



Submersible Sand Pumps

**HSD/KTV/KRS
NKZ/GPN
GSZ-6**



Innovations that ensure high durability and superb wear resistance

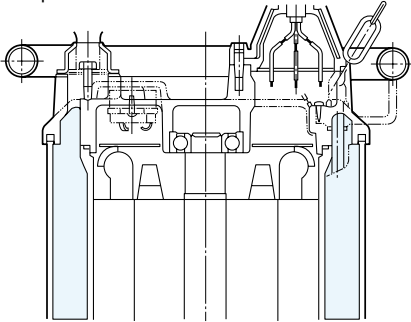
Specification Table

Category	Submersible pumps					
	Slurry	Slurry (Bentonite)		Sand (General construction)		
Series	HSD	KTV	KRS	NKZ	GPN	GSZ-6
Discharge bore (mm)	50	50~80	80~150	80~150	80~100	200
Output (kW)	0.55	2~3	4~9	2.2~11	5.5~11	22~37
Poles	2	2	4	4	4	6
Forced motor cooling				⊙	⊙	⊙
Side flow mechanism		⊙	⊙			
Spiral structure	⊙			⊙	⊙	⊙
Forced agitation	⊙	⊙	⊙	⊙	⊙	
Guide rail fitting system				△	△	

⊙ Standard equipment △ Prepared to order

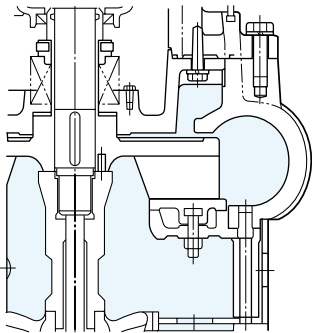
Forced Motor Cooling

As illustrated, a part of pumped fluid flows in between the outer cover and the motor housing before being discharged, thus cooling the motor on its way. This forced motor cooling construction assures the pump of long and continuous operations even exposed to the air.



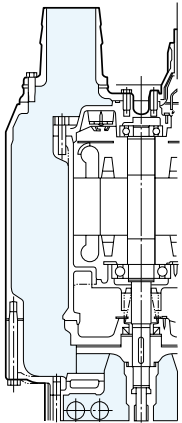
Spiral Structure

The spiral structure marvelously facilitates the passage of sand, sludge, or slime—without clogging.



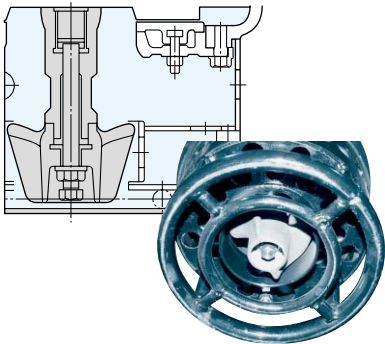
Side Flow Mechanism

The Tsurumi's original side flow, top discharge mechanism not only makes the installation in narrow places but also keeps the motor cool even if the pump runs with its' motor exposed in the air.



Forced Agitation

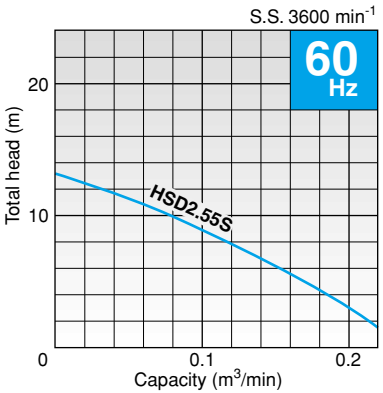
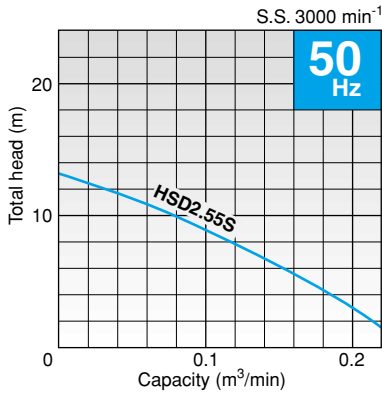
The agitator installed on the motor shaft extension forcibly agitates the fluid for easy and efficient transmission of sludge and slime.



Single-phase compact pump fit for use in slurry dewatering in foundation works. Uses chromium iron casting for the impeller and agitator.



Performance Curves



Major Standard Specifications

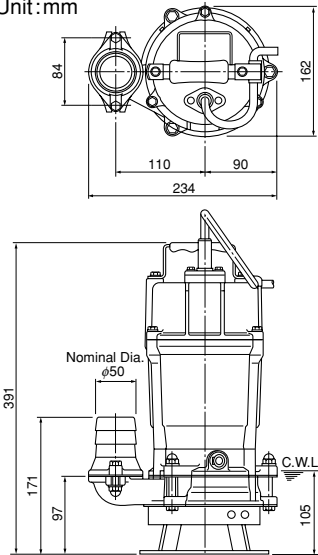
Item		Discharge bore size mm		50	
Pumping fluid	Type of fluid			Sludge, slurry, liquids containing sand and mud	
	Fluid temperature			0~40℃	
Pump	Structure	Impeller	Semi-vortex		
		Shaft seal	Double mechanical seal		
		Bearing	Shielded ball bearing		
	Materials	Impeller	Chromium iron casting		
		Casing	Ductile iron casting		
		Shaft seal (mechanical seal)	Silicon carbide		
Motor	Type, Poles		Dry-type submersible induction motor, 2 poles		
	Insulation		Class E		
	Phase / Voltage		Single-phase/ 110V, 220V, 230V, 240V		
	Motor protector (Built-in)		Circle thermal protector		
	Lubricant		Turbine oil (ISO VG32)		
	Materials	Frame	Aluminum alloy casting		
		Shaft	Stainless steel #403		
Cable		PVC			
Discharge connection				Hose coupling	

Standard Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
50	HSD2.55S	0.55	Single-phase	9	0.1	Capacitor Run	15	5

* Dry weight excluding cable

Dimensions Unit:mm



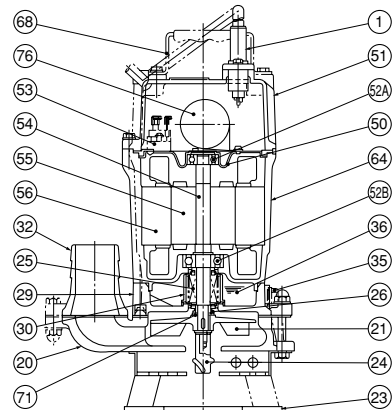
C.W.L. : Continuous Running Water Level

Standard Accessories

- Hose coupling 1pc.
- Hose band 1pc.

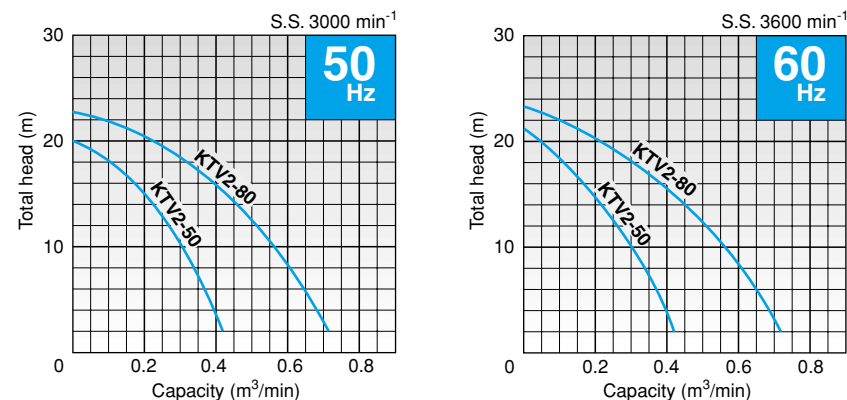


Cross-Section



NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cabtyre Cable	50	Motor Bracket
20	Pump Casing	51	Motor Head Cover
21	Impeller	52A	Upper Bearing
23	Strainer Stand	52B	Lower Bearing
24	Forced Agitation	53	Motor Protector
25	Mechanical Seal	54	Shaft
26	V-ring	55	Rotor
29	Oil Casing	56	Stator
30	Oil Lifter	64	Motor Frame
32	Hose Coupling	68	Handle
35	Oil Plug	71	Shaft Sleeve
36	Lubricant	76	Capacitor

Performance Curves



Standard Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
50	KTV2-50	2	Three-phase	12	0.25	D.O.L.	24.5	8
80	KTV2-80	3	Three-phase	12	0.50	D.O.L.	37.5	8

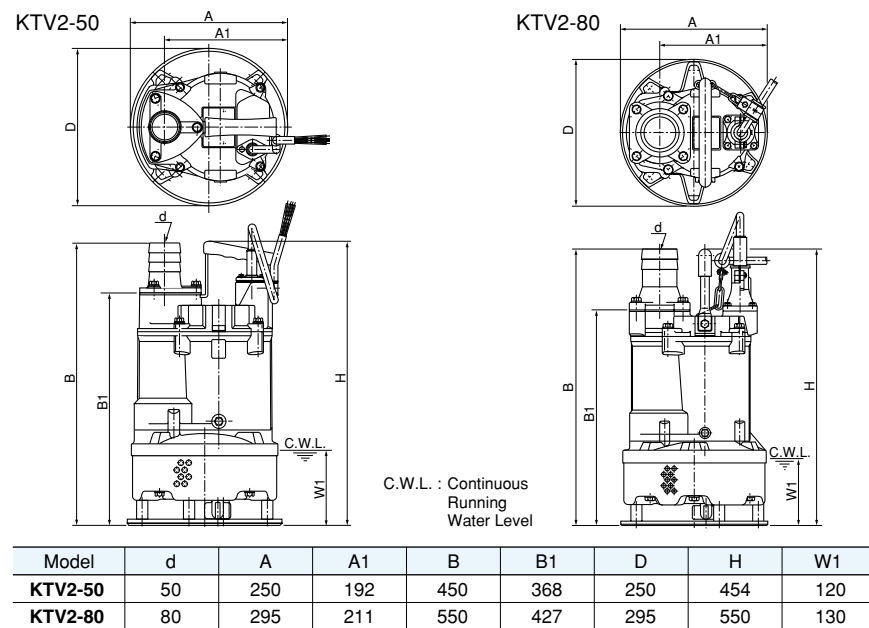
• Dry weight excluding cable

Major Standard Specifications

Discharge bore size mm		50	80
Pumping fluid	Type of fluid	Sludge, slurry, liquid containing mud	
	Fluid temperature	0~40°C	
Pump	Impeller	Semi-vortex	
	Shaft seal	Double mechanical seal	
	Bearing	Shielded ball bearing	
	Impeller	Chromium iron casting	
	Casing	Synthetic rubber (with casing retainer)	
Materials	Shaft seal (mechanical seal)	Silicon carbide	
Motor	Type, Poles	Dry-type submersible induction motor, 2 poles	
	Insulation	Class E	
	Phase / Voltage	Three-phase/ 220V,380V,400V,415V, 440V,460V	
	Motor protector (Built-in)	Circle thermal protector	
	Lubricant	Turbine oil (ISO VG32)	
	Materials	Frame: Aluminium alloy casting Shaft: Stainless steel #403 Cable: PVC Chloroprene rubber	
Discharge connection		Hose coupling	

Dimensions

Unit:mm



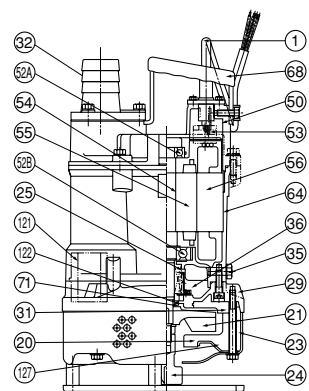
C.W.L. : Continuous Running Water Level

Standard Accessory

- Hose coupling1pc.



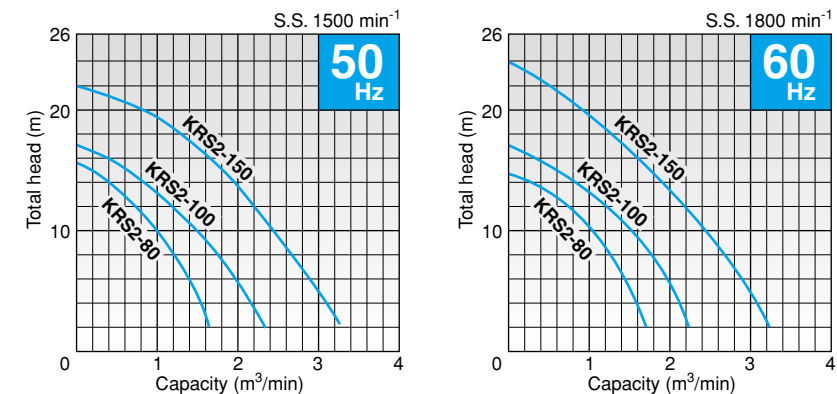
Cross-Section



NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cabtyre Cable	52A	Upper Bearing
20	Pump Casing	52B	Lower Bearing
21	Impeller	53	Motor Protector
23	Strainer Stand	54	Shaft
24	Forced Agitation	55	Rotor
25	Mechanical Seal	56	Stator
29	Oil Casing	64	Motor Frame
31	Wearing Plate	68	Handle
32	Hose Coupling	71	Shaft Sleeve
35	Oil Plug	121	Duct Sleeve
36	Lubricant	122	V-ring
50	Motor Bracket	127	Fixing Plate

• Oil Lifter is not illustrated.

Performance Curves



Standard Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
80	KRS2-80	4	Three-phase	10	1.0	D.O.L.	105	8
100	KRS2-100	6	Three-phase	10	1.5	D.O.L.	143	8
150	KRS2-150	9	Three-phase	15/8	1.8/2.5	D.O.L.	170/162	8

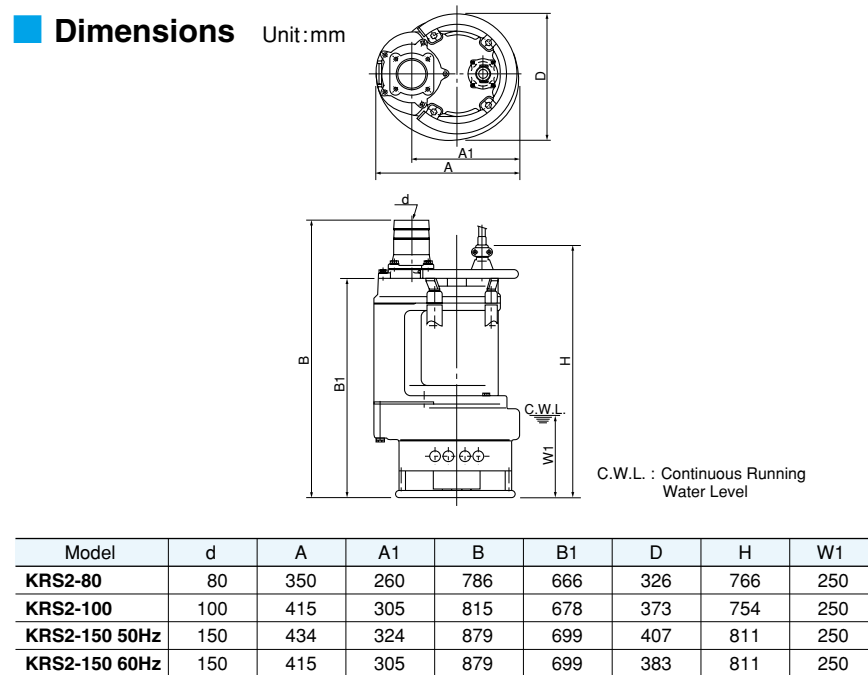
• Dry weight excluding cable

Major Standard Specifications

Discharge bore size mm		80	100	150
Pumping fluid	Type of fluid	Sludge, slurry, liquids containing sandy mud and/or bentonite		
	Fluid temperature	0~40°C		
Pump	Impeller	Semi-open		
	Shaft seal	Double mechanical seal		
	Bearing	Shielded ball bearing		
	Impeller	Chromium iron casting		
	Casing	Grey iron casting		
Materials	Suction plate	Chromium iron casting		
	Shaft seal (mechanical seal)	Silicon carbide		
Motor	Type, Poles	Dry-type submersible induction motor, 4 poles		
	Insulation	Class E · B		
	Phase / Voltage	Three-phase/ 220V,380V,400V,415V, 440V,460V		
	Motor protector (Built-in)	Circle thermal protector		
	Lubricant	Turbine oil (ISO VG32)		
	Materials	Frame: Grey iron casting Shaft: Stainless steel #420 Cable: Chloroprene rubber		
Discharge connection		Hose coupling		

Dimensions

Unit:mm



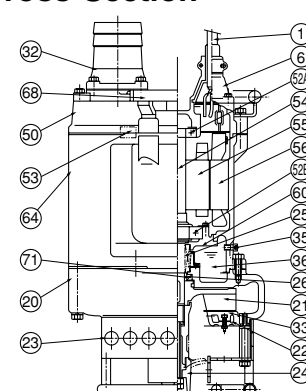
C.W.L. : Continuous Running Water Level

Standard Accessory

- Hose coupling1pc.



Cross-Section



NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cabtyre Cable	36	Lubricant
6	Stuffing Box	50	Motor Bracket
20	Pump Casing	52A	Upper Bearing
21	Impeller	52B	Lower Bearing
22	Suction Cover	53	Motor Protector
23	Strainer Stand	54	Shaft
24	Forced Agitation	55	Rotor
25	Mechanical Seal	56	Stator
26	Oil Seal	60	Bearing Housing
32	Hose Coupling	64	Motor Frame
33	Suction Plate	68	Handle
35	Oil Plug	71	Shaft Sleeve

• Oil Lifter is not illustrated.



Major Standard Specifications

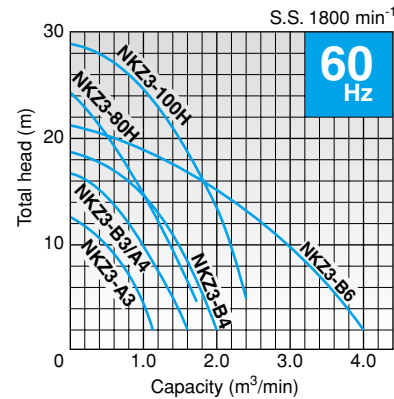
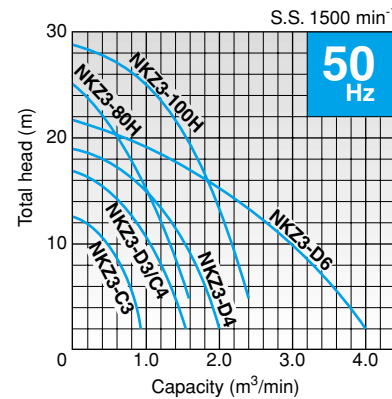
Item	Discharge bore size mm		
	80	100	150
Pumping fluid	Type of fluid	Sludge, various types of slurry, liquid containing sandy mud	
	Fluid temperature	0~40°C	
	Structure	Impeller	Semi-open
		Shaft seal	Double mechanical seal
Pump	Structure	Bearing	Shielded ball bearing
		Impeller	Ductile iron casting Chromium iron casting (H type)
	Materials	Casing	Grey iron casting
		Suction cover	Grey iron casting Ductile iron casting (H type)
		Shaft seal (mechanical seal)	Silicon carbide
Motor	Type, Poles	Dry-type submersible induction motor, 4 poles	
	Insulation	Class E · B	
	Phase / Voltage	Three-phase/ 220V, 380V, 400V, 415V, 440V, 460V	
	Motor protector (Built-in)	Circle thermal protector	
	Lubricant	Turbine oil (ISO VG32)	
	Materials	Frame	Grey iron casting
Discharge connection	Shaft	Stainless steel #420	
	Cable	Chloroprene rubber	

Standard Accessory

- Hose coupling 1pc.



Performance Curves

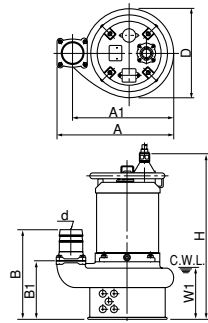


Standard Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
80	NKZ3-C3/A3	2.2	Three-phase	10	0.50	D.O.L.	91	8
80	NKZ3-D3/B3	3.7	Three-phase	15	0.50	D.O.L.	100	8
80	NKZ3-80H	5.5	Three-phase	20	0.55	D.O.L.	132	8
100	NKZ3-C4/A4	3.7	Three-phase	10	1.00	D.O.L.	97	8
100	NKZ3-D4/B4	5.5	Three-phase	15	1.00	D.O.L.	115	8
100	NKZ3-100H	11	Three-phase	25	1.00	D.O.L.	196	8
150	NKZ3-D6/B6	11	Three-phase	15	2.00	D.O.L.	192	8

• Dry weight excluding cable

Dimensions Unit: mm



C.W.L. : Continuous Running Water Level

Model	d	A	A1	B	B1	D	H	W1
NKZ3-C3/A3	80	467	405	371	249	370	664	225
NKZ3-D3/B3	80	467	405	371	249	370	709	225
NKZ3-80H	80	491	430	387	264	401	754	220
NKZ3-C4/A4	100	467	405	386	249	370	709	225
NKZ3-D4/B4	100	485	424	382	245	380	715	220
NKZ3-100H	100	547	486	422	284	414	841	240
NKZ3-D6/B6	150	620	520	458	266	450	798	240

Specific Installation

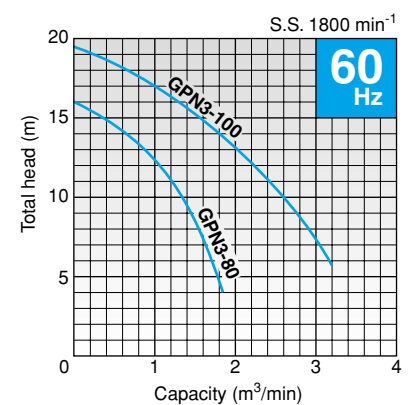
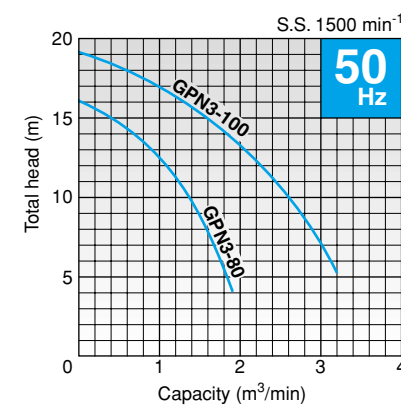
(Contact your nearest dealer for more information)

Guide Rail Fitting System

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



Performance Curves

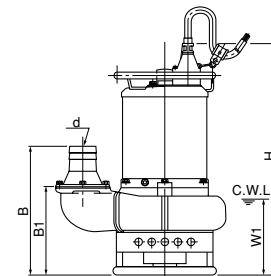
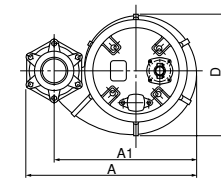


Standard Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
80	GPN3-80	5.5	Three-phase	12	1.1	D.O.L.	145	8
100	GPN3-100	11	Three-phase	15	1.6	D.O.L.	217	8

• Dry weight excluding cable

Dimensions Unit: mm



C.W.L. : Continuous Running Water Level

Model	d	A	A1	B	B1	D	H	W1
GPN3-80	80	487	426	429	307	390	777	270
GPN3-100	100	617	517	481	328	450	860	295

Specific Installation

(Contact your nearest dealer for more information)

Guide Rail Fitting System

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



Major Standard Specifications

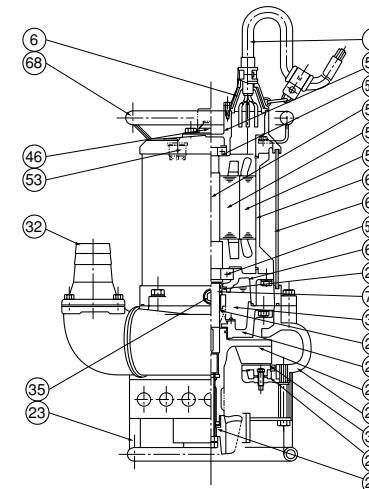
Item	Discharge bore size mm	
	80	100
Pumping fluid	Type of fluid	Sludge, various types of slurry, liquid containing sandy mud
	Fluid temperature	0~40°C
Pump	Impeller	Semi-open
	Structure	Shaft seal
	Bearing	Mechanical seal
		Shielded ball bearing
	Impeller	Chromium iron casting
	Casing	Grey iron casting
Materials	Suction plate	Chromium iron casting
	Shaft seal (mechanical seal)	Silicon carbide
Motor	Type, Poles	Dry-type submersible induction motor, 4 poles
	Insulation	Class E · B
	Phase / Voltage	Three-phase/ 220V, 380V, 400V, 415V, 440V, 460V
	Motor protector (Built-in)	Circle thermal protector
	Lubricant	Turbine oil (ISO VG32)
	Frame	Grey iron casting
Materials	Shaft	Chromium molybdenum steel
	Cable	Chloroprene rubber
Discharge connection		Hose coupling

Standard Accessory

- Hose coupling 1pc.



Cross-Section



NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cabtyre Cable	46	Air Release Valve
6	Stuffing Box	50	Motor Bracket
20	Pump Casing	52A	Upper Bearing
21	Impeller	52B	Lower Bearing
22	Suction Cover	53	Motor Protector
23	Strainer Stand	54	Shaft
24	Forced Agitation	55	Rotor
25	Mechanical Seal	56	Stator
26	Oil Seal	60	Bearing Housing
29	Oil Casing	64	Motor Frame
32	Hose Coupling	65	Outer Cover
33	Suction Plate	68	Handle
35	Oil Plug	71	Shaft Sleeve
36	Lubricant		

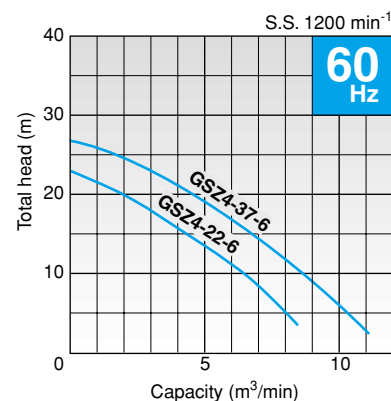
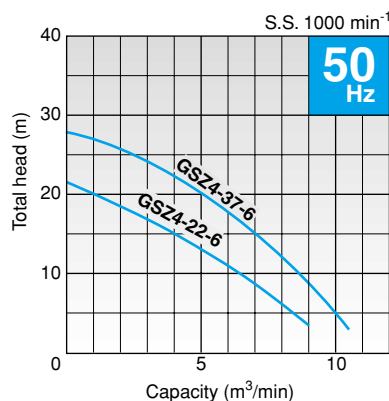
• Oil Lifter is not installed.

GSZ-6

This powerful high-volume pump series features a special-steel impeller and a 6-pole motor.



Performance Curves



Major Standard Specifications

Item		Discharge bore size mm	200
Pumping fluid	Type of fluid	Sludge, various types of slurry, liquid containing sandy mud	
	Fluid temperature	0~40°C	
Pump	Structure	Impeller	Semi-open
		Shaft seal	Double mechanical seal
		Bearing	Shielded ball bearing
	Materials	Impeller	Chromium iron casting
		Casing	Grey iron casting
Motor	Type, Poles	Dry-type submersible induction motor, 6 poles	
		Insulation	
	Phase / Voltage	Class F	
		Three-phase/ 220V, 380V, 400V, 415V, 440V, 460V	
	Motor protector (Built-in)	Miniature protector	
	Lubricant	Turbine oil (ISO VG32)	
Materials	Frame	Grey iron casting	
		Shaft	
	Cable	Stainless steel #420	
Discharge connection		Chloroprene rubber	
		JIS10K Flange	

Standard Accessory

- Discharge pipe (JIS10K Flange) 1pc.

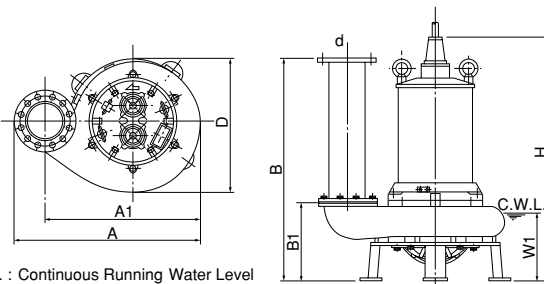
Standard Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
200	GSZ4-22-6	22	Three-phase	15	4.0	D.O.L.	750	10
200	GSZ4-37-6	37	Three-phase	20	5.0/4.5	Star-Delta	850	10

• Dry weight excluding cable

Dimensions

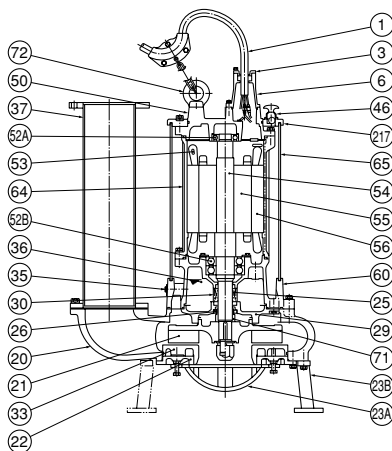
Unit: mm



C.W.L. : Continuous Running Water Level

Model	d	A	A1	B	B1	D	H	W1
GSZ4-22-6	200	965	800	1202	474	720	1393	350
GSZ4-37-6	200	1047	882	1283	430	804	1416	370

Cross-Section



NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cabletyre Cable	37	Discharge Pipe
3	Gland	46	Air Release Valve
6	Stuffing Box	50	Motor Bracket
20	Pump Casing	52A	Upper Bearing
21	Impeller	52B	Lower Bearing
22	Suction Cover	53	Motor Protector
23A	Strainer	54	Shaft
23B	Stand	55	Rotor
25	Mechanical Seal	56	Stator
26	Oil Seal	60	Bearing Housing
29	Oil Casing	64	Motor Frame
30	Oil Lifter	65	Outer Cover
33	Suction Plate	71	Shaft Sleeve
35	Oil Plug	72	Eye Bolt
36	Lubricant	217	Fixing Plate

We reserve the right to change the specifications and designs for improvement without prior notice.

TSURUMI
MANUFACTURING CO., LTD.

Your Dealer