

Series:

**PU**

Discharge Bore:

**40 - 80mm**

Motor Output / Pole:

**0.15 - 3.7kW / 2-pole**



The PU-series is a submersible portable vortex pump designed for raw sewage, wastewater, and liquid carrying solid matters. It is made of resin and 304 stainless steel and excellent in corrosion-resistance. The vortex mechanism provides practically unchokable operation in sewage pumping. Liquid paraffin is used for the lubricating oil, which widens the application of the pump to decorative waterfalls, fishponds, aquaculture, etc.

**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. Tsurumi “TOK” type resin-made guide rail fitting system can be used with every PU-series.

**Automatic & Auto-Alternation Model**

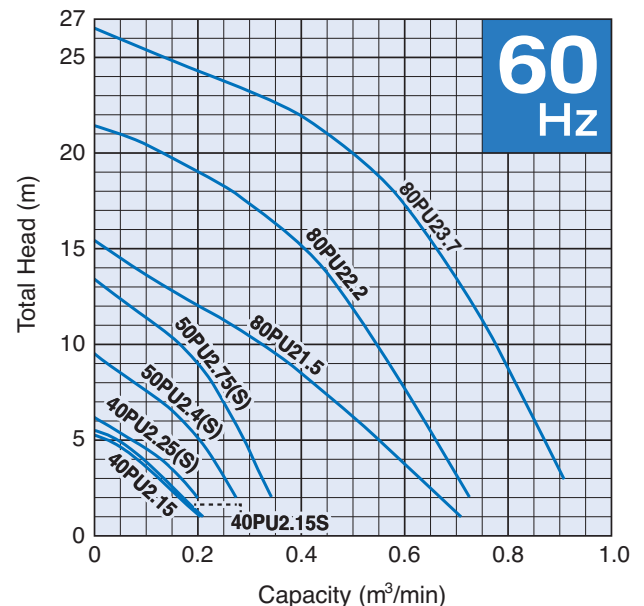
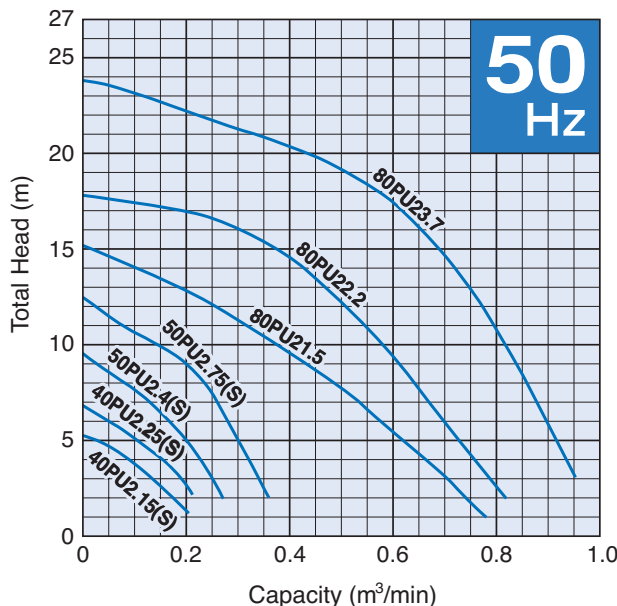
Automatic models and auto-alternation models are available. These models have an integral control circuitry and float switches. Auto-alternation operation can be achieved by the combinatorial use of the automatic model and the auto-alternation model without the need of a simple power panel.

**Selection Table**

Model			Discharge Bore mm	Motor Output kW	Phase	Pole	Optional Accessories for Guide Rail Fitting System
Standard	Automatic	Auto-Alternation					
40PU2.15S	40PUA2.15S	—	40	0.15	1-phase	2	TOK4-P
40PU2.15	40PUA2.15	—	40	0.15	3-phase	2	TOK4-P
40PU2.25S	40PUA2.25S	40PUW2.25S	40	0.25	1-phase	2	TOK4-P
40PU2.25	40PUA2.25	40PUW2.25	40	0.25	3-phase	2	TOK4-P
50PU2.4S	50PUA2.4S	50PUW2.4S	50	0.4	1-phase	2	TOK4-P
50PU2.4	50PUA2.4	50PUW2.4	50	0.4	3-phase	2	TOK4-P
50PU2.75S	50PUA2.75S	—	50	0.75	1-phase	2	TOK4-P
50PU2.75	50PUA2.75	50PUW2.75	50	0.75	3-phase	2	TOK4-P
80PU21.5	80PUA21.5	80PUW21.5	80	1.5	3-phase	2	TOK2-65
80PU22.2	80PUA22.2	80PUW22.2	80	2.2	3-phase	2	TOK2-65T
80PU23.7	80PUA23.7	80PUW23.7	80	3.7	3-phase	2	TOK2-65T

**Performance Curves**

Standard, Automatic and Auto-Alternation models have the identical performance.



SPECIFICATIONS	Model	40PU2.15S	
		PU-series	
		0.15kW, 1-phase	

**Type of Pump**

Submersible vortex pump made of 304 stainless steel and resin 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 & Connection**

40mm, Threaded Oval Flange

**Motor Output**

0.15kW

**Power Supply**

Single-phase

**Starting Method**

Capacitor Run

**Motor**

Continuous-duty rated, dry-type induction motor

Insulation Class: E

Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)

2-pole, 3000/3600min<sup>-1</sup> (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
220V – 1.65A	110V – 3.2 A
230V – 1.65A	220V – 1.75A
240V – 1.7 A	

**Power Cable**

Sheath: PVC

Standard Length: 5m

100 to 240V supply:

1 × 3 × 0.75mm<sup>2</sup>, O.D. 9.2mm

**Dry Weight (excluding cable)**

Standard Model: 5.3kg

Automatic Model: 6kg

**Impeller**

Vortex impeller made of glass-fiber reinforced PPO

Solids Passage

50Hz –  $\phi$ 35mm

60Hz –  $\phi$ 35mm

**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**

316 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 + Ceramic

**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

Liquid Paraffin (ISO VG32), 135ml

**Motor Protection Device**

A miniature thermal protector is embedded in winding of the motor. Directly cuts the motor circuit if excessive heat builds up in the motor.

**Optional Accessories**
**TOK Set (Guide Rail Fitting Type)**

- Duckfoot Bend
- Guide Support
- Guide Hook
- Lifting Chain 4m (with Shackles)

SPECIFICATIONS	Model	40PU2.15	
		PU-series 0.15kW, 3-phase	

**Type of Pump**

Submersible vortex pump made of 304 stainless steel and resin 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 & Connection**

40mm, Threaded Oval Flange

**Motor Output**

0.15kW

**Power Supply**

Three-phase

**Starting Method**

Direct on Line

**Motor**

Continuous-duty rated, dry-type induction motor

Insulation Class: E

Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)

2-pole, 3000/3600min<sup>-1</sup> (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 0.7A	220V – 1.3A
400V – 0.7A	380V – 0.7A
415V – 0.7A	440V – 0.6A

**Power Cable**

Sheath: PVC

Standard Length: 6m

200 to 600V supply:

1 × 4 × 0.75mm<sup>2</sup>, O.D. 10.1mm

**Dry Weight (excluding cable)**

Standard Model: 4.8kg

Automatic Model: 5.5kg

**Impeller**

Vortex impeller made of glass-fiber reinforced PPO

Solids Passage

50Hz –  $\phi$ 35mm

60Hz –  $\phi$ 35mm

**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**

316 stainless steel

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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

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**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

Liquid Paraffin (ISO VG32), 135ml

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

- Duckfoot Bend
- Guide Support
- Guide Hook
- Lifting Chain 4m (with Shackles)

SPECIFICATIONS	Model	40PU2.25S							
		PU-series 0.25kW, 1-phase							
<p><b>Type of Pump</b> Submersible vortex pump made of 304 stainless steel and resin 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> 40mm, Threaded Oval Flange</p> <p><b>Motor Output</b> 0.25kW</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, 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 – 2.5A</td> <td>110V – 4.4A</td> </tr> <tr> <td>230V – 2.5A</td> <td>220V – 2.4A</td> </tr> <tr> <td>240V – 2.5A</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) Standard Model: 7.1kg Auto &amp; Auto-Alternation Model: 7.8kg</p>	50Hz	60Hz	220V – 2.5A	110V – 4.4A	230V – 2.5A	220V – 2.4A	240V – 2.5A		<p><b>Impeller</b> Vortex impeller made of glass-fiber reinforced PPO</p> <p>Solids Passage 50Hz – ϕ35mm 60Hz – ϕ35mm</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 miniature thermal protector is embedded in winding of the motor. Directly cuts the motor circuit if excessive heat builds up in the motor.</p>
50Hz	60Hz								
220V – 2.5A	110V – 4.4A								
230V – 2.5A	220V – 2.4A								
240V – 2.5A									
<p><b>Optional Accessories</b></p> <p><b>TOK 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 4m (with Shackles)</li> </ul>									
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SPECIFICATIONS	Model <b>40PU2.25</b>	PU-series							
		0.25kW, 3-phase							
<p><b>Type of Pump</b> Submersible vortex pump made of 304 stainless steel and resin 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> 40mm, Threaded Oval Flange</p> <p><b>Motor Output</b> 0.25kW</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 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 – 0.9A</td> <td>220V – 1.6A</td> </tr> <tr> <td>400V – 0.9A</td> <td>380V – 0.9A</td> </tr> <tr> <td>415V – 1.0A</td> <td>440V – 0.8A</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) Standard Model: 6.1kg Auto &amp; Auto-Alternation Model: 6.8kg</p>	50Hz	60Hz	380V – 0.9A	220V – 1.6A	400V – 0.9A	380V – 0.9A	415V – 1.0A	440V – 0.8A	<p><b>Impeller</b> Vortex impeller made of glass-fiber reinforced PPO</p> <p>Solids Passage 50Hz – ϕ35mm 60Hz – ϕ35mm</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>
50Hz	60Hz								
380V – 0.9A	220V – 1.6A								
400V – 0.9A	380V – 0.9A								
415V – 1.0A	440V – 0.8A								
<p><b>Optional Accessories</b></p> <p><b>TOK 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 4m (with Shackles)</li> </ul>									
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SPECIFICATIONS	Model	50PU2.4S									
		PU-series 0.4kW, 1-phase									
<p><b>Type of Pump</b> Submersible vortex pump made of 304 stainless steel and resin 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> 50mm, 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, 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 – 3.2A</td> <td>110V – 5.7A</td> </tr> <tr> <td>230V – 3.1A</td> <td>220V – 2.9A</td> </tr> <tr> <td>240V – 3.0A</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) Standard Model: 7.1kg Auto &amp; Auto-Alternation Model: 7.8kg</p>	50Hz	60Hz	220V – 3.2A	110V – 5.7A	230V – 3.1A	220V – 2.9A	240V – 3.0A			<p><b>Impeller</b> Vortex impeller made of glass-fiber reinforced PPO</p> <p>Solids Passage 50Hz – φ35mm 60Hz – φ35mm</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 miniature thermal protector is embedded in winding of the motor. Directly cuts the motor circuit if excessive heat builds up in the motor.</p>	
50Hz	60Hz										
220V – 3.2A	110V – 5.7A										
230V – 3.1A	220V – 2.9A										
240V – 3.0A											
<p><b>Optional Accessories</b></p> <p><b>TOK 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 4m (with Shackles)</li> </ul>											
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SPECIFICATIONS	Model	PU-series							
	50PU2.4	0.4kW, 3-phase							
<p><b>Type of Pump</b> Submersible vortex pump made of 304 stainless steel and resin 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> 50mm, Threaded Oval Flange</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 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 – 1.2 A</td> <td>220V – 2.0A</td> </tr> <tr> <td>400V – 1.2 A</td> <td>380V – 1.1A</td> </tr> <tr> <td>415V – 1.25A</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) Standard Model: 7kg Auto &amp; Auto-Alternation Model: 7.7kg</p>	50Hz	60Hz	380V – 1.2 A	220V – 2.0A	400V – 1.2 A	380V – 1.1A	415V – 1.25A	440V – 1.0A	<p><b>Impeller</b> Vortex impeller made of glass-fiber reinforced PPO</p> <p>Solids Passage 50Hz – ϕ35mm 60Hz – ϕ35mm</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>
50Hz	60Hz								
380V – 1.2 A	220V – 2.0A								
400V – 1.2 A	380V – 1.1A								
415V – 1.25A	440V – 1.0A								
<p><b>Optional Accessories</b></p> <p><b>TOK 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 4m (with Shackles)</li> </ul>									
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SPECIFICATIONS	Model	50PU2.75S							
		PU-series 0.75kW, 1-phase							
<p><b>Type of Pump</b> Submersible vortex pump made of 304 stainless steel and resin 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> 50mm, 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, 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 – 5.5A</td> <td>110V – 9.0A</td> </tr> <tr> <td>230V – 5.4A</td> <td>220V – 5.0A</td> </tr> <tr> <td>240V – 5.3A</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) Standard Model: 8.9kg Automatic Model: 9.5kg</p>	50Hz	60Hz	220V – 5.5A	110V – 9.0A	230V – 5.4A	220V – 5.0A	240V – 5.3A		<p><b>Impeller</b> Vortex impeller made of glass-fiber reinforced PPO</p> <p>Solids Passage 50Hz – ϕ35mm 60Hz – ϕ35mm</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>
50Hz	60Hz								
220V – 5.5A	110V – 9.0A								
230V – 5.4A	220V – 5.0A								
240V – 5.3A									
<p><b>Optional Accessories</b></p> <p><b>TOK 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 4m (with Shackles)</li> </ul>									
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SPECIFICATIONS	Model	50PU2.75	
		PU-series 0.75kW, 3-phase	

**Type of Pump**

Submersible vortex pump made of 304 stainless steel and resin 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 & Connection**

50mm, Threaded Oval Flange

**Motor Output**

0.75kW

**Power Supply**

Three-phase

**Starting Method**

Direct on Line

**Motor**

Continuous-duty rated, dry-type induction motor

Insulation Class: E

Degree of Protection: IP68

No. of Poles & Speed (Synchronous Speed)

2-pole, 3000/3600min<sup>-1</sup> (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 2.0A	220V – 3.2A
400V – 1.9A	380V – 1.8A
415V – 1.9A	440V – 1.6A

**Power Cable**

Sheath: PVC

Standard Length: 6m

200 to 600V supply:

1 × 4 × 1.25mm<sup>2</sup>, O.D. 11.1mm

**Dry Weight (excluding cable)**

Standard Model: 8.3kg

Auto & Auto-Alternation Model: 9kg

**Impeller**

Vortex impeller made of glass-fiber reinforced PPO

Solids Passage

50Hz –  $\phi$ 35mm

60Hz –  $\phi$ 35mm

**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**

304 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 + Ceramic

**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

Liquid Paraffin (ISO VG32), 240ml

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

- Duckfoot Bend
- Guide Support
- Guide Hook
- Lifting Chain 4m (with Shackles)

SPECIFICATIONS	Model	80PU21.5							
		PU-series 1.5kW, 3-phase							
<p><b>Type of Pump</b> Submersible vortex pump made of 304 stainless steel and resin 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> 1.5kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Direct on Line</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E 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 – 4.1A</td> <td>220V – 6.6A</td> </tr> <tr> <td>400V – 4.0A</td> <td>380V – 3.9A</td> </tr> <tr> <td>415V – 4.0A</td> <td>440V – 3.6A</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) Standard Model: 16kg Auto &amp; Auto-Alternation Model: 16.9kg</p>	50Hz	60Hz	380V – 4.1A	220V – 6.6A	400V – 4.0A	380V – 3.9A	415V – 4.0A	440V – 3.6A	<p><b>Impeller</b> Vortex impeller made of glass-fiber reinforced PPO</p> <p>Solids Passage 50Hz – φ46mm 60Hz – φ46mm</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 + 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 Liquid Paraffin (ISO VG32), 500ml</p> <p><b>Motor Protection Device</b> A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.</p>
50Hz	60Hz								
380V – 4.1A	220V – 6.6A								
400V – 4.0A	380V – 3.9A								
415V – 4.0A	440V – 3.6A								
<p><b>Optional Accessories</b></p> <p><b>TOK 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> </ul>									
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SPECIFICATIONS	Model	PU-series							
	80PU22.2	2.2kW, 3-phase							
<p><b>Type of Pump</b> Submersible vortex pump made of 304 stainless steel and resin 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> 2.2kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Direct on Line</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E 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 – 5.1A</td> <td>220V – 8.5A</td> </tr> <tr> <td>400V – 5.1A</td> <td>380V – 4.9A</td> </tr> <tr> <td>415V – 5.1A</td> <td>440V – 4.3A</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) Standard Model: 22kg Auto &amp; Auto-Alternation Model: 23kg</p>	50Hz	60Hz	380V – 5.1A	220V – 8.5A	400V – 5.1A	380V – 4.9A	415V – 5.1A	440V – 4.3A	<p><b>Impeller</b> Vortex impeller made of glass-fiber reinforced PA+ABS</p> <p>Solids Passage 50Hz – φ46mm 60Hz – φ46mm</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 + 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 Liquid Paraffin (ISO VG32), 680ml</p> <p><b>Motor Protection Device</b> A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.</p>
50Hz	60Hz								
380V – 5.1A	220V – 8.5A								
400V – 5.1A	380V – 4.9A								
415V – 5.1A	440V – 4.3A								
<p><b>Optional Accessories</b></p> <p><b>TOK 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> </ul>									
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SPECIFICATIONS	Model	PU-series							
	80PU23.7	3.7kW, 3-phase							
<p><b>Type of Pump</b> Submersible vortex pump made of 304 stainless steel and resin 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> 3.7kW</p> <p><b>Power Supply</b> Three-phase</p> <p><b>Starting Method</b> Direct on Line</p> <p><b>Motor</b> Continuous-duty rated, dry-type induction motor</p> <p>Insulation Class: E 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 – 7.9A</td> <td>220V – 13.4A</td> </tr> <tr> <td>400V – 7.5A</td> <td>380V – 7.8A</td> </tr> <tr> <td>415V – 7.5A</td> <td>440V – 6.7A</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) Standard Model: 27kg Auto &amp; Auto-Alternation Model: 28kg</p>	50Hz	60Hz	380V – 7.9A	220V – 13.4A	400V – 7.5A	380V – 7.8A	415V – 7.5A	440V – 6.7A	<p><b>Impeller</b> Vortex impeller made of glass-fiber reinforced PA+ABS</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> 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 + 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 Liquid Paraffin (ISO VG32), 680ml</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 – 7.9A	220V – 13.4A								
400V – 7.5A	380V – 7.8A								
415V – 7.5A	440V – 6.7A								
<p><b>Optional Accessories</b></p> <p><b>TOK 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> </ul>									
TSURUMI MANUFACTURING CO., LTD.									

**DIMENSIONS**

**Model 40PU(A/W)2.15S to 50PU(A/W)2.75**

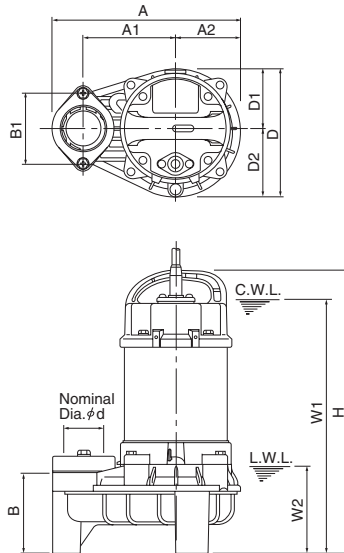
**PU-series**

**40·50mm**

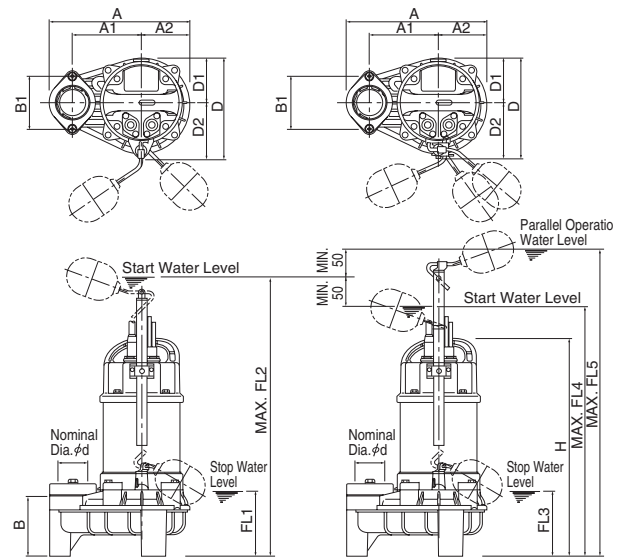
**Free Standing Type**

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

**Standard Model**



**Auto & Auto-Alternation Model**



**Standard Model**

Unit: mm

Model	d	A	A1	A2	B	B1	D	D1	D2	W1	W2	H
40PU2.15S	40	203	95	68	96	90	136	68	68	315	100	376
50PU2.15	40	203	95	68	96	90	136	68	68	315	100	376
40PU2.25S	40	236	115	81	102	90	162	76	86	325	110	360
40PU2.25	40	236	115	81	102	90	162	76	86	310	110	349
50PU2.4S	50	236	115	81	102	90	162	76	86	325	110	360
50PU2.4	50	236	115	81	102	90	162	76	86	325	110	360
50PU2.75S	50	236	115	81	102	90	162	76	86	345	110	380
50PU2.75	50	236	115	81	102	90	162	76	86	335	110	374

**Auto & Auto-Alternation Model**

Unit: mm

Model	d	A	A1	A2	B	B1	D	D1	D2	H	FL1	FL2	FL3	FL4	FL5
40PUA2.15S	40	203	95	68	96	90	176	68	108	376	100	596	—	—	—
40PUA2.15	40	203	95	68	96	90	176	68	108	376	100	596	—	—	—
40PUA2.25S	40	236	115	81	102	90	173	76	97	374	115	607	—	—	—
40PUA2.25	40	236	115	81	102	90	173	76	97	363	115	596	—	—	—
50PUA2.4S	50	236	115	81	102	90	173	76	97	374	115	607	—	—	—
50PUA2.4	50	236	115	81	102	90	173	76	97	374	115	607	—	—	—
50PUA2.75S	50	236	115	81	102	90	173	76	97	394	115	627	—	—	—
50PUA2.75	50	236	115	81	102	90	173	76	97	388	115	621	—	—	—
40PUW2.25S	40	236	115	81	102	90	173	76	97	374	—	—	115	557	657
40PUW2.25	40	236	115	81	102	90	173	76	97	363	—	—	115	546	646
50PUW2.4S	50	236	115	81	102	90	173	76	97	374	—	—	115	557	657
50PUW2.4	50	236	115	81	102	90	173	76	97	374	—	—	115	557	657
50PUW2.75	50	236	115	81	102	90	173	76	97	388	—	—	115	571	671

**DIMENSIONS**

Model **40PU(A/W)2.15S to 50PU(A/W)2.75**

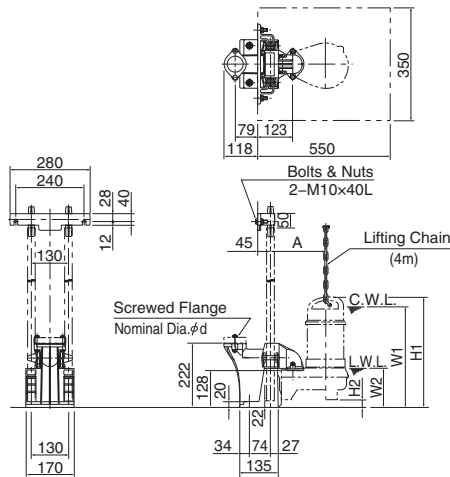
**PU-series**

**40·50mm**

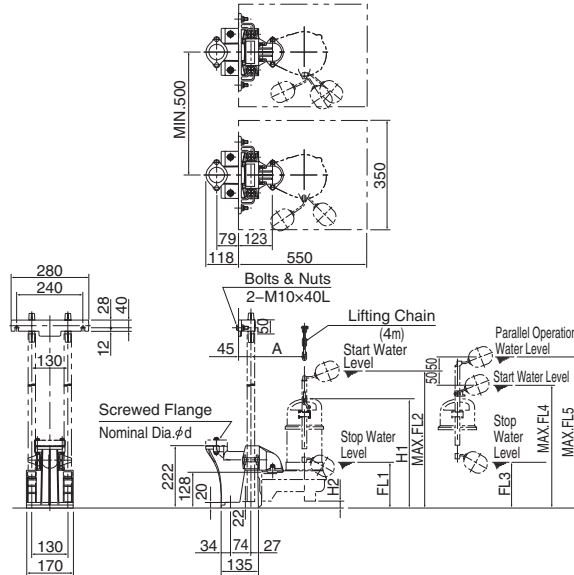
**Guide Rail Fitting Type: TOK Set**

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

**Standard Model**



**Auto & Auto-Alternation Model**



**Standard Model**

Unit: mm

Model	d	A	W1	W2	H1	H2
40PU2.15S	40	173	345	130	408	32
40PU2.15	40	173	345	130	408	32
40PU2.25S	40	193	350	135	386	26
40PU2.25	40	193	335	135	375	26
50PU2.4S	50	193	350	135	386	26
50PU2.4	50	193	350	135	386	26
50PU2.75S	50	193	365	135	406	26
50PU2.75	50	193	360	135	400	26

**Auto & Auto-Alternation Model**

Unit: mm

Model	d	A	H1	H2	FL1	FL2	FL3	FL4	FL5
40PUA2.15S	40	173	408	26	132	628	—	—	—
40PUA2.15	40	173	408	32	132	628	—	—	—
40PUA2.25S	40	193	400	26	141	633	—	—	—
40PUA2.25	40	193	389	26	141	622	—	—	—
50PUA2.4S	50	193	400	26	141	633	—	—	—
50PUA2.4	50	193	400	26	141	633	—	—	—
50PUA2.75S	50	193	420	26	141	653	—	—	—
50PUA2.75	50	193	414	26	141	647	—	—	—
40PUW2.25S	40	193	400	26	—	—	141	583	683
40PUW2.25	40	193	389	26	—	—	141	572	672
50PUW2.4S	50	193	400	26	—	—	141	583	683
50PUW2.4	50	193	400	26	—	—	141	583	683
50PUW2.75	50	193	414	26	—	—	141	597	697

**DIMENSIONS**

Model **80PU(A/W)21.5 to 80PU(A/W)23.7**

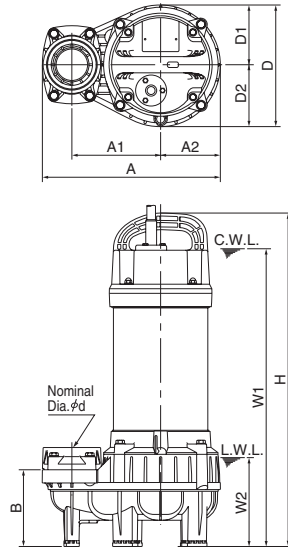
**PU-series**

**80mm**

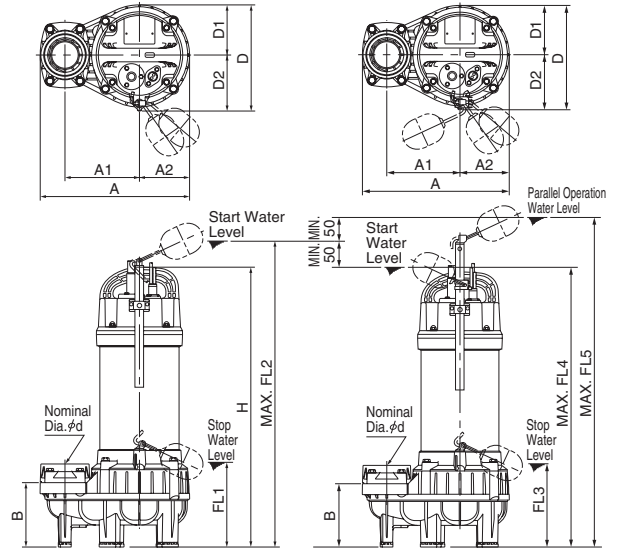
**Free Standing Type**

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

**Standard Model**



**Auto & Auto-Alternation Model**



**Standard Model**

Unit: mm

Model	d	A	A1	A2	B	D	D1	D2	W1	W2	H
80PU21.5	80	295	145	99	129	196	92	104	430	150	475
80PU22.2	80	311	155	105	134	212	104	108	520	155	583
80PU23.7	80	311	155	105	134	212	104	108	555	155	618

**Auto & Auto-Alternation Model**

Unit: mm

Model	d	A	A1	A2	B	D	D1	D2	H	FL1	FL2	FL3	FL4	FL5
80PUA21.5	80	295	145	99	129	206	92	114	475	178	663	—	—	—
80PUA22.2	80	311	155	105	134	221	104	117	583	176	791	—	—	—
80PUA23.7	80	311	155	105	134	221	104	117	618	176	826	—	—	—
80PUW21.5	50	295	145	99	129	206	92	114	475	—	—	178	613	713
80PUW22.2	80	311	155	105	134	221	104	117	583	—	—	176	741	841
80PUW23.7	80	311	155	105	134	221	104	117	618	—	—	176	776	876



## DIMENSIONS

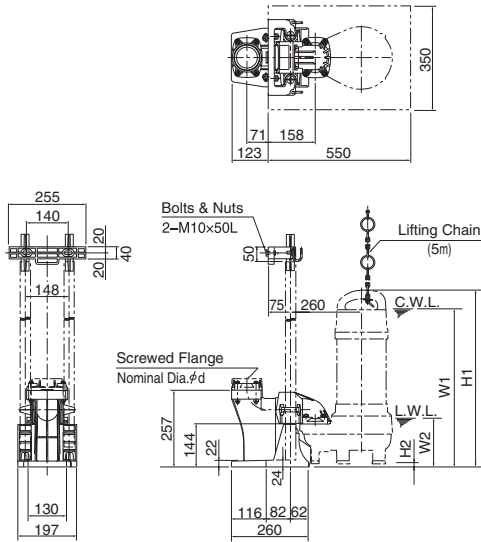
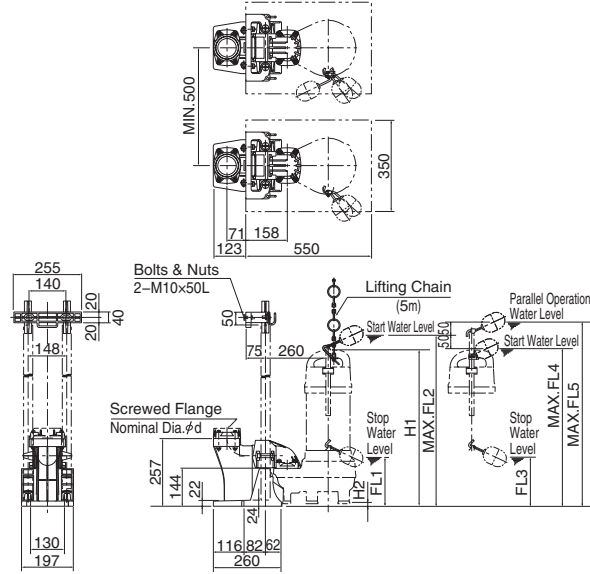
Model 80PU(A/W)21.5 to 80PU(A/W)23.7

PU-series

80mm

**Guide Rail Fitting Type: TOK Set**

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

**Standard Model**

**Auto & Auto-Alternation Model**

**Standard Model**

Unit: mm

Model	d	A	W1	W2	H1	H2
80PU21.5	80	238	445	165	490	15
80PU22.2	80	260	530	165	593	10
80PU23.7	80	260	565	165	628	10

**Auto & Auto-Alternation Model**

Unit: mm

Model	d	A	H1	H2	FL1	FL2	FL3	FL4	FL5
80PUA21.5	80	238	490	15	193	678	—	—	—
80PUA22.2	80	260	593	10	186	801	—	—	—
80PUA23.7	80	260	628	10	186	836	—	—	—
80PUW21.5	80	238	490	15	—	—	193	628	728
80PUW22.2	80	260	593	10	—	—	186	751	851
80PUW23.7	80	260	628	10	—	—	186	786	886