CATALOGO RC
RC CATALOGUE /
RC-KATALOG /

VARVEL®
KNOW-HOW TO DO IT

L'esperienza al servizio dell'innovazione

IT

Dal 1955 il Gruppo Varvel progetta e realizza sistemi di trasmissione di potenza impiegati in numerosi settori dell'industria. "Know-how to do it": Varvel ha le competenze per soddisfare al meglio le richieste dei clienti. Grazie alla grande esperienza maturata in oltre sessant'anni, Varvel offre alla clientela un'ampia gamma di soluzioni standard e prodotti personalizzati per esigenze specifiche. L'intera gamma di prodotti Varvel è progettata e realizzata in Italia, ma il Gruppo è presente in tutto il mondo con due filiali (una in USA e l'altra in India) e una rete globale con oltre 100 partner commerciali.

Experience at the service of innovation

EN

The Varvel Group has been designing and producing power transmission systems for numerous areas of industry since 1955. "Know-how to do it": Varvel has the know-how needed to satisfy customers' requests in the best way possible. Thanks to over sixty years of accumulated experience, Varvel can offer customers a vast range of standard solutions and customise products for specific needs. The entire product range is designed and made in Italy and sold worldwide through two subsidiaries (in the USA and India) and a global network of over 100 commercial partners.

Erfahrung im Dienste der Innovation

DE

Die Varvel-Gruppe entwickelt und produziert seit 1955 Kraftübertragungssysteme für viele Industriezweige. "Know-how to do it": Varvel verfügt über das Know-how, um die Anforderungen der Kunden bestmöglich zu erfüllen. Dank der in über sechzig Jahren Firmenaktivität gesammelten Erfahrung kann Varvel seinen Kunden eine breite Palette von Standardlösungen und maßgeschneiderten Produkten für alle spezifischen Anforderungen bieten. Die gesamte Varvel-Produktpalette wird in Italien entwickelt und hergestellt; darüber hinaus ist die Gruppe aber auch weltweit mit zwei Tochtergesellschaften (die eine in den USA und die andere in Indien) und einem globalen Netzwerk mit über 100 Geschäftspartnern präsent.

UNI EN ISO 9001:2015
UNI EN ISO 14001:2015
BS OHSAS 180001:2007

EC DIRECTIVE 2014/34/EC (ATEX)

RC

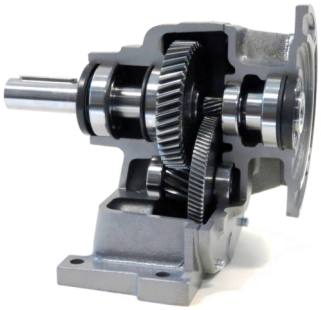
RIDUTTORI AD INGRANAGGI
due, tre e quattro coppie di ingranaggi
carcassa e coperchi in ghisa

HELICAL GEARBOXES
two, three and four gear stages
cast iron housing and covers

STIRNRADGETRIEBE
zwei-, drei- u. vierstufig
Gehäuse und Deckel in Grauguss

RC Riduttori - Gearboxes - Getriebe

Descrizione - Description - Beschreibung



La serie dei riduttori RC è concepita secondo le norme di progettazione ISO.
La robusta struttura non subisce deformazioni significative sotto effetto della coppia di funzionamento e dei carichi esterni con positivi risultati sulle superfici di tenuta.
I riduttori delle serie RC sono costruiti in ghisa, 7 grandezze, più di 40 rapporti per due, tre e quattro coppie di riduzione e momenti torcenti fra 37 e 2500 Nm.
A richiesta, sono realizzabili rapporti di riduzione con componenti standard fino a 17.233.850:1.
I riduttori serie RC sono costruiti con carcassa realizzata in forma B3 con piedi o in forma B5.
La lavorazione in unico piazzamento con linee di produzione CNC dell'ultima generazione e i più moderni processi di calcolo e controllo originano una superiore affidabilità di funzionamento, le massime coppie disponibili, elevati carichi radiali ed assiali e lunga vita operativa.

Direttiva ATEX

I riduttori VARVEL-ATEX, fornibili su richiesta, sono progettati e costruiti in accordo alla Direttiva 94/9/CE "ATEX" e sono pertanto idonei alla installazione in atmosfere potenzialmente esplosive:

- Zone di Gruppo II,
- Categoria 2 (o 3),
- Pericolo di esplosione in presenza di Gas (Zona 1 o 2),
- Pericolo di esplosione in presenza di Polveri combustibili (Zona 21 o 22).

Vedi informazioni dettagliate alle pagine 39 e 39.

La serie VARVEL-ATEX viene identificata mediante la marcatura supplementare:

The gearboxes, series RC are designed according to ISO engineering specifications.

The monolithic framework does not deflect under the effect of torque and external loads with effective results on sealing surfaces.

The gearboxes of series RC are manufactured of cast iron in 7 sizes, more than 40 reduction ratios in two, three and four stages and output torques from 37 up to 2500 Nm.

On demand, reduction ratios are configured with standard components up to the ratio17,233,850:1.

The RC gearboxes are manufactured with B3 footed housing and B5 flange mounting.
Single-setup machining on state-of-the-art CNC production lines, the most recent calculation techniques and process controls give superior operational reliability, maximum output torques, high overhung and thrust load capacity, and long working lifetime.

Directive ATEX

The gearboxes VARVEL-ATEX, supplied on demand, are designed and manufactured according to Directive 94/9/CE "ATEX" and therefore, they are qualified for installation in potentially explosive atmospheres:

- Zones of Group II,
- Category 2 (or 3),
- Explosion hazard with gas presence (Zone 1 or 2),
- Explosion hazard with combustible dust presence (Zone 21 or 22).

See detailed information at pages 38 and 39.

The units VARVEL-ATEX are identified by the additional marking:

Die Getriebe der Baureihe RC sind nach den ISO Normen konstruiert.
Die Gehäusestruktur wird von den Betriebsdrehmomenten und durch außen am Getriebe wirkende Kräfte nahezu nicht beeinflusste, was sich positiv auf die Lebensdauer der Wellen-dichtungen auswirkt.
Die Serie RC ist für 7 Baugrößen lieferbar, mit mehr als 40 Untersetzungen, zwei-, drei - oder vierstufig und Ausgangsdrehmomenten zwischen 37 und 2500 Nm.
Nach Anfrage sind die Untersetzungsverhältnisse mit Standardbauteilen bis zu 17.233.850: 1 realisierbar.
Die RC-Serie ist mit Gehäusen in B3 Fussform oder in B5 Flanschform hergestellt.
Durch Zusammenfassung modernster Maschinen in CNC-Produktionslinien, durch fortschrittlichste Berechnungsverfahren und durch permanente Kontrolle der Produktion werden höchste Zuverlässigkeit, große Drehmomente, hohe Achsbelastbarkeit und Stossfestigkeit bei langer Lebensdauer erreicht

ATEX Richtlinien

Die Getriebe VARVEL-ATEX, ausschließlich auf Anfrage geliefert, sind entsprechend den ATEX-Richtlinien 94/9/ EG "ATEX" konstruiert und hergestellt und somit zugelassen für die Installation in potentiell explosiver Atmosphäre:

- Gefahrenbereiche der Gruppe II
- Kategorie 2 (oder 3)
- Explosiongefärdeter Bereich mit Gase (Gefahrenbereiche 1 oder 2)
- Explosiongefärdeter Bereich mit zundfähigen Stäube (Gefahrenbereiche 21 oder 22).

Ausführliche Informationen finden Sie auf den Seiten 38 und 39.

Die VARVEL-ATEX Produkte sind mit folgenden zusätzlichen Bezeichnung versehen:

Ⓔx II 2 GD ck IP66 CE T_{max}=135 °C

Getriebe - Gearboxes - Riduttori RC

Beschreibung - Description - Descrizione

	SPECIFICHE GENERALI	GENERAL SPECIFICATIONS	ALLGEMEINE EIGENSCHAFTEN
Gamma Range Bereich	7 grandezze 47 rapporti in 2, 3 e 4 coppie 2500 Nm coppia uscita max.	7 sizes 47 ratios in 2, 3 and 4 stages 2500 Nm max. output torque	7 Baugrößen 47 Übersetzungen in 2-, 3- u. 4-stufen 2500 Nm max. Abtriebsmoment
Dimensionamento Sizing Auslegung	Secondo ISO6336 / DIN3990. Vita media 10.000 ore con fattore di servizio SF1	According to ISO6336 / DIN3990. 10,000 hrs average lifetime with service factor SF1	Laut ISO6336 / DIN3990. 10.000 durchschnittstunden Lebensdauer bei einem Betriebsfaktor SF1
Carcassa, Coperchi Housing, Covers Gehäuse, Flansche	Ghisa grigia	Cast iron	Grauguss
Entrata Input Eingang	Flange IEC con foro e accoppiamento chiavetta/cava chiavetta	IEC motor flanges with key/keyway fitting	IEC-Flansche mit Hochwelle mit Feder/Passfederverbindung
Parti dentate Toothed parts Verzahnung	Acciaio legato, cementato e temprato Evolvente rettificato o sbarbato	Alloy steel, case hardened Tooth profile ground or shaved	Legiert Stahl, einsatzgehärtet Zahnprofil geschliffen / rasiert
Alberi & Linguette Shafts & Keys Wellen	Tolleranze: Alberi h6 Acciaio Fori E8 Linguette secondo DIN6885 B1	Tolerances: Shafts h6 Steel Bores E8 Keys according to DIN6885 B1	Toleranzen: Wellen h6 Stahl Bohrungen E8 Passfedern nach DIN6885 B1
Cuscinetti Bearings Lagerung	Sfere o rulli, secondo grandezza	Ball- or roller-types, according to sizes	Kugel- oder Rollenlager entsprechend den technischen Vorschriften
Paraolio Oil seals Dichtungen	NBR - Nitril Butadiene Rubber con secondo labbro parapolvere (DIN 3760). FKM - Fluoro elastomero Viton, a richiesta PTFE - Politetrafluoroetilene Silicone, a richiesta	NBR - Nitril-Butadiene Rubber with additional anti-dust lip (DIN 3760) FKM - Fluor elastomer Viton, on demand PTFE - Polytetrafluoroethylene Silicone, on demand	NBR - Nitril-Butadien Rubber mit zusätzlicher Staublippe (DIN 3760) FKM - Fluorelaste Viton, auf Anfrage PTFE - Polytetrafluoroethylene Silikone, auf Anfrage
Lubrificante Lubricant Schmierung	Olio sintetico a lunga durata Gradazione ISO VG 320 Senza tappi Riempimento in fabbrica	Synthetic long-life oil Grade ISO VG 320 No oil/vent plugs In-house filling	Synthetisches Getriebeöl ISO VG 320 als Langzeit-Füllung ohne zusätzliche Verschlussschrauben. Füllung im Werk
Verniciatura Painting Gehäuselackierung	Vernice a polveri epossidiche grigia RAL 7012	Grey Epoxy powder paint RAL 7012	Grau Epoxydpulverfarbe RAL 7012
Rendimento Efficiency Wirkungsgrad	- 2 coppie: 96% - 3 coppie: 94% - 4 coppie: 92%	- 2 stages: 96% - 3 stages: 94% - 4 stages: 92%	- 2 Stufen: 96% - 3 Stufen: 94% - 4 Stufen: 92%
ATEX	A richiesta	On demand	Auf Anfrage

RC Riduttori - Gearboxes - Getriebe

Designazione Riduttore e Motore - Gearbox & Motor Designation - Getriebe- u. Motorbezeichnungen

DESIGNAZIONE DEL RIDUTTORE - GEARBOX DESIGNATION - GETRIEBEBEZEICHNUNG

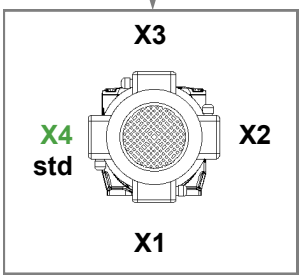
F	RC	2	10	/B3	20	IEC71	-B5	AU30	DFU200

- DFU200: Flangia uscita ø - Output flange - Ausangsflansch
- AU30: Albero uscita ø - Output shaft ø - Ausgangswelle ø
- -B5: Forma del motore - Motor form - Motorbauform
- IEC71: Grandezza del motore elettrico - Electric motor frame - Motorbaugrösse
- 20: Rapporto di riduzione - Reduction ratio - Getriebeübersetzung
- /B3: Forma costruttiva del riduttore - Gearbox form - Bauform des Getriebes
- 10: Grandezza del riduttore - Gearbox size - Baugröße des Getriebes
- 2: N. coppie del riduttore - Gearbox stages - Stufen des Getriebes
- RC: Tipo del riduttore - Gearbox type - Getriebetyp
- F: M = Motoriduttore / F = Riduttore con entrata IEC / … = (nulla) Riduttore con albero entrata sporgente
  M = Geared motor / F = Gearbox with input flange / … = (nothing) Gearbox with input free shaft
  M = Getriebemotor / F = Getriebe mit Eingangsflansch / … = (kein) Getriebe mit Freie Eingangswelle

DESIGNAZIONE DEL MOTORE- MOTOR DESIGNATION - MOTORBEZEICHNUNG

MT	0.37 kW	71 B	4	B5	230/400/50	IP55	F	X4

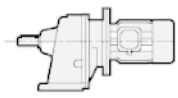
- X4: Posizione della morsettiera / Terminal box position / Klemmkastenposition
- F: Classe F (std) = Classe isolamento / Insulation class / Isolationsklasse
- IP55: IP55 (std) = Grado di protezione - Protection class - Schutzart
- 230/400/50: Tensione / Frequenza - Voltage/frequency - Spannung/Frequenz
- B5: Forma costruttiva - Mounting form - Bauform
- 4: Numero poli - Number of poles - Polzahl
- 71 B: Grandezza IEC del motore - IEC motor frame - IEC-Motorbaugröße
- 0.37 kW: Potenza del motore - Motor power - Motorleistung
- MT: MT = Motore trifase / MM = Motore monofase / MA = Motore autofrenante
  MT = Three-phase motor / MM = Single-phase motor / MA = Brake motor
  MT = Dreiphasenmotor / MM = Einphasenmotor / MA = Bremsmotor

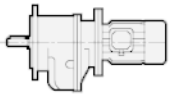


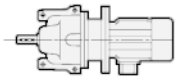
Getriebe - Gearboxes - Riduttori RC

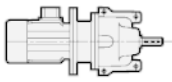
Einbauanlagen u. Ausgangskräfte - Positions & External Loads - Posizioni e Carichi esterni

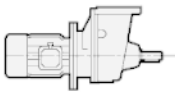
Einbauanlagen - Mounting positions - Posizioni di montaggio

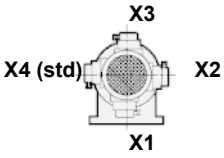

B3

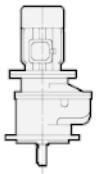

B5

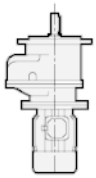

B6

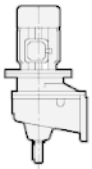

B7

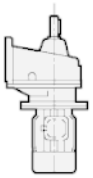

B8



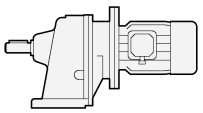
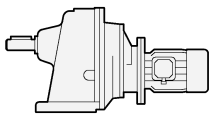
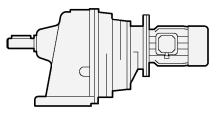

V1


V3


V5


V6

Ausgangskräfte - External loads - Carichi esterni

Due coppie Two stages Zweistufig [N]	RC2	500 rpm	300 rpm	150 rpm	75 rpm	30 rpm	
	205	450	600	750	950	1100	
	210	750	900	1100	1400	1500	
	220	1100	1250	1650	2100	2500	
	230	1800	2100	2700	3500	4200	
	240	2750	3200	4150	5300	6200	
	250	4200	4750	6200	8000	9300	
	260	8000	9500	12000	16000	18000	
Tre coppie Three stages Dreistufig [N]	RC3	25 - 3 rpm					
	305	1200					
	310	1600					
	320	2700					
	330	4500					
	340	6750					
	350	10000					
	360	19500					
Quattro coppie Four stages Vierstufig [N]	RC4	2.7 - 0.4 rpm					
	405	1300					
	410	1700					
	420	2900					
	430	4800					
	440	7500					
	450	10700					
	460	21000					

RC Riduttori - Gearboxes - Getriebe

Carichi esterni - External Loads - Ausgangskräfte

CARICHI RADIALI USCITA

Il carico radiale riportato nelle tabelle, deve essere verificato in base alla velocità di uscita, alla posizione di montaggio (A) e al tipo di elemento di trasmissione (B) montato sull'albero di uscita del riduttore tramite i relativi fattori k_L e k_T.

OUTPUT RADIAL LOADS (OHL)

The radial (overhung) load shown in the tables, should be checked according to output speed, mounting position (A) and type of the transmission element (B) fitted on the gearbox output shaft by the appropriate k_L and k_T rating factors.

AUSGANGSRADIALKRÄFTE

Die Radialkräfte in den Tabellen müssen mit entsprechender Abtriebsdrehzahl, den montierten Montageposition (A) und dem Übertragungselement (B) auf der Getriebe-Ausgangswelle durch entsprechendem Faktoren k_L und k_T verglichen werden.

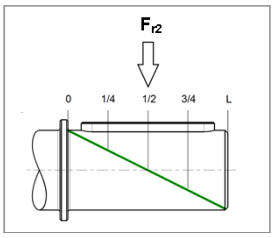
(A) - Punto di applicazione del carico radiale - Application point of radial load - Anwendung Punkt der Radialbelastung

Il carico radiale è considerato applicato alla mezzeria dell'albero di uscita.
Altre posizioni originano carichi da correggere con l'appropriato fattore k_L.
Esempi del fattore k_L in funzione della distanza L del carico dallo spallamento dell'albero di uscita:

OHL is considered as applied at the output shaft mid-point.
Other positions origin loads to be adjusted with the appropriate factor k_L.
Examples of factor k_L depending on the distance L of the load from the output shaft shoulder:

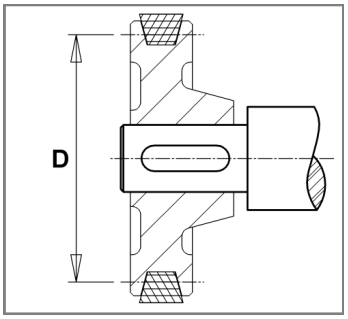
Die Radialbelastung wird auf der Mitte der Ausgangswelle angelegt.
Andere Positionen erzeugen Lasten, die mit dem entsprechendem Faktor k_L zu korrigieren sind. Beispiele des k_L-Faktors abhängig vom Abstand L der Lasten zum Ausgangswellenabsatz .

k_L	L
1.1	1/4 * L
1.0	1/2 * L
0.9	3/4 * L
0.8	L



(B) - Elemento della trasmissione - Transmission element - Übertragungselement

k_T	Tipo dell'elemento	Element type	Elementtyp
1,15	Ingranaggio n. denti < 17	Gear tooth No. < 17	Zahnrad Zähnezahl < 17
	Pignone catena	Chain sprocket	Kettenrad
1,40	n. denti < 13	tooth No. < 13	Zähnezahl < 13
1,25	n. denti < 20	tooth No. < 20	Zähnezahl < 20
1,00	n. denti > 20	tooth No. > 20	Zähnezahl > 20
	Puleggia per	Pulley for	Riemen für
2,50	cinghie "V"	V-belt	Keilriemen "V"
1,25	cinghie dentate	toothed-belt	Zahnriemen



F_{r2} - Carico radiale - Radial (overhung) load - Radialkräfte

$$F_{r2} = \frac{2000 * M_2}{D} \times k_L \times k_T$$

CARICHI ASSIALI USCITA

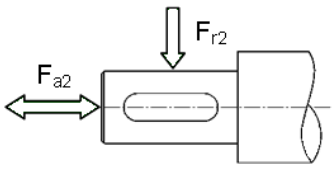
Il valore del carico assiale
$F_{a2} = F_{r2} \times 0.2$
è incluso nel valore dei carichi radiali di catalogo ed è valido sia a trazione che a compressione.

OUTPUT AXIAL LOADS

Axial load value
$F_{a2} = F_{r2} \times 0.2$
is included within the catalogue radial load figure and is valid on both tensile and compressive stress.

AUSGANGSAXIALKRÄFTE

Der Wert der Axialkräfte
$F_{a2} = F_{r2} \times 0.2$
ist in dem Wert der Radialkräfte des Kataloges enthalten und gilt sowohl in Zug und Druck.



FATTORE DI SERVIZIO del riduttore

Il fattore di servizio FS1.0 è inteso come rappresentativo di un funzionamento di 8 ore al giorno. con carico uniforme e fattore di accelerazione delle masse $k_{(a)} \leq 0.2$. avviamenti inferiori a 200 all'ora e temperatura ambiente fra 15 e 35 °C.

Le prestazioni riportate nelle tabelle permettono di calcolare il fattore di servizio come rapporto fra la coppia massima di uscita del riduttore M_2 e la coppia richiesta dalla ap-plicazione $M_{(app)}$.

Non è necessario tener conto della potenza termica (v. pag.19) quando la durata massima di servizio continuativo è di circa 3 h seguita da pause sufficienti (circa 2 - 4 h) a ristabilire nel riduttore la temperatura ambiente.

Per temperatura massima ambiente maggiore di 40 °C oppure minore di 0 °C interpellare il Servizio Clienti.

SERVICE FACTOR of the gearbox

Service factor FS1.0 is meant as typical of 8 hours/day operation. with uniform load and mass acceleration factor $k_{(a)} \leq 0.2$. starts/ stops lower than 200 per hour and ambient temperature between 15 and 35 Celsius.

The performance shown in the tables gives the service factor calculation as a ratio between gearbox maximum output torque M_2 and application torque $M_{(app)}$.

Thermal power (see page19) can be not considered when the max. continuous operation is about 3 hours with long enough rest periods (about 2 to 4 hours) to restore the ambient temperature into the gearbox.

For max. ambient temperature exceeding 40 °C or below 0 °C. please ask our Customer Service.

BETRIEBSFAKTOR des Getriebes

Für den Servicefaktor FS1.0 gilt ein 8- bis 10-stündiger Betrieb mit gleichförmiger Last und einem Massenbeschleunigungs Faktor $k_{(a)}$ $J_2 \leq 2$. bis zu 200 Starts/Stops je Stunde und Umgebungstemperaturen zwischen 15° und 35 °C. Die in den Tabellen dargestellten Daten ermöglichen eine Bestimmung des genauen Betriebsfaktors aus dem max. Abtriebsmoment des Getriebes M_2 und dem erforderlichen Moment der Anwendung $M_{(app)}$.

Thermische Leistung (siehe Seite 19) können nicht berücksichtigt. wenn die max. Dauerbetrieb etwa 3 Stunden lang genug Ruhezeiten (ca. 2 bis 4 Stunden). um die Umgebungstemperatur in dem Getriebe wiederherzustellen.

Für max. Umgebungstemperatur über 40° C oder unter 0° C. fragen Sie bitte unseren Kundenservice.

Fattore di Servizio SF - Service Factor SF - Betriebsfaktor SF

Carico - Charge - Belastung				Avviamenti / Ora Start-Stops / Hour Schaltungen/Stunde		
ore hours Stunden	uniforme uniform gleichmäßige **SF_1**	variabile variable variabel **SF_1**	a urti with shocks **mit Stöße SF_1**	numero number Anzahl	**SF_2**	**$SF = SF_1 \times SF_2$**
8	0.8	1.1	1.4	6	1.0	
16	1.0	1.3	1.5	600	1.2	
24	1.2	1.4	1.6	1200	1.3	

Fattore di accelerazione delle masse
Mass acceleration factor
Beschleunigungsfaktor der Massen

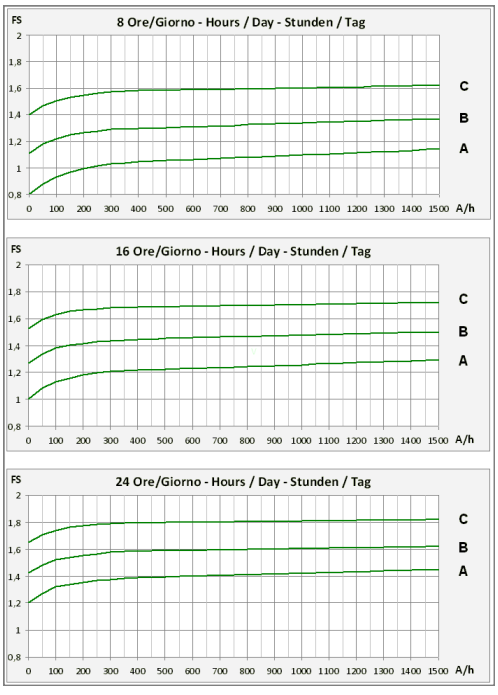
Classi di carico
Load class
Belastungsklassen

A - Carico uniforme
Uniform load $k_{(a)} \leq 0.2$
Gleichförmige Last

B - Carico con urti moderati
Moderate shock load $0.2 < k_{(a)} \leq 3$
Ungleichförmige Last

C - Carico con forti urti
Severe shock load $3 < k_{(a)} \leq 10$
Stark ungleichförmige Last

A/h - Numero di avviamenti/ora
Number of starts/stops per hour
Anzahl der Schaltungen je Stunde



RC Riduttori - Gearboxes - Getriebe

Fattori di servizio - Service factors - Betriebsfaktoren

TIPO DI SERVIZIO del motore

Le specifiche dei vari tipi di servizi sono definiti dalle norme CEI EN60034-1/IEC34-1.

DUTY TYPE of the motor

The specifications of various duty types are defined by CEI EN60034-1/IEC34-1 Standard.

BETRIEBSARTEN des Motors

Die Betriebsarten sind definiert in den Normen CEI EN60034-1/IEC34-1.

S1 - Servizio continuo

Funzionamento a carico costante per un periodo di tempo indefinito (N), comunque sufficiente a raggiungere l'equilibrio termico.

S1 - Continuous duty

Steady load operation for an indefinite period (N), but long enough to achieve thermal balancing.

S1 - Dauerbetrieb

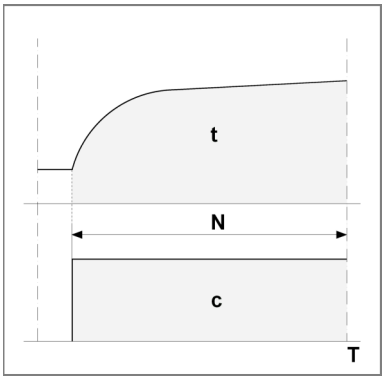
Betrieb mit konstanter Belastung über eine unbestimmte Zeit (N), ohne dass der thermische Beharrungszustand der Maschine beeinträchtigt wird.

FS = 1.0

N = Tempo di lavoro
Operation time
Betriebszeit

c = Carico
Load
Belastung

t = Temperatura
Temperature
Temperatur



S3 - Servizio intermittente periodico

Funzionamento secondo un ciclo (C) comprendente un periodo di tempo a carico costante (N) ed un periodo di tempo di riposo (R). Gli avviamenti non influiscono sulle temperature. Il ciclo (C) di riferimento è di 10 minuti complessivi.
Il rapporto di intermittenza viene determinato secondo la formula.

S3 - Periodic intermittent duty

Operation according to cycle (C) including steady load time (N) and rest time (R). Starts/stops do not affect temperature. The reference cycle (C) is up to a total of 10 minutes.
Intermittence ratio is calculated as follows.

S3 - Aussetzbetriebe

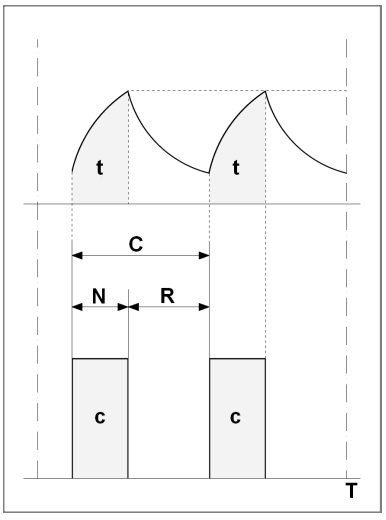
Betrieb als Folge (C) gleichartiger Spiele mit konstanter Last während der Zeit (N) und einer folgenden Pause (R). Start und Stopp beeinflussen nicht die Temperatur.
Für die Zyklusdauer (C) gilt eine Zeit von 10 Minuten.
Der Arbeitszyklus wird nach der Formel bestimmt.

$$\frac{N}{(N+R)} * 100 = \begin{array}{ll} 60\% & \textbf{FS = 1.1} \\ 40\% & \textbf{FS = 1.2} \\ 25\% & \textbf{FS = 1.3} \\ 15\% & \textbf{FS = 1.4} \end{array}$$

N = Tempo di lavoro
Operation time
Betriebsdauer

R = Tempo di riposo
Rest time
Pause

C = Ciclo di lavoro
Duty cycle
Zyklusdauer

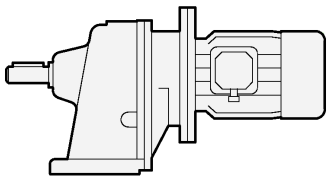


Getriebe - Gearboxes - Riduttori RC

Ausgangsdrehmomente u. Ölmenge - Output torques & Oil quantity - Coppie uscita & Quantità olio

RC2	Nm	Ölmenge - Oil quantity - Quantità olio		
		l_1	l_2	l_3
205	37	0.2	0.2	0.2
210	75	0.2	0.3	0.2
220	150	0.5	0.6	0.5
230	300	0.7	1.2	0.8
240	600	1.2	2.3	2.0
250	1250	2.3	4.4	4.0
260	2500	6.0	8.8	8.0

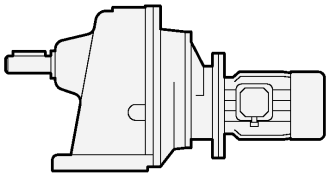
Due coppie - Two stages - zweistufig



[Liter - Litres - Litri] l_1 = B3, B5, B6, B7, B8
l_2 = V3, V6
l_3 = V3, V6

RC3	Nm	Ölmenge - Oil quantity - Quantità olio		
		l_1	l_2	l_3
305	37	0.2	0.3	0.3
310	75	0.3	0.5	0.4
320	150	0.6	0.8	0.6
330	300	1.2	1.5	1.2
340	600	1.5	3.0	2.3
350	1250	3.8	6.0	5.0
360	2500	8.0	10	8.8

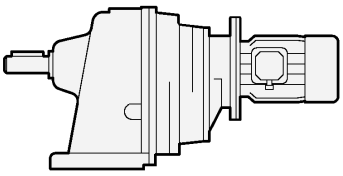
Tre coppie - Three stages - dreistufig



[Liter - Litres - Litri] l_1 = B3, B5, B6, B7, B8
l_2 = V3, V6
l_3 = V3, V6

RC4	Nm	Ölmenge - Oil quantity - Quantità olio		
		l_1	l_2	l_3
405	37	0.2	0.4	0.4
410	75	0.4	0.7	0.5
420	150	0.9	1.1	0.9
430	300	1.3	1.6	1.3
440	600	2.8	5.0	3.5
450	1250	6.5	10	8.0
460	2500	12	15	14

Quattro coppie - Four stages - vierstufig

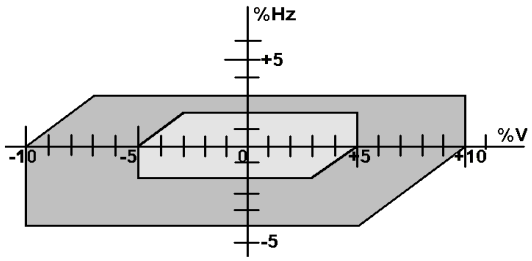


[Liter - Litres - Litri] l_1 = B3, B5, B6, B7, B8
l_2 = V3, V6
l_3 = V3, V6

RC Riduttori - Gearboxes - Getriebe

Standard Motori elettrici - Electric motor Standards - E-Motoren Standards

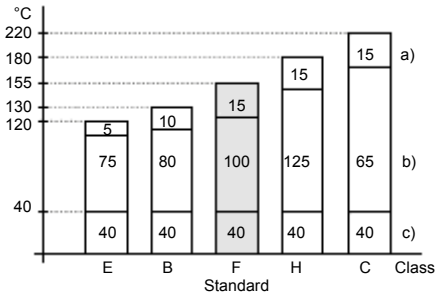
Voltaggio e frequenza - Voltage and frequency - Spannung u. Frequenz



Valori nominali Rated values Nennwerte	Valori utilizzabili Usable values Benutzbarwerte
230/400V 50Hz	240/415V 50Hz 220/380V 50Hz
277/480V 60 Hz	265/460V 60Hz 260/440V 60Hz

- Servizio normale - Normal duty - Normaldienst
- Servizio pesante e limitato - Heavy duty but limited - Schwerdienst aber begrenzt

Classe di isolamento - Insulation class - Isolationsklasse

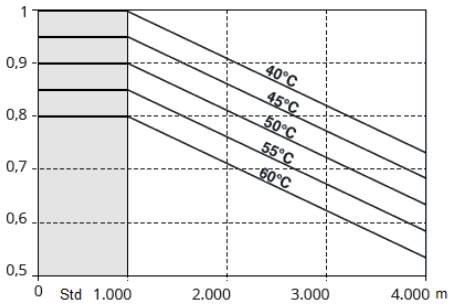


a) margine di sicurezza
safety margin
Sicherheitspanne

b) sovratemperatura ammissibile
admissible temperature
Zulässige Temperatur

c) temperatura ambiente convenzionale
conventional ambient temperature
Konventionelle Zimmertemperatur

Coefficienti di Altitudine e di Temperatura - Altitude and Temperature Factors - Höhe u. Temperatur Faktoren



- <u>Condizioni di lavoro convenzionali</u>
Conventional working conditions
Konventional Arbeitsbedingungen

1000 m [3285 ft]	- altitudine s.l.m. altitude above sea level über dem Meeresspiegel
40 °C [104 °F]	- temperatura ambiente ambient temperature Zimmertemperatur
-15 °C [5 °F]	- min. temperatura ambiente dell'aria min. ambient air temperature Minimum Zimmerlufttemperatur
≤ 60%	- umidità relativa relative humidity relative Feuchtigkeit

MRC

- Motoriduttori a due, tre e quattro coppie di ingranaggi
  Potenza: 0.09 kW a 22 kW a 4 poli
  Giri uscita: 630 rpm a 0.4 rpm

- Geared motors with two, three and four gear sets
  Powers: 0.09 kW to 22 kW, 4 poles
  Output speed: 630 rpm to 0.4 rpm

- Zwei-, Drei- u. Vierstufige Getriebemotoren
  Leistung: 0.09 kW bis 22 kW, 4-polen
  Ausgangsgeschwindigkeit: 630 UpM bis 0.4 UpM

FRC

- Riduttori a due, tre e quattro coppie di ingranaggi con flangia motore entrata, albero d'entrata cavo con chiavetta
  Flange motore: IEC 56 a IEC 180 - **Attenzione**: le grandezze motore indicate alle pagine 12 a 18 debbono intendersi solo come opzioni possibili e da verificare con le reali coppie di uscita.
  Coppia: 4.9 Nm a 2500 Nm / Rapporti di riduzione: 2.3:1 a 3620:1

- Gearboxes with two, three and four gear sets and with input motor flange, input quill with keyway
  Motor flanges: IEC 56 to IEC 180 - **Warning**: the motor frames shown at pages 12 to 18, to be intended as possible options and to be checked according to real output torques.
  Output torque: 4.9 Nm to 2500 Nm / Reduction ratios: 2.3:1 to 3620:1

- Zwei-. Drei- u. Vierstufige Getriebemotoren mit Motorflansch, Eingangshohlwelle mit Passfeder
  Motorflansche: IEC 56 bis IEC 180 - **Achtung**: die auf Seite 12 und 18 gezeigten Motorgrößen sind als mögliche Optionen zu verstehen und mit dem realen Abtriebsdrehmoment abzugleichen.
  Ausgangsdrehmoment: 4.9 Nm bis 2500 Nm
  Untersetzungsverhältnis: 2.3:1 bis 3620:1

RC

- Riduttori a due, tre e quattro coppie di ingranaggi con albero entrata sporgente
  Coppia: 4.9 Nm a 3400 Nm
  Rapporti di riduzione: 2.3:1 a 3620:1

- Gearboxes with two, three and four gear sets with input solid shaft
  Output torque: 4.9 Nm to 2500 Nm
  Reduction ratios: 2.3:1 to 3620:1

- Zwei-, Drei- u. Vierstufige Getriebemotoren mit Eingangswelle
  Ausgangsdrehmoment: 4.9 Nm bis 2500 Nm
  Untersetzungsverhältnis: 2.3:1 bis 3620:1

RC Riduttori - Gearboxes - Getriebe

RC05 - 37 Nm

Selezione Riduttore - Speed Reducer Selection - Getriebeauswahl — **1400 rpm**

	i_n	i_r	n_2 [rpm]	M_2 [Nm]	P_1 [kW]	FRC [kg]	B3, B5 [lt]	56 B14	63 B5	71 B5
FRC205	2.3	2.34	630	4.9	0.37	4.5	0.2	⊙	⊙	⊙
	2.7	2.72	540	6.1	0.37			⊙	⊙	⊙
	3.2	3.20	460	7.8	0.37			⊙	⊙	⊙
	3.8	3.78	388	9.8	0.37			⊙	⊙	⊙
	4.5	4.54	324	10	0.37			⊙	⊙	⊙
	5.5	5.55	268	12	0.37			⊙	⊙	⊙
	6.2	6.19	240	15	0.37			⊙	⊙	⊙
	6.6	6.57	230	16	0.37			⊙	⊙	⊙
	7.0	6.96	210	17	0.37			⊙	⊙	⊙
	7.7	7.71	196	18	0.37			⊙	⊙	⊙
	9.1	9.13	166	20	0.37			⊙	⊙	⊙
	11	10.95	138	16	0.25			⊙	⊙	⊙
	13	13.38	113	20	0.25			⊙	⊙	⊙
	15	14.93	101	23	0.25			⊙	⊙	⊙
	17	16.79	90	26	0.25			⊙	⊙	⊙
	18	17.52	82	22	0.18			⊙	⊙	- - -
	21	20.75	69	24	0.18			⊙	⊙	- - -
	25	24.90	57	30	0.18			⊙	⊙	- - -
	30	30.43	47	37	0.18			⊙	⊙	- - -
	34	33.95	42	37	0.18			⊙	⊙	- - -
	38	38.18	37	34	0.12			⊙	⊙	- - -
	46	46.03	31	37	0.12			⊙	⊙	- - -
	51	51.46	27	30	0.09			⊙	⊙	- - -
FRC305	64	63.96	23	37	0.09	6.0	0.2	⊙	⊙	⊙
	76	75.74	19	37	0.09			⊙	⊙	⊙
	91	90.89	16	37	0.06			⊙	⊙	⊙
	111	111.08	13.5	37	0.06			⊙	⊙	⊙
	124	123.93	12	37	0.06			⊙	⊙	⊙
	139	139.36	10.5	37	0.04			⊙	⊙	⊙
	145	145.43	9.5	37	0.04			⊙	⊙	- - -
	172	172.23	8	37	0.03			⊙	⊙	- - -
	207	206.67	6.5	37	0.03			⊙	⊙	- - -
	253	252.60	5.5	37	0.02			⊙	⊙	- - -
	282	281.82	5	37	0.02			⊙	⊙	- - -
	317	316.89	4.5	37	0.02			⊙	⊙	- - -
	382	382.03	3.5	37	0.014			⊙	⊙	- - -
	427	427.12	3	37	0.014			⊙	⊙	- - -
FRC405	531	530.84	2.7	37	0.009	7.0	0.2	⊙	⊙	⊙
	629	628.62	2.5	37	0.009			⊙	⊙	⊙
	754	754.35	1.9	37	0.006			⊙	⊙	⊙
	922	921.98	1.6	37	0.006			⊙	⊙	⊙
	1029	1028.65	1.4	37	0.006			⊙	⊙	⊙
	1157	1156.66	1.25	37	0.004			⊙	⊙	⊙
	1429	1429.47	1.0	37	0.004			⊙	⊙	- - -
	1715	1715.36	0.8	37	0.003			⊙	⊙	- - -
	2339	2339.13	0.6	37	0.003			⊙	⊙	- - -
	2630	2630.22	0.5	37	0.0014			⊙	⊙	- - -
	3545	3545.08	0.4	37	0.0014			⊙	⊙	- - -

	i_n	i_r	n_2 [rpm]	M_2 [Nm]	P_1 [kW]	FRC [kg]	B3, B5 [lt]	56 B14	63 B5	71 B5	80 B5	80 B14
FRC210	2.3	2.30	630	10	0.75	5.5	0.2	⊙	⊙	⊙	⊙	⊙
	2.7	2.68	540	12	0.75			⊙	⊙	⊙	⊙	⊙
	3.1	3.14	460	16	0.75			⊙	⊙	⊙	⊙	⊙
	3.7	3.72	388	18	0.75			⊙	⊙	⊙	⊙	⊙
	4.5	4.46	324	20	0.75			⊙	⊙	⊙	⊙	⊙
	5.4	5.45	268	24	0.75			⊙	⊙	⊙	⊙	⊙
	6.0	6.09	240	27	0.75			⊙	⊙	⊙	⊙	⊙
	6.2	6.26	230	31	0.75			⊙	⊙	⊙	⊙	⊙
	6.8	6.84	210	35	0.75			⊙	⊙	⊙	⊙	⊙
	7.3	7.34	196	37	0.75			⊙	⊙	⊙	⊙	⊙
	8.7	8.70	166	39	0.75			⊙	⊙	⊙	⊙	⊙
	10	10.44	138	36	0.55			⊙	⊙	⊙	⊙	⊙
	13	12.76	113	45	0.55			⊙	⊙	⊙	⊙	⊙
	14	14.23	101	52	0.55			⊙	⊙	⊙	⊙	⊙
	16	16.00	90	55	0.55			⊙	⊙	⊙	⊙	⊙
	18	17.59	82	58	0.37			⊙	⊙	⊙	- - -	- - -
	20	20.83	69	50	0.37			⊙	⊙	⊙	- - -	- - -
	25	25.00	57	61	0.37			⊙	⊙	⊙	- - -	- - -
	30	30.55	47	75	0.37			⊙	⊙	⊙	- - -	- - -
	34	34.09	42	75	0.25			⊙	⊙	⊙	- - -	- - -
	39	39.33	37	65	0.25			⊙	⊙	⊙	- - -	- - -
	46	46.21	31	65	0.18			⊙	⊙	⊙	- - -	- - -
	52	52.63	27	65	0.18			⊙	⊙	⊙	- - -	- - -
FRC310	61	61.22	23	75	0.18	8.0	0.3	⊙	⊙	⊙		
	72	72.49	19	75	0.18			⊙	⊙	⊙		
	87	87.00	16	75	0.12			⊙	⊙	⊙		
	106	106.33	13.5	75	0.12			⊙	⊙	⊙		
	119	118.63	12	75	0.12			⊙	⊙	⊙		
	133	133.40	10.5	75	0.09			⊙	⊙	⊙		
	147	146.60	9.5	75	0.09			⊙	⊙	- - -		
	174	173.61	8	75	0.06			⊙	⊙	- - -		
	208	208.33	6.5	75	0.06			⊙	⊙	- - -		
	255	354.62	5.5	75	0.04			⊙	⊙	- - -		
	284	284.09	5	75	0.04			⊙	⊙	- - -		
	319	319.44	4.5	75	0.04			⊙	⊙	- - -		
	385	385.10	3.5	75	0.03			⊙	⊙	- - -		
	431	430.55	3	75	0.03			⊙	⊙	- - -		
FRC410	510	510.18	2.7	75	0.02	9.0	0.4	⊙	⊙	- - -		
	604	604.16	2.5	75	0.02			⊙	⊙	- - -		
	725	724.99	1.9	75	0.01			⊙	⊙	- - -		
	886	886.11	1.6	75	0.01			⊙	⊙	- - -		
	989	988.63	1.4	75	0.01			⊙	⊙	- - -		
	1112	1111.66	1.25	75	0.007			⊙	⊙	- - -		
	1447	1446.75	1.0	75	0.007			⊙	⊙	- - -		
	1736	1736.11	0.8	75	0.006			⊙	⊙	- - -		
	2420	2420.03	0.6	75	0.006			⊙	⊙	- - -		
	2662	2662.03	0.5	75	0.003			⊙	⊙	- - -		
	3588	3587.96	0.4	75	0.003			⊙	⊙	- - -		

RC Riduttori - Gearboxes - Getriebe

RC20 - 150 Nm

Selezione Riduttore - Speed Reducer Selection - Getriebeauswahl — 1400 rpm

	i_n	i_r	n_2 [rpm]	M_2 [Nm]	P_1 [kW]	FRC [kg]	B3, B5 [lt]	56 B14	63 B5	71 B5	80 B5	80 B14	90 B5
FRC220	2.3	2.30	630	25	1.5	10.5	0.5	⊙	⊙	⊙	⊙	- - -	⊙
	2.7	2.68	540	30	1.5			⊙	⊙	⊙	⊙	- - -	⊙
	3.1	3.14	460	35	1.5			⊙	⊙	⊙	⊙	- - -	⊙
	3.7	3.72	388	40	1.5			⊙	⊙	⊙	⊙	- - -	⊙
	4.5	4.46	324	45	1.5			⊙	⊙	⊙	⊙	- - -	⊙
	5.4	5.45	268	50	1.5			⊙	⊙	⊙	⊙	- - -	⊙
	6.0	6.09	240	55	1.5			⊙	⊙	⊙	⊙	- - -	⊙
	6.2	6.26	230	65	1.5			⊙	⊙	⊙	⊙	- - -	⊙
	6.8	6.84	210	70	1.5			⊙	⊙	⊙	⊙	- - -	⊙
	7.3	7.34	196	72	1.5			⊙	⊙	⊙	⊙	- - -	⊙
	8.7	8.70	166	75	1.5			⊙	⊙	⊙	⊙	- - -	⊙
	10	10.44	138	75	1.1			⊙	⊙	⊙	⊙	- - -	⊙
	13	12.76	113	90	1.1			⊙	⊙	⊙	⊙	- - -	⊙
	14	14.23	101	100	1.1			⊙	⊙	⊙	⊙	- - -	⊙
	16	16.00	90	110	1.1			⊙	⊙	⊙	⊙	- - -	⊙
	18	17.59	82	110	0.75			⊙	⊙	⊙	⊙	- - -	- - -
	20	20.83	69	110	0.75			⊙	⊙	⊙	⊙	- - -	- - -
	25	25.00	57	125	0.75			⊙	⊙	⊙	⊙	- - -	- - -
	30	30.55	47	150	0.75			⊙	⊙	⊙	⊙	- - -	- - -
	34	34.09	42	150	0.55			⊙	⊙	⊙	⊙	- - -	- - -
	39	39.33	37	144	0.55			⊙	⊙	⊙	⊙	- - -	- - -
	46	46.21	31	135	0.37			⊙	⊙	⊙	⊙	- - -	- - -
	52	52.63	27	122	0.37			⊙	⊙	⊙	⊙	- - -	- - -
FRC320	61	61.22	23	150	0.25	12.5	0.6	⊙	⊙	⊙	⊙	⊙	
	72	72.49	19	150	0.25			⊙	⊙	⊙	⊙	⊙	
	87	87.00	16	150	0.18			⊙	⊙	⊙	⊙	⊙	
	106	106.33	13.5	150	0.18			⊙	⊙	⊙	⊙	⊙	
	119	118.63	12	150	0.18			⊙	⊙	⊙	⊙	⊙	
	133	133.40	10.5	150	0.12			⊙	⊙	⊙	⊙	⊙	
	147	146.60	9.5	150	0.12			⊙	⊙	⊙	- - -	- - -	
	174	173.61	8	150	0.12			⊙	⊙	⊙	- - -	- - -	
	208	208.33	6.5	150	0.12			⊙	⊙	⊙	- - -	- - -	
	255	354.62	5.5	150	0.09			⊙	⊙	⊙	- - -	- - -	
	284	284.09	5	150	0.09			⊙	⊙	⊙	- - -	- - -	
	319	319.44	4.5	150	0.09			⊙	⊙	⊙	- - -	- - -	
	385	385.10	3.5	150	0.06			⊙	⊙	⊙	- - -	- - -	
	431	430.55	3	150	0.06			⊙	⊙	⊙	- - -	- - -	
FRC420	510	510.18	2.7	150	0.04	14	0.9	⊙	⊙	⊙			
	604	604.16	2.5	150	0.04			⊙	⊙	⊙			
	725	724.99	1.9	150	0.02			⊙	⊙	⊙			
	886	886.11	1.6	150	0.02			⊙	⊙	⊙			
	989	988.63	1.4	150	0.02			⊙	⊙	⊙			
	1112	1111.66	1.25	150	0.015			⊙	⊙	⊙			
	1447	1446.75	1.0	150	0.015			⊙	⊙	- - -			
	1736	1736.11	0.8	150	0.01			⊙	⊙	- - -			
	2420	2420.03	0.6	150	0.01			⊙	⊙	- - -			
	2662	2662.03	0.5	150	0.006			⊙	⊙	- - -			
	3588	3587.96	0.4	150	0.006			⊙	⊙	- - -			

	i_n	i_r	n_2 [rpm]	M_2 [Nm]	P_1 [kW]	FRC [kg]	B3, B5 [lt]	56 B14	63 B5	71 B5	80 B5	90 B5	100 B5	112 B5
FRC230	2.3	2.30	630	50	5.5	19	0.7	---	---	⊙	⊙	⊙	⊙	⊙
	2.7	2.68	540	55	5.5			---	---	⊙	⊙	⊙	⊙	⊙
	3.1	3.14	460	65	5.5			---	---	⊙	⊙	⊙	⊙	⊙
	3.7	3.72	388	70	5.5			---	---	⊙	⊙	⊙	⊙	⊙
	4.5	4.46	324	80	5.5			---	---	⊙	⊙	⊙	⊙	⊙
	5.4	5.45	268	100	5.5			---	---	⊙	⊙	⊙	⊙	⊙
	6.0	6.09	240	115	3.0			---	---	⊙	⊙	⊙	⊙	⊙
	6.2	6.26	230	125	3.0			---	---	⊙	⊙	⊙	⊙	⊙
	6.8	6.84	210	130	3.0			---	---	⊙	⊙	⊙	⊙	⊙
	7.3	7.34	196	145	3.0			---	---	⊙	⊙	⊙	⊙	⊙
	8.7	8.70	166	160	3.0			---	---	⊙	⊙	⊙	⊙	⊙
	10	10.44	138	145	2.2			---	---	⊙	⊙	⊙	⊙	⊙
	13	12.76	113	180	2.2			---	---	⊙	⊙	⊙	⊙	⊙
	14	14.23	101	200	2.2			---	---	⊙	⊙	⊙	⊙	⊙
	16	16.00	90	210	2.2			---	---	⊙	⊙	⊙	⊙	⊙
	18	17.59	82	220	1.5			---	---	⊙	⊙	⊙	---	---
	20	20.83	69	230	1.5			---	---	⊙	⊙	⊙	---	---
	25	25.00	57	250	1.5			---	---	⊙	⊙	⊙	---	---
	30	30.55	47	300	1.5			---	---	⊙	⊙	⊙	---	---
	34	34.09	42	300	1.1			---	---	⊙	⊙	⊙	---	---
	39	39.33	37	290	1.1			---	---	⊙	⊙	⊙	---	---
	46	46.21	31	270	0.75			---	---	⊙	⊙	⊙	---	---
	52	52.63	27	250	0.75			---	---	⊙	⊙	⊙	---	---
FRC330	61	61.22	23	300	0.55	21	1.2	⊙	⊙	⊙	⊙	⊙		
	72	72.49	19	300	0.55			⊙	⊙	⊙	⊙	⊙		
	87	87.00	16	300	0.37			⊙	⊙	⊙	⊙	⊙		
	106	106.33	13.5	300	0.37			⊙	⊙	⊙	⊙	⊙		
	119	118.63	12	300	0.37			⊙	⊙	⊙	⊙	⊙		
	133	133.40	10.5	300	0.37			⊙	⊙	⊙	⊙	⊙		
	147	146.60	9.5	300	0.7			⊙	⊙	⊙	⊙	⊙		
	174	173.61	8	300	0.25			⊙	⊙	⊙	⊙	⊙		
	208	208.33	6.5	300	0.25			⊙	⊙	⊙	⊙	⊙		
	255	354.62	5.5	300	0.12			⊙	⊙	⊙	⊙	⊙		
	284	284.09	5	300	0.12			⊙	⊙	⊙	⊙	⊙		
	319	319.44	4.5	300	0.12			⊙	⊙	⊙	⊙	⊙		
	385	385.10	3.5	300	0.09			⊙	⊙	⊙	⊙	⊙		
	431	430.55	3	300	0.09			⊙	⊙	⊙	⊙	⊙		
FRC430	510	510.18	2.7	300	0.06	22	1.3	⊙	⊙	⊙	⊙			
	604	604.16	2.5	300	0.06			⊙	⊙	⊙	⊙			
	725	724.99	1.9	300	0.04			⊙	⊙	⊙	⊙			
	886	886.11	1.6	300	0.04			⊙	⊙	⊙	⊙			
	989	988.63	1.4	300	0.04			⊙	⊙	⊙	⊙			
	1112	1111.66	1.25	300	0.03			⊙	⊙	⊙	⊙			
	1447	1446.75	1.0	300	003			⊙	⊙	⊙	---			
	1736	1736.11	0.8	300	0.02			⊙	⊙	⊙	---			
	2420	2420.03	0.6	300	0.02			⊙	⊙	⊙	---			
	2662	2662.03	0.5	300	0.01			⊙	⊙	⊙	---			
	3588	3587.96	0.4	300	0.01			⊙	⊙	⊙	---			

RC Riduttori - Gearboxes - Getriebe

RC40 - 600 Nm

Selezione Riduttore - Speed Reducer Selection - Getriebeauswahl — **1400 rpm**

	i_n	i_r	n_2 [rpm]	M_2 [Nm]	P_1 [kW]	FRC [kg]	B3, B5 [lt]	56 B14	63 B5	71 B5	80 B5	90 B5	100 B5	112 B5	132 B5
FRC240	2.3	2.30	630	120	7.5	30	1.2	- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	2.7	2.68	540	125	7.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	3.1	3.14	460	160	7.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	3.7	3.72	388	200	7.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	4.5	4.46	324	230	7.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	5.4	5.45	268	230	7.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	6.0	6.09	240	230	5.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	6.2	6.26	230	240	5.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	6.8	6.84	210	250	5.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	7.3	7.34	196	270	5.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	8.7	8.70	166	280	5.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	10	10.44	138	280	4.0			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	13	12.76	113	330	4.04			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	14	14.23	101	360	4.04			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	16	16.00	90	380	4.0			- - -	- - -	⊙	⊙	⊙	⊙	⊙	⊙
	18	17.59	82	420	4.0			- - -	- - -	⊙	⊙	⊙	⊙	⊙	- - -
	20	20.83	69	500	4.0			- - -	- - -	⊙	⊙	⊙	⊙	⊙	- - -
	25	25.00	57	500	3.0			- - -	- - -	⊙	⊙	⊙	⊙	⊙	- - -
	30	30.55	47	580	3.0			- - -	- - -	⊙	⊙	⊙	⊙	⊙	- - -
	34	34.09	42	600	2.2			- - -	- - -	⊙	⊙	⊙	⊙	⊙	- - -
	39	39.33	37	580	2.2			- - -	- - -	⊙	⊙	⊙	⊙	⊙	- - -
	46	46.21	31	590	1.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	- - -
	52	52.63	27	600	1.5			- - -	- - -	⊙	⊙	⊙	⊙	⊙	- - -
FRC340	61	61.22	23	600	1.1	36	1.5	- - -	⊙	⊙	⊙	⊙	⊙	⊙	
	72	72.49	19	600	1.1			- - -	⊙	⊙	⊙	⊙	⊙	⊙	
	87	87.00	16	600	0.75			- - -	⊙	⊙	⊙	⊙	⊙	⊙	
	106	106.33	13.5	600	0.75			- - -	⊙	⊙	⊙	⊙	⊙	⊙	
	119	118.63	12	600	0.75			- - -	⊙	⊙	⊙	⊙	⊙	⊙	
	133	133.40	10.5	600	0.55			- - -	⊙	⊙	⊙	⊙	⊙	⊙	
	147	146.60	9.5	600	0.55			- - -	⊙	⊙	⊙	⊙	- - -	- - -	
	174	173.61	8	600	0.37			- - -	⊙	⊙	⊙	⊙	- - -	- - -	
	208	208.33	6.5	600	0.37			- - -	⊙	⊙	⊙	⊙	- - -	- - -	
	255	354.62	5.5	600	0.25			- - -	⊙	⊙	⊙	⊙	- - -	- - -	
	284	284.09	5	600	0.25			- - -	⊙	⊙	⊙	⊙	- - -	- - -	
	319	319.44	4.5	600	0.25			- - -	⊙	⊙	⊙	⊙	- - -	- - -	
	385	385.10	3.5	600	0.18			- - -	⊙	⊙	⊙	⊙	- - -	- - -	
	431	430.55	3	600	0.18			- - -	⊙	⊙	⊙	⊙	- - -	- - -	
FRC440	510	510.18	2.7	600	0.12	38	2.8	⊙	⊙	⊙	⊙				
	604	604.16	2.5	600	0.12			⊙	⊙	⊙	⊙				
	725	724.99	1.9	600	0.09			⊙	⊙	⊙	⊙				
	886	886.11	1.6	600	0.09			⊙	⊙	⊙	⊙				
	989	988.63	1.4	600	0.09			⊙	⊙	⊙	⊙				
	1112	1111.66	1.25	600	0.06			⊙	⊙	⊙	⊙				
	1447	1446.75	1.0	600	0.06			⊙	⊙	⊙	⊙				
	1736	1736.11	0.8	600	0.04			⊙	⊙	⊙	⊙				
	2420	2420.03	0.6	600	0.04			⊙	⊙	⊙	⊙				
	2662	2662.03	0.5	600	0.02			⊙	⊙	⊙	⊙				
	3588	3587.96	0.4	600	0.02			⊙	⊙	⊙	⊙				

RC50 - 1250 Nm

Getriebe - Gearboxes - Riduttori RC

1400 rpm

Getriebeauswahl - Speed Reducer Selection - Selezione Riduttore

	i_n	i_r	n_2 [rpm]	M_2 [Nm]	P_1 [kW]	FRC [kg]	B3, B5 [lt]	63 B5	71 B5	80 B5	90 B5	100 B5	112 B5	132 B5	160 B5
FRC250	2.3	2.30	630	230	15	67	2.3	---	---	---	---	⊙	⊙	⊙	⊙
	2.7	2.68	540	250	15			---	---	---	---	⊙	⊙	⊙	⊙
	3.1	3.14	460	310	15			---	---	---	---	⊙	⊙	⊙	⊙
	3.7	3.72	388	400	15			---	---	---	---	⊙	⊙	⊙	⊙
	4.5	4.46	324	430	15			---	---	---	---	⊙	⊙	⊙	⊙
	5.4	5.45	268	450	15			---	---	---	---	⊙	⊙	⊙	⊙
	6.0	6.09	240	460	11			---	---	---	---	⊙	⊙	⊙	⊙
	6.2	6.26	230	480	11			---	---	---	---	⊙	⊙	⊙	⊙
	6.8	6.84	210	500	11			---	---	---	---	⊙	⊙	⊙	⊙
	7.3	7.34	196	550	11			---	---	---	---	⊙	⊙	⊙	⊙
	8.7	8.70	166	580	11			---	---	---	---	⊙	⊙	⊙	⊙
	10	10.44	138	600	7.5			---	---	---	---	⊙	⊙	⊙	⊙
	13	12.76	113	750	7.5			---	---	---	---	⊙	⊙	⊙	⊙
	14	14.23	101	800	7.5			---	---	---	---	⊙	⊙	⊙	⊙
	16	16.00	90	830	7.5			---	---	---	---	⊙	⊙	⊙	⊙
	18	17.59	82	850	7.5			---	---	⊙	⊙	⊙	⊙	⊙	---
	20	20.83	69	850	7.5			---	---	⊙	⊙	⊙	⊙	⊙	---
	25	25.00	57	900	5.5			---	---	⊙	⊙	⊙	⊙	⊙	---
	30	30.55	47	1250	5.5			---	---	⊙	⊙	⊙	⊙	⊙	---
	34	34.09	42	1100	4.0			---	---	⊙	⊙	⊙	⊙	⊙	---
	39	39.33	37	950	4.0			---	---	⊙	⊙	⊙	⊙	⊙	---
	46	46.21	31	1050	4.0			---	---	⊙	⊙	⊙	⊙	⊙	---
	52	52.63	27	990	4.0			---	---	⊙	⊙	⊙	⊙	⊙	---
FRC350	61	61.22	23	1250	3.0	59	3.8	---	⊙	⊙	⊙	⊙	⊙	⊙	
	72	72.49	19	1250	3.0			---	⊙	⊙	⊙	⊙	⊙	⊙	
	87	87.00	16	1250	1.5			---	⊙	⊙	⊙	⊙	⊙	⊙	
	106	106.33	13.5	1250	1.5			---	⊙	⊙	⊙	⊙	⊙	⊙	
	119	118.63	12	1250	1.5			---	⊙	⊙	⊙	⊙	⊙	⊙	
	133	133.40	10.5	1250	1.1			---	⊙	⊙	⊙	⊙	⊙	⊙	
	147	146.60	9.5	1250	1.1			---	⊙	⊙	⊙	⊙	⊙	---	
	174	173.61	8	1250	0.75			---	⊙	⊙	⊙	⊙	⊙	---	
	208	208.33	6.5	1250	0.75			---	⊙	⊙	⊙	⊙	⊙	---	
	255	354.62	5.5	1250	0.55			---	⊙	⊙	⊙	⊙	⊙	---	
	284	284.09	5	1250	0.55			---	⊙	⊙	⊙	⊙	⊙	---	
	319	319.44	4.5	1250	0.55			---	⊙	⊙	⊙	⊙	⊙	---	
	385	385.10	3.5	1250	0.37			---	⊙	⊙	⊙	⊙	⊙	---	
	431	430.55	3	1250	0.37			---	⊙	⊙	⊙	⊙	⊙	---	
FRC450	510	510.18	2.7	1250	0.25	70	6.5	⊙	⊙	⊙	⊙	⊙	⊙		
	604	604.16	2.5	1250	0.25			⊙	⊙	⊙	⊙	⊙	⊙		
	725	724.99	1.9	1250	0.18			⊙	⊙	⊙	⊙	⊙	⊙		
	886	886.11	1.6	1250	0.18			⊙	⊙	⊙	⊙	⊙	⊙		
	989	988.63	1.4	1250	0.18			⊙	⊙	⊙	⊙	⊙	⊙		
	1112	1111.66	1.25	1250	0.12			⊙	⊙	⊙	⊙	⊙	⊙		
	1447	1446.75	1.0	1250	0.12			⊙	⊙	⊙	⊙	---	---		
	1736	1736.11	0.8	1250	0.09			⊙	⊙	⊙	⊙	---	---		
	2420	2420.03	0.6	1250	0.09			⊙	⊙	⊙	⊙	---	---		
	2662	2662.03	0.5	1250	0.06			⊙	⊙	⊙	⊙	---	---		
	3588	3587.96	0.4	1250	0.06			⊙	⊙	⊙	⊙	---	---		

RC Riduttori - Gearboxes - Getriebe

RC60 - 2500 Nm

Selezione Riduttore - Speed Reducer Selection - Getriebeauswahl — **1400 rpm**

	i_n	i_r	n_2 [rpm]	M_2 [Nm]	P_1 [kW]	FRC [kg]	B3, B5 [lt]	71 B5	80 B5	90 B5	100 B5	112 B5	132 B5	160 B5	180 B5
FRC260	2.3	2.30	630	360	22	132	6.0	---	---	---	---	---	---	⊙	⊙
	2.7	2.68	540	400	22			---	---	---	---	---	---	⊙	⊙
	3.1	3.14	460	450	22			---	---	---	---	---	---	⊙	⊙
	3.7	3.72	388	575	22			---	---	---	---	---	---	⊙	⊙
	4.5	4.46	324	600	22			---	---	---	---	---	---	⊙	⊙
	5.4	5.45	268	650	22			---	---	---	---	---	---	⊙	⊙
	6.0	6.09	240	700	18.5			---	---	---	---	---	---	⊙	⊙
	6.2	6.26	230	760	18.5			---	---	---	---	---	---	⊙	⊙
	6.8	6.84	210	820	18.5			---	---	---	---	---	---	⊙	⊙
	7.3	7.34	196	870	18.5			---	---	---	---	---	---	⊙	⊙
	8.7	8.70	166	930	18.5			---	---	---	---	---	---	⊙	⊙
	10	10.44	138	985	15			---	---	---	---	---	---	⊙	⊙
	13	12.76	113	1230	15			---	---	---	---	---	---	⊙	⊙
	14	14.23	101	1400	15			---	---	---	---	---	---	⊙	⊙
	16	16.00	90	1450	15			---	---	---	---	---	---	⊙	⊙
	18	17.59	82	1500	15			---	---	---	---	---	⊙	⊙	---
	20	20.83	69	1765	15			---	---	---	---	---	⊙	⊙	---
	25	25.00	57	1800	11			---	---	---	---	---	⊙	⊙	---
	30	30.55	47	2250	11			---	---	---	---	---	⊙	⊙	---
	34	34.09	42	2500	7.5			---	---	---	---	---	⊙	⊙	---
	39	39.33	37	2000	7.5			---	---	---	---	---	⊙	⊙	---
	46	46.21	31	2000	7.5			---	---	---	---	---	⊙	⊙	---
	52	52.63	27	2500	7.5			---	---	---	---	---	⊙	⊙	---
FRC360	61	61.22	23	2500	5.5	146	8.0	---	---	---	⊙	⊙	⊙	⊙	
	72	72.49	19	2500	5.5			---	---	---	⊙	⊙	⊙	⊙	
	87	87.00	16	2500	3.0			---	---	---	⊙	⊙	⊙	⊙	
	106	106.33	13.5	2500	3.0			---	---	---	⊙	⊙	⊙	⊙	
	119	118.63	12	2500	3.0			---	---	---	⊙	⊙	⊙	⊙	
	133	133.40	10.5	2500	2.2			---	---	---	⊙	⊙	⊙	⊙	
	147	146.60	9.5	2500	2.2			---	⊙	⊙	⊙	⊙	⊙	---	
	174	173.61	8	2500	1.5			---	⊙	⊙	⊙	⊙	⊙	---	
	208	208.33	6.5	2500	1.5			---	⊙	⊙	⊙	⊙	⊙	---	
	255	354.62	5.5	2500	1.1			---	⊙	⊙	⊙	⊙	⊙	---	
	284	284.09	5	2500	1.1			---	⊙	⊙	⊙	⊙	⊙	---	
	319	319.44	4.5	2500	1.1			---	⊙	⊙	⊙	⊙	⊙	---	
	385	385.10	3.5	2500	0.75			---	⊙	⊙	⊙	⊙	⊙	---	
	431	430.55	3	2500	0.75			---	⊙	⊙	⊙	⊙	⊙	---	
FRC460	510	510.18	2.7	2500	0.55	170	12	⊙	⊙	⊙	⊙	⊙	⊙		
	604	604.16	2.5	2500	0.55			⊙	⊙	⊙	⊙	⊙	⊙		
	725	724.99	1.9	2500	0.37			⊙	⊙	⊙	⊙	⊙	⊙		
	886	886.11	1.6	2500	0.37			⊙	⊙	⊙	⊙	⊙	⊙		
	989	988.63	1.4	2500	0.37			⊙	⊙	⊙	⊙	⊙	⊙		
	1112	1111.66	1.25	2500	0.25			⊙	⊙	⊙	⊙	⊙	⊙		
	1447	1446.75	1.0	2500	0.25			⊙	⊙	⊙	⊙	⊙	---		
	1736	1736.11	0.8	2500	0.12			⊙	⊙	⊙	⊙	⊙	---		
	2420	2420.03	0.6	2500	0.12			⊙	⊙	⊙	⊙	⊙	---		
	2662	2662.03	0.5	2500	0.09			⊙	⊙	⊙	⊙	⊙	---		
	3588	3587.96	0.4	2500	0.09			⊙	⊙	⊙	⊙	⊙	---		

0.09 kW	rpm	i	Nm	SF	kg
MRC330	3.0	432	270	1.1	26
MRC330	3.5	388	230	1.3	26
MRC320	4.5	320	180	0.8	17
MRC320	5.0	284	160	0.9	17
MRC320	5.5	254	150	1.0	17
MRC320	6.5	208	125	1.2	17
MRC320	8.0	174	100	1.5	17
MRC310	9.5	147	85	0.9	15
MRC310	10.5	133	75	1.0	15
MRC310	12.0	119	65	1.1	15
MRC310	13.5	103	60	1.2	15
MRC310	16	87	50	1.5	15
MRC305	19	73	42	0.9	12
MRC305	23	61	35	1.1	12
MRC205	27	52	30	1.2	10
MRC205	31	46	26	1.4	10
MRC205	37	38	22	1.6	10
MRC205	42	34	20	1.8	10
MRC205	47	30	17	2.0	10
MRC205	57	25	14	2.5	10
MRC205	69	20	12	3.0	10
MRC205	82	18	10	>3	10
MRC205	90	16	9.2	>3	10
MRC205	101	14	8.2	>3	10
MRC205	113	13	7.3	>3	10
MRC205	138	10	6.0	>3	10
MRC205	166	8.7	5.0	>3	10
MRC205	196	7.3	4.2	>3	10
MRC205	210	6.8	3.9	>3	10
MRC205	230	6.3	3.6	>3	10
MRC205	240	6.0	3.4	>3	10
MRC205	268	5.4	3.1	>3	10
MRC205	324	4.5	2.5	>3	10
MRC205	388	3.7	2.1	>3	10
MRC205	460	3.1	1.8	>3	10
MRC205	540	2.7	1.5	>3	10
MRC205	630	2.3	1.3	>3	10

0.12 kW	rpm	i =	Nm	SF	kg
MRC340	3.0	432	360	1.7	43
MRC330	3.5	388	310	1.0	26
MRC330	4.5	320	240	1.3	26
MRC330	5.0	284	215	1.4	26
MRC330	5.5	254	195	1.5	26
MRC320	6.5	208	165	0.9	17
MRC320	8.0	174	135	1.1	17
MRC320	9.5	147	115	1.3	17
MRC320	10.5	133	105	1.4	17
MRC310	12.0	119	90	0.8	15
MRC310	13.5	103	80	0.9	15
MRC310	16	87	65	1.1	15
MRC310	19	73	55	1.3	15
MRC310	23	61	45	1.6	15
MRC210	27	52	40	1.9	11
MRC210	31	46	35	2.1	11
MRC205	37	38	30	1.2	10
MRC205	42	34	26	1.4	10
MRC205	47	30	23	1.6	10
MRC205	57	25	19	1.9	10
MRC205	69	20	16	2.3	10
MRC205	82	18	13	2.8	10

0.12 kW	rpm	i	Nm	SF	kg
MRC205	90	16	12	3.0	10
MRC205	101	14	11	>3	10
MRC205	113	13	10	>3	10
MRC205	138	10	8.0	>3	10
MRC205	166	8.7	6.6	>3	10
MRC205	196	7.3	5.6	>3	10
MRC205	210	6.8	5.2	>3	10
MRC205	230	6.3	4.8	>3	10
MRC205	240	6.0	4.6	>3	10
MRC205	268	5.4	4.1	>3	10
MRC205	324	4.5	3.4	>3	10
MRC205	388	3.7	2.8	>3	10
MRC205	460	3.1	2.4	>3	10
MRC205	540	2.7	2.0	>3	10
MRC205	630	2.3	1.7	>3	10

0.18 kW	rpm	i =	Nm	SF	kg
MRC340	3.0	432	540	1.1	44
MRC340	3.5	388	460	1.3	44
MRC340	4.5	320	360	1.7	44
MRC340	5.0	284	320	1.8	44
MRC340	5.5	254	295	2.0	44
MRC330	6.5	208	250	1.2	27
MRC330	8.0	174	200	1.5	27
MRC330	9.5	147	170	1.7	27
MRC330	10.5	133	155	1.9	27
MRC320	12.0	119	135	1.1	18
MRC320	13.5	103	120	1.3	18
MRC320	16	87	100	1.5	18
MRC310	19	73	85	0.9	16
MRC310	23	61	70	1.1	16
MRC210	27	52	60	1.2	12
MRC210	31	46	55	1.4	12
MRC210	37	38	45	1.6	12
MRC210	42	34	39	1.9	12
MRC205	47	30	35	1.0	11
MRC205	57	25	29	1.2	11
MRC205	69	20	24	1.5	11
MRC205	82	18	20	1.8	11
MRC205	90	16	18	2.0	11
MRC205	101	14	16	2.3	11
MRC205	113	13	15	2.5	11
MRC205	138	10	12	3.0	11
MRC205	166	8.7	10	>3	11
MRC205	196	7.3	8.4	2.0	11
MRC205	210	6.8	7.8	>3	11
MRC205	230	6.3	7.2	>3	11
MRC205	240	6.0	6.9	>3	11
MRC205	268	5.4	6.2	>3	11
MRC205	324	4.5	5.1	>3	11
MRC205	388	3.7	4.3	>3	11
MRC205	460	3.1	3.6	>3	11
MRC205	540	2.7	3.1	>3	11
MRC205	630	2.3	2.6	>3	11

0.25 kW	rpm	i =	Nm	SF	kg
MRC350	3.0	432	800	1.6	71
MRC350	3.5	388	640	2.0	71
MRC340	4.5	320	500	1.2	45
MRC340	5.0	284	450	1.3	45
MRC340	5.5	254	410	1.5	45

RC Riduttori - Gearboxes - Getriebe

MRC

Selezione Motoriduttore - Geared Motor Selection - Getriebemotorauswahl 1400 rpm

0.25kW	rpm	i	Nm	SF	kg
MRC330	6.5	208	340	0.9	28
MRC330	8.0	174	280	1.1	28
MRC330	9.5	147	235	1.3	28
MRC330	10.5	133	215	1.4	28
MRC330	12.0	119	190	1.6	28
MRC330	13.5	103	165	1.8	28
MRC330	16	87	140	2.0	28
MRC320	19	73	120	1.2	19
MRC320	23	61	100	1.5	19
MRC220	27	52	85	1.7	18
MRC220	31	46	75	2.0	18
MRC210	37	38	65	1.2	13
MRC210	42	34	55	1.4	13
MRC210	47	30	49	1.5	13
MRC210	57	25	40	1.8	13
MRC210	69	20	33	2.2	13
MRC210	82	18	28	2.6	13
MRC205	90	16	25	1.4	12
MRC205	101	14	23	1.6	12
MRC205	113	13	20	1.8	12
MRC205	138	10	17	2.2	12
MRC205	166	8.7	14	2.6	12
MRC205	196	7.3	12	>3	12
MRC205	210	6.8	11	>3	12
MRC205	230	6.3	10	>3	12
MRC205	240	6.0	9.5	>3	12
MRC205	268	5.4	8.5	>3	12
MRC205	324	4.5	7.1	>3	12
MRC205	388	3.7	5.9	>3	12
MRC205	460	3.1	5.0	>3	12
MRC205	540	2.7	4.2	>3	12
MRC205	630	2.3	3.6	>3	12

0.37 kW	rpm	i =	Nm	SF	kg
MRC350	3.0	432	1110	1.1	71
MRC350	3.5	388	950	1.3	71
MRC350	4.5	320	740	1.7	71
MRC350	5.0	284	665	1.9	71
MRC350	5.5	254	505	2.0	71
MRC340	6.5	208	510	1.2	45
MRC340	8.0	174	415	1.4	45
MRC330	9.5	147	350	0.9	29
MRC330	10.5	133	315	1.0	29
MRC330	12.0	119	275	1.1	29
MRC330	13.5	103	245	1.2	29
MRC330	16	87	210	1.4	29
MRC330	19	73	175	1.7	29
MRC330	23	61	145	2.1	29
MRC220	27	52	125	1.2	18
MRC220	31	46	110	1.4	18
MRC220	37	38	90	1.6	18
MRC220	42	34	80	1.9	18
MRC210	47	30	75	1.0	13
MRC210	57	25	60	1.2	13
MRC210	69	20	50	1.5	13
MRC210	82	18	41	1.8	13
MRC210	90	16	38	2.0	13
MRC210	101	14	34	2.2	13
MRC210	113	13	30	2.5	13
MRC210	138	10	25	3.0	13
MRC205	166	8.7	20	1.8	12

0.37 kW	rpm	i	Nm	SF	kg
MRC205	196	7.3	17	2.1	12
MRC205	210	6.8	16	2.3	12
MRC205	230	6.3	15	2.5	12
MRC205	240	6.0	14	2.6	12
MRC205	268	5.4	13	2.9	12
MRC205	324	4.5	11	>3	12
MRC205	388	3.7	8.7	>3	12
MRC205	460	3.1	7.4	>3	12
MRC205	540	2.7	6.3	>3	12
MRC205	630	2.3	5.4	>3	12

0.55 kW	rpm	i =	Nm	SF	kg
MRC360	3.0	432	1650	1.5	152
MRC360	3.5	388	1410	1.8	152
MRC350	4.5	320	1100	1.1	74
MRC350	5.0	284	990	1.3	74
MRC350	5.5	254	900	1.4	74
MRC350	6.5	208	760	1.6	74
MRC350	8.0	174	620	2.0	74
MRC340	9.5	147	520	1.2	48
MRC340	10.5	133	470	1.3	48
MRC340	12.0	119	410	1.5	48
MRC340	13.5	103	365	1.6	48
MRC340	16	87	310	1.9	48
MRC330	19	73	260	1.2	31
MRC330	23	61	215	1.4	31
MRC230	27	52	190	1.6	30
MRC230	31	46	165	1.8	30
MRC220	37	38	135	1.1	21
MRC220	42	34	120	1.2	21
MRC220	47	30	110	1.4	21
MRC220	57	25	90	1.7	21
MRC220	69	20	75	2.0	21
MRC220	82	18	60	2.5	21
MRC210	90	16	55	1.3	16
MRC210	101	14	50	1.5	16
MRC210	113	13	45	1.7	16
MRC210	138	10	36	2.1	16
MRC210	166	8.7	30	2.5	16
MRC210	196	7.3	26	2.9	16
MRC210	210	6.8	24	>3	16
MRC210	230	6.3	22	>3	16
MRC210	240	6.0	21	>3	16
MRC210	268	5.4	19	>3	16
MRC210	324	4.5	16	>3	16
MRC210	388	3.7	13	>3	16
MRC210	460	3.1	11	>3	16
MRC210	540	2.7	9.3	>3	16
MRC210	630	2.3	8.0	>3	16

0.75 kW	rpm	i =	Nm	SF	kg
MRC360	3.0	432	2245	1.0	153
MRC360	3.5	388	1925	1.2	153
MRC360	4.5	320	1500	1.7	153
MRC360	5.0	284	1350	1.9	153
MRC360	5.5	254	1225	2.0	153
MRC350	6.5	208	1035	1.2	75
MRC350	8.0	174	840	1.5	75
MRC350	9.5	147	710	1.8	75
MRC350	10.5	133	640	1.9	75
MRC340	12.0	119	560	1.1	49

0.75 kW	rpm	i	Nm	SF	kg
MRC340	13.5	103	500	1.2	49
MRC340	16	87	420	1.4	49
MRC340	19	73	355	1.7	49
MRC340	23	61	295	2.1	49
MRC230	27	52	255	1.2	33
MRC230	31	46	220	1.4	33
MRC230	37	38	185	1.6	33
MRC230	42	34	165	1.8	33
MRC220	47	30	145	1.0	22
MRC220	57	25	120	1.2	22
MRC220	69	20	100	1.5	22
MRC220	82	18	85	1.8	22
MRC220	90	16	75	2.0	22
MRC220	101	14	70	2.2	22
MRC220	113	13	60	2.5	22
MRC220	138	10	50	3.0	22
MRC210	166	8.7	41	1.8	17
MRC210	196	7.3	35	2.1	17
MRC210	210	7.3	33	2.3	17
MRC210	230	6.3	30	2.5	17
MRC210	240	6.0	26	2.9	17
MRC210	268	5.4	26	>3	17
MRC210	324	4.5	21	>3	17
MRC210	388	3.7	18	>3	17
MRC210	460	3.1	15	>3	17
MRC210	540	2.7	13	>3	17
MRC210	630	2.3	11	>3	17

1.1 kW	rpm	i =	Nm	SF	kg
MRC360	4.5	320	2195	1.1	157
MRC360	5.0	284	1975	1.3	157
MRC360	5.5	254	1795	1.4	157
MRC360	6.5	208	1520	1.6	157
MRC360	8.0	174	1235	2.0	157
MRC350	9.5	147	1040	1.2	77
MRC350	10.5	133	940	1.3	77
MRC350	12.0	119	825	1.5	77
MRC350	13.5	103	730	1.7	77
MRC350	16	87	620	2.0	77
MRC340	19	73	520	1.2	51
MRC340	23	61	430	1.4	51
MRC240	27	52	375	1.6	44
MRC240	31	46	325	1.8	44
MRC230	37	38	275	1.1	34
MRC230	42	34	240	1.2	34
MRC230	47	30	215	1.4	34
MRC230	57	25	180	1.7	34
MRC230	69	20	145	2.0	34
MRC230	82	18	125	2.4	34
MRC220	90	16	115	1.3	24
MRC220	101	14	100	1.5	24
MRC220	113	13	90	1.7	24
MRC220	138	10	75	2.0	24
MRC220	166	8.8	60	2.5	24
MRC220	196	7.3	50	2.9	34
MRC220	210	6.8	48	>3	34
MRC220	230	6.3	44	>3	34
MRC220	240	6.0	42	>3	34
MRC220	268	5.4	38	>3	34
MRC220	324	4.5	31	>3	34
MRC220	388	3.7	26	>3	34

1.1 kW	rpm	i	Nm	SF	kg
MRC220	460	3.1	22	>3	34
MRC220	540	2.7	19	>3	34
MRC220	630	2.3	16	>3	34

1.5 kW	rpm	i =	Nm	SF	kg
MRC360	6.5	208	2070	1.2	160
MRC360	8.0	174	1685	1.5	160
MRC360	9.5	147	1420	1.8	160
MRC360	10.5	133	1285	1.9	160
MRC350	12.0	119	1125	1.1	80
MRC350	13.5	103	1000	1.3	80
MRC350	16	87	840	1.5	80
MRC350	19	73	700	1.8	80
MRC350	23	61	585	2.1	80
MRC240	27	52	510	1.2	48
MRC240	31	46	445	1.4	48
MRC240	37	38	370	1.6	48
MRC240	42	34	330	1.8	48
MRC230	47	30	300	1.0	38
MRC230	57	25	240	1.2	38
MRC230	69	20	200	1.5	38
MRC230	82	18	170	1.8	38
MRC230	90	16	155	2.0	38
MRC230	101	14	135	2.2	38
MRC230	113	13	120	2.5	38
MRC230	138	10	100	3.0	38
MRC220	166	8.7	85	1.8	27
MRC220	196	7.3	70	2.1	27
MRC220	210	6.8	65	2.3	27
MRC220	230	6.3	60	2.5	27
MRC220	240	6.0	55	2.6	27
MRC220	268	5.4	50	3.0	27
MRC220	324	4.5	42	>3	27
MRC220	388	3.7	35	>3	27
MRC220	460	3.1	30	>3	27
MRC220	540	2.7	25	>3	27
MRC220	630	2.3	22	>3	27

2.2 kW	rpm	i =	Nm	SF	kg
MRC360	9.5	147	2080	1.2	164
MRC360	10.5	133	1880	1.3	164
MRC360	12.0	119	1650	1.5	164
MRC360	13.5	103	1465	1.7	164
MRC360	16	87	1235	2.0	164
MRC350	19	73	1040	1.2	86
MRC350	23	61	860	1.5	86
MRC250	27	52	750	1.7	82
MRC250	31	46	650	1.9	82
MRC240	37	38	545	1.1	54
MRC240	42	34	480	1.2	54
MRC240	47	30	430	1.4	54
MRC240	57	25	355	1.7	54
MRC240	69	20	295	2.0	54
MRC240	82	18	245	2.4	54
MRC230	90	16	225	1.3	44
MRC230	101	14	200	1.5	44
MRC230	113	13	180	1.7	44
MRC230	138	10	150	2.0	44
MRC230	166	8.7	125	2.5	44
MRC230	196	7.3	105	2.9	44
MRC230	210	6.8	95	>3	44

RC Riduttori - Gearboxes - Getriebe

MRC

Selezione Motoriduttore - Geared Motor Selection - Getriebemotorauswahl 1400 rpm

2.2 kW	rpm	i	Nm	SF	kg
MRC230	230	6.3	90	>3	44
MRC230	240	6.0	85	>3	44
MRC230	268	5.4	75	>3	44
MRC230	324	4.5	65	>3	44
MRC230	388	3.7	55	>3	44
MRC230	460	3.1	45	>3	44
MRC230	540	2.7	40	>3	44
MRC230	630	2.3	35	>3	44

3 kW	rpm	i =	Nm	SF	kg
MRC360	12.0	119	2250	1.1	167
MRC360	13.5	103	2000	1.3	167
MRC360	16	87	1685	1.5	167
MRC350	19	73	1415	0.9	101
MRC350	23	61	1170	1.1	101
MRC250	27	52	1020	1.2	88
MRC250	31	46	890	1.4	88
MRC250	37	38	745	1.7	88
MRC250	42	34	655	1.9	88
MRC240	47	30	590	1.0	56
MRC240	57	25	485	1.2	56
MRC240	69	20	400	1.5	56
MRC240	82	18	335	1.8	56
MRC240	90	16	305	2.0	56
MRC240	101	14	275	2.2	56
MRC240	113	13	245	2.5	56
MRC240	138	10	200	3.0	56
MRC230	166	8.7	165	1.8	46
MRC230	196	7.3	140	2.1	46
MRC230	210	6.8	130	2.3	46
MRC230	230	6.3	120	2.5	46
MRC230	240	6.0	115	2.6	46
MRC230	268	5.4	105	2.9	46
MRC230	324	4.5	85	>3	46
MRC230	388	3.7	70	>3	46
MRC230	460	3.1	60	>3	46
MRC230	540	2.7	50	>3	46
MRC230	630	2.3	45	>3	46

4 kW	rpm	i =	Nm	SF	kg
MRC360	19	73	1890	1.3	185
MRC360	23	61	1560	1.6	185
MRC250	27	52	1350	0.9	114
MRC250	31	46	1185	1.1	114
MRC250	37	38	990	1.3	114
MRC250	42	34	875	1.4	114
MRC250	47	30	780	1.6	114
MRC250	57	25	645	1.9	114
MRC240	69	20	530	1.1	69
MRC240	82	18	450	1.4	69
MRC240	90	16	410	1.5	69
MRC240	101	14	365	1.7	69
MRC240	113	13	325	1.8	69
MRC240	138	10	265	2.3	69
MRC240	166	8.7	220	2.7	69
MRC240	196	7.3	190	>3	69
MRC240	210	6.8	175	>3	69
MRC240	230	6.3	160	>3	69
MRC240	240	6.0	155	>3	69
MRC230	268	5.4	135	>3	59
MRC230	324	4.5	115	>3	59

4 kW	rpm	i	Nm	SF	kg
MRC230	388	3.7	95	>3	59
MRC230	460	3.1	80	>3	59
MRC230	540	2.7	70	>3	59
MRC230	630	2.3	60	>3	59

5.5 kW	rpm	i =	Nm	SF	kg
MRC360	19	73	2500	1.0	205
MRC360	23	61	2145	1.2	205
MRC260	27	52	1870	1.3	199
MRC260	31	46	1630	1.5	199
MRC260	37	38	1365	1.8	199
MRC260	42	34	1200	2.1	199
MRC250	47	30	1075	1.2	123
MRC250	57	25	885	1.4	123
MRC250	69	20	730	1.7	123
MRC250	82	18	615	2.0	123
MRC250	90	16	560	2.2	123
MRC250	101	14	500	2.5	123
MRC250	113	13	450	2.8	123
MRC250	138	10	365	>3	123
MRC240	166	8.7	305	1.9	78
MRC240	196	7.3	260	2.3	78
MRC240	230	6.3	220	2.7	78
MRC240	240	6.0	210	2.8	78
MRC240	268	5.4	190	>3	78
MRC240	324	4.5	155	>3	78
MRC240	388	3.7	130	>3	78
MRC240	460	3.1	110	>3	78
MRC240	540	2.7	95	>3	78
MRC240	630	2.3	80	>3	78

7.5 kW	rpm	i =	Nm	SF	kg
MRC260	27	52	2500	1.0	209
MRC260	31	46	2220	1.1	209
MRC260	37	38	1860	1.3	209
MRC260	42	34	1640	1.5	209
MRC260	47	30	1465	1.7	209
MRC260	57	25	1210	2.1	209
MRC250	69	20	1000	1.3	133
MRC250	82	18	840	1.5	133
MRC250	90	16	765	1.6	133
MRC250	101	14	680	1.8	133
MRC250	113	13	610	2.1	133
MRC250	138	10	500	2.5	133
MRC250	166	8.7	415	3.0	133
MRC250	196	7.3	350	>3	133
MRC250	210	6.8	330	>3	133
MRC250	230	6.3	300	>3	133
MRC250	240	6.0	290	>3	133
MRC240	268	5.4	260	2.3	88
MRC240	324	4.5	215	2.8	88
MRC240	388	3.7	180	>3	88
MRC240	460	3.1	150	>3	88
MRC240	540	2.7	130	>3	88
MRC240	630	2.3	110	>3	88

11 kW	rpm	i =	Nm	SF	kg
MRC260	47	30	2150	1.2	219
MRC260	57	25	1770	1.4	219
MRC260	69	20	1460	1.7	219
MRC260	82	18	1230	2.0	219

11 kW	rpm	i	Nm	SF	kg
MRC260	90	16	1120	2.2	219
MRC260	101	14	1000	2.3	219
MRC260	113	13	895	2.8	219
MRC260	138	10	730	3.0	219
MRC250	166	8.7	610	2.0	148
MRC250	196	7.3	515	2.4	148
MRC250	210	6.8	480	2.6	148
MRC250	230	6.3	440	2.8	148
MRC250	240	6.0	420	3.0	148
MRC250	268	5.4	380	>2	148
MRC250	324	4.5	310	>2	148
MRC250	388	3.7	260	>2	148
MRC250	460	3.1	220	>2	148
MRC250	540	2.7	190	>2	148
MRC250	630	2.3	160	>2	148

15 kW	rpm	i =	Nm	SF	kg
MRC260	69	20	2000	1.3	240
MRC260	82	18	1680	1.5	240
MRC260	90	16	1530	1.6	240
MRC260	101	14	1360	1.8	240
MRC260	113	13	1220	2.1	240
MRC260	138	10	1000	2.5	240
MRC260	166	8.7	830	3.0	240
MRC260	196	7.3	700	>3	240
MRC260	210	6.8	660	>3	240
MRC260	230	6.3	600	>3	240
MRC260	240	6.0	575	>3	240

15 kW	rpm	i	Nm	SF	kg
MRC250	268	5.4	515	>3	178
MRC250	324	4.5	425	>3	178
MRC250	388	3.7	355	>3	178
MRC250	460	3.1	300	>3	178
MRC250	540	2.7	255	>3	178
MRC250	630	2.3	220	>3	178

18.5 kW	rpm	i =	Nm	SF	kg
MRC260	166	8.8	1000	2.5	260
MRC260	196	7.3	850	2.9	260
MRC260	210	6.8	790	>3	260
MRC260	230	6.3	725	>3	260
MRC260	240	6.0	695	>3	260
MRC260	268	5.4	620	>3	260
MRC260	324	4.5	515	>3	260
MRC260	388	3.7	430	>3	260
MRC260	460	3.1	360	>3	260
MRC260	540	2.7	310	>3	260
MRC260	630	2.3	265	>3	260

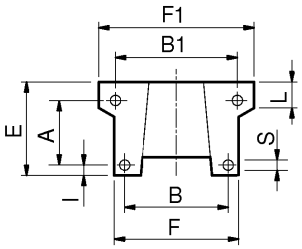
22 kW	rpm	i =	Nm	SF	kg
MRC260	268	5.4	755	>3	300
MRC260	324	4.5	625	>3	300
MRC260	388	3.7	520	>3	300
MRC260	460	3.1	440	>3	300
MRC260	540	2.7	375	>3	300
MRC260	630	2.3	320	>3	300

RC Riduttori - Gearboxes - Getriebe

Fissaggio piedi e Albero uscita - Footprint and Output shaft - Füße Befestigung u. Ausgangswelle

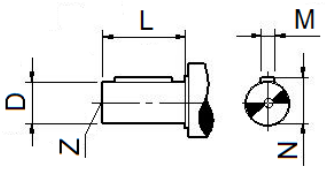
Fissaggio piedi - Footprint - Füße Befestigung

MRC - FRC - RC	A	B	B1	E	F	F1	I	L	S
205 - 305 - 405	57	90	113	85	110	135	7.5	32	9
210 - 310 - 410	58	110	125	90	130	146	10	32	9
220 - 320 - 420	65	140	157	105	170	185	13	37	11
230 - 330 - 430	85	160	187	128	190	215	14	47	13
240 - 340 - 440	105	190	223	154	220	260	15	52	15
250 - 350 - 450	140	250	283	196	290	330	20	62	17
260 - 360 - 460	185	310	352	260	360	400	23	87	19



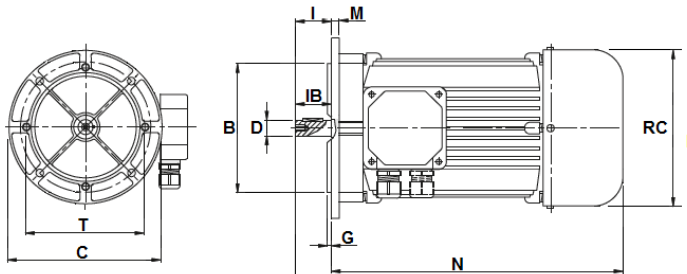
Albero uscita - Output shaft - Ausgangswelle

MRC - FRC - RC	$D_{2\ h6}$	L_2	M	N	Z
205 - 305 - 405	17	35	5	19	M6 x 15
210 - 310 - 410	20	40	6	22.5	M6 x 15
220 - 320 - 420	25	50	8	28	M8 x 20
230 - 330 - 430	32	80	10	35	M8 x 20
240 -340 - 440	40	90	12	43	M10 x 25
250 - 350 - 450	50	110	14	53.5	M12 x 30
260 - 360 - 460	65	140	18	64	M14 x 35

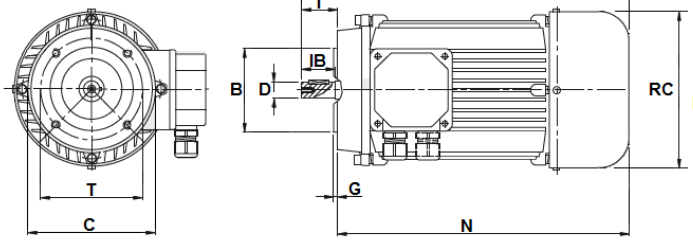


Dimensioni e pesi non impegnativi | Not binding dimensions and weights | unverbindliche Abmessungen u. Gewichte

IEC - B5



IEC - B14



Taglia Frame Große	4 poli - poles - polig kW	rpm	kg (B3)	2 poli - poles - polig kW	rpm	kg (B3)	Flangia Flange Flansch C / T / B	Albero Shaft Welle D x I	G	IB	M	N	O	RC
T56A T56B	0.06 0.09	1410 1340	2.5 2.6	0.09 0.14	2730 2750	2.6 3.2	B5 - 120 / 100 / 80 B14 - 80 / 65 / 50	9 x 20	2.5	20	8.5	168 125	188 145	110
T63A T63B	0.13 0.18	1340 1360	3.7 4.3	0.18 0.25	2770 2820	3.7 4.3	B5 - 140 / 115 / 95 B14 - 90 / 75 / 60	11 x 23	2.5	23	10	190.5 140	213.5 161	123
T71A T71B	0.25 0.37	1410 1370	5.8 6.2	0.37 0.55	2860 2860	5.8 6.2	B5 - 160 / 130 / 110 B14 - 105 / 85/ 70	14 x 30	3.0	30	10	218 168	248 188	140
T80A T80B	0.55 0.75	1430 1430	8.5 9.8	0.75 1.1	2860 2850	8.5 9.8	B5 - 200 / 165 / 130 B14 - 120 / 100 / 80	19 x 40	3.0	40	11	248	282	159
T90S T90L	1.1 1.5	1430 1430	12.0 13.5	1.5 2.2	2880 2850	12.0 13.5	B5 - 200 / 165 / 130 B14 - 140 / 115 / 95	24 x 50	3.5	50	10	255 280	305 330	176
T100A T100B	2.2 3	1430 1430	19.0 21.0	3 4	2910 2920	18.5 21.0	B5 - 250 / 215 / 180 B14 - 160 / 130 / 110	28 x 60	4.0	60	14	312	372	195
T112A	4	1440	29.0	5.5	2920	32.0	B5 - 250 / 215 / 180 B14 - 160 / 130 / 110	28 x 60	4.0	60	14	330	390	219
T132S T132M T132ML	5.5 7.5 9.2	1460 1460 1460	43 52 54	7.5 11 15	2920 2940 2940	48 54 58	B5 - 300 / 265 / 230 B14 - 200 / 165 / 130	38 x 80	4.0	80	20	380.5 418.5	460.5 498.5	258
T160M T160L	11 15	1470 1480	90 100	- - - 18.5	- - - 2960	- - - 99	B5 - 350 / 300 / 250 B14 - 250 / 215 / 180	42 x 110	5.0	110	20	491 535	601 645	315
T180M T180L	18.5 22	1470 1480	120 135	22 ---	2940 ---	110 ---	B% - 350 / 300 / 250	48 x 110	5.0	110	20	610	720	348

unverbindliche Abmessungen u. Gewichte | Not binding dimensions and weights | Dimensioni e pesi non impegnativi

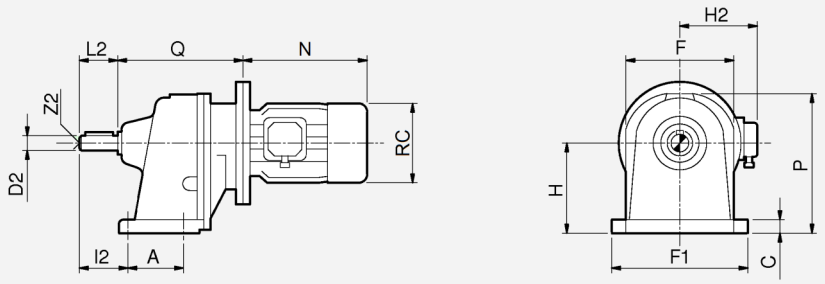
RC Riduttori - Gearboxes - Getriebe

MRC2-FRC2

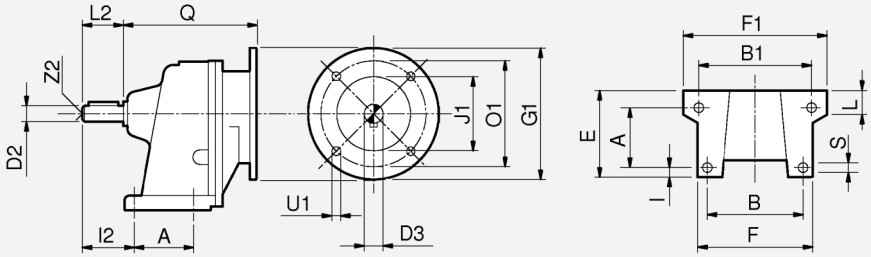
Dimensioni - Dimensions - Abmessungen

Due coppie
Two stages
Zweistufig

MRC-B3



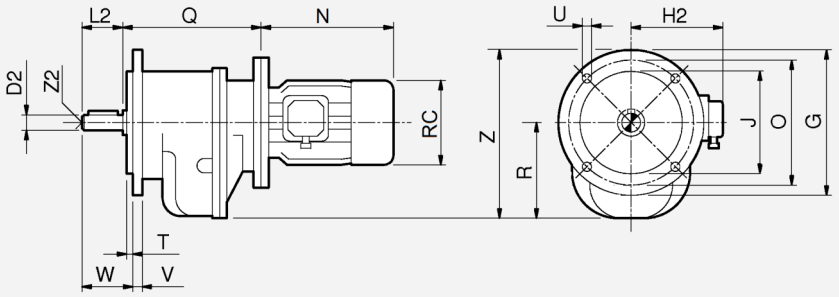
FRC-B3



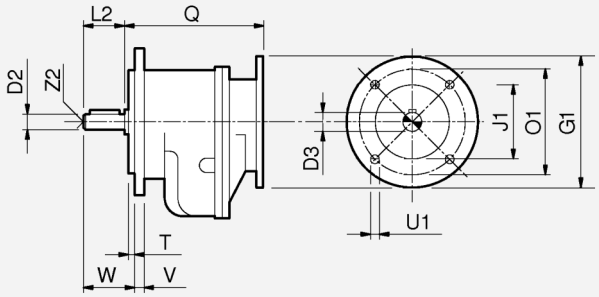
MRC - FRC	B3 - Base - Foot mount - Fuß Ausführung										Uscita - Output - Ausgangswelle						
	A	B	B_1	C	E	F	I_2	S	H	P	$D_{2\,k6}$	I_2	M_2	N_2	Z_2	Q	IEC
205	57	90	113	8	110	110	45	9	81	130	17	35	19	5	M6x15	125	56
																127	63
																137	71
210	58	110	125	9	120	130	54	9	96	150	20	40	22.5	6	M6x15	134	63
																144	71
																154	*
220	65	140	157	14	145	170	67	11	128	195	25	50	28	8	M8x20	160	71
																175	80
																175	90
230	85	160	187	17	178	190	99	13	155	240	32	80	35	10	M10x25	207	80
																207	90
																208	**
240	105	190	223	20	210	230	111	15	185	285	40	60	43.5	12	M12x30	238	90
																248	**
																260	132
250	140	250	283	28	270	290	136	17	245	375	50	110	54	14	M14x35	287	**
																317	132
																387	160
260	185	310	352	29	350	360	164	19	305	468	65	140	70	18	M14x35	376	132
																414	160
																414	180

Dimensioni e pesi non impegnativi | Not binding dimensions and weights | unverbindliche Abmessungen u. Gewichte

Due coppie
Two stages
Zweistufig



MRC-B5



FRC-B5

B5 - Flangia - Flange mount - Flansch Ausführung										FRC - Entrata - Input - Eingang								MRC - FRC
G	J_{j6}	O	T	U	V	W	R	Z	Q	IEC	F	$J_{1\ E8}$	O_1	U_1	$D_{1\ H7}$	M_1	N_1	
140	95	115	2	10.5	8	39	80	151	125	56	80	50	65	5.5	9	10.3	3	
									127	63	140	95	115	M8	11	12.7	4	205
									137	71	160	110	130	M8	14	16.2	5	
160	110	130	2	10.5	10	46	95	175	134	63	140	95	115	M8	11	12.7	4	
									144	71	160	110	130	M8	14	16.2	5	210
									154	*	120	80	100	6.5	19	21.7	5	
200	130	165	3	11.5	10	58	124	224	180	71	160	110	130	M8	14	16.2	5	
									175	80	200	130	165	M10	19	21.7	6	220
									175	90	200	130	165	M10	24	27.2	6	
250	180	215	3	14.5	12	88	153	278	207	80	200	130	165	M10	19	21.7	6	
									207	90	200	130	165	M10	24	27.2	8	230
									208	**	250	180	215	M12	28	31.2	8	
300	230	265	4	14.5	16	100	184	334	238	90	200	130	165	M10	24	27.2	8	
									248	**	250	180	215	M12	28	31.2	8	240
									260	132	300	230	265	M12	38	41.7	10	
350	250	300	4	18.5	20	120	243	418	287	**	250	180	215	M12	28	31.2	8	
									317	132	300	230	265	M12	28	41.7	10	250
									357	160	350	250	300	M16	42	45.7	12	
450	350	400	5	22	25	149	304	529	376	132	300	230	265	M12	38	41.7	10	
									414	160	350	250	300	M16	42	45.7	12	260
* IEC80 B14 - ** IEC100/112									414	180	350	250	300	M16	48	52.2	14	

unverbindliche Abmessungen u. Gewichte | Not binding dimensions and weights | Dimensioni e pesi non impegnativi

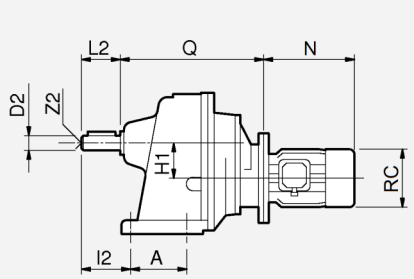
RC Riduttori - Gearboxes - Getriebe

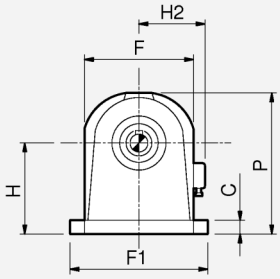
MRC3-FRC3

Dimensioni - Dimensions - Abmessungen

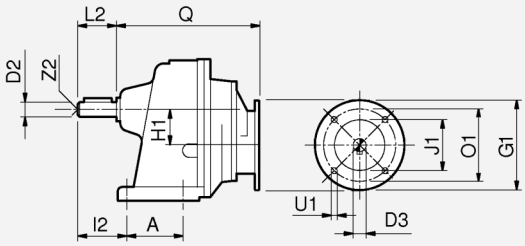
Tre coppie
Three stages
Dreistufig

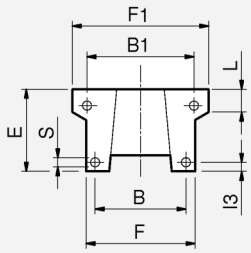
MRC-B3





FRC-B3

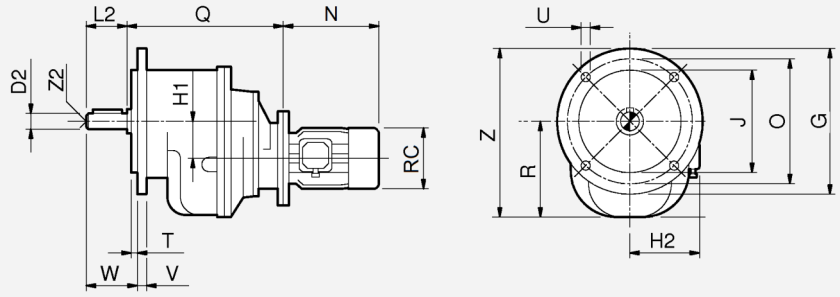




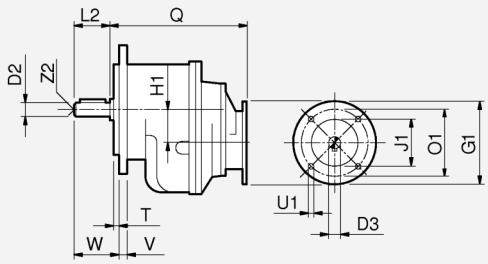
MRC - FRC	B3 - Base - Foot mount - Fuß Ausführung											Uscita - Output - Ausgangswelle						
	A	B	B_1	C	E	F	I_2	S	H	H_1	P	$D_{2\,k6}$	I_2	M_2	N_2	Z_2	Q	IEC
305	57	90	113	8	110	110	45	9	81	43	130	17	35	10	5	M6x15	150	56
310	58	110	125	9	120	130	54	9	96	50	150	20	40	22.5	6	M6x15	156	56
																	159	63
320	65	140	157	14	145	170	67	11	126	80	195	25	50	28	8	M8x20	173	56
																	176	63
																	186	71
330	85	160	187	17	178	190	99	13	155	95	240	32	80	35.5	10	M10x25	208	56
																	214	63
																	216	71
																	231	80
340	105	190	223	20	210	230	111	15	185	110	285	40	90	43.5	12	M12x30	242	63
																	242	71
																	271	80
																	271	90
350	140	250	283	28	270	290	136	17	245	155	375	50	110	54	14	M14x35	311	71
																	324	80
																	324	90
																	324	100
360	185	310	352	29	350	360	164	19	305	185	488	65	140	70	18	M14x35	394	80
																	394	90
																	404	*
																	404	132

Dimensioni e pesi non impegnativi | Not binding dimensions and weights | unverbindliche Abmessungen u. Gewichte

Tre coppie
Three stages
Dreistufig



MRC-B5



FRC-B5

B5 - Flangia - Flange mount - Flansch Ausführung											FRC - Entrata - Input - Eingang								MRC - FRC
G	J_{j6}	O	T	U	V	W	R	R_1	Z	Q	IEC	F	$J_{1\ E8}$	O_1	U_1	$D_{1\ H7}$	M_1	N_1	
140	95	115	2	10.5	8	39	80	42	151	150	56	80	50	65	5.5	9	10.3	3	305
160	110	130	2	10.5	10	46	95	50	175	156	56	80	50	65	5.5	9	10.3	3	310
										159	63	140	95	115	M8	11	12.7	4	
200	130	165	3	11.5	10	58	124	79	224	173	56	80	50	65	5.5	9	10.3	3	320
										176	63	140	95	115	M8	11	12.7	4	
										186	71	160	110	130	M8	14	16.2	5	
250	180	215	3	14.5	12	88	153	93	278	208	56	80	50	65	5.5	9	10.3	3	330
										214	63	140	95	115	M8	11	12.7	4	
										216	71	160	110	130	M8	14	16.2	5	
										231	*	120	80	100	6.5	19	21.7	6	
300	230	265	4	14.5	16	100	184	109	334	242	63	140	95	115	M8	11	12.7	4	340
										242	71	160	110	130	M8	14	16.2	5	
										271	80	200	130	165	M10	19	21.7	6	
										271	90	200	130	165	M10	24	27.2	8	
350	250	300	4	18.5	20	120	243	153	418	311	71	160	110	130	M8	14	16.2	5	350
										324	80	200	130	165	M10	19	21.7	6	
										324	90	200	130	165	M10	24	27.2	8	
										324	100	250	180	215	M12	28	31.2	8	
450	350	400	5	22	25	149	304	184	529	394	80	200	130	165	M10	19	21.7	6	360
										394	90	200	130	165	M10	24	27.2	8	
										404	**	250	180	215	M12	28	31.2	8	
* IEC80 B14 - ** IEC100/112										404	132	300	230	265	M12	38	41.7	10	

unverbindliche Abmessungen u. Gewichte | Not binding dimensions and weights | Dimensioni e pesi non impegnativi

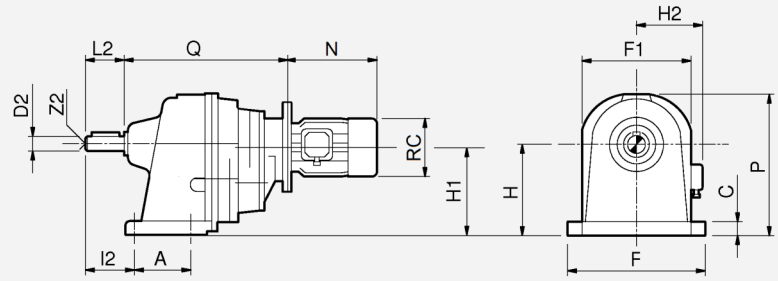
RC Riduttori - Gearboxes - Getriebe

MRC4-FRC4

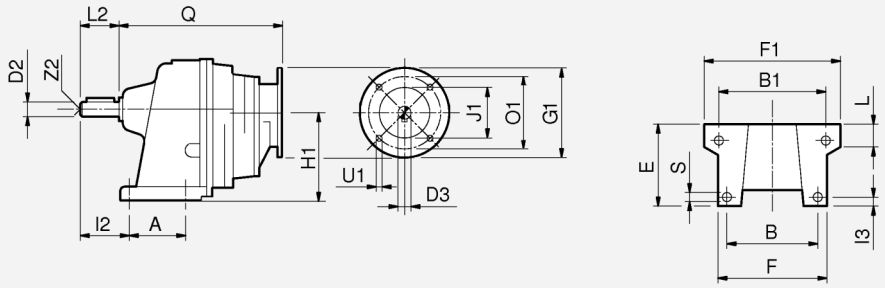
Dimensioni - Dimensions - Abmessungen

Quattro coppie
Four stages
Vierstufig

MRC-B3



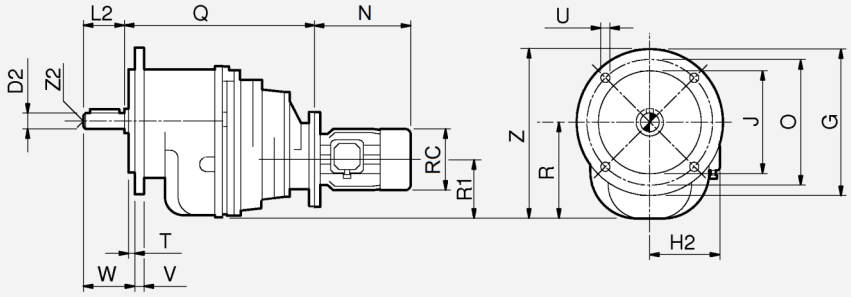
FRC-B3



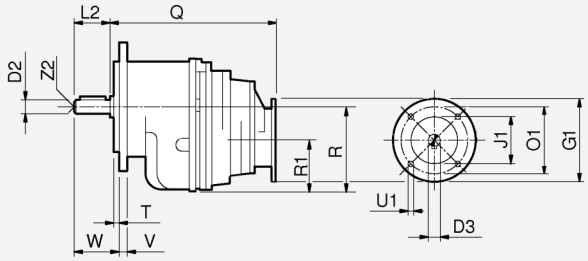
MRC - FRC	B3 - Base - Foot mount - Fuß Ausführung											Uscita - Output - Ausgangswelle						
	A	B	B_1	C	E	F	I_2	S	H	H_1	P	$D_{2\,k6}$	I_2	M_2	N_2	Z_2	Q	IEC
405	57	90	113	8	110	110	45	9	81	43	130	17	35	10	5	M6x15	175	56
410	58	110	125	9	120	130	54	9	96	50	150	20	40	22.5	6	M6x15	181	56
420	65	140	157	14	145	170	67	11	126	80	195	25	50	28	8	M8x20	198	56
430	85	160	187	17	178	190	99	13	155	95	240	32	80	35.5	10	M10x25	229	56
440	105	190	223	20	210	230	111	15	185	110	285	40	90	43.5	12	M12x30	272	56
																	278	63
450	140	250	283	28	270	290	136	17	245	155	375	50	110	54	14	M14x35	328	63
																	328	71
460	185	310	352	29	350	360	164	19	305	185	488	65	140	70	18	M14x35	428	71
																		80

Dimensioni e pesi non impegnativi | Not binding dimensions and weights | unverbindliche Abmessungen u. Gewichte

Quattro coppie
Four stages
Vierstufig



MRC-B5



FRC-B5

B5 - Flangia - Flange mount - Flansch Ausführung											FRC - Entrata - Input - Eingang								MRC - FRC
G	J_{j6}	O	T	U	V	W	R	R_1	Z	Q	IEC	F	$J_{1\ E8}$	O_1	U_1	$D_{1\ H7}$	M_1	N_1	
140	95	115	2	10.5	8	39	80	42	151	175	56	80	50	65	5.5	9	10.3	3	405
160	110	130	2	10.5	10	46	95	50	175	181	56	80	50	65	5.5	9	10.3	3	410
200	130	165	3	11.5	10	58	124	79	224	198	56	80	50	65	5.5	9	10.3	3	420
250	180	215	3	14.5	12	88	153	93	278	229	56	80	50	65	5.5	9	10.3	3	430
300	230	265	4	14.5	16	100	184	109	334	272	56	80	50	65	5.5	9	10.3	3	
										278	63	140	95	115	M8	11	12.7	4	440
350	250	300	4	18.5	20	120	243	153	418	328	63	140	95	115	M8	11	12.7	4	
										328	71	160	110	130	M8	14	16.2	5	450
450	350	400	5	22	25	149	304	184	529	428	71	160	110	130	M8	14	16.2	5	
										441	80	200	130	165	M10	19	21.7	6	460

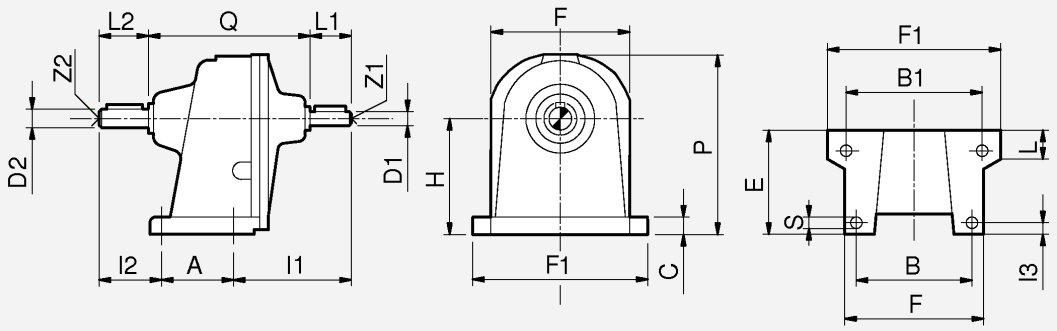
unverbindliche Abmessungen u. Gewichte | Not binding dimensions and weights | Dimensioni e pesi non impegnativi

RC Riduttori - Gearboxes - Getriebe

Dimensioni - Dimensions - Abmessungen

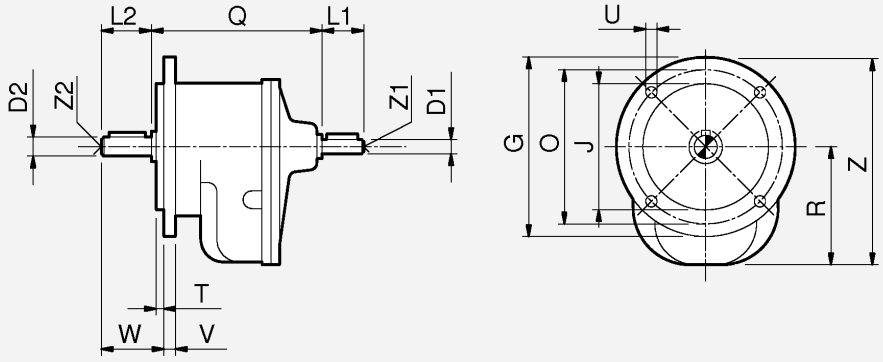
Due coppie
Two stages
Zweistufig

RC-B3



RC	B3 - Fissaggio a piedi - Foot mount - Fuß Ausführung													Uscita - Output - Ausgang			Entrata - Input - Eingang		
	A	B	B_1	C	E	F	I_1	I_2	P	Q	S	H	H_1	$D_{2\,k6}$	L_2	Z_2	$D_{1\,k6}$	L_1	Z_1
205	57	90	113	8	110	135	94	45	130	131	9	81	- - -	17	35	M6x15	11	30	M4x10
210	58	110	125	9	120	146	103	54	150	145	9	96	- - -	20	40	M6x15	11	30	M4x10
220	65	140	157	14	145	185	124	67	195	176	11	126	- - -	25	50	M8x20	14	30	M5x12
230	85	160	187	17	178	215	144	99	240	208	13	155	- - -	32	80	M10x25	19	40	M6x15
240	105	190	223	20	210	260	169	111	285	245	15	185	- - -	40	90	M12x30	24	50	M8x20
250	140	250	283	28	270	330	224	136	375	310	17	245	- - -	50	110	M14x35	28	80	M8x20
260	185	310	352	29	350	400	269	164	468	398	19	305	- - -	65	140	M14x35	38	80	M10x25

Dimensioni e pesi non impegnativi | Not binding dimensions and weights | unverbindliche Abmessungen u. Gewichte



Due coppie
Two stages
Zweistufig

RC-B5

RC	B5 - Fissaggio a flangia- Flange mount - Flansch Ausführung											Uscita - Output - Ausgang			Entrata - Input - Eingang		
	G	J_{j6}	O	Q	T	U	V	W	Z	H_1	R	$D_{2\,k6}$	L_2	Z_2	$D_{1\,k6}$	L_1	Z_1
205	140	95	115	131	2	10.5	8	30	151	- - -	80	17	35	M6x15	11	30	M4x10
210	160	110	130	145	2	10.5	10	48	175	- - -	95	20	40	M6x15	11	30	M4x10
220	200	130	165	176	3	11.5	10	58	224	- - -	124	25	50	M8x20	14	30	M5x12
230	250	180	215	208	3	14.5	12	88	278	- - -	153	32	80	M10x25	19	40	M6x15
240	300	230	265	245	4	14.5	16	100	334	- - -	184	40	90	M12x30	24	50	M8x20
250	350	250	300	310	4	18.5	20	120	412	- - -	243	50	110	M14x35	28	80	M8x20
260	450	350	400	398	5	22	25	149	529	- - -	304	65	140	M14x35	38	80	M10x25

unverbindliche Abmessungen u. Gewichte | Not binding dimensions and weights | Dimensioni e pesi non impegnativi

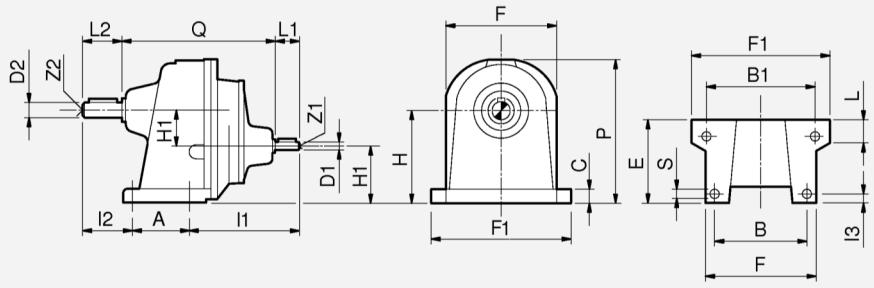
RC Riduttori - Gearboxes - Getriebe

RC3-RC4

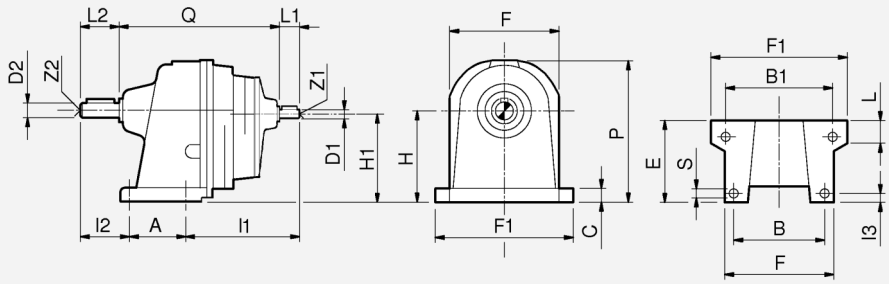
Dimensioni - Dimensions - Abmessungen

Tre coppie
Three stages
Dreistufig

RC-B3



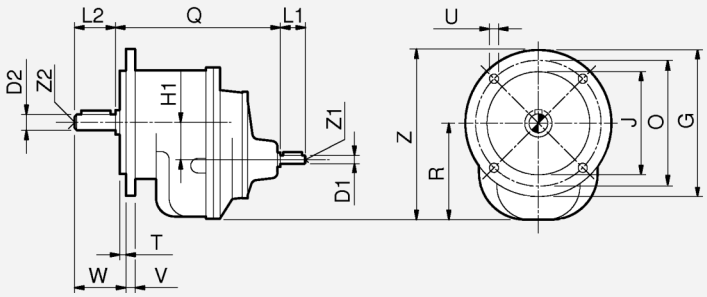
Quattro coppie
Four stages
Vierstufig



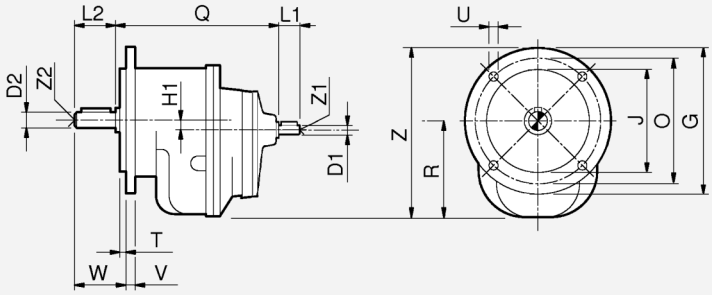
RC	B3 - Fissaggio a piedi - Foot mount - Fuß Ausführung													Uscita - Output - Ausgang			Entrata - Input - Eingang		
	A	B	B_1	C	E	F	I_1	I_2	P	Q	S	H	H_1	$D_{2\,k6}$	L_2	Z_2	$D_{1\,k6}$	L_1	Z_1
305	65	90	- - -	10	85	110	29	40	130.4	74	8.5	81	37.4	14	30	M5x12	11	30	M4x10
310	80	110	- - -	11	100	130	31	53	155	84	8.5	96	45	19	40	M6x15	11	40	M4x10
320	95	150	- - -	12	115	180	43	62	199	100	8.5	126	60	24	50	M8x20	14	50	M5x12
330	115	170	- - -	14	140	200	47	76	248	118	10.5	155	75	28	60	M8x20	19	60	M6x15
340	140	205	- - -	20	170	250	58	100	299	138	12.5	185	90	32	80	M10x25	24	80	M8x20
350	170	250	- - -	30	205	310	77	122	398	169	16.5	245	120	42	100	M12x30	28	100	M8x20
360	210	310	- - -	35	260	400	77	140	503	207	18.5	305	150	50	110	M14x35	38	110	M10x25
405	57	90	113	8	110	135	94	45	130	131	9	81	- - -	17	35	M6x15	11	30	M4x10
410	58	110	125	9	120	146	103	54	150	145	9	96	- - -	20	40	M6x15	11	30	M4x10
420	65	140	157	14	145	185	124	67	195	176	11	126	- - -	25	50	M8x20	14	30	M5x12
430	85	160	187	17	178	215	144	99	240	208	13	155	- - -	32	80	M10x25	19	40	M6x15
440	105	190	223	20	210	260	169	111	285	245	15	185	- - -	40	90	M12x30	24	50	M8x20
450	140	250	283	28	270	330	224	136	375	310	17	245	- - -	50	110	M14x35	28	80	M8x20
460	185	310	352	29	350	400	269	164	468	398	19	305	- - -	65	140	M14x35	38	80	M10x25

Dimensioni e pesi non impegnativi | Not binding dimensions and weights | unverbindliche Abmessungen u. Gewichte

Tre coppie
Three stages
Dreistufig



RC-B5



Quattro coppie
Four stages
Vierstufig

RC	B5 - Fissaggio a flangia- Flange mount - Flansch Ausführung											Uscita - Output - Ausgang			Entrata - Input - Eingang		
	G	J_{j6}	O	Q	T	U	V	W	Z	H_1	R	$D_{2\,k6}$	L_2	Z_2	$D_{1\,k6}$	L_1	Z_1
305	140	95	115	156	2	10.5	8	30	151	38	80	14	30	M5x12	11	30	M4x10
310	160	110	130	170	2	10.5	10	48	175	45	95	19	40	M6x15	11	40	M4x10
320	200	130	165	186	3	11.5	10	58	224	45	124	24	50	M8x20	14	50	M5x12
330	250	180	215	222	3	14.5	12	88	278	60	153	28	60	M8x20	19	60	M6x15
340	300	230	265	272	4	14.5	16	100	334	75	184	32	80	M10x25	24	80	M8x20
350	350	250	300	331	4	18.5	20	120	412	90	243	42	100	M12x30	28	100	M8x20
360	450	350	400	427	5	22	25	149	529	121	304	50	110	M14x35	38	110	M10x25
405	140	95	115	131	2	10.5	8	30	151	- - -	80	17	35	M6x15	11	30	M4x10
410	160	110	130	145	2	10.5	10	48	175	- - -	95	20	40	M6x15	11	30	M4x10
420	200	130	165	176	3	11.5	10	58	224	- - -	124	25	50	M8x20	14	30	M5x12
430	250	180	215	208	3	14.5	12	88	278	15	153	32	80	M10x25	19	40	M6x15
440	300	230	265	245	4	14.5	16	100	334	15	184	40	90	M12x30	24	50	M8x20
450	350	250	300	310	4	18.5	20	120	412	15	243	50	110	M14x35	28	80	M8x20
460	450	350	400	398	5	22	25	149	529	31	304	65	140	M14x35	38	80	M10x25

unverbindliche Abmessungen u. Gewichte | Not binding dimensions and weights | Dimensioni e pesi non impegnativi

RC Riduttori - Gearboxes - Getriebe

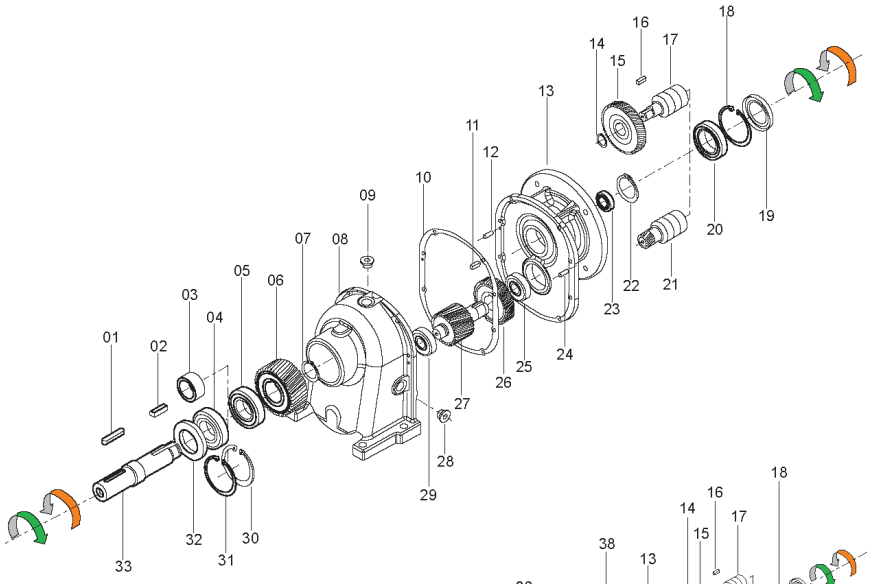
Rotazione e Parti Componenti - Rotation and Component Parts - Drehrichtung u. Bauelemente

RC2

Riduttore a due coppie

Two-stage gearbox

Zweistufig Getriebe

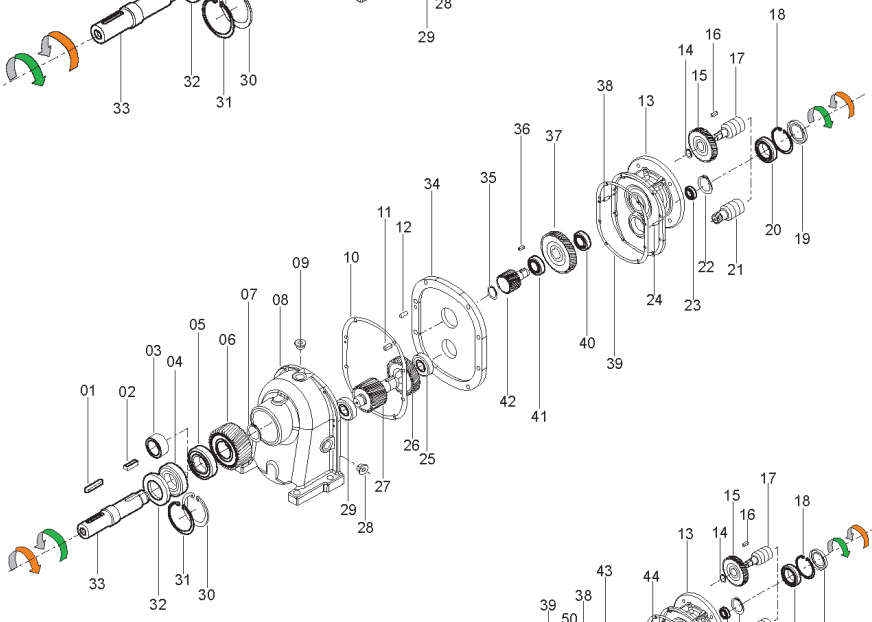


RC3

Riduttore a tre coppie

Three-stage gearbox

Dreistufig Getriebe

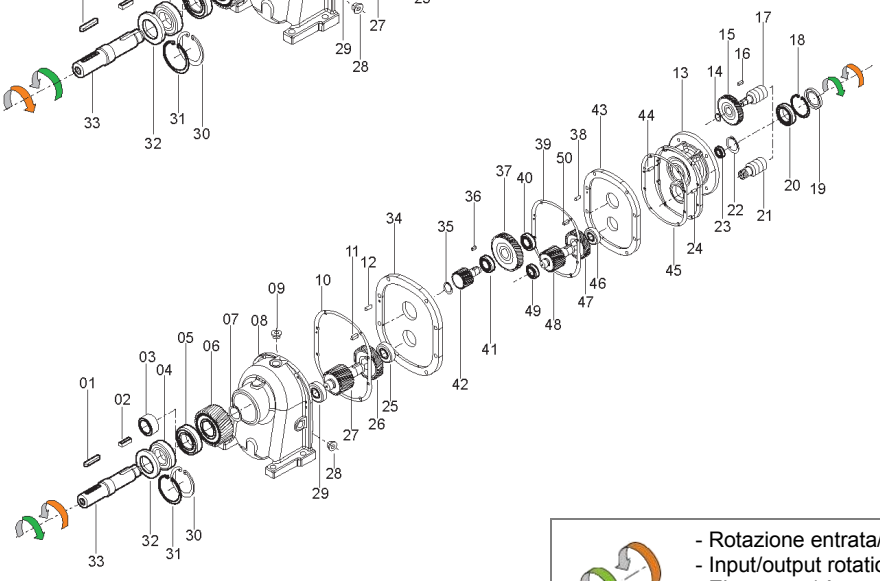


RC4

Riduttore a quattro coppie

Four-stage gearbox

Vierstufig Getriebe



- Rotazione entrata/uscita
- Input/output rotation
- Eingangs- / Ausgangs-drehrichtung

Getriebe - Gearboxes - Riduttori RC

Bauelemente - Component Parts - Parti Componenti

Pos.	Descrizione	Item	Description	Nr.	Beschreibung
01	Linguetta	01	Key	01	Keil
02	Linguetta	02	Key	02	Keil
03	Distanziale (RC40, 50, 60)	03	Spacer (RC40, 50, 60)	03	Distanzring (RC40, 50, 60)
04	Cuscinetto	04	Bearing	04	Lager
05	Cuscinetto	05	Bearing	05	Lager
06	Ruota	06	Gear	06	Rad
07	Seeger	07	Seeger ring	07	Seegerring
08	Carcassa	08	Housing	08	Gehäuse
09	Tappo olio	09	Oil plug	09	Ölschraube
10	Guarnizione	10	Gasket	10	Dichtung
11	Linguetta	11	Kei	11	Keil
12	Spina cilindrica	12	Parallel pin	12	Zylindrisch Stift
13	Coperchio entrata	13	Input cover	13	Eingangsdeckel
14	Seeger	14	Seeger ring	14	Seegerring
15	Pignone	15	Pinion	15	Ritzel
16	Linguetta	16	Key	16	Keil
17	Entrata cavo, con perno	17	Input, hollow, with stud	17	Eingangshohlwelle, mit Stift
18	Seeger	18	Seeger ring	18	Seegerring
19	Paraolio	19	Oil seal	19	Öldichtung
20	Cuscinetto	20	Bearing	20	Lager
21	Entrata cavo, dentato	21	Input, hollow and toothed	21	Eingangshohlwelle, bezahnt
22	Seeger	22	Seeger ring	22	Seegerring
23	Cuscinetto	23	Bearing	23	Lager
24	Spina cilindrica	24	Parallel pin	24	Zylindrisch Stift
25	Cuscinetto	25	Bearing	25	Lager
26	Ruota	26	Gear	26	Rad
27	Pignone	27	Pinion	27	Ritzel
28	Tappo olio	28	Oil plug	28	Ölschraube
29	Cuscinetto	29	Bearing	29	Lager
30	Seeger (RC05, 10, 20, 30)	30	Seeger ring (RC05, 10, 20, 30)	30	Seegerring (RC05, 10, 20, 30)
31	Seeger (RC05, 10, 20, 30)	31	Seeger ring (RC05, 10, 20, 30)	31	Seegerring (RC05, 10, 20, 30)
32	Paraolio	32	Oil seal	32	Öldichtung
33	Albero uscita	33	Output shaft	33	Ausgangswelle
34	Coperchio intermedio	34	Intermediate cover	34	Mitteldeckel
35	Seeger	35	Seeger ring	35	Seegerring
36	Linguetta	36	Key	36	Keil
37	Pignone	37	Pinion	37	Ritzel
38	Spina cilindrica	38	Parallel pin	38	Zylindrisch Stift
39	Guarnizione	39	Gasket	39	Dichtung
40	Cuscinetto	40	Bearing	40	Lager
41	Cuscinetto	41	Bearing	41	Lager
42	Pignone	42	Pinion	42	Ritzel
43	Coperchio intermedio	43	Intermediate cover	43	Mitteldeckel
44	Spina cilindrica	44	Parallel pin	44	Zylindrisch Stift
45	Guarnizione	45	Gasket	45	Dichtung
46	Cuscinetto	46	Bearing	46	Lager
47	Ruota	47	Gear	47	Rad
48	Pignone	48	Pinion	48	Ritzel
49	Cuscinetto	49	Bearing	49	Lager

RC Riduttori - Gearboxes - Getriebe

ATEX - Direttiva Europea 94/9/CE - European Directive 94/9/EC - Europäische Richtlinie 94/9/EG

La Direttiva Europea 94/9/CE-ATEX riguarda non solo gli apparecchi elettrici ma tutte le macchine e gli organi di comando che sono destinati, soli o combinati, ad essere utilizzati in atmosfere potenzialmente esplosive nei territori della Comunità Europea.
I riduttori VARVEL-ATEX sono costruiti con

- carcassa e coperchi in materiale metallico, contenenti gli elementi di trasmissione montati su cuscinetti a sfere o a rulli;
- paraolio in fluoro-elastomero FKM (Viton) sugli alberi di entrata e di uscita;
- quantità di lubrificante idonea per assicurare il funzionamento del progetto;
- viteria sigillata con pasta frena-filetti.

I riduttori VARVEL-ATEX sono identificati nella Direttiva come «componenti», pertanto privati di loro funzione autonoma, ma essenziali per il funzionamento di apparecchi e di sistemi di protezione destinati alla produzione, trasporto, immagazzinamento, misurazione, regolazione e conversione d'energia e trasformazione dei materiali che, per le loro proprie potenzialità d'infiammabilità, rischiano di provocare l'innesco di un'esplosione.

The European Directive 94/9/EC-ATEX relates not only to electric devices but to all the machines and driving units destined, alone or combined, to operate in potentially explosive environments within European Community territory.
The gearboxes VARVEL-ATEX are manufactured

- with metallic housings and covers, containing the driving gears fitted on ball or roller bearings;
- FKM-Fluor-elastomer (Viton) oil seals on input and output shafts;
- the needed oil quantity to ensure the unit operation;
- sealed thread screws with sealing paste.

The gearboxes VARVEL-ATEX are identified in the Directive as «components», therefore stripped away any autonomous function, but fundamental to operation of units and protection systems destined to production, transport, storage, measuring, adjusting and conversion of energy and material transformation that because of their own inflammable potentiality, risk to induce an explosion trigger.

Die Europäische Richtlinie 94/9/EG-ATEX gilt nicht nur für elektrische Ausrüstungen, sondern auch für alle Arten von Maschinen und Steuerungsteile, allein oder kombiniert, für den Gebrauch in potentiell explosiver Atmosphäre in den Gebieten der Europäischen Gemeinschaft.
Die VARVEL-ATEX Getriebe sind hergestellt mit

- Gehäuse und Deckel in Metall, beinhaltet Getriebe montiert auf Kugel- oder Rollenlager;
- FKM-Fluorelaste (Viton) Dichtungen auf Eingangs- und Ausgangswellen;
- ausreichende Ölmenge, um das Funktionieren des Projekts zu gewährleisten;
- Schrauben sind mit Schraubensicherungspaste abgedichtet.

VARVEL-ATEX Getriebe sind in der Richtlinie als "Komponenten" identifiziert, von daher ihre autonome Funktion, aber wesentlich für den Betrieb von Geräten und Schutzsystemen für die Produktion, Transport, Lagerung, Messung, Regelung und Umwandlung von Energie und Verarbeitung von Materialien, die wegen ihrer eigenen potenzialer Entflammbarkeit, die Auslösung einer Explosion riskieren.

Specifica Codice Direttiva ATEX

- **Gruppo**
  utilizzazione in
  I - miniera
  II - industrie di superficie
- **Categoria**
  1 - esposizione continuata in ambiente possibilmente esplosivo con durata >1000 ore/anno o con frequenti malfunzionamenti
  2 - esposizione occasionale in ambiente possibilmente esplosivo con durata fra 10 e 1000 ore/anno o con saltuari malfunzionamenti
  3 - esposizione poco probabile in ambiente possibilmente esplosivo e se avvenuta, si verifica per un breve periodo con durata inferiore a 10 ore/anno
- **Lettere "G" e "D"**
  G - presenza di gas
  D - presenza di polveri
- **Lettere "c" e "k"**
  c - indice di sicurezza di costruzione
  k - indice di sicurezza di immersione in liquido
- **IP66**
  IP - marcatura 'International Protection'
  6 - 1a cifra - totalmente protetto contro la polvere
  6 - 2a cifra - protetto da ondate
- **T_{max} e T_{amb}**
  T_{max} - temperatura max della superficie
  T_{amb} - temperatura max dell'ambiente

ATEX-Directive Code Breakdown

- **Group**
  utilization in
  I - mining
  II - surface industries
- **Category**
  1 - continuous exposure in possibly explosive environment for more than 1000 hrs/year or with frequent malfunctioning
  2 - occasional exposure in possibly explosive environment for 10 to 1000 hrs/year or with sporadic malfunctioning
  3 - not very likely exposure in possibly explosive environment and if happened, not longer than 10 hours/year
- **Letters "G" and "D"**
  G - gas presence
  D - dust presence
- **Letters "c" and "k"**
  c - safety indication of construction
  k - safety indication of immersion in liquid
- **IP66**
  IP - International Protection Coding
  6 - 1st digit - protection dust tight
  6 - 2nd digit - protection against powerful water jets
- **T_{max} and T_{amb}**
  T_{max} - surface max. temperature
  T_{amb} - ambient max. temperature

Richtlinie ATEX Kode Erläuterung

- **Gruppe**
  Verwendung in
  I - Minen
  II - Oberflächen Branchen
- **Kategorien**
  1 - kontinuierliche Exposition in möglicher explosiver Umgebung bei Dauer >1000 Stunden/Jahr oder mit häufigen Störungen
  2 - gelegentliche Exposition in möglicher explosiver Umgebung mit Dauer zwischen 10 und 1000 Stunden/Jahr oder mit gelegentlichen Fehlfunktionen
  3 - unwahrscheinliche Exposition, in mögl icher explosiver Umgebung und wenn dies eintrifft, bei einem kurzen Zeitraum mit Dauer von weniger als 10 Stunden/Jahr
- **Buchstaben "G" und "D"**
  G - Vorhandensein von Gas
  D - Vorhandensein von Staub
- **Buchstaben "c" und "k"**
  c - Indiz der Bausicherheit
  k - Indiz des Eintauchens in Flüssigkeit
- **IP66**
  IP - Internationaler Schutz Kode
  6 - 1. Ziffer - Staubschutz
  6 - 2. Ziffer - Schutz gegen starkem Wasser-Strahl
- **T_{max} u. T_{amb}**
  T_{max} - Maximale Oberflächentemperatur
  T_{amb} - Umgebungstemperatur

Le serie VARVEL RD, RS, RT, RN, RO, RV, RP90 e XA100 sono conformi alle richieste di progetto esatte dal Gruppo II, Categoria 2 o 3 e per funzionamento in zone con pericolo di esplosione in presenza di gas (zona 1 e zona 2) e di polveri combustibili (zona 21 e zona 22).
I prodotti VARVEL-ATEX sono marcati

II 2 GD ck IP66 CE
T_{max}=135°C

VARVEL RD, RS, RT, Rn, RO, RV, RP90 and XA100 series are conforming with design requirements asked by Group II, Category 2 or 3, and for operation in possible hazardous zones in presence of gas (zones 1 and 2) and combustible dust (zones 21 and 22).
The VARVEL-ATEX products are marked

II 2 GD ck IP66 CE
T_{max}=135°C

Die Serie VARVEL RD, RS, RT, RN, RO, RV, RP90 u. XA100 stimmen mit dir Konstruktionsanforderungen von Gruppe II, Kategorie 2 oder 3 und für Betrieb in Zonen mit Explosionsgefahr in der Gegenwart von Gas (Zone 1 und Zone 2) und Staub (Zone 21 und Zone 22) überein gekennzeichnet.
Die Produkte VARVEL-ATEX sind markiert

II 2 GD ck IP66 CE
T_{max}=135°C

Gruppo Group Gruppe	Categoria Category Kategorie	Gas, Vapori, Nebbie Gas, Vapours, Cloud Gas, Dämpfe, Nebel	Zona Zone	Polveri Dust Stäube
I (a)	M1 (c) M2 (d)			
II (b)	1 (c)	G (0)		D (20)
	2 (d)	G (1)		D (21)
	3 (e)	G (2)		D (22)

Attenzione I riduttori VARVEL-ATEX **non sono certificati** per funzionamento nelle aree in **colore grigio.**	**Warning** The VARVEL-ATEX gearboxes **are not certified** for operation in **shaded areas**.	**Vorsicht !** Die Getriebe VARVEL-ATEX sind für den Anbau in die **Graufarbezone nicht zertifiziert.**
(a) - Miniere	(a) - Mines	(a) - Bergwerke
(b) - Industrie di superficie	(b) - Surface industries	(b) - Oberfläche-Industrien
(c) - Livello di protezione: molto elevato	(c) - Protection level: very high	(c) - Schutzklasse: sehr hoch
(d) - Livello di protezione: elevato	(d) - Protection level: high	(d) - Schutzklasse: hoch
(e) - Livello di protezione: normale	(e) - Protection level: normal	(e) - Schutzklasse: normal
(0) - Presenza continua di gas	(0) - Continuous presence of gas	(0) - ständige Gegenwart von Gas
(1) - Presenza discontinua di gas	(1) - Discontinuous presence of gas	(1) - nicht ständige Gegenwart von Gas
(2) - Presenza occasionale di gas	(2) - Occasional presence of gas	(2) - gelegentliche Gegenwart von Gas
(20) - Presenza continua di polveri	(20) - Continuous presence of dust	(20) - ständige Gegenwart von Stäub
(21) - Presenza discontinua di polveri	(21) - Discontinuous presence of dust	(21) - nicht ständige Gegenwart von Stäub
(22) - Presenza occasionale di polveri	(22) - Occasional presence of dust	(22) - gelegentliche Gegenwart von Stäub

RC Riduttori - Gearboxes - Getriebe

Estratto delle ISTRUZIONI D'USO E MANUTENZIONE
(manuale completo su **www.varvel.com**)

I riduttori e i variatori di velocità non ricadono nel campo d'applicazione della Direttiva Macchine, art,1(2) e non possono essere messi in servizio finché la macchina nella quale devono essere incorporati, sia stata dichiarata conforme all'art, 4(2), all, II(B) delle Direttive Macchine 98/37/CEE/22,6,98 e, solo per l'Italia, al DL 459/24,7,96.

Installazione
Accertarsi che il gruppo da installare abbia le caratteristiche atte a svolgere la funzione richiesta e che la posizione di montaggio sia coerente con quanto ordinato. Tali caratteristiche sono deducibili dalla targhetta d'identificazione apposta sul riduttore. Effettuare la verifica della stabilità del montaggio affinché non si verifichino vibrazioni o sovraccarichi durante il funzionamento.

Funzionamento
Il riduttore può essere collegato per rotazione oraria o antioraria. Arrestare immediatamente il riduttore in caso di funzionamento difettoso o di rumorosità anomala, rimuovere il difetto o ritornare l'apparecchio alla fabbrica per un'adeguata revisione. Se la parte difettosa non è sostituita, anche altri componenti possono essere danneggiati con conseguenti ulteriori danneggiamenti e più scarsa possibilità di risalire alle cause.

Manutenzione
Sebbene i gruppi siano provati con funzionamento senza carico prima della spedizione, è consigliabile non usarli a carico massimo durante le prime 20-30 ore di funzionamento affinché le parti interne possano adattarsi reciprocamente. I riduttori sono spediti già riempiti con olio sintetico a lunga durata e, se occorre sostituire o rabboccare il lubrificante, non mescolare oli a base sintetica con oli a base minerale.

Movimentazione
In caso di sollevamenti con paranco, utilizzare posizioni di aggancio sulla struttura della carcassa, golfari ove esistenti, fori dei piedi o sulle flange, evitando tutte le parti mobili.

Verniciatura
Qualora il gruppo subisca una verniciatura successiva, è necessario proteggere accuratamente gli anelli di tenuta, i piani di accoppiamento e gli alberi sporgenti.

Conservazione prolungata a magazzino
Per permanenze maggiori di tre mesi, è consigliata l'applicazione di antiossidanti su alberi esterni e piani lavorati, e di grasso protettivo sui labbri dei paraolio.

Gestione Ambientale del prodotto
In conformità alla Certificazione Ambientale ISO 14001, sono suggerite le seguenti indicazioni per lo smaltimento del nostro prodotto:
- i componenti del gruppo che vengono rottamati debbono essere consegnati a centri di raccolta au-torizzati per i materiali metallici;
- gli oli ed i lubrificanti raccolti dal gruppo devono essere smaltiti consegnandoli ai Consorzi Oli esausti;
- gli imballi a corredo dei gruppi (pallet, cartone, carta, plastica, ecc.,) vanno avviati per quanto più possibile al recupero/riciclo, consegnandoli a ditte autorizzate per le singole classi di rifiuto.

Abstract of OPERATION AND MAINTENANCE INSTRUCTIONS
(complete manual on **www.varvel.com**)

Variable speed and reduction gearboxes are not part of the field of application of the Machinery Directive, art,1(2), and they must not be put into service until the machinery into which they are to be incorporated, has been declared in conformity with the provision of art,4(2), annex II(B) of Machinery Directives 98/37/CEE/22,6,98 and for Italy only, of DL 459/24,7,96.

Installation
Check if the unit to be installed, is properly selected to perform the required function and that its mounting position complies with the order.
The nameplate reports such information.
Check mounting stability to ensure the unit runs without vibrations or overloads.

Running
The unit may be connected for clockwise or counter-clockwise rotation.
The unit must be stopped as soon as defective running or unexpected noise occur, remove the faulty part or return the unit to the factory for checking.
If the faulty part is not replaced, other parts can also be affected, causing more severe damage and making the identification of initial cause more difficult.

Maintenance
Although the units are no-load run tested in the factory before despatch, it is recommended not to run them at maximum load for the first 20-30 running hours to allow the proper running in.
The gearboxes are delivered already filled with long-life synthetic oil and, in case of replacement or topping, do not mix with mineral lubricants.

Handling
When hoisting, use relevant housing locations or eyebolts if provided, or foot or flange holes
Never hoist on any moving part.

Painting
Carefully protect oil seals, coupling faces and shafts when units are re-painted.

Long-term storage
For storages longer than three months, apply anti-oxidants onto shafts and machined surfaces, and protective grease on oil seal lips.

Product's Environmental Management
In conformity with Environmental Certification ISO 14001, we recommend the following to dispose of our products:
- scraped components of the units to be delivered to authorized centres for metal object collection;
- oils and lubricants drained from the units to be delivered to Exhausted Oil Unions;
- packages (pallets, carton boxes, paper, plastic, etc.,) to lead into regeneration/recycling circuits as far as possible, by delivering separate waste classes to authorized companies.

Zusammenfassung der BETRIEBS- u. WARTUNGSANWEISUNGEN
(vollständiges Handbuch auf **www.varvel.com**)

VARVEL-Getriebe und Variatoren fallen nicht unter den Geltungsbereich der Maschinenrichtlinien, Artikel 1 (2): Sie dürfen jedoch nicht in Betrieb gesetzt werden, bevor sich nicht Maschinen, in die sie eingebaut werden, mit Artikel 4 (2), Anhang II (B) der Maschinenrichtlinien 98/37/CEE/22,6,98, und (nur für Italien) DL 459/24,07,96, in Übereinstimmung befinden.

Installation
Vor der Aufstellung ist zu prüfen, dass die Antriebseinheit in Bezug auf die Betriebsbedingungen richtig ausgewählt wurde und die Einbaulage mit der Bestellung übereinstimmt. Angaben hierüber sind auf dem Typenschild zu finden. Die Stützkonstruktion für die Getriebe ist so stabil auszuführen, dass keine Schwingungen oder Überlastungen auftreten, eventuell sind elastische Kupplungen oder Drehmomentbegrenzer zu verwenden.

Inbetriebnahme
Die Antriebseinheit kann in beiden Drehrichtungen eingesetzt werden. Die Einheit muss sofort angehalten werden, wenn ein unzulässiger Lauf oder unerwartete Geräusche auftreten.
Das fehlerhafte Teil ist zu ersetzen oder die Einheit ist zur Überprüfung einzuschicken, falls das fehlerhafte Teil nicht ersetzt wird, kann dies zu weiteren Schäden an anderen Bauteilen führen, was eine Feststellung der Ursachen sehr schwierig machen kann.

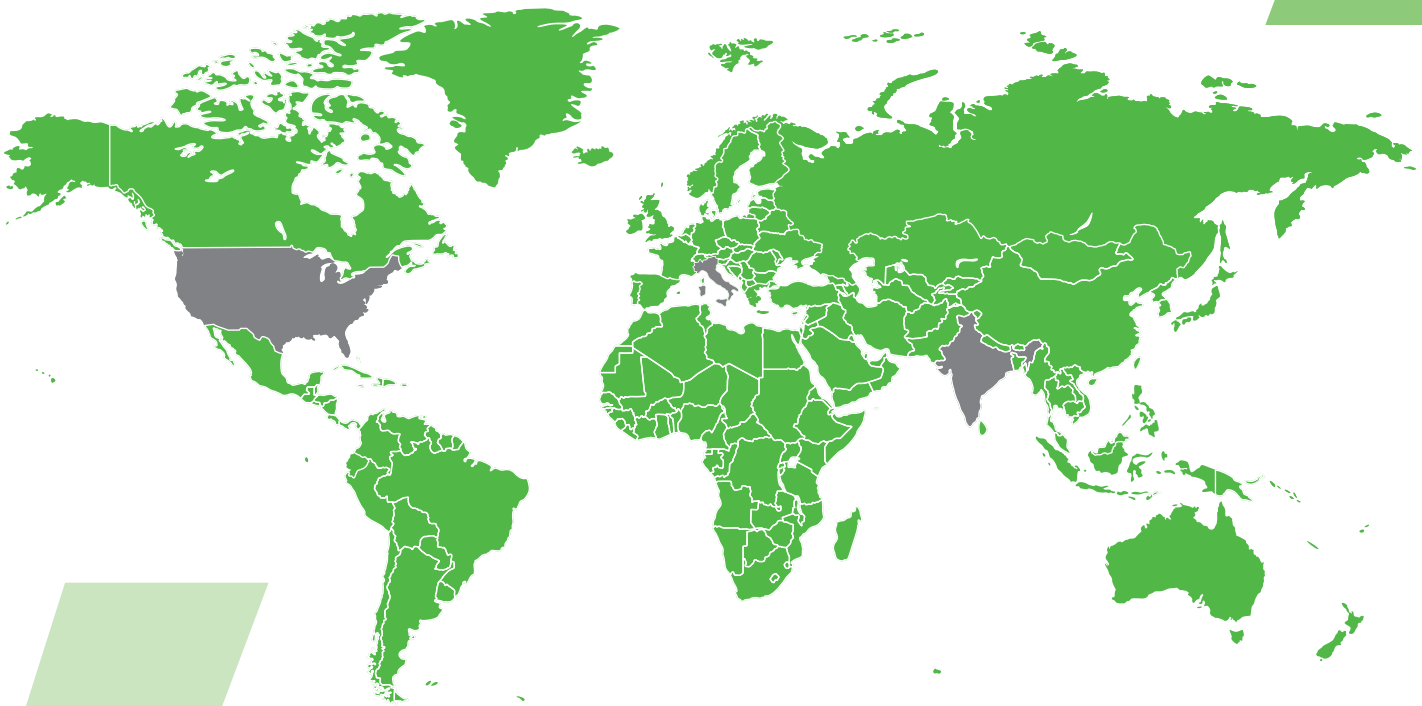
Wartung
Obwohl die Einheiten vor der Auslieferung im Leerlauf getestet wurden, ist es ratsam sie in den ersten 20-30 Stunden nicht mit Volllast zu betreiben, um ein einwandfreies Einlaufen zu gewährleisten. Die Einheiten werden entsprechend den Anga-ben auf dem Typenschild mit synthetischem Schmierstoff Lebensdauer geschmiert ausgelie-fert. Bei einem eventuellen Ölwechsel oder Nachfül-len darf der Schmierstoff nicht mit Mineralöl vermischt werden.

Handhabung und Transport
Beim Heben und Transport ist auf standsichere Lage und sorgfältige Befestigung geeigneter Hebe Vorrichtungen zu achten, Bewegliche Teile dürfen nicht zum Anheben be-nutzt werden.

Anstrich
Beim Erneuern oder dem zusätzlichen Aufbringen eines Anstriches sind die Dichtungen, Kupplungssitze und Wellen sorgfältig zu schützen.

Langzeitlagerung
Die Einlagerung der Einheiten muss trocken und staubfrei erfolgen, bei einer Einlagerungszeit über 3 Monate sind bearbeitete Flächen und Wellen mit Rostschutzmitteln zu besprühen, Dichtlippen sind mit Fett zu schützen.

Entsorgung
In Übereinstimmung mit ISO 14001 weisen wir darauf hin, im Falle des Verschrottens die einzelnen Metallteile getrennt zu behandeln und Schmiermittel bei den befugten Stellen zu entsorgen.
Verpackungen sollten soweit wie möglich wieder verwendet werden.



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