TSURUMI PUMP

SQ - SERIES
ALL 304 SS - DEWATERING PUMP

SPECIFICATIONS

FEATURES

1. Semi-open, 304 Stainless steel impeller with replaceable/ adjustable wear plate increases wear resistance when pumpage contains abrasive particles.

2. Double inside mechanical seals with silicon carbide faces, running in an oil filled chamber and further protected by a lip seal running against a replaceable, 430 stainless steel shaft sleeve, provides for the most durable seal design available.

2. Highly efficient, continuous duty air filled, copper wound motor with class E, insulation minimizes the cost of operation.

4. Built in thermal & amperage sensing, protector prevents motor failure due to- overloading or accidental run -dry conditions.

5. Double shielded, permanently lubricated, high temperature C3 ball bearings rated for a B-10 life of 60,000 hours, extend operational life.

6. Top discharge, flow-thru design enables operation at low water levels for extended periods.

APPLICATIONS

1. Residential, commercial, industrial wastewater and construction site drainage.

2. Chemical spill containment.

3. Decorative waterfalls, fountains and fish ponds.

4. Raw water supply from rivers or lakes.

OIL LIFTER EQUIPPED

SPECIFICATIONS

Discharge Size	2" Npt (50 mm)
Horsepower Range	1/ 2 ~ 1Hp. (.4 ~ .75 kW)
Performance Range Capacity	14.5 ~ 79.3 Gpm. (.06 ~ .30 m^3/min)
Head	13.1 Ft. ~ 50.9 Ft. (4.0 ~ 15.5 m)
Maximum water temperature	104^0 F. (40^0 C.)
Materials of Construction	
Casing	304 Stainless Steel
Impeller	304 Stainless Steel
Shaft	304 Stainless Steel
Motor Frame	304 Stainless Steel
Fasteners	304 Stainless Steel
Mechanical Seal	Silicon Carbide
Elastomers	NBR (Nitril Butadien Rubber)
Impeller Type	Semi-Open, solids handling.
Solids Handling Capability	0.236” (6 mm)
Motor Nomenclature	
Type, Speed, Hz.	Air Filled, 3600 Rpm, 60 Hz.
Voltage, Phase	115 V. or 230 V., (1 Phase) 208-220, 230, 440 or 460 V. (3Phase)
Insulation	Class E
Bearings	Pre-lubricated, Double Shielded
Accessories	Submersible Power Cable 32' (10 m)
Operational Mode	Manual

OPTIONS

Length as Required

TS-301 Float Switch

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1. SCOPE OF SUPPLY -

Furnish and install TSURUMI Model _____ Submersible Pump(s). Each unit shall be capable of delivering _____GPM (_____m^3/min) at _____Feet (_____m) TDH. The pump(s) shall be designed to pump waste water, without damage during operation. The pump(s) shall be designed so that the shaft power required (BHP)/(kW) shall not exceed the motor rated output throughout the entire operating range of the pump performance curve. Pump(s) shall be of the top discharge, flow through design.

2. MATERIALS OF CONSTRUCTION -

Construction of all parts of the pumping unit(s) shall be heavy gage fabricated 304 stainless steel. Impellers shall be of the multi-vane semi -open solids handling design, and shall be slip fit to the shaft and key driven. Internal and external surfaces coming into contact with the pumpage shall not require a protective coating. All exposed fasteners shall be stainless steel. All units shall be furnished with 2" NPT discharge connector. All surface materials and lubricant shall be non-toxic.

3. MECHANICAL SEAL -

All units shall be furnished with a dual inside mechanical shaft seal located completely out of the pumpage, running in a separate oil filled chamber. The oil chamber shall be fitted with a device that shall provide positive lubrication of the top mechanical seal, (down to one third of the standard oil level). The device shall not consume any additional electrical power. Mechanical seals shall rated to preclude the incursion of water up to 42.6 PSI (98.4 Ft.) submergence. Units shall have silicon carbide mechanical seal faces. Mechanical seal hardware shall be stainless steel.

4. MOTOR-

The pump motor(s) shall be _____HP., _____kW., _____V., 60 Hz. __ Phase and shall be NEMA MG-1, Design Type B equivalent. Motor(s) shall be rated at _____ full load amps. Motor(s) shall have a 1.15 service factor and shall be rated for 20 starts per hour. Motor(s) shall be air filled, copper wound, class E insulated with built in thermal protection. Motor shaft shall be 304 stainless steel, shall be supported by two permanently lubricated, high temperature ball bearings, with a B-10 life rating at best efficiency point of 60,000 hours. Bearings on all units shall be single row, double shielded, C3, deep groove type ball bearing. Motors shall be suitable for across the line start or variable speed applications, utilizing a properly sized variable frequency drive.

5. POWER CABLE AND CABLE ENTRANCE -

The pump power cable shall be suitable for submersible pump applications. The cable entrance shall incorporates built in strain relief, and a one piece, three way mechanical compression seal with a fatigue reducing cable boot. The cable entrance assembly shall contain a anti-wicking block to eliminate water incursion into the motor due to capillary wicking should the power cable be accidentally damaged.

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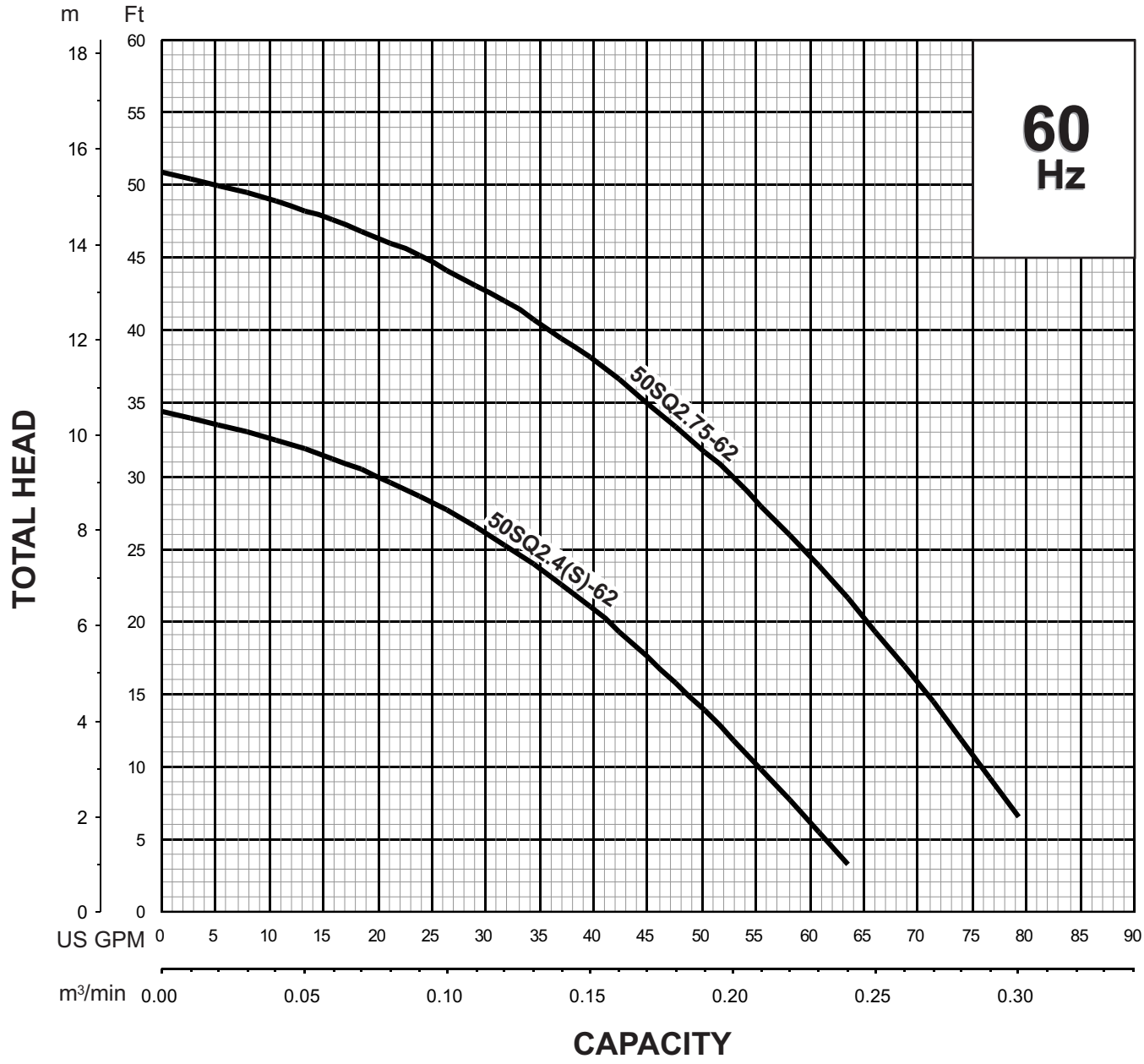
GROUP PERFORMANCE RANGE



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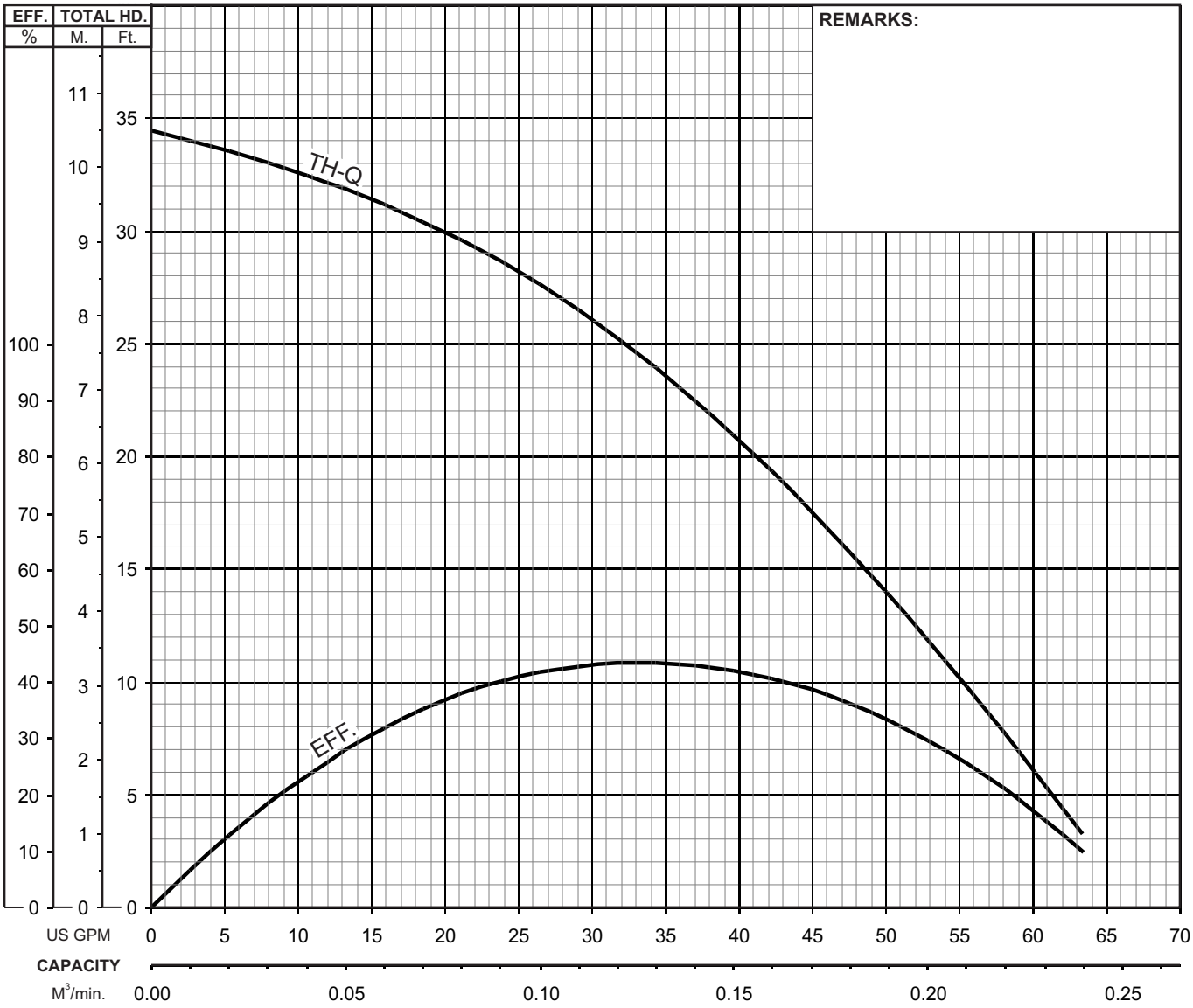
PERFORMANCE CURVE

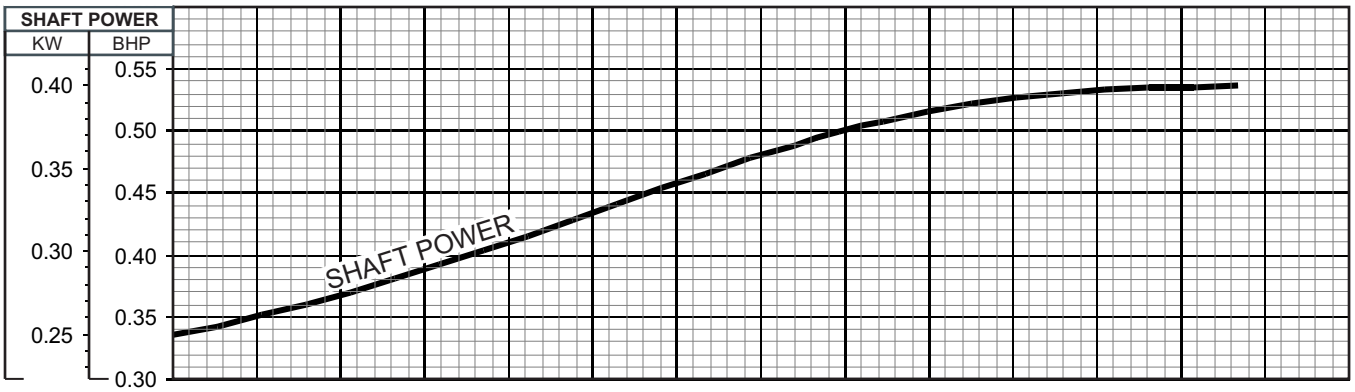
MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
50SQ2.4S-62	2"/50mm	0.54	0.40	3376	0.236"/6mm	Water	1.0	1.81 CST	60°F

PUMP TYPE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS
All 304 SS - Dewatering Pump	Single	110/115/220/230	6.4 / 6.5 / 3.3 / 3.4	60	Capacitor-Start	E

CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS
-	-	-	-	-	-	-	-

REMARKS:





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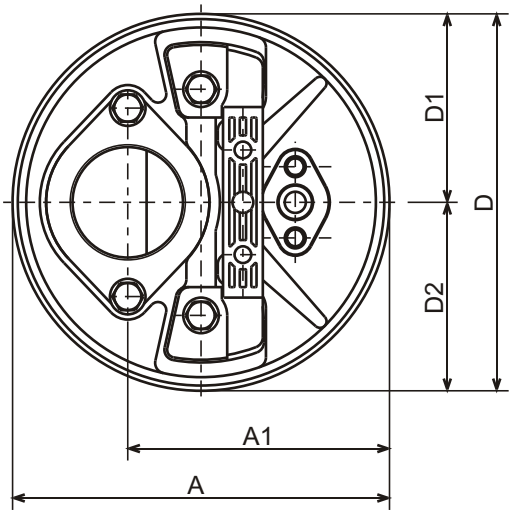
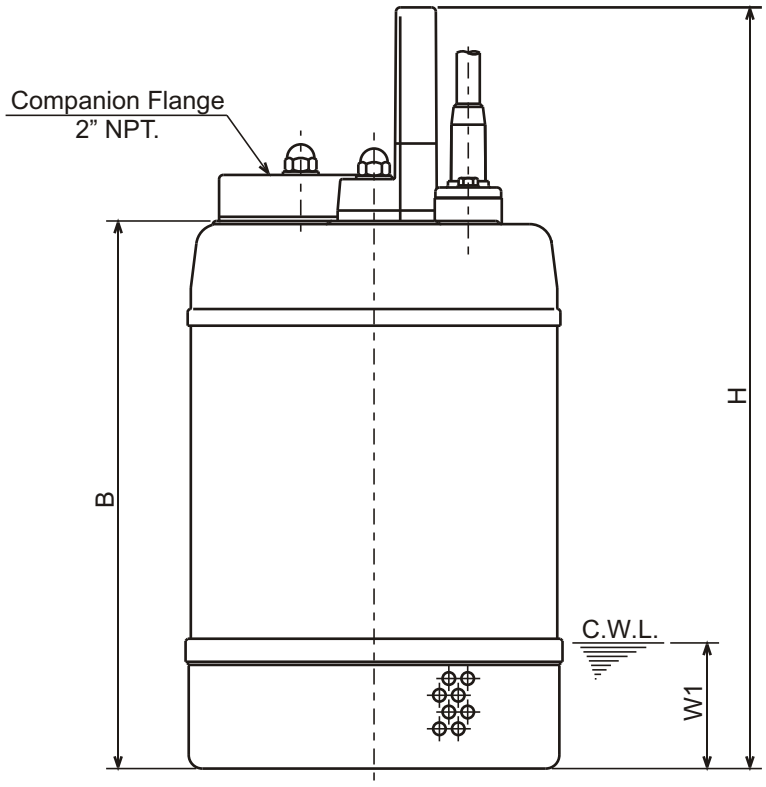
DIMENSIONS

50SQ2.4S-62
50SQ2.75-62





C.W.L. : Continuous running Water Level

DIMENSIONS:USCS (Inch)

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (lbs.)
			A	A1	B	D	D1	D2	H	W1	
50SQ2.4S-62	1/2	2"	7 1/16	4 15/16	10 5/16	7 1/16	3 9/16	3 9/16	14 5/16	2 3/8	29
50SQ2.75-62	1	2"	7 1/16	4 15/16	11 1/16	7 1/16	3 9/16	3 9/16	15 1/8	2 3/8	31

DIMENSIONS:METRIC (mm)

Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (kg)
			A	A1	B	D	D1	D2	H	W1	
50SQ2.4S-62	0.40	50	180	125	262	180	90	90	364	60	13
50SQ2.75-62	0.75	50	180	125	282	180	90	90	384	60	14

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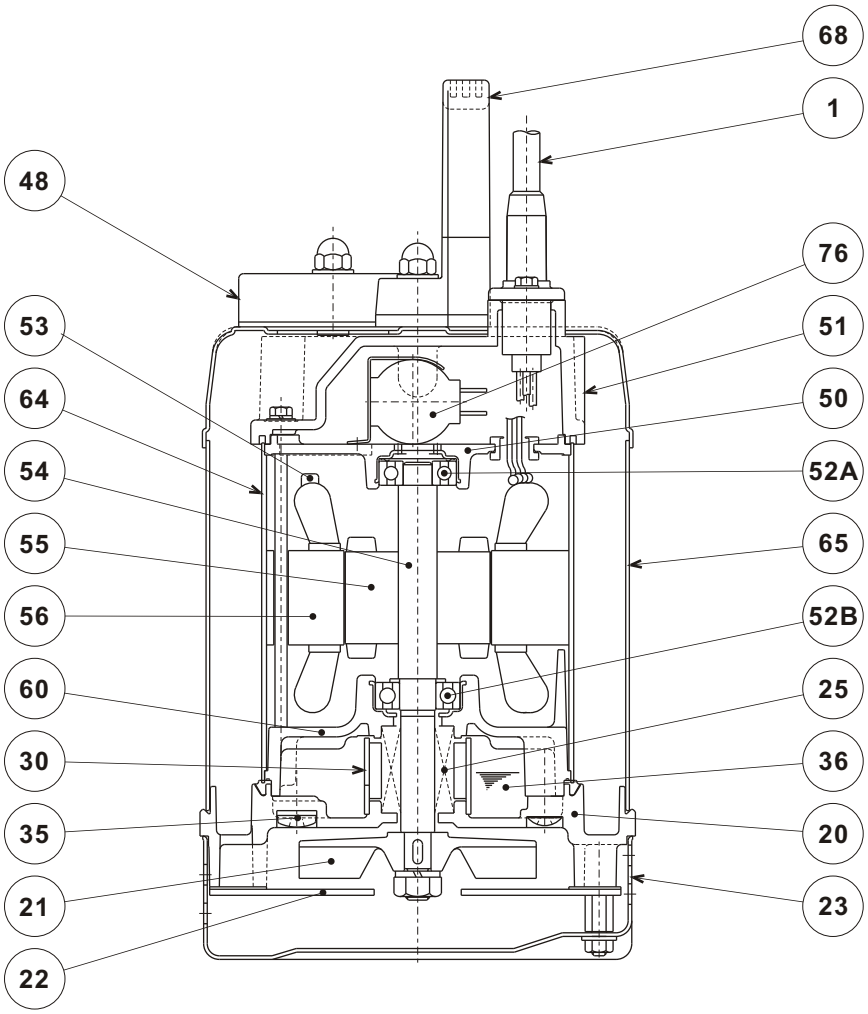
SECTIONAL VIEW

50SQ2.4S-62



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	ASTM, AISI CODE	RELATED DIN CODE	Q'TY
1	Power Cable	PVC Sheath AWG16/3-32ft			1
20	Pump Casing	Stainless Steel Casting	A743 CF-8	17445 G-X6 CrNi 18-9	1
21	Impeller	Stainless Steel Casting	A743 CF-8	17445 G-X6 CrNi 18-9	1
22	Suction Cover	Stainless Steel	AISI 304	17440 X5 CrNi 18-9	1
23	Suction Strainer	Stainless Steel	AISI 304	17440 X5 CrNi 18-9	1
25	Mechanical Seal	Silicon Carbide / W-14HL			1
30	Oil Lifter	PBT Plastic w/(GF+MD)40			1
35	Oil Plug	Stainless Steel	AISI 304	17440 X5 CrNi 18-9	1
36	Lubricant	White Oil ISO VG15			
48	Companion Flange	PBT Plastic W/GF30 / NPT 2"			1
50	Motor Bracket	Aluminum Alloy Die Casting	B85 , A383	N/A (BS Code LM 2)	1
51	Motor Head Cover	Stainless Steel Casting	A743 CF-8	17445 G-X6 CrNi 18-9	1
52A	Upper Bearing	#6201ZZC3			1
52B	Lower Bearing	#6202ZZC3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	AISI 304	17440 X5 CrNi 18-9	1
55	Rotor				1
56	Stator				1
60	Bearing Housing	Aluminum Alloy Die Casting	B85, A383	N/A, (BS Code LM 2)	1
64	Motor Housing	Stainless Steel	AISI 304	17440 X5 CrNi 18-9	1
65	Outer Cover	Stainless Steel	AISI 304	17440 X5 CrNi 18-9	1
68	Handle	ABS Resin			1
76	Capacitor				1