



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**■ STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**■ OPTIONS**

Length as Required

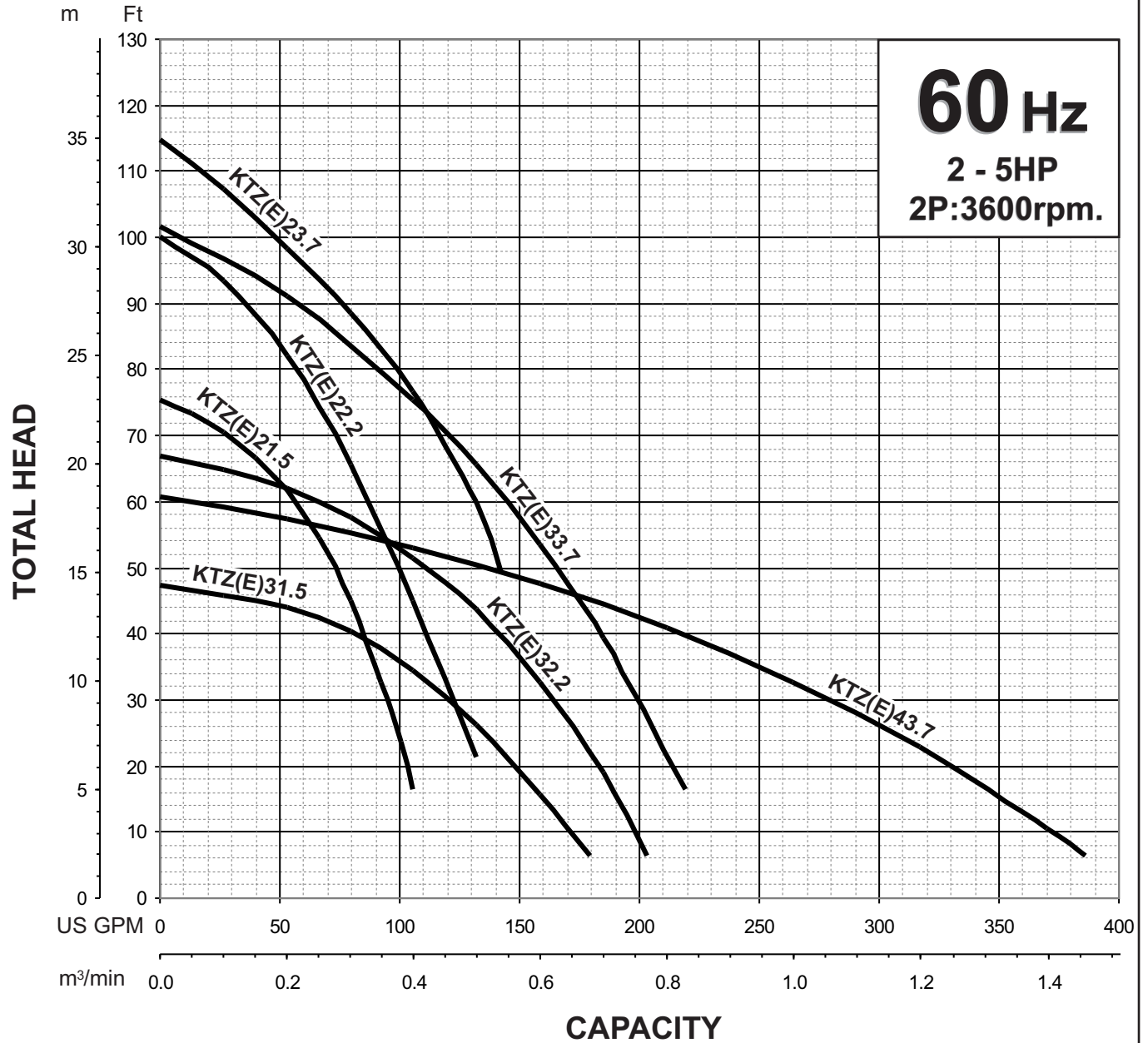


**TSURUMI PUMP**

**KTZ(E) - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

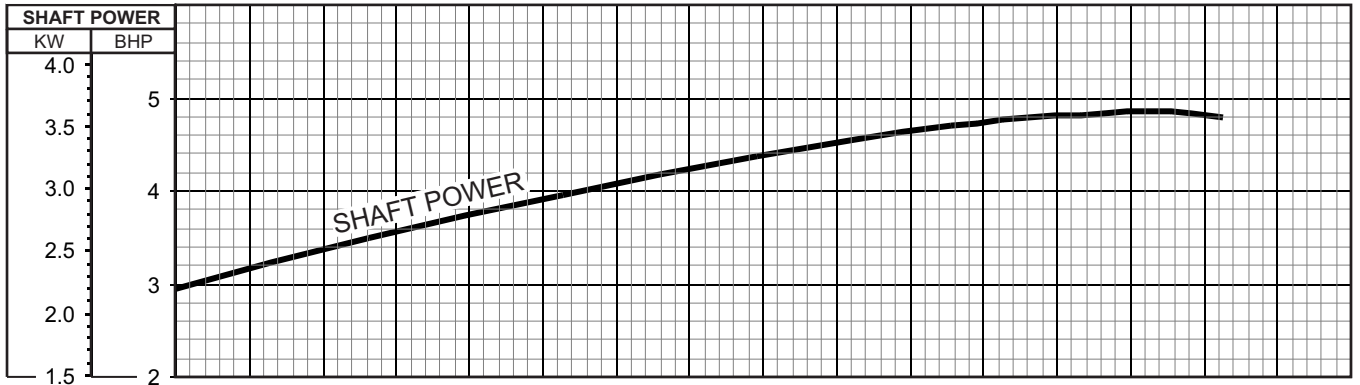
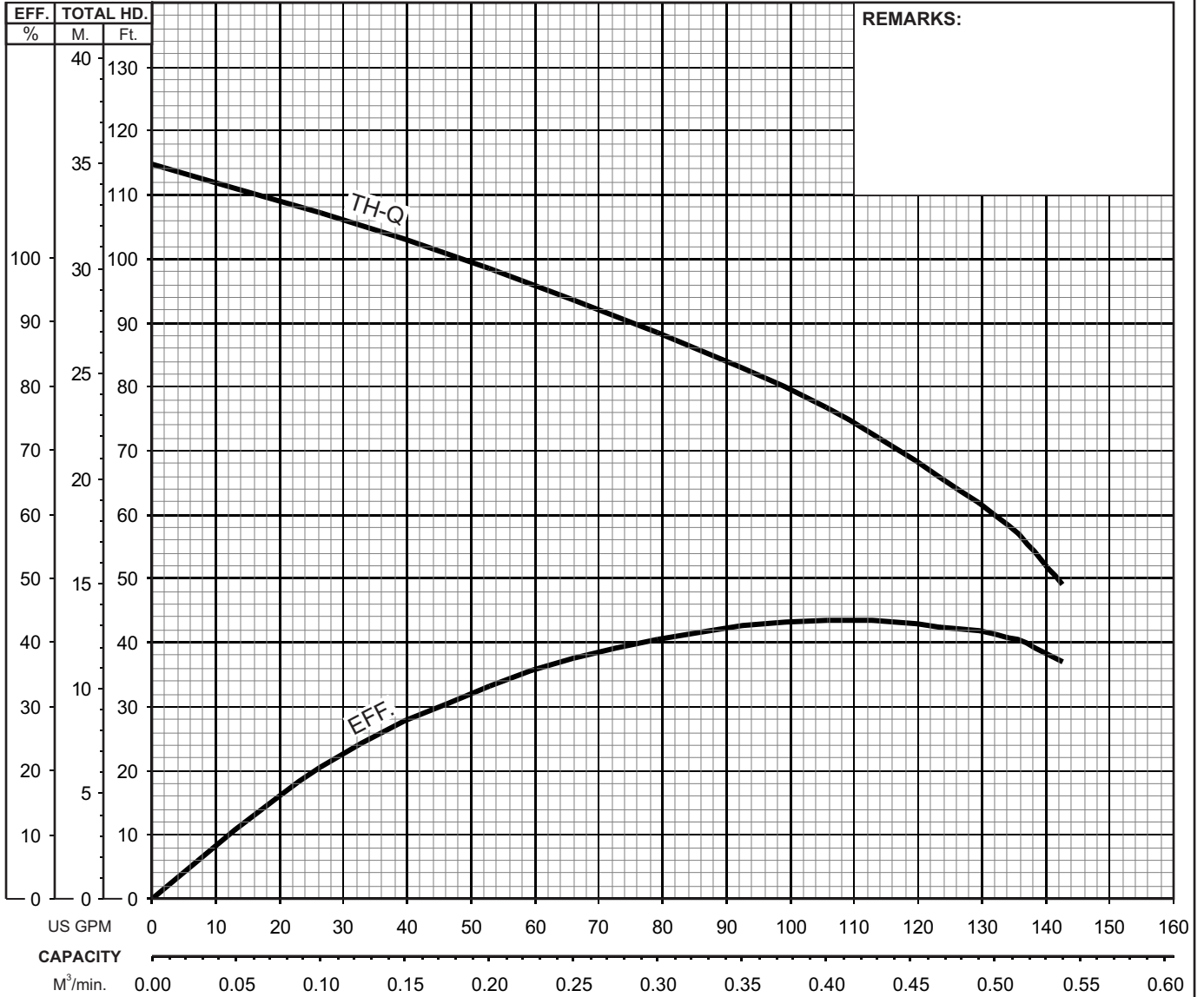




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

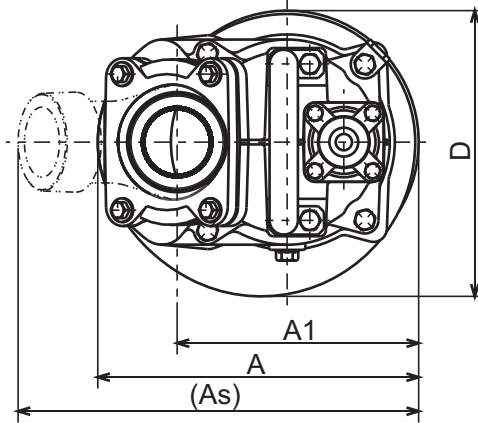
MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ23.7-63	2"/50mm	5	3.7	3410	0.334"/8.5mm	Water	1.0	1.123 cSt.	60°F
PUMP TYPE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS			
Dewatering Pump	3	208-230/460/575	15.0-13.6 / 6.8 / 5.3	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		



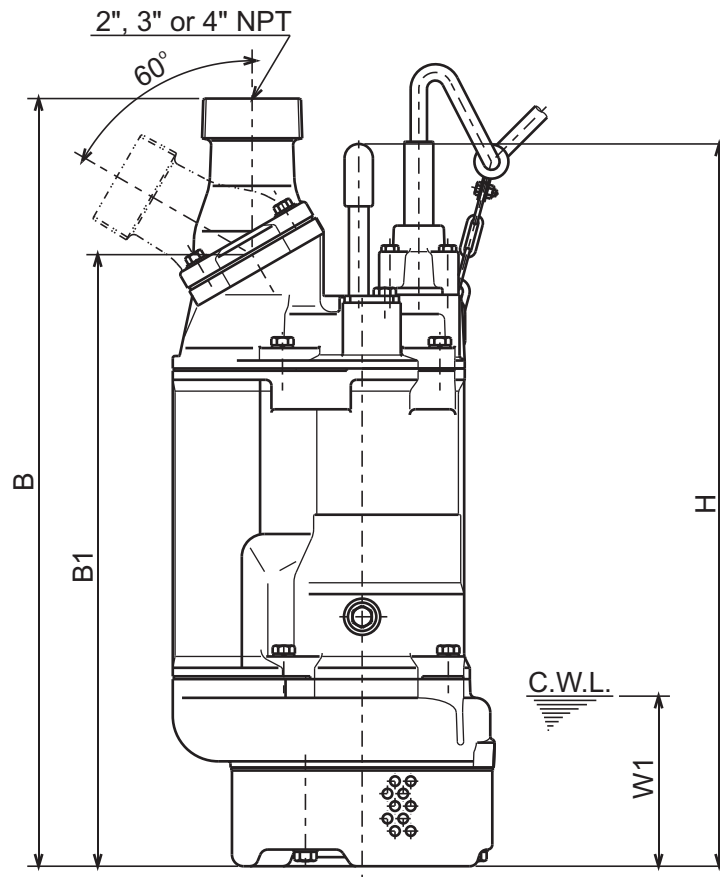


**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**



**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**



C.W.L. : Continuous running Water Level

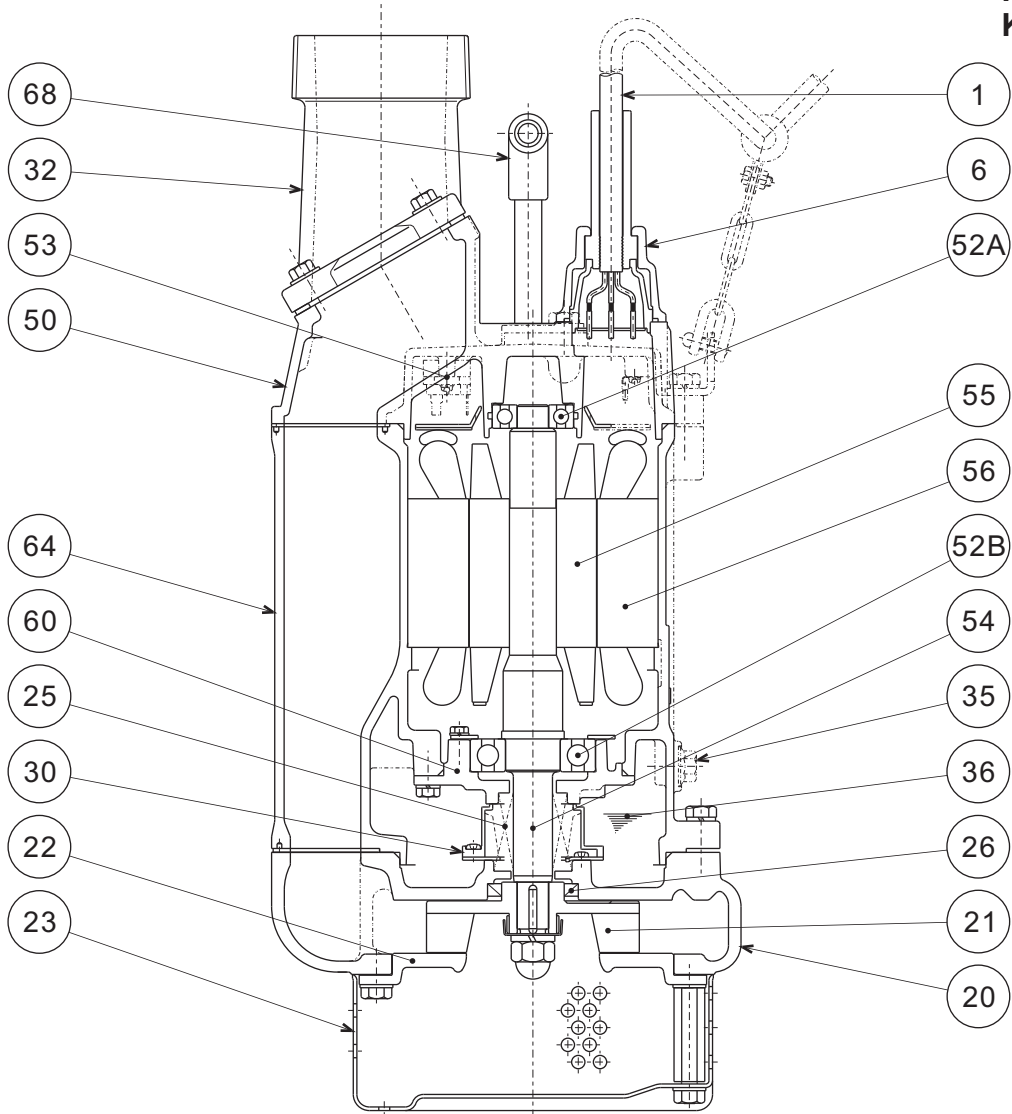
**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt.
			A	As	A1	B	B1	D	H	W1	(lbs.)
KTZ23.7-63	5	2"	11 1/8	13 5/16	8 3/8	26 1/4	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ33.7-63	5	3"	11 1/8	13 7/8	8 3/8	26 5/8	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ43.7-63	5	4"	11 1/8	14 1/2	8 3/8	27 1/16	21 1/4	9 15/16	25 1/16	5 7/8	137

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt.
			A	As	A1	B	B1	D	H	W1	(kg)
KTZ23.7-63	3.7	50	283	337	213	667	539	252	637	150	62
KTZ33.7-63	3.7	80	283	353	213	677	539	252	637	150	62
KTZ43.7-63	3.7	100	283	368	213	687	539	252	637	150	62

**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**



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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	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 2", 3" or 4"	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


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 \_\_\_\_\_ HP., \_\_\_\_\_ 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**■ STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**■ OPTIONS**

Length as Required

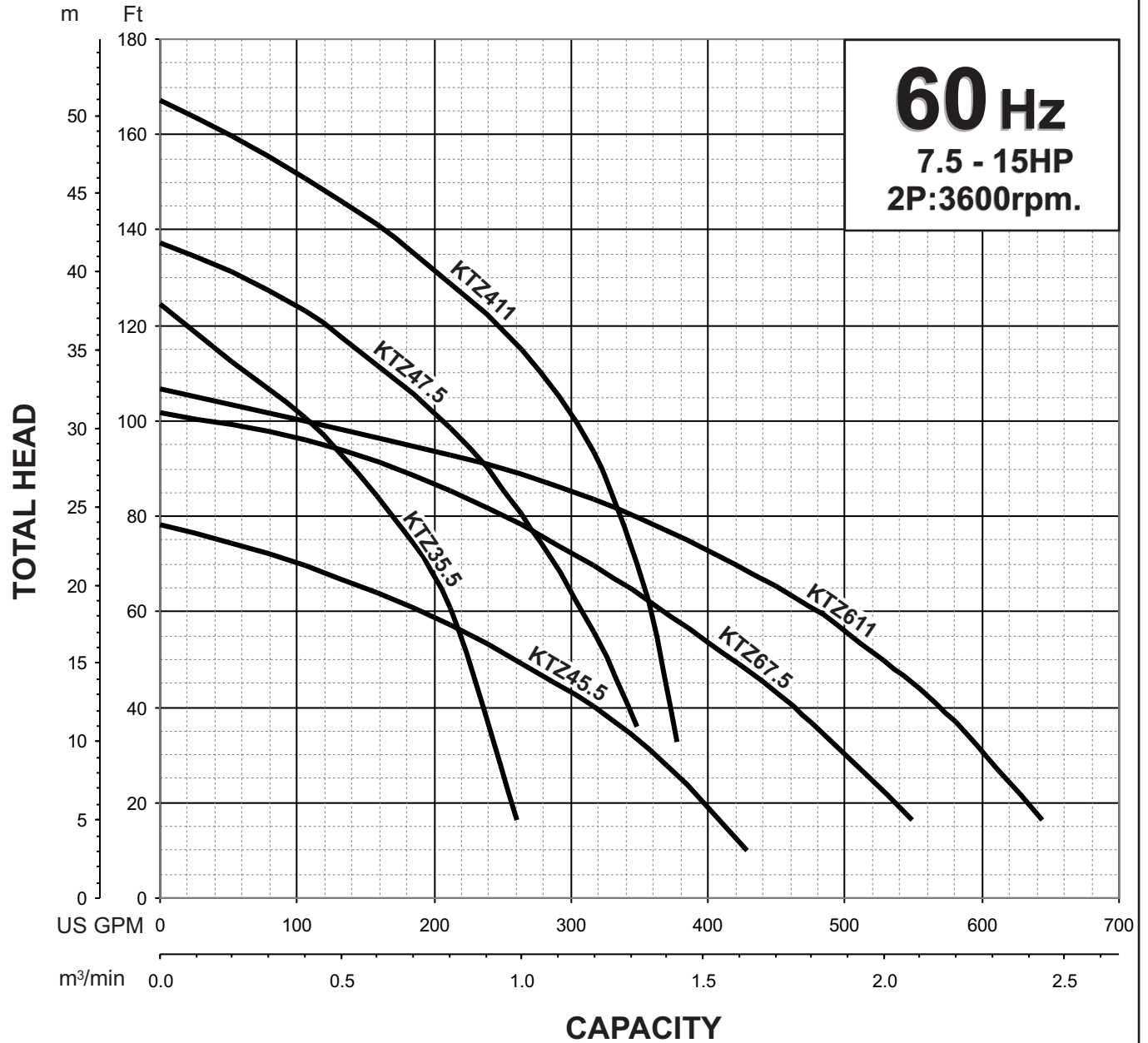


**TSURUMI PUMP**

**KTZ - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

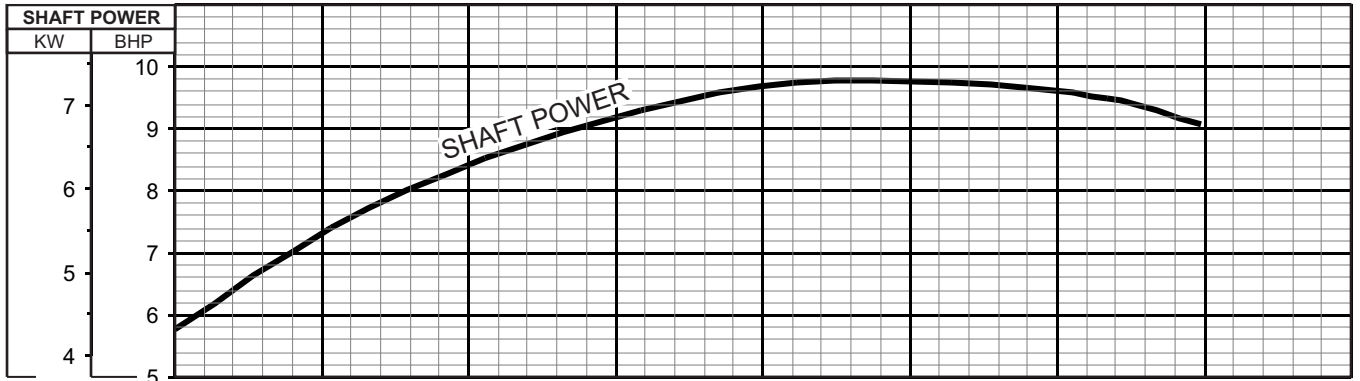
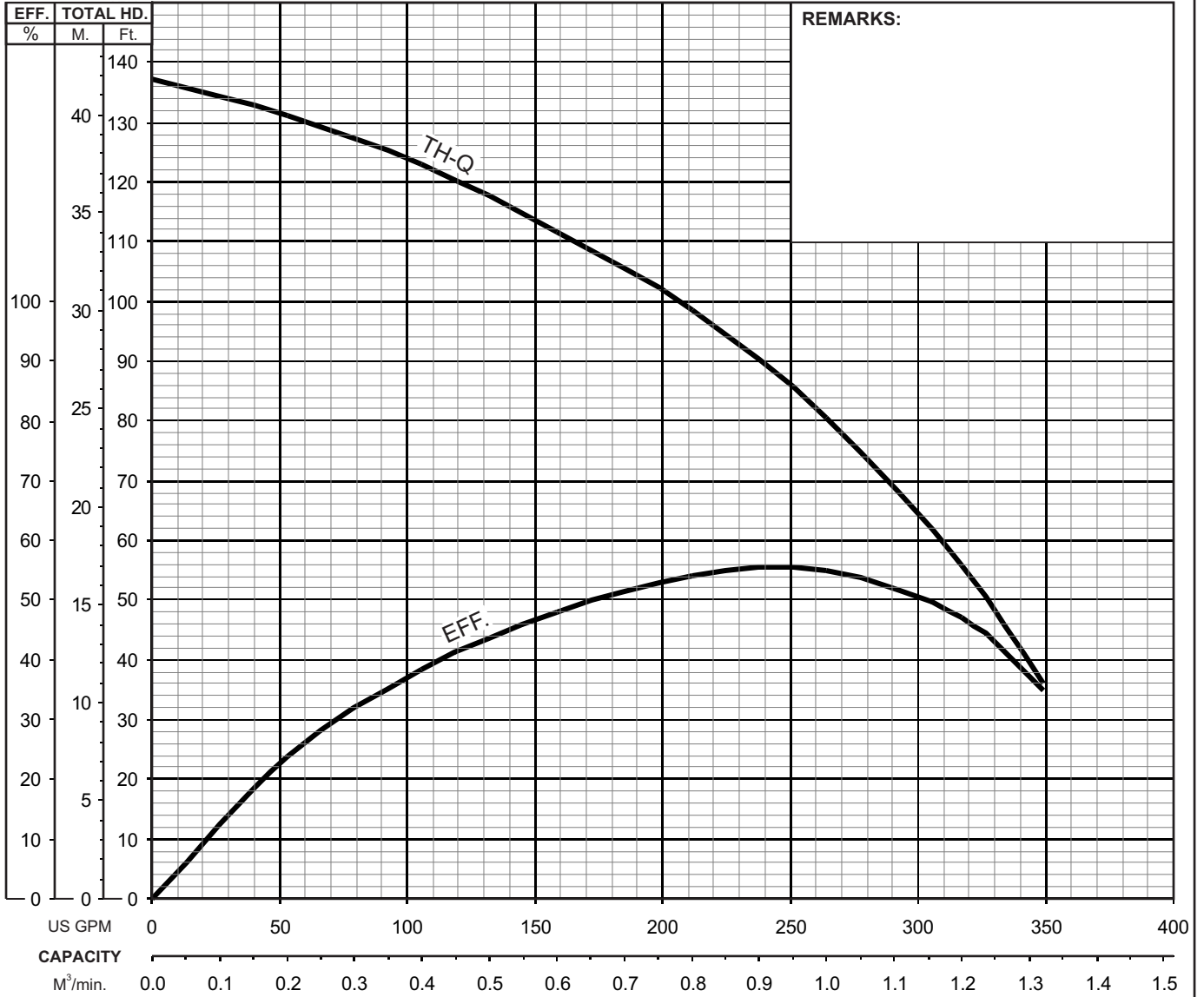




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ47.5-63	4"/100mm	10	7.5	3545	0.472"/12mm	Water	1.0	1.123 cSt.	60°F
PUMP TYPE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS			
Dewatering Pump	3	208-230/460/575	29.8-27.3 / 13.3 / 10.4	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

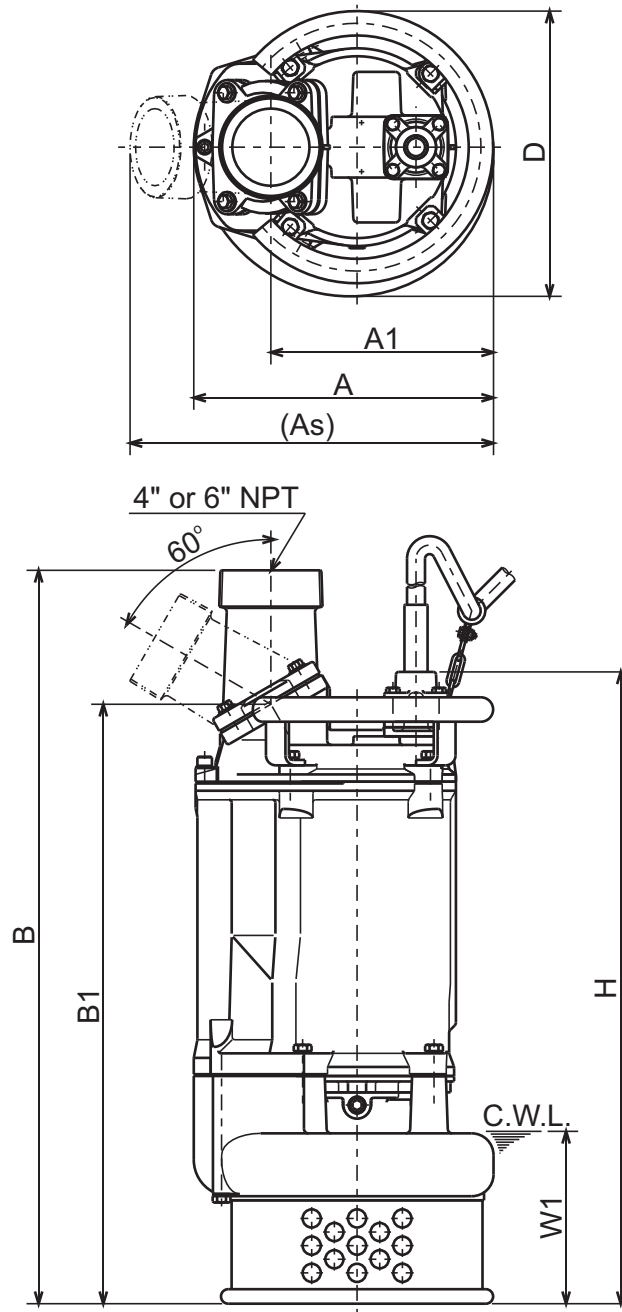




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ47.5-63  
KTZ67.5-63**



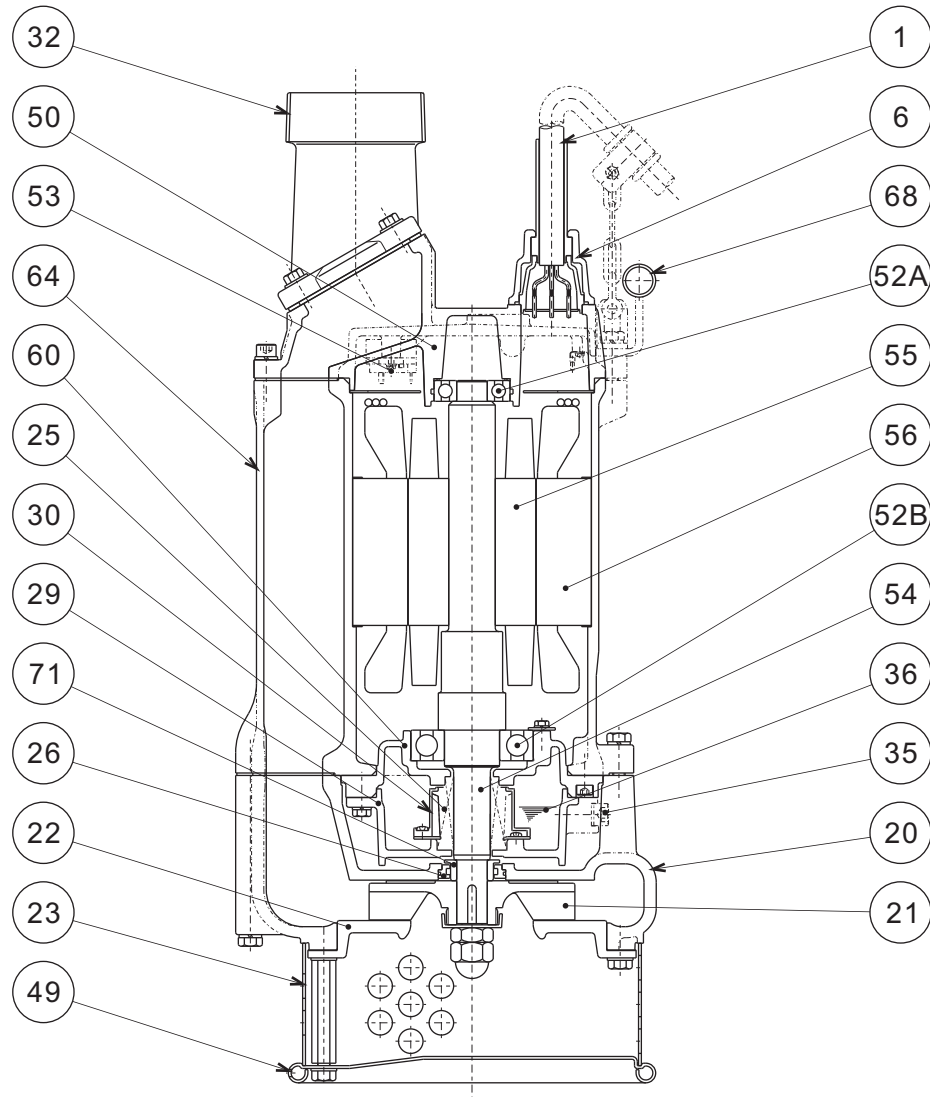
**DIMENSIONS:USCS (Inch)**

C.W.L. : Continuous running Water Level

Model	HP	NOM. SIZE	Pump & Motor							C.W.L. W1	Wt. (lbs.)
			A	As	A1	B	B1	D	H		
KTZ47.5-63	10	4"	13	15 3/4	9 11/16	31 13/16	26	12 3/8	27 7/16	7 1/2	225
KTZ67.5-63(4")	10	4"	13	15 3/4	9 11/16	31 13/16	26	12 3/8	27 7/16	7 1/2	225
KTZ67.5-63	10	6"	14 9/16	15 9/16	11 3/16	31 7/8	26	12 3/8	27 7/16	7 1/2	222

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor							C.W.L. W1	Wt. (kg)
			A	As	A1	B	B1	D	H		
KTZ47.5-63	7.5	100	330	401	245	809	661	314	697	190	102
KTZ67.5-63(4")	7.5	100	330	401	245	809	661	314	697	190	102
KTZ67.5-63	7.5	150	369	395	284	810	661	314	697	190	101

**KTZ47.5-63  
KTZ67.5-63**


ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	Chloroprene Sheath AWG10/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-30T			1
30	Oil Lifter	PBT Resin			1
26	Labyrinth Ring	Stainless Steel	S 30400	1.4301	1
32	Discharge Connection	Cast Iron / NPT 4" (or 6")	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			
49	Bottom Plate	Steel (Cold Rolled)	A109/A1008	EN 10130	1
50	Motor Head Cover	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
52A	Upper Bearing	#6305ZZC3			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 Class25B	EN 1561 GJL-150	1
64	Motor Housing	Cast Iron	A48M Class30B or 25B	EN 1561 GJL-200 or GJL-150	1
68	Handle	Carbon Steel Pipe + Steel	A53 Type F + A283 Grade D	DIN 1615 St33 + EN 10025 S275	1
71	Shaft Sleeve	Stainless Steel	S 40300	1.4000	1


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DEWATERING PUMPS**
**SAMPLE  
SPECIFICATIONS**

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### 4. MOTOR-

The pump motor(s) shall be \_\_\_\_\_ HP., \_\_\_\_\_ 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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.

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**■ SPECIFICATIONS**

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- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
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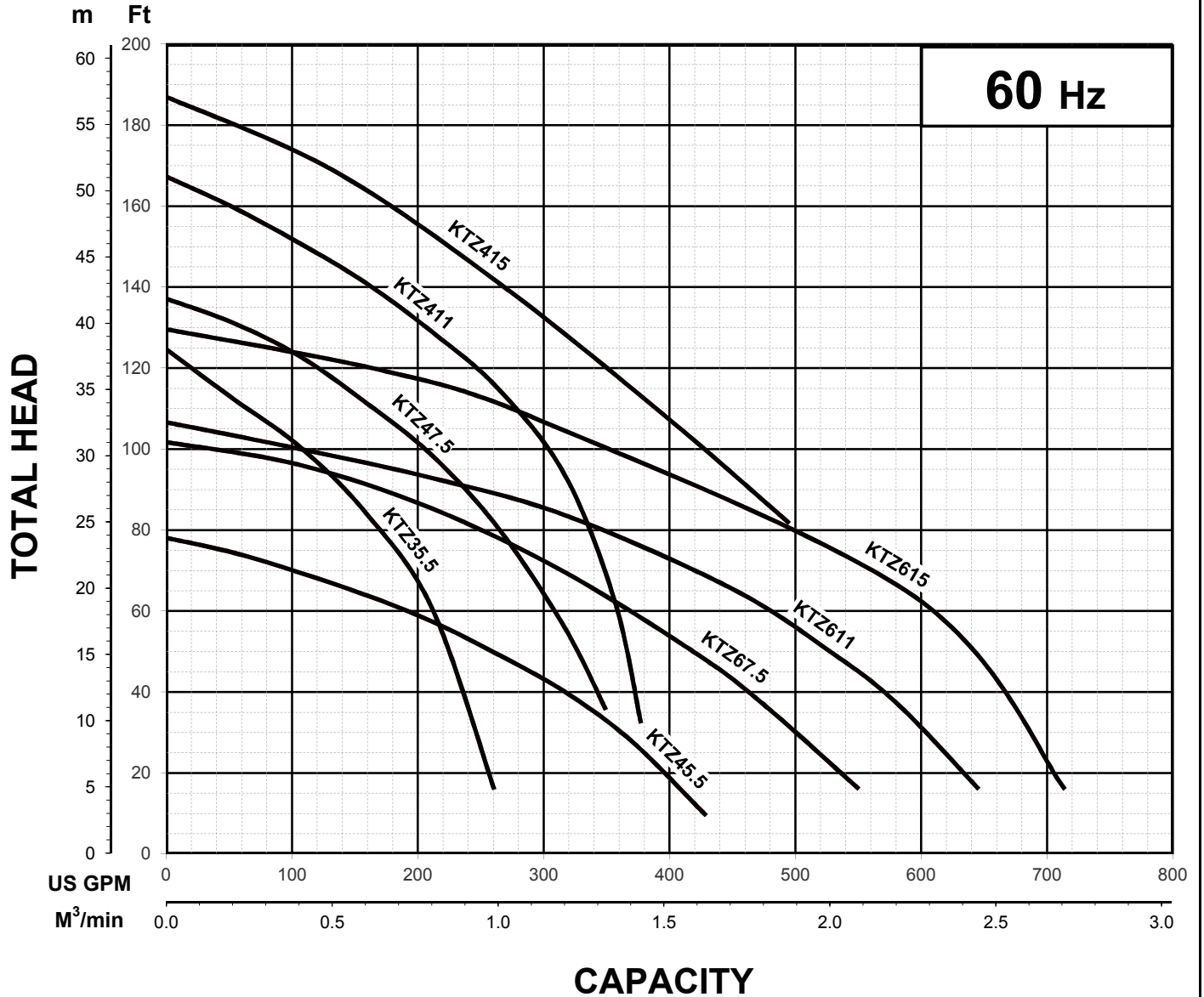
**■ STANDARD**

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- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**■ OPTIONS**

Length as Required

**GROUP PERFORMANCE RANGE**



**Note**

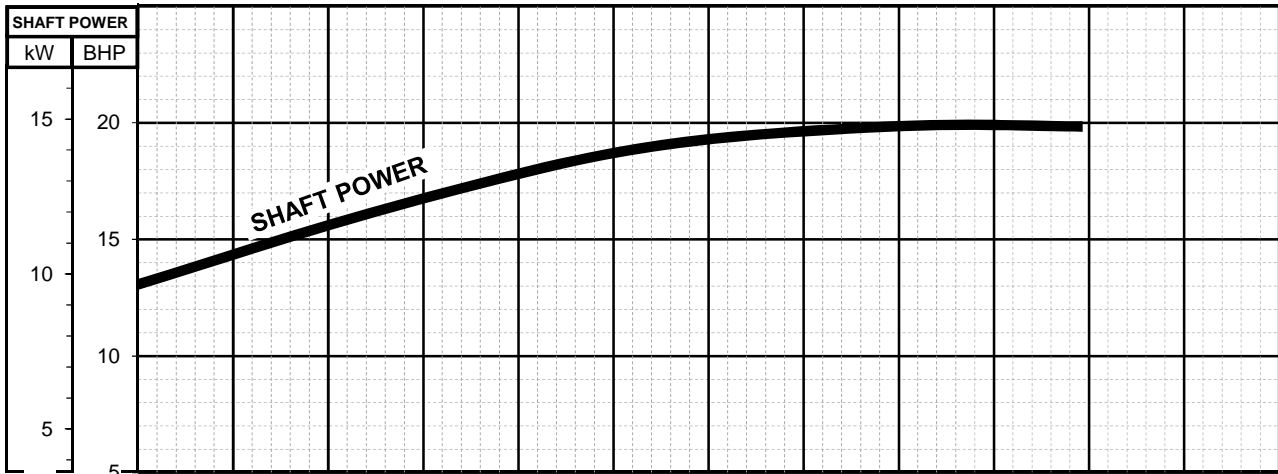
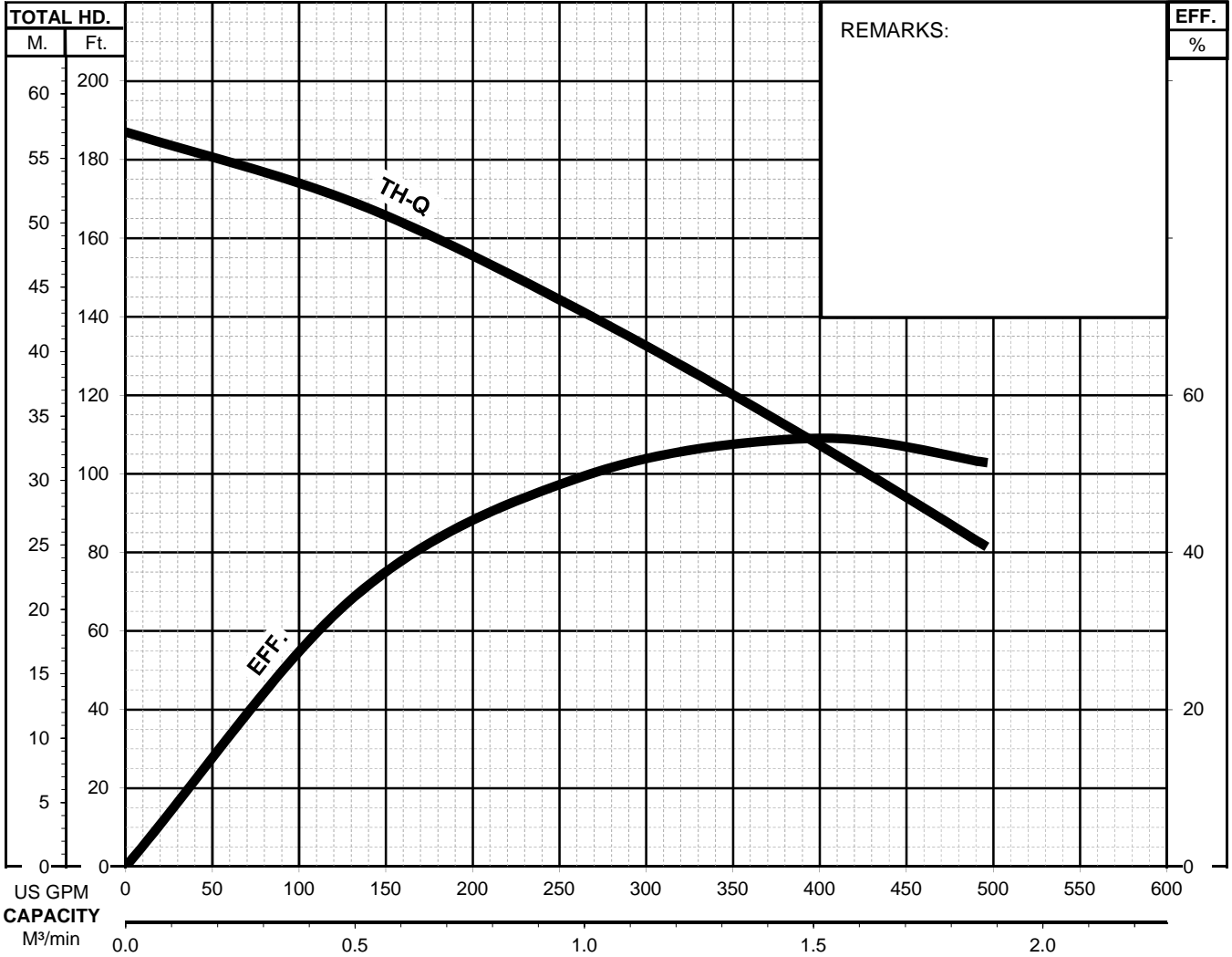


# KTZ - SERIES

SUBMERSIBLE DEWATERING PUMPS

PERFORMANCE  
CURVE

MODEL	BORE	HP	kW	RPM	SOLIDS DIA.	LIQUID	SG.	VISCOSITY	TEMP.
KTZ415-61	4"/100mm	20	15	3520	0.472"/12mm	Water	1.0	1.123cSt.	60°F
PUMP TYPE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS			
Dewatering Pump	3	208-230/460/575	***.*** / 24.4 / ***	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

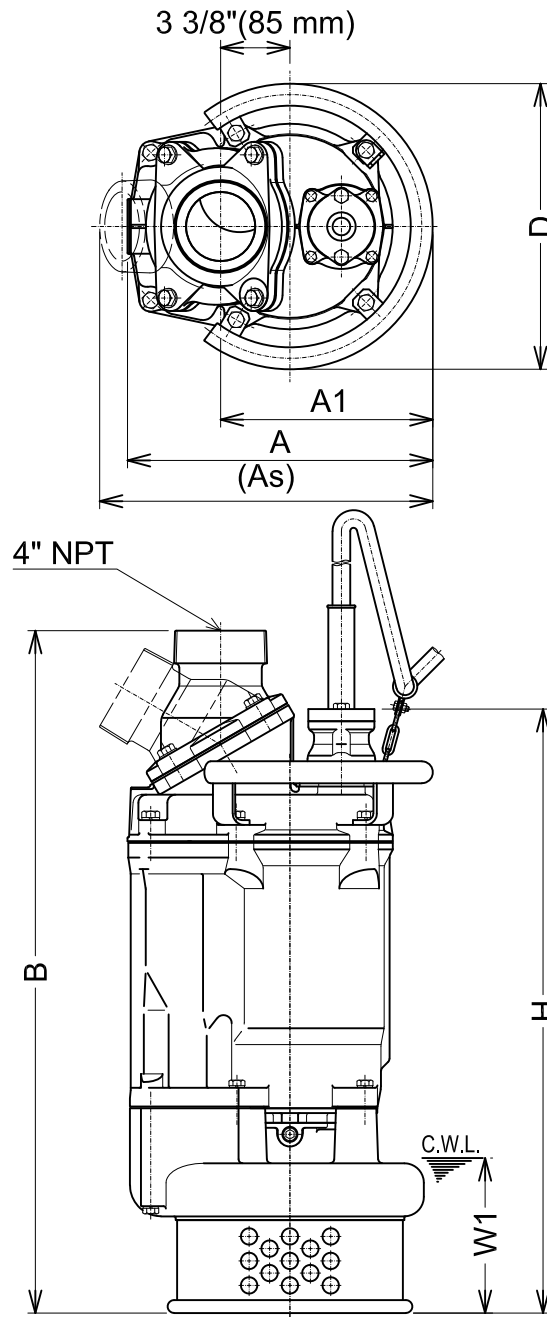




**KTZ SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ411-63  
KTZ415-61**



C.W.L. :Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor						C.W.L. W1	Wt.* (lbs.)
			A	A1	As	B	D	H		
KTZ411-63	15	4"	14 3/4	10 1/4	16 1/16	32 15/16	13 3/4	29 1/8	7 1/2	293
KTZ415-61	20	4"	14 3/4	10 1/4	16 1/16	35 11/16	13 3/4	31 7/8	7 1/2	315

**DIMENSIONS:METRIC (mm)**

\*Excluding Cable

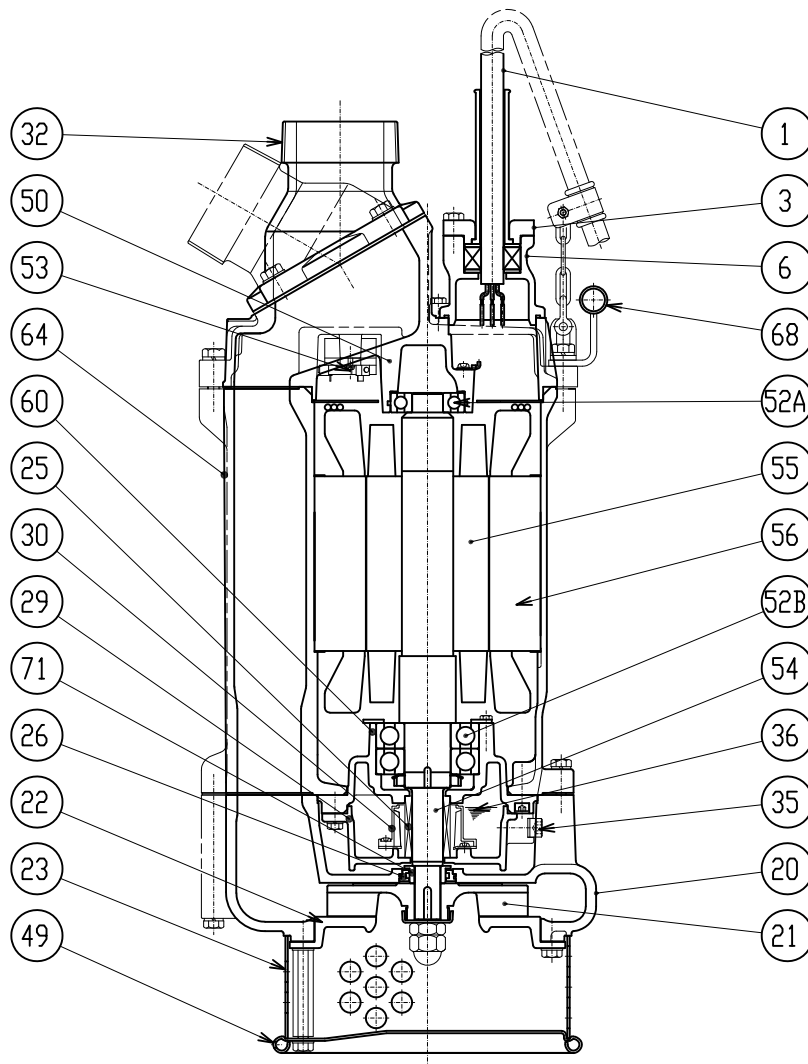
Model	kW	NOM. SIZE	Pump & Motor						C.W.L. W1	Wt.* (kg)
			A	A1	As	B	D	H		
KTZ411-63	11	100	374	260	408	836	350	740	190	133
KTZ415-61	15	100	374	260	408	906	350	810	190	143



**KTZ SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ415-61  
KTZ615-61**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	ASTM, AISI CODE	RELATED DIN CODE	Q'TY
1	Power Cable	PVC Sheath AWG6/4-50ft			1
3	Gland	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
6	Stufing 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 TypeA	DIN 1695 G-X260Cr27	1
22	Suction Cover	Ductile Cast Iron	A536 65-45-12	EN 1563 GJS-500-7	1
23	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-30T			1
26	Labyrinth Ring	Stainless Steel	S30400	1.4301	1
29	Oil Casing	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
30	Oil Lifter	PBT Plastic W/(GF+MD)40			1
32	Discharge Connection	Cast Iron / NPT 4" (6" optional for KTZ615)	A48M Class30B	EN 1561 GJL-200	1
35	Oil Plug	Stainless Steel	S30400	1.4301	1
36	Lubricant	Turbine Oil ISO VG32 or SAE 10W-20			
49	Bottom Plate	Steel (Cold Rolled)	A109/A1008	EN 10130	1
50	Motor Bracket	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
52A	Upper Bearing	#6306ZZC3			1
52B	Lower Bearing	#6309ZZD2C3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	S42000	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	Steel Pipe & Steel	A53 Type F & A283 Grade D	DIN 1615 St 33 & EN 10025 S275	1
71	Shaft Sleeve	Stainless Steel	S40300	1.4000	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 \_\_\_\_\_ HP., \_\_\_\_\_ 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

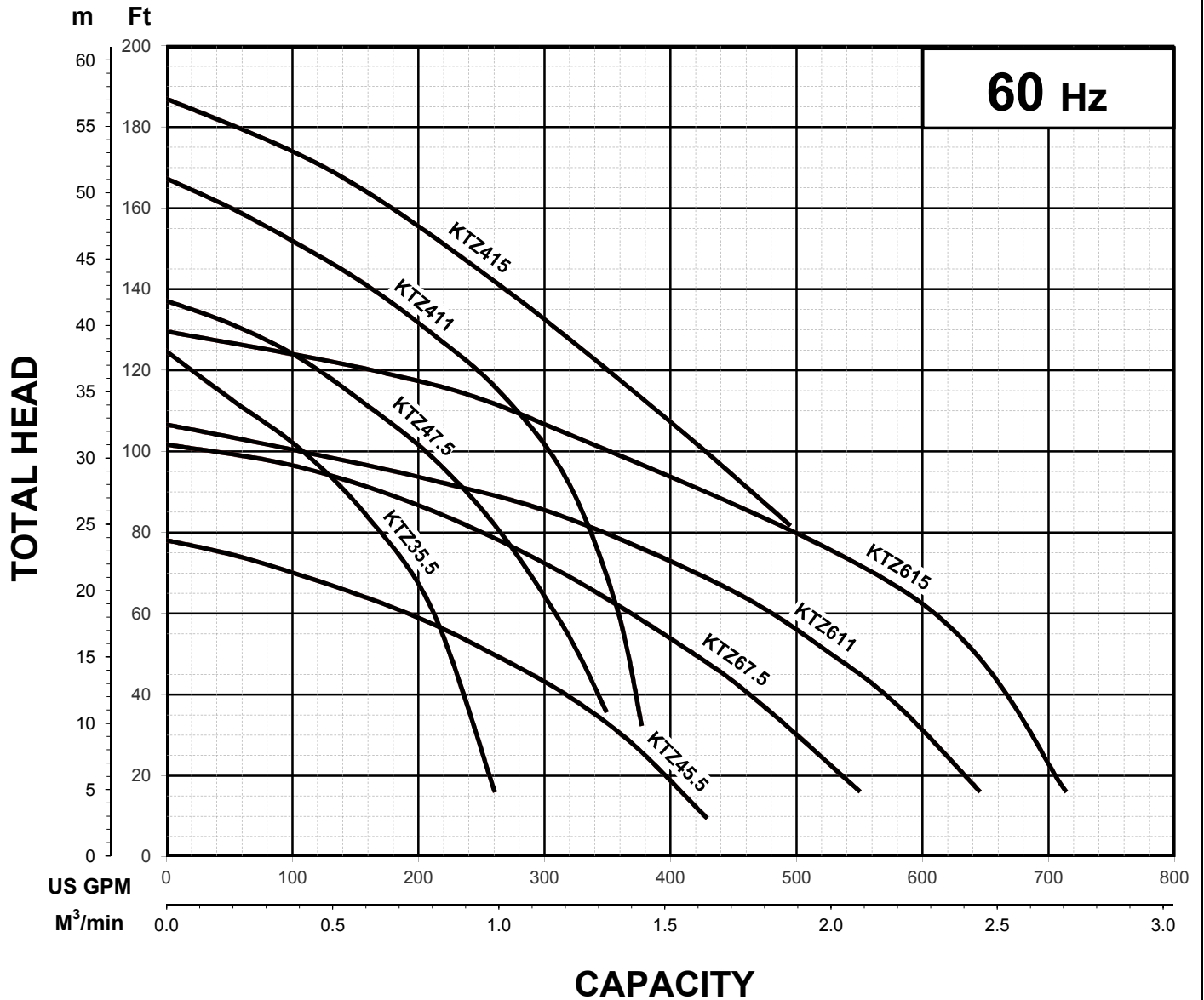
- Discharge Size
- Horsepower Range
- Performance Range Capacity Head
- Maximum water temperature
- Materials of Construction
  - Casing
  - Impeller
  - Shaft
  - Motor Frame
  - Fasteners
- Seal Pressure Relief Ports
- Mechanical Seal
  - Elastomers
- Impeller Type
- Solids Handling Capability
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**■ STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**■ OPTIONS**

Length as Required

**GROUP PERFORMANCE RANGE**

**Note**

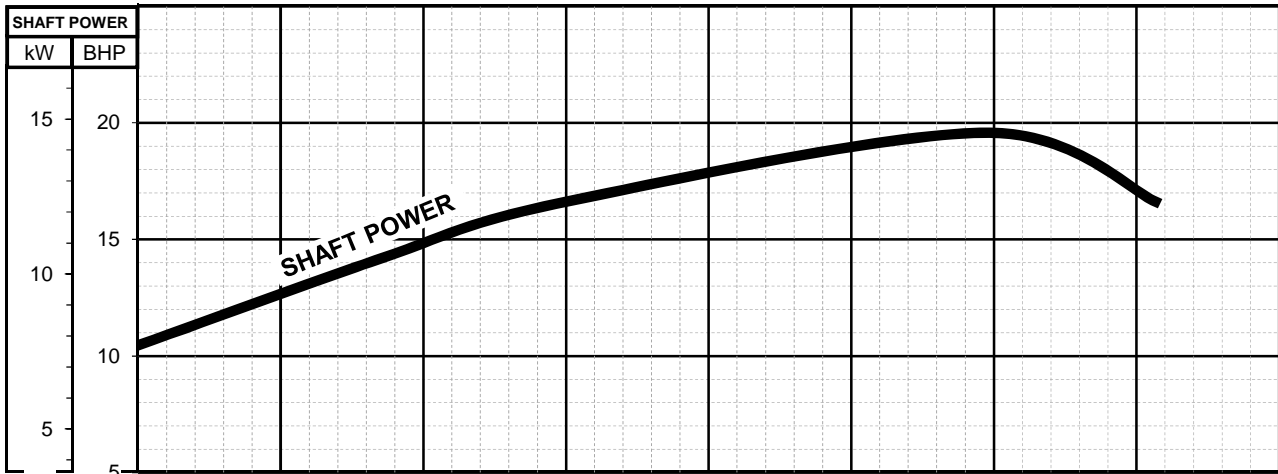
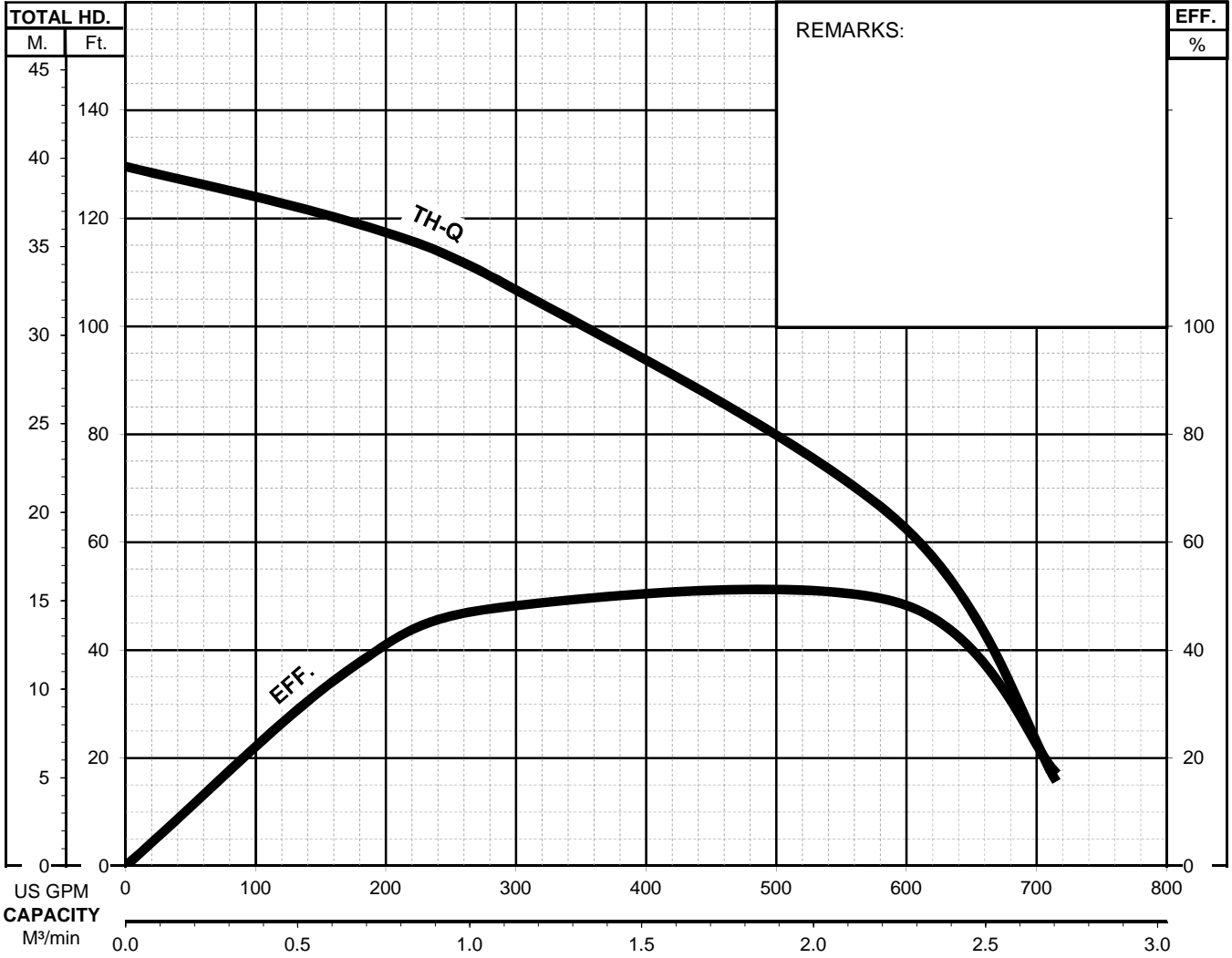


# KTZ - SERIES

SUBMERSIBLE DEWATERING PUMPS

PERFORMANCE  
CURVE

MODEL		BORE	HP	kW	RPM	SOLIDS DIA.	LIQUID	SG.	VISCOSITY	TEMP.
KTZ615-61		4"/100mm	20	15	3520	0.787"/20mm	Water	1.0	1.123cSt.	60°F
PUMP TYPE		PHASE	VOLTAGE		AMPERAGE	HZ	STARTING METHOD		INS. CLASS	
Dewatering Pump		3	208-230/460/575		***.*** / 24.4 / ***	60	Direct On Line		F	
CURVE No.	DATE	PHASE	VOLTAGE		AMPERAGE	HZ	STARTING METHOD		INS. CLASS	
-	-	-	-		-	-	-		-	

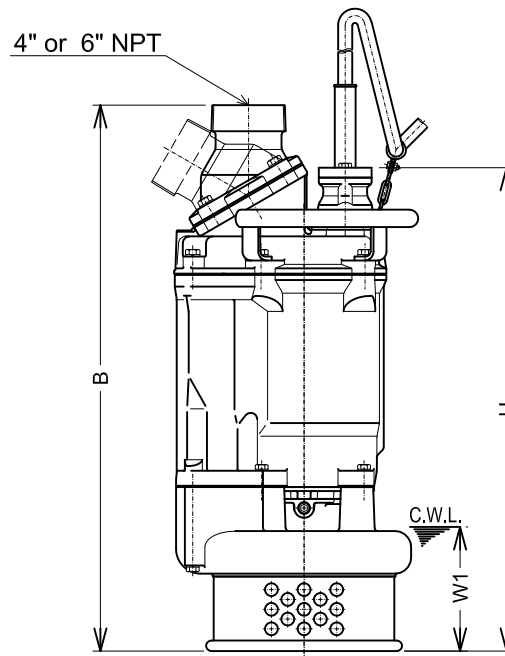
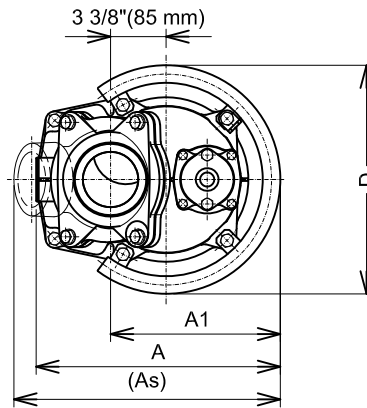




**KTZ SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ611-63  
KTZ615-61**



C.W.L. :Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor						C.W.L. W1	Wt.* (lbs.)
			A	A1	As	B	D	H		
KTZ611-63(4")	15	4"	14 12/16	10 1/4	16 1/16	32 15/16	13 3/4	29 1/8	7 1/2	291
KTZ611-63	15	*6"	14 12/16	10 1/4	17 1/4	33 11/16	13 3/4	29 1/8	7 1/2	293
KTZ615-61(4")	20	4"	14 12/16	10 1/4	16 1/16	35 11/16	13 3/4	31 7/8	7 1/2	319
KTZ615-61	20	*6"	14 12/16	10 1/4	17 1/4	36 7/16	13 3/4	31 7/8	7 1/2	322

**DIMENSIONS:METRIC (mm)**

\*Excluding Cable

Model	kW	NOM. SIZE	Pump & Motor						C.W.L. W1	Wt.* (kg)
			A	A1	As	B	D	H		
KTZ611-63(4")	11	100	374	260	408	836	350	740	190	132
KTZ611-63	11	*150	374	260	438	856	350	740	190	133
KTZ615-61(4")	15	100	374	260	408	906	350	810	190	145
KTZ615-61	15	*150	374	260	438	926	350	810	190	146

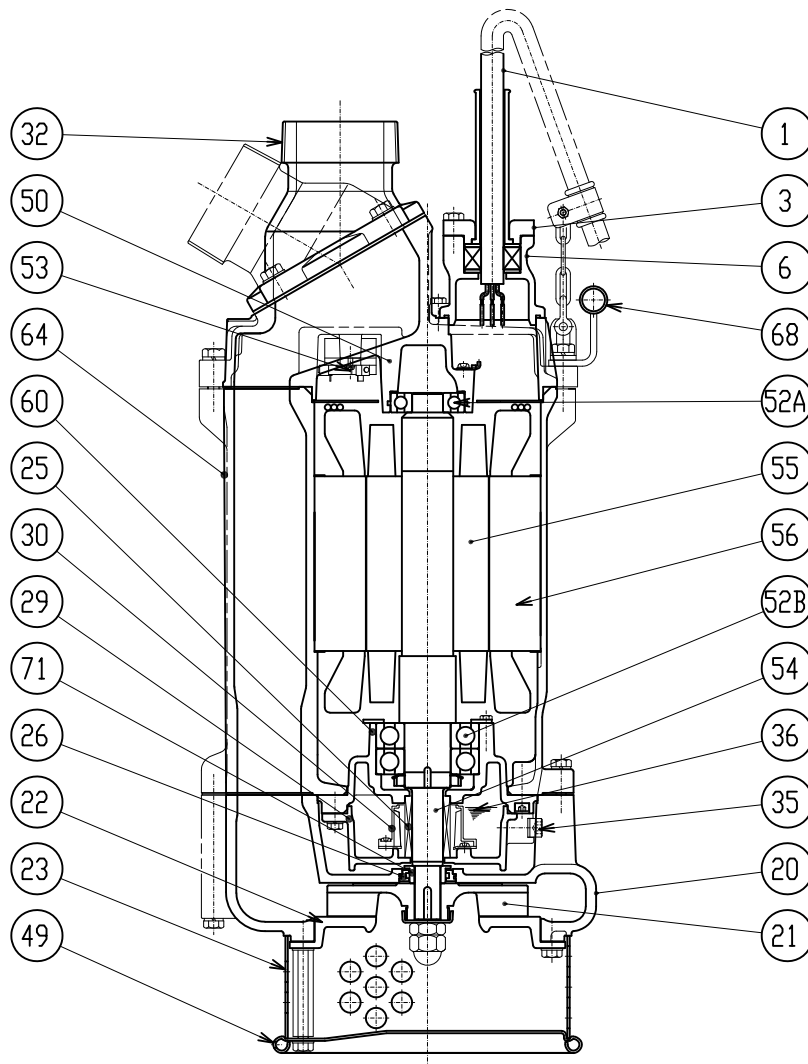
\*6" (150mm) is optional



**KTZ SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ415-61  
KTZ615-61**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	ASTM, AISI CODE	RELATED DIN CODE	Q'TY
1	Power Cable	PVC Sheath AWG6/4-50ft			1
3	Gland	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
6	Stufing 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 TypeA	DIN 1695 G-X260Cr27	1
22	Suction Cover	Ductile Cast Iron	A536 65-45-12	EN 1563 GJS-500-7	1
23	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-30T			1
26	Labyrinth Ring	Stainless Steel	S30400	1.4301	1
29	Oil Casing	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
30	Oil Lifter	PBT Plastic W/(GF+MD)40			1
32	Discharge Connection	Cast Iron / NPT 4" (6" optional for KTZ615)	A48M Class30B	EN 1561 GJL-200	1
35	Oil Plug	Stainless Steel	S30400	1.4301	1
36	Lubricant	Turbine Oil ISO VG32 or SAE 10W-20			
49	Bottom Plate	Steel (Cold Rolled)	A109/A1008	EN 10130	1
50	Motor Bracket	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
52A	Upper Bearing	#6306ZZC3			1
52B	Lower Bearing	#6309ZZD2C3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	S42000	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	Steel Pipe & Steel	A53 Type F & A283 Grade D	DIN 1615 St 33 & EN 10025 S275	1
71	Shaft Sleeve	Stainless Steel	S40300	1.4000	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 \_\_\_\_\_ HP., \_\_\_\_\_ 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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.



**KTZ-SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

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  
 Motor Nomenclature  
     Type, Speed, Hz.  
     Voltage, Phase  
     Insulation  
     Bearings  
 Accessories  
 Operational Mode

**■ STANDARD**

2 ~ 4" NPT (50 - 100 mm)  
 6" is Optional (KTZ67.5 / KTZ611)  
 2 ~ 15 HP. (1.5 ~ 11 Kw)  
 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)  
 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)  
 104° F. (40° C.)  
 Cast Iron  
 High Chrome Iron  
 420 Stainless Steel  
 Cast Iron  
 304 Stainless Steel  
 10 - 15HP (7.5 - 11kW)  
 Silicon Carbide  
 NBR (Nitrile Butadiene Rubber)  
 Semi-open, solids handling.  
 0.334 - 0.787" (8.5 - 20.0mm)  
 Air Filled, 3600 RPM, 60 Hz.  
 208/230/460/575 V., 3 Phase  
 Class F  
 Pre-lubricated, Double Shielded  
 Submersible Power Cable 50' (15.0m)  
 Manual

**■ OPTIONS**

Length as Required



**TSURUMI PUMP**

# Positive Effect of Advanced KTZ KTZE – Automatic Pump with **Electrode**

## 1.5 / 2.2 / 3.7kW

### *Automatic Operation with Electrode*

The electrode-type sensor ON/OFF operation prevents dry running, reduces power consumption (50% over standard type – Tsurumi comparison), and extends operational life.

Energy Conservation

Cost Saving

Noise Reduction

### *Multi-Directional Hose Coupling*

The hose coupling has been devised so that it can be, without any extra parts, converted to an inclined discharge direction.



Every KTZ-series pump (1.5 to 11kW) is equipped with the above hose coupling as standard.

\* The additional features do NOT affect on the pump performance.

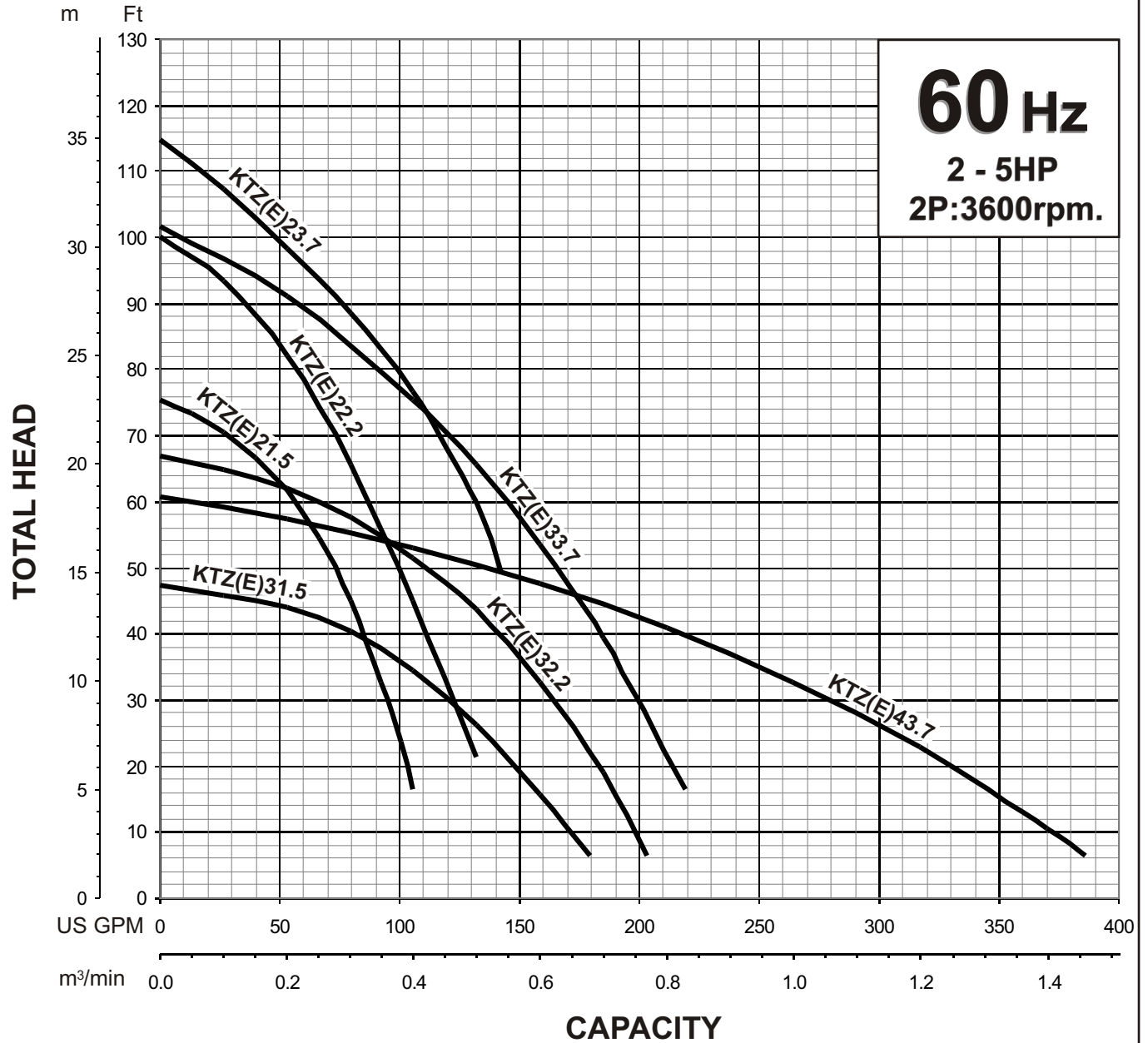




# KTZ(E) - SERIES DEWATERING PUMPS

## PERFORMANCE RANGE

### GROUP PERFORMANCE RANGE

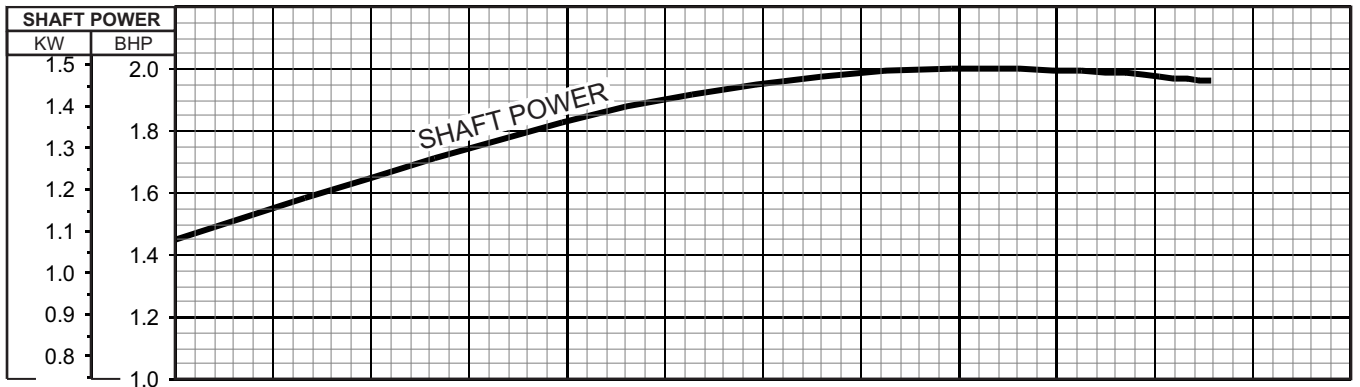
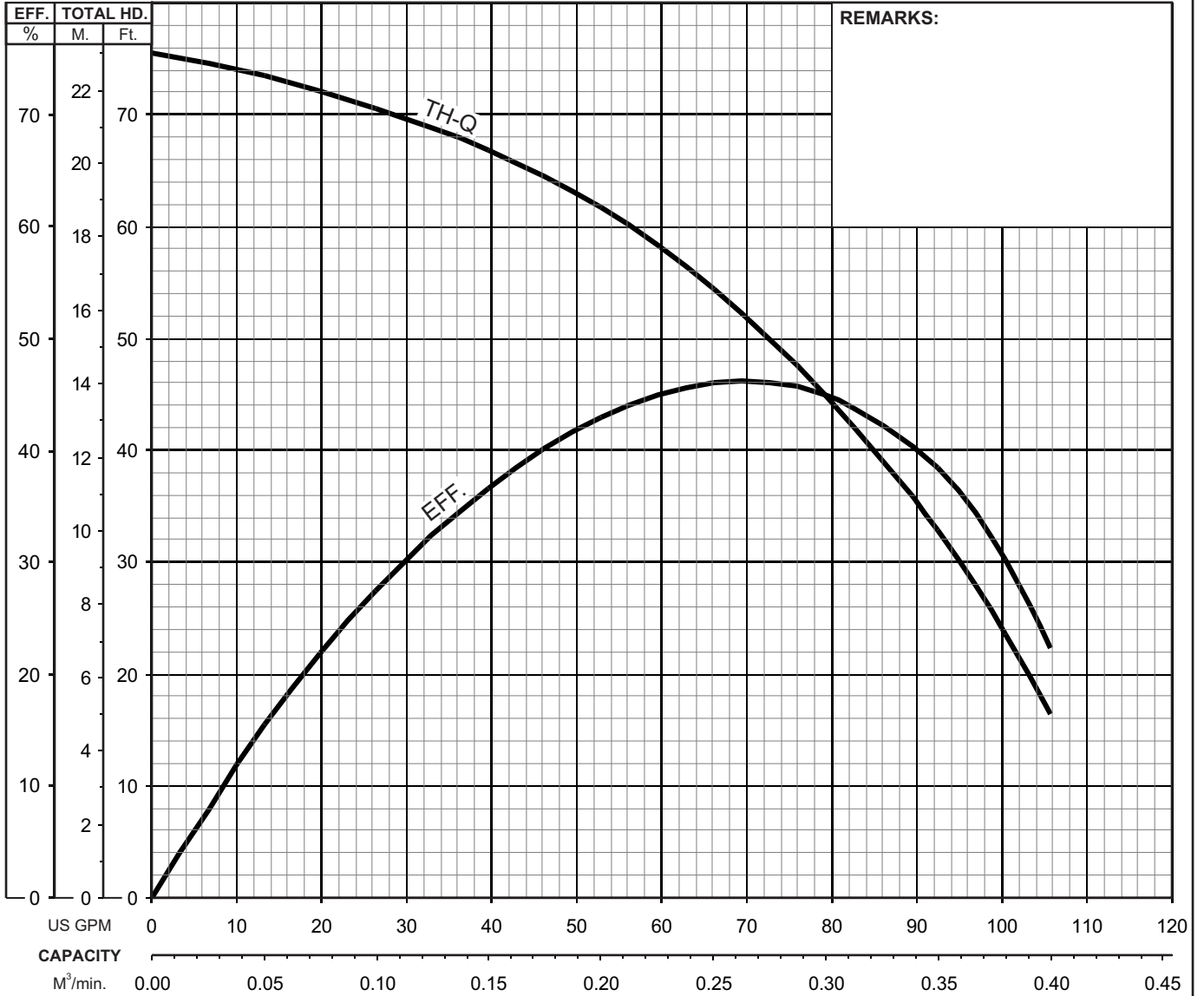




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ21.5-61	2"/50mm	2	1.5	3400	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	208-230/460/575	6.2-6.0 / 3.1 / 2.3	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

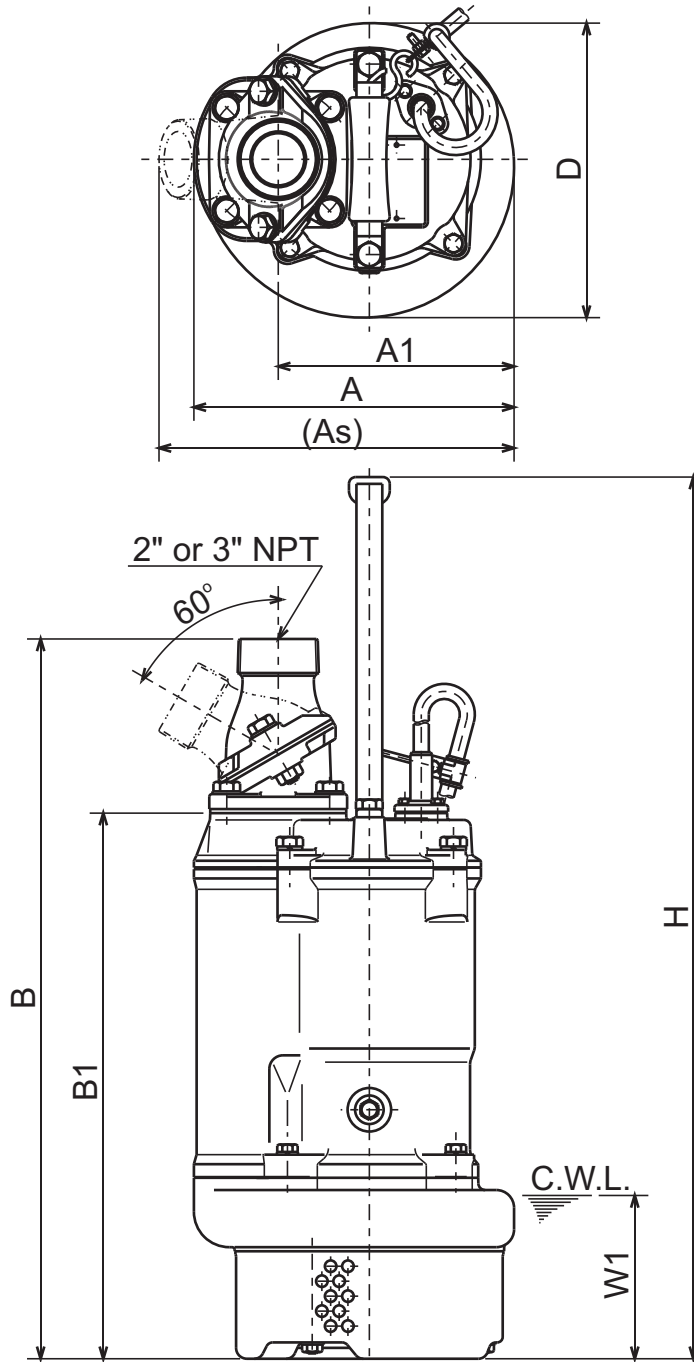




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ21.5-61  
KTZ31.5-61**



C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.		Wt. (lbs.)
			A	As	A1	B	B1	D	H	W1		
KTZ21.5-61	2	2"	9 1/4	10 1/4	6 13/16	20 13/16	15 13/16	8 1/2	25 1/2	4 3/4	77	
KTZ31.5-61	2	3"	9 1/4	10 9/16	6 13/16	20 13/16	15 13/16	8 1/2	25 1/2	4 3/4	75	

**DIMENSIONS:METRIC (mm)**

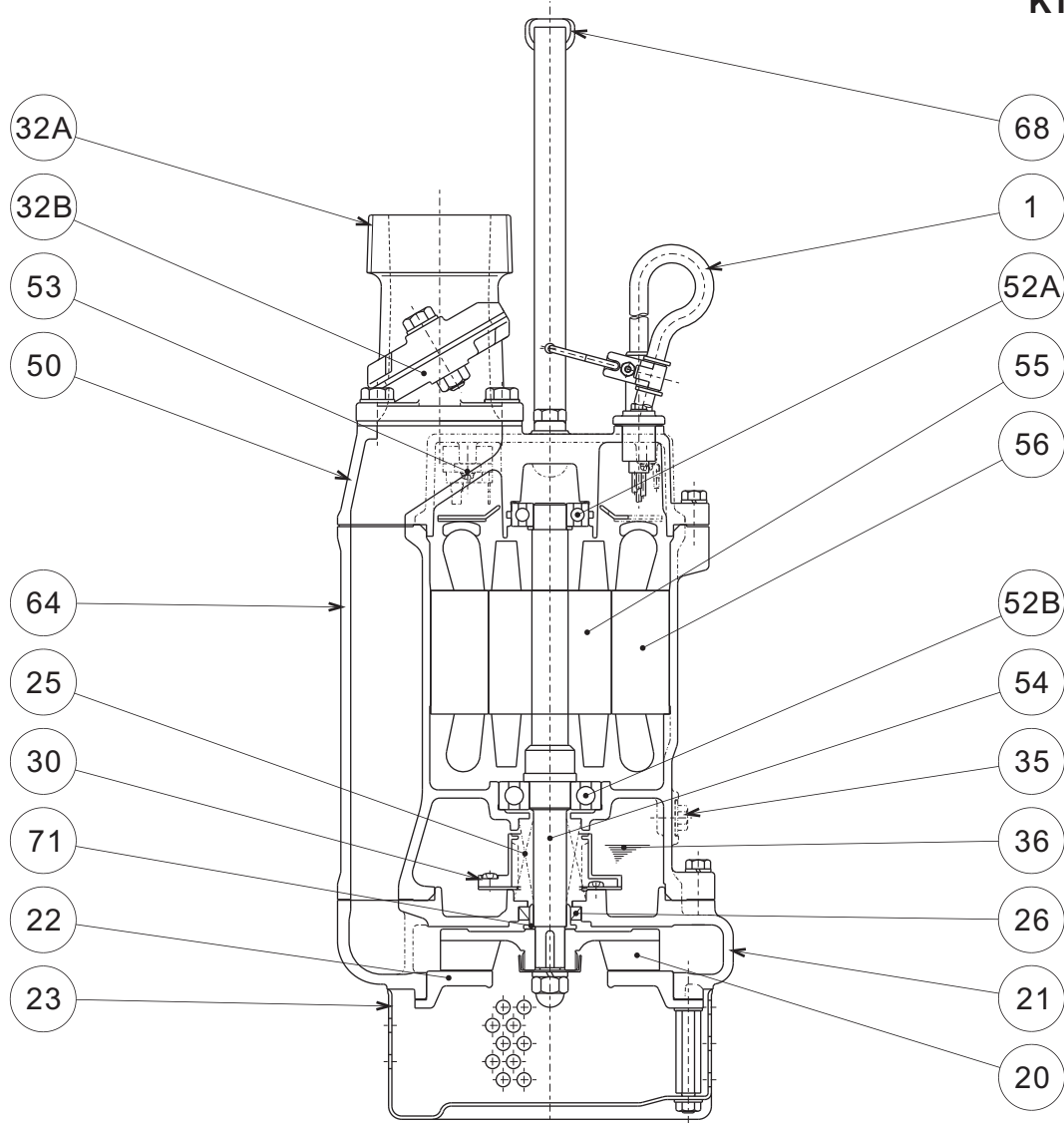
Model	kW	NOM. SIZE	Pump & Motor							C.W.L.		Wt. (kg)
			A	As	A1	B	B1	D	H	W1		
KTZ21.5-61	1.5	50	235	261	173	529	401	216	648	120	35	
KTZ31.5-61	1.5	80	235	268	173	529	401	216	648	120	34	



**KTZ - SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ21.5-61  
KTZ31.5-61**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	PVC Sheath AWG16/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-20T			1
26	Oil Seal	Nitrile Butadiene Rubber / TC-25388			1
30	Oil Lifter	PBT Resin			1
32A	Discharge Connection	Cast Iron / NPT 2" or 3"	A48M Class30B	EN 1561 GJL-200	1
32B	Attachment	Aluminum Alloy Die Casting	B85 383.0	EN 1706 AC-46100	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	#6204ZZC3			1
52B	Lower Bearing	#6305ZZC3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	S 42000	1.4028	1
55	Rotor				1
56	Stator				1
64	Motor Housing	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
68	Handle	Steel (Cold Rolled) + NBR Rubber	A109/A1008	EN 10130	1
71	Shaft Sleeve	Stainless Steel	S 30400	1.4301	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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. 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 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 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.



**KTZ-SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

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  
 Motor Nomenclature  
     Type, Speed, Hz.  
     Voltage, Phase  
     Insulation  
     Bearings  
 Accessories  
 Operational Mode

**■ STANDARD**

2 ~ 4" NPT (50 - 100 mm)  
 6" is Optional (KTZ67.5 / KTZ611)  
 2 ~ 15 HP. (1.5 ~ 11 Kw)  
 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)  
 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)  
 104° F. (40° C.)  
 Cast Iron  
 High Chrome Iron  
 420 Stainless Steel  
 Cast Iron  
 304 Stainless Steel  
 10 - 15HP (7.5 - 11kW)  
 Silicon Carbide  
 NBR (Nitrile Butadiene Rubber)  
 Semi-open, solids handling.  
 0.334 - 0.787" (8.5 - 20.0mm)  
 Air Filled, 3600 RPM, 60 Hz.  
 208/230/460/575 V., 3 Phase  
 Class F  
 Pre-lubricated, Double Shielded  
 Submersible Power Cable 50' (15.0m)  
 Manual

**■ OPTIONS**

Length as Required



**TSURUMI PUMP**

# Positive Effect of Advanced KTZ KTZE – Automatic Pump with **Electrode**

## 1.5 / 2.2 / 3.7kW

### *Automatic Operation with Electrode*

The electrode-type sensor ON/OFF operation prevents dry running, reduces power consumption (50% over standard type – Tsurumi comparison), and extends operational life.

Energy Conservation

Cost Saving

Noise Reduction

### *Multi-Directional Hose Coupling*

The hose coupling has been devised so that it can be, without any extra parts, converted to an inclined discharge direction.



Every KTZ-series pump (1.5 to 11kW) is equipped with the above hose coupling as standard.

\* The additional features do NOT affect on the pump performance.

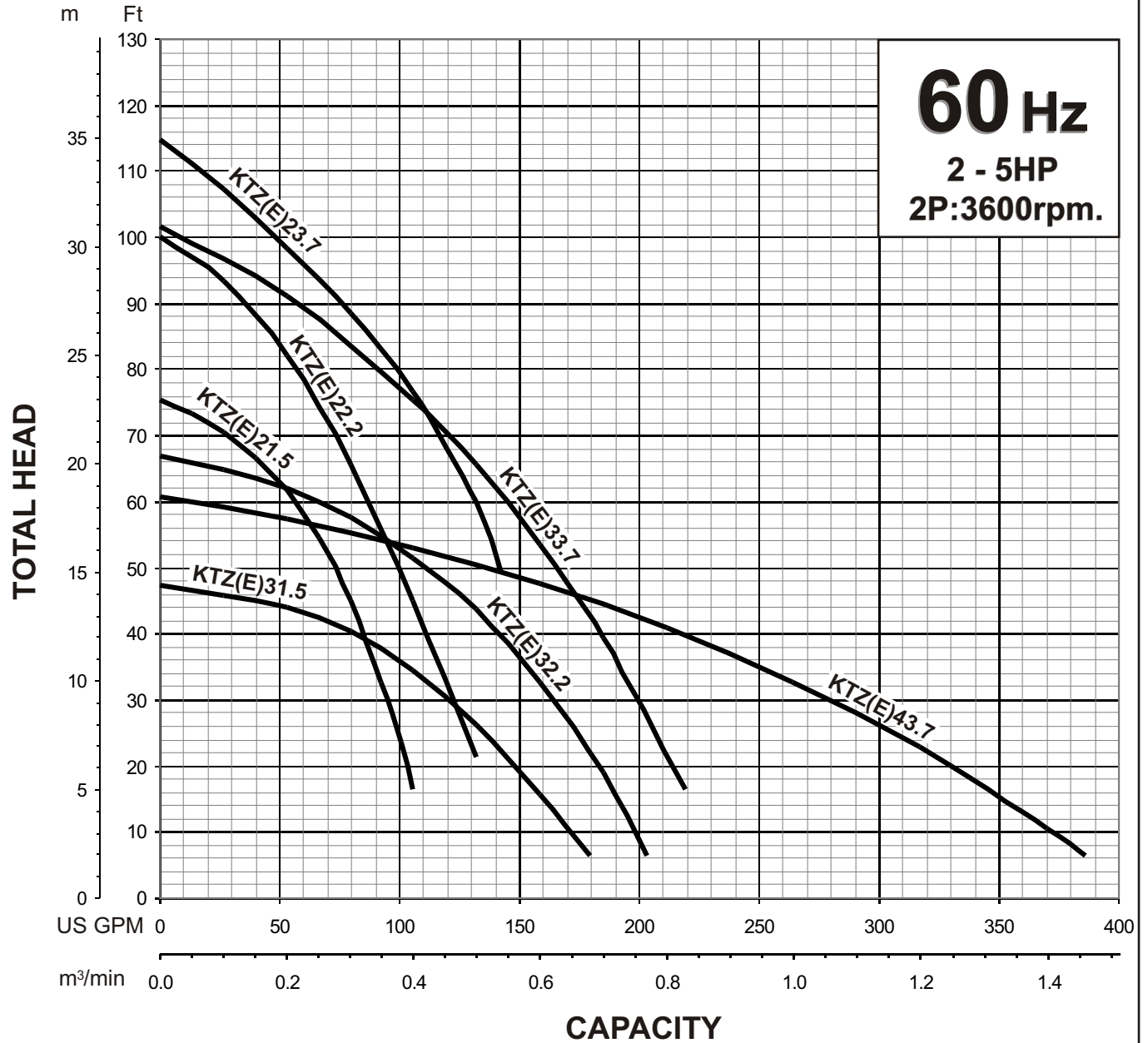


**TSURUMI PUMP**

**KTZ(E) - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

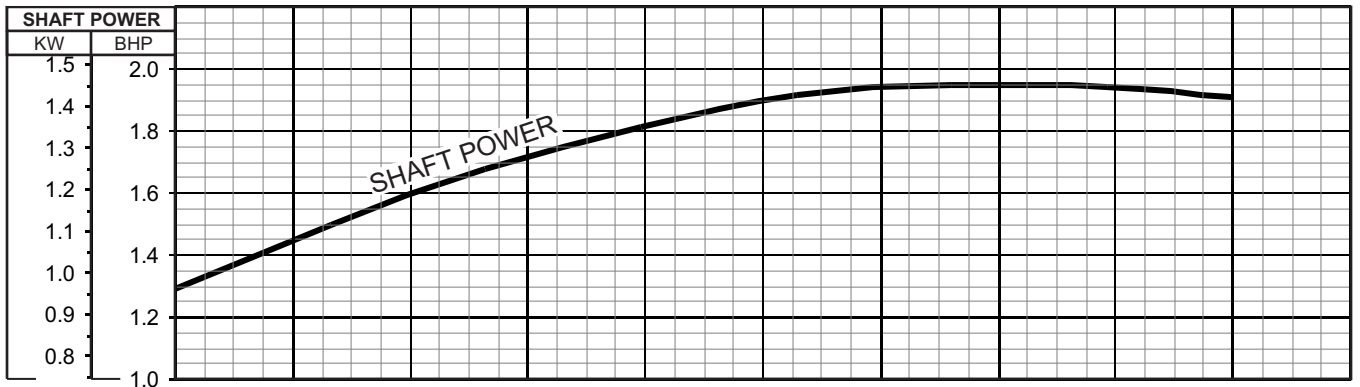
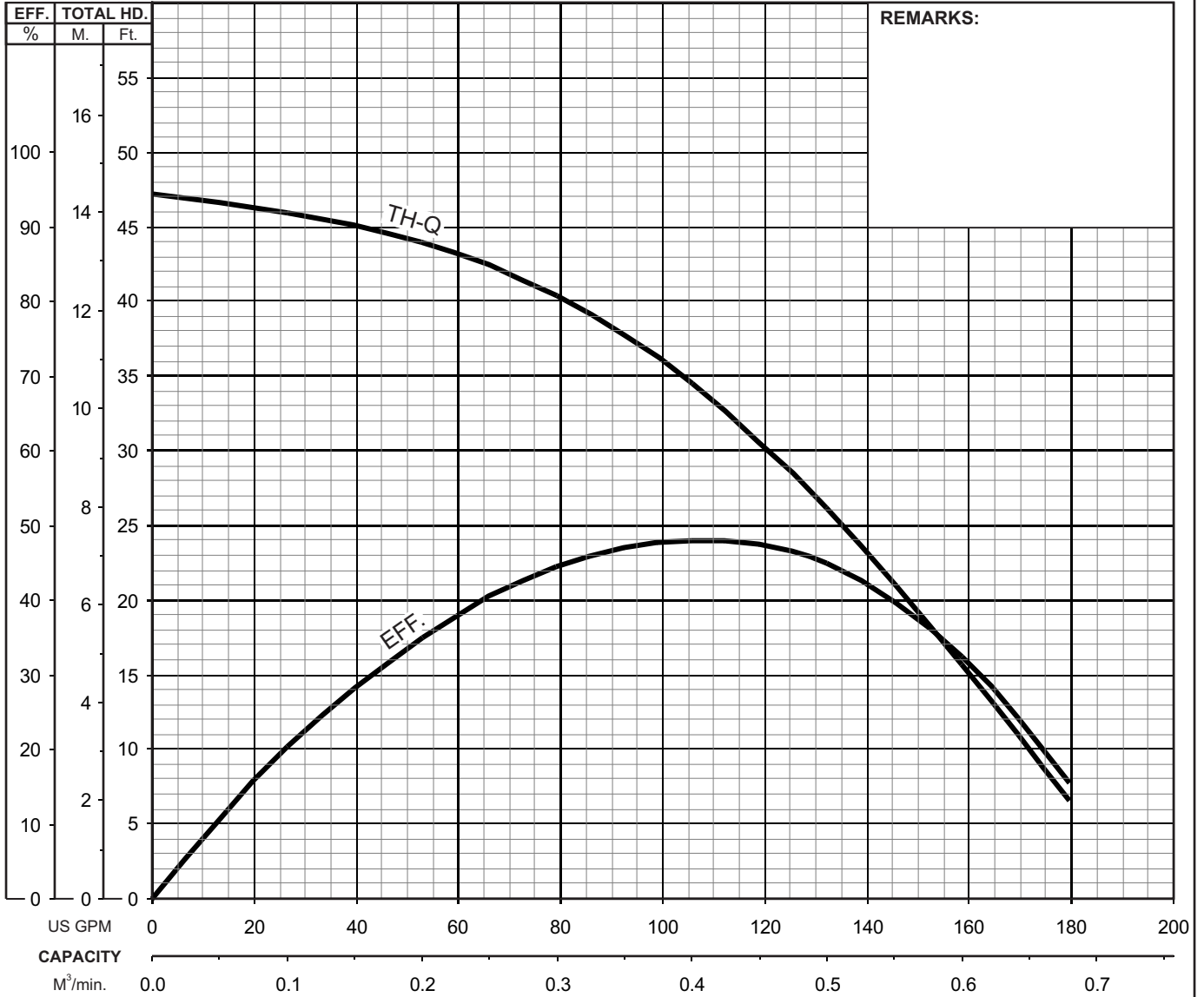




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ31.5-61	3"/80mm	2	1.5	3400	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	208-230/460/575	6.2-6.0 / 3.1 / 2.3	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

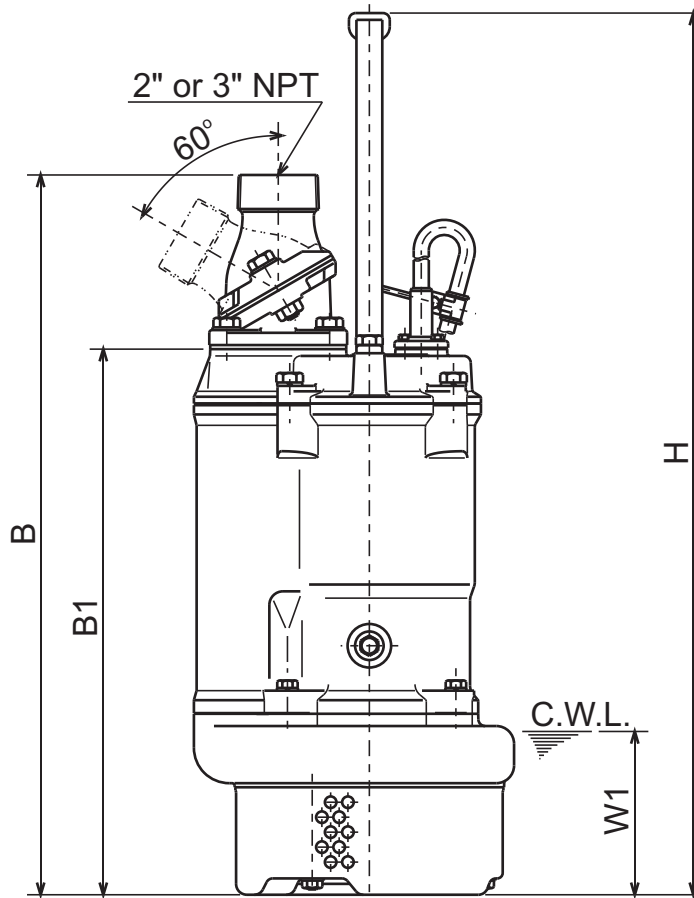
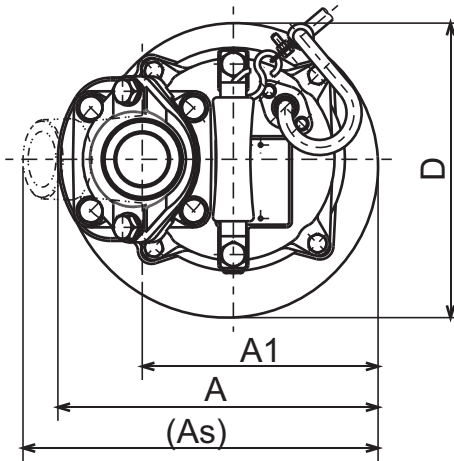




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ21.5-61  
KTZ31.5-61**



C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (lbs.)
			A	As	A1	B	B1	D	H	W1	
KTZ21.5-61	2	2"	9 1/4	10 1/4	6 13/16	20 13/16	15 13/16	8 1/2	25 1/2	4 3/4	77
KTZ31.5-61	2	3"	9 1/4	10 9/16	6 13/16	20 13/16	15 13/16	8 1/2	25 1/2	4 3/4	75

**DIMENSIONS:METRIC (mm)**

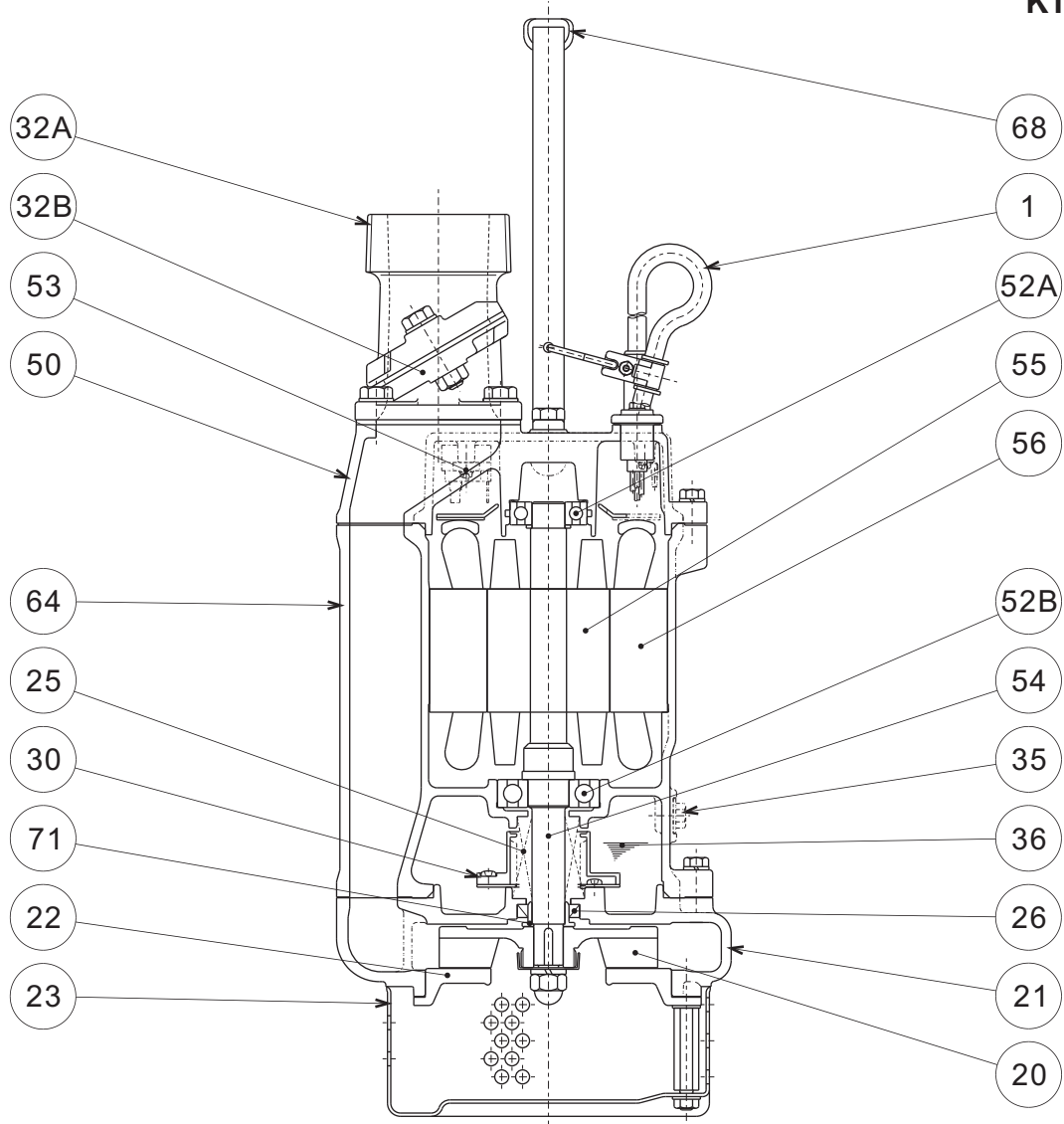
Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (kg)
			A	As	A1	B	B1	D	H	W1	
KTZ21.5-61	1.5	50	235	261	173	529	401	216	648	120	35
KTZ31.5-61	1.5	80	235	268	173	529	401	216	648	120	34



**KTZ - SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ21.5-61  
KTZ31.5-61**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	PVC Sheath AWG16/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-20T			1
26	Oil Seal	Nitrile Butadiene Rubber / TC-25388			1
30	Oil Lifter	PBT Resin			1
32A	Discharge Connection	Cast Iron / NPT 2" or 3"	A48M Class30B	EN 1561 GJL-200	1
32B	Attachment	Aluminum Alloy Die Casting	B85 383.0	EN 1706 AC-46100	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	#6204ZZC3			1
52B	Lower Bearing	#6305ZZC3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	S 42000	1.4028	1
55	Rotor				1
56	Stator				1
64	Motor Housing	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
68	Handle	Steel (Cold Rolled) + NBR Rubber	A109/A1008	EN 10130	1
71	Shaft Sleeve	Stainless Steel	S 30400	1.4301	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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. 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 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 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.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**■ STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**■ OPTIONS**

Length as Required

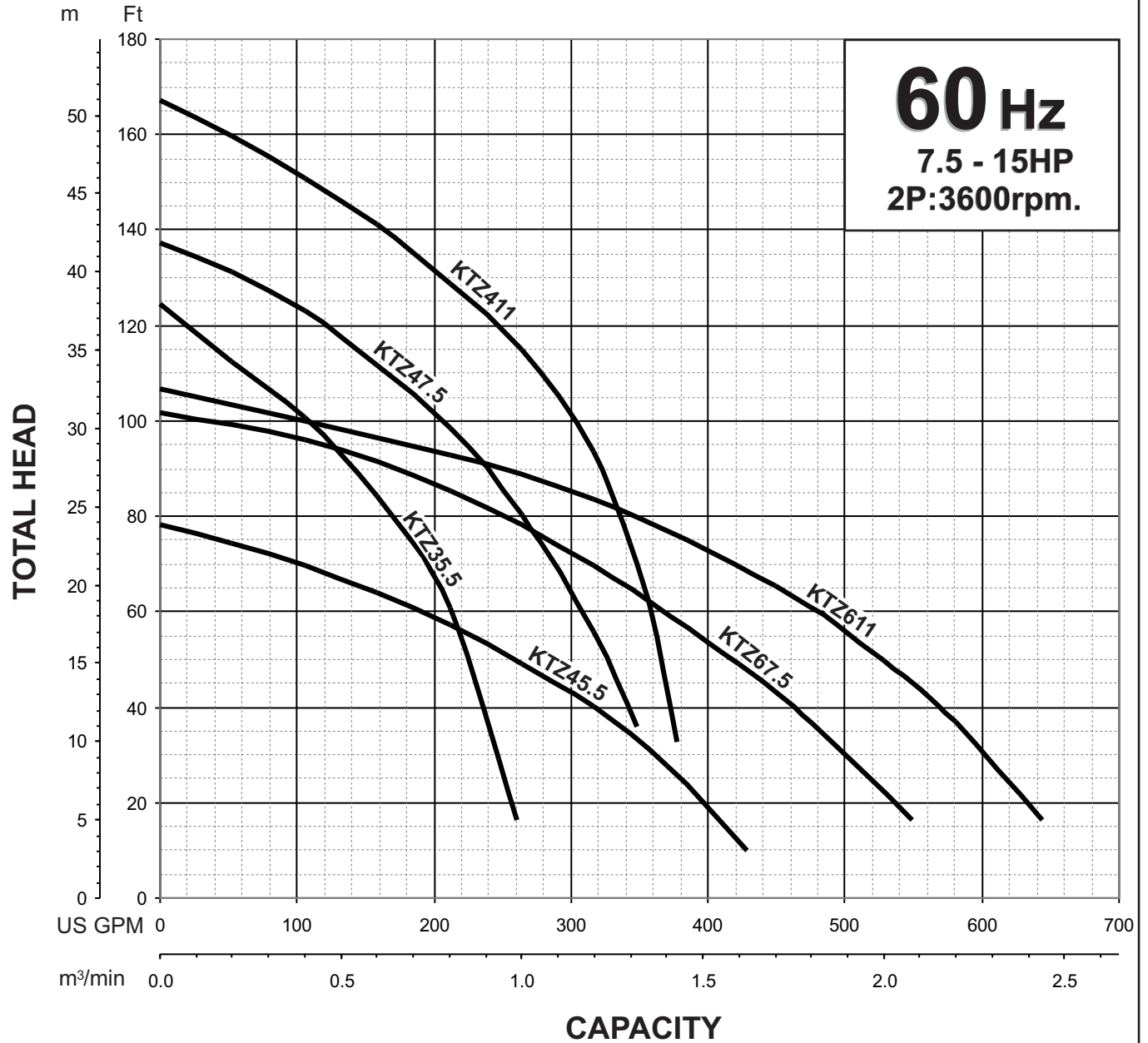


**TSURUMI PUMP**

**KTZ - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

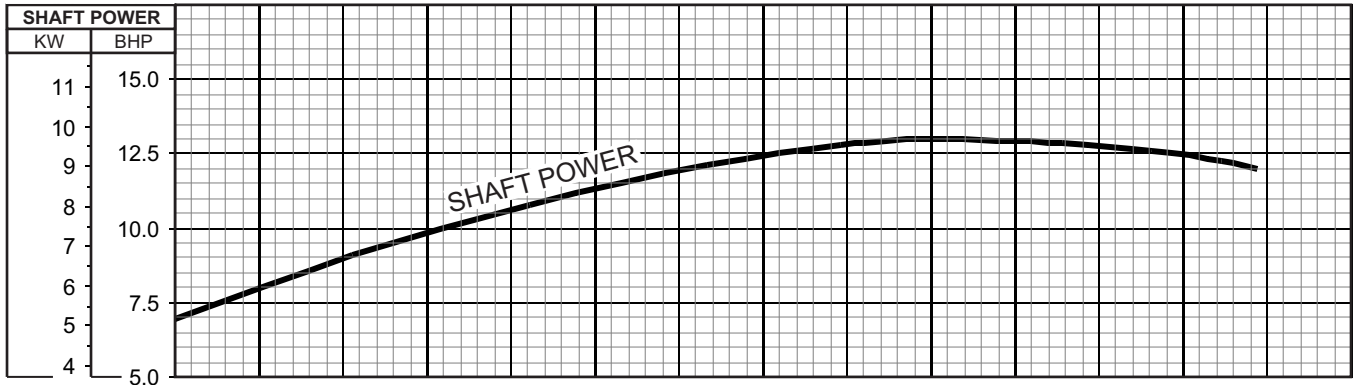
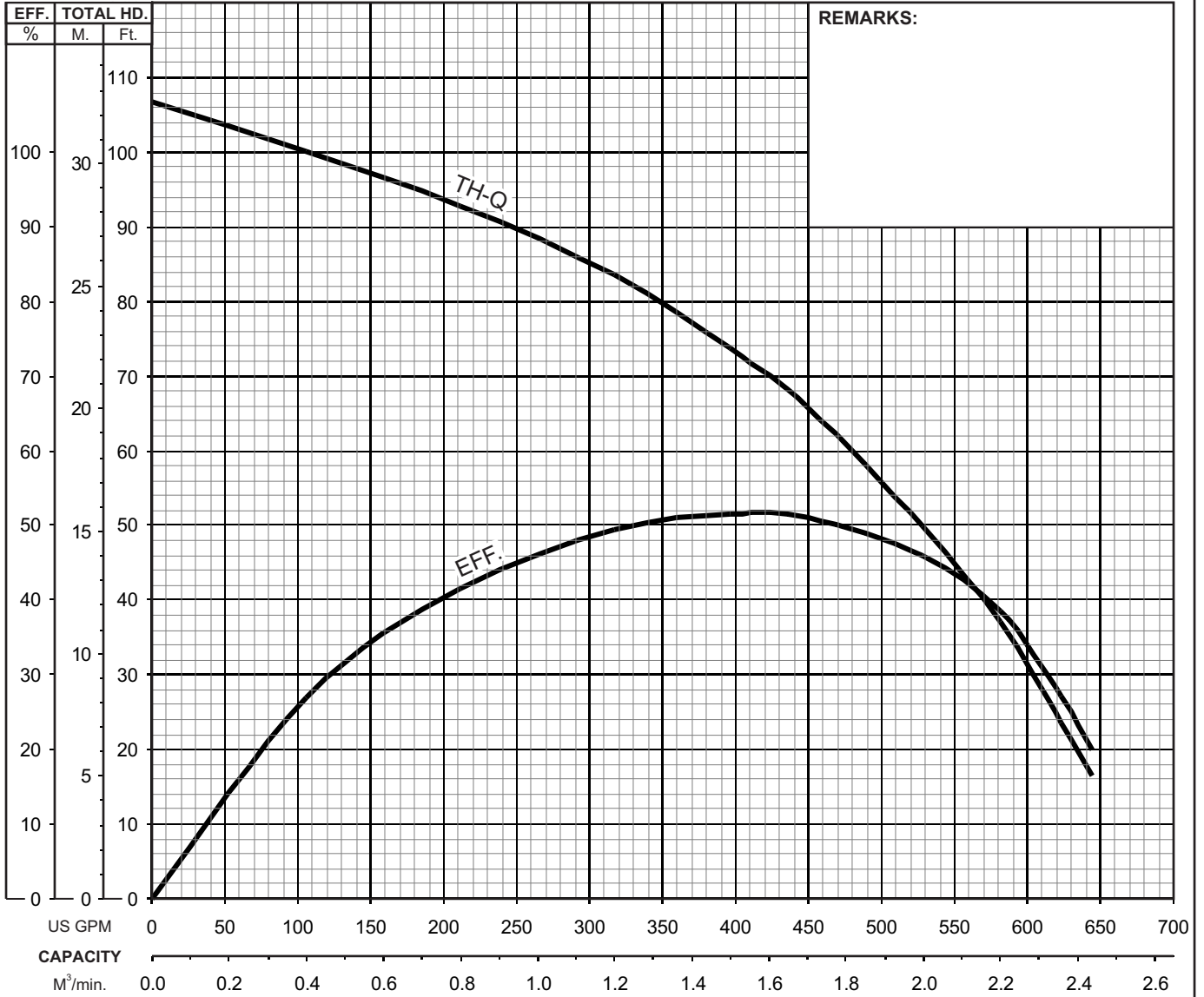




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ611-63	4"/100mm	15	11	3520	0.787"/20mm	Water	1.0	1.123 cSt.	60°F
PUMP TYPE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS			
Dewatering Pump	3	208-230/460/575	39.8-37.4 / 18.6 / 14.9	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

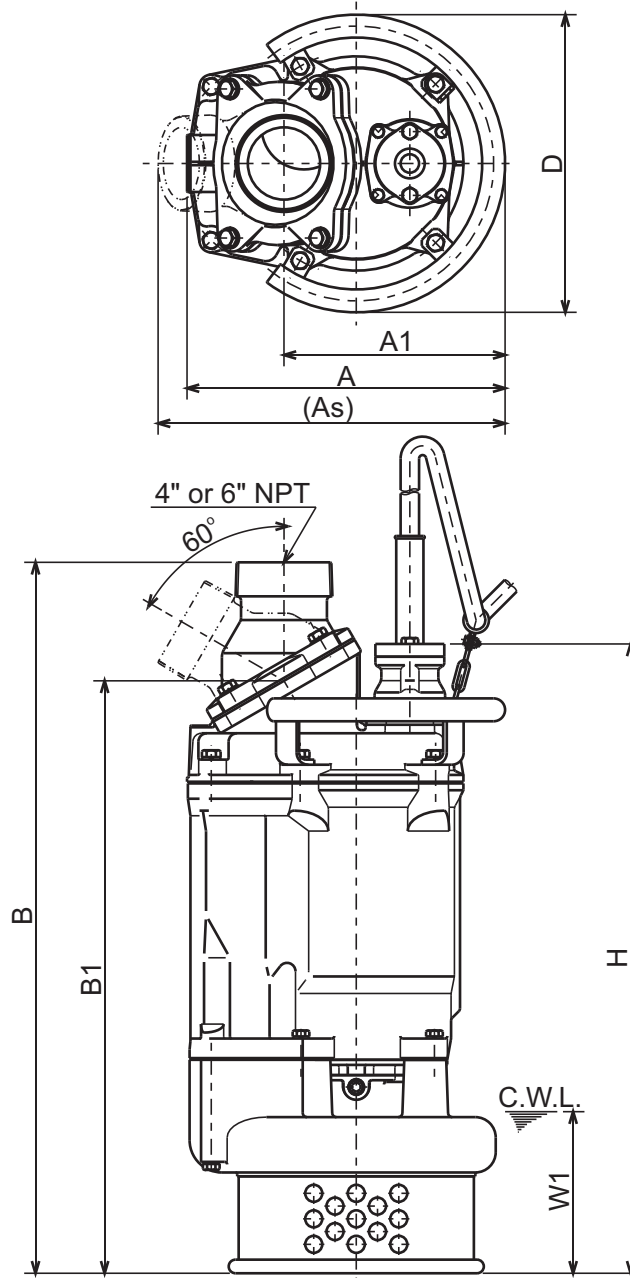




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ411-63  
KTZ611-63**



C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L. W1	Wt. (lbs.)
			A	As	A1	B	B1	D	H		
KTZ411-63	15	4"	14 3/4	16 1/16	10 1/4	32 15/16	27 7/16	13 3/4	29 1/8	7 1/2	293
KTZ611-63(4")	15	4"	14 3/4	16 1/16	10 1/4	32 15/16	27 7/16	13 3/4	29 1/8	7 1/2	295
KTZ611-63	15	6"	14 3/4	17 1/4	10 1/4	33 11/16	27 7/16	13 3/4	29 1/8	7 1/2	295

**DIMENSIONS:METRIC (mm)**

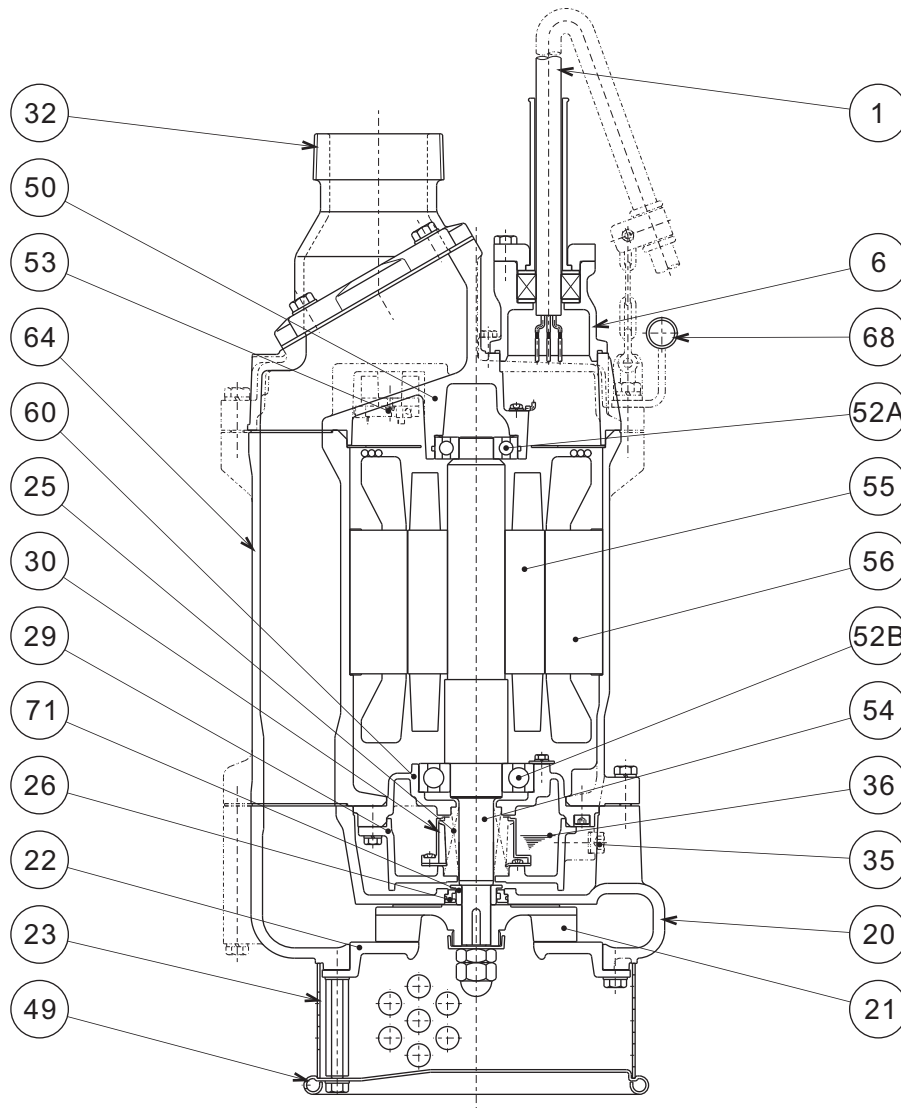
Model	kW	NOM. SIZE	Pump & Motor							C.W.L. W1	Wt. (kg)
			A	As	A1	B	B1	D	H		
KTZ411-63	11	100	374	408	260	836	697	350	740	190	133
KTZ611-63(4")	11	100	374	408	260	836	697	350	740	190	134
KTZ611-63	11	150	374	439	260	856	697	350	740	190	134



**KTZ - SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ411-63  
KTZ611-63**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	Chloroprene Sheath AWG8/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-30T			1
30	Oil Lifter	PBT Resin			1
26	Labyrinth Ring	Stainless Steel	S 30400	1.4301	1
32	Discharge Connection	Cast Iron / NPT 4" (or 6")	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			
49	Bottom Plate	Steel (Cold Rolled)	A109/A1008	EN 10130	1
50	Motor Head Cover	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
52A	Upper Bearing	#6306ZXC3			1
52B	Lower Bearing	#6309ZXC3			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 Class30B or 25B	EN 1561 GJL-200 or GJL-150	1
68	Handle	Carbon Steel Pipe + Steel	A53 Type F + A283 Grade D	DIN 1615 St33 + EN 10025 S275	1
71	Shaft Sleeve	Stainless Steel	S 40300	1.4000	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 \_\_\_\_\_ HP., \_\_\_\_\_ 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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.



**KTZ-SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

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  
 Motor Nomenclature  
     Type, Speed, Hz.  
     Voltage, Phase  
     Insulation  
     Bearings  
 Accessories  
 Operational Mode

**■ STANDARD**

2 ~ 4" NPT (50 - 100 mm)  
 6" is Optional (KTZ67.5 / KTZ611)  
 2 ~ 15 HP. (1.5 ~ 11 Kw)  
 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)  
 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)  
 104° F. (40° C.)  
 Cast Iron  
 High Chrome Iron  
 420 Stainless Steel  
 Cast Iron  
 304 Stainless Steel  
 10 - 15HP (7.5 - 11kW)  
 Silicon Carbide  
 NBR (Nitrile Butadiene Rubber)  
 Semi-open, solids handling.  
 0.334 - 0.787" (8.5 - 20.0mm)  
 Air Filled, 3600 RPM, 60 Hz.  
 208/230/460/575 V., 3 Phase  
 Class F  
 Pre-lubricated, Double Shielded  
 Submersible Power Cable 50' (15.0m)  
 Manual

**■ OPTIONS**

Length as Required



**TSURUMI PUMP**

# Positive Effect of Advanced KTZ KTZE – Automatic Pump with **Electrode**

## 1.5 / 2.2 / 3.7kW

### *Automatic Operation with Electrode*

The electrode-type sensor ON/OFF operation prevents dry running, reduces power consumption (50% over standard type – Tsurumi comparison), and extends operational life.

Energy Conservation

Cost Saving

Noise Reduction

### *Multi-Directional Hose Coupling*

The hose coupling has been devised so that it can be, without any extra parts, converted to an inclined discharge direction.



Every KTZ-series pump (1.5 to 11kW) is equipped with the above hose coupling as standard.

\* The additional features do NOT affect on the pump performance.

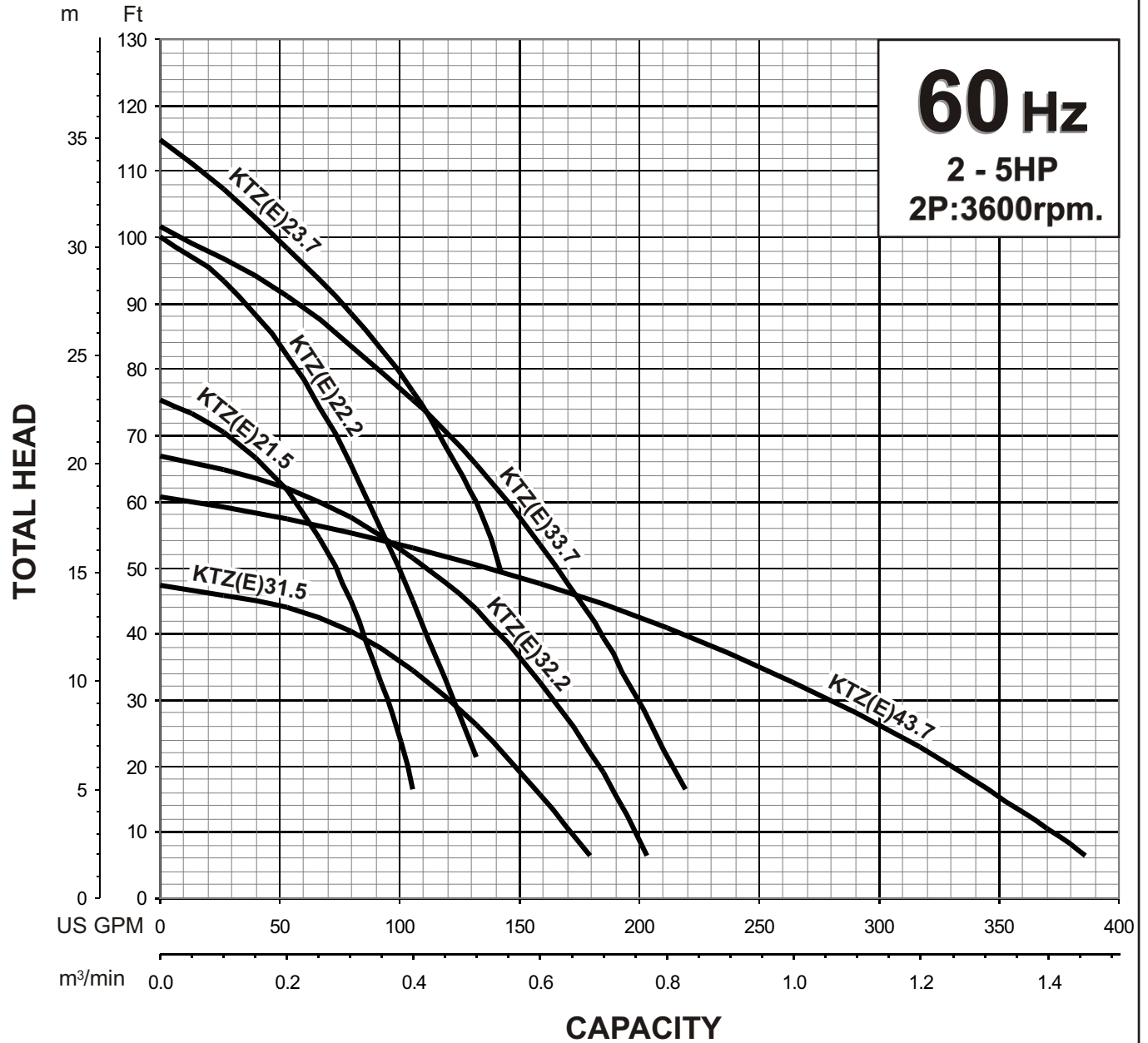


**TSURUMI PUMP**

**KTZ(E) - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

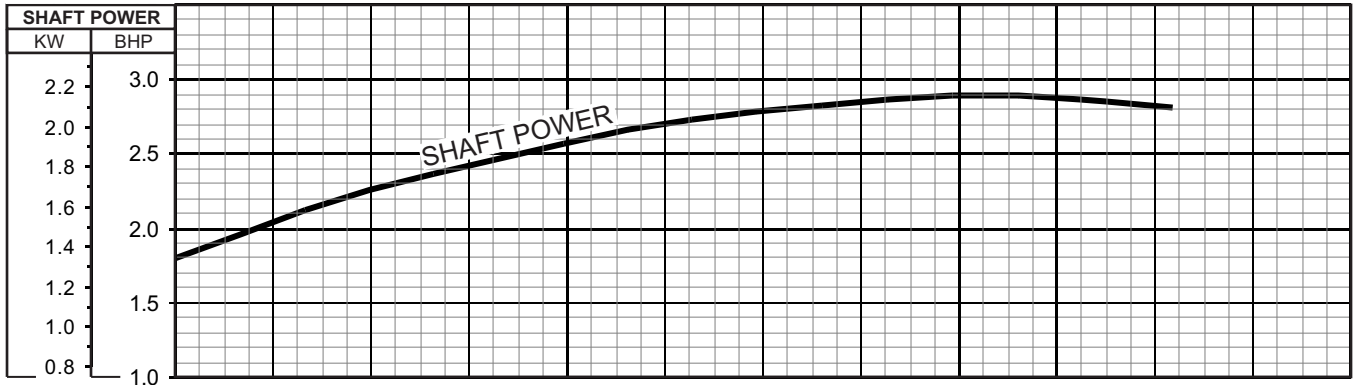
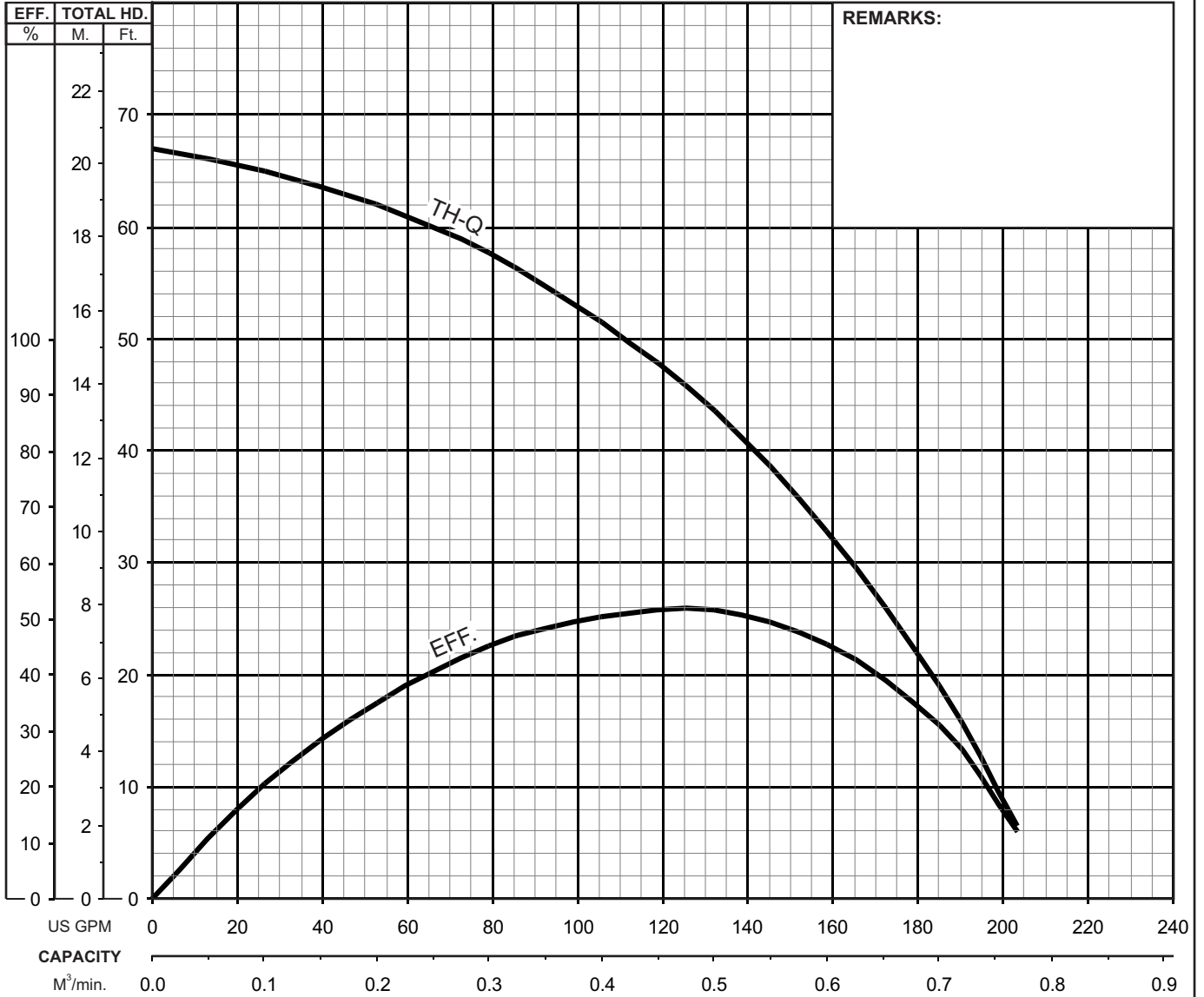




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ32.2-61	3"/80mm	3	2.2	3410	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	208-230/460/575	9.4-9.0 / 4.5 / 3.5	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

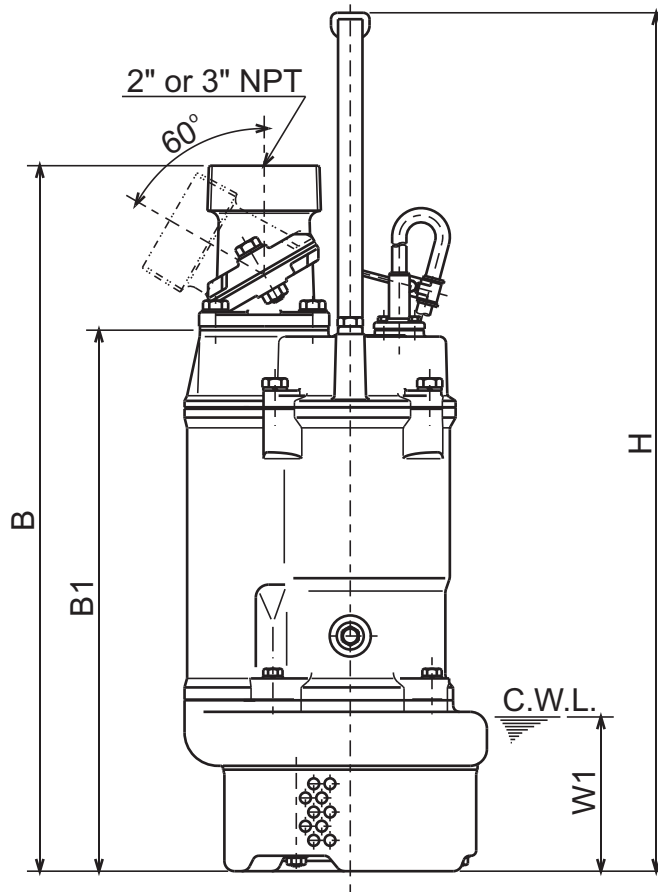
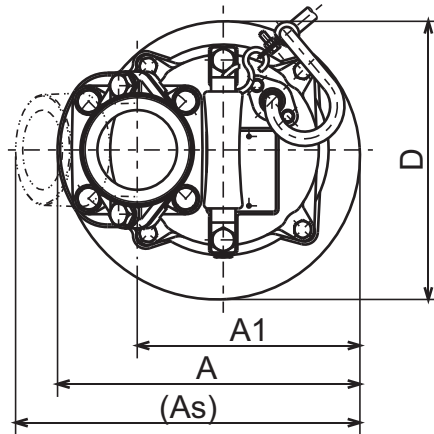




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ22.2-61  
KTZ32.2-61**



C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (lbs.)
			A	As	A1	B	B1	D	H	W1	
KTZ22.2-61	3	2"	9 1/4	10 1/4	6 13/16	21 5/8	16 9/16	8 1/2	26 5/16	4 3/4	79
KTZ32.2-61	3	3"	9 1/4	10 9/16	6 13/16	21 5/8	16 9/16	8 1/2	26 5/16	4 3/4	77

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (kg)
			A	As	A1	B	B1	D	H	W1	
KTZ22.2-61	2.2	50	235	261	173	549	421	216	668	120	36
KTZ32.2-61	2.2	80	235	268	173	549	421	216	668	120	35

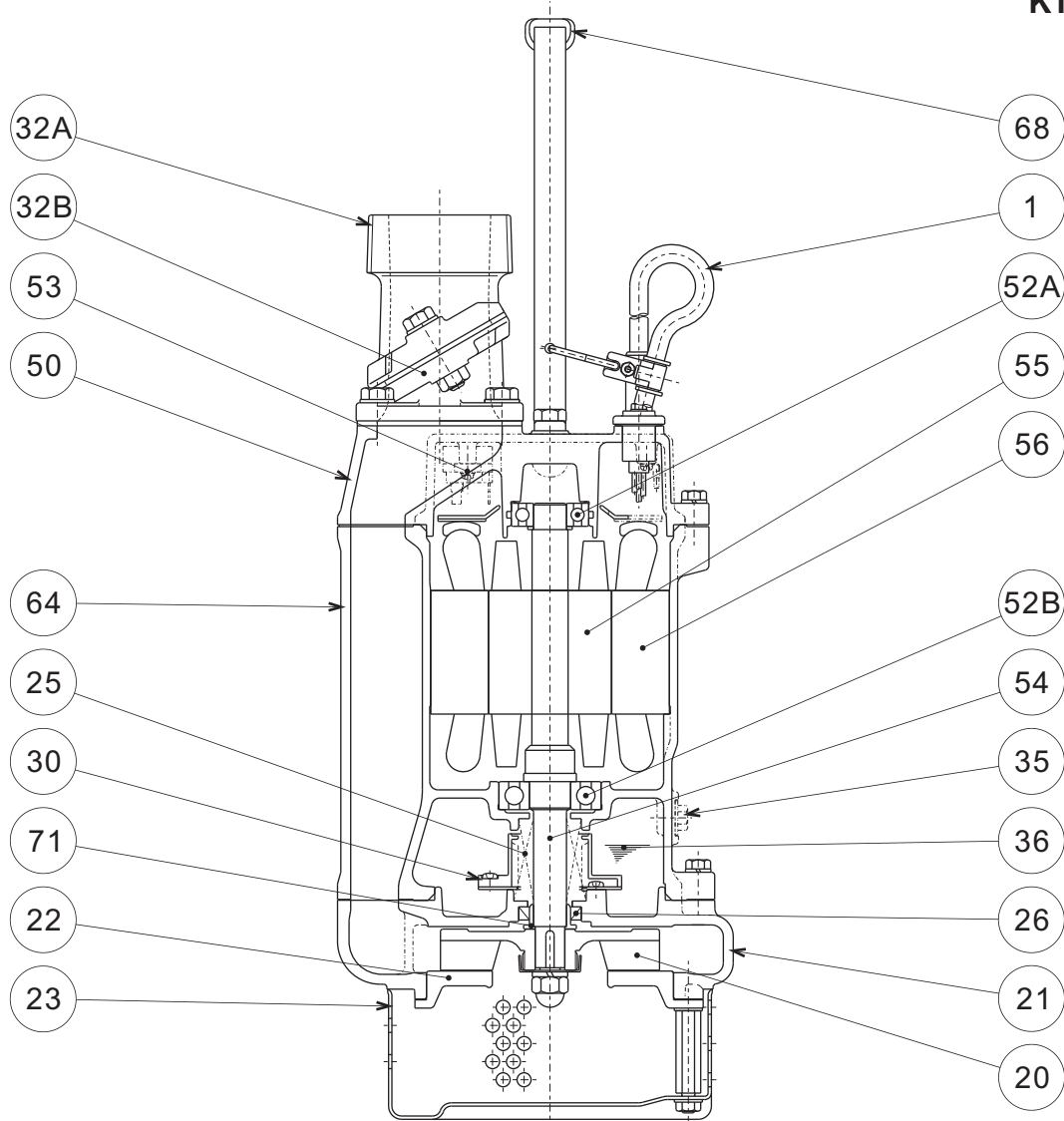


**TSURUMI PUMP**

**KTZ - SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ22.2-61  
KTZ32.2-61**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	PVC Sheath AWG16/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-20T			1
26	Oil Seal	Nitrile Butadiene Rubber / TC-25388			1
30	Oil Lifter	PBT Resin			1
32A	Discharge Connection	Cast Iron / NPT 2" or 3"	A48M Class30B	EN 1561 GJL-200	1
32B	Attachment	Aluminum Alloy Die Casting	B85 383.0	EN 1706 AC-46100	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	#6204ZZC3			1
52B	Lower Bearing	#6305ZZC3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	S 42000	1.4028	1
55	Rotor				1
56	Stator				1
64	Motor Housing	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
68	Handle	Steel (Cold Rolled) + NBR Rubber	A109/A1008	EN 10130	1
71	Shaft Sleeve	Stainless Steel	S 30400	1.4301	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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. 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 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 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.



**KTZ-SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

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  
 Motor Nomenclature  
     Type, Speed, Hz.  
     Voltage, Phase  
     Insulation  
     Bearings  
 Accessories  
 Operational Mode

**■ STANDARD**

2 ~ 4" NPT (50 - 100 mm)  
 6" is Optional (KTZ67.5 / KTZ611)  
 2 ~ 15 HP. (1.5 ~ 11 Kw)  
 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)  
 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)  
 104° F. (40° C.)  
 Cast Iron  
 High Chrome Iron  
 420 Stainless Steel  
 Cast Iron  
 304 Stainless Steel  
 10 - 15HP (7.5 - 11kW)  
 Silicon Carbide  
 NBR (Nitrile Butadiene Rubber)  
 Semi-open, solids handling.  
 0.334 - 0.787" (8.5 - 20.0mm)  
 Air Filled, 3600 RPM, 60 Hz.  
 208/230/460/575 V., 3 Phase  
 Class F  
 Pre-lubricated, Double Shielded  
 Submersible Power Cable 50' (15.0m)  
 Manual

**■ OPTIONS**

Length as Required



**TSURUMI PUMP**

# Positive Effect of Advanced KTZ KTZE – Automatic Pump with **Electrode**

## 1.5 / 2.2 / 3.7kW

### *Automatic Operation with Electrode*

The electrode-type sensor ON/OFF operation prevents dry running, reduces power consumption (50% over standard type – Tsurumi comparison), and extends operational life.

Energy Conservation

Cost Saving

Noise Reduction

### *Multi-Directional Hose Coupling*

The hose coupling has been devised so that it can be, without any extra parts, converted to an inclined discharge direction.



Every KTZ-series pump (1.5 to 11kW) is equipped with the above hose coupling as standard.

\* The additional features do NOT affect on the pump performance.

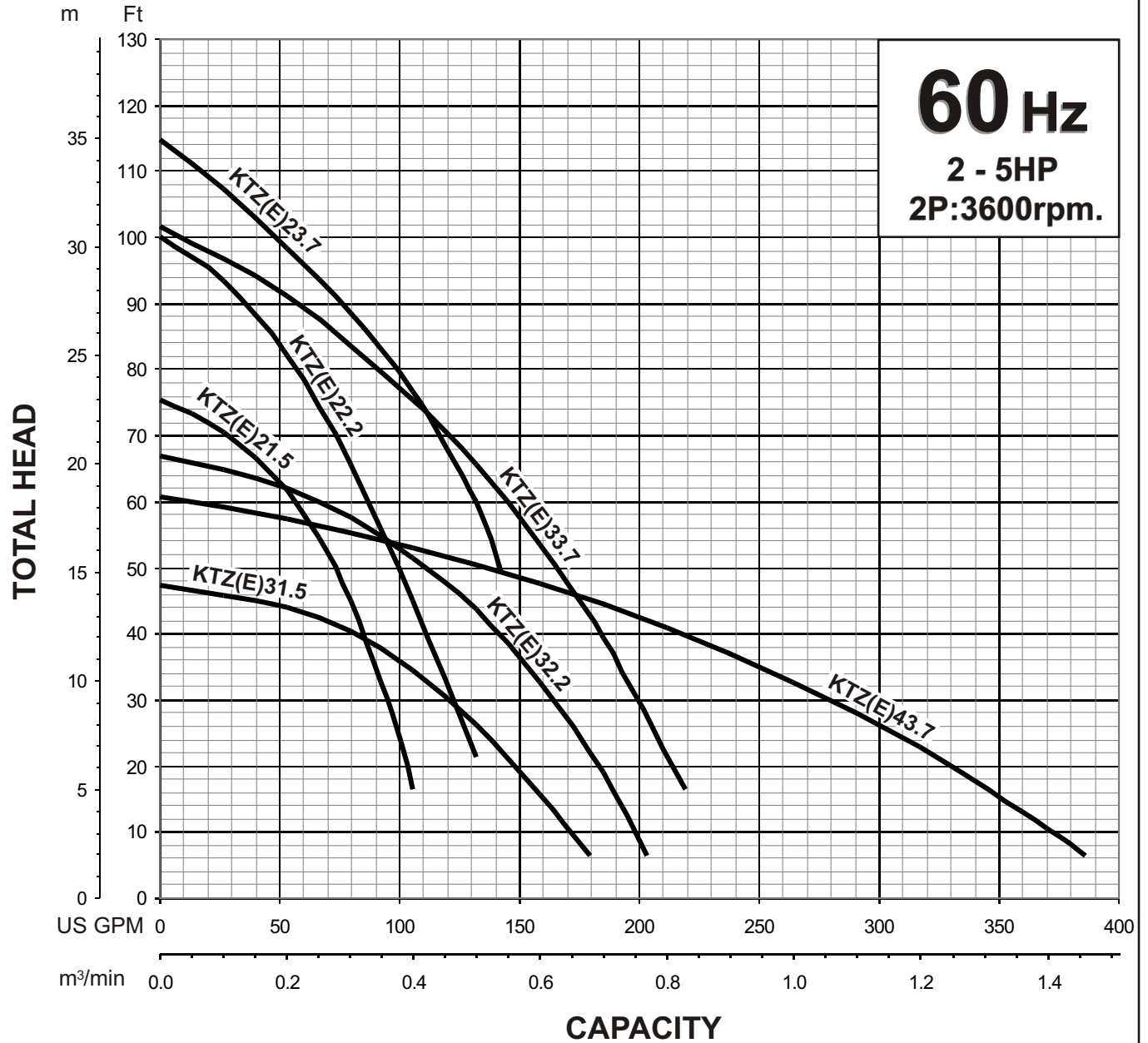


**TSURUMI PUMP**

**KTZ(E) - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

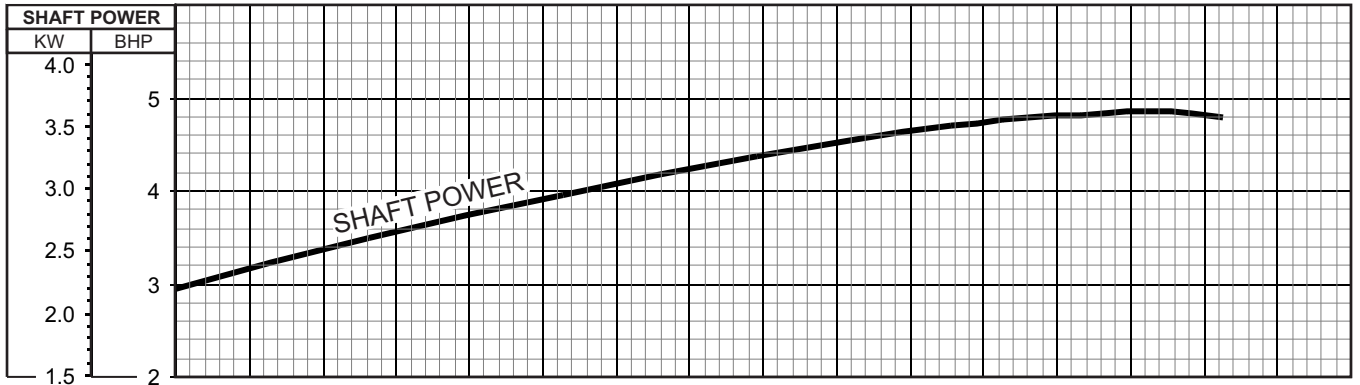
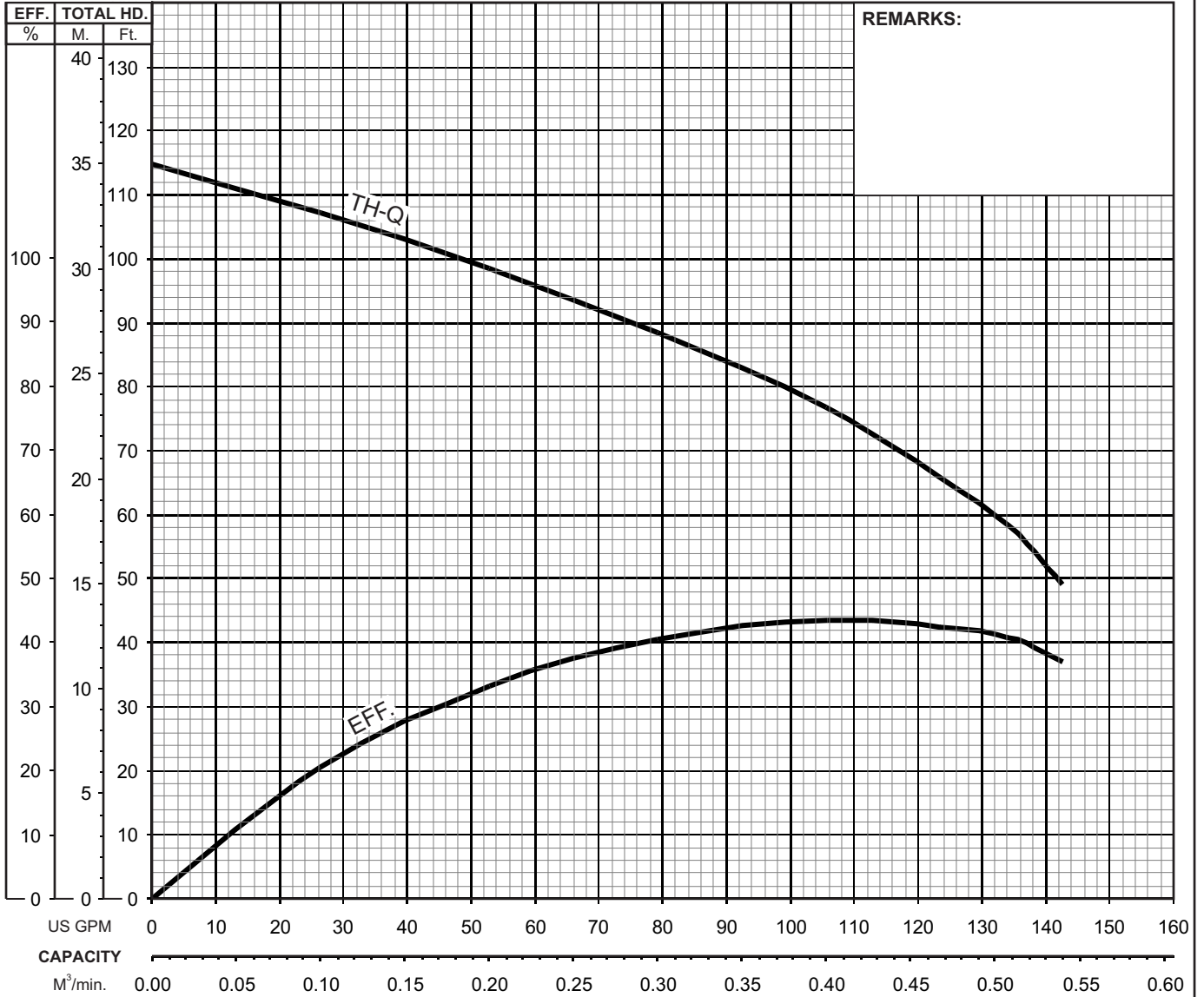




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

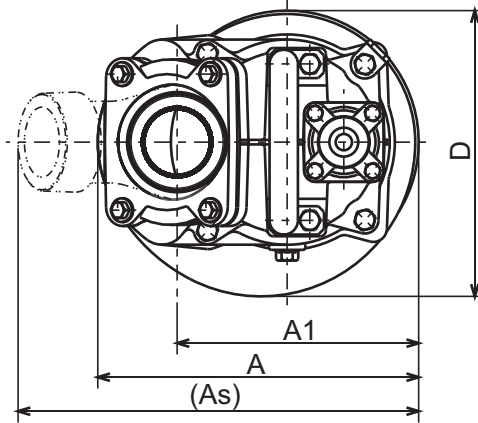
MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ23.7-63	2"/50mm	5	3.7	3410	0.334"/8.5mm	Water	1.0	1.123 cSt.	60°F
PUMP TYPE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS			
Dewatering Pump	3	208-230/460/575	15.0-13.6 / 6.8 / 5.3	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		



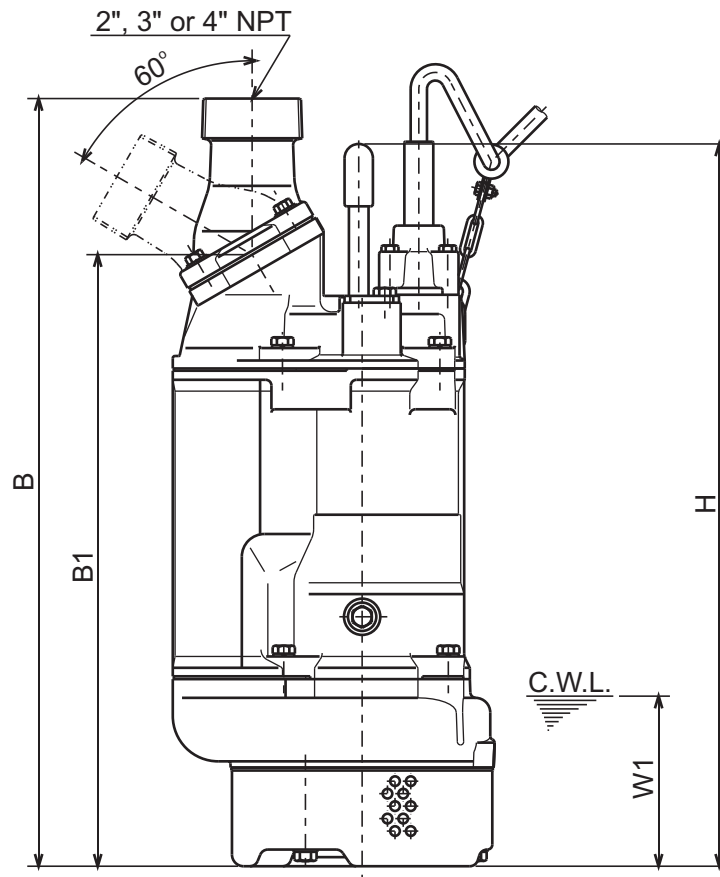


**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**



**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**



C.W.L. : Continuous running Water Level

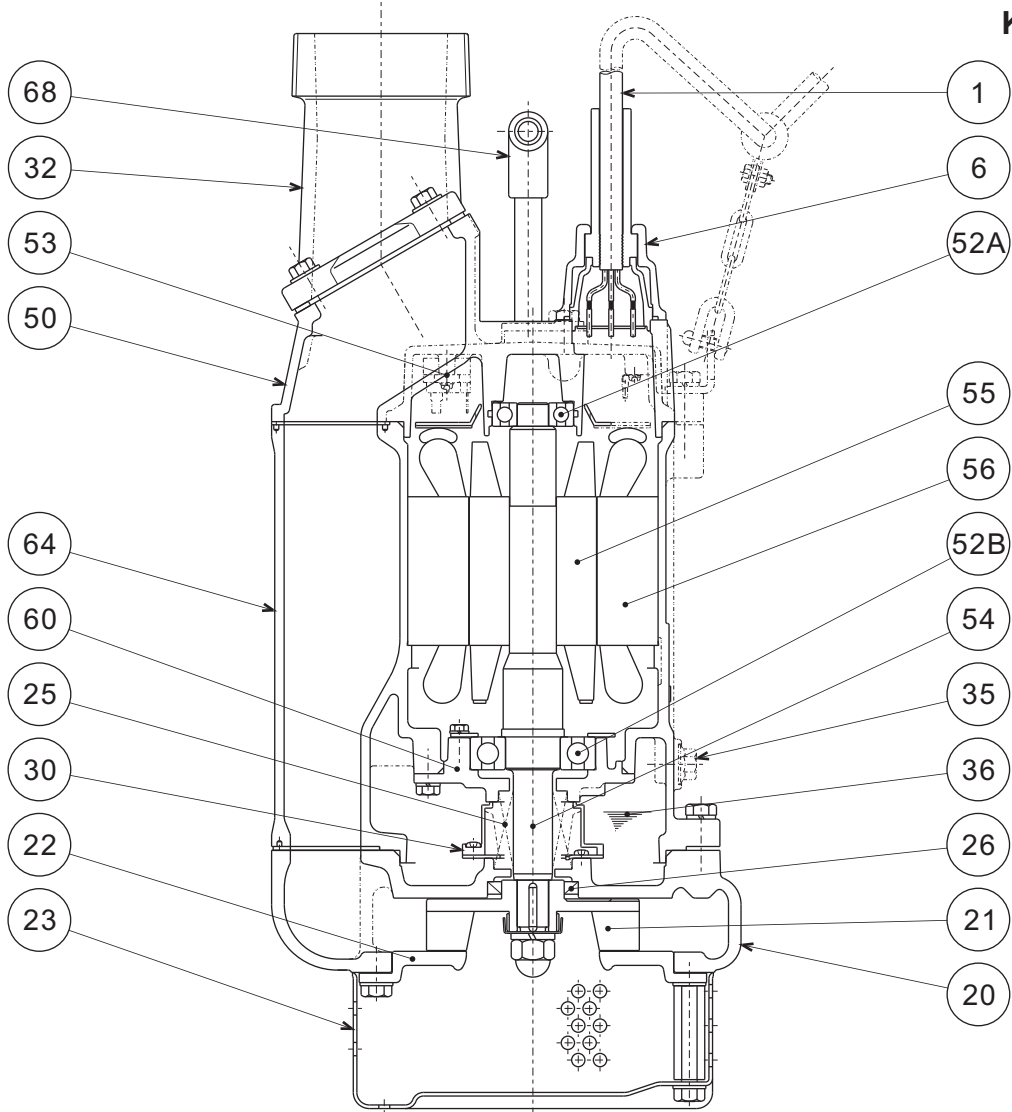
**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L. W1	Wt. (lbs.)
			A	As	A1	B	B1	D	H		
KTZ23.7-63	5	2"	11 1/8	13 5/16	8 3/8	26 1/4	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ33.7-63	5	3"	11 1/8	13 7/8	8 3/8	26 5/8	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ43.7-63	5	4"	11 1/8	14 1/2	8 3/8	27 1/16	21 1/4	9 15/16	25 1/16	5 7/8	137

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor							C.W.L. W1	Wt. (kg)
			A	As	A1	B	B1	D	H		
KTZ23.7-63	3.7	50	283	337	213	667	539	252	637	150	62
KTZ33.7-63	3.7	80	283	353	213	677	539	252	637	150	62
KTZ43.7-63	3.7	100	283	368	213	687	539	252	637	150	62

**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**



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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	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 2", 3" or 4"	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


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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. 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 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 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.



**KTZ-SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

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  
 Motor Nomenclature  
     Type, Speed, Hz.  
     Voltage, Phase  
     Insulation  
     Bearings  
 Accessories  
 Operational Mode

**■ STANDARD**

2 ~ 4" NPT (50 - 100 mm)  
 6" is Optional (KTZ67.5 / KTZ611)  
 2 ~ 15 HP. (1.5 ~ 11 Kw)  
 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)  
 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)  
 104° F. (40° C.)  
 Cast Iron  
 High Chrome Iron  
 420 Stainless Steel  
 Cast Iron  
 304 Stainless Steel  
 10 - 15HP (7.5 - 11kW)  
 Silicon Carbide  
 NBR (Nitrile Butadiene Rubber)  
 Semi-open, solids handling.  
 0.334 - 0.787" (8.5 - 20.0mm)  
 Air Filled, 3600 RPM, 60 Hz.  
 208/230/460/575 V., 3 Phase  
 Class F  
 Pre-lubricated, Double Shielded  
 Submersible Power Cable 50' (15.0m)  
 Manual

**■ OPTIONS**

Length as Required



**TSURUMI PUMP**

# Positive Effect of Advanced KTZ KTZE – Automatic Pump with **Electrode**

## 1.5 / 2.2 / 3.7kW

### *Automatic Operation with Electrode*

The electrode-type sensor ON/OFF operation prevents dry running, reduces power consumption (50% over standard type – Tsurumi comparison), and extends operational life.

Energy Conservation

Cost Saving

Noise Reduction

### *Multi-Directional Hose Coupling*

The hose coupling has been devised so that it can be, without any extra parts, converted to an inclined discharge direction.



Every KTZ-series pump (1.5 to 11kW) is equipped with the above hose coupling as standard.

\* The additional features do NOT affect on the pump performance.

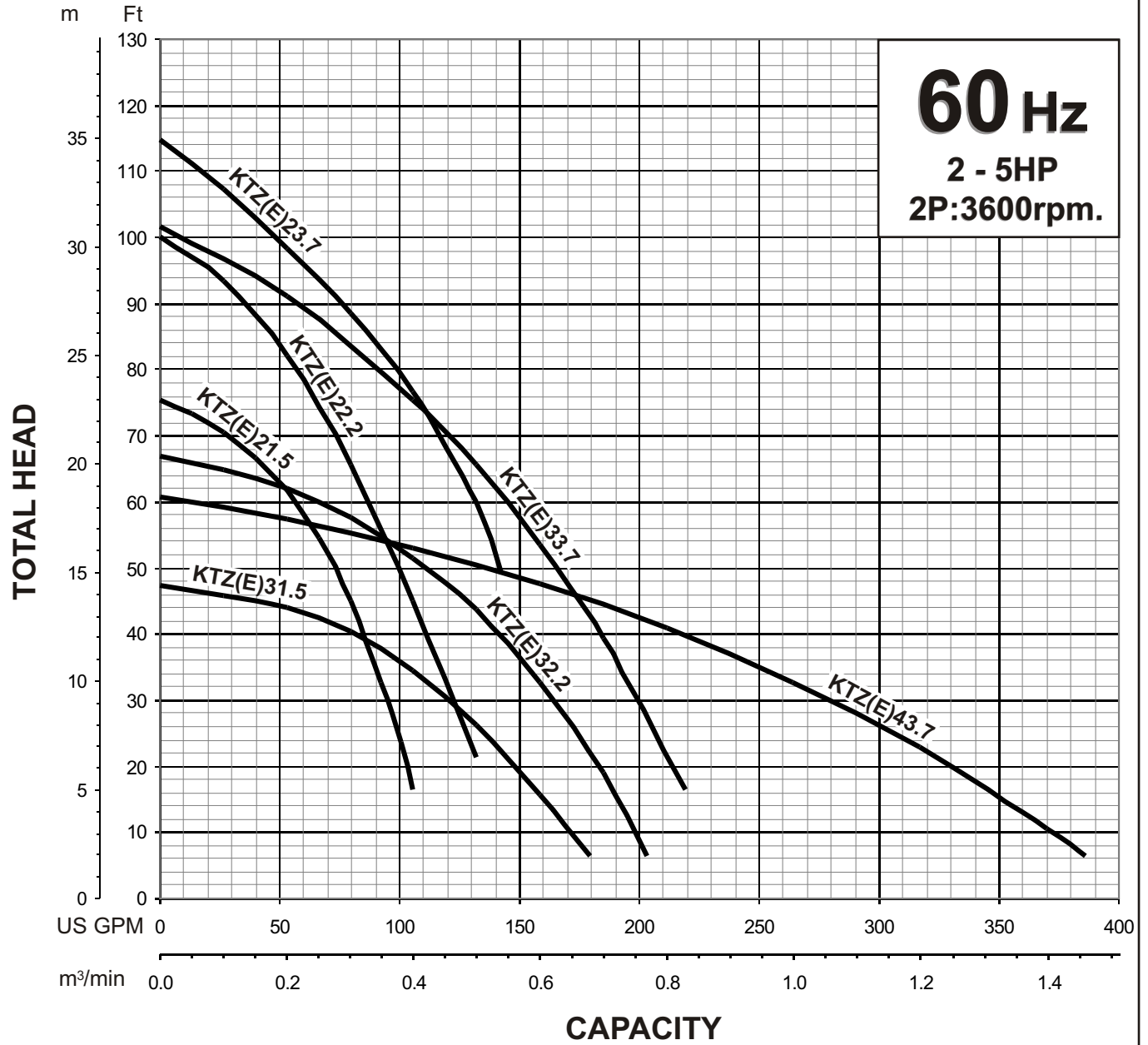


**TSURUMI PUMP**

**KTZ(E) - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

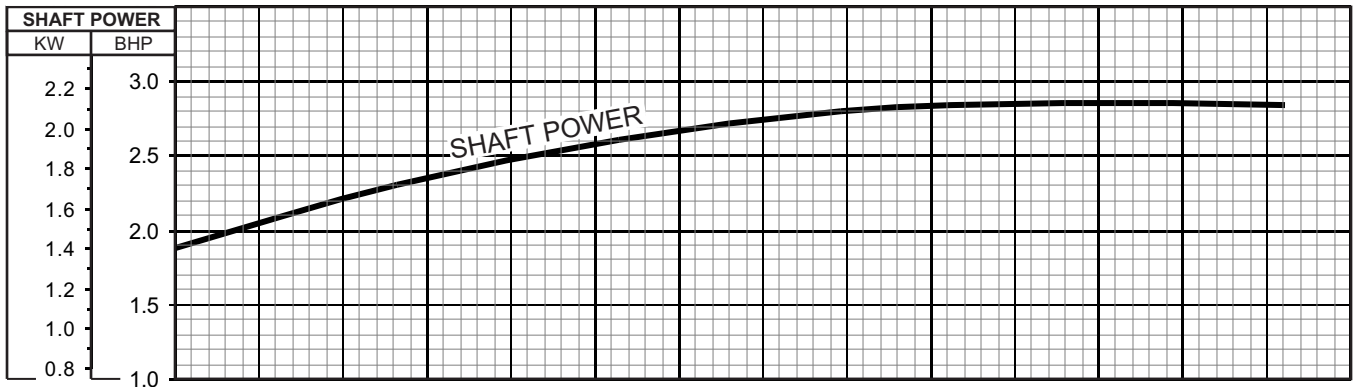
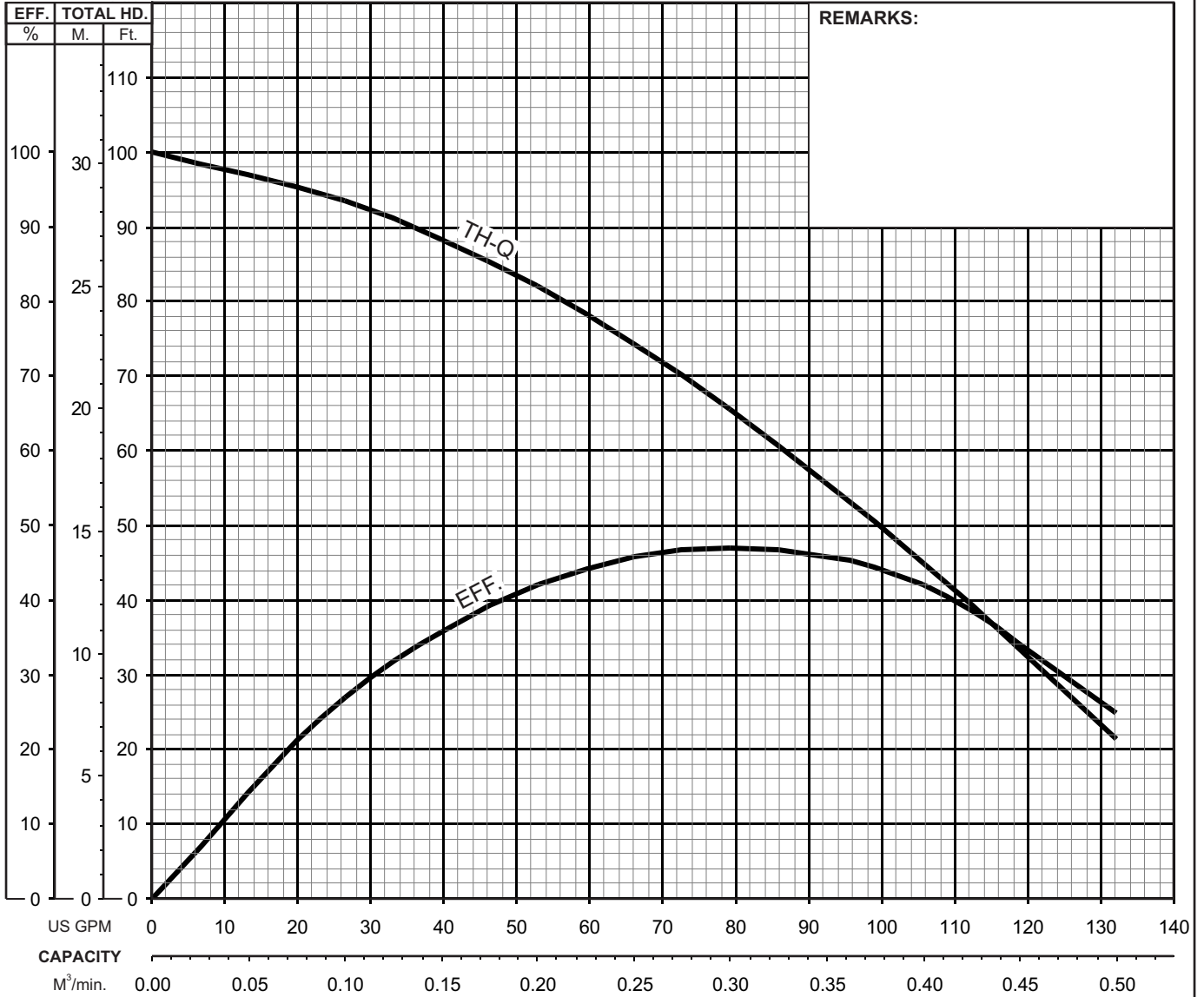




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ22.2-61	2"/50mm	3	2.2	3410	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	208-230/460/575	9.4-9.0 / 4.5 / 3.5	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

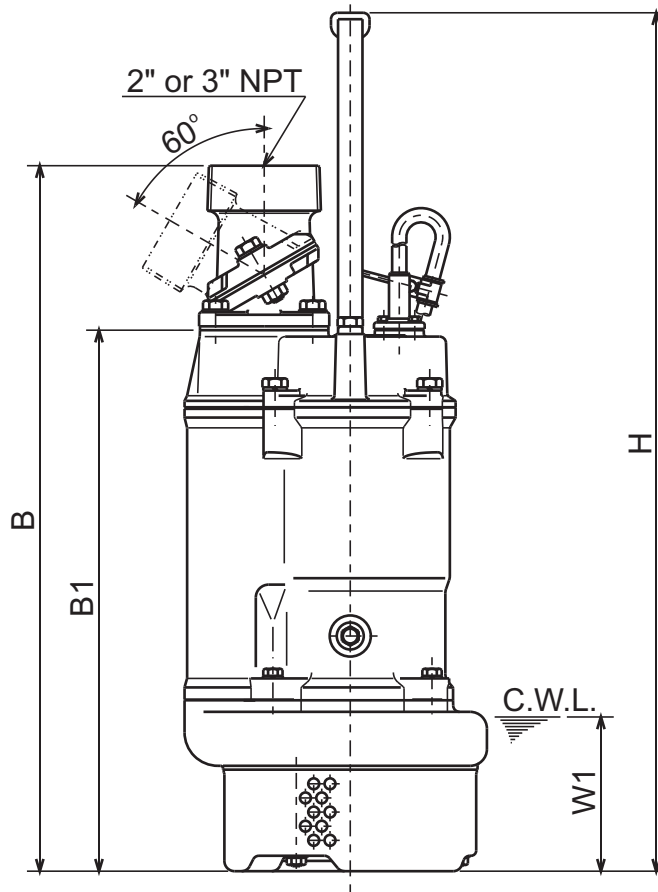
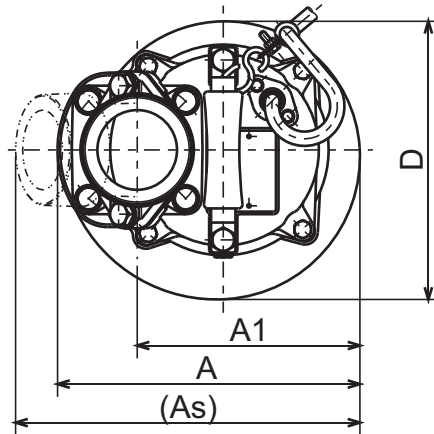




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ22.2-61  
KTZ32.2-61**



C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (lbs.)
			A	As	A1	B	B1	D	H	W1	
KTZ22.2-61	3	2"	9 1/4	10 1/4	6 13/16	21 5/8	16 9/16	8 1/2	26 5/16	4 3/4	79
KTZ32.2-61	3	3"	9 1/4	10 9/16	6 13/16	21 5/8	16 9/16	8 1/2	26 5/16	4 3/4	77

**DIMENSIONS:METRIC (mm)**

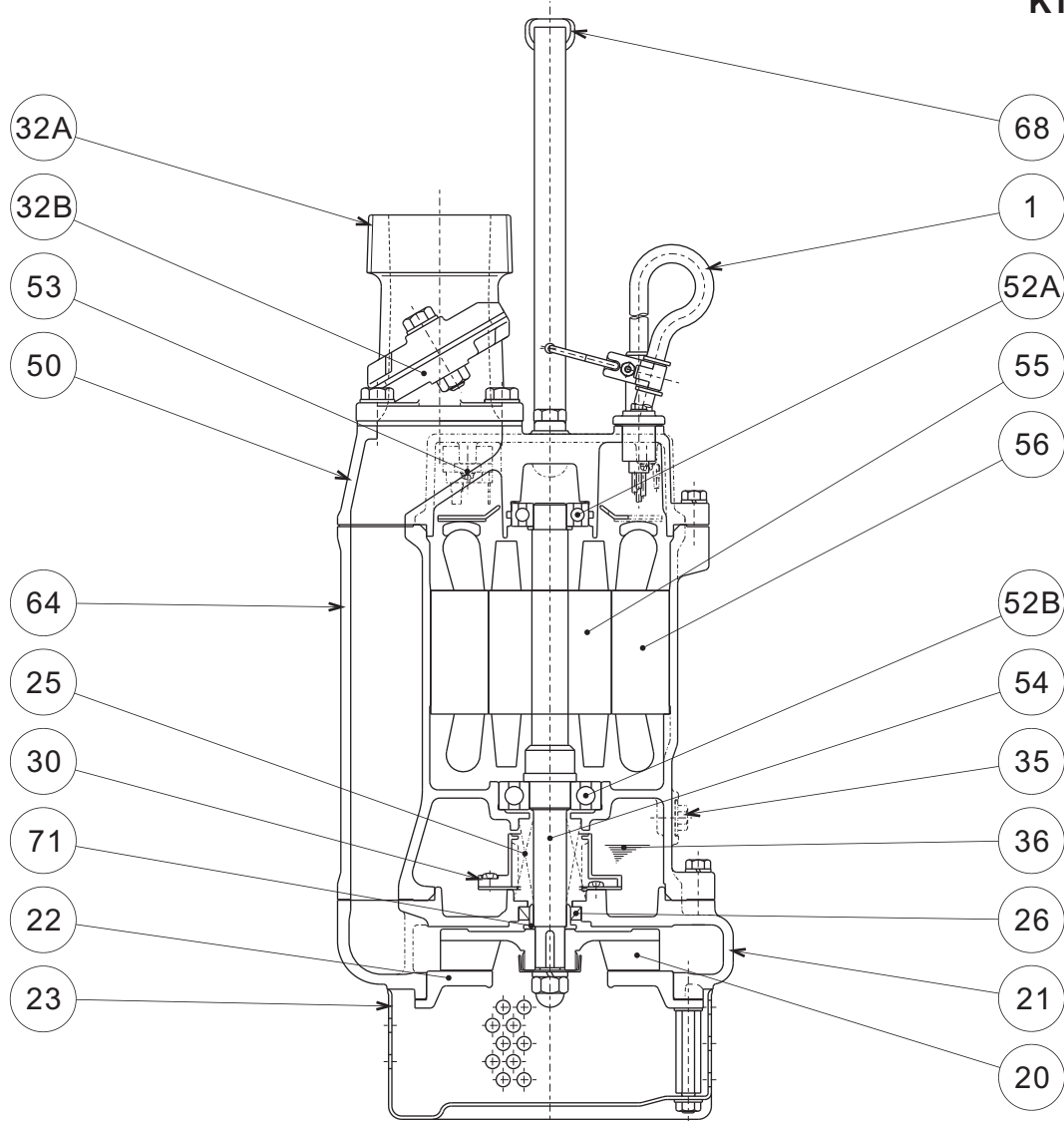
Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (kg)
			A	As	A1	B	B1	D	H	W1	
KTZ22.2-61	2.2	50	235	261	173	549	421	216	668	120	36
KTZ32.2-61	2.2	80	235	268	173	549	421	216	668	120	35



**KTZ - SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ22.2-61  
KTZ32.2-61**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	PVC Sheath AWG16/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-20T			1
26	Oil Seal	Nitrile Butadiene Rubber / TC-25388			1
30	Oil Lifter	PBT Resin			1
32A	Discharge Connection	Cast Iron / NPT 2" or 3"	A48M Class30B	EN 1561 GJL-200	1
32B	Attachment	Aluminum Alloy Die Casting	B85 383.0	EN 1706 AC-46100	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	#6204ZZC3			1
52B	Lower Bearing	#6305ZZC3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	S 42000	1.4028	1
55	Rotor				1
56	Stator				1
64	Motor Housing	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
68	Handle	Steel (Cold Rolled) + NBR Rubber	A109/A1008	EN 10130	1
71	Shaft Sleeve	Stainless Steel	S 30400	1.4301	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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. 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 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 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.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**OPTIONS**

Length as Required

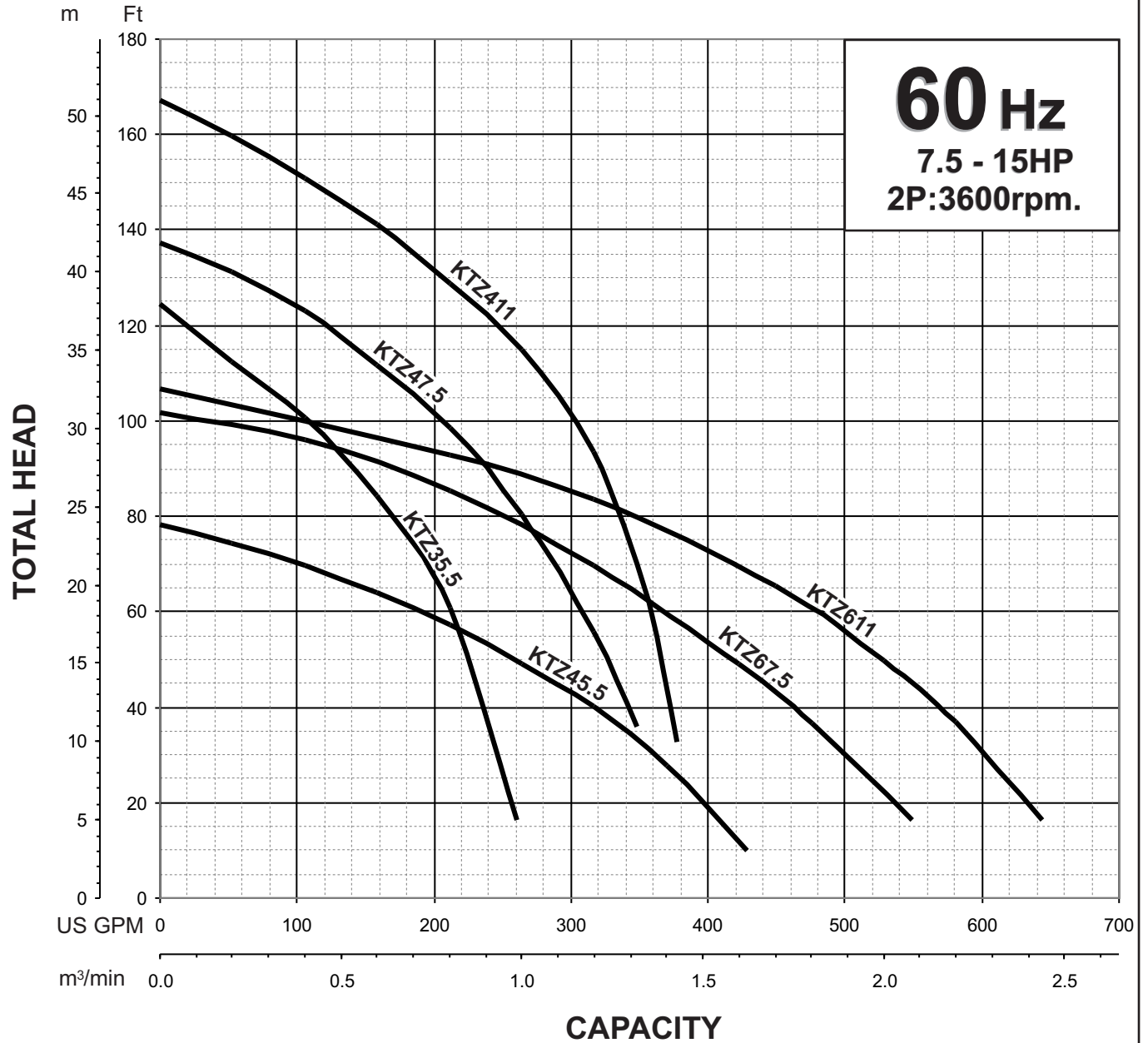


**TSURUMI PUMP**

**KTZ - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

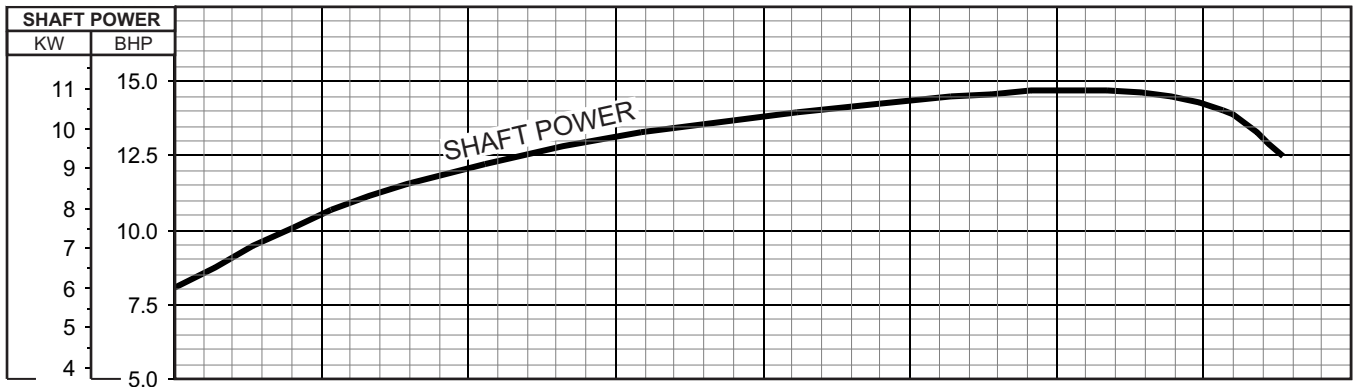
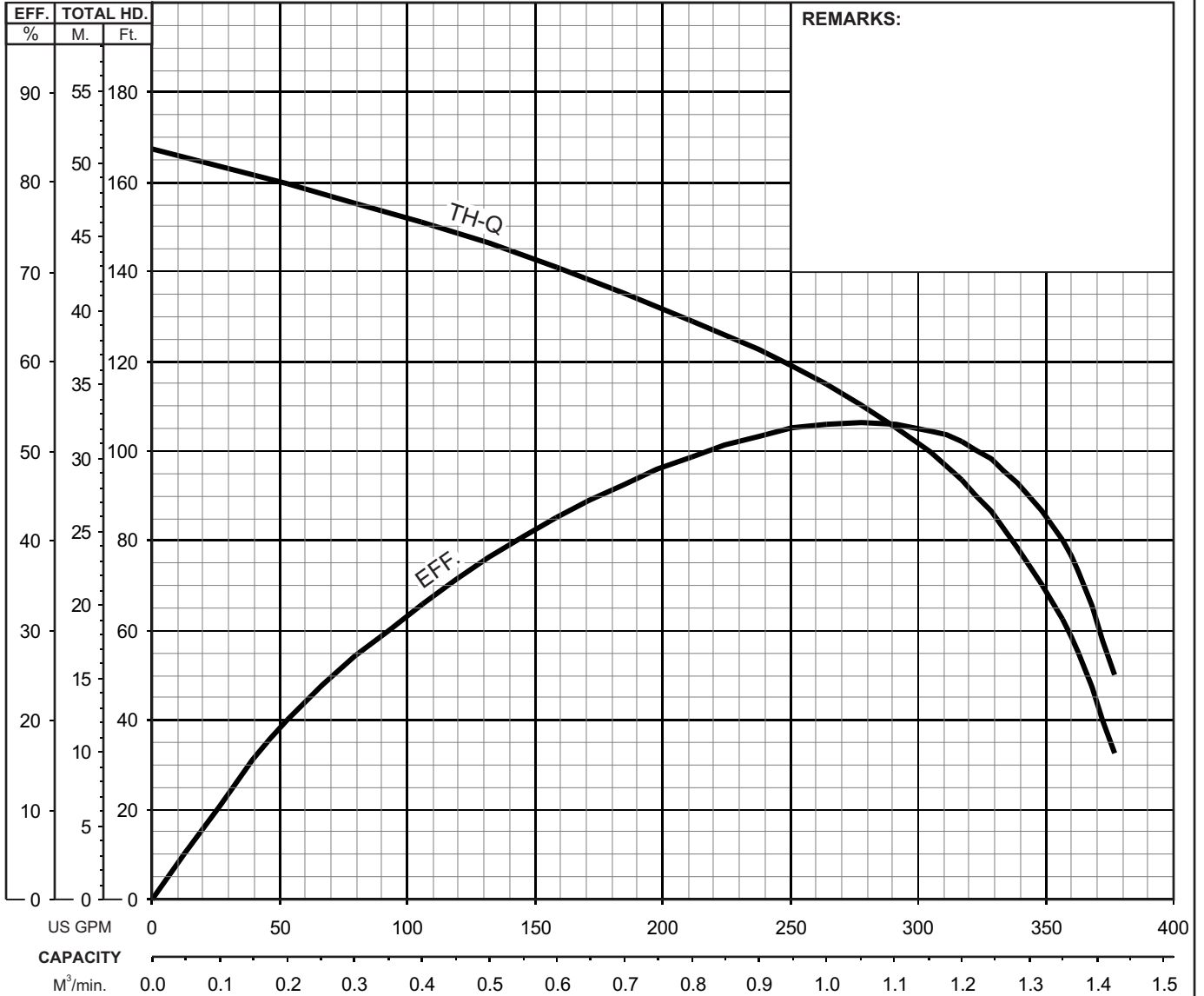




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ411-63	4"/100mm	15	11	3520	0.472"/12mm	Water	1.0	1.123 cSt.	60°F
PUMP TYPE	PHASE	VOLTAGE	AMPERAGE		HZ	STARTING METHOD	INS. CLASS		
Dewatering Pump	3	208-230/460/575	39.8-37.4 / 18.6 / 14.9		60	Direct On Line	F		
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

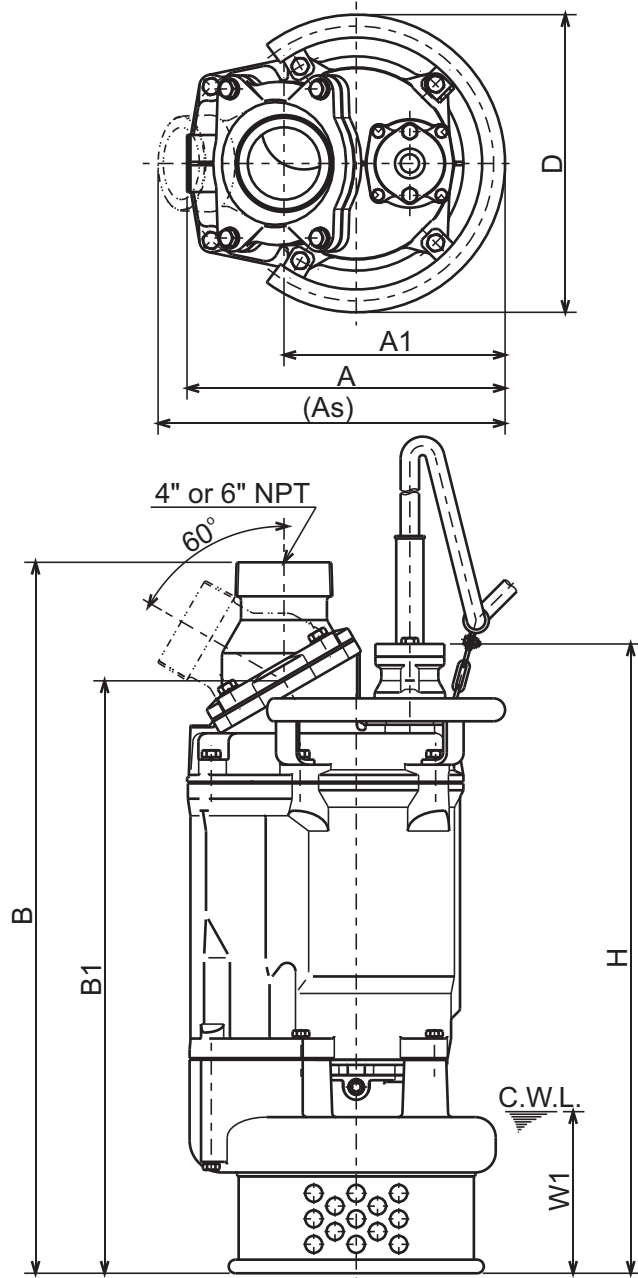




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ411-63  
KTZ611-63**



C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L. W1	Wt. (lbs.)
			A	As	A1	B	B1	D	H		
KTZ411-63	15	4"	14 3/4	16 1/16	10 1/4	32 15/16	27 7/16	13 3/4	29 1/8	7 1/2	293
KTZ611-63(4")	15	4"	14 3/4	16 1/16	10 1/4	32 15/16	27 7/16	13 3/4	29 1/8	7 1/2	295
KTZ611-63	15	6"	14 3/4	17 1/4	10 1/4	33 11/16	27 7/16	13 3/4	29 1/8	7 1/2	295

**DIMENSIONS:METRIC (mm)**

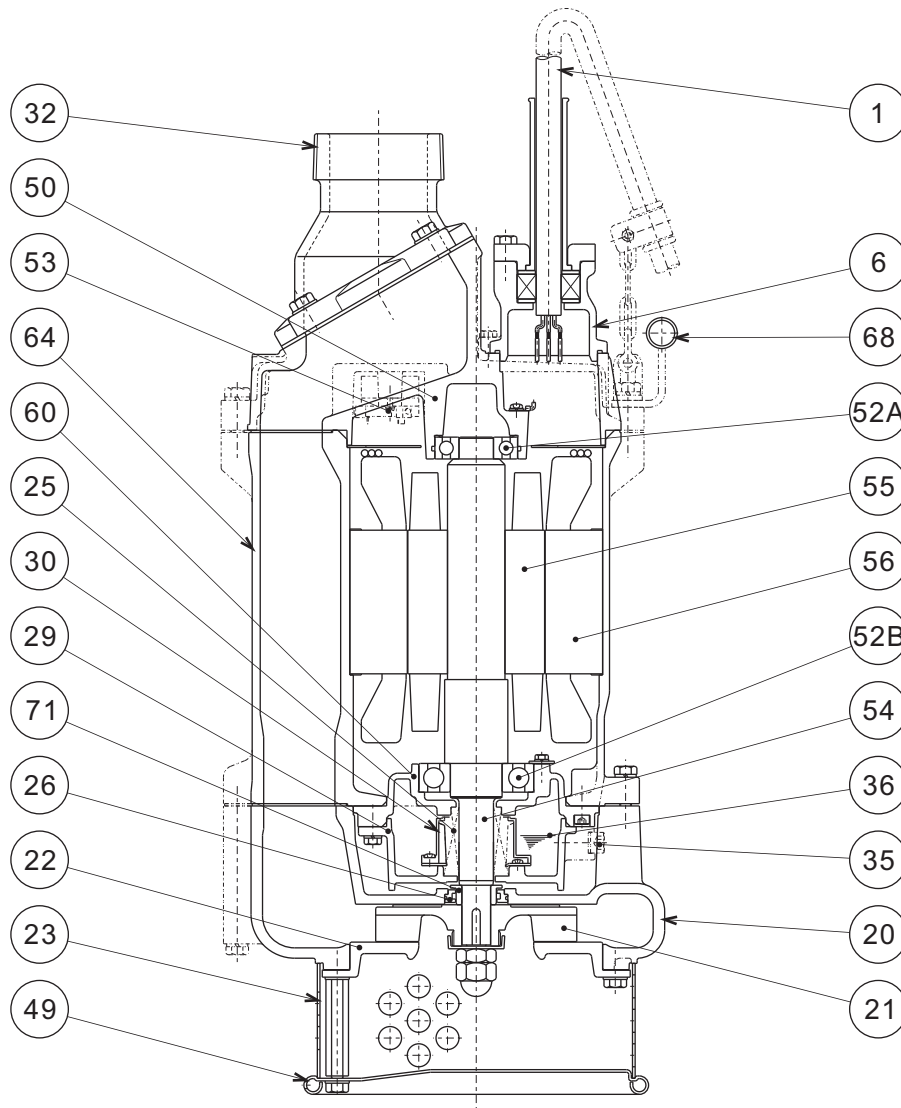
Model	kW	NOM. SIZE	Pump & Motor							C.W.L. W1	Wt. (kg)
			A	As	A1	B	B1	D	H		
KTZ411-63	11	100	374	408	260	836	697	350	740	190	133
KTZ611-63(4")	11	100	374	408	260	836	697	350	740	190	134
KTZ611-63	11	150	374	439	260	856	697	350	740	190	134



**KTZ - SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ411-63  
KTZ611-63**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	Chloroprene Sheath AWG8/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-30T			1
30	Oil Lifter	PBT Resin			1
26	Labyrinth Ring	Stainless Steel	S 30400	1.4301	1
32	Discharge Connection	Cast Iron / NPT 4" (or 6")	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			
49	Bottom Plate	Steel (Cold Rolled)	A109/A1008	EN 10130	1
50	Motor Head Cover	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
52A	Upper Bearing	#6306ZC3			1
52B	Lower Bearing	#6309ZC3			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 Class30B or 25B	EN 1561 GJL-200 or GJL-150	1
68	Handle	Carbon Steel Pipe + Steel	A53 Type F + A283 Grade D	DIN 1615 St33 + EN 10025 S275	1
71	Shaft Sleeve	Stainless Steel	S 40300	1.4000	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 \_\_\_\_\_ HP., \_\_\_\_\_ 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**■ STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**■ OPTIONS**

Length as Required

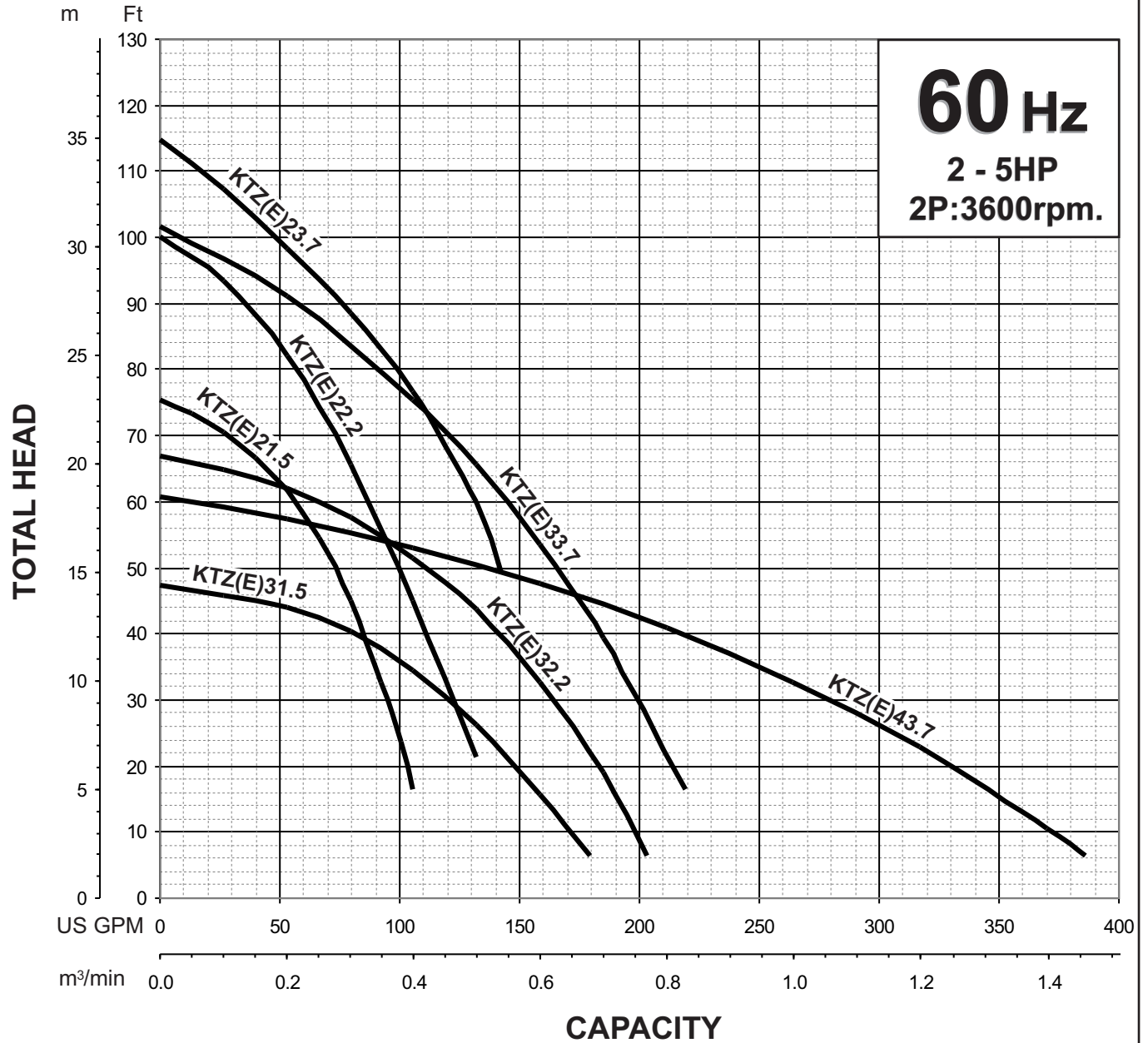


**TSURUMI PUMP**

**KTZ(E) - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

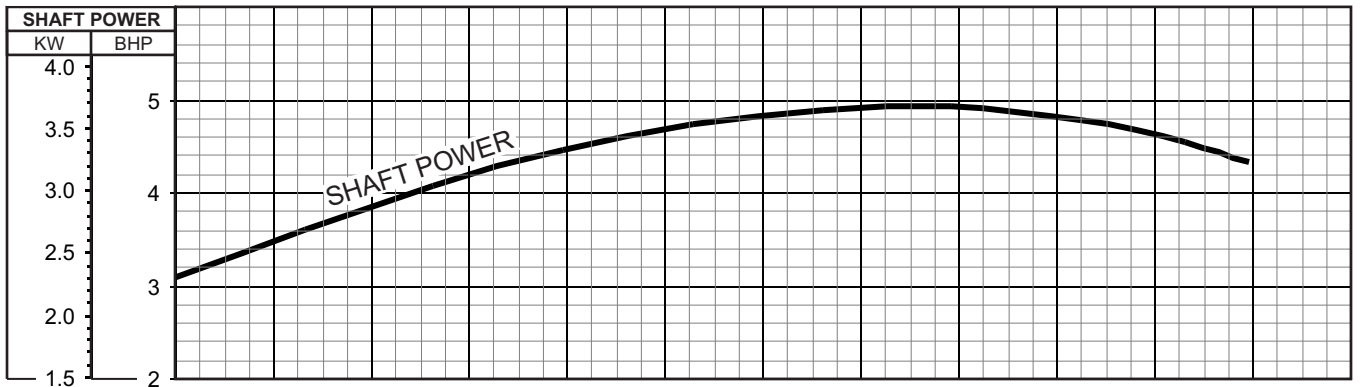
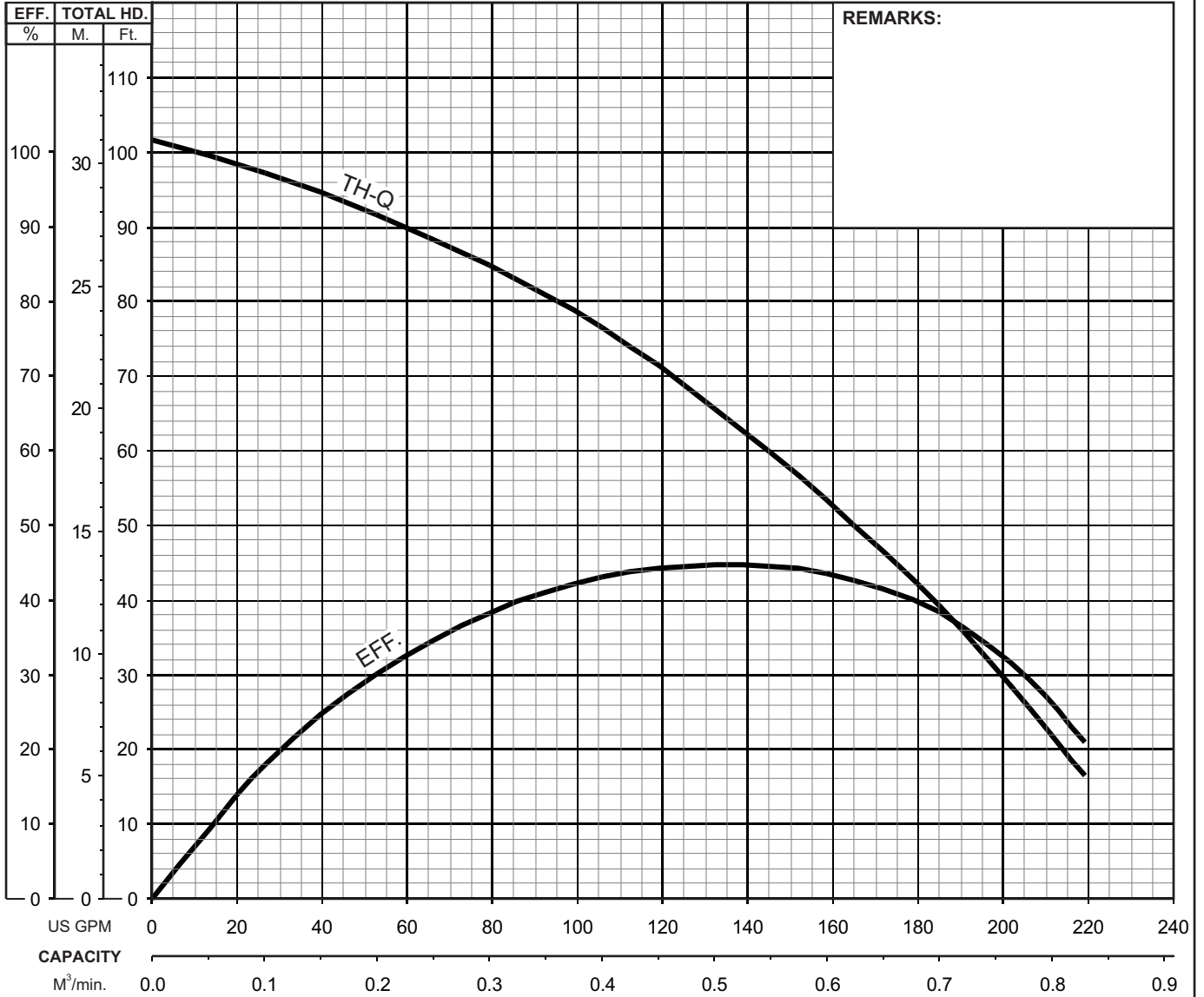




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

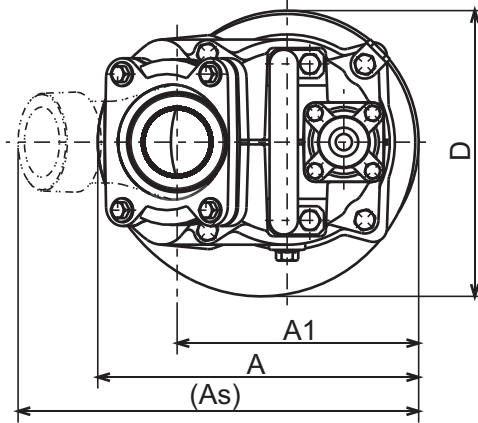
MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ33.7-63	3"/80mm	5	3.7	3410	0.334"/8.5mm	Water	1.0	1.123 cSt.	60°F
PUMP TYPE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS			
Dewatering Pump	3	208-230/460/575	15.0-13.6 / 6.8 / 5.3	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		



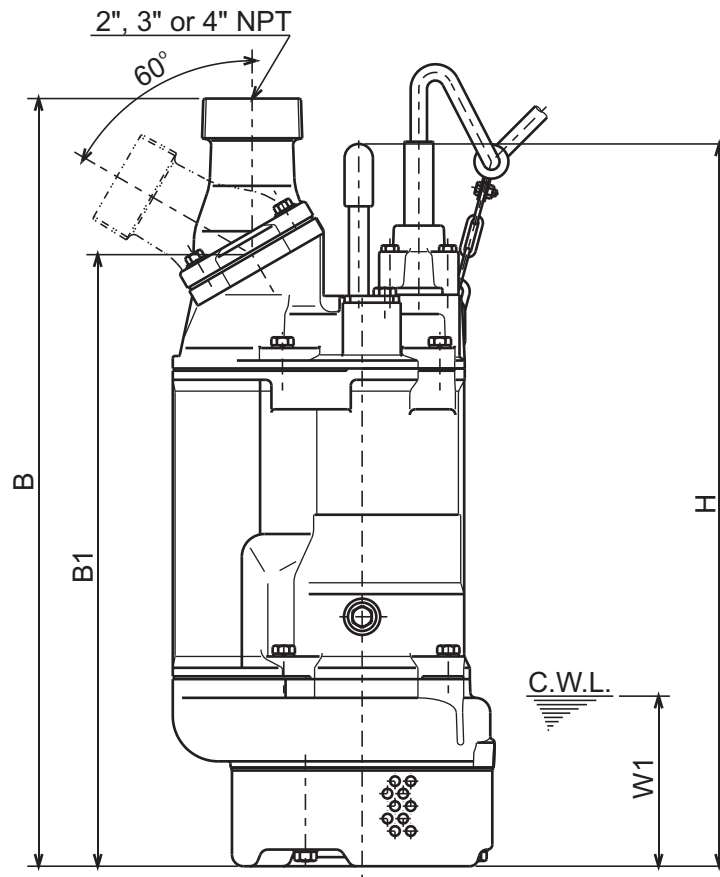


**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**



**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**



C.W.L. : Continuous running Water Level

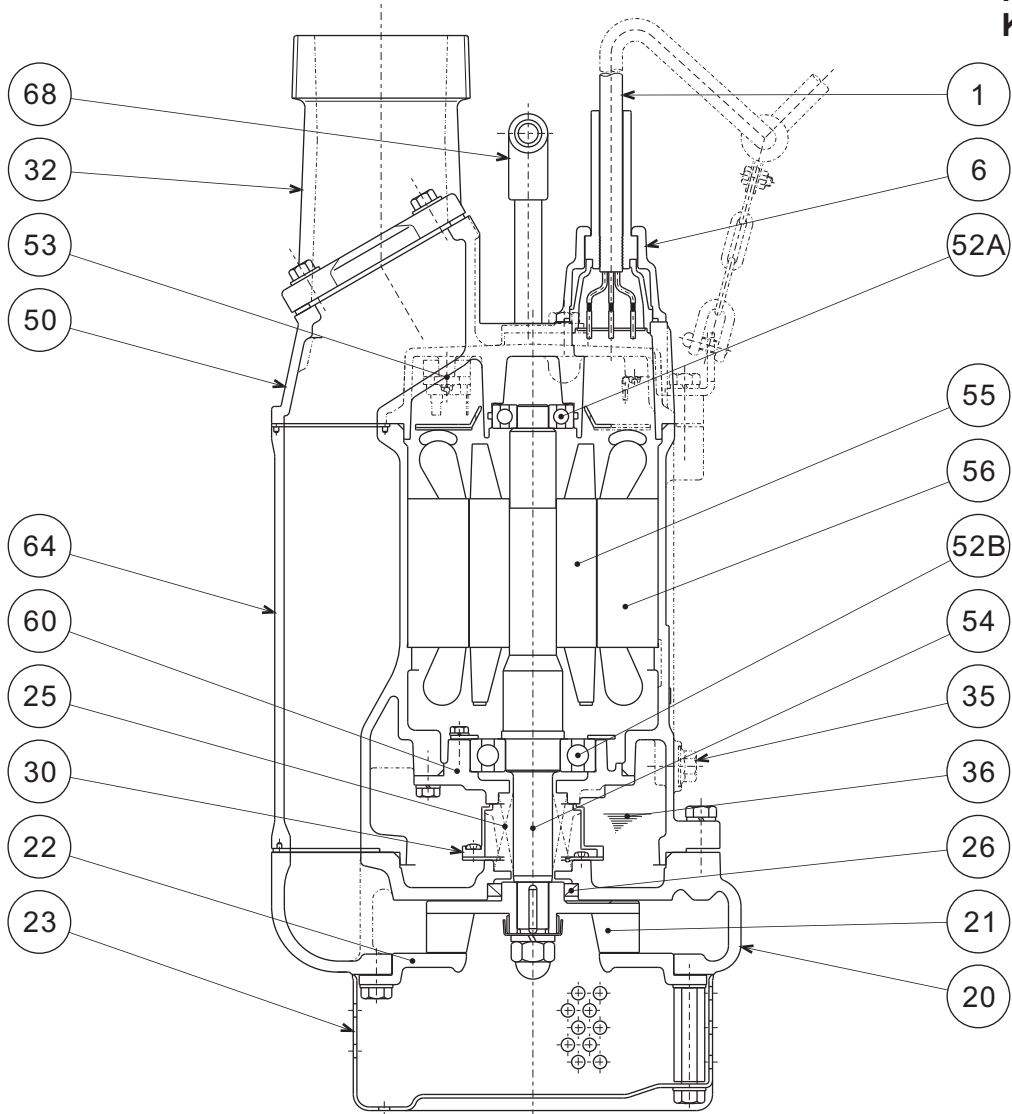
**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt.
			A	As	A1	B	B1	D	H	W1	(lbs.)
KTZ23.7-63	5	2"	11 1/8	13 5/16	8 3/8	26 1/4	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ33.7-63	5	3"	11 1/8	13 7/8	8 3/8	26 5/8	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ43.7-63	5	4"	11 1/8	14 1/2	8 3/8	27 1/16	21 1/4	9 15/16	25 1/16	5 7/8	137

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt.
			A	As	A1	B	B1	D	H	W1	(kg)
KTZ23.7-63	3.7	50	283	337	213	667	539	252	637	150	62
KTZ33.7-63	3.7	80	283	353	213	677	539	252	637	150	62
KTZ43.7-63	3.7	100	283	368	213	687	539	252	637	150	62

**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**



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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	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 2", 3" or 4"	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


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 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. 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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 a anti-wicking block to eliminate water incursion into the motor due to capillary wicking should the power cable be accidentally damaged.



**KTZ-SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

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  
 Motor Nomenclature  
     Type, Speed, Hz.  
     Voltage, Phase  
     Insulation  
     Bearings  
 Accessories  
 Operational Mode

**■ STANDARD**

2 ~ 4" NPT (50 - 100 mm)  
 6" is Optional (KTZ67.5 / KTZ611)  
 2 ~ 15 HP. (1.5 ~ 11 Kw)  
 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)  
 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)  
 104° F. (40° C.)  
 Cast Iron  
 High Chrome Iron  
 420 Stainless Steel  
 Cast Iron  
 304 Stainless Steel  
 10 - 15HP (7.5 - 11kW)  
 Silicon Carbide  
 NBR (Nitrile Butadiene Rubber)  
 Semi-open, solids handling.  
 0.334 - 0.787" (8.5 - 20.0mm)  
 Air Filled, 3600 RPM, 60 Hz.  
 208/230/460/575 V., 3 Phase  
 Class F  
 Pre-lubricated, Double Shielded  
 Submersible Power Cable 50' (15.0m)  
 Manual

**■ OPTIONS**

Length as Required



**TSURUMI PUMP**

# Positive Effect of Advanced KTZ KTZE – Automatic Pump with **Electrode**

## 1.5 / 2.2 / 3.7kW

### *Automatic Operation with Electrode*

The electrode-type sensor ON/OFF operation prevents dry running, reduces power consumption (50% over standard type – Tsurumi comparison), and extends operational life.

Energy Conservation

Cost Saving

Noise Reduction

### *Multi-Directional Hose Coupling*

The hose coupling has been devised so that it can be, without any extra parts, converted to an inclined discharge direction.



Every KTZ-series pump (1.5 to 11kW) is equipped with the above hose coupling as standard.

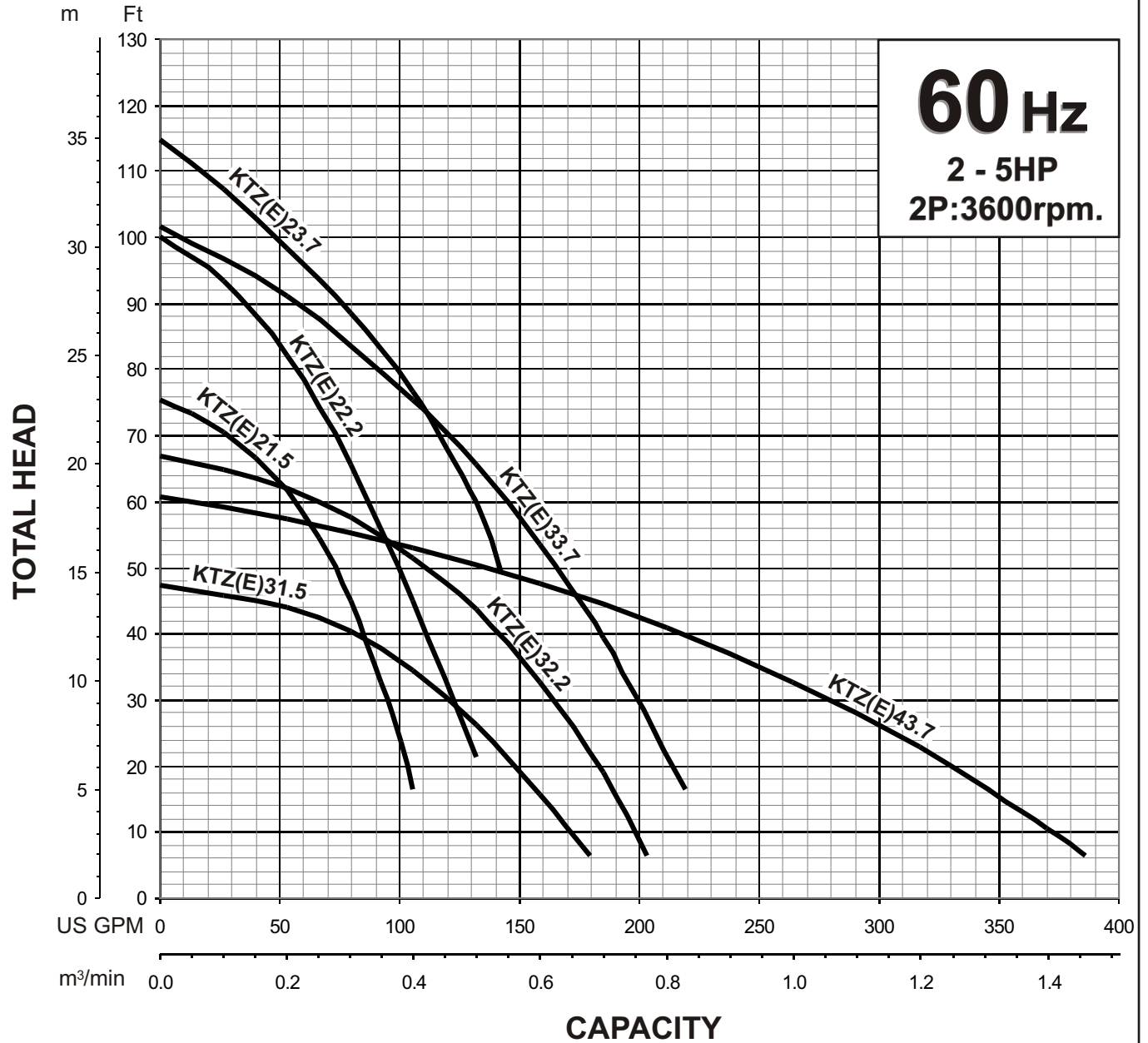
\* The additional features do NOT affect on the pump performance.



# KTZ(E) - SERIES DEWATERING PUMPS

# PERFORMANCE RANGE

## GROUP PERFORMANCE RANGE

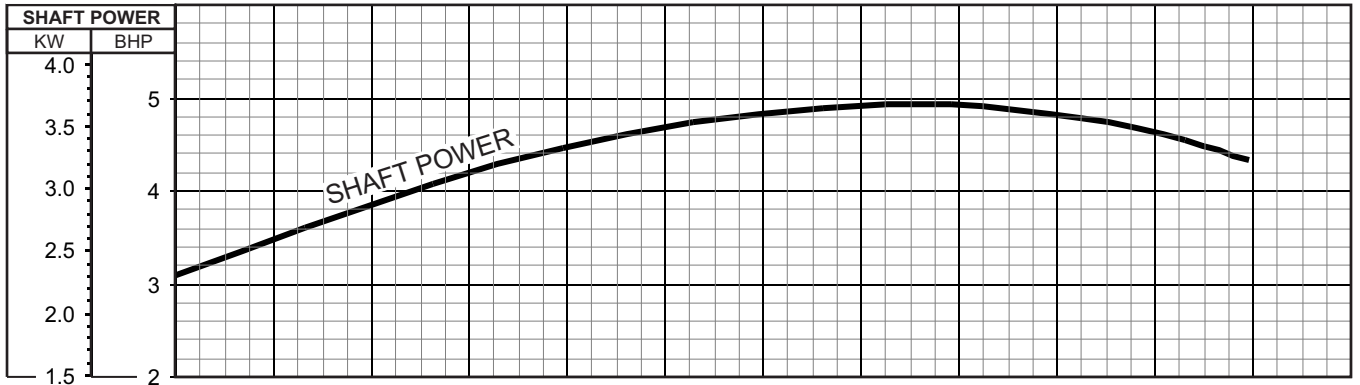
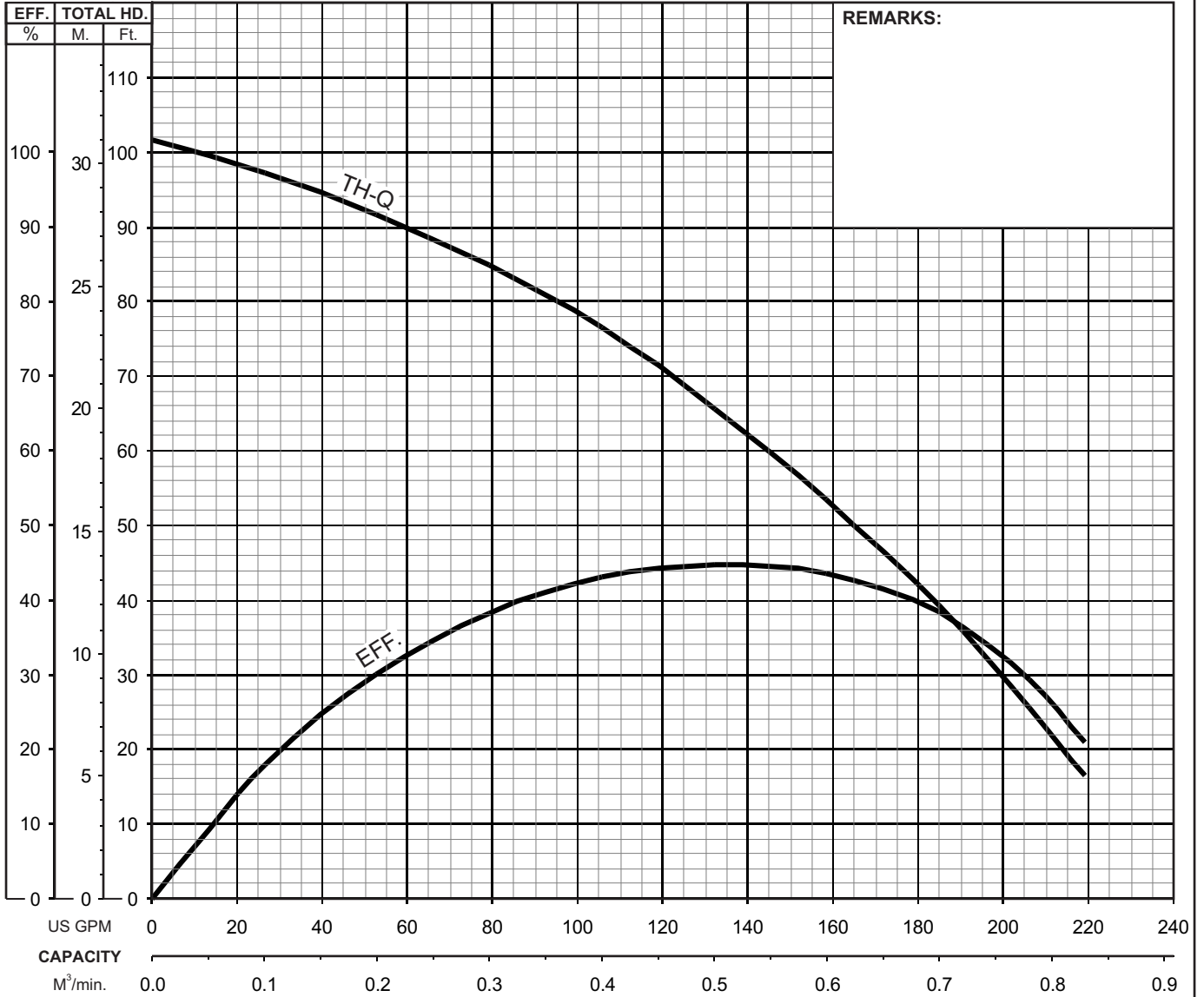




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

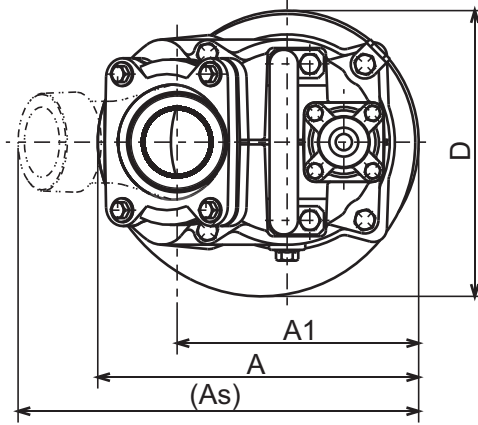
MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ33.7-63	3"/80mm	5	3.7	3410	0.334"/8.5mm	Water	1.0	1.123 cSt.	60°F
PUMP TYPE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS			
Dewatering Pump	3	208-230/460/575	15.0-13.6 / 6.8 / 5.3	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		



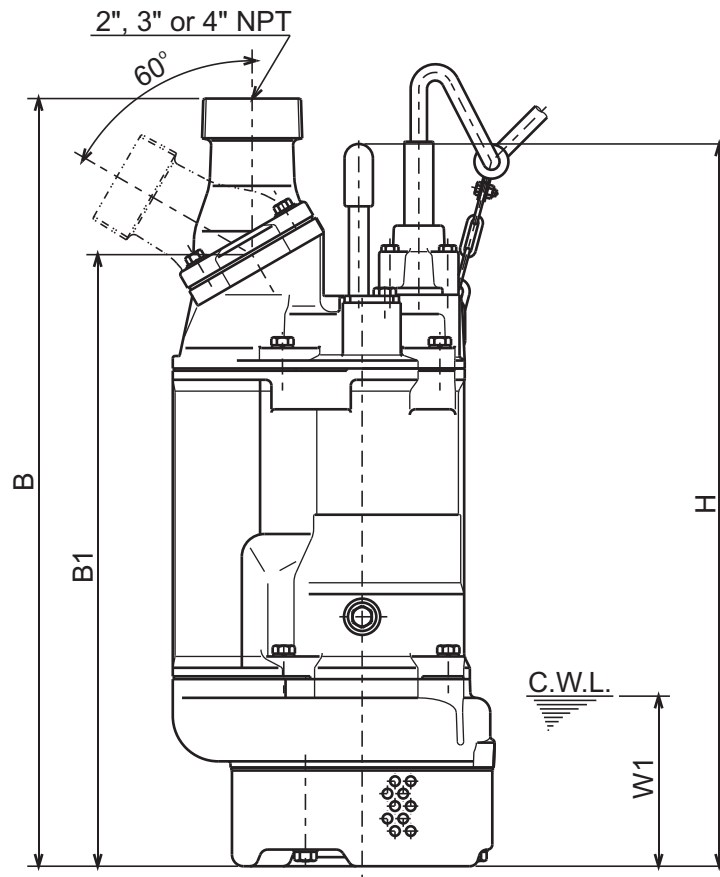


**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**



**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**



C.W.L. : Continuous running Water Level

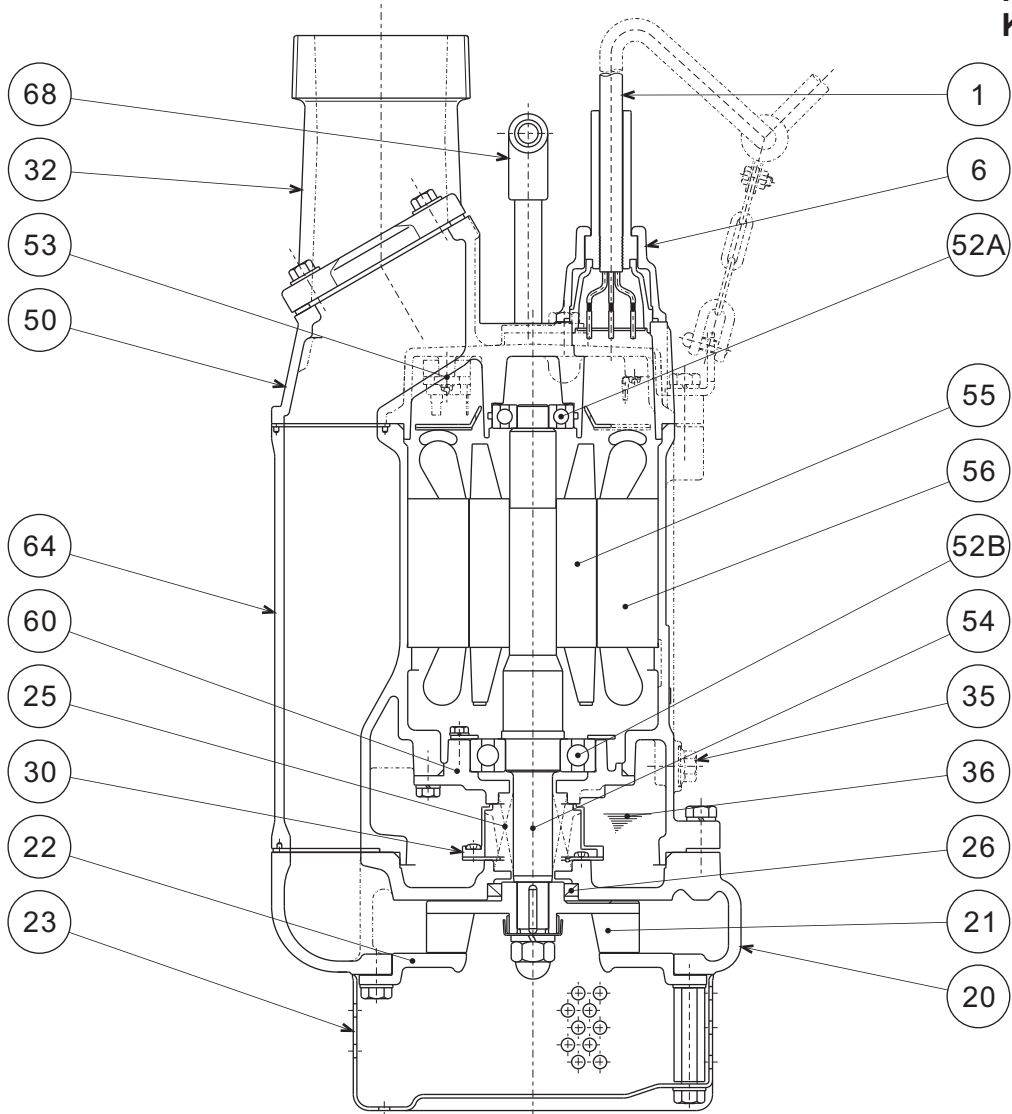
**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L. W1	Wt. (lbs.)
			A	As	A1	B	B1	D	H		
KTZ23.7-63	5	2"	11 1/8	13 5/16	8 3/8	26 1/4	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ33.7-63	5	3"	11 1/8	13 7/8	8 3/8	26 5/8	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ43.7-63	5	4"	11 1/8	14 1/2	8 3/8	27 1/16	21 1/4	9 15/16	25 1/16	5 7/8	137

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor							C.W.L. W1	Wt. (kg)
			A	As	A1	B	B1	D	H		
KTZ23.7-63	3.7	50	283	337	213	667	539	252	637	150	62
KTZ33.7-63	3.7	80	283	353	213	677	539	252	637	150	62
KTZ43.7-63	3.7	100	283	368	213	687	539	252	637	150	62

**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**



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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	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 2", 3" or 4"	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



## KTZ - SERIES DEWATERING 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. 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 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 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.



**KTZ-SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

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  
 Motor Nomenclature  
     Type, Speed, Hz.  
     Voltage, Phase  
     Insulation  
     Bearings  
 Accessories  
 Operational Mode

**■ STANDARD**

2 ~ 4" NPT (50 - 100 mm)  
 6" is Optional (KTZ67.5 / KTZ611)  
 2 ~ 15 HP. (1.5 ~ 11 Kw)  
 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)  
 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)  
 104° F. (40° C.)  
 Cast Iron  
 High Chrome Iron  
 420 Stainless Steel  
 Cast Iron  
 304 Stainless Steel  
 10 - 15HP (7.5 - 11kW)  
 Silicon Carbide  
 NBR (Nitrile Butadiene Rubber)  
 Semi-open, solids handling.  
 0.334 - 0.787" (8.5 - 20.0mm)  
 Air Filled, 3600 RPM, 60 Hz.  
 208/230/460/575 V., 3 Phase  
 Class F  
 Pre-lubricated, Double Shielded  
 Submersible Power Cable 50' (15.0m)  
 Manual

**■ OPTIONS**

Length as Required



**TSURUMI PUMP**

# Positive Effect of Advanced KTZ KTZE – Automatic Pump with **Electrode**

## 1.5 / 2.2 / 3.7kW

### *Automatic Operation with Electrode*

The electrode-type sensor ON/OFF operation prevents dry running, reduces power consumption (50% over standard type – Tsurumi comparison), and extends operational life.

Energy Conservation

Cost Saving

Noise Reduction

### *Multi-Directional Hose Coupling*

The hose coupling has been devised so that it can be, without any extra parts, converted to an inclined discharge direction.



Every KTZ-series pump (1.5 to 11kW) is equipped with the above hose coupling as standard.

\* The additional features do NOT affect on the pump performance.

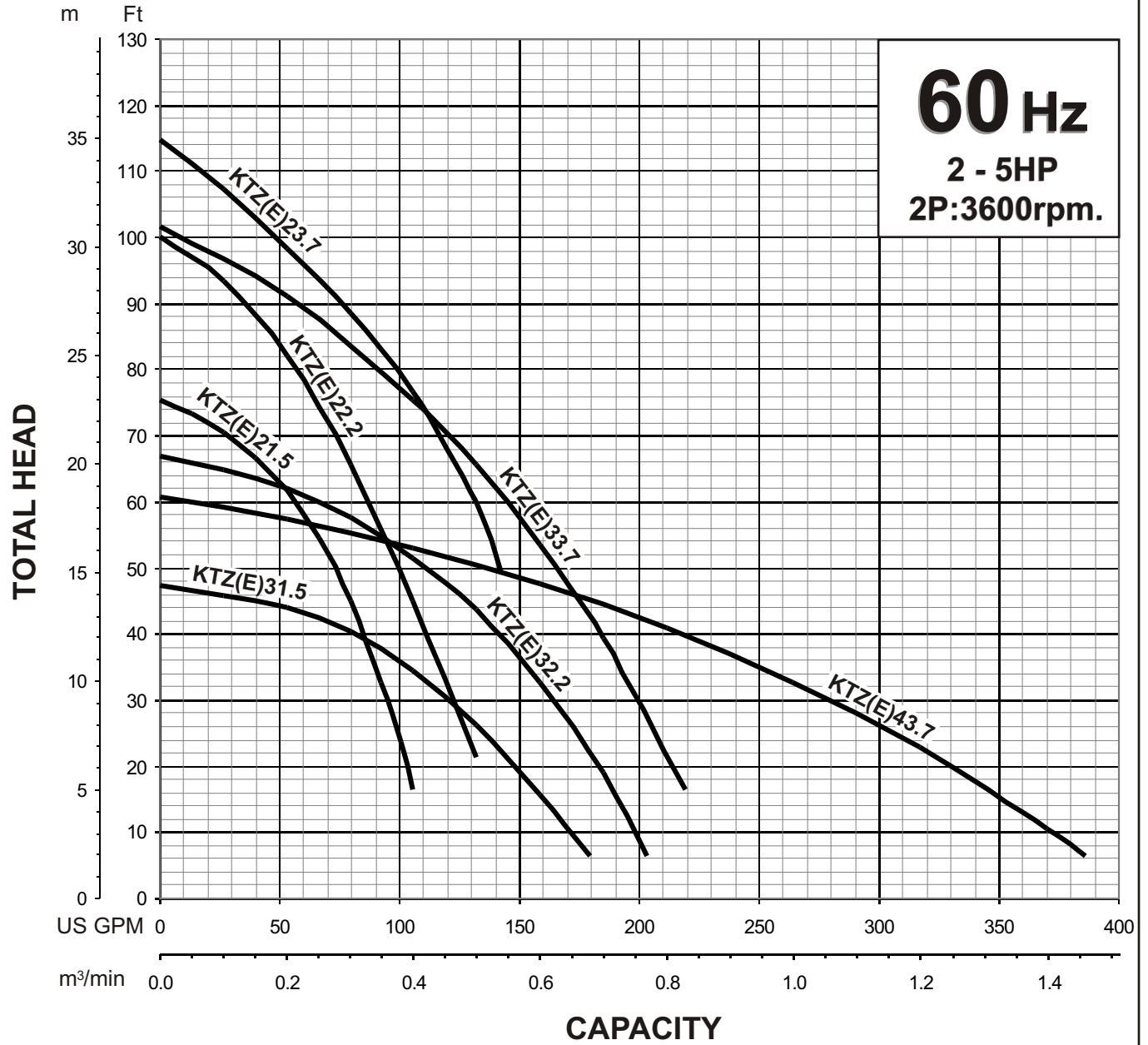




# KTZ(E) - SERIES DEWATERING PUMPS

## PERFORMANCE RANGE

### GROUP PERFORMANCE RANGE

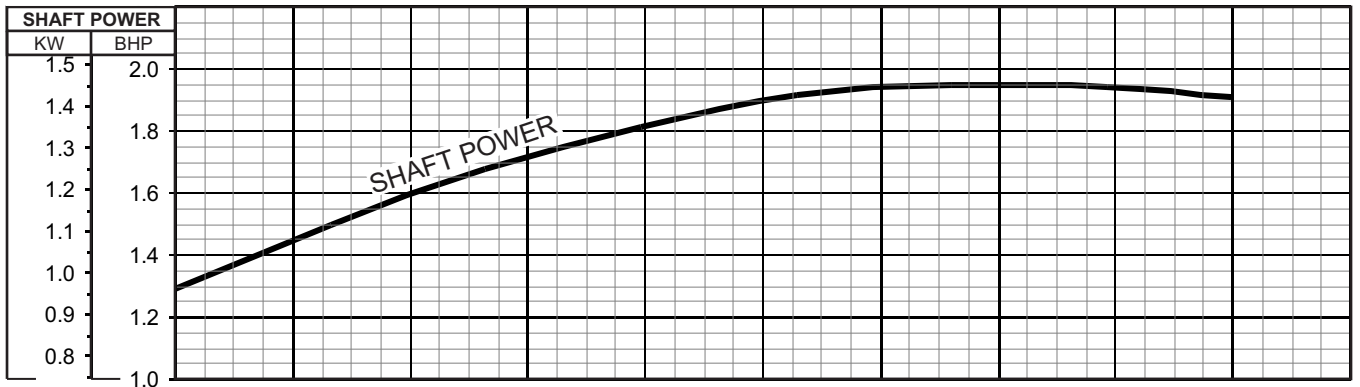
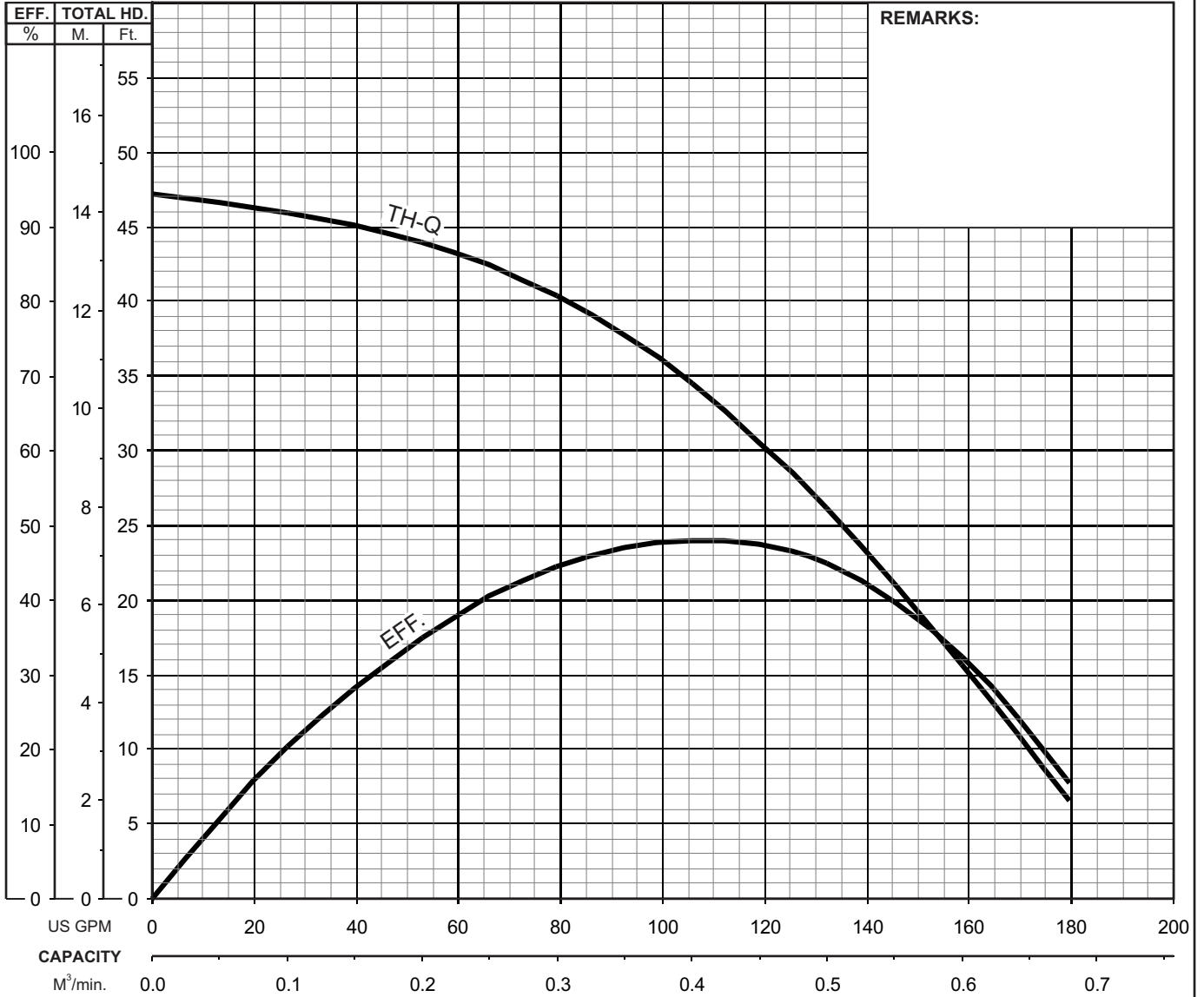




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ31.5-61	3"/80mm	2	1.5	3400	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	208-230/460/575	6.2-6.0 / 3.1 / 2.3	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

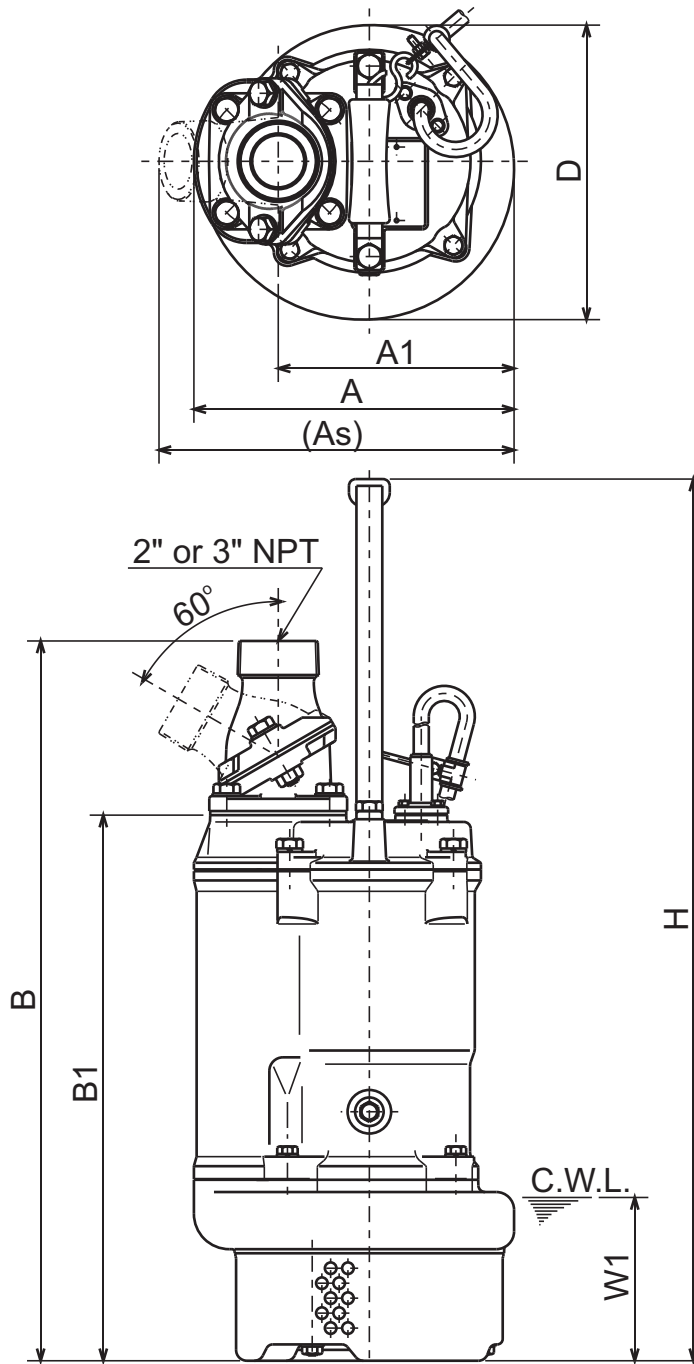




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ21.5-61  
KTZ31.5-61**



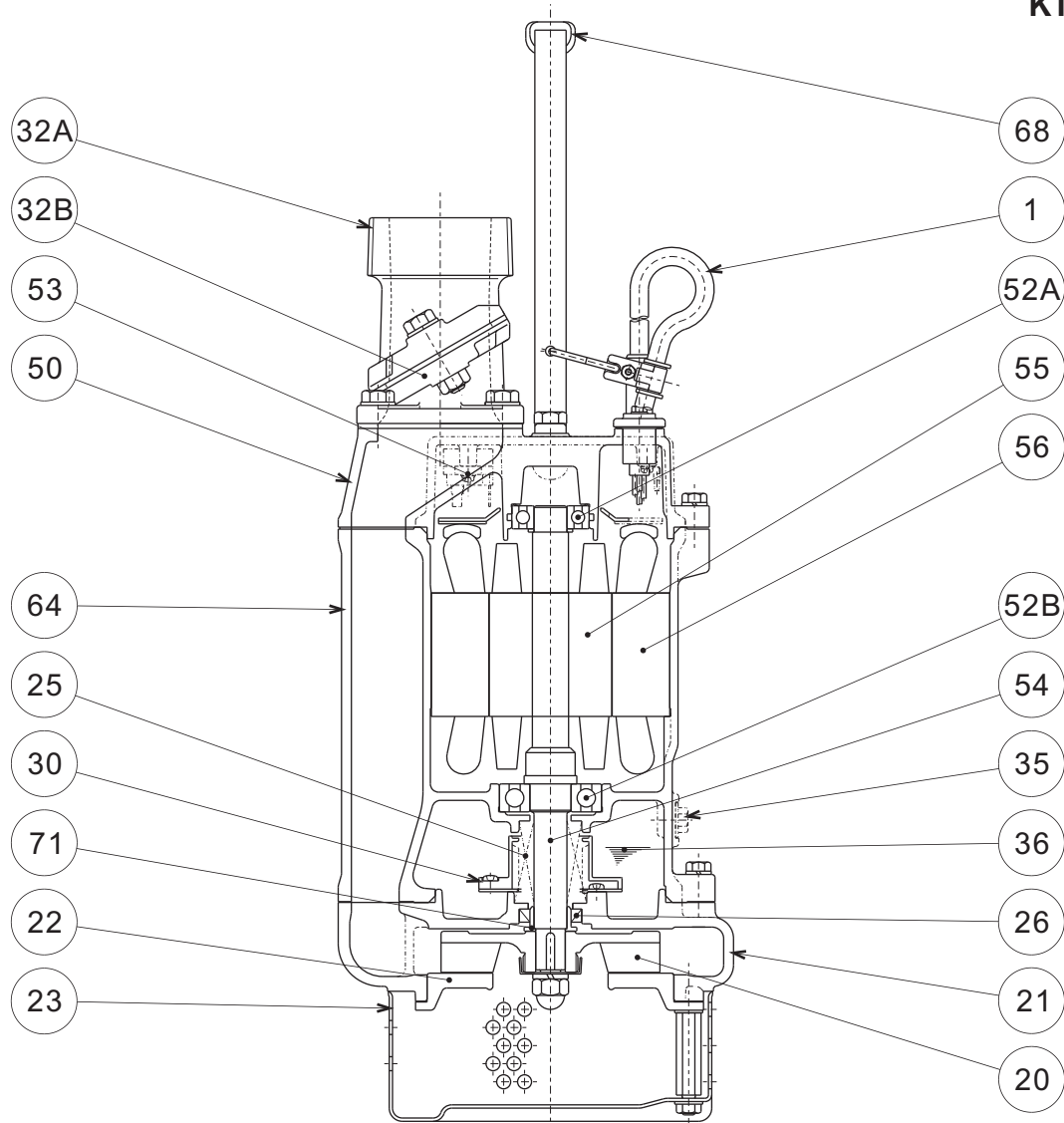
C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (lbs.)
			A	As	A1	B	B1	D	H	W1	
KTZ21.5-61	2	2"	9 1/4	10 1/4	6 13/16	20 13/16	15 13/16	8 1/2	25 1/2	4 3/4	77
KTZ31.5-61	2	3"	9 1/4	10 9/16	6 13/16	20 13/16	15 13/16	8 1/2	25 1/2	4 3/4	75

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (kg)
			A	As	A1	B	B1	D	H	W1	
KTZ21.5-61	1.5	50	235	261	173	529	401	216	648	120	35
KTZ31.5-61	1.5	80	235	268	173	529	401	216	648	120	34

**KTZ21.5-61  
KTZ31.5-61**


ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	PVC Sheath AWG16/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-20T			1
26	Oil Seal	Nitrile Butadiene Rubber / TC-25388			1
30	Oil Lifter	PBT Resin			1
32A	Discharge Connection	Cast Iron / NPT 2" or 3"	A48M Class30B	EN 1561 GJL-200	1
32B	Attachment	Aluminum Alloy Die Casting	B85 383.0	EN 1706 AC-46100	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	#6204ZZC3			1
52B	Lower Bearing	#6305ZZC3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	S 42000	1.4028	1
55	Rotor				1
56	Stator				1
64	Motor Housing	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
68	Handle	Steel (Cold Rolled) + NBR Rubber	A109/A1008	EN 10130	1
71	Shaft Sleeve	Stainless Steel	S 30400	1.4301	1



## KTZ - SERIES DEWATERING 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. 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 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 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.



**KTZ-SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**SPECIFICATIONS**

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  
 Motor Nomenclature  
     Type, Speed, Hz.  
     Voltage, Phase  
     Insulation  
     Bearings  
 Accessories  
 Operational Mode

**STANDARD**

2 ~ 4" NPT (50 - 100 mm)  
 6" is Optional (KTZ67.5 / KTZ611)  
 2 ~ 15 HP. (1.5 ~ 11 Kw)  
 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)  
 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)  
 104° F. (40° C.)  
 Cast Iron  
 High Chrome Iron  
 420 Stainless Steel  
 Cast Iron  
 304 Stainless Steel  
 10 - 15HP (7.5 - 11kW)  
 Silicon Carbide  
 NBR (Nitrile Butadiene Rubber)  
 Semi-open, solids handling.  
 0.334 - 0.787" (8.5 - 20.0mm)  
 Air Filled, 3600 RPM, 60 Hz.  
 208/230/460/575 V., 3 Phase  
 Class F  
 Pre-lubricated, Double Shielded  
 Submersible Power Cable 50' (15.0m)  
 Manual

**OPTIONS**

Length as Required



**TSURUMI PUMP**

# Positive Effect of Advanced KTZ KTZE – Automatic Pump with **Electrode**

## 1.5 / 2.2 / 3.7kW

### *Automatic Operation with Electrode*

The electrode-type sensor ON/OFF operation prevents dry running, reduces power consumption (50% over standard type – Tsurumi comparison), and extends operational life.

Energy Conservation

Cost Saving

Noise Reduction

### *Multi-Directional Hose Coupling*

The hose coupling has been devised so that it can be, without any extra parts, converted to an inclined discharge direction.



Every KTZ-series pump (1.5 to 11kW) is equipped with the above hose coupling as standard.

\* The additional features do NOT affect on the pump performance.

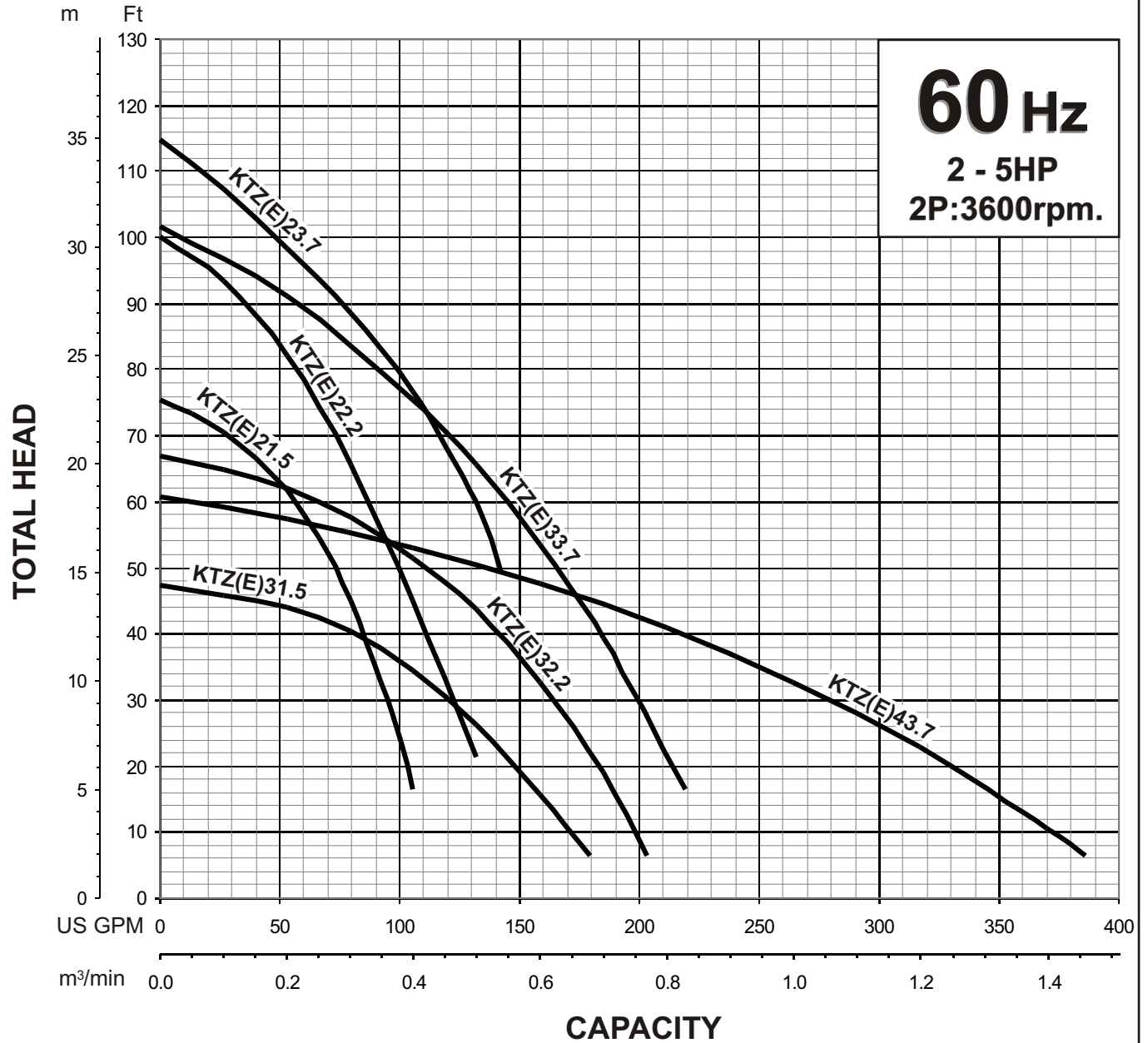


**TSURUMI PUMP**

**KTZ(E) - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

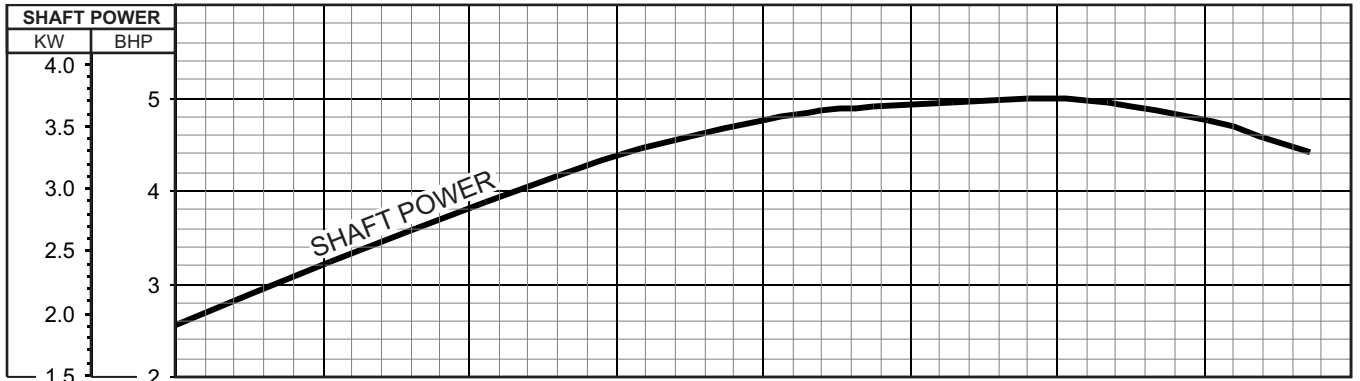
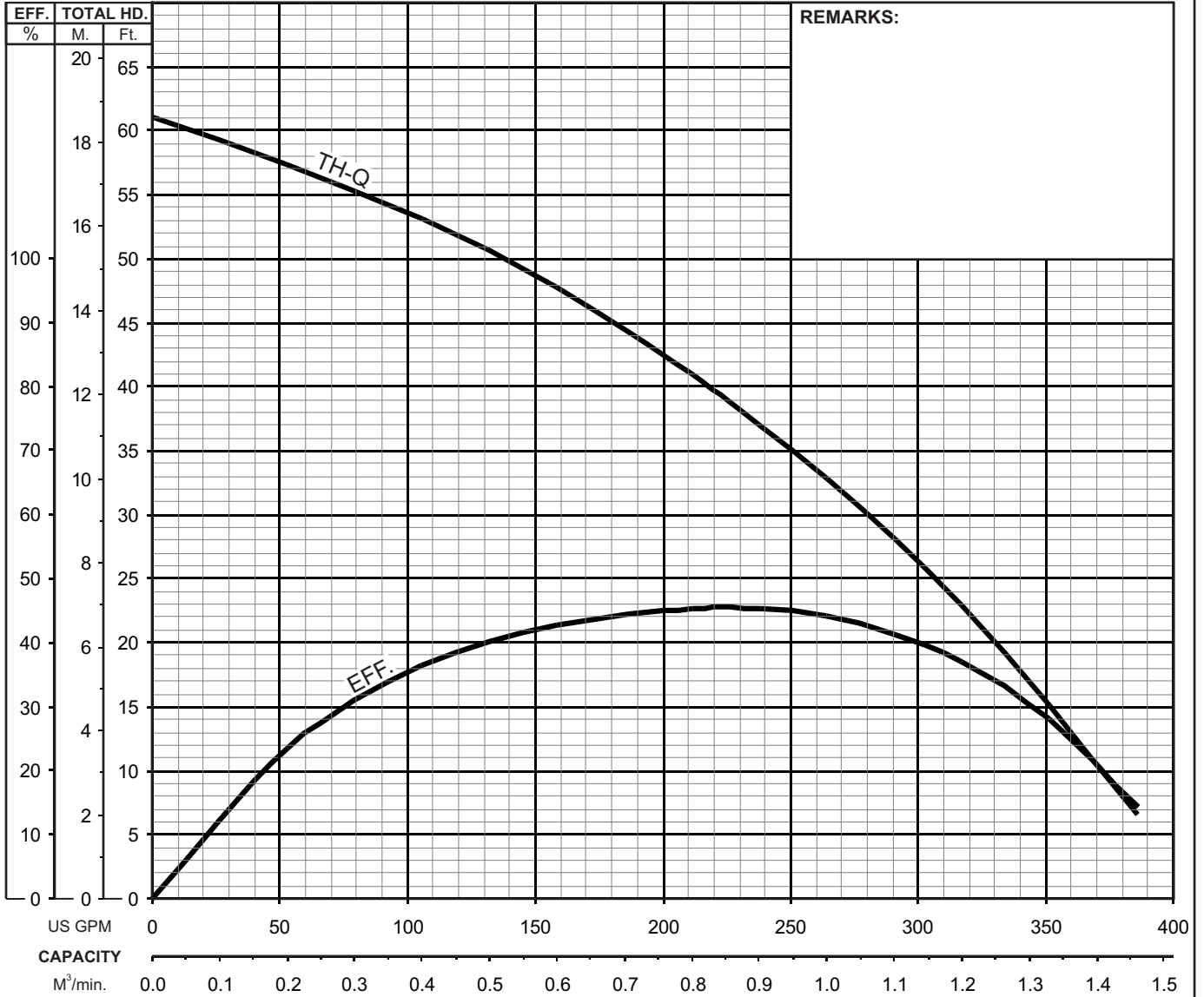




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

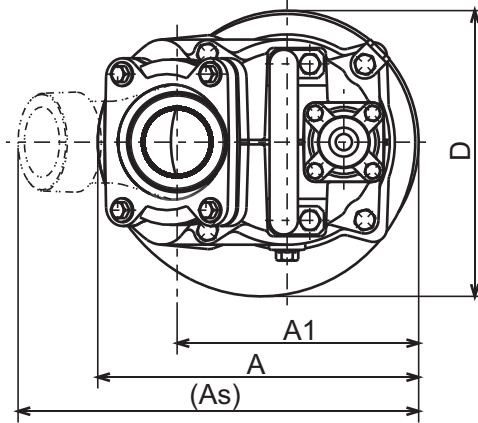
MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ43.7-63	4"/100mm	5	3.7	3410	0.334"/8.5mm	Water	1.0	1.123 cSt.	60°F
PUMP TYPE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS			
Dewatering Pump	3	208-230/460/575	15.0-13.6 / 6.8 / 5.3	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		



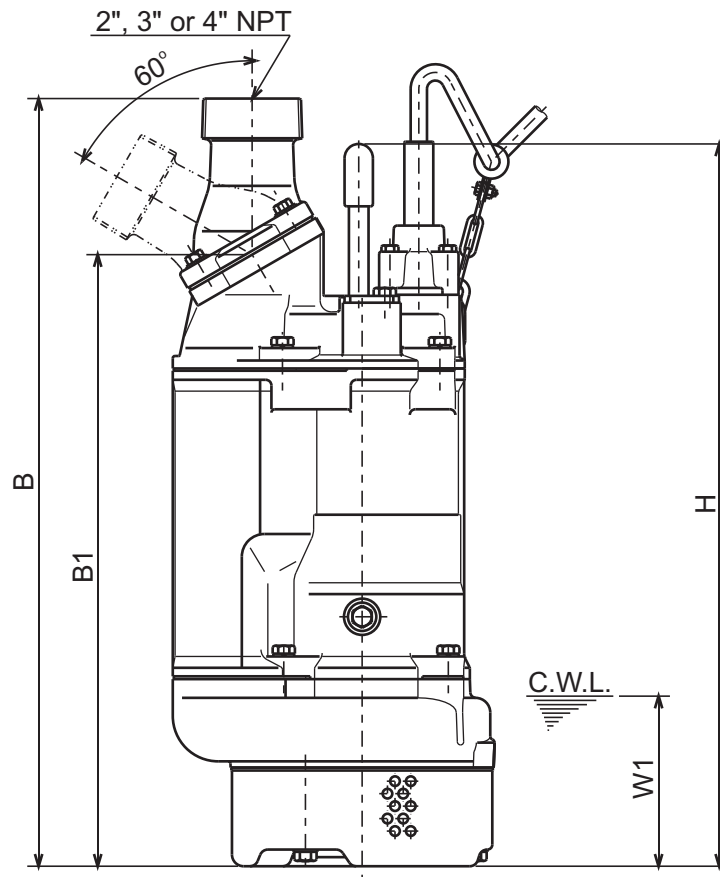


**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**



**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**



C.W.L. : Continuous running Water Level

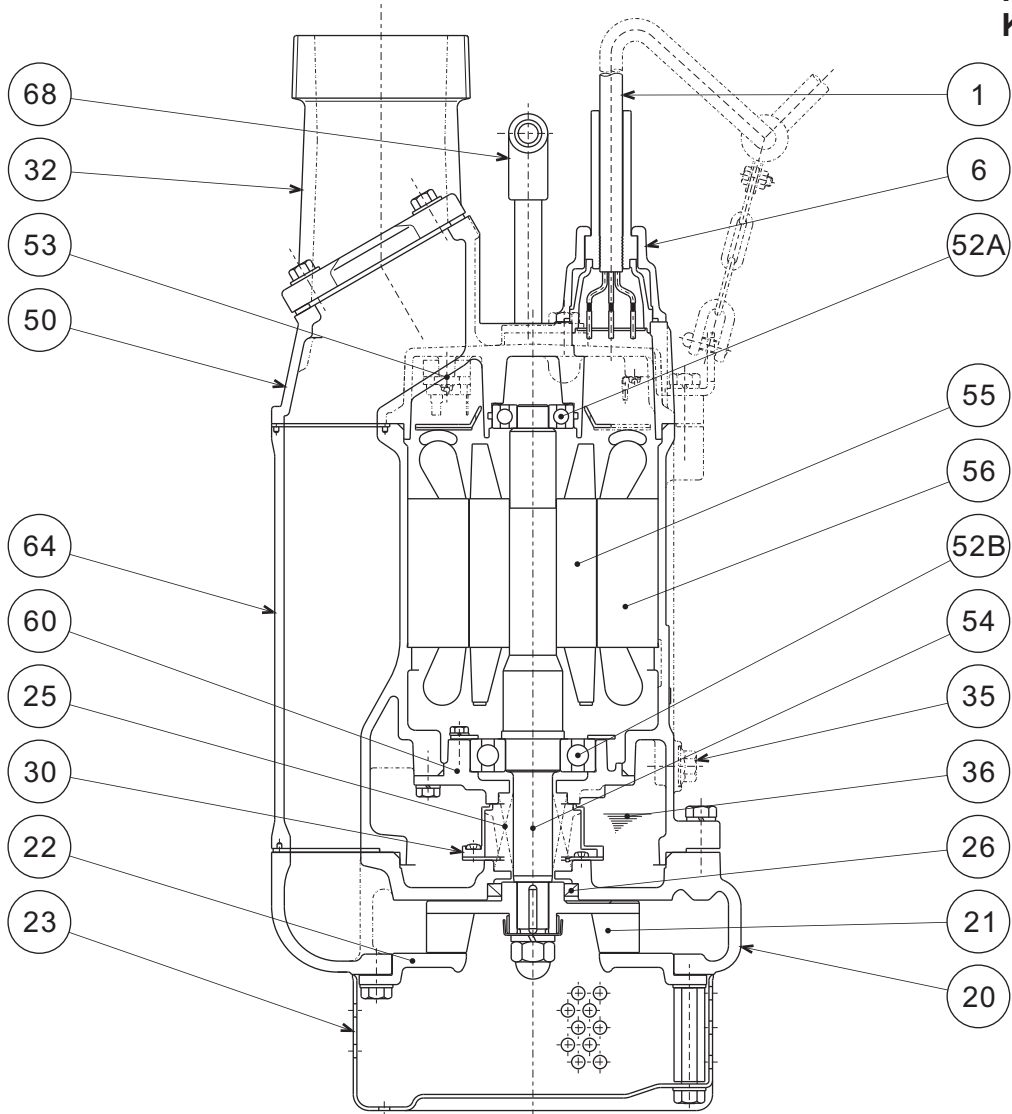
**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt.
			A	As	A1	B	B1	D	H	W1	(lbs.)
KTZ23.7-63	5	2"	11 1/8	13 5/16	8 3/8	26 1/4	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ33.7-63	5	3"	11 1/8	13 7/8	8 3/8	26 5/8	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ43.7-63	5	4"	11 1/8	14 1/2	8 3/8	27 1/16	21 1/4	9 15/16	25 1/16	5 7/8	137

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt.
			A	As	A1	B	B1	D	H	W1	(kg)
KTZ23.7-63	3.7	50	283	337	213	667	539	252	637	150	62
KTZ33.7-63	3.7	80	283	353	213	677	539	252	637	150	62
KTZ43.7-63	3.7	100	283	368	213	687	539	252	637	150	62

**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**



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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	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 2", 3" or 4"	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


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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. 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 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 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.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**■ STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**■ OPTIONS**

Length as Required

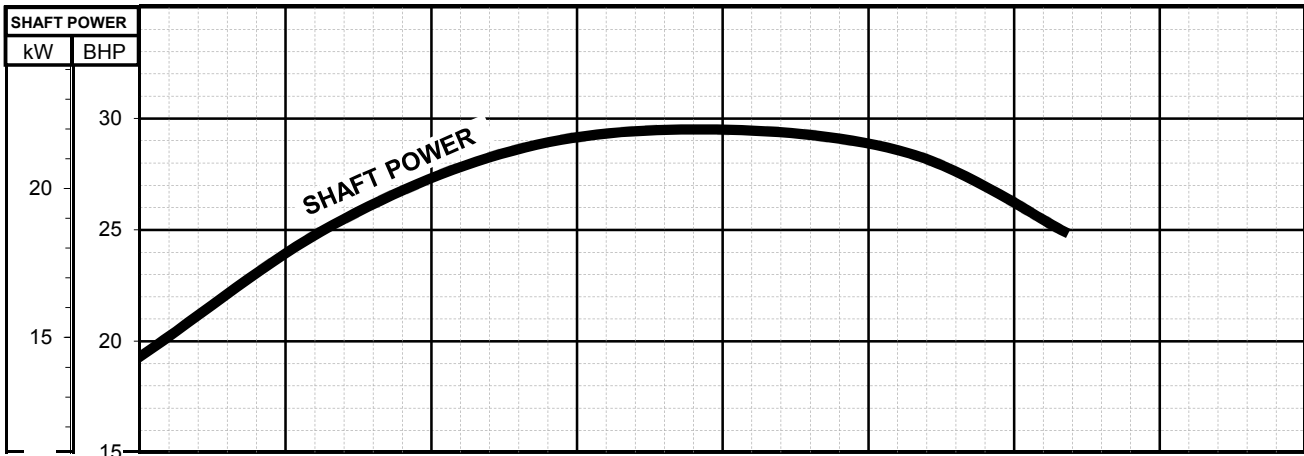
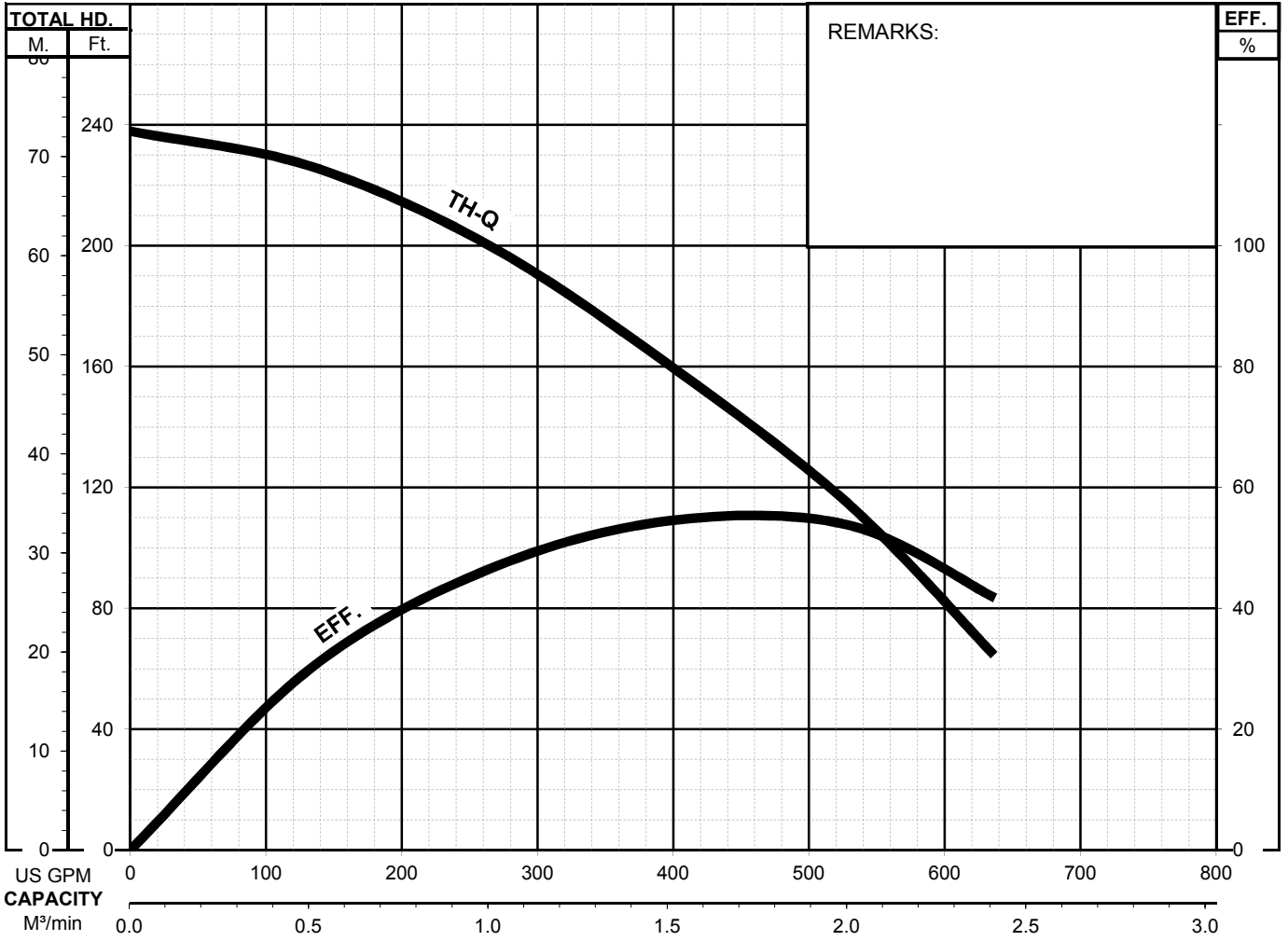


# KTZ - SERIES

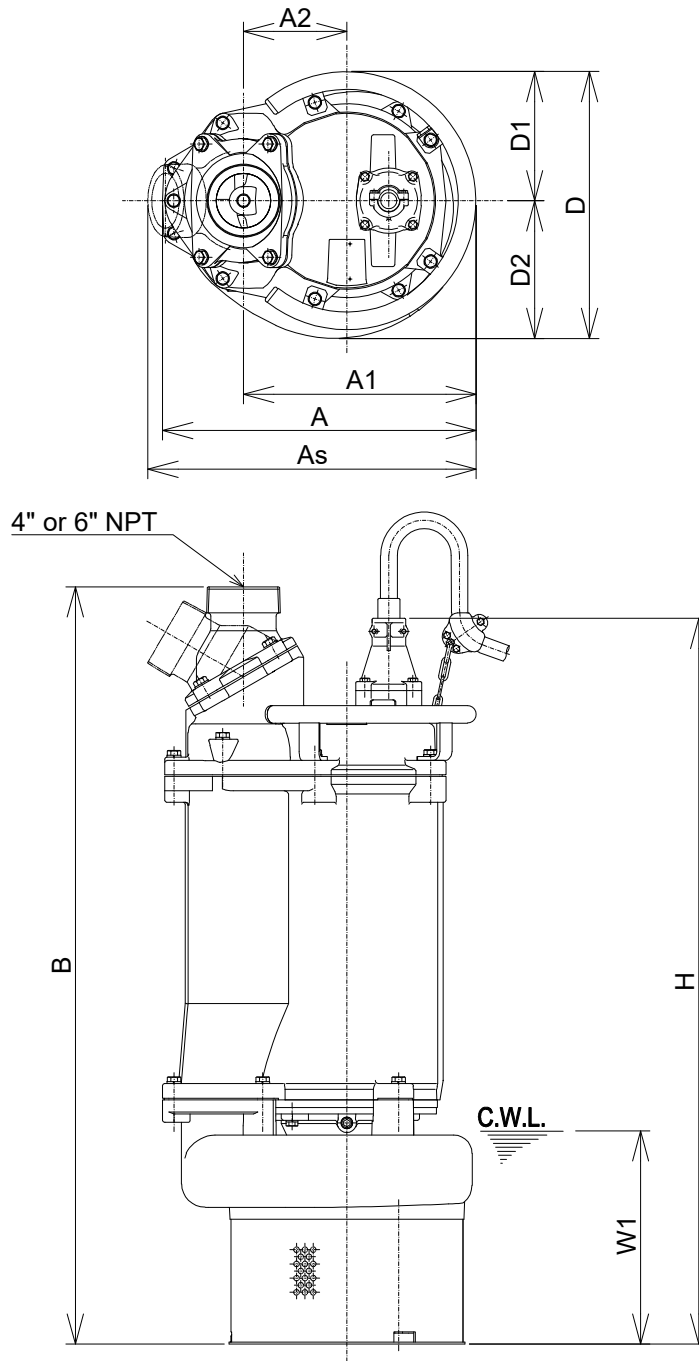
SUBMERSIBLE DEWATERING PUMPS

## PERFORMANCE CURVE

MODEL	BORE	HP	kW	RPM	SOLIDS DIA.	LIQUID	SG.	VISCOSITY	TEMP.
KTZ422-61	4"/100mm	30	22	3512	0.335"/8.5mm	Water	1.0	1.123cSt.	60°F
PUMP TYPE		PHASE	VOLTAGE	AMPERAGE		HZ	STARTING METHOD		INS. CLASS
Dewatering Pump		3	460 / 575	35.2 / 26.0		60	Direct On Line		F
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE		HZ	STARTING METHOD		INS. CLASS
-	-	-	-	-		-	-		-



**KTZ422-61  
KTZ622-61**



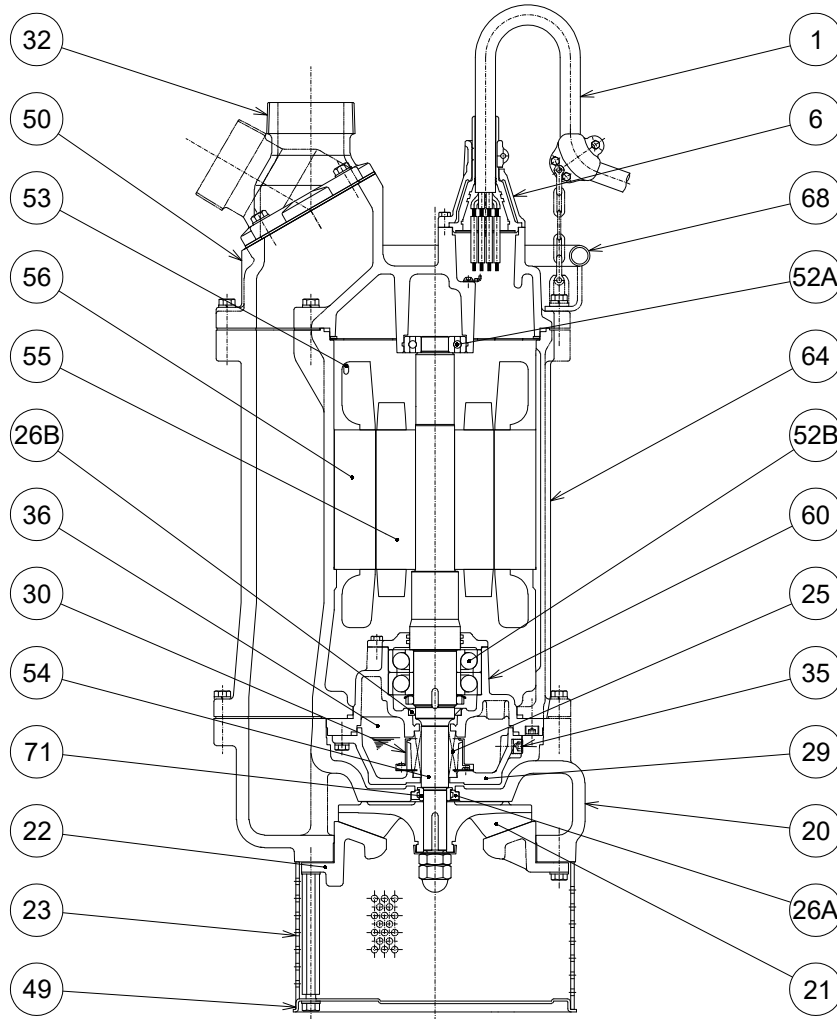
**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor									C.W.L. W1	Wt.* (lbs.)
			A	A1	A2	As	B	D	D1	D2	H		
KTZ422-61	30	4"	19 1/8	14 3/16	6 5/16	20	46 1/8	16 1/4	7 7/8	8 3/8	44 3/16	13	648
KTZ622-61	30	6"	19 1/8	14 3/16	6 5/16	21 1/4	46 15/16	16 1/4	7 7/8	8 3/8	44 3/16	13	650

**DIMENSIONS:METRIC (mm)**

\*Excluding Cable

Model	kW	NOM. SIZE	Pump & Motor									C.W.L. W1	Wt.* (kg)
			A	A1	A2	As	B	D	D1	D2	H		
KTZ422-61	22	100	485	360	160	508	1172	413	200	213	1123	330	294
KTZ622-61	22	150	485	360	160	539	1192	413	200	213	1123	330	295

**KTZ422-61  
KTZ622-61**


ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	ASTM, AISI CODE	RELATED DIN CODE	Q'TY
1	Power Cable	Chloroprene Sheath AWG6/4, 14/2-50ft			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 TypeA	DIN 1695 G-X260Cr27	1
22	Suction Cover	Ductile Cast Iron	A536 65-45-12	EN 1563 GJS-500-7	1
23	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-35T			1
26A	Labyrinth Ring	Stainless Steel	S 30400	1.4301	1
26B	Oil Seal	Nitrile Butadiene Rubber / SC-50689			1
29	Oil Casing	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
30	Oil Lifter	PBT Plastic W/(GF+MD)40			1
32	Discharge Connection	Cast Iron / NPT 4" (or 6")	A48M Class30B	EN 1561 GJL-200	1
35	Oil Plug	Stainless Steel	S 30400	1.4301	1
36	Lubricant	Turbine Oil ISO VG32 or SAE 10W-20			
49	Bottom Plate	Steel (Cold Rolled)	A109/A1008	EN 10130	1
50	Motor Bracket	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
52A	Upper Bearing	#6307ZZC3			1
52B	Lower Bearing	#7311DBC3			1
53	Motor Protector				3
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	Steel Pipe & Steel	A53 Type F & A283 Grade D	DIN 1615 St 33 & EN 10025 S275	1
71	Shaft Sleeve	Stainless Steel	S 40300	1.4000	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 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. 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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 a anti-wicking block to eliminate water incursion into the motor due to capillary wicking should the power cable be accidentally damaged.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**■ STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**■ OPTIONS**

Length as Required

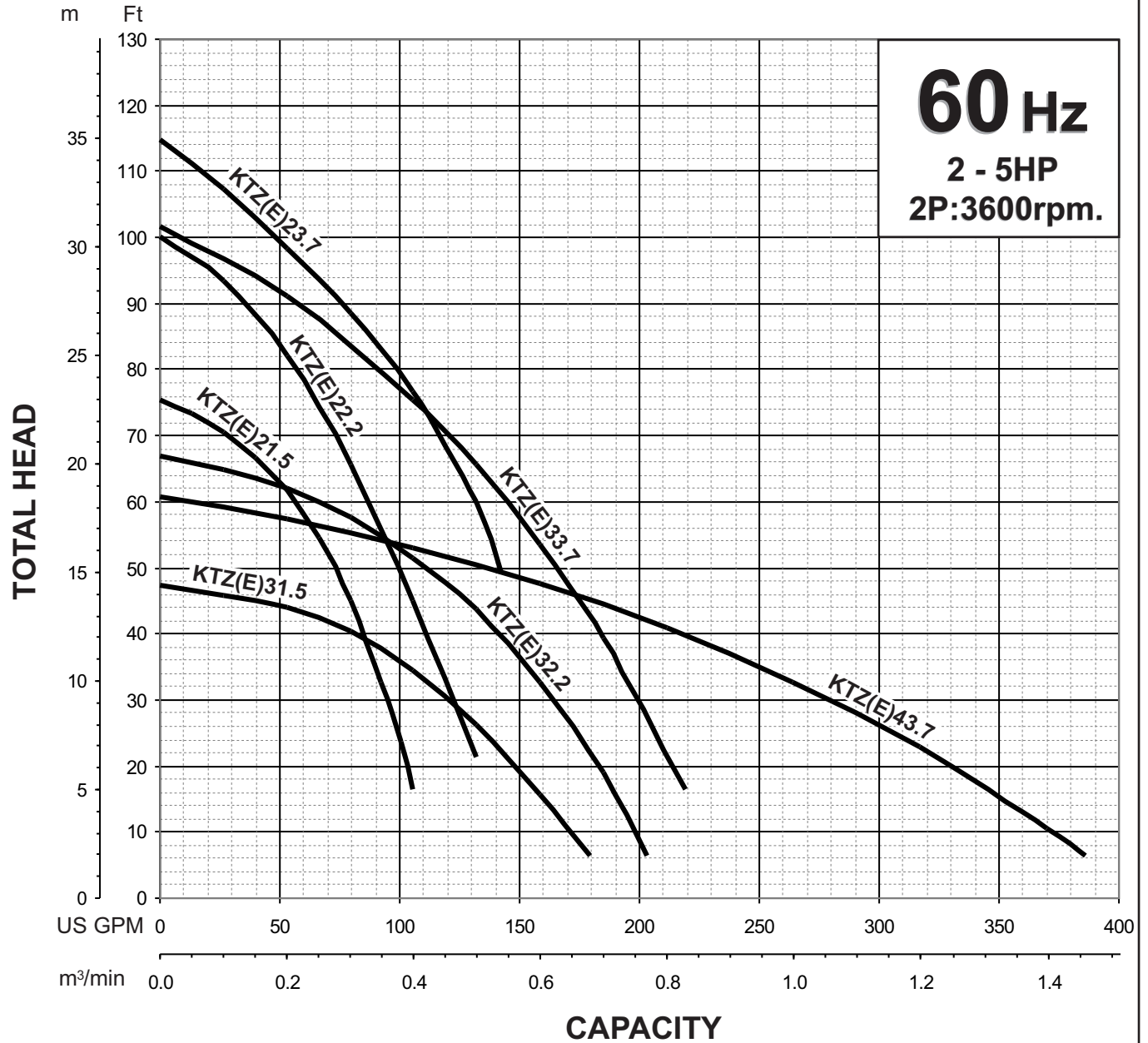


**TSURUMI PUMP**

**KTZ(E) - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

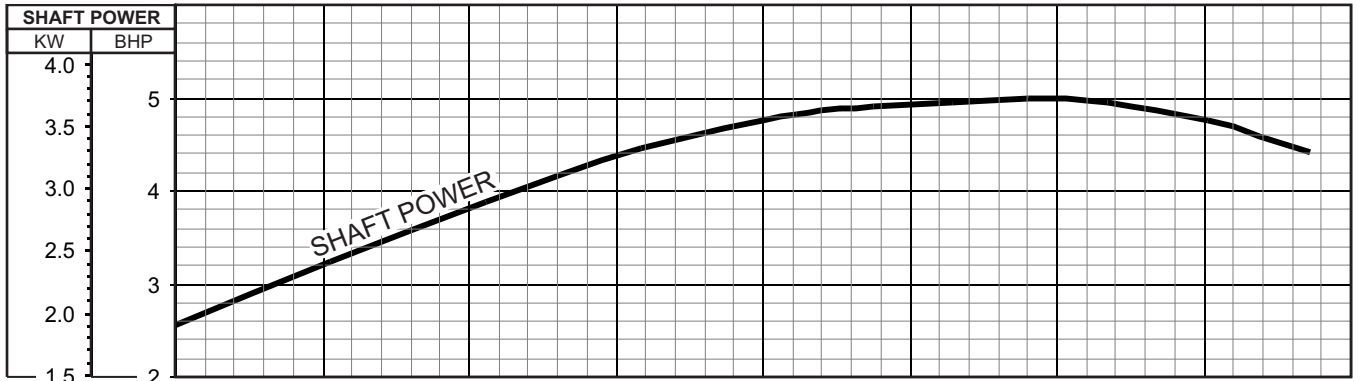
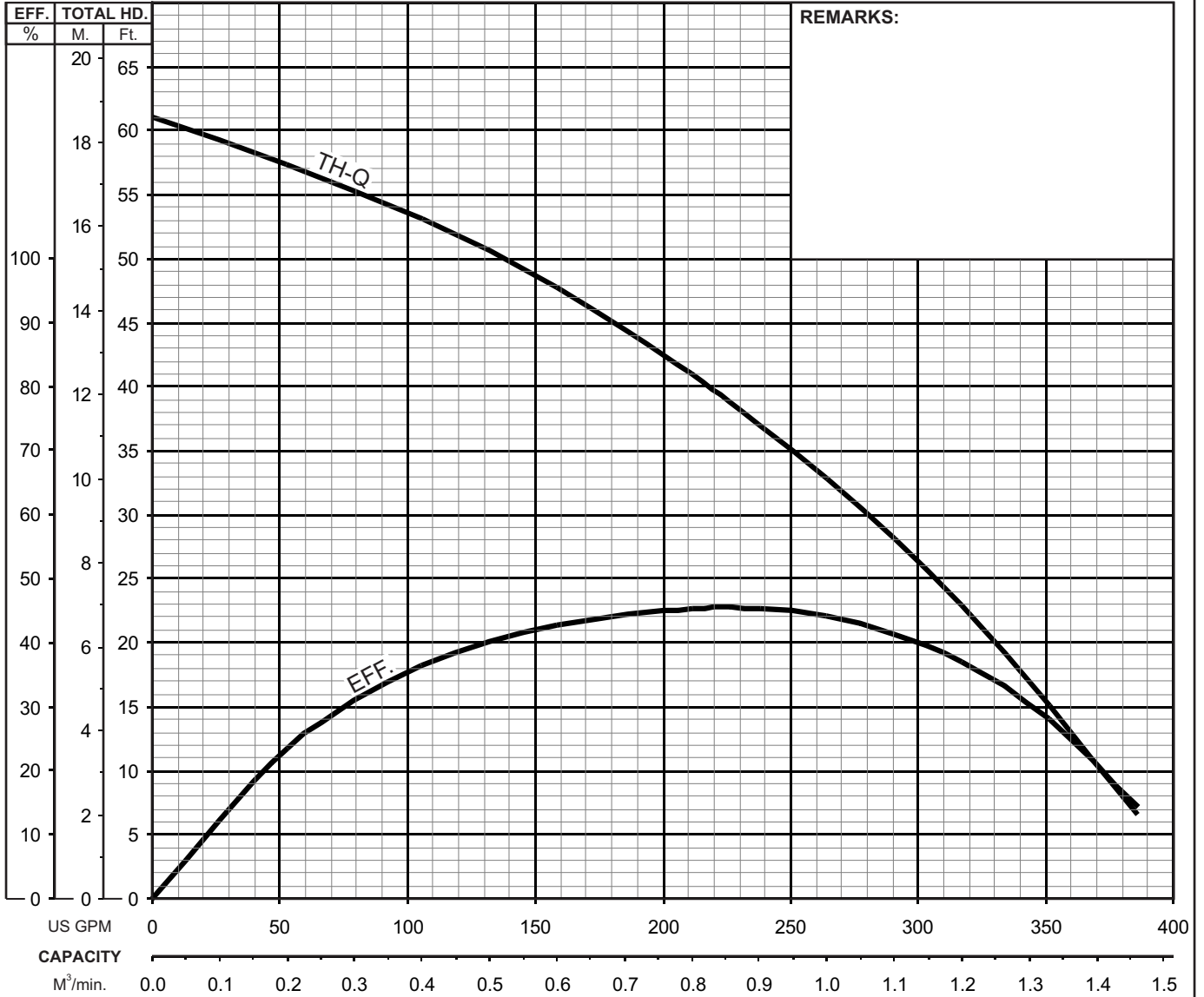


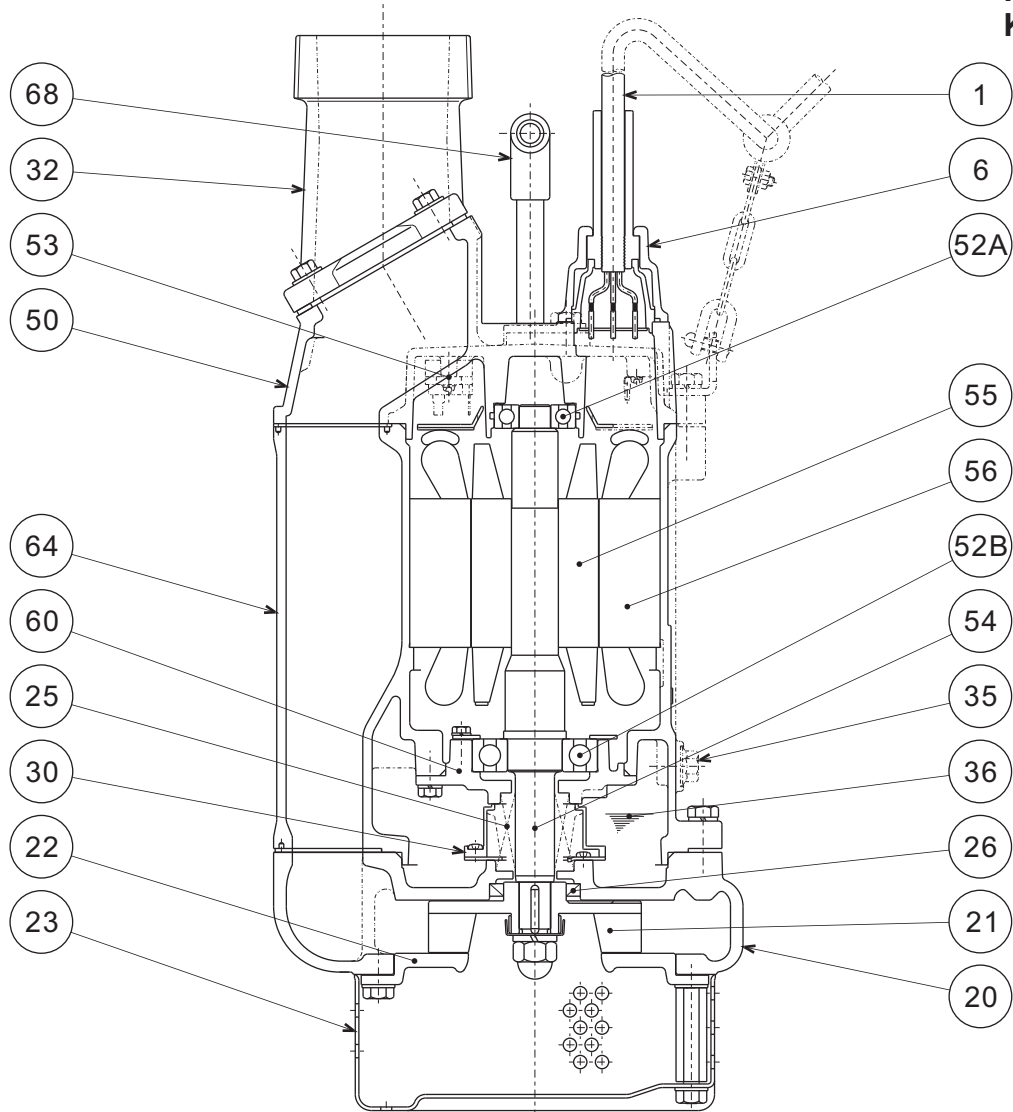


# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ43.7-63	4"/100mm	5	3.7	3410	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	208-230/460/575	15.0-13.6 / 6.8 / 5.3	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		



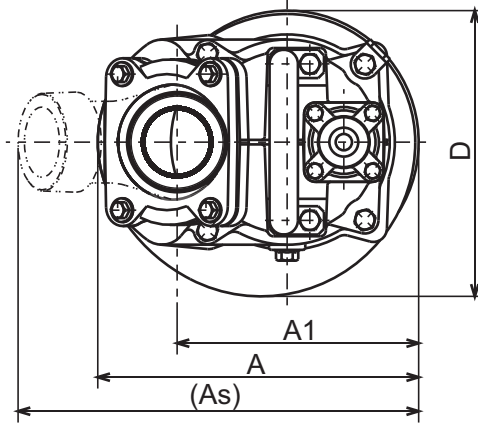
**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**


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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	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 2", 3" or 4"	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

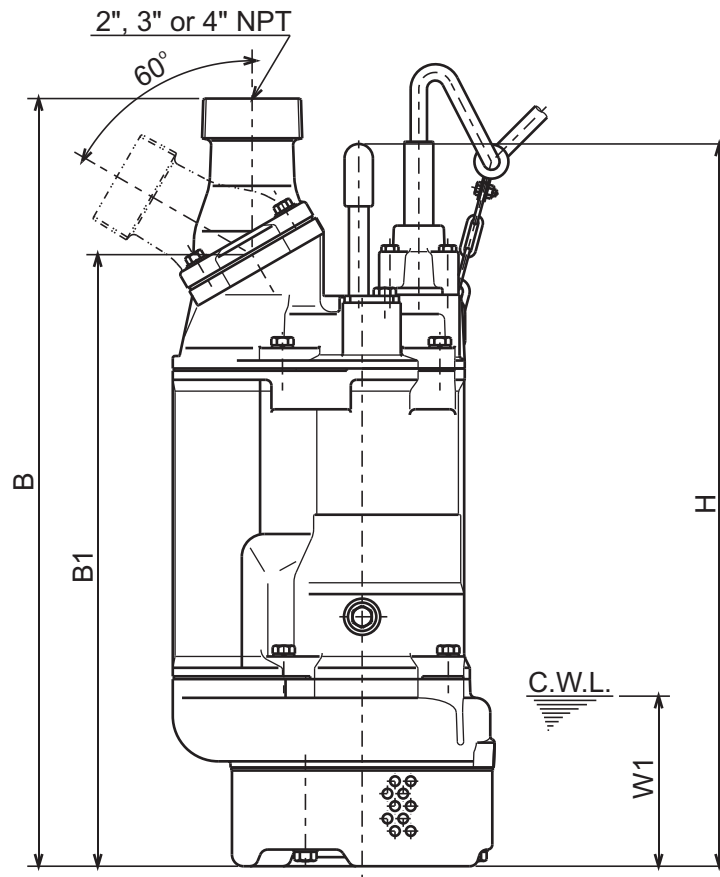


**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**



**KTZ23.7-63  
KTZ33.7-63  
KTZ43.7-63**



**DIMENSIONS:USCS (Inch)**

C.W.L. : Continuous running Water Level

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt.
			A	As	A1	B	B1	D	H	W1	(lbs.)
KTZ23.7-63	5	2"	11 1/8	13 5/16	8 3/8	26 1/4	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ33.7-63	5	3"	11 1/8	13 7/8	8 3/8	26 5/8	21 1/4	9 15/16	25 1/16	5 7/8	137
KTZ43.7-63	5	4"	11 1/8	14 1/2	8 3/8	27 1/16	21 1/4	9 15/16	25 1/16	5 7/8	137

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt.
			A	As	A1	B	B1	D	H	W1	(kg)
KTZ23.7-63	3.7	50	283	337	213	667	539	252	637	150	62
KTZ33.7-63	3.7	80	283	353	213	677	539	252	637	150	62
KTZ43.7-63	3.7	100	283	368	213	687	539	252	637	150	62


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 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. 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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 a anti-wicking block to eliminate water incursion into the motor due to capillary wicking should the power cable be accidentally damaged.



**KTZ-SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

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  
 Motor Nomenclature  
   Type, Speed, Hz.  
   Voltage, Phase  
   Insulation  
   Bearings  
 Accessories  
 Operational Mode

**■ STANDARD**

2 ~ 4" NPT (50 - 100 mm)  
 6" is Optional (KTZ67.5 / KTZ611)  
 2 ~ 15 HP. (1.5 ~ 11 Kw)  
 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)  
 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)  
 104° F. (40° C.)  
 Cast Iron  
 High Chrome Iron  
 420 Stainless Steel  
 Cast Iron  
 304 Stainless Steel  
 10 - 15HP (7.5 - 11kW)  
 Silicon Carbide  
 NBR (Nitrile Butadiene Rubber)  
 Semi-open, solids handling.  
 0.334 - 0.787" (8.5 - 20.0mm)  
 Air Filled, 3600 RPM, 60 Hz.  
 208/230/460/575 V., 3 Phase  
 Class F  
 Pre-lubricated, Double Shielded  
 Submersible Power Cable 50' (15.0m)  
 Manual

**■ OPTIONS**

Length as Required



**TSURUMI PUMP**

# Positive Effect of Advanced KTZ KTZE – Automatic Pump with **Electrode**

## 1.5 / 2.2 / 3.7kW

### *Automatic Operation with Electrode*

The electrode-type sensor ON/OFF operation prevents dry running, reduces power consumption (50% over standard type – Tsurumi comparison), and extends operational life.

Energy Conservation

Cost Saving

Noise Reduction

### *Multi-Directional Hose Coupling*

The hose coupling has been devised so that it can be, without any extra parts, converted to an inclined discharge direction.



Every KTZ-series pump (1.5 to 11kW) is equipped with the above hose coupling as standard.

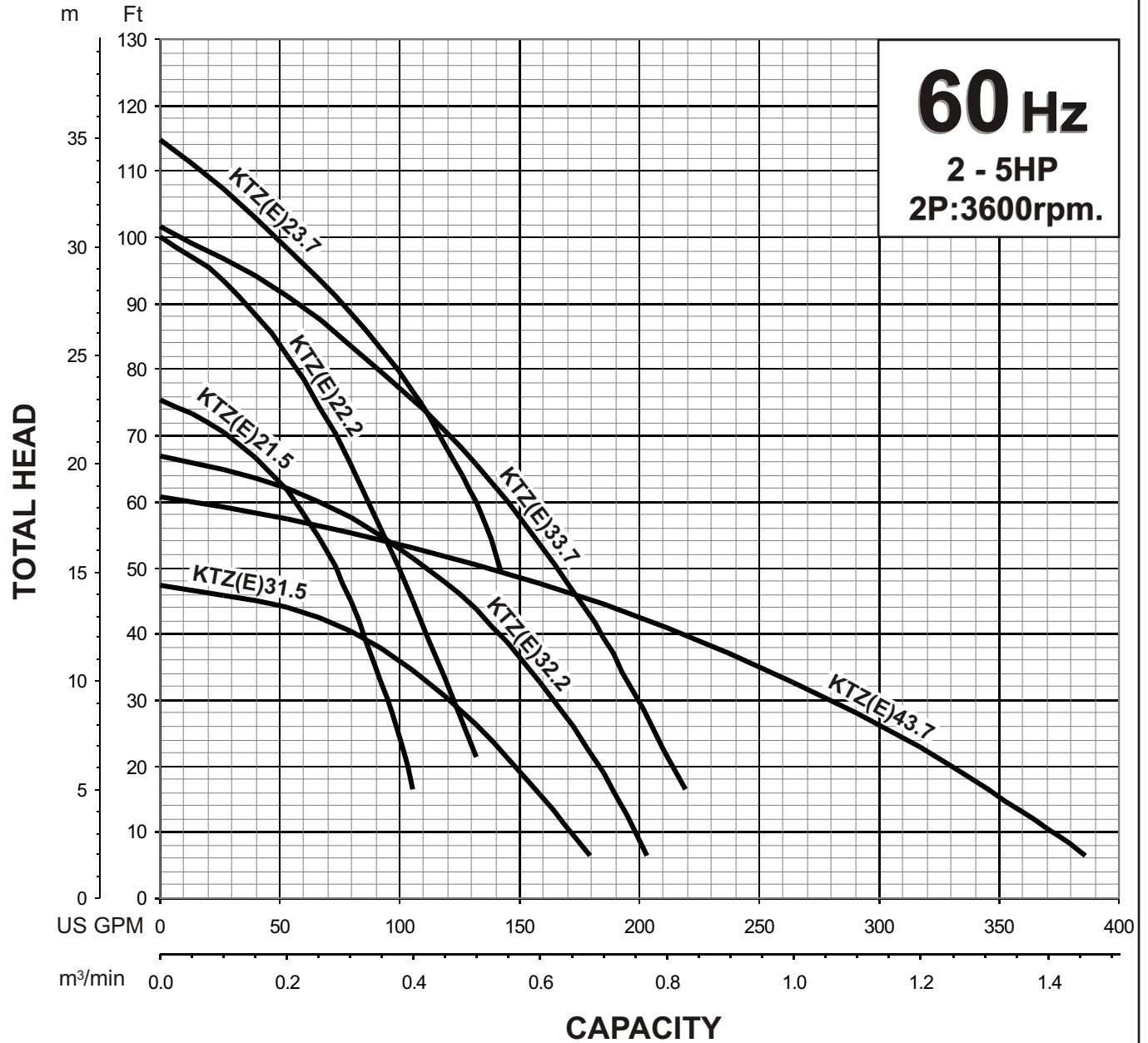
\* The additional features do NOT affect on the pump performance.



# KTZ(E) - SERIES DEWATERING PUMPS

# PERFORMANCE RANGE

## GROUP PERFORMANCE RANGE

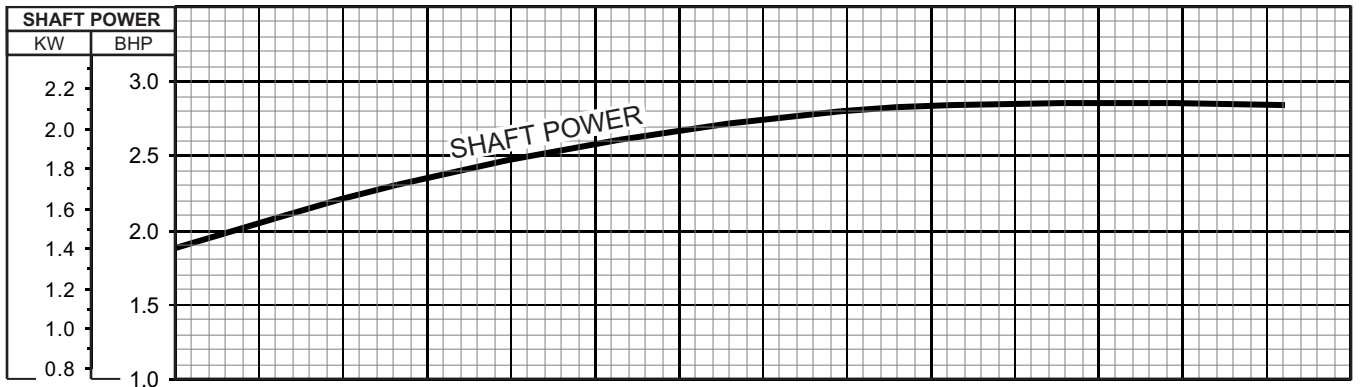
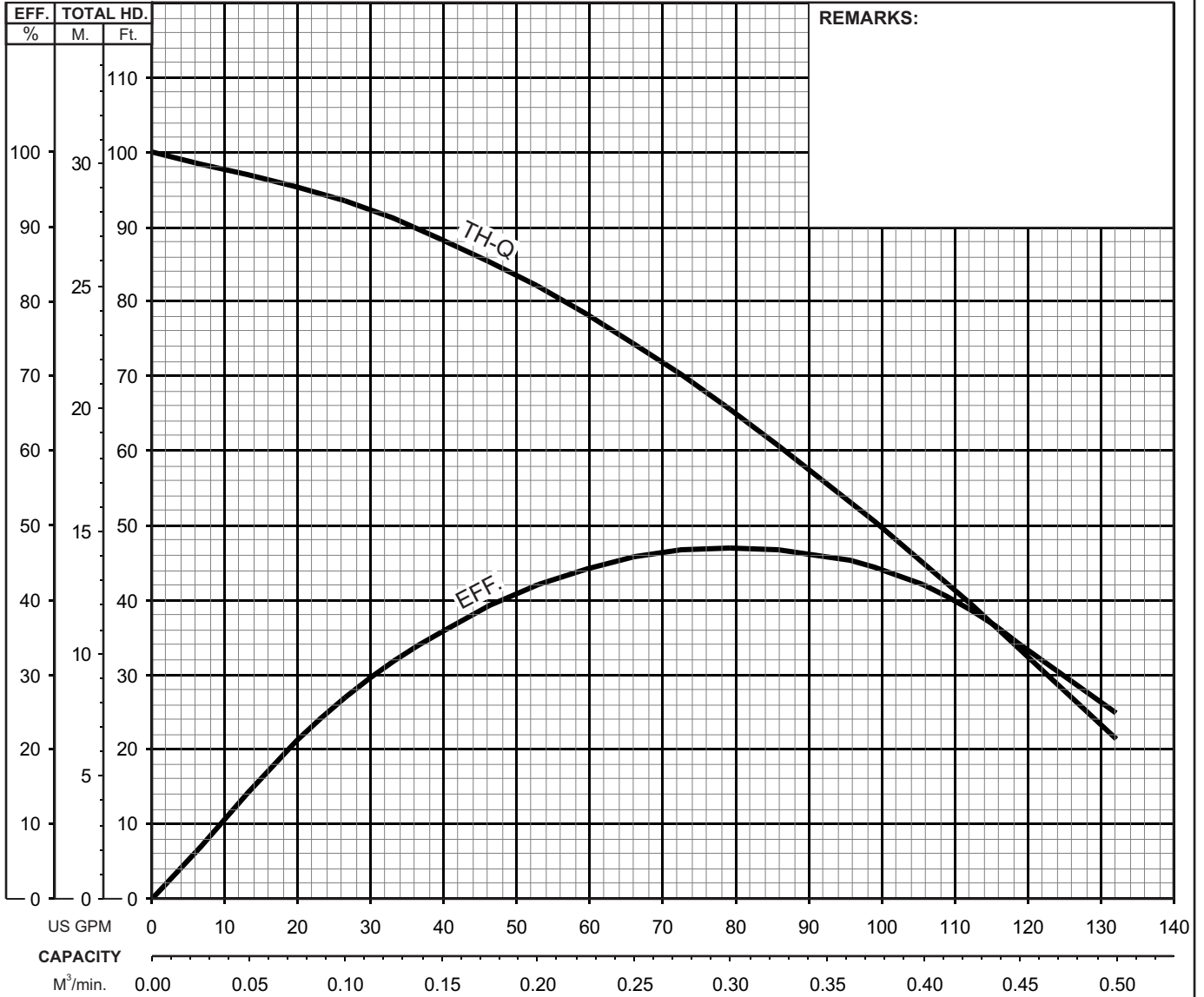




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ22.2-61	2"/50mm	3	2.2	3410	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	208-230/460/575	9.4-9.0 / 4.5 / 3.5	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

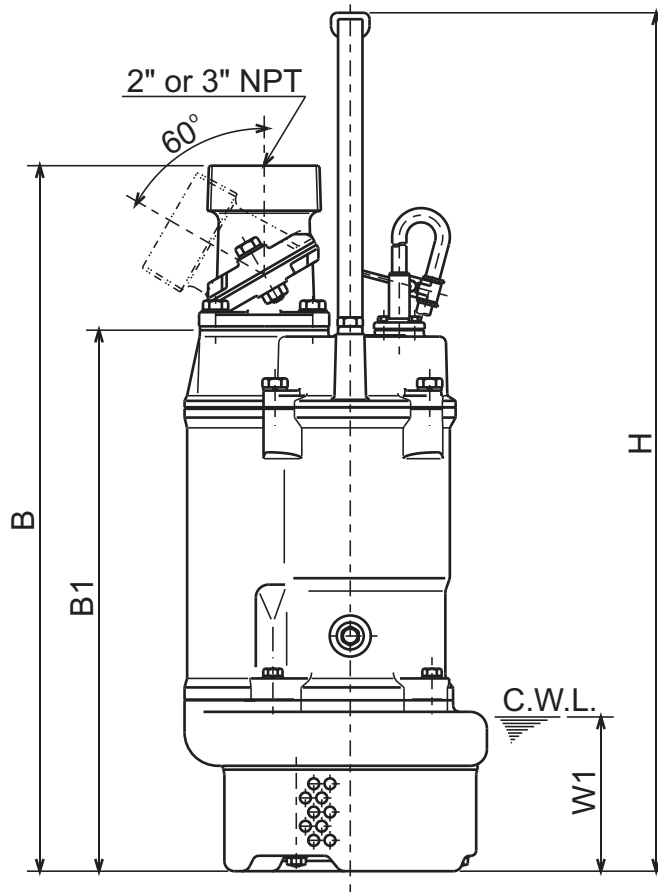
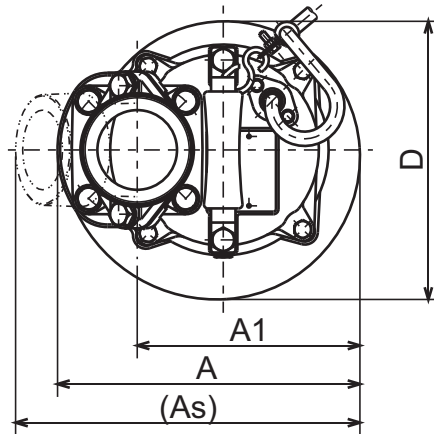




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ22.2-61  
KTZ32.2-61**



C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.		Wt. (lbs.)
			A	As	A1	B	B1	D	H	W1		
KTZ22.2-61	3	2"	9 1/4	10 1/4	6 13/16	21 5/8	16 9/16	8 1/2	26 5/16	4 3/4	79	
KTZ32.2-61	3	3"	9 1/4	10 9/16	6 13/16	21 5/8	16 9/16	8 1/2	26 5/16	4 3/4	77	

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor							C.W.L.		Wt. (kg)
			A	As	A1	B	B1	D	H	W1		
KTZ22.2-61	2.2	50	235	261	173	549	421	216	668	120	36	
KTZ32.2-61	2.2	80	235	268	173	549	421	216	668	120	35	

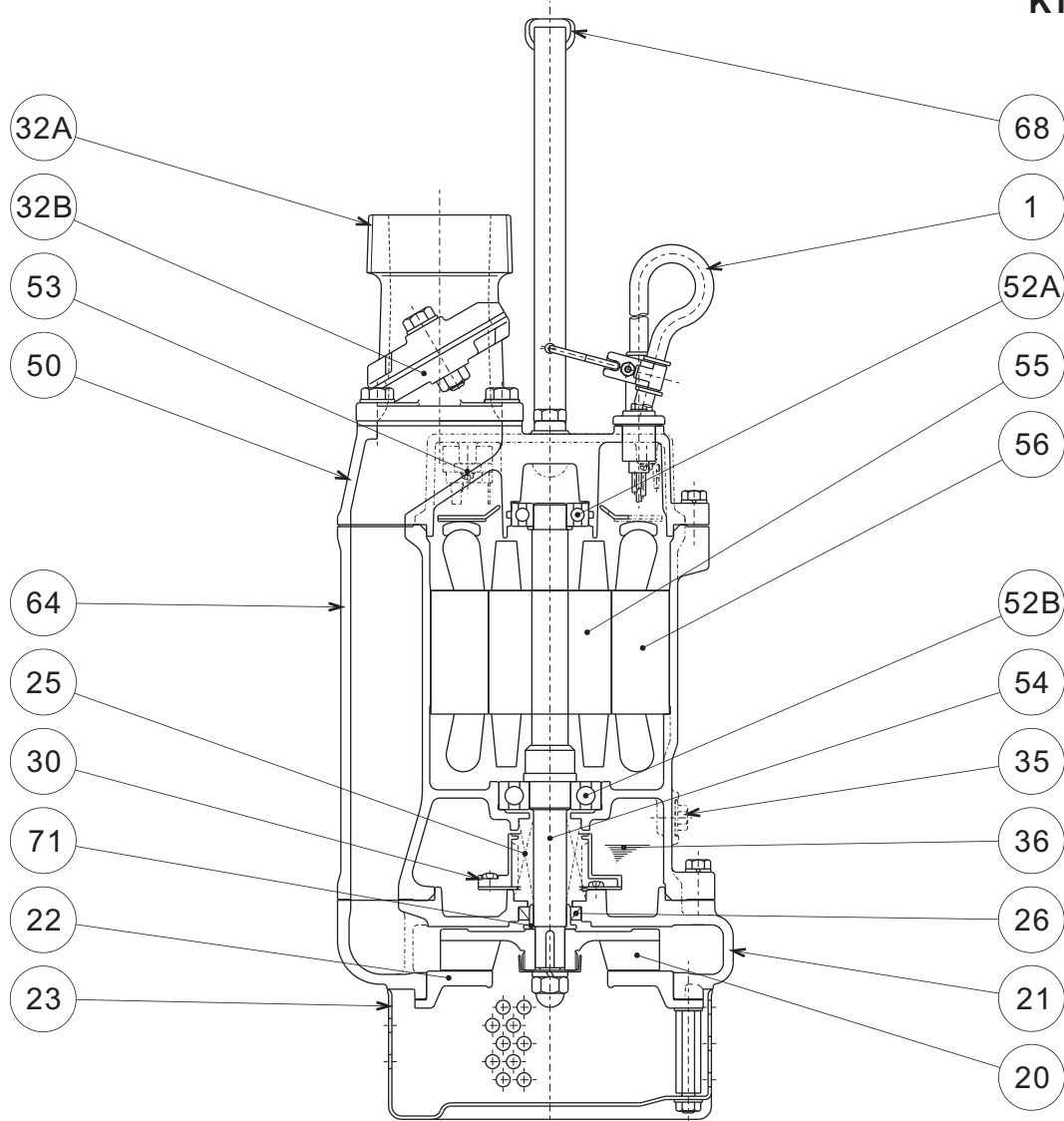


**TSURUMI PUMP**

**KTZ - SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ22.2-61  
KTZ32.2-61**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	PVC Sheath AWG16/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-20T			1
26	Oil Seal	Nitrile Butadiene Rubber / TC-25388			1
30	Oil Lifter	PBT Resin			1
32A	Discharge Connection	Cast Iron / NPT 2" or 3"	A48M Class30B	EN 1561 GJL-200	1
32B	Attachment	Aluminum Alloy Die Casting	B85 383.0	EN 1706 AC-46100	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	#6204ZZC3			1
52B	Lower Bearing	#6305ZZC3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	S 42000	1.4028	1
55	Rotor				1
56	Stator				1
64	Motor Housing	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
68	Handle	Steel (Cold Rolled) + NBR Rubber	A109/A1008	EN 10130	1
71	Shaft Sleeve	Stainless Steel	S 30400	1.4301	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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. 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 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 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.



**KTZ-SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

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  
Motor Nomenclature  
Type, Speed, Hz.  
Voltage, Phase  
Insulation  
Bearings  
Accessories  
Operational Mode

**■ STANDARD**

2 ~ 4" NPT (50 - 100 mm)  
6" is Optional (KTZ67.5 / KTZ611)  
2 ~ 15 HP. (1.5 ~ 11 Kw)  
33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)  
13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)  
104° F. (40° C.)  
Cast Iron  
High Chrome Iron  
420 Stainless Steel  
Cast Iron  
304 Stainless Steel  
10 - 15HP (7.5 - 11kW)  
Silicon Carbide  
NBR (Nitrile Butadiene Rubber)  
Semi-open, solids handling.  
0.334 - 0.787" (8.5 - 20.0mm)  
Air Filled, 3600 RPM, 60 Hz.  
208/230/460/575 V., 3 Phase  
Class F  
Pre-lubricated, Double Shielded  
Submersible Power Cable 50' (15.0m)  
Manual

**■ OPTIONS**

Length as Required



**TSURUMI PUMP**

# Positive Effect of Advanced KTZ KTZE – Automatic Pump with **Electrode**

## 1.5 / 2.2 / 3.7kW

### *Automatic Operation with Electrode*

The electrode-type sensor ON/OFF operation prevents dry running, reduces power consumption (50% over standard type – Tsurumi comparison), and extends operational life.

Energy Conservation

Cost Saving

Noise Reduction

### *Multi-Directional Hose Coupling*

The hose coupling has been devised so that it can be, without any extra parts, converted to an inclined discharge direction.



Every KTZ-series pump (1.5 to 11kW) is equipped with the above hose coupling as standard.

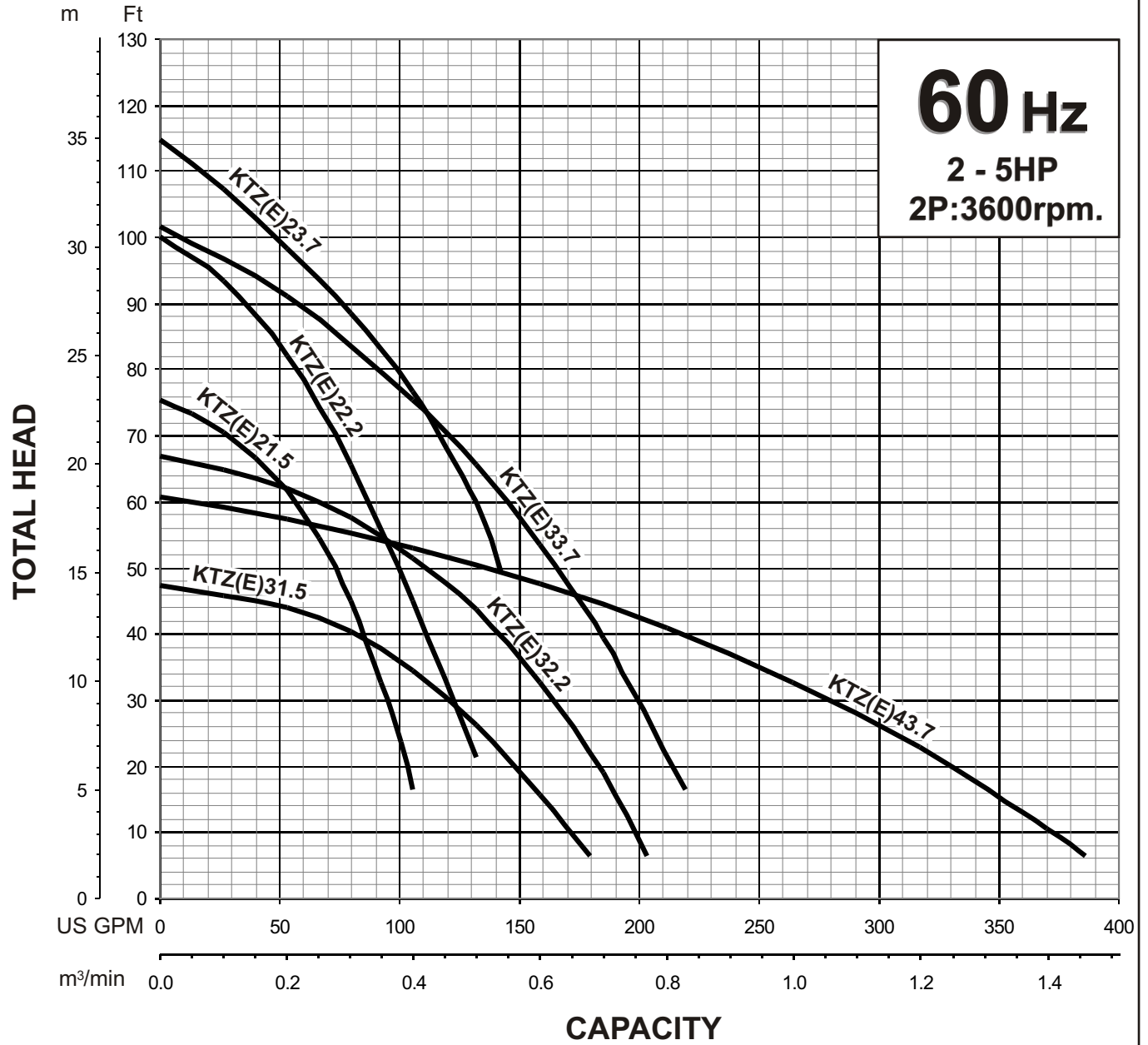
\* The additional features do NOT affect on the pump performance.



# KTZ(E) - SERIES DEWATERING PUMPS

# PERFORMANCE RANGE

## GROUP PERFORMANCE RANGE

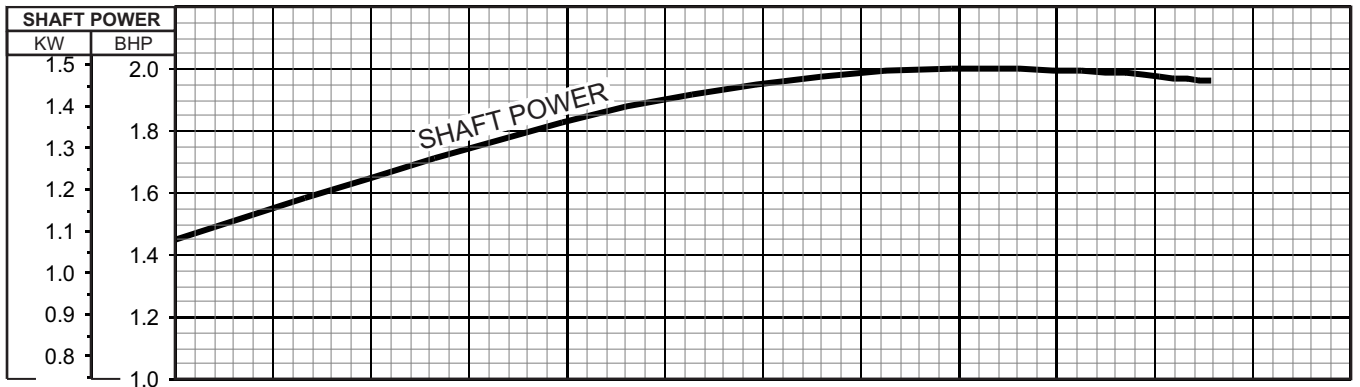
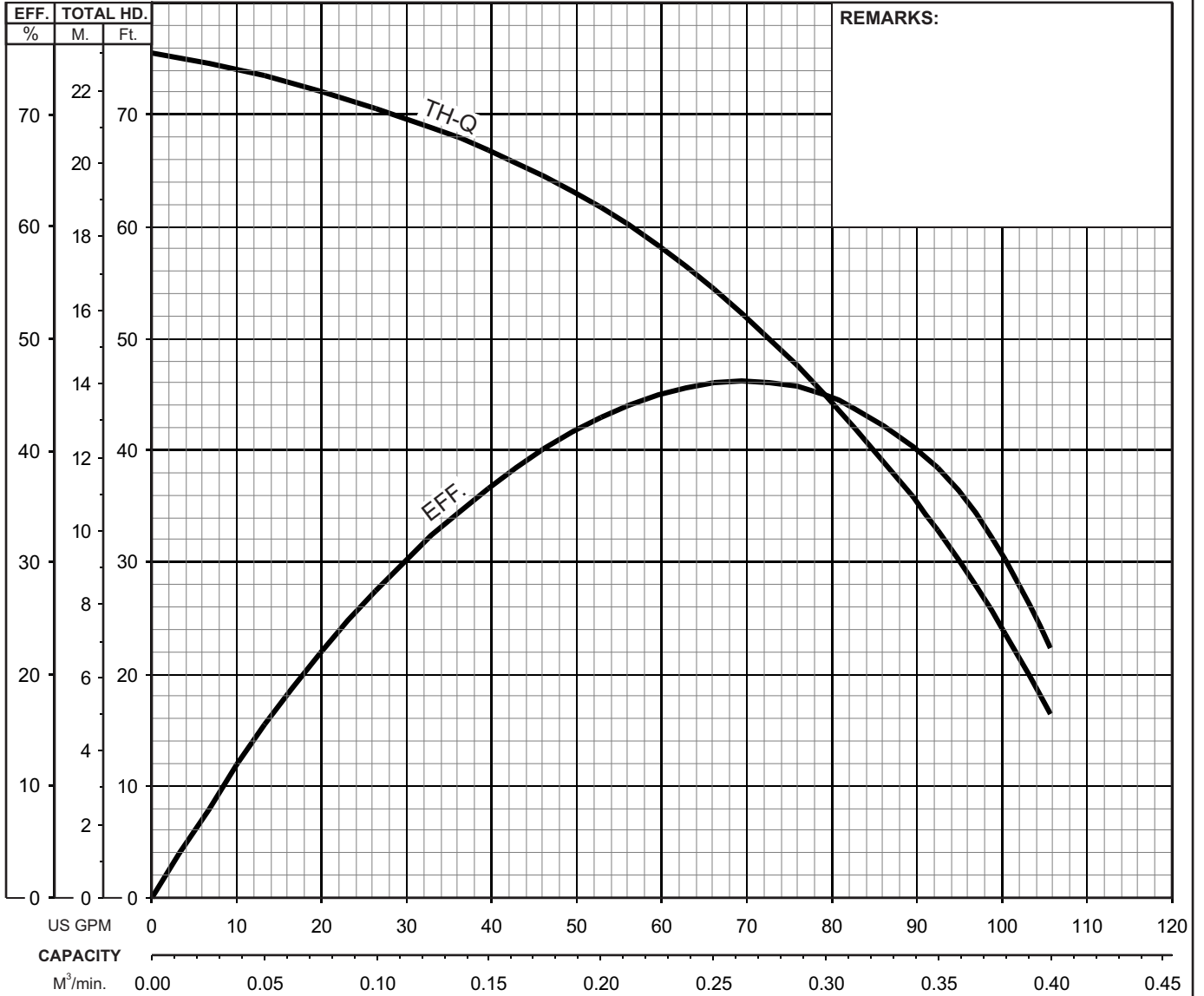




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ21.5-61	2"/50mm	2	1.5	3400	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	208-230/460/575	6.2-6.0 / 3.1 / 2.3	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

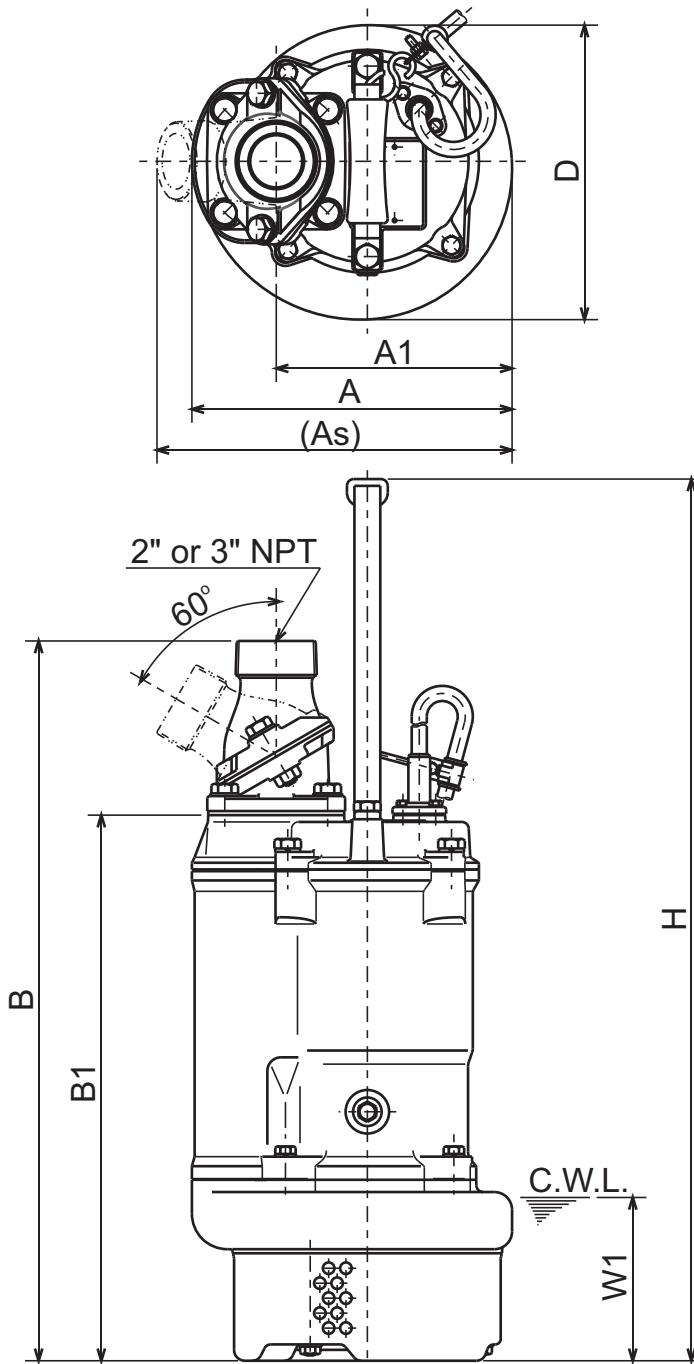




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ21.5-61  
KTZ31.5-61**



**DIMENSIONS:USCS (Inch)**

C.W.L. : Continuous running Water Level

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (lbs.)
			A	As	A1	B	B1	D	H	W1	
KTZ21.5-61	2	2"	9 1/4	10 1/4	6 13/16	20 13/16	15 13/16	8 1/2	25 1/2	4 3/4	77
KTZ31.5-61	2	3"	9 1/4	10 9/16	6 13/16	20 13/16	15 13/16	8 1/2	25 1/2	4 3/4	75

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (kg)
			A	As	A1	B	B1	D	H	W1	
KTZ21.5-61	1.5	50	235	261	173	529	401	216	648	120	35
KTZ31.5-61	1.5	80	235	268	173	529	401	216	648	120	34

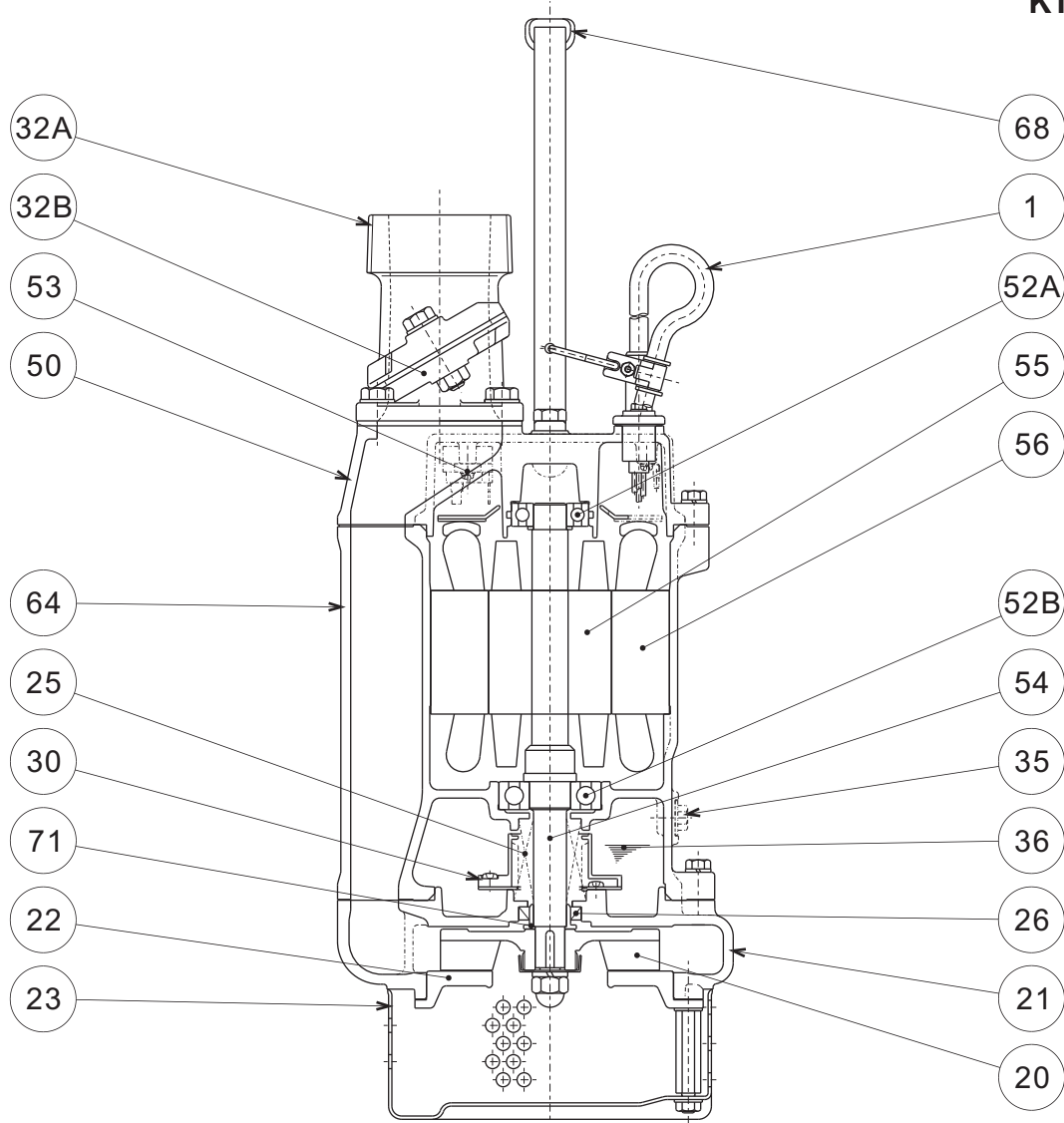


**TSURUMI PUMP**

**KTZ - SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ21.5-61  
KTZ31.5-61**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	PVC Sheath AWG16/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-20T			1
26	Oil Seal	Nitrile Butadiene Rubber / TC-25388			1
30	Oil Lifter	PBT Resin			1
32A	Discharge Connection	Cast Iron / NPT 2" or 3"	A48M Class30B	EN 1561 GJL-200	1
32B	Attachment	Aluminum Alloy Die Casting	B85 383.0	EN 1706 AC-46100	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	#6204ZZC3			1
52B	Lower Bearing	#6305ZZC3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	S 42000	1.4028	1
55	Rotor				1
56	Stator				1
64	Motor Housing	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
68	Handle	Steel (Cold Rolled) + NBR Rubber	A109/A1008	EN 10130	1
71	Shaft Sleeve	Stainless Steel	S 30400	1.4301	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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. 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 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 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.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**■ STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**■ OPTIONS**

Length as Required

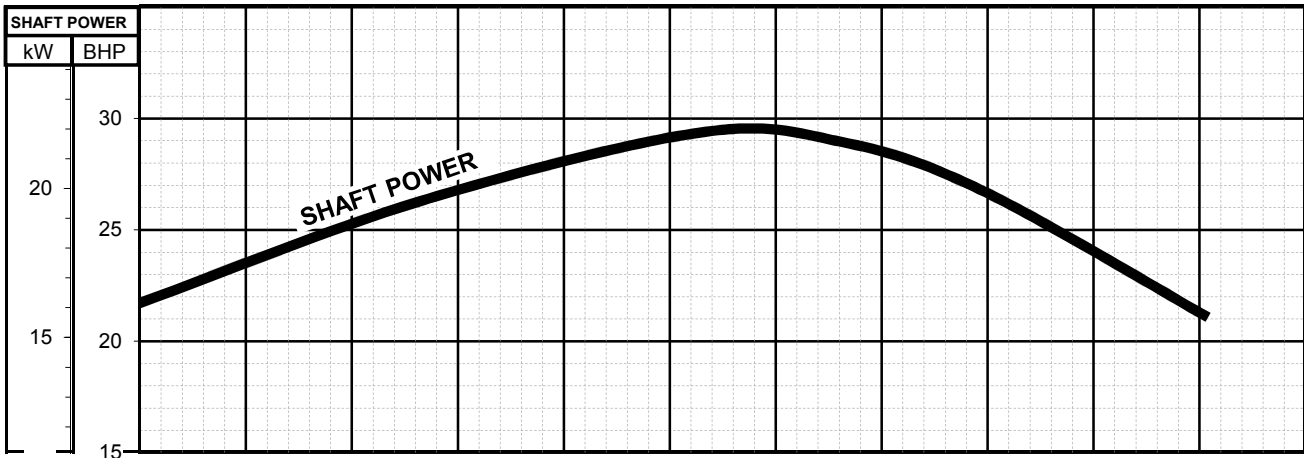
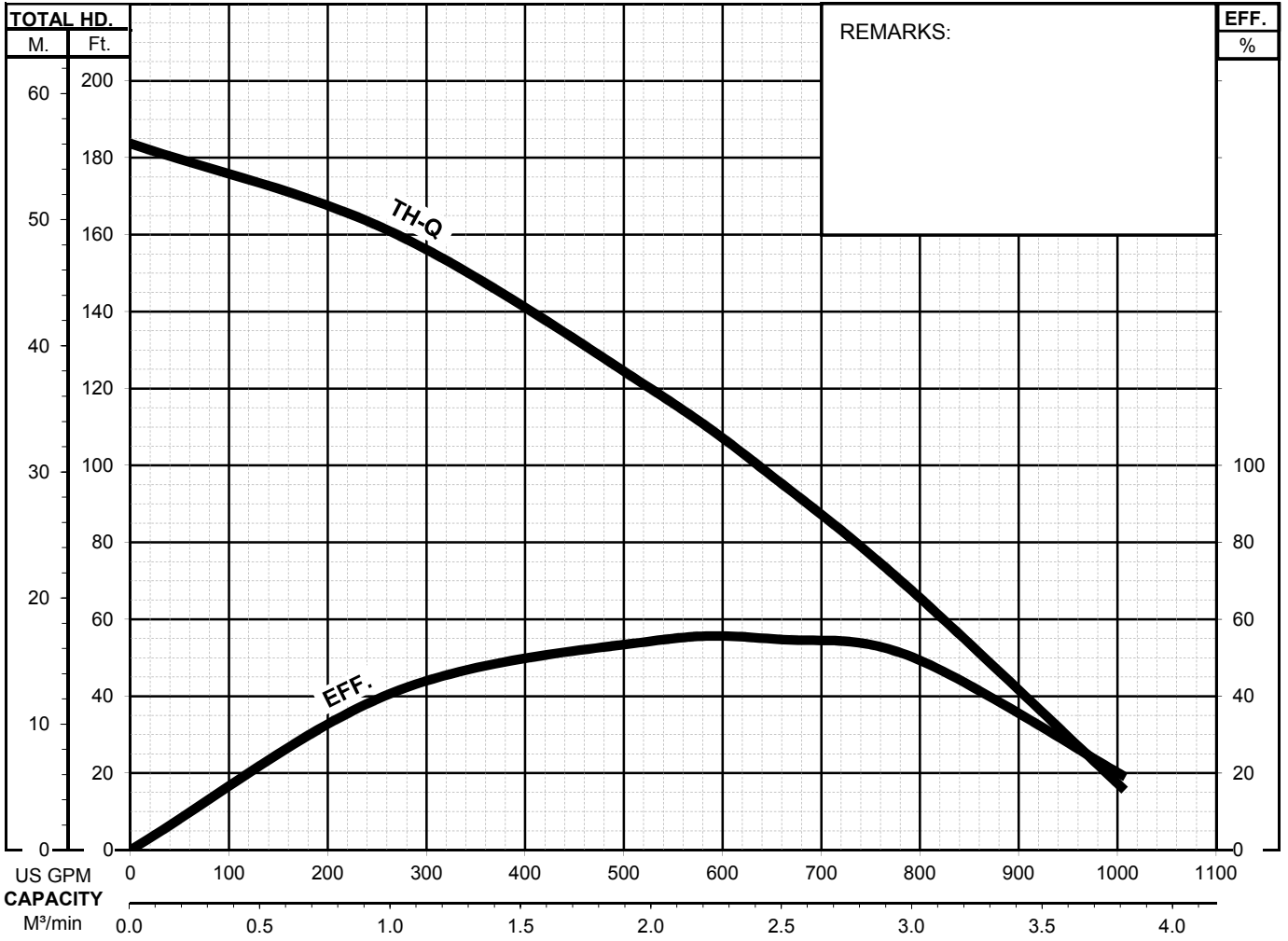


# KTZ - SERIES

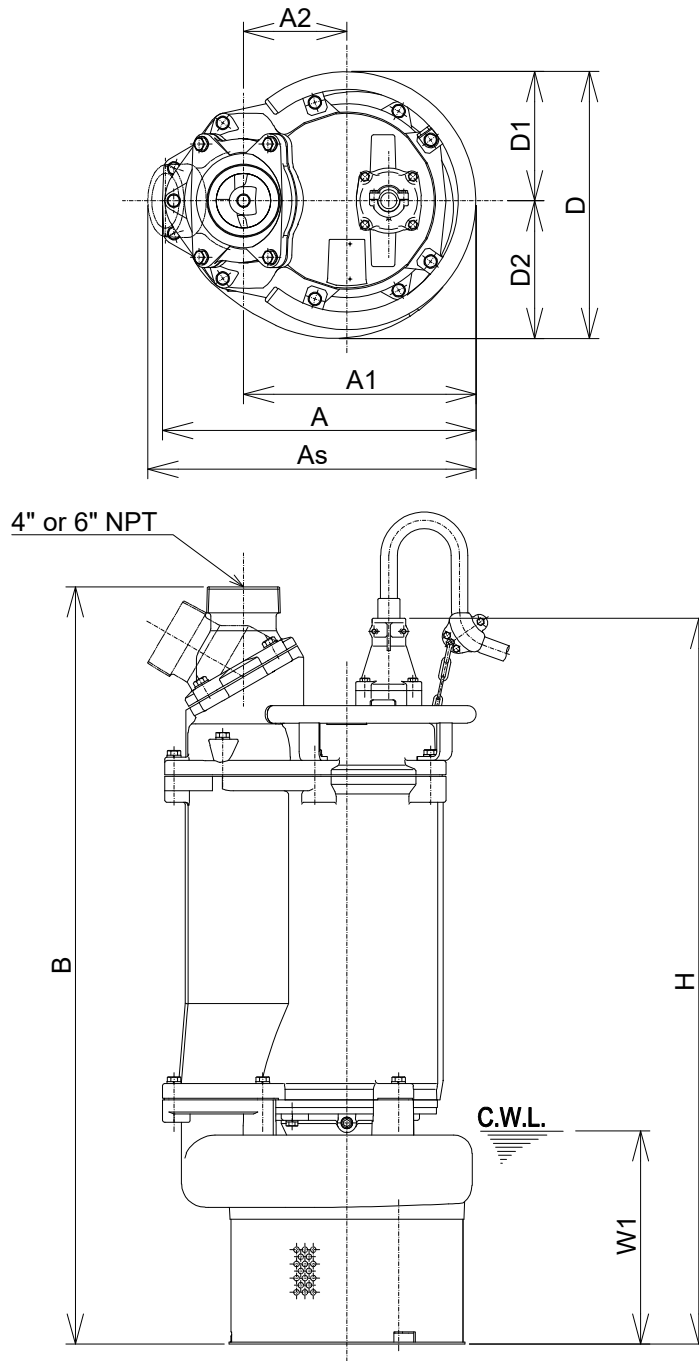
SUBMERSIBLE DEWATERING PUMPS

## PERFORMANCE CURVE

<b>MODEL</b>	<b>BORE</b>	<b>HP</b>	<b>kW</b>	<b>RPM</b>	<b>SOLIDS DIA.</b>	<b>LIQUID</b>	<b>SG.</b>	<b>VISCOSITY</b>	<b>TEMP.</b>
KTZ622-61	6"/150mm	30	22	3512	0.472"/12mm	Water	1.0	1.123cSt.	60°F
<b>PUMP TYPE</b>	<b>PHASE</b>	<b>VOLTAGE</b>	<b>AMPERAGE</b>		<b>HZ</b>	<b>STARTING METHOD</b>		<b>INS. CLASS</b>	
Dewatering Pump	3	460 / 575	35.2 / 26.0		60	Direct On Line		F	
<b>CURVE No.</b>	<b>DATE</b>	<b>PHASE</b>	<b>VOLTAGE</b>	<b>AMPERAGE</b>	<b>HZ</b>	<b>STARTING METHOD</b>	<b>INS. CLASS</b>		
-	-	-	-	-	-	-	-		



**KTZ422-61  
KTZ622-61**



**DIMENSIONS:USCS (Inch)**

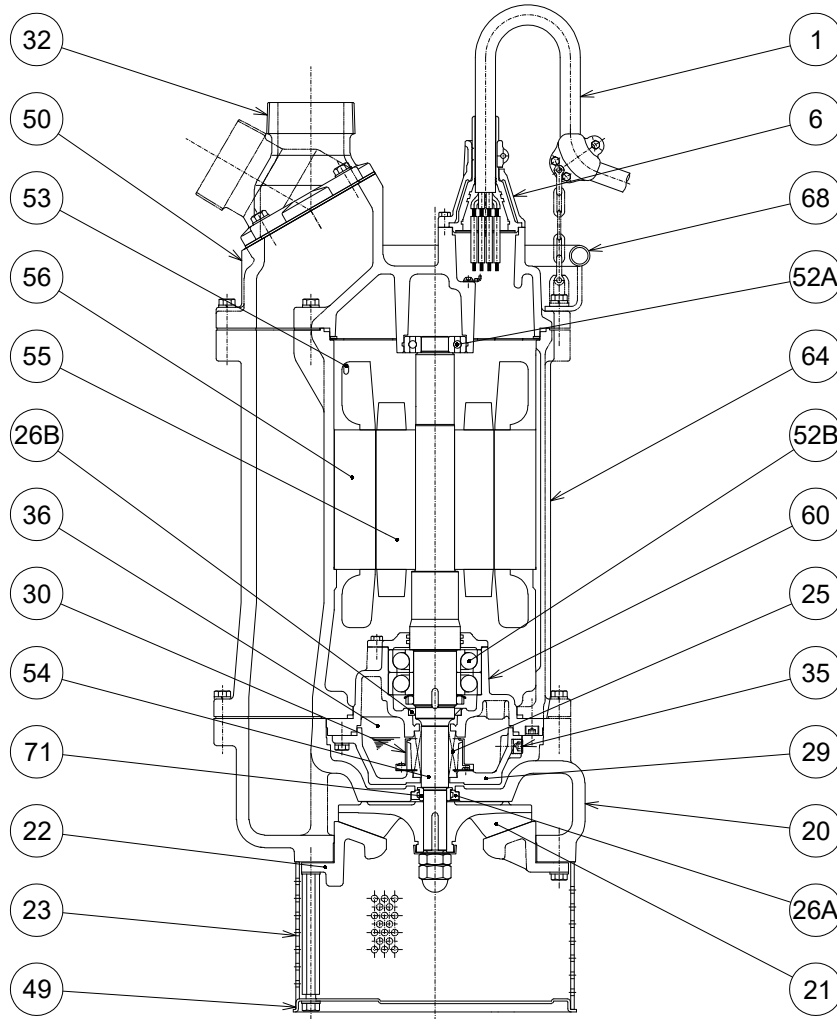
Model	HP	NOM. SIZE	Pump & Motor									C.W.L. W1	Wt.* (lbs.)
			A	A1	A2	As	B	D	D1	D2	H		
KTZ422-61	30	4"	19 1/8	14 3/16	6 5/16	20	46 1/8	16 1/4	7 7/8	8 3/8	44 3/16	13	648
KTZ622-61	30	6"	19 1/8	14 3/16	6 5/16	21 1/4	46 15/16	16 1/4	7 7/8	8 3/8	44 3/16	13	650

**DIMENSIONS:METRIC (mm)**

\*Excluding Cable

Model	kW	NOM. SIZE	Pump & Motor									C.W.L. W1	Wt.* (kg)
			A	A1	A2	As	B	D	D1	D2	H		
KTZ422-61	22	100	485	360	160	508	1172	413	200	213	1123	330	294
KTZ622-61	22	150	485	360	160	539	1192	413	200	213	1123	330	295

**KTZ422-61  
KTZ622-61**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	ASTM, AISI CODE	RELATED DIN CODE	Q'TY
1	Power Cable	Chloroprene Sheath AWG6/4, 14/2-50ft			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 TypeA	DIN 1695 G-X260Cr27	1
22	Suction Cover	Ductile Cast Iron	A536 65-45-12	EN 1563 GJS-500-7	1
23	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-35T			1
26A	Labyrinth Ring	Stainless Steel	S 30400	1.4301	1
26B	Oil Seal	Nitrile Butadiene Rubber / SC-50689			1
29	Oil Casing	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
30	Oil Lifter	PBT Plastic W/(GF+MD)40			1
32	Discharge Connection	Cast Iron / NPT 4" (or 6")	A48M Class30B	EN 1561 GJL-200	1
35	Oil Plug	Stainless Steel	S 30400	1.4301	1
36	Lubricant	Turbine Oil ISO VG32 or SAE 10W-20			
49	Bottom Plate	Steel (Cold Rolled)	A109/A1008	EN 10130	1
50	Motor Bracket	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
52A	Upper Bearing	#6307ZZC3			1
52B	Lower Bearing	#7311DBC3			1
53	Motor Protector				3
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	Steel Pipe & Steel	A53 Type F & A283 Grade D	DIN 1615 St 33 & EN 10025 S275	1
71	Shaft Sleeve	Stainless Steel	S 40300	1.4000	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 \_\_\_\_\_ HP., \_\_\_\_\_ 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**■ STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**■ OPTIONS**

Length as Required

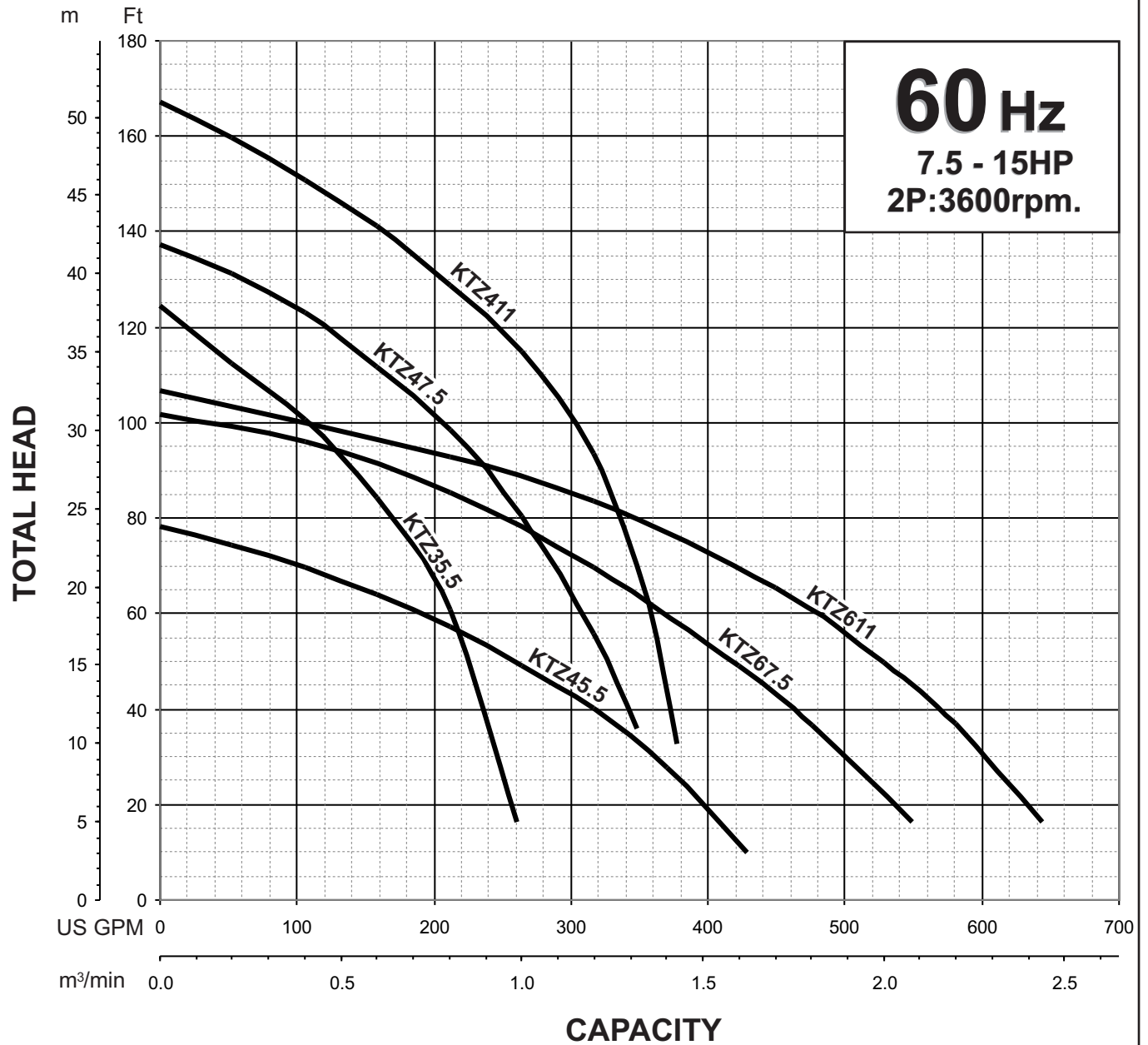


**TSURUMI PUMP**

**KTZ - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

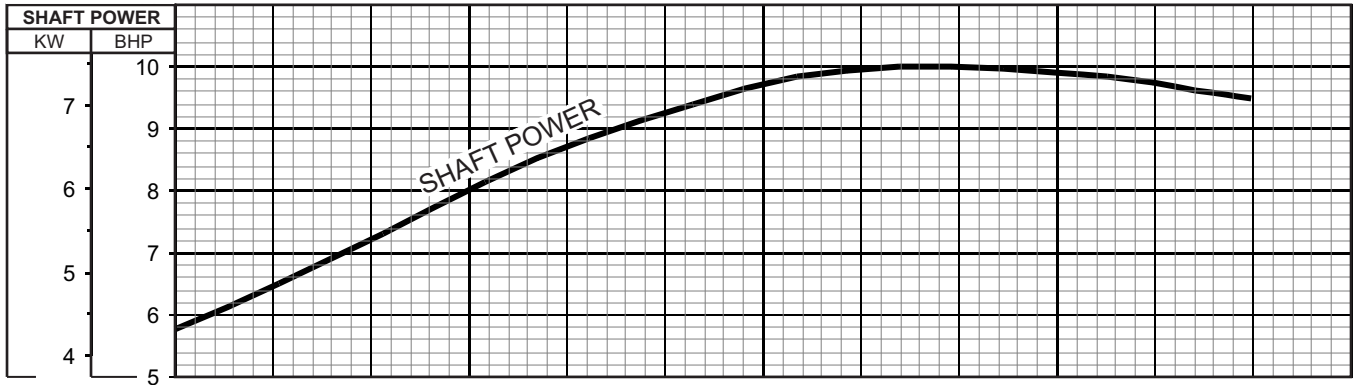
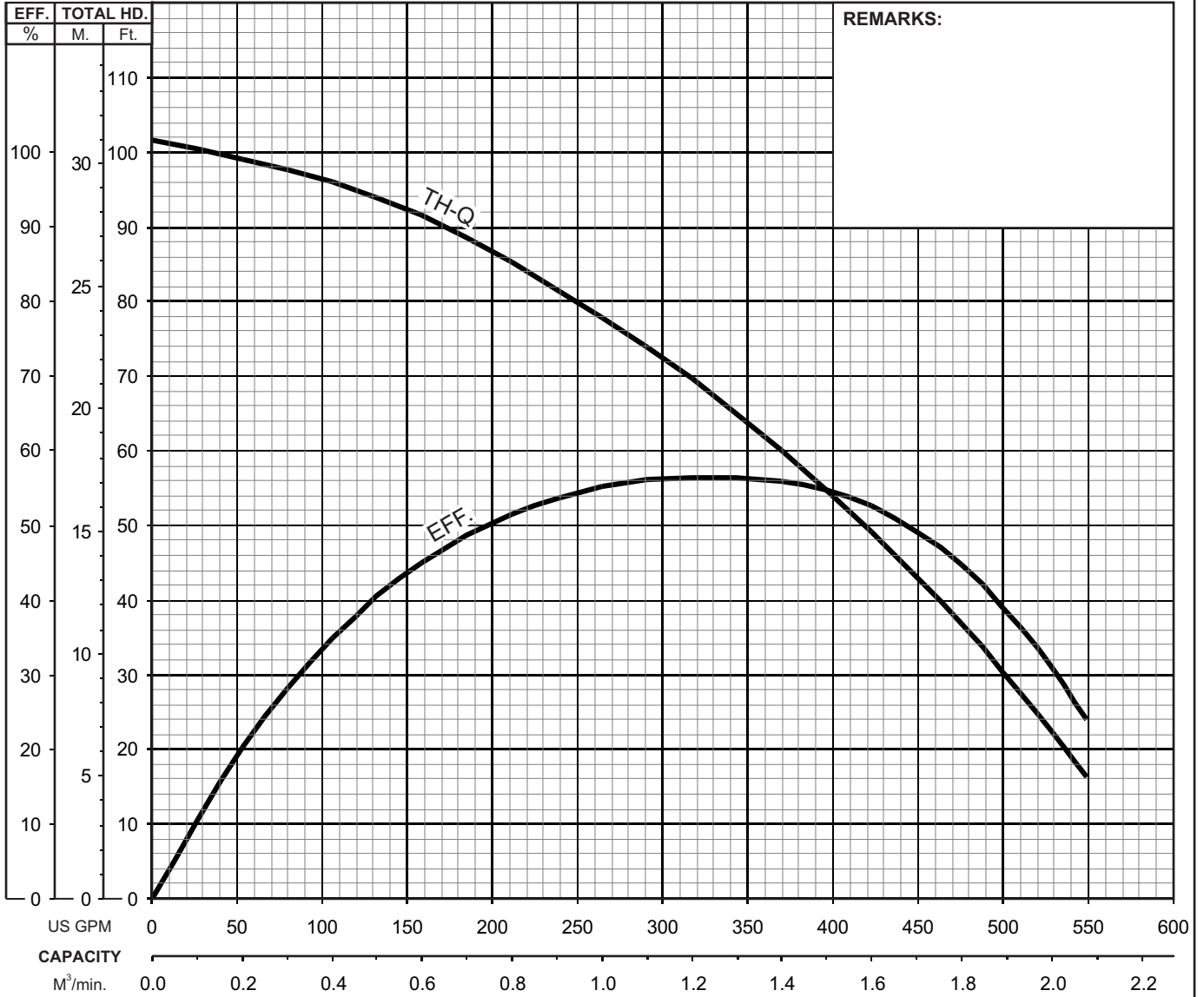




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ67.5-63	4"/100mm	10	7.5	3545	0.787"/20mm	Water	1.0	1.123 cSt.	60°F
PUMP TYPE	PHASE	VOLTAGE	AMPERAGE		HZ	STARTING METHOD	INS. CLASS		
Dewatering Pump	3	208-230/460/575	29.8-27.3 / 13.3 / 10.4		60	Direct On Line	F		
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

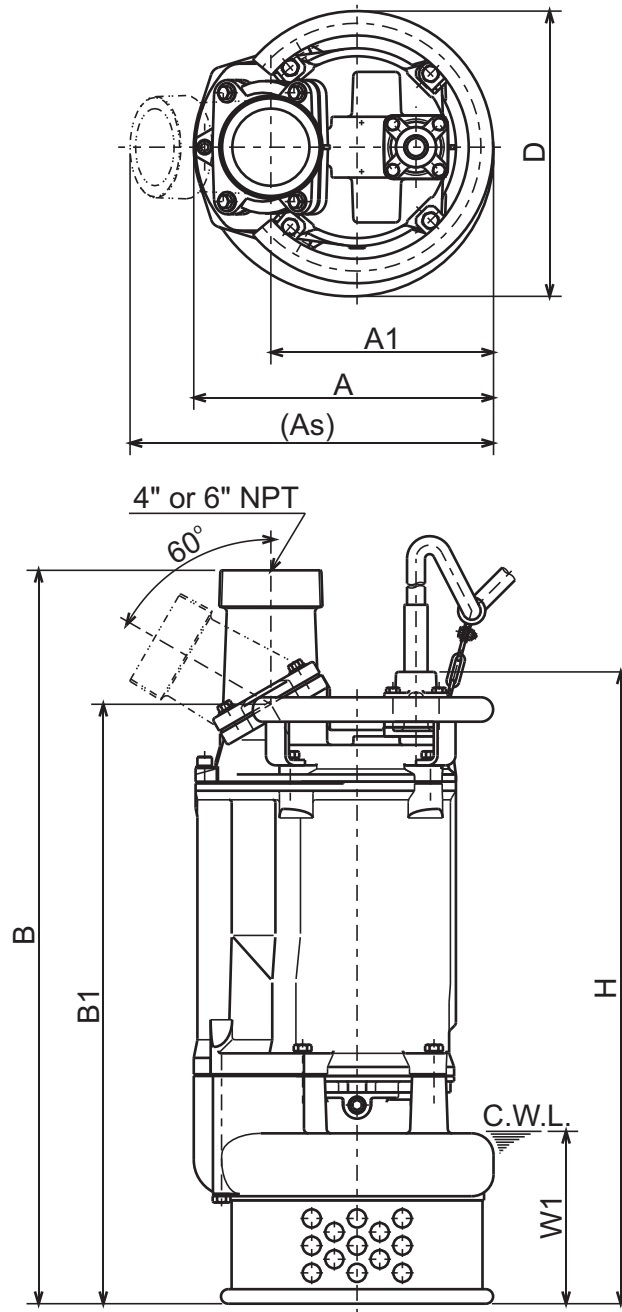




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ47.5-63  
KTZ67.5-63**



**DIMENSIONS:USCS (Inch)**

C.W.L. : Continuous running Water Level

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt.
			A	As	A1	B	B1	D	H	W1	(lbs.)
KTZ47.5-63	10	4"	13	15 3/4	9 11/16	31 13/16	26	12 3/8	27 7/16	7 1/2	225
KTZ67.5-63(4")	10	4"	13	15 3/4	9 11/16	31 13/16	26	12 3/8	27 7/16	7 1/2	225
KTZ67.5-63	10	6"	14 9/16	15 9/16	11 3/16	31 7/8	26	12 3/8	27 7/16	7 1/2	222

**DIMENSIONS:METRIC (mm)**

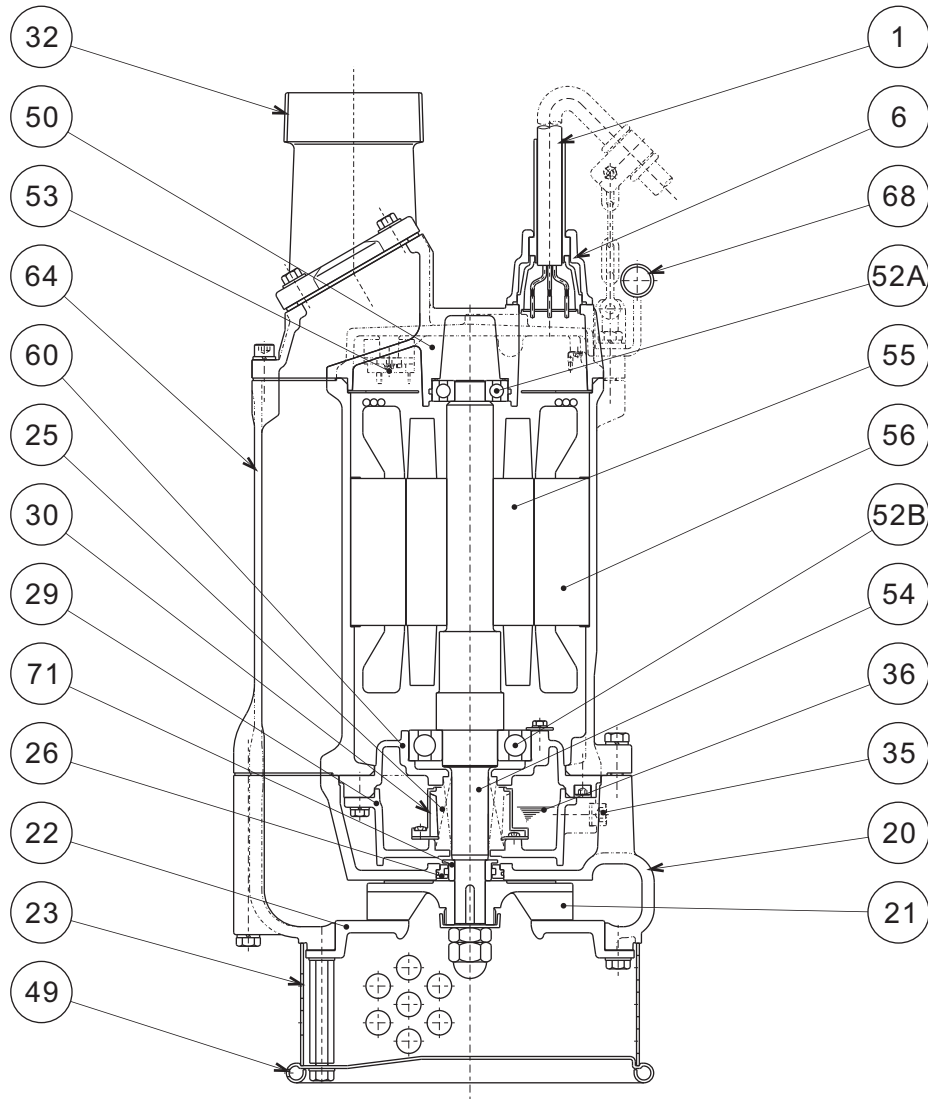
Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt.
			A	As	A1	B	B1	D	H	W1	(kg)
KTZ47.5-63	7.5	100	330	401	245	809	661	314	697	190	102
KTZ67.5-63(4")	7.5	100	330	401	245	809	661	314	697	190	102
KTZ67.5-63	7.5	150	369	395	284	810	661	314	697	190	101



**KTZ - SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ47.5-63  
KTZ67.5-63**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	Chloroprene Sheath AWG10/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-30T			1
30	Oil Lifter	PBT Resin			1
26	Labyrinth Ring	Stainless Steel	S 30400	1.4301	1
32	Discharge Connection	Cast Iron / NPT 4" (or 6")	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			
49	Bottom Plate	Steel (Cold Rolled)	A109/A1008	EN 10130	1
50	Motor Head Cover	Cast Iron	A48M Class30B	EN 1561 GJL-200	1
52A	Upper Bearing	#6305ZZC3			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 Class25B	EN 1561 GJL-150	1
64	Motor Housing	Cast Iron	A48M Class30B or 25B	EN 1561 GJL-200 or GJL-150	1
68	Handle	Carbon Steel Pipe + Steel	A53 Type F + A283 Grade D	DIN 1615 St33 + EN 10025 S275	1
71	Shaft Sleeve	Stainless Steel	S 40300	1.4000	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 \_\_\_\_\_ HP., \_\_\_\_\_ 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**OPTIONS**

Length as Required

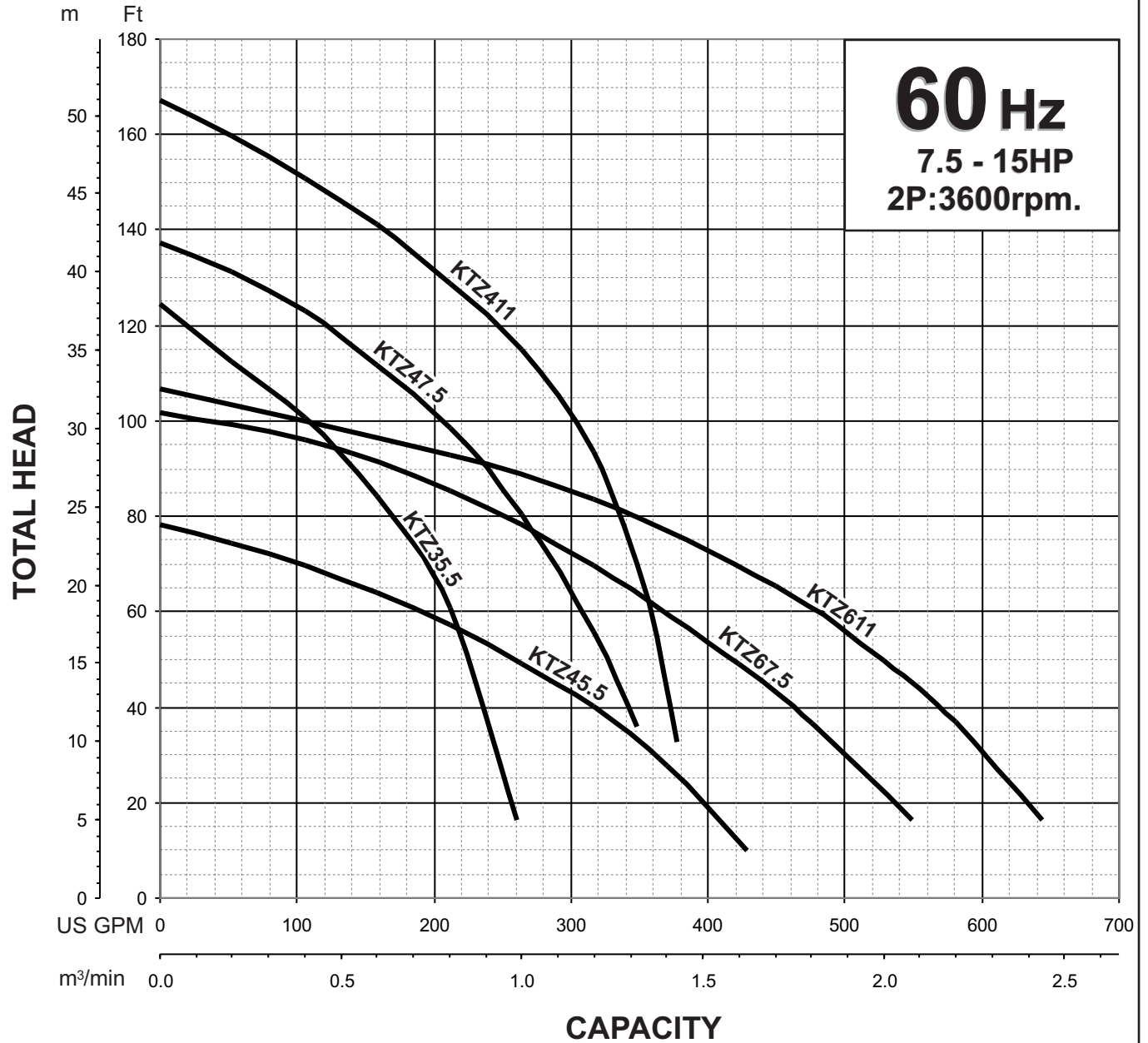


**TSURUMI PUMP**

**KTZ - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

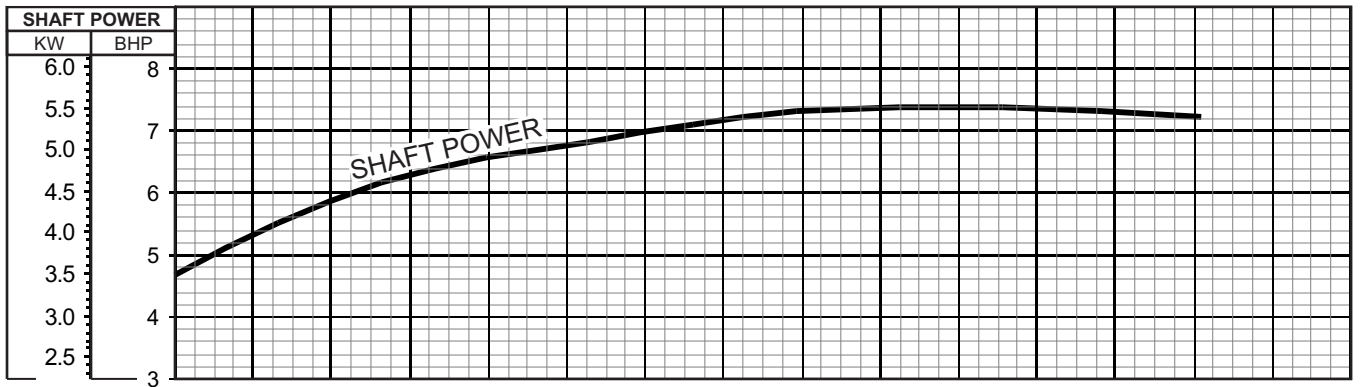
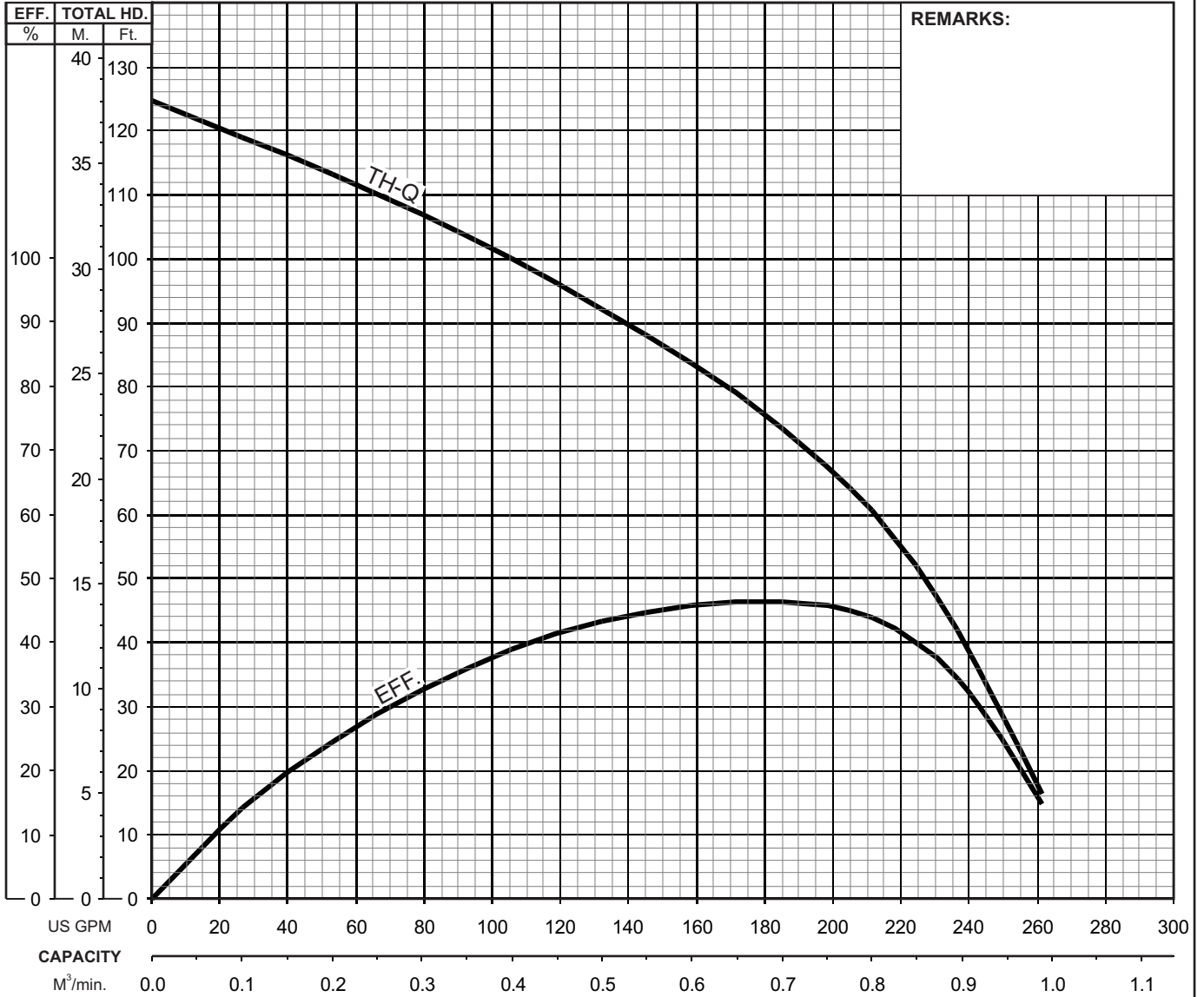




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ35.5-63	3"/80mm	7.5	5.5	3545	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	208-230/460/575	21.0-19.7 / 10.0 / 7.9	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

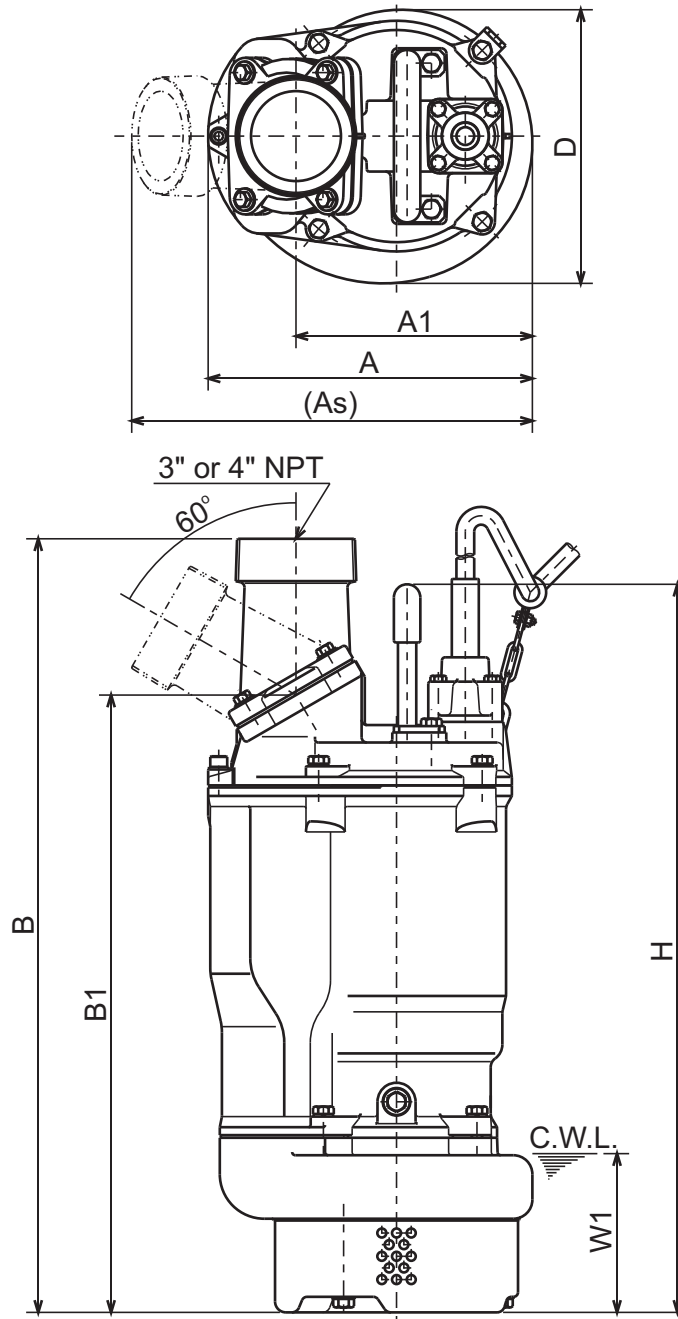




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ35.5-63  
KTZ45.5-63**



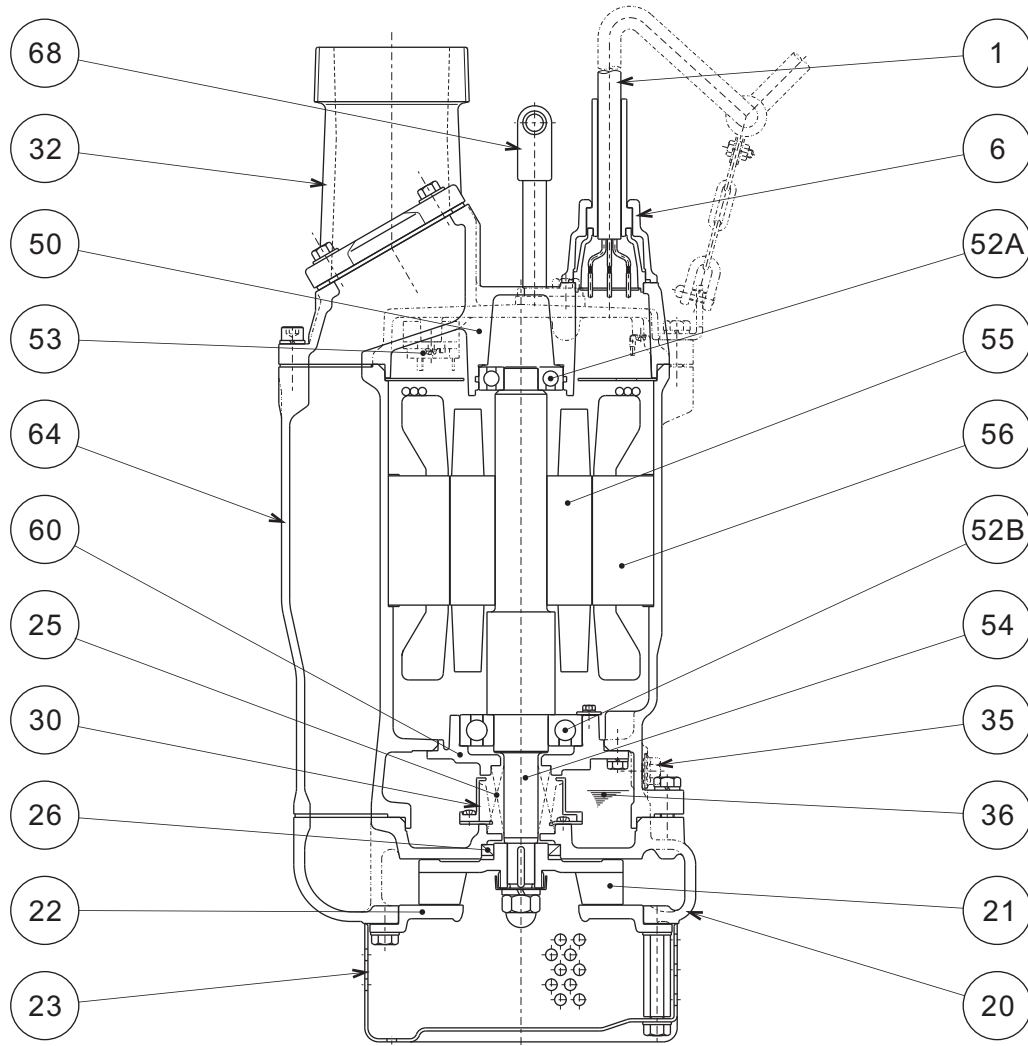
C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor								C.W.L.	Wt. (lbs.)
			A	As	A1	B	B1	D	H	W1		
KTZ35.5-63	7.5	3"	12 1/16	14 5/16	8 13/16	28 3/8	22 15/16	10 3/16	27 1/16	5 7/8	167	
KTZ45.5-63	7.5	4"	12 1/16	14 7/8	8 13/16	28 3/4	22 15/16	10 3/16	27 1/16	5 7/8	170	

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor								C.W.L.	Wt. (kg)
			A	As	A1	B	B1	D	H	W1		
KTZ35.5-63	5.5	80	306	363	223	721	583	259	688	150	76	
KTZ45.5-63	5.5	100	306	379	223	731	583	259	688	150	77	


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING PUMPS**
**SECTIONAL VIEW**
**KTZ35.5-63  
KTZ45.5-63**


ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	Chloroprene Sheath AWG12/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	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" or 4"	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 Class30B	EN 1561 GJL-200	1
52A	Upper Bearing	#6305ZC3			1
52B	Lower Bearing	#6308ZC3			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


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 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. 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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 a anti-wicking block to eliminate water incursion into the motor due to capillary wicking should the power cable be accidentally damaged.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**■ STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**■ OPTIONS**

Length as Required

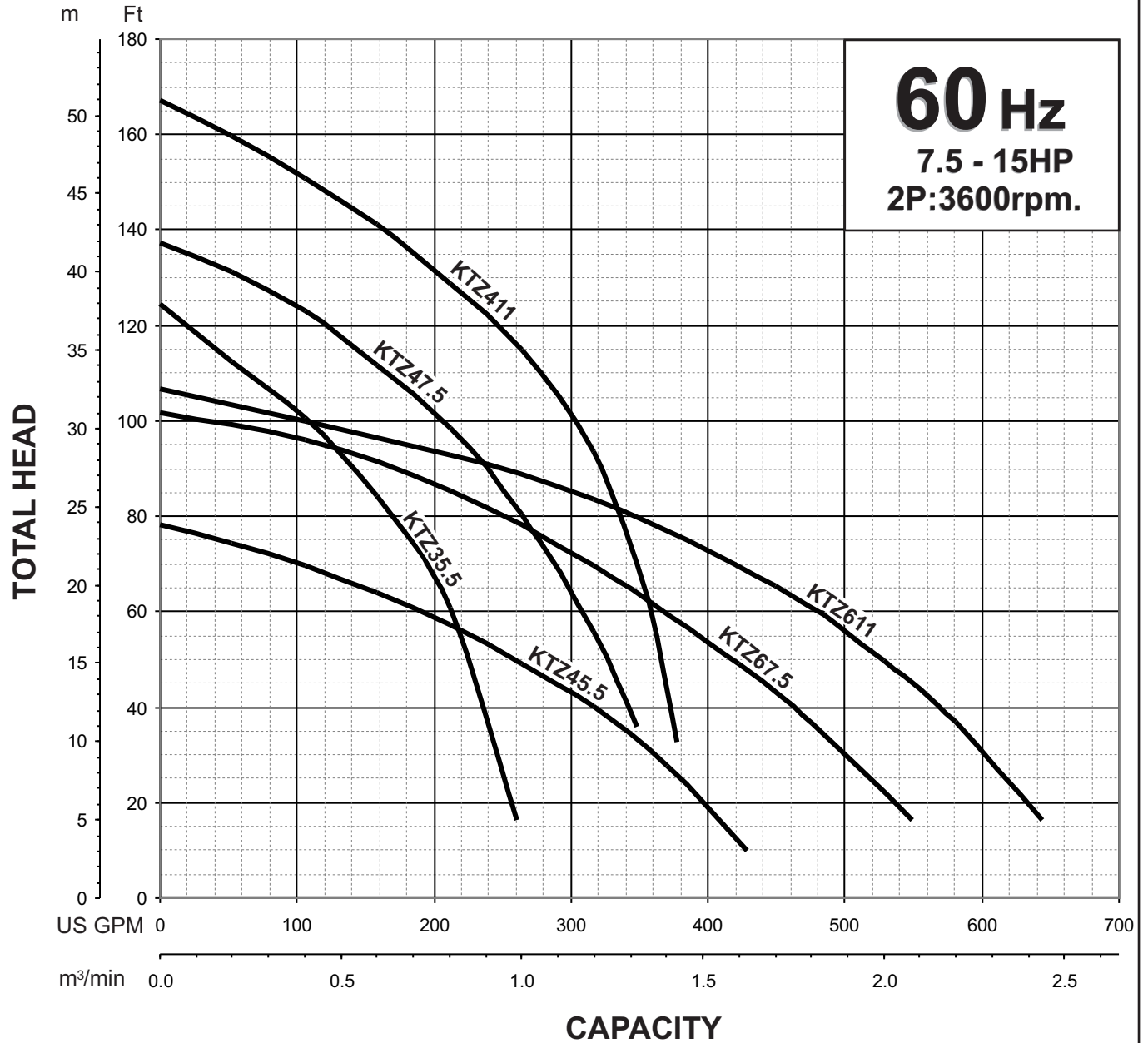


**TSURUMI PUMP**

**KTZ - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

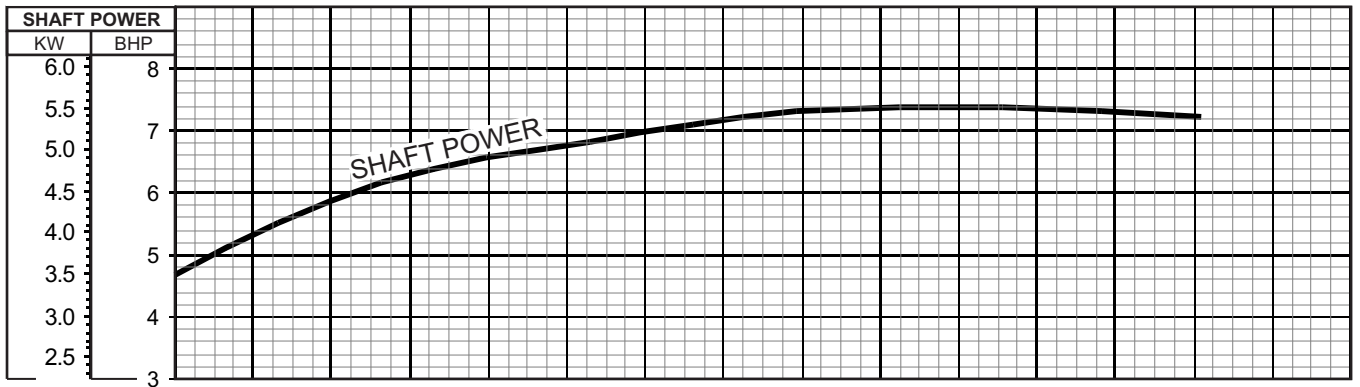
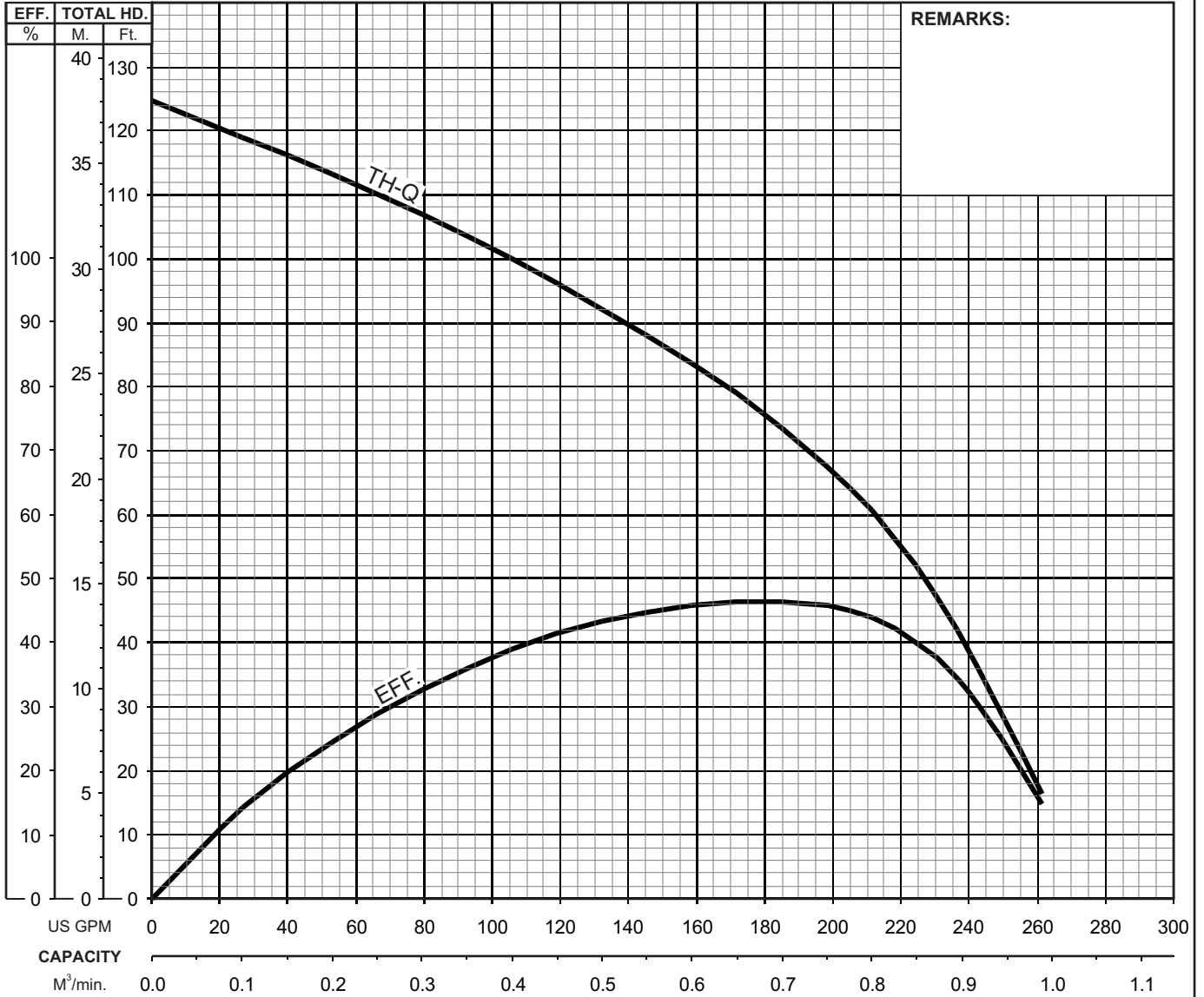




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ35.5-63	3"/80mm	7.5	5.5	3545	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	208-230/460/575	21.0-19.7 / 10.0 / 7.9	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

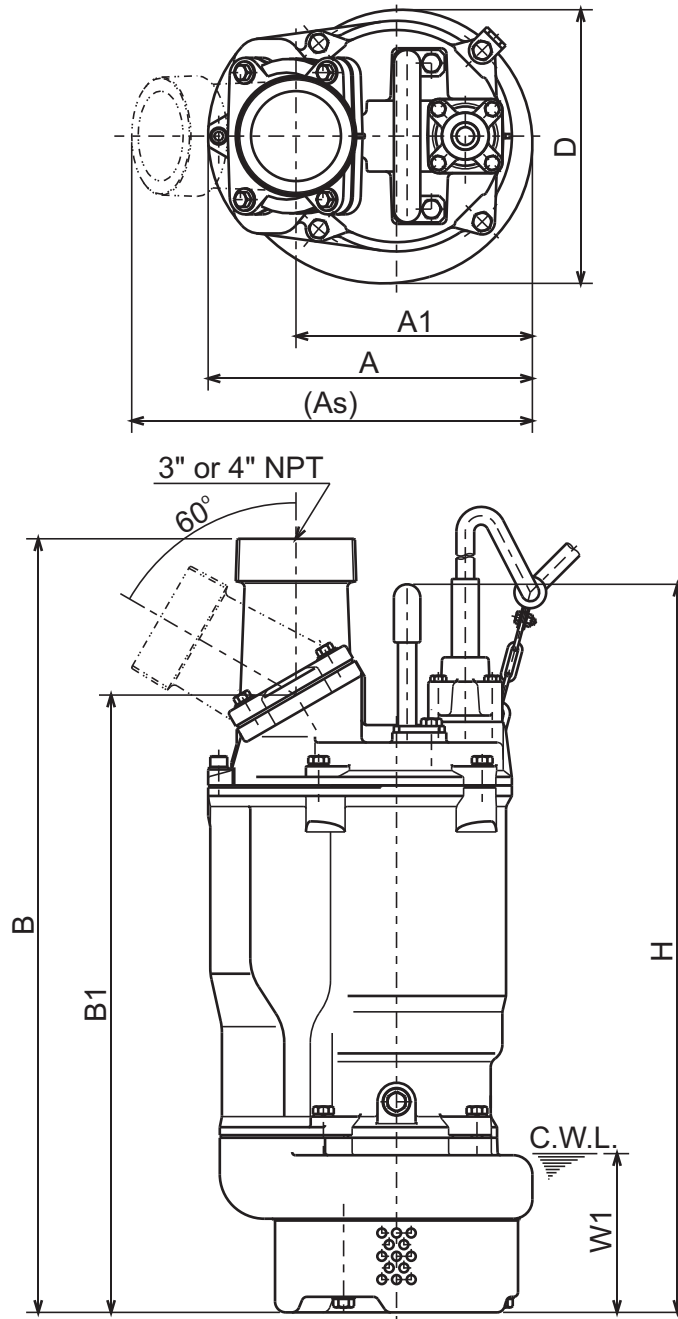




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ35.5-63  
KTZ45.5-63**



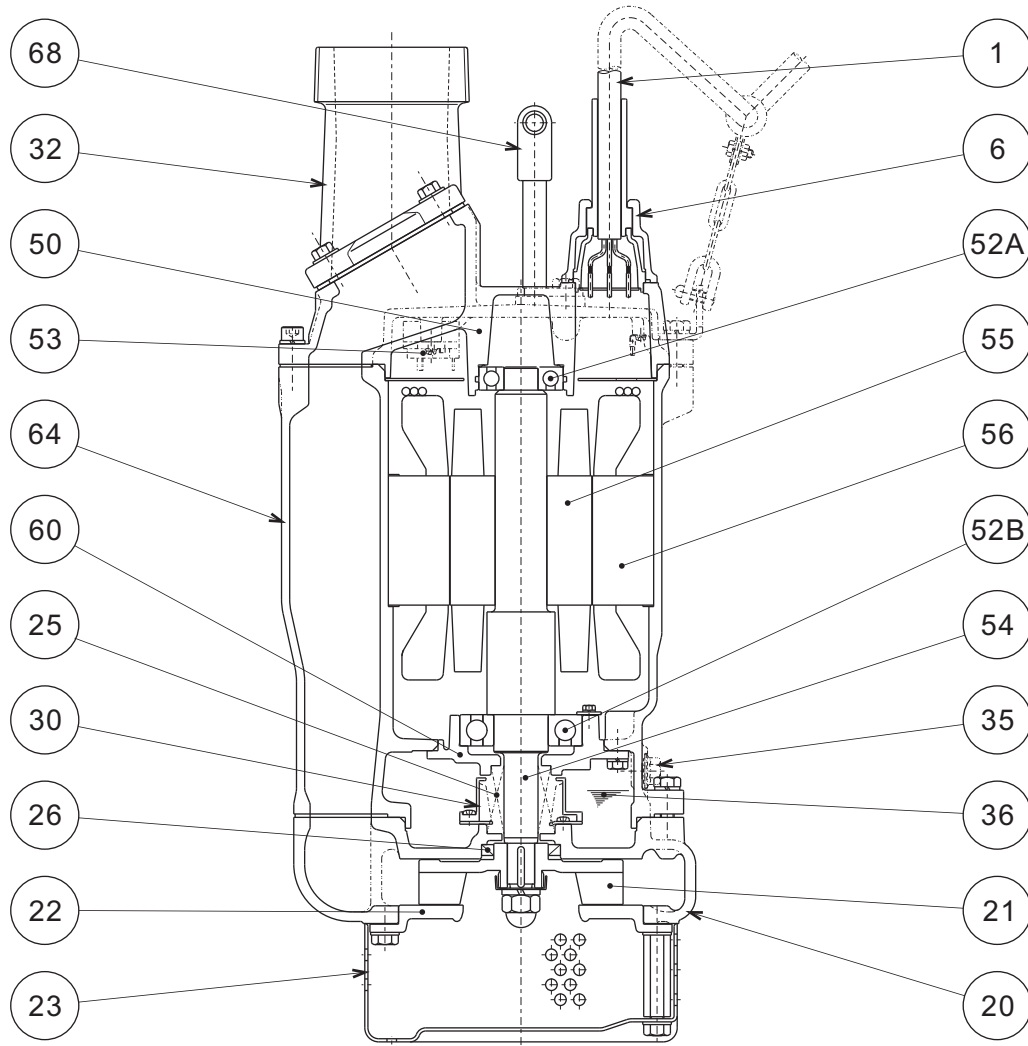
C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor								C.W.L.	Wt. (lbs.)
			A	As	A1	B	B1	D	H	W1		
KTZ35.5-63	7.5	3"	12 1/16	14 5/16	8 13/16	28 3/8	22 15/16	10 3/16	27 1/16	5 7/8	167	
KTZ45.5-63	7.5	4"	12 1/16	14 7/8	8 13/16	28 3/4	22 15/16	10 3/16	27 1/16	5 7/8	170	

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor								C.W.L.	Wt. (kg)
			A	As	A1	B	B1	D	H	W1		
KTZ35.5-63	5.5	80	306	363	223	721	583	259	688	150	76	
KTZ45.5-63	5.5	100	306	379	223	731	583	259	688	150	77	

**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING PUMPS**
**SECTIONAL VIEW**
**KTZ35.5-63  
KTZ45.5-63**


ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	Chloroprene Sheath AWG12/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	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" or 4"	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 Class30B	EN 1561 GJL-200	1
52A	Upper Bearing	#6305ZC3			1
52B	Lower Bearing	#6308ZC3			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


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 \_\_\_\_\_ HP., \_\_\_\_\_ 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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.



**KTZ- SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**SPECIFICATIONS**

- 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
- Motor Nomenclature
  - Type, Speed, Hz.
  - Voltage, Phase
  - Insulation
  - Bearings
- Accessories
- Operational Mode

**STANDARD**

- 2 ~ 4" NPT (50 - 100 mm)
- 6" is Optional (KTZ67.5 / KTZ611)
- 2 ~ 15 HP. (1.5 ~ 11 kW)
- 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)
- 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)
- 104° F. (40° C.)
- Cast Iron
- High Chrome Iron
- 420 Stainless Steel
- Cast Iron
- 304 Stainless Steel
- 10 - 15HP (7.5 - 11kW)
- Silicon Carbide
- NBR (Nitrile Butadiene Rubber)
- Semi-open, solids handling.
- 0.334 - 0.787" (8.5 - 20.0mm)
- Air Filled, 3600 RPM, 60 Hz.
- 208/230/460/575 V., 3 Phase
- Class F
- Pre-lubricated, Double Shielded
- Submersible Power Cable 50' (15.0m)
- Manual

**OPTIONS**

Length as Required

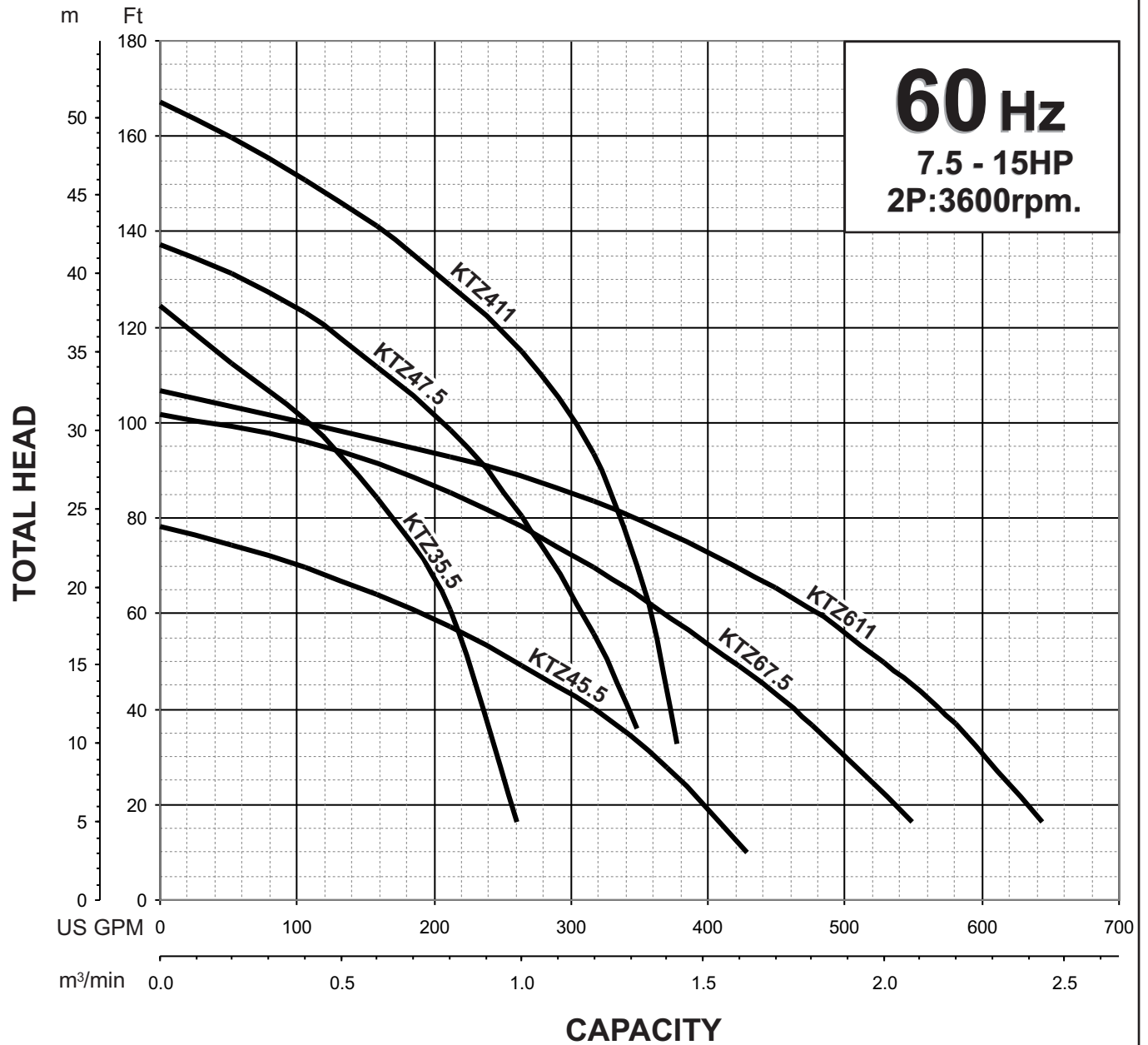


**TSURUMI PUMP**

**KTZ - SERIES  
DEWATERING PUMPS**

**PERFORMANCE  
RANGE**

**GROUP PERFORMANCE RANGE**

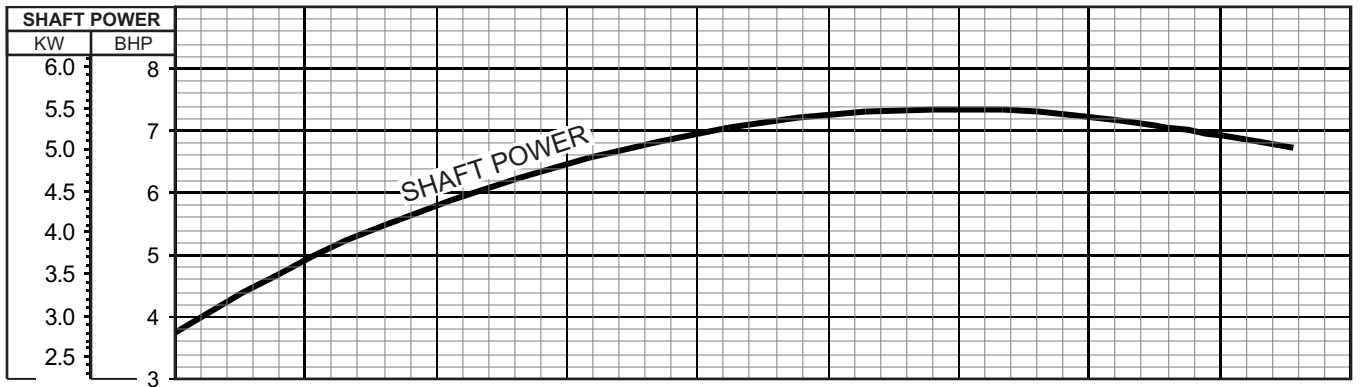
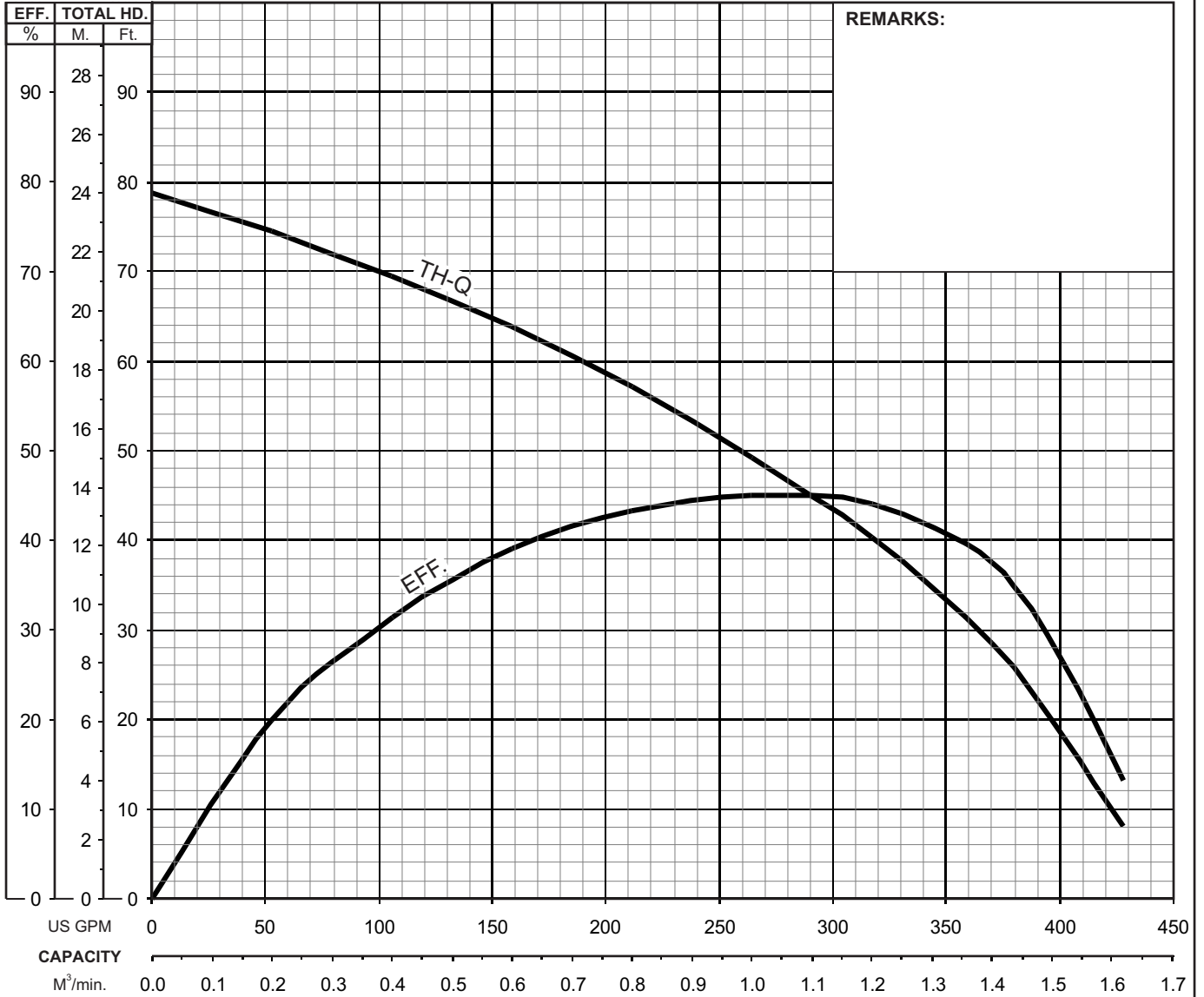




# KTZ - SERIES DEWATERING PUMPS

# PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ45.5-63	4"/100mm	7.5	5.5	3545	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	208-230/460/575	21.0-19.7 / 10.0 / 7.9	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

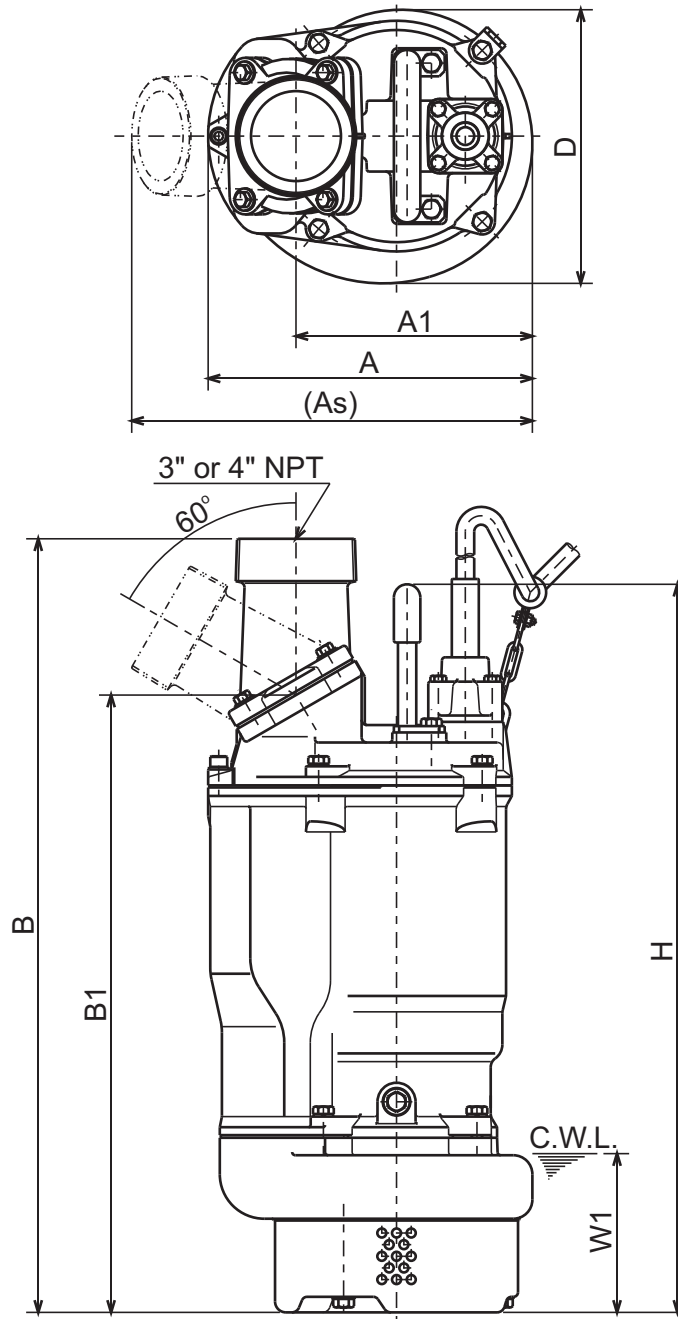




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ35.5-63  
KTZ45.5-63**



C.W.L. : Continuous running Water Level

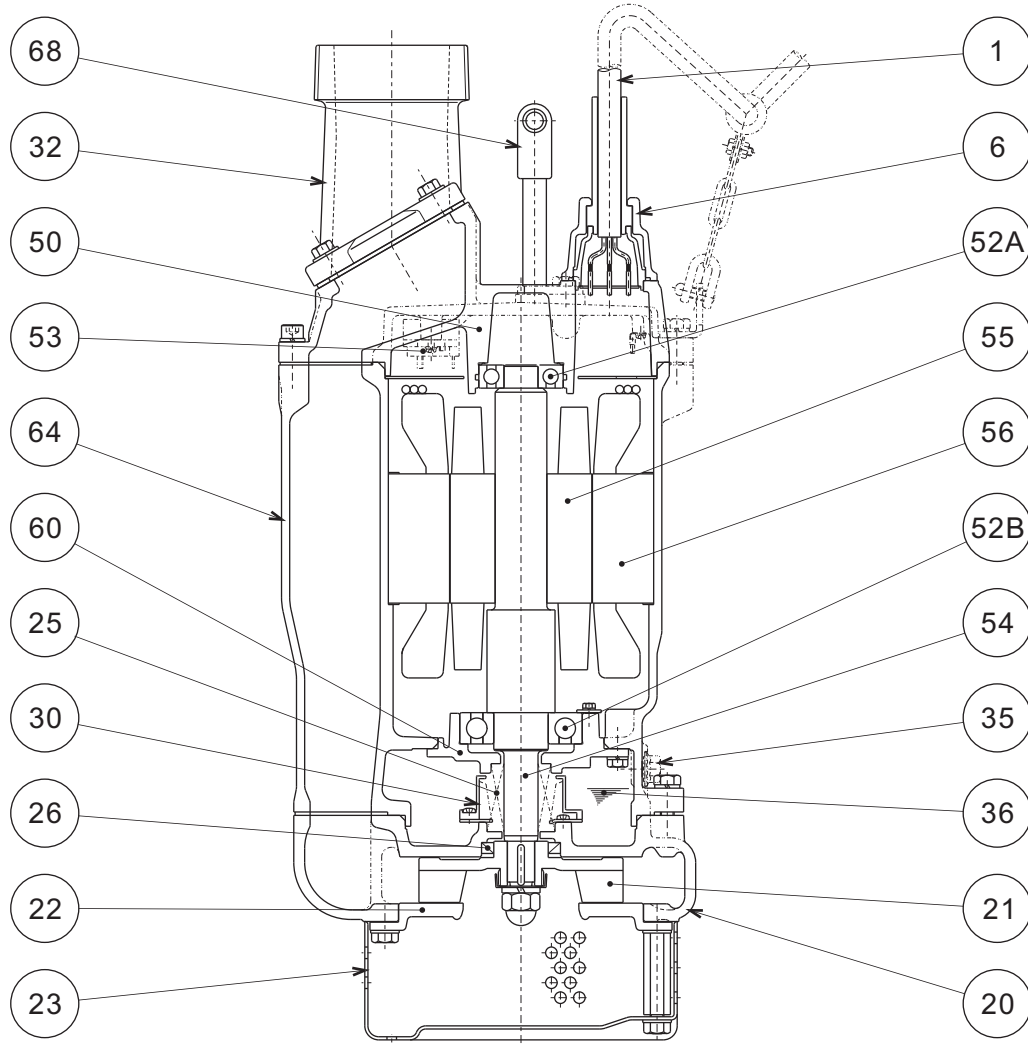
**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor								C.W.L.	Wt. (lbs.)
			A	As	A1	B	B1	D	H	W1		
KTZ35.5-63	7.5	3"	12 1/16	14 5/16	8 13/16	28 3/8	22 15/16	10 3/16	27 1/16	5 7/8	167	
KTZ45.5-63	7.5	4"	12 1/16	14 7/8	8 13/16	28 3/4	22 15/16	10 3/16	27 1/16	5 7/8	170	

**DIMENSIONS:METRIC (mm)**

Model	kW	NOM. SIZE	Pump & Motor								C.W.L.	Wt. (kg)
			A	As	A1	B	B1	D	H	W1		
KTZ35.5-63	5.5	80	306	363	223	721	583	259	688	150	76	
KTZ45.5-63	5.5	100	306	379	223	731	583	259	688	150	77	

**KTZ35.5-63  
KTZ45.5-63**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	Chloroprene Sheath AWG12/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	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" or 4"	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 Class30B	EN 1561 GJL-200	1
52A	Upper Bearing	#6305ZC3			1
52B	Lower Bearing	#6308ZC3			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


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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 30B. Motor frame shall be gray cast iron, ASTM A48 CLASS 25B. 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 \_\_\_\_\_ HP., \_\_\_\_\_ 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 insulated with built in thermal and over amperage protection for each winding. Motor shaft shall be 420 stainless steel, fitted with a replaceable 304(2 and 3 Hp.) or 403(10 and 15 Hp.) 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.



**KTZ-SERIES  
DEWATERING PUMP**

**SPECIFICATIONS**

**■ FEATURES**

1. Semi-open, high chrome iron impeller with ductile iron 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.
3. Highly efficient, continuous duty air filled, copper wound motor with class F insulation minimizes the cost of operation.
4. Built in thermal & amperage sensing protector prevents motor failure due to single Phasing,

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. Commercial, industrial wastewater and construction site drainage.
2. Effluent transfer.
3. Decorative waterfalls and fountains.
4. Raw water supply from rivers or lakes..



**■ SPECIFICATIONS**

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  
 Motor Nomenclature  
     Type, Speed, Hz.  
     Voltage, Phase  
     Insulation  
     Bearings  
 Accessories  
 Operational Mode

**■ STANDARD**

2 ~ 4" NPT (50 - 100 mm)  
 6" is Optional (KTZ67.5 / KTZ611)  
 2 ~ 15 HP. (1.5 ~ 11 Kw)  
 33.0 ~ 645.0 GPM. (0.13 ~ 2.44 m<sup>3</sup>/min)  
 13.1 ~ 167.0 Ft. (4.0 ~ 50.9 m)  
 104° F. (40° C.)  
 Cast Iron  
 High Chrome Iron  
 420 Stainless Steel  
 Cast Iron  
 304 Stainless Steel  
 10 - 15HP (7.5 - 11kW)  
 Silicon Carbide  
 NBR (Nitrile Butadiene Rubber)  
 Semi-open, solids handling.  
 0.334 - 0.787" (8.5 - 20.0mm)  
 Air Filled, 3600 RPM, 60 Hz.  
 208/230/460/575 V., 3 Phase  
 Class F  
 Pre-lubricated, Double Shielded  
 Submersible Power Cable 50' (15.0m)  
 Manual

**■ OPTIONS**

Length as Required



**TSURUMI PUMP**

# Positive Effect of Advanced KTZ KTZE – Automatic Pump with **Electrode**

## 1.5 / 2.2 / 3.7kW

### *Automatic Operation with Electrode*

The electrode-type sensor ON/OFF operation prevents dry running, reduces power consumption (50% over standard type – Tsurumi comparison), and extends operational life.

Energy Conservation

Cost Saving

Noise Reduction

### *Multi-Directional Hose Coupling*

The hose coupling has been devised so that it can be, without any extra parts, converted to an inclined discharge direction.



Every KTZ-series pump (1.5 to 11kW) is equipped with the above hose coupling as standard.

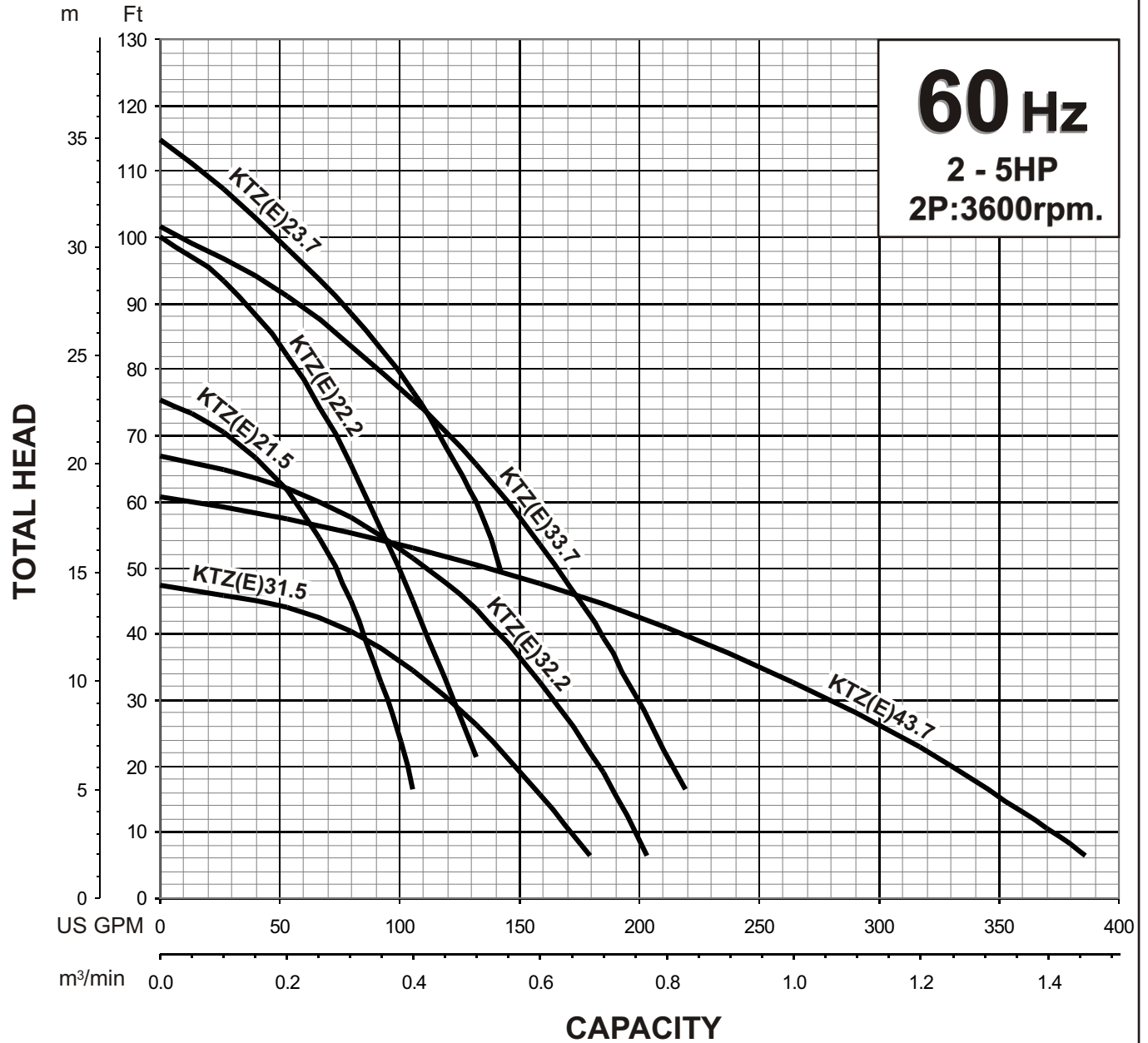
\* The additional features do NOT affect on the pump performance.



# KTZ(E) - SERIES DEWATERING PUMPS

## PERFORMANCE RANGE

### GROUP PERFORMANCE RANGE

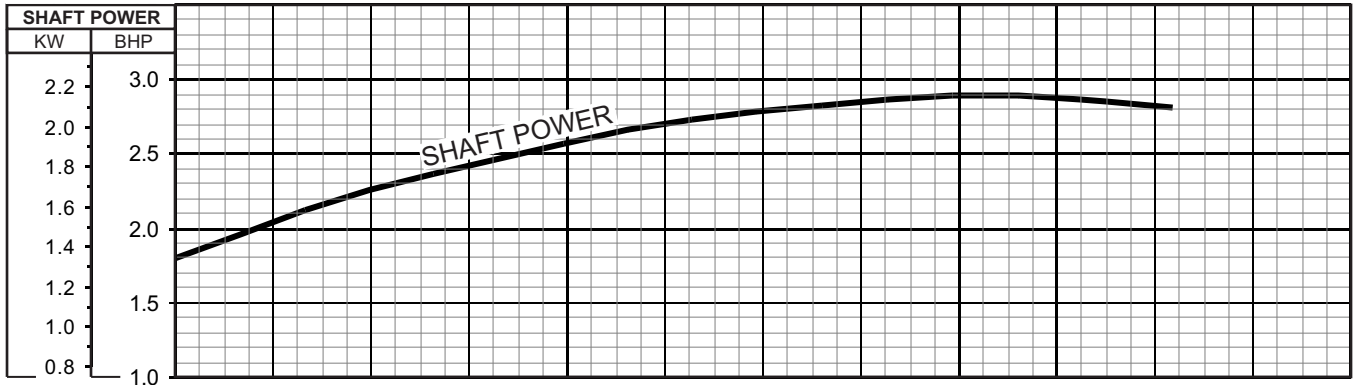
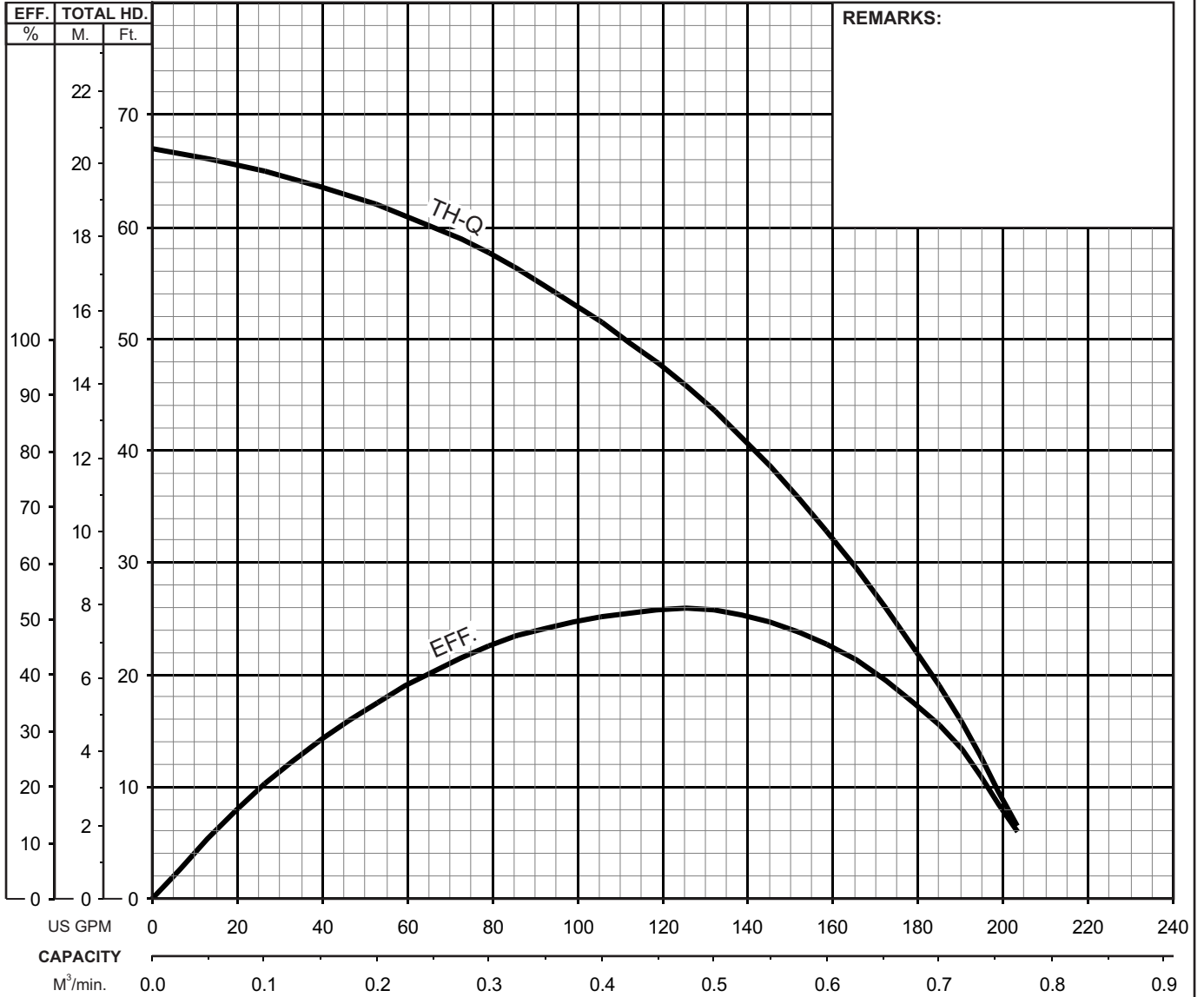




# KTZ - SERIES DEWATERING PUMPS

## PERFORMANCE CURVE

MODEL	BORE	HP	KW	RPM	SOLIDS DIA	LIQUID	SG.	VISCOSITY	TEMP.
KTZ32.2-61	3"/80mm	3	2.2	3410	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	208-230/460/575	9.4-9.0 / 4.5 / 3.5	60	Direct On Line	F			
CURVE No.	DATE	PHASE	VOLTAGE	AMPERAGE	HZ	STARTING METHOD	INS. CLASS		
-	-	-	-	-	-	-	-		

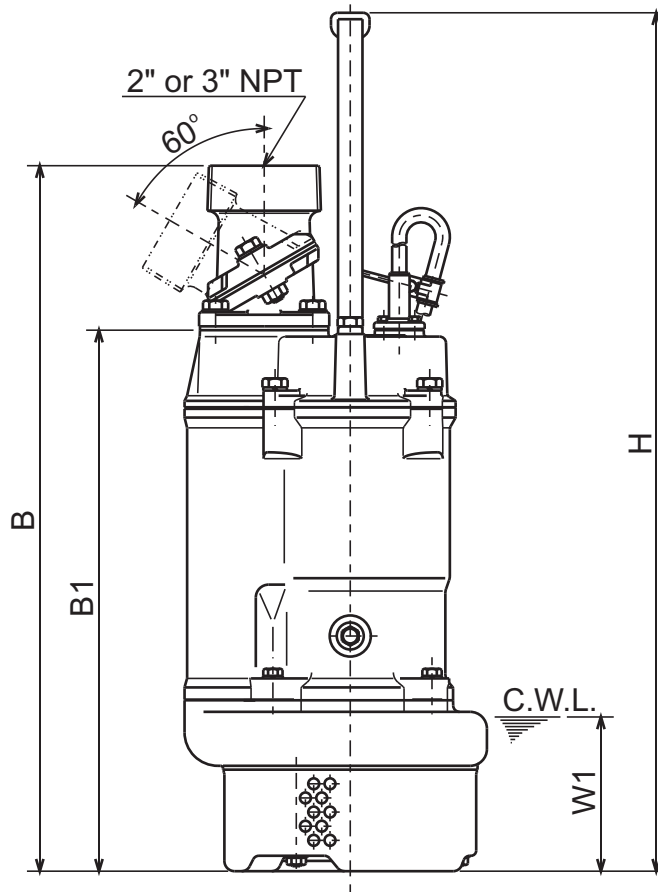
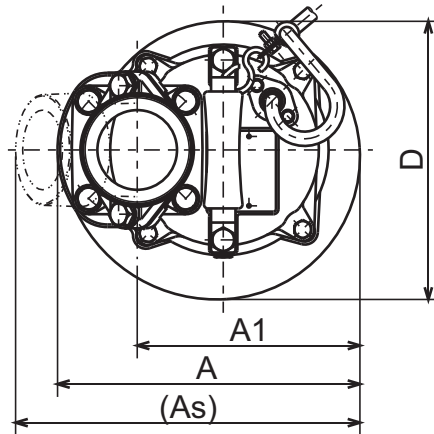




**KTZ - SERIES  
DEWATERING PUMPS**

**DIMENSIONS**

**KTZ22.2-61  
KTZ32.2-61**



C.W.L. : Continuous running Water Level

**DIMENSIONS:USCS (Inch)**

Model	HP	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (lbs.)
			A	As	A1	B	B1	D	H	W1	
KTZ22.2-61	3	2"	9 1/4	10 1/4	6 13/16	21 5/8	16 9/16	8 1/2	26 5/16	4 3/4	79
KTZ32.2-61	3	3"	9 1/4	10 9/16	6 13/16	21 5/8	16 9/16	8 1/2	26 5/16	4 3/4	77

**DIMENSIONS:METRIC (mm)**

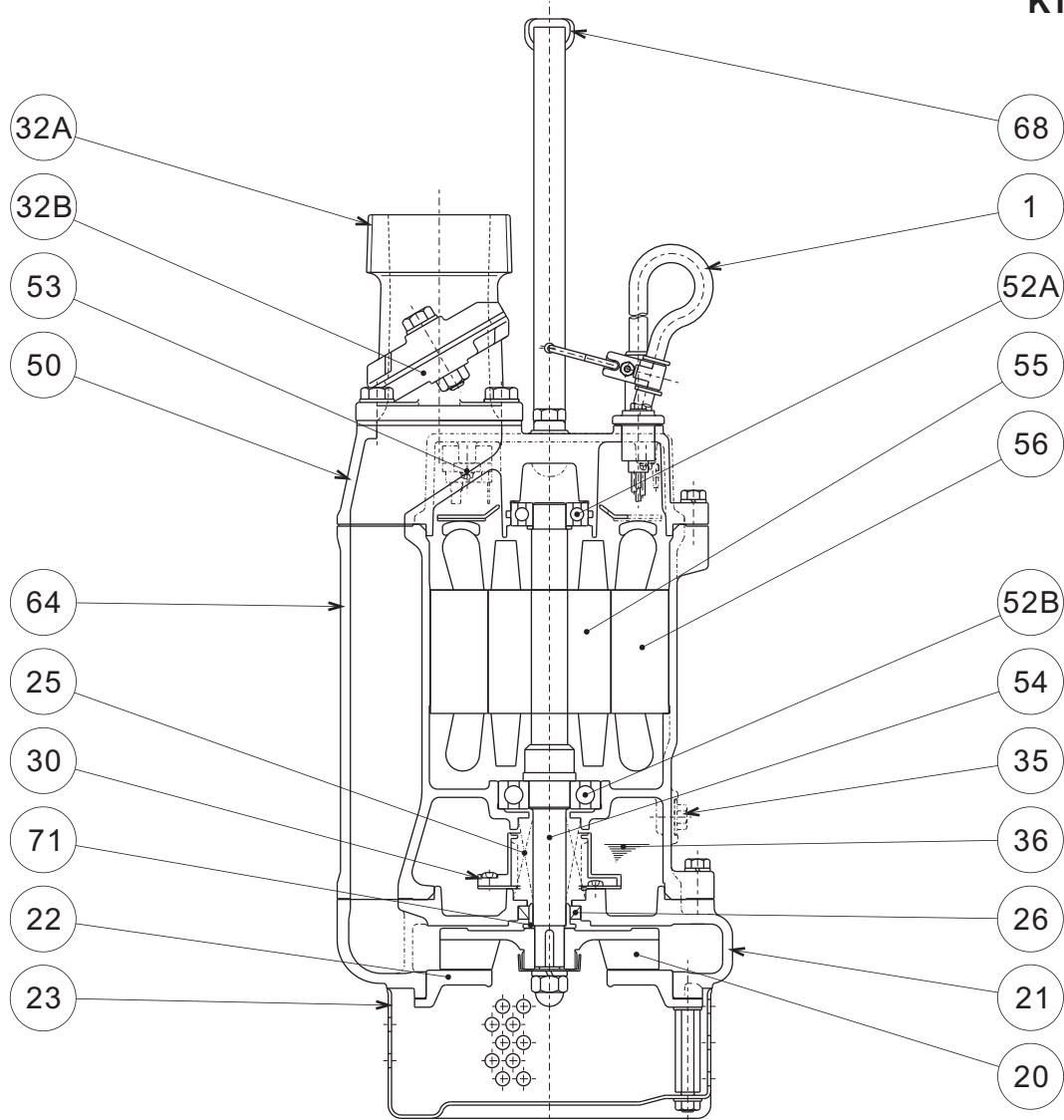
Model	kW	NOM. SIZE	Pump & Motor							C.W.L.	Wt. (kg)
			A	As	A1	B	B1	D	H	W1	
KTZ22.2-61	2.2	50	235	261	173	549	421	216	668	120	36
KTZ32.2-61	2.2	80	235	268	173	549	421	216	668	120	35



**KTZ - SERIES  
DEWATERING PUMPS**

**SECTIONAL VIEW**

**KTZ22.2-61  
KTZ32.2-61**



ITEM#	DESCRIPTION	MAIN MATERIAL / NOTE	RELATED ASTM, AISI CODE	RELATED EN CODE	Q'TY
1	Power Cable	PVC Sheath AWG16/4-50ft			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	Suction Strainer	Steel (Cold Rolled)	A109/A1008	EN 10130	1
25	Mechanical Seal	Silicon Carbide / H-20T			1
26	Oil Seal	Nitrile Butadiene Rubber / TC-25388			1
30	Oil Lifter	PBT Resin			1
32A	Discharge Connection	Cast Iron / NPT 2" or 3"	A48M Class30B	EN 1561 GJL-200	1
32B	Attachment	Aluminum Alloy Die Casting	B85 383.0	EN 1706 AC-46100	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	#6204ZZC3			1
52B	Lower Bearing	#6305ZZC3			1
53	Motor Protector				1
54	Shaft	Stainless Steel	S 42000	1.4028	1
55	Rotor				1
56	Stator				1
64	Motor Housing	Cast Iron	A48M Class25B	EN 1561 GJL-150	1
68	Handle	Steel (Cold Rolled) + NBR Rubber	A109/A1008	EN 10130	1
71	Shaft Sleeve	Stainless Steel	S 30400	1.4301	1


**TSURUMI PUMP**
**KTZ - SERIES  
DEWATERING 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. 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 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 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.