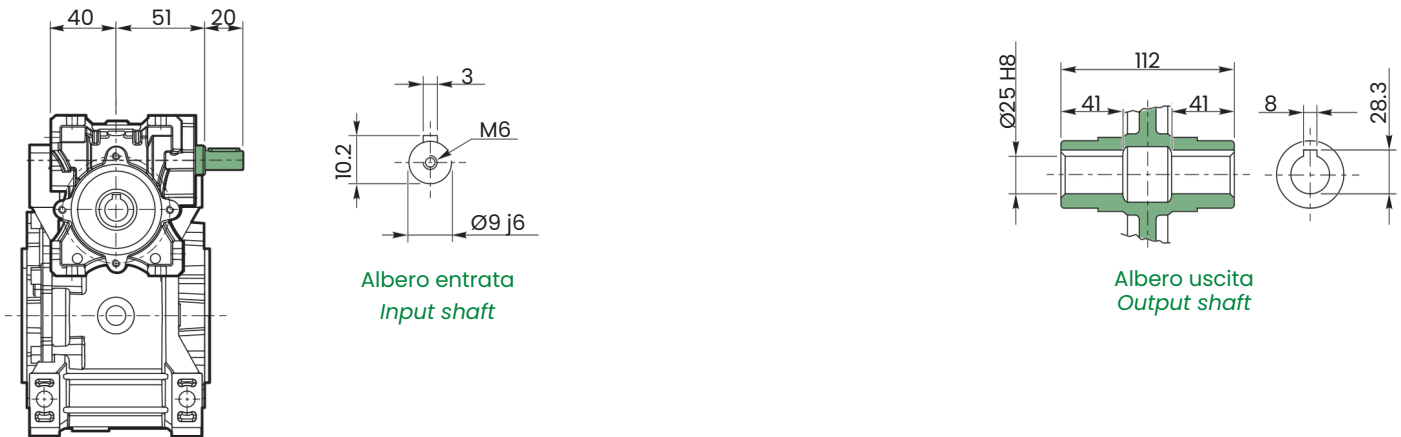
NGD 030/050



NMGD 030/063

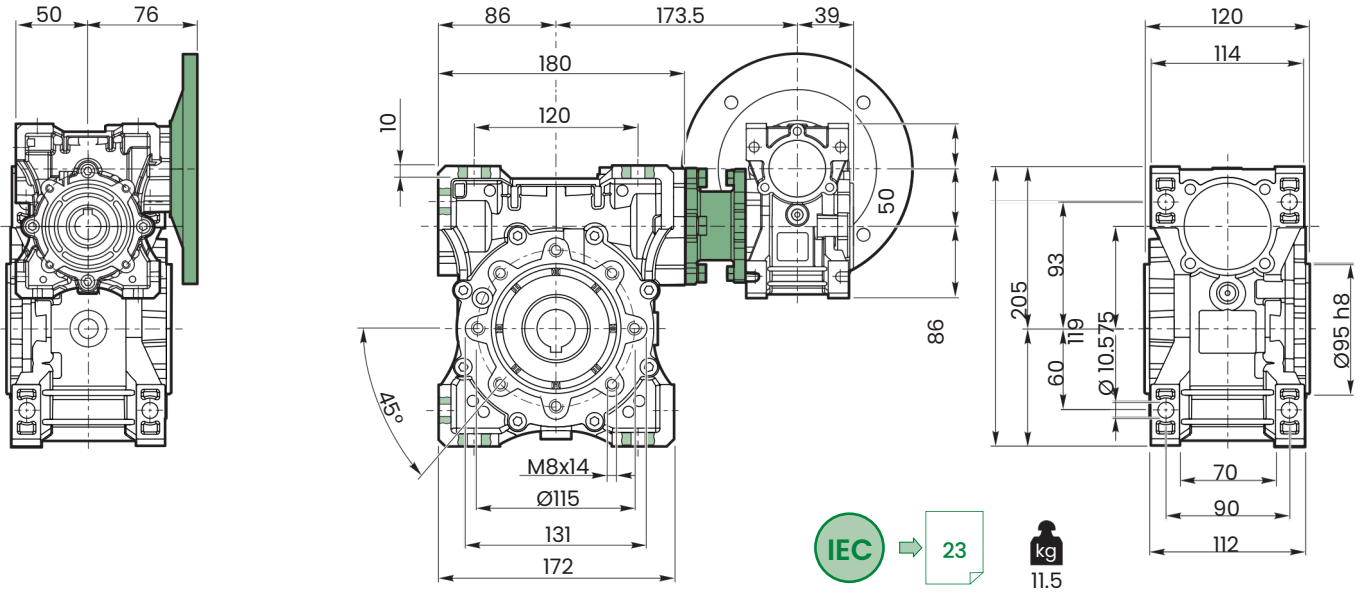


NGD 030/063

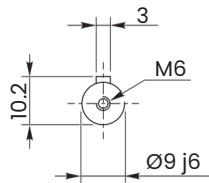
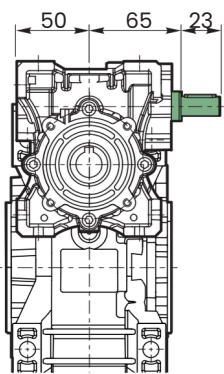


040/075

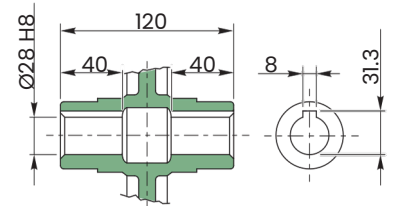
NMGD 040/075



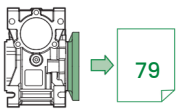
NGD 040/075



Albero entrata
Input shaft

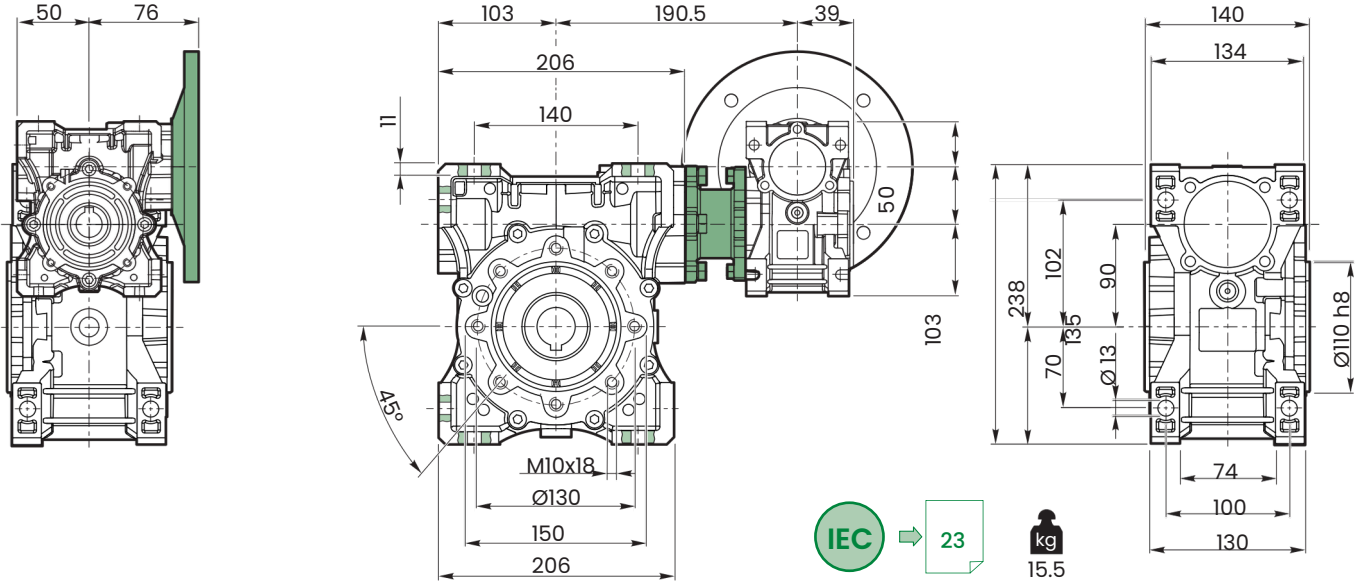


Albero uscita
Output shaft

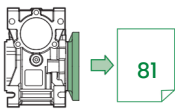


040/090

NMGD 040/090

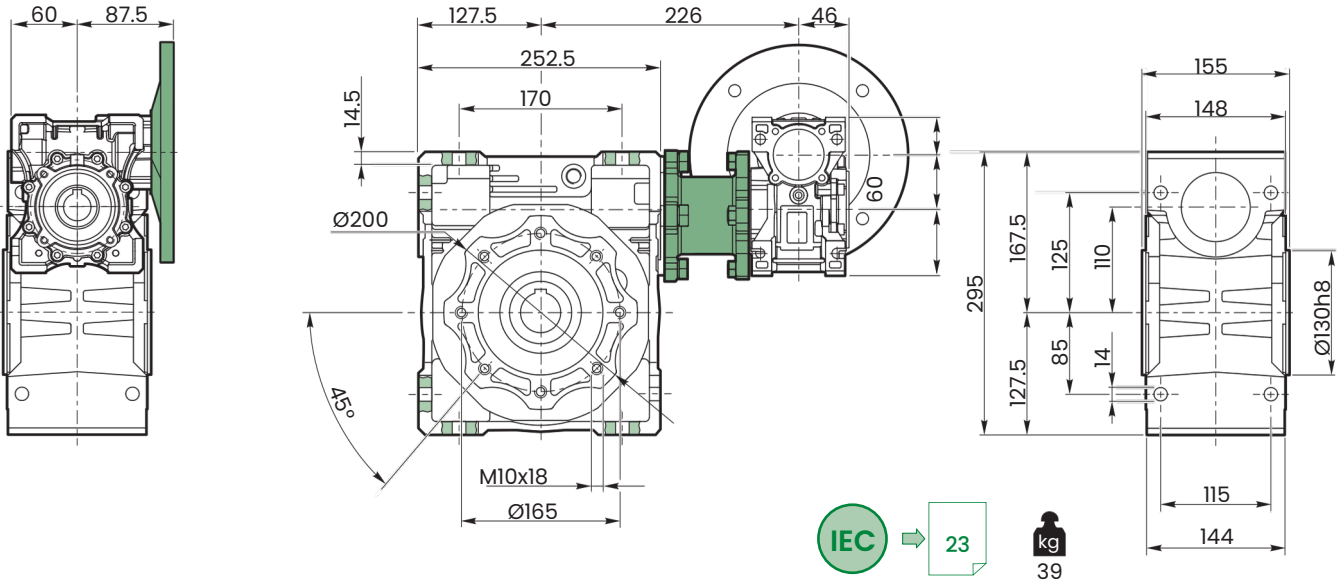


NGD 040/090

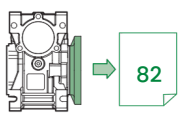


050/110

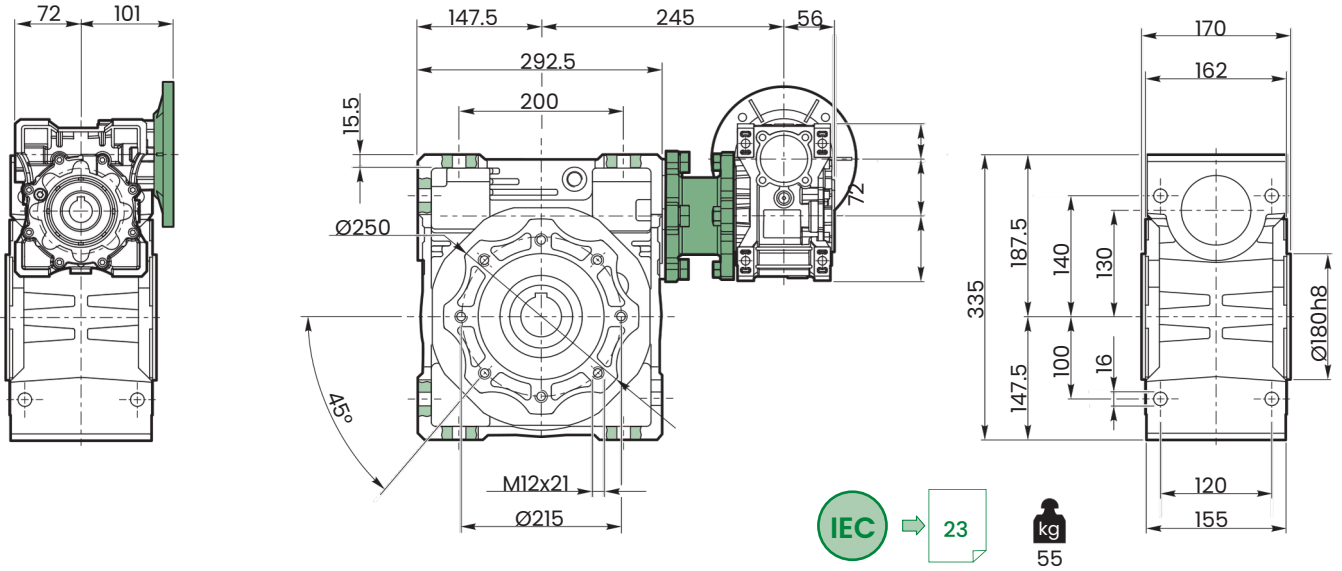
NMGD 050/110



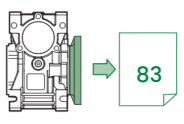
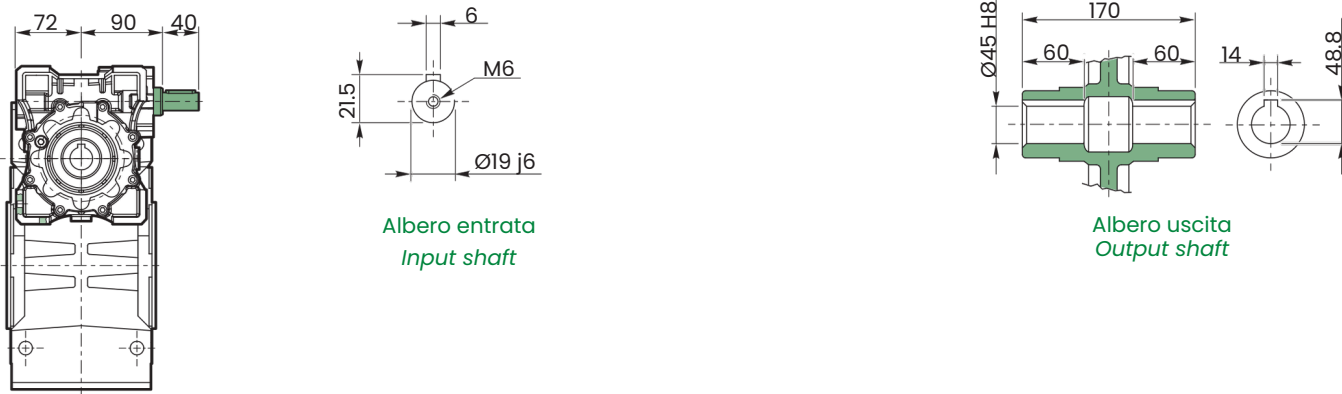
NGD 050/110



NMGD 063/130

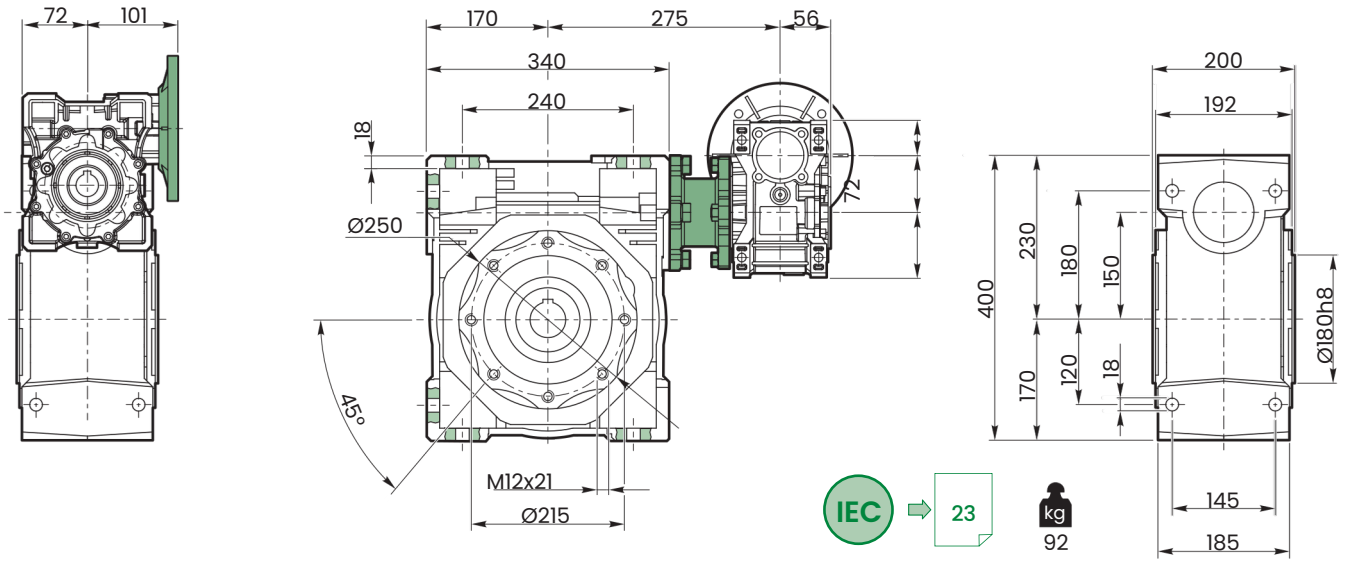


NGD 063/130

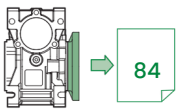
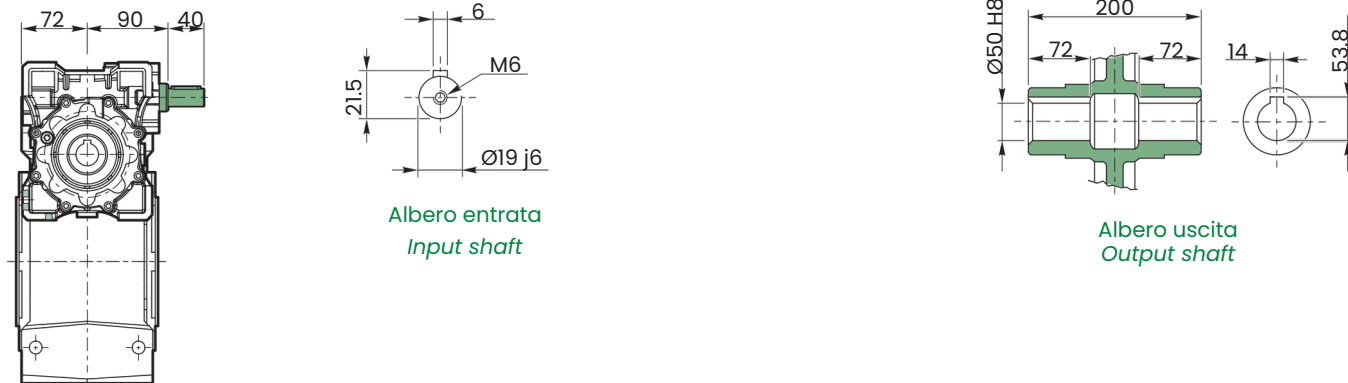


063/150

NMGD 063/150



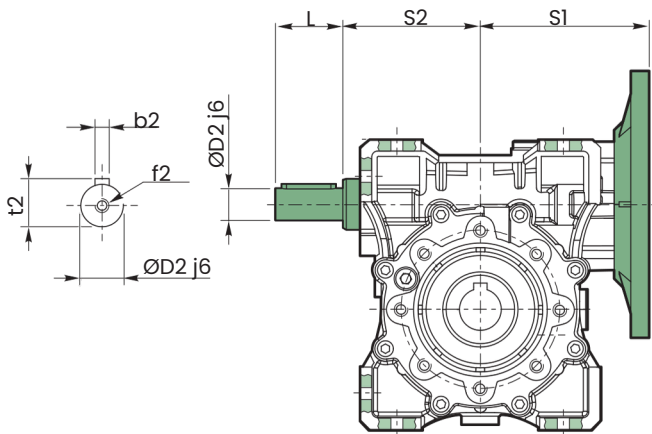
NGD 063/150



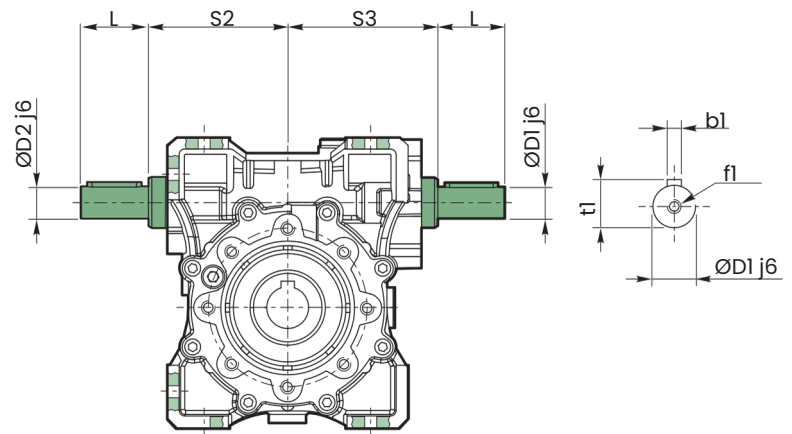
Entrata supplementare

Addition input

NMG ..



NG ..



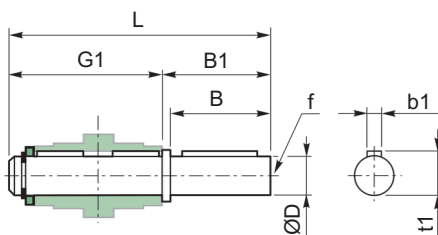
NMG / NG	030	040	050	063	075	090	110	130	150
L	20	23	30	40	50	50	60	80	80
D1 j6	9	11	14	19	24	24	28	30	35
D2 j6									
S1	61	76	87.5	101	118.5	135.5	160	180	210
S2	45	53	63	75	90	108	135	153	177
S3	51	65	75	90	105	122	145	169	199
b1	3	4	5	6	8	8	8	8	10
b2									
f1	-	-	M6	M6	M8	M8	M10	M10	M12
f2	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

Accessori

Accessories

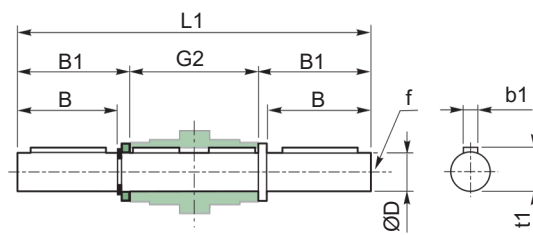
AS

Albero lento semplice / Single output shaft



AD

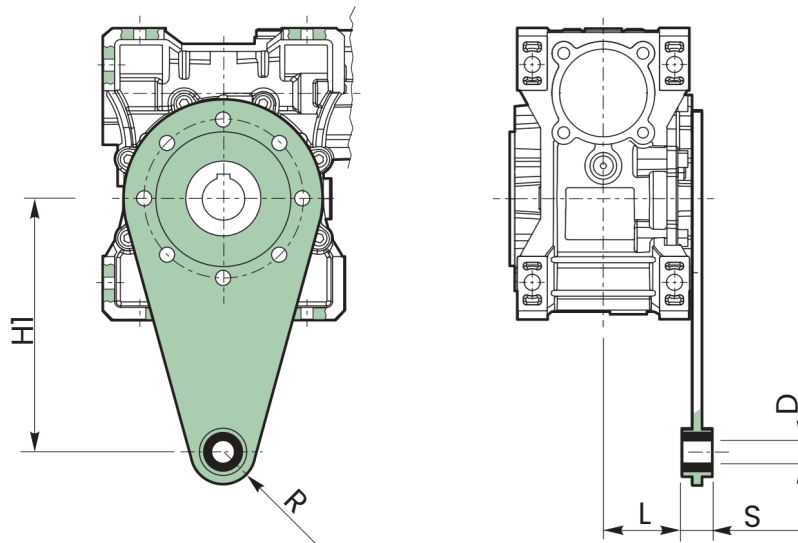
Albero lento doppio / Double output shaft



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

BR

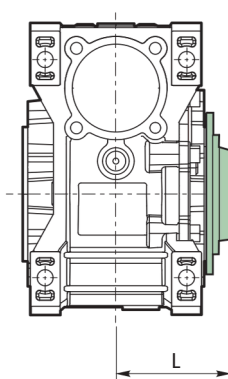
Braccio di reazione / Torque arm



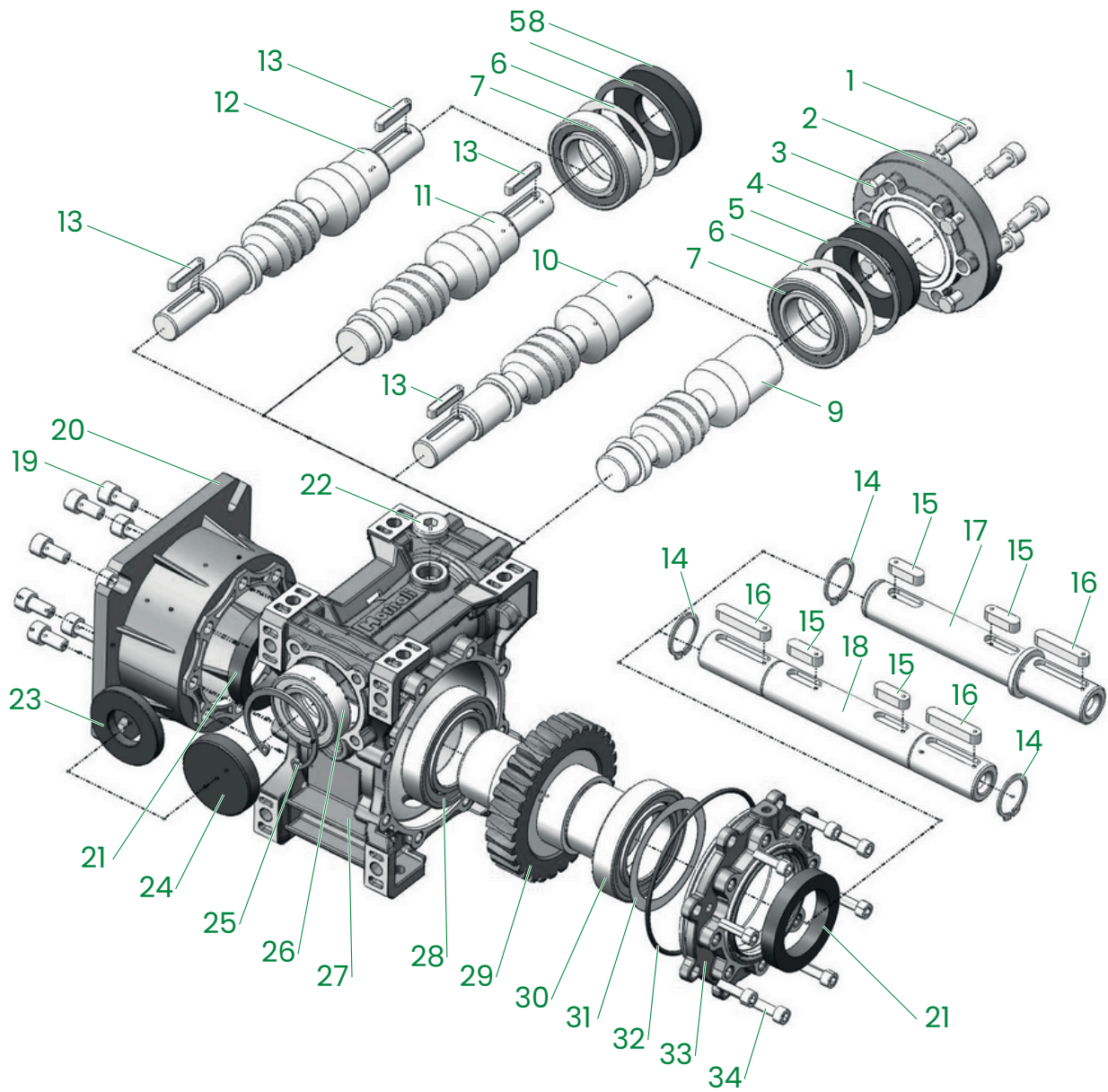
NMG / NG	025	030	040	050	063	075	090	110	130	150
HI	70	85	100	100	150	200	200	250	250	250
S	14	14	14	14	14	25	25	30	30	30
L	17.5	24	31.5	38.5	49	47.5	57.5	62	69	84
ØD	8	8	10	10	10	20	20	25	25	25
R	15	15	18	18	18	30	30	35	35	35

CC

Coperchio protezione albero cavo / Cover hollow shaft protection



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



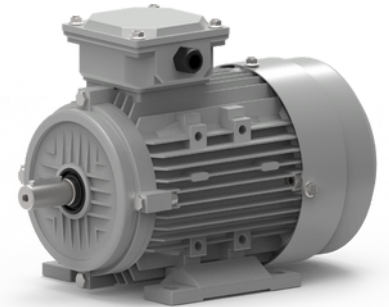
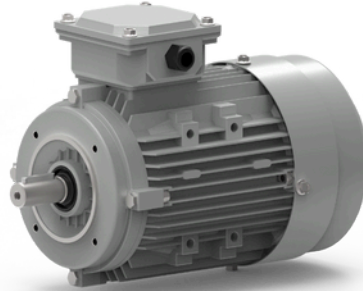
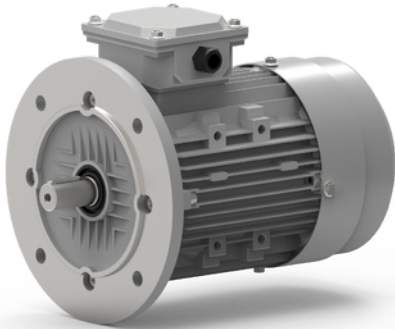
n°	Denominazione	Part name
1	Vite	Screw
2	Flangia ingresso	Input flange
3	Vite	Screw
4	Paraolio	Oil seal
5	Anello seeger	Elastic retaining ring for shaft
6	Anello rasamento	Adjust spacer
7	Cuscinetto	Bearing
8	Paraolio	Oil seal
9	Vite senza fine per PAM	Hole input worm
10	Vite senza fine per PAM bisporgente	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 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.

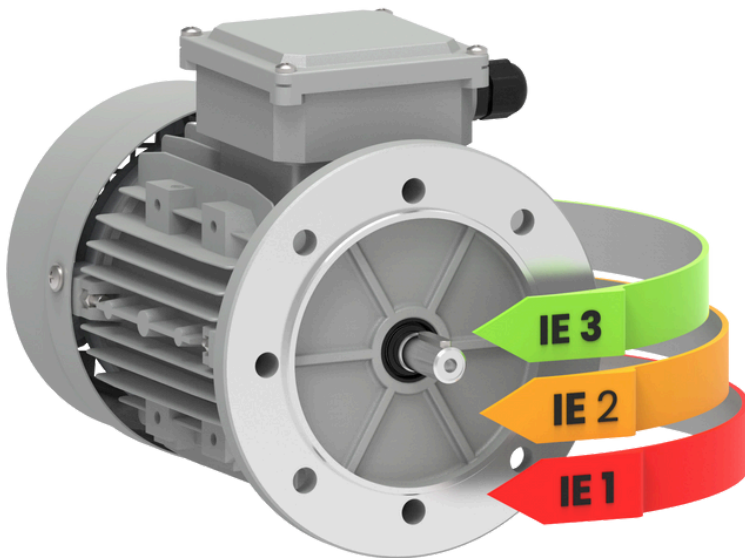
Electric motors

The range of 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

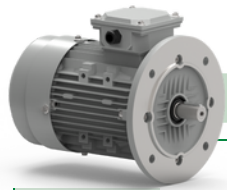


P [kW]	IE1	IE2	IE3
0.06	✓		
0.09	✓	✓	
0.12	✓	✓	
0.18	✓	✓	
0.25	✓	✓	
0.37	✓	✓	
0.55	✓	✓	
0.75	✓		✓
1.1	✓		✓
1.5	✓		✓
2.2	✓		✓
3	✓		✓
4	✓		✓
5.5	✓		✓
7.5	✓		✓
11	✓		✓
15	✓		✓



Designazione

Designation



MOTORI / MOTORS

T 1 04 071 037 B5

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

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 φ	Fattore di potenza	Power factor
P_n [kW]	Potenza nominale in entrata	Nominal input power
η	Rendimento	Efficiency

**2 poli
2 poles**

		P_n		I [A] 400 V	n_n [rpm]	η			$\cos \varphi$	M_n [Nm]	M_s / M_n	I_s / I_n	M_{MAX} / M_n
		[kW]	[Hp]			100%	75%	50%					
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

**4 poli
4 poles**

		P_n		I [A] 400 V	n_n [rpm]	η			$\cos \varphi$	M_n [Nm]	M_s / M_n	I_s / I_n	M_{MAX} / M_n
		[kW]	[Hp]			100%	75%	50%					
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

**6 poli
6 poles**

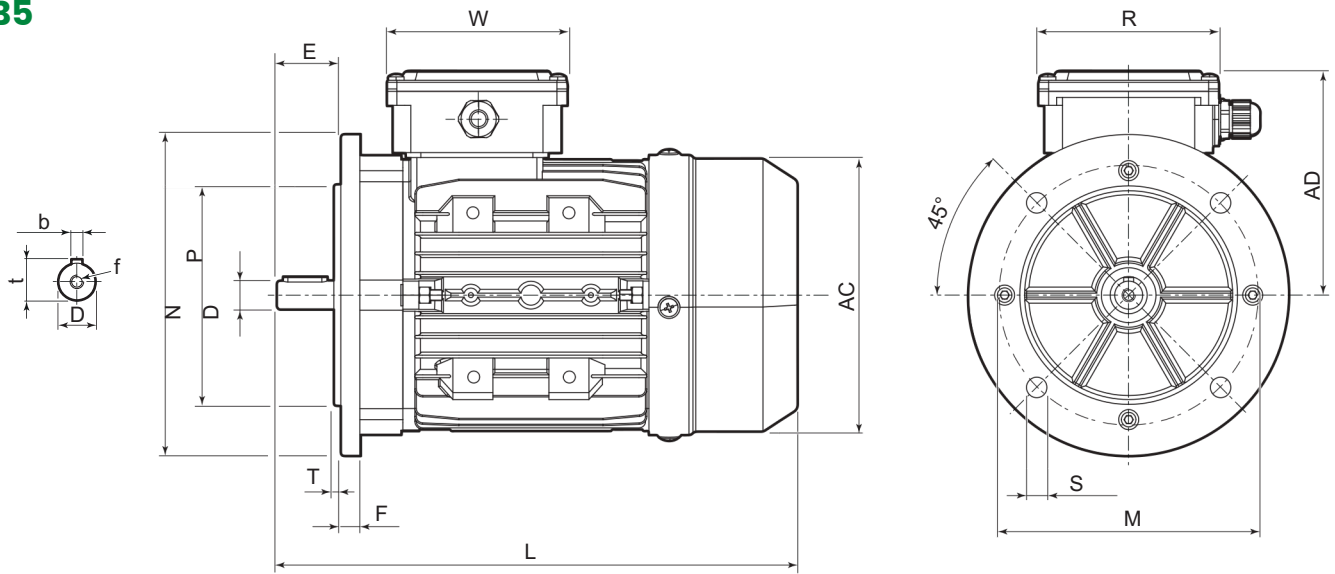
		P_n		I [A] 400 V	n_n [rpm]	η			$\cos \varphi$	M_n [Nm]	M_s / M_n	I_s / I_n	M_{MAX} / M_n
		[kW]	[Hp]			100%	75%	50%					
IE1 (S3-75%)	63A-6	0.09	0.12	0.49	840	44.0	44.0	43.1	0.6	1.02	1.8	3.5	1.9
	63B-6	0.12	0.18	0.75	850	38.3	38.3	37.5	0.6	1.35	1.8	3.5	1.9
	71A-6	0.18	0.25	0.86	850	45.5	45.5	44.6	0.66	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



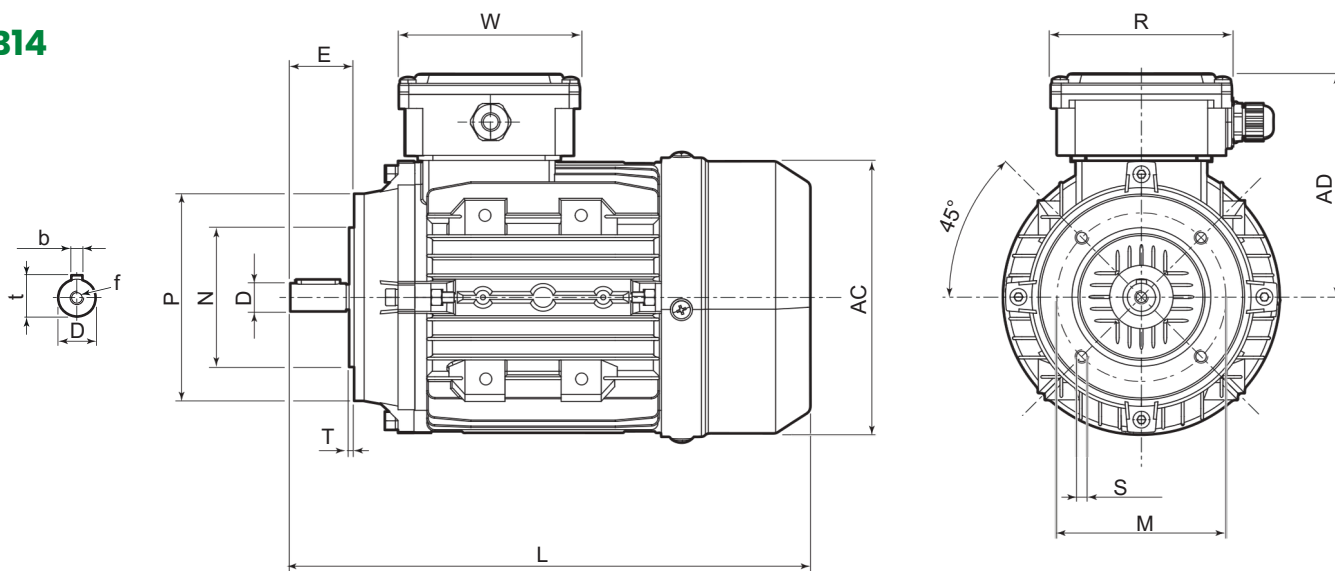
Dimensioni

Dimensions

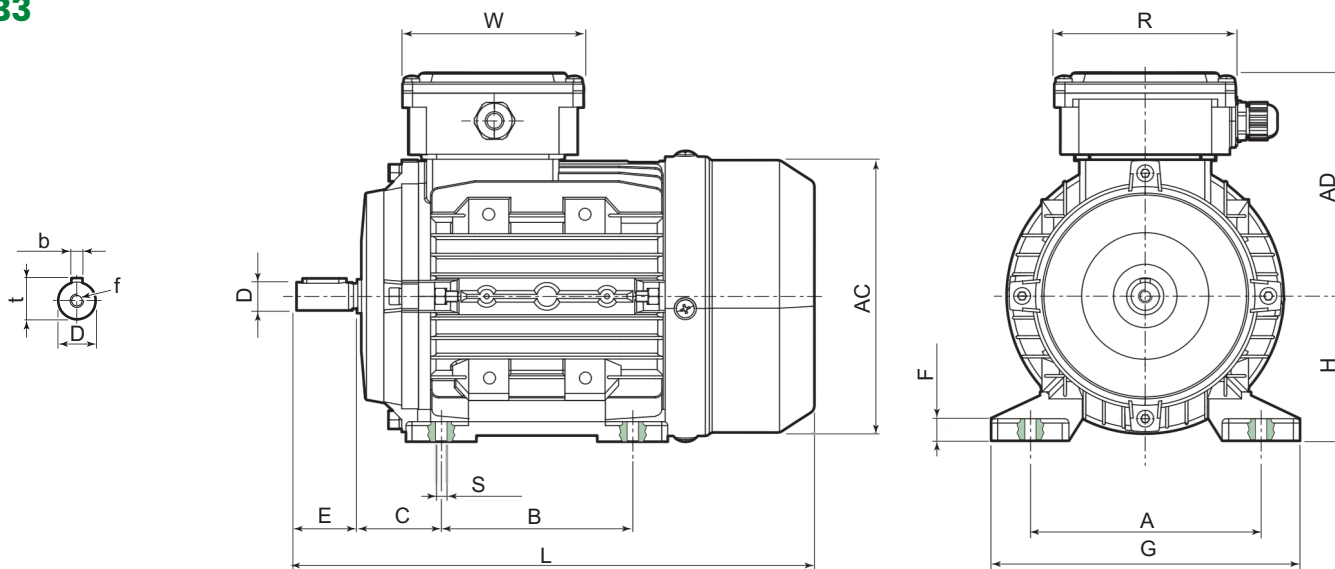
B5



B14



B3



	Albero / Shaft					B5					Motore / Motor				
	D	E	b	f	t	M	N	P	T	S	AC	AD	L	R	W
56	Ø9	20	3	M4x12	10.2	Ø100	Ø80	Ø120	3	Ø7	113	96	199	86	86
63	Ø11	23	4	M4x12	12.5	Ø115	Ø95	Ø140	3	Ø10	120	102	217	101	101
71	Ø14	30	5	M5x12	16	Ø130	Ø110	Ø160	3.5	Ø10	136	109	245	101	101
80	Ø19	40	6	M6x16	21.5	Ø165	Ø130	Ø200	3.5	Ø12	157	129	290	101	101
90S	Ø24	50	8	M8x19	27	Ø165	Ø130	Ø200	3.5	Ø12	175	140	325	109	109
90L/M	Ø24	50	8	M8x19	27	Ø165	Ø130	Ø200	3.5	Ø12	175	140	350	109	109
100	Ø28	60	8	M10x22	31	Ø215	Ø180	Ø250	4	Ø15	198	156	398	109	109
112	Ø28	60	8	M10x22	31	Ø215	Ø180	Ø250	4	Ø15	225	176	394	117.5	117.5
132S	Ø38	80	10	M12x28	41	Ø265	Ø230	Ø300	4	Ø15	258	188	475	117.5	117.5
132M	Ø38	80	10	M12x28	41	Ø265	Ø230	Ø300	4	Ø15	315	188	513	117.5	117.5
160M/L	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
56	Ø9	20	3	M4x12	10.2	Ø50	Ø65	Ø80	2.5	M5	113	96	199	86	86
63	Ø11	23	4	M4x12	12.5	Ø60	Ø75	Ø90	2.5	M5	120	102	217	101	101
71	Ø14	30	5	M5x12	16	Ø70	Ø85	Ø105	2.5	M6	136	109	245	101	101
80	Ø19	40	6	M6x16	21.5	Ø80	Ø100	Ø120	3	M6	157	129	290	101	101
90S	Ø24	50	8	M8x19	27	Ø95	Ø115	Ø140	3	M8	175	140	325	109	109
90L/M	Ø24	50	8	M8x19	27	Ø95	Ø115	Ø140	3	M8	175	140	350	109	109
100	Ø28	60	8	M10x22	31	Ø110	Ø130	Ø160	3.5	M8	198	156	398	109	109
112	Ø28	60	8	M10x22	31	Ø110	Ø130	Ø160	3.5	M8	225	176	394	117.5	117.5
132S	Ø38	80	10	M12x28	41	Ø130	Ø165	Ø200	4	M10	258	188	475	117.5	117.5
132M	Ø38	80	10	M12x28	41	Ø130	Ø165	Ø200	4	M10	315	188	513	117.5	117.5
160M/L	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
56	Ø9	20	3	M4x12	10.2	90	71	36	111	56	7	5.8x8.3	113	96	199	86	86
63	Ø11	23	4	M4x12	12.5	100	80	40	123	63	7	7x9.5	120	102	217	101	101
71	Ø14	30	5	M5x12	16	112	90	45	138	71	8	7x11	136	109	245	101	101
80	Ø19	40	6	M6x16	21.5	125	100	50	157	80	8	10x14	157	129	290	101	101
90S	Ø24	50	8	M8x19	27	140	100	56	173	90	10	10x14	175	140	325	109	109
90L/M	Ø24	50	8	M8x19	27	140	125	56	173	90	10	10x14	175	140	350	109	109
100	Ø28	60	8	M10x22	31	160	140	63	196	100	11	12x16	198	156	398	109	109
112	Ø28	60	8	M10x22	31	190	140	70	227	112	12	12x16	225	176	427	117.5	117.5
132S	Ø38	80	10	M12x28	41	216	140	89	262	132	15	12x16	258	188	445	117.5	117.5
132M	Ø38	80	10	M12x28	41	216	178	89	262	132	15	12x16	315	188	483	117.5	117.5
160M/L	Ø42	110	12	M16x36	45	254	210/254	108	304	160	18	15x18	315	242	589/633	167	167

**Protezione****Protection**

I motori 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.

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 motors are IP55.

I motori standard sono IP55.

IP 55

Protezione contro i corpi solidi Protection against foreign bodies		Protezione contro i liquidi Protection against liquid	
IP	Definizione / Description	IP	Definizione / Description
0	Non protetto <i>No protection</i>	0	Non protetto <i>No protection</i>
1	Protetto contro i corpi solidi superiori a 50 mm <i>Protection against solid foreign bodies of thickness greater than 50 mm</i>	1	Protetto contro la caduta verticale di gocce d'acqua <i>Protection against vertical drops of water</i>
2	Protetto contro i corpi solidi superiori a 12 mm <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 <i>Protection against sprinkle water until 15° from the vertical</i>
3	Protetto contro i corpi solidi superiori a 2.5 mm <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 <i>Protection against sprinkle water until 60° from the vertical</i>
4	Protetto contro i corpi solidi superiori a 1 mm <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 <i>Protection against jets of water from any directions</i>
5	Protetto contro le polveri <i>Protection against ingress of dust</i>	5	Protetto contro i getti d'acqua con lancia da tutte le direzioni <i>Protection against water projected by a nozzle from any directions</i>
6	Totalmente protetto contro le polveri <i>Complete protection against ingress of dust</i>	6	Protetto contro le proiezioni d'acqua simili a onde marine <i>Protection against water projections similar to sea waves</i>
		7	Protetto contro gli effetti dell'immersione <i>Protection against the effects of immersion</i>
		8	Protetto contro immersione/sommersione prolungata <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 Duty Service	Descrizione Description
S1	Servizio continuo <i>Continuous duty</i>	Funzionamento del motore a carico costante e di durata sufficiente a raggiungere l'equilibrio termico. <i>Constant load motor operation for a sufficient time to reach thermal balance</i>
S2	Servizio di durata limitata <i>Limited duration Duty</i>	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. <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>
S3	Servizio intermittente periodico <i>Periodic intermittent Duty</i>	Funzionamento del motore secondo un ciclo che prevede un periodo di tempo a carico costante ed un periodo di riposo. <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 sono realizzati nel rispetto della normativa IEC 60085 garantendo la classe d'isolamento F.

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



Collegamenti motori elettrici

Electric motor connections

230 V

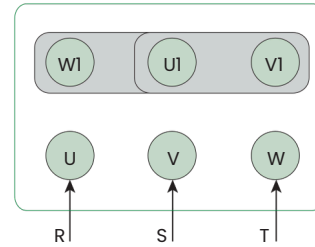
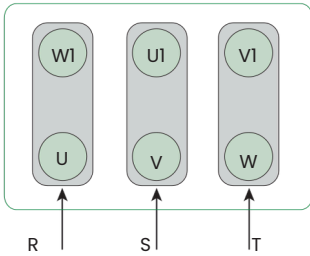
400 V > 3kW

400 V

690 V > 3kW

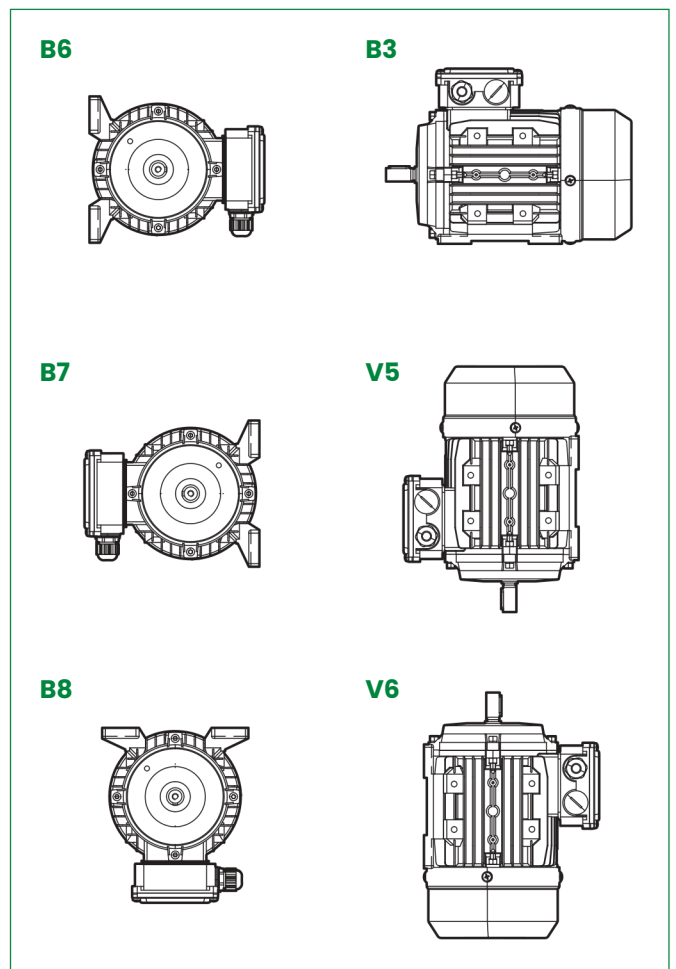
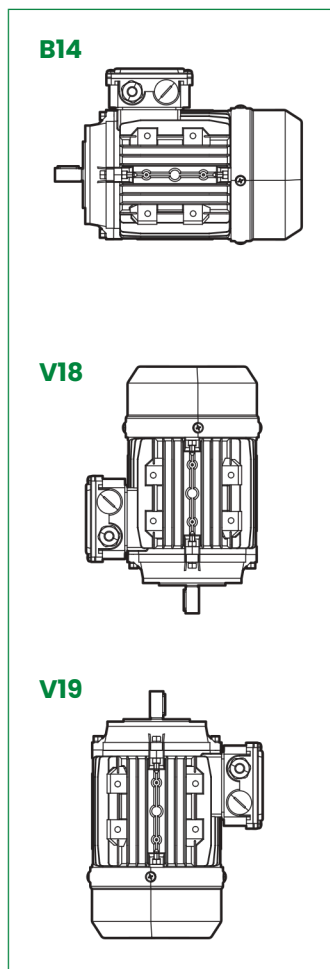
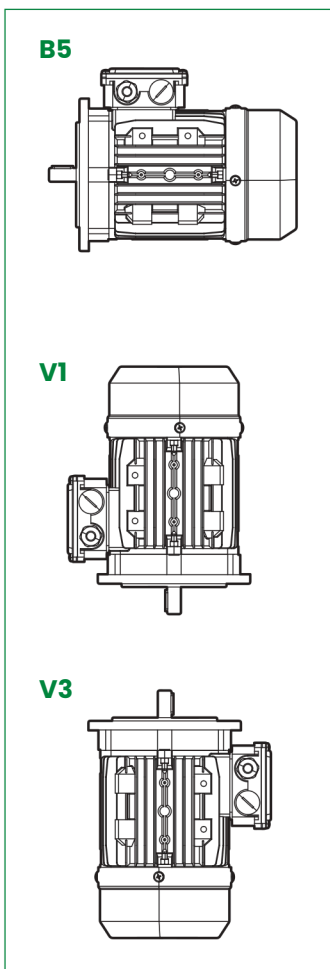
Collegamento triangolo
Triangle connection

Collegamento stella
Star connection



Posizioni di montaggio

Mounting positions





Variatori di velocità

Speed variators

La gamma dei variatori di velocità 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.

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

- 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

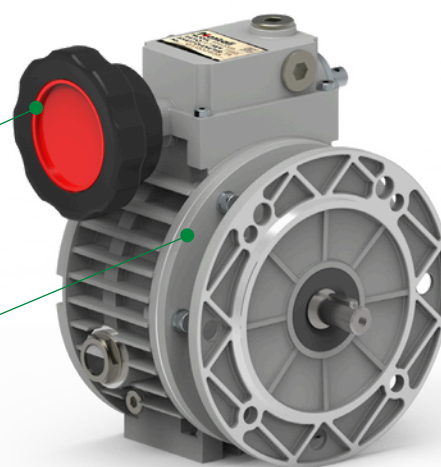
- Variable ratio epicyclic transmission
- Settled for direct connection
- Easy use
- Simple rotation speed adjustment
- Predisposition for foot attachment
- Cost reduction

- 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 e ghisa per MVD 030 e 050.

- 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.

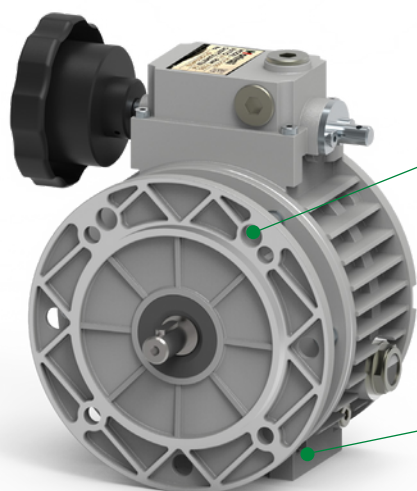
Semplice regolazione della velocità di rotazione
Simple rotation speed adjustment

Trasmissione epicicloidale a rapporto variabile
Variable ratio epicyclic transmission



Predisposizione per attacco diretto su riduttore
Settled for direct connection

Predisposizione per attacco piedi B3 (1)
Prearrangement for B3 foot attachment ⁽¹⁾





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**

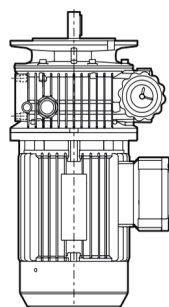
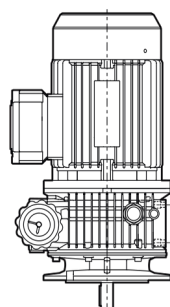
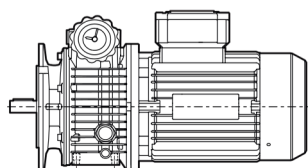
Posizioni di montaggio

Mounting positions

B5

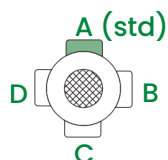
V1

V3



Q.tà olio in litri
Oil quantity in litres

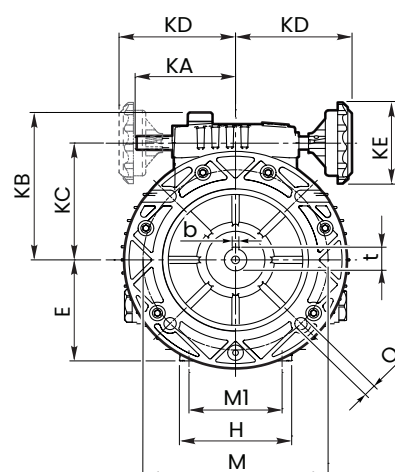
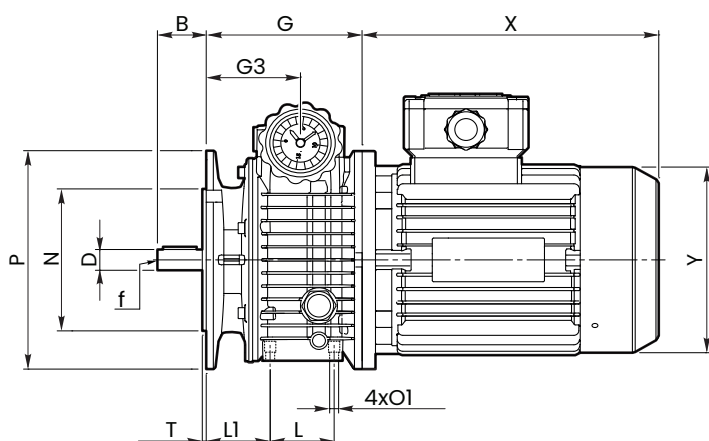
	B5	V1	V3
MVD 02 063B5	0.13	0.3	0.2
MVD 05 071B5	0.15	0.4	0.25
MVD 10 080B5	0.33	0.8	0.45
MVD 20 090B5	0.8	1.4	1
MVD 30 100B5	1.2	2.1	1.2
MVD 50 100B5	1.2	2.1	1.2



Dati tecnici

Technical data

n1 = 1400 (min-1)	P1 (kW)	i	Attacco motore IEC IEC motor adaptor	n2 max (min-1)	n2 min (min-1)	M2 min (Nm)	M2 max (Nm)
MVD 02 063B5	0.18	1.6 - 8.2	63 B5	880	170	1.5	3
	0.25					2	3
MVD 05 071B5	0.37	1.4 - 7.4	71 B5	1000	190	3	6
	0.55					4.5	6
MVD 10 080B5	0.75	1.4 - 7.4	80 B5	1000	190	6	12
MVD 20 090B5	1.1	1.4 - 7.4	90 B5	1000	190	9	18
	1.5					12	24
MVD 30 100B5	2.2	1.4 - 7.4	100 B5	1000	190	18	36
	3.0					24	48
MVD 50 100B5	4.0	1.4 - 7.4	100 B5	1000	190	32	64



	B	D j6	G	G3	E	H	L	LI	M	MI	N	O	OI	P	T	KA	KB	KC	KD	KE	b	t	f	kg
MVD 02 063B5	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
MVD 05 071B5	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
MVD 10 080B5	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
MVD 20 090B5	50	24	174	106.5	111	230	-	-	165	-	130	11	-	200	3.5	108.5	148	127	140	85	8	27	M8	14
MVD 30 100B5	60	28	222	131	136	265	-	-	215	-	180	15	-	250	4	131	181	158	150	120	8	31	M8	55
MVD 50 100B5	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.

