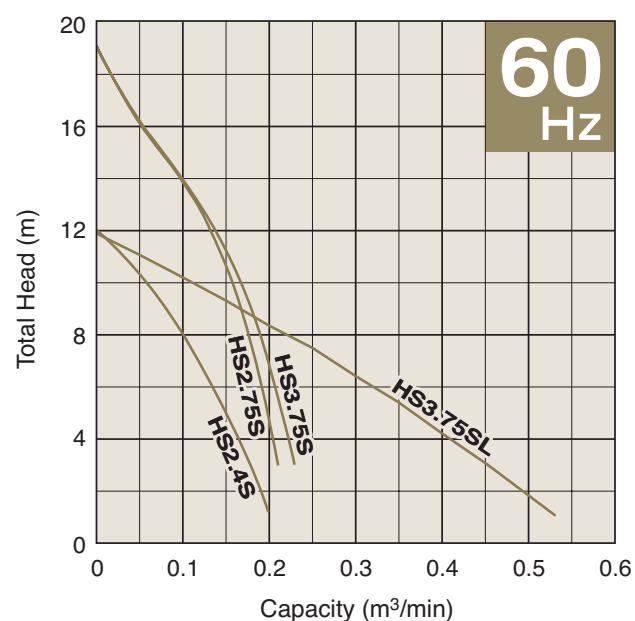
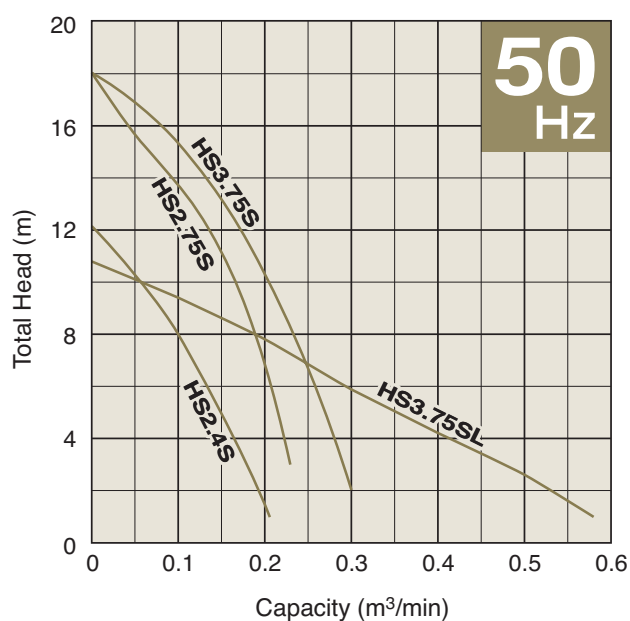


**Series:**
**HS**
**Discharge Bore:**
**50·80mm**
**Motor Output / Pole:**
**0.4·0.75kW / 2-pole**


The HS-series is a submersible single-phase portable drainage pump. Though it is a single-phase unit, the pump has the durability equivalent to three-phase drainage pumps, since the wear parts are made of abrasion-resistant materials. The side discharge, spiral design allows smoother passage of the sucked solid matters. The shaft-mounted agitator prevents the air lock that tends to take place on vortex or semi-vortex pumps.

**Selection Table**

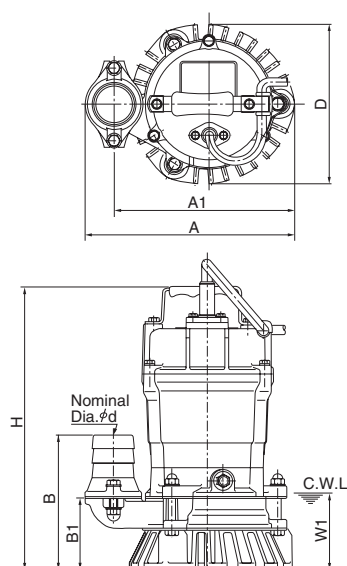
Model	Discharge Bore mm	Motor Output kW	Phase	Starting Method	Pole	Dry Weight kg
HS2.4S	50	0.4	1-phase	Capacitor Run	2	11.3
HS2.75S	50	0.75	1-phase	Capacitor Run	2	16.4
HS3.75S	80	0.75	1-phase	Capacitor Run	2	16.8
<del>HS3.75SL</del>	<del>80</del>	<del>0.75</del>	<del>1-phase</del>	<del>Capacitor Run</del>	<del>2</del>	<del>19.6</del>

**Performance Curves**


SPECIFICATIONS	Model	HS2.4S	HS-series								
			0.4kW, 1-phase								
<p><b>Type of Pump</b> Submersible drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p><b>Type of Fluid</b> Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 50mm, Hose Coupling</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><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>220V – 2.7A</td><td>110V – 5.4A</td></tr><tr><td>230V – 2.6A</td><td>220V – 2.7A</td></tr><tr><td>240V – 2.6A</td><td></td></tr></table> <p><b>Power Cable</b> Sheath: H07RN-F Standard Length: 10m 100 to 240V supply: 1 x 3 x 1.00mm<sup>2</sup>, O.D. 9.0mm</p> <p><b>Dry Weight</b> (excluding cable) 11.3kg</p>		50Hz	60Hz	220V – 2.7A	110V – 5.4A	230V – 2.6A	220V – 2.7A	240V – 2.6A		<p><b>Impeller</b> Vortex impeller deigned for “high-gap structure”, made of urethane rubber</p> <p>Solids Passage 50Hz – ϕ7mm 60Hz – ϕ7mm</p> <p><b>Agitator</b> Sintered alloy</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> 403 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 Turbine Oil (ISO VG32), 160ml</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 – 2.7A	110V – 5.4A										
230V – 2.6A	220V – 2.7A										
240V – 2.6A											
<div>Optional Accessory</div> <p>Male Threaded Coupling</p>											
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	HS2.75S	HS-series
			0.75kW, 1-phase
<b>Type of Pump</b> Submersible drainage pump for construction and foundation works, floodwater drainage, etc.			<b>Impeller</b> Vortex impeller deigned for “high-gap structure”, made of urethane rubber
<b>Type of Fluid</b> Stormwater, groundwater, wash water, and sand-carrying water			Solids Passage 50Hz – ϕ7mm 60Hz – ϕ7mm
Temperature: 0 to 40°C			<b>Agitator</b> Sintered alloy
<b>Discharge Bore &amp; Connection</b> 50mm, Hose Coupling			<b>Cable Entry with Anti-Wicking Block</b> Watertight cable entry with strain-relief device. The anti-wicking block prevents water incursion due to capillary action should the power cable be damaged or the end submerged.
<b>Motor Output</b> 0.75kW			<b>Bearing</b> Permanently lubricated, deep-groove, double-shielded C3 ball bearings
<b>Power Supply</b> Single-phase			<b>Shaft</b> 403 stainless steel
<b>Starting Method</b> Capacitor Run			<b>Shaft Seal (Mechanical Seal)</b> Furnished with a double-face mechanical seal located in oil chamber. Both upper and lower seal faces always run in a clean environment.
<b>Motor</b> Continuous-duty rated, dry-type induction motor			Upper Seal Face: Ceramic + Carbon Lower Seal Face: SiC + Ceramic
Insulation Class: E Degree of Protection: IP68			<b>V-Ring</b> Used as a “Dust Seal”, it protects the mechanical seal from abrasive particles.
No. of Poles & Speed (Synchronous Speed) 2-pole, 3000/3600min <sup>-1</sup> (50/60Hz)			<b>OIL LIFTER</b> Equipped in oil chamber. It forcibly supplies lubricating oil to the mechanical seal and continues to supply the oil to the upper seal faces even if lubricant falls below the rated volume.
Power Supply Voltages & Rated Currents 50Hz                      60Hz 220V – 4.9A              110V – 10.0A 230V – 4.8A              220V – 5.1A 240V – 4.7A			Type of Lubricating Oil & Volume Turbine Oil (ISO VG32), 160ml
<b>Power Cable</b> Sheath: H07RN-F Standard Length: 10m 200 to 240V supply: 1 x 3 x 1.00mm <sup>2</sup> , O.D. 9.0mm			<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.
<b>Dry Weight</b> (excluding cable) 16.4kg			
<b>Optional Accessory</b>  Male Threaded Coupling			
TSURUMI MANUFACTURING CO., LTD.			

SPECIFICATIONS	Model	HS3.75S	HS-series								
			0.75kW, 1-phase								
<p><b>Type of Pump</b> Submersible drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p><b>Type of Fluid</b> Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 80mm, Hose Coupling</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><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>220V – 4.9A</td><td>110V – 10.0A</td></tr><tr><td>230V – 4.8A</td><td>220V – 5.1A</td></tr><tr><td>240V – 4.7A</td><td></td></tr></table> <p><b>Power Cable</b> Sheath: H07RN-F Standard Length: 10m 200 to 240V supply: 1 x 3 x 1.00mm<sup>2</sup>, O.D. 9.0mm</p> <p><b>Dry Weight</b> (excluding cable) 16.8kg</p>		50Hz	60Hz	220V – 4.9A	110V – 10.0A	230V – 4.8A	220V – 5.1A	240V – 4.7A		<p><b>Impeller</b> Vortex impeller deigned for “high-gap structure”, made of urethane rubber</p> <p>Solids Passage 50Hz – ϕ7mm 60Hz – ϕ7mm</p> <p><b>Agitator</b> Sintered alloy</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> 403 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>V-Ring</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), 160ml</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 – 4.9A	110V – 10.0A										
230V – 4.8A	220V – 5.1A										
240V – 4.7A											
<div>Optional Accessory</div> <p>Male Threaded Coupling</p>											
TSURUMI MANUFACTURING CO., LTD.											

**DIMENSIONS**
**Model**
**HS2.4S to HS3.75SL**
**HS-series**
**50・80mm**


C. W. L. : Continuous Running Water Level

Unit: mm

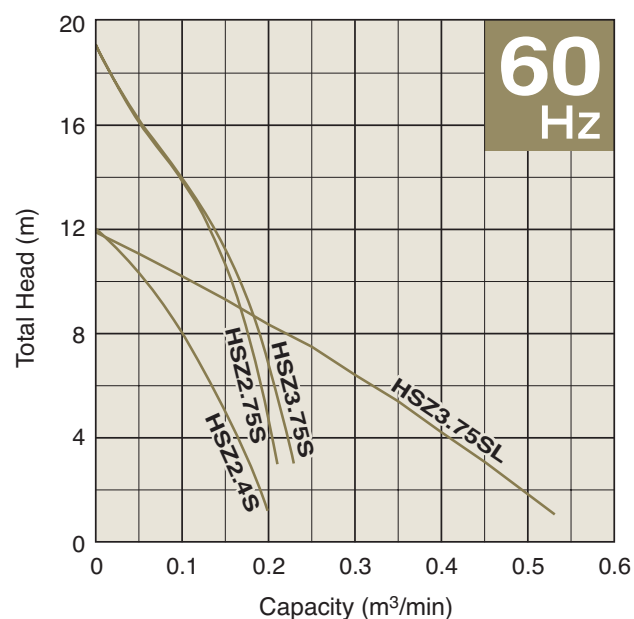
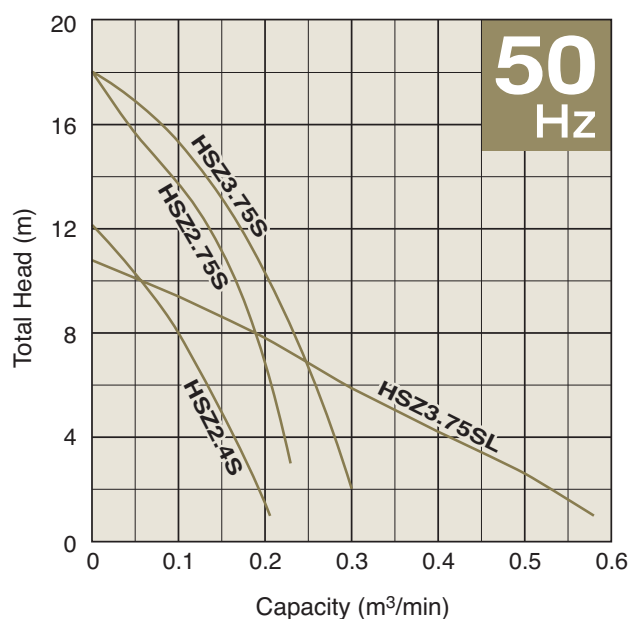
Model	d	A	A1	B	B1	D	H	W1
HS2.4S	50	241	207	158	84	184	328	90
HS2.75S	50	285	233	218	110	184	394	90
HS3.75S	80	285	233	218	110	184	394	90
HS3.75SL	80	288	233	249	141	184	425	120

**Series:**
**HSZ**
**Discharge Bore:**
**50·80mm**
**Motor Output / Pole:**
**0.4·0.75kW / 2-pole**


The HSZ-series is a submersible single-phase automatic portable drainage pump. The automatic operation, controlled by a single float switch, reduces power consumption and extends operating life. Though the pump is a single-phase unit, it has the durability equivalent to three-phase drainage pumps, since the wear parts are made of abrasion-resistant materials. The side discharge, spiral design allows smoother passage of the sucked solid matters. The shaft-mounted agitator prevents the air lock that tends to take place on vortex or semi-vortex pumps.

**Selection Table**

Model	Discharge Bore mm	Motor Output kW	Phase	Starting Method	Pole	Dry Weight kg
HSZ2.4S	50	0.4	1-phase	Capacitor Run	2	11.3
HSZ2.75S	50	0.75	1-phase	Capacitor Run	2	16.4
HSZ3.75S	80	0.75	1-phase	Capacitor Run	2	16.8
<del>HSZ3.75SL</del>	<del>80</del>	<del>0.75</del>	<del>1-phase</del>	<del>Capacitor Run</del>	<del>2</del>	<del>19.6</del>

**Performance Curves**


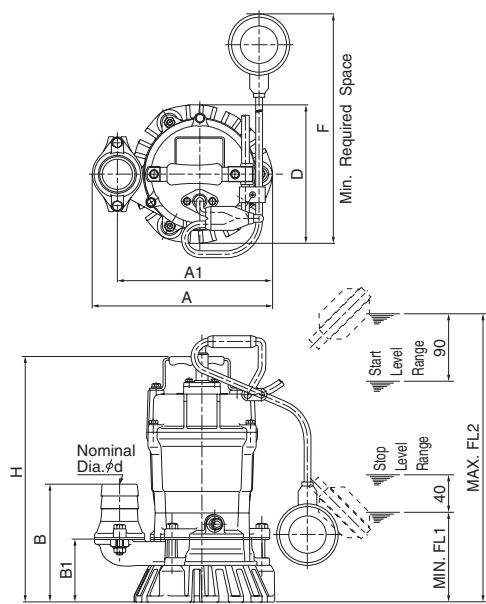
SPECIFICATIONS	Model	HSZ2.4S	HSZ-series								
			0.4kW, 1-phase								
<p><b>Type of Pump</b> Submersible automatic drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p><b>Automatic Control Device</b> Float Switch</p> <p><b>Type of Fluid</b> Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 50mm, Hose Coupling</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><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>220V – 2.7A</td><td>110V – 5.4A</td></tr><tr><td>230V – 2.6A</td><td>220V – 2.7A</td></tr><tr><td>240V – 2.6A</td><td></td></tr></table> <p><b>Power Cable</b> Sheath: H07RN-F Standard Length: 10m 100 to 240V supply: 1 x 3 x 1.00mm<sup>2</sup>, O.D. 9.0mm</p> <p><b>Dry Weight</b> (excluding cable) 11.3kg</p>		50Hz	60Hz	220V – 2.7A	110V – 5.4A	230V – 2.6A	220V – 2.7A	240V – 2.6A		<p><b>Impeller</b> Vortex impeller deigned for “high-gap structure”, made of urethane rubber</p> <p>Solids Passage 50Hz – ϕ7mm 60Hz – ϕ7mm</p> <p><b>Agitator</b> Sintered alloy</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> 403 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 Turbine Oil (ISO VG32), 160ml</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 – 2.7A	110V – 5.4A										
230V – 2.6A	220V – 2.7A										
240V – 2.6A											
<div>Optional Accessory</div> <p>Male Threaded Coupling</p>											
TSURUMI MANUFACTURING CO., LTD.											

SPECIFICATIONS	Model	HSZ2.75S	HSZ-series							
			0.75kW, 1-phase							
<p><b>Type of Pump</b> Submersible automatic drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p><b>Automatic Control Device</b> Float Switch</p> <p><b>Type of Fluid</b> Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 50mm, Hose Coupling</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><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>220V – 4.9A</td><td>110V – 10.0A</td></tr><tr><td>230V – 4.8A</td><td>220V – 5.1A</td></tr><tr><td>240V – 4.7A</td><td></td></tr></table> <p><b>Power Cable</b> Sheath: H07RN-F Standard Length: 10m 200 to 240V supply: 1 x 3 x 1.0mm<sup>2</sup>, O.D. 9.0mm</p> <p><b>Dry Weight</b> (excluding cable) 16.4kg</p>		50Hz	60Hz	220V – 4.9A	110V – 10.0A	230V – 4.8A	220V – 5.1A	240V – 4.7A		<p><b>Impeller</b> Vortex impeller deigned for “high-gap structure”, made of urethane rubber</p> <p>Solids Passage 50Hz – ϕ7mm 60Hz – ϕ7mm</p> <p><b>Agitator</b> Sintered alloy</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> 403 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>V-Ring</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), 160ml</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 – 4.9A	110V – 10.0A									
230V – 4.8A	220V – 5.1A									
240V – 4.7A										
<p><b>Optional Accessory</b></p> <p><b>Male Threaded Coupling</b></p>										
TSURUMI MANUFACTURING CO., LTD.										



SPECIFICATIONS	Model	HSZ3.75S	HSZ-series								
			0.75kW, 1-phase								
<p><b>Type of Pump</b> Submersible automatic drainage pump for construction and foundation works, floodwater drainage, etc.</p> <p><b>Automatic Control Device</b> Float Switch</p> <p><b>Type of Fluid</b> Stormwater, groundwater, wash water, and sand-carrying water</p> <p>Temperature: 0 to 40°C</p> <p><b>Discharge Bore &amp; Connection</b> 80mm, Hose Coupling</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><tr><td>50Hz</td><td>60Hz</td></tr><tr><td>220V – 4.9A</td><td>110V – 10.0A</td></tr><tr><td>230V – 4.8A</td><td>220V – 5.1A</td></tr><tr><td>240V – 4.7A</td><td></td></tr></table> <p><b>Power Cable</b> Sheath: H07RN-F Standard Length: 10m 200 to 240V supply: 1 x 3 x 1.00mm<sup>2</sup>, O.D. 9.0mm</p> <p><b>Dry Weight</b> (excluding cable) 16.8kg</p>		50Hz	60Hz	220V – 4.9A	110V – 10.0A	230V – 4.8A	220V – 5.1A	240V – 4.7A		<p><b>Impeller</b> Vortex impeller deigned for “high-gap structure”, made of urethane rubber</p> <p>Solids Passage 50Hz – ϕ7mm 60Hz – ϕ7mm</p> <p><b>Agitator</b> Sintered alloy</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> 403 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>V-Ring</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), 160ml</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 – 4.9A	110V – 10.0A										
230V – 4.8A	220V – 5.1A										
240V – 4.7A											
<p><b>Optional Accessory</b></p> <p><b>Male Threaded Coupling</b></p>											
TSURUMI MANUFACTURING CO., LTD.											

DIMENSIONS	Model	HSZ2.4S to HSZ3.75SL	HSZ-series
			50・80mm



Unit: mm

Model	d	A	A1	B	B1	D	F	H	FL1	FL2
HSZ2.4S	50	241	207	158	84	184	340	328	120	385
HSZ2.75S	50	285	233	218	110	184	370	394	150	475
HSZ3.75S	80	285	233	218	110	184	370	394	150	475
HSZ3.75SL	80	288	233	249	141	184	350	425	150	475