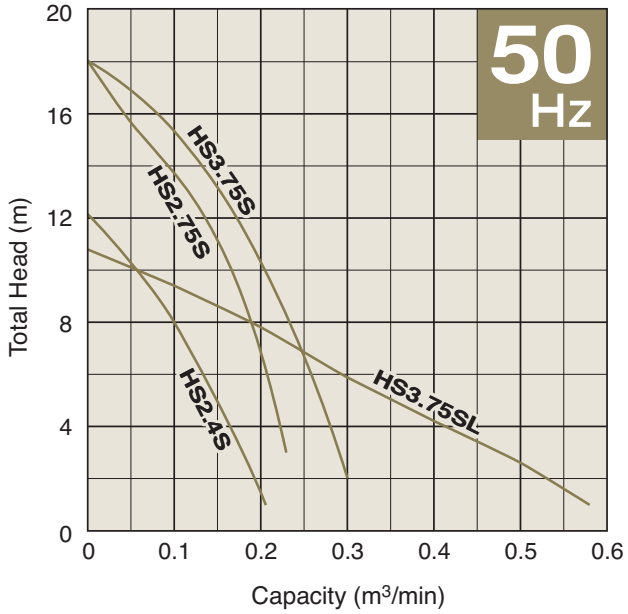
Series:	Discharge Bore:	Motor Output / Pole:
HS	50·80mm	0.4·0.75kW / 2-pole

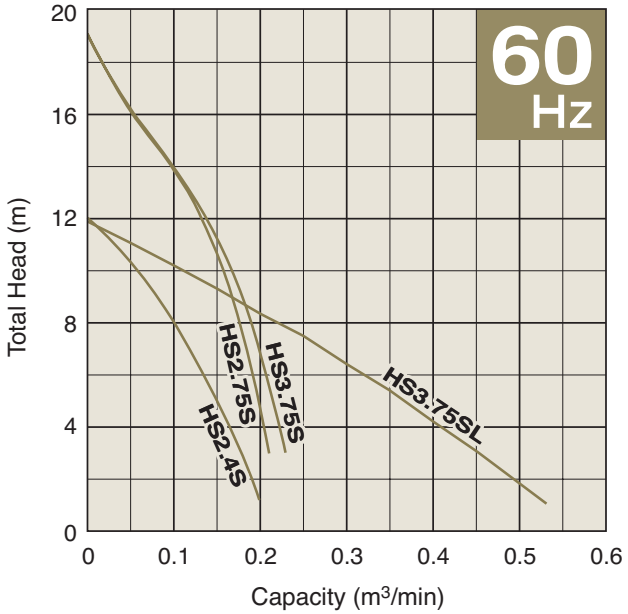
The HS-series is a submersible single-phase portable drainage pump. Though it is a single-phase unit, the pump has the durability equivalent to three-phase drainage pumps, since the wear parts are made of abrasion-resistant materials. The side discharge, spiral design allows smoother passage of the sucked 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
~~HS3.75SL~~	~~80~~	~~0.75~~	~~1-phase~~	~~Capacitor Run~~	~~2~~	~~19.6~~

Performance Curves





SPECIFICATIONS	Model	HS2.4S	HS-series 0.4kW, 1-phase

Type of Pump
Submersible drainage pump for construction and foundation works, floodwater drainage, etc.

Type of Fluid
Stormwater, groundwater, wash water, and sand-carrying water

Temperature: 0 to 40°C

Discharge Bore & Connection
50mm, Female BSPTHose Coupling

Motor Output
0.4kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
220V – 2.7A	110V – 5.4A
230V – 2.6A	220V – 2.7A
240V – 2.6A	

Power Cable
Sheath: H07RN-F
Standard Length: 10m
100 to 240V supply:
1 x 3 x 1.00mm^2, O.D. 9.0mm

Dry Weight (excluding cable)
11.3kg

Impeller
Vortex impeller deigned for "high-gap structure", made of urethane rubber

Solids Passage
50Hz – ϕ7mm
60Hz – ϕ7mm

Agitator
Sintered alloy

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
403 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
Turbine Oil (ISO VG32), 160ml

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 Accessory

Male Threaded Coupling

SPECIFICATIONS	Model	HS2.75S	HS-series 0.75kW, 1-phase

Type of Pump
Submersible drainage pump for construction and foundation works, floodwater drainage, etc.

Type of Fluid
Stormwater, groundwater, wash water, and sand-carrying water

Temperature: 0 to 40°C

Discharge Bore & Connection
50mm, F Female BSPT with Hose Coupling

Motor Output
0.75kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
220V – 4.9A	110V – 10.0A
230V – 4.8A	220V – 5.1A
240V – 4.7A	

Power Cable
Sheath: H07RN-F
Standard Length: 10m
200 to 240V supply:
1 x 3 x 1.00mm^2, O.D. 9.0mm

Dry Weight (excluding cable)
16.4kg

Impeller
Vortex impeller deigned for "high-gap structure", made of urethane rubber

Solids Passage
50Hz – ϕ7mm
60Hz – ϕ7mm

Agitator
Sintered alloy

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
403 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

V-Ring
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), 160ml

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 Accessory

Male Threaded Coupling

SPECIFICATIONS	Model	HS3.75S	HS-series 0.75kW, 1-phase

Type of Pump
Submersible drainage pump for construction and foundation works, floodwater drainage, etc.

Type of Fluid
Stormwater, groundwater, wash water, and sand-carrying water

Temperature: 0 to 40°C

Discharge Bore & Connection
80mm, Female BSPT with Hose Coupling

Motor Output
0.75kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
220V – 4.9A	110V – 10.0A
230V – 4.8A	220V – 5.1A
240V – 4.7A	

Power Cable
Sheath: H07RN-F
Standard Length: 10m
200 to 240V supply:
1 x 3 x 1.00mm^2, O.D. 9.0mm

Dry Weight (excluding cable) 16.8kg

Impeller
Vortex impeller deigned for "high-gap structure", made of urethane rubber

Solids Passage
50Hz – ϕ7mm
60Hz – ϕ7mm

Agitator
Sintered alloy

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
403 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

V-Ring
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), 160ml

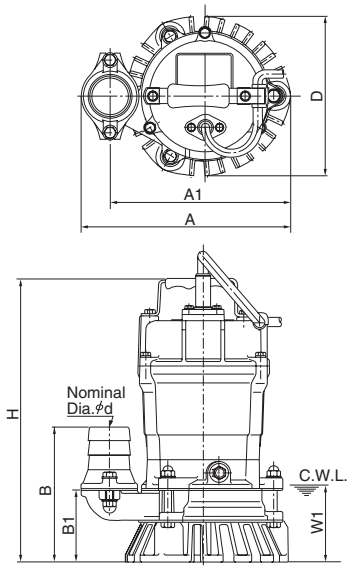
Motor Protection Device
A circle thermal protector built in the motor housing. Directly cuts the motor circuit if excessive heat builds up or an overcurrent condition occurs in the motor.

Optional Accessory

Male Threaded Coupling

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

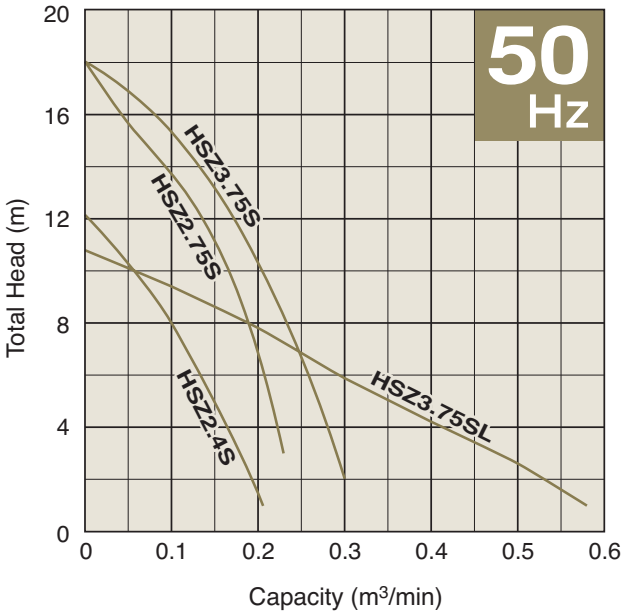
Series:	Discharge Bore:	Motor Output / Pole:
HSZ	50·80mm	0.4·0.75kW / 2-pole

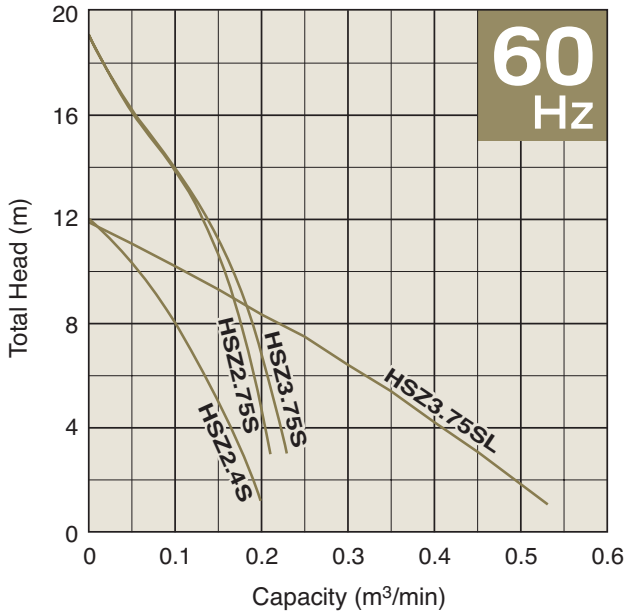
The HSZ-series is a submersible single-phase automatic portable drainage pump. The automatic operation, controlled by a single float switch, reduces power consumption and extends operating life. Though the pump is a single-phase unit, it has the durability equivalent to three-phase drainage pumps, since 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
~~HSZ3.75SL~~	~~80~~	~~0.75~~	~~1-phase~~	~~Capacitor Run~~	~~2~~	~~19.6~~

Performance Curves





SPECIFICATIONS	Model	HSZ2.4S	HSZ-series 0.4kW, 1-phase

Type of Pump
Submersible automatic drainage pump for construction and foundation works, floodwater drainage, etc.

Automatic Control Device
Float Switch

Type of Fluid
Stormwater, groundwater, wash water, and sand-carrying water

Temperature: 0 to 40°C

Discharge Bore & Connection
50mm, Female BSPT with Hose Coupling

Motor Output
0.4kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
220V – 2.7A	110V – 5.4A
230V – 2.6A	220V – 2.7A
240V – 2.6A	

Power Cable
Sheath: H07RN-F
Standard Length: 10m
100 to 240V supply:
1 x 3 x 1.00mm^2, O.D. 9.0mm

Dry Weight (excluding cable)
11.3kg

Impeller
Vortex impeller deigned for "high-gap structure", made of urethane rubber

Solids Passage
50Hz – ϕ7mm
60Hz – ϕ7mm

Agitator
Sintered alloy

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
403 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
Turbine Oil (ISO VG32), 160ml

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 Accessory

Male Threaded Coupling

SPECIFICATIONS	Model	HSZ2.75S	HSZ-series
			0.75kW, 1-phase

Type of Pump
Submersible automatic drainage pump for construction and foundation works, floodwater drainage, etc.

Automatic Control Device
Float Switch

Type of Fluid
Stormwater, groundwater, wash water, and sand-carrying water

Temperature: 0 to 40°C

Discharge Bore & Connection
50mm, Female BSPT with Hose Coupling

Motor Output
0.75kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
220V – 4.9A	110V – 10.0A
230V – 4.8A	220V – 5.1A
240V – 4.7A	

Power Cable
Sheath: H07RN-F
Standard Length: 10m
200 to 240V supply:
1 x 3 x 1.0mm^2, O.D. 9.0mm

Dry Weight (excluding cable) 16.4kg

Impeller
Vortex impeller deigned for "high-gap structure", made of urethane rubber

Solids Passage
50Hz – ϕ7mm
60Hz – ϕ7mm

Agitator
Sintered alloy

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
403 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

V-Ring
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), 160ml

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 Accessory

Male Threaded Coupling

SPECIFICATIONS	Model	HSZ3.75S	HSZ-series
			0.75kW, 1-phase

Type of Pump
Submersible automatic drainage pump for construction and foundation works, floodwater drainage, etc.

Automatic Control Device
Float Switch

Type of Fluid
Stormwater, groundwater, wash water, and sand-carrying water

Temperature: 0 to 40°C

Discharge Bore & Connection
80mm, Female BSPT with Hose Coupling

Motor Output
0.75kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
220V – 4.9A	110V – 10.0A
230V – 4.8A	220V – 5.1A
240V – 4.7A	

Power Cable
Sheath: H07RN-F
Standard Length: 10m
200 to 240V supply:
1 x 3 x 1.00mm^2, O.D. 9.0mm

Dry Weight (excluding cable)
16.8kg

Impeller
Vortex impeller deigned for "high-gap structure", made of urethane rubber

Solids Passage
50Hz – ϕ7mm
60Hz – ϕ7mm

Agitator
Sintered alloy

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
403 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

V-Ring
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.

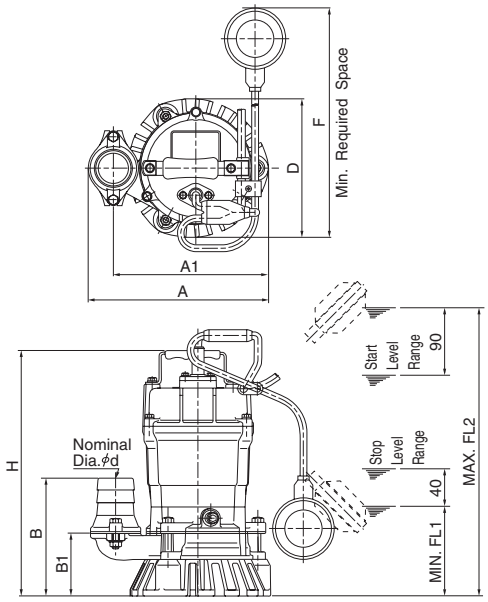
Type of Lubricating Oil & Volume
Turbine Oil (ISO VG32), 160ml

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 Accessory

Male Threaded Coupling

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