

Series:	Discharge Bore:	Motor Output / Pole:
<b>B</b>	<b>50·80mm</b>	<b>0.4 - 1.5kW / 2-pole</b>



The B-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. The B-series has a proven track record for offering long life in both continuous and intermittent sump applications. It is available as an extended line-up from 50 to 800mm discharge bores.

**Guide Rail Fitting System**

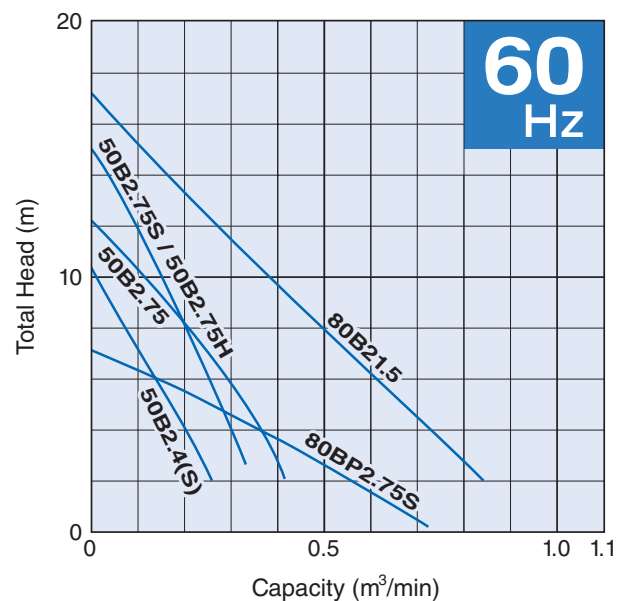
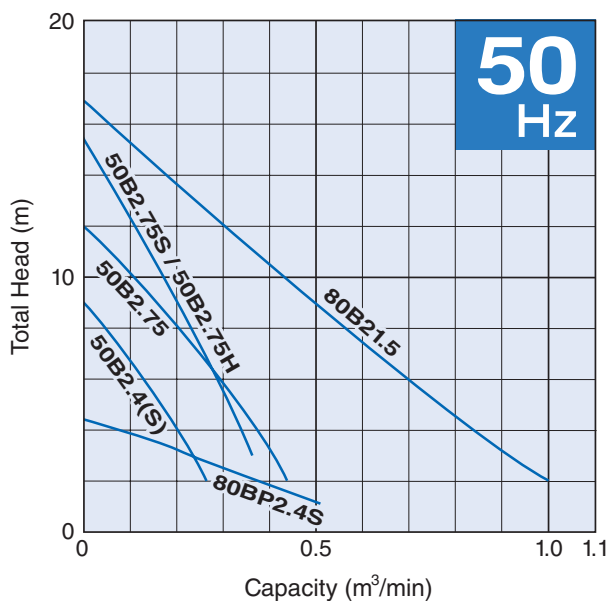
The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump.

**Selection Table**

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Optional Accessories for Types of Installation	
					Free Standing	Guide Rail Fitting
					Bend Set	“TOS” Set
50B2.4S	50	0.4	1-phase	2	BEND 50 (oval)	TOS3-50
50B2.4	50	0.4	3-phase	2	BEND 50 (oval)	TOS3-50
50B2.75S	50	0.75	1-phase	2	BEND 50 (oval)	TOS3-50
50B2.75H	50	0.75	3-phase	2	BEND 50 (oval)	TOS3-50
50B2.75	50	0.75	3-phase	2	BEND 50 (oval)	TOS3-50
80BP2.4S(50Hz)	80	0.4	1-phase	2	—	—
80BP2.75S(60Hz)	80	0.75	1-phase	2	—	—
80B21.5	80	1.5	3-phase	2	BEND 80 (oval)	TOS3-80-80

- The models except 80BP2.4S and 80BP2.75S are supplied without the discharge bend. Select the accessory for the desired type of installation.
- Model 80BP2.4S and 80BP2.75S are free standing type.

**Performance Curves**



SPECIFICATIONS	Model	50B2.4S							
		B-series							
		0.4kW, 1-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> 50mm</p> <p><b>Motor Output</b> 0.4kW</p> <p><b>Power Supply</b> Single-phase</p> <p><b>Starting Method</b> Capacitor Start</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 2-pole, 3000/3600min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>220V – 3.6A</td> <td>110V – 6.7A</td> </tr> <tr> <td>230V – 3.6A</td> <td>220V – 3.4A</td> </tr> <tr> <td>240V – 3.6A</td> <td></td> </tr> </table> <p><b>Power Cable</b> Sheath: PVC Standard Length: 5m 100 to 240V supply: 1 × 3 × 1.25mm<sup>2</sup>, O.D. 10.1mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 25kg Guide Rail Fitting Type: 24kg</p>	50Hz	60Hz	220V – 3.6A	110V – 6.7A	230V – 3.6A	220V – 3.4A	240V – 3.6A		<p><b>Impeller</b> Semi-open single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 35 × 22mm 60Hz – 35 × 18mm</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), 180ml</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								
220V – 3.6A	110V – 6.7A								
230V – 3.6A	220V – 3.4A								
240V – 3.6A									
<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 Oval 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>									
<b>TSURUMI MANUFACTURING CO., LTD.</b>									

SPECIFICATIONS	Model	50B2.4							
		B-series 0.4kW, 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> 50mm</p> <p><b>Motor Output</b> 0.4kW</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) 2-pole, 3000/3600min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 1.2A</td> <td>220V – 1.8A</td> </tr> <tr> <td>400V – 1.1A</td> <td>380V – 1.2A</td> </tr> <tr> <td>415V – 1.0A</td> <td>440V – 1.0A</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: 23kg Guide Rail Fitting Type: 22kg</p>	50Hz	60Hz	380V – 1.2A	220V – 1.8A	400V – 1.1A	380V – 1.2A	415V – 1.0A	440V – 1.0A	<p><b>Impeller</b> Semi-open single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 35 × 22mm 60Hz – 35 × 18mm</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), 180ml</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 – 1.2A	220V – 1.8A								
400V – 1.1A	380V – 1.2A								
415V – 1.0A	440V – 1.0A								
<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 Oval 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>		<p><b>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60°C)</b></p>							
<b>TSURUMI MANUFACTURING CO., LTD.</b>									

SPECIFICATIONS	Model	B-series							
	50B2.75S	0.75kW, 1-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> 50mm</p> <p><b>Motor Output</b> 0.75kW</p> <p><b>Power Supply</b> Single-phase</p> <p><b>Starting Method</b> Capacitor Start</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 2-pole, 3000/3600min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>220V – 6.6A</td> <td>110V – 12.0A</td> </tr> <tr> <td>230V – 6.7A</td> <td>220V – 6.0A</td> </tr> <tr> <td>240V – 6.1A</td> <td></td> </tr> </table> <p><b>Power Cable</b> Sheath: PVC Standard Length: 5m 200 to 240V supply: 1 × 3 × 1.25mm<sup>2</sup>, O.D. 10.1mm 100 to 120V supply: 1 × 3 × 2.0mm<sup>2</sup>, O.D. 10.9mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 32kg Guide Rail Fitting Type: 30kg</p>	50Hz	60Hz	220V – 6.6A	110V – 12.0A	230V – 6.7A	220V – 6.0A	240V – 6.1A		<p><b>Impeller</b> Semi-open single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 21 × 25mm 60Hz – 21 × 25mm</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), 440ml</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								
220V – 6.6A	110V – 12.0A								
230V – 6.7A	220V – 6.0A								
240V – 6.1A									
<p><b>Optional Accessories</b></p> <table border="0"> <tr> <td data-bbox="177 1789 564 1877"> <p><b>Bend Set</b> (Free Standing Type)</p> <ul style="list-style-type: none"> <li>• Discharge Bend</li> <li>• Threaded Oval Flange</li> </ul> </td> <td data-bbox="879 1789 1353 1821"> <p><b>External Leakage Sensor</b> (Electrode)</p> </td> </tr> <tr> <td data-bbox="177 1904 592 2074"> <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> </td> <td></td> </tr> </table>			<p><b>Bend Set</b> (Free Standing Type)</p> <ul style="list-style-type: none"> <li>• Discharge Bend</li> <li>• Threaded Oval Flange</li> </ul>	<p><b>External Leakage Sensor</b> (Electrode)</p>	<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>Bend Set</b> (Free Standing Type)</p> <ul style="list-style-type: none"> <li>• Discharge Bend</li> <li>• Threaded Oval Flange</li> </ul>	<p><b>External Leakage Sensor</b> (Electrode)</p>								
<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>									
TSURUMI MANUFACTURING CO., LTD.									

SPECIFICATIONS	Model	B-series								
	50B2.75H	0.75kW, 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> 50mm</p> <p><b>Motor Output</b> 0.75kW</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 or E Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 2-pole, 3000/3600min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 1.9A</td> <td>220V – 3.5A</td> </tr> <tr> <td>400V – 1.9A</td> <td>380V – 1.9A</td> </tr> <tr> <td>415V – 2.0A</td> <td>440V – 1.7A</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: 24kg Guide Rail Fitting Type: 23kg</p>	50Hz	60Hz	380V – 1.9A	220V – 3.5A	400V – 1.9A	380V – 1.9A	415V – 2.0A	440V – 1.7A	<p><b>Impeller</b> Semi-open single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 21 × 25mm 60Hz – 21 × 25mm</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), 440ml</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>	<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 Oval 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> <p><b>External Leakage Sensor</b> (Electrode)</p> <p><b>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60°C)</b></p>
50Hz	60Hz									
380V – 1.9A	220V – 3.5A									
400V – 1.9A	380V – 1.9A									
415V – 2.0A	440V – 1.7A									
TSURUMI MANUFACTURING CO., LTD.										

SPECIFICATIONS	Model	50B2.75	
		B-series 0.75kW, 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> 50mm</p> <p><b>Motor Output</b> 0.75kW</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 or E Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 2-pole, 3000/3600min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 1.9A</td> <td>220V – 3.5A</td> </tr> <tr> <td>400V – 1.9A</td> <td>380V – 1.9A</td> </tr> <tr> <td>415V – 2.0A</td> <td>440V – 1.7A</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: 25kg Guide Rail Fitting Type: 24kg</p>	50Hz	60Hz	380V – 1.9A	220V – 3.5A	400V – 1.9A	380V – 1.9A	415V – 2.0A	440V – 1.7A	<p><b>Impeller</b> Semi-open single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 45 × 20mm 60Hz – 51 × 23mm</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), 440ml</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 – 1.9A	220V – 3.5A								
400V – 1.9A	380V – 1.9A								
415V – 2.0A	440V – 1.7A								

### Optional Accessories

**Bend Set** (Free Standing Type)

- Discharge Bend
- Threaded Oval Flange

**TOS Set** (Guide Rail Fitting Type)

- Duckfoot Bend
- Guide Support
- Guide Hook
- Lifting Chain 5m (with Shackles)
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**External Leakage Sensor** (Electrode)

### Special Specifications

**High Temperature Liquids Version (60°C)**

**Seawater-Resistant (DS or DF Version)\***

- \* DS: 316 Stainless Steel Casting Impeller
- DF: FC250 Cast Iron Impeller

SPECIFICATIONS	Model	80BP2.4S (50Hz)	B-series
			0.4kW, 1-phase
<p><b>Type of Pump</b> Submersible channel impeller pump made of 304 stainless steel, resin and cast iron 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> 80mm, Threaded Oval Flange</p> <p><b>Motor Output</b> 0.4kW</p> <p><b>Power Supply</b> Single-phase</p> <p><b>Starting Method</b> Capacitor Run</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 2-pole, 3000min<sup>-1</sup> (50Hz)</p> <p>Power Supply Voltages &amp; Rated Currents 50Hz 220V – 3.1A 230V – 3.1A 240V – 3.0A</p> <p><b>Power Cable</b> Sheath: PVC Standard Length: 5m 200 to 240V supply: 1 x 3 x 1.25mm<sup>2</sup>, O.D. 10.1mm</p> <p><b>Dry Weight (excluding cable)</b> 12.7kg</p>	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, made of glass-fiber reinforced PPO</p> <p>Solids Passage 50Hz – <math>\phi</math>34mm</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> 304 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 + Ceramic</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 Liquid Paraffin (ISO VG32), 240ml</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>		



SPECIFICATIONS	Model <b>80BP2.75S (60Hz)</b>	B-series
		0.75kW, 1-phase
<p><b>Type of Pump</b> Submersible channel impeller pump made of 304 stainless steel, resin and cast iron 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> 80mm, Threaded Oval Flange</p> <p><b>Motor Output</b> 0.75kW</p> <p><b>Power Supply</b> Single-phase</p> <p><b>Starting Method</b> Capacitor Run</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 2-pole, 3600min<sup>-1</sup> (60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents 60Hz 110V – 9.5A 220V – 4.7A</p> <p><b>Power Cable</b> Sheath: PVC Standard Length: 5m 200 to 240V supply: 1 x 3 x 1.25mm<sup>2</sup>, O.D. 10.1mm 100 to 120V supply: 1 x 3 x 2.0mm<sup>2</sup>, O.D. 10.9mm</p> <p><b>Dry Weight (excluding cable)</b> 14.5kg</p>	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, made of glass-fiber reinforced PPO</p> <p>Solids Passage 60Hz – <math>\phi</math>34mm</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> 304 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 + Ceramic</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 Liquid Paraffin (ISO VG32), 240ml</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>	
<b>TSURUMI MANUFACTURING CO., LTD.</b>		



SPECIFICATIONS	Model	80B21.5	B-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: F Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 2-pole, 3000/3600min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 3.5A</td> <td>220V – 6.0A</td> </tr> <tr> <td>400V – 3.5A</td> <td>380V – 3.4A</td> </tr> <tr> <td>415V – 3.5A</td> <td>440V – 3.2A</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: 36kg Guide Rail Fitting Type: 34kg</p>	50Hz	60Hz	380V – 3.5A	220V – 6.0A	400V – 3.5A	380V – 3.4A	415V – 3.5A	440V – 3.2A	<p><b>Impeller</b> Semi-open single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 49 × 41mm 60Hz – 49 × 35mm</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), 900ml</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 – 3.5A	220V – 6.0A								
400V – 3.5A	380V – 3.4A								
415V – 3.5A	440V – 3.2A								

### Optional Accessories

**Bend Set** (Free Standing Type)

- Discharge Bend
- Threaded Oval Flange

**TOS Set** (Guide Rail Fitting Type)

- Duckfoot Bend
- Guide Support
- Guide Hook
- Lifting Chain 5m (with Shackles)
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**External Leakage Sensor** (Electrode)

### Special Specifications

**High Temperature Liquids Version (60-80°C)**

**Seawater-Resistant (DS or DF Version)\***

- \* DS: 316 Stainless Steel Casting Impeller
- DF: FC250 Cast Iron Impeller

Series:

**B**

Discharge Bore:

**80mm -High Head-**

Motor Output / Pole:

**11 - 22kW / 4-pole**



The B-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. The B-series has a proven track record for offering long life in both continuous and intermittent sump applications. It is available as an extended line-up from 50 to 800mm discharge bores.

**Guide Rail Fitting System**

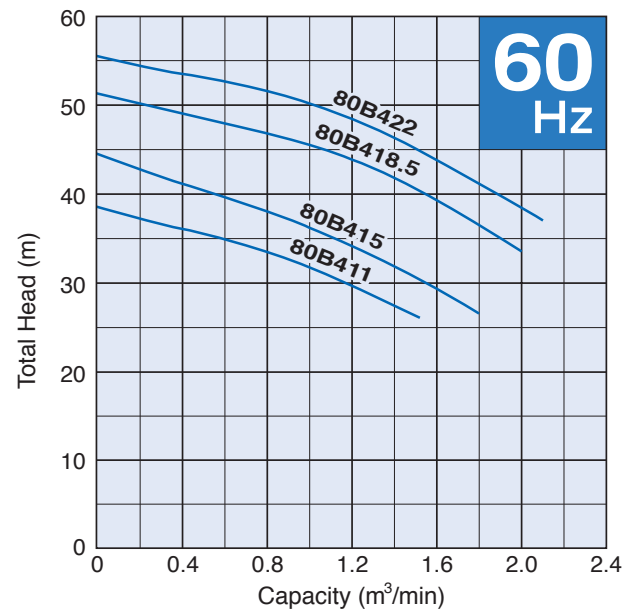
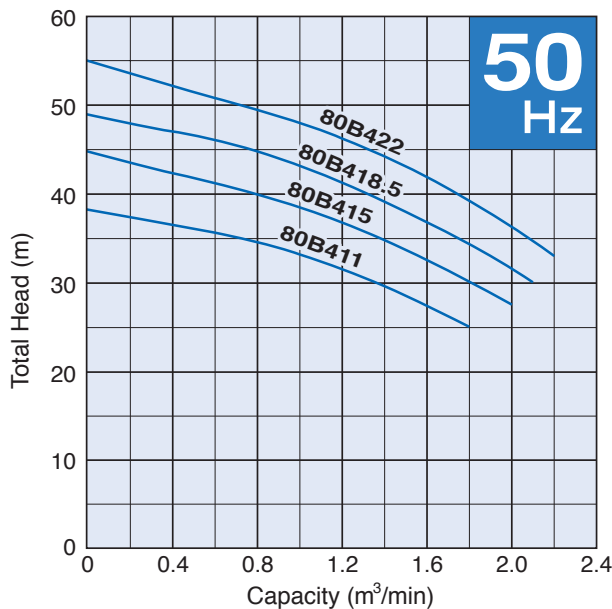
The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump.

**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
80B411	80	11	3-phase	4	BEND 80-80F	STAND SET	TOS-80F
80B415	80	15	3-phase	4	BEND 80-80F	50Hz: STAND SET 3 A 60Hz: STAND SET	TOS-80F
80B418.5	80	18.5	3-phase	4	BEND 80-80F	50Hz: STAND SET 3 A 60Hz: STAND SET	TOS-80F
80B422	80	22	3-phase	4	BEND 80-80F	STAND SET 3 A	TOS-80F

● Every above model is supplied without the discharge bend and pump stand. Select the accessory for the desired type of installation.

**Performance Curves**



SPECIFICATIONS	Model	B-series							
	80B411	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> 80mm</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 24.0A</td> <td>220V – 39.8A</td> </tr> <tr> <td>400V – 23.6A</td> <td>380V – 21.9A</td> </tr> <tr> <td>415V – 23.6A</td> <td>440V – 19.9A</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 (excluding cable)</b> Free Standing Type: 270/265kg (50/60Hz) Guide Rail Fitting Type: 265/260kg (50/60Hz)</p>	50Hz	60Hz	380V – 24.0A	220V – 39.8A	400V – 23.6A	380V – 21.9A	415V – 23.6A	440V – 19.9A	<p><b>Impeller</b> Semi-open two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – <math>\phi</math>46mm 60Hz – <math>\phi</math>46mm</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), 4700ml</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 – 24.0A	220V – 39.8A								
400V – 23.6A	380V – 21.9A								
415V – 23.6A	440V – 19.9A								
<p><b>Optional Accessories</b></p> <p><b>Bend Set (Free Standing Type)</b></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 (Free Standing Type)</b></p> <ul style="list-style-type: none"> <li>• Stand</li> </ul> <p><b>TOS Set (Guide Rail Fitting Type)</b></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 (Electrode)</b></p> <p><b>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60-80°C)</b></p>								
TSURUMI MANUFACTURING CO., LTD.									

SPECIFICATIONS	Model	80B415							
		B-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</b> 80mm</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 32.6A</td> <td>220V – 54.6A</td> </tr> <tr> <td>400V – 31.9A</td> <td>380V – 30.7A</td> </tr> <tr> <td>415V – 31.2A</td> <td>440V – 27.2A</td> </tr> </table> <p><b>Power Cable</b> Standard Length: 8m 200 to 600V supply: 1 × 4 × 5.5mm<sup>2</sup>, O.D. 16.8mm, Chloroprene rubber 1 × 3 × 5.5mm<sup>2</sup>, O.D. 15.2mm, 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: 290/265kg (50/60Hz) Guide Rail Fitting Type: 275/265kg (50/60Hz)</p>	50Hz	60Hz	380V – 32.6A	220V – 54.6A	400V – 31.9A	380V – 30.7A	415V – 31.2A	440V – 27.2A	<p><b>Impeller</b> Semi-open two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – <math>\phi</math>46mm 60Hz – <math>\phi</math>46mm</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), 4700ml</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 – 32.6A	220V – 54.6A								
400V – 31.9A	380V – 30.7A								
415V – 31.2A	440V – 27.2A								
<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>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>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60-80°C)</b></p>								

SPECIFICATIONS	Model	B-series							
	80B418.5	18.5kW, 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> 18.5kW</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 37.5A</td> <td>220V – 71.8A</td> </tr> <tr> <td>400V – 37.0A</td> <td>380V – 41.6A</td> </tr> <tr> <td>415V – 37.0A</td> <td>440V – 35.9A</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: 380/360kg (50/60Hz) Guide Rail Fitting Type: 365/355kg (50/60Hz)</p>	50Hz	60Hz	380V – 37.5A	220V – 71.8A	400V – 37.0A	380V – 41.6A	415V – 37.0A	440V – 35.9A	<p><b>Impeller</b> Semi-open two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – <math>\phi</math>46mm 60Hz – <math>\phi</math>46mm</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), 5300ml</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 – 37.5A	220V – 71.8A								
400V – 37.0A	380V – 41.6A								
415V – 37.0A	440V – 35.9A								
<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>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>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60°C)</b></p>								
TSURUMI MANUFACTURING CO., LTD.									

SPECIFICATIONS	Model	B-series							
	80B422	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</b> 80mm</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) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 44.0A</td> <td>220V – 75.0A</td> </tr> <tr> <td>400V – 43.0A</td> <td>380V – 43.0A</td> </tr> <tr> <td>415V – 42.0A</td> <td>440V – 37.5A</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: 385/375kg (50/60Hz) Guide Rail Fitting Type: 365/360kg (50/60Hz)</p>	50Hz	60Hz	380V – 44.0A	220V – 75.0A	400V – 43.0A	380V – 43.0A	415V – 42.0A	440V – 37.5A	<p><b>Impeller</b> Semi-open two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – <math>\phi</math>46mm 60Hz – <math>\phi</math>46mm</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), 5300ml</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 – 44.0A	220V – 75.0A								
400V – 43.0A	380V – 43.0A								
415V – 42.0A	440V – 37.5A								
<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>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>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60°C)</b></p>								



Series:

**B**

Discharge Bore:

**100mm**

Motor Output / Pole:

**2.2 - 7.5kW / 4-pole**



The B-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. The B-series has a proven track record for offering long life in both continuous and intermittent sump applications. It is available as an extended line-up from 50 to 800mm discharge bores.

**Guide Rail Fitting System**

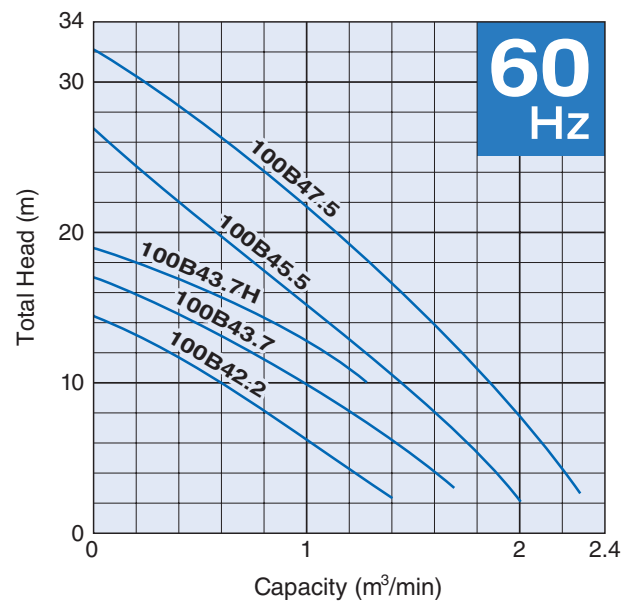
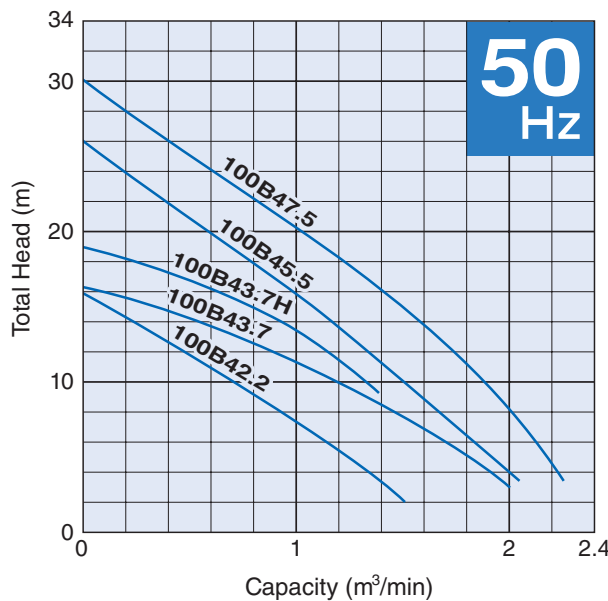
The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump.

**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
100B42.2	100	2.2	3-phase	4	BEND 80-100F	—	TOS3-80-100
100B43.7	100	3.7	3-phase	4	BEND 80-100F	—	TOS3-80-100
100B43.7H	100	3.7	3-phase	4	BEND 80-100F	—	TOS3-80-100
100B45.5	100	5.5	3-phase	4	BEND 100-100F	STAND SET	TOS3-100-100
100B47.5	100	7.5	3-phase	4	BEND 100-100F	STAND SET	TOS3-100-100

● 2.2 and 3.7kW models are supplied without the discharge bend. 5.5 and 7.5kW models are supplied without the discharge bend and pump stand. Select the accessory for the desired type of installation.

**Performance Curves**





SPECIFICATIONS	Model	B-series								
	100B42.2	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: 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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 5.1A</td> <td>220V – 8.8A</td> </tr> <tr> <td>400V – 5.0A</td> <td>380V – 4.9A</td> </tr> <tr> <td>415V – 5.0A</td> <td>440V – 4.4A</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: 66kg Guide Rail Fitting Type: 59kg</p>	50Hz	60Hz	380V – 5.1A	220V – 8.8A	400V – 5.0A	380V – 4.9A	415V – 5.0A	440V – 4.4A	<p><b>Impeller</b> Semi-open single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 47 × 53mm 60Hz – 47 × 46mm</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), 1350ml</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>	<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> <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> <p><b>Seawater-Resistant (DS or DF Version)*</b></p> <p>* DS: 316 Stainless Steel Casting Impeller DF: FC250 Cast Iron Impeller</p>
50Hz	60Hz									
380V – 5.1A	220V – 8.8A									
400V – 5.0A	380V – 4.9A									
415V – 5.0A	440V – 4.4A									
TSURUMI MANUFACTURING CO., LTD.										

SPECIFICATIONS	Model	100B43.7	
		B-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: 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 border="0"> <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: 80kg Guide Rail Fitting Type: 73kg</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> Semi-open single-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 81 × 53mm 60Hz – 81 × 47mm</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), 1350ml</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								

### Optional Accessories

**Bend Set** (Free Standing Type)

- Discharge Bend
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**TOS Set** (Guide Rail Fitting Type)

- Duckfoot Bend
- Guide Support
- Guide Hook
- Lifting Chain 5m (with Shackles)
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**External Leakage Sensor** (Electrode)

### Special Specifications

**High Temperature Liquids Version (60-80°C)**

**Seawater-Resistant (DS or DF Version)\***

- \* DS: 316 Stainless Steel Casting Impeller
- DF: FC250 Cast Iron Impeller

SPECIFICATIONS	Model	100B43.7H	
		B-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: 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 border="0"> <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: 82kg Guide Rail Fitting Type: 75kg</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> Semi-open two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 35 × 62mm 60Hz – 35 × 55mm</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), 1350ml</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								

**Optional Accessories**

**Bend Set** (Free Standing Type)

- Discharge Bend
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**TOS Set** (Guide Rail Fitting Type)

- Duckfoot Bend
- Guide Support
- Guide Hook
- Lifting Chain 5m (with Shackles)
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**External Leakage Sensor** (Electrode)

**Special Specifications**

**High Temperature Liquids Version (60-80°C)**

**Seawater-Resistant (DS or DF Version)\***

- \* DS: 316 Stainless Steel Casting Impeller
- DF: FC250 Cast Iron Impeller

<b>SPECIFICATIONS</b>	<b>Model</b>	<b>100B45.5</b>	<b>B-series</b>
			<b>5.5kW, 3-phase</b>

<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 (Star-Delta available on special request)</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 border="0"> <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: 140kg Guide Rail Fitting Type: 133kg</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 two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 40 × 51mm 60Hz – 40 × 43mm</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> <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>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60-80°C)*</b></p> <p>* For Rank 80 (80°C) of this model, when motor is not completely submerged, continuous pump operation should not exceed 20 minutes.</p> <p><b>Seawater-Resistant (DS or DF Version)*</b></p> <p>* DS: 316 Stainless Steel Casting Impeller DF: FC250 Cast Iron Impeller</p>
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SPECIFICATIONS	Model	100B47.5	
		B-series 7.5kW, 3-phase	

**Type of Pump**

Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.

**Type of Fluid**

Sewage, wastewater, and water carrying solid matters

Temperature: 0 to 40°C

**Discharge Bore**

100mm

**Motor Output**

7.5kW

**Power Supply**

Three-phase

**Starting Method**

Direct on Line (Star-Delta available on special request)

**Motor**

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 – 16.6A	220V – 28.4A
400V – 16.4A	380V – 16.0A
415V – 16.1A	440V – 14.2A

**Power Cable**

Sheath: Chloroprene rubber

Standard Length: 8m

200 to 600V supply:

1 × 4 × 5.5mm<sup>2</sup>, O.D. 16.8mm

**Dry Weight (excluding cable)**

Free Standing Type: 154kg

Guide Rail Fitting Type: 147kg

**Impeller**

Shrouded two-channel impeller for solid-handling design, dynamically balanced

Solids Passage

50Hz – 40 × 61mm

60Hz – 40 × 54mm

**Cable Entry with Anti-Wicking Block**

Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.

**Bearing**

Permanently lubricated, deep-groove, double-shielded C3 ball bearings

**Shaft**

420 stainless steel

**Shaft Seal (Mechanical Seal)**

Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.

Upper Seal Face: Ceramic + Carbon

Lower Seal Face: SiC + SiC

**Oil Seal (Lip Seal)**

Used as a "Dust Seal", it protects the mechanical seal from abrasive particles.

**OIL LIFTER**

Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.

Type of Lubricating Oil & Volume

Turbine Oil (ISO VG32), 4800ml

**Motor Protection Device**

A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.

**Optional Accessories**
**Bend Set (Free Standing Type)**

- Discharge Bend
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**Stand Set (Free Standing Type)**

- Stand

**TOS Set (Guide Rail Fitting Type)**

- Duckfoot Bend
- Guide Support
- Guide Hook
- Lifting Chain 5m (with Shackles)
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**External Leakage Sensor (Electrode)**
**Special Specifications**
**High Temperature Liquids Version (60-80°C)\***

\* For Rank 80 (80°C) of this model, when motor is not completely submerged, continuous pump operation should not exceed 20 minutes.

**Seawater-Resistant (DS or DF Version)\***

\* DS: 316 Stainless Steel Casting Impeller  
DF: FC250 Cast Iron Impeller

Series:

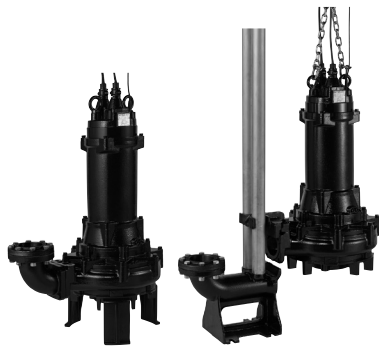
**B**

Discharge Bore:

**100mm -High Head-**

Motor Output / Pole:

**11 - 22kW / 4-pole**



The B-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. The B-series has a proven track record for offering long life in both continuous and intermittent sump applications. It is available as an extended line-up from 50 to 800mm discharge bores.

**Guide Rail Fitting System**

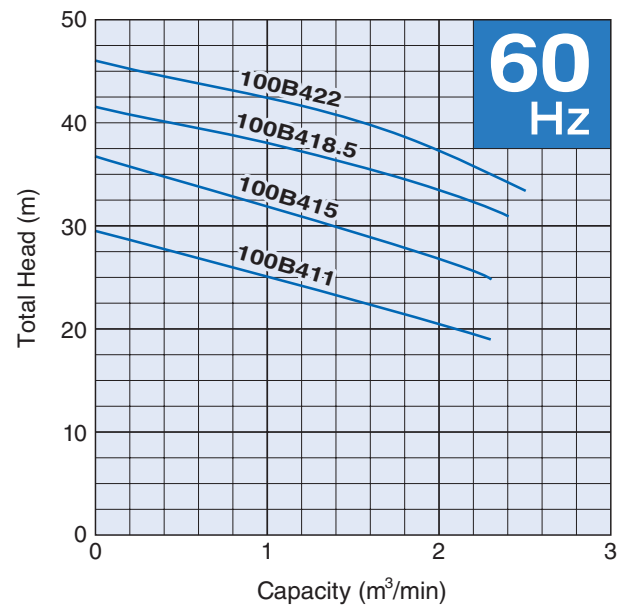
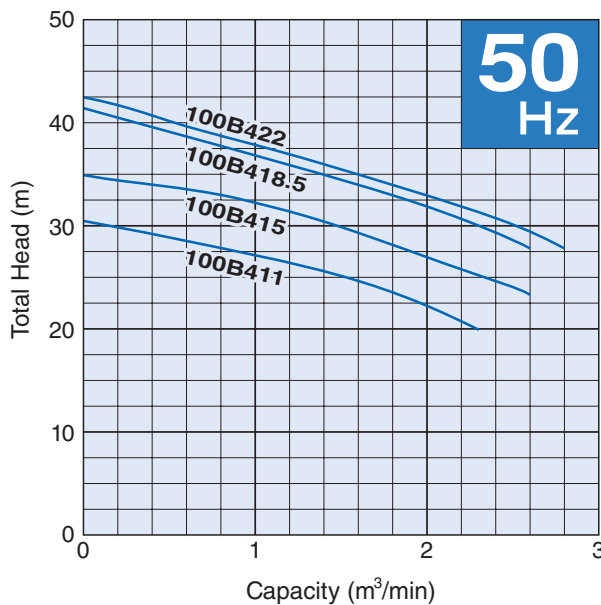
The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump.

**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
100B411	100	11	3-phase	4	BEND 100-100F	50Hz: STAND SET 6C 60Hz: STAND SET	TOS-100F
100B415	100	15	3-phase	4	BEND 100-100F	50Hz: STAND SET 6C 60Hz: STAND SET	TOS-100F
100B418.5	100	18.5	3-phase	4	BEND 100-100F	STAND SET 6C	TOS-100F
100B422	100	22	3-phase	4	BEND 100-100F	STAND SET 6C	TOS-100F

● Every above model is supplied without the discharge bend and pump stand. Select the accessory for the desired type of installation.

**Performance Curves**





SPECIFICATIONS	Model	B-series							
	100B411	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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 24.0A</td> <td>220V – 39.8A</td> </tr> <tr> <td>400V – 23.6A</td> <td>380V – 21.9A</td> </tr> <tr> <td>415V – 23.6A</td> <td>440V – 19.9A</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: 280/230kg (50/60Hz) Guide Rail Fitting Type: 270/220kg (50/60Hz)</p>	50Hz	60Hz	380V – 24.0A	220V – 39.8A	400V – 23.6A	380V – 21.9A	415V – 23.6A	440V – 19.9A	<p><b>Impeller</b> Semi-open two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ57mm 60Hz – ϕ57mm</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), 4700ml</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 – 24.0A	220V – 39.8A								
400V – 23.6A	380V – 21.9A								
415V – 23.6A	440V – 19.9A								
<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>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>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60-80°C)</b></p>								
TSURUMI MANUFACTURING CO., LTD.									



SPECIFICATIONS	Model	B-series							
	100B415	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</b> 100mm</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 32.6A</td> <td>220V – 54.6A</td> </tr> <tr> <td>400V – 31.9A</td> <td>380V – 30.1A</td> </tr> <tr> <td>415V – 31.2A</td> <td>440V – 27.2A</td> </tr> </table> <p><b>Power Cable</b> Standard Length: 8m 200 to 600V supply: 1 × 4 × 5.5mm<sup>2</sup>, O.D. 16.8mm, Chloroprene rubber 1 × 3 × 5.5mm<sup>2</sup>, O.D. 15.2mm, 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: 280/230kg (50/60Hz) Guide Rail Fitting Type: 270/220kg (50/60Hz)</p>	50Hz	60Hz	380V – 32.6A	220V – 54.6A	400V – 31.9A	380V – 30.1A	415V – 31.2A	440V – 27.2A	<p><b>Impeller</b> Semi-open two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – <math>\phi</math>57mm 60Hz – <math>\phi</math>57mm</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), 4700ml</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 – 32.6A	220V – 54.6A								
400V – 31.9A	380V – 30.1A								
415V – 31.2A	440V – 27.2A								
<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>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>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60-80°C)</b></p>								
TSURUMI MANUFACTURING CO., LTD.									

SPECIFICATIONS	Model	B-series							
	100B418.5	18.5kW, 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> 18.5kW</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 37.5A</td> <td>220V – 71.8A</td> </tr> <tr> <td>400V – 37.0A</td> <td>380V – 41.6A</td> </tr> <tr> <td>415V – 37.0A</td> <td>440V – 35.9A</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: 370kg Guide Rail Fitting Type: 360/355kg (50/60Hz)</p>	50Hz	60Hz	380V – 37.5A	220V – 71.8A	400V – 37.0A	380V – 41.6A	415V – 37.0A	440V – 35.9A	<p><b>Impeller</b> Semi-open two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – <math>\phi</math>57mm 60Hz – <math>\phi</math>57mm</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), 5300ml</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 – 37.5A	220V – 71.8A								
400V – 37.0A	380V – 41.6A								
415V – 37.0A	440V – 35.9A								
<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>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>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> <p><b>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60°C)</b></p>								

SPECIFICATIONS	Model	B-series							
	100B422	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</b> 100mm</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) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 44.0A</td> <td>220V – 75.0A</td> </tr> <tr> <td>400V – 43.0A</td> <td>380V – 43.0A</td> </tr> <tr> <td>415V – 42.0A</td> <td>440V – 37.5A</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: 370kg Guide Rail Fitting Type: 360/355kg (50/60Hz)</p>	50Hz	60Hz	380V – 44.0A	220V – 75.0A	400V – 43.0A	380V – 43.0A	415V – 42.0A	440V – 37.5A	<p><b>Impeller</b> Semi-open two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – <math>\phi</math>57mm 60Hz – <math>\phi</math>57mm</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), 5300ml</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 – 44.0A	220V – 75.0A								
400V – 43.0A	380V – 43.0A								
415V – 42.0A	440V – 37.5A								
<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>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>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60°C)</b></p>								

Series:

**B**

Discharge Bore:

**150mm**

Motor Output / Pole:

**3.7 - 22kW / 4-6-pole**



The B-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. The B-series has a proven track record for offering long life in both continuous and intermittent sump applications. It is available as an extended line-up from 50 to 800mm discharge bores.

**Guide Rail Fitting System**

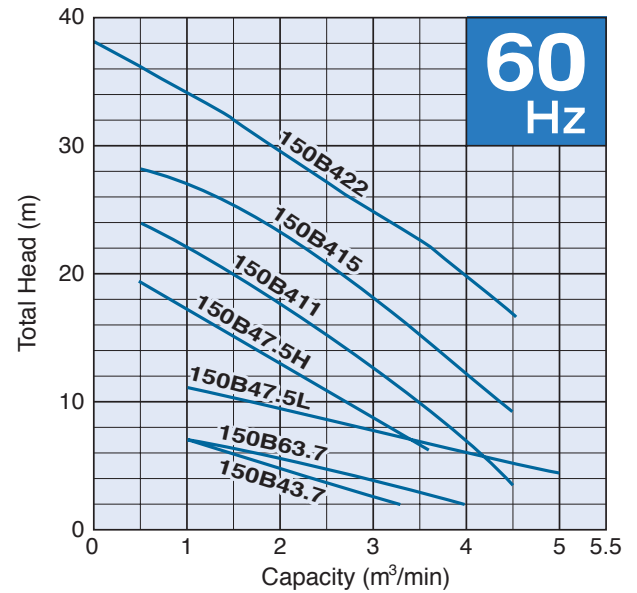
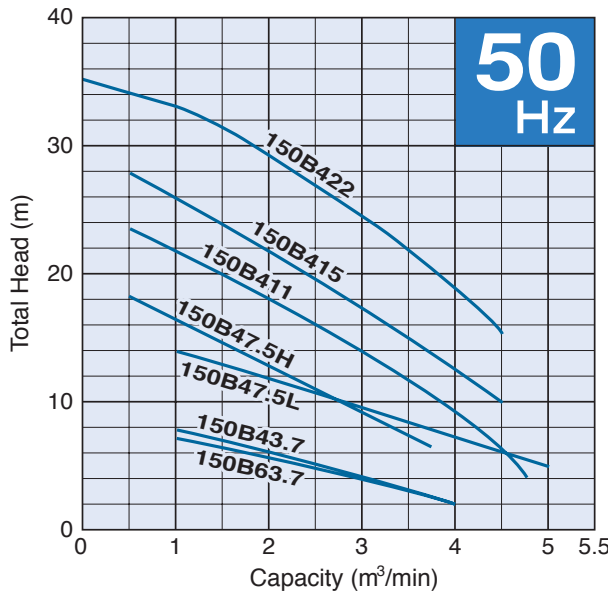
The guide rail fitting system connects the pump to and from the piping easily just by lowering or hoisting the pump, allowing easy maintenance and inspection without the need to enter the sump.

**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
150B43.7	150	3.7	3-phase	4	BEND 150-150F	STAND SET 6C	TOS-150A
150B63.7	150	3.7	3-phase	6	BEND 150-150F	STAND SET 6 A2	TOS-150A
150B47.5H	150	7.5	3-phase	4	BEND 150-150F	STAND SET 6B	TOS-150A
150B47.5L	150	7.5	3-phase	4	BEND 150-150F	STAND SET 6C	TOS-150A
150B411	150	11	3-phase	4	BEND 150-150F	STAND SET 6C	TOS-150A
150B415	150	15	3-phase	4	BEND 150-150F	STAND SET 6C	TOS-150A
150B422	150	22	3-phase	4	BEND 150-150F	STAND SET 6C	TOS-150A

● Every above model is supplied without the discharge bend and pump stand. Select the accessory for the desired type of installation.

**Performance Curves**



SPECIFICATIONS	Model	B-series								
	150B43.7	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> 150mm</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: 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 border="0"> <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: 145kg Guide Rail Fitting Type: 120kg</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 two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – ϕ51mm 60Hz – ϕ51mm</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), 1350ml</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>	<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> <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>
50Hz	60Hz									
380V – 8.2A	220V – 14.2A									
400V – 7.9A	380V – 8.0A									
415V – 7.7A	440V – 7.1A									
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SPECIFICATIONS	Model	150B63.7	
		B-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> 150mm</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 (Star-Delta available on special request)</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: B (available in F on special request) 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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 9.4A</td> <td>220V – 15.6A</td> </tr> <tr> <td>400V – 8.9A</td> <td>380V – 8.5A</td> </tr> <tr> <td>415V – 8.8A</td> <td>440V – 7.8A</td> </tr> </table> <p><b>Power Cable</b> Sheath: Chloroprene rubber Standard Length: 6m 200 to 600V supply: 1 × 4 × 3.5mm<sup>2</sup>, O.D. 14.1mm</p> <p><b>Dry Weight (excluding cable)</b> Free Standing Type: 188kg Guide Rail Fitting Type: 158kg</p>	50Hz	60Hz	380V – 9.4A	220V – 15.6A	400V – 8.9A	380V – 8.5A	415V – 8.8A	440V – 7.8A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – φ70mm 60Hz – φ55mm</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 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 – 9.4A	220V – 15.6A								
400V – 8.9A	380V – 8.5A								
415V – 8.8A	440V – 7.8A								

<p><b>Optional Accessories</b></p> <p><b>Bend Set (Free Standing Type)</b></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 (Free Standing Type)</b></p> <ul style="list-style-type: none"> <li>• Stand</li> </ul> <p><b>TOS Set (Guide Rail Fitting Type)</b></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 (Electrode)</b></p> <p><b>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60-80°C)</b></p>
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SPECIFICATIONS	Model	150B47.5H	
		B-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> 150mm</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 (Star-Delta available on special request)</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 border="0"> <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: 205kg Guide Rail Fitting Type: 175kg</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 – φ75mm 60Hz – φ70mm</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), 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 – 16.6A	220V – 28.4A								
400V – 16.4A	380V – 16.0A								
415V – 16.1A	440V – 14.2A								

<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>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>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60-80°C)*</b></p> <p>* For Rank 80 (80°C) of this model, when motor is not completely submerged, continuous pump operation should not exceed 20 minutes.</p>
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SPECIFICATIONS	Model	150B47.5L	
		B-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> 150mm</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 (Star-Delta available on special request)</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 border="0"> <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: 200kg Guide Rail Fitting Type: 175kg</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 two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – φ60mm 60Hz – φ50mm</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> <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>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60-80°C)*</b></p> <p>* For Rank 80 (80°C) of this model, when motor is not completely submerged, continuous pump operation should not exceed 20 minutes.</p>
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SPECIFICATIONS	Model	150B411	
		B-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> 150mm</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 border="0"> <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: 245kg Guide Rail Fitting Type: 215kg</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 two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – φ75mm 60Hz – φ75mm</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), 5400ml</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								

### Optional Accessories

**Bend Set** (Free Standing Type)

- Discharge Bend
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**Stand Set** (Free Standing Type)

- Stand

**TOS Set** (Guide Rail Fitting Type)

- Duckfoot Bend
- Guide Support
- Guide Hook
- Lifting Chain 5m (with Shackles)
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**External Leakage Sensor** (Electrode)

### Special Specifications

**High Temperature Liquids Version (60-80°C)**

**Seawater-Resistant (DS or DF Version)\***

- \* DS: 316 Stainless Steel Casting Impeller
- DF: FC250 Cast Iron Impeller

SPECIFICATIONS	Model	150B415	
		B-series	
		15kW, 3-phase	

**Type of Pump**

Submersible cast iron pump suitable for pumping sewage, wastewater, storm water, etc.

**Type of Fluid**

Sewage, wastewater, and water carrying solid matters

Temperature: 0 to 40°C

**Discharge Bore**

150mm

**Motor Output**

15kW

**Power Supply**

Three-phase

**Starting Method**

Star-Delta

**Motor**

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 – 32.4A	220V – 53.4A
400V – 30.9A	380V – 30.5A
415V – 30.5A	440V – 26.7A

**Power Cable**

Standard Length: 8m

200 to 600V supply:

- 1 × 4 × 5.5mm<sup>2</sup>, O.D. 16.8mm, Chloroprene rubber
- 1 × 3 × 5.5mm<sup>2</sup>, O.D. 15.2mm, Chloroprene rubber
- 1 × 2 × 1.25mm<sup>2</sup>, O.D. 9.6mm, PVC

**Dry Weight (excluding cable)**

Free Standing Type: 266kg

Guide Rail Fitting Type: 236kg

**Impeller**

Shrouded two-channel impeller for solid-handling design, dynamically balanced

Solids Passage

50Hz –  $\phi$ 75mm

60Hz –  $\phi$ 75mm

**Cable Entry with Anti-Wicking Block**

Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.

**Bearing**

Permanently lubricated, deep-groove, double-shielded C3 ball bearings

**Shaft**

420 stainless steel

**Shaft Seal (Mechanical Seal)**

Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.

Upper Seal Face: SiC + SiC

Lower Seal Face: SiC + SiC

**Oil Seal (Lip Seal)**

Used as a "Dust Seal", it protects the mechanical seal from abrasive particles.

**OIL LIFTER**

Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.

Type of Lubricating Oil & Volume

Turbine Oil (ISO VG32), 5700ml

**Motor Protection Device**

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.

**Optional Accessories**
**Bend Set (Free Standing Type)**

- Discharge Bend
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**Stand Set (Free Standing Type)**

- Stand

**TOS Set (Guide Rail Fitting Type)**

- Duckfoot Bend
- Guide Support
- Guide Hook
- Lifting Chain 5m (with Shackles)
- Threaded JIS 10kg/cm<sup>2</sup> Flange

**External Leakage Sensor (Electrode)**
**Special Specifications**
**High Temperature Liquids Version (60-80°C)**
**Seawater-Resistant (DS or DF Version)\***

- \* DS: 316 Stainless Steel Casting Impeller
- DF: FC250 Cast Iron Impeller

<b>SPECIFICATIONS</b>	<b>Model</b>	<b>150B422</b>	<b>B-series</b>
			<b>22kW, 3-phase</b>

<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> 150mm</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) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 43.5A</td> <td>220V – 75.0A</td> </tr> <tr> <td>400V – 42.5A</td> <td>380V – 43.0A</td> </tr> <tr> <td>415V – 42.0A</td> <td>440V – 37.5A</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 × 2 × 1.25mm<sup>2</sup>, O.D. 9.6mm, PVC</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 327kg Guide Rail Fitting Type: 298kg</p>	50Hz	60Hz	380V – 43.5A	220V – 75.0A	400V – 42.5A	380V – 43.0A	415V – 42.0A	440V – 37.5A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – φ75mm 60Hz – φ75mm</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), 4600ml</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 – 43.5A	220V – 75.0A								
400V – 42.5A	380V – 43.0A								
415V – 42.0A	440V – 37.5A								

**Optional Accessories**

- Bend Set** (Free Standing Type)
- Discharge Bend
  - Threaded JIS 10kg/cm<sup>2</sup> Flange

- Stand Set** (Free Standing Type)
- Stand

- TOS Set** (Guide Rail Fitting Type)
- Duckfoot Bend
  - Guide Support
  - Guide Hook
  - Lifting Chain 5m (with Shackles)
  - Threaded JIS 10kg/cm<sup>2</sup> Flange

**External Leakage Sensor** (Electrode)

Series:	Discharge Bore:	Motor Output / Pole:
<b>B</b>	<b>150mm</b>	<b>37.75kW / 4-pole</b>



The B-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. The B-series has a proven track record for offering long life in both continuous and intermittent sump applications. It is available as an extended line-up from 50 to 800mm discharge bores.

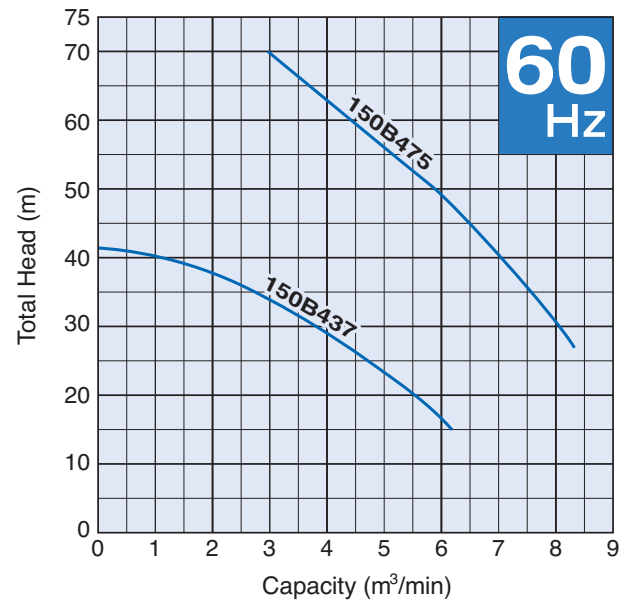
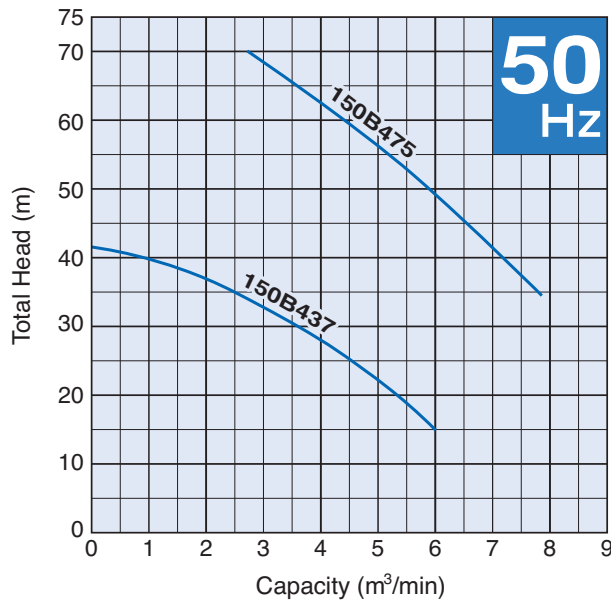
**Guide Rail Fitting System**

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
150B437	150	37	3-phase	4	150B437	TO150B437
150B475	150	75	3-phase	4	150B475	TO150B475

**Performance Curves**



SPECIFICATIONS	Model	150B437							
		B-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> 150mm, 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) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 75A</td> <td>220V – 124A</td> </tr> <tr> <td>400V – 74A</td> <td>380V – 72A</td> </tr> <tr> <td>415V – 74A</td> <td>440V – 65A</td> </tr> </table> <p><b>Power Cable</b> Standard Length: 8m 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 (excluding cable)</b> Free Standing Type: 640kg Guide Rail Fitting Type: 540kg</p>	50Hz	60Hz	380V – 75A	220V – 124A	400V – 74A	380V – 72A	415V – 74A	440V – 65A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 40 × 72mm 60Hz – 40 × 50mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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 – 75A	220V – 124A								
400V – 74A	380V – 72A								
415V – 74A	440V – 65A								



SPECIFICATIONS	Model <b>150B475</b>	B-series <b>75kW, 3-phase</b>							
<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> 150mm, JIS 10kg/cm<sup>2</sup> Flange</p> <p><b>Motor Output</b> 75kW</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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 163A</td> <td>380V – 160A</td> </tr> <tr> <td>400V – 159A</td> <td>440V – 141A</td> </tr> <tr> <td>415V – 159A</td> <td></td> </tr> </table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V 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 (excluding cable)</b> Free Standing Type: 1180kg Guide Rail Fitting Type: 1140kg</p>	50Hz	60Hz	380V – 163A	380V – 160A	400V – 159A	440V – 141A	415V – 159A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 40 × 110mm 60Hz – 45 × 90mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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 three as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Labyrinth Ring</b> Made of 403 stainless steel, equipped to provide a better countermeasure against wear caused by high pressure generated in the casing.</p> <p><b>Pressure Relief Ports</b> Protect the mechanical seal against excessive pressure, and also protect 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 – 163A	380V – 160A								
400V – 159A	440V – 141A								
415V – 159A									

Series:

**B**

Discharge Bore:

**200 - 300mm**

Motor Output / Pole:

**7.5 - 22kW / 4-6-pole**



The B-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. The B-series has a proven track record for offering long life in both continuous and intermittent sump applications. It is available as an extended line-up from 50 to 800mm discharge bores.

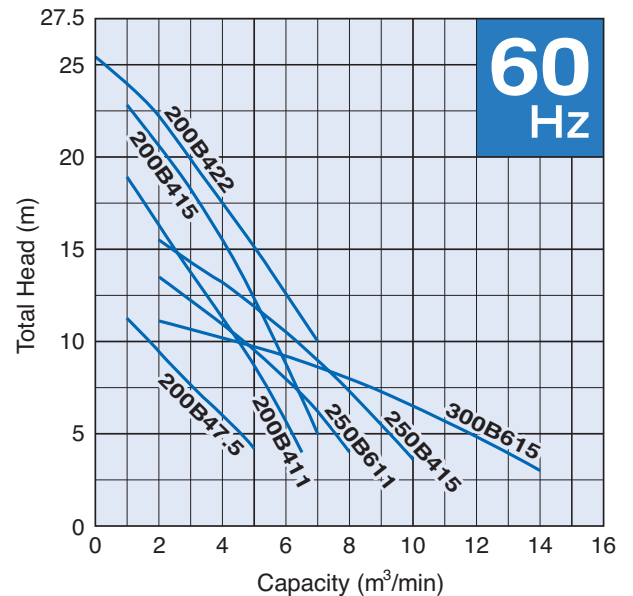
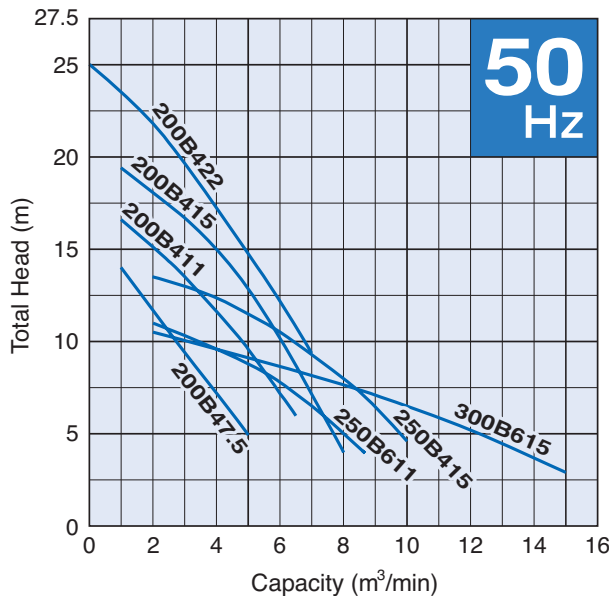
**Guide Rail Fitting System**

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 “TOS” or “TO”.

**Selection Table**

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Types of Installation	
					Free Standing	Guide Rail Fitting
200B47.5	200	7.5	3-phase	4	200B47.5	TO200B47.5
200B411	200	11	3-phase	4	200B411	TO200B411
200B415	200	15	3-phase	4	200B415	TO200B415
200B422	200	22	3-phase	4	200B422	TOS200B422
250B611	250	11	3-phase	6	250B611	TO250B611
250B415	250	15	3-phase	4	250B415	TO250B415
300B615	300	15	3-phase	6	250B615	TO300B615

**Performance Curves**



SPECIFICATIONS	Model	200B47.5							
		B-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 &amp; Connection</b> 200mm, JIS 10kg/cm<sup>2</sup> Flange</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 (Star-Delta available on special request)</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 border="0"> <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: 207kg Guide Rail Fitting Type: 212kg</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 two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 80 × 60mm 60Hz – 100 × 50mm</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 Accessory</b></p> <p>External Leakage Sensor (Electrode)</p> <p><b>Special Specifications</b></p> <p><b>High Temperature Liquids Version (60-80°C)*</b></p> <p>* For Rank 80 (80°C) of this model, when motor is not completely submerged, continuous pump operation should not exceed 20 minutes.</p>									
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<b>SPECIFICATIONS</b>	Model	<b>200B411</b>	<b>B-series</b>
			<b>11kW, 3-phase</b>

<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> 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 border="0"> <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: 253kg Guide Rail Fitting Type: 258kg</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 two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 68 × 60mm 60Hz – 65 × 58mm</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								

**Optional Accessory**

**External Leakage Sensor** (Electrode)

**Special Specifications**

**High Temperature Liquids Version (60-80°C)**

SPECIFICATIONS	Model	200B415	B-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> 200mm, JIS 10kg/cm<sup>2</sup> 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 border="0"> <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: 8m 200 to 600V supply: 1 × 4 × 5.5mm<sup>2</sup>, O.D. 16.8mm, Chloroprene rubber 1 × 3 × 5.5mm<sup>2</sup>, O.D. 15.2mm, 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: 291kg Guide Rail Fitting Type: 276kg</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 two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 70 × 60mm 60Hz – 69 × 60mm</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 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>External Leakage Sensor (Electrode)</p> <p><b>Special Specifications</b></p> <p>High Temperature Liquids Version (60-80°C)</p>											
<b>TSURUMI MANUFACTURING CO., LTD.</b>											

SPECIFICATIONS	Model	B-series							
	200B422	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) 4-pole, 1500/1800min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 43.5A</td> <td>220V – 75.0A</td> </tr> <tr> <td>400V – 42.5A</td> <td>380V – 43.0A</td> </tr> <tr> <td>415V – 42.0A</td> <td>440V – 37.5A</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 × 2 × 1.25mm<sup>2</sup>, O.D. 9.6mm, PVC</p> <p><b>Dry Weight (excluding cable)</b> Free Standing Type: 323kg Guide Rail Fitting Type: 289kg</p>	50Hz	60Hz	380V – 43.5A	220V – 75.0A	400V – 42.5A	380V – 43.0A	415V – 42.0A	440V – 37.5A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – φ75mm 60Hz – φ75mm</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), 4600ml</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 – 43.5A	220V – 75.0A								
400V – 42.5A	380V – 43.0A								
415V – 42.0A	440V – 37.5A								
<p><b>Optional Accessory</b></p> <p><b>External Leakage Sensor (Electrode)</b></p>									
TSURUMI MANUFACTURING CO., LTD.									



SPECIFICATIONS	Model <b>250B611</b>	B-series <b>11kW, 3-phase</b>							
	<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> 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: B (available in F on special request) 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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 25A</td> <td>220V – 40A</td> </tr> <tr> <td>400V – 24A</td> <td>380V – 23A</td> </tr> <tr> <td>415V – 23A</td> <td>440V – 20A</td> </tr> </table> <p><b>Power Cable</b> Sheath: Chloroprene rubber Standard Length: 8m 380 to 600V supply: 1 × (7 × 3.5mm<sup>2</sup> / 2 × 2 mm<sup>2</sup>) O.D. 21.3mm 200 to 240V supply: 1 × (7 × 5.5mm<sup>2</sup> / 2 × 2 mm<sup>2</sup>) O.D. 24.4mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 430kg Guide Rail Fitting Type: 390kg</p>	50Hz	60Hz	380V – 25A	220V – 40A	400V – 24A	380V – 23A	415V – 23A	440V – 20A
50Hz	60Hz								
380V – 25A	220V – 40A								
400V – 24A	380V – 23A								
415V – 23A	440V – 20A								
<p><b>Optional Accessory</b> External Leakage Sensor (Electrode)</p> <p><b>Special Specifications</b> High Temperature Liquids Version (60-80°C)</p>									
TSURUMI MANUFACTURING CO., LTD.									

SPECIFICATIONS	Model	250B415	B-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> 250mm, JIS 10kg/cm<sup>2</sup> 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 border="0"> <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: 8m 200 to 600V supply: 1 × 4 × 5.5mm<sup>2</sup>, O.D. 16.8mm, Chloroprene rubber 1 × 3 × 5.5mm<sup>2</sup>, O.D. 15.2mm, 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: 411kg Guide Rail Fitting Type: 371kg</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 two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 73 × 64mm 60Hz – 73 × 64mm</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 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>External Leakage Sensor (Electrode)</p> <p><b>Special Specifications</b></p> <p>High Temperature Liquids Version (60-80°C)</p>											
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	300B615	B-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> 300mm, JIS 10kg/cm<sup>2</sup> 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: B (available in F on special request) 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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 34A</td> <td>220V – 54A</td> </tr> <tr> <td>400V – 32A</td> <td>380V – 31A</td> </tr> <tr> <td>415V – 32A</td> <td>440V – 27A</td> </tr> </table> <p><b>Power Cable</b> Sheath: Chloroprene rubber Standard Length: 8m 380 to 600V supply: 1 × (7 × 5.5mm<sup>2</sup> / 2 × 2 mm<sup>2</sup>) O.D. 24.4mm 200 to 240V supply: 1 × (7 × 8mm<sup>2</sup> / 2 × 2mm<sup>2</sup>) O.D. 25.6mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 550kg Guide Rail Fitting Type: 520kg</p>	50Hz	60Hz	380V – 34A	220V – 54A	400V – 32A	380V – 31A	415V – 32A	440V – 27A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 140 × 90mm 60Hz – 140 × 60mm</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 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), 6000ml</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 – 34A	220V – 54A										
400V – 32A	380V – 31A										
415V – 32A	440V – 27A										
<p><b>Optional Accessory</b></p> <p>External Leakage Sensor (Electrode)</p> <p><b>Special Specifications</b></p> <p>High Temperature Liquids Version (60-80°C)</p>											
<b>TSURUMI MANUFACTURING CO., LTD.</b>											

Series:	Discharge Bore:	Motor Output / Pole:
<b>B</b>	<b>350mm</b>	<b>22 - 45kW / 6·8-pole</b>



The B-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. The B-series has a proven track record for offering long life in both continuous and intermittent sump applications. It is available as an extended line-up from 50 to 800mm discharge bores.

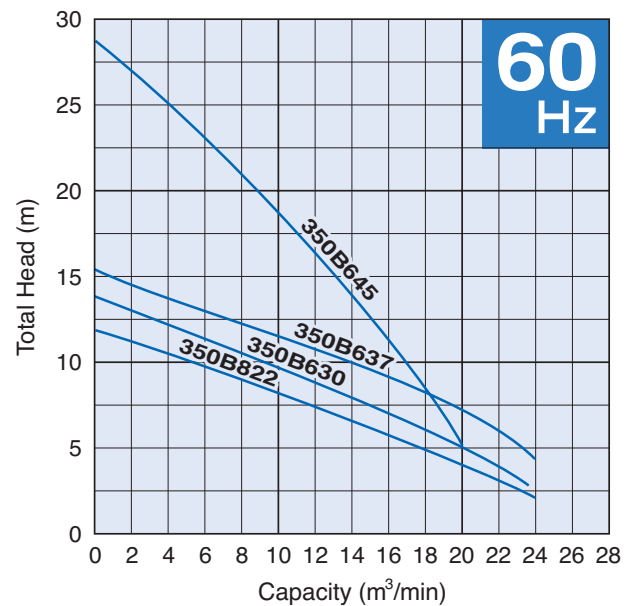
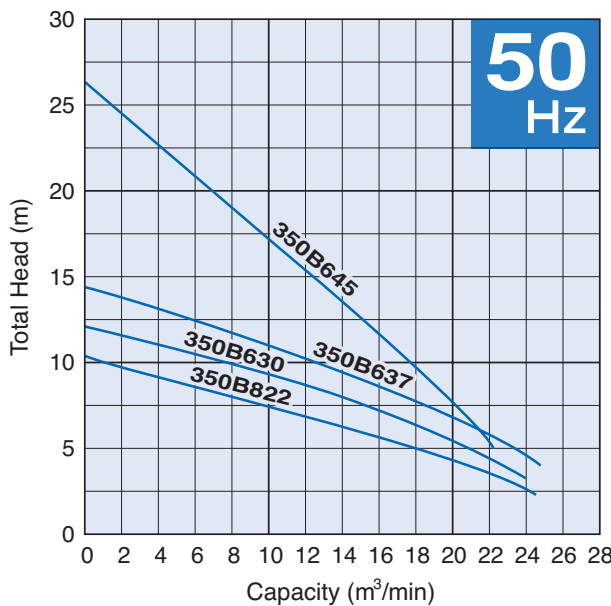
**Guide Rail Fitting System**

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
350B822	350	22	3-phase	8	350B822	TO350B822
350B630	350	30	3-phase	6	350B630	TO350B630
350B637	350	37	3-phase	6	350B637	TO350B637
350B645	350	45	3-phase	6	350B645	TO350B645

**Performance Curves**



SPECIFICATIONS	Model	B-series							
	350B822	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> 350mm, 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) 8-pole, 750/900min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 51.0A</td> <td>220V – 89.0A</td> </tr> <tr> <td>400V – 50.0A</td> <td>380V – 50.5A</td> </tr> <tr> <td>415V – 50.0A</td> <td>440V – 45.0A</td> </tr> </table> <p><b>Power Cable</b> Standard Length: 8m 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 (excluding cable)</b> Free Standing Type: 910kg Guide Rail Fitting Type: 760kg</p>	50Hz	60Hz	380V – 51.0A	220V – 89.0A	400V – 50.0A	380V – 50.5A	415V – 50.0A	440V – 45.0A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 156 × 100mm 60Hz – 160 × 90mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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), 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 – 51.0A	220V – 89.0A								
400V – 50.0A	380V – 50.5A								
415V – 50.0A	440V – 45.0A								

SPECIFICATIONS	Model	350B630	B-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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 62.5A</td> <td>220V – 108.0A</td> </tr> <tr> <td>400V – 61.0A</td> <td>380V – 63.0A</td> </tr> <tr> <td>415V – 61.0A</td> <td>440V – 56.0A</td> </tr> </table> <p><b>Power Cable</b> Standard Length: 8m 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 (excluding cable)</b> Free Standing Type: 870kg Guide Rail Fitting Type: 720kg</p>	50Hz	60Hz	380V – 62.5A	220V – 108.0A	400V – 61.0A	380V – 63.0A	415V – 61.0A	440V – 56.0A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 190 × 95mm 60Hz – 200 × 70mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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), 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 – 62.5A	220V – 108.0A								
400V – 61.0A	380V – 63.0A								
415V – 61.0A	440V – 56.0A								
<b>TSURUMI MANUFACTURING CO., LTD.</b>									



SPECIFICATIONS	Model	B-series							
	350B637	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> 350mm, 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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 77.0A</td> <td>220V – 140.0A</td> </tr> <tr> <td>400V – 76.0A</td> <td>380V – 78.0A</td> </tr> <tr> <td>415V – 75.0A</td> <td>440V – 68.5A</td> </tr> </table> <p><b>Power Cable</b> Standard Length: 8m 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 (excluding cable)</b> Free Standing Type: 905kg Guide Rail Fitting Type: 750kg</p>	50Hz	60Hz	380V – 77.0A	220V – 140.0A	400V – 76.0A	380V – 78.0A	415V – 75.0A	440V – 68.5A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 190 × 130mm 60Hz – 200 × 100mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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), 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 – 77.0A	220V – 140.0A								
400V – 76.0A	380V – 78.0A								
415V – 75.0A	440V – 68.5A								
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SPECIFICATIONS	Model	B-series							
	350B645	45kW, 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/cm<sup>2</sup> 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) 6-pole, 1000/1200min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 109A</td> <td>380V – 105A</td> </tr> <tr> <td>400V – 112A</td> <td>440V – 95A</td> </tr> <tr> <td>415V – 116A</td> <td></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</p> <p><b>Dry Weight (excluding cable)</b> Free Standing Type: 1420kg Guide Rail Fitting Type: 1320kg</p>	50Hz	60Hz	380V – 109A	380V – 105A	400V – 112A	440V – 95A	415V – 116A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 130 × 90mm 60Hz – 140 × 78mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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 four as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Ports</b> Protect the mechanical seal against excessive pressure, and also protect 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), 11000ml</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 – 109A	380V – 105A								
400V – 112A	440V – 95A								
415V – 116A									

Series:

**B**

Discharge Bore:

**400mm**

Motor Output / Pole:

**22 - 75kW / 6·8-pole**



The B-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. The B-series has a proven track record for offering long life in both continuous and intermittent sump applications. It is available as an extended line-up from 50 to 800mm discharge bores.

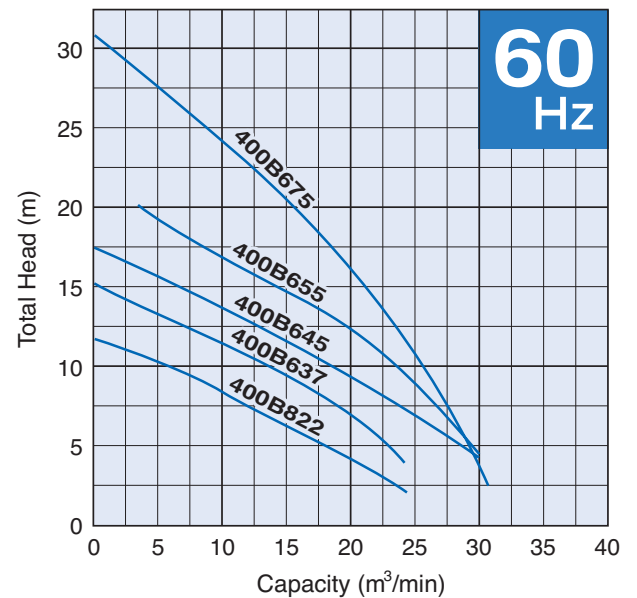
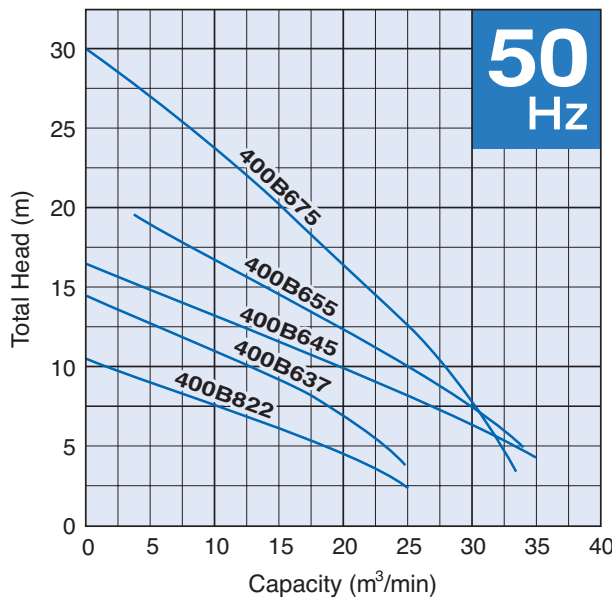
**Guide Rail Fitting System**

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
400B822	400	22	3-phase	8	400B822	TO400B822
400B637	400	37	3-phase	6	400B637	TO400B637
400B645	400	45	3-phase	6	400B645	TO400B645
400B655	400	55	3-phase	6	400B655	TO400B655
400B675	400	75	3-phase	6	400B675	TO400B675

**Performance Curves**



SPECIFICATIONS	Model	B-series							
	400B822	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> 400mm, 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) 8-pole, 750/900min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 51.0A</td> <td>220V – 89.0A</td> </tr> <tr> <td>400V – 50.0A</td> <td>380V – 50.5A</td> </tr> <tr> <td>415V – 50.0A</td> <td>440V – 45.0A</td> </tr> </table> <p><b>Power Cable</b> Standard Length: 8m 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 (excluding cable)</b> Free Standing Type: 930kg Guide Rail Fitting Type: 865kg</p>	50Hz	60Hz	380V – 51.0A	220V – 89.0A	400V – 50.0A	380V – 50.5A	415V – 50.0A	440V – 45.0A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 156 × 109mm 60Hz – 160 × 90mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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), 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 – 51.0A	220V – 89.0A								
400V – 50.0A	380V – 50.5A								
415V – 50.0A	440V – 45.0A								

SPECIFICATIONS	Model	400B637	B-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> 400mm, 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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 77.0A</td> <td>220V – 140.0A</td> </tr> <tr> <td>400V – 76.0A</td> <td>380V – 78.0A</td> </tr> <tr> <td>415V – 75.0A</td> <td>440V – 68.5A</td> </tr> </table> <p><b>Power Cable</b> Standard Length: 8m 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 (excluding cable)</b> Free Standing Type: 925kg Guide Rail Fitting Type: 855kg</p>	50Hz	60Hz	380V – 77.0A	220V – 140.0A	400V – 76.0A	380V – 78.0A	415V – 75.0A	440V – 68.5A	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 190 × 130mm 60Hz – 200 × 100mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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), 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 – 77.0A	220V – 140.0A								
400V – 76.0A	380V – 78.0A								
415V – 75.0A	440V – 68.5A								
TSURUMI MANUFACTURING CO., LTD.									

SPECIFICATIONS	Model	B-series							
	400B645	45kW, 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> 400mm, JIS 10kg/cm<sup>2</sup> 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) 6-pole, 1000/1200min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 109A</td> <td>380V – 105A</td> </tr> <tr> <td>400V – 112A</td> <td>440V – 95A</td> </tr> <tr> <td>415V – 116A</td> <td></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</p> <p><b>Dry Weight (excluding cable)</b> Free Standing Type: 1470kg Guide Rail Fitting Type: 1420kg</p>	50Hz	60Hz	380V – 109A	380V – 105A	400V – 112A	440V – 95A	415V – 116A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 175 × 128mm 60Hz – 175 × 100mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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 four as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Ports</b> Protect the mechanical seal against excessive pressure, and also protect 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), 11000ml</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 – 109A	380V – 105A								
400V – 112A	440V – 95A								
415V – 116A									
TSURUMI MANUFACTURING CO., LTD.									



SPECIFICATIONS	Model	400B655	B-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> 400mm, JIS 10kg/cm<sup>2</sup> 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: E (available in F on special request) 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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 122A</td> <td>380V – 125A</td> </tr> <tr> <td>400V – 124A</td> <td>440V – 108A</td> </tr> <tr> <td>415V – 128A</td> <td></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</p> <p><b>Dry Weight (excluding cable)</b> Free Standing Type: 1720kg Guide Rail Fitting Type: 1670kg</p>	50Hz	60Hz	380V – 122A	380V – 125A	400V – 124A	440V – 108A	415V – 128A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 145 × 110mm 60Hz – 175 × 100mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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 four as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Ports</b> Protect the mechanical seal against excessive pressure, and also protect 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), 11000ml</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 – 122A	380V – 125A								
400V – 124A	440V – 108A								
415V – 128A									

SPECIFICATIONS	Model	400B675	B-series						
			75kW, 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> 400mm, JIS 10kg/cm<sup>2</sup> Flange</p> <p><b>Motor Output</b> 75kW</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: E (available in F on special request) 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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 169A</td> <td>380V – 163A</td> </tr> <tr> <td>400V – 173A</td> <td>440V – 145A</td> </tr> <tr> <td>415V – 181A</td> <td></td> </tr> </table> <p><b>Power Cable</b> Standard Length: 10m 380 to 600V 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 (excluding cable)</b> Free Standing Type: 1760kg Guide Rail Fitting Type: 1710kg</p>	50Hz	60Hz	380V – 169A	380V – 163A	400V – 173A	440V – 145A	415V – 181A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 130 × 100mm 60Hz – 140 × 90mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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 four as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Ports</b> Protect the mechanical seal against excessive pressure, and also protect 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), 11000ml</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 – 169A	380V – 163A								
400V – 173A	440V – 145A								
415V – 181A									

Series:

**B**

Discharge Bore:

**500mm**

Motor Output / Pole:

**37 - 75kW / 6 - 12-pole**



The B-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. The B-series has a proven track record for offering long life in both continuous and intermittent sump applications. It is available as an extended line-up from 50 to 800mm discharge bores.

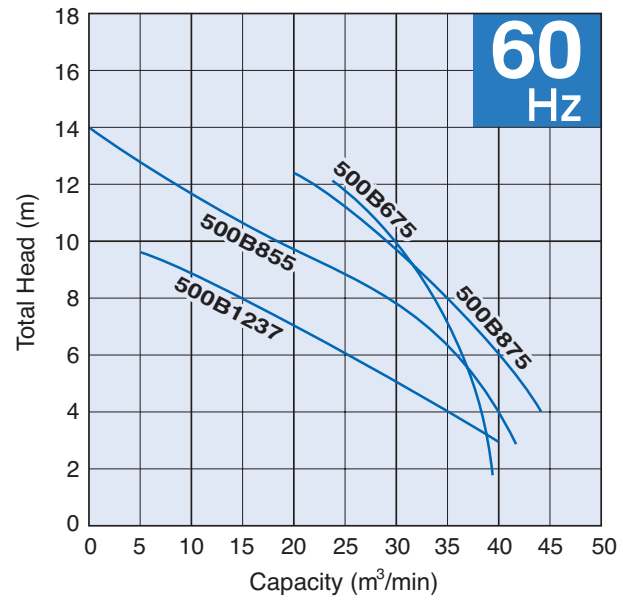
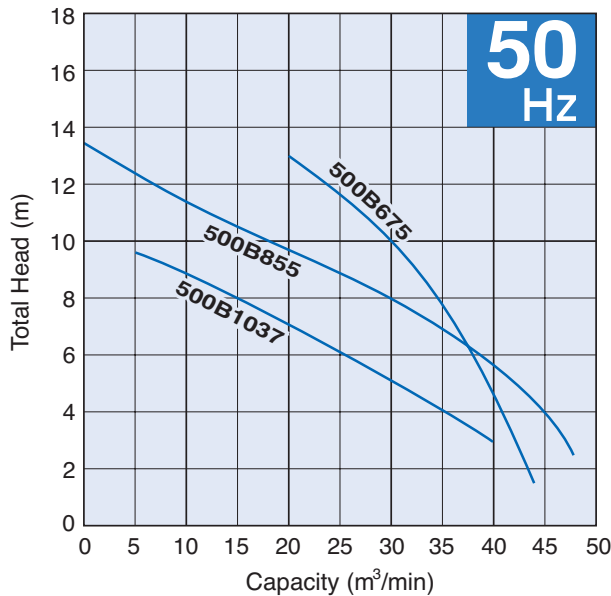
**Guide Rail Fitting System**

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
500B1037(50Hz)	500	37	3-phase	10	500B1037	TO500B1037
500B1237(60Hz)	500	37	3-phase	12	500B1237	TO500B1237
500B855	500	55	3-phase	8	500B855	TO500B855
500B675	500	75	3-phase	6	500B675	TO500B675
500B875(60Hz)	500	75	3-phase	8	500B875	TO500B875

**Performance Curves**



SPECIFICATIONS	Model	500B1037 (50Hz)	B-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>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> 500mm, 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) 10-pole, 600min<sup>-1</sup> (50Hz)</p> <p>Power Supply Voltages &amp; Rated Currents 50Hz 380V – 82A 400V – 77A 415V – 75A</p> <p><b>Power Cable</b> Sheath: Chloroprene rubber Standard Length: 10m 200 to 600V supply:  <math>1 \times \begin{pmatrix} 3 \times 38\text{mm}^2 \\ 1 \times 22\text{mm}^2 \\ 3 \times 2\text{mm}^2 \end{pmatrix}</math> O.D. 35.8mm  <math>1 \times 3 \times 38\text{mm}^2</math>, O.D. 35.9mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 2050kg Guide Rail Fitting Type: 1950kg</p>	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 225 × 100mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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 four as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Ports</b> Protect the mechanical seal against excessive pressure, and also protect 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>		

SPECIFICATIONS	Model	500B1237 (60Hz)	B-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>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> 500mm, 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) 12-pole, 600min<sup>-1</sup> (60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents 60Hz 220V – 168A 380V – 98A 440V – 84A</p> <p><b>Power Cable</b> Sheath: Chloroprene rubber Standard Length: 10m 200 to 600V supply:  <math>1 \times \begin{pmatrix} 3 \times 38\text{mm}^2 \\ 1 \times 22\text{mm}^2 \\ 3 \times 2\text{mm}^2 \end{pmatrix}</math> O.D. 35.8mm  <math>1 \times 3 \times 38\text{mm}^2</math>, O.D. 35.9mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 2050kg Guide Rail Fitting Type: 1950kg</p>			<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 60Hz – 225 × 100mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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 four as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Ports</b> Protect the mechanical seal against excessive pressure, and also protect 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>

SPECIFICATIONS	Model	500B855											
		B-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> 500mm, JIS 10kg/cm<sup>2</sup> 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: E (available in F on special request) Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 8-pole, 750/900min<sup>-1</sup> (50/60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents</p> <table border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 127A</td> <td>380V – 126A</td> </tr> <tr> <td>400V – 129A</td> <td>440V – 108A</td> </tr> <tr> <td>415V – 136A</td> <td></td> </tr> </table> <p><b>Power Cable</b> Sheath: Chloroprene rubber Standard Length: 10m 380 to 600V supply:</p> <table border="0"> <tr> <td>1 × <math>\begin{pmatrix} 3 \times 38\text{mm}^2 \\ 1 \times 22\text{mm}^2 \\ 3 \times 2\text{mm}^2 \end{pmatrix}</math></td> <td>O.D. 35.8mm</td> </tr> <tr> <td>1 × 3 × 38mm<sup>2</sup>,</td> <td>O.D. 35.9mm</td> </tr> </table> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 2850kg Guide Rail Fitting Type: 2750kg</p>	50Hz	60Hz	380V – 127A	380V – 126A	400V – 129A	440V – 108A	415V – 136A		1 × $\begin{pmatrix} 3 \times 38\text{mm}^2 \\ 1 \times 22\text{mm}^2 \\ 3 \times 2\text{mm}^2 \end{pmatrix}$	O.D. 35.8mm	1 × 3 × 38mm <sup>2</sup> ,	O.D. 35.9mm	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 175 × 140mm 60Hz – 175 × 80mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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 four as a "Dust Seal", it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Ports</b> Protect the mechanical seal against excessive pressure, and also protect 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), 11000ml</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 – 127A	380V – 126A												
400V – 129A	440V – 108A												
415V – 136A													
1 × $\begin{pmatrix} 3 \times 38\text{mm}^2 \\ 1 \times 22\text{mm}^2 \\ 3 \times 2\text{mm}^2 \end{pmatrix}$	O.D. 35.8mm												
1 × 3 × 38mm <sup>2</sup> ,	O.D. 35.9mm												



SPECIFICATIONS	Model	500B675	B-series						
			75kW, 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> 500mm, JIS 10kg/cm<sup>2</sup> Flange</p> <p><b>Motor Output</b> 75kW</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: E (available in F on special request) 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 border="0"> <tr> <td>50Hz</td> <td>60Hz</td> </tr> <tr> <td>380V – 169A</td> <td>380V – 163A</td> </tr> <tr> <td>400V – 173A</td> <td>440V – 145A</td> </tr> <tr> <td>415V – 181A</td> <td></td> </tr> </table> <p><b>Power Cable</b> Sheath: Chloroprene rubber Standard Length: 10m 380 to 600V supply:  <math>1 \times \begin{pmatrix} 3 \times 38\text{mm}^2 \\ 1 \times 22\text{mm}^2 \\ 3 \times 2\text{mm}^2 \end{pmatrix}</math> O.D. 35.8mm  <math>1 \times 3 \times 38\text{mm}^2</math>, O.D. 35.9mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 2060kg Guide Rail Fitting Type: 1960kg</p>	50Hz	60Hz	380V – 169A	380V – 163A	400V – 173A	440V – 145A	415V – 181A		<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 50Hz – 130 × 120mm 60Hz – 130 × 100mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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 four as a "Dust Seal", it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Ports</b> Protect the mechanical seal against excessive pressure, and also protect 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 – 169A	380V – 163A								
400V – 173A	440V – 145A								
415V – 181A									

SPECIFICATIONS	Model	500B875 (60Hz)	B-series
			75kW, 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> 500mm, JIS 10kg/cm<sup>2</sup> Flange</p> <p><b>Motor Output</b> 75kW</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: E (available in F on special request) Degree of Protection: IP68</p> <p>No. of Poles &amp; Speed (Synchronous Speed) 8-pole, 900min<sup>-1</sup> (60Hz)</p> <p>Power Supply Voltages &amp; Rated Currents 60Hz 380V – 146A 440V – 134A</p> <p><b>Power Cable</b> Sheath: Chloroprene rubber Standard Length: 10m 380 to 600V supply: 1 × <math>\begin{pmatrix} 3 \times 38\text{mm}^2 \\ 1 \times 22\text{mm}^2 \\ 3 \times 2\text{mm}^2 \end{pmatrix}</math> O.D. 35.8mm 1 × 3 × 38mm<sup>2</sup>, O.D. 35.9mm</p> <p><b>Dry Weight</b> (excluding cable) Free Standing Type: 2550kg Guide Rail Fitting Type: 2450kg</p>	<p><b>Impeller</b> Shrouded two-channel impeller for solid-handling design, dynamically balanced</p> <p>Solids Passage 60Hz – 190 × 80mm</p> <p><b>Mouth Ring &amp; Wear Ring</b> Prevent wear in the pump casing and suction cover, resulting in reduced maintenance costs.</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: Cylindrical roller 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: Niresist + Phosphor Bronze Lower Seal Face: SiC + SiC</p> <p><b>Oil Seal (Lip Seal)</b> Used four as a “Dust Seal”, it protects the mechanical seal from abrasive particles.</p> <p><b>Pressure Relief Ports</b> Protect the mechanical seal against excessive pressure, and also protect 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>		
<b>TSURUMI MANUFACTURING CO., LTD.</b>			

Series:

**B**

Discharge Bore:

**600 - 800mm**

Motor Output / Pole:

**45 - 110kW / 10 - 18-pole**



The B-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. The B-series has a proven track record for offering long life in both continuous and intermittent sump applications. It is available as an extended line-up from 50 to 800mm discharge bores.

**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**

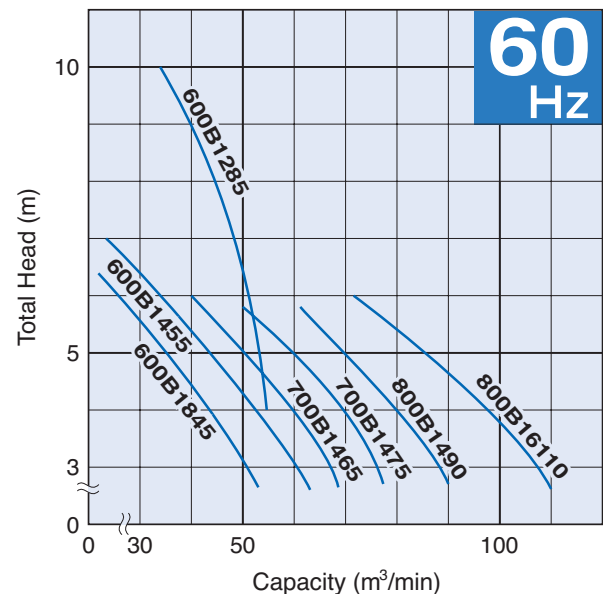
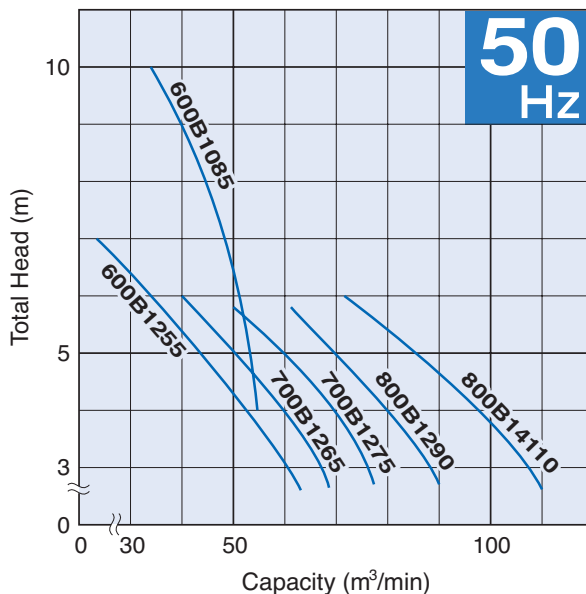
**50Hz**

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Types of Installation	
					Free Standing	Guide Rail Fitting
600B1255	600	55	3-phase	12	600B1255	TO600B1255
600B1085	600	85	3-phase	10	600B1085	TO600B1085
700B1265	700	65	3-phase	12	700B1265	TO700B1265
700B1275	700	75	3-phase	12	700B1275	TO700B1275
800B1290	800	90	3-phase	12	800B1290	TO800B1290
800B14110	800	110	3-phase	14	800B14110	TO800B14110

**60Hz**

Model	Discharge Bore mm	Motor Output kW	Phase	Pole	Types of Installation	
					Free Standing	Guide Rail Fitting
600B1845	600	45	3-phase	18	600B1845	TO600B1845
600B1455	600	55	3-phase	14	600B1455	TO600B1455
600B1285	600	85	3-phase	12	600B1285	TO600B1285
700B1465	700	65	3-phase	14	700B1465	TO700B1465
700B1475	700	75	3-phase	14	700B1475	TO700B1475
800B1490	800	90	3-phase	14	800B1490	TO800B1490
800B16110	800	110	3-phase	16	800B16110	TO800B16110

**Performance Curves**



**DIMENSIONS**

Model

**50B2.4S to 80B422**

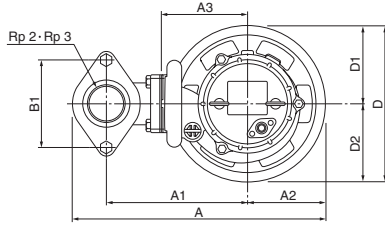
**B-series**

**50·80mm**

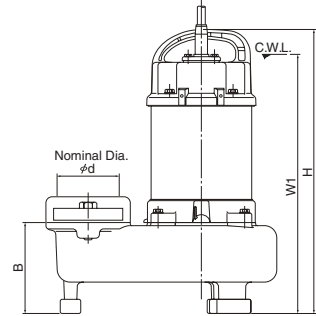
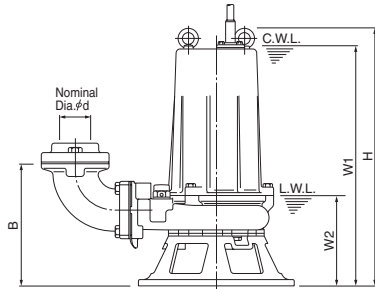
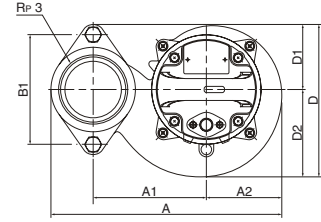
**Free Standing Type**

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

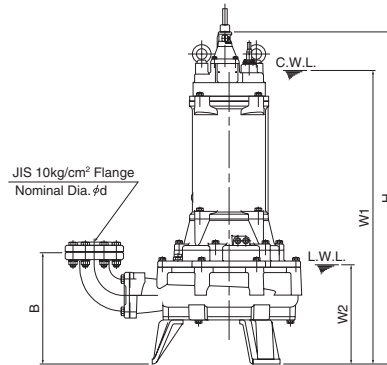
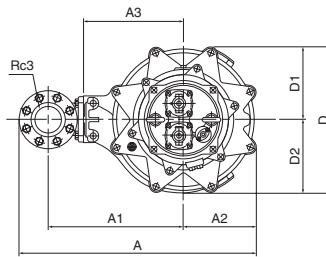
50B2.4S  
50B2.4  
50B2.75S  
50B2.75H  
50B2.75  
80B21.5



80BP2.4S(50Hz)  
80BP2.75S(60Hz)



80B411  
80B415  
80B418.5  
80B422



Unit: mm

Model	d	A	A1	A2	A3	B	B1	D	D1	D2	W1	W2	H
50B2.4S	50	340	208	78	120	182	140	220	110	110	430	140	453
50B2.4	50	340	208	78	120	182	140	220	110	110	400	140	420
50B2.75S	50	405	226	125	138	196	140	250	125	125	500	145	523
50B2.75H	50	405	226	125	138	196	140	250	125	125	385	145	415
50B2.75	50	405	226	125	138	199	140	250	125	125	410	170	439
80BP2.4S(50Hz)	80	296	145	97	—	116	140	195	83	112	330	—	363
80BP2.75S(60Hz)	80	296	145	97	—	116	140	195	83	112	350	—	383
80B21.5	80	446	267	125	165	234	140	250	125	125	465	190	536
80B411	80	753	429	231	317	354	—	466	231	235	935	315	1057
80B415(50Hz)	80	791	428	270	316	354	—	540	270	270	935	315	1057
80B415(60Hz)	80	753	429	231	317	354	—	466	231	235	935	315	1057
80B418.5(50Hz)	80	791	428	270	316	354	—	540	270	270	1040	315	1222
80B418.5(60Hz)	80	753	429	231	317	354	—	466	231	235	1040	315	1222
80B422	80	791	428	270	316	354	—	540	270	270	1040	315	1222

**DIMENSIONS**

**Model TOS50B2.4S to TOS80B422**

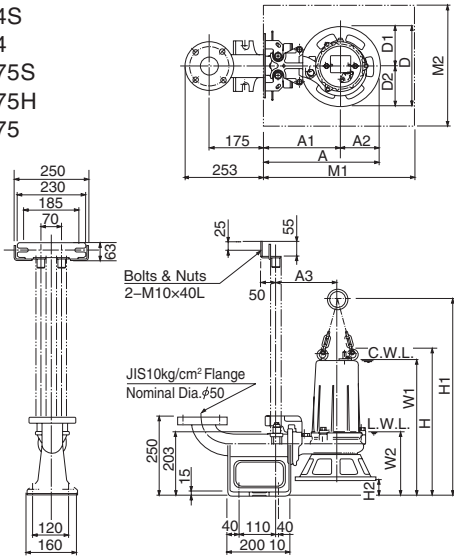
**B-series**

**50·80mm**

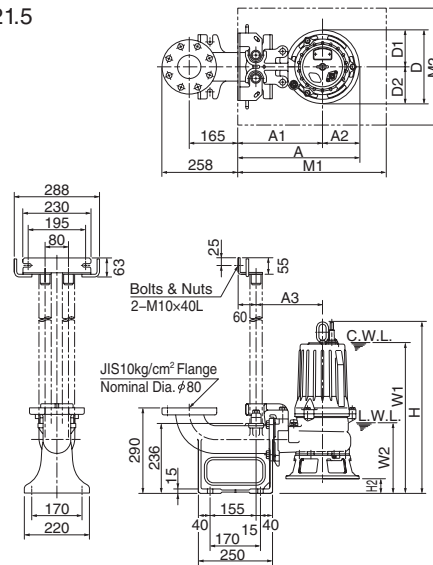
**Guide Rail Fitting Type: TOS Set**

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

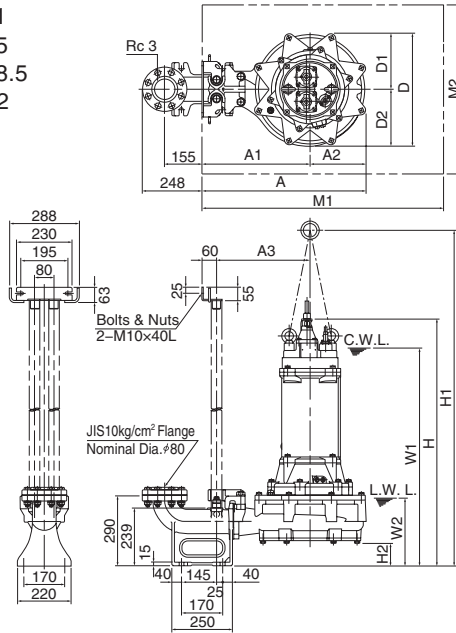
TOS50B2.4S  
TOS50B2.4  
TOS50B2.75S  
TOS50B2.75H  
TOS50B2.75



TOS80B21.5



TOS80B411  
TOS80B415  
TOS80B418.5  
TOS80B422



Unit: mm

Model	A	A1	A2	A3	D	D1	D2	W1	W2	H	H1	H2	M1	M2
TOS50B2.4S	303	225	78	175	220	110	110	490	200	511	639	58	550	350
TOS50B2.4	303	225	78	175	220	110	110	455	200	478	606	58	550	350
TOS50B2.75S	368	243	125	193	250	125	125	545	190	567	695	44	550	350
TOS50B2.75H	368	243	125	193	250	125	125	430	190	458	589	44	550	350
TOS50B2.75	368	243	125	193	250	125	125	450	210	479	610	40	550	350
TOS80B21.5	410	285	125	225	250	125	125	515	240	586	—	50	500	400
TOS80B411	678	447	231	387	466	231	235	900	280	1021	1387	93	1000	700
TOS80B415(50Hz)	694	446	248	386	493	233	260	900	280	1021	1387	93	1000	700
TOS80B415(60Hz)	678	447	231	387	466	231	235	900	280	1021	1387	93	1000	700
TOS80B418.5(50Hz)	694	446	248	386	493	233	260	1005	280	1186	1558	93	1000	700
TOS80B418.5(60Hz)	678	447	231	387	466	231	235	1005	280	1186	1558	93	1000	700
TOS80B422	694	446	248	386	493	233	260	1005	280	1186	1558	93	1000	700

**DIMENSIONS**

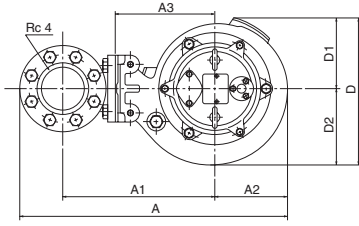
Model

**100B42.2 to 100B422**

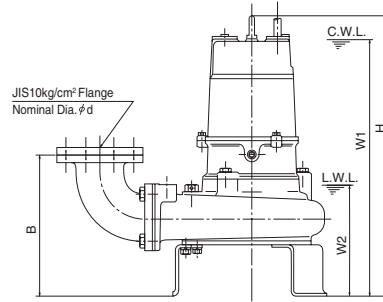
**B-series**

**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
100B42.2	100	596	337	154	210	329	324	158	166	600	225	642
100B43.7	100	601	337	159	210	334	333	158	175	675	235	716
100B43.7H	100	602	337	160	210	329	344	169	175	650	225	692
100B45.5	100	686	387	194	260	372	410	205	205	775	335	908
100B47.5	100	686	387	194	260	372	410	205	205	800	335	929
100B411(50Hz)	100	775	439	231	312	443	490	245	245	990	370	1114
100B411(60Hz)	100	691	398	188	271	377	410	205	205	935	300	1056
100B415(50Hz)	100	775	439	231	312	443	490	245	245	990	370	1114
100B415(60Hz)	100	691	398	188	271	377	410	205	205	935	300	1056
100B418.5	100	775	439	231	312	443	490	245	245	1100	370	1279
100B422	100	775	439	231	312	443	490	245	245	1100	370	1279



**DIMENSIONS**

**Model TOS100B42.2 to TOS100B422**

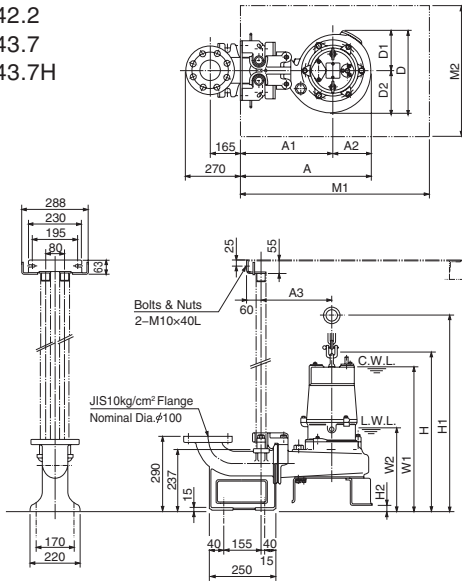
**B-series**

**100mm**

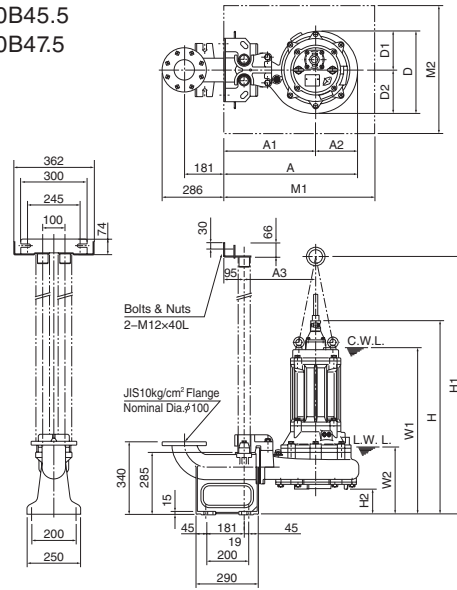
**Guide Rail Fitting Type: TOS Set**

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

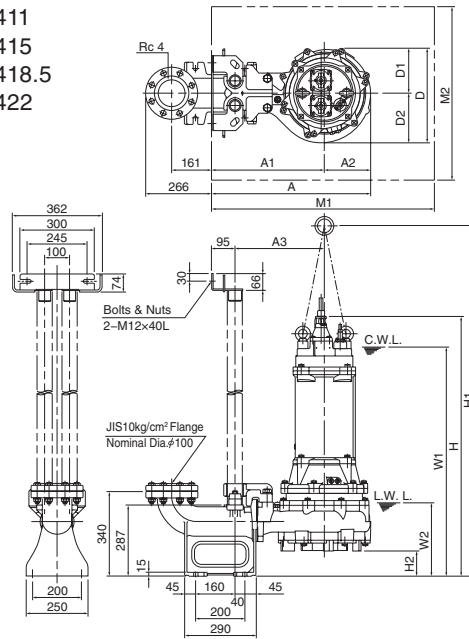
TOS100B42.2  
TOS100B43.7  
TOS100B43.7H



TOS100B45.5  
TOS100B47.5



TOS100B411  
TOS100B415  
TOS100B418.5  
TOS100B422

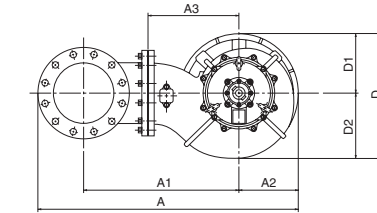
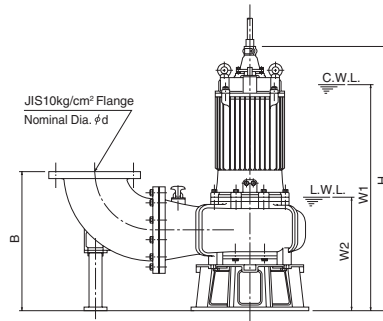


Unit: mm

Model	A	A1	A2	A3	D	D1	D2	W1	W2	H	H1	H2	M1	M2
TOS100B42.2	484	330	154	270	324	158	166	615	240	656	778	15	600	500
TOS100B43.7	489	330	159	270	333	158	175	685	245	725	847	10	600	500
TOS100B43.7H	490	330	160	270	344	169	175	665	240	706	828	15	600	500
TOS100B45.5	619	425	194	330	384	181	203	785	335	906	1268	118	700	600
TOS100B47.5	619	425	194	330	384	181	203	805	335	927	1293	118	700	600
TOS100B411(50Hz)	728	497	231	402	465	231	234	970	350	1091	1457	127	900	700
TOS100B411(60Hz)	644	456	188	361	382	182	200	925	265	1049	1415	101	900	700
TOS100B415(50Hz)	728	497	231	402	465	231	234	970	350	1091	1457	127	900	700
TOS100B415(60Hz)	644	456	188	361	382	182	200	925	265	1049	1415	101	900	700
TOS100B418.5	728	497	231	402	465	231	234	1057	350	1256	1628	127	1200	850
TOS100B422	728	497	231	402	465	231	234	1057	350	1256	1628	127	1200	850

**DIMENSIONS**

Model

**150B63.7 to 500B875**
**B-series**
**150 - 500mm**
**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
150B43.7	150	871	503	228	320	515	486	232	254	830	450	875
150B63.7	150	838	493	205	310	437	424	205	219	750	380	903
150B47.5H	150	834	483	211	300	435	418	205	213	830	325	951
150B47.5L	150	871	503	228	320	515	486	232	254	955	450	1085
150B411	150	895	513	242	330	505	490	245	245	975	405	1097
150B415	150	895	513	242	330	505	490	245	245	1045	405	1167
150B422	150	898	513	245	330	501	492	245	247	1040	460	1222
150B437	150	1085	583	362	400	628	724	362	362	1340	560	1548
150B475	150	1305	785	380	—	570	775	350	425	640	—	1896
200B47.5	200	926	533	228	320	545	486	232	254	955	450	1085
200B411	200	926	533	228	323	545	486	232	254	1010	450	1131
200B415	200	971	543	263	330	545	526	263	263	1075	450	1196
200B422	200	953	543	245	330	531	492	245	247	1040	460	1222
250B611	250	1203	703	300	420	628	621	300	321	1070	500	1211
250B415	250	1146	683	263	400	617	558	263	295	1105	450	1228
300B615	300	1302	763	316	450	745	656	300	356	1180	600	1314
350B822	350	1488	863	380	500	885	789	380	409	1465	685	1677
350B630	350	1488	863	380	500	885	789	380	409	1465	685	1677
350B637	350	1488	863	380	500	885	789	380	409	1475	685	1684
350B645	350	1493	863	385	—	822	831	381	450	767	—	1988
400B822	400	1583	923	380	500	945	789	380	409	1465	685	1677
400B637	400	1583	923	380	500	945	789	380	409	1475	685	1684
400B645	400	1621	963	378	—	972	791	350	441	808	—	2029
400B655	400	1621	963	378	—	972	791	350	441	808	—	2029
400B675	400	1616	963	373	510	972	784	351	433	940	—	1878
500B1037(50Hz)	500	2073	1273	462	720	1248	1017	420	597	1100	—	2081
500B1237(60Hz)	500	2073	1273	462	720	1248	1017	420	597	1100	—	2081
500B855	500	2111	1273	500	720	1203	1030	430	600	1100	—	2593
500B675	500	2263	1333	592	780	1185	1187	494	693	1000	—	2143
500B875(60Hz)	500	2151	1303	510	750	1400	1048	450	598	1100	—	2694

**DIMENSIONS**

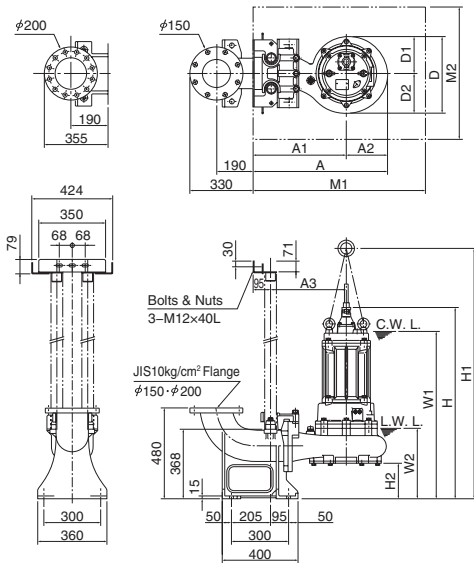
**Model TOS150B43.7 to TO250B415**

**B-series**

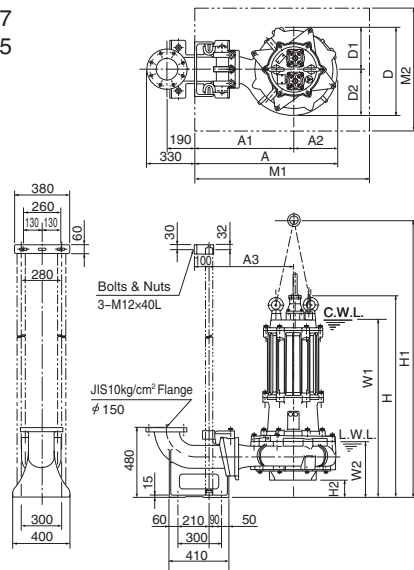
**150 - 250mm**

**Guide Rail Fitting Type: TOS/TO Set**

TOS150B43.7  
TOS150B63.7  
TOS150B47.5H  
TOS150B47.5L  
TOS150B411  
TOS150B415  
TOS150B422  
TOS200B422

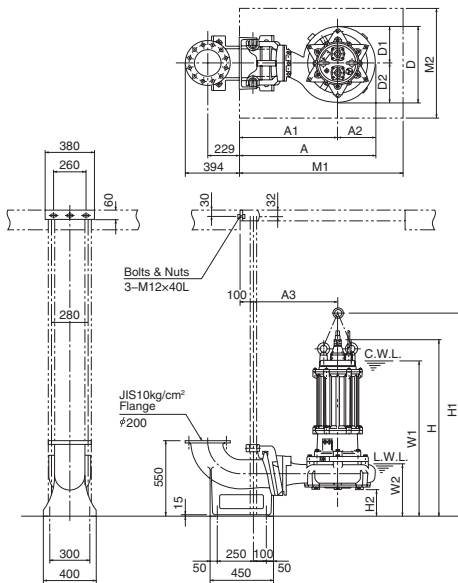


TO150B437  
TO150B475

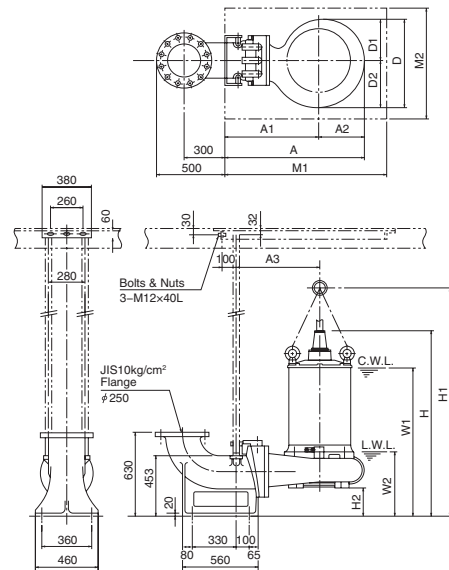


C. W. L.: Continuous Running Water Level  
L. W. L.: Lowest Running Water Level

TO200B47.5  
TO200B411  
TO200B415



TO250B611  
TO250B415



Unit: mm

Model	A	A1	A2	A3	D	D1	D2	W1	W2	H	H1	H2	M1	M2
TOS150B43.7	735	507	228	412	459	205	254	775	395	820	1010	155	900	700
TOS150B63.7	693	497	196	402	395	176	219	820	400	926	1271	152	900	700
TOS150B47.5H	698	487	211	392	404	191	213	855	345	976	1342	147	900	700
TOS150B47.5L	735	507	228	412	459	205	254	900	400	1030	1378	144	900	700
TOS150B411	759	517	242	422	464	220	244	930	360	1052	1418	147	900	700
TOS150B415	759	517	242	422	464	220	244	1000	360	1122	1488	147	900	700
TOS150B422	762	517	245	422	470	223	247	1000	420	1181	1520	151	1200	850
TO 150B437	976	681	295	581	610	290	320	1170	390	1380	1873	121	1200	850
TO 150B475	1187	807	380	712	765	340	425	530	—	1786	2204	135	1300	1000
TOS200B422	762	517	245	422	470	223	247	1000	420	1181	1520	147	1200	850
TO 200B47.5	872	644	228	544	459	205	254	920	420	1050	1398	164	1200	850
TO 200B411	872	644	228	544	459	205	254	975	415	1096	1462	164	1200	850
TO 200B415	840	624	216	524	433	193	240	1040	415	1161	1535	165	1200	850
TO 250B611	1013	725	288	625	574	253	321	1025	455	1165	1484	131	1200	850
TO 250B415	951	706	245	606	497	202	295	1070	420	1194	1567	166	1200	850

