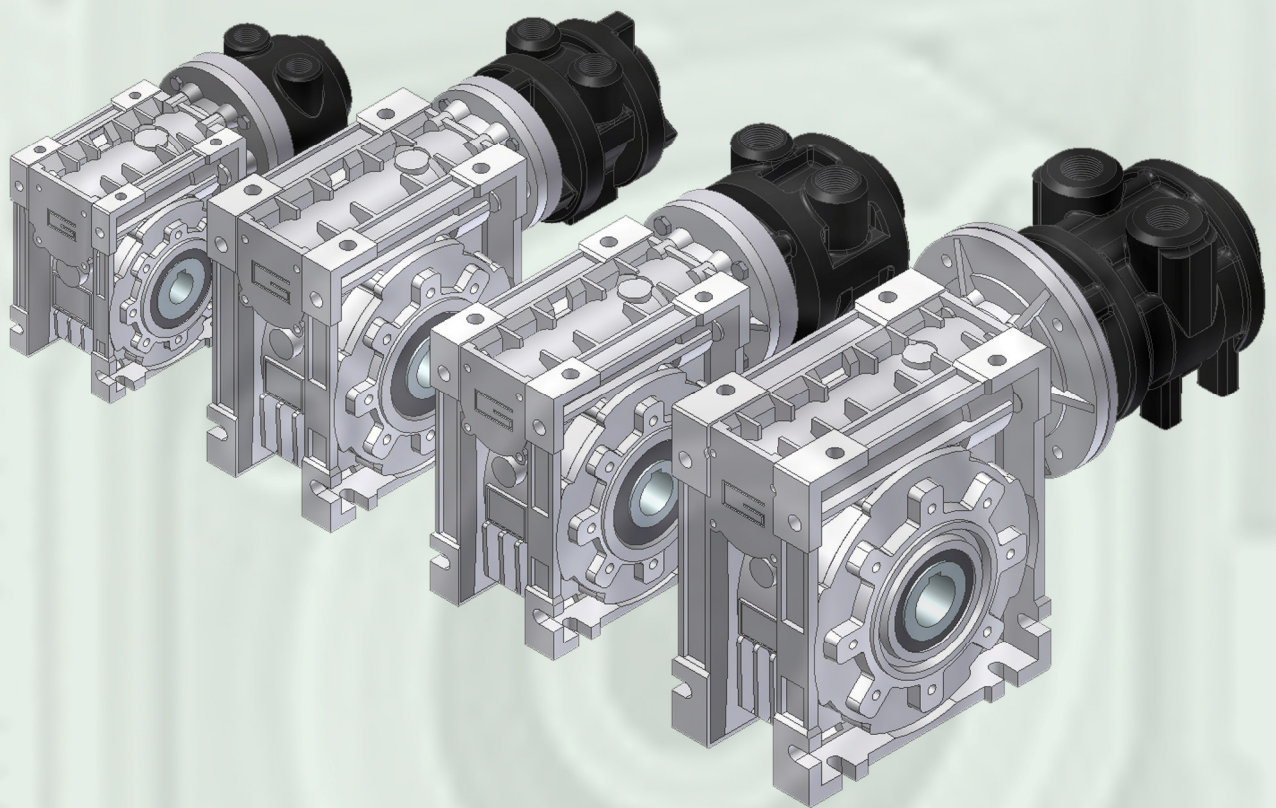




## **GEARED VANE AIR MOTOR**





# TECHNICAL FEATURES

The main features of worm gearboxes used are:

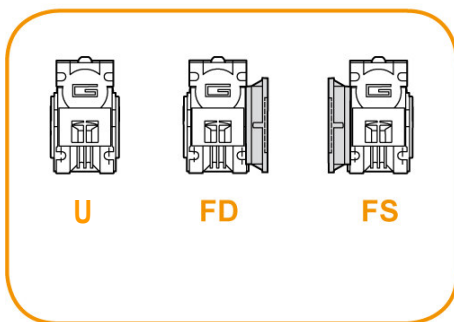
- Aluminum housing
- Double taper roller bearing on size 090 and 110.
- Permanent synthetic oil long-life lubrication

## Designation

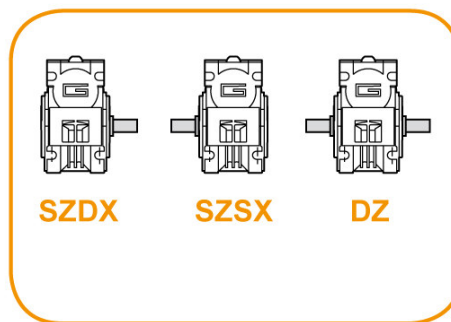
### GEARED VANE AIR MOTORS

Type	Ratio	Version	Output shaft	Torque arm	Optins
M55CM030	See model	U	SZDX	BRDX	VS (See Pag.14)
M55CM040		FD	SZSX	BRSX	BN (See Pag.15)
M55CM050		FS	DZ		
M95CM040					
M95CM050					
M95CM063					
M250CM063					
M250CM090					
M410CM090					
M410CM110					
M620CM090					
M620CM110					
M1100CM090					
M1100CM110					

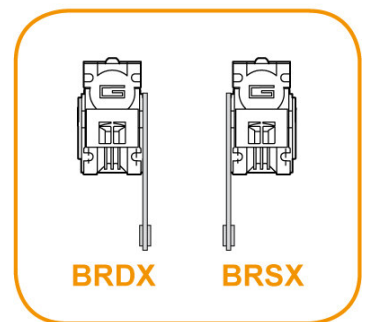
Version



Output shaft



Torque arm



## Symbols

$A_2$  Permitted output axial load

$n_2$  [min-1] Output speed

$R_2$  [N] Permitted output radial load

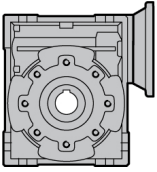
Rd Dynamic efficiency

Rs Static efficiency

f.s. Service factor

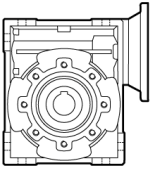
i Ratio

# LUBRICATION



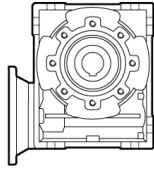
CM	Oil quantity (liters) Life lubricated					
	B3	B8	B6	B7	V5	V6
030	0.04					
040	0.07					
050	0.1					
063	0.25					
090	0.85					
110	1.5					

## Mounting position

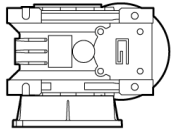


**B3**

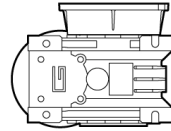
(Standard)



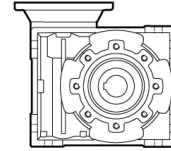
**B8**



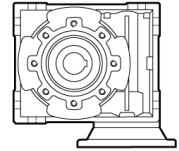
**B6**



**B7**



**V5**



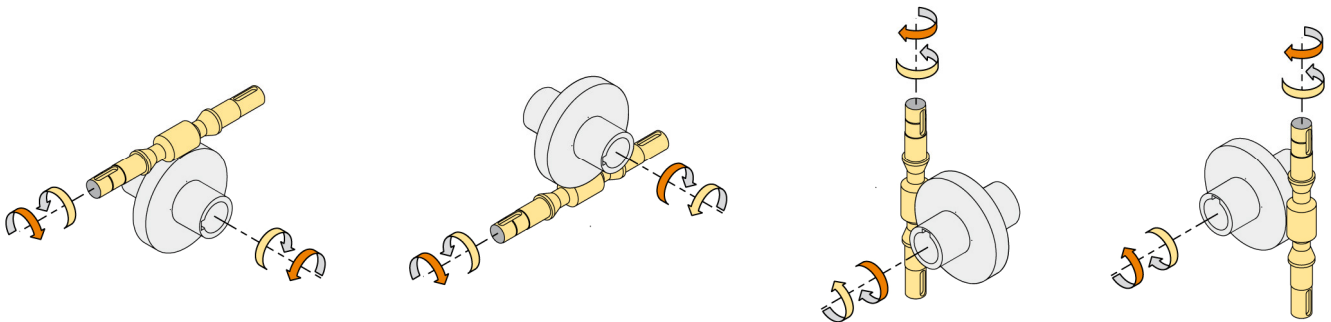
**V6**

## Reccomended oils

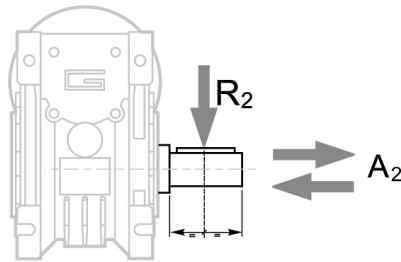
SHELL	AGIP	ESSO	MOBIL	CASTROL	BP
Rivela Oil SC320	Blasia S320	S320	Glygoyle 30	Alphasyn PG320	Energol SG-XP 320

All unit size are complete with a long life synthetic lubricant, viscosity 320 and do not require maintenance.

## Direction of rotation



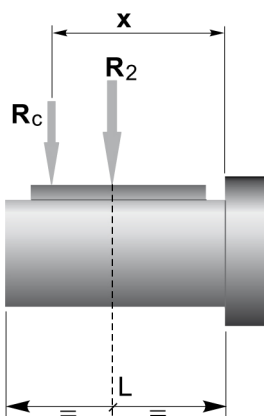
## RADIAL LOAD



$$A_2 = R_2 \times 0.2$$

n <sub>2</sub> [min.]	R <sub>2</sub> [N]					
	CM030	CM040	CM050	CM063	CM090	CM110
187	674	1264	1770	2445	3161	5058
140	743	1392	1949	2692	3481	5570
93	851	1596	2234	3085	3990	6384
70	936	1754	2456	3392	4386	7018
56	1008	1890	2646	3654	4725	7560
47	1069	2004	2805	3874	5009	8014
35	1179	2210	3095	4273	5526	8842
28	1270	2381	3334	4603	5953	9524
23	1356	2542	3559	4915	6356	10170
18	1471	2759	3862	5334	6897	11036
14	1600	3000	4200	5800	7500	12000

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					
	030	040	050	063	090	110
a	65	84	101	120	182	176
b	50	64	76	95	122	136
R <sub>2 MAX</sub>	1600	3000	4200	5800	7500	12000

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

$$R \leq R_c$$

a, b = valori riportati nella tabella

# SPECIFIC

## Operating temperature

The environmental temperature affects specifications of gearboxes.

Models	Standard temperature
CM030	-35°/+50° C
CM040	-35°/+50° C
CM050	-35°/+50° C
CM063	-35°/+50° C
CM090	-35°/+50° C
CM110	-35°/+50° C

### Special temperature ranges

Models	<-15°C	-35°C/-25°C	<-35°C	>+50°C
CM030			Use silicone (VMQ) oil seals  Use low temperature lubricant	Use Viton (FPM) oil seals  Use high temperature lubricant
CM040				
CM050				
CM063				
CM090				
CM110				

## Irreversibilità dynamic and static

### DYNAMIC IRREVERSIBILITY

Dynamic irreversibility is achieved when the output shaft stops instantly when drive is no longer transmitted through the worm shaft. This condition requires a dynamic efficiency of  $R_d < 0.5$ .

### STATIC IRREVERSIBILITY

Static irreversibility is achieved when, with the gear reducer at a standstill, the application of a load to the output shaft does not set in motion the worm shaft. This condition requires a static efficiency of  $R_s < 0.5$ .

Models	i	7,5	15	20	25	30	40	50	60	80
CM030	Rd	0,85	0,77	0,73	0,68	0,65	0,59	0,55	0,51	0,44
	Rs	0,67	0,55	0,5	0,43	0,39	0,35	0,31	0,27	0,23
CM040	Rd	0,87	0,82	0,78	0,75	0,7	0,65	0,62	0,58	0,52
	Rs	0,71	0,6	0,55	0,51	0,45	0,4	0,36	0,32	0,28
CM050	Rd	0,88	0,82	0,79	0,76	0,72	0,67	0,63	0,59	0,53
	Rs	0,7	0,59	0,55	0,51	0,44	0,39	0,35	0,32	0,27
CM063	Rd	0,88	0,83	0,81	0,78	0,74	0,7	0,66	0,62	0,57
	Rs	0,71	0,6	0,55	0,51	0,45	0,4	0,36	0,33	0,28
CM090	Rd	0,9	0,86	0,84	0,82	0,78	0,75	0,72	0,69	0,63
	Rs	0,73	0,64	0,6	0,56	0,49	0,45	0,41	0,38	0,32
CM110	Rd	0,9	0,86	0,85	0,84	0,79	0,78	0,75	0,72	0,67
	Rs	0,72	0,63	0,62	0,59	0,48	0,48	0,44	0,41	0,36

## SERIES M55

### Performance at 6 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M55CM030i7,5	7,5	0,32	400	5	4	2,5	1	10
M55CM030i15	15	0,32	200	10	6	2,5	1	
M55CM030i30	30	0,27	100	17	8	2,5	1	
M55CM040i40	40	0,27	75	22	11	3,5	1	
M55CM040i50	50	0,25	60	26	13	3,5	1	
M55CM050i60	60	0,25	50	31	14	4,5	1	
M55CM050i80	80	0,23	37	38	15	4,5	1	

### Performance at 5 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M55CM030i7,5	7,5	0,26	400	4	3	2,5	1	8,4
M55CM030i15	15	0,26	200	8	5	2,5	1	
M55CM030i30	30	0,24	100	15	7	2,5	1	
M55CM040i40	40	0,24	75	20	9	3,5	1	
M55CM040i50	50	0,22	60	23	10	3,5	1	
M55CM050i60	60	0,22	50	25	11	4,5	1	
M55CM050i80	80	0,18	37	31	13	4,5	1	

### Performance at 4 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M55CM030i7,5	7,5	0,19	400	3	2	2,5	1	6,8
M55CM030i15	15	0,19	200	6	4	2,5	1	
M55CM030i30	30	0,16	100	10	5	2,5	1	
M55CM040i40	40	0,16	75	14	7	3,5	1	
M55CM040i50	50	0,16	60	17	8	3,5	1	
M55CM050i60	60	0,16	50	20	9	4,5	1	
M55CM050i80	80	0,14	37	24	10	4,5	1	

Torque data in the table above are related to the bronze wheel wear resistance during a theoretical period of 10000 hours and with f.s.=1 and perfect lubrication.

## SERIES M95

### Performance at 6 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M95CM040i7,5	7,5	0,7	400	11	10	6	1	22,2
M95CM040i15	15	0,7	200	21	17	6	1	
M95CM040i30	30	0,6	100	39	25	6	1	
M95CM050i40	40	0,6	75	50	29	7	1	
M95CM050i50	50	0,6	60	61	33	7	1	
M95CM063i60	60	0,6	50	72	37	10	1	
M95CM063i80	80	0,5	37	89	42	10	1	

### Performance at 5 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M95CM040i7,5	7,5	0,5	400	8	8	6	1	19
M95CM040i15	15	0,5	200	16	14	6	1	
M95CM040i30	30	0,5	100	29	21	6	1	
M95CM050i40	40	0,4	75	38	24	7	1	
M95CM050i50	50	0,4	60	45	28	7	1	
M95CM063i60	60	0,4	50	54	31	10	1	
M95CM063i80	80	0,4	37	67	35	10	1	

### Performance at 4 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M95CM040i7,5	7,5	0,3	400	5	7	6	1	15,9
M95CM040i15	15	0,3	200	11	12	6	1	
M95CM040i30	30	0,3	100	20	17	6	1	
M95CM050i40	40	0,3	75	26	20	7	1	
M95CM050i50	50	0,3	60	31	23	7	1	
M95CM063i60	60	0,3	50	37	26	10	1	
M95CM063i80	80	0,3	37	45	29	10	1	

Torque data in the table above are related to the bronze wheel wear resistance during a theoretical period of 10000 hours and with f.s.=1 and perfect lubrication.



## SERIES M250

### Performance at 6 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M250CM063i7,5	7,5	1,9	400	30	20	10.5	1	34,8
M250CM063i15	15	1,8	200	56	34	10.5	1	
M250CM063i30	30	1,7	100	104	52	10.5	1	
M250CM063i40	40	1,6	75	133	61	10.5	1	
M250CM063i50	50	1,5	60	160	69	10.5	1	
M250CM090i60	60	1,5	50	184	76	17	1	
M250CM090i80	80	1,3	37	228	86	17	1	

### Performance at 5 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M250CM063i7,5	7,5	1,5	400	24	16	10.5	1	29,6
M250CM063i15	15	1,5	200	46	28	10.5	1	
M250CM063i30	30	1,3	100	85	42	10.5	1	
M250CM063i40	40	1,3	75	110	50	10.5	1	
M250CM063i50	50	1,3	60	132	57	10.5	1	
M250CM090i60	60	1,3	50	162	72	17	1	
M250CM090i80	80	1,2	37	205	81	17	1	

### Performance at 4 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M250CM063i7,5	7,5	1,2	400	19	13	10.5	1	24,3
M250CM063i15	15	1,1	200	36	22	10.5	1	
M250CM063i30	30	1,1	100	67	33	10.5	1	
M250CM063i40	40	1	75	86	39	10.5	1	
M250CM063i50	50	1	60	103	44	10.5	1	
M250CM090i60	60	1	50	127	56	17	1	
M250CM090i80	80	0,9	37	161	63	17	1	

Torque data in the table above are related to the bronze wheel wear resistance during a theoretical period of 10000 hours and with f.s.=1 and perfect lubrication.

## SERIES M410

### Performance at 6 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M410CM063i7,5	7,5	3,8	400	59	38	14.5	1	62,2
M410CM063i15	15	3,7	200	113	64	14.5	1	
M410CM090i30	30	3,6	100	219	104	21	1	
M410CM090i40	40	3,5	75	281	128	21	1	
M410CM090i50	50	3,4	60	343	146	21	1	
M410CM110i60	60	3,3	50	406	175	43	1	
M410CM110i80	80	3,1	37	513	205	43	1	

### Performance at 5 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M410CM063i7,5	7,5	3,1	400	48	31	14.5	1	54,1
M410CM063i15	15	3	200	93	53	14.5	1	
M410CM090i30	30	3	100	184	86	21	1	
M410CM090i40	40	2,8	75	232	106	21	1	
M410CM090i50	50	2,7	60	282	120	21	1	
M410CM110i60	60	2,7	50	334	145	43	1	
M410CM110i80	80	2,5	37	423	169	43	1	

### Performance at 4 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M410CM063i7,5	7,5	2,4	400	38	24	14.5	1	46,1
M410CM063i15	15	2,3	200	73	42	14.5	1	
M410CM090i30	30	2,3	100	141	68	21	1	
M410CM090i40	40	2,2	75	182	84	21	1	
M410CM090i50	50	2,1	60	221	95	21	1	
M410CM110i60	60	2,1	50	262	114	43	1	
M410CM110i80	80	2	37	332	134	43	1	

Torque data in the table above are related to the bronze wheel wear resistance during a theoretical period of 10000 hours and with f.s.=1 and perfect lubrication.

## SERIES M620

### Performance at 6 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M620CM090i7,5	7,5	6,1	400	93	77	25	1	101,9
M620CM090i15	15	5,9	200	181	135	25	1	
M620CM0110i30	30	5,5	100	337	203	47	1	
M620CM0110i40	40	5,4	75	444	260	47	1	
M620CM0110i50	50	5,3	60	541	311	47	1	
M620CM0110i60	60	5,2	50	633	347	47	1	

### Performance at 5 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M620CM090i7,5	7,5	4,9	400	76	64	25	1	87,6
M620CM090i15	15	4,8	200	147	112	25	1	
M620CM0110i30	30	4,5	100	275	168	47	1	
M620CM0110i40	40	4,4	75	363	215	47	1	
M620CM0110i50	50	4,3	60	442	257	47	1	
M620CM0110i60	60	4,2	50	517	288	47	1	

### Performance at 4 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M620CM090i7,5	7,5	3,8	400	59	50	25	1	73,4
M620CM090i15	15	3,7	200	114	89	25	1	
M620CM0110i30	30	3,5	100	213	133	47	1	
M620CM0110i40	40	3,4	75	281	170	47	1	
M620CM0110i50	50	3,3	60	343	204	47	1	
M620CM0110i60	60	3,2	50	401	228	47	1	

Torque data in the table above are related to the bronze wheel wear resistance during a theoretical period of 10000 hours and with f.s.=1 and perfect lubrication.

## SERIES M1100

### Performance at 6 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M1100CM090i7,5	7,5	11,1	320	212	155	35	1	132,5
M1100CM110i15	15	10,7	160	410	269	58	1	
M1100CM110i20	20	10,6	120	541	353	58	1	
M1100CM110i25	25	10,5	96	668	419	58	1	
M1100CM110i30	30	10	80	765	409	58	1	

### Performance at 5 Bar

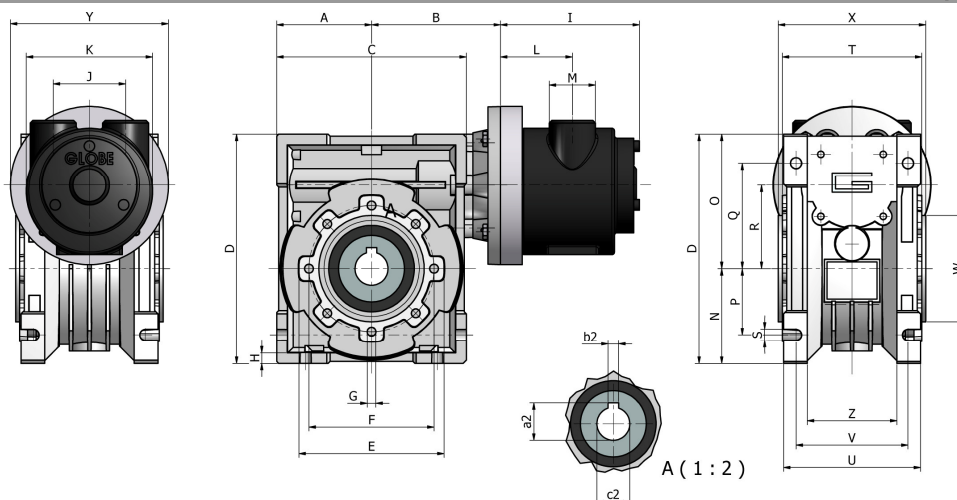
Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M1100CM090i7,5	7,5	9,1	320	174	129	35	1	116
M1100CM110i15	15	8,8	160	336	223	58	1	
M1100CM110i20	20	8,7	120	444	292	58	1	
M1100CM110i25	25	8,6	96	548	348	58	1	
M1100CM110i30	30	8,2	80	628	340	58	1	

### Performance at 4 Bar

Models	i	Power KW	Max rpn	Torque max power Nm	Min. starting torque Nm	Weight Kg.	f.s.	Consum l/sec.
M1100CM090i7,5	7,5	7,1	320	136	102	35	1	99,5
M1100CM110i15	15	6,9	160	263	177	58	1	
M1100CM110i20	20	6,8	120	347	232	58	1	
M1100CM110i25	25	6,7	96	429	277	58	1	
M1100CM110i30	30	6,4	80	490	270	58	1	

Torque data in the table above are related to the bronze wheel wear resistance during a theoretical period of 10000 hours and with f.s.=1 and perfect lubrication.

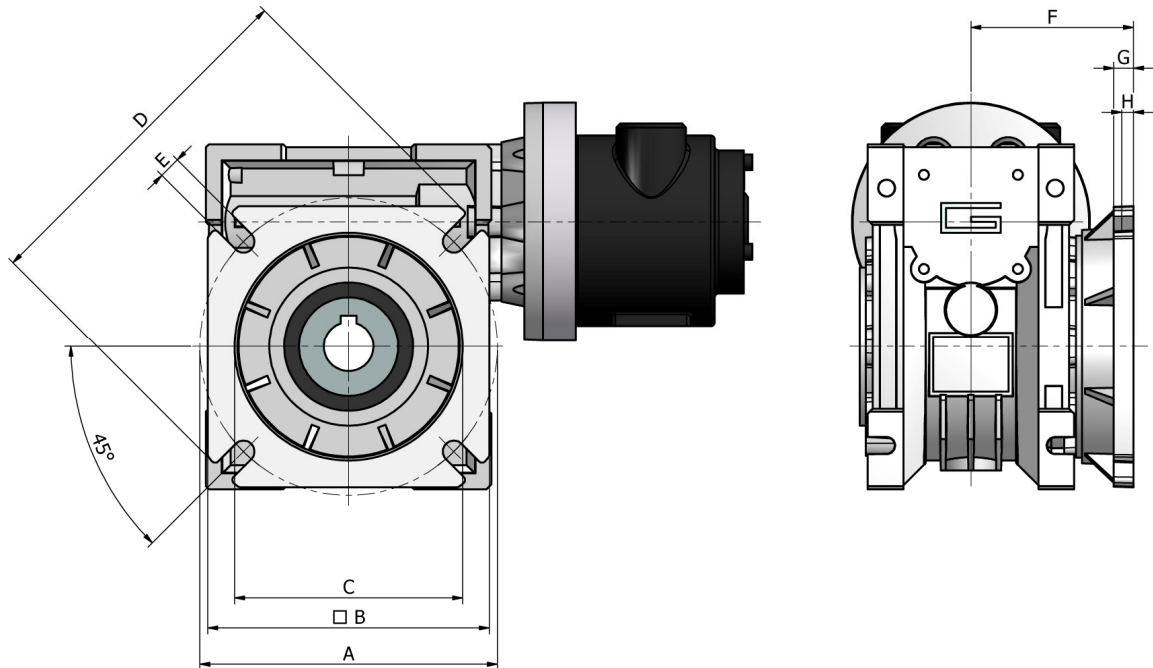
# DIMENSIONS



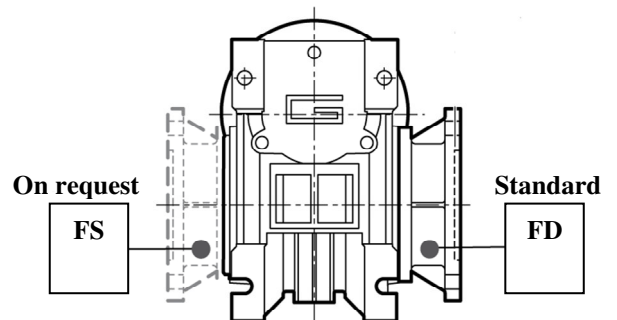
Models	A	B	C	D	ØE	ØF	G	H	I	L	M	N	O	P
M55CM030	40	55	80	97	75	65	M6	5.5	84	47	¼"NPT	40	57	27
M55CM040	50	70	100	121.5	87	75	M6	6.5	84	47	¼"NPT	50	71.5	35
M55CM050	60	80	120	144	98	85	M8	7	84	47	¼"NPT	60	84	40
M95CM040	50	70	100	121.5	87	75	M6	6.5	86.5	44	3/8"NPT	50	71.5	35
M95CM050	60	80	120	144	98	85	M8	7	86.5	44	3/8"NPT	60	84	40
M95CM063	72	98	144	174	110	95	M8	8	86.5	44	3/8"NPT	72	102	50
M250CM063	72	98	144	174	110	95	M8	8	105.5	54.5	½"NPT	72	102	50
M250CM090	103	130	206	238	160	130	M10	11	105.5	54.5	½"NPT	103	135	70
M410CM063	72	98	144	174	110	95	M8	8	150.5	77.5	¾"NPT	72	102	50
M410CM090	103	130	206	238	160	130	M10	11	150.5	77.5	¾"NPT	103	135	70
M410CM110	127.5	160	255	295	200	165	M10	14	150.5	77.5	¾"NPT	127.5	167.5	85
M620CM090	103	130	206	238	160	130	M10	11	168	90	1"NPT	103	135	70
M620CM110	127.5	160	255	295	200	165	M10	14	168	90	1"NPT	127.5	167.5	85
M1100CM090	103	130	206	238	160	130	M10	11	214.5	116.5	1.1/4"	103	135	70
M1100CM110	127.5	160	255	295	200	165	M10	14	214.5	116.5	1.1/4"	127.5	167.5	85

Models	Q	R	S	T	U	V	Z	ØY	ØK	J	ØW	a2	b2	Øc2
M55CM030	44	30	6.5	58	56	44	32	90	71	36	55h8	16.3	5	14H8
M55CM040	55	40	6.5	73	71	60	43	90	71	36	60h8	20.8	6	18H8
M55CM050	64	50	8.5	87	85	70	49	90	71	36	70h8	28.3	8	25H8
M95CM040	55	40	6.5	73	71	60	43	105	96	55	60h8	20.8	6	18H8
M95CM050	64	50	8.5	87	85	70	49	105	96	55	70h8	28.3	8	25H8
M95CM063	80	63	8.5	106	104	85	68	105	96	55	80h8	28.3	8	25H8
M250CM063	80	63	8.5	106	104	85	68	120	96	55	80 h8	28.3	8	28 H8
M250CM090	102	90	13	134	130	100	74	120	96	55	110 h8	38.3	10	35 H8
M410CM063	80	63	8.5	106	104	85	68	120	130	65	80 h8	28.3	8	28 H8
M410CM090	102	90	13	134	130	100	74	120	130	65	110 h8	38.3	10	35 H8
M410CM110	125	110	14	148	144	115	70	140	130	65	130 h8	45.3	12	42 H8
M620CM090	102	90	13	134	130	100	74	140	140	78	110 h8	38.3	10	35 H8
M620CM110	125	110	14	148	144	115	70	140	140	78	130 h8	45.3	12	42 H8
M1100CM090	102	90	13	134	130	100	74	200	160	90	110 h8	38.3	10	35 H8
M1100CM110	125	110	14	148	144	115	70	200	160	90	130 h8	45.3	12	42 H8

## VERSION DIMENSION FD / FS

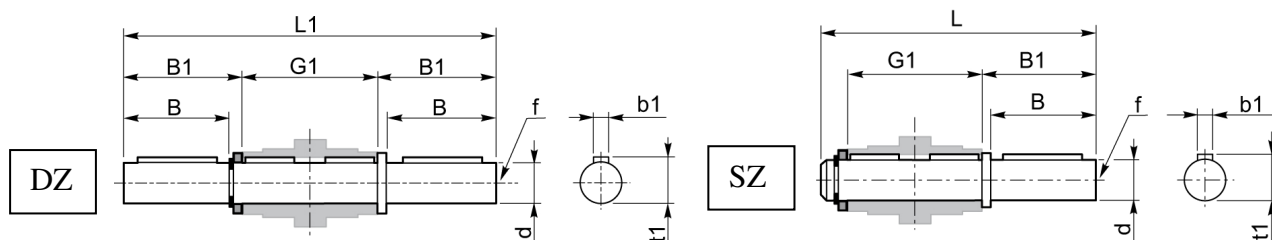


Models	A	B	C	D	E	F	G	H
M55CM030F	Ø 68	70	Ø 50 H8	Ø 80	6.5	54.5	6	4
M55CM040F	Ø 80-95	95	Ø 60 H8	Ø 110	9	80	8.5	5
M55CM050F	Ø 90-110	110	Ø 70 H8	Ø 125	11	89	9	5
M95CM040F	Ø 80-95	95	Ø 60 H8	Ø 110	9	80	8.5	5
M95CM050F	Ø 90-110	110	Ø 70 H8	Ø 125	11	89	9	5
M95CM063F	Ø 150-160	142	Ø 115 H8	Ø 180	11	82	10	6
M250CM063F	Ø 150-160	142	Ø 115 H8	Ø 180	11	82	10	6
M250CM090F	Ø 175-190	200	Ø 152 H8	Ø 210	14	111	13	6
M410CM063F	Ø 150-160	142	Ø 115 H8	Ø 180	11	82	10	6
M410CM090F	Ø 175-190	200	Ø 152 H8	Ø 210	14	111	13	6
M410CM110F	Ø 230	260	Ø 170 H8	Ø 280	14	131	15	6
M620CM090F	Ø 175-190	200	Ø 152 H8	Ø 210	14	111	13	6
M620CM110F	Ø 230	260	Ø 170 H8	Ø 280	14	131	15	6
M1100CM090F	Ø 175-190	200	Ø 152 H8	Ø 210	14	111	13	6
M1100CM110F	Ø 230	260	Ø 170 H8	Ø 280	14	131	15	6



# ACCESORIES

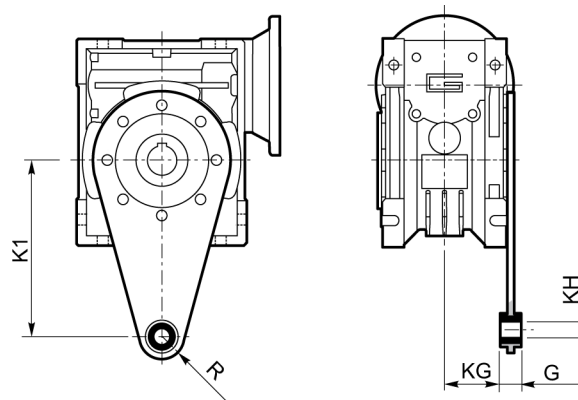
## Single and double output shaft



CM	d h7	B	B1	G1	L	L1	f	b1	t1
030	14	30	32.5	63	102	128	M6	5	16
040	18	40	43	78	128	164	M6	6	20.5
050	25	50	53.5	92	153	199	M10	8	28
063	25	50	53.5	112	173	219	M10	8	28
090	35	80	84.5	140	234	309	M12	10	38
110	42	80	84.5	155	249	324	M16	12	45

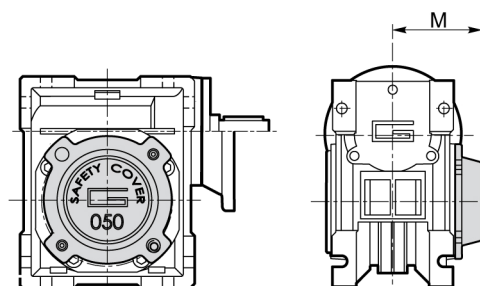
## Torque arm

CM	K1	G	KG	KH	R
030	85	14	23	8	15
040	100	14	31	10	18
050	100	14	38	10	18
063	150	14	47.5	10	18
090	200	25	56.5	20	30
110	250	30	62	25	35



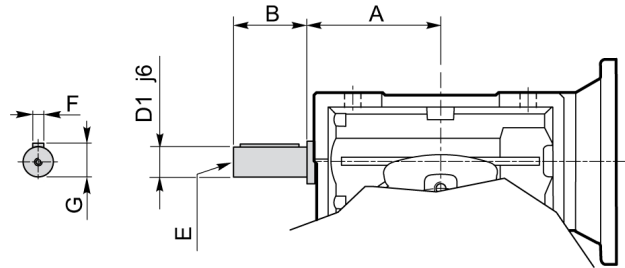
## Safety cover

CM	M
030	47
040	54.5
050	62.5
063	73
090	94
110	102



## OPTIONS

### VS – Extended input shaft

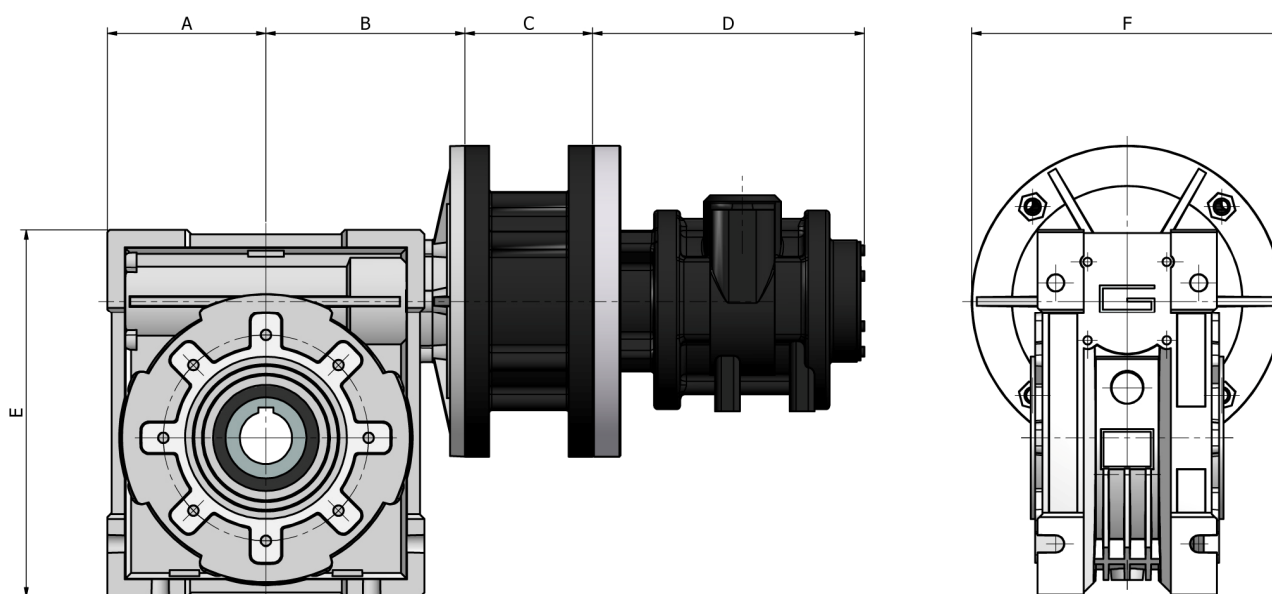


Models	A	B	D1 j6	E	F	G
M55CM030	45	20	9	M4	3	10.2
M55CM040	53	23	11	M5	4	12.5
M55CM050	64	30	14	M6	5	16
M95CM040	53	23	11	M5	4	12.5
M95CM050	64	30	14	M6	5	16
M95CM063	75	40	Ø 19	M6	6	21.5
M250CM063	75	40	Ø 19	M6	6	21.5
M250CM090	108	50	Ø 24	M8	8	27
M410CM063	75	40	Ø 19	M6	6	21.5
M410CM090	108	50	Ø 24	M8	8	27
M410CM110	-	-	-	-	-	-
M620CM090	108	50	Ø 24	M8	8	27
M620CM110	-	-	-	-	-	-
M1100CM090	108	50	Ø 24	M8	8	27
M1100CM110	-	-	-	-	-	-



## Pneumatic brakes BN

The BN series presents safety breaks which are usually closed (the spring breaks and the air releases them) and used as static breaks, but can also be used in dynamic conditions in certain applications. The pneumatic brakes are certified according to European Directive for products destined to be used in potentially explosive atmospheres ATEX I cat.2 G&D T3 (in static applications).



Models	A	B	C	D	E	F
M55CM050	60	80	106.5	78	144	Ø160
M95CM063	72	98	145	88,5	174	Ø200
M250CM063	72	98	145	105.5	174	Ø200
M250CM090	103	130	145	105.5	238	Ø200
M410CM063	72	98	145	145.5	174	Ø200
M410CM090	103	130	145	145.5	238	Ø200
M410CM110	127.5	160	145	145.5	295	Ø200
M620CM090	103	130	103	167.5	238	Ø250
M620CM110	127.5	130	103	167.5	295	Ø250
M1100CM090	103	130	103	218.5	238	Ø250
M1100CM110	127.5	160	103	218.5	295	Ø250

# NOTES



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