SHAKTI

PUMPING LIFE

4, 6, 8 & 10 INCH SUBMERSIBLE MOTORS MANUAL

60Hz BOOKLET

SHAKTI

THE POWER OF INNOVATION, EFFICIENCY & TECHNOLOGY.

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Considering continuous product development the information/performance/specifications and illustrations disseminated in this catalogue are subject to change without notice.

PRODUCT APPLICATION AND PRODUCT SPECIFICATION

GENERAL DATA

These 4 Inch Encapsulated motors, manufactured in ISO 9001:2015 certified facilities

Applications

This motor is built for dependable operation in 4" diameter or larger water wells. It is fitted with water lubricated radial and thrust bearings for a maintenance – free operations. The motor is filled with a special fluid, Providing frost protection down to 5°F storage temperature . A special diaphragm ensures pressure compensation inside the motor..

Product advantages:

- Hermetically sealed stator , Anti track, self healing stator resin prevents motor burn out.
- High efficiency electrical design (low operation cost, cooler winding temperature).
- Removable water resistance lead connector.
- Motor with sand slinger.
- Cable material in accordance with regulations for drinking water.
- Water lubricated radial and thrust bearing.
- All motors pre-filled and 100% tested.
- Non contaminating, water-filled design.
- Max. storage temperature 5°F to 140°F.

Technical Specification

• Power range	:	0.5-5 HP – Single phase 0.5-10 HP – Three phase
• Mounting	:	4" NEMA
• Degree of protection	:	IP68
• Insulation Class	:	F
• Ambient temperature	:	86°F
• Cooling flow	:	0.25 ft/sec
• Starts/hr	:	20
• Voltage tolerance	:	+6% / -10% U_N

4 INCH ENCAPSULATED PREMIUM MOTOR

MOTOR PERFORMANCE DATA

SUBMERSIBLE MOTORS			
Material	Stainless Steel 304/316	Rating	0.5 HP - 5.0 HP
Type	Encapsulated	Thrust Rating	1500 - 6500 N

SINGLE PHASE MOTOR SPECIFICATION (60Hz) 3450 RPM

Type	Material Code	Rating				Full Load		Maximum Load		Winding Resistance (Ohms)	Efficiency %		Power Factor %		Locked Rotor Amps	Thrust
		HP	kW	Volts	S.F.	Amps	Watts	Amps	Watts	M=MAIN RES S=START RES	S.F.	F.L.	S.F.	F.L.		
4" 2-wire	5000000598	0.5	0.37	115	1.6	10	670	12	960	1.15-1.39	62	56	73	58	64.4	337
	5000000478	0.5	0.37	230	1.6	5.0	670	6.0	960	5.42-6.62	62	56	73	58	32.2	337
	5000000479	0.75	0.55	230	1.5	6.8	940	8.0	1310	3.83-4.68	64	59	74	62	40.7	337
	5000000480	1	0.75	230	1.4	8.2	1210	10.4	1600	2.59-3.16	65	62	74	63	48.7	337
	5000000481	1.5	1.1	230	1.3	10.6	1710	13.1	2280	1.80-2.20	64	63	83	76	66.2	337
4 " 3-wire	5000000471	0.5	0.37	230	1.6	Y=3.2 B=3.7 R=2.0	655	Y=4.3 B=4.0 R=2.0	890	M=5.89-7.21 S=11.88-14.52	67	57	90	81	23	337
	5000000472	0.75	0.55	230	1.5	Y=4.4 B=5.0 R=3.2	925	Y=5.7 B=5.2 R=3.1	1220	M=4.46-5.46 S=9.44-11.54	69	60	92	84	34.2	337
	5000000473	1	0.75	230	1.4	Y=5.6 B=5.7 R=3.4	1160	Y=8.1 B=6.2 R=3.3	1490	M=2.79-3.41 S=9.90-12.10	70	64	92	86	41.8	337
	5000000474	1.5	1.1	230	1.3	Y=10 B=9.9 R=1.3	1620	Y=11.5 B=11.0 R=1.3	2080	M=1.93-2.37 S=7.18-8.78	70	69	85	79	51.4	337
	5000000475	2	1.5	230	1.25	Y=10 B=9.3 R=2.6	2025	Y=13.2 B=11.9 R=2.6	2555	M=1.84-2.24 S=4.46-5.46	73	74	95	94	53.1	674
	5000000476	3	2.2	230	1.15	Y=14.0 B=11.2 R=6.1	3000	Y=17.0 B=12.6 R=6.0	3400	M=1.37-1.68 S=2.70-3.30	75	75	99	99	83.4	674
	5000000477	5	3.7	230	1.15	Y=23.0 B=15.9 R=11	4830	Y=27.5 B=19.1 R=10.8	5500	M=0.81-0.99 S=1.41-1.73	78	77	100	100	129	1461

1. M: Main winding = yellow to black; S: Start winding = yellow to red
2. Y: Yellow lead = line amps; B: Black lead = main winding amps; R: Red lead = start or auxiliary winding amps

4 INCH ENCAPSULATED PREMIUM MOTOR

MOTOR PERFORMANCE DATA

SUBMERSIBLE MOTORS			
Material	Stainless Steel 304/316	Rating	0.5 HP - 10 HP
Type	Encapsulated	Thrust Rating	1500 - 6500 N

THREE PHASE MOTOR SPECIFICATION (60 Hz) 3450 RPM

Material Code	Rating				Full Load		Maximum Load		Winding Resistance (Ohms)	Efficiency %		Locked Rotor Amps	Thrust
	HP	kW	Volts	S.F.	Amps	Watts	Amps	Watts		SF	FL		
5000000491	0.5	0.37	230	1.6	2.4	585	2.9	860	12.66-10.35	70	64	15.2	337
5000000482			460	1.6	1.2	585	1.5	860	50.74-41.51			7.6	
5000000492	0.75	0.55	230	1.5	3.1	810	3.8	1150	8.85-7.24	73	69	21.4	337
5000000483			460	1.5	1.6	810	1.9	1150	35.31-28.89			10.7	
5000000493	1	0.75	230	1.4	3.9	1070	4.7	1440	5.10-4.17	72	70	26.9	337
5000000484			460	1.4	2.0	1070	2.4	1440	24.42-19.98			13.5	
5000000494	1.5	1.1	230	1.3	5.0	1460	5.9	1890	3.63-2.97	76	76	33.2	337
5000000485			460	1.3	2.5	1460	3.1	1890	16.21-13.26			16.6	
5000000495	2	1.5	230	1.25	6.7	1960	8.1	2430	2.60-2.13	76	76	45	337
5000000486			460	1.25	3.4	1960	4.1	2430	10.20-8.35			22.5	
5000000496	3	2.2	230	1.15	9.5	2920	10.9	3360	2.03-1.66	77	77	60.3	1461
5000000487			460	1.15	4.8	2920	5.5	3360	7.85-6.42			31	
5000000497	5	3.7	230	1.15	15.9	4800	17.8	5500	1.25-1.02	78	78	102	1461
5000000488			460	1.15	8.0	4800	8.9	5500	4.41-3.60			53.7	
5000000498	7.5	5.5	230	1.15	23	7150	26.4	8200	0.84-0.69	78	78	152	1461
5000000489			460	1.15	11.5	7150	13.2	8200	3.01-2.46			83.8	
5000000499	10	7.5	230	1.15	31.2	10000	33.9	11400	0.58-0.47	75	75	195	1461
5000000490			460	1.15	15.9	10000	17.30	11400	2.23-1.82			116	

MOTOR LENGTH & WEIGHT

SUBMERSIBLE MOTORS			
Material	Stainless Steel 304/316	Rating	0.5 HP - 5.0 HP
Type	Encapsulated	Thrust Rating	1500 - 6500 N

LENGTH & WEIGHT (3 WIRE) AISI SS 304/316

PREMIUM 100 SINGLE PHASE 230V 60Hz

HP	kW	LENGTH (Inches)	SHIPPING WEIGHT		MOTOR CARTON SIZE (in Inches)
			LBS	KG	
0.5	0.37	9.6	22	10	3.62x3.62x19.68
0.75	0.55	11.57	26	12	3.62x3.62x19.68
1	0.75	11.57	26	12	3.62x3.62x19.68
1.5	1.1	13.46	33	15	3.62x3.62x21.65
2	1.5	15.98	37	17	3.62x3.62x21.65
3	2.2	21.45	53	24	3.62x3.62x31.49
4	3	27.44	68	31	3.62x3.62x31.496
5	3.7	27.44	68	31	3.62x3.62x35.43

PREMIUM 100 THREE PHASE 230V 60Hz

HP	kW	LENGTH (Inches)	SHIPPING WEIGHT		MOTOR CARTON SIZE (in Inches)
			LBS	KG	
0.5	0.37	10.75	24	11	3.62x3.62x19.68
0.75	0.55	10.75	24	11	3.62x3.62x19.68
1	0.75	11.57	26	12	3.62x3.62x19.68
1.5	1.1	13.46	33	15	3.62x3.62x21.65
2	1.5	15.98	37	17	3.62x3.62x21.65
3	2.2	21.45	53	24	3.62x3.62x31.49
5	3.7	22.95	57	26	3.62x3.62x35.43
7.5	5.5	30.47	77	35	3.62x3.62x43.30

PREMIUM 100 THREE PHASE 460V 60Hz

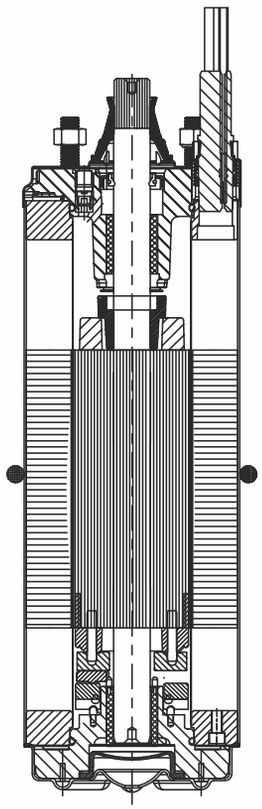
HP	kW	LENGTH (Inches)	SHIPPING WEIGHT		MOTOR CARTON SIZE (in Inches)
			LBS	KG	
0.5	0.37	10.75	24	11	3.62x3.62x19.68
0.75	0.55	10.75	24	11	3.62x3.62x19.68
1	0.75	11.57	26	12	3.62x3.62x19.68
1.5	1.1	13.46	33	15	3.62x3.62x21.65
2	1.5	15.98	37	17	3.62x3.62x21.65
3	2.2	21.45	53	24	3.62x3.62x31.49
5	3.7	22.95	68	31	3.62x3.62x35.43
7.5	5.5	30.472	77	35	3.62x3.62x43.30
10	7.5	32.75	84	38	3.62x3.62x43.30

MATERIAL OF CONSTRUCTION

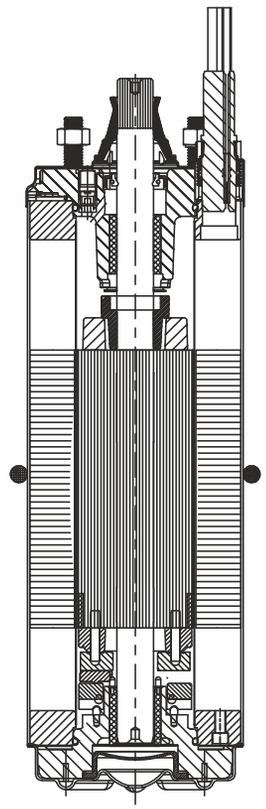
SUBMERSIBLE MOTORS			
Material	Stainless Steel 304/316	Rating	0.5 HP - 10 HP
Type	Encapsulated	Thrust Rating	1500 - 6500 N

PREMIUM (0.5 TO 2 HP)

SS AISI 304



SS AISI 316



PART	MATERIAL
SAND SLINGER	NBR
SEAL COVER	PPS
OIL SEAL	EPDM+ SS AISI 304
TOP END BELL COVER	SS AISI-304
TOP END BELL	CAST IRON - POWDER COATED
BUSH	CARBON WITH RESIGN IMPREGATED
ROTOR SHAFT	SS (STAINLESS STEEL SPECIAL GRADE)
ROTOR SUB ASSLY	N/A
TOP FLANGE	MS
STATOR PIPE	SS AISI-304
STATOR SUB ASSL Y	N/A
THRUST DISC	ANTIMONY CARBON
THRUST PAD	SS AISI-420
LEVELING DISC	MS+ HARD CHROM
BOTTOM END BELL	CAST IRON - POWDER COATED
DIAPHRAGM	EPDM
BOTTOM FLANGE	MS
BOTTOM END BELL COVER	SS AISI-304

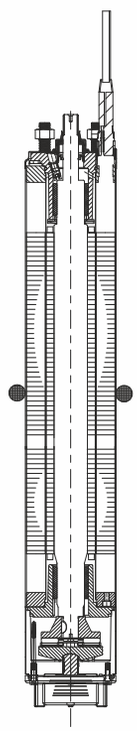
PART	MATERIAL
SAND SLINGER	NBR
SEAL COVER	PPS
OIL SEAL	EPDM+ SS AISI 304
TOP END BELL COVER	SS AISI-316
TOP END BELL	CAST IRON - POWDER COATED
BUSH	CARBON WITH RESIGN IMPREGATED
ROTOR SHAFT	SS (STAINLESS STEEL SPECIAL GRADE)
ROTOR SUB ASSLY	N/A
TOP FLANGE	MS
STATOR PIPE	SS AISI-316
STATOR SUB ASSL Y	N/A
THRUST DISC	ANTIMONY CARBON
THRUST PAD	SS AISI-420
LEVELING DISC	MS+ HARD CHROM
BOTTOM END BELL	CAST IRON - POWDER COATED
DIAPHRAGM	EPDM
BOTTOM FLANGE	MS
BOTTOM END BELL COVER	SS AISI-316

MATERIAL OF CONSTRUCTION

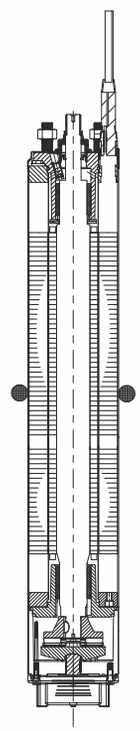
SUBMERSIBLE MOTORS			
Material	Stainless Steel 304/316	Rating	0.5 HP - 10 HP
Type	Encapsulated	Thrust Rating	1500 - 6500 N

PREMIUM (3 TO 10 HP)

SS AISI 304



SS AISI 316



PART	MATERIAL
SAND SLINGER	NBR
SEAL COVER	PPS
OIL SEAL	EPDM+ SS AISI 304
TOP END BELL COVER	SS AISI-304
TOP END BELL	CAST IRON - POWDER COATED
BUSH	CARBON WITH RESIGN IMPREGATED
ROTOR SHAFT	SS (STAINLESS STEEL SPECIAL GRADE)
ROTOR SUB ASSLY	N/A
TOP FLANGE	MS
STATOR PIPE	SS AISI-304
STATOR SUB ASSL Y	N/A
THRUST HOUSING	CAST IRON - POWDER COATED
THRUST PIPE	SS AISI-304
THRUST DISC	CAST IRON - POWDER COATED
CARBON PLATE	REGIN IMPREGNATED
LEVELING DISC	SS AISI 410L
ADJUSTING STUD	DUPLEX
BOTTOM END BELL	CAST IRON - POWDER COATED
DIAPHRAGM	EPDM
BOTTOM FLANGE	MS
BASE	SS AISI-304

PART	MATERIAL
SAND SLINGER	NBR
SEAL COVER	PPS
OIL SEAL	EPDM+ SS AISI 304
TOP END BELL COVER	SS AISI-316
TOP END BELL	CAST IRON - POWDER COATED
BUSH	CARBON WITH RESIGN IMPREGATED
ROTOR SHAFT	SS (STAINLESS STEEL SPECIAL GRADE)
ROTOR SUB ASSLY	N/A
TOP FLANGE	MS
STATOR PIPE	SS AISI-316
STATOR SUB ASSL Y	N/A
THRUST HOUSING	CAST IRON - POWDER COATED
THRUST HOUSING	SS AISI-304
THRUST DISC	CAST IRON - POWDER COATED
CARBON PLATE	REGIN IMPREGNATED
LEVELING DISC	SS AISI 410L
ADJUSTING STUD	DUPLEX
BOTTOM END BELL	CAST IRON - POWDER COATED
DIAPHRAGM	EPDM
BOTTOM FLANGE	MS
BASE	SS AISI-316

PRODUCT APPLICATION AND PRODUCT SPECIFICATION

GENERAL DATA

These 100 mm Rewindable motors, manufactured in ISO 9001:2015 & ISO 14001:2015 certified facilities

Applications

This motor is built for dependable operation in 4 Inch diameter or larger water wells. It is fitted with water lubricated radial and thrust bearings for a maintenance free operations. The motor is filled with a special fluid, Providing frost protection down to -15ºC storage temperature . A special diaphragm ensures pressure compensation inside the motor.

Product advantages

- High efficiency electrical design (low operation cost).
- Motor with sand slinger.
- Cable material in accordance with regulations for drinking water.
- Water lubricated radial and thrust bearing.
- All motors pre-filled and 100% tested.
- Non contaminating, water-filled design.
- Max. storage temperature -15ºC to +60ºC.

Technical specification

Power range	: 0.5 HP - 3 HP / 0.37 kW - 3.7 kW - Single phase
	: 0.5 HP - 7.5 HP / 0.37 kW - 5.5 kW - Three phase
Flange	: 100 mm NEMA
Degree of protection	: IP68
Ambient temperature	: 30ºC
Cooling flow	: 0.5 HP - 7.5 HP / 0.37 kW - 5.5 kW = 0.08 m/s
Starts/hr	: 20 Max
Voltage tolerance	: +6% / -10% UN

MOTOR PERFORMANCE DATA

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	0.5HP - 5HP
Type	Rewindable	Thrust Rating	1500 - 6500 N

SINGLE PHASE 4 INCH MCIP MOTOR SPECIFICATION (60Hz)

Material Code	Rating			Full Load		RPM	Winding Resistance (Ohms)	Efficiency	Power Factor %	Locked Rotor Amps	Thrust
	HP	kW	Volts	Amps	Watts		M=MAIN RES S=START RES	F.L.			
5000000500	0.5	0.37	230	Y=4 B=4.2 R=2.7	765	3548	M=4.95-6.05 S=15.51-18.95	43	83	18	337
5000000501	0.75	0.55		Y=4.8 B=4.6 R=2.6	1000	3515	M=4.95-6.05 S=15.51-18.95	55	91	19	337
5000000502	1	0.75		Y=5.5 B=5 R=2.6	1127	3500	M=4.95-6.05 S=15.51-18.95	66.5	90	20	337
5000000503	1.5	1.1		Y=9.1 B=8.8 R=2.1	1641	3484	M=2.61-3.19 S=16.9-20.68	67	79	28	1461
5000000504	2	1.5		Y=12.8 B=13.8 R=2.7	2219	3480	M=1.61-1.96 S=5.88-7.19	67.6	76	38	1461
5000000505	3	2.2		Y=15.5 B=11.9 R=6	3303	3436	M=1.8-2.2 S=6.15-7.51	66.6	93	47	1461
5000000644	5	3.7		Y=25.7 B=23.7 R=10.7	5263	3478	M=2.36-2.89 S=1.59-1.95	70.3	91	84	1461

1. M: Main winding = yellow to black; S: Start winding = yellow to red
2. Y: Yellow lead = line amps; B: Black lead = main winding amps; R: Red lead = start or auxiliary winding amps

MOTOR PERFORMANCE DATA

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	0.5HP - 7.5HP
Type	Rewindable	Thrust Rating	1500 - 6500 N

THREE PHASE 4" MCIP MOTOR SPECIFICATION (60 HZ)

Material Code	Rating			Full load		RPM	Line to Line resistance Ohms	Efficiency %	Power Factor %	Locked rotor amps	Thrust
	HP	kW	Volts	Amps	Watts			F.L			
5000000506	1	0.75	460	1.9	1136	3472	30.96-37.84	66	75	10	1461
5000000507	1.5	1.1	460	2.6	1594	3476	18.27-22.33	69	78	13	1461
5000000508	2	1.5	460	3.5	2143	3435	18.45-22.55	70	80	18	1461
5000000509	3	2.2	460	5.6	3143	3475	10.53-12.87	70	77	29	1461
5000000510	5	3.7	460	8.5	4868	3440	6.10-7.45	76	78	44	1461
5000000511	7.5	5.5	460	12.3	7237	3472	4.37-5.35	76	75	63	1461

MOTOR PERFORMANCE DATA

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	0.5HP - 7.5HP
Type	Rewindable	Thrust Rating	1500 - 6500 N

MCIP 100 LOW THRUST

Pn (HP)	Pn (kW)	Phase	Length (Inches)	L (mm) appx.	Motor Packing Size	Shipping Weight (kg)	
						LBS	KG
0.5	0.37	1Φ	12.28	312	500x94x94	27	12
		3Φ	12.28	312	500x94x94	25	11
0.75	0.55	1Φ	13.11	333	600x94x94	27	12
		3Φ	13.11	333	600x94x94	25	11
1	0.75	1Φ	15.00	381	600x94x94	31	14
		3Φ	15.00	381	600x94x94	31	14

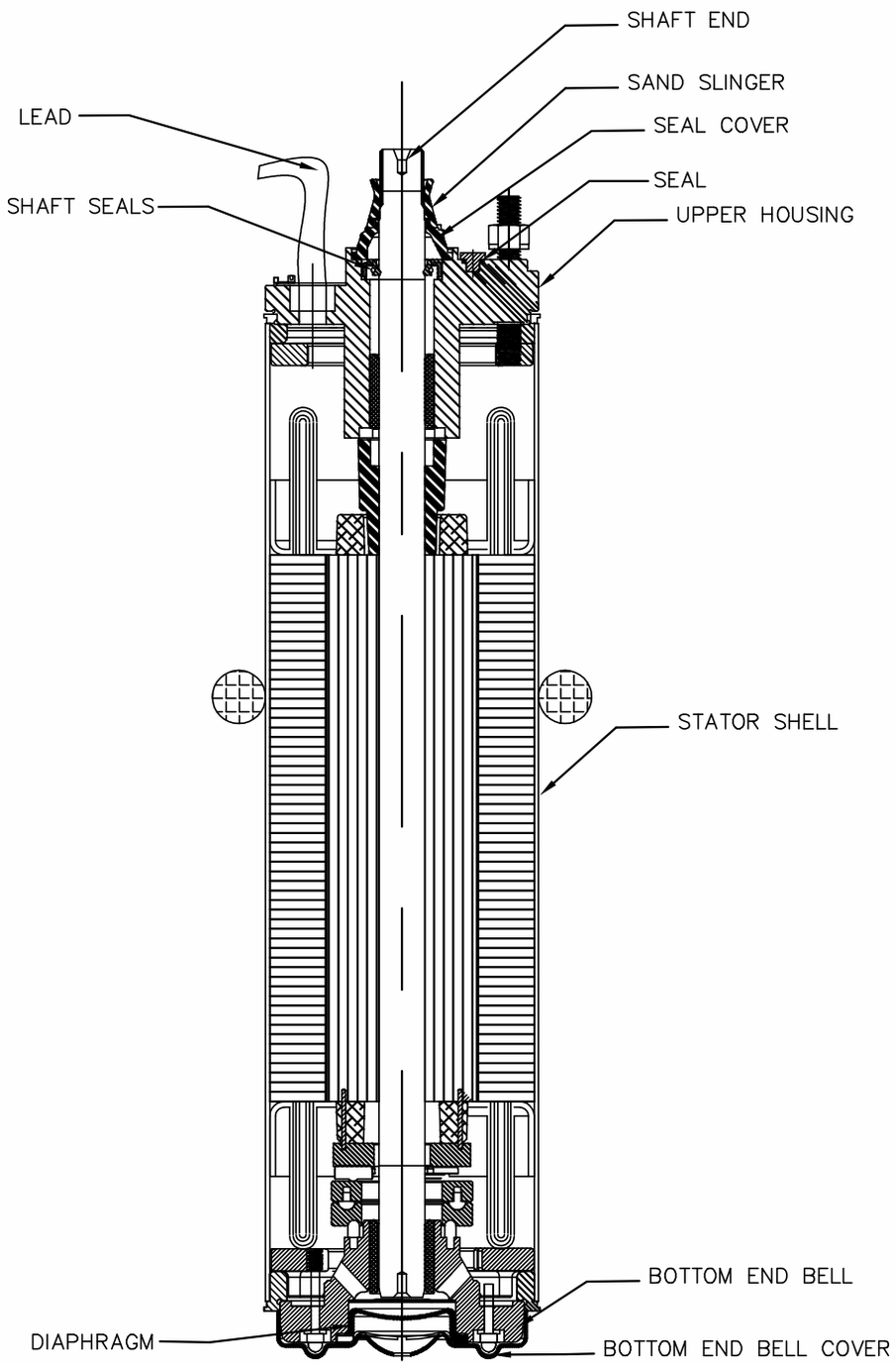
MCIP 101 HIGH THRUST

Pn [HP]	Pn [kW]	Phase	Length (Inches)	L (mm) appx.	Motor Packing Size	Shipping Weight	
						LBS	KG
0.50	0.37	1Φ	15.79	401	600x94x94	31	14
		3Φ	15.79	401	600x94x94	29	13
0.75	0.55	1Φ	16.61	422	600x94x94	31	14
		3Φ	16.61	422	600x94x94	31	14
1.0	0.75	1Φ	18.50	470	600x94x94	36	16
		3Φ	18.50	470	600x94x94	36	16
1.5	1.1	1Φ	20.28	515	800x94x94	41	19
		3Φ	20.28	515	800x94x94	41	19
2.0	1.5	1Φ	21.46	545	800x94x94	44	20
		3Φ	21.46	545	800x94x94	44	20
3.0	2.2	1Φ	35.16	893	1000x94x94	70	32
		3Φ	24.69	627	900x94x94	54	24
4.0	3.0	3Φ	26.18	665	1000x94x94	53	24
5.5	4.0	3Φ	30.67	779	1000x94x94	71	32
7.5	5.5	3Φ	33.70	856	1100x94x94	79	36

MOTOR SECTIONAL VIEW

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	0.5HP - 7.5HP
Type	Rewindable	Thrust Rating	1500 - 6500 N

MCIP 100



MOTOR MOC

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	0.5HP - 7.5HP
Type	Rewindable	Thrust Rating	1500 - 6500 N

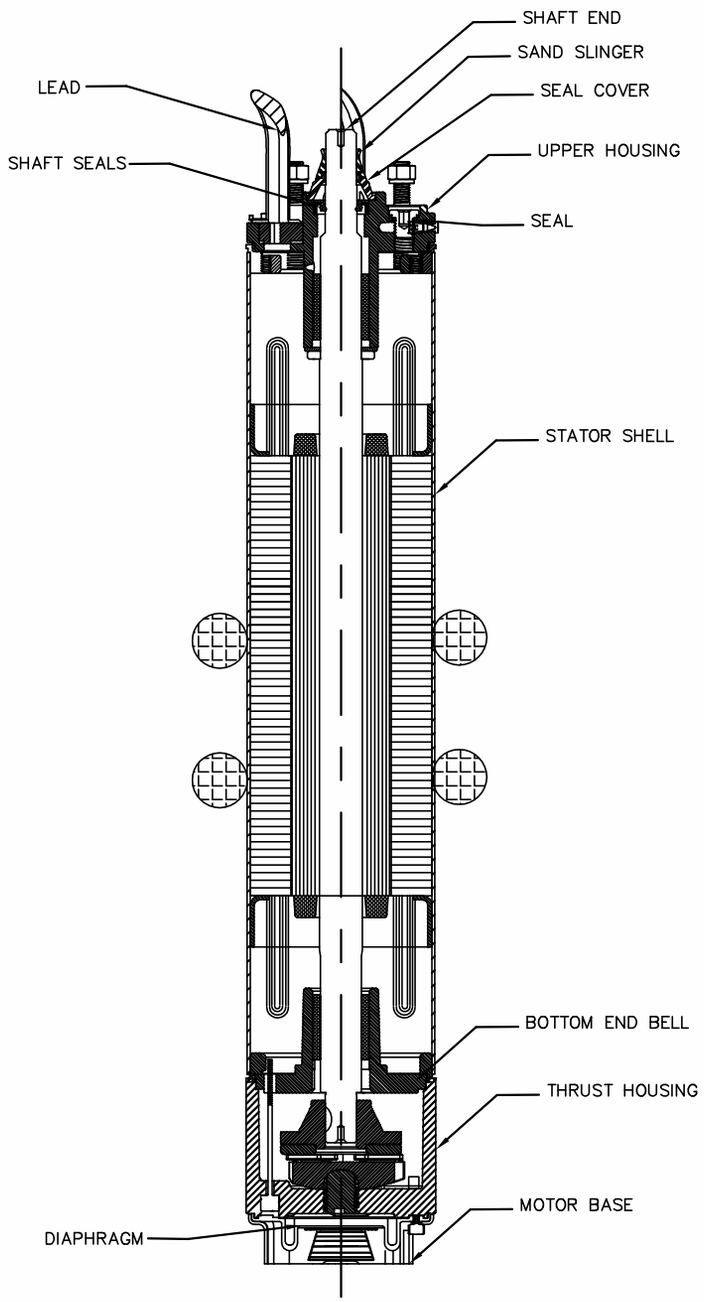
MCIP 100

PART	MATERIAL	
	AISI SS 304	AISI SS 316
SAND SLINGER	NBR	NBR
SEAL COVER	PPS	PPS
UPPER HOUSING	AISI SS 304	AISI SS 316
STATOR SHELL	AISI SS 304	AISI SS 316
SEALS	NBR	NBR
SHAFT END	DUPLEX	DUPLEX
SHAFT SEAL	EPDM + AISI SS 304	EPDM + AISI SS 304
BOTTOM END BELL	CAST IRON POWDER COATED	CAST IRON POWDER COATED
BOTTOM END BELL COVER	AISI SS 304	AISI SS 316
DIAPHRAGM	EPDM	EPDM
LEAD	EPR	EPR

MOTOR SECTIONAL VIEW

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	0.5HP - 7.5HP
Type	Rewindable	Thrust Rating	1500 - 6500 N

MCIP 101



MOTOR MOC

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	0.5HP - 7.5HP
Type	Rewindable	Thrust Rating	1500 - 6500 N

MCIP 101

PART	MATERIAL	
	AISI SS 304	AISI SS 316
SAND SLINGER	NBR	NBR
SEAL COVER	PPS	PPS
UPPER HOUSING	AISI SS 304	AISI SS 316
STATOR SHELL	AISI SS 304	AISI SS 316
SEALS	NBR	NBR
SHAFT END	DUPLEX	DUPLEX
SHAFT SEAL	EPDM + AISI SS 304	EPDM + AISI SS 304
BOTTOM END BELL	CAST IRON POWDER COATED	CAST IRON POWDER COATED
THRUST HOUSING	AISI SS 304	AISI SS 316
MOTOR BASE	AISI SS 304	AISI SS 316
DIAPHRAGM	EPDM	EPDM
LEAD	EPR	EPR

6 INCH MTSML MOTOR

PRODUCT APPLICATION AND PRODUCT SPECIFICATION

GENERAL DATA

These 150 mm rewindable motors, manufactured in iso 9001 : 2015 & ISO 14001 : 2015 certified facilities.

Applications

This motor is built for dependable operation in 150 mm diameter or larger water wells. It is fitted with water lubricated radial and thrust bearings for a maintenance – free operations. The motor is filled with a special fluid, Providing frost protection down to -15ºC storage temperature . A special diaphragm ensures pressure compensation inside the motor.

Product advantages

- High efficiency electrical design (low operation cost, cooler winding temperature).
- Motor with oil seal and sand slinger.
- Cable material in accordance with regulations for drinking water.
- Water lubricated radial and thrust bearing.
- All motors pre-filled and 100% tested.
- Non contaminating, water-filled design.
- Max. storage temperature -15ºC to +60ºC.

Technical specification

Power range	: 5 - 15 HP / 3.7 - 11 kW
Flange	: 150 mm NEMA
Degree of protection	: IP68
Ambient temperature	: 30ºC
Cooling flow	: 5 - 15 HP / 3.7 - 11 kW = 0.2 m/s
Starts/hr	: 20
Voltage tolerance	: +6% / -10% U_N

Considering continuous product development the information/performance/specifications and illustrations disseminated in this catalogue are subject to change without notice.

MOTOR PERFORMANCE DATA

SUBMERSIBLE MOTORS			
Material	CI, Stainless Steel 304/316	Rating	5 HP - 15 HP
Type	Rewindable NG SML	Thrust Rating	15500 - 27500 N

Material Code	Rating				Full Load		Maximum Load		Winding Resistance (Ohms)	Efficiency %		Power Factor %		Locked Rotor Amps	Thrust
	HP	kW	Volts	S.F.	Amps	Watts	Amps	Watts	M=MAIN RES S=START RES	S.F.	F.L.	S.F.	F.L.		
5000000512	5	3.7	230	1.15	Y=23 B=14.3 R=10.8	4910	Y=27.5 B=17.4 R=10.5	5570	M=0.64-0.77 S=1.29-1.56	77	76	100	99	99	3484
5000000513	7.5	5.5		1.15	Y=36.5 B=34.4 R=5.5	7300	Y=42.1 B=40.5 R=5.4	8800	M=0.47-0.57 S=1.05-1.28	73	74	91	90	165	3484
5000000514	10	7.5		1.15	Y=44 B=39.5 R=9.3	9800	Y=51 B=47.5 R=8.9	11300	M=0.45-0.55 S=1.06-1.28	76	77	96	96	204	3484
5000000515	15	11		1.15	Y=62.0 B=52.0 R=17.5	13900	Y=75.0 B=62.5 R=16.9	16200	M=0.23-0.27 S=0.60-0.73	79	80	97	98	303	3484

1. M: Main winding = yellow to black; S: Start winding = yellow to red
2. Y: Yellow lead = line amps; B: Black lead = main winding amps; R: Red lead = start or auxiliary winding amps

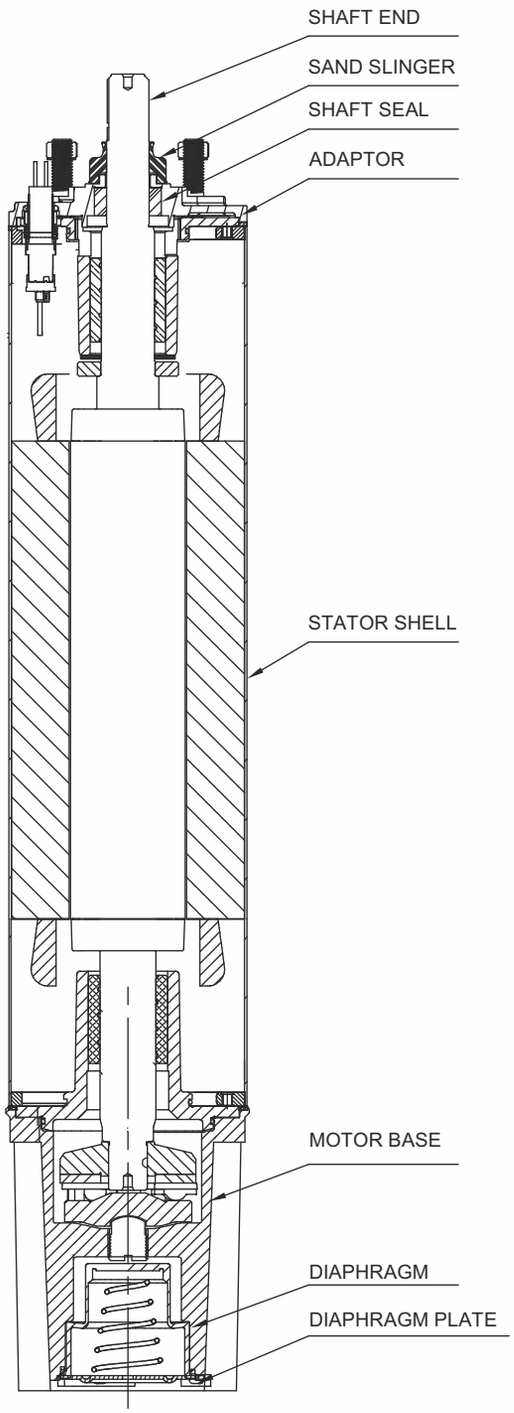
Motor Lengths & Weights 50Hz/60Hz

[HP]	[kW]	L [MM]	Motor Weight (Net) KG
5	4	621	39
7.5	5.5	621	40
10	7.5	670	45
15	11	725	50
20	15	775	55
25	18.5	825/878	60

MATERIAL OF CONSTRUCTION

SUBMERSIBLE MOTORS			
Material	CI, Stainless Steel 304/316	Rating	5 HP - 15 HP
Type	Rewindable NG SML	Thrust Rating	15500 - 27500 N

6" Rewindable MOC



List of Material

PART	MATERIAL
ADAPTOR	AISI SS 304
STATOR SHELL	AISI SS 304
SEALS	NBR
SAND SLINGER	NBR
SHAFT END	DUPLEX
SHAFT SEAL	SIC
MOTOR BASE	AISI SS 304
DIAPHRAGM	EPDM
DIAPHRAGM PLATE	AISI SS 304
LEAD	EPR

6 INCH REWINDABLE MTSF MOTOR

PRODUCT APPLICATION AND PRODUCT SPECIFICATION

GENERAL DATA

These 6" Rewindable motors, manufactured in ISO 9001:2015 certified facilities

Applications

This motor is built for dependable operation in 6" diameter or larger water wells. It is fitted with water lubricated radial and thrust bearings for a maintenance – free operations. The motor is filled with a special fluid, Providing frost protection down to 5°F storage temperature . A special diaphragm ensures pressure compensation inside the motor.

Product advantages:

- High efficiency electrical design (low operation cost, cooler winding temperature).
- Design for retrofittable PT100 sensor.
- Motor With SiC Mechanical seal and sand slinger.
- Cable material in accordance with regulations for drinking water.
- Water lubricated radial and thrust bearing.
- All motors pre-filled and 100% tested.
- Non contaminating, water-filled design.
- Max. storage temperature 5°F to 140°F.

Technical Specification

• Power range	:	5 -50 HP
• Mounting	:	6" NEMA
• Degree of protection	:	IP68
• Ambient temperature	:	86°F
• Cooling flow	:	5-20 HP = 0.66 ft/sec
	:	25-50 HP = 1.64 ft/sec
• Starts/hr	:	20
• Voltage tolerance	:	+6% / -10% U_N

MOTOR PERFORMANCE DATA

SUBMERSIBLE MOTORS			
Material	CI, Stainless Steel 304/316	Rating	5 HP - 50 HP
Type	Rewindable MTSFC / MTSFN	Thrust Rating	15500 - 27500 N

THREE PHASE MOTOR SPECIFICATION (60 Hz) 3450 RPM & SF-1.15

Three phase 6 " Mtsf motor specification (60 Hz) 3450 rpm													
Material Code (CI)	Rating				Full load		Maximum Load		Line to Line resistance Ohms	Efficiency %		Locked rotor amps	Thrust
	HP	kW	Volts	S.F	Amps	Watts	Amps	Watts		S.F	F.L		
5000000525	5	3.7	230	1.15	15	4700	17.6	5400	0.76-0.92	79	79	86	3484
5000000516			460	1.15	7.5	4700	8.8	5400	3.45-4.17			43	
5000000526	7.5	5.5	230	1.15	21.8	7000	24.6	8000	0.58-0.70	80	80	130	3484
5000000517			460	1.15	10.9	7000	12.3	8000	2.89-3.50			65	
5000000527	10	7.5	230	1.15	28.4	9400	32.2	10800	0.47-0.57	79	79	172	3484
5000000518			460	1.15	14.2	9400	16.1	10800	2.28-2.76			86	
5000000528	15	11	230	1.15	41.6	13700	47.4	15800	0.29-0.35	81	81	266	3484
5000000519			460	1.15	20.8	13700	23.7	15800	1.38-1.67			133	
5000000529	20	15.0	230	1.15	53.8	18100	60.6	20900	0.23-0.28	82	82	362	3484
5000000520			460	1.15	26.9	18100	30.3	20900	0.84-1.01			181	
5000000530	25	18.5	230	1.15	67	22500	76.4	25700	0.16-0.19	83	83	480	6182
5000000521			460	1.15	33.5	22500	38.2	25700	0.70-0.85			240	
5000000531	30	22	230	1.15	79	26900	90.4	31100	0.15-0.19	83	83	568	6182
5000000522			460	1.15	39.5	26900	45.2	31100	0.52-0.63			284	
5000000523	40	30	460	1.15	54.9	35600	62.9	41400	0.35-0.43	83	83	302	6182
5000000524	50	37	460	1.15	68.1	45100	78.1	52200	0.29-0.35	82	83	414	6182

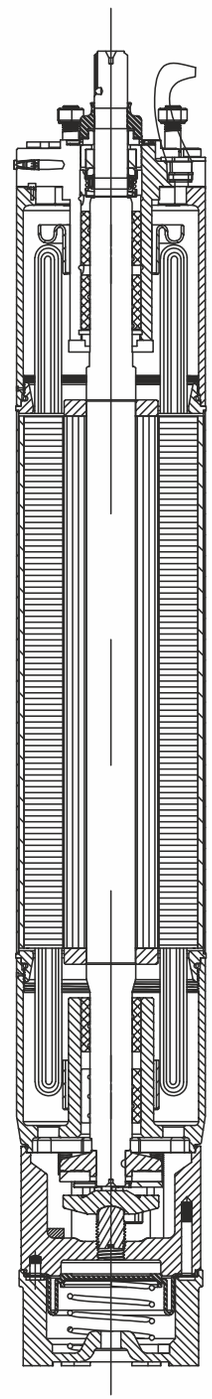
Three phase 6 " Mtsf motor specification (60 Hz) 3450 rpm													
Material Code (SS304)	Rating				Full load		Maximum Load		Line to Line resistance Ohms	Efficiency %		Locked rotor amps	Thrust
	HP	kW	Volts	S.F	Amps	Watts	Amps	Watts		S.F	F.L		
5000000532	7.5	5.5	230	1.15	21.8	7000	24.6	8000	0.58-0.70	80	80	130	3484
5000000538			460	1.15	10.9	7000	12.3	8000	2.89-3.50			65	
5000000533	10	7.5	230	1.15	28.4	9400	32.2	10800	0.47-0.57	79	79	172	3484
5000000539			460	1.15	14.2	9400	16.1	10800	2.28-2.76			86	
5000000534	15	11	230	1.15	41.6	13700	47.4	15800	0.29-0.35	81	81	266	3484
5000000540			460	1.15	20.8	13700	23.7	15800	1.38-1.67			133	
5000000535	20	15	230	1.15	53.8	18100	60.6	20900	0.23-0.28	82	82	362	3484
5000000541			460	1.15	26.9	18100	30.3	20900	0.84-1.01			181	
5000000536	25	18.5	230	1.15	67	22500	76.4	25700	0.16-0.19	83	83	480	6182
5000000542			460	1.15	33.5	22500	38.2	25700	0.70-0.85			240	
5000000537	30	22	230	1.15	79	26900	90.4	31100	0.15-0.19	83	83	568	6182
5000000543			460	1.15	39.5	26900	45.2	31100	0.52-0.63			284	
5000000544	40	30	460	1.15	54.9	35600	62.9	41400	0.35-0.43	83	83	302	6182
5000000545	50	37	460	1.15	68.1	45100	78.1	52200	0.29-0.35	82	83	414	6182

MATERIAL OF CONSTRUCTION

SUBMERSIBLE MOTORS			
Material	CI, Stainless Steel 304/316	Rating	5 HP - 50 HP
Type	Rewindable MTSFC / MTSFN	Thrust Rating	15500 - 27500 N

MTSF 150 (5 TO 50 HP)

PART	MATERIAL DIN/AISI	
	CAST IRON	**AISI-SS 304**
SAND SLINGER	NBR	NBR
DUST COVER	AISI SS 304	AISI SS 304
ADAPTOR	CAST IRON POWDER COATED	AISI-SS 304
STATOR SHELL	AISI-SS 304	AISI-SS 304
SHAFT SEAL	SIC	SIC
SHAFT EXTENTION	DUPLEX(EN 1.4362)	DUPLEX(EN 1.4362)
DIAPHRAGM	EPDM	EPDM
DIAPHRAGM COVER	AISI SS 304	AISI SS 304
THRUST BEARING HOUSING	CAST IRON POWDER COATED	AISI-SS 304
LEAD	EPR	EPR



MOTOR LENGTH & WEIGHT

SUBMERSIBLE MOTORS			
Material	CI, Stainless Steel 304/316	Rating	5 HP - 50 HP
Type	Rewindable MTSFC / MTSFN	Thrust Rating	15500 - 27500 N

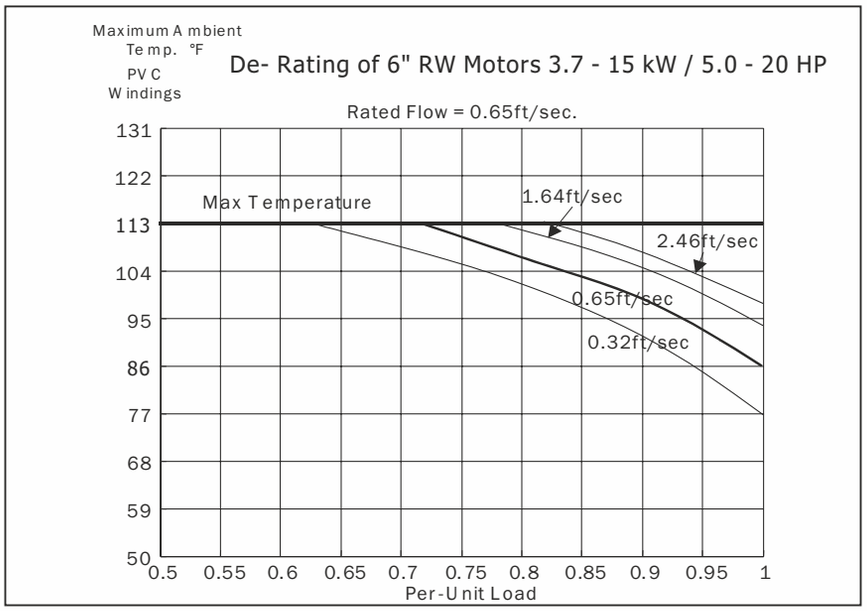
MTSF -150 THREE PHASE 230V/460V 60Hz DIM & WEIGHT CHART

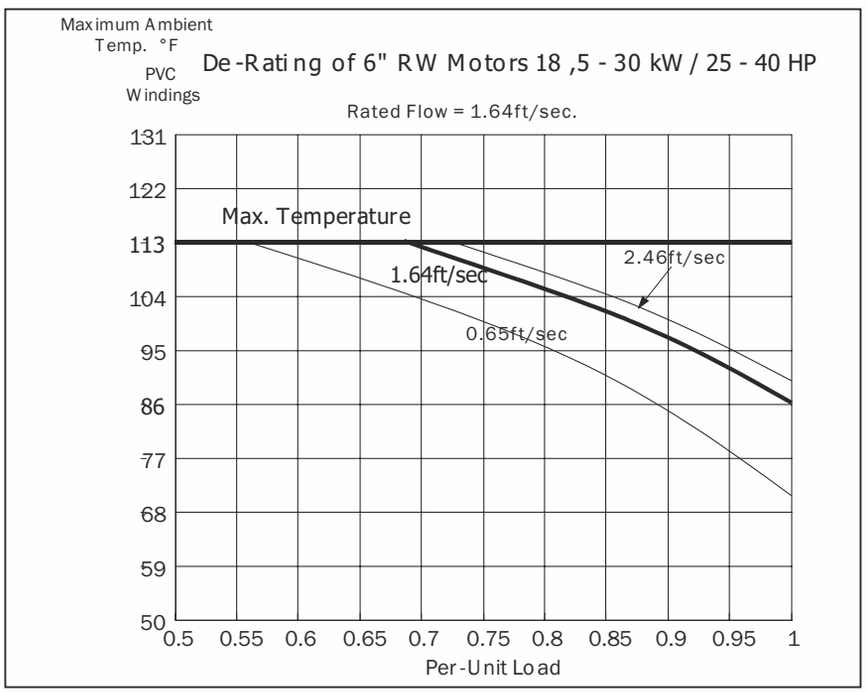
HP	kW	LENGTH (Inches)	SHIPPING WEIGHT		MOTOR CARTON SIZE (in Inches)
			LBS	KG	
5.0	3.7	27.52	112	51	39.37x6.5x6.5
7.5	5.5	27.52	112	51	39.37x6.5x6.5
10	7.5	28.31	119	54	39.37x6.5x6.5
15	11	30.67	130	59	44.49x6.5x6.5
20	15	34.41	154	70	49.21x6.5x6.5
25	18.5	36.18	161	73	49.21x6.5x6.5
30	22	39.72	180	82	53.15x6.5x6.5
40	30	47.80	236	107	53.15x6.5x6.5
50	37	50.94	254	115	55.91x6.5x6.5

DE-RATING CURVES

SUBMERSIBLE MOTORS			
Material	CI, Stainless Steel 304/316	Rating	5 HP - 50 HP
Type	Rewindable MTSFC / MTSFN	Thrust Rating	15500 - 27500 N

6" REWINDABLE MOTORS DE- RATING CURVES





8 INCH REWINDABLE MTSF MOTOR

PRODUCT APPLICATION AND PRODUCT SPECIFICATION

GENERAL DATA

These 8" Rewindable motors, manufactured in ISO 9001:2015 certified facilities

Applications

This motor is built for dependable operation in 8" diameter or larger water wells. It is fitted with water lubricated radial and thrust bearings for a maintenance – free operations. The motor is filled with a special fluid, Providing frost protection down to 5°F storage temperature . A special diaphragm ensures pressure compensation inside the motor.

Product advantages:

- High efficiency electrical design (low operation cost, cooler winding temperature).
- Design for retrofittable PT100 sensor.
- Motor With SiC Mechanical seal and sand slinger.
- Cable material in accordance with regulations for drinking water.
- Water lubricated radial and thrust bearing.
- All motors pre-filled and 100% tested.
- Non contaminating, water-filled design.
- Max. storage temperature 5°F to 140°F.

Technical Specification

• Power range	:	40 -125 HP
• Mounting	:	8" NEMA
• Degree of protection	:	IP68
• Ambient temperature	:	86°F
• Cooling flow	:	40-70 HP = 0.66 ft/sec
	:	75-125 HP = 1.64 ft/sec
• Starts/hr	:	10
• Voltage tolerance	:	+6% / -10% U_N

MOTOR PERFORMANCE DATA

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	40 HP -125 HP
Type	Rewindable MTSF	Thrust Rating	45000 N

THREE PHASE 8" MTSF MOTOR SPECIFICATION (60 HZ) 3525 RPM

Material Code (ss 304) PE2PA WINDING WIRE	Rating				Full load		Maximum Load		Line to Line resistance Ohms	Efficiency %		Locked rotor amps	Thurst load
	HP	kW	Volts	S.F	Amps	Watts	Amps	Watts		S.F	F.L		
5000000550	40	30	460	1.15	53	35000	60	40000	0.29-0.35	86	86	396	10116
5000000551	50	37	460	1.15	64	43000	73	49000	0.29-0.35	87	87	542	10116
5000000552	60	45	460	1.15	76	52000	86	60000	0.23-0.28	88	87	658	10116
5000000553	75	55	460	1.15	94	64000	107	73500	0.16-0.19	88	88	864	10116
5000000554	100	75	460	1.15	132	85000	148	97500	0.109-0.134	89	89	1211	10116
5000000555	125	93	460	1.15	167	109000	188	125000	0.10-0.13	87	86	1318	10116

THREE PHASE 8" MTSF MOTOR SPECIFICATION (60 HZ) 3525 RPM WITH 6" FLANGE

Material Code (ss 304)	Rating				Full load		Maximum Load		Line to Line resistance Ohms	Efficiency %		Locked rotor amps	Thurst load
	HP	kW	Volts	S.F	Amps	Watts	Amps	Watts		S.F	F.L		
5000000546	30	22	460	1.15	40	22581	46	29416	0.39-0.47	86	86	296	10116
5000000547	40	30	460	1.15	53	35000	60	40000	0.29-0.35	86	86	396	10116
5000000548	50	37	460	1.15	64	43000	73	49000	0.29-0.35	87	87	542	10116
5000000549	60	45	460	1.15	76	52000	86	60000	0.23-0.28	88	87	658	10116

MOTOR LENGTH & WEIGHT

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	40 HP -125 HP
Type	Rewindable MTSF	Thrust Rating	45000 N

MTSF -200 THREE PHASE 460V 60Hz DIM & WEIGHT CHART

HP	kW	LENGTH (Inches)	SHIPPING WEIGHT		MOTOR CARTON SIZE (in Inches)
			LBS	KG	
40	30	44.88	362	164	61.02x7.87x11.42
50	37	44.88	362	164	61.02x7.87x11.42
60	45	48.43	417	189	61.02x7.87x11.42
75	55	52.76	448	203	64.96x7.87x11.42
100	75	61.42	644	292	78.74x7.87x11.42
125	93	68.50	787	357	82.68x7.87x11.42

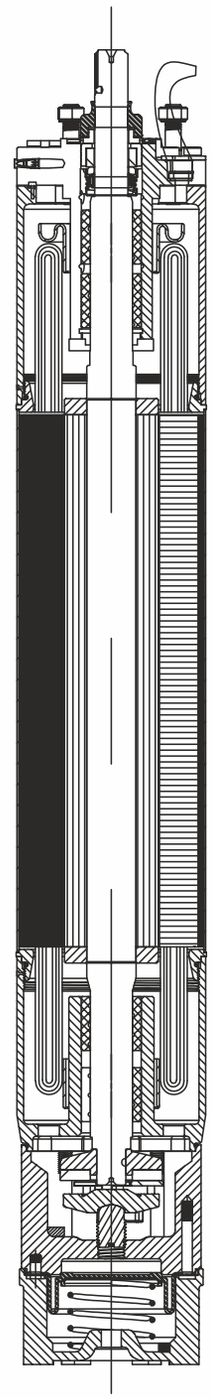
MATERIAL OF CONSTRUCTION

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	40 HP -125 HP
Type	Rewindable MTSF	Thrust Rating	45000 N

MTSF 200 (40 TO 125 HP)

Material of Construction

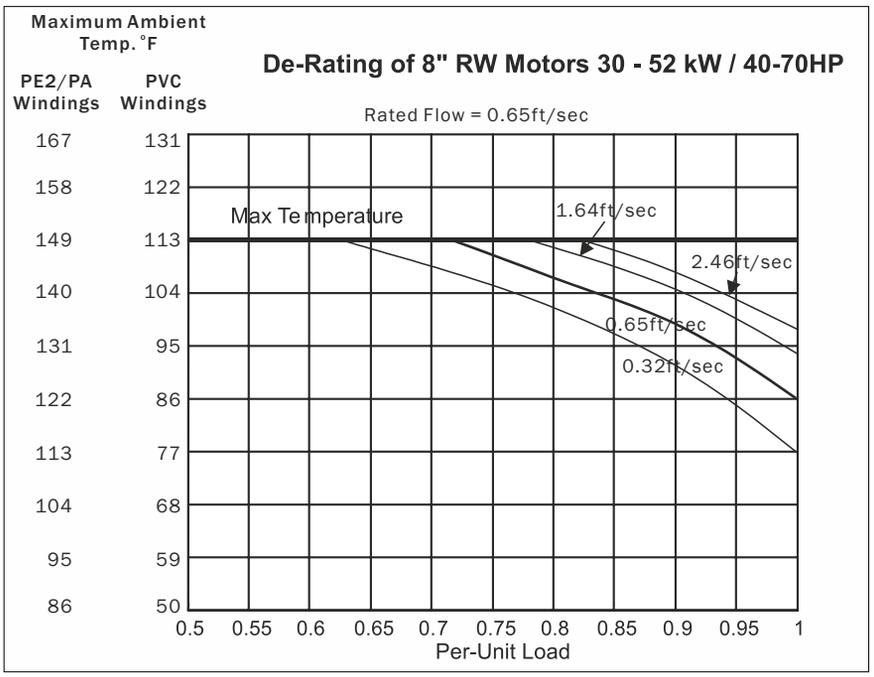
Part	Material DIN/AISI	
	SS 304	**SS 316**
Stator shell	SS AISI 304	SS AISI 316
End bell	Cast Iron / Power Coated	SS AISI 316
Thrust Housing	Cast Iron / Power Coated	SS AISI 316
Seals	BUNA-N	BUNA-N
Seal Cover	Cast Iron	SS AISI 316
Shaft Seal	SiC	SiC
Shaft end	SS AISI 304	SS AISI 316
Diaphragm	EPDM	EPDM
Diaphragm Cover	SS AISI 304	SS AISI 316
Lead	EPR	EPR

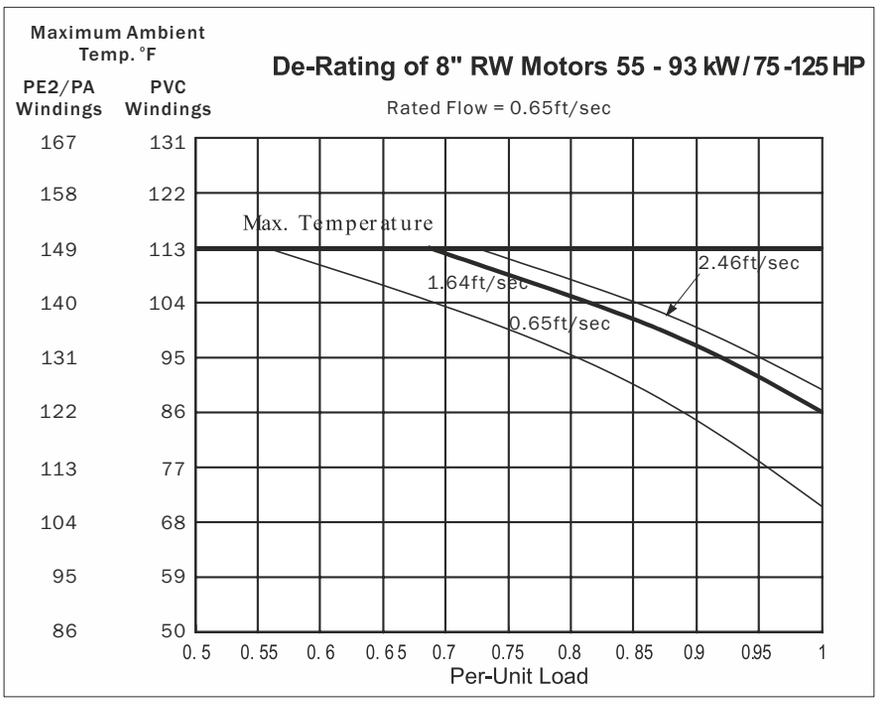


DE-RATING CURVES

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	40 HP -125 HP
Type	Rewindable MTSF	Thrust Rating	45000 N

8" REWINDABLE MOTORS DE- RATING CURVES





10 INCH REWINDABLE MTSF MOTOR

PRODUCT APPLICATION AND PRODUCT SPECIFICATION

GENERAL DATA

These 10" Rewindable motors, manufactured in ISO 9001:2015 certified facilities

Applications

This motor is built for dependable operation in 10" diameter or larger water wells. It is fitted with water lubricated radial and thrust bearings for a maintenance – free operations. The motor is filled with a special fluid, Providing frost protection down to 5°F storage temperature . A special diaphragm ensures pressure compensation inside the motor.

Product advantages:

- High efficiency electrical design (low operation cost, cooler winding temperature).
- Design for retrofittable PT100 sensor.
- Motor With SiC Mechanical seal and sand slinger.
- Cable material in accordance with regulations for drinking water.
- Water lubricated radial and thrust bearing.
- All motors pre-filled and 100% tested.
- Non contaminating, water-filled design.
- Max. storage temperature 5°F to 140°F.

Technical Specification

- Power range : 150 -250 HP
- Mounting : 10"
- Degree of protection : IP68
- Ambient temperature : 86°F
- Cooling flow : 1.64 ft/sec
- Starts/hr : 10
- Voltage tolerance : +6% / -10% U_N

MOTOR PERFORMANCE DATA

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	150 HP -250 HP
Type	Rewindable MTSF	Thrust Rating	45000 N

THREE PHASE 10 " MTSF MOTOR SPECIFICATION (60 HZ) 3510 RPM

Material Code	Rating				Full load		Maximum Load		Line to Line resistance Ohms	Efficiency %		Locked rotor amps	Thurst load
	HP	kW	Volts	S.F	Amps	KW	Amps	KW		S.F	F.L		
5000000562	150	110	460	1.15	196	129	225	148	0.08-0.10	87	87	1176	13489
5000000563	175	130	460	1.15	219	149	254	172	0.06-0.08	87	87	1308	13489
5000000564	200	150	460	1.15	249	172	294	199	0.05-0.06	87	87	1557	13489
5000000565	250	185	460	1.15	322	213	377	246	0.03-0.04	87	87	2130	13489

MOTOR LENGTH & WEIGHT

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	150 HP -252 HP
Type	Rewindable MTSF	Thrust Rating	45000 N

MTSF -250 THREE PHASE 460V 60Hz DIM & WEIGHT CHART

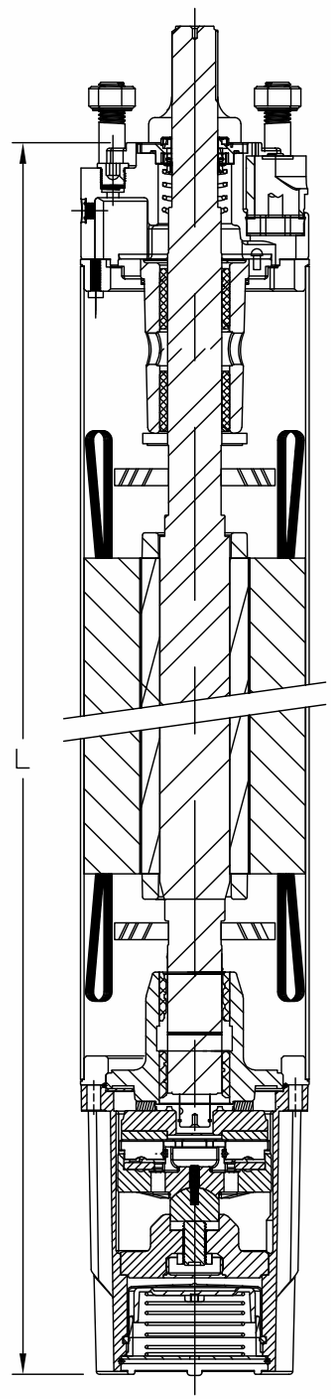
HP	kW	LENGTH (Inches)	SHIPPING WEIGHT		MOTOR CARTON SIZE (in Inches)
			LBS	KG	
150	110	60.20	816	370	13.78x10.24x78.74
175	130	65.31	908	412	13.78x10.24x78.74
200	150	69.65	964	437	13.78x10.24x78.74
250	185	75.55	1058	480	13.78x10.24x78.74

MATERIAL OF CONSTRUCTION

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	150 HP -252 HP
Type	Rewindable MTSF	Thrust Rating	45000 N

MTSF 250 (150 TO 252 HP)

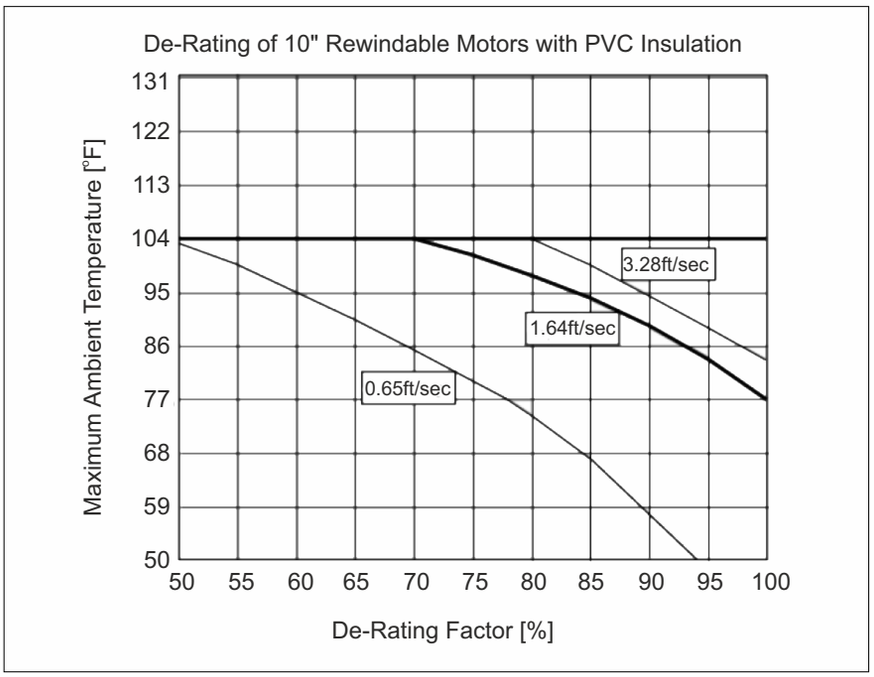
PART	MATERIAL DIN/AISI	
	CAST IRON	AISI-SS 304
ADAPTOR	CAST IRON - POWDER COATED	AISI-SS 304
STATOR SHELL	AISI-SS 304	AISI-SS 304
SHAFT SEAL	SIC	SIC
SHAFT EXTENTION	DUPLEX(EN 1.4362)	DUPLEX(EN 1.4362)
DIAPHRAGM	EPDM	EPDM
DIAPHRAGM COVER	AISI SS 304	AISI SS 304
MOTOR BASE	CAST IRON - POWDER COATED	AISI-SS 304
LEAD	EPR	EPR

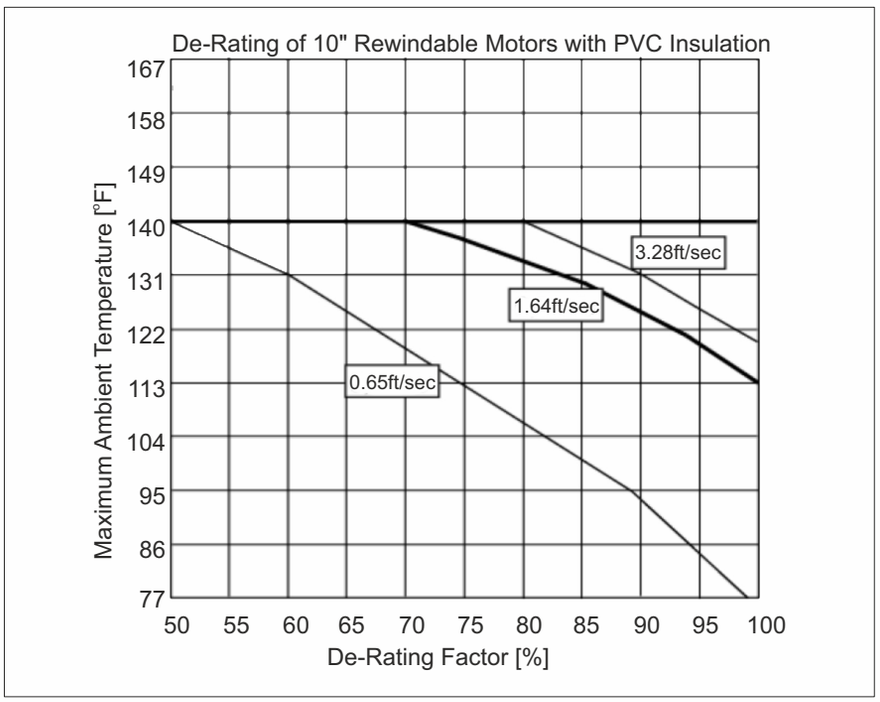


DE-RATING CURVES

SUBMERSIBLE MOTORS			
Material	CI, SS 304/316	Rating	150 HP -252 HP
Type	Rewindable MTSF	Thrust Rating	45000 N

10" REWINDABLE MOTORS DE- RATING CURVES





CABLE SELECTION CHART

4- INCH/SINGLE-PHASE / 3-LEAD / 75 °C CABLE

MOTOR RATING			AWG Copper Wire Size												
VOLTS	HP	KW	14	12	10	8	6	4	3	2	1	0	0	0	0
115	0.5	0.37	100	160	250	390	620	960	1190	1460	1780	2160	2630	3140	3770
230	0.5	0.37	400	650	1020	1610	2510	3880	4810	5880	7170	8720	--	--	--
	0.75	0.55	300	480	760	1200	1870	2890	3580	4370	5330	6470	7870	9380	--
	1	0.75	250	400	630	990	1540	2380	2960	3610	4410	5360	6520	7780	9350
	1.5	1.1	190	310	480	770	1200	1870	2320	2850	3500	4280	5240	6300	7620
	2	1.5	150	250	390	620	970	1530	1910	2360	2930	3620	4480	5470	6700
	3	2.2	120	190	300	470	750	1190	1490	1850	2320	2890	3610	4470	5550
	5	3.7	0	110	180	280	450	710	890	1110	1390	1740	2170	2680	3330

4- INCH/THREE-PHASE / 3-LEAD / 75 °C CABLE

MOTOR RATING			Maximum Cable Length (ft) Measured from Service entrance to motor																	
			AWG Copper Wire Size													MCM Copper Wire Size				
VOLTS	HP	KW	14	12	10	8	6	4	3	2	1	0	0	0	0	250	300	350	400	500
230	0.5	0.37	930	1490	2350	3700	5760	8910	—	—	—	—	—	—	—	—	—	—	—	—
	0.75	0.55	670	1080	1700	2580	4190	6490	8060	9860	—	—	—	—	—	—	—	—	—	—
	1	0.75	560	910	1430	2260	3520	5460	6780	8290	—	—	—	—	—	—	—	—	—	—
	1.5	1.1	420	670	1060	1670	2610	4050	5030	6160	7530	9170	—	—	—	—	—	—	—	—
	2	1.5	320	510	810	1280	2010	3130	3890	4770	5860	7170	8780	—	—	—	—	—	—	—
	3	2.2	240	390	620	990	1540	2400	2980	3660	4480	5470	6690	8020	9680	—	—	—	—	—
	5	3.7	140	230	370	590	920	1430	1790	2190	2690	3290	4030	4850	5870	6650	7560	8460	9220	—
	7.5	5.5	0	160	260	420	650	1020	1270	1560	1920	2340	2870	3440	4160	4710	5340	5970	6500	7510
460	0.5	0.37	3770	6020	9460	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	0.75	0.55	2730	4350	6850	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1	0.75	2300	3670	5770	9070	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1.5	1.1	1700	2710	4270	6730	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	1.5	1300	2070	3270	5150	8050	—	—	—	—	—	—	—	—	—	—	—	—	—
	3	2.2	1000	1600	2520	3970	6200	—	—	—	—	—	—	—	—	—	—	—	—	—
	5	3.7	590	950	1500	2360	3700	5750	—	—	—	—	—	—	—	—	—	—	—	—
	7.5	5.5	420	680	1070	1690	2640	4100	5100	6260	7680	—	—	—	—	—	—	—	—	—
	10	7.5	310	500	790	1250	1960	3050	3800	4680	5750	7050	—	—	—	—	—	—	—	—
	15	11	0	340	540	850	1340	2090	2600	3200	3930	4810	5900	7110	—	—	—	—	—	—

6- INCH/SINGLE-PHASE / 3-LEAD / 75 °C CABLE

MOTOR RATING			**AWG Copper Wire Size**												
VOLTS	**HP**	**KW**	**14**	**12**	**10**	**8**	**6**	**4**	**3**	**2**	**1**	**0**	**0**	**0**	**0**
230	5	3.7	0	110	180	280	450	710	890	1110	1390	1740	2170	2680	3330
	7.5	5.5	0	0	120	200	310	490	610	750	930	1140	1410	1720	2100
	10	7.5	0	0	0	160	250	390	490	600	750	930	1160	1430	1760
	15	11	0	0	0	0	170	270	340	430	530	660	820	1020	1260

CABLE SELECTION CHART

6- INCH/THREE-PHASE / 3-LEAD / 75 °C CABLE

MOTOR RATING			Maximum Cable Length (ft) Measured from Service entrance to motor																	
			AWG Copper Wire Size													MCM Copper Wire Size				
VOLTS	HP	KW	14	12	10	8	6	4	3	2	1	0	00	000	0000	250	300	350	400	500
460	5	3.7	590	950	1500	2360	3700	5750	—	—	—	—	—	—	—	—	—	—	—	—
	7.5	5.5	420	680	1070	1690	2640	4100	5100	6260	7680	—	—	—	—	—	—	—	—	—
	10	7.5	310	500	790	1250	1960	3050	3800	4680	5750	7050	—	—	—	—	—	—	—	—
	15	11	0	340	540	850	1340	2090	2600	3200	3930	4810	5900	7110	—	—	—	—	—	—
	20	15	0	0	410	650	1030	1610	2000	2470	3040	3730	4580	5530	—	—	—	—	—	—
	25	19	0	0	330	530	830	1300	1620	1990	2450	3010	3700	4470	5430	—	—	—	—	—
	30	22	0	0	270	430	680	1070	1330	1640	2030	2490	3060	3700	4500	5130	5860	—	—	—
	40	30	0	0	0	320	500	790	980	1210	1490	1830	2250	2710	3290	3730	4250	—	—	—
	50	37	0	0	0	0	410	640	800	980	1210	1480	1810	2190	2650	3010	3420	3830	4180	4850
	60	45	0	0	0	0	0	540	670	830	1020	1250	1540	1850	2240	2540	2890	3240	3540	4100

8- INCH/THREE-PHASE / 3-LEAD / 75 °C CABLE

MOTOR RATING			Maximum Cable Length (ft) Measured from Service entrance to motor																	
			AWG Copper Wire Size													MCM Copper Wire Size				
VOLTS	HP	KW	14	12	10	8	6	4	3	2	1	0	00	000	0000	250	300	350	400	500
460	40	30	0	0	0	320	500	790	980	1210	1490	1830	2250	2710	3290	3730	4250	—	—	—
	50	37	0	0	0	0	410	640	800	980	1210	1480	1810	2190	2650	3010	3420	3830	4180	4850
	60	45	0	0	0	0	0	540	670	830	1020	1250	1540	1850	2240	2540	2890	3240	3540	4100
	75	55	0	0	0	0	0	440	550	680	840	1030	1260	1520	1850	2100	2400	2700	2950	3440
	100	75	0	0	0	0	0	0	0	500	620	760	940	1130	1380	1560	1790	2010	2190	2550
	125	93	0	0	0	0	0	0	0	0	0	600	740	890	1000	1220	1390	1560	1700	1960
	150	110	0	0	0	0	0	0	0	0	0	0	630	760	920	1050	1190	1340	1460	1690
	175	130	0	0	0	0	0	0	0	0	0	0	0	670	810	930	1060	1190	1300	1510
	200	150	0	0	0	0	0	0	0	0	0	0	0	590	710	810	920	1030	1130	1310

10- INCH/THREE-PHASE / 3-LEAD / 75 °C CABLE

MOTOR RATING			Maximum Cable Length (ft) Measured from Service entrance to Motor																				
			AWG Copper Wire Size						MCM Copper Wire Size														
VOLTS	HP	KW	2	1	0	00	000	0000	250	300	350	400	500	600	700	750	800	900	1000	1250	1500	1750	2000
460	175	130	0	0	0	570	690	830	950	1090	1220	1330	1550	1720	1860	1930	1990	2100	2190	2400	2550	2750	2860
	200	150	0	0	0	0	600	720	820	940	1050	1150	1340	1480	1610	1670	1720	1810	1890	2070	2210	2370	2470
	250	185	0	0	0	0	0	0	640	730	810	880	1020	1130	1210	1260	1290	1360	1410	1540	1630	1740	1810

MOTOR LEAD DIMENSIONS

Type	Rating			Default Lead Length	Lead Cross Section
	HP	kW	Volts		
4" Single-phase (2-wire)	0.5	0.37	115	5.5 feet	14 AWG
	0.5	0.37	230	5.5 feet	14 AWG
	0.75	0.55		5.5 feet	14 AWG
	1	0.75		5.5 feet	14 AWG
	1.5	1.1		5.5 feet	14 AWG
4" Single-phase (3-wire)	0.5	0.37		5.5 feet	14 AWG
	0.75	0.55		5.5 feet	14 AWG
	1	0.75		5.5 feet	14 AWG
	1.5	1.1		5.5 feet	14 AWG
	2	1.5		5.5 feet	14 AWG
	3	2.2		5.5 feet	14 AWG
	5	3.7		10 feet	14 AWG
4" Three-phase	0.5	0.37	460	5.5 feet	14 AWG
			230	5.5 feet	14 AWG
	0.75	0.55	460	5.5 feet	14 AWG
			230	5.5 feet	14 AWG
	1	0.75	460	5.5 feet	14 AWG
			230	5.5 feet	14 AWG
	1.5	1.1	460	5.5 feet	14 AWG
			230	5.5 feet	14 AWG
	2	1.5	460	5.5 feet	14 AWG
			230	5.5 feet	14 AWG
	3	2.2	460	5.5 feet	14 AWG
			230	5.5 feet	14 AWG
	5	3.7	460	10 feet	14 AWG
			230	10 feet	14 AWG
	7.5	5.5	460	10 feet	14 AWG
			230	10 feet	14 AWG
	10	7.5	460	10 feet	14 AWG
			230	10 feet	14 AWG
6" Single-Phase	5	3.7	230	13 feet	12 AWG
	7.5	5.5		13 feet	12 AWG
	10	7.5		13 feet	12 AWG
	15	11		13 feet	10 AWG

MOTOR LEAD DIMENSIONS

Type	Rating			Default Lead Length	Lead Cross Section
	HP	kW	Volts		
6" Three-Phase	5.5	4	460	13 feet	12 AWG
	7.5	5.5	460	13 feet	12 AWG
			230	13 feet	12 AWG
	10	7.5	460	13 feet	12 AWG
			230	13 feet	12 AWG
	15	11	460	13 feet	10 AWG
			230	13 feet	10 AWG
	20	15	460	13 feet	10 AWG
			230	13 feet	10 AWG
	25	18.5	460	13 feet	10 AWG
			230	13 feet	10 AWG
	30	22	460	13 feet	10 AWG
			230	13 feet	10 AWG
	40	30	460	13 feet	8 AWG
	50	37	460	13 feet	8 AWG
8" Three-Phase	30	22	460	13 feet	10 AWG
	40	30		13 feet	10 AWG
	50	37		13 feet	10 AWG
	60	45		13 feet	8 AWG
	75	55		20 Feet	6 AWG
	100	75		20 Feet	4 AWG
	125	90		20 Feet	4 AWG
10" Three-Phase	150	110	460	20 Feet	0 AWG
	177	130		20 Feet	0 AWG
	204	150		20 Feet	0 AWG
	252	185		20 Feet	0 AWG

CAPACITOR RATING

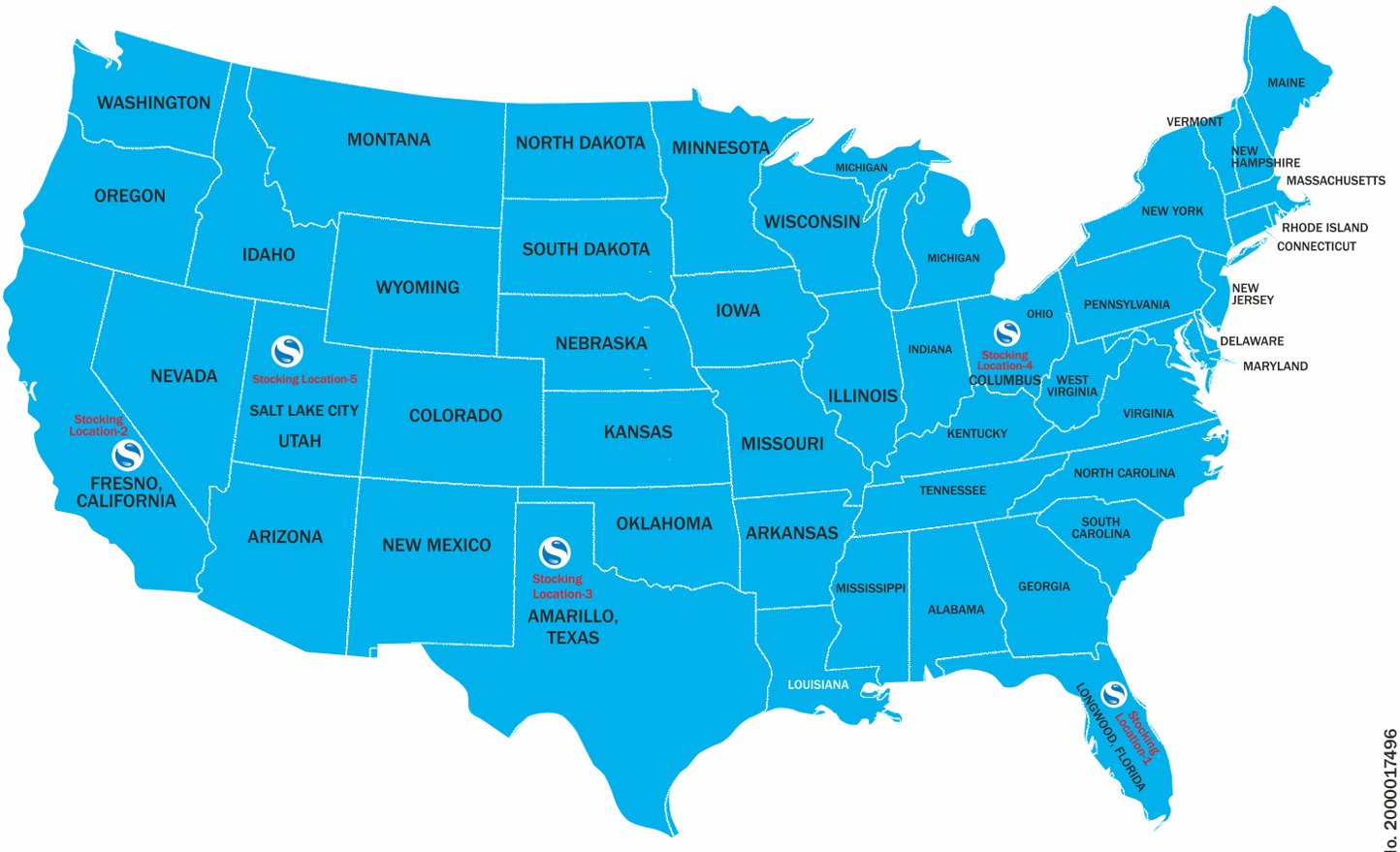
Motor Size	Motor Rating (HP)	Start Capacitor		Qty	Run Capacitor		
		MFD.	Volts		MFD.	Volts	Qty
4"	0.5	43-52	330	1	15	450	1
	0.75	64-77	330	1	20	450	1
	1	88-106	330	1	20	450	1
	1.5	100-120	330	1	15	450	1
	2	189-227	330	1	20	450	1
	3	250-300	330	1	45	450	1
	5	189-227	330	2	80	450	1
6"	5	250-300	330	1	80	450	2
	7.5	250-300	330	2	45	450	2
	10	189-227	330	1	100	450	1
		250-300	330	2			
	15	189-227	330	1	45	450	3
		250-300	330	2			

FUSING SIZE

Type	Rating			Circuit Breakers or Fuse Amps (Maximum per NEC)			Circuit Breakers or Fuse Amps (Typical Submersible)		
	HP	kW	Volts	Standard Fuse	Dual Element Time Delay Fuse	Circuit Breakers	Standard Fuse	Dual Element Time Delay Fuse	Circuit Breakers
4" Single-phase (2-wire)	0.5	0.37	115	35	20	30	30	15	30
	0.5	0.37	230	20	10	15	15	8	15
	0.75	0.55		25	15	20	20	10	20
	1	0.75		30	20	25	25	11	25
	1.5	1.1		35	20	30	35	15	30
4" Single-phase (3-wire)	0.5	0.37		20	10	15	15	8	15
	0.75	0.55		25	15	20	20	10	20
	1	0.75		30	20	25	25	11	25
	1.5	1.1		35	20	30	30	15	30
	2	1.5		30	20	25	30	15	30
	3	2.2		45	30	40	45	20	40
	5	3.7		80	45	60	70	30	60

FUSING SIZE

Type	Rating			Circuit Breakers or Fuse Amps (Maximum per NEC)			Circuit Breakers or Fuse Amps (Typical Submersible)		
	HP	kW	Volts	Standard Fuse	Dual Element Time Delay Fuse	Circuit Breakers	Standard Fuse	Dual Element Time Delay Fuse	Circuit Breakers
4" Three-phase	0.5	0.37	460	4	2.25	3	4	2	15
			230	8	4.5	6	8	4	15
	0.75	0.55	460	5	2.8	4	5	3	15
			230	10	5.6	8	10	5	15
	1	0.75	460	6	3.5	5	6	3	15
			230	15	7	10	12	6	15
	1.5	1.1	460	8	4.5	8	8	4	15
			230	15	9	15	15	8	15
	2	1.5	460	15	6	10	11	5	15
			230	25	12	20	25	10	20
	3	2.2	460	15	9	15	15	6	15
			230	30	17.5	25	30	12	25
	5	3.7	460	25	15	20	25	10	20
			230	50	30	40	45	20	40
	7.5	5.5	460	40	25	30	35	15	30
			230	80	45	60	70	30	60
	10	7.5	460	60	30	45	50	25	45
6" Single-Phase	5	3.7	230	80	45	60	70	30	60
	7.5	5.5		125	70	100	110	50	100
	10	7.5		150	80	125	150	60	125
	15	11		200	125	175	200	90	175
6" Three-Phase	5	3.7	460	25	15	20	25	10	20
	7.5	5.5	460	35	20	30	35	15	30
			230	70	40	60	70	30	60
	10	7.5	460	45	25	40	45	20	40
			230	90	50	80	90	40	80
	15	11	460	70	40	60	60	30	60
			230	150	80	110	125	60	110
	20	15	460	90	50	70	80	35	70
			230	175	100	150	175	70	150
	25	18.5	460	110	60	90	100	45	90
			230	225	125	175	200	90	175
	30	22	460	125	70	110	125	50	100
			230	250	150	225	250	100	200
	40	30	460	175	100	150	175	70	150
	50	37	460	225	125	175	200	90	175
8" Three-Phase	40	30	460	175	100	150	175	70	150
	50	37		200	125	175	200	80	175
	60	45		250	150	200	225	100	200
	75	55		300	175	250	300	125	250
	100	75		400	225	350	400	175	350
	125	90		225	125	175	200	90	175



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