

 TSURUMI PUMP	LH - SERIES DEWATERING PUMP	SPECIFICATIONS
<p>■ FEATURES</p> <ol style="list-style-type: none"> 1. Semi-open, high chrome iron impeller with replaceable / adjustable high chrome iron wear rings, increases wear resistance, when pumpage contains abrasive particles. 2. Double inside mechanical seals with silicon carbide faces, (both top and bottom) 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. 3. Highly efficient, continuous duty air filled, copper wound motor with class B, F insulation minimizes the cost of operation. 4. Built in thermal & amperage sensing protector prevents motor failure due to 	<p>overloading or accidental run -dry conditions.</p> <ol style="list-style-type: none"> 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. <p>■ APPLICATIONS</p> <ol style="list-style-type: none"> 1. Commercial, industrial wastewater and construction site drainage. 2. Effluent transfer. 3. Decorative waterfalls and fountains. 4. Raw water supply from rivers or lakes. 	   <p>EQUIPPED</p>
<p>■ SPECIFICATIONS</p> <p>Discharge Size Horsepower Range Performance Range Capacity Head Maximum water temperature Materials of Construction Casing Impeller Shaft Motor Frame Fasteners Seal Pressure Relief Ports Mechanical Seal Elastomers Impeller Type Solids Handling Capability</p> <p>Bearings</p> <p>Motor Nomenclature Type, Speed, Hz. Voltage, Phase Insulation</p> <p>Accessories</p> <p>Operational Mode</p>	<p>■ STANDARD</p> <p>3" ~ 8" NPT (80 mm ~ 200 mm) 4 ~ 150 HP. (3 ~ 110 Kw) 26.4 ~ 1717.0 GPM. (0.1 ~ 6.5 m³/min) 20.5 ~ 604.0 Ft. (6.25 ~ 184.1m) 104° F. (40° C.)</p> <p>Cast Iron , Ductile Cast Iron High Chrome Cast Iron 420 Stainless Steel Cast Iron 304 Stainless Steel 50 - 150HP (37 - 110 kW) Silicon Carbide NBR (Nitrile Butadiene Rubber) Semi-open, solids handling. 0.236 - 0.787" (6 - 20mm)</p> <p>Prelubricated, Double Shielded</p> <p>Air Filled, 3600 RPM, 60 Hz. 208/230/460/575 V., 3 Phase. Class B , F</p> <p>Submersible Power Cable 50 - 65' (15 - 20m)</p> <p>Manual</p>	<p>■ OPTIONS</p> <p>Length as Required.</p> <p>TS-303 Float Switch</p>

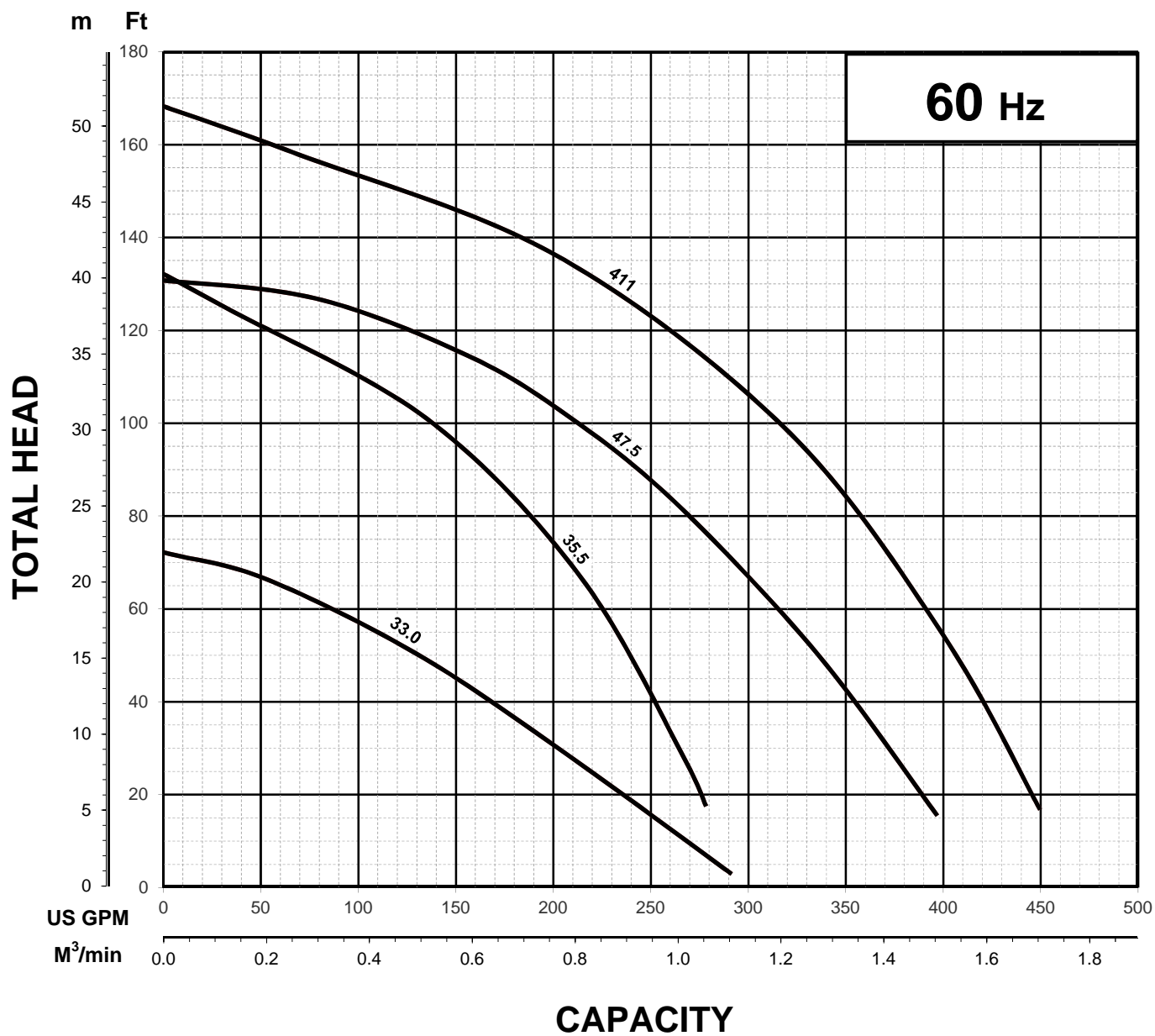


LH - SERIES

SUBMERSIBLE DEWATERING PUMPS

PERFORMANCE
RANGE

GROUP PERFORMANCE RANGE

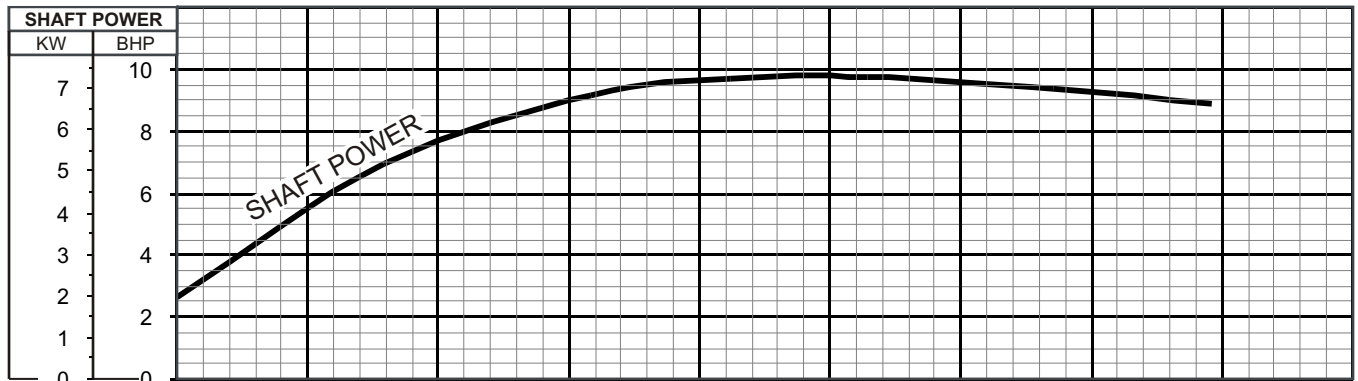
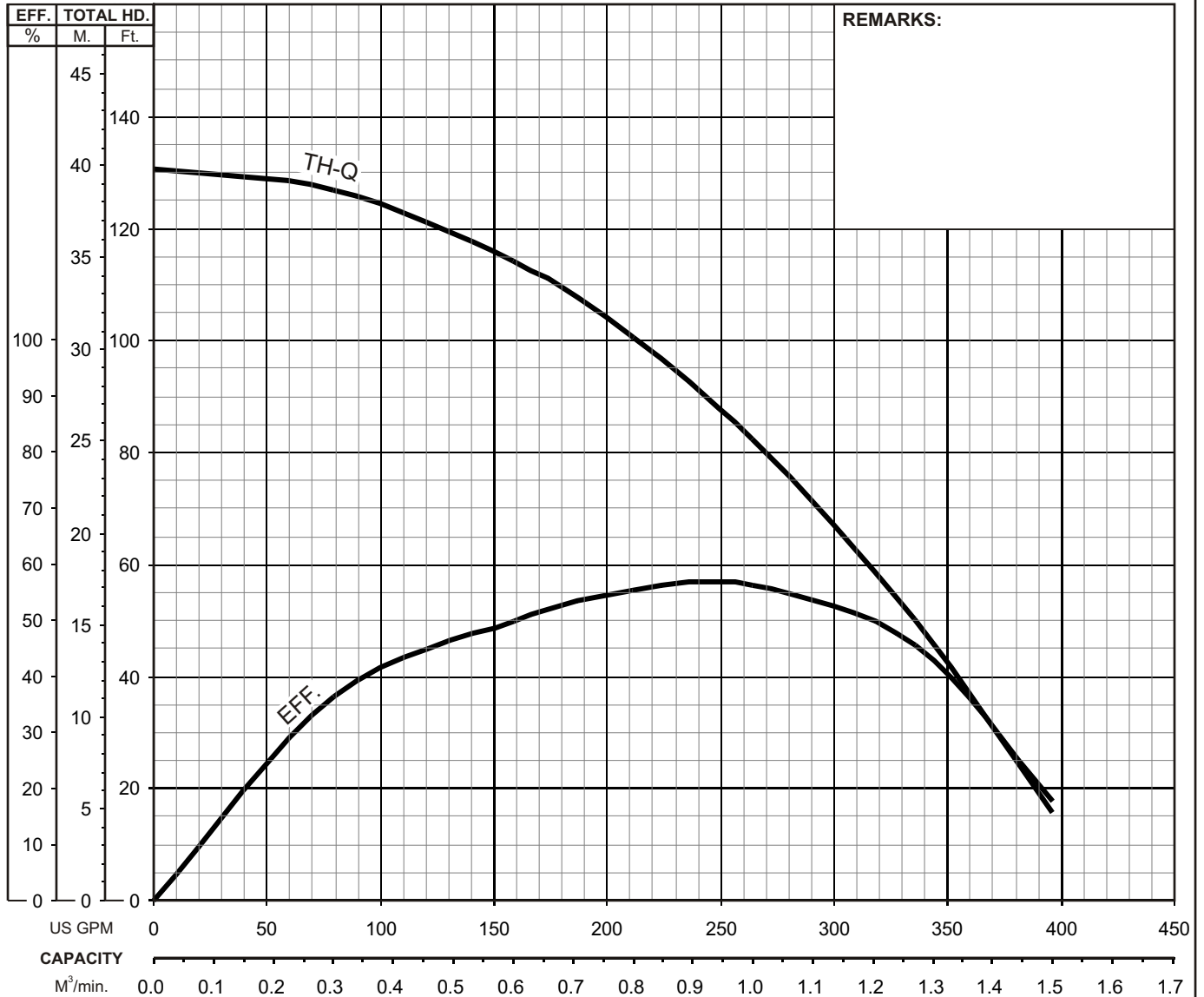


Note

Ex.


TSURUMI PUMP
**LH - SERIES
DEWATERING PUMPS**
**PERFORMANCE
CURVE**

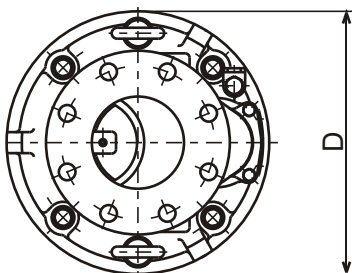
MODEL		BORE	HP	KW	RPM	SOLIDS DIA	LIQUID		SG.	VISCOSITY	TEMP.
LH47.5-61		4"/100mm	10	7.5	3490	0.334"/8.5mm	Water		1.0	1.123 cSt.	60°F
PUMP TYPE		PHASE	VOLTAGE		AMPERAGE		HZ	STARTING METHOD		INS. CLASS	
Dewatering Pump		3	208-220 / 440		28.0-26.5 / 13.5		60	Direct On Line		B	
CURVE No.	DATE	PHASE	VOLTAGE		AMPERAGE		HZ	STARTING METHOD		INS. CLASS	
-	-	-	-		-		-	-		-	





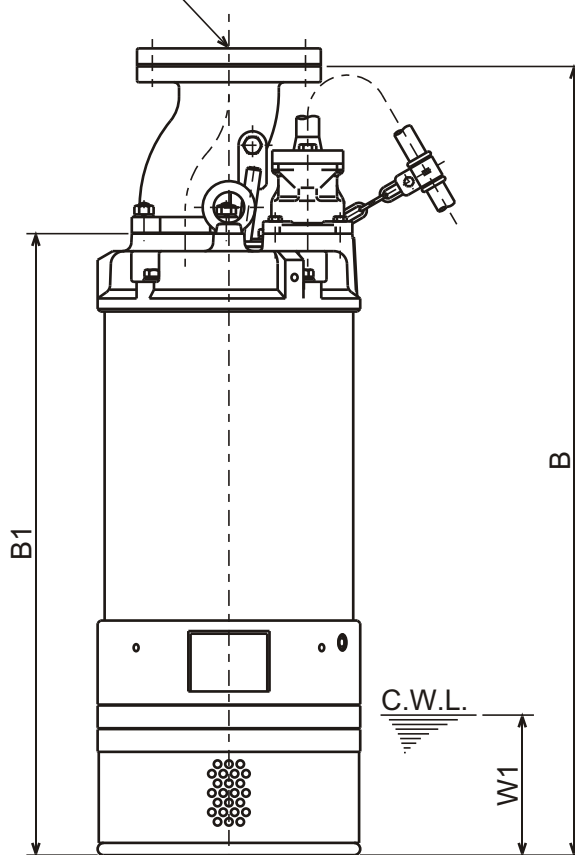
LH - SERIES **DEWATERING PUMPS**

DIMENSIONS



LH47.5-61
LH411-61

4" JIS10K (150PSI) Flange
 with
 4" NPT Companion Flange



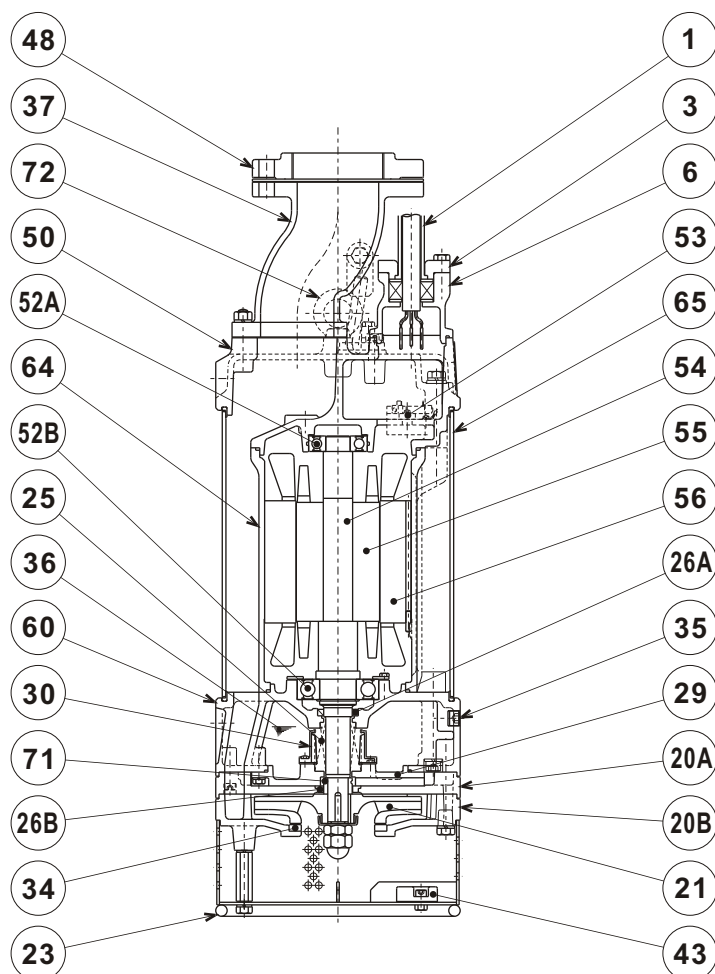
C.W.L. : Continuous running Water Level

DIMENSIONS:USCS (Inch)

Model	HP	NOM. SIZE	Pump & Motor			C.W.L.	Wt. (lbs.)
			B	B1	D	W1	
LH47.5-61	10	4"	35 1/2	27 15/16	11 13/16	6 1/4	287
LH411-61	15	4"	35 1/2	27 15/16	11 13/16	6 1/4	302

DIMENSIONS:METRIC (mm)

Model	kW	NOM. SIZE	Pump & Motor			C.W.L.	Wt. (kg)
			B	B1	D	W1	
LH47.5-61	7.5	100	901	710	300	160	130
LH411-61	11	100	901	710	300	160	137


TSURUMI PUMP
**LH - SERIES
DEWATERING PUMPS**
SECTIONAL VIEW
**LH47.5-61
LH411-61**


ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable (LH47.5-61) Power Cable (LH411-61)	Chloroprene Sheath AWG10/4-50ft Chloroprene Sheath AWG8/4-50ft			1
3	Gland	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
6	Stuffing Box	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
20A	Upper Pump Casing	Ductile Cast Iron	A536 65-45-12	EN 1563 GJS-450-10	1
20B	Lower Pump Casing	Ductile Cast Iron	A536 65-45-12	EN 1563 GJS-450-10	1
21	Impeller	High Chrome Cast Iron	A532 Class TypeA	DIN 1695 G-X260Cr27	1
23	Suction Strainer	Steel	A283 Grade D	EN 10025 S275	1
25	Mechanical Seal	Silicon Carbide / H-30T			1
26A	Oil Seal	NBR / SC-35508			1
26B	Labyrinth Ring	Stainless Steel	S 30400	1.4301	1
29	Oil Casing	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
30	Oil Lifter	PBT Resin W/GF40			1
34	Mouth Ring	High Chrome Cast Iron	A532 Class TypeA	DIN 1695 G-X260Cr27	1
35	Oil Plug	Stainless Steel	S 30400	1.4301	1
36	Lubricant	Turbine Oil ISO VG32 or SAE 10W-20			
37	Discharge Pipe	Ductile Cast Iron / 4" JIS10K	A536 65-45-12	EN 1563 GJS-450-10	1
43	Cathodic Protection Plate	Zinc Anode			4
48	Companion Flange	Cast Iron / NPT4" JIS10K	A48M Class30B	EN 1561 GJL-200	1
50	Motor Bracket	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
52A	Upper Bearing	#6306ZZC3			1
52B	Lower Bearing	#6309ZZC3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	S 42000	1.4028	1
55	Rotor				1
56	Stator				1
60	Bearing Housing	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
64	Motor Housing	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
65	Outer Cover	Steel	A283 Grade D	EN 10025 S275	1
71	Shaft Sleeve	Stainless Steel	S 40300	1.4000	1
72	Lifting Lug Bolt	Stainless Steel	S 30400	1.4301	2


TSURUMI PUMP
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DEWATERING PUMPS**
**SAMPLE
SPECIFICATIONS**
1. SCOPE OF SUPPLY -

Furnish and install TSURUMI Model _____ Submersible Pump(s).
Each unit shall be capable of delivering _____ GPM (_____ m³/min) at _____ Feet (_____ m) TDH. The pump(s) shall be designed to pump waste water or effluent 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 major parts of the pumping unit(s) shall be gray cast iron, ASTMA48 CLASS 35. Impellers and field adjustable/replaceable wear plates shall be high chrome iron. Internal and external surfaces coming into contact with the pumpage shall be protected by a fused polymer coating. All exposed fasteners shall be stainless steel. All units up to 75 HP and LH875/890/8110 shall be furnished with 150 lb. (10 kg/cm²) flat face flange and NPT companion flange. LH675/690/6110 shall be furnished with 300 lb. (20 kg/cm²) flat face flange and NPT companion flange. Impellers shall be of the multi-vane enclosed solids handling design equipped with back pump out vanes and shall be slip fit to the shaft and key driven. The unit(s) shall include built in cathodic protection.

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 and further protected by an exclusionary oil seal located between the bottom seal faces and the fluid being pumped. 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 be 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. Unit(s) shall incorporate seal pressure relief ports. Units 75 Hp and above shall be supplied with electrode type seal sensor. All unit(s) shall be fitted with a replaceable shaft sleeve.

4. MOTOR-

The pump motor(s) shall be _____ H P., _____ kW., _____ V., 60 Hz. 3 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 F or B (up to 30 HP) insulated with built in thermal protection for each winding. Motor shaft shall be 420 stainless steel and shall be supported by two high temperature bearings, with a B-10 life rating at best efficiency point of 60,000 hours. On units up to 60 HP, the bottom bearing shall be two row, double shielded, C3, deep groove type ball bearing, and the top bearing shall be single row, double shielded, C3, deep groove type ball bearing. On units 75 HP and above, the bottom bearing shall be re-greasable, two row, C3, angular contact type ball bearing, and the top bearing shall be re-greasable, single row, C3, cylindrical roller bearing. Motors shall be D.O.L. or star-delta start (40 HP and above), and 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 and shall be field replaceable utilizing standard submersible pump cable. The cable entrance shall incorporate built in strain relief and a combination three way mechanical compression sealing. 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.