

# GEARBOXES

POWER AT WORK.



Worm  
Gearboxes  
Variators  
Motors



# ENGAGING THE WORLD.



[www.satispa.com](http://www.satispa.com)

**Sati è** una realtà importante nella produzione e distribuzione di prodotti per la trasmissione di potenza ad uso industriale. Fondata nel 1974, Sati è diventata leader nel settore coniugando l'esperienza all'innovazione. Quello che rende unica Sati sono il servizio e la capacità di risposta al cliente.



**Sati is** a major player in the production and distribution of power transmission products for industrial use. Founded in 1974, Sati has grown up to the rank of leading company in its sector combining experience with innovation. What makes Sati unique are the excellence in service and the uncompromising dedication to customer's needs.

L'ampia gamma di prodotti, la velocità e la puntualità nella consegna sono i nostri punti di forza. Un magazzino organizzato con le più moderne tecnologie gestionali, personale altamente qualificato e multilingue e un sistema di consegna in tempo reale sono i motivi che spingono sempre più clienti a scegliere Sati. La vasta gamma di articoli a catalogo rispetta normative e misure internazionali; i processi interni sono tutti rispondenti all'UNI EN ISO 9001.

*Our strength is represented by a wide range of products as well as fast and timely deliveries. In addition to this, a warehouse equipped with the most advanced management technologies, highly qualified multilingual staff and real-time delivery of orders are further reasons why more and more customers decide to give their preference to Sati. Our vast range of off-the-shelf articles respects all the international standards and regulations; internal processes all comply with UNI EN ISO 9001.*

In un mondo che corre Sati riesce a essere competitiva e rendere competitivi i propri clienti, perché noi il prodotto lo consegniamo subito, con puntualità, in qualsiasi quantità e in qualsiasi parte del mondo. Il magazzino di SATI, con i suoi 5000 metri quadri di superficie, è il centro strategico dell'azienda. Il nostro sistema informatizzato è uno strumento fondamentale per gestire più di 15.000 articoli in giacenza e 20.000 spedizioni annuali. Inoltre grazie a Diogene, un sistema di E-Business avanzato, il rapporto con la nostra clientela è sempre più stretto. Grazie a Diogene infatti i nostri clienti possono entrare nel nostro magazzino e consultare l'offerta di Sati: non solo pignoni e corone, calettatori, pulegge, catene, cremagliere, giunti, bussole e tenditori, ma anche cinghie, motori elettrici, riduttori e variatori. Per ogni tipologia di prodotto Diogene permette di verificarne la disponibilità in tempo reale e ricevere il materiale in pronta consegna in tempi strettissimi; tutto quello che risulta in stock su Diogene è come se fosse già nel magazzino dei nostri clienti. E poi ancora: controllare se la spedizione è già stata eseguita, ristampare le fatture, consultare lo storico ordini: con Diogene il cliente è informato in tempo reale sullo stato dei suoi acquisti.

*In a world that runs so fast, Sati succeeds in being competitive, and in making its customers competitive, too, because we deliver products immediately, timely, in whatever amount and everywhere in the world. Sati's warehouse, with its 5000 square metres, is the strategical centre of the company. Our computerized system is a key tool to handle over 15.000 articles in stock and 20.000 shipments per year. Besides, Diogene, a leading-edge E-Business tool, allows us to come closer to our customers. Indeed thanks to Diogene our customers can access our inventory and check our comprehensive product portfolio: not only sprockets and plate wheels, locking devices, pulys, chains, racks, couplings, bushings and tensioners, but also belts, electric motors, gearboxes and speed variators. Through Diogene portal our customers can enter a virtual warehouse, in which they can check availability and place orders in real time, thus minimizing packing and delivery times; all what is available in Diogene is already virtually transferred in our customers' warehouse. To complete the process, they can track shipments, download and print their invoices, retrieve archived orders: with Diogene, the customer is always updated about the current status of his purchases.*

Sati è fuori standard non solo per il servizio d'eccellenza offerto, ma anche per la sua produzione di articoli speciali a disegno. Il personale specializzato del nostro Ufficio tecnico effettua accurati studi di fattibilità, seleziona i migliori produttori a seconda della lavorazione richiesta, ed esegue rigorosi controlli qualitativi sui componenti. Per tutte le lavorazioni meccaniche e per tutti i trattamenti superficiali e termici Sati utilizza procedure collaudate per realizzare prodotti sempre diversi e su misura: per Sati, infatti, anche lo Speciale è ordinaria amministrazione!

*Sati is out-of-standard not only for the excellence of its service, but also for the engineering of special design items. The highly qualified staff of our Engineering Dept. carries out feasibility studies, selects the best manufacturers for every type of machining needed, and performs strict quality controls on the components. Proven protocols are applied by SATI to all mechanical processes and surface as well as heat treatments required to achieve the most varied finished products, often tailor-made: because for Sati even Specials are ordinary business!*

**Tutto ciò che vi serve, ovunque. Con rapidità e puntualità.**

**All you need, everywhere. Fast and timely.**

[sale@technobearing.ru](mailto:sale@technobearing.ru)

[TECHNOBEARING.RU](http://TECHNOBEARING.RU)

8 (800) 700-72-07

## RIDUTTORI A VITE SENZA FINE / WORM GEARBOXES

<b>INTRODUZIONE / INTRODUCTION</b>	Presentazione della gamma SATI di riduttori a vite senza fine / <i>SATI worm gearboxes range</i>	4
	Posizioni di montaggio / <i>Mounting positions</i>	10
	Esecuzione / <i>Versions</i>	10
	Lubrificazione / <i>Lubrication</i>	11
	Quantità olio / <i>Quantity of oil</i>	11
	Controllo del livello e cambi dell'olio / <i>Level check and oil change</i>	12
	Simbologia / <i>Symbols</i>	12
	Introduzione / <i>Introduction</i>	12
	Velocità entrata / <i>Input speed</i>	12
	Rapporto di riduzione / <i>Reduction ratio</i>	12
	Velocità in uscita / <i>Output speed</i>	13
	Coppia massima in uscita / <i>Max output torque</i>	13
	Coppia trasmessa / <i>Output torque</i>	13
	Coppia richiesta / <i>Required torque</i>	13
	Potenza massima in entrata / <i>Max input power</i>	13
	Potenza massima in uscita / <i>Max output power</i>	13
	Potenza nominale in entrata / <i>Rated input power</i>	14
	Rendimento / <i>Efficiency</i>	14
	Irreversibilità / <i>Irreversibility</i>	14
	Fattore di servizio / <i>Service factor</i>	15
	Carichi radiali / <i>Radial loads</i>	16
	Carichi assiali / <i>Axial loads</i>	17
	Senso di rotazione / <i>Direction of rotation</i>	17
	Selezione / <i>Selection</i>	18
	Scelta del riduttore / <i>Selecting of gearbox</i>	18
	Scelta del motoriduttore / <i>Selecting of gearmotor</i>	18
	Temperatura operativa / <i>Operating temperature</i>	19
Verniciatura / <i>Painting</i>	19	
Installazione / <i>Installation</i>	20	
Identificazione / <i>Identification</i>	20	

**VP**



Riduttori a vite senza fine VP / <i>VP worm gearboxes</i>	VP1
Designazione / <i>Designation</i>	VP2
Predisposizioni IEC / <i>IEC Pre-arrangements</i>	VP5
Dati tecnici riduttori / <i>Gearboxe technical data</i>	VP8
Tabella dati tecnici motoriduttori / <i>Table technical data gearmotors</i>	VP18
Dimensioni riduttori a vite senza fine / <i>Dimensions worm gearboxes</i>	VP42
Dimensioni riduttori a vite senza fine con precoppia / <i>Dimensions helical worm gearboxes</i>	VP52
Dimensioni riduttori a vite senza fine combinati / <i>Dimensions combination worm gearboxes</i>	VP64
Seconda entrata / <i>Additional input</i>	VP74
Kit assemblaggio - Accessori / <i>Assembly Kit - Accessories</i>	VP75

**VTS**



Riduttori a vite senza fine VTS / <i>VTS worm gearboxes</i>	VTS1
Designazione / <i>Designation</i>	VTS2
Predisposizioni IEC / <i>IEC Pre-arrangements</i>	VTS6
Dati tecnici riduttori / <i>Gearboxe technical data</i>	VTS7
Tabella dati tecnici motoriduttori / <i>Table technical data gearmotors</i>	VTS16
Dimensioni riduttori a vite senza fine / <i>Dimensions worm gearboxes</i>	VTS25
Dimensioni riduttori a vite senza fine con precoppia / <i>Dimensions helical worm gearboxes</i>	VTS31
Dimensioni riduttori a vite senza fine combinati / <i>Dimensions combination worm gearboxes</i>	VTS33
Kit assemblaggio - Accessori / <i>Assembly Kit - Accessories</i>	VTS36

**M**



Motori elettrici / <i>Electric motors</i>	MOT1
2 Poli / <i>poles</i>	MOT2
4 Poli / <i>poles</i>	MOT3
6 Poli / <i>poles</i>	MOT4
Dimensioni d'ingombro motori IE1 / <i>Dimensions motors IE1</i>	MOT5
Caratteristiche tecniche / <i>Technical Specifications</i>	MOT6
Protezione / <i>Protection</i>	MOT6
Servizio / <i>Operative use</i>	MOT7
Caratteristiche elettriche generali / <i>General electrical specifications</i>	MOT7
Schemi di collegamenti / <i>Diagram of connectons</i>	MOT8
Posizioni di piazzamento / <i>Mounting positions</i>	MOT9

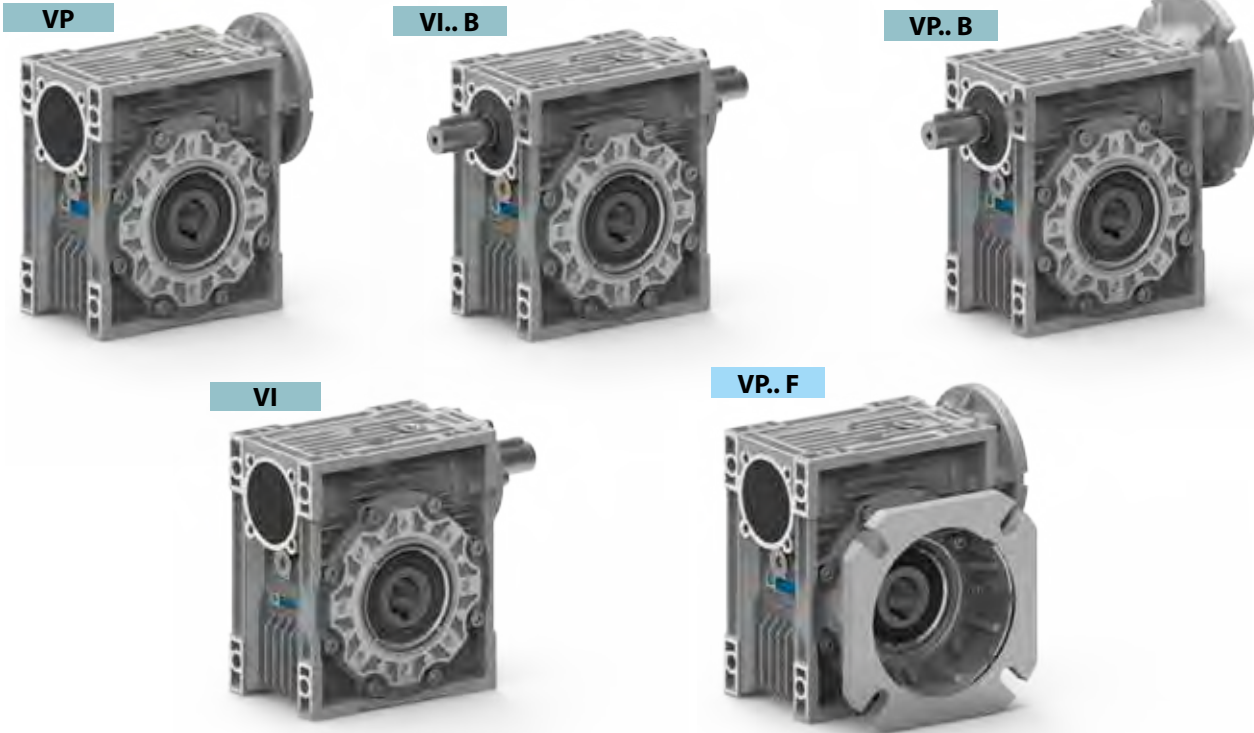
**SV**



Variatori di velocità / <i>Speed variators</i>	SV1
Designazione / <i>Designation</i>	SV2
Posizioni di montaggio / <i>Mounting positions</i>	SV2
Dati tecnici / <i>Technical data</i>	SV2
Dimensioni / <i>Dimensions</i>	SV3

Condizioni generali di vendita / <i>General sales terms</i>	E1
---	----

## Presentazione gamma SATI / SATI range presentation



SATI ha il piacere di presentare la sua nuova gamma di riduttori a vite senza fine che entra a far parte della vasta gamma di prodotti per la trasmissione del moto.

**I riduttori a vite senza fine SATI VP** sono disponibili nelle seguenti versioni:

- riduttori a vite senza fine semplici, costituiti da un singolo stadio di riduzione tramite coppia vite senza fine/corona elicoidale, con **rapporti di riduzione compresi fra 7,5/1 e 100/1**.

La gamma di riduttori a vite senza fine semplici consta di **10 grandezze che vanno dalla 25 fino alla 150**.

- riduttori a vite senza fine con **precoppia**, ovvero provvisti di un ulteriore stadio di riduzione ad ingranaggi elicoidali, un pre-stadio, situato a monte del riduttore.

Le grandezze dello stadio di precoppia sono 4 (**63-71-80 e 90**), che possono essere accoppiate a più grandezze di riduttori, come riportato nelle tabelle che seguono.

I rapporti di riduzione dei riduttori con precoppia vanno da **73,5/1 fino a 400/1**.

- riduttori **combinati** a vite senza fine, costituiti da due riduttori accoppiati in cascata fra di loro, ovvero disposti in serie l'uno dopo l'altro, in modo tale che il rapporto di riduzione totale del combinato sia pari al prodotto dei rapporti dei due stadi singoli accoppiati.

I rapporti di riduzione dei combinati vanno **da 100/1 fino a 5000/1**.

Tutti i riduttori singoli e combinati sono disponibili tanto con entrata PAM, ovvero predisposta per accoppiamento diretto del motore elettrico, quanto con entrata albero maschio sporgente per accoppiamento ad una trasmissione in entrata.

La designazione dei prodotti, come apparirà chiaramente anche nelle tabelle che seguono, è la seguente:

- **VP** riduttore singolo con predisposizione **PAM**
- **VI** riduttore singolo con **entrata albero maschio**
- **VC** riduttore **combinato** con predisposizione **PAM**
- **VS** riduttore **combinato** con **entrata albero maschio**
- **VR** riduttori a vite senza fine con **precoppia** fornito nella sola versione con predisposizione **PAM**

La ragione per la quale i riduttori con precoppia sono forniti esclusivamente in versione PAM è che lo stadio di precoppia funge a tutti gli effetti pratici da stadio di riduzione in entrata, alla stessa stregua delle trasmissioni meccaniche, per cui l'eventuale impiego di una trasmissione in entrata risulta superfluo.

A complemento dei riduttori SATI propone ai suoi clienti anche i **motori elettrici asincroni trifase**, a singola velocità, nelle versioni a 2, 4 e 6 poli, in forma flangiata B5 o B14 dalla grandezza IEC 56 fino alla grandezza IEC 160, per accoppiamento diretto ai riduttori o, in alternativa, in forma con piedi B3.

SATI is pleased to introduce its new range of worm gearboxes, which joins its wide range of power transmission products.

**VP SATI worm gearboxes** are available in the following versions:

- single worm gearboxes, consisting of a single reduction stage through a worm/helical wormwheel pair, with **reduction ratios between 7.5/1 and 100/1**.

The range of single worm gearboxes consists of **10 sizes, ranging from 25 to 150**.

- helical worm gearboxes, which have an additional reduction stage with helical gears, a pre-stage, located upstream of the gearbox.

The pre-stage consists of 4 sizes (**63-71-80 and 90**), which can be fitted with a certain number of gearbox sizes, as stated in the following tables.

The reduction ratios of the helical worm gearboxes range from **73.5/1 to 400/1**.

- **combination** worm gearboxes, consisting of two gearboxes fitted in cascade one after the other, that is to say arranged in series one after the other, in such a way that the total reduction ratio of the combination unit is equal to the product of the individual ratios of the two mutually connected single stages.

The reduction ratios of the combination gearboxes range **from 100/1 to 5000/1**.

All single and combination gearboxes are available both with PAM input, in other words ready for direct connection to the electric motor, and with the extended solid input shaft for connection to an input transmission.

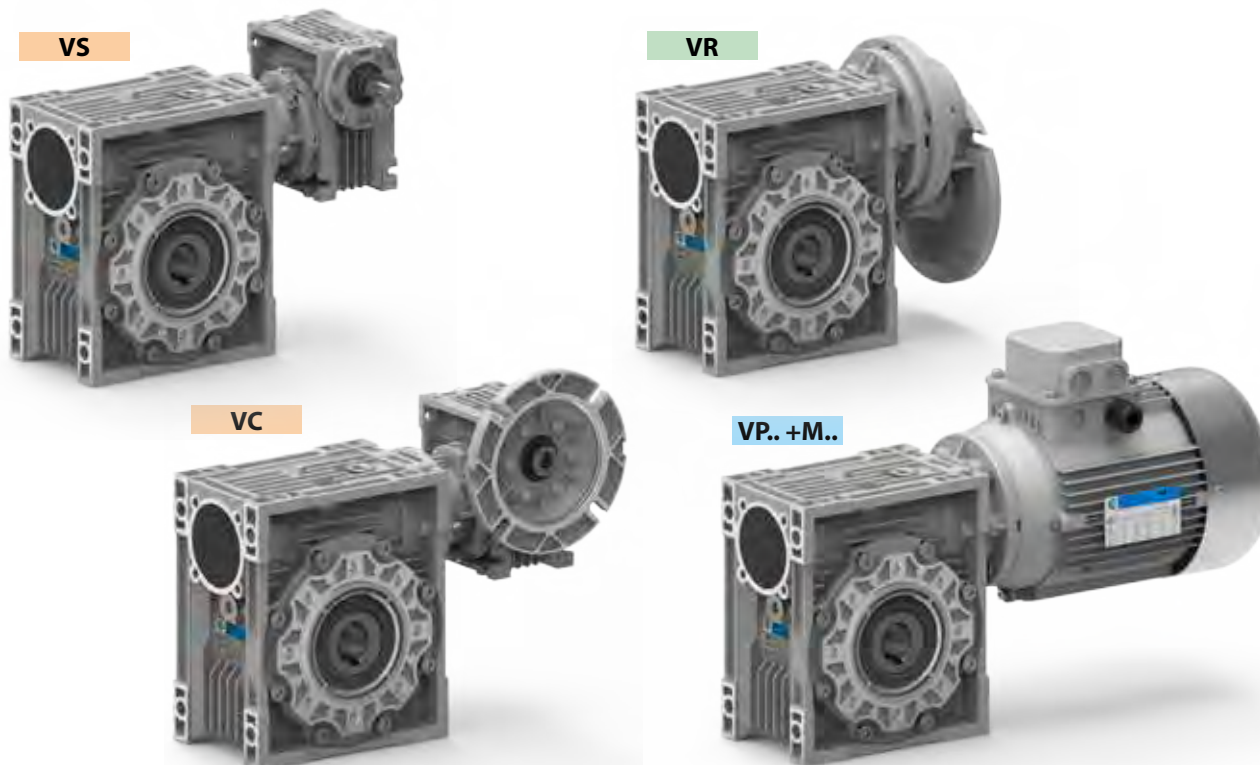
Product designation, as is also clearly shown in the tables below, is as follows:

- **VP** single gearbox, with **PAM pre-arrangement**
- **VI** single gearbox with **solid input shaft**
- **VC** combination gearbox, with **PAM pre-arrangement**
- **VS** combination gearbox with **solid input shaft**
- **VR** helical worm gearboxes supplied only in the **PAM** version

The reason why the helical worm gearboxes are supplied only in the PAM version is that the pre-stage acts, to all practical effects, as an input reduction stage, in the same way as a mechanical transmission, so that the usage of an input transmission is meaningless.

In addition to its gearboxes, SATI offers its customers a range of **three-phase asynchronous single-speed electric motors**, in versions with 2, 4 and 6 poles, in B5 or B14 flanged version, size IEC 56 up to size IEC 160, for direct connection to the gearboxes or, alternatively, the foot-mounting B3 version.

**Presentazione gamma SATI / SATI range presentation**



Gli **alberi uscita standard**, chiamati anche alberi lenti o a bassa velocità, sono cavi.  
Come accessori, sono fornibili alberi uscita maschi semplici e doppi, oltre che il **braccio di reazione** per montaggio pendolare.

Le carcasse dei riduttori della gamma a vite senza fine hanno forma quadrata, consentendo una notevole flessibilità di installazione.  
I piedi sono incorporati alla carcassa ed i riduttori sono idonei per montaggio su pavimento, soffitto e pareti laterali.  
La versatilità e flessibilità del montaggio è uno dei reali punti di forza di questa gamma.  
Come opzioni, SATI offre anche una vasta gamma di **flange in uscita**, che possono essere montate sul lato destro o sinistro dell'uscita riduttore.  
Nelle pagine di catalogo dedicate ad ogni singola grandezza, è possibile prendere visione del numero e delle dimensioni delle flange uscita disponibili.

I due stadi dei riduttori combinati sono accoppiati fra di loro mediante flangia di combinazione ed albero di combinazione, il che rende particolarmente agevole e flessibile l'accoppiamento.

**MATERIALI E PROPRIETA'**

La carcassa dei riduttori dalla grandezza 25 fino alla grandezza 90 è costruita in **alluminio** da pressofusione.  
La carcassa dei riduttori dalla grandezza 110 alla grandezza 150 è costruita in **ghisa** grigia.  
Tutte le viti senza fine sono in acciaio legato da cementazione ad alta resistenza e sono cementate, temprate e sottoposte a rinvenimento di distensione.  
Le corone elicoidali sono in **bronzo** ad alta resistenza all'usura.  
Gli alberi lenti cavi sono in ghisa grigia.

**PUNTI DI FORZA DELLA GAMMA SATI**

I riduttori a vite senza fine sono i tipi di riduttore più versatili e flessibili e si prestano ad una vastissima gamma di possibili applicazioni.  
I riduttori della gamma SATI hanno il grande vantaggio di essere facili da installare e disinstallare, nei quali le esigenze di manutenzione sono veramente ridotte al minimo.  
Efficienti e robusti, si adattano ad ogni condizione di impiego che rientri nelle relative specifiche di funzionamento.

*The **standard output shafts**, also called **low speed shafts**, are hollow. Single and double solid output shafts can be supplied as accessories, as well as the **torque arm** for shaft-mounting.*

*The housings of the worm gearboxes have a square shape, permitting high installation flexibility. The feet are incorporated into the housing and the gearboxes are ideal for mounting on the floor, ceiling and side walls. Assembly versatility and flexibility is one of the actual strong points of this range. As options, SATI can also offer a **wide range of output flanges**, which can be fitted on the right or left side of the gearbox output. You can look at the number and size of the available output flanges for each size on the pages in the catalogue devoted to each size.*

*The combination gearboxes are mutually fitted by means of a combination flange and a combination shaft, which makes fitting particularly easy and flexible.*

**MATERIALS AND PROPERTIES**

*The housing of the gearboxes from size 25 up to size 90 is made of pressure die casting aluminium. The housing of the gearboxes from size 110 up to size 150 is made of **grey cast iron**. All worms are made of high strength, case-hardening alloy steel and are case-hardened, hardened and subjected to stress relieving. The helical wormwheels are made of high wear resistant **bronze**. The hollow output shafts are made of grey cast iron.*

**STRONG POINTS OF THE SATI RANGE**

*The worm gearboxes are the most versatile and flexible types of gearboxes and prove to be ideal for a wide range of possible applications. The gearboxes in the SATI range have the great advantage of being easy to install and uninstall, where maintenance needs are really minimal. Strong and efficient, they adapt to all conditions of use within their operating specifications.*

## Presentazione gamma SATI / SATI range presentation



VTS..P



VES...P



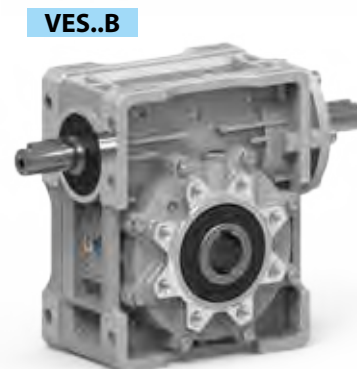
VES..P



VTS..P



VTS..F



VES..B

SATI ha il piacere di presentare la sua nuova gamma di riduttori a vite senza fine VTS che entra a far parte della vasta gamma di prodotti per la trasmissione del moto.

**I riduttori a vite senza fine SATI VTS** sono disponibili nella versione tonda e quadra:

- **riduttori a vite senza fine semplici**, costituiti da un singolo stadio di riduzione tramite coppia vite senza fine/corona elicoidale, con **rapporti di riduzione compresi fra 7:1 e 100:1**.  
La gamma di riduttori a vite senza fine semplici consta di 3 grandezze con corpo tondo (**030 - 044 - 049**) e 3 grandezze a corpo quadro (**063 - 075 - 086**).
- **a richiesta riduttori a vite senza fine con precoppia**, ovvero provvisti di un ulteriore stadio di riduzione ad ingranaggi elicoidali, situato a monte del riduttore. Le grandezze della precoppia sono 4 (**63-71-80-90**), che possono essere accoppiate a più grandezze di riduttori, come riportato nelle tabelle che seguono. **I rapporti di riduzione sono compresi tra 73.5/1 e 300/1**.
- **riduttori combinati a vite senza fine**, costituiti da due riduttori accoppiati in cascata fra di loro, ovvero disposti in serie l'uno dopo l'altro, in modo tale che il rapporto di riduzione totale del combinato sia pari al prodotto dei rapporti dei due stadi singoli accoppiati. **I rapporti di riduzione sono compresi tra 49/1 e 10000/1**.

Tutti i riduttori singoli e combinati sono disponibili tanto con entrata PAM, ovvero predisposta per accoppiamento diretto del motore elettrico, quanto con entrata albero maschio sporgente per accoppiamento ad una trasmissione in entrata.

La designazione dei prodotti, come apparirà chiaramente anche nelle tabelle che seguono, è la seguente:

- **VTS** riduttore singolo con predisposizione **PAM**
- **VES** riduttore singolo con **entrata albero maschio**
- **VKS** riduttore **combinato** con predisposizione **PAM**
- **VKE** riduttore **combinato** con **entrata albero maschio**
- **VRT** riduttori a vite senza fine con **precoppia** fornito nella sola versione con predisposizione **PAM**

La ragione per la quale i riduttori con precoppia sono forniti esclusivamente in versione PAM è che lo stadio di precoppia funge a tutti gli effetti pratici da stadio di riduzione in entrata, alla stessa stregua delle trasmissioni meccaniche, per cui l'eventuale impiego di una trasmissione in entrata risulta superfluo.

A complemento dei riduttori SATI propone ai suoi clienti anche i **motori elettrici asincroni trifase**, a singola velocità, nelle versioni a 2, 4 e 6 poli,

SATI is pleased to introduce its new range of worm gearboxes, which joins its wide range of power transmission products.

Worm gearboxes **SATI VTS** are available in the round and square version:

- **single worm gearboxes**, consisting of a single reduction stage through a worm/helical wormwheel pair, with **reduction ratios between 7/1 and 100/1**.  
The range of single worm gearboxes consists of 3 sizes with round body (**030 - 044 - 049**) and 3 sizes with square body (**063 - 075 - 086**).
- **Upon request helical worm gearboxes**, which have an additional reduction stage with helical gears, a pre-stage, located upstream of the gearbox. The pre-stage consists of 4 sizes (63-71-80 and 90), which can be fitted with a certain number of gearbox sizes, as stated in the following tables. The reduction ratios of the helical worm gearboxes range from **73.5/1 to 300/1**.
- **combination worm gearboxes**, consisting of two gearboxes fitted in cascade one after the other, that is to say arranged in series one after the other, in such a way that the total reduction ratio of the combination unit is equal to the product of the individual ratios of the two mutually connected single stages. The reduction ratios of the combination gearboxes range from **49/1 to 10000/1**.

All single and combination gearboxes are available both with PAM input, in other words ready for direct connection to the electric motor, and with the extended solid input shaft for connection to an input transmission.

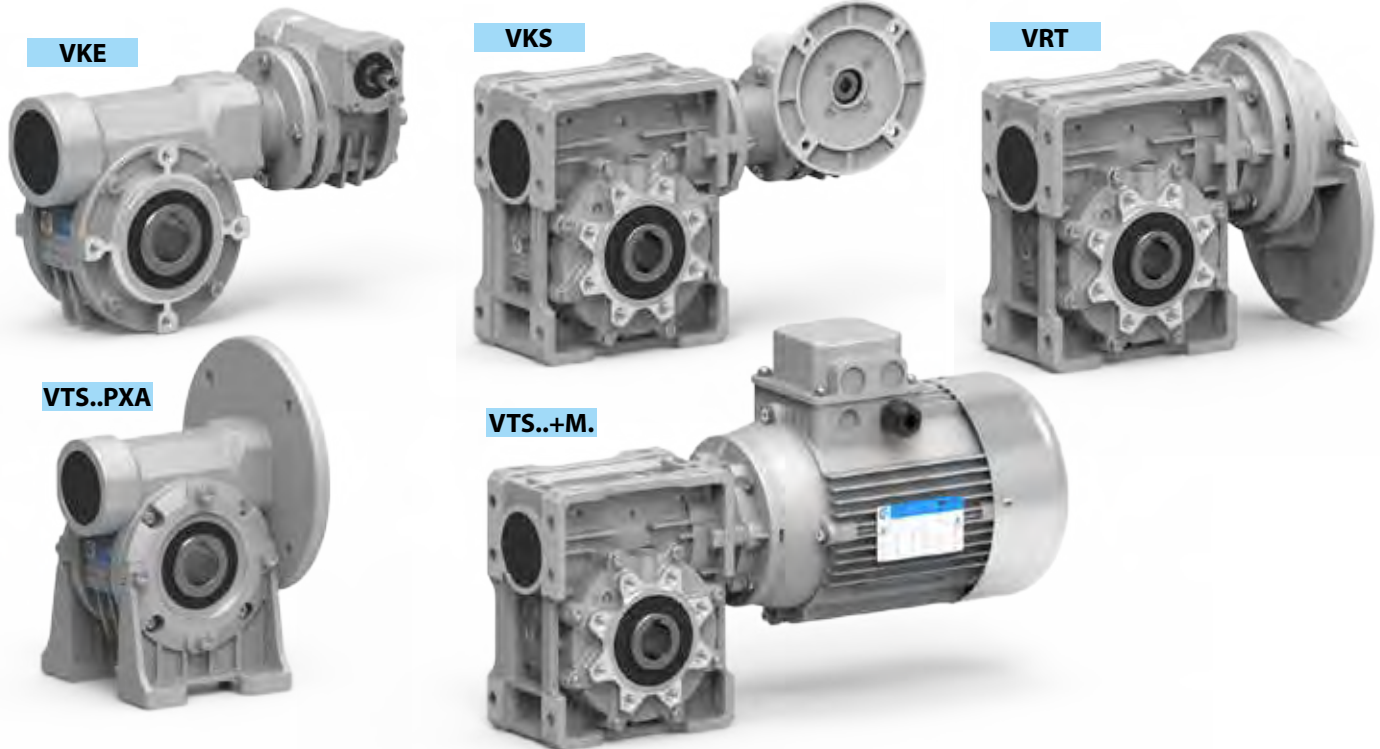
Product designation, as is also clearly shown in the tables below, is as follows:

- **VTS** single gearbox, with **PAM pre-arrangement**
- **VES** single gearbox with **solid input shaft**
- **VKS** combination gearbox, with **PAM pre-arrangement**
- **VKE** combination gearbox with **solid input shaft**
- **VRT** helical worm gearboxes supplied only in the **PAM** version

The reason why the helical worm gearboxes are supplied only in the PAM version is that the pre-stage acts, to all practical effects, as an input reduction stage, in the same way as a mechanical transmission, so that the usage of an input transmission is meaningless.

In addition to its gearboxes, SATI offers its customers a range of three-phase asynchronous single-speed electric motors, in versions with 2, 4 and 6 poles, in

**Presentazione gamma SATI / SATI range presentation**



in forma flangiata B5 o B14 dalla grandezza IEC 56 fino alla grandezza IEC 160, per accoppiamento diretto ai riduttori o, in alternativa, in forma con piedi B3.

Gli **alberi uscita standard**, chiamati anche alberi lenti o a bassa velocità, sono cavi.

Come accessori, sono fornibili **alberi uscita maschi semplici e doppi**, oltreché il **braccio di reazione** per montaggio pendolare.

Le carcasce dei riduttori della gamma a vite senza fine gr. 063, 075 e 086 hanno forma quadra, consentendo una notevole flessibilità di installazione e pertanto idonei per montaggio su pavimento, soffitto e pareti laterali.

**Le gr. 030, 044 e 049**, oltre alla versione standard, presentano la possibilità di montare i piedi direttamente sulla flangia pendolare consentendo il passaggio da una versione all'altra con grande facilità.

La versatilità e flessibilità del montaggio è uno dei reali punti di forza di questa gamma.

Come opzioni, SATI offre anche una vasta gamma di **flange in uscita**, che possono essere montate sul lato destro o sinistro dell'uscita riduttore.

I due stadi dei riduttori combinati sono accoppiati fra di loro mediante flangia di combinazione ed albero di combinazione, il che rende particolarmente agevole e flessibile l'accoppiamento.

**PRINCIPALI CARATTERISTICHE**

Le principali caratteristiche della gamma SATI VTS sono:

- carcasce e flange realizzate in alluminio di alta qualità, verniciatura epossidica.
- elevate coppie in uscita
- funzionamento a basso impatto acustico
- elevata capacità di smaltimento calore
- design ricercato, lunga durata e ridotto ingombro
- facilità di manutenzione
- intercambiabilità elevata
- viti senza fine in acciaio legato cementato, temprato con rinvenimento di distensione
- corone elicoidali in bronzo ad elevata resistenza
- alberi cavi in ghisa grigia

**PUNTI DI FORZA DELLA GAMMA SATI**

I riduttori a vite senza fine sono i tipi di riduttore più versatili e flessibili e si prestano ad una vastissima gamma di possibili applicazioni.

I riduttori della gamma SATI hanno il grande vantaggio di essere facili da installare e disinstallare.

Lubrificati a vita non necessitano di manutenzione.

Efficienti e robusti, si adattano ad ogni condizione di impiego che rientri nelle relative specifiche di funzionamento.

B5 or B14 flanged version, size IEC 56 up to size IEC 160, for direct connection to the gearboxes or, alternatively, the foot-mounting B3 version.

The **standard output shafts**, also called **low speed shafts**, are hollow.

Single and double solid output shafts can be supplied as accessories, as well as the **torque arm** for shaft-mounting.

The housings of worm gearboxes of sizes 063, 075 and 086 have a square shape, thus featuring high installation flexibility and enabling the mounting on the floor, to the ceiling and hanging on side walls.

**The sizes 030, 044 and 049**, in addition to the standard version, can be fitted with removable feet mounted directly on the gearbox body thus enabling a smooth changeover from one version to another.

Assembly versatility and flexibility is one of the actual strong points of this range.

As options, SATI can also offer a **wide range of output flanges**, which can be fitted on the right or left side of the gearbox output.

You can look at the number and size of the available output flanges for each size on the pages in the catalogue devoted to each size.

The combination gearboxes are mutually fitted by means of a combination flange and a combination shaft, which makes fitting particularly easy and flexible.

**MATERIALS AND PROPERTIES**

The main features of SATI VTS range can be summarized as follows:

- housings and flanges made of high quality, low weight epoxy painted aluminum
- high output torques
- low-noise running
- high heat dissipation capacity
- stylish look, long life and compact design
- easy maintenance
- high interchangeability
- worms in alloy steel, case hardened and hardened with tempering
- helical wormwheels in high-resistance bronze
- hollow shafts in grey cast iron

**STRONG POINTS OF THE SATI RANGE**

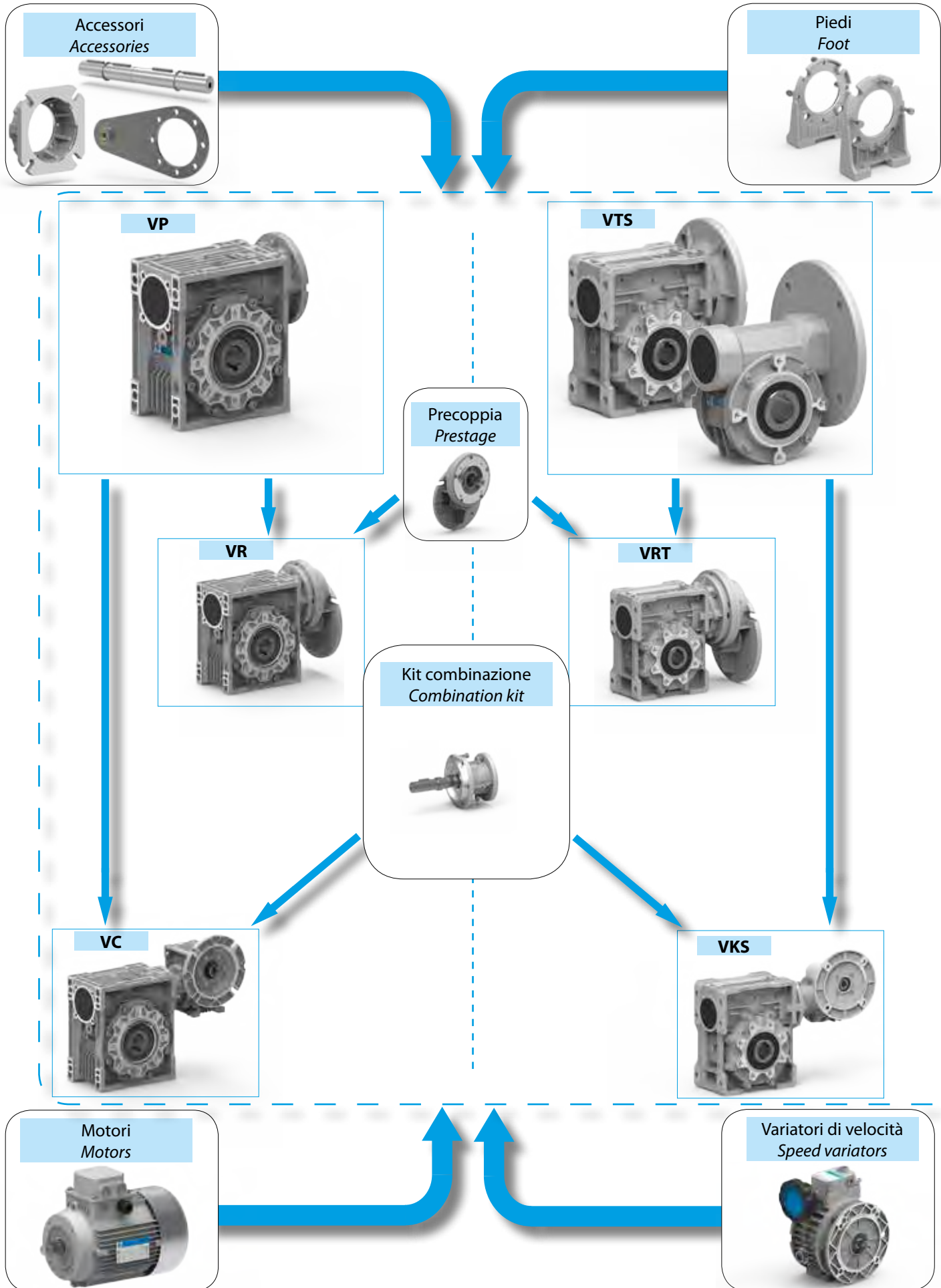
The worm gearboxes are the most versatile and flexible types of gearboxes and prove to be ideal for a wide range of possible applications.

The gearboxes in the SATI range have the great advantage of being easy to install and uninstall, where maintenance needs are really minimal.

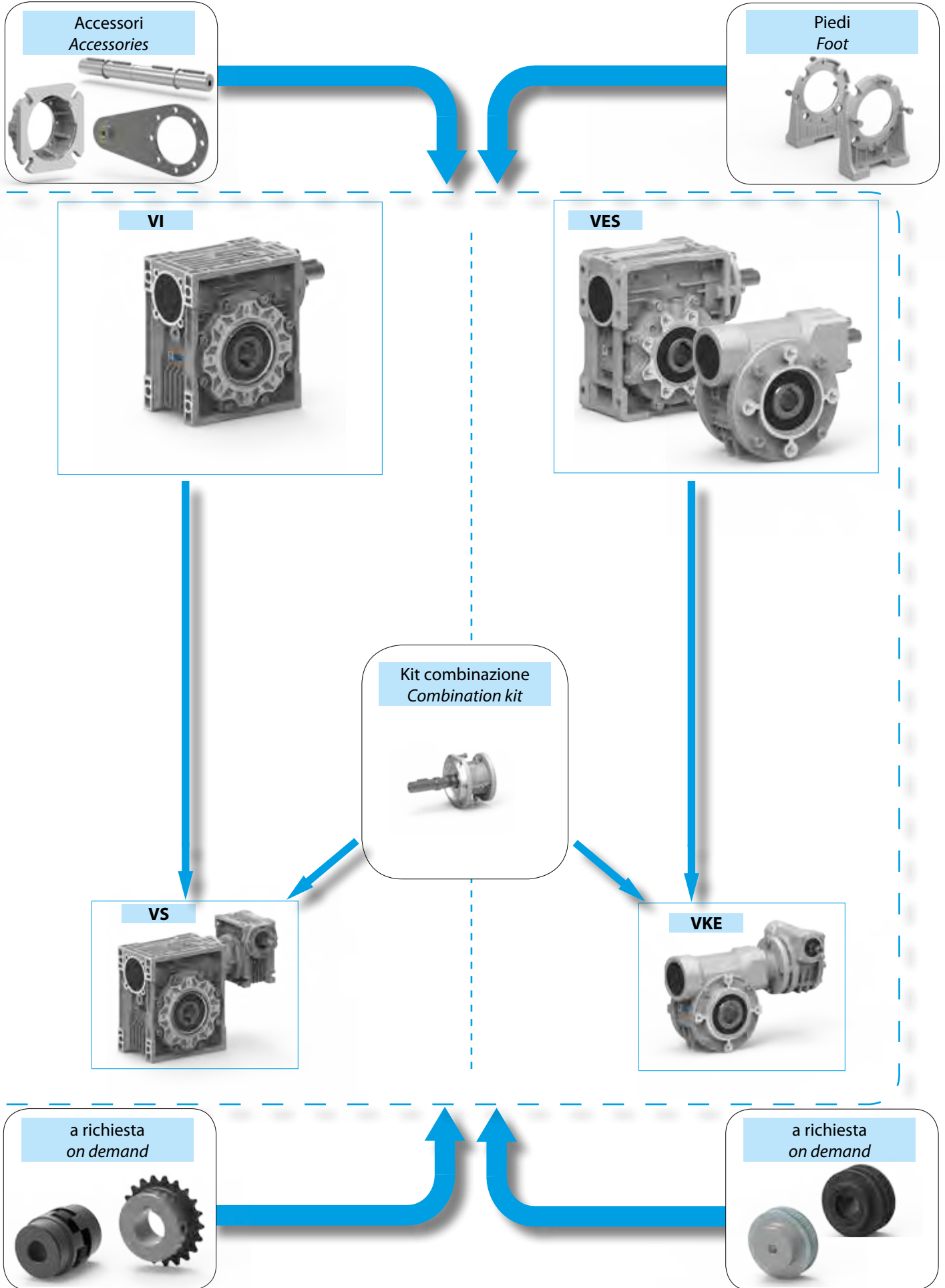
Strong and efficient, they adapt to all conditions of use within their operating specifications.



Presentazione gamma SATI / SATI range presentation

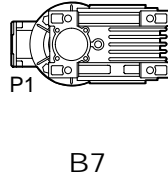
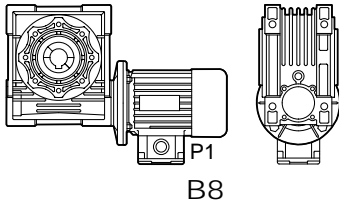
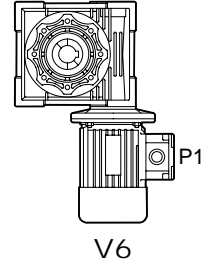
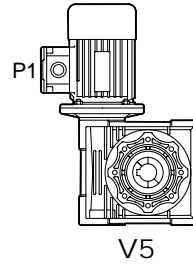
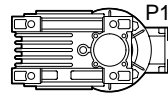
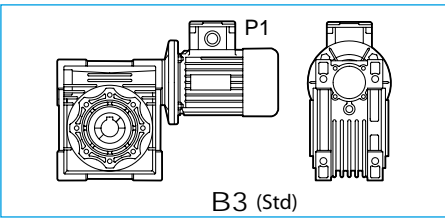


Presentazione gamma SATI / SATI range presentation

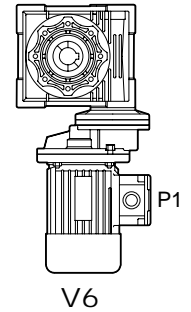
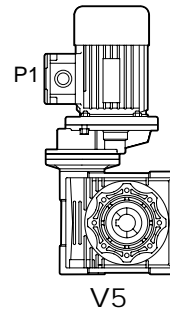
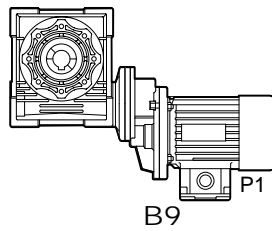
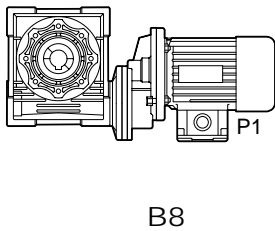
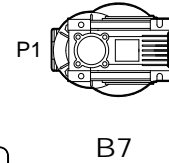
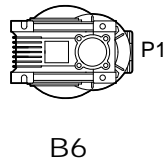
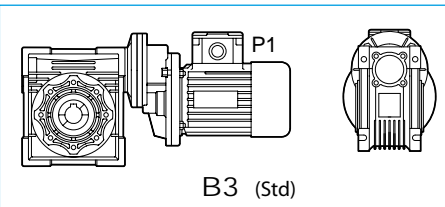


**Posizioni di montaggio / Mounting positions**

**VP / VI - VTS / VES**

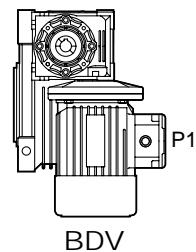
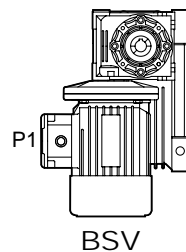
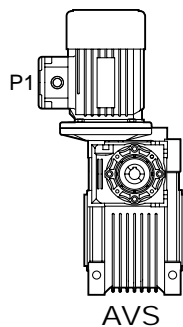
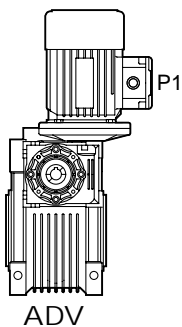
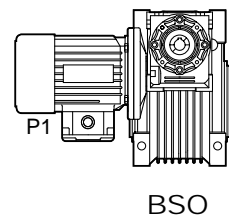
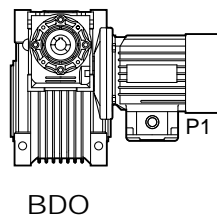
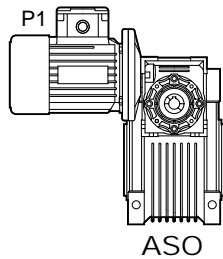
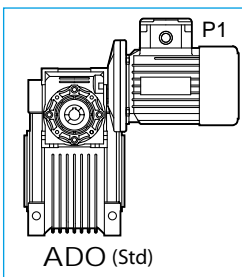


**VR - VRT**

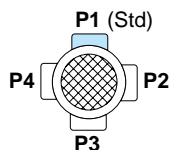


**Esecuzione / Versions**

**VC / VS - VKS / VKE**



Negli schemi di montaggio del motoriduttori sopra riportati, è indicata anche la posizione standard (1) della morsettiera mediante un numero il cui significato è rappresentato nel disegno seguente. In caso di particolari esigenze specificare in fase d'ordine la posizione desiderata (P1, P2, P3 o P4) della morsettiera.



The following draw, describing the gearmotor mounting positions, shows also the standard position (1) of the terminal box. It can be identified by a number, whose meaning is described in the following drawing. For special requirements, orders must specify the position required (P1, P2, P3 or P4) of the terminal box.

Nel caso dei riduttori combinati sono importanti tanto l'esecuzione quanto la posizione di montaggio. L'esecuzione rappresenta la posizione reciproca che i due riduttori hanno uno rispetto all'altro. Nelle immagini che definiscono le varie forme di esecuzione, il riduttore è sempre rappresentato in posizione di montaggio B3. Per quel che riguarda invece la posizione di montaggio, essa fa esplicito riferimento al secondo riduttore, quello situato a valle. Le varie posizioni di montaggio (indicate con le sigle B3, V5 ecc..) si riferiscono a detto riduttore e sono conformi a quanto indicato nelle tabelle delle posizioni di montaggio dei riduttori singoli.

In the specific case of combination worm gearboxes, both the version and the mounting position have a great importance. The version means the mutual position the two single worm gearboxes have in relation one with the other. In the sketches that define the several possible versions, the combined unit is always shown in the mounting position B3. On the other hand, as far as the mounting position is concerned, this one makes explicit reference to the second worm gearbox, the one located downstream. The various mounting positions (indicated by the descriptions B3, V5 etc..) refer to said unit and wholly conform to what is stated in the tables of the mounting positions of the single worm gearboxes.

### Lubrificazione / Lubrication

Tutti i riduttori a vite senza fine SATI sono forniti completi di lubrificante. Dalla grandezza 25 fino alla 90 i riduttori sono lubrificati con olio sintetico e non necessitano di manutenzione; per questa ragione sono definiti riduttori "lifetime".

All SATI gearboxes are supplied complete with lubricant. From size 25 to 90, the gearboxes are lubricated with synthetic oil and do not require any maintenance; for this reason, they are called lifetime gearboxes.

Queste grandezze non richiedendo manutenzione e sono prive di tappi. Dalla grandezza 110 alla 150 i riduttori sono lubrificati con olio minerale e vengono forniti completi di lubrificante nella quantità prevista in posizione di montaggio B3. In caso di posizione di montaggio diversa dalla B3, sarà compito del cliente adattare la quantità di olio alla posizione di montaggio (v. tab. precedenti). 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 sfato fornito a corredo del riduttore stesso. La mancata installazione del tappo di sfato può portare ad un malfunzionamento del riduttore e a possibili perdite di lubrificante.

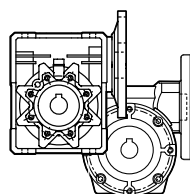
These maintenance-free sizes have no plugs. From size 110 to 150, the gearboxes are lubricated with mineral oil and are supplied with the required oil amount for the mounting position B3. For mounting positions other than B3, it will be the responsibility of the customer to adjust the oil amount to the needs of the specific mounting position (see previous tab.). It is also necessary, at the time of installation of the gearbox, to replace the filler plug, supplied closed for reasons of transport, with the breather plug supplied with the gearbox itself. Failure to install the breather plug can lead to gearbox malfunctioning and possibly oil leakage.

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 tabelle precedenti sono riportate le quantità indicative di lubrificante contenute nei singoli riduttori in funzione delle posizioni di montaggio. 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).

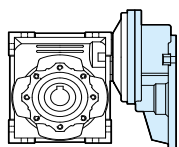
It will also be necessary to remember to install the level and unloading plugs in the correct place for the specific mounting position. For sizes from 110 to 150, after the running-in phase (approximately 300 hours of operation) we recommend changing the oil. The above tables give the approximate amounts of lubricant contained in the single gearboxes according to the mounting positions. When changing the oil or topping up, always remember to check that the lubricant reaches the correct level by looking through the window in the level plug (the correct level is in the centre).

Taglia / Size	025 ÷ 090	110 ÷ 150
Lubrificante / Lubricant	Olio sintetico / Synthetic oil	Olio minerale / Mineral oil
°C Ambiente / Ambient	-25 ° / +50 °C	-5 ° / +40 °C
ISO	VG 320	VG 220
ENI	TELIUM VSF320	BLASIA 220
SHELL	OMALA S4 WE 320	OMALA S2 G 220
MOBIL	SHC 632	MOBILGEAR 630
BP	ENERGOL SG-XP320	ENERGOL GR-XP220
CASTROL	ALPHASYN T320	ALPHA SP 220

### Quantità olio / Quantity of oil



Taglia riduttore Gearbox size	025	030	040	044	049	050	063	075	086	090	110	130	150
Posizioni di montaggio Mounting position	B3	VP	VP	VTS	VP	VTS	VTS	VP	VTS	VP	VTS	VP	VP
	B8												
	B9												
	B6 - B7	0.02	0.04	0.035	0.08	0.055	0.09	0.15	0.30	0.25	0.55	0.50	0.73
	V5										1.00		
	V6											3.00	4.50



Taglia precoppia Prestage size	063	071	080	090
	0.05	0.07	0.15	0.15

Q.tà olio in litri  
Oil quantity in litres

### Controllo del livello e cambi dell'olio / Level check and oil change

Sono richiesti e necessari solamente per i riduttori lubrificati con olio minerale (taglie 110, 130 e 150)

In linea di massima, si consiglia di provvedere al cambio dell'olio con la seguente frequenza;

- Temperatura operativa minore o uguale a 60 °C:

servizio continuo: 5000 ore

servizio intermittente: 8000 ore

- Temperatura operativa maggiore di 60 °C:

servizio continuo: 2500 ore

servizio intermittente: 5000 ore

Gli attuali riduttori non richiedono più come requisito indispensabile il cambio dell'olio dopo un periodo iniziale di rodaggio.

*These actions are needed only for gearboxes lubricated with mineral oil (size 110, 130 and 150).*

*Generally, it is advisable to change the oil with the following frequency:*

*- Operating temperature below 60°C*

*continuous service: 5000 hours*

*intermittent service: 8000 hours*

*- Operating temperature above 60°C*

*continuous service: 2500 hours*

*intermittent service: 5000 hours*

*The current gearboxes no longer require an oil change as a prerequisite after an initial run-in period.*

### Simbologia / Symbols

$n_1$	[min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>
$n_2$	[min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>
$i$		Rapporto di riduzione / <i>Ratio</i>
$Mm_2$	[Nm]	Coppia massima in uscita / <i>Max output torque</i>
$M_2$	[Nm]	Coppia trasmessa / <i>Output torque</i>
$Mr_2$	[Nm]	Coppia richiesta / <i>Required torque</i>
$Pm_1$	[kW]	Potenza massima in entrata / <i>Max input power</i>
$Pm_2$	[kW]	Potenza massima in uscita / <i>Max output power</i>
$Pn_1$	[kW]	Potenza nominale in entrata / <i>Nominal input power</i>
$Rd$		Rendimento dinamico / <i>Dynamic efficiency</i>
$Rs$		Rendimento statico / <i>Static efficiency</i>
$fs$		Fattore di servizio / <i>Service factor</i>
$Fr_1$	[N]	Carico radiale ammissibile in entrata / <i>Permitted input radial load</i>
$Fa_1$	[N]	Carico assiale ammissibile in entrata / <i>Permitted input axial load</i>
$Fr_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$Fa_2$	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>

### Introduzione / Introduction

La corretta selezione dei riduttori a vite senza fine avviene seguendo la successione degli argomenti esposti in questo catalogo. Di seguito vengono indicati i principali aspetti correlati delle relative indicazioni.

*To select the worm gearboxes correctly, please follow the sequence of topics covered in this catalogue. Here are the main aspects along with the relevant information.*

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

#### Velocità entrata / Input speed

Indica la velocità in entrata al riduttore vite senza fine.

Dipende dal tipo di motorizzazione prescelta.

Le velocità in ingresso si riferiscono all'impiego nei paesi in cui la frequenza della corrente alternata è 50 Hz.

Per valori di velocità diversi da quelli riportati in questo documento, contattare servizio tecnico Sati.

*This indicates the worm gearbox input speed.*

*It depends on the type of motor drive selected.*

*The input speeds relate to use in countries where the alternate current frequency is 50 Hz.*

*For speed values other than those stated in this document, please contact the Sati technical service.*

#### $i$

#### Rapporto di riduzione / Reduction ratio

In generale, esso dipende dal numero di denti degli ingranaggi accoppiati. Nel caso di riduttori a vite senza fine, però, il rapporto di riduzione si ottiene dividendo il numero di denti della corona elicoidale per il numero di filetti, o principi, della vite.

Viene definito dalla seguente relazione:

*Generally speaking, it depends on the number of teeth of the matching gears.*

*In the case of worm gearboxes, however, the reduction ratio is obtained by dividing the number of teeth of the helical wormwheel by the number of threads, or starts, of the worm.*

*It is defined by the following equation:*

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

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

**Velocità in uscita / Output speed**

Indica la velocità in uscita al riduttore vite senza fine.  
Si ricava dalla relazione precedente:

*This indicates the worm gearbox output speed.  
It is obtained from the previous equation:*

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

**$Mm_2$  (Nm)**

**Coppia massima in uscita / Max output torque**

Indica la coppia in uscita massima trasmissibile dal riduttore considerando un funzionamento con servizio di carico continuo uniforme, corrispondente ad un fattore di servizio pari a 1, riferito ad un determinato valore di velocità  $n_1$ .  
Tale valore corrisponde al valore di coppia trasmessa dalla versione riduttore (albero sporgente in ingresso) e può essere relazionata alla coppia trasmessa  $M_2$  tramite la seguente formula:

*This indicates the maximum output torque that can be transmitted by the gearbox considering operation with a service of continuous uniform load, corresponding to a service factor of 1, relating to a specific speed value  $n_1$ .*

*This value corresponds to the torque transmitted by the gearbox version (extended solid input shaft) and may be related to the transmitted torque  $M_2$  using the following formula:*

$$Mm_2 = M_2 \cdot fs$$

**$M_2$  (Nm)**

**Coppia trasmessa / Output torque**

Indica la coppia in uscita trasmessa dal riduttore.  
Dipende dalla velocità  $n_1$ , dalla potenza  $P_1$  applicata in ingresso al riduttore (nel caso del motoriduttore  $P_1 = Pn_1$ ) e dal rendimento dinamico  $Rd$ .  
Può essere ricavata dalla seguente relazione:

*This indicates the output torque transmitted by the gearbox.  
It depends on the speed  $n_1$ , the power  $P_1$  applied at the gearbox input (for gear-motor  $P_1 = Pn_1$ ) and the dynamic efficiency  $Rd$ .  
It can be obtained from the following equation:*

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

**$Mr_2$  (Nm)**

**Coppia richiesta / Required torque**

Indica la coppia richiesta dall'applicazione in uscita al riduttore.  
E' un valore che deve essere calcolato in funzione dei dati dell'applicazione o che comunque l'utilizzatore del riduttore deve conoscere.

*This indicates the torque required by the application at the gearbox output.  
It is a value to be calculated as a function of the application data or data that the gearbox user must know.*

**$Pm_1$  (kW)**

**Potenza massima in entrata / Max input power**

Indica la massima potenza applicabile in ingresso al riduttore considerando un funzionamento con servizio di carico continuo uniforme, corrispondente ad un fattore di servizio pari a 1, riferito ad un determinato valore di velocità  $n_1$ .  
Tale valore corrisponde al valore massimo di potenza applicabile in ingresso nella versione riduttore (albero sporgente in ingresso).

*This indicates the maximum applicable gearbox input power considering operation with a service of continuous uniform load, corresponding to a service factor of 1, relating to a specific speed value  $n_1$ .*

*This value corresponds to the maximum applicable input power value in the gearbox version (extended solid input shaft).*

**$Pm_2$  (kW)**

**Potenza massima in uscita / Max output power**

Indica la massima potenza trasmessa in uscita al riduttore.  
Si ricava dalle relazioni seguenti:

*This indicates the maximum transmitted gearbox output power.  
It is obtained from the following equations:*

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

$$Pm_2 = Pm_1 \cdot Rd$$

## **$P_{n1}$ (kW)**

## **Potenza nominale in entrata / Rated input power**

Indica la potenza nominale del motore applicato in ingresso al riduttore.

*This indicates the rated power of the motor applied to the gearbox input.*

## **Rd / Rs**

## **Rendimento / Efficiency**

**Rd:** rappresenta il rendimento dinamico, definito dal rapporto tra la potenza in uscita  $P_2$  e quella in entrata  $P_1$  al riduttore.

Le prestazioni dei riduttori sono state determinate considerando il valore di Rd il cui valore ottimale si raggiunge nel funzionamento a regime, successivo alla fase di rodaggio.

**Rs:** rappresenta il rendimento statico presente in fase di avviamento.

Al fine della corretta selezione del riduttore da impiegare, nel caso di applicazioni in cui non si raggiungono mai le condizioni di funzionamento a regime (es. sollevamenti), è importante declassare le prestazioni del riduttore in uscita utilizzando Rs.

Nella tabella della pagina seguente sono riportati i valori dei rendimenti riferiti ai diversi rapporti di riduzione. Nel caso di Rd, i valori sono riferiti a  $n_1 = 1400$  rpm

**Rd:** represents the dynamic efficiency, which is defined by the ratio of the gearbox output power  $P_2$  to the gearbox input power  $P_1$ .

The performance of the gearboxes has been determined considering the value of Rd, whose optimal value is reached at steady operation stage, after completion of the running-in period.

**Rs:** represents the static efficiency in the start-up phase.

In order to properly select the gearbox to be used, in the case of applications that never reach steady operating conditions (e.g. lifting), it is important to downgrade the performance of the output gearbox by using Rs. In practice, performance rates are downgraded by using the ratio between Rs and Rd.

The table on the next page gives the values of the efficiencies referred to different reduction ratios. In the case of Rd, the values are referred to  $n_1 = 1400$  rpm

## **Irreversibilità / Irreversibility**

Strettamente legata al valore del rendimento (dinamico e statico) è l'irreversibilità del riduttore vite senza fine che consiste nell'impossibilità di porre in rotazione l'albero entrata del riduttore tramite l'applicazione di una coppia sull'albero uscita. Il livello di difficoltà con cui l'albero entrata viene posto in rotazione determina il grado di irreversibilità di un riduttore. Questo aspetto del funzionamento dei riduttori a vite senza fine cresce con l'aumentare del rapporto di riduzione (strettamente legato al rendimento) e dipende da più fattori (es. lubrificazione, presenza di vibrazioni, temperatura, ecc) e nel caso di un'applicazione in cui è richiesto un non ritorno del carico è comunque necessario dotare l'applicazione di un altro dispositivo frenante esterno perché il vite senza fine non garantisce da solo l'assoluta assenza di movimento.

Closely tied to the efficiency value (dynamic and static ones), there is the irreversibility of the worm gearbox, that consists in the inability of putting the gearbox input shaft in rotation by applying a torque on the output shaft. The level of difficulty by which the input shaft is put in rotation gives rise to the degree of irreversibility of a gearbox.

This aspect of the operation of worm gearboxes increases as the reduction ratio increases (closely related to the efficiency) and depends on several factors (e.g. lubrication, vibrations, temperature etc.) and in the case of an application that requires no return of the load, it is anyway necessary to equip the application with an additional outer braking device, because the worm alone does not assure the absolute absence of movement.

## **Irreversibilità dinamica / Dynamic irreversibility**

Rappresenta la capacità di sostegno del carico in caso di arresto o assenza dell'azione motrice.

Tale condizione è di difficile ottenimento in quanto influenzata da eventuali vibrazioni che il carico può generare e dal tipo di applicazione stessa. Nella tabella sottostante sono indicati i vari gradi di irreversibilità dinamica:

*This represents the ability to support the load when stopping or when there is no driving action.*

*This condition is difficult to obtain, since it is affected by the presence of any vibrations that the load might generate, as well as by the type of application.*

*The table below shows the varying degrees of dynamic irreversibility:*

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

## **Irreversibilità statica / Static irreversibility**

Rappresenta la capacità di impedimento alla rotazione indotta dall'albero uscita senza però escludere possibili rotazioni lente nel caso in cui il carico sia sottoposto o generi vibrazioni.

Nella tabella sottostante sono indicati i vari gradi di irreversibilità statica:

*It refers to the ability of prevention of the rotation induced by the output shaft, without anyway excluding possible low speed rotations just in case the load is subject to or generates vibrations.*

*In the table below, the various degrees of static irreversibility are given:*

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

Rendimento statico Rs / Rs static efficiency

i	025			030			040			044			049			050			063			075			086			090			110			130			150		
	VP	VP	VTS	VP	VP	VTS	VP	VP	VTS	VP	VP	VTS	VP	VP	VTS	VP	VP	VTS	VP	VP	VTS	VP	VP	VTS	VP	VP	VTS	VP	VP	VTS	VP	VP	VTS	VP	VP	VTS			
R5	0.71	0.71	-	0.72	-	-	0.73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
R7	-	-	0.68	-	0.70	0.69	-	0.69	-	0.69	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70					
R7.5	0.70	0.66	-	0.69	-	-	0.69	0.70	-	0.69	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70	-	0.70						
R10	0.67	0.62	0.63	0.65	0.65	0.63	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65						
R12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R14	-	-	-	-	-	0.59	0.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R15	0.60	0.54	0.55	0.58	-	-	0.58	0.59	0.58	0.60	0.58	0.58	0.60	0.58	0.58	0.60	0.58	0.58	0.60	0.58	0.58	0.60	0.58	0.58	0.60	0.58	0.63	0.62	0.62	0.62	0.66	0.66							
R18	-	-	-	-	-	0.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R20	0.55	0.50	0.50	0.53	0.53	-	0.54	0.54	-	0.57	0.55	0.58	0.59	0.61	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60						
R23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R24	-	-	-	-	-	0.49	-	-	-	0.50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R25	-	0.43	-	0.50	-	-	0.50	0.50	-	0.52	0.51	-	0.55	0.58	0.59	0.61	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60						
R28	-	-	-	-	0.43	0.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R30	0.46	0.39	0.40	0.44	-	-	0.44	0.45	0.42	0.46	0.43	0.43	0.49	0.48	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49						
R35	-	-	-	-	0.40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R36	-	-	-	-	-	0.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R38	-	-	-	-	-	-	-	-	-	0.39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R40	0.41	0.35	0.35	0.40	-	-	0.39	0.40	-	0.42	0.38	0.43	0.45	0.48	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46	0.46						
R45	-	-	-	-	-	0.34	-	-	-	0.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R46	-	-	-	-	0.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R50	0.36	0.31	-	0.36	-	-	0.35	0.36	-	0.38	0.35	-	0.41	0.44	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43	0.43						
R56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R60	0.34	0.27	0.28	0.32	0.30	0.28	0.32	0.33	-	0.35	0.32	-	0.38	0.41	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39						
R64	-	-	-	-	-	-	-	-	-	0.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R70	-	-	0.25	-	0.28	0.27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
R80	-	0.23	-	0.28	-	0.24	0.27	0.28	0.25	0.29	0.27	0.31	0.32	0.36	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34						
R100	-	-	-	0.24	0.23	0.21	0.23	0.24	0.22	0.26	0.24	0.27	0.28	0.32	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3						

fs

Fattore di servizio / Service factor

È un valore che prende in considerazione le varie condizioni di funzionamento dell'applicazione ed indica il sovradimensionamento da applicare ad un determinato riduttore per garantire la durata richiesta e resistenza agli urti. I valori dei fattori di servizio sono riportati 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 a quello individuato consultando la tabella seguente.

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

This value takes into account the different operating conditions of the application and indicates the oversizing to apply to a specific gearbox in order to ensure the required duration and the necessary impact strength.

The values of the service factors are given in the following table according to the type of load (A-B-C), the number of starts per hour and the duration of operation (hours/days).

The service factor value, determined in this way, must be compared with the value of the service factor assured by the gearbox chosen for the application (indicated in the technical data tables). The latter must be equal to or greater than the one determined by referring to the following table.

The values shown in the table refer to operation with an electric motor. When using a brake motor, it is necessary to consider twice the number of starts actually required.

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
<b>A</b> 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>B</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
<b>C</b> 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



## Carichi radiali / Radial loads

L'applicazione sull'albero entrata o uscita del riduttore di un qualsiasi tipo di organo di trasmissione (es. pignone, pulegge ecc.) determina delle spinte radiali ( $Fr_1$  su albero entrata,  $Fr_2$  su albero uscita) che, se non considerate, possono portare al danneggiamento del riduttore stesso. Il carico radiale esterno  $Fr$  agente sull'albero del riduttore è ricavabile dalla seguente relazione:

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

in cui:

- D (mm) = diametro primitivo dell'organo di trasmissione
- w = coefficiente dipendente da tipo di trasmissione
  - w = 1.1 ruota per ingranaggio
  - w = 1.4 ruota per catena
  - w = 1.5 - 2.5 puleggia per cinghia a V

where:

- D (mm) = pitch diameter of the transmission part
- w = coefficient dependent on transmission type
  - w = 1.1 wheel for gear
  - w = 1.4 wheel for chain
  - w = 1.5 - 2.5 pulley for V belt

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

$$Fr < Fr_1$$

I valori di  $Fr_1$  ed  $Fr_2$  riportati nelle tabelle dati tecnici sono riferiti a carichi agenti sulla mezzeria dell'albero sporgente. Nel caso in cui il carico sia applicato in una posizione diversa dalla mezzeria, è necessario valutarne l'effetto tramite le relazioni indicate nei paragrafi seguenti.

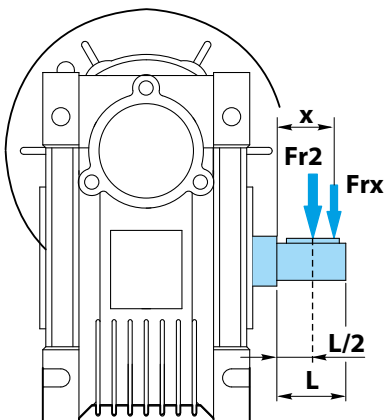
The radial load value obtained from the above equation is to be compared with the values of  $Fr_1$  (in case of input shaft) or  $Fr_2$  in case of output shaft, indicated in the gearbox technical data tables. The following equations must be satisfied:

$$Fr < Fr_2$$

The values of  $Fr_1$  and  $Fr_2$  given in the technical data tables refer to loads acting on the centre line of the extended shaft. If the load is applied at a position other than the centre line, its effect must be evaluated by using the equations given in the following paragraphs.

### Fr2 (N)

## Carichi radiali uscita / Output radial loads



VP / VI	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

VTS / VES	030	044	050	063	075	086
a (mm)	60	71	99	132	139	149
b (mm)	45	51	69	102	109	119
Fr2max (N)	1700	2500	3450	5000	6200	7000

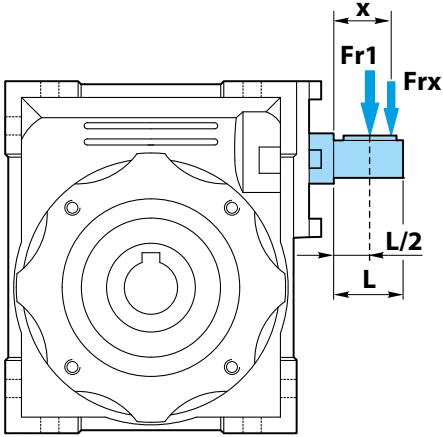
$$Fr_x = \frac{Fr_2 \cdot a}{(b + x)} < Fr_{2max}$$

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

$$Fr < Fr_x$$

## Fr<sub>1</sub> (N)

### Carichi radiali entrata / Input radial loads



VI / VS	030	040	050	063	075	090	110	130	150
a (mm)	86	106	129	159	192	227	266	314	350
b (mm)	76	94.5	114	139	167	202	236	274	310
Fr <sub>1max</sub> (N)	210	350	490	700	980	1270	1700	2100	2800

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

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

$$Fr < Fr_x$$

## Fa<sub>1</sub> ; Fa<sub>2</sub> (N)

### Carichi assiali / Axial loads

A seconda del tipo di applicazione, insieme al carico radiale può essere presente anche una forza Fa agente assialmente sull'albero (Fa<sub>1</sub> nel caso di albero entrata, Fa<sub>2</sub> nel caso di albero uscita).  
Il carico assiale massimo applicabile sull'albero è da considerare pari a:

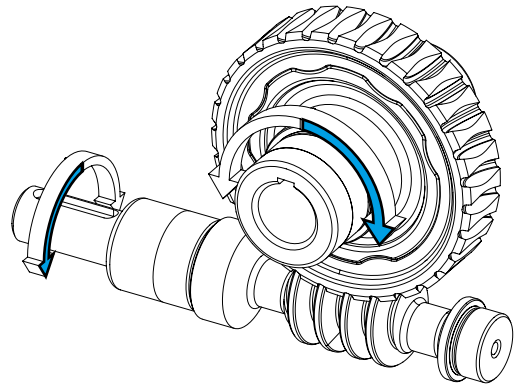
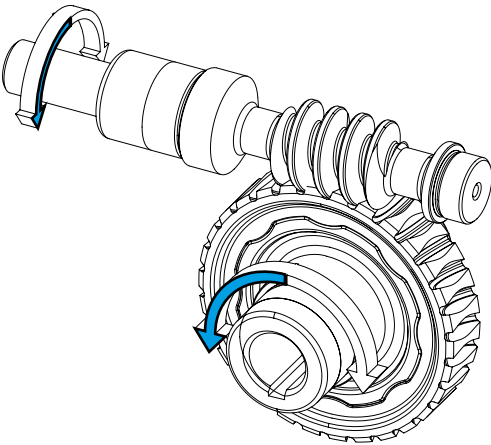
Depending on the type of application, along with the radial load there may also be a force Fa acting axially on the shaft (Fa<sub>1</sub> for the input shaft, Fa<sub>2</sub> for the output shaft).  
The maximum axial load applicable to the shaft is to be considered equal to:

$$Fa_1 = Fr_1 \cdot 0.2$$

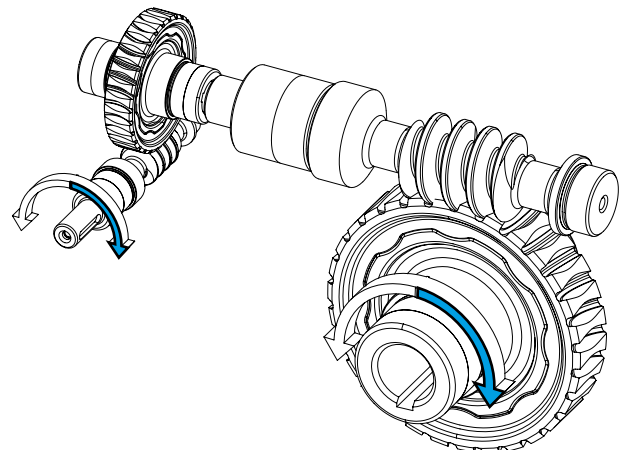
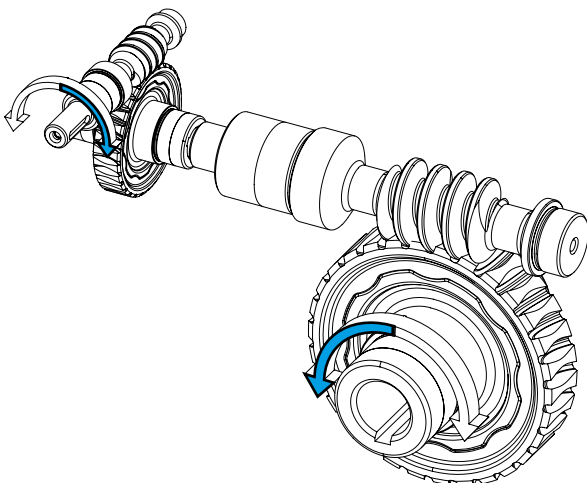
$$Fa_2 = Fr_2 \cdot 0.2$$

### Senso di rotazione / Direction of rotation

#### VP / VI - VTS / VES



#### VC / VS - VKS / VKE



## Selezione / Selection

Per definire il riduttore o motoriduttore idoneo per l'applicazione, come primo passo, è necessario individuare il valore del fattore di servizio  $f_s$  consigliato (consultando la relativa tabella) noti il ciclo di lavoro ed il tipo di carico.

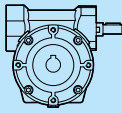
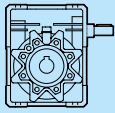
To define the suitable gearbox or gearmotor for the application, as a first step, it is necessary to identify the recommended service factor  $f_s$  (referring to the relevant table) knowing the operating cycle and the type of load.

## Scelta del riduttore / Selecting of gearbox

Nota la velocità in entrata al riduttore  $n_1$ , dalle tabelle dati tecnici riduttore riferite a  $n_1 = 1400 / 2800 / 900$  (min<sup>-1</sup>), si individuerà il prodotto che, in corrispondenza di un rapporto di riduzione prossimo a quello calcolato, ammetta una coppia:

Knowing the gearbox input speed  $n_1$  and using the gearbox technical data tables referring to  $n_1 = 1400 / 2800 / 900$  (min<sup>-1</sup>), you can identify the product that, at a reduction ratio close to the calculated one, permits a torque:

$$Mm_2 \geq Mr_2 \cdot f_s$$

				Grandezza / Size					
									
i	$n_1$	$n_2$		030	044	049	063	075	086
R7	2800	400.0	Mm <sub>2</sub> [Nm]	12	22	41	105	170	225
			Pm <sub>1</sub> [kW]	0.58	1.10	2.00	4.90	7.80	10.40
			Fr <sub>2</sub> [N]	510	950	950	1010	700	2930
			Fr <sub>1</sub> [N]	120	220	400	480	750	850
	1400	200.0	Mm <sub>2</sub> [Nm]	16	29	54	120	190	250
			Pm <sub>1</sub> [kW]	0.41	0.75	1.30	2.90	4.40	5.90
			Fr <sub>2</sub> [N]	630	1180	1170	1550	1530	3920
			Fr <sub>1</sub> [N]	140	220	400	480	750	850
	900	128.6	Mm <sub>2</sub> [Nm]	18	39	61	130	205	270
			Pm <sub>1</sub> [kW]	0.30	0.63	0.97	2.00	3.10	4.10
			Fr <sub>2</sub> [N]	730	1300	1370	1870	2120	4670
			Fr <sub>1</sub> [N]	150	220	400	480	750	850
500	71.4	Mm <sub>2</sub> [Nm]	20	45	74	140	225	295	
		Pm <sub>1</sub> [kW]	0.19	0.41	0.67	1.20	2.00	2.60	
		Fr <sub>2</sub> [N]	920	1610	1670	2420	2940	5890	
		Fr <sub>1</sub> [N]	150	220	400	480	750	850	

## Scelta del motoriduttore / Selecting of gearmotor

1 - Se è nota la potenza motore P (kW) da applicare in ingresso al riduttore e richiesta dall'applicazione, si può passare direttamente alla consultazione delle tabelle dati tecnici motoriduttori (v. p.to 2).  
In alternativa, se è nota la coppia richiesta in uscita dall'applicazione  $Mr_2$ , è necessario determinare la potenza motore P con la formula:

1 - Knowing the motor power P (kW) to be applied at the gearbox input and required by the application, you can directly refer to the technical data tables for the gearmotors (see point 2).

Alternatively, if the output torque required by the application  $Mr_2$  is known, it is necessary to determine the motor power P with the formula:

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

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

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

2 - Consultando le tabelle dei dati tecnici dei motoriduttori, individuare la motorizzazione in cui  $Pn_1$  risulti maggiore o uguale alla potenza  $P$  precedentemente calcolata. Con riferimento ad una velocità  $n_2$  prossima a quella desiderata, individuare la motorizzazione in cui il fattore di servizio  $fs$  indicato sia maggiore o uguale a quello ricavato all'inizio del processo di selezione.

2 - Referring to the technical data tables for the gearmotors, identify the motor drive where  $Pn_1$  is greater than or equal to the power  $P$  previously calculated. With reference to a speed  $n_2$  close to the one you want, identify the motor drive where the indicated service factor  $fs$  is greater than or equal to that obtained at the beginning of the selection process.

**ESEMPIO:**

Dati applicazione:

- $P = 0.25 \text{ kW}$
- $fs = 1.5$
- $n_2 = 70 \text{ (min}^{-1}\text{)}$

Motoriduttore selezionato:  
VTS 44 i=20 --  $Pn_1 = 0.25 \text{ kW}$  --  $fs = 1.5$

**EXAMPLE:**

Application data:

- $P = 0.25 \text{ kW}$
- $fs = 1.5$
- $n_2 = 70 \text{ (min}^{-1}\text{)}$

Selected gearmotor:  
VTS 44 i=20 --  $Pn_1 = 0.25 \text{ kW}$  --  $fs = 1.5$

$Pn_1$ (kW)	$n_2$ ( $\text{min}^{-1}$ )	$M_2$ (Nm)	$fs$	$i$	VTS		$\emptyset$ [mm]
					030/044/049	063/075/086	
<b>0.25</b>							
M1 071 0.25 4P.. ( $n_1 = 1400 \text{ min}^{-1}$ )		<b>140.0</b>	14.3	2.0	10	44	14
		<b>100.0</b>	19.3	1.5	14	44	14
		<b>70.0</b>	26.3	1.5	20	44	14
		<b>58.3</b>	30.7	2.0	24	49	14
		<b>50.0</b>	33.9	1.2	28	44	14
		<b>40.0</b>	40.6	1.0	35	44	14
		<b>38.9</b>	41.1	1.7	36	49	14

**Temperatura operativa / Operating temperature**

Tutti i riduttori della nuova gamma SATI sono idonei ad operare fino ad una temperatura massima continuativa all'interno del riduttore di +85°C.

All the gearboxes in the new SATI range are suitable to operate up to a maximum continuous temperature inside the gearbox of +85°C.

Gli anelli di tenuta sono in mescole acrilonitriliche.

The shaft seals are made of acrylonitrile compounds.

Per temperature operative continuative più elevate di + 85°C, si richiede di consultare l'Ufficio Tecnico SATI per i suggerimenti del caso. La temperatura minima a cui i riduttori possono operare è di -5°C.

For continuous operating temperatures higher than + 85°C, it is necessary to contact the SATI Engineering Department for advice. The minimum temperature at which the gearboxes can operate is -5°C.

in caso di ambiente di lavoro con temperatura <-5 °C o >+40°C, contattare servizio tecnico SATI.

For ambient temperatures <-5°C or >+40°C, it is recommended to contact SATI technical service.

**Verniciatura / Painting**

Tutti i riduttori SATI sono verniciati a polveri epossidiche in colore grigio RAL 9006, ad esclusione delle parti lavorate per appoggi di fissaggio e accoppiamenti.

All SATI gearboxes are epoxy powder painted in the colour RAL 9006 grey, except for the machined parts, for fixing supports and couplings.

## Installazione / Installation

In fase d'installazione si consiglia di:

- allineare correttamente il riduttore con il motore e l'utenza rispettando la corretta posizione di montaggio definita in fase d'ordine;
- verificare che eventuali organi di trasmissione montati sull'albero entrata o uscita del riduttore siano calettati correttamente così da non generare spinte superiori a quelle ammesse;
- controllare che i dati in targhetta corrispondano al prodotto selezionato;
- verificare che l'ambiente di lavoro non sia corrosivo;
- verificare che il senso di rotazione in uscita dal riduttore sia quello desiderato preventivamente al montaggio sull'applicazione;
- prevedere un avviamento graduale evitando l'applicazione della massima potenza;
- montare il riduttore stabilmente evitando qualsiasi vibrazione.

Pur potendo essere impiegati anche con motore a 2 poli, velocità in entrata di 2800 RPM, i riduttori a vite senza fine non sono in generale particolarmente indicati per un impiego ad alta velocità in entrata.

Nei limiti del possibile, si consiglia ai clienti di preferire motoriduttori a 4 oppure a 6 poli. Qualora si renda indispensabile l'utilizzo di un motoriduttore a 2 poli, si consiglia di attenersi scrupolosamente alle prestazioni indicate sul catalogo e possibilmente di scegliere un riduttore che abbia un fattore di servizio decisamente più alto di quello presunto per l'applicazione. L'impiego dei riduttori con motori 2 poli ed a 60 Hz è fortemente sconsigliato.

Sono inoltre sconsigliati:

- Impiego del riduttore come moltiplicatore
- Utilizzo del riduttore per argani di sollevamento ed in generale per applicazioni in cui è in gioco la sicurezza di persone o cose
- Applicazioni che prevedono una immersione parziale o totale del riduttore

Non fare mai affidamento sulla reale irreversibilità di un riduttore ed in caso di necessità impiegare motori auto frenanti o altri dispositivi di sicurezza. L'eventuale rottura di organi del riduttore non deve mai determinare rischi gravi per la sicurezza soprattutto di persone.

During installation it is recommended to:

- properly align the gearbox with the motor and the user and comply with the correct mounting position defined in the order;
- verify that any transmission components fitted on the input or output shaft of the gearbox are correctly locked, so as not to generate higher thrust loads than the acceptable ones;
- check that the name plate data match the selected product;
- ensure that the work environment is not corrosive;
- Prior to installation on the application make sure that the direction of rotation at the gearbox output is the desired one;
- provide for a gradual start without applying the maximum power;
- fit the gearbox in a stable manner to avoid any vibration.

While worm gearboxes can also be used with a 2-pole motor, input speed of 2800 rpm, they are generally not particularly suitable for use at high input speed.

As far as possible, customers are recommended to prefer gearmotors with 4 or 6 poles. If it is necessary to use a 2-pole gearmotor, it is advisable to strictly comply with the performance indicated in the catalogue and preferably choose a gearbox that has a definitely higher service factor than the one assumed for the application.

Using gearboxes with 2-pole and 60 Hz motors is strongly discouraged.

It is also advised against:

- Using the gearbox as a multiplier
- Using the gearbox for hoisting winches and, generally, for applications where safety is at stake for people and property
- Applications involving a total or partial immersion of the gearbox

Never rely on the actual irreversibility of a gearbox and if necessary use brake motors or other safety devices.

Any breakage of parts of the gearbox must never result in serious risks for safety especially of people.

## Identificazione / Identification

Tutti i riduttori SATI sono identificati da una targhetta contenente i dati relativi alla tipologia di prodotto a cui si riferiscono oltre che da un identificativo numerico per la rintracciabilità.

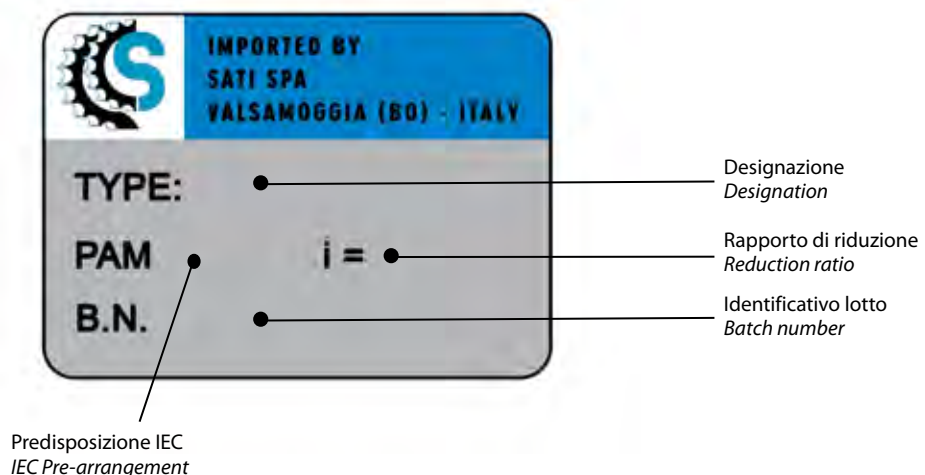
Si presti pertanto attenzione a non danneggiare né rimuovere tale etichetta.

Si riporta di seguito un esempio di targhetta.

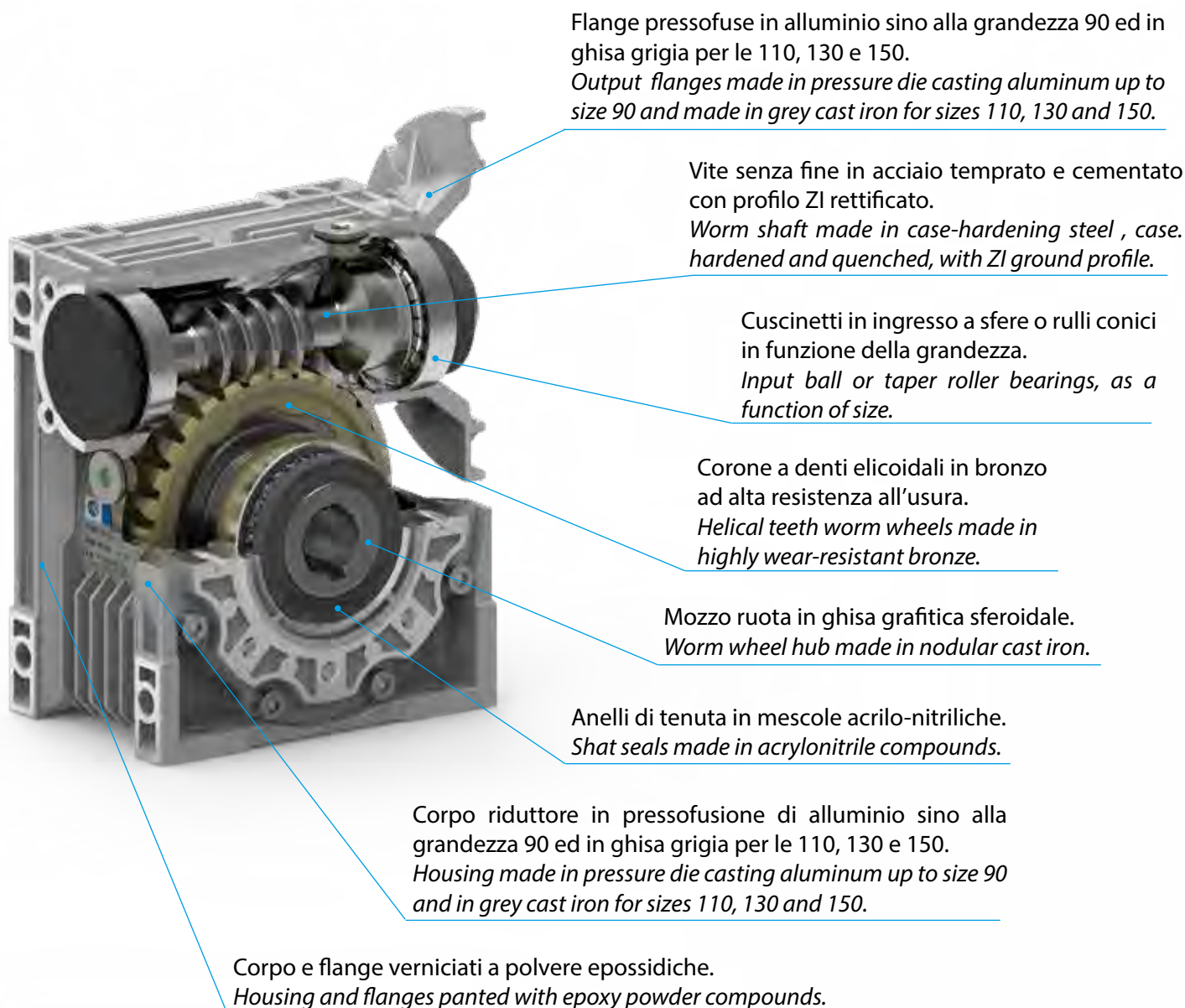
All SATI gearboxes are identified by a name plate containing the data related to the type of product to which they refer, as well as numeric identification for traceability.

For the above reasons, take care that this name plate does never get damaged or removed.

An example of a name plate is given below.



Riduttori a vite senza fine VP / VP worm gearboxes



Flange pressofuse in alluminio sino alla grandezza 90 ed in ghisa grigia per le 110, 130 e 150.  
*Output flanges made in pressure die casting aluminum up to size 90 and made in grey cast iron for sizes 110, 130 and 150.*

Vite senza fine in acciaio temprato e cementato con profilo ZI rettificato.  
*Worm shaft made in case-hardening steel, case hardened and quenched, with ZI ground profile.*

Cuscinetti in ingresso a sfere o rulli conici in funzione della grandezza.  
*Input ball or taper roller bearings, as a function of size.*

Corone a denti elicoidali in bronzo ad alta resistenza all'usura.  
*Helical teeth worm wheels made in highly wear-resistant bronze.*

Mozzo ruota in ghisa grafitica sferoidale.  
*Worm wheel hub made in nodular cast iron.*

Anelli di tenuta in mescole acrilio-nitriliche.  
*Shat seals made in acrylonitrile compounds.*

Corpo riduttore in pressofusione di alluminio sino alla grandezza 90 ed in ghisa grigia per le 110, 130 e 150.  
*Housing made in pressure die casting aluminum up to size 90 and in grey cast iron for sizes 110, 130 and 150.*

Corpo e flange verniciati a polvere epossidiche.  
*Housing and flanges panted with epoxy powder compounds.*

La gamma di riduttori a vite senza fine della serie VP sono disponibili in diverse versioni dettagliate nelle pagine seguenti:

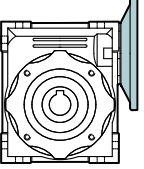
- VP con flangia motore**
- VI con albero sporgente**
- VR con precoppia (solo versione flangiata)**
- VC combinato con flangia motore**
- VS combinato con albero sporgente**

The range of VP series worm gearboxes is composed of different versions presented/illustrated in the following pages:

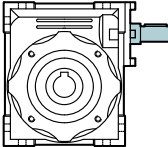
- VP with motor flange**
- VI with input male shaft**
- VR with pre-stage series (only motor flange version)**
- VC combination with motor flange**
- VS combination with input male shaft**

## Designazione / Designation

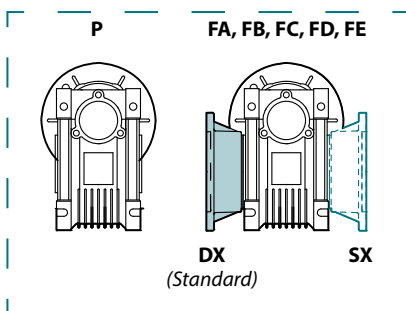
### RIDUTTORE A VITE SENZA FINE QUADRO FLANGIATO / WORM GEARBOXES WITH FLANGE ACCESSORI / ACCESSORIES

Riduttore Gearbox	Grandezza Size	Versione riduttore Gearbox Version	Posizione flangia uscita Position Output flange	Rapporto rid. = i Ratio = i	Predispos. attacco motore Motor coupling	Forma costruttiva Version	Posizione di mont. Mounting position	Seconda entrata Additional input	Albero uscita Output shaft	Braccio di reazione Torque arm
<b>VP</b>	<b>040</b>	<b>P</b>	<b>-</b>	<b>R10</b>	<b>63 B5</b>	<b>U</b>	<b>-</b>	<b>AD</b>	<b>BR</b>	
	025 030 040 050 063 075 090 110 130 150	P FA FB FC FD FE  VP42	- DX SX	R7.5 R10 R15 R20 R25 R30 R40 R50 R60 R80 R100	56 63 71 80 90 100 112 132	B5 B14	U* B3 B6 B7 B8 V5 V6  10 VP74	- B (1) VP75	AS AD VP75	BR VP75

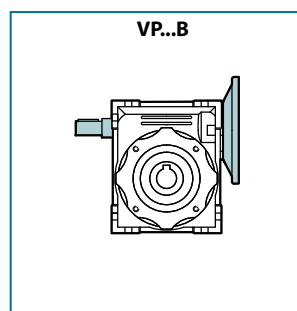
### RIDUTTORE A VITE SENZA FINE QUADRO / WORM GEARBOXES ACCESSORI / ACCESSORIES

Riduttore Gearbox	Grandezza Size	Versione riduttore Gearbox Version	Posizione flangia uscita Position Output flange	Rapporto rid. = i Ratio = i	Posizione di mont. Mounting position	Seconda entrata Additional input	Albero uscita Output shaft	Braccio di reazione Torque arm
<b>VI</b>	<b>040</b>	<b>P</b>	<b>-</b>	<b>R10</b>	<b>U</b>	<b>-</b>	<b>AD</b>	<b>BR</b>
	030 040 050 063 075 090 110 130 150	P FA FB FC FD FE  VP42	- DX SX	R7.5 R10 R15 R20 R25 R30 R40 R50 R60 R80 R100	U* B3 B6 B7 B8 V5 V6  10 VP74	- B VP75	AS AD VP75	BR VP75

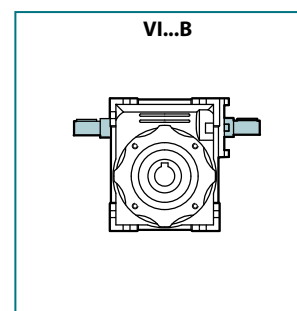
Versione riduttore / Gearbox version



Seconda entrata / Additional input



Seconda entrata / Additional input



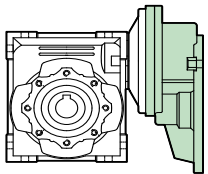







(1) Versione seconda entrata disponibile dalla gr. 30 alla 150.

(1) Version with additional input is available from size 30 to 150.

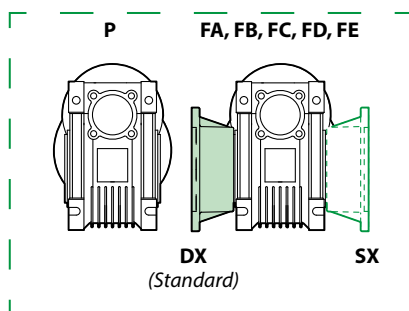
\* Dalla gr. 25 alla 63, i riduttori sono forniti in posizione U = Universale

\* From size 25 to 63, the gearboxes are supplied in position U = Universal

Designazione / Designation

RIDUTTORE A VITE SENZA FINE CON PRECOPPIA / HELICAL WORM GEARBOXES							ACCESSORI / ACCESSORIES						
Riduttore Gearbox	Grandezza precoppia Size pre-stage	Grandezza riduttore Size gearbox	Versione riduttore Gearbox Version	Posizione flangia uscita Position Output flange	Rapporto rid. = i Ratio = i	Predispos. attacco motore Motor coupling	Forma costruttiva Version	Posizione di montaggio Mounting position	Albero uscita Output shaft	Braccio di reazione Torque arm			
VR	063/040	P	-	R73.5	63 B5	U	AD	BR					
	063/040 063/050 071/050 071/063 071/075 080/075 080/090 080/110 090/090 090/110 090/130	P FA FB FC FD FE	- DX SX	R61.2 R73.5 R75 R88.2 R90 R98 R117.5 R120 R122.5 R147 R150 R176.4 R180 R235.2 R240 R294 R300  (1)	63 71 80 90	B5	U* B3 B6 B7 B8 V5 V6	AS   AD 	BR 	 VP6	 10	 VP75	 VP75

Versione riduttore / Gearbox version



(1) Rapporti di riduzione reali del kit precoppia, consultare tab. p.20

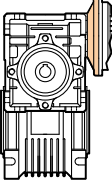
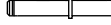
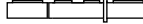

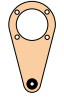

\* Dalla gr. 25 alla 63, i riduttori sono forniti in posizione U = Universale

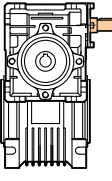
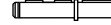
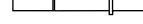

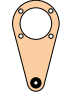

(1) Actual reduction ratios, see table p.20

\* From size 25 to 63, the gearboxes are supplied in position U = Universal

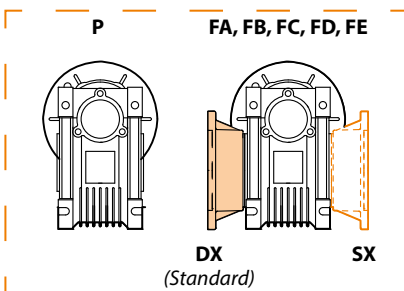


## Designazione / Designation

RIDUTTORE COMBINATI A VITE SENZA FINE / COMBINATION WORM GEARBOXES							ACCESSORI / ACCESSORIES				
Riduttore Gearbox	Grandezza riduttore entrata Size input gearbox	Grandezza riduttore uscita Size output gearbox	Versione riduttore Gearbox Version	Posizione flangia uscita Position Output flange	Rapporto rid. = i Ratio = i	Predispos. attacco motore Motor coupling	Forma costruttiva Version	Esecuzione Version	Posizione di montaggio Mounting position	Albero uscita Output shaft	Braccio di reazione Torque arm
<b>VC</b>	<b>030/040</b>	<b>P</b>	<b>-</b>	<b>R5000</b>	<b>63</b>	<b>B5</b>	<b>ADO</b>	<b>U</b>	<b>AD</b>	<b>BR</b>	
	025/030 025/040 030/040 030/050 030/063 040/075 040/090 050/110 063/130 063/150	P FA FB FC FD FE	- DX SX	R100 R150 R200 R250 R300 R400 R500 R600 R750 R900 R1200 R1500 R1800 R2400 R3000 R4000 R4800 R5000	56 63 71 80 90	B5 B14	ADO BDO ADV BDV ASO BSO ASV BSV	U* B3 B6 B7 B8 V5 V6  (1)	    	  	

RIDUTTORE COMBINATI A VITE SENZA FINE / COMBINATION WORM GEARBOXES							ACCESSORI / ACCESSORIES		
Riduttore Gearbox	Grandezza riduttore entrata Size input gearbox	Grandezza riduttore uscita Size output gearbox	Versione riduttore Gearbox Version	Posizione flangia uscita Position Output flange	Rapporto rid. = i Ratio = i	Esecuzione Version	Posizione di montaggio Mounting position	Albero uscita Output shaft	Braccio di reazione Torque arm
<b>VS</b>	<b>030/040</b>	<b>P</b>	<b>-</b>	<b>R5000</b>		<b>ADO</b>	<b>U</b>	<b>AD</b>	<b>BR</b>
	030/040 030/050 030/063 040/075 040/090 050/110 063/130 063/150	P FA FB FC FD FE	- DX SX	R100 R150 R200 R250 R300 R400 R500 R600 R750 R900 R1200 R1500 R1800 R2400 R3000 R4000 R4800 R5000		ADO BDO ADV BDV ASO BSO ASV BSV	U* B3 B6 B7 B8 V5 V6  (1)	    	  

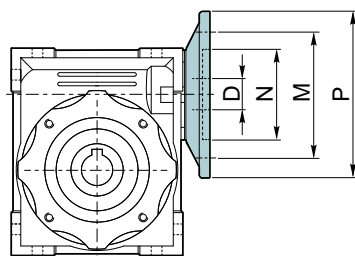
Versione riduttore / Gearbox version



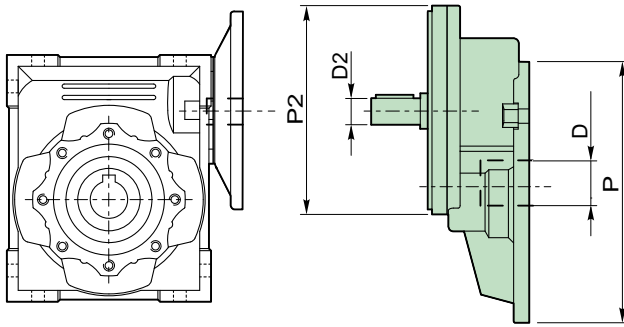
(1) Posizione di montaggio riferita al riduttore uscita  
\* Dalla gr. 25 alla 63, i riduttori sono forniti in posizione U = Universale

(1) Mounting position refers to output gearbox  
\* From size 25 to 63, the gearboxes are supplied in position U = Universal

Predisposizioni IEC / IEC Pre-arrangements



VP	IEC	N	M	P	D												
					R5	R7.5	R10	R15	R20	R25	R30	R40	R50	R60	R80	R100	
025	56B14	50	65	80	9	9	9	9	9	9	9	9	9	9	9	-	-
030	63B5	95	115	140	11	11	11	11	11	11	11	11	11	11	11	-	-
	63B14	60	75	90	9	9	9	9	9	9	9	9	9	9	9	9	-
	56B5	80	100	120	9	9	9	9	9	9	9	9	9	9	9	9	-
	56B14	50	65	80	9	9	9	9	9	9	9	9	9	9	9	9	-
040	71B5	110	130	160	14	14	14	14	14	14	14	14	14	14	14	14	14
	71B14	70	85	105	11	11	11	11	11	11	11	11	11	11	11	11	11
	63B5	95	115	140	11	11	11	11	11	11	11	11	11	11	11	11	11
	63B14	60	75	90	-	-	-	-	-	-	-	-	-	9	9	9	9
	56B5	80	100	120	-	-	-	-	-	-	-	-	-	9	9	9	9
050	80B5	130	165	200	19	19	19	19	19	19	19	19	19	19	19	19	19
	80B14	80	100	120	14	14	14	14	14	14	14	14	14	14	14	14	14
	71B5	110	130	160	-	-	-	-	-	-	-	-	11	11	11	11	11
	71B14	70	85	105	-	-	-	-	-	-	-	-	11	11	11	11	11
	63B5	95	115	140	-	-	-	-	-	-	-	-	11	11	11	11	11
063	90B5	130	165	200	-	24	24	24	24	24	24	24	24	24	-	-	-
	90B14	95	115	140	-	19	19	19	19	19	19	19	19	19	19	19	19
	80B5	130	165	200	-	19	19	19	19	19	19	19	19	19	19	19	19
	80B14	80	100	120	-	14	14	14	14	14	14	14	14	14	14	14	14
	71B5	110	130	160	-	14	14	14	14	14	14	14	14	14	14	14	14
	71B14	70	85	105	-	14	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	-	24	24	24	24	24	24	24	24	24	24	24	24
	90B5	130	165	200	-	19	19	19	19	19	19	19	19	19	19	19	19
	90B14	95	115	140	-	19	19	19	19	19	19	19	19	19	19	19	19
	80B5	130	165	200	-	19	19	19	19	19	19	19	19	19	19	19	19
	80B14	80	100	120	-	19	19	19	19	19	19	19	19	19	19	19	19
	71B5	110	130	160	-	14	14	14	14	14	14	14	14	14	14	14	14
090	100/112B5	180	215	250	-	28	28	28	28	28	28	28	-	-	-	-	-
	100/112B14	110	130	160	-	24	24	24	24	24	24	24	24	24	24	24	24
	90B5	130	165	200	-	19	19	19	19	19	19	19	19	19	19	19	19
	90B14	95	115	140	-	19	19	19	19	19	19	19	19	19	19	19	19
	80B5	130	165	200	-	19	19	19	19	19	19	19	19	19	19	19	19
	80B14	80	100	120	-	19	19	19	19	19	19	19	19	19	19	19	19
110	132B5	230	265	300	-	38	38	38	38	38	38	38	-	-	-	-	-
	132 B14	130	165	200	-	28	28	28	28	28	28	28	28	28	28	-	-
	100/112B5	180	215	250	-	28	28	28	28	28	28	28	28	28	28	28	28
	100/112B14	110	130	160	-	24	24	24	24	24	24	24	24	24	24	24	24
	90B5	130	165	200	-	-	-	-	-	-	-	-	-	19	19	19	19
	90B14	95	115	140	-	-	-	-	-	-	-	-	-	19	19	19	19
	80B5	130	165	200	-	-	-	-	-	-	-	-	-	19	19	19	19
130	132B5	230	265	300	-	38	38	38	38	38	38	38	-	-	-	-	-
	132 B14	130	165	200	-	28	28	28	28	28	28	28	28	28	28	28	28
	100/112B5	180	215	250	-	-	-	-	-	28	28	28	28	28	28	28	28
	100/112B14	110	130	160	-	-	-	-	-	-	-	-	-	-	-	24	24
	90B5	130	165	200	-	-	-	-	-	-	-	-	-	-	-	-	-
150	160B5	250	300	350	-	42	42	42	42	42	-	-	-	-	-	-	-
	132B5	230	265	300	-	-	-	-	38	38	38	38	38	38	38	-	-
	100/112B5	180	215	250	-	-	-	-	-	-	-	28	28	28	28	28	28

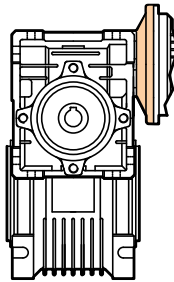
**Predisposizioni IEC / IEC Pre-arrangements**


IEC: P / D

VR	CODICE / CODE	P	D	P2	D2
063/040 063/050	PR063A11	140	11	105	11
	PR063A14	140	11	105	14
071/050 071/063 071/075	PR071A14	160	14	120	14
	PR071A19	160	14	120	19
080/075 080/090 080/110	PR080A19	200	19	160	19
	PR080A24	200	19	160	24
090/090 090/110 090/130	PR090A24	200	24	160	24
	PR090A28	200	24	160	28

i = R1 x R2		Grandezza precoppia / Size pre-stage			
Grandezza riduttore Size gearbox	R2	063	071	080	090
		IEC 140 / 11	IEC 160 / 14	IEC 200 / 19	IEC 200 / 24
		R1 = 2.94	R1 = 2.94	R1 = 3	R1 = 2.45
VR ... / 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			
VR ... / 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			
VR ... / 063	25				
	30				
	40		i = 117.6		
	50		i = 147		
	60		i = 176.4		
	80		i = 235.2		
	100		i = 294		
VR ... / 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	
VR ... / 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	
VR ... / 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
VR ... / 130	25				
	30				
	40				
	50				
	60				
	80				i = 196
	100				i = 245

Predisposizioni IEC / IEC Pre-arrangements



$i = R1 \times R2$

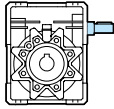
**R1** = Rapporto di riduzione riduttore entrata  
Ratio input gearbox

**R2** = Rapporto di riduzione riduttore uscita  
Ratio output gearbox

VC	i	n2	IEC	R1	R2
025 / 030	100	14	56	10	10
	150	9.3		10	15
	200	7		10	20
	250	5.6		10	25
	300	4.7		10	30
	400	3.5		20	20
	500	2.8		20	25
	600	2.3		20	30
	750	1.9		30	25
	900	1.6		30	30
	1200	1.2		40	30
	1500	0.93		50	30
	1800	0.78		60	30
	2400	0.58		60	40
3000	0.47	60	50		
025 / 040	100	14	56	10	10
	150	9.3		10	15
	200	7		10	20
	250	5.6		10	25
	300	4.7		10	30
	400	3.5		10	40
	500	2.8		20	25
	600	2.3		20	30
	750	1.9		25	30
	900	1.6		30	30
	1200	1.2		40	30
	1500	0.93		50	30
	1800	0.78		60	30
	2400	0.58		60	40
3000	0.47	60	50		
4000	0.35	50	80		
5000	0.28	50	100		
030 / 040	100	14	56 63	10	10
	150	9.3		10	15
	200	7		10	20
	250	5.6		10	25
	300	4.7		10	30
	400	3.5		10	40
	500	2.8		20	25
	600	2.3		20	30
	900	1.6		30	30
	1200	1.2		40	30
	1500	0.93		50	30
	1800	0.78		60	30
	2400	0.58		60	40
	3200	0.47		80	40
4000	0.35	50	80		
5000	0.28	50	100		
030 / 050	100	14	56 63	10	10
	150	9.3		10	15
	200	7		10	20
	250	5.6		10	25
	300	4.7		10	30
	400	3.5		10	40
	500	2.8		10	50
	600	2.3		20	30
	750	1.9		25	30
	900	1.6		30	30
	1200	1.2		40	30
	1500	0.93		50	30
	1800	0.78		60	30
	2400	0.58		60	40
3000	0.47	60	50		
4000	0.35	50	80		
4800	0.29	60	80		

VC	i	n2	IEC	R1	R2
030 / 063	100	14	56 63	10	10
	150	9.3		10	15
	200	7		10	20
	250	5.6		10	25
	300	4.7		10	30
	400	3.5		10	40
	500	2.8		10	50
	600	2.3		20	30
	750	1.9		25	30
	900	1.6		30	30
	1200	1.2		40	30
	1500	0.93		50	30
	1800	0.78		60	30
	2400	0.58		60	40
3000	0.47	60	50		
4000	0.35	50	80		
5000	0.29	50	100		
040 / 075 040 / 090	200	7	63	10	20
	250	5.6		10	25
	300	4.7		10	30
	400	3.5		10	40
	500	2.8		10	50
	600	2.3		20	30
	750	1.9		25	30
	900	1.6		30	30
	1200	1.2		40	30
	1500	0.93		50	30
	1800	0.78		60	30
	2400	0.58		60	40
	3000	0.47		60	50
	4000	0.35		80	50
5000	0.28	100	50		
050 / 110	100	14	63 71 80	10	10
	150	9.3		10	15
	200	7		10	20
	250	5.6		10	25
	300	4.7		10	30
	400	3.5		10	40
	500	2.8		20	25
	600	2.3		20	30
	750	1.9		25	30
	900	1.6		30	30
	1200	1.2		40	30
	1500	0.93		50	30
	1800	0.78		60	30
	2400	0.58		60	40
3000	0.47	60	50		
4000	0.35	80	50		
5000	0.28	100	50		
063 / 130 063 / 150	250	5.6	71 80 90	10	25
	300	4.7		10	30
	400	3.5		10	40
	500	2.8		10	50
	600	2.3		20	30
	750	1.9		25	30
	900	1.6		30	30
	1200	1.2		40	30
	1500	0.93		50	30
	1800	0.78		60	30
	2400	0.58		60	40
	3000	0.47		60	50
	4000	0.35		80	50
	5000	0.28		100	50

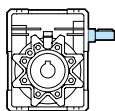
## Dati tecnici riduttore / Gearbox technical data



				Grandezza / Size									
				025 <sup>(1)</sup>	030	040	050	063	075	090	110	130	150
i	n <sub>1</sub>	n <sub>2</sub>											
R5	2800	560	Mm <sub>2</sub> [Nm]	-	10	25	43	-	-	-	-	-	-
			Pm <sub>1</sub> [kW]	-	0.65	1.6	2.8	-	-	-	-	-	-
			Rd	0.86	0.88	0.87	0.88	-	-	-	-	-	-
			Fr <sub>2</sub> [N]	-	450	900	1200	-	-	-	-	-	-
			Fr <sub>1</sub> [N]	-	90	170	240	-	-	-	-	-	-
	1400	280	Mm <sub>2</sub> [Nm]	-	18	34	62	-	-	-	-	-	-
			Pm <sub>1</sub> [kW]	-	0.61	1.1	2.0	-	-	-	-	-	-
			Rd	0.86	0.86	0.88	0.87	-	-	-	-	-	-
			Fr <sub>2</sub> [N]	-	597	1149	1577	-	-	-	-	-	-
			Fr <sub>1</sub> [N]	-	150	250	350	-	-	-	-	-	-
	900	180	Mm <sub>2</sub> [Nm]	-	20	44	75	-	-	-	-	-	-
			Pm <sub>1</sub> [kW]	-	0.44	0.87	1.6	-	-	-	-	-	-
Rd			0.82	0.84	0.84	0.84	-	-	-	-	-	-	
Fr <sub>2</sub> [N]			-	692	1331	1827	-	-	-	-	-	-	
Fr <sub>1</sub> [N]			-	175	290	400	-	-	-	-	-	-	
500	100	Mm <sub>2</sub> [Nm]	-	20	44	75	-	-	-	-	-	-	
		Pm <sub>1</sub> [kW]	-	0.24	0.45	0.85	-	-	-	-	-	-	
		Rd	0.80	0.82	0.82	0.83	-	-	-	-	-	-	
		Fr <sub>2</sub> [N]	-	692	1331	1827	-	-	-	-	-	-	
		Fr <sub>1</sub> [N]	-	175	290	400	-	-	-	-	-	-	
R7.5	2800	373.3	Mm <sub>2</sub> [Nm]	-	13	28	52	93	130	210	391	520	840
			Pm <sub>1</sub> [kW]	-	0.58	1.2	2.3	4.0	5.7	9.0	16.8	22.3	35.7
			Rd	0.84	0.85	0.86	0.87	0.87	0.88	0.88	0.88	0.89	0.90
			Fr <sub>2</sub> [N]	-	542	1044	1433	1873	2210	2446	3090	4042	5526
			Fr <sub>1</sub> [N]	-	125	233	324	395	560	715	950	1190	1550
	1400	186.7	Mm <sub>2</sub> [Nm]	-	18	40	71	128	185	290	552	750	1200
			Pm <sub>1</sub> [kW]	-	0.4	0.9	1.6	2.8	4.1	6.4	12.1	16.3	25.8
			Rd	0.84	0.84	0.86	0.87	0.87	0.88	0.89	0.89	0.90	0.91
			Fr <sub>2</sub> [N]	-	683	1315	1805	2359	2785	3081	3893	5092	6962
			Fr <sub>1</sub> [N]	-	150	294	401	500	700	900	1200	1500	1950
	900	120	Mm <sub>2</sub> [Nm]	-	20	44	84	151	215	340	650	880	1400
			Pm <sub>1</sub> [kW]	-	0.30	0.66	1.2	2.2	3.1	4.9	9.3	12.4	19.6
Rd			0.80	0.81	0.82	0.83	0.84	0.85	0.85	0.86	0.87	0.88	
Fr <sub>2</sub> [N]			-	792	1524	2091	2734	32227	3570	4511	5901	8067	
Fr <sub>1</sub> [N]			-	175	319	448	580	810	1040	1390	1740	2270	
500	66.7	Mm <sub>2</sub> [Nm]	-	24	54	103	184	260	410	794	1080	1700	
		Pm <sub>1</sub> [kW]	-	0.21	0.45	0.87	1.5	2.2	3.3	6.4	8.7	13.5	
		Rd	0.78	0.79	0.80	0.81	0.82	0.83	0.83	0.84	0.85	0.86	
		Fr <sub>2</sub> [N]	-	963	1853	2544	3325	3925	4343	5488	7178	9812	
		Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800	
R10	2800	280	Mm <sub>2</sub> [Nm]	-	13	29	54	97	145	235	437	580	890
			Pm <sub>1</sub> [kW]	-	0.45	1.0	1.8	3.2	4.8	7.7	14.2	18.9	28.4
			Rd	0.83	0.83	0.85	0.85	0.86	0.87	0.87	0.87	0.88	0.89
			Fr <sub>2</sub> [N]	-	597	1149	1577	2061	2433	2692	3401	4449	6082
			Fr <sub>1</sub> [N]	-	140	272	378	463	703	900	1194	1493	1848
	1400	140	Mm <sub>2</sub> [Nm]	-	18	40	72	130	195	310	598	820	1240
			Pm <sub>1</sub> [kW]	-	0.3	0.7	1.2	2.2	3.3	5.2	10.0	13.5	20.2
			Rd	0.82	0.81	0.85	0.84	0.86	0.87	0.88	0.88	0.88	0.90
			Fr <sub>2</sub> [N]	-	752	1447	1987	2597	3065	3391	4285	5605	7663
			Fr <sub>1</sub> [N]	-	169	331	490	615	851	1082	1463	1845	2267
	900	90	Mm <sub>2</sub> [Nm]	-	20	44	84	153	230	370	713	960	1480
			Pm <sub>1</sub> [kW]	-	0.24	0.51	0.95	1.7	2.6	4.1	7.7	10.4	15.7
Rd			0.78	0.79	0.80	0.81	0.82	0.83	0.84	0.85	0.86	0.87	
Fr <sub>2</sub> [N]			-	871	1677	2302	3009	3551	3929	4956	6494	8878	
Fr <sub>1</sub> [N]			-	197	350	490	661	975	1270	1700	2100	2700	
500	50	Mm <sub>2</sub> [Nm]	-	24	54	103	185	270	435	851	1160	1780	
		Pm <sub>1</sub> [kW]	-	0.16	0.35	0.67	1.2	1.7	2.7	5.2	7.1	10.7	
		Rd	0.76	0.76	0.78	0.80	0.80	0.81	0.82	0.83	0.83	0.84	
		Fr <sub>2</sub> [N]	-	1060	2040	2800	3660	4320	4780	6040	7900	10800	
		Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800	

(1) Grandezza 025 non disponibile versione VI / Size 025 not allowed version VI

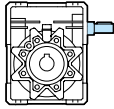
Dati tecnici riduttore / Gearbox technical data



				Grandezza / Size									
				025 <sup>(1)</sup>	030	040	050	063	075	090	110	130	150
i	n <sub>1</sub>	n <sub>2</sub>											
R15	2800	186.7	Mm <sub>2</sub> [Nm]	-	13	31	57	103	150	270	489	670	910
			Pm <sub>1</sub> [kW]	-	0.32	0.72	1.3	2.3	3.4	6.0	10.9	14.7	19.8
			Rd	0.79	0.80	0.81	0.83	0.83	0.84	0.85	0.85	0.86	0.87
			Fr <sub>2</sub> [N]	-	683	1315	1805	2389	2785	3081	3893	5092	6962
			Fr <sub>1</sub> [N]	-	140	291	399	492	727	1034	1337	1725	1889
	1400	93.3	Mm <sub>2</sub> [Nm]	-	18	40	74	140	200	360	656	920	1250
			Pm <sub>1</sub> [kW]	-	0.2	0.5	0.9	1.7	2.3	4.1	7.5	10.3	13.9
			Rd	0.78	0.76	0.81	0.80	0.82	0.84	0.85	0.85	0.86	0.88
			Fr <sub>2</sub> [N]	-	861	1657	2274	2973	3509	3882	4905	6416	8771
			Fr <sub>1</sub> [N]	-	169	331	490	615	851	1257	1604	2070	2285
	900	60	Mm <sub>2</sub> [Nm]	-	20	45	84	155	235	420	759	1060	1450
			Pm <sub>1</sub> [kW]	-	0.17	0.36	0.67	1.2	1.8	3.2	5.7	7.8	10.5
Rd			0.73	0.74	0.75	0.77	0.78	0.80	0.81	0.82	0.83	0.84	
Fr <sub>2</sub> [N]			-	997	1920	2635	3444	4065	4498	5684	7434	10163	
Fr <sub>1</sub> [N]			-	197	350	490	670	980	1270	1700	2100	2645	
500	33	Mm <sub>2</sub> [Nm]	-	24	55	103	187	280	490	909	1300	1730	
		Pm <sub>1</sub> [kW]	-	0.12	0.26	0.47	0.85	1.3	2.1	3.9	5.5	7.2	
		Rd	0.70	0.71	0.72	0.74	0.75	0.77	0.78	0.79	0.80	0.81	
		Fr <sub>2</sub> [N]	-	1213	2335	32005	4190	4945	5472	6914	9043	12363	
		Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800	
R20	2800	140	Mm <sub>2</sub> [Nm]	-	12	29	53	100	160	260	483	660	980
			Pm <sub>1</sub> [kW]	-	0.23	0.52	0.95	1.7	2.8	4.4	8.1	11.0	16.0
			Rd	0.77	0.75	0.79	0.80	0.82	0.83	0.83	0.84	0.85	0.86
			Fr <sub>2</sub> [N]	-	752	1447	1987	2597	3065	3391	4285	5605	7663
			Fr <sub>1</sub> [N]	-	146	204	417	538	872	1120	1485	1912	2289
	1400	70	Mm <sub>2</sub> [Nm]	-	18	39	73	135	210	355	644	910	1300
			Pm <sub>1</sub> [kW]	-	0.2	0.4	0.7	1.2	1.9	3.1	5.6	7.8	11.0
			Rd	0.74	0.72	0.77	0.77	0.80	0.81	0.83	0.84	0.85	0.86
			Fr <sub>2</sub> [N]	-	948	1824	2503	3272	3862	4273	5399	7062	9654
			Fr <sub>1</sub> [N]	-	190	350	490	667	980	1270	1700	2100	2674
	900	45	Mm <sub>2</sub> [Nm]	-	20	44	77	148	235	390	725	1040	1500
			Pm <sub>1</sub> [kW]	-	0.13	0.28	0.48	0.91	1.4	2.3	4.1	5.9	8.3
Rd			0.71	0.68	0.73	0.74	0.77	0.78	0.80	0.81	0.82	0.82	
Fr <sub>2</sub> [N]			-	1098	2113	2900	3791	4474	4951	6256	8182	11186	
Fr <sub>1</sub> [N]			-	210	350	490	700	980	1270	1700	2100	2800	
500	752	Mm <sub>2</sub> [Nm]	-	23	52	93	178	285	470	863	1230	1820	
		Pm <sub>1</sub> [kW]	-	0.09	0.19	0.33	0.63	0.99	1.6	2.8	4.0	5.8	
		Rd	0.67	0.65	0.69	0.71	0.73	0.74	0.75	0.77	0.78	0.79	
		Fr <sub>2</sub> [N]	-	1336	2570	3528	4611	5443	6022	7610	9953	13607	
		Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800	
R25	2800	112	Mm <sub>2</sub> [Nm]	-	16	28	51	92	150	250	506	670	890
			Pm <sub>1</sub> [kW]	-	0.26	0.42	0.75	1.3	2.1	3.4	6.9	9.1	11.9
			Rd	0.73	0.74	0.75	0.77	0.80	0.81	0.82	0.83	0.84	0.85
			Fr <sub>2</sub> [N]	-	810	1559	2140	2797	3302	3653	4616	6038	8254
			Fr <sub>1</sub> [N]	-	210	236	482	593	980	1270	1700	2100	2494
	1400	56	Mm <sub>2</sub> [Nm]	-	21	38	70	130	200	340	679	930	1200
			Pm <sub>1</sub> [kW]	-	0.2	0.3	0.5	1.0	1.5	2.5	4.8	6.5	8.3
			Rd	0.72	0.73	0.74	0.74	0.77	0.79	0.81	0.83	0.83	0.84
			Fr <sub>2</sub> [N]	-	1021	1964	2696	3524	4160	4603	5816	7607	10400
			Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800
	900	36	Mm <sub>2</sub> [Nm]	-	23	43	75	137	215	370	759	1050	1380
			Pm <sub>1</sub> [kW]	-	0.14	0.23	0.39	0.70	1.1	1.8	3.5	4.9	6.2
Rd			0.65	0.66	0.68	0.70	0.73	0.75	0.76	0.78	0.80	0.81	
Fr <sub>2</sub> [N]			-	1183	2276	3124	4084	4820	5333	6739	8814	12050	
Fr <sub>1</sub> [N]			-	210	350	490	700	980	1270	1700	2100	2800	
500	20	Mm <sub>2</sub> [Nm]	-	29	49	91	164	285	440	909	1200	1630	
		Pm <sub>1</sub> [kW]	-	0.10	0.15	0.27	0.48	0.99	1.2	2.4	3.2	4.3	
		Rd	0.62	0.61	0.64	0.67	0.70	0.71	0.73	0.75	0.77	0.78	
		Fr <sub>2</sub> [N]	-	1439	2769	3800	4967	5443	6487	8198	10722	14658	
		Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800	

(1) Grandezza 025 non disponibile versione VI / Size 025 not allowed version VI

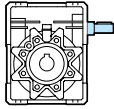
## Dati tecnici riduttore / Gearbox technical data



				Grandezza / Size									
				025 <sup>(1)</sup>	030	040	050	063	075	090	110	130	150
i	n <sub>1</sub>	n <sub>2</sub>											
<b>R30</b>	2800	<b>93.3</b>	Mm <sub>2</sub> [Nm]	-	15	34	64	120	170	310	552	770	920
			Pm <sub>1</sub> [kW]	-	0.21	0.44	0.81	1.5	2.1	3.7	6.5	9.0	10.3
			Rd	0.70	0.70	0.72	0.74	0.76	0.77	0.78	0.79	0.80	0.81
			Fr <sub>2</sub> [N]	-	861	1657	2274	2973	3509	3882	4905	6416	8771
			Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800
	1400	<b>46.7</b>	Mm <sub>2</sub> [Nm]	-	20	45	84	160	230	410	725	1040	1200
			Pm <sub>1</sub> [kW]	-	0.2	0.3	0.6	1.1	1.5	2.6	4.5	6.4	7.0
			Rd	0.66	0.64	0.69	0.70	0.73	0.75	0.77	0.78	0.79	0.83
			Fr <sub>2</sub> [N]	-	1085	2087	2865	3745	4421	4891	6181	8084	11051
			Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800
	900	<b>30</b>	Mm <sub>2</sub> [Nm]	-	21	49	90	175	260	460	840	1170	1400
			Pm <sub>1</sub> [kW]	-	0.11	0.23	0.42	0.79	1.2	1.9	3.5	4.8	5.4
Rd			0.62	0.62	0.64	0.66	0.69	0.70	0.72	0.73	0.74	0.75	
Fr <sub>2</sub> [N]			-	1257	2419	3320	4339	5122	5667	7161	9366	12805	
Fr <sub>1</sub> [N]			-	210	350	490	700	980	1270	1700	2100	2800	
500	<b>16.7</b>	Mm <sub>2</sub> [Nm]	-	26	58	108	200	300	550	1000	1400	1670	
		Pm <sub>1</sub> [kW]	-	0.08	0.16	0.30	0.53	0.77	1.4	2.4	3.4	3.7	
		Rd	0.58	0.58	0.60	0.62	0.64	0.66	0.67	0.69	0.71	0.72	
		Fr <sub>2</sub> [N]	-	1529	2942	4038	5279	6231	6894	8711	11394	15576	
		Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800	
<b>R40</b>	2800	<b>70</b>	Mm <sub>2</sub> [Nm]	-	14	31	59	108	165	275	529	730	1200
			Pm <sub>1</sub> [kW]	-	0.16	0.32	0.59	1.1	1.6	2.6	4.8	6.5	10.5
			Rd	0.67	0.64	0.69	0.71	0.73	0.74	0.76	0.77	0.79	0.80
			Fr <sub>2</sub> [N]	-	948	1824	2503	3272	3862	4273	5399	7062	9654
			Fr <sub>1</sub> [N]	-	127	350	490	700	980	1270	1700	2100	2800
	1400	<b>35</b>	Mm <sub>2</sub> [Nm]	-	18	41	76	145	220	360	702	1050	1550
			Pm <sub>1</sub> [kW]	-	0.1	0.2	0.4	0.8	1.1	1.8	3.3	4.9	7.2
			Rd	0.61	0.58	0.64	0.65	.69	0.71	0.74	0.77	0.77	0.78
			Fr <sub>2</sub> [N]	-	1194	2298	3153	4122	4865	5383	6803	8897	12163
			Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800
	900	<b>22.5</b>	Mm <sub>2</sub> [Nm]	-	20	45	82	160	240	410	794	1100	1800
			Pm <sub>1</sub> [kW]	-	0.09	0.17	0.31	0.58	0.84	1.4	2.5	3.5	5.6
Rd			0.58	0.54	0.60	0.62	0.65	0.66	0.68	0.70	0.71	0.72	
Fr <sub>2</sub> [N]			-	1383	2662	3654	4776	5637	6238	7882	10309	14094	
Fr <sub>1</sub> [N]			-	210	350	490	700	980	1270	1700	2100	2800	
500	<b>12.5</b>	Mm <sub>2</sub> [Nm]	-	23	53	98	185	280	480	932	1300	2120	
		Pm <sub>1</sub> [kW]	-	0.06	0.12	0.22	0.40	0.58	0.94	1.7	2.4	3.4	
		Rd	0.54	0.50	0.56	0.58	0.61	0.62	0.64	0.66	0.68	0.69	
		Fr <sub>2</sub> [N]	-	1683	3238	4445	5810	6858	7588	9588	12540	17144	
		Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800	
<b>R50</b>	2800	<b>56</b>	Mm <sub>2</sub> [Nm]	-	13	30	53	100	150	265	495	700	1100
			Pm <sub>1</sub> [kW]	-	0.12	0.26	0.45	0.81	1.2	2.0	3.7	5.1	8.0
			Rd	0.62	0.61	0.64	0.67	0.69	0.72	0.73	0.75	0.77	0.78
			Fr <sub>2</sub> [N]	-	1021	1964	2696	3524	4160	4603	5816	7607	10400
			Fr <sub>1</sub> [N]	-	128	350	490	700	980	1270	1700	2100	2800
	1400	<b>28</b>	Mm <sub>2</sub> [Nm]	-	17	39	73	135	210	340	660	980	1400
			Pm <sub>1</sub> [kW]	-	0.1	0.2	0.3	0.6	0.9	1.4	2.6	3.8	5.3
			Rd	0.57	0.54	0.61	0.61	0.65	0.68	0.71	0.74	0.74	0.76
			Fr <sub>2</sub> [N]	-	1286	2485	3397	4440	5241	5799	7328	9584	13103
			Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800
	900	<b>18</b>	Mm <sub>2</sub> [Nm]	-	18	42	77	145	220	390	748	1050	1600
			Pm <sub>1</sub> [kW]	-	0.07	0.14	0.25	0.45	0.66	1.1	2.0	2.8	4.1
Rd			0.52	0.51	0.54	0.58	0.60	0.63	0.65	0.67	0.68	0.69	
Fr <sub>2</sub> [N]			-	1490	2868	3936	5145	6073	6719	8491	11105	15182	
Fr <sub>1</sub> [N]			-	210	350	490	700	980	1270	1700	2100	2800	
500	<b>10</b>	Mm <sub>2</sub> [Nm]	-	21	49	91	173	250	450	880	1220	1870	
		Pm <sub>1</sub> [kW]	-	0.05	0.10	0.17	0.32	0.44	0.75	1.4	1.9	2.8	
		Rd	0.48	0.47	0.50	0.53	0.55	0.58	0.61	0.63	0.65	0.66	
		Fr <sub>2</sub> [N]	-	1813	3488	4788	6259	7380	8174	10320	13500	18000	
		Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800	

(1) Grandezza 025 non disponibile versione VI / Size 025 not allowed version VI

Dati tecnici riduttore / Gearbox technical data

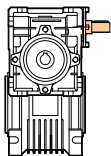


				Grandezza / Size									
				025 <sup>(1)</sup>	030	040	050	063	075	090	110	130	150
i	n <sub>1</sub>	n <sub>2</sub>											
R60	2800	46.7	Mm <sub>2</sub> [Nm]	-	12	28	50	95	145	245	473	640	990
			Pm <sub>1</sub> [kW]	-	0.10	0.21	0.37	0.67	1.0	1.6	3.0	4.0	6.1
			Rd	0.58	0.56	0.60	0.63	0.66	0.68	0.70	0.72	0.74	0.75
			Fr <sub>2</sub> [N]	-	1085	2087	2865	3745	4421	4891	6181	8084	11051
			Fr <sub>1</sub> [N]	-	126	350	490	700	980	1270	1700	2100	2800
	1400	23.3	Mm <sub>2</sub> [Nm]	-	16	36	68	130	200	320	616	900	1260
			Pm <sub>1</sub> [kW]	-	0.1	0.2	0.3	0.5	0.8	1.1	2.1	3.0	4.2
			Rd	0.54	0.050	0.57	0.57	0.61	0.64	0.668	0.71	0.71	0.73
			Fr <sub>2</sub> [N]	-	1367	2630	3610	4719	5569	6163	7787	10185	13924
			Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800
	900	15	Mm <sub>2</sub> [Nm]	-	17	39	72	138	210	350	682	940	1440
			Pm <sub>1</sub> [kW]	-	0.06	0.11	0.21	0.37	0.55	0.86	1.6	2.1	3.2
			Rd	0.48	0.47	0.50	0.53	0.56	0.58	0.61	0.63	0.66	0.67
			Fr <sub>2</sub> [N]	-	583	3047	4183	5467	6453	7140	9023	11801	16133
			Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800
	500	8.3	Mm <sub>2</sub> [Nm]	-	19	46	83	160	240	400	781	1070	1680
Pm <sub>1</sub> [kW]			-	0.04	0.08	0.14	0.26	0.38	0.58	1.1	1.5	2.3	
Rd			0.43	0.43	0.45	0.49	0.51	0.54	0.56	0.58	0.62	0.63	
Fr <sub>2</sub> [N]			-	1830	3490	4840	6270	7380	8180	10320	13500	18000	
Fr <sub>1</sub> [N]			-	210	350	490	700	980	1270	1700	2100	2800	
R80	2800	35	Mm <sub>2</sub> [Nm]	-	11	25	45	85	130	225	399	590	920
			Pm <sub>1</sub> [kW]	-	0.08	0.16	0.27	0.49	0.72	1.2	2.0	2.9	4.5
			Rd	-	0.53	0.57	0.60	0.63	0.65	0.67	0.69	0.72	0.73
			Fr <sub>2</sub> [N]	-	1194	2298	3153	4122	4865	5383	6803	8897	12163
			Fr <sub>1</sub> [N]	-	130	350	490	700	980	1270	1700	2100	2800
	1400	17.5	Mm <sub>2</sub> [Nm]	-	13	33	65	122	190	285	515	840	1150
			Pm <sub>1</sub> [kW]	-	0.1	0.1	0.2	0.4	0.6	0.8	1.4	2.3	3.1
			Rd	-	0.44	0.51	0.51	0.56	0.59	0.62	0.66	0.67	0.68
			Fr <sub>2</sub> [N]	-	1504	2895	3973	5193	6130	6783	8571	11210	15325
			Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800
	900	11.3	Mm <sub>2</sub> [Nm]	-	15	35	68	128	200	315	567	860	1300
			Pm <sub>1</sub> [kW]	-	0.04	0.09	0.16	0.29	0.43	0.63	1.1	1.6	2.3
			Rd	-	0.43	0.47	0.50	0.53	0.55	0.58	0.60	0.63	0.64
			Fr <sub>2</sub> [N]	-	1743	3354	4604	6018	7103	7859	9931	12989	17757
			Fr <sub>1</sub> [N]	-	210	350	490	700	980	1270	1700	2100	2800
	500	6.3	Mm <sub>2</sub> [Nm]	-	17	40	75	137	215	365	662	970	1530
Pm <sub>1</sub> [kW]			-	0.03	0.06	0.11	0.19	0.28	0.45	0.75	1.1	1.7	
Rd			-	0.39	0.43	0.45	0.49	0.51	0.53	0.55	0.58	0.59	
Fr <sub>2</sub> [N]			-	1830	3490	4840	6270	7380	8180	10320	13500	18000	
Fr <sub>1</sub> [N]			-	210	350	490	700	980	1270	1700	2100	2800	
R100	2800	28	Mm <sub>2</sub> [Nm]	-	-	23	40	74	120	200	368	520	810
			Pm <sub>1</sub> [kW]	-	-	0.12	0.21	0.37	0.57	0.9	1.5	2.2	3.3
			Rd	-	-	0.54	0.57	0.59	0.61	0.63	0.65	0.69	0.70
			Fr <sub>2</sub> [N]	-	-	2475	3397	4440	5241	5799	7328	9584	13103
			Fr <sub>1</sub> [N]	-	-	350	490	700	980	1270	1700	2100	2800
	1400	14	Mm <sub>2</sub> [Nm]	-	-	29	55	118	180	270	483	740	1000
			Pm <sub>1</sub> [kW]	-	-	0.1	0.2	0.3	0.5	0.7	1.1	1.7	2.3
			Rd	-	-	0.47	0.49	0.50	0.54	0.58	0.62	0.63	0.64
			Fr <sub>2</sub> [N]	-	-	3118	4280	5595	6603	7306	9232	12076	16508
			Fr <sub>1</sub> [N]	-	-	350	490	700	980	1270	1700	2100	2800
	900	9	Mm <sub>2</sub> [Nm]	-	-	32	56	124	190	280	515	780	1150
			Pm <sub>1</sub> [kW]	-	-	0.07	0.12	0.25	0.36	0.49	0.82	1.2	1.8
			Rd	-	-	0.44	0.46	0.49	0.51	0.53	0.56	0.59	0.60
			Fr <sub>2</sub> [N]	-	-	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	-	-	350	490	700	980	1270	1700	2100	2800
	500	5	Mm <sub>2</sub> [Nm]	-	-	36	65	128	210	330	599	860	1350
Pm <sub>1</sub> [kW]			-	-	0.05	0.09	0.16	0.24	0.35	0.58	0.83	1.29	
Rd			-	-	0.40	0.42	0.44	0.46	0.48	0.51	0.54	0.55	
Fr <sub>2</sub> [N]			-	-	3490	4840	6270	7380	8180	10320	13500	18000	
Fr <sub>1</sub> [N]			-	-	350	490	700	980	1270	1700	2100	2800	

(1) Grandezza 025 non disponibile versione VI / Size 025 not allowed version VI



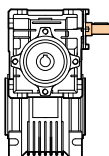
## Dati tecnici riduttore / Gearbox technical data



				Grandezza / Size							
				030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
i	n <sub>1</sub>	n <sub>2</sub>									
<b>R100</b>	2800	<b>28</b>	Mm <sub>2</sub> [Nm]	71	103	103					
			Pm <sub>1</sub> [kW]	0.31	0.44	0.44					
			Fr <sub>2</sub> [N]	2769	3800	4967					
			Fr <sub>1</sub> [N]	140	140	140					
	1400	<b>14</b>	Mm <sub>2</sub> [Nm]	71	137	150					
			Pm <sub>1</sub> [kW]	0.16	0.31	0.34					
			Fr <sub>2</sub> [N]	2769	3800	4967					
			Fr <sub>1</sub> [N]	169	169	169	(1)	(1)	(1)	(1)	(1)
	900	<b>9</b>	Mm <sub>2</sub> [Nm]	71	137	166					
			Pm <sub>1</sub> [kW]	0.11	0.20	0.24					
			Fr <sub>2</sub> [N]	2769	3800	4967					
			Fr <sub>1</sub> [N]	197	197	197					
500	<b>5</b>	Mm <sub>2</sub> [Nm]	71	137	198						
		Pm <sub>1</sub> [kW]	0.06	0.12	0.17						
		Fr <sub>2</sub> [N]	2769	3800	4967						
		Fr <sub>1</sub> [N]	210	210	210						
<b>R150</b>	2800	<b>18.7</b>	Mm <sub>2</sub> [Nm]	72	135	144					
			Pm <sub>1</sub> [kW]	0.22	0.42	0.44					
			Fr <sub>2</sub> [N]	3169	4350	5686					
			Fr <sub>1</sub> [N]	140	140	140					
	1400	<b>9.3</b>	Mm <sub>2</sub> [Nm]	72	135	211					
			Pm <sub>1</sub> [kW]	0.12	0.22	0.34					
			Fr <sub>2</sub> [N]	3169	4350	5686					
			Fr <sub>1</sub> [N]	169	169	169	(1)	(1)	(1)	(1)	(1)
	900	<b>6</b>	Mm <sub>2</sub> [Nm]	72	135	233					
			Pm <sub>1</sub> [kW]	0.08	0.14	0.24					
			Fr <sub>2</sub> [N]	3169	4350	5686					
			Fr <sub>1</sub> [N]	197	197	197					
500	<b>3.3</b>	Mm <sub>2</sub> [Nm]	72	135	260						
		Pm <sub>1</sub> [kW]	0.04	0.06	0.16						
		Fr <sub>2</sub> [N]	3169	4350	5686						
		Fr <sub>1</sub> [N]	210	210	210						
<b>R200</b>	2800	<b>14</b>	Mm <sub>2</sub> [Nm]	65	120	182	336	487	832		
			Pm <sub>1</sub> [kW]	0.16	0.30	0.44	0.65	0.93	1.78		
			Fr <sub>2</sub> [N]	3488	4788	6259	5904	6540	10320		
			Fr <sub>1</sub> [N]	140	140	140	350	350	378		
	1400	<b>7</b>	Mm <sub>2</sub> [Nm]	65	120	253	420	608	1139		
			Pm <sub>1</sub> [kW]	0.08	0.15	0.32	0.50	0.7	1.25		
			Fr <sub>2</sub> [N]	3488	4788	6259	5904	6540	10320		
			Fr <sub>1</sub> [N]	169	169	169	350	350	490	(1)	(1)
	900	<b>4.5</b>	Mm <sub>2</sub> [Nm]	65	120	253	420	608	1139		
			Pm <sub>1</sub> [kW]	0.05	0.10	0.21	0.33	0.46	0.82		
			Fr <sub>2</sub> [N]	3488	4788	6259	5904	6540	10320		
			Fr <sub>1</sub> [N]	197	197	197	350	350	490		
500	<b>2.5</b>	Mm <sub>2</sub> [Nm]	65	120	253	420	608	1139			
		Pm <sub>1</sub> [kW]	0.03	0.06	0.12	0.18	0.27	0.47			
		Fr <sub>2</sub> [N]	3488	4788	6259	5904	6540	10320			
		Fr <sub>1</sub> [N]	210	210	210	350	350	490			

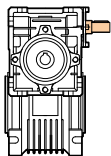
(1): i a richiesta / i on request

Dati tecnici riduttore / Gearbox technical data



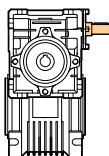
				Grandezza / Size							
				030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
i	n <sub>1</sub>	n <sub>2</sub>									
R250	2800	11.2	Mm <sub>2</sub> [Nm]	61	110	218	304	450	1013	1530	1864
			Pm <sub>1</sub> [kW]	0.13	0.23	0.44	0.53	0.71	1.78	2.69	3.27
			Fr <sub>2</sub> [N]	3490	4840	6270	6640	7360	10320	13500	18000
			Fr <sub>1</sub> [N]	140	140	140	350	350	378	471	471
	1400	5.6	Mm <sub>2</sub> [Nm]	61	110	231	380	564	1173	1530	2050
			Pm <sub>1</sub> [kW]	0.07	0.12	0.24	0.40	0.54	1.05	1.37	1.84
			Fr <sub>2</sub> [N]	3490	4840	6270	6640	7360	10320	13500	18000
			Fr <sub>1</sub> [N]	169	169	169	350	350	490	595	595
	900	3.6	Mm <sub>2</sub> [Nm]	61	110	231	380	564	1173	1530	2050
			Pm <sub>1</sub> [kW]	0.04	0.08	0.16	0.26	0.35	0.69	0.90	1.21
			Fr <sub>2</sub> [N]	3490	4840	6270	6640	7360	10320	13500	18000
			Fr <sub>1</sub> [N]	197	197	197	350	350	490	661	661
500	2	Mm <sub>2</sub> [Nm]	61	110	231	380	564	1173	1530	2050	
		Pm <sub>1</sub> [kW]	0.03	0.05	0.09	0.18	0.20	0.40	0.52	0.70	
		Fr <sub>2</sub> [N]	3490	4840	6270	6640	7360	10320	13500	18000	
		Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700	
R300	2800	9.3	Mm <sub>2</sub> [Nm]	73	145	255	316	500	1085	1760	1678
			Pm <sub>1</sub> [kW]	0.14	0.27	0.51	0.62	0.92	1.78	2.84	2.45
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	140	140	125	350	350	378	471	516
	1400	4.7	Mm <sub>2</sub> [Nm]	73	145	255	390	610	1265	1760	2312
			Pm <sub>1</sub> [kW]	0.07	0.14	0.26	0.38	0.56	1.06	1.45	1.75
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	169	150	350	350	490	595	660
	900	3	Mm <sub>2</sub> [Nm]	73	145	255	449	689	1265	1760	2340
			Pm <sub>1</sub> [kW]	0.05	0.09	0.17	0.28	0.41	0.70	0.96	1.16
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	197	197	175	350	350	490	661	700
500	1.7	Mm <sub>2</sub> [Nm]	73	145	255	449	689	1265	1760	2340	
		Pm <sub>1</sub> [kW]	0.03	0.05	0.08	0.16	0.23	0.40	0.55	0.68	
		Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000	
		Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700	
R400	2800	7	Mm <sub>2</sub> [Nm]	65	124	255	292	500	1185	1650	2624
			Pm <sub>1</sub> [kW]	0.10	0.20	0.39	0.45	0.74	1.50	20.9	3.27
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	140	140	140	350	350	378	471	471
	1400	3.5	Mm <sub>2</sub> [Nm]	65	124	255	360	610	1185	1650	2670
			Pm <sub>1</sub> [kW]	0.06	0.10	0.20	0.28	0.45	0.77	1.07	1.70
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	169	169	350	350	490	595	595
	900	2.3	Mm <sub>2</sub> [Nm]	65	124	255	414	689	1185	1650	2670
			Pm <sub>1</sub> [kW]	0.04	0.07	0.13	0.21	0.33	0.51	0.70	1.12
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	197	197	197	350	350	490	661	661
500	1.3	Mm <sub>2</sub> [Nm]	65	124	255	414	689	1185	1650	2670	
		Pm <sub>1</sub> [kW]	0.02	0.04	0.08	0.13	0.17	0.29	0.41	0.65	
		Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000	
		Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700	

## Dati tecnici riduttore / Gearbox technical data



				Grandezza / Size							
				030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
i	n <sub>1</sub>	n <sub>2</sub>									
R500	2800	5.6	Mm <sub>2</sub> [Nm]	61	120	236	259	459	994	1550	2330
			Pm <sub>1</sub> [kW]	0.07	0.16	0.331	0.34	0.57	0.94	1.65	2.48
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	146	140	140	350	350	417	471	471
	1400	2.8	Mm <sub>2</sub> [Nm]	61	120	236	320	560	1173	1550	2330
			Pm <sub>1</sub> [kW]	0.04	0.08	0.16	0.21	0.35	0.57	0.84	1.27
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	169	169	350	350	490	595	595
	900	1.8	Mm <sub>2</sub> [Nm]	61	120	236	368	633	1173	1550	2330
			Pm <sub>1</sub> [kW]	0.02	0.06	0.11	0.16	0.25	0.38	0.55	0.83
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	197	197	350	350	490	661	661
500	1	Mm <sub>2</sub> [Nm]	61	120	236	368	633	1173	1550	2330	
		Pm <sub>1</sub> [kW]	0.01	0.03	0.06	0.09	0.13	0.20	0.29	0.42	
		Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000	
		Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700	
R600	2800	4.7	Mm <sub>2</sub> [Nm]	73	145	220	316	500	1065	1760	2670
			Pm <sub>1</sub> [kW]	0.08	0.15	0.22	0.34	0.51	0.94	1.49	2.27
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	146	146	146	350	350	417	556	516
	1400	2.3	Mm <sub>2</sub> [Nm]	73	145	271	390	610	1265	1760	2670
			Pm <sub>1</sub> [kW]	0.05	0.08	0.15	0.21	0.31	0.58	0.77	1.18
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	180	180	350	350	490	700	660
	900	1.5	Mm <sub>2</sub> [Nm]	73	145	271	449	689	1265	1760	2670
			Pm <sub>1</sub> [kW]	0.03	0.05	0.10	0.16	0.23	0.39	0.52	0.77
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
500		Mm <sub>2</sub> [Nm]	73	145	271	449	689	1265	1760	2670	
		Pm <sub>1</sub> [kW]	0.01	0.02	0.06	0.09	0.12	0.21	0.27	0.38	
		Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000	
		Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700	
R750	2800	3.7	Mm <sub>2</sub> [Nm]	73	145	271	316	459	1025	1760	2330
			Pm <sub>1</sub> [kW]	0.06	0.13	0.23	0.31	0.41	0.74	1.22	1.69
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	482	613	516
	1400	1.9	Mm <sub>2</sub> [Nm]	73	145	271	390	560	1265	1760	2330
			Pm <sub>1</sub> [kW]	0.04	0.07	0.13	0.19	0.25	0.48	0.64	0.87
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	660
	900	1.2	Mm <sub>2</sub> [Nm]	73	145	271	449	633	1265	1760	2330
			Pm <sub>1</sub> [kW]	0.02	0.05	0.09	0.14	0.18	0.32	0.43	0.58
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
500		Mm <sub>2</sub> [Nm]	73	145	271	449	633	1265	1760	2330	
		Pm <sub>1</sub> [kW]	0.01	0.02	0.05	0.08	0.10	0.17	0.22	0.30	
		Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000	
		Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700	

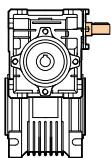
Dati tecnici riduttore / Gearbox technical data



				Grandezza / Size							
				030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
i	n <sub>1</sub>	n <sub>2</sub>									
R900	2800	3.1	Mm <sub>2</sub> [Nm]	73	145	271	316	414	1265	1760	2100
			Pm <sub>1</sub> [kW]	0.06	0.11	0.20	0.28	0.34	0.80	1.07	1.19
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
	1400	1.6	Mm <sub>2</sub> [Nm]	73	145	271	390	505	1265	1760	2100
			Pm <sub>1</sub> [kW]	0.04	0.06	0.11	0.17	0.21	0.42	0.56	0.62
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
	900	1	Mm <sub>2</sub> [Nm]	73	145	271	449	571	1265	1760	2100
			Pm <sub>1</sub> [kW]	0.02	0.04	0.08	0.13	0.15	0.29	0.38	0.42
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
	500		Mm <sub>2</sub> [Nm]	73	145	271	449	571	1265	1760	2100
			Pm <sub>1</sub> [kW]	0.01	0.02	0.04	0.07	0.08	0.16	0.20	0.24
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	3350	490	700	700
R1200	2800	2.3	Mm <sub>2</sub> [Nm]	73	145	256	310	500	1186	1760	2670
			Pm <sub>1</sub> [kW]	0.05	0.09	0.15	0.22	0.33	0.58	0.83	1.25
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	127	127	127	350	350	490	700	700
	1400	1.2	Mm <sub>2</sub> [Nm]	65	145	271	360	610	1265	1760	2670
			Pm <sub>1</sub> [kW]	0.03	0.05	0.09	0.13	0.20	0.34	0.45	0.66
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
	900	0.8	Mm <sub>2</sub> [Nm]	73	145	271	414	689	1265	1760	2670
			Pm <sub>1</sub> [kW]	0.02	0.03	0.06	0.10	0.15	0.23	0.31	0.45
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
	500		Mm <sub>2</sub> [Nm]	73	145	271	414	689	1265	1760	2670
			Pm <sub>1</sub> [kW]	0.01	0.02	0.04	0.06	0.08	0.13	0.16	0.24
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
R1500	2800	1.9	Mm <sub>2</sub> [Nm]	73	145	238	335	459	1065	1760	(1)
			Pm <sub>1</sub> [kW]	0.04	0.07	0.12	0.21	0.26	0.44	0.70	
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	
			Fr <sub>1</sub> [N]	128	128	128	350	350	490	700	
	1400	0.9	Mm <sub>2</sub> [Nm]	73	145	271	390	560	1265	1760	
			Pm <sub>1</sub> [kW]	0.03	0.04	0.08	0.12	0.16	0.29	0.38	
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	
	900	0.6	Mm <sub>2</sub> [Nm]	73	145	271	449	633	1265	1760	
			Pm <sub>1</sub> [kW]	0.01	0.03	0.05	0.09	0.12	0.20	0.26	
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	
	500		Mm <sub>2</sub> [Nm]	73	145	271	449	633	1265	1760	
			Pm <sub>1</sub> [kW]	0.01	0.02	0.03	0.05	0.07	0.12	0.14	
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	

(1): i a richiesta / i on request

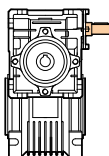
## Dati tecnici riduttore / Gearbox technical data



				Grandezza / Size							
				030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150
i	n <sub>1</sub>	n <sub>2</sub>									
<b>R1800</b>	2800	<b>1.6</b>	Mm <sub>2</sub> [Nm]	73	145	220	335	414	1005	1760	2100
			Pm <sub>1</sub> [kW]	0.03	0.07	0.10	0.19	0.21	0.36	0.61	0.68
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	126	126	126	350	350	490	700	700
	1400	<b>0.8</b>	Mm <sub>2</sub> [Nm]	73	145	271	390	505	1265	1760	2100
			Pm <sub>1</sub> [kW]	0.02	0.04	0.07	0.11	0.13	0.26	0.33	0.37
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
	900	<b>0.5</b>	Mm <sub>2</sub> [Nm]	73	145	271	449	571	1265	1760	2100
			Pm <sub>1</sub> [kW]	0.01	0.03	0.05	0.08	0.09	0.18	0.23	0.26
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
	500		Mm <sub>2</sub> [Nm]	73	145	271	449	571	1265	1760	2100
			Pm <sub>1</sub> [kW]	0.01	0.02	0.03	0.05	0.05	0.10	0.12	0.14
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
<b>R2400</b>	2800	<b>1.2</b>	Mm <sub>2</sub> [Nm]	65	124	255	310	500	1185	1650	2610
			Pm <sub>1</sub> [kW]	0.03	0.05	0.09	0.14	0.20	0.33	0.45	0.70
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	126	126	126	350	350	490	700	700
	1400	<b>0.6</b>	Mm <sub>2</sub> [Nm]	65	124	255	360	610	1185	1650	2670
			Pm <sub>1</sub> [kW]	0.02	0.03	0.05	0.08	0.12	0.19	0.25	0.39
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
	900	<b>0.4</b>	Mm <sub>2</sub> [Nm]	65	124	255	414	689	1185	1650	2670
			Pm <sub>1</sub> [kW]	0.01	0.02	0.04	0.06	0.09	0.13	0.17	0.27
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
	500		Mm <sub>2</sub> [Nm]	65	124	255	414	689	1185	1650	2670
			Pm <sub>1</sub> [kW]	0.01	0.02	0.02	0.03	0.05	0.07	0.09	0.15
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
<b>R3000</b>	2800	<b>0.9</b>	Mm <sub>2</sub> [Nm]	(1)	120	236	282	459	1100	1550	2330
			Pm <sub>1</sub> [kW]	(1)	0.04	0.08	0.11	0.16	0.26	0.35	0.53
			Fr <sub>2</sub> [N]	(1)	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	(1)	126	126	350	350	490	700	700
	1400	<b>0.5</b>	Mm <sub>2</sub> [Nm]	(1)	120	236	320	560	1100	1550	2330
			Pm <sub>1</sub> [kW]	(1)	0.020	0.04	0.06	0.10	0.14	0.19	0.29
			Fr <sub>2</sub> [N]	(1)	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	(1)	210	210	350	350	490	700	700
	900	<b>0.3</b>	Mm <sub>2</sub> [Nm]	(1)	120	236	368	633	1100	1550	2330
			Pm <sub>1</sub> [kW]	(1)	0.02	0.03	0.04	0.07	0.10	0.13	0.20
			Fr <sub>2</sub> [N]	(1)	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	(1)	210	210	350	350	490	700	700
	500		Mm <sub>2</sub> [Nm]	(1)	120	236	368	633	1100	1550	2330
			Pm <sub>1</sub> [kW]	(1)	0.01	0.02	0.02	0.04	0.06	0.07	0.12
			Fr <sub>2</sub> [N]	(1)	4840	6270	7380	8180	10320	13500	18000
			Fr <sub>1</sub> [N]	(1)	210	210	350	350	490	700	700

(1): i a richiesta / i on request

Dati tecnici riduttore / Gearbox technical data

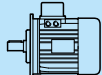
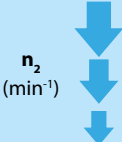
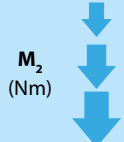
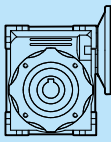
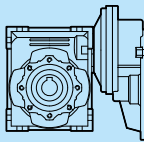
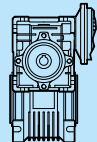


				Grandezza / Size								
				030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150	
i	n <sub>1</sub>	n <sub>2</sub>										
<b>R3200</b>	2800	<b>0.9</b>	Mm <sub>2</sub> [Nm]	60								
			Pm <sub>1</sub> [kW]	0.02								
			Fr <sub>2</sub> [N]	3490								
			Fr <sub>1</sub> [N]	126								
	1400	<b>0.5</b>	Mm <sub>2</sub> [Nm]	60								
			Pm <sub>1</sub> [kW]	0.01								
			Fr <sub>2</sub> [N]	3490								
			Fr <sub>1</sub> [N]	210	(1)	(1)	(1)	(1)	(1)	(1)	(1)	
	900	<b>0.3</b>	Mm <sub>2</sub> [Nm]	60								
			Pm <sub>1</sub> [kW]	0.01								
			Fr <sub>2</sub> [N]	3490								
			Fr <sub>1</sub> [N]	210								
500		Mm <sub>2</sub> [Nm]	60									
		Pm <sub>1</sub> [kW]	0.01									
		Fr <sub>2</sub> [N]	3490									
		Fr <sub>1</sub> [N]	210									
<b>R4000</b>	2800	<b>0.7</b>	Mm <sub>2</sub> [Nm]	48	82	236	220	377	1100	1550	2330	
			Pm <sub>1</sub> [kW]	0.01	0.02	0.06	0.07	0.11	0.21	0.28	0.43	
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000	
			Fr <sub>1</sub> [N]	128	128	130	350	350	490	700	700	
	1400	<b>0.4</b>	Mm <sub>2</sub> [Nm]	48	82	236	250	460	1100	1550	2330	
			Pm <sub>1</sub> [kW]	0.01	0.01	0.04	0.04	0.07	0.12	0.16	0.24	
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000	
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700	
	900	<b>0.2</b>	Mm <sub>2</sub> [Nm]	48	82	236	288	520	1100	1550	2330	
			Pm <sub>1</sub> [kW]	0.01	0.01	0.03	0.03	0.05	0.08	0.11	0.17	
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000	
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700	
500		Mm <sub>2</sub> [Nm]	48	82	236	288	520	1100	1550	2330		
		Pm <sub>1</sub> [kW]	0.01	0.01	0.01	0.02	0.03	0.05	0.06	0.09		
		Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000		
		Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700		
<b>R4800 *</b>	2800	<b>0.6</b>	Mm <sub>2</sub> [Nm]	43	79	150	202	336	1100	1550	2330	
			Pm <sub>1</sub> [kW]	0.01	0.02	0.04	0.05	0.08	0.18	0.25	0.37	
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000	
			Fr <sub>1</sub> [N]	128	128	128	350	350	490	700	700	
	1400	<b>0.3</b>	Mm <sub>2</sub> [Nm]	43	79	150	230	410	1100	1550	2330	
			Pm <sub>1</sub> [kW]	0.01	0.01	0.02	0.03	0.05	0.10	0.14	0.21	
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000	
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700	
	<b>R5000</b>	900	<b>0.2</b>	Mm <sub>2</sub> [Nm]	43	79	150	265	463	1100	1550	2330
				Pm <sub>1</sub> [kW]	0.01	0.01	0.01	0.02	0.04	0.07	0.10	0.15
				Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000
				Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700
500			Mm <sub>2</sub> [Nm]	43	79	150	265	463	1100	1550	2330	
			Pm <sub>1</sub> [kW]	0.01	0.01	0.01	0.01	0.02	0.04	0.06	0.08	
			Fr <sub>2</sub> [N]	3490	4840	6270	7380	8180	10320	13500	18000	
			Fr <sub>1</sub> [N]	210	210	210	350	350	490	700	700	

(1): i a richiesta / i on request

\* : R4800 solo per VS 030/050 / R4800 only for VS 030/050

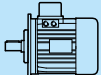
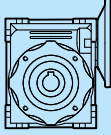
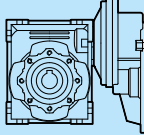
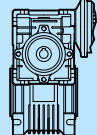
**Tabella dati tecnici motoriduttori / Table technical data gearmotors**

 $Pn_1$ (kW)	 $n_2$ (min <sup>-1</sup> )	 $M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>0.06</b>								
M1 056 0.06 4P... ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>280</b>	2	6.2	5	<b>VP025</b>			439
	<b>280</b>	2	10.1	5	<b>VP030</b>			597
	<b>186.7</b>	3	4.2	7.5	<b>VP025</b>			503
	<b>186.7</b>	3	6.9	7.5	<b>VP030</b>			683
	<b>140</b>	3	3.5	10	<b>VP025</b>			553
	<b>140</b>	3	5.4	10	<b>VP030</b>			752
	<b>93.3</b>	5	2.5	15	<b>VP025</b>			633
	<b>93.3</b>	5	3.8	15	<b>VP030</b>			861
	<b>70</b>	6	2	20	<b>VP025</b>			697
	<b>70</b>	6	3	20	<b>VP030</b>			948
	<b>56</b>	7	3	25	<b>VP030</b>			1021
	<b>46.7</b>	8	1.6	30	<b>VP025</b>			798
	<b>46.7</b>	8	2.5	30	<b>VP030</b>			1085
	<b>35</b>	10	1.3	40	<b>VP025</b>			878
	<b>35</b>	10	1.9	40	<b>VP030</b>			1194
	<b>28</b>	12*	0.9*	50	<b>VP025</b>			946
	<b>28</b>	11	1.5	50	<b>VP030</b>			1286
	<b>28</b>	13	3.3	50	<b>VP040</b>			2475
	<b>23.3</b>	14*	0.7*	60	<b>VP025</b>			1006
	<b>23.3</b>	13	1.3	60	<b>VP030</b>			1367
	<b>23.3</b>	14	2.6	60	<b>VP040</b>			2630
	<b>17.5</b>	14*	0.9*	80	<b>VP030</b>			1504
	<b>17.5</b>	17	1.9	80	<b>VP040</b>			2895
	<b>14</b>	25	1.3	100			<b>VC025/030</b>	1620
	<b>14</b>	20	1.5	100	<b>VP040</b>			3118
	<b>14</b>	26	2.7	100			<b>VC030/040</b>	2769
	<b>9.3</b>	32*	0.9*	150			<b>VC025/030</b>	1830
	<b>9.3</b>	37	1.9	150			<b>VC030/040</b>	3169
	<b>7</b>	41*	0.7*	200			<b>VC025/030</b>	1830
	<b>7</b>	47	1.4	200			<b>VC030/040</b>	3488
	<b>7</b>	47	2.6	200			<b>VC030/050</b>	4788
	<b>5.6</b>	44*	0.8*	250			<b>VC025/030</b>	1830
	<b>5.6</b>	55	1.1	250			<b>VC030/040</b>	3490
	<b>5.6</b>	55	2	250			<b>VC030/050</b>	4840
	<b>4.7</b>	59	1.2	300			<b>VC025/040</b>	3490
	<b>4.7</b>	57	1.3	300			<b>VC030/040</b>	3490
	<b>4.7</b>	61	2.4	300			<b>VC030/050</b>	4840
	<b>3.5</b>	71*	0.9*	400			<b>VC025/040</b>	3490
	<b>3.5</b>	70*	0.9*	400			<b>VC030/040</b>	3490
	<b>3.5</b>	73	1.7	400			<b>VC030/050</b>	4840
	<b>3.5</b>	76	3.4	400			<b>VC030/063</b>	6270
	<b>2.8</b>	96*	0.6*	500			<b>VC030/040</b>	3490
	<b>2.8</b>	82*	0.7*	500			<b>VC025/040</b>	3490
	<b>2.8</b>	85	1.4	500			<b>VC030/050</b>	4840
	<b>2.8</b>	88	2.7	500			<b>VC030/063</b>	6270
	<b>2.3</b>	101*	0.6*	600			<b>VC025/040</b>	3490
	<b>2.3</b>	104*	0.7*	600			<b>VC030/040</b>	3490
	<b>2.3</b>	109	1.3	600			<b>VC030/050</b>	4840
	<b>2.3</b>	111	2.4	600			<b>VC030/063</b>	6270
	<b>1.9</b>	116*	0.5*	750			<b>VC025/040</b>	3490
	<b>1.9</b>	121*	0.6*	750			<b>VC030/040</b>	3490
	<b>1.9</b>	127	1.1	750			<b>VC030/050</b>	4840
	<b>1.9</b>	129	2.1	750			<b>VC030/063</b>	6270
	<b>1.6</b>	143*	0.5*	900			<b>VC025/040</b>	3490
	<b>1.6</b>	139*	0.5*	900			<b>VC030/040</b>	3490
	<b>1.6</b>	141	1	900			<b>VC030/050</b>	4840
	<b>1.6</b>	148	1.8	900			<b>VC030/063</b>	6270
	<b>1.2</b>	171*	0.4*	1200			<b>VC025/040</b>	3490
	<b>1.2</b>	166*	0.4*	1200			<b>VC030/040</b>	3490
	<b>1.2</b>	169*	0.7*	1200			<b>VC030/050</b>	4840
	<b>1.2</b>	180	1.5	1200			<b>VC030/063</b>	6270
	<b>0.93</b>	199*	0.7*	1500			<b>VC030/050</b>	4840
	<b>0.9</b>	197*	0.3*	1500			<b>VC025/040</b>	3490
	<b>0.9</b>	196*	0.4*	1500			<b>VC030/040</b>	3490
	<b>0.9</b>	204	1.1	1500			<b>VC030/063</b>	6270

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

Tabella dati tecnici motoriduttori / Table technical data gearmotors

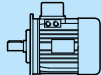
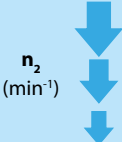
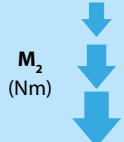
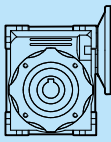
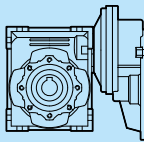
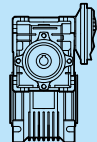
 $P_{n1}$ (kW)	$n_2$ (min <sup>-1</sup> )	$M_2$ (Nm)	$f_s$	$i$				$FR_2$ (N)
<b>0.06</b>								
M1 056 0.06 4P... ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>0.9</b>	248	1.8	1500			<b>VC040/075</b>	7380
	<b>0.9</b>	259	2.7	1500			<b>VC040/090</b>	8180
	<b>0.8</b>	217*	0.3*	1800			<b>VC025/040</b>	3490
	<b>0.8</b>	218*	0.3*	1800			<b>VC030/040</b>	3490
	<b>0.8</b>	278	1.6	1800			<b>VC040/075</b>	7380
	<b>0.8</b>	291	2.4	1800			<b>VC040/090</b>	8180
	<b>0.78</b>	222*	0.7*	1800			<b>VC030/050</b>	4840
	<b>0.78</b>	225*	0.9*	1800			<b>VC030/063</b>	6270
	<b>0.6</b>	268*	0.2*	2400			<b>VC025/040</b>	3490
	<b>0.6</b>	266*	0.5*	2400			<b>VC030/050</b>	4840
	<b>0.6</b>	330	1.1	2400			<b>VC040/075</b>	7380
	<b>0.6</b>	359	1.7	2400			<b>VC040/090</b>	8180
	<b>0.58</b>	261*	0.2*	2400			<b>VC030/040</b>	3490
	<b>0.58</b>	276*	0.8*	2400			<b>VC030/063</b>	6270
	<b>0.5</b>	324*	0.2*	3000			<b>VC025/040</b>	3490
	<b>0.5</b>	307*	0.4*	3000			<b>VC030/050</b>	4840
	<b>0.5</b>	406	1.4	3000			<b>VC040/090</b>	8180
	<b>0.47</b>	319*	0.7*	3000			<b>VC030/063</b>	6270
	<b>0.47</b>	377*	0.8*	3000			<b>VC040/075</b>	7380
	<b>0.4</b>	294*	0.1*	4000			<b>VC025/040</b>	3490
	<b>0.4</b>	279*	0.1*	4000			<b>VC030/040</b>	3490
	<b>0.4</b>	300*	0.2*	3200			<b>VC030/040</b>	3490
	<b>0.35</b>	288*	0.3*	4000			<b>VC030/050</b>	4840
	<b>0.35</b>	306*	0.6*	4000			<b>VC030/063</b>	6270
	<b>0.35</b>	355*	0.7*	4000			<b>VC040/075</b>	7380
	<b>0.35</b>	365	1.3	4000			<b>VC040/090</b>	8180
	<b>0.28</b>	356*	0.1*	5000			<b>VC025/040</b>	3490
	<b>0.29</b>	311*	0.3*	4800			<b>VC030/050</b>	4840
	<b>0.28</b>	338*	0.1*	5000			<b>VC030/040</b>	3490
	<b>0.28</b>	360*	0.4*	5000			<b>VC030/063</b>	6270
	<b>0.28</b>	419*	0.5*	5000			<b>VC040/075</b>	7380
	<b>0.28</b>	431	1	5000			<b>VC040/090</b>	8180
<b>0.09</b>								
M1 056 0.09 2P.. ( $n_1 = 2800 \text{ min}^{-1}$ )	<b>373.3</b>	2	3.9	7.5	<b>VP025</b>			399
	<b>373.3</b>	2	6.5	7.5	<b>VP030</b>			542
	<b>280</b>	2.6	3.4	10	<b>VP025</b>			439
	<b>280</b>	2.6	5	10	<b>VP030</b>			597
	<b>186.7</b>	3.8	2.4	15	<b>VP025</b>			503
	<b>186.7</b>	3.7	3.5	15	<b>VP030</b>			683
	<b>140</b>	4.9	1.8	20	<b>VP025</b>			553
	<b>140</b>	4.7	2.5	20	<b>VP030</b>			752
	<b>112</b>	5.9	1.5	25	<b>VP025</b>			590
	<b>112</b>	5.5	2.9	25	<b>VP030</b>			810
	<b>93.3</b>	6.4	2.3	30	<b>VP030</b>			861
	<b>93.3</b>	6.7	13	30	<b>VP025</b>			633
	<b>70</b>	8.5	1.1	40	<b>VP025</b>			697
	<b>70</b>	8	18	40	<b>VP030</b>			948
	<b>56</b>	10*	0.9*	50	<b>VP025</b>			751
	<b>56</b>	9.4	1.4	50	<b>VP030</b>			1021
	<b>56</b>	11	2.8	50	<b>VP040</b>			1964
	<b>46.7</b>	11*	0.7*	60	<b>VP025</b>			798
	<b>46.7</b>	10	1.1	60	<b>VP030</b>			1085
	<b>46.7</b>	12	2.3	60	<b>VP040</b>			2087
	<b>35</b>	13*	0.9*	80	<b>VP030</b>			1194
	<b>35</b>	15	1.7	80	<b>VP040</b>			2298
	<b>28</b>	17	1.4	100	<b>VP040</b>			2475
	<b>28</b>	18	1.6	100			<b>VC025/030</b>	1286
	<b>18.7</b>	25	1.1	150			<b>VC025/030</b>	1472
	<b>14</b>	31*	0.9*	200			<b>VC025/030</b>	1620
	<b>28</b>	39	1.8	100			<b>VC025/040</b>	2769
	<b>18.6</b>	54	1.2	150			<b>VC025/040</b>	3488
	<b>9.3</b>	43	1.6	300			<b>VC025/040</b>	3490
	<b>14</b>	70*	0.9*	200			<b>VC025/040</b>	3488
	<b>7</b>	52	1.2	400			<b>VC025/040</b>	3490
	<b>11.2</b>	83*	0.7*	250			<b>VC025/040</b>	3490
	<b>5.6</b>	71*	0.8*	500			<b>VC025/040</b>	3490

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $f_s$ :  $M_{m2} = M_2 \times f_s$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $f_s$ :  $M_{m2} = M_2 \times f_s$



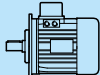
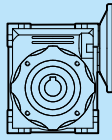
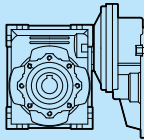
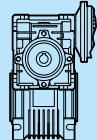
## Tabella dati tecnici motoriduttori / Table technical data gearmotors

 $Pn_1$ (kW)	 $n_2$ ( $min^{-1}$ )	 $M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>0.09</b>								
M1 056 0.09 4P. ( $n_1 = 1400 min^{-1}$ )	<b>280</b>	3	4.1	5	<b>VP025</b>			439
	<b>280</b>	3	6.7	5	<b>VP030</b>			597
	<b>186.7</b>	4	2.8	7.5	<b>VP025</b>			503
	<b>186.7</b>	4	4.6	7.5	<b>VP030</b>			683
	<b>140</b>	5	2.4	10	<b>VP025</b>			553
	<b>140</b>	5	3.6	10	<b>VP030</b>			752
	<b>93.3</b>	7	1.6	15	<b>VP025</b>			633
	<b>93.3</b>	7	2.5	15	<b>VP030</b>			861
	<b>70</b>	9	1.3	20	<b>VP025</b>			697
	<b>70</b>	9	2	20	<b>VP030</b>			948
	<b>56</b>	10	2	25	<b>VP030</b>			1021
	<b>46.7</b>	12	1.1	30	<b>VP025</b>			798
	<b>46.7</b>	12	1.7	30	<b>VP030</b>			1085
	<b>35</b>	15*	0.9*	40	<b>VP025</b>			878
	<b>35</b>	14	1.2	40	<b>VP030</b>			1194
	<b>28</b>	17	1	50	<b>VP030</b>			1286
	<b>28</b>	19	2	50	<b>VP040</b>			2475
	<b>23.3</b>	19*	0.9*	60	<b>VP030</b>			1367
	<b>23.3</b>	21	1.7	60	<b>VP040</b>			2630
	<b>17.5</b>	26	1.3	80	<b>VP040</b>			2895
	<b>14</b>	38	0.8	100			<b>VC025/030</b>	1620
	<b>14</b>	29	1	100	<b>VP040</b>			3118
	<b>14</b>	39	1.8	100			<b>VC030/040</b>	2769
	<b>14</b>	40	3.4	100			<b>VC030/050</b>	3800
	<b>9.3</b>	49*	0.6*	150			<b>VC025/030</b>	1830
	<b>9.3</b>	56	1.3	150			<b>VC030/040</b>	3169
	<b>9.3</b>	56	2.4	150			<b>VC030/050</b>	4350
	<b>7</b>	62*	0.5*	200			<b>VC025/030</b>	1830
	<b>7</b>	70*	0.9*	200			<b>VC030/040</b>	3488
	<b>7</b>	70	1.7	200			<b>VC030/050</b>	4788
	<b>5.6</b>	66*	0.5*	250			<b>VC025/030</b>	1830
	<b>5.6</b>	83*	0.7*	250			<b>VC030/040</b>	3490
	<b>5.6</b>	83	1.3	250			<b>VC030/050</b>	4840
	<b>5.6</b>	85	2.7	250			<b>VC030/063</b>	6270
	<b>4.7</b>	75*	0.4*	300			<b>VC025/030</b>	1830
	<b>4.7</b>	88*	0.8*	300			<b>VC030/040</b>	3490
	<b>4.7</b>	92	1.6	300			<b>VC030/050</b>	4840
	<b>4.7</b>	88	2.9	300			<b>VC030/063</b>	6270
	<b>3.5</b>	107*	0.3*	400			<b>VC025/030</b>	1830
	<b>3.5</b>	107	1.2	400			<b>VC030/050</b>	4840
	<b>3.5</b>	114	2.2	400			<b>VC030/063</b>	6270
	<b>2.8</b>	115*	0.3*	500			<b>VC025/030</b>	1830
	<b>2.8</b>	123	1	500			<b>VC030/050</b>	4840
	<b>2.8</b>	132	1.8	500			<b>VC030/063</b>	6270
	<b>2.3</b>	135*	0.2*	600			<b>VC025/030</b>	1830
	<b>2.3</b>	159*	0.9*	600			<b>VC030/050</b>	4840
	<b>2.3</b>	166	1.6	600			<b>VC030/063</b>	6270
	<b>1.9</b>	151*	0.2*	750			<b>VC025/030</b>	1830
	<b>1.9</b>	185*	0.8*	750			<b>VC030/050</b>	4840
	<b>1.9</b>	194	1.4	750			<b>VC030/063</b>	6270
	<b>1.6</b>	178*	0.2*	900			<b>VC025/030</b>	1830
	<b>1.6</b>	212*	0.7*	900			<b>VC030/050</b>	4840
	<b>1.6</b>	200	1	900			<b>VC030/063</b>	6270
	<b>1.2</b>	212*	0.1*	1200			<b>VC025/030</b>	1830
	<b>1.2</b>	263*	0.9*	1200			<b>VC030/063</b>	6270
	<b>0.93</b>	305*	0.7*	1500			<b>VC030/063</b>	6270
	<b>0.9</b>	247*	0.1*	1500			<b>VC025/030</b>	1830
	<b>0.9</b>	360	1.1	1500			<b>VC040/075</b>	7380
	<b>0.78</b>	304*	0.1*	1800			<b>VC025/030</b>	1830
	<b>0.78</b>	404	1	1800			<b>VC040/075</b>	7380
	<b>0.58</b>	340*	0.1*	2400			<b>VC025/030</b>	1830
	<b>0.58</b>	496*	0.7*	2400			<b>VC040/075</b>	7380
	<b>0.5</b>	609*	0.9*	3000			<b>VC040/090</b>	8180
	<b>0.47</b>	405*	0.1*	3000			<b>VC025/030</b>	1830
	<b>0.35</b>	548*	0.8*	4000			<b>VC040/090</b>	8180

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$


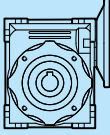
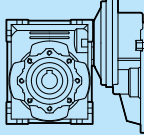
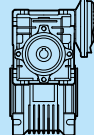
Tabella dati tecnici motoriduttori / Table technical data gearmotors

 $Pn_1$ (kW)	$n_2$ (min <sup>-1</sup> )	$M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>0.12</b>								
M1 056 0.12 2P... (n1 = 2800 min <sup>-1</sup> )	<b>373.3</b>	2.7	3	7.5	<b>VP025</b>			399
	<b>280</b>	3.5	2.6	10	<b>VP025</b>			439
	<b>186.7</b>	5.1	1.8	15	<b>VP025</b>			503
	<b>186.7</b>	5	2.6	15	<b>VP030</b>			683
	<b>140</b>	6.5	1.4	20	<b>VP025</b>			553
	<b>140</b>	6	1.9	20	<b>VP030</b>			752
	<b>112</b>	7.9	1.1	25	<b>VP025</b>			590
	<b>112</b>	8	2.1	25	<b>VP030</b>			810
	<b>93.3</b>	9	1	30	<b>VP025</b>			633
	<b>93.3</b>	9	1.7	30	<b>VP030</b>			861
	<b>70</b>	11*	0.8*	40	<b>VP025</b>			697
	<b>70</b>	11	1.3	40	<b>VP030</b>			948
	<b>56</b>	13	1	50	<b>VP030</b>			1021
	<b>56</b>	14	2.1	50	<b>VP040</b>			1964
	<b>46.7</b>	14*	0.8*	60	<b>VP030</b>			1085
	<b>46.7</b>	16	1.7	60	<b>VP040</b>			2087
	<b>35</b>	20	1.3	80	<b>VP040</b>			2298
	<b>28</b>	23	1	100	<b>VP040</b>			2475
M1 063 0.12 4P... (n1 = 1400 min <sup>-1</sup> )	<b>280</b>	4	5.1	5	<b>VP030</b>			597
	<b>186.7</b>	5	3.4	7.5	<b>VP030</b>			683
	<b>140</b>	7	2.7	10	<b>VP030</b>			752
	<b>93.3</b>	10	1.9	15	<b>VP030</b>			861
	<b>70</b>	12	1.5	20	<b>VP030</b>			948
	<b>70</b>	13	3.3	20	<b>VP040</b>			1824
	<b>56</b>	14	1.5	25	<b>VP030</b>			1021
	<b>56</b>	16	2.5	25	<b>VP040</b>			1964
	<b>46.7</b>	16	1.3	30	<b>VP030</b>			1085
	<b>46.7</b>	17	2.6	30	<b>VP040</b>			2087
	<b>35</b>	19*	0.9*	40	<b>VP030</b>			1194
	<b>35</b>	21	1.9	40	<b>VP040</b>			2298
	<b>28</b>	23*	0.8*	50	<b>VP030</b>			1286
	<b>28</b>	25	1.5	50	<b>VP040</b>			2475
	<b>28</b>	26	2.9	50	<b>VP050</b>			3397
	<b>23.3</b>	28	1.3	60	<b>VP040</b>			2630
	<b>23.3</b>	29	2.3	60	<b>VP050</b>			3610
	<b>19.1</b>	42	1.2	73.5		<b>VR063/040</b>		2833
	<b>17.5</b>	34	1	80	<b>VP040</b>			2895
	<b>17.5</b>	35	1.9	80	<b>VP050</b>			3973
	<b>15.9</b>	46	1.2	88.2		<b>VR063/040</b>		3011
	<b>14</b>	38*	0.8*	100	<b>VP040</b>			3118
	<b>14</b>	52	1.4	100			<b>VC030/040</b>	2769
	<b>14</b>	40	1.4	100	<b>VP050</b>			4280
	<b>14</b>	54	2.6	100			<b>VC030/050</b>	3800
	<b>14</b>	54	2.8	100			<b>VC030/063</b>	4967
	<b>11.9</b>	57*	0.9*	117.6		<b>VR063/040</b>		3314
	<b>11.7</b>	58	1.8	117.6		<b>VR063/050</b>		4548
	<b>9.5</b>	66*	0.7*	147		<b>VR063/040</b>		3490
	<b>9.5</b>	68	1.3	147		<b>VR063/050</b>		4840
	<b>9.3</b>	74	1	150			<b>VC030/040</b>	3169
	<b>9.3</b>	74	1.8	150			<b>VC030/050</b>	4350
	<b>9.3</b>	75	2.8	150			<b>VC030/063</b>	5686
	<b>8</b>	75	1.1	176.4		<b>VR063/050</b>		4840
	<b>7.9</b>	74*	0.6*	176.4		<b>VR063/040</b>		3490
	<b>7</b>	94	1.3	200			<b>VC030/050</b>	4788
<b>7</b>	95	2.7	200			<b>VC030/063</b>	6259	
<b>5.8</b>	88*	0.8*	235.2		<b>VR063/050</b>		4840	
<b>5.6</b>	110	1	250			<b>VC030/050</b>	4840	
<b>5.6</b>	114	2	250			<b>VC030/063</b>	6270	
<b>5.6</b>	120	3.2	250			<b>VC040/075</b>	7380	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

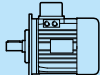
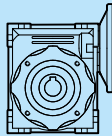
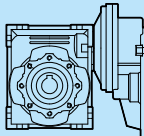
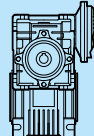
**Tabella dati tecnici motoriduttori / Table technical data gearmotors**

 $Pn_1$ (kW)	$n_2$ (min <sup>-1</sup> )	$M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)	
<b>0.12</b>									
M1 063 0.12 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>4.8</b>	98*	0.7*	294		<b>VR063/050</b>		4840	
	<b>4.7</b>	119	1.2	300				<b>VC030/050</b>	4840
	<b>4.7</b>	117	2.2	300				<b>VC030/063</b>	6270
	<b>4.7</b>	134	3.3	300				<b>VC040/075</b>	7380
	<b>3.5</b>	142*	0.9*	400				<b>VC030/050</b>	4840
	<b>3.5</b>	152	1.7	400				<b>VC030/063</b>	6270
	<b>3.5</b>	164	2.5	400				<b>VC040/075</b>	7380
	<b>2.8</b>	164*	0.7*	500				<b>VC030/050</b>	4840
	<b>2.8</b>	171	1.3	500				<b>VC030/063</b>	6270
	<b>2.8</b>	188	2	500				<b>VC040/075</b>	7380
	<b>2.8</b>	202	2.8	500				<b>VC040/090</b>	8180
	<b>2.3</b>	208	1.1	600				<b>VC030/063</b>	6270
	<b>2.3</b>	248	1.8	600				<b>VC040/075</b>	7380
	<b>2.3</b>	260	2.7	600				<b>VC040/090</b>	8180
	<b>1.9</b>	241*	0.9*	750				<b>VC030/063</b>	6270
	<b>1.9</b>	299	1.5	750				<b>VC040/075</b>	7380
	<b>1.9</b>	313	2.2	750				<b>VC040/090</b>	8180
	<b>1.6</b>	297*	0.9*	900				<b>VC030/063</b>	6270
	<b>1.6</b>	325	1.2	900				<b>VC040/075</b>	7380
	<b>1.6</b>	350	2	900				<b>VC040/090</b>	8180
	<b>1.2</b>	360*	0.8*	1200				<b>VC030/063</b>	6270
	<b>1.2</b>	399*	0.9*	1200				<b>VC040/075</b>	7380
	<b>1.2</b>	434	1.6	1200				<b>VC040/090</b>	8180
	<b>1.2</b>	448	2.8	1200				<b>VC050/110</b>	10320
	<b>0.9</b>	495*	0.9*	1500				<b>VC040/075</b>	7380
	<b>0.9</b>	518	1.4	1500				<b>VC040/090</b>	8180
	<b>0.9</b>	527	2.4	1500				<b>VC050/110</b>	10320
	<b>0.8</b>	556*	0.8*	1800				<b>VC040/075</b>	7380
	<b>0.8</b>	547*	0.9*	1800				<b>VC040/090</b>	8180
	<b>0.8</b>	592	2.1	1800				<b>VC050/110</b>	10320
	<b>0.6</b>	766	1.5	2400				<b>VC050/110</b>	10320
	<b>0.58</b>	695*	0.9*	2400				<b>VC040/090</b>	8180
<b>0.5</b>	884	1.2	3000	<b>VC050/110</b>	10320				
<b>0.35</b>	784	1	4000	<b>VC050/110</b>	10320				
<b>0.28</b>	928*	0.8*	5000	<b>VC050/110</b>	10320				
M1 063 0.12 6P. ( $n_1 = 900 \text{ min}^{-1}$ )	<b>180</b>	5	3.7	5	<b>VP030</b>			692	
	<b>120</b>	8	2.5	7.5	<b>VP030</b>			792	
	<b>90</b>	10	2	10	<b>VP030</b>			871	
	<b>60</b>	14	1.4	15	<b>VP030</b>			997	
	<b>60</b>	15	3.3	15	<b>VP040</b>			1920	
	<b>45</b>	18	1.1	20	<b>VP030</b>			1098	
	<b>45</b>	19	2.5	20	<b>VP040</b>			2113	
	<b>36</b>	20	1.1	25	<b>VP030</b>			1183	
	<b>36</b>	23	1.9	25	<b>VP040</b>			2276	
	<b>30</b>	23*	0.9*	30	<b>VP030</b>			1257	
	<b>30</b>	25	1.9	30	<b>VP040</b>			2419	
	<b>22.5</b>	29*	0.7*	40	<b>VP030</b>			1383	
	<b>22.5</b>	32	1.4	40	<b>VP040</b>			2662	
	<b>22.5</b>	32	2.6	40	<b>VP050</b>			3654	
	<b>18</b>	36	1.2	50	<b>VP040</b>			2868	
	<b>18</b>	38	2	50	<b>VP050</b>			3936	
	<b>15</b>	41*	0.9*	60	<b>VP040</b>			3047	
	<b>15</b>	42	1.7	60	<b>VP050</b>			4183	
	<b>12.3</b>	62	1	73.5				<b>VR063/040</b>	3283
	<b>11.3</b>	50*	0.7*	80	<b>VP040</b>				3354
	<b>11.3</b>	50	1.4	80	<b>VP050</b>				4604
	<b>10.2</b>	68	1.1	88.2				<b>VR063/040</b>	3488
	<b>9</b>	56	1	100	<b>VP050</b>				4840
	<b>7.7</b>	83*	0.8*	117.6				<b>VR063/040</b>	3490
	<b>7.7</b>	84	1.5	117.6				<b>VR063/050</b>	4840
	<b>6.1</b>	97	1.2	147				<b>VR063/050</b>	4840
	<b>5.1</b>	108	1	176.4				<b>VR063/050</b>	4840
	<b>3.8</b>	125*	0.7*	235.2				<b>VR063/050</b>	4840

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

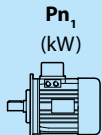
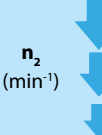
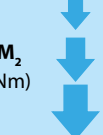
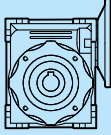
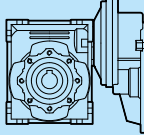
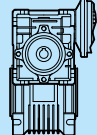
Tabella dati tecnici motoriduttori / Table technical data gearmotors

 $Pn_1$ (kW)	$n_2$ (min <sup>-1</sup> )	$M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>0.18</b>								
M1 063 0.18 2P. ( $n_1 = 2800 \text{ min}^{-1}$ )	<b>373.3</b>	4	3.2	7.5	<b>VP030</b>			542
	<b>280</b>	5.2	2.5	10	<b>VP030</b>			597
	<b>186.7</b>	7.4	1.8	15	<b>VP030</b>			683
	<b>140</b>	9.5	1.3	20	<b>VP030</b>			752
	<b>140</b>	10	2.8	20	<b>VP040</b>			1447
	<b>112</b>	11	1.4	25	<b>VP030</b>			810
	<b>112</b>	12	2.3	25	<b>VP040</b>			1559
	<b>93.3</b>	13	1.2	30	<b>VP030</b>			861
	<b>93.3</b>	14	2.5	30	<b>VP040</b>			1657
	<b>70</b>	16*	0.9*	40	<b>VP030</b>			948
	<b>70</b>	17	1.8	40	<b>VP040</b>			1824
	<b>70</b>	18	3.2	40	<b>VP050</b>			2503
	<b>56</b>	21	1.4	50	<b>VP040</b>			1964
	<b>56</b>	21	2.5	50	<b>VP050</b>			2696
	<b>46.7</b>	24	1.2	60	<b>VP040</b>			2087
	<b>46.7</b>	24	2.1	60	<b>VP050</b>			2865
	<b>35</b>	29*	0.8*	80	<b>VP040</b>			2298
	<b>35</b>	30	1.5	80	<b>VP050</b>			3153
	<b>28</b>	34	1.2	100	<b>VP050</b>			3397
	M1 063 0.18 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>280</b>	5	3.4	5	<b>VP030</b>		
<b>186.7</b>		8	2.3	7.5	<b>VP030</b>			683
<b>140</b>		10	1.8	10	<b>VP030</b>			752
<b>93.3</b>		14	1.3	15	<b>VP030</b>			861
<b>93.3</b>		15	2.9	15	<b>VP040</b>			1657
<b>70</b>		18	1	20	<b>VP030</b>			948
<b>70</b>		19	2	20	<b>VP040</b>			1824
<b>56</b>		21	1	25	<b>VP030</b>			1021
<b>56</b>		23	1.7	25	<b>VP040</b>			1964
<b>46.7</b>		24*	0.8*	30	<b>VP030</b>			1085
<b>46.7</b>		26	1.7	30	<b>VP040</b>			2087
<b>35</b>		32	1.3	40	<b>VP040</b>			2298
<b>35</b>		33	2.3	40	<b>VP050</b>			3153
<b>28</b>		38	1	50	<b>VP040</b>			2475
<b>28</b>		39	1.9	50	<b>VP050</b>			3397
<b>23.3</b>		43*	0.8*	60	<b>VP040</b>			2630
<b>23.3</b>		43	1.6	60	<b>VP050</b>			3610
<b>19.1</b>		64*	0.8*	73.5		<b>VR063/040</b>		2833
<b>17.5</b>		52	1.2	80	<b>VP050</b>			3973
<b>15.9</b>		70*	0.8*	88.2		<b>VR063/040</b>		3011
<b>14</b>		78*	0.9*	100			<b>VC030/040</b>	2769
<b>14</b>		60*	0.9*	100	<b>VP050</b>			4280
<b>14</b>		81	1.7	100			<b>VC030/050</b>	3800
<b>14</b>		81	1.9	100			<b>VC030/063</b>	4967
<b>11.9</b>		85*	0.6*	117.6		<b>VR063/040</b>		3314
<b>11.9</b>		87	1.1	117.6		<b>VR063/050</b>		4548
<b>9.5</b>		101*	0.9*	147		<b>VR063/050</b>		4840
<b>9.3</b>		112	1.2	150			<b>VC030/050</b>	4350
<b>9.3</b>		113	1.9	150			<b>VC030/063</b>	5686
<b>7.9</b>		113*	0.7*	176.4		<b>VR063/050</b>		4840
<b>7</b>		141*	0.9*	200			<b>VC030/050</b>	4788
<b>7</b>		143	1.8	200			<b>VC030/063</b>	6259
<b>7</b>		150	2.8	200			<b>VC040/075</b>	7380
<b>5.8</b>	133*	0.6*	235.2		<b>VR063/050</b>		4840	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$


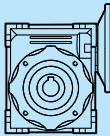
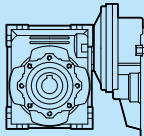
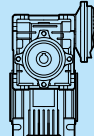
**Tabella dati tecnici motoriduttori / Table technical data gearmotors**

 $Pn_1$ (kW)	 $n_2$ (min <sup>-1</sup> )	 $M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>0.18</b>								
M1 063 0.18 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>5.6</b>	171	1.4	250			<b>VC030/063</b>	6270
	<b>5.6</b>	180	2.1	250			<b>VC040/075</b>	7380
	<b>5.6</b>	188	3	250			<b>VC040/090</b>	8180
	<b>4.7</b>	183*	0.8*	300			<b>VC030/050</b>	4840
	<b>4.7</b>	175	1.5	300			<b>VC030/063</b>	6270
	<b>4.7</b>	200	2.2	300			<b>VC040/075</b>	7380
	<b>4.7</b>	210	3.3	300			<b>VC040/090</b>	8180
	<b>3.5</b>	222	1	400			<b>VC030/063</b>	6270
	<b>3.5</b>	246	1.7	400			<b>VC040/075</b>	7380
	<b>3.5</b>	259	2.4	400			<b>VC040/090</b>	8180
	<b>2.8</b>	257*	0.8*	500			<b>VC030/063</b>	6270
	<b>2.8</b>	282	1.3	500			<b>VC040/075</b>	7380
	<b>2.8</b>	303	1.9	500			<b>VC040/090</b>	8180
	<b>2.3</b>	333*	0.8*	600			<b>VC030/063</b>	6270
	<b>2.3</b>	362	1.1	600			<b>VC040/075</b>	7380
	<b>2.3</b>	390	1.8	600			<b>VC040/090</b>	8180
	<b>1.9</b>	435*	0.9*	750			<b>VC040/075</b>	7380
	<b>1.9</b>	469	1.5	750			<b>VC040/090</b>	8180
	<b>1.6</b>	487*	0.8*	900			<b>VC040/075</b>	7380
	<b>1.6</b>	526	1.3	900			<b>VC040/090</b>	8180
<b>1.2</b>	622*	0.7*	1200			<b>VC040/075</b>	7380	
<b>1.2</b>	629	1	1200			<b>VC040/090</b>	8180	
<b>1.2</b>	671	1.9	1200			<b>VC050/110</b>	10320	
<b>0.9</b>	735*	0.8*	1500			<b>VC040/090</b>	8180	
<b>0.9</b>	790	1.6	1500			<b>VC050/110</b>	10320	
<b>0.8</b>	874*	0.8*	1800			<b>VC040/090</b>	8180	
<b>0.8</b>	861	1.5	1800			<b>VC050/110</b>	10320	
<b>0.58</b>	1113	1.1	2400			<b>VC050/110</b>	10320	
<b>0.5</b>	1370*	0.8*	3000			<b>VC050/110</b>	10320	
M1 071 0.18 6P. ( $n_1 = 900 \text{ min}^{-1}$ )	<b>90</b>	16	3	10	<b>VP040</b>			1677
	<b>60</b>	23	2.2	15	<b>VP040</b>			1920
	<b>45</b>	29	1.5	20	<b>VP040</b>			2113
	<b>45</b>	29	2.8	20	<b>VP050</b>			2900
	<b>36</b>	34	1.3	25	<b>VP040</b>			2276
	<b>36</b>	35	2.1	25	<b>VP050</b>			3124
	<b>30</b>	38	1.3	30	<b>VP040</b>			2419
	<b>30</b>	40	2.4	30	<b>VP050</b>			3320
	<b>22.5</b>	47	1	40	<b>VP040</b>			2662
	<b>22.5</b>	49	1.8	40	<b>VP050</b>			3654
	<b>22.5</b>	50	3.4	40	<b>VP063</b>			4776
	<b>18</b>	56	1.4	50	<b>VP050</b>			3936
	<b>18</b>	59	2.7	50	<b>VP063</b>			5145
	<b>15</b>	63	1.1	60	<b>VP050</b>			4183
	<b>15</b>	66	2.1	60	<b>VP063</b>			5467
	<b>15</b>	66	2.1	60	<b>VP075</b>			5467
	<b>12.2</b>	95	1.2	73.5		<b>VR071/050</b>		4506
	<b>11.3</b>	75*	0.9*	80	<b>VP050</b>			4604
	<b>11.3</b>	79	1.6	80	<b>VP063</b>			6018
	<b>11.3</b>	79	1.6	80	<b>VP075</b>			6018
	<b>10.2</b>	105	1.4	88.2		<b>VR071/050</b>		4788
	<b>9</b>	90	1.4	100	<b>VP063</b>			6270
	<b>9</b>	90	1.4	100	<b>VP075</b>			6270
	<b>7.7</b>	126	1	117.6		<b>VR071/050</b>		4840
	<b>7.7</b>	131	1.8	117.6		<b>VR071/063</b>		6270
	<b>6.1</b>	152	1.4	147		<b>VR071/063</b>		6270
	<b>6</b>	148*	0.8*	147		<b>VR071/050</b>		
	<b>5.1</b>	168	1.2	176.4		<b>VR071/063</b>		6270
	<b>5.1</b>	179	1.7	176.4		<b>VR071/075</b>		7380
	<b>3.8</b>	197*	0.9*	235.2		<b>VR071/063</b>		6270
	<b>3.8</b>	211	1.2	235.2		<b>VR071/075</b>		7380
	<b>3.1</b>	218*	0.7*	294		<b>VR071/063</b>		6270
<b>3.1</b>	235	1	294		<b>VR071/075</b>		7380	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

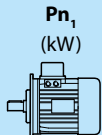
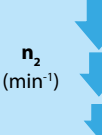
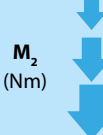
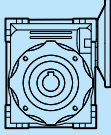
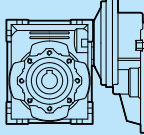
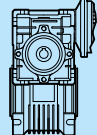
Tabella dati tecnici motoriduttori / Table technical data gearmotors

 $Pn_1$ (kW)	$n_2$ (min <sup>-1</sup> )	$M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>0.25</b>								
M1 063 0.25 2P. (n1 = 2800 min <sup>-1</sup> )	<b>373.3</b>	5.6	2.3	7.5	<b>VP030</b>			542
	<b>280</b>	7.2	1.8	10	<b>VP030</b>			597
	<b>186.7</b>	10	1.3	15	<b>VP030</b>			683
	<b>186.7</b>	11	2.9	15	<b>VP040</b>			1315
	<b>140</b>	13*	0.9*	20	<b>VP030</b>			752
	<b>140</b>	14	2	20	<b>VP040</b>			1447
	<b>112</b>	15	1	25	<b>VP030</b>			810
	<b>112</b>	17	1.6	25	<b>VP040</b>			1559
	<b>93.3</b>	18*	0.8*	30	<b>VP030</b>			861
	<b>93.3</b>	20	1.7	30	<b>VP040</b>			1657
	<b>70</b>	25	1.2	40	<b>VP040</b>			1824
	<b>70</b>	25	2.3	40	<b>VP050</b>			2503
	<b>56</b>	29	1	50	<b>VP040</b>			1964
	<b>56</b>	30	1.8	50	<b>VP050</b>			2696
	<b>46.7</b>	34*	0.8*	60	<b>VP040</b>			2087
	<b>46.7</b>	34	1.5	60	<b>VP050</b>			2865
	<b>35</b>	42	1.1	80	<b>VP040</b>			3153
	<b>28</b>	48*	0.8*	100	<b>VP040</b>			3397
	<b>7</b>	150	1.4	400			<b>VC030/063</b>	6270
	<b>5.6</b>	175	1.2	500			<b>VC030/063</b>	6270
M1 071 0.25 4P. (n1 = 1400 min <sup>-1</sup> )	<b>280</b>	8	4.5	5	<b>VP040</b>			1149
	<b>186.7</b>	11	3.6	7.5	<b>VP040</b>			1315
	<b>140</b>	14	2.8	10	<b>VP040</b>			1447
	<b>93.3</b>	21	1.9	15	<b>VP040</b>			1657
	<b>70</b>	27	1.5	20	<b>VP040</b>			1824
	<b>70</b>	27	2.7	20	<b>VP050</b>			2503
	<b>56</b>	32	1.2	25	<b>VP040</b>			1964
	<b>56</b>	32	2.2	25	<b>VP050</b>			2696
	<b>46.7</b>	36	1.3	30	<b>VP040</b>			2087
	<b>46.7</b>	37	2.3	30	<b>VP050</b>			2865
	<b>35</b>	44*	0.9*	40	<b>VP040</b>			2298
	<b>35</b>	46	1.7	40	<b>VP050</b>			3153
	<b>35</b>	48	3.1	40	<b>VP063</b>			4122
	<b>28</b>	54	1.4	50	<b>VP050</b>			3397
	<b>28</b>	56	2.4	50	<b>VP063</b>			4440
	<b>23.3</b>	60	1.1	60	<b>VP050</b>			3610
	<b>23.3</b>	63	2	60	<b>VP063</b>			4719
	<b>23.3</b>	68	3.2	60	<b>VP075</b>			5569
	<b>19</b>	88	1	73.5		<b>VR071/050</b>		3889
	<b>17.5</b>	72*	0.9*	80	<b>VP050</b>			3973
	<b>17.5</b>	78	1.6	80	<b>VP063</b>			5193
	<b>17.5</b>	82	2.3	80	<b>VP075</b>			6130
	<b>15.9</b>	98	1.1	88.2		<b>VR071/050</b>		4132
	<b>14</b>	87	1.4	100	<b>VP063</b>			5595
	<b>14</b>	94	1.9	100	<b>VP075</b>			6603
	<b>11.9</b>	121*	0.8*	117.6		<b>VR071/050</b>		4548
	<b>11.9</b>	125	1.5	117.6		<b>VR071/063</b>		5945
	<b>9.5</b>	143	1.2	147		<b>VR071/063</b>		6270
	<b>9.5</b>	151	1.7	147		<b>VR071/075</b>		7380
	<b>7.9</b>	163	1	176.4		<b>VR071/063</b>		6270
	<b>7.9</b>	172	1.4	176.4		<b>VR071/075</b>		7380
	<b>7</b>	209	2	200			<b>VC040/075</b>	7380
	<b>7</b>	217	2.8	200			<b>VC040/090</b>	8174
	<b>6</b>	192*	0.7*	235.2		<b>VR071/063</b>		6270
	<b>6</b>	201	1.1	235.2		<b>VR071/075</b>		7380
	<b>5.6</b>	250	1.5	250			<b>VC040/075</b>	7380
<b>5.6</b>	261	2.2	250			<b>VC040/090</b>	8180	
<b>4.8</b>	215*	0.6*	294		<b>VR071/063</b>		6270	
<b>4.8</b>	230*	0.9*	294		<b>VR071/075</b>		7380	
<b>4.7</b>	278	1.6	300			<b>VC040/075</b>	7380	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

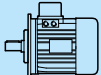
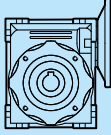
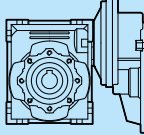
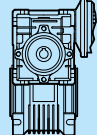
**Tabella dati tecnici motoriduttori / Table technical data gearmotors**

 $P_{n1}$ (kW)	 $n_2$ (min <sup>-1</sup> )	 $M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>0.25</b>								
M1 071 0.25 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>4.7</b>	291	2.4	300			<b>VC040/090</b>	8180
	<b>3.5</b>	336	1.1	400			<b>VC040/075</b>	7380
	<b>3.5</b>	359	1.7	400			<b>VC040/090</b>	8180
	<b>3.5</b>	386	3.1	400			<b>VC050/110</b>	10320
	<b>2.8</b>	384*	0.8*	500			<b>VC040/075</b>	7380
	<b>2.8</b>	420	1.3	500			<b>VC040/090</b>	8180
	<b>2.8</b>	512	2.3	500			<b>VC050/110</b>	10320
	<b>2.8</b>	460	3.4	500			<b>VC063/130</b>	13500
	<b>2.3</b>	517*	0.9*	600			<b>VC040/075</b>	7380
	<b>2.3</b>	512	1.2	600			<b>VC040/090</b>	8180
	<b>2.3</b>	548	2.3	600			<b>VC050/110</b>	10320
	<b>2.3</b>	571	3.1	600			<b>VC063/130</b>	13500
	<b>1.9</b>	622*	0.7*	750			<b>VC040/075</b>	7380
	<b>1.9</b>	598*	0.9*	750			<b>VC040/090</b>	8180
	<b>1.9</b>	660	1.9	750			<b>VC050/110</b>	10320
	<b>1.9</b>	687	2.6	750			<b>VC063/130</b>	13500
	<b>1.9</b>	666	3.5	750			<b>VC063/150</b>	18000
	<b>1.6</b>	667*	0.8*	900			<b>VC040/090</b>	8180
	<b>1.6</b>	751	1.7	900			<b>VC050/110</b>	10320
	<b>1.6</b>	783	2.2	900			<b>VC063/130</b>	13500
	<b>1.6</b>	840	2.5	900			<b>VC063/150</b>	18000
	<b>1.2</b>	905*	0.8*	1200			<b>VC040/090</b>	8180
	<b>1.2</b>	943	1.3	1200			<b>VC050/110</b>	10320
	<b>1.2</b>	988	1.8	1200			<b>VC063/130</b>	13500
	<b>1.2</b>	1013	2.6	1200			<b>VC063/150</b>	18000
	<b>0.9</b>	1064	1.2	1500			<b>VC050/110</b>	10320
	<b>0.9</b>	1165	1.5	1500			<b>VC063/130</b>	13500
	<b>0.8</b>	1315	1.3	1800			<b>VC063/130</b>	13500
	<b>0.8</b>	1199	1.8	1800			<b>VC063/150</b>	18000
	<b>0.8</b>	1195	1.1	1800			<b>VC050/110</b>	10320
	<b>0.6</b>	1676*	0.7*	2400			<b>VC050/110</b>	10320
	<b>0.6</b>	1624	1	2400			<b>VC063/130</b>	13500
<b>0.6</b>	1446	1.8	2400			<b>VC063/150</b>	18000	
<b>0.5</b>	1935*	0.8*	3000			<b>VC063/130</b>	13500	
<b>0.5</b>	1713	1.4	3000			<b>VC063/150</b>	18000	
<b>0.4</b>	2046*	0.6*	4000			<b>VC063/130</b>	13500	
<b>0.4</b>	2026*	0.9*	4000			<b>VC063/150</b>	18000	
<b>0.3</b>	2430*	0.5*	5000			<b>VC063/130</b>	13500	
<b>0.3</b>	2251*	0.7*	5000			<b>VC063/150</b>	18000	
M1 071 0.25 6P. ( $n_1 = 900 \text{ min}^{-1}$ )	<b>180</b>	12	3.5	5	<b>VP040</b>			1331
	<b>120</b>	17	2.6	7.5	<b>VP040</b>			1524
	<b>90</b>	22	2	10	<b>VP040</b>			1677
	<b>60</b>	31	1.4	15	<b>VP040</b>			1920
	<b>60</b>	32	2.9	15	<b>VP050</b>			2635
	<b>45</b>	40	1.1	20	<b>VP040</b>			2113
	<b>45</b>	40	1.9	20	<b>VP050</b>			2900
	<b>36</b>	48*	0.9*	25	<b>VP040</b>			2276
	<b>36</b>	48	1.5	25	<b>VP050</b>			3124
	<b>36</b>	50	3	25	<b>VP063</b>			4084
	<b>30</b>	53*	0.9*	30	<b>VP040</b>			2419
	<b>30</b>	54	1.7	30	<b>VP050</b>			3320
	<b>30</b>	57	3.1	30	<b>VP063</b>			4339
	<b>22.5</b>	67*	0.7*	40	<b>VP040</b>			2662
	<b>22.5</b>	67	1.2	40	<b>VP050</b>			3654
	<b>22.5</b>	70	2.4	40	<b>VP063</b>			4776
	<b>18</b>	78	1	50	<b>VP050</b>			3936
	<b>18</b>	81	1.8	50	<b>VP063</b>			5145
	<b>18</b>	85	3	50	<b>VP075</b>			6073
	<b>15</b>	88*	0.8*	60	<b>VP050</b>			4183
<b>15</b>	92	1.5	60	<b>VP063</b>			5467	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

Tabella dati tecnici motoriduttori / Table technical data gearmotors

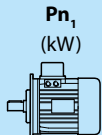
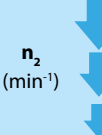
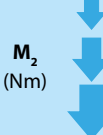
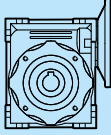
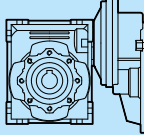
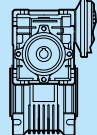
 $P_{n1}$ (kW)	$n_2$ ( $\text{min}^{-1}$ )	$M_2$ (Nm)	$f_s$	$i$				$FR_2$ (N)
<b>0.25</b>								
M1 071 0.25 6P.. ( $n_1 = 900 \text{ min}^{-1}$ )	<b>15</b>	99	2.5	60	<b>VP075</b>			6453
	<b>11.3</b>	110	1.2	80	<b>VP063</b>			6018
	<b>11.3</b>	117	1.7	80	<b>VP075</b>			7103
	<b>9</b>	125	1	100	<b>VP063</b>			6270
	<b>9</b>	133	1.4	100	<b>VP075</b>			7380
	<b>7.7</b>	181	1.3	117.6		<b>VR071/063</b>		6270
	<b>6.1</b>	211	1	147		<b>VR071/063</b>		6270
	<b>6.1</b>	219	1.5	147		<b>VR071/075</b>		7380
	<b>5.1</b>	248	1.2	176.4		<b>VR071/075</b>		7380
	<b>0.37</b>							
M1 071 0.37 2P.. ( $n_1 = 2800 \text{ min}^{-1}$ )	<b>373.3</b>	8.3	3.4	7.5	<b>VP040</b>			1044
	<b>280</b>	11	2.6	10	<b>VP040</b>			1149
	<b>186.7</b>	16	1.9	15	<b>VP040</b>			1315
	<b>140</b>	20	1.4	20	<b>VP040</b>			1447
	<b>112</b>	25	1.1	25	<b>VP040</b>			1559
	<b>112</b>	25	2	25	<b>VP050</b>			2140
	<b>93.3</b>	29	1.2	30	<b>VP040</b>			1657
	<b>93.3</b>	29	2.2	30	<b>VP050</b>			2274
	<b>70</b>	37*	0.8*	40	<b>VP040</b>			1824
	<b>70</b>	37	1.6	40	<b>VP050</b>			2503
	<b>70</b>	38	2.9	40	<b>VP063</b>			3272
	<b>56</b>	44	1.2	50	<b>VP050</b>			2696
	<b>56</b>	45	2.3	50	<b>VP063</b>			3524
	<b>56</b>	47	3.5	50	<b>VP075</b>			4160
	<b>46.7</b>	50	1	60	<b>VP050</b>			2865
	<b>46.7</b>	52	1.9	60	<b>VP063</b>			3745
	<b>46.7</b>	55	2.9	60	<b>VP075</b>			4421
	<b>35</b>	62*	0.7*	80	<b>VP050</b>			3153
	<b>35</b>	65	1.4	80	<b>VP063</b>			4122
	<b>35</b>	68	2.1	80	<b>VP075</b>			4865
<b>28</b>	74	1.1	100	<b>VP063</b>			4440	
<b>28</b>	78	1.7	100	<b>VP075</b>			5241	
M1 071 0.37 4P.. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>280</b>	11	3	5	<b>VP040</b>			1149
	<b>186.7</b>	16	2.4	7.5	<b>VP040</b>			1315
	<b>140</b>	21	1.9	10	<b>VP040</b>			1447
	<b>140</b>	22	3.3	10	<b>VP050</b>			1987
	<b>93.3</b>	31	1.3	15	<b>VP040</b>			1657
	<b>93.3</b>	31	2.4	15	<b>VP050</b>			2274
	<b>70</b>	39	1	20	<b>VP040</b>			1824
	<b>70</b>	40	1.8	20	<b>VP050</b>			2503
	<b>56</b>	47*	0.8*	25	<b>VP040</b>			1964
	<b>56</b>	48	1.5	25	<b>VP050</b>			2696
	<b>56</b>	50	2.7	25	<b>VP063</b>			3524
	<b>46.7</b>	53*	0.8*	30	<b>VP040</b>			2087
	<b>46.7</b>	55	1.5	30	<b>VP050</b>			2865
	<b>46.7</b>	57	2.8	30	<b>VP063</b>			3745
	<b>35</b>	68	1.1	40	<b>VP050</b>			3153
	<b>35</b>	71	2.1	40	<b>VP063</b>			4122
	<b>35</b>	74	3.3	40	<b>VP075</b>			4865
	<b>28</b>	80*	0.9*	50	<b>VP050</b>			3397
	<b>28</b>	83	1.6	50	<b>VP063</b>			4440
	<b>28</b>	88	2.5	50	<b>VP075</b>			5241
<b>23.3</b>	89*	0.8*	60	<b>VP050</b>			3610	
<b>23.3</b>	94	1.4	60	<b>VP063</b>			4719	
<b>23.3</b>	98	2.0	60	<b>VP075</b>			5569	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $f_s$ :  $M_{m2} = M_2 \times f_s$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $f_s$ :  $M_{m2} = M_2 \times f_s$



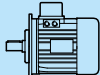
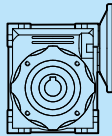
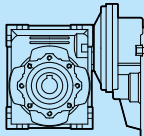
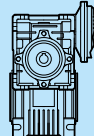
**Tabella dati tecnici motoriduttori / Table technical data gearmotors**

 $Pn_1$ (kW)	 $n_2$ (min <sup>-1</sup> )	 $M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>0.37</b>								
M1 071 0.37 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>17.5</b>	115	1.1	80	<b>VP063</b>			5193
	<b>17.5</b>	121	1.6	80				<b>VP075</b>
	<b>14</b>	129*	0.9*	100	<b>VP063</b>			5595
	<b>14.0</b>	139	1.3	100				<b>VP075</b>
	<b>11.9</b>	185	1	117.6				5945
	<b>9.5</b>	212*	0.8*	147				<b>VR071/063</b>
	<b>9.5</b>	223	1.1	147				7380
	<b>7.9</b>	254*	0.9*	176.4				<b>VR071/075</b>
	<b>7</b>	309	1.4	200				7380
	<b>7</b>	322	1.9	200				<b>VC040/075</b>
	<b>7</b>	338	3.4	200				10320
	<b>5.6</b>	370	1	250				<b>VC040/090</b>
	<b>5.6</b>	386	1.5	250				8180
	<b>5.6</b>	412	2.8	250				<b>VC050/110</b>
	<b>4.7</b>	405	1	300				7380
	<b>4.7</b>	402	1.5	300				<b>VC040/075</b>
	<b>4.7</b>	441	2.9	300				8180
	<b>3.5</b>	498*	0.7*	400				<b>VC040/090</b>
	<b>3.5</b>	523	1.2	400				7380
	<b>3.5</b>	571	2.1	400				<b>VC040/090</b>
	<b>3.5</b>	571	2.9	400				10320
	<b>2.8</b>	611*	0.9*	500				<b>VC050/110</b>
	<b>2.8</b>	757	1.5	500				8180
	<b>2.8</b>	681	2.3	500				<b>VC063/130</b>
	<b>2.8</b>	681	3.4	500				13500
	<b>2.3</b>	757*	0.8*	600				<b>VC063/150</b>
	<b>2.3</b>	812	1.6	600				8180
	<b>2.3</b>	844	2.1	600				<b>VC040/090</b>
	<b>2.3</b>	840	3.2	600				13500
	<b>1.9</b>	950	1.3	750				<b>VC063/150</b>
	<b>1.9</b>	1017	1.7	750				10320
	<b>1.9</b>	986	2.4	750				<b>VC063/130</b>
	<b>1.6</b>	1079	1.2	900				18000
	<b>1.6</b>	1158	1.5	900				<b>VC063/150</b>
	<b>1.6</b>	1244	1.7	900				10320
	<b>1.2</b>	1396*	0.8*	1200				<b>VC050/110</b>
	<b>1.2</b>	1462	1.2	1200				13500
	<b>1.2</b>	1499	1.8	1200				<b>VC063/130</b>
	<b>0.9</b>	1623*	0.8*	1500				18000
	<b>0.9</b>	1674	1.1	1500				<b>VC050/110</b>
	<b>0.8</b>	1887*	0.9*	1800				13500
	<b>0.8</b>	1775	1.2	1800				<b>VC063/130</b>
	<b>0.6</b>	2141	1.2	2400				18000
	<b>0.5</b>	2535*	0.9*	3000				<b>VC063/150</b>

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$


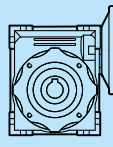
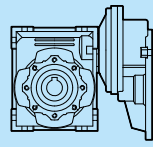
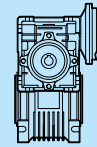
Tabella dati tecnici motoriduttori / Table technical data gearmotors

 $Pn_1$ (kW)	$n_2$ (min <sup>-1</sup> )	$M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>0.37</b>								
M1 080 0.37 6P. (n1 = 900 min <sup>-1</sup> )	180	17	4.3	5	VP050			1827
	120	25	3.3	7.5	VP050			2091
	90	33	2.5	10	VP050			2302
	60	47	1.8	15	VP050			2635
	45	60	1.3	20	VP050			2900
	45	60	2.4	20	VP063			3791
	36	72	1	25	VP050			3124
	36	74	1.9	25	VP063			4084
	36	77	3.1	25	VP075			4820
	30	80	1.1	30	VP050			3320
	30	82	2.1	30	VP063			4339
	30	87	3.3	30	VP075			5122
	22.5	102	1.6	40	VP063			4776
	22.5	108	2.6	40	VP075			5637
	18	120	1.2	50	VP063			5145
	18	126	1.8	50	VP075			6073
	18	136	3.2	50	VP090			6719
	15	137	1	60	VP063			5467
	15	144	1.5	60	VP075			6453
	15	153	2.5	60	VP090			7140
	12	206	1.6	75		VR080/075		6952
	11.3	167*	0.8*	80	VP063			6018
	11.3	173	1.2	80	VP075			7103
	11.3	185	1.7	80	VP090			7859
	11.3	201	2.8	80	VP110			9931
	10	260	1.7	90		VR080/075		7380
	9	196	1	100	VP075			7380
	9	212	1.3	100	VP090			8180
	9	232	2.2	100	VP110			10320
	7.5	283	1.3	120		VR080/075		7380
6	324	1	150		VR080/075		7380	
6	347	1.6	150		VR080/090		8180	
5	389	1.3	180		VR080/090		8180	
3.8	471	1.0	240		VR080/090		8180	
3.8	509	1.6	240		VR080/110		10320	
3	577	1.3	300		VR080/110		10320	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

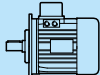
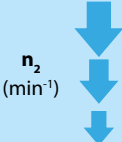
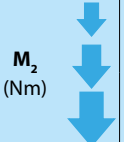
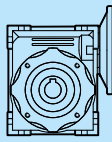
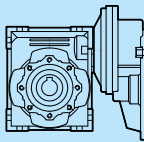
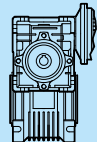
**Tabella dati tecnici motoriduttori / Table technical data gearmotors**

 $Pn_1$ (kW)	$n_2$ (min <sup>-1</sup> )	$M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>0.55</b>								
M1 071 0.55 2P. (n1 = 2800 min <sup>-1</sup> )	<b>373</b>	12	2.3	7.5	<b>VP040</b>			1044
	<b>280</b>	16	1.8	10	<b>VP040</b>			1149
	<b>280</b>	17	3.2	10	<b>VP050</b>			1577
	<b>187</b>	24	1.3	15	<b>VP040</b>			1315
	<b>186.7</b>	24	2.4	15	<b>VP050</b>			18,5
	<b>140</b>	30	1	20	<b>VP040</b>			1447
	<b>140</b>	31	1.7	20	<b>VP050</b>			1987
	<b>140</b>	32	3.3	20	<b>VP063</b>			2597
	<b>112</b>	37*	0.8*	25	<b>VP040</b>			1559
	<b>112</b>	38	1.4	25	<b>VP050</b>			2140
	<b>112</b>	39	2.5	25	<b>VP063</b>			2797
	<b>93.3</b>	43*	0.8*	30	<b>VP040</b>			1657
	<b>93.3</b>	43	1.5	30	<b>VP050</b>			2274
	<b>93.3</b>	44	2.7	30	<b>VP063</b>			2973
	<b>70</b>	55	1.1	40	<b>VP050</b>			2503
	<b>70</b>	56	1.9	40	<b>VP063</b>			3272
	<b>70</b>	59	3.1	40	<b>VP075</b>			3862
	<b>56</b>	65*	0.8*	50	<b>VP050</b>			2696
	<b>56</b>	68	1.5	50	<b>VP063</b>			3524
	<b>56</b>	70	2.3	50	<b>VP075</b>			4160
	<b>46.7</b>	74*	0.7*	60	<b>VP050</b>			2865
	<b>46.7</b>	78	1.2	60	<b>VP063</b>			3745
	<b>46.7</b>	81	2	60	<b>VP075</b>			4421
	<b>35</b>	96*	0.9*	80	<b>VP063</b>			4122
	<b>35</b>	99	1.3	80	<b>VP075</b>			4865
	<b>28</b>	111*	0.7*	100	<b>VP063</b>			4440
	<b>28</b>	116	1	100	<b>VP075</b>			5241
	M1 080 0.55 4P. (n1 = 1400 min <sup>-1</sup> )	<b>280</b>	17	3.7	5	<b>VP050</b>		
<b>186.7</b>		25	2.9	7.5	<b>VP050</b>			1805
<b>140</b>		32	2.2	10	<b>VP050</b>			1987
<b>93.3</b>		46	1.6	15	<b>VP050</b>			2274
<b>93.3</b>		47	3.2	15	<b>VP063</b>			2973
<b>70</b>		59	1.2	20	<b>VP050</b>			2503
<b>70</b>		61	2.2	20	<b>VP063</b>			3272
<b>56</b>		71	1	25	<b>VP050</b>			2696
<b>56</b>		73	1.8	25	<b>VP063</b>			3524
<b>56</b>		76	2.8	25	<b>VP075</b>			4160
<b>46.7</b>		81	1	30	<b>VP050</b>			2865
<b>46.7</b>		83	1.9	30	<b>VP063</b>			3745
<b>46.7</b>		87	2.9	30	<b>VP075</b>			4421
<b>35</b>		97	0.8*	40	<b>VP050</b>			3153
<b>35</b>		105	1.4	40	<b>VP063</b>			4122
<b>35</b>		108	2	40	<b>VP075</b>			4865
<b>35</b>		114	3.5	40	<b>VP090</b>			5383
<b>28</b>		124	1.1	50	<b>VP063</b>			4440
<b>28</b>		129	1.6	50	<b>VP075</b>			5241
<b>28</b>		137	2.7	50	<b>VP090</b>			5799
<b>23.3</b>		140*	0.9*	60	<b>VP063</b>			4719
<b>23.3</b>		146	1.4	60	<b>VP075</b>			5569
<b>23.3</b>		158	2.2	60	<b>VP090</b>			6163
<b>18.7</b>		205	1.2	75		<b>VR080/075</b>		6000
<b>17.5</b>		180	1.1	80	<b>VP075</b>			6130
<b>17.5</b>		189	1.5	80	<b>VP090</b>			6783
<b>17.5</b>		201	2.6	80	<b>VP110</b>			8571
<b>15.6</b>		230	1.3	90		<b>VR080/075</b>		6375
<b>14</b>		206*	0.9*	100	<b>VP075</b>			6603
<b>14</b>		221	1.2	100	<b>VP090</b>			7306
<b>14</b>		236	2	100	<b>VP110</b>			9232
<b>14</b>		268	2.4	100			<b>VC050/110</b>	10320

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$


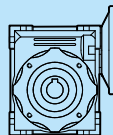
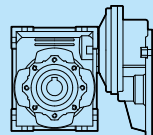
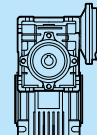
Tabella dati tecnici motoriduttori / Table technical data gearmotors

 $P_{n1}$ (kW)	 $n_2$ (min <sup>-1</sup> )	 $M_2$ (Nm)	$f_s$	$i$				$FR_2$ (N)
<b>0.55</b>								
M1 080 0.55 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>11.7</b>	284	1	120		<b>VR080/075</b>		7017
	<b>11.7</b>	297	1.6	120		<b>VR080/090</b>		7764
	<b>9.3</b>	332*	0.8*	150		<b>VR080/075</b>		7380
	<b>9.3</b>	355	1.3	150		<b>VR080/090</b>		8180
	<b>9.3</b>	387	2.4	150			<b>VC050/110</b>	10320
	<b>7.8</b>	398	1	180		<b>VR080/090</b>		8180
	<b>7</b>	503	2.3	200			<b>VC050/110</b>	10320
	<b>5.8</b>	513	1.3	240		<b>VR080/110</b>		10320
	<b>5.6</b>	612	1.9	250			<b>VC050/110</b>	10320
	<b>5.6</b>	612	2.5	250			<b>VC063/130</b>	13500
	<b>4.7</b>	597	1	300		<b>VR080/110</b>		10320
	<b>4.7</b>	639	2	300			<b>VC050/110</b>	10320
	<b>4.7</b>	666	2.6	300			<b>VC063/130</b>	13500
	<b>3.5</b>	826	1.4	400			<b>VC050/110</b>	10320
	<b>3.5</b>	849	1.9	400			<b>VC063/130</b>	13500
	<b>2.8</b>	984	1.1	500			<b>VC050/110</b>	10320
	<b>2.8</b>	996	1.6	500			<b>VC063/130</b>	13500
	<b>2.3</b>	1181	1	600			<b>VC050/110</b>	10320
	<b>1.9</b>	1411*	0.9*	750			<b>VC050/110</b>	10320
	<b>1.9</b>	1471	1.2	750			<b>VC063/130</b>	13500
<b>1.6</b>	1651*	0.8*	900			<b>VC050/110</b>	10320	
<b>1.2</b>	2132*	0.8*	1200			<b>VC063/130</b>	13500	
<b>0.8</b>	2638*	0.8*	1800			<b>VC063/150</b>	18000	
<b>0.6</b>	3182*	0.8*	2400			<b>VC063/150</b>	18000	
M1 080 0.55 6P. ( $n_1 = 900 \text{ min}^{-1}$ )	<b>120</b>	38	2.2	7.5	<b>VP050</b>			2091
	<b>90</b>	49	1.7	10	<b>VP050</b>			2302
	<b>90</b>	50	3.1	10	<b>VP063</b>			3009
	<b>60</b>	69	1.2	15	<b>VP050</b>			2635
	<b>60</b>	71	2.2	15	<b>VP063</b>			3444
	<b>45</b>	89*	0.9*	20	<b>VP050</b>			2900
	<b>45</b>	90	1.6	20	<b>VP063</b>			3791
	<b>45</b>	93	2.9	20	<b>VP075</b>			4474
	<b>36</b>	109	1.3	25	<b>VP063</b>			4084
	<b>36</b>	124	2.1	25	<b>VP075</b>			4820
	<b>36</b>	117	3.5	25	<b>VP090</b>			5333
	<b>30</b>	123	1.4	30	<b>VP063</b>			4339
	<b>30</b>	128	2	30	<b>VP075</b>			5122
	<b>22.5</b>	152	1.1	40	<b>VP063</b>			4776
	<b>22.5</b>	159	1.5	40	<b>VP075</b>			5637
	<b>22.5</b>	168	2.7	40	<b>VP090</b>			6238
	<b>18</b>	181*	0.9*	50	<b>VP063</b>			5145
	<b>18</b>	187	1.2	50	<b>VP075</b>			6073
	<b>18</b>	198	2	50	<b>VP090</b>			6719
	<b>15</b>	207*	0.7*	60	<b>VP063</b>			5467
	<b>15</b>	214	1	60	<b>VP075</b>			6453
	<b>15</b>	224	1.6	60	<b>VP090</b>			7140
	<b>15</b>	242	2.8	60	<b>VP110</b>			9023
	<b>12</b>	306	1.1	75			<b>VR080/075</b>	6952
	<b>11.3</b>	262*	0.8*	80	<b>VP075</b>			7103
	<b>11.3</b>	275	1.1	80	<b>VP090</b>			7859
	<b>11.3</b>	294	1.9	80	<b>VP110</b>			9931
	<b>10</b>	341	1.1	90			<b>VR080/075</b>	7380
	<b>9</b>	315*	0.9*	100	<b>VP090</b>			8180
	<b>9</b>	338	1.5	100	<b>VP110</b>			10320
<b>7.5</b>	441	1.4	120			<b>VR080/090</b>	8180	
<b>6</b>	516	1.1	150			<b>VR080/090</b>	8180	
<b>5</b>	578*	0.9*	180			<b>VR080/090</b>	8180	
<b>3.8</b>	756	1.1	240			<b>VR080/110</b>	10320	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $f_s$ :  $M_{m2} = M_2 \times f_s$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $f_s$ :  $M_{m2} = M_2 \times f_s$

## Tabella dati tecnici motoriduttori / Table technical data gearmotors

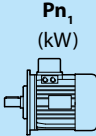
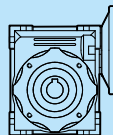
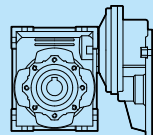
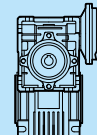
 $P_{n1}$ (kW)	$n_2$ (min <sup>-1</sup> )	$M_2$ (Nm)	$f_s$	$i$				$FR_2$ (N)
<b>0.75</b>								
M3 080 0.75 2P. ( $n_1 = 2800 \text{ min}^{-1}$ )	<b>373.3</b>	17	3	7.5	<b>VP050</b>			1433
	<b>280</b>	22	2.4	10	<b>VP050</b>			1577
	<b>186.7</b>	31	1.7	15	<b>VP050</b>			1805
	<b>186.7</b>	33	3.3	15	<b>VP063</b>			2359
	<b>140</b>	41	1.3	20	<b>VP050</b>			1987
	<b>140</b>	43	2.3	20	<b>VP063</b>			2597
	<b>112</b>	49	1	25	<b>VP050</b>			2140
	<b>112</b>	52	1.8	25	<b>VP063</b>			2797
	<b>112</b>	54	2.9	25	<b>VP075</b>			3302
	<b>93.3</b>	56	1.1	30	<b>VP050</b>			2274
	<b>93.3</b>	60	2	30	<b>VP063</b>			2973
	<b>93.3</b>	62	3	30	<b>VP075</b>			3509
	<b>70</b>	73	0.8*	40	<b>VP050</b>			2503
	<b>70</b>	77	1.4	40	<b>VP063</b>			3272
	<b>70</b>	80	2.3	40	<b>VP075</b>			3862
	<b>70</b>	82	3.4	40	<b>VP090</b>			4273
	<b>56</b>	92	1.1	50	<b>VP063</b>			3524
	<b>56</b>	96	1.7	50	<b>VP075</b>			4160
	<b>56</b>	99	2.7	50	<b>VP090</b>			4603
	<b>46.7</b>	106*	0.9*	60	<b>VP063</b>			3745
	<b>46.7</b>	107	1.3	60	<b>VP075</b>			4421
	<b>46.7</b>	115	2.1	60	<b>VP090</b>			4891
	<b>35</b>	135	1	80	<b>VP075</b>			4865
	<b>35</b>	143	1.6	80	<b>VP090</b>			5383
	<b>35</b>	152	2.6	80	<b>VP110</b>			6803
	<b>28</b>	159*	0.8*	100	<b>VP075</b>			5241
	<b>28</b>	169	1.2	100	<b>VP090</b>			5799
	<b>28</b>	179	2.1	100	<b>VP110</b>			7328
	<b>9.3</b>	424	2.8	300			<b>VC050/110</b>	10320
	<b>7</b>	553	2.1	400			<b>VC050/110</b>	10320
<b>5.6</b>	640	1.6	500			<b>VC050/110</b>	10320	
M3 080 0.75 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>280</b>	23	2.7	5	<b>VP050</b>			1577
	<b>186.7</b>	34	2.1	7.5	<b>VP050</b>			1805
	<b>140</b>	44	1.6	10	<b>VP050</b>			1987
	<b>140</b>	45	3	10	<b>VP063</b>			2567
	<b>93.3</b>	63	1.2	15	<b>VP050</b>			2274
	<b>93.3</b>	64	2.2	15	<b>VP063</b>			2973
	<b>93</b>	66	3.5	15	<b>VP075</b>			3509
	<b>70</b>	81*	0.9*	20	<b>VP050</b>			2503
	<b>70</b>	83	1.6	20	<b>VP063</b>			3272
	<b>70</b>	85	2.8	20	<b>VP075</b>			3862
	<b>56</b>	99*	0.7*	25	<b>VP050</b>			2696
	<b>56</b>	100	1.3	25	<b>VP063</b>			3524
	<b>56</b>	102	2	25	<b>VP075</b>			4160
	<b>46.7</b>	112*	0.8*	30	<b>VP050</b>			2865
	<b>46.7</b>	114	1.4	30	<b>VP063</b>			3745
	<b>46.7</b>	117	2	30	<b>VP075</b>			4421
	<b>35</b>	97	0.8*	40	<b>VP050</b>			2298
	<b>35</b>	143	1	40	<b>VP063</b>			4122
	<b>35</b>	147	1.5	40	<b>VP075</b>			4865
	<b>35.0</b>	156	3	40	<b>VP090</b>			5383
	<b>28</b>	171*	0.8*	50	<b>VP063</b>			4440
	<b>28</b>	177	1.2	50	<b>VP075</b>			5241
	<b>28</b>	184	1.8	50	<b>VP090</b>			5800
	<b>28</b>	194	3.4	50	<b>VP110</b>			7328
	<b>23.3</b>	200	1	60	<b>VP075</b>			5569
	<b>23.3</b>	212	1.5	60	<b>VP090</b>			6163
	<b>23.3</b>	227	2.7	60	<b>VP110</b>			7787
	<b>18.7</b>	280*	0.9*	75			<b>VR080/075</b>	6000
	<b>17.5</b>	258	1.1	80	<b>VP090</b>			6783
	<b>17.5</b>	274	1.9	80	<b>VP110</b>			8571
<b>17.5</b>	250	80	80	<b>VP075</b>			6130	
<b>15.6</b>	313	1	90			<b>VR080/075</b>	6375	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $f_s$ :  $M_{m2} = M_2 \times f_s$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $f_s$ :  $M_{m2} = M_2 \times f_s$




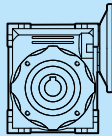
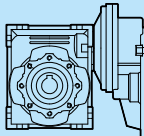
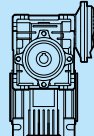
**Tabella dati tecnici motoriduttori / Table technical data gearmotors**

 $P_{n1}$ (kW)	$n_2$ (min <sup>-1</sup> )	$M_2$ (Nm)	$f_s$	$i$				$FR_2$ (N)
<b>1.10</b>								
M3 080 1.10 2P. (n1 = 2800 min <sup>-1</sup> )	<b>373.3</b>	25	2.1	7.5	<b>VP050</b>			1433
	<b>280</b>	33	1.7	10	<b>VP050</b>			1577
	<b>280</b>	33	3	10	<b>VP063</b>			2061
	<b>186.7</b>	48	1.2	15	<b>VP050</b>			1805
	<b>186.7</b>	46	2.1	15	<b>VP063</b>			2359
	<b>186.7</b>	50	3.3	15	<b>VP075</b>			2785
	<b>140</b>	62*	0.9*	20	<b>VP050</b>			1987
	<b>140</b>	60	1.6	20	<b>VP063</b>			2597
	<b>140</b>	65	2.7	20	<b>VP075</b>			3065
	<b>112</b>	72	1.2	25	<b>VP063</b>			2797
	<b>112</b>	77	2	25	<b>VP075</b>			3302
	<b>112</b>	81	3.1	25	<b>VP090</b>			3653
	<b>93.3</b>	87*	0.7*	30	<b>VP050</b>			2274
	<b>93.3</b>	82	1.4	30	<b>VP063</b>			2973
	<b>93.3</b>	89	1.9	30	<b>VP075</b>			3509
	<b>93.3</b>	93	3.3	30	<b>VP090</b>			3882
	<b>70</b>	104	1	40	<b>VP063</b>			3272
	<b>70</b>	114	1.4	40	<b>VP075</b>			3862
	<b>70</b>	120	2.3	40	<b>VP090</b>			4273
	<b>56</b>	137	1.1	50	<b>VP075</b>			4160
	<b>56</b>	145	1.8	50	<b>VP090</b>			4603
	<b>56</b>	150	3.3	50	<b>VP110</b>			5816
	<b>46.7</b>	158*	0.9*	60	<b>VP075</b>			4421
	<b>46.7</b>	169	1.5	60	<b>VP090</b>			4891
	<b>46.7</b>	176	2.7	60	<b>VP110</b>			6181
	<b>35</b>	201*	0.7*	80	<b>VP075</b>			4865
	<b>35</b>	210	1.1	80	<b>VP090</b>			5383
	<b>35</b>	222	1.8	80	<b>VP110</b>			6803
<b>28</b>	248*	0.8*	100	<b>VP090</b>			5799	
<b>28</b>	263	1.4	100	<b>VP110</b>			7328	
M3 090 1.10 6P. (n1 = 900 min <sup>-1</sup> )	<b>120</b>	76	2	7.5	<b>VP063</b>			2734
	<b>120</b>	77	2.8	7.5	<b>VP075</b>			3227
	<b>90</b>	99	1.5	10	<b>VP063</b>			3009
	<b>90</b>	100	2.3	10	<b>VP075</b>			3551
	<b>60</b>	142	1.1	15	<b>VP063</b>			3444
	<b>60</b>	144	1.6	15	<b>VP075</b>			4065
	<b>60</b>	149	3.1	15	<b>VP090</b>			4498
	<b>45</b>	180*	0.8*	20	<b>VP063</b>			3791
	<b>45</b>	184	1.3	20	<b>VP075</b>			4474
	<b>45</b>	195	2.2	20	<b>VP090</b>			4951
	<b>36</b>	225	1	25	<b>VP075</b>			4820
	<b>36</b>	231	1.6	25	<b>VP090</b>			5333
	<b>36</b>	239	3.2	25	<b>VP110</b>			6739
	<b>30</b>	256	1	30	<b>VP075</b>			5122
	<b>30</b>	263	1.8	30	<b>VP090</b>			5667
	<b>30</b>	270	3.1	30	<b>VP110</b>			7161
	<b>22.5</b>	322*	0.9*	40	<b>VP075</b>			5637
	<b>22.5</b>	331	1.2	40	<b>VP090</b>			6238
	<b>22.5</b>	345	2.3	40	<b>VP110</b>			7882
	<b>18</b>	397	1	50	<b>VP090</b>			6719
	<b>18</b>	414	1.8	50	<b>VP110</b>			8491
	<b>15</b>	448*	0.8*	60	<b>VP090</b>			7140
	<b>15</b>	476	1.4	60	<b>VP110</b>			9023
	<b>12.2</b>	576	2.2	73.5		<b>VR090/110</b>		9614
	<b>11.3</b>	588	1	80	<b>VP110</b>			9931
	<b>11.3</b>	598	1.4	80	<b>VP130</b>			12989
	<b>9.2</b>	746	1.6	98		<b>VR090/110</b>		10320

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $f_s$ :  $M_{m2} = M_2 \times f_s$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $f_s$ :  $M_{m2} = M_2 \times f_s$

Tabella dati tecnici motoriduttori / Table technical data gearmotors

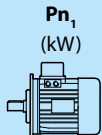
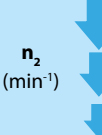
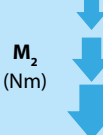
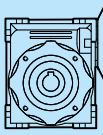
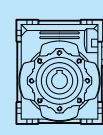
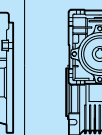
 $Pn_1$ (kW)	$n_2$ (min <sup>-1</sup> )	$M_2$ (Nm)	$f_s$	$i$				$FR_2$ (N)
<b>1.10</b>								
M3 090 1.10 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>9</b>	686	1.1	100	<b>VP130</b>			13500
	<b>7.3</b>	890	1.2	122.5		<b>VR090/110</b>		10320
	<b>6.1</b>	1000	1	147		<b>VR090/110</b>		10320
	<b>186.7</b>	50	2.6	7.5	<b>VP063</b>			2359
	<b>140</b>	65	2	10	<b>VP063</b>			2597
	<b>140</b>	66	3	10	<b>VP075</b>			3065
	<b>93.3</b>	93	1.5	15	<b>VP063</b>			2973
	<b>93.3</b>	96	2.1	15	<b>VP075</b>			3509
	<b>70</b>	122	1.1	20	<b>VP063</b>			3272
	<b>70</b>	123	1.7	20	<b>VP075</b>			3862
	<b>70</b>	128	3.1	20	<b>VP090</b>			4273
	<b>56</b>	146*	0.9*	25	<b>VP063</b>			3524
	<b>56</b>	150	1.3	25	<b>VP075</b>			4160
	<b>56</b>	156	2.4	25	<b>VP090</b>			4603
	<b>46.7</b>	167	1	30	<b>VP063</b>			3745
	<b>46.7</b>	171	1.3	30	<b>VP075</b>			4421
	<b>46.7</b>	178	2.4	30	<b>VP090</b>			4891
	<b>35</b>	216	1	40	<b>VP075</b>			4865
	<b>35</b>	225	1.6	40	<b>VP090</b>			5383
	<b>35</b>	237	3	40	<b>VP110</b>			6803
	<b>28</b>	263*	0.9*	50	<b>VP075</b>			5241
	<b>28</b>	270	1.3	50	<b>VP090</b>			5799
	<b>28</b>	281	2.3	50	<b>VP110</b>			7328
	<b>23.3</b>	297*	0.7*	60	<b>VP075</b>			5569
	<b>23.3</b>	311	1	60	<b>VP090</b>			6163
	<b>23.3</b>	324	1.9	60	<b>VP110</b>			7787
	<b>19</b>	392	2.5	73.5		<b>VR090/110</b>		8298
	<b>17.5</b>	384	1	80	<b>VP090</b>			6783
	<b>17.5</b>	402	1.3	80	<b>VP110</b>			8571
	<b>17.5</b>	408	2.1	80	<b>VP130</b>			11210
	<b>14.3</b>	508	1.8	98		<b>VR090/110</b>		9133
	<b>14</b>	473	1	100	<b>VP110</b>			9232
	<b>14</b>	480	1.5	100	<b>VP130</b>			12076
	<b>11.4</b>	599	1.5	122.5		<b>VR090/110</b>		9838
	<b>9.5</b>	686	1.1	147		<b>VR090/110</b>		10320
	<b>7.1</b>	828*	0.8*	196		<b>VR090/110</b>		10320
	<b>5.7</b>	962*	0.9*	245		<b>VR090/130</b>		13500
	<b>5.6</b>	1224	1.2	250			<b>VC063/130</b>	13500
	<b>5.6</b>	1175	1.7	250			<b>VC063/150</b>	18000
	<b>4.7</b>	1312	1.3	300			<b>VC063/130</b>	13500
<b>4.7</b>	1364	1.7	300			<b>VC063/150</b>	18000	
<b>3.5</b>	1671	1	400			<b>VC063/130</b>	13500	
<b>3.5</b>	1619	1.6	400			<b>VC063/150</b>	18000	
<b>2.8</b>	1991*	0.8*	500			<b>VC063/130</b>	13500	
<b>2.8</b>	1893	1.2	500			<b>VC063/150</b>	18000	
<b>2.3</b>	2510*	0.7*	600			<b>VC063/130</b>	13500	
<b>2.3</b>	2242	1.2	600			<b>VC063/150</b>	18000	
<b>1.9</b>	2616*	0.9*	750			<b>VC063/150</b>	18000	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $f_s$ :  $M_{m2} = M_2 \times f_s$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $f_s$ :  $M_{m2} = M_2 \times f_s$




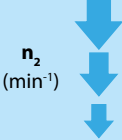
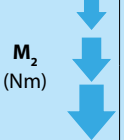
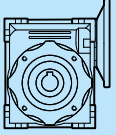
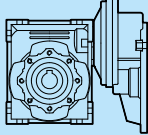
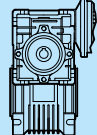
**Tabella dati tecnici motoriduttori / Table technical data gearmotors**

 $Pn_1$ (kW)	 $n_2$ (min <sup>-1</sup> )	 $M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>1.50</b>								
M3 100 1.50 6P. ( $n_1 = 900 \text{ min}^{-1}$ )	<b>120</b>	105	2	7.5	<b>VP075</b>			3227
	<b>90</b>	137	1.7	10	<b>VP075</b>			3551
	<b>90</b>	138	2.7	10	<b>VP090</b>			3929
	<b>60</b>	196	1.2	15	<b>VP075</b>			4065
	<b>60</b>	201	2.1	15	<b>VP090</b>			4498
	<b>45</b>	255	1.1	20	<b>VP075</b>			4474
	<b>45</b>	258	1.5	20	<b>VP090</b>			4951
	<b>45</b>	264	2.7	20	<b>VP110</b>			6256
	<b>36</b>	311*	0.8*	25	<b>VP075</b>			4820
	<b>36</b>	314	1.2	25	<b>VP090</b>			5333
	<b>36</b>	322	2.4	25	<b>VP110</b>			6739
	<b>36</b>	330	3.2	25	<b>VP130</b>			8814
	<b>30</b>	354*	0.8*	30	<b>VP075</b>			5122
	<b>30</b>	358	1.3	30	<b>VP090</b>			5667
	<b>30</b>	363	2.3	30	<b>VP110</b>			7161
	<b>30</b>	377	3.1	30	<b>VP130</b>			9366
	<b>22.5</b>	459	1	40	<b>VP090</b>			6238
	<b>22.5</b>	471	1.7	40	<b>VP110</b>			7882
	<b>22.5</b>	478	2.3	40	<b>VP130</b>			10309
	<b>18</b>	565	1.3	50	<b>VP110</b>			8491
<b>18</b>	573	1.8	50	<b>VP130</b>			11105	
<b>18</b>	589	2.7	50	<b>VP150</b>			15182	
<b>15</b>	649	1.1	60	<b>VP110</b>			9023	
<b>15</b>	659	1.4	60	<b>VP130</b>			11801	
<b>15</b>	678	2.1	60	<b>VP150</b>			16133	
<b>11.3</b>	815	1.1	80	<b>VP130</b>			12989	
<b>11.3</b>	841	1.5	80	<b>VP150</b>			17757	
<b>9</b>	955*	0.8*	100	<b>VP130</b>			13500	
<b>9</b>	971	1.2	100	<b>VP150</b>			18000	
M3 090 1.50 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>186.7</b>	68	1.9	7.5	<b>VP063</b>			2359
	<b>186.7</b>	68	2.7	7.5	<b>VP075</b>			2785
	<b>140</b>	89	1.5	10	<b>VP063</b>			2597
	<b>140</b>	90	2.2	10	<b>VP075</b>			3065
	<b>93.3</b>	127	1.1	15	<b>VP063</b>			2973
	<b>93.3</b>	130	1.5	15	<b>VP075</b>			3509
	<b>93.3</b>	134	3	15	<b>VP090</b>			3882
	<b>70</b>	166*	0.8*	20	<b>VP063</b>			3272
	<b>70</b>	168	1.3	20	<b>VP075</b>			3862
	<b>70</b>	172	2.1	20	<b>VP090</b>			4273
	<b>56</b>	205	1	25	<b>VP075</b>			4160
	<b>56</b>	210	1.6	25	<b>VP090</b>			4603
	<b>56</b>	218	3.1	25	<b>VP110</b>			5816
	<b>46.7</b>	233	1	30	<b>VP075</b>			4421
	<b>46.7</b>	239	1.7	30	<b>VP090</b>			4891
	<b>46.7</b>	246	3	30	<b>VP110</b>			6181
	<b>35</b>	299*	0.8*	40	<b>VP075</b>			4865
	<b>35</b>	307	1.2	40	<b>VP090</b>			5383
	<b>35</b>	319	2.2	40	<b>VP110</b>			6803
	<b>28</b>	368*	0.9*	50	<b>VP090</b>			5799
	<b>28</b>	384	1.7	50	<b>VP110</b>			7328
	<b>23.3</b>	424*	0.8*	60	<b>VP090</b>			6163
	<b>23.3</b>	442	1.4	60	<b>VP110</b>			7787
	<b>19</b>	535	1.9	73.5		<b>VR090/110</b>		8298
	<b>17.5</b>	548*	0.9*	80	<b>VP110</b>			8571
	<b>17.5</b>	557	1.5	80	<b>VP130</b>			11210
	<b>14.3</b>	693	1.3	98		<b>VR090/110</b>		9133
	<b>14</b>	655	1.1	100	<b>VP130</b>			12076
	<b>11.4</b>	817	1.1	122.5		<b>VR090/110</b>		9838
	<b>9.5</b>	936*	0.8*	147		<b>VR090/110</b>		10320
<b>7.1</b>	1149*	0.8*	196		<b>VR090/130</b>		13500	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

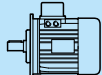
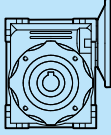
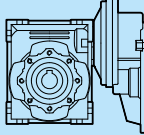
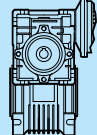
**Tabella dati tecnici motoriduttori / Table technical data gearmotors**

 $Pn_1$ (kW)	 $n_2$ (min <sup>-1</sup> )	 $M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>1.50</b>								
M3 090 1.50 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>5.7</b>	962*	0.9*	245		<b>VR090/130</b>		13500
	<b>5.6</b>	1669*	0.9*	250			<b>VC063/130</b>	13500
	<b>5.6</b>	1602	1.3	250			<b>VC063/150</b>	18000
	<b>4.7</b>	1789	1	300			<b>VC063/130</b>	13500
	<b>4.7</b>	1860	1.3	300			<b>VC063/150</b>	18000
	<b>3.5</b>	2279*	0.7*	400			<b>VC063/130</b>	13500
	<b>3.5</b>	2208	1.2	400			<b>VC063/150</b>	18000
	<b>2.8</b>	2582*	0.9*	500			<b>VC063/150</b>	18000
	<b>2.3</b>	3057*	0.9*	600			<b>VC063/150</b>	18000
	M3 090 1.50 2P. ( $n_1 = 2800 \text{ min}^{-1}$ )	<b>373</b>	35	2.7	7.5		<b>VP063</b>	
<b>280</b>		45	2.2	10	<b>VP063</b>			2061
<b>280</b>		45	3.2	10	<b>VP075</b>			2433
<b>186.7</b>		66	1.6	15	<b>VP063</b>			2359
<b>186.7</b>		66	2.3	15	<b>VP075</b>			2785
<b>140</b>		86	1.2	20	<b>VP063</b>			2597
<b>140</b>		86	1.9	20	<b>VP075</b>			3065
<b>140</b>		90	2.9	20	<b>VP090</b>			3391
<b>112</b>		105*	0.9*	25	<b>VP063</b>			2797
<b>112</b>		105	1.4	25	<b>VP075</b>			3302
<b>112</b>		110	2.3	25	<b>VP090</b>			3653
<b>93.3</b>		120	1	30	<b>VP063</b>			2973
<b>93.3</b>		121	1.4	30	<b>VP075</b>			3509
<b>93.3</b>		127	2.4	30	<b>VP090</b>			3882
<b>70</b>		156*	0.7*	40	<b>VP063</b>			3272
<b>70</b>		156	1.1	40	<b>VP075</b>			3862
<b>70</b>		164	1.7	40	<b>VP090</b>			4273
<b>70</b>		170	3.1	40	<b>VP110</b>			5399
<b>56</b>		187	1.3	50	<b>VP075</b>			4160
<b>56</b>		197	1.3	50	<b>VP090</b>			4603
<b>56</b>		205	2.4	50	<b>VP110</b>			5816
<b>46.7</b>		215	1.1	60	<b>VP075</b>			4421
<b>46.7</b>		227	1.1	60	<b>VP090</b>			4891
<b>46.7</b>		236	2	60	<b>VP110</b>			6181
<b>35</b>		287*	0.8*	80	<b>VP090</b>			5383
<b>35</b>		299	1.3	80	<b>VP110</b>			6803
<b>28</b>		358	1	100	<b>VP110</b>			7328
<b>9.3</b>		878	1.9	300			<b>VC063/130</b>	13500
<b>7</b>		1105	1.4	400			<b>VC063/130</b>	13500
<b>5.6</b>		1305	1.1	500			<b>VC063/130</b>	13500
<b>2.20</b>								
M3 100 2.20 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>186.7</b>	100	1.8	7.5	<b>VP075</b>			2785
	<b>186.7</b>	101	2.9	7.5	<b>VP090</b>			3081
	<b>140</b>	132	1.5	10	<b>VP075</b>			3065
	<b>140</b>	134	2.3	10	<b>VP090</b>			3391
	<b>93.3</b>	191	1	15	<b>VP075</b>			3509
	<b>93.3</b>	194	1.9	15	<b>VP090</b>			3882
	<b>93.3</b>	196	3.3	15	<b>VP110</b>			4905
	<b>70</b>	249*	0.9*	20	<b>VP075</b>			3862
	<b>70.00</b>	252	1.4	20	<b>VP090</b>			4273
	<b>70</b>	255	2.5	20	<b>VP110</b>			5399
	<b>56</b>	304*	0.7*	25	<b>VP075</b>			4160
	<b>56.00</b>	308	1.1	25	<b>VP090</b>			4603
	<b>56</b>	315	2.2	25	<b>VP110</b>			5816
	<b>56</b>	319	2.9	25	<b>VP130</b>			7607
	<b>46.7</b>	347*	0.7*	30	<b>VP075</b>			4421
	<b>46.70</b>	351	1.2	30	<b>VP090</b>			4891
	<b>46.7</b>	356	2	30	<b>VP110</b>			6181

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

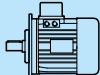
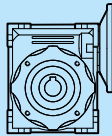
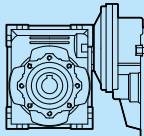
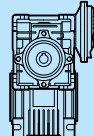
**Tabella dati tecnici motoriduttori / Table technical data gearmotors**

 $Pn_1$ (kW)	$n_2$ ( $min^{-1}$ )	$M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>2.20</b>								
M3 100 2.20 4P. ( $n_1 = 1400 min^{-1}$ )	<b>46.7</b>	365	2.9	30	<b>VP130</b>			8084
	<b>35</b>	468	1.5	40	<b>VP110</b>			6803
	<b>35</b>	468	2.2	40	<b>VP130</b>			8897
	<b>30.00</b>	456*	0.9*	40	<b>VP090</b>			5383
	<b>28</b>	563	1.2	50	<b>VP110</b>			7328
	<b>28</b>	563	1.7	50	<b>VP130</b>			9584
	<b>28</b>	570	2.5	50	<b>VP150</b>			13103
	<b>23.3</b>	648	1.0	60	<b>VP110</b>			7787
	<b>23.3</b>	648	1.4	60	<b>VP130</b>			10185
	<b>23.3</b>	657	1.9	60	<b>VP150</b>			13924
	<b>17.5</b>	816	1	80	<b>VP130</b>			11210
	<b>17.5</b>	816	1.4	80	<b>VP150</b>			15325
	<b>14.0</b>	976	1	100	<b>VP130</b>			12076
	<b>14</b>	960	1	100	<b>VP150</b>			16508
M3 112 2.20 6P. ( $n_1 = 900 min^{-1}$ )	<b>120</b>	154	1.4	7.5	<b>VP075</b>			3227
	<b>120</b>	156	2.2	7.5	<b>VP090</b>			3570
	<b>90</b>	201	1.1	10	<b>VP075</b>			3551
	<b>90</b>	203	1.8	10	<b>VP090</b>			3929
	<b>90</b>	205	3.5	10	<b>VP110</b>			4965
	<b>60</b>	291*	0.9*	15	<b>VP075</b>			4065
	<b>60</b>	294	1.4	15	<b>VP090</b>			4498
	<b>60</b>	298	2.6	15	<b>VP110</b>			5684
	<b>45</b>	374*	0.7*	20	<b>VP075</b>			4474
	<b>45</b>	532*	0.9*	30	<b>VP090</b>			5667
	<b>45</b>	378	1	20	<b>VP090</b>			4951
	<b>45</b>	388	1.9	20	<b>VP110</b>			6256
	<b>36</b>	467*	0.9*	25	<b>VP090</b>			5333
	<b>36</b>	473	1.6	25	<b>VP110</b>			6739
	<b>36</b>	479	2.2	25	<b>VP130</b>			8814
	<b>30</b>	532	1.6	30	<b>VP110</b>			7161
	<b>30</b>	546	2.1	30	<b>VP130</b>			9366
	<b>22.5</b>	701	1.1	40	<b>VP110</b>			7882
	<b>22.5</b>	700	1.6	40	<b>VP130</b>			10309
	<b>18</b>	841*	0.9*	50	<b>VP110</b>			8491
	<b>18</b>	840	1.2	50	<b>VP130</b>			11105
	<b>18</b>	864	1.9	50	<b>VP150</b>			15182
	<b>15</b>	967*	0.7*	60	<b>VP110</b>			9023
	<b>15</b>	966	1	60	<b>VP130</b>			11801
	<b>15</b>	995	1.4	60	<b>VP150</b>			16133
	<b>11.3</b>	1214*	0.7*	80	<b>VP130</b>			12898
	<b>11.3</b>	1233	1.1	80	<b>VP150</b>			17757
<b>9</b>	1425*	0.8*	100	<b>VP150</b>			18000	
M3 090 2.20 2P. ( $n_1 = 2800 min^{-1}$ )	<b>373.3</b>	51	1.8	7.5	<b>VP063</b>			1873
	<b>373.3</b>	50	2.6	7.5	<b>VP075</b>			2210
	<b>280</b>	66	1.5	10	<b>VP063</b>			2061
	<b>280</b>	66	2.2	10	<b>VP075</b>			2433
	<b>280</b>	68	3.5	10	<b>VP090</b>			2692
	<b>186.7</b>	97	1.1	15	<b>VP063</b>			2359
	<b>186.7</b>	97	1.5	15	<b>VP075</b>			2785
	<b>186.7</b>	100	2.7	15	<b>VP090</b>			3081
	<b>140</b>	128*	0.8*	20	<b>VP063</b>			2597
	<b>140</b>	126	1.3	20	<b>VP075</b>			3065
	<b>140</b>	129	2	20	<b>VP090</b>			3391
	<b>112</b>	154	1	25	<b>VP075</b>			3302
	<b>112</b>	159	1.6	25	<b>VP090</b>			3653
	<b>112</b>	161	3.1	25	<b>VP110</b>			4616
	<b>93.3</b>	178	1	30	<b>VP075</b>			3509
	<b>93.3</b>	185	1.7	30	<b>VP090</b>			3882
	<b>93.3</b>	187	3	30	<b>VP110</b>			4905

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

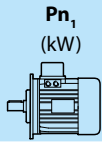
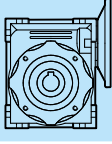
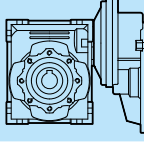
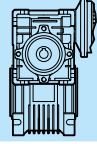
Tabella dati tecnici motoriduttori / Table technical data gearmotors

 $Pn_1$ (kW)	$n_2$ ( $min^{-1}$ )	$M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>2.20</b>								
M3 090 2.20 2P. ( $n_1 = 2800 min^{-1}$ )	<b>70</b>	234*	0.8*	40	<b>VP075</b>			3862
	<b>70</b>	237	1.2	40	<b>VP090</b>			4273
	<b>70</b>	243	2.2	40	<b>VP110</b>			5399
	<b>56</b>	289*	0.9*	50	<b>VP090</b>			4603
	<b>56</b>	296	1.7	50	<b>VP110</b>			5816
	<b>46.7</b>	347	1.4	60	<b>VP110</b>			6181
	<b>38.6</b>	398	2.1	73.5		<b>VR090/110</b>		6586
	<b>35</b>	444*	0.9*	80	<b>VP110</b>			
	<b>35</b>	444	1.3	80	<b>VP130</b>			8897
	<b>28.9</b>	516	1.5	98		<b>VR090/110</b>		7249
	<b>28</b>	525*	0.7*	100	<b>VP110</b>			
	<b>28</b>	525	1	100	<b>VP130</b>			9584
	<b>23.1</b>	617	1.2	122.5		<b>VR090/110</b>		7809
	<b>3.00</b>							
M3 100 3.00 2P. ( $n_1 = 2800 min^{-1}$ )	<b>373.3</b>	68	1.9	7.5	<b>VP075</b>			2210
	<b>373.3</b>	70	3	7.5	<b>VP090</b>			2446
	<b>280</b>	90	1.6	10	<b>VP075</b>			2433
	<b>280</b>	92	2.6	10	<b>VP090</b>			2692
	<b>186.7</b>	135	1.2	15	<b>VP075</b>			2785
	<b>186.7</b>	137	2	15	<b>VP090</b>			3081
	<b>140</b>	176	1	20	<b>VP075</b>			3065
	<b>140</b>	180	1.4	20	<b>VP090</b>			3391
	<b>140</b>	182	2.7	20	<b>VP110</b>			4285
	<b>112</b>	215*	0.7*	25	<b>VP075</b>			3302
	<b>112</b>	220	1.1	25	<b>VP090</b>			3653
	<b>112</b>	225	2.2	25	<b>VP110</b>			4616
	<b>93.3</b>	249*	0.7*	30	<b>VP075</b>			3509
	<b>93.3</b>	255	1.2	30	<b>VP090</b>			3882
	<b>93.3</b>	258	2.1	30	<b>VP110</b>			4905
	<b>70</b>	328*	0.8*	40	<b>VP090</b>			4273
	<b>70</b>	340	1.6	40	<b>VP110</b>			5399
	<b>56</b>	409	1.2	50	<b>VP110</b>			5816
	<b>46.7</b>	479	1	60	<b>VP110</b>			6181
	M3 100 3.00 4P. ( $n_1 = 1400 min^{-1}$ )	<b>186.7</b>	137	1.4	7.5	<b>VP075</b>		
<b>186.7</b>		138	2.1	7.5	<b>VP090</b>			3081
<b>140</b>		180	1.1	10	<b>VP075</b>			3065
<b>140</b>		182	1.7	10	<b>VP090</b>			3391
<b>140</b>		182	3.3	10	<b>VP110</b>			4285
<b>93.3</b>		261*	0.8*	15	<b>VP075</b>			3509
<b>93.3</b>		264	1.4	15	<b>VP090</b>			3882
<b>93.3</b>		264	2.5	15	<b>VP110</b>			4905
<b>70</b>		344	1	20	<b>VP090</b>			4273
<b>70</b>		348	1.9	20	<b>VP110</b>			5399
<b>56</b>		420*	0.8*	25	<b>VP090</b>			4603
<b>56</b>		430	1.6	25	<b>VP110</b>			5816
<b>56</b>		430	2.2	25	<b>VP130</b>			7607
<b>46.7</b>		479*	0.9*	30	<b>VP090</b>			4891
<b>46.7</b>		485	1.5	30	<b>VP110</b>			6181
<b>46.7</b>		491	2.1	30	<b>VP130</b>			8084
<b>35</b>		638	1.1	40	<b>VP110</b>			6803
<b>35</b>		638	1.6	40	<b>VP130</b>			8897
<b>28</b>		767*	0.9*	50	<b>VP110</b>			7328
<b>28</b>		767	1.3	50	<b>VP130</b>			9584

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

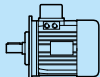
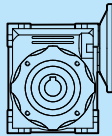
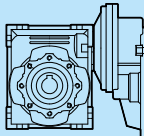
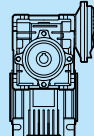
**Tabella dati tecnici motoriduttori / Table technical data gearmotors**

 $Pn_1$ (kW)	$n_2$ (min <sup>-1</sup> )	$M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)
<b>3.00</b>								
M3 100 3.00 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>28</b>	778	1.8	50	<b>VP150</b>			13103
	<b>23.3</b>	884	1	60	<b>VP130</b>			10185
	<b>23.3</b>	896	1.4	60	<b>VP150</b>			13924
	<b>17.5</b>	1113*	0.8*	80	<b>VP130</b>			11210
	<b>17.5</b>	1113	1	80	<b>VP150</b>			15325
	<b>14.00</b>	1310*	0.8*	100	<b>VP150</b>			16508
M3 132 3.00 6P. ( $n_1 = 900 \text{ min}^{-1}$ )	<b>120</b>	212	3.1	7.5	<b>VP110</b>			4511
	<b>90</b>	280	2.5	10	<b>VP110</b>			4965
	<b>90</b>	280	3.4	10	<b>VP130</b>			6494
	<b>60</b>	406	1.9	15	<b>VP110</b>			5684
	<b>60</b>	406	2.6	15	<b>VP130</b>			7434
	<b>45</b>	528	1.4	20	<b>VP110</b>			6256
	<b>45</b>	535	1.9	20	<b>VP130</b>			8182
	<b>45</b>	541	2.8	20	<b>VP150</b>			11186
	<b>36</b>	653	1.2	25	<b>VP110</b>			6739
	<b>36</b>	653	1.6	25	<b>VP130</b>			8814
	<b>36</b>	669	2.1	25	<b>VP150</b>			12050
	<b>30</b>	736	1.1	30	<b>VP110</b>			7161
	<b>30</b>	745	1.6	30	<b>VP130</b>			9366
	<b>30</b>	783	1.8	30	<b>VP150</b>			12805
	<b>22.5</b>	955*	0.8*	40	<b>VP110</b>			7882
	<b>22.5</b>	955	1.2	40	<b>VP130</b>			10309
	<b>22.5</b>	968	1.9	40	<b>VP150</b>			14094
	<b>18</b>	1178	1.4	50	<b>VP150</b>			15182
	<b>15</b>	1357	1.1	60	<b>VP150</b>			16133
	<b>4.00</b>							
M3 112 4.00 2P. ( $n_1 = 2800 \text{ min}^{-1}$ )	<b>373.3</b>	91	1.4	7.5	<b>VP075</b>			2210
	<b>373.3</b>	93	2.3	7.5	<b>VP090</b>			2446
	<b>280</b>	120	1.2	10	<b>VP075</b>			2433
	<b>280</b>	123	1.9	10	<b>VP090</b>			2692
	<b>186.7</b>	180*	0.9*	15	<b>VP075</b>			2785
	<b>186.7</b>	182	1.5	15	<b>VP090</b>			3081
	<b>140</b>	235	0.7	20	<b>VP075</b>			3065
	<b>140</b>	240	1.1	20	<b>VP090</b>			3391
	<b>112</b>	293*	0.9*	25	<b>VP090</b>			3653
	<b>93.3</b>	340*	0.9*	30	<b>VP090</b>			3882
	M3 112 4.00 4P. ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>186.7</b>	180	1	7.5	<b>VP075</b>		
<b>186.7</b>		184	1.6	7.5	<b>VP090</b>			3081
<b>187</b>		184	3.0	7.5	<b>VP110</b>			3893
<b>140</b>		237*	0.8*	10	<b>VP075</b>			3065
<b>140</b>		243	1.3	10	<b>VP090</b>			3391
<b>140</b>		243	2.5	10	<b>VP110</b>			4285
<b>93.3</b>		352	1	15	<b>VP090</b>			3882
<b>93.3</b>		352	1.9	15	<b>VP110</b>			4905
<b>70</b>		458*	0.8*	20	<b>VP090</b>			4273
<b>70</b>		464	1.4	20	<b>VP110</b>			5399
<b>56</b>		573	1.2	25	<b>VP110</b>			5816
<b>56</b>		573	1.6	25	<b>VP130</b>			7607
<b>46.7</b>		647	1.1	30	<b>VP110</b>			6181
<b>46.7</b>		655	1.6	30	<b>VP130</b>			8084
<b>35</b>		863*	0.8*	40	<b>VP110</b>			6803
<b>35</b>		851	1.2	40	<b>VP130</b>			8897
<b>28</b>		1023	1	50	<b>VP130</b>			9584
<b>28</b>		1037	1.4	50	<b>VP150</b>			13103
<b>23.3</b>		1179*	0.8*	60	<b>VP130</b>			10185
<b>23.3</b>		1195	1.1	60	<b>VP150</b>			13924
<b>17.5</b>	1484*	0.8*	80	<b>VP150</b>			15325	
M3 132 4.00 6P. ( $n_1 = 900 \text{ min}^{-1}$ )	<b>120</b>	283	2.3	7.5	<b>VP110</b>			4511
	<b>120</b>	287	3.1	7.5	<b>VP130</b>			5901
	<b>90</b>	374	1.9	10	<b>VP110</b>			4965
	<b>90</b>	374	2.6	10	<b>VP130</b>			6494
	<b>60</b>	541	1.4	15	<b>VP110</b>			5684

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

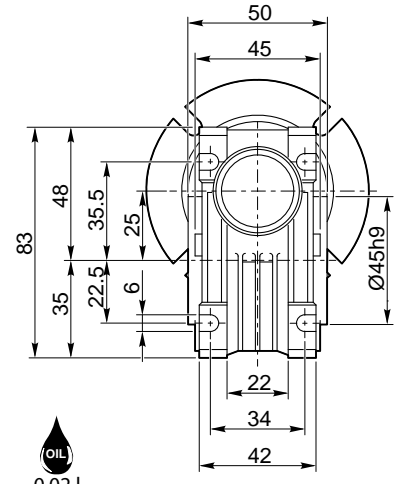
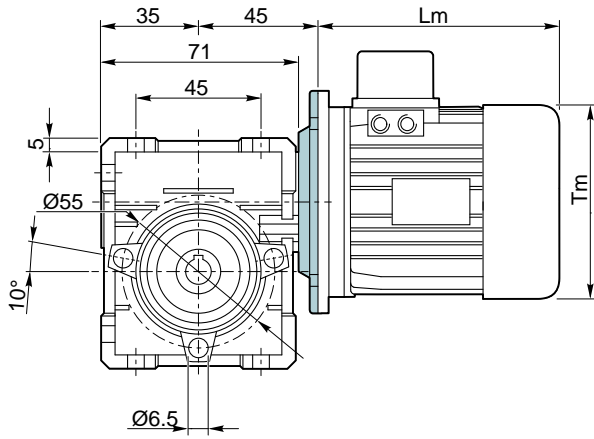
Tabella dati tecnici motoriduttori / Table technical data gearmotors

 $Pn_1$ (kW)	$n_2$ ( $min^{-1}$ )	$M_2$ (Nm)	$fs$	$i$				$FR_2$ (N)	
<b>4.00</b>									
M3 132 4.00 6P. ( $n_1 = 900 min^{-1}$ )	<b>60</b>	541	2	15	<b>VP130</b>			7434	
	<b>56</b>	580	1.2	25	<b>VP110</b>			5816	
	<b>46.7</b>	655	1.1	30	<b>VP110</b>			6181	
	<b>45</b>	713	1.5	20	<b>VP130</b>			8182	
	<b>45</b>	722	2.1	20	<b>VP150</b>			11186	
	<b>36</b>	870	1.2	25	<b>VP130</b>			8814	
	<b>36</b>	892	1.5	25	<b>VP150</b>			12050	
	<b>35</b>	863*	0.8*	40	<b>VP110</b>			6803	
	<b>30</b>	1006	1.2	30	<b>VP130</b>			9366	
	<b>30</b>	1045	1.3	30	<b>VP150</b>			12805	
	<b>22.5</b>	1291*	0.9*	40	<b>VP130</b>			10309	
	<b>22.5</b>	1291	1.4	40	<b>VP150</b>			14094	
	<b>18</b>	1571	1	50	<b>VP150</b>			15182	
	<b>15</b>	1809*	0.8*	60	<b>VP150</b>			16133	
<b>5.50</b>									
M3 132 5.50 4P. ( $n_1 = 1400 min^{-1}$ )	<b>186.7</b>	253	2.2	7.5	<b>VP110</b>			3893	
	<b>140</b>	334	1.8	10	<b>VP110</b>			4285	
	<b>140</b>	334	2.5	10	<b>VP130</b>			5605	
	<b>93.3</b>	484	1.4	15	<b>VP110</b>			4905	
	<b>93.3</b>	490	1.9	15	<b>VP130</b>			6416	
	<b>70</b>	638	1	20	<b>VP110</b>			5399	
	<b>70</b>	645	1.4	20	<b>VP130</b>			7062	
	<b>70</b>	645	2	20	<b>VP150</b>			9654	
	<b>56</b>	798*	0.9*	25	<b>VP110</b>			5816	
	<b>56</b>	788	1.2	25	<b>VP130</b>			7607	
	<b>56</b>	788	1.5	25	<b>VP150</b>			10400	
	<b>46.7</b>	901*	0.8*	30	<b>VP110</b>			6181	
	<b>46.7</b>	900	1.2	30	<b>VP130</b>			8084	
	<b>46.7</b>	934	1.3	30	<b>VP150</b>			11051	
	<b>35</b>	1171*	0.9*	40	<b>VP130</b>			8897	
	<b>35</b>	1171	1.3	40	<b>VP150</b>			12163	
	<b>28</b>	1426	1	50	<b>VP150</b>			13103	
	<b>23.3</b>	1643*	0.8*	60	<b>VP150</b>			13924	
	<b>7.50</b>								
	M3 132 7.50 4P. ( $n_1 = 1400 min^{-1}$ )	<b>186.7</b>	345	1.6	7.5	<b>VP110</b>			3893
<b>186.7</b>		349	2.1	7.5	<b>VP130</b>			5092	
<b>140</b>		455	1.3	10	<b>VP110</b>			4285	
<b>140</b>		455	1.8	10	<b>VP130</b>			5605	
<b>93.3</b>		660	1	15	<b>VP110</b>			4905	
<b>93.3</b>		668	1.4	15	<b>VP130</b>			6416	
<b>70</b>		880*	0.7*	20	<b>VP110</b>			5399	
<b>70</b>		880	1.0	20	<b>VP130</b>			7062	
<b>70</b>		880	1.5	20	<b>VP150</b>			9654	
<b>56</b>		1074*	0.9*	25	<b>VP130</b>			7607	
<b>56</b>		1074	1.1	25	<b>VP150</b>			10400	
<b>46.7</b>		1228*	0.8*	30	<b>VP130</b>			8084	
<b>46.7</b>		1274*	0.9*	30	<b>VP150</b>			11051	
<b>35</b>		1596*	0.7*	40	<b>VP130</b>			8897	
<b>35</b>		1596	1	40	<b>VP150</b>			12163	
<b>28</b>		1971*	0.7*	50	<b>VP150</b>			13103	
<b>11.0</b>									
M3 160 11.0 4P. ( $n_1 = 1400 min^{-1}$ )		<b>187</b>	512	2.3	7.5	<b>VP150</b>			6962
	<b>140</b>	675	1.8	10	<b>VP150</b>			7663	
	<b>93.3</b>	990	1.3	15	<b>VP150</b>			8771	
	<b>70</b>	1291	1.0	20	<b>VP150</b>			9654	
	<b>56</b>	1576*	0.8*	25	<b>VP150</b>			10400	
<b>15.0</b>									
M3 160 15.0 4P. ( $n_1 = 1400 min^{-1}$ )	<b>187</b>	698	1.7	7.5	<b>VP150</b>			6962	
	<b>140</b>	921	1.3	10	<b>VP150</b>			7663	
	<b>93.3</b>	1351*	0.9*	15	<b>VP150</b>			8771	
	<b>70</b>	1760*	0.7*	20	<b>VP150</b>			9654	

\* **NOTA:** la coppia massima utilizzabile  $M_{m2}$  deve essere determinata utilizzando il fattore di servizio  $fs$ :  $M_{m2} = M_2 \times fs$

\* **NOTE:** Maximun allowable torque  $M_{m2}$  must be calculated using service factor  $fs$ :  $M_{m2} = M_2 \times fs$

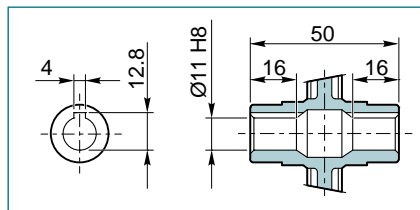
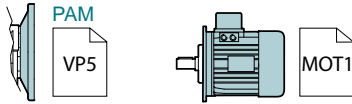
**VP 025 P...**



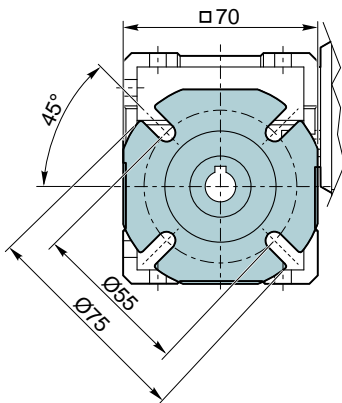
**Kg**  
0.7 kg

**OIL**  
0.02 l

Albero uscita / Output shaft

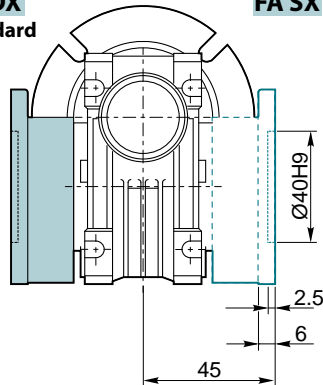


**VP 025 F...**



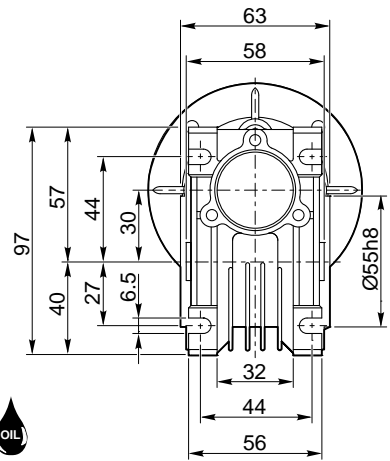
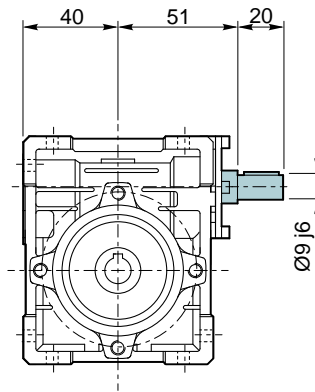
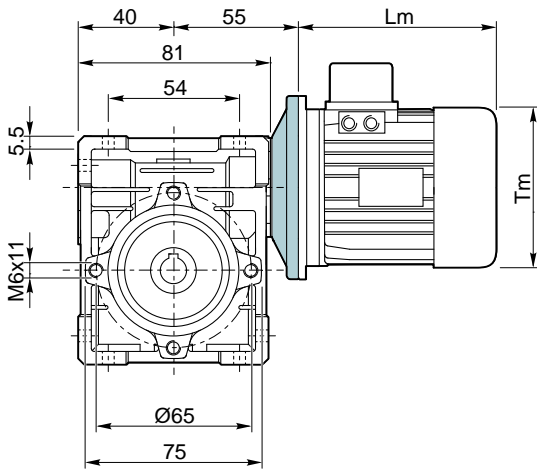
**FA DX**  
Standard

**FA SX**



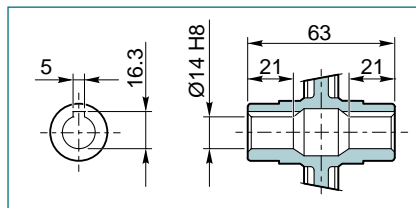
VP 030 P...

VI 030 P...

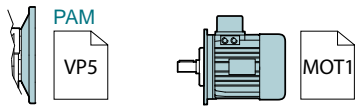
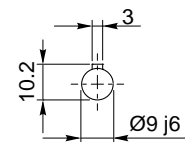


**Kg** 1.2 kg  
**OIL** 0.04 l

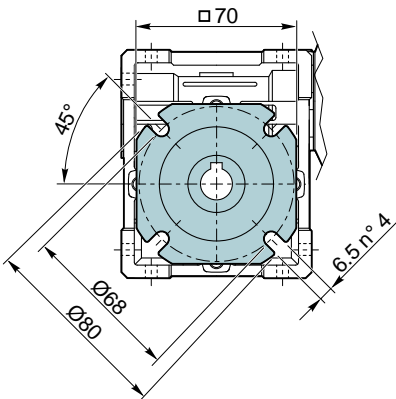
Albero uscita / Output shaft



Albero entrata / Input shaft

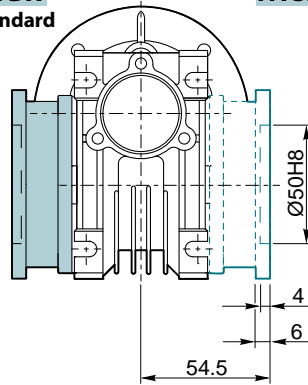


VP 030 F... / VI 030 F...



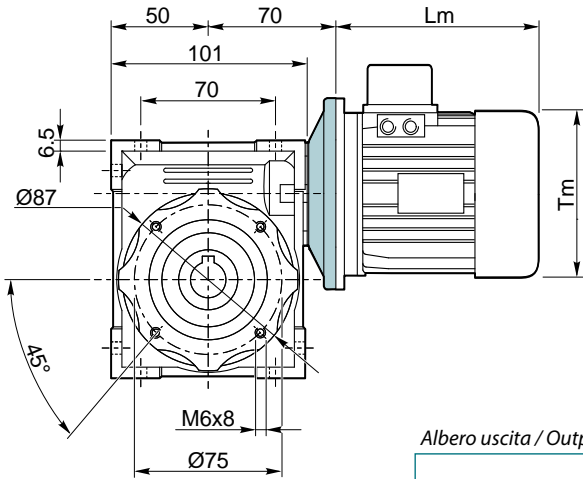
**FA DX**  
Standard

**FA SX**

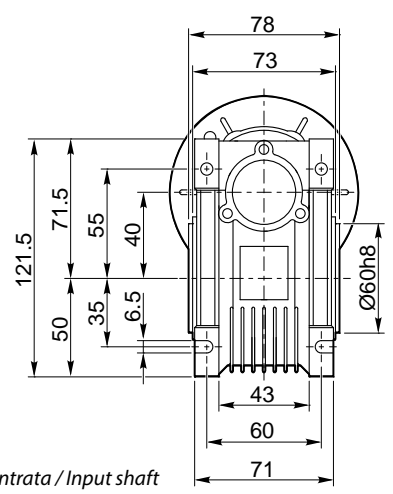
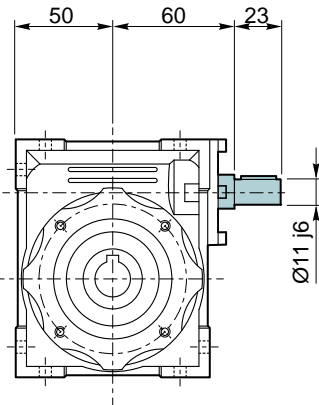




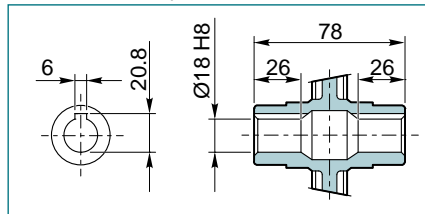
**VP 040 P ...**



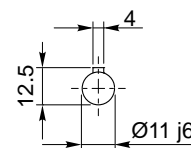
**VI 040 P ...**



Albero uscita / Output shaft

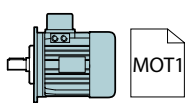
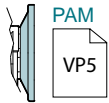


Albero entrata / Input shaft

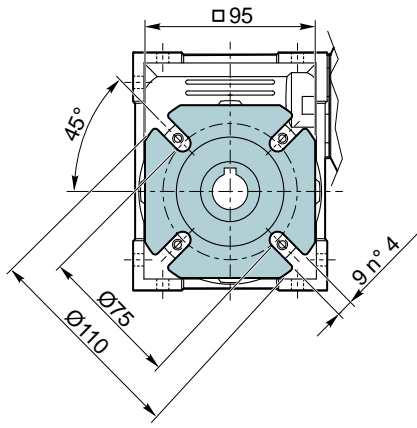


**Kg**  
2.3 kg

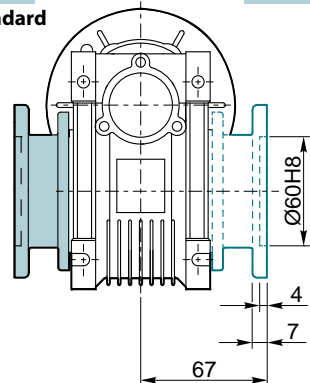
**OIL**  
0.08 l



**VP 040 F... / VI 040 F...**

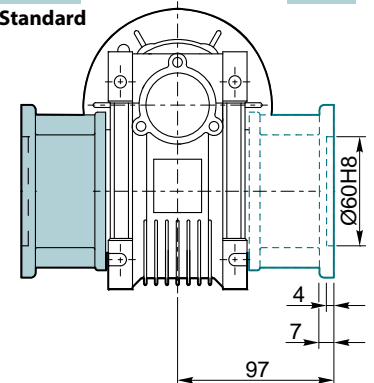


**FA DX**  
Standard

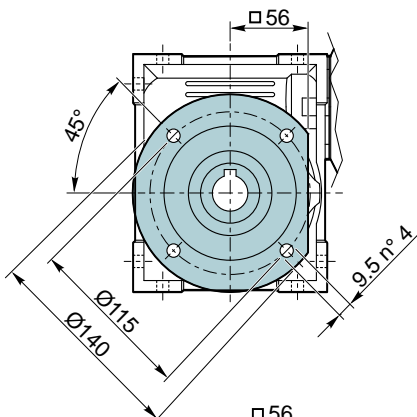


**FA SX**

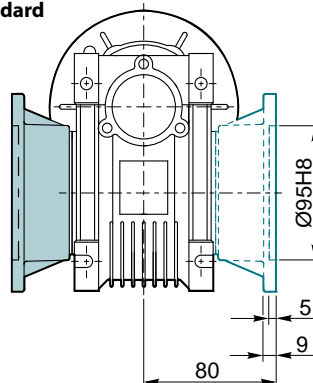
**FB DX**  
Standard



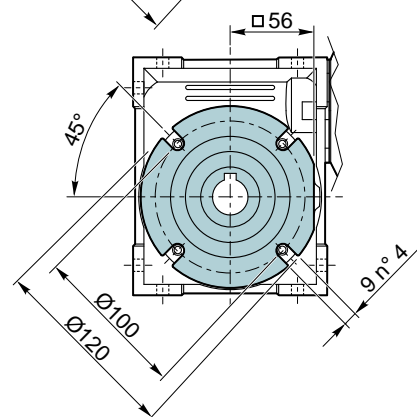
**FB SX**



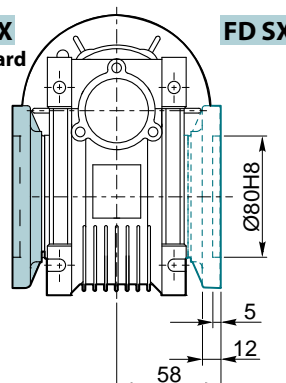
**FC DX**  
Standard



**FC SX**

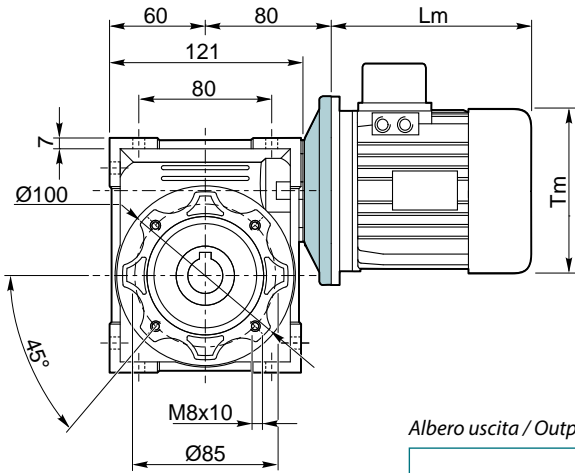


**FD DX**  
Standard

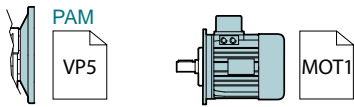
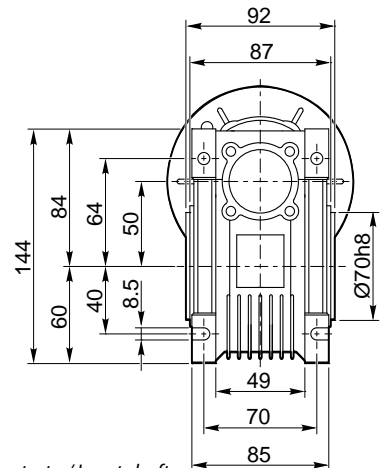
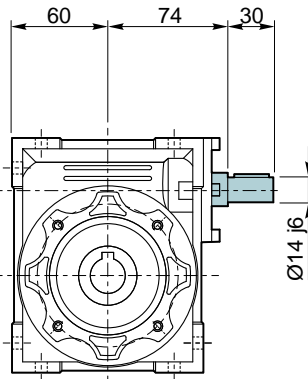


**FD SX**

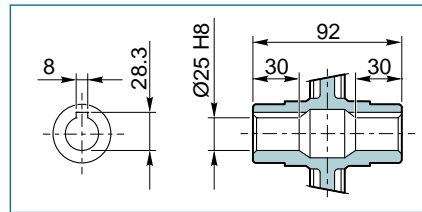
VP 050 P ...



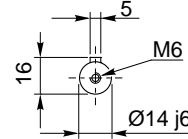
VI 050 P ...



Albero uscita / Output shaft

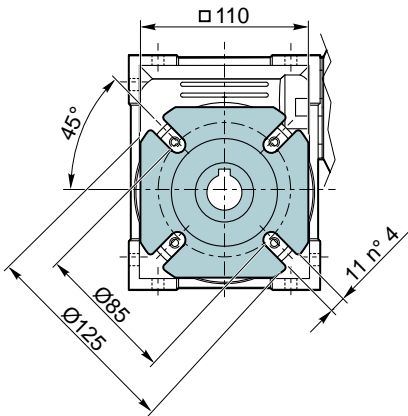


Albero entrata / Input shaft

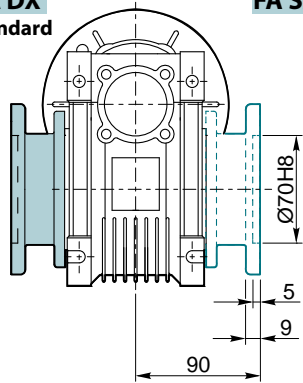


**Kg** 3.5 kg **(OIL)** 0.15 l

VP 050 F... / VI 050 F...

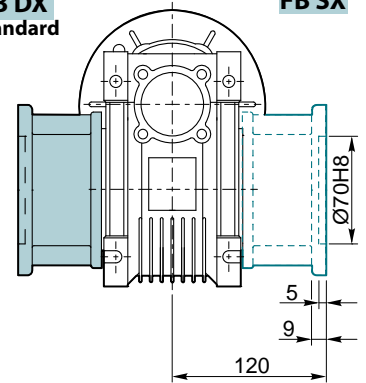


**FA DX**  
Standard

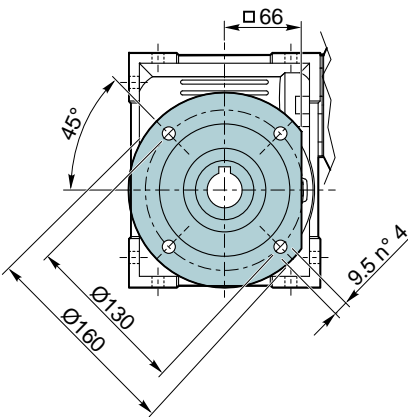


**FA SX**

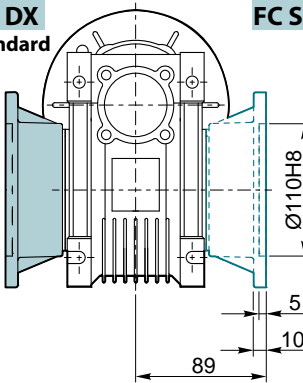
**FB DX**  
Standard



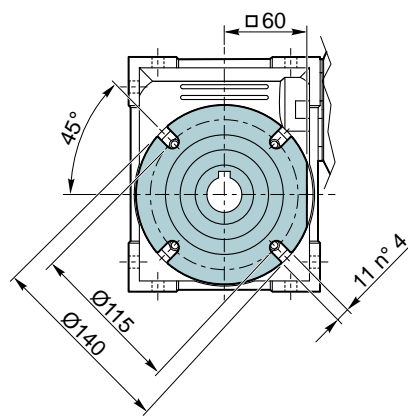
**FB SX**



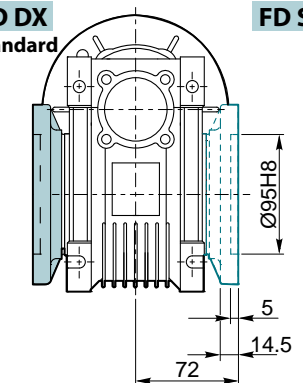
**FC DX**  
Standard



**FC SX**



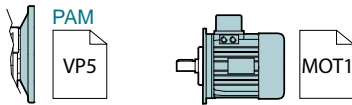
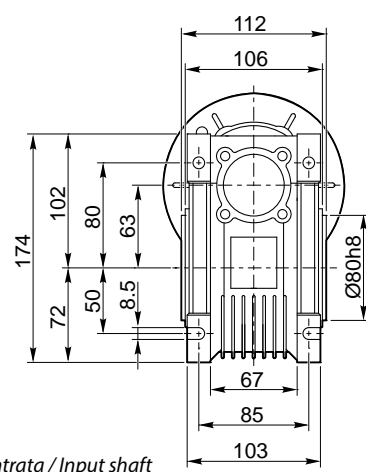
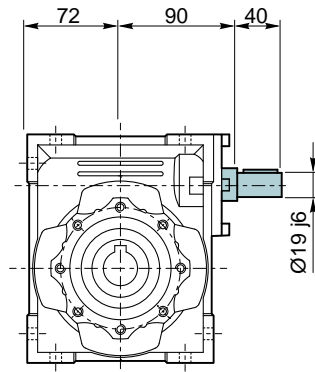
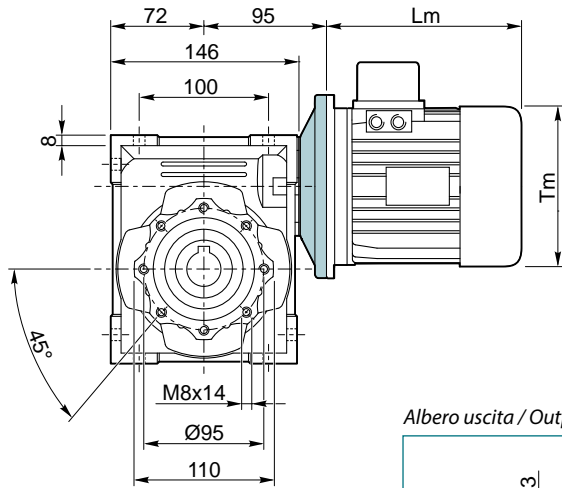
**FD DX**  
Standard



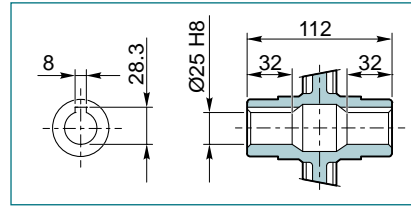
**FD SX**

**VP 063 P...**

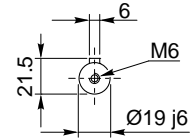
**VI 063 P...**



Albero uscita / Output shaft

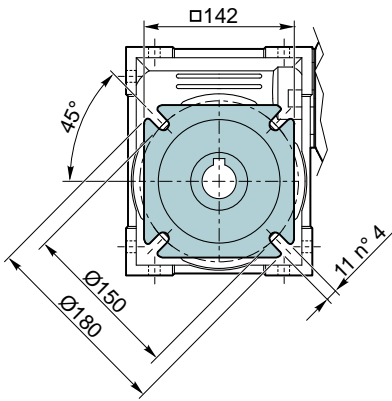


Albero entrata / Input shaft

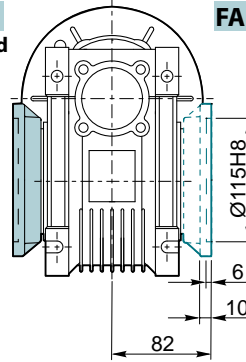


**Kg** 6.2 kg  
**OIL** 0.25 l

**VP 063 F... / VI 063 F...**

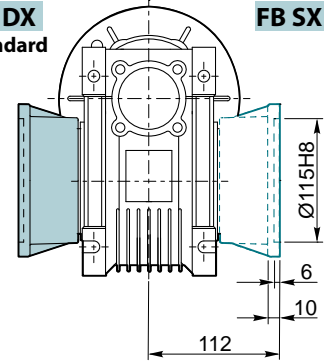


**FA DX**  
Standard

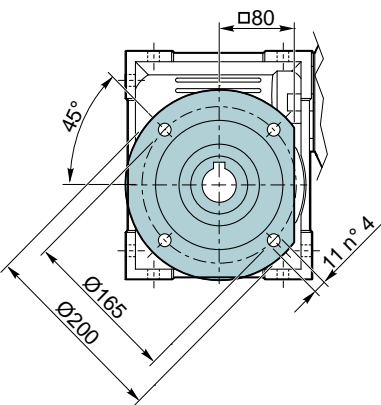


**FA SX**

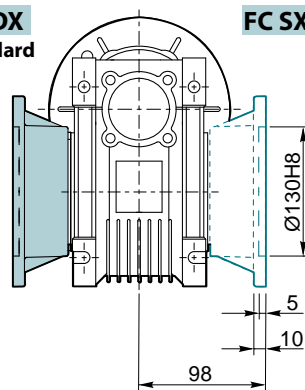
**FB DX**  
Standard



**FB SX**

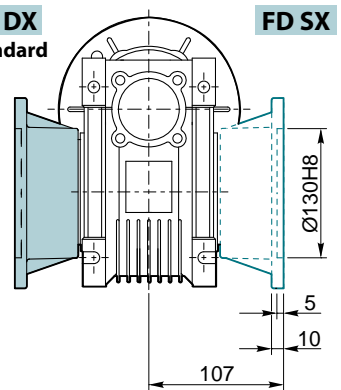


**FC DX**  
Standard

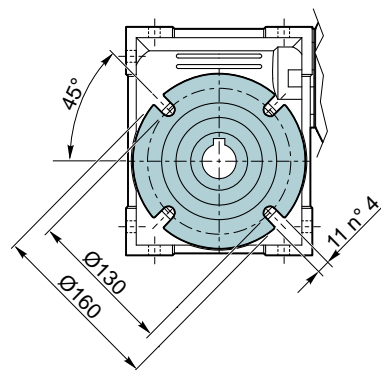


**FC SX**

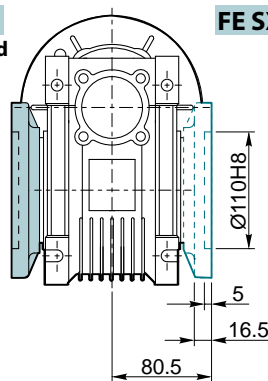
**FD DX**  
Standard



**FD SX**



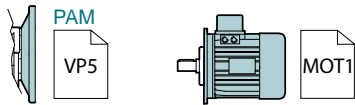
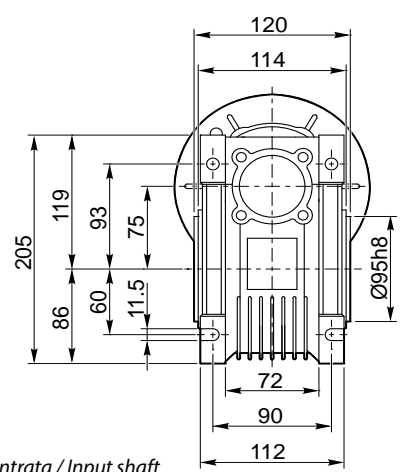
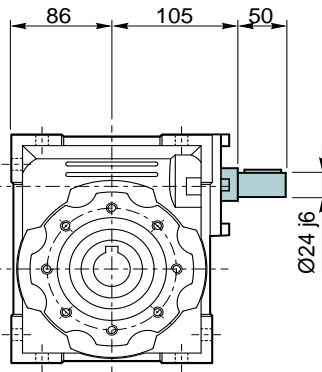
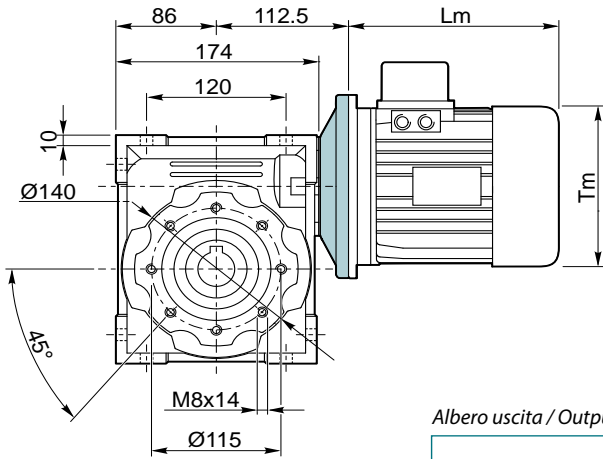
**FE DX**  
Standard



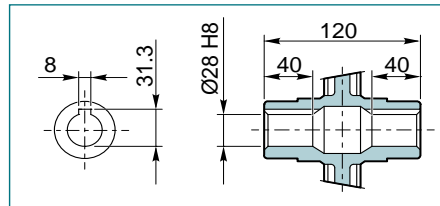
**FE SX**

VP 075 P...

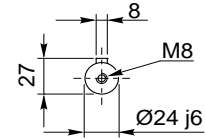
VI 075 P...



Albero uscita / Output shaft

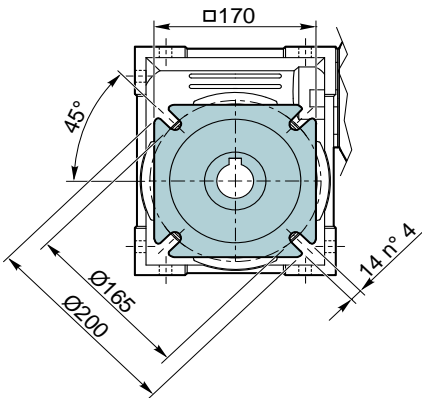


Albero entrata / Input shaft

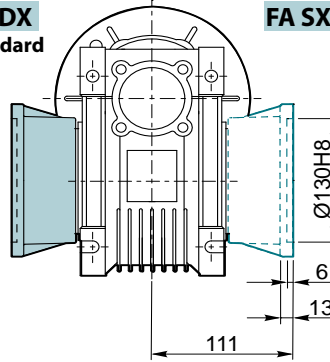


**Kg** 9.0 kg **OIL** 0.50 l

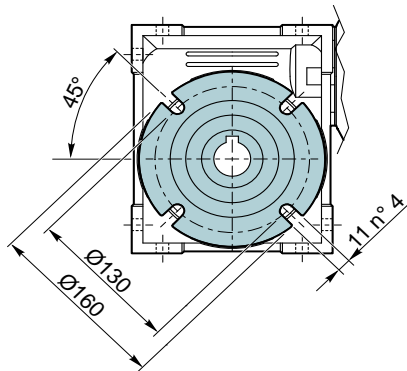
VP 075 F... / VI 075 F...



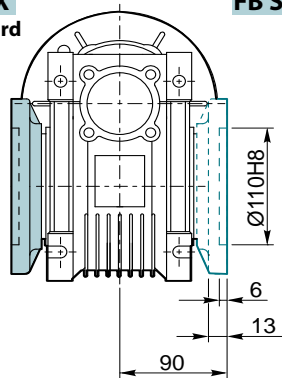
**FA DX**  
Standard



**FA SX**



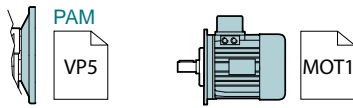
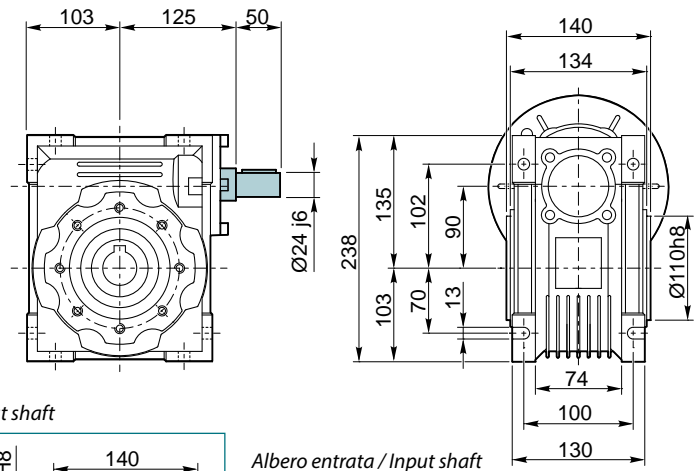
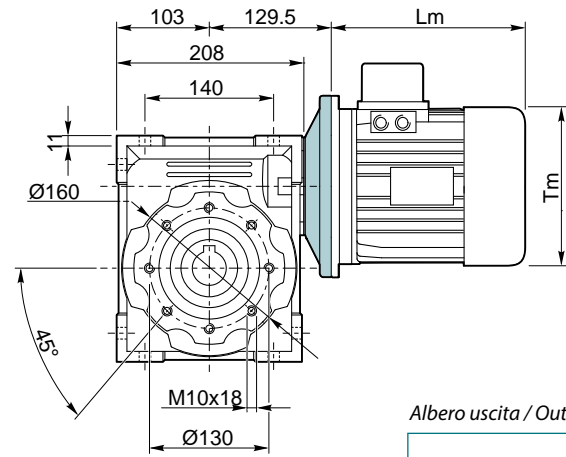
**FB DX**  
Standard



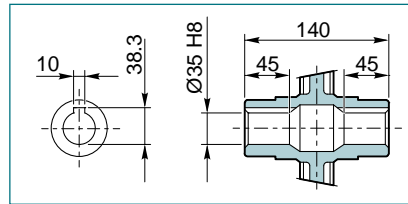
**FB SX**

**VP 090 P...**

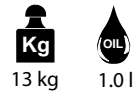
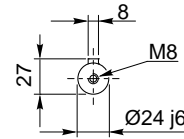
**VI 090 P...**



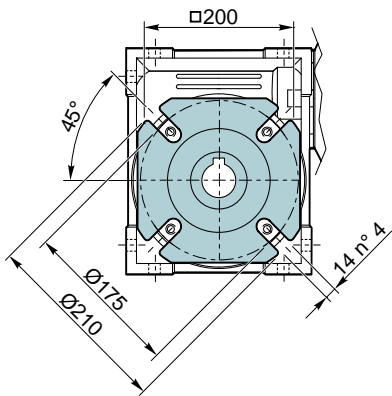
Albero uscita / Output shaft



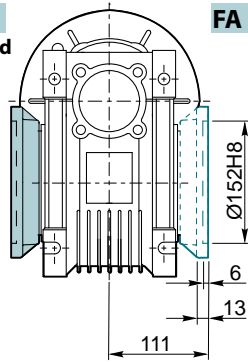
Albero entrata / Input shaft



**VP 090 F... / VI 090 F...**

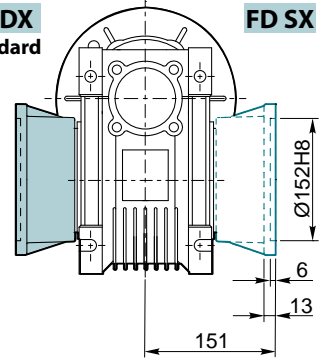


**FA DX**  
Standard

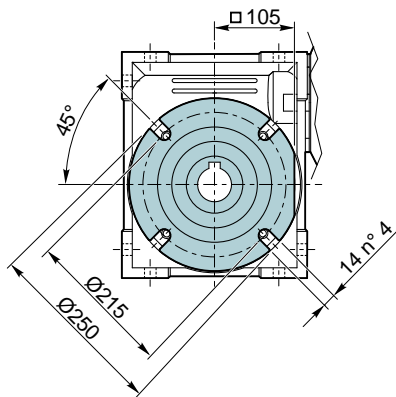


**FA SX**

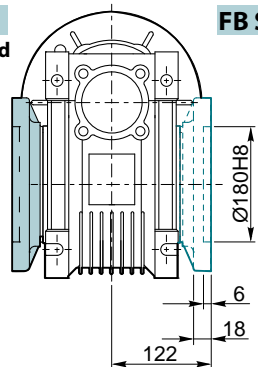
**FD DX**  
Standard



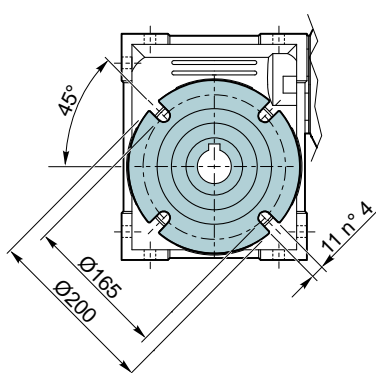
**FD SX**



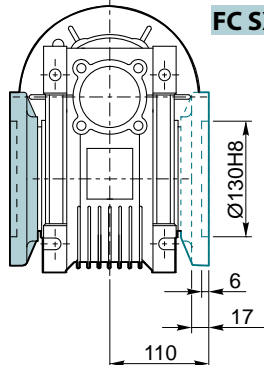
**FB DX**  
Standard



**FB SX**



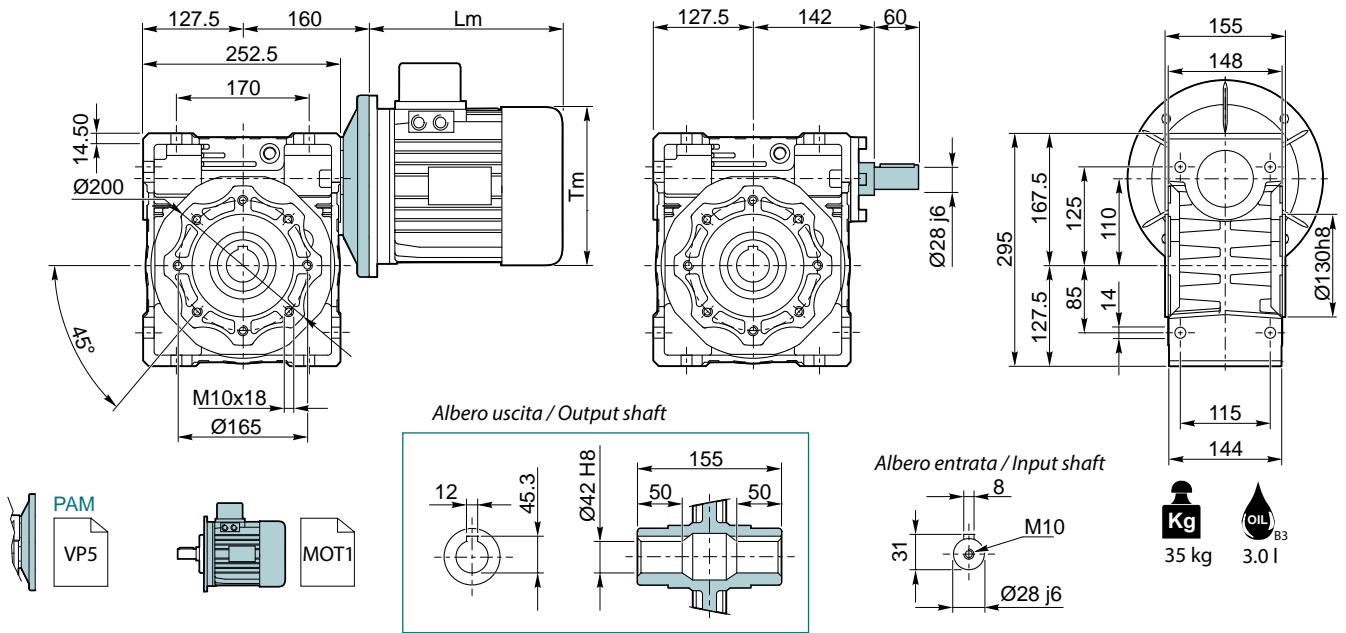
**FC DX**  
Standard



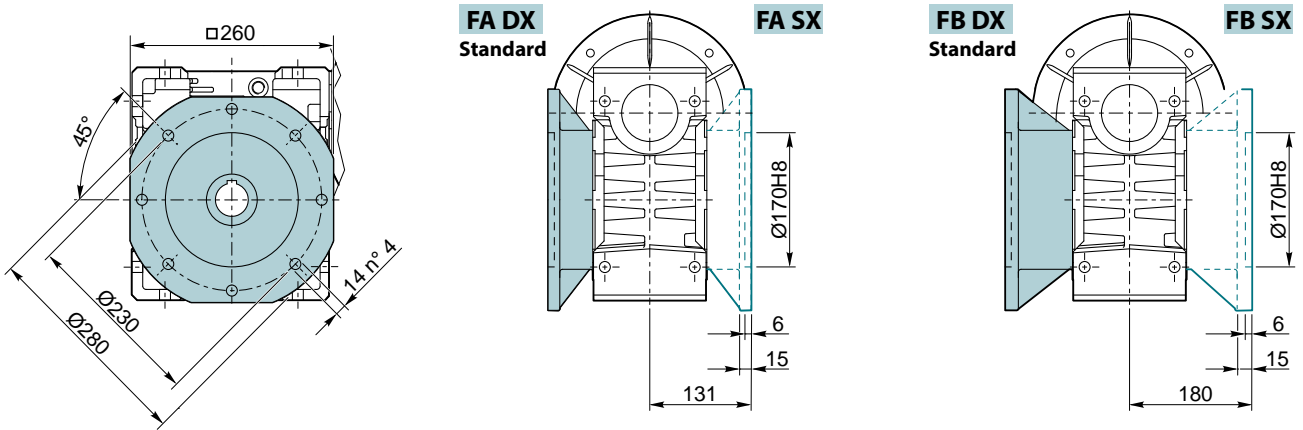
**FC SX**

VP 110 P...

VI 110 P...

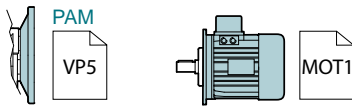
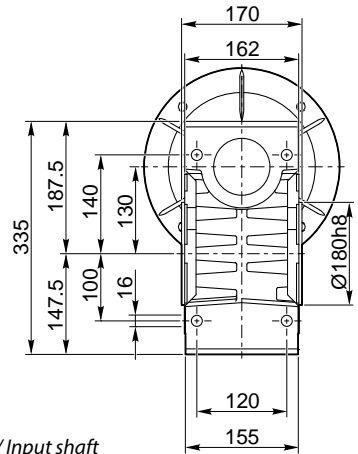
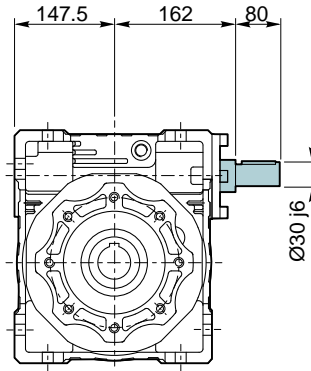
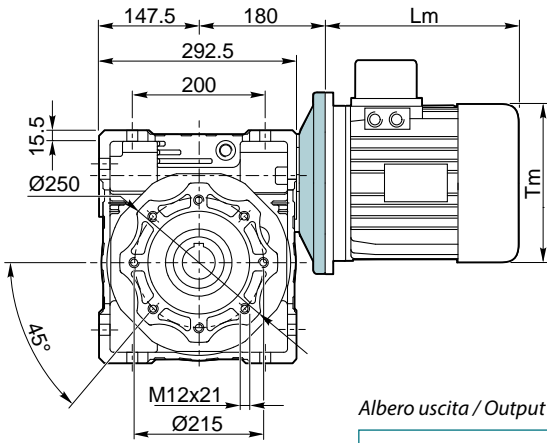


VP 110 F... / VI 110 F...

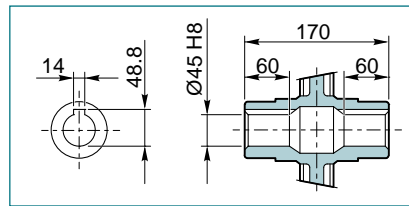


**VP 130 P...**

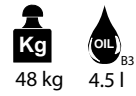
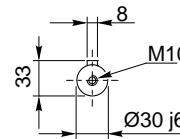
**VI 130 P...**



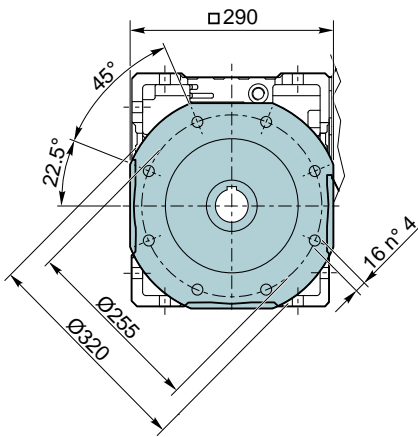
Albero uscita / Output shaft



Albero entrata / Input shaft

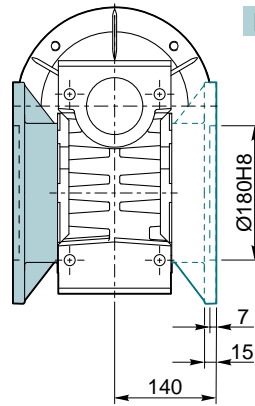


**VP 130 F... / VI 130 F...**



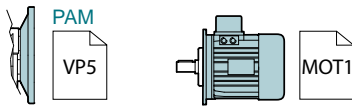
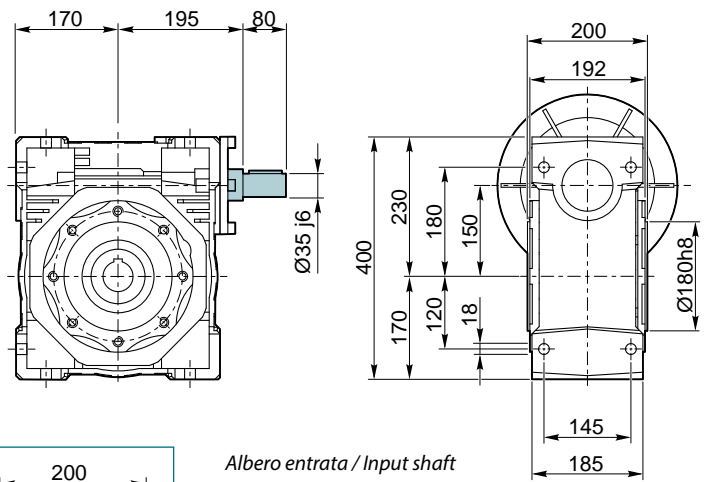
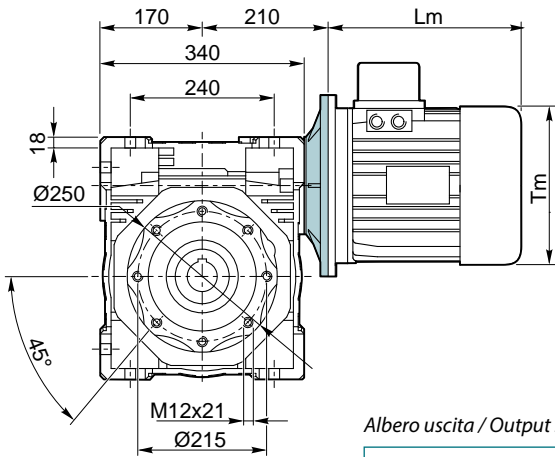
**FA DX**  
Standard

**FA SX**

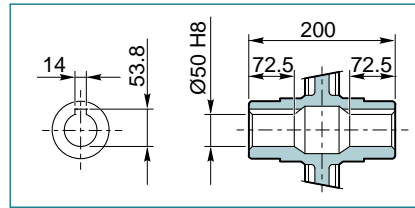


VP 150 P...

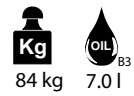
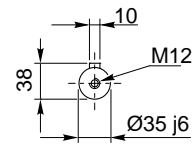
VI 150 P...



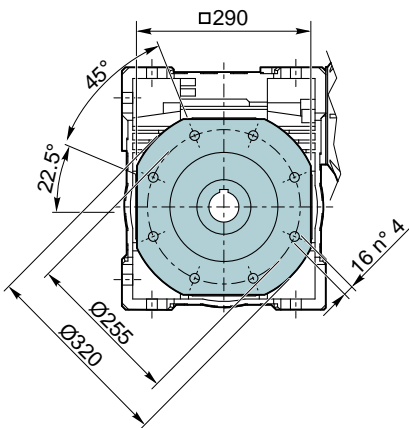
Albero uscita / Output shaft



Albero entrata / Input shaft

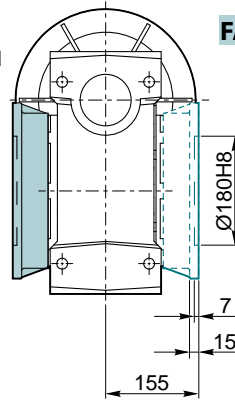


VP 150 F... / VI 150 F...



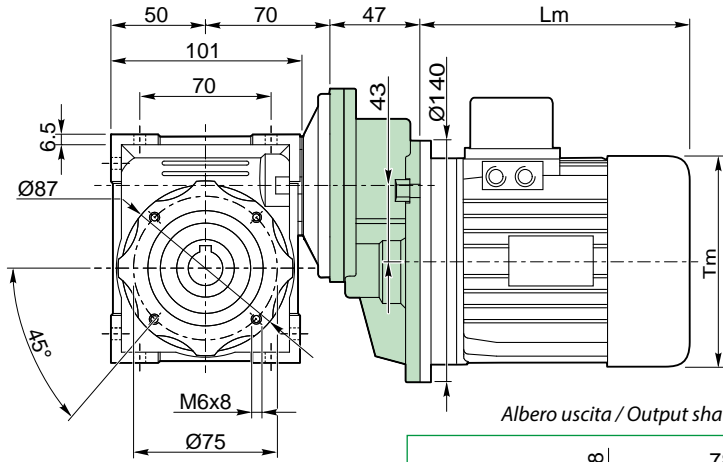
FA DX  
Standard

FA SX

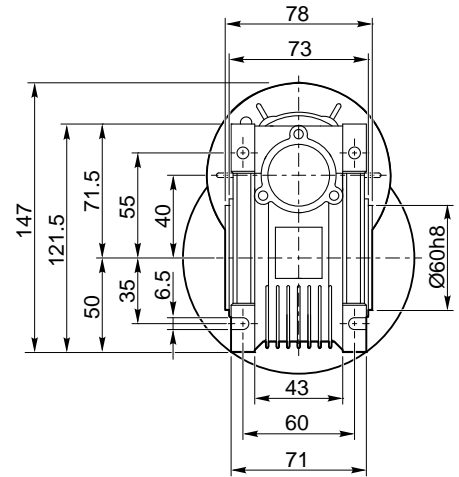
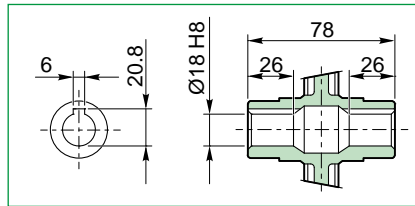




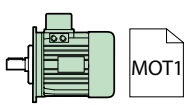
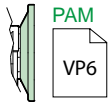
**VR 063 / 040 P...**



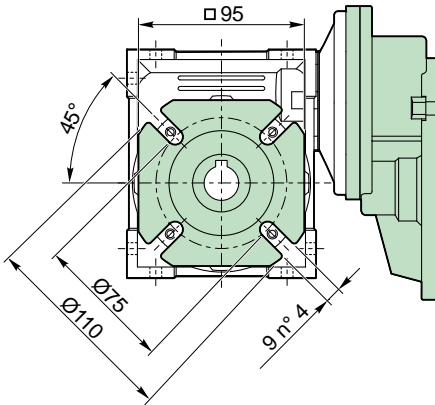
Albero uscita / Output shaft



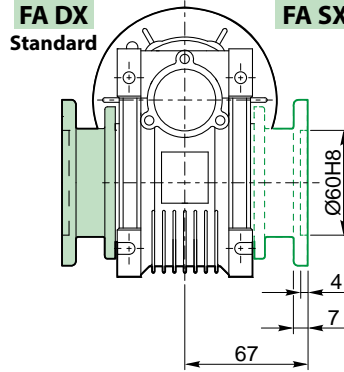
**Kg**  
3.8 kg



**VR 063 / 040 F...**

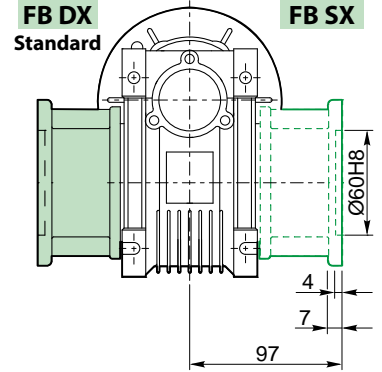


**FA DX**  
Standard

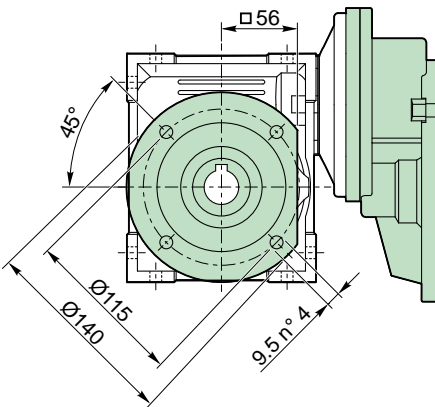


**FA SX**

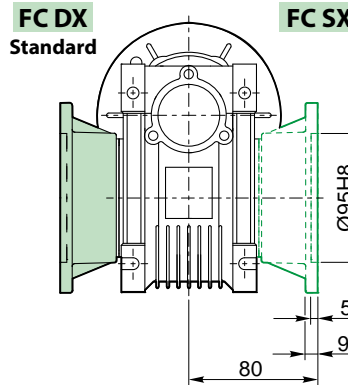
**FB DX**  
Standard



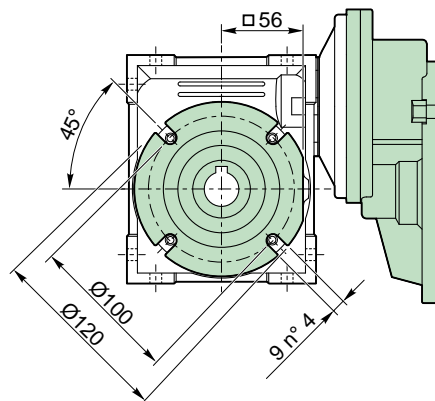
**FB SX**



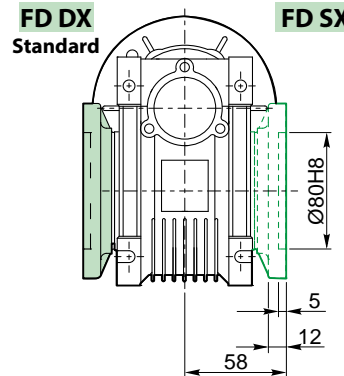
**FC DX**  
Standard



**FC SX**

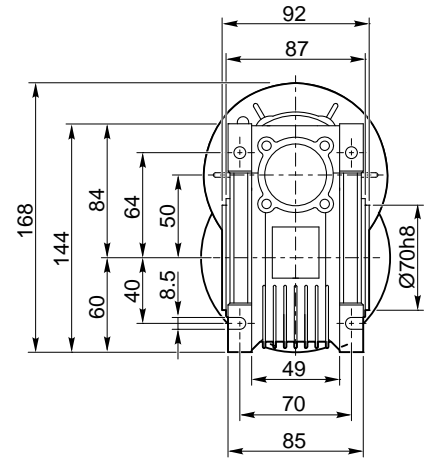
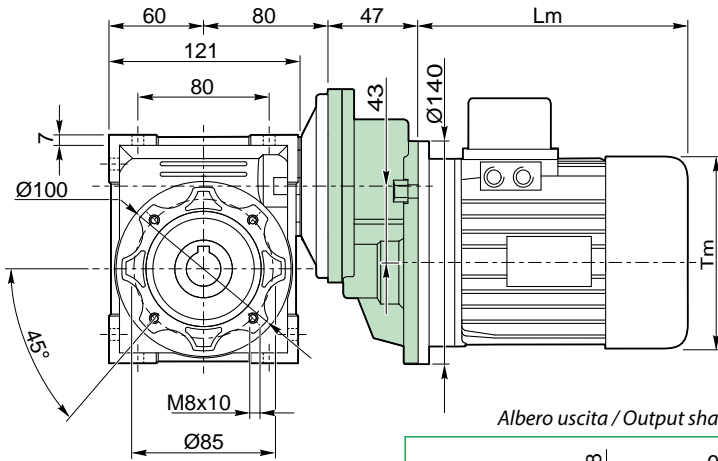


**FD DX**  
Standard

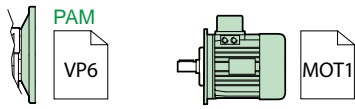
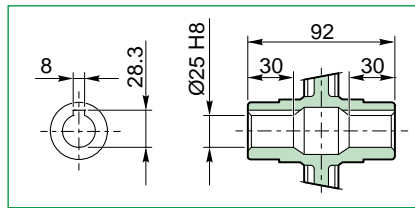


**FD SX**

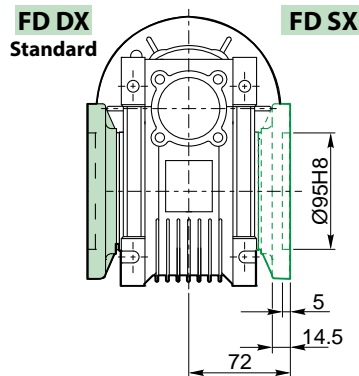
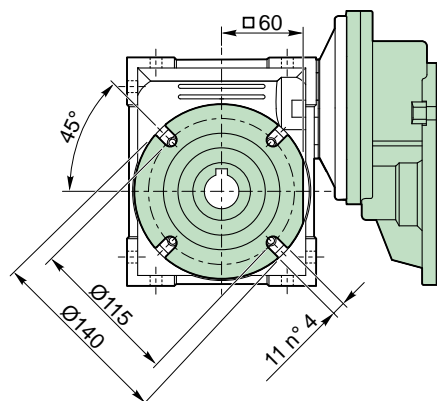
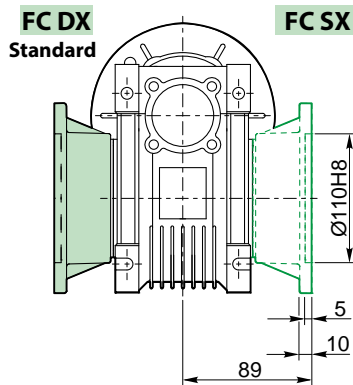
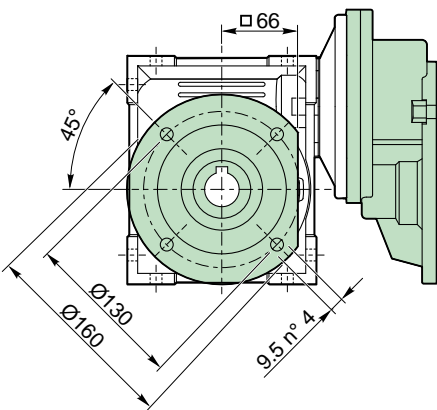
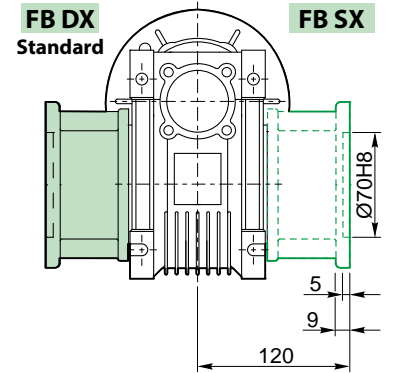
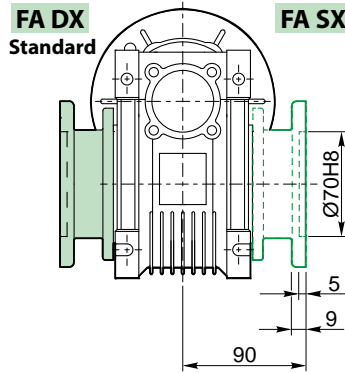
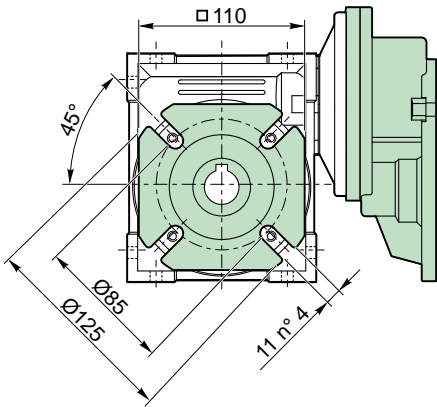
VR 063 / 050 P...



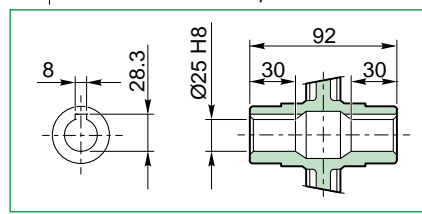
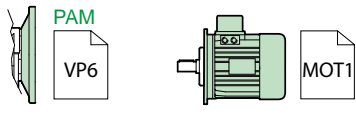
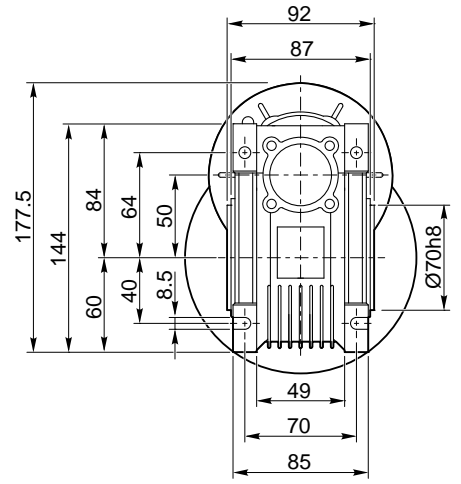
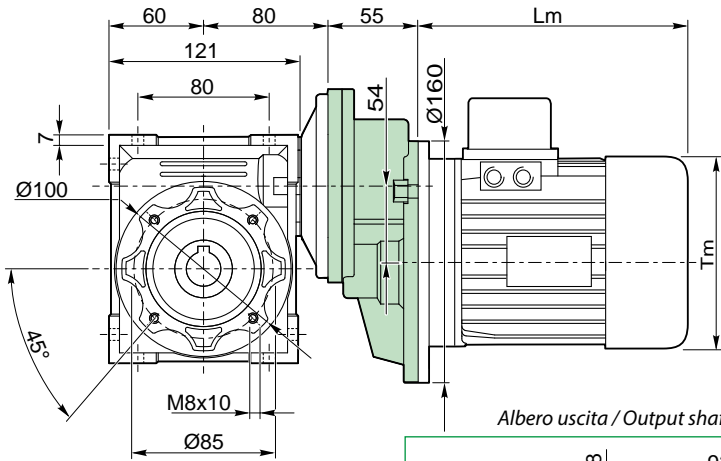
Albero uscita / Output shaft



VR 063 / 050 F...

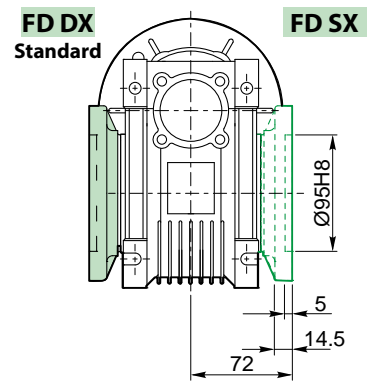
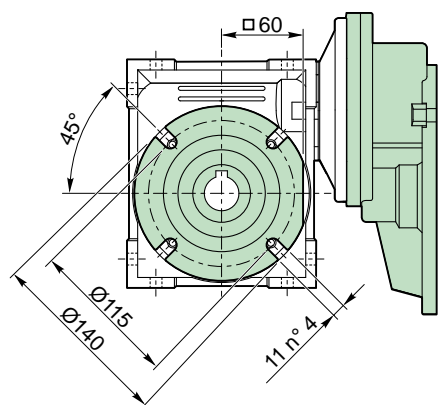
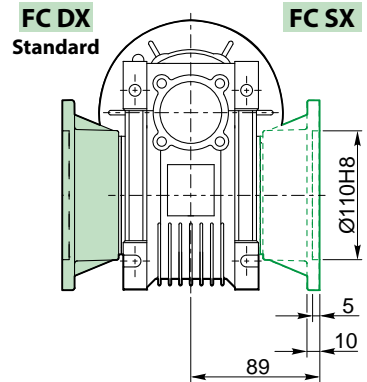
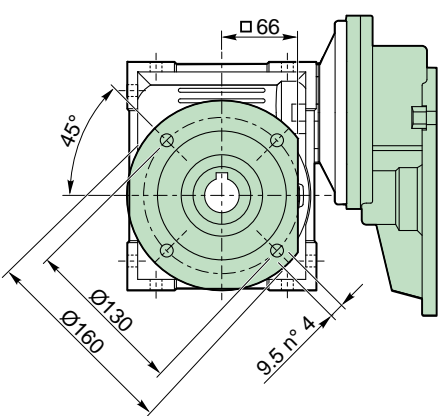
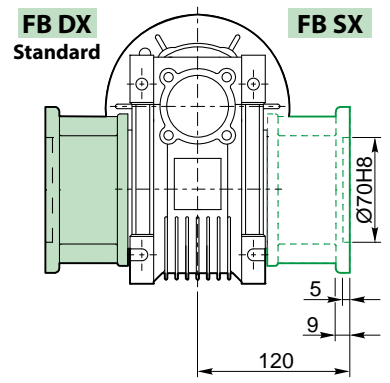
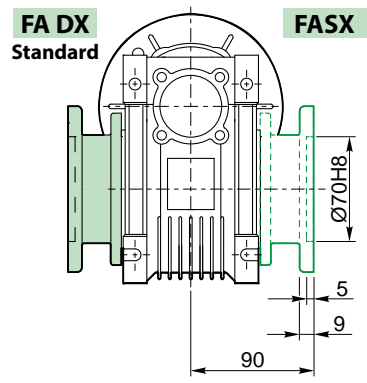
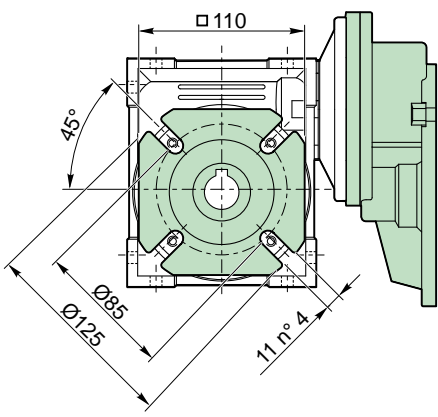


**VR 071 / 050 P...**

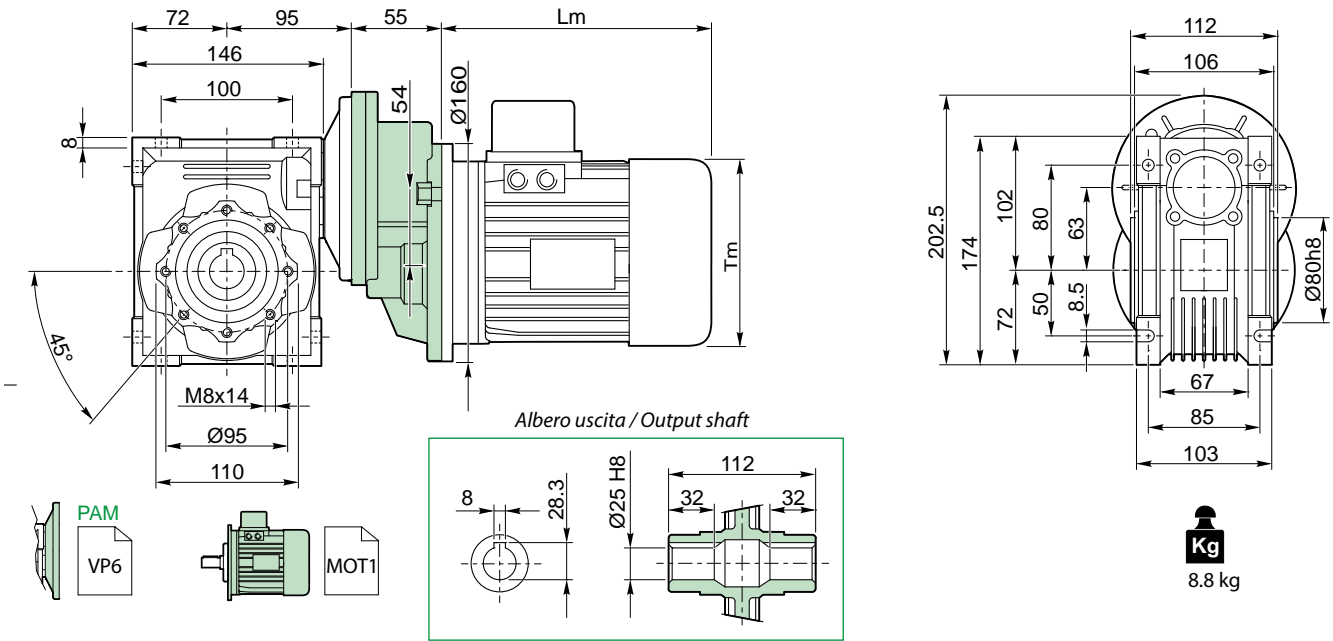


**Kg**  
6.1 kg

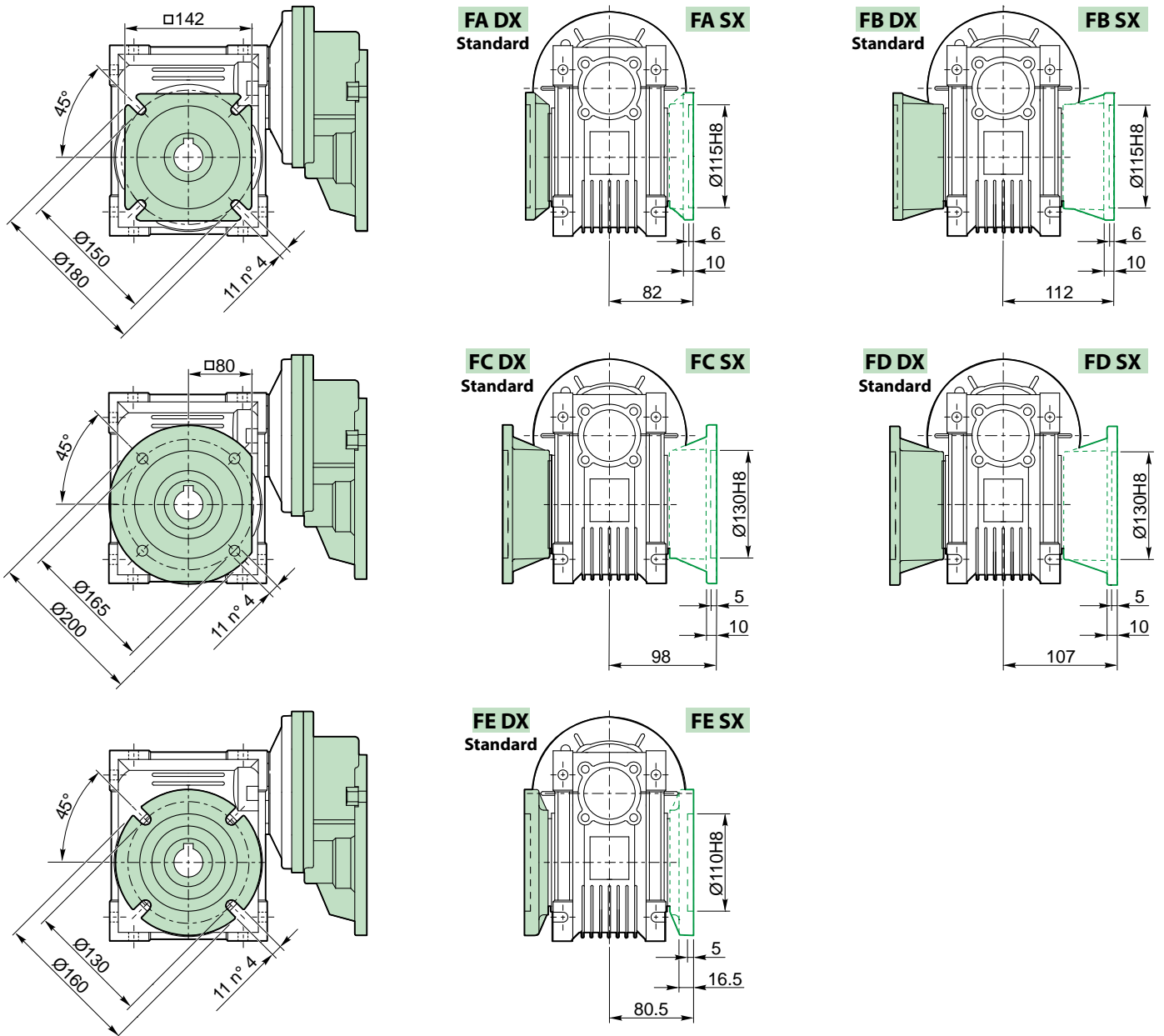
**VR 071 / 050 F...**



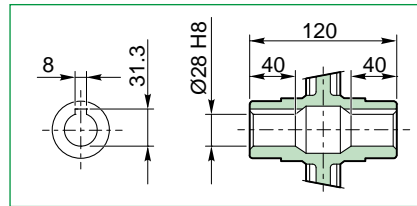
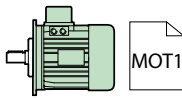
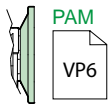
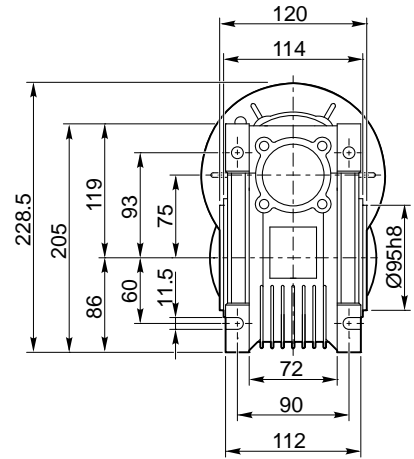
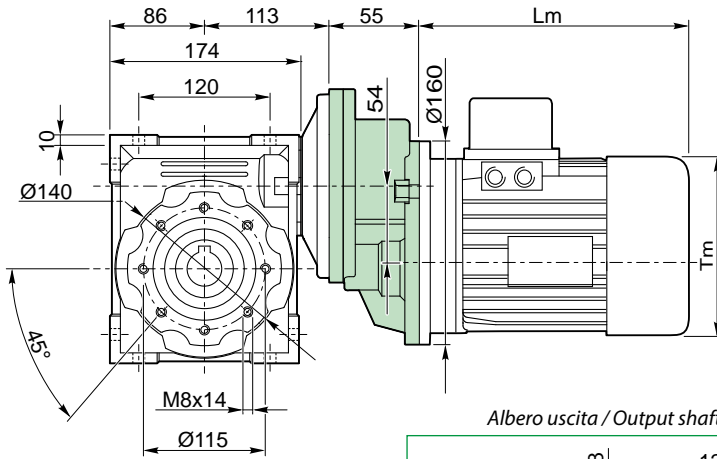
VR 071 / 063 P...



VR 071 / 063 F...

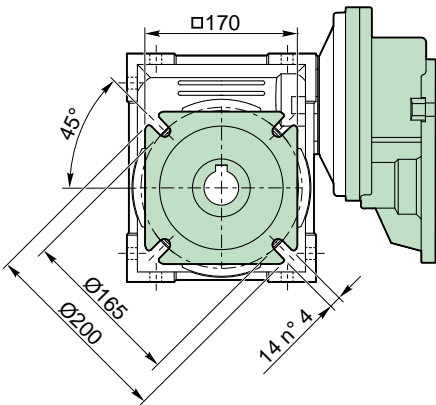


**VR 071/075 P...**

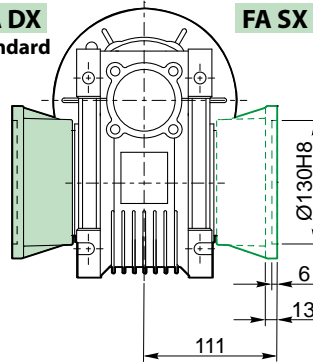


**Kg**  
11.6 kg

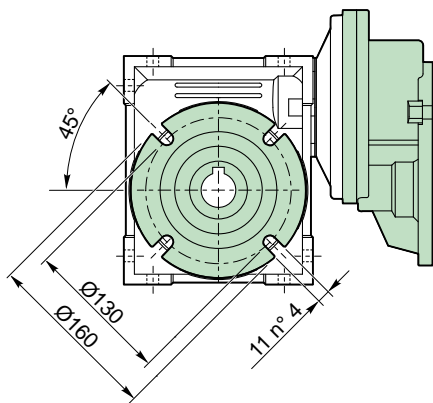
**VR 071 / 075 F...**



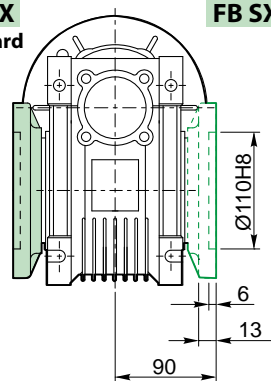
**FA DX**  
Standard



**FA SX**

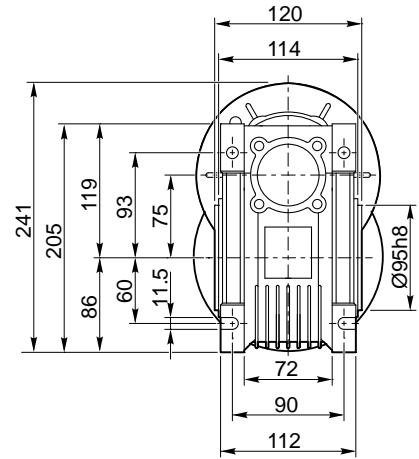
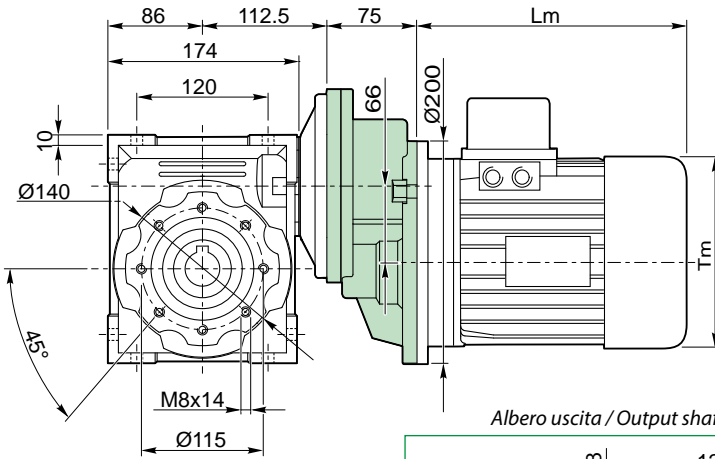


**FB DX**  
Standard

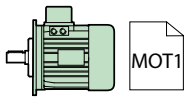
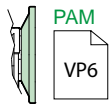
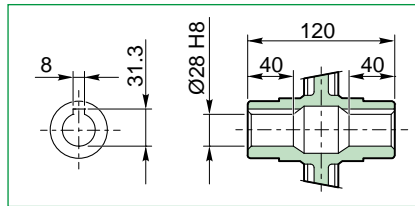


**FB SX**

VR 080 / 075 P...

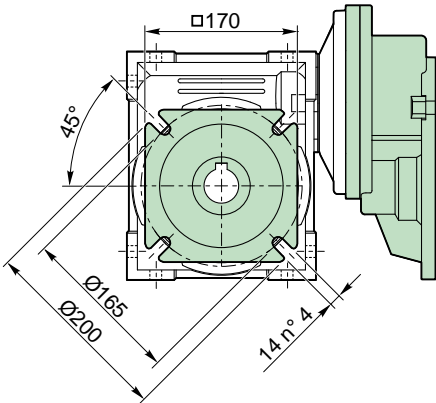


Albero uscita / Output shaft

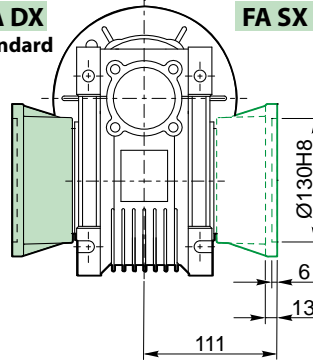


**Kg**  
13.7 kg

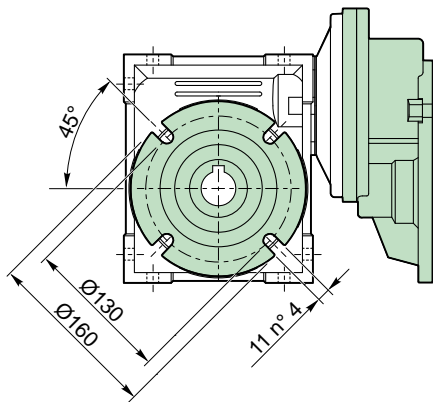
VR 080 / 075 F...



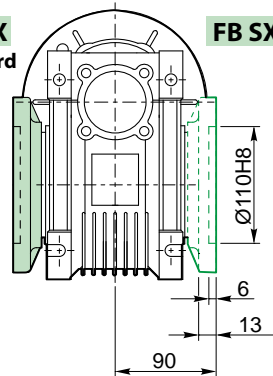
**FA DX**  
Standard



**FA SX**

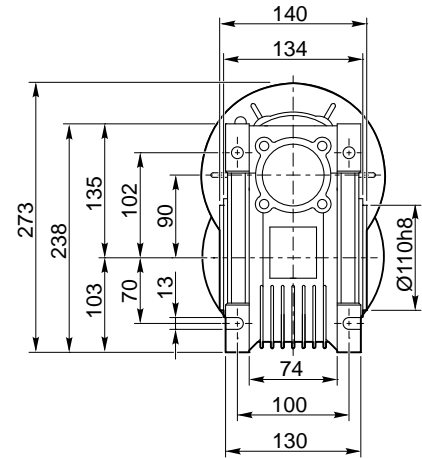
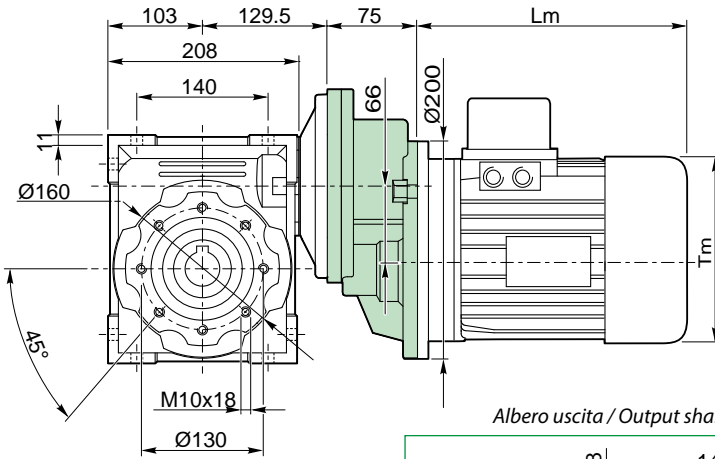


**FB DX**  
Standard

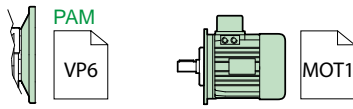
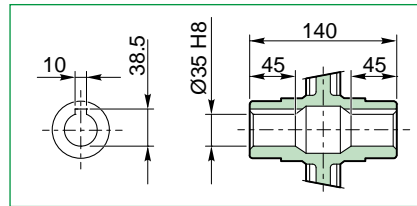


**FB SX**

**VR 080 / 090 P...**

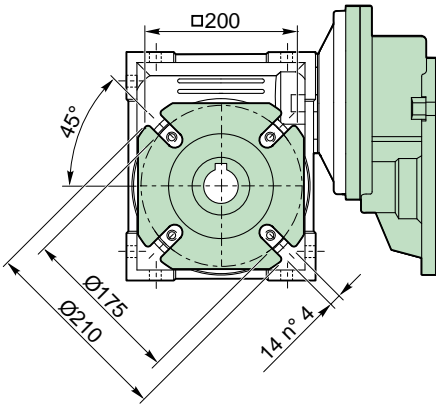


Albero uscita / Output shaft

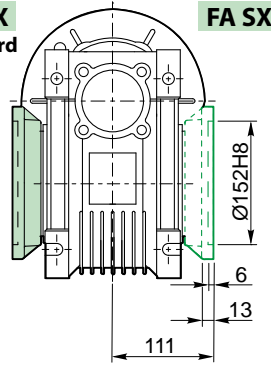


**Kg**  
17.7 kg

**VR 080 / 090 F...**

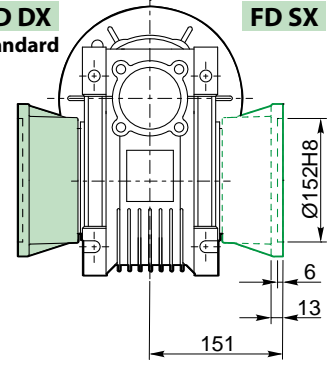


**FA DX**  
Standard

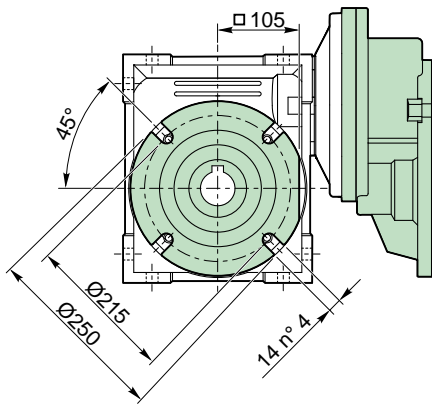


**FA SX**

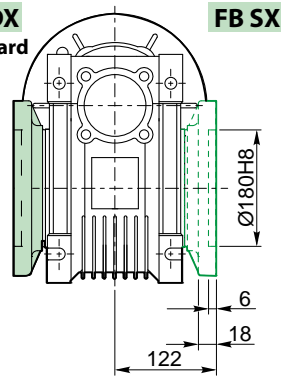
**FD DX**  
Standard



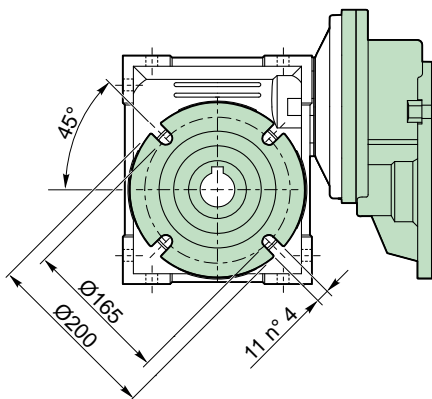
**FD SX**



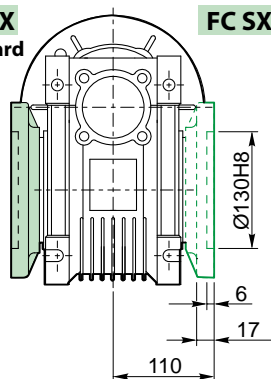
**FB DX**  
Standard



**FB SX**

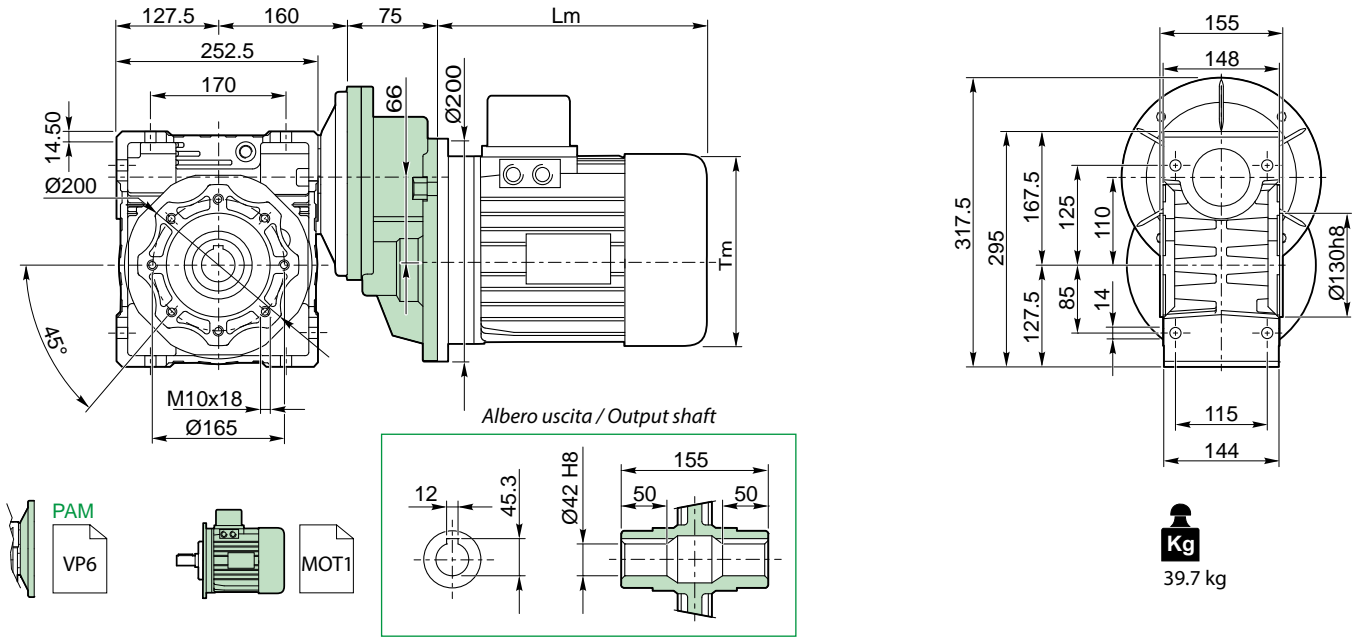


**FC DX**  
Standard

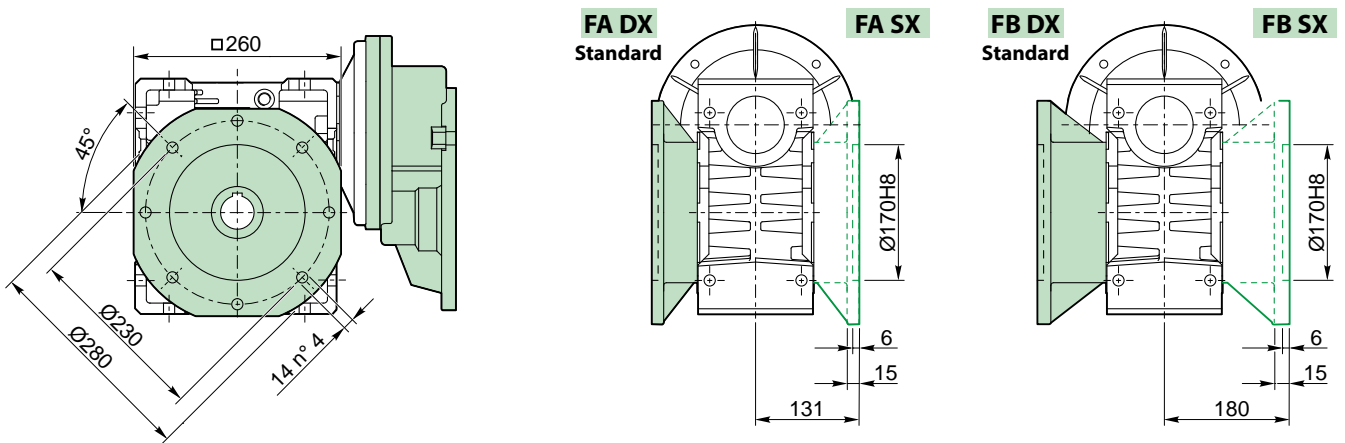


**FC SX**

VR 080 / 110 P...

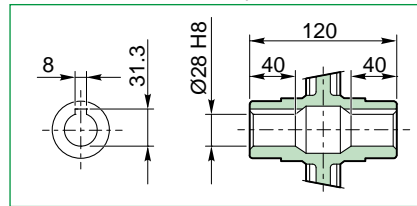
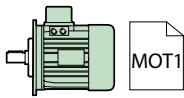
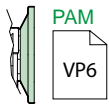
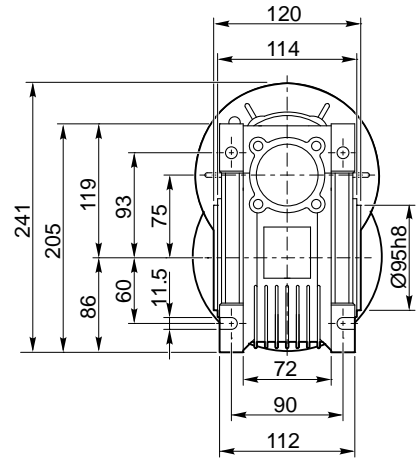
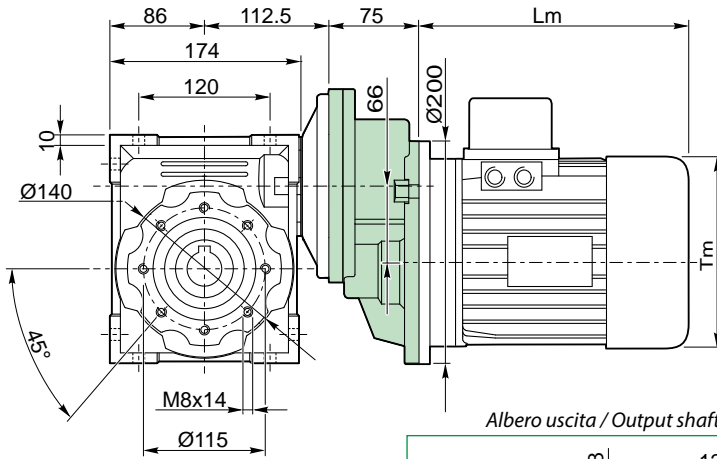


VR 080 / 110 F...



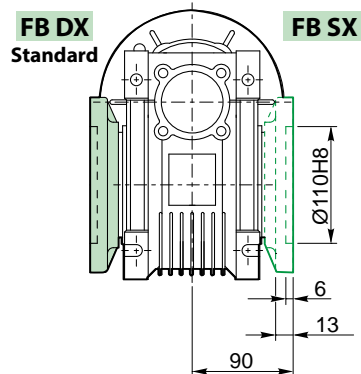
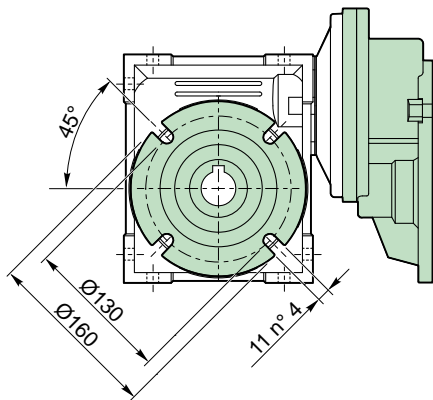
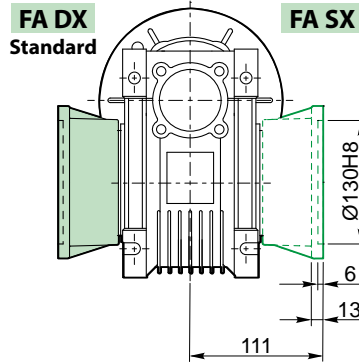
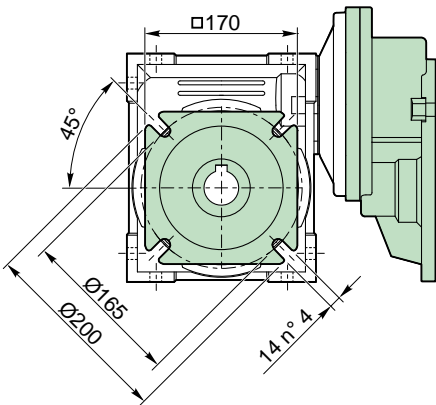


**VR 090 / 075 P...**

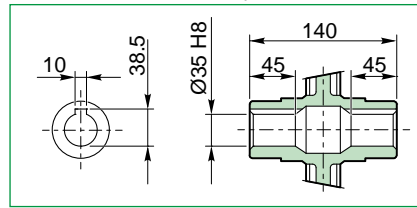
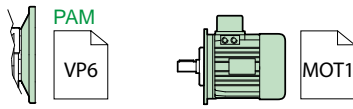
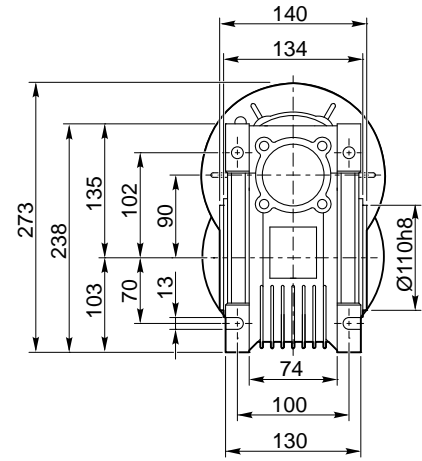
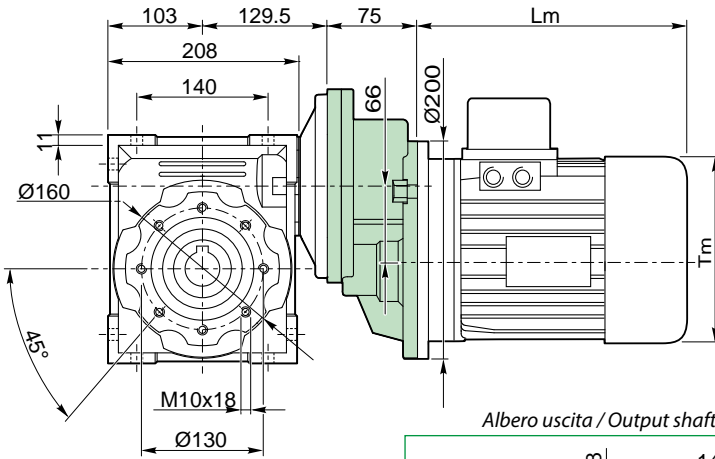


**Kg**  
13.7 kg

**VR 090 / 075 F...**

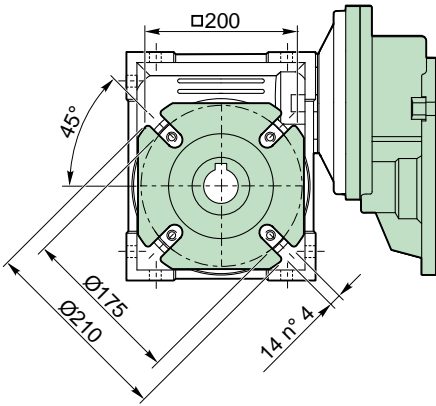


VR 090 / 090 P...

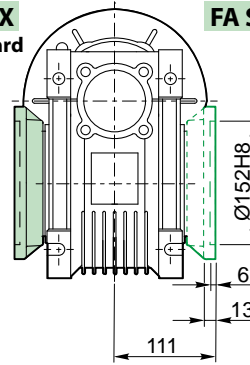


**Kg**  
17.7 kg

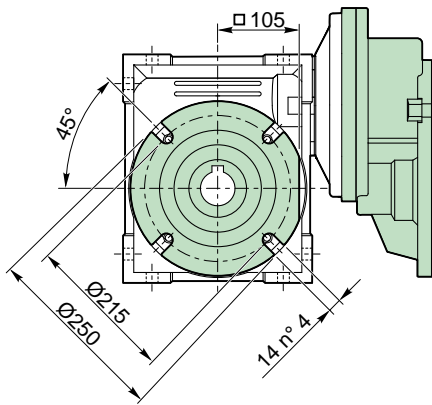
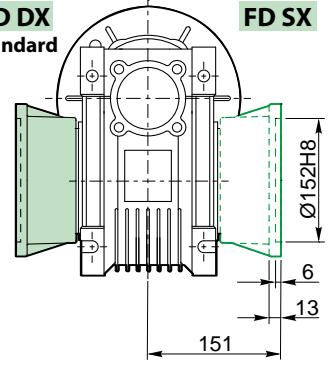
VR 090 / 090 F...



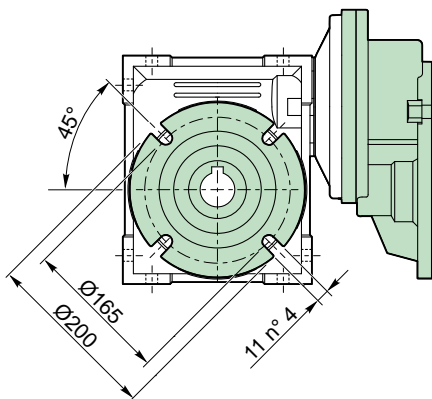
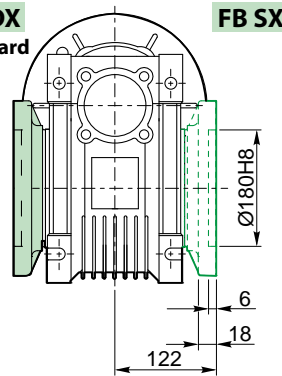
**FA DX**  
Standard



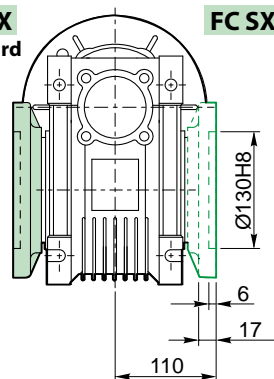
**FD DX**  
Standard



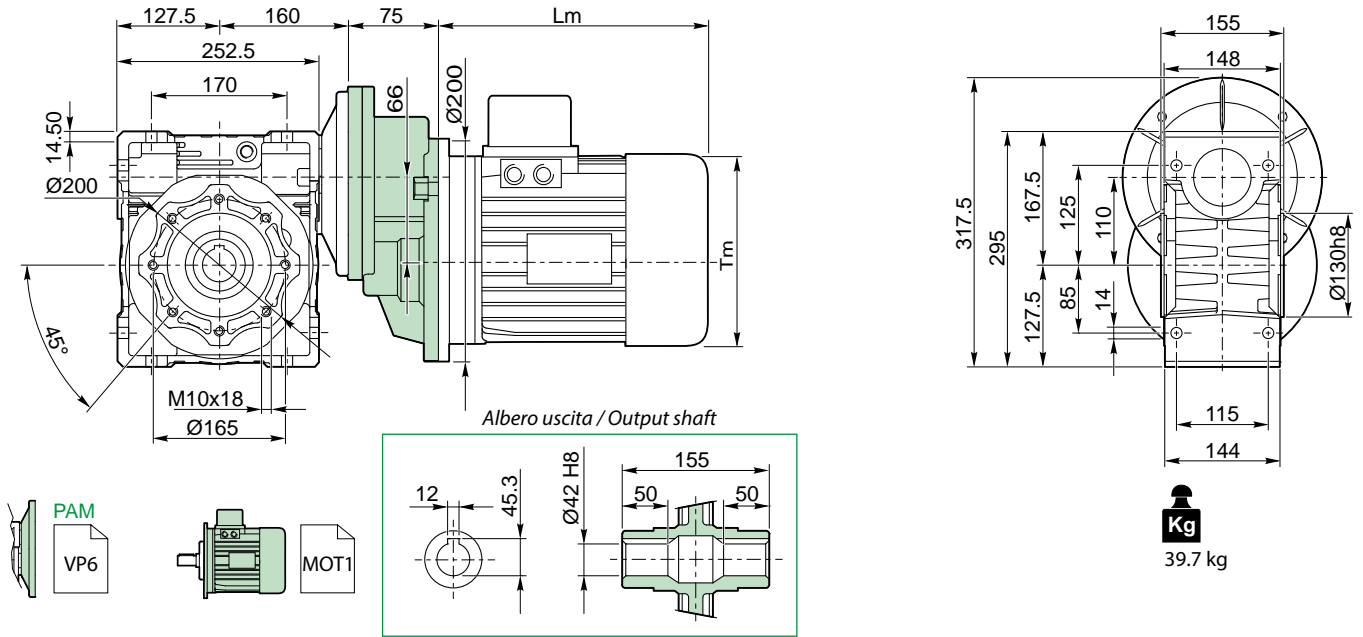
**FB DX**  
Standard



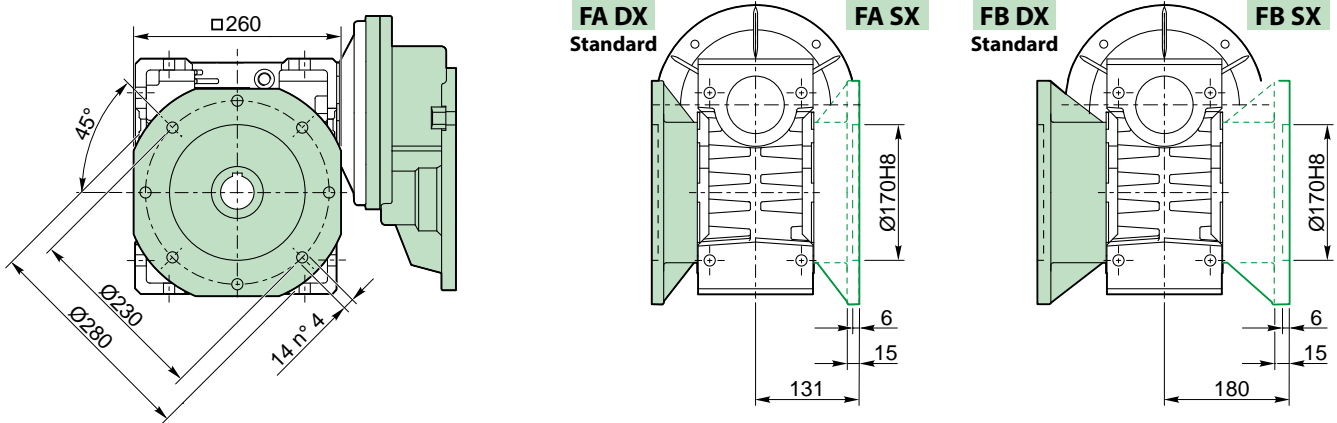
**FC DX**  
Standard



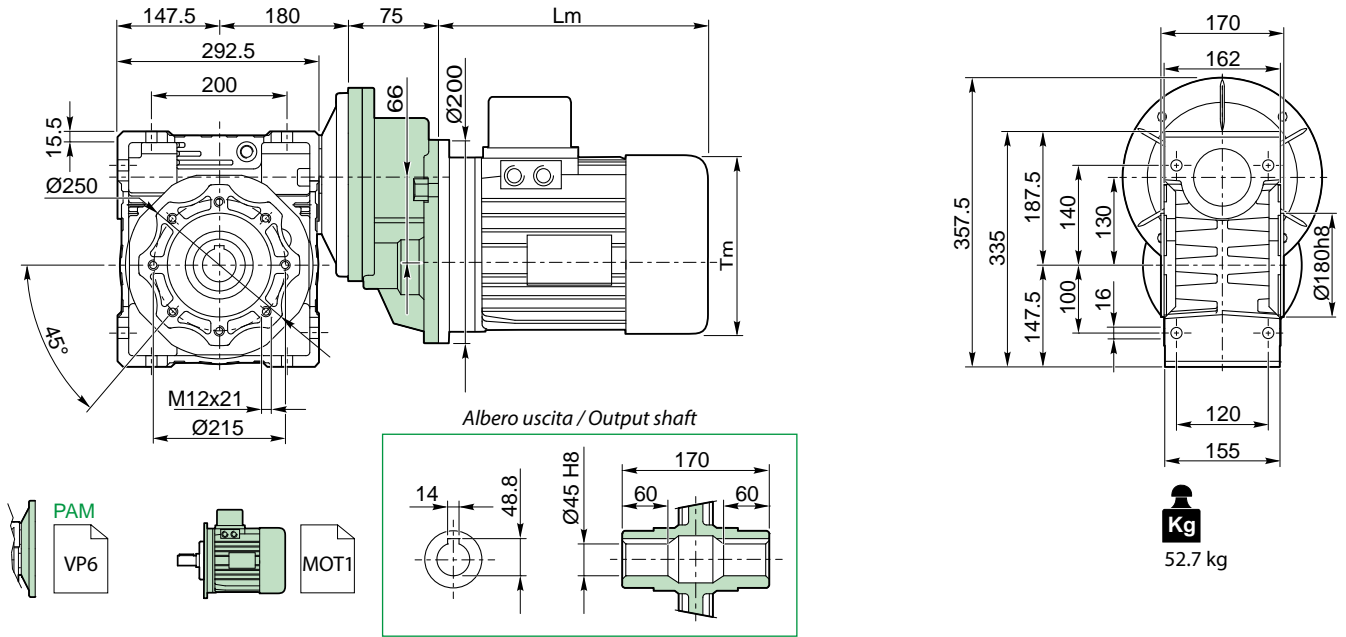
**VR 090 / 110 P...**



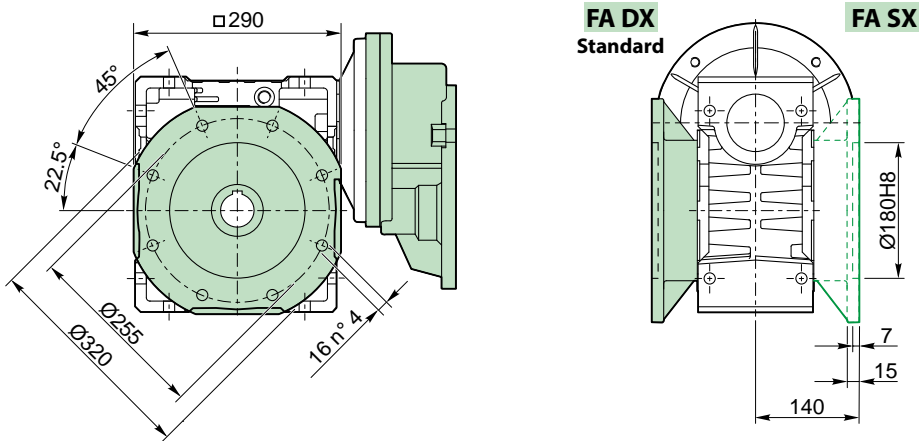
**VR 090 / 110 F...**



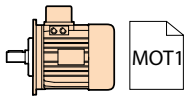
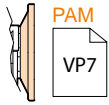
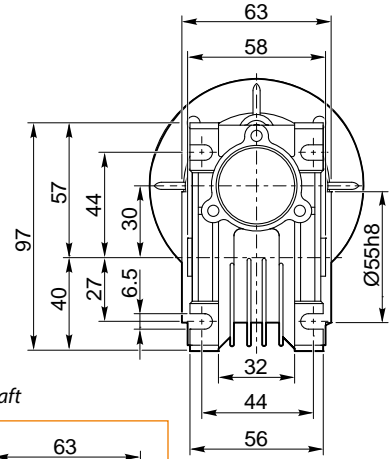
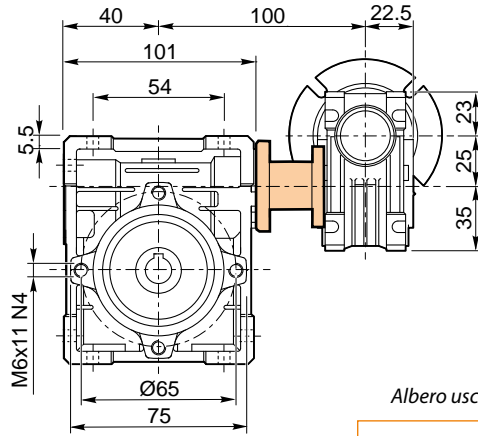
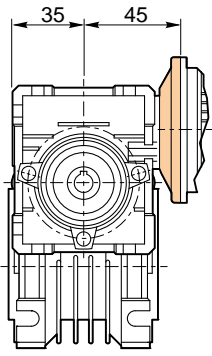
**VR 090 / 130 P...**



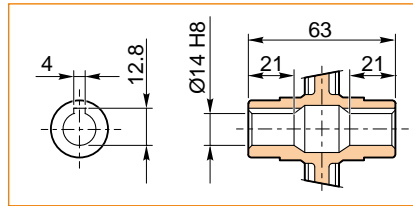
**VR 090 / 130 F...**



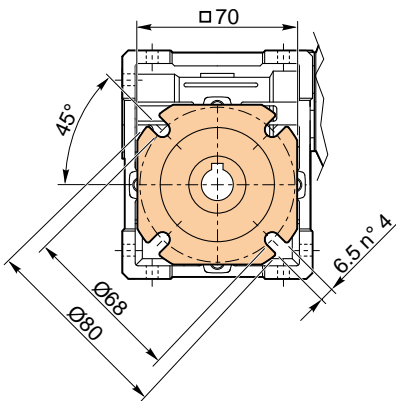
**VC 025 / 030 P...**



Albero uscita / Output shaft

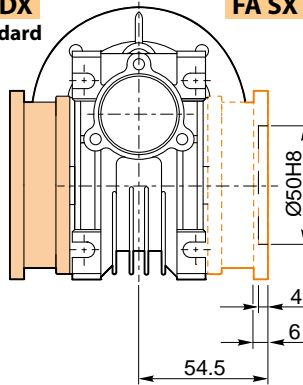


**VC 025 / 030 F...**

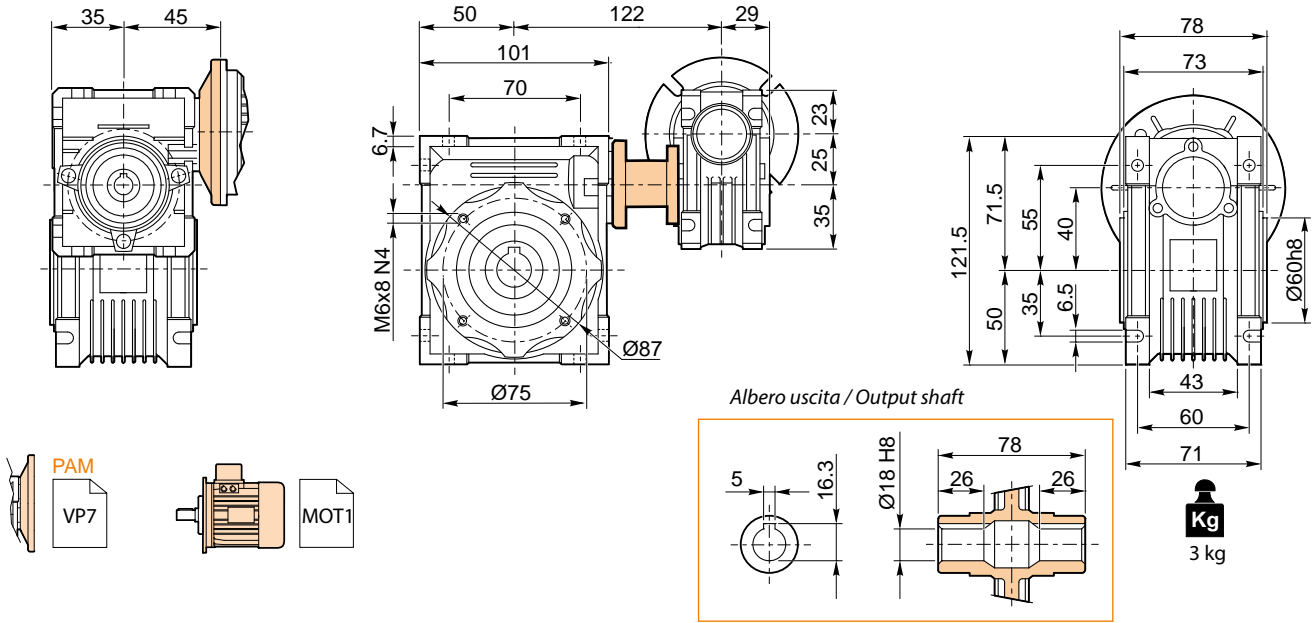


**FA DX**  
Standard

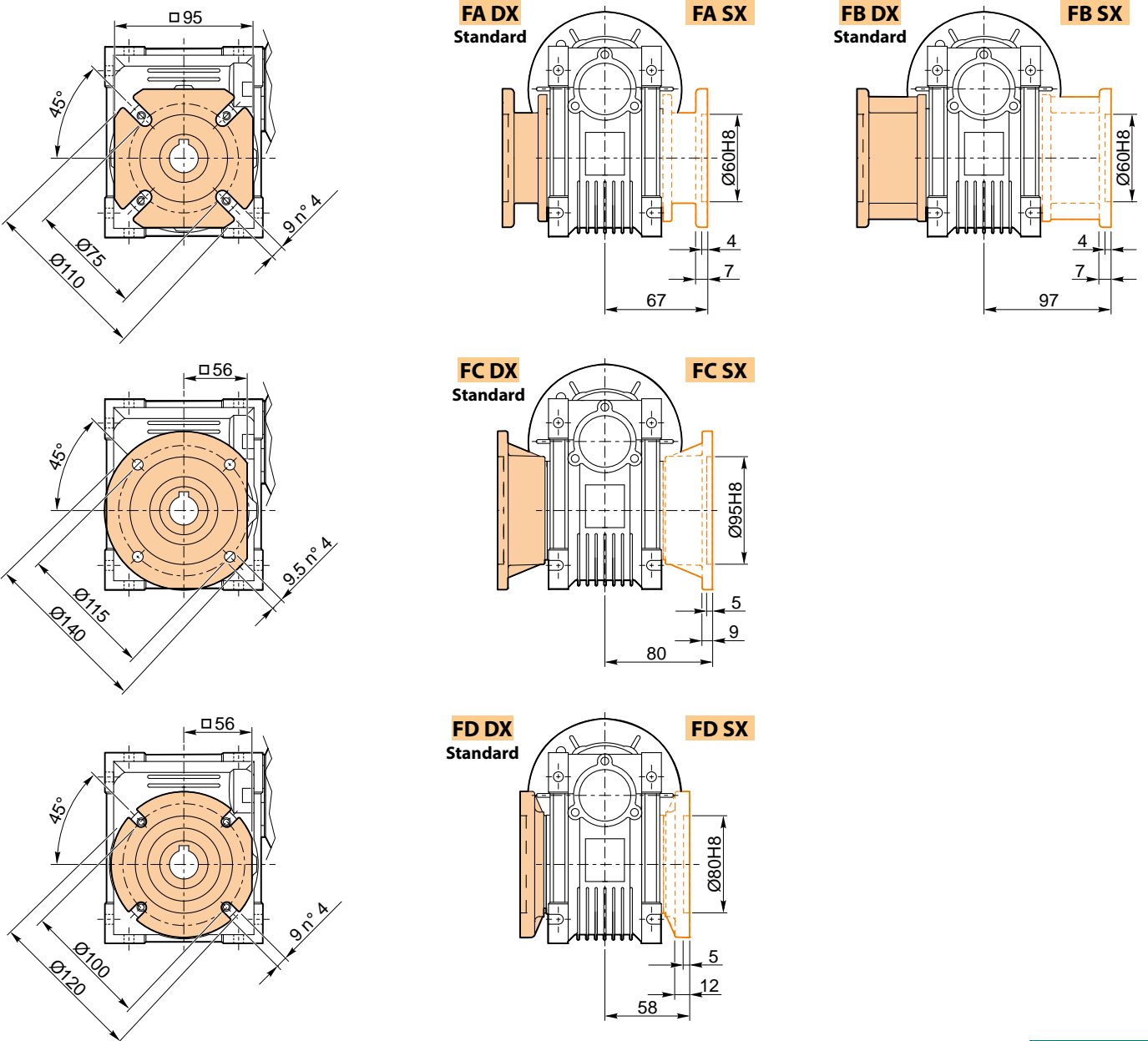
**FA SX**



VC 025 / 040 P...

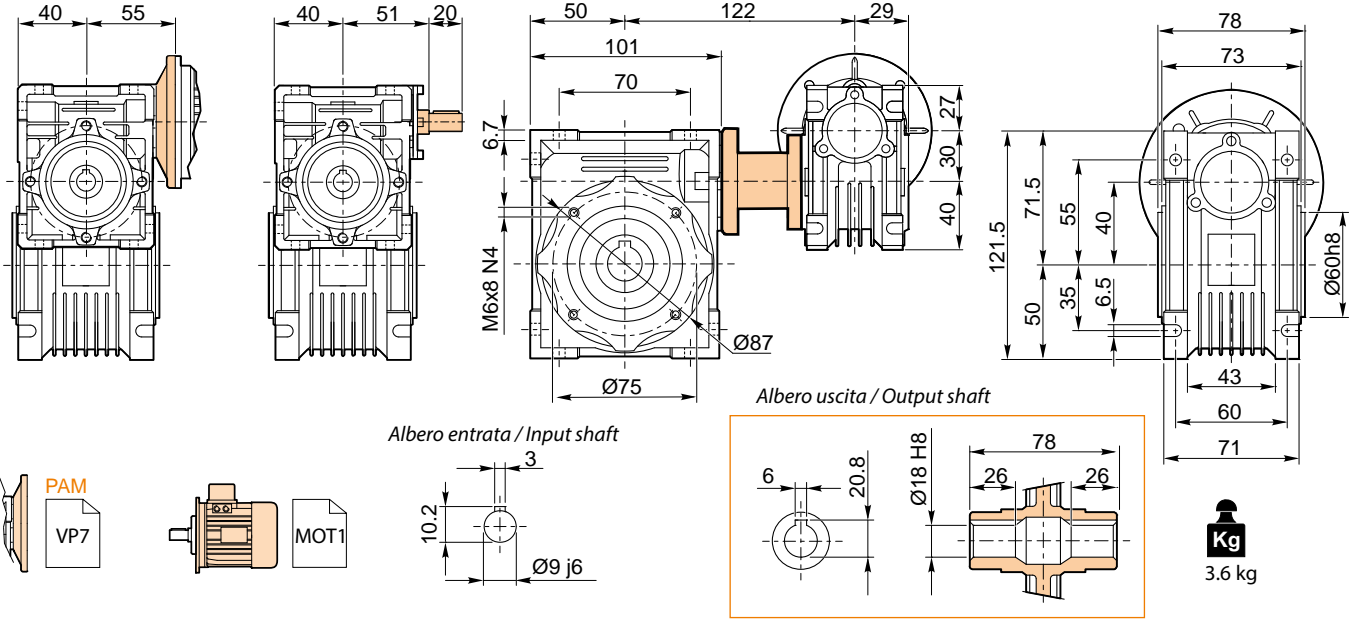


VC 025 / 040 F...



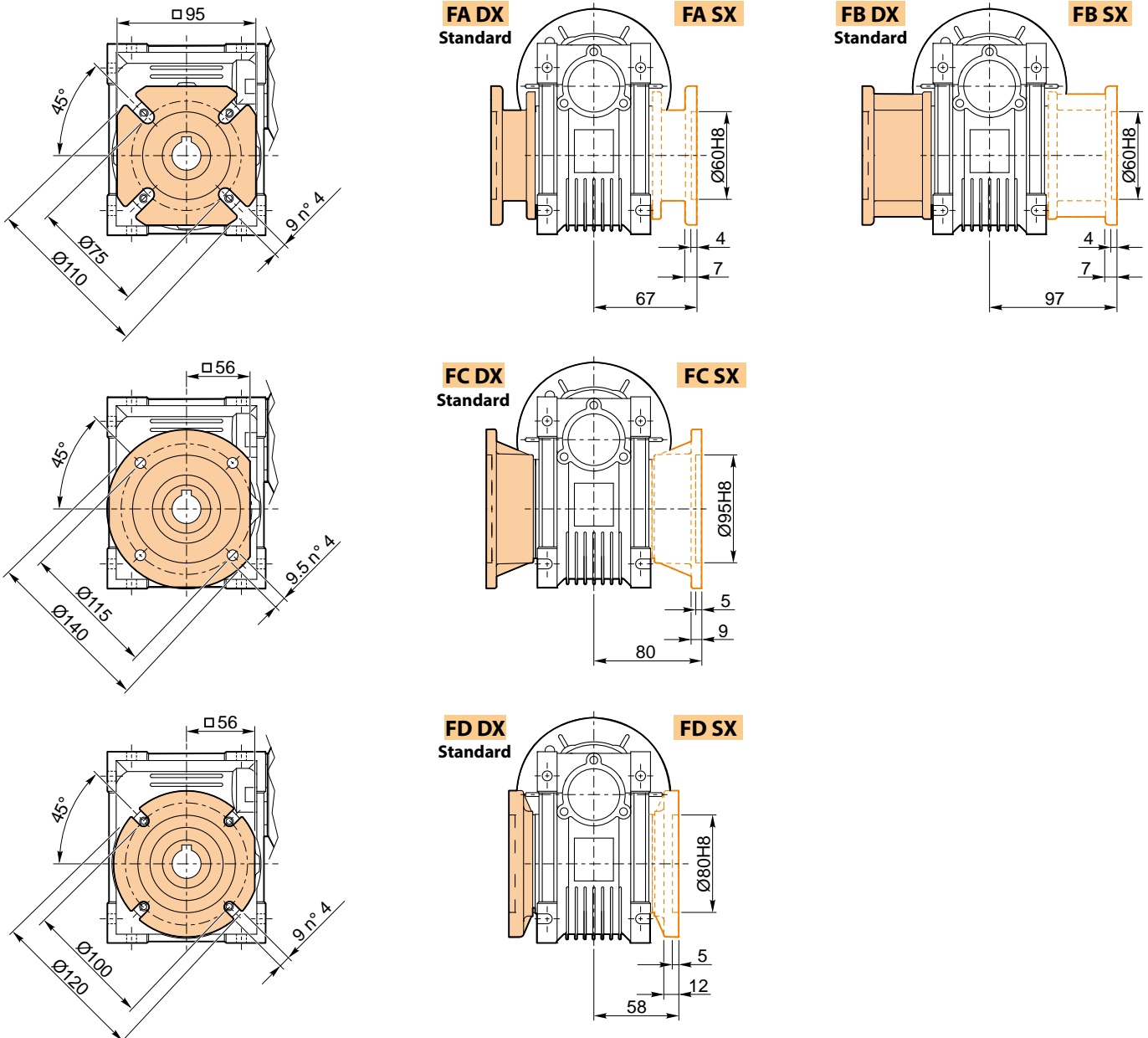
**VC 030/040 P...**

**VS 030/040 P...**



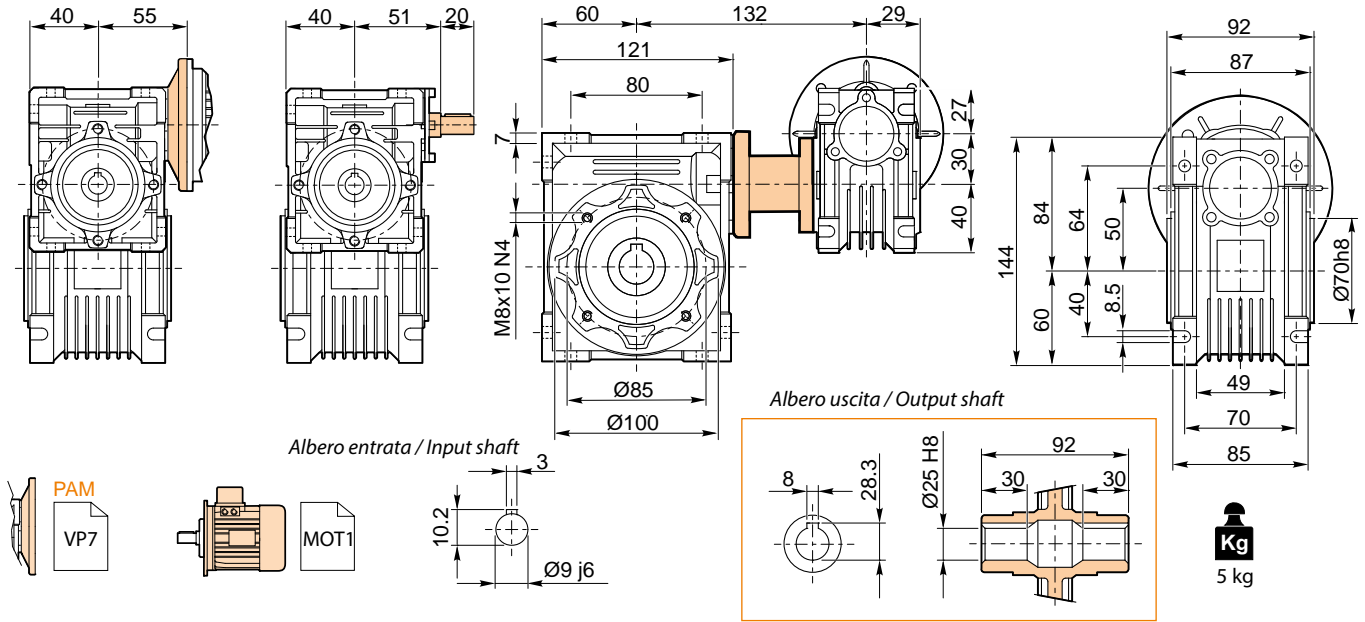
**VC 030/040 F...**

**VS 030/040 F...**



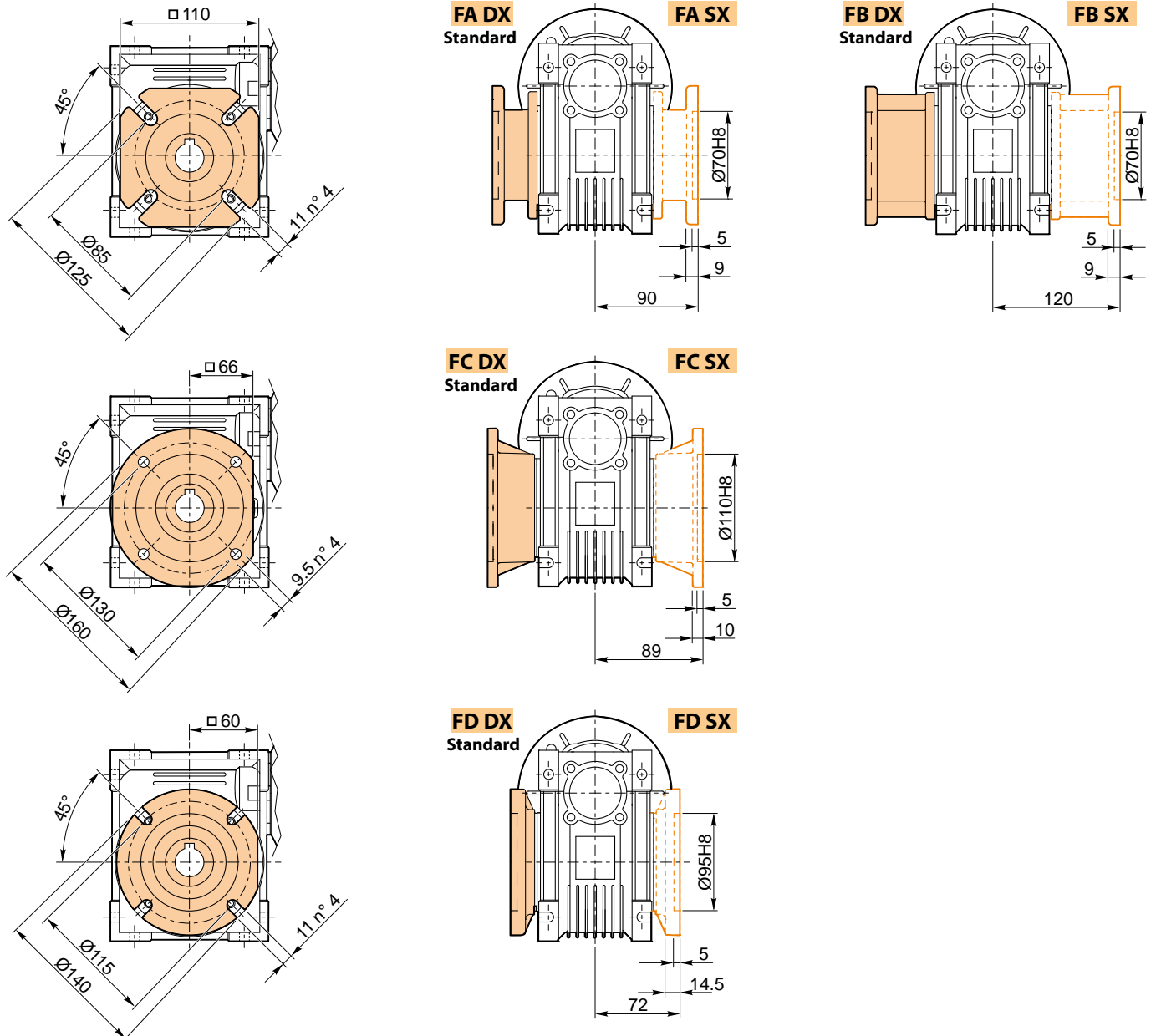
VC 030/050 P...

VS 030/050 P...



VC 030/050 F...

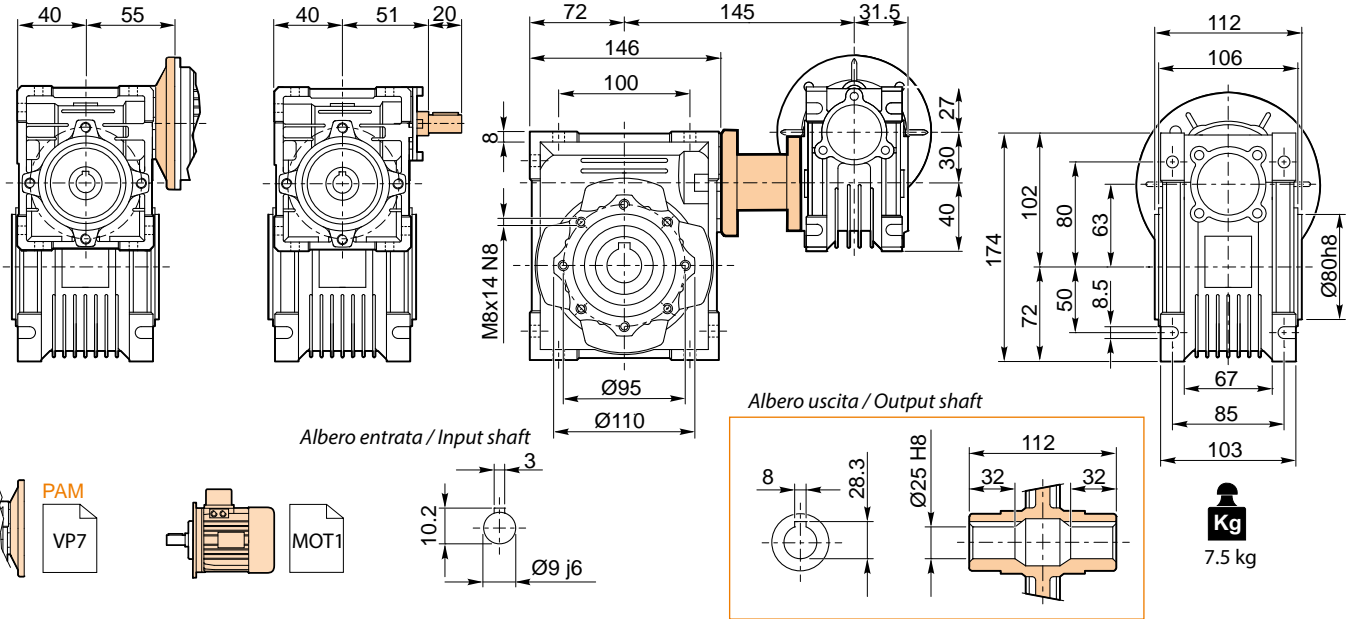
VS 030/050 F...





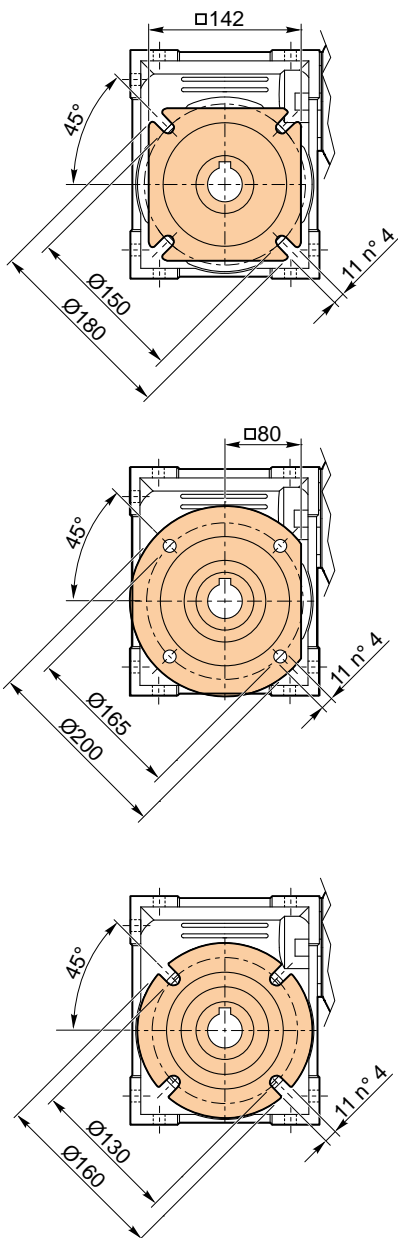
VC 030/063 P...

VS 030/063 P...



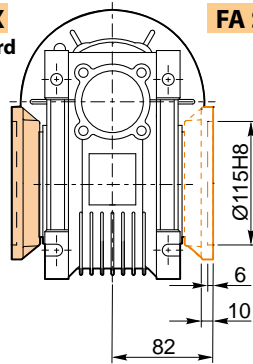
VC 030/063 F...

VS 030/063 F...



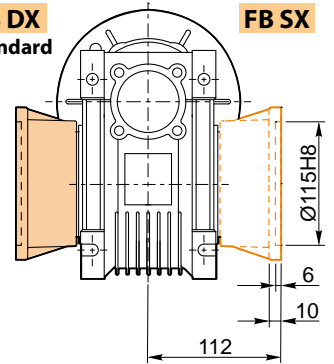
**FA DX**  
Standard

**FA SX**



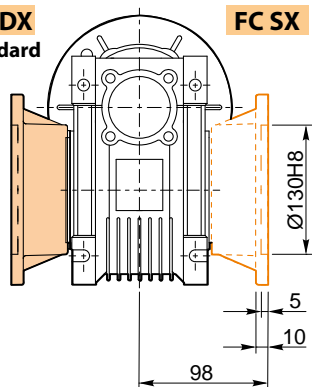
**FB DX**  
Standard

**FB SX**



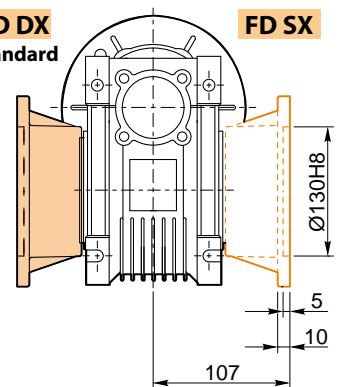
**FC DX**  
Standard

**FC SX**



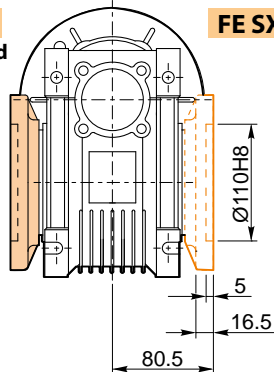
**FD DX**  
Standard

**FD SX**



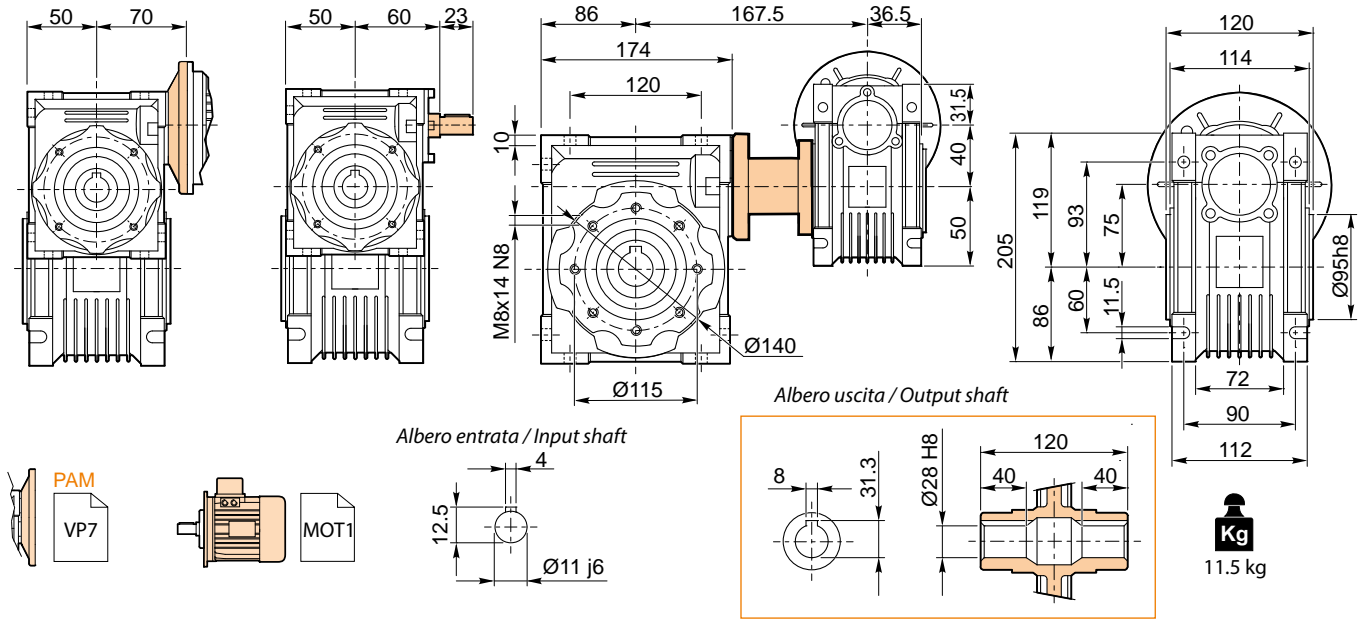
**FE DX**  
Standard

**FE SX**



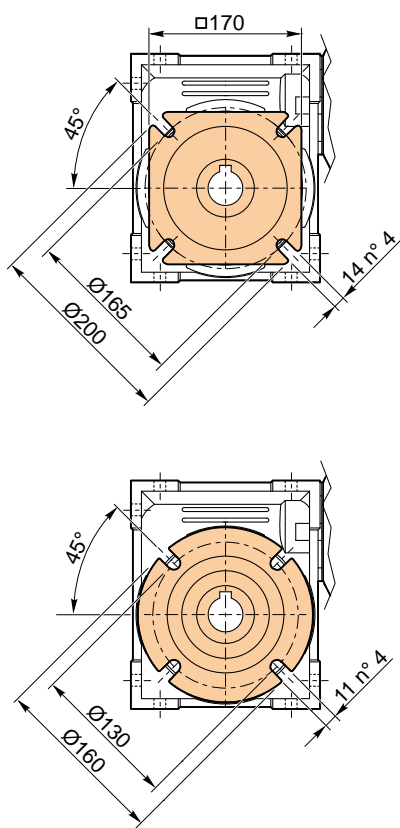
VC 040/075 P...

VS 040/075 P...



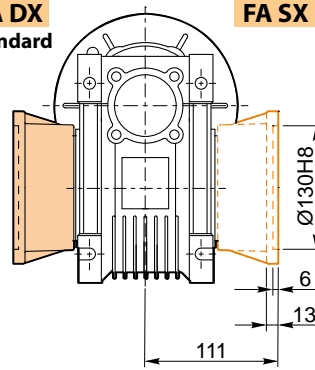
VC 040 / 075 F...

VS 040 / 075 F...



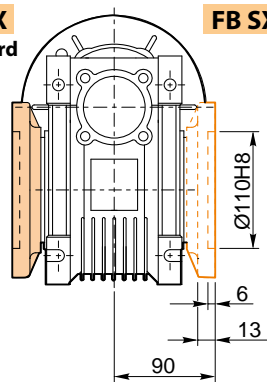
FA DX  
Standard

FA SX



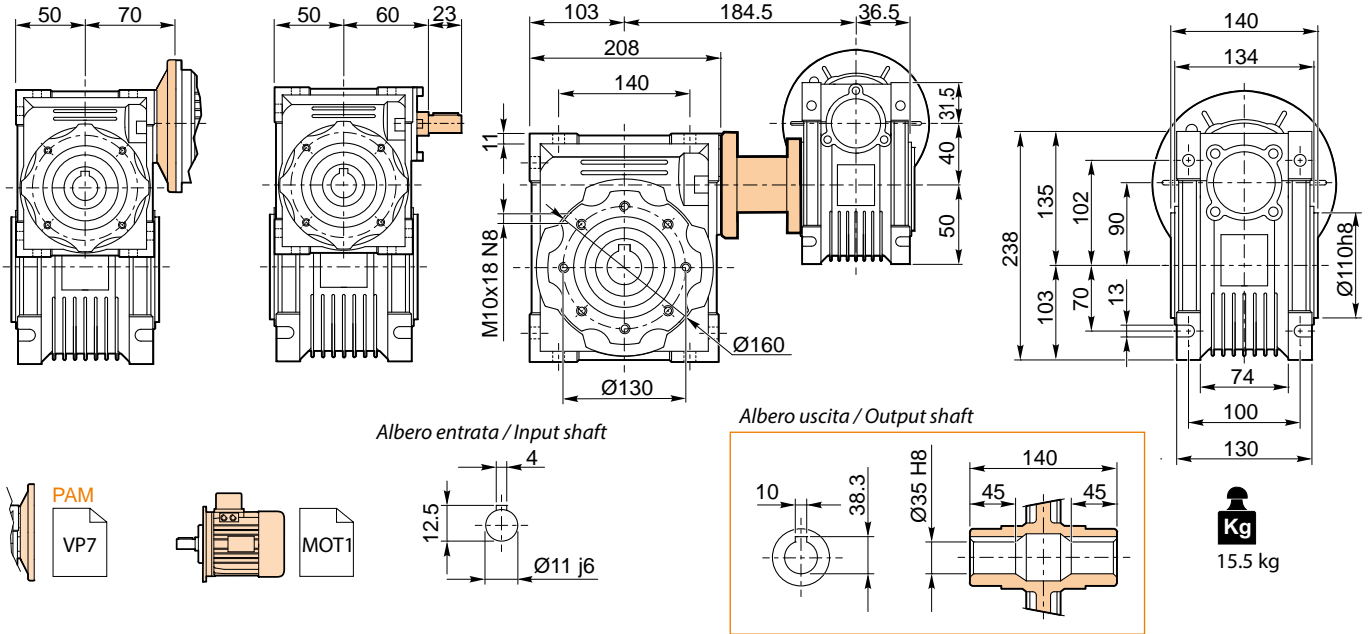
FB DX  
Standard

FB SX



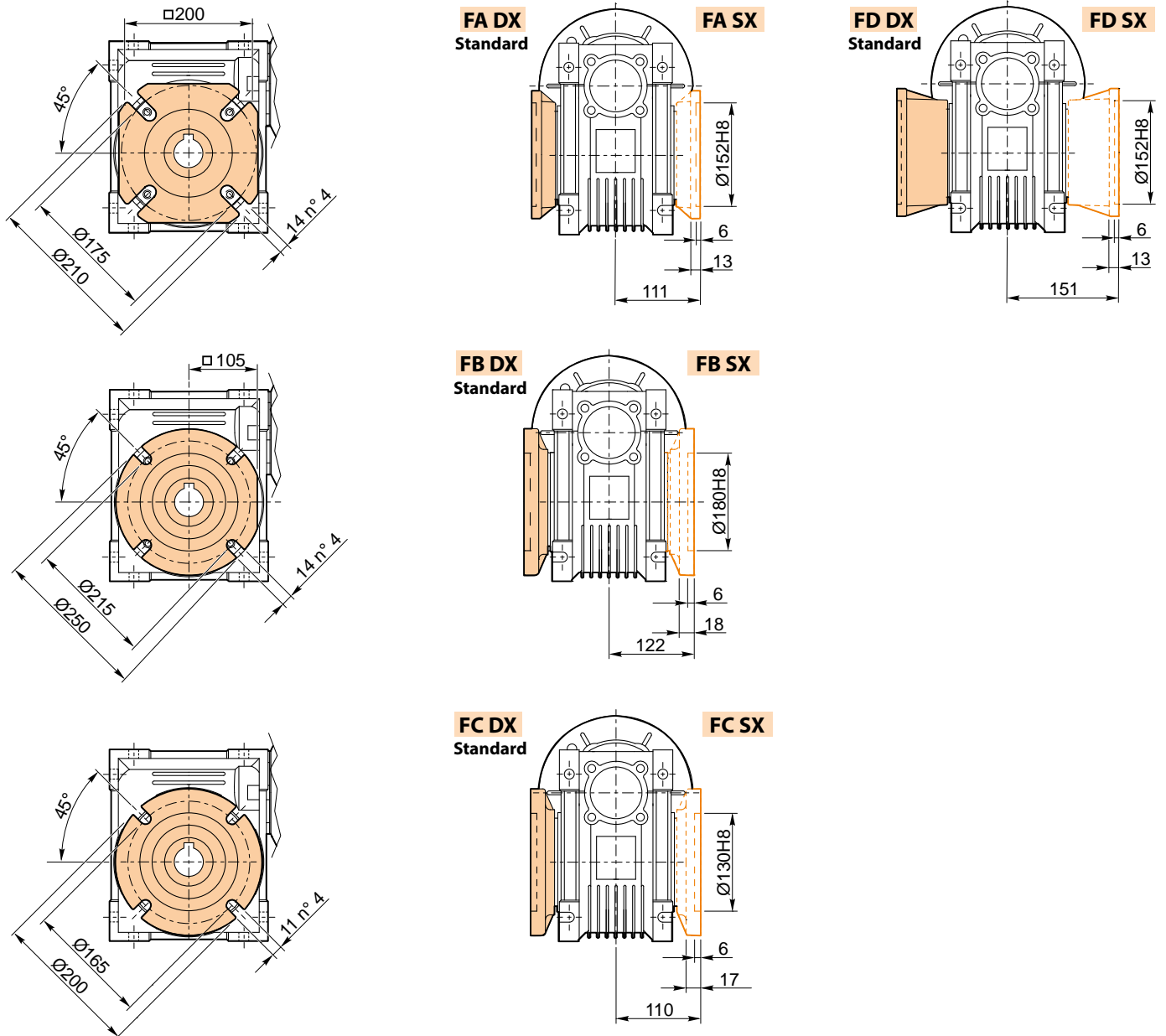
**VC 040/090 P...**

**VS 040/090 P...**



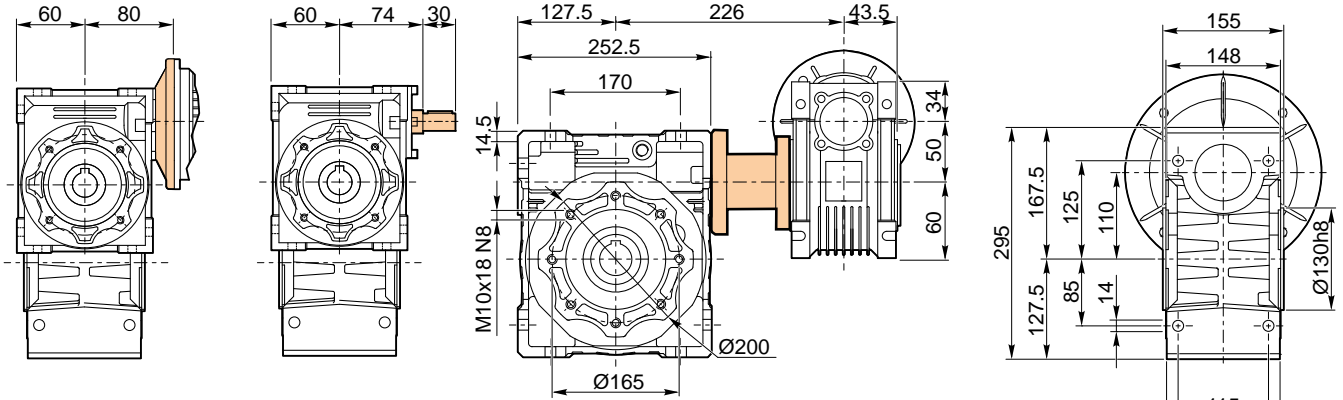
**VC 040/090 F...**

**VS 040/090 F...**



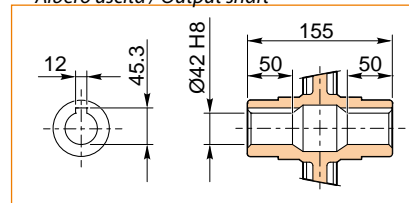
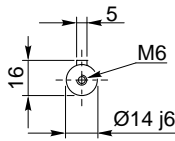
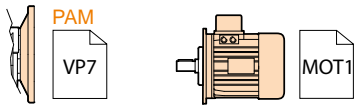
VC 050/110 P...

VS 050/110 P...



Albero entrata / Input shaft

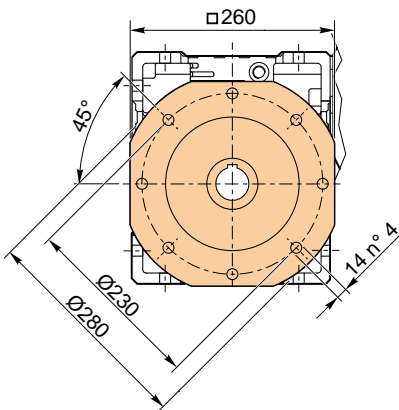
Albero uscita / Output shaft



**Kg**  
39 kg

VC 050/110 F...

VS 050/110 F...

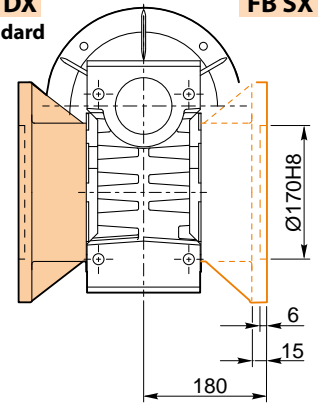
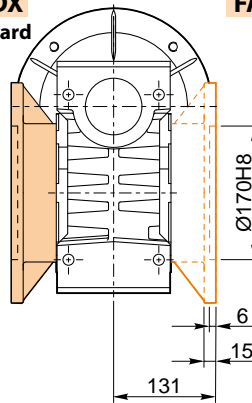


**FA DX**  
Standard

**FA SX**

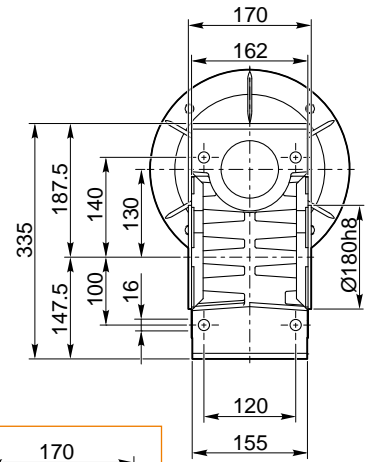
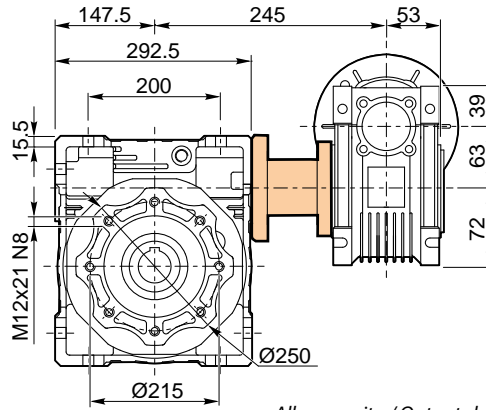
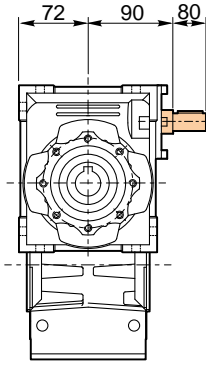
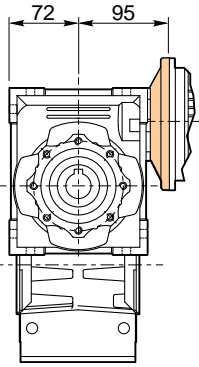
**FB DX**  
Standard

**FB SX**

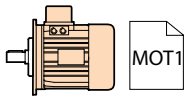
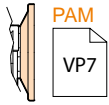


VC 063 / 130 P ...

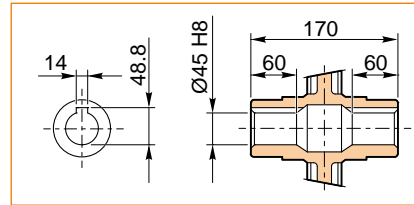
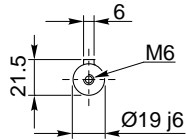
VS 063 / 130 P ...



Albero uscita / Output shaft



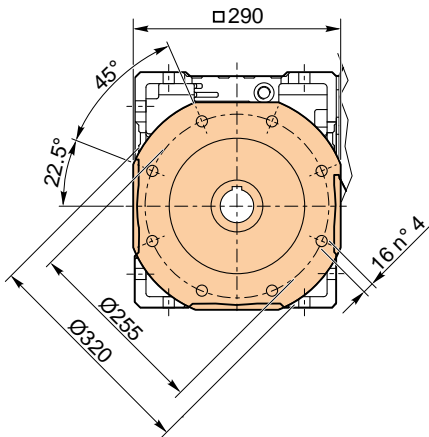
Albero entrata / Input shaft



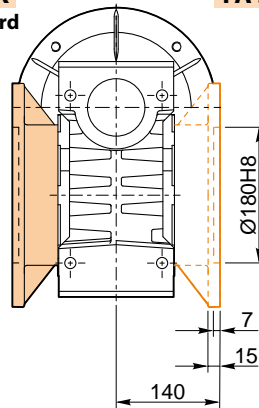
**Kg**  
55 kg

VC 063 / 130 F...

VS 063 / 130 F...



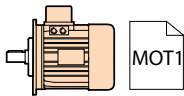
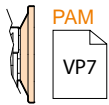
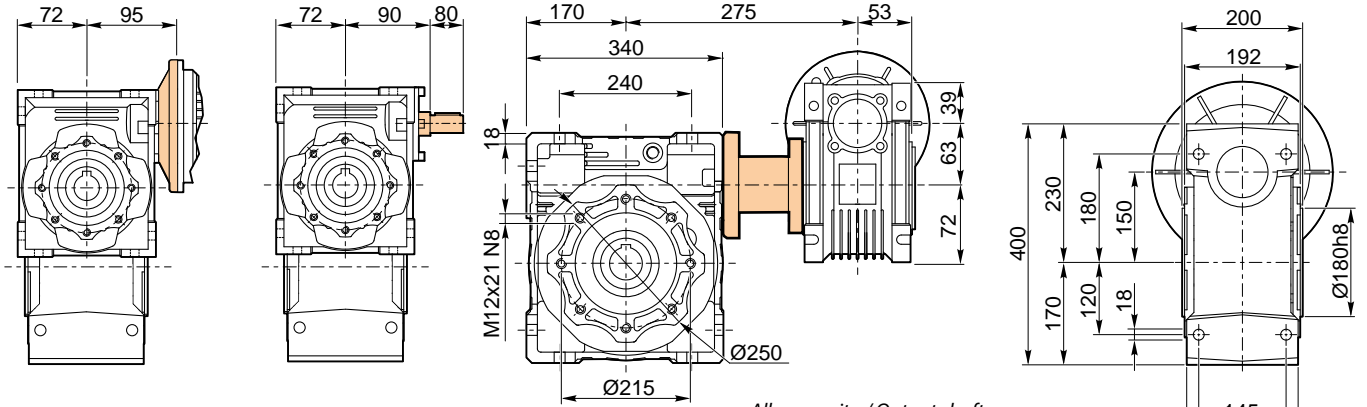
**FA DX**  
Standard



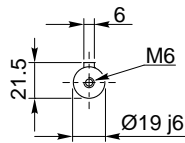
**FA SX**

VC 063 / 150 P ...

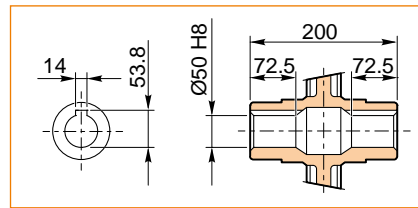
VS 063 / 150 P ...



Albero entrata / Input shaft



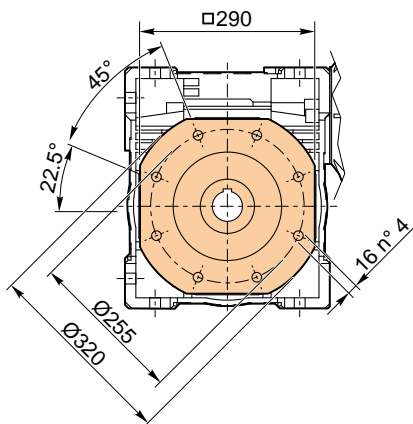
Albero uscita / Output shaft



**Kg**  
92 kg

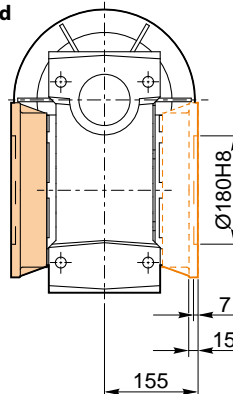
VC 063 / 150F...

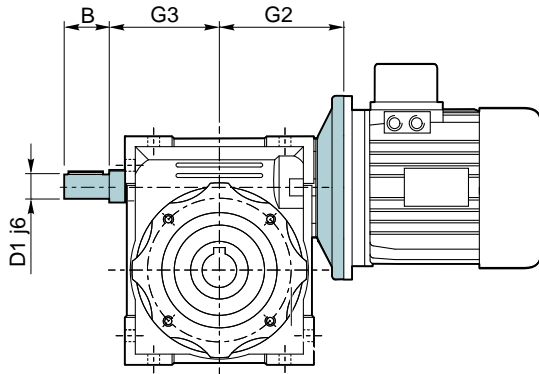
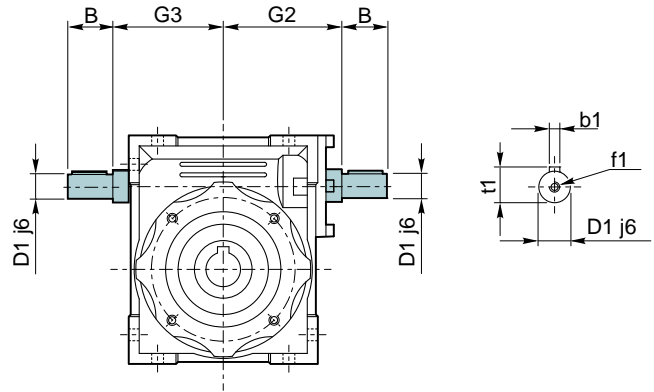
VS 063 / 150 F...



FA DX  
Standard

FA SX



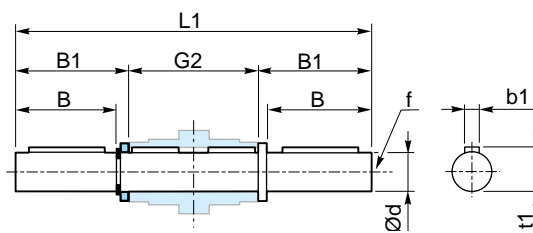
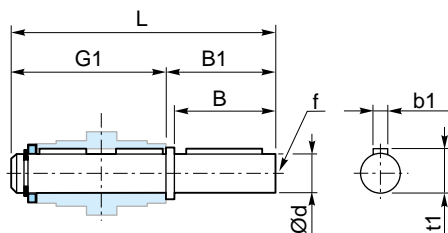
**Seconda entrata / Additional input**
**VP**

**VI**


VP / VI	030	040	050	063	075	090	110	130	150
<b>B</b>	20	23	30	40	50	50	60	80	80
<b>D1 j6</b>	9	11	14	19	24	24	28	30	35
<b>G2</b>	51	60	74	90	105	125	142	162	195
<b>G3</b>	45	53	64	75	90	108	135	155	175
<b>b1</b>	3	4	5	6	8	8	8	8	10
<b>M12f1</b>	-	-	M6	M6	M8	M8	M10	M10	M12
<b>t1</b>	10.2	12.5	16	21.5	27	27	31	33	38

Kit assemblaggio - Accessori / Assembly Kit - Accessories

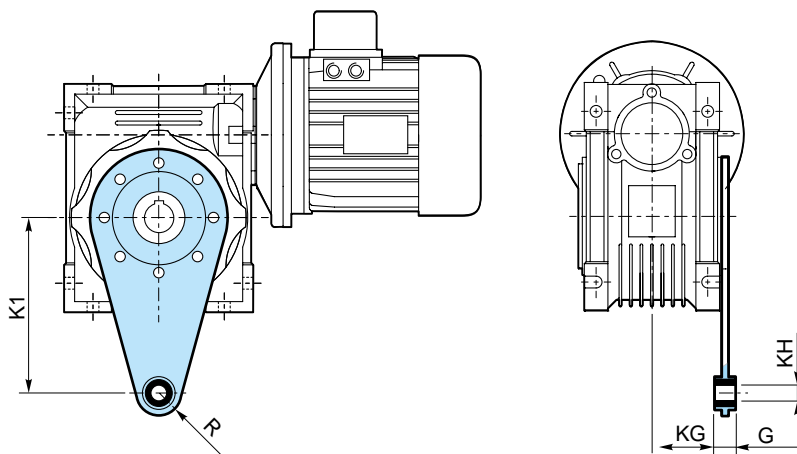
**AS** Albero lento semplice / Single output shaft

**AD** Albero lento doppio / Double output shaft



		Grandezza - Size										
Riduttore Gearbox	VP / VI	025	030	040	050	063	075	090	110	130	150	
	VR	-	-	063/040	063/050 071/050	071/063	071/075 080/075	080/090 090/090	080/110 090/110	090/130	-	
	VC / VS	-	025/030	025/040 030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150	
d	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		
CODICE / CODE AS	AS025	AS030	AS040	AS050	AS063	AS075	AS090	AS110	AS130	AS150		
CODICE / CODE AD	AD025	AD030	AD040	AD050	AD063	AD075	AD090	AD110	AD130	AD150		

**BR** Braccio di reazione / Torque arm

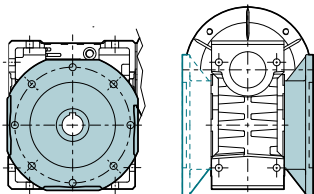


		Grandezza - Size										
Riduttore Gearbox	VP / VI	025	030	040	050	063	075	090	110	130	150	
	VR	-	-	063/040	063/050 071/050	071/063	071/075 080/075	080/090 090/090	080/110 090/110	090/130	-	
	VC / VS	-	025/030	025/040 030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150	
K1	70	85	100	100	150	200	200	250	250	250		
G	14	14	14	14	14	25	25	30	30	30		
KG	17.5	24	31.5	38.5	49	47.5	57.5	62	69	84		
KH	8	8	10	10	10	20	20	25	25	25		
R	15	15	18	18	18	30	30	35	35	35		
CODICE / CODE	BR025	BR030	BR040	BR050	BR063	BR075	BR090	BR110	BR130	BR150		

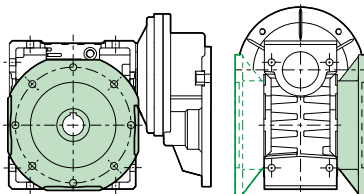


### KIT FLANGIA USCITA / KIT OUTPUT FLANGE

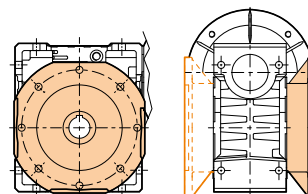
VP / VI



VR



VC / VS

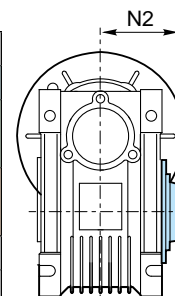


		Grandezza - Size														
Riduttore Gearbox	VP / VI	025	030	040				050				063				
	VR	-	-	063/040				063/050 071/050				071/063				
	VC / VS	-	025/030	025/040 030/040				030/050				030/063				
TIPO FLANGIA / TYPE FLANGE		FA	FA	FA	FB	FC	FD	FA	FB	FC	FD	FA	FB	FC	FD	FE
CODICE / CODE		FA025	FA030	FA040	FB040	FC040	FD040	FA050	FB050	FC050	FD050	FA063	FB063	FC063	FD063	FE063

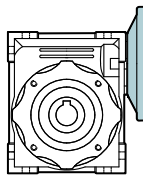
		Grandezza - Size											
Riduttore Gearbox	VP / VI	075			090			110		130		150	
	VR	071/075 080/075			080/090 090/090			080/110 090/110		090/130		-	
	VC / VS	040/075			040/090			050/110		063/130		063/150	
TIPO FLANGIA / TYPE FLANGE		FA	FB	FA	FB	FC	FD	FA	FB	FA	FA		
CODICE / CODE		FA075	FB075	FA090	FB090	FC090	FD090	FA110	FB110	FA130	FA150		

### KIT PROTEZIONE ALBERO CAVO / KIT HOLLOW SHAFT PROTECTION

		Grandezza - Size										
Riduttore Gearbox	VP / VI	025	030	040	050	063	075	090	110	130	150	
	VR	-	-	063/040	063/050 071/050	071/063	071/075 080/075	080/090 090/090	080/110 090/110	090/130	-	
	VC / VS	-	025/030	025/040 030/040	030/050	030/063	040/075	040/090	050/110	063/130	063/150	
N2		-	42	50	58	69	74	86	94	102	113	
CODICE / CODE		-	CO030	CO040	CO050	CO063	CO075	CO090	CO110	CO130		



**KIT FLANGIA ENTRATA / KIT INPUT FLANGE**

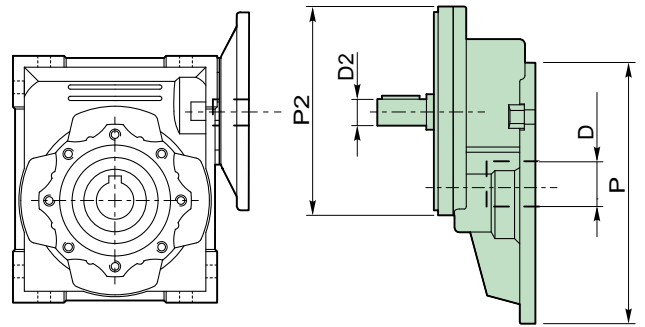


VP	IEC	CODICE / CODE
025	56B14	FI025056B14
030	63B5	FI030063B5
	63B14	FI030063B14
	56B5	FI030056B5
	56B14	FI030056B14
040	71B5	FI040071B5
	71B14	FI040071B14
	63B5	FI040063B5
	63B14	FI040063B14
	56B5	FI040056B5
050	80B5	FI050080B5
	80B14	FI050080B14
	71B5	FI050071B5
	71B14	FI050071B14
	63B5	FI050063B5
063	90B5	FI063080B5
	90B14	FI063090B14
	80B5	FI063080B5
	80B14	FI063080B14
	71B5	FI063071B5
	71B14	FI063071B14
075	100/112B5	FI075100B5
	100/112B14	FI075100B14
	90B5	FI075080B5
	90B14	FI075090B14
	80B5	FI075080B5
	80B14	FI075080B14
	71B5	FI075071B5
090	100/112B5	FI075100B5
	100/112B14	FI075100B14
	90B5	FI075080B5
	90B14	FI075090B14
	80B5	FI075080B5
	80B14	FI075080B14
110	132B5	FI110132B5
	132 B14	FI110132B14
	100/112B5	FI110100B5
	100/112B14	FI110100B14
	90B5	FI110080B5
	90B14	FI110090B14
	80B5	FI110080B5
130	132B5	FI110132B5
	132 B14	FI110132B14
	100/112B5	FI110100B5
	100/112B14	FI110100B14
	90B5	FI110080B5
150	160B5	FI150160B5
	132B5	FI150132B5
	100/112B5	FI150100B5

## Kit assemblaggio - Accessori / Assembly Kit - Accessories

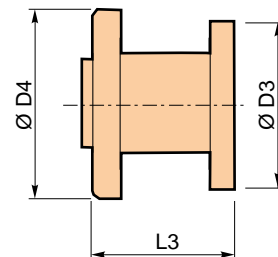
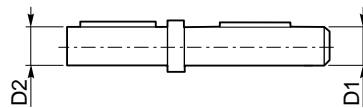
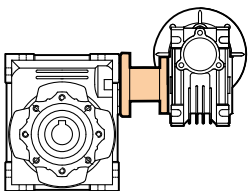
### KIT PRECOPPIA / KIT PRE-STAGE

VR	CODICE / CODE	P	D	P2	D2	R1	Kg
063/040 063/050	PR063A11	140	11	105	11	2.94	1.5
	PR063A14	140	11	105	14		1.5
071/050 071/063 071/075	PR071A14	160	14	120	14	2.94	2.6
	PR071A19	160	14	120	19		2.6
080/075 080/090 080/110	PR080A19	200	19	160	19	3	4.7
	PR080A24	200	19	160	24		4.7
090/090 090/110 090/130	PR090A24	200	24	160	24	2.45	4.7
	PR090A28	200	24	160	28		4.7



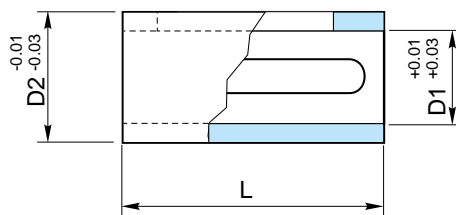
### KIT COMBINAZIONE VITE SENZA FINE / KIT COMBINATION WORMGEARBOXES

Albero di combinazione / Combination shaft      Flangia di combinazione / Combination flange



VR	CODICE / CODE	Albero di combinazione / Combination shaft		Flangia di combinazione / Combination flange		
		D1	D2	D3	D4	L3
025/030	KC025030A09	11	9	70	58	36.5
025/040	KC025040A11	11	11	70	75	41.5
030/040	KC030040A11	14	11	75	75	40
030/050	KC030050A14	14	14	75	89	40
	KC030063A14	14	14	75	89	42
	KC030063A19	14	19			
040/075	KC040075A19	18	19	87	96	41
040/090	KC040090A24	18	24	87	96	41
050/110	KC050110A28	25	28	100	115	56.5
063/130	KC063130A28	25	28	110	115	47
063/150	KC063150A38	25	38	110	155	52

### BC Boccola di riduzione in acciaio / Metal shaft sleeves

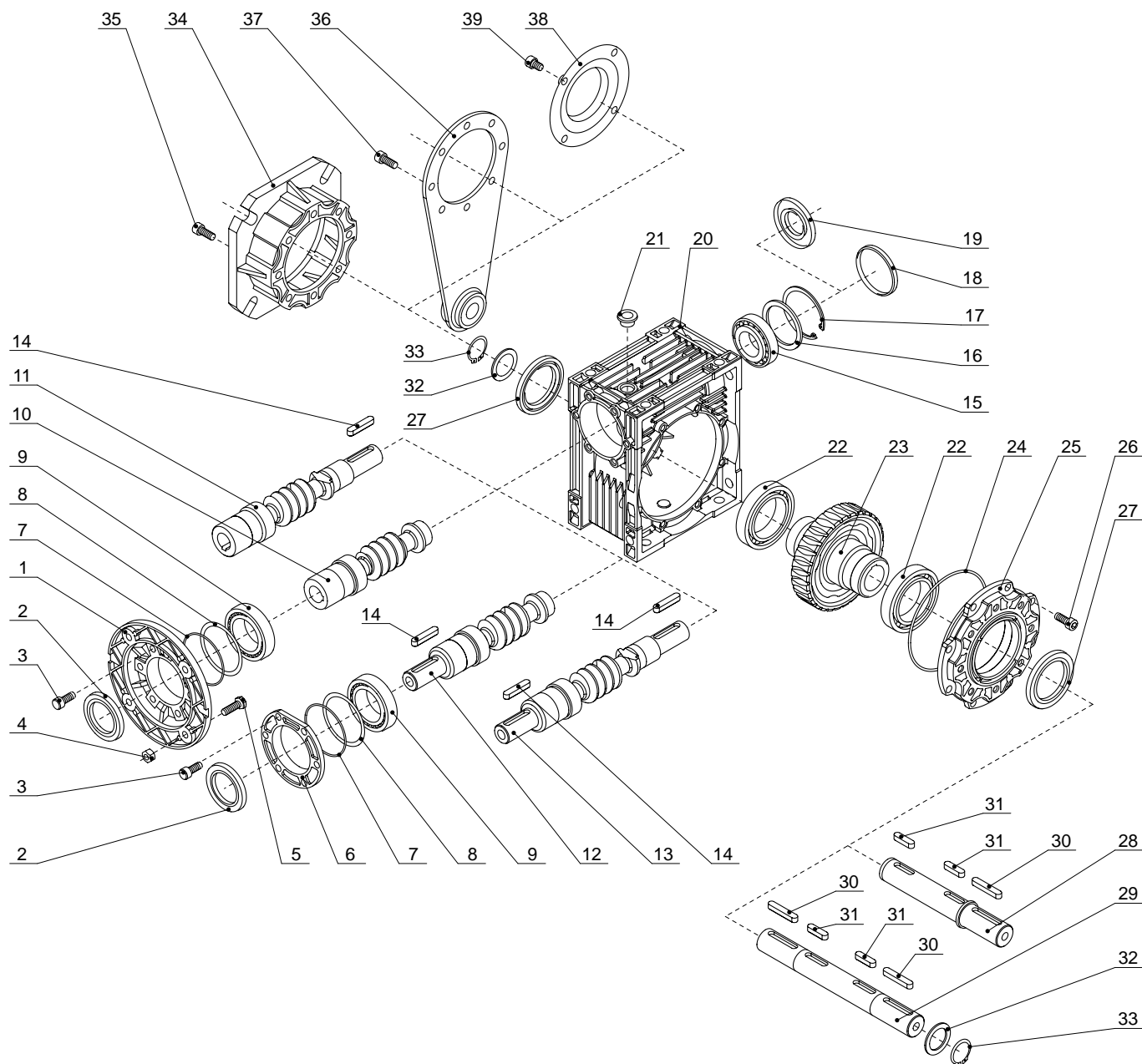


D2	11	14	19	19	24	24	28	28	38	38	42
D1	9	11	11	14	14	19	19	24	24	28	38
L	23	30	40	40	50	50	60	60	80	80	110
CODICE / CODE	BC1109	BC1411	BC1911	BC1914	BC2414	BC2419	BC2819	BC2824	BC3824	BC3828	BC4238

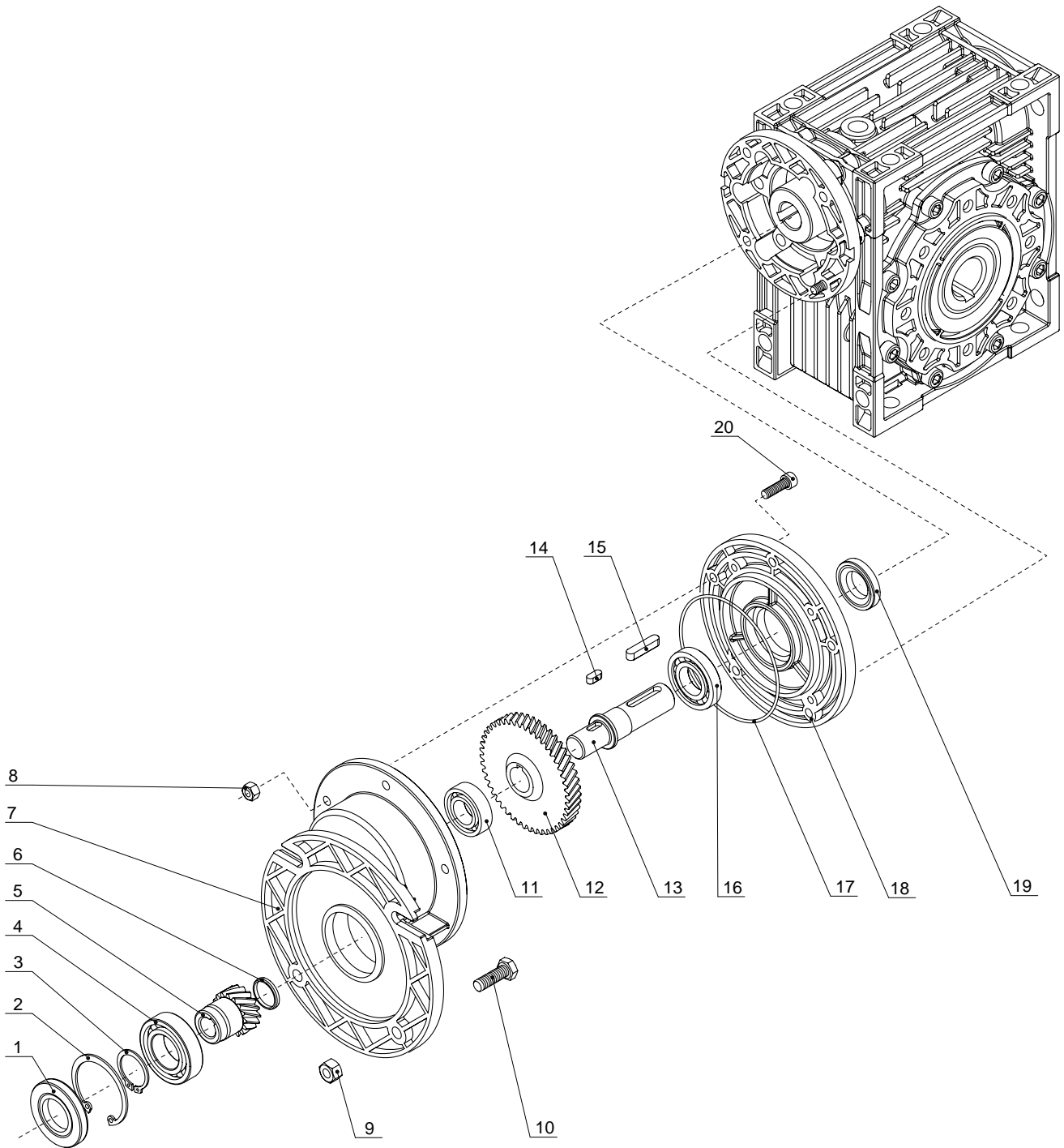
Disegno esploso / Exploded view

VP / VI

VP

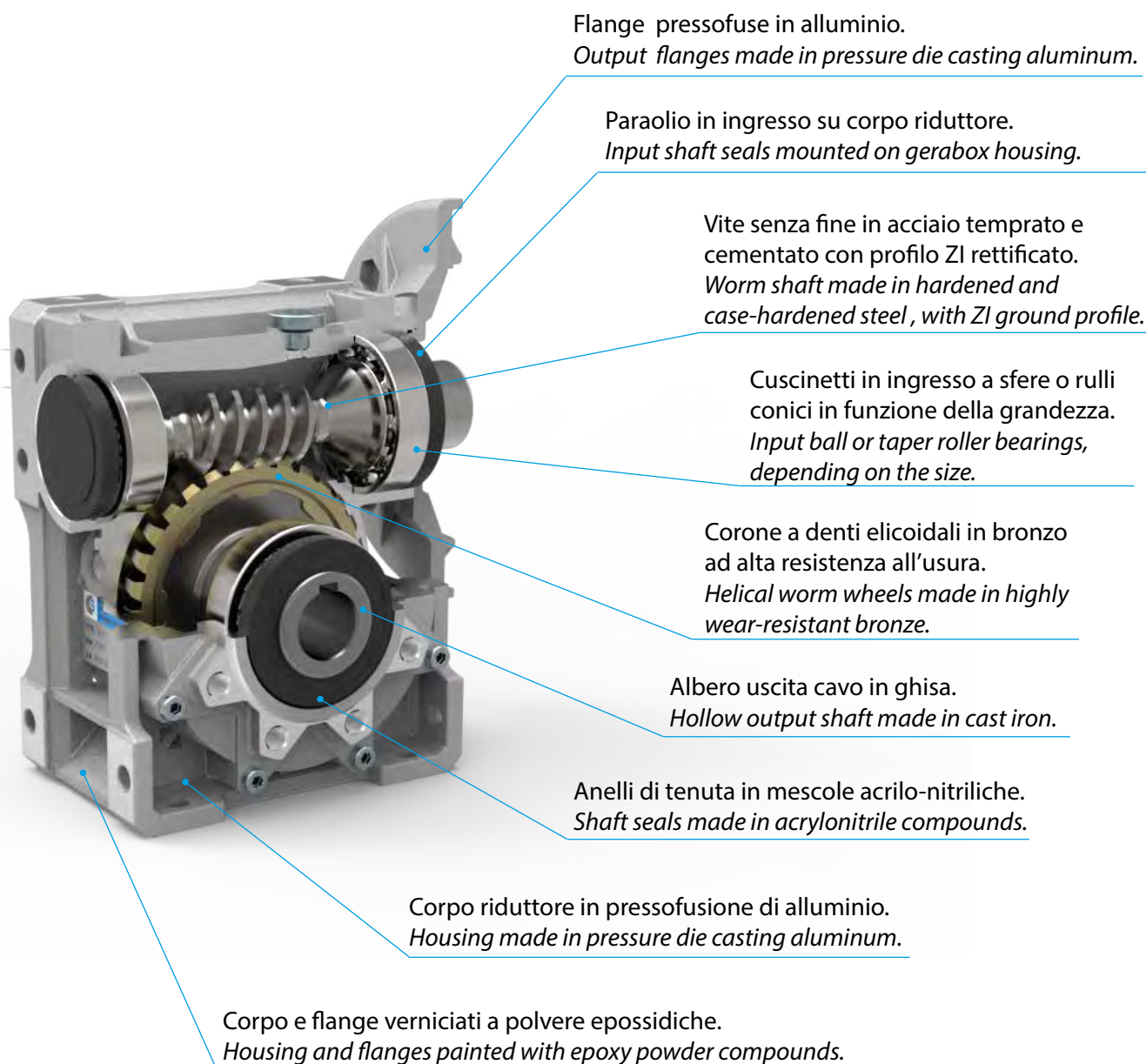


1	Flangia Motore Flange PAM	11	Vite PAM seconda entrata Double ext. PAM worm	21	Tappo Plug cock	31	Linguetta Parallel key
2	Paraolio Oil seal	12	Vite sporgente RV worm	22	Cuscinetto Bearing	32	Rondella Washer
3	Vite Hexagon socket head cap screw	13	Vite sporgente seconda entrata Double ext. RV worm	23	Corona Worm wheel	33	Seeger Circlips
4	Grano Hexagon nuts	14	Linguetta entrata Parallel key	24	O-ring O-ring	34	Flangia uscita Output flange
5	Vite Hexagon bolt	15	Cuscinetto Bearing	25	Coperchio pendolare Bearing support cover	35	Vite Hexagon socket head cap screw
6	Coperchio Gear unit cover	16	Distanziale Washer	26	Vite Hexagon socket head cap screw	36	Braccio reazione Torque arm
7	O-ring O-ring	17	Seeger Circlips	27	Paraolio Oil seal	37	Vite Hexagon socket head cap screw
8	Rasamento Spacer shim	18	Cappello Cap	28	Albero lento semplice Single output Shaft	38	Coperchio protezione Protection cap
9	Cuscinetto Bearing	19	Paraolio Oil seal	29	Albero lento doppio Double output Shaft	39	Vite Hexagon socket head cap screw
10	Vite PAM PAM worm	20	Carcassa Housing	30	Linguetta Parallel key		



1	Paraolio Oil seal	6	Cappellotto Cap	11	Cuscinetto Bearing	16	Cuscinetto Bearing
2	Seeger Circlips	7	Cassa precoppia Pre-stage housing	12	Ingranaggio Gear	17	O-ring O-ring
3	Seeger Circlips	8	Grano Hexagon nuts	13	Albero Low speed shaft	18	Coperchio uscita Output cover
4	Cuscinetto Bearing	9	Grano Hexagon nuts	14	Linguetta Parallel key	19	Paraolio Oil seal
5	Pinion Hollow pinion	10	Vite Hexagon bolt	15	Linguetta Parallel key	20	Vite Hexagon socket head cap screw

**Riduttori a vite senza fine VTS / VTS worm gearboxes**



Flange pressofuse in alluminio.  
*Output flanges made in pressure die casting aluminum.*

Paraolio in ingresso su corpo riduttore.  
*Input shaft seals mounted on gearbox housing.*

Vite senza fine in acciaio temprato e cementato con profilo ZI rettificato.  
*Worm shaft made in hardened and case-hardened steel, with ZI ground profile.*

Cuscinetti in ingresso a sfere o rulli conici in funzione della grandezza.  
*Input ball or taper roller bearings, depending on the size.*

Corone a denti elicoidali in bronzo ad alta resistenza all'usura.  
*Helical worm wheels made in highly wear-resistant bronze.*

Albero uscita cavo in ghisa.  
*Hollow output shaft made in cast iron.*

Anelli di tenuta in mescole acrilico-nitriliche.  
*Shaft seals made in acrylonitrile compounds.*

Corpo riduttore in pressofusione di alluminio.  
*Housing made in pressure die casting aluminum.*

Corpo e flange verniciati a polvere epossidiche.  
*Housing and flanges painted with epoxy powder compounds.*

La gamma di riduttori a vite senza fine della serie VTS sono disponibili in diverse versioni dettagliate nelle pagine seguenti:

- VTS con flangia motore**
- VES con albero sporgente**
- VRT con precoppia (solo versione flangiata)**
- VKE combinato con albero sporgente**
- VKS combinato con flangia motore**

The range of VTS series worm gearboxes is composed of different versions presented/illustrated in the following pages:

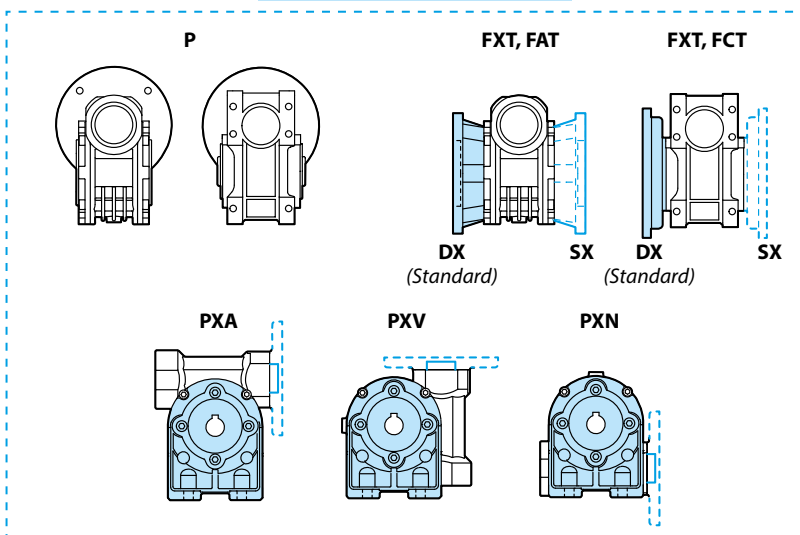
- VTS with motor flange**
- VES with solid input shaft**
- VRT with helical worm units (only motor flange version)**
- VKE combination unit with solid input shaft**
- VKS combination unit with motor flange**

## Designazione / Designation

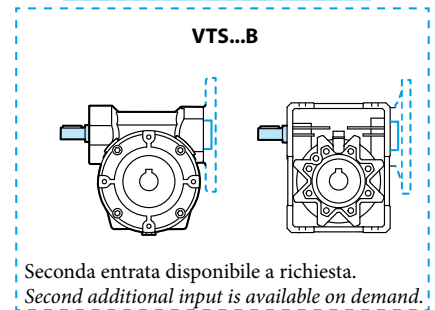
RIDUTTORE A VITE SENZA FINE FLANGIATO / WORM GEARBOXES WITH FLANGE										ACCESSORI / ACCESSORIES	
Riduttore Gearbox	Grandezza Size	Versione riduttore Gearbox Version	Posizione flangia uscita Position Output flange	Rapporto rid. = i Ratio = i	Predispos. attacco motore Motor coupling		Forma costruttiva Version	Posizione di mont. Mounting position	Seconda entrata Additional input	Albero uscita Output shaft	Braccio di reazione Torque arm
					without flange	IEC flange					
<b>VTS</b>	<b>044</b>	<b>P</b>	<b>-</b>	<b>R10</b>	<b>-</b>	<b>63 B5</b>	<b>U</b>	<b>-</b>	<b>ADT</b>	<b>BRT</b>	
	<b>030 044 049</b>	<b>P</b> <b>FXT FAT</b>  <b>PX</b>	<b>-</b> <b>DX SX</b>  <b>A N V</b>	<b>R7</b> <b>R10</b> <b>R12</b> <b>R14</b> <b>R15</b> <b>R18</b> <b>R19</b> <b>R20</b> <b>R23</b> <b>R24</b> <b>R25</b> <b>R28</b> <b>R30</b> <b>R35</b> <b>R36</b> <b>R38</b> <b>R40</b> <b>R45</b> <b>R46</b> <b>R50</b> <b>R56</b> <b>R60</b> <b>R64</b> <b>R70</b> <b>R80</b> <b>R100</b>	<b>-</b> <b>F09</b> <b>F11</b> <b>F14</b> <b>F19</b> <b>F24</b> <b>F28</b>	<b>-</b> <b>56</b> <b>63</b> <b>71</b> <b>80</b> <b>90</b> <b>100</b> <b>112</b>	<b>-</b> <b>B5</b> <b>B14</b>	<b>U*</b> <b>B3</b> <b>B6</b> <b>B7</b> <b>B8</b> <b>V5</b> <b>V6</b>  <b>-</b> <b>B</b>	<b>AST</b>  <b>ADT</b> 	<b>BRT</b> 	
	<b>063 075 086</b>	<b>P</b> <b>FXT FCT</b>	<b>-</b> <b>DX SX</b>								

\* Tutta la gamma viene fornita in posizione Universale  
All the gearboxes are supplied suitable for universal mounting.

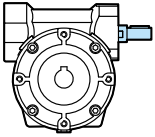



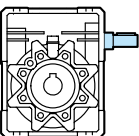




### Versione riduttore / Gearbox version



### Seconda entrata / Additional input

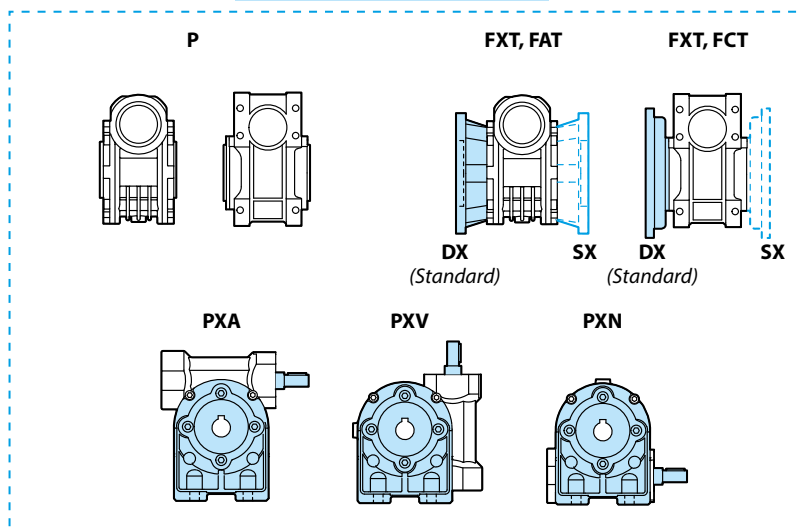


Designazione / Designation

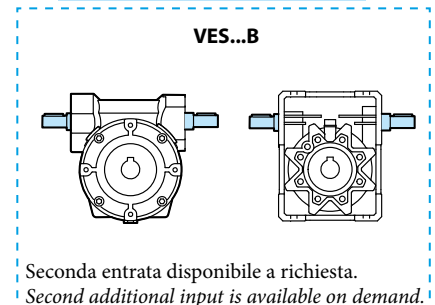
RIDUTTORE A VITE SENZA FINE ALBERATO / WORM GEARBOXES WITH SHAFT							ACCESSORI / ACCESSORIES	
Riduttore Gearbox	Grandezza Size	Versione riduttore Gearbox Version	Posizione flangia uscita Position Output flange	Rapporto rid. = i Ratio = i	Posizione di mont. Mounting position	Seconda entrata Additional input	Albero uscita Output shaft	Braccio di reazione Torque arm
<b>VES</b>	<b>044</b>	<b>FXT</b>	<b>DX</b>	<b>R10</b>	<b>B6</b>	-	<b>ADT</b>	<b>BRT</b>
	<b>030</b> <b>044</b> <b>049</b>	<b>P</b> <b>FXT</b> <b>FAT</b>  <b>PX</b>	- <b>DX</b> <b>SX</b>  <b>A</b> <b>N</b> <b>V</b>	<b>R7</b> <b>R10</b> <b>R12</b> <b>R14</b> <b>R15</b> <b>R18</b> <b>R19</b> <b>R20</b> <b>R23</b> <b>R24</b> <b>R25</b> <b>R28</b> <b>R30</b> <b>R35</b> <b>R38</b> <b>R40</b> <b>R45</b> <b>R46</b> <b>R50</b> <b>R56</b> <b>R60</b> <b>R64</b> <b>R70</b> <b>R80</b> <b>R100</b>	<b>U*</b> <b>B3</b> <b>B6</b> <b>B7</b> <b>B8</b> <b>V5</b> <b>V6</b>	- <b>B</b>	<b>AST</b>  <b>ADT</b> 	<b>BRT</b> 
	<b>063</b> <b>075</b> <b>086</b>	<b>P</b> <b>FXT</b> <b>FCT</b>  	- <b>DX</b> <b>SX</b>					

\* Tutta la gamma viene fornita in posizione Universale  
All the gearboxes are supplied suitable for universal mounting.

Versione riduttore / Gearbox version



Seconda entrata / Additional input



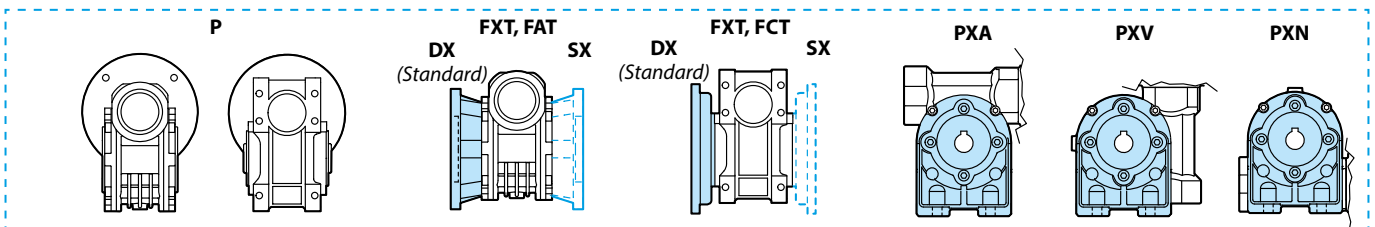


## Designazione / Designation

RIDUTTORE A VITE SENZA FINE CON PRECOPPIA / HELICAL WORM GEARBOXES								ACCESSORI / ACCESSORIES		
Riduttore Gearbox	Grandezza precoppia Size pre-stage	Grandezza riduttore Size gearbox	Versione riduttore Gearbox Version	Posizione flangia uscita Position Output flange	Rapporto rid. = i Ratio = i	Predispos. attacco motore Motor coupling	Forma costruttiva Version	Posizione di montaggio Mounting position	Albero uscita Output shaft	Braccio di reazione Torque arm
<b>VRT</b>	<b>063/044</b>	<b>P</b>	-	<b>R73.5</b>	<b>63</b>	<b>B5</b>	<b>U</b>	<b>ADT</b>	<b>BRT</b>	
	<b>063/044</b> <b>063/049</b> <b>071/049</b>	<b>P</b> <b>FXT</b> <b>FAT</b> <b>PX</b>	- <b>DX</b> <b>SX</b> <b>A</b> <b>N</b> <b>V</b>	Contattare ufficio tecnico SATI Contact SATI technical Office	<b>63</b> <b>71</b> <b>80</b> <b>90</b>	<b>B5</b>	<b>U*</b> <b>B3</b> <b>B6</b> <b>B7</b> <b>B8</b> <b>B9</b> <b>V5</b> <b>V6</b>	<b>AST</b> 	<b>BRT</b> 	
	<b>071/063</b> <b>071/075</b> <b>080/075</b> <b>080/086</b> <b>090/086</b>	<b>P</b> <b>FXT</b> <b>FCT</b>	- <b>DX</b> <b>SX</b>							

\* Tutta la gamma viene fornita in posizione Universale  
All the gearboxes are supplied suitable for universal mounting.

### Versione riduttore / Gearbox version



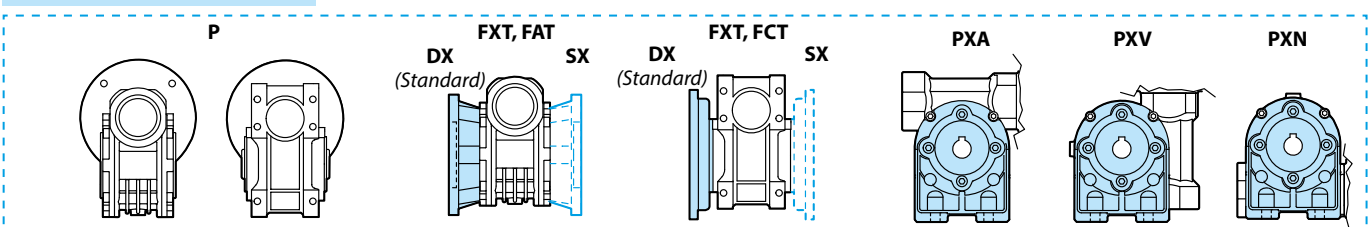
## Designazione / Designation

VTS

RIDUTTORE A VITE SENZA FINE COMBINATO / COMBINATION WORM GEARBOXES									ACCESSORI / ACCESSORIES		
Riduttore Gearbox	Grandezza riduttore entrata Size input gearbox	Grandezza riduttore uscita Size output gearbox	Versione riduttore Gearbox Version	Posizione flangia uscita Position Output flange	Rapporto rid. = i Ratio = i	Predispos. attacco motore Motor coupling	Forma costruttiva Version	Esecuzione Version	Posizione di montaggio Mounting position	Albero uscita Output shaft	Braccio di reazione Torque arm
<b>VKS</b>	<b>030/044</b>	<b>P</b>	<b>-</b>	<b>R1500</b>	<b>63 B5</b>	<b>ADO</b>	<b>U</b>			<b>ADT</b>	<b>BRT</b>
	<b>030/044</b> <b>030/049</b>	<b>P</b> <b>FXT</b> <b>FAT</b> <b>PX</b>	<b>-</b> <b>DX</b> <b>SX</b> <b>A</b> <b>N</b> <b>V</b>	Contattare ufficio tecnico SATI Contact SATI technical Office	<b>56</b> <b>63</b> <b>71</b>	<b>B5</b> <b>B14</b>		<b>ADO</b> <b>BDO</b> <b>ADV</b> <b>BDV</b> <b>ASO</b> <b>BSO</b> <b>ASV</b> <b>BSV</b>	<b>U*</b> <b>B3</b> <b>B6</b> <b>B7</b> <b>B8</b> <b>V5</b> <b>V6</b>	<b>AST</b>	<b>BRT</b>
	<b>030/063</b> <b>044/075</b> <b>044/086</b>	<b>P</b> <b>FXT</b> <b>FCT</b>	<b>-</b> <b>DX</b> <b>SX</b>								

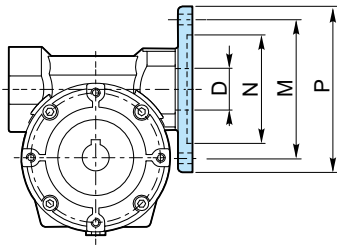
RIDUTTORE A VITE SENZA FINE COMBINATO / COMBINATION WORM GEARBOXES									ACCESSORI / ACCESSORIES	
Riduttore Gearbox	Grandezza riduttore entrata Size input gearbox	Grandezza riduttore uscita Size output gearbox	Versione riduttore Gearbox Version	Posizione flangia uscita Position Output flange	Rapporto rid. = i Ratio = i	Esecuzione Version	Posizione di montaggio Mounting position	Albero uscita Output shaft	Braccio di reazione Torque arm	
<b>VKE</b>	<b>030/044</b>	<b>P</b>	<b>-</b>	<b>R1500</b>	<b>ADO</b>	<b>U</b>			<b>ADT</b>	<b>BRT</b>
	<b>030/044</b> <b>030/049</b>	<b>P</b> <b>FXT</b> <b>FAT</b> <b>PX</b>	<b>-</b> <b>DX</b> <b>SX</b> <b>A</b> <b>N</b> <b>V</b>	Contattare ufficio tecnico SATI Contact SATI technical Office		<b>ADO</b> <b>BDO</b> <b>ADV</b> <b>BDV</b> <b>ASO</b> <b>BSO</b> <b>ASV</b> <b>BSV</b>	<b>U*</b> <b>B3</b> <b>B6</b> <b>B7</b> <b>B8</b> <b>V5</b> <b>V6</b>	<b>AST</b>	<b>BRT</b>	
	<b>030/063</b> <b>044/075</b> <b>044/086</b>	<b>P</b> <b>FXT</b> <b>FCT</b>	<b>-</b> <b>DX</b> <b>SX</b>							

Versione riduttore / Gearbox version

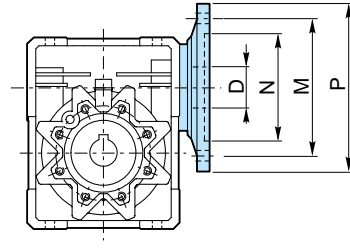


\* Tutta la gamma viene fornita in posizione Universale / All the gearboxes are supplied suitable for universal mounting.

## Predisposizioni IEC / IEC Pre-arrangements



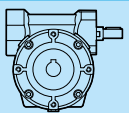
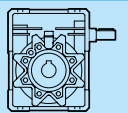
**030 - 044 - 049**



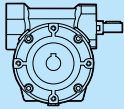
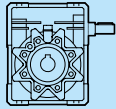
**063 - 075 - 086**

VTS	IEC	N	M	P	D																									
					R7	R10	R12	R14	R15	R18	R19	R20	R23	R24	R25	R28	R30	R35	R36	R38	R40	R45	R46	R50	R56	R60	R64	R70	R80	R100
030	63B5	95	115	140	11	11	-	-	11	-	-	11	-	-	-	-	11	-	-	-	11	-	-	-	11	-	11	-	-	
	63B14	60	75	90																										
	56B14	50	65	80	9	9	-	-	9	-	-	9	-	-	-	-	9	-	-	-	9	-	-	-	9	-	9	-	-	
044	71B5	110	130	160	14	14	-	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	
	63B14	60	75	90																										
049	80B5	130	165	200	19	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	14	
	71B14	70	85	105																										
	63B5	95	115	140	11	11	-	11	-	11	-	-	-	11	-	11	-	-	11	-	-	11	-	-	11	-	11	11	11	
063	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	-	19	19	
	80B14	80	100	120																										
	71B5	110	130	160	14	14	14	-	14	-	14	-	-	14	-	14	-	-	14	-	14	-	14	-	-	14	-	14	14	
	71B14	70	85	105																										
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	-	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																										
086	71B5	110	130	160	14	14	-	-	14	-	-	14	-	-	14	-	14	-	-	14	-	14	-	14	-	14	-	14	14	
	100/112B5	180	215	250	28	28	-	-	28	-	-	28	28	-	-	28	-	-	28	-	28	-	28	-	-	-	-	-		
	100/112B14	110	130	160																										
	90B5	130	165	200	24	24	-	-	24	-	-	24	24	-	-	24	-	-	24	-	24	-	24	-	24	-	24	24		
	90B14	95	115	140																										
	80B5	130	165	200	19	19	-	-	19	-	-	19	19	-	-	19	-	-	19	-	19	-	19	-	19	-	19	19		

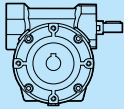
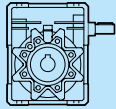
Dati tecnici riduttore / Gearbox technical data

				Grandezza / Size					
									
i	n <sub>1</sub>	n <sub>2</sub>		030	044	049	063	075	086
R7	2800	400.0	Mm <sub>2</sub> [Nm]	12	22	41	105	170	225
			Pm <sub>1</sub> [kW]	0.58	1.10	2.00	4.90	7.80	10.40
			Rd	0.87	0.88	0.88	0.90	0.91	0.91
			Fr <sub>2</sub> [N]	510	950	950	1010	700	2930
			Fr <sub>1</sub> [N]	120	220	400	480	750	850
	1400	200.0	Mm <sub>2</sub> [Nm]	16	29	54	120	190	250
			Pm <sub>1</sub> [kW]	0.41	0.75	1.30	2.90	4.40	5.90
			Rd	0.84	0.86	0.86	0.88	0.90	0.89
			Fr <sub>2</sub> [N]	630	1180	1170	1550	1530	3920
			Fr <sub>1</sub> [N]	140	220	400	480	750	850
	900	128.6	Mm <sub>2</sub> [Nm]	18	39	61	130	205	270
			Pm <sub>1</sub> [kW]	0.30	0.63	0.97	2.00	3.10	4.10
Rd			0.82	0.85	0.85	0.87	0.88	0.88	
Fr <sub>2</sub> [N]			730	1300	1370	1870	2120	4670	
Fr <sub>1</sub> [N]			150	220	400	480	750	850	
500	71.4	Mm <sub>2</sub> [Nm]	20	45	74	140	225	295	
		Pm <sub>1</sub> [kW]	0.19	0.41	0.67	1.20	2.00	2.60	
		Rd	0.81	0.83	0.83	0.84	0.86	0.85	
		Fr <sub>2</sub> [N]	920	1610	1670	2420	2940	5890	
		Fr <sub>1</sub> [N]	150	220	400	480	750	850	
R10	2800	280.0	Mm <sub>2</sub> [Nm]	12	22	44	125	205	260
			Pm <sub>1</sub> [kW]	0.41	0.74	1.50	4.20	6.70	8.50
			Rd	0.85	0.87	0.86	0.88	0.90	0.90
			Fr <sub>2</sub> [N]	620	1150	1140	1360	1610	3490
			Fr <sub>1</sub> [N]	70	220	400	370	750	850
	1400	140.0	Mm <sub>2</sub> [Nm]	16	29	59	140	230	290
			Pm <sub>1</sub> [kW]	0.30	0.51	1.00	2.40	3.80	4.80
			Rd	0.81	0.84	0.84	0.86	0.88	0.88
			Fr <sub>2</sub> [N]	770	1430	1410	1840	2240	4620
			Fr <sub>1</sub> [N]	80	220	400	480	750	850
	900	90.0	Mm <sub>2</sub> [Nm]	18	39	64	150	250	310
			Pm <sub>1</sub> [kW]	0.22	0.45	0.75	1.70	2.70	3.40
Rd			0.79	0.82	0.82	0.84	0.86	0.86	
Fr <sub>2</sub> [N]			900	1610	1670	2220	2700	5500	
Fr <sub>1</sub> [N]			150	220	400	480	750	850	
500	50.0	Mm <sub>2</sub> [Nm]	20	45	74	165	275	345	
		Pm <sub>1</sub> [kW]	0.14	0.29	0.49	1.10	1.70	2.20	
		Rd	0.77	0.80	0.80	0.81	0.84	0.82	
		Fr <sub>2</sub> [N]	1120	1980	2060	2830	3480	6860	
		Fr <sub>1</sub> [N]	150	220	400	480	750	850	
R12	2800	233.3	Mm <sub>2</sub> [Nm]	-	-	-	125	-	-
			Pm <sub>1</sub> [kW]	-	-	-	3.50	-	-
			Rd	-	-	-	0.87	-	-
			Fr <sub>2</sub> [N]	-	-	-	1540	-	-
			Fr <sub>1</sub> [N]	-	-	-	435	-	-
	1400	116.7	Mm <sub>2</sub> [Nm]	-	-	-	140	-	-
			Pm <sub>1</sub> [kW]	-	-	-	2.00	-	-
			Rd	-	-	-	0.85	-	-
			Fr <sub>2</sub> [N]	-	-	-	2070	-	-
			Fr <sub>1</sub> [N]	-	-	-	480	-	-
	900	75.0	Mm <sub>2</sub> [Nm]	-	-	-	150	-	-
			Pm <sub>1</sub> [kW]	-	-	-	1.40	-	-
Rd			-	-	-	0.82	-	-	
Fr <sub>2</sub> [N]			-	-	-	2480	-	-	
Fr <sub>1</sub> [N]			-	-	-	480	-	-	
500	41.7	Mm <sub>2</sub> [Nm]	-	-	-	165	-	-	
		Pm <sub>1</sub> [kW]	-	-	-	0.92	-	-	
		Rd	-	-	-	0.79	-	-	
		Fr <sub>2</sub> [N]	-	-	-	3140	-	-	
		Fr <sub>1</sub> [N]	-	-	-	480	-	-	

**Dati tecnici riduttore / Gearbox technical data**

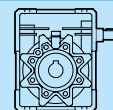
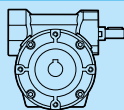
				Grandezza / Size					
									
i	n <sub>1</sub>	n <sub>2</sub>		030	044	049	063	075	086
<b>R14</b>	2800	<b>200.0</b>	Mm <sub>2</sub> [Nm]	-	22	49	-	-	-
			Pm <sub>1</sub> [kW]	-	0.55	1.20	-	-	-
			Rd	-	0.84	0.84	-	-	-
			Fr <sub>2</sub> [N]	-	1340	1310	-	-	-
			Fr <sub>1</sub> [N]	-	220	400	-	-	-
	1400	<b>100.0</b>	Mm <sub>2</sub> [Nm]	-	29	65	-	-	-
			Pm <sub>1</sub> [kW]	-	0.37	0.90	-	-	-
			Rd	-	0.81	0.81	-	-	-
			Fr <sub>2</sub> [N]	-	1680	1630	-	-	-
			Fr <sub>1</sub> [N]	-	220	400	-	-	-
	900	<b>64.3</b>	Mm <sub>2</sub> [Nm]	-	39	71	-	-	-
			Pm <sub>1</sub> [kW]	-	0.34	0.61	-	-	-
			Rd	-	0.78	0.78	-	-	-
			Fr <sub>2</sub> [N]	-	1890	1920	-	-	-
			Fr <sub>1</sub> [N]	-	220	400	-	-	-
	500	<b>35.7</b>	Mm <sub>2</sub> [Nm]	-	50	78	-	-	-
Pm <sub>1</sub> [kW]			-	0.25	0.39	-	-	-	
Rd			-	0.76	0.75	-	-	-	
Fr <sub>2</sub> [N]			-	2280	2400	-	-	-	
Fr <sub>1</sub> [N]			-	220	400	-	-	-	
<b>R15</b>	2800	<b>186.7</b>	Mm <sub>2</sub> [Nm]	14	-	-	125	187	295
			Pm <sub>1</sub> [kW]	0.34	-	-	2.80	5.00	6.60
			Rd	0.81	-	-	0.86	0.88	0.87
			Fr <sub>2</sub> [N]	720	-	-	1770	2120	4200
			Fr <sub>1</sub> [N]	-	-	-	410	750	850
	1400	<b>93.3</b>	Mm <sub>2</sub> [Nm]	18	-	-	150	250	330
			Pm <sub>1</sub> [kW]	0.24	-	-	1.80	2.90	3.80
			Rd	0.76	-	-	0.83	0.85	0.85
			Fr <sub>2</sub> [N]	910	-	-	2280	2870	5510
			Fr <sub>1</sub> [N]	-	-	-	480	750	850
	900	<b>60.0</b>	Mm <sub>2</sub> [Nm]	20	-	-	160	270	355
			Pm <sub>1</sub> [kW]	0.17	-	-	1.30	2.00	2.70
			Rd	0.74	-	-	0.80	0.83	0.82
			Fr <sub>2</sub> [N]	1060	-	-	2740	3440	6520
			Fr <sub>1</sub> [N]	-	-	-	480	750	850
	500	<b>33.3</b>	Mm <sub>2</sub> [Nm]	22	-	-	180	295	390
Pm <sub>1</sub> [kW]			0.11	-	-	0.83	1.30	1.70	
Rd			0.71	-	-	0.76	0.80	0.78	
Fr <sub>2</sub> [N]			1320	-	-	3430	4380	7000	
Fr <sub>1</sub> [N]			-	-	-	480	750	850	
<b>R18</b>	2800	<b>155.6</b>	Mm <sub>2</sub> [Nm]	-	-	44	-	-	-
			Pm <sub>1</sub> [kW]	-	-	0.87	-	-	-
			Rd	-	-	0.82	-	-	-
			Fr <sub>2</sub> [N]	-	-	1520	-	-	-
			Fr <sub>1</sub> [N]	-	-	400	-	-	-
	1400	<b>77.8</b>	Mm <sub>2</sub> [Nm]	-	-	59	-	-	-
			Pm <sub>1</sub> [kW]	-	-	0.60	-	-	-
			Rd	-	-	0.78	-	-	-
			Fr <sub>2</sub> [N]	-	-	1890	-	-	-
			Fr <sub>1</sub> [N]	-	-	400	-	-	-
	900	<b>50.0</b>	Mm <sub>2</sub> [Nm]	-	-	68	-	-	-
			Pm <sub>1</sub> [kW]	-	-	0.47	-	-	-
			Rd	-	-	0.75	-	-	-
			Fr <sub>2</sub> [N]	-	-	2190	-	-	-
			Fr <sub>1</sub> [N]	-	-	400	-	-	-
	500	<b>27.8</b>	Mm <sub>2</sub> [Nm]	-	-	74	-	-	-
Pm <sub>1</sub> [kW]			-	-	0.30	-	-	-	
Rd			-	-	0.72	-	-	-	
Fr <sub>2</sub> [N]			-	-	2730	-	-	-	
Fr <sub>1</sub> [N]			-	-	400	-	-	-	

Dati tecnici riduttore / Gearbox technical data

			Grandezza / Size						
									
i	n <sub>1</sub>	n <sub>2</sub>		030	044	049	063	075	086
R19	2800	147.4	Mm <sub>2</sub> [Nm]	-	-	-	130	-	-
			Pm <sub>1</sub> [kW]	-	-	-	2.40	-	-
			Rd	-	-	-	0.84	-	-
			Fr <sub>2</sub> [N]	-	-	-	1990	-	-
			Fr <sub>1</sub> [N]	-	-	-	310	-	-
	1400	73.7	Mm <sub>2</sub> [Nm]	-	-	-	150	-	-
			Pm <sub>1</sub> [kW]	-	-	-	1.40	-	-
			Rd	-	-	-	0.81	-	-
			Fr <sub>2</sub> [N]	-	-	-	2600	-	-
			Fr <sub>1</sub> [N]	-	-	-	480	-	-
	900	47.4	Mm <sub>2</sub> [Nm]	-	-	-	160	-	-
			Pm <sub>1</sub> [kW]	-	-	-	1.00	-	-
			Rd	-	-	-	0.78	-	-
			Fr <sub>2</sub> [N]	-	-	-	3100	-	-
			Fr <sub>1</sub> [N]	-	-	-	480	-	-
	500	26.3	Mm <sub>2</sub> [Nm]	-	-	-	180	-	-
Pm <sub>1</sub> [kW]			-	-	-	0.68	-	-	
Rd			-	-	-	0.73	-	-	
Fr <sub>2</sub> [N]			-	-	-	3860	-	-	
Fr <sub>1</sub> [N]			-	-	-	480	-	-	
R20	2800	140.0	Mm <sub>2</sub> [Nm]	14	29	-	-	140	285
			Pm <sub>1</sub> [kW]	0.26	0.52	-	-	3.80	4.90
			Rd	0.78	0.81	-	-	0.86	0.86
			Fr <sub>2</sub> [N]	820	1490	-	-	2550	4900
			Fr <sub>1</sub> [N]	-	220	-	-	750	850
	1400	70.0	Mm <sub>2</sub> [Nm]	18	39	-	-	250	320
			Pm <sub>1</sub> [kW]	0.19	0.37	-	-	2.20	2.80
			Rd	0.73	0.77	-	-	0.83	0.84
			Fr <sub>2</sub> [N]	1030	1860	-	-	3410	6380
			Fr <sub>1</sub> [N]	-	220	-	-	750	850
	900	45.0	Mm <sub>2</sub> [Nm]	20	45	-	-	270	345
			Pm <sub>1</sub> [kW]	0.14	0.29	-	-	1.60	2.00
			Rd	0.70	0.74	-	-	0.80	0.81
			Fr <sub>2</sub> [N]	1200	2160	-	-	4050	7000
			Fr <sub>1</sub> [N]	-	220	-	-	750	850
	500	25.0	Mm <sub>2</sub> [Nm]	22	50	-	-	295	380
Pm <sub>1</sub> [kW]			0.09	0.18	-	-	1.00	1.30	
Rd			0.67	0.72	-	-	0.77	0.77	
Fr <sub>2</sub> [N]			1490	2500	-	-	5120	7000	
Fr <sub>1</sub> [N]			150	220	-	-	750	850	
R23	2800	121.7	Mm <sub>2</sub> [Nm]	-	-	-	-	-	285
			Pm <sub>1</sub> [kW]	-	-	-	-	-	4.30
			Rd	-	-	-	-	-	0.85
			Fr <sub>2</sub> [N]	-	-	-	-	-	5250
			Fr <sub>1</sub> [N]	-	-	-	-	-	850
	1400	60.9	Mm <sub>2</sub> [Nm]	-	-	-	-	-	320
			Pm <sub>1</sub> [kW]	-	-	-	-	-	2.50
			Rd	-	-	-	-	-	0.82
			Fr <sub>2</sub> [N]	-	-	-	-	-	6800
			Fr <sub>1</sub> [N]	-	-	-	-	-	850
	900	39.1	Mm <sub>2</sub> [Nm]	-	-	-	-	-	345
			Pm <sub>1</sub> [kW]	-	-	-	-	-	1.80
			Rd	-	-	-	-	-	0.80
			Fr <sub>2</sub> [N]	-	-	-	-	-	7000
			Fr <sub>1</sub> [N]	-	-	-	-	-	850
	500	21.1	Mm <sub>2</sub> [Nm]	-	-	-	-	-	380
Pm <sub>1</sub> [kW]			-	-	-	-	-	1.20	
Rd			-	-	-	-	-	0.75	
Fr <sub>2</sub> [N]			-	-	-	-	-	7000	
Fr <sub>1</sub> [N]			-	-	-	-	-	850	

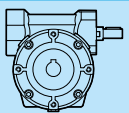
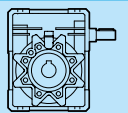
**Dati tecnici riduttore / Gearbox technical data**

Grandezza / Size



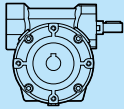
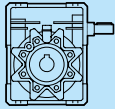
i	n <sub>1</sub>	n <sub>2</sub>		Grandezza / Size					
				030	044	049	063	075	086
R24	2800	116.7	Mm <sub>2</sub> [Nm]	-	-	47	130	-	-
			Pm <sub>1</sub> [kW]	-	-	0.73	1.90	-	-
			Rd	-	-	0.79	0.82	-	-
			Fr <sub>2</sub> [N]	-	-	1670	2250	-	-
			Fr <sub>1</sub> [N]	-	-	400	370	-	-
	1400	58.3	Mm <sub>2</sub> [Nm]	-	-	63	155	-	-
			Pm <sub>1</sub> [kW]	-	-	0.50	1.20	-	-
			Rd	-	-	0.75	0.78	-	-
			Fr <sub>2</sub> [N]	-	-	2110	2890	-	-
			Fr <sub>1</sub> [N]	-	-	400	480	-	-
	900	37.5	Mm <sub>2</sub> [Nm]	-	-	68	165	-	-
			Pm <sub>1</sub> [kW]	-	-	0.36	0.86	-	-
Rd			-	-	0.71	0.75	-	-	
Fr <sub>2</sub> [N]			-	-	2480	3440	-	-	
Fr <sub>1</sub> [N]			-	-	400	480	-	-	
500	20.8	Mm <sub>2</sub> [Nm]	-	-	74	185	-	-	
		Pm <sub>1</sub> [kW]	-	-	0.24	0.58	-	-	
		Rd	-	-	0.68	0.70	-	-	
		Fr <sub>2</sub> [N]	-	-	3090	4280	-	-	
		Fr <sub>1</sub> [N]	-	-	400	480	-	-	
R25	2800	112.0	Mm <sub>2</sub> [Nm]	-	-	-	-	112	-
			Pm <sub>1</sub> [kW]	-	-	-	-	3.20	-
			Rd	-	-	-	-	0.83	-
			Fr <sub>2</sub> [N]	-	-	-	-	2900	-
			Fr <sub>1</sub> [N]	-	-	-	-	750	-
	1400	56.0	Mm <sub>2</sub> [Nm]	-	-	-	-	250	-
			Pm <sub>1</sub> [kW]	-	-	-	-	1.80	-
			Rd	-	-	-	-	0.80	-
			Fr <sub>2</sub> [N]	-	-	-	-	3840	-
			Fr <sub>1</sub> [N]	-	-	-	-	750	-
	900	36.0	Mm <sub>2</sub> [Nm]	-	-	-	-	270	-
			Pm <sub>1</sub> [kW]	-	-	-	-	1.30	-
Rd			-	-	-	-	0.77	-	
Fr <sub>2</sub> [N]			-	-	-	-	4550	-	
Fr <sub>1</sub> [N]			-	-	-	-	750	-	
500	20.0	Mm <sub>2</sub> [Nm]	-	-	-	-	295	-	
		Pm <sub>1</sub> [kW]	-	-	-	-	0.85	-	
		Rd	-	-	-	-	0.73	-	
		Fr <sub>2</sub> [N]	-	-	-	-	5720	-	
		Fr <sub>1</sub> [N]	-	-	-	-	750	-	
R28	2800	100.0	Mm <sub>2</sub> [Nm]	-	29	56	-	-	-
			Pm <sub>1</sub> [kW]	-	0.40	0.78	-	-	-
			Rd	-	0.76	0.75	-	-	-
			Fr <sub>2</sub> [N]	-	1710	1740	-	-	-
			Fr <sub>1</sub> [N]	-	220	400	-	-	-
	1400	50.0	Mm <sub>2</sub> [Nm]	-	39	74	-	-	-
			Pm <sub>1</sub> [kW]	-	0.29	0.55	-	-	-
			Rd	-	0.71	0.71	-	-	-
			Fr <sub>2</sub> [N]	-	2140	2170	-	-	-
			Fr <sub>1</sub> [N]	-	220	400	-	-	-
	900	32.1	Mm <sub>2</sub> [Nm]	-	49	82	-	-	-
			Pm <sub>1</sub> [kW]	-	0.24	0.41	-	-	-
Rd			-	0.67	0.67	-	-	-	
Fr <sub>2</sub> [N]			-	2300	2540	-	-	-	
Fr <sub>1</sub> [N]			-	220	400	-	-	-	
500	17.9	Mm <sub>2</sub> [Nm]	-	55	88	-	-	-	
		Pm <sub>1</sub> [kW]	-	0.16	0.26	-	-	-	
		Rd	-	0.64	0.63	-	-	-	
		Fr <sub>2</sub> [N]	-	2500	3180	-	-	-	
		Fr <sub>1</sub> [N]	-	220	400	-	-	-	

Dati tecnici riduttore / Gearbox technical data

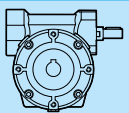
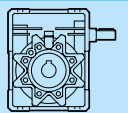
			Grandezza / Size						
									
i	n <sub>1</sub>	n <sub>2</sub>		030	044	049	063	075	086
R30	2800	93.3	Mm <sub>2</sub> [Nm]	15	-	-	125	93	320
			Pm <sub>1</sub> [kW]	0.21	-	-	1.60	2.90	3.90
			Rd	0.71	-	-	0.78	0.81	0.81
			Fr <sub>2</sub> [N]	960	-	-	2540	3100	5740
			Fr <sub>1</sub> [N]	-	-	-	440	750	850
	1400	46.7	Mm <sub>2</sub> [Nm]	20	-	-	160	270	370
			Pm <sub>1</sub> [kW]	0.15	-	-	1.10	1.70	2.40
			Rd	0.65	-	-	0.74	0.77	0.76
			Fr <sub>2</sub> [N]	1200	-	-	3170	4090	7000
			Fr <sub>1</sub> [N]	-	-	-	480	750	850
	900	30.0	Mm <sub>2</sub> [Nm]	22	-	-	170	290	400
			Pm <sub>1</sub> [kW]	0.12	-	-	0.76	1.20	1.70
			Rd	0.61	-	-	0.70	0.74	0.73
			Fr <sub>2</sub> [N]	1400	-	-	3770	4860	7000
			Fr <sub>1</sub> [N]	-	-	-	480	750	850
	500	16.7	Mm <sub>2</sub> [Nm]	24	-	-	190	320	440
Pm <sub>1</sub> [kW]			0.07	-	-	0.52	0.81	1.10	
Rd			0.58	-	-	0.64	0.69	0.67	
Fr <sub>2</sub> [N]			1700	-	-	4690	6080	7000	
Fr <sub>1</sub> [N]			-	-	-	480	750	850	
R35	2800	80.0	Mm <sub>2</sub> [Nm]	-	29	-	-	-	-
			Pm <sub>1</sub> [kW]	-	0.33	-	-	-	-
			Rd	-	0.73	-	-	-	-
			Fr <sub>2</sub> [N]	-	1870	-	-	-	-
			Fr <sub>1</sub> [N]	-	220	-	-	-	-
	1400	40.0	Mm <sub>2</sub> [Nm]	-	39	-	-	-	-
			Pm <sub>1</sub> [kW]	-	0.25	-	-	-	-
			Rd	-	0.68	-	-	-	-
			Fr <sub>2</sub> [N]	-	2300	-	-	-	-
			Fr <sub>1</sub> [N]	-	220	-	-	-	-
	900	25.7	Mm <sub>2</sub> [Nm]	-	49	-	-	-	-
			Pm <sub>1</sub> [kW]	-	0.20	-	-	-	-
			Rd	-	0.64	-	-	-	-
			Fr <sub>2</sub> [N]	-	2300	-	-	-	-
			Fr <sub>1</sub> [N]	-	220	-	-	-	-
	500	14.3	Mm <sub>2</sub> [Nm]	-	55	-	-	-	-
Pm <sub>1</sub> [kW]			-	0.14	-	-	-	-	
Rd			-	0.60	-	-	-	-	
Fr <sub>2</sub> [N]			-	2500	-	-	-	-	
Fr <sub>1</sub> [N]			-	220	-	-	-	-	
R36	2800	77.8	Mm <sub>2</sub> [Nm]	-	-	52	-	-	-
			Pm <sub>1</sub> [kW]	-	-	0.59	-	-	-
			Rd	-	-	0.72	-	-	-
			Fr <sub>2</sub> [N]	-	-	1970	-	-	-
			Fr <sub>1</sub> [N]	-	-	400	-	-	-
	1400	38.9	Mm <sub>2</sub> [Nm]	-	-	69	-	-	-
			Pm <sub>1</sub> [kW]	-	-	0.42	-	-	-
			Rd	-	-	0.67	-	-	-
			Fr <sub>2</sub> [N]	-	-	2460	-	-	-
			Fr <sub>1</sub> [N]	-	-	400	-	-	-
	900	25.0	Mm <sub>2</sub> [Nm]	-	-	75	-	-	-
			Pm <sub>1</sub> [kW]	-	-	0.31	-	-	-
			Rd	-	-	0.63	-	-	-
			Fr <sub>2</sub> [N]	-	-	2880	-	-	-
			Fr <sub>1</sub> [N]	-	-	400	-	-	-
	500	13.9	Mm <sub>2</sub> [Nm]	-	-	80	-	-	-
Pm <sub>1</sub> [kW]			-	-	0.20	-	-	-	
Rd			-	-	0.59	-	-	-	
Fr <sub>2</sub> [N]			-	-	3450	-	-	-	
Fr <sub>1</sub> [N]			-	-	400	-	-	-	



**Dati tecnici riduttore / Gearbox technical data**

					Grandezza / Size				
									
i	n <sub>1</sub>	n <sub>2</sub>		030	044	049	063	075	086
<b>R38</b>	2800	<b>37.7</b>	Mm <sub>2</sub> [Nm]	-	-	-	130	-	-
			Pm <sub>1</sub> [kW]	-	-	-	1.40	-	-
			Rd	-	-	-	0.75	-	-
			Fr <sub>2</sub> [N]	-	-	-	2800	-	-
			Fr <sub>1</sub> [N]	-	-	-	330	-	-
	1400	<b>36.8</b>	Mm <sub>2</sub> [Nm]	-	-	-	155	-	-
			Pm <sub>1</sub> [kW]	-	-	-	0.85	-	-
			Rd	-	-	-	0.70	-	-
			Fr <sub>2</sub> [N]	-	-	-	3580	-	-
			Fr <sub>1</sub> [N]	-	-	-	480	-	-
	900	<b>23.7</b>	Mm <sub>2</sub> [Nm]	-	-	-	165	-	-
			Pm <sub>1</sub> [kW]	-	-	-	0.62	-	-
			Rd	-	-	-	0.66	-	-
			Fr <sub>2</sub> [N]	-	-	-	4240	-	-
			Fr <sub>1</sub> [N]	-	-	-	480	-	-
	500	<b>13.2</b>	Mm <sub>2</sub> [Nm]	-	-	-	185	-	-
Pm <sub>1</sub> [kW]			-	-	-	0.42	-	-	
Rd			-	-	-	0.61	-	-	
Fr <sub>2</sub> [N]			-	-	-	5000	-	-	
Fr <sub>1</sub> [N]			-	-	-	480	-	-	
<b>R40</b>	2800	<b>70.0</b>	Mm <sub>2</sub> [Nm]	14	-	-	-	70	295
			Pm <sub>1</sub> [kW]	0.16	-	-	-	2.10	2.70
			Rd	0.66	-	-	-	0.77	0.79
			Fr <sub>2</sub> [N]	1090	-	-	-	3660	6670
			Fr <sub>1</sub> [N]	-	-	-	-	750	850
	1400	<b>35.0</b>	Mm <sub>2</sub> [Nm]	19	-	-	-	255	330
			Pm <sub>1</sub> [kW]	0.12	-	-	-	1.30	1.60
			Rd	0.60	-	-	-	0.72	0.75
			Fr <sub>2</sub> [N]	1360	-	-	-	4770	7000
			Fr <sub>1</sub> [N]	-	-	-	-	750	850
	900	<b>22.5</b>	Mm <sub>2</sub> [Nm]	20	-	-	-	275	355
			Pm <sub>1</sub> [kW]	0.09	-	-	-	1.00	1.20
			Rd	0.56	-	-	-	0.68	0.71
			Fr <sub>2</sub> [N]	1590	-	-	-	5630	7000
			Fr <sub>1</sub> [N]	-	-	-	-	750	850
	500	<b>12.5</b>	Mm <sub>2</sub> [Nm]	22	-	-	-	305	390
Pm <sub>1</sub> [kW]			0.06	-	-	-	0.63	0.77	
Rd			0.53	-	-	-	0.63	0.66	
Fr <sub>2</sub> [N]			1700	-	-	-	6200	7000	
Fr <sub>1</sub> [N]			-	-	-	-	750	850	
<b>R45</b>	2800	<b>62.2</b>	Mm <sub>2</sub> [Nm]	-	-	49	130	-	-
			Pm <sub>1</sub> [kW]	-	-	0.46	1.20	-	-
			Rd	-	-	0.69	0.73	-	-
			Fr <sub>2</sub> [N]	-	-	2180	3020	-	-
			Fr <sub>1</sub> [N]	-	-	400	380	-	-
	1400	<b>31.1</b>	Mm <sub>2</sub> [Nm]	-	-	65	145	-	-
			Pm <sub>1</sub> [kW]	-	-	0.33	0.71	-	-
			Rd	-	-	0.63	0.67	-	-
			Fr <sub>2</sub> [N]	-	-	2724	3920	-	-
			Fr <sub>1</sub> [N]	-	-	400	480	-	-
	900	<b>20.0</b>	Mm <sub>2</sub> [Nm]	-	-	71	155	-	-
			Pm <sub>1</sub> [kW]	-	-	0.25	0.52	-	-
			Rd	-	-	0.59	0.63	-	-
			Fr <sub>2</sub> [N]	-	-	3190	4630	-	-
			Fr <sub>1</sub> [N]	-	-	400	480	-	-
	500	<b>11.1</b>	Mm <sub>2</sub> [Nm]	-	-	78	170	-	-
Pm <sub>1</sub> [kW]			-	-	0.17	0.34	-	-	
Rd			-	-	0.55	0.58	-	-	
Fr <sub>2</sub> [N]			-	-	3450	5000	-	-	
Fr <sub>1</sub> [N]			-	-	400	480	-	-	

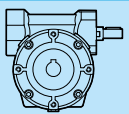
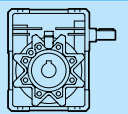
Dati tecnici riduttore / Gearbox technical data

				Grandezza / Size					
									
i	n <sub>1</sub>	n <sub>2</sub>		030	044	049	063	075	086
R46	2800	60.9	Mm <sub>2</sub> [Nm]	-	29	-	-	-	305
			Pm <sub>1</sub> [kW]	-	0.27	-	-	-	2.5
			Rd	-	0.69	-	-	-	0.77
			Fr <sub>2</sub> [N]	-	2080	-	-	-	7000
			Fr <sub>1</sub> [N]	-	220	-	-	-	850
	1400	30.4	Mm <sub>2</sub> [Nm]	-	39	-	-	-	340
			Pm <sub>1</sub> [kW]	-	0.19	-	-	-	1.5
			Rd	-	0.63	-	-	-	0.73
			Fr <sub>2</sub> [N]	-	2300	-	-	-	7000
			Fr <sub>1</sub> [N]	-	220	-	-	-	850
	900	19.6	Mm <sub>2</sub> [Nm]	-	49	-	-	-	365
			Pm <sub>1</sub> [kW]	-	0.17	-	-	-	1.1
Rd			-	0.59	-	-	-	0.69	
Fr <sub>2</sub> [N]			-	2300	-	-	-	7000	
Fr <sub>1</sub> [N]			-	220	-	-	-	850	
500	10.9	Mm <sub>2</sub> [Nm]	-	50	-	-	-	405	
		Pm <sub>1</sub> [kW]	-	0.10	-	-	-	0.73	
		Rd	-	0.55	-	-	-	0.63	
		Fr <sub>2</sub> [N]	-	2500	-	-	-	7000	
		Fr <sub>1</sub> [N]	-	220	-	-	-	850	
R50	2800	56.0	Mm <sub>2</sub> [Nm]	-	-	-	-	56	-
			Pm <sub>1</sub> [kW]	-	-	-	-	1.60	-
			Rd	-	-	-	-	0.73	-
			Fr <sub>2</sub> [N]	-	-	-	-	4180	-
			Fr <sub>1</sub> [N]	-	-	-	-	750	-
	1400	28.0	Mm <sub>2</sub> [Nm]	-	-	-	-	220	-
			Pm <sub>1</sub> [kW]	-	-	-	-	0.95	-
			Rd	-	-	-	-	0.68	-
			Fr <sub>2</sub> [N]	-	-	-	-	5410	-
			Fr <sub>1</sub> [N]	-	-	-	-	750	-
	900	18.0	Mm <sub>2</sub> [Nm]	-	-	-	-	235	-
			Pm <sub>1</sub> [kW]	-	-	-	-	0.70	-
Rd			-	-	-	-	0.63	-	
Fr <sub>2</sub> [N]			-	-	-	-	6200	-	
Fr <sub>1</sub> [N]			-	-	-	-	750	-	
500	10.0	Mm <sub>2</sub> [Nm]	-	-	-	-	260	-	
		Pm <sub>1</sub> [kW]	-	-	-	-	0.47	-	
		Rd	-	-	-	-	0.58	-	
		Fr <sub>2</sub> [N]	-	-	-	-	6200	-	
		Fr <sub>1</sub> [N]	-	-	-	-	750	-	
R56	2800	50.0	Mm <sub>2</sub> [Nm]	-	-	-	-	-	265
			Pm <sub>1</sub> [kW]	-	-	-	-	-	1.80
			Rd	-	-	-	-	-	0.75
			Fr <sub>2</sub> [N]	-	-	-	-	-	7000
			Fr <sub>1</sub> [N]	-	-	-	-	-	850
	1400	25.0	Mm <sub>2</sub> [Nm]	-	-	-	-	-	300
			Pm <sub>1</sub> [kW]	-	-	-	-	-	1.10
			Rd	-	-	-	-	-	0.70
			Fr <sub>2</sub> [N]	-	-	-	-	-	7000
			Fr <sub>1</sub> [N]	-	-	-	-	-	850
	900	16.1	Mm <sub>2</sub> [Nm]	-	-	-	-	-	325
			Pm <sub>1</sub> [kW]	-	-	-	-	-	0.83
Rd			-	-	-	-	-	0.66	
Fr <sub>2</sub> [N]			-	-	-	-	-	7000	
Fr <sub>1</sub> [N]			-	-	-	-	-	850	
500	8.9	Mm <sub>2</sub> [Nm]	-	-	-	-	-	355	
		Pm <sub>1</sub> [kW]	-	-	-	-	-	0.55	
		Rd	-	-	-	-	-	0.60	
		Fr <sub>2</sub> [N]	-	-	-	-	-	7000	
		Fr <sub>1</sub> [N]	-	-	-	-	-	850	



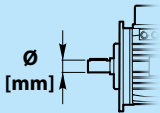
**Dati tecnici riduttore / Gearbox technical data**

			Grandezza / Size						
i	n <sub>1</sub>	n <sub>2</sub>		030	044	049	063	075	086
<b>R60</b>	2800	<b>46.7</b>	Mm <sub>2</sub> [Nm]	14	29	44	-	47	-
			Pm <sub>1</sub> [kW]	0.12	0.22	0.34	-	1.30	-
			Rd	0.59	0.65	0.64	-	0.70	-
			Fr <sub>2</sub> [N]	1270	2290	2480	-	4610	-
			Fr <sub>1</sub> [N]	-	220	400	-	750	-
	1400	<b>23.3</b>	Mm <sub>2</sub> [Nm]	19	39	59	-	200	-
			Pm <sub>1</sub> [kW]	0.09	0.16	0.25	-	0.75	-
			Rd	0.51	0.58	0.58	-	0.65	-
			Fr <sub>2</sub> [N]	1590	2300	3100	-	5960	-
			Fr <sub>1</sub> [N]	-	220	400	-	750	-
	900	<b>15.0</b>	Mm <sub>2</sub> [Nm]	20	45	64	-	215	-
			Pm <sub>1</sub> [kW]	0.07	0.13	0.19	-	0.56	-
Rd			0.48	0.54	0.53	-	0.60	-	
Fr <sub>2</sub> [N]			1650	2300	3300	-	6200	-	
Fr <sub>1</sub> [N]			-	220	400	-	750	-	
500	<b>8.3</b>	Mm <sub>2</sub> [Nm]	22	50	69	-	235	-	
		Pm <sub>1</sub> [kW]	0.05	0.09	0.12	-	0.37	-	
		Rd	0.44	0.50	0.49	-	0.55	-	
		Fr <sub>2</sub> [N]	1700	2500	3450	-	6200	-	
		Fr <sub>1</sub> [N]	-	220	400	-	750	-	
<b>R64</b>	2800	<b>43.8</b>	Mm <sub>2</sub> [Nm]	-	-	-	110	-	250
			Pm <sub>1</sub> [kW]	-	-	-	0.75	-	1.6
			Rd	-	-	-	0.67	-	0.73
			Fr <sub>2</sub> [N]	-	-	-	3650	-	7000
			Fr <sub>1</sub> [N]	-	-	-	480	-	850
	1400	<b>21.9</b>	Mm <sub>2</sub> [Nm]	-	-	-	125	-	280
			Pm <sub>1</sub> [kW]	-	-	-	0.47	-	0.94
			Rd	-	-	-	0.61	-	0.68
			Fr <sub>2</sub> [N]	-	-	-	4680	-	7000
			Fr <sub>1</sub> [N]	-	-	-	480	-	850
	900	<b>14.1</b>	Mm <sub>2</sub> [Nm]	-	-	-	135	-	300
			Pm <sub>1</sub> [kW]	-	-	-	0.35	-	0.7
Rd			-	-	-	0.56	-	0.63	
Fr <sub>2</sub> [N]			-	-	-	5000	-	7000	
Fr <sub>1</sub> [N]			-	-	-	480	-	850	
500	<b>7.8</b>	Mm <sub>2</sub> [Nm]	-	-	-	150	-	330	
		Pm <sub>1</sub> [kW]	-	-	-	0.24	-	0.47	
		Rd	-	-	-	0.51	-	0.58	
		Fr <sub>2</sub> [N]	-	-	-	5000	-	7000	
		Fr <sub>1</sub> [N]	-	-	-	480	-	850	
<b>R70</b>	2800	<b>40.0</b>	Mm <sub>2</sub> [Nm]	11	22	41	-	-	-
			Pm <sub>1</sub> [kW]	0.18	0.15	0.28	-	-	-
			Rd	0.55	0.62	0.61	-	-	-
			Fr <sub>2</sub> [N]	1380	2300	2650	-	-	-
			Fr <sub>1</sub> [N]	-	220	400	-	-	-
	1400	<b>20.0</b>	Mm <sub>2</sub> [Nm]	15	29	55	-	-	-
			Pm <sub>1</sub> [kW]	0.07	0.11	0.21	-	-	-
			Rd	0.48	0.55	0.54	-	-	-
			Fr <sub>2</sub> [N]	1600	2300	3150	-	-	-
			Fr <sub>1</sub> [N]	-	220	400	-	-	-
	900	<b>12.9</b>	Mm <sub>2</sub> [Nm]	17	39	60	-	-	-
			Pm <sub>1</sub> [kW]	0.05	0.10	0.16	-	-	-
Rd			0.45	0.51	0.50	-	-	-	
Fr <sub>2</sub> [N]			1700	2300	3300	-	-	-	
Fr <sub>1</sub> [N]			-	220	400	-	-	-	
500	<b>7.1</b>	Mm <sub>2</sub> [Nm]	19	45	69	-	-	-	
		Pm <sub>1</sub> [kW]	0.04	0.07	0.11	-	-	-	
		Rd	0.41	0.47	0.46	-	-	-	
		Fr <sub>2</sub> [N]	1700	2500	3450	-	-	-	
		Fr <sub>1</sub> [N]	-	220	400	-	-	-	



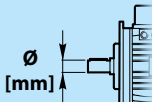
Dati tecnici riduttore / Gearbox technical data

				Grandezza / Size					
									
i	n <sub>1</sub>	n <sub>2</sub>		030	044	049	063	075	086
R80	2800	35.0	Mm <sub>2</sub> [Nm]	-	-	41	100	35	225
			Pm <sub>1</sub> [kW]	-	-	0.25	0.59	0.90	1.20
			Rd	-	-	0.59	0.62	0.65	0.69
			Fr <sub>2</sub> [N]	-	-	2780	4050	5310	7000
			Fr <sub>1</sub> [N]	-	-	400	480	750	850
	1400	17.5	Mm <sub>2</sub> [Nm]	-	-	54	115	180	255
			Pm <sub>1</sub> [kW]	-	-	0.19	0.38	0.56	0.73
			Rd	-	-	0.52	0.56	0.59	0.64
			Fr <sub>2</sub> [N]	-	-	3150	5000	6200	7000
			Fr <sub>1</sub> [N]	-	-	400	480	750	850
	900	11.3	Mm <sub>2</sub> [Nm]	-	-	58	125	195	275
			Pm <sub>1</sub> [kW]	-	-	0.14	0.28	0.43	0.55
Rd			-	-	0.47	0.52	0.54	0.59	
Fr <sub>2</sub> [N]			-	-	3300	5000	6200	7000	
Fr <sub>1</sub> [N]			-	-	400	480	750	850	
500	6.3	Mm <sub>2</sub> [Nm]	-	-	59	135	215	305	
		Pm <sub>1</sub> [kW]	-	-	0.09	0.19	0.29	0.38	
		Rd	-	-	0.43	0.46	0.49	0.53	
		Fr <sub>2</sub> [N]	-	-	3450	5000	6200	7000	
		Fr <sub>1</sub> [N]	-	-	400	480	750	850	
R100	2800	28.0	Mm <sub>2</sub> [Nm]	-	21	37	100	28	205
			Pm <sub>1</sub> [kW]	-	0.11	0.20	0.51	0.65	0.92
			Rd	-	0.55	0.54	0.58	0.61	0.65
			Fr <sub>2</sub> [N]	-	2300	3050	4420	5960	7000
			Fr <sub>1</sub> [N]	-	220	400	480	750	850
	1400	14.0	Mm <sub>2</sub> [Nm]	-	28	49	115	150	230
			Pm <sub>1</sub> [kW]	-	0.09	0.13	0.33	0.40	0.57
			Rd	-	0.47	0.47	0.51	0.55	0.59
			Fr <sub>2</sub> [N]	-	2300	3150	5000	6200	7000
			Fr <sub>1</sub> [N]	-	220	400	480	750	850
	900	9.0	Mm <sub>2</sub> [Nm]	-	30	52	120	160	-
			Pm <sub>1</sub> [kW]	-	0.06	0.11	0.25	0.30	-
			Rd	-	0.43	0.42	0.46	0.50	-
			Fr <sub>2</sub> [N]	-	2300	3300	5000	6200	-
			Fr <sub>1</sub> [N]	-	220	400	480	750	-
	500	5.0	Mm <sub>2</sub> [Nm]	-	32	59	130	180	-
Pm <sub>1</sub> [kW]			-	0.04	0.08	0.17	0.21	-	
Rd			-	0.39	0.38	0.41	0.44	-	
Fr <sub>2</sub> [N]			-	2500	3450	5000	6200	-	
Fr <sub>1</sub> [N]			-	220	400	480	750	-	



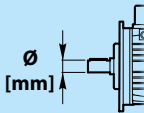
**Dati tecnici motoriduttore / Motorgearbox technical data**

$Pn_1$ (kW) 	$n_2$ (min <sup>-1</sup> ) 	$M_2$ (Nm)	$f_s$	$i$	VTS		 Ø [mm]
					030/044/049	063/075/086	
<b>0.06</b>							
M1 056 0.06 4P.. (n1 = 1400 min <sup>-1</sup> )	<b>35.0</b>	9.8	2.0	40	30	9	
	<b>23.3</b>	12.5	1.5	60	30	9	
	<b>20.0</b>	13.8	1.2	70	30	9	
<b>0.09</b>							
M1 056 0.09 2P.. (n1 = 2800 min <sup>-1</sup> )	<b>70.0</b>	8.1	1.8	40	30	9	
	<b>46.7</b>	10.9	1.3	60	30	9	
	<b>40.0</b>	11.8	2.0	70	30	9	
M1 056 0.09 4P.. (n1 = 1400 min <sup>-1</sup> )	<b>70.0</b>	9.0	2.1	20	30	9	
	<b>46.7</b>	12.0	1.7	30	30	9	
	<b>35.0</b>	14.7	1.3	40	30	9	
<b>0.12</b>							
M1 056 0.12 2P.. (n1 = 2800 min <sup>-1</sup> )	<b>140.0</b>	6.4	2.2	20	30	9	
	<b>93.3</b>	8.7	1.8	30	30	9	
	<b>70.0</b>	10.8	1.3	40	30	9	
	<b>46.7</b>	14.5	1.0	60	30	9	
	<b>40.0</b>	15.8	1.5	70	30	9	
M1 063 0.12 4P.. (n1 = 1400 min <sup>-1</sup> )	<b>200</b>	4.8	3.3	7	30	11	
	<b>140</b>	6.6	2.4	10	30	11	
	<b>93.3</b>	9.3	2.0	15	30	11	
	<b>70.0</b>	12.0	1.6	20	30	11	
	<b>46.7</b>	16.0	1.3	30	30	11	
	<b>40.0</b>	19.5	2.1	35	44	11	
	<b>35.0</b>	19.6	1.0	40	30	11	
	<b>30.4</b>	23.7	1.6	46	44	11	
	<b>23.3</b>	25.0	0.8	60	30	11	
	<b>23.3</b>	28.5	1.3	60	44	11	
	<b>23.3</b>	28.5	2.1	60	49	11	
	<b>20.0</b>	31.5	0.9	70	44	11	
	<b>20.0</b>	30.9	1.8	70	49	11	
	<b>17.5</b>	34.1	1.6	80	49	11	
	<b>14.0</b>	38.5	0.8	100	44	11	
<b>14.0</b>	38.5	1.1	100	49	11		
M1 063 0.12 6P.. (n1 = 900 min <sup>-1</sup> )	<b>128.5</b>	7.3	2.4	7	30	11	
	<b>90.0</b>	10.1	1.8	10	30	11	
	<b>60.0</b>	14.1	1.4	15	30	11	
	<b>45.0</b>	17.8	1.2	20	30	11	
	<b>32.1</b>	23.9	2.0	28	44	11	
	<b>30.0</b>	23.3	1.0	30	30	11	
	<b>25.7</b>	28.5	1.7	35	44	11	
	<b>22.5</b>	28.5	0.8	40	30	11	
	<b>20.0</b>	33.8	2.1	45	49	11	
	<b>19.6</b>	34.6	1.4	46	44	11	
	<b>15.0</b>	41.3	1.1	60	44	11	
	<b>15.0</b>	40.5	1.6	60	49	11	
	<b>12.9</b>	45.5	0.8	70	44	11	
	<b>12.9</b>	44.6	1.3	70	49	11	
	<b>11.3</b>	58.1	1.2	80	49	11	
<b>9.0</b>	53.5	0.9	100	49	11		

Dati tecnici motoriduttore / Motorgearbox technical data

$Pn_1$ (kW) 	$n_2$ (min <sup>-1</sup> ) 	$M_2$ (Nm)	$f_s$	$i$	VTS		
					030/044/049	063/075/086	
<b>0.18</b>							
M1 063 0.18 2P.. (n1 = 2800 min <sup>-1</sup> )	<b>400</b>	3.7	3.2	7	30	11	
	<b>280</b>	5.2	2.3	10	30	11	
	<b>186.7</b>	7.5	1.9	15	30	11	
	<b>140.0</b>	9.6	1.4	20	30	11	
	<b>93.3</b>	13.1	1.2	30	30	11	
	<b>80.0</b>	15.7	1.8	35	44	11	
	<b>70.0</b>	16.2	0.9	40	30	11	
	<b>60.9</b>	19.5	1.5	46	44	11	
	<b>46.7</b>	23.9	1.2	60	44	11	
	<b>46.7</b>	23.6	1.9	60	49	11	
	<b>40.0</b>	23.6	1.0	70	30	11	
	<b>40.0</b>	26.6	0.8	70	44	11	
	<b>40.0</b>	26.2	1.6	70	49	11	
	<b>35.0</b>	29.0	1.4	80	49	11	
	<b>28.0</b>	33.2	1.1	100	49	11	
	M1 063 0.18 4P.. (n1 = 1400 min <sup>-1</sup> )	<b>200.0</b>	7.2	2.2	7	30	11
<b>140.0</b>		9.9	1.7	10	30	11	
<b>100.0</b>		13.9	2.1	14	44	11	
<b>93.3</b>		14.0	1.3	15	30	11	
<b>70.0</b>		17.9	1.1	20	30	11	
<b>70.0</b>		18.9	2.1	20	44	11	
<b>50.0</b>		24.4	1.6	28	44	11	
<b>46.7</b>		23.9	0.8	30	30	11	
<b>40.0</b>		29.2	1.4	35	44	11	
<b>31.1</b>		34.8	1.8	45	49	11	
<b>30.4</b>		35.6	1.1	46	44	11	
<b>23.3</b>		42.7	0.9	60	44	11	
<b>23.3</b>		42.7	1.4	60	49	11	
<b>20.0</b>		46.4	1.2	70	49	11	
<b>17.5</b>		51.1	1.1	80	49	11	
<b>14.0</b>		57.7	0.7	100	49	11	
M1 071 0.18 6P.. (n1 = 900 min <sup>-1</sup> )	<b>64.3</b>	20.9	1.9	14	44	14	
	<b>45.0</b>	28.3	1.6	20	44	14	
	<b>37.5</b>	32.5	2.0	24	49	14	
	<b>32.1</b>	35.8	1.3	28	44	14	
	<b>25.7</b>	42.8	1.1	35	44	14	
	<b>25.0</b>	43.3	1.7	36	49	14	
	<b>20.0</b>	50.7	1.4	45	49	14	
	<b>19.6</b>	51.8	0.9	46	44	14	
	<b>15.0</b>	61.9	0.7	60	44	14	
	<b>15.0</b>	60.7	1.1	60	49	14	
	<b>12.9</b>	66.9	0.9	70	49	14	
	<b>11.3</b>	87.1	0.8	80	49	14	
	<b>0.25</b>						
M1 063 0.25 2P.. (n1 = 2800 min <sup>-1</sup> )	<b>400</b>	5.2	2.3	7	30	11	
	<b>280.0</b>	7.2	1.6	10	30	11	
	<b>186.7</b>	10.4	1.4	15	30	11	
	<b>140.0</b>	13.3	1.0	20	30	11	
	<b>140.0</b>	13.8	2.1	20	44	11	
	<b>100.0</b>	18.1	1.6	28	44	11	
	<b>93.3</b>	18.2	0.8	30	30	11	
	<b>80.0</b>	21.8	1.3	35	44	11	
	<b>62.2</b>	26.5	1.8	45	49	11	
	<b>60.9</b>	27.1	1.1	46	44	11	
	<b>46.7</b>	33.3	0.9	60	44	11	
	<b>46.7</b>	32.7	1.4	60	49	11	
	<b>40.0</b>	32.8	0.7	70	30	11	
	<b>40.0</b>	36.4	1.1	70	49	11	
	<b>35.0</b>	40.2	1.0	80	49	11	
	<b>28.0</b>	46.0	0.8	100	49	11	

**Dati tecnici motoriduttore / Motorgearbox technical data**




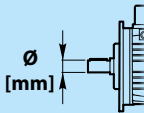
$Pn_1$ (kW) 	$n_2$ (min <sup>-1</sup> ) 	$M_2$ (Nm)	$f_s$	$i$	VTS		 Ø [mm]
					030/044/049	063/075/086	
<b>0.25</b>							
M1 071 0.25 4P.. (n1 = 1400 min <sup>-1</sup> )	<b>140.0</b>	14.3	2.0	10	44	14	
	<b>100.0</b>	19.3	1.5	14	44	14	
	<b>70.0</b>	26.3	1.5	20	44	14	
	<b>58.3</b>	30.7	2.0	24	49	14	
	<b>50.0</b>	33.9	1.2	28	44	14	
	<b>40.0</b>	40.6	1.0	35	44	14	
	<b>38.9</b>	41.1	1.7	36	49	14	
	<b>31.1</b>	48.3	1.3	45	49	14	
	<b>30.4</b>	49.4	0.8	46	44	14	
	<b>23.3</b>	59.3	1.0	60	49	14	
	<b>21.9</b>	66.6	1.9	64	63	14	
	<b>20.0</b>	64.5	0.8	70	49	14	
	<b>17.5</b>	70.9	0.8	80	49	14	
	<b>17.5</b>	76.4	1.5	80	63	14	
	<b>14.0</b>	87.0	1.3	100	63	14	
	<b>14.0</b>	93.8	1.6	100	75	14	
	M1 071 0.25 6P.. (n1 = 900 min <sup>-1</sup> )	<b>90.0</b>	21.8	1.8	10	44	14
<b>64.3</b>		29.0	1.4	14	44	14	
<b>50.0</b>		35.8	1.9	18	49	14	
<b>45.0</b>		39.3	1.2	20	44	14	
<b>37.5</b>		45.2	1.4	24	49	14	
<b>32.1</b>		49.8	1.0	28	44	14	
<b>32.1</b>		49.8	1.6	28	49	14	
<b>25.7</b>		59.4	0.8	35	44	14	
<b>25.0</b>		60.2	1.2	36	49	14	
<b>20.0</b>		70.4	1.0	45	49	14	
<b>20.0</b>		75.2	2.1	45	63	14	
<b>15.0</b>		84.4	0.8	60	49	14	
<b>14.1</b>		95.1	1.4	64	63	14	
<b>11.3</b>		110.4	1.1	80	63	14	
<b>11.3</b>		114.6	1.7	80	75	14	
<b>9.0</b>		122.0	1.0	100	63	14	
<b>9.0</b>		132.6	1.2	100	75	14	
<b>0.37</b>							
M1 071 0.37 2P.. (n1 = 2800 min <sup>-1</sup> )	<b>280.0</b>	11.0	2.0	10	44	14	
	<b>200.0</b>	14.8	1.5	14	44	14	
	<b>140.0</b>	20.4	1.4	20	44	14	
	<b>116.7</b>	23.9	2.0	24	49	14	
	<b>100.0</b>	26.9	1.1	28	44	14	
	<b>100.0</b>	26.5	2.1	28	49	14	
	<b>80.0</b>	32.2	0.9	35	44	14	
	<b>77.8</b>	32.7	1.6	36	49	14	
	<b>62.2</b>	39.2	1.2	45	49	14	
	<b>60.9</b>	40.1	0.7	46	44	14	
	<b>46.7</b>	48.5	0.9	60	49	14	
	<b>43.8</b>	54.1	2.0	64	63	14	
	<b>40.0</b>	53.9	0.8	70	49	14	
	<b>35.0</b>	62.6	1.6	80	63	14	
	<b>28.0</b>	73.2	1.4	100	63	14	
	<b>28.0</b>	77.0	1.8	100	75	14	
	M1 071 0.37 4P.. (n1 = 1400 min <sup>-1</sup> )	<b>200.0</b>	15.2	2.0	7	44	14
<b>140.0</b>		21.2	1.4	10	44	14	
<b>100.0</b>		28.6	1.0	14	44	14	
<b>77.8</b>		35.4	1.6	18	49	14	
<b>70.0</b>		38.9	1.0	20	44	14	
<b>58.3</b>		45.4	1.4	24	49	14	
<b>50.0</b>		50.2	0.8	28	44	14	
<b>50.0</b>		50.2	1.5	28	49	14	
<b>38.9</b>		60.9	1.1	36	49	14	
<b>31.1</b>		71.6	0.9	45	49	14	
<b>31.1</b>		76.1	1.9	45	63	14	
<b>23.3</b>		98.4	2.0	60	75	14	
<b>21.9</b>		98.5	1.3	64	63	14	
<b>17.5</b>		113.1	1.0	80	63	14	

Dati tecnici motoriduttore / Motorgearbox technical data

 $Pn_1$ (kW)	 $n_2$ ( $min^{-1}$ )	$M_2$ (Nm)	$f_s$	$i$	VTS		 $\varnothing$ [mm]
					030/044/049	063/075/086	
<b>0.37</b>							
M1 071 0.37 4P.. ( $n_1 = 1400 min^{-1}$ )	<b>17.5</b>	119.1	1.5	80	75	14	
	<b>14.0</b>	128.7	0.9	100	63	14	
	<b>14.0</b>	138.8	1.1	100	75	14	
M1 080 0.37 6P.. ( $n_1 = 900 min^{-1}$ )	<b>90.0</b>	32.2	2.0	10	49	19	
	<b>64.3</b>	42.9	1.6	14	49	19	
	<b>50.0</b>	53.0	1.3	18	49	19	
	<b>37.5</b>	66.9	1.0	24	49	19	
	<b>32.1</b>	73.7	1.1	28	49	19	
	<b>30.0</b>	82.4	2.1	30	63	19	
	<b>25.0</b>	89.0	0.8	36	49	19	
	<b>23.7</b>	98.5	1.7	38	63	19	
	<b>20.0</b>	111.3	1.4	45	63	19	
	<b>18.0</b>	123.7	1.9	50	75	19	
	<b>15.0</b>	141.3	1.5	60	75	19	
	<b>14.1</b>	140.7	0.9	64	63	19	
	<b>14.1</b>	158.3	1.9	64	86	19	
	<b>11.3</b>	163.3	0.8	80	63	19	
	<b>11.3</b>	169.6	1.2	80	75	19	
	<b>11.3</b>	185.3	1.5	80	86	19	
	<b>9.0</b>	196.3	0.8	100	75	19	
<b>0.55</b>							
M1 071 0.55 2P.. ( $n_1 = 2800 min^{-1}$ )	<b>400.0</b>	11.6	2.0	7	44	14	
	<b>280.0</b>	16.3	1.3	10	44	14	
	<b>200.0</b>	22.1	1.0	14	44	14	
	<b>200.0</b>	22.1	2.2	14	49	14	
	<b>155.6</b>	27.7	1.6	18	49	14	
	<b>140.0</b>	30.4	0.9	20	44	14	
	<b>116.7</b>	35.6	1.3	24	49	14	
	<b>100.0</b>	39.9	0.7	28	44	14	
	<b>100.0</b>	39.4	1.4	28	49	14	
	<b>77.8</b>	48.6	1.1	36	49	14	
	<b>62.2</b>	58.2	0.8	45	49	14	
	<b>62.2</b>	61.6	2.2	45	63	14	
	<b>43.8</b>	80.4	1.4	64	63	14	
	<b>35.0</b>	93.0	1.1	80	63	14	
	<b>35.0</b>	97.5	1.6	80	75	14	
	<b>28.0</b>	108.8	0.9	100	63	14	
	<b>28.0</b>	114.4	1.2	100	75	14	
M1 080 0.55 4P.. ( $n_1 = 1400 min^{-1}$ )	<b>140.0</b>	31.5	1.8	10	49	19	
	<b>100.0</b>	42.5	1.6	14	49	19	
	<b>77.8</b>	52.7	1.1	18	49	19	
	<b>58.3</b>	67.5	0.9	24	49	19	
	<b>58.3</b>	70.2	2.2	24	63	19	
	<b>50.0</b>	74.6	1.0	28	49	19	
	<b>46.7</b>	83.3	2.0	30	63	19	
	<b>38.9</b>	90.5	0.8	36	49	19	
	<b>36.8</b>	99.8	1.5	38	63	19	
	<b>31.1</b>	113.1	1.3	45	63	19	
	<b>28.0</b>	127.6	1.7	50	75	19	
	<b>25.0</b>	147.1	2.0	56	86	19	
	<b>23.3</b>	146.3	1.4	60	75	19	
	<b>21.9</b>	146.5	0.9	64	63	19	
	<b>21.9</b>	163.3	1.7	64	86	19	
	<b>17.5</b>	177.1	1.0	80	75	19	
	<b>17.5</b>	192.1	1.3	80	86	19	
<b>14.0</b>	206.3	0.7	100	75	19		
<b>14.0</b>	221.4	1.0	100	86	19		





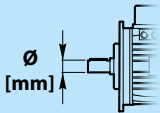
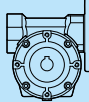
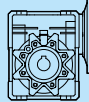
**Dati tecnici motoriduttore / Motorgearbox technical data**

$Pn_1$ (kW) 	$n_2$ (min <sup>-1</sup> ) 	$M_2$ (Nm) 	$f_s$	$i$	VTS		 Ø [mm]
					030/044/049	063/075/086	
<b>0.55</b>							
M1 080 0.55 6P.. (n1 = 900 min <sup>-1</sup> )	<b>128.6</b>	34.7	1.8	7	49	19	
	<b>90.0</b>	47.9	1.4	10	49	19	
	<b>64.3</b>	63.7	1.1	14	49	19	
	<b>50.0</b>	78.8	0.9	18	49	19	
	<b>47.4</b>	86.5	1.8	19	63	19	
	<b>37.5</b>	105.1	1.6	24	63	19	
	<b>32.1</b>	109.5	0.7	28	49	19	
	<b>30.0</b>	122.6	1.4	30	63	19	
	<b>30.0</b>	129.6	2.2	30	75	19	
	<b>23.7</b>	146.4	1.1	38	63	19	
	<b>22.5</b>	158.7	1.8	40	75	19	
	<b>22.5</b>	165.7	2.2	40	86	19	
	<b>20.0</b>	165.5	0.9	45	63	19	
	<b>19.6</b>	185.2	2.0	46	86	19	
	<b>18.0</b>	183.8	1.3	50	75	19	
	<b>16.1</b>	215.7	1.5	56	86	19	
	<b>15.0</b>	210.1	1.0	60	75	19	
	<b>14.1</b>	235.3	1.3	64	86	19	
	<b>11.3</b>	252.1	0.8	80	75	19	
	<b>11.3</b>	275.5	1.0	80	86	19	
<b>0.75</b>							
M3 080 0.75 2P.. (n1 = 2800 min <sup>-1</sup> )	<b>280.0</b>	22.0	2.0	10	49	19	
	<b>200.0</b>	30.1	1.6	14	49	19	
	<b>155.6</b>	37.8	1.2	18	49	19	
	<b>116.7</b>	48.5	1.0	24	49	19	
	<b>100.0</b>	53.7	1.0	28	49	19	
	<b>93.3</b>	59.9	2.1	30	63	19	
	<b>77.8</b>	66.3	0.8	36	49	19	
	<b>73.7</b>	72.9	1.9	38	63	19	
	<b>62.2</b>	84.0	1.6	45	63	19	
	<b>56.0</b>	93.4	2.1	50	75	19	
	<b>46.7</b>	107.4	1.7	60	75	19	
	<b>43.8</b>	109.7	1.0	64	63	19	
	<b>43.8</b>	119.5	2.1	64	86	19	
	<b>35.0</b>	126.9	0.8	80	63	19	
	<b>35.0</b>	133.0	1.2	80	75	19	
	<b>35.0</b>	141.2	1.6	80	86	19	
	<b>28.0</b>	156.0	0.9	100	75	19	
	<b>28.0</b>	166.3	1.2	100	86	19	
	M3 080 0.75 4P.. (n1 = 1400 min <sup>-1</sup> )	<b>200.0</b>	30.8	1.7	7	49	19
		<b>140.0</b>	43.0	1.3	10	49	19
<b>100.0</b>		58.0	1.2	14	49	19	
<b>77.8</b>		71.8	0.8	18	49	19	
<b>73.7</b>		78.7	1.9	19	63	19	
<b>58.3</b>		95.8	1.6	24	63	19	
<b>50.0</b>		101.7	0.7	28	49	19	
<b>46.7</b>		113.6	1.5	30	63	19	
<b>36.8</b>		136.1	1.1	38	63	19	
<b>35.0</b>		147.3	1.7	40	75	19	
<b>35.0</b>		153.5	2.1	40	86	19	
<b>31.1</b>		154.2	0.9	45	63	19	
<b>30.4</b>		171.8	2.0	46	86	19	
<b>28.0</b>		173.9	1.3	50	75	19	
<b>25.0</b>		200.6	1.5	56	86	19	
<b>23.3</b>		199.5	1.0	60	75	19	
<b>21.9</b>		222.7	1.3	64	86	19	
<b>17.5</b>		241.5	0.7	80	75	19	
<b>17.5</b>		261.9	1.0	80	86	19	
<b>14.0</b>		301.8	0.8	100	86	19	



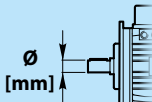
Dati tecnici motoriduttore / Motorgearbox technical data

 $Pn_1$ (kW)	 $n_2$ ( $min^{-1}$ )	$M_2$ (Nm)	$f_s$	$i$	VTS		 $\varnothing$ [mm]
					030/044/049	063/075/086	
<b>0.75</b>							
M3 090 0.75 6P.. ( $n_1 = 900 min^{-1}$ )	<b>75.0</b>	78.3	1.9	12	63	24	
	<b>60.0</b>	95.5	1.7	15	63	24	
	<b>47.4</b>	117.9	1.3	19	63	24	
	<b>45.0</b>	127.3	2.1	20	75	24	
	<b>37.5</b>	143.3	1.1	24	63	24	
	<b>36.0</b>	153.2	1.7	25	75	24	
	<b>30.0</b>	167.1	1.0	30	63	24	
	<b>30.0</b>	176.7	1.6	30	75	24	
	<b>23.7</b>	199.6	0.8	38	63	24	
	<b>22.5</b>	216.5	1.3	40	75	24	
	<b>22.5</b>	226.0	1.6	40	86	24	
	<b>19.6</b>	252.6	1.5	46	86	24	
	<b>18.0</b>	250.7	0.9	50	75	24	
	<b>16.1</b>	294.1	1.1	56	86	24	
	<b>15.0</b>	286.5	0.7	60	75	24	
	<b>14.1</b>	320.9	0.9	64	86	24	
<b>11.3</b>	375.6	0.7	80	86	24		
<b>1.1</b>							
M3 080 1.1 2P.. ( $n_1 = 2800 min^{-1}$ )	<b>400.0</b>	23.1	1.8	7	49	19	
	<b>280.0</b>	32.3	1.4	10	49	19	
	<b>200.0</b>	44.1	1.1	14	49	19	
	<b>155.6</b>	55.4	0.8	18	49	19	
	<b>147.4</b>	59.9	2.2	19	63	19	
	<b>116.7</b>	73.8	1.7	24	63	19	
	<b>100.0</b>	78.8	0.7	28	49	19	
	<b>93.3</b>	87.8	1.5	30	63	19	
	<b>73.7</b>	106.9	1.3	38	63	19	
	<b>70.0</b>	115.6	1.9	40	75	19	
	<b>62.2</b>	123.2	1.1	45	63	19	
	<b>56.0</b>	136.9	1.5	50	75	19	
	<b>50.0</b>	157.6	1.6	56	86	19	
	<b>46.7</b>	157.6	1.2	60	75	19	
	<b>43.8</b>	175.3	1.5	64	86	19	
	<b>35.0</b>	195.1	0.8	80	75	19	
<b>35.0</b>	207.1	1.1	80	86	19		
<b>28.0</b>	243.9	0.8	100	86	19		
M3 090 1.1 4P.. ( $n_1 = 1400 min^{-1}$ )	<b>140.0</b>	64.5	2.2	10	63	24	
	<b>116.7</b>	76.5	1.8	12	63	24	
	<b>93.3</b>	93.4	1.6	15	63	24	
	<b>73.7</b>	115.5	1.3	19	63	24	
	<b>70.0</b>	124.6	2.0	20	75	24	
	<b>58.3</b>	140.5	1.1	24	63	24	
	<b>56.0</b>	150.1	1.6	25	75	24	
	<b>46.7</b>	166.6	1.0	30	63	24	
	<b>46.7</b>	173.3	1.5	30	75	24	
	<b>46.7</b>	171.1	2.2	30	86	24	
	<b>36.8</b>	199.6	0.8	38	63	24	
	<b>35.0</b>	216.1	1.2	40	75	24	
	<b>35.0</b>	225.1	1.5	40	86	24	
	<b>30.4</b>	252.0	1.4	46	86	24	
	<b>28.0</b>	255.1	0.9	50	75	24	
	<b>25.0</b>	294.1	1.0	56	86	24	
<b>21.9</b>	326.6	0.9	64	86	24		
M3 090 1.1 6P.. ( $n_1 = 900 min^{-1}$ )	<b>128.6</b>	71.1	1.8	7	63	24	
	<b>90.0</b>	98.0	1.5	10	63	24	
	<b>75.0</b>	114.9	1.3	12	63	24	
	<b>60.0</b>	140.1	1.2	15	63	24	
	<b>60.0</b>	145.3	1.8	15	75	24	
	<b>47.4</b>	173.0	0.9	19	63	24	



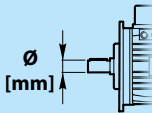


**Dati tecnici motoriduttore / Motorgearbox technical data**

 $Pn_1$ (kW)	 $n_2$ ( $\text{min}^{-1}$ )	$M_2$ (Nm)	$f_s$	$i$	<b>VTS</b>		 $\varnothing$ [mm]
					 030/044/049	 063/075/086	
<b>1.1</b>							
M3 090 1.1 6P... ( $n_1 = 900 \text{ min}^{-1}$ )	<b>45.0</b>	186.8	1.5	20	75	24	
	<b>45.0</b>	189.1	1.8	20	86	24	
	<b>39.1</b>	214.8	1.6	23	86	24	
	<b>37.5</b>	210.1	0.8	24	63	24	
	<b>36.0</b>	224.7	1.2	25	75	24	
	<b>30.0</b>	259.1	1.1	30	75	24	
	<b>30.0</b>	255.6	1.5	30	86	24	
	<b>22.5</b>	317.5	0.9	40	75	24	
	<b>22.5</b>	331.5	1.1	40	86	24	
	<b>19.6</b>	370.5	1.0	46	86	24	
	<b>16.1</b>	431.4	0.8	56	86	24	
	<b>1.5</b>						
M3 090 1.5 2P... ( $n_1 = 2800 \text{ min}^{-1}$ )	<b>186.7</b>	66.0	1.9	15	63	24	
	<b>147.4</b>	81.7	1.6	19	63	24	
	<b>116.7</b>	100.7	1.3	24	63	24	
	<b>112.0</b>	106.2	2.1	25	75	24	
	<b>93.3</b>	119.7	1.1	30	63	24	
	<b>93.3</b>	124.3	1.9	30	75	24	
	<b>73.7</b>	145.8	0.9	38	63	24	
	<b>70.0</b>	157.6	1.4	40	75	24	
	<b>70.0</b>	161.7	1.8	40	86	24	
	<b>62.2</b>	168.1	0.8	45	63	24	
	<b>60.9</b>	181.2	1.7	46	86	24	
	<b>56.0</b>	186.7	1.1	50	75	24	
	<b>50.0</b>	214.9	1.2	56	86	24	
	<b>46.7</b>	214.9	0.9	60	75	24	
	<b>43.8</b>	239.0	1.1	64	86	24	
	<b>35.0</b>	282.4	0.8	80	86	24	
M3 090 1.5 4P... ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>200.0</b>	63.0	1.9	7	63	24	
	<b>140.0</b>	88.0	1.6	10	63	24	
	<b>116.7</b>	104.4	1.3	12	63	24	
	<b>93.3</b>	127.4	1.2	15	63	24	
	<b>93.3</b>	130.5	1.9	15	75	24	
	<b>73.7</b>	157.5	0.9	19	63	24	
	<b>70.0</b>	169.9	1.5	20	75	24	
	<b>70.0</b>	171.9	1.9	20	86	24	
	<b>60.9</b>	193.0	1.7	23	86	24	
	<b>58.3</b>	191.5	0.8	24	63	24	
	<b>56.0</b>	204.6	1.2	25	75	24	
	<b>46.7</b>	227.2	0.7	30	63	24	
	<b>46.7</b>	236.4	1.1	30	75	24	
	<b>46.7</b>	233.3	1.6	30	86	24	
	<b>35.0</b>	294.7	0.9	40	75	24	
	<b>35.0</b>	307.0	1.1	40	86	24	
<b>30.4</b>	343.6	1.0	46	86	24		
<b>25.0</b>	401.1	0.7	56	86	24		
M3 100 1.5 6P... ( $n_1 = 900 \text{ min}^{-1}$ )	<b>128.6</b>	98.0	2.1	7	75	28	
	<b>90.0</b>	136.9	1.8	10	75	28	
	<b>60.0</b>	198.2	1.3	15	75	28	
	<b>60.0</b>	195.8	1.8	15	86	28	
	<b>45.0</b>	254.7	1.1	20	75	28	
	<b>45.0</b>	257.9	1.3	20	86	28	
	<b>39.1</b>	292.9	1.2	23	86	28	
	<b>36.0</b>	306.4	0.9	25	75	28	
	<b>30.0</b>	353.4	0.8	30	75	28	
	<b>30.0</b>	348.6	1.1	30	86	28	
	<b>22.5</b>	452.0	0.8	40	86	28	
	<b>19.6</b>	505.2	0.7	46	86	28	

Dati tecnici motoriduttore / Motorgearbox technical data

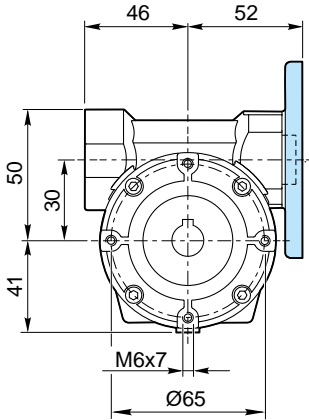
$Pn_1$ (kW) 	$n_2$ (min <sup>-1</sup> ) 	$M_2$ (Nm)	$f_s$	$i$	VTS		 Ø [mm]
					030/044/049	063/075/086	
M3 090 2.2 2P... (n1 = 2800 min <sup>-1</sup> )	<b>280.0</b>	66.0	1.9	10	63	24	
	<b>233.3</b>	78.3	1.6	12	63	24	
	<b>186.7</b>	96.8	1.3	15	63	24	
	<b>147.4</b>	119.8	1.1	19	63	24	
	<b>140.0</b>	129.1	1.7	20	75	24	
	<b>121.7</b>	146.7	2.0	23	86	24	
	<b>116.7</b>	147.7	0.9	24	63	24	
	<b>112.0</b>	155.7	1.5	25	75	24	
	<b>93.3</b>	175.6	0.7	30	63	24	
	<b>93.3</b>	182.3	1.3	30	75	24	
	<b>93.3</b>	182.3	1.8	30	86	24	
	<b>70.0</b>	231.1	1.0	40	75	24	
	<b>70.0</b>	237.1	1.2	40	86	24	
	<b>60.9</b>	265.8	1.1	46	86	24	
	<b>56.0</b>	273.9	0.7	50	75	24	
	<b>50.0</b>	315.2	0.8	56	86	24	
	<b>43.8</b>	350.6	0.7	64	86	24	
M3 100 2.2 4P... (n1 = 1400 min <sup>-1</sup> )	<b>200.0</b>	94.5	2.0	7	75	28	
	<b>140.0</b>	132.1	1.7	10	75	28	
	<b>140.0</b>	132.1	2.2	10	86	28	
	<b>93.3</b>	191.3	1.3	15	75	28	
	<b>93.3</b>	191.3	1.7	15	86	28	
	<b>70.0</b>	249.1	1.0	20	75	28	
	<b>70.0</b>	252.1	1.3	20	86	28	
	<b>60.9</b>	283.0	1.1	23	86	28	
	<b>56.0</b>	300.1	0.8	25	75	28	
	<b>46.7</b>	346.7	0.8	30	75	28	
	<b>46.7</b>	342.2	1.1	30	86	28	
	M3 112 2.2 6P... (n1 = 900 min <sup>-1</sup> )	<b>128.6</b>	143.8	1.4	7	75	28
<b>128.6</b>		143.8	1.9	7	86	28	
<b>90.0</b>		200.8	1.2	10	75	28	
<b>90.0</b>		200.8	1.5	10	86	28	
<b>60.0</b>		290.6	0.9	15	75	28	
<b>60.0</b>		287.1	1.2	15	86	28	
<b>45.0</b>		373.5	0.7	20	75	28	
<b>45.0</b>		378.2	0.9	20	86	28	
<b>39.1</b>		429.5	0.8	23	86	28	
<b>30.0</b>		511.2	0.8	30	86	28	

**Dati tecnici motoriduttore / Motorgearbox technical data**

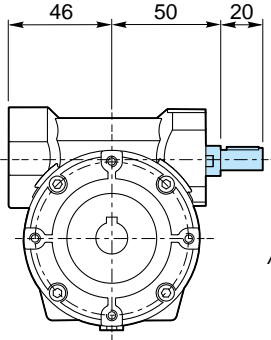
 $Pn_1$ (kW)	 $n_2$ ( $\text{min}^{-1}$ )	$M_2$ (Nm)	$f_s$	$i$	<b>VTS</b>		 $\varnothing$ [mm]
					 030/044/049	 063/075/086	
<b>3.0</b>							
M3 100 3.0 2P... ( $n_1 = 2800 \text{ min}^{-1}$ )	<b>186.7</b>	135.1	1.7	15	75	28	
	<b>140.0</b>	176.0	1.3	20	75	28	
	<b>140.0</b>	176.0	1.6	20	86	28	
	<b>121.7</b>	200.0	1.4	23	86	28	
	<b>112.0</b>	212.3	1.1	25	75	28	
	<b>93.3</b>	248.6	1.0	30	75	28	
	<b>93.3</b>	248.6	1.3	30	86	28	
	<b>70.0</b>	323.3	0.9	40	86	28	
	<b>60.9</b>	362.4	0.8	46	86	28	
M3 100 3.0 4P... ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>200.0</b>	128.9	1.5	7	75	28	
	<b>200.0</b>	127.5	2.0	7	86	28	
	<b>140.0</b>	180.1	1.3	10	75	28	
	<b>140.0</b>	180.1	1.6	10	86	28	
	<b>93.3</b>	260.9	1.0	15	75	28	
	<b>93.3</b>	260.9	1.3	15	86	28	
	<b>70.0</b>	339.7	0.7	20	75	28	
	<b>70.0</b>	343.8	0.9	20	86	28	
	<b>60.9</b>	386.0	0.8	23	86	28	
<b>46.7</b>	466.6	0.8	30	86	28		
<b>4.0</b>							
M3 112 4.0 2P... ( $n_1 = 2800 \text{ min}^{-1}$ )	<b>400.0</b>	86.9	2.0	7	75	28	
	<b>280.0</b>	122.8	1.7	10	75	28	
	<b>280.0</b>	122.8	2.1	10	86	28	
	<b>186.7</b>	180.1	1.3	15	75	28	
	<b>186.7</b>	178.0	1.7	15	86	28	
	<b>140.0</b>	234.7	1.0	20	75	28	
	<b>140.0</b>	234.7	1.2	20	86	28	
	<b>121.7</b>	266.7	1.1	23	86	28	
	<b>112.0</b>	283.1	0.8	25	75	28	
	<b>93.3</b>	331.5	0.7	30	75	28	
	<b>93.3</b>	331.5	1.0	30	86	28	
	M3 112 4.0 4P... ( $n_1 = 1400 \text{ min}^{-1}$ )	<b>200.0</b>	171.9	1.1	7	75	28
<b>200.0</b>		170.0	1.5	7	86	28	
<b>140.0</b>		240.1	1.0	10	75	28	
<b>140.0</b>		240.1	1.2	10	86	28	
<b>93.3</b>		347.9	0.7	15	75	28	
<b>93.3</b>		347.9	1.0	15	86	28	

## Dimensioni riduttori a vite senza fine / Dimensions worm gearboxes

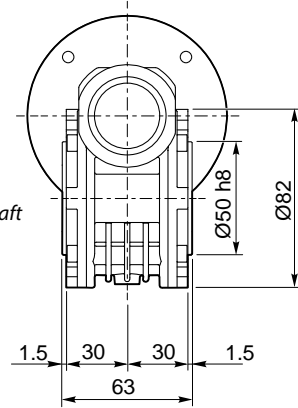
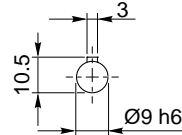
**VTS 030 P ...**



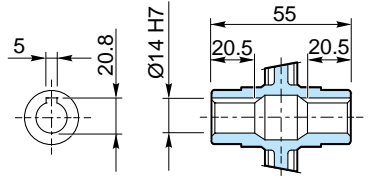
**VES 030 P ...**



Albero entrata / Input shaft

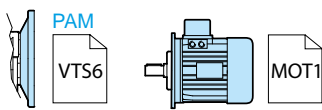


Albero uscita / Output shaft

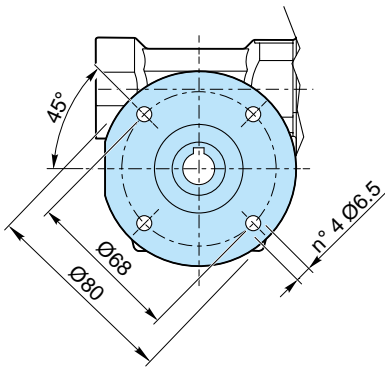


**Kg**  
0.9 kg

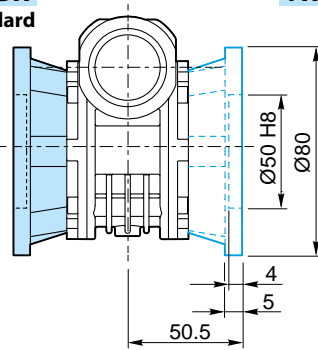
**oil**  
0.035 l



**VTS 030 FXT / VES 030 FXT**

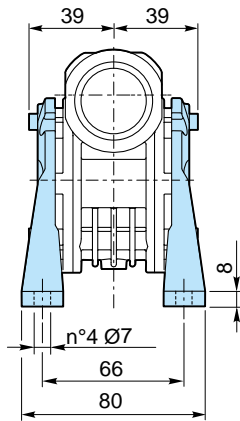
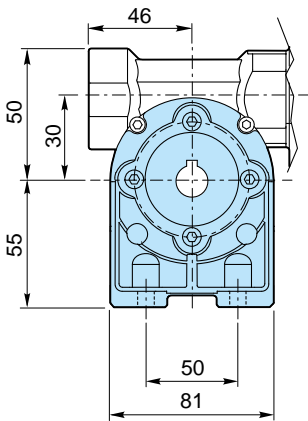


**FXT DX**  
Standard

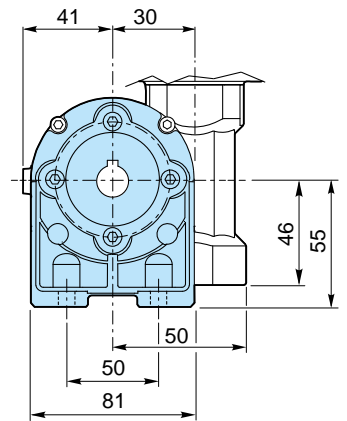
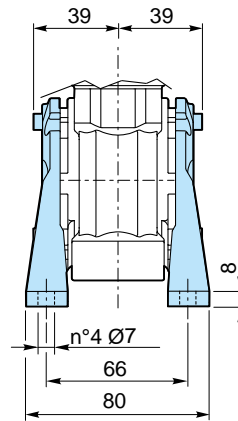


**FXT SX**

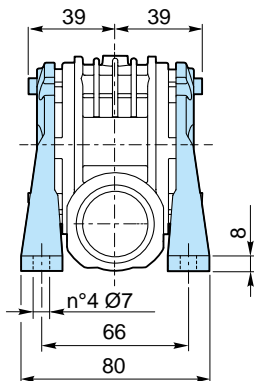
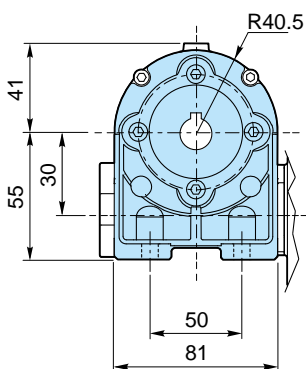
**VTS 030 PXA... / VES 030 PXA...**

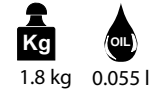
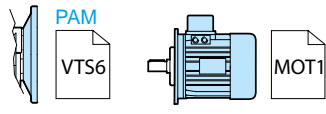
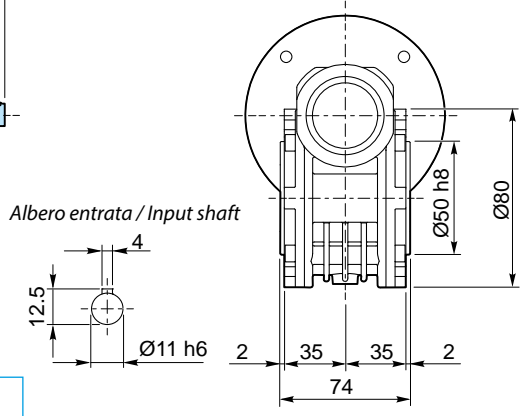
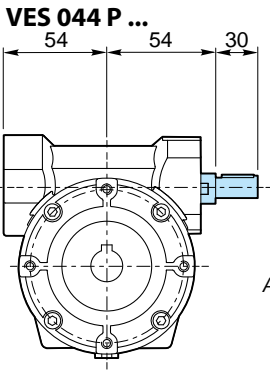
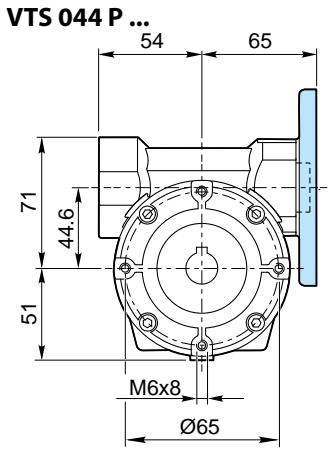


**VTS 030 PXV... / VES 030 PXV...**

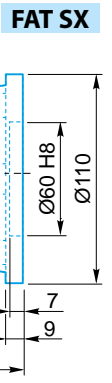
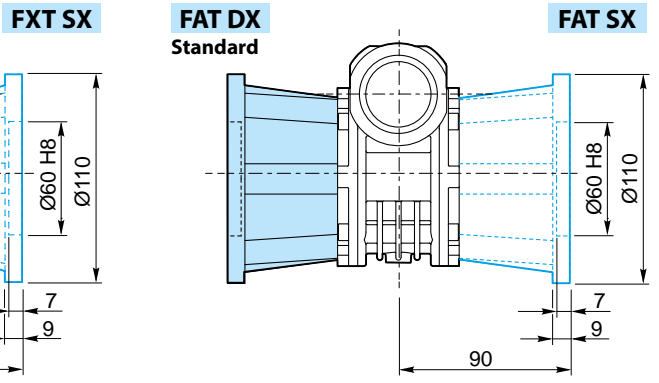
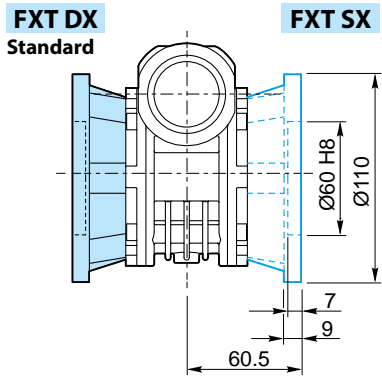
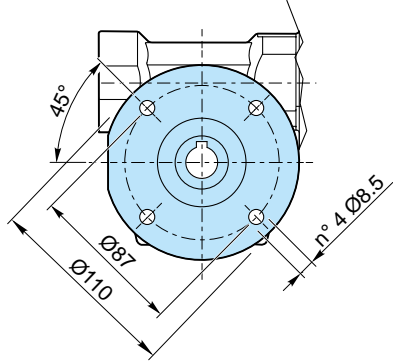


**VTS 030 PXN... / VES 030 PXN...**

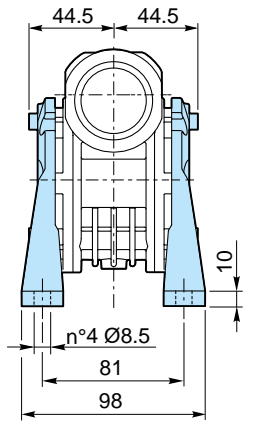
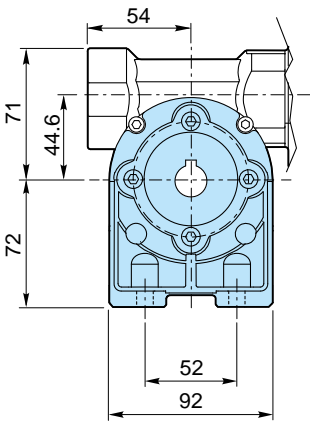




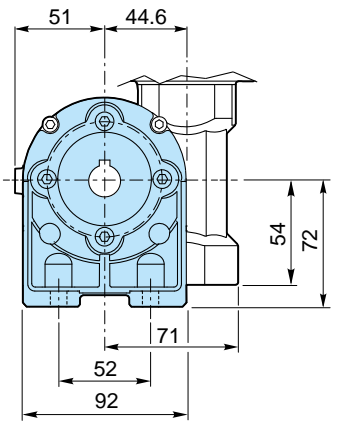
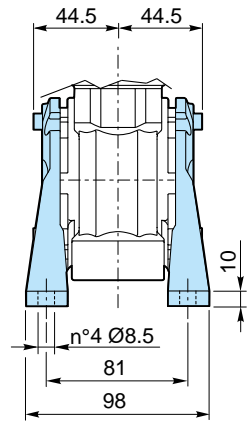
**VTS 044 F... / VES 044 F...**



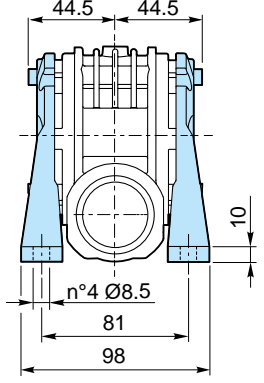
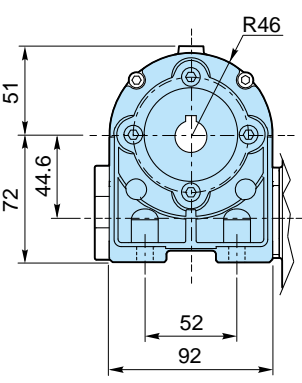
**VTS 044 PXA... / VES 044 PXA...**



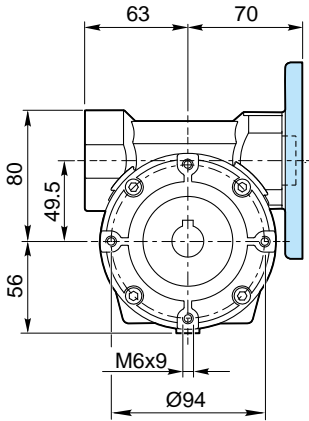
**VTS 044 PXV... / VES 044 PXV...**



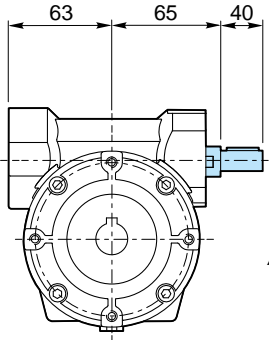
**VTS 044 PXN... / VES 044 PXN...**



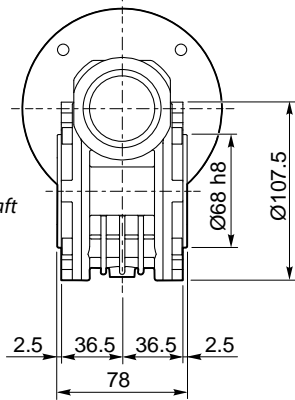
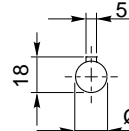
VTS 049 P ...



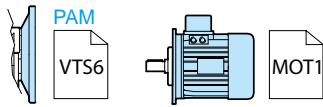
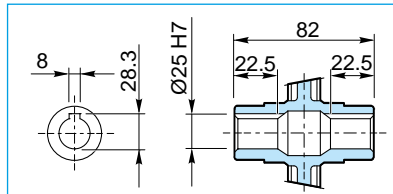
VES 049 P ...



Albero entrata / Input shaft

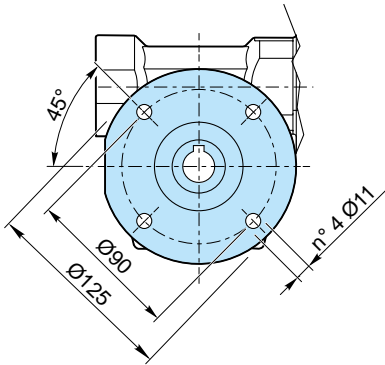


Albero uscita / Output shaft

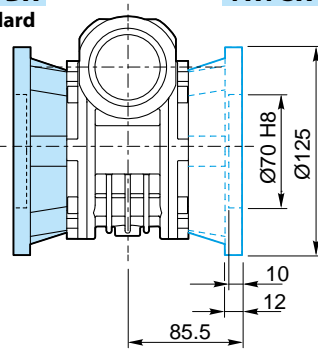


**Kg** 2.5 kg  
**OIL** 0.09 l

VTS 049 F... / VES 049 F...

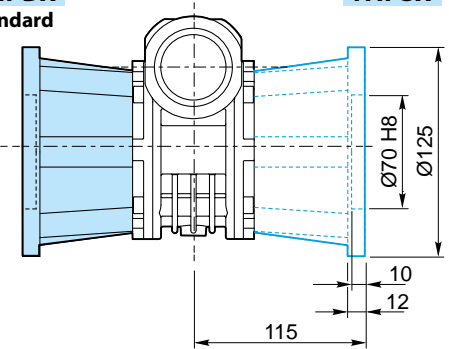


**FXT DX**  
Standard



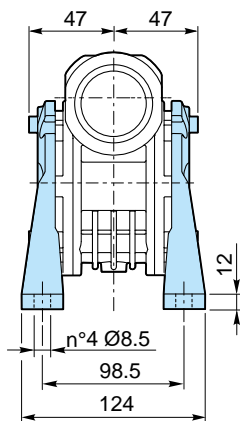
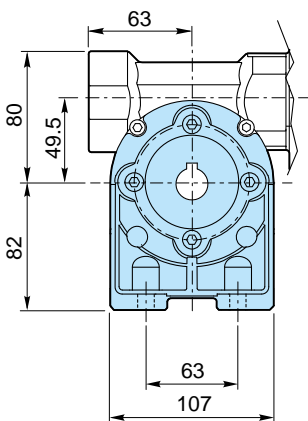
**FXT SX**

**FAT DX**  
Standard

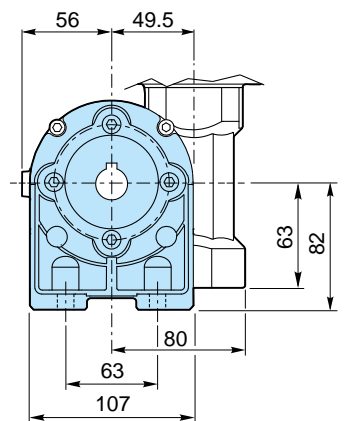
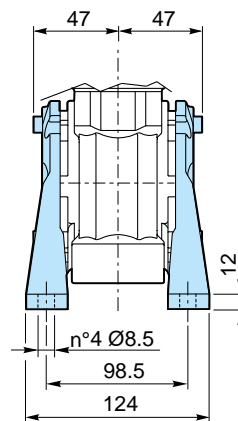


**FAT SX**

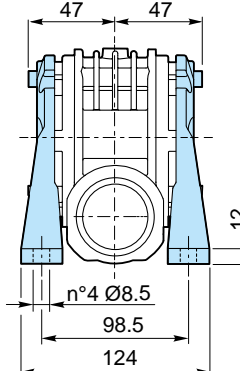
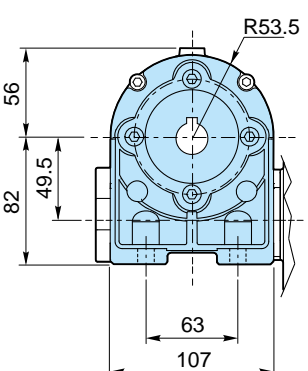
VTS 049 PXA... / VES 049 PXA...



VTS 049 PXV... / VES 049 PXV...



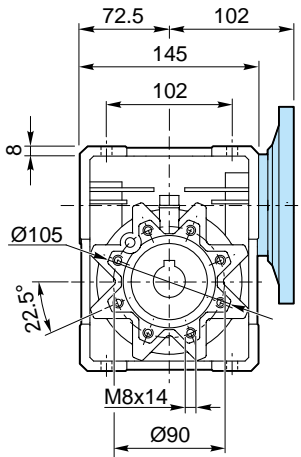
VTS 049PXN... / VES 049 PXN...



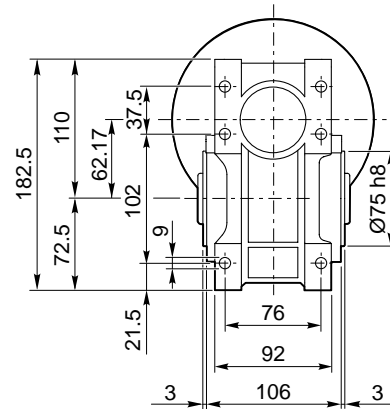
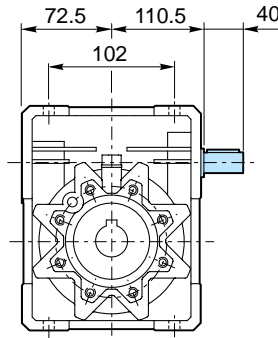


## Dimensioni riduttori a vite senza fine / Dimensions worm gearboxes

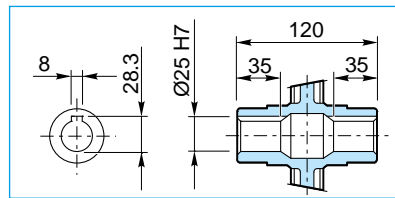
VTS 063 P ...



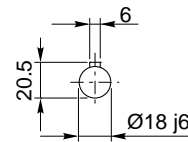
VES 063 P ...



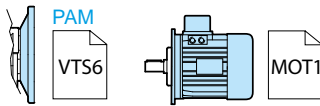
Albero uscita / Output shaft



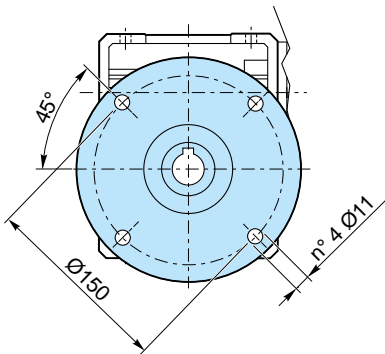
Albero entrata / Input shaft



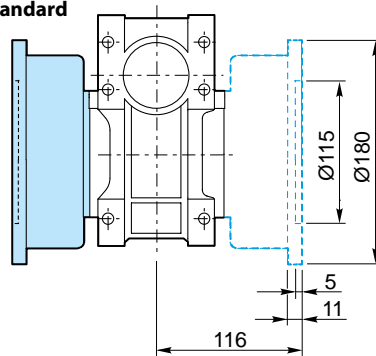
**Kg** 5.2 kg **OIL** 0.30 l



VTS 063 FXT / VES 063 FXT

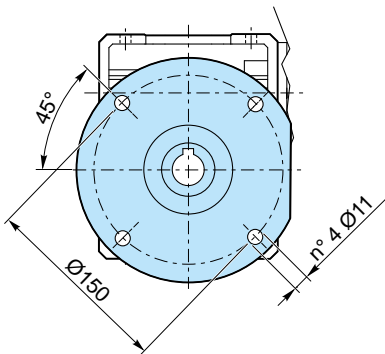


**FXT DX**  
Standard

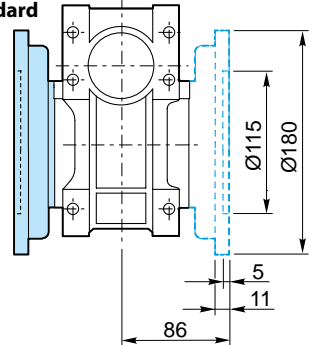


**FXT SX**

VTS 063 FCT / VES 063 FCT

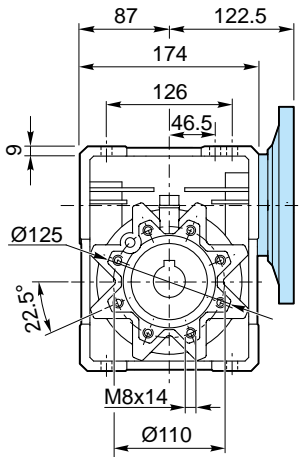


**FCT DX**  
Standard

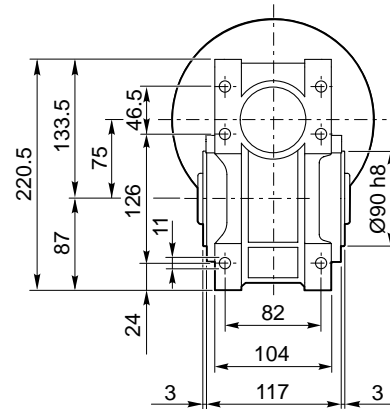
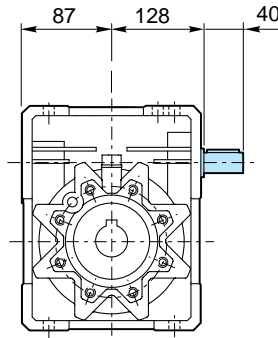


**FCT SX**

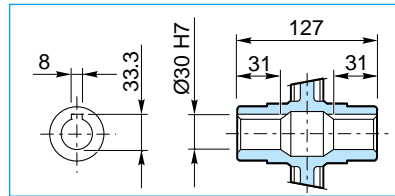
### VTS 075 P ...



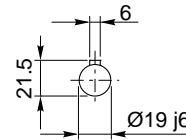
### VES 075 P ...



Albero uscita / Output shaft

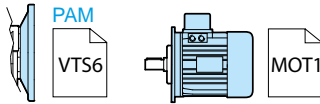


Albero entrata / Input shaft

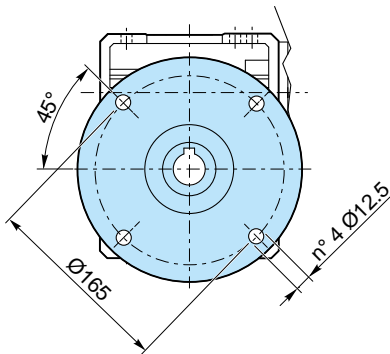


**Kg**  
8.2 kg

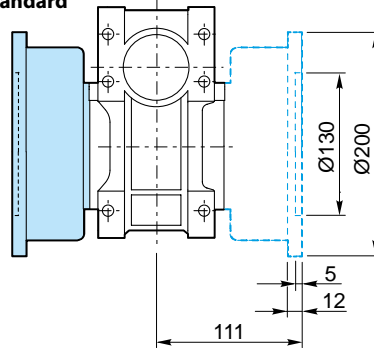
**OIL**  
0.55 l



### VTS 075 FXT / VES 075 FXT

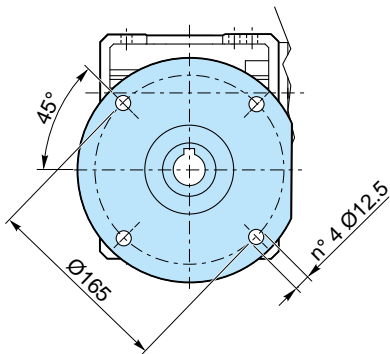


**FXT DX**  
Standard

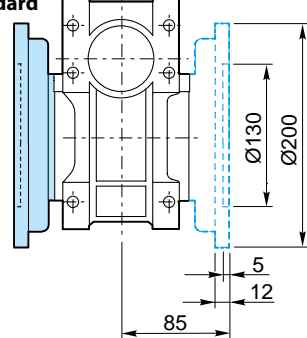


**FXT SX**

### VTS 075 FCT / VES 075 FCT



**FCT DX**  
Standard

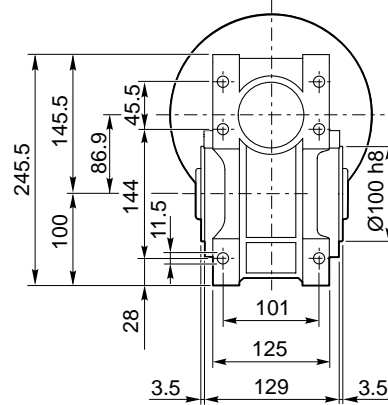
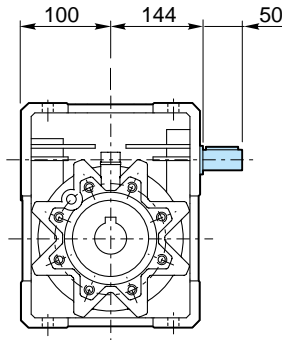
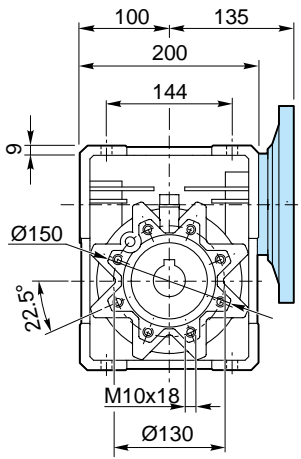


**FCT SX**

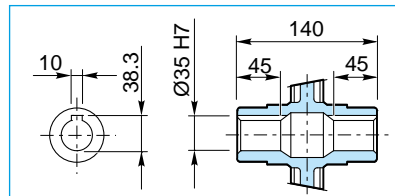
## Dimensioni riduttori a vite senza fine / Dimensions worm gearboxes

VTS 086 P ...

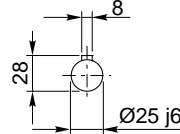
VES 086 P ...



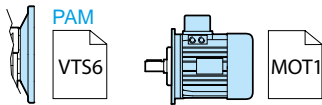
Albero uscita / Output shaft



Albero entrata / Input shaft



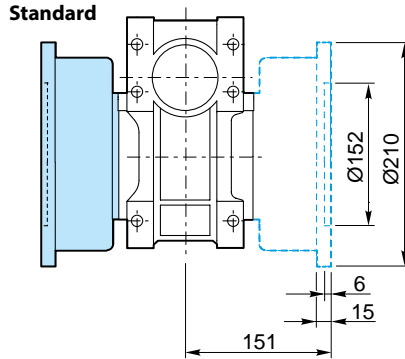
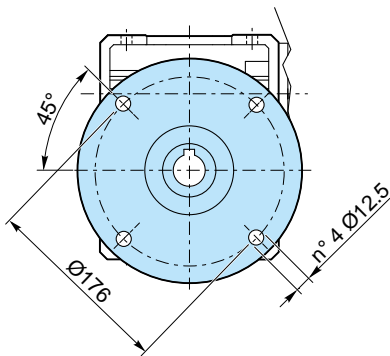
**Kg** 11.2 kg  
**OIL** 1.0 l



VTS 086 FXT / VES 086 FXT

**FXT DX**  
Standard

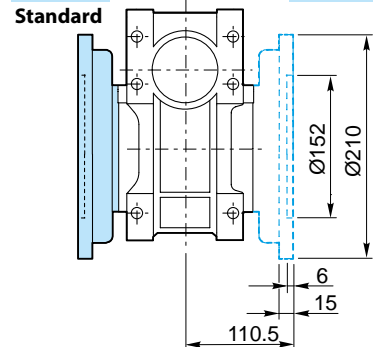
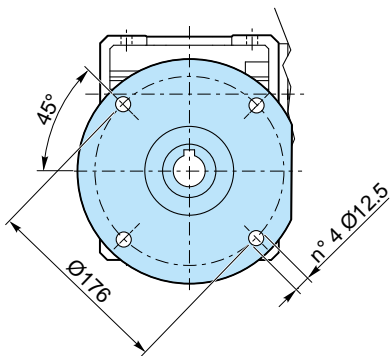
**FXT SX**



VTS 086 FCT / VES 086 FCT

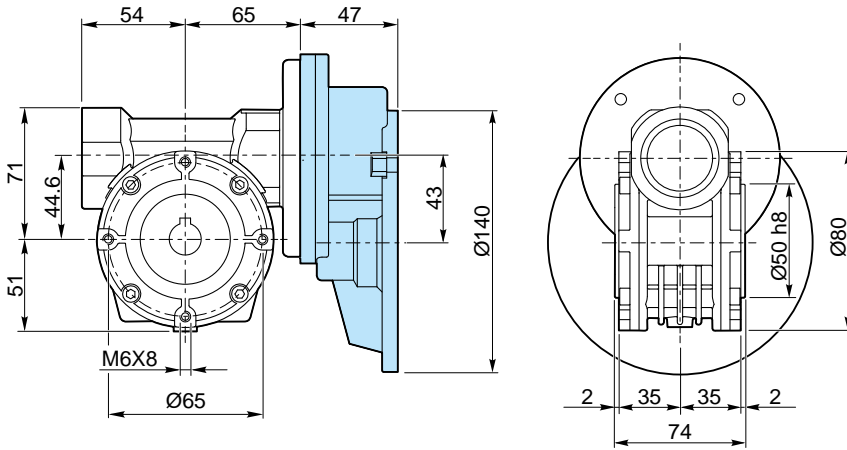
**FCT DX**  
Standard

**FCT SX**

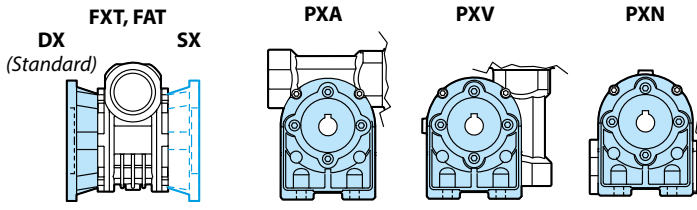
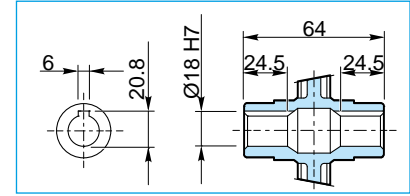


## Dimensioni riduttori a vite senza con precoppia / Dimensions helical worm gearboxes

### VRT 063/044 P ...



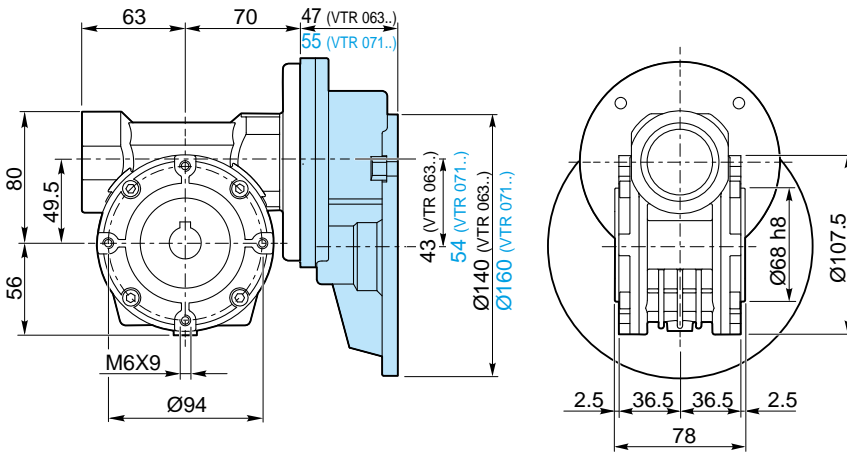
Albero uscita / Output shaft



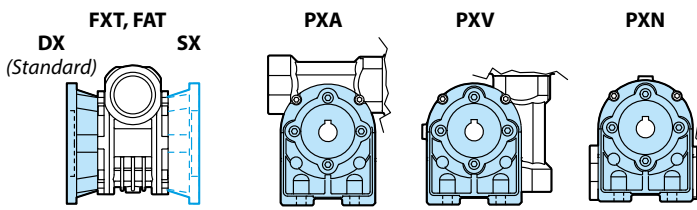
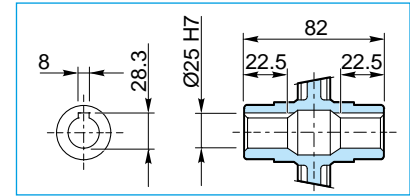
VTS 26

### VRT 063/049 P ...

### VRT 071/049 P ...



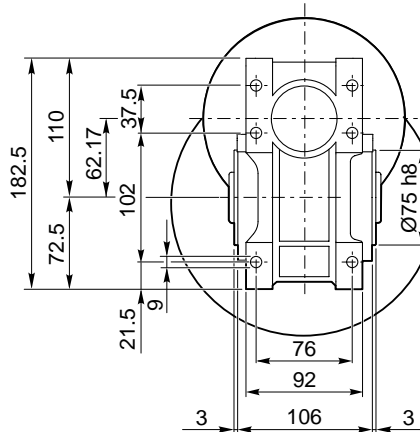
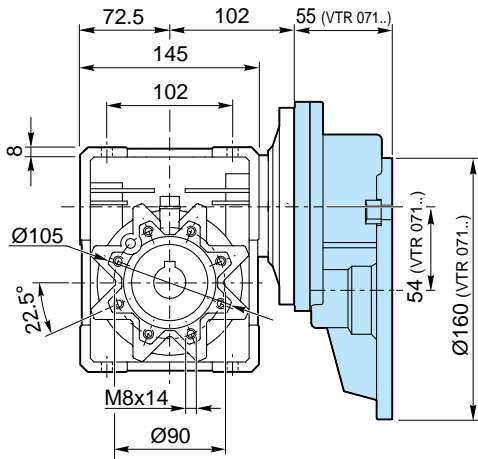
Albero uscita / Output shaft



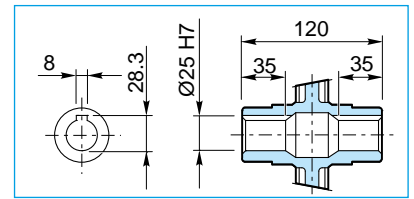
VTS 27

## Dimensioni riduttori a vite senza con precoppia / Dimensions helical worm gearboxes

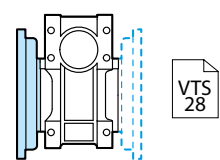
**VRT 071/063 P ...**



Albero uscita / Output shaft

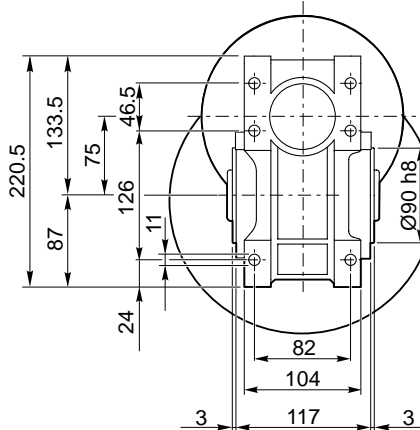
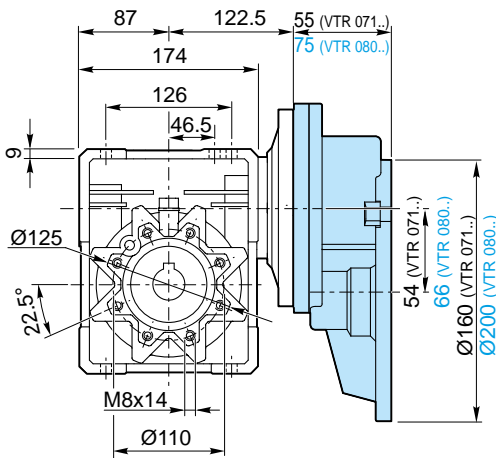


FXT, FCT

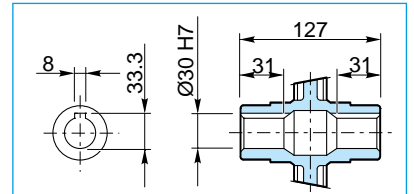


**VRT 071/075 P ...**

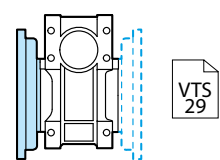
**VRT 080/075 P ...**



Albero uscita / Output shaft

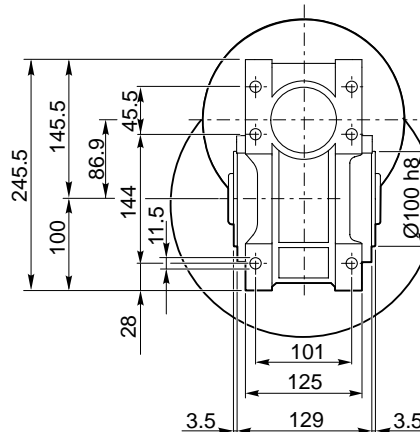
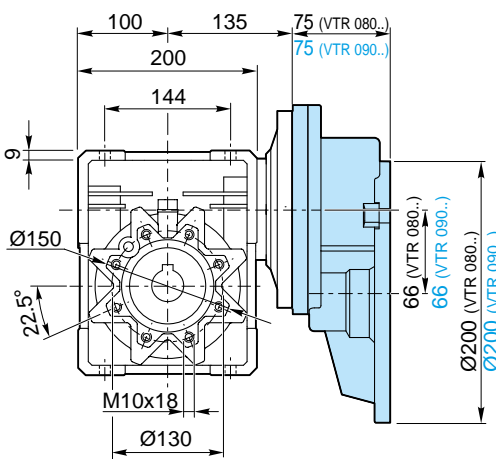


FXT, FCT

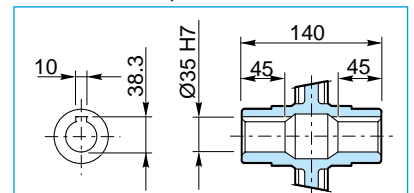


**VRT 080/086 P ...**

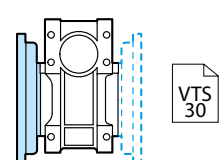
**VRT 090/086 P ...**



Albero uscita / Output shaft

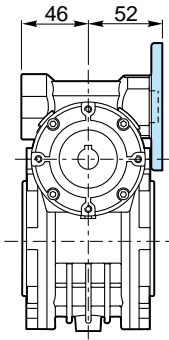


FXT, FCT

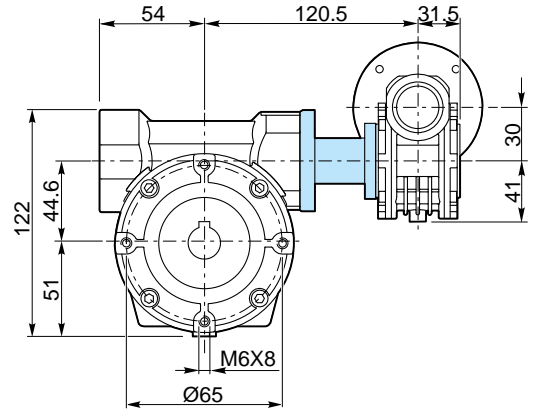
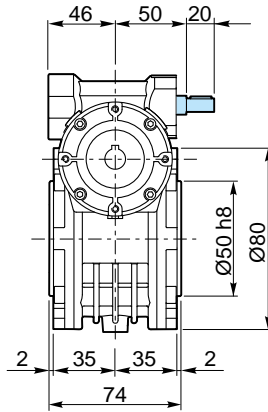


## Dimensioni riduttori a vite senza fine combinati / Dimensions combination worm gearboxes

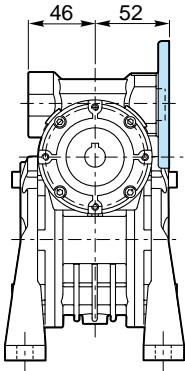
VKS 030/044 P ...



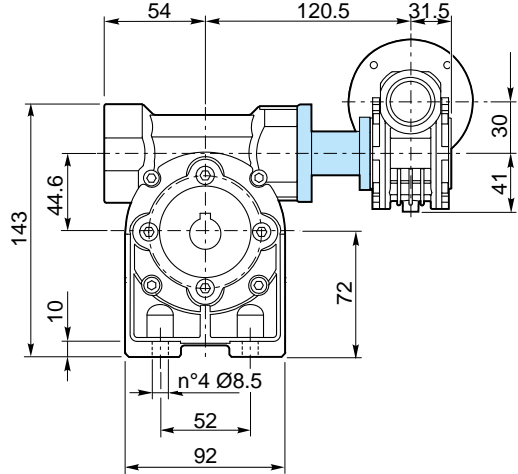
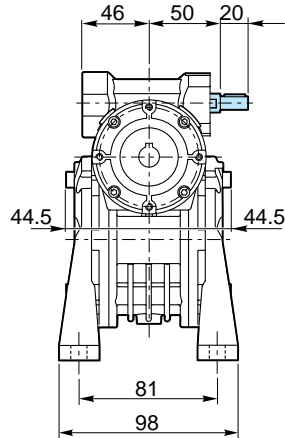
VKE 030/044 P ...



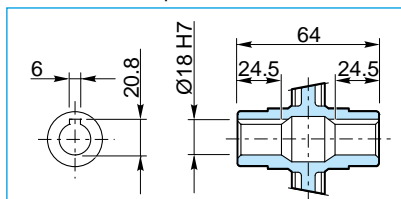
VKS 030/044 PXA ...



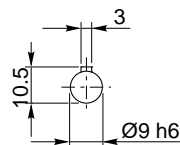
VKE 030/044 PXA ...



Albero uscita / Output shaft

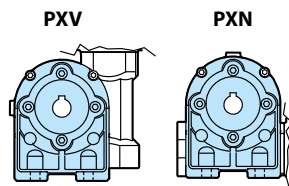
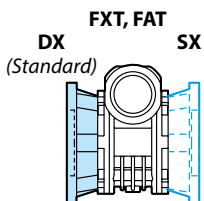


Albero entrata / Input shaft



VKS 030/044 ...

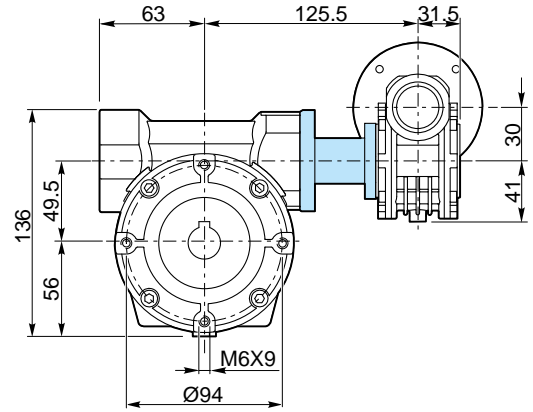
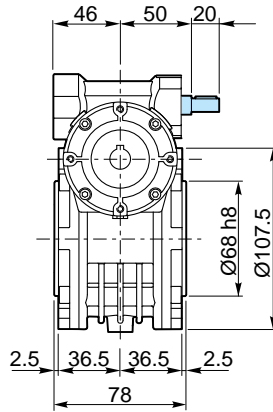
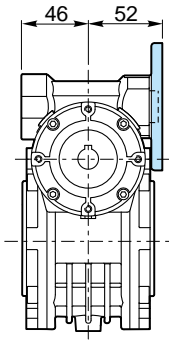
VKE 030/044 ...



## Dimensioni riduttori a vite senza fine combinati / Dimensions combination worm gearboxes

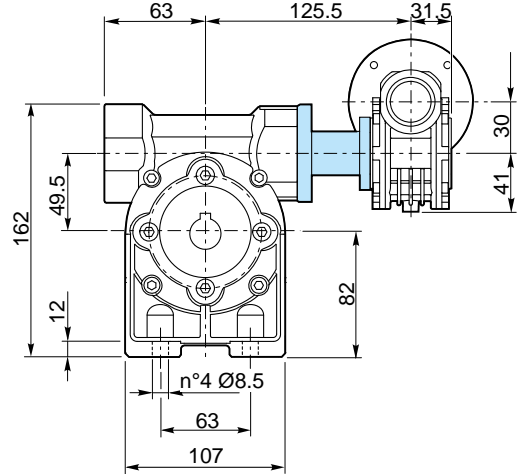
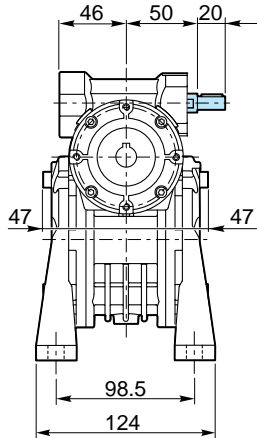
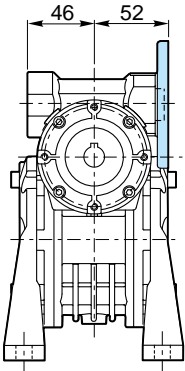
VKS 030/049 P ...

VKE 030/049 P ...

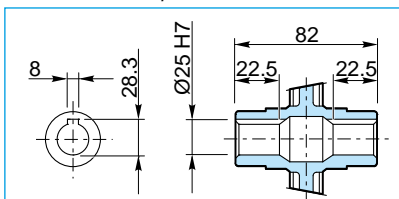


VKS 030/049 PXA ...

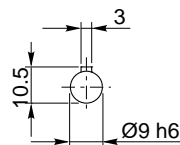
VKE 030/049 PXA ...



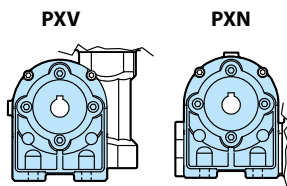
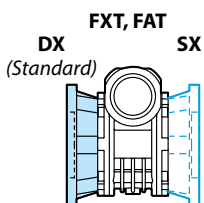
Albero uscita / Output shaft



Albero entrata / Input shaft



VKS 030/049 ...  
VKE 030/049 ...

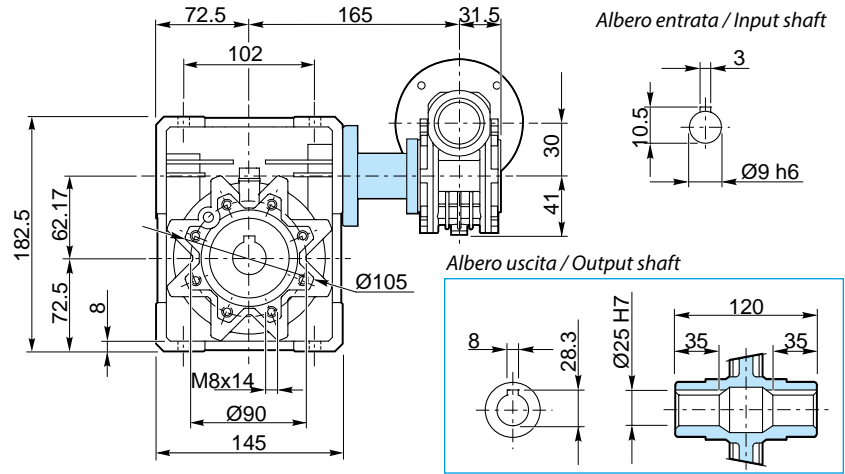
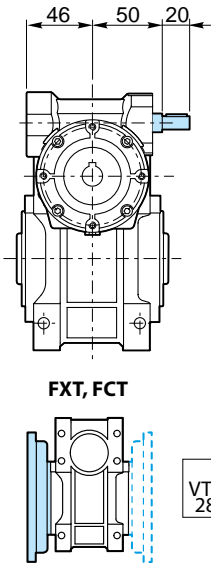
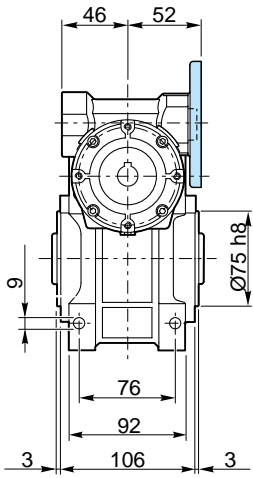


VTS  
27

## Dimensioni riduttori a vite senza fine combinati / Dimensions combination worm gearboxes

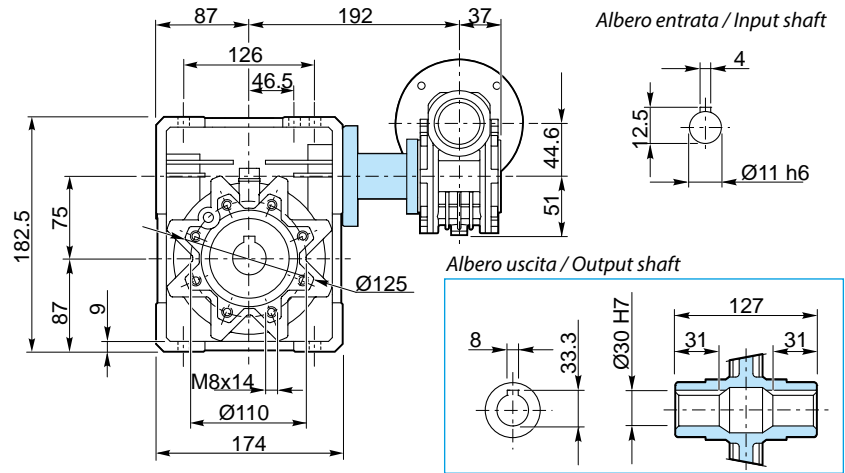
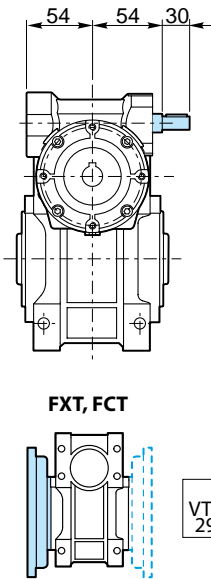
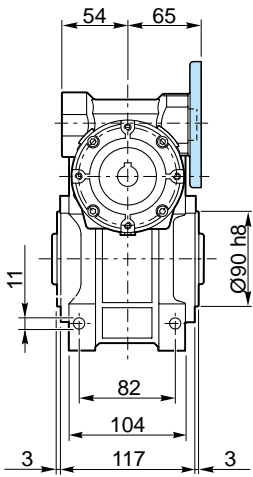
**VKS 030/063 P ...**

**VKE 030/063 P ...**



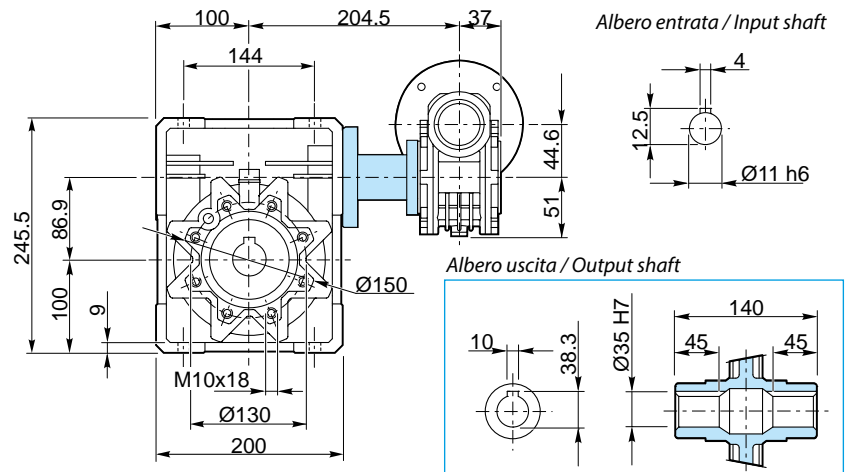
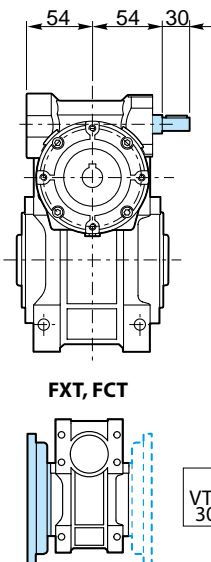
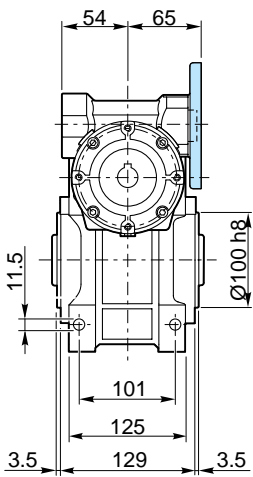
**VKS 044/075 P ...**

**VKE 044/075 P ...**



**VKS 044/086 P ...**

**VKE 044/086 P ...**

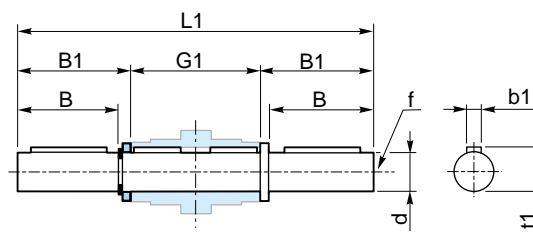
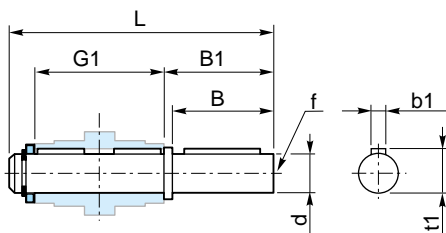




## Kit assemblaggio - Accessori / Assembly Kit - Accessories

### AST Albero lento semplice / Single output shaft

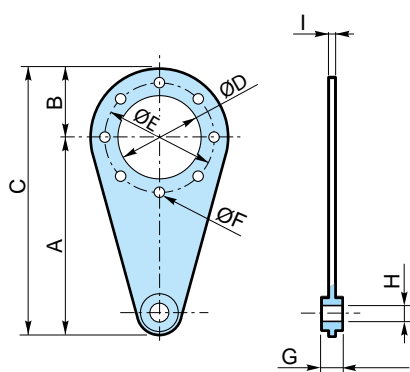
### ADT Albero lento doppio / Double output shaft



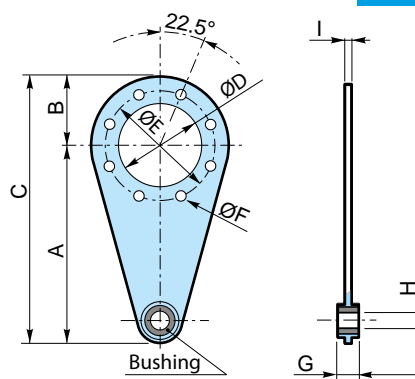
VTS / VES	Grandezza - Size					
	030	044	049	063	075	086
d	14 h6	18 h6	25 h6	25 h6	30 h6	35 h6
B	30	40	60	60	60	60
B1	35	45	65	65	65	65
G1	61	70	89	127	134	149
G2	55	64	82	120	127	140
L	96	115	154	192	199	214
L1	120	149.4	208.4	246.4	255	268
f	M5	M6	M8	M8	M10	M10
b1	5	6	8	8	8	10
t1	16	20.5	28	28	33	38
CODICE / CODE AST	AST030	AST044	AST049	AST063	AST075	AST086
CODICE / CODE ADT	ADT030	ADT044	ADT049	ADT063	ADT075	ADT086

### BRT Braccio di reazione / Torque arm

030 - 044 - 049



063 - 075 - 086



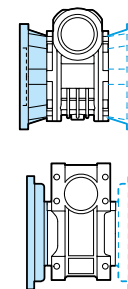
	Grandezza - Size					
	030	044	049	063	075	086
A	100	100	100	150	200	200
B	40	40	55	52.5	62.5	75
C	157.5	157.5	172.5	232.5	300	312.5
D	50	50	68	75	90	110
E	65	65	94	90	110	130
F	7	7	7	9	9	11
G	14	14	14	20	25	25
H	8	8	8	10	20	20
I	4	4	4	6	6	6
CODICE / CODE	BRT030	BRT044	BRT049	BRT063	BRT075	BRT086

Kit assemblaggio - Accessori / Assembly Kit - Accessories

VTS

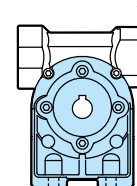
KIT FLANGIA USCITA / KIT OUTPUT FLANGE

Riduttore Gearbox	Grandezza - Size													
	VTS / VTE		030		044		049		063		075		086	
	VKS / VKE		-		030/044		030/049		030/063		044/075		044/086	
	TIPO FLANGIA / TYPE FLANGE		FXT	FXT	FAT	FXT	FAT	FXT	FCT	FXT	FCT	FXT	FCT	
	CODICE / CODE		FXT030	FXT044	FAT044	FXT049	FAT049	FXT063	FCT063	FXT075	FCT075	FXT086	FCT086	



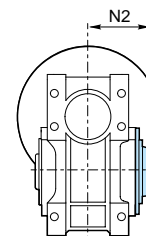
KIT PIEDE / KIT FOOT

Riduttore Gearbox	Grandezza - Size			
	VTS / VTE	030	044	049
	VKS / VKE	-	030/044	030/049
	CODICE / CODE	PUT030	PUT044	PUT049



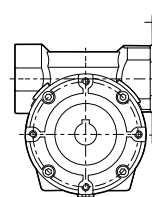
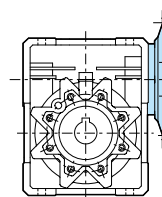
KIT PROTEZIONE ALBERO CAVO / KIT HOLLOW SHAFT PROTECTION

Riduttore Gearbox	Grandezza - Size						
	VTS / VTE	030	044	049	063	075	086
	VKS / VKE	-	030/044	030/049	030/063	044/075	044/086
	N2	42	50	58	82	85.5	93.5
	CODICE / CODE	COT030	COT044	COT049	COT063	COT075	COT086



KIT FLANGIA ENTRATA / KIT INPUT FLANGE

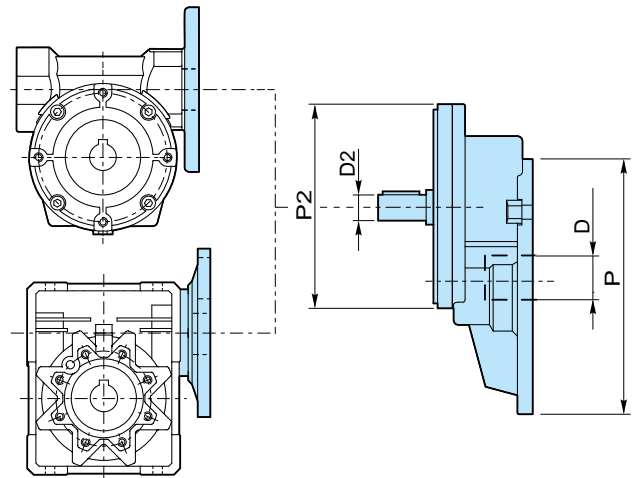
VTS	IEC	CODICE / CODE
030	63B5	FIT030063B5
	63B14	FIT030063B14
	56B14	FIT030056B14
044	71B5	FIT044071B5
	71B14	FIT044071B14
	63B5	FIT044063B5
	63B14	FIT044063B14
049	80B5	FIT049080B5
	80B14	FIT049080B14
	71B5	FIT049071B5
	71B14	FIT049071B14
	63B5	FIT049063B5
063	63B14	FIT049063B14
	90B5	FIT063080B5
	90B14	FIT063090B14
	80B5	FIT063080B5
	80B14	FIT063080B14
	71B5	FIT063071B5
075	71B14	FIT063071B14
	100/112B5	FIT075100B5
	100/112B14	FIT075100B14
	90B5	FIT075080B5
	90B14	FIT075090B14
	80B5	FIT075080B5
	80B14	FIT075080B14
086	71B5	FIT075071B5
	100/112B5	FIT075100B5
	100/112B14	FIT075100B14
	90B5	FIT075080B5
	90B14	FIT075090B14
	80B5	FIT075080B5
	80B14	FIT075080B14



## Kit assemblaggio - Accessori / Assembly Kit - Accessories

### KIT PRECOPPIA / KIT PRE-STAGE

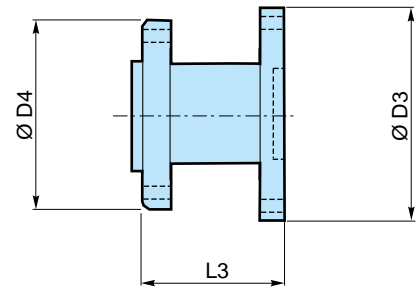
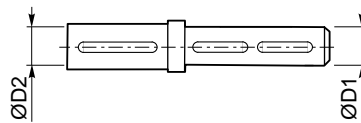
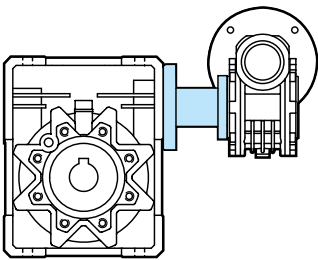
VR	CODICE / CODE	P	D	P2	D2	R1	Kg
<b>063/044</b> <b>063/049</b>	PR063A11	140	11	105	11	2.94	1.5
	PR063A14	140	11	105	14		1.5
<b>071/049</b> <b>071/063</b> <b>071/075</b>	PR071A14	160	14	120	14	2.94	2.6
	PR071A19	160	14	120	19		2.6
<b>080/075</b> <b>080/086</b>	PR080A19	200	19	160	19	3	4.7
	PR080A24	200	19	160	24		4.7
<b>090/086</b>	PR090A24	200	24	160	24	2.45	4.7
	PR090A28	200	24	160	28		4.7



### KIT COMBINAZIONE VITE SENZA FINE / KIT COMBINATION WORMGEARBOXES

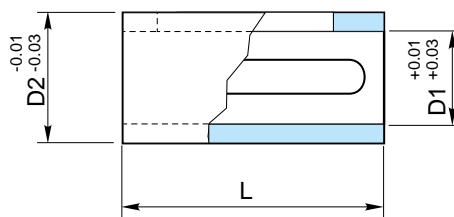
Albero di combinazione / Combination shaft

Flangia di combinazione / Combination flange



VKS / VKE	CODICE / CODE	Albero di combinazione / Combination shaft		Flangia di combinazione / Combination flange		
		D1	D2	D3	D4	L3
<b>030/044</b>	KCT030044A11	14	11	78	58	37.5
	KCT030044A14	14	14			
<b>030/049</b>	KCT030049A14	14	14	78	65	38
	KCT030049A19	14	19			
<b>030/063</b>	KCT030063A19	14	19	80	90	55
	KCT030063A24	14	24			
<b>044/075</b> <b>044/086</b>	KCT044075A19	18	19	80	100	57.5
	KCT044075A24	18	24			

### BC Boccola di riduzione in acciaio / Metal shaft sleeves



<b>D2</b>	11	14	19	19	24	24	28	28
<b>D1</b>	9	11	11	14	14	19	19	24
<b>L</b>	23	30	40	40	50	50	60	60
<b>CODICE / CODE</b>	BC1109	BC1411	BC1911	BC1914	BC2414	BC2419	BC2819	BC2824

### Motori elettrici / Electric motors

I **motori elettrici** proposti da SATI sono costruiti secondo le dimensioni delle norme internazionali: flange, alberi e fissaggio a piedi sono dimensionati secondo le dimensioni richiamate dalla normativa IEC 72-1 e IEC 34-7.

La costruzione dei motori è chiusa, ventilata esternamente e con rotore a gabbia equilibrato dinamicamente.

Tutti i motori della gamma SATI sono avvolti per collegamento stella/triangolo, nei quali il voltaggio alto corrisponde all'avvolgimento a stella ed il voltaggio basso al collegamento a triangolo.

I motori **fino alla taglia 100** compresa sono a **230/400 V 50 Hz** e solo i motori delle grandezze 112, 132 e 160 sono avvolti a 400/690 V 50 Hz.

La tensione nominale dei motori SATI (V. 230/400 - 50 Hz) ammette una variazione  $\pm 10\%$ .

*SATI's **electric motors** are manufactured according to the dimensions stated in the relevant international standards: flanges, shafts and feet attachments to the base are dimensioned according to IEC 72-1 and IEC 34-7 regulations.*

*The motor housing is enclosed, with outer fan and with a shielded and dynamically balanced rotor.*

*All SATI electric motors are wound in star/delta connection: the high voltage corresponds to the star connection and the low voltage corresponds to the delta connection.*

*Motors **up to size 100** are wound at **230/400 V 50 Hz** and only motors of sizes 112, 132 and 160 are wound at 400/690 V 50 Hz.*

*The rated voltage of motors (230/400 V - 50 Hz) can function with a variation of  $\pm 10\%$ .*



Prodotto escluso dal campo di applicazione del Sistema Qualità ISO 9001  
*This product is excluded from the scope of ISO 9001 Quality Management System*

**Motori asincroni trifase / Asynchronous three-phase motors**
**2 Poli / poles 2800 rpm**
**MOTORE / MOTOR**

	Motore Motor	Classe energetica Energy class	Grandezza Size	Potenza kW Power kW	Numero di poli Number of poles	Forma costruttiva Version
<b>ES. DESIGNAZIONE EX. DESIGNATION</b>	<b>M</b>	<b>1</b>	<b>063</b>	<b>0.25</b>	<b>2P</b>	<b>B5</b>
<b>ES. CODICE EX. CODE</b>	<b>M</b>	<b>1</b>	<b>063</b>	<b>025</b>	<b>2</b>	<b>B5</b>

**Caratteristiche tecniche 2 Poli - 2800 rpm / Technical characteristics 2 Poles - 2800 rpm**

Codice code			Tipo Type	Potenza Power	Tensione Voltage	Corrente Current	Classe energetica Energy class	Rendimento Efficiency	Fattore di potenza Power factor	Coppia nominale Rated torque	Coppia spunto / Cn Starting torque / Cn	Peso Weight
B5	B3	B14		kW	V	A (400V)		%	cos Φ	Cn (Nm)	Cs/Cn	B5 (kg)
M10560092B5	M10560092B3	M10560092B14	56A	0.09	230/400	0.44	IE1	45	0.65	0.32	2.2	2.8
M10560122B5	M10560122B3	M10560122B14	56B	0.12	230/400	0.56	IE1	45	0.69	0.43	2.2	3.2
M10630182B5	M10630182B3	M10630182B14	63A	0.18	230/400	0.66	IE1	53	0.72	0.63	2.2	4
M10630252B5	M10630252B3	M10630252B14	63B	0.25	230/400	0.80	IE1	58	0.78	0.88	2.2	4.4
M10630372B5	M10630372B3	M10630372B14	63C	0.37	230/400	1.07	IE1	64	0.78	1.30	2.2	4.9
M10710372B5	M10710372B3	M10710372B14	71A	0.37	230/400	1.06	IE1	64	0.79	1.29	2.2	5.6
M10710552B5	M10710552B3	M10710552B14	71B	0.55	230/400	1.46	IE1	69	0.79	1.90	2.2	6.3
M30800752B5	M30800752B3	M30800752B14	80A	0.75	230/400	1.64	IE3	80.7	0.82	2.52	2.3	10.4
M30801102B5	M30801102B3	M30801102B14	80B	1.1	230/400	2.32	IE3	82.7	0.84	3.69	2.2	13.3
M30901502B5	M30901502B3	M30901502B14	90S	1.5	230/400	3.07	IE3	84.2	0.84	5.03	2.2	12.5
M30902202B5	M30902202B3	M30902202B14	90L	2.2	230/400	4.37	IE3	85.9	0.85	7.35	2.2	15.4
M31003002B5	M31003002B3	M31003002B14	100L	3	230/400	5.74	IE3	87.1	0.87	9.91	2.2	28
M31124002B5	M31124002B3	M31124002B14	112M	4	400/690	7.48	IE3	88.1	0.88	13.22	2.2	34.4
M31325502B5	M31325502B3	M31325502B14	132SA	5.5	400/690	10.16	IE3	89.2	0.88	18.11	2.0	38
M31327502B5	M31327502B3	M31327502B14	132SB	7.5	400/690	13.71	IE3	90.1	0.88	24.61	2.0	65

**Nota:**

- I dati tecnici indicati in tabella si riferiscono ad una tensione di alimentazione di 400 V, 50 Hz.
- Motori speciali sono disponibili a richiesta

**Note:**

- Technical characteristics are referred to voltage 400 V, 50 Hz.
- Special motors on request

Motori asincroni trifase / Asynchronous three-phase motors

4 Poli / poles 1400 rpm

MOTORE / MOTOR

	Motore Motor	Classe energetica Energy class	Grandezza Size	Potenza kW Power kW	Numero di poli Number of poles	Forma costruttiva Version
ES. DESIGNAZIONE EX. DESIGNATION	M	1	063	0.25	4P	B5
ES. CODICE EX. CODE	M	1	063	025	4	B5

Caratteristiche tecniche 4 Poli - 1400 rpm / Technical characteristics 4 Poles - 1400 rpm

Codice code			Tipo Type	Potenza Power	Tensione Voltage	Corrente Current	Classe energetica Energy class	Rendimento Efficiency	Fattore di potenza Power factor	Coppia nominale Rated torque	Coppia spunto / Cn Starting torque / Cn	Peso Weight
B5	B3	B14		kW	V	A (400V)		%	cos Φ	Cn (Nm)	Cs/Cn	B5 (kg)
M10560064B5	M10560064B3	M10560064B14	56A	0.06	230/400	0.30	IE1	48.5	0.59	0.43	2.3	3
M10560094B5	M10560094B3	M10560094B14	56B	0.09	230/400	0.43	IE1	50	0.61	0.65	2.3	3.3
M10630124B5	M10630124B3	M10630124B14	63A	0.12	230/400	0.55	IE1	50	0.64	0.85	2.2	3.9
M10630184B5	M10630184B3	M10630184B14	63B	0.18	230/400	0.70	IE1	57	0.65	1.27	2.2	4.3
M10630224B5	M10630224B3	M10630224B14	63C	0.25	230/400	0.89	IE1	61.5	0.66	1.77	2.2	5
M10710254B5	M10710254B3	M10710254B14	71A	0.25	230/400	0.82	IE1	61.5	0.72	1.77	2.2	5.4
M10710374B5	M10710374B3	M10710374B14	71B	0.37	230/400	1.09	IE1	66	0.74	2.58	2.2	6.5
M10710554B5	M10710554B3	M10710554B14	71C	0.55	230/400	1.51	IE1	70	0.75	3.81	2.2	7.2
M10800554B5	M10800554B3	M10800554B14	80A	0.55	230/400	1.51	IE1	70	0.75	3.83	2.2	8.2
M30800754B5	M30800754B3	M30800754B14	80B	0.75	230/400	1.76	IE3	82.5	0.75	5.08	2.3	12.8
M30901104B5	M30901104B3	M30901104B14	90S	1.1	230/400	2.49	IE3	84.1	0.76	7.40	2.3	16.2
M30901504B5	M30901504B3	M30901504B14	90LA	1.5	230/400	3.31	IE3	85.3	0.77	10.09	2.3	19.2
M31002204B5	M31002204B3	M31002204B14	100LA	2.2	230/400	4.54	IE3	86.7	0.81	14.69	2.3	25
M31003004B5	M31003004B3	M31003004B14	100LB	3	230/400	6.05	IE3	87.7	0.82	19.90	2.3	29.5
M31124004B5	M31124004B3	M31124004B14	112M	4	400/690	7.98	IE3	88.6	0.82	26.53	2.2	37.8
M31325504B5	M31325504B3	M31325504B14	132S	5.5	400/690	10.72	IE3	89.6	0.83	36.22	2.0	58.7
M31327504B5	M31327504B3	M31327504B14	132M	7.5	400/690	14.31	IE3	90.4	0.84	49.40	2.0	68
M316011X4B5	M316011X4B3	M316011X4B14	160M	11	400/690	20.52	IE3	91.4	0.85	72.45	2.2	97
M316015X4B5	M316015X4B3	M316015X4B14	160L	15	400/690	27.45	IE3	92.1	0.86	98.79	2.2	112

Nota:

- I dati tecnici indicati in tabella si riferiscono ad una tensione di alimentazione di 400 V, 50 Hz.  
- Motori speciali sono disponibili a richiesta

Note:

- Technical characteristics are referred to voltage 400 V, 50 Hz.  
- Special motors on request

**Motori asincroni trifase / Asynchronous three-phase motors**
**6 Poli / poles 900 rpm**
**MOTORE / MOTOR**

	Motore Motor	Classe energetica Energy class	Grandezza Size	Potenza kW Power kW	Numero di poli Number of poles	Forma costruttiva Version
<b>DESIGNAZIONE DESIGNATION</b>	<b>M</b>	<b>1</b>	<b>080</b>	<b>0.37</b>	<b>6P</b>	<b>B5</b>
<b>CODICE CODE</b>	<b>M</b>	<b>1</b>	<b>080</b>	<b>037</b>	<b>6</b>	<b>B5</b>

**Caratteristiche tecniche 6 Poli - 900 rpm / Technical characteristics 6 Poles - 900 rpm**

Codice code			Tipo Type	Potenza Power	Tensione Voltage	Corrente Current	Classe energetica Energy class	Rendimento Efficiency	Fattore di potenza Power factor	Coppia nominale Rated torque	Coppia spunto / Cn Starting torque / Cn	Peso Weight
B5	B3	B14		kW	V	A (400V)		%	cos Φ	Cn (Nm)	Cs/Cn	B5 (kg)
M10630126B5	M10630126B3	M10630126B14	63B	0.12	230/400	0.73	IE1	38.3	0.62	1.35	2	5.3
M10710186B5	M10710186B3	M10710186B14	71A	0.18	230/400	0.87	IE1	45.5	0.66	1.95	1.6	6
M10710256B5	M10710256B3	M10710256B14	71B	0.25	230/400	0.99	IE1	52.1	0.7	2.65	2.1	6.5
M10710376B5	M10710376B3	M10710376B14	71C	0.37	230/400	1.30	IE1	59.7	0.69	3.97	2	7.2
M10800376B5	M10800376B3	M10800376B14	80A	0.37	230/400	1.28	IE1	59.7	0.7	3.93	1.9	8.2
M10800556B5	M10800556B3	M10800556B14	80B	0.55	230/400	1.68	IE1	65.8	0.72	5.84	2	9.9
M30900756B5	M30900756B3	M30900756B14	90S	0.75	230/400	1.94	IE3	78.9	0.71	7.62	2.0	18.2
M30901106B5	M30901106B3	M30901106B14	90L	1.1	230/400	2.70	IE3	81	0.73	11.06	2.0	24.3
M31001506B5	M31001506B3	M31001506B14	100L	1.5	230/400	3.61	IE3	82.5	0.73	15.08	2.0	25.7
M31122206B5	M31122206B3	M31122206B14	112M	2.2	230/400	5.11	IE3	84.3	0.74	21.89	2.0	32
M31323006B5	M31323006B3	M31323006B14	132S	3	230/400	6.86	IE3	85.6	0.74	39.54	2.0	34
M31324006B5	M31324006B3	M31324006B14	132MA	4	400/690	9.03	IE3	86.8	0.74	39.38	2.0	45
M31325506B5	M31325506B3	M31325506B14	132MB	5.5	400/690	12.08	IE3	88	0.75	54.15	2.0	63

**Nota:**

- I dati tecnici indicati in tabella si riferiscono ad una tensione di alimentazione di 400 V, 50 Hz.

- Motori speciali sono disponibili a richiesta

**Note:**

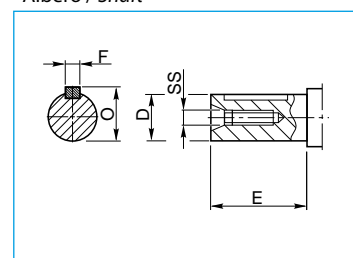
- Technical characteristics are referred to voltage 400 V, 50 Hz.

- Special motors on request

**Dimensioni d'ingombro / Dimensions**

Tipo/ Type	B3 / B5 / B14				
	D	E	F	O	SS
56	Ø9	20	3	10.2	M3
63	Ø11	23	4	12.5	M4
71	Ø14	30	5	16	M5
80	Ø19	40	6	21.5	M6
90S	Ø24	50	8	27	M8
90L	Ø24	50	8	27	M8
100	Ø28	60	8	31	M10
112	Ø28	60	8	31	M10
132S	Ø38	80	10	41	M12
132M/L	Ø38	80	10	41	M12
160M/L	Ø42	110	12	45	M16

Albero / Shaft



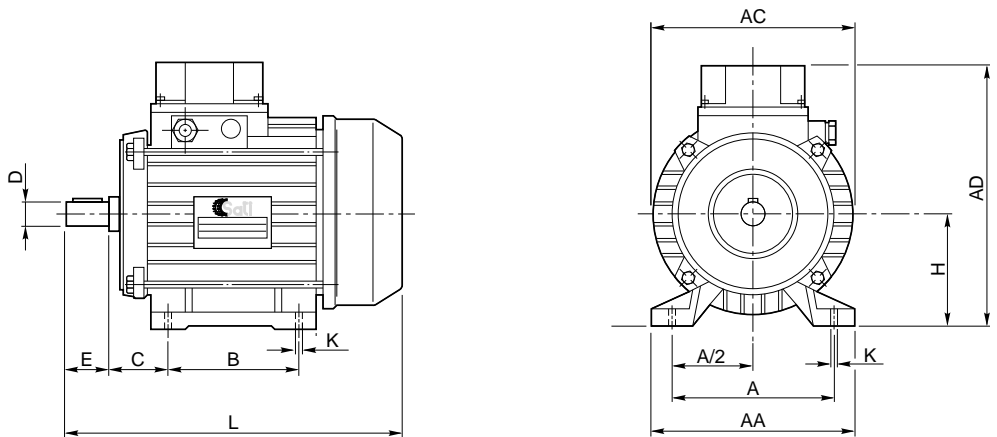
Dimensioni d'ingombro motori IE1 / Dimensions motors IE1

Tipo/ Type	B3							B5					B14					B3 / B5 / B14		
	H	A	AA	AD	B	C	K	M	N	P	T	S	N	M	P	T	S	HD	AC	L
56	56	90	110	156/151	71	36	5.8X8.8	Ø100	Ø80	Ø120	3	Ø7	Ø50	Ø65	Ø80	2.5	M5	100/96	Ø112	195
63	63	100	120	173/169	80	40	7X10	Ø115	Ø95	Ø140	3	Ø10	Ø60	Ø75	Ø90	2.5	M5	110/106	Ø121	230
71	71	112	132	188/184	90	45	7X10	Ø130	Ø110	Ø160	3.5	Ø10	Ø70	Ø85	Ø105	2.5	M6	117/113	Ø140	260
80	80	125	160	217/212	100	50	10X13	Ø165	Ø130	Ø200	3.5	Ø12	Ø80	Ø100	Ø120	3	M6	137/132	Ø156	295
90S	90	140	175	235/230	100	56	10X13	Ø165	Ø130	Ø200	3.5	Ø12	Ø95	Ø115	Ø140	3	M8	145/140	Ø175	315
90L	90	140	175	235/230	125	56	10X13	Ø165	Ø130	Ø200	3.5	Ø12	Ø95	Ø115	Ø140	3	M8	145/140	Ø175	335/365
100	100	160	198	253/248	140	63	12X15	Ø215	Ø180	Ø250	4	Ø15	Ø110	Ø130	Ø160	3.5	M8	152/157	Ø200	400
112	112	190	220	282/274	140	70	12X15	Ø215	Ø180	Ø250	4	Ø15	Ø110	Ø130	Ø160	3.5	M8	180/172	Ø220	400/440
132S	132	216	252	325/317	140	89	12X15	Ø265	Ø230	Ø300	4	Ø15	Ø130	Ø165	Ø200	4	M10	193/185	Ø260	440
132M/L	132	216	252	325/317	178	89	12X15	Ø265	Ø230	Ø300	4	Ø15	Ø130	Ø165	Ø200	4	M10	193/185	Ø260	480/500
160M/L	160	254	290	390	210/254	108	15X19	Ø300	Ø250	Ø350	5	Ø19	Ø180	Ø215	Ø250	4	M12	230	Ø320	640

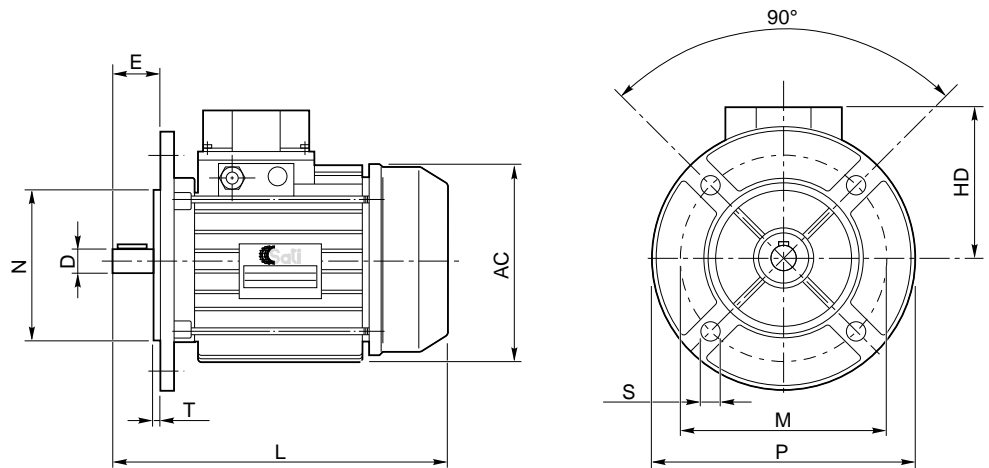
**Nota:**  
Dimensioni dei motori IE3 contattare servizio tecnico SATI

**Note:**  
Dimensions of motors IE3, contact the technical department SATI.

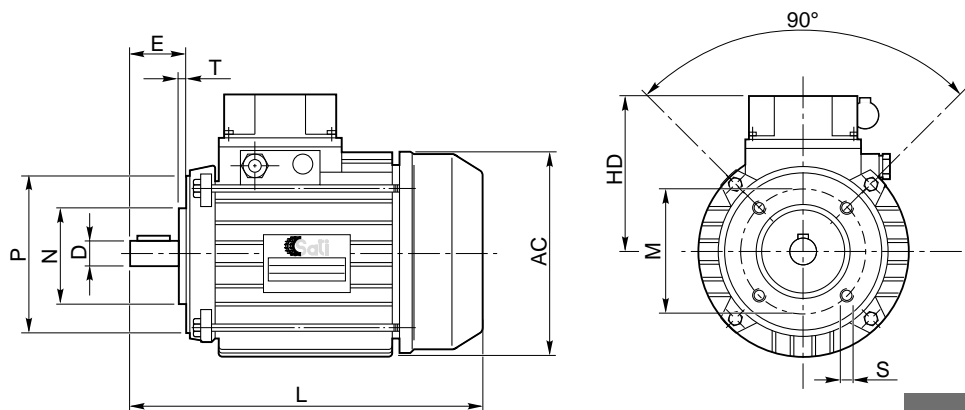
**B3**



**B5**



**B14**





**Caratteristiche tecniche / Technical specifications**

La tensione nominale dei motori (230/400 V - 50 Hz o alternativamente 400/690 V - 50 Hz) ammette una variazione di  $\pm 10\%$ .

L'uso dei motori con frequenza d'alimentazione di 60 Hz non è consentito, a meno che non si tratti del range di voltaggio indicato nella successiva tabella.

The nominal voltage of motors (230/400 V - 50 Hz or, alternatively, 400/690 V - 50 Hz) can function with a variation of  $\pm 10\%$ .

The use of the motors with frequency supply at 60 Hz is not allowed, except for the range of voltage shown on the following table.

Tipo	230/400 V - 50 Hz	240/415 V - 50 Hz	260/440 V - 60 Hz	280/480 V - 60 Hz	400/690 V - 50 Hz
56	●	●	●	●	
63	●	●	●	●	
71	●	●	●	●	
80	●	●	●	●	
90	●	●	●	●	
100	●	●	●	●	
112					● (1)
132					●
160					●

(1) Versione 6 poli: solo 230/400 V

(1) Version 6 poles: only 230/400 V

Le caratteristiche di protezione e funzionamento sono le seguenti:

Protezione: IP 55

Isolamento: classe F

Servizio: S 1

Le macchine sono costruite con materiali di sicura qualità; in particolare, la carcassa è in alluminio pressofuso, gli alberi in acciaio C 40, la copriventola in lamiera stampata e fissata con viti al corpo carcassa, rotore in alluminio e statore isolato con materiali idonei alla classificazione "F".

The specifications regarding protection and operation are as follows:

Protection: IP 55

Insulation: class F

Service: S 1

The motors are built from high-quality materials; in particular, the casing is in pressure-cast aluminium, the shafts in C 40 steel, the fan cover is in stamped sheet metal and fixed with screws to the casing, the rotor is made from aluminium and the stator is insulated with materials conforming to "F" classification.

**Protezione / Protection**

I tipi di protezione indicati dalla norma (CEI EN 60529 - IEC 34/5) sono identificati dalla sigla "IP" seguita da due cifre che determinano le caratteristiche della protezione stessa: la prima sta ad indicare la protezione contro la penetrazione di materie estranee o contatti accidentali e la seconda contro l'acqua.

**Prima cifra:**

- 0 Nessuna protezione
- 1 Contro penetrazione di corpi di grandi dimensioni
- 2 Contro penetrazione di corpi di medie dimensioni
- 3 Contro penetrazione di corpi di piccole dimensioni
- 4 Contro penetrazione di corpi di minuscole dimensioni
- 5 Contro depositi interni di polvere
- 6 Protezione totale da depositi interni di polvere

**Seconda cifra:**

- 0 Nessuna protezione
- 1 Contro penetrazione verticale di gocce d'acqua
- 2 Contro penetrazione inclinata di gocce d'acqua
- 3 Contro spruzzi fini d'acqua
- 4 Contro spruzzi d'acqua
- 5 Contro getti d'acqua
- 6 Contro l'inondazione
- 7 Contro l'immersione
- 8 Contro la sommersione

The types of protection conforming to regulations (EN 60529 - IEC 34/5) are identified by the mark "IP" followed by two numbers which lay down the specifications of the actual protection: the first represents the degree of protection against penetration of extraneous material or accidental contacts and the second against penetration of water.

**First number:**

- 0 No protection
- 1 Against penetration by large objects
- 2 Against penetration by medium-sized objects
- 3 Against penetration by small objects
- 4 Against penetration by tiny objects
- 5 Against internal deposits of dust
- 6 Total protection form internal deposits of dust

**Second number:**

- 0 No protection
- 1 Against vertical penetration of drops of water
- 2 Against inclined penetration of drops of water
- 3 Against fine water spray
- 4 Against water spray
- 5 Against jets of water
- 6 Against floods
- 7 Against immersion
- 8 Against submersion

### Servizio / Operative use

Quando il carico è costante o varia con criteri conosciuti, si può rappresentare con valori numerici o con grafici indicanti la variazione del carico al passare del tempo. In caso contrario, la tabella di seguito riportata detta alcuni parametri dei servizi di lavoro.

**S1** Funzionamento a carico costante e di durata sufficiente al raggiungimento dell'equilibrio termico (**servizio continuo**).

**S2** Funzionamento a carico costante per un periodo di tempo inferiore a quanto sopra, seguito da un periodo di riposo sufficiente a ristabilire tra temperatura della macchina e quello del fluido, l'uguaglianza con una tolleranza di 2° (**servizio di durata limitata**)

**S3** Sequenza di cicli identici di funzionamento, ciascuno comprendente fasi di riposo e di lavoro a carico costante (**servizio intermittente periodico**)

**S4** Sequenza di cicli identici di funzionamento, ciascuno comprendente fasi trascurabili di avviamento. Un periodo di lavoro a carico costante ed un periodo di riposo; in questo caso è consigliabile indicare il n° di inserzioni/h (**Servizio periodico con avviamento**)

**S5** Come S4, ma con frenata rapida (**servizio periodico con frenata**)

**S6** Sequenza di cicli identici di funzionamento, ciascuno comprendente un periodo di carico costante ed un periodo di funzionamento a vuoto senza alcun periodo di riposo (**servizio ininterrotto periodico con carico intermittente**)

**S7** Sequenza di cicli di funzionamento come S5, ma senza periodi di riposo (**servizio ininterrotto periodico con frenata**)

**S8** Sequenza di cicli identici di funzionamento, ciascuno comprendente un periodo di carico costante ad una velocità prestabilita, seguito da cicli a carico costante ma a velocità diverse, senza periodo di riposo (**servizio ininterrotto periodico con variazioni correlate di carico e velocità**)

**S9** Carico e velocità variano in modo non periodico compreso frequenti sovraccarichi, superiori al valore a pieno carico (**servizio con variazioni, non periodiche, di carico e velocità**).

When the load is constant or varies by known criteria, the actual loading cycle can be shown through numbers or in a graph form, showing the load variation while time is elapsing. If this is not the case, the table below provides some parameters suitable for operative use.

**S1** Operation under constant load and for a sufficient duration for thermal equilibrium to be reached (**continuous operation**).

**S2** Operation under constant load for less time than above, followed by a rest phase sufficient to re-establish a balance between the temperature of the machine and that of fluid within a tolerance of 2° (**operation for a limited period of time**).

**S3** A series of identical work cycles, each including rest phases and constant load work phases (**periodic intermittent operation**).

**S4** A series of identical work cycles, each including negligible start-up phases, a work phase under constant load and a rest; in this case, it is advisable to indicate the number of start-ups per hour (**periodic operation with start-up**).

**S5** As per S4 but with rapid electrical braking (**periodic operation with braking**).

**S6** A sequence of identical work cycles, each including a period of constant load and a period of idling but without any rest phases (**uninterrupted periodic operation with intermittent load**).

**S7** Sequence of cycles as per S5 but without any rest phases (**uninterrupted periodic operation with braking**).

**S8** A sequence of identical work cycles, each including a period of constant load at a certain pre-established velocity, followed by constant load period but at different velocities, without any rest phase (**uninterrupted periodic operation with correlated variations of load and velocity**).

**S9** Load and velocity vary in a non-periodic manner and include frequent overloads which are greater than the value at full load (**operation with non-periodic variations of load and velocity**).

### Caratteristiche elettriche generali / General electrical specifications

**Tensione nominale:** è la tensione che normalmente si ha nei morsetti di alimentazione

**Potenza nominale:** è la potenza sviluppata, all'albero

**Coppia nominale:** è il fattore risultante dalla potenza nominale ed i giri nominali

**Coppia massima:** è la coppia che si ottiene dal motore alimentato a tensione e frequenza nominali.

**Rated voltage:** this is the voltage which is normally available from power supply terminals.

**Nominal power:** this is the power generated at the shaft.

**Rated torque:** this is the factor derived from the nominal power and the nominal revolutions.

**Maximum torque:** this is the torque obtained from the motor operating with nominal voltage and frequency.

**Temperature di funzionamento:**

**Operating temperatures:**

classe di isolamento/ insulation category	temperatura limite di esercizio/ upper temperature operating limit
A	105°C
E	120°C
B	130°C
F	155°C
H	180°C

#### Attenzione

La temperatura indicata in tabella, è comprensiva della temperatura ambiente (es. se si ha una temperatura nell'area di lavoro di 30 ° C, un motore con isolamento H può funzionare con temperatura propria di 150°C).

#### Important note

The temperature shown in the table includes the ambient temperature (eg, if the temperature in the work area is 30°C, a motor with insulation category H can safely operate with a working temperature of its own of 150°C).

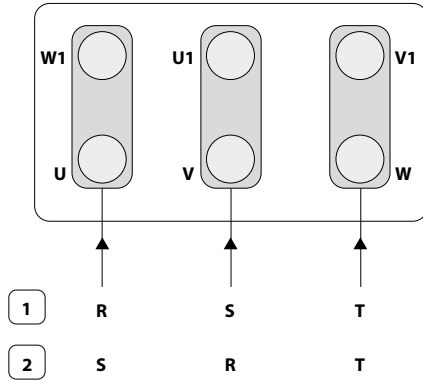
## Schemi di collegamenti / Diagram of connections

(Prodotto escluso dal campo di applicazione del Sistema Qualità ISO 9001)  
 (This product is excluded from the scope of ISO 9001 Quality Management System)

### Motori asincroni trifase / Three-phase asynchronous motors

#### 230 Volt

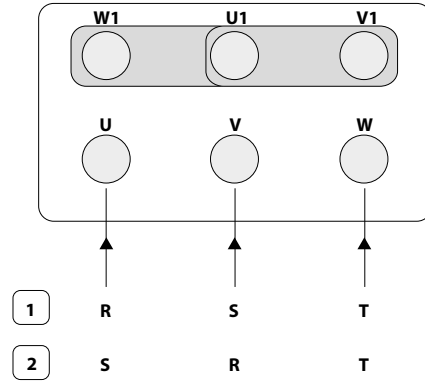
##### Collegamento triangolo / Triangle connection



1 Rotazione oraria/Clockwise rotation

#### 400 Volt

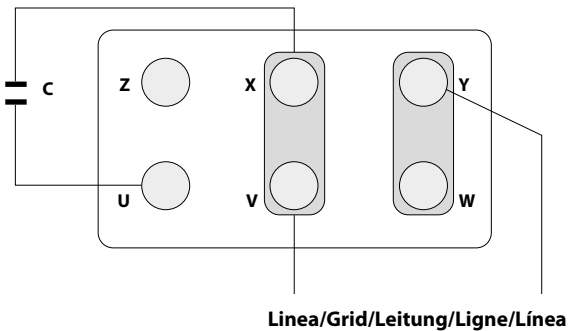
##### Collegamento stella / Star connection



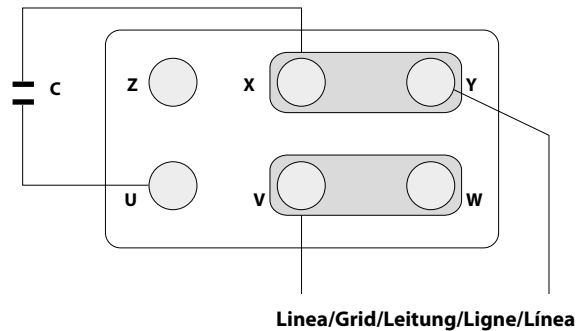
2 Rotazione antioraria/Anti-clockwise rotation

### Motori monofase / Monophase motors

#### Rotazione antioraria / Anti-clockwise rotation



#### Rotazione oraria / Clockwise rotation



### Avviamento con collegamento diretto /Starting up with direct connection

È il metodo più semplice e corrente per motori di piccola-media potenza, collegando direttamente i morsetti dell'avvolgimento alla linea.

This is the simplest and most common method for low to medium-power motors, executed by connecting the clips from the winding directly to the power source.

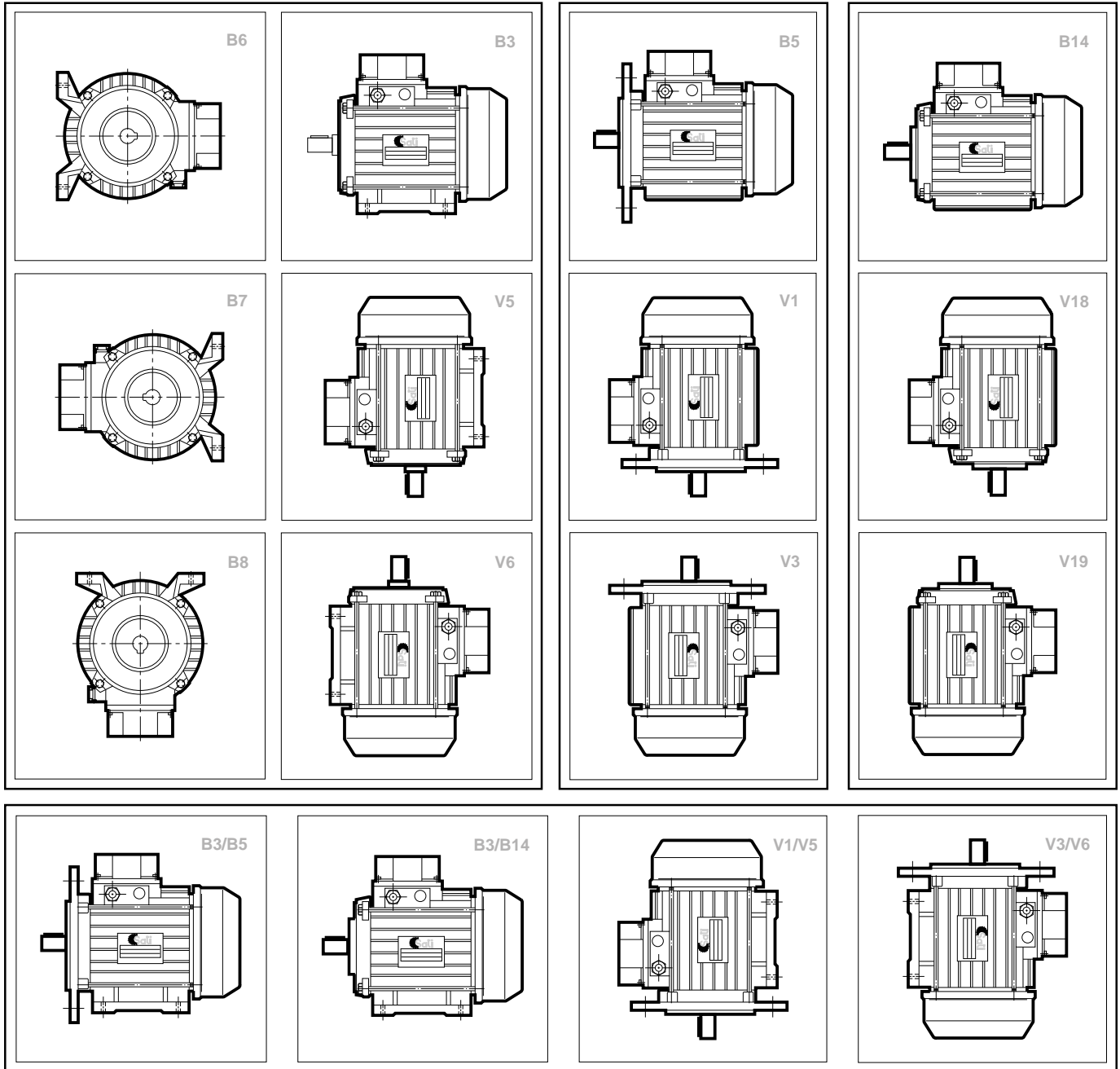
### Avviamento stella triangolo /Starting up with star-triangle

Per motori di media-grossa potenza occorre verificare lo spunto di avviamento, in quanto, se origina valori superiori a quanto disponibili in rete occorre provvedere a collegamenti con partenza a stella-triangolo, interponendo, tra la linea ed il motore, un apposito avviatore.

In motors of medium to high power, it is necessary to ascertain the energy needed to overcome the starting resistance since, if this should be greater than that available in the electrical grid, it will be necessary to use a series of connections with a star-triangle start-up and to place a suitable starter between grid and motor.

**Posizioni di piazzamento / Mounting positions**

(Prodotto escluso dal campo di applicazione del Sistema Qualità ISO 9001)  
 (This product is excluded from the scope of ISO 9001 Quality Management System)

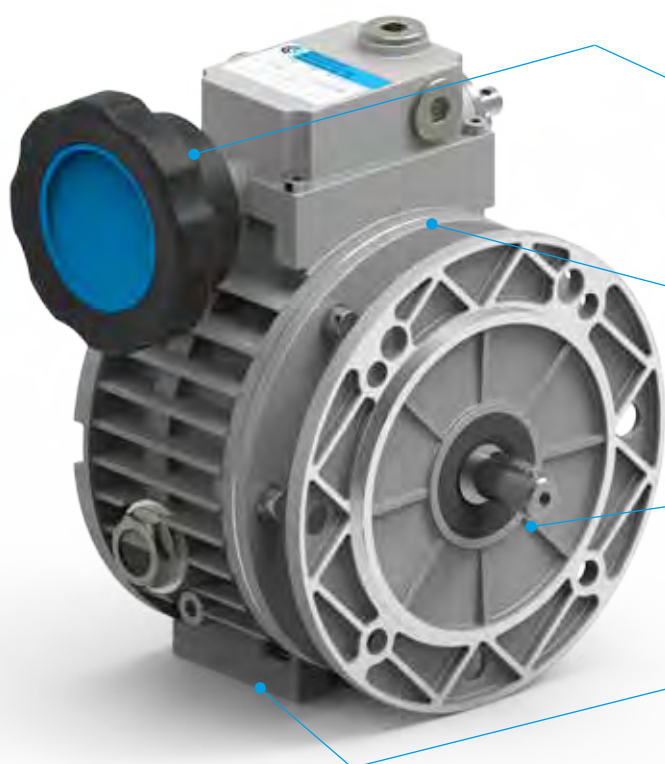




### Presentazione della gamma SATI di variatori di velocità / SATI speed variators

SATI ha il piacere di presentare la sua nuova gamma di variatori di velocità serie SV con carcassa in alluminio nelle grandezze 02,05 e 10 e con carcassa in ghisa nelle grandezze 20,30 e 50.

*SATI is pleased to introduce its new range of speed variators SV series manufactured with aluminum housing for size 02,05, and 10 and cast iron housing for size 20,30,50.*



Agevole regolazione della velocità di rotazione.  
*Easy adjustment of rotating speed.*

Trasmissione epicicloidale a rapporto variabile.  
*Epicyclic transmission for variable ratios.*

Uscita predisposta per attacco diretto su riduttore.  
*Output prearranged for direct motor connection.*

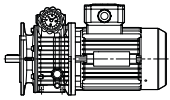
Predisposizione per attacco piedi B3 <sup>(1)</sup>.  
*Prearrangement for B3 foot mounting <sup>(1)</sup>.*

<sup>(1)</sup> Solo per SV 02-05- 10 / *Only for SV 02 - 05 - 10.*

## Designazione / Designation

SV

02 063B5

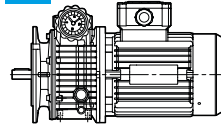


05 071B5  
10 080B5  
20 090B5  
30 100B5  
50 100B5

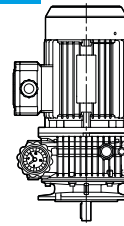
Grandezza  
Size  
Attacco motore IEC  
IEC motor adaptor

## Posizioni di montaggio / Mounting positions

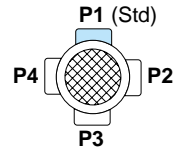
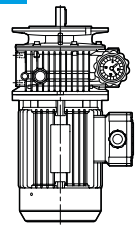
B5



V1



V3



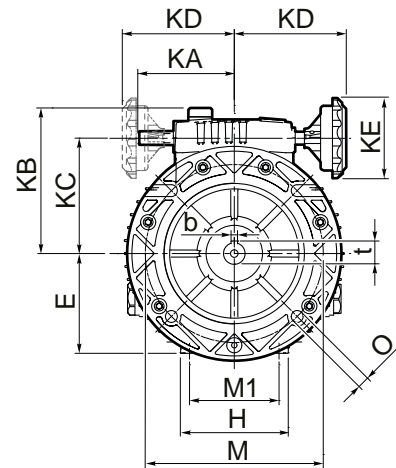
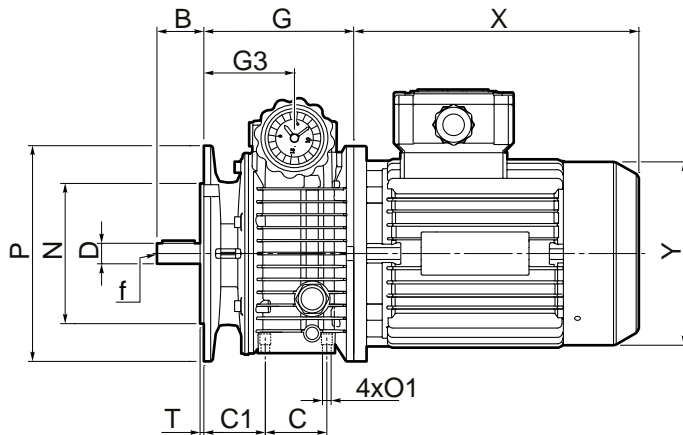
Q.tà olio in litri Oil quantity in litres	B5	V1	V3
<b>SV 02 063B5</b>	0.13	0.3	0.2
<b>SV 05 071B5</b>	0.15	0.4	0.25
<b>SV 10 080B5</b>	0.33	0.8	0.45
<b>SV 20 090B5</b>	0.8	1.4	1
<b>SV 30 100B5</b>	1.2	2.1	1.2
<b>SV 50 100B5</b>	1.2	2.1	1.2

Olio raccomandato: A.T.F. DEXRON  
Recommended oil: A.T.F. DEXRON

## Dati tecnici / Technical data

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

## Dimensioni / Dimensions



	B	D j6	C	G	G3	E	H	M	M1	N	O	O1	P	T	C1	KA	KB	KC	KD	KE	b	t	f	kg
<b>SV 02 063B5</b>	23	11	50	111.5	64	70	72	115	60	95	9	M6	140	3.5	46	75	113	78	113	70	4	12.5	M5	3.4
<b>SV 05 071B5</b>	30	14	40	108	71.5	80	90	130	11	110	9	M8	160	3.5	51.5	75	125	91	113	70	5	16	M5	4.7
<b>SV 10 080B5</b>	40	19	58	143.5	87.5	100	98	165	84	130	11	M8	200	3.5	62	82.5	142	107	120	85	6	21.5	M6	7.8
<b>SV 20 090B5</b>	50	24	-	174	106.5	111	230	165	-	130	11	-	200	3.5	-	108.5	148	127	140	85	8	27	M8	31
<b>SV 30 100B5</b>	60	28	-	222	131	136	265	215	-	180	15	-	250	4	-	131	181	158	150	120	8	31	M8	55
<b>SV 50 100B5</b>	60	28	-	222	131	136	265	215	-	180	15	-	250	4	-	131	181	158	150	120	8	31	M8	57

I valori A, X e Y dipendono dal motore utilizzato

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

**Attenzione:** La regolazione della velocità non si può **mai** effettuare con il variatore fermo.  
**Warning:** Speed adjustment is **never** possible when variator is stationary.

Per maggiori informazioni contattare il nostro Ufficio tecnico  
 For further information please contact our Technical Office





1. **ORDINI.** Per la vendita dei propri articoli SATI S.p.A. accetta unicamente ordini scritti. Invitiamo a consultare il catalogo indicando i nostri codici prodotto e ad inviare gli ordini a mezzo fax, e-mail o web. Una volta iniziata la lavorazione o l'imballo dei pezzi non vengono accettati annullamenti o riduzioni dell'ordine – salvo differenti accordi con il nostro personale interno. Per i prodotti realizzati su specifica del cliente, il numero di pezzi spediti può variare del  $\pm 5\%$  rispetto alla quantità ordinata; la fatturazione al committente viene adeguata di conseguenza.
  2. **PREZZI.** I prezzi vengono concordati in fase di offerta o fanno riferimento al listino generale. SATI S.p.A. si riserva la facoltà di modificare le proprie quotazioni, ove ciò si rendesse necessario come conseguenza di mutate condizioni di mercato e di produzione.
  3. **DIVIETO DI CESSIONE.** Gli obblighi e i diritti del Cliente non possono essere ceduti a terzi senza la previa autorizzazione di SATI S.p.A.
  4. **TERMINI E MODALITÀ DI PAGAMENTO.** I termini e le modalità di pagamento devono essere preventivamente concordati con il nostro ufficio vendite. Non sono consentiti arrotondamenti o trattenute sugli importi dovuti se non autorizzati dall'ufficio vendite. L'insolvenza di R.I.BA e ogni ritardato pagamento genera l'addebito di spese e di interessi di mora fino al massimo previsto dalla legge. Le commissioni della banca estera relative ai pagamenti sono a carico dell'ordinante.
  5. **RISERVA DI PROPRIETÀ.** La merce viene venduta con riserva di proprietà, fino al pagamento dell'intero prezzo, compresi eventuali interessi e accessori.  
Il rilascio di cambiali ed eventuali loro rinnovi, anche parziali, da parte del Cliente, non può considerarsi estinzione, né quale novazione né quale pagamento definitivo del prezzo, se non a buon fine delle cambiali stesse; analogamente, il rilascio di cambiali non può pregiudicare la riserva di proprietà.  
Nonostante quanto precede, il rischio di perdita, perimento o danneggiamento viene trasferito al Cliente in sede di consegna in conformità con quanto previsto negli art. 6 e 8 delle presenti condizioni.
  6. **TERMINI DI CONSEGNA.** I termini di consegna delle forniture devono essere concordati ad ogni ordine. In caso di difficoltà nell'approvvigionamento dei materiali o comunque in tutti i casi di forza maggiore, i termini di consegna possono subire variazioni senza pregiudicare la validità dell'ordine. Nel caso di prodotti realizzati su specifica, il Cliente è in ogni caso tenuto al ritiro del materiale ordinato. E' in ogni caso esclusa la responsabilità della SATI S.p.A. per danni da mancata o ridotta produzione, nonché per danni indiretti e consequenziali, derivanti nel ritardo nella consegna dei prodotti ordinati.
  7. **IMBALLO.** SATI S.p.A. fattura l'imballo dei propri prodotti al prezzo di costo.
  8. **TRASPORTO.** Le condizioni di trasporto devono essere concordate tra SATI S.p.A. e il Cliente. La merce viaggia a rischio e pericolo del committente, salvo le responsabilità del vettore ai sensi dell'Art. 1693 cc.
  9. **RECLAMI.** Eventuali reclami e contestazioni sulla merce consegnata devono essere segnalati per iscritto entro 10 giorni lavorativi dal ricevimento della merce. Il trattamento da adottare per i singoli pezzi riconosciuti difettosi – compresi gli eventuali oneri economici –, e la decisione sull'intera fornitura, devono essere sempre concordate. In particolare, non si accetta l'addebito di costi di riparazione sostenuti direttamente dal Cliente, se non preventivamente autorizzati dal nostro personale interno. La presenza di materiale contestato all'interno di una fornitura non giustifica in alcun modo un ritardato o mancato pagamento dell'intera fattura relativa alla fornitura stessa.
1. **ORDERS.** SATI S.p.A. accepts only written orders. Customers shall place orders by fax, e-mail or e-commerce website and if possible they shall indicate the product codes which are to be found in the general catalogue. Once an order has been processed or packaged, it can no longer be cancelled or reduced – except in case of specific agreement with our Sales Office. The quantity of items produced according to customer's drawings can vary of  $\pm 5\%$  with respect to the ordered quantity; invoices adjust accordingly.
  2. **PRICES.** Prices are agreed at the time of quotation or refer to the general price list. SATI S.p.A. reserves the faculty to modify its prices, if changes in market and production conditions make it necessary.
  3. **PROHIBITION OF ASSIGNMENT.** Contractual rights and liabilities can not be assigned to third parties without prior authorization from SATI S.p.A.
  4. **PAYMENT TERMS.** Payment terms shall be agreed in advance with our Sales Office. Unless authorized by our Sales Department, rounding-offs or deductions from the amounts due are not allowed. Unpaid cash orders and delayed payments determine expenses and delay interests charged to the Customer in the limits foreseen by the Italian law. Foreign bank charges related to payments are at Customer's expenses.
  5. **RETENTION OF TITLE.** Goods are subject to retention of title, until they are fully paid for, including inter-ests and accessories.  
Customer's drawing or renewing (full or in part) of bills of exchange shall not be considered as extinction, novation or final payment of the price, until the full payment occurs. Similarly, drawing bills of exchange do not compromise the retention of title.  
Notwithstanding the foregoing, risks of loss, failure or damage shall transfer to the Customer upon goods delivery, as stated in articles 6 and 8 of these sales terms.
  6. **DELIVERY TERMS.** Upon placement of each order, delivery terms must be arranged and reconfirmed by SATI S.p.A. Delivery terms may vary in case of production problems, difficulties in collecting material or in the event of force majeure, without affecting the validity of the order. The Customer is forced to collect items according to drawing in any case. SATI S.p.A. shall not incur any liability by reason of damages due to failed or reduced production of goods, nor for indirect and consequential damages caused by delays in the delivery of ordered goods.
  7. **PACKAGING.** SATI S.p.A. charges packaging at cost price.
  8. **TRANSPORTATION.** Transport conditions must be agreed between SATI S.p.A. and the Customer. Goods travel at the risk of the Customer, except from the carrier's liability by virtue of article 1693 of the Italian Civil Code.
  9. **CLAIMS.** Potential claims and objections on delivered goods must be reported in writing within 10 days from receipt of the goods. Decisions concerning admittedly defective goods and the entire supply these goods belong to – including economic charges – always have to be agreed upon with our Sales Office. In particular, Customer repair costs charges, unless previously authorised by our employees, are not accepted. A supply containing contested products does not justify any delay or failure of payment of the whole invoice of the supply.

10. **GARANZIA.** E' garantita la riparazione o la sostituzione dei soli pezzi riconosciuti difettosi da SATI S.p.A. Per le modalità di reso si rimanda alle modalità sotto precisate. La garanzia decade per prodotti usati in maniera difforme rispetto alle indicazioni fornite. La garanzia altresì decade per prodotti modificati, riparati, smontati anche parzialmente, oppure che siano stati conservati, installati, lubrificati o manutenti in maniera errata o negligente. La verifica della compatibilità delle applicazioni e della correttezza degli accoppiamenti meccanici e dei collegamenti elettrici è di pertinenza e responsabilità del compratore. La garanzia non copre i materiali e le parti per loro natura soggette a deterioramento (es. perdite di lubrificante causate da normale usura degli anelli di tenuta nei riduttori venduti da SATI S.p.A.). SATI S.p.A. non assume alcuna responsabilità ed esclude il riconoscimento di qualunque tipo di indennizzo per danni che si dovessero verificare nell'impiego dei prodotti venduti, siano essi difettosi o meno. La responsabilità correlata all'applicazione di prodotti forniti è considerata in carico esclusivamente all'utilizzatore anche nei casi in cui l'applicazione sia stata consigliata da personale di SATI S.p.A. Viene infine declinata ogni responsabilità nella fornitura di particolari a disegno coperti da eventuale brevetto.
11. **RESI.** SATI S.p.A. accetta esclusivamente i resi preventivamente autorizzati dall'Ufficio Commerciale. L'autorizzazione viene comunicata al Cliente attraverso un modulo RMA che deve essere sempre citato nella documentazione di consegna della merce (fattura o documento di trasporto). Possono essere accettati resi solamente alla condizione che i prodotti siano di produzione standard (non a commessa o su specifica) e consegnati da non più di 10 giorni lavorativi (tra data di consegna e la data di richiesta autorizzazione al reso). La merce resa dovrà risultare integra e non lavorata od utilizzata dal Cliente; in caso contrario, sarà restituita al mittente con spese a Suo carico. Gli imballi della merce resa devono essere idonei onde evitare danneggiamenti durante il trasporto. Non si accettano resi di merce priva di imballi originali SATI S.p.A. ove previsti. SATI S.p.A. si riserva il diritto di addebitare un importo pari al 30% del prezzo originario di vendita a copertura dei costi di movimentazione e stoccaggio delle merci e la restituzione deve essere effettuata in porto franco. Non saranno autorizzati resi per importi inferiori a 50,00 euro per riga. Non si accettano resi entranti nei mesi di novembre e dicembre.
12. **LEGGE APPLICABILE.** Qualsiasi rapporto derivante, disciplinato o comunque collegato alle presenti condizioni generali sarà sottoposto esclusivamente alla legge italiana.
13. **FORO COMPETENTE.** Per qualsiasi controversia in materia di esecuzione, interpretazione o risoluzione di un qualsiasi rapporto derivante, disciplinato o comunque collegato alle presenti condizioni generali, sarà competente in via esclusiva il foro di Bologna, salva la facoltà di SATI S.p.A. di convenire il Cliente presso il foro territorialmente competente per il luogo in cui il medesimo Cliente ha la propria sede.
10. **GUARANTEE:** *The repair or substitution of any item is guaranteed only if SATI S.p.A. acknowledges them as defective. The return procedure is explained in the next paragraph. The guarantee is no longer valid if the products have been used in a different way than the recommended one, or if the products have been modified, repaired, tampered with, even partially disassembled or if they have been stored, installed, lubricated or maintained wrongly or carelessly. The compatibility of the product with the intended application as well as the accuracy of mechanic couplings and electrical connections must be checked under the sole buyer's responsibility. The guarantee does not cover any consumable material or part (i.e. lubricant leaks due to usual wear and tear of seals in the gearboxes sold by SATI S.p.A.). SATI S.p.A. will not be liable and excludes any indemnification for damages occurring during use of the products sold, regardless of their defectiveness. The user only shall be held liable for the applications in which the products sold by SATI S.p.A. are employed, even when the application has been recommended by SATI S.p.A. staff. Furthermore, SATI S.p.A. declines all responsibility for the supply of items made to drawing which are protected by any patent.*
11. **MATERIAL RETURN.** *SATI S.p.A. can accept exclusively the return of goods previously authorized in writing by our Sales Department. The said authorization is given to the customer by means of an RMA form, whose number shall always be mentioned in each return delivery document (invoice and/or shipping document). Only returns of standard goods (not made according to the customer's specifications) can be accepted, as well as only goods returned within 10 working days from the delivery date (10 days between delivery date and goods return request). The goods returned shall be intact and not modified or used by the Customer; if this is not the case returns will be sent back at Customer's charge. The goods shall be packed correctly to prevent any damage during transportation. Returned goods won't be accepted if not packed in original SATI S.p.A. packages, if foreseen. SATI S.p.A. reserves the right to charge the Customer with 30% of the original selling price to cover handling and stocking costs and goods shall be returned carriage paid. Returns for amounts lower than € 50,00 per each sales line won't be accepted. Returns of goods in the months of November and December are not accepted.*
12. **APPLICABLE LAW.** *Any relationship arising hereunder shall be exclusively governed by, and construed in accordance with, the Italian Law.*
13. **COURT HAVING JURISDICTION.** *All disputes concerning the execution, interpretation or termination of any relationship arising out of, regulated by, or somehow related to the terms of these general conditions, will be exclusively submitted to the judgement of the Law Court of Bologna, except if SATI S.p.A. agrees to submit them to the judgement of the Court having jurisdiction in the Customer's registered office.*

Qualora esigenze di costruzione, sviluppo evolutivo del prodotto o errori di compilazione lo rendessero necessario, SATI S.p.A. si riserva il diritto di modificare senza preavviso i contenuti di questo catalogo. In ogni caso si rimanda al sito web [www.satispa.com](http://www.satispa.com) per la consultazione dei documenti tecnici e informativi aggiornati.

*SATI S.p.A. reserves the right to modify the contents of this catalogue without previous notice if made necessary by specific construction requirements, product design evolution or detection of mistakes. In any case the latest version of our technical or informative documents is always available for consultation at [www.satispa.com](http://www.satispa.com).*













