

**Series:**
**BZ**
**Discharge Bore:**
**80·100mm**
**Motor Output / Pole:**
**1.5 - 15kW / 4-pole**


The BZ-series is a submersible channel impeller pump designed for handling raw sewage, wastewater and heavy-duty industrial applications, where the pump is subject to complete submersion and requires maximum reliability. A wide opening channel impeller allows the pump to handle solid matters of over 3 inches (76.2mm) in diameter.

#### Guide Rail Fitting System

The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump.

### Selection Table

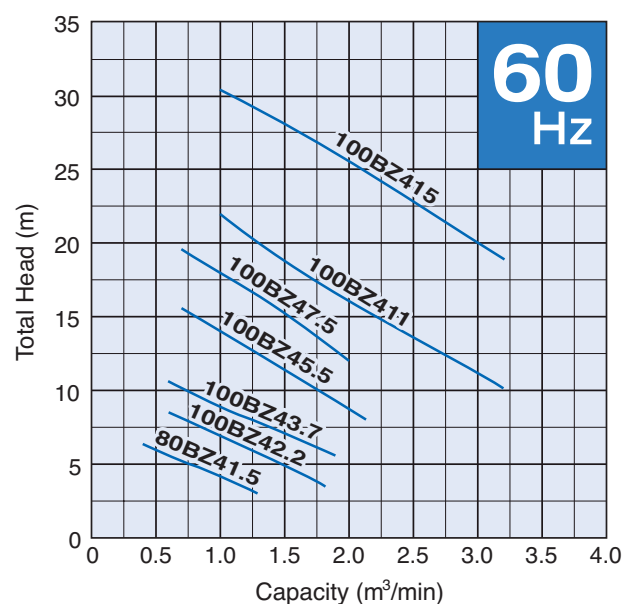
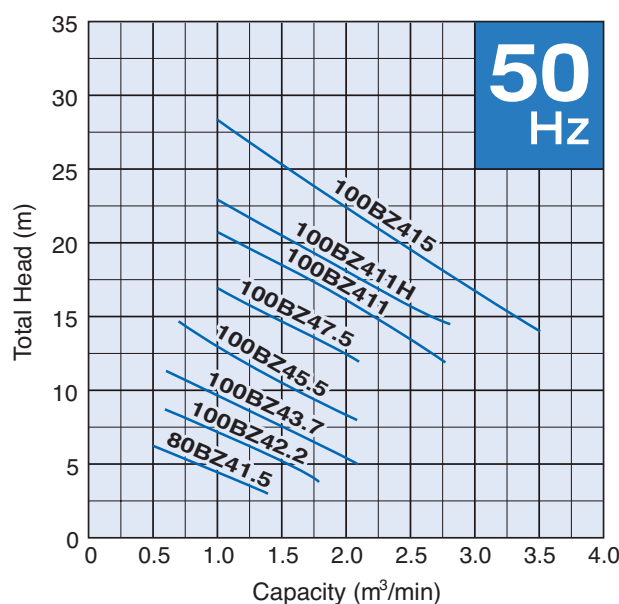
Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Optional Accessories for Types of Installation		
					Free Standing		Guide Rail Fitting
					Bend Set	Stand Set	"TOS" Set
80BZ41.5	80	1.5	3-phase	4	BEND 80-80F	—	TOS3-80-80
100BZ42.2	100	2.2	3-phase	4	BEND 80-100F	—	TOS3-80-100
100BZ43.7	100	3.7	3-phase	4	BEND 80-100F	—	TOS3-80-100
100BZ45.5	100	5.5	3-phase	4	BEND 100-100F	STAND SET	TOS3-100-100
100BZ47.5	100	7.5	3-phase	4	BEND 100-100F	STAND SET	TOS3-100-100
100BZ411	100	11	3-phase	4	BEND 100-100F	STAND SET	TOS3-100-100
100BZ411H(50Hz)	100	11	3-phase	4	BEND 100-100F	STAND SET	TOS3-100-100

- 1.5 to 3.7kW models are supplied without the discharge bend. 5.5 to 11kW models are supplied without the discharge bend and pump stand. Select the accessory for the desired type of installation.

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Types of Installation	
					Free Standing	Guide Rail Fitting
100BZ415	100	15	3-phase	4	100BZ415	TOS100BZ415

- Model 100BZ415 is supplied either in the form of free standing type (complete with bend and stand) or in the form of guide rail fitting type (complete with prefix "TOS").

### Performance Curves



SPECIFICATIONS	Model	80BZ41.5	BZ-series								
			1.5kW, 3-phase								
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore</b> 80mm</p> <p><b>Motor Output</b> 1.5kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Direct on Line</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E (available in F on special request) Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 4.2A</td><td>220V – 8.0A</td></tr><tr><td>400V – 4.0A</td><td>380V – 4.2A</td></tr><tr><td>415V – 4.1A</td><td>440V – 4.0A</td></tr></table> <p><b>Power Cable</b> Sheath: PVC Standard Length: 6m 200 to 600V supply: 1 × 4 × 1.25mm<sup>2</sup>, O.D. 11.1mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 78kg Guide Rail Fitting Type: 74kg</p>		50Hz	60Hz	380V – 4.2A	220V – 8.0A	400V – 4.0A	380V – 4.2A	415V – 4.1A	440V – 4.0A	<p><b>Impeller</b> Shrouded single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ80mm 60Hz – ϕ80mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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: Ceramic + Carbon Lower Seal Face: SiC + SiC</p> <p><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 1300ml</p> <p><b>Motor Protection Device</b> 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 – 4.2A	220V – 8.0A										
400V – 4.0A	380V – 4.2A										
415V – 4.1A	440V – 4.0A										
<div><div>Optional Accessories</div><div><p><b>Bend Set</b> (Free Standing Type)</p><ul style="list-style-type: none"><li>• Discharge Bend</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul><p><b>TOS Set</b> (Guide Rail Fitting Type)</p><ul style="list-style-type: none"><li>• Duckfoot Bend</li><li>• Guide Support</li><li>• Guide Hook</li><li>• Lifting Chain 5m (with Shackles)</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul></div><div><p><b>External Leakage Sensor</b> (Electrode)</p><div><div>Special Specifications</div><p><b>High Temperature Liquids Version (60-80°C)</b></p></div></div></div>											
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	100BZ42.2	BZ-series								
			2.2kW, 3-phase								
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore</b> 100mm</p> <p><b>Motor Output</b> 2.2kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Direct on Line</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E (available in F on special request) Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 5.7A</td><td>220V – 9.4A</td></tr><tr><td>400V – 5.3A</td><td>380V – 5.2A</td></tr><tr><td>415V – 5.1A</td><td>440V – 4.7A</td></tr></table> <p><b>Power Cable</b> Sheath: PVC Standard Length: 6m 380 to 600V supply: 1 × 4 × 1.25mm<sup>2</sup>, O.D. 11.1mm 200 to 240V supply: 1 × 4 × 2.0mm<sup>2</sup>, O.D. 11.8mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 80kg Guide Rail Fitting Type: 74kg</p>		50Hz	60Hz	380V – 5.7A	220V – 9.4A	400V – 5.3A	380V – 5.2A	415V – 5.1A	440V – 4.7A	<p><b>Impeller</b> Shrouded single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ80mm 60Hz – ϕ80mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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: Ceramic + Carbon Lower Seal Face: SiC + SiC</p> <p><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 1300ml</p> <p><b>Motor Protection Device</b> 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 – 5.7A	220V – 9.4A										
400V – 5.3A	380V – 5.2A										
415V – 5.1A	440V – 4.7A										
<div><div>Optional Accessories</div><div><p><b>Bend Set</b> (Free Standing Type)</p><ul style="list-style-type: none"><li>• Discharge Bend</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul><p><b>TOS Set</b> (Guide Rail Fitting Type)</p><ul style="list-style-type: none"><li>• Duckfoot Bend</li><li>• Guide Support</li><li>• Guide Hook</li><li>• Lifting Chain 5m (with Shackles)</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul></div></div> <div><div>External Leakage Sensor (Electrode)</div><div><div>Special Specifications</div><div>High Temperature Liquids Version (60-80°C)</div></div></div>											
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	100BZ43.7	BZ-series							
			3.7kW, 3-phase							
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore</b> 100mm</p> <p><b>Motor Output</b> 3.7kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Direct on Line</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E (available in F on special request) Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 8.2A</td><td>220V – 14.2A</td></tr><tr><td>400V – 7.9A</td><td>380V – 8.0A</td></tr><tr><td>415V – 7.7A</td><td>440V – 7.1A</td></tr></table> <p><b>Power Cable</b> Sheath: PVC Standard Length: 6m 380 to 600V supply: 1 × 4 × 2.0mm<sup>2</sup>, O.D. 11.8mm 200 to 240V supply: 1 × 4 × 3.5mm<sup>2</sup>, O.D. 13.9mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 100kg Guide Rail Fitting Type: 94kg</p>		50Hz	60Hz	380V – 8.2A	220V – 14.2A	400V – 7.9A	380V – 8.0A	415V – 7.7A	440V – 7.1A	<p><b>Impeller</b> Shrouded single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ80mm 60Hz – ϕ80mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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: Ceramic + Carbon Lower Seal Face: SiC + SiC</p> <p><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 1300ml</p> <p><b>Motor Protection Device</b> 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 – 8.2A	220V – 14.2A									
400V – 7.9A	380V – 8.0A									
415V – 7.7A	440V – 7.1A									
<div><div><p><b>Optional Accessories</b></p><p><b>Bend Set</b> (Free Standing Type)</p><ul style="list-style-type: none"><li>• Discharge Bend</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul><p><b>TOS Set</b> (Guide Rail Fitting Type)</p><ul style="list-style-type: none"><li>• Duckfoot Bend</li><li>• Guide Support</li><li>• Guide Hook</li><li>• Lifting Chain 5m (with Shackles)</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul></div><div><p><b>External Leakage Sensor</b> (Electrode)</p><p><b>Special Specifications</b></p><p><b>High Temperature Liquids Version (60-80°C)</b></p></div></div>										
TSURUMI MANUFACTURING CO., LTD.										

SPECIFICATIONS	Model	100BZ45.5	BZ-series								
			5.5kW, 3-phase								
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore</b> 100mm</p> <p><b>Motor Output</b> 5.5kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Direct on Line</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 12.4A</td><td>220V – 21.4A</td></tr><tr><td>400V – 12.1A</td><td>380V – 12.1A</td></tr><tr><td>415V – 12.0A</td><td>440V – 10.7A</td></tr></table> <p><b>Power Cable</b> Sheath: Chloroprene rubber Standard Length: 8m 200 to 600V supply: 1 × 4 × 3.5mm<sup>2</sup>, O.D. 14.1mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 168kg Guide Rail Fitting Type: 161kg</p>		50Hz	60Hz	380V – 12.4A	220V – 21.4A	400V – 12.1A	380V – 12.1A	415V – 12.0A	440V – 10.7A	<p><b>Impeller</b> Shrouded single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ80mm 60Hz – ϕ80mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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: Ceramic + Carbon Lower Seal Face: SiC + SiC</p> <p><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 4200ml</p> <p><b>Motor Protection Device</b> 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 – 12.4A	220V – 21.4A										
400V – 12.1A	380V – 12.1A										
415V – 12.0A	440V – 10.7A										
<p><b>Optional Accessories</b></p> <table><tr><td><p><b>Bend Set</b> (Free Standing Type)</p><ul style="list-style-type: none"><li>• Discharge Bend</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul><p><b>Stand Set</b> (Free Standing Type)</p><ul style="list-style-type: none"><li>• Stand</li></ul></td><td><p><b>TOS Set</b> (Guide Rail Fitting Type)</p><ul style="list-style-type: none"><li>• Duckfoot Bend</li><li>• Guide Support</li><li>• Guide Hook</li><li>• Lifting Chain 5m (with Shackles)</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul><p><b>External Leakage Sensor</b> (Electrode)</p></td></tr></table>				<p><b>Bend Set</b> (Free Standing Type)</p> <ul style="list-style-type: none"><li>• Discharge Bend</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul> <p><b>Stand Set</b> (Free Standing Type)</p> <ul style="list-style-type: none"><li>• Stand</li></ul>	<p><b>TOS Set</b> (Guide Rail Fitting Type)</p> <ul style="list-style-type: none"><li>• Duckfoot Bend</li><li>• Guide Support</li><li>• Guide Hook</li><li>• Lifting Chain 5m (with Shackles)</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul> <p><b>External Leakage Sensor</b> (Electrode)</p>						
<p><b>Bend Set</b> (Free Standing Type)</p> <ul style="list-style-type: none"><li>• Discharge Bend</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul> <p><b>Stand Set</b> (Free Standing Type)</p> <ul style="list-style-type: none"><li>• Stand</li></ul>	<p><b>TOS Set</b> (Guide Rail Fitting Type)</p> <ul style="list-style-type: none"><li>• Duckfoot Bend</li><li>• Guide Support</li><li>• Guide Hook</li><li>• Lifting Chain 5m (with Shackles)</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul> <p><b>External Leakage Sensor</b> (Electrode)</p>										
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	100BZ47.5	BZ-series								
			7.5kW, 3-phase								
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore</b> 100mm</p> <p><b>Motor Output</b> 7.5kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Direct on Line</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 16.6A</td><td>220V – 28.4A</td></tr><tr><td>400V – 16.4A</td><td>380V – 16.0A</td></tr><tr><td>415V – 16.1A</td><td>440V – 14.2A</td></tr></table> <p><b>Power Cable</b> Sheath: Chloroprene rubber Standard Length: 8m 200 to 600V supply: 1 × 4 × 5.5mm<sup>2</sup>, O.D. 16.8mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 179kg Guide Rail Fitting Type: 172kg</p>		50Hz	60Hz	380V – 16.6A	220V – 28.4A	400V – 16.4A	380V – 16.0A	415V – 16.1A	440V – 14.2A	<p><b>Impeller</b> Shrouded single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ80mm 60Hz – ϕ80mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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: Ceramic + Carbon Lower Seal Face: SiC + SiC</p> <p><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 4800ml</p> <p><b>Motor Protection Device</b> 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 – 16.6A	220V – 28.4A										
400V – 16.4A	380V – 16.0A										
415V – 16.1A	440V – 14.2A										
<p><b>Optional Accessories</b></p> <div><p><b>Bend Set</b> (Free Standing Type)</p><ul style="list-style-type: none"><li>• Discharge Bend</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul><p><b>Stand Set</b> (Free Standing Type)</p><ul style="list-style-type: none"><li>• Stand</li></ul></div> <div><p><b>TOS Set</b> (Guide Rail Fitting Type)</p><ul style="list-style-type: none"><li>• Duckfoot Bend</li><li>• Guide Support</li><li>• Guide Hook</li><li>• Lifting Chain 5m (with Shackles)</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul><p><b>External Leakage Sensor</b> (Electrode)</p></div>											
TSURUMI MANUFACTURING CO., LTD.											



SPECIFICATIONS	Model	100BZ411	BZ-series								
			11kW, 3-phase								
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore</b> 100mm</p> <p><b>Motor Output</b> 11kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 24.5A</td><td>220V – 39.2A</td></tr><tr><td>400V – 23.4A</td><td>380V – 22.8A</td></tr><tr><td>415V – 22.8A</td><td>440V – 19.6A</td></tr></table> <p><b>Power Cable</b> Standard Length: 8m 200 to 600V supply: 1 × 4 × 3.5mm<sup>2</sup>, O.D. 14.1mm, Chloroprene rubber 1 × 3 × 3.5mm<sup>2</sup>, O.D. 12.9mm, Chloroprene rubber 1 × 2 × 1.25mm<sup>2</sup>, O.D. 9.6mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 214kg Guide Rail Fitting Type: 207kg</p>		50Hz	60Hz	380V – 24.5A	220V – 39.2A	400V – 23.4A	380V – 22.8A	415V – 22.8A	440V – 19.6A	<p><b>Impeller</b> Shrouded single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ80mm 60Hz – ϕ80mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 6500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p>	
50Hz	60Hz										
380V – 24.5A	220V – 39.2A										
400V – 23.4A	380V – 22.8A										
415V – 22.8A	440V – 19.6A										
<p><b>Optional Accessories</b></p> <table><tr><td><p><b>Bend Set</b> (Free Standing Type)</p><ul style="list-style-type: none"><li>• Discharge Bend</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul><p><b>Stand Set</b> (Free Standing Type)</p><ul style="list-style-type: none"><li>• Stand</li></ul></td><td><p><b>TOS Set</b> (Guide Rail Fitting Type)</p><ul style="list-style-type: none"><li>• Duckfoot Bend</li><li>• Guide Support</li><li>• Guide Hook</li><li>• Lifting Chain 5m (with Shackles)</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul><p><b>External Leakage Sensor</b> (Electrode)</p></td></tr></table>				<p><b>Bend Set</b> (Free Standing Type)</p> <ul style="list-style-type: none"><li>• Discharge Bend</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul> <p><b>Stand Set</b> (Free Standing Type)</p> <ul style="list-style-type: none"><li>• Stand</li></ul>	<p><b>TOS Set</b> (Guide Rail Fitting Type)</p> <ul style="list-style-type: none"><li>• Duckfoot Bend</li><li>• Guide Support</li><li>• Guide Hook</li><li>• Lifting Chain 5m (with Shackles)</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul> <p><b>External Leakage Sensor</b> (Electrode)</p>						
<p><b>Bend Set</b> (Free Standing Type)</p> <ul style="list-style-type: none"><li>• Discharge Bend</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul> <p><b>Stand Set</b> (Free Standing Type)</p> <ul style="list-style-type: none"><li>• Stand</li></ul>	<p><b>TOS Set</b> (Guide Rail Fitting Type)</p> <ul style="list-style-type: none"><li>• Duckfoot Bend</li><li>• Guide Support</li><li>• Guide Hook</li><li>• Lifting Chain 5m (with Shackles)</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul> <p><b>External Leakage Sensor</b> (Electrode)</p>										
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	100BZ411H (50Hz)	BZ-series
			11kW, 3-phase
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore</b> 100mm</p> <p><b>Motor Output</b> 11kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500min<sup>-1</sup> (50Hz)</p> <p>Power Supply Voltages &amp; Rated Currents 50Hz 380V – 24.5A 400V – 23.4A 415V – 22.8A</p> <p><b>Power Cable</b> Standard Length: 8m 200 to 600V supply: 1 × 4 × 3.5mm<sup>2</sup>, O.D. 14.1mm, Chloroprene rubber 1 × 3 × 3.5mm<sup>2</sup>, O.D. 12.9mm, Chloroprene rubber 1 × 2 × 1.25mm<sup>2</sup>, O.D. 9.6mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 214kg Guide Rail Fitting Type: 207kg</p>		<p><b>Impeller</b> Shrouded single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – Ø80mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 6500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p>	
<p><b>Optional Accessories</b></p> <div><p><b>Bend Set</b> (Free Standing Type)</p><ul style="list-style-type: none"><li>• Discharge Bend</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul><p><b>Stand Set</b> (Free Standing Type)</p><ul style="list-style-type: none"><li>• Stand</li></ul></div> <div><p><b>TOS Set</b> (Guide Rail Fitting Type)</p><ul style="list-style-type: none"><li>• Duckfoot Bend</li><li>• Guide Support</li><li>• Guide Hook</li><li>• Lifting Chain 5m (with Shackles)</li><li>• Threaded JIS 10kg/cm<sup>2</sup> Flange</li></ul><p><b>External Leakage Sensor</b> (Electrode)</p></div>			
TSURUMI MANUFACTURING CO., LTD.			



SPECIFICATIONS	Model	100BZ415	BZ-series								
			15kW, 3-phase								
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 100mm, Threaded JIS 10kg/cm² Flange</p> <p><b>Motor Output</b> 15kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 32.4A</td><td>220V – 53.4A</td></tr><tr><td>400V – 30.9A</td><td>380V – 30.5A</td></tr><tr><td>415V – 30.5A</td><td>440V – 26.7A</td></tr></table> <p><b>Power Cable</b> Standard Length: 10/8m (50/60Hz) 200 to 600V supply: 1 × 4 × 5.5mm², O.D. 16.8mm, Chloroprene rubber 1 × 3 × 5.5mm², O.D. 15.2mm, Chloroprene rubber 1 × 2 × 1.25mm², O.D. 9.6mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 297/308kg (50/60Hz) Guide Rail Fitting Type: 292/293kg (50/60Hz)</p>		50Hz	60Hz	380V – 32.4A	220V – 53.4A	400V – 30.9A	380V – 30.5A	415V – 30.5A	440V – 26.7A	<p><b>Impeller</b> Shrouded single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ80mm 60Hz – ϕ80mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal</b> (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><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 5500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p>	
50Hz	60Hz										
380V – 32.4A	220V – 53.4A										
400V – 30.9A	380V – 30.5A										
415V – 30.5A	440V – 26.7A										
<p><b>Optional Accessory</b></p> <p><b>External Leakage Sensor</b> (Electrode)</p>											
TSURUMI MANUFACTURING CO., LTD.											

**Series:**
**BZ**
**Discharge Bore:**
**200mm**
**Motor Output / Pole:**
**22 - 75kW / 4-6-pole**

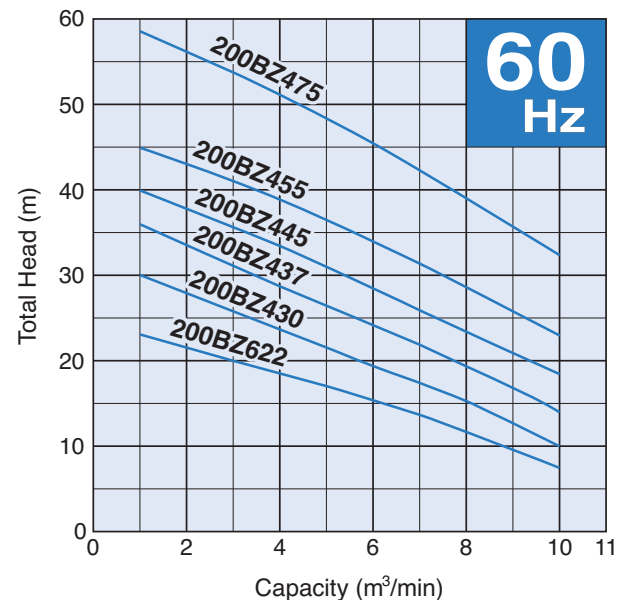
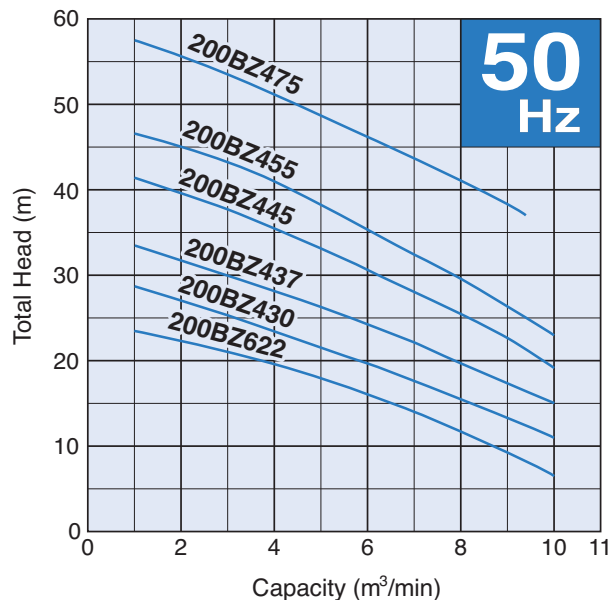

The BZ-series is a submersible channel impeller pump designed for handling raw sewage, wastewater and heavy-duty industrial applications, where the pump is subject to complete submersion and requires maximum reliability. A wide opening channel impeller allows the pump to handle solid matters of over 3 inches (76.2mm) in diameter.

**Guide Rail Fitting System**

The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump. The models used in combination with the guide rail fitting system can be identified by the prefix "TO".

**Selection Table**

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Types of Installation	
					Free Standing	Guide Rail Fitting
200BZ622	200	22	3-phase	6	200BZ622	TO200BZ622
200BZ430	200	30	3-phase	4	200BZ430	TO200BZ430
200BZ437	200	37	3-phase	4	200BZ437	TO200BZ437
200BZ445	200	45	3-phase	4	200BZ445	TO200BZ445
200BZ455	200	55	3-phase	4	200BZ455	TO200BZ455
200BZ475	200	75	3-phase	4	200BZ475	TO200BZ475

**Performance Curves**


SPECIFICATIONS	Model	200BZ622	BZ-series								
			22kW, 3-phase								
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 200mm, JIS 10kg/cm<sup>2</sup> Flange</p> <p><b>Motor Output</b> 22kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 6-pole, 1000/1200min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 48A</td><td>220V – 86A</td></tr><tr><td>400V – 47A</td><td>380V – 48A</td></tr><tr><td>415V – 47A</td><td>440V – 43A</td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 200 to 600V supply: 1 × 4 × 14mm<sup>2</sup>, O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm<sup>2</sup>, O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm<sup>2</sup>, O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 690kg Guide Rail Fitting Type: 610kg</p>		50Hz	60Hz	380V – 48A	220V – 86A	400V – 47A	380V – 48A	415V – 47A	440V – 43A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>	
50Hz	60Hz										
380V – 48A	220V – 86A										
400V – 47A	380V – 48A										
415V – 47A	440V – 43A										
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	200BZ430	BZ-series								
			30kW, 3-phase								
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 200mm, JIS 10kg/cm<sup>2</sup> Flange</p> <p><b>Motor Output</b> 30kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 61A</td><td>220V – 108A</td></tr><tr><td>400V – 60A</td><td>380V – 60A</td></tr><tr><td>415V – 59A</td><td>440V – 54A</td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 200 to 600V supply: 1 × 4 × 14mm<sup>2</sup>, O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm<sup>2</sup>, O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm<sup>2</sup>, O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 620kg Guide Rail Fitting Type: 540kg</p>		50Hz	60Hz	380V – 61A	220V – 108A	400V – 60A	380V – 60A	415V – 59A	440V – 54A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>	
50Hz	60Hz										
380V – 61A	220V – 108A										
400V – 60A	380V – 60A										
415V – 59A	440V – 54A										
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	200BZ437	BZ-series
			37kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm	
Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 200mm, JIS 10kg/cm² Flange		<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings	
<b>Motor Output</b> 37kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Starting Method</b> Star-Delta		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
Insulation Class: F Degree of Protection: IP68		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		<b>OIL LIFTER</b> 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.	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 73A              220V – 136A 400V – 72A              380V – 75A 415V – 72A              440V – 68A		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9500ml	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC 200 to 240V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Dry Weight (excluding cable)</b> Free Standing Type: 690kg Guide Rail Fitting Type: 610kg		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	200BZ445	BZ-series							
			45kW, 3-phase							
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 200mm, JIS 10kg/cm² Flange</p> <p><b>Motor Output</b> 45kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 91A</td><td>380V – 90A</td></tr><tr><td>400V – 88A</td><td>440V – 79A</td></tr><tr><td>415V – 87A</td><td></td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 720kg Guide Rail Fitting Type: 640kg</p>		50Hz	60Hz	380V – 91A	380V – 90A	400V – 88A	440V – 79A	415V – 87A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>
50Hz	60Hz									
380V – 91A	380V – 90A									
400V – 88A	440V – 79A									
415V – 87A										
TSURUMI MANUFACTURING CO., LTD.										



SPECIFICATIONS	Model	200BZ455	BZ-series							
			55kW, 3-phase							
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 200mm, JIS 10kg/cm² Flange</p> <p><b>Motor Output</b> 55kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 112 A</td><td>380V – 110 A</td></tr><tr><td>400V – 110 A</td><td>440V – 98 A</td></tr><tr><td>415V – 110 A</td><td></td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 930kg Guide Rail Fitting Type: 850kg</p>		50Hz	60Hz	380V – 112 A	380V – 110 A	400V – 110 A	440V – 98 A	415V – 110 A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9400ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>
50Hz	60Hz									
380V – 112 A	380V – 110 A									
400V – 110 A	440V – 98 A									
415V – 110 A										
TSURUMI MANUFACTURING CO., LTD.										

SPECIFICATIONS	Model	200BZ475	BZ-series
			75kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		<b>Cable Entry with Anti-Wicking Block</b> 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.	
Temperature: 0 to 40°C		<b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back	
<b>Discharge Bore &amp; Connection</b> 200mm, JIS 10kg/cm² Flange		<b>Shaft</b> 420 stainless steel	
<b>Motor Output</b> 75kW		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Power Supply</b> Three-phase		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
Insulation Class: F Degree of Protection: IP68		<b>OIL LIFTER</b> 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.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9400ml	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 147 A          380V – 150 A 400V – 144 A          440V – 135 A 415V – 144 A		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 990kg Guide Rail Fitting Type: 910kg			
TSURUMI MANUFACTURING CO., LTD.			

**Series:**
**BZ**
**Discharge Bore:**
**250mm**
**Motor Output / Pole:**
**22 - 75kW / 4-6-pole**


The BZ-series is a submersible channel impeller pump designed for handling raw sewage, wastewater and heavy-duty industrial applications, where the pump is subject to complete submersion and requires maximum reliability. A wide opening channel impeller allows the pump to handle solid matters of over 3 inches (76.2mm) in diameter.

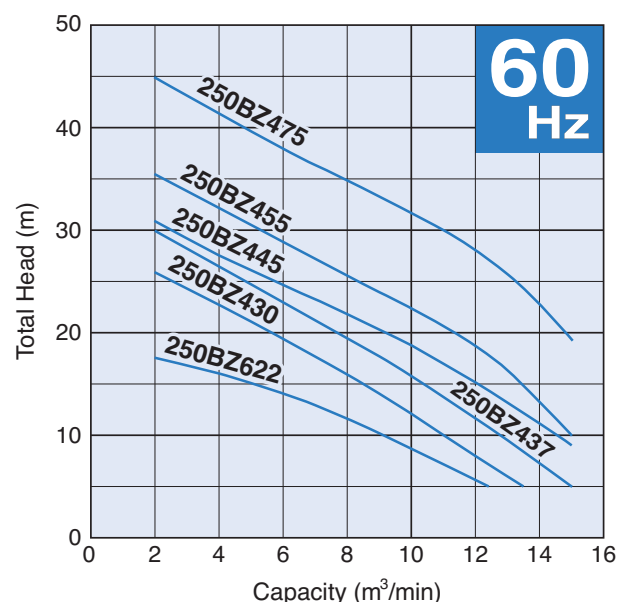
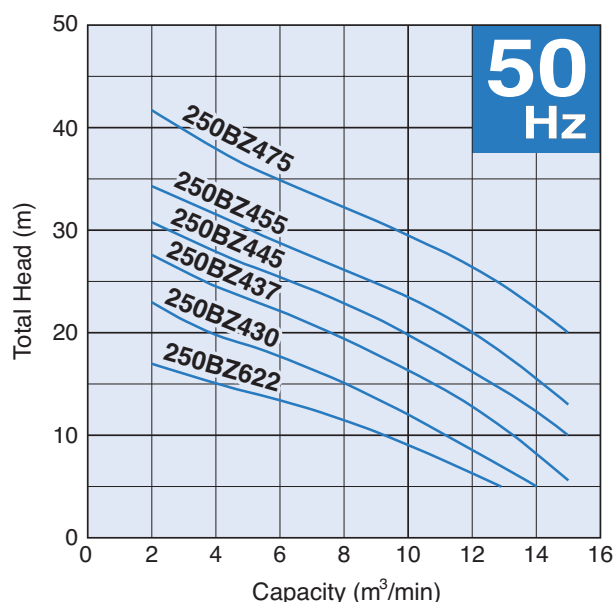
#### Guide Rail Fitting System

The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump. The models used in combination with the guide rail fitting system can be identified by the prefix "TO".

### Selection Table

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Types of Installation	
					Free Standing	Guide Rail Fitting
250BZ622	250	22	3-phase	6	250BZ622	TO250BZ622
250BZ430	250	30	3-phase	4	250BZ430	TO250BZ430
250BZ437	250	37	3-phase	4	250BZ437	TO250BZ437
250BZ445	250	45	3-phase	4	250BZ445	TO250BZ445
250BZ455	250	55	3-phase	4	250BZ455	TO250BZ455
250BZ475	250	75	3-phase	4	250BZ475	TO250BZ475

### Performance Curves



SPECIFICATIONS	Model	250BZ622	BZ-series
			22kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		Solids Passage 50Hz – ϕ90mm 60Hz – ϕ80mm	
Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm² Flange		<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings	
<b>Motor Output</b> 22kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Starting Method</b> Star-Delta		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
Insulation Class: F Degree of Protection: IP68		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
No. of Poles & Speed (Synchronous Speed) 6-pole, 1000/1200min <sup>-1</sup> (50/60Hz)		<b>OIL LIFTER</b> 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.	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 48A              220V – 86A 400V – 47A              380V – 48A 415V – 47A              440V – 43A		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9500ml	
<b>Power Cable</b> Standard Length: 10m 200 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 800kg Guide Rail Fitting Type: 680kg		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	250BZ430	BZ-series							
			30kW, 3-phase							
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm<sup>2</sup> Flange</p> <p><b>Motor Output</b> 30kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 61 A</td><td>220V – 108A</td></tr><tr><td>400V – 60 A</td><td>380V – 60A</td></tr><tr><td>415V – 59 A</td><td>440V – 54A</td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm<sup>2</sup>, O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm<sup>2</sup>, O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm<sup>2</sup>, O.D. 11.1mm, PVC 200 to 240V supply: 1 × 4 × 22mm<sup>2</sup>, O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm<sup>2</sup>, O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm<sup>2</sup>, O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 730kg Guide Rail Fitting Type: 610kg</p>		50Hz	60Hz	380V – 61 A	220V – 108A	400V – 60 A	380V – 60A	415V – 59 A	440V – 54A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ80mm 60Hz – ϕ79mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>
50Hz	60Hz									
380V – 61 A	220V – 108A									
400V – 60 A	380V – 60A									
415V – 59 A	440V – 54A									
TSURUMI MANUFACTURING CO., LTD.										

SPECIFICATIONS	Model	250BZ437	BZ-series
			37kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		Solids Passage 50Hz – ϕ80mm 60Hz – ϕ79mm	
Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm² Flange		<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings	
<b>Motor Output</b> 37kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Starting Method</b> Star-Delta		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
Insulation Class: F Degree of Protection: IP68		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		<b>OIL LIFTER</b> 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.	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 73A              220V – 136A 400V – 72A              380V – 75A 415V – 72A              440V – 68A		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9500ml	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC 200 to 240V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 800kg Guide Rail Fitting Type: 680kg		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			



SPECIFICATIONS	Model	250BZ445	BZ-series								
			45kW, 3-phase								
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm² Flange</p> <p><b>Motor Output</b> 45kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 91 A</td><td>380V – 90A</td></tr><tr><td>400V – 88A</td><td>440V – 79A</td></tr><tr><td>415V – 87A</td><td></td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 830kg Guide Rail Fitting Type: 710kg</p>		50Hz	60Hz	380V – 91 A	380V – 90A	400V – 88A	440V – 79A	415V – 87A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ80mm 60Hz – ϕ79mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>	
50Hz	60Hz										
380V – 91 A	380V – 90A										
400V – 88A	440V – 79A										
415V – 87A											
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	250BZ455	BZ-series
			55kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ90mm 60Hz – ϕ80mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		<b>Cable Entry with Anti-Wicking Block</b> 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.	
Temperature: 0 to 40°C		<b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back	
<b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm² Flange		<b>Shaft</b> 420 stainless steel	
<b>Motor Output</b> 55kW		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Power Supply</b> Three-phase		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
Insulation Class: F Degree of Protection: IP68		<b>OIL LIFTER</b> 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.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9400ml	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 112 A          380V – 110 A 400V – 110 A          440V – 98 A 415V – 110 A		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 1090kg Guide Rail Fitting Type: 970kg			

TSURUMI MANUFACTURING CO., LTD.

SPECIFICATIONS	Model	250BZ475	BZ-series
			75kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ90mm 60Hz – ϕ80mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters  Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm² Flange		<b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back	
<b>Motor Output</b> 75kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.  Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor  Insulation Class: F Degree of Protection: IP68  No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)  Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 147 A          380V – 150 A 400V – 144 A          440V – 135 A 415V – 144 A		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>OIL LIFTER</b> 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.  Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9400ml	
<b>Dry Weight (excluding cable)</b> Free Standing Type: 1150kg Guide Rail Fitting Type: 1030kg		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			

**Series:**
**BZ**
**Discharge Bore:**
**250mm -High Head-**
**Motor Output / Pole:**
**22 - 75kW / 4-6-pole**


The BZ-series is a submersible channel impeller pump designed for handling raw sewage, wastewater and heavy-duty industrial applications, where the pump is subject to complete submersion and requires maximum reliability. A wide opening channel impeller allows the pump to handle solid matters of over 3 inches (76.2mm) in diameter.

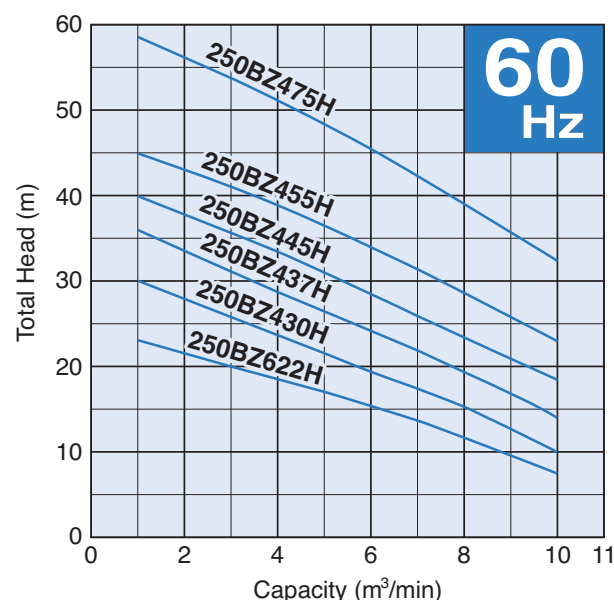
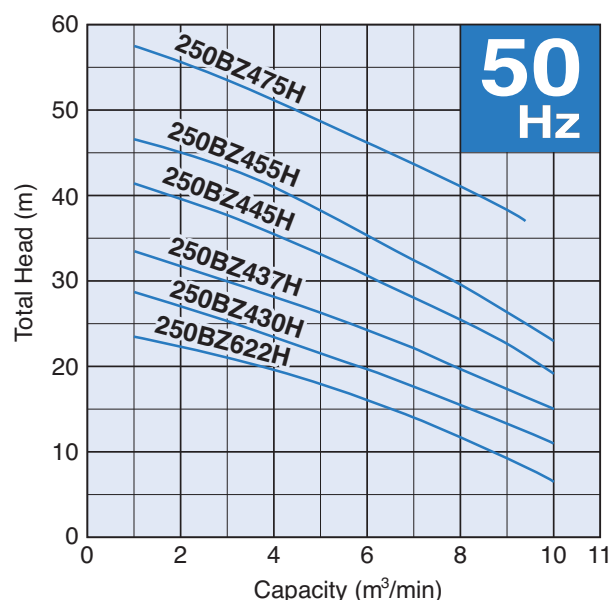
#### Guide Rail Fitting System

The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump. The models used in combination with the guide rail fitting system can be identified by the prefix "TO".

### Selection Table

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Types of Installation	
					Free Standing	Guide Rail Fitting
250BZ622H	250	22	3-phase	6	250BZ622H	TO250BZ622H
250BZ430H	250	30	3-phase	4	250BZ430H	TO250BZ430H
250BZ437H	250	37	3-phase	4	250BZ437H	TO250BZ437H
250BZ445H	250	45	3-phase	4	250BZ445H	TO250BZ445H
250BZ455H	250	55	3-phase	4	250BZ455H	TO250BZ455H
250BZ475H	250	75	3-phase	4	250BZ475H	TO250BZ475H

### Performance Curves



SPECIFICATIONS	Model	250BZ622H	BZ-series
			22kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm	
Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm² Flange		<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings	
<b>Motor Output</b> 22kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Starting Method</b> Star-Delta		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
Insulation Class: F Degree of Protection: IP68		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
No. of Poles & Speed (Synchronous Speed) 6-pole, 1000/1200min <sup>-1</sup> (50/60Hz)		<b>OIL LIFTER</b> 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.	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 48A              220V – 86A 400V – 47A              380V – 48A 415V – 47A              440V – 43A		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9500ml	
<b>Power Cable</b> Standard Length: 10m 200 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 720kg Guide Rail Fitting Type: 620kg		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	250BZ430H	BZ-series
			30kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm	
Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm² Flange		<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings	
<b>Motor Output</b> 30kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Starting Method</b> Star-Delta		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
Insulation Class: F Degree of Protection: IP68		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		<b>OIL LIFTER</b> 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.	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 61 A              220V – 108A 400V – 60 A              380V – 60A 415V – 59 A              440V – 54A		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9500ml	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC 200 to 240V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 650kg Guide Rail Fitting Type: 550kg		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			



SPECIFICATIONS	Model	250BZ437H	BZ-series
			37kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm	
Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm² Flange		<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings	
<b>Motor Output</b> 37kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Starting Method</b> Star-Delta		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
Insulation Class: F Degree of Protection: IP68		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		<b>OIL LIFTER</b> 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.	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 73A              220V – 136A 400V – 72A              380V – 75A 415V – 72A              440V – 68A		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9500ml	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC 200 to 240V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 720kg Guide Rail Fitting Type: 620kg		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	250BZ445H	BZ-series								
			45kW, 3-phase								
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm² Flange</p> <p><b>Motor Output</b> 45kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 91 A</td><td>380V – 90A</td></tr><tr><td>400V – 88A</td><td>440V – 79A</td></tr><tr><td>415V – 87A</td><td></td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 750kg Guide Rail Fitting Type: 650kg</p>		50Hz	60Hz	380V – 91 A	380V – 90A	400V – 88A	440V – 79A	415V – 87A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>	
50Hz	60Hz										
380V – 91 A	380V – 90A										
400V – 88A	440V – 79A										
415V – 87A											
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	250BZ455H	BZ-series
			55kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		<b>Cable Entry with Anti-Wicking Block</b> 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.	
Temperature: 0 to 40°C		<b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back	
<b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm² Flange		<b>Shaft</b> 420 stainless steel	
<b>Motor Output</b> 55kW		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Power Supply</b> Three-phase		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
Insulation Class: F Degree of Protection: IP68		<b>OIL LIFTER</b> 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.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9400ml	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 112 A          380V – 110 A 400V – 110 A          440V – 98 A 415V – 110 A		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 960kg Guide Rail Fitting Type: 860kg			
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	250BZ475H	BZ-series
			75kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ76.2mm 60Hz – ϕ76.2mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters  Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 250mm, JIS 10kg/cm² Flange		<b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back	
<b>Motor Output</b> 75kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.  Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor  Insulation Class: F Degree of Protection: IP68  No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)  Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 147 A            380V – 150 A 400V – 144 A            440V – 135 A 415V – 144 A		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>OIL LIFTER</b> 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.  Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9400ml	
<b>Dry Weight (excluding cable)</b> Free Standing Type: 1020kg Guide Rail Fitting Type: 920kg		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			

**Series:**
**BZ**
**Discharge Bore:**
**300mm**
**Motor Output / Pole:**
**22 - 75kW / 4-6-pole**


The BZ-series is a submersible channel impeller pump designed for handling raw sewage, wastewater and heavy-duty industrial applications, where the pump is subject to complete submersion and requires maximum reliability. A wide opening channel impeller allows the pump to handle solid matters of over 3 inches (76.2mm) in diameter.

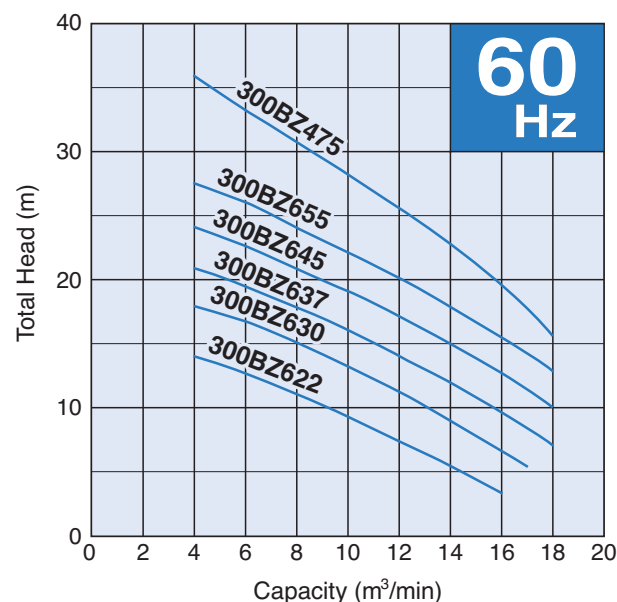
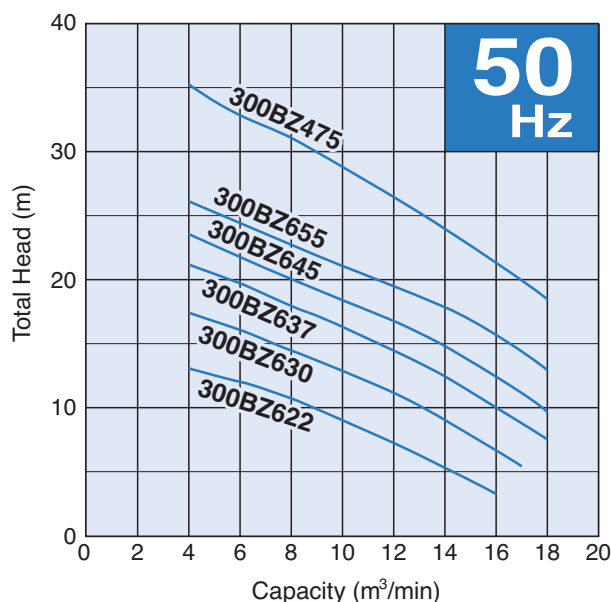
#### Guide Rail Fitting System

The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump. The models used in combination with the guide rail fitting system can be identified by the prefix "TO".

### Selection Table

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Types of Installation	
					Free Standing	Guide Rail Fitting
300BZ622	300	22	3-phase	6	300BZ622	TO300BZ622
300BZ630	300	30	3-phase	6	300BZ630	TO300BZ630
300BZ637	300	37	3-phase	6	300BZ637	TO300BZ637
300BZ645	300	45	3-phase	6	300BZ645	TO300BZ645
300BZ655	300	55	3-phase	6	300BZ655	TO300BZ655
300BZ475	300	75	3-phase	4	300BZ475	TO300BZ475

### Performance Curves



SPECIFICATIONS	Model	300BZ622	BZ-series							
			22kW, 3-phase							
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm² Flange</p> <p><b>Motor Output</b> 22kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 6-pole, 1000/1200min⁻¹ (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 48A</td><td>220V – 86A</td></tr><tr><td>400V – 47A</td><td>380V – 48A</td></tr><tr><td>415V – 47A</td><td>440V – 43A</td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 200 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 960kg Guide Rail Fitting Type: 880kg</p>		50Hz	60Hz	380V – 48A	220V – 86A	400V – 47A	380V – 48A	415V – 47A	440V – 43A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – Ø90mm 60Hz – Ø90mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>
50Hz	60Hz									
380V – 48A	220V – 86A									
400V – 47A	380V – 48A									
415V – 47A	440V – 43A									
TSURUMI MANUFACTURING CO., LTD.										



SPECIFICATIONS	Model	300BZ630	BZ-series							
			30kW, 3-phase							
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm<sup>2</sup> Flange</p> <p><b>Motor Output</b> 30kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 6-pole, 1000/1200min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 65A</td><td>220V – 115A</td></tr><tr><td>400V – 65A</td><td>380V – 63A</td></tr><tr><td>415V – 64A</td><td>440V – 57A</td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm<sup>2</sup>, O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm<sup>2</sup>, O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm<sup>2</sup>, O.D. 11.1mm, PVC 200 to 240V supply: 1 × 4 × 22mm<sup>2</sup>, O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm<sup>2</sup>, O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm<sup>2</sup>, O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 1000kg Guide Rail Fitting Type: 920kg</p>		50Hz	60Hz	380V – 65A	220V – 115A	400V – 65A	380V – 63A	415V – 64A	440V – 57A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ90mm 60Hz – ϕ90mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>
50Hz	60Hz									
380V – 65A	220V – 115A									
400V – 65A	380V – 63A									
415V – 64A	440V – 57A									
TSURUMI MANUFACTURING CO., LTD.										

SPECIFICATIONS	Model	300BZ637	BZ-series							
			37kW, 3-phase							
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm<sup>2</sup> Flange</p> <p><b>Motor Output</b> 37kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 6-pole, 1000/1200min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 80A</td><td>220V – 140A</td></tr><tr><td>400V – 80A</td><td>380V – 78A</td></tr><tr><td>415V – 79A</td><td>440V – 70A</td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm<sup>2</sup>, O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm<sup>2</sup>, O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm<sup>2</sup>, O.D. 11.1mm, PVC 200 to 240V supply: 1 × 4 × 22mm<sup>2</sup>, O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm<sup>2</sup>, O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm<sup>2</sup>, O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 1010kg Guide Rail Fitting Type: 930kg</p>		50Hz	60Hz	380V – 80A	220V – 140A	400V – 80A	380V – 78A	415V – 79A	440V – 70A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ90mm 60Hz – ϕ90mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>
50Hz	60Hz									
380V – 80A	220V – 140A									
400V – 80A	380V – 78A									
415V – 79A	440V – 70A									
TSURUMI MANUFACTURING CO., LTD.										

SPECIFICATIONS	Model	300BZ645	BZ-series
			45kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ90mm 60Hz – ϕ90mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		<b>Cable Entry with Anti-Wicking Block</b> 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.	
Temperature: 0 to 40°C		<b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back	
<b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm² Flange		<b>Shaft</b> 420 stainless steel	
<b>Motor Output</b> 45kW		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Power Supply</b> Three-phase		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
Insulation Class: F Degree of Protection: IP68		<b>OIL LIFTER</b> 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.	
No. of Poles & Speed (Synchronous Speed) 6-pole, 1000/1200min <sup>-1</sup> (50/60Hz)		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 11000ml	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 95A              380V – 95A 400V – 95A              440V – 88A 415V – 95A		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 1350kg Guide Rail Fitting Type: 1270kg			
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	300BZ655	BZ-series
			55kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ90mm 60Hz – ϕ90mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		<b>Cable Entry with Anti-Wicking Block</b> 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.	
Temperature: 0 to 40°C		<b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back	
<b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm² Flange		<b>Shaft</b> 420 stainless steel	
<b>Motor Output</b> 55kW		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Power Supply</b> Three-phase		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
Insulation Class: F Degree of Protection: IP68		<b>OIL LIFTER</b> 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.	
No. of Poles & Speed (Synchronous Speed) 6-pole, 1000/1200min <sup>-1</sup> (50/60Hz)		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 13000ml	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 112 A          380V – 112 A 400V – 111 A          440V – 99 A 415V – 110 A		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
<b>Dry Weight (excluding cable)</b> Free Standing Type: 1350kg Guide Rail Fitting Type: 1270kg			
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	300BZ475	BZ-series
			75kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ90mm 60Hz – ϕ90mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		<b>Cable Entry with Anti-Wicking Block</b> 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.	
Temperature: 0 to 40°C		<b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back	
<b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm² Flange		<b>Shaft</b> 420 stainless steel	
<b>Motor Output</b> 75kW		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Power Supply</b> Three-phase		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
Insulation Class: F Degree of Protection: IP68		<b>OIL LIFTER</b> 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.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9400ml	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 147 A          380V – 150 A 400V – 144 A          440V – 135 A 415V – 144 A		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 1260kg Guide Rail Fitting Type: 1180kg			
TSURUMI MANUFACTURING CO., LTD.			

**Series:**
**BZ**
**Discharge Bore:**
**300mm -High Head-**
**Motor Output / Pole:**
**22 - 75kW / 4-6-pole**


The BZ-series is a submersible channel impeller pump designed for handling raw sewage, wastewater and heavy-duty industrial applications, where the pump is subject to complete submersion and requires maximum reliability. A wide opening channel impeller allows the pump to handle solid matters of over 3 inches (76.2mm) in diameter.

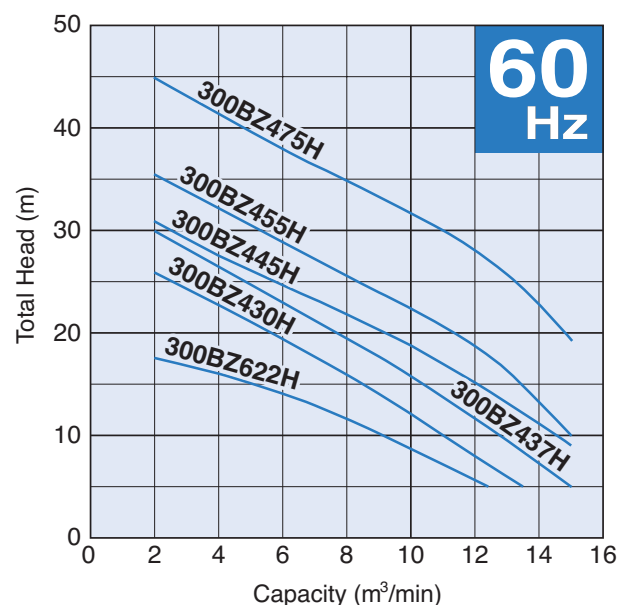
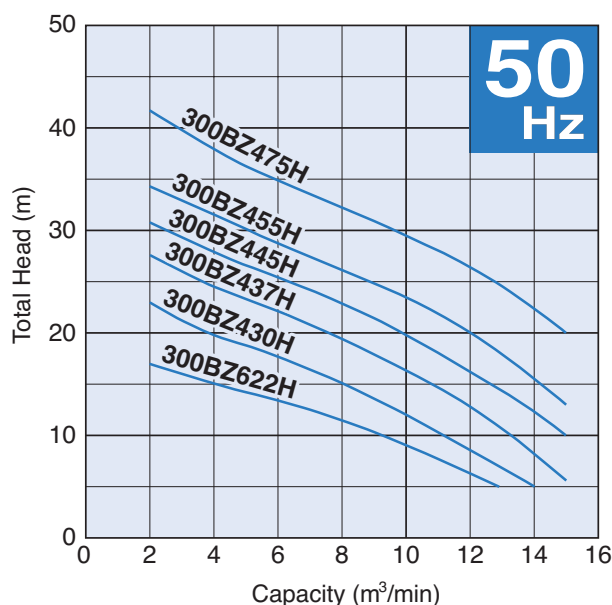
#### Guide Rail Fitting System

The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump. The models used in combination with the guide rail fitting system can be identified by the prefix "TO".

### Selection Table

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Types of Installation	
					Free Standing	Guide Rail Fitting
300BZ622H	300	22	3-phase	6	300BZ622H	TO300BZ622H
300BZ430H	300	30	3-phase	4	300BZ430H	TO300BZ430H
300BZ437H	300	37	3-phase	4	300BZ437H	TO300BZ437H
300BZ445H	300	45	3-phase	4	300BZ445H	TO300BZ445H
300BZ455H	300	55	3-phase	4	300BZ455H	TO300BZ455H
300BZ475H	300	75	3-phase	4	300BZ475H	TO300BZ475H

### Performance Curves





SPECIFICATIONS	Model	300BZ622H	BZ-series							
			22kW, 3-phase							
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm² Flange</p> <p><b>Motor Output</b> 22kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 6-pole, 1000/1200min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 48A</td><td>220V – 86A</td></tr><tr><td>400V – 47A</td><td>380V – 48A</td></tr><tr><td>415V – 47A</td><td>440V – 43A</td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 200 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 810kg Guide Rail Fitting Type: 700kg</p>		50Hz	60Hz	380V – 48A	220V – 86A	400V – 47A	380V – 48A	415V – 47A	440V – 43A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ90mm 60Hz – ϕ80mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>
50Hz	60Hz									
380V – 48A	220V – 86A									
400V – 47A	380V – 48A									
415V – 47A	440V – 43A									
TSURUMI MANUFACTURING CO., LTD.										

SPECIFICATIONS	Model	300BZ430H	BZ-series
			30kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		Solids Passage 50Hz – ϕ80mm 60Hz – ϕ79mm	
Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm² Flange		<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings	
<b>Motor Output</b> 30kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Starting Method</b> Star-Delta		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
Insulation Class: F Degree of Protection: IP68		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		<b>OIL LIFTER</b> 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.	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 61 A              220V – 108A 400V – 60 A              380V – 60A 415V – 59 A              440V – 54A		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9500ml	
<b>Power Cable</b> Standard Length: 10m 200 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 740kg Guide Rail Fitting Type: 630kg		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	300BZ437H	BZ-series
			37kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		Solids Passage 50Hz – ϕ80mm 60Hz – ϕ79mm	
Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm <sup>2</sup> Flange		<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings	
<b>Motor Output</b> 37kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Starting Method</b> Star-Delta		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
Insulation Class: F Degree of Protection: IP68		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		<b>OIL LIFTER</b> 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.	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 73A              220V – 136A 400V – 72A              380V – 75A 415V – 72A              440V – 68A		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9500ml	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm <sup>2</sup> , O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm <sup>2</sup> , O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm <sup>2</sup> , O.D. 11.1mm, PVC 200 to 240V supply: 1 × 4 × 22mm <sup>2</sup> , O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm <sup>2</sup> , O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm <sup>2</sup> , O.D. 11.1mm, PVC		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 810kg Guide Rail Fitting Type: 700kg		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	300BZ445H	BZ-series
			45kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ80mm 60Hz – ϕ79mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		<b>Cable Entry with Anti-Wicking Block</b> 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.	
Temperature: 0 to 40°C		<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings	
<b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm² Flange		<b>Shaft</b> 420 stainless steel	
<b>Motor Output</b> 45kW		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Power Supply</b> Three-phase		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
Insulation Class: F Degree of Protection: IP68		<b>OIL LIFTER</b> 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.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9500ml	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 91A              380V – 90A 400V – 88A              440V – 79A 415V – 87A		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 840kg Guide Rail Fitting Type: 730kg			
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	300BZ455H	BZ-series							
			55kW, 3-phase							
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm² Flange</p> <p><b>Motor Output</b> 55kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 112 A</td><td>380V – 110 A</td></tr><tr><td>400V – 110 A</td><td>440V – 98 A</td></tr><tr><td>415V – 110 A</td><td></td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 1100kg Guide Rail Fitting Type: 990kg</p>		50Hz	60Hz	380V – 112 A	380V – 110 A	400V – 110 A	440V – 98 A	415V – 110 A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ90mm 60Hz – ϕ80mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9400ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>
50Hz	60Hz									
380V – 112 A	380V – 110 A									
400V – 110 A	440V – 98 A									
415V – 110 A										
TSURUMI MANUFACTURING CO., LTD.										

SPECIFICATIONS	Model	300BZ475H	BZ-series
			75kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ90mm 60Hz – ϕ80mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		<b>Cable Entry with Anti-Wicking Block</b> 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.	
Temperature: 0 to 40°C		<b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back	
<b>Discharge Bore &amp; Connection</b> 300mm, JIS 10kg/cm² Flange		<b>Shaft</b> 420 stainless steel	
<b>Motor Output</b> 75kW		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Power Supply</b> Three-phase		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
Insulation Class: F Degree of Protection: IP68		<b>OIL LIFTER</b> 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.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9400ml	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 147 A          380V – 150 A 400V – 144 A          440V – 135 A 415V – 144 A		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 1160kg Guide Rail Fitting Type: 1050kg			
TSURUMI MANUFACTURING CO., LTD.			



**Series:**
**BZ**
**Discharge Bore:**
**350mm -High Head-**
**Motor Output / Pole:**
**22 - 75kW / 4-6-pole**


The BZ-series is a submersible channel impeller pump designed for handling raw sewage, wastewater and heavy-duty industrial applications, where the pump is subject to complete submersion and requires maximum reliability. A wide opening channel impeller allows the pump to handle solid matters of over 3 inches (76.2mm) in diameter.

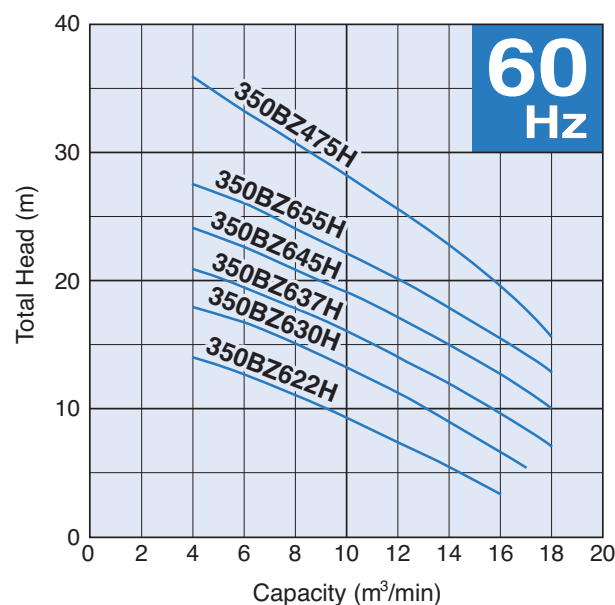
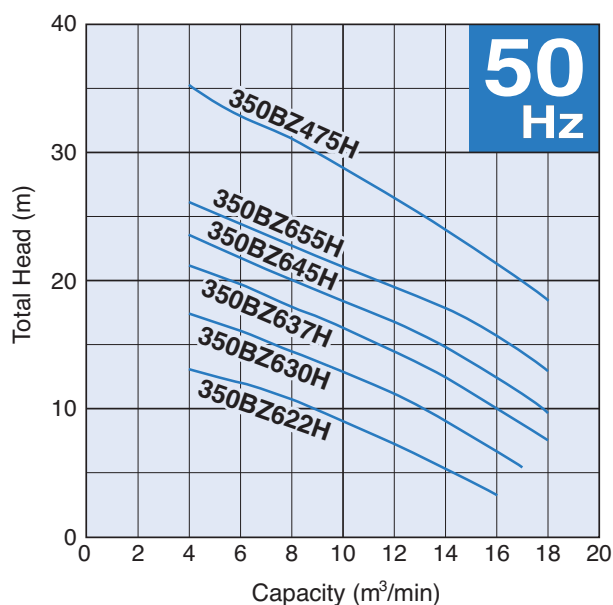
#### Guide Rail Fitting System

The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump. The models used in combination with the guide rail fitting system can be identified by the prefix "TO".

### Selection Table

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Types of Installation	
					Free Standing	Guide Rail Fitting
350BZ622H	350	22	3-phase	6	350BZ622H	TO350BZ622H
350BZ630H	350	30	3-phase	6	350BZ630H	TO350BZ630H
350BZ637H	350	37	3-phase	6	350BZ637H	TO350BZ637H
350BZ645H	350	45	3-phase	6	350BZ645H	TO350BZ645H
350BZ655H	350	55	3-phase	6	350BZ655H	TO350BZ655H
350BZ475H	350	75	3-phase	4	350BZ475H	TO350BZ475H

### Performance Curves



SPECIFICATIONS	Model	350BZ622H	BZ-series
			22kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		Solids Passage 50Hz – ϕ90mm 60Hz – ϕ90mm	
Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 350mm, JIS 10kg/cm² Flange		<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings	
<b>Motor Output</b> 22kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Starting Method</b> Star-Delta		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
Insulation Class: F Degree of Protection: IP68		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
No. of Poles & Speed (Synchronous Speed) 6-pole, 1000/1200min <sup>-1</sup> (50/60Hz)		<b>OIL LIFTER</b> 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.	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 48A              220V – 86A 400V – 47A              380V – 48A 415V – 47A              440V – 43A		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9500ml	
<b>Power Cable</b> Standard Length: 10m 200 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 990kg Guide Rail Fitting Type: 900kg		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	350BZ630H	BZ-series							
			30kW, 3-phase							
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 350mm, JIS 10kg/cm<sup>2</sup> Flange</p> <p><b>Motor Output</b> 30kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 6-pole, 1000/1200min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 65A</td><td>220V – 115A</td></tr><tr><td>400V – 65A</td><td>380V – 63A</td></tr><tr><td>415V – 64A</td><td>440V – 57A</td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm<sup>2</sup>, O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm<sup>2</sup>, O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm<sup>2</sup>, O.D. 11.1mm, PVC 200 to 240V supply: 1 × 4 × 22mm<sup>2</sup>, O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm<sup>2</sup>, O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm<sup>2</sup>, O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 1030kg Guide Rail Fitting Type: 940kg</p>		50Hz	60Hz	380V – 65A	220V – 115A	400V – 65A	380V – 63A	415V – 64A	440V – 57A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ90mm 60Hz – ϕ90mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 9500ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>
50Hz	60Hz									
380V – 65A	220V – 115A									
400V – 65A	380V – 63A									
415V – 64A	440V – 57A									
TSURUMI MANUFACTURING CO., LTD.										

SPECIFICATIONS	Model	350BZ637H	BZ-series
			37kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		Solids Passage 50Hz – ϕ90mm 60Hz – ϕ90mm	
Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 350mm, JIS 10kg/cm² Flange		<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings	
<b>Motor Output</b> 37kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Starting Method</b> Star-Delta		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
Insulation Class: F Degree of Protection: IP68		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
No. of Poles & Speed (Synchronous Speed) 6-pole, 1000/1200min <sup>-1</sup> (50/60Hz)		<b>OIL LIFTER</b> 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.	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 80A              220V – 140A 400V – 80A              380V – 78A 415V – 79A              440V – 70A		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9500ml	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC 200 to 240V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 1040kg Guide Rail Fitting Type: 950kg		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	350BZ645H	BZ-series
			45kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ90mm 60Hz – ϕ90mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters  Temperature: 0 to 40°C		<b>Cable Entry with Anti-Wicking Block</b> 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.	
<b>Discharge Bore &amp; Connection</b> 350mm, JIS 10kg/cm² Flange		<b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back	
<b>Motor Output</b> 45kW		<b>Shaft</b> 420 stainless steel	
<b>Power Supply</b> Three-phase		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.  Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor  Insulation Class: F Degree of Protection: IP68  No. of Poles & Speed (Synchronous Speed) 6-pole, 1000/1200min <sup>-1</sup> (50/60Hz)  Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 95A              380V – 95A 400V – 95A              440V – 88A 415V – 95A		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>OIL LIFTER</b> 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.  Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 11000ml	
<b>Dry Weight (excluding cable)</b> Free Standing Type: 1380kg Guide Rail Fitting Type: 1290kg		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	350BZ655H	BZ-series							
			55kW, 3-phase							
<p><b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.</p> <p><b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.</p> <p><b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 350mm, JIS 10kg/cm² Flange</p> <p><b>Motor Output</b> 55kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Star-Delta</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 6-pole, 1000/1200min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>380V – 112 A</td><td>380V – 112 A</td></tr><tr><td>400V – 111 A</td><td>440V – 99 A</td></tr><tr><td>415V – 110 A</td><td></td></tr></table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 14mm², O.D. 21.7mm, Chloroprene rubber 1 × 3 × 14mm², O.D. 19.7mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 1380kg Guide Rail Fitting Type: 1290kg</p>		50Hz	60Hz	380V – 112 A	380V – 112 A	400V – 111 A	440V – 99 A	415V – 110 A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ90mm 60Hz – ϕ90mm</p> <p><b>Cable Entry with Anti-Wicking Block</b> 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><b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back</p> <p><b>Shaft</b> 420 stainless steel</p> <p><b>Shaft Seal (Mechanical Seal)</b> 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><b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.</p> <p><b>OIL LIFTER</b> 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 &amp; Volume Turbine Oil (ISO VG32), 13000ml</p> <p><b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.</p> <p><b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.</p>
50Hz	60Hz									
380V – 112 A	380V – 112 A									
400V – 111 A	440V – 99 A									
415V – 110 A										
TSURUMI MANUFACTURING CO., LTD.										



SPECIFICATIONS	Model	350BZ475H	BZ-series
			75kW, 3-phase
<b>Type of Pump</b> Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.		<b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced	
<b>Water Jacket</b> Equipped with a water jacket, around the motor frame. A portion of the pumped liquid is allowed to flow into the water jacket to cool the motor.		Solids Passage 50Hz – ϕ90mm 60Hz – ϕ90mm	
<b>Type of Fluid</b> Sewage, wastewater, and water carrying solid matters		<b>Cable Entry with Anti-Wicking Block</b> 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.	
Temperature: 0 to 40°C		<b>Bearing</b> Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing Lower: Duplex angular contact ball bearing mounted back-to-back	
<b>Discharge Bore &amp; Connection</b> 350mm, JIS 10kg/cm² Flange		<b>Shaft</b> 420 stainless steel	
<b>Motor Output</b> 75kW		<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.	
<b>Power Supply</b> Three-phase		Upper Seal Face: SiC + SiC Lower Seal Face: SiC + SiC	
<b>Starting Method</b> Star-Delta		<b>Oil Seal (Lip Seal)</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.	
<b>Motor</b> Continuous-duty rated, dry-type induction motor		<b>Pressure Relief Port</b> Protects the mechanical seal against excessive pressure, and also protects the seal faces from abrasive particles by drawing the particles away.	
Insulation Class: F Degree of Protection: IP68		<b>OIL LIFTER</b> 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.	
No. of Poles & Speed (Synchronous Speed) 4-pole, 1500/1800min <sup>-1</sup> (50/60Hz)		Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 9400ml	
Power Supply Voltages & Rated Currents 50Hz                      60Hz 380V – 147 A          380V – 150 A 400V – 144 A          440V – 135 A 415V – 144 A		<b>Motor Protection Device</b> A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.	
<b>Power Cable</b> Standard Length: 10m 380 to 600V supply: 1 × 4 × 22mm², O.D. 28.8mm, Chloroprene rubber 1 × 3 × 22mm², O.D. 26.1mm, Chloroprene rubber 1 × 3 × 1.25mm², O.D. 11.1mm, PVC		<b>Leakage Sensor (Electrode)</b> Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.	
<b>Dry Weight</b> (excluding cable) Free Standing Type: 1290kg Guide Rail Fitting Type: 1200kg			

TSURUMI MANUFACTURING CO., LTD.

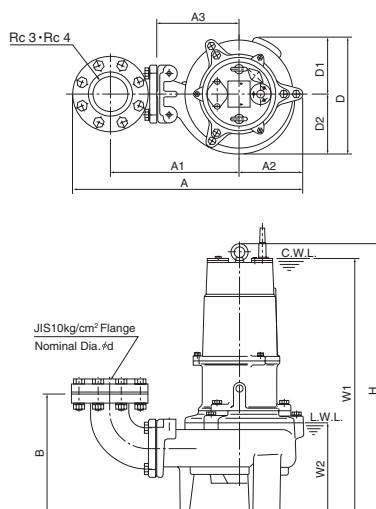
# DIMENSIONS

Model (TOS)80BZ41.5 to (TOS)100BZ415

BZ-series

80・100mm

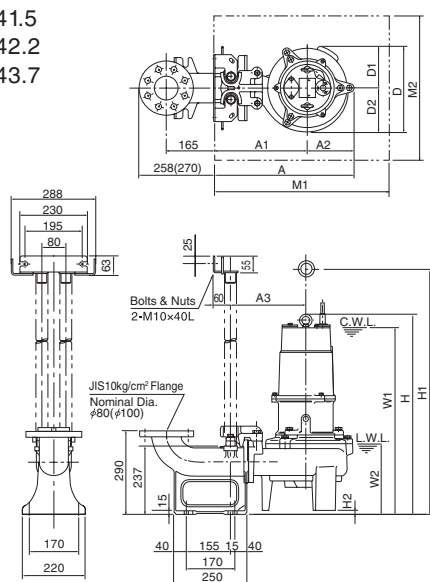
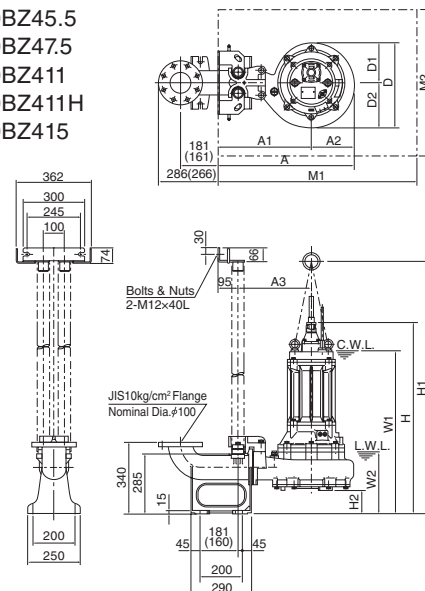
## Free Standing Type


C. W. L.: Continuous Running Water Level  
L. W. L.: Lowest Running Water Level

Unit: mm

Model	d	A	A1	A2	A3	B	D	D1	D2	W1	W2	H
80BZ41.5	80	523	302	129	190	303	273	133	140	590	235	631
100BZ42.2	100	551	317	129	190	328	273	133	140	590	235	631
100BZ43.7	100	585	327	153	200	328	289	139	150	640	235	681
100BZ45.5	100	716	407	204	280	380	421	205	216	800	305	924
100BZ47.5	100	716	407	204	280	380	421	205	216	820	305	945
100BZ411	100	727	407	215	280	377	431	205	226	900	330	1023
100BZ411H(50Hz)	100	727	407	215	280	377	431	205	226	900	330	1023
100BZ415(50Hz)	100	845	477	263	350	455	526	263	263	1000	420	1160
100BZ415(60Hz)	100	770	447	218	320	382	444	215	229	970	335	1093

## Guide Rail Fitting Type: TOS Set

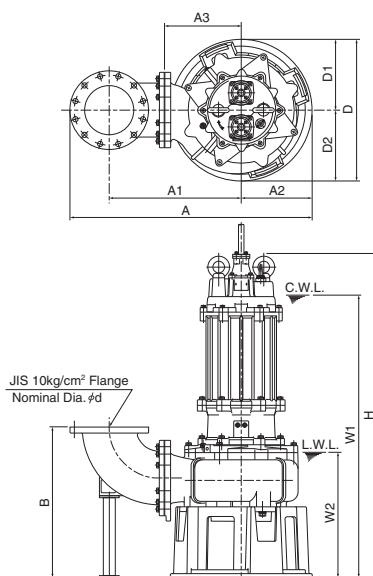
TOS 80BZ41.5  
TOS100BZ42.2  
TOS100BZ43.7

TOS100BZ45.5  
TOS100BZ47.5  
TOS100BZ411  
TOS100BZ411H  
TOS100BZ415


\*Figure in ( ) shows the dimensions of nominal dia. 100mm.

\*Figure in ( ) shows the dimensions of model TOS100BZ415.

Unit: mm

Model	A	A1	A2	A3	D	D1	D2	W1	W2	H	H1	H2	M1	M2
TOS 80BZ41.5	439	310	129	250	273	133	140	605	250	646	767	15	600	500
TOS100BZ42.2	439	310	129	250	273	133	140	605	250	646	767	15	600	500
TOS100BZ43.7	473	320	153	260	289	139	150	655	250	696	817	15	600	500
TOS100BZ45.5	649	445	204	350	406	190	216	790	295	914	1276	110	950	700
TOS100BZ47.5	649	445	204	350	406	190	216	810	295	935	1301	110	950	700
TOS100BZ411	660	445	215	350	428	202	226	895	330	1016	1382	113	950	700
TOS100BZ411H(50Hz)	660	445	215	350	428	202	226	895	330	1016	1382	113	950	700
TOS100BZ415(50Hz)	778	535	243	440	494	243	251	915	335	1074	1440	99	950	700
TOS100BZ415(60Hz)	723	505	218	410	444	215	229	960	320	1081	1447	108	950	700

**DIMENSIONS**
**Model**
**200BZ622 to 350BZ475H**
**BZ-series**
**200 - 350mm**
**Free Standing Type**


C. W. L. : Continuous Running Water Level  
L. W. L. : Lowest Running Water Level

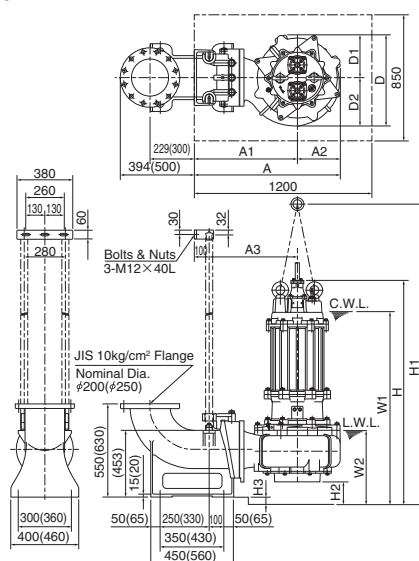
Unit: mm

Model	d	A	A1	A2	A3	B	D	D1	D2	W1	W2	H
200BZ622	200	1208	663	380	450	650	760	380	380	1375	570	1584
200BZ430	200	1208	663	380	450	650	760	380	380	1325	570	1504
200BZ437	200	1208	663	380	450	650	760	380	380	1370	570	1577
200BZ445	200	1208	663	380	450	650	760	380	380	1375	570	1584
200BZ455	200	1208	663	380	450	650	760	380	380	700	-	1736
200BZ475	200	1208	663	380	450	650	760	380	380	700	-	1736
250BZ622	250	1235	673	362	390	768	724	362	362	1440	640	1650
250BZ430	250	1235	673	362	390	768	724	362	362	1390	640	1570
250BZ437	250	1235	673	362	390	768	724	362	362	1435	640	1643
250BZ445	250	1235	673	362	390	768	724	362	362	1440	640	1650
250BZ455	250	1235	673	362	390	768	724	362	362	760	-	1802
250BZ475	250	1235	673	362	390	768	724	362	362	760	-	1802
250BZ622H	250	1313	733	380	450	700	760	380	380	1375	570	1584
250BZ430H	250	1313	733	380	450	700	760	380	380	1325	570	1504
250BZ437H	250	1313	733	380	450	700	760	380	380	1370	570	1577
250BZ445H	250	1313	733	380	450	700	760	380	380	1375	570	1584
250BZ455H	250	1313	733	380	450	700	760	380	380	700	-	1736
250BZ475H	250	1313	733	380	450	700	760	380	380	700	-	1736
300BZ622	300	1386	763	400	450	832	800	400	400	1470	670	1677
300BZ630	300	1386	763	400	450	832	800	400	400	1470	670	1677
300BZ637	300	1386	763	400	450	832	800	400	400	1470	670	1677
300BZ645	300	1386	763	400	450	832	800	400	400	790	-	1845
300BZ655	300	1386	763	400	450	832	800	400	400	790	-	1845
300BZ475	300	1386	763	400	450	832	800	400	400	790	-	1829
300BZ622H	300	1288	703	362	390	818	724	362	362	1440	640	1650
300BZ430H	300	1288	703	362	390	818	724	362	362	1390	640	1570
300BZ437H	300	1288	703	362	390	818	724	362	362	1435	640	1643
300BZ445H	300	1288	703	362	390	818	724	362	362	1440	640	1650
300BZ455H	300	1288	703	362	390	818	724	362	362	760	-	1802
300BZ475H	300	1288	703	362	390	818	724	362	362	760	-	1802
350BZ622H	350	1508	863	400	450	885	800	400	400	1470	670	1677
350BZ630H	350	1508	863	400	450	885	800	400	400	1470	670	1677
350BZ637H	350	1508	863	400	450	885	800	400	400	1470	670	1677
350BZ645H	350	1508	863	400	450	885	800	400	400	790	-	1845
350BZ655H	350	1508	863	400	450	885	800	400	400	790	-	1845
350BZ475H	350	1508	863	400	450	885	800	400	400	790	-	1829

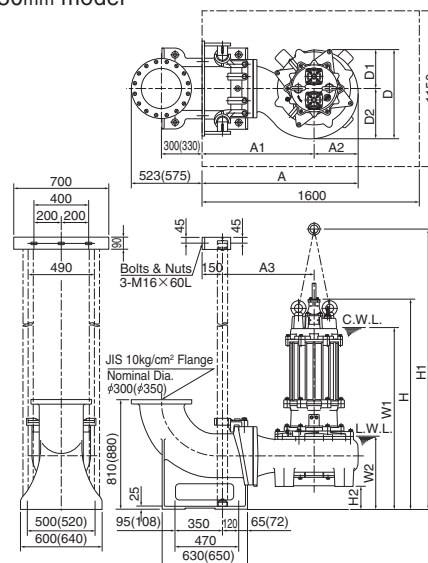
**DIMENSIONS**
**Model TO200BZ622 to TO350BZ475H**
**BZ-series**  
**200 - 350mm**
**Guide Rail Fitting Type: TO Set**

C. W. L.: Continuous Running Water Level  
L. W. L.: Lowest Running Water Level

200 · 250mm model



300 · 350mm model



\*Figure in ( ) shows the dimensions of nominal dia. 250mm.

\*Figure in ( ) shows the dimensions of nominal dia. 350mm.

Unit: mm

Model	A	A1	A2	A3	D	D1	D2	W1	W2	H	H1	H2	H3
TO200BZ622	1065	744	321	644	660	314	346	1285	480	1494	2017	178	50
TO200BZ430	1065	744	321	644	660	314	346	1235	480	1409	1931	178	50
TO200BZ437	1065	744	321	644	660	314	346	1280	480	1487	2010	178	50
TO200BZ445	1065	744	321	644	660	314	346	1285	480	1494	2017	178	50
TO200BZ455	1067	744	323	644	660	314	346	610	-	1646	2177	178	50
TO200BZ475	1067	744	323	644	660	314	346	610	-	1646	2177	178	50
TO250BZ622	986	696	290	596	616	290	326	1305	500	1514	2037	153	50
TO250BZ430	986	696	290	596	616	290	326	1260	500	1434	1951	153	50
TO250BZ437	986	696	290	596	616	290	326	1300	500	1507	2033	153	50
TO250BZ445	986	696	290	596	616	290	326	1305	500	1514	2040	153	50
TO250BZ455	1019	696	323	596	636	310	326	630	-	1666	2197	153	50
TO250BZ475	1019	696	323	596	636	310	326	630	-	1666	2197	153	50
TO250BZ622H	1077	756	321	656	660	314	346	1260	460	1467	1989	151	-
TO250BZ430H	1077	756	321	656	660	314	346	1205	460	1387	1903	151	-
TO250BZ437H	1077	756	321	656	660	314	346	1250	460	1460	1982	151	-
TO250BZ445H	1077	756	321	656	660	314	346	1260	460	1467	1989	151	-
TO250BZ455H	1079	756	323	656	660	314	346	590	-	1619	2150	151	-
TO250BZ475H	1079	756	323	656	660	314	346	590	-	1619	2150	151	-
TO300BZ622	1151	827	324	677	658	288	370	1340	540	1550	2075	170	-
TO300BZ630	1151	827	324	677	658	288	370	1340	540	1550	2075	170	-
TO300BZ637	1151	827	324	677	658	288	370	1340	540	1550	2075	170	-
TO300BZ645	1168	827	341	677	680	310	370	670	-	1718	2265	170	-
TO300BZ655	1168	827	341	677	680	310	370	670	-	1718	2265	170	-
TO300BZ475	1151	827	324	677	680	310	370	670	-	1702	2233	170	-
TO300BZ622H	1057	767	290	617	616	290	326	1330	530	1537	2059	175	-
TO300BZ430H	1057	767	290	617	616	290	326	1275	530	1457	1973	175	-
TO300BZ437H	1057	767	290	617	616	290	326	1320	530	1530	2055	175	-
TO300BZ445H	1057	767	290	617	616	290	326	1330	530	1537	2062	175	-
TO300BZ455H	1090	767	323	617	636	310	326	660	-	1689	2220	175	-
TO300BZ475H	1090	767	323	617	636	310	326	660	-	1689	2220	175	-
TO350BZ622H	1174	850	324	700	658	288	370	1385	590	1595	2120	215	-
TO350BZ630H	1174	850	324	700	658	288	370	1385	590	1595	2120	215	-
TO350BZ637H	1174	850	324	700	658	288	370	1385	590	1595	2120	215	-
TO350BZ645H	1191	850	341	700	680	310	370	710	-	1763	2310	215	-
TO350BZ655H	1191	850	341	700	680	310	370	710	-	1763	2310	215	-
TO350BZ475H	1174	850	324	700	680	310	370	710	-	1747	2278	215	-