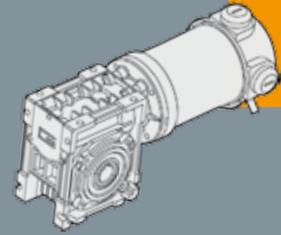


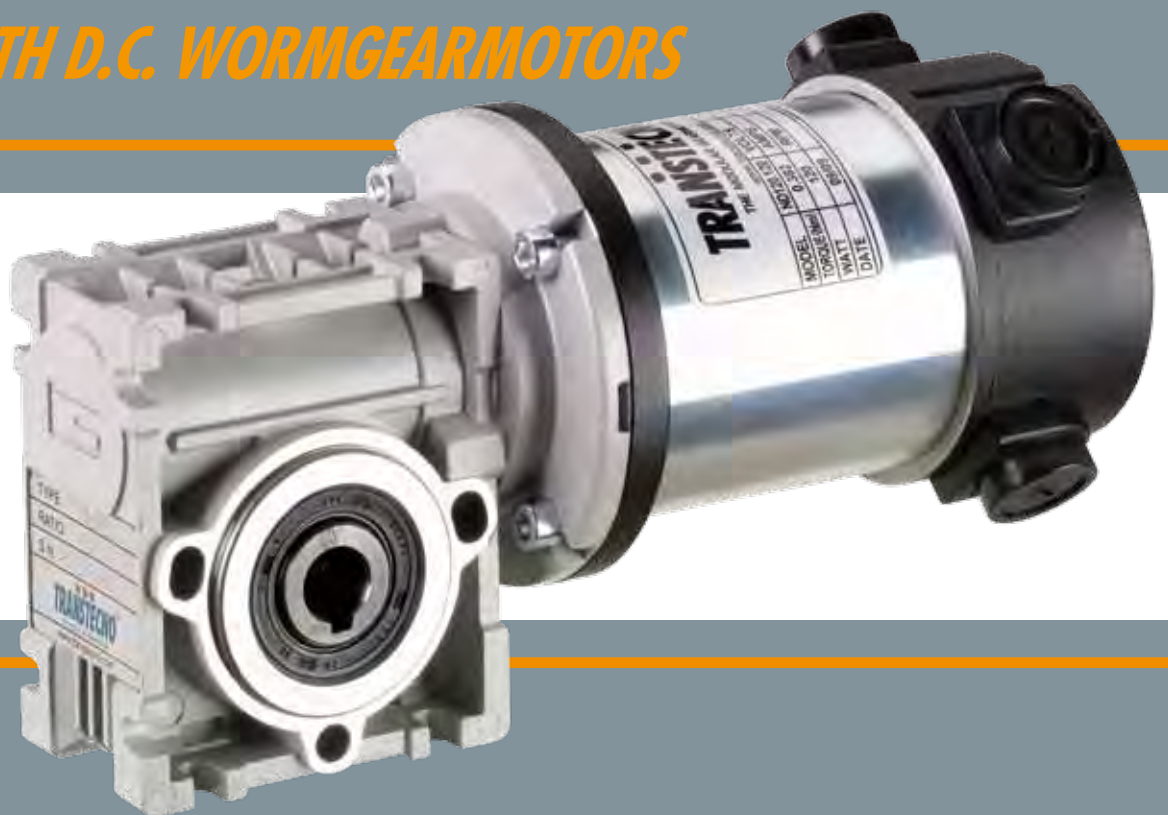
**TRANSTECNO**<sup>TM</sup>  
THE MODULAR GEARMOTOR

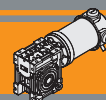
**NDCM**

NDCM



**MOTORIDUTTORI C.C. A VITE SENZA FINE**  
**RARE EARTH D.C. WORMGEARMOTORS**





<b>Indice</b>	<b>Index</b>	Pag. Page
Caratteristiche tecniche	<i>Technical features</i>	<b>C2</b>
Designazione	<i>Designation</i>	<b>C2</b>
Simbologia	<i>Symbols</i>	<b>C2</b>
Lubrificazione	<i>Lubrication</i>	<b>C3</b>
Carichi radiali	<i>Radial loads</i>	<b>C3</b>
Dati di dentatura	<i>Toothing data</i>	<b>C4</b>
Rendimento	<i>Efficiency</i>	<b>C4</b>
Dati tecnici	<i>Technical data</i>	<b>C5</b>
Motori applicabili	<i>IEC Motor adapters</i>	<b>C5</b>
Dimensioni	<i>Dimensions</i>	<b>C6</b>
Opzioni	<i>Options</i>	<b>C8</b>
Accessori	<i>Accessories</i>	<b>C8</b>



**Caratteristiche tecniche**

**Technical features**

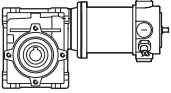
Le caratteristiche principali dei motoriduttori a corrente continua della serie NDCM sono:

The main features of NDCM D.C. gearmotors range are:

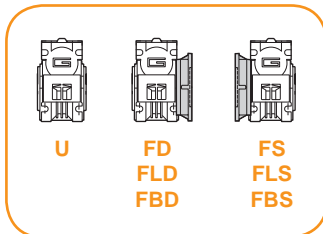
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenza motore disponibile 160 W S2
- Magneti in terre rare
- Carcasce dei riduttori a vite senza fine in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Low voltage power supply 12/24 Vdc
- Suitable for encoder assembly
- Motor power rating available 160 W S2
- Rare earth magnets
- Die-cast aluminum housing on wormgearboxes
- Permanent synthetic oil long-life lubrication

**Designazione**

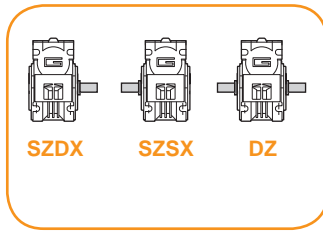
**Designation**

MOTORIDUTTORE / GEARMOTOR								
NDCM	120/030	U	10	SZDX	BRSX	90	240	VS
Tipo Type	Grandezza Size	Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Versione Motore Motor Version	Opzioni Options
<b>NDCM</b> 	<b>120/026</b> <b>120/030</b> <b>120/040</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>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>120 — 240</b>	<b>VS</b>

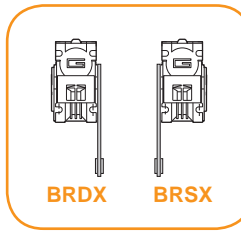
Versione Riduttore  
Gearbox Version



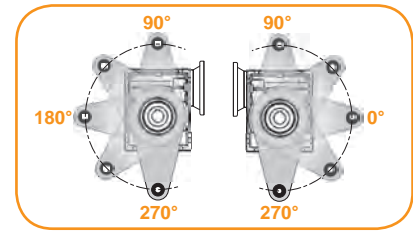
Albero di uscita  
Output shaft



Braccio di reazione  
Torque arm



Angolo  
Angle



**Simbologia**

**Symbols**

$n_1$	[min <sup>-1</sup> ]	Velocità in ingresso / <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 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>
$R_s$	%	Rendimento statico / <i>Static efficiency</i>
$R_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$Z$		Numero di principi della vite / <i>Worm starts</i>
$\beta$		Angolo d'elica / <i>Helix angle</i>



**Lubrificazione**

**Lubrication**

I riduttori a vite senza fine della serie CM sono lubrificati a vite 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.

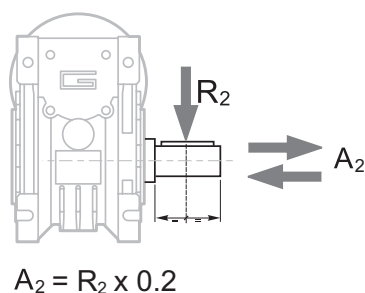
Quantità di olio (litri) / Oil quantity (liters)	
Per tutte le posizioni di montaggio / For all mounting positions	
CM026	0.02
CM030	0.04
CM040	0.08

Lubrificazione a vita  
Life lubricated

**NDCM**

**Carichi radiali**

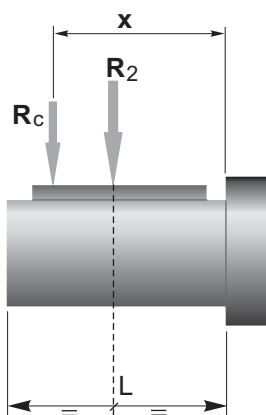
**Radial loads**



n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]		
	CM026	CM030	CM040
187	400	674	1264
140	490	743	1392
93	580	851	1596
70	610	936	1754
56	610	1008	1890
47	610	1069	2004
35	610	1179	2210
28	610	1270	2381
23	610	1356	2542
18	610	1471	2759
14	610	1600	3000

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:

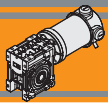


$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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

	CM		
	026	030	040
a	56	65	84
b	43	50	64
R <sub>2MAX</sub>	610	1600	3000



**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		
	$\beta$	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
	$\beta$	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
	$\beta$	34° 19'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'

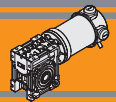
**Rendimento**

**Efficiency**

	$n_1$ [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	21
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	24

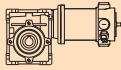


**Rendimento teorico del riduttore dopo il rodaggio**  
*Theoretical efficiency of the gearbox after the first running period*



**Dati tecnici per servizio S2**

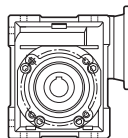
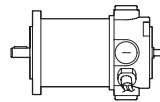
**Technical data for S2 duty**

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version
<b>160</b>						
(3000 min <sup>-1</sup> )	600	2.3	4.4	5	<b>120/026</b>	120/240
	400	3.3	3.3	7.5		
	300	4.3	2.5	10		
	200	6.3	1.7	15		
	150	8.1	1.3	20		
	100	11	1.1	30		
	75	14	0.8	40		
	60	14	0.7	50		
	50	13	0.7	60		
	600	2.3	5.7	5		
400	3.4	4.5	7.5			
300	4.4	3.7	10			
200	6.4	2.5	15			
150	8.3	1.7	20			
120	9.9	1.5	25			
100	11	1.6	30			
75	14	1.1	40			
60	17	0.9	50			
50	19	0.7	60			
38	17	0.7	80			
30	16	0.7	100			
150	8.5	3.7	20	<b>120/040</b>	120/240	
120	10	2.7	25			
100	12	3.2	30			
75	15	2.3	40			
60	18	1.8	50			
50	20	1.4	60			
38	24	1.1	80			
30	29	0.8	100			

**NDCM**

**Motori applicabili**

**IEC Motor adapters**



		<b>ND</b>
		<b>120.120</b> <b>120.240</b>
<b>CM</b>	<b>026</b>	5-60
	<b>030</b>	5-100
	<b>040</b>	5-100

5-60

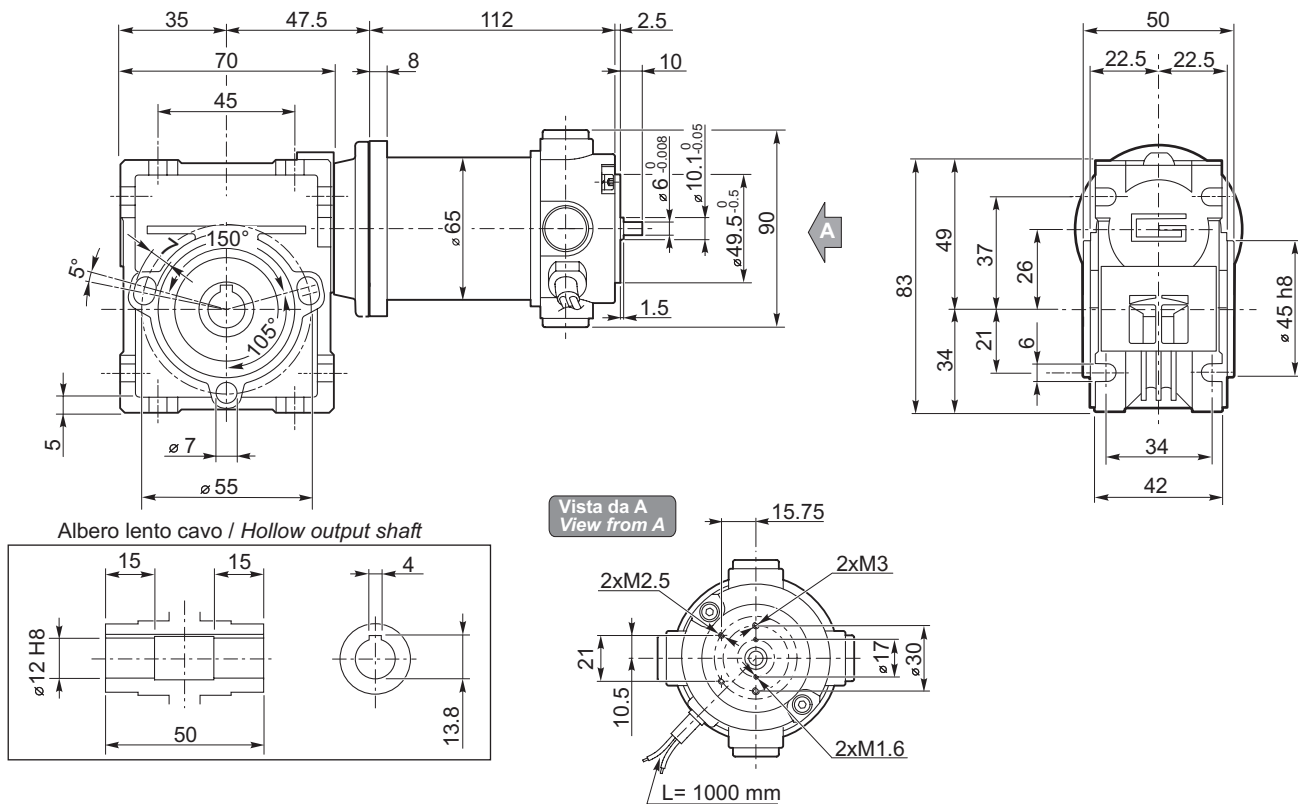
Rapporti di riduzione i  
Ratio i



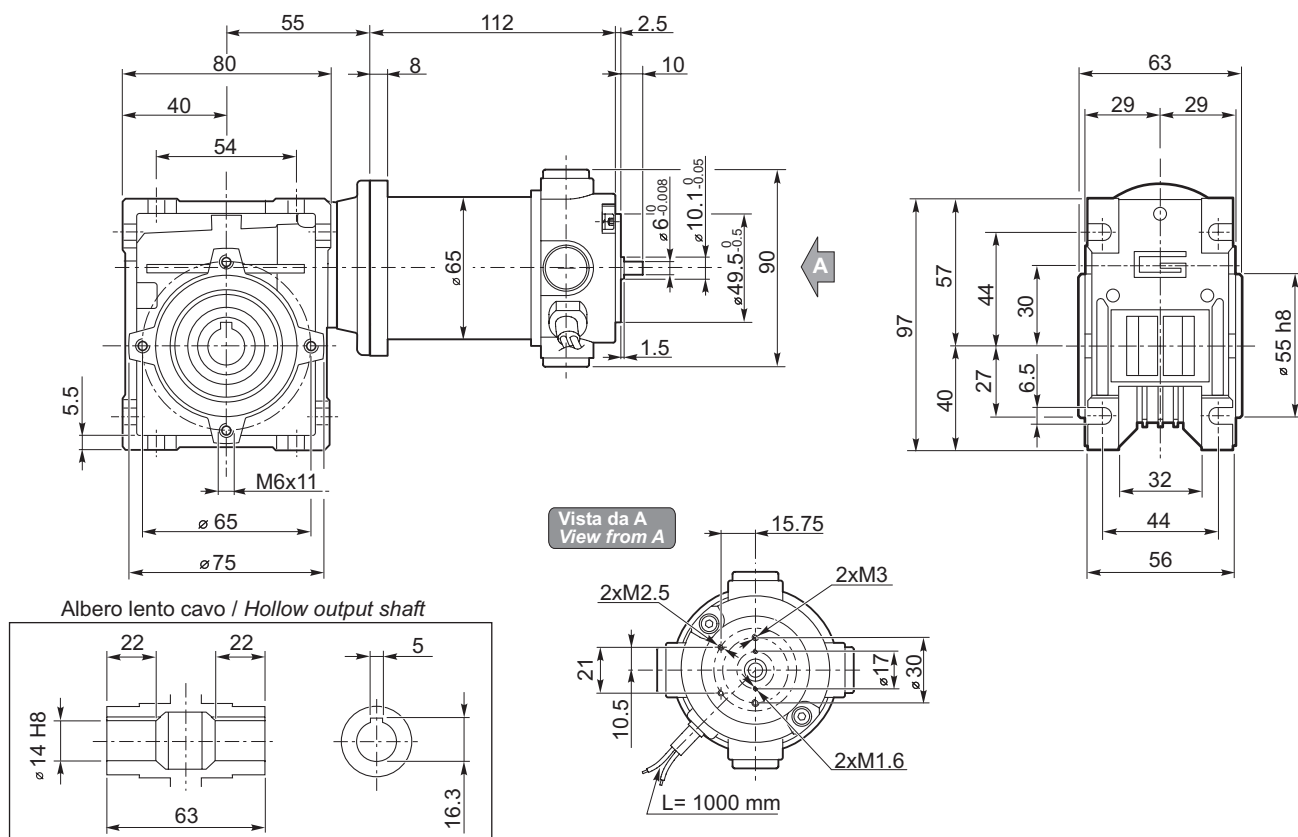
**Dimensioni**

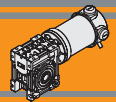
**Dimensions**

**NDCM120/026 U**



**NDCM120/030 U**

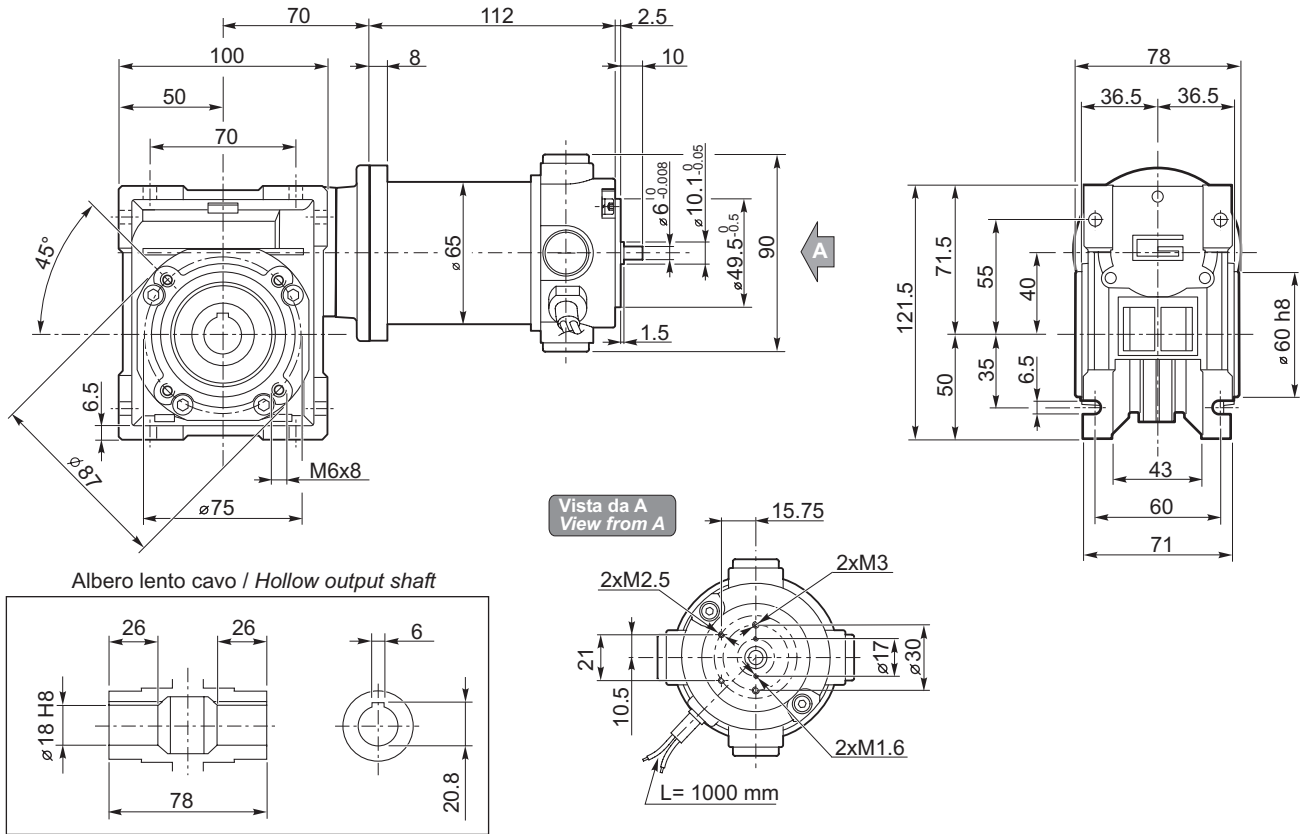




Dimensioni

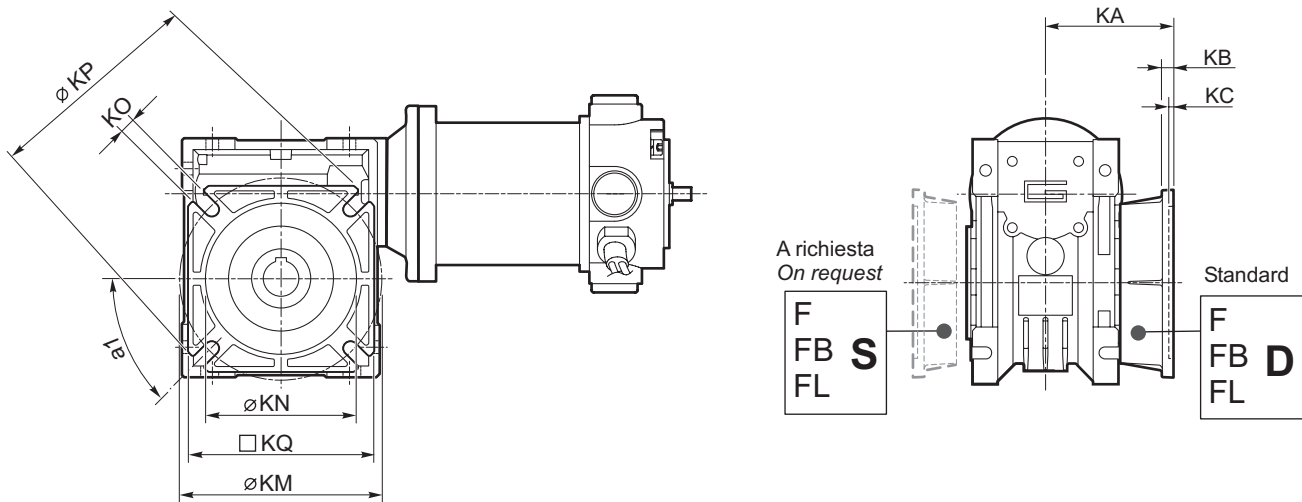
Dimensions

NDCM120/040 U



NDCM

NDCM.../... F... Flange uscita / Output flanges



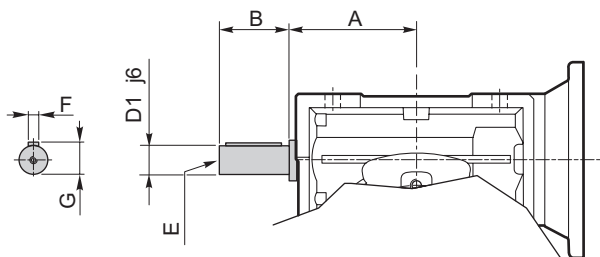
CM	CM..F									CM..FB							CM..FL								
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
026	45°	45	6	4.5	55-69	40	6.5(n.4)	75	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
030	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
040	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	10(n.4)	110	95



**Opzioni**

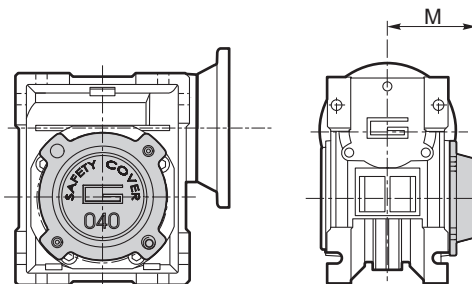
**Options**

**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
CM 040	53	23	11	M5	4	12.5

**SC - Safety cover**



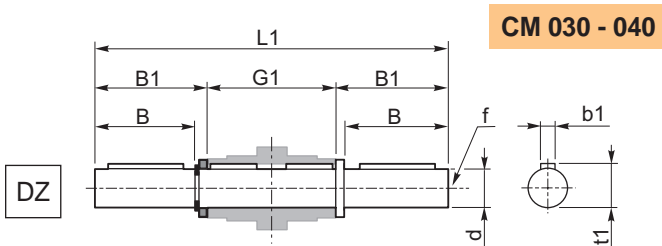
	M
CM 030	47
CM 040	54.5

**Accessori**

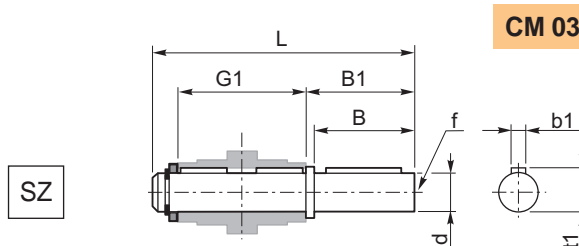
**Accessories**

**Albero lento**

**Output shaft**

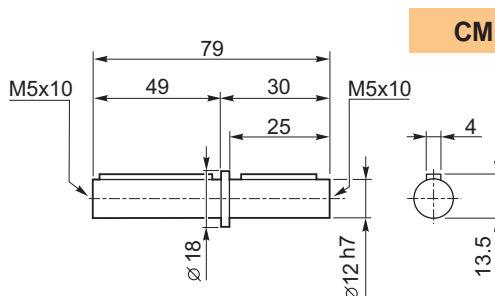


CM 030 - 040



CM 030 - 040

	d h7	B	B1	G1	L	L1	f	b1	t1
CM 030	14	30	32.5	63	102	128	M6	5	16
CM 040	18	40	43	78	128	164	M6	6	20.5



CM 026

**Braccio di reazione**

**Torque arm**

	K1	G	KG	KH	R
CM 030	85	14	23	8	15
CM 040	100	14	31	10	18

