

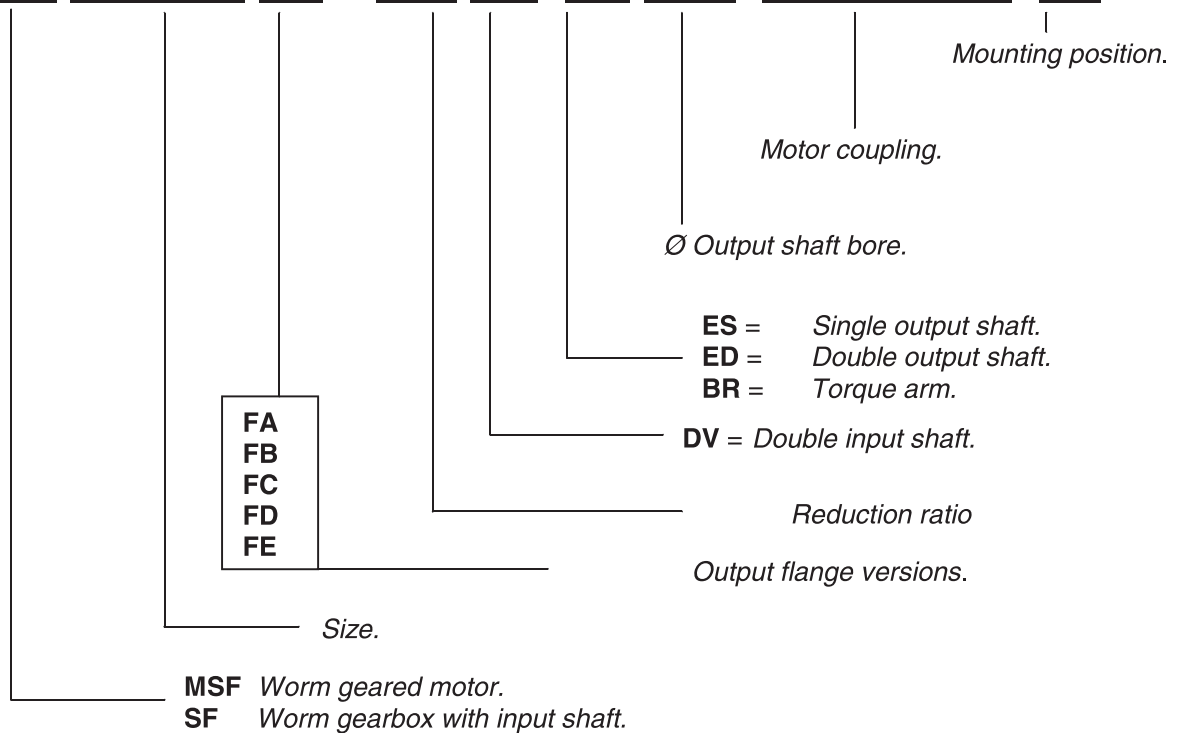


COMBINED WORM GEARBOXES

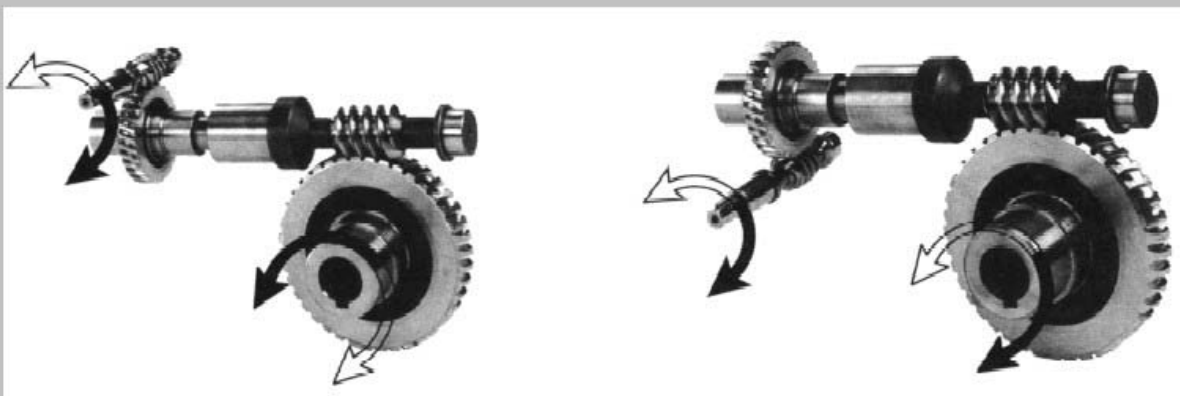
MSF/MSF Combined worm geared motors

Designation

MSF 050/110 FA – 900 DV ES Ø25 PAM80B14 B3



Direction or rotation

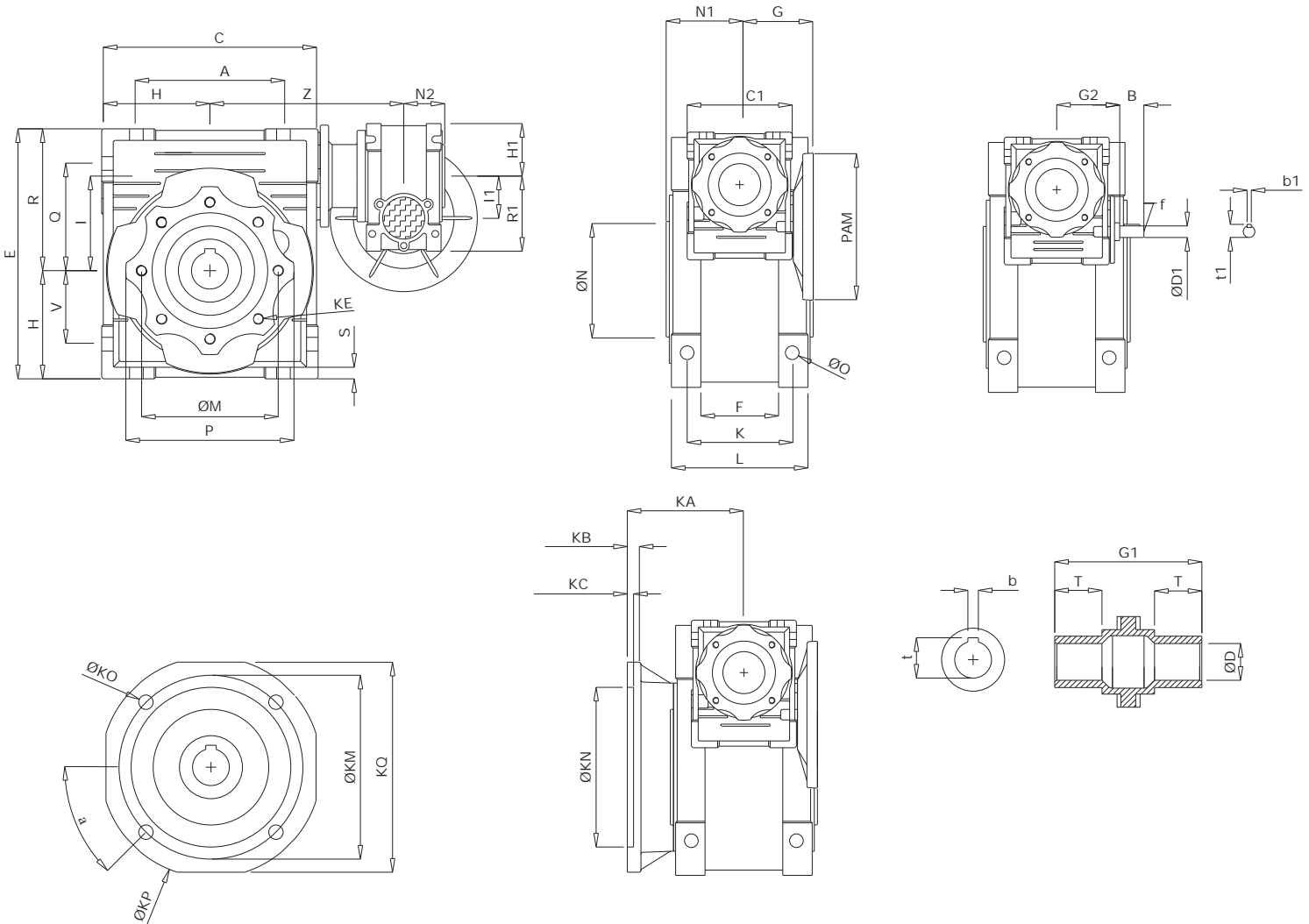


Performance of combined worm geared motors

Motor		n2	i	M2	f.s	Type	
Kw		rpm		Nm			
0.06	4P n1=1400	4.7	300	57	1.3	MSF 030/040	
		3.5	400	70	0.9		
		2.8	500	96	0.6		
		2.3	600	104	0.7		
		1.9	750	121	0.6		
		1.6	900	139	0.5		
		1.2	1200	166	0.4		
		0.9	1500	196	0.4		
		0.8	1800	218	0.3		
		0.58	2400	261	0.2		
		0.4	3200	300	0.2		
		1.6	900	141	1.0		MSF 030/050
		1.2	1200	169	0.7		
		0.93	1500	199	0.7		
		0.78	1800	222	0.7		
	0.6	2400	266	0.5			
	0.5	3000	307	0.4			
	0.35	4000	288	0.3			
	0.29	4800	311	0.3			
	0.93	1500	204	1.1	MSF 030/063		
	0.78	1800	225	0.9			
	0.58	2400	276	0.8			
	0.47	3000	319	0.7			
	0.35	4000	306	0.6	MSF 040/075		
	0.28	5000	360	0.4			
	0.58	2400	330	1.1			
	0.47	3000	377	0.8			
	0.35	4000	355	0.7			
	0.28	5000	419	0.5	MSF 040/090		
	0.47	3000	406	1.4			
	0.35	4000	365	1.3			
	0.28	5000	431	1.0			
	0.09	4P n1=1400	4.7	300	88	0.8	MSF 030/040
3.5			400	65	0.7		
3.5			400	107	1.2	MSF 030/050	
2.8			500	123	1.0		
2.3			600	159	0.9		
1.9			750	185	0.8		
1.6			900	212	0.7	MSF 030/063	
1.2			1200	263	0.9		
0.93			1500	305	0.7		
0.93			1500	360	1.1	MSF 040/075	
0.78			1800	404	1.0		
0.58			2400	496	0.7	MSF 040/090	
0.47			3000	609	0.9		
0.35			4000	548	0.8		
0.12			4P n1=1400	4.7	300	119	1.2
	3.5	400		142	0.9		
	2.8	500		164	0.7		
	2.8	500		171	1.3	MSF 030/63	
	2.3	600		208	1.1		
	1.9	750		241	0.9	MSF 040/075	
	1.6	900		325	1.2		
	1.2	1200		399	0.9		
	0.78	1800		547	0.9	MSF 040/090	
	0.58	2400		695	0.9		
	0.47	3000		884	1.1	MSF 050/110	
	0.35	4000		784	1.0		
0.28	5000	928	0.8				

Motor		n2	i	M2	f.s	Type
Kw		rpm		Nm		
0.18	4P n1=1400	3.5	400	222	1.0	MSF 030/063
		2.8	500	257	0.8	
		2.3	600	362	1.1	MSF 040/075
		1.9	750	435	0.9	
		1.6	900	487	0.8	
		1.2	1200	629	1.0	MSF 040/090
		0.93	1500	735	0.8	
		0.78	1800	861	1.3	MSF 050/110
		0.58	2400	1113	0.9	
		0.25	4P n1=1400	3.5	400	336
2.8	500			384	0.8	
2.3	600			512	1.2	MSF 040/090
1.9	750			598	0.9	
1.6	900			667	0.8	
1.2	1200			943	1.1	MSF 050/110
0.93	1500			1064	1.0	
0.78	1800			1195	0.9	MSF 063/130
0.58	2400	1624	1.0			
0.47	3000	1935	0.8			
0.35	4000	2046	0.6			
0.28	5000	2430	0.5			
0.37	4P n1=1400	4.7	300	405	1.0	MSF 040/075
		3.5	400	498	0.7	
		4.7	300	402	1.5	MSF 040/090
		3.5	400	523	1.2	
		2.8	500	611	0.9	
		2.3	600	757	0.8	MSF 050/110
		1.9	750	950	1.2	
		1.6	900	1079	1.0	
		1.2	1200	1396	0.7	
		0.93	1500	1674	1.1	MSF 063/130
0.78	1800	1887	0.9			
0.55	4P n1=1400	4.7	300	639	1.7	MSF 050/110
		3.5	400	826	1.2	
		2.8	500	984	1.0	
		2.3	600	1181	0.9	MSF 063/130
		1.9	750	1411	0.8	
		2.8	500	996	1.6	
1.9	750	1471	1.2	MSF 063/130		
1.2	1200	2132	0.8			
0.75	4P n1=1400	4.7	300	871	1.3	MSF 050/110
		3.5	400	1126	0.9	
		2.8	500	1358	1.1	MSF 063/130
		2.3	600	1631	1.0	
1.9	750	2005	0.9	MSF 063/130		
1.6	900	2283	0.8			
1.10	4P n1=1400	4.7	300	1312	1.3	MSF 063/130
		3.5	400	1671	1.0	
		2.8	500	1991	0.8	
1.50	4P n1=1400	4.7	300	1789	1.0	MSF 063/130
		3.5	400	2279	0.7	

Overall dimensions



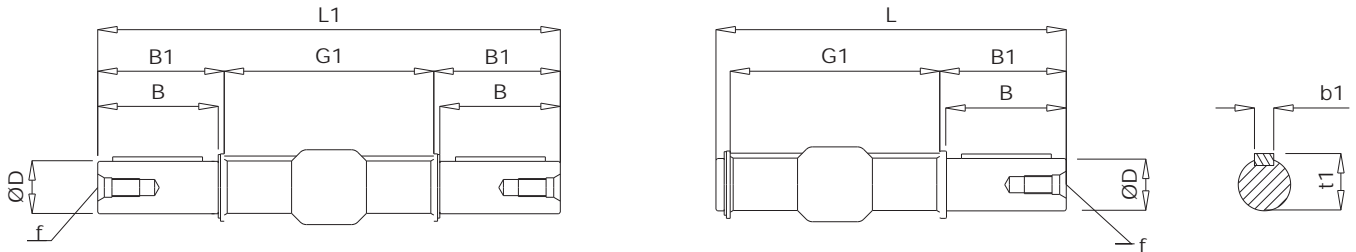
Size	A	B	C	C1	D (H7)	D1 (j6)	E	F	G	G1	G2	H	H1	I	I1	L	M	N (h8)	N1	N2	O	P	Q	R
030 / 040	70	20	100	80	18	9	121.5	43	55	78	51	50	40	40	30	71	75	60	36.5	29	6.5	87	55	71.5
030 / 050	80	20	120	80	25	9	144	49	55	92	51	60	40	50	30	85	85	70	43.5	29	8.5	100	64	84
030 / 063	100	20	144	80	25	9	174	67	55	112	51	72	40	63	30	103	95	80	53	29	8.5	110	80	102
040 / 075	120	23	172	100	28	11	205	72	70	120	60	86	50	75	40	112	115	95	57	36.5	11	140	93	119
040 / 090	140	23	208	100	35	11	238	74	70	140	60	103	50	90	40	130	130	110	67	36.5	13	160	102	135
050 / 110	170	30	252.5	120	42	14	295	-	80	155	74	127.5	60	110	50	144	165	130	74	43.5	14	200	125	167.5
063 / 130	200	40	292.5	144	45	19	335	-	95	170	90	147.5	72	130	63	155	215	180	81	53	16	250	140	187.5

Size	R1	S	T	V	Z	K	KA	KB	KC	KE	a	KM	KN (H8)	KO	KP	KQ	b	b1	f	t	t1	kg
030 / 040	57	6.5	26	35	120	60	67	7	4	M6 x 8 (4)	45°	87	60	9	110	95	6	3	-	20.8	10.2	3.9
030 / 050	57	7	30	40	130	70	90	9	5	M8 x 10 (4)	45°	90	70	11	125	110	8	3	-	28.3	10.2	5.0
030 / 063	57	8	36	50	145	85	82	10	6	M8 x 14 (8)	45°	150	115	11	180	142	8	3	-	28.3	10.2	7.8
040 / 075	71.5	10	40	60	165	90	111	13	6	M8 x 14 (8)	45°	165	130	14	200	170	8	4	-	31.3	12.5	12.0
040 / 090	71.5	11	45	70	182	100	111	13	6	M10 x 18 (8)	45°	175	152	14	210	200	10	4	-	38.3	12.5	16.0
050 / 110	84	14	50	85	225	115	131	15	6	M10 x 18 (8)	45°	230	170	14	280	260	12	5	M6	45.3	16.0	39.2
063 / 130	102	15	60	100	245	120	140	15	6	M12 x 21 (8)	45°	255	180	16	320	290	14	6	M6	48.8	21.5	55.0

For dimensions concerning the motor coupling (dimension PAM) please refer to the table on page 14.

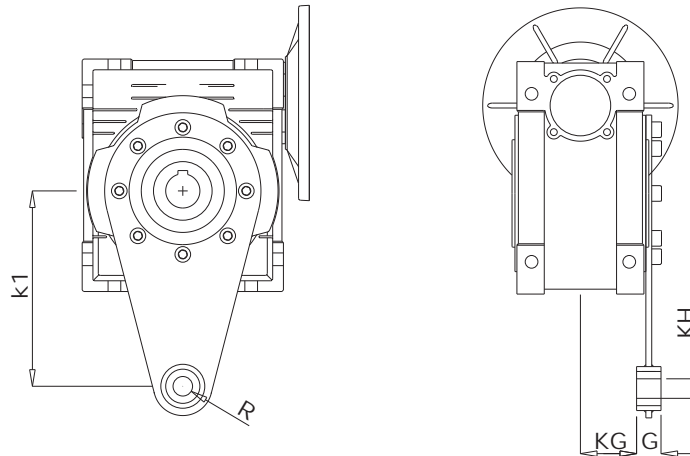
Accessories

Single and double output shafts



	D h6	B	B1	G1	L	L1	f	b1	t1
025	11	23	25.5	50	81	101	-	4	12.5
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
075	28	60	63.5	120	192	247	M10	8	31
090	35	80	84.5	140	234	309	M12	10	38
110	42	80	84.5	155	249	324	M16	12	45
130	45	80	85	170	265	340	M16	14	48.5

Torque arms



	K1	G	KG	KH	R
025	70	14	17.5	8	15
030	85	14	24	8	15
040	100	14	31.5	10	18
050	100	14	38.5	10	18
063	150	14	49	10	18
075	200	25	47.5	20	30
090	200	25	57.5	20	30
110	250	30	62	25	35
130	250	30	69		

Mounting Positions

	B3	B8	B6	B7	V5	V6
MSF						

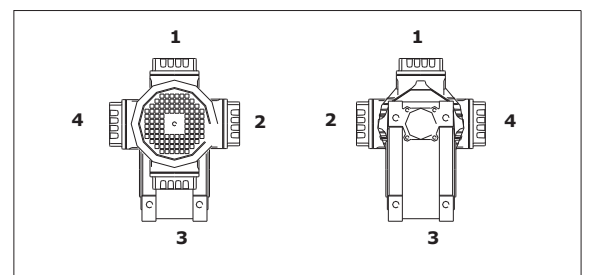
	B3	B8	B6	B7	V5	V6
PR-MSF						

	AS1	AS2	VS1	VS2
MSF-MSF				
	PS1	PS2	BS1	BS2

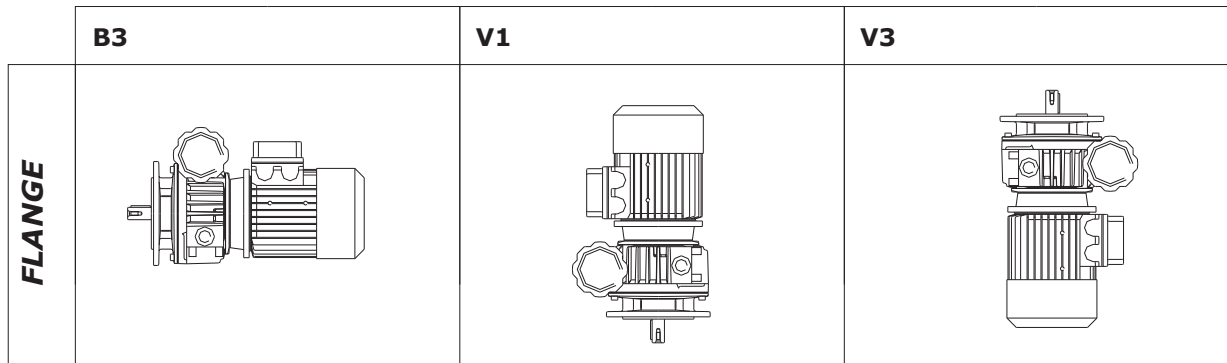
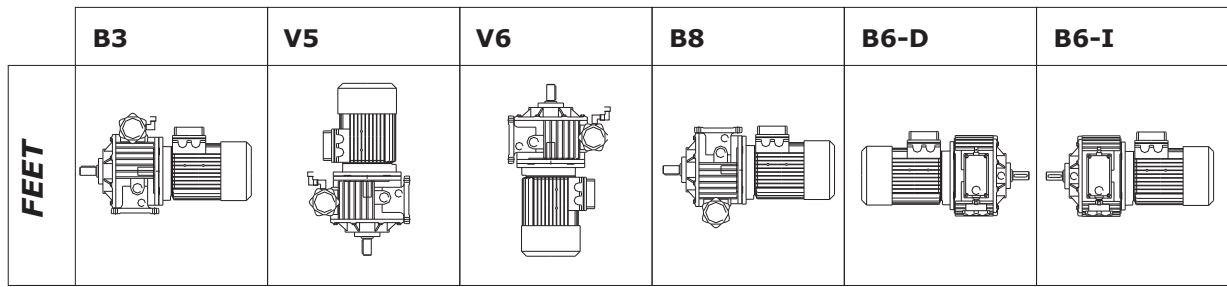
OUTPUT FLANGE

POS. TERMINAL BOX

STANDARD	OPPOSITE SIDE



Mounting Positions



Lubrication

Choice of lubricants

	Lubricant	MVB Speed Variators	MSF Worm-gear speed reducers				Helical Units
			MSF 025~090	MSF 110~130			
			Synthetic	Synthetic	Synthetic	Mineral	
Temp °C	Synthetic	-25°C ~ +40°C	-25°C ~ +50°C	-25°C ~ +40°C	-5°C ~ +40°C	-15°C ~ +25°C	-25°C ~ +50°C
ISO		VG 32	VG 320	VG 320	VG 460	VG 220	VG 320
IP		A.T.F. DEXRON FLUID	TELUM VSF	MELLANA OIL 320	MELLANA OIL 460	MELLANA OIL 220	TELUM VSF
SHELL		A.T.F. DEXRON	TIVELA OIL SC320	OMALA OIL 320	OMALA OIL 460	OMALA OIL 220	TIVELA OIL SC320
AGIP		A.T.F. DEXRON	BLASIA S320	BLASIA 320	BLASIA 460	BLASIA 220	BLASIA S320
ESSO		A.T.F. DEXRON	S 220	S 220	SPARTAN EP 460	SPARTAN EP 220	S 220
MOBIL		A.T.F. 220	GLYGOYLE 30	MOBIL GEAR 320	MOBIL GEAR 634	MOBIL GEAR 630	GLYGOYLE 30
CASTROL		TQ DEXRON II	ALPHASYN PG 320	ALPHASYN PG 320	ALPHA MAX 460	ALPHA MAX 220	ALPHASYN PG 320
BP		AUTRAN DX	ENERGOL SG-XP 320	ENERGOL SG-XP 320	ENERGOL SG-XP 460	ENERGOL SG-XP 220	ENERGOL SG-XP 320

Oil volume

MSF									
Size	025	030	040	050	063	075	090	110	130
L	0.02	0.04	0.08	0.15	0.3	0.55	1	3	4.5

MVB							
Size	0.18	0.37	0.75	1.50	2.20	4.00	7.50
L	0.02	0.04	0.08	0.15	0.3	0.55	1

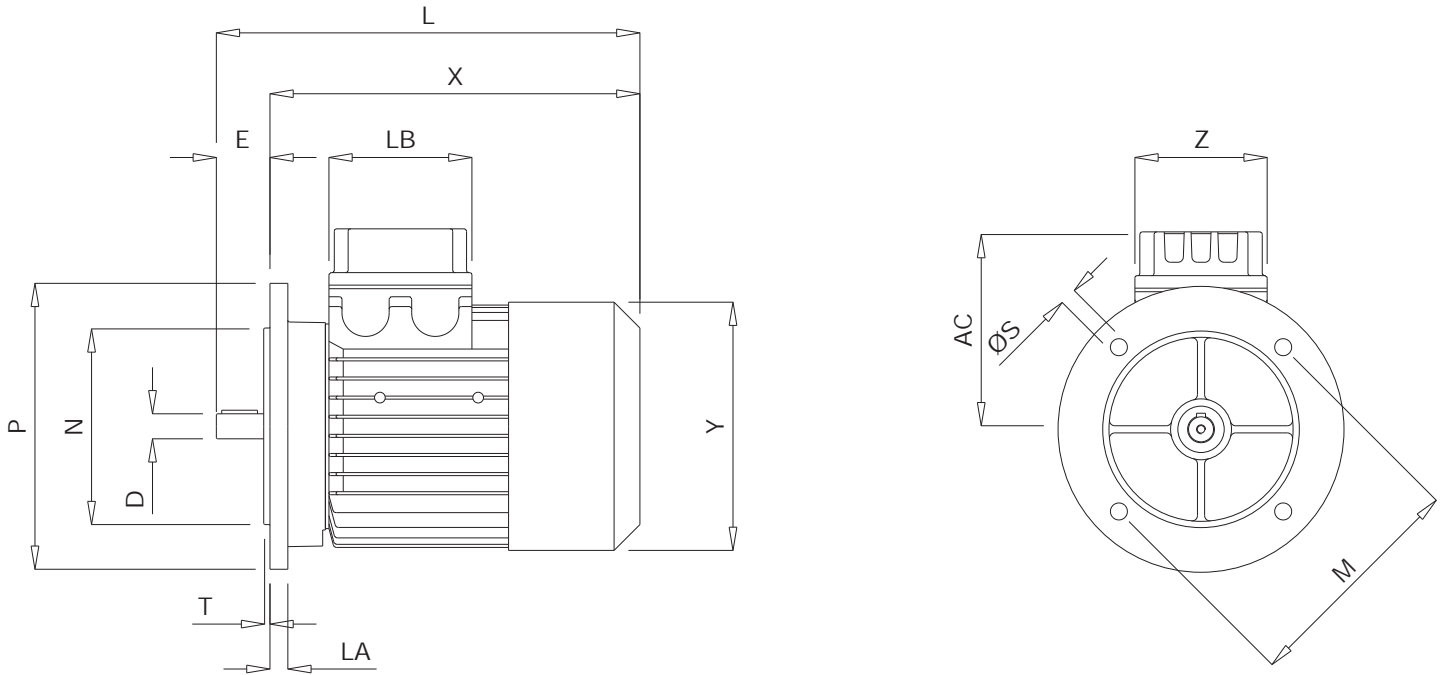


ELECTRIC MOTORS

Electric motors

Overall dimensions

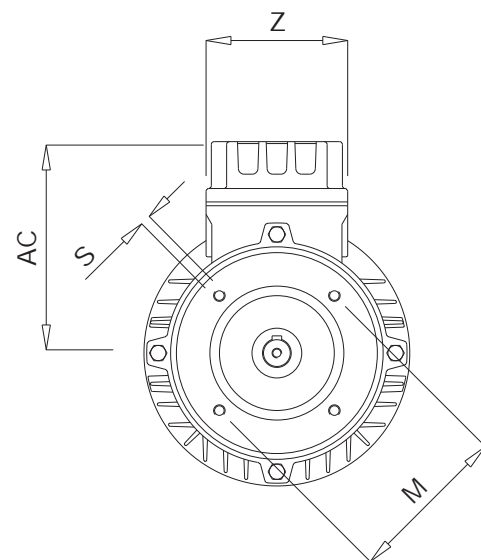
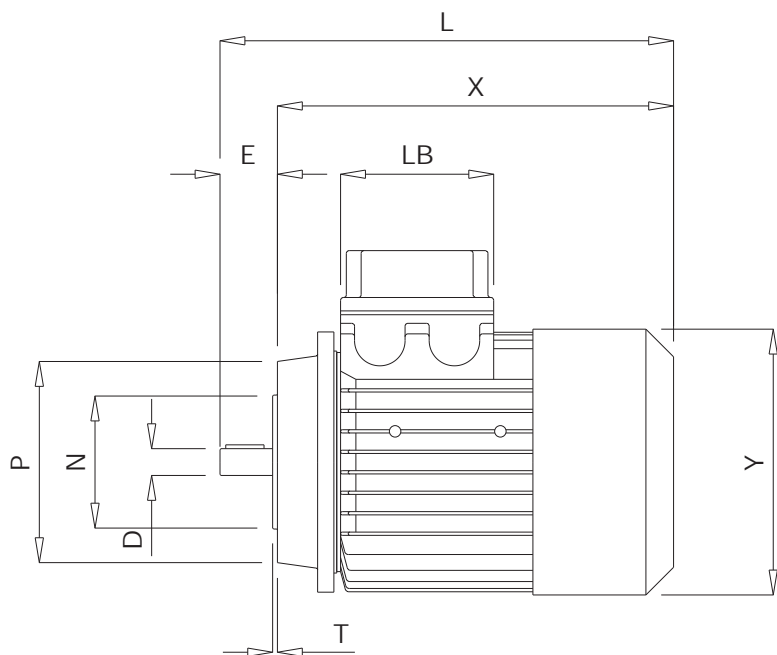
B5



SIZE	N	M	P	D	E	S	L	X	LB	Z	T	LA	AC	Y	Kg
56	80	100	120	9	20	7	193	173	74	74	3	9	91.5	110	3.1
63	95	115	140	11	23	9	212	189	74	74	3	10.5	98	123	4.2
71	110	130	160	14	30	9	246	216	74	74	3.5	10	105	136	6.5
80	130	165	200	19	40	12	275	235	89	89	3.5	11	122	156	9.2
90 S	130	165	200	24	50	12	301	251	89	89	3.5	10.5	127	176	11.4
90 L	130	165	200	24	50	12	326	276	89	89	3.5	10.5	127	176	14.4
100	180	215	250	28	60	14	364	304	89	89	4	15.5	138	194	23.4
112	180	215	250	28	60	14	388	328	89	89	4	15.5	150	218	30.4
132 S	230	265	300	38	80	14	450	370	104	104	4	20	177	257	49.2
132 M	230	265	300	38	80	14	488	408	104	104	4	20	177	257	54.5
160 M	250	300	350	42	110	18	602	492	186	186	5	14	240	310	93.8
160 L	250	300	350	42	110	18	646	536	186	186	5	14	240	310	102
180 M	250	300	350	48	110	18.5	625	538	186	186	5	20	240	360	150
180 L	250	300	350	48	110	18.5	625	613	186	186	5	20	240	360	162
200 L	300	350	400	55	110	18.5	790	613	186	186	5	18	257	354	231

Overall dimensions

B14



SIZE	N	M	P	D	E	S	L	X	LB	Z	T	AC	Y	Kg
56	50	65	80	9	20	M5	193	173	74	74	2	91.5	110	3.1
63	60	75	90	11	23	M5	212	189	74	74	2	98	123	4.2
71	70	85	105	14	30	M6	246	216	74	74	2.5	105	136	6.5
80	80	100	120	19	40	M6	275	235	89	89	3	122	156	9.2
90 S	95	115	140	24	50	M8	301	251	89	89	3	127	176	11.4
90 L	95	115	140	24	50	M8	326	276	89	89	3	127	176	14.4
100	110	130	160	28	60	M8	364	304	89	89	3.5	138	194	23.4
112	110	130	160	28	60	M8	388	328	89	89	3.5	150	218	30.4
132 S	130	165	200	38	80	M10	450	370	104	104	3.5	177	257	49.2
132 M	130	165	200	38	80	M10	488	408	104	104	3.5	177	257	54.5