

Series: KTZE	Discharge Bore: 50 - 100mm	Motor Output / Pole: 1.5 - 3.7kW / 2-pole
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The KTZE-series is a submersible three-phase automatic cast iron high head heavy-duty drainage pump. An innovative electrode type relay unit built into the pump automatically starts and stops the pump to eliminate dry-running. This mechanism greatly reduces power consumption and extends operating life. The cast iron body with high-chromium cast iron impeller enables it to withstand demanding conditions found in construction, aggregate and mining applications. The top discharge, side flow design assures efficient motor cooling even when it operates with its motor exposed to air. The slim design allows the pump to be placed in a confined space. The discharge direction is selectable between vertical and inclined, which prevents folding or bending of the discharge hose.

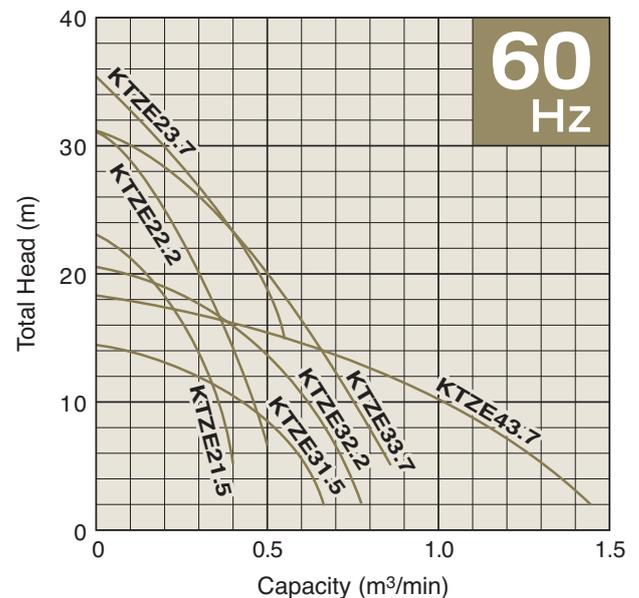
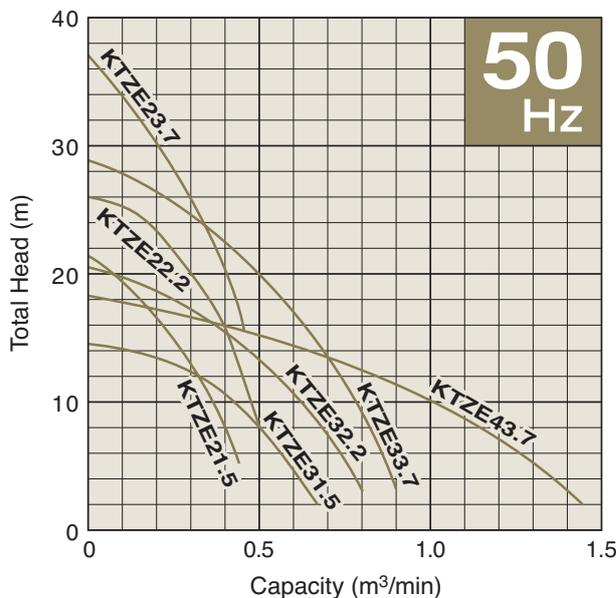
Registration of Design

Tsurumi has registered the design of the KTZ-series in major countries. Design rights are granted under the laws of each country.

Selection Table

Model	Discharge Bore mm	Motor Output kW	Phase	Starting Method	Pole	Dry Weight kg
KTZE21.5	50	1.5	3-phase	Direct on Line	2	39
KTZE22.2	50	2.2	3-phase	Direct on Line	2	41
KTZE23.7	50	3.7	3-phase	Direct on Line	2	69
KTZE31.5	80	1.5	3-phase	Direct on Line	2	38
KTZE32.2	80	2.2	3-phase	Direct on Line	2	40
KTZE33.7	80	3.7	3-phase	Direct on Line	2	69
KTZE43.7	100	3.7	3-phase	Direct on Line	2	69

Performance Curves



Electrode Probe Cover (Optional Accessory)

The electrode probe for the water level sensor is a critical component for the automatic operation of the pump. Pumps are occasionally subjected to strong impacts during installation or when moving from place to place in harsh sites such as construction and mining. Therefore, Tsurumi has prepared a probe cover made of structural steel to protect the electrode probe from strong impacts. This component can be easily installed in the field.



SPECIFICATIONS	Model	KTZE21.5	KTZE-series
			1.5kW, 3-phase

<p>Type of Pump Submersible automatic high head drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p>Automatic Control Device Electrode</p> <p>Type of Fluid Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p>Discharge Bore & Connection 50mm, Multi-directional Hose Coupling</p> <p>Motor Output 1.5kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line</p> <p>Motor Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles & Speed (Synchronous Speed) 2-pole, 3000/3600min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages & Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 3.6A</td> <td>220V – 6.2A</td> </tr> <tr> <td>400V – 3.6A</td> <td>380V – 3.4A</td> </tr> <tr> <td>415V – 3.6A</td> <td>440V – 3.2A</td> </tr> </table> <p>Power Cable Sheath: PVC Standard Length: 8m 200 to 600V supply: 1 x 4 x 1.25mm², O.D. 11.1mm</p> <p>Dry Weight (excluding cable) 39kg</p>	50Hz	60Hz	380V – 3.6A	220V – 6.2A	400V – 3.6A	380V – 3.4A	415V – 3.6A	440V – 3.2A	<p>Impeller Semi-open impeller made of high-chromium cast iron</p> <p>Solids Passage 50Hz – φ8.5mm 60Hz – φ8.5mm</p> <p>Cable Entry with Anti-Wicking Block Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.</p> <p>Bearing Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p>Shaft 420 stainless steel</p> <p>Shaft Seal (Mechanical Seal) Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.</p> <p>Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC</p> <p>Oil Seal (Lip Seal) Used as a “Dust Seal”; it protects the mechanical seal from abrasive particles.</p> <p>OIL LIFTER Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.</p> <p>Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 740ml</p> <p>Motor Protection Device A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.</p>
50Hz	60Hz								
380V – 3.6A	220V – 6.2A								
400V – 3.6A	380V – 3.4A								
415V – 3.6A	440V – 3.2A								

<p>Optional Accessories</p> <p>Multi-directional Male Threaded Coupling Extension Probe Electrode Probe Cover</p>
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SPECIFICATIONS	Model	KTZE22.2									
		KTZE-series 2.2kW, 3-phase									
<p>Type of Pump Submersible automatic high head drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p>Automatic Control Device Electrode</p> <p>Type of Fluid Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p>Discharge Bore & Connection 50mm, Multi-directional Hose Coupling</p> <p>Motor Output 2.2kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line</p> <p>Motor Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles & Speed (Synchronous Speed) 2-pole, 3000/3600min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages & Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 5.3A</td> <td>220V – 9.8A</td> </tr> <tr> <td>400V – 5.3A</td> <td>380V – 5.3A</td> </tr> <tr> <td>415V – 5.3A</td> <td>440V – 4.8A</td> </tr> </table> <p>Power Cable Sheath: PVC Standard Length: 8m 200 to 600V supply: 1 x 4 x 1.25mm², O.D. 11.1mm</p> <p>Dry Weight (excluding cable) 41kg</p>		50Hz	60Hz	380V – 5.3A	220V – 9.8A	400V – 5.3A	380V – 5.3A	415V – 5.3A	440V – 4.8A	<p>Impeller Semi-open impeller made of high-chromium cast iron</p> <p>Solids Passage 50Hz – φ8.5mm 60Hz – φ8.5mm</p> <p>Cable Entry with Anti-Wicking Block Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.</p> <p>Bearing Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p>Shaft 420 stainless steel</p> <p>Shaft Seal (Mechanical Seal) Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.</p> <p>Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC</p> <p>Oil Seal (Lip Seal) Used as a “Dust Seal”; it protects the mechanical seal from abrasive particles.</p> <p>OIL LIFTER Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.</p> <p>Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 740ml</p> <p>Motor Protection Device A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.</p>	
50Hz	60Hz										
380V – 5.3A	220V – 9.8A										
400V – 5.3A	380V – 5.3A										
415V – 5.3A	440V – 4.8A										
<p>Optional Accessories</p> <p>Multi-directional Male Threaded Coupling Extension Probe Electrode Probe Cover</p>											

SPECIFICATIONS	Model	KTZE23.7									
		KTZE-series 3.7kW, 3-phase									
<p>Type of Pump Submersible automatic high head drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p>Automatic Control Device Electrode</p> <p>Type of Fluid Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p>Discharge Bore & Connection 50mm, Multi-directional Hose Coupling</p> <p>Motor Output 3.7kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line</p> <p>Motor Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles & Speed (Synchronous Speed) 2-pole, 3000/3600min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages & Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 8.4A</td> <td>220V – 14.8A</td> </tr> <tr> <td>400V – 8.0A</td> <td>380V – 8.4A</td> </tr> <tr> <td>415V – 7.7A</td> <td>440V – 7.6A</td> </tr> </table> <p>Power Cable Sheath: Chloroprene rubber Standard Length: 8m 200 to 600V supply: 1 x 4 x 2.0mm², O.D. 14.4mm</p> <p>Dry Weight (excluding cable) 69kg</p>		50Hz	60Hz	380V – 8.4A	220V – 14.8A	400V – 8.0A	380V – 8.4A	415V – 7.7A	440V – 7.6A	<p>Impeller Semi-open impeller made of high-chromium cast iron</p> <p>Solids Passage 50Hz – φ8.5mm 60Hz – φ8.5mm</p> <p>Cable Entry with Anti-Wicking Block Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.</p> <p>Bearing Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p>Shaft 420 stainless steel</p> <p>Shaft Seal (Mechanical Seal) Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.</p> <p>Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC</p> <p>Oil Seal (Lip Seal) Used as a “Dust Seal”; it protects the mechanical seal from abrasive particles.</p> <p>OIL LIFTER Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.</p> <p>Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 1250ml</p> <p>Motor Protection Device A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.</p>	
50Hz	60Hz										
380V – 8.4A	220V – 14.8A										
400V – 8.0A	380V – 8.4A										
415V – 7.7A	440V – 7.6A										
<p>Optional Accessories</p> <p>Multi-directional Male Threaded Coupling Extension Probe Electrode Probe Cover</p>											

SPECIFICATIONS	Model	KTZE31.5	KTZE-series
			1.5kW, 3-phase

<p>Type of Pump Submersible automatic high head drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p>Automatic Control Device Electrode</p> <p>Type of Fluid Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p>Discharge Bore & Connection 80mm, Multi-directional Hose Coupling</p> <p>Motor Output 1.5kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line</p> <p>Motor Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles & Speed (Synchronous Speed) 2-pole, 3000/3600min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages & Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 3.6A</td> <td>220V – 6.2A</td> </tr> <tr> <td>400V – 3.6A</td> <td>380V – 3.4A</td> </tr> <tr> <td>415V – 3.6A</td> <td>440V – 3.2A</td> </tr> </table> <p>Power Cable Sheath: PVC Standard Length: 8m 200 to 600V supply: 1 x 4 x 1.25mm², O.D. 11.1mm</p> <p>Dry Weight (excluding cable) 38kg</p>	50Hz	60Hz	380V – 3.6A	220V – 6.2A	400V – 3.6A	380V – 3.4A	415V – 3.6A	440V – 3.2A	<p>Impeller Semi-open impeller made of high-chromium cast iron</p> <p>Solids Passage 50Hz – φ8.5mm 60Hz – φ8.5mm</p> <p>Cable Entry with Anti-Wicking Block Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.</p> <p>Bearing Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p>Shaft 420 stainless steel</p> <p>Shaft Seal (Mechanical Seal) Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.</p> <p>Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC</p> <p>Oil Seal (Lip Seal) Used as a “Dust Seal”; it protects the mechanical seal from abrasive particles.</p> <p>OIL LIFTER Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.</p> <p>Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 740ml</p> <p>Motor Protection Device A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.</p>
50Hz	60Hz								
380V – 3.6A	220V – 6.2A								
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<p>Optional Accessories</p> <p>Multi-directional Male Threaded Coupling Extension Probe Electrode Probe Cover</p>
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SPECIFICATIONS	Model	KTZE32.2							
		KTZE-series 2.2kW, 3-phase							
<p>Type of Pump Submersible automatic high head drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p>Automatic Control Device Electrode</p> <p>Type of Fluid Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p>Discharge Bore & Connection 80mm, Multi-directional Hose Coupling</p> <p>Motor Output 2.2kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line</p> <p>Motor Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles & Speed (Synchronous Speed) 2-pole, 3000/3600min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages & Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 5.3A</td> <td>220V – 9.8A</td> </tr> <tr> <td>400V – 5.3A</td> <td>380V – 5.3A</td> </tr> <tr> <td>415V – 5.3A</td> <td>440V – 4.8A</td> </tr> </table> <p>Power Cable Sheath: PVC Standard Length: 8m 200 to 600V supply: 1 x 4 x 1.25mm², O.D. 11.1mm</p> <p>Dry Weight (excluding cable) 40kg</p>	50Hz	60Hz	380V – 5.3A	220V – 9.8A	400V – 5.3A	380V – 5.3A	415V – 5.3A	440V – 4.8A	<p>Impeller Semi-open impeller made of high-chromium cast iron</p> <p>Solids Passage 50Hz – φ8.5mm 60Hz – φ8.5mm</p> <p>Cable Entry with Anti-Wicking Block Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.</p> <p>Bearing Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p>Shaft 420 stainless steel</p> <p>Shaft Seal (Mechanical Seal) Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.</p> <p>Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC</p> <p>Oil Seal (Lip Seal) Used as a “Dust Seal”; it protects the mechanical seal from abrasive particles.</p> <p>OIL LIFTER Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.</p> <p>Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 740ml</p> <p>Motor Protection Device A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.</p>
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<p>Optional Accessories</p> <p>Multi-directional Male Threaded Coupling Extension Probe Electrode Probe Cover</p>									

SPECIFICATIONS	Model	KTZE33.7									
		KTZE-series 3.7kW, 3-phase									
<p>Type of Pump Submersible automatic high head drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p>Automatic Control Device Electrode</p> <p>Type of Fluid Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p>Discharge Bore & Connection 80mm, Multi-directional Hose Coupling</p> <p>Motor Output 3.7kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line</p> <p>Motor Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles & Speed (Synchronous Speed) 2-pole, 3000/3600min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages & Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 8.4A</td> <td>220V – 14.8A</td> </tr> <tr> <td>400V – 8.0A</td> <td>380V – 8.4A</td> </tr> <tr> <td>415V – 7.7A</td> <td>440V – 7.6A</td> </tr> </table> <p>Power Cable Sheath: Chloroprene rubber Standard Length: 8m 200 to 600V supply: 1 x 4 x 2.0mm², O.D. 14.4mm</p> <p>Dry Weight (excluding cable) 69kg</p>		50Hz	60Hz	380V – 8.4A	220V – 14.8A	400V – 8.0A	380V – 8.4A	415V – 7.7A	440V – 7.6A	<p>Impeller Semi-open impeller made of high-chromium cast iron</p> <p>Solids Passage 50Hz – φ8.5mm 60Hz – φ8.5mm</p> <p>Cable Entry with Anti-Wicking Block Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.</p> <p>Bearing Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p>Shaft 420 stainless steel</p> <p>Shaft Seal (Mechanical Seal) Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.</p> <p>Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC</p> <p>Oil Seal (Lip Seal) Used as a “Dust Seal”; it protects the mechanical seal from abrasive particles.</p> <p>OIL LIFTER Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.</p> <p>Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 1250ml</p> <p>Motor Protection Device A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.</p>	
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<p>Optional Accessories</p> <p>Multi-directional Male Threaded Coupling Extension Probe Electrode Probe Cover</p>											

SPECIFICATIONS	Model	KTZE43.7									
		KTZE-series 3.7kW, 3-phase									
<p>Type of Pump Submersible automatic high head drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p>Automatic Control Device Electrode</p> <p>Type of Fluid Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p>Discharge Bore & Connection 100mm, Multi-directional Hose Coupling</p> <p>Motor Output 3.7kW</p> <p>Power Supply Three-phase</p> <p>Starting Method Direct on Line</p> <p>Motor Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles & Speed (Synchronous Speed) 2-pole, 3000/3600min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages & Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 8.4A</td> <td>220V – 14.8A</td> </tr> <tr> <td>400V – 8.0A</td> <td>380V – 8.4A</td> </tr> <tr> <td>415V – 7.7A</td> <td>440V – 7.6A</td> </tr> </table> <p>Power Cable Sheath: Chloroprene rubber Standard Length: 8m 200 to 600V supply: 1 x 4 x 2.0mm², O.D. 14.4mm</p> <p>Dry Weight (excluding cable) 69kg</p>		50Hz	60Hz	380V – 8.4A	220V – 14.8A	400V – 8.0A	380V – 8.4A	415V – 7.7A	440V – 7.6A	<p>Impeller Semi-open impeller made of high-chromium cast iron</p> <p>Solids Passage 50Hz – φ8.5mm 60Hz – φ8.5mm</p> <p>Cable Entry with Anti-Wicking Block Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.</p> <p>Bearing Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p>Shaft 420 stainless steel</p> <p>Shaft Seal (Mechanical Seal) Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.</p> <p>Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC</p> <p>Oil Seal (Lip Seal) Used as a “Dust Seal”; it protects the mechanical seal from abrasive particles.</p> <p>OIL LIFTER Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.</p> <p>Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 1250ml</p> <p>Motor Protection Device A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.</p>	
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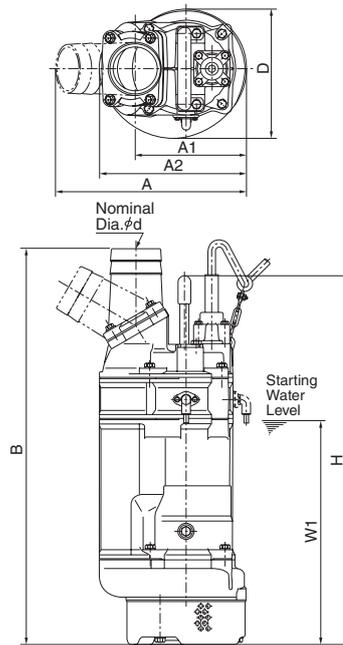
DIMENSIONS

Model

KTZE21.5 to KTZE43.7

KTZE-series

50 - 100mm



Unit: mm

Model	d	A	A1	A2	B	D	H	W1
KTZE21.5	50	270	173	235	623	216	628	345
KTZE22.2	50	270	173	235	643	216	648	355
KTZE23.7	50	342	213	283	755	252	717	435
KTZE31.5	80	276	173	235	623	216	628	345
KTZE32.2	80	276	173	235	643	216	648	355
KTZE33.7	80	347	213	283	755	252	717	435
KTZE43.7	100	367	213	283	770	252	717	435