




**TRANSTECNO**<sup>TM</sup>  
THE MODULAR GEARMOTOR

# AC





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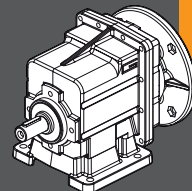
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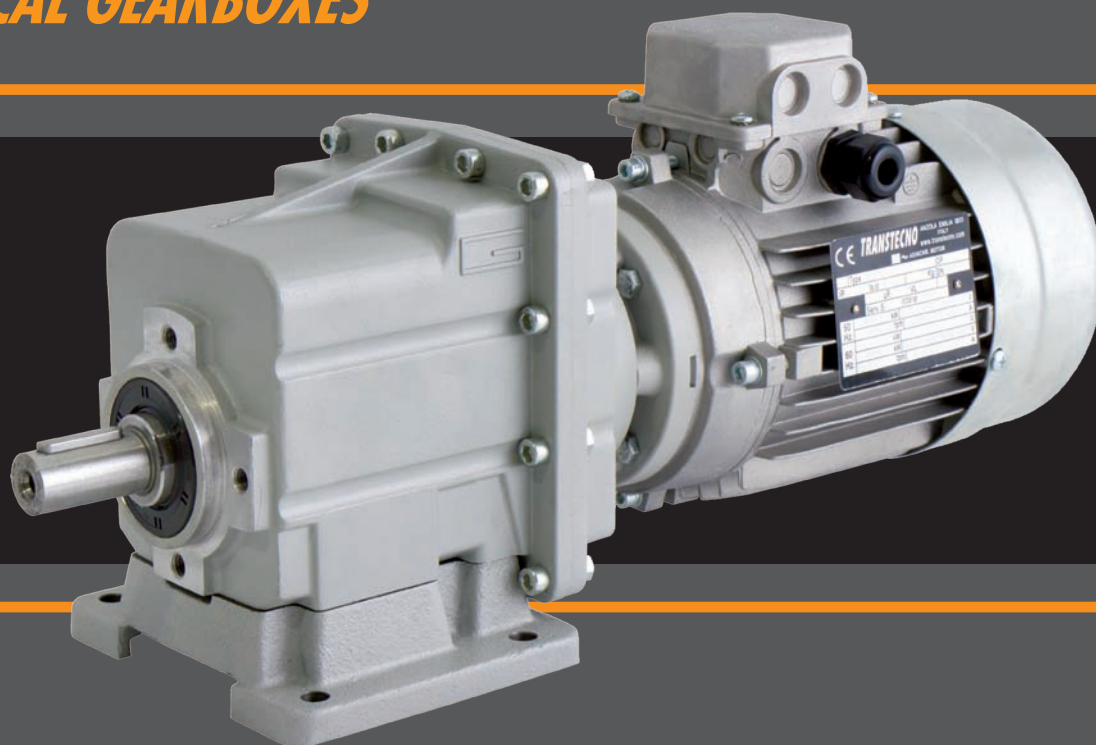
**TRANSTECNO**<sup>®</sup>  
THE MODULAR GEARMOTOR

**CMG**

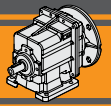
CMG



***RIDUTTORI AD INGRANAGGI CILINDRICI***  
***HELICAL GEARBOXES***



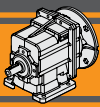




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**Caratteristiche tecniche**

**Technical features**

I riduttori della serie CMG sono caratterizzati da un elevato grado di modularità: partendo da un corpo di base è possibile configurarlo secondo le esigenze, con flangia o piede.

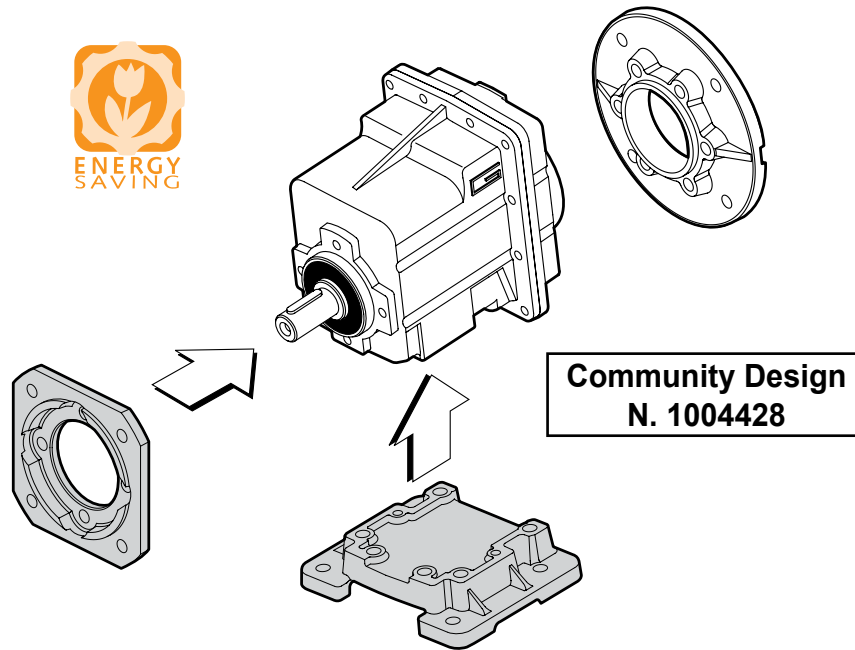
The high degree of modularity is a design feature of CMG helical gearboxes range. It is possible to set up the version required using flanges or feet.

Caratteristiche comuni a tutta la serie:

The main features of CMG range are:

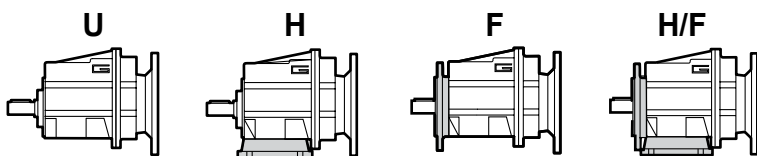
- Carcasa e flangia PAM in pressofusione di alluminio per le taglie 00, 01, 02, 03 e 04. La taglia 05 è costruita in ghisa;
- Piedi e flange d'uscita in ghisa;
- Ingranaggi sempre rettificati;
- Lubrificazione permanente con olio sintetico.

- Die-cast aluminum housings and input flanges for sizes 00, 01, 02, 03 and 04. Cast iron housing on size 05;
- Cast iron feet and output flanges;
- Ground-hardened helical gears;
- Permanent synthetic oil long-life lubrication.



**Designazione**

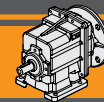
**Classification**



RIDUTTORE / GEARBOX

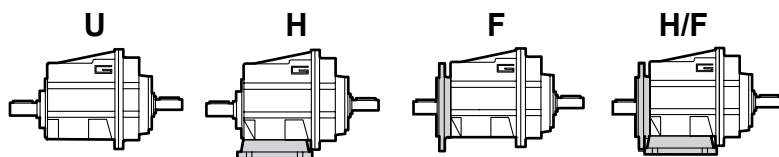
CMG	01	2	H65	9.81	D20	71	B14	B3
Tipo Type	Grandezza Size	Stadi Stages	Versione Version	Rapporto Ratio	Albero uscita Output shaft	IEC 	Forma costruttiva Version	Pos. di montaggio Mounting position
CMG	00 01 02 03 04 05	2 3	U... H... F... H.../F...	vedi tabelle see tables	vedi tabelle see tables	56.. — 112..	B5 B14	B3-B5 B8 B6 B7 V5-V1 V6-V3





**Designazione**

**Classification**



RIDUTTORE / GEARBOX

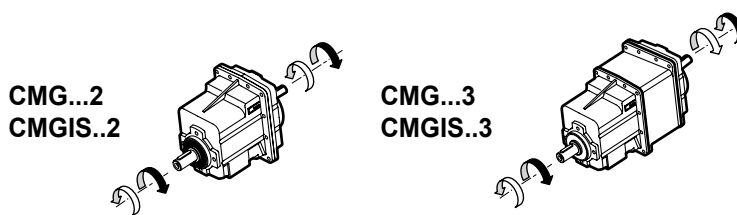
CMGIS	01	2	U	9.81	D20	B3
Tipo Type	Grandezza Size	Stadi Stages	Versione Version	Rapporto Ratio	Albero uscita Output shaft	Pos. di montaggio Mounting position
CMGIS	01 02 03 04 05	2 3	U... H... F... H.../F...	vedi tabelle see tables	vedi tabelle see tables	B3-B5 B8 B6 B7 V5-V1 V6-V3

MOTORE / MOTOR

0.75kW	4p	3ph	50Hz	T1
Potenza Power	Poli Poles	Fasi Phases	Frequenza Frequency	Pos. morsettiere Terminal box pos.
vedi tabelle see tables	2p 4p 6p 8p	1ph 3ph	50Hz 60Hz	T1 (Std)  T4 T2 T3

**Sensi di rotazione**

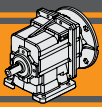
**Direction of rotation**



**Simbologia**

**Symbols**

$n_1$	[min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>
$n_2$	[min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>
$i$		Rapporto di riduzione / <i>Ratio</i>
$P_1$	[kW]	Potenza in entrata / <i>Input power</i>
$M_2$	[Nm]	Coppia nominale in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$P_{n1}$	[kW]	Potenza nominale in entrata / <i>Nominal input power</i>
$M_{n2}$	[Nm]	Coppia nominale in uscita in funzione di $P_{n1}$ / <i>Nominal output torque referred to <math>P_{n1}</math></i>
$sf$		Fattore di servizio / <i>Service factor</i>
$R_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$A_2$	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>



**Lubrificazione**

**Lubrication**

Tutti i riduttori nelle taglie 00, 01, 02, 03 e 04 sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione. Per la taglia 05 la lubrificazione dipende dalla posizione di montaggio.

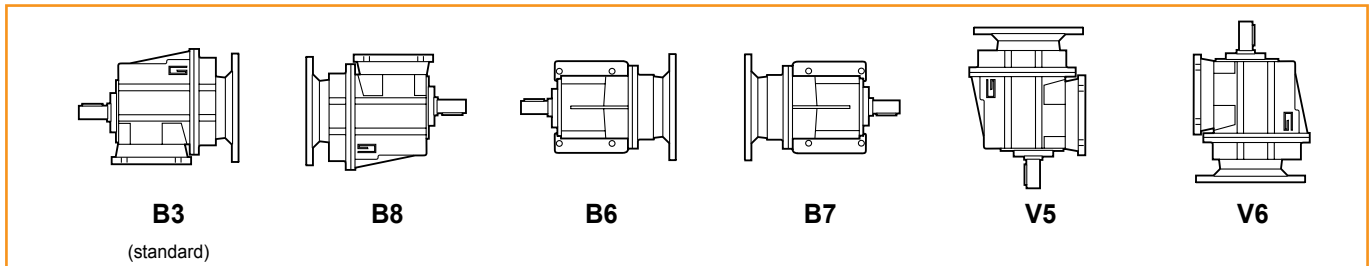
*Permanent synthetic oil long-life lubrication ( viscosity grade 320) makes it possible to use sizes 00, 01, 02, 03 and 04 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance. For size 05 lubrication depends on assembly position.*

CMG CMGIS	Quantità di olio (litri) / Oil quantity (litres)					
	B3	B8	B6	B7	V5	V6
002				0.18		
012				0.32		
013				0.94		
022				0.32		
023				0.94		
032				0.7		
033				1.8		
042				0.7		
043				1.8		
052	2.6	2	2.3	2.3	2.6	3.3
053	3.2	2.6	2.9	2.9	4.9	4.7

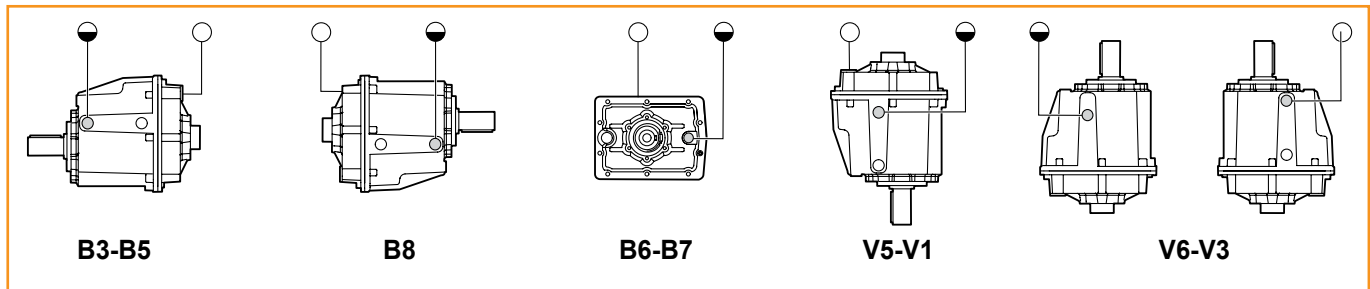
Lubrificati a vita  
Life lubrication

Posizioni di montaggio / Mounting positions

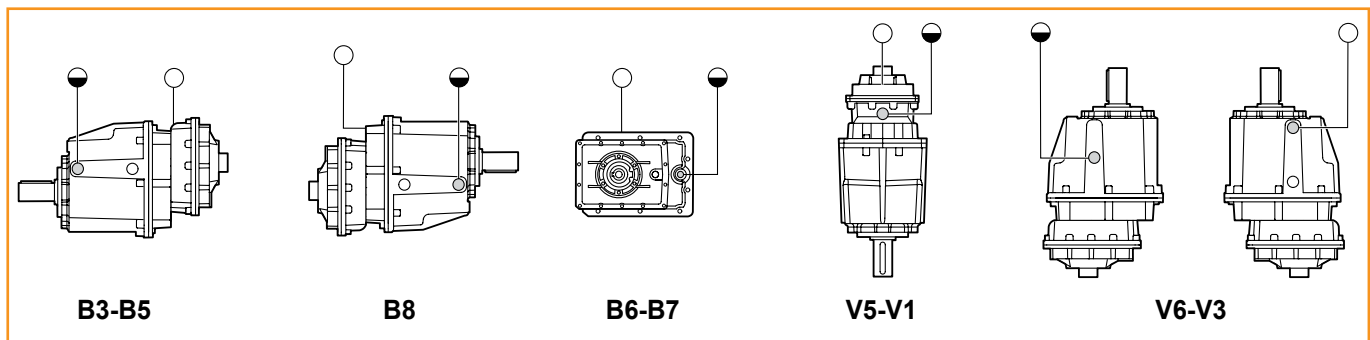
**CMG 002-012-013-022-023-032-033-042-043**



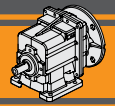
**CMG 052**



**CMG 053**

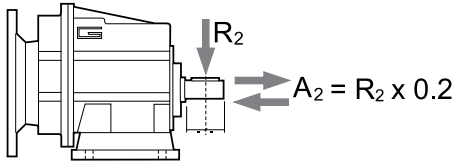


○ Sfiato e tappo di riempimento / Breather and filling plug  
● Livello olio / Oil level plug



Carichi radiali

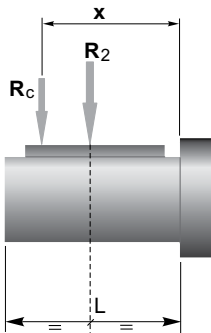
Radial loads



n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]					
	CMG 00	CMG 01	CMG 02	CMG 03	CMG 04	CMG 05
700	416	764	1529	1987	2379	3556
600	437	805	1609	2092	2504	3744
500	465	855	1710	2223	2661	3979
400	501	921	1842	2395	2866	4286
250	586	1077	2154	2801	3353	5013
180	653	1323	2554	3321	3897	5853
150	748	1406	2714	3529	4244	6392
120	806	1631	3467	3801	4572	7388
100	958	1842	3684	4507	5234	7851
80	1032	1984	3969	5042	5991	8963
60	1136	2184	4368	5549	6594	10483
40	1300	2500	5000	6500	8000	12000
10	1300	2500	5000	6500	8000	12000

Quando il carico radiale risultante non è applicato sulla mezza-  
ria dell'albero occorre calcolare quello effettivo con la seguente  
formula:

When the resulting radial load is not applied on the centre line  
of the shaft it is necessary to calculate the effective load with the  
following formula:

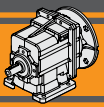


	CMG 00	CMG 01	CMG 02	CMG 03	CMG 04	CMG 05
a	73	104	117	132	150	180
b	53	84	92	102	115	140
R <sub>2MAX</sub>	1300	2500	5000	6500	8000	12000

$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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



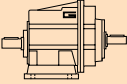
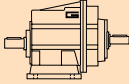
**CMG**

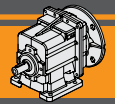
**RIDUTTORI AD INGRANAGGI CILINDRICI**  
**HELICAL GEARBOXES**

**Dati tecnici**

$n_1$  1400 min<sup>-1</sup>

**Technical data**

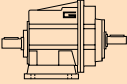
	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$		$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMGIS 002</b>					<b>CMGIS 022</b>				
	279	40	1.2	5.03		383	100	4.2	3.66
	230	40	1.0	6.10		316	100	3.4	4.43
	187	40	0.82	7.49		257	100	2.8	5.45
	156	50	0.85	8.99		190	120	2.5	7.39
	138	50	0.75	10.16		159	120	2.1	8.78
	116	50	0.63	12.07		141	120	1.8	9.93
	105	70	0.80	13.40		127	200	2.8	11.01
	92.5	70	0.71	15.14		116	200	2.5	12.05
	77.1	70	0.59	18.17		106	200	2.3	13.21
	64.9	70	0.50	21.58		94.6	200	2.1	14.81
	59.6	70	0.45	23.51		81.9	160	1.4	17.10
	55.8	70	0.43	25.10		76.7	160	1.3	18.26
	51.7	70	0.39	27.08		69.7	200	1.5	20.08
	43.1	70	0.33	32.49		58.7	200	1.3	23.85
	33.3	70	0.25	42.04		46.8	200	1.0	29.93
	31.2	70	0.24	44.89		39.0	200	0.9	35.91
	28.7	70	0.22	48.86		30.1	200	0.7	46.46
						28.2	200	0.6	49.61
						25.9	200	0.6	54.00
<b>CMGIS 012</b>					<b>CMGIS 023</b>				
	367	60	2.4	3.82		21.9	200	0.49	64.01
	302	60	2.0	4.63		18.4	200	0.41	76.02
	246	60	1.6	5.69		15.5	200	0.35	90.29
	181	80	1.6	7.72		12.2	200	0.27	114.46
	153	80	1.3	9.17		10.3	200	0.23	135.95
	143	80	1.2	9.81		8.0	200	0.18	175.89
	122	100	1.3	11.50		6.8	200	0.15	204.69
	118	100	1.3	11.90		5.3	200	0.12	264.84
	101	120	1.3	13.80		4.5	200	0.10	307.80
	95.7	120	1.3	14.62		3.5	200	0.08	398.25
	78.4	120	1.0	17.86					
	73.4	120	1.0	19.07					
	70.6	120	0.9	19.83					
	59.4	120	0.8	23.56					
	47.4	120	0.6	29.56					
	39.5	120	0.5	35.47					
	30.5	120	0.4	45.89					
	28.6	120	0.4	49.00					
	26.3	120	0.3	53.33					
<b>CMGIS 013</b>					<b>CMGIS 032</b>				
	22.1	120	0.30	63.22		374	150	6.1	3.74
	18.6	120	0.25	75.08		311	150	5.1	4.50
	15.7	120	0.21	89.17		255	150	4.2	5.48
	12.4	120	0.17	113.05		222	180	4.4	6.31
	10.4	120	0.14	134.27		177	180	3.5	7.93
	8.1	120	0.11	173.72		154	180	3.0	9.08
	6.9	120	0.09	202.16		128	180	2.5	10.93
	5.4	120	0.07	261.57		111	250	3.0	12.60
	4.6	120	0.06	304.00		105	250	2.9	13.30
	3.6	120	0.05	393.33		91.5	280	2.8	15.30
						76.9	280	2.3	18.21
						72.8	280	2.2	19.24
						66.2	280	2.0	21.15
						56.0	300	1.8	24.99
						45.8	300	1.5	30.57
						40.9	300	1.3	34.20
						36.2	300	1.2	38.63
						31.7	300	1.0	44.18
						27.3	300	0.9	51.30
						23.0	300	0.8	60.80



**Dati tecnici**

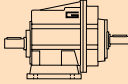
**$n_1$  1400 min<sup>-1</sup>**

**Technical data**

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMGIS 033</b>				
	19.2	300	0.64	72.83
	14.4	300	0.48	97.45
	12.1	300	0.40	115.74
	9.9	300	0.33	140.81
	8.0	300	0.27	174.26
	6.2	300	0.21	225.47
	5.3	300	0.18	262.05
	4.3	300	0.14	325.79
	3.7	300	0.12	378.64

<b>CMGIS 042</b>				
	374	230	9.4	3.74
	311	230	7.8	4.50
	255	230	6.4	5.48
	222	260	6.3	6.31
	177	260	5.0	7.93
	154	280	4.7	9.08
	128	280	3.9	10.93
	111	350	4.2	12.60
	105	350	4.0	13.30
	91.5	420	4.2	15.30
	76.9	420	3.5	18.21
	72.8	420	3.3	19.24
	56.0	500	3.1	24.99
	45.8	500	2.5	30.57
	40.9	500	2.2	34.20
	36.2	500	2.0	38.63
	31.7	500	1.7	44.18
	27.3	500	1.5	51.30
	23.0	480	1.2	60.80

<b>CMGIS 043</b>				
	19.2	500	1.1	72.83
	14.4	500	0.80	97.45
	12.1	500	0.67	115.74
	9.9	500	0.55	140.81
	8.0	500	0.45	174.26
	6.2	500	0.35	225.47
	5.3	500	0.30	262.05
	4.3	500	0.24	325.79
	3.7	500	0.21	378.64

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMGIS 052</b>				
	371	410	16.6	3.78
	292	410	13.0	4.80
	241	410	10.8	5.82
	210	470	10.7	6.68
	167	470	8.6	8.37
	153	510	8.5	9.16
	141	510	7.9	9.90
	120	630	8.3	11.64
	106	630	7.3	13.25
	99.2	750	8.1	14.11
	86.4	750	7.1	16.20
	68.9	750	5.6	20.31
	58.3	900	5.7	24.02
	43.6	900	4.3	32.13
	30.2	900	3.0	46.31
	26.1	900	2.6	53.74

<b>CMGIS 053</b>				
	21.7	900	2.18	64.48
	18.7	900	1.87	74.96
	17.3	900	1.73	81.07
	16.2	900	1.63	86.24
	12.9	900	1.29	108.43
	10.9	900	1.09	128.84
	8.1	900	0.81	172.32
	7.5	900	0.75	186.17
	6.5	900	0.65	216.19
	5.6	900	0.56	248.99
	4.8	900	0.49	289.15

CMG

Nota:

$Pn_1$  è la potenza meccanica.

La potenza applicabile è ridotta del fattore termico.

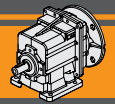
Per maggiori dettagli consultare il nostro Servizio Tecnico.

Note:

$Pn_1$  is an input mechanical power which must be reduced by the heating factor in order to get the relevant one. For more details please contact our Technical Service.

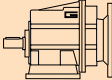

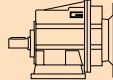





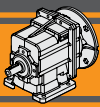


**Dati tecnici**

**Technical data**

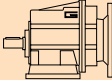

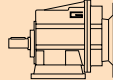

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.18</b>							<b>0.25</b>						
63B4 (1400 min <sup>-1</sup> )	78.4	21	5.7	17.86	CMG012	B5	71A4 (1400 min <sup>-1</sup> )	367	6	9.6	3.82	CMG012	B5/B14
	73.4	22	5.3	19.07		B5		302	8	7.9	4.63		B5/B14
	70.6	23	5.1	19.83		B5		246	9	6.4	5.69		B5/B14
	59.4	28	4.3	23.56		B5		181	13	6.3	7.72		B5/B14
	47.4	35	3.4	29.56		B5		153	15	5.3	9.17		B5/B14
	39.5	42	2.9	35.47		B5		143	16	5.0	9.81		B5/B14
	30.5	54	2.2	45.89		B5		122	19	5.3	11.50		B5/B14
	28.6	58	2.1	49.00		B5		118	19	5.1	11.90		B5/B14
	26.3	63	1.9	53.33		B5		101	23	5.3	13.80		B5/B14
								95.7	24	5.0	14.62		B5/B14
	22.1	73	1.6	63.22	CMG013	B5		78.4	29	4.1	17.86	B5/B14	
	18.6	87	1.4	75.08		B5		73.4	31	3.8	19.07	B5/B14	
	15.7	103	1.2	89.17		B5		70.6	32	3.7	19.83	B5/B14	
	12.4	130	0.9	113.05		B5		59.4	39	3.1	23.56	B5/B14	
	21.9	74	2.7	64.01	CMG023	B5		47.4	48	2.5	29.56	B5/B14	
	18.4	88	2.3	76.02		B5		39.5	58	2.1	35.47	B5/B14	
	15.5	104	1.9	90.29		B5		30.5	75	1.6	45.89	B5/B14	
	12.2	132	1.5	114.46		B5		28.6	80	1.5	49.00	B5/B14	
	10.3	157	1.3	135.95		B5		26.3	87	1.4	53.33	B5/B14	
	8.0	203	1.0	175.89	B5		22.1	101	1.2	63.22	CMG013	B5/B14	
	6.8	236	0.8	204.69	B5		18.6	120	1.0	75.08		B5/B14	
							15.7	143	0.8	89.17		B5/B14	
	19.2	84	3.6	72.83	CMG033	B5		383	6	16.7	3.66	CMG022	B5/B14
	14.4	112	2.7	97.45		B5		316	7	13.8	4.43		B5/B14
	12.1	134	2.2	115.74		B5		257	9	11.2	5.45		B5/B14
	9.9	163	1.8	140.81		B5		189	12	9.9	7.39		B5/B14
	8.0	201	1.5	174.26		B5		160	14	8.4	8.78		B5/B14
	6.2	260	1.2	225.47	B5		141	16	7.4	9.93	B5/B14		
	5.3	302	1.0	262.05	B5		127	18	11.1	11.01	B5/B14		
	19.2	84	5.9	72.83	CMG043	B5		116	20	10.1	12.05	B5/B14	
	14.4	112	4.4	97.45		B5		106	22	9.2	13.21	B5/B14	
	12.1	134	3.7	115.74		B5		94.6	24	8.3	14.81	B5/B14	
	9.9	163	3.1	140.81		B5		81.9	28	5.7	17.10	B5/B14	
	8.0	201	2.5	174.26		B5		76.7	30	5.4	18.26	B5/B14	
	6.2	260	1.9	225.47		B5		69.7	33	6.1	20.08	B5/B14	
	5.3	302	1.7	262.05		B5		58.7	39	5.1	23.85	B5/B14	
	4.3	376	1.3	325.79		B5		46.8	49	4.1	29.93	B5/B14	
	3.7	437	1.1	378.64		B5		39.0	59	3.4	35.91	B5/B14	
								30.1	76	2.6	46.46	B5/B14	
							28.2	81	2.5	49.61	B5/B14		
							25.9	88	2.3	54.00	B5/B14		
	279	8	4.9	5.03	CMG002	B5/B14		21.9	103	1.9	64.01	CMG023	B5/B14
71A4 (1400 min <sup>-1</sup> )	230	10	4.0	6.10		B5/B14		18.4	122	1.6	76.02		B5/B14
	187	12	3.3	7.49		B5/B14		15.5	145	1.4	90.29		B5/B14
	156	15	3.4	8.99		B5/B14		12.2	183	1.1	114.46		B5/B14
	138	17	3.0	10.16		B5/B14		10.3	218	0.9	135.95		B5/B14
	116	20	2.5	12.07		B5/B14							
	105	22	3.2	13.40		B5/B14							
	92.5	25	2.8	15.14		B5/B14							
	77.1	30	2.4	18.17		B5/B14		31.7	72	4.1	44.18	CMG032	B5
	64.9	35	2.0	21.58		B5/B14		27.3	84	3.6	51.30		B5
	59.6	38	1.8	23.51		B5/B14							
	55.8	41	1.7	25.10		B5/B14		19.2	117	2.6	72.83	CMG033	B5/B14
	51.7	44	1.6	27.08		B5/B14		14.4	156	1.9	97.45		B5/B14
	43.1	53	1.3	32.49		B5/B14		12.1	186	1.6	115.74		B5/B14
	33.3	69	1.0	42.04		B5/B14		9.9	226	1.3	140.81		B5/B14
	31.2	73	1.0	44.89		B5/B14		8.0	279	1.1	174.26		B5/B14
	28.7	80	0.9	48.86		B5/B14		6.2	361	0.8	225.47		B5/B14

CMG

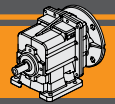


**Dati tecnici**

**Technical data**

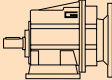

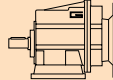

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i					
<b>0.25</b>							<b>0.37</b>									
71A4 (1400 min <sup>-1</sup> )	19.2	117	4.3	72.83	CMG043	B5/B14	71B4 (1400 min <sup>-1</sup> )	383	9	11.3	3.66	CMG022	B5/B14			
	14.4	156	3.2	97.45			B5/B14	316	11	9.3	4.43			B5/B14		
	12.1	186	2.7	115.74			B5/B14	257	13	7.6	5.45			B5/B14		
	9.9	226	2.2	140.81			B5/B14	189	18	6.7	7.39			B5/B14		
	8.0	279	1.8	174.26			B5/B14	160	21	5.6	8.78			B5/B14		
	6.2	361	1.4	225.47			B5/B14	141	24	5.0	9.93			B5/B14		
	5.3	420	1.2	262.05			B5/B14	127	27	7.5	11.01			B5/B14		
	4.3	522	1.0	325.79			B5/B14	116	29	6.8	12.05			B5		
	3.7	607	0.8	378.64			B5/B14	106	32	6.2	13.21			B5		
	21.7	103	8.7	64.48			CMG053	B5	94.6	36	5.6			14.81	B5/B14	
	18.7	120	7.5	74.96					B5/B14	81.9	41			3.9	17.10	B5/B14
	17.3	130	6.9	81.07					B5/B14	76.7	44			3.6	18.26	B5/B14
	16.2	138	6.5	86.24					B5/B14	69.7	49			4.1	20.08	B5/B14
	12.9	174	5.2	108.43					B5/B14	58.7	58			3.5	23.85	B5/B14
	10.9	207	4.4	128.84					B5/B14	46.8	73			2.8	29.93	B5/B14
	8.1	276	3.3	172.32					B5/B14	39.0	87			2.3	35.91	B5/B14
	7.5	298	3.0	186.17	B5/B14	30.1			113	1.8	46.46	B5/B14				
	6.5	347	2.6	216.19	B5/B14	28.2			120	1.7	49.61	B5/B14				
	5.6	399	2.3	248.99	B5/B14	25.9			131	1.5	54.00	B5/B14				
	4.8	464	1.9	289.15	B5/B14											
							21.9	152	1.3	64.01	CMG023	B5/B14				
							18.4	180	1.1	76.02			B5/B14			
							15.5	214	0.9	90.29			B5/B14			
<b>0.37</b>																
71B4 (1400 min <sup>-1</sup> )	279	12	3.3	5.03	CMG002	B5/B14	374	9	16.5	3.74	CMG032	B5				
	230	15	2.7	6.10			B5/B14	311	11	13.7			4.50	B5		
	187	18	2.2	7.49			B5/B14	255	13	11.3			5.48	B5		
	156	22	2.3	8.99			B5/B14	222	15	11.8			6.31	B5		
	138	25	2.0	10.16			B5/B14	177	19	9.4			7.93	B5		
	116	29	1.7	12.07			B5/B14	154	22	8.2			9.08	B5		
	105	32	2.2	13.40			B5/B14	128	26	6.8			10.93	B5		
	92.5	37	1.9	15.14			B5/B14	111	31	8.2			12.60	B5		
	77.1	44	1.6	18.17			B5/B14	105	32	7.8			13.30	B5		
	64.9	52	1.3	21.58			B5/B14	91.5	37	7.6			15.30	B5		
	59.6	57	1.2	23.51			B5/B14	76.9	44	6.3			18.21	B5		
	55.8	61	1.2	25.10			B5/B14	72.8	47	6.0			19.24	B5		
	51.7	66	1.1	27.08			B5/B14	66.2	51	5.5			21.15	B5		
	43.1	79	0.9	32.49			B5/B14	56.0	61	5.0			24.99	B5		
	367	9	6.5	3.82			CMG012	B5/B14	45.8	74			4.0	30.57	B5	
	302	11	5.3	4.63					B5/B14	40.9			83	3.6	34.20	B5
	246	14	4.4	5.69	B5/B14	36.2			94	3.2	38.63	B5				
	181	19	4.3	7.72	B5/B14	31.7			107	2.8	44.18	B5				
	153	22	3.6	9.17	B5/B14	27.3			124	2.4	51.30	B5				
	143	24	3.4	9.81	B5/B14	23.0			147	2.0	60.80	B5				
	122	28	3.6	11.50	B5/B14											
	118	29	3.5	11.90	B5/B14	19.2			173	1.7	72.83	CMG033	B5/B14			
	101	33	3.6	13.80	B5/B14	14.4			231	1.3	97.45			B5/B14		
	95.7	35	3.4	14.62	B5/B14	12.1			275	1.1	115.74			B5/B14		
	78.4	43	2.8	17.86	B5/B14	9.9			334	0.9	140.81	B5/B14				
	73.4	46	2.6	19.07	B5/B14											
	70.6	48	2.5	19.83	B5/B14	19.2			173	2.9	72.83	CMG043	B5/B14			
	59.4	57	2.1	23.56	B5/B14	14.4			231	2.2	97.45			B5/B14		
	47.4	72	1.7	29.56	B5/B14	12.1			275	1.8	115.74			B5/B14		
	39.5	86	1.4	35.47	B5/B14	9.9			334	1.5	140.81			B5/B14		
	30.5	111	1.1	45.89	B5/B14	8.0	413	1.2	174.26	B5/B14						
	28.6	119	1.0	49.00	B5/B14	6.2	535	0.9	225.47	B5/B14						
	26.3	129	0.9	53.33	B5/B14											
	22.1	150	0.8	63.22	CMG013	B5/B14										





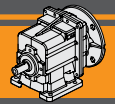
**Dati tecnici**

**Technical data**

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			
<b>0.37</b>							<b>0.55</b>							
71B4 (1400 min <sup>-1</sup> )	21.7	153	5.9	64.48	CMG053	B5	80A4 (1400 min <sup>-1</sup> )	21.9	226	0.9	64.01	CMG023	B5/B14	
	18.7	178	5.1	74.96		B5		374	13	11.1	3.74	CMG032	B5/B14	
	17.3	192	4.7	81.07		B5		311	16	9.2	4.50		B5/B14	
	16.2	205	4.4	86.24		B5		255	20	7.6	5.48		B5/B14	
	12.9	257	3.5	108.43		B5		222	23	7.9	6.31		B5/B14	
	10.9	306	2.9	128.84		B5		177	29	6.3	7.93		B5/B14	
	8.1	409	2.2	172.32		B5		154	33	5.5	9.08		B5/B14	
	7.5	442	2.0	186.17		B5		128	39	4.6	10.93		B5/B14	
	6.5	513	1.8	216.19		B5		111	45	5.5	12.60		B5/B14	
	5.6	591	1.5	248.99		B5		105	48	5.2	13.30		B5/B14	
	4.8	686	1.3	289.15		B5		91.5	55	5.1	15.30		B5/B14	
							76.9	66	4.3	18.21	B5/B14			
							72.8	69	4.0	19.24	B5/B14			
							66.2	76	3.7	21.15	B5/B14			
							56.0	90	3.3	24.99	B5/B14			
							45.8	110	2.7	30.57	B5/B14			
							40.9	123	2.4	34.20	B5/B14			
							36.2	139	2.2	38.63	B5/B14			
							31.7	159	1.9	44.18	B5/B14			
							27.3	185	1.6	51.30	B5/B14			
							23.0	219	1.4	60.80	B5/B14			
							19.2	257	1.2	72.83	CMG033	B5/B14		
							14.4	344	0.9	97.45	B5/B14			
							23.0	219	2.2	60.80	CMG042	B5/B14		
							19.2	257	1.9	72.83	CMG043	B5/B14		
							14.4	344	1.5	97.45		B5/B14		
							12.1	408	1.2	115.74		B5/B14		
							9.9	497	1.0	140.81		B5/B14		
							9.9	497	1.0	140.81		B5/B14		
							8.0	615	0.8	174.26		B5/B14		
							26.1	194	4.6	53.74		CMG052	B5/B14	
							21.7	227	4.0	64.48		CMG053	B5/B14	
							18.7	264	3.4	74.96			B5/B14	
							17.3	286	3.1	81.07			B5/B14	
							17.3	286	3.1	81.07			B5/B14	
							16.2	304	3.0	86.24	B5/B14			
							12.9	382	2.4	108.43	B5/B14			
							10.9	454	2.0	128.84	B5/B14			
							8.1	608	1.5	172.32	B5/B14			
							7.5	657	1.4	186.17	B5/B14			
							6.5	762	1.2	216.19	B5/B14			
							5.6	878	1.0	248.99	B5/B14			
							4.8	1020	0.9	289.15	B5/B14			
<b>0.55</b>														
80A4 (1400 min <sup>-1</sup> )	279	18	2.2	5.03	CMG002	B5/B14								
	230	22	1.8	6.10		B5/B14								
	187	27	1.5	7.49		B5/B14								
	156	32	1.5	8.99		B5/B14								
	138	37	1.4	10.16		B5/B14								
	116	43	1.2	12.07		B5/B14								
	105	48	1.5	13.40		B5/B14								
	92.5	55	1.3	15.14		B5/B14								
	77.1	65	1.1	18.17		B5/B14								
	64.9	78	0.9	21.58		B5/B14								
	59.6	85	0.8	23.51		B5/B14								
	367	14	4.4	3.82	CMG012	B5/B14								
	302	17	3.6	4.63		B5/B14								
	246	20	2.9	5.69		B5/B14								
	181	28	2.9	7.72		B5/B14								
	153	33	2.4	9.17		B5/B14								
	143	35	2.3	9.81		B5/B14								
	122	41	2.4	11.50		B5/B14								
	118	43	2.3	11.90		B5/B14								
	101	50	2.4	13.80		B5/B14								
	95.7	53	2.3	14.62		B5/B14								
	78.4	64	1.9	17.86		B5/B14								
	73.4	69	1.7	19.07	B5/B14									
	70.6	71	1.7	19.83	B5/B14									
	59.4	85	1.4	23.56	B5/B14									
	47.4	106	1.1	29.56	B5/B14									
	39.5	128	0.9	35.47	B5/B14									
	383	13	7.6	3.66	CMG022	B5/B14								
	316	16	6.3	4.43		B5/B14								
	257	20	5.1	5.45		B5/B14								
	189	27	4.5	7.39		B5/B14								
	160	32	3.8	8.78		B5/B14								
	141	36	3.4	9.93		B5/B14								
	127	40	5.0	11.01		B5/B14								
	116	43	4.6	12.05		B5/B14								
	106	48	4.2	13.21		B5/B14								
	94.6	53	3.8	14.81		B5/B14								
	81.9	62	2.6	17.10		B5/B14								
	76.7	66	2.4	18.26	B5/B14									
	69.7	72	2.8	20.08	B5/B14									
	58.7	86	2.3	23.85	B5/B14									
	46.8	108	1.9	29.93	B5/B14									
	39.0	129	1.5	35.91	B5/B14									
	30.1	167	1.2	46.46	B5/B14									
	28.2	179	1.1	49.61	B5/B14									
	25.9	194	1.0	54.00	B5/B14									

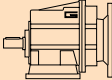

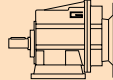

CMG



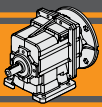


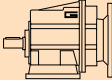

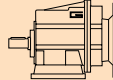

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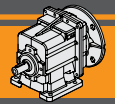
**Technical data**

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			
<b>1.1</b>							<b>1.5</b>							
90S4 (1400 min <sup>-1</sup> )	<b>374</b>	27	5.6	3.74	<b>CMG032</b>	<b>B5/B14</b>	90L4 (1400 min <sup>-1</sup> )	<b>367</b>	38	1.6	3.82	<b>CMG012</b>	<b>B5/B14</b>	
	<b>311</b>	32	4.6	4.50		<b>B5/B14</b>	<b>302</b>	45	1.3	4.63	<b>B5/B14</b>			
	<b>255</b>	39	3.8	5.48		<b>B5/B14</b>	<b>246</b>	56	1.1	5.69	<b>B5/B14</b>			
	<b>222</b>	45	4.0	6.31		<b>B5/B14</b>	<b>181</b>	76	1.1	7.72	<b>B5/B14</b>			
	<b>177</b>	57	3.2	7.93		<b>B5/B14</b>	<b>153</b>	90	0.9	9.17	<b>B5/B14</b>			
	<b>154</b>	65	2.8	9.08		<b>B5/B14</b>								
	<b>128</b>	79	2.3	10.93		<b>B5/B14</b>	<b>383</b>	36	2.8	3.66	<b>CMG022</b>		<b>B5/B14</b>	
	<b>111</b>	91	2.8	12.60		<b>B5/B14</b>	<b>316</b>	44	2.3	4.43			<b>B5/B14</b>	
	<b>105</b>	96	2.6	13.30		<b>B5/B14</b>	<b>257</b>	54	1.9	5.45			<b>B5/B14</b>	
	<b>91.5</b>	110	2.5	15.30		<b>B5/B14</b>	<b>189</b>	73	1.7	7.39			<b>B5/B14</b>	
	<b>76.9</b>	131	2.1	18.21		<b>B5/B14</b>	<b>160</b>	86	1.4	8.78			<b>B5/B14</b>	
	<b>72.8</b>	139	2.0	19.24		<b>B5/B14</b>	<b>141</b>	98	1.2	9.93			<b>B5/B14</b>	
	<b>66.2</b>	152	1.8	21.15		<b>B5/B14</b>	<b>116</b>	118	1.7	12.05			<b>B5/B14</b>	
	<b>56.0</b>	180	1.7	24.99		<b>B5/B14</b>	<b>106</b>	130	1.5	13.21			<b>B5/B14</b>	
	<b>45.8</b>	220	1.4	30.57		<b>B5/B14</b>	<b>94.6</b>	145	1.4	14.81			<b>B5/B14</b>	
	<b>40.9</b>	246	1.2	34.20		<b>B5/B14</b>	<b>69.7</b>	197	1.0	20.08			<b>B5/B14</b>	
	<b>36.2</b>	278	1.1	38.63		<b>B5/B14</b>	<b>58.7</b>	234	0.9	23.85	<b>B5/B14</b>			
	<b>31.7</b>	318	0.9	44.18		<b>B5/B14</b>								
	<b>374</b>	27	8.5	3.74		<b>CMG042</b>	<b>B5/B14</b>	<b>374</b>	37	4.1	3.74		<b>CMG032</b>	<b>B5/B14</b>
	<b>311</b>	32	7.1	4.50			<b>B5/B14</b>	<b>311</b>	44	3.4	4.50			<b>B5/B14</b>
	<b>255</b>	39	5.8	5.48			<b>B5/B14</b>	<b>255</b>	54	2.8	5.48			<b>B5/B14</b>
	<b>222</b>	45	5.7	6.31			<b>B5/B14</b>	<b>222</b>	62	2.9	6.31			<b>B5/B14</b>
	<b>177</b>	57	4.6	7.93			<b>B5/B14</b>	<b>177</b>	78	2.3	7.93			<b>B5/B14</b>
	<b>154</b>	65	4.3	9.08			<b>B5/B14</b>	<b>154</b>	89	2.0	9.08			<b>B5/B14</b>
	<b>128</b>	79	3.6	10.93			<b>B5/B14</b>	<b>128</b>	107	1.7	10.93			<b>B5/B14</b>
	<b>111</b>	91	3.9	12.60			<b>B5/B14</b>	<b>111</b>	124	2.0	12.60			<b>B5/B14</b>
	<b>105</b>	96	3.7	13.30			<b>B5/B14</b>	<b>105</b>	131	1.9	13.30			<b>B5/B14</b>
	<b>91.5</b>	110	3.8	15.30			<b>B5/B14</b>	<b>91.5</b>	150	1.9	15.30			<b>B5/B14</b>
	<b>76.9</b>	131	3.2	18.21			<b>B5/B14</b>	<b>76.9</b>	179	1.6	18.21			<b>B5/B14</b>
	<b>72.8</b>	139	3.0	19.24			<b>B5/B14</b>	<b>72.8</b>	189	1.5	19.24			<b>B5/B14</b>
	<b>66.2</b>	152	2.8	21.15			<b>B5/B14</b>	<b>66.2</b>	208	1.3	21.15			<b>B5/B14</b>
	<b>56.0</b>	180	2.8	24.99			<b>B5/B14</b>	<b>56.0</b>	245	1.2	24.99			<b>B5/B14</b>
	<b>45.8</b>	220	2.3	30.57			<b>B5/B14</b>	<b>45.8</b>	300	1.0	30.57			<b>B5/B14</b>
	<b>40.8</b>	247	2.0	34.30			<b>B5/B14</b>	<b>40.9</b>	336	0.9	34.20			<b>B5/B14</b>
	<b>36.2</b>	278	1.8	38.63			<b>B5/B14</b>	<b>36.2</b>	379	0.8	38.63			<b>B5/B14</b>
	<b>31.7</b>	318	1.6	44.18		<b>B5/B14</b>								
	<b>27.3</b>	370	1.4	51.30		<b>B5/B14</b>	<b>374</b>	37	6.3	3.74	<b>CMG042</b>		<b>B5/B14</b>	
	<b>23.0</b>	438	1.1	60.80	<b>B5/B14</b>	<b>311</b>	44	5.2	4.50	<b>B5/B14</b>				
						<b>255</b>	54	4.3	5.48	<b>B5/B14</b>				
						<b>222</b>	62	4.2	6.31	<b>B5/B14</b>				
						<b>177</b>	78	3.3	7.93	<b>B5/B14</b>				
						<b>154</b>	89	3.1	9.08	<b>B5/B14</b>				
						<b>128</b>	107	2.6	10.93	<b>B5/B14</b>				
						<b>111</b>	124	2.8	12.60	<b>B5/B14</b>				
						<b>105</b>	131	2.7	13.30	<b>B5/B14</b>				
						<b>91.5</b>	150	2.8	15.30	<b>B5/B14</b>				
						<b>76.9</b>	179	2.3	18.21	<b>B5/B14</b>				
						<b>72.8</b>	189	2.2	19.24	<b>B5/B14</b>				
						<b>56.0</b>	245	2.0	24.99	<b>B5/B14</b>				
						<b>45.8</b>	300	1.7	30.57	<b>B5/B14</b>				
						<b>40.9</b>	336	1.5	34.20	<b>B5/B14</b>				
						<b>36.2</b>	379	1.3	38.63	<b>B5/B14</b>				
						<b>31.7</b>	434	1.2	44.18	<b>B5/B14</b>				
						<b>27.3</b>	504	1.0	51.30	<b>B5/B14</b>				
	<b>19.2</b>	514	1.0	72.83	<b>CMG043</b>	<b>B5/B14</b>								
	<b>371</b>	27	15.1	3.78	<b>CMG052</b>	<b>B5/B14</b>								
	<b>292</b>	35	11.9	4.80		<b>B5/B14</b>								
	<b>241</b>	42	9.8	5.82		<b>B5/B14</b>								
	<b>210</b>	48	9.8	6.68		<b>B5/B14</b>								
	<b>167</b>	60	7.8	8.37		<b>B5/B14</b>								
	<b>153</b>	66	7.7	9.16		<b>B5/B14</b>								
	<b>141</b>	71	7.1	9.90		<b>B5/B14</b>								
	<b>120</b>	84	7.5	11.64		<b>B5/B14</b>								
	<b>106</b>	95	6.6	13.25		<b>B5/B14</b>								
	<b>99.2</b>	102	7.4	14.11		<b>B5/B14</b>								
	<b>86.4</b>	117	6.4	16.20		<b>B5/B14</b>								
	<b>68.9</b>	146	5.1	20.31		<b>B5/B14</b>								
	<b>58.3</b>	173	5.2	24.02		<b>B5/B14</b>								
	<b>43.6</b>	231	3.9	32.13		<b>B5/B14</b>								
	<b>30.2</b>	334	2.7	46.31		<b>B5/B14</b>								
	<b>26.1</b>	387	2.3	53.74		<b>B5/B14</b>								
	<b>21.7</b>	455	2.0	64.48		<b>CMG053</b>	<b>B5/B14</b>							
	<b>18.7</b>	529	1.7	74.96	<b>B5/B14</b>									
	<b>17.3</b>	572	1.6	81.07	<b>B5/B14</b>									
	<b>16.2</b>	608	1.5	86.24	<b>B5/B14</b>									
	<b>12.9</b>	765	1.2	108.43	<b>B5/B14</b>									
	<b>10.9</b>	909	1.0	128.84	<b>B5/B14</b>									

CMG

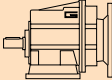

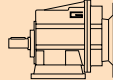

**Dati tecnici****Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				
<b>1.5</b>							<b>1.85</b>								
90L4 (1400 min <sup>-1</sup> )	371	37	11.1	3.78	CMG052	B5/B14	90LB4 (1400 min <sup>-1</sup> )	56.0	303	1.7	24.99	CMG042	B5/B14		
	292	47	8.7	4.80		B5/B14		45.8	370	1.3	30.57		B5/B14		
	241	57	7.2	5.82		B5/B14		40.9	414	1.2	34.20		B5/B14		
	210	66	7.2	6.68		B5/B14		36.2	468	1.1	38.63		B5/B14		
	167	82	5.7	8.37		B5/B14		31.7	535	0.9	44.18		B5/B14		
	153	90	5.7	9.16		B5/B14		27.3	621	0.8	51.30		B5/B14		
	141	97	5.2	9.90		B5/B14									
	120	114	5.5	11.64		B5/B14		371	46	9.0	3.78		CMG052	B5/B14	
	106	130	4.8	13.25		B5/B14		292	58	7.1	4.80			B5/B14	
	99.2	139	5.4	14.11		B5/B14		241	70	5.8	5.82			B5/B14	
	86.4	159	4.7	16.20	B5/B14	210		81	5.8	6.68	B5/B14				
	68.9	199	3.8	20.31	B5/B14	167		101	4.6	8.37	B5/B14				
	58.3	236	3.8	24.02	B5/B14	153		111	4.6	9.16	B5/B14				
	43.6	316	2.9	32.13	B5/B14	141		120	4.3	9.90	B5/B14				
	30.2	455	2.0	46.31	B5/B14	120		141	4.5	11.64	B5/B14				
	26.1	528	1.7	53.74	B5/B14	106		160	3.9	13.25	B5/B14				
						99.2		171	4.4	14.11	B5/B14				
	21.7	620	1.5	64.48	CMG053	B5/B14		86.4	196	3.8	16.20	B5/B14	CMG053	B5/B14	
	18.7	721	1.2	74.96		B5/B14		68.9	246	3.0	20.31	B5/B14			
	17.3	780	1.2	81.07		B5/B14		58.3	291	3.1	24.02	B5/B14			
16.2	829	1.1	86.24	B5/B14		43.6	389	2.3	32.13	B5/B14					
12.9	1043	0.9	108.43	B5/B14		30.2	561	1.6	46.31	B5/B14					
						26.1	651	1.4	53.74	B5/B14					
<b>1.85</b>							<b>2.2</b>								
90LB4 (1400 min <sup>-1</sup> )	367	46	1.3	3.82	CMG012	B5/B14	100LA4 (1400 min <sup>-1</sup> )	374	54	2.8	3.74	CMG032	B5/B14		
	302	56	1.1	4.63		B5/B14		311	65	2.3	4.50		B5/B14		
	383	44	2.3	3.66	CMG022	B5/B14		255	79	1.9	5.48		B5/B14		
	316	54	1.9	4.43		B5/B14		222	91	2.0	6.31		B5/B14		
	257	66	1.5	5.45		B5/B14		177	114	1.6	7.93		B5/B14		
	189	90	1.3	7.39		B5/B14		154	131	1.4	9.08		B5/B14		
	160	106	1.1	8.78		B5/B14		128	157	1.1	10.93		B5/B14		
	141	120	1.0	9.93		B5/B14		111	182	1.4	12.60		B5/B14		
	116	146	1.4	12.05		B5/B14		105	192	1.3	13.30		B5/B14		
	106	160	1.2	13.21		B5/B14		91.5	220	1.3	15.30		B5/B14		
	94.6	179	1.1	14.81		B5/B14		76.9	262	1.1	18.21		B5/B14		
								72.8	277	1.0	19.24		B5/B14		
	374	45	3.3	3.74	CMG032	B5/B14		66.2	305	0.9	21.15		B5/B14	CMG042	B5/B14
	311	55	2.7	4.50		B5/B14		56.0	360	0.8	24.99		B5/B14		
	255	66	2.3	5.48		B5/B14									
	222	76	2.4	6.31		B5/B14		374	54	4.3	3.74		B5/B14		
	177	96	1.9	7.93		B5/B14		311	65	3.5	4.50		B5/B14		
	154	110	1.6	9.08		B5/B14		255	79	2.9	5.48		B5/B14		
	128	132	1.4	10.93		B5/B14		222	91	2.9	6.31		B5/B14		
	111	153	1.6	12.60		B5/B14		177	114	2.3	7.93		B5/B14		
105	161	1.6	13.30	B5/B14		154	131	2.1	9.08	B5/B14					
91.5	185	1.5	15.30	B5/B14		128	157	1.8	10.93	B5/B14					
76.9	221	1.3	18.21	B5/B14	111	182	1.9	12.60	B5/B14						
72.8	233	1.2	19.24	B5/B14	105	192	1.8	13.30	B5/B14						
66.2	256	1.1	21.15	B5/B14	91.5	220	1.9	15.30	B5/B14						
56.0	303	1.0	24.99	B5/B14	76.9	262	1.6	18.21	B5/B14						
45.8	370	0.8	30.57	B5/B14	72.8	277	1.5	19.24	B5/B14						
					56.0	360	1.4	24.99	B5/B14						
374	45	5.1	3.74	CMG042	B5/B14	45.8	440	1.1	30.57	B5/B14	CMG042	B5/B14			
311	55	4.2	4.50		B5/B14	40.8	494	1.0	34.30	B5/B14					
255	66	3.5	5.48		B5/B14	36.2	557	0.9	38.63	B5/B14					
222	76	3.4	6.31		B5/B14										
177	96	2.7	7.93		B5/B14										
154	110	2.5	9.08		B5/B14										
128	132	2.1	10.93		B5/B14										
111	153	2.3	12.60		B5/B14										
105	161	2.2	13.30		B5/B14										
91.5	185	2.3	15.30		B5/B14										
76.9	221	1.9	18.21	B5/B14											
72.8	233	1.8	19.24	B5/B14											

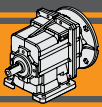


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Technical data

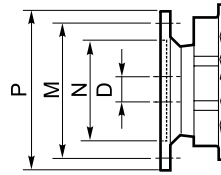
P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i					
<b>2.2</b>							<b>4</b>									
100LA4 (1400 min <sup>-1</sup> )	<b>371</b>	54	7.5	3.78	<b>CMG052</b>	<b>B5/B14</b>	112M4 (1400 min <sup>-1</sup> )	<b>374</b>	98	1.5	3.74	<b>CMG032</b>	<b>B5/B14</b>			
	<b>292</b>	69	5.9	4.80			<b>B5/B14</b>	<b>311</b>	118	1.3	4.50			<b>B5/B14</b>		
	<b>241</b>	84	4.9	5.82			<b>B5/B14</b>	<b>255</b>	144	1.0	5.48			<b>B5/B14</b>		
	<b>210</b>	96	4.9	6.68			<b>B5/B14</b>	<b>222</b>	165	1.1	6.31			<b>B5/B14</b>		
	<b>167</b>	121	3.9	8.37			<b>B5/B14</b>	<b>177</b>	208	0.9	7.93			<b>B5/B14</b>		
	<b>153</b>	132	3.9	9.16			<b>B5/B14</b>									
	<b>141</b>	143	3.6	9.90			<b>B5/B14</b>	<b>374</b>	98	2.3	3.74			<b>CMG042</b>	<b>B5/B14</b>	
	<b>120</b>	168	3.8	11.64			<b>B5/B14</b>	<b>311</b>	118	1.9	4.50					<b>B5/B14</b>
	<b>106</b>	191	3.3	13.25			<b>B5/B14</b>	<b>255</b>	144	1.6	5.48					<b>B5/B14</b>
	<b>99.2</b>	203	3.7	14.11			<b>B5/B14</b>	<b>222</b>	165	1.6	6.31					<b>B5/B14</b>
	<b>86.4</b>	233	3.2	16.20			<b>B5/B14</b>	<b>177</b>	208	1.3	7.93					<b>B5/B14</b>
	<b>68.9</b>	293	2.6	20.31			<b>B5/B14</b>	<b>154</b>	238	1.2	9.08					<b>B5/B14</b>
	<b>58.3</b>	346	2.6	24.02			<b>B5/B14</b>	<b>128</b>	286	1.0	10.93					<b>B5/B14</b>
	<b>43.6</b>	463	1.9	32.13			<b>B5/B14</b>	<b>111</b>	330	1.1	12.60					<b>B5/B14</b>
	<b>30.2</b>	667	1.3	46.31			<b>B5/B14</b>	<b>105</b>	348	1.0	13.30					<b>B5/B14</b>
	<b>26.1</b>	774	1.2	53.74			<b>B5/B14</b>	<b>91.5</b>	401	1.0	15.30					<b>B5/B14</b>
								<b>76.9</b>	477	0.9	18.21					<b>B5/B14</b>
	<b>21.7</b>	910	1.0	64.48	<b>CMG053</b>	<b>B5/B14</b>	<b>72.8</b>	504	0.8	19.24	<b>B5/B14</b>					
	<b>18.7</b>	1057	0.9	74.96			<b>B5/B14</b>	<b>56.0</b>	655	0.8	24.99	<b>B5/B14</b>				
<b>3</b>							<b>5.5</b>									
100LB4 (1400 min <sup>-1</sup> )	<b>374</b>	74	2.0	3.74	<b>CMG032</b>	<b>B5/B14</b>	132S4 (1400 min <sup>-1</sup> )	<b>371</b>	136	3.0	3.78	<b>CMG052</b>	<b>B5</b>			
	<b>311</b>	88	1.7	4.50			<b>B5/B14</b>	<b>292</b>	173	2.4	4.80					<b>B5</b>
	<b>255</b>	108	1.4	5.48			<b>B5/B14</b>	<b>241</b>	210	2.0	5.82					<b>B5</b>
	<b>222</b>	124	1.5	6.31			<b>B5/B14</b>	<b>210</b>	241	2.0	6.68			<b>B5</b>		
	<b>177</b>	156	1.2	7.93			<b>B5/B14</b>	<b>167</b>	302	1.6	8.37			<b>B5</b>		
	<b>154</b>	178	1.0	9.08			<b>B5/B14</b>	<b>153</b>	330	1.5	9.16			<b>B5</b>		
	<b>128</b>	215	0.8	10.93			<b>B5/B14</b>	<b>141</b>	357	1.4	9.90			<b>B5</b>		
	<b>111</b>	248	1.0	12.60			<b>B5/B14</b>	<b>120</b>	419	1.5	11.64			<b>B5</b>		
	<b>105</b>	261	1.0	13.30			<b>B5/B14</b>	<b>106</b>	477	1.3	13.25			<b>B5</b>		
	<b>91.5</b>	301	0.9	15.30			<b>B5/B14</b>	<b>99.2</b>	508	1.5	14.11			<b>B5</b>		
								<b>86.4</b>	583	1.3	16.20			<b>B5</b>		
	<b>374</b>	74	3.1	3.74			<b>CMG042</b>	<b>B5/B14</b>	<b>68.9</b>	532	1.4			20.31	<b>B5/B14</b>	
	<b>311</b>	88	2.6	4.50					<b>B5/B14</b>	<b>58.3</b>	629			1.4	24.02	<b>B5/B14</b>
	<b>255</b>	108	2.1	5.48					<b>B5/B14</b>	<b>43.6</b>	842			1.1	32.13	<b>B5/B14</b>
	<b>222</b>	124	2.1	6.31					<b>B5/B14</b>							
	<b>177</b>	156	1.7	7.93					<b>B5/B14</b>							
	<b>154</b>	178	1.6	9.08					<b>B5/B14</b>							
	<b>128</b>	215	1.3	10.93	<b>B5/B14</b>											
	<b>111</b>	248	1.4	12.60	<b>B5/B14</b>											
	<b>105</b>	261	1.3	13.30	<b>B5/B14</b>											
	<b>91.5</b>	301	1.4	15.30	<b>B5/B14</b>											
	<b>76.9</b>	358	1.2	18.21	<b>B5/B14</b>											
	<b>72.8</b>	378	1.1	19.24	<b>B5/B14</b>											
	<b>56.0</b>	491	1.0	24.99	<b>B5/B14</b>											
	<b>45.8</b>	601	0.8	30.57	<b>B5/B14</b>											
	<b>371</b>	74	5.5	3.78	<b>CMG052</b>	<b>B5/B14</b>			132MA4 (1400 min <sup>-1</sup> )	<b>371</b>	185	2.2	3.78	<b>CMG052</b>	<b>B5</b>	
	<b>292</b>	94	4.3	4.80					<b>B5/B14</b>	<b>292</b>	236	1.7	4.80			<b>B5</b>
	<b>241</b>	114	3.6	5.82			<b>B5/B14</b>	<b>241</b>	286	1.4	5.82	<b>B5</b>				
	<b>210</b>	131	3.6	6.68			<b>B5/B14</b>	<b>210</b>	328	1.4	6.68	<b>B5</b>				
	<b>167</b>	164	2.9	8.37			<b>B5/B14</b>	<b>167</b>	411	1.1	8.37	<b>B5</b>				
	<b>153</b>	180	2.8	9.16			<b>B5/B14</b>	<b>153</b>	450	1.1	9.16	<b>B5</b>				
	<b>141</b>	195	2.6	9.90			<b>B5/B14</b>	<b>141</b>	486	1.0	9.90	<b>B5</b>				
	<b>120</b>	229	2.8	11.64			<b>B5/B14</b>	<b>120</b>	572	1.1	11.64	<b>B5</b>				
	<b>106</b>	260	2.4	13.25			<b>B5/B14</b>	<b>106</b>	651	1.0	13.25	<b>B5</b>				
	<b>99.2</b>	277	2.7	14.11			<b>B5/B14</b>	<b>99.2</b>	693	1.1	14.11	<b>B5</b>				
	<b>86.4</b>	318	2.4	16.20			<b>B5/B14</b>	<b>86.4</b>	796	0.9	16.20	<b>B5</b>				
	<b>68.9</b>	399	1.9	20.31			<b>B5/B14</b>									
	<b>58.3</b>	472	1.9	24.02			<b>B5/B14</b>									
	<b>43.6</b>	631	1.4	32.13			<b>B5/B14</b>									
	<b>30.2</b>	910	1.0	46.31			<b>B5/B14</b>									
	<b>26.1</b>	1056	0.9	53.74			<b>B5/B14</b>									

CMG



Motori applicabili

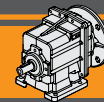
IEC Motor adapters



	IEC	N	M	P	D	i (rapporto / ratio)																		
						5.03	6.1	7.49	8.99	10.16	12.07	13.4	15.14	18.17	21.58	23.51	25.1	27.08	32.49	42.04	44.89	48.86		
<b>CMG002</b>	<b>80B5</b>	130	165	200	19																			
	<b>80B14</b>	80	100	120																				
	<b>71B5</b>	110	130	160	14																			
	<b>71B14</b>	70	85	105																				
	<b>63B5</b>	95	115	140	11																			
	<b>63B14</b>	60	75	90																				
	<b>56B5</b>	80	100	120	9																			
	<b>56B14</b>	50	65	80																				
						3.82	4.63	5.69	7.72	9.17	9.81	11.50	11.90	13.80	14.62	17.86	19.07	19.83	23.56	29.56	35.47	45.89	49.00	53.33
<b>CMG012</b>	<b>90 B5</b>	130	165	200	24																			
	<b>90 B14</b>	95	115	140																				
	<b>80 B5</b>	130	165	200	19																			
	<b>80 B14</b>	80	100	120																				
	<b>71 B5</b>	110	130	160	14																			
	<b>71 B14</b>	70	85	105																				
	<b>63 B5</b>	95	115	140	11																			
																						63.22	75.08	89.17
<b>CMG013</b>	<b>90 B5</b>	130	165	200	24																			
	<b>90 B14</b>	95	115	140																				
	<b>80 B5</b>	130	165	200	19																			
	<b>80 B14</b>	80	100	120																				
	<b>71 B5</b>	110	130	160	14																			
	<b>71 B14</b>	70	85	105																				
	<b>63 B5</b>	95	115	140	11																			
																						3.66	4.43	5.45
<b>CMG022</b>	<b>90 B5</b>	130	165	200	24																			
	<b>90 B14</b>	95	115	140																				
	<b>80 B5</b>	130	165	200	19																			
	<b>80 B14</b>	80	100	120																				
	<b>71 B5</b>	110	130	160	14																			
	<b>71 B14</b>	70	85	105																				
	<b>63 B5</b>	95	115	140	11																			
																						64.01	76.02	90.29
<b>CMG023</b>	<b>90 B5</b>	130	165	200	24																			
	<b>90 B14</b>	95	115	140																				
	<b>80 B5</b>	130	165	200	19																			
	<b>80 B14</b>	80	100	120																				
	<b>71 B5</b>	110	130	160	14																			
	<b>71 B14</b>	70	85	105																				
	<b>63 B5</b>	95	115	140	11																			
																						64.01	76.02	90.29

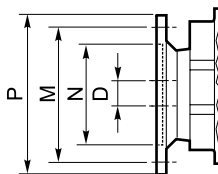
N.B.  
Le aree evidenziate in indicano l'applicabilità della corrispondente grandezza motore.  
**B/BS** = Boccia di riduzione in acciaio.

N.B.  
Highlighted areas indicate motor inputs available on each size of unit.  
**B/BS** = Metal shaft sleeve.



Motori applicabili

IEC Motor adapters



CMG

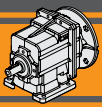
	IEC	N	M	P	D	i (rapporto / ratio)															
						3.74	4.50	5.48	6.31	7.93	9.08	10.93	12.60	13.30	15.30	18.21	19.24	21.15	24.99	30.57	34.20
<b>CMG032</b>	<b>100/112B5</b>	180	215	250	28																
	<b>100/112B14</b>	110	130	160																	
	<b>90 B5</b>	130	165	200	24																
	<b>90 B14</b>	95	115	140																	
	<b>80 B5</b>	130	165	200	19																
	<b>80 B14</b>	80	100	120																	
<b>71 B5</b>	110	130	160	14	<b>B</b>																

						3.74	4.50	5.48	6.31	7.93	9.08	10.93	12.60	13.30	15.30	18.21	19.24	24.99	30.57	34.20	38.63	44.18	51.30	60.80
<b>CMG042</b>	<b>100/112B5</b>	180	215	250	28																			
	<b>100/112B14</b>	110	130	160																				
	<b>90 B5</b>	130	165	200	24																			
	<b>90 B14</b>	95	115	140																				
	<b>80 B5</b>	130	165	200	19																			
	<b>80 B14</b>	80	100	120																				
<b>71 B5</b>	110	130	160	14	<b>B</b>																			

						72.83	97.45	115.74	140.81	174.26	225.47	262.05	325.79	378.64
<b>CMG033</b> <b>CMG043</b>	<b>90 B5</b>	130	165	200	24									
	<b>90 B14</b>	95	115	140										
	<b>80 B5</b>	130	165	200	19									
	<b>80 B14</b>	80	100	120										
	<b>71 B5</b>	110	130	160	14									
	<b>71 B14</b>	70	85	105										
<b>63 B5</b>	95	115	140	11										

						3.78	4.80	5.82	6.68	8.37	9.16	9.90	11.64	13.25	14.11	16.20	20.31	24.02	32.13	46.31	53.74																	
<b>CMG052</b>	<b>132 B5</b>	230	265	300	38																																	
	<b>100/112B5</b>	180	215	250	28																																	
	<b>100/112B14</b>	110	130	160																																		
	<b>90 B5</b>	130	165	200	24																		<b>B</b>															
	<b>90 B14</b>	95	115	140																																		
	<b>80 B5</b>	130	165	200	19																		<b>BS</b>															

						64.48	74.96	81.07	86.24	108.43	128.84	172.32	186.17	216.19	248.99	289.15
<b>CMG053</b>	<b>100/112B5</b>	180	215	250	28											
	<b>100/112B14</b>	110	130	160												
	<b>90 B5</b>	130	165	200	24											
	<b>90 B14</b>	95	115	140												
	<b>80 B5</b>	130	165	200	19											
	<b>80 B14</b>	80	100	120												
<b>71 B5</b>	110	130	160	14	<b>B</b>											



**Dimensioni**

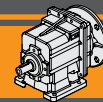
**Dimensions**

CMG CMGIS	A	B	I	j	LM	LR	Albero entrata / Input shaft					Albero uscita / Output shaft					Peso / Weight [kg]	
							D <sub>1</sub> h6	E <sub>1</sub>	F <sub>1</sub>	G <sub>1</sub>	T <sub>1</sub>	D <sub>2</sub> h6	E <sub>2</sub>	F <sub>2</sub>	G <sub>2</sub>	T <sub>2</sub>	CMG	CMGIS
<b>002</b>	92	81.5	0	44	143 <sup>1)</sup> 153 <sup>2)</sup>	140	14	30	5	M6	16	16 20	40	5 6	M6	18 22.5	2.9 <sup>1)</sup> 3.2 <sup>2)</sup>	3.0
<b>012</b>	124	93	6.5	45	195	187	16	40	5	M6	18	20	40	6	M6	22.5	5.3	5.0
<b>013</b>		112	43		268	260											7.8	7.5
<b>022</b>	124	98	11.5	45	205	197	16	40	5	M6	18	25	50	8	M8	28	6.2	5.9
<b>023</b>		117	48		278	270											8.7	8.4
<b>032</b>	156	118	5	70	237	229.5	19	40	6	M6	21.5	30	60	8	M10	33	11.3	11.2
<b>033</b>			41.5		303	295											16	5
<b>042</b>	156	128	15	70	250	242.5	19	40	6	M6	21.5	35	70	10	M12	38	13.2	13.1
<b>043</b>			51.5		316	308											16	5
<b>052</b>	190	157	20	88	307.5	286.5	28	60	8	M10	31	40	80	12	M16	43	37.5	37.8
<b>053</b>			68		380	373											19	40

<sup>1)</sup> IEC 63/71, <sup>2)</sup> IEC 80

Versione <b>U</b> / <b>U</b> Version						
CMG CMGIS	H	K	L	M	N f7	O
<b>002</b>	2.5	11	78	64	50	n°5 M6x14
<b>012</b> <b>013</b>	8.5	13.5	95	76	60	n°4 M8x15
<b>022</b> <b>023</b>	8.5	13.5	95	76	60	n°4 M8x15
<b>032</b> <b>033</b>	9	15	127	110	90	n°6 M8x19
<b>042</b> <b>043</b>	9	15	127	110	90	n°6 M8x19
<b>052</b> <b>053</b>	10	16	160	135	110	n°6 M10x22



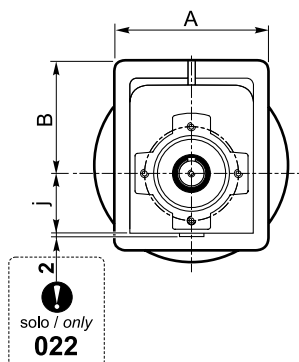
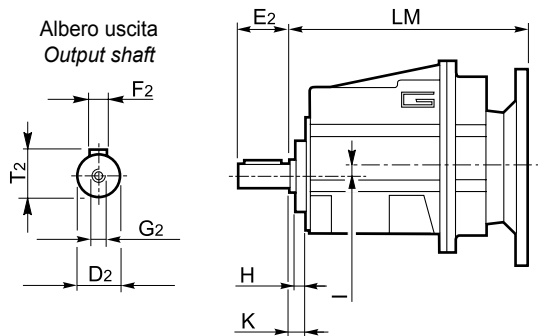


Dimensioni

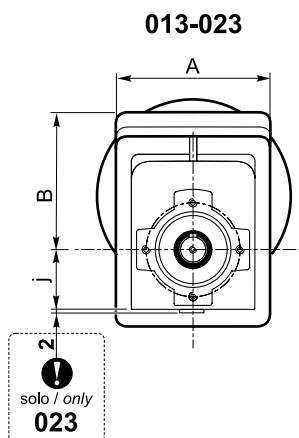
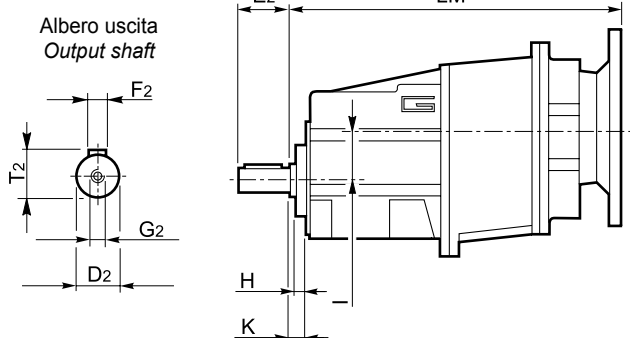
Dimensions

CMG..U

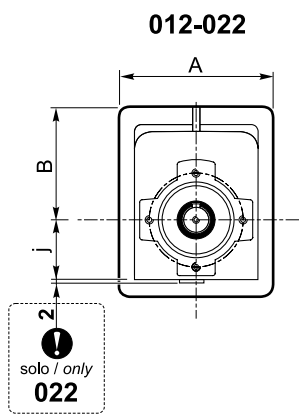
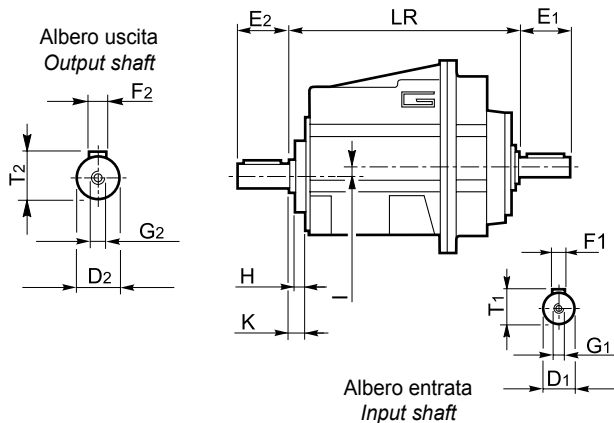
CMG..2 U



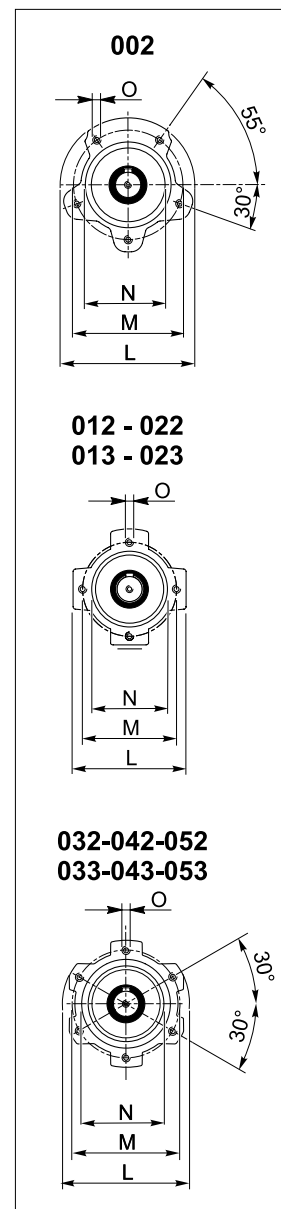
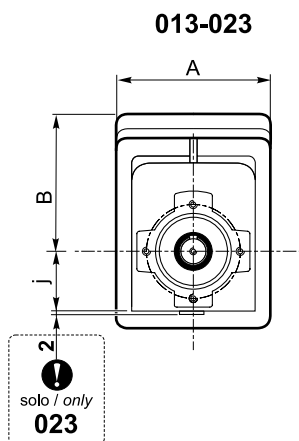
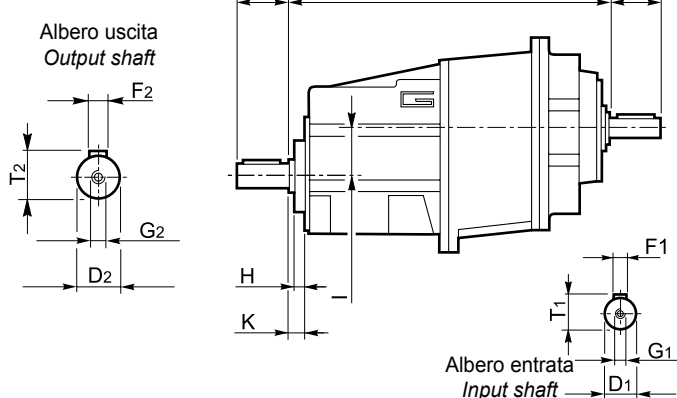
CMG..3 U



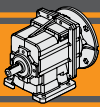
CMGIS..2 U



CMGIS..3 U



CMG



**CMG**

**RIDUTTORI AD INGRANAGGI CILINDRICI**  
**HELICAL GEARBOXES**

**Dimensioni**

**Dimensions**

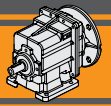
CMG CMGIS	A	B	I	LM	LR	Albero entrata / Input shaft					Albero uscita / Output shaft					*Peso / Weight [kg]	
						D <sub>1</sub> h6	E <sub>1</sub>	F <sub>1</sub>	G <sub>1</sub>	T <sub>1</sub>	D <sub>2</sub> h6	E <sub>2</sub>	F <sub>2</sub>	G <sub>2</sub>	T <sub>2</sub>	CMG	CMGIS
						<b>002</b>	92	81.5	0	143 <sup>1)</sup> 153 <sup>2)</sup>	140	14	30	5	M6		
<b>012</b>	124	93	6.5	195	187	16	40	5	M6	18	20	40	6	M6	22.5	5.3	5.0
<b>013</b>		112	43	268	260											7.8	7.5
<b>022</b>	124	98	11.5	205	197	16	40	5	M6	18	25	50	8	M8	28	6.2	5.9
<b>023</b>		117	48	278	270											8.7	8.4
<b>032</b>	156	118	5	237	229.5	19	40	6	M6	21.5	30	60	8	M10	33	11.3	11.2
<b>033</b>			41.5	303	295	16		5		18						13.6	13.3
<b>042</b>	156	128	15	250	242.5	19	40	6	M6	21.5	35	70	10	M12	38	13.2	13.1
<b>043</b>			51.5	316	308	16		5		18						15.5	15.2
<b>052</b>	190	157	20	307.5	286.5	28	60	8	M10	31	40	80	12	M16	43	37.5	37.8
<b>053</b>			68	380	373	19	40	6	M6	21.5						42.0	42.3

<sup>1)</sup> IEC 63/71, <sup>2)</sup> IEC 80

\* Versione U / U Version

Versione H / H Version										
CMG CMGIS	P	Q	R	S	U	V	X	Z	Piede / Foot	
									Tipo / Type	Peso / Weight [kg]
<b>002</b>	<b>18</b>	<b>60</b>	<b>80</b>	<b>9</b>	<b>100</b>	<b>10</b>	<b>60</b>	<b>120</b>	<b>H60</b>	<b>0.2</b>
	18	80	104	9	110 - 120	10	75	145	H75	0.3
	18	50 - 87	110	9	110	10	85	135	H85	0.4
<b>012</b> <b>013</b>	<b>20</b>	<b>85</b>	<b>108</b>	<b>9</b>	<b>115</b>	<b>12</b>	<b>65</b>	<b>139</b>	<b>H65</b>	<b>0.7</b>
	18	80	118	9	110	12	75	140	H75	1.0
	25	85	120	9	120	12	80	140	H80	1.1
	18	50 - 87	118	9	110	12	85	130	H85	1.2
	25	130	154	9	110	12	90	135	H90	1.5
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7
<b>022</b> <b>023</b>	<b>20</b>	<b>85</b>	<b>108</b>	<b>9</b>	<b>115</b>	<b>12</b>	<b>65</b>	<b>139</b>	<b>H65</b>	<b>0.7</b>
	18	80	118	9	110	12	75	140	H75	1.0
	25	85	120	9	120	12	80	140	H80	1.1
	18	50 - 87	118	9	110	12	85	130	H85	1.2
	25	130	154	9	110	12	90	135	H90	1.5
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7
<b>032</b> <b>033</b>	<b>30</b>	<b>105</b>	<b>136</b>	<b>14</b>	<b>160</b>	<b>14</b>	<b>95</b>	<b>194</b>	<b>H95</b>	<b>1.5</b>
	30	100	150	11	150	14	110	185	H110	1.9
	18	70			160					
	30	165	195	14	135	14	115	170	H115	2.2
	35	110	160	14	170	14	120	210	H120	2.6
<b>042</b> <b>043</b>	<b>30</b>	<b>105</b>	<b>136</b>	<b>14</b>	<b>160</b>	<b>14</b>	<b>95</b>	<b>194</b>	<b>H95</b>	<b>1.5</b>
	30	100	150	11	150	14	110	185	H110	1.9
	18	70			160					
	30	165	195	14	135	14	115	170	H115	2.2
	35	110	160	14	170	14	120	210	H120	2.6
<b>052</b> <b>053</b>	35	145	200	18	200	22	120	239	H120	3.5
	35	205	244	18	170	22	140	219	H140	4.3
	25	110 156	199	18	225	22	155	264	H155	5.1

Preferenziale / Preferred

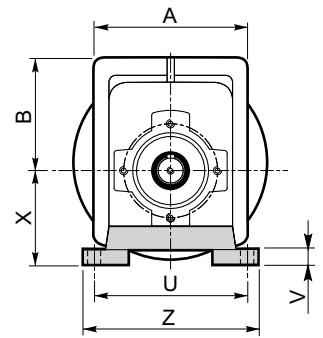
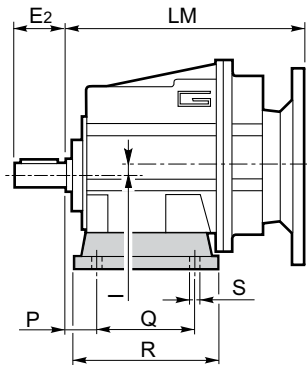
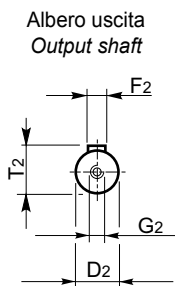


Dimensioni

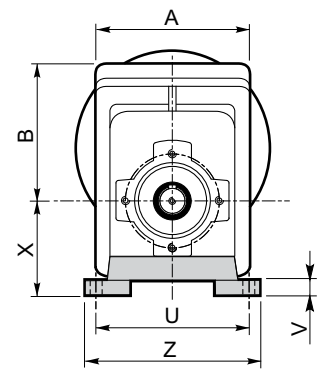
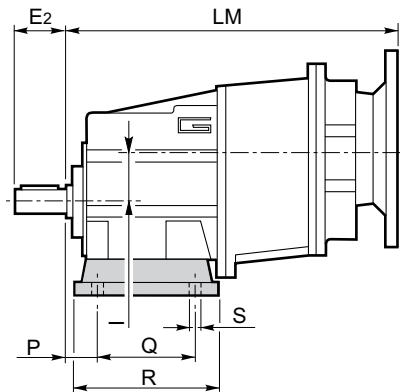
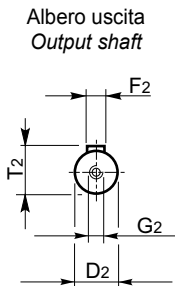
Dimensions

**CMG..H**

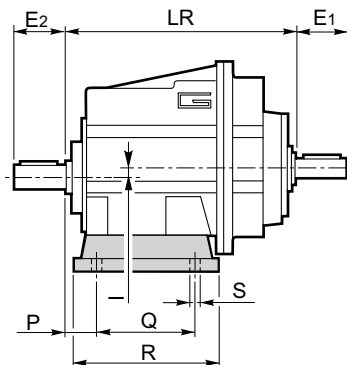
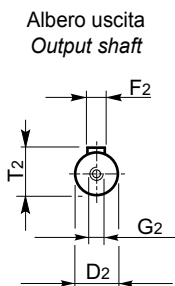
**CMG..2 H..**



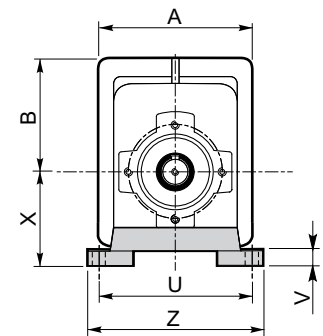
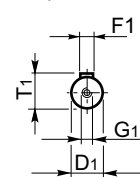
**CMG..3 H..**



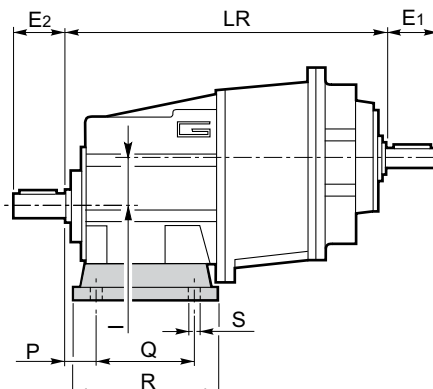
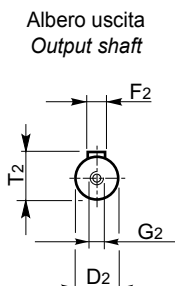
**CMGIS..2 H..**



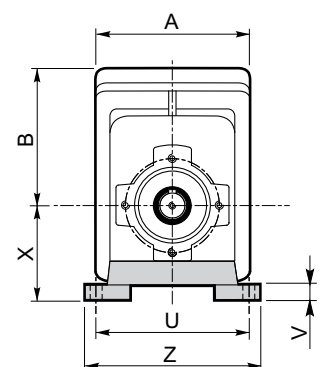
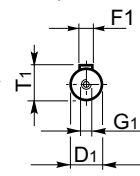
Albero entrata  
Input shaft



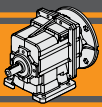
**CMGIS..3 H..**



Albero entrata  
Input shaft



CMG



**Dimensioni**

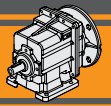
**Dimensions**

CMG CMGIS	A	B	I	LM	LR	Albero entrata / Input shaft					Albero uscita / Output shaft					*Peso / Weight [kg]	
						D <sub>1</sub> h6	E <sub>1</sub>	F <sub>1</sub>	G <sub>1</sub>	T <sub>1</sub>	D <sub>2</sub> h6	E <sub>2</sub>	F <sub>2</sub>	G <sub>2</sub>	T <sub>2</sub>	CMG	CMGIS
<b>002</b>	92	81.5	0	143 <sup>1)</sup> 153 <sup>2)</sup>	140	14	30	5	M6	16	16 20	40	5 6	M6	18 22.5	2.9 <sup>1)</sup> 3.2 <sup>2)</sup>	3.0
<b>012</b>	124	93	6.5	195	187	16	40	5	M6	18	20	40	6	M6	22.5	5.3	5.0
<b>013</b>		112	43	268	260											7.8	7.5
<b>022</b>	124	98	11.5	205	197	16	40	5	M6	18	25	50	8	M8	28	6.2	5.9
<b>023</b>		117	48	278	270											8.7	8.4
<b>032</b>	156	118	5	237	229.5	19	40	6	M6	21.5	30	60	8	M10	33	11.3	11.2
<b>033</b>			41.5	303	295	16		5		18						13.6	13.3
<b>042</b>	156	128	15	250	242.5	19	40	6	M6	21.5	35	70	10	M12	38	13.2	13.1
<b>043</b>			51.5	316	308	16		5		18						15.5	15.2
<b>052</b>	190	157	20	307.5	286.5	28	60	8	M10	31	40	80	12	M16	43	37.5	37.8
<b>053</b>			68	380	373	19										40	6

<sup>1)</sup> IEC 63/71, <sup>2)</sup> IEC 80

\* Versione U / U Version

Versione F / F Version									
CMG CMGIS	H	K	L	M	N f7	O	P	Flangia / Flange	
								Tipo / Type	Peso / Weight [kg]
<b>002</b>	3.5	7	105	85	70	6.5	90	<b>F105</b>	0.1
	3.5	8	120	100	80	7	100	<b>F120</b>	0.2
	3.5	8	140	115	95	9	115	<b>F140</b>	0.2
<b>012</b> <b>013</b>	3	9	120	100	80	9	106	<b>F120</b>	0.5
	3.5	9	140	115	95	9	115	<b>F140</b>	0.8
	3.5	9	160	130	110	9	126	<b>F160</b>	1.1
	3.5	11	200	165	130	11	165	<b>F200</b>	1.8
<b>022</b> <b>023</b>	3	9	120	100	80	9	106	<b>F120</b>	0.5
	3.5	9	140	115	95	9	115	<b>F140</b>	0.8
	3.5	9	160	130	110	9	126	<b>F160</b>	1.1
	3.5	11	200	165	130	11	165	<b>F200</b>	1.8
<b>032</b> <b>033</b>	3.5	11	160	130	110	9	140	<b>F160</b>	1.0
	3.5	11	200	165	130	11	165	<b>F200</b>	1.8
	4	13	250	215	180	14	215	<b>F250</b>	2.9
<b>042</b> <b>043</b>	3.5	11	160	130	110	9	140	<b>F160</b>	1.0
	3.5	11	200	165	130	11	165	<b>F200</b>	1.8
	4	13	250	215	180	14	215	<b>F250</b>	2.9
<b>052</b> <b>053</b>	4	13	250	215	180	14	215	<b>F250</b>	2.9
	4	13	300	265	230	14	265	<b>F300</b>	4.4

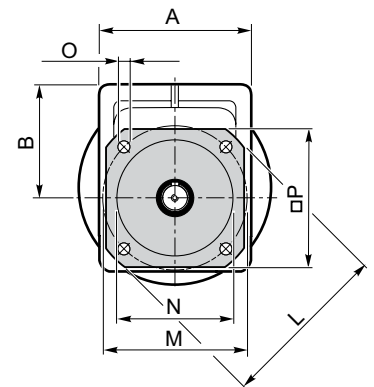
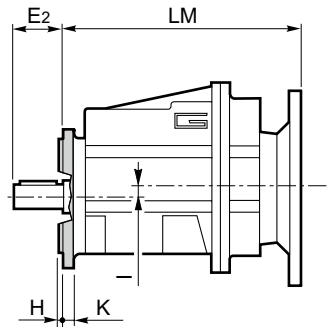
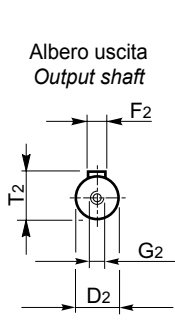


Dimensioni

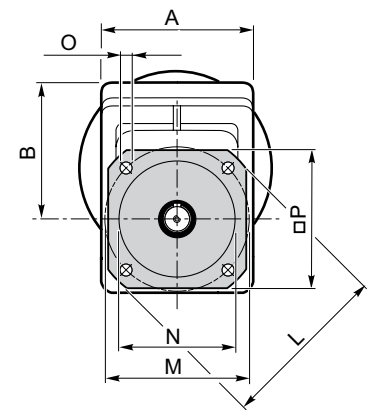
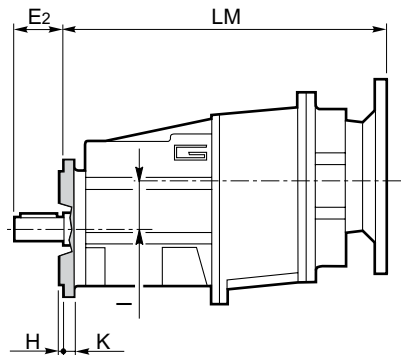
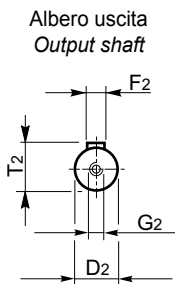
Dimensions

CMG..F

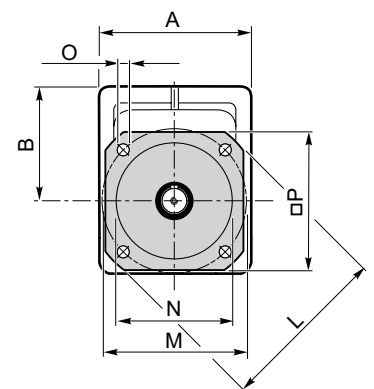
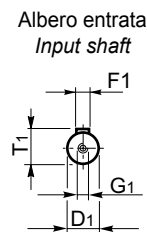
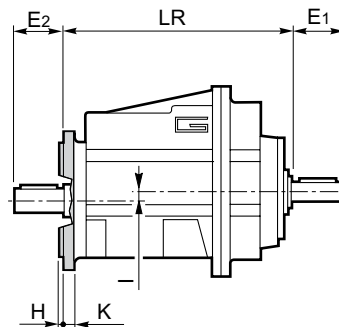
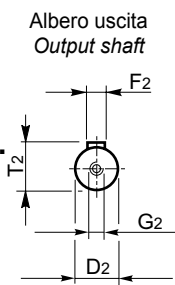
CMG..2 F..



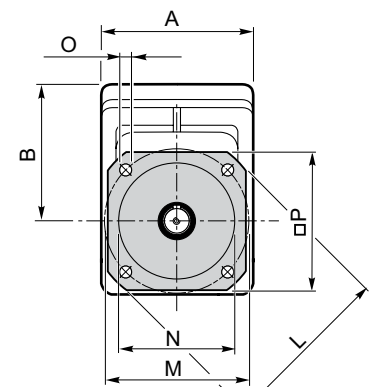
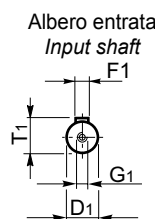
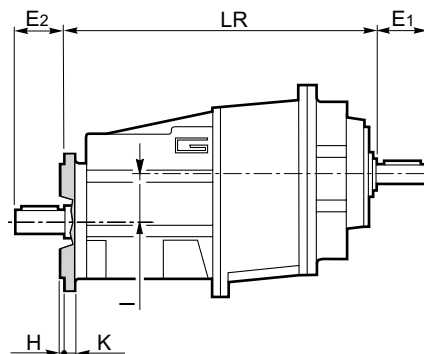
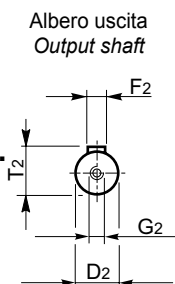
CMG..3 F..



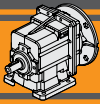
CMGIS..2 F..



CMGIS..3 F..



CMG



**CMG**

**RIDUTTORI AD INGRANAGGI CILINDRICI**  
**HELICAL GEARBOXES**

**Dimensioni**

**Dimensions**

CMG CMGIS	A	B	I	LM	LR	Albero entrata / Input shaft					Albero uscita / Output shaft					*Peso / Weight [kg]				
						D <sub>1</sub> h6	E <sub>1</sub>	F <sub>1</sub>	G <sub>1</sub>	T <sub>1</sub>	D <sub>2</sub> h6	E <sub>2</sub>	F <sub>2</sub>	G <sub>2</sub>	T <sub>2</sub>	CMG	CMGIS			
<b>002</b>	92	81.5	0	143 <sup>1)</sup> 153 <sup>2)</sup>	140	14	30	5	M6	16	16	20	40	5	6	M6	18	22.5	2.9 <sup>1)</sup> 3.2 <sup>2)</sup>	3.0
<b>012</b> <b>013</b>	124	93 112	6.5 43	195 268	187 260	16	40	5	M6	18	18	20	40	6	M6	22.5	22.5	5.3 7.8	5.0 7.5	
<b>022</b> <b>023</b>	124	98 117	11.5 48	205 278	197 270	16	40	5	M6	18	18	25	50	8	M8	28	28	6.2 8.7	5.9 8.4	
<b>032</b> <b>033</b>	156	118	5 41.5	237 303	229.5 295	19 16	40	6 5	M6	21.5 18	18	30	60	8	M10	33	33	11.3 13.6	11.2 13.3	
<b>042</b> <b>043</b>	156	128	15 51.5	250 316	242.5 308	19 16	40	6 5	M6	21.5 18	18	35	70	10	M12	38	38	13.2 15.5	13.1 15.2	
<b>052</b> <b>053</b>	190	157	20 68	307.5 380	286.5 373	28 19	60 40	8 6	M10 M6	31 21.5	21.5	40	80	12	M16	43	43	37.5 42.0	37.8 42.3	

<sup>1)</sup> IEC 63/71, <sup>2)</sup> IEC 80

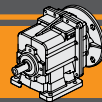
\* Versione U / U Version

CMG CMGIS	Versione H / H Version									Combinazioni possibili H/F Possible combinations H/F							
	P	Q	R	S	U	V	X	Z	Piede / Foot		F105	F120	F140	F160	F200	F250	F300
									Tipo Type	Peso / Weight [kg]							
<b>002</b>	18	60	80	9	100	10	60	120	H60	0.2	•	•	•				
	18	80	104	9	110 - 120	10	75	145	H75	0.3	•	•	•				
	18	50 - 87	110	9	110	10	85	135	H85	0.4	•	•	•				
<b>012</b> <b>013</b>	20	85	108	9	115	12	65	139	H65	0.7		•	•				
	18	80	118	9	110	12	75	140	H75	1.0		•	•	•			
	25	85	120	9	120	12	80	140	H80	1.1		•	•	•			
	18	50 - 87	118	9	110	12	85	130	H85	1.2		•	•	•			
	25	130	154	9	110	12	90	135	H90	1.5		•	•	•	•		
<b>022</b> <b>023</b>	18	60 - 107.5	135	11	130	12	100	155	H100	1.7		•	•	•	•		
	20	85	108	9	115	12	65	139	H65	0.7		•	•				
	18	80	118	9	110	12	75	140	H75	1.0		•	•	•			
	25	85	120	9	120	12	80	140	H80	1.1		•	•	•			
	18	50 - 87	118	9	110	12	85	130	H85	1.2		•	•	•			
<b>032</b> <b>033</b>	25	130	154	9	110	12	90	135	H90	1.5		•	•	•	•		
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7		•	•	•	•		
	30	105	136	14	160	14	95	194	H95	1.5				•	•		
	30	100	150	11	150	14	110	185	H110	1.9				•	•		
	18	70	160		160												
<b>042</b> <b>043</b>	30	165	195	14	135	14	115	170	H115	2.2				•	•	•	
	35	110	160	14	170	14	120	210	H120	2.6				•	•	•	
	30	105	136	14	160	14	95	194	H95	1.5				•	•		
	30	100	150	11	150	14	110	185	H110	1.9				•	•		
<b>052</b> <b>053</b>	18	70	160		160												
	30	165	195	14	135	14	115	170	H115	2.2				•	•	•	
	35	110	160	14	170	14	120	210	H120	2.6				•	•	•	
	35	145	199	18	200	22	120	239	H120	3.5						•	
<b>052</b> <b>053</b>	35	205	244	18	170	22	140	219	H140	4.3						•	•
	25	110 156	199	18	225	22	155	264	H155	5.1						•	•

Preferenziale / Preferred

• Combinazioni possibili H/F / Possible combinations H/F

CMG CMGIS	Versione F / F Version								Flangia / Flange	
	H	K	L	M	N f7	O	P	Flangia / Flange		
								Tipo / Type	Peso / Weight [kg]	
<b>002</b>	3.5	7	105	85	70	6.5	90	F105	0.1	
	3.5	8	120	100	80	7	100	F120	0.2	
	3.5	8	140	115	95	9	115	F140	0.2	
<b>012</b> <b>013</b>	3	9	120	100	80	9	106	F120	0.5	
	3.5	9	140	115	95	9	115	F140	0.8	
	3.5	9	160	130	110	9	126	F160	1.1	
<b>022</b> <b>023</b>	3.5	11	200	165	130	11	165	F200	1.8	
	3	9	120	100	80	9	106	F120	0.5	
	3.5	9	140	115	95	9	115	F140	0.8	
	3.5	9	160	130	110	9	126	F160	1.1	
<b>032</b> <b>033</b>	3.5	11	200	165	130	11	165	F200	1.8	
	3.5	11	200	165	130	11	165	F200	1.8	
	4	13	250	215	150	14	215	F250	2.9	
	3.5	11	160	130	110	9	140	F160	1.0	
<b>042</b> <b>043</b>	3.5	11	200	165	130	11	165	F200	1.8	
	3.5	11	200	165	130	11	165	F200	1.8	
	4	13	250	215	150	14	215	F250	2.9	
<b>052</b> <b>053</b>	4	13	250	215	150	14	215	F250	2.9	
	4	13	300	265	230	14	265	F300	4.4	

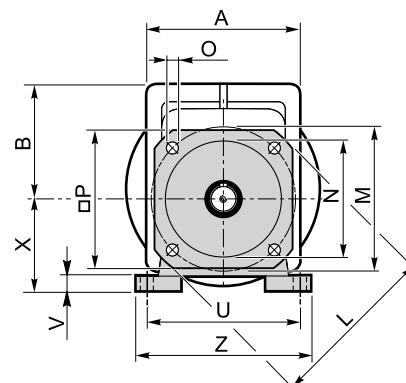
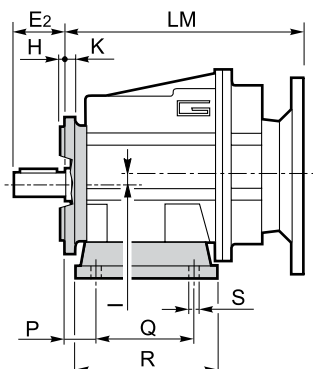
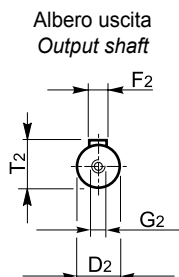


Dimensioni

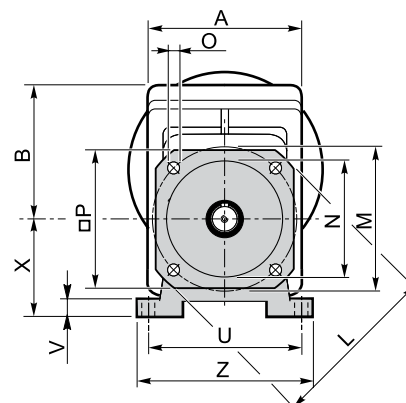
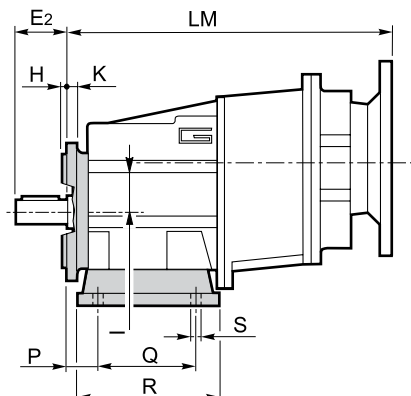
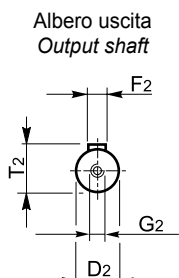
Dimensions

CMG..H../F..

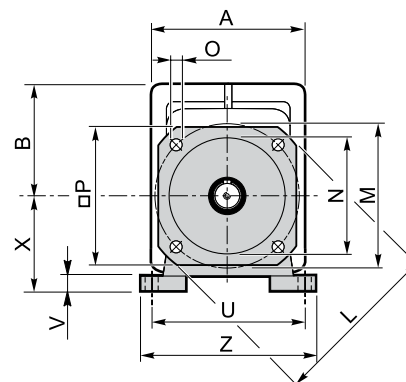
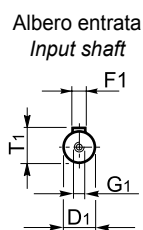
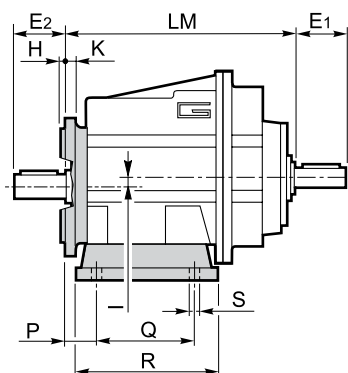
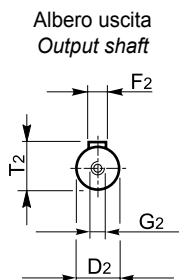
CMG..2 H../F..



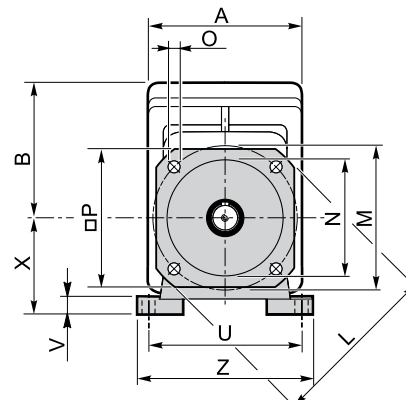
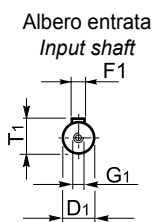
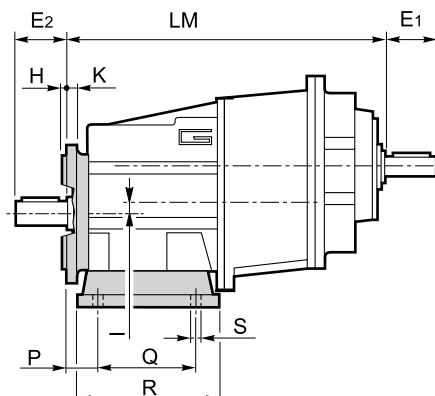
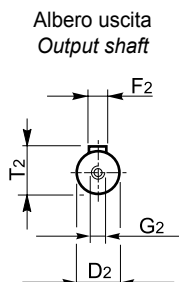
CMG..3 H../F..



CMGIS..2 H../F..



CMGIS..3 H../F..



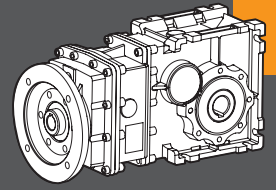




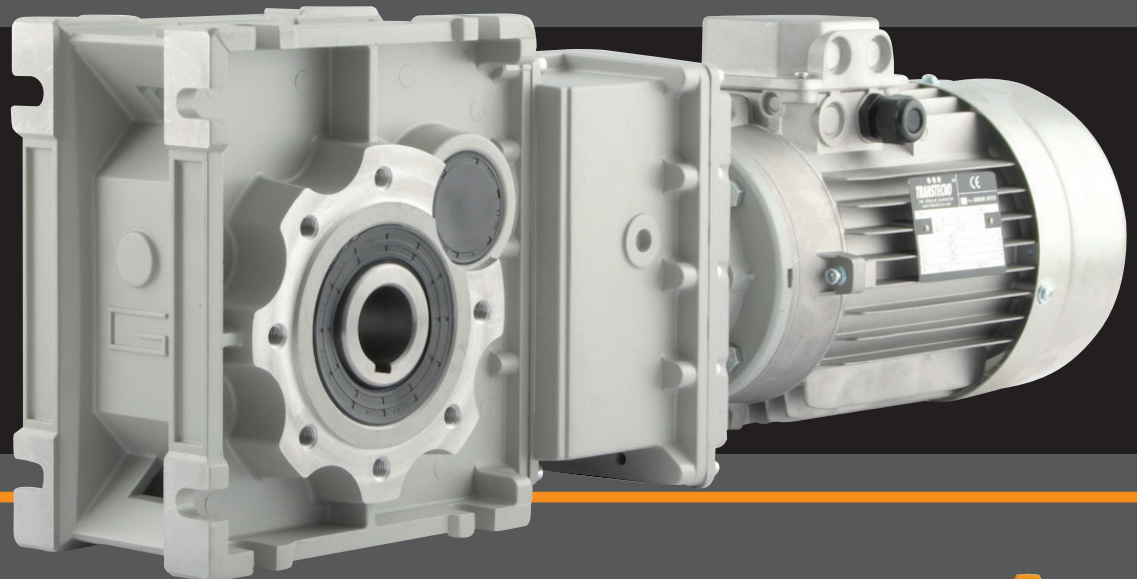
**TRANSTECNO**<sup>®</sup>  
THE MODULAR GEARMOTOR

**CMB**

CMB



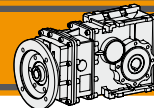
**RIDUTTORI AD ASSI ORTOGONALI**  
**BEVEL HELICAL GEARBOXES**



ENERGY  
SAVING



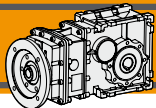




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Designazione	<i>Classification</i>	<b>C2</b>
Sensi di rotazione	<i>Direction of rotation</i>	<b>C3</b>
Simbologia	<i>Symbols</i>	<b>C3</b>
Lubrificazione	<i>Lubrication</i>	<b>C4</b>
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Dati tecnici	<i>Technical data</i>	<b>C5</b>
Motori applicabili	<i>IEC Motor adapters</i>	<b>C10</b>
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## Caratteristiche tecniche

I riduttori ad ingranaggi ad assi ortogonali della serie CMB sono caratterizzati da un elevato grado di modularità: essi infatti sono stati realizzati con una carcassa completamente intercambiabile con quella dei riduttori a vite senza fine della serie CM.

Sono pertanto configurabili secondo le esigenze dell'applicazione con flangia di uscita, albero di uscita, braccio di reazione.

Caratteristiche comuni a tutta la serie:

- Carcassa in alluminio nelle grandezze 402, 502, 633 e 903. La grandezza 1103 è costruita con carcassa in ghisa.
- Ingranaggi sempre rettificati.
- Lubrificazione permanente con olio sintetico.

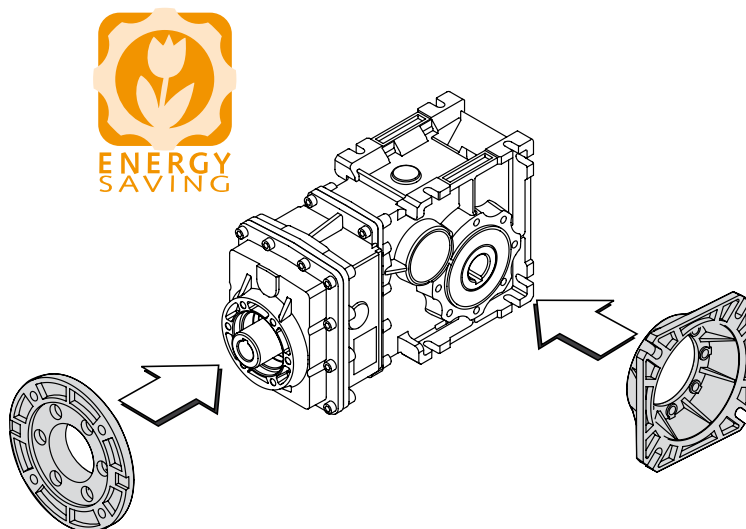
## Technical features

The high degree of modularity of CMB bevel helical gearbox allows it to be completely interchangeable with CM wormgearboxes.

It is possible to set up the version required using output flanges, output shafts and optional torque arms.

Common features of all CMB range are:

- Die-cast aluminum housing on sizes 402, 502, 633 and 903. Cast-iron housing on size 1103.
- Ground helical gears.
- Permanent synthetic oil long-life lubrication.

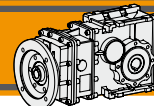


## Designazione

## Classification

RIDUTTORE / GEARBOX											
CMB	63 3	U	9.81	D25	90	B5	SZDX	BRSX	90	B3	
Tipo Type	Grandezza Size	Stadi Stages	Versione Version	Rapporto Ratio	Albero uscita Output shaft	IEC 	Forma costruttiva Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Pos. di montaggio Mounting position
 <b>CMB</b>	<b>40 50 63 90 110</b>	<b>2 3</b>	<b>U... FD... FS... FBD... FBS... FLD... FLS...</b>	vedi tabelle see tables	vedi tabelle see tables	<b>56... — 90...</b>	<b>B5 B14</b>	<b>SZDX SZSX DZ</b>	<b>BRDX BRSX</b>	<b>0° 90° 180° 270°</b>	<b>B3 B8 B6 B7 V5 V6</b>

RIDUTTORE / GEARBOX									
CMBIS	63 3	U	9.81	D25	SZDX	BRSX	90	B3	
Tipo Type	Grandezza Size	Stadi Stages	Versione Version	Rapporto Ratio	Albero uscita Output shaft	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Pos. di montaggio Mounting position
 <b>CMBIS</b>	<b>40 50 63 90 110</b>	<b>2 3</b>	<b>U... FD... FS... FBD... FBS... FLD... FLS...</b>	vedi tabelle see tables	vedi tabelle see tables	<b>SZDX SZSX DZ</b>	<b>BRDX BRSX</b>	<b>0° 90° 180° 270°</b>	<b>B3 B8 B6 B7 V5 V6</b>



**Designazione**

**Classification**

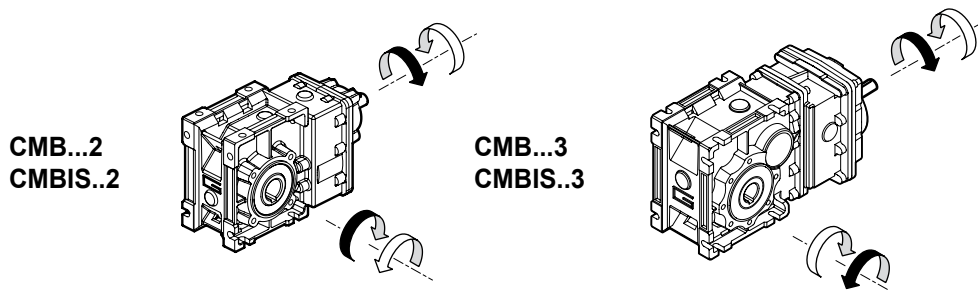
Versione Riduttore Gearbox Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle
<p><b>U</b>      <b>FD</b>      <b>FS</b> <b>FLD</b>      <b>FLS</b> <b>FBD</b>      <b>FBS</b></p>	<p><b>SZDX</b>      <b>SZSX</b>      <b>DZ</b></p>	<p><b>BRDX</b>      <b>BRSX</b></p>	<p>90°      90° 180°      0° 270°      270°</p>

CMB

MOTORE / MOTOR				
1.5kW	4p	3ph	50Hz	T1
Potenza Power	Poli Poles	Fasi Phases	Frequenza Frequency	Pos. morsetti Terminal box pos.
Vedi tabelle See tables	<b>2p</b> <b>4p</b> <b>6p</b> <b>8p</b>	<b>1ph</b> <b>3ph</b>	<b>50Hz</b> <b>60Hz</b>	<p>T1 (Std) T4      T2 T3</p>

**Sensi di rotazione**

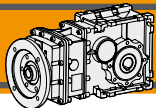
**Direction of rotation**



**Simbologia**

**Symbols**

$n_1$	[min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>
$n_2$	[min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>
$i$		Rapporto di riduzione / <i>Ratio</i>
$P_1$	[kW]	Potenza in entrata / <i>Input power</i>
$M_2$	[Nm]	Coppia nominale in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$P_{n1}$	[kW]	Potenza nominale in entrata / <i>Nominal input power</i>
$M_{n2}$	[Nm]	Coppia nominale in uscita in funzione di $P_{n1}$ / <i>Nominal output torque referred to <math>P_{n1}</math></i>
$sf$		Fattore di servizio / <i>Service factor</i>
$R_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$A_2$	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>



## Lubrificazione

Tutti i riduttori nelle taglie 402, 502, 633 e 903 sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione. Per la taglia 1103 la lubrificazione dipende dalla posizione di montaggio.

*Permanent synthetic oil long-life lubrication ( viscosity grade 320) makes it possible to use sizes 402, 502, 633 and 903 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance. For size 1103 lubrication depends on assembly position.*

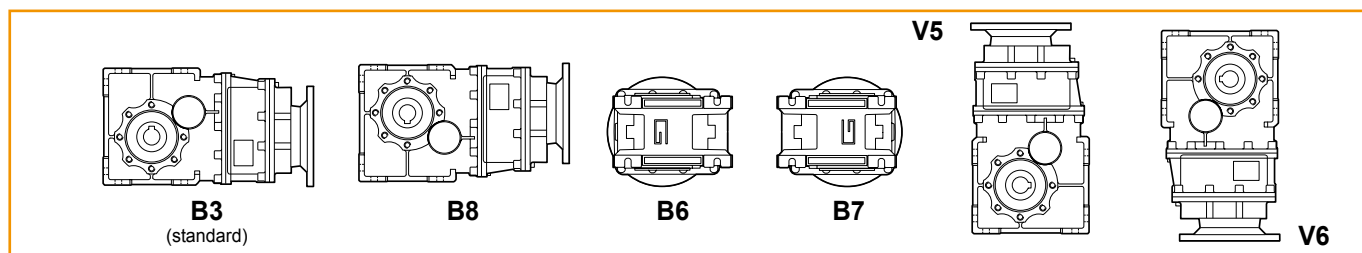
CMB CMBIS	Quantità di olio (litri) / Oil quantity (litres)					
	B3	B8	B6	B7	V5	V6
402				0.4		
502				0.52		
633				1.3		
903				2.8		
1103	4.7		3		5	4.2

Lubrificati a vita  
Life lubrication

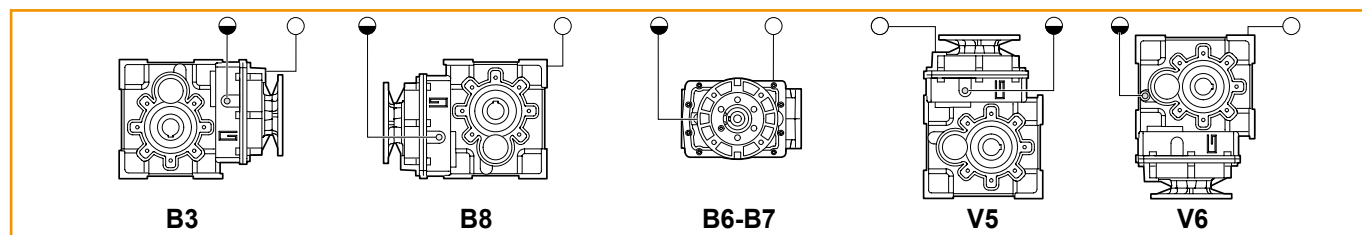
N.B.  
Le quantità di lubrificante sono indipendenti dalla posizione di montaggio per le taglie 402, 502, 633 e 903.  
*The oil quantity does not depend on mounting position for sizes 402, 502, 633 and 903.*

## Posizioni di montaggio / Mounting positions

### CMB 402-502-633-903



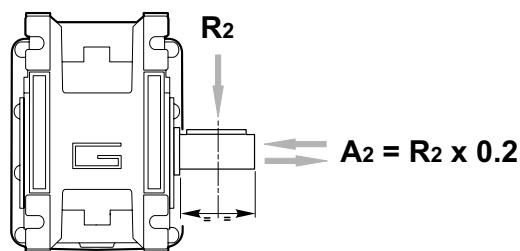
### CMB 1103



○ Sfiato e tappo di riempimento / Breather and filling plug  
● Livello olio / Oil level plug

## Carichi radiali

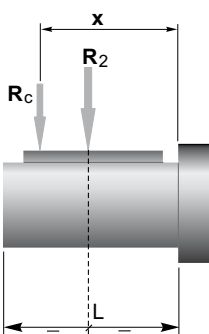
## Radial loads



n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]				
	CMB 402	CMB 502	CMB 633	CMB 903	CMB1103
400	905	1116	1835	2682	3409
300	996	1228	2020	2952	3752
200	1141	1406	2312	3379	4294
170	1204	1484	2441	3567	4534
140	1414	1743	2604	3806	4837
100	1582	1949	2913	4686	5411
90	1638	2019	3321	4853	5832
60	2047	2490	3801	5556	7299
40	2524	3029	4492	6614	8355
30	2778	3334	5159	7540	9524
20	3180	3816	5906	8631	10903
15	3500	4200	6500	9500	12000
10	3500	4200	6500	9500	12000

Quando il carico radiale risultante non è applicato sulla mezzeria dell'albero occorre calcolare quello effettivo con la seguente formula

*When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:*

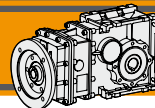


	CMB 402	CMB 502	CMB 633	CMB 903	CMB 1103
a	86	104	118	157	173
b	66	79	93	117	133
R <sub>2MAX</sub>	3500	4200	6500	9500	12000

$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

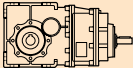
a, b = valori riportati nella tabella  
a, b = values given in the table

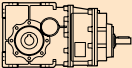


Dati tecnici

$n_1$  1400 min<sup>-1</sup>

Technical data

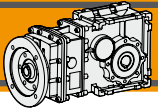
	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMBIS 402</b>				
	227	40	1.0	6.18
	187	40	0.83	7.49
	152	40	0.68	9.20
	118	45	0.59	11.83
	112	45	0.56	12.48
	94.4	45	0.47	14.83
	79.4	45	0.40	17.63
	75.3	55	0.46	18.60
	62.7	55	0.38	22.33
	58.6	55	0.36	23.91
	48.5	65	0.35	28.89
	45.4	65	0.33	30.84
	41.7	65	0.30	33.57
	39.3	65	0.28	35.63
	32.7	65	0.24	42.75
	25.3	65	0.18	55.31
	23.7	65	0.17	59.06
	21.8	65	0.16	64.29
<b>CMBIS502</b>				
	227	70	1.8	6.18
	187	70	1.5	7.49
	152	70	1.2	9.20
	118	90	1.2	11.83
	112	90	1.1	12.48
	94.4	90	0.95	14.83
	79.4	90	0.80	17.63
	75.3	110	0.92	18.60
	62.7	110	0.77	22.33
	58.6	110	0.72	23.91
	48.5	125	0.67	28.89
	45.4	125	0.63	30.84
	41.7	125	0.58	33.57
	39.3	125	0.55	35.63
	32.7	125	0.46	42.75
	25.3	125	0.35	55.31
	23.7	125	0.33	59.06
	21.8	125	0.30	64.29
<b>CMBIS 633</b>				
	213	150	3.6	6.58
	175	150	2.9	7.99
	143	150	2.4	9.81
	134	150	2.2	10.44
	112	150	1.9	12.53
	105	150	1.8	13.31
	88.6	170	1.7	15.81
	78.8	220	1.9	17.77
	64.9	220	1.6	21.56
	52.9	220	1.3	26.48
	49.7	220	1.2	28.17
	41.4	220	1.0	33.81
	39.0	220	0.96	35.92
	36.0	250	1.00	38.88
	29.7	250	0.83	47.16
	24.2	250	0.67	57.93
	22.7	250	0.63	61.63
	18.9	250	0.53	73.96
	17.8	250	0.50	78.58
	15.0	250	0.42	93.33
	10.0	250	0.28	140.52
	7.7	250	0.21	181.81
	6.6	250	0.18	211.31

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMBIS 903</b>				
	211	280	6.57	6.65
	175	280	5.46	8.00
	144	280	4.48	9.74
	125	280	3.90	11.21
	99.3	300	3.32	14.09
	78.0	450	3.91	17.95
	64.8	450	3.25	21.60
	53.2	450	2.67	26.30
	46.3	450	2.32	30.25
	35.7	500	1.99	39.26
	29.6	500	1.65	47.25
	24.3	500	1.36	57.52
	21.2	500	1.18	66.17
	16.8	500	0.94	83.20
	13.0	500	0.72	108.09
	10.6	500	0.59	132.23
	9.5	500	0.53	147.92
	8.4	500	0.47	167.09
	7.3	500	0.41	191.06
	6.3	500	0.35	221.88
	5.3	500	0.30	262.96
<b>CMBIS 1103</b>				
	198	550	12.1	7.08
	156	550	9.5	8.99
	128	550	7.9	10.90
	112	550	6.9	12.52
	89.2	620	6.2	15.69
	76.7	810	6.9	18.25
	60.4	810	5.4	23.18
	49.8	810	4.5	28.11
	43.4	810	3.9	32.27
	37.7	900	3.8	37.09
	29.7	900	3.0	47.12
	24.5	900	2.5	57.14
	21.3	900	2.1	65.59
	17.0	900	1.7	82.21
	14.4	900	1.4	97.25
	10.8	900	1.1	130.07
	7.5	900	0.75	187.50
	6.4	900	0.65	217.58

Nota:  
 $Pn_1$  è la potenza meccanica.  
La potenza applicabile è ridotta del fattore termico.  
Per maggiori dettagli consultare il nostro Servizio Tecnico.

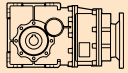

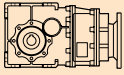

Note:  
 $Pn_1$  is an input mechanical power which must be reduced by the heating factor in order to get the relevant one. For more details please contact our Technical Service.

CMB

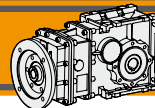


**Dati tecnici**

**Technical data**

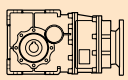

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i								
<b>0.06</b>																			
56A4 (1400 min <sup>-1</sup> )	39.3	14	4.7	35.63	CMB402	B5/B14	63B4 (1400 min <sup>-1</sup> )	45.4	36	1.8	30.84	CMB402	B5/B14						
	32.7	16	4.0	42.75				41.7	39	1.7	33.57			B5/B14					
	25.3	21	3.1	55.31				39.3	41	1.6	35.63								
	23.7	23	2.9	59.06				32.7	49	1.3	42.75								
	21.8	25	2.6	64.29				25.3	64	1.0	55.31								
							23.7	68	0.95	59.06	B5/B14								
							21.8	74	0.88	64.29	B5/B14								
<b>0.09</b>																			
56B4 (1400 min <sup>-1</sup> )	48.5	17	3.9	28.89	CMB402	B5/B14	63B4 (1400 min <sup>-1</sup> )	45.4	36	3.5	30.84	CMB502	B5/B14						
	45.4	18	3.7	30.84				41.7	39	3.2	33.57			B5/B14					
	41.7	19	3.4	33.57				39.3	41	3.0	35.63								
	39.3	21	3.2	35.63				32.7	49	2.5	42.75								
	32.7	25	2.6	42.75				25.3	64	2.0	55.31								
	25.3	32	2.0	55.31				23.7	68	1.8	59.06								
	23.7	34	1.9	59.06				21.8	74	1.7	64.29								
	21.8	37	1.8	64.29															
											24.2				67	3.7	57.93	CMB633	B5
											22.7				71	3.5	61.63		
							18.9	85	2.9	73.96									
							17.8	91	2.8	78.58									
							15.0	108	2.3	93.33									
							10.0	162	1.5	140.52	B5								
							7.7	210	1.2	181.81	B5								
							6.6	244	1.0	211.31	B5								
<b>0.12</b>																			
63A4 (1400 min <sup>-1</sup> )	227	5	8.4	6.18	CMB402	B5/B14	71A4 (1400 min <sup>-1</sup> )	227	10	4.0	6.18	CMB402	B5/B14						
	187	6	6.9	7.49				187	12	3.3	7.49			B5/B14					
	152	7	5.6	9.20				152	15	2.7	9.20								
	118	9	4.9	11.83				118	19	2.4	11.83								
	112	10	4.7	12.48				112	20	2.2	12.48								
	94.4	11	3.9	14.83				94.4	24	1.9	14.83								
	79.4	14	3.3	17.63				79.4	28	1.6	17.63								
	75.3	14	3.8	18.60				75.3	30	1.8	18.60								
	62.7	17	3.2	22.33				62.7	36	1.5	22.33								
	58.6	18	3.0	23.91				58.6	38	1.4	23.91								
	48.5	22	2.9	28.89				48.5	46	1.4	28.89								
	45.4	24	2.7	30.84				45.4	49	1.3	30.84								
	41.7	26	2.5	33.57				41.7	54	1.2	33.57								
	39.3	27	2.4	35.63				39.3	57	1.1	35.63								
	32.7	33	2.0	42.75				32.7	69	0.9	42.75								
	25.3	43	1.5	55.31															
	23.7	45	1.4	59.06															
	21.8	49	1.3	64.29															
											227				10	7.1	6.18	CMB502	B5/B14
											187				12	5.8	7.49		
							152	15	4.7	9.20									
							118	19	4.7	11.83									
							112	20	4.5	12.48									
							94.4	24	3.8	14.83									
							79.4	28	3.2	17.63									
							75.3	30	3.7	18.60									
							62.7	36	3.1	22.33									
							58.6	38	2.9	23.91									
							48.5	46	2.7	28.89									
							45.4	49	2.5	30.84									
							41.7	54	2.3	33.57									
							39.3	57	2.2	35.63									
							32.7	69	1.8	42.75									
							25.3	89	1.4	55.31									
							23.7	95	1.3	59.06									
							21.8	103	1.2	64.29									
<b>0.18</b>																			
63B4 (1400 min <sup>-1</sup> )	227	7	5.6	6.18	CMB402	B5/B14	71A4 (1400 min <sup>-1</sup> )	227	10	7.1	6.18	CMB502	B5/B14						
	187	9	4.6	7.49				187	12	5.8	7.49			B5/B14					
	152	11	3.8	9.20				152	15	4.7	9.20								
	118	14	3.3	11.83				118	19	4.7	11.83								
	112	14	3.1	12.48				112	20	4.5	12.48								
	94.4	17	2.6	14.83				94.4	24	3.8	14.83								
	79.4	20	2.2	17.63				79.4	28	3.2	17.63								
	75.3	21	2.6	18.60				75.3	30	3.7	18.60								
	62.7	26	2.1	22.33				62.7	36	3.1	22.33								
	58.6	28	2.0	23.91				58.6	38	2.9	23.91								
	48.5	33	1.9	28.89				48.5	46	2.7	28.89								
											45.4				49	2.5	30.84		
											41.7				54	2.3	33.57		
											39.3				57	2.2	35.63		
							32.7	69	1.8	42.75									
							25.3	89	1.4	55.31									
							23.7	95	1.3	59.06									
							21.8	103	1.2	64.29									

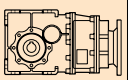





**Dati tecnici**

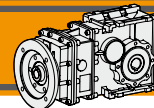
**Technical data**

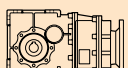

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			
<b>0.25</b>							
71A4 (1400 min <sup>-1</sup> )	41.4	54	4.1	33.81	<b>CMB633</b>	<b>B5/B14</b>	
	39.0	58	3.8	35.92		<b>B5/B14</b>	
	36.0	62	4.0	38.88		<b>B5/B14</b>	
	29.7	76	3.3	47.16		<b>B5/B14</b>	
	24.2	93	2.7	57.93		<b>B5/B14</b>	
	22.7	99	2.5	61.63		<b>B5/B14</b>	
	18.9	119	2.1	73.96		<b>B5/B14</b>	
	17.8	126	2.0	78.58		<b>B5/B14</b>	
	15.0	150	1.7	93.33		<b>B5/B14</b>	
	10.0	225	1.1	140.52		<b>B5/B14</b>	
	7.7	291	0.9	181.81		<b>B5/B14</b>	
	24.3	92	5.4	57.52		<b>CMB903</b>	<b>B5</b>
		21.2	106	4.7			66.17
16.8		133	3.7	83.20	<b>B5</b>		
13.0		173	2.9	108.09	<b>B5</b>		
10.6		212	2.4	132.23	<b>B5</b>		
9.5		237	2.1	147.92	<b>B5</b>		
8.4		268	1.9	167.09	<b>B5</b>		
7.3		306	1.6	191.06	<b>B5</b>		
6.3		356	1.4	221.88	<b>B5</b>		
5.3		422	1.2	262.96	<b>B5</b>		

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i				
<b>0.37</b>								
71B4 (1400 min <sup>-1</sup> )	29.6	112	4.5	47.25	<b>CMB903</b>	<b>B5</b>		
	24.3	136	3.7	57.52		<b>B5</b>		
	21.2	157	3.2	66.17		<b>B5</b>		
	16.8	197	2.5	83.20		<b>B5</b>		
	13.0	256	1.9	108.09		<b>B5</b>		
	10.6	314	1.6	132.23		<b>B5</b>		
	9.5	351	1.4	147.92		<b>B5</b>		
	8.4	396	1.3	167.09		<b>B5</b>		
	7.3	453	1.1	191.06		<b>B5</b>		
	6.3	526	0.9	221.88		<b>B5</b>		
	5.3	624	0.8	262.96		<b>B5</b>		
	<b>0.55</b>							
	80A4 (1400 min <sup>-1</sup> )	227	22	3.2		6.18	<b>CMB502</b>	<b>B5/B14</b>
187		26	2.6	7.49	<b>B5/B14</b>			
152		32	2.2	9.20	<b>B5/B14</b>			
118		42	2.2	11.83	<b>B5/B14</b>			
112		44	2.0	12.48	<b>B5/B14</b>			
94.4		52	1.7	14.83	<b>B5/B14</b>			
79.4		62	1.4	17.63	<b>B5/B14</b>			
75.3		66	1.7	18.60	<b>B5/B14</b>			
62.7		79	1.4	22.33	<b>B5/B14</b>			
58.6		84	1.3	23.91	<b>B5/B14</b>			
48.5		102	1.2	28.89	<b>B5/B14</b>			
45.4		109	1.1	30.84	<b>B5/B14</b>			
41.7		118	1.1	33.57	<b>B5/B14</b>			
39.3		126	1.0	35.63	<b>B5/B14</b>			
213		23	6.5	6.58	<b>CMB633</b>	<b>B5/B14</b>		
		175	28	5.3		7.99	<b>B5/B14</b>	
		143	35	4.3		9.81	<b>B5/B14</b>	
		134	37	4.1		10.44	<b>B5/B14</b>	
		112	44	3.4		12.53	<b>B5/B14</b>	
		105	47	3.2		13.31	<b>B5/B14</b>	
		88.6	56	3.0		15.81	<b>B5/B14</b>	
		78.8	63	3.5		17.77	<b>B5/B14</b>	
		64.9	76	2.9		21.56	<b>B5/B14</b>	
		52.9	93	2.4		26.48	<b>B5/B14</b>	
		49.7	99	2.2		28.17	<b>B5/B14</b>	
		41.4	119	1.8		33.81	<b>B5/B14</b>	
		39.0	127	1.7		35.92	<b>B5/B14</b>	
		36.0	137	1.8		38.88	<b>B5/B14</b>	
29.7	166	1.5	47.16	<b>CMB903</b>	<b>B5/B14</b>			
	24.2	204	1.2		57.93	<b>B5/B14</b>		
	22.7	217	1.2		61.63	<b>B5/B14</b>		
	18.9	261	1.0		73.96	<b>B5/B14</b>		
	17.8	277	0.9		78.58	<b>B5/B14</b>		
	46.3	107	4.2		30.25	<b>B5/B14</b>		
	35.7	138	3.6		39.26	<b>B5/B14</b>		
	29.6	167	3.0		47.25	<b>B5/B14</b>		
	24.3	203	2.5		57.52	<b>B5/B14</b>		
	21.2	233	2.1		66.17	<b>B5/B14</b>		
	16.8	293	1.7		83.20	<b>B5/B14</b>		
	13.0	381	1.3		108.09	<b>B5/B14</b>		
	10.6	466	1.1		132.23	<b>B5/B14</b>		
	9.5	522	1.0		147.92	<b>B5/B14</b>		
8.4	589	0.8	167.09	<b>B5/B14</b>				
<b>0.37</b>								
71B4 (1400 min <sup>-1</sup> )	227	15	2.7	6.18	<b>CMB402</b>	<b>B5/B14</b>		
	187	18	2.3	7.49		<b>B5/B14</b>		
	152	22	1.8	9.20		<b>B5/B14</b>		
	118	28	1.6	11.83		<b>B5/B14</b>		
	112	30	1.5	12.48		<b>B5/B14</b>		
	94.4	35	1.3	14.83		<b>B5/B14</b>		
	79.4	42	1.1	17.63		<b>B5/B14</b>		
	75.3	44	1.2	18.60		<b>B5/B14</b>		
	62.7	53	1.0	22.33		<b>B5/B14</b>		
	58.6	57	1.0	23.91		<b>B5/B14</b>		
	48.5	69	0.9	28.89		<b>B5/B14</b>		
	45.4	73	0.9	30.84		<b>B5/B14</b>		
	227	15	4.8	6.18		<b>CMB502</b>	<b>B5/B14</b>	
		187	18	3.9			7.49	<b>B5/B14</b>
		152	22	3.2			9.20	<b>B5/B14</b>
		118	28	3.2			11.83	<b>B5/B14</b>
		112	30	3.0	12.48		<b>B5/B14</b>	
		94.4	35	2.6	14.83		<b>B5/B14</b>	
		79.4	42	2.2	17.63		<b>B5/B14</b>	
		75.3	44	2.5	18.60		<b>B5/B14</b>	
		62.7	53	2.1	22.33		<b>B5/B14</b>	
		58.6	57	1.9	23.91		<b>B5/B14</b>	
		48.5	69	1.8	28.89		<b>B5/B14</b>	
		45.4	73	1.7	30.84		<b>B5/B14</b>	
		41.7	80	1.6	33.57		<b>B5/B14</b>	
		39.3	85	1.5	35.63		<b>B5/B14</b>	
		32.7	101	1.2	42.75		<b>B5/B14</b>	
		25.3	131	1.0	55.31		<b>B5/B14</b>	
	23.7	140	0.9	59.06	<b>B5/B14</b>			
	64.9	51	4.3	21.56	<b>CMB633</b>	<b>B5/B14</b>		
		52.9	63	3.5		26.48	<b>B5/B14</b>	
		49.7	67	3.3		28.17	<b>B5/B14</b>	
41.4		80	2.7	33.81		<b>B5/B14</b>		
39.0		85	2.6	35.92		<b>B5/B14</b>		
36.0		92	2.7	38.88		<b>B5/B14</b>		
29.7		112	2.2	47.16		<b>B5/B14</b>		
24.2		137	1.8	57.93		<b>B5/B14</b>		
22.7		146	1.7	61.63		<b>B5/B14</b>		
18.9		175	1.4	73.96		<b>B5/B14</b>		
17.8		186	1.3	78.58		<b>B5/B14</b>		
15.0		221	1.1	93.33		<b>B5/B14</b>		
29.7		166	5.4	47.12		<b>CMB1103</b>	<b>B5</b>	
		24.5	202	4.5			57.14	<b>B5</b>
		21.3	231	3.9			65.59	<b>B5</b>
		17.0	290	3.1			82.21	<b>B5</b>
	14.4	343	2.6	97.25	<b>B5</b>			
	10.8	459	2.0	130.07	<b>B5</b>			
	7.5	661	1.4	187.50	<b>B5</b>			
	6.4	767	1.2	217.5	<b>B5</b>			

**CMB**





P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
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**1.85**

90LB4 (1400 min <sup>-1</sup> )	<b>213</b>	78	1.9	6.58	<b>CMB633</b>	<b>B5/B14</b>
	<b>175</b>	95	1.6	7.99		<b>B5/B14</b>
	<b>143</b>	116	1.3	9.81		<b>B5/B14</b>
	<b>105</b>	158	1.0	13.31		<b>B5/B14</b>
	<b>88.6</b>	188	0.9	15.81		<b>B5/B14</b>
	<b>78.8</b>	211	1.0	17.77		<b>B5/B14</b>
	<b>211</b>	79	3.5	6.65	<b>CMB903</b>	<b>B5/B14</b>
		95	2.9	8.00		<b>B5/B14</b>
		116	2.4	9.74		<b>B5/B14</b>
		133	2.1	11.21		<b>B5/B14</b>
		167	1.8	14.09		<b>B5/B14</b>
		213	2.1	17.95		<b>B5/B14</b>
		256	1.8	21.60		<b>B5/B14</b>
		312	1.4	26.30		<b>B5/B14</b>
		359	1.3	30.25		<b>B5/B14</b>
		466	1.1	39.26		<b>B5/B14</b>
		561	0.9	47.25		<b>B5/B14</b>
		<b>198</b>	84	6.6		7.08
107	5.2		8.99	<b>B5/B14</b>		
129	4.3		10.90	<b>B5/B14</b>		
148	3.7		12.52	<b>B5/B14</b>		
186	3.3		15.69	<b>B5/B14</b>		
216	3.7		18.25	<b>B5/B14</b>		
275	2.9		23.18	<b>B5/B14</b>		
334	2.4		28.11	<b>B5/B14</b>		
383	2.1		32.27	<b>B5/B14</b>		
440	2.0		37.09	<b>B5/B14</b>		
559	1.6		47.12	<b>B5/B14</b>		
678	1.3		57.14	<b>B5/B14</b>		
778	1.2	65.59	<b>B5/B14</b>			
975	0.9	82.21	<b>B5/B14</b>			

**2.2**

100LA4 (1400 min <sup>-1</sup> )	<b>211</b>	94	3.0	6.65	<b>CMB903</b>	<b>B5/B14</b>	
	<b>175</b>	113	2.5	8.00		<b>B5/B14</b>	
	<b>144</b>	137	2.0	9.74		<b>B5/B14</b>	
	<b>125</b>	158	1.8	11.21		<b>B5/B14</b>	
	<b>99.3</b>	199	1.5	14.09		<b>B5/B14</b>	
	<b>78.0</b>	253	1.8	17.95		<b>B5/B14</b>	
	<b>64.8</b>	305	1.5	21.60		<b>B5/B14</b>	
	<b>53.2</b>	371	1.2	26.30		<b>B5/B14</b>	
	<b>46.3</b>	427	1.1	30.25		<b>B5/B14</b>	
	<b>35.7</b>	554	0.9	39.26		<b>B5/B14</b>	
	<b>198</b>	100	5.5	7.08		<b>CMB1103</b>	<b>B5/B14</b>
		127	4.3	8.99			<b>B5/B14</b>
154		3.6	10.90	<b>B5/B14</b>			
177		3.1	12.52	<b>B5/B14</b>			
221		2.8	15.69	<b>B5/B14</b>			
257		3.1	18.25	<b>B5/B14</b>			
327		2.5	23.18	<b>B5/B14</b>			
397		2.0	28.11	<b>B5/B14</b>			
455		1.8	32.27	<b>B5/B14</b>			
523		1.7	37.09	<b>B5/B14</b>			
665		1.4	47.12	<b>B5/B14</b>			
806		1.1	57.14	<b>B5/B14</b>			
925	1.0	65.59	<b>B5/B14</b>				

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
------------------------	--	------------------------	----	---	---	---

**3**

100LB4 (1400 min <sup>-1</sup> )	<b>211</b>	128	2.2	6.65	<b>CMB903</b>	<b>B5/B14</b>	
	<b>175</b>	154	1.8	8.00		<b>B5/B14</b>	
	<b>144</b>	187	1.5	9.74		<b>B5/B14</b>	
	<b>125</b>	216	1.3	11.21		<b>B5/B14</b>	
	<b>99.3</b>	271	1.1	14.09		<b>B5/B14</b>	
	<b>78.0</b>	345	1.3	17.95		<b>B5/B14</b>	
	<b>64.8</b>	416	1.1	21.60		<b>B5/B14</b>	
	<b>53.2</b>	506	0.9	26.30		<b>B5/B14</b>	
	<b>198</b>	136	4.0	7.08		<b>CMB1103</b>	<b>B5/B14</b>
		173	3.2	8.99			<b>B5/B14</b>
		210	2.6	10.90			<b>B5/B14</b>
		241	2.3	12.52			<b>B5/B14</b>
302		2.1	15.69	<b>B5/B14</b>			
351		2.3	18.25	<b>B5/B14</b>			
446		1.8	23.18	<b>B5/B14</b>			
541		1.5	28.11	<b>B5/B14</b>			
621		1.3	32.27	<b>B5/B14</b>			
713		1.3	37.09	<b>B5/B14</b>			
906		1.0	47.12	<b>B5/B14</b>			

**4**

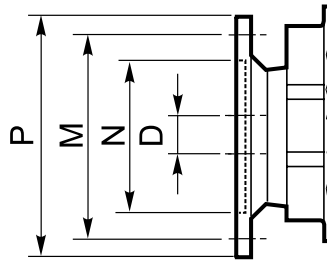
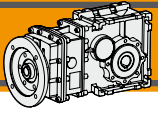
112M4 (1400 min <sup>-1</sup> )	<b>211</b>	171	1.6	6.65	<b>CMB903</b>	<b>B5/B14</b>	
	<b>175</b>	205	1.4	8.00		<b>B5/B14</b>	
	<b>144</b>	250	1.1	9.74		<b>B5/B14</b>	
	<b>125</b>	287	1.0	11.21		<b>B5/B14</b>	
	<b>99.3</b>	361	0.8	14.09		<b>B5/B14</b>	
	<b>78.0</b>	460	1.0	17.95		<b>B5/B14</b>	
	<b>198</b>	182	3.0	7.08		<b>CMB1103</b>	<b>B5/B14</b>
		231	2.4	8.99			<b>B5/B14</b>
		280	2.0	10.90			<b>B5/B14</b>
		321	1.7	12.52			<b>B5/B14</b>
		402	1.5	15.69			<b>B5/B14</b>
		468	1.7	18.25			<b>B5/B14</b>
595		1.4	23.18	<b>B5/B14</b>			
721		1.1	28.11	<b>B5/B14</b>			
828		1.0	32.27	<b>B5/B14</b>			
951		0.9	37.09	<b>B5/B14</b>			

**5.5**

132S4 (1400 min <sup>-1</sup> )	<b>198</b>	250	2.2	7.08	<b>CMB1103</b>	<b>B5</b>
	<b>156</b>	317	1.7	8.99		<b>B5</b>
	<b>128</b>	385	1.4	10.90		<b>B5</b>
	<b>112</b>	441	1.2	12.52		<b>B5</b>
	<b>89.2</b>	553	1.1	15.69		<b>B5</b>
	<b>76.7</b>	644	1.3	18.25		<b>B5</b>
	<b>60.4</b>	818	1.0	23.18		<b>B5</b>

**7.5**

132MA4 (1400 min <sup>-1</sup> )	<b>198</b>	340	1.6	7.08	<b>CMB1103</b>	<b>B5</b>
	<b>156</b>	432	1.3	8.99		<b>B5</b>
	<b>128</b>	524	1.0	10.90		<b>B5</b>
	<b>112</b>	602	0.9	12.52		<b>B5</b>
	<b>89.2</b>	754	0.8	15.69		<b>B5</b>
	<b>76.7</b>	878	0.9	18.25		<b>B5</b>

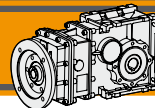


	IEC	N	M	P	D	i (rapporto / ratio)													
						6.18	7.49	9.2	11.83	12.48	14.83	17.63	18.6	22.33	23.91	28.89	30.84	33.57	35.63
<b>CMB402</b>	<b>71B5</b>	110	130	160	14														
	<b>71B14</b>	70	85	105															
	<b>63B5</b>	95	115	140	11														
	<b>63B14</b>	60	75	90															
	<b>56B5</b>	80	100	120	9														
	<b>56B14</b>	50	65	80															

	IEC	N	M	P	D	i (rapporto / ratio)													
						6.18	7.49	9.2	11.83	12.48	14.83	17.63	18.6	22.33	23.91	28.89	30.84	33.57	35.63
<b>CMB502</b>	<b>80B5</b>	130	165	200	19														
	<b>80B14</b>	80	100	120															
	<b>71B5</b>	110	130	160	14														
	<b>71B14</b>	70	85	105															
	<b>63B5</b>	95	115	140	11														
	<b>63B14</b>	60	75	90															
	<b>56B5</b>	80	100	120	9														
	<b>56B14</b>	50	65	80															

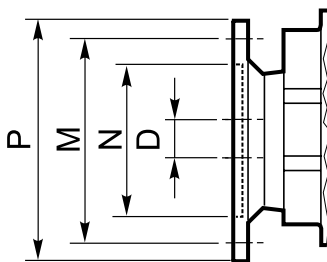
N.B.  
Le aree evidenziate indicano l'applicabilità della corrispondente grandezza motore.  
**B/BS** = Boccia di riduzione in acciaio

N.B.  
Highlighted areas indicate motor inputs available on each size of unit.  
**B/BS** = Metal shaft sleeve



Motori applicabili

IEC Motor adapters



CMB

	IEC	N	M	P	D	i (rapporto / ratio)																
						6.58	7.99	9.81	10.44	12.53	13.31	15.81	17.77	21.56	26.48	28.17	33.81	35.92	38.88	47.16	57.93	61.63
<b>CMB633</b>	<b>90 B5</b>	130	165	200	24																	
	<b>90 B14</b>	95	115	140																		
	<b>80 B5</b>	130	165	200	19																	
	<b>80 B14</b>	80	100	120																		
	<b>71 B5</b>	110	130	160	14																	
	<b>71 B14</b>	70	85	105																		
	<b>63 B5</b>	95	115	140	11																	

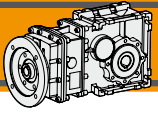
	IEC	N	M	P	D	i (rapporto / ratio)																
						6.65	8.00	9.74	11.21	14.09	17.95	21.60	26.30	30.25	39.26	47.25	57.52	66.17	83.20	108.09	132.23	147.92
<b>CMB903</b>	<b>100/112B5</b>	180	215	250	28																	
	<b>100/112B14</b>	110	130	160																		
	<b>90 B5</b>	130	165	200	24																	
	<b>90 B14</b>	95	115	140																		
	<b>80 B5</b>	130	165	200	19																	
	<b>80 B14</b>	80	100	120																		
	<b>71 B5</b>	110	130	160	14	<b>B</b>																

	IEC	N	M	P	D	i (rapporto / ratio)														
						7.08	8.99	10.90	12.52	15.69	18.25	23.18	28.11	32.27	37.09	47.12	57.14	65.59	82.21	97.25
<b>CMB1103</b>	<b>132/B5</b>	230	265	300	38															
	<b>100/112B5</b>	180	215	250	28															
	<b>100/112B14</b>	110	130	160																
	<b>90 B5</b>	130	165	200	24															
	<b>90 B14</b>	95	115	140																
	<b>80 B5</b>	130	165	200	19															

N.B.  
Le aree evidenziate indicano l'applicabilità della corrispondente grandezza motore.  
**B/BS** = Boccia di riduzione in acciaio

N.B.  
Highlighted areas indicate motor inputs available on each size of unit.  
**B/BS** = Metal shaft sleeve





**Dimensioni**

**Dimensions**

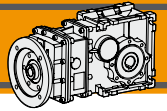
CMB CMBIS	A	C	E	G	H	I	K	KE	a <sub>2</sub>	L	M	N f7	N1	O	P	Q	R	S	U	V	CMB CMBIS	
																					Peso / Weight [kg]	
402	70	100	121.5	154.5	50	24.5	60	4-M6x11	45°	73	75	60	71	6.5	87	55	71.5	6.5	151.5	35	3.4	3.5
502	80	120	144	165.5 <sup>(1)</sup>	60	23	70	4-M8x12	45°	87	85	70	85	8.5	98	64	84	7	162.5	40	4.7 <sup>(1)</sup>	4.8
				175.5 <sup>(2)</sup>																	5 <sup>(2)</sup>	
633	100	144	174	241	72	0	85	7-M8x15	45°	106	95	80	104	8.5	110	80	102	8	233	50	9.5	9.2
903	140	206	238	287	103	0	100	7-M10x20	45°	134	130	110	130	13	160	102	135	11	279.5	70	18.4	18.1
1103	170	255	295	277.5	127.5	30	115	7-M10x19	45°	148	165	130	145	14	200	125	167.5	14	256.5	85	50	50.3

<sup>(1)</sup> IEC 56/63/71

<sup>(2)</sup> IEC 80

CMB CMBIS	Albero entrata Input shaft					Albero uscita cavo Hollow output shaft				
	D <sub>1</sub> j6	E <sub>1</sub>	F <sub>1</sub>	G <sub>1</sub>	T <sub>1</sub>	D <sub>2</sub> H8	F <sub>2</sub>	G <sub>2</sub>	b	t
402	14	30	5	M6	16	18 20	26	78	6	20.8 22.8
502	14	30	5	M6	16	25	30	92	8	28.3
633	16	40	5	M6	18	25	35	112	8	28.3
903	19	40	6	M6	21.5	35	45	140	10	38.3
1103	28	60	8	M10	31	42	50	155	12	45.3

CMB CMBIS	Flange uscita / Output flanges																										
	F									FL									FB								
	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ
402	45°	67	7.5	4.5	80-95	60	9	110	95	45°	97	7.5	4.5	80-95	60	9	110	95	45°	80	8.5	5	115-125	95	9.5	140	112
502	45°	90	9	5	90-110	70	11	125	110	45°	120	9	5	90-110	70	11	125	110	45°	89	9	5	130-145	110	9.5	160	132
633	45°	82	10	6	150 - 160	115	11	180	142	45°	112	10	8	150 - 160	115	11	180	142	45°	98	11	5	165	130	11	200	160
903	45°	111	13	6	175 - 188	152	14	210	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1103	45°	131	15	6	230	170	14	280	260	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

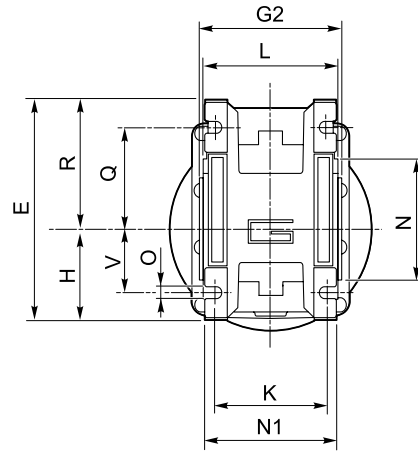
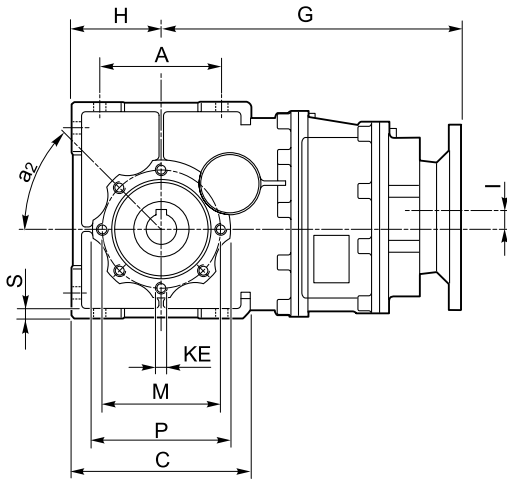


Dimensioni

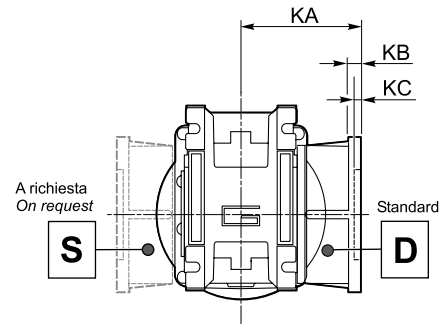
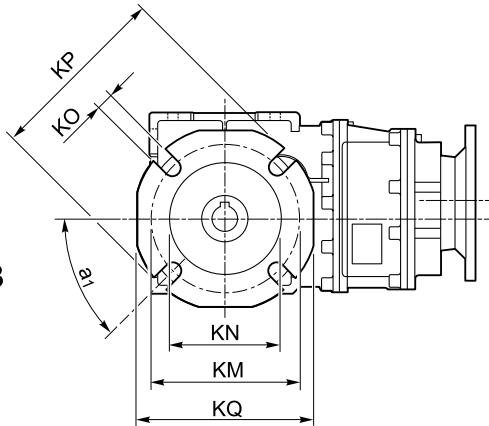
Dimensions

CMB.. - CMBIS..

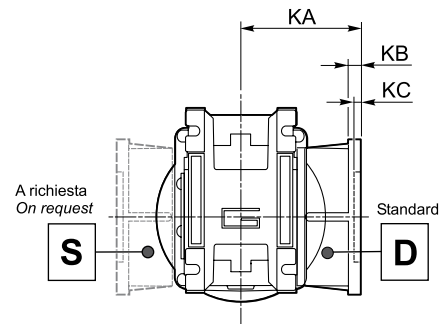
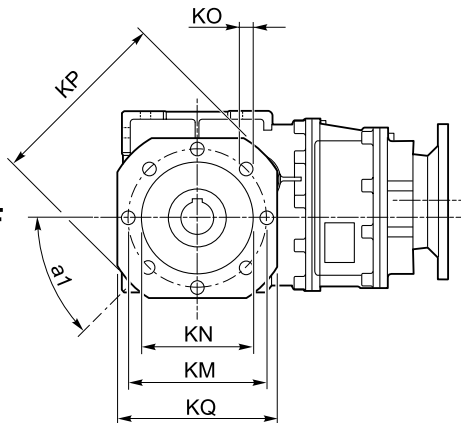
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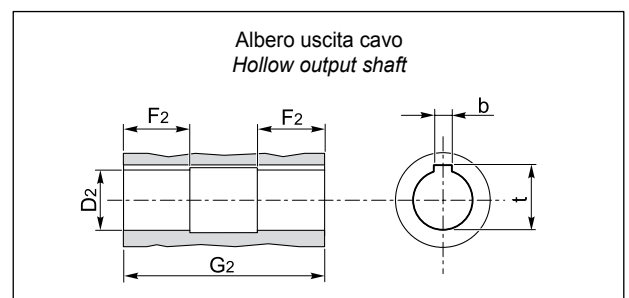
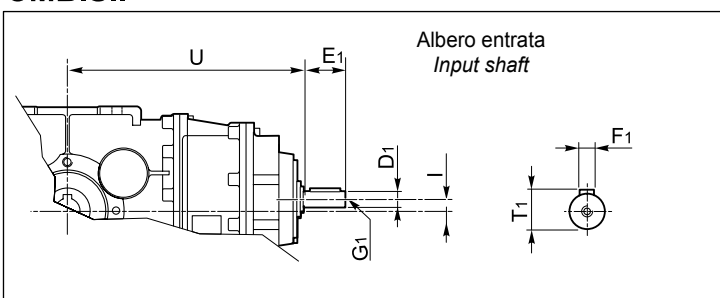
CMB..F  
CMB..FL  
CMB..FB



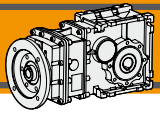
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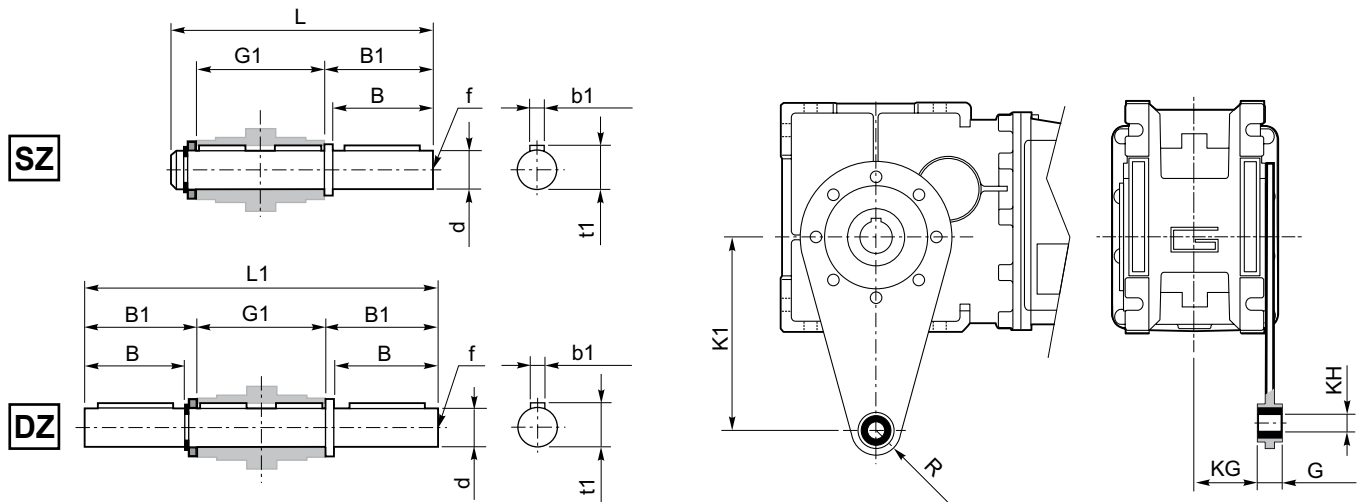


CMB



Accessori

Accessories



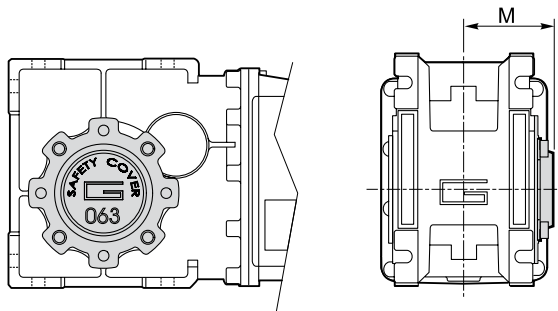
Albero lento / Output shaft

CMB CMBIS	d h7	B	B1	G1	L	L1	f	b1	t1
402	18	40	43	78	128	164	M6	6	20.5
502	25	50	53.5	92	153	199	M10	8	28
633	25	50	53.5	112	173	219	M10	8	28
903	35	80	84.5	140	234	309	M12	10	38
1103	42	80	84.5	155	249	324	M16	12	45

Braccio di reazione / Torque arm

CMB CMBIS	K1	G	KG	KH	R
402	100	14	31	10	18
502	100	14	38	10	18
633	150	14	47.5	10	18
903	200	25	56.5	20	30
1103	250	30	62	25	35

**SC - Safety cover**



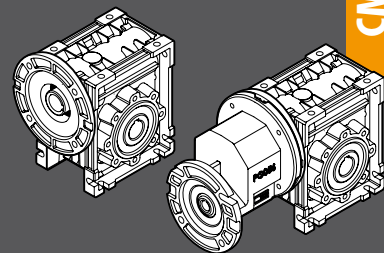
CMB CMBIS	M
402	54.5
502	62.5
633	73
903	94
1103	102



**TRANSTECNO**<sup>TM</sup>  
THE MODULAR GEARMOTOR

**CM-CMP**

CM - CMP

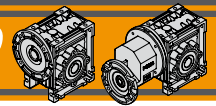


**RIDUTTORI A VITE SENZA FINE**  
**WORMGEARBOXES**

**RIDUTTORI A VITE SENZA FINE CON PRECOPPIA**  
**PRE-STAGE WORMGEARBOXES**



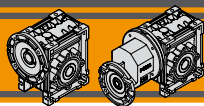




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## Caratteristiche tecniche

## Technical features

L'elevata modularità contraddistingue i riduttori a vite senza fine della serie CM e CMP: i diversi kit entrata ed uscita li rendono estremamente versatili.

The high degree of modularity is a design feature of CM and CMP wormgearboxes range thanks to a wide selection of input and output kits.

Le caratteristiche principali della serie CM e CMP sono:

Main features of CM and CMP range are:

- Carcassa in alluminio nelle grandezze 026, 030, 040, 050, 063, 075, 090 e 110. La grandezza 130 è costruita con carcassa in ghisa;
- Le grandezze 090, 110 e 130 sono fornite con cuscinetti a rulli conici sulla vite;
- Le precoppie sono costruite con carcassa in alluminio;
- Lubrificazione permanente con olio sintetico.
- Die-cast aluminum housing on sizes 026, 030, 040, 050, 063, 075, 090 and 110. Cast iron housing on size 130;
- Double taper roller bearing on sizes 090, 110 and 130;
- Die-cast aluminum housing on pre-stage units;
- Permanent synthetic oil long-life lubrication.

## Designazione

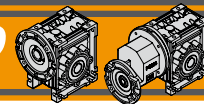
## Classification

### RIDUTTORI A VITE SENZA FINE / WORMGEARBOXES

RIDUTTORE / GEARBOX										
CM	050	U	10	71	B5	SZDX	BRSX	90	B3	VS
Tipo Type	Grandezza Size	Versione riduttore Gearbox Version	Rapporto Ratio	IEC 	Forma costruttiva Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Pos. di montaggio Mounting position	Opzioni Options
<b>CM</b> 	<b>026</b> <b>030</b> <b>040</b> <b>050</b> <b>063</b> <b>075</b> <b>090</b> <b>110</b> <b>130</b>	<b>U</b> <b>FD</b> <b>FS</b> <b>FLD</b> <b>FLS</b> <b>FBD</b> <b>FBS</b>	Vedere tabella  See tables	<b>56..</b> — <b>132..</b>	<b>B5</b> <b>B14</b>	<b>SZDX</b> <b>SZSX</b> <b>DZ</b>	<b>BRDX</b> <b>BRSX</b>	<b>0°</b> <b>90°</b> <b>180°</b> <b>270°</b>	<b>B3</b> <b>B8</b> <b>B6</b> <b>B7</b> <b>V5</b> <b>V6</b>	<b>VS</b>
<b>CMIS</b> 										

### RIDUTTORI A VITE SENZA FINE CON PRECOPPIA / PRE-STAGE WORMGEARBOXES

RIDUTTORE / GEARBOX											
CMP	063/050	U	90	63	B14	SZDX	BRSX	90	P4	B3	VS
Tipo Type	Grandezza Size	Versione Riduttore Gearbox Version	Rapporto Ratio	IEC 	Forma costruttiva Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Pos. di montaggio precoppia Pre stage mounting position	Pos. di montaggio Mounting position	Opzioni Options
<b>CMP</b> 	<b>056/030</b> <b>056/040</b> <b>063/040</b> <b>063/050</b> <b>063/063</b> <b>071/050</b> <b>071/063</b> <b>071/075</b> <b>071/090</b> <b>080/063</b> <b>080/075</b> <b>080/090</b> <b>080/110</b> <b>080/130</b> <b>090/075</b> <b>090/090</b> <b>090/110</b> <b>090/130</b>	<b>U</b> <b>FD</b> <b>FS</b> <b>FLD</b> <b>FLS</b> <b>FBD</b> <b>FBS</b>	Vedere tabella  See tables	<b>56..</b> — <b>80..</b>	<b>B5</b> <b>B14</b>	<b>SZDX</b> <b>SZSX</b> <b>DZ</b>	<b>BRDX</b> <b>BRSX</b>	<b>0°</b> <b>90°</b> <b>180°</b> <b>270°</b>	<b>P1</b> <b>P2</b> <b>P3 (standard)</b> <b>P4</b>	<b>B3</b> <b>B8</b> <b>B6</b> <b>B7</b> <b>V5</b> <b>V6</b>	<b>VS</b>



**Designazione**

**Classification**

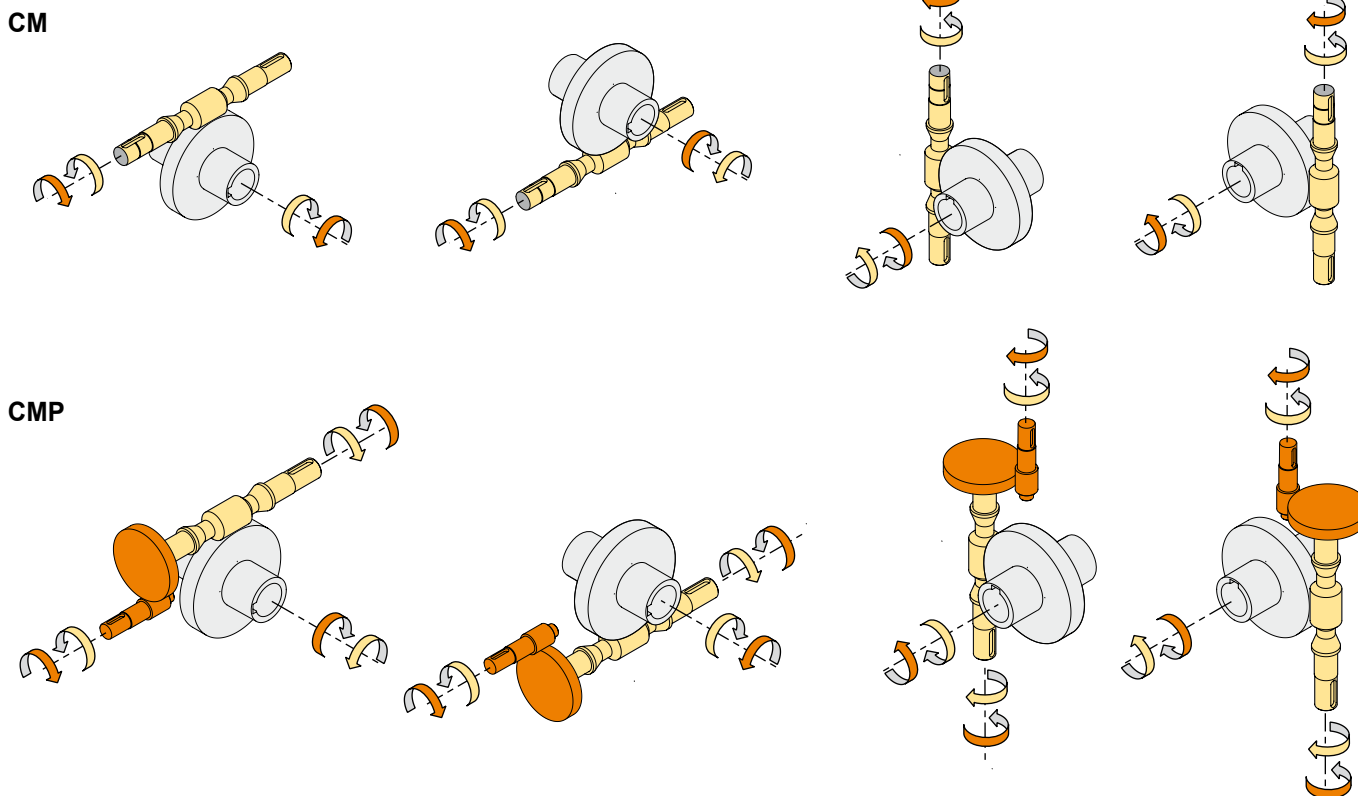
Versione Riduttore Gearbox Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle
<p><b>U</b>      <b>FD</b> <b>FLD</b>      <b>FS</b> <b>FBD</b>      <b>FLS</b>             <b>FBS</b></p>	<p><b>SZDX</b>      <b>SZSX</b>      <b>DZ</b></p>	<p><b>BRDX</b>      <b>BRSX</b></p>	<p>90°      90° 180°      0° 270°      270°</p>

MOTORE CM / CM MOTOR				
<b>0.75kW</b>	<b>4p</b>	<b>3ph</b>	<b>50Hz</b>	<b>T1</b>
Potenza Power	Poli Poles	Fasi Phases	Frequenza Frequency	Pos. morsetteria Terminal box pos.
Vedi tabelle See tables	<b>2p</b> <b>4p</b> <b>6p</b> <b>8p</b>	<b>1ph</b> <b>3ph</b>	<b>50Hz</b> <b>60Hz</b>	<b>T1 (Std)</b> T4      T2 T3

CM/CMP

**Sensi di rotazione**

**Direction of rotation**

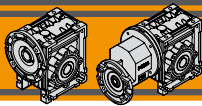


**Simbologia**

**Symbols**

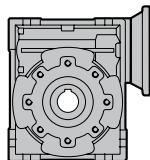
$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>	sf	Fattore di servizio / <i>Service factor</i>
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>	Rd %	Rendimento dinamico / <i>Dynamic efficiency</i>
i	Rapporto di riduzione / <i>Ratio</i>	Rs %	Rendimento statico / <i>Static efficiency</i>
$P_1$ [kW]	Potenza in entrata / <i>Nominal input power</i>	$R_2$ [N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$M_2$ [Nm]	Coppia in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>	$A_2$ [N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
$P_{n1}$ [kW]	Potenza nominale in entrata / <i>Nominal input power</i>	Z	Numero di principi della vite / <i>Worm starts</i>
$M_{n2}$ [Nm]	Coppia nominale in uscita in funzione di $P_{n1}$ / <i>Nominal output torque referred to <math>P_{n1}</math></i>	$\beta$	Angolo d'elica / <i>Helix angle</i>





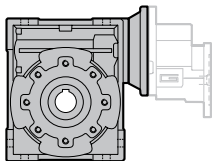
### Lubrificazione

### Lubrication



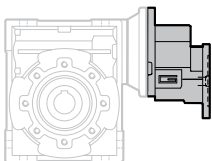
CM	Quantità di olio (litri) / Oil quantity (litres)					
	B3	B8	B6	B7	V5	V6
026	0.02					
030	0.03					
040	0.07					
050	0.1					
063	0.25					
075	0.4					
090	0.7					
110	1.1					
130	4.5	3.3	3.5	3.5	4.5	3.3

Lubrificati a vita  
Life lubrication



CMP	Quantità di olio (litri) / Oil quantity (litres)					
	B3	B8	B6	B7	V5	V6
056/030	0.03					
056/040 - 063/040	0.07					
063/050 - 071/050	0.1					
063/063 - 071/063 - 080/063	0.25					
071/075 - 080/075 - 090/075	0.4					
071/090 - 080/090 - 090/090	0.7					
080/110 - 090/110	1.1					
080/130 - 090/130	4.5	3.3	3.5	3.5	4.5	3.3

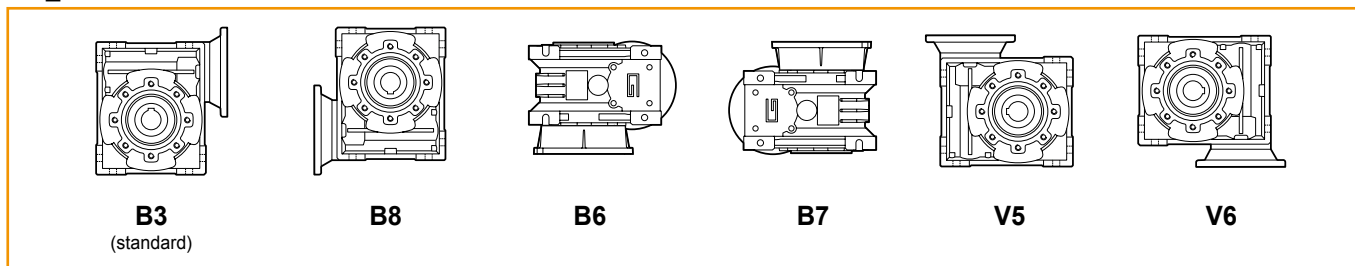
Lubrificati a vita  
Life lubrication



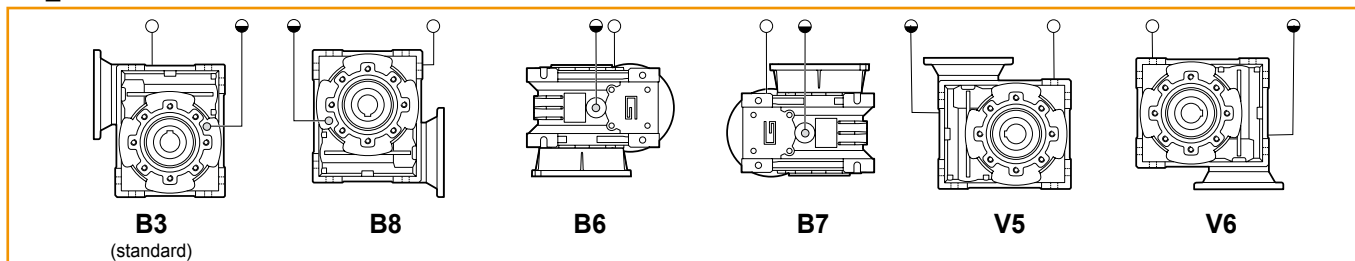
CMP				
056/030 056/040	063/040 063/050 063/063	071/050 071/063 071/075 071/090	080/063 080/075 080/090 080/110 080/130	090/075 090/090 090/110 090/130
Lubrificazione a vita Life lubricated				

### Posizioni di montaggio / Mounting positions

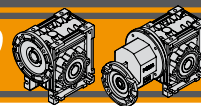
#### CM\_CMP 026-030-040-050-063-075-090-110



#### CM\_CMP 130

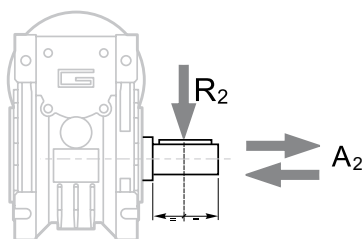


○ Sfiato e tappo di riempimento / Breather and filling plug  
● Livello olio / Oil level plug



Carichi radiali

Radial loads

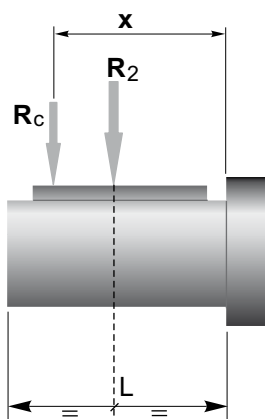


$$A_2 = R_2 \times 0.2$$

n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]								
	CM026	CM030	CM040	CM050	CM063	CM075	CM090	CM110	CM130
187	400	674	1264	1770	2445	2824	3161	5058	5732
140	490	743	1392	1949	2692	3110	3481	5570	6313
93	580	851	1596	2234	3085	3564	3990	6384	7235
70	610	936	1754	2456	3392	3918	4386	7018	7953
56	610	1008	1890	2646	3654	4221	4725	7560	8567
47	610	1069	2004	2805	3874	4475	5009	8014	9083
35	610	1179	2210	3095	4273	4937	5526	8842	10021
28	610	1270	2381	3334	4603	5318	5953	9524	10794
23	610	1356	2542	3559	4915	5678	6356	10170	11526
18	610	1471	2759	3862	5334	6162	6897	11036	12507
14	610	1600	3000	4200	5800	6700	7500	12000	13600
	CMP... /030	CMP... /040	CMP... /050	CMP... /063	CMP... /075	CMP... /090	CMP... /110	CMP... /130	

Quando il carico radiale risultante non è applicato sulla mezza-  
ria dell'albero occorre calcolare quello effettivo con la seguente  
formula:

When the resulting radial load is not applied on the centre line  
of the shaft it is necessary to calculate the effective load with the  
following formula:

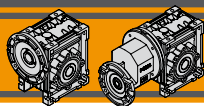


	CM	CM / CMP							
	026	030	040	050	063	075	090	110	130
a	56	65	84	101	120	131	182	176	188
b	43	50	64	76	95	101	122	136	148
R <sub>2MAX</sub>	610	1600	3000	4200	5800	6700	7500	12000	13600

$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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



### Dati di dentatura

### Toothing data

	Dati della coppia vite-corona Worm wheel data	Rapporto / Ratio											
		5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	Z	6	4	3	2	2		1	1	1	1		
	β	34° 35'	24° 41'	19° 1'	12° 57'	10° 30'		6° 33'	5° 17'	4° 26'	3° 49'		
CM030	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	27° 4'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'
CM040	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	34° 19'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'
CM050	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	33° 37'	23° 54'	18° 23'	12° 29'	10° 6'	8° 28'	6° 19'	5° 5'	4° 15'	3° 39'	2° 51'	2° 20'
CM063	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	34° 23'	24° 31'	18° 53'	12° 50'	10° 24'	8° 44'	6° 30'	5° 14'	4° 23'	3° 47'	2° 57'	2° 25'
CM075	Z		4	3	2	2	2	1	1	1	1	1	1
	β		26° 17'	20° 20'	13° 52'	11° 18'	9° 32'	7° 2'	5° 42'	4° 48'	4° 8'	3° 14'	2° 40'
CM090	Z		4	3	2	2	2	1	1	1	1	1	1
	β		29° 11'	22° 43'	15° 36'	12° 50'	10° 53'	7° 56'	6° 30'	5° 29'	4° 45'	3° 45'	3° 6'
CM110	Z		4	3	2	2	2	1	1	1	1	1	1
	β		28° 14'	21° 56'	15° 1'	14° 41'	12° 34'	7° 38'	7° 28'	6° 21'	5° 32'	4° 24'	3° 39'
CM130	Z		4	3	2	2	2	1	1	1	1	1	1
	β		28° 43'	22° 20'	15° 19'	13° 47'	11° 54'	7° 48'	7° 00'	6° 01'	5° 16'	4° 08'	3° 27'

### Rendimento

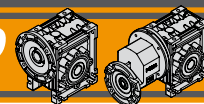
### Efficiency

	n <sub>1</sub> [min <sup>-1</sup> ]	Rendimento Efficiency	Rapporto / Ratio											
			5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	2800	Rd	89	87	85	83	80		73	68	64	60		
	1400		87	84	83	78	74		66	61	57	53		
	900		84	83	80	75	71		61	57	52	48		
			Rs	72	71	68	61	56	46	41	36	34		
CM030	2800	Rd	89	88	86	84	81	78	74	70	65	62	57	52
	1400		86	85	84	79	75	72	67	62	58	55	48	43
	900		84	83	81	75	71	68	62	58	53	49	43	39
			Rs	72	67	63	55	50	43	39	35	31	27	23
CM040	2800	Rd	90	89	87	84	83	80	77	73	69	66	60	56
	1400		88	86	84	81	78	74	70	65	60	58	52	46
	900		86	84	82	77	74	70	66	60	57	53	46	41
			Rs	74	71	67	60	55	51	45	40	36	32	28
CM050	2800	Rd	91	90	88	86	84	82	78	74	71	68	62	58
	1400		89	87	85	82	79	76	72	67	63	60	54	49
	900		87	85	84	79	75	72	68	62	59	55	48	43
			Rs	73	70	66	59	55	51	44	39	35	32	27
CM063	2800	Rd	91	90	88	86	84	83	79	76	73	70	65	60
	1400		90	88	86	84	81	78	75	70	66	63	57	52
	900		89	86	84	81	78	75	70	65	61	58	52	47
			Rs	73	71	67	60	55	51	45	40	36	33	28
CM075	2800	Rd		90	89	87	85	84	81	78	75	72	68	63
	1400			89	87	84	83	80	77	73	69	66	60	56
	900			87	85	83	80	77	73	68	64	61	55	50
			Rs		71	68	61	57	53	46	42	38	35	29
CM090	2800	Rd		91	90	88	86	85	83	80	78	75	71	67
	1400			90	88	86	84	83	79	76	72	69	64	60
	900			88	87	84	82	80	76	72	68	65	60	55
			Rs		73	70	64	60	56	49	45	41	38	32
CM110	2800	Rd		90	89	88	87	86	82	81	79	77	73	70
	1400			89	88	86	85	84	80	79	76	73	68	64
	900			88	87	84	83	82	78	75	71	68	63	59
			Rs		72	69	63	62	59	48	46	44	41	36
CM130	2800	Rd		90	89	88	87	86	82	80	79	77	72	70
	1400			89	88	86	84	83	79	76	75	73	69	64
	900			88	87	84	82	81	77	74	73	70	64	59
			Rs		72	69	62	61	59	49	46	43	39	34



Rendimento teorico del riduttore dopo il rodaggio  
Theoretical efficiency of the gearbox after the first running period








**Dati tecnici**


$n_1$  1400 min<sup>-1</sup>


**Technical data**


	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMIS026</b>				
	280	13	0.44	5
	187	14	0.33	7,5
	140	14	0.25	10
	93	14	0.18	15
	70	14	0.14	20
	47	15	0.11	30
	35	14	0.08	40
	28	13	0.07	50
	23	12	0.06	60


	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMIS030</b>				
	280	18	0.61	5
	187	20	0.46	7.5
	140	21	0.37	10
	93	21	0.26	15
	70	19	0.19	20
	56	20	0.16	25
	47	22	0.16	30
	35	20	0.12	40
	28	19	0.10	50
	23	17	0.08	60
	18	15	0.06	80
	14	14	0.05	100


	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMIS040</b>				
	280	41	1.37	5
	187	44	1.00	7.5
	140	45	0.79	10
	93	45	0.54	15
	70	40	0.38	20
	56	38	0.30	25
	47	48	0.34	30
	35	42	0.24	40
	28	39	0.19	50
	23	36	0.15	60
	18	33	0.12	80
	14	31	0.10	100


	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMIS050</b>				
	280	75	2.5	5
	187	79	1.8	7.5
	140	82	1.4	10
	93	82	0.98	15
	70	72	0.67	20
	56	70	0.54	25
	47	88	0.60	30
	35	76	0.42	40
	28	72	0.34	50
	23	69	0.28	60
	18	60	0.20	80
	14	56	0.17	100

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMIS063</b>				
	280	134	4.4	5
	187	144	3.2	7.5
	140	148	2.5	10
	93	154	1.8	15
	70	136	1.23	20
	56	135	1.0	25
	47	166	1.1	30
	35	142	0.74	40
	28	136	0.60	50
	23	126	0.49	60
	18	118	0.38	80
	14	116	0.33	100

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMIS075</b>				
	187	219	4.8	7.5
	140	238	4.0	10
	93	249	2.9	15
	70	224	2.0	20
	56	200	1.5	25
	47	269	1.7	30
	35	235	1.2	40
	28	212	0.90	50
	23	210	0.78	60
	18	190	0.58	80
	14	175	0.46	100

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMIS090</b>				
	187	317	6.9	7.5
	140	354	5.9	10
	93	404	4.6	15
	70	384	3.4	20
	56	342	2.4	25
	47	457	2.8	30
	35	404	1.9	40
	28	357	1.5	50
	23	328	1.2	60
	18	302	0.86	80
	14	278	0.68	100

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMIS110</b>				
	187	560	12.3	7.5
	140	617	10.3	10
	93	678	7.7	15
	70	661	5.7	20
	56	615	4.3	25
	47	755	4.6	30
	35	716	3.3	40
	28	648	2.5	50
	23	578	1.9	60
	18	523	1.4	80
	14	486	1.1	100

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMIS130</b>				
	187	750	16.5	7.5
	140	820	13.7	10
	93	910	10.3	15
	70	910	7.9	20
	56	920	6.5	25
	47	1050	6.5	30
	35	1050	5.1	40
	28	970	3.8	50
	23	890	3.0	60
	18	830	2.2	80
	14	735	1.7	100

Nota:

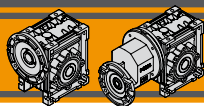
$Pn_1$  è la potenza meccanica.

La potenza applicabile è ridotta del fattore termico.

Per maggiori dettagli consultare il nostro Servizio Tecnico.

Note:

$Pn_1$  is an input mechanical power which must be reduced by the heating factor in order to get the relevant one. For more details please contact our Technical Service.









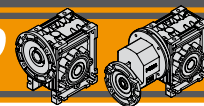
# CM/CMP

## RIDUTTORI A VITE SENZA FINE WORMGEARBOXES

### Dati tecnici







### Technical data

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				
<b>0.06</b>								<b>0.09</b>								
56A4 (1400 min <sup>-1</sup> )	280	2	7.3	5	CM026		B14	56A2 (2800 min <sup>-1</sup> )	31	17	1.6	90	CM030	CMP056/030	B14	
	187	3	5.4	7.5	CM026		B14		28	16	0.7	100		CMP056/030	B5/B14	
	140	3	4.1	10	CM026		B14		23	21	1.1	120		CMP056/030	B14	
	93	5	2.9	15	CM026		B14		19	24	0.9	150		CMP056/030	B14	
	70	6	2.3	20	CM026		B14		CM040	47	12	2.4		60		B5/B14
	47	8	1.9	30	CM026		B14			47	13	3.4		60	CMP056/040	B14
	35	10	1.4	40	CM026		B14			37	16	2.8		75	CMP056/040	B14
	28	12	1.1	50	CM026		B14			31	18	3.1		90	CMP056/040	B14
	23	13	0.9	60	CM026		B14			23	22	2.2		120	CMP056/040	B14
	280	2	10.2	5	CM030		B5/B14			19	26	1.8		150	CMP056/040	B14
	187	3	7.7	7.5	CM030		B5/B14			16	29	1.5	180	CMP056/040	B14	
	140	3	6.1	10	CM030		B5/B14			12	33	1.2	240	CMP056/040	B14	
	93	5	4.3	15	CM030		B5/B14			9.3	37	1.0	300	CMP056/040	B14	
	70	6	3.1	20	CM030		B5/B14			56B4 (1400 min <sup>-1</sup> )	280	3	4.9	5	CM026	
	56	7	2.7	25	CM030		B5/B14		187		4	3.6	7.5	CM026		B14
	47	8	2.7	30	CM030		B5/B14		140		5	2.7	10	CM026		B14
	35	10	2.0	40	CM030		B5/B14		93		7	1.9	15	CM026		B14
	28	12	1.6	50	CM030		B5/B14		70		9	1.5	20	CM026		B14
	23	14	1.3	60	CM030		B5/B14		47		12	1.2	30	CM026		B14
	23	16	1.6	60		CMP056/030	B14		35		15	0.9	40	CM026		B14
19	19	1.4	75		CMP056/030	B14	28	17	0.7		50	CM026		B14		
18	16	1.0	80	CM030		B5/B14	CM030	280	3		6.8	5			B5/B14	
16	21	1.5	90		CMP056/030	B14		187	4		5.1	7.5	CM030		B5/B14	
14	18	0.8	100	CM030		B5/B14		140	5		4.1	10	CM030		B5/B14	
12	26	1.1	120		CMP056/030	B14		93	7		2.9	15	CM030		B5/B14	
9.3	29	0.9	150		CMP056/030	B14		70	9		2.1	20	CM030		B5/B14	
28	12	3.2	50	CM040		B5/B14		56	11		1.8	25	CM030		B5/B14	
23	14	2.5	60	CM040		B5/B14		47	12		1.8	30	CM030		B5/B14	
23	17	3.4	60		CMP056/040	B14		35	15		1.3	40	CM030		B5/B14	
19	20	2.6	75		CMP056/040	B14		28	18		1.1	50	CM030		B5/B14	
18	17	1.9	80	CM040		B5/B14		23	20		0.8	60	CM030		B5/B14	
16	23	3.1	90		CMP056/040	B14	23	24	1.1		60			B14		
14	19	1.6	100	CM040		B5/B14	19	29	0.9		75			B14		
12	28	2.2	120		CMP056/040	B14	18	24	0.6	80	CM030		B5/B14			
9.3	32	1.8	150		CMP056/040	B14	16	32	1.0	90			B14			
7.8	35	1.5	180		CMP056/040	B14	12	38	0.8	120			B14			
5.8	41	1.1	240		CMP056/040	B14	CM040	35	16	2.6	40			B5/B14		
4.7	46	0.9	300		CMP056/040	B14		28	18	2.1	50	CM040		B5/B14		
<b>0.09</b>								23	21	1.7	60	CM040		B5/B14		
56A2 (2800 min <sup>-1</sup> )	560	1	7.3	5	CM026			B14	23	25	2.3	60			B14	
	373	2	5.5	7.5	CM026			B14	19	30	1.7	75			B14	
	280	3	4.2	10	CM026			B14	18	26	1.3	80	CM040		B5/B14	
	187	4	2.9	15	CM026			B14	16	34	2.1	90			B14	
	140	5	2.2	20	CM026			B14	14	28	1.1	100	CM040		B5/B14	
	93	7	1.8	30	CM026			B14	12	42	1.5	120			B14	
	70	8	1.3	40	CM026			B14	9.3	48	1.2	150			B14	
	56	10	1.0	50	CM026		B14	7.8	53	1.0	180			B14		
	47	11	0.8	60	CM026		B14	5.8	62	0.8	240			B14		
	140	5	2.8	20	CM030		B5/B14	63A6 (900 min <sup>-1</sup> )	180	4	5.2	5	CM030		B5/B14	
	112	6	2.5	25	CM030		B5/B14		120	6	4.0	7.5	CM030		B5/B14	
	93	7	2.6	30	CM030		B5/B14		90	8	3.1	10	CM030		B5/B14	
	70	9	1.9	40	CM030		B5/B14		60	11	2.3	15	CM030		B5/B14	
	56	10	1.5	50	CM030		B5/B14		45	14	1.6	20	CM030		B5/B14	
	47	11	1.2	60	CM030		B5/B14		36	16	1.4	25	CM030		B5/B14	
	47	13	1.7	60		CMP056/030	B14		30	18	1.5	30	CM030		B5/B14	
	37	15	1.4	75		CMP056/030	B14		23	22	1.0	40	CM030		B5/B14	
	35	14	0.9	80	CM030		B5/B14		18	25	0.9	50	CM030		B5/B14	



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Technical data

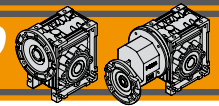
$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i					
<b>0.09</b>								<b>0.12</b>									
63A6 (900 min <sup>-1</sup> )	45	14	3.2	20	CM040			56B2 (2800 min <sup>-1</sup> )	35	20	1.4	80	CM040		B5/B14		
	36	17	2.6	25	CM040				31	24	2.4	90	CM040	CMP056/040	B14		
	30	19	3.0	30	CM040				28	23	1.0	100	CM040		B5/B14		
	23	23	2.1	40	CM040				23	29	1.7	120		CMP056/040	B14		
	18	27	1.7	50	CM040				19	34	1.3	150		CMP056/040	B14		
	15	30	1.4	60	CM040				16	38	1.1	180		CMP056/040	B14		
	15	38	1.8	60		CMP063/040	B14		12	44	0.9	240		CMP056/040	B14		
	12	45	1.3	75		CMP063/040	B14										
	11	35	1.1	80	CM040		B5/B14										
	10	48	1.7	90		CMP063/040	B14		63A4 (1400 min <sup>-1</sup> )	280	4	5.1	5	CM030		B5/B14	
	9	39	0.9	100	CM040		B5/B14		187	5	3.8	7.5	CM030		B5/B14		
	9	39	0.9	100	CM040		B5/B14		140	7	3.1	10	CM030		B5/B14		
	7.5	58	1.1	120		CMP063/040	B14		93	10	2.2	15	CM030		B5/B14		
									70	12	1.5	20	CM030		B5/B14		
	15	32	2.4	60	CM050		B5/B14		56	15	1.4	25	CM030		B5/B14		
	15	38	3.2	60		CMP063/050	B14		47	16	1.3	30	CM030		B5/B14		
	12	45	2.5	75		CMP063/050	B14		35	20	1.0	40	CM030		B5/B14		
	11	37	1.9	80	CM050		B5/B14		28	24	0.8	50	CM030		B5/B14		
	10	49	3.0	90		CMP063/050	B14										
	9	41	1.6	100	CM050		B5/B14		280	4	11.4	5	CM040		B5/B14		
7.5	60	2.0	120		CMP063/050	B14	187	5	8.3	7.5	CM040		B5/B14				
6.0	67	1.7	150		CMP063/050	B14	140	7	6.5	10	CM040		B5/B14				
5.0	74	1.4	180		CMP063/050	B14	93	10	4.5	15	CM040		B5/B14				
3.8	85	1.0	240		CMP063/050	B14	70	13	3.1	20	CM040		B5/B14				
							56	15	2.5	25	CM040		B5/B14				
6.0	70	3.0	150		CMP063/063	B14	47	17	2.8	30	CM040		B5/B14				
5.0	77	2.5	180		CMP063/063	B14	35	21	2.0	40	CM040		B5/B14				
3.8	90	1.9	240		CMP063/063	B14	28	25	1.6	50	CM040		B5/B14				
3.0	98	1.5	300		CMP063/063	B14	23	28	1.3	60	CM040		B5/B14				
							23	34	1.7	60		CMP063/040	B14				
							19	40	1.3	75		CMP063/040	B14				
							18	34	1.0	80	CM040		B5/B14				
							16	45	1.6	90		CMP063/040	B14				
							14	38	0.8	100	CM040		B5/B14				
							12	56	1.1	120		CMP063/040	B14				
							35	22	3.5	40	CM050		B5/B14				
							28	26	2.8	50	CM050		B5/B14				
							23	29	2.3	60	CM050		B5/B14				
							23	34	3.0	60		CMP063/050	B14				
							19	40	2.3	75		CMP063/050	B14				
							18	35	1.7	80	CM050		B5/B14				
							16	47	2.7	90		CMP063/050	B14				
							14	40	1.4	100	CM050		B5/B14				
							12	57	1.9	120		CMP063/050	B14				
							9.3	66	1.6	150		CMP063/050	B14				
							7.8	74	1.3	180		CMP063/050	B14				
							5.8	85	1.0	240		CMP063/050	B14				
							14.0	43	2.7	100	CM063		B5				
							9.3	69	2.8	150		CMP063/063	B14				
							7.8	77	2.3	180		CMP063/063	B14				
							5.8	90	1.7	240		CMP063/063	B14				
							4.7	101	1.4	300		CMP063/063	B14				
							63B6 (900 min <sup>-1</sup> )	180	5	3.9	5	CM030		B5/B14			
							120	8	3.0	7.5	CM030		B5/B14				
							90	10	2.3	10	CM030		B5/B14				
							60	14	1.7	15	CM030		B5/B14				
							45	18	1.2	20	CM030		B5/B14				
							36	22	1.0	25	CM030		B5/B14				
							30	24	1.1	30	CM030		B5/B14				
							23	30	0.8	40	CM030		B5/B14				

CM/CMP









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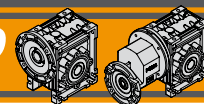
Technical data

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i							
<b>0.37</b>								<b>0.37</b>											
71A2 (2800 min <sup>-1</sup> )	31	78	2.4	90	<b>CM063</b>	<b>CMP071/063</b>	B14	71B4 (1400 min <sup>-1</sup> )	18	129	2.3	80	<b>CM090</b>	<b>CMP071/090</b>	B5				
	28	76	1.1	100					14	151	1.8	100				B5			
	23	96	1.7	120					12	196	2.9	120				B14			
	19	113	1.3	150					9.3	226	2.3	150				B14			
	16	129	1.1	180	7.8	263	1.8		180	B14									
	35	69	2.0	80	<b>CM075</b>	<b>CMP071/075</b>	B5		5.8	315	1.3	240	<b>CM075</b>	<b>CMP071/075</b>	B14				
	28	80	1.6	100					4.7	356	1.0	300				B14			
	23	101	2.6	120					80A6 (900 min <sup>-1</sup> )	180	17	5.2				5	<b>CM050</b>	B5/B14	
	19	119	2.0	150					120	25	3.7	7.5				<b>CM050</b>	B5/B14		
	16	136	1.7	180	<b>CMP071/075</b>	90	33		2.9	10	<b>CM050</b>	B5/B14							
	12	163	1.3	240	<b>CMP071/075</b>	60	47		2.0	15	<b>CM050</b>	B5/B14							
	9.3	186	1.0	300	<b>CMP071/075</b>	45	59		1.4	20	<b>CM050</b>	B5/B14							
	16	145	2.6	180	<b>CMP071/090</b>	36	71		1.1	25	<b>CM050</b>	B5/B14							
	12	178	2.0	240	<b>CMP071/090</b>	30	80		1.2	30	<b>CM050</b>	B5/B14							
	9.3	204	1.6	300	<b>CMP071/090</b>	45	61		2.5	20	<b>CM063</b>	B5/B14							
	71B4 (1400 min <sup>-1</sup> )	280	11	3.7	5	<b>CM040</b>			B5/B14	36	74	1.9	25	<b>CM063</b>		B5/B14			
187		16	2.7	7.5	30			82		2.3	30	<b>CM063</b>	B5/B14						
140		21	2.1	10	23			102		1.6	40	<b>CM063</b>	B5/B14						
93		31	1.5	15	18			120		1.3	50	<b>CM063</b>	B5/B14						
70		39	1.0	20	<b>CM040</b>	15	137	1.0	60	<b>CM063</b>	B5/B14								
56		47	0.8	25	<b>CM040</b>	15	155	1.5	60	<b>CMP080/063</b>	B14								
47		53	0.9	30	<b>CM040</b>	12	182	1.1	75		<b>CMP080/063</b>	B14							
93		31	2.6	15	<b>CM050</b>		B5/B14	10	208		1.3	90	<b>CMP080/063</b>	B14					
70		40	1.8	20				18	126		1.9	50	<b>CM075</b>	B5/B14					
56		48	1.5	25				15	144	1.6	60	<b>CM075</b>		B5/B14					
47		55	1.6	30				15	159	2.5	60	<b>CMP080/075</b>		B14					
35		68	1.1	40	12	190	1.8	75	<b>CMP080/075</b>	B14									
28		80	0.9	50	<b>CM050</b>	11	173	1.2	80	<b>CM075</b>	B5/B14								
23		91	0.8	60	<b>CM050</b>	10	218	2.1	90		<b>CMP080/075</b>	B14							
23		105	1.0	60	<b>CMP071/050</b>	B14	B5/B14	9	196	1.0	100	<b>CM075</b>	<b>CMP080/075</b>	B5/B14					
19		124	0.7	75				7.5	263	1.5	120			<b>CMP080/075</b>	B14				
16	145	0.9	90	11				188	1.9	80	<b>CM090</b>			B5/B14					
35	71	2.0	40	10				229	3.5	90				<b>CM090</b>	B5/B14				
28	83	1.6	50	<b>CM063</b>	B5/B14	B5/B14	9	216	1.5	100	<b>CM090</b>	<b>CMP080/090</b>	B14						
23	95	1.3	60				7.5	235	2.9	120			<b>CMP080/090</b>	B14					
23	108	1.7	60				6.0	329	1.7	150			<b>CMP080/090</b>	B14					
19	130	1.3	75				5.0	367	1.4	180			<b>CMP080/090</b>	B14					
18	115	1.0	80	<b>CM063</b>	<b>CMP071/063</b>	B5/B14	6.0	352	3.0	150		<b>CMP080/110</b>	B14						
16	142	1.6	90				5.0	395	2.3	180			<b>CMP080/110</b>	B14					
14	131	0.9	100				3.8	471	1.7	240			<b>CMP080/110</b>	B14					
12	178	1.2	120				3.0	531	1.3	300			<b>CMP080/110</b>	B14					
9.3	211	0.9	150	<b>CMP071/063</b>	B14	B5/B14	3.8	471	2.4	240		<b>CMP080/130</b>	B14						
7.8	236	0.8	180				3.0	554	1.8	300			<b>CMP080/130</b>	B14					
28	87	2.4	50				<b>CM075</b>		B5	<b>0.55</b>									
23	100	2.1	60							<b>CM075</b>			<b>CMP071/075</b>	B5	71B2 (2800 min <sup>-1</sup> )	560	8	3.4	5
23	111	2.8	60	373	13	2.5					7.5	<b>CM040</b>			B5/B14				
19	134	2.1	75	280	16	2.0					10	<b>CM040</b>			B5/B14				
18	121	1.6	80	187	24	1.5	15	<b>CM040</b>	B5/B14										
16	156	2.4	90	<b>CM075</b>	<b>CMP071/075</b>	B5	140	31	1.0	20	<b>CM040</b>		B5/B14						
14	141	1.2	100				140	31	1.0	20				<b>CM040</b>	B5/B14				
12	193	1.7	120				<b>CMP071/075</b>	B14											
9.3	226	1.4	150				<b>CMP071/075</b>	B14											
7.8	254	1.2	180	<b>CMP071/075</b>	B14														
5.8	297	0.8	240	<b>CMP071/075</b>	B14														
4.7	334	0.7	300	<b>CMP071/075</b>	B14														

CM/CMP





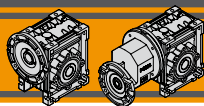


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





P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i				P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			
<b>0.55</b>								<b>0.75</b>							
80A4 (1400 min <sup>-1</sup> )	18	204	2.6	80	CM110		B5	80A2 (2800 min <sup>-1</sup> )	560	12	4.6	5	CM050		B5/B14
	14	240	2.0	100	CM110		B5		373	17	3.3	7.5	CM050		B5/B14
	9.3	358	2.5	150		CMP080/110	B14		280	23	2.7	10	CM050		B5/B14
	7.8	410	2.0	180		CMP080/110	B14		187	33	1.9	15	CM050		B5/B14
	5.8	503	1.4	240		CMP080/110	B14		140	43	1.3	20	CM050		B5/B14
	4.7	574	1.1	300		CMP080/110	B14		112	52	1.0	25	CM050		B5/B14
	7.8	424	2.6	180		CMP080/130	B14		93	60	1.1	30	CM050		B5/B14
	5.8	512	1.9	240		CMP080/130	B14		140	43	2.4	20	CM063		B5/B14
	4.7	585	1.5	300		CMP080/130	B14		112	53	1.8	25	CM063		B5/B14
									93	61	2.1	30	CM063		B5/B14
80B6 (900 min <sup>-1</sup> )	180	26	3.4	5	CM050		B5/B14	70	78	1.4	40	CM063		B5/B14	
	120	37	2.5	7.5	CM050		B5/B14	56	93	1.1	50	CM063		B5/B14	
	90	49	1.9	10	CM050		B5/B14	47	107	0.9	60	CM063		B5/B14	
	60	69	1.4	15	CM050		B5/B14	47	117	1.3	60		CMP080/063	B14	
	45	88	0.9	20	CM050		B5/B14	37	141	1.0	75		CMP080/063	B14	
	60	71	2.5	15	CM063		B5/B14	31	158	1.2	90		CMP080/063	B14	
	45	91	1.7	20	CM063		B5/B14	70	80	2.3	40	CM075		B5/B14	
	36	109	1.3	25	CM063		B5/B14	56	96	1.7	50	CM075		B5/B14	
	30	123	1.5	30	CM063		B5/B14	47	111	1.4	60	CM075		B5/B14	
	23	152	1.1	40	CM063		B5/B14	47	120	2.1	60		CMP080/075	B14	
	18	178	0.8	50	CM063		B14	37	145	1.6	75		CMP080/075	B14	
	15	230	1.0	60		CMP080/063	B14	35	139	1.0	80	CM075		B5/B14	
	12	270	0.8	75		CMP080/063	B14	31	165	1.9	90		CMP080/075	B14	
	10	309	0.9	90		CMP080/063	B14	28	161	0.8	100	CM075		B5/B14	
	36	112	2.0	25	CM075		B5/B14	23	205	1.3	120		CMP080/075	B14	
	30	128	2.4	30	CM075		B5/B14	35	145	1.6	80	CM090		B5/B14	
	23	159	1.7	40	CM075		B5/B14	31	171	3.1	90		CMP080/090	B14	
	18	187	1.3	50	CM075		B5/B14	28	171	1.2	100	CM090		B5/B14	
	15	214	1.1	60	CM075		B5/B14	23	217	2.1	120		CMP080/090	B5/B14	
	15	237	1.7	60		CMP080/075	B14	19	256	1.6	150		CMP080/090	B14	
	12	283	1.2	75		CMP080/075	B14	16	293	1.3	180		CMP080/090	B14	
	11	257	0.8	80	CM075		B5/B14	28	179	2.0	100	CM110		B5	
	10	324	1.4	90		CMP080/075	B14	19	267	2.8	150		CMP080/110	B14	
	7.5	391	1.0	120		CMP080/075	B14	16	307	2.2	180		CMP080/110	B14	
	15	228	1.7	60	CM090		B5/B14	12	379	1.6	240		CMP080/110	B14	
	15	247	2.7	60		CMP080/090	B14	9.3	444	1.2	300		CMP080/110	B14	
	12	296	2.0	75		CMP080/090	B14	16	316	2.9	180		CMP080/130	B14	
	11	280	1.2	80	CM090		B5/B14	12	385	2.2	240		CMP080/130	B14	
	10	340	2.3	90		CMP080/090	B14	9.3	444	1.7	300		CMP080/130	B14	
	9	321	1.0	100	CM090		B5/B14								
7.5	350	1.9	120		CMP080/090	B14									
6.0	489	1.2	150		CMP080/090	B14									
5.0	546	0.9	180		CMP080/090	B14									
11	294	2.1	80	CM110		B5	80B4 (1400 min <sup>-1</sup> )	280	23	3.3	5	CM050		B5/B14	
9	344	1.6	100	CM110		B5	187	33	2.4	7.5	CM050		B5/B14		
7.5	446	2.7	120		CMP080/110	B14	140	43	1.9	10	CM050		B5/B14		
6.0	523	2.0	150		CMP080/110	B14	93	63	1.3	15	CM050		B5/B14		
5.0	587	1.6	180		CMP080/110	B14	70	81	0.9	20	CM050		B5/B14		
3.8	700	1.1	240		CMP080/110	B14	56	97	0.7	25	CM050		B5/B14		
3.0	789	0.9	300		CMP080/110	B14	47	111	0.8	30	CM050		B5/B14		
5.0	587	2.2	180		CMP080/130	B14									
3.8	700	1.6	240		CMP080/130	B14									
3.0	824	1.2	300		CMP080/130	B14									

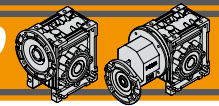
CM/CMP



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### Technical data

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			
<b>0.75</b>								<b>0.75</b>							
80B4 (1400 min <sup>-1</sup> )	93	64	2.4	15	CM063			90S6 (900 min <sup>-1</sup> )	180	35	4.6	5	CM063		
	70	83	1.6	20	CM063				120	51	3.3	7.5	CM063		
	56	100	1.4	25	CM063				90	67	2.6	10	CM063		
	47	115	1.4	30	CM063				60	97	1.8	15	CM063		
	35	143	1.0	40	CM063				45	124	1.2	20	CM063		
	28	169	0.8	50	CM063				36	149	0.9	25	CM063		
	23	220	0.9	60		CMP080/063	B14		30	167	1.1	30	CM063		
	19	263	0.7	75		CMP080/063	B14		45	127	2.0	20	CM075		
	16	289	0.8	90		CMP080/063	B14		36	153	1.5	25	CM075		
									30	174	1.8	30	CM075		
70	85	2.6	20	CM075		B5/B14	23	216	1.2	40	CM075				
56	102	2.0	25	CM075		B5/B14	15	323	1.3	60		CMP090/075	B5/B14		
47	118	2.3	30	CM075		B5/B14	12	386	1.0	75		CMP090/075	B5/B14		
35	149	1.6	40	CM075		B5/B14	10	442	1.2	90		CMP090/075	B5/B14		
28	177	1.2	50	CM075		B5/B14	8	533	0.8	120		CMP090/075	B5/B14		
23	203	1.0	60	CM075		B5/B14									
23	226	1.4	60		CMP080/075	B14	23	229	2.0	40	CM090		B5/B14		
19	271	1.0	75		CMP080/075	B14	18	271	1.5	50	CM090		B5/B14		
18	246	0.8	80	CM075		B5/B14	15	310	1.2	60	CM090		B5/B14		
16	316	1.2	90		CMP080/075	B14	15	337	2.2	60		CMP090/090	B5/B14		
							12	404	1.6	75		CMP090/090	B5/B14		
12	391	0.9	120		CMP080/075	B14	10	463	1.9	90		CMP090/090	B5/B14		
35	156	2.6	40	CM090		B5/B14	8	571	1.3	120		CMP090/090	B5/B14		
28	184	1.9	50	CM090		B5/B14	6	667	1.0	150		CMP090/090	B5/B14		
23	212	1.5	60	CM090		B5/B14	5	744	0.8	180		CMP090/090	B5/B14		
23	235	2.2	60		CMP080/090	B14	18	283	2.7	50	CM110		B5/B14		
19	282	1.6	75		CMP080/090	B14	15	325	2.1	60	CM110		B5/B14		
18	262	1.2	80	CM090		B5/B14	15	351	3.7	60		CMP090/110	B5/B14		
16	316	2.0	90		CMP080/090	B14	12	421	2.9	75		CMP090/110	B5/B14		
14	307	0.9	100	CM090		B5/B14	11	401	1.5	80	CM110		B5/B14		
12	397	1.5	120		CMP080/090	B14	10	470	3.1	90		CMP090/110	B5/B14		
9.3	459	1.1	150		CMP080/090	B14	9	470	1.2	100	CM110		B5/B14		
7.8	532	0.9	180		CMP080/090	B14	8	608	2.2	120		CMP090/110	B5/B14		
							6	714	1.6	150		CMP090/110	B5/B14		
23	224	2.6	60	CM110		B5	5	800	1.3	180		CMP090/110	B5/B14		
19	290	2.9	75		CMP080/110	B14	4	955	0.9	240		CMP090/110	B5/B14		
18	278	1.9	80	CM110		B5	3	1076	0.7	300		CMP090/110	B5/B14		
16	325	3.2	90		CMP080/110	B14									
14	327	1.5	100	CM110		B5	6	714	2.1	150		CMP090/130	B5/B14		
12	415	2.4	120		CMP080/110	B14	5	800	1.7	180		CMP090/130	B5/B14		
9.3	489	1.9	150		CMP080/110	B14	4	955	1.3	240		CMP090/130	B5/B14		
7.8	560	1.5	180		CMP080/110	B14	3	1123	1.0	300		CMP090/130	B5/B14		
5.8	686	1.1	240		CMP080/110	B14									
4.7	782	0.8	300		CMP080/110	B14									
14	327	2.2	100	CM130		B5									
9.3	504	2.4	150		CMP080/130	B14									
7.8	578	1.9	180		CMP080/130	B14									
5.8	698	1.4	240		CMP080/130	B14									
4.7	797	1.1	300		CMP080/130	B14									
<b>1.1</b>								<b>1.1</b>							
80B2 (2800 min <sup>-1</sup> )	560	17	3.2	5	CM050			80B2 (2800 min <sup>-1</sup> )	560	17	3.2	5	CM050		B5/B14
	373	25	2.3	7.5	CM050				373	25	2.3	7.5	CM050		B5/B14
	280	33	1.8	10	CM050				280	33	1.8	10	CM050		B5/B14
	187	48	1.3	15	CM050				187	48	1.3	15	CM050		B5/B14
	140	63	0.9	20	CM050				140	63	0.9	20	CM050		B5/B14
									187	48	2.4	15	CM063		B5/B14
									140	63	1.6	20	CM063		B5/B14
									112	78	1.2	25	CM063		B5/B14
									93	89	1.4	30	CM063		B5/B14
									70	114	1.0	40	CM063		B5/B14
							47	172	0.9	60		CMP080/063	B14		
							37	207	0.7	75		CMP080/063	B14		
							31	232	0.8	90		CMP080/063	B14		

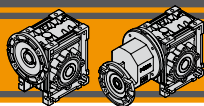


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





$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			
<b>1.1</b>								<b>1.1</b>							
80B2 (2800 min <sup>-1</sup> )	93	91	2.3	30	CM075		B5/B14	80C4 (1400 min <sup>-1</sup> )	35	228	1.8	40	CM090		B5/B14
	70	117	1.6	40	CM075		B5/B14		28	270	1.3	50	CM090		B5/B14
	56	141	1.2	50	CM075		B5/B14		23	311	1.1	60	CM090		B5/B14
	47	162	1.0	60	CM075		B5/B14		23	344	1.5	60		CMP080/090	B14
	47	176	1.4	60		CMP080/075	B14		19	414	1.1	75		CMP080/090	B14
	37	212	1.1	75		CMP080/075	B14		18	384	0.8	80	CM090		B5/B14
	31	242	1.3	90		CMP080/075	B14		16	463	1.4	90		CMP080/090	B14
	23	300	0.9	120		CMP080/075	B14		12	582	1.0	120		CMP080/090	B14
	56	146	1.9	50	CM090		B5/B14		9.3	673	0.8	150		CMP080/090	B14
	47	169	1.5	60	CM090		B5/B14		28	285	2.3	50	CM110		B5
	47	181	2.4	60		CMP080/090	B14		23	329	1.8	60	CM110		B5
	37	221	1.8	75		CMP080/090	B14		23	353	2.5	60		CMP080/110	B14
	35	213	1.1	80	CM090		B5/B14		19	425	2.0	75		CMP080/110	B14
	31	251	2.1	90		CMP080/090	B14		18	408	1.3	80	CM110		B5
	28	251	0.9	100	CM090		B5/B14		16	477	2.2	90		CMP080/110	B14
	23	318	1.4	120		CMP080/090	B14		14	480	1.0	100	CM110		B5
	19	375	1.1	150		CMP080/090	B14		12	609	1.6	120		CMP080/110	B14
	16	430	0.9	180		CMP080/090	B14		9.3	717	1.3	150		CMP080/110	B14
	35	219	1.8	80	CM110		B5		7.8	821	1.0	180		CMP080/110	B14
	28	263	1.4	100	CM110		B5		18	414	2.0	80	CM130		B5
23	331	2.5	120		CMP080/110	B14	16	477	3.1	90		CMP080/130	B14		
19	392	1.9	150		CMP080/110	B14	14	480	1.5	100	CM130		B5		
16	450	1.5	180		CMP080/110	B14	12	600	2.3	120		CMP080/130	B14		
12	556	1.1	240		CMP080/110	B14	9.3	739	1.7	150		CMP080/130	B14		
9.3	651	0.9	300		CMP080/110	B14	7.8	847	1.3	180		CMP080/130	B14		
19	403	2.5	150		CMP080/130	B14	5.8	1024	0.9	240		CMP080/130	B14		
16	463	2.0	180		CMP080/130	B14									
12	565	1.5	240		CMP080/130	B14									
9.3	651	1.2	300		CMP080/130	B14									
80C4 (1400 min <sup>-1</sup> )	280	33	2.2	5	CM050		B5/B14	90S4 (1400 min <sup>-1</sup> )	280	34	4.0	5	CM063		B5/B14
	187	49	1.6	7.5	CM050		B5/B14		187	50	2.9	7.5	CM063		B5/B14
	140	64	1.3	10	CM050		B5/B14		140	65	2.3	10	CM063		B5/B14
	93	92	0.9	15	CM050		B5/B14		93	95	1.6	15	CM063		B5/B14
	280	34	4.0	5	CM063		B5/B14		70	122	1.1	20	CM063		B5/B14
	187	50	2.9	7.5	CM063		B5/B14		56	146	0.9	25	CM063		B5/B14
	140	65	2.3	10	CM063		B5/B14		47	169	1.0	30	CM063		B5/B14
	93	95	1.6	15	CM063		B5/B14		93	95	2.6	15	CM075		B5/B14
	70	122	1.1	20	CM063		B5/B14		70	125	1.8	20	CM075		B5/B14
	56	146	0.9	25	CM063		B5/B14		56	150	1.3	25	CM075		B5/B14
	47	169	1.0	30	CM063		B5/B14		47	173	1.6	30	CM075		B5/B14
	280	34	4.0	5	CM075		B5/B14		35	219	1.1	40	CM075		B5/B14
	56	150	1.3	25	CM075		B5/B14		23	331	0.9	60		CMP090/075	B5/B14
	47	173	1.6	30	CM075		B5/B14		19	397	0.7	75		CMP090/075	B5/B14
	35	219	1.1	40	CM075		B5/B14		16	463	0.8	90		CMP090/075	B5/B14
	28	259	0.8	50	CM075		B5/B14		56	156	2.2	25	CM090		B5/B14
	23	331	0.9	60		CMP080/075	B14		47	178	2.6	30	CM090		B5/B14
	19	397	0.7	75		CMP080/075	B14		35	228	1.8	40	CM090		B5/B14
	16	463	0.8	90		CMP080/075	B14		28	270	1.3	50	CM090		B5/B14
									23	311	1.1	60	CM090		B5/B14
							23	344	1.5	60		CMP090/090	B5/B14		
							19	414	1.1	75		CMP090/090	B5/B14		
							18	384	0.8	80	CM090		B5/B14		
							16	463	1.4	90		CMP090/090	B5/B14		
							12	582	1.0	120		CMP090/090	B5/B14		
							9	673	0.8	150		CMP090/090	B5/B14		

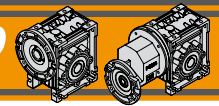
CM/CMP



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### Technical data

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				
<b>1.1</b>																
90S4 (1400 min <sup>-1</sup> )	35	237	3.0	40	CM110			90L6 (900 min <sup>-1</sup> )	11	598	1.5	80	CM130		B5	
	28	285	2.3	50	CM110				9	689	1.1	100	CM130		B5	
	23	329	1.8	60	CM110				8	865	1.9	120		CMP090/130	B5/B14	
	23	353	2.5	60		CMP090/110	B5/B14		6	1047	1.4	150		CMP090/130	B5/B14	
	19	425	2.0	75		CMP090/110	B5/B14		5	1174	1.2	180		CMP090/130	B5/B14	
	18	408	1.3	80	CM110				4	1400	0.9	240		CMP090/130	B5/B14	
	16	477	2.2	90		CMP090/110	B5/B14									
	14	480	1.0	100	CM110											
	12	609	1.6	120		CMP090/110	B5/B14									
	9	717	1.3	150		CMP090/110	B5/B14									
	8	821	1.0	180		CMP090/110	B5/B14									
	6	1006	0.7	240		CMP090/110	B5/B14									
	18	414	2.0	80	CM130		B5		560	23	4.2	5	CM063		B5/B14	
	14	480	1.5	100	CM130		B5		(2800 min <sup>-1</sup> )	373	35	3.0	7.5	CM063		B5/B14
	12	600	2.1	120		CMP090/130	B5/B14		280	45	2.4	10	CM063		B5/B14	
	9	739	1.7	150		CMP090/130	B5/B14		187	66	1.7	15	CM063		B5/B14	
	8	847	1.3	180		CMP090/130	B5/B14		140	86	1.2	20	CM063		B5/B14	
	6	1024	1.0	240		CMP090/130	B5/B14		112	106	0.9	25	CM063		B5/B14	
5	1169	0.7	300		CMP090/130	B5/B14	93	121	1.0	30	CM063		B5/B14			
<b>1.5</b>																
90L6 (900 min <sup>-1</sup> )	180	52	3.1	5	CM063		B5/B14	140	87	2.0	20	CM075		B5/B14		
	120	75	2.2	7.5	CM063		B5/B14	112	107	1.4	25	CM075		B5/B14		
	90	98	1.8	10	CM063		B5/B14	93	124	1.7	30	CM075		B5/B14		
	60	142	1.3	15	CM063		B5/B14	70	160	1.1	40	CM075		B5/B14		
	45	182	0.8	20	CM063		B5/B14	47	241	1.1	60		CMP090/075	B5/B14		
	60	145	2.0	15	CM075		B5/B14	37	290	0.8	75		CMP090/075	B5/B14		
	45	187	1.4	20	CM075		B5/B14	31	329	0.9	90		CMP090/075	B5/B14		
	36	225	1.0	25	CM075		B5/B14	70	164	1.9	40	CM090		B5/B14		
	30	256	1.2	30	CM075		B5/B14	56	200	1.4	50	CM090		B5/B14		
	23	317	0.8	40	CM075		B5/B14	47	230	1.1	60	CM090		B5/B14		
	15	474	0.9	60		CMP090/075	B5/B14	47	247	1.8	60		CMP090/090	B5/B14		
	12	566	0.7	75		CMP090/075	B5/B14	37	301	1.3	75		CMP090/090	B5/B14		
	10	649	0.8	90		CMP090/075	B5/B14	31	343	1.5	90		CMP090/090	B5/B14		
	45	191	2.3	20	CM090		B5/B14	23	433	1.1	120		CMP090/090	B5/B14		
	36	233	1.7	25	CM090		B5/B14	19	511	0.8	150		CMP090/090	B5/B14		
	30	266	2.0	30	CM090		B5/B14	56	202	2.5	50	CM110		B5/B14		
	23	336	1.4	40	CM090		B5/B14	47	236	1.9	60	CM110		B5/B14		
	18	397	1.0	50	CM090		B5/B14	37	308	2.3	75		CMP090/110	B5/B14		
	15	455	0.8	60	CM090		B5/B14	35	299	1.3	80	CM110		B5/B14		
	15	494	1.5	60	CM090		B5/B14	31	352	2.5	90		CMP090/110	B5/B14		
	12	592	1.1	75		CMP090/090	B5/B14	28	358	1.0	100	CM110		B5/B14		
	10	679	1.3	90		CMP090/090	B5/B14	23	451	1.8	120		CMP090/110	B5/B14		
	8	837	0.9	120		CMP090/090	B5/B14	19	534	1.4	150		CMP090/110	B5/B14		
	18	414	1.8	50	CM110		B5/B14	16	614	1.1	180		CMP090/110	B5/B14		
	15	476	1.4	60	CM110		B5/B14	12	758	0.8	240		CMP090/110	B5/B14		
	15	515	2.5	60		CMP090/110	B5/B14	35	295	2.0	80	CM130		B5		
	12	618	1.9	75		CMP090/110	B5/B14	28	358	1.5	100	CM130		B5		
	11	588	1.0	80	CM110		B5/B14	23	445	2.5	120		CMP090/130	B5/B14		
	10	690	2.1	90		CMP090/110	B5/B14	19	549	1.9	150		CMP090/130	B5/B14		
	9	689	0.8	100	CM110		B5/B14	16	632	1.5	180		CMP090/130	B5/B14		
8	892	1.5	120		CMP090/110	B5/B14	12	770	1.1	240		CMP090/130	B5/B14			
6	1047	1.1	150		CMP090/110	B5/B14	9	887	0.9	300		CMP090/130	B5/B14			
5	1174	0.9	180		CMP090/110	B5/B14										
<b>1.5</b>																
90L4 (1400 min <sup>-1</sup> )	280	46	2.9	5	CM063		B5/B14	90L4 (1400 min <sup>-1</sup> )	187	68	2.1	7.5	CM063		B5/B14	
	187	68	2.1	7.5	CM063		B5/B14		140	88	1.7	10	CM063		B5/B14	
	140	88	1.7	10	CM063		B5/B14		93	129	1.2	15	CM063		B5/B14	
	93	129	1.2	15	CM063		B5/B14		70	166	0.8	20	CM063		B5/B14	
	70	166	0.8	20	CM063		B5/B14									

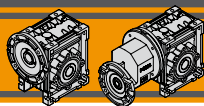


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





$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			
<b>1.5</b>								<b>2.2</b>							
90L4 (1400 min <sup>-1</sup> )	<b>93</b>	129	1.9	15	<b>CM075</b>		B5/B14	90L2 (2800 min <sup>-1</sup> )	<b>560</b>	34	2.8	5	<b>CM063</b>		B5/B14
	<b>70</b>	170	1.3	20	<b>CM075</b>		B5/B14		<b>373</b>	51	2.0	7.5	<b>CM063</b>		B5/B14
	<b>56</b>	205	1.0	25	<b>CM075</b>		B5/B14		<b>280</b>	66	1.7	10	<b>CM063</b>		B5/B14
	<b>47</b>	236	1.1	30	<b>CM075</b>		B5/B14		<b>187</b>	97	1.2	15	<b>CM063</b>		B5/B14
	<b>35</b>	299	0.8	40	<b>CM075</b>		B5/B14		<b>140</b>	126	0.8	20	<b>CM063</b>		B5/B14
	<b>70</b>	172	2.2	20	<b>CM090</b>		B5/B14		<b>187</b>	98	1.9	15	<b>CM075</b>		B5/B14
	<b>56</b>	212	1.6	25	<b>CM090</b>		B5/B14		<b>140</b>	128	1.3	20	<b>CM075</b>		B5/B14
	<b>47</b>	243	1.9	30	<b>CM090</b>		B5/B14		<b>112</b>	158	1.0	25	<b>CM075</b>		B5/B14
	<b>35</b>	311	1.3	40	<b>CM090</b>		B5/B14		<b>93</b>	182	1.1	30	<b>CM075</b>		B5/B14
	<b>28</b>	368	1.0	50	<b>CM090</b>		B5/B14		<b>140</b>	129	2.2	20	<b>CM090</b>		B5/B14
	<b>23</b>	424	0.8	60	<b>CM090</b>		B5/B14		<b>112</b>	159	1.6	25	<b>CM090</b>		B5/B14
	<b>23</b>	469	1.1	60		<b>CMP090/090</b>	B5/B14		<b>93</b>	187	1.9	30	<b>CM090</b>		B5/B14
	<b>19</b>	564	0.8	75		<b>CMP090/090</b>	B5/B14		<b>70</b>	240	1.3	40	<b>CM090</b>		B5/B14
	<b>16</b>	632	1.0	90		<b>CMP090/090</b>	B5/B14		<b>56</b>	293	1.0	50	<b>CM090</b>		B5/B14
	<b>12</b>	794	0.7	120		<b>CMP090/090</b>	B5/B14		<b>47</b>	362	1.2	60		<b>CMP090/090</b>	B5/B14
	<b>35</b>	323	2.2	40	<b>CM110</b>		B5/B14		<b>37</b>	441	0.9	75		<b>CMP090/090</b>	B5/B14
	<b>28</b>	389	1.7	50	<b>CM110</b>		B5/B14		<b>31</b>	503	1.0	90		<b>CMP090/090</b>	B5/B14
	<b>23</b>	448	1.3	60	<b>CM110</b>		B5/B14		<b>23</b>	635	0.7	120		<b>CMP090/090</b>	B5/B14
	<b>23</b>	481	1.8	60		<b>CMP090/110</b>	B5/B14		<b>70</b>	243	2.3	40	<b>CM110</b>		B5/B14
	<b>19</b>	579	1.5	75		<b>CMP090/110</b>	B5/B14		<b>56</b>	296	1.7	50	<b>CM110</b>		B5/B14
	<b>18</b>	557	0.9	80	<b>CM110</b>		B5/B14		<b>47</b>	347	1.3	60	<b>CM110</b>		B5/B14
	<b>16</b>	650	1.6	90		<b>CMP090/110</b>	B5/B14		<b>47</b>	366	2.1	60		<b>CMP090/110</b>	B5/B14
	<b>12</b>	830	1.2	120		<b>CMP090/110</b>	B5/B14		<b>47</b>	366	2.1	60		<b>CMP090/110</b>	B5/B14
	<b>9</b>	978	0.9	150		<b>CMP090/110</b>	B5/B14		<b>37</b>	452	1.5	75		<b>CMP090/110</b>	B5/B14
	<b>8</b>	1119	0.7	180		<b>CMP090/110</b>	B5/B14		<b>35</b>	438	0.9	80	<b>CM110</b>		B5/B14
	<b>23</b>	448	2.0	60	<b>CM130</b>		B5		<b>31</b>	516	1.7	90		<b>CMP090/110</b>	B5/B14
	<b>19</b>	579	2.1	75		<b>CMP090/130</b>	B5/B14		<b>23</b>	662	1.3	120		<b>CMP090/110</b>	B5/B14
	<b>18</b>	565	1.5	80	<b>CM130</b>		B5		<b>19</b>	783	1.0	150		<b>CMP090/110</b>	B5/B14
	<b>16</b>	650	2.2	90		<b>CMP090/130</b>	B5/B14		<b>16</b>	900	0.8	180		<b>CMP090/110</b>	B5/B14
	<b>14</b>	655	1.1	100	<b>CM130</b>		B5		<b>47</b>	347	1.8	60	<b>CM130</b>		B5
	<b>12</b>	818	1.5	120		<b>CMP090/130</b>	B5/B14		<b>35</b>	432	1.3	80	<b>CM130</b>		B5
	<b>9</b>	1008	1.2	150		<b>CMP090/130</b>	B5/B14		<b>28</b>	525	1.0	100	<b>CM130</b>		B5
	<b>8</b>	1155	0.9	180		<b>CMP090/130</b>	B5/B14		<b>23</b>	653	1.7	120		<b>CMP090/130</b>	B5/B14
	<b>6</b>	1396	0.7	240		<b>CMP090/130</b>	B5/B14		<b>19</b>	805	1.3	150		<b>CMP090/130</b>	B5/B14
									<b>16</b>	927	1.0	180		<b>CMP090/130</b>	B5/B14
									<b>12</b>	1129	0.8	240		<b>CMP090/130</b>	B5/B14
100LA6 (900 min <sup>-1</sup> )	<b>120</b>	104	2.5	7.5	<b>CM075</b>		B5/B14	100LA4 (1400 min <sup>-1</sup> )	<b>187</b>	100	2.2	7.5	<b>CM075</b>		B5/B14
	<b>90</b>	135	2.0	10	<b>CM075</b>		B5/B14		<b>140</b>	131	1.8	10	<b>CM075</b>		B5/B14
	<b>60</b>	198	1.5	15	<b>CM075</b>		B5/B14		<b>93</b>	189	1.3	15	<b>CM075</b>		B5/B14
	<b>60</b>	201	2.4	15	<b>CM090</b>		B5/B14		<b>140</b>	132	2.7	10	<b>CM090</b>		B5/B14
	<b>45</b>	261	1.7	20	<b>CM090</b>		B5/B14		<b>93</b>	194	2.1	15	<b>CM090</b>		B5/B14
	<b>36</b>	318	1.2	25	<b>CM090</b>		B5/B14		<b>70</b>	252	1.5	20	<b>CM090</b>		B5/B14
	<b>30</b>	363	1.5	30	<b>CM090</b>		B5/B14		<b>56</b>	311	1.1	25	<b>CM090</b>		B5/B14
	<b>36</b>	326	2.1	25	<b>CM110</b>		B5/B14		<b>47</b>	356	1.3	30	<b>CM090</b>		B5/B14
	<b>30</b>	372	2.3	30	<b>CM110</b>		B5/B14		<b>70</b>	255	2.6	20	<b>CM110</b>		B5/B14
	<b>23</b>	478	1.7	40	<b>CM110</b>		B5/B14		<b>56</b>	315	2.0	25	<b>CM110</b>		B5/B14
	<b>18</b>	565	1.3	50	<b>CM110</b>		B5/B14		<b>47</b>	360	2.1	30	<b>CM110</b>		B5/B14
	<b>15</b>	649	1.1	60	<b>CM110</b>		B5/B14		<b>35</b>	474	1.5	40	<b>CM110</b>		B5/B14
	<b>18</b>	581	1.8	50	<b>CM130</b>		B5		<b>28</b>	570	1.1	50	<b>CM110</b>		B5/B14
	<b>15</b>	669	1.5	60	<b>CM130</b>		B5		<b>23</b>	657	0.9	60	<b>CM110</b>		B5/B14
	<b>11</b>	815	1.1	80	<b>CM130</b>		B5		<b>35</b>	456	2.3	40	<b>CM130</b>		B5
	<b>9</b>	939	0.8	100	<b>CM130</b>		B5		<b>28</b>	563	1.7	50	<b>CM130</b>		B5
									<b>23</b>	657	1.4	60	<b>CM130</b>		B5
									<b>18</b>	828	1.0	80	<b>CM130</b>		B5
									<b>14</b>	960	0.8	100	<b>CM130</b>		B5

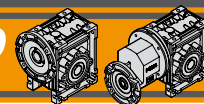
CM/CMP



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





### Technical data

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				
<b>2.2</b>																
112M6 (900 min <sup>-1</sup> )	120	154	2.5	7.5	CM090		B5/B14	132S6 (900 min <sup>-1</sup> )	120	210	3.2	7.5	CM110		B5/B14	
	90	203	2.0	10	CM090		B5/B14		90	277	2.6	10	CM110		B5/B14	
	60	294	1.6	15	CM090		B5/B14		60	401	2.0	15	CM110		B5/B14	
	45	383	1.2	20	CM090		B5/B14		45	528	1.4	20	CM110		B5/B14	
	36	467	0.8	25	CM090		B5/B14		36	653	1.1	25	CM110		B5/B14	
	30	532	1.0	30	CM090		B5/B14									
	45	388	2.0	20	CM110		B5/B14		45	522	2.0	20	CM130		B5/B14	
	36	479	1.5	25	CM110		B5/B14		36	645	1.6	25	CM130		B5/B14	
	30	546	1.6	30	CM110		B5/B14		30	735	1.6	30	CM130		B5/B14	
	23	700	1.2	40	CM110		B5/B14		23	942	1.2	40	CM130		B5/B14	
	18	829	0.9	50	CM110		B5/B14									
	23	691	1.6	40	CM130		B5									
	18	852	1.2	50	CM130		B5									
	15	980	1.0	60	CM130		B5									
	<b>3.0</b>															
100LA2 (2800 min <sup>-1</sup> )	373	69	2.3	7.5	CM075		B5/B14	112M2 (2800 min <sup>-1</sup> )	373	92	1.7	7.5	CM075		B5/B14	
	280	91	1.9	10	CM075		B5/B14		280	121	1.4	10	CM075		B5/B14	
	187	134	1.4	15	CM075		B5/B14		187	178	1.0	15	CM075		B5/B14	
	187	135	2.2	15	CM090		B5/B14		280	123	2.1	10	CM090		B5/B14	
	140	176	1.6	20	CM090		B5/B14		187	180	1.7	15	CM090		B5/B14	
	112	217	1.2	25	CM090		B5/B14		140	235	1.2	20	CM090		B5/B14	
	93	255	1.4	30	CM090		B5/B14		140	237	2.1	20	CM110		B5/B14	
	112	220	2.2	25	CM110		B5/B14		112	293	1.6	25	CM110		B5/B14	
	93	252	2.3	30	CM110		B5/B14		93	336	1.8	30	CM110		B5/B14	
	70	332	1.7	40	CM110		B5/B14		70	442	1.3	40	CM110		B5/B14	
	56	404	1.3	50	CM110		B5/B14		56	539	0.9	50	CM110		B5/B14	
	47	473	0.9	60	CM110		B5/B14									
	56	404	1.7	50	CM130		B5									
	47	473	1.3	60	CM130		B5									
	35	589	0.9	80	CM130		B5									
<b>4.0</b>																
100LB4 (1400 min <sup>-1</sup> )	187	137	1.6	7.5	CM075		B5/B14	112M4 (1400 min <sup>-1</sup> )	187	182	1.2	7.5	CM075		B5/B14	
	140	178	1.3	10	CM075		B5/B14		140	237	1.0	10	CM075		B5/B14	
	93	258	1.0	15	CM075		B5/B14		187	184	1.7	7.5	CM090		B5/B14	
	187	138	2.3	7.5	CM090		B5/B14		140	240	1.5	10	CM090		B5/B14	
	140	180	2.0	10	CM090		B5/B14		93	352	1.1	15	CM090		B5/B14	
	93	264	1.5	15	CM090		B5/B14		70	458	0.8	20	CM090		B5/B14	
	70	344	1.1	20	CM090		B5/B14		140	240	2.6	10	CM110		B5/B14	
	56	425	0.8	25	CM090		B5/B14		93	352	1.9	15	CM110		B5/B14	
	47	485	0.9	30	CM090		B5/B14		70	464	1.4	20	CM110		B5/B14	
	93	264	2.6	15	CM110		B5/B14		56	573	1.1	25	CM110		B5/B14	
	70	348	1.9	20	CM110		B5/B14		47	655	1.2	30	CM110		B5/B14	
	56	430	1.4	25	CM110		B5/B14		35	862	0.8	40	CM110		B5/B14	
	47	491	1.5	30	CM110		B5/B14		70	458	2.0	20	CM130		B5	
	35	647	1.1	40	CM110		B5/B14		56	566	1.6	25	CM130		B5	
	28	778	0.8	50	CM110		B5/B14		47	647	1.6	30	CM130		B5	
47	485	2.2	30	CM130		B5	35	829	1.3	40	CM130		B5			
35	622	1.7	40	CM130		B5	28	1023	0.9	50	CM130		B5			
<b>132L6</b>																
132L6 (900 min <sup>-1</sup> )	120	280	2.4	7.5	CM110		B5/B14	132L6 (900 min <sup>-1</sup> )	120	280	2.4	7.5	CM110		B5/B14	
	90	369	2.0	10	CM110		B5/B14		90	369	2.0	10	CM110		B5/B14	
	60	535	1.5	15	CM110		B5/B14		60	535	1.5	15	CM110		B5/B14	
	45	705	1.1	20	CM110		B5/B14		45	705	1.1	20	CM110		B5/B14	
	45	696	1.5	20	CM130		B5/B14		45	696	1.5	20	CM130		B5/B14	
	36	860	1.2	25	CM130		B5/B14		36	860	1.2	25	CM130		B5/B14	
30	980	1.2	30	CM130		B5/B14	30	980	1.2	30	CM130		B5/B14			



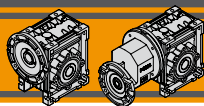
**Dati tecnici**

**Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			
<b>5.5</b>								<b>7.5</b>							
132SA2 (2800 min <sup>-1</sup> )	373	127	3.2	7.5	CM110			132SB2 (2800 min <sup>-1</sup> )	373	173	2.4	7.5	CM110		
	280	167	2.7	10	CM110				280	228	2.0	10	CM110		
	187	248	2.0	15	CM110				187	338	1.5	15	CM110		
	140	326	1.5	20	CM110				140	445	1.1	20	CM110		
	112	403	1.2	25	CM110				112	550	0.9	25	CM110		
	140	326	2.1	20	CM130				187	338	2.1	15	CM130		
	112	403	1.6	25	CM130				140	445	1.5	20	CM130		
	93	461	1.7	30	CM130				112	550	1.2	25	CM130		
	70	600	1.3	40	CM130				93	629	1.3	30	CM130		
							70	819	0.9	40	CM130				
132S4 (1400 min <sup>-1</sup> )	187	250	2.2	7.5	CM110			132MA4 (1400 min <sup>-1</sup> )	187	341	1.6	7.5	CM110		
	140	330	1.9	10	CM110				140	450	1.4	10	CM110		
	93	484	1.4	15	CM110				93	660	1.0	15	CM110		
	70	638	1.0	20	CM110				70	870	0.8	20	CM110		
	56	788	0.8	25	CM110										
	187	250	3.0	7.5	CM130			187	341	2.2	7.5	CM130			
	140	330	2.5	10	CM130			140	450	1.8	10	CM130			
	93	484	1.9	15	CM130			93	660	1.4	15	CM130			
	70	630	1.4	20	CM130			70	860	1.1	20	CM130			
	56	778	1.2	25	CM130			56	1062	0.9	25	CM130			
	47	889	1.2	30	CM130			47	1213	0.9	30	CM130			
	35	1141	0.9	40	CM130										

CM/CMP

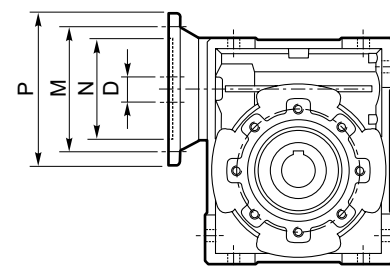




### Motori applicabili

### IEC Motor adapters

	IEC	N	M	P	D	i																		
						5	7.5	10	15	20	25	30	40	50	60	80	100							
CM026	56B14	50	65	80	9																			
	63B5	95	115	140	11																			
CM030	63B14	60	75	90	11																			
	56B5	80	100	120	9	B	B	B	B	B	B	B	B	B										
	56B14	50	65	80	9	B	B	B	B	B	B	B	B	B										
CM040	71B5	110	130	160	14																			
	71B14	70	85	105	14																			
	63B5	95	115	140	11	B	B	B	B	B	B	B	B											
	63B14	60	75	90	11	B	B	B	B	B	B	B	B											
	56B5	80	100	120	9	BS	BS	BS	BS	BS	BS	BS	BS	BS	B	B	B	B						
	56B14	50	65	80	9	BS	BS	BS	BS	BS	BS	BS	BS	BS	B	B	B	B						
CM050	80B5	130	165	200	19																			
	80B14	80	100	120	19																			
	71B5	110	130	160	14	B	B	B	B	B	B	B												
	71B14	70	85	105	14	B	B	B	B	B	B	B												
	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS	B	B	B	B							
	63B14	60	75	90	11	BS	BS	BS	BS	BS	BS	BS	BS	B	B	B	B							
CM063	90B5	130	165	200	24																			
	90B14	95	115	140	24																			
	80B5	130	165	200	19	B	B	B	B	B	B	B												
	80B14	80	100	120	19	B	B	B	B	B	B	B												
	71B5	110	130	160	14	BS	BS	BS	BS	BS	BS	BS	BS	B	B	B								
	71B14	70	85	105	14	BS	BS	BS	BS	BS	BS	BS	BS	B	B	B								
	63B5	95	115	140	11									BS	BS	BS	B	B						
CM075	100/112B5	180	215	250	28																			
	100/112B14	110	130	160	28																			
	90B5	130	165	200	24	B	B	B																
	90B14	95	115	140	24	B	B	B																
	80B5	130	165	200	19	BS	BS	BS	B	B	B	B												
	80B14	80	100	120	19	BS	BS	BS	B	B	B	B												
	71B5	110	130	160	14									BS	BS	BS	B	B	B	B				
CM090	100/112B5	180	215	250	28																			
	100/112B14	110	130	160	28																			
	90B5	130	165	200	24	B	B	B	B	B	B													
	90B14	95	115	140	24	B	B	B	B	B	B													
	80B5	130	165	200	19	BS	BS	BS	BS	BS	BS	BS	B	B	B									
	80B14	80	100	120	19	BS	BS	BS	BS	BS	BS	BS	B	B	B									
	71B5	110	130	160	14									BS	BS	BS	B	B	B	B				
CM110	132B5	230	265	300	38																			
	132B14	130	165	200	38																			
	100/112B5	180	215	250	28	B	B	B	B	B														
	100/112B14	110	130	160	28	B	B	B	B	B														
	90B5	130	165	200	24	BS	BS	BS	BS	BS	B	B	B	B										
	90B14	95	115	140	24	BS	BS	BS	BS	BS	B	B	B	B										
	80B5	130	165	200	19									BS	BS	BS	BS	B	B					
CM130	132B5	230	265	300	38																			
	132B14	130	165	200	38																			
	100/112B5	180	215	250	28	B	B	B	B	B	B	B												
	90B5	130	165	200	24	BS	BS	BS	BS	BS	BS	BS	B	B	B	B								
	80B5	130	165	200	19									BS	BS	BS	BS	B	B					



N.B.

Le aree evidenziate in grigio indicano l'applicabilità della corrispondente grandezza motore.

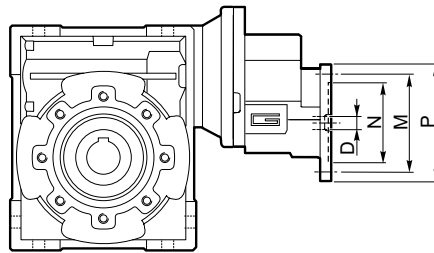
*N.B. Grey areas indicate motor inputs available on each size of unit.*

**B/BS = Boccola di riduzione in acciaio**

**B/BS = Metal shaft sleeve**

**Nota:** flange Nema disponibili a richiesta  
**Note:** Nema flange available on demand





CM/CMP

CMP	IEC	N	M	P	D	i (i <sub>1</sub> x i <sub>2</sub> )								
						60 (3x20)	75 (3x25)	90 (3x30)	120 (3x40)	150 (3x50)	180 (3x60)	240 (3x80)	300 (3x100)	
056/030	56 B14	50	65	80	9									
056/040						B	B	B	B					
063/040	63 B14	60	75	90	11									
063/050						B	B	B						
063/063						BS	BS	BS	B	B	B			
071/050	71 B14	70	85	105	14									
071/063						B	B	B						
071/075						B	B	B	B					
071/090						BS	BS	BS	B	B	B			
080/063	80 B14	80	100	120	19									
080/075														
080/090						B	B	B						
080/110						BS	BS	B	B	B	B			
080/130						BS	BS	BS	BS	B	B	B	B	
090/075	90 B14 90 B5	95 130	115 165	140 200	24									
090/090						B	B	B						
090/110						BS	BS	B	B	B	B			
090/130						BS	BS	BS	BS	B	B	B	B	

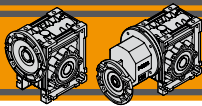
N.B.

Le aree evidenziate in grigio indicano l'applicabilità della corrispondente grandezza motore.

N.B. Grey areas indicate motor inputs available on each size of unit.

**B/BS = Boccia di riduzione in acciaio**

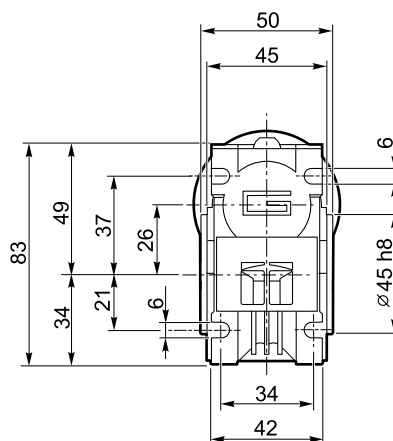
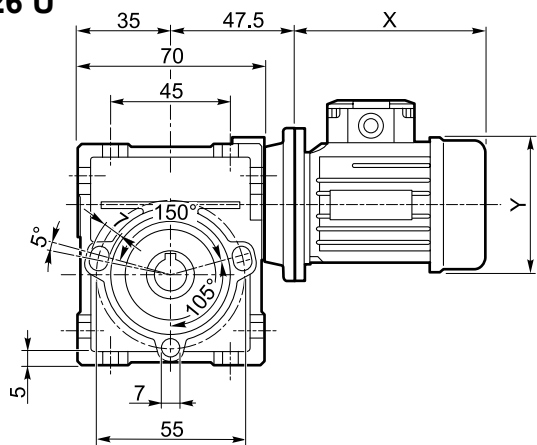
**B/BS = Metal shaft sleeve**



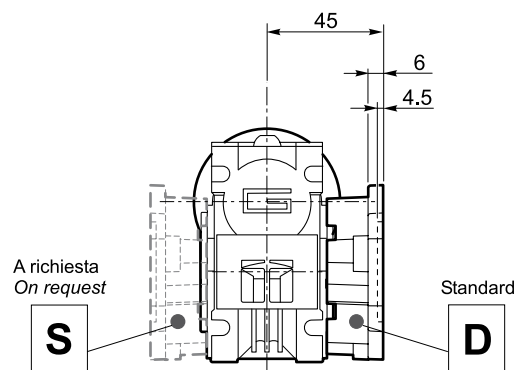
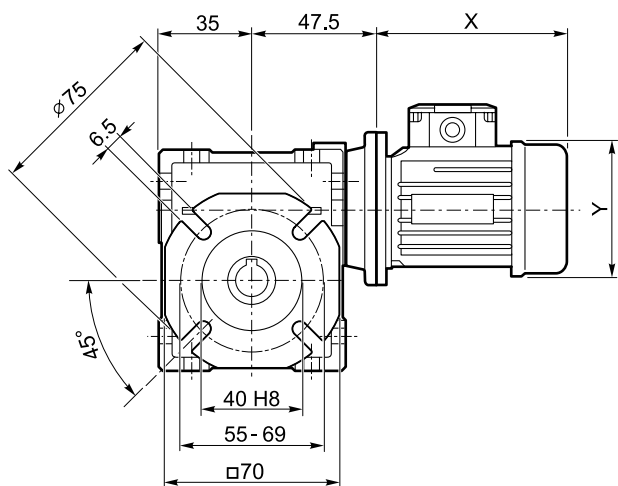
**Dimensioni**

**Dimensions**

**CM 026 U**

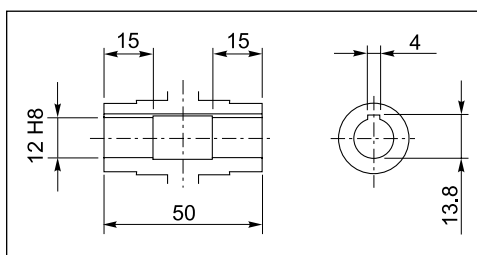
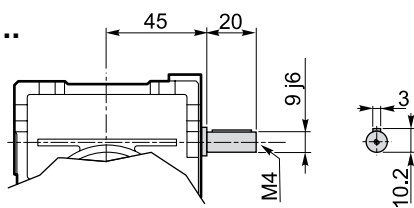


**CM 026 F**

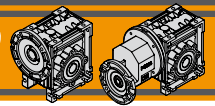


**Kg**  
0.8

**CMIS 026 ..**



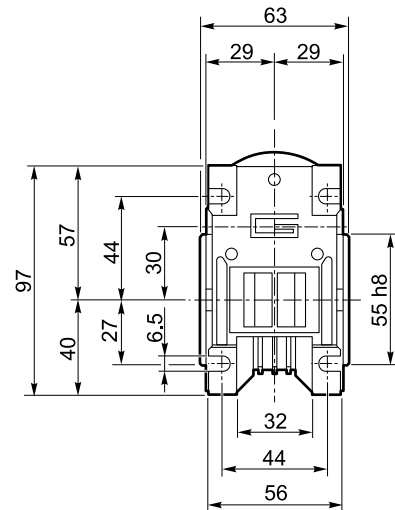
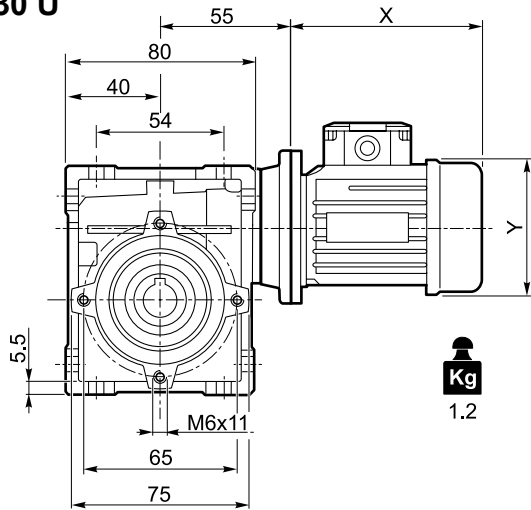
Albero lento cavo / Hollow output shaft



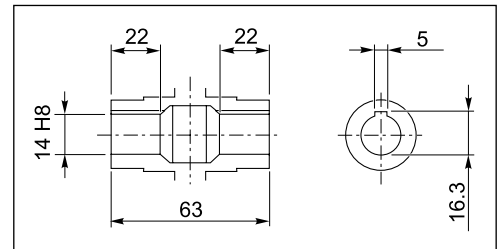
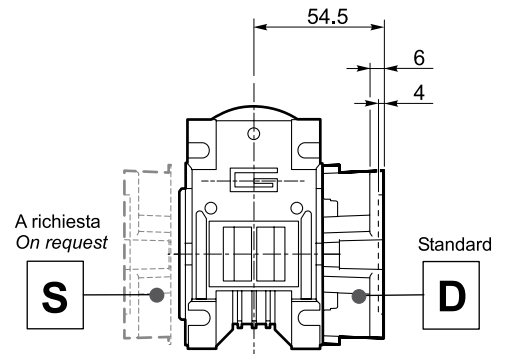
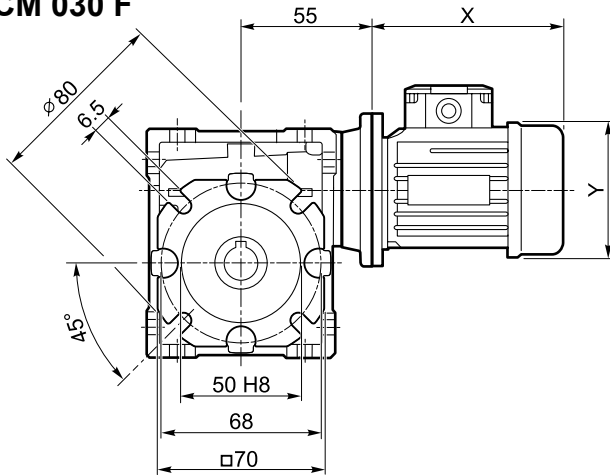
Dimensioni

Dimensions

CM 030 U

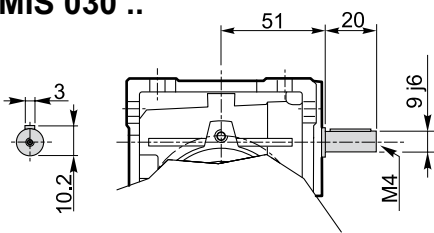


CM 030 F

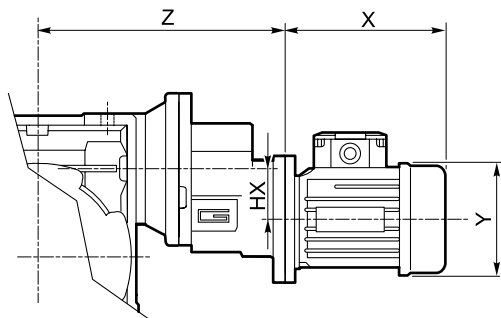


Albero lento cavo / Hollow output shaft

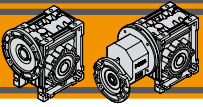
CMIS 030 ..



CMP ..



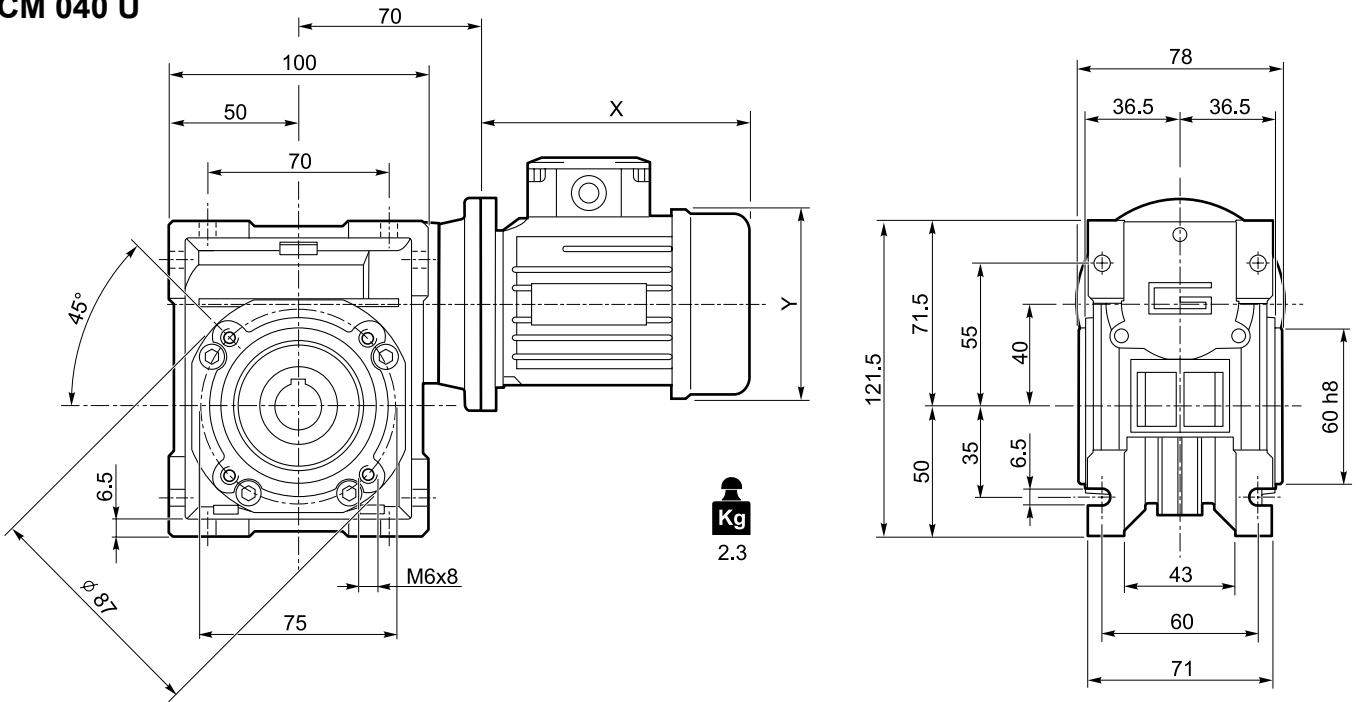
	HX	Z	Kg
056/030	30.5	124	2.1



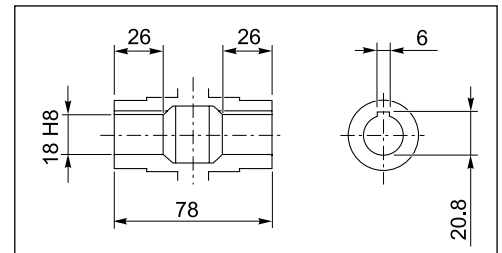
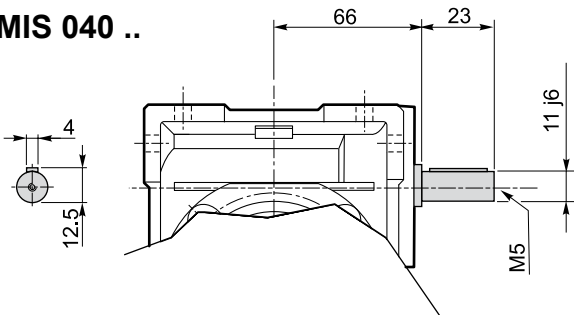
### Dimensioni

### Dimensions

#### CM 040 U

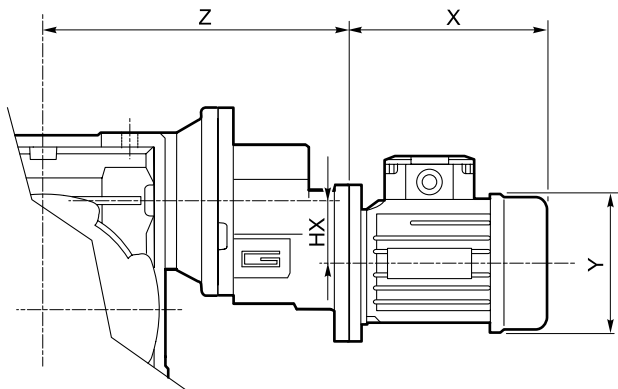


#### CMIS 040 ..

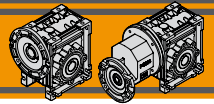


Albero lento cavo / Hollow output shaft

#### CMP ..

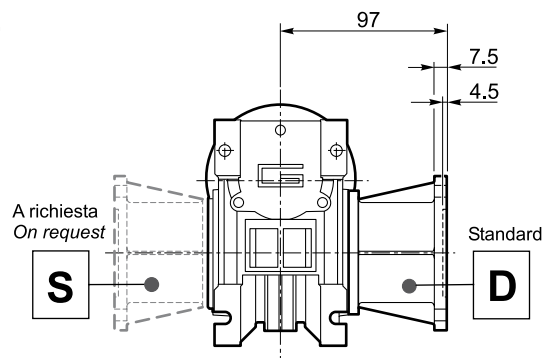
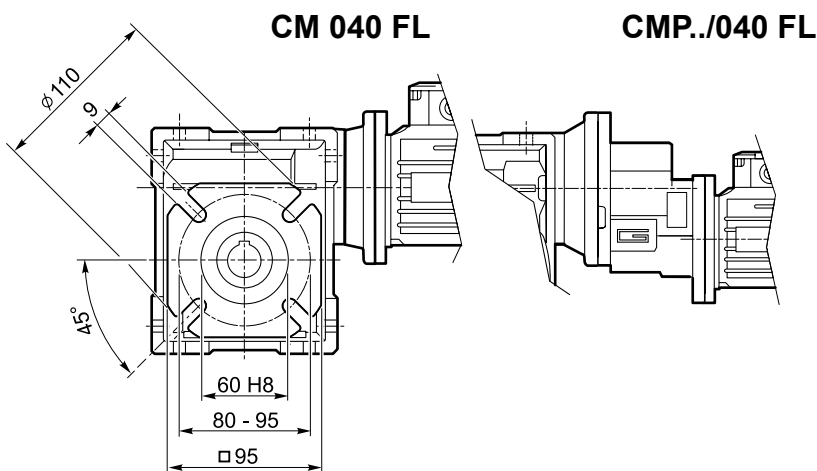
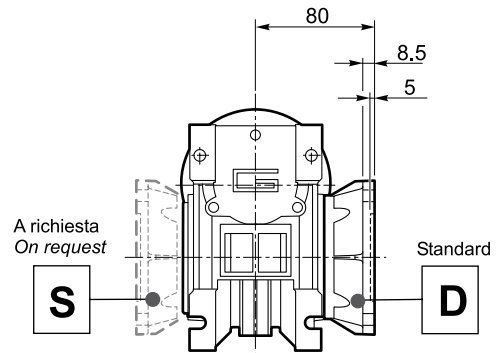
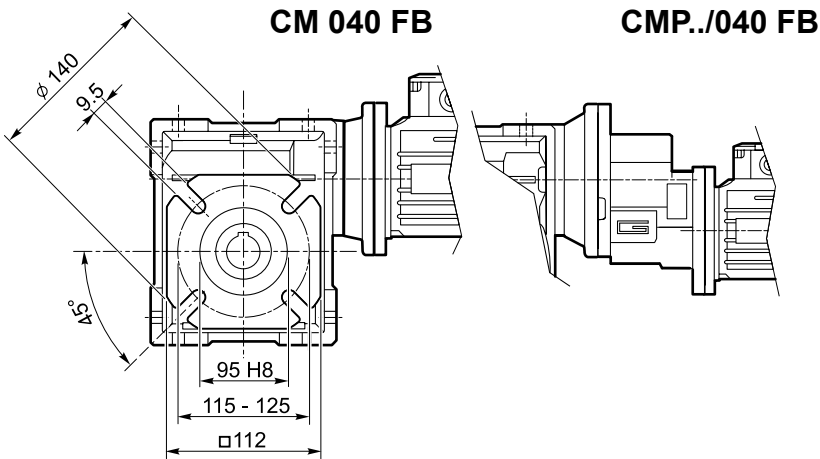
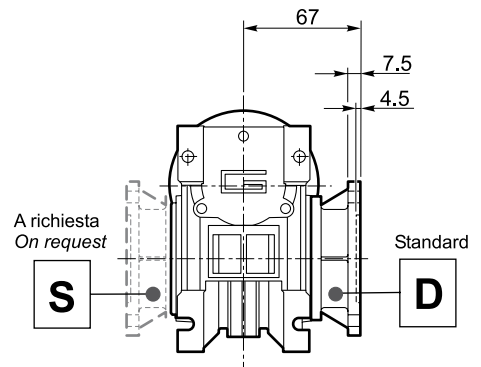
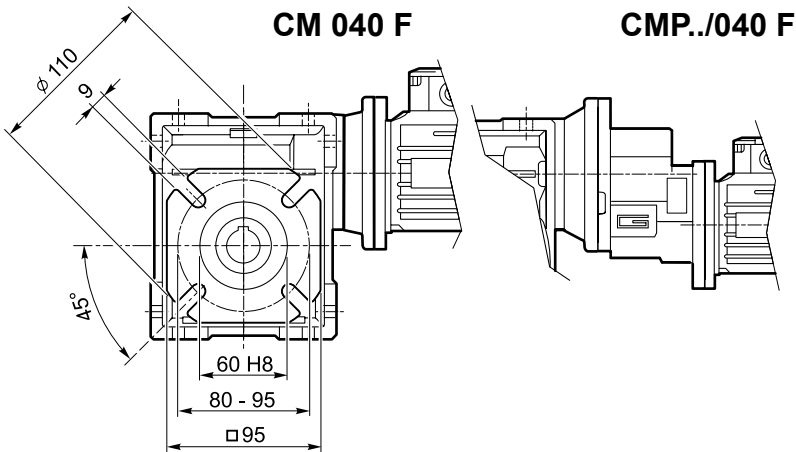


	HX	Z	Kg
056/040	30.5	139	3.2
063/040	30.5	142	3.3

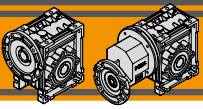


Dimensioni

Dimensions



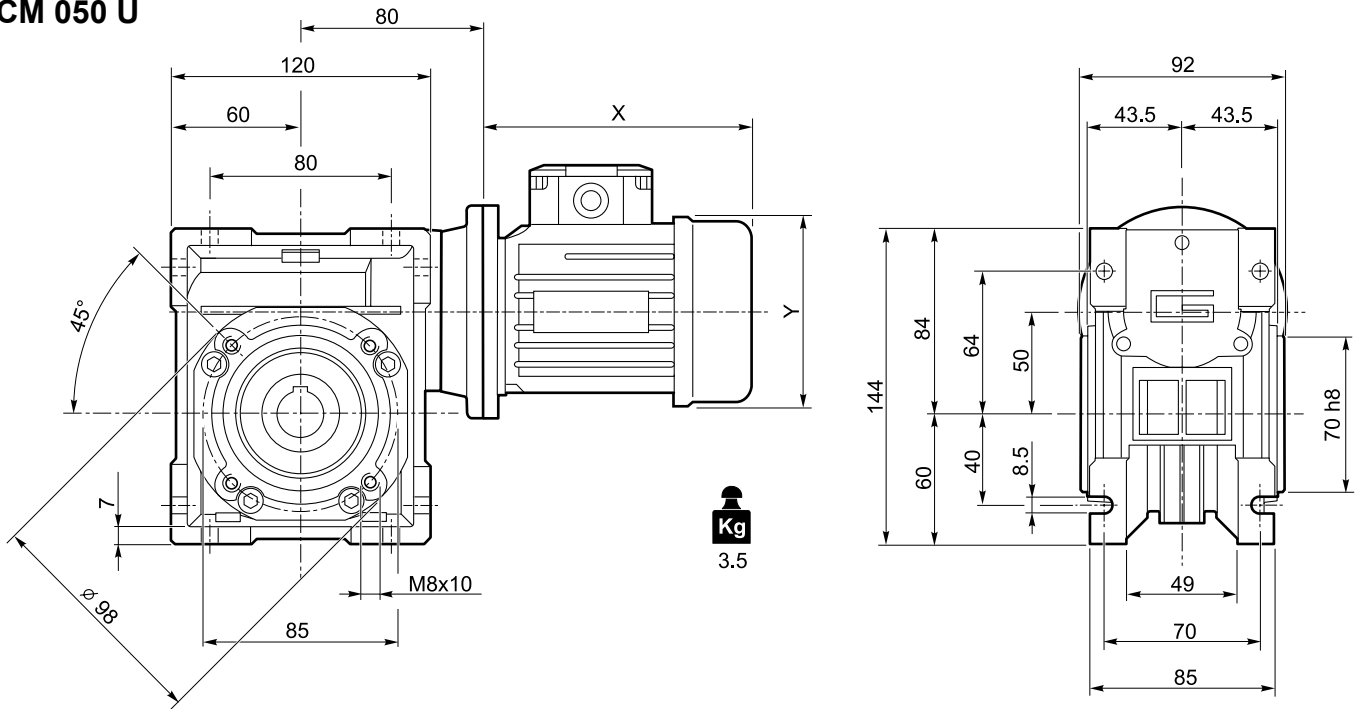
CM/CMP



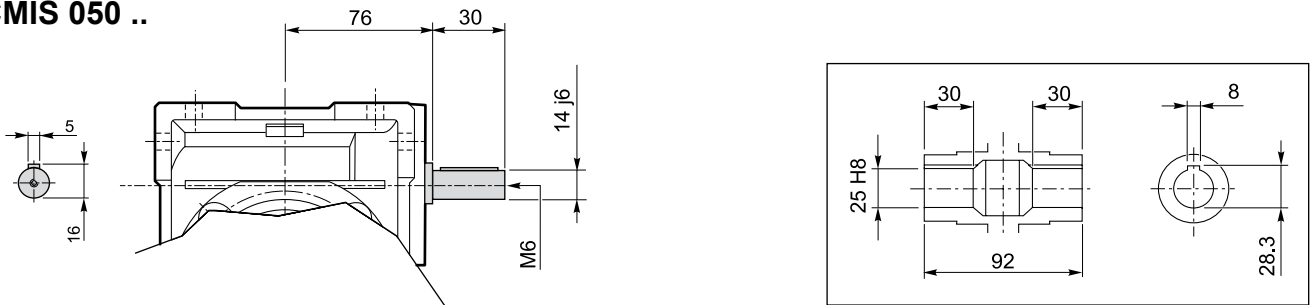
**Dimensioni**

**Dimensions**

**CM 050 U**

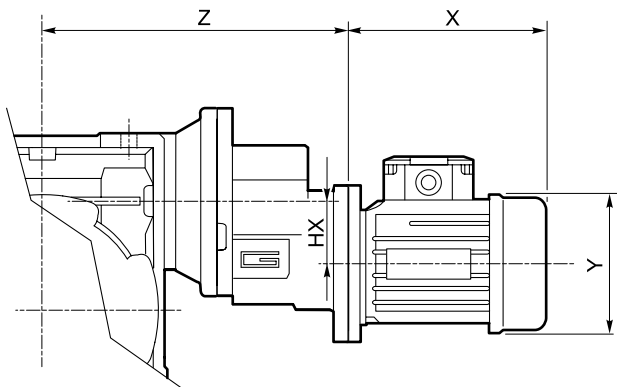


**CMIS 050 ..**

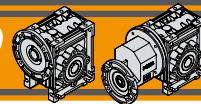


Albero lento cavo / Hollow output shaft

**CMP ..**

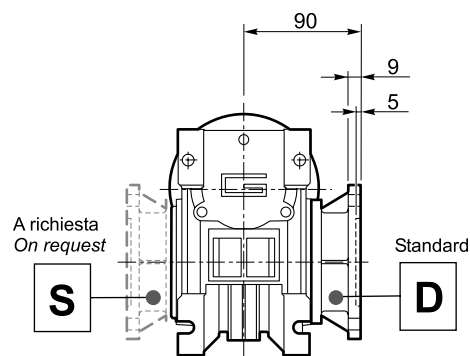
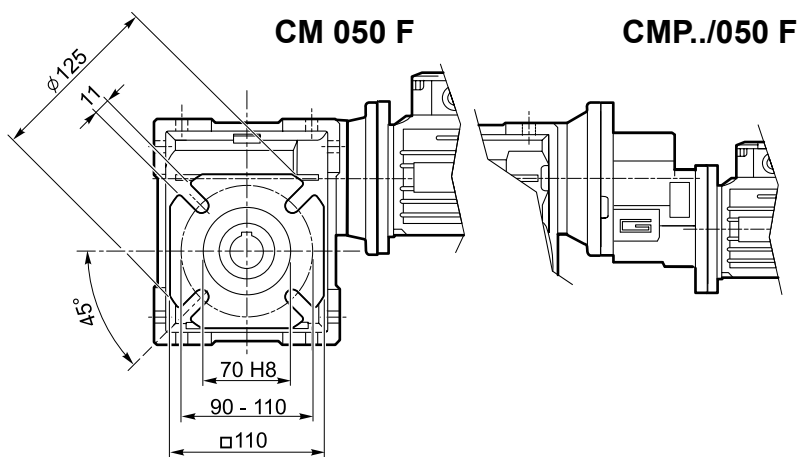


	HX	Z	Kg
063/050	30.5	152	4.5
071/050	41	169	5.5

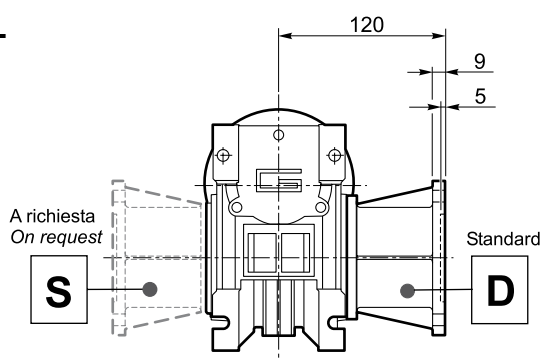
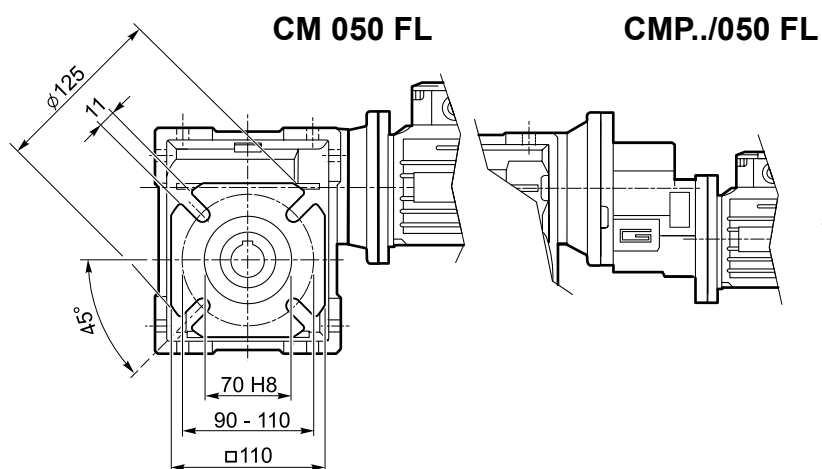
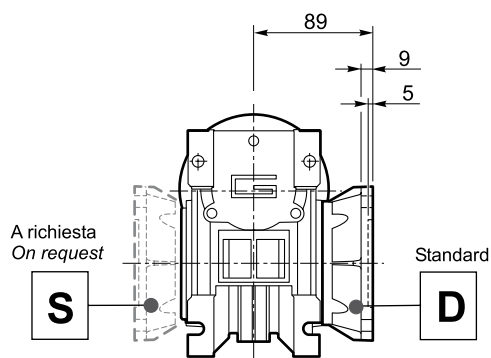
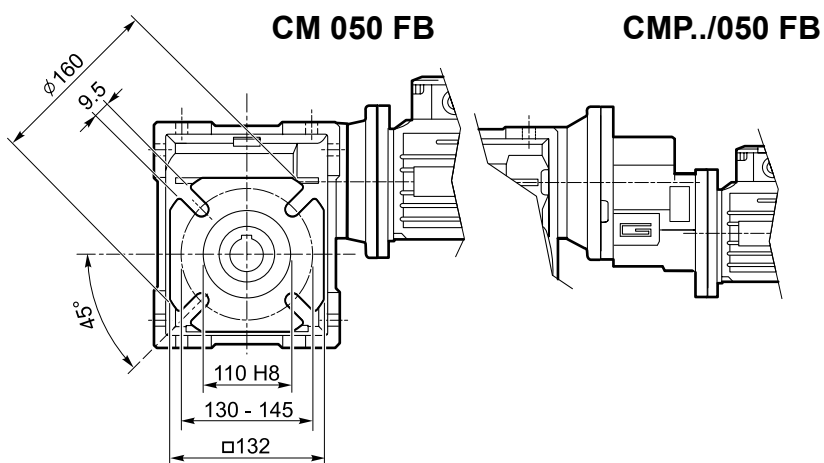


Dimensioni

Dimensions

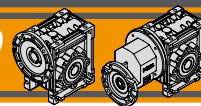


CM/CMP



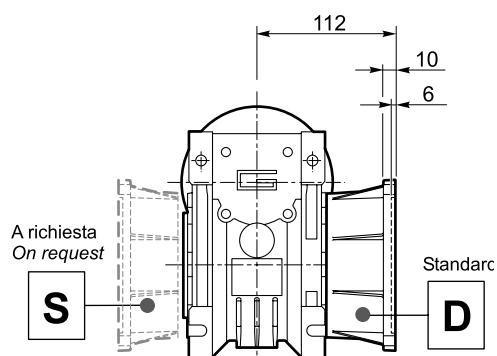
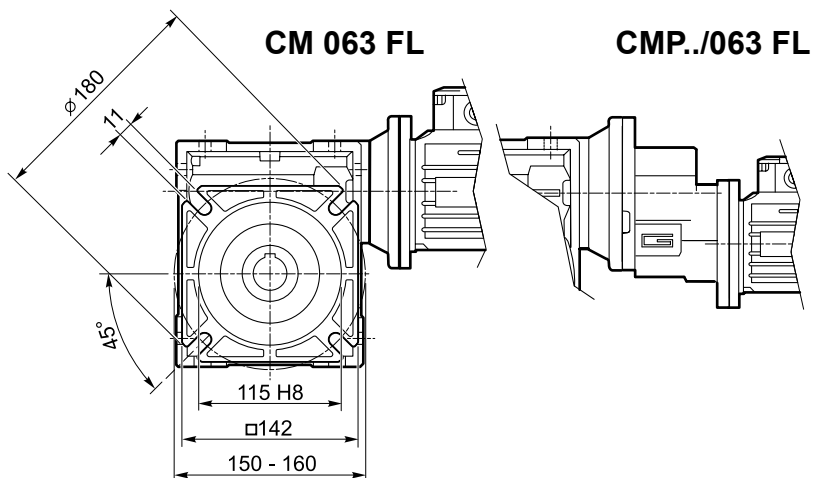
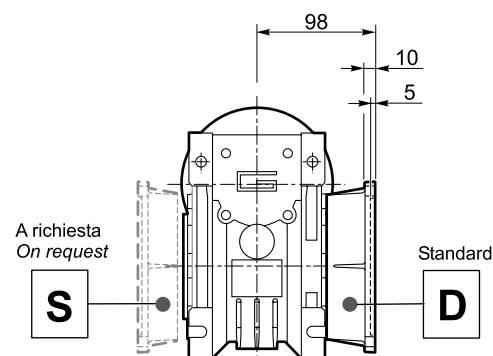
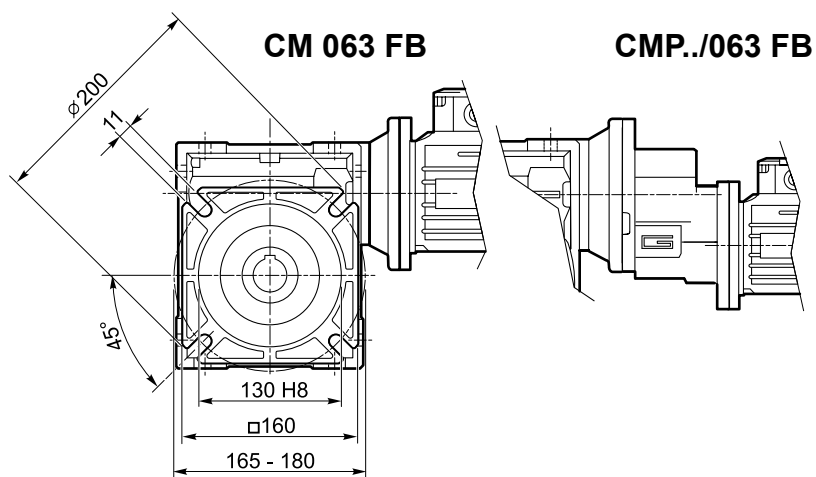
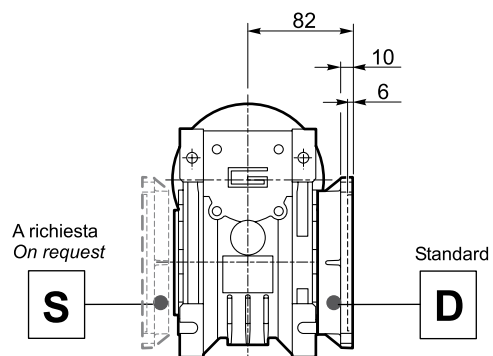
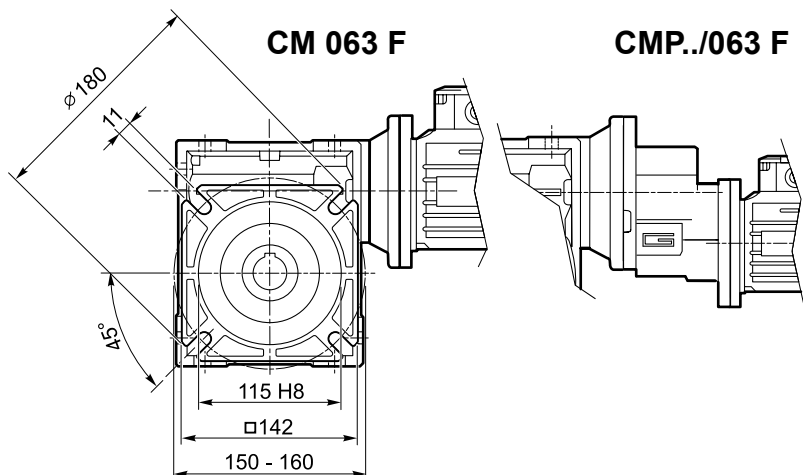




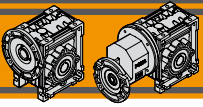


Dimensioni

Dimensions



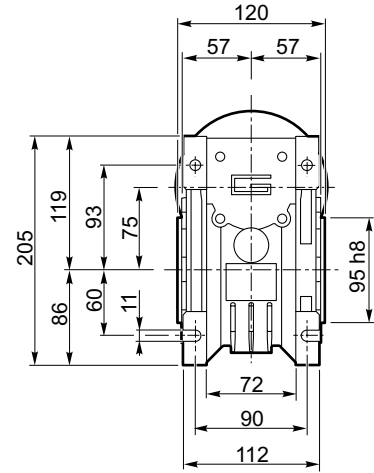
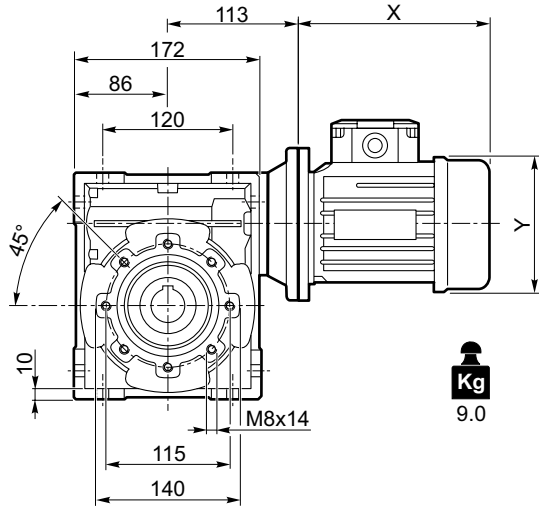
CM/CMP



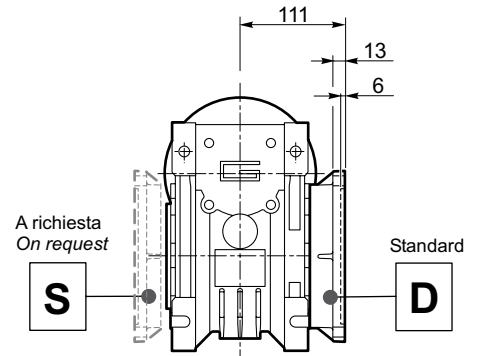
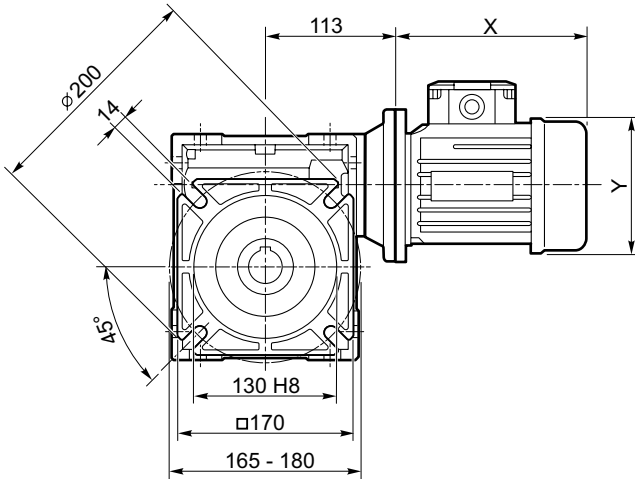
### Dimensioni

### Dimensions

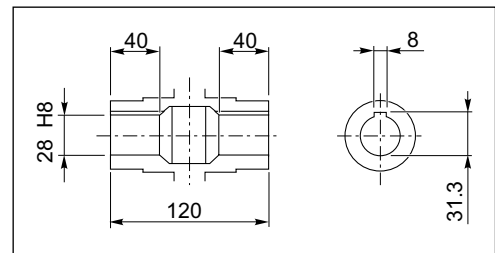
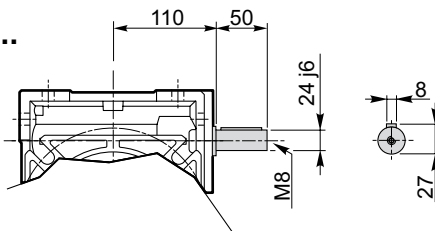
#### CM 075 U



#### CM 075 F

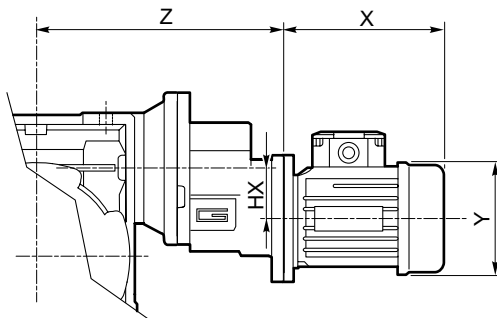


#### CMIS 075 ..

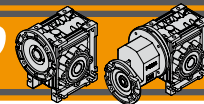


Albero lento cavo / Hollow output shaft

#### CMP ..



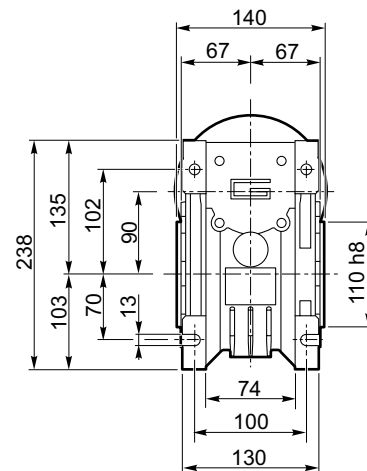
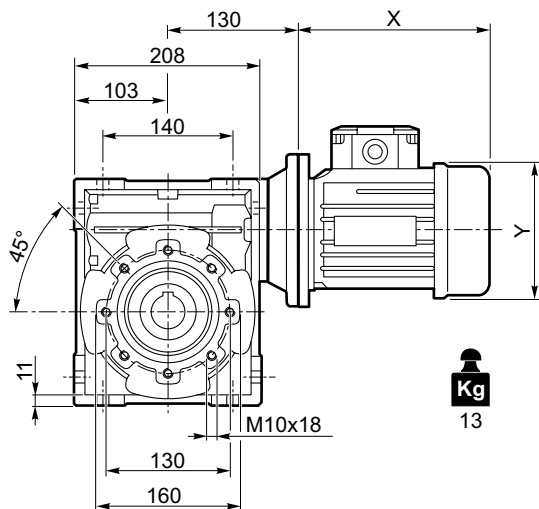
	HX	Z	Kg
071/075	41	202	11.0
080/075	41	213	11.8
090/075	36.5	267	12.5



Dimensioni

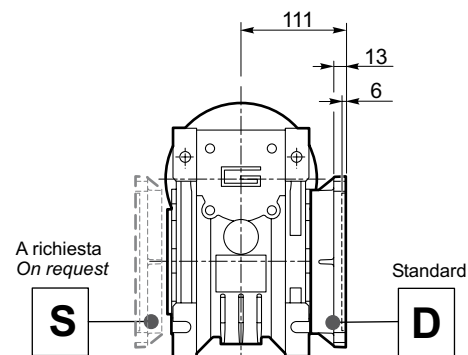
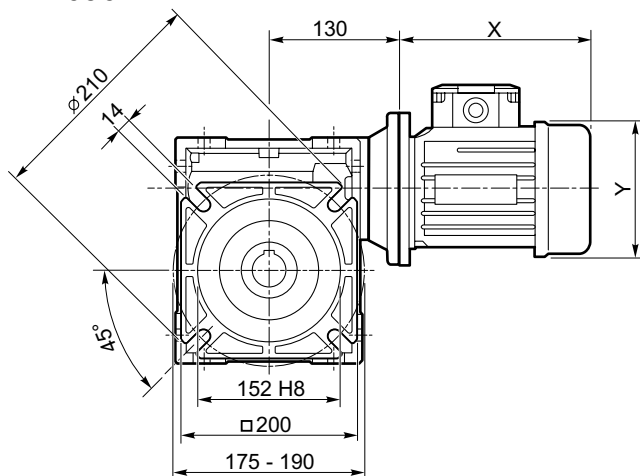
Dimensions

CM 090 U

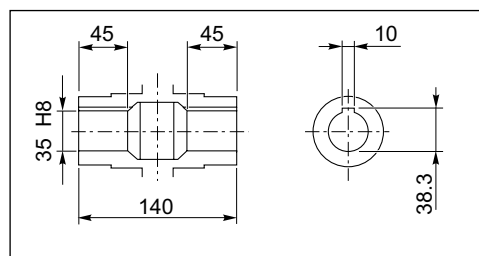
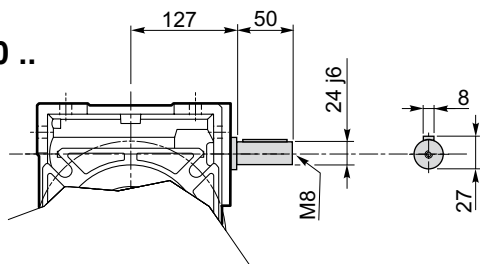


CM/CMP

CM 090 F

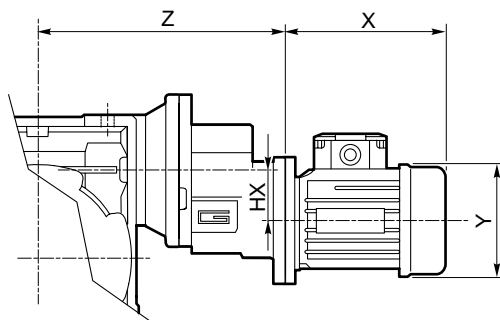


CMIS 090 ..

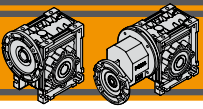


Albero lento cavo / Hollow output shaft

CMP ..



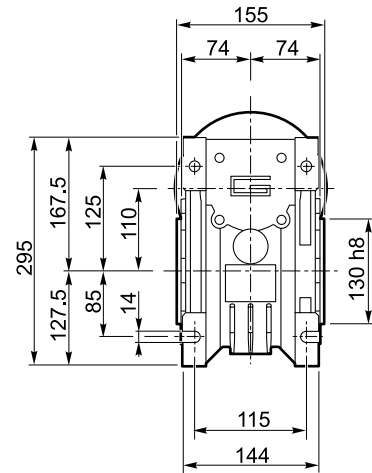
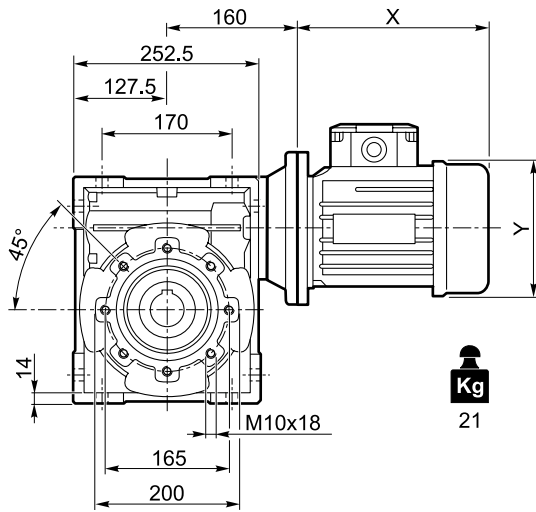
	HX	Z	Kg
071/090	41	219	15.0
080/090	41	230	15.8
090/090	36.5	284	16.5



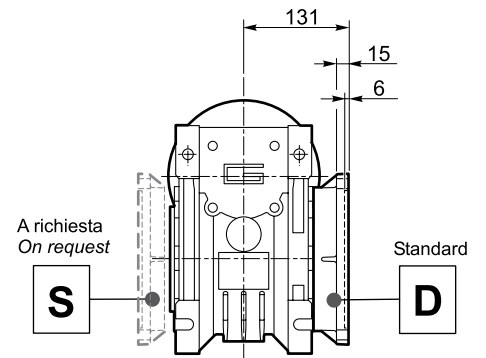
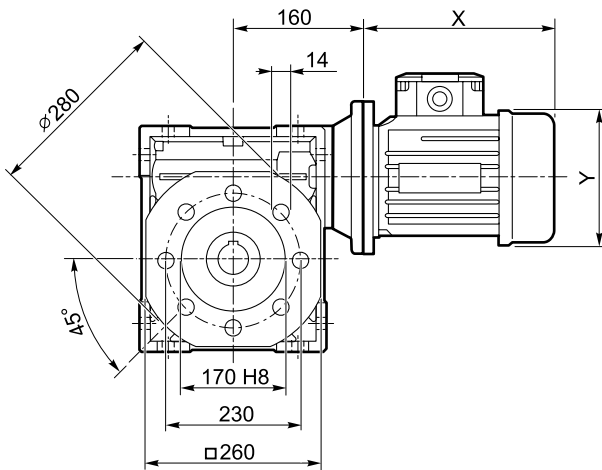
### Dimensioni

### Dimensions

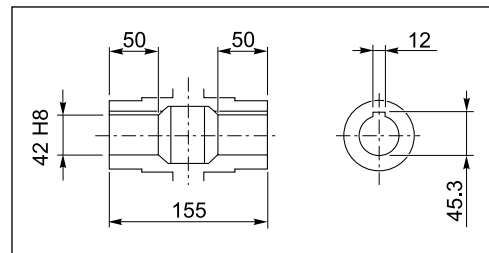
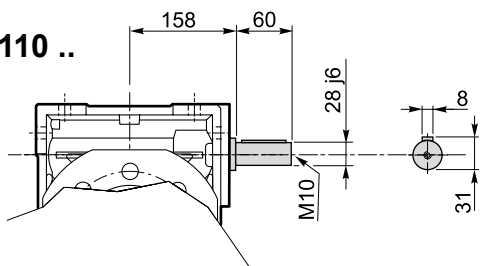
#### CM 110 U



#### CM 110 F

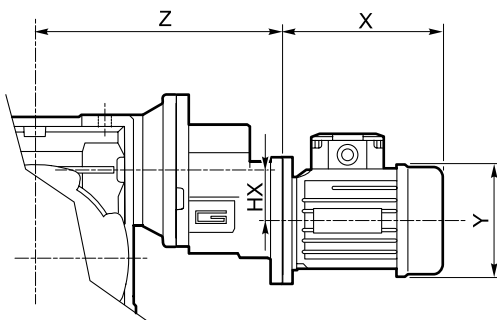


#### CMIS 110 ..

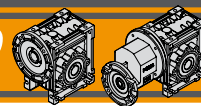


Albero lento cavo / Hollow output shaft

#### CMP ..



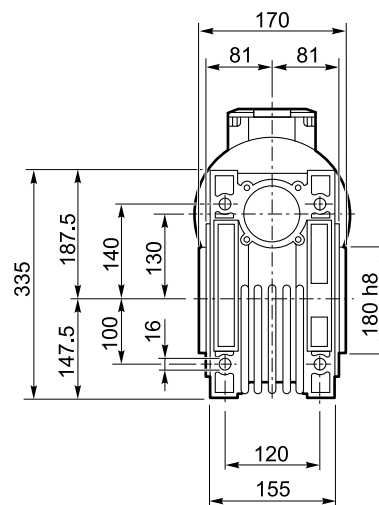
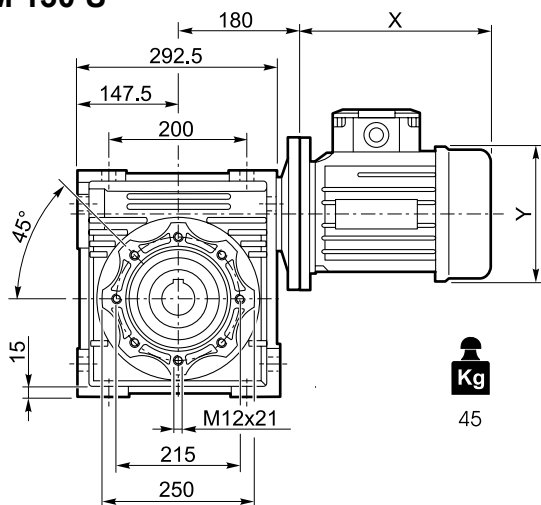
	HX	Z	Kg
080/110	41	260	23.8
090/110	36.5	314	24.5



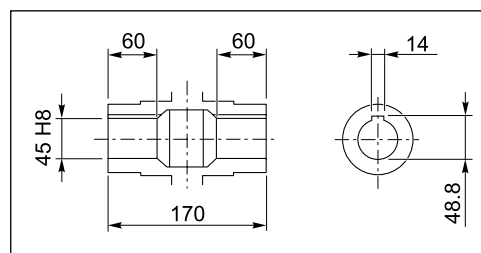
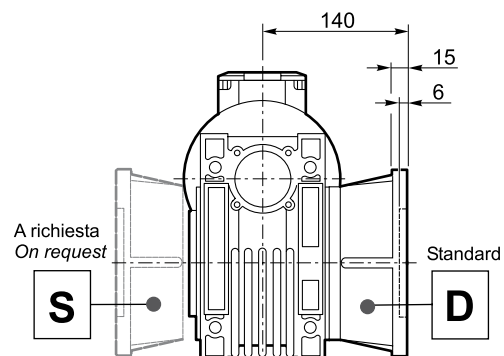
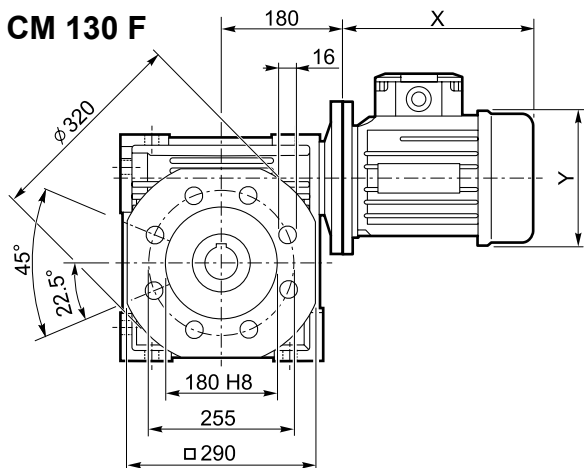
Dimensioni

Dimensions

CM 130 U

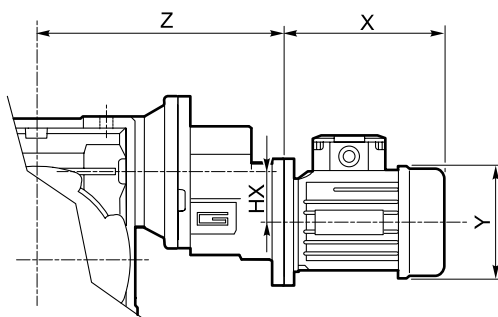


CM 130 F

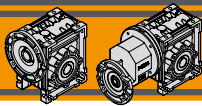


Albero lento cavo / Hollow output shaft

CMP ..



	HX	Z	Kg
080/130	41	280	47.8
090/130	36.5	334	48.5

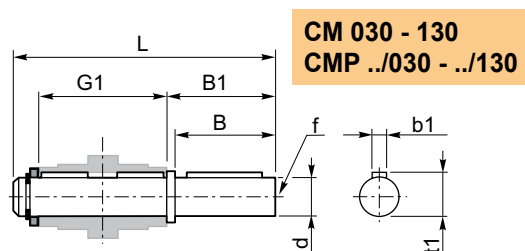
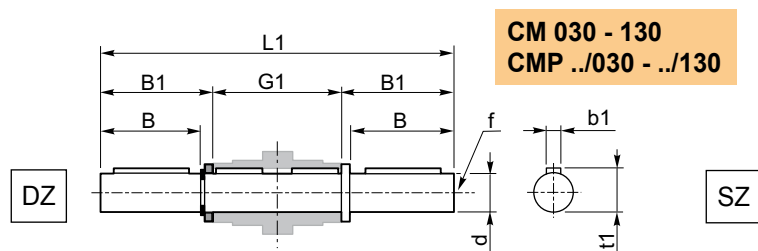


## Accessori

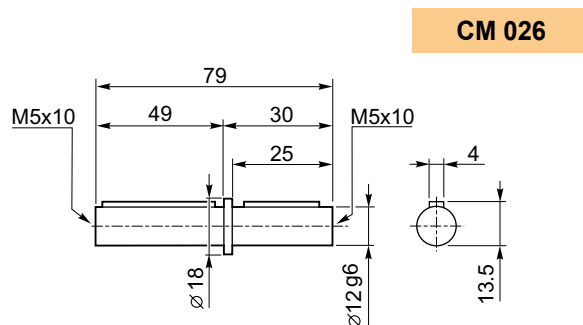
## Accessories

### Albero lento semplice e doppio

### Single and double output shaft



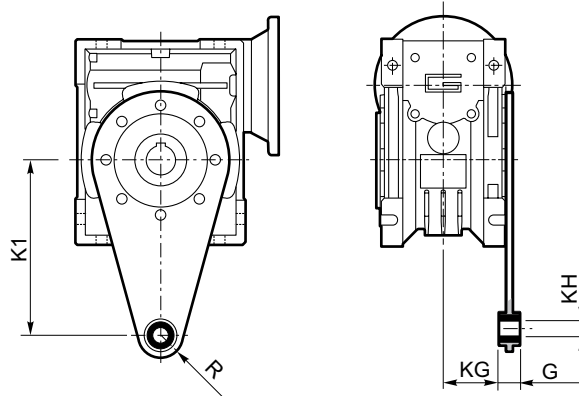
CM	CMP	d <sub>h7</sub>	B	B1	G1	L	L1	f	b1	t1
030	056/030	14	30	32.5	63	102	128	M6	5	16
040	056/040 063/040	18	40	43	78	128	164	M6	6	20.5
050	063/050 071/050	25	50	53.5	92	153	199	M10	8	28
063	063/063 071/063 080/063	25	50	53.5	112	173	219	M10	8	28
075	071/075 080/075 090/075	28	60	63.5	120	192	247	M10	8	31
090	071/090 080/090 090/090	35	80	84.5	140	234	309	M12	10	38
110	080/110 090/110	42	80	84.5	155	249	324	M16	12	45
130	080/130 090/130	45	80	85	170	265	340	M16	14	48.5



### Braccio di reazione

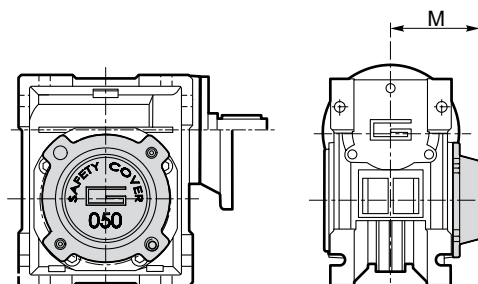
### Torque arm

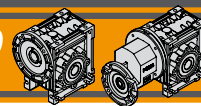
CM	CMP	K1	G	KG	KH	R
030	056/030	85	14	23	8	15
040	056/040 063/040	100	14	31	10	18
050	063/050 071/050	100	14	38	10	18
063	063/063 071/063 080/063	150	14	47.5	10	18
075	071/075 080/075 090/075	200	25	46.5	20	30
090	071/090 080/090 090/090	200	25	56.5	20	30
110	080/110 090/110	250	30	62	25	35
130	080/130 090/130	250	30	69	25	35



### SC - Safety Cover

CM	CMP	M
030	056/030	47
040	056/040 063/040	54.5
050	063/050 071/050	62.5
063	063/063 071/063 080/063	73
075	071/075 080/075 090/075	79
090	071/090 080/090 090/090	94
110	080/110 090/110	102
130	080/130 090/130	117



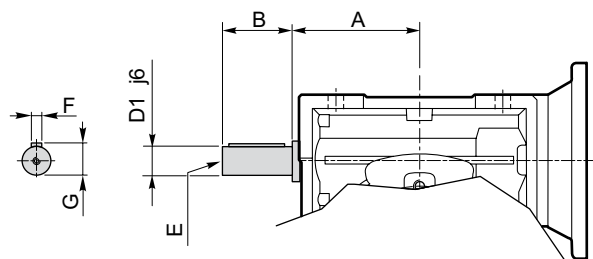


**Opzioni**

**Options**

**VS - Vite sporgente / Extended input shaft**

CM	CMP	A	B	D <sub>1</sub> j6	E	F	G
030	056/030	45	20	9	M4	3	10.2
040	056/040 063/040	53	23	11	M5	4	12.5
050	063/050 071/050	64	30	14	M6	5	16
063	063/063 071/063 080/063	75	40	19	M6	6	21.5
075	071/075 080/075 090/075	90	50	24	M8	8	27
090	071/090 080/090 090/090	108	50	24	M8	8	27
110	080/110 090/110	135	60	28	M10	8	31
130	080/130 090/130	—	—	—	—	—	—



**CM/CMP**

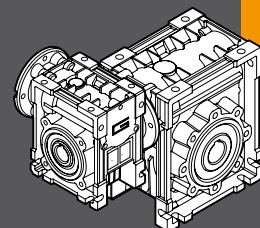




**TRANSTECNO**<sup>TM</sup>  
THE MODULAR GEARMOTOR

**CMM**

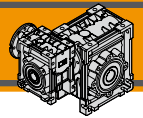
CMM



***RIDUTTORI COMBINATI A VITE SENZA FINE***  
***COMBINATION WORMGEARBOXES***



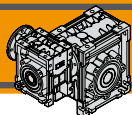




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Designazione	<i>Classification</i>	<b>E2</b>
Simbologia	<i>Symbols</i>	<b>E2</b>
Esecuzioni di montaggio	<i>Mounting executions</i>	<b>E3</b>
Combinazioni rapporti	<i>Combination ratio</i>	<b>E3</b>
Lubrificazione	<i>Lubrication</i>	<b>E3</b>
Dati tecnici	<i>Technical data</i>	<b>E4</b>
Motori applicabili	<i>IEC Motor adapters</i>	<b>E8</b>
Dimensioni	<i>Dimensions</i>	<b>E10</b>
Accessori	<i>Accessories</i>	<b>E14</b>
Opzioni	<i>Options</i>	<b>E14</b>

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## Caratteristiche tecniche

## Technical features

I riduttori combinati a vite senza fine della serie CMM hanno le seguenti caratteristiche principali :

CMM range combination gearboxes have the following main features:

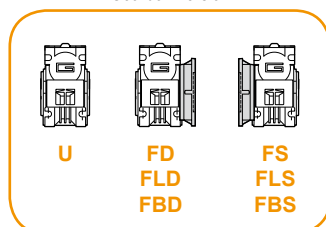
- Carcassa in alluminio nelle grandezze 026, 030, 040, 050, 063, 075, 090 e 110. La grandezza 130 è costruita con carcassa in ghisa;
- Die-cast aluminum housing on sizes 026, 030, 040, 050, 063, 075, 090 and 110. Cast iron housing on size 130;
- Le grandezze 090, 110 e 130 sono fornite con cuscinetti a rulli conici sulla vite;
- Double taper roller bearing on sizes 090, 110 and 130;
- Lubrificazione permanente con olio sintetico.
- Permanent synthetic oil long-life lubrication.

## Designazione

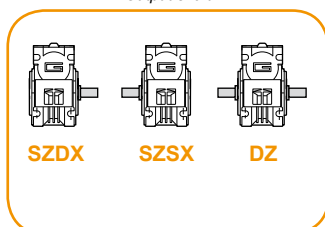
## Classification

RIDUTTORE / GEARBOX											
CMM	030/063	FD	20	71	B5	SZDX	BRSX	90	B3	US1	VS
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	IEC 	Forma costruttiva Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Pos. di montaggio Mounting position	Esecuzione di montaggio Mounting execution	Opzioni Options
 <b>CMM</b>	026/026 026/030 026/040 026/050 030/040	U FD FS FBD	vedi tabelle- see tables	56.. — 90..	B5 B14	SZDX SZSX DZ	BRDX BRSX	0° 90° 180° 270°	B3 B8 B6 B7 V5 V6	UB1 UB2 US1 US2 UV1 UV2 UC1 UC2	VS1 VS2
 <b>CMMIS</b>	030/050 030/063 040/075 040/090 050/110 063/130	FBS FLD FLS									

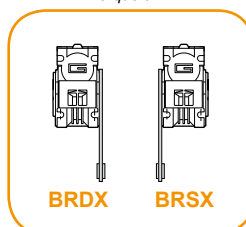
Versione Riduttore  
Gearbox Version



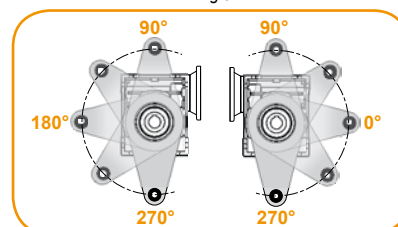
Albero di uscita  
Output shaft



Braccio di reazione  
Torque arm



Angolo  
Angle



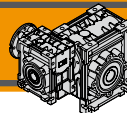
MOTORE CM / CM MOTOR

0.25kW	4p	3ph	50Hz	T1
Potenza Power  Vedi tabelle See tables	Poli Poles  2p 4p 6p 8p	Fasi Phases  1ph 3ph	Frequenza Frequency  50Hz 60Hz	Pos. morsettiera Terminal box pos.  T1 (Std)  T4 T3

## Simbologia

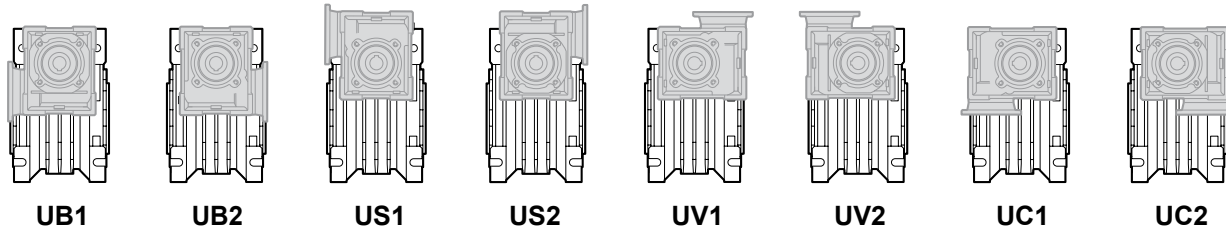
## Symbols

- |                            |                                    |            |   |
|----------------------------|------------------------------------|------------|---|
| $n_1$ [min <sup>-1</sup> ] | Velocità in ingresso / Input speed | $M_2$ [Nm] | Coppia in uscita in funzione di $P_1$ / Output torque referred to $P_1$ |
| $n_2$ [min <sup>-1</sup> ] | Velocità in uscita / Output speed  | sf         | Fattore di servizio / Service factor                                    |
| i                          | Rapporto di riduzione / Ratio      | $R_2$ [N]  | Carico radiale ammissibile in uscita / Permitted output radial load     |
| $P_1$ [kW]                 | Potenza in entrata / Input power   | $A_2$ [N]  | Carico assiale ammissibile in uscita / Permitted output axial load      |



**Esecuzioni di montaggio**

**Mounting executions**



**Combinazioni rapporti**

**Combination ratio**

CMM 026/026 - CMM 026/030 - CMM 026/040 - CMM 026/050												
i (i <sub>1</sub> x i <sub>2</sub> )												
	150	225	300	450	600	900	1200	1500	1800	2400	3000	3600
i <sub>1</sub>	10	15	10	15	20	30	40	50	60	60	60	60
i <sub>2</sub>	15	15	30	30	30	30	30	30	30	40	50	60

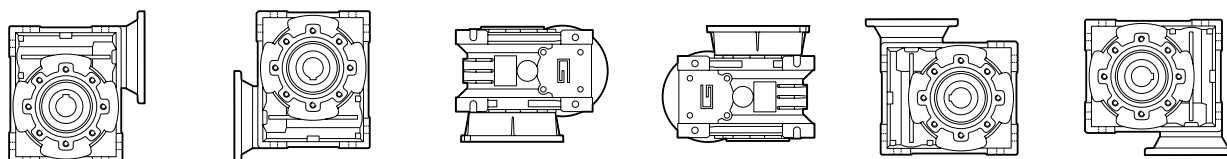
CMM 030/040 - CMM 030/050 - CMM 030/063 - CMM 040/075 - CMM 040/090 - CMM 050/110 - CMM 063/130																
i (i <sub>1</sub> x i <sub>2</sub> )																
	75	100	150	200	250	300	400	500	600	750	900	1200	1500	1800	2400	3000
i <sub>1</sub>	7.5	10	10	10	10	10	10	10	20	25	30	40	50	60	60	60
i <sub>2</sub>	10	10	15	20	25	30	40	50	30	30	30	30	30	30	40	50

**Lubrificazione**

**Lubrication**

	CMM											
	026/026	026/030	026/040	026/050	030/040	030/050	030/063	040/075	040/090	050/110	063/130	
①	026				030			040		050	063	
	Lubrificazione a vita <i>Life lubricated</i>											
②	026	030	040	050	040	050	063	075	090	110	130	
	Lubrificazione a vita <i>Life lubricated</i>											

**Posizioni di montaggio / Mounting positions**



**B3**  
(standard)

**B8**

**B6**

**B7**

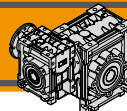
**V5**

**V6**

	Quantità di olio (litri) / Oil quantity (litres)					
	B3	B8	B6	B7	V5	V6
CM026				0.02		
CM030				0.03		
CM040				0.07		
CM050				0.1		
CM063				0.25		
CM075				0.4		
CM090				0.85		
CM110				1.5		
CM130	4.5	3.3	3.5	3.5	4.5	3.3



Lubrificati a vita  
*Life lubrication*







Dati tecnici

Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			
<b>0.09</b>							
56B4 (1400 min <sup>-1</sup> )	7.0	69	3.8	200	<b>CMM</b> <b>030/063</b>	B5/B14	
	5.6	81	2.8	250		B5/B14	
	4.7	93	3.3	300		B5/B14	
	3.5	111	2.3	400		B5/B14	
	2.8	129	1.8	500		B5/B14	
	2.3	166	1.9	600		B5/B14	
	1.9	199	1.6	750		B5/B14	
	1.6	222	1.4	900		B5/B14	
	1.2	267	1.0	1200		B5/B14	
	0.93	320	1.0	1500		B5/B14	
	0.78	365	0.9	1800		B5/B14	
	0.93	348	1.5	1500		<b>CMM</b> <b>040/075</b>	B5/B14
	0.78	404	1.3	1800			B5/B14
	0.58	487	0.9	2400			B5/B14
0.47	378	1.0	3000	B5/B14			
0.8	423	2.1	1800	<b>CMM</b> <b>040/090</b>	B5/B14		
0.58	521	1.4	2400		B5/B14		
0.47	609	1.0	3000		B5/B14		

<b>0.12</b>							
63A4 (1400 min <sup>-1</sup> )	18.7	39	2.1	75	<b>CMM</b> <b>030/040</b>	B5/B14	
	14.0	52	1.6	100		B5/B14	
	9.3	71	1.2	150		B5/B14	
	7.0	92	0.8	200		B5/B14	
	5.6	67	1.0	250		B5/B14	
	4.7	118	0.8	300		B5/B14	
	18.7	40	3.9	75	<b>CMM</b> <b>030/050</b>	B5/B14	
	14.0	52	3.0	100		B5/B14	
	9.3	74	2.2	150		B5/B14	
	7.0	94	1.5	200		B5/B14	
	5.6	110	1.1	250		B5/B14	
	4.7	120	1.4	300		B5/B14	
	3.5	146	0.9	400	<b>CMM</b> <b>030/063</b>	B5/B14	
	2.8	165	0.8	500		B5/B14	
	2.3	214	0.8	600		B5/B14	
	18.7	40	7.1	75		<b>CMM</b> <b>030/063</b>	B5/B14
	14.0	53	5.4	100			B5/B14
	9.3	73	4.1	150			B5/B14
	7.0	92	2.8	200	B5/B14		
	5.6	108	2.1	250	B5/B14		
	4.7	124	2.5	300	B5/B14		
	3.5	149	1.8	400	<b>CMM</b> <b>040/075</b>	B5/B14	
	2.8	172	1.3	500		B5/B14	
	2.3	221	1.4	600		B5/B14	
	1.9	265	1.2	750		B5/B14	
	1.6	296	1.0	900		B5/B14	
	1.2	260	1.0	1200		B5/B14	
	0.93	310	1.0	1500	<b>CMM</b> <b>040/075</b>	B5/B14	
	4.7	130	3.9	300		B5/B14	
	3.5	157	2.8	400		B5/B14	
	2.8	182	2.1	500		B5/B14	
	2.3	241	2.1	600		B5/B14	
	1.9	286	1.8	750		B5/B14	
	1.6	325	1.6	900	<b>CMM</b> <b>040/090</b>	B5/B14	
	1.2	392	1.1	1200		B5/B14	
	0.93	464	1.1	1500		B5/B14	
0.78	538	0.9	1800	B5/B14			
2.8	196	3.2	500	<b>CMM</b> <b>040/090</b>		B5/B14	
2.3	253	3.5	600			B5/B14	
1.9	300	2.9	750		B5/B14		
1.6	340	2.6	900		B5/B14		

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i			
<b>0.12</b>							
	1.2	419	1.8	1200	<b>CMM</b> <b>040/090</b>	B5/B14	
	0.9	486	1.8	1500		B5/B14	
	0.8	564	1.6	1800		B5/B14	
	0.58	695	1.1	2400		B5/B14	
	0.47	812	0.8	3000		B5/B14	
	0.9	518	2.9	1500		<b>CMM</b> <b>050/110</b>	B5/B14
	0.8	592	2.5	1800			B5/B14
	0.6	766	1.7	2400			B5/B14
	0.5	899	1.3	3000			B5/B14
	<b>0.18</b>						
63B4 (1400 min <sup>-1</sup> )	18.7	59	1.4	75	<b>CMM</b> <b>030/040</b>		B5/B14
	14.0	77	1.1	100		B5/B14	
	9.3	107	0.8	150		B5/B14	
	18.7	59	2.6	75		<b>CMM</b> <b>030/050</b>	B5/B14
	14.0	78	2.0	100	B5/B14		
	9.3	111	1.4	150	B5/B14		
	7.0	140	1.0	200	B5/B14		
	5.6	165	0.7	250	<b>CMM</b> <b>030/063</b>	B5/B14	
	4.7	179	0.9	300		B5/B14	
	18.7	60	4.8	75		<b>CMM</b> <b>030/063</b>	B5/B14
	14.0	79	3.6	100			B5/B14
	9.3	110	2.8	150	B5/B14		
7.0	138	1.9	200	B5/B14			
5.6	162	1.4	250	<b>CMM</b> <b>030/063</b>	B5/B14		
4.7	186	1.7	300		B5/B14		
3.5	223	1.2	400		B5/B14		
2.8	258	0.9	500		B5/B14		
2.3	332	0.9	600	<b>CMM</b> <b>030/063</b>	B5/B14		
1.9	398	0.8	750		B5/B14		
18.7	62	7.6	75		<b>CMM</b> <b>040/075</b>	B5/B14	
14.0	80	5.8	100			B5/B14	
9.3	113	4.3	150	B5/B14			
7.0	142	3.0	200	B5/B14			
5.6	170	2.3	250	<b>CMM</b> <b>040/075</b>	B5/B14		
4.7	195	2.6	300		B5/B14		
3.5	235	1.8	400		B5/B14		
2.8	273	1.4	500		B5/B14		
2.3	362	1.4	600	<b>CMM</b> <b>040/075</b>	B5/B14		
1.9	429	1.2	750		B5/B14		
1.6	487	1.0	900		B5/B14		
2.8	294	2.2	500		<b>CMM</b> <b>040/090</b>	B5/B14	
2.3	379	2.3	600	B5/B14			
1.9	450	2.0	750	B5/B14			
1.6	511	1.7	900	B5/B14			
1.2	629	1.2	1200	<b>CMM</b> <b>040/090</b>	B5/B14		
0.9	729	1.2	1500		B5/B14		
0.8	846	1.0	1800		B5/B14		
1.2	690	1.9	1200		<b>CMM</b> <b>050/110</b>	B5/B14	
0.9	777	1.9	1500	B5/B14			
0.8	888	1.7	1800	B5/B14			
0.6	1149	1.1	2400	B5/B14			
0.5	1348	0.9	3000	B5/B14			

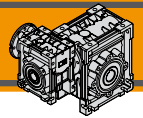
<b>0.18</b>							
63C4 (1400 min <sup>-1</sup> )	18.7	72	1.2	75	<b>CMM</b> <b>030/040</b>	B5/B14	
	14.0	95	0.9	100		B5/B14	
	18.7	73	2.1	75		<b>CMM</b> <b>030/050</b>	B5/B14
	14.0	96	1.6	100			B5/B14
	9.3	136	1.2	150	B5/B14		
	7.0	171	0.8	200	B5/B14		

<b>0.22</b>							
63C4 (1400 min <sup>-1</sup> )	18.7	72	1.2	75	<b>CMM</b> <b>030/040</b>	B5/B14	
	14.0	95	0.9	100		B5/B14	
	18.7	73	2.1	75		<b>CMM</b> <b>030/050</b>	B5/B14
	14.0	96	1.6	100			B5/B14
	9.3	136	1.2	150	B5/B14		
	7.0	171	0.8	200	B5/B14		

CMM







**Dati tecnici**

**Technical data**

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
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P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
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**0.55**

71C4 (1400 min <sup>-1</sup> )	2.8	973	1.2	500	<b>CMM</b> <b>050/110</b>	B5/B14		
	2.3	1191	1.2	600		B5/B14		
	1.9	1433	1.0	750		B5/B14		
	1.6	1629	0.9	900		B5/B14		
	1.2	2127	0.9	1200	<b>CMM</b> <b>063/130</b>	B5/B14		
	0.9	2451	0.8	1500		B5/B14		
	80A4 (1400 min <sup>-1</sup> )	18.7	198	6.3		75	<b>CMM</b> <b>050/110</b>	B5/B14
		14.0	258	4.8		100		B5/B14
9.3		364	3.7	150	B5/B14			
7.0		478	2.7	200	B5/B14			
5.6		574	2.1	250	B5/B14			
4.7		641	2.3	300	B5/B14			
3.5		829	1.6	400	B5/B14			
2.8		973	1.2	500	B5/B14			
2.3		1191	1.2	600	B5/B14			
1.9		1433	1.0	750	B5/B14			
1.6		1629	0.9	900	B5/B14			
5.6		589	2.8	250	<b>CMM</b> <b>063/130</b>	B5/B14		
4.7	639	3.2	300	B5/B14				
3.5	813	2.2	400	B5/B14				
2.8	984	1.6	500	B5/B14				
2.3	1203	1.7	600	B5/B14				
1.9	1449	1.4	750	B5/B14				
1.6	1671	1.2	900	B5/B14				
1.2	2127	0.9	1200	B5/B14				
0.9	2451	0.8	1500	B5/B14				

**1.1**

90S4 (1400 min <sup>-1</sup> )	18.7	406	4.1	75	<b>CMM</b> <b>063/130</b>	B5/B14
	14.0	529	3.2	100		B5/B14
	9.3	745	2.6	150		B5/B14
	7.0	968	1.9	200		B5/B14
	5.6	1178	1.4	250	B5/B14	
	4.7	1278	1.6	300	B5/B14	
	3.5	1626	1.1	400	B5/B14	
	2.8	1968	0.8	500	B5/B14	
	2.3	2407	0.9	600	B5/B14	

**1.5**

90L4 (1400 min <sup>-1</sup> )	18.7	554	3.0	75	<b>CMM</b> <b>063/130</b>	B5/B14
	14.0	722	2.3	100		B5/B14
	9.3	1016	1.9	150		B5/B14
	7.0	1320	1.4	200		B5/B14
	5.6	1606	1.0	250	B5/B14	
	4.7	1742	1.2	300	B5/B14	
	3.5	2218	0.8	400	B5/B14	

**1.85**

90LB4 (1400 min <sup>-1</sup> )	18.7	683	2.5	75	<b>CMM</b> <b>063/130</b>	B5/B14
	14.0	890	1.9	100		B5/B14
	9.3	1254	1.5	150		B5/B14
	7.0	1628	1.1	200		B5/B14
	5.6	1981	0.8	250	B5/B14	
	4.7	2149	1.0	300	B5/B14	

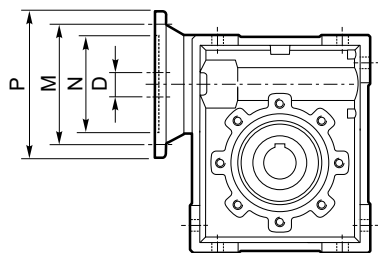
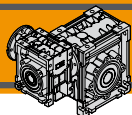
**0.75**

80B4 (1400 min <sup>-1</sup> )	18.7	270	4.6	75	<b>CMM</b> <b>050/110</b>	B5/B14
	14.0	352	3.5	100		B5/B14
	9.3	496	2.7	150		B5/B14
	7.0	652	2.0	200		B5/B14
	5.6	783	1.5	250		B5/B14
	4.7	874	1.7	300		B5/B14
	3.5	1131	1.2	400		B5/B14
	2.8	1326	0.9	500		B5/B14
	2.3	1625	0.9	600	<b>CMM</b> <b>063/130</b>	B5/B14
	1.9	1954	0.8	750		B5/B14
	7.0	660	2.7	200		B5/B14
	5.6	803	2.0	250		B5/B14
	4.7	871	2.4	300		B5/B14
	3.5	1109	1.6	400		B5/B14
	2.8	1342	1.2	500		B5/B14
	2.3	1641	1.3	600		B5/B14
	1.9	1975	1.0	750	B5/B14	
	1.6	2279	0.9	900	B5/B14	

**1.1**

80C4 (1400 min <sup>-1</sup> )	18.7	397	3.1	75	<b>CMM</b> <b>050/110</b>	B5/B14
	14.0	517	2.4	100		B5/B14
	9.3	727	1.9	150		B5/B14
	7.0	957	1.4	200		B5/B14
	5.6	1148	1.0	250		B5/B14
	4.7	1282	1.2	300		B5/B14
	3.5	1658	0.8	400	<b>CMM</b> <b>063/130</b>	B5/B14
	7.0	968	1.9	200		B5/B14
	5.6	1178	1.4	250		B5/B14
	4.7	1278	1.6	300		B5/B14
	3.5	1626	1.1	400		B5/B14
	2.8	1968	0.8	500		B5/B14
	2.3	2407	0.9	600		B5/B14

**CMM**

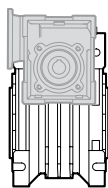


N.B.

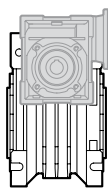
Le aree evidenziate in grigio indicano l'applicabilità della corrispondente grandezza motore.  
Grey areas indicate motor inputs available on each size of unit.

**B/BS = Boccia di riduzione in acciaio**

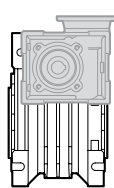
**B/BS = Metal shaft sleeve**



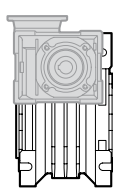
**US1**



**US2**

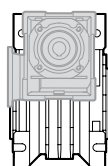


**UV1**

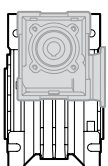


**UV2**

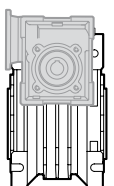
CMM	IEC	N	M	P	D	i <sub>1</sub>						
						10	15	20	30	40	50	60
<b>026/026</b>	<b>56B14</b>	50	65	80	9							



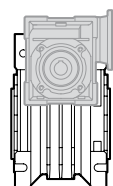
**UB1**



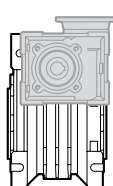
**UB2**



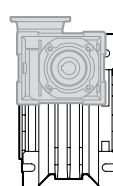
**US1**



**US2**

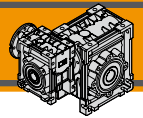


**UV1**



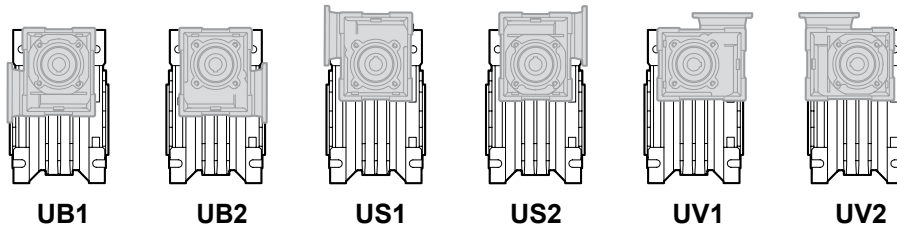
**UV2**

CMM	IEC	N	M	P	D	i <sub>1</sub>						
						10	15	20	30	40	50	60
<b>026/030</b> <b>026/040</b> <b>026/050</b>	<b>56B14</b>	50	65	80	9							

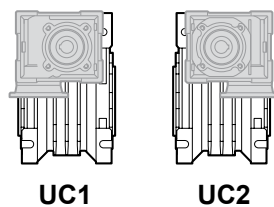


**Motori applicabili**

**IEC Motor adapters**

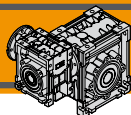


CMM	IEC	N	M	P	D	i <sub>1</sub>								
						7.5	10	15	20	25	30	40	50	60
030/040 030/050 030/063	63B5	95	115	140	11									
	63B14	60	75	90	11									
	56B5	80	100	120	9	B	B	B	B	B	B	B	B	
	56B14	50	65	80	9									
040/075 040/090	71B5	110	130	160	14									
	71B14	70	85	105	14									
	63B5	95	115	140	11	B	B	B	B	B	B	B		
	63B14	60	75	90	11									
	56B5	80	100	120	9	BS	BS	BS	BS	BS	BS	BS	B	B
56B14	50	65	80	9										
050/110	80B5	130	165	200	19									
	80B14	80	100	120	19									
	71B5	110	130	160	14	B	B	B	B	B	B			
	71B14	70	85	105	14									
	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	B	B	B
63B14	60	75	90	11										
063/130	90B5	130	165	200	24									
	90B14	95	115	140	24									
	80B5	130	165	200	19	B	B	B	B	B	B			
	80B14	80	100	120	19									
	71B5	110	130	160	14	BS	BS	BS	BS	BS	BS	B	B	B
	71B14	70	85	105	14									
	63B5	95	115	140	11							BS	BS	BS



CMM	IEC	N	M	P	D	i <sub>1</sub>								
						7.5	10	15	20	25	30	40	50	60
030/040 030/050	63B14	60	75	90	11									
	56B5	80	100	120	9	B	B	B	B	B	B	B	B	
	56B14	50	65	80	9									
030/063	63B5	95	115	140	11									
	63B14	60	75	90	11									
	56B5	80	100	120	9	B	B	B	B	B	B	B	B	
	56B14	50	65	80	9									
040/075 040/090	71B14	70	85	105	14									
	63B5	95	115	140	11	B	B	B	B	B	B			
	63B14	60	75	90	11									
	56B5	80	100	120	9	BS	BS	BS	BS	BS	BS	BS	B	B
	56B14	50	65	80	9									
050/110	80B14	80	100	120	19									
	71B5	110	130	160	14	B	B	B	B	B	B			
	71B14	70	85	105	14									
	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	B	B	B
	63B14	60	75	90	11									
063/130	90B14	95	115	140	24									
	80B14	80	100	120	19	B	B	B	B	B	B			
	71B5	110	130	160	14	BS	BS	BS	BS	BS	BS	B	B	B
	71B14	70	85	105	14									
	63B5	95	115	140	11							BS	BS	BS

CMM



**Dimensioni**

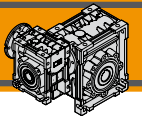
**Dimensions**

CMM..U - CMM..F - CMM..FB - CMM..FL																	
	A	C	D <sub>H8</sub>	E	F	G	G1	H	H1	I	I1	K	L	M	N <sub>h8</sub>	N1	N2
<b>026/026</b>	45	70	12	83	22	47.5	50	35	34	26	26	34	42	55	45	22.5	21
<b>026/030</b>	54	80	14	97	32	47.5	63	40	34	30	26	44	56	65	55	29	21
<b>026/040</b>	70	100	18	121.5	43	47.5	78	50	34	40	26	60	71	75	60	36.5	21
<b>026/050</b>	80	120	25	144	49	47.5	92	60	34	50	26	70	85	85	70	43.5	21

CMM..U - CMM..F - CMM..FB - CMM..FL															
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg	
<b>026/026</b>	6	—	37	49	49	5	15	21	76	7	—	4	13.8	1.6	
<b>026/030</b>	6.5	75	44	57	49	5.5	22	27	81	M6x11(n.4)	90°	5	16.3	2.4	
<b>026/040</b>	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	3.5	
<b>026/050</b>	8.5	98	64	84	49	7	30	40	100.5	M8x10(n.4)	45°	8	28.3	5.0	

	CMM..F								CMM..FB								CMM..FL									
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	
<b>026/026</b>	45°	45	6	4.5	55-69	40	6.5(n.4)	75	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>026/030</b>	45°	54.5	6	4	68	50	6.5(n.4)	80	70								—									
<b>026/040</b>	45°	67	7.5	4.5	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95	60	9(n.4)	110	95	
<b>026/050</b>	45°	90	9	5	90-110	70	11(n.4)	125	110	89	9	5	130-145	110	9.5(n.4)	160	132	120	9	5	90-110	70	11(n.4)	125	110	

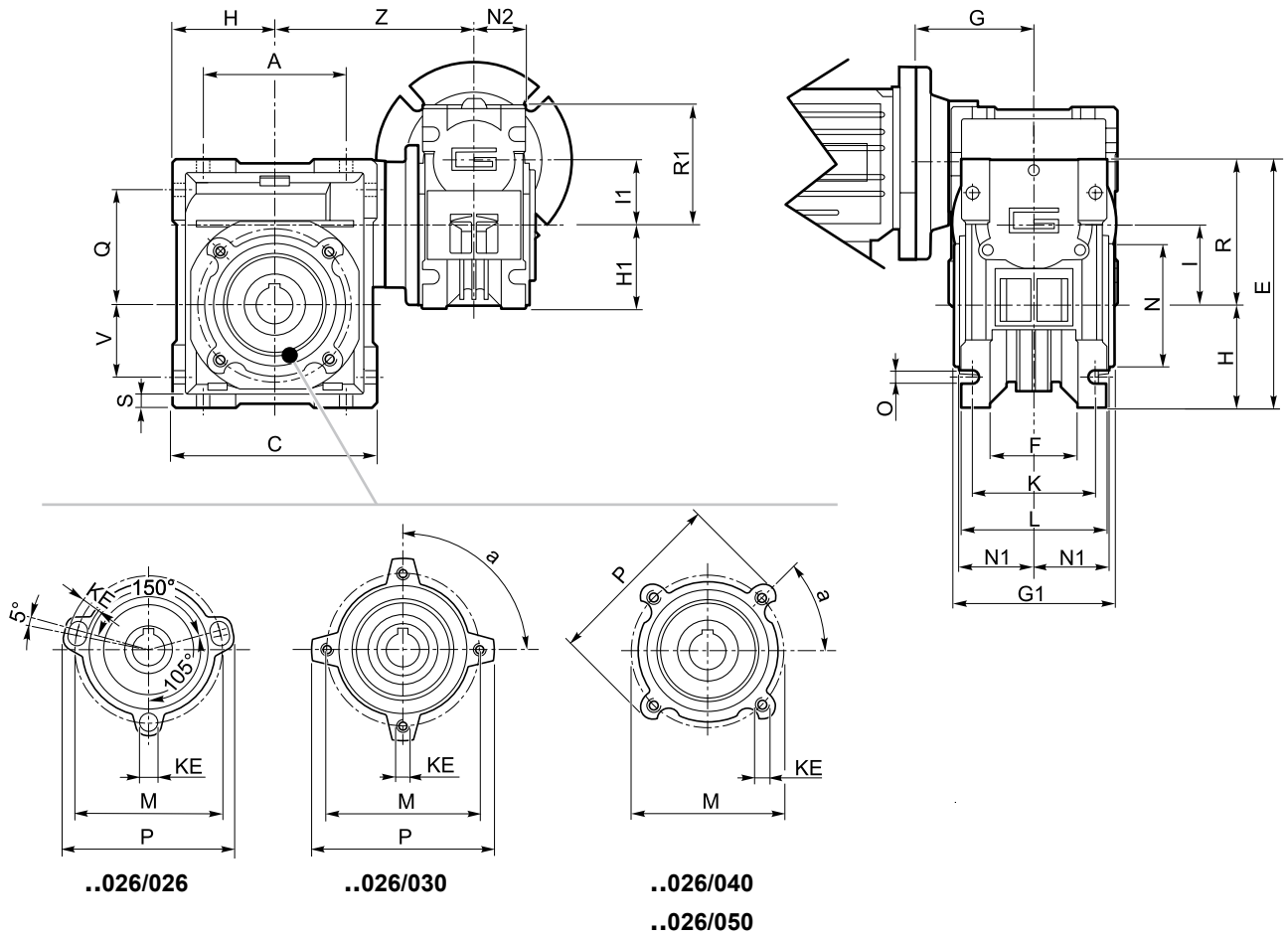
CMMIS						
	A	B	D1 <sub>j6</sub>	E	F	M
<b>026/026</b> <b>026/030</b> <b>026/040</b> <b>026/050</b>	45	20	9	M4	3	10.2



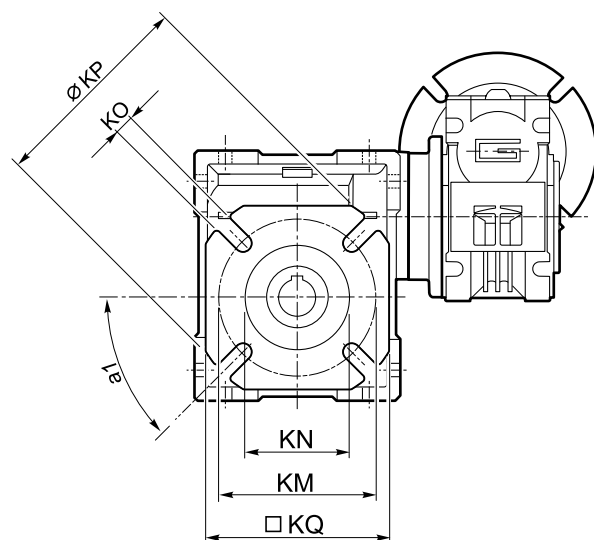
Dimensioni

Dimensions

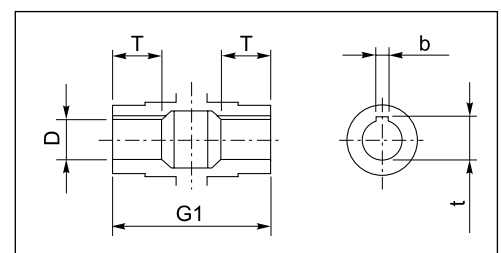
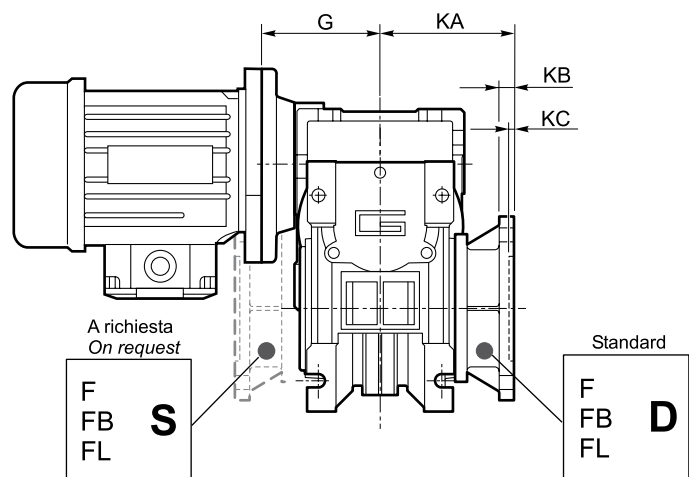
CMM026/..U



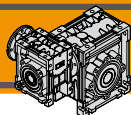
CMM



CMM026/..F  
CMM026/..FB  
CMM026/..FL



Albero lento cavo / Hollow output shaft



**Dimensioni**

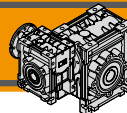
**Dimensions**

CMM.. - CMM..F - CMM..FB - CMM..FL																	
	A	C	D <sub>H8</sub>	E	F	G	G1	H	H1	I	I1	K	L	M	N <sub>H8</sub>	N1	N2
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29
030/050	80	120	25	144	49	55	92	60	40	50	30	70	85	85	70	43.5	29
030/063	100	144	25	174	67	55	112	72	40	63	30	85	104	95	80	53	29
040/075	120	172	28	205	72	70	120	86	50	75	40	90	112	115	95	57	36.5
040/090	140	208	35	238	74	70	140	103	50	90	40	100	130	130	110	67	36.5
050/110	170	252.5	42	295	—	80	155	127.5	60	110	50	115	144	165	130	74	43.5
063/130	200	292.5	45	335	—	95	170	147.5	72	130	63	120	155	215	180	81	53

CMM.. - CMM..F - CMM..FB - CMM..FL															
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg	
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8 (21.8)	3.9	
030/050	8.5	98	64	84	57	7	30	40	132	M8x10(n.4)	45°	8	28.3 (27.3)	5.0	
030/063	8.5	110	80	102	57	8	36	50	145	M8x10(n.8)	45°	8	28.3	7.0	
040/075	11	140	93	119	71.5	10	40	60	165	M8x14(n.8)	45°	8	31.3	12.0	
040/090	13	160	102	135	71.5	11	45	70	182	M10x18(n.8)	45°	10	38.3	15.6	
050/110	14	200	125	167.5	84	14	50	85	225	M10x18(n.8)	45°	12	45.3	30.2	
063/130	16	250	140	187.5	102	15	60	100	245	M12x21(n.8)	45°	14	48.8	55.0	

	CMP..F								CMP..FB								CMP..FL							
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
030/040	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	97	7.5	4.5	80-95	60	9(n.4)	110	95
030/050	45°	90	9	5	90-110	70	11(n.4)	125	110	89	9	5	130-145	110	9.5(n.4)	160	120	9	5	90-110	70	11(n.4)	125	110
030/063	45°	82	10	6	150-160	115	11(n.4)	180	142	98	10	5	165-180	130	11(n.4)	200	112	10	6	150-160	115	11(n.4)	180	142
040/075	45°	111	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
040/090	45°	111	13	6	175-190	152	14(n.4)	210	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
050/110	45°	131	15	6	230	170	14(n.8)	280	260	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
063/130	22.5°	140	15	6	255	180	16(n.8)	320	290	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

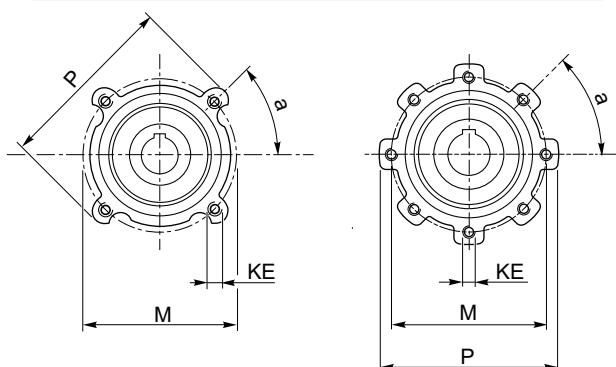
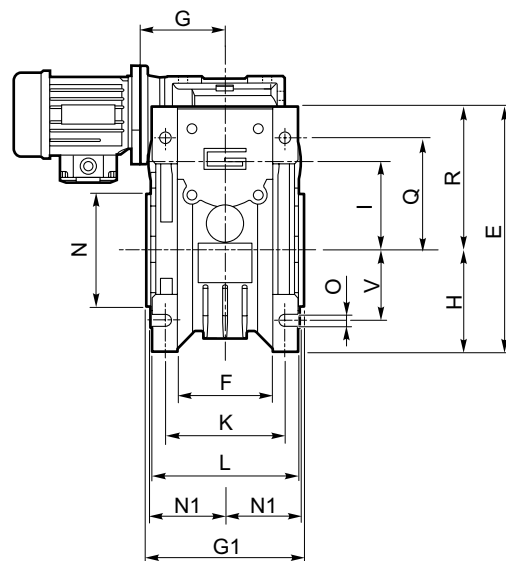
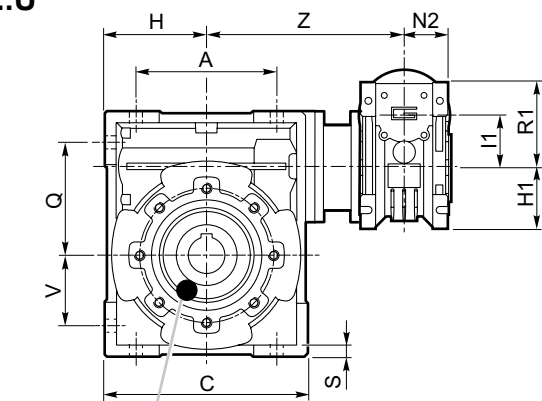
CMMIS						
	A	B	D1 <sub>j6</sub>	E	F	M
030/040 030/050 030/063	51	20	9	M4	3	10.2
040/075 040/090	66	23	11	M5	4	12.5
050/110	76	30	14	M6	5	16
063/130	94.5	40	19	M6	6	21.5



Dimensioni

Dimensions

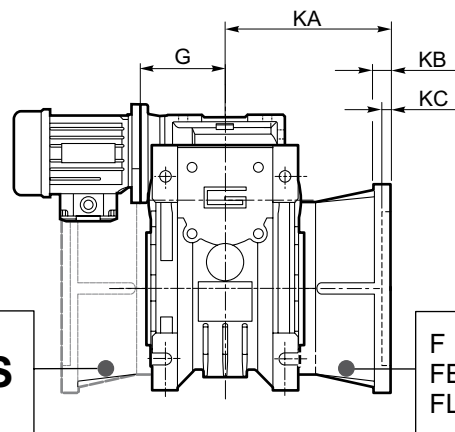
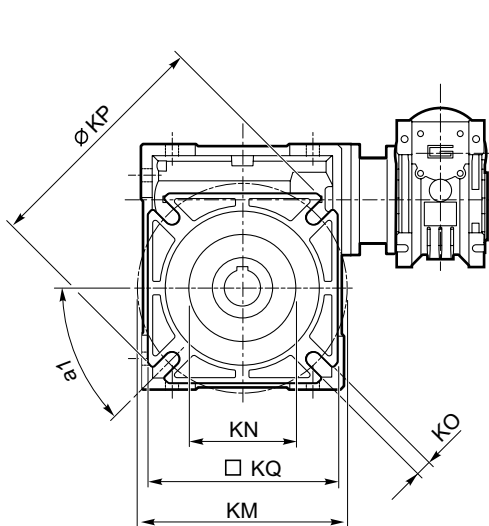
CMM..U



..030/040  
..030/050

..030/063 ..040/075  
..040/090 ..050/110  
..063/130

CMM



CMM..F (../030 - ../090)

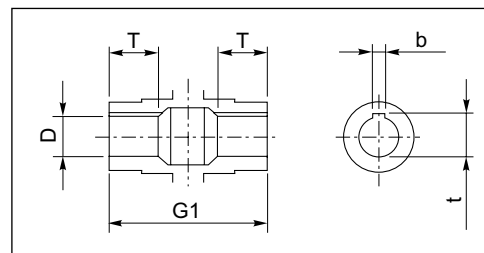
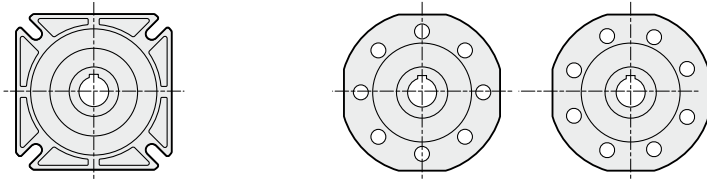
CMM..FB (../040 - ../063)

CMM..FL (../040 - ../063)

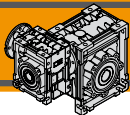
CMM..F

(../110

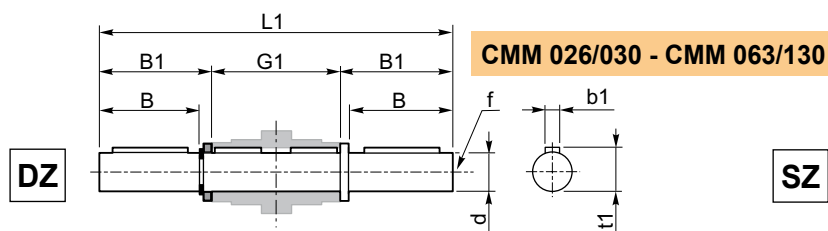
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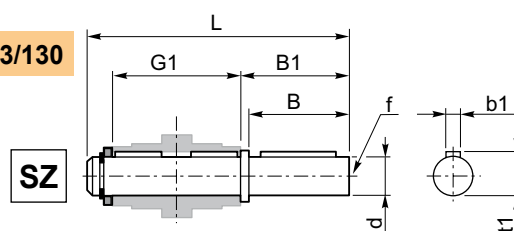
Albero lento cavo / Hollow output shaft



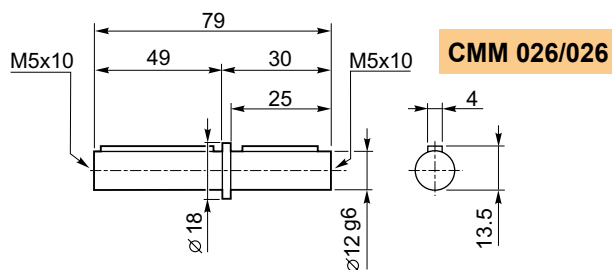
**Albero lento semplice e doppio**



**Single and double output shaft**



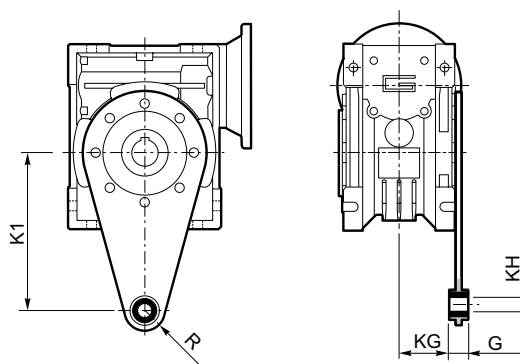
CMM	d <sub>h7</sub>	B	B1	G1	L	L1	f	b1	t1
026/030	14	30	32.5	63	102	128	M6	5	16
026/040 030/040	18	40	43	78	128	164	M6	6	20.5
026/050 030/050	25	50	53.5	92	153	199	M10	8	28
030/063	25	50	53.5	112	173	219	M10	8	28
040/075	28	60	63.5	120	192	247	M10	8	31
040/090	35	80	84.5	140	234	309	M12	10	38
050/110	42	80	84.5	155	249	324	M16	12	45
063/130	45	80	85	170	265	340	M16	14	48.5



**Braccio di reazione**

CMM	K1	G	KG	KH	R
026/030	85	14	23	8	15
026/040 030/040	100	14	31	10	18
026/050 030/050	100	14	38	10	18
030/063	150	14	47.5	10	18
040/075	200	25	46.5	20	30
040/090	200	25	56.5	20	30
050/110	250	30	62	25	35
063/130	250	30	69	25	35

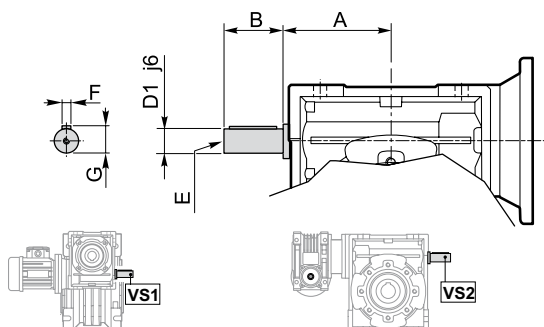
**Torque arm**



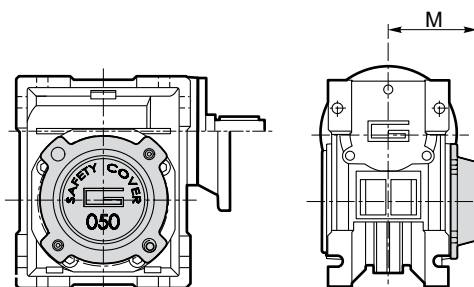
Opzioni

Options

**VS1 - VS2 - Vite sporgente / Extended input shaft**



**SC - Safety cover**



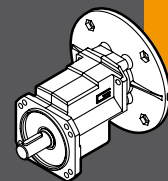
CMM	VS1						VS2					
	A	B	D <sub>1</sub> j <sub>6</sub>	E	F	G	A	B	D <sub>1</sub> j <sub>6</sub>	E	F	G
026/030	—	—	—	—	—	—	45	20	9	M4	3	10.2
026/040	—	—	—	—	—	—	53	23	11	M5	4	12.5
026/050	—	—	—	—	—	—	64	30	14	M6	5	16
030/040	45	20	9	M4	3	10.2	53	23	11	M5	4	12.5
030/050	45	20	9	M4	3	10.2	64	30	14	M6	5	16
030/063	45	20	9	M4	3	10.2	75	40	19	M6	6	21.5
040/075	53	23	11	M5	4	12.5	90	50	24	M8	8	27
040/090	53	23	11	M5	4	12.5	108	50	24	M8	8	27
050/110	64	30	14	M6	5	16	135	60	28	M10	8	31
063/130	75	40	19	M6	6	21.5	—	—	—	—	—	—

M	CM							
	30	40	50	63	75	90	110	130
M	47	54.5	62.5	73	79	94	102	117



**TRANSTECNO**<sup>TM</sup>  
THE MODULAR GEARMOTOR

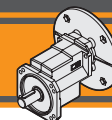
**PU** **PU**



***RIDUTTORI AD INGRANAGGI MONOSTADIO***  
***SINGLE STAGE HELICAL GEARBOXES***



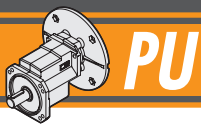




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Lubrificazione	<i>Lubrication</i>	<b>F3</b>
Carichi radiali	<i>Radial loads</i>	<b>F3</b>
Simbologia	<i>Symbols</i>	<b>F3</b>
Dati tecnici	<i>Technical data</i>	<b>F3</b>
Motori applicabili	<i>IEC Motor adapters</i>	<b>F4</b>
Dimensioni	<i>Dimensions</i>	<b>F4</b>

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# RIDUTTORI AD INGRANAGGI CILINDRICI MONOSTADIO SINGLE STAGE HELICAL GEARBOXES

## Caratteristiche tecniche

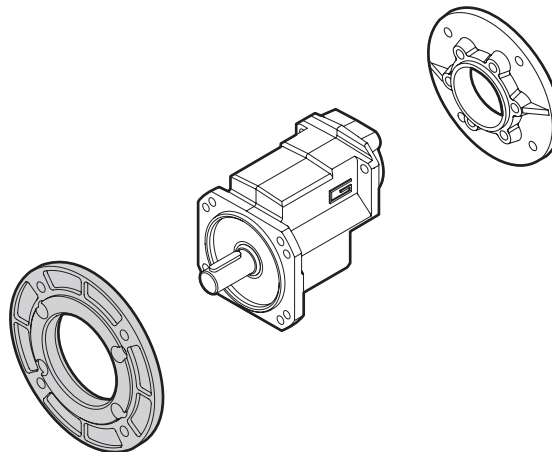
I riduttori monostadio ad ingranaggi cilindrici della serie PU hanno le seguenti caratteristiche principali:

- Carcassa, flangia entrata e flangia uscita in pressofusione di alluminio;
- Ingranaggi rettificati;
- Lubrificazione permanente con olio sintetico.

## Technical features

PU range single stage helical gearbox has the following main features:

- Die-cast aluminum housings, input and output flanges;
- Ground-hardened helical gears;
- Permanent synthetic oil long-life lubrication.

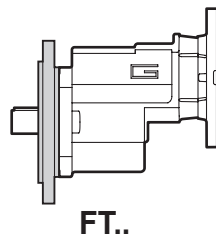
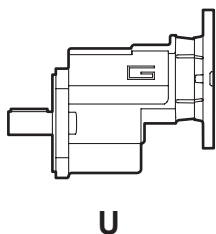


## Designazione

## Classification

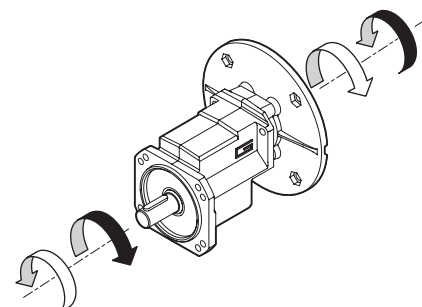
RIDUTTORE / GEARBOX						
PU	01	FT1	5.70	71	B5	O3
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	IEC 	Forma costruttiva Version	Diam. Albero uscita Output shaft diam.
	01	U FT1 FT2 FT3	5.70 8.57	63 71 80	B5 B14	vedi tabelle see tables

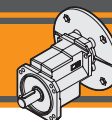
MOTORE / MOTOR				
0.25kW	4p	3ph	50Hz	T1
Potenza Power	Poli Poles	Fasi Phases	Frequenza Frequency	Pos. morsettiere Terminal box pos.
Vedi tabelle See tables	2p 4p 6p 8p	1ph 3ph	50Hz 60Hz	T1 (Std) 



## Sensi di rotazione

## Direction of rotation





**Lubrificazione**

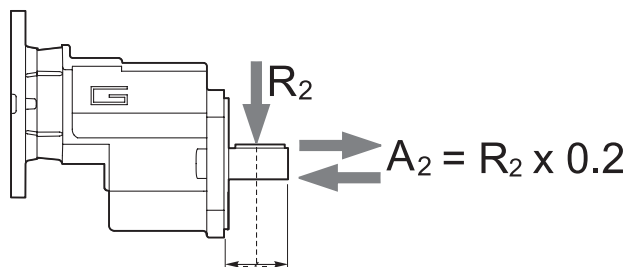
**Lubrication**

Tutti i riduttori della serie PU sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

*Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use PU range in all mounting positions.*

**Carichi radiali**

**Radial loads**



n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]
	PU 01
500	643
400	693
300	763
250	810
200	873
150	961
100	1100



**Simbologia**



**Symbols**

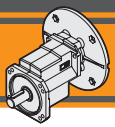
- n<sub>1</sub> [min<sup>-1</sup>] Velocità in ingresso / *Input speed*
- n<sub>2</sub> [min<sup>-1</sup>] Velocità in uscita / *Output speed*
- i Rapporto di riduzione / *Ratio*
- P<sub>1</sub> [kW] Potenza in entrata / *Input power*
- M<sub>2</sub> [Nm] Coppia nominale in uscita in funzione di P<sub>1</sub> / *Output torque referred to P<sub>1</sub>*
- sf Fattore di servizio / *Service factor*
- R<sub>2</sub> [N] Carico radiale ammissibile in uscita / *Permitted output radial load*
- A<sub>2</sub> [N] Carico assiale ammissibile in uscita / *Permitted output axial load*

**Dati tecnici**

**Technical data**

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.18</b>						
63A4 (1400 min <sup>-1</sup> )	246 163	6.7 10.0	7.5 5.0	5.70 8.57	PU01 PU01	B5/B14 B5/B14
<b>0.22</b>						
63B4 (1400 min <sup>-1</sup> )	246 163	8.2 12.3	6.1 4.1	5.70 8.57	PU01 PU01	B5/B14 B5/B14
<b>0.25</b>						
71A4 (1400 min <sup>-1</sup> )	246 163	9.4 14	5.3 2.8	5.70 8.57	PU01 PU01	B5/B14 B5/B14
<b>0.37</b>						
71B4 (1400 min <sup>-1</sup> )	246 163	14 21	3.6 1.9	5.70 8.57	PU01 PU01	B5/B14 B5/B14

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.55</b>						
71C4 (1400 min <sup>-1</sup> )	246 163	21 31	2.4 1.3	5.70 8.57	PU01 PU01	B5/B14 B5/B14
80A4 (1400 min <sup>-1</sup> )	246 163	21 31	2.4 1.3	5.70 8.57	PU01 PU01	B5/B14 B5/B14
<b>0.75</b>						
80B4 (1400 min <sup>-1</sup> )	246 163	28 42	2.4 0.9	5.70 8.57	PU01 PU01	B5/B14 B5/B14
<b>1.1</b>						
80B4 (1400 min <sup>-1</sup> )	246	41	1.2	5.7	PU01	B5/B14

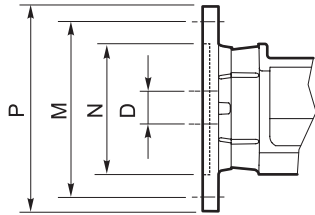


**PU**

**RIDUTTORI AD INGRANAGGI CILINDRICI MONOSTADIO**  
**SINGLE STAGE HELICAL GEARBOXES**

**Motori applicabili**

**IEC Motor adapters**

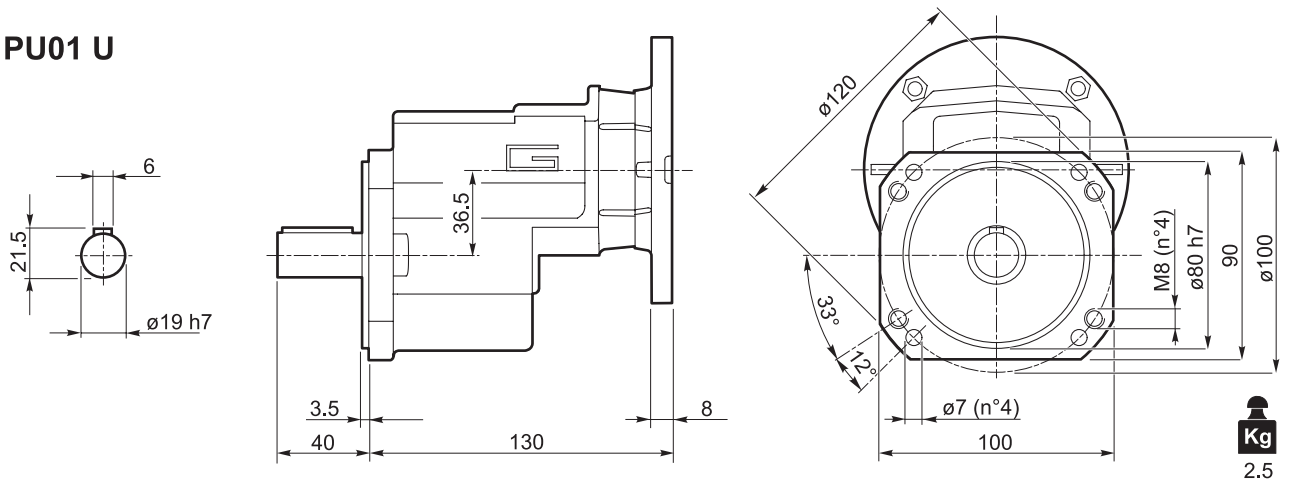


	IEC	N	M	P	D	i (rapporto / ratio)	
						5.70	8.57
<b>PU01</b>	<b>80 B5</b>	130	165	200	19		
	<b>80 B14</b>	80	100	120	19		
	<b>71 B5</b>	110	130	160	14	<b>B</b>	
	<b>71 B14</b>	70	85	105	14		
	<b>63 B5</b>	95	115	140	11	<b>BS</b>	
	<b>63 B14</b>	60	75	90	11		

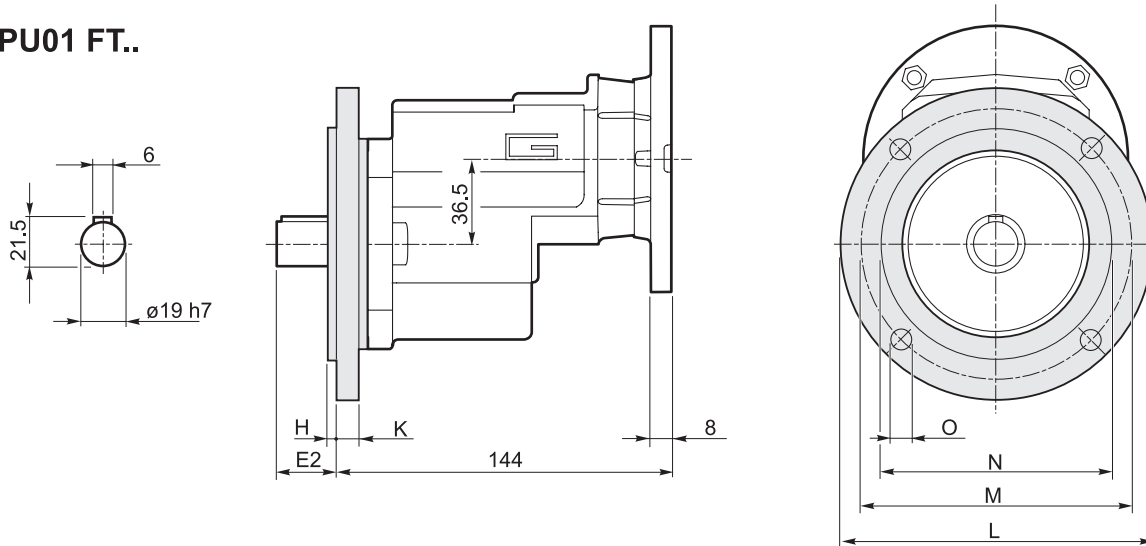
**Dimensioni**

**Dimensions**

**PU01 U**



**PU01 FT..**

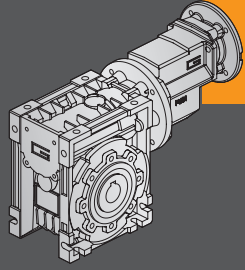


		Versione / Version							Peso / Weight [kg]
		E <sub>2</sub>	H	K	L	M	N f7	O	
<b>PU01</b>	<b>FT1</b>	26	3	10	140	115	95	M8	0.3
	<b>FT2</b>	26	3.5	10	160	130	110	9	0.4
	<b>FT3</b>	26	3.5	10	200	165	130	11	0.5

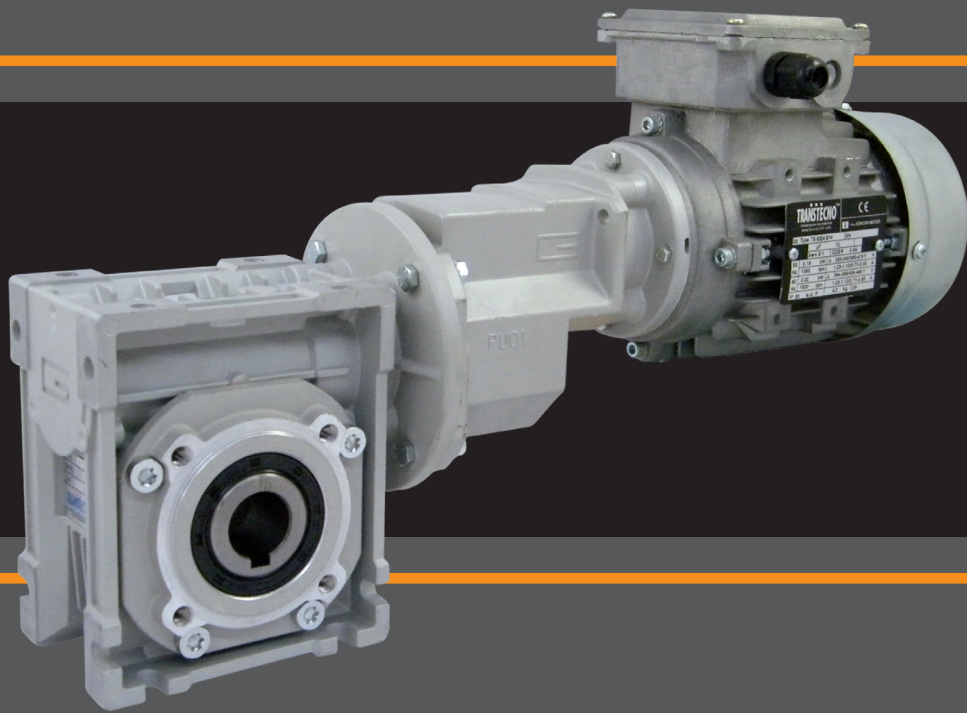
**TRANSTECNO**<sup>TM</sup>  
THE MODULAR GEARMOTOR

**CMPU**

CMPU

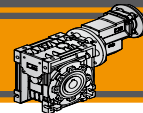


***RIDUTTORI A VITE SENZA FINE CON PRECOPPIA PU***  
***PU PRE-STAGE WORMGEARBOXES***





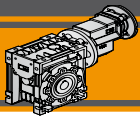




<b>Indice</b>	<b>Index</b>	Pag. Page
Caratteristiche tecniche	<i>Technical features</i>	<b>G2</b>
Designazione	<i>Classification</i>	<b>G3</b>
Sensi di rotazione	<i>Direction of rotation</i>	<b>G3</b>
Simbologia	<i>Symbols</i>	<b>G3</b>
Lubrificazione	<i>Lubrication</i>	<b>G4</b>
Carichi radiali	<i>Radial loads</i>	<b>G4</b>
Motori applicabili	<i>IEC Motor adapters</i>	<b>G5</b>
Dati tecnici	<i>Technical data</i>	<b>G6</b>
Dimensioni	<i>Dimensions</i>	<b>G10</b>
Accessori	<i>Accessories</i>	<b>G12</b>
Opzioni	<i>Options</i>	<b>G12</b>

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# CMPU

## RIDUTTORI A VITE SENZA FINE CON PRECOPPIA PU PU PRE-STAGE WORMGEARBOXES

### Caratteristiche tecniche

### Technical features

L'elevata modularità contraddistingue i riduttori a vite senza fine della serie CMPU: i diversi kit entrata ed uscita li rendono estremamente versatili.

The high degree of modularity is a design feature of CMPU wormgearboxes range thanks to a wide selection of input and output kits. Main features of CMPU range are:

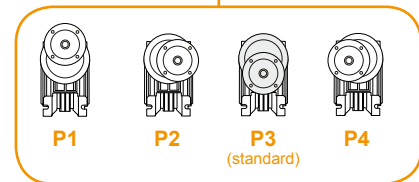
Le caratteristiche principali della serie CMPU sono:

- Carcassa in alluminio pressofuso
- Le grandezze 090 e 110 sono fornite con cuscinetti a rulli conici sulla vite
- Lubrificazione permanente con olio sintetico
- Die cast aluminium housing
- Double taper roller bearing on sizes 090 and 110
- Permanent synthetic oil long life lubrication

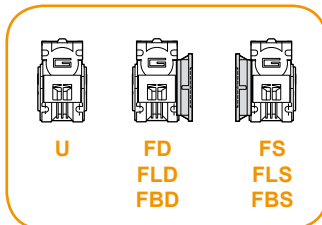
### Designazione

### Classification

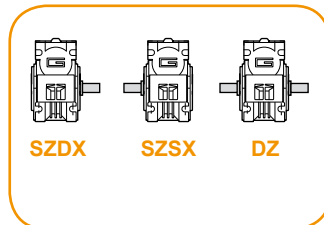
RIDUTTORE A VITE SENZA FINE CON PRECOPPIA / PRE-STAGE WORMGEARBOX											
CMPU	01/050	U	57	71	B14	SZDX	BRSX	90	P4	B3	VS
Tipo Type	Grandezza Size	Versione riduttore Gearbox Version	Rapporto Ratio	IEC 	Forma costruttiva Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Pos. di montaggio precoppia Pre stage mounting position	Pos. di montaggio Mounting position	Opzioni Options
	01/050 01/063 01/075 01/090	U FD FS FLD FLS FBD FBS	Vedere tabella  See tables	63 71 80	B5 B14	SZDX SZSX DZ	BRDX BRSX	0° 90° 180° 270°	P1 P2 P3 (standard) P4	B3 B8 B6 B7 V5 V6	VS



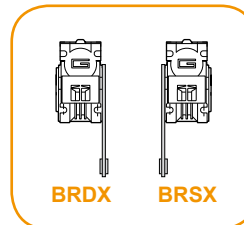
Versione Riduttore  
Gearbox Version



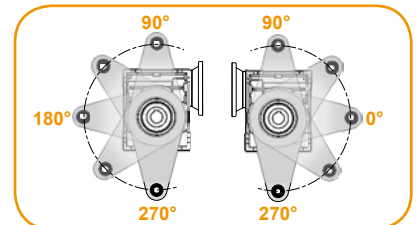
Albero di uscita  
Output shaft

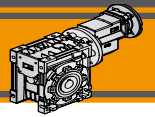


Braccio di reazione  
Torque arm



Angolo  
Angle





**Designazione**

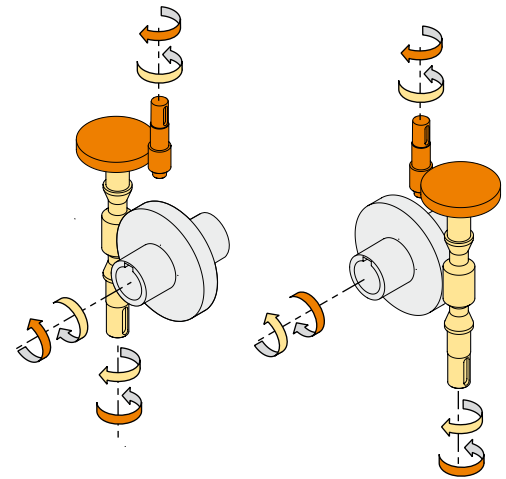
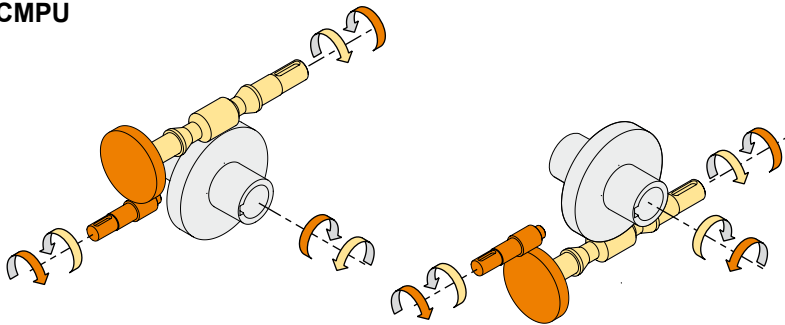
**Classification**

MOTORE CM / CM MOTOR				
0.75kW	4p	3ph	50Hz	T1
Potenza Power	Poli Poles	Fasi Phases	Frequenza Frequency	Pos. morsetteria Terminal box pos.
Vedi tabelle See tables	2p 4p 6p 8p	1ph 3ph	50Hz 60Hz	T1 (Std) T4 T2 T3

**Sensi di rotazione**

**Direction of rotation**

**CMPU**

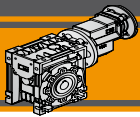


**CMPU**

**Simbologia**

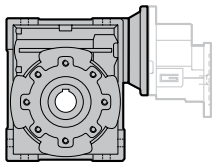
**Symbols**

$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>	$M_2$ [Nm]	Coppia in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>	sf	Fattore di servizio / <i>Service factor</i>
i	Rapporto di riduzione / <i>Ratio</i>	$R_2$ [N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$P_1$ [kW]	Potenza in entrata / <i>Nominal input power</i>	$A_2$ [N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>

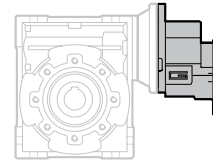


### Lubrificazione

### Lubrication



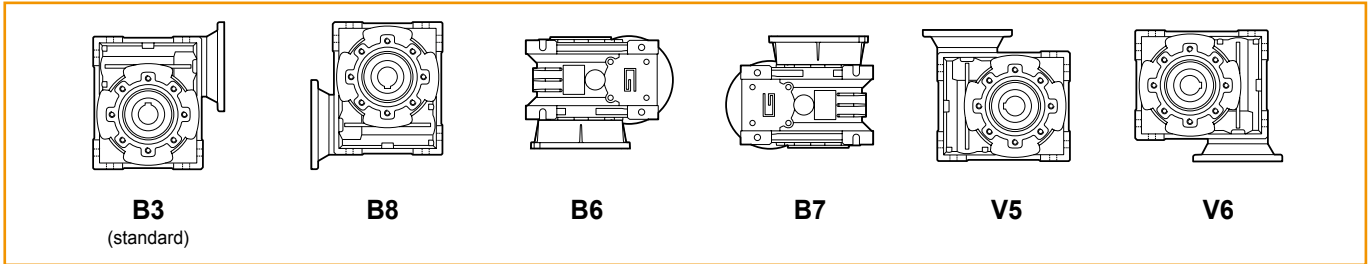
CMPU	Quantità di olio (litri) / Oil quantity (litres)					
	B3	B8	B6	B7	V5	V6
01/050				0.1		
01/063				0.25		
01/075				0.4		
01/090				0.7		
Lubrificazione a vita Life lubrication						



CMPU
01/050
01/063
01/075
01/090
Lubrificazione a vita Life lubrication

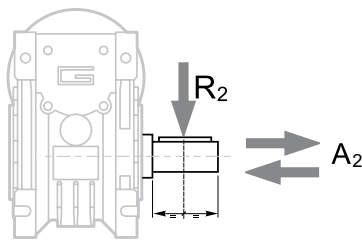
Posizioni di montaggio / Mounting positions

### CM 050-063-075-090



### Carichi radiali

### Radial loads

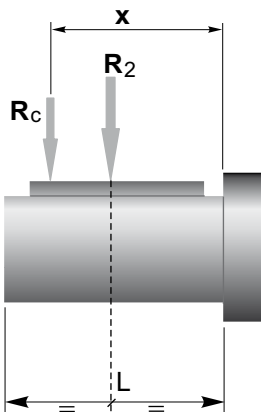


n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]			
	CMPU 01/050	CMPU 01/063	CMPU 01/075	CMPU 01/090
47	2805	3874	4475	5009
35	3095	4273	4937	5526
28	3334	4603	5318	5953
23	3559	4915	5678	6356
18	3862	5334	6162	6897
14	4200	5800	6700	7500

$$A_2 = R_2 \times 0.2$$

Quando il carico radiale risultante non è applicato sulla mezza-  
ria dell'albero occorre calcolare quello effettivo con la seguente  
formula:

When the resulting radial load is not applied on the centre line  
of the shaft it is necessary to calculate the effective load with the  
following formula:

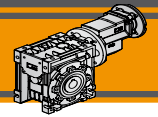


	CMPU			
	01/050	01/063	01/075	01/090
a	101	120	131	182
b	76	95	101	122
R <sub>2MAX</sub>	4200	5800	6700	7500

$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

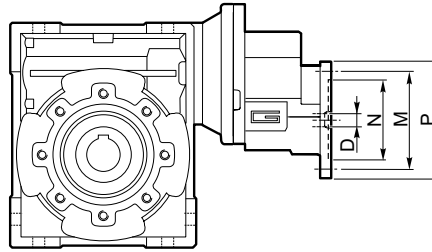
$$R \leq R_c$$

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



**Motori applicabili**

**IEC Motor adapters**



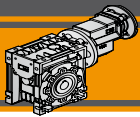
CMPU	IEC	N	M	P	D	i (i <sub>1</sub> x i <sub>2</sub> )										
						28.5 (5,7x5)	42.75 (5,7x7,5)	57 (5,7x10)	64.28 (8,57x7,5)	85.5 (5,7x15)	85.7 (8,57x10)	114 (5,7x20)	128.55 (8,57x15)	142.5 (5,7x25)	171 (5,7x30)	214.25 (8,57x25)
01/050	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	63B14	60	75	90		BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	71B5	110	130	160	14	B	B	B	B	B	B	B	B	B	B	B
	71B14	70	85	105		B	B	B	B	B	B	B	B	B	B	B
	80B5	130	165	200		19										
80B14	80	100	120													
01/063	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	63B14	60	75	90		BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	71B5	110	130	160	14	B	B	B	B	B	B	B	B	B	B	B
	71B14	70	85	105		B	B	B	B	B	B	B	B	B	B	B
	80B5	130	165	200		19										
80B14	80	100	120													
01/075	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	63B14	60	75	90		BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	71B5	110	130	160	14	B	B	B	B	B	B	B	B	B	B	B
	71B14	70	85	105		B	B	B	B	B	B	B	B	B	B	B
	80B5	130	165	200		19										
80B14	80	100	120													
01/090	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	63B14	60	75	90		BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	71B5	110	130	160	14	B	B	B	B	B	B	B	B	B	B	B
	71B14	70	85	105		B	B	B	B	B	B	B	B	B	B	B
	80B5	130	165	200		19										
80B14	80	100	120													

CMPU	IEC	N	M	P	D	i (i <sub>1</sub> x i <sub>2</sub> )										
						228 (5,7x40)	257.1 (8,57x30)	285 (5,7x50)	342.8 (8,57x40)	428.5 (8,57x50)	456 (5,7x80)	514.2 (8,57x60)	570 (5,7x100)	685.6 (8,57x80)	857 (8,57x100)	
01/050	63B5	95	115	140	11		BS									
	63B14	60	75	90			BS									
	71B5	110	130	160	14		B									
	71B14	70	85	105			B									
	80B5	130	165	200		19										
80B14	80	100	120													
01/063	63B5	95	115	140	11	BS	BS	BS	BS	BS		BS				
	63B14	60	75	90		BS	BS	BS	BS	BS		BS				
	71B5	110	130	160	14	B	B	B	B	B		B				
	71B14	70	85	105			B	B	B	B		B				
	80B5	130	165	200		19										
80B14	80	100	120													
01/075	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	63B14	60	75	90		BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	71B5	110	130	160	14	B	B	B	B	B	B	B	B	B	B	B
	71B14	70	85	105			B	B	B	B	B	B	B	B	B	B
	80B5	130	165	200		19										
80B14	80	100	120													
01/090	63B5	95	115	140	11	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	63B14	60	75	90		BS	BS	BS	BS	BS	BS	BS	BS	BS	BS	BS
	71B5	110	130	160	14	B	B	B	B	B	B	B	B	B	B	B
	71B14	70	85	105			B	B	B	B	B	B	B	B	B	B
	80B5	130	165	200		19										
80B14	80	100	120													

N.B.  
 Le aree evidenziate in grigio indicano l'applicabilità della corrispondente grandezza motore.  
 N.B. Grey areas indicate motor inputs available on each size of unit.

**B/BS = Boccia di riduzione in acciaio**  
**B/BS = Metal shaft sleeve**

CMPU







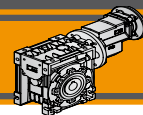
# CMPU

## RIDUTTORI A VITE SENZA FINE CON PRECOPPIA PU PU PRE-STAGE WORMGEARBOXES

### Dati tecnici





### Technical data

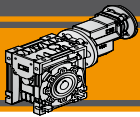
$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				
<b>0.18</b>							<b>0.22</b>								
63B4 (1400 min <sup>-1</sup> )	<b>49</b>	31	4.9	28.50	<b>CMPU01/050</b>	B5/B14	63C4 (1400 min <sup>-1</sup> )	<b>49</b>	37	4.0	28.50	<b>CMPU01/050</b>	B5/B14		
	<b>33</b>	45	3.5	42.75			B5/B14		<b>33</b>	55	2.9			42.75	B5/B14
	<b>25</b>	58	2.7	57.00			B5/B14		<b>25</b>	71	2.2			57.00	B5/B14
	<b>22</b>	67	2.3	64.28			B5/B14		<b>22</b>	82	1.9			64.28	B5/B14
	<b>16</b>	88	1.8	85.70			B5/B14		<b>16</b>	107	1.4			85.70	B5/B14
	<b>12</b>	109	1.3	114.00			B5/B14		<b>12</b>	132	1.0			114.00	B5/B14
	<b>11</b>	127	1.3	128.55			B5/B14		<b>11</b>	155	1.0			128.55	B5/B14
	<b>9.8</b>	131	0.9	142.50			B5/B14		<b>9.8</b>	159	0.8			142.50	B5/B14
	<b>8.2</b>	148	1.1	171.00			B5/B14		<b>8.2</b>	181	0.9			171.00	B5/B14
	<b>22</b>	62	4.7	64.28	<b>CMPU01/063</b>	B5/B14		<b>25</b>	65	4.4	57.00	<b>CMPU01/063</b>	B5/B14		
	<b>16</b>	80	3.6	85.70			B5/B14		<b>22</b>	76	3.9			64.28	B5/B14
	<b>12</b>	92	2.8	114.00			B5/B14		<b>16</b>	97	3.0			85.70	B5/B14
	<b>11</b>	110	2.8	128.55			B5/B14		<b>12</b>	112	2.3			114.00	B5/B14
	<b>9.8</b>	108	2.1	142.50			B5/B14		<b>11</b>	134	2.3			128.55	B5/B14
	<b>8.2</b>	124	2.5	171.00			B5/B14		<b>9.8</b>	132	1.7			142.50	B5/B14
	<b>6.5</b>	163	1.4	214.25			B5/B14		<b>8.2</b>	151	2.1			171.00	B5/B14
	<b>6.1</b>	148	1.8	228.00			B5/B14		<b>6.5</b>	198	1.2			214.25	B5/B14
	<b>5.4</b>	186	1.7	257.10			B5/B14		<b>6.1</b>	181	1.4			228.00	B5/B14
	<b>4.9</b>	172	1.4	285.00	B5/B14		<b>5.4</b>	227	1.4	257.10	B5/B14				
	<b>4.1</b>	223	1.2	342.80	B5/B14		<b>4.9</b>	209	1.1	285.00	B5/B14				
	<b>3.3</b>	258	0.9	428.50	B5/B14		<b>4.1</b>	272	1.0	342.80	B5/B14				
	<b>12</b>	95	4.6	114.00	<b>CMPU01/075</b>	B5/B14		<b>16</b>	98	4.8	85.70	<b>CMPU01/075</b>	B5/B14		
	<b>11</b>	113	4.3	128.55			B5/B14		<b>12</b>	116	3.8			114.00	B5/B14
	<b>9.8</b>	113	3.4	142.50			B5/B14		<b>11</b>	138	3.6			128.55	B5/B14
	<b>8.2</b>	130	3.9	171.00			B5/B14		<b>9.8</b>	138	2.8			142.50	B5/B14
	<b>6.5</b>	170	2.3	214.25			B5/B14		<b>8.2</b>	158	3.2			171.00	B5/B14
	<b>6.1</b>	157	2.8	228.00			B5/B14		<b>6.5</b>	208	1.8			214.25	B5/B14
	<b>5.4</b>	195	2.6	257.10			B5/B14		<b>6.1</b>	191	2.3			228.00	B5/B14
	<b>4.9</b>	182	2.1	285.00			B5/B14		<b>5.4</b>	238	2.1			257.10	B5/B14
	<b>4.1</b>	236	1.8	342.80			B5/B14		<b>4.9</b>	222	1.7			285.00	B5/B14
	<b>3.3</b>	274	1.4	428.50	B5/B14		<b>4.1</b>	287	1.5	342.80	B5/B14				
	<b>3.1</b>	236	1.3	456.00	B5/B14		<b>3.3</b>	334	1.1	428.50	B5/B14				
	<b>2.7</b>	304	1.2	514.20	B5/B14		<b>3.1</b>	288	1.0	456.00	B5/B14				
	<b>2.5</b>	261	1.0	570.00	B5/B14		<b>2.7</b>	370	1.0	514.20	B5/B14				
	<b>2.0</b>	355	0.8	685.60	B5/B14		<b>2.5</b>	318	0.8	570.00	B5/B14				
	<b>1.6</b>	393	0.7	857.00	B5/B14		<b>2.0</b>	433	0.7	685.60	B5/B14				
	<b>6.5</b>	178	3.7	214.25	<b>CMPU01/090</b>	B5/B14		<b>9.8</b>	145	4.6	142.50	<b>CMPU01/090</b>	B5/B14		
	<b>6.1</b>	168	4.5	228.00			B5/B14		<b>6.5</b>	217	3.0			214.25	B5/B14
	<b>5.4</b>	205	4.3	257.10			B5/B14		<b>6.1</b>	204	3.7			228.00	B5/B14
	<b>4.9</b>	196	3.2	285.00			B5/B14		<b>5.4</b>	249	3.5			257.10	B5/B14
	<b>4.1</b>	252	3.0	342.80			B5/B14		<b>4.9</b>	239	2.7			285.00	B5/B14
	<b>3.3</b>	294	2.2	428.50			B5/B14		<b>4.1</b>	307	2.5			342.80	B5/B14
	<b>3.1</b>	258	1.9	456.00			B5/B14		<b>3.3</b>	359	1.8			428.50	B5/B14
	<b>2.7</b>	329	1.8	514.20			B5/B14		<b>3.1</b>	315	1.6			456.00	B5/B14
	<b>2.5</b>	289	1.5	570.00			B5/B14		<b>2.7</b>	401	1.4			514.20	B5/B14
	<b>2.0</b>	388	1.3	685.60	B5/B14		<b>2.5</b>	352	1.3	570.00	B5/B14				
	<b>1.6</b>	434	1.0	857.00	B5/B14		<b>2.0</b>	474	1.1	685.60	B5/B14				
							<b>1.6</b>	529	0.8	857.00	B5/B14				



**Dati tecnici**





**Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			
<b>0.25</b>							<b>0.37</b>							
71A4 (1400 min <sup>-1</sup> )	<b>49</b>	42	3.5	28.5	<b>CMPU01/050</b>	B5/B14	71B4 (1400 min <sup>-1</sup> )	<b>49</b>	63	2.4	28.50	<b>CMPU01/050</b>	B5/B14	
	<b>33</b>	62	2.5	42.75		B5/B14		<b>33</b>	92	1.7	42.75		B5/B14	
	<b>25</b>	81	1.9	57.00		B5/B14		<b>25</b>	120	1.3	57.00		B5/B14	
	<b>22</b>	93	1.7	64.28		B5/B14		<b>22</b>	138	1.1	64.28		B5/B14	
	<b>16</b>	121	1.3	85.70		B5/B14		<b>16</b>	180	0.9	85.70		B5/B14	
	<b>12</b>	150	0.9	114.00		B5/B14								
	<b>11</b>	176	0.9	128.55		B5/B14		<b>49</b>	58	4.8	28.50		<b>CMPU01/063</b>	B5/B14
	<b>9.8</b>	180	0.7	142.50		B5/B14		<b>33</b>	84	3.5	42.75			B5/B14
	<b>8.2</b>	205	0.8	171.00		B5/B14		<b>25</b>	108	2.6	57.00			B5/B14
								<b>22</b>	127	2.3	64.28			B5/B14
	<b>25</b>	73	3.9	57.00	<b>CMPU01/063</b>	B5/B14	<b>16</b>	163	1.8	85.70	B5/B14			
	<b>22</b>	86	3.4	64.28		B5/B14		<b>12</b>	189	1.4	114.00	B5/B14		
	<b>16</b>	110	2.6	85.70		B5/B14		<b>11</b>	225	1.3	128.55	B5/B14		
	<b>12</b>	127	2.0	114.00		B5/B14		<b>9.8</b>	222	1.0	142.50	B5/B14		
	<b>11</b>	152	2.0	128.55		B5/B14		<b>8.2</b>	253	1.2	171.00	B5/B14		
	<b>9.8</b>	150	1.5	142.50		B5/B14		<b>6.5</b>	333	0.7	214.25	B5/B14		
	<b>8.2</b>	171	1.8	171.00		B5/B14		<b>6.1</b>	304	0.9	228.00	B5/B14		
	<b>6.5</b>	225	1.0	214.25		B5/B14		<b>5.4</b>	381	0.8	257.10	B5/B14		
	<b>6.1</b>	205	1.3	228.00		B5/B14		<b>4.9</b>	352	0.7	285.00	B5/B14		
	<b>5.4</b>	257	1.2	257.10		B5/B14								
	<b>4.9</b>	237	1.0	285.00	B5/B14		<b>25</b>	110	4.3	57.00	<b>CMPU01/075</b>	B5/B14		
	<b>4.1</b>	308	0.8	342.80	B5/B14		<b>22</b>	129	3.5	64.28		B5/B14		
							<b>16</b>	165	2.8	85.70		B5/B14		
	<b>16</b>	111	4.2	85.70	<b>CMPU01/075</b>	B5/B14	<b>12</b>	194	2.2	114.00		B5/B14		
	<b>12</b>	131	3.3	114.00		B5/B14		<b>11</b>	232	2.1		128.55	B5/B14	
	<b>11</b>	156	3.1	128.55		B5/B14		<b>9.8</b>	232	1.7		142.50	B5/B14	
	<b>9.8</b>	157	2.5	142.50		B5/B14		<b>8.2</b>	266	1.9		171.00	B5/B14	
	<b>8.2</b>	179	2.8	171.00		B5/B14		<b>6.5</b>	349	1.1		214.25	B5/B14	
	<b>6.5</b>	236	1.6	214.25		B5/B14		<b>6.1</b>	321	1.3		228.00	B5/B14	
	<b>5.4</b>	270	1.9	257.10		B5/B14		<b>5.4</b>	400	1.3		257.10	B5/B14	
	<b>6.1</b>	217	2.0	228.00		B5/B14		<b>4.9</b>	373	1.0	285.00	B5/B14		
	<b>4.9</b>	252	1.5	285.00		B5/B14		<b>4.1</b>	483	0.9	342.80	B5/B14		
	<b>4.1</b>	326	1.3	342.80		B5/B14		<b>3.3</b>	561	0.7	428.50	B5/B14		
	<b>3.3</b>	378	1.0	428.50	B5/B14									
	<b>3.1</b>	327	0.9	456.00	B5/B14		<b>16</b>	169	4.1	85.70	<b>CMPU01/090</b>	B5/B14		
	<b>2.7</b>	420	0.9	514.20	B5/B14		<b>12</b>	203	3.7	114.00		B5/B14		
	<b>2.5</b>	361	0.7	570.00	B5/B14		<b>11</b>	238	3.4	128.55		B5/B14		
							<b>9.8</b>	243	2.7	142.50		B5/B14		
	<b>9.8</b>	164	4.0	142.50	<b>CMPU01/090</b>	B5/B14	<b>8.2</b>	279	3.2	171.00		B5/B14		
	<b>8.2</b>	188	4.7	171.00		B5/B14		<b>6.5</b>	365	1.8		214.25	B5/B14	
	<b>6.5</b>	246	2.7	214.25		B5/B14		<b>6.1</b>	343	2.2		228.00	B5/B14	
	<b>6.1</b>	232	3.3	228.00		B5/B14		<b>5.4</b>	419	2.1		257.10	B5/B14	
	<b>5.4</b>	283	3.1	257.10		B5/B14		<b>4.9</b>	401	1.6		285.00	B5/B14	
	<b>4.9</b>	271	2.3	285.00		B5/B14		<b>4.1</b>	516	1.5		342.80	B5/B14	
	<b>4.1</b>	348	2.2	342.80		B5/B14		<b>3.3</b>	603	1.1	428.50	B5/B14		
	<b>3.3</b>	407	1.6	428.50		B5/B14		<b>3.1</b>	529	0.9	456.00	B5/B14		
	<b>3.1</b>	357	1.4	456.00		B5/B14		<b>2.7</b>	673	0.9	514.20	B5/B14		
	<b>2.7</b>	454	1.3	514.20		B5/B14		<b>2.5</b>	591	0.7	570.00	B5/B14		
	<b>2.5</b>	399	1.1	570.00	B5/B14									
	<b>2.0</b>	537	0.9	685.60	B5/B14									
	<b>1.6</b>	600	0.7	857.00	B5/B14									

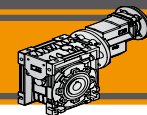


**Dati tecnici**

**Technical data**





$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i				
<b>0.55</b>							<b>0.55</b>								
71C4 (1400 min <sup>-1</sup> )	<b>49</b>	93	1.6	28.50	<b>CMPU01/050</b>	B5/B14	80A4 (1400 min <sup>-1</sup> )	<b>49</b>	93	1.6	28.5	<b>CMPU01/050</b>	B5/B14		
	<b>33</b>	137	1.1	42.75			B5/B14		<b>33</b>	137	1.1			42.75	B5/B14
	<b>25</b>	178	0.9	57.00			B5/B14		<b>25</b>	178	0.9			57.00	B5/B14
	<b>22</b>	206	0.8	64.28			B5/B14		<b>22</b>	206	0.8			64.28	B5/B14
	<b>49</b>	86	3.2	28.5	<b>CMPU01/063</b>	B5/B14		<b>49</b>	86	3.2	28.50	<b>CMPU01/063</b>	B5/B14		
	<b>33</b>	126	2.3	42.75			B5/B14		<b>33</b>	126	2.3			42.75	B5/B14
	<b>25</b>	161	1.8	57.00			B5/B14		<b>25</b>	161	1.8			57.00	B5/B14
	<b>22</b>	189	1.5	64.28			B5/B14		<b>22</b>	189	1.5			64.28	B5/B14
	<b>16</b>	243	1.2	85.70			B5/B14		<b>16</b>	243	1.2			85.70	B5/B14
	<b>12</b>	281	0.9	114.00			B5/B14		<b>12</b>	281	0.9			114.00	B5/B14
	<b>11</b>	335	0.9	128.55			B5/B14		<b>11</b>	335	0.9			128.55	B5/B14
	<b>9.8</b>	330	0.7	142.50			B5/B14		<b>9.8</b>	330	0.7			142.50	B5/B14
	<b>8.2</b>	377	0.8	171.00			B5/B14		<b>8.2</b>	377	0.8			171.00	B5/B14
	<b>33</b>	127	3.5	42.75			<b>CMPU01/075</b>	B5/B14		<b>33</b>	127			3.5	42.75
	<b>25</b>	163	2.9	57.00	B5/B14				<b>25</b>	163	2.9	57.00	B5/B14		
	<b>22</b>	191	2.3	64.28	B5/B14				<b>22</b>	191	2.3	64.28	B5/B14		
	<b>16</b>	246	1.9	85.70	B5/B14				<b>16</b>	246	1.9	85.70	B5/B14		
	<b>12</b>	289	1.5	114.00	B5/B14				<b>12</b>	289	1.5	114.00	B5/B14		
	<b>11</b>	345	1.4	128.55	B5/B14				<b>11</b>	345	1.4	128.55	B5/B14		
	<b>9.8</b>	346	1.1	142.50	B5/B14				<b>9.8</b>	346	1.1	142.50	B5/B14		
	<b>8.2</b>	396	1.3	171.00	B5/B14				<b>8.2</b>	396	1.3	171.00	B5/B14		
	<b>6.5</b>	520	0.7	214.25	B5/B14				<b>6.5</b>	520	0.7	214.25	B5/B14		
	<b>6.1</b>	478	0.9	228.00	B5/B14				<b>6.1</b>	478	0.9	228.00	B5/B14		
	<b>5.4</b>	595	0.9	257.10	B5/B14		<b>5.4</b>	595	0.9	257.10	B5/B14				
	<b>4.9</b>	555	0.7	285.00	B5/B14		<b>4.9</b>	555	0.7	285.00	B5/B14				
	<b>25</b>	168	4.2	57.00	<b>CMPU01/090</b>	B5/B14		<b>25</b>	168	4.2	57.00	<b>CMPU01/090</b>	B5/B14		
	<b>22</b>	196	3.4	64.28			B5/B14		<b>22</b>	196	3.4			64.28	B5/B14
	<b>16</b>	252	2.8	85.70			B5/B14		<b>16</b>	252	2.8			85.70	B5/B14
	<b>12</b>	302	2.5	114.00			B5/B14		<b>12</b>	302	2.5			114.00	B5/B14
	<b>11</b>	354	2.3	128.55			B5/B14		<b>11</b>	354	2.3			128.55	B5/B14
	<b>9.8</b>	361	1.8	142.50			B5/B14		<b>9.8</b>	361	1.8			142.50	B5/B14
	<b>8.2</b>	415	2.1	171.00			B5/B14		<b>8.2</b>	415	2.1			171.00	B5/B14
	<b>6.5</b>	543	1.2	214.25			B5/B14		<b>6.5</b>	543	1.2			214.25	B5/B14
	<b>6.1</b>	511	1.5	228.00			B5/B14		<b>6.1</b>	511	1.5			228.00	B5/B14
	<b>5.4</b>	624	1.4	257.10			B5/B14		<b>5.4</b>	624	1.4			257.10	B5/B14
	<b>4.9</b>	597	1.1	285.00	B5/B14		<b>4.9</b>	597	1.1	285.00	B5/B14				
	<b>4.1</b>	768	1.0	342.80	B5/B14		<b>4.1</b>	768	1.0	342.80	B5/B14				
	<b>3.3</b>	898	0.7	428.50	B5/B14		<b>3.3</b>	898	0.7	428.50	B5/B14				

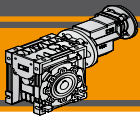




**Dati tecnici**

**Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		
<b>0.75</b>							<b>1.1</b>						
80B4 (1400 min <sup>-1</sup> )	<b>49</b>	127	1.2	28.50	<b>CMPU01/050</b>	B5/B14	80C4 (1400 min <sup>-1</sup> )	<b>49</b>	186	0.8	28.50	<b>CMPU01/050</b>	B5/B14
	<b>33</b>	187	0.8	42.75		B5/B14							
	<b>49</b>	117	2.4	28.50	<b>CMPU01/063</b>	B5/B14		<b>49</b>	172	1.6	28.50	<b>CMPU01/063</b>	B5/B14
	<b>33</b>	172	1.7	42.75		B5/B14		<b>33</b>	251	1.2	42.75		B5/B14
	<b>25</b>	220	1.3	57.00		B5/B14		<b>25</b>	323	0.9	57.00		B5/B14
	<b>22</b>	258	1.1	64.28		B5/B14		<b>16</b>	446	0.7	85.50		B5/B14
	<b>16</b>	331	0.9	85.70		B5/B14							
	<b>12</b>	383	0.7	114.00	B5/B14		<b>33</b>	255	1.7	42.75	<b>CMPU01/075</b>	B5/B14	
	<b>11</b>	458	0.7	128.60	B5/B14		<b>25</b>	327	1.4	57.00		B5/B14	
					B5/B14		<b>16</b>	459	1.1	85.50		B5/B14	
	<b>33</b>	174	2.6	42.75	<b>CMPU01/075</b>	B5/B14		<b>12</b>	578	0.8	114.00	B5/B14	
	<b>25</b>	223	2.1	57.00		B5/B14		<b>33</b>	261	2.5	42.75	<b>CMPU01/090</b>	B5/B14
	<b>22</b>	261	1.7	64.28		B5/B14		<b>25</b>	335	2.1	57.00		B5/B14
	<b>16</b>	335	1.4	85.70		B5/B14		<b>16</b>	471	1.7	85.50		B5/B14
	<b>12</b>	395	1.1	114.00		B5/B14		<b>12</b>	603	1.2	114.00		B5/B14
	<b>11</b>	471	1.0	128.60		B5/B14		<b>9.8</b>	723	0.9	142.50		B5/B14
	<b>9.8</b>	472	0.8	142.50		B5/B14		<b>8.2</b>	830	1.1	171.00		B5/B14
	<b>8.2</b>	541	0.9	171.00		B5/B14		<b>6.1</b>	1022	0.7	228.00		B5/B14
	<b>6.1</b>	652	0.7	228.00		B5/B14							
	<b>33</b>	178	3.7	42.75		<b>CMPU01/090</b>	B5/B14						
	<b>25</b>	229	3.0	57.00	B5/B14								
	<b>22</b>	268	2.5	64.28	B5/B14								
	<b>16</b>	344	2.0	85.70	B5/B14								
	<b>12</b>	412	1.8	114.00	B5/B14								
	<b>11</b>	484	1.7	128.55	B5/B14								
	<b>9.8</b>	493	1.3	142.50	B5/B14								
	<b>8.2</b>	566	1.6	171.00	B5/B14								
	<b>6.5</b>	742	0.9	214.25	B5/B14								
	<b>6.1</b>	698	1.1	228.00	B5/B14								
	<b>5.4</b>	851	1.0	257.10	B5/B14								
	<b>4.9</b>	815	0.8	285.00	B5/B14								
	<b>4.1</b>	1049	0.7	342.80	B5/B14								



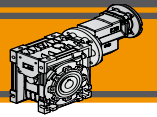
**Dimensioni**

**Dimensions**

CMPU.. - CMPU..F - CMPU..FB - CMPU..FL															
	A	C	D <sub>H8</sub>	E	F	G1	H	H1	HX	I	K	L	M	N <sub>h8</sub>	N1
01/050	80	120	25	144	49	92	60	40	36.5	50	70	85	85	70	43.5
01/063	100	144	25	174	67	112	72	40	36.5	63	85	104	95	80	53
01/075	120	172	28	205	72	120	86	50	36.5	75	90	112	115	95	57
01/090	140	208	35	238	74	140	103	50	36.5	90	100	130	130	110	67

CMPU.. - CMPU..F - CMPU..FB - CMPU..FL													
	O	P	Q	R	S	T	V	Z	KE	a	b	t	Kg
01/050	8.5	98	64	84	7	30	40	210	M8x10(n.4)	45°	8	28.3 (27.3)	6.0
01/063	8.5	110	80	102	8	36	50	228	M8x10(n.8)	45°	8	28.3	8.7
01/075	11	140	93	119	10	40	60	243	M8x14(n.8)	45°	8	31.3	11.5
01/090	13	160	102	135	11	45	70	260	M10x18(n.8)	45°	10	38.3	15.5

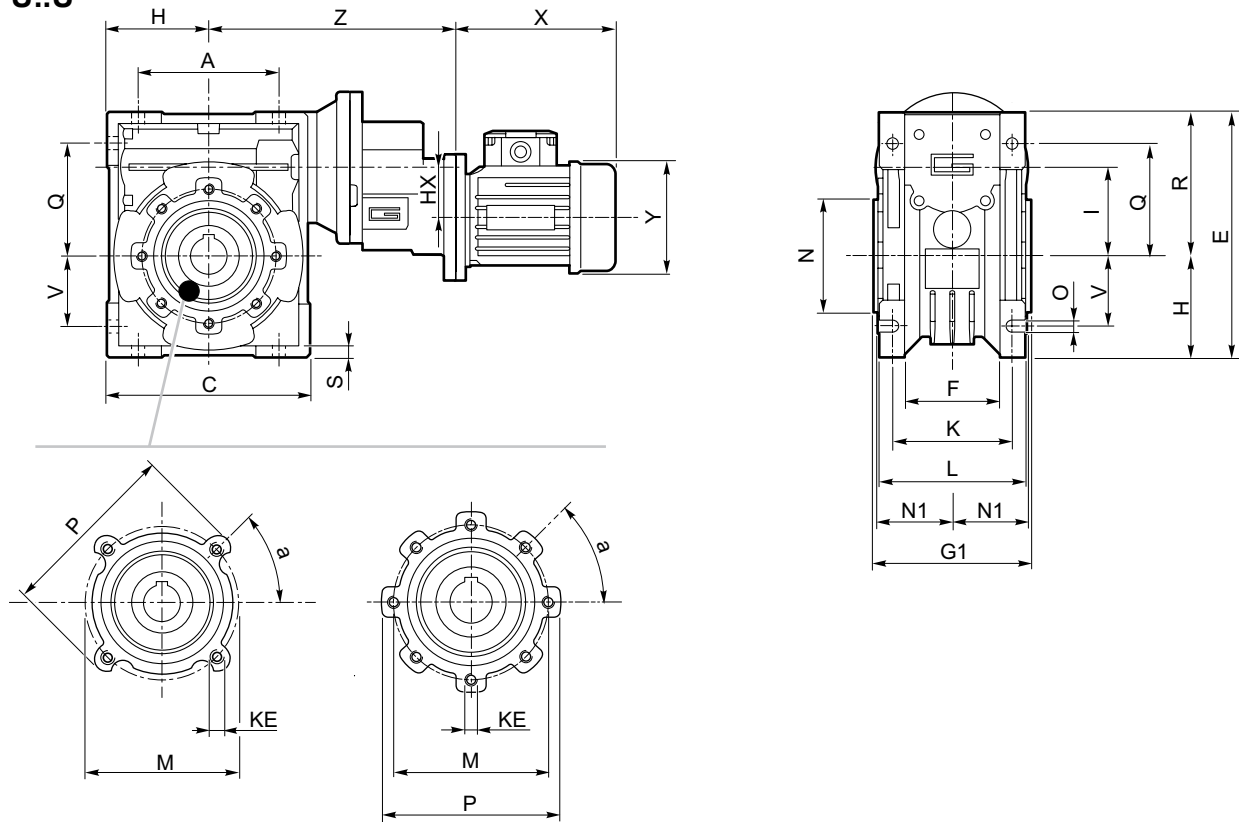
	CMPU..F								CMPU..FB								CMPU..FL							
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
01/050	45°	90	9	5	90-110	70	11(n.4)	125	110	89	9	5	130-145	110	9.5(n.4)	160	120	9	5	90-110	70	11(n.4)	125	110
01/063	45°	82	10	6	150-160	115	11(n.4)	180	142	98	10	5	165-180	130	11(n.4)	200	112	10	6	150-160	115	11(n.4)	180	142
01/075	45°	111	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
01/090	45°	111	13	6	175-190	152	14(n.4)	210	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



**Dimensioni**

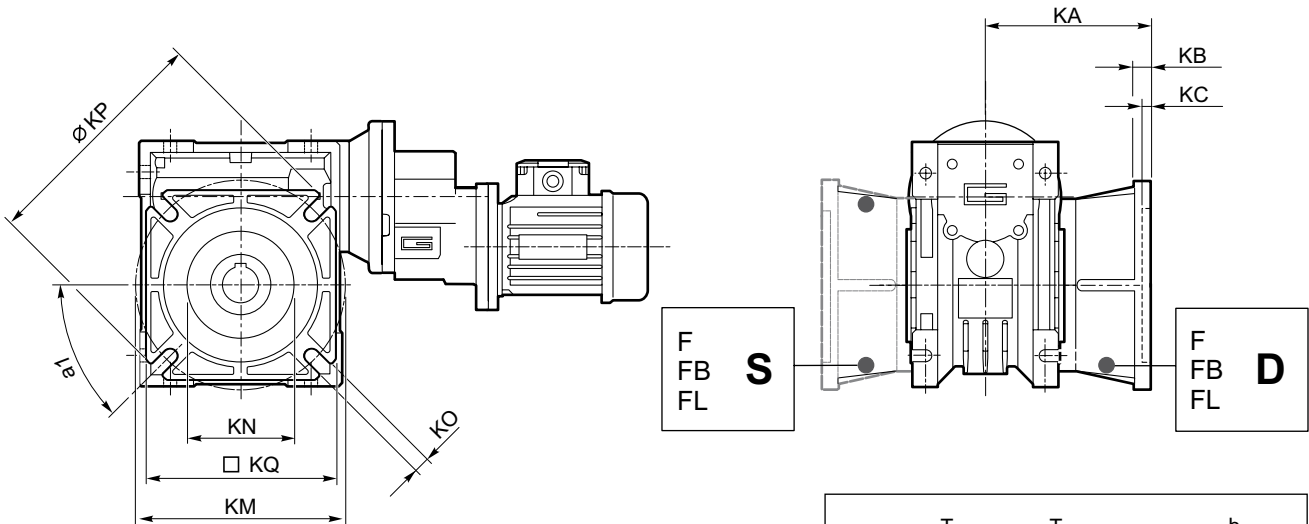
**Dimensions**

**CMPU..U**



**..01/050**

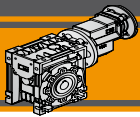
**..01/063**  
**..01/075**  
**..01/090**



**CMPU..F** (..01/050 - .. 01/090)  
**CMPU..FB** (.. 01/050 - .. 01/063)  
**CMPU..FL** (.. 01/050 - .. 01/063)

Albero lento cavo / Hollow output shaft

**CMPU**



**CMPU**

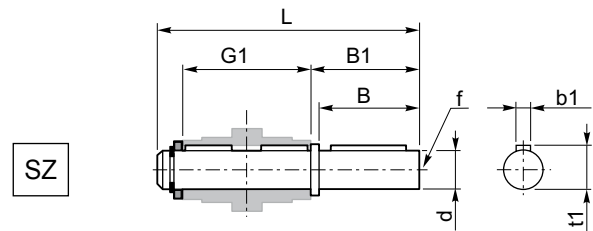
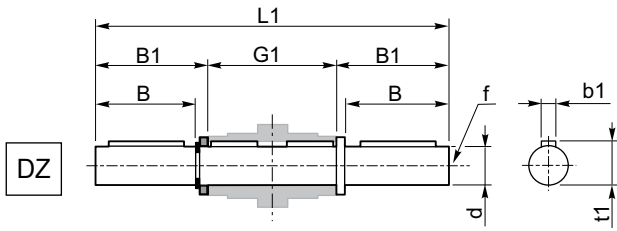
**RIDUTTORI A VITE SENZA FINE CON PRECOPPIA PU**  
**PU PRE-STAGE WORMGEARBOXES**

**Accessori**

**Accessories**

Albero lento semplice e doppio

Single and double output shaft

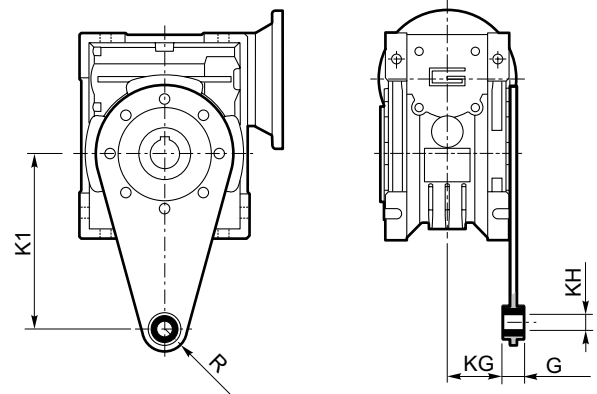


CMPU	d <sub>h7</sub>	B	B1	G1	L	L1	f	b1	t1
01/050	25	50	53.5	92	153	199	M10	8	28
01/063	25	50	53.5	112	173	219	M10	8	28
01/075	28	60	63.5	120	192	247	M10	8	31
01/090	35	80	84.5	140	234	309	M12	10	38

**Braccio di reazione**

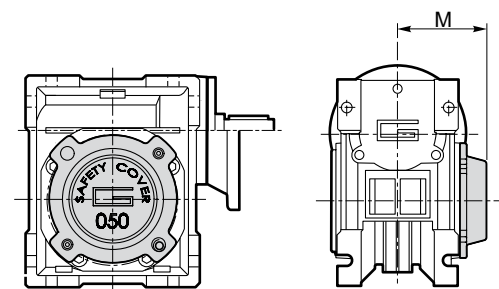
**Torque arm**

CMPU	K1	G	KG	KH	R
01/050	100	14	38	10	18
01/063	150	14	47.5	10	18
01/075	200	25	46.5	20	30
01/090	200	25	56.5	20	30



**SC - Safety Cover**

CMPU	M
01/050	62.5
01/063	73
01/075	79
01/090	94

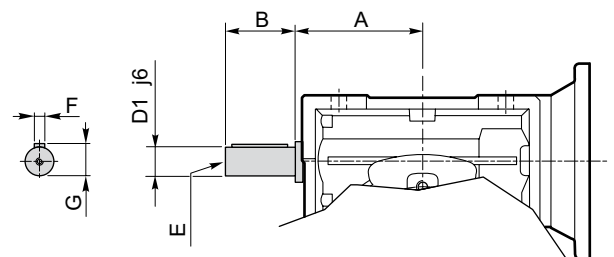


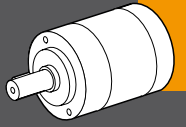
**Opzioni**

**Options**

**VS - Vite sporgente / Extended input shaft**

CMPU	A	B	D <sub>1</sub> <sub>j6</sub>	E	F	G
01/050	64	30	14	M6	5	16
01/063	75	40	19	M6	6	21.5
01/075	90	50	24	M8	8	27
01/090	108	50	24	M8	8	27

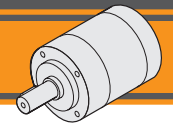




***RIDUTTORI EPICICLOIDALI***  
***PLANETARY GEARBOXES***



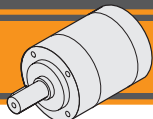




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Designazione	<i>Classification</i>	<b>H2</b>
Versioni	<i>Versions</i>	<b>H2</b>
Simbologia	<i>Symbols</i>	<b>H2</b>
Lubrificazione	<i>Lubrication</i>	<b>H3</b>
Carichi radiali e assiali	<i>Radial and axial loads</i>	<b>H3</b>
Rendimento	<i>Efficiency</i>	<b>H3</b>
Dati tecnici	<i>Technical data</i>	<b>H4</b>
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Opzioni	<i>Options</i>	<b>H12</b>

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**P****RIDUTTORI EPICICLOIDALI  
PLANETARY GEAR UNITS****Caratteristiche tecniche****Technical features**

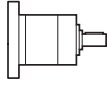

I riduttori epicicloidali della serie P hanno le seguenti caratteristiche principali:

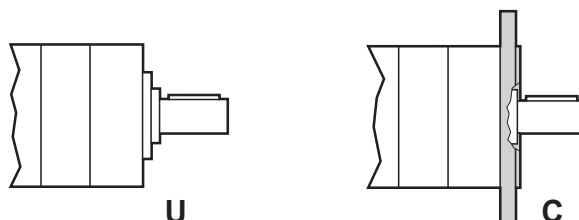
*P planetary gearboxes have the following features:*

- Ingresso ed uscita coassiali
- Senso di rotazione concorde ingresso/uscita
- Alte coppie in ingombri ridotti
- Adatti per servizio continuo ed intermittente

- *Coaxial arrangement of the input and output*
- *Same rotation input/output*
- *Advantageous torque with minimum space requirements*
- *Suitable for continuous, reversing and intermittent operation*

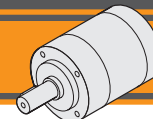
**Designazione****Classification**

RIDUTTORE / GEARBOX				
<b>P</b>	<b>52</b>	<b>2</b>	<b>C</b>	<b>34.97</b>
Tipo Type	Grandezza Size	Stadi riduttore Gearbox stages	Versione riduttore Gearbox Version	Rapporto Ratio
<b>P</b> 	<b>42</b> <b>52</b> <b>62</b> <b>72</b> <b>81</b>	<b>1</b> <b>2</b> <b>3</b>	<b>U</b> <b>C80</b> <b>C90</b> <b>C105</b> <b>C120</b> <b>C140</b> <b>C160</b>	Vedere tabella See tables
<b>PIS</b> 	<b>105</b> <b>120</b>			

**Versioni****Versions****Simbologia****Symbols**

$N_s$	Stadi / Stages	$M_{n_2}$ [Nm]	Coppia nominale in uscita / Nominal output torque
$n_1$ [ $\text{min}^{-1}$ ]	Velocità in ingresso / Input speed	Rd %	Rendimento dinamico / Dynamic efficiency
$n_2$ [ $\text{min}^{-1}$ ]	Velocità in uscita / Output speed	$A_2$ [N]	Carico assiale ammissibile in uscita / Permitted output axial load
i	Rapporto di riduzione / Ratio	$R_2$ [N]	Carico radiale ammissibile in uscita / Permitted output radial load



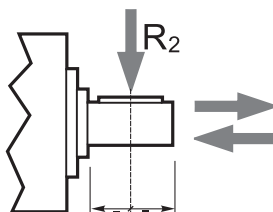

**Lubrificazione**
**Lubrication**

Tutti i riduttori P sono forniti completi di lubrificante, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

*Permanent grease long-life lubrication makes it possible to use P in all mounting positions.*

Temperatura ambiente di funzionamento consentita / *Operating environmental temperature range*

-50 / +40 °C

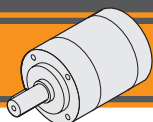
**Carichi radiali e assiali**
**Radial and axial loads**


$n_1 = 3000 \text{ min}^{-1}$

Grandezza Size	Albero uscita / <i>Output shaft</i>						Albero entrata / <i>Input shaft</i>	
	1 stadio / <i>stage</i>		2 stadi / <i>stages</i>		3 stadi / <i>stages</i>		1 - 2 - 3 stadi / <i>stages</i>	
	$R_2$ [N]	$A_2$ [N]	$R_2$ [N]	$A_2$ [N]	$R_2$ [N]	$A_2$ [N]	$R_2$ [N]	$A_2$ [N]
<b>P42</b>	160	50	230	80	300	110	70	40
<b>P52</b>	200	60	320	100	450	150	110	50
<b>P62</b>	240	70	360	100	520	150	120	60
<b>P72</b>	320	70	480	100	760	160	160	80
<b>P81</b>	400	80	600	120	1000	200	200	100
<b>P105</b>	600	120	900	180	1500	300	240	125
<b>P120</b>	600	120	900	180	1500	300	300	150

**Rendimento**
**Efficiency**

Stadi / <i>Stage (Ns)</i>	1	2	3
Rendimento / <i>Efficiency (Rd)</i>	0.80	0.75	0.70



**P**

**RIDUTTORI EPICICLOIDALI  
PLANETARY GEAR UNITS**

**Dati tecnici**

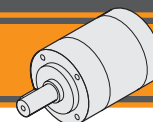
3000 rpm

**Technical data**

Ns	i	Mn <sub>2</sub> [Nm]						
		P42	P52	P62	P72	P81	P105	P120
1	3.70	3	4	8	14	20	35	50
	4.28							—
	5.18							—
	6.75							50
2	13.73	7.5	12	25	42	60	105	150
	15.88							—
	18.36							—
	19.20							—
	22.20							—
	25.01							150
	26.85							—
	28.93							—
	34.97							—
	45.56							150
3	50.89	15	25	50	84	120	195	300
	58.85							—
	68.06							—
	71.16							—
	78.71							—
	92.70							300
	95.17							—
	99.50							—
	107.20							—
	115.07							—
	123.97							—
	129.62							—
	139.13							—
	149.90							—
	168.84							300
	181.24							—
	195.26							—
236.09	—							
307.54	300							

Rapporti preferenziali / Preferred ratios

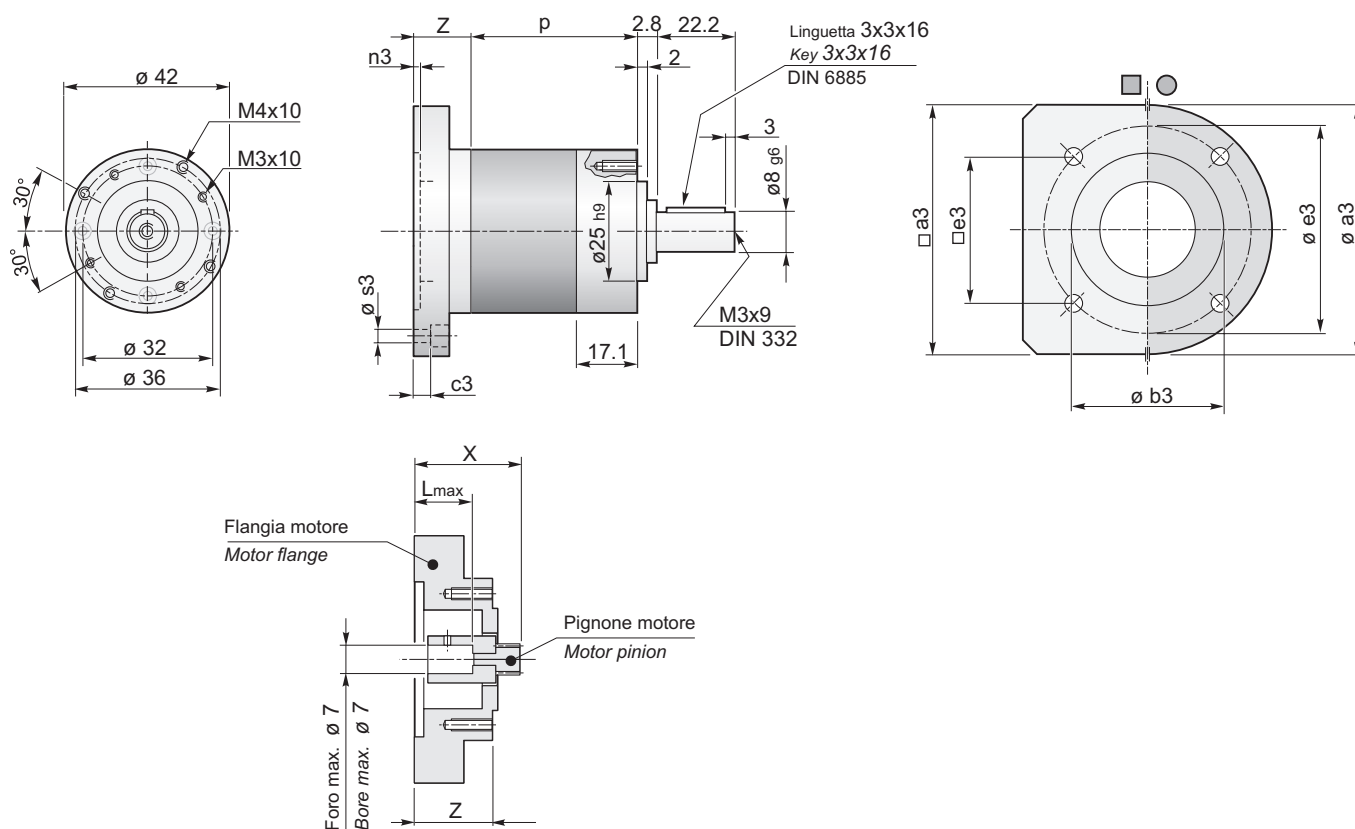
Disponibili 4 stadi con rapporti fino a 2076 / Available 4 stages with ratio up to 2076



**Dimensioni**

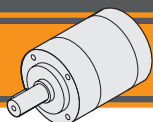
**Dimensions**

**P42 U**



		Lunghezza riduttore Gearbox length
		P
<b>P42...</b>	<b>1</b>	39
	<b>2</b>	52
	<b>3</b>	65

	Flange entrata / Input flanges									
	Flangia Flange	a3	b3	c3	e3	n3	s3	Z	L max	X
<b>P42</b>	<b>AS05</b>	□ 42	22	17	□ 31	3	4 - Ø 3.5	32	25	42.7
	<b>AS11</b>	□ 56	38.1	/	□ 47.14	3	4 - M4	27	21	37.5
	<b>AS32</b>	Ø 42	22	13	Ø 32	3	4 - Ø 3.5	21	15	31.5
	<b>AS33</b>	Ø 42	16	16	Ø 25.5	3	4 - Ø 3.5	21	15	31.5
	<b>AS47</b>	Ø 64	28	5	Ø 50	3	3 - Ø 4.5	26.5	25	37
	<b>AS58</b>	□ 52	36	/	□ 41	2	4 - M4	27	21	37.5
	<b>AS63</b>	Ø 44	16	24	Ø 22	2	6 - Ø 3.3	31	25	39
	<b>AS70</b>	Ø 80	50	8.2	Ø 65	3	4 - Ø 5.5	26	20	36.5
	<b>AS117</b>	□ 56	22	3	Ø 40	3	4 - Ø 5.5	19	13	29.7
				/	□ 47		4 - M4			
	<b>AS130</b>	Ø 52	25	15	Ø 40	3	4 - Ø 5.5	21	15	31.5
	<b>AS134</b>	Ø 77	50	8.2	Ø 65	3	4 - Ø 5.5	21	15	31.5
	/			Ø 65	4 - M5					
<b>AS213</b>	□ 60	36	/	□ 50	2.5	4 - M4	28.9	23	39.4	



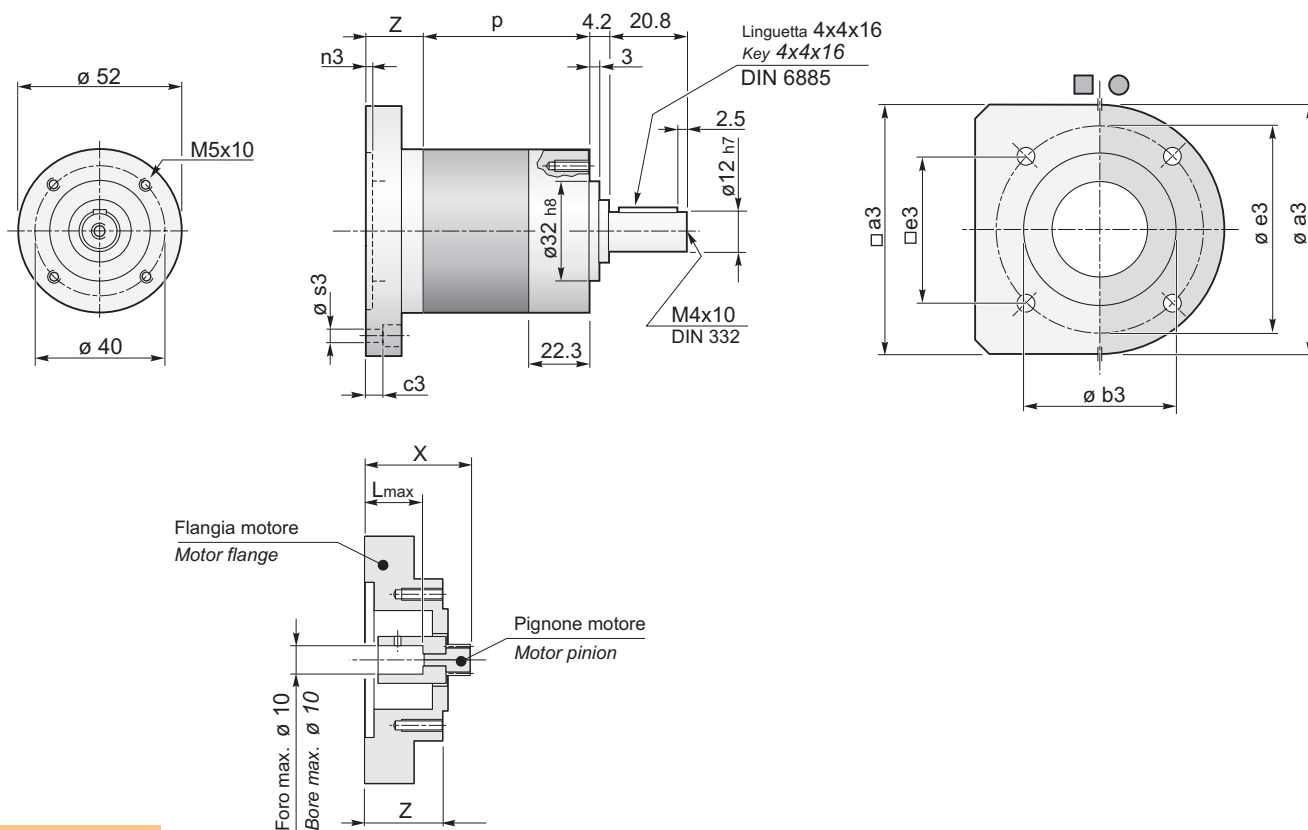
**P**

**RIDUTTORI EPICICLOIDALI  
PLANETARY GEAR UNITS**

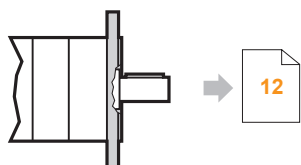
**Dimensioni**

**Dimensions**

**P52 U**

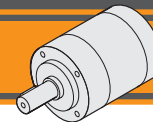


**P52 C..**



		Lunghezza riduttore Gearbox length
		P
<b>P52...</b>	<b>1</b>	46
	<b>2</b>	60
	<b>3</b>	74

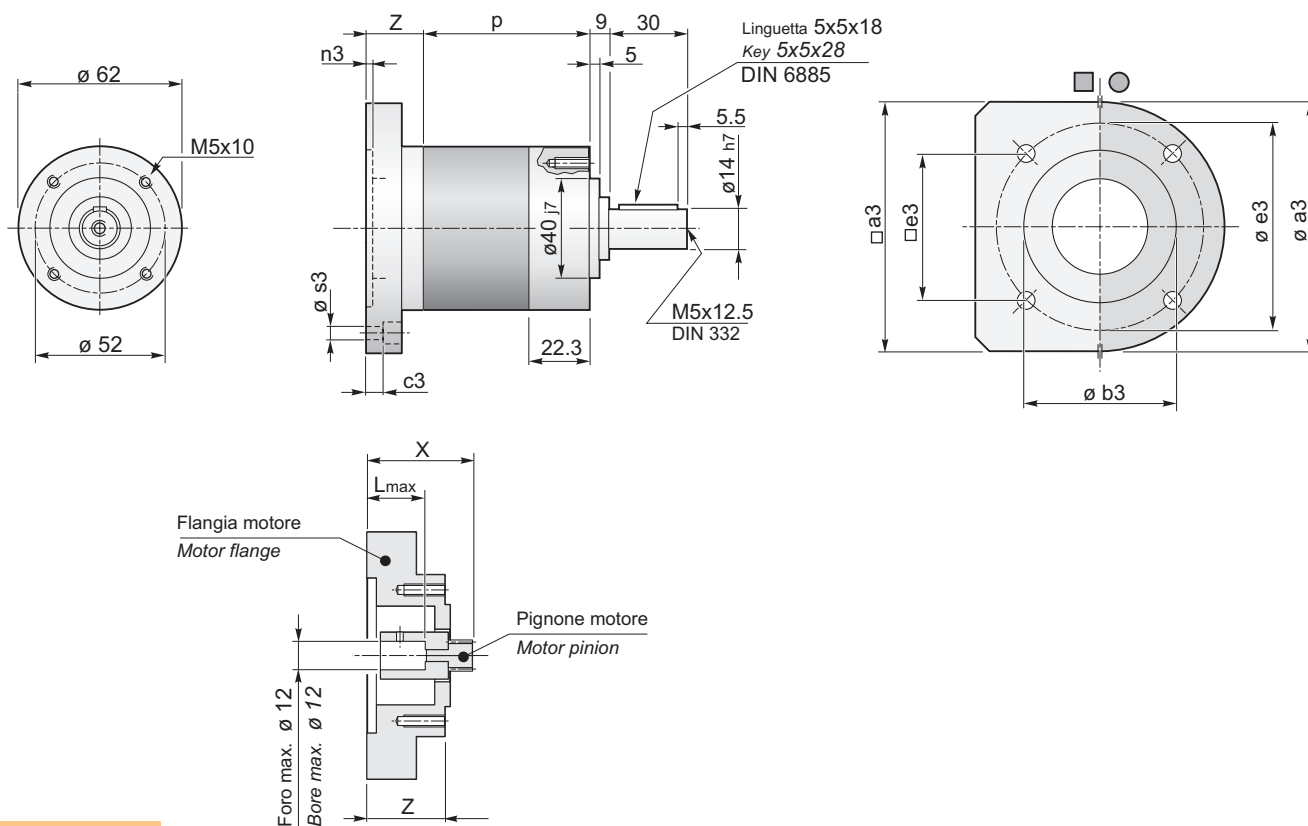
	Flange entrata / Input flanges									
	Flangia Flange	a3	b3	c3	e3	n3	s3	Z	L max	X
<b>P52</b>	<b>AS09</b>	$\square 60$	36	/	$\square 50$	2	4 - M4	27	20.6	37.5
	<b>AS23</b>	$\varnothing 60$	26	17.5	$\varnothing 39$	3	4 - $\varnothing 5.5$	26.5	20	37
	<b>AS36</b>	$\varnothing 60$	28	15	$\varnothing 42$	3	4 - $\varnothing 5.5$	21	15	31.5
	<b>AS38</b>	$\varnothing 65$	32	18	$\varnothing 46$	3	4 - $\varnothing 4.5$	29	22.5	39.5
	<b>AS50</b>	$\varnothing 79$	45	14.5	$\varnothing 65.5$	3.5	4 - $\varnothing 5.5$	32	24	42.5
	<b>AS51</b>	$\varnothing 68$	28	21.5	$\varnothing 50$	3	3 - $\varnothing 4.5$	31.5	24	42
	<b>AS60</b>	$\varnothing 80$	50	10.2	$\varnothing 65$	3	4 - $\varnothing 5.5$	28	20	38.5
	<b>AS68</b>	$\varnothing 52$	22	13	$\varnothing 30$	3	4 - $\varnothing 4.5$	28	20	38.5
	<b>AS86</b>	$\varnothing 52$	30	/	$\varnothing 46$	3	4 - M4	33.5	25	44
	<b>AS109</b>	$\varnothing 80$	55	10	$\varnothing 65$	3	4 - $\varnothing 6.5$	24	16	34.5
	<b>AS115</b>	$\varnothing 52$	25	17.5	$\varnothing 40$	3	4 - $\varnothing 5.5$	26.5	20	37
	<b>AS140</b>	$\varnothing 80$	50	10.2	$\varnothing 65$	3	4 - $\varnothing 5.5$	28	20	38.5



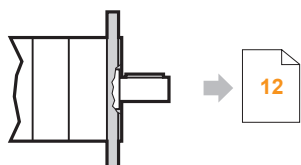
**Dimensioni**

**Dimensions**

**P62 U**



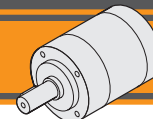
**P62 C..**



		Lunghezza riduttore Gearbox length
		P
<b>P62...</b>	1	46
	2	62
	3	78

P62	Flange entrata / Input flanges									
	Flangia Flange	a3	b3	c3	e3	n3	s3	Z	L max	X
	AS08	□ 60	50	/	□ 49.5	4	4 - M4	37	30	49.8
	AS12	□ 84.5	73.02	/	□ 69.6	2	4 - M5	40	30	52.8
	AS15	□ 58	38.1	/	□ 47.14	2	4 - M4	30	20.6	42.8
	AS61	Ø 90	60	7	Ø 75	3	4 - Ø 5.5	30	23	42.8
	AS244	Ø 80	50	5	Ø 65	3.5	4 - Ø 5.5	28	20	40.8

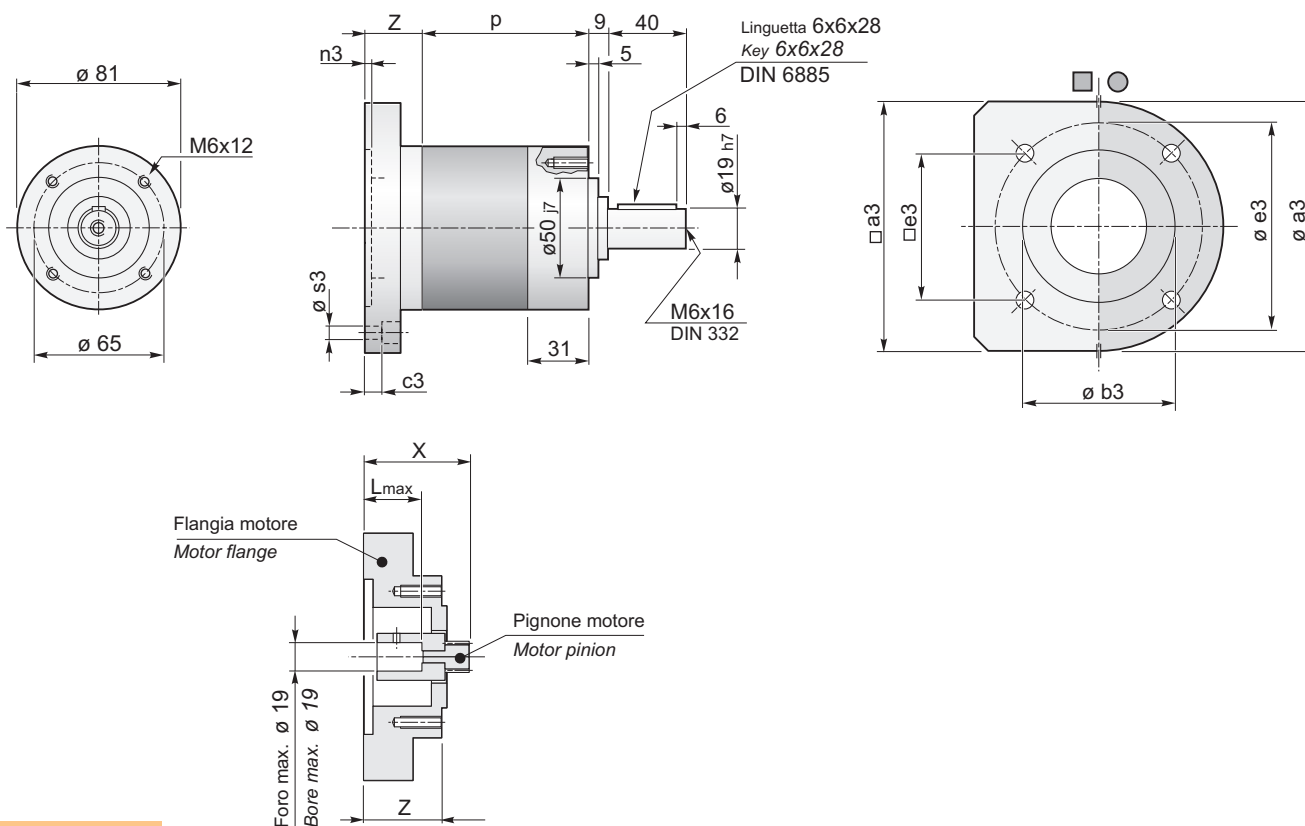




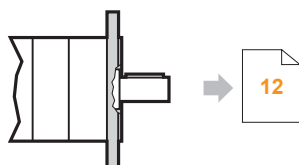
**Dimensioni**

**Dimensions**

**P81 U**



**P81 C..**

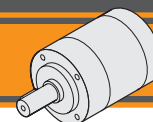


		Lunghezza riduttore Gearbox length
		P
<b>P81...</b>	1	59
	2	81
	3	103

	Flange entrata / Input flanges									
	Flangia Flange	a3	b3	c3	e3	n3	s3	Z	L max	X
<b>P81</b>	AS04	□ 100	95	25	∅ 115	3.5	4 - ∅ 9	43	30	59.3
	AS12B	□ 85	73.02	—	□ 69.6	2	4 - M5	43	30	59.3
	AS18	∅ 114	80	26	∅ 100	4	4 - ∅ 6.5	53	40	69.3
	AS30	∅ 80	50	35.5	∅ 70	3.5	4 - ∅ 5.5	42.5	28	58.8
	AS40	□ 80	70	26.5	∅ 90	4	4 - ∅ 6.5	52.5	40	68.8
	AS73	□ 110	55.524	49.8	□ 88.9	2	4 - ∅ 8.5	67.8	55.63	84.1
	AS92	□ 85	35	—	□ 69.6	10.5	4 - M5	53	40.2	69.3
	AS248	∅ 80	50	5	∅ 65	3.5	4 - ∅ 5.5	32	20	48.3
	AS249	∅ 90	60	5	∅ 75	3.5	4 - ∅ 5.5	35	23	51.3
	AS254	∅ 105	70	6	∅ 85	4	4 - ∅ 6.5	42	30	58.3
	AS280	∅ 120	80	8	∅ 100	4	4 - ∅ 6.5	52	40	68.3



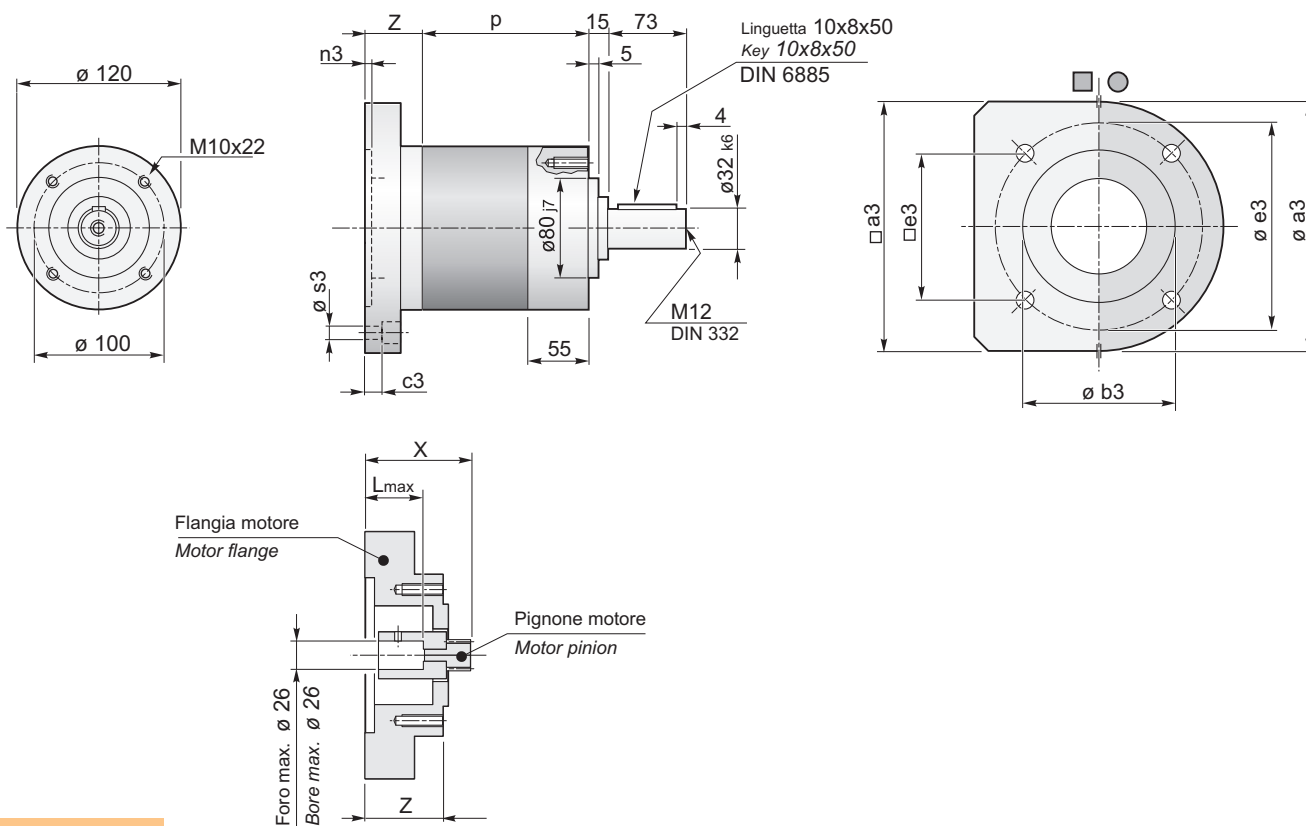




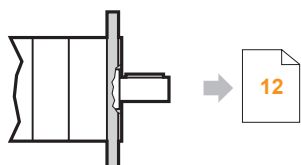
**Dimensioni**

**Dimensions**

**P120 U**

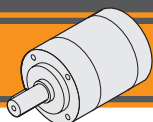


**P120 C..**



		Lunghezza riduttore Gearbox length
		P
P120...	1	89.7
	2	123.9
	3	158.1

P120	Flange entrata / Input flanges									
	Flangia Flange	a3	b3	c3	e3	n3	s3	Z	L max	X
	AS255	Ø 120	50	5	Ø 65	3.5	4 - Ø 5.5	41.4	20	60.2
	AS256	Ø 120	60	5	Ø 75	3.5	4 - Ø 5.5	41.4	23	63.2
	AS257	Ø 120	70	6	Ø 85	4	4 - Ø 6.5	43.5	30	70.2
	AS282	Ø 120	80	8	Ø 100	4	4 - Ø 6.5	53.5	40	80.2
	AS283	Ø 140	95	10	Ø 115	4.5	4 - Ø 8.5	63.5	50	90.2



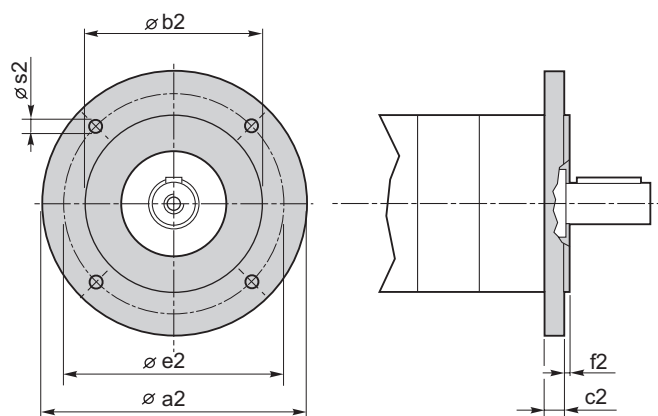
**P**

**RIDUTTORI EPICICLOIDALI  
PLANETARY GEAR UNITS**

**Dimensioni**

**Dimensions**

**P.. C..**



**Flange uscita / Output flanges**

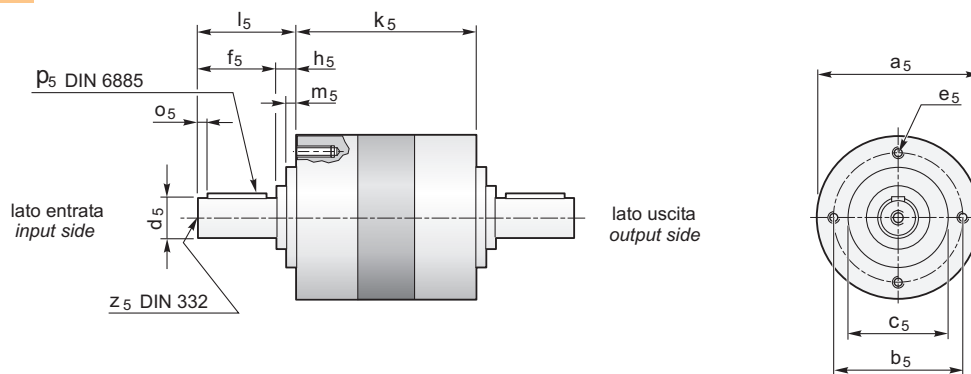
P	a2	b2	c2	e2	f2	s2	Flangia Flange
52	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
62	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
72	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	M5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
81	90	60 j7	9	75	2.5	M5	C90
	105	70 j7	9	85	2.5	M6	C105
	120	80 j7	9	100	3.0	6.5	C120
105	120	80 j7	12	100	3	M6	C120
	140	95 j7	12	115	3.5	M8	C140
	160	110 j7	12	130	3.5	M8	C160
120	140	95 j7	15	115	3	M8	C140
	160	110 j7	15	130	3.5	M8	C160

**Opzioni**

**Options**

**PIS**

**Albero in ingresso / Input shaft**

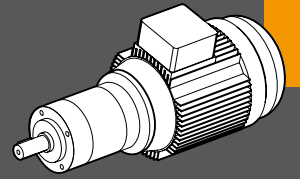


stadi / stages	P 42			P 52			P 62			P 72			P 81			P 105			P 120		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
<b>k5</b>	61	74	87	71	85	99	69	86	103	83	102	122	90	112	134	106	137	169	132	166	200
<b>a5</b>	42			52			62			72			81			105			120		
<b>b5</b>	36			40			52			60			65			85			100		
<b>c5</b>	25 h9			32 h8			40 j7			45 j7			50 j7			70 j7			80 j7		
<b>d5</b>	6 h7			10 h7			12 h7			14 h7			16 h7			19 h7			28 h7		
<b>e5</b>	M4 x 10 (4 x 90°)			M5 x 10 (4 x 90°)			M5 x 10 (4 x 90°)			M5 x 10 (4 x 90°)			M6 x 12 (4 x 90°)			M8 x 16 (4 x 90°)			M10 x 22 (4 x 90°)		
<b>f5</b>	22.2			20			30			30			40			40			58		
<b>h5</b>	2.8			5			9			9			9			9			15		
<b>l5</b>	25			25			39			39			49			49			73		
<b>m5</b>	2			3			5			5			5			5			5		
<b>o5</b>	3			2			5			5.5			5			6			4		
<b>p5</b>	A 2 x 2 x 16			A 3 x 3 x 16			A 4 x 4 x 20			A5x5x22			A 5 x 5 x 30			A 6 x 6 x 28			A 10 x 8 x 50		
<b>z5</b>	—			M3 x 9			M4 x 10			M5x12.5			M5 x 12.5			M6 x 16			M10 x 22		

**TRANSTECNO**<sup>TM</sup>  
THE MODULAR GEARMOTOR

**ACP**

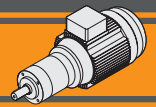
ACP



**MOTORIDUTTORI C.A. EPICICLOIDALI**  
**A.C. PLANETARY GEARMOTORS**



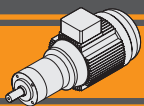




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Designazione	<i>Classification</i>	<b>12</b>
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**Caratteristiche tecniche**

**Technical features**

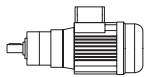
Le caratteristiche principali dei riduttori epicicloidali della serie ACP sono:

The main features of ACP planetary gearbox range are:

- Alimentazione in corrente alternata trifase;
  - Ingresso ed uscita coassiali;
  - Design compatto;
  - Lubrificazione permanente a grasso;
  - Possono essere installati in qualunque posizione di montaggio
- Threephase power supply;
  - Coaxial arrangement of the input and output;
  - Compact design;
  - Permanent grease long life lubrication;
  - Can be installed in all mounting positions.

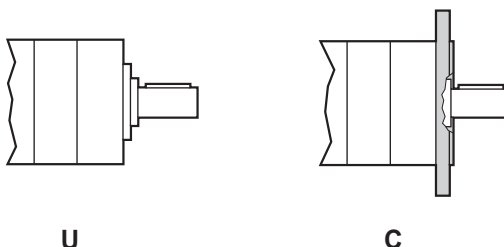
**Designazione**

**Classification**

MOTORIDUTTORE / GEARMOTOR									
ACP	712/81						2	C	34.97
Tipo Type	Grandezza Size						Stadi riduttore Gearbox stages	Versione riduttore Gearbox Version	Rapporto Ratio
	56.../52	63.../62	71.../72	80.../81	90/52	180/120	1	U	Vedere tabella See tables
	56.../62	63.../72	71.../81	80.../105	100/62		2	C80	
	56.../72	63.../81	71.../105	80.../120	100/72		3	C90	
	56.../81	63.../105	71.../120		100/81			C105	
	56.../105	63.../120						C120	
56.../120							C140		
								C160	

**Versioni**

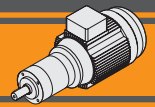
**Versions**



**Simbologia**

**Symbols**

$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / Input speed	sf	Fattore di servizio / Service factor
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / Output speed	Rd %	Rendimento dinamico / Dynamic efficiency
i	Rapporto di riduzione / Ratio	A <sub>2</sub> [N]	Carico assiale ammissibile in uscita / Permitted output axial load
P <sub>1</sub> [kW]	Potenza in entrata / Input power	R <sub>2</sub> [N]	Carico radiale ammissibile in uscita / Permitted output radial load
M <sub>2</sub> [Nm]	Coppia in uscita in funzione di P <sub>1</sub> / Output torque referred to P <sub>1</sub>		



**Lubrificazione**

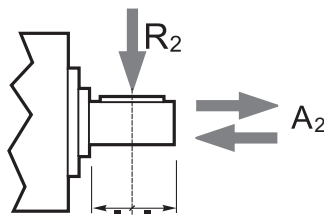
**Lubrication**

I riduttori epicicloidali sono lubrificati in modo permanente, non richiedono quindi ulteriore manutenzione. Questo gli consente di essere installati praticamente ovunque. La temperatura ambiente di funzionamento consentita va da -50°C a + 40 °C; per applicazioni particolari, possono essere adottate misure per raggiungere livelli di temperatura maggiori.

*Planetary gearboxes are life-time lubricated with grease, therefore they are maintenance free. They can be installed in any location. The environmental temperature range is from -50 °C up to +40°C; for special applications, measures can be taken for higher temperature range.*

**Carichi radiali**

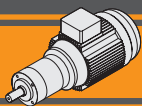
**Radial loads**



Numero di stadi N° of stages	Carichi Radiali R <sub>2</sub> [N] / Radial Load R <sub>2</sub> [N]					
	P52	P62	P72	P81	P105	P120
1	200	240	320	400	600	600
2	320	360	480	600	900	900
3	450	520	760	1000	1500	1500

Numero di stadi N° of stages	Carichi Assiali A <sub>2</sub> [N] / Axial Load A <sub>2</sub> [N]					
	P52	P62	P72	P81	P105	P120
1	60	70	70	80	120	120
2	100	100	100	120	180	180
3	150	150	160	200	300	300

ACP



**Rapporti**

**Ratios**

Numero di stadi N° of stages	Per tutte le grandezze di riduttori della serie P For all gearbox sizes of P range		
	Rapporti / Ratios		
1	3.70		
	4.28*		
	5.18*		
	6.75		
2	13.73		
	15.88*		
	18.36*		
	19.20*		
	22.20*		
	25.01		
	26.85*		
	28.93*		
	34.97*		
	45.56		
3	50.89		
	58.85*		
	68.06*		
	71.16*		
	78.71*		
	92.70		
	95.17*		
	99.50*		
	107.20*		
	115.07*		
	123.97*		
	129.62*		
	139.13*		
	149.90*		
	168.84		
	181.24*		
195.26*			
236.09*			
307.54			

Rapporti preferenziali  
Preferred ratios

 Rapporti preferenziali / Preferred ratios

\* Rapporto non disponibile su grandezza P120 / Ratio not available on size P120

Disponibile a 4 stadi con rapporti fino a 2076 / Available 4 stages with ratio up to 2076

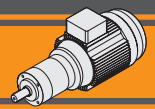
**Rendimento**

**Efficiency**

Rendimento Efficiency	Per tutte le grandezze di riduttori della serie P For all gearbox sizes of P range		
	Numero di stadi / N° of stages		
	1	2	3
Rd %	80	75	70

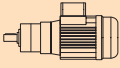
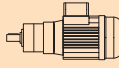
Rendimento medio per velocità nominale in ingresso 3000 rpm  
Average efficiency with input rated speed 3000 rpm



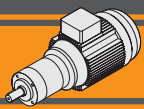


**Dati tecnici**

**Technical data**

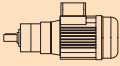
$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i	
<b>0.06</b>						<b>0.09</b>					
(1400 min <sup>-1</sup> )	<b>378</b>	1.2	4.2	3.70	<b>5614/521</b>	(1400 min <sup>-1</sup> )	<b>378</b>	1.8	2.8	3.70	<b>5624/521</b>
	<b>327</b>	1.4	3.6	4.28			<b>327</b>	2.1	2.4	4.28	
	<b>270</b>	1.7	3.0	5.18			<b>270</b>	2.5	2.0	5.18	
	<b>207</b>	2.2	2.3	6.75			<b>207</b>	3.3	1.5	6.75	
	<b>102</b>	4.2	3.6	13.73	<b>5614/522</b>		<b>102</b>	6.3	2.4	13.73	<b>5624/522</b>
	<b>88.2</b>	4.9	3.1	15.88			<b>88.2</b>	7.3	2.1	15.88	
	<b>76.3</b>	5.6	2.7	18.36			<b>76.3</b>	8.4	1.8	18.36	
	<b>72.9</b>	5.9	2.6	19.20			<b>72.9</b>	8.8	1.7	19.20	
	<b>63.1</b>	6.8	2.2	22.20			<b>63.1</b>	10	1.5	22.20	
	<b>56.0</b>	7.7	2.0	25.01			<b>56.0</b>	11	1.3	25.01	
	<b>52.1</b>	8.3	1.8	26.85			<b>52.1</b>	12	1.2	26.85	
	<b>48.4</b>	8.9	1.7	28.93			<b>48.4</b>	13	1.1	28.93	
	<b>40.0</b>	11	1.4	34.97			<b>40.0</b>	16	0.9	34.97	
	<b>30.7</b>	14	1.1	45.56			<b>30.7</b>	21	0.7	45.56	
	<b>27.5</b>	15	2.2	50.89	<b>5614/523</b>		<b>27.5</b>	22	1.5	50.89	<b>5624/523</b>
	<b>23.8</b>	17	1.9	58.85			<b>23.8</b>	25	1.3	58.85	
	<b>20.6</b>	20	1.6	68.06			<b>20.6</b>	29	1.1	68.06	
	<b>19.7</b>	20	1.5	71.16			<b>19.7</b>	30	1.0	71.16	
	<b>17.8</b>	23	1.4	78.71			<b>17.8</b>	34	0.9	78.71	
	<b>15.1</b>	27	1.2	92.70			<b>15.1</b>	40	0.8	92.70	
	<b>14.7</b>	27	1.2	95.17			<b>14.7</b>	41	0.8	95.17	
	<b>14.1</b>	29	1.1	99.50			<b>14.1</b>	42	0.7	99.50	
	<b>13.1</b>	31	1.0	107.20			<b>13.1</b>	46	0.7	107.20	
	<b>12.2</b>	33	1.0	115.07							
	<b>11.3</b>	36	0.9	123.97							
	<b>10.8</b>	37	0.9	129.62			<b>72.9</b>	8.8	3.6	19.20	<b>5624/622</b>
	<b>10.1</b>	40	0.8	139.13			<b>63.1</b>	10	3.1	22.20	
	<b>9.3</b>	43	0.7	149.90			<b>56.0</b>	11	2.8	25.01	
	<b>8.3</b>	48	0.7	168.84			<b>52.1</b>	12	2.6	26.85	
	<b>48.4</b>	8.9	3.6	28.93	<b>5614/622</b>		<b>48.4</b>	13	2.4	28.93	
	<b>40.0</b>	11	2.9	34.97			<b>40.0</b>	16	2.0	34.97	
	<b>30.7</b>	14	2.3	45.56			<b>30.7</b>	21	1.5	45.56	
	<b>27.5</b>	15	4.3	50.89	<b>5614/623</b>		<b>27.5</b>	22	2.9	50.89	<b>5624/623</b>
	<b>23.8</b>	17	3.7	58.85			<b>23.8</b>	25	2.5	58.85	
	<b>20.6</b>	20	3.2	68.06			<b>20.6</b>	29	2.2	68.06	
	<b>19.7</b>	20	3.1	71.16			<b>19.7</b>	30	2.1	71.16	
	<b>17.8</b>	23	2.8	78.71			<b>17.8</b>	34	1.9	78.71	
	<b>15.1</b>	27	2.4	92.70			<b>15.1</b>	40	1.6	92.70	
	<b>14.7</b>	27	2.3	95.17			<b>14.7</b>	41	1.6	95.17	
	<b>14.1</b>	29	2.2	99.50			<b>14.1</b>	42	1.5	99.50	
	<b>13.1</b>	31	2.1	107.20			<b>13.1</b>	46	1.4	107.20	
	<b>12.2</b>	33	1.9	115.07			<b>12.2</b>	49	1.3	115.07	
	<b>11.3</b>	36	1.8	123.97			<b>11.3</b>	53	1.2	123.97	
	<b>10.8</b>	37	1.7	129.62			<b>10.8</b>	55	1.1	129.62	
	<b>10.1</b>	40	1.6	139.13			<b>10.1</b>	59	1.1	139.13	
	<b>9.3</b>	43	1.5	149.90			<b>9.3</b>	64	1.0	149.90	
	<b>8.3</b>	48	1.3	168.84			<b>8.3</b>	72	0.9	168.84	
	<b>7.7</b>	52	1.2	181.24			<b>7.7</b>	77	0.8	181.24	
	<b>7.2</b>	56	1.1	195.26			<b>7.2</b>	83	0.8	195.26	
	<b>5.9</b>	68	0.9	236.09							
	<b>4.6</b>	88	0.7	307.54			<b>15.1</b>	40	2.7	92.70	<b>5624/723</b>
	<b>8.3</b>	48	2.2	168.84	<b>5614/723</b>		<b>14.7</b>	41	2.6	95.17	
	<b>7.7</b>	52	2.0	181.24			<b>14.1</b>	42	2.5	99.50	
	<b>7.2</b>	56	1.9	195.26			<b>13.1</b>	46	2.3	107.20	
	<b>5.9</b>	68	1.6	236.09			<b>12.2</b>	49	2.2	115.07	
	<b>4.6</b>	88	1.2	307.54			<b>11.3</b>	53	2.0	123.97	
							<b>10.8</b>	55	1.9	129.62	

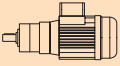
ACP



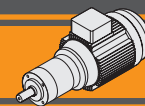
**Dati tecnici**

**Technical data**

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.09</b>						
(1400 min <sup>-1</sup> )	10.1	59	1.8	139.13	<b>5624/723</b>	
	9.3	64	1.7	149.90		
	8.3	72	1.5	168.84		
	7.7	77	1.4	181.24		
	7.2	83	1.3	195.26		
	5.9	101	1.1	236.09		
	4.6	131	0.8	307.54		
	8.3	72	2.1	168.84	<b>5624/813</b>	
	7.7	77	2.0	181.24		
	7.2	83	1.8	195.26		
	5.9	101	1.5	236.09		
	4.6	131	1.2	307.54		
	<b>0.12</b>					
	(1400 min <sup>-1</sup> )	378	2.4	4.2	3.70	<b>6314/621</b>
327		2.8	3.7	4.28		
270		3.4	3.0	5.18		
207		4.4	2.3	6.75		
102		8.3	3.8	13.73	<b>6314/622</b>	
88.2		9.6	3.3	15.88		
76.3		11	2.8	18.36		
72.9		12	2.7	19.20		
63.1		13	2.3	22.20		
56.0		15	2.1	25.01		
52.1		16	1.9	26.85		
48.4		18	1.8	28.93		
40.0		21	1.5	34.97		
30.7		28	1.1	45.56		
27.5		29	2.2	50.89	<b>6314/623</b>	
23.8		33	1.9	58.85		
20.6		39	1.6	68.06		
19.7		40	1.6	71.16		
17.8		45	1.4	78.71		
15.1		53	1.2	92.70		
14.7		54	1.2	95.17		
14.1		56	1.1	99.50		
13.1		61	1.0	107.20		
12.2		65	1.0	115.07		
11.3		70	0.9	123.97		
10.8		73	0.9	129.62		
10.1		79	0.8	139.13		
9.3		85	0.7	149.90		
8.3		96	0.7	168.84		
27.5		29	3.7	50.89	<b>6314/723</b>	
23.8		33	3.2	58.85		
20.6		39	2.8	68.06		
19.7		40	2.6	71.16		
17.8		45	2.4	78.71		
15.1	53	2.0	92.70			
14.7	54	2.0	95.17			
14.1	56	1.9	99.50			
13.1	61	1.7	107.20			
12.2	65	1.6	115.07			
11.3	70	1.5	123.97			
10.8	73	1.4	129.62			

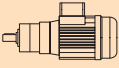
P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.12</b>					
(1400 min <sup>-1</sup> )	10.1	79	1.3	139.13	<b>6314/723</b>
	9.3	85	1.3	149.90	
	8.3	96	1.1	168.84	
	7.7	103	1.0	181.24	
	7.2	111	1.0	195.26	
	5.9	134	0.8	236.09	
	4.6	152*	0.7	307.54	
	15.1	53	2.9	92.70	<b>6314/813</b>
	14.7	54	2.8	95.17	
	14.1	56	2.7	99.50	
	13.1	61	2.5	107.20	
	12.2	65	2.3	115.07	
	11.3	70	2.2	123.97	
	10.8	73	2.1	129.62	
10.1	79	1.9	139.13		
9.3	85	1.8	149.90		
8.3	96	1.6	168.84		
7.7	103	1.5	181.24		
7.2	111	1.4	195.26		
5.9	134	1.1	236.09		
4.6	174	0.9	307.54		
8.3	96	2.6	168.84	<b>6314/1053</b>	
7.7	103	2.4	181.24		
7.2	111	2.2	195.26		
5.9	134	1.8	236.09		
4.6	174	1.4	307.54		
<b>0.18</b>					
(1400 min <sup>-1</sup> )	378	3.7	2.7	3.70	<b>6324/621</b>
	327	4.3	2.3	4.28	
	270	5.2	1.9	5.18	
	207	6.8	1.5	6.75	
	102	13	2.4	13.73	<b>6324/622</b>
	88.2	15	2.1	15.88	
	76.3	17	1.8	18.36	
	72.9	18	1.7	19.20	
	63.1	21	1.5	22.20	
	56.0	24	1.3	25.01	
	52.1	25	1.2	26.85	
	48.4	27	1.2	28.93	
	40.0	33	1.0	34.97	
	30.7	43	0.7	45.56	
	27.5	45	1.4	50.89	<b>6324/623</b>
	23.8	52	1.2	58.85	
	20.6	60	1.1	68.06	
	19.7	63	1.0	71.16	
	17.8	69	0.9	78.71	
	15.1	82	0.8	92.70	
	14.7	84	0.8	95.17	
	14.1	88	0.7	99.50	
	13.1	95	0.7	107.20	

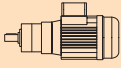
\* Coppia limitata / Limited torque



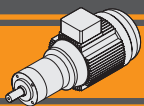
**Dati tecnici**

**Technical data**

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.18</b>					
(1400 min <sup>-1</sup> )	<b>72.9</b>	18	2.9	19.20	<b>6324/722</b>
	<b>63.1</b>	21	2.5	22.20	
	<b>56.0</b>	24	2.2	25.01	
	<b>52.1</b>	25	2.1	26.85	
	<b>48.4</b>	27	1.9	28.93	
	<b>40.0</b>	33	1.6	34.97	<b>6324/723</b>
	<b>30.7</b>	43	1.2	45.56	
	<b>27.5</b>	45	2.4	50.89	
	<b>23.8</b>	52	2.0	58.85	
	<b>20.6</b>	60	1.8	68.06	
	<b>19.7</b>	63	1.7	71.16	
	<b>17.8</b>	69	1.5	78.71	
	<b>15.1</b>	82	1.3	92.70	
	<b>14.7</b>	84	1.3	95.17	
	<b>14.1</b>	88	1.2	99.50	
	<b>13.1</b>	95	1.1	107.20	
	<b>12.2</b>	101	1.0	115.07	
	<b>11.3</b>	109	1.0	123.97	
	<b>10.8</b>	114	0.9	129.62	
	<b>10.1</b>	123	0.9	139.13	
	<b>9.3</b>	132	0.8	149.90	
	<b>8.3</b>	149	0.7	168.84	
	<b>20.6</b>	60	2.5	68.06	<b>6324/813</b>
	<b>19.7</b>	63	2.4	71.16	
	<b>17.8</b>	69	2.2	78.71	
	<b>15.1</b>	82	1.9	92.70	
	<b>14.7</b>	84	1.8	95.17	
	<b>14.1</b>	88	1.7	99.50	
	<b>13.1</b>	95	1.6	107.20	
	<b>12.2</b>	101	1.5	115.07	
	<b>11.3</b>	109	1.4	123.97	
	<b>10.8</b>	114	1.3	129.62	
	<b>10.1</b>	123	1.2	139.13	
	<b>9.3</b>	132	1.1	149.90	
	<b>8.3</b>	149	1.0	168.84	
	<b>7.7</b>	160	1.0	181.24	
	<b>7.2</b>	172	0.9	195.26	
	<b>5.9</b>	208	0.7	236.09	
	<b>4.6</b>	217*	0.7	307.54	
	<b>15.1</b>	82	3.0	92.70	<b>6324/1053</b>
	<b>14.7</b>	84	2.9	95.17	
	<b>14.1</b>	88	2.8	99.50	
	<b>13.1</b>	95	2.6	107.20	
	<b>12.2</b>	101	2.4	115.07	
	<b>11.3</b>	109	2.3	123.97	
	<b>10.8</b>	114	2.2	129.62	
	<b>10.1</b>	123	2.0	139.13	
	<b>9.3</b>	132	1.9	149.90	
	<b>8.3</b>	149	1.7	168.84	
	<b>7.7</b>	160	1.5	181.24	
	<b>7.2</b>	172	1.4	195.26	
	<b>5.9</b>	208	1.2	236.09	
	<b>4.6</b>	271	0.9	307.54	
	<b>8.3</b>	149	2.6	168.84	
	<b>4.6</b>	271	1.4	307.54	

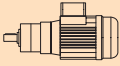
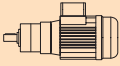
P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.25</b>					
(1400 min <sup>-1</sup> )	<b>378</b>	5.0	2.0	3.70	<b>6334/621</b>
	<b>327</b>	5.8	1.7	4.28	
	<b>270</b>	7.0	1.4	5.18	
	<b>207</b>	9.2	1.1	6.75	
	<b>102</b>	18	1.8	13.73	<b>6334/622</b>
	<b>88.2</b>	20	1.6	15.88	
	<b>76.3</b>	23	1.4	18.36	
	<b>72.9</b>	24	1.3	19.20	
	<b>63.1</b>	28	1.1	22.20	
	<b>56.0</b>	32	1.0	25.01	
	<b>52.1</b>	34	0.9	26.85	
	<b>48.4</b>	37	0.9	28.93	
	<b>40.0</b>	45	0.7	34.97	
	<b>27.5</b>	61	1.0	50.89	<b>6334/623</b>
	<b>23.8</b>	70	0.9	58.85	
	<b>20.6</b>	81	0.8	68.06	
	<b>19.7</b>	85	0.7	71.16	
	<b>17.8</b>	90*	0.7	78.71	
	<b>15.1</b>	90*	0.7	92.70	
	<b>378</b>	5.0	3.5	3.70	<b>6334/721</b>
	<b>327</b>	5.8	3.0	4.28	
	<b>270</b>	7.0	2.5	5.18	
	<b>207</b>	9.2	1.9	6.75	
	<b>102</b>	18	3.0	13.73	<b>6334/722</b>
	<b>88.2</b>	20	2.6	15.88	
	<b>76.3</b>	23	2.3	18.36	
	<b>72.9</b>	24	2.2	19.20	
	<b>63.1</b>	28	1.9	22.20	
	<b>56.0</b>	32	1.7	25.01	
	<b>52.1</b>	34	1.6	26.85	
	<b>48.4</b>	37	1.4	28.93	
	<b>40.0</b>	45	1.2	34.97	
	<b>30.7</b>	58	0.9	45.56	
	<b>27.5</b>	61	1.8	50.89	<b>6334/723</b>
	<b>23.8</b>	70	1.5	58.85	
	<b>20.6</b>	81	1.3	68.06	
	<b>19.7</b>	85	1.3	71.16	
	<b>17.8</b>	94	1.1	78.71	
	<b>15.1</b>	110	1.0	92.70	
	<b>14.7</b>	113	0.9	95.17	
	<b>14.1</b>	118	0.9	99.50	
	<b>13.1</b>	128	0.8	107.20	
	<b>12.2</b>	137	0.8	115.07	
	<b>11.3</b>	148	0.7	123.97	
	<b>10.8</b>	154	0.7	129.62	
	<b>56.0</b>	32	2.4	25.01	<b>6334/812</b>
	<b>52.1</b>	34	2.2	26.85	
	<b>48.4</b>	37	2.1	28.93	
	<b>40.0</b>	45	1.7	34.97	
	<b>30.7</b>	58	1.3	45.56	

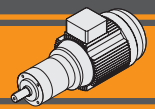
\* Coppia limitata / Limited torque



**Dati tecnici**

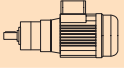
**Technical data**

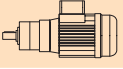
P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.25</b>						<b>0.25</b>					
(1400 min <sup>-1</sup> )	<b>27.5</b>	61	2.5	50.89	<b>6334/813</b>	(1400 min <sup>-1</sup> )	<b>27.5</b>	61	1.8	50.89	<b>7114/723</b>
	<b>23.8</b>	70	2.2	58.85			<b>23.8</b>	70	1.5	58.85	
	<b>20.6</b>	81	1.9	68.06			<b>20.6</b>	81	1.3	68.06	
	<b>19.7</b>	85	1.8	71.16			<b>19.7</b>	85	1.3	71.16	
	<b>17.8</b>	94	1.6	78.71			<b>17.8</b>	94	1.1	78.71	
	<b>15.1</b>	110	1.4	92.70			<b>15.1</b>	110	1.0	92.70	
	<b>14.7</b>	113	1.3	95.17			<b>14.7</b>	113	0.9	95.17	
	<b>14.1</b>	118	1.3	99.50			<b>14.1</b>	118	0.9	99.50	
	<b>13.1</b>	128	1.2	107.20			<b>13.1</b>	128	0.8	107.20	
	<b>12.2</b>	137	1.1	115.07			<b>12.2</b>	137	0.8	115.07	
	<b>11.3</b>	148	1.0	123.97			<b>11.3</b>	148	0.7	123.97	
	<b>10.8</b>	154	1.0	129.62			<b>10.8</b>	154	0.7	129.62	
	<b>10.1</b>	166	0.9	139.13							
	<b>9.3</b>	178	0.9	149.90			<b>56.0</b>	32	2.4	25.01	<b>7114/812</b>
	<b>8.3</b>	201	0.8	168.84			<b>52.1</b>	34	2.2	26.85	
	<b>7.7</b>	216	0.7	181.24			<b>48.4</b>	37	2.1	28.93	
	<b>7.2</b>	232	0.7	195.26			<b>40.0</b>	45	1.7	34.97	
							<b>30.7</b>	58	1.3	45.56	
	<b>20.6</b>	81	3.0	68.06	<b>6334/1053</b>						
	<b>19.7</b>	85	2.9	71.16			<b>27.5</b>	61	2.5	50.89	<b>7114/813</b>
	<b>17.8</b>	94	2.6	78.71			<b>23.8</b>	70	2.2	58.85	
	<b>15.1</b>	110	2.2	92.70			<b>20.6</b>	81	1.9	68.06	
	<b>14.7</b>	113	2.2	95.17			<b>19.7</b>	85	1.8	71.16	
	<b>14.1</b>	118	2.1	99.50			<b>17.8</b>	94	1.6	78.71	
	<b>13.1</b>	128	1.9	107.20			<b>15.1</b>	110	1.4	92.70	
	<b>12.2</b>	137	1.8	115.07			<b>14.7</b>	113	1.3	95.17	
	<b>11.3</b>	148	1.7	123.97			<b>14.1</b>	118	1.3	99.50	
	<b>10.8</b>	154	1.6	129.62			<b>13.1</b>	128	1.2	107.20	
	<b>10.1</b>	166	1.5	139.13			<b>12.2</b>	137	1.1	115.07	
	<b>9.3</b>	178	1.4	149.90			<b>11.3</b>	148	1.0	123.97	
	<b>8.3</b>	201	1.2	168.84			<b>10.8</b>	154	1.0	129.62	
	<b>7.7</b>	216	1.1	181.24			<b>10.1</b>	166	0.9	139.13	
	<b>7.2</b>	232	1.1	195.26			<b>9.3</b>	178	0.9	149.90	
	<b>5.9</b>	281	0.9	236.09			<b>8.3</b>	201	0.8	168.84	
	<b>4.6</b>	366	0.7	307.54			<b>7.7</b>	216	0.7	181.24	
							<b>7.2</b>	232	0.7	195.26	
	<b>15.1</b>	110	3.4	92.70	<b>6334/1203</b>						
	<b>8.3</b>	201	1.9	168.84			<b>20.6</b>	81	3.0	68.06	<b>7114/1053</b>
	<b>4.6</b>	366	1.0	307.54			<b>19.7</b>	85	2.9	71.16	
							<b>17.8</b>	94	2.6	78.71	
	<b>378</b>	5.0	3.5	3.70	<b>7114/721</b>		<b>15.1</b>	110	2.2	92.70	
	<b>327</b>	5.8	3.0	4.28			<b>14.7</b>	113	2.2	95.17	
	<b>270</b>	7.0	2.5	5.18			<b>14.1</b>	118	2.1	99.50	
	<b>207</b>	9.2	1.9	6.75			<b>13.1</b>	128	1.9	107.20	
							<b>12.2</b>	137	1.8	115.07	
	<b>102</b>	18	3.0	13.73	<b>7114/722</b>		<b>11.3</b>	148	1.7	123.97	
	<b>88.2</b>	20	2.6	15.88			<b>10.8</b>	154	1.6	129.62	
	<b>76.3</b>	23	2.3	18.36			<b>10.1</b>	166	1.5	139.13	
	<b>72.9</b>	24	2.2	19.20			<b>9.3</b>	178	1.4	149.90	
	<b>63.1</b>	28	1.9	22.20			<b>8.3</b>	201	1.2	168.84	
	<b>56.0</b>	32	1.7	25.01			<b>7.7</b>	216	1.1	181.24	
	<b>52.1</b>	34	1.6	26.85			<b>7.2</b>	232	1.1	195.26	
	<b>48.4</b>	37	1.4	28.93			<b>5.9</b>	281	0.9	236.09	
	<b>40.0</b>	45	1.2	34.97			<b>4.6</b>	366	0.7	307.54	
	<b>30.7</b>	58	0.9	45.56							



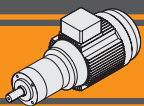
**Dati tecnici**

**Technical data**

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.25</b>					
(1400 min <sup>-1</sup> )	<b>15.1</b>	110	3.4	92.70	<b>7114/1203</b>
	<b>8.3</b>	201	1.9	168.84	
	<b>4.6</b>	366	1.0	307.54	
<b>0.37</b>					
(1400 min <sup>-1</sup> )	<b>378</b>	7.5	2.4	3.70	<b>7124/721</b>
	<b>327</b>	8.6	2.1	4.28	
	<b>270</b>	10	1.7	5.18	
	<b>207</b>	14	1.3	6.75	
	<b>102</b>	26	2.0	13.73	<b>7124/722</b>
	<b>88.2</b>	30	1.8	15.88	
	<b>76.3</b>	35	1.5	18.36	
	<b>72.9</b>	36	1.5	19.20	
	<b>63.1</b>	42	1.3	22.20	
	<b>56.0</b>	47	1.1	25.01	
	<b>52.1</b>	51	1.0	26.85	
	<b>48.4</b>	55	1.0	28.93	
	<b>40.0</b>	66	0.8	34.97	<b>7124/723</b>
	<b>30.7</b>	86	0.6	45.56	
	<b>27.5</b>	90	1.2	50.89	
	<b>23.8</b>	104	1.0	58.85	
	<b>20.6</b>	120	0.9	68.06	
	<b>19.7</b>	126	0.8	71.16	
	<b>17.8</b>	139	0.8	78.71	<b>7124/812</b>
	<b>15.1</b>	164	0.7	92.70	
	<b>102</b>	26	2.9	13.73	
	<b>88.2</b>	30	2.5	15.88	
	<b>76.3</b>	35	2.2	18.36	
	<b>72.9</b>	36	2.1	19.20	
	<b>63.1</b>	42	1.8	22.20	
	<b>56.0</b>	47	1.6	25.01	
	<b>52.1</b>	51	1.5	26.85	
	<b>48.4</b>	55	1.4	28.93	
	<b>40.0</b>	66	1.1	34.97	<b>7124/813</b>
	<b>30.7</b>	86	0.9	45.56	
	<b>27.5</b>	90	1.7	50.89	
	<b>23.8</b>	104	1.5	58.85	
	<b>20.6</b>	120	1.3	68.06	
	<b>19.7</b>	126	1.2	71.16	
	<b>17.8</b>	139	1.1	78.71	
	<b>15.1</b>	164	0.9	92.70	
	<b>14.7</b>	168	0.9	95.17	
	<b>14.1</b>	176	0.9	99.50	
	<b>13.1</b>	189	0.8	107.20	
	<b>12.2</b>	203	0.7	115.07	
	<b>11.3</b>	219	0.7	123.97	
	<b>10.8</b>	229	0.7	129.62	

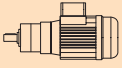
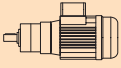
P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.37</b>					
(1400 min <sup>-1</sup> )	<b>56.0</b>	47	2.8	25.01	<b>7124/1052</b>
	<b>52.1</b>	51	2.6	26.85	
	<b>48.4</b>	55	2.4	28.93	
	<b>40.0</b>	66	2.0	34.97	
	<b>30.7</b>	86	1.5	45.56	
	<b>27.5</b>	90	2.7	50.89	<b>7124/1053</b>
	<b>23.8</b>	104	2.4	58.85	
	<b>20.6</b>	120	2.1	68.06	
	<b>19.7</b>	126	2.0	71.16	
	<b>17.8</b>	139	1.8	78.71	
	<b>15.1</b>	164	1.5	92.70	
	<b>14.7</b>	168	1.5	95.17	
	<b>14.1</b>	176	1.4	99.50	
	<b>13.1</b>	189	1.3	107.20	
	<b>12.2</b>	203	1.2	115.07	
	<b>11.3</b>	219	1.1	123.97	
	<b>10.8</b>	229	1.1	129.62	
	<b>10.1</b>	245	1.0	139.13	
	<b>9.3</b>	264	0.9	149.90	
	<b>8.3</b>	298	0.8	168.84	
	<b>7.7</b>	320	0.8	181.24	
	<b>7.2</b>	344	0.7	195.26	
	<b>15.1</b>	164	2.3	92.70	<b>7124/1203</b>
	<b>8.3</b>	298	1.3	168.84	
	<b>4.6</b>	543	0.7	307.54	
<b>0.55</b>					
(1400 min <sup>-1</sup> )	<b>378</b>	11	1.6	3.70	<b>7134/721</b>
	<b>327</b>	13	1.4	4.28	
	<b>270</b>	16	1.1	5.18	
	<b>207</b>	20	0.9	6.75	
	<b>102</b>	39	1.4	13.73	<b>7134/722</b>
	<b>88.2</b>	45	1.2	15.88	
	<b>76.3</b>	52	1.0	18.36	
	<b>72.9</b>	54	1.0	19.20	
	<b>63.1</b>	62	0.9	22.20	
	<b>56.0</b>	70	0.8	25.01	
	<b>52.1</b>	76	0.7	26.85	
	<b>48.4</b>	81	0.7	28.93	
	<b>378</b>	11	2.3	3.70	<b>7134/811</b>
	<b>327</b>	13	2.0	4.28	
	<b>270</b>	16	1.6	5.18	
	<b>207</b>	20	1.3	6.75	

ACP

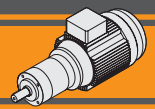


### Dati tecnici

### Technical data

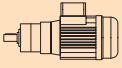
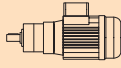
P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.55</b>						<b>0.55</b>					
(1400 min <sup>-1</sup> )	<b>102</b>	39	2.0	13.73	<b>7134/812</b>	(1400 min <sup>-1</sup> )	<b>102</b>	39	2.0	13.73	<b>8014/812</b>
	<b>88.2</b>	45	1.7	15.88			<b>88.2</b>	45	1.7	15.88	
	<b>76.3</b>	52	1.5	18.36			<b>76.3</b>	52	1.5	18.36	
	<b>72.9</b>	54	1.4	19.20			<b>72.9</b>	54	1.4	19.20	
	<b>63.1</b>	62	1.2	22.20			<b>63.1</b>	62	1.2	22.20	
	<b>56.0</b>	70	1.1	25.01			<b>56.0</b>	70	1.1	25.01	
	<b>52.1</b>	76	1.0	26.85			<b>52.1</b>	76	1.0	26.85	
	<b>48.4</b>	81	0.9	28.93			<b>48.4</b>	81	0.9	28.93	
	<b>40.0</b>	98	0.8	34.97			<b>40.0</b>	98	0.8	34.97	
	<b>30.7</b>	128	0.6	45.56			<b>30.7</b>	108*	0.7	45.56	
	<b>27.5</b>	134	1.1	50.89	<b>7134/813</b>		<b>27.5</b>	134	1.1	50.89	<b>8014/813</b>
	<b>23.8</b>	154	1.0	58.85			<b>23.8</b>	154	1.0	58.85	
	<b>20.6</b>	179	0.9	68.06			<b>20.6</b>	179	0.9	68.06	
	<b>19.7</b>	187	0.8	71.16			<b>19.7</b>	187	0.8	71.16	
	<b>17.8</b>	207	0.7	78.71			<b>17.8</b>	207	0.7	78.71	
	<b>15.1</b>	217*	0.7	92.70			<b>15.1</b>	217*	0.7	92.70	
	<b>72.9</b>	54	2.5	19.20	<b>7134/1052</b>		<b>72.9</b>	54	2.5	19.20	<b>8014/1052</b>
	<b>63.1</b>	62	2.1	22.20			<b>63.1</b>	62	2.1	22.20	
	<b>56.0</b>	70	1.9	25.01			<b>56.0</b>	70	1.9	25.01	
	<b>52.1</b>	76	1.8	26.85			<b>52.1</b>	76	1.8	26.85	
	<b>48.4</b>	81	1.6	28.93			<b>48.4</b>	81	1.6	28.93	
	<b>40.0</b>	98	1.4	34.97			<b>40.0</b>	98	1.4	34.97	
	<b>30.7</b>	128	1.0	45.56			<b>30.7</b>	128	1.0	45.56	
	<b>27.5</b>	134	1.8	50.89	<b>7134/1053</b>		<b>27.5</b>	134	1.8	50.89	<b>8014/1053</b>
	<b>23.8</b>	154	1.6	58.85			<b>23.8</b>	154	1.6	58.85	
	<b>20.6</b>	179	1.4	68.06			<b>20.6</b>	179	1.4	68.06	
	<b>19.7</b>	187	1.3	71.16			<b>19.7</b>	187	1.3	71.16	
	<b>17.8</b>	207	1.2	78.71			<b>17.8</b>	207	1.2	78.71	
	<b>15.1</b>	243	1.0	92.70			<b>15.1</b>	243	1.0	92.70	
	<b>14.7</b>	250	1.0	95.17			<b>14.7</b>	250	1.0	95.17	
	<b>14.1</b>	261	0.9	99.50			<b>14.1</b>	261	0.9	99.50	
	<b>13.1</b>	281	0.9	107.20			<b>13.1</b>	281	0.9	107.20	
	<b>12.2</b>	302	0.8	115.07			<b>12.2</b>	302	0.8	115.07	
	<b>11.3</b>	325	0.8	123.97			<b>11.3</b>	325	0.8	123.97	
	<b>10.8</b>	340	0.7	129.62			<b>10.8</b>	340	0.7	129.62	
	<b>10.1</b>	365	0.7	139.13			<b>10.1</b>	353*	0.7	139.13	
	<b>9.3</b>	353*	0.7	149.90			<b>9.3</b>	353*	0.7	149.90	
	<b>8.3</b>	353*	0.7	168.84			<b>8.3</b>	353*	0.7	168.84	
	<b>30.7</b>	120	1.6	45.56	<b>7134/1202</b>		<b>30.7</b>	120	1.6	45.56	<b>8014/1202</b>
	<b>27.5</b>	134	2.8	50.89	<b>7134/1203</b>		<b>27.5</b>	134	2.8	50.89	<b>8014/1203</b>
	<b>15.1</b>	243	1.6	92.70			<b>15.1</b>	243	1.6	92.70	
	<b>8.3</b>	443	0.9	168.84			<b>8.3</b>	443	0.9	168.84	
	<b>378</b>	11	2.3	3.70	<b>8014/811</b>						
	<b>327</b>	13	2.0	4.28							
	<b>270</b>	16	1.6	5.18							
	<b>207</b>	20	1.3	6.75							

\* Coppia limitata / Limited torque

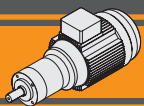


**Dati tecnici**

**Technical data**

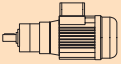
P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.75</b>						<b>1.1</b>					
(1400 min <sup>-1</sup> )	<b>378</b>	15	1.7	3.70	<b>8024/811</b>	(1400 min <sup>-1</sup> )	<b>378</b>	22	1.1	3.70	<b>8034/811</b>
	<b>327</b>	18	1.4	4.28			<b>327</b>	26	1.0	4.28	
	<b>270</b>	21	1.2	5.18			<b>270</b>	31	0.8	5.18	
	<b>207</b>	28	0.9	6.75			<b>207</b>	36*	0.7	6.75	
	<b>102</b>	53	1.4	13.73	<b>8024/812</b>		<b>102</b>	77	1.0	13.73	<b>8034/812</b>
	<b>88.2</b>	61	1.2	15.88			<b>88.2</b>	89	0.9	15.88	
	<b>76.3</b>	71	1.1	18.36			<b>76.3</b>	103	0.7	18.36	
	<b>72.9</b>	74	1.0	19.20			<b>72.9</b>	108	0.7	19.20	
	<b>63.1</b>	85	0.9	22.20							
	<b>56.0</b>	96	0.8	25.01			<b>378</b>	22	2.0	3.70	<b>8034/1051</b>
	<b>52.1</b>	103	0.7	26.85			<b>327</b>	26	1.7	4.28	
	<b>48.4</b>	111	0.7	28.93			<b>270</b>	31	1.4	5.18	
							<b>207</b>	41	1.1	6.75	
	<b>27.5</b>	182	0.8	50.89	<b>8024/813</b>						
	<b>23.8</b>	211	0.7	58.85			<b>102</b>	77	1.7	13.73	<b>8034/1052</b>
	<b>20.6</b>	217*	0.7	68.06			<b>88.2</b>	89	1.5	15.88	
							<b>76.3</b>	103	1.3	18.36	
	<b>378</b>	15	2.9	3.70	<b>8024/1051</b>		<b>72.9</b>	108	1.2	19.20	
	<b>327</b>	18	2.5	4.28			<b>63.1</b>	125	1.1	22.20	
	<b>270</b>	21	2.1	5.18			<b>56.0</b>	141	0.9	25.01	
	<b>207</b>	28	1.6	6.75			<b>52.1</b>	151	0.9	26.85	
							<b>48.4</b>	163	0.8	28.93	
	<b>102</b>	53	2.5	13.73	<b>8024/1052</b>		<b>40.0</b>	197	0.7	34.97	
	<b>88.2</b>	61	2.2	15.88			<b>30.7</b>	256	0.5	45.56	
	<b>76.3</b>	71	1.9	18.36							
	<b>72.9</b>	74	1.8	19.20			<b>27.5</b>	267	0.9	50.89	<b>8034/1053</b>
	<b>63.1</b>	85	1.6	22.20			<b>23.8</b>	309	0.8	58.85	
	<b>56.0</b>	96	1.4	25.01			<b>20.6</b>	357	0.7	68.06	
	<b>52.1</b>	103	1.3	26.85							
	<b>48.4</b>	111	1.2	28.93			<b>207</b>	35	1.8	6.75	<b>8034/1201</b>
	<b>40.0</b>	134	1.0	34.97							
	<b>30.7</b>	175	0.8	45.56			<b>102</b>	72	2.6	13.73	<b>8034/1202</b>
							<b>56.0</b>	131	1.4	25.01	
	<b>27.5</b>	182	1.4	50.89	<b>8024/1053</b>		<b>30.7</b>	239	0.8	45.56	
	<b>23.8</b>	211	1.2	58.85							
	<b>20.6</b>	244	1.0	68.06			<b>27.5</b>	267	1.4	50.89	<b>8034/1203</b>
	<b>19.7</b>	255	1.0	71.16			<b>15.1</b>	487	0.8	92.70	
	<b>17.8</b>	282	0.9	78.71							
	<b>15.1</b>	332	0.7	92.70			<b>207</b>	35	1.8	6.75	<b>90S4/1201</b>
	<b>207</b>	24	2.6	6.75	<b>8024/1201</b>		<b>102</b>	72	2.6	13.73	<b>90S4/1202</b>
							<b>56.0</b>	131	1.4	25.01	
	<b>102</b>	49	3.9	13.73	<b>8024/1202</b>		<b>30.7</b>	239	0.8	45.56	
	<b>56.0</b>	90	2.1	25.01							
	<b>30.7</b>	163	1.2	45.56			<b>27.5</b>	267	1.4	50.89	<b>90S4/1203</b>
							<b>15.1</b>	487	0.8	92.70	
	<b>27.5</b>	182	2.1	50.89	<b>8024/1203</b>						
	<b>15.1</b>	332	1.1	92.70							
	<b>8.3</b>	542*	0.7	168.84							

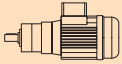
\* Coppia limitata / Limited torque



**Dati tecnici**

**Technical data**

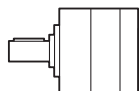
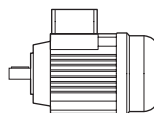
P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>1.5</b>					
(1400 min <sup>-1</sup> )	<b>378</b>	26	2.4	3.70	<b>90L14/1201</b>
	<b>207</b>	48	1.3	6.75	
	<b>102</b>	98	1.9	13.73	<b>90L14/1202</b>
	<b>56.0</b>	179	1.1	25.01	
	<b>30.7</b>	271*	0.7	45.56	
	<b>27.5</b>	364	1.0	50.89	<b>90L14/1203</b>
	<b>15.1</b>	543*	0.7	92.70	

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>2.2</b>					
(1400 min <sup>-1</sup> )	<b>378</b>	39	1.6	3.70	<b>90L24/1201</b>
	<b>207</b>	71	0.9	6.75	
	<b>102</b>	144	1.3	13.73	<b>90L24/1202</b>
	<b>56.0</b>	263	0.7	25.01	
	<b>27.5</b>	535	0.7	50.89	<b>90L24/1203</b>

\* Coppia limitata / Limited torque

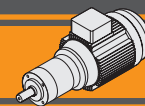
**Motori applicabili**

**IEC Motor adapters**



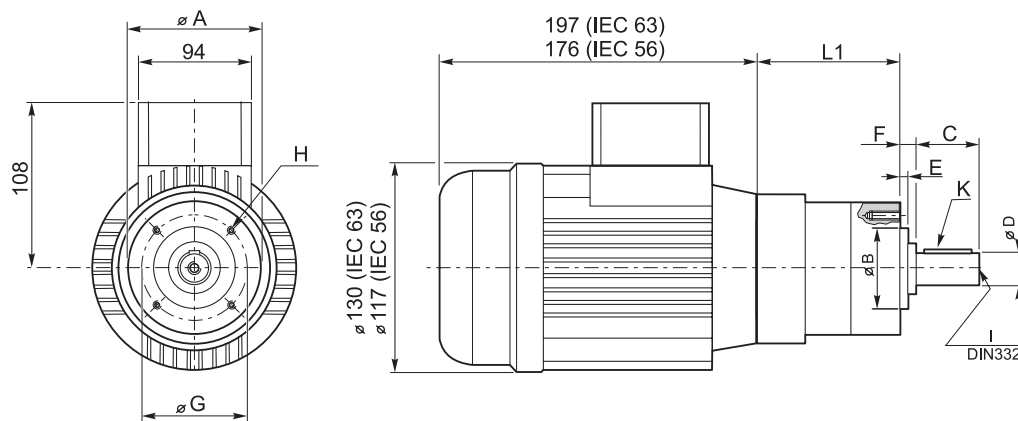
		TS				
		56...	63...	71...	80...	90...
<b>P</b>	<b>52...</b>					
	<b>62...</b>					
	<b>72...</b>					
	<b>81...</b>					
	<b>105...</b>					
	<b>120...</b>					





Dimensioni

Dimensions

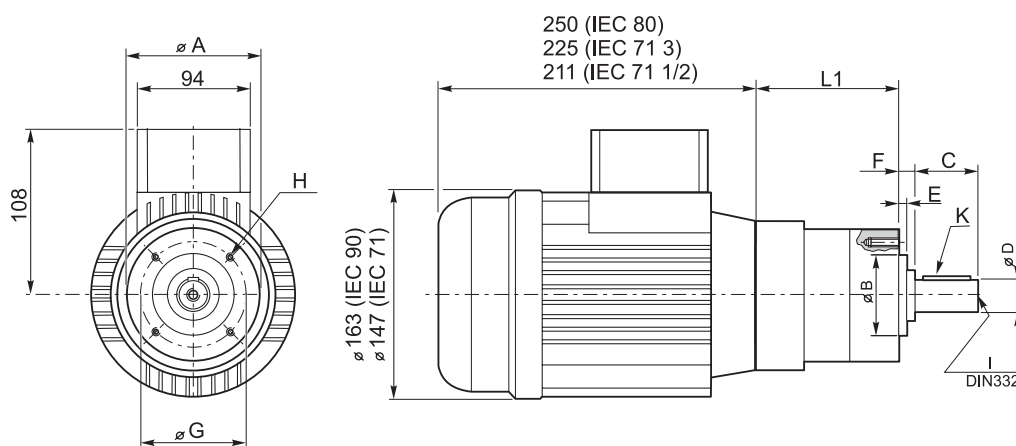
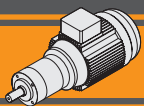


ACP56.../... U

Tipo Type	Numero di stadi N° of stages	Dimensioni / Dimensions										
		L1	A	B	C	D	E	F	G	H	I	K
ACP56.../52...	1	74	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	88										
	3	102										
ACP56.../62...	1	74	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	90										
	3	106										
ACP56.../72...	1	82	72	45 j7	40	16 h7	5	9	60	M5x10	M5x12	5x5x30
	2	101.5										
	3	121										
ACP56.../81...	1	91	81	50 j7	40	19 h7	5	9	65	M6x12	M6x16	6x6x28
	2	113										
	3	135										
ACP56.../105...	1	113	105	70 j7	50	25 h7	5	9	85	M8x16	M10x22	8x7x40
	2	144										
	3	175										
ACP56.../120...	1	131	120	80 j7	73	32 k6	5	15	100	M10x22	M12	10x8x50
	2	165										
	3	199.5										

ACP 63.../... U

Tipo Type	Numero di stadi N° of stages	Dimensioni / Dimensions										
		L1	A	B	C	D	E	F	G	H	I	K
ACP63.../62...	1	76	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	92										
	3	108										
ACP63.../72...	1	88.4	72	45 j7	40	16 h7	5	9	60	M5x10	M5x12	5x5x30
	2	108										
	3	127.6										
ACP63.../81...	1	94	81	50 j7	40	19 h7	5	9	65	M6x12	M6x16	6x6x28
	2	116										
	3	138										
ACP63.../105...	1	116.6	105	70 j7	50	25 h7	5	9	85	M8x16	M10x22	8x7x40
	2	147.5										
	3	178.5										
ACP63.../120...	1	134.4	120	80 j7	73	32 k6	5	15	100	M10x22	M12	10x8x50
	2	168.6										
	3	202.8										

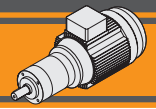


**ACP 71.../... U**

Tipo Type	Numero di stadi N° of stages	Dimensioni / Dimensions										
		L1	A	B	C	D	E	F	G	H	I	K
ACP71../72...	1	95.4	72	45 j7	40	16 h7	5	9	60	M5x10	M5x12	5x5x30
	2	115										
	3	134.6										
ACP71../81...	1	101	81	50 j7	40	19 h7	5	9	65	M6x12	M6x16	6x6x28
	2	123										
	3	145										
ACP71../105...	1	123.4	105	70 j7	50	25 h7	5	9	85	M8x16	M10x22	8x7x40
	2	154.5										
	3	185.5										
ACP71../120...	1	136.5	120	80 j7	73	32 k6	5	15	100	M10x22	M12	10x8x50
	2	170.7										
	3	204.9										

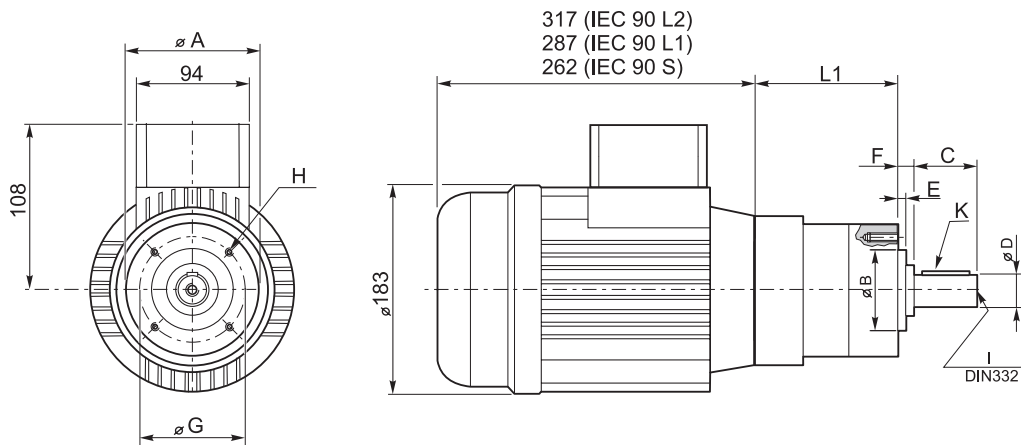
**ACP 80.../... U**

Tipo Type	Numero di stadi N° of stages	Dimensioni / Dimensions										
		L1	A	B	C	D	E	F	G	H	I	K
ACP80../81...	1	111	81	50 j7	40	19 h7	5	9	65	M6x12	M6x16	6x6x28
	2	133										
	3	155										
ACP80../105...	1	130.4	105	70 j7	50	25 h7	5	9	85	M8x16	M10x22	8x7x40
	2	161.5										
	3	192.6										
ACP80../120...	1	143.5	120	80 j7	73	32 k6	5	15	100	M10x22	M12	10x8x50
	2	178										
	3	212										



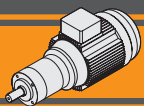
**Dimensioni**

**Dimensions**



**ACP 90.../... U**

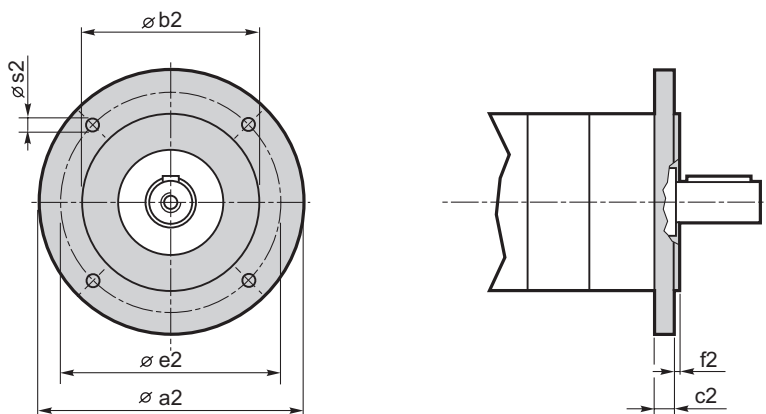
Tipo Type	Numero di stadi N° of stages	Dimensioni / Dimensions										
		L1	A	B	C	D	E	F	G	H	I	K
ACP90../120...	1	153.5	120	80 j7	73	32 k6	5	15	100	M10x22	M12	10x8x50
	2	188										
	3	222										



**Dimensioni**

**Dimensions**

**ACP.../... C...** Flange uscita / Output flanges

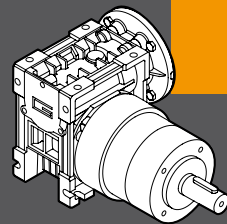


Dimensioni / Dimensions							
P	a2	b2	c2	e2	f2	s2	Flangia uscita Output flange
52	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
62	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
72	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	M5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
81	90	60 j7	9	75	2.5	M5	C90
	105	70 j7	9	85	2.5	M6	C105
	120	80 j7	9	100	3.0	6.5	C120
105	120	80 j7	12	100	3	M6	C120
	140	95 j7	12	115	3.5	M8	C140
	160	110 j7	12	130	3.5	M8	C160
120	140	95 j7	15	115	3	M8	C140
	160	110 j7	15	130	3.5	M8	C160

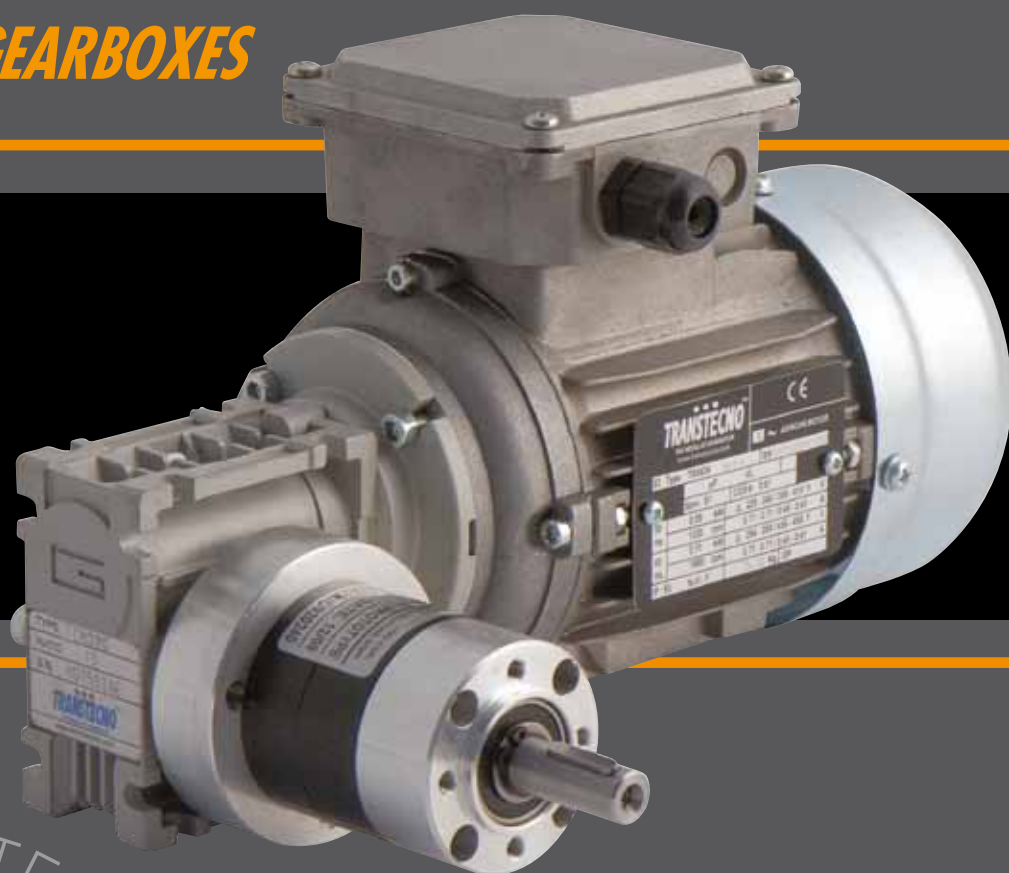
**TRANSTECNO**<sup>TM</sup>  
THE MODULAR GEARMOTOR

**WMP**

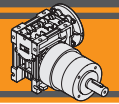
WMP



**RIDUTTORI COMBINATI**  
**COMBINATION GEARBOXES**



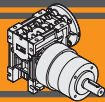




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Rendimento	<i>Efficiency</i>	<b>J3</b>
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## Caratteristiche tecniche

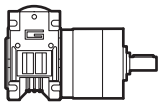
## Technical features

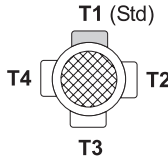
L'accoppiamento di un riduttore a vite senza fine con un riduttore epicicloidale consente di ottenere elevati rapporti di riduzione ( $i_{max} = 1/18452$ ) e di disporre di un gruppo autolubrificato compatto, silenzioso e con un'elevata affidabilità.

The coupling of a wormgearbox to a planetary gearbox allows to obtain high reduction ratios ( $i_{max} = 1/18452$ ) and to get a compact, silent, self lubricated with high reliability group.

## Designazione

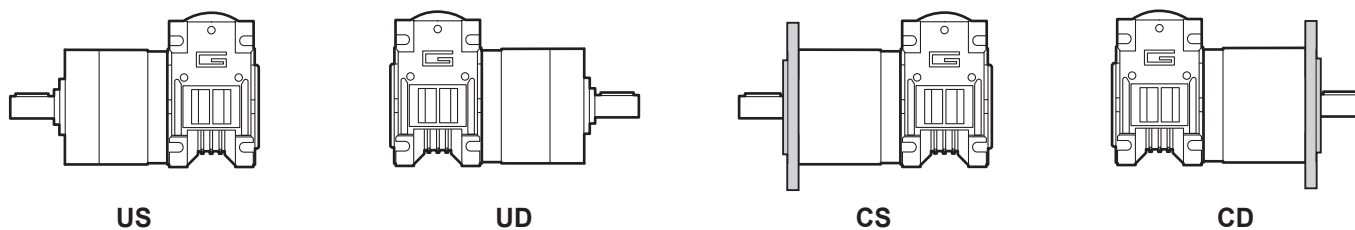
## Classification

MOTORIDUTTORE / GEARMOTOR						
WMP	026/52	1	CS90	202.5	56B14	VS
Tipo Type	Grandezza Size	Numero stadi epicicloidale N° of planetary stages	Versione Version	Rapporto Ratio	IEC	Opzioni Options
	<b>026/52</b> <b>026/62</b> <b>030/81</b>	<b>1</b> <b>2</b> <b>3</b>	<b>US</b> <b>UD</b> <b>CS80...120</b> <b>CD80...120</b>	Vedere tabella See tables	<b>56B14</b> <b>63B14</b> <b>63B5</b>	<b>VS</b>

MOTORE CM / CM MOTOR				
0.09kW	4p	3ph	50Hz	T1
Potenza Power	Poli Poles	Fasi Phases	Frequenza Frequency	Pos. morsetti Terminal box pos.
Vedi tabelle See tables	<b>2p</b> <b>4p</b> <b>6p</b> <b>8p</b>	<b>1ph</b> <b>3ph</b>	<b>50Hz</b> <b>60Hz</b>	

## Versioni

## Versions

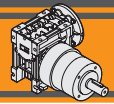


## Simbologia

## Symbols

$n_1$	[min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>
$n_2$	[min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>
$i$		Rapporto di riduzione / <i>Ratio</i>
$P_1$	[kW]	Potenza in entrata / <i>Input power</i>
$M_n$	[Nm]	Coppia nominale in uscita del riduttore / <i>Maximum output torque of the gearbox</i>
$M_2$	[Nm]	Coppia in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$sf$		Fattore di servizio / <i>Service factor</i>
$R_d$	%	Rendimento dinamico / <i>Dynamic efficiency</i>
$A_2$	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
$R_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>




**Lubrificazione**
**Lubrication**

I riduttori a vite senza fine della serie CM sono lubrificati a vita con olio sintetico di viscosità 320 e possono essere installati in qualunque posizione di montaggio.

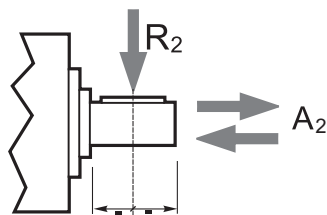
*Permanent synthetic oil long-life lubrication allow to use CM wormgearbox range in all mounting position.*

I riduttori epicicloidali sono lubrificati in modo permanente, non richiedono quindi ulteriore manutenzione.

*Planetary gearboxes are life-time lubricated with grease, therefore they are maintenance free.*

Questo gli consente di essere installati praticamente ovunque. La temperatura ambiente di funzionamento consentita va da -50°C a + 40°C; per applicazioni particolari possono essere adottate misure per raggiungere livelli di temperatura maggiori.

*They can be installed in any location. The environmental temperature range is from -50°C up to +40°C; for special applications, measures can be taken for higher temperature range.*

**Carichi radiali**
**Radial loads**


Numero di stadi N° of stages	Carichi Radiali R <sub>2</sub> [N] Radial Load R <sub>2</sub> [N]		
	P52	P62	P81
1	200	240	400
2	320	360	600
3	450	520	1000

Numero di stadi N° of stages	Carichi Assiali A <sub>2</sub> [N] Axial Load A <sub>2</sub> [N]		
	P52	P62	P81
1	60	70	80
2	100	100	120
3	150	150	200

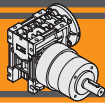
**Rapporti**
**Ratios**

Motoriduttore Gearmotor	Numero stadi epicicloidale N° of planetary stages	Rapporto epicicloidale Planetary ratio	Rapporto vite senza fine Wormgearbox ratio	Rapporto finale Total ratio
WMP 026/052 WMP 026/062 WMP 030/081	1	6.75	10	67.5
			15	101.3
			20	135
			30	202.5
			40	270
			50	337.5
	2	28.93	10	289.3
			15	434.0
			20	578.6
			30	867.9
			40	1157
			50	1447
			60	1736
			60	2098
	34.97	60	2098	
	45.56	60	2734	

**Rendimento**
**Efficiency**

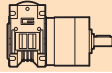

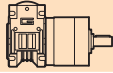

Motoriduttore Gearmotor	n <sub>1</sub> [min <sup>-1</sup> ]	Rendimento Efficiency	Rapporto / Ratio															
			67.5	101.3	135	202.5	270	337.5	405	289.3	434	578.6	867.9	1157	1447	1736	2098	2734
WMP026/52...	1400	Rd %	66.4	62.4	59.2	52.8	48.8	45.6	42.4	62.3	58.5	55.5	49.5	45.8	42.8	39.8	39.8	39.8
WMP026/62...			66.4	62.4	59.2	52.8	48.8	45.6	42.4	62.3	58.5	55.5	49.5	45.8	42.8	39.8	39.8	39.8
WMP030/81...			67.2	63.2	60	53.6	49.6	46.4	44	63	59.3	56.3	50.3	46.5	43.5	41.3	41.3	41.3

**Rendimento teorico del riduttore dopo il rodaggio**  
*Theoretical efficiency of the gearbox after the first running period*

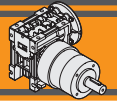


## Dati tecnici

## Technical data

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		
<b>0.09</b>							<b>0.12</b>						
56B (1400 min <sup>-1</sup> )	20.7	25	1.0	67.5	<b>026/521</b>	B14	63A (1400 min <sup>-1</sup> )	20.7	37	2.2	67.5	<b>030/811</b>	63B5/B14
	13.8	25	1.0	101.3				13.8	52	1.5	101.3		
	10.4	25	1.0	135				10.4	66	1.2	135		63B5/B14
	6.9	25	1.0	202.5				6.9	80	1.0	202.5		63B5/B14
	5.2	25	1.0	270				5.2	80	1.0	270		63B5/B14
	4.8	25	1.0	289.3	<b>026/522</b>	B14		4.8	120	1.0	289.3	<b>030/812</b>	63B5/B14
	4.1	25	1.0	337.5	<b>026/521</b>	B14	<b>0.18</b>						
	3.5	25	1.0	405			63B (1400 min <sup>-1</sup> )	20.7	56	1.4	67.5	<b>030/811</b>	63B5/B14
	3.2	25	1.0	434	<b>026/522</b>	B14	13.8	79	1.0	101.3	63B5/B14		
	2.4	25	1.0	578.6				10.4	80	1.0	135		63B5/B14
	1.6	25	1.0	867.9									
	1.2	25	1.0	1157									
	1.0	25	1.0	1447									
	0.8	25	1.0	1736									
	0.7	25	1.0	2098									
	0.5	25	1.0	2734									
	20.7	27	1.5	67.5	<b>026/621</b>	B14							
	13.8	39	1.0	101.3									
	10.4	40	1.0	135									
	6.9	40	1.0	202.5									
	5.2	40	1.0	270									
	4.8	50	1.0	289.3	<b>026/622</b>	B14							
	4.1	40	1.0	337.5	<b>026/621</b>	B14							
	3.5	40	1.0	405									
	3.2	50	1.0	434	<b>026/622</b>	B14							
	2.4	50	1.0	578.6									
	1.6	50	1.0	867.9									
	1.2	50	1.0	1157									
	1.0	50	1.0	1447									
	0.8	50	1.0	1736									
	0.7	50	1.0	2098									
	0.5	50	1.0	2734									
	20.7	28	2.9	67.5	<b>030/811</b>	B5/B14							
	13.8	39	2.0	101.3									
	10.4	49	1.6	135									
	6.9	66	1.2	202.5									
	5.2	80	1.0	270									
	4.8	111	1.1	289.3	<b>030/812</b>	B5/B14							
	4.1	80	1.0	337.5	<b>030/811</b>	B5/B14							
	3.5	80	1.0	405									
	3.2	120	1.0	434	<b>030/812</b>	B5/B14							
	2.4	120	1.0	578.6									
	1.6	120	1.0	867.9									
	1.2	120	1.0	1157									
	1.0	120	1.0	1447									
	0.8	120	1.0	1736									
	0.7	120	1.0	2098									
	0.5	120	1.0	2734									

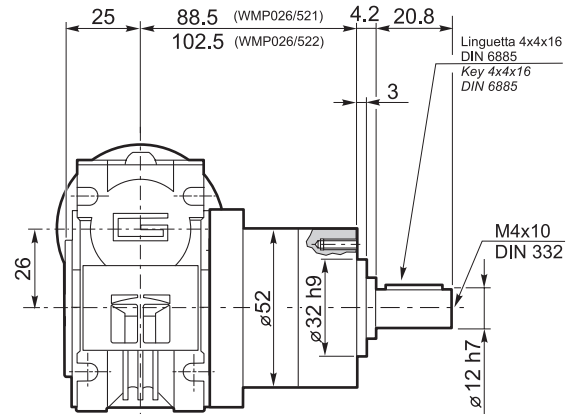
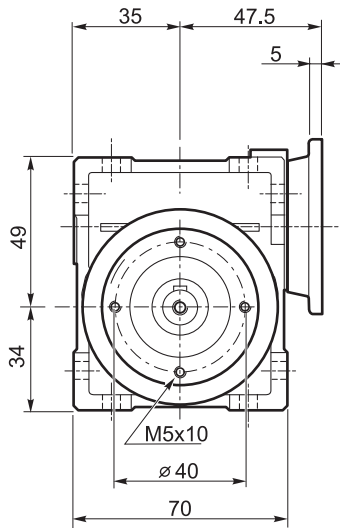
**Nota:** Verificare sempre che la coppia  $M_2$  utilizzata non ecceda il valore indicato nelle caselle in grigio  
**Note:** Please check that the output torque  $M_2$  does not exceed the value into the grey areas



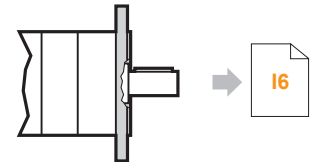
Dimensioni

Dimensions

WMP026/52...U

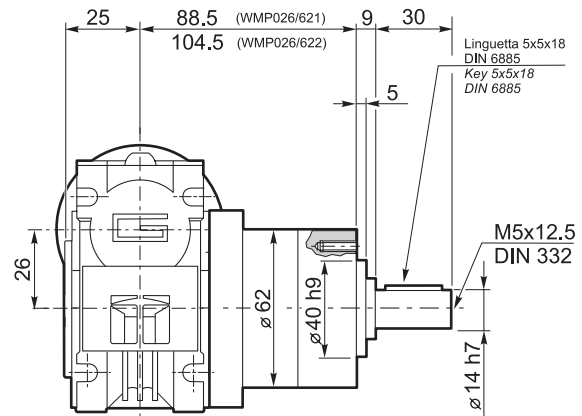
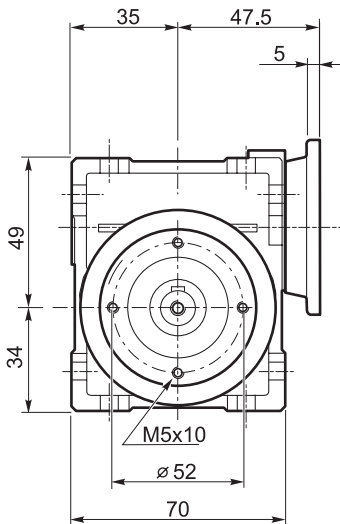


	Kg
WMP026/521	1.6
WMP026/522	1.8

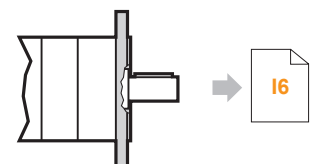


WMP026/52...C

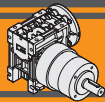
WMP026/62...U



	Kg
WMP026/621	1.7
WMP026/622	2.1



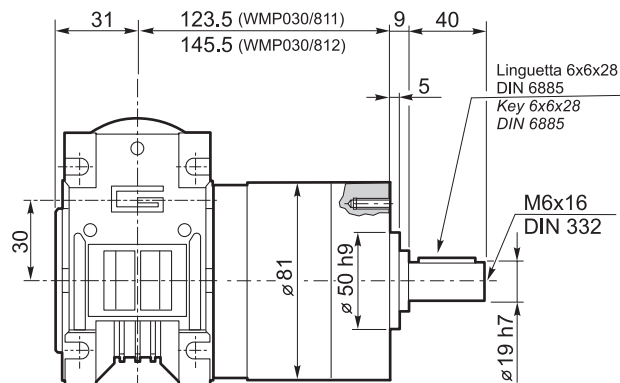
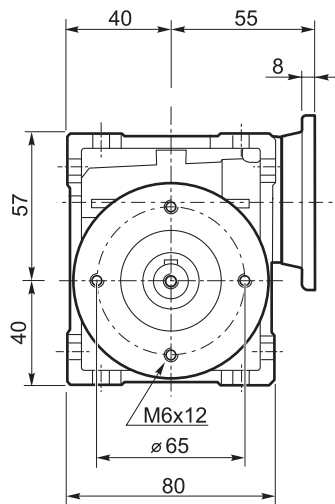
WMP026/62...C



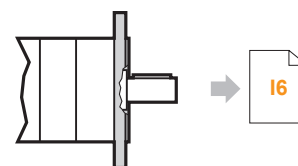
**Dimensioni**

**Dimensions**

**WMP030/81...U**

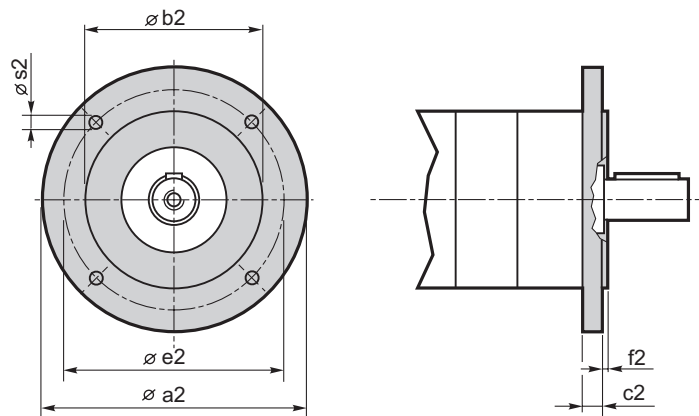


	Kg
WMP030/811	3.1
WMP030/812	3.8



**WMP030/81...C**

**WMP.../.../... C... Flange uscita / Output flanges**

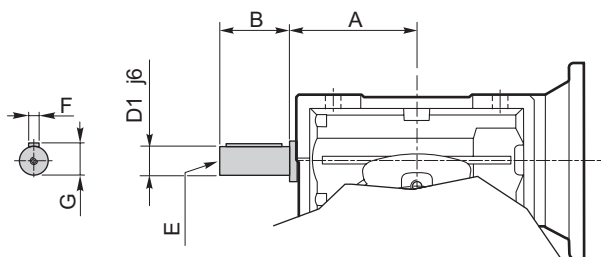


Dimensioni / Dimensions							
P	a2	b2	c2	e2	f2	s2	Flangia uscita / Output flange
52	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
62	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
81	90	60 j7	9	75	2.5	M5	C90
	105	70 j7	9	85	2.5	M6	C105
	120	80 j7	9	100	3.0	6.5	C120

**Opzioni**

**Options**

**VS - Vite sporgente / Extended input shaft**

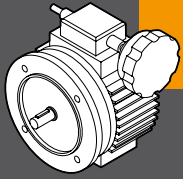


	A	B	D <sub>1</sub> j6	E	F	G
CM 030	45	20	9	M4	3	10.2

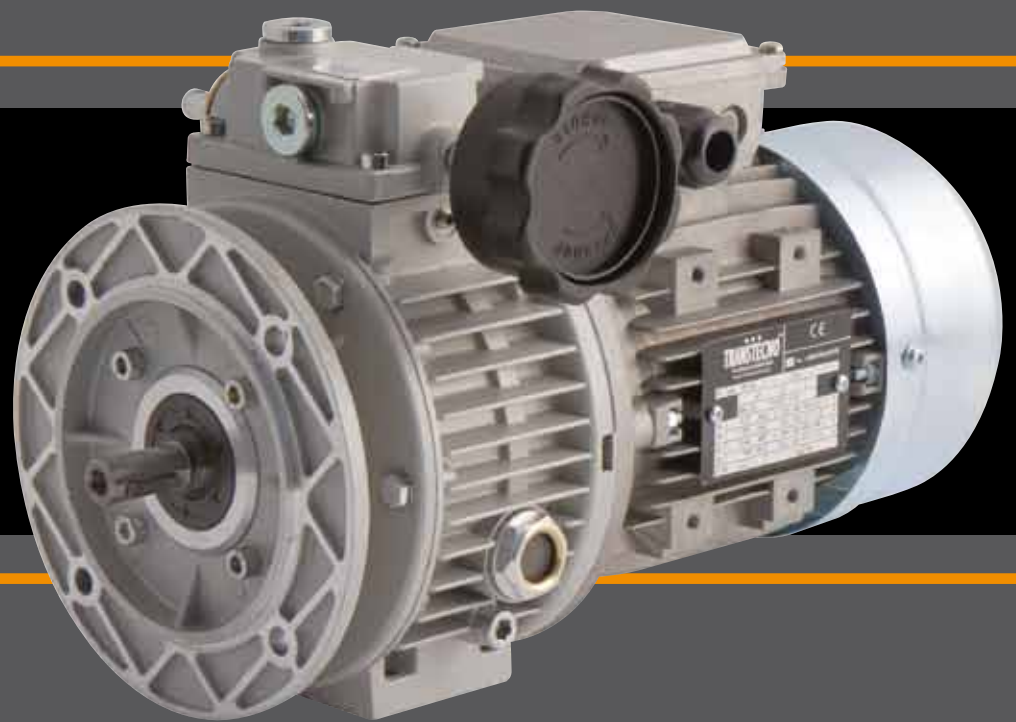
**TRANSTECNO**<sup>TM</sup>  
THE MODULAR GEARMOTOR

**VAM**

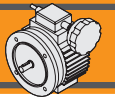
VAM



**MOTOVARIATORI**  
**MECHANICAL VARIATORS**



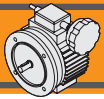




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Designazione	<i>Classification</i>	<b>K2</b>
Principio di funzionamento	<i>Operating principle</i>	<b>K3</b>
Lubrificazione	<i>Lubrication</i>	<b>K4</b>
Dati tecnici	<i>Technical data</i>	<b>K4</b>
Simbologia	<i>Symbols</i>	<b>K4</b>
Dimensioni	<i>Dimensions</i>	<b>K5</b>
Accessori	<i>Accessories</i>	<b>K5</b>
Opzioni	<i>Options</i>	<b>K5</b>
Uso e manutenzione	<i>Use and maintenance</i>	<b>K6</b>

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**Caratteristiche tecniche**

**Technical features**

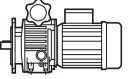
I variatori epicicloidali a satelliti conici VAM hanno le seguenti caratteristiche principali:

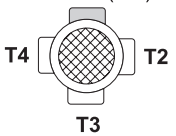
VAM mechanical variator range has the following main features:

- Precisione nella regolazione della velocità, contenuta in  $\pm 0.5/1\%$ .
  - Campo di regolazione continuo 1:5.
  - Funzionamento continuo in entrambi i sensi di rotazione, con entrata ed uscita concordi.
  - Flangia di attacco motore in standard IEC B5.
  - Le grandezze 018, 037 e 075 sono costruite con carcassa in alluminio, le altre grandezze in ghisa.
- *Precise speed setting :  $\pm 0.5/1\%$*
  - *Continuous setting within 1:5 range*
  - *Continuous CW and CCW rotation, synchronous input and output movement.*
  - *B5 IEC standards*
  - *Die-cast aluminum housing on sizes 018, 037 and 075; cast iron housing on sizes 15, 22 and 40.*

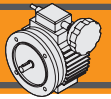
**Designazione**

**Classification**

MOTOVARIATORI / MECHANICAL VARIATORS			
VAM	037	B5	PF
Tipo <i>Type</i>	Grandezza <i>Size</i>	Posizione di montaggio <i>Mounting position</i>	Opzioni <i>Options</i>
<b>VAM</b> 	<b>018</b> <b>037</b> <b>075</b> <b>15</b> <b>22</b> <b>40</b>	<b>B5</b> <b>V1</b> <b>V3</b>	<b>PF</b>

MOTORE / MOTOR				
0.75kW	4p	3ph	50Hz	T1
Potenza <i>Power</i>	Poli <i>Poles</i>	Fasi <i>Phases</i>	Frequenza <i>Frequency</i>	Pos. morsettiera <i>Terminal box pos.</i>
Vedi tabelle <i>See tables</i>	<b>2p</b> <b>4p</b> <b>6p</b> <b>8p</b>	<b>1ph</b> <b>3ph</b>	<b>50Hz</b> <b>60Hz</b>	<b>T1 (Std)</b> 





**Principio di funzionamento**

**Operating principle**

L'albero motore mette in rotazione i satelliti ( 7 ) tramite le le 2 piste interne del solare: una fissa ( 10 ) e l'altra mobile ( 11 ).

*Motor shaft spins the planet wheels ( 7 ) by the solar rings: a fixed inferior planetary orbit ( 10 ) and a moving inferior planetary orbit ( 11 ).*

Esternamente i satelliti ruotano su altre 2 piste: una fissa ( 9 ) e l'altra mobile ( 6 ).

*Planet wheels rotate onto two other external rings: a fixed outer planetary orbit ( 9 ) and a moving outer planetary orbit ( 6 ).*

I satelliti sono collegati all'albero di uscita tramite il porta satelliti ( 2 ).

*Planet wheels are connected to the output shaft by the planet support ( 2 ).*

Azionando il volantino di comando si apre o si chiude ( in senso assiale ) la pista esterna mobile.

*Rotating the control handwheel the moving outer planetary orbit moves axially.*

Grazie alle superfici coniche di piste e satelliti, aprendo la pista esterna mobile i satelliti si spostano verso l'esterno, diminuendo la velocità.

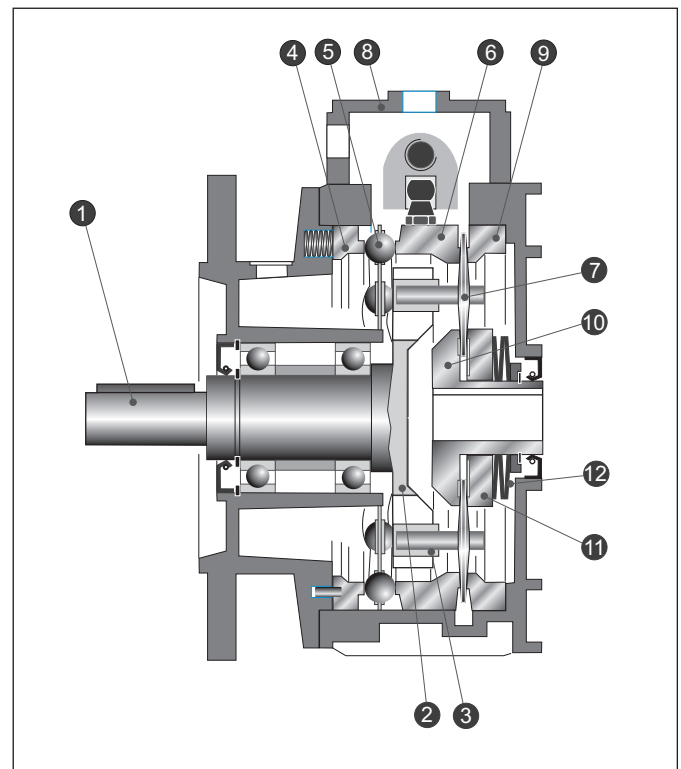
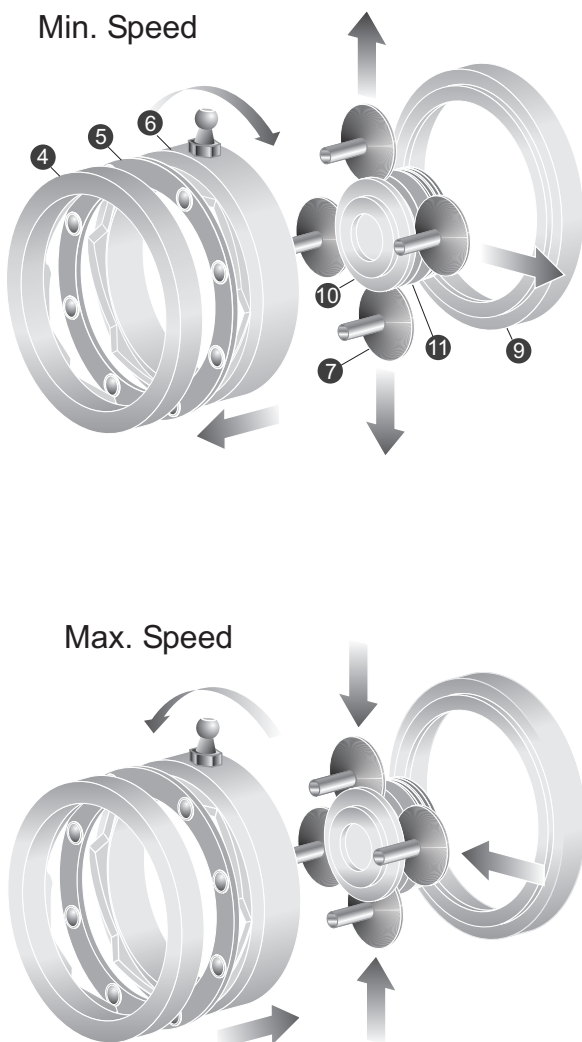
*Thanks to the conical surfaces of rings and planet wheels, opening the moving outer planetary orbit the planet wheels move to the outer side, decreasing speed.*

Al contrario, chiudendo la pista esterna, i satelliti traslano verso l'interno aumentando la velocità dell'albero in uscita.

*Differently, closing the moving outer planetary orbit the planet wheels move to the internal side, increasing speed.*

**La regolazione di velocità non deve mai essere effettuata a variatore fermo.**

**Speed adjustment is possible only when variator is running.**



1	Albero uscita	Output shaft
2	Portasatelliti	Planet support
3	Boccola scorrevole	Slide block
4	Pista di regolazione	Regulating orbit
5	Anello portasfere	Ball ring
6	Pista mobile esterna	Moving outer planetary orbit
7	Satellite	Planet wheel
8	Scatola di comando	Operating box
9	Pista fissa esterna	Fixed outer planetary orbit
10	Pista fissa interna	Fixed inferior planetary orbit
11	Pista mobile interna	Moving inferior planetary orbit
12	Molle a tazza	Belleville spring

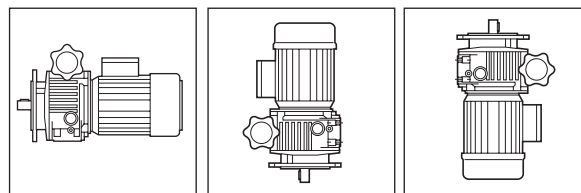


**Lubrificazione**

**Lubrication**

	Quantità di olio (litri) / Oil quantity (litres)					
	VAM					
	018	037	075	15	22	40
<b>B5</b>	0.13	0.15	0.33	0.80	1.20	1.20
<b>V1</b>	0.30	0.40	0.85	1.40	2.15	2.15
<b>V3</b>	0.13	0.15	0.33	0.80	1.20	1.20

Posizioni di montaggio / Mounting positions



**B5**

**V1**

**V3**

N.B. In fase di ordine specificare sempre la posizione di montaggio desiderata.

*NOTE: Always specify the desired installation position at the time of order.*

**Dati tecnici**

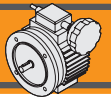
**Technical data**

Variatore Variator	Motore Motor	P <sub>1</sub> [kW]	n <sub>1</sub> [min <sup>-1</sup> ]	n <sub>2</sub> [min <sup>-1</sup> ] max - min	M <sub>2</sub> [Nm]
<b>VAM 018</b>	63C4	<b>0.22</b>	1400	880 - 170	1.9 - 3.8
	63C2	<b>0.37</b>	2800	1760-340	1.7 - 3.8
<b>VAM 037</b>	71B4	<b>0.37</b>	1400	1000 - 200	3 - 6
	71B2	<b>0.55</b>	2800	2000 - 400	2.2 - 6
<b>VAM 075</b>	80B4	<b>0.75</b>	1400	1000 - 200	6 - 12
	80B2	<b>1.1</b>	2800	2000 - 400	4.4 - 12
<b>VAM 15</b>	90S4	<b>1.1</b>	1400	1000 - 200	9 - 18
	90L4	<b>1.5</b>	1400	1000 - 200	12 - 24
	90L2	<b>2.2</b>	2800	2000 - 400	9 - 24
<b>VAM 22</b>	100LA4	<b>2.2</b>	1400	1000 - 200	18 - 36
<b>VAM 40</b>	100LB4	<b>3.0</b>	1400	1000 - 200	24 - 48
	112M4	<b>4.0</b>	1400	1000 - 200	32 - 64

**Simbologia**

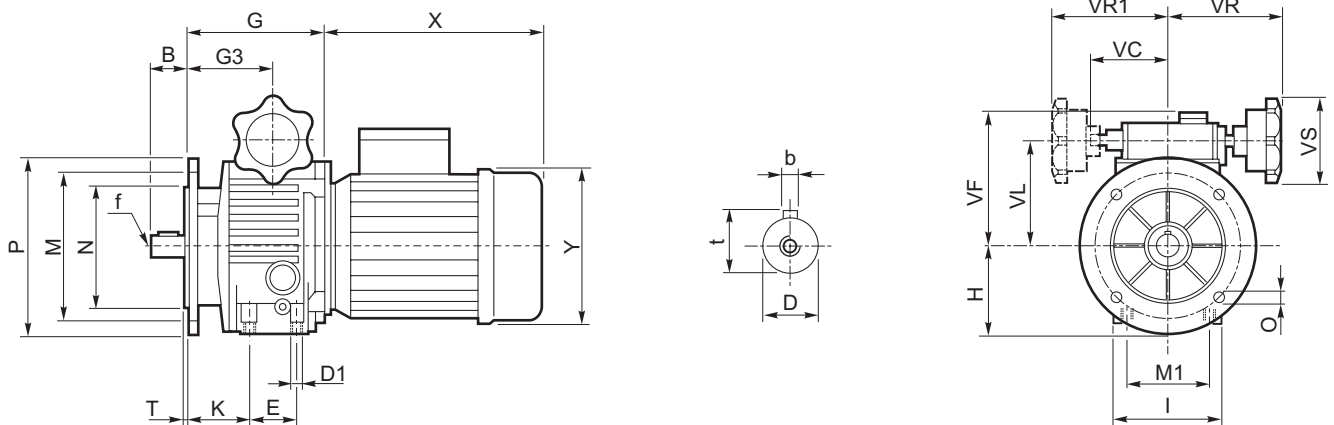
**Symbols**

- n<sub>1</sub> [min<sup>-1</sup>] Velocità in ingresso / Input speed
- n<sub>2</sub> [min<sup>-1</sup>] Velocità in uscita / Output speed
- P<sub>1</sub> [kW] Potenza in entrata / Input power
- M<sub>2</sub> [Nm] Coppia in uscita in funzione di P<sub>1</sub> / Output torque referred to P<sub>1</sub>



**Dimensioni**

**Dimensions**



VAM	B	D	E	G	G3	H	I	M	M1	N	O	D1	P	T	K	VC	VF	VL	VR	VR1	VS	b	f	t	X	Y	kG
018	23	11	50	112.5	64.5	70	72	115	60	95	9	M6	140	3.5	46	71	111	78	110	110	85	4	M5	12.5	200	120	3.4
037	30	14	40	110	74	80	90	130	77	110	9	M8	160	3.5	53	71	123	90	110	110	85	5	M6	16	227	141	4.7
075	40	19	58	139	85.5	100	98	165	84	130	11	M8	200	3.5	60	79	140	107	120	120	85	6	M6	21.5	268	160	7.8
15	50	24	—	188	115	126	241	165	—	130	11	—	200	3.5	—	—	144	122	120	120	85	8	M8	27	290	195	31
22	60	28	—	208	131	150	270	215	—	180	15	—	250	4	—	—	188	150	160	—	110	8	M10	33	320	215	55
40	60	28	—	208	131	150	270	215	—	180	15	—	250	4	—	—	188	150	160	—	110	8	M10	33	340	240	57

**Accessori**

**Accessories**

**Indicatore gravitazionale**

Un utile accessorio da applicare sul volantino di comando è l'indicatore gravitazionale.

Esso consente di visualizzare, su una scala graduata, un riferimento numerico relativo alla velocità in uscita.

Non è utilizzabile nelle posizioni C e D (con asse volantino verticale).

**Indicator**

The indicator is an extremely useful accessory, mounted on the handwheel.

It shows the output speed on a graduated scale.

It cannot be used in positions C and D (with vertical handwheel axis).

**Taratura dell'indicatore gravitazionale**

Sull' indicatore smontato fare coincidere le due lancette con lo zero, regolare la velocità del variatore al minimo e rimontare l'indicatore nell'apposito alloggiamento nel volantino di comando.

**Setting the indicator**

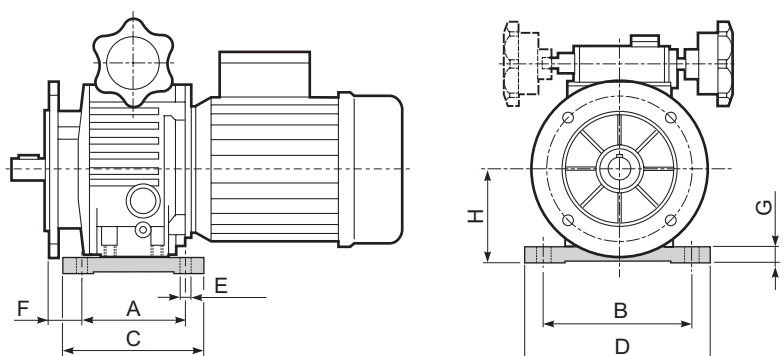
Move the two hands to zero, set the variator's speed to minimum and then put the indicator back in place on the handwheel.

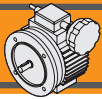
**Opzioni**

**Options**

**PF - Piedi di fissaggio / Fixing feet**

VAM	A	B	C	D	E	F	G	H
018	105	110	121	147	6.5	17.5	10	76.5
037	105	120	124	149	8.5	20.5	11	94
075	125	160	150	190	11	26.5	12	111





## Uso e manutenzione

## Use and maintenance

La regolazione della velocità deve essere effettuata durante il funzionamento. Non azionare il volantino di regolazione a motore fermo.

Le due viti a brugola montate al di sotto del volantino di regolazione sono tarate in fabbrica. Si prega di non toccarle.

I variatori sono riempiti di olio lubrificante in fabbrica. Dopo un rodaggio di circa 100 ore è necessario sostituire l'olio; cambi successivi potranno essere effettuati ad intervalli di circa 1000 ore di funzionamento.

Il livello dell'olio deve essere a 2/3 della spia di livello. Controllare periodicamente tale livello; in caso di livello insufficiente non usare il variatore.

La temperatura di funzionamento normale può raggiungere i 50-55 °C oltre la temperatura ambiente con valori massimi di 85-95 °C.

Per montare o smontare giunti, pulegge o pignoni sull'albero del variatore utilizzare appositi tiranti ed estrattori; eventuali urti possono danneggiare i cuscinetti.

Si sconsiglia l'uso del variatore in applicazioni dove possono verificarsi bloccaggi improvvisi della macchina azionata.

L'utilizzo di motori autofrenanti è sconsigliato. Per esigenze particolari consultare il nostro Servizio Tecnico.

*The speed regulation must be done whilst the variator is working. Do not adjust handwheel when motor is off.*

*The 2 socket head screws assembled under the control handwheel are calibrated in the factory, please do not adjust them.*

*The variators are filled with lubrication oil in the factory. After a running-in of approximately 100 hours, the oil must be changed; The subsequent changes can be done with intervals of roughly 1000-functioning hours.*

*The oil level must be at 2/3 of the sight glass plug. Check periodically this level and top up as required.*

*The temperature of normal functioning can reach 50-55 degrees C over the environment temperature, with maximum peaks of 85-95 degrees C.*

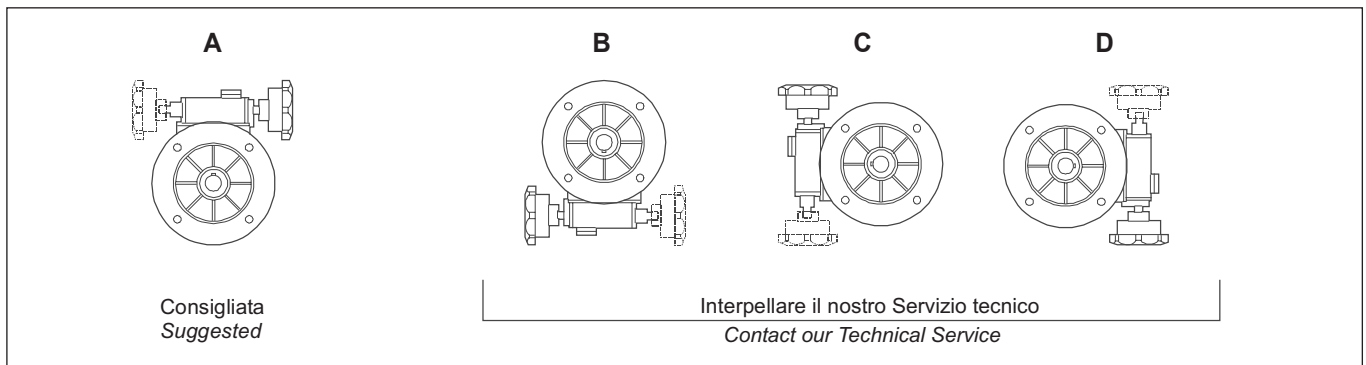
*To assemble and disassemble couplings, pulleys and pinions on the variator shaft use the stay bolt and strippers provided. Any impacts can damage the bearings.*

*The variator should not be used in applications where unexpected overloads may occur.*

*We recommend to don't use brake motors. For particular requirements please contact our Technical Service.*

### POSIZIONE SCATOLA DI MONTAGGIO

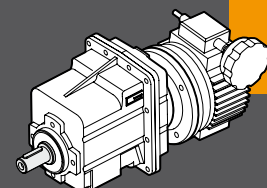
### SPEED CONTROL BOX POSITION



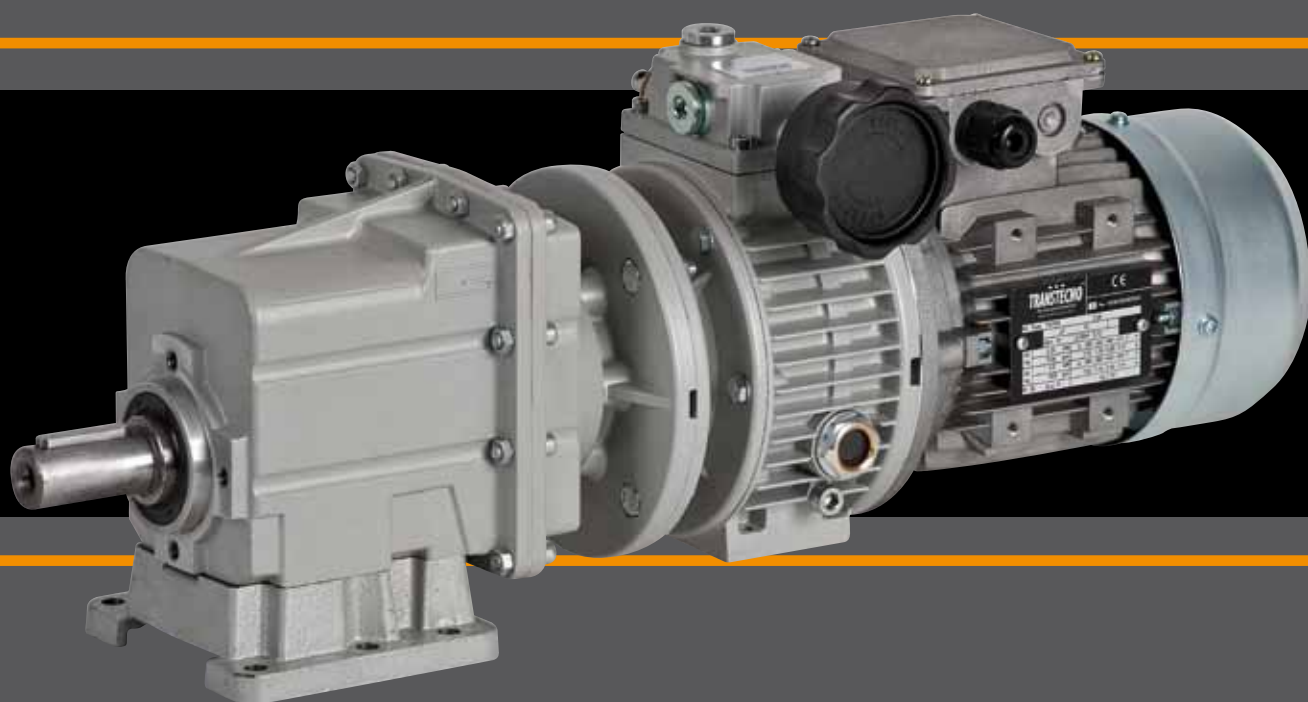
**TRANSTECNO**<sup>TM</sup>  
THE MODULAR GEARMOTOR

**CMGV**

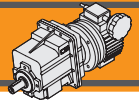
CMGV



***MOTOVARIARIDUTTORI AD INGRANAGGI CILINDRICI***  
***MECHANICAL VARIATORS AND HELICAL GEARBOXES***



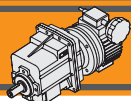




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Designazione	<i>Classification</i>	<b>L2</b>
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Carichi radiali	<i>Radial loads</i>	<b>L4</b>
Dati tecnici	<i>Technical data</i>	<b>L5</b>
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## Caratteristiche tecniche

## Tecnical features

I motovariariduttori della serie CMGV hanno le seguenti caratteristiche principali:

- Precisione nella regolazione della velocità, contenuta in  $\pm 0.5/1\%$ .
- Campo di regolazione continuo 1:5.
- Le grandezze CMG 00, 01, 02, 03, 04 sono costruite con carcassa in Alluminio. La grandezza 05 è costruita con carcassa in ghisa.
- Le grandezze VAM018, 037, e 075 sono costruite con carcassa in Alluminio, le altre grandezze in ghisa.

CMGV mechanical variators and helical gearboxes main features:

- Precision in speed regulation:  $\pm 0.5/1\%$
- Speed range 1:5
- Die-cast aluminum housing on CMG 00, 01, 02, 03 and 04. Cast iron housing on CMG05.
- Die-cast aluminum housing on VAM018, 037 and 075. Cast iron housing on the other sizes.

## Designazione

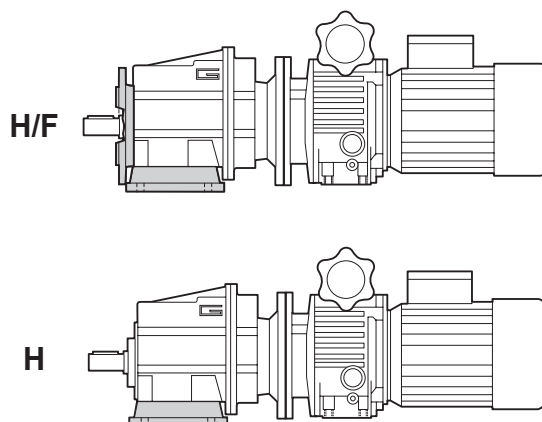
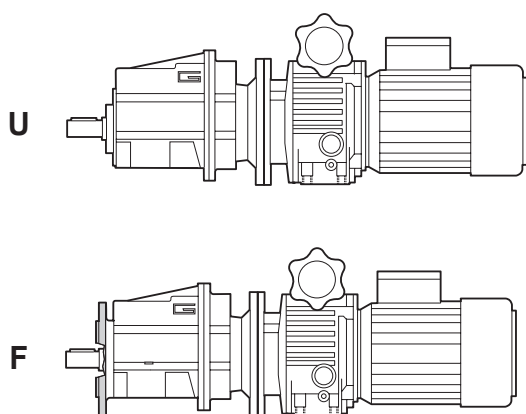
## Classification

RIDUTTORE / GEARBOX				
CMGV	043/040	H75	9.81	B3/1
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	Posizione di montaggio Mounting position
CMGV	002/018 — 043/040	U... H... F... H.../F...	vedi tabella see tables	Vedi pag. K3 See page K3

MOTORE / MOTOR				
0.37kW	4p	3ph	50Hz	T1
Potenza Power	Poli Poles	Fasi Phases	Frequenza Frequency	Pos. morsettiera Terminal box pos.
Vedi tabelle See tables	2p 4p	1ph 3ph	50Hz 60Hz	Vedi pag. K3 See page K3

## Versioni

## Versions

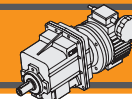


## Simbologia

## Symbols

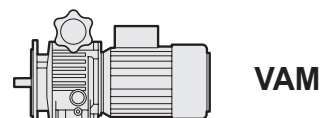
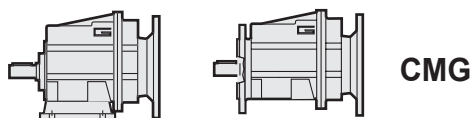
$n_1$	[min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>
$n_2$	[min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>
$i$		Rapporto di riduzione / <i>Ratio</i>
$P_1$	[kW]	Potenza in entrata / <i>Input power</i>
$M_2$	[Nm]	Coppia nominale in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$sf$		Fattore di servizio / <i>Service factor</i>
$R_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$A_2$	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>





**Lubrificazione**

**Lubrication**



I riduttori CMG 00, 01, 02 03, 04 sono forniti completi di lubrificante, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione. La grandezza CMG 05 è fornita completa di lubrificante per posizione B3. I variatori VAM sono forniti completi di lubrificante per posizione B3.

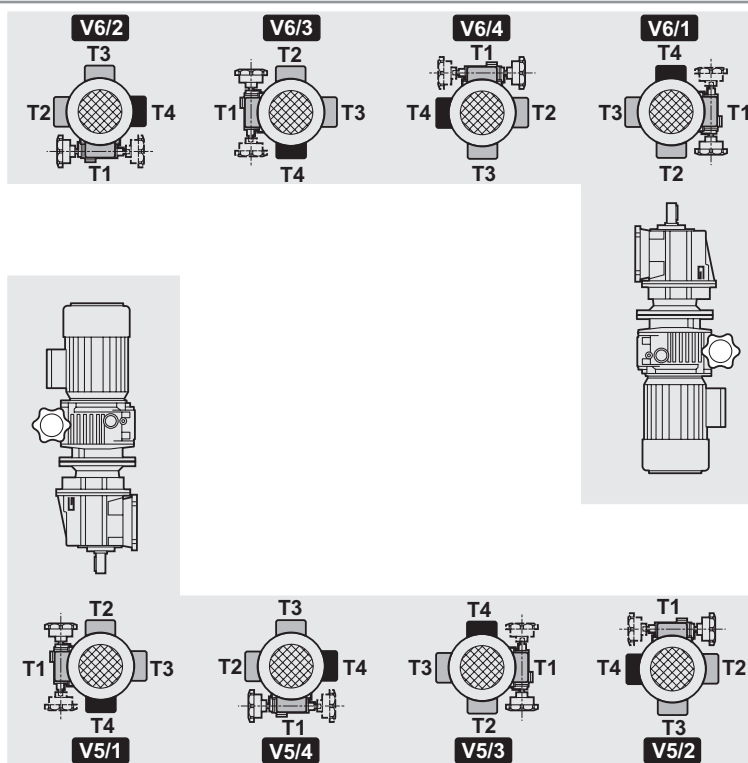
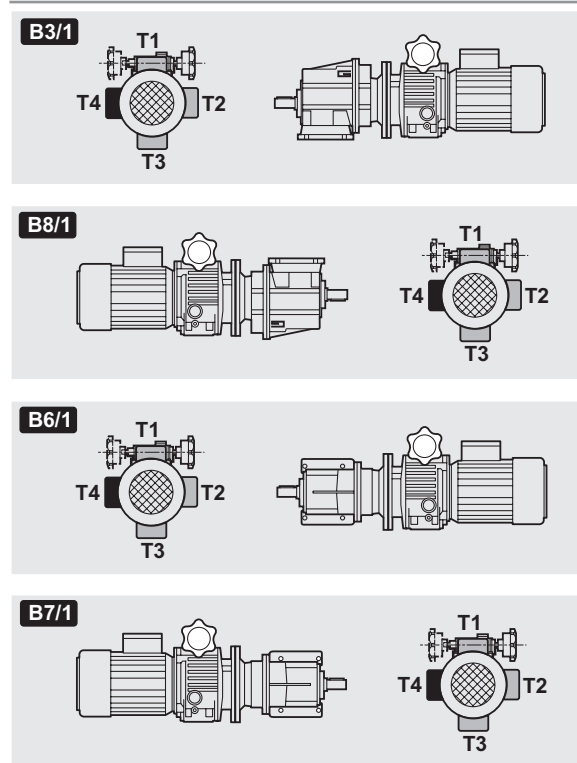
*All CMG gear units are supplied complete with lubricant. For this reason they can be installed in any assembly position and do not require maintenance. CMG 05 is supplied filled with lubricant for B3 position. VAM are supplied filled with lubricant for B3 position.*

Pos. mont. Mount. pos.	Quantità di olio (litri) / Oil quantity (litres)					
	VAM					
	018	037	075	15	22	40
<b>B3 - B5 - B6 - B7 - B8</b>	0.13	0.15	0.33	0.80	1.20	1.20
<b>V1 - V5</b>	0.30	0.40	0.85	1.40	2.15	2.15
<b>V3 - V6</b>	0.13	0.15	0.33	0.80	1.20	1.20

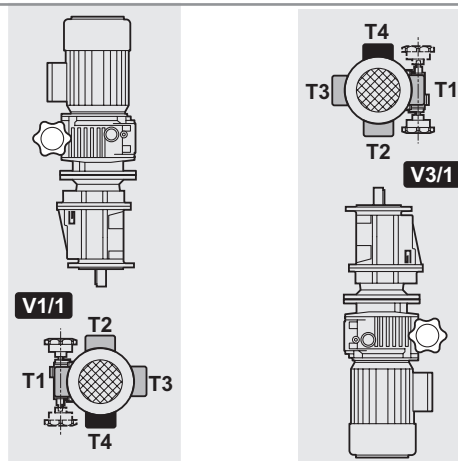
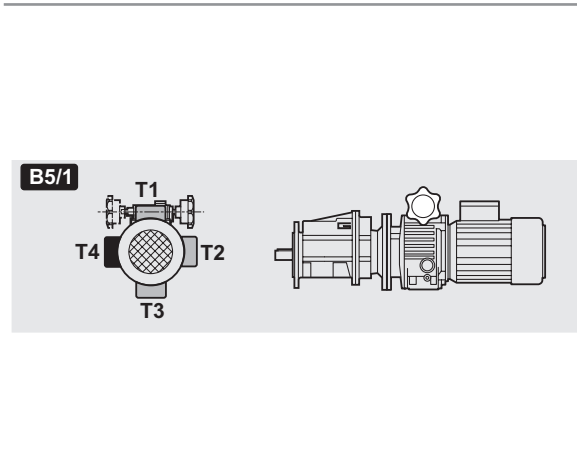
**Posizioni di montaggio**

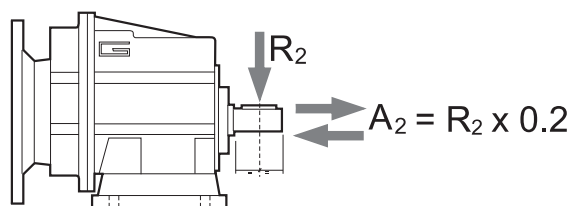
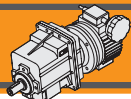
**Mounting positions**

Versione / Version **H.. - H../F..**

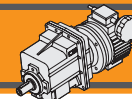


Versione / Version **U.. - F..**





$n_2$ [min <sup>-1</sup> ]	$R_2$ [N]					
	CMG 00	CMG 01	CMG 02	CMG 03	CMG 04	CMG 05
700	416	764	1529	1987	2379	3556
600	437	805	1609	2092	2504	3744
500	465	855	1710	2223	2661	3979
400	501	921	1842	2395	2866	4286
250	586	1077	2154	2801	3353	5013
180	653	1323	2554	3321	3897	5853
150	748	1406	2714	3529	4244	6392
120	806	1631	3467	3801	4572	7388
100	958	1842	3684	4507	5234	7851
80	1032	1984	3969	5042	5991	8963
60	1136	2184	4368	5549	6594	10483
40	1300	2500	5000	6500	8000	12000
10	1300	2500	5000	6500	8000	12000



**Dati tecnici**

**Technical data**

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		

**0.22**

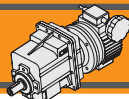
63C4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	175	9	4.9	33.8	18	2.5	5.03	<b>CMGV 002/018</b>
	144	11	4.0	27.9	22	2.1	6.1	
	117	14	3.3	22.7	27	1.7	7.49	
	97.9	16	3.4	18.9	33	1.8	8.99	
	86.6	19	3.0	16.7	37	1.6	10.16	
	72.9	22	2.5	14.1	44	1.3	12.07	
	65.7	24	3.2	12.7	49	1.6	13.4	
	58.1	28	2.8	11.2	55	1.5	15.14	
	48.4	33	2.4	9.4	66	1.2	18.17	
	40.8	39	2.0	7.9	79	1.0	21.58	
	37.4	43	1.8	7.2	86	0.9	23.51	
	35.1	46	1.7	6.8	92	0.9	25.1	
	32.5	49	1.6	6.3	99	0.8	27.08	
	27.1	59	1.3	5.2	119	0.7	32.49	
	230	7	9.7	44.5	14	5.0	3.82	
190	8	8.0	36.7	17	4.1	4.63		
155	10	6.5	29.9	21	3.3	5.69		
114	14	6.4	22.0	28	3.3	7.72		
96.0	17	5.4	18.5	33	2.8	9.17		
89.7	18	5.0	17.3	36	2.6	9.81		
76.5	21	5.3	14.8	42	2.7	11.50		
73.9	22	5.2	14.3	43	2.6	11.90		
63.8	25	5.3	12.3	50	2.7	13.80		
60.2	27	5.0	11.6	53	2.6	14.62		
49.3	33	4.1	9.5	65	2.1	17.86		
46.1	35	3.9	8.9	70	2.0	19.07		
44.4	36	3.7	8.6	72	1.9	19.83		
37.4	43	3.1	7.2	86	1.6	23.56		
29.8	54	2.5	5.8	108	1.3	29.56		
24.8	65	2.1	4.8	129	1.1	35.47		
19.2	84	1.6	3.7	167	0.8	45.89		
18.0	89	1.5	3.5	179	0.8	49.00		
16.5	97	1.4	3.2	195	0.7	53.33		
18.9	83	1.6	3.6	166	0.8	46.61	<b>CMGV 013/018</b>	
15.9	99	1.4	3.1	198	0.7	55.36		
13.9	113	1.2	2.7	226	0.6	63.22		
18.6	84	2.7	3.6	169	1.4	47.19	<b>CMGV 023/018</b>	
15.7	100	2.2	3.0	200	1.1	56.05		
13.7	114	2.0	2.7	229	1.0	64.01		
11.6	136	1.6	2.2	272	0.8	76.02		
9.7	161	1.4	1.9	323	0.7	90.29		
7.7	204	1.1	1.5	409	0.6	114.46		
19.5	81	4.2	3.8	161	2.1	45.21	<b>CMGV 033/018</b>	
14.4	110	3.1	2.8	219	1.6	61.32		
12.1	130	2.6	2.3	260	1.3	72.83		
9.0	174	1.9	1.7	348	1.0	97.45		
7.6	207	1.6	1.5	413	0.8	115.74		
6.2	251	1.3	1.2	503	0.7	140.81		
5.0	311	1.1	1.0	622	0.6	174.26		

**0.22**

63C4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	9.0	174	3.2	1.7	348	1.7	97.45	<b>CMGV 043/018</b>
	7.6	207	2.7	1.5	413	1.4	115.74	
	6.2	251	2.2	1.2	503	1.1	140.81	
	5.0	311	1.8	1.0	622	0.9	174.26	
	3.9	403	1.4	0.8	805	0.7	225.47	
3.4	468	1.2	0.6	936	0.6	262.05		



**0.37**

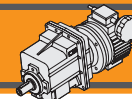
63C2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	350	8	4.3	67.6	18	2.5	5.03	<b>CMGV 002/018</b>
	289	10	3.6	55.7	22	2.1	6.1	
	235	12	2.9	45.4	27	1.7	7.49	
	196	15	3.0	37.8	33	1.8	8.99	
	173	17	2.7	33.5	37	1.6	10.16	
	146	20	2.3	28.2	44	1.3	12.07	
	131	22	2.8	25.4	49	1.6	13.4	
	116	25	2.5	22.5	55	1.5	15.14	
	96.9	30	2.1	18.7	66	1.2	18.17	
	81.6	35	1.8	15.8	79	1.0	21.58	
	74.9	38	1.6	14.5	86	0.9	23.51	
	70.1	41	1.5	13.5	92	0.9	25.1	
	65.0	44	1.4	12.6	99	0.8	27.08	
	54.2	53	1.2	10.5	119	0.7	32.49	
	461	6	8.6	89.0	14	5.0	3.82	
380	8	7.1	73.4	17	4.1	4.63		
309	9	5.8	59.8	21	3.3	5.69		
228	13	5.7	44.0	28	3.3	7.72		
192	15	4.8	37.1	33	2.8	9.17		
179	16	4.4	34.7	36	2.6	9.81		
153	19	4.7	29.6	42	2.7	11.50		
148	19	4.6	28.6	43	2.6	11.90		
128	23	4.7	24.6	50	2.7	13.80		
120	24	4.5	23.3	53	2.6	14.62		
98.5	29	3.7	19.0	65	2.1	17.86		
92.3	31	3.4	17.8	70	2.0	19.07		
88.8	32	3.3	17.1	72	1.9	19.83		
74.7	38	2.8	14.4	86	1.6	23.56		
59.5	48	2.2	11.5	108	1.3	29.56		
49.6	58	1.8	9.6	129	1.1	35.47		
38.4	75	1.4	7.4	167	0.8	45.89		
35.9	80	1.3	6.9	179	0.8	49.00		
33.0	87	1.2	6.4	195	0.7	53.33		
37.8	74	1.4	7.3	166	0.8	46.61	<b>CMGV 013/018</b>	
31.8	88	1.2	6.1	198	0.7	55.36		
27.8	101	1.1	5.4	226	0.6	63.22		
37.3	75	2.4	7.2	169	1.4	47.19	<b>CMGV 023/018</b>	
31.4	90	2.0	6.1	200	1.1	56.05		
27.5	102	1.7	5.3	229	1.0	64.01		
23.2	121	1.5	4.5	272	0.8	76.02		
19.5	144	1.2	3.8	323	0.7	90.29		
15.4	183	1.0	3.0	409	0.6	114.46		



## Dati tecnici

## Technical data

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i		P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf				n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		
<b>0.37</b>									<b>0.37</b>								
63C2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>38.9</b>	72	3.7	<b>7.5</b>	161	2.1	45.21	<b>CMGV 033/018</b>	71B4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>13.7</b>	205	2.7	<b>2.7</b>	411	1.4	72.83	<b>CMGV 043/037</b>
	<b>28.7</b>	98	2.7	<b>5.5</b>	219	1.6	61.32			<b>10.3</b>	275	2.0	<b>2.1</b>	550	1.0	97.45	
	<b>24.2</b>	116	2.3	<b>4.7</b>	260	1.3	72.83			<b>8.6</b>	326	1.7	<b>1.7</b>	653	0.9	115.74	
	<b>18.1</b>	156	1.7	<b>3.5</b>	348	1.0	97.45			<b>7.1</b>	397	1.4	<b>1.4</b>	794	0.7	140.81	
	<b>15.2</b>	185	1.4	<b>2.9</b>	413	0.8	115.74			<b>5.7</b>	491	1.1	<b>1.1</b>	983	0.6	174.26	
	<b>12.5</b>	225	1.2	<b>2.4</b>	503	0.7	140.81			<b>7.8</b>	363	2.8	<b>1.6</b>	727	1.4	128.84	
	<b>10.1</b>	278	1.0	<b>2.0</b>	622	0.6	174.26			<b>5.8</b>	486	2.1	<b>1.2</b>	972	1.1	172.32	
71B4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>199</b>	14	3.1	<b>39.8</b>	29	1.6	5.03	<b>CMGV 002/037</b>	<b>5.4</b>	525	1.9	<b>1.1</b>	1050	1.0	186.17	<b>CMGV 053/037</b>	
	<b>164</b>	18	2.6	<b>32.8</b>	35	1.3	6.1		<b>4.6</b>	610	1.7	<b>0.9</b>	1219	0.8	216.19		
	<b>134</b>	22	2.1	<b>26.7</b>	43	1.1	7.49		<b>4.0</b>	702	1.4	<b>0.8</b>	1404	0.7	248.99		
	<b>111</b>	26	2.2	<b>22.2</b>	52	1.1	8.99		<b>3.5</b>	815	1.2	<b>0.7</b>	1631	0.6	289.15		
	<b>98</b>	29	1.9	<b>19.7</b>	59	1.0	10.16										
	<b>83</b>	35	1.6	<b>16.6</b>	70	0.8	12.07										
	<b>75</b>	39	2.0	<b>14.9</b>	77	1.0	13.4										
	<b>66</b>	44	1.8	<b>13.2</b>	87	0.9	15.14										
	<b>55</b>	52	1.5	<b>11.0</b>	105	0.8	18.17										
	<b>46</b>	62	1.3	<b>9.3</b>	124	0.6	21.58										
	<b>43</b>	68	1.2	<b>8.5</b>	135	0.6	23.51										
	<b>40</b>	72	1.1	<b>8.0</b>	145	0.6	25.1										
	<b>262</b>	11	6.1	<b>52.4</b>	22	3.1	3.82	<b>CMGV 012/037</b>	<b>524</b>	8	6.6	<b>105</b>	22	3.1	3.82	<b>CMGV 012/037</b>	
	<b>216</b>	13	5.0	<b>43.2</b>	27	2.6	4.63		<b>432</b>	10	5.5	<b>86.4</b>	27	2.6	4.63		
	<b>176</b>	16	4.1	<b>35.1</b>	33	2.1	5.69		<b>352</b>	12	4.4	<b>70.3</b>	33	2.1	5.69		
	<b>130</b>	22	4.0	<b>25.9</b>	44	2.1	7.72		<b>259</b>	16	4.4	<b>51.8</b>	44	2.1	7.72		
	<b>109</b>	26	3.4	<b>21.8</b>	53	1.7	9.17		<b>218</b>	19	3.7	<b>43.6</b>	53	1.7	9.17		
	<b>102</b>	28	3.2	<b>20.4</b>	57	1.6	9.81		<b>204</b>	21	3.4	<b>40.8</b>	57	1.6	9.81		
	<b>87.0</b>	33	3.4	<b>17.4</b>	66	1.7	11.50		<b>174</b>	24	3.7	<b>34.8</b>	66	1.7	11.50		
	<b>84.0</b>	34	3.3	<b>16.8</b>	69	1.7	11.90	<b>168</b>	25	3.5	<b>33.6</b>	69	1.7	11.90			
	<b>72.5</b>	40	3.4	<b>14.5</b>	79	1.7	13.80	<b>145</b>	29	3.7	<b>29.0</b>	79	1.7	13.80			
	<b>68.4</b>	42	3.2	<b>13.7</b>	84	1.6	14.62	<b>137</b>	31	3.5	<b>27.4</b>	84	1.6	14.62			
	<b>56.0</b>	51	2.6	<b>11.2</b>	103	1.3	17.86	<b>112</b>	38	2.8	<b>22.4</b>	103	1.3	17.86			
	<b>52.4</b>	55	2.4	<b>10.5</b>	110	1.3	19.07	<b>105</b>	40	2.7	<b>21.0</b>	110	1.3	19.07			
	<b>50.4</b>	57	2.4	<b>10.1</b>	114	1.2	19.83	<b>101</b>	42	2.5	<b>20.2</b>	114	1.2	19.83			
	<b>42.4</b>	68	2.0	<b>8.5</b>	136	1.0	23.56	<b>84.9</b>	50	2.1	<b>17.0</b>	136	1.0	23.56			
	<b>33.8</b>	85	1.6	<b>6.8</b>	170	0.8	29.56	<b>67.7</b>	62	1.7	<b>13.5</b>	170	0.8	29.56			
<b>28.2</b>	102	1.3	<b>5.6</b>	204	0.7	35.47	<b>56.4</b>	75	1.4	<b>11.3</b>	204	0.7	35.47				
<b>41.9</b>	69	3.3	<b>8.4</b>	137	1.7	23.85	<b>CMGV 022/037</b>	<b>83.9</b>	50	3.5	<b>16.8</b>	137	1.7	23.85	<b>CMGV 022/037</b>		
<b>33.4</b>	86	2.6	<b>6.7</b>	172	1.3	29.93		<b>66.8</b>	63	2.8	<b>13.4</b>	172	1.3	29.93			
<b>27.8</b>	103	2.2	<b>5.6</b>	207	1.1	35.91		<b>55.7</b>	76	2.3	<b>11.1</b>	207	1.1	35.91			
<b>21.5</b>	134	1.7	<b>4.3</b>	268	0.9	46.46		<b>43.0</b>	98	1.8	<b>8.6</b>	268	0.9	46.46			
<b>20.2</b>	143	1.6	<b>4.0</b>	286	0.8	49.61		<b>40.3</b>	105	1.7	<b>8.1</b>	286	0.8	49.61			
<b>18.5</b>	156	1.4	<b>3.7</b>	311	0.7	54.00		<b>37.0</b>	114	1.6	<b>7.4</b>	311	0.7	54.00			
<b>22.1</b>	127	2.6	<b>4.4</b>	255	1.4	45.21		<b>CMGV 033/037</b>									
<b>16.3</b>	173	1.9	<b>3.3</b>	346	1.0	61.32											
<b>13.7</b>	205	1.6	<b>2.7</b>	411	0.8	72.83											
<b>10.3</b>	275	1.2	<b>2.1</b>	550	0.6	97.45											



**Dati tecnici**

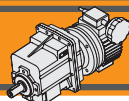
**Technical data**

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i		
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf			
71B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	44.2	93	2.9	8.8	255	1.4	45.21	<b>CMGV 033/037</b>	
	32.6	127	2.1	6.5	346	1.0	61.32		
	27.5	151	1.8	5.5	411	0.8	72.83		
	20.5	202	1.3	4.1	550	0.6	97.45		
	32.6	127	3.5	6.5	346	1.7	61.32		<b>CMGV 043/037</b>
	27.5	151	3.0	5.5	411	1.4	72.83		
	20.5	202	2.2	4.1	550	1.0	97.45		
	17.3	239	1.9	3.5	653	0.9	115.74		
	14.2	291	1.5	2.8	794	0.7	140.81		
	11.5	360	1.2	2.3	983	0.6	174.26		
	18.4	224	3.6	3.7	612	1.7	108.43	<b>CMGV 053/037</b>	
		15.5	266	3.0	3.1	727	1.4		128.84
11.6		356	2.2	2.3	972	1.1	172.32		
10.7		385	2.1	2.1	1050	1.0	186.17		
9.3		447	1.8	1.9	1219	0.8	216.19		
8.0		515	1.6	1.6	1404	0.7	248.99		
6.9		598	1.3	1.4	1631	0.6	289.15		

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		
80B4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	22.1	255	2.2	4.4	510	1.1	45.21	<b>CMGV 043/075</b>
	16.3	346	1.6	3.3	692	0.8	61.32	
	13.7	411	1.4	2.7	821	0.7	72.83	
	17.8	316	3.2	3.6	632	1.6	56.05	<b>CMGV 053/075</b>
	15.5	364	2.8	3.1	727	1.4	64.48	
	13.3	423	2.4	2.7	846	1.2	74.96	
12.3	457	2.2	2.5	914	1.1	81.07		
11.6	486	2.1	2.3	973	1.1	86.24		
9.2	612	1.6	1.8	1223	0.8	108.43		
7.8	727	1.4	1.6	1453	0.7	128.84		



P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		
80B4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	274	21	5.3	54.6	42	2.7	3.66	<b>CMGV 022/075</b>
	225	26	4.4	45.1	51	2.3	4.43	
	184	31	3.6	36.7	63	1.8	5.45	
	135	43	3.2	27.1	85	1.6	7.39	
	114	51	2.7	22.8	101	1.4	8.78	
	101	57	2.3	20.1	114	1.2	9.93	
	90.8	63	3.5	18.2	127	1.8	11.01	
	83.0	69	3.2	16.6	139	1.7	12.05	
	75.7	76	2.9	15.1	152	1.5	13.21	
	67.5	85	2.6	13.5	171	1.3	14.81	
	58.5	98	1.8	11.7	197	0.9	17.10	
	54.8	105	1.7	11.0	210	0.9	18.26	
	49.8	116	1.9	10.0	231	1.0	20.08	
	41.9	137	1.6	8.4	275	0.8	23.85	
	33.4	172	1.3	6.7	345	0.7	29.93	
	27.8	207	1.1	5.6	414	0.6	35.91	
	91.5	63	3.2	18.3	126	1.6	10.93	<b>CMGV 032/075</b>
	79.3	73	3.9	15.9	145	2.0	12.60	
	75.2	77	3.7	15.0	153	1.9	13.30	
	65.4	88	3.6	13.1	176	1.8	15.30	
	54.9	105	3.0	11.0	210	1.5	18.21	
	52.0	111	2.8	10.4	222	1.5	19.24	
	47.3	122	2.6	9.5	244	1.3	21.15	
	32.7	176	1.9	6.5	352	1.0	30.57	
22.6	254	1.3	4.5	509	0.7	44.18		
19.5	295	1.1	3.9	591	0.6	51.30		

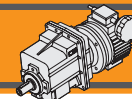
P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i		
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf			
80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	547	15	5.8	109	42	2.7	3.66	<b>CMGV 022/075</b>	
	451	19	4.8	90.3	51	2.3	4.43		
	367	23	3.9	73.4	63	1.8	5.45		
	271	31	3.4	54.1	85	1.6	7.39		
	228	37	2.9	45.6	101	1.4	8.78		
	201	42	2.5	40.3	114	1.2	9.93		
	182	47	3.8	36.3	127	1.8	11.01		
	166	51	3.5	33.2	139	1.7	12.05		
	151	56	3.2	30.3	152	1.5	13.21		
	135	63	2.8	27.0	171	1.3	14.81		
	117	72	2.0	23.4	197	0.9	17.10		
	110	77	1.8	21.9	210	0.9	18.26		
	99.6	85	2.1	19.9	231	1.0	20.08		
	83.9	101	1.8	16.8	275	0.8	23.85		
	66.8	126	1.4	13.4	345	0.7	29.93		
	55.7	152	1.2	11.1	414	0.6	35.91		
	131	65	3.9	26.1	176	1.8	15.30	<b>CMGV 032/075</b>	
	110	77	3.2	22.0	210	1.5	18.21		
	104	81	3.1	20.8	222	1.5	19.24		
	94.6	89	2.8	18.9	244	1.3	21.15		
	65.4	129	2.1	13.1	352	1.0	30.57		
	45.3	187	1.4	9.1	509	0.7	44.18		
	39.0	217	1.2	7.8	591	0.6	51.30		
	44.2	187	2.4	8.8	510	1.1	45.21		<b>CMGV 043/075</b>
32.6	254	1.8	6.5	692	0.8	61.32			
27.5	301	1.5	5.5	821	0.7	72.83			
31.0	267	3.0	6.2	727	1.4	64.48	<b>CMGV 053/075</b>		
26.7	310	2.6	5.3	846	1.2	74.96			
24.7	335	2.4	4.9	914	1.1	81.07			
23.2	357	2.2	4.6	973	1.1	86.24			
18.4	448	1.8	3.7	1223	0.8	108.43			
15.5	533	1.5	3.1	1453	0.7	128.84			



## Dati tecnici

## Technical data

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i		P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf				n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		
<b>1.1</b>									<b>1.5</b>								
90S4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	267	32	5.2	53.4	65	2.7	3.74	<b>CMGV 032/15</b>	90L4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	126	91	3.2	25.2	183	1.6	7.93	<b>CMGV 042/15</b>
	222	39	4.3	44.4	78	2.2	4.50			110	105	3.0	22.0	209	1.5	9.08	
	182	47	3.5	36.5	95	1.8	5.48			91.5	126	2.5	18.3	252	1.3	10.93	
	159	55	3.7	31.7	109	1.9	6.31			79.3	145	2.7	15.9	290	1.4	12.60	
	126	69	2.9	25.2	137	1.5	7.93			75.2	153	2.6	15.0	306	1.3	13.30	
	110	78	2.6	22.0	157	1.3	9.08			65.4	176	2.7	13.1	353	1.4	15.30	
	91.5	94	2.1	18.3	189	1.1	10.93			54.9	210	2.2	11.0	420	1.2	18.21	
	79.3	109	2.6	15.9	218	1.3	12.60			52.0	222	2.1	10.4	443	1.1	19.24	
	75.2	115	2.4	15.0	230	1.3	13.30			32.7	352	1.6	6.5	704	0.8	30.57	
	65.4	132	2.4	13.1	264	1.2	15.30			22.6	509	1.1	4.5	1018	0.6	44.18	
	54.9	157	2.0	11.0	315	1.0	18.21			31.1	370	2.7	6.2	740	1.4	32.13	
	52.0	166	1.9	10.4	332	1.0	19.24			21.6	534	1.9	4.3	1067	1.0	46.31	
	47.3	183	1.7	9.5	365	0.9	21.15			17.8	632	1.6	3.6	1264	0.8	56.05	
	32.7	264	1.3	6.5	528	0.7	30.57			15.5	727	1.4	3.1	1455	0.7	64.48	
	91.5	94	3.3	18.3	189	1.7	10.93			13.3	846	1.2	2.7	1691	0.6	74.96	
	79.3	109	3.6	15.9	218	1.8	12.60		12.3	914	1.1	2.5	1829	0.6	81.07		
	75.2	115	3.4	15.0	230	1.8	13.30										
	65.4	132	3.6	13.1	264	1.8	15.30										
	54.9	157	3.0	11.0	315	1.5	18.21										
	52.0	166	2.8	10.4	332	1.5	19.24										
	32.7	264	2.1	6.5	528	1.1	30.57										
	22.6	382	1.5	4.5	763	0.8	44.18										
	19.5	443	1.3	3.9	886	0.6	51.30										
	31.1	278	3.6	6.2	555	1.9	32.13										
	21.6	400	2.5	4.3	800	1.3	46.31										
	22.1	382	1.5	4.4	765	0.8	45.21										
	16.3	519	1.1	3.3	1038	0.6	61.32										
	17.8	474	2.1	3.6	948	1.1	56.05										
	15.5	545	1.8	3.1	1091	0.9	64.48										
	13.3	634	1.6	2.7	1268	0.8	74.96										
	12.3	686	1.5	2.5	1372	0.8	81.07										
	11.6	730	1.4	2.3	1459	0.7	86.24										
	9.2	917	1.1	1.8	1835	0.6	108.43										
<b>2.2</b>																	
									90L2 n <sub>i</sub> =2800 [min <sup>-1</sup> ]	534	32	4.1	107	86	2.0	3.74	<b>CMGV 032/15</b>
										444	39	3.4	88.8	104	1.7	4.50	
										365	47	2.8	72.9	126	1.4	5.48	
										317	55	2.9	63.4	145	1.4	6.31	
										252	69	2.3	50.4	183	1.1	7.93	
										220	78	2.0	44.1	209	1.0	9.08	
										183	94	1.7	36.6	252	0.8	10.93	
										159	109	2.0	31.7	290	1.0	12.60	
										150	115	1.9	30.1	306	0.9	13.30	
										131	132	1.9	26.1	353	0.9	15.30	
										110	157	1.6	22.0	420	0.8	18.21	
										104	166	1.5	20.8	443	0.7	19.24	
										94.6	183	1.4	18.9	487	0.7	21.15	
										252	69	3.4	50.4	183	1.6	7.93	
										220	78	3.2	44.1	209	1.5	9.08	
										183	94	2.6	36.6	252	1.3	10.93	
										159	109	2.9	31.7	290	1.4	12.60	
										150	115	2.7	30.1	306	1.3	13.30	
										131	132	2.8	26.1	353	1.4	15.30	
										110	157	2.4	22.0	420	1.2	18.21	
										104	166	2.2	20.8	443	1.1	19.24	
										65.4	264	1.7	13.1	704	0.8	30.57	
										45.3	382	1.2	9.1	1018	0.6	44.18	



**Dati tecnici**

**Technical data**

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		

**2.2**

90L2 n <sub>i</sub> =2800 [min <sup>-1</sup> ]	<b>62.2</b>	278	2.9	<b>12.4</b>	740	1.4	32.13	<b>CMGV 052/15</b>
	<b>43.2</b>	400	2.0	<b>8.6</b>	1067	1.0	46.31	
	<b>35.7</b>	474	1.7	<b>7.1</b>	1264	0.8	56.05	<b>CMGV 053/15</b>
	<b>31.0</b>	545	1.5	<b>6.2</b>	1455	0.7	64.48	
	<b>26.7</b>	634	1.3	<b>5.3</b>	1691	0.6	74.96	
	<b>24.7</b>	686	1.2	<b>4.9</b>	1829	0.6	81.07	
100LA4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	<b>267</b>	65	4.0	<b>53.4</b>	129	2.0	3.74	<b>CMGV 042/22</b>
	<b>222</b>	78	3.3	<b>44.4</b>	156	1.7	4.50	
	<b>182</b>	95	2.7	<b>36.5</b>	190	1.4	5.48	
	<b>159</b>	109	2.7	<b>31.7</b>	218	1.4	6.31	
	<b>126</b>	137	2.1	<b>25.2</b>	274	1.1	7.93	
	<b>110</b>	157	2.0	<b>22.0</b>	314	1.0	9.08	
	<b>91.5</b>	189	1.7	<b>18.3</b>	378	0.9	10.93	
	<b>79.3</b>	218	1.8	<b>15.9</b>	436	0.9	12.60	
	<b>75.2</b>	230	1.7	<b>15.0</b>	460	0.9	13.30	
	<b>65.4</b>	264	1.8	<b>13.1</b>	529	0.9	15.30	
	<b>54.9</b>	315	1.5	<b>11.0</b>	629	0.8	18.21	<b>CMGV 052/22</b>
	<b>52.0</b>	332	1.4	<b>10.4</b>	665	0.7	19.24	
	<b>109.2</b>	158	3.6	<b>21.8</b>	317	1.9	9.16	
	<b>101.0</b>	171	3.3	<b>20.2</b>	342	1.7	9.90	
	<b>85.9</b>	201	3.5	<b>17.2</b>	402	1.8	11.64	
	<b>75.5</b>	229	3.1	<b>15.1</b>	458	1.6	13.25	
	<b>70.9</b>	244	3.4	<b>14.2</b>	488	1.8	14.11	
	<b>61.7</b>	280	3.0	<b>12.3</b>	560	1.5	16.20	
	<b>49.2</b>	351	2.4	<b>9.8</b>	702	1.2	20.31	
	<b>41.6</b>	415	2.4	<b>8.3</b>	830	1.2	24.02	
<b>31.1</b>	555	1.8	<b>6.2</b>	1110	0.9	32.13	<b>CMGV 052/22</b>	
<b>21.6</b>	800	1.3	<b>4.3</b>	1601	0.6	46.31		

**3**

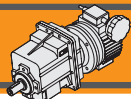
100LB4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	<b>265</b>	87	5.3	<b>52.9</b>	174	2.7	3.78	<b>CMGV 052/40</b>
	<b>208</b>	111	4.2	<b>41.7</b>	221	2.1	4.80	
	<b>172</b>	134	3.4	<b>34.4</b>	268	1.8	5.82	
	<b>150</b>	154	3.4	<b>29.9</b>	308	1.8	6.68	
	<b>119</b>	193	2.7	<b>23.9</b>	386	1.4	8.37	
	<b>109</b>	211	2.7	<b>21.8</b>	422	1.4	9.16	
	<b>101</b>	228	2.5	<b>20.2</b>	456	1.3	9.90	
	<b>85.9</b>	268	2.6	<b>17.2</b>	536	1.4	11.64	
	<b>75.5</b>	305	2.3	<b>15.1</b>	610	1.2	13.25	
	<b>70.9</b>	325	2.6	<b>14.2</b>	650	1.3	14.11	
	<b>61.7</b>	373	2.3	<b>12.3</b>	746	1.2	16.20	
<b>49.2</b>	468	1.8	<b>9.8</b>	936	0.9	20.31	<b>CMGV 052/40</b>	
<b>41.6</b>	553	1.8	<b>8.3</b>	1107	0.9	24.02		
<b>31.1</b>	740	1.4	<b>6.2</b>	1480	0.7	32.13		

**4**

112M4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	<b>267</b>	115	2.2	<b>53.4</b>	230	1.2	3.74	<b>CMGV 042/40</b>	
	<b>222</b>	138	1.9	<b>44.4</b>	277	1.0	4.50		
	<b>182</b>	168	1.5	<b>36.5</b>	337	0.8	5.48		
	<b>159</b>	194	1.5	<b>31.7</b>	388	0.8	6.31		
	<b>126</b>	244	1.2	<b>25.2</b>	487	0.6	7.93		
	<b>110</b>	279	1.1	<b>22.0</b>	558	0.6	9.08		
	<b>265</b>	116	4.0	<b>52.9</b>	232	2.0	3.78		<b>CMGV 052/40</b>
	<b>208</b>	147	3.1	<b>41.7</b>	295	1.6	4.80		
	<b>172</b>	179	2.6	<b>34.4</b>	358	1.3	5.82		
	<b>150</b>	205	2.6	<b>29.9</b>	410	1.3	6.68		
	<b>119</b>	257	2.0	<b>23.9</b>	514	1.1	8.37		
<b>109</b>	281	2.0	<b>21.8</b>	563	1.0	9.16			
<b>101</b>	304	1.9	<b>20.2</b>	608	1.0	9.90			
<b>85.9</b>	358	2.0	<b>17.2</b>	715	1.0	11.64			
<b>75.5</b>	407	1.7	<b>15.1</b>	814	0.9	13.25			
<b>70.9</b>	434	1.9	<b>14.2</b>	867	1.0	14.11			
<b>61.7</b>	498	1.7	<b>12.3</b>	995	0.9	16.20			
<b>49.2</b>	624	1.3	<b>9.8</b>	1248	0.7	20.31	<b>CMGV 052/40</b>		
<b>41.6</b>	738	1.4	<b>8.3</b>	1476	0.7	24.02			

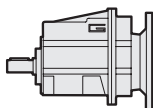
**3**

100LB4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	<b>267</b>	86	3.0	<b>53.4</b>	172	1.5	3.74	<b>CMGV 042/40</b>
	<b>222</b>	104	2.5	<b>44.4</b>	208	1.3	4.50	
	<b>182</b>	126	2.0	<b>36.5</b>	253	1.0	5.48	
	<b>159</b>	145	2.0	<b>31.7</b>	291	1.0	6.31	
	<b>126</b>	183	1.6	<b>25.2</b>	365	0.8	7.93	
	<b>110</b>	209	1.5	<b>22.0</b>	418	0.8	9.08	
	<b>91.5</b>	252	1.2	<b>18.3</b>	503	0.6	10.93	
	<b>79.3</b>	290	1.3	<b>15.9</b>	581	0.7	12.60	
	<b>75.2</b>	306	1.3	<b>15.0</b>	613	0.7	13.30	
	<b>65.4</b>	353	1.3	<b>13.1</b>	705	0.7	15.30	
	<b>54.9</b>	420	1.1	<b>11.0</b>	839	0.6	18.21	

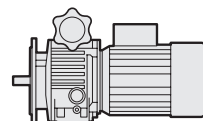


**Dimensioni**

**Dimensions**



**CMG**



**VAM**

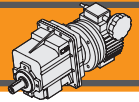
CMG	A	B	I	j1	LM	Albero uscita / Output shaft				
						D <sub>2</sub> h6	E <sub>2</sub>	F <sub>2</sub>	G <sub>2</sub>	T <sub>2</sub>
<b>002</b>	92	81.5	0	44	143 <sup>1)</sup> 153 <sup>2)</sup>	16 20	40	5 6	M6	18 22.5
<b>012</b>	124	93	6.5	45	195	20	40	6	M6	22.5
<b>013</b>		112	43		268					
<b>022</b>	124	98	11.5	45	205	25	50	8	M8	28
<b>023</b>		117	48		278					
<b>032</b>	156	118	5	70	237	30	60	8	M10	33
<b>033</b>			41.5		303					
<b>042</b>	156	128	15	70	250	35	70	10	M12	38
<b>043</b>			51.5		316					
<b>052</b>	190	157	20	88	307.5	40	80	12	M16	43
<b>053</b>			68		380					

<sup>1)</sup> IEC 63/71, <sup>2)</sup> IEC 80

	VAM							
	G	G3	VC	VF	VL	VR	VR1	VS
<b>018</b>	112.5	64.5	71	111	78	110	110	85
<b>037</b>	110	74	71	123	90	110	110	85
<b>075</b>	139	85.5	79	140	107	120	120	85
<b>15</b>	188	115	—	144	122	120	120	85
<b>22</b>	208	131	—	188	150	160	—	110
<b>40</b>	208	131	—	188	150	160	—	110

Versione U / U Version						
CMG	H	K	L	M	N f7	O
<b>002</b>	2.5	11	78	64	50	n°5 M6x14
<b>012</b> <b>013</b>	8.5	13.5	95	76	60	n°4 M8x15
<b>022</b> <b>023</b>	8.5	13.5	95	76	60	n°4 M8x15
<b>032</b> <b>033</b>	9	15	127	110	90	n°6 M8x19
<b>042</b> <b>043</b>	9	15	127	110	90	n°6 M8x19
<b>052</b> <b>053</b>	10	16	160	135	110	n°6 M10x22



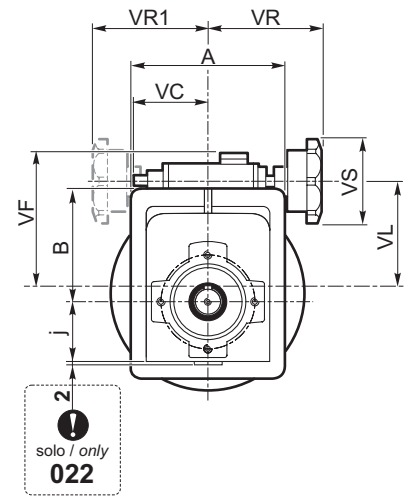
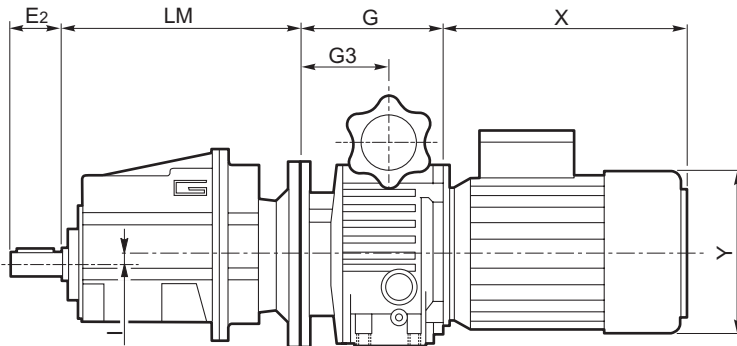


Dimensioni

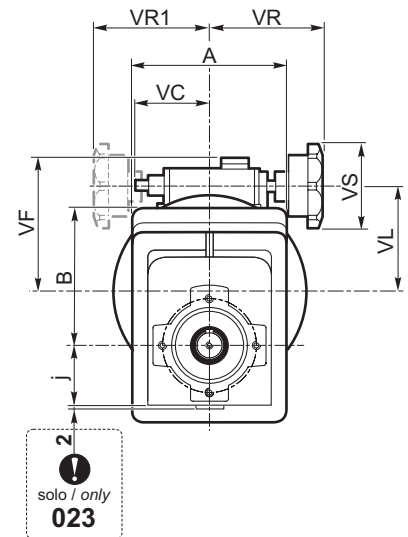
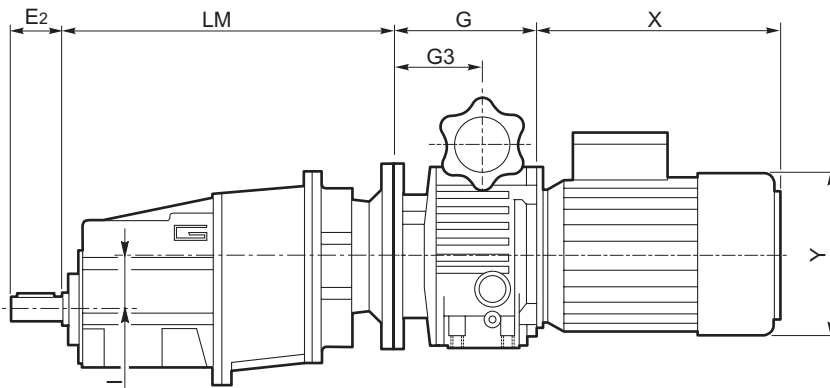
Dimensions

**CMGV..U**

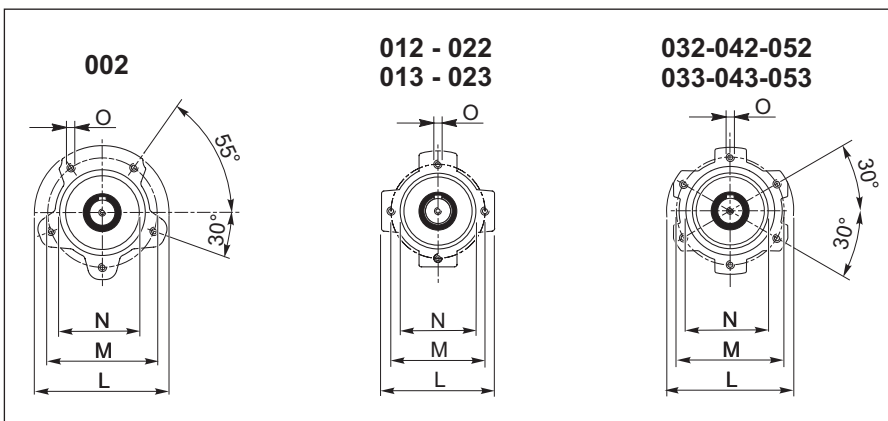
**CMGV..2 U**



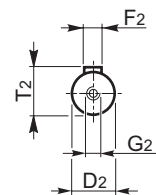
**CMGV..3 U**

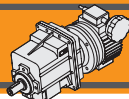


CMGV



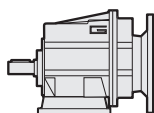
Albero uscita / Output shaft



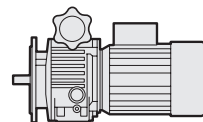


**Dimensioni**

**Dimensions**



**CMG**



**VAM**

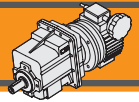
CMG	A	B	I	LM	Albero uscita / Output shaft				
					D <sub>2</sub> h6	E <sub>2</sub>	F <sub>2</sub>	G <sub>2</sub>	T <sub>2</sub>
<b>002</b>	92	81.5	0	143 <sup>1)</sup> 153 <sup>2)</sup>	16 20	40	5 6	M6	18 22.5
<b>012</b>	124	93	6.5	195	20	40	6	M6	22.5
<b>013</b>		112	43	268					
<b>022</b>	124	98	11.5	205	25	50	8	M8	28
<b>023</b>		117	48	278					
<b>032</b>	156	118	5	237	30	60	8	M10	33
<b>033</b>			41.5	303					
<b>042</b>	156	128	15	250	35	70	10	M12	38
<b>043</b>			51.5	316					
<b>052</b>	190	157	20	307.5	40	80	12	M16	43
<b>053</b>			68	380					

	VAM							
	G	G3	VC	VF	VL	VR	VR1	VS
<b>018</b>	112.5	64.5	71	111	78	110	110	85
<b>037</b>	110	74	71	123	90	110	110	85
<b>075</b>	139	85.5	79	140	107	120	120	85
<b>15</b>	188	115		144	122	120	120	85
<b>22</b>	208	131		188	150	160		110
<b>40</b>	208	131		188	150	160		110

<sup>1)</sup> IEC 63/71, <sup>2)</sup> IEC 80

Versione H / H Version										
CMG	P	Q	R	S	U	V	X	Z	Piede / Foot	
									Tipo / Type	Peso / Weight [kg]
<b>002</b>	<b>18</b>	<b>60</b>	<b>80</b>	<b>9</b>	<b>100</b>	<b>10</b>	<b>60</b>	<b>120</b>	<b>H60</b>	<b>0.2</b>
	18	80	104	9	110 - 120	10	75	145	H75	0.3
	18	50 - 87	110	9	110	10	85	135	H85	0.4
<b>012</b> <b>013</b>	<b>20</b>	<b>85</b>	<b>108</b>	<b>9</b>	<b>115</b>	<b>12</b>	<b>65</b>	<b>139</b>	<b>H65</b>	<b>0.7</b>
	18	80	118	9	110	12	75	140	H75	1.0
	25	85	120	9	120	12	80	140	H80	1.1
	18	50 - 87	118	9	110	12	85	130	H85	1.2
	25	130	154	9	110	12	90	135	H90	1.5
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7
<b>022</b> <b>023</b>	<b>20</b>	<b>85</b>	<b>108</b>	<b>9</b>	<b>115</b>	<b>12</b>	<b>65</b>	<b>139</b>	<b>H65</b>	<b>0.7</b>
	18	80	118	9	110	12	75	140	H75	1.0
	25	85	120	9	120	12	80	140	H80	1.1
	18	50 - 87	118	9	110	12	85	130	H85	1.2
	25	130	154	9	110	12	90	135	H90	1.5
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7
<b>032</b> <b>033</b>	<b>30</b>	<b>105</b>	<b>136</b>	<b>14</b>	<b>160</b>	<b>14</b>	<b>95</b>	<b>194</b>	<b>H95</b>	<b>1.5</b>
	30	100	150	11	150	14	110	185	H110	1.9
	18	70			160					
	30	165	195	14	135	14	115	170	H115	2.2
	35	110	160	14	170	14	120	210	H120	2.6
<b>042</b> <b>043</b>	<b>30</b>	<b>105</b>	<b>136</b>	<b>14</b>	<b>160</b>	<b>14</b>	<b>95</b>	<b>194</b>	<b>H95</b>	<b>1.5</b>
	30	100	150	11	150	14	110	185	H110	1.9
	18	70			160					
	30	165	195	14	135	14	115	170	H115	2.2
	35	110	160	14	170	14	120	210	H120	2.6
<b>052</b> <b>053</b>	35	145	200	18	200	22	120	239	H120	3.5
	35	205	244	18	170	22	140	219	H140	4.3
	25	110 156	199	18	225	22	155	264	H155	5.1

Preferenziale / Preferred

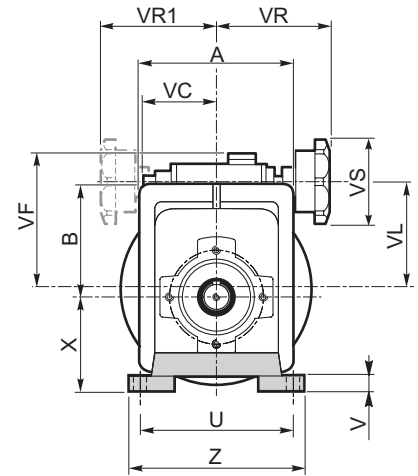
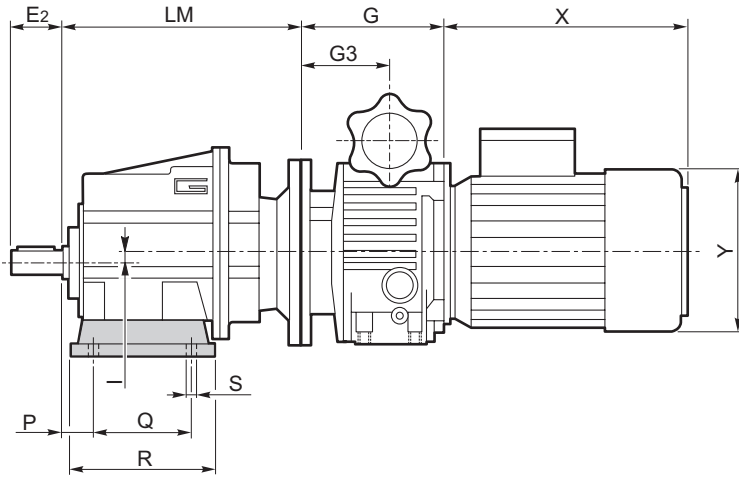


Dimensioni

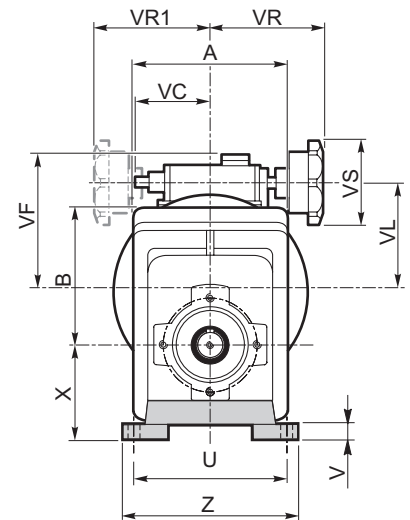
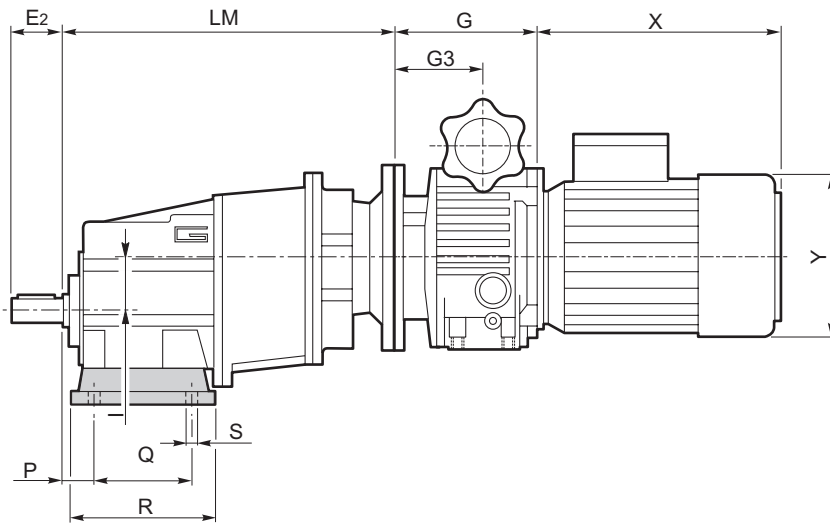
Dimensions

**CMGV..H**

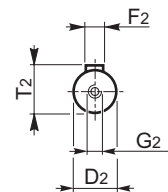
**CMGV.2 H..**



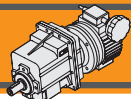
**CMGV.3 H..**



Albero uscita / Output shaft

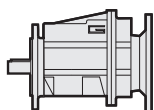


**CMGV**

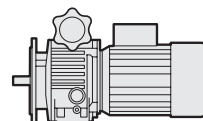


**Dimensioni**

**Dimensions**



**CMG**



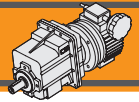
**VAM**

CMG	A	B	I	LM	Albero uscita / Output shaft				
					D <sub>2</sub> h6	E <sub>2</sub>	F <sub>2</sub>	G <sub>2</sub>	T <sub>2</sub>
<b>002</b>	92	81.5	0	143 <sup>1)</sup> 153 <sup>2)</sup>	16 20	40	5 6	M6	18 22.5
<b>012</b>	124	93	6.5	195	20	40	6	M6	22.5
<b>013</b>		112	43	268					
<b>022</b>	124	98	11.5	205	25	50	8	M8	28
<b>023</b>		117	48	278					
<b>032</b>	156	118	5	237	30	60	8	M10	33
<b>033</b>			41.5	303					
<b>042</b>	156	128	15	250	35	70	10	M12	38
<b>043</b>			51.5	316					
<b>052</b>	190	157	20	307.5	40	80	12	M16	43
<b>053</b>			68	380					

	VAM							
	G	G3	VC	VF	VL	VR	VR1	VS
<b>018</b>	112.5	64.5	71	111	78	110	110	85
<b>037</b>	110	74	71	123	90	110	110	85
<b>075</b>	139	85.5	79	140	107	120	120	85
<b>15</b>	188	115		144	122	120	120	85
<b>22</b>	208	131		188	150	160		110
<b>40</b>	208	131		188	150	160		110

<sup>1)</sup> IEC 63/71, <sup>2)</sup> IEC 80

Versione F / F Version									
CMG	H	K	L	M	N f7	O	P	Flangia / Flange	
								Tipo / Type	Peso / Weight [kg]
<b>002</b>	3.5	7	105	85	70	6.5	90	<b>F105</b>	0.1
	3.5	8	120	100	80	7	100	<b>F120</b>	0.2
	3.5	8	140	115	95	9	115	<b>F140</b>	0.2
<b>012</b> <b>013</b>	3	9	120	100	80	9	106	<b>F120</b>	0.5
	3.5	9	140	115	95	9	115	<b>F140</b>	0.8
	3.5	9	160	130	110	9	126	<b>F160</b>	1.1
	3.5	11	200	165	130	11	165	<b>F200</b>	1.8
<b>022</b> <b>023</b>	3	9	120	100	80	9	106	<b>F120</b>	0.5
	3.5	9	140	115	95	9	115	<b>F140</b>	0.8
	3.5	9	160	130	110	9	126	<b>F160</b>	1.1
	3.5	11	200	165	130	11	165	<b>F200</b>	1.8
<b>032</b> <b>033</b>	3.5	11	160	130	110	9	140	<b>F160</b>	1.0
	3.5	11	200	165	130	11	165	<b>F200</b>	1.8
	4	13	250	215	180	14	215	<b>F250</b>	2.9
<b>042</b> <b>043</b>	3.5	11	160	130	110	9	140	<b>F160</b>	1.0
	3.5	11	200	165	130	11	165	<b>F200</b>	1.8
	4	13	250	215	180	14	215	<b>F250</b>	2.9
<b>052</b> <b>053</b>	4	13	250	215	180	14	215	<b>F250</b>	2.9
	4	13	300	265	230	14	265	<b>F300</b>	4.4

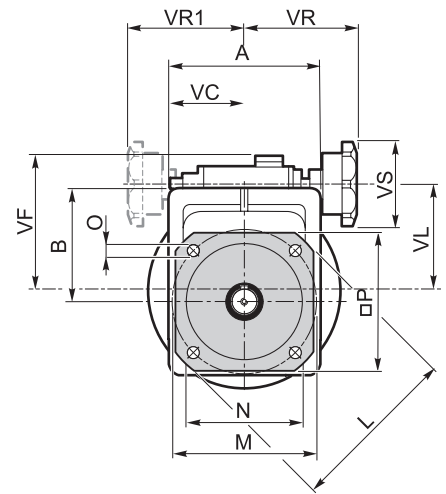
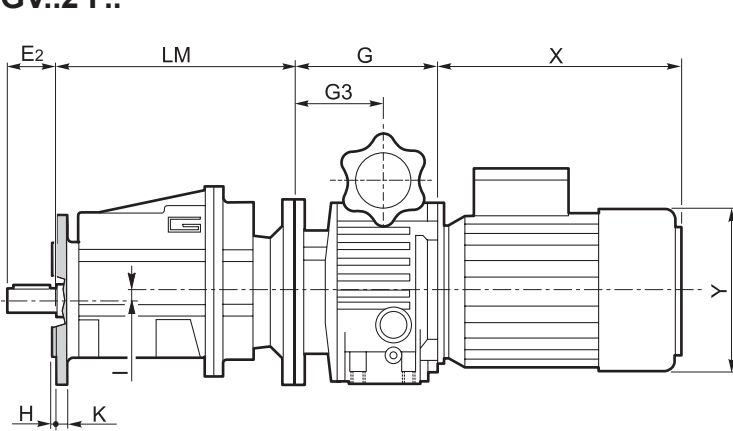


Dimensioni

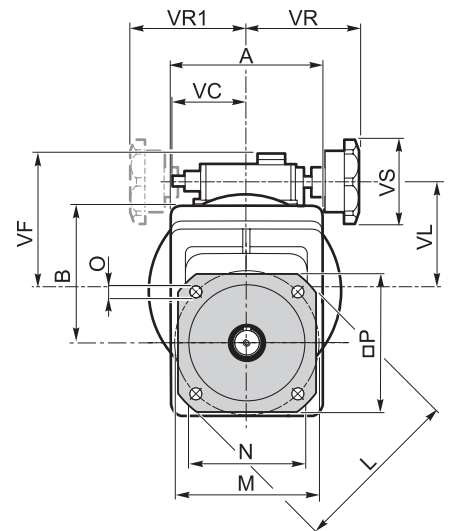
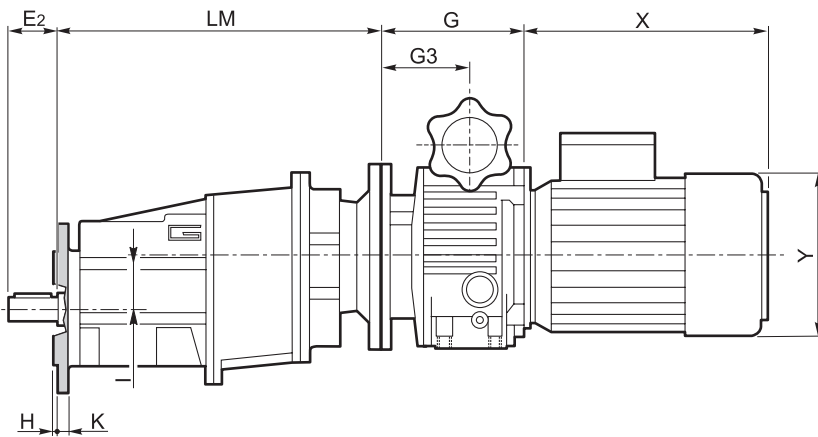
Dimensions

**CMGV..F**

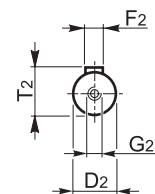
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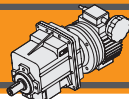


**CMGV.3 F..**



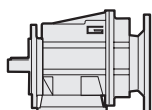
Albero uscita / Output shaft



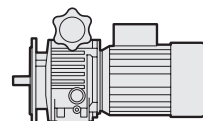


## Dimensioni

## Dimensions



**CMG**



**VAM**

CMG	A	B	I	LM	Albero uscita / Output shaft				
					D <sub>2</sub> h6	E <sub>2</sub>	F <sub>2</sub>	G <sub>2</sub>	T <sub>2</sub>
<b>002</b>	92	81.5	0	143 <sup>1)</sup> 153 <sup>2)</sup>	16 20	40	5 6	M6	18 22.5
<b>012</b>	124	93	6.5	195	20	40	6	M6	22.5
<b>013</b>		112	43	268					
<b>022</b>	124	98	11.5	205	25	50	8	M8	28
<b>023</b>		117	48	278					
<b>032</b>	156	118	5	237	30	60	8	M10	33
<b>033</b>			41.5	303					
<b>042</b>	156	128	15	250	35	70	10	M12	38
<b>043</b>			51.5	316					
<b>052</b>	190	157	20	307.5	40	80	12	M16	43
<b>053</b>			68	380					

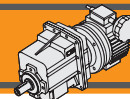
1) IEC 63/71, 2) IEC 80

	VAM							
	G	G3	VC	VF	VL	VR	VR1	VS
<b>018</b>	112.5	64.5	71	111	78	110	110	85
<b>037</b>	110	74	71	123	90	110	110	85
<b>075</b>	139	85.5	79	140	107	120	120	85
<b>15</b>	188	115		144	122	120	120	85
<b>22</b>	208	131		188	150	160		110
<b>40</b>	208	131		188	150	160		110

CMG	Versione H / H Version									Combinazioni possibili H/F Possible combinations H/F							
	P	Q	R	S	U	V	X	Z	Piede / Foot		F105	F120	F140	F160	F200	F250	F300
									Tipo Type	Peso [kg] Weight [kg]							
<b>002</b>	<b>18</b>	<b>60</b>	<b>80</b>	<b>9</b>	<b>100</b>	<b>10</b>	<b>60</b>	<b>120</b>	<b>H60</b>	<b>0.2</b>	•	•	•				
	18	80	104	9	110-120	10	75	145	H75	0.3	•	•	•				
	18	50 - 87	110	9	110	10	85	135	H85	0.4	•	•	•				
<b>012</b> <b>013</b>	<b>20</b>	<b>85</b>	<b>108</b>	<b>9</b>	<b>115</b>	<b>12</b>	<b>65</b>	<b>139</b>	<b>H65</b>	<b>0.7</b>		•	•				
	18	80	118	9	110	12	75	140	H75	1.0		•	•	•			
	25	85	120	9	120	12	80	140	H80	1.1		•	•	•			
	18	50 - 87	118	9	110	12	85	130	H85	1.2		•	•	•			
	25	130	154	9	110	12	90	135	H90	1.5		•	•	•	•		
<b>022</b> <b>023</b>	18	60 - 107.5	135	11	130	12	100	155	H100	1.7		•	•	•	•		
	<b>20</b>	<b>85</b>	<b>108</b>	<b>9</b>	<b>115</b>	<b>12</b>	<b>65</b>	<b>139</b>	<b>H65</b>	<b>0.7</b>		•	•				
	18	80	118	9	110	12	75	140	H75	1.0		•	•	•			
	25	85	120	9	120	12	80	140	H80	1.1		•	•	•			
	18	50 - 87	118	9	110	12	85	130	H85	1.2		•	•	•			
<b>032</b> <b>033</b>	25	130	154	9	110	12	90	135	H90	1.5		•	•	•	•		
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7		•	•	•	•		
	<b>30</b>	<b>105</b>	<b>136</b>	<b>14</b>	<b>160</b>	<b>14</b>	<b>95</b>	<b>194</b>	<b>H95</b>	<b>1.5</b>				•	•		
	30	100	150	11	150	14	110	185	H110	1.9				•	•		
	18	70	160	14	160	14	110	185	H110	1.9				•	•		
<b>042</b> <b>043</b>	30	165	195	14	135	14	115	170	H115	2.2				•	•	•	
	35	110	160	14	170	14	120	210	H120	2.6				•	•	•	
	<b>30</b>	<b>105</b>	<b>136</b>	<b>14</b>	<b>160</b>	<b>14</b>	<b>95</b>	<b>194</b>	<b>H95</b>	<b>1.5</b>				•	•		
	30	100	150	11	150	14	110	185	H110	1.9				•	•		
<b>052</b> <b>053</b>	18	70	160	14	170	14	120	210	H120	2.6				•	•	•	
	30	165	195	14	135	14	115	170	H115	2.2				•	•	•	
	35	110	160	14	170	14	120	210	H120	2.6				•	•	•	
	35	145	199	18	200	22	120	239	H120	3.5						•	•
<b>052</b> <b>053</b>	35	205	244	18	170	22	140	219	H140	4.3						•	•
	25	110	199	18	225	22	155	264	H155	5.1						•	•

Preferenziale / Preferred

• Combinazioni possibili H/F / Possible combinations H/F

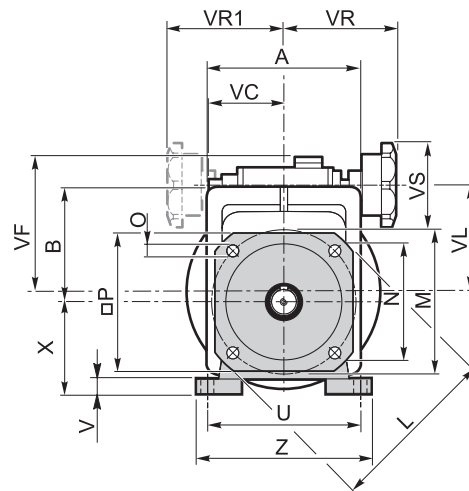
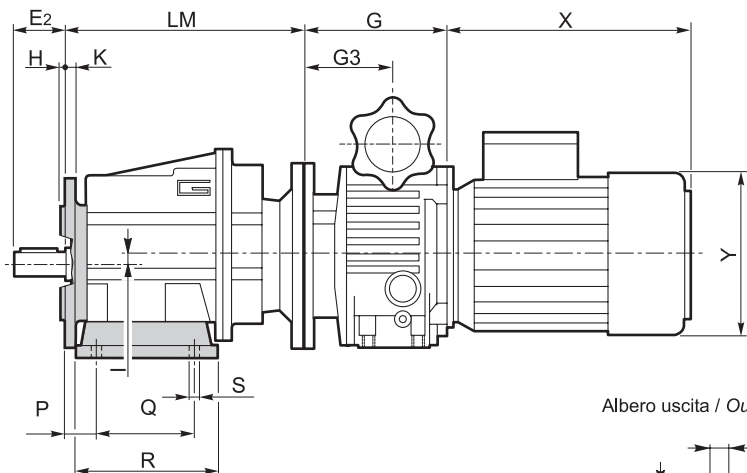


Dimensioni

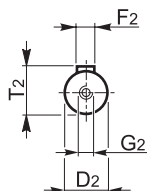
Dimensions

CMGV..H/F

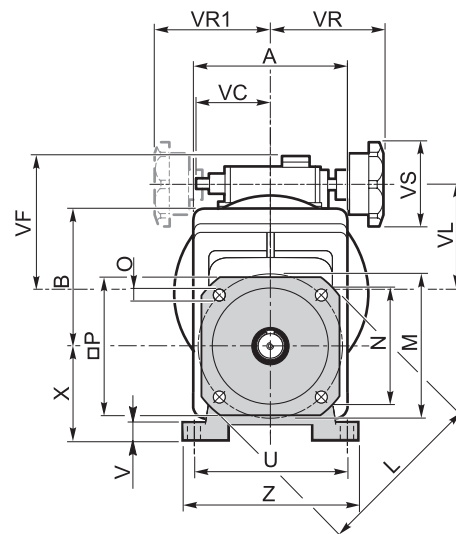
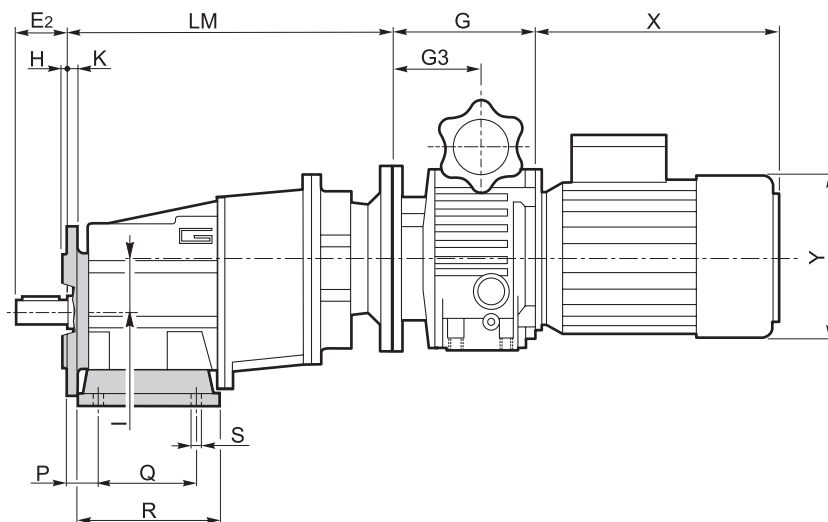
CMGV..2 H../F..



Albero uscita / Output shaft



CMGV..3 H../F..



Versione F / F Version

CMG	H	K	L	M	N f7	O	P	Flangia / Flange		
								Tipo / Type	Peso / Weight [kg]	
002	3.5	7	105	85	70	6.5	90	F105	0.1	
	3.5	8	120	100	80	7	100	F120	0.2	
	3.5	8	140	115	95	9	115	F140	0.2	
012	3	9	120	100	80	9	106	F120	0.5	
	3.5	9	140	115	95	9	115	F140	0.8	
	013	3.5	9	160	130	110	9	126	F160	1.1
	3.5	11	200	165	130	11	165	F200	1.8	
022	3	9	120	100	80	9	106	F120	0.5	
	3.5	9	140	115	95	9	115	F140	0.8	
	023	3.5	9	160	130	110	9	126	F160	1.1
	3.5	11	200	165	130	11	165	F200	1.8	
032	3.5	11	160	130	110	9	140	F160	1.0	
	033	3.5	11	200	165	130	11	165	F200	1.8
		4	13	250	215	150	14	215	F250	2.9
042	3.5	11	160	130	110	9	140	F160	1.0	
	043	3.5	11	200	165	130	11	165	F200	1.8
		4	13	250	215	150	14	215	F250	2.9
052	4	13	250	215	150	14	215	F250	2.9	
	053	4	13	300	265	230	14	265	F300	4.4

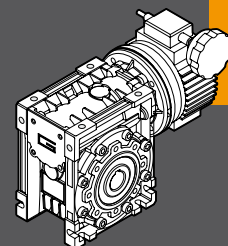




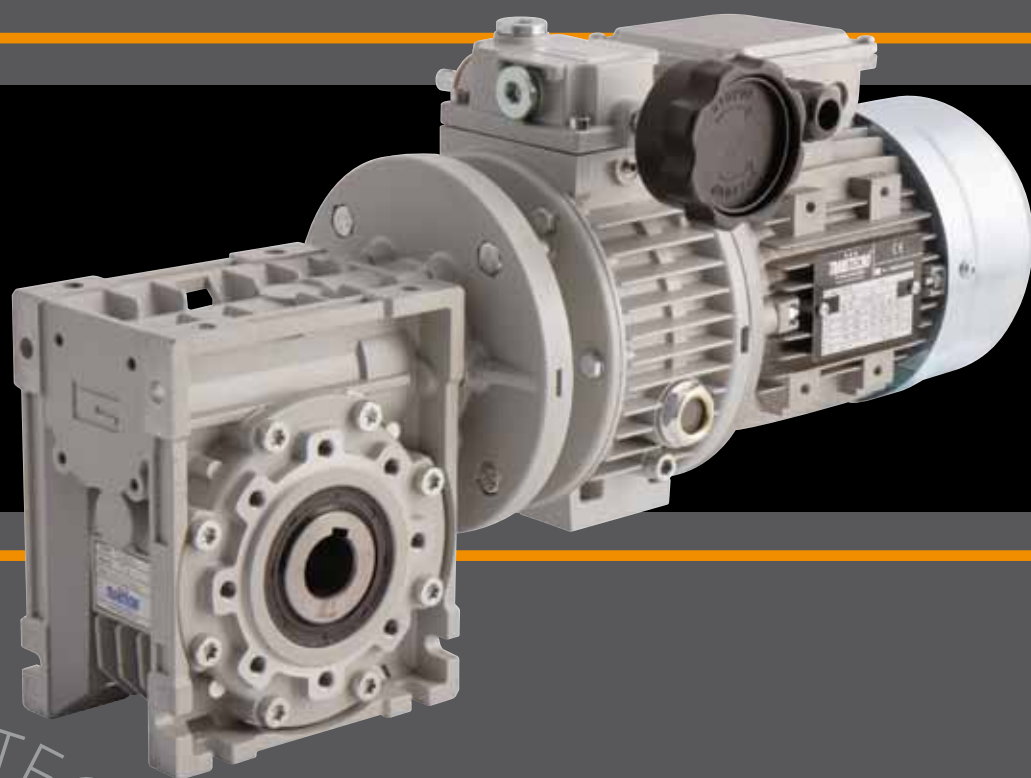
**TRANSTECNO**<sup>TM</sup>  
THE MODULAR GEARMOTOR

**CMV**

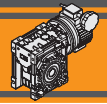
CMV



***MOTOVARIARIDUTTORI A VITE SENZA FINE***  
***MECHANICAL VARIATORS AND WORMGEARBOXES***







<b>Indice</b>	<b>Index</b>	Pag. Page
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Versioni	<i>Versions</i>	<b>M2</b>
Simbologia	<i>Symbols</i>	<b>M2</b>
Lubrificazione	<i>Lubrication</i>	<b>M3</b>
Posizione di montaggio	<i>Mounting position</i>	<b>M3</b>
Dati tecnici	<i>Technical data</i>	<b>M4</b>
Dimensioni	<i>Dimensions</i>	<b>M8</b>
Accessori	<i>Accessories</i>	<b>M10</b>
Optional	<i>Options</i>	<b>M10</b>

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## Caratteristiche tecniche

## Technical features

I motovariariduttori della serie CMV hanno le seguenti caratteristiche principali:

CMV mechanical variators and wormgearboxes main features:

- Precisione nella regolazione della velocità, contenuta in  $\pm 0.5/1\%$ .
- Campo di regolazione continuo 1:5.
- Le grandezze CM040, 050, 063, 075, 090 e 110 sono costruite con carcassa in alluminio, la grandezza 130 ha la carcassa in ghisa.
- Le grandezze VAM018, 037 e 075 sono costruite con carcassa in alluminio, le altre grandezze in ghisa
- Precision in speed regulation:  $\pm 0.5/1\%$
- Speed range 1:5
- Die-cast aluminum housing on CM040, 050, 063, 075, 090 and 110. Cast iron housing on CM130.
- Die-cast aluminum housing on VAM018, 037 and 075. Cast iron housing on the other sizes.

## Designazione

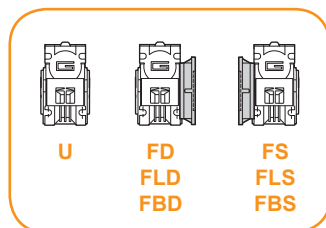
## Classification

MOTOVARIARIDUTTORE / MECHANICAL VARIATOR AND GEARBOX								
CMV	040/037	FD	20	SZDX	BRSX	90	B3/1	VS
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Pos. di montaggio Mounting position	Opzioni Options
CMV	040/018 — 130/40	U FD FS FBD FBS FLD FLS	vedi tabelle see tables	SZDX SZSX DZ	BRDX BRSX	0° 90° 180° 270°	Vedi pag. L3 See page L3	VS

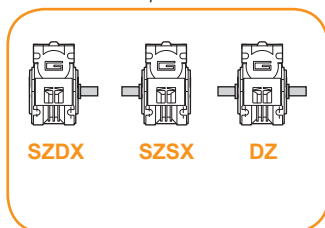
  

MOTORE / MOTOR				
0.37kW	4p	3ph	50Hz	T1
Potenza Power	Poli Poles	Fasi Phases	Frequenza Frequency	Pos. morsetti Terminal box pos.
Vedi tabelle See tables	2p 4p	1ph 3ph	50Hz 60Hz	Vedi pag. L3 See page L3

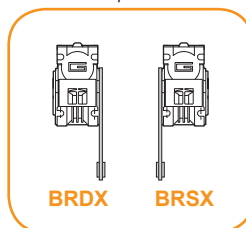
Versione Riduttore  
Gearbox Version



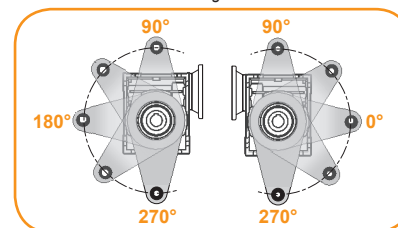
Albero di uscita  
Output shaft



Braccio di reazione  
Torque arm



Angolo  
Angle



## Simbologia

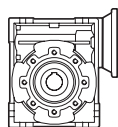
## Symbols

$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / Input speed	$M_2$ [Nm]	Coppia in uscita in funzione di $P_1$ / Output torque referred to $P_1$
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / Output speed	sf	Fattore di servizio / Service factor
i	Rapporto di riduzione / Ratio	$R_2$ [N]	Carico radiale ammissibile in uscita / Permitted output radial load
$P_1$ [kW]	Potenza in entrata / Input power	$A_2$ [N]	Carico assiale ammissibile in uscita / Permitted output axial load

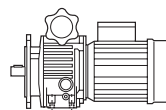


**Lubrificazione**

**Lubrication**



CM



VAM

	Quantità di olio (litri) / Oil quantity (litres)					
	B3	B8	B6	B7	V5	V6
CM040	0.07					
CM050	0.1					
CM063	0.25					
CM075	0.4					
CM090	0.85					
CM110	1.5					
CM130	4.5	3.3	3.5	3.5	4.5	3.3

Lubrificati a vita  
Life lubricated

	Quantità di olio (litri) / Oil quantity (litres)					
	VAM					
	018	037	075	15	22	40
B5	0.13	0.15	0.33	0.80	1.20	1.20
V1	0.30	0.40	0.85	1.40	2.15	2.15
V3	0.13	0.15	0.33	0.80	1.20	1.20

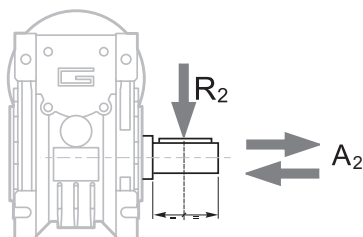
**Posizioni di montaggio**

**Mounting positions**



**Carichi radiali**

**Radial loads**

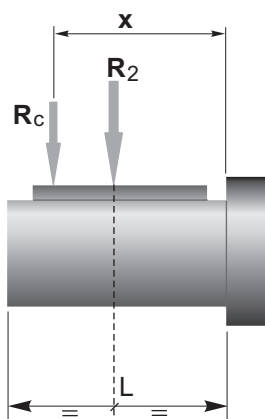


$$A_2 = R_2 \times 0.2$$

$n_2$ [min <sup>-1</sup> ]	$R_2$ [N]						
	CM040	CM050	CM063	CM075	CM090	CM110	CM130
187	1264	1770	2445	2824	3161	5058	5732
140	1392	1949	2692	3110	3481	5570	6313
93	1596	2234	3085	3564	3990	6384	7235
70	1754	2456	3392	3918	4386	7018	7953
56	1890	2646	3654	4221	4725	7560	8567
47	2004	2805	3874	4475	5009	8014	9083
35	2210	3095	4273	4937	5526	8842	10021
28	2381	3334	4603	5318	5953	9524	10794
23	2542	3559	4915	5678	6356	10170	11526
18	2759	3862	5334	6162	6897	11036	12507
14	3000	4200	5800	6700	7500	12000	13600

Quando il carico radiale risultante non è applicato sulla mezza-  
 ria dell'albero occorre calcolare quello effettivo con la seguente  
 formula:

*When the resulting radial load is not applied on the centre line  
 of the shaft it is necessary to calculate the effective load with the  
 following formula:*



	CM						
	040	050	063	075	090	110	130
<b>a</b>	84	101	120	131	182	176	188
<b>b</b>	64	76	95	101	122	136	148
<b>R<sub>2MAX</sub></b>	3000	4200	5800	6700	7500	12000	13600

$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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



**Dati tecnici**

**Technical data**

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		
63C4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	176	8	5.6	34.0	15	5.2	5	CMV 040/018
	117	12	4.3	22.7	22	3.8	7.5	
	88.0	16	3.3	17.0	29	2.9	10	
	58.7	22	2.5	11.3	39	2.2	15	
	44.0	28	1.6	8.5	51	1.5	20	
	35.2	33	1.3	6.8	61	1.1	25	
	29.3	38	1.5	5.7	65	1.4	30	
	22.0	46	1.1	4.3	79	0.9	40	
	17.6	54	0.8	3.4	89	0.8	50	
	22.0	47	1.8	4.3	81	1.7	40	
17.6	56	1.4	3.4	91	1.4	50	CMV 050/018	
	14.7	63	1.2	2.8	100	1.1		60
	11.0	73	0.9	2.1	116	0.8		80
	8.8	82	0.8	1.7	129	0.7		100
14.7	66	2.1	2.8	105	2.0	60	CMV 063/018	
	11.0	79	1.6	2.1	122	1.5		80
	8.8	89	1.4	1.7	133	1.2		100

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		
71B4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	66.7	36	2.7	13.3	65	2.5	15	CMV 050/037
	50.0	45	1.8	10.0	82	1.7	20	
	40.0	54	1.4	8.0	96	1.3	25	
	33.3	61	1.6	6.7	104	1.6	30	
	25.0	74	1.1	5.0	127	1.1	40	
	20.0	89	0.9	4.0	144	0.9	50	
	16.7	99	0.8	3.3	158	0.7	60	
	25.0	78	2.1	5.0	130	2.0	40	
	20.0	92	1.6	4.0	150	1.5	50	
	16.7	104	1.4	3.3	166	1.3	60	
12.5	125	1.0	2.5	192	1.0	80	CMV 063/037	
	10.0	141	0.9	2.0	210	0.8		100
	16.7	110	2.1	3.3	176	2.0		60
	12.5	132	1.6	2.5	206	1.5		80
10.0	150	1.3	2.0	228	1.2	100	CMV 075/037	
	10.0	165	1.9	2.0	252	1.7		100



P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		
63C2 n <sub>i</sub> =2800 [min <sup>-1</sup> ]	352	7	5.5	68.0	16	3.8	5	CMV 040/018
	235	11	4.0	45.3	23	2.8	7.5	
	176	14	3.2	34.0	30	2.2	10	
	117	21	2.2	22.7	42	1.6	15	
	88.0	27	1.5	17.0	53	1.1	20	
	70.4	31	1.2	13.6	63	0.8	25	
	58.7	36	1.3	11.3	72	1.0	30	
	44.0	44	1.0	8.5	88	0.7	40	
	88.0	27	2.7	17.0	54	1.9	20	
	70.4	32	2.2	13.6	64	1.4	25	
58.7		37	2.4	11.3	74	1.7	30	
44.0		46	1.7	8.5	90	1.2	40	
35.2		54	1.3	6.8	105	1.0	50	
29.3	61	1.1	5.7	116	0.8	60	CMV 063/018	
	35.2	56	2.4	6.8	108	1.8		50
	29.3	64	2.0	5.7	121	1.5		60
	22.0	78	1.5	4.3	143	1.1		80
17.6	88	1.3	3.4	160	0.9	100	CMV 090/037	
	17.6	88	1.3	3.4	160	0.9		100
71B4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	200	13	3.6	40.0	24	3.3	5	CMV 040/037
	133	19	2.7	26.7	35	2.4	7.5	
	100	25	2.1	20.0	45	1.9	10	
	66.7	35	1.6	13.3	62	1.4	15	
	50.0	44	1.0	10.0	80	0.9	20	
	40.0	53	0.8	8.0	96	0.7	25	
	33.3	59	0.9	6.7	103	0.9	30	

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		
71B2 n <sub>i</sub> =2800 [min <sup>-1</sup> ]	400	10	3.6	80.0	25	2.4	5	CMV 040/037
	267	14	2.6	53.3	37	1.8	7.5	
	200	19	2.1	40.0	47	1.4	10	
	133	27	1.5	26.7	66	1.0	15	
	100	35	1.0	20.0	84	0.7	20	
	400	65	6.6	80	26	4.4	5	
	267	15	4.7	53.3	37	3.2	7.5	
	200	19	3.8	40.0	48	2.5	10	
	133	28	2.6	26.7	68	1.7	15	
	100	36	1.8	20.0	85	1.2	20	
80.0	43	1.4	16.0	101	0.9	25	CMV 050/037	
	66.7	49	1.6	13.3	117	1.1		30
	50.0	62	1.1	10.0	142	0.8		40
	100	36	3.3	20.0	88	2.1		20
80.0	44	2.6	16.0	105	1.6	25	CMV 063/037	
	66.7	51	2.9	13.3	115	2.0		30
50.0	64	2.0	10.0	144	1.4	40	CMV 075/037	
	40.0	76	1.6	8.0	171	1.1		50
33.3	87	1.3	6.7	191	0.9	60	CMV 090/037	
	25.0	107	1.0	5.0	226	0.7		80
50.0	66	3.2	10.0	156	2.2	40	CMV 075/037	
	40.0	78	2.4	8.0	183	1.7		50
	33.3	91	2.0	6.7	205	1.4		60
	25.0	113	1.5	5.0	240	1.0		80
20.0	130	1.2	4.0	270	0.8	100	CMV 090/037	
	33.3	95	3.1	6.7	212	2.2		60
25.0	118	2.3	5.0	254	1.6	80	CMV 090/037	
	20.0	139	1.8	4.0	288	1.3		100



## Dati tecnici

## Technical data

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i		P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf				n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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80B4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	26	3.4	<b>40</b>	49	3.0	5	<b>CMV 050/075</b>	80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>40.0</b>	169	3.4	<b>8.0</b>	390	2.3	50	<b>CMV 110/075</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	<b>133</b>	38	2.4	<b>26.7</b>	71	2.2	7.5			<b>100</b>	50	1.9	<b>20.0</b>	91	1.7	10		<b>66.7</b>	71	1.3	<b>13.3</b>	130	1.2	15	<b>50.0</b>	90	0.9	<b>10.0</b>	163	0.8	20	<b>40.0</b>	108	0.7	<b>8.0</b>	192	0.6	25	<b>33.3</b>	122	0.8	<b>6.7</b>	209	0.8	30	<b>66.7</b>	73	2.4	<b>13.3</b>	128	2.4	15	<b>CMV 063/075</b>	90S4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	40	4.0	<b>40</b>	74	3.8	5	<b>CMV 063/15</b>	<b>50.0</b>	94	1.6	<b>10.0</b>	161	1.6	20	<b>40.0</b>	113	1.2	<b>8.0</b>	189	1.2	25	<b>33.3</b>	126	1.5	<b>6.7</b>	216	1.4	30	<b>25.0</b>	156	1.0	<b>5.0</b>	259	1.0	40	<b>20.0</b>	183	0.8	<b>4.0</b>	300	0.8	50	<b>40.0</b>	110	2.1	<b>8.0</b>	198	1.9	25	<b>CMV 075/075</b>	50.0	144	1.8	<b>10.0</b>	248	1.7	20	<b>CMV 075/15</b>	<b>33.3</b>	122	2.5	<b>6.7</b>	227	2.3	30	<b>25.0</b>	154	1.7	<b>5.0</b>	274	1.6	40	<b>20.0</b>	192	1.3	<b>4.0</b>	318	1.2	50	<b>16.7</b>	220	1.1	<b>3.3</b>	353	1.0	60	<b>12.5</b>	264	0.8	<b>2.5</b>	413	0.7	80	<b>25.0</b>	173	2.7	<b>5.0</b>	293	2.6	40	<b>CMV 090/075</b>	20.0	306	1.4	<b>4.0</b>	513	1.2	50	<b>CMV 090/15</b>	<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50	<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60	<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80	<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100	<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8	80	<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572	1.0	60	<b>CMV 110/15</b>	<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	53	3.0	<b>40</b>	98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75	1.6	7.5	<b>200</b>	38	1.9	<b>40.0</b>	96	1.3	10	<b>133</b>	55	1.3	<b>26.7</b>	135	0.9	15	<b>400</b>	20	5.8	<b>80</b>	53	3.7	5	<b>CMV 063/075</b>	133	77	2.2	<b>26.7</b>	144	2.0	7.5	<b>CMV 075/15</b>	<b>267</b>	29	4.2	<b>53.3</b>	76	2.8	7.5	<b>200</b>	38	3.4	<b>40.0</b>	98	2.2	10	<b>133</b>	56	2.4	<b>26.7</b>	139	1.6	15	<b>100</b>	72	1.6	<b>20.0</b>	175	1.1	20	<b>80.0</b>	88	1.3	<b>16.0</b>	210	0.8	25	<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>	482	3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																				
	<b>100</b>	50	1.9	<b>20.0</b>	91	1.7	10			<b>66.7</b>	71	1.3	<b>13.3</b>	130	1.2	15		<b>50.0</b>	90	0.9	<b>10.0</b>	163	0.8	20	<b>40.0</b>	108	0.7	<b>8.0</b>	192	0.6	25	<b>33.3</b>	122	0.8	<b>6.7</b>	209	0.8	30	<b>66.7</b>	73	2.4	<b>13.3</b>	128	2.4	15	<b>CMV 063/075</b>	90S4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	40	4.0	<b>40</b>	74			3.8	5	<b>CMV 063/15</b>	<b>50.0</b>	94	1.6	<b>10.0</b>		161	1.6	20	<b>40.0</b>	113	1.2	<b>8.0</b>	189	1.2	25	<b>33.3</b>	126	1.5	<b>6.7</b>	216	1.4	30	<b>25.0</b>	156	1.0	<b>5.0</b>	259	1.0	40	<b>20.0</b>	183	0.8	<b>4.0</b>	300	0.8	50	<b>40.0</b>	110	2.1	<b>8.0</b>	198	1.9	25	<b>CMV 075/075</b>	50.0	144	1.8			<b>10.0</b>	248	1.7	20	<b>CMV 075/15</b>	<b>33.3</b>		122	2.5	<b>6.7</b>	227	2.3	30	<b>25.0</b>	154	1.7	<b>5.0</b>	274	1.6	40	<b>20.0</b>	192	1.3	<b>4.0</b>	318	1.2	50	<b>16.7</b>	220	1.1	<b>3.3</b>	353	1.0	60	<b>12.5</b>	264	0.8	<b>2.5</b>	413	0.7	80	<b>25.0</b>	173	2.7	<b>5.0</b>	293	2.6	40	<b>CMV 090/075</b>			20.0	306	1.4	<b>4.0</b>	513	1.2		50	<b>CMV 090/15</b>	<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50	<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60	<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80	<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100	<b>12.5</b>	302	2.0	<b>2.5</b>	490			1.8	80	<b>CMV 110/075</b>	16.7	351	1.1		<b>3.3</b>	572	1.0	60	<b>CMV 110/15</b>	<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20			3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]		<b>200</b>	53	3.0	<b>40</b>	98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75	1.6	7.5	<b>200</b>	38	1.9	<b>40.0</b>	96	1.3	10	<b>133</b>	55	1.3	<b>26.7</b>	135	0.9			15	<b>400</b>	20	5.8	<b>80</b>	53		3.7	5	<b>CMV 063/075</b>	133	77	2.2	<b>26.7</b>	144	2.0	7.5	<b>CMV 075/15</b>	<b>267</b>	29	4.2	<b>53.3</b>	76	2.8	7.5	<b>200</b>	38	3.4	<b>40.0</b>	98	2.2	10	<b>133</b>	56	2.4	<b>26.7</b>	139	1.6	15	<b>100</b>	72	1.6	<b>20.0</b>	175	1.1	20	<b>80.0</b>	88	1.3			<b>16.0</b>	210	0.8	25	<b>66.7</b>	102		1.4	<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30			<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1		40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>			366	1.4	50	<b>33.3</b>	190	1.5		<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468			0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>		<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>	482	3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																													
	<b>66.7</b>	71	1.3	<b>13.3</b>	130	1.2	15			<b>50.0</b>	90	0.9	<b>10.0</b>	163	0.8	20		<b>40.0</b>	108	0.7	<b>8.0</b>	192	0.6	25	<b>33.3</b>	122	0.8	<b>6.7</b>	209	0.8	30	<b>66.7</b>	73	2.4	<b>13.3</b>	128	2.4	15	<b>CMV 063/075</b>	90S4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	40	4.0	<b>40</b>	74			3.8	5	<b>CMV 063/15</b>	<b>50.0</b>	94			1.6	<b>10.0</b>		161	1.6	20	<b>40.0</b>		113	1.2	<b>8.0</b>	189	1.2	25	<b>33.3</b>	126	1.5	<b>6.7</b>	216	1.4	30	<b>25.0</b>	156	1.0	<b>5.0</b>	259	1.0	40	<b>20.0</b>	183	0.8	<b>4.0</b>	300	0.8	50	<b>40.0</b>	110	2.1	<b>8.0</b>	198	1.9	25	<b>CMV 075/075</b>	50.0	144	1.8			<b>10.0</b>	248			1.7	20	<b>CMV 075/15</b>	<b>33.3</b>		122		2.5	<b>6.7</b>	227	2.3	30	<b>25.0</b>	154	1.7	<b>5.0</b>	274	1.6	40	<b>20.0</b>	192	1.3	<b>4.0</b>	318	1.2	50	<b>16.7</b>	220	1.1	<b>3.3</b>	353	1.0	60	<b>12.5</b>	264	0.8	<b>2.5</b>	413	0.7	80	<b>25.0</b>	173	2.7	<b>5.0</b>	293	2.6	40	<b>CMV 090/075</b>					20.0	306	1.4	<b>4.0</b>	513		1.2		50	<b>CMV 090/15</b>	<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50	<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60	<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80	<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100	<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8	80			<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572	1.0		60	<b>CMV 110/15</b>	<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]			<b>400</b>	20	3.2	<b>80</b>	51				2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	53	3.0		<b>40</b>	98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75	1.6	7.5	<b>200</b>	38	1.9	<b>40.0</b>	96	1.3	10	<b>133</b>			55	1.3	<b>26.7</b>	135	0.9	15		<b>400</b>	20			5.8	<b>80</b>	53	3.7	5	<b>CMV 063/075</b>		133	77	2.2	<b>26.7</b>	144	2.0	7.5	<b>CMV 075/15</b>	<b>267</b>	29	4.2	<b>53.3</b>	76	2.8	7.5	<b>200</b>	38	3.4	<b>40.0</b>	98	2.2	10	<b>133</b>	56	2.4	<b>26.7</b>	139	1.6	15	<b>100</b>	72			1.6	<b>20.0</b>	175	1.1	20	<b>80.0</b>		88	1.3	<b>16.0</b>	210	0.8			25	<b>66.7</b>	102	1.4	<b>13.3</b>	230		1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0			<b>16.0</b>	216	1.3	25	<b>66.7</b>	104		2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6			<b>10.0</b>	312	1.1	40	<b>40.0</b>	158		1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>			252	2.5	30	<b>50.0</b>	137	2.6		<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50			<b>33.3</b>			190	1.5	<b>6.7</b>	425	1.1			60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547			0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9		<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>	482	3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																									
	<b>50.0</b>	90	0.9	<b>10.0</b>	163	0.8	20			<b>40.0</b>	108	0.7	<b>8.0</b>	192	0.6	25		<b>33.3</b>	122	0.8	<b>6.7</b>	209	0.8	30	<b>66.7</b>	73	2.4	<b>13.3</b>	128	2.4	15	<b>CMV 063/075</b>	90S4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	40	4.0	<b>40</b>	74			3.8	5	<b>CMV 063/15</b>	<b>50.0</b>	94			1.6	<b>10.0</b>		161	1.6			20	<b>40.0</b>		113	1.2	<b>8.0</b>	189		1.2	25	<b>33.3</b>	126	1.5	<b>6.7</b>	216	1.4	30	<b>25.0</b>	156	1.0	<b>5.0</b>	259	1.0	40	<b>20.0</b>	183	0.8	<b>4.0</b>	300	0.8	50	<b>40.0</b>	110	2.1	<b>8.0</b>	198	1.9	25	<b>CMV 075/075</b>	50.0	144	1.8			<b>10.0</b>	248			1.7	20			<b>CMV 075/15</b>	<b>33.3</b>		122		2.5		<b>6.7</b>	227	2.3	30	<b>25.0</b>	154	1.7	<b>5.0</b>	274	1.6	40	<b>20.0</b>	192	1.3	<b>4.0</b>	318	1.2	50	<b>16.7</b>	220	1.1	<b>3.3</b>	353	1.0	60	<b>12.5</b>	264	0.8	<b>2.5</b>	413	0.7	80	<b>25.0</b>	173	2.7	<b>5.0</b>	293	2.6	40	<b>CMV 090/075</b>							20.0	306	1.4	<b>4.0</b>		513		1.2		50	<b>CMV 090/15</b>	<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50	<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60	<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80	<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100	<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8	80			<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572	1.0		60	<b>CMV 110/15</b>	<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																			80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>				51	2.2			5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]		<b>200</b>	53	3.0	<b>40</b>		98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75	1.6	7.5	<b>200</b>	38	1.9	<b>40.0</b>			96	1.3	10	<b>133</b>	55	1.3		<b>26.7</b>	135			0.9	15	<b>400</b>	20	5.8				<b>80</b>	53	3.7	5	<b>CMV 063/075</b>	133		77	2.2	<b>26.7</b>	144	2.0	7.5	<b>CMV 075/15</b>	<b>267</b>	29	4.2	<b>53.3</b>	76	2.8	7.5	<b>200</b>	38	3.4	<b>40.0</b>	98	2.2	10	<b>133</b>	56			2.4	<b>26.7</b>	139	1.6	15	<b>100</b>		72	1.6	<b>20.0</b>	175	1.1			20	<b>80.0</b>	88	1.3	<b>16.0</b>	210		0.8	25			<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0		30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7	40			<b>100</b>	74	2.7	<b>20.0</b>	180	1.7		20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25			<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5		30	<b>50.0</b>	132	1.6	<b>10.0</b>			312	1.1	40	<b>40.0</b>	158	1.2		<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1			30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>		410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>			137			2.6	<b>10.0</b>	317	1.8	40			<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>			190	1.5	<b>6.7</b>	425			1.1	60		<b>25.0</b>	236	1.1		<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8			40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>		576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>	482	3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																						
	<b>40.0</b>	108	0.7	<b>8.0</b>	192	0.6	25			<b>33.3</b>	122	0.8	<b>6.7</b>	209	0.8	30		<b>66.7</b>	73	2.4	<b>13.3</b>	128	2.4	15	<b>CMV 063/075</b>	90S4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	40	4.0	<b>40</b>	74			3.8	5	<b>CMV 063/15</b>	<b>50.0</b>	94			1.6	<b>10.0</b>		161	1.6			20	<b>40.0</b>		113	1.2			<b>8.0</b>	189		1.2	25	<b>33.3</b>	126		1.5	<b>6.7</b>	216	1.4	30	<b>25.0</b>	156	1.0	<b>5.0</b>	259	1.0	40	<b>20.0</b>	183	0.8	<b>4.0</b>	300	0.8	50	<b>40.0</b>	110	2.1	<b>8.0</b>	198	1.9	25	<b>CMV 075/075</b>	50.0	144	1.8			<b>10.0</b>	248			1.7	20			<b>CMV 075/15</b>	<b>33.3</b>				122		2.5		<b>6.7</b>		227	2.3	30	<b>25.0</b>	154	1.7	<b>5.0</b>	274	1.6	40	<b>20.0</b>	192	1.3	<b>4.0</b>	318	1.2	50	<b>16.7</b>	220	1.1	<b>3.3</b>	353	1.0	60	<b>12.5</b>	264	0.8	<b>2.5</b>	413	0.7	80	<b>25.0</b>	173	2.7	<b>5.0</b>	293	2.6	40	<b>CMV 090/075</b>									20.0	306	1.4		<b>4.0</b>		513		1.2		50	<b>CMV 090/15</b>	<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50	<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60	<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80	<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100	<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8	80			<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572	1.0		60	<b>CMV 110/15</b>	<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2				<b>80</b>	51			2.2				5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>		53	3.0	<b>40</b>		98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75	1.6	7.5			<b>200</b>	38	1.9	<b>40.0</b>	96	1.3		10	<b>133</b>			55	1.3	<b>26.7</b>	135	0.9				15	<b>400</b>	20	5.8				<b>80</b>	53	3.7	5	<b>CMV 063/075</b>	133		77	2.2	<b>26.7</b>	144	2.0	7.5	<b>CMV 075/15</b>	<b>267</b>	29	4.2	<b>53.3</b>	76	2.8	7.5	<b>200</b>	38			3.4	<b>40.0</b>	98	2.2	10	<b>133</b>		56	2.4	<b>26.7</b>	139	1.6			15	<b>100</b>	72	1.6	<b>20.0</b>	175		1.1	20			<b>80.0</b>	88	1.3	<b>16.0</b>	210	0.8		25			<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0		30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185			1.6	10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0		<b>10.0</b>	288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>			180	1.7	20	<b>80.0</b>	90	2.0		<b>16.0</b>	216	1.3	25	<b>66.7</b>			104	2.3	<b>13.3</b>	252	1.5	30		<b>50.0</b>	132	1.6	<b>10.0</b>			312	1.1	40	<b>40.0</b>	158			1.2		<b>8.0</b>	366	0.8	50		<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182			1.0			<b>6.7</b>	410	0.7	60	<b>66.7</b>			107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137			2.6	<b>10.0</b>	317	1.8			40	<b>40.0</b>		165	1.9	<b>8.0</b>		366	1.4	50	<b>33.3</b>			190	1.5	<b>6.7</b>	425	1.1			60		<b>25.0</b>	236	1.1	<b>5.0</b>		509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8			40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>		576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>	482	3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100			
	<b>33.3</b>	122	0.8	<b>6.7</b>	209	0.8	30			<b>66.7</b>	73	2.4	<b>13.3</b>	128	2.4	15		<b>CMV 063/075</b>	90S4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	40	4.0	<b>40</b>	74			3.8	5	<b>CMV 063/15</b>	<b>50.0</b>	94			1.6	<b>10.0</b>		161	1.6			20	<b>40.0</b>		113	1.2			<b>8.0</b>	189		1.2	25			<b>33.3</b>	126		1.5	<b>6.7</b>	216	1.4		30	<b>25.0</b>	156	1.0	<b>5.0</b>	259	1.0	40	<b>20.0</b>	183	0.8	<b>4.0</b>	300	0.8	50	<b>40.0</b>	110	2.1	<b>8.0</b>	198	1.9	25	<b>CMV 075/075</b>	50.0	144	1.8			<b>10.0</b>	248			1.7	20			<b>CMV 075/15</b>	<b>33.3</b>				122				2.5		<b>6.7</b>		227		2.3	30	<b>25.0</b>	154	1.7	<b>5.0</b>	274	1.6	40	<b>20.0</b>	192	1.3	<b>4.0</b>	318	1.2	50	<b>16.7</b>	220	1.1	<b>3.3</b>	353	1.0	60	<b>12.5</b>	264	0.8	<b>2.5</b>	413	0.7	80	<b>25.0</b>	173	2.7	<b>5.0</b>	293	2.6	40	<b>CMV 090/075</b>											20.0	306		1.4		<b>4.0</b>		513		1.2		50	<b>CMV 090/15</b>	<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50	<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60	<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80	<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100	<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8	80			<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572	1.0		60	<b>CMV 110/15</b>	<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>				20	3.2			<b>80</b>				51			2.2		5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]		<b>200</b>	53	3.0		<b>40</b>	98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29			2.3	<b>53.3</b>	75	1.6	7.5	<b>200</b>		38	1.9			<b>40.0</b>	96	1.3	10	<b>133</b>				55	1.3	<b>26.7</b>	135				0.9	15	<b>400</b>	20				5.8	<b>80</b>	53	3.7	5	<b>CMV 063/075</b>		133	77	2.2	<b>26.7</b>	144	2.0	7.5	<b>CMV 075/15</b>	<b>267</b>			29	4.2	<b>53.3</b>	76	2.8	7.5		<b>200</b>	38	3.4	<b>40.0</b>	98			2.2	10	<b>133</b>	56	2.4	<b>26.7</b>		139	1.6			15	<b>100</b>	72	1.6	<b>20.0</b>	175		1.1			20	<b>80.0</b>	88	1.3	<b>16.0</b>	210		0.8			25	<b>66.7</b>	102	1.4			<b>13.3</b>	230		1.0	30	<b>CMV 090/15</b>		100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>			<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7		40	<b>100</b>	74	2.7	<b>20.0</b>			180	1.7	20	<b>80.0</b>	90	2.0		<b>16.0</b>	216	1.3	25			<b>66.7</b>	104	2.3	<b>13.3</b>	252			1.5		30	<b>50.0</b>	132	1.6				<b>10.0</b>	312	1.1	40	<b>40.0</b>	158		1.2	<b>8.0</b>			366			0.8	50	<b>CMV 075/075</b>	50.0	263			1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182			1.0	<b>6.7</b>	410	0.7			60	<b>66.7</b>		107	3.8	<b>13.3</b>		252	2.5	30	<b>50.0</b>			137	2.6	<b>10.0</b>	317	1.8			40		<b>40.0</b>	165	1.9	<b>8.0</b>		366	1.4	50			<b>33.3</b>	190	1.5	<b>6.7</b>	425			1.1		60	<b>25.0</b>	236	1.1		<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547			0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9		<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>	482	3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>
	<b>66.7</b>	73	2.4	<b>13.3</b>	128	2.4	15			<b>CMV 063/075</b>	90S4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	40	4.0	<b>40</b>	74				3.8	5	<b>CMV 063/15</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	<b>50.0</b>	94	1.6	<b>10.0</b>	161	1.6	20					<b>40.0</b>	113	1.2	<b>8.0</b>	189				1.2	25		<b>33.3</b>	126			1.5	<b>6.7</b>		216	1.4			30	<b>25.0</b>		156	1.0			<b>5.0</b>	259		1.0	40	<b>20.0</b>	183	0.8	<b>4.0</b>		300	0.8	50	<b>40.0</b>	110	2.1	<b>8.0</b>	198	1.9	25	<b>CMV 075/075</b>	50.0	144	1.8	<b>10.0</b>	248	1.7	20	<b>CMV 075/15</b>	<b>33.3</b>	122	2.5	<b>6.7</b>	227	2.3	30	<b>25.0</b>	154	1.7	<b>5.0</b>	274	1.6	40	<b>20.0</b>			192	1.3			<b>4.0</b>	318			1.2	50				<b>16.7</b>	220	1.1		<b>3.3</b>	353	1.0		60		<b>12.5</b>	264	0.8	<b>2.5</b>	413	0.7	80	<b>25.0</b>	173	2.7	<b>5.0</b>	293	2.6	40	<b>CMV 090/075</b>	20.0	306	1.4	<b>4.0</b>	513	1.2	50	<b>CMV 090/15</b>	<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50	<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60	<b>12.5</b>	288	1.2	<b>2.5</b>					451	1.1	80	<b>10.0</b>					330	1.0	<b>2.0</b>	504	0.9		100		<b>12.5</b>		302		2.0	<b>2.5</b>	490	1.8	80	<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572	1.0	60	<b>CMV 110/15</b>	<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	53	3.0	<b>40</b>	98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29		2.3	<b>53.3</b>	75	1.6		7.5						<b>200</b>		38				1.9	<b>40.0</b>			96				1.3			10		<b>133</b>				55	1.3	<b>26.7</b>		135	0.9	15	<b>400</b>		20	5.8	<b>80</b>	53	3.7	5	<b>CMV 063/075</b>	133	77	2.2	<b>26.7</b>	144	2.0	7.5	<b>CMV 075/15</b>	<b>267</b>	29	4.2	<b>53.3</b>	76		2.8		7.5	<b>200</b>	38	3.4				<b>40.0</b>	98	2.2	10				<b>133</b>	56	2.4	<b>26.7</b>	139				1.6	15	<b>100</b>	72	1.6	<b>20.0</b>		175	1.1	20	<b>80.0</b>	88	1.3	<b>16.0</b>	210	0.8	25	<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>			<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7		40			<b>100</b>	74	2.7	<b>20.0</b>	180	1.7		20			<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>		104	2.3		<b>13.3</b>		252	1.5	30	<b>50.0</b>	132	1.6		<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263			1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>		<b>33.3</b>	182	1.0	<b>6.7</b>			410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252		2.5	30	<b>50.0</b>	137	2.6			<b>10.0</b>	317	1.8	40	<b>40.0</b>	165		1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>			425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509		0.8	80			<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40		<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100			<b>40.0</b>	243	2.9	<b>8.0</b>	432			2.8		25	<b>CMV 110/15</b>	16.7	710		0.8	<b>2.0</b>	1104			0.7	100	<b>CMV 110/15</b>	<b>33.3</b>	270			3.2		<b>6.7</b>	482	3.1	30		<b>25.0</b>	350	2.4	<b>5.0</b>			624	2.1	40	<b>20.0</b>			426	1.8		<b>4.0</b>	732	1.6		50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0			<b>2.5</b>	979	0.9	80	<b>10.0</b>	710		0.8	<b>2.0</b>	1104	0.7	100																				
	<b>40.0</b>	113	1.2	<b>8.0</b>	189	1.2	25					<b>33.3</b>	126	1.5	<b>6.7</b>	216				1.4	30		<b>25.0</b>	156			1.0	<b>5.0</b>		259	1.0			40	<b>20.0</b>		183	0.8	<b>4.0</b>	300	0.8	50		<b>40.0</b>	110	2.1	<b>8.0</b>	198	1.9	25	<b>CMV 075/075</b>	50.0	144	1.8	<b>10.0</b>	248	1.7	20	<b>CMV 075/15</b>	<b>33.3</b>			122	2.5	<b>6.7</b>	227	2.3	30		<b>25.0</b>	154	1.7	<b>5.0</b>	274	1.6	40	<b>20.0</b>	192	1.3	<b>4.0</b>	318	1.2	50	<b>16.7</b>			220	1.1			<b>3.3</b>	353			1.0	60	<b>12.5</b>	264		0.8	<b>2.5</b>	413		0.7	80	<b>25.0</b>		173	2.7	<b>5.0</b>	293	2.6	40	<b>CMV 090/075</b>	20.0	306	1.4	<b>4.0</b>	513	1.2	50	<b>CMV 090/15</b>	<b>20.0</b>			204	2.0	<b>4.0</b>	342	1.9	50		<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60	<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80	<b>10.0</b>	330	1.0	<b>2.0</b>				504	0.9	100	<b>12.5</b>	302	2.0				<b>2.5</b>	490	1.8	80	<b>CMV 110/075</b>	16.7	351		1.1		<b>3.3</b>		572	1.0	60	<b>CMV 110/15</b>	<b>10.0</b>			354	1.6	<b>2.0</b>	552	1.4	100		<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2		5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	53	3.0	<b>40</b>			98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3		<b>53.3</b>	75		1.6	7.5	<b>200</b>	38		1.9						<b>40.0</b>		96				1.3	10			<b>133</b>				55			1.3		<b>26.7</b>				135	0.9	15		<b>400</b>	20	5.8	<b>80</b>		53	3.7	5	<b>CMV 063/075</b>	133	77			2.2	<b>26.7</b>	144	2.0	7.5	<b>CMV 075/15</b>		<b>267</b>	29	4.2	<b>53.3</b>	76	2.8	7.5	<b>200</b>	38	3.4	<b>40.0</b>	98			2.2	10	<b>133</b>	56	2.4				<b>26.7</b>	139	1.6	15	<b>100</b>				72	1.6	<b>20.0</b>	175	1.1	20		<b>80.0</b>	88	1.3	<b>16.0</b>	210	0.8	25	<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100	101			1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>		<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7	40	<b>100</b>	74	2.7			<b>20.0</b>	180	1.7	20	<b>80.0</b>	90		2.0			<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>		252	1.5		30		<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1		40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263			1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182		1.0	<b>6.7</b>	410	0.7	60			<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>		137	2.6	<b>10.0</b>	317	1.8			40	<b>40.0</b>	165	1.9	<b>8.0</b>	366		1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60			<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>		25.0	468	0.8	<b>5.0</b>			547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9		<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9			<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8		<b>2.0</b>			1104	0.7	100	<b>CMV 110/15</b>	<b>33.3</b>			270	3.2		<b>6.7</b>	482			3.1		30	<b>25.0</b>	350	2.4		<b>5.0</b>	624	2.1	40			<b>20.0</b>	426	1.8	<b>4.0</b>			732	1.6		50	<b>16.7</b>	490		1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9			80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104		0.7	100																							
	<b>33.3</b>	126	1.5	<b>6.7</b>	216	1.4	30					<b>25.0</b>	156	1.0	<b>5.0</b>	259				1.0	40		<b>20.0</b>	183			0.8	<b>4.0</b>		300	0.8	50	<b>40.0</b>	110	2.1		<b>8.0</b>	198	1.9	25	<b>CMV 075/075</b>	50.0	144	1.8	<b>10.0</b>	248	1.7	20	<b>CMV 075/15</b>	<b>33.3</b>			122	2.5	<b>6.7</b>	227	2.3	30		<b>25.0</b>			154	1.7	<b>5.0</b>	274	1.6	40		<b>20.0</b>	192	1.3	<b>4.0</b>	318	1.2	50	<b>16.7</b>	220	1.1	<b>3.3</b>	353	1.0	60	<b>12.5</b>			264	0.8			<b>2.5</b>	413	0.7	80	<b>25.0</b>	173	2.7	<b>5.0</b>		293	2.6	40		<b>CMV 090/075</b>	20.0	306	1.4	<b>4.0</b>	513	1.2	50	<b>CMV 090/15</b>	<b>20.0</b>			204	2.0	<b>4.0</b>	342	1.9	50		<b>16.7</b>			234	1.6	<b>3.3</b>	382	1.5	60		<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80	<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100	<b>12.5</b>	302	2.0	<b>2.5</b>			490	1.8	80	<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>			572	1.0	60	<b>CMV 110/15</b>			<b>10.0</b>	354	1.6		<b>2.0</b>		552	1.4	100		<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]		<b>200</b>	53	3.0	<b>40</b>	98	2.8		5			<b>CMV 063/15</b>	<b>267</b>	29	2.3			<b>53.3</b>	75	1.6		7.5	<b>200</b>	38		1.9	<b>40.0</b>		96	1.3	10	<b>133</b>		55						1.3		<b>26.7</b>				135	0.9			15				<b>400</b>			20		5.8				<b>80</b>	53	3.7		5	<b>CMV 063/075</b>	133	77		2.2	<b>26.7</b>	144			2.0			7.5	<b>CMV 075/15</b>	<b>267</b>	29	4.2			<b>53.3</b>	76	2.8	7.5	<b>200</b>	38	3.4	<b>40.0</b>	98	2.2	10	<b>133</b>	56	2.4	<b>26.7</b>	139	1.6	15	<b>100</b>			72	1.6	<b>20.0</b>	175	1.1	20				<b>80.0</b>	88	1.3	<b>16.0</b>	210	0.8		25	<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185			1.6			10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0			<b>10.0</b>	288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104			2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6		<b>10.0</b>	312		1.1		40	<b>40.0</b>	158	1.2	<b>8.0</b>	366		0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454			1.1			30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0		<b>6.7</b>	410		0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366			1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>		425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8			80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547				0.8	40	<b>CMV 090/15</b>			<b>20.0</b>	277	0.9		<b>4.0</b>	576	0.6		100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>			1104	0.7	100	<b>CMV 110/15</b>			<b>33.3</b>	270	3.2		<b>6.7</b>			482	3.1		30	<b>25.0</b>	350	2.4	<b>5.0</b>		624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6			50	<b>16.7</b>	490	1.4			<b>3.3</b>	821		1.2	60	<b>12.5</b>		586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104			0.7	100																														
	<b>25.0</b>	156	1.0	<b>5.0</b>	259	1.0	40					<b>20.0</b>	183	0.8	<b>4.0</b>	300				0.8	50		<b>40.0</b>	110	2.1	<b>8.0</b>	198	1.9		25	<b>CMV 075/075</b>	50.0	144	1.8	<b>10.0</b>	248	1.7	20	<b>CMV 075/15</b>	<b>33.3</b>			122	2.5	<b>6.7</b>	227	2.3	30		<b>25.0</b>			154	1.7	<b>5.0</b>	274	1.6	40		<b>20.0</b>			192	1.3	<b>4.0</b>	318	1.2	50		<b>16.7</b>	220	1.1	<b>3.3</b>	353	1.0	60	<b>12.5</b>	264	0.8	<b>2.5</b>	413	0.7	80	<b>25.0</b>			173	2.7	<b>5.0</b>	293	2.6	40	<b>CMV 090/075</b>	20.0	306	1.4	<b>4.0</b>	513		1.2	50	<b>CMV 090/15</b>	<b>20.0</b>			204	2.0	<b>4.0</b>	342	1.9	50		<b>16.7</b>			234	1.6	<b>3.3</b>	382	1.5	60		<b>12.5</b>			288	1.2	<b>2.5</b>	451	1.1	80		<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100	<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8	80	<b>CMV 110/075</b>	16.7	351	1.1		<b>3.3</b>	572	1.0	60			<b>CMV 110/15</b>	<b>10.0</b>	354	1.6		<b>2.0</b>	552	1.4		100	<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9		100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]		<b>200</b>	53	3.0	<b>40</b>	98	2.8	5				<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75		1.6				7.5	<b>200</b>	38			1.9	<b>40.0</b>	96		1.3	10	<b>133</b>		55	1.3		<b>26.7</b>	135	0.9	15		<b>400</b>						20		5.8				<b>80</b>	53			3.7				5			<b>CMV 063/075</b>		133				77	2.2	<b>26.7</b>		144			2.0		7.5	<b>CMV 075/15</b>	<b>267</b>			29			4.2		<b>53.3</b>	76	2.8			7.5	<b>200</b>	38	3.4	<b>40.0</b>	98	2.2	10	<b>133</b>	56	2.4	<b>26.7</b>	139	1.6	15	<b>100</b>	72	1.6	<b>20.0</b>	175	1.1	20	<b>80.0</b>	88	1.3	<b>16.0</b>	210		0.8		25	<b>66.7</b>	102	1.4	<b>13.3</b>	230		1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185			1.6	10	<b>CMV 090/15</b>	<b>50.0</b>			128			1.0		<b>10.0</b>	288	0.7			40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>		366		0.8	50	<b>CMV 075/075</b>	50.0	263	1.2		<b>6.7</b>	454			1.1	30	<b>CMV 075/15</b>	<b>33.3</b>			182			1.0		<b>6.7</b>	410	0.7		60	<b>66.7</b>		107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>			547			0.8	40	<b>CMV 090/15</b>	<b>20.0</b>				277	0.9				<b>4.0</b>	576	0.6		100	<b>40.0</b>	243		2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710			0.8	<b>2.0</b>	1104			0.7	100	<b>CMV 110/15</b>				<b>33.3</b>	270	3.2		<b>6.7</b>	482	3.1	30	<b>25.0</b>		350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490			1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0		<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																						
<b>20.0</b>	183	0.8	<b>4.0</b>	300	0.8	50	<b>40.0</b>	110	2.1			<b>8.0</b>	198	1.9	25	<b>CMV 075/075</b>	50.0	144	1.8	<b>10.0</b>	248		1.7	20	<b>CMV 075/15</b>	<b>33.3</b>	122	2.5	<b>6.7</b>	227			2.3	30	<b>25.0</b>	154	1.7	<b>5.0</b>		274			1.6	40	<b>20.0</b>	192	1.3	<b>4.0</b>		318			1.2	50	<b>16.7</b>	220	1.1	<b>3.3</b>		353			1.0	60	<b>12.5</b>	264	0.8	<b>2.5</b>		413	0.7	80	<b>25.0</b>	173	2.7	<b>5.0</b>	293	2.6	40	<b>CMV 090/075</b>	20.0	306	1.4	<b>4.0</b>	513	1.2	50	<b>CMV 090/15</b>	<b>20.0</b>	204	2.0	<b>4.0</b>			342	1.9	50	<b>16.7</b>	234	1.6	<b>3.3</b>		382			1.5	60	<b>12.5</b>	288	1.2	<b>2.5</b>		451			1.1	80	<b>10.0</b>	330	1.0	<b>2.0</b>		504			0.9	100	<b>12.5</b>	302	2.0	<b>2.5</b>		490	1.8	80	<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572	1.0	60	<b>CMV 110/15</b>	<b>10.0</b>	354			1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531	1.0	<b>2.0</b>		828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	53	3.0	<b>40</b>		98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3				<b>53.3</b>	75	1.6	7.5	<b>200</b>	38	1.9					<b>40.0</b>	96	1.3	10	<b>133</b>		55				1.3	<b>26.7</b>	135			0.9	15	<b>400</b>		20	5.8	<b>80</b>		53	3.7		5	<b>CMV 063/075</b>	133	77		2.2						<b>26.7</b>		144				2.0	7.5			<b>CMV 075/15</b>				<b>267</b>									29	4.2	<b>53.3</b>		76			2.8		7.5		<b>200</b>			38			3.4		<b>40.0</b>	98	2.2			10	<b>133</b>	56	2.4	<b>26.7</b>	139	1.6	15	<b>100</b>	72	1.6	<b>20.0</b>	175	1.1	20	<b>80.0</b>	88	1.3	<b>16.0</b>	210	0.8	25	<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>			128	1.0	<b>10.0</b>	288			0.7	40		<b>100</b>			74			2.7		<b>20.0</b>	180	1.7			20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>			<b>33.3</b>	182	1.0	<b>6.7</b>	410			0.7	60		<b>66.7</b>			107			3.8		<b>13.3</b>	252	2.5		30	<b>50.0</b>		137	2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8			40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>			576	0.6		100		<b>40.0</b>		243	2.9				<b>8.0</b>	432	2.8		25	<b>CMV 110/15</b>	16.7		710	0.8	<b>2.0</b>	1104	0.7			100			<b>CMV 110/15</b>	<b>33.3</b>	270			3.2	<b>6.7</b>					482	3.1	30		<b>25.0</b>	350	2.4	<b>5.0</b>	624		2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																													
<b>40.0</b>	110	2.1	<b>8.0</b>	198	1.9	25	<b>CMV 075/075</b>	50.0	144	1.8	<b>10.0</b>	248	1.7	20	<b>CMV 075/15</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
<b>33.3</b>	122	2.5	<b>6.7</b>	227	2.3	30			<b>25.0</b>	154	1.7	<b>5.0</b>	274	1.6				40	<b>20.0</b>	192	1.3	<b>4.0</b>	318	1.2		50	<b>16.7</b>	220	1.1	<b>3.3</b>			353	1.0	60	<b>12.5</b>	264	0.8		<b>2.5</b>			413	0.7	80	<b>25.0</b>	173	2.7		<b>5.0</b>			293	2.6	40	<b>CMV 090/075</b>	20.0	306		1.4	<b>4.0</b>	513	1.2	50	<b>CMV 090/15</b>	<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50	<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60			<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1		80	<b>10.0</b>	330	1.0			<b>2.0</b>	504	0.9	100	<b>12.5</b>	302	2.0		<b>2.5</b>			490	1.8	80	<b>CMV 110/075</b>	16.7	351		1.1			<b>3.3</b>	572	1.0	60	<b>CMV 110/15</b>	<b>10.0</b>		354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	53	3.0	<b>40</b>	98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75	1.6	7.5	<b>200</b>		38	1.9	<b>40.0</b>	96	1.3	10	<b>133</b>			55	1.3	<b>26.7</b>	135		0.9	15	<b>400</b>		20	5.8	<b>80</b>				53	3.7	5	<b>CMV 063/075</b>	133	77	2.2					<b>26.7</b>	144	2.0	7.5	<b>CMV 075/15</b>		<b>267</b>				29	4.2	<b>53.3</b>			76	2.8	7.5		<b>200</b>	38	3.4		<b>40.0</b>	98	2.2	10			<b>133</b>	56	2.4		<b>26.7</b>	139			1.6		15	<b>100</b>	72	1.6	<b>20.0</b>	175						1.1	20									<b>80.0</b>	88	1.3		<b>16.0</b>			210		0.8		25			<b>66.7</b>	102	1.4	<b>13.3</b>		230	1.0	30		<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25			<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5		30			<b>50.0</b>	132	1.6	<b>10.0</b>			312	1.1		40			<b>40.0</b>	158	1.2	<b>8.0</b>		366	0.8	50		<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40			<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4				50	<b>33.3</b>	190	1.5	<b>6.7</b>			425	1.1		60			<b>25.0</b>	236	1.1	<b>5.0</b>		509	0.8	80		<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7			100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2			<b>6.7</b>		482	3.1	30	<b>25.0</b>			350	2.4		<b>5.0</b>		624		2.1	40		<b>20.0</b>	426	1.8	<b>4.0</b>	732		1.6			50	<b>16.7</b>	490	1.4	<b>3.3</b>	821			1.2				60	<b>12.5</b>			586	1.0			<b>2.5</b>	979	0.9	80	<b>10.0</b>		710	0.8	<b>2.0</b>	1104	0.7	100																																																																											
<b>25.0</b>	154	1.7	<b>5.0</b>	274	1.6	40			<b>20.0</b>	192	1.3	<b>4.0</b>	318	1.2				50	<b>16.7</b>	220	1.1	<b>3.3</b>	353	1.0		60	<b>12.5</b>	264	0.8	<b>2.5</b>			413	0.7	80	<b>25.0</b>	173	2.7		<b>5.0</b>			293	2.6	40	<b>CMV 090/075</b>	20.0	306		1.4	<b>4.0</b>	513	1.2	50	<b>CMV 090/15</b>			<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50		<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60	<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80			<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9		100	<b>12.5</b>	302	2.0			<b>2.5</b>	490	1.8	80	<b>CMV 110/075</b>	16.7	351		1.1			<b>3.3</b>	572	1.0			60		<b>CMV 110/15</b>	<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4		100	<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2		5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	53	3.0	<b>40</b>			98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3		<b>53.3</b>	75	1.6	7.5	<b>200</b>	38	1.9	<b>40.0</b>		96	1.3	10	<b>133</b>	55	1.3	<b>26.7</b>			135	0.9	15	<b>400</b>		20	5.8	<b>80</b>		53	3.7	5				<b>CMV 063/075</b>	133	77			2.2	<b>26.7</b>					144	2.0	7.5	<b>CMV 075/15</b>			<b>267</b>				29	4.2	<b>53.3</b>			76	2.8	7.5		<b>200</b>	38	3.4		<b>40.0</b>	98	2.2	10			<b>133</b>	56	2.4	<b>26.7</b>	139	1.6			15		<b>100</b>	72	1.6	<b>20.0</b>	175	1.1	20	<b>80.0</b>				88	1.3				<b>16.0</b>					210	0.8	25		<b>66.7</b>			102		1.4		<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100	101		1.7	<b>20.0</b>	185	1.6			10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0	<b>10.0</b>		288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>			252	1.5	30	<b>50.0</b>	132	1.6		<b>10.0</b>			312	1.1	40	<b>40.0</b>			158	1.2		<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263		1.2	<b>6.7</b>	454	1.1			30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>		410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>			366	1.4	50	<b>33.3</b>	190	1.5				<b>6.7</b>	425	1.1	60	<b>25.0</b>			236	1.1		<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468		0.8	<b>5.0</b>	547	0.8			40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>		576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8			<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>			<b>33.3</b>		270	3.2	<b>6.7</b>			482		3.1	30	<b>25.0</b>	350			2.4	<b>5.0</b>		624	2.1	40	<b>20.0</b>	426	1.8		<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4			<b>3.3</b>	821	1.2	60	<b>12.5</b>	586			1.0				<b>2.5</b>	979	0.9	80	<b>10.0</b>	710			0.8	<b>2.0</b>	1104	0.7	100																																																																																		
<b>20.0</b>	192	1.3	<b>4.0</b>	318	1.2	50			<b>16.7</b>	220	1.1	<b>3.3</b>	353	1.0				60	<b>12.5</b>	264	0.8	<b>2.5</b>	413	0.7		80	<b>25.0</b>	173	2.7	<b>5.0</b>			293	2.6	40	<b>CMV 090/075</b>	20.0	306		1.4	<b>4.0</b>	513	1.2	50	<b>CMV 090/15</b>			<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50				<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60		<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80	<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100			<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8		80	<b>CMV 110/075</b>	16.7	351			1.1	<b>3.3</b>	572	1.0			60		<b>CMV 110/15</b>	<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531		1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]		<b>200</b>	53	3.0	<b>40</b>	98	2.8		5			<b>CMV 063/15</b>	<b>267</b>	29	2.3			<b>53.3</b>	75	1.6		7.5	<b>200</b>	38		1.9	<b>40.0</b>	96	1.3	10	<b>133</b>	55	1.3		<b>26.7</b>	135	0.9	15	<b>400</b>	20	5.8			<b>80</b>	53	3.7	5		<b>CMV 063/075</b>	133	77		2.2	<b>26.7</b>	144						2.0			7.5	<b>CMV 075/15</b>					<b>267</b>	29	4.2				<b>53.3</b>				76	2.8	7.5			<b>200</b>	38	3.4		<b>40.0</b>	98	2.2		10	<b>133</b>	56	2.4			<b>26.7</b>	139	1.6	15	<b>100</b>	72	1.6		<b>20.0</b>		175	1.1	20	<b>80.0</b>	88	1.3	<b>16.0</b>	210		0.8	25	<b>66.7</b>	102				1.4				<b>13.3</b>	230	1.0	30		<b>CMV 090/15</b>	100	101	1.7		<b>20.0</b>		185	1.6	10	<b>CMV 090/15</b>			<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7			40		<b>100</b>	74	2.7	<b>20.0</b>		180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6	<b>10.0</b>			312	1.1	40	<b>40.0</b>	158	1.2		<b>8.0</b>			366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>		454	1.1	30	<b>CMV 075/15</b>			<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7			60		<b>66.7</b>	107	3.8	<b>13.3</b>		252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>			425	1.1	60	<b>25.0</b>	236	1.1				<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>		547	0.8	40	<b>CMV 090/15</b>			<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6			100		<b>40.0</b>	243	2.9	<b>8.0</b>		432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7			100	<b>CMV 110/15</b>			<b>33.3</b>	270	3.2	<b>6.7</b>				482		3.1	30	<b>25.0</b>			350		2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8		<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0			<b>2.5</b>	979	0.9	80	<b>10.0</b>	710			0.8	<b>2.0</b>	1104		0.7	100																																																																																													
<b>16.7</b>	220	1.1	<b>3.3</b>	353	1.0	60			<b>12.5</b>	264	0.8	<b>2.5</b>	413	0.7				80	<b>25.0</b>	173	2.7	<b>5.0</b>	293	2.6		40	<b>CMV 090/075</b>	20.0	306	1.4	<b>4.0</b>	513	1.2	50	<b>CMV 090/15</b>			<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50				<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60				<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80		<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100	<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8	80			<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572		1.0			60	<b>CMV 110/15</b>	<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531		1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]		<b>200</b>	53	3.0	<b>40</b>	98	2.8	5				<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75		1.6				7.5	<b>200</b>	38			1.9	<b>40.0</b>	96		1.3	10	<b>133</b>		55	1.3	<b>26.7</b>	135	0.9	15	<b>400</b>	20		5.8	<b>80</b>	53	3.7	5	<b>CMV 063/075</b>	133			77	2.2	<b>26.7</b>	144				2.0		7.5	<b>CMV 075/15</b>	<b>267</b>						29			4.2						<b>53.3</b>	76	2.8				7.5				<b>200</b>	38	3.4			<b>40.0</b>	98	2.2		10	<b>133</b>	56		2.4	<b>26.7</b>	139	1.6			15	<b>100</b>	72	1.6	<b>20.0</b>	175	1.1	20	<b>80.0</b>		88	1.3	<b>16.0</b>	210	0.8	25	<b>66.7</b>	102		1.4	<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100	101	1.7			<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>			<b>50.0</b>	128		1.0	<b>10.0</b>	288	0.7	40				<b>100</b>	74	2.7	<b>20.0</b>	180	1.7			20		<b>80.0</b>	90	2.0	<b>16.0</b>		216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>			366	0.8	50	<b>CMV 075/075</b>	50.0	263		1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>			<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60				<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5			30		<b>50.0</b>	137	2.6	<b>10.0</b>		317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>			509	0.8	80	<b>CMV 090/075</b>	25.0	468		0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>			<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100				<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8			25		<b>CMV 110/15</b>	16.7	710	0.8		<b>2.0</b>	1104	0.7			100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2			<b>6.7</b>				482	3.1	30	<b>25.0</b>				350		2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>		426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8			<b>2.0</b>	1104	0.7	100																																																																																																							
<b>12.5</b>	264	0.8	<b>2.5</b>	413	0.7	80			<b>25.0</b>	173	2.7	<b>5.0</b>	293	2.6		40	<b>CMV 090/075</b>	20.0	306	1.4	<b>4.0</b>	513	1.2	50	<b>CMV 090/15</b>	<b>20.0</b>			204	2.0	<b>4.0</b>	342	1.9	50				<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60				<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80				<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100		<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8	80	<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572	1.0	60	<b>CMV 110/15</b>			<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531		1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]		<b>200</b>	53	3.0	<b>40</b>	98	2.8	5				<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75	1.6					7.5	<b>200</b>	38	1.9	<b>40.0</b>		96				1.3	10	<b>133</b>			55	1.3	<b>26.7</b>		135	0.9	15		<b>400</b>	20	5.8	<b>80</b>	53	3.7	5	<b>CMV 063/075</b>		133	77	2.2	<b>26.7</b>	144					2.0	7.5	<b>CMV 075/15</b>	<b>267</b>				29		4.2		<b>53.3</b>						76			2.8						7.5	<b>200</b>	38				3.4				<b>40.0</b>	98	2.2			10	<b>133</b>	56		2.4	<b>26.7</b>	139		1.6	15	<b>100</b>	72	1.6	<b>20.0</b>	175	1.1	20	<b>80.0</b>	88	1.3	<b>16.0</b>	210	0.8	25	<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6			10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7				40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20				<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3			25		<b>66.7</b>	104	2.3	<b>13.3</b>		252	1.5	30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>			<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60				<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30				<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8			40		<b>40.0</b>	165	1.9	<b>8.0</b>		366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>			<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100				<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25				<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104			0.7				100	<b>CMV 110/15</b>		<b>33.3</b>	270	3.2			<b>6.7</b>		482	3.1	30			<b>25.0</b>				350	2.4	<b>5.0</b>	624		2.1	40	<b>20.0</b>		426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																
<b>25.0</b>	173	2.7	<b>5.0</b>	293	2.6	40	<b>CMV 090/075</b>	20.0	306	1.4	<b>4.0</b>	513	1.2	50	<b>CMV 090/15</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
<b>20.0</b>	204	2.0	<b>4.0</b>	342	1.9	50			<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5		60			<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1		80			<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9				100	<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8				80	<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572		1.0	60	<b>CMV 110/15</b>	<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	53	3.0	<b>40</b>	98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75	1.6	7.5	<b>200</b>		38	1.9	<b>40.0</b>	96	1.3	10	<b>133</b>				55	1.3	<b>26.7</b>	135	0.9	15	<b>400</b>					20	5.8	<b>80</b>	53	3.7	5					<b>CMV 063/075</b>	133	77	2.2	<b>26.7</b>		144				2.0	7.5	<b>CMV 075/15</b>			<b>267</b>	29	4.2		<b>53.3</b>	76	2.8		7.5	<b>200</b>	38	3.4	<b>40.0</b>	98	2.2				10	<b>133</b>	56	2.4					<b>26.7</b>	139		1.6				15		<b>100</b>		72						1.6	<b>20.0</b>	175	1.1						20	<b>80.0</b>	88		1.3	<b>16.0</b>	210				0.8	25	<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0		30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0			<b>16.0</b>	216	1.3	25	<b>66.7</b>			104		2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>				132	1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158				1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2		<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137	2.6			<b>10.0</b>	317	1.8	40	<b>40.0</b>	165				1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190				1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236				1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8		<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710			0.8	<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>				<b>33.3</b>	270	3.2	<b>6.7</b>	482	3.1	30				<b>25.0</b>	350	2.4	<b>5.0</b>	624	2.1	40						<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50				<b>16.7</b>		490	1.4	<b>3.3</b>	821			1.2		60	<b>12.5</b>	586			1.0		<b>2.5</b>	979	0.9	80	<b>10.0</b>	710		0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																										
<b>16.7</b>	234	1.6	<b>3.3</b>	382	1.5	60			<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1		80			<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9		100			<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8				80	<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572		1.0	60	<b>CMV 110/15</b>			<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100		<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2		5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	53	3.0	<b>40</b>			98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3		<b>53.3</b>	75	1.6	7.5	<b>200</b>	38	1.9	<b>40.0</b>		96	1.3	10	<b>133</b>	55	1.3	<b>26.7</b>				135	0.9	15	<b>400</b>	20	5.8	<b>80</b>					53	3.7	5	<b>CMV 063/075</b>	133	77							2.2	<b>26.7</b>	144		2.0				7.5	<b>CMV 075/15</b>				<b>267</b>	29	4.2		<b>53.3</b>	76	2.8		7.5	<b>200</b>	38	3.4	<b>40.0</b>	98	2.2				10	<b>133</b>	56	2.4					<b>26.7</b>	139		1.6				15		<b>100</b>		72				1.6	<b>20.0</b>	175	1.1	20	<b>80.0</b>				88		1.3	<b>16.0</b>	210	0.8	25	<b>66.7</b>	102	1.4	<b>13.3</b>		230	1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6			10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0	<b>10.0</b>		288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25			<b>66.7</b>	104	2.3	<b>13.3</b>	252			1.5		30	<b>50.0</b>	132	1.6	<b>10.0</b>	312				1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8		50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454			1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>		410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40			<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4				50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1				60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8		80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547			0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>		576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8			<b>2.0</b>			1104	0.7	100	<b>CMV 110/15</b>	<b>33.3</b>					270	3.2	<b>6.7</b>	482	3.1	30	<b>25.0</b>				350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>		426	1.8			<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>			821		1.2	60	<b>12.5</b>	586			1.0		<b>2.5</b>	979	0.9	80	<b>10.0</b>	710		0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																	
<b>12.5</b>	288	1.2	<b>2.5</b>	451	1.1	80			<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9		100			<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8		80			<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572		1.0	60	<b>CMV 110/15</b>			<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100		<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]		<b>200</b>	53	3.0	<b>40</b>	98	2.8		5			<b>CMV 063/15</b>	<b>267</b>	29	2.3			<b>53.3</b>	75	1.6		7.5	<b>200</b>	38		1.9	<b>40.0</b>	96	1.3	10	<b>133</b>	55	1.3		<b>26.7</b>	135	0.9	15	<b>400</b>	20	5.8				<b>80</b>	53	3.7	5	<b>CMV 063/075</b>	133	77					2.2	<b>26.7</b>	144			2.0							7.5	<b>CMV 075/15</b>	<b>267</b>		29				4.2					<b>53.3</b>	76	2.8		7.5	<b>200</b>	38		3.4	<b>40.0</b>	98	2.2	10	<b>133</b>	56				2.4	<b>26.7</b>	139	1.6					15	<b>100</b>		72		1.6	<b>20.0</b>	175		1.1		20			<b>80.0</b>	88	1.3	<b>16.0</b>	210	0.8	25	<b>66.7</b>	102	1.4	<b>13.3</b>		230	1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>			128	1.0	<b>10.0</b>	288	0.7			40		<b>100</b>	74	2.7	<b>20.0</b>		180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30			<b>50.0</b>	132	1.6	<b>10.0</b>	312			1.1		40	<b>40.0</b>	158	1.2	<b>8.0</b>	366		0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>			182	1.0	<b>6.7</b>	410			0.7	60		<b>66.7</b>	107	3.8	<b>13.3</b>		252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50			<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1				60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8		80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>			277	0.9	<b>4.0</b>	576			0.6	100		<b>40.0</b>	243	2.9	<b>8.0</b>		432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7			100	<b>CMV 110/15</b>			<b>33.3</b>			270	3.2	<b>6.7</b>		482					3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>	624		2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4			<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>			979		0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104		0.7	100																																																																																																																																																											
<b>10.0</b>	330	1.0	<b>2.0</b>	504	0.9	100			<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8		80			<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572		1.0	60	<b>CMV 110/15</b>			<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100		<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]		<b>200</b>	53	3.0	<b>40</b>	98	2.8	5				<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75		1.6				7.5	<b>200</b>	38			1.9	<b>40.0</b>	96		1.3	10	<b>133</b>		55	1.3	<b>26.7</b>	135	0.9	15	<b>400</b>	20		5.8	<b>80</b>	53	3.7	5	<b>CMV 063/075</b>	133				77	2.2	<b>26.7</b>	144			2.0					7.5	<b>CMV 075/15</b>	<b>267</b>			29							4.2		<b>53.3</b>		76				2.8					7.5	<b>200</b>	38		3.4	<b>40.0</b>	98		2.2	10	<b>133</b>	56	2.4	<b>26.7</b>	139				1.6	15	<b>100</b>	72	1.6	<b>20.0</b>			175	1.1		20	<b>80.0</b>	88	1.3	<b>16.0</b>		210	0.8	25	<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>			128	1.0	<b>10.0</b>	288	0.7	40		<b>100</b>			74	2.7	<b>20.0</b>	180	1.7			20		<b>80.0</b>	90	2.0	<b>16.0</b>		216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40			<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>		50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>			182	1.0	<b>6.7</b>	410	0.7	60		<b>66.7</b>			107	3.8	<b>13.3</b>	252			2.5	30		<b>50.0</b>	137	2.6	<b>10.0</b>		317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60			<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8		80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>			277	0.9	<b>4.0</b>	576	0.6	100		<b>40.0</b>			243	2.9	<b>8.0</b>	432			2.8	25		<b>CMV 110/15</b>	16.7	710	0.8		<b>2.0</b>	1104	0.7			100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2			<b>6.7</b>				482			3.1	30	<b>25.0</b>		350			2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0			<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																						
<b>12.5</b>	302	2.0	<b>2.5</b>	490	1.8	80			<b>CMV 110/075</b>	16.7	351	1.1	<b>3.3</b>	572		1.0	60	<b>CMV 110/15</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
<b>10.0</b>	354	1.6	<b>2.0</b>	552	1.4	100	<b>10.0</b>	531			1.0	<b>2.0</b>	828	0.9	100	<b>1.1</b>																		80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	53	3.0	<b>40</b>	98	2.8	5	<b>CMV 063/15</b>	<b>267</b>	29	2.3	<b>53.3</b>	75	1.6	7.5	<b>200</b>	38	1.9	<b>40.0</b>	96		1.3	10	<b>133</b>	55	1.3	<b>26.7</b>	135				0.9	15	<b>400</b>	20	5.8	<b>80</b>	53					3.7	5	<b>CMV 063/075</b>	133	77		2.2				<b>26.7</b>	144	2.0			7.5	<b>CMV 075/15</b>	<b>267</b>		29	4.2	<b>53.3</b>		76	2.8	7.5	<b>200</b>	38	3.4	<b>40.0</b>	98		2.2	10	<b>133</b>	56	2.4						<b>26.7</b>	139	1.6	15			<b>100</b>					72		1.6			<b>20.0</b>							175		1.1		20				<b>80.0</b>					88	1.3	<b>16.0</b>		210	0.8	25		<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25			<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5		30			<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1		40			<b>40.0</b>	158	1.2	<b>8.0</b>	366			0.8		50	<b>CMV 075/075</b>	50.0	263		1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8		40		<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4		50			<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1		60			<b>25.0</b>	236	1.1	<b>5.0</b>			509	0.8		80	<b>CMV 090/075</b>	25.0	468		0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7			100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>		482			3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>		624			2.1	40	<b>20.0</b>	426			1.8	<b>4.0</b>				732	1.6		50	<b>16.7</b>	490			1.4		<b>3.3</b>	821	1.2			60				<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9		80		<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																			
<b>10.0</b>	531	1.0	<b>2.0</b>	828	0.9	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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80B2 n <sub>1</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	20	3.2	<b>80</b>	51	2.2	5	<b>CMV 050/075</b>	90L4 n <sub>1</sub> =1400 [min <sup>-1</sup> ]	<b>200</b>	53	3.0	<b>40</b>	98	2.8	5	<b>CMV 063/15</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	<b>267</b>	29	2.3	<b>53.3</b>	75	1.6	7.5			<b>200</b>	38	1.9	<b>40.0</b>	96	1.3	10		<b>133</b>	55	1.3	<b>26.7</b>	135	0.9	15	<b>400</b>	20	5.8	<b>80</b>	53	3.7	5	<b>CMV 063/075</b>	133		77	2.2	<b>26.7</b>	144	2.0	7.5	<b>CMV 075/15</b>			<b>267</b>	29	4.2	<b>53.3</b>	76	2.8	7.5		<b>200</b>	38	3.4	<b>40.0</b>	98	2.2	10	<b>133</b>	56	2.4	<b>26.7</b>	139		1.6	15	<b>100</b>	72	1.6	<b>20.0</b>	175				1.1	20	<b>80.0</b>	88	1.3	<b>16.0</b>	210					0.8	25			<b>66.7</b>		102				1.4	<b>13.3</b>	230			1.0		30		<b>CMV 090/15</b>	100	101		1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>	128		1.0	<b>10.0</b>	288	0.7	40	<b>100</b>	74			2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3		25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60	<b>66.7</b>	107			3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>		137	2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710			0.8	<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>	<b>33.3</b>		270	3.2	<b>6.7</b>	482	3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																		
	<b>200</b>	38	1.9	<b>40.0</b>	96	1.3	10			<b>133</b>	55	1.3	<b>26.7</b>	135	0.9	15		<b>400</b>	20	5.8	<b>80</b>	53	3.7	5	<b>CMV 063/075</b>	133	77	2.2	<b>26.7</b>	144	2.0				7.5	<b>CMV 075/15</b>	<b>267</b>	29	4.2	<b>53.3</b>				76	2.8	7.5	<b>200</b>	38	3.4	<b>40.0</b>		98	2.2	10	<b>133</b>	56	2.4	<b>26.7</b>	139	1.6	15	<b>100</b>	72		1.6	<b>20.0</b>	175	1.1	20	<b>80.0</b>	88				1.3	<b>16.0</b>	210	0.8	25	<b>66.7</b>	102					1.4	<b>13.3</b>			230		1.0				30	<b>CMV 090/15</b>	100			101		1.7				<b>20.0</b>		185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>		128	1.0	<b>10.0</b>	288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>			454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182		1.0	<b>6.7</b>	410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>			252	2.5	30	<b>50.0</b>	137	2.6		<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0			468	0.8	<b>5.0</b>	547	0.8	40		<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8			25			<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>		1104		0.7	100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>	482	3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																														
	<b>133</b>	55	1.3	<b>26.7</b>	135	0.9	15			<b>400</b>	20	5.8	<b>80</b>	53	3.7	5		<b>CMV 063/075</b>	133	77	2.2	<b>26.7</b>	144	2.0			7.5	<b>CMV 075/15</b>	<b>267</b>	29	4.2				<b>53.3</b>		76	2.8	7.5	<b>200</b>				38	3.4	<b>40.0</b>	98	2.2	10	<b>133</b>		56	2.4	<b>26.7</b>	139	1.6	15	<b>100</b>	72	1.6	<b>20.0</b>	175	1.1		20	<b>80.0</b>	88	1.3	<b>16.0</b>	210	0.8				25	<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0					30	<b>CMV 090/15</b>	100	101	1.7		<b>20.0</b>				185					1.6	10	<b>CMV 090/15</b>				<b>50.0</b>		128	1.0	<b>10.0</b>		288		0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2			<b>6.7</b>	454	1.1			30	<b>CMV 075/15</b>	<b>33.3</b>		182	1.0		<b>6.7</b>	410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8					<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>			277	0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25			<b>CMV 110/15</b>	16.7	710			0.8	<b>2.0</b>	1104		0.7	100	<b>CMV 110/15</b>	<b>33.3</b>		270	3.2	<b>6.7</b>	482	3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																															
	<b>400</b>	20	5.8	<b>80</b>	53	3.7	5			<b>CMV 063/075</b>	133	77	2.2	<b>26.7</b>	144	2.0				7.5	<b>CMV 075/15</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	<b>267</b>	29	4.2	<b>53.3</b>	76	2.8	7.5					<b>200</b>	38	3.4	<b>40.0</b>	98				2.2		10	<b>133</b>	56			2.4		<b>26.7</b>	139	1.6				15		<b>100</b>	72	1.6	<b>20.0</b>				175	1.1	20	<b>80.0</b>	88	1.3	<b>16.0</b>		210	0.8	25	<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0	30	<b>CMV 090/15</b>	100		101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>				<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7	40			<b>100</b>		74			2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>		90			2.0	<b>16.0</b>	216	1.3		25			<b>66.7</b>	104	2.3	<b>13.3</b>	252		1.5		30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5			30	<b>50.0</b>			137	2.6	<b>10.0</b>			317		1.8		40	<b>40.0</b>		165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9			<b>8.0</b>	432					2.8	25	<b>CMV 110/15</b>	16.7		710			0.8	<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>	482	3.1	30					<b>25.0</b>			350	2.4	<b>5.0</b>		624	2.1		40		<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																												
	<b>200</b>	38	3.4	<b>40.0</b>	98	2.2	10					<b>133</b>	56	2.4	<b>26.7</b>	139				1.6		15	<b>100</b>	72			1.6		<b>20.0</b>	175	1.1				20		<b>80.0</b>	88	1.3	<b>16.0</b>				210	0.8	25	<b>66.7</b>	102	1.4	<b>13.3</b>		230	1.0	30	<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6				10	<b>CMV 090/15</b>	<b>50.0</b>	128	1.0	<b>10.0</b>				288	0.7	40	<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>		90			2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3			<b>13.3</b>	252	1.5	30		<b>50.0</b>			132	1.6	<b>10.0</b>	312	1.1		40		<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30			<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>	410		0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>			317	1.8			40	<b>40.0</b>	165			1.9		<b>8.0</b>		366	1.4		50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>			547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277		0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432			2.8	25					<b>CMV 110/15</b>	16.7				710			0.8	<b>2.0</b>	1104	0.7	100		<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>	482	3.1					30			<b>25.0</b>	350	2.4		<b>5.0</b>	624		2.1		40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																											
	<b>133</b>	56	2.4	<b>26.7</b>	139	1.6	15					<b>100</b>	72	1.6	<b>20.0</b>	175				1.1		20	<b>80.0</b>	88			1.3		<b>16.0</b>	210	0.8	25	<b>66.7</b>		102		1.4	<b>13.3</b>	230	1.0	30			<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6		10	<b>CMV 090/15</b>	<b>50.0</b>			128	1.0	<b>10.0</b>	288	0.7			40	<b>100</b>		74	2.7	<b>20.0</b>	180		1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5			30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40			<b>40.0</b>	158	1.2	<b>8.0</b>		366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>		454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>	410			0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>				252	2.5	30	<b>50.0</b>	137		2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>			190	1.5			<b>6.7</b>	425	1.1	60	<b>25.0</b>	236		1.1		<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>	576			0.6	100	<b>40.0</b>			243	2.9	<b>8.0</b>		432	2.8		25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>			<b>33.3</b>	270			3.2	<b>6.7</b>						482	3.1		30	<b>25.0</b>	350	2.4	<b>5.0</b>			624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732			1.6			50	<b>16.7</b>	490	1.4	<b>3.3</b>	821		1.2		60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																									
	<b>100</b>	72	1.6	<b>20.0</b>	175	1.1	20					<b>80.0</b>	88	1.3	<b>16.0</b>	210				0.8		25	<b>66.7</b>	102	1.4	<b>13.3</b>	230		1.0	30	<b>CMV 090/15</b>	100	101		1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>					128	1.0	<b>10.0</b>	288	0.7		40		<b>100</b>			74	2.7	<b>20.0</b>	180	1.7			20	<b>80.0</b>		90	2.0	<b>16.0</b>	216		1.3	25	<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1			40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454		1.1	30	<b>CMV 075/15</b>			<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60		<b>66.7</b>	107	3.8	<b>13.3</b>	252			2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>				317	1.8	40	<b>40.0</b>	165		1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>			236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8		<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>			277	0.9	<b>4.0</b>	576	0.6	100		<b>40.0</b>	243	2.9	<b>8.0</b>	432			2.8	25	<b>CMV 110/15</b>			16.7	710	0.8		<b>2.0</b>	1104		0.7			100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>				482	3.1	30	<b>25.0</b>	350	2.4						<b>5.0</b>	624	2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>			732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821			1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80		<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																																			
	<b>80.0</b>	88	1.3	<b>16.0</b>	210	0.8	25					<b>66.7</b>	102	1.4	<b>13.3</b>	230		1.0	30	<b>CMV 090/15</b>		100	101	1.7	<b>20.0</b>	185	1.6	10	<b>CMV 090/15</b>	<b>50.0</b>			128	1.0	<b>10.0</b>	288	0.7	40	<b>100</b>		74	2.7	<b>20.0</b>			180	1.7	20	<b>80.0</b>	90	2.0	<b>16.0</b>		216			1.3	25	<b>66.7</b>	104	2.3			<b>13.3</b>	252		1.5	30	<b>50.0</b>	132		1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>			410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>				252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>		317	1.8	40	<b>40.0</b>	165			1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>				190	1.5	<b>6.7</b>	425	1.1		60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>			576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>		432			2.8	25	<b>CMV 110/15</b>	16.7	710	0.8		<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>			<b>33.3</b>	270					3.2	<b>6.7</b>		482	3.1		30			<b>25.0</b>		350	2.4	<b>5.0</b>	624		2.1	40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6					50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>			586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																	
	<b>66.7</b>	102	1.4	<b>13.3</b>	230	1.0	30			<b>CMV 090/15</b>	100	101	1.7	<b>20.0</b>	185	1.6		10	<b>CMV 090/15</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	<b>50.0</b>	128	1.0	<b>10.0</b>	288	0.7	40					<b>100</b>	74	2.7	<b>20.0</b>	180		1.7			20		<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3		25			<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30		<b>50.0</b>	132	1.6			<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2		<b>8.0</b>			366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454		1.1	30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30			<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8		40	<b>40.0</b>	165	1.9			<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5				<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1		<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>			25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>		<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25			<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104		0.7	100	<b>CMV 110/15</b>	<b>33.3</b>			270	3.2	<b>6.7</b>	482	3.1	30	<b>25.0</b>		350			2.4	<b>5.0</b>			624	2.1		40	<b>20.0</b>	426	1.8				<b>4.0</b>	732		1.6	50		<b>16.7</b>	490		1.4	<b>3.3</b>	821	1.2			60		<b>12.5</b>	586	1.0	<b>2.5</b>		979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104			0.7	100																																																																																																																																																																																																																																																																																																																																																																																									
<b>100</b>	74	2.7	<b>20.0</b>	180	1.7	20	<b>80.0</b>	90	2.0			<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3			<b>13.3</b>		252	1.5	30	<b>50.0</b>	132	1.6		<b>10.0</b>			312	1.1	40	<b>40.0</b>	158	1.2	<b>8.0</b>		366	0.8	50			<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1		30	<b>CMV 075/15</b>	<b>33.3</b>	182	1.0	<b>6.7</b>			410	0.7	60	<b>66.7</b>	107	3.8	<b>13.3</b>		252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>			366	1.4	50	<b>33.3</b>	190	1.5		<b>6.7</b>	425	1.1	60			<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80				<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8		40	<b>CMV 090/15</b>	<b>20.0</b>	277		0.9	<b>4.0</b>		576	0.6	100	<b>40.0</b>	243	2.9		<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7	100	<b>CMV 110/15</b>	<b>33.3</b>	270					3.2	<b>6.7</b>	482	3.1		30	<b>25.0</b>		350			2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>	426		1.8			<b>4.0</b>	732			1.6	50		<b>16.7</b>	490	1.4	<b>3.3</b>		821	1.2	60	<b>12.5</b>		586	1.0		<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8			<b>2.0</b>		1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																							
<b>80.0</b>	90	2.0	<b>16.0</b>	216	1.3	25	<b>66.7</b>	104	2.3			<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6			<b>10.0</b>		312	1.1	40	<b>40.0</b>	158	1.2		<b>8.0</b>			366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2		<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>			<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60		<b>66.7</b>	107	3.8	<b>13.3</b>			252	2.5	30	<b>50.0</b>	137	2.6	<b>10.0</b>		317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>			425	1.1	60	<b>25.0</b>	236	1.1		<b>5.0</b>	509	0.8	80			<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8		40	<b>CMV 090/15</b>			<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100		<b>40.0</b>	243		2.9	<b>8.0</b>		432	2.8	25	<b>CMV 110/15</b>	16.7	710		0.8	<b>2.0</b>	1104	0.7			100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>		482	3.1					30	<b>25.0</b>	350	2.4		<b>5.0</b>	624		2.1			40	<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6		50	<b>16.7</b>	490	1.4	<b>3.3</b>			821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>		979	0.9	80	<b>10.0</b>		710	0.8		<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																																	
<b>66.7</b>	104	2.3	<b>13.3</b>	252	1.5	30	<b>50.0</b>	132	1.6			<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2			<b>8.0</b>		366	0.8	50	<b>CMV 075/075</b>	50.0	263		1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>			<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60				<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30		<b>50.0</b>	137	2.6	<b>10.0</b>			317	1.8	40	<b>40.0</b>	165	1.9	<b>8.0</b>		366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>			509	0.8	80	<b>CMV 090/075</b>	25.0	468		0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>			<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100				<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25		<b>CMV 110/15</b>	16.7		710	0.8		<b>2.0</b>	1104	0.7			100		<b>CMV 110/15</b>	<b>33.3</b>	270	3.2			<b>6.7</b>		482	3.1	30	<b>25.0</b>		350	2.4					<b>5.0</b>	624	2.1	40		<b>20.0</b>	426		1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>			979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>		1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																																										
<b>50.0</b>	132	1.6	<b>10.0</b>	312	1.1	40	<b>40.0</b>	158	1.2			<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263		1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>			<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60				<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30				<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8	40		<b>40.0</b>	165	1.9	<b>8.0</b>			366	1.4	50	<b>33.3</b>	190	1.5	<b>6.7</b>		425	1.1	60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>			<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100				<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25				<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7					100	<b>CMV 110/15</b>		<b>33.3</b>	270	3.2			<b>6.7</b>			482	3.1	30			<b>25.0</b>		350	2.4	<b>5.0</b>	624		2.1	40	<b>20.0</b>	426			1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490		1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																																																				
<b>40.0</b>	158	1.2	<b>8.0</b>	366	0.8	50	<b>CMV 075/075</b>	50.0	263	1.2	<b>6.7</b>	454	1.1	30	<b>CMV 075/15</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
<b>33.3</b>	182	1.0	<b>6.7</b>	410	0.7	60			<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5				30	<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8				40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4				50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1				60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8		80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100	<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25			<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104				0.7	100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>				482	3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>						624	2.1	40	<b>20.0</b>	426				1.8	<b>4.0</b>		732	1.6	50	<b>16.7</b>			490	1.4		<b>3.3</b>	821	1.2			60		<b>12.5</b>	586	1.0	<b>2.5</b>		979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																																																																											
<b>66.7</b>	107	3.8	<b>13.3</b>	252	2.5	30			<b>50.0</b>	137	2.6	<b>10.0</b>	317	1.8				40	<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4				50	<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1				60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8		80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>			277	0.9	<b>4.0</b>	576	0.6	100		<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25	<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104	0.7					100	<b>CMV 110/15</b>	<b>33.3</b>	270				3.2	<b>6.7</b>		482	3.1	30	<b>25.0</b>				350	2.4	<b>5.0</b>	624	2.1	40	<b>20.0</b>		426	1.8			<b>4.0</b>	732	1.6	50	<b>16.7</b>	490			1.4	<b>3.3</b>		821	1.2	60	<b>12.5</b>			586	1.0		<b>2.5</b>	979	0.9	80	<b>10.0</b>	710		0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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<b>40.0</b>	165	1.9	<b>8.0</b>	366	1.4	50			<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1				60	<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8		80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>			277	0.9	<b>4.0</b>	576	0.6	100		<b>40.0</b>			243	2.9	<b>8.0</b>	432	2.8	25		<b>CMV 110/15</b>			16.7	710	0.8	<b>2.0</b>	1104	0.7				100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2			<b>6.7</b>		482	3.1	30					<b>25.0</b>		350	2.4		<b>5.0</b>	624	2.1	40		<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50	<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0			<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7		100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
<b>33.3</b>	190	1.5	<b>6.7</b>	425	1.1	60			<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8		80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>	<b>20.0</b>			277	0.9	<b>4.0</b>	576	0.6	100		<b>40.0</b>			243	2.9	<b>8.0</b>	432	2.8	25		<b>CMV 110/15</b>			16.7	710	0.8	<b>2.0</b>	1104	0.7						100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2				<b>6.7</b>		482	3.1	30			<b>25.0</b>		350	2.4	<b>5.0</b>	624	2.1			40		<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50		<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
<b>25.0</b>	236	1.1	<b>5.0</b>	509	0.8	80	<b>CMV 090/075</b>	25.0	468	0.8	<b>5.0</b>	547	0.8	40	<b>CMV 090/15</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
<b>20.0</b>	277	0.9	<b>4.0</b>	576	0.6	100			<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8		25			<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104		0.7			100	<b>CMV 110/15</b>	<b>33.3</b>	270	3.2	<b>6.7</b>		482			3.1	30	<b>25.0</b>	350	2.4	<b>5.0</b>						624	2.1	40	<b>20.0</b>	426			1.8	<b>4.0</b>		732		1.6	50	<b>16.7</b>	490			1.4		<b>3.3</b>	821	1.2			60		<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>		710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
<b>40.0</b>	243	2.9	<b>8.0</b>	432	2.8	25			<b>CMV 110/15</b>	16.7	710	0.8	<b>2.0</b>	1104		0.7					100	<b>CMV 110/15</b>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
<b>33.3</b>	270	3.2	<b>6.7</b>	482	3.1	30					<b>25.0</b>	350	2.4	<b>5.0</b>		624					2.1		40	<b>20.0</b>		426			1.8		<b>4.0</b>	732	1.6	50		<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586	1.0		<b>2.5</b>	979		0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>		1104	0.7		100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
<b>25.0</b>	350	2.4	<b>5.0</b>	624	2.1	40					<b>20.0</b>	426	1.8	<b>4.0</b>		732					1.6		50	<b>16.7</b>		490	1.4	<b>3.3</b>	821		1.2	60	<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7		100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
<b>20.0</b>	426	1.8	<b>4.0</b>	732	1.6	50					<b>16.7</b>	490	1.4	<b>3.3</b>		821	1.2	60			<b>12.5</b>		586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>		710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
<b>16.7</b>	490	1.4	<b>3.3</b>	821	1.2	60	<b>12.5</b>	586			1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710	0.8			<b>2.0</b>		1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
<b>12.5</b>	586	1.0	<b>2.5</b>	979	0.9	80	<b>10.0</b>	710			0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
<b>10.0</b>	710	0.8	<b>2.0</b>	1104	0.7	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															





**Dati tecnici**

**Technical data**

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		

P <sub>1</sub> [kW]	velocità massima max speed			velocità minima min speed			i	
	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf		

**1.5**

90L4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	<b>20.0</b>	438	2.4	<b>4.0</b>	732	2.0	50	<b>CMV 130/15</b>
	<b>16.7</b>	504	1.9	<b>3.3</b>	821	1.7	60	
	<b>12.5</b>	614	1.4	<b>2.5</b>	979	1.2	80	
	<b>10.0</b>	708	1.1	<b>2.0</b>	1152	1.0	100	

**2.2**

100LA4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	<b>33.3</b>	416	2.8	<b>6.7</b>	713	2.4	30	<b>CMV 130/22</b>
	<b>25.0</b>	533	2.1	<b>5.0</b>	907	1.8	40	
	<b>20.0</b>	657	1.6	<b>4.0</b>	1098	1.4	50	
	<b>16.7</b>	756	1.3	<b>3.3</b>	1231	1.1	60	
	<b>12.5</b>	922	1.0	<b>2.5</b>	1469	0.8	80	

**2.2**

90L2 n <sub>i</sub> =2800 [min <sup>-1</sup> ]	<b>400</b>	41	2.8	<b>80.0</b>	105.6	1.9	5	<b>CMV 063/15</b>	
	<b>267</b>	60	2.0	<b>53.3</b>	151	1.4	7.5		
	<b>200</b>	78	1.6	<b>40.0</b>	197	1.1	10		
		<b>133</b>	115	1.2	<b>26.7</b>	277	0.8	15	
		<b>267</b>	60	3.1	<b>53.3</b>	151	2.1	7.5	<b>CMV 075/15</b>
		<b>200</b>	79	2.6	<b>40.0</b>	199	1.7	10	
		<b>133</b>	115	1.9	<b>26.7</b>	284	1.2	15	
		<b>100</b>	151	1.3	<b>20.0</b>	360	0.9	20	
		<b>80.0</b>	185	1.0	<b>16.0</b>	432	0.6	25	
		<b>66.7</b>	213	1.1	<b>13.3</b>	504	0.7	30	
		<b>267</b>	61	4.5	<b>53.3</b>	153	3.1	7.5	<b>CMV 090/15</b>
		<b>200</b>	80	3.8	<b>40.0</b>	202	2.5	10	
	<b>133</b>	117	3.0	<b>26.7</b>	292	1.9	15		
	<b>100</b>	153	2.2	<b>20.0</b>	374	1.4	20		
	<b>80.0</b>	189	1.6	<b>16.0</b>	450	1.0	25		
	<b>66.7</b>	219	1.8	<b>13.3</b>	504	1.3	30		
	<b>50.0</b>	281	1.3	<b>10.0</b>	634	0.9	40		
	<b>40.0</b>	338	0.9	<b>8.0</b>	732	0.7	50		
	<b>80.0</b>	191	2.8	<b>16.0</b>	462	1.8	25	<b>CMV 110/15</b>	
	<b>66.7</b>	219	3.1	<b>13.3</b>	518	2.0	30		
	<b>50.0</b>	288	2.2	<b>10.0</b>	662	1.5	40		
	<b>40.0</b>	347	1.7	<b>8.0</b>	780	1.2	50		
	<b>33.3</b>	405	1.3	<b>6.7</b>	893	0.9	60		
	<b>25.0</b>	504	0.9	<b>5.0</b>	1094	0.7	80		
	<b>50.0</b>	281	3.1	<b>10.0</b>	653	1.9	40	<b>CMV 130/15</b>	
	<b>40.0</b>	347	2.4	<b>8.0</b>	804	1.5	50		
	<b>33.3</b>	405	1.9	<b>6.7</b>	922	1.2	60		
	<b>25.0</b>	504	1.4	<b>5.0</b>	1114	0.9	80		
	<b>20.0</b>	603	1.0	<b>4.0</b>	1272	0.7	100		

**3**

100LB4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	<b>133</b>	157	1.7	<b>26.7</b>	292	1.5	7.5	<b>CMV 075/40</b>
	<b>100</b>	204	1.3	<b>20.0</b>	374	1.3	10	
	<b>66.7</b>	299	1.0	<b>13.3</b>	526	0.9	15	
	<b>133</b>	158	2.4	<b>26.7</b>	299	2.2	7.5	<b>CMV 090/40</b>
	<b>100</b>	209	2.0	<b>20.0</b>	384	1.8	10	
	<b>66.7</b>	302	1.6	<b>13.3</b>	540	1.5	15	
	<b>50.0</b>	394	1.1	<b>10.0</b>	691	1.1	20	
	<b>40.0</b>	480	0.8	<b>8.0</b>	828	0.8	25	
	<b>33.3</b>	547	1.0	<b>6.7</b>	950	0.9	30	
	<b>66.7</b>	317	2.5	<b>13.3</b>	598	1.9	15	<b>CMV 110/40</b>
	<b>50.0</b>	418	1.8	<b>10.0</b>	778	1.6	20	
	<b>40.0</b>	504	1.4	<b>8.0</b>	912	1.5	25	
	<b>33.3</b>	598	1.5	<b>6.7</b>	1080	1.2	30	
	<b>25.0</b>	787	1.1	<b>5.0</b>	1382	0.9	40	
	<b>20.0</b>	936	0.8	<b>4.0</b>	1608	0.9	50	
	<b>16.7</b>	1080	0.6	<b>3.3</b>	1872	0.7	60	
	<b>40.0</b>	486	2.2	<b>8.0</b>	876	1.7	25	<b>CMV 130/40</b>
	<b>33.3</b>	554	2.1	<b>6.7</b>	950	1.8	30	
	<b>25.0</b>	710	1.5	<b>5.0</b>	1210	1.3	40	
	<b>20.0</b>	876	1.2	<b>4.0</b>	1464	1.0	50	
	<b>16.7</b>	1008	1.0	<b>3.3</b>	1642	0.9	60	
	<b>12.5</b>	1229	0.7	<b>2.5</b>	1958	0.6	80	

**4**

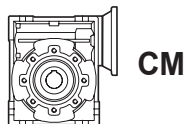
112M4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	<b>133</b>	211	1.8	<b>26.7</b>	398	1.7	7.5	<b>CMV 090/40</b>
	<b>100</b>	278	1.5	<b>20.0</b>	512	1.4	10	
	<b>66.7</b>	403	1.2	<b>13.3</b>	720	1.1	15	
	<b>50.0</b>	525	0.8	<b>10.0</b>	922	0.8	20	
	<b>100</b>	275	2.7	<b>20.0</b>	518	2.4	10	<b>CMV 110/40</b>
	<b>66.7</b>	398	2.0	<b>13.3</b>	739	1.8	15	
	<b>50.0</b>	525	1.4	<b>10.0</b>	973	1.3	20	
	<b>40.0</b>	648	1.1	<b>8.0</b>	1184	1.0	25	
	<b>33.3</b>	720	1.2	<b>6.7</b>	1248	1.2	30	
	<b>25.0</b>	960	0.9	<b>5.0</b>	1664	0.8	40	
	<b>40.0</b>	648	1.6	<b>8.0</b>	1168	1.3	25	<b>CMV 130/40</b>
	<b>33.3</b>	739	1.6	<b>6.7</b>	1267	1.3	30	
	<b>25.0</b>	947	1.2	<b>5.0</b>	1613	1.0	40	
	<b>20.0</b>	1168	0.9	<b>4.0</b>	1952	0.8	50	
	<b>16.7</b>	1344	0.7	<b>3.3</b>	2189	0.6	60	

100LA4 n <sub>i</sub> =1400 [min <sup>-1</sup> ]	<b>133</b>	117	2.2	<b>26.7</b>	219	2.0	7.5	<b>CMV 075/22</b>
	<b>100</b>	153	1.8	<b>20.0</b>	281	1.7	10	
	<b>66.7</b>	224	1.3	<b>13.3</b>	394	1.2	15	
	<b>133</b>	119	3.2	<b>26.7</b>	224	2.9	7.5	<b>CMV 090/22</b>
	<b>100</b>	157	2.7	<b>20.0</b>	288	2.4	10	
	<b>66.7</b>	227	2.1	<b>13.3</b>	405	2.0	15	
	<b>50.0</b>	295	1.5	<b>10.0</b>	518	1.4	20	
	<b>40.0</b>	360	1.1	<b>8.0</b>	621	1.1	25	
	<b>33.3</b>	410	1.3	<b>6.7</b>	713	1.2	30	
	<b>133</b>	119	5.7	<b>26.7</b>	224	5.1	7.5	<b>CMV 110/22</b>
	<b>100</b>	157	4.7	<b>20.0</b>	292	4.3	10	
	<b>66.7</b>	227	3.5	<b>13.3</b>	410	3.3	15	
	<b>50.0</b>	299	2.5	<b>10.0</b>	540	2.4	20	
	<b>40.0</b>	369	1.9	<b>8.0</b>	648	1.9	25	
	<b>33.3</b>	421	2.1	<b>6.7</b>	724	2.0	30	
	<b>25.0</b>	540	1.5	<b>5.0</b>	936	1.4	40	
	<b>20.0</b>	639	1.2	<b>4.0</b>	1098	1.1	50	
	<b>16.7</b>	734	0.9	<b>3.3</b>	1231	0.8	60	



**Dimensioni**

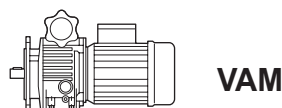
**Dimensions**



**CM**

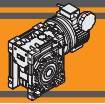
CM.. - CM..F - CM..FB - CM..FL																									
	A	C	D <sub>H8</sub>	E	F	G	G1	H	I	L	M	N <sub>h8</sub>	N1	O	P	Q	R	S	T	V	K	KE	a	b	t
<b>040</b>	70	100	18	121.5	43	70	78	50	40	71	75	60	36.5	6.5	87	55	71.5	6.5	26	35	60	M6x8 (n.4)	45°	6	20.8
<b>050</b>	80	120	25	144	49	80	92	60	50	85	85	70	43.5	8.5	100	64	84	7	30	40	70	M8x10 (n.4)	45°	8	28.3
<b>063</b>	100	144	25	174	67	95	112	72	63	103	95	80	53	8.5	110	80	102	8	36	50	85	M8x10 (n.8)	45°	8	28.3
<b>075</b>	120	172	28	205	72	112.5	120	86	75	112	115	95	57	11	140	93	119	10	40	60	90	M8x14 (n.8)	45°	8	31.3
<b>090</b>	140	205	35	238	74	129.5	140	102.5	90	130	130	110	67	13	160	102	135	11	45	70	100	M10x18 (n.8)	45°	10	38.3
<b>110</b>	170	252.5	42	295	—	160	155	127.5	110	144	165	130	74	14	200	125	167.5	14	50	85	115	M10x18 (n.8)	45°	12	45.3
<b>130</b>	200	292.5	45	335	—	180	170	147.5	130	155	215	180	81	16	250	140	187.5	15	60	100	120	M12x21 (n.8)	45°	14	48.8

	CM..F								CM..FB								CM..FL							
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
<b>040</b>	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	97	7.5	4.5	80-95	60	9(n.4)	110	95
<b>050</b>	45°	90	9	5	90-110	70	11(n.4)	125	110	89	9	5	130-145	110	9.5(n.4)	160	120	9	5	90-110	70	11(n.4)	125	110
<b>063</b>	45°	82	10	6	150-160	115	11(n.4)	180	142	98	10	5	165-180	130	11(n.4)	200	112	10	6	150-160	115	11(n.4)	180	142
<b>075</b>	45°	111	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>090</b>	45°	111	13	6	175-190	152	14(n.4)	210	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>110</b>	45°	131	15	6	230	170	14(n.8)	280	260	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>130</b>	45°	140	15	6	255	180	16(n.8)	320	290	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



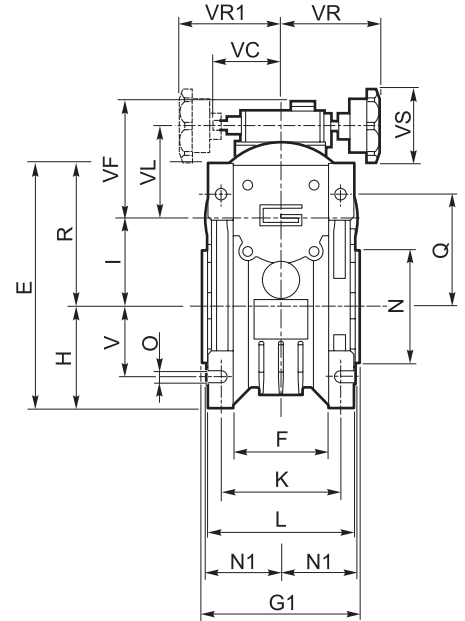
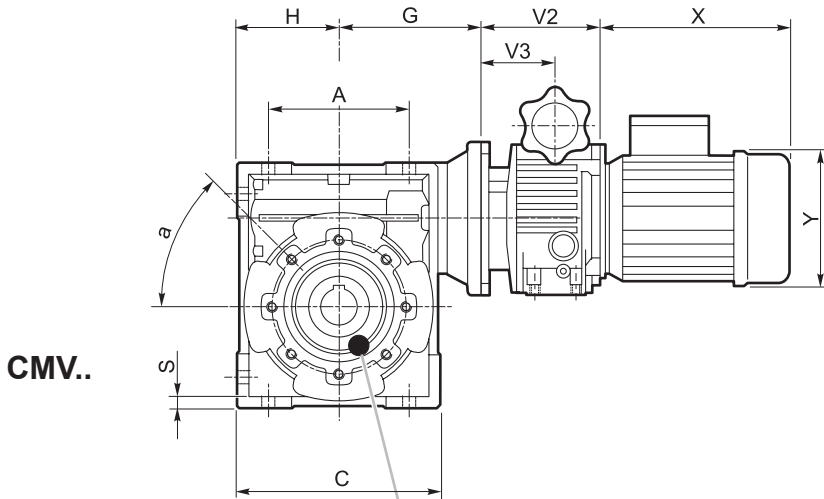
**VAM**

	VAM							
	V2	V3	VC	VF	VL	VR	VR1	VS
<b>018</b>	112.5	64.5	71	111	78	110	110	85
<b>037</b>	110	74	71	123	90	110	110	85
<b>075</b>	139	85.5	79	140	107	120	120	85
<b>15</b>	188	115	—	144	122	120	120	85
<b>22</b>	208	131	—	188	150	160	—	110
<b>40</b>	208	131	—	188	150	160	—	110

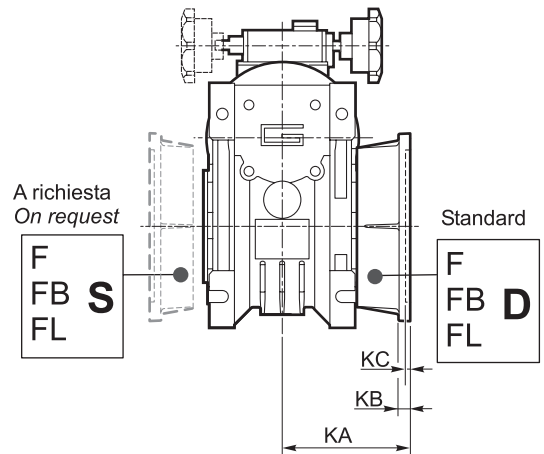
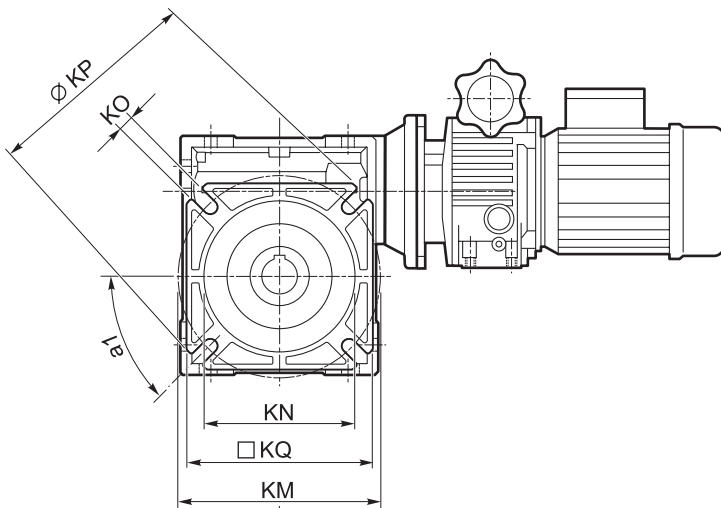
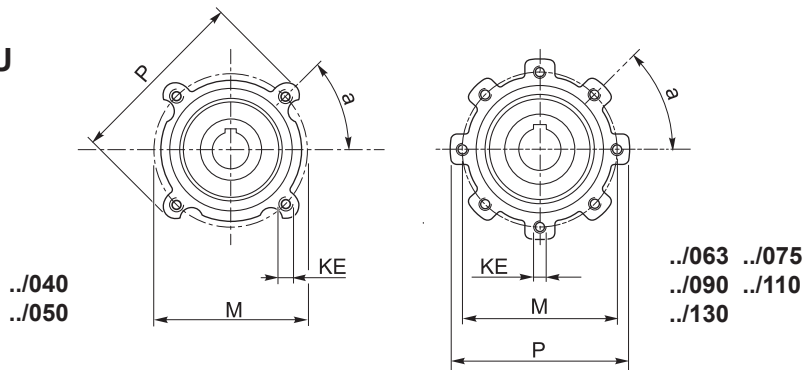


**Dimensioni**

**Dimensions**

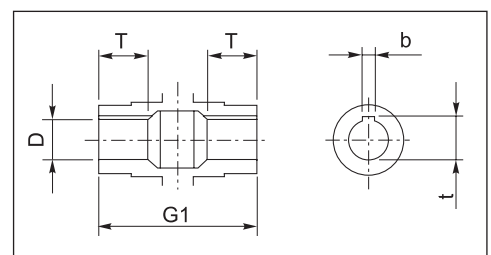
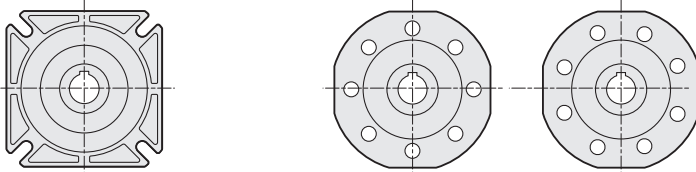


**CMV..U**



**CMV..F** (../040 - ../090)  
**CMV..FB** (../040 - ../063)  
**CMV..FL** (../040 - ../063)

**CMV..F**  
 (../110) (../130)



Albero lento cavo / Hollow output shaft

**CMV**



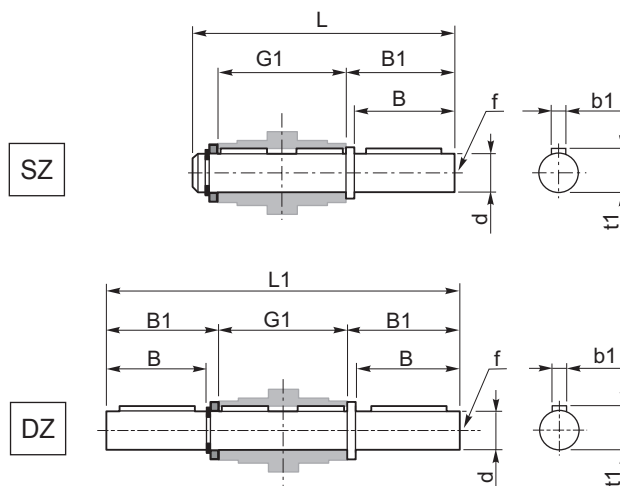
**Accessori**

**Accessories**

**Albero lento semplice e doppio**

**Single and double output shaft**

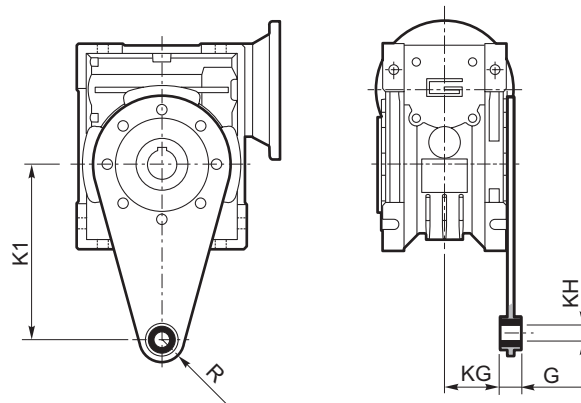
	d <sub>h7</sub>	B	B1	G1	L	L1	f	b1	t1
CM 040	18	40	43	78	128	164	M6	6	20.5
CM 050	25	50	53.5	92	153	199	M10	8	28
CM 063	25	50	53.5	112	173	219	M10	8	28
CM 075	28	60	63.5	120	192	247	M10	8	31
CM 090	35	80	84.5	140	234	309	M12	10	38
CM 110	42	80	84.5	155	249	324	M16	12	45
CM 130	45	80	85	170	265	340	M16	14	48.5



**Braccio di reazione**

**Torque arm**

	K1	G	KG	KH	R
CM 040	100	14	31	10	18
CM 050	100	14	38	10	18
CM 063	150	14	47.5	10	18
CM 075	200	25	46.5	20	30
CM 090	200	25	56.5	20	30
CM 110	250	30	62	25	35
CM 130	250	30	69	25	35

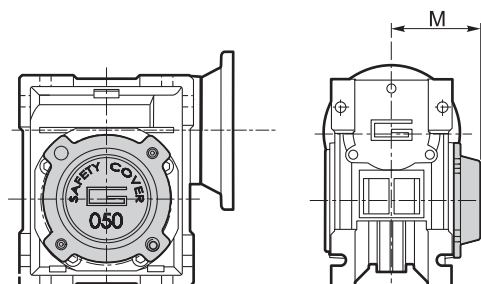
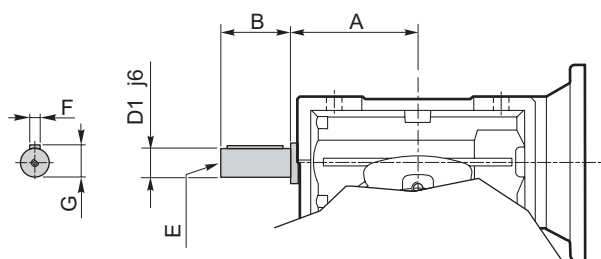


**Opzioni**

**Options**

**VS - Vite sporgente / Extended input shaft**

**SC - Safety cover**



	A	B	D <sub>1 j6</sub>	E	F	G
CM 040	53	23	11	M5	4	12.5
CM 050	64	30	14	M6	5	16
CM 063	75	40	19	M6	6	21.5
CM 075	90	50	24	M8	8	27
CM 090	108	50	24	M8	8	27
CM 110	—	—	—	—	—	—
CM 130	—	—	—	—	—	—

	M
CM 040	54.5
CM 050	62.5
CM 063	73
CM 075	79
CM 090	94
CM 110	102
CM 130	117

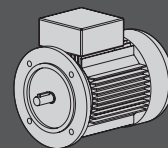




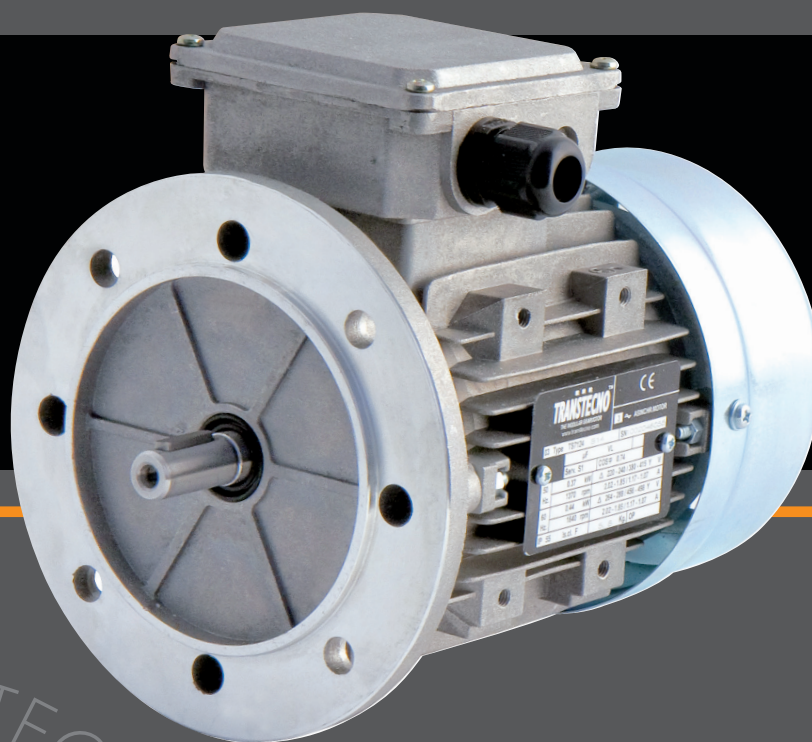
**TRANSTECNO**<sup>®</sup>  
THE MODULAR GEARMOTOR

**TS-MY**

TS-MY

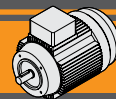


**MOTORI ELETTRICI C.A. ASINCRONI**  
**A.C. ASYNCHRONOUS ELECTRIC MOTORS**





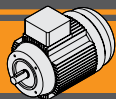




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Designazione	<i>Classification</i>	<b>N2</b>
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**Caratteristiche tecniche**

I motori della serie TS e MY sono chiusi e dotati di ventola di raffreddamento.

La serie TS comprende motori ad induzione trifase 230/400 Vca a 50 Hz e 275/480 Vca a 60 Hz, 4 poli, per potenze da 0.09 kW fino a 3.0 kW: silenziosi e dinamicamente ben bilanciati uniscono qualità robustezza e convenienza.

La serie MY comprende motori ad induzione monofase 230 Vca 50 Hz, per potenze da 0.09 kW fino a 0.75 kW, adatti per uso con macchine che necessitano di potenze ridotte.

Anch'essi uniscono qualità e convenienza.

Entrambe le serie sono costruite in alluminio e sono disponibili in configurazione B5 oppure B14.

Altre caratteristiche standard dei motori TS - MY sono:

- Isolamento termico di classe F
- Grado di protezione IP55
- Sonda bimetallica PTO per protezione da sovratemperatura (solo MY)
- Rumorosità e vibrazioni contenute
- Temperatura ambiente: -20 °C ÷ +40 °C, senza condensa.
- I motori della serie MY si caratterizzano per l' ampia coprimorsettiera dove il condensatore di marcia trova alloggiamento e protezione.
- Per uso industriale (industria leggera e pesante) e commerciale.

**Technical characteristics**

*TS and MY series motors are closed and fan cooled.*

*TS range includes induction threephase 4 poles motors 230/400 Vac at 50 Hz and 275/480 Vac at 60 Hz, it covers power sizes from 0.09 kW up to 3.0 kW. These motors run quietly, they are dynamically well balanced, robust and are an economic solution.*

*MY range includes induction singlephase motors 230 Vac at 50 Hz and covers power sizes from 0.09 kW up to 0.75 kW.*

*They are particularly suitable for low powered applications. Similar to TS motors, they are robust and are a low cost solution.*

*Both ranges are made with an aluminum frame and are available with B5 or B14 flange mountings.*

*Standard features are:*

- *Class F thermal insulation*
- *IP55 enclosure protection*
- *PTO thermostat for overheating protection (only MY)*
- *Low noise and vibrations*
- *Ambient temperature: -20 °C ÷ +40 °C, without condensing.*
- *MY series motors have a large terminal box, which includes the run capacitor, protecting it from the external environment.*
- *Suitable for heavy and light industrial applications and also for commercial use.*

**Designazione**

**Classification**

TS	63	2	4	B5	230-400	50 Hz
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency
<b>TS</b> trifase threephase	vedi tabelle see tables	<b>1-2-3-S</b> <b>L1-L2</b>	<b>4</b>	<b>B5</b> <b>B14</b>	<b>230-400</b>	<b>50Hz</b> <b>60Hz</b>

MY	63	2	4	B5	230	50 Hz
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency
<b>MY</b> monofase singlephase	vedi tabelle see tables	<b>2</b>	<b>4</b>	<b>B5</b> <b>B14</b>	<b>230</b>	<b>50Hz</b>

<b>TRANSTECNO</b> THE MODULAR GEARMOTOR www.transtecno.com		<b>CE</b>	
3 ASINCHR. MOTOR			
03 Type	μF	VL	SN
50 Hz.	kW	Δ 220 - 240/380 - 415 Y	V
	rpm		A
60 Hz.	kW	Δ 264 - 288/456 - 498 Y	V
	rpm		A
IP 55	Is.cl. F	Kg.OP	

TS 0.09 - 0.55 kW

<b>TRANSTECNO</b> THE MODULAR GEARMOTOR www.transtecno.com		<b>CE</b> IE2	
3 ASINCHR. MOTOR			
03 Type TS	μF	VL	SN
50 Hz.	kW	Δ 220 - 240/380 - 415 Y	V
	rpm		A
Year of manufacture	100%	75%	50%
	%	%	%
IP 55	Is.cl. F	Kg.OP	

TS 0.75 - 3.0 kW

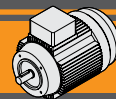


Diagramma famiglia TS-MY

TS-MY series

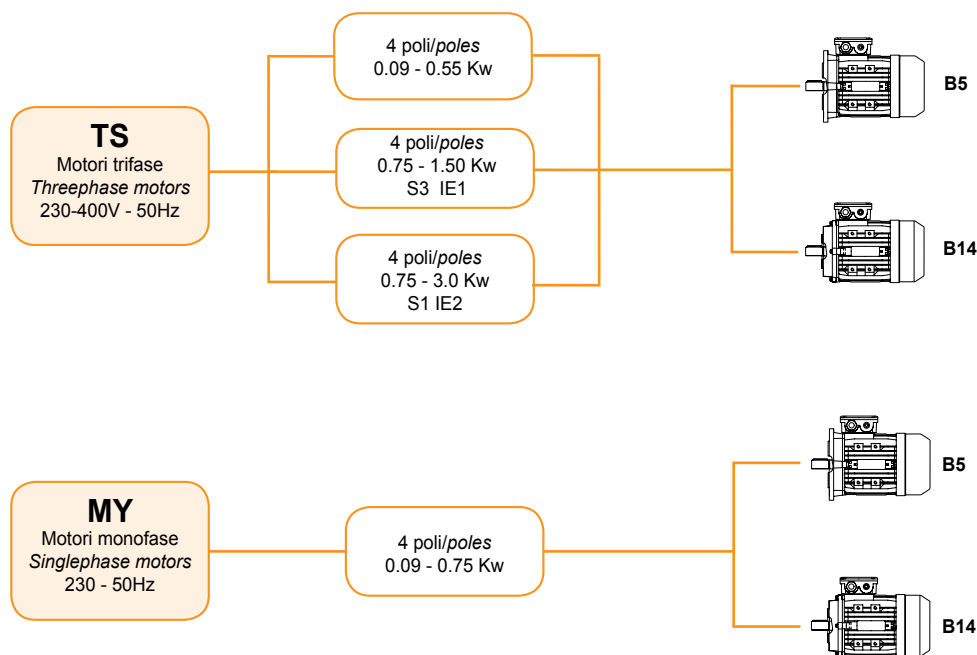
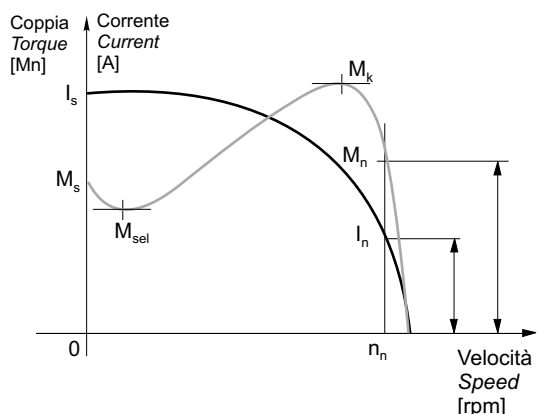


Gráfico generale coppia-corrente-velocità

Torque-current-speed general diagram



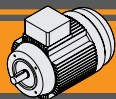
Il gráfico evidenzia la caratteristica coppia/corrente – giri per un generico motore asincrono. Si noti che talvolta Msel e MS coincidono.

Torque/Current vs speed diagram of an asynchronous motor. Note: sometimes Msel and Ms are the same.

Simbologia e formule

Symbols and formulas

$P_n$	[kW]	Potenza nominale	Rated power
$I_n$	[A]	Corrente nominale (a 400V)	Rated current (at 400V)
$M_n$	[Nm]	Coppia nominale	Rated torque
$n_n$	[rpm]	Velocità nominale	Rated speed
LR	[dB]	Livello di rumorosità	Noise Level
$M_s / M_n$		Rapporto coppia spunto / coppia nominale	Ratio start torque / rated torque
$M_k / M_n$		Rapporto coppia massima / coppia nominale	Ratio max torque / rated torque
$M_{sel} / M_n$		Rapporto coppia di sella (minima) / coppia nominale	Ratio saddle torque / rated torque
$I_s / I_n$		Rapporto corrente di spunto / corrente nominale	Ratio start current / rated current
$\cos\phi$		Fattore di potenza al carico nominale	Power factor at rated torque load
$\eta$		Rendimento al carico nominale	Efficiency at rated torque load
Potenza Power	[HP]	Potenza [kW] x 1.34 circa	Power [kW] x 1.34 (about)
Potenza resa $P_n$ $P_n$ output power	[kW]	Potenza assorbita x $\eta$	Absorbed power x $\eta$
Pot. assorbita Absorbed power	[kW]	$\frac{V \times I \times PF}{1000}$ (monofase) $\frac{V \times I \times \sqrt{3} \times PF}{1000}$ (trifase)	$\frac{V \times I \times PF}{1000}$ (singlephase) $\frac{V \times I \times \sqrt{3} \times PF}{1000}$ (threephase)
$I_n$ (230 V)		$I_n$ (400 V) x $\sqrt{3}$	$I_n$ (400 V) x $\sqrt{3}$



**Dati tecnici**

**Technical data**

Motori trifase serie **TS / TS** Series three phase motors (230-400 V - 50 Hz - 1500 min<sup>-1</sup>) S1

poli / poles **4**

TS	P <sub>n</sub> [kW]	M <sub>n</sub> [Nm]	n <sub>n</sub> [min <sup>-1</sup> ]	I <sub>n</sub> (400V) [A]	η %	cosφ	M <sub>s</sub> /M <sub>n</sub>	I <sub>s</sub> /I <sub>n</sub>	M <sub>k</sub> /M <sub>n</sub>	M <sub>sel</sub> /M <sub>n</sub>	LR [dB]	Massa Mass [Kg]
562-4	0.09	0.63	1360	0.45	52	0.59	2.3	4	2.4	2	50	3.2
632-4	0.18	1.31	1310	0.70	57	0.65	2.2	4	2.4	2	52	4.2
633-4	0.25	1.78	1340	0.91	60	0.66	2.2	4	2.2	2	54	5.0
711-4	0.25	1.77	1350	0.84	60	0.72	2.2	6	2.4	1.7	55	5.0
712-4	0.37	2.58	1370	1.11	65	0.74	2.2	6	2.4	1.7	55	5.8
713-4	0.55	3.80	1380	1.60	66	0.75	2.2	6	2.4	1.7	57	6.5

Motori trifase serie **TS / TS** Series three phase motors (230-400 V - 50 Hz - 1500 min<sup>-1</sup>) S1 IE2

poli / poles **4**

TS*	P <sub>n</sub> [kW]	M <sub>n</sub> [Nm]	n <sub>n</sub> [min <sup>-1</sup> ]	I <sub>n</sub> (400V) [A]	η %	cosφ	M <sub>s</sub> /M <sub>n</sub>	I <sub>s</sub> /I <sub>n</sub>	M <sub>k</sub> /M <sub>n</sub>	LR [dB]	Massa Mass [Kg]
802-4 IE2	0.75	5.08	1410	1.79	79.6	0.76	2.8	5.3	3	58	11.2
90S-4 IE2	1.1	7.4	1420	2.50	81.4	0.78	3.8	6.7	2.6	61	13.9
90L1-4 IE2	1.5	10.1	1420	3.31	82.8	0.79	4	7.2	2.7	61	16.0
100L1-4 IE2	2.2	14.6	1440	4.83	84.3	0.78	3.6	7.4	3.6	64	22.7
100L2-4 IE2	3	19.9	1440	6.33	85.5	0.80	3.5	7.8	3.5	64	26.5

\* Motori ad efficienza IE2 / IE2 efficiency electric motors

Motori trifase serie **TS / TS** Series three phase motors (230-400 V - 50 Hz - 1500 min<sup>-1</sup>) S3 IE1

poli / poles **4**

TS	P <sub>n</sub> [kW]	M <sub>n</sub> [Nm]	n <sub>n</sub> [min <sup>-1</sup> ]	I <sub>n</sub> (400V) [A]	η %	cosφ	M <sub>s</sub> /M <sub>n</sub>	I <sub>s</sub> /I <sub>n</sub>	M <sub>k</sub> /M <sub>n</sub>	M <sub>sel</sub> /M <sub>n</sub>	LR [dB]	Massa Mass [Kg]
802-4	0.75	5.19	1380	1.93	72	0.78	2.2	6	2.4	1.6	58	9.1
803-4	1.1	7.55	1390	2.67	76.2	0.78	2.2	6	2.4	1.6	60	11.0
90S-4	1.1	7.50	1400	2.64	76.2	0.79	2.2	6	2.4	1.6	61	11.7
90L1-4	1.5	10.2	1400	3.45	78.5	0.8	2.2	6	2.4	1.6	61	14.4

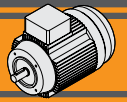
Motore monofase serie **MY / MY** Series single phase motors (230 V - 50 Hz - 1500 min<sup>-1</sup>) S1

poli / poles **4**

MY	P <sub>n</sub> [kW]	M <sub>n</sub> [Nm]	n <sub>n</sub> [min <sup>-1</sup> ]	I <sub>n</sub> (230V) [A]	η %	cosφ	M <sub>s</sub> /M <sub>n</sub>	I <sub>s</sub> /I <sub>n</sub> [A]	M <sub>k</sub> /M <sub>n</sub>	M <sub>sel</sub> /M <sub>n</sub>	C [μF]	Massa Mass [Kg]
5624	0.09	0.64	1340	0.87	55	0.9	0.65	2.0	1.6	0.60	6	3.4
6324	0.18	1.26	1360	1.54	60	0.9	0.55	2.7	1.7	0.50	8	3.4
7124	0.37	2.58	1370	3	68	0.92	0.50	3.2	1.6	0.45	16	7.0
8024	0.75	5.20	1380	5.5	73	0.92	0.55	3.2	1.6	0.50	30	11.5

Legenda: vedere pagina N3

Key: read page N3

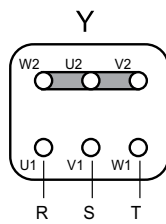
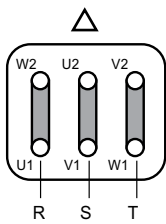


**Connessioni e collegamenti**

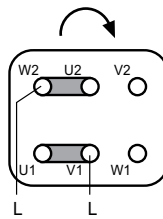
**Connection diagram**

**TS - 230 V - 50 Hz (275 V 60Hz) / 400 V - 50 Hz (480 V 60Hz)**

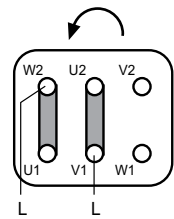
**MY - 230 V - 50 Hz**



Nota: per invertire il senso di rotazione spostare tra loro 2 cavi  
Note: swap the 2 leads to reverse rotation



Senso di rotazione orario  
(vs ventola)  
Clockwise rotation (vs fan)



Senso di rotazione antiorario  
(vs ventola)  
Counterclockwise rotation (vs fan)

**Protezione termica bimetallica (PTO) - solo MY**

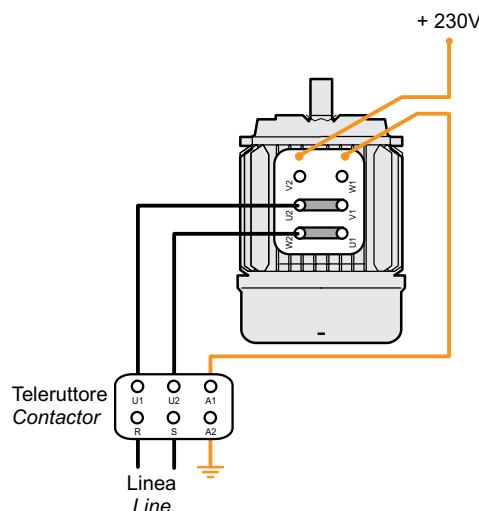
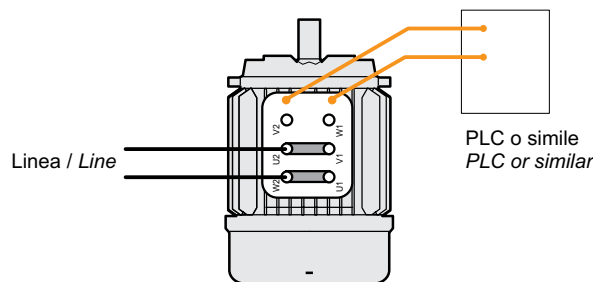
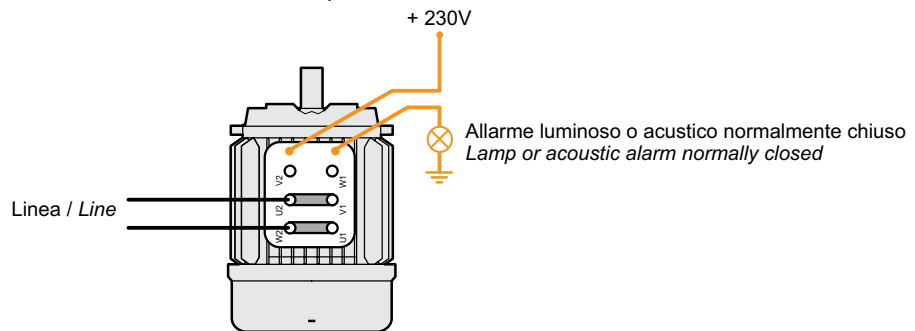
**Thermal bimetallic protector (PTO) - only MY**

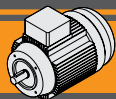
La serie MY è dotata di pastiglia termica bimetallica (PTO) per il monitoraggio del superamento della soglia termica (135°C ± 5°C). Utile per uso tale da raggiungere temperature elevate. Sotto alcuni esempi dell'utilizzo.

MY range is provided with a standard bimetallic thermal protector (PTO) which monitors over-temperature (135°C ± 5°C). This is useful for motor applications that reach high temperatures. See below for some examples.

La pastiglia termica in dotazione standard è un contatto normalmente chiuso: si apre al superamento della temperatura di soglia. Attenzione: si tratta solo di esempi, affidarsi a personale esperto.

The built-in thermal protector is a normally closed contact. It opens only when the temperature exceeds the threshold. Please consult qualified personnel, below are only some examples.





Dimensioni motori trifase serie **TS**

**B5**

**TS Series three phase motor dimensions**

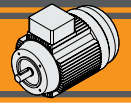
TS	Albero / Shaft					B5											
	D	E	DH	GA	F	P	M	N	S	T	AC	AD	AF	KK	L	LL	V
56	9	20	M3	10.2	3	120	100	80	7	3	117	100	88	1-M16x1.5	196	88	14
63	11	23	M4	12.5	4	140	115	95	10	3	130	108	94	1-M16x1.5	220	94	14
71 1/2 (3)	14	30	M5	16	5	160	130	110	10	3.5	147	115	94	1-M20x1.5	241 (255)	94	20
80	19	40	M6	21.5	6	200	165	130	12	3.5	163	133	105	1-M20x1.5	290	105	27
90S	24	50	M8	27	8	200	165	130	12	3.5	183	139	105	1-M20x1.5	312	105	30
90L1	24	50	M8	27	8	200	165	130	12	3.5	183	139	105	1-M20x1.5	337	105	30
100L 1/2	28	60	M10	31	8	250	215	180	15	4	205	152	105	2-M20x1.5	369	105	26

Dimensioni motori trifase serie **TS**

**B14**

**TS Series three phase motor dimensions**

TS	Albero / Shaft					B14											
	D	E	DH	GA	F	P	M	N	S	T	AC	AD	AF	KK	L	LL	V
56	9	20	M3	10.2	3	80	65	50	M5	2.5	117	100	88	1-M16x1.5	196	88	14
63	11	23	M4	12.5	4	90	75	60	M5	2.5	130	108	94	1-M16x1.5	220	94	14
71 1/2 (3)	14	30	M5	16	5	105	85	70	M6	2.5	147	115	94	1-M20x1.5	241 (255)	94	20
80	19	40	M6	21.5	6	120	100	80	M6	3	163	133	105	1-M20x1.5	290	105	27
90S	24	50	M8	27	8	140	115	95	M8	3	183	139	105	1-M20x1.5	312	105	30
90L1	24	50	M8	27	8	140	115	95	M8	3	183	139	105	1-M20x1.5	337	105	30
100L 1/2	28	60	M10	31	8	160	130	110	M8	3.5	205	152	105	2-M20x1.5	369	105	26



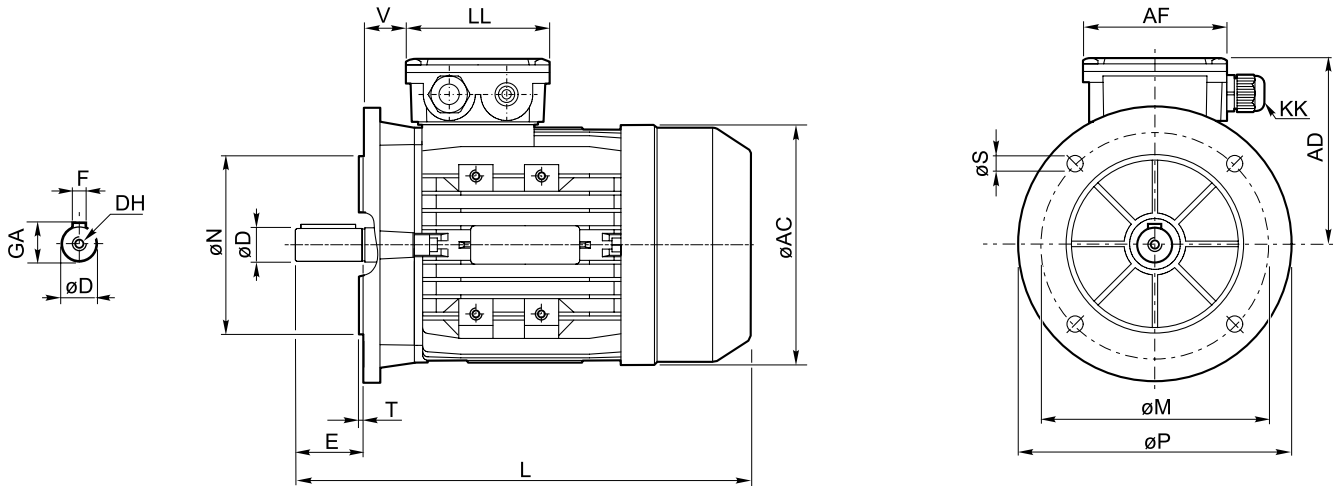
Dati tecnici: dimensioni motori

Technical data: motor dimensions

Dimensioni motori trifase serie TS

B5

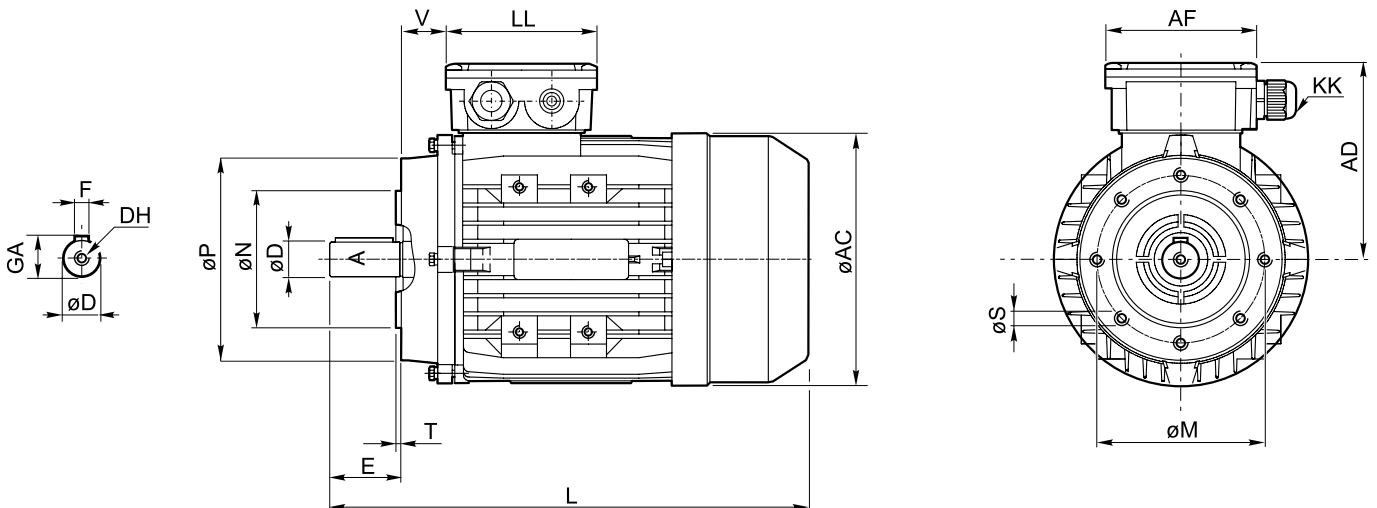
TS Series three phase motor dimensions

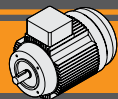


Dimensioni motori trifase serie TS

B14

TS Series three phase motor dimensions





Dimensioni motori monofase serie **MY** **B5** *MY Series single phase motor dimensions*

MY	AC	AD	AF	AF1	D j6	DH	E	F
56	110	90	124	84	9	M4x12	20	3
63	121	90	124	84	11	M4x12	23	4
71	138	110	128	84	14	M5x12	30	5
80	159	152	128	60	19	M6x16	40	6

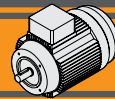
MY	KK	L	M	N j6	P	S	T	GA
56	2-M18x1.5	192	100	80	120	7	3	10.2
63	2-M18x1.5	214	115	95	140	9	3	12.5
71	2-M18x1.5	250	130	110	160	9	3.5	16
80	2-M20x1.5	284	165	130	200	12	3.5	21.5

Dimensioni motori monofase serie **MY** **B14** *MY Series single phase motor dimensions*

MY	AC	AD	AF	AF1	D j6	DH	E	F
56	110	90	124	84	9	M4x12	20	3
63	121	90	124	84	11	M4x12	23	4
71	138	110	128	84	14	M5x12	30	5
80	159	152	128	60	19	M6x16	40	6

	KK	L	M	N j6	P	S	T	GA
56	2-M18x1.5	192	65	50	80	M5	3	10.2
63	2-M18x1.5	214	75	60	90	M5	3	12.5
71	2-M18x1.5	250	85	70	105	M6	3.5	16
80	2-M20x1.5	284	100	80	120	M6	3.5	21.5



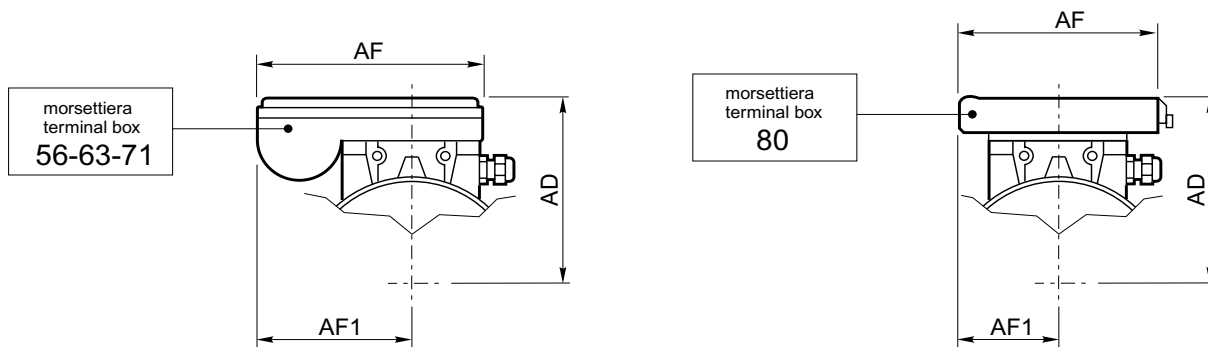


**Dati tecnici: dimensioni motori**

**Technical data: motor dimensions**

**Dimensioni motori monofase serie MY**

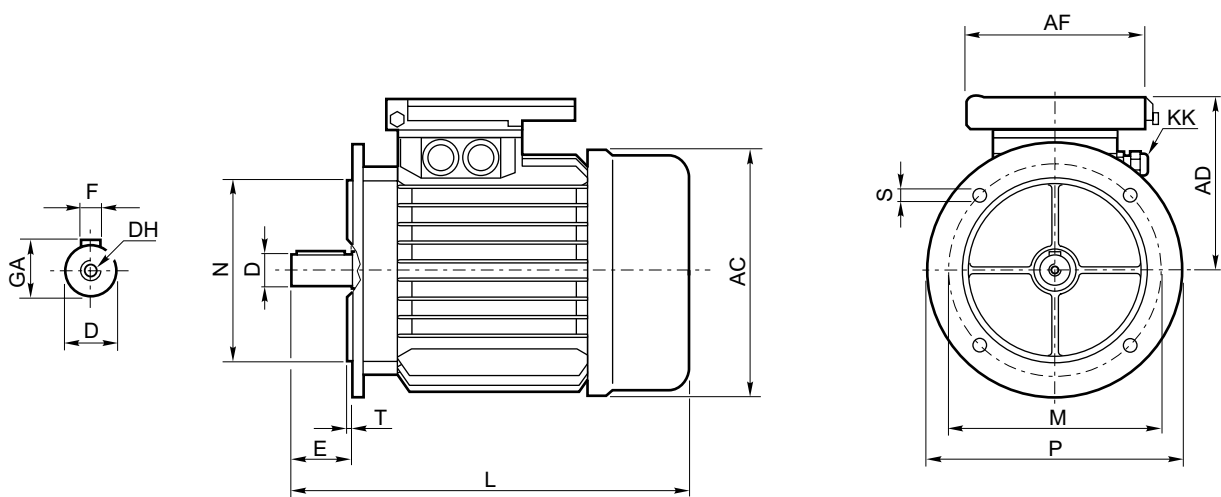
**MY Series single phase motor dimensions**



**Dimensioni motori monofase serie MY**

**B5**

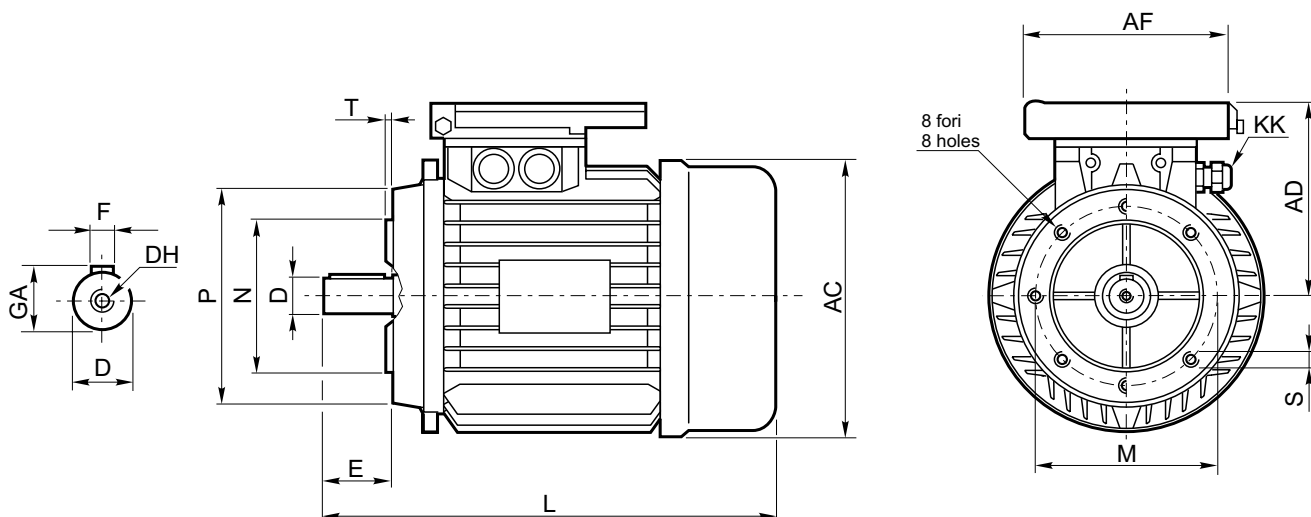
**MY Series single phase motor dimensions**



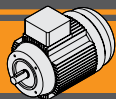
**Dimensioni motori monofase serie MY**

**B14**

**MY Series single phase motor dimensions**



**TS-MY**



## Informazioni generali

## General information

### Caratteristiche generali

### General characteristics

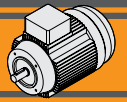
- Ventilazione: ventola a pale radiali in materiale plastico.
  - Copriventola: in lamiera stampata consente ottima canalizzazione del flusso e protezione alla ventola.
  - Rotore: del tipo a gabbia di scoiattolo, equilibrato dinamicamente.
  - Carcassa: lega di alluminio di elevata resistenza.
  - Avvolgimento: isolamento termico di classe F.
  - Protezione: IP55
  - Temperatura ambiente: -20 °C ÷ +40 °C, senza condensa
  - Massima altitudine: 1000 m sul livello del mare
- *Cooling: fan with plastic blades.*
  - *Fan cover: sheet metal, for optimum circulation and also provides fan protection.*
  - *Rotor: squirrel cage type. Dynamically balanced.*
  - *Housing: highly resistant aluminium alloy*
  - *Windings: class F thermal insulation*
  - *IP55 protection degree*
  - *Ambient temperature: -20 °C ÷ +40 °C, without condensing*
  - *Maximum altitude: 1000 m above sea level*

### Dati cuscinetto, paraoli, pressacavi

### Ball bearing, oil seal, cable glands data

TS	Cuscinetto anteriore Front bearings	Cuscinetto posteriore Rear bearings	Paraoli Oilseals Ø	Pressacavi Cable glands
56	6201 2RZ	6201 2RZ	12x22x5	1-M16x1.5
63	6201 2RZ	6201 2RZ	12x24x5	1-M16x1.5
71	6202 2RZ	6202 2RZ	15x25x7	1-M20x1.5
80	6204 2RZ	6204 2RZ	20x34x7	1-M20x1.5
90	6205 2RZ	6205 2RZ	25x37x7	1-M20x1.5
100	6206 2RZ	6206 2RZ	30x44x7	2-M20x1.5

MY	Cuscinetto anteriore Front bearings	Cuscinetto posteriore Rear bearings	Paraoli Oilseals Ø	Pressacavi Cable glands
56	6201ZZ-C3	6201ZZ-C3	12x22x5	2-M18x1.5
63	6201ZZ-C3	6201ZZ-C3	12x22x7	2-M18x1.5
71	6202ZZ-C3	6202ZZ-C3	15x25x7	2-M18x1.5
80	6204ZZ-C3	6204ZZ-C3	20x30x7	2-M20x1.5



**Grado di protezione IP**

**IP protection rating**

Indica il grado di isolamento meccanico del corpo motore.






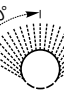
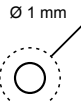

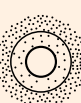

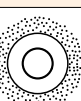
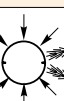


1<sup>a</sup> cifra protezione alla penetrazione di corpi solidi.

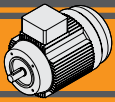
2<sup>a</sup> cifra protezione contro la penetrazione d'acqua.

IP protection rating indicates the degree of mechanical insulation of the motor casing.

The 1<sup>st</sup> figure indicates the level of protection against the intrusion of solid matter.

The 2<sup>nd</sup> figure indicates to which degree the motor is waterproof.

IP		Definizione / Description	IP		Definizione / Description
0		Non protetto / No protection	0		Non protetto / No protection
1		Protetto da corpi solidi superiori a Ø 50 mm. Protected against solid matter (over Ø 50 mm).	1		Protetto contro la caduta verticale di gocce d'acqua. Protected against drops of water falling vertically.
2		Protetto da corpi solidi superiori a Ø 12 mm. Protected against solid matter (over Ø 12 mm).	2		Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15°. Protected against drops of water falling up to 15°.
3		Protetto da corpi solidi superiori a Ø 2.5 mm. Protected against solid matter (over Ø 2.5 mm).	3		Protetto contro la pioggia. Rain proof.
4		Protetto da corpi solidi superiori a Ø1 mm. Protected against solid matter (over Ø1 mm).	4		Protetto contro gli spruzzi. Splash proof.
5		Protetto contro la polvere. Dust protected.	5		Protetto contro getti d'acqua. Water jet proof.
6		Totalmente protetto contro la polvere. Fully dust tight.	6		Protetto dalle ondate. Waveproof.
7	N.A.		7		Protetto contro immersione. Immersion up to 1 metre.
8	N.A.		8		Protetto contro immersione/sommersione prolungata. Immersion beyond 1 metre.

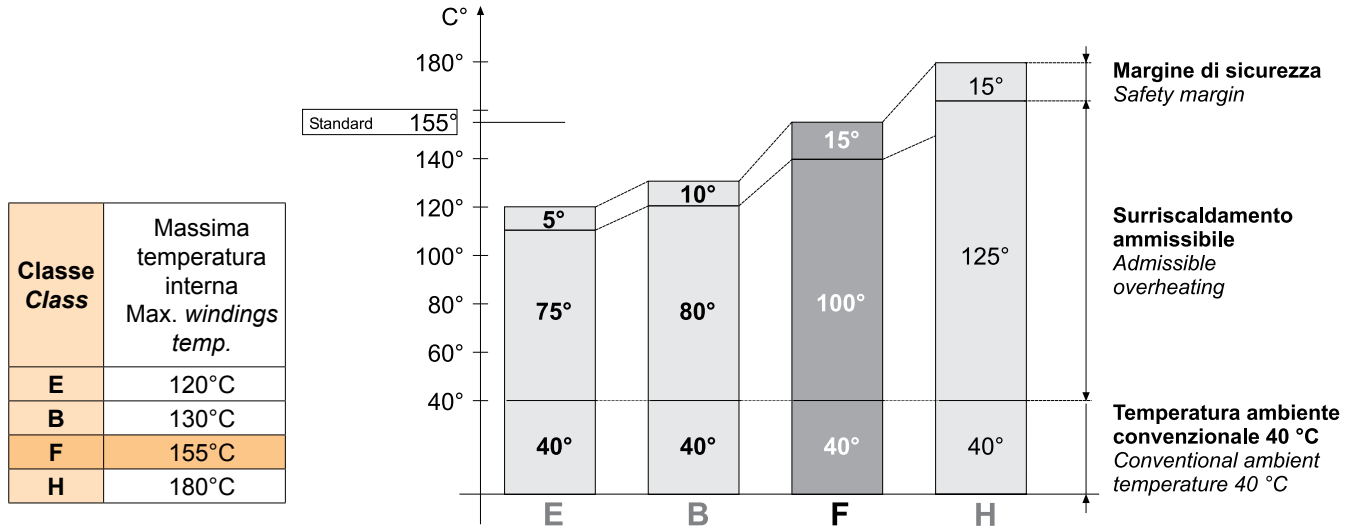


**Classe di isolamento termico**

**Insulation class**

La classe termica indica il grado di resistenza alla temperatura interna, nel punto più caldo (avvolgimenti). Maggiore il carico e migliore deve essere il livello di protezione. Attiene alle resine e in generale a tutti i materiali interni di isolamento.

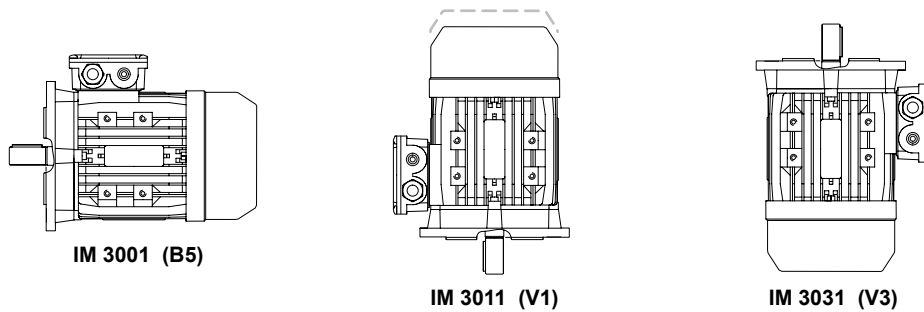
Thermal insulation class indicates the level of thermal protection measured at the hottest point inside the motor (windings). The bigger the load, the more thermal insulation is required. This is related to resin and all the internal insulation materials.



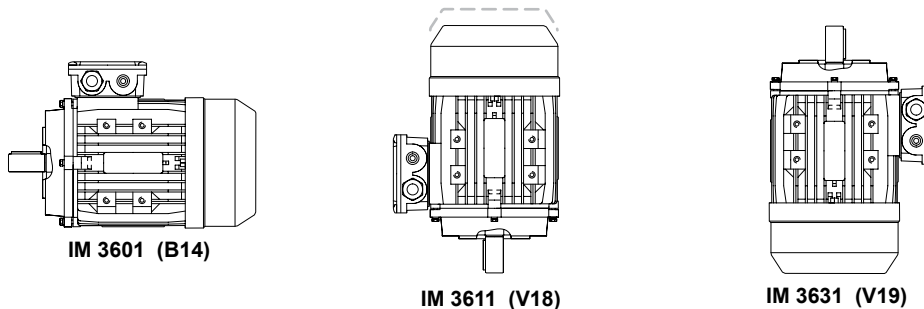
**Forme costruttive e posizioni**

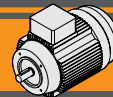
**Mounting type and position**

**B5**



**B14**





**Serie TS - Funzionamento in ambiente 60 Hz**

**Series TS - 60 Hz line power supply**

In via teorica il motore 400 V 50 Hz può essere alimentato a 60 Hz con le seguenti conseguenze:

Theoretically a 400 V 50 Hz motor can run under 60 Hz however with the following consequences:

- La velocità aumenta del 20 % perché dipendente direttamente dalla frequenza.
- La coppia modifica in funzione della tensione (infatti il rapporto tensione/frequenza è proporzionale al flusso magnetico ammesso).  
A 400 V la coppia cala di circa il 20% mentre la potenza rimane invariata.  
A 480 V la coppia rimane invariata e la potenza aumenta del 20% circa.  
Valori intermedi di tensione producono effetti intermedi.

- 20% speed increase as it depends on the frequency.
- Varied torque as it depends on the voltage (ratio Volt/Hertz is proportional to the available magnetic flux).

With 400 Vac, torque decreases about 20% but the power remains the same.

With 480 Vac, torque remains the same and the power increases 20%.

Mean voltage gives mean results.

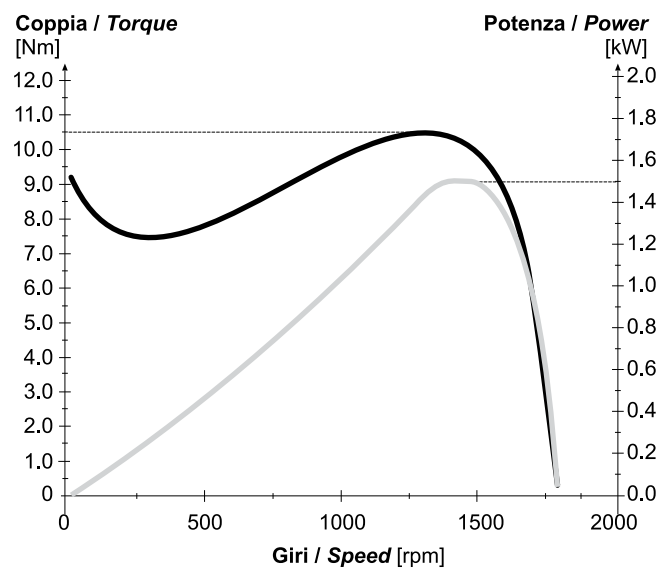
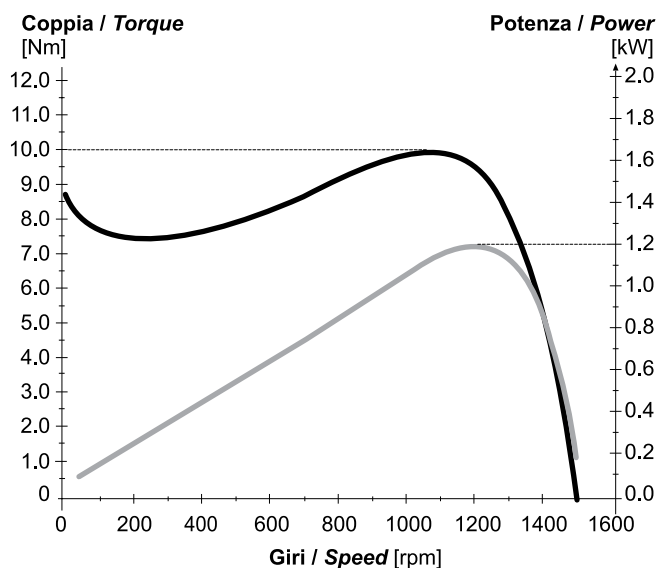
	50 Hz	60 Hz
<b>400 V</b>	standard	Velocità / speed ≈ + 20% Coppia / torque ≈ -20% Potenza / power ≈ invariata / the same
<b>480 V</b>	Velocità / speed ≈ invariata / the same Coppia / torque - potenza / power ≈ +20% <b>Attenzione, perdite e surriscaldamento</b> <b>Take care of losses and overheating</b>	Velocità / speed ≈ + 20% Coppia / torque ≈ invariata / the same Potenza / power ≈ + 20%

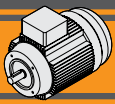
In realtà fenomeni quali la saturazione del flusso magnetico nel ferro, perdite per rotolamento, non linearità, ecc, modificano l'efficienza complessiva e si possono ottenere scostamenti del dato teorico che quindi è da intendersi come indicazione. Per valori precisi, si prega di contattare Transtecno s.r.l.

In practice, the magnetic flux of iron saturation, rotational losses, non linearity etc. can change the efficiency, altering the theoretical data therefore this data should only be considered as an indication. Please contact Transtecno for further information.

**Grafico motore TS 8024 (S3) nelle 2 configurazioni 400 V 50 Hz / 480 V 60 Hz**

**Motor TS 8024 (S3) performance diagram, both configurations 400 V 50 Hz / 480 V 60 Hz**





**Tipi di servizio IEC**

**IEC duty cycles**

Il servizio di un motore indica il tipo di utilizzo e la gravosità del ciclo di lavoro. Lo stesso motore può funzionare in tutti i servizi, purché si moduli la potenza nominale al fine di consentire il corretto equilibrio termico.

Lo stesso motore è dichiarato per potenze diverse se è diverso il servizio.

The duty cycle of a motor indicates its use and running cycle. The same motor can work under all these conditions by adjusting the rated power in order to maintain the correct temperature balance.

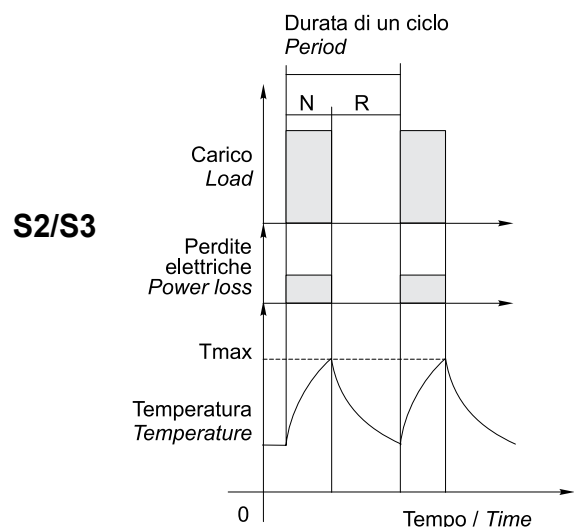
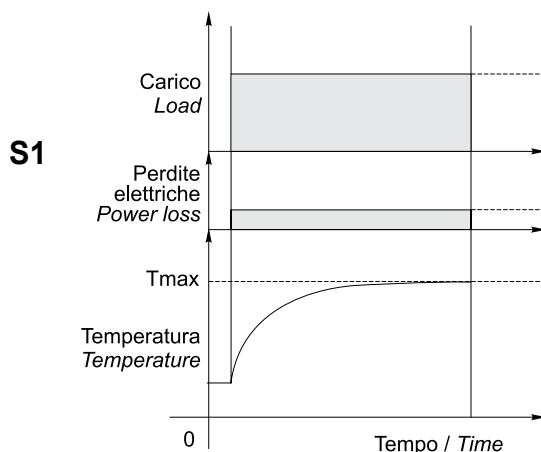
The same motor can be declared as having a different power if it has a different duty cycle.

<b>S1</b>	<b>Servizio continuo.</b> Funzionamento a carico costante per una durata sufficiente al raggiungimento dell'equilibrio termico.	<b>Continuous duty.</b> The motor works at a constant load for enough time to reach temperature equilibrium
<b>S2</b>	<b>Servizio di durata limitata.</b> Funzionamento a carico costante per una durata inferiore a quella necessaria al raggiungimento dell'equilibrio termico, seguito da un periodo di riposo tale da riportare il motore alla temperatura ambiente.	<b>Short time duty.</b> The motor works at a constant load, but not long enough to reach temperature equilibrium, and the rest periods are long enough for the motor to reach ambient temperature.
<b>S3</b>	<b>Servizio periodico intermittente.</b> Sequenze di cicli identici di marcia e di riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti trascurabili sul surriscaldamento del motore.	<b>Intermittent periodic duty.</b> Sequential, identical run and rest cycles with constant load. Temperature equilibrium is never reached. Starting current has little effect on temperature rise.
<b>S4</b>	<b>Servizio periodico intermittente con avviamento.</b> Sequenza di cicli di funzionamento identici di avviamento, marcia e riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti sul riscaldamento del motore.	<b>Intermittent periodic duty with starting.</b> Sequential identical start, run and rest cycles with constant load. Temperature equilibrium is not reached, but starting current affects temperature rise.
<b>S5</b>	<b>Servizio periodico intermittente con frenatura elettrica.</b> Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante, frenatura elettrica e riposo, senza raggiungimento dell'equilibrio termico.	<b>Intermittent periodic duty with electric braking.</b> Sequential, identical cycles of starting, running at constant load, electric braking and rest. Temperature equilibrium is not reached.
<b>S6</b>	<b>Servizio periodico ininterrotto con carico intermittente.</b> Sequenza di cicli di lavoro identici con carico costante e senza carico. Non ci sono periodi di riposo.	<b>Continuous operation with intermittent load.</b> Sequential, identical cycles of running with constant load and running with no load. No rest periods.
<b>S7</b>	<b>Servizio periodico ininterrotto con frenatura elettrica.</b> Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante e frenatura elettrica, senza periodi di riposo.	<b>Continuous operation with electric braking.</b> Sequential, identical cycles of starting, running at constant load and electric braking. No rest periods.
<b>S8</b>	<b>Servizio periodico ininterrotto con variazioni di carico e di velocità.</b> Sequenza di cicli identici di avviamento, marcia a carico costante e velocità definita, seguiti da marcia a carico costante e velocità differente e velocità differente dalla precedente. Non ci sono periodi di riposo.	<b>Continuous operation with periodic changes in load and speed.</b> Sequential, identical, duty cycles of start, run at constant load and given speed, then run at other constant loads and speeds. No rest periods.
<b>S9</b>	<b>Servizio con variazioni di carico e velocità non periodiche</b>	<b>Load and speed non periodic variations</b>

**Grafico servizi più comuni**

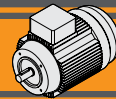
**Most common services diagram**

N = funzionamento / run  
R = riposo / rest



NOTA: Lo stesso motore può essere usato per cicli e servizi diversi, con l'unica limitazione che la temperatura interna non superi mai la Tmax stabilita dalla classe di isolamento termico del motore.

NOTE: The same motor can run under all duty services, limitation is due to internal temperature that must not override Tmax stated by motor thermal class.



## Linee guida di montaggio

## Assembly guidelines

### Avvertenze per il corretto e sicuro uso dei motori

Si consiglia di affidare l'installazione, uso e manutenzione del motore elettrico a personale esperto e qualificato.

**I consigli di seguito riportati non annullano la necessità al buon senso e alla prudenza in ogni applicazione e comunque non sostituiscono le imposizioni delle normative vigenti nei campi di applicazione.**

### Alla ricezione

verificare eventuali danni all'albero, copri ventola e carcassa prima della installazione. Controllare i valori di targa del motore. Non utilizzare se i dati non sono conformi alle esigenze (tensione, frequenze, coppia, grado di protezione IP, velocità, servizio termico).

Se necessario immagazzinare, tenere il motore in ambiente asciutto e pulito.

### Avviamento

Fissare in maniera sicura ed adeguata il motore.

Le parti meccaniche esposte e soprattutto gli organi rotanti vanno adeguatamente protette dal contatto con persone, animali e cose. Collegare il contatto di terra del motore alla linea di terra o al sistema di protezione.

Non alimentare il motore con la chiavetta non fissata: potrebbe sfuggire e colpire persone ed oggetti.

Segnalare adeguatamente il senso di rotazione laddove possa arrecare danni.

E' consigliata protezione adeguata sulla sovracorrente, ad esempio tramite un relé termico che comandi un sezionatore di potenza I fusibili e i dispositivi di protezione devono essere tarati per un valore inferiore alla corrente di rotore bloccato.

La serie MY è fornita con PTO standard per la protezione termica, utile per fornire allarme o, tramite opportuno collegamento, interrompere l'erogazione di corrente.

Si dovranno inserire tutte le protezioni richieste dall'applicazione (ad esempio, sovra velocità dovuta a trascinamento del carico, bassa tensione, ecc).

Dimensionare la sezione dei cavi in funzione della loro lunghezza e della corrente secondo le normative vigenti.

Non tentare il riavvio automatico del motore dopo interruzione di una protezione, possibili condizioni di pericolo. Affidarsi a personale esperto.

Il motore si scalda durante il funzionamento: non toccare e attendere il tempo necessario al raffreddamento dopo averlo spento.

Mantenere pulita la superficie alettata del motore per favorire lo scambio termico e in efficienza la ventola. Non rimuovere il copri ventola.

Prima di operare alcun intervento sul motore, togliere alimentazione (possibilmente sezionare fisicamente dalla rete elettrica) attendere l'arresto delle parti in movimento e verificare che non possano essere trascinate da altre parti della macchina collegate.

### Manutenzione

Prima di operare alcun intervento sul motore, togliere alimentazione (possibilmente sezionare fisicamente la rete di alimentazione) attendere l'arresto delle parti in movimento e verificare che non possano essere trascinate da altre parti della macchina collegate. Controllare usura meccanica albero, stato dei cavi di alimentazione, stato ventola e quant'altro l'uso suggerisca.

### Warnings for the correct and safe use of AC motors

Installation and maintenance should be carried out by qualified personnel.

**The following suggestions do not replace standard rules and regulations in specific fields or applications.**

### On receipt of goods

Before installation, check that the fan cover, frame and shaft have not been damaged in transit.

Check the data on the nameplate and do not use the motor if it is not suitable for the application (voltage, frequency, torque, IP protection, speed, temperature, service).

Store the electric motor in a dry and clean room.

### Running

Fit the electric motor securely in its working position.

The exposed mechanical and transmission parts must be protected from contact with people, animals and properties. Connect the earth wire to the outside protection system.

Never start the motor without the key being fixed beforehand as it could be thrown out by the centrifugal force and could damage anything in its immediate surroundings. Indicate clearly the rotational direction of the motor.

Overcurrent protection is advised, for example a thermal relay that automatically drives a knife switch.

Fuses and current protection devices must be set under the current value.

MY motors are available with a standard PTO which will signal a problem in the connection or will switch off the current.

All protections necessary for the application must be applied, for example : overspeed due to load drag, low voltage, etc.

Select the correct cable according to regulations concerning the length and current.

Do not attempt to reset automatically the motor after tripping as it can be dangerous! Please consult qualified personnel to reset it manually.

Do not touch the motor surface, it could be hot.

Allow the external housing to cool down when the motor has stopped.

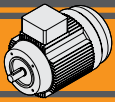
Keep the surface of the motor clean. Do not remove the fan cover.

Before doing any work on the motor or in the surrounding area, make sure it has been disconnected from the power source. Wait for the motor to stop.

### Maintenance

Before doing any work on the motor or in the surrounding area, make sure it has been disconnected from the power source. Wait for the motor to stop. Ensure that it is not connected to the machine.

Check if the shaft is worn and check the condition of the power lead and any other necessary parts.



La convenzione di Kyoto ha posto l'attenzione di tutti sulla drammatica situazione ecologica del riscaldamento globale causato dall'emissione di grandi quantità di gas serra.

*The Kyoto Convention has drawn the world's attention to the dramatic ecological problem of Global Warming, caused by emissions of greenhouse gases.*

Unitamente alla congiuntura economica e alla maggior difficoltà di reperire fonti di approvvigionamento energetico, la commissione europea ha imposto l'adozione di misure concrete per il risparmio energetico. Dato il considerevole uso di motori elettrici CA nell'industria mondiale, norme più rigide stanno entrando in vigore nella CE. In particolare miranti ad aumentare l'efficienza dei motori, classificati in classi crescenti da IE1, IE2, IE3 e così via. L'efficienza è la misura espressa in percentuale dell'efficacia di un motore di convertire energia elettrica in meccanica, quindi aumentare l'efficienza significa ottenere lo stesso lavoro a minor consumo energetico. Con benefici per tutti, natura compresa.

*As a result of the current economic situation and the increasing difficulty to find energy resources, the European Commission has adopted concrete measures in order to save energy.*

*Due to the increasing use of AC motors in industry, stricter laws are being brought in to the EU. They are aimed specifically to increase the efficiency of motors classified as IE1, IE2, IE3 etc.*

*Efficiency is expressed as a percentage of the effectiveness of a motor to convert electrical energy into mechanical work, therefore increasing the efficiency means getting the same outcome with less power, with benefits for everyone, including nature.*

Dal giugno del 2011 sono stati banditi i motori con la classe più bassa di efficienza (gli IE1) spingendo a ridisegnare gli stessi e a scegliere materiali più adatti.

*Since June 2011, low efficiency motors (IE1) have been banned, forcing motors to be redesigned with more suitable materials.*

Più in dettaglio il testo cita:

*For further information:*

il REGOLAMENTO (CE) N. 640/2009 DELLA COMMISSIONE EUROPEA del 22 luglio 2009 recante modalità di applicazione della direttiva 2005/32/CE del Parlamento europeo e del Consiglio in merito alle specifiche per la progettazione ecocompatibile dei motori elettrici ... si intendono applicati a:

*The COMMISSION REGULATION (EC) No 640/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for electric motor applies to:*

un motore elettrico a induzione a gabbia, mono velocità e trifase, con una frequenza di 50 Hz o 50-60 Hz che abbia: da 2 a 6 poli, una tensione nominale massima di 1000V, una potenza nominale compresa tra 0,75 kW e 375 kW, caratteristiche basate su un funzionamento in continuo; ... a partire dal 16 giugno 2011 i motori devono avere come minimo un livello di efficienza IE2.

*Single speed electric motors, three phase 50Hz or 50/60Hz, squirrel cage induction motors, that have 2 to 6 poles, a rated voltage up to 1000V and a rated output between 0,75kW and 375kW which are rated on the basis of continuous duty operation...from 16<sup>th</sup> June 2011 motors must have a minimum efficiency of IE2.*

Negli anni successivi si porranno in obbligo livelli ancora superiori di efficienza.

*In the next few years higher efficiency levels will come into force.*

Disponibili anche motori IE3 e MEPS2 (Australia).

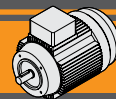
*IE3 and MEPS2 (Australian) motors are also available.*

Prego contattare Transtecno per offerte e informazioni tecniche.

*Please contact Transtecno for further information.*

<p><b>IE2</b> <b>Motore</b> <b>Motor</b></p>	<p><b>2 - 4 - 6 poli / poles</b> <b>&lt; 1000 V 50, 60, 50/60 Hz</b> <b>0.75 kW ≤ Motor ≤ 375 kW S1</b></p>
--	---





**Esclusioni**

Secondo il regolamento n° 640/2009 della Commissione Europea sono esclusi i motori:

- Costruiti per un servizio intermittente (ad esempio S3).
- Autofrenanti.
- Per ambienti esplosivi.
- Immersi in un liquido.
- Integrati completamente in un prodotto.
- Per uso oltre 1000 metri sul livello del mare.
- In ambienti con temperature fuori standard.

(Per conoscenza della lista completa si invita a consultare il citato regolamento europeo).

**Exceptions**

According to the Directive n°640/2009 of the European Commission, the following motors are an exception to the rule :

- Motors constructed for an intermittent service (for ex. S3).
- Brake motors.
- Motors used in explosive environments.
- Motors immersed in liquid.
- Motors integrated in a product/machine.
- Motors used over 1000 metres above sea level.
- Motors used in extreme temperatures.

(Please consult the Directive above for more information)

**Calendario di validità delle norme**

Per i motori che rientrano nel dominio di applicabilità della norma:

- Dal 16 giugno 2011 tutti i motori elettrici devono avere livello di efficienza IE2 minimo
- Dal 1 gennaio 2015 i motori elettrici compresi tra 7.5 kW e 375 kW devono avere come minimo livello di efficienza IE3 oppure IE2 ma solo se applicati assieme ad un variatore di velocità (convertitore di frequenza).
- Dal 1 gennaio 2017 tutti i motori elettrici compresi tra 0,75 e 375 kW devono avere come minimo livello di efficienza IE3 oppure IE2 ma solo se applicati assieme ad un variatore di velocità (convertitore di frequenza).

**Calendar dates of regulations**

The following dates apply to all motors under the Directive:

- From 16th June 2011, all electric motors should have at least IE2 efficiency.
- From 1st January 2015, electric motors from 7.5kW to 375kW must have an efficiency of at least IE3 or IE2 if they are used together with a speed variator (frequency convertor).
- From 1st January 2017, all electric motors from 0.75kW to 375kW must have a minimum efficiency of IE3 or IE2 if they are used together with a speed variator (frequency convertor).

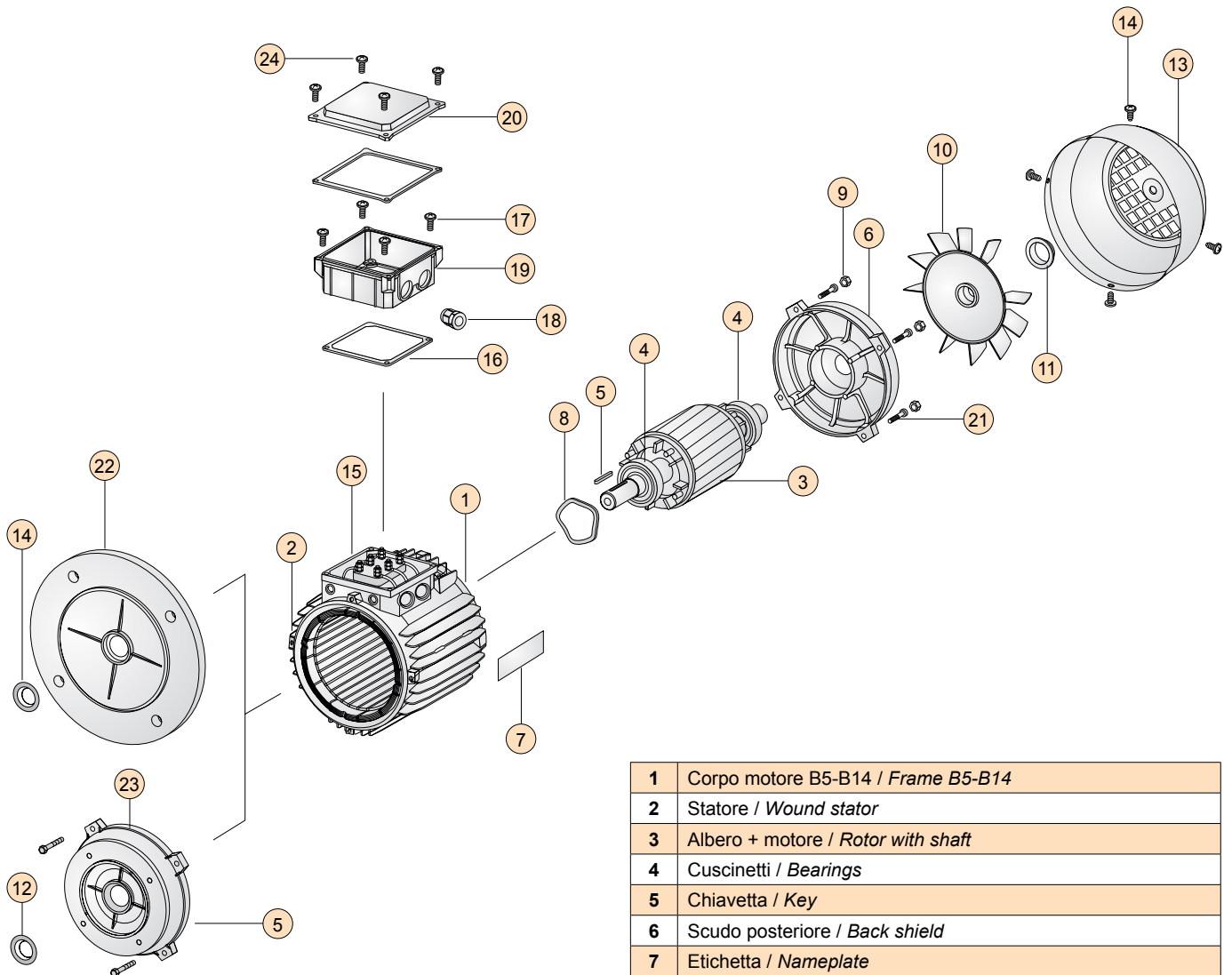
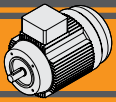
**Informazioni di prodotto per i motori elettrici IE2**

- Costruttore: Transtecno srl, [www.transtecno.com](http://www.transtecno.com)
- Anno di fabbricazione: dal 2011 (v. targhetta motore per i dettagli).

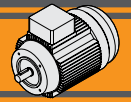
**IE2 electric motor information**

- Manufacturer: Transtecno srl, [www.transtecno.com](http://www.transtecno.com)
- Year of manufacturing: since 2011 (see the motor's nameplate for details)

Modello/ Type	Eff. 100% [%]	Eff. 75% [%]	Eff. 50% [%]	Eff. Livello Level eff.	N° Poli Poles nr. [#]	Potenza Power [kW]	Frequenza Frequency [Hz]	Tensione nominale Rated Voltage [V]	Velocità nominale Rated Speed [rpm]
TS8024	79.6	80.2	78.3	IE2	4	0.75	50	230/400	1410
TS90S4	81.54	82.2	80.2	IE2	4	1.1	50	230/400	1420
TS90L14	82.8	83.4	81.8	IE2	4	1.5	50	230/400	1420
TS100L14	84.3	84.4	82.5	IE2	4	2.2	50	230/400	1440
TS100L24	85.5	86.0	84.3	IE2	4	3.0	50	230/400	1440

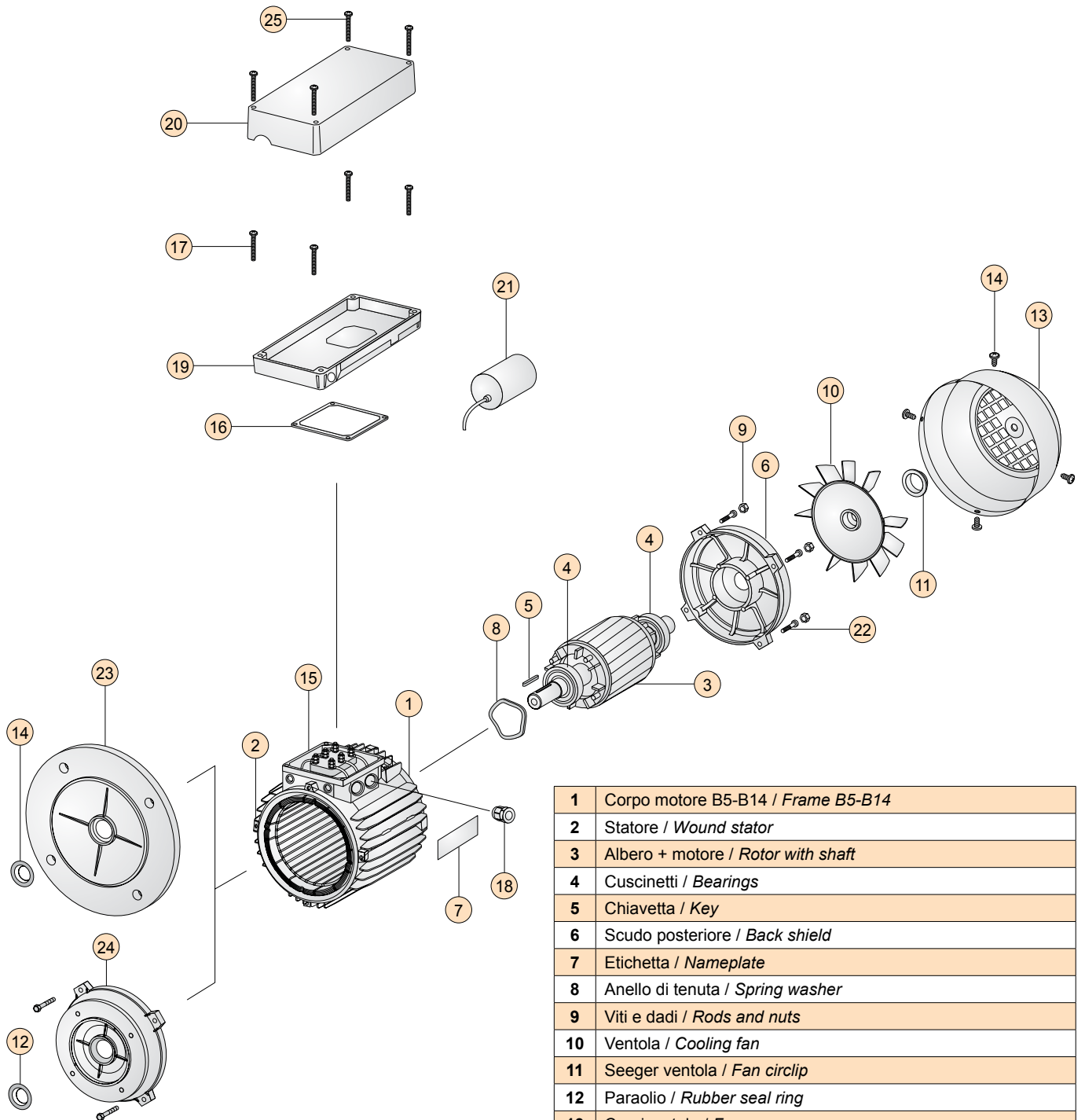


1	Corpo motore B5-B14 / Frame B5-B14
2	Statore / Wound stator
3	Albero + motore / Rotor with shaft
4	Cuscinetti / Bearings
5	Chiavetta / Key
6	Scudo posteriore / Back shield
7	Etichetta / Nameplate
8	Anello di tenuta / Spring washer
9	Viti e dadi / Rods and nuts
10	Ventola / Cooling fan
11	Seeger ventola / Fan circlip
12	Paraolio / Rubber seal ring
13	Copriventola / Fan cover
14	Viti copriventola / Self-threading screws for fan cover fixing
15	Porta terminali completo / Terminal board complete
16	Guarnizione / Terminal seal
17	Viti scatola morsettiera / Screws for terminal box fixing
18	Pressacavo / Cable gland
19	Scatola morsettiera / Terminal box (base)
20	Coperchio scatola morsettiera / Terminal box (cover)
21	Viti scudi / Mounting studs screws
22	Flangia B5 / Flange B5
23	Flangia B14 / Flange B14
24	Viti coperchio / Screws for terminal box fixing



Lista dei componenti MY

MY spare parts list



1	Corpo motore B5-B14 / Frame B5-B14
2	Statore / Wound stator
3	Albero + motore / Rotor with shaft
4	Cuscinetti / Bearings
5	Chiavetta / Key
6	Scudo posteriore / Back shield
7	Etichetta / Nameplate
8	Anello di tenuta / Spring washer
9	Viti e dadi / Rods and nuts
10	Ventola / Cooling fan
11	Seeger ventola / Fan circlip
12	Paraolio / Rubber seal ring
13	Copriventola / Fan cover
14	Viti copriventola / Self-threading screws for fan cover fixing
15	Porta terminali completo / Terminal board complete
16	Guarnizione / Terminal seal
17	Viti scatola morsettiera / Screws for terminal box fixing
18	Pressacavo / Cable gland
19	Scatola morsettiera / Terminal box (base)
20	Coperchio scatola morsettiera / Terminal box (cover)
21	Condensatore / Run capacitor
22	Viti scudi / Mounting studs screws
23	Flangia B5 / Flange B5
24	Flangia B14 / Flange B14
25	Viti coperchio / Screws for terminal box fixing



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**APPENDICE**  
**APPENDIX**



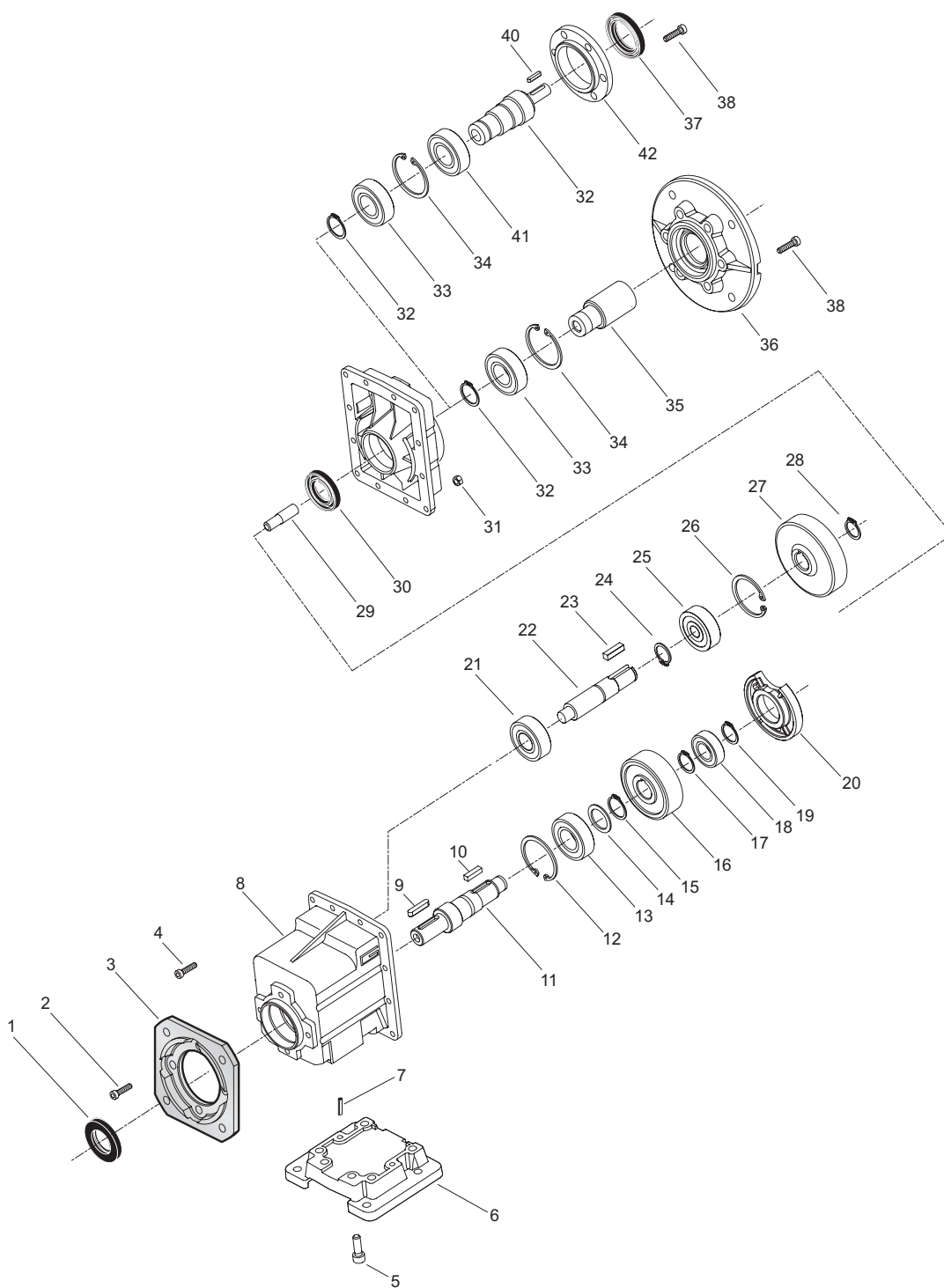


<b>Indice</b>	<b>Index</b>	Pag. Page
Liste parti di ricambio	<i>Spare parts list</i>	
CMG..2	CMG..2	<b>02</b>
CMG..3	CMG..3	<b>03</b>
CMB..2	CMB..2	<b>04</b>
CMB..3	CMB..3	<b>05</b>
CM026..CM130	CM026..CM130	<b>06</b>
PU	PU	<b>07</b>
VAM018..VAM040	VAM018..VAM040	<b>08</b>
Boccole di riduzione in acciaio	<i>Metal shaft sleeves</i>	<b>09</b>

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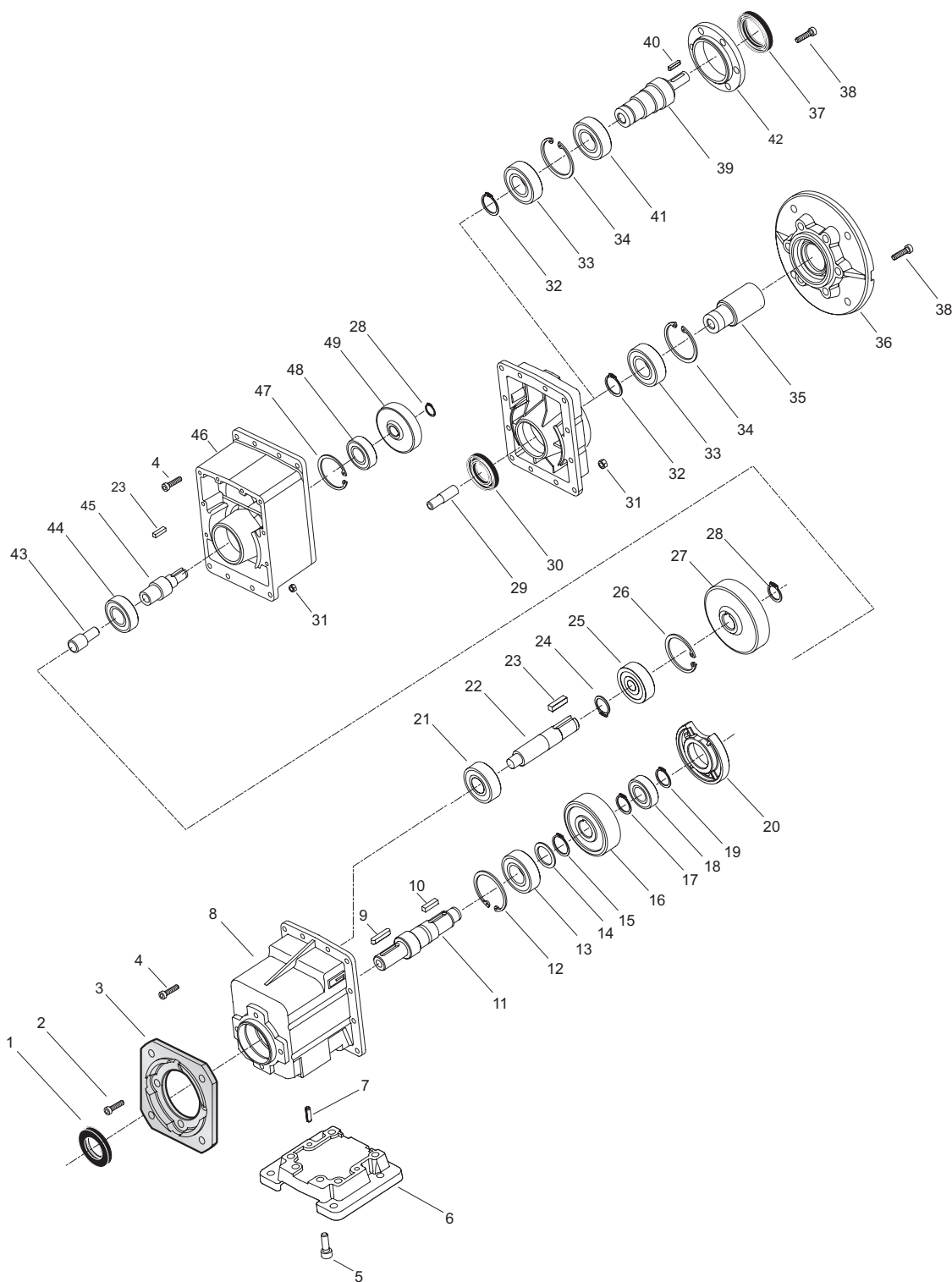
**CMG..2**



CMG	Cuscinetti / Bearings						Anelli di tenuta / Oil seals		
	13	18	21	25	33	41	1	30	37
<b>002</b>	<b>6203</b> 40x17x12	<b>6201</b> 32x12x10	<b>6200</b> 30x10x9	<b>6202 2RS</b> 35x15x11	<b>6004 2RS</b> 42x20x12	<b>6204-2RS</b> 47x20x14	22/40/7	20/37/7	—
<b>012</b>	<b>6205</b> 25/52/15	<b>6203</b> 17/40/12	<b>6300 2RS</b> 10/35/11	<b>6202 2RS</b> 15/35/11	<b>6205 2RS</b> 25/52/15	<b>6006 2RS</b> 30/55/13	30/52/7	25/47/7	35/52/7
<b>022</b>	<b>3205A</b> 25/52/20.6	<b>6204</b> 20/47/14	<b>6301 2RS</b> 12/37/12	<b>6302 2RS</b> 15/42/13	<b>6205 2RS</b> 25/52/15	<b>6006 2RS</b> 30/55/13	35/52/7	25/47/7	35/52/7
<b>032</b>	<b>6207</b> 35/72/17	<b>6205</b> 25/52/15	<b>6303 2RS</b> 17/47/14	<b>6204 2RS</b> 17/47/14	<b>6206 2RS</b> 30/62/16	<b>6007 2RS</b> 35/62/14	40/72/7	30/52/7	40/60/7
<b>042</b>	<b>3207A</b> 35/72/27	<b>6206</b> 30/62/16	<b>6304 2RS</b> 20/52/15	<b>6304 2RS</b> 20/52/15	<b>6206 2RS</b> 30/62/16	<b>6007 2RS</b> 35/62/14	45/72/7	30/52/7	40/60/7
<b>052</b>	<b>3209A</b> 85x45x30	<b>6207</b> 72x35x17	<b>6305 2RS</b> 62x25x17	<b>6305 2RS</b> 62x25x17	<b>6207 2RS</b> 72x35x17	<b>6307 2RS</b> 80x35x21	55/85/10	35/62/7	35/80/8

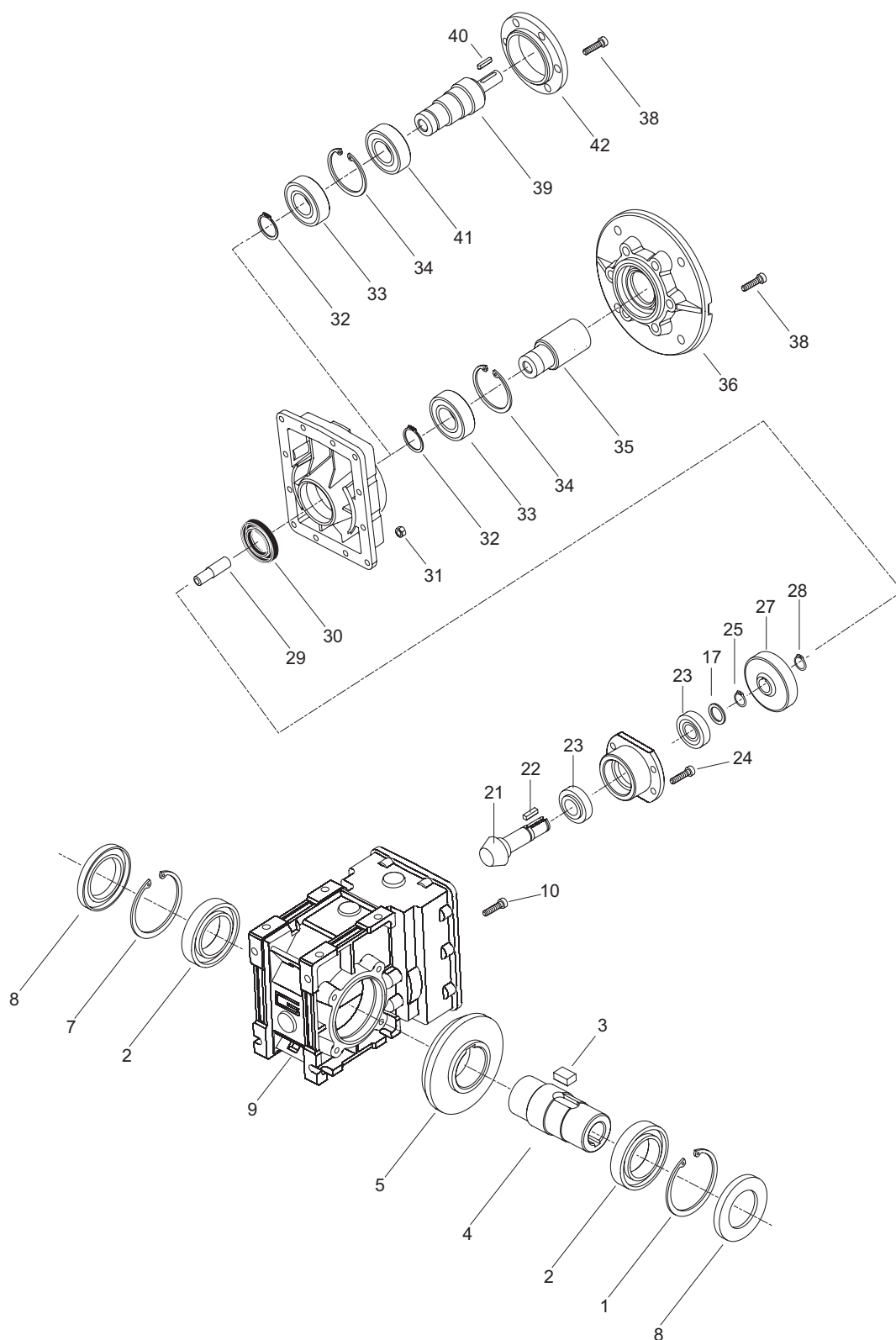


**CMG..3**



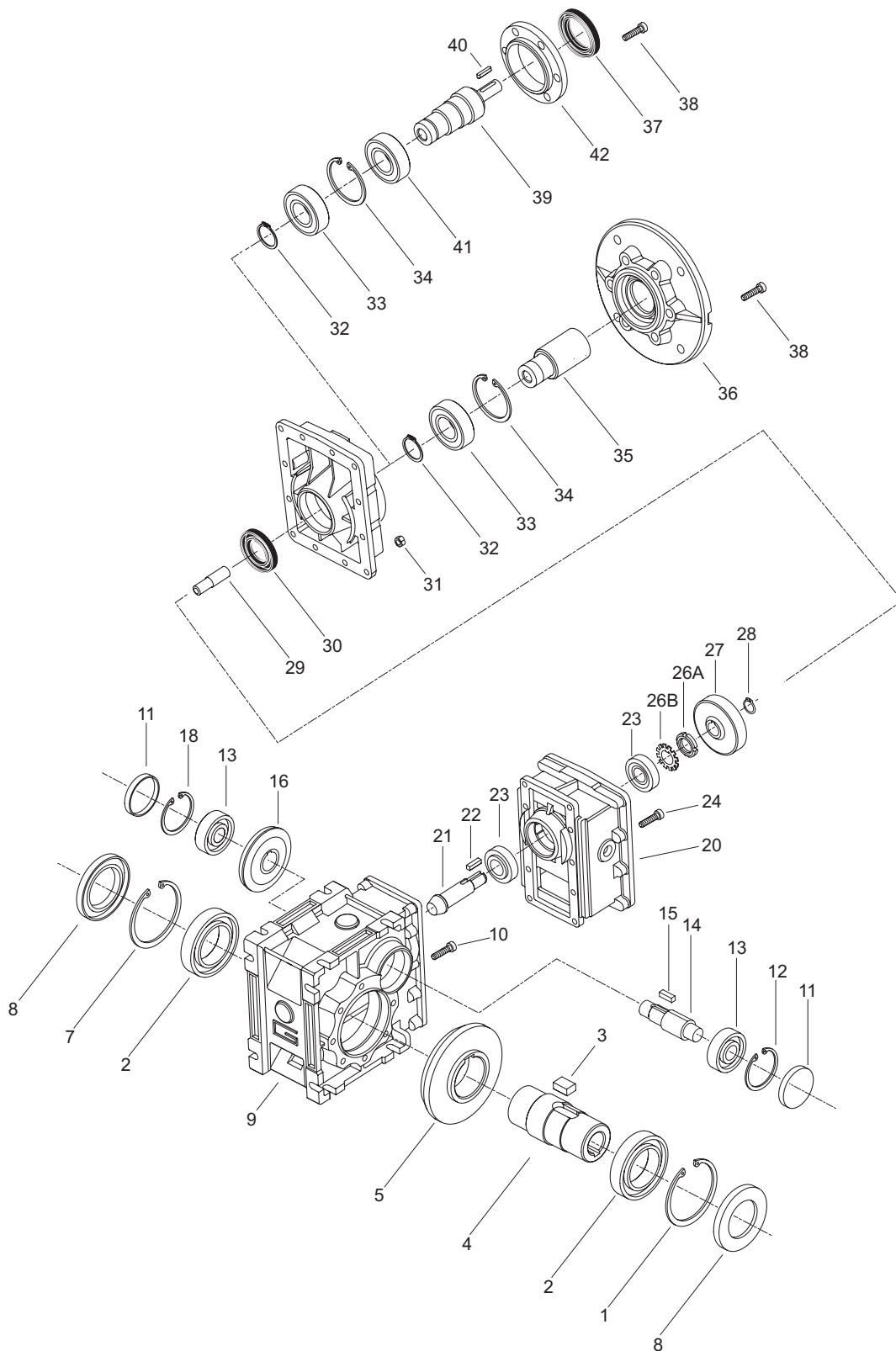
CMG	Cuscinetti / Bearings								Anelli di tenuta / Oil seals		
	13	18	21	25	33	41	44	48	1	30	37
013	6205 25/52/15	6203 17/40/12	6300 2RS 10/35/11	6202 2RS 15/35/11	6205 2RS 25/52/15	6006 2RS 30/55/13	6204 20/47/14	6203 17/40/12	30/52/7	25/47/7	35/52/7
023	3205A 25/52/20.6	6204 20/47/14	6301 2RS 12/37/12	6302 2RS 15/42/13	6205 2RS 25/52/15	6006 2RS 30/55/13	6204 20/47/14	6203 17/40/12	35/52/7	25/47/7	35/52/7
033	6207 35/72/17	6205 25/52/15	6303 2RS 17/47/14	6204 2RS 17/47/14	6206 2RS 30/62/16	6007 2RS 35/62/14	6205 25/52/15	6204 20/47/14	40/72/7	30/52/7	40/60/7
043	3207A 35/72/27	6206 30/62/16	6304 2RS 20/52/15	6304 2RS 20/52/15	6206 2RS 30/62/16	6007 2RS 35/62/14	6205 25/52/15	6204 20/47/14	45/72/7	30/52/7	40/60/7
053	3209A 85x45x30	6207 72x35x17	6305 2RS 62x25x17	6305 2RS 62x25x17	6207 2RS 72x35x17	6307 2RS 80x35x21	6206 62x30x16	6205 52x25x15	55/85/10	35/62/7	35/80/8

**CMB ..2**



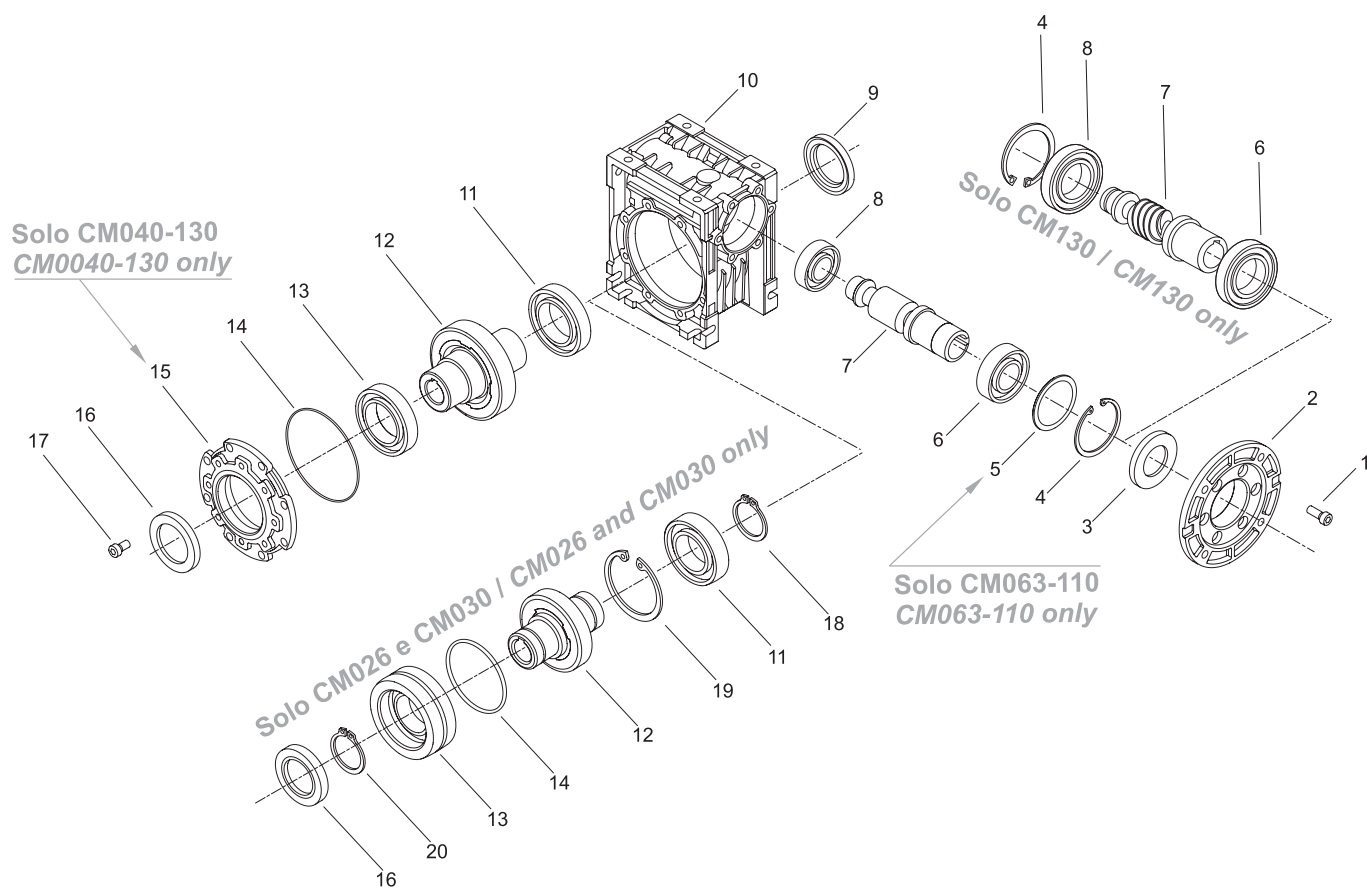
CMB	Cuscinetti / Bearings				Anelli di tenuta / Oil seals	
	2	23	33	41	8	30
402	16006 30x55x9	7202 BE 15x35x11	6004 2RS 42x20x12	6204-2RS 47x20x14	30/55/7	20/37/7
502	61908 40x62x12	7203 BE 17x40x12	6004 2RS 42x20x12	6204-2RS 47x20x14	40/62/7	20/37/7

**CMB ..3**



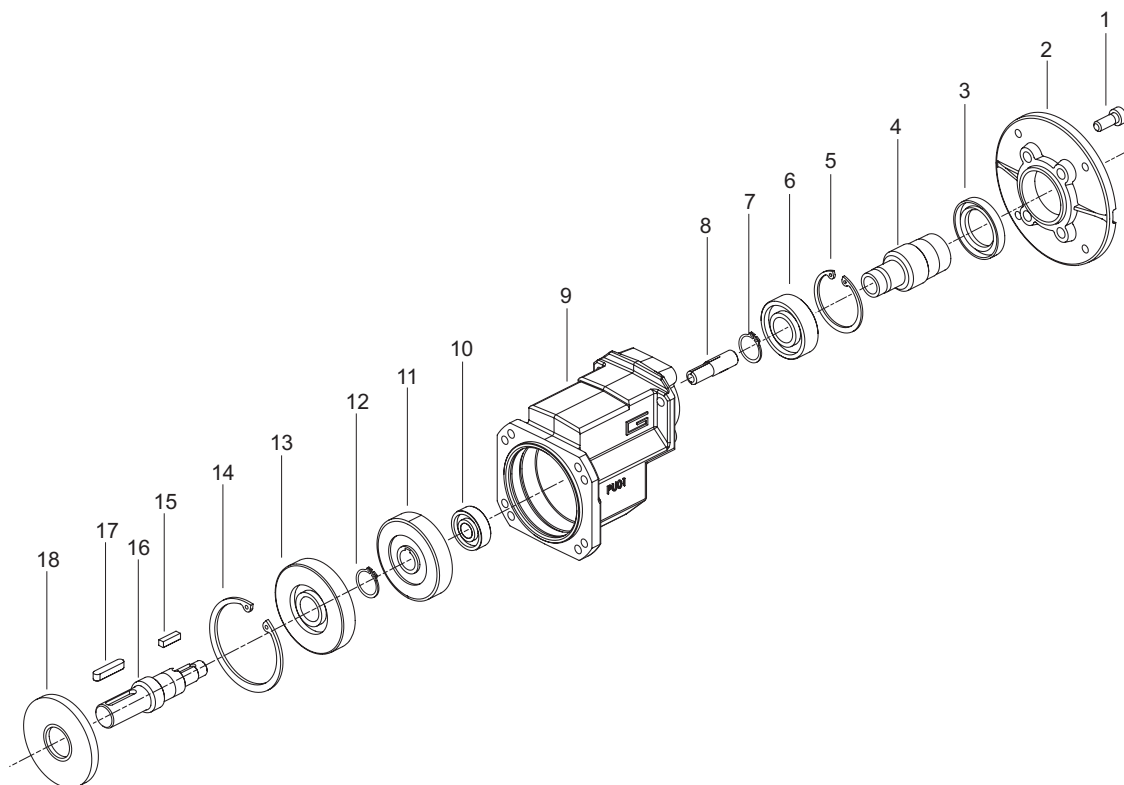
CMB	Cuscinetti / Bearings					Anelli di tenuta / Oil seals			RCA
	2	13	23	33	41	8	30	37	
<b>633</b>	<b>6009</b> 75x45x16	<b>6303 2RS</b> 47x17x14	<b>30203</b> 17x40x13	<b>6205 2RS</b> 25x52x15	<b>6006 2RS</b> 30x55x13	45/75/8	25/47/7	35/52/7	47/7
<b>903</b>	<b>6011</b> 90x55x18	<b>6304 2RS</b> 52x20x15	<b>30204</b> 47x20x15	<b>6206 2RS</b> 30x62x16	<b>6007 2RS</b> 62x35x14	55/90/10	30/52/7	40/60/7	52/7
<b>1103</b>	<b>6013</b> 100x65x18	<b>6305 2RS</b> 62x25x17	<b>30206</b> 62x30x27	<b>6207 2RS</b> 72x35x17	<b>6307 2RS</b> 80x35x21	65/100/10	35/62/7	35/80/8	62/7

**CM026..CM130**



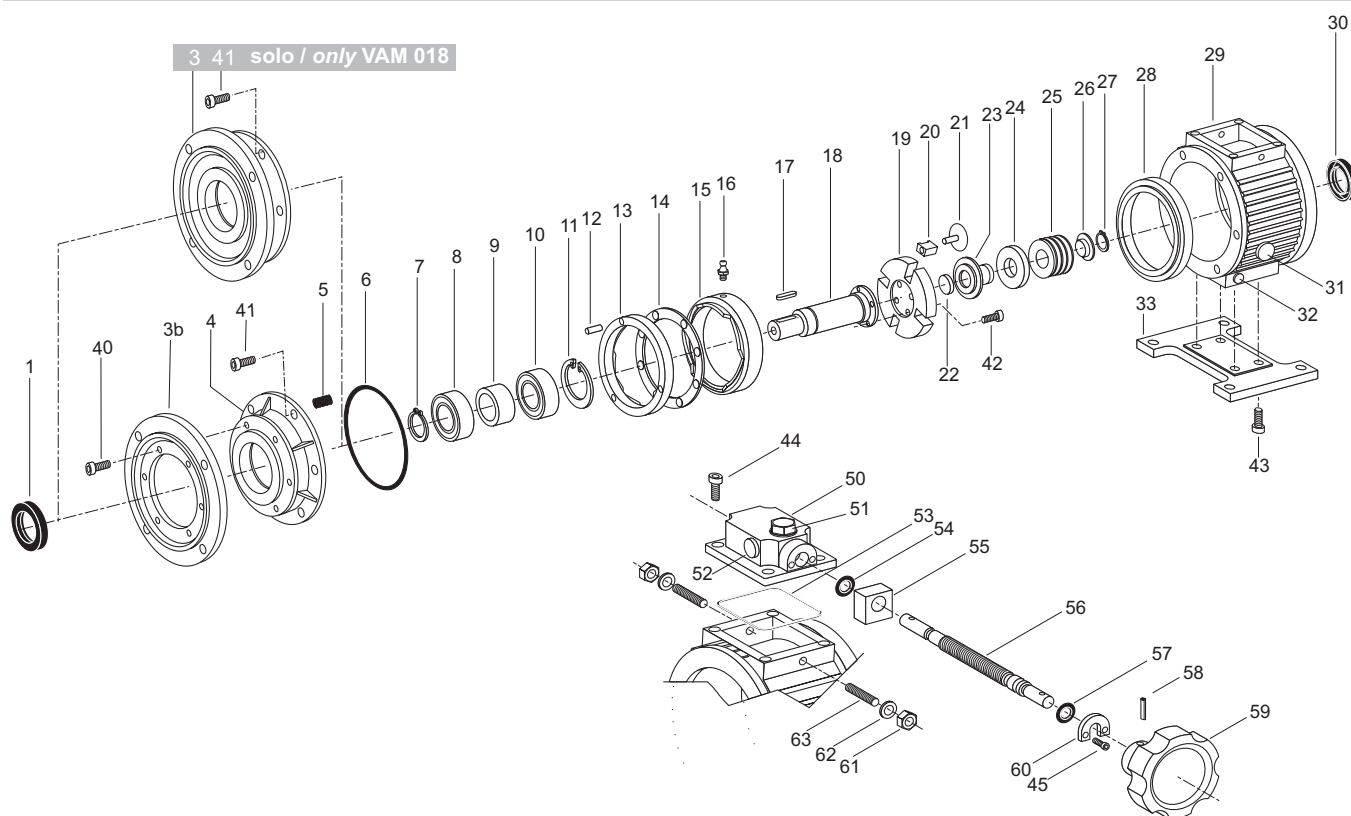
CM	Anelli di tenuta / Oil seals		
	3	9	16
<b>026</b>	15/28/7	20/32/5	20/32/5
<b>030</b>	20/37/7	25/40/7	25/40/7
<b>040</b>	25/42/7	30/47/7	30/47/7
<b>050</b>	30/47/7	40/55/7	40/55/7
<b>063</b>	35/62/7	45/65/8	45/65/8
<b>075</b>	40/68/7	50/72/8	50/72/8
<b>090</b>	40/68/7	60/85/8	60/85/8
<b>110</b>	50/80/8	65/85/10	65/85/10
<b>130</b>	50/68/8	70/90/10	70/90/10

**PU**



PU	Cuscinetti / Bearings			Anelli di tenuta / Oil seals	
	6	10	13	3	18
01	6204 20x47x14	6201 12x32x10	6204 sp 20x72x14	30/47/7	25/72/7

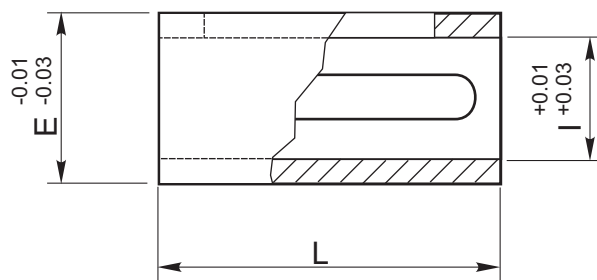
**VAM018..VAM040**



Grandezza Size	Anelli di tenuta / Oil seals	
	1	30
<b>VAM 018</b>	15/32/7	18/30/7
<b>VAM 037</b>	20/42/7	25/47/7
<b>VAM 075</b>	25/52/7	30/52/7
<b>VAM 15</b>	30/52/7	40/62/7
<b>VAM 22</b>	48/72/10	55/80/8
<b>VAM 40</b>	48/72/10	55/80/8

**Boccole di riduzione in acciaio**

**Metal shaft sleeves**



Quantità per scatola Quantity each box	Tipo / Type	Dimensioni mm. / Dimensions mm.		
		E	I	L
50	<b>B 0911</b>	11	9	22
50	<b>B 1114</b>	14	11	28
50	<b>B 1419</b>	19	14	40
30	<b>B 1924</b>	24	19	50
20	<b>B 2428</b>	28	24	60
15	<b>B 2838</b>	38	28	70
25	<b>BS 0914</b>	14	9	26
25	<b>BS 1119</b>	19	11	35
30	<b>BS 1424</b>	24	14	40
20	<b>BS 1928</b>	28	19	40
15	<b>BS 2438</b>	38	24	70

Nota: Le boccole in acciaio sono fornite complete di linguette.  
Note: The metal shaft sleeves are supplied complete with keys.

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