



M series

6" – 8" – 10"
Submersible Motors



50 Hz

M series Submersible Motors

Sterling Pumps produce a wide and versatile range of high efficiency, quality and reliable submersible electric motors. The motors are rewindable and water filled/lubricated.

Sterling submersible motors feature high quality laminations combined with efficient operational design, silicon carbide mechanical seals, oversized journal bearings and rugged high quality thrust bearings to allow reliable service for a diverse range of pumping duties for water supply, irrigation and agricultural, mining, industrial and municipal applications.

M series range

6"	5.5 kW to 45kW	Standard all 304SS and all 316SS constructions
8"	22 kW up to 110 kW	Standard cast iron/304SS and full 316SS constructions
10"	55 kW up to 185 kW	Standard cast iron/304SS and full 316SS constructions

All M series motors

Water temperature	up to 40°C without derating
Duty	S1 continuous duty
Windings	Class E (PE/PA)
Degree of protection	IP68
Maximum submerged depth	350 metres
Mechanical Seal	Sic/Sic as standard
Shaft/spline/mount	Conform to NEMA standard
Variable frequency/speed	Suitable for use with VFD's
Maintenance	Maintenance free

- Sterling submersible motors are suitable for use in potable drinking water
- All motors feature an earth cable that is terminated to the body from inside and a separate earth cable is provided within the motor lead. (Lead type is 3C+E)
- Temperature sensors, RTD can be provided inside the motor up to quantity of three
- All motors feature flat motor leads

Size	Cooling Flow required, metres per second (m/s)	Maximum no of starts, min run time of 1 minute
6"	0.20 m/s	30 starts per hour
8"	0.30 m/s (22kW to 37kW)	15 starts per hour
	0.45 m/s (45kW up to 110kW)	
10"	0.30 m/s (55kW up to 93kW)	15 starts per hour
	0.50 m/s (110kW up to 185kW)	

Motor options available:

- Construction materials, refer to page 7 for additional materials
- 4 pole motors, refer to page 7
- Longer motor leads, length to suit
- RTD's
- Larger motors up to 20" and up to 600kW



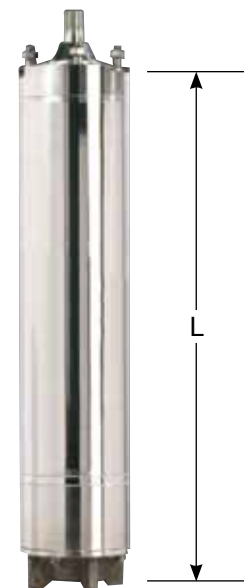
6" Submersible Motor Performance Data 50 Hz

Model	Pn		Thrust Load (N)	Un Volts	RPM	In	Istart/In	η (efficiency) [%]			COS Ø (Power Factor-PF)			Torque Tn (Nm)
	kW	HP						at % Load			at % Load			
								50	75	100	50	75	100	
M6-SPB5.5	5.5	7.5	15,500	380	2865	13.7	3.43	73	76	76	0.68	0.79	0.83	18.31
				400	2885	13.3	3.76	72	76	76	0.62	0.75	0.81	18.20
				415	2890	13.4	4.03	72	75	75	0.60	0.71	0.79	13.10
M6-SPB7.5	7.5	10	15,500	380	2870	18.3	3.17	77	78	78	0.70	0.80	0.83	25.10
				400	2890	17.7	3.56	76	78	77	0.66	0.75	0.81	24.80
				415	2890	17.7	3.62	73	74	79	0.62	0.74	0.81	24.80
M6-SPB9.3	9.3	12.5	15,500	380	2855	22	3.41	79	80	79	0.70	0.80	0.83	31.11
				400	2860	21.3	3.62	79	79	78	0.63	0.75	0.81	31.00
				415	2885	21.1	3.84	77	79	78	0.60	0.72	0.82	30.91
M6-SPB11	11	15	15,500	380	2865	25.8	3.61	77	80	78	0.71	0.8	0.84	36.60
				400	2880	25.2	3.65	77	80	80	0.66	0.75	0.83	36.40
				415	2890	25.1	4.02	75	78	80	0.61	0.73	0.81	36.30
M6-SPB15	15	20	15,500	380	2880	33.9	4.13	80	82	81	0.72	0.82	0.85	49.71
				400	2895	33.1	4.44	80	81	81	0.66	0.78	0.84	49.40
				415	2900	33	4.7	78	80	81	0.61	0.74	0.82	49.20
M6-SPB18.5	18.5	25	15,500	380	2870	42.3	4.04	80	82	81	0.66	0.79	0.84	61.72
				400	2880	42	4.33	77	80	81	0.61	0.73	0.81	61.33
				415	2895	42.5	4.42	76	80	80	0.58	0.71	0.78	61.00
M6-SPB22	22	30	15,500	380	2875	49.1	4.42	82	83	84	0.69	0.78	0.83	72.62
				400	2900	49	4.71	80	82	83	0.61	0.74	0.81	72.48
				415	2910	49.6	4.82	76	81	82	0.57	0.68	0.78	72.20
M6-SPB26	26	35	15,500	380	2890	57.5	4.64	82	84	83	0.69	0.79	0.85	86.10
				400	2905	56.7	4.99	81	82	83	0.60	0.74	0.84	85.50
				415	2910	57.4	5.14	77	83	83	0.56	0.70	0.81	85.20
M6-SPB30	30	40	27,500	380	2895	66.4	4.96	81	84	83	0.68	0.77	0.84	98.82
				400	2910	66.4	5.21	80	82	82	0.61	0.74	0.81	98.41
				415	2910	67.5	5.33	77	81	82	0.56	0.69	0.78	98.22
M6-SPB37	37	50	27,500	380	2890	82	4.95	82	83	83	0.68	0.76	0.83	122.00
				400	2910	81.9	5.27	81	82	83	0.60	0.73	0.81	121.50
				415	2910	83.9	5.35	78	80	82	0.56	0.67	0.77	121.20
M6-SPA45	45	60	27,500	380	2890	93	5.4	81	83	84.5	0.72	0.81	0.87	148.77
				400	2900	92.4	5.3	82	84	85.5	0.67	0.80	0.86	148.26
				415	2900	94.2	5.32	82.2	84.2	85.6	0.64	0.76	0.84	147.00

Performance is typical, not guaranteed at specified voltages

6" Submersible Motor, Dimension & Weights

Model	kW	HP	Length L (mm)	Dia (mm)	Net Weight (kg)	Gross Weight (kg)
M6-SPB5.5	5.5	7.5	747	144	49	54.2
M6-SPB7.5	7.5	10	777		54	57.8
M6-SPB9.3	9.3	12.5	803		59	63
M6-SPB11	11	15	847		63	66.6
M6-SPB15	15	20	937		71	75.2
M6-SPB18.5	18.5	25	992		80	83.5
M6-SPB22	22	30	1067		90	94.3
M6-SPB26	26	35	1127		97	101
M6-SPB30	30	40	1247		100	105
M6-SPB37	37	50	1347		125.5	130.5
M6-SPA45	45	60	1350		135	141



8" Submersible Motor Performance Data 50 Hz

Model	Pn		Thrust Load (N)	Un Volts	RPM	In	Istart/In	η (efficiency) [%]			COS Ø (Power Factor-PF)			Torque Tn (Nm)
	kW	HP						at % Load			at % Load			
								50	75	100	50	75	100	
M8-SPA22	22	30	45,000	380	2890	49	4.5	79	82	83.2	0.69	0.78	0.84	72.73
				400	2900	45.6	4.6	80	83	84	0.66	0.79	0.84	72.49
				415	2900	44.6	4.5	79.6	82.4	83.4	0.66	0.78	0.85	72.49
M8-SPA26	26	35	45,000	380	2890	57	4.5	79.2	82.2	83.4	0.69	0.78	0.85	85.96
				400	2900	53.8	4.6	80.2	83	84	0.68	0.79	0.85	85.66
				415	2900	53	4.55	80	82.6	83.6	0.67	0.80	0.86	85.66
M8-SPA30	30	40	45,000	380	2890	63	4.5	79.8	83.2	84.2	0.71	0.82	0.89	99.19
				400	2900	60	4.6	81	84	85	0.70	0.83	0.89	98.84
				415	2900	58	4.65	80.6	83.8	84.9	0.68	0.82	0.88	98.84
M8-SPA37	37	50	45,000	380	2890	77.8	4.7	80	83	84.1	0.73	0.83	0.88	122.30
				400	2900	74.8	4.8	81.2	84	85	0.71	0.82	0.86	121.90
				415	2900	73.8	4.85	80.6	83.4	84.4	0.69	0.79	0.84	121.90
M8-SPA45	45	60	45,000	380	2890	93	4.7	80.2	83.2	85.2	0.72	0.86	0.88	148.80
				400	2900	90	4.8	81.4	84	85.9	0.71	0.80	0.86	148.30
				415	2900	89	4.9	81.2	83.8	85.8	0.69	0.79	0.84	148.30
M8-SPA55	55	75	45,000	380	2890	114	4.9	80.4	84	85.7	0.73	0.83	0.88	181.84
				400	2910	109.9	5	81.8	85	86.4	0.71	0.81	0.86	180.60
				415	2910	109	5.1	81.4	84.6	86.2	0.68	0.79	0.84	180.60
M8-SPA75	75	100	45,000	380	2890	150.4	4.9	80.8	84.6	86.2	0.73	0.84	0.89	247.96
				400	2910	146.6	5	81.8	85.4	87	0.71	0.82	0.87	246.26
				415	2910	145	5.1	81.6	85.2	86.6	0.69	0.78	0.84	246.26
M8-SPA93	93	125	45,000	380	2900	187	4.9	80.4	84.4	86.5	0.74	0.83	0.88	306.40
				400	2910	181.5	5	86.3	86.3	87.8	0.70	0.80	0.86	305.36
				415	2920	180	5.05	81.6	85.4	87	0.69	0.78	0.84	304.31
M8-SPA110	110	150	45,000	380	2890	231	4.92	79	83.3	85	0.72	0.81	0.85	363.68
				400	2900	224	5.02	79.5	84.1	85.5	0.71	0.79	0.83	362.42
				415	2900	220	5.08	80	84.7	86	0.69	0.77	0.81	362.42

Performance is typical, not guaranteed at specified voltages

8" Submersible Motor, Dimension & Weights

Model	kW	HP	Length L (mm)	Dia (mm)	Net Weight (kg)	Gross Weight (kg)
M8-SPA22	22	30	1076	190	130	150
M8-SPA26	26	35	1076		140	170
M8-SPA30	30	40	1146		140	170
M8-SPA37	37	50	1216		179	219
M8-SPA45	45	60	1266		188	231
M8-SPA55	55	75	1381		210	255
M8-SPA75	75	100	1519		265	315
M8-SPA93	93	125	1659		281	337
M8-SPA110	110	150	1789		310	359



10" Submersible Motor Performance Data 50 Hz

Model	Pn		Thrust Load (N)	Un Volts	RPM	In	Istart/In	η (efficiency) [%]			COS Ø (Power Factor-PF)			Torque Tn (Nm)
	kW	HP						at % Load			at % Load			
								50	75	100	50	75	100	
M10-SPA55	55	75	45,000	380	2890	119	4.55	77	81	82.6	0.67	0.76	0.82	181.84
				400	2900	115	4.6	79.2	82.2	83	0.68	0.78	0.83	181.21
				415	2900	113	4.65	79.2	82	83	0.67	0.78	0.83	181.21
M10-SPA66	66	90	45,000	380	2890	141	4.6	78.5	81.6	83.2	0.67	0.77	0.82	218.20
				400	2900	136.6	4.7	80	83	84	0.68	0.78	0.83	217.45
				415	2900	134	4.75	79.8	82.8	84	0.67	0.78	0.83	217.45
M10-SPA75	75	100	45,000	380	2890	157	4.64	79	82	84	0.68	0.78	0.83	247.96
				400	2900	153	4.7	80	84	85	0.69	0.79	0.84	247.11
				415	2900	151	4.72	80	83	84	0.68	0.79	0.84	247.11
M10-SPA93	93	125	60,000	380	2890	192	4.74	79.5	83.5	85	0.69	0.8	0.85	307.47
				400	2900	188	4.8	80.5	83.8	85	0.69	0.79	0.84	306.41
				415	2900	186	4.83	80.6	84	85	0.68	0.78	0.85	306.41
M10-SPA110	110	150	60,000	380	2900	226	4.8	79.8	85	87	0.68	0.82	0.87	362.42
				400	2910	222	4.8	80.6	85.8	86	0.68	0.79	0.83	361.20
				415	2910	222	4.83	80.8	85	86	0.69	0.79	0.82	361.20
M10-SPA135	135	180	60,000	380	2900	266	4.8	79.8	85	87	0.68	0.82	0.87	444.80
				400	2910	256	4.9	81	87	88	0.69	0.81	0.86	443.27
				415	2910	255	4.95	80.8	85.8	87	0.69	0.80	0.84	443.27
M10-SPA150	150	200	60,000	380	2900	302	4.8	79.8	84.6	86	0.68	0.83	0.88	494.22
				400	2910	294	4.9	81	86	87	0.70	0.80	0.85	492.52
				415	2920	291	4.94	81	84.8	87	0.69	0.80	0.84	490.83
M10-SPA166	166	225	60,000	380	2900	336	4.9	80	84	86	0.69	0.82	0.87	543.64
				400	2910	326	5	81.5	85.5	87	0.70	0.80	0.85	541.77
				415	2910	322	5.05	81.2	85.7	87	0.70	0.80	0.85	541.77
M10-SPA185	185	250	60,000	380	2900	375	4.9	80.2	85.2	87	0.69	0.81	0.86	609.53
				400	2910	365	5	81.8	86.8	88	0.70	0.80	0.85	607.44
				415	2910	361	5.05	81.5	84.5	86	0.70	0.81	0.85	607.44

Performance is typical, not guaranteed at specified voltages

10" Submersible Motor, Dimension & Weights

Model	kW	HP	Length L (mm)	Dia (mm)	Net Weight (kg)	Gross Weight (kg)
M10-SPA55	55	75	1352	240	252	309
M10-SPA66	66	90	1422		270	330
M10-SPA75	75	100	1522		295	361
M10-SPA93	93	125	1572		312	378
M10-SPA110	110	150	1622		327	397
M10-SPA135	135	180	1682		344	419
M10-SPA150	150	200	1722		358	433
M10-SPA165	165	225	1772		373	451
M10-SPA185	185	250	1822		387	472



Cable Selection Guide for submersible motors, 3 wire, 415V, 2 pole, 3 phase, 50 Hz

Rated Output		CABLE SELECTION (mm ²)															CABLE SELECTION (mm ²) 2 Lines in Parallel						
kW	HP	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	2x50	2x70	2x95	2x120	2x150	2x185	
3	4	127	211	338																			
4	5.5	98	163	262	390																		
5.5	7.5	75	124	200	297																		
7.5	10	56	93	149	222	379																	
9.3	12.5	46*	77	123	184	314	488																
11	15	39*	65	104	155	264	410																
13	17.5		55*	89	132	225	350																
15	20		49*	78	117	199	310	471															
18.5	25			65*	97	166	258	391															
22	30			55*	82	140	217	330	455														
26	35				68*	116	180	274	377														
30	40					101	157	239	330	469													
37	50					82*	128	195	268	382													
45	60						106*	161	222	315	433												
52	70						95*	145	199	283	833	491											
59	80							125	172	245	335	424											
67	90							112*	154	219	300	380	467										
75	100								137	195	267	337	415	492									
93	125								116*	164	226	286	352	419	480								
110	150									138*	190	242	299	358	412								
135	180										156*	199	246	294	338	420							
150	200											140*	179	222	266	306	381						
170	230												158*	195	234	269	334						
185	250												148*	184	221	254	318						
220	300												154*	184*	211	262							
260	350													157*	180*	224							

Rated Output		CABLE SELECTION (mm ²) 2 Lines in Parallel					
kW	HP	2x50	2x70	2x95	2x120	2x150	2x185
59	80	489					
67	90	438					
75	100	390					
93	125	329	451				
110	150	276	380	484			
135	180	226	312	397	491		
150	200	203	281	358	443		
170	230	180*	248	316	391	468	
185	250	168*	232	296	367	441	
220	300		195*	248	307	368	423
260	350			211*	282	313	360

* Valid for cables with EPR insulation only

Lengths are shown in metres from motor to control panel and are maximum lengths

Rated Output		Generator Power DOL starting		Generator Power Star-Delta starting	
kW	HP	kW	KVA	kW	KVA
4	5.5	10	12.5	8	10
5.5	7.5	12.5	15.6	10.8	13.5
7.5	10	15	18.8	14	17.5
9.3	12.5	18.5	23.5	17.2	21.5
11	15	22.5	28	20.5	25.5
15	20	30	38	27	34
18.5	25	40	50	33	42
22	30	45	57	40	50
26	35	52	65	45	57
30	40	60	75	52	65
37	50	75	94	65	81
45	60	90	112	77	97
55	75	120	150	102	128
66	90	135	170	115	144
75	100	150	190	128	160
93	125	185	230	158	198
110	150	210	260	190	237
135	180	260	323	228	284
150	200	280	360	254	316
165	225	325	404	285	354
185	250	365	454	320	398

Chart provides guidelines only
 Confirm with generator supplier for sizing and selection
 Use motor amps for correct sizing
 Caution with frequency and motor speed relating to pump affinity laws



M series submersible motors – Options available

As a well established quality pump and motor manufacturer, Sterling Pumps possesses a diverse range of capabilities and resources to offer materials, variances and options to best suit your pumping and fluid duties and applications.

If not listed below, please contact our technical sales staff.

904 – Duplex Stainless Steel
6" to 20"
Duplex 22054, PREN value 34

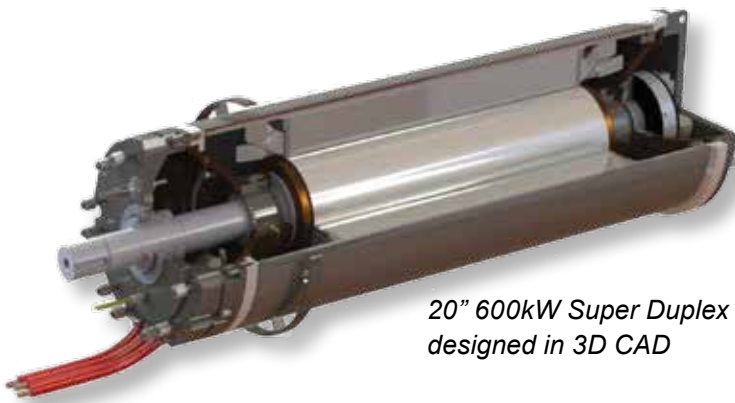
Super Duplex Stainless Steel
6" to 20"
Super Duplex 2507 (S32750) PREN value 45

Zeron 100
6" to 20"
S32760, PREN value > 40

Nickel Aluminium Bronze
6" to 20"

Copper Nickel – CuNi 90/10
6" to 20"

Inconel 625
6" to 20"



*20" 600kW Super Duplex motor
designed in 3D CAD*

4 pole motors
8" – 10" – 12" and 14"

High Voltage
690V, 1,000V, 2,300V, 3,300V

Larger kW motors
12" up to 20" and up to 600kW

High temperature Windings
For water temp up to 105°C and high voltage motors

60 Hertz motors
All kW sizes



*1 of 4 x 14" 330kW Super
Duplex SS motor and pump*



Sterling Pumps Pty Ltd
14 Sharnet Circuit, Pakenham, VIC, 3810
P: 03 5941 3400 F: 03 5940 2645
sales@sterlingpumps.com.au

www.sterlingpumps.com.au

