Series:	Discharge Bore:	Motor Output / Pole:
GSZ-4	150 - 250mm	37 - 150kW / 4-pole

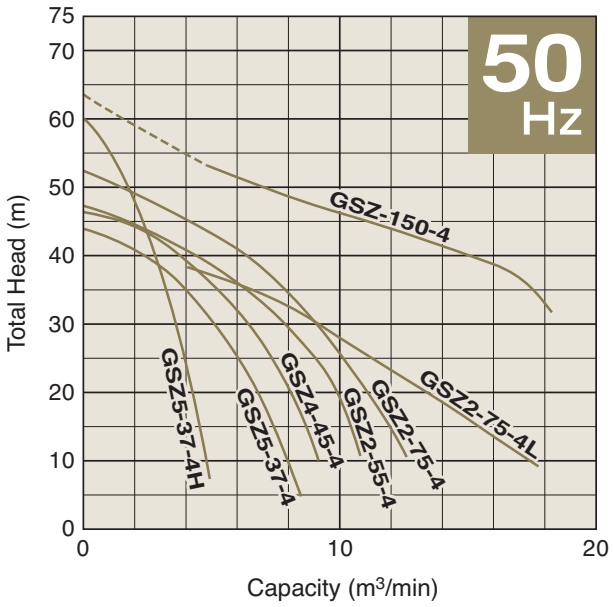
The GSZ-4-series is a submersible three-phase cast iron high head and high volume heavy-duty drainage pump driven by a 4-pole motor. The side discharge, spiral design allows smoother passage of the sucked solid matters. The motor is cooled by a water jacket that assures efficient motor cooling even when it operates with its motor exposed to air. The pump incorporates seal pressure relief ports that prevent the pumping pressure from applying to the shaft seal.

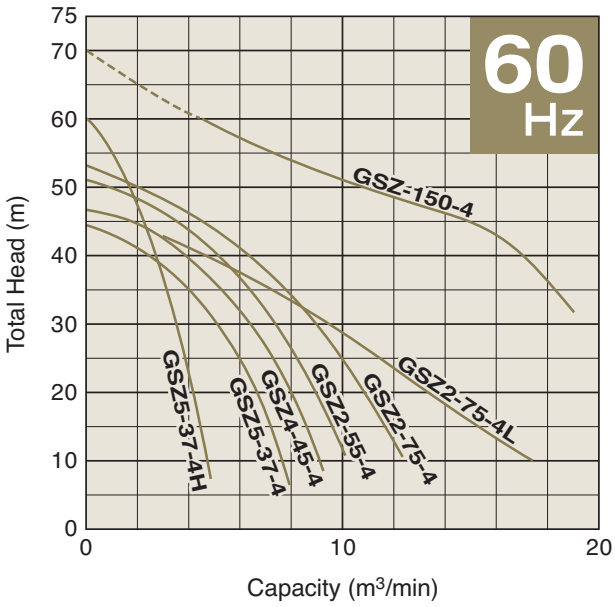
Selection Table

Model	Discharge Bore mm	Motor Output kW	Phase	Starting Method	Pole	Dry Weight kg
GSZ5-37-4H	150	37	3-phase	Star-Delta	4	595
GSZ5-37-4	200	37	3-phase	Star-Delta	4	566
GSZ4-45-4	200	45	3-phase	Star-Delta	4	583
GSZ2-55-4	250	55	3-phase	Star-Delta	4	1091
GSZ2-75-4	250	75	3-phase	Star-Delta	4	1141
GSZ2-75-4L	250	75	3-phase	Star-Delta	4	1200
GSZ-150-4	250	150	3-phase	Star-Delta	4	2315

Performance Curves

It is not recommended to operate the unit continuously along the dashed curve.





SPECIFICATIONS	Model	GSZ5-37-4H	GSZ-4-series 37kW, 3-phase

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

Water Jacket
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.

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

Temperature: 0 to 40°C

Discharge Bore & Connection
150mm, JIS 10kg/cm² Flange

Motor Output
37kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 80A	220V – 140A
400V – 76A	380V – 81A
415V – 73A	440V – 72A

Power Cable
Standard Length: 10m
380 to 600V supply:
1 x 4 x 14mm², O.D. 25.6mm, Chloroprene rubber
1 x 3 x 14mm², O.D. 25.6mm, Chloroprene rubber
1 x 2 x 1.25mm², O.D. 9.6mm, PVC
200 to 240V supply:
1 x 4 x 22mm², O.D. 31.6mm, Chloroprene rubber
1 x 3 x 22mm², O.D. 27.1mm, Chloroprene rubber
1 x 2 x 1.25mm², O.D. 9.6mm, PVC

Dry Weight (excluding cable)
595kg

Impeller
Closed impeller made of 304 stainless steel casting

Solids Passage
50Hz – ϕ10mm
60Hz – ϕ10mm

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

Pressure Relief Ports
Protect the mechanical seal against excessive pressure, and also protect the seal faces from abrasive particles by drawing the particles away.

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), 8400ml

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.

Special Specifications

High Temperature Liquids Version (60°C)

SPECIFICATIONS	Model	GSZ5-37-4	GSZ-4-series 37kW, 3-phase

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

Water Jacket
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.

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

Temperature: 0 to 40°C

Discharge Bore & Connection
200mm, JIS 10kg/cm² Flange

Motor Output
37kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 80A	220V – 140A
400V – 76A	380V – 81A
415V – 73A	440V – 72A

Power Cable
Standard Length: 10m
380 to 600V supply:
1 x 4 x 14mm², O.D. 25.6mm, Chloroprene rubber
1 x 3 x 14mm², O.D. 25.6mm, Chloroprene rubber
1 x 2 x 1.25mm², O.D. 9.6mm, PVC
200 to 240V supply:
1 x 4 x 22mm², O.D. 31.6mm, Chloroprene rubber
1 x 3 x 22mm², O.D. 27.1mm, Chloroprene rubber
1 x 2 x 1.25mm², O.D. 9.6mm, PVC

Dry Weight (excluding cable)
566kg

Impeller
Closed impeller made of high-chromium cast iron

Solids Passage
50Hz – φ25mm
60Hz – φ25mm

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

Pressure Relief Ports
Protect the mechanical seal against excessive pressure, and also protect the seal faces from abrasive particles by drawing the particles away.

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), 8400ml

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.

Special Specifications

High Temperature Liquids Version (60°C)

SPECIFICATIONS	Model	GSZ4-45-4	GSZ-4-series
			45kW, 3-phase

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

Water Jacket
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.

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

Temperature: 0 to 40°C

Discharge Bore & Connection
200mm, JIS 10kg/cm² Flange

Motor Output
45kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 92A	380V – 89A
400V – 87A	440V – 78A
415V – 84A	

Power Cable
Standard Length: 10m
380 to 600V supply:
1 x 4 x 22mm², O.D. 31.6mm, Chloroprene rubber
1 x 3 x 22mm², O.D. 27.1mm, Chloroprene rubber
1 x 2 x 1.25mm², O.D. 9.6mm, PVC

Dry Weight (excluding cable)
583kg

Impeller
Closed impeller made of high-chromium cast iron

Solids Passage
50Hz – ϕ25mm
60Hz – ϕ25mm

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

Pressure Relief Ports
Protect the mechanical seal against excessive pressure, and also protect the seal faces from abrasive particles by drawing the particles away.

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), 8000ml

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.

Special Specifications

High Temperature Liquids Version (60°C)

SPECIFICATIONS	Model	GSZ2-55-4	GSZ-4-series 55kW, 3-phase

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

Water Jacket
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.

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

Temperature: 0 to 40°C

Discharge Bore & Connection
250mm, JIS 10kg/cm² Flange

Motor Output
55kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 114A	380V – 111A
400V – 108A	440V – 95A
415V – 105A	

Power Cable
Sheath: Chloroprene rubber
Standard Length: 10m
380 to 600V supply:
1 x (3 x 30mm² / 1 x 14mm² / 2 x 2mm²) O.D. 35.9mm
1 x 3 x 30mm², O.D. 35.9mm

Dry Weight (excluding cable)
1091kg

Special Specifications

High Temperature Liquids Version (60°C)

Impeller
Closed impeller made of high-chromium cast iron

Solids Passage
50Hz – ϕ25mm
60Hz – ϕ25mm

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
Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing
Lower: Duplex angular contact ball bearing mounted back-to-back

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

Labyrinth Ring
Made of 403 stainless steel, equipped to provide a better countermeasure against wear caused by high pressure generated in the casing.

Pressure Relief Ports
Protect the mechanical seal against excessive pressure, and also protect the seal faces from abrasive particles by drawing the particles away.

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), 9400ml

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.

Leakage Sensor
Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.

SPECIFICATIONS	Model	GSZ2-75-4	GSZ-4-series 75kW, 3-phase

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

Water Jacket
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.

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

Temperature: 0 to 40°C

Discharge Bore & Connection
250mm, JIS 10kg/cm² Flange

Motor Output
75kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 164A	380V – 154A
400V – 152A	440V – 133A
415V – 150A	

Power Cable
Sheath: Chloroprene rubber
Standard Length: 10m
380 to 600V supply:
1 x (3 x 30mm² / 1 x 14mm² / 2 x 2mm²) O.D. 35.9mm
1 x 3 x 30mm², O.D. 35.9mm

Dry Weight (excluding cable)
1141kg

Special Specifications

High Temperature Liquids Version (60°C)

Impeller
50Hz – Closed impeller made of 304 stainless steel casting
60Hz – Closed impeller made of high-chromium cast iron

Solids Passage
50Hz – ϕ25mm
60Hz – ϕ25mm

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
Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing
Lower: Duplex angular contact ball bearing mounted back-to-back

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

Labyrinth Ring
Made of 403 stainless steel, equipped to provide a better countermeasure against wear caused by high pressure generated in the casing.

Pressure Relief Ports
Protect the mechanical seal against excessive pressure, and also protect the seal faces from abrasive particles by drawing the particles away.

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), 9400ml

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.

Leakage Sensor
Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.

SPECIFICATIONS	Model	GSZ2-75-4L	GSZ-4-series
			75kW, 3-phase

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

Water Jacket
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.

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

Temperature: 0 to 40°C

Discharge Bore & Connection
250mm, JIS 10kg/cm^2 Flange

Motor Output
75kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 164A	380V – 154A
400V – 152A	440V – 133A
415V – 150A	

Power Cable
Sheath: Chloroprene rubber
Standard Length: 10m
380 to 600V supply:
1 x (3 x 30mm^2 / 1 x 14mm^2 / 2 x 2mm^2) O.D. 35.9mm
1 x 3 x 30mm^2, O.D. 35.9mm

Dry Weight (excluding cable)
1200kg

Impeller
Closed impeller made of high-chromium cast iron

Solids Passage
50Hz – ϕ25mm
60Hz – ϕ25mm

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
Upper: Permanently lubricated, deep-groove, double-shielded C3 ball bearing
Lower: Duplex angular contact ball bearing mounted back-to-back

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

Labyrinth Ring
Made of 403 stainless steel, equipped to provide a better countermeasure against wear caused by high pressure generated in the casing.

Pressure Relief Ports
Protect the mechanical seal against excessive pressure, and also protect the seal faces from abrasive particles by drawing the particles away.

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), 9400ml

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.

Leakage Sensor
Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.

SPECIFICATIONS	Model	GSZ-150-4	GSZ-4-series 150kW, 3-phase

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

Water Jacket
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.

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

Temperature: 0 to 40°C

Discharge Bore & Connection
250mm, JIS 10kg/cm^2 Flange

Motor Output
150kW

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^{-1} (50/60Hz)

Power Supply Voltages & Rated Currents

50Hz	60Hz
380V – 307A	380V – 307A
400V – 292A	440V – 265A
415V – 281A	

Power Cable
Sheath: Chloroprene rubber
Standard Length: 10m
380 to 600V supply:
1 x (3 x 80mm^2 / 1 x 38mm^2 / 3 x 2mm^2) O.D. 53.5mm
1 x 3 x 80mm^2, O.D. 48.9mm

Dry Weight (excluding cable)
2315kg

Impeller
Closed impeller made of high-chromium cast iron

Solids Passage
50Hz – ϕ25mm
60Hz – ϕ25mm

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
Upper: Cylindrical roller bearing
Lower: Duplex angular contact ball bearing mounted back-to-back

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: Tungsten Carbide + Carbon
Lower Seal Face: SiC + SiC

Oil Seal (Lip Seal)
Used four as a "Dust Seal", it protects the mechanical seal from abrasive particles.

Pressure Relief Ports
Protect the mechanical seal against excessive pressure, and also protect the seal faces from abrasive particles by drawing the particles away.

Type of Lubricating Oil & Volume
Turbine Oil (ISO VG32), 26000ml

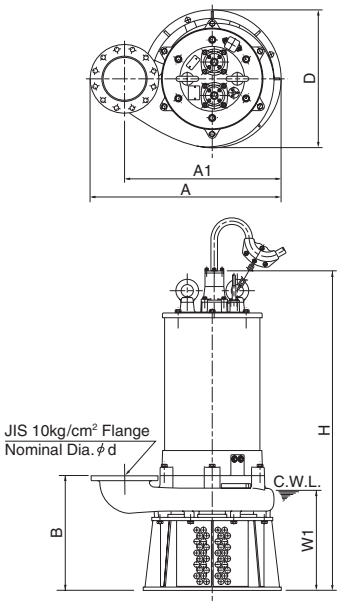
Motor Protection Device
A miniature thermal protector is embedded in each winding of the motor. Should excessive heat builds up, the bimetal strip opens to cause the control panel to shut the power supply.

Leakage Sensor
Made of 304 stainless steel. It can be wired to a control panel to alert operators of water incursion into the oil chamber.

DIMENSIONS | Model GSZ5-37-4H to GSZ-150-4

GSZ-4-series
150 - 250mm

C. W. L.: Continuous Running Water Level



Unit: mm

Model	d	A	A1	B	D	H	W1
GSZ5-37-4H	150	900	760	520	700	1553	440
GSZ5-37-4	200	915	750	550	660	1583	480
GSZ4-45-4	200	915	750	600	660	1591	460
GSZ2-55-4	250	1050	850	655	708	1927	510
GSZ2-75-4	250	1050	850	655	708	1927	510
GSZ2-75-4L	250	1050	850	700	739	1972	730
GSZ-150-4	250	1218	1018	764	846	2420	780