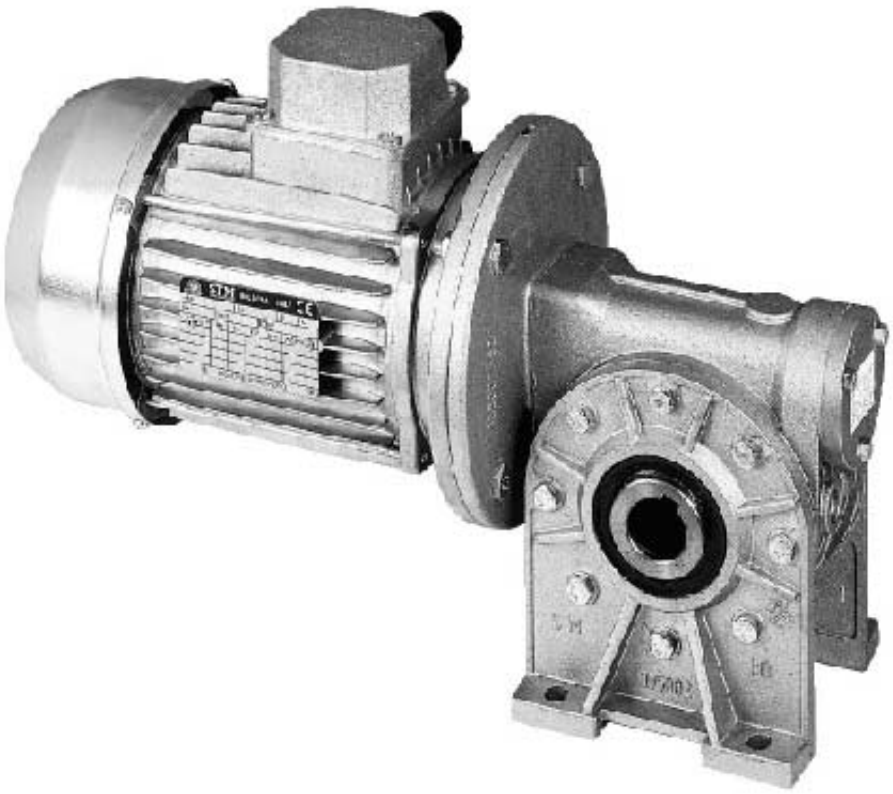
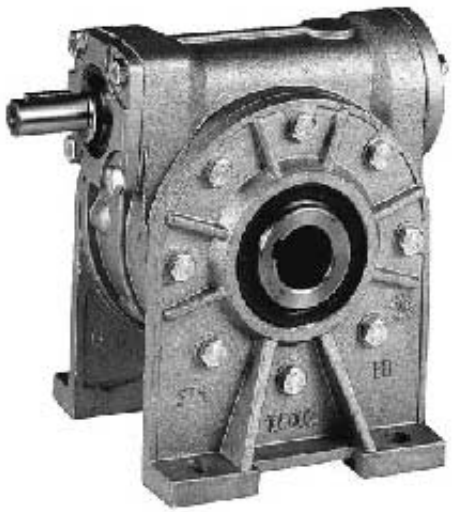
2.0 RIDUTTORI A VITE SENZA FINE
WORM GEARBOXES
SCHNECKENGETRIEBE

RI
RMI





2.1 Caratteristiche tecniche

I nostri riduttori a vite senza fine combinati vengono realizzati seguendo il criterio della massima affidabilità nel tempo, risultato ottenuto utilizzando ottimi materiali e moderni criteri di progettazione.
Carcasse, flange e piedi sono realizzati in ghisa meccanica G20 UNI 5007 ad esclusione dei modelli di bassa potenza (28-40-50-63-70) per i quali è invece utilizzato l'alluminio SG-AlSi UNI 1706.
Le viti senza fine sono realizzate in acciaio e vengono cementate, temprate e rettificate. La rettifica sul filetto, nei rapporti di riduzione per i quali il valore del modulo lo consente, viene eseguita con profilo ZI migliorando così i contatti tra le superfici dentate e, conseguentemente, il rendimento e la silenziosità di funzionamento.
La corona ha il mozzo in ghisa G20 sul quale viene riportata una fusione in bronzo GCuSn12 UNI7013.
Sono utilizzati cuscinetti a rulli conici o radiali a sfere di qualità per garantire una lunga durata.
Il programma di fabbricazione prevede anche, l'applicazione di un limitatore di coppia con allarme di arresto e l'assemblaggio con variatore.

2.1 Technical characteristics

Our gearboxes are manufactured with high quality material and modern design in order to guarantee the maximum reliability and duration.
Housings, flanges and feet are made out of engineering cast iron G20 UNI 5007 excluding the smaller sized models (28-40-50-63-70) for which aluminium SG-AlSi UNI 1706 is utilized instead.
Wormshafts are made of steel and are casehardened, hardened and ground.
The thread grinding in the gear ratios that the module value permits is carried out with ZI-Profile. This improves the contact between the toothed surfaces and therefore performance and reduces operating noise.
The wormwheel has a G20 cast iron hub onto which a casting in GCsSn12 UNI7013 bronze is fitted.
To guarantee a long life, taper roller bearing or radial ball bearings are used.
Our range also provides possible application of torque limiters equipped with stop devices and assembly on to variators.

2.1 Technische Eigenschaften

Unsere Untersetzungsgetriebe werden unter Verwendung von besten Materialien und mit modernsten Herstellungsmethoden hergestellt, um eine maximale Zuverlässigkeit sowie eine lange Lebensdauer zu garantieren. Außer bei den Modellen mit niedriger Leistung, bei welchen Aluminium SG-AlSi UNI 1706 verwendet wird, werden alle Gehäuse, Flansche und Sockel aus Maschinenguß G20 UNI 5007 gefertigt.
Die Schnecken sind aus einsatzgehärtetem, gehärtetem und geschliffenem Stahl.
Das Gewindeschleifen erfolgt in den vom Modulwert zulässigen Übersetzunsverhältnissen mit ZI-Profil, wodurch die Kontakte zwischen den verzahnten Oberflächen und folglich die Leistung und der geräuscharme Betrieb verbessert werden.
Das Schneckenrad hat eine Nabe aus Gußeisen G20, auf die ein Guß aus Bronze GcuSn12 UNI7013 aufgetragen wird.
Um eine lange Lebensdauer zu gewährleisten, werden Kegelrollenlager oder Radialkugellager von hoher Qualität verwendet.
Die Getriebe können mit einer Rutschkupplung, einem einstellbaren Drehmomentbegrenzer und mit einem Drehzahlregler ausgerüstet werden.

2.2 Designazione

2.2 Designation

2.2 Bezeichnung

	Grandezza *Size* Größe	Versione *Version* Ausführung	i	* IEC	kW	n° Poli *Poles* Polig	
							Esempio / *Example* / Beispiel
RMI	28 40 50 63 70 85 110 130 150 180	S I D FL P PP (F1) (F2) (F3)	7 10 15 20 28 40 49 56 70 80 100	63 (B5) 63(B14)			**RMI 40S 1:20 PAM 63 (B5)**
					0.13 0.18	2 4	63 (B5) 63 (B14) ....
							RMI 40S 1:20 kW 0.18 4 63 (B5)
RI							**RI 40S 1:20**

*** Se non conforme alle specifiche dimensionali IEC precisare diametro foro e flangia (es. 14/120)**

Altre specifiche:

- Versione flangiata con montaggio sinistro (opposto a catalogo)
- posizione della morsettiera del motore se diversa da quella standard (1)
- lubrificante (non per i tipi 28,40,50,63, 70,85 già lubrificati a vita)
- elica della vite sinistra (esecuzione speciale)
- posizione di montaggio con indicazione tappi di livello e sfiato;se non specificato si considerano standard le posizioni 01
- cuscinetti conici corona
- bisporgenza vite
- alberi lenti
- lubrificazione forzata
- limitatore di coppia
- limitatore di coppia RDB

**** If not conform to IEC specifications please specify diameter of wormshaft's bore and flange (i.e. :14/200)***

Further specification:

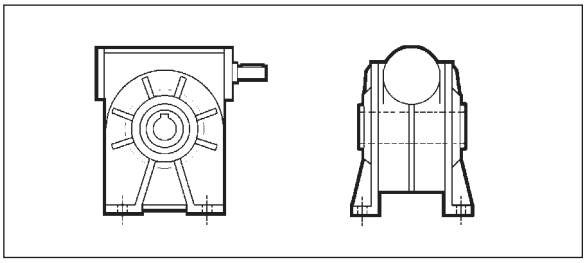
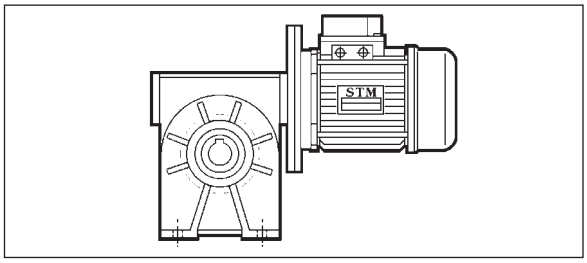
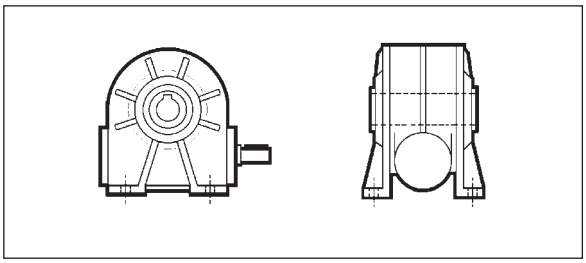
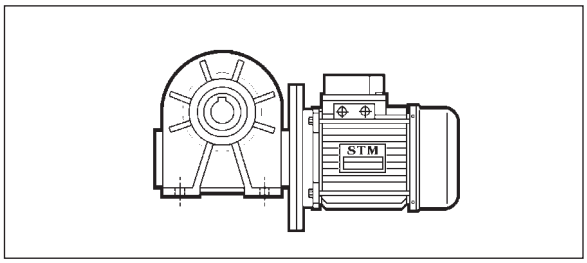
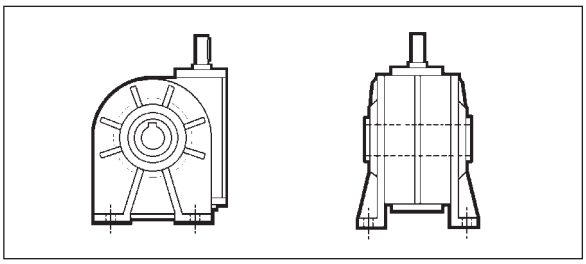
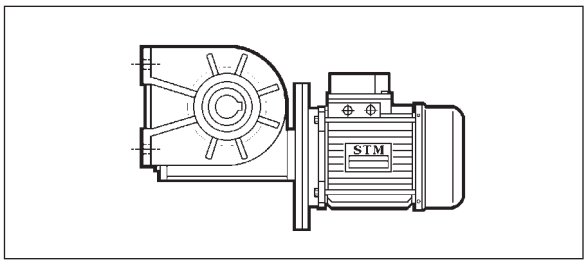
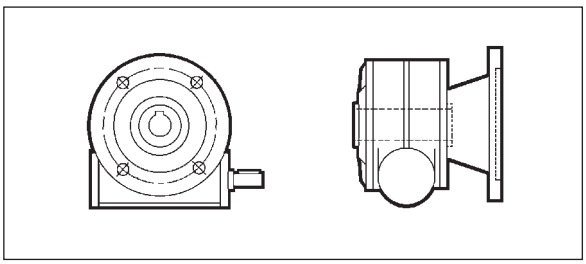
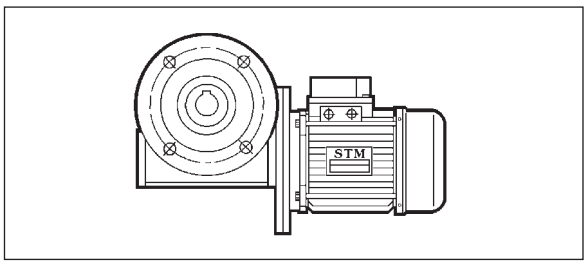
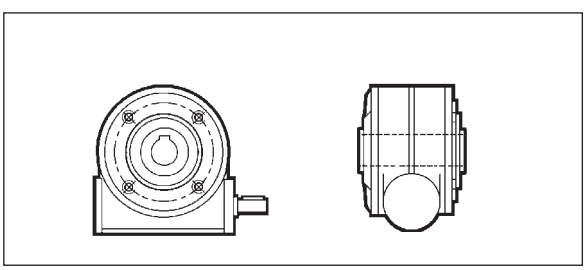
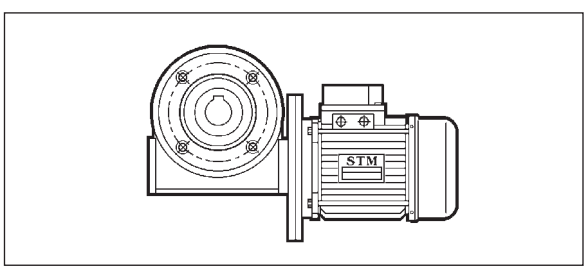
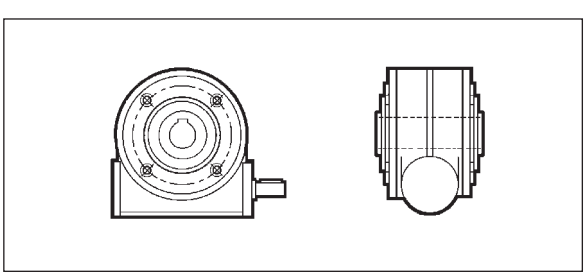
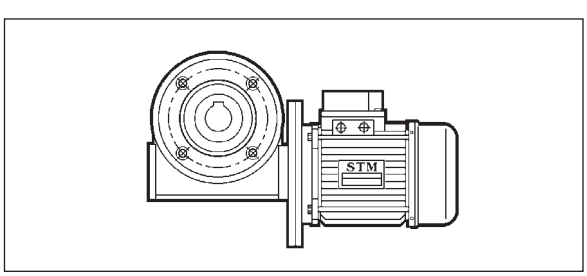
- *flanged version. Left mounting opposite to catalogue*
- *terminal board box position if different from standard (1)*
- *lubrication (except for size 28,40,50,63, 70,85 lubricated for life)*
- *left helix (special version)*
- *mounting position. Indications must be given regarding level and breather plugs. If not specified positions 01 are considered standard*
- *wormwheel taper roller bearings*
- *double extended input shaft*
- *output shafts*
- *forzed lubrication*
- *torque limiter*
- *torque limiter RDB*

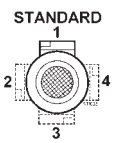
*** Falls nicht nach IEC, bitte Durchmesser der Eingangswellenbohrung und des Flansches angeben (z.B.: 14/200)**

Weitere Spezifikationen:

- Geflanschte Ausführung mit Montage links (nicht wie im Katalog)
- Stellung des Klemmenkastens des Motors, falls diese von der Standard- Ausführung abweicht (1)
- Schmiermittelfüllung (außer bei den wartungsfreien Typen 28,40,50,63,70,85)
- Linksgängige Schraubenlinie der Schnek- ke (Spezialausführung)
- Montagestellung mit Angabe der Ölpegel und Entlüfterstöpsel. Falls nicht anders angegeben, gelten die Pos. 01 als Standard.
- Kegelrollenlager auf der Schnecke
- Beidseitige Zapfen auf Eingangswelle
- Abtriebswellen
- Zwangsschmierung
- Rutschkupplung
- Rutschkupplung RDB

2.3 Versioni — *2.3 Versions* — 2.3 Ausführungen

	RI	RMI
S **28 - 180**		
I **28 - 180**		
D **28 - 180**		
FL **(F1, F2, F3)** **28 - 180**		
P **28, 85 - 180**		
PP **40 - 70**		



Posizione morsettiera
Terminal board position
Lage des Klemmenkastens

2.4 Lubrificazione

Si consiglia l'uso di oli a base sintetica. Vedere a tale proposito le indicazioni riportate nel capitolo 1.6.
La viscosità ISO consigliata è 320 cSt.

Dal punto di vista della lubrificazione le posizioni di montaggio più favorevoli sono la 02, 05 e 06 in quanto il cinematismo vite-corona è costantemente immerso nel lubrificante.
Nella posizione 01 i cuscinetti della vite sono lubrificati in maniera soddisfacente nei riduttori di piccole dimensioni (<Gr.85) con elevato numero di giri (n_1>700 min^{-1}).
Nei riduttori di grandi dimensioni e in tutti i riduttori con basse velocità in ingresso, è necessario aumentare la quantità del lubrificante.
Nelle posizioni 03 e 04 il cuscinetto superiore della vite viene a trovarsi al di sopra del livello del lubrificante per cui nei riduttori più piccoli è lubrificato dall'olio proiettato dalla rotazione veloce della vite. In questo caso, per velocità n_1<700 min^{-1} è necessario schermare il cuscinetto.
Nei riduttori dalla grandezza RI 85 alla grandezza RI 180 è disponibile a richiesta la lubrificazione forzata utilizzabile con velocità n_1 da 1 a 3000 min^{-1}.
In Fig. 2.1 è riportata la soluzione costruttiva adottata.
Le quantità di lubrificante riportate nella Tab.2.2 sono indicative per la posizione 01. Per le altre posizioni, in fase di installazione immettere l'esatta quantità di lubrificante riferendosi alla spia di livello (dove prevista).
In fase di ordine specificare sempre la posizione di montaggio desiderata. Se omessa, il riduttore verrà fornito con i tappi predisposti per la posizione 01.

2.4 Lubrication

It is recommended to use synthetic based oil. See instructions in *chapter 1, paragraph 1.6.*
Recommended ISO VG viscosity is 320 cSt.

As far as lubrication is concerned, the more suitable assembly positions are 02, 05 and 06 as the wormshaft / wormwheel unit is constantly dipped in the lubricant.

In position 01 the wormshaft bearings are lubricated in a satisfactory way for gearboxes of small sizes (<Size 85) with a high number of rev (n_1>700 min^{-1}).
In gearboxes of bigger sizes and in every gearbox with low input speed it is necessary to increase the quantity of the lubricant.
In positions 03 and 04 the upper bearing of the wormshaft is over the lubricant level therefore in smaller gearbox sizes it is lubricated by the oil projected by the wormshaft fast rotation. In this case, it is necessary to screen the bearing for speeds n_1<700 min^{-1}.
For gearboxes from size RI 85 to RI 180 a forced lubrication for speed n_1 from 1 to 3000 min^{-1} is available upon request.

Fig 2.1 shows the adopted constructive solution.
The lubricant quantities listed in table 2.2 are indicative of position 01. For the other positions, during the mounting fill in the exact quantity of lubrifiant referring to the oil window (if present).

During the order, the desired mounting position must be always specified. Otherwise, the gearbox will be supplied with the plug suitable for position 01.

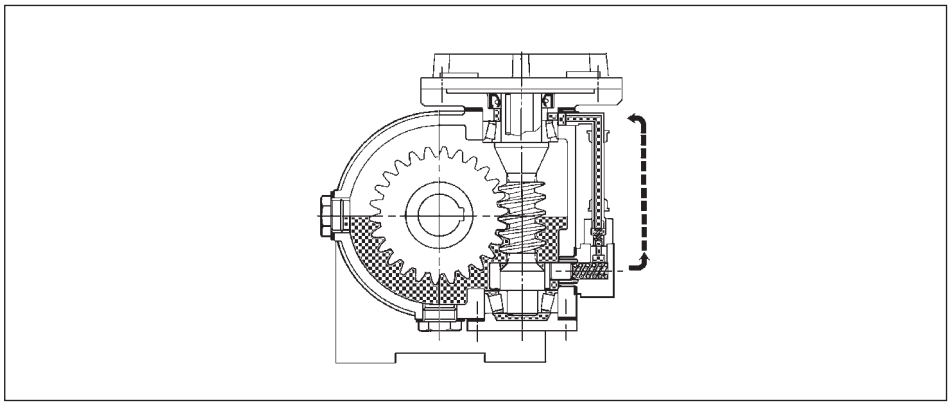
2.4 Schmierung

Wir empfehlen den Einsatz von synthetischem Öl (siehe Abschnitt 1.6). Die empfohlene ISO-Viskosität beträgt 320.

Im Bezug auf die Schmierung sind die günstigsten Montagestellungen 02, 05 und 06, weil hier Schnecke und Schne- ckenrad ständig im Schmiermittel laufen.
Bei kleineren Getrieben (<Gr.85) mit einer Drehzahl von mehr als 700 min^{-1} sind in Montageposition 01 die Lager der Schneckenwelle ausreichend geschmiert.
Bei größeren Getrieben sowie solchen mit niedrigen Eingangsdrehzahlen ist es notwendig, die Ölmenge zu erhöhen.
In den Stellungen 03 und 04 befindet sich das obere Lager der Schnecke über dem Schmiermittelpegel. Bei den kleineren Getrieben wird es durch das aufgrund der Schneckenrotation hochgeschleuderte Öl geschmiert. In diesem Fall muß das Lager bei Drehzahlen n_1<700 min^{-1} abgeschirmt werden.
Bei Getrieben von Größe RI 85 bis RI 180 ist auf Anfrage eine Zwangsschmierung erhältlich, die bei Drehzahlen n_1 von 1 bis 3000 min^{-1} verwendet werden kann.
In Fig. 2.1 ist die konstruktive Lösung abgebildet.
Die Füllmengen, gültig für Montageposition 01, sind in Tab. 2.2 augelistet. Bei den anderen Montagepositionen ist während der Montage die richtige Ölmenge anhand des Schauglases (wenn vorhanden) aufzufüllen.

Bei der Bestellung immer die gewünschte Montageposition angeben. Bei fehlenden Angaben wird das Getriebe mit einer Schraubenanordnung für Position 01 geliefert.

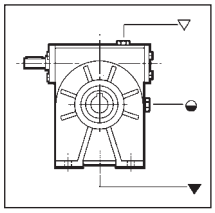
Fig. 2.1

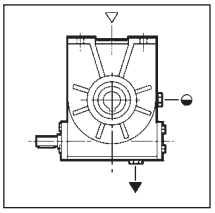


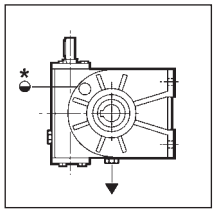
2.5 Posizioni di montaggio

2.5 Mounting positions

2.5 Montagepositionen


S01


S02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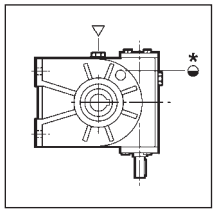
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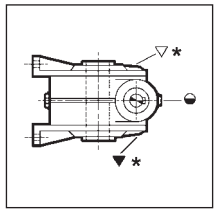
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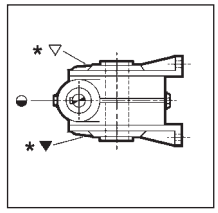
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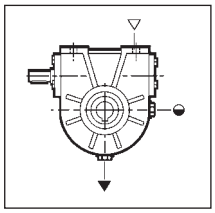
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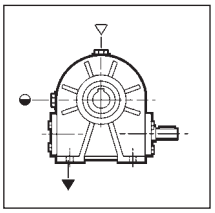
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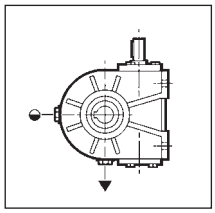
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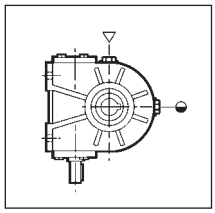
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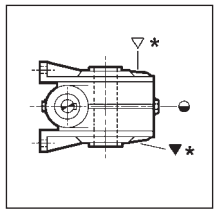
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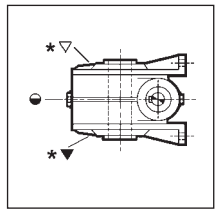
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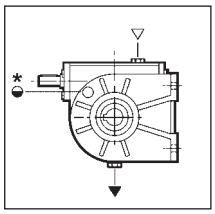
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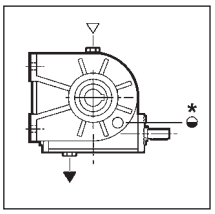
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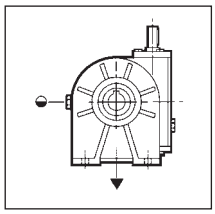
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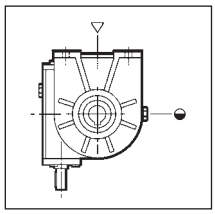
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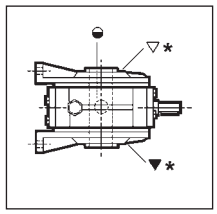
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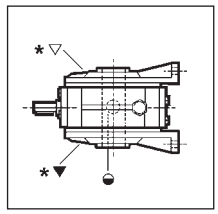
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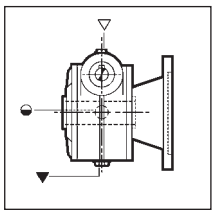
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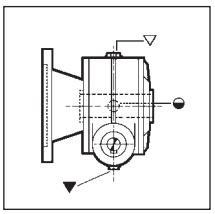
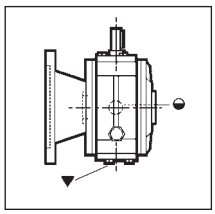
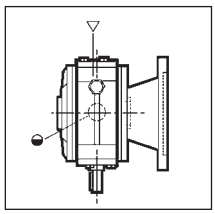
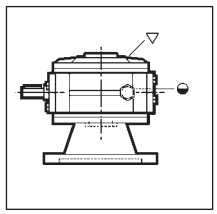
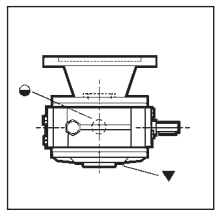

F02


F03


F04


F05


F06

Tab. 2.2

Quantità di lubrificante per la posizione 01 / *Lubricant Quantity* / Schmiermittelmenge (kg)			
RI - RMI	Posizioni di montaggio /*Mounting Positions* / Montagepositionen		* n°. tappi olio * *No. of plugs* * Anzahl Schrauben
28	0.045	Riduttori forniti completi di lubrificante sintetico *Gearboxes suplied with synthetic oil* Getriebe werden mit synthetischem Öl geliefert	1
40	0.100		1
50	0.190		1
63	0.385		1
70	0.500		1
85	1.000		3 (S,I,D) 4 (FL,F1,F2,F3)
110	2.600	Riduttori predisposti per lubrificazione ad olio *Gearboxes suplied ready for oil lubrication* Getriebe sind für Ölschmierung vorgerüstet	3 (S,I,D) 4 (FL,F1,F2,F3)
130	4.100		3 (S,I,D) 4 (FL)
150	6.000		3 (S,I,D) 4 (FL)
180	11.000		3 (S,I,D) 4 (FL,F1)

I riduttori nelle grandezze 110, 130, 150, 180 sono forniti predisposti per lubrificazione ad olio ma privi di lubrificante il quale potrà essere fornito a richiesta.
Il tappo di sfiato è allegato solo nei riduttori che hanno più di un tappo olio.
* Eventuali forniture con predisposizioni tappi diverse da quelle indicata in tabella, dovranno essere concordate.

The gearboxes size 110, 130, 150 and 180 are oil lubricated but are supplied without lubricant which can be delivered upon request.
The drain plug is annexed only in the gearbox with move than one oil plug.
** Supplies with oil plugs different from those listed in the table are to be agreed upon.*

Die Getriebe in den Größen 110, 130, 150 und 180 sind ölgeschmiert, werden aber ohne Ölfüllung ausgeliefert. Auf Anfrage ist diese ebenfalls erhältlich.
Eine Entlüftungsschraube gibt es nur bei Getrieben mit mehr als einer Ölschrauibe.
* Schraubenpositionen, die von denen in der Tabelle aufgeführten Positionen abweichen, müssen mit uns vereinbart werden.

▽ Carico / *Breather plug* / Nachfüllen - Entlüftung
◒ Livello / *Level plug* / Pegel
▼ Scarico / *Drain plug* / Auslauf
* Disponibile su richiesta / *Available on request* / Erbältheb auf Anfrage

2.6 Carichi radiali e assiali

Quando la trasmissione del moto avviene tramite meccanismi che generano carichi radiali sull'estremità dell'albero,è necessario verificare che i valori risultanti non eccedono quelli indicati nelle tabelle.

Nella Tab. 2.3 sono riportati i valori dei carichi radiali ammissibili per l'albero veloce (Fr_1). Come carico assiale ammissibile contemporaneo si ha:

$$Fa_1 = 0.2 \times Fr_1$$

In Tab. 2.4 sono riportati i valori dei carichi radiali ammissibili per l'albero lento (Fr_2) . Come carico assiale ammissibile contemporaneo si ha:

$$Fa_2 = 0.2 \times F_{r2}$$

2.6 Axial and overhung loads

Should transmission movement determine radial loads on the angular shaft end, it is necessary to make sure that resulting values do not exceed the ones indicated in the tables.

In Table 2.3 permissible radial load for input shaft are listed (Fr_1). Contemporary permissible axial load is given by the following formula:

$$Fa_1 = 0.2 \times Fr_1$$

In Table 2.4 permissible radial loads for output shaft *are listed (Fr_2).*
Permissible axial load is given by the following formula:

$$Fa_2 = 0.2 \times Fr_2$$

2.6 Radiale und Axiale Belastungen

Wird das Wellenende auch durch Radialkräfte belastet, so muß sichergestellt werden, daß die resultierenden Werte die in der Tabelle angegebenen nicht überschreiten.

In Tabelle 2.3 sind die Werte der zulässigen Radialbelastungen für die Antriebswelle (Fr_1) angegeben. Die Axialbelastung beträgt dann:

$$Fa_1 = 0.2 \times Fr_1$$

In Tabelle 2.4 sind die Werte der zulässigen Radialbelastungen für die Abtriebswelle angegeben.
Als zulässige Axialbelas- tung gilt:

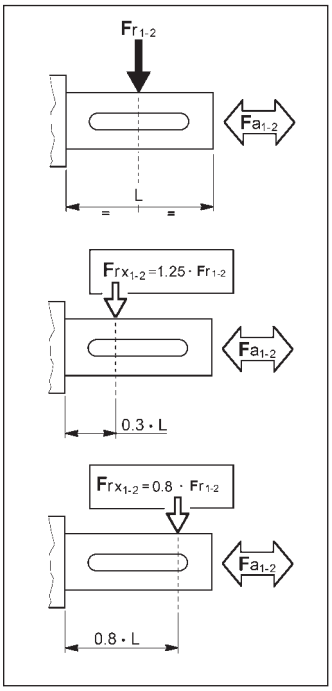
$$Fa_2 = 0.2 \times Fr_2$$

Tab. 2.3

n_1 min^{-1}	Fr_1 (N) RI - RMI									
	28	**40**	**50**	**63**	**70**	**85**	**110**	**130**	**150**	**180**
1400	60	220	320	420	500	700	1000	1600	2200	2500
900	60	250	350	460	530	800	1200	1800	2350	2700
700	70	280	400	500	570	900	1300	2000	2500	3000
500	70	310	450	530	600	1000	1450	2200	2700	3200

Tab. 2.4

n_2 min^{-1}	Fr_2 (N) RI - RMI									
	28	**40**	**50**	**63**	**70**	**85**	**110**	**130**	**150**	**180**
200	700	950	1280	1310	1770	2250	3000	4000	5900	6250
140	750	1050	1450	1680	2350	2400	3150	4250	6700	6900
93	800	1200	1620	1740	2700	2500	3600	4800	7500	7500
70	900	1350	1850	1930	3100	2650	4150	5300	8400	8500
50	950	1500	2100	2150	3300	3560	4850	6600	9400	10300
35	1000	1600	2230	2300	3700	3850	5700	7500	10100	11500
29	1070	1700	2400	2500	3900	4400	6200	8200	11100	12500
25	1130	1800	2580	2700	4100	4620	6600	8750	12000	13400
20	1200	1950	2700	2900	4300	5150	7200	9600	12700	15200
18	1280	2100	2850	3100	4450	5500	7800	10300	14000	16300
14	1430	2300	3200	3300	4700	5800	8250	10700	15000	17000



I carichi radiali indicati nelle tabelle si intendono applicati a metà della sporgenza dell'albero e sono riferiti ai riduttori operanti con fattore di servizio 1.
Valori intermedi relativi a velocità non riportate possono essere ottenuti per interpolazione considerando però che Fr_1 a 500 min^{-1} e Fr_2 a 14 min^{-1} rappresentano i carichi massimi consentiti.
Per i carichi non agenti sulla mezzeria dell'albero lento o veloce si ha:

a 0.3 della sporgenza:

$$F_{rx} = 1.25 \times F_{r1\text{-}2}$$

a 0.8 dalla sporgenza:

$$F_{rx} = 0.8 \times F_{r1\text{-}2}$$

The radial loads shown in the tables are applied on the centre line of the shaft extension and are related to gearboxes working with service factor 1.
Intermediate values of speeds that are not listed can be obtained through interpolation but it must be considered that Fr_1 at 500 min^{-1} and Fr_2 at 14 min^{-1} represent the maximum allowable loads.
For loads which are not applied on the centre line of the output or input shaft, following values will be obtained:

at 0.3 from extension:

$$F_{rx} = 1.25 \times F_{r1\text{-}2}$$

at 0.8 from extension:

$$F_{rx} = 0.8 \times F_{r1\text{-}2}$$

Bei den in der Tabelle angegebenen Ra dialbelastungen wird eine Krafteinwirkung auf die Mitte des Wellenendes zugrunde gelegt; außerdem arbeiten die Getriebe mit Betriebsfaktor 1. Zwischenwerte für nicht aufgeführte Drehzahlen können durch Interpolation ermittelt werden. Hierbei ist jedoch zu berücksichtigen, daß die Werte von Fr_1 bei 500 min^{-1} und von Fr_2 bei 14 min^{-1} die Maximalbelastungen repräsentieren.
Bei Lasten, die nicht auf die Mitte der Ab- bzw. Antriebswellen wirken, legt man folgende Werte zugrunde:

0.3 vom Wellenabsatz:

$$F_{rx} = 1.25 \times F_{r1\text{-}2}$$

0.8 vom Wellenabsatz:

$$F_{rx} = 0.8 \times F_{r1\text{-}2}$$

2.6 Carichi radiali e assiali

A richiesta possono essere fornite versioni rinforzate con cuscinetti a rulli conici sulla corona in grado di sopportare carichi superiori a quelli ammessi dalle versioni normali.
Si veda a tal proposito la tabella 2.5, in cui sono riportati i valori dei carichi radiali e assiali ammissibili sull'albero uscita nel caso di cuscinetti conici sulla corona. Si consiglia, in questi casi, di adottare versioni flangiate, verificando che il carico assiale venga interamente assorbito dal cuscinetto alloggiato nella flangia di fissaggio. Si sconsiglia, invece, la versione a piede, in quanto la resistenza meccanica della struttura non è sufficiente a garantire la necessaria sicurezza sia statica sia dinamica (urti e sovraccarichi).
Tale soluzione non è prevista sulla grandezza 28.

2.6 Axial and overhung loads

In order to increase the load capacity of the gearboxes it is possible to fit taper roller bearings on to the output shaft. Such reinforced versions are available upon request.
With regard to this reinforced version, let see output radial and axial load values shown on tab. 2.5. It's advisable to use flange mounted versions and to make sure that the axial load is absorbed by the bearing, housed in the fixing flange.
The foot mounted version is not recommended, because the structural safety is very reduced, with regard both to static and dynamic conditions.

Please note that this solution is not available for size 28.

2.6 Radiale und Axiale Belastungen

Für größere Belastungen stehen auf Wunsch auch verstärkte Ausführungen mit Kegelrollenlagern für die Schneckenwelle zur Verfügung.
Tabelle 2.5 listet die zulässigen Radial- und Axiallasten bei Verwendung von Kegelrollenlagern auf. Es wird in diesen Fällen empfohlen, Flanschausführungen zu verwenden und sicherzustellen, daß die axiale Last vollständig vom Lager, das sich im Befestigungsflansch befindet, aufgenommen wird. Die Fuâversion empfiehlt sich in diesem Falle nicht, da deren Festigkeit nicht ausreicht, um die erforderliche Sicherheit gegen Stoße und Überlasten sowohl in statischer wie in dynamischer Hinsicht zu gewährleisten.
Hinweis:
Für die Baugröße 28 ist diese Lösung nicht vorgesehen.

Tab. 2.5

CARICHI RADIALI - ASSIALI CON CUSCINETTI CONICI SULLA CORONA
AXIAL AND OVERHUNG LOADS WITH TAPER ROLLER BEARINGS ON WORMWHEEL
RADIALE UND AXIALE BELASTUNGEN MIT KEGELROLLENLAGERN AUF DEM SCHNECKENRAD [N]

n_2 (rpm)	RI - RMI																	
	40		50		63		70		85		110		130		150		180	
	Fr_2	Fa_2	Fr_2	Fa_2	Fr_2	Fa_2	Fr_2	Fa_2	Fr_2	Fa_2	Fr_2	Fa_2	Fr_2	Fa_2	Fr_2	Fa_2	Fr_2	Fa_2
200	2300	3000	5100	5900	5200	6000	6000	7300	6000	8000	8500	10900	8300	11700	16000	20800	19000	24800
140	2300	3000	5600	6500	5750	6650	6700	8200	6600	8800	9200	11800	8400	11850	17500	22700	20000	26000
93	2300	3000	6300	7300	6500	7550	7500	9150	7600	10100	9200	11800	9000	12700	18500	24000	21000	27400
70	2300	3000	6550	7600	6200	7200	7600	9300	6500	8650	9200	11800	9500	13400	19200	25000	22000	28700
50	2300	3000	6900	8000	6900	8000	8700	10600	7900	10500	10600	13600	10000	14100	20000	26000	23000	30000
35	2300	3000	6900	8000	6900	8000	9000	11000	9000	12000	13900	17800	12600	17750	20000	26000	23000	30000
29	2300	3000	6900	8000	6900	8000	9000	11000	9000	12000	14800	19000	13600	19200	20000	26000	23000	30000
25	2300	3000	6900	8000	6900	8000	9000	11000	9000	12000	14800	19000	14600	20600	20000	26000	23000	30000
20	2300	3000	6900	8000	6900	8000	9000	11000	9000	12000	14800	19000	15600	22000	20000	26000	23000	30000
18	2300	3000	6900	8000	6900	8000	9000	11000	9000	12000	14800	19000	15600	15600	20000	26000	23000	30000

2.7 Prestazioni riduttori RI — *2.7 RI gearboxes performances* — 2.7 Leistungen der RI-Getriebe

RI 28

Kg 1.4

	n_1 = 1400 min^{-1}				n_1 = 900 min^{-1}				n_1 = 500 min^{-1}				IEC
	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	
7	200	15	0.39	81	129	18	0.31	79	71	22	0.21	78	63-56-50
10	140	17	0.31	79	90	20	0.24	77	50	24	0.16	76	
15	93	18	0.23	75	60	20	0.18	73	33	24	0.12	71	
20	70	15	0.16	72	45	18	0.12	69	25	21	0.08	67	
28	50	19	0.15	64	32	21	0.12	61	18	25	0.08	58	
40	35	16	0.10	59	23	18	0.08	56	13	21	0.05	53	
49	29	15	0.08	56	18	17	0.06	52	10	20	0.04	49	56-50
56	25	15	0.07	54	16	17	0.05	52	8.9	19	0.04	47	
70	20	13	0.06	49	13	15	0.04	46	7.1	17	0.03	43	
80	18	12	0.05	45	11	13	0.04	41	6.3	15	0.02	38	
100	14	10	0.03	41	9.0	10	0.03	38	5.0	11	0.02	35	

RI 40

Kg 2.1

	n_1 = 1400 min^{-1}				n_1 = 900 min^{-1}				n_1 = 500 min^{-1}				IEC
	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	
7	200	37	0.93	83	129	44	0.73	81	71	54	0.50	80	71-63-56
10	140	42	0.75	81	90	49	0.58	79	50	59	0.40	78	
15	93	42	0.54	77	60	49	0.41	75	33	59	0.28	73	
20	70	37	0.37	73	45	43	0.29	70	25	51	0.20	67	
28	50	43	0.34	67	32	50	0.26	64	18	59	0.18	61	
40	35	40	0.24	60	23	45	0.19	56	13	53	0.13	53	
49	29	38	0.20	57	18	43	0.16	53	10	50	0.11	49	63-56
56	25	36	0.17	54	16	40	0.13	51	8.9	47	0.09	47	
70	20	28	0.13	47	13	32	0.10	44	7.1	37	0.07	39	
80	18	26	0.11	44	11	29	0.09	40	6.3	34	0.06	36	
100	14	28	0.09	45	9.0	30	0.07	41	5.0	31	0.04	38	

RI 50

Kg 3.8

	n_1 = 1400 min^{-1}				n_1 = 900 min^{-1}				n_1 = 500 min^{-1}				IEC
	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	
7	200	68	1.7	84	129	81	1.3	83	71	100	0.91	82	80-71
10	140	73	1.3	82	90	86	1.0	81	50	100	0.66	79	
15	93	76	0.93	80	60	89	0.70	79	33	100	0.45	77	
20	70	74	0.71	76	45	86	0.55	74	25	100	0.37	71	
28	50	80	0.60	70	32	92	0.46	67	18	100	0.29	64	80-71-63
40	35	81	0.45	66	23	92	0.34	63	13	100	0.22	59	
49	29	72	0.34	63	18	82	0.27	59	10	96	0.19	55	71-63
56	25	69	0.30	60	16	78	0.24	56	8.9	91	0.16	53	
70	20	64	0.24	56	13	72	0.19	52	7.1	84	0.13	48	
80	18	58	0.21	51	11	66	0.16	47	6.3	75	0.11	43	
100	14	52	0.16	48	9.0	59	0.13	44	5.0	60	0.08	40	

RI 63

Kg 6.0

	n_1 = 1400 min^{-1}				n_1 = 900 min^{-1}				n_1 = 500 min^{-1}				IEC
	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	
7	200	115	2.9	84	129	137	2.2	84	71	169	1.5	83	90-80-71
10	140	126	2.2	83	90	149	1.7	81	50	182	1.2	80	
15	93	131	1.6	80	60	153	1.2	78	33	184	0.84	76	
20	70	136	1.3	77	45	158	1.0	75	25	189	0.69	72	
28	50	135	1.0	71	32	156	0.77	68	18	186	0.53	65	
40	35	145	0.79	67	23	166	0.61	64	13	195	0.42	60	
49	29	125	0.58	64	18	142	0.45	61	10	166	0.31	57	80-71
56	25	127	0.54	62	16	145	0.42	58	8.9	169	0.29	54	
70	20	117	0.42	58	13	133	0.33	54	7.1	154	0.23	50	
80	18	110	0.37	55	11	124	0.29	51	6.3	144	0.20	47	
100	14	99	0.28	51	9.0	112	0.22	47	5.0	125	0.15	43	

2.7 Prestazioni riduttori RI — *2.7 RI gearboxes performances* — 2.7 Leistungen der RI-Getriebe

RI 70

Kg 7.5

	n_1 = 1400 min^{-1}				n_1 = 900 min^{-1}				n_1 = 500 min^{-1}				IEC
	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	
7	200	132	3.2	85	129	158	2.5	84	71	195	1.8	83	100-90-80
10	140	142	2.5	83	90	168	1.9	82	50	205	1.3	80	
15	93	145	1.8	80	60	170	1.4	78	33	205	0.94	76	
20	70	151	1.4	77	45	175	1.1	75	25	210	0.76	72	90-80
28	50	147	1.1	71	32	170	0.84	68	18	202	0.59	64	
40	35	162	0.89	67	23	186	0.68	64	13	219	0.48	60	
49	29	166	0.78	64	18	190	0.61	60	10	223	0.43	56	80-71
56	25	167	0.71	62	16	191	0.55	58	8.9	223	0.39	54	
70	20	149	0.55	57	13	169	0.42	54	7.1	197	0.30	49	
80	18	141	0.48	54	11	160	0.38	50	6.3	185	0.26	46	
100	14	128	0.37	51	9.0	144	0.29	47	5.0	166	0.20	43	

RI 85

Kg 19

	n_1 = 1400 min^{-1}				n_1 = 900 min^{-1}				n_1 = 500 min^{-1}				IEC
	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	
7	200	247	6.1	85	129	297	4.8	84	71	369	3.3	83	112-100-90
10	140	280	4.9	84	90	332	3.8	83	50	407	2.6	81	
15	93	282	3.4	81	60	333	2.7	79	33	403	1.8	77	
20	70	310	2.9	79	45	362	2.2	77	25	434	1.5	74	
28	50	275	2.0	72	32	319	1.6	69	18	381	1.1	65	
40	35	312	1.7	69	23	359	1.3	66	13	424	0.90	62	
49	29	287	1.3	65	18	329	1.0	62	10	387	0.71	58	90-80
56	25	283	1.1	66	16	322	0.87	62	8.9	377	0.61	58	
70	20	261	0.90	61	13	297	0.70	57	7.1	346	0.49	53	
80	18	243	0.77	58	11	276	0.60	54	6.3	320	0.42	50	
100	14	217	0.60	53	9.0	243	0.46	50	5.0	281	0.33	44	

RI 110

Kg 38

	n_1 = 1400 min^{-1}				n_1 = 900 min^{-1}				n_1 = 500 min^{-1}				IEC
	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	
7	200	478	11.6	86	129	577	9.1	85	71	720	6.4	84	112-100
10	140	537	9.3	85	90	640	7.2	84	50	788	5.0	82	
15	93	535	6.4	82	60	632	5.0	80	33	769	3.4	78	
20	70	617	5.6	81	45	722	4.3	79	25	869	3.0	76	
28	50	570	4.0	75	32	665	3.1	72	18	796	2.2	69	
40	35	638	3.3	72	23	737	2.6	68	13	873	1.8	65	112-100-90
49	29	581	2.5	69	18	667	1.9	66	10	786	1.4	62	
56	25	465	1.8	69	16	532	1.4	64	8.9	624	0.97	60	
70	20	483	1.6	64	13	551	1.2	60	7.1	644	0.88	55	
80	18	491	1.5	62	11	559	1.1	58	6.3	651	0.80	53	
100	14	444	1.1	57	9.0	503	0.89	53	5.0	583	0.62	49	

RI 130

Kg 48

	n_1 = 1400 min^{-1}				n_1 = 900 min^{-1}				n_1 = 500 min^{-1}				IEC
	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	
7	200	706	16.8	88	129	855	13.2	87	71	1070	9.5	84	132-112-100
10	140	791	13.3	87	90	846	10.5	85	50	1167	7.4	83	
15	93	840	9.8	84	60	993	7.5	83	33	1210	5.3	80	
20	70	915	8.1	83	45	1073	6.2	82	25	1296	4.4	77	
28	50	805	5.6	76	32	941	4.2	75	18	1131	3.1	69	
40	35	903	4.5	73	23	1045	3.5	71	13	1243	2.5	65	112-100
49	29	880	3.8	70	18	1014	2.8	69	10	1200	2.0	63	
56	25	814	3.1	69	16	935	2.3	68	8.9	1100	1.7	62	
70	20	812	2.5	67	13	928	2.0	62	7.1	1086	1.4	58	
80	18	778	2.2	64	11	886	1.7	60	6.3	1034	1.2	56	
100	14	691	1.7	59	9.0	785	1.4	55	5.0	913	0.94	51	

2.7 Prestazioni riduttori RI — *2.7 RI gearboxes performances* — 2.7 Leistungen der RI-Getriebe

RI 150

77 Kg

	n_1 = 1400 min^{-1}				n_1 = 900 min^{-1}				n_1 = 500 min^{-1}				IEC
	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	
7	200	1070	25	88	129	1300	20	87	71	1630	14.2	86	
10	140	1180	19.9	87	90	1420	15.6	86	50	1755	10.9	84	132
15	93	1270	14.6	85	60	1500	11.4	83	33	1830	7.9	81	
20	70	1430	12.5	84	45	1680	9.7	82	25	2040	6.8	79	
28	50	1280	8.8	76	32	1500	6.8	74	18	1810	4.8	71	
40	35	1400	6.8	75	23	1630	5.3	73	13	1950	3.8	67	132-112-100
49	29	1320	5.6	71	18	1530	4.3	69	10	1800	3.0	65	
56	25	1306	4.7	73	16	1500	3.7	68	8.9	1768	2.6	64	
70	20	1183	3.7	67	13	1355	2.9	63	7.1	1591	2.0	59	
80	18	1136	3.2	66	11	1297	2.5	62	6.3	1518	1.7	57	112-100
100	14	1029	2.4	62	9.0	1169	1.9	58	5.0	1361	1.3	54	

RI 180

130 Kg

	n_1 = 1400 min^{-1}				n_1 = 900 min^{-1}				n_1 = 500 min^{-1}				IEC
	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	n_2 min^{-1}	T_{2M} Nm	P kW	RD %	
7	200	1510	36	89	129	1840	28	88	71	2320	20	86	
10	140	1650	27	88	90	1990	22	87	50	2470	15.2	85	
15	93	1800	20	86	60	2140	15.8	85	33	2620	11.2	82	
20	70	2037	17.8	84	45	2400	13.6	83	25	2910	9.5	80	
28	50	1870	12.4	79	32	2200	9.6	77	18	2660	6.8	73	160-132
40	35	2000	9.8	8.41	23	2330	7.5	73	13	2790	5.3	69	
49	29	2080	7.4	74	18	2415	6.5	72	10	2870	4.7	66	
56	25	2103	7.5	73	16	2423	5.7	71	8.9	2864	4.1	66	
70	20	1900	5.9	68	13	2182	4.5	66	7.1	2570	3.2	61	
80	18	1816	5.0	3.77	11	2079	3.8	65	6.3	2440	2.7	59	132
100	14	1622	3.8	63	9.0	1850	2.9	61	5.0	2163	2.1	54	

I pesi riportati sono indicativi e possono variare in funzione della versione del riduttore.

Listed weights are for reference only and can vary according to the gearbox version.

Die angegebenen Gewichte sind Richtwerte und können je nach Getriebeversion etwas variieren.

La Tab. 2.5 riporta il valore del rendimento statico attribuito ad ogni rapporto di riduzione.
Per ulteriori dettagli su questo argomento consultare il par. 1.4 del presente catalogo.

Table 2.5 shows the static efficiency given to every reduction ratio.

For more details on the matter, please refer to chapter 1.4 of this catalogue.

In Tabelle 2.5 ist der jedem Untersetzungsverhältnis zugeordnete statische Wirkungsgrad aufgeführt.
Weitere Einzelheiten siehe Kap. 1.4 dieses Katalogs.

Tab. 2.5

Valori del rendimento statico RS (%) / *Static efficiency RS (%)* / Statischer Wirkungsgrad RS (%)

ir	7	10	15	20	28	40	49	56	70	80	100
RI 28	70	67	61	57	46	41	38	36	32	27	25
RI 40	72	69	62	55	48	39	36	34	27	26	25
RI 50	73	70	68	60	51	46	42	40	36	30	28
RI 63	74	70	64	60	50	46	42	40	36	33	29
RI 70	74	70	64	60	49	45	40	39	34	31	29
RI 85	73	70	64	62	48	46	41	43	38	35	30
RI 110	74	72	64	63	52	48	45	44	39	37	33
RI 130	74	72	68	64	51	47	44	45	40	39	34
RI 150	75	73	68	65	53	48	46	47	41	39	36
RI 180	75	73	69	65	54	49	46	47	41	39	35

Nella tab. 2.6 sono riportate le dimensioni IEC e le possibili combinazioni albero/flangia riduttore predisposto per accoppiamento motore.

In table 2.6 are listed the IEC dimensions as well as the possible shaft/flange combinations of the gearbox to be coupled with a motor.

In Tabelle 2.6 sind sowohl die IEC-Anschlußmaße als auch weitere mögliche Welle/Flansch-Kombinationen zur Motorbefestigung aufgeführt.

Tab. 2.6

Possibili accoppiamenti con motori IEC / *Possible couplings with IEC motors* / Mögliche Verbindungen mit IEC-Motoren.

	IEC	ir										
		7	10	15	20	28	40	49	56	70	80	100
RMI 28	63	**11/90** (B14)										
	56	**9/120** (B5) - **9/80•** (B14)										
RI 40	71	**14/160** (B5) - **14/105** (B14) - 14/140 - 14/120 - 14/90•										
	63	**11/140** (B5) - **11/90** (B14) 11/120 - 11/80•										
	56	**9/120** (B5) - **9/80•** (B14) 9/140 - 9/90										
RMI 50	80	**19/120** (B14) - **19/200** (B5) 19/160										
	71	**14/160** (B5) - **14/105** (B14) 14/140 - 14/120 -14/90•										
	63*					**11/140** (B5) - **11/90•** B14 11/160 - 11/120 -11/105							
RMI 63	90	**24/200** (B5) - **24/140** (B14) 24/160 - 24/120 - 24/105•										
	80	**19/200** (B5) - **19/120** (B14) 19/160 - 19/140 - 19/105•										
	71*	**14/160** (B5) - **14/105•** (B14) 14/200 - 14/140 - 14/120										
RMI 70	100	**28/160** (B14)										
	90	**24/200** (B5) - **24/140** (B14) 24/160 - 24/120 - 24/105•										
	80	**19/200** (B5) - **19/120** (B14) 19/160 - 19/140 - 19/105•										
	71*						**14/160** (B5) - **14/105•** (B14) 14/200 - 14/140 - 14/120					
RMI 85	100	**28/250** (B5) - **28/160** (B14) 28/200										
	90	**24/200** (B5) - **24/140** (B14) 24/250 - 24/160 - 24/120										
	80*						**19/200** (B5) - **19/120** B14 19/250 - 19/160 - 19/140					
RMI 110	112	**28/250** (B5) - **28/160** (B14) 28/200										
	100	**28/250** (B5) - **28/160** (B14) 28/200										
	90*						**24/200** (B5) 24/250 - 24/160					
RMI 130	132	**38/300** (B5)										
	112*	**28/250** (B5) 28/200										
	100*	**28/250** (B5) 28/200										
RMI 150	132	**38/300** (B5) 38/250 - 38/200										
	112*				**28/250** (B5) 28/300 - 28/200							
	100*				**28/250** (B5) 28/300 - 28/200							
RMI 180	160	**42/350** (B5) 42/300 - 42/250										
	132*	**38/300** (B5) 38/350 - 38/250										

* I riduttori RMI con vite bisporgente vengono realizzati con boccola di riduzione in acciaio (es. per RMI 110 boccola riduzione ø 28/24).

Legenda:

11/140 (B5) 11/120

11/140 : combinazioni albero/flangia standard
(B5) : forma costruttiva motore IEC
11/120 : combinazioni albero/flangia a richiesta

N.B.
La configurazione standard della flangia attacco motore prevede 4 fori a 45° (esempio x: vedi par. 2.3).
Per le flange contrassegnate con il simbolo (•) i fori per il fissaggio al motore sono disposti in croce (esempio +). Pertanto è opportuno valutare l'ingombro della morsettiera del motore che verrà installato in quanto essa verrà a trovarsi orientata a 45° rispetto agli assi. Per la scelta della posizione della morsettiera rispetto agli assi fare riferimento allo schema seguente (in cui la posizione 5 è quella standard):

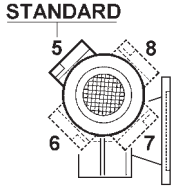
* *The RMI worm gearboxes with double extended input shaft have a steel axle box (e.g. for RMI 110 axle box ø 28/24).*

Key:

***11/140** (B5) 11/120*

***11/140** : standard shaft/flange combination*
(B5) : IEC motor constructive shape
11/120 : shaft/flange combinations upon request

NOTE.
The standard configuration for the 4 holes is 45° to the axles (like an x: see par. 2.3).
For the B14 flanges marked with (•) the holes to fit the motor are on the axles (like a +). Therefore we suggest to check the dimensions of the terminal board of the motor as it will be at 45° to the axles. Please, choose the terminal board position refering to the following sketch (in which N° 5 is the standard position):



* RMI-Getriebe mit beidseitiger Antriebswelle haben eine Stahl-Reduziermuffe (z.B. RMI 110 Muffe 28/24)

Legende:

11/140 (B5) 11/120

11/140 : Standardkombinationen Welle/Flansch
(B5) : Konstruktionsform IEC-Motor
11/120 : Sonderkombinationen Welle/Flansch

HINWEIS.
In der Standardkonfiguration sind die 4 Flanschbohrungen im 45°-Winkel zu den Achsen angeordnet (wie ein x: siehe Kapital 2.3).
Bei B14-Flanschen, die mit (•) gekennzeichnet sind, sind die Bohrungen auf den Achsen angeordnet (wie ein +). Es sollte deshalb der Platzbedarf des Motorklemmenkastens beachtet werden, da er sich in 45°-Position zu den Achsen befinden wird. Die Lage des Klemmenkastens des Motors wählen Sie bitte anhand der folgenden Skizze (Pos.5 ist Standardposition):

2.8 Prestazioni motoriduttori RMI

2.8 RMI Gearmotors performances

2.8 Leistungen der RMI Getriebemotoren

0.09 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	3.5	4.4	**RMI 28**
200	7	3.6	10.3	**RMI 40**
140	10	4.9	3.5	**RMI 28**
140	10	5.0	8.4	**RMI 40**
93	15	6.9	2.5	**RMI 28**
93	15	7.1	6.0	**RMI 40**
70	20	8.8	1.7	**RMI 28**
70	20	9.0	4.2	**RMI 40**
50	28	11	1.7	**RMI 28**
50	28	12	3.8	**RMI 40**
35	40	15	1.1	**RMI 28**
35	40	15	2.7	**RMI 40**
29	49	17	0.9	**RMI 28**
29	49	17	2.2	**RMI 40**
25	56	19	0.8	**RMI 28**
25	56	19	1.9	**RMI 40**
20	70	20	1.4	**RMI 40**
18	80	22	1.2	**RMI 40**
14	100	28	1.0	**RMI 40**
n_1 = 900 min^{-1}				
129	7	5.3	3.4	**RMI 28**
129	7	5.4	8.1	**RMI 40**
90	10	7.4	2.7	**RMI 28**
90	10	7.5	6.5	**RMI 40**
60	15	11	2.0	**RMI 28**
60	15	11	4.6	**RMI 40**
45	20	13	1.3	**RMI 28**
45	20	13	3.2	**RMI 40**
32	28	16	1.3	**RMI 28**
32	28	17	2.9	**RMI 40**
32	28	18	5.1	**RMI 50**
23	40	21	0.8	**RMI 28**
23	40	21	2.1	**RMI 40**
23	40	24	3.8	**RMI 50**
18	49	25	1.7	**RMI 40**
18	49	28	3.0	**RMI 50**
16	56	27	1.5	**RMI 40**
16	56	30	2.6	**RMI 50**
13	70	29	1.1	**RMI 40**
13	70	35	2.1	**RMI 50**
11	80	31	1.0	**RMI 40**
11	80	36	1.8	**RMI 50**
9	100	39	0.8	**RMI 40**
9	100	42	1.4	**RMI 50**

0.13 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	5.0	3.0	**RMI 28**
200	7	5.2	7.1	**RMI 40**
140	10	7.0	2.4	**RMI 28**
140	10	7.2	5.8	**RMI 40**
93	15	10	1.8	**RMI 28**
93	15	10	4.1	**RMI 40**
70	20	13	1.2	**RMI 28**
70	20	13	2.9	**RMI 40**
50	28	16	1.2	**RMI 28**
50	28	17	2.6	**RMI 40**
50	28	17	4.6	**RMI 50**
35	40	21	0.8	**RMI 28**
35	40	21	1.9	**RMI 40**
35	40	23	3.4	**RMI 50**
29	49	25	1.5	**RMI 40**
29	49	27	2.6	**RMI 50**
25	56	27	1.3	**RMI 40**
25	56	30	2.3	**RMI 50**
20	70	29	1.0	**RMI 40**
20	70	35	1.8	**RMI 50**
18	80	31	0.8	**RMI 40**
18	80	36	1.6	**RMI 50**
14	100	43	1.2	**RMI 50**
n_1 = 900 min^{-1}				
129	7	7.6	2.4	**RMI 28**
129	7	7.8	5.6	**RMI 40**
90	10	11	1.9	**RMI 28**
90	10	11	4.5	**RMI 40**
60	15	15	1.4	**RMI 28**
60	15	16	3.2	**RMI 40**
45	20	19	0.9	**RMI 28**
45	20	19	2.2	**RMI 40**
32	28	24	0.9	**RMI 28**
32	28	25	2.0	**RMI 40**
32	28	26	3.6	**RMI 50**
23	40	31	1.5	**RMI 40**
23	40	35	2.6	**RMI 50**
18	49	36	1.2	**RMI 40**
18	49	40	2.1	**RMI 50**
16	56	39	1.0	**RMI 40**
16	56	43	1.8	**RMI 50**
13	70	42	0.8	**RMI 40**
13	70	50	1.4	**RMI 50**
11	80	52	1.3	**RMI 50**
9	100	61	1.0	**RMI 50**

0.18 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	7.0	2.2	**RMI 28**
200	7	7.1	5.2	**RMI 40**
140	10	9.7	1.7	**RMI 28**
140	10	9.9	4.2	**RMI 40**
93	15	14	1.3	**RMI 28**
93	15	14	3.0	**RMI 40**
70	20	18	0.9	**RMI 28**
70	20	18	2.1	**RMI 40**
50	28	22	0.8	**RMI 28**
50	28	23	1.9	**RMI 40**
50	28	24	3.3	**RMI 50**
35	40	29	1.4	**RMI 40**
35	40	32	2.5	**RMI 50**
29	49	34	1.1	**RMI 40**
29	49	38	1.9	**RMI 50**
25	56	37	1.0	**RMI 40**
25	56	41	1.7	**RMI 50**
20	70	48	1.3	**RMI 50**
18	80	50	1.2	**RMI 50**
14	100	59	0.9	**RMI 50**
n_1 = 900 min^{-1}				
129	7	11	4.0	**RMI 40**
129	7	11	7.3	**RMI 50**
129	7	11	12.2	**RMI 63**
90	10	15	3.2	**RMI 40**
90	10	15	5.6	**RMI 50**
90	10	15	9.6	**RMI 63**
60	15	21	2.3	**RMI 40**
60	15	23	3.9	**RMI 50**
60	15	22	6.8	**RMI 63**
45	20	27	1.6	**RMI 40**
45	20	28	3.0	**RMI 50**
45	20	29	5.5	**RMI 63**
32	28	34	1.5	**RMI 40**
32	28	36	2.6	**RMI 50**
32	28	36	4.3	**RMI 63**
23	40	48	1.9	**RMI 50**
23	40	49	3.4	**RMI 63**
23	40	49	3.8	**RMI 70**
18	49	55	1.5	**RMI 50**
18	49	57	2.5	**RMI 63**
18	49	56	3.4	**RMI 70**
16	56	60	1.3	**RMI 50**
16	56	62	2.3	**RMI 63**
16	56	62	3.1	**RMI 70**
13	70	70	1.0	**RMI 50**

2.8 Prestazioni motoriduttori RMI

2.8 RMI Gearmotors performances

2.8 Leistungen der RMI Getriebemotoren

0.18 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 900 min^{-1}				
13	70	72	1.8	**RMI 63**
13	70	72	2.3	**RMI 70**
11	80	72	0.9	**RMI 50**
11	80	78	1.6	**RMI 63**
11	80	76	2.1	**RMI 70**
9	100	90	1.2	**RMI 63**
9	100	90	1.6	**RMI 70**

0.25 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	10.0	6.8	**RMI 50**
140	10	14	3.0	**RMI 40**
140	10	14	5.2	**RMI 50**
93	15	20	2.1	**RMI 40**
93	15	20	3.7	**RMI 50**
70	20	25	1.5	**RMI 40**
70	20	26	2.9	**RMI 50**
50	28	32	1.4	**RMI 40**
50	28	33	2.4	**RMI 50**
35	40	45	1.8	**RMI 50**
35	40	46	3.2	**RMI 63**
29	49	53	1.4	**RMI 50**
29	49	53	2.3	**RMI 63**
29	49	53	3.1	**RMI 70**
25	56	57	1.2	**RMI 50**
25	56	59	2.1	**RMI 63**
25	56	59	2.8	**RMI 70**
20	70	67	1.0	**RMI 50**
20	70	69	1.7	**RMI 63**
20	70	68	2.2	**RMI 70**
18	80	70	0.8	**RMI 50**
18	80	75	1.5	**RMI 63**
18	80	74	1.9	**RMI 70**
14	100	87	1.1	**RMI 63**
14	100	87	1.5	**RMI 70**
n_1 = 900 min^{-1}				
129	7	15	2.9	**RMI 40**
129	7	15	5.3	**RMI 50**
90	10	21	2.3	**RMI 40**
90	10	21	4.0	**RMI 50**
60	15	30	1.6	**RMI 40**
60	15	31	2.8	**RMI 50**
45	20	37	1.2	**RMI 40**
45	20	39	2.2	**RMI 50**

0.25 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 900 min^{-1}				
32	28	48	1.0	**RMI 40**
32	28	50	1.8	**RMI 50**
32	28	51	3.1	**RMI 63**
23	40	67	1.4	**RMI 50**
23	40	68	2.4	**RMI 63**
23	40	68	2.7	**RMI 70**
18	49	77	1.1	**RMI 50**
18	49	79	1.8	**RMI 63**
18	49	78	2.4	**RMI 70**
16	56	83	0.9	**RMI 50**
16	56	86	1.7	**RMI 63**
16	56	86	2.2	**RMI 70**
13	70	100	1.3	**RMI 63**
13	70	100	1.7	**RMI 70**
11	80	108	1.1	**RMI 63**
11	80	106	1.5	**RMI 70**
9	100	125	0.9	**RMI 63**
9	100	125	1.2	**RMI 70**

0.37 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	15	2.5	**RMI 40**
200	7	15	4.6	**RMI 50**
140	10	20	2.0	**RMI 40**
140	10	21	3.5	**RMI 50**
93	15	29	1.4	**RMI 40**
93	15	30	2.5	**RMI 50**
70	20	37	1.0	**RMI 40**
70	20	38	1.9	**RMI 50**
70	20	39	3.5	**RMI 63**
50	28	47	0.9	**RMI 40**
50	28	49	1.6	**RMI 50**
50	28	50	2.7	**RMI 63**
35	40	67	1.2	**RMI 50**
35	40	68	2.1	**RMI 63**
35	40	68	2.4	**RMI 70**
29	49	78	0.9	**RMI 50**
29	49	79	1.6	**RMI 63**
29	49	79	2.1	**RMI 70**
25	56	85	0.8	**RMI 50**
25	56	88	1.5	**RMI 63**
25	56	88	1.9	**RMI 70**
20	70	102	1.1	**RMI 63**
20	70	101	1.5	**RMI 70**
18	80	111	1.0	**RMI 63**

0.37 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
18	80	109	1.3	**RMI 70**
14	100	129	1.0	**RMI 70**
n_1 = 900 min^{-1}				
129	7	23	3.6	**RMI 50**
90	10	32	2.7	**RMI 50**
60	15	47	1.9	**RMI 50**
60	15	46	3.3	**RMI 63**
45	20	58	1.5	**RMI 50**
45	20	59	2.7	**RMI 63**
45	20	59	3.0	**RMI 70**
32	28	74	1.2	**RMI 50**
32	28	75	2.1	**RMI 63**
32	28	75	2.3	**RMI 70**
23	40	101	1.6	**RMI 63**
23	40	101	1.8	**RMI 70**
23	40	104	3.5	**RMI 85**
18	49	117	1.2	**RMI 63**
18	49	115	1.6	**RMI 70**
18	49	119	2.8	**RMI 85**
16	56	128	1.1	**RMI 63**
16	56	128	1.5	**RMI 70**
16	56	136	2.4	**RMI 85**
13	70	148	0.9	**RMI 63**
13	70	148	1.1	**RMI 70**
13	70	157	1.9	**RMI 85**
11	80	157	1.0	**RMI 70**
11	80	170	1.6	**RMI 85**
9	100	196	1.2	**RMI 85**
9	100	196	1.2	**RMI 85**

0.55 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	22	3.1	**RMI 50**
200	7	22	5.2	**RMI 63**
140	10	31	2.4	**RMI 50**
140	10	31	4.1	**RMI 63**
93	15	45	1.7	**RMI 50**
93	15	45	2.9	**RMI 63**
93	15	45	3.2	**RMI 70**
70	20	57	1.3	**RMI 50**
70	20	58	2.4	**RMI 63**
70	20	58	2.6	**RMI 70**
50	28	74	1.1	**RMI 50**
50	28	75	1.8	**RMI 63**

2.8 Prestazioni motoriduttori RMI

2.8 RMI Gearmotors performances

2.8 Leistungen der RMI Getriebemotoren

0.55 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
50	28	75	2.0	**RMI 70**
35	40	101	1.4	**RMI 63**
35	40	101	1.6	**RMI 70**
35	40	104	3.0	**RMI 85**
29	49	118	1.1	**RMI 63**
29	49	118	1.4	**RMI 70**
29	49	119	2.4	**RMI 85**
25	56	130	1.0	**RMI 63**
25	56	130	1.3	**RMI 70**
25	56	139	2.0	**RMI 85**
20	70	150	1.0	**RMI 70**
20	70	160	1.6	**RMI 85**
18	80	162	0.9	**RMI 70**
18	80	174	1.4	**RMI 85**
14	100	199	1.1	**RMI 85**
n_1 = 900 min^{-1}				
129	7	34	2.4	**RMI 50**
90	10	47	1.8	**RMI 50**
90	10	47	3.2	**RMI 63**
60	15	69	1.3	**RMI 50**
60	15	68	2.2	**RMI 63**
60	15	68	2.5	**RMI 70**
45	20	86	1.0	**RMI 50**
45	20	88	1.8	**RMI 63**
45	20	88	2.0	**RMI 70**
32	28	109	0.8	**RMI 50**
32	28	111	1.4	**RMI 63**
32	28	111	1.5	**RMI 70**
23	40	149	1.1	**RMI 63**
23	40	149	1.2	**RMI 70**
23	40	154	2.3	**RMI 85**
18	49	174	0.8	**RMI 63**
18	49	172	1.1	**RMI 70**
18	49	177	1.9	**RMI 85**
16	56	190	0.8	**RMI 63**
16	56	190	1.0	**RMI 70**
16	56	203	1.6	**RMI 85**
13	70	221	0.8	**RMI 70**
13	70	233	1.3	**RMI 85**
11	80	252	1.1	**RMI 85**
9	100	292	0.8	**RMI 85**

0.75 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	30	2.3	**RMI 50**
200	7	30	3.8	**RMI 63**
140	10	42	1.7	**RMI 50**
140	10	42	3.0	**RMI 63**
93	15	61	1.2	**RMI 50**
93	15	61	2.1	**RMI 63**
93	15	61	2.4	**RMI 70**
70	20	78	1.0	**RMI 50**
70	20	79	1.7	**RMI 63**
70	20	79	1.9	**RMI 70**
50	28	100	0.8	**RMI 50**
50	28	102	1.3	**RMI 63**
50	28	102	1.4	**RMI 70**
35	40	137	1.1	**RMI 63**
35	40	137	1.2	**RMI 70**
35	40	141	2.2	**RMI 85**
29	49	160	1.0	**RMI 70**
29	49	163	1.8	**RMI 85**
25	56	178	0.9	**RMI 70**
25	56	189	1.5	**RMI 85**
20	70	218	1.2	**RMI 85**
18	80	237	1.0	**RMI 85**
14	100	271	0.8	**RMI 85**
n_1 = 900 min^{-1}				
129	7	47	2.9	**RMI 63**
90	10	64	2.3	**RMI 63**
90	10	65	2.6	**RMI 70**
60	15	93	1.6	**RMI 63**
60	15	93	1.8	**RMI 70**
45	20	119	1.3	**RMI 63**
45	20	119	1.5	**RMI 70**
45	20	123	3.0	**RMI 85**
32	28	152	1.0	**RMI 63**
32	28	152	1.1	**RMI 70**
32	28	154	2.1	**RMI 85**
23	40	210	1.7	**RMI 85**
23	40	216	3.4	**RMI 110**
18	49	242	1.4	**RMI 85**
18	49	257	2.6	**RMI 110**
16	56	276	1.2	**RMI 85**
16	56	285	1.9	**RMI 110**
13	70	318	0.9	**RMI 85**
13	70	334	1.6	**RMI 110**
11	80	344	0.8	**RMI 85**
11	80	369	1.5	**RMI 110**
9	100	422	1.2	**RMI 110**

1.1 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	44	2.6	**RMI 63**
200	7	45	2.9	**RMI 70**
140	10	62	2.0	**RMI 63**
140	10	62	2.3	**RMI 70**
93	15	90	1.4	**RMI 63**
93	15	90	1.6	**RMI 70**
93	15	91	3.1	**RMI 85**
70	20	116	1.2	**RMI 63**
70	20	116	1.3	**RMI 70**
70	20	119	2.6	**RMI 85**
50	28	149	0.9	**RMI 63**
50	28	149	1.0	**RMI 70**
50	28	151	1.8	**RMI 85**
35	40	207	1.5	**RMI 85**
35	40	216	3.0	**RMI 110**
29	49	239	1.2	**RMI 85**
29	49	254	2.3	**RMI 110**
25	56	277	1.0	**RMI 85**
25	56	290	1.6	**RMI 110**
20	70	320	0.8	**RMI 85**
20	70	336	1.4	**RMI 110**
18	80	372	1.3	**RMI 110**
14	100	428	1.0	**RMI 110**
n_1 = 900 min^{-1}				
129	7	69	2.0	**RMI 63**
129	7	69	2.3	**RMI 70**
90	10	95	1.6	**RMI 63**
90	10	96	1.8	**RMI 70**
60	15	137	1.1	**RMI 63**
60	15	137	1.2	**RMI 70**
60	15	138	2.4	**RMI 85**
45	20	175	0.9	**RMI 63**
45	20	175	1.0	**RMI 70**
45	20	180	2.0	**RMI 85**
32	28	226	1.4	**RMI 85**
23	40	308	1.2	**RMI 85**
23	40	317	2.3	**RMI 110**
18	49	355	0.9	**RMI 85**
18	49	377	1.8	**RMI 110**
16	56	418	1.3	**RMI 110**
13	70	490	1.1	**RMI 110**
11	80	542	1.0	**RMI 110**
9	100	619	0.8	**RMI 110**

2.8 Prestazioni motoriduttori RMI

2.8 RMI Gearmotors performances

2.8 Leistungen der RMI Getriebemotoren

1.5 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	60	1.9	RMI 63
200	7	61	2.2	RMI 70
140	10	85	1.5	RMI 63
140	10	85	1.7	RMI 70
140	10	86	3.3	RMI 85
93	15	123	1.1	RMI 63
93	15	123	1.2	RMI 70
93	15	124	2.3	RMI 85
70	20	158	0.9	RMI 63
70	20	158	1.0	RMI 70
70	20	162	1.9	RMI 85
50	28	206	1.3	RMI 85
35	40	282	1.1	RMI 85
35	40	295	2.2	RMI 110
29	49	326	0.9	RMI 85
29	49	346	1.7	RMI 110
25	56	395	1.2	RMI 110
20	70	458	1.1	RMI 110
18	80	508	1.0	RMI 110
n_1 = 900 min^{-1}				
129	7	94	3.2	RMI 85
90	10	132	2.5	RMI 85
60	15	189	1.8	RMI 85
60	15	191	3.3	RMI 110
45	20	245	1.5	RMI 85
45	20	251	2.9	RMI 110
32	28	308	1.0	RMI 85
32	28	321	2.1	RMI 110
32	28	334	2.8	RMI 130
23	40	433	1.7	RMI 110
23	40	452	2.3	RMI 130
18	49	515	1.3	RMI 110
18	49	538	1.9	RMI 130
18	49	538	2.8	RMI 150
16	56	570	0.9	RMI 110
16	56	606	1.5	RMI 130
16	56	606	2.5	RMI 150
13	70	691	1.3	RMI 130
13	70	702	1.9	RMI 150
11	80	764	1.2	RMI 130
11	80	789	1.6	RMI 150
9	100	875	0.9	RMI 130
9	100	923	1.3	RMI 150

1.8 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	74	1.5	RMI 63
200	7	75	1.8	RMI 70
200	7	75	3.3	RMI 85
140	10	105	1.2	RMI 63
140	10	105	1.4	RMI 70
140	10	106	2.6	RMI 85
93	15	151	0.9	RMI 63
93	15	151	1.0	RMI 70
93	15	153	1.8	RMI 85
70	20	194	0.8	RMI 70*
70	20	199	1.6	RMI 85
50	28	254	1.1	RMI 85
35	40	348	0.9	RMI 85*
35	40	363	1.8	RMI 110
29	49	427	1.4	RMI 110
25	56	488	1.0	RMI 110
20	70	565	0.9	RMI 110
n_1 = 900 min^{-1}				
129	7	115	2.6	RMI 85
90	10	163	2.0	RMI 85
60	15	233	1.4	RMI 85
60	15	236	2.7	RMI 110
45	20	302	1.2	RMI 85
45	20	310	2.3	RMI 110
45	20	322	3.3	RMI 130
32	28	379	0.8	RMI 85*
32	28	396	1.7	RMI 110
32	28	412	2.3	RMI 130
23	40	534	1.4	RMI 110
23	40	558	1.9	RMI 130
23	40	573	2.8	RMI 150
18	49	635	1.1	RMI 110
18	49	664	1.5	RMI 130
18	49	664	2.3	RMI 150
16	56	748	1.3	RMI 130
16	56	748	2.0	RMI 150
13	70	852	1.1	RMI 130
13	70	866	1.6	RMI 150
11	80	942	0.9	RMI 130
11	80	974	1.3	RMI 150
9	100	1139	1.0	RMI 150

2.2 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	89	1.5	RMI 70
200	7	89	2.8	RMI 85
140	10	125	1.1	RMI 70
140	10	126	2.2	RMI 85
93	15	180	0.8	RMI 70*
93	15	182	1.6	RMI 85
70	20	237	1.3	RMI 85
70	20	243	2.5	RMI 110
70	20	249	3.7	RMI 130
50	28	303	0.9	RMI 85*
50	28	315	1.8	RMI 110
50	28	319	2.5	RMI 130
35	40	432	1.5	RMI 110
35	40	438	2.1	RMI 130
35	40	450	3.1	RMI 150
29	49	507	1.1	RMI 110
29	49	515	1.7	RMI 130
29	49	522	2.5	RMI 150
25	56	580	0.8	RMI 110
25	56	580	1.4	RMI 130
25	56	613	2.1	RMI 150
20	70	704	1.2	RMI 130
20	70	704	1.7	RMI 150
18	80	768	1.0	RMI 130
18	80	792	1.4	RMI 150
14	100	930	1.1	RMI 150
n_1 = 900 min^{-1}				
129	7	137	2.2	RMI 85
129	7	139	4.2	RMI 110
90	10	194	1.7	RMI 85
90	10	196	3.3	RMI 110
60	15	277	1.2	RMI 85
60	15	280	2.3	RMI 110
60	15	291	3.4	RMI 130
45	20	360	1.0	RMI 85
45	20	369	2.0	RMI 110
45	20	383	2.8	RMI 130
32	28	471	1.4	RMI 110
32	28	490	1.9	RMI 130
32	28	484	3.1	RMI 150
23	40	635	1.2	RMI 110
23	40	663	1.6	RMI 130
23	40	682	2.4	RMI 150
18	49	755	0.9	RMI 110
18	49	789	1.3	RMI 130

2.8 Prestazioni motoriduttori RMI

2.8 RMI Gearmotors performances

2.8 Leistungen der RMI Getriebemotoren

2.2kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 900 min^{-1}				
18	49	789	1.9	**RMI 150**
16	56	889	1.1	**RMI 130**
16	56	889	1.7	**RMI 150**
13	70	1013	0.9	**RMI 130**
13	70	1029	1.3	**RMI 150**
11	80	1121	0.8	**RMI 130**
11	80	1158	1.1	**RMI 150**
9	100	1354	0.9	**RMI 150**

3 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	122	1.2	**RMI 70***
200	7	122	2.0	**RMI 85**
140	10	170	0.8	**RMI 70***
140	10	172	1.6	**RMI 85**
93	15	249	1.1	**RMI 85 ***
93	15	252	2.1	**RMI 110**
93	15	258	3.3	**RMI 130**
70	20	323	1.0	**RMI 85***
70	20	332	1.9	**RMI 110**
70	20	340	2.7	**RMI 130**
50	28	430	1.3	**RMI 110**
50	28	435	1.8	**RMI 130**
50	28	435	2.9	**RMI 150**
35	40	589	1.1	**RMI 110**
35	40	598	1.5	**RMI 130**
35	40	614	2.3	**RMI 150**
29	49	692	0.8	**RMI 110***
29	49	702	1.3	**RMI 130**
29	49	712	1.9	**RMI 150**
25	56	791	1.0	**RMI 130**
25	56	837	1.6	**RMI 150**
20	70	960	0.8	**RMI 130**
20	70	960	1.2	**RMI 150**
18	80	1081	1.1	**RMI 150**
14	100	1269	0.8	**RMI 150**
n_1 = 900 min^{-1}				
129	7	194	4.4	**RMI 130**
129	7	194	6.7	**RMI 150**
90	10	271	3.5	**RMI 130**
90	10	274	5.2	**RMI 150**
60	15	396	2.5	**RMI 130**
60	15	396	3.8	**RMI 150**

3 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 900 min^{-1}				
45	20	522	2.1	**RMI 130**
45	20	522	3.2	**RMI 150**
32	28	669	1.4	**RMI 130**
32	28	660	2.3	**RMI 150**
32	28	686	3.2	**RMI 180**
23	40	930	1.8	**RMI 150**
23	40	930	2.5	**RMI 180**
18	49	1076	1.4	**RMI 150**
18	49	1123	2.2	**RMI 180**
16	56	1212	1.2	**RMI 150**
16	56	1266	1.9	**RMI 180**
13	70	1404	1.0	**RMI 150**
13	70	1471	1.5	**RMI 180**
11	80	1655	1.3	**RMI 180**
9	100	1942	1.0	**RMI 180**

4 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	162	1.5	**RMI 85***
200	7	164	2.9	**RMI 110**
140	10	229	1.2	**RMI 85***
140	10	232	2.3	**RMI 110**
140	10	237	3.3	**RMI 130**
93	15	332	0.9	**RMI 85***
93	15	336	1.6	**RMI 110**
93	15	344	2.4	**RMI 130**
70	20	442	1.4	**RMI 110**
70	20	453	2.0	**RMI 130**
70	20	458	3.1	**RMI 150**
50	28	573	1.0	**RMI 110***
50	28	581	1.4	**RMI 130**
50	28	581	2.2	**RMI 150**
35	40	786	0.8	**RMI 110***
35	40	797	1.1	**RMI 130**
35	40	819	1.7	**RMI 150**
29	49	936	0.9	**RMI 130***
29	49	949	1.4	**RMI 150**
25	56	1115	1.2	**RMI 150**
20	70	1280	0.9	**RMI 150**
18	80	1441	0.8	**RMI 150**

4 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 900 min^{-1}				
129	7	258	3.3	**RMI 130**
129	7	258	5.0	**RMI 150**
90	10	361	2.6	**RMI 130**
90	10	365	3.9	**RMI 150**
60	15	528	1.9	**RMI 130**
60	15	528	2.8	**RMI 150**
45	20	696	1.5	**RMI 130**
45	20	696	2.4	**RMI 150**
45	20	705	3.4	**RMI 180**
32	28	891	1.1	**RMI 130**
32	28	879	1.7	**RMI 150**
32	28	915	2.4	**RMI 180**
23	40	1239	1.3	**RMI 150**
23	40	1239	1.9	**RMI 180**
18	49	1435	1.1	**RMI 150**
18	49	1497	1.6	**RMI 180**
16	56	1616	0.9	**RMI 150**
16	56	1688	1.4	**RMI 180**
13	70	1961	1.1	**RMI 180**
11	80	2207	0.9	**RMI 180**

5.5 kW

n_2 min^{-1}	ir	T2 Nm	FS'	RMI
n_1 = 1400 min^{-1}				
200	7	231	3.1	**RMI 130**
200	7	231	4.6	**RM I150**
140	10	326	2.4	**RMI 130**
140	10	326	3.6	**RMI 150**
93	15	473	1.8	**RMI 130**
93	15	478	2.7	**RMI 150**
70	20	623	1.5	**RMI 130**
70	20	630	2.3	**RMI 150**
70	20	630	3.2	**RMI 180**
50	28	798	1.0	**RMI 130***
50	28	798	1.6	**RMI 150**
50	28	830	2.3	**RMI 180**
35	40	1126	1.2	**RMI 150**
35	40	1126	1.8	**RMI 180**
29	49	1305	1.0	**RMI 150**
29	49	1360	1.5	**RMI 180**
25	56	1534	0.9	**RMI 150**
25	56	1534	1.4	**RMI 180**
20	70	1786	1.1	**RMI 180**
18	80	2011	0.9	**RMI 180**

2.8 Prestazioni motoriduttori RMI

n_2 min^{-1}	ir	T2 Nm	FS'	RMI

5.5 kW

n_1 = 900 min^{-1}				
129	7	355	2.4	**RMI 130**
129	7	355	3.7	**RMI 150**
90	10	496	1.9	**RMI 130**
90	10	502	2.8	**RMI 150**
60	15	727	1.4	**RMI 130**
60	15	727	2.1	**RMI 150**
60	15	744	2.9	**RMI 180**
45	20	957	1.1	**RMI 130**
45	20	957	1.8	**RMI 150**
45	20	969	2.5	**RMI 180**
32	28	1226	0.8	**RMI 130***
32	28	1209	1.2	**RMI 150**
32	28	1258	1.7	**RMI 180**
23	40	1704	1.0	**RMI 150**
23	40	1704	1.4	**RMI 180**
18	49	2059	1.2	**RMI 180**
16	56	2320	1.0	**RMI 180**
13	70	2696	0.8	**RMI 180**

7.5 kW

n_1 = 1400 min^{-1}				
200	7	315	2.2	**RMI 130**
200	7	315	3.4	**RMI 150**
140	10	445	1.8	**RMI 130**
140	10	445	2.7	**RMI 150**
140	10	450	3.7	**RMI 180**
93	15	645	1.3	**RMI 130***
93	15	652	1.9	**RMI 150**
93	15	660	2.7	**RMI 180**
70	20	849	1.1	**RMI 130***
70	20	860	1.7	**RMI 150**
70	20	860	2.4	**RMI 180**
50	28	1089	1.2	**RMI 150***
50	28	1132	1.7	**RMI 180**
35	40	1535	0.9	**RMI 150***
35	40	1535	1.3	**RMI 180**
29	49	1855	1.1	**RMI 180**
25	56	2091	1.0	**RMI 180**

n_1 = 900 min^{-1}				
129	7	490	3.8	**RMI 180**
90	10	692	2.9	**RMI 180**
60	15	1015	2.1	**RMI 180**
45	20	1321	1.8	**RMI 180**

2.8 RMI Gearmotors performances

n_2 min^{-1}	ir	T2 Nm	FS'	RMI

7.5 kW

n_1 = 900 min^{-1}				
32	28	1716	1.3	**RMI 180**
23	40	2324	1.0	**RMI 180**
18	49	2808	0.9	**RMI 180**

9.2 kW

n_1 = 1400 min^{-1}				
200	7	387	1.8	**RMI 130**
200	7	387	2.8	**RMI 150**
200	7	391	3.9	**RMI 180**
140	10	546	1.4	**RMI 130***
140	10	546	2.2	**RMI 150**
140	10	552	3.0	**RMI 180**
93	15	791	1.1	**RMI 130***
93	15	800	1.6	**RMI 150**
93	15	810	2.2	**RMI 180**
70	20	1042	0.9	**RMI 130***
70	20	1054	1.4	**RMI 150**
70	20	1054	1.9	**RMI 180**
50	28	1335	1.0	**RMI 150***
50	28	1388	1.3	**RMI 180**
35	40	1883	1.1	**RMI 180***
29	49	2276	0.9	**RMI 180***
25	56	2566	0.8	**RMI 180***

11 kW

n_1 = 1400 min^{-1}				
200	7	467	3.2	**RMI 180**
140	10	660	2.5	**RMI 180**
93	15	968	1.9	**RMI 180**
70	20	1261	1.6	**RMI 180**
50	28	1660	1.1	**RMI 180***
35	40	2251	0.9	**RMI 180***
29	49	2721	0.8	**RMI 180***

n_1 = 900 min^{-1}				
129	7	719	2.6	**RMI 180**
90	10	1015	2.0	**RMI 180**
60	15	1488	1.4	**RMI 180**
45	20	1938	1.2	**RMI 180**
32	28	2517	0.9	**RMI 180***

2.8 Leistungen der RMI Getriebemotoren

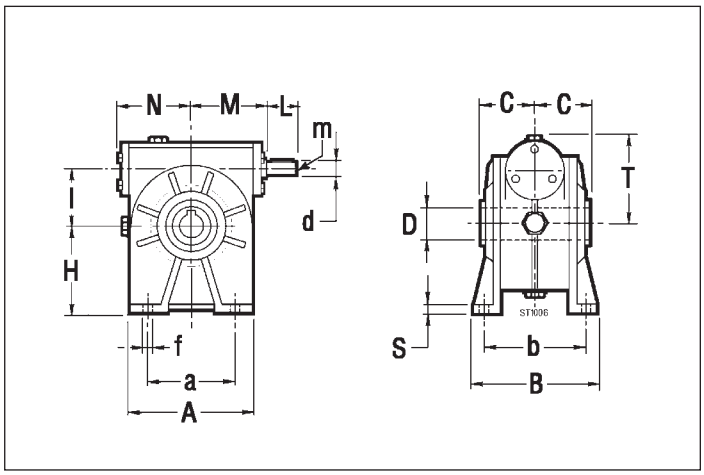
n_2 min^{-1}	ir	T2 Nm	FS'	RMI

15 kW

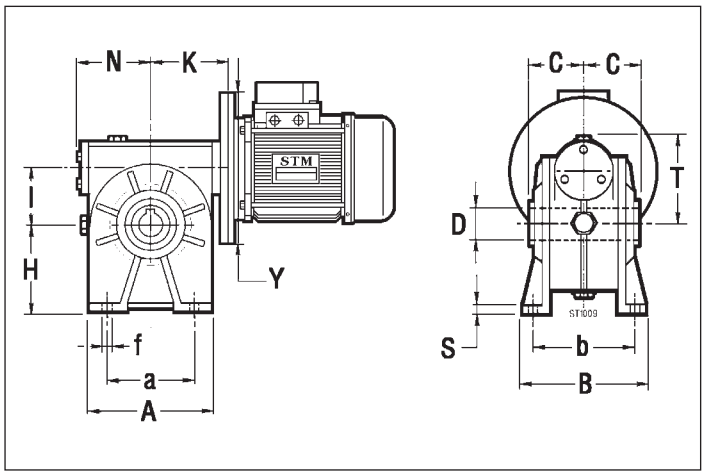
n_1 = 1400 min^{-1}				
200	7	637	2.4	**RMI 180**
140	10	900	1.8	**RMI 180**
93	15	1320	1.4	**RMI 180**
70	20	1719	1.2	**RMI 180***
50	28	2263	0.8	**RMI 180***

N.B.
Tutte le potenze indicate si riferiscono alla potenza meccanica dei riduttori.
Per i riduttori contrassegnati con **(*)** è opportuno effettuare la verifica della potenza limite termico secondo le indicazioni riportate nel par. 1.7
NOTE.
The indicated power is based on the mechanical capacities of the gearboxes.
For the gearboxes marked with (*) it is aslo necessary to obey the therminal capacity like shown on chapter 1.7.
HINWEIS.
Die Leistungsangaben beziehen sich auf die mecanische Belasbarkeit der Getriebe.
Bei den mit (*) gekennzeichneten Getrieben ist außerdem die thermische Leistungsgrenze zu beachten (s. Kap. 1.7).

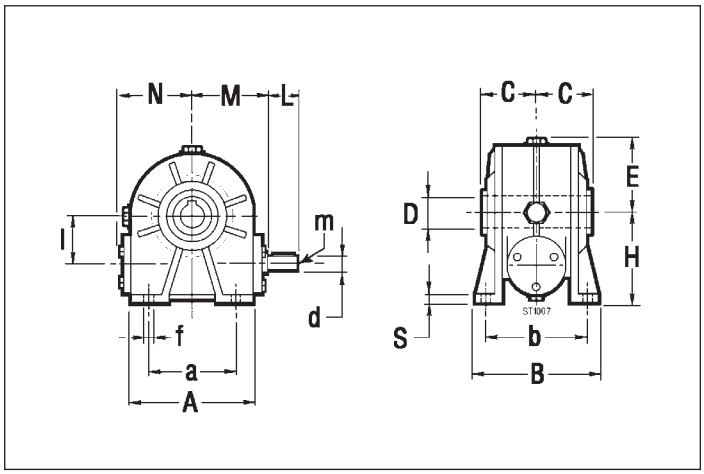
RI S



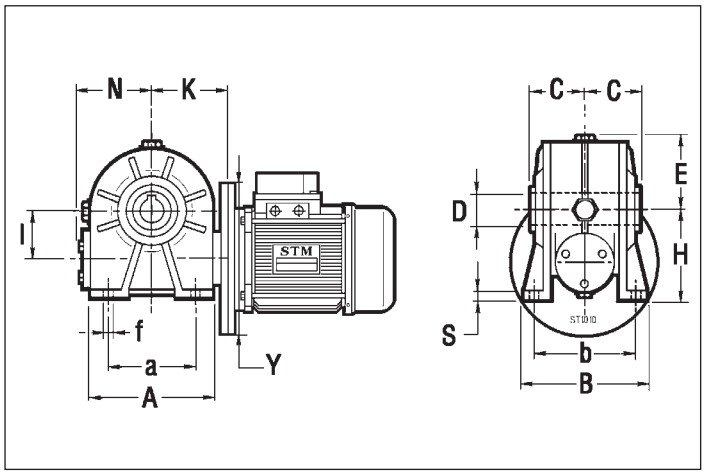
RMI S



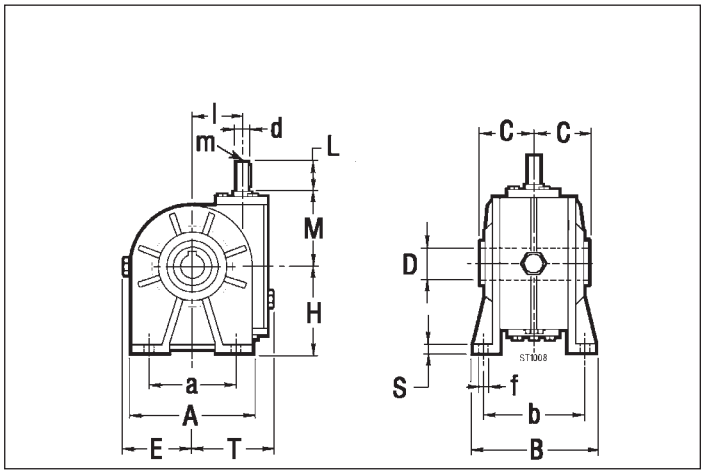
RI I



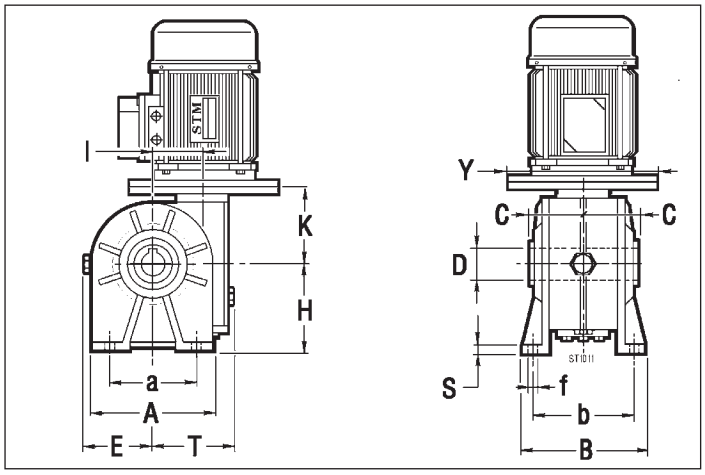
RMI I



RI D



RMI D



2.9 Dimensioni — *2.9 Dimensions* — 2.9 Abmessungen

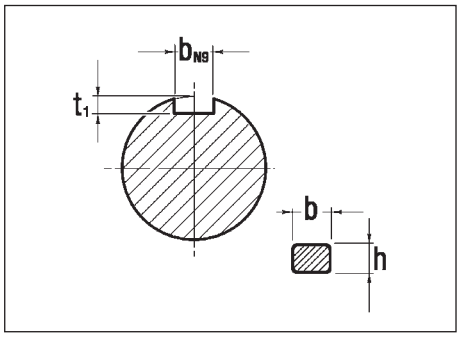
RI RMI	A	a	B	b	C	D H7	d j6	E	f	H	I	L	M	m	N	S	T
28	67	52	78	66 $^{+2}_{-6}$	30	14	9	40	5.5	52	28	20	47	M4	44.5(46)*	6	49
40	100	70	102	84 $^{\pm3}$	41	19 (18)	11	59	7	71	40	22	64	M5	61.5	8	68.5
50	120	85	119	99 $^{\pm3}$	49	24 (25)	14	69	9	85	50	30	74	M6	72.5	10	81.5
63	140	95	136	111 $^{+2}_{-8}$	60	25	18	81	11	100	63	45	96	M6	84	11	99
70	158	120	140	116	60	28	19	87	11	115	70	40	97	M8	92	13	108
85	193	140	168	140	61	32 (35)	24	105	13	135	85	50	115	M8	111	15	135
110	250	200	200	162	77.5	42	28	135	14	172	110	60	146	M8	142	17	170
130	286	235	230	190	90	48	38	150	15	200	130	80	166	M10	159	19	200
150	336	260	250	210	105	55	42	178	19	230	150	100	195	M12	189	20	224
180	400	310	320	260	120	65	48	210	22	265	180	110	235	M14	232	22	265

***RI 28 - RMI 28 IEC56: N=44.5, RMI 28 IEC63: N=46**

	RMI																			
	28		40		50		63		70		85		110		130		150		180	
	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K
B5	120	49	120	63.5	140	77	160	95	160	100	160	116	200	145	—	—	—	—	—	—
	—	—	140	63.5	160	77	200	95	200	100	200	116	250	145	250	163	250	190	300	234
	—	—	160	71	200	81	—	—	—	—	250	118	—	—	300	163	300	190	350	234
B14	80•	49	80•	63.5	90•	77	105•	95	105	100	120	116	160	145	—	—	—	—	—	—
	90	51	90	63.5	105	77	120	95	120	100	140	116	—	—	—	—	—	—	—	—
	—	—	105	71	120	81	140	95	140	100	160	118	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	160	100	—	—	—	—	—	—	—	—	—	—

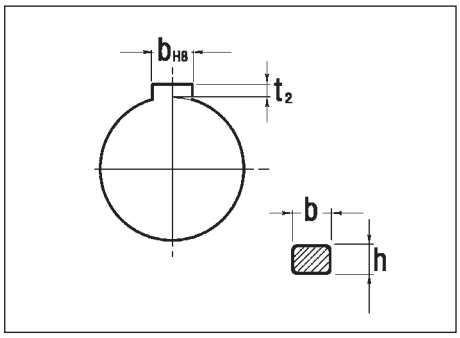
(•) Vedi nota in fondo a tabella 2.6. — *(•) See note at the bottom of table 2.6.* — (•) Siehe Bemerkungen Tabelle 2.6 unten.

Linguette — *Keys* — Federn



Albero entrata
Input shaft
Antriebswelle

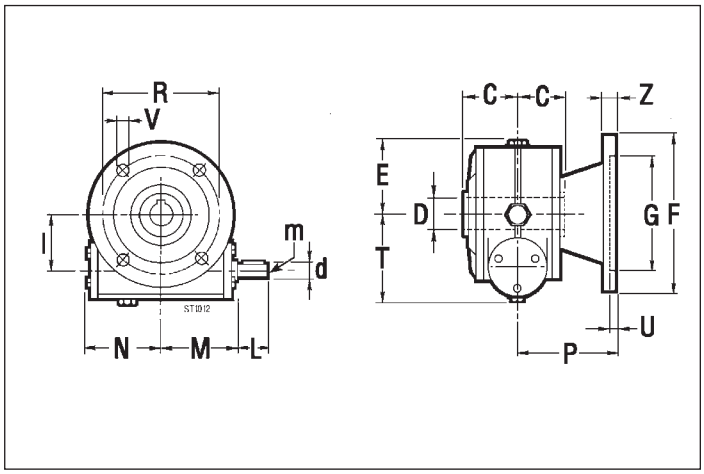
d	b x h	t_1	
9	3 x 3	1.8	+ 0.1 0
11	4 x 4	2.5	
14	5 x 5	3.0	
18	6 x 6	3.5	
19	6 x 6	3.5	
24	8 x 7	4.0	+ 0.2 0
28	8 x 7	4.0	
38	10 x 8	5.0	
42	12 x 8	5.0	
48	14 x 9	5.5	



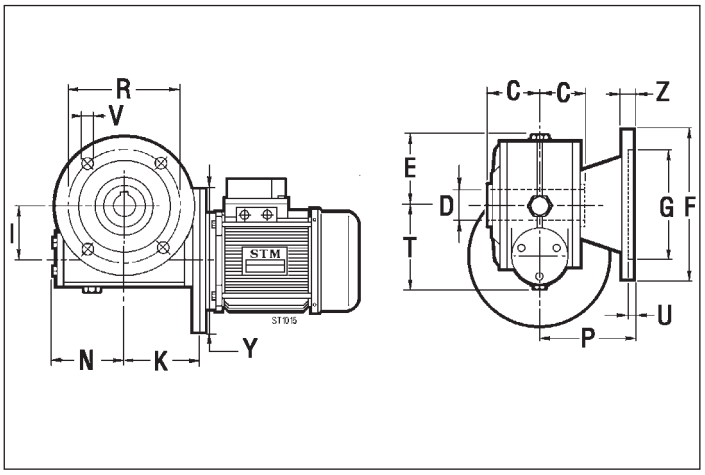
Albero uscita
Output shaft
Abtriebswelle

D	b x h	t_2	
14	5 x 5	2.3	+ 0.1 0
18	6 x 6	2.8	
19	6 x 6	2.8	
24	8 x 7	3.3	+ 0.2 0
25	8 x 7	3.3	
28	8 x 7	3.3	
32	10 x 8	3.3	
35	10 x 8	3.3	
42	12 x 8	3.3	
48	14 x 9	3.8	
55	16 x 10	4.3	
65	18 x 11	4.4	

RI FL



RMI FL

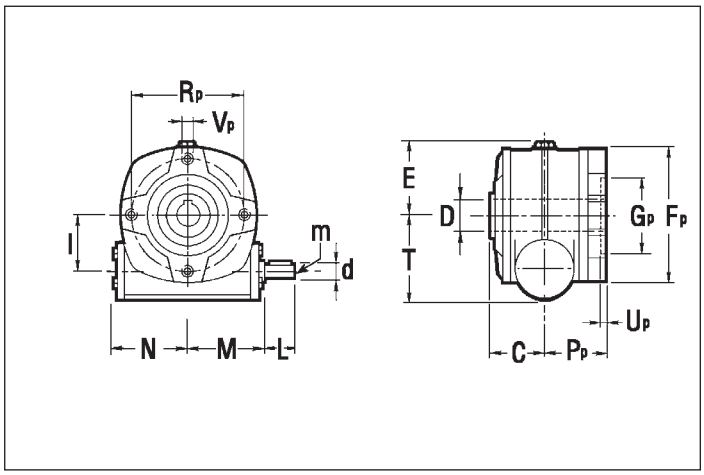


N.B.
Nelle grandezze 40, 50, 63, 70 la versione FL viene ottenuta applicando una flangia modulare sulla flangia pendolare della versione PP.

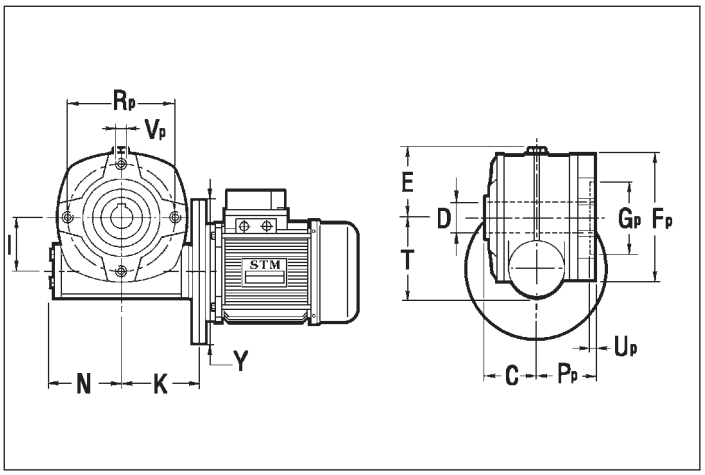
NOTE.
In sizes 40, 50, 63, 70, the FL version is obtained by applying a modular flange onto the shaft-mounted flange of the PP version.

HINWEIS.
Bei den Größen 40, 50, 63 und 70 erhält man die FL-Version, indem ein Modulflansch an den Flansch mit Drehmomentstütze der PP-Version befestigt wird.

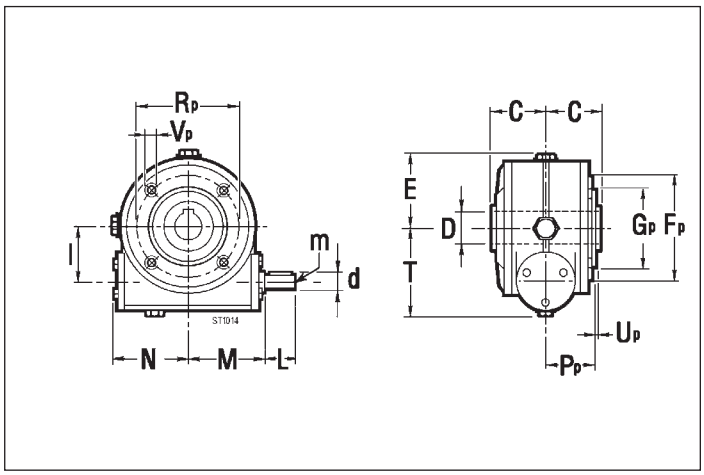
RI 28P



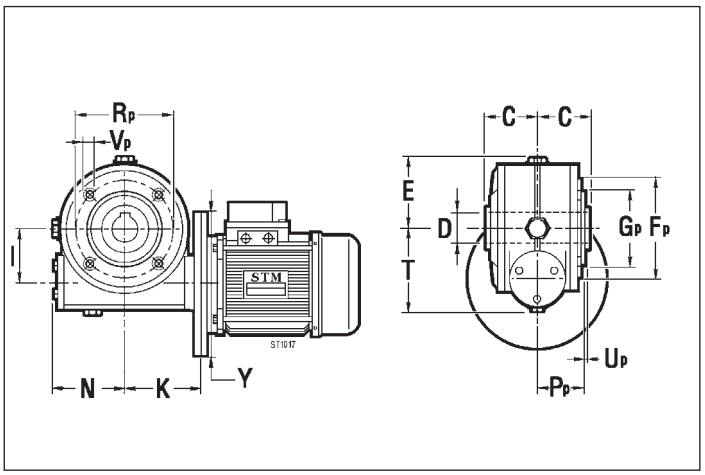
RMI 28P



RI 40PP - 70PP, 85P - 180P



RMI 40PP - 70PP, 85P - 180P



2.9 Dimensioni — *2.9 Dimensions* — 2.9 Abmessungen

RI RMI	C	D H7	d j6	E	I	L	M	m	N	T
28	30	14	9	40	28	20	47	M4	44.5 (46)*	49
40	41	19 (18)	11	59	40	22	64	M5	61.5	68.5
50	49	24 (25)	14	69	50	30	74	M6	72.5	81.5
63	60	25	18	81	63	45	96	M6	84	99
70	60	28	19	87	70	40	97	M8	92	108
85	61	32 (35)	24	105	85	50	115	M8	111	135
110	77.5	42	28	135	110	60	146	M8	142	170
130	90	48	38	150	130	80	166	M10	159	200
150	105	55	42	178	150	100	195	M12	189	224
180	120	65	48	210	180	110	235	M14	232	265

***RI 28 - RMI 28 IEC56: N=44.5, RMI 28 IEC63: N=46**

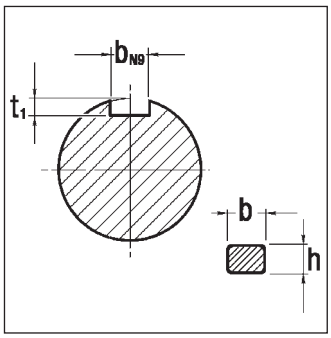
RI RMI	F	G H8	P	R	U	V	Z	Fp	Gp h8	Pp	Rp	Up	Vp
28	70	40	49	56	5	6	5	67	42(H8)	36	56	7	M6
40	140	95	82	115	5	8.5	9	95	60	38	83	2	M6
50	160	110	91.5	130	5	10	10	105	70	49	85	2.5	M8
63	180	115	116	150	5	11	11	105	70	57.5	85	3.5	M8
70	200	130	111	165	5	13	11	120	80	57	100	4	M8
85	200	130	100	165	5	13	12	144	110	56.5	130	3.5	M10
110	250	180	150	215	5	15	16	200	130	74	165	3	M12
130	300	230	150	265	5	15	18	242	180	87	215	5	M12
150	350	250	160	300	6	19	18	250	180	102	215	5	M14
180	400	300	180	350	6.5	22	22	300	230	117	265	5	M16

	RMI																			
	28		40		50		63		70		85		110		130		150		180	
	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K
B5	120	49	120	63.5	140	77	160	95	160	100	160	116	200	145	—	—	—	—	—	—
	—	—	140	63.5	160	77	200	95	200	100	200	116	250	145	250	163	250	190	300	234
	—	—	160	71	200	81	—	—	—	—	250	118	—	—	300	163	300	190	350	234
B14	80•	49	80•	63.5	90•	77	105•	95	105	100	120	116	160	145	—	—	—	—	—	—
	90	51	90	63.5	105	77	120	95	120	100	140	116	—	—	—	—	—	—	—	—
	—	—	105	71	120	81	140	95	140	100	160	118	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	160	100	—	—	—	—	—	—	—	—	—	—

(•) Vedi nota in fondo a tabella 2.6. — *(•) See note at the bottom of table 2.6.* — (•) Siehe Bemerkungen Tabelle 2.6 unten.

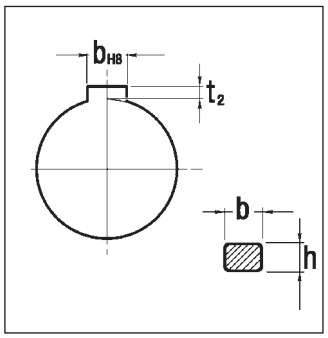
Linguette — *Keys* — Federn

Albero entrata
Input shaft
Antriebswelle



d	b x h	t_1	
9	3 x 3	1.8	
11	4 x 4	2.5	
14	5 x 5	3.0	+ 0.1 0
18	6 x 6	3.5	
19	6 x 6	3.5	
24	8 x 7	4.0	
28	8 x 7	4.0	
38	10 x 8	5.0	+ 0.2 0
42	12 x 8	5.0	
48	14 x 9	5.5	

Albero uscita
Output shaft
Abtriebswelle



D	b x h	t_2	
14	5 x 5	2.3	
18	6 x 6	2.8	+ 0.1 0
19	6 x 6	2.8	
24	8 x 7	3.3	
25	8 x 7	3.3	
28	8 x 7	3.3	
32	10 x 8	3.3	
35	10 x 8	3.3	
42	12 x 8	3.3	+ 0.2 0
48	14 x 9	3.8	
55	16 x 10	4.3	
65	18 x 11	4.4	

2.9 Dimensioni

Versioni speciali (a richiesta)

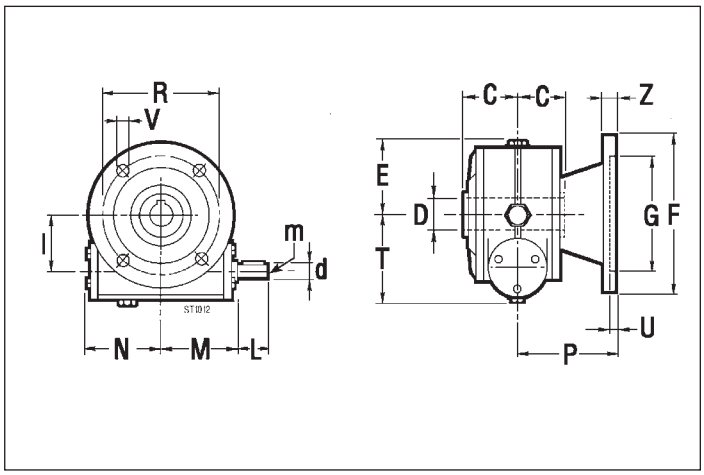
2.9 Dimensions

Non standard versions (on request)

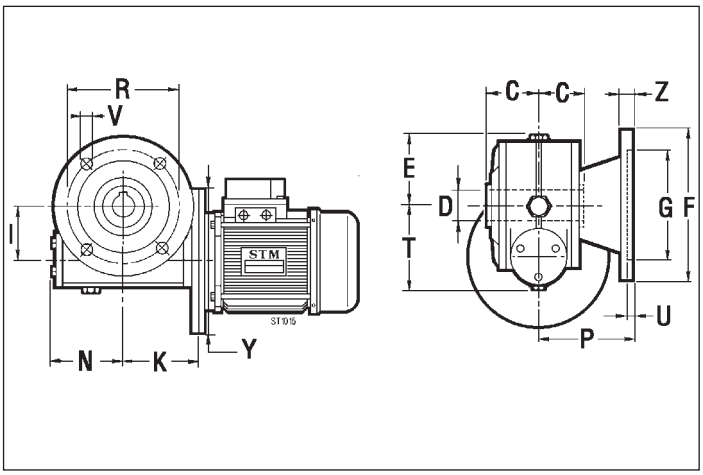
2.9 Abmessungen

Spezialausführungen (auf Anfrage)

RI F1 - F2 - F3



RMI F1 - F2 - F3



N.B.
Le versioni F1, F2, F3 contrassegnate con il simbolo (°) sono ottenute applicando una flangia modulare sulla flangia pendolare della versione PP.

NOTE.
F1, F2 and F3 versions that are marked with (°) are obtained by applying a modular flange onto the shaft-mounted flange of the PP version.

HINWEIS.
Die mit (°) gekennzeichneten Versionen F1, F2 und F3 erhält man, indem ein Modulflansch an den Flansch mit Drehmomentstütze der PP-Version befestigt wird.

RI RMI		F	G H8	P	R	U	V	Z	C	D H7	d j6	E	I	L	M	m	N	T
28	**F1**	80	50	53	62^{0}_{+6}	4	6	7	30	14	9	40	28	20	47	M4	44.5(46)*	49
40	**F1** **F2**	106 120	60 80	69 62	87 100	5 5	8.5 9	9 9	41	19 (18)	11	59	40	22	64	M5	61.5	68.5
50	**F1** **F2** **F3**	125 125 140	70 70 95	93 73 81	90^{0}_{+9} 100 115	5 4 4	10.5 9 9	10 9 9	49	24 (25)	14	69	50	30	74	M6	72.5	81.5
63	**F1°** **F2°** **F3°**	175 200 160	115 130 110	86 102 82	150 165 130	5 5 5	11 13 10	11 11 11	60	25	18	81	63	45	96	M6	81	99
70	**F1°** **F2°** **F3**	175 175 160	115 115 110	116 85 101	150 150 130	5 5 6	11 11 11	10 10 11	60	28	19	87	70	40	97	M8	92	108
85	**F1** **F2** **F3**	200 210 160	130 152 110	141 120 91	165 176 130	6 5 5	13 13 11.5	12 14 10	61	32 (35)	24	105	85	50	115	M8	111	135
110	**F1** **F2** **F3**	200 270 270	130 170 170	115 132 178	165 230 230	5 10 10	13 13.5 13.5	12 18 18	77.5	42	28	135	110	60	146	M8	142	170
180	**F2**	400	300	150	350	6.5	22	22	120	65	48	210	180	110	235	M14	232	265

***RI 28 - RMI 28 IEC56: N=44.5, RMI 28 IEC63: N=46**

	RMI																			
	28		40		50		63		70		85		110		130		150		180	
	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K	Y	K
B5	120	49	120	63.5	140	77	160	95	160	100	160	116	200	145	—	—	—	—	—	—
	—	—	140	63.5	160	77	200	95	200	100	200	116	250	145	250	163	250	190	300	234
	—	—	160	71	200	81	—	—	—	—	250	118	—	—	300	163	300	190	350	234
B14	80•	49	80•	63.5	90•	77	105•	95	105	100	120	116	160	145	—	—	—	—	—	—
	90	51	90	63.5	105	77	120	95	120	100	140	116	—	—	—	—	—	—	—	—
	—	—	105	71	120	81	140	95	140	100	160	118	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	160	100	—	—	—	—	—	—	—	—	—	—

(•) Vedi nota in fondo a tabella 2.6.

(•) See note at the bottom of table 2.6.

(•) Siehe Bemerkungen Tabelle 2.6 unten.

2.9 Dimensioni

Esecuzione con vite bisporgente

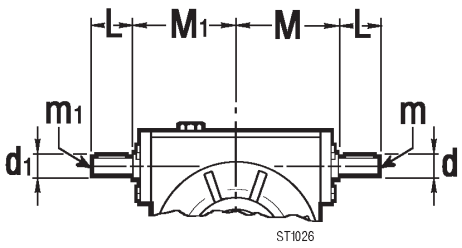
2.9 Dimensions

Double extended input shaft

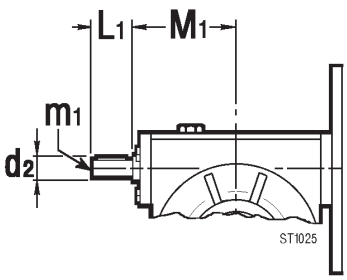
2.9 Abmessungen

Ausführung mit beidseitiger Antriebswelle

RI



RMI



RI RMI	d j6	d_1 j6	d_2 j6	L	L_1	m	m_1	M	M_1
28	9	9	9	20	20	M4	—	47	47
40	11	11	11	22	22	M5	M5	64	64*
50	14	14	14	30	30	M6	M6	74	74
63	18	18	18	45	45	M6	M6	96	85
70	19	19	19	40	40	M8	M8	97	97
85	24	24	24	50	50	M8	M8	115	115
110	28	28	28	60	60	M8	M8	146	146
130	38	38	38	80	80	M10	M10	166	166
150	42	42	42	100	100	M12	M12	195	195
180	48	48	48	110	110	M14	M14	235	235

* RMI 40 IEC 71 : M_1=67

Per i riduttori RMI con vite bisporgente vedi nota tab. 2.6.

The RMI worm gearboxwith double extended input shaft see table 2.6.

Bei der Ausführung mit beidseitiger Antriebswelle bitte dieBemerkung auf Tab. 2.6 beachten.

2.10 Gioco ridotto

I riduttori vite senza fine sono anche disponibili con gioco ridotto/registrabile. Per informazioni sulle quantità e prezzi contattare il nostro uff. commerciale.

2.10 Low backlash

The worm gearboxes are also available with low/adjustable backlash. For informations of quantities and prices please contact our sales department.

2.10 Spielarme Getriebe

Die Schneckengetriebe sind auch spielarm bzw. mit einstellbarem Spiel erhältlich. Für informationen bzl. Abnahmemenge und Preis wenden Sie sich bitte an unseren Vertrieb.

2.11 Accessori
Braccio di reazione

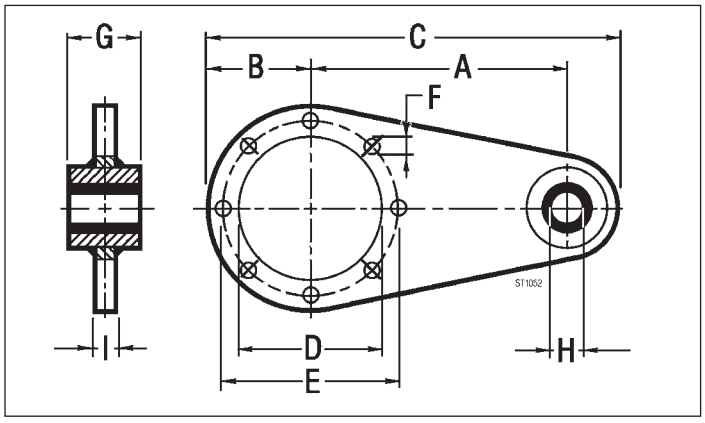
Con boccola VKL

2.11 Accessories
Torque arm

With VKL bushing

2.11 Zubehör
Drehmomentstütze

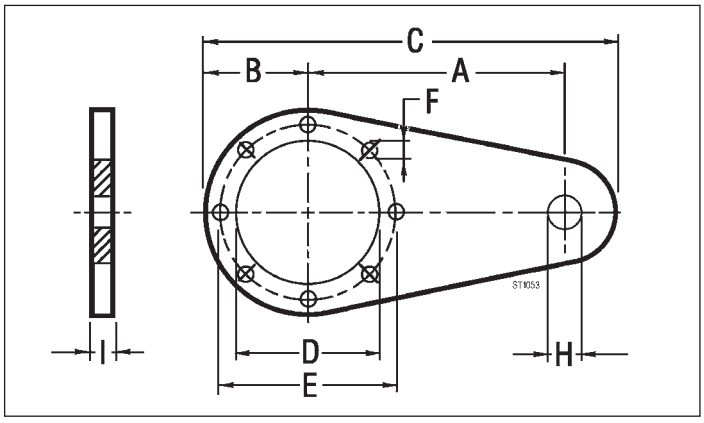
Mit VKL-Buchse



Standard

Standard

Standard



	RI - RMI									
	28	**40**	**50**	**63**	**70**	**85**	**110**	**130**	**150**	**180**
A	70	90	100	150	150	200	250	300	350	400
B	34.5	50	60	53	60	75	100	120	125	150
C	119.5	165	185	230	240	313	388	465	525	610
D	42.15	60	70	70	80	110	130	180	180	230
E	56	83	85	85	100	130	165	215	215	265
F	6.5	7	9	9	9	11	13	13	15	17
G	—	15	15	20	20	25	25	30	30	35
H	9	10	10	10	10	20	20	25	25	35
I	4	4	4	6	6	6	6	6	6	10

2.11 Accessori
Alberi lenti

Tutti i riduttori a vite senza fine sono forniti con albero lento cavo. A richiesta, possono essere forniti alberi lenti come indicato nei disegni dimensionali.
Le dimensioni delle linguette sono conformi alle norme UNI 6604-69.

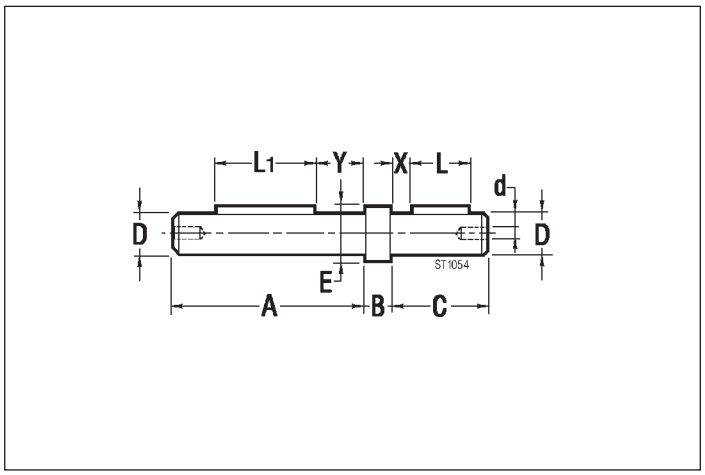
2.11 Accessories
Output shafts

All worm gearboxes are supplied with hollow output shaft. Output shafts as shown in the size drawings can be supplied upon request.
Sizes of feathers comply with standards UNI 6604-69.

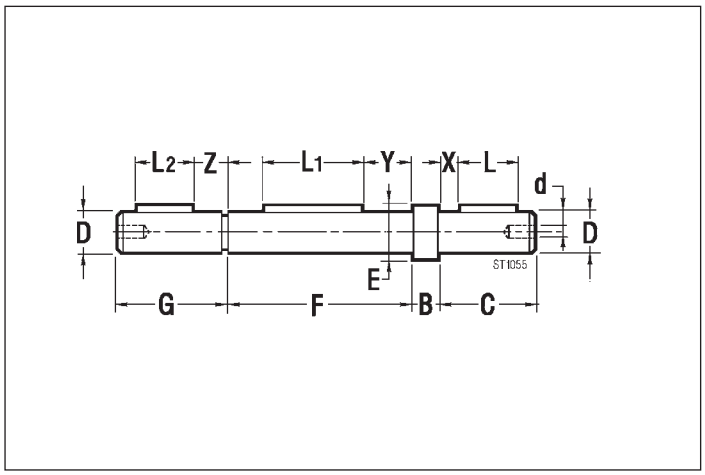
2.11 Zubehör
Abtriebswellen

Alle Schneckengetriebe werden mit hohler Abtriebswelle geliefert. Auf Anfrage können Abtriebswellen gemäß den Maßzeichnungen geliefert werden.
Die Abmessungen der Federn entsprechen den Normen UNI 6604-69.

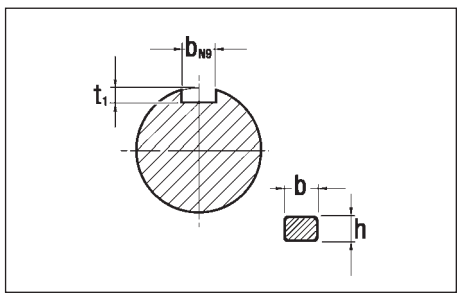
Albero lento
Single output shaft
Einseitige Abtriebswelle



Albero lento bisporgente
Double output shaft
Beidseitige Abtriebswelle



	RI - RMI									
	28	**40**	**50**	**63**	**70**	**85**	**110**	**130**	**150**	**180**
A	58	80	95	117	117	119	153	177	207	239
B	1.5	10	10	10	10	10	10	20	20	20
C	29.5	40	45	60	60	71	100	110	110	130
D_{g6}	14	19	24	25	28	32	42	48	55	65
d	M6	M8	M8	M8	M8	M10	M10	M10	M12	M14
E	17	22	28	34	34	38	50	58	63	78
F	60	82	98	120	120	122	155	180	210	240
G	31	50	55	70	70	81	110	130	130	150
L	20	25	30	40	40	50	80	90	90	100
L1	20	40	50	60	60	70	80	90	100	120
L2	20	25	30	40	40	50	80	90	90	100
X	4.5	8	7.5	10	10	10	10	10	10	15
Y	20	21	24	30	30	26	37	45	55	60
Z	6	18	18	20	20	20	20	30	30	35



D	b x h	t_1	
14	5 x 5	3.0	+ 0.1 0
19	6 x 6	3.5	
24	8 x 7	4.0	+ 0.2 0
25	8 x 7	4.0	
28	8 x 7	4.0	
32	10 x 8	5.0	
42	12 x 8	5.0	
48	14 x 9	5.5	
55	16 x 10	6.0	
65	18 x 11	7.0	

N.B.
Tutti gli alberi lenti vengono forniti in kit di montaggio completi di linguette,. rondelle, viti (e anelli elastici seeger per l'albero bisporgente).

NOTE.
All output shafts are supplied in kit complete with feathers, washers and screws (as well as snap rings for the double extended shaft).

HINWEIS.
Alle Abtriebswellen werden als Bausätze komplett mit Federn, Scheiben und Schrauben geliefert (bei der beidseitigen Abtriebswelle auch die Seegerringe).