

# KTD

A cast iron made, heavy-duty slurry pump employing the KTZ-series as the base



**NEW** Tsurumi Agitator Pump **KTD Series** is a cast iron made, heavy-duty slurry pump employing the KTZ Series as the base. An agitator is provided to assist smooth suction of the pumping fluid. The side-flow, top-discharge design keeps the motor cooling even if the pump is operated continuously with its motor exposed in air, and it makes the pump easier to place in a confined space.

**KTD Series** is suitable for transferring or draining bentonite slurry used for slurry drilling, draining slurry mixed water in civil engineering works or foundation works.

## Standard Specifications

MODEL	MOTOR SPECIFICATIONS					PUMP SPECIFICATIONS			DIMENSIONS				
	Motor Output (HP)	Rated Current (A)				RPM	Discharge Size (in.)	Maximum Capacity (GPM)	Maximum Head (ft.)	Dimension (in.)		Continuous Running Water Level (in.)	Pump Weight (lbs.)
		208V	230V	460V	575V					Diameter	Height		
KTD22.0	2.7	8.7*	8.2	4.1	3.3	3410	2	111	66	9 1/4	23 3/16	5 1/2	86
KTD33.0	4	12.0*	11.4	5.9	4.5	3410	3	209	75	11 11/16	25 3/4	6 1/4	145

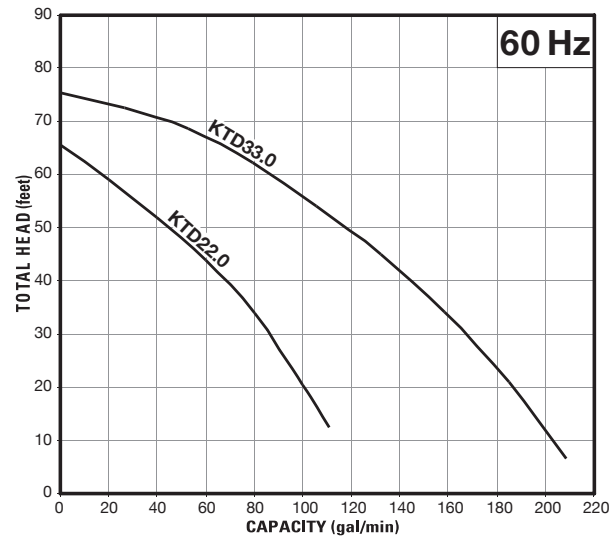
\* : 208 & 230V same motor

## Major Components & Specifications

Discharge Bore		inches	2	3
Pumping Fluid	Type of Fluid	Sludge, Slurry, Fluid containing Mud		
	Fluid Temperature	32 ~ 104°F		
Pump	Structure	Impeller	Semi-open	
		Shaft Seal	Double Mechanical Seal with Oil Lifter	
		Bearing	Double-shielded Ball Bearing	
	Materials	Impeller	High-chromium Cast Iron	
		Shaft Seal	Silicon Carbide	
		Casing	Gray Cast Iron	
	Agitator	Ductile Cast Iron		
Motor	Type, Pole	Dry Type Submersible Induction Motor, 2-pole		
	Insulation	Class F		
	Phase	Three-phase		
	Starting Method	Direct on Line		
	Protection Device (Built-in)	Circle Thermal Protector		
	Lubricant	Turbine Oil (ISO VG32)		
	Materials	Frame	Gray Cast Iron	
		Shaft	420 Stainless Steel	
Cable		PVC (KTD22.0) Chloroprene Rubber (KTD33.0)		
Discharge Connection		NPT Coupling		

\* We reserve the right to change the specifications and designs for improvement without prior notice.

## Performance Curves

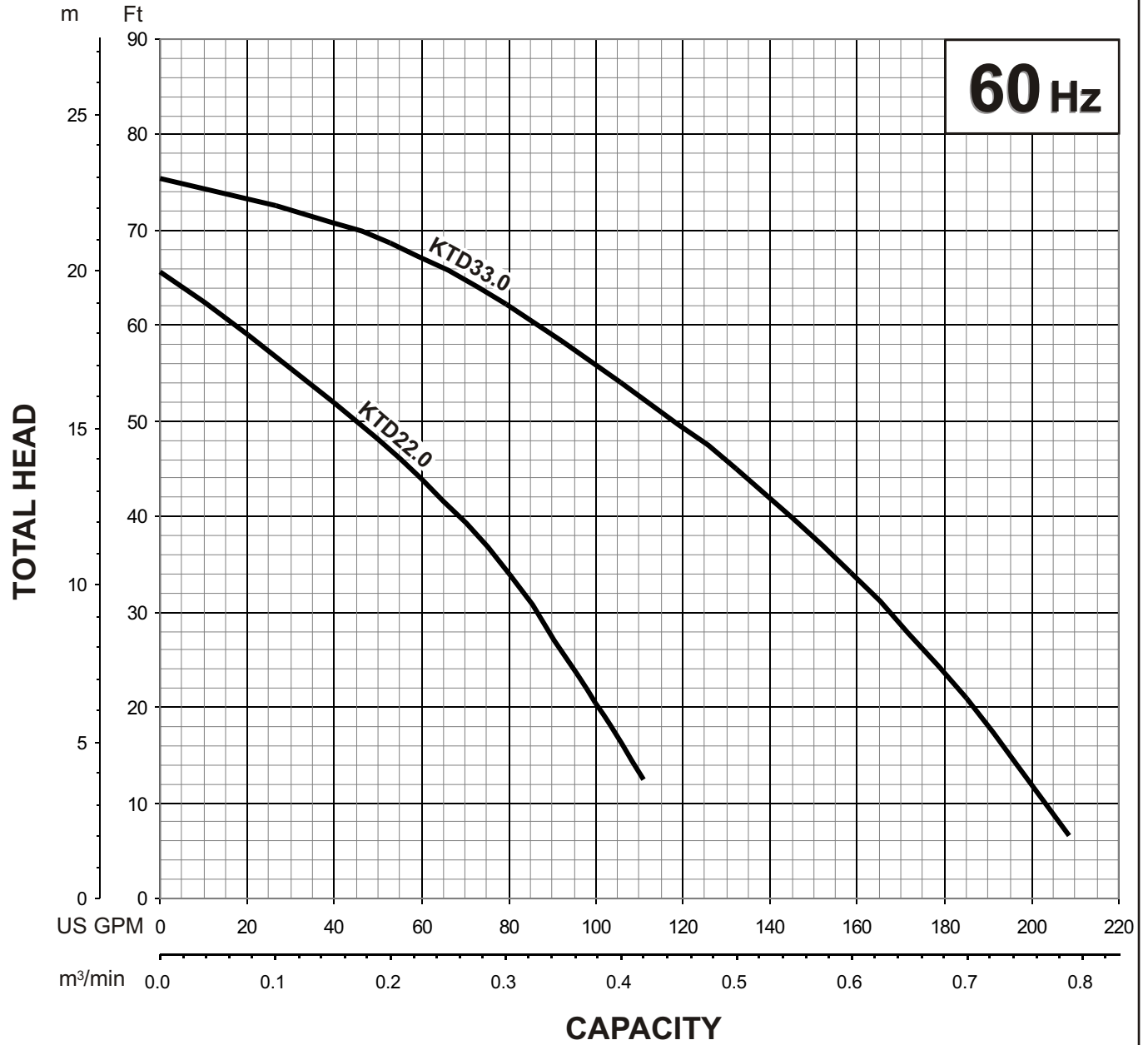




# KTD - SERIES SUBMERSIBLE AGITATOR PUMPS

# PERFORMANCE RANGE

## GROUP PERFORMANCE RANGE

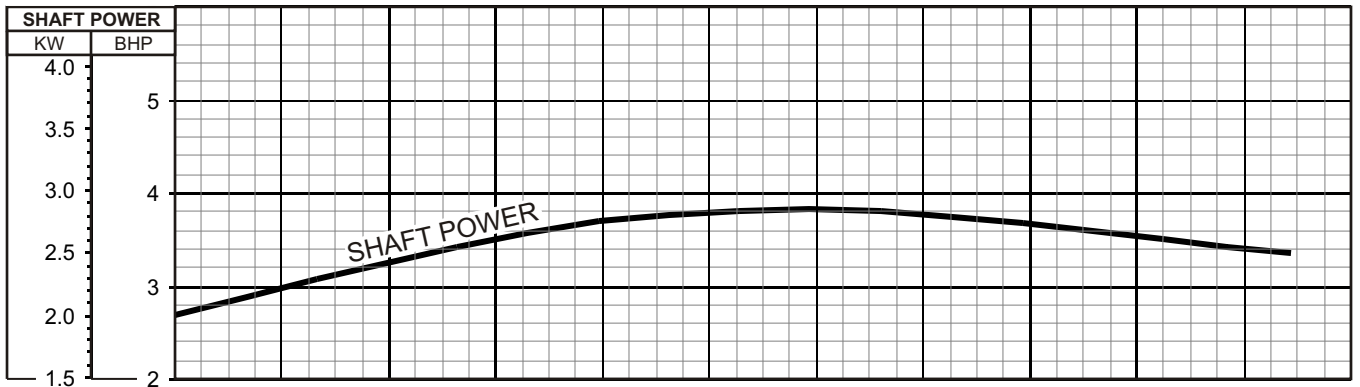
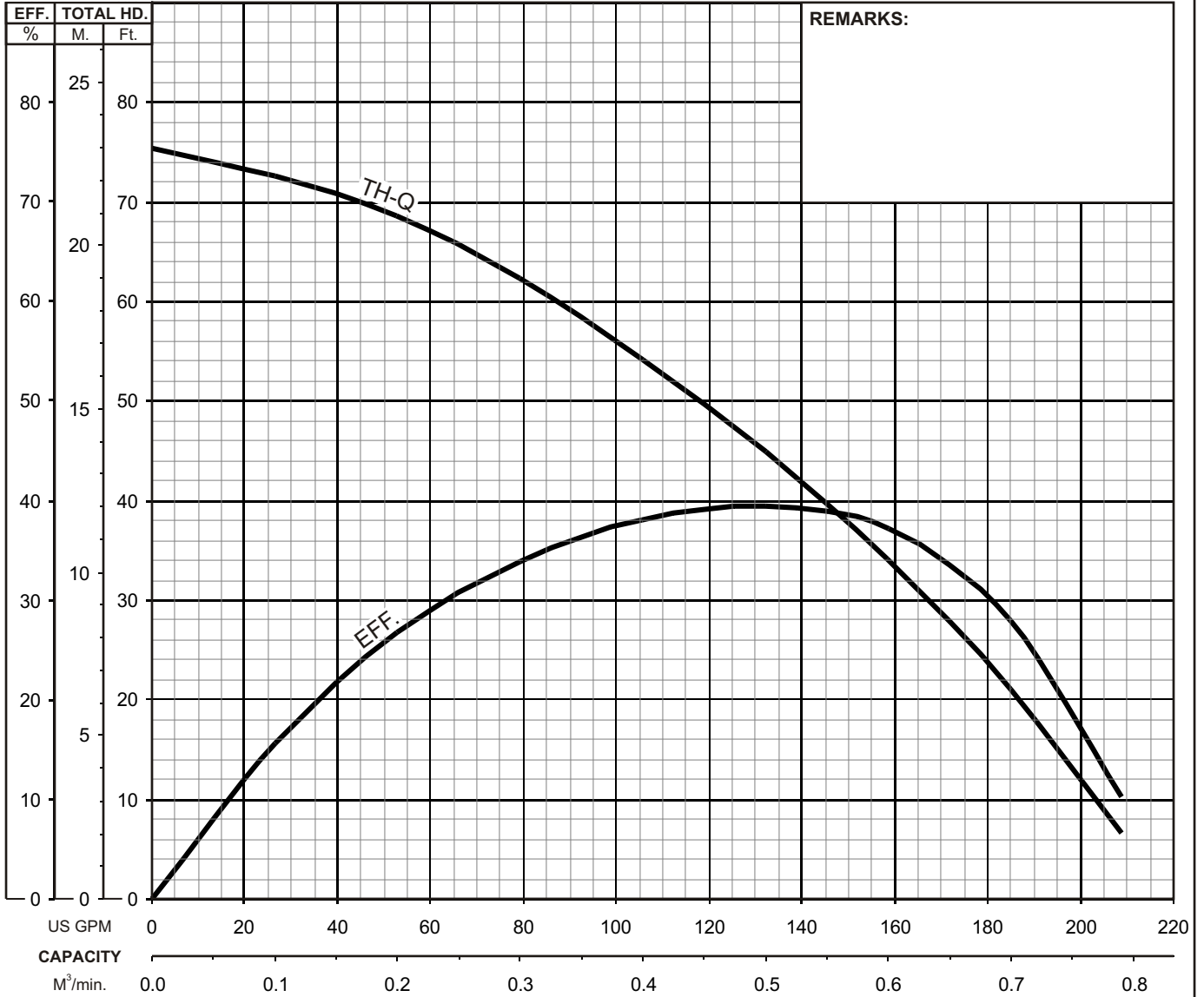




## KTD - SERIES SUBMERSIBLE AGITATOR PUMPS

## PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTD33.0-63	3"/80mm	4	3.0	3410	0.394"/10mm	Water	1.0	1.123 cSt.	60°F
PUMP TYPE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS			
Agitator Pump	3	208-230/460/575	12.0-11.4 / 5.9 / 4.5	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

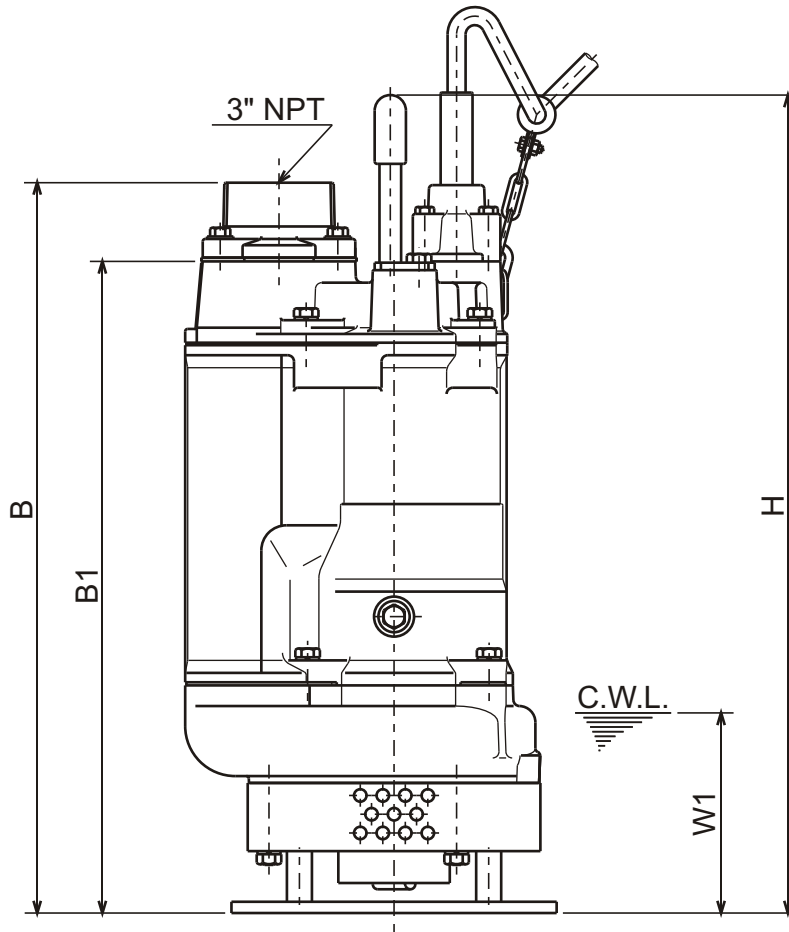
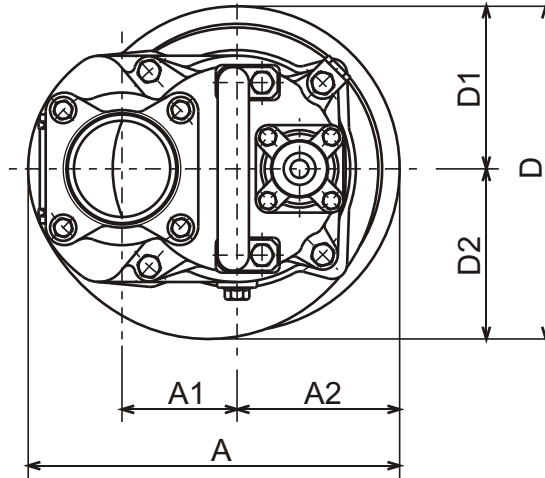




**KTD - SERIES**  
**SUBMERSIBLE AGITATOR PUMPS**

**DIMENSIONS**

**KTD33.0-63**



C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (In ch)**

Model	HP	NOM. SIZE	Pump & Motor									C.W.L.	*Wt.
			A	A1	A2	B	B1	D	D1	D2	H	W1	(lbs.)
KTD33.0-63	4	3"	11 11/16	3 5/8	5 1/8	23	20 1/2	10 1/2	5 1/8	5 3/8	25 3/4	6 1/4	145

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor									C.W.L.	*Wt.
			A	A1	A2	B	B1	D	D1	D2	H	W1	(kg)
KTD33.0-63	3.0	80	297	92	130	584	521	266	130	136	654	160	66

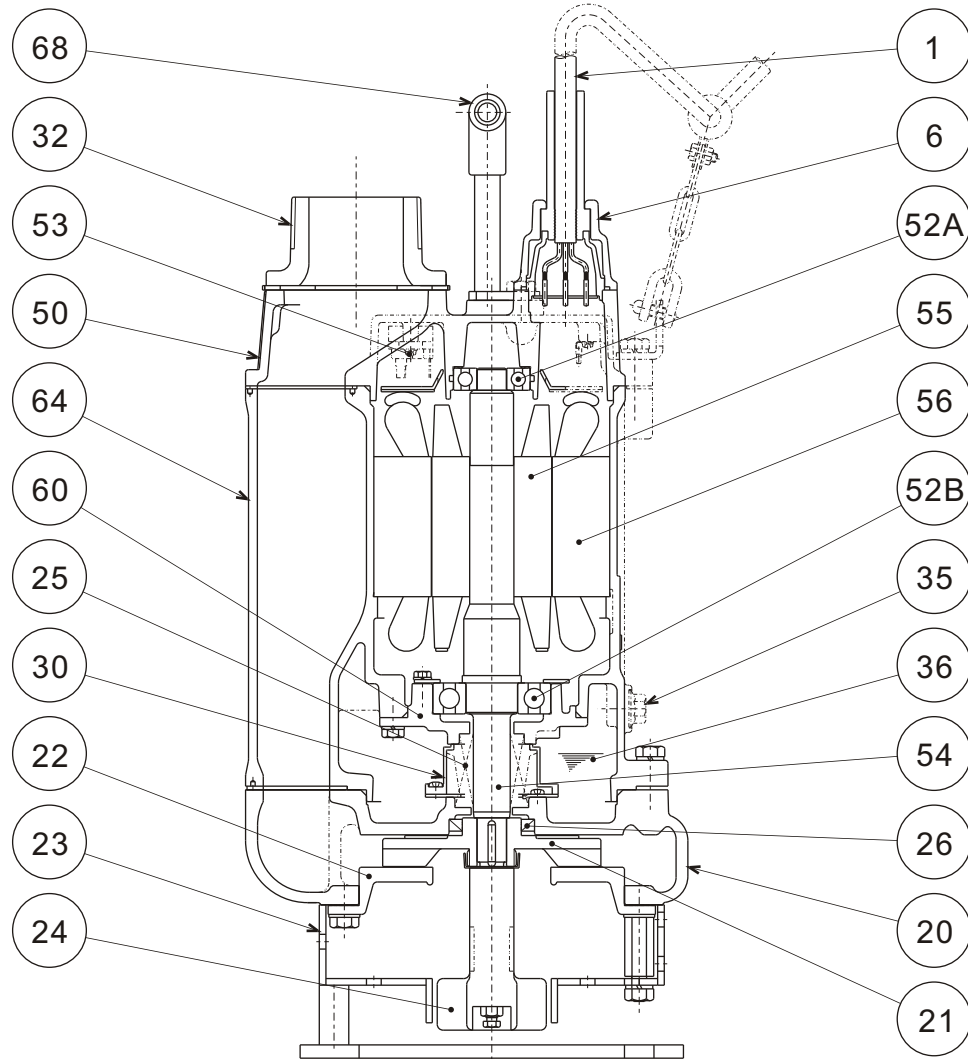
\*Excluding Cable



**KTD - SERIES**  
**SUBMERSIBLE AGITATOR PUMPS**

**SECTIONAL VIEW**

**KTD33.0-63**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	Chloroprene Sheath AWG14/4-50ft			1
6	Stuffing Box	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
20	Pump Casing	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
21	Impeller	High Chrome Cast Iron	A532 Class III Type A	DIN 1695 G-X260Cr27	1
22	Suction Cover	Ductile Cast Iron	A536 80-55-06	EN 1563 GJS-500-7	1
23	Strainer Stand	Steel + Carbon Steel Pipe	A283 Grade D + A53 Type F	EN 10025 S275 + DIN 1615 St33	1
24	Agitator	Ductile Cast Iron (Hardened)	A536 100-70-03	EN 1563 GJS-700-2	1
25	Mechanical Seal	Silicon Carbide / H-25T			1
26	Oil Seal	Nitrile Butadiene Rubber / TC-40588			1
30	Oil Lifter	PBT Resin			1
32	Discharge Connection	Cast Iron / NPT 3"	A48M Class30B	EN 1561 GJL-200	1
35	Oil Plug	Stainless Steel	S 30400	1.4301	1
36	Lubricant	Turbine Oil ISO VG32 or SAE10W-20			
50	Motor Head Cover	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
52A	Upper Bearing	#6304ZZC3			1
52B	Lower Bearing	#6307ZZC3			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 Class25B	EN 1561 GJL-150	1
64	Motor Housing	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
68	Handle	Carbon Steel Pipe + NBR Rubber	A53 Type F	DIN 1615 St33	1



## KTD - SERIES SUBMERSIBLE AGITATOR PUMPS

## SAMPLE SPECIFICATIONS

### 1. SCOPE OF SUPPLY -

Furnish and install TSURUMI Model \_\_\_\_\_ Submersible Pump(s).

Each unit shall be capable of delivering \_\_\_\_\_GPM ( \_\_\_\_\_m<sup>3</sup>/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 major parts of the pumping unit(s) shall be as follows: Pump casing shall be gray cast iron, ASTM A48 CLASS 35. Motor frame shall be gray cast iron, ASTM A48 CLASS 30. Agitator and Field adjustable/replaceable, wear plate shall be ductile cast iron. Impellers shall be of the multi-vane semi-open design and shall be high chrome cast iron. Impellers shall be equipped with back pump out vanes, slip fit to the shaft and key driven. 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 shall be furnished with \_\_\_\_\_" NPT discharge connector.

### 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.

### 4. MOTOR-

The pump motor(s) shall be \_\_\_\_\_H P., \_\_\_\_\_kW., \_\_\_\_\_V., 60 Hz. 3 Phase Motor(s) shall be rated at \_\_\_\_\_ full load amps. Motor(s) shall have a 1.15 service factor and shall be rated for 10 starts per hour. Motor(s) shall be air filled, copper wound, class B or E (up to 7.5 Hp) insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 403 stainless steel shaft sleeve and 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 -

Units up to 3 HP shall be supplied with a cable entrance that incorporates built in strain relief, a one piece, three way mechanical compression seal and a fatigue reducing cable boot. The pump power cable shall be suitable for submersible pump applications. The power cable on units 5 Hp and above 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 with a fatigue reducing boot. The cable entrance assembly shall contain an anti-wicking block to eliminate water incursion into the motor due to capillary wicking should the power cable be accidentally damaged.