TSURUMI PUMP

Submersible Sand Pumps

HSD/KTV/KRS
NKZ/GPN
GSZ-6

Amenics
Amenities from Technology
for People and the Earth

Innovations that ensure high durability and superb wear resistance

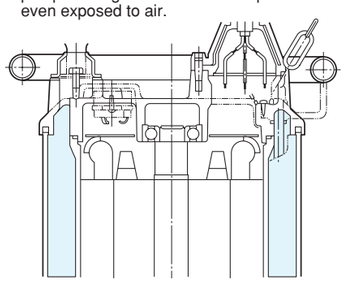
Specification Table

◎ Standard equipment △ Prepared to order

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 design		◎	◎			
Spiral design	◎			◎	◎	◎
Forced stirring	◎	◎	◎	◎	◎	
Guide rail fitting system				△	△	

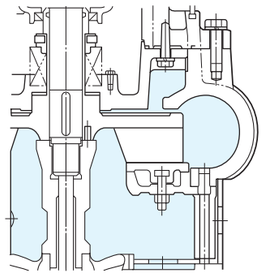
Forced Motor Cooling

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 air.



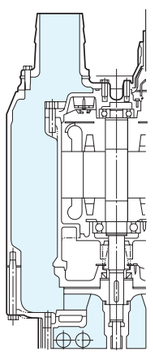
Spiral Design

The spiral design allows fluids containing slurry, sand, or mud to pass through smoothly.



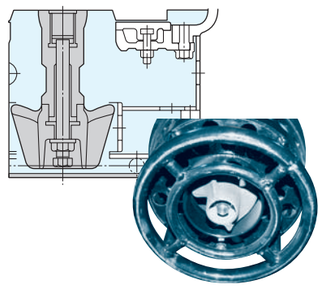
Side Flow Design

The side flow design not only makes the pump easier to install in narrow locations but also keeps the motor cooling forcibly even if the pump is operated continuously with its motor exposed to air.



Forced Stirring

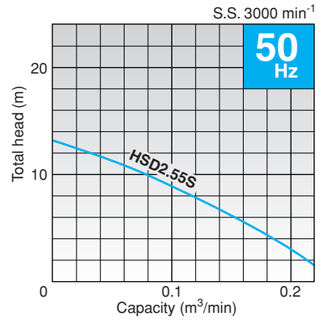
The stirrer installed on the motor shaft extension forcibly stirs the fluid for easy and efficient transfer of slurry, sand, or mud.

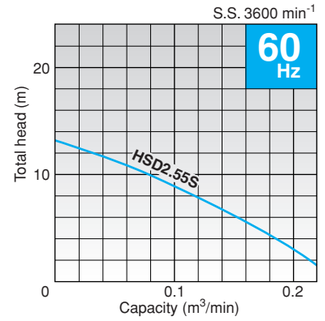


Single-phase portable pump fit for use in slurry dewatering in foundation works.
Uses chromium iron casting for the impeller and stirrer.

HSD

Performance Curves





Major Standard Specifications

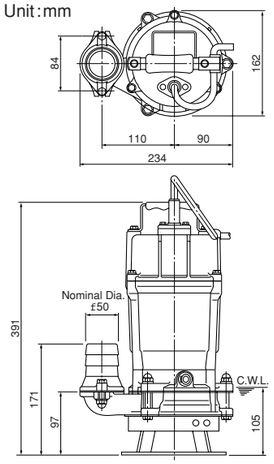
Item			Discharge bore size mm: 50
Pumping fluid	Type of fluid		Sludge, slurry, liquids containing sand and mud
	Fluid temperature		0~40°C
Pump	Structure	Impeller	Semi-vortex
		Shaft seal	Double mechanical seal
		Bearing	Shielded ball bearing
	Materials	Impeller	Chromium iron casting
		Casing	Ductile 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

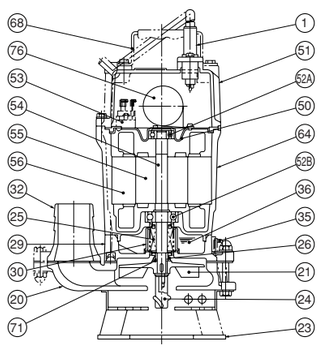


C.W.L. : Continuous Running Water Level

Standard Accessories

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

Cross-Section

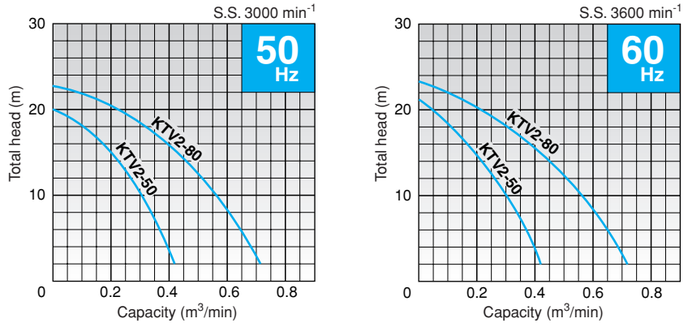


NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cabtyre Cable	50	Motor Bracket
20	Pump Casing	51	Motor Head Cover
21	Impeller	52A	Upper Bearing
23	Strainer Stand	52B	Lower Bearing
24	Stirrer	53	Motor Protector
25	Mechanical Seal	54	Shaft
26	V-ring	55	Rotor
29	Oil Casing	56	Stator
30	Oil Lifter	64	Motor Frame
32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

KTV

**A compact slurry pump series using KTV pumps as a base.
Features high wear resistance and durability and extra light weight.**

Performance Curves



Standard Specifications 50/60Hz

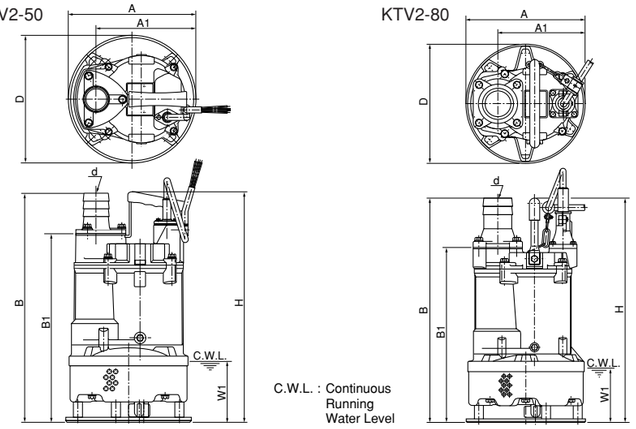
Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
50	**KTV2-50**	2	Three-phase	12	0.25	D.O.L.	25	8
80	**KTV2-80**	3	Three-phase	12	0.50	D.O.L.	38	8

• Dry weight excluding cable

Major Standard Specifications

Item			Discharge bore size mm: 50	80
Pumping fluid	Type of fluid		Sludge, slurry, liquid containing mud	
	Fluid temperature		0~40°C	
Pump	Structure	Impeller	Semi-vortex	
		Shaft seal	Double mechanical seal	
		Bearing	Shielded ball bearing	
	Materials	Impeller	Chromium iron casting	
		Casing	Synthetic rubber (with casing retainer)	
		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

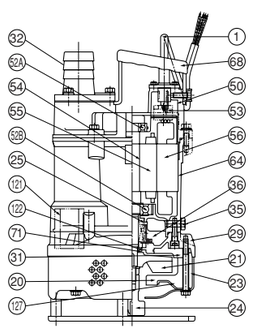


Model	d	A	A1	B	B1	D	H	W1
KTV2-50	50	250	192	450	368	250	454	120
KTV2-80	80	295	216	550	427	295	550	130

Standard Accessory

● Hose coupling ..... 1pc.

Cross-Section



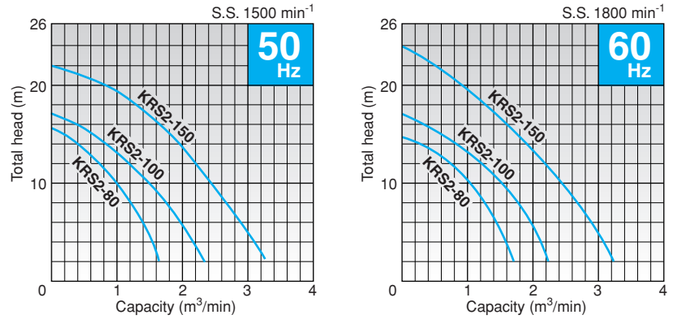
NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cabtyre Cable	52A	Upper Bearing
20	Pump Casing	52B	Lower Bearing
21	Impeller	53	Motor Protector
23	Strainer Stand	54	Shaft
24	Stirrer	55	Rotor
25	Mechanical Seal	56	Stator
29	Oil Casing	64	Motor Frame
31	Wearing Plate	68	Handle
32	Hose Coupling	71	Shaft Sleeve
35	Oil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

• Oil Lifter is not illustrated.

KRS

Tsurumi's typical slurry pumps with a 4-pole motor for an increased lifetime and greater convenience.

Performance Curves



Standard Specifications 50/60Hz

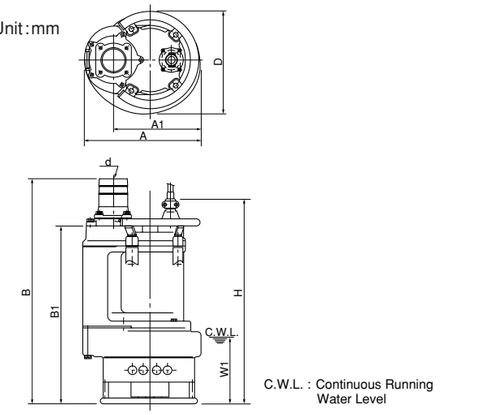
Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
80	**KRS2-80**	4	Three-phase	10	1.0	D.O.L.	105	8
100	**KRS2-100**	6	Three-phase	10	1.5	D.O.L.	143	8
150	**KRS2-150**	9	Three-phase	15/8	1.8/2.5	D.O.L.	170/162	8

• Dry weight excluding cable

Major Standard Specifications

Item			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	Structure	Impeller	Semi-open		
		Shaft seal	Double mechanical seal		
		Bearing	Shielded ball bearing		
	Materials	Impeller	Chromium iron casting		
		Casing	Grey iron casting		
		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		

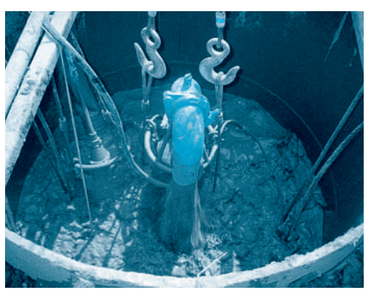
Dimensions Unit:mm



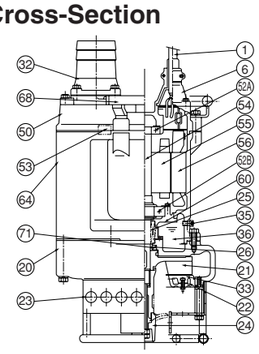
Model	d	A	A1	B	B1	D	H	W1
KRS2-80	80	350	260	786	666	326	766	250
KRS2-100	100	415	305	815	678	373	754	250
KRS2-150 50Hz	150	434	324	879	699	407	811	250
KRS2-150 60Hz	150	415	305	879	699	383	811	250

Standard Accessory

● Hose coupling ..... 1pc.



Cross-Section



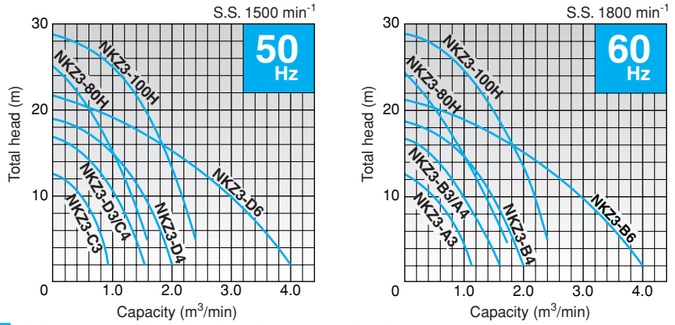
NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cabtyre Cable	36	Lubricant
6	Stuffing Box	50	Motor Bracket
20	Pump Casing	52A	Upper Bearing
21	Impeller	52B	Lower Bearing
22	Suction Cover	53	Motor Protector
23	Strainer Stand	54	Shaft
24	Stirrer	55	Rotor
25	Mechanical Seal	56	Stator
26	Oil Seal	60	Bearing Housing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

• Oil Lifter is not illustrated.

NKZ

All pumps in this series provide very smooth passage of sandy earth and slime.
A forcibly cooled motor ensures long and continuous pump operations exposed to air.

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

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		
Pump	Structure	Impeller	Semi-open		
		Shaft seal	Double mechanical seal		
		Bearing	Shielded ball bearing		
	Materials	Impeller	Ductile iron casting Chromium iron casting (H type)		
		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		
		Shaft	Stainless steel #420		
		Cable	Chloroprene rubber		
Discharge connection			Hose coupling		

Dimensions Unit:mm

C.W.L. : Continuous Running Water Level

Specific Installation

(Contact your nearest dealer for more information)

Guide Rail Fitting System

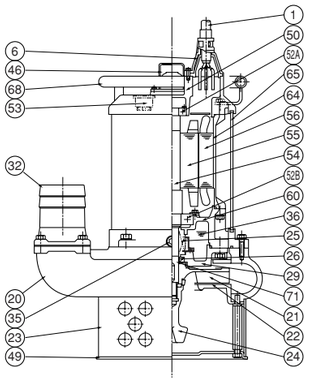
The guide rail fitting system connects the pump to and from the piping easily just by lowering and hoisting the pump, allowing easy maintenance and inspection without the need to enter the pit.

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

Standard Accessory

● Hose coupling ..... 1pc.

Cross-Section



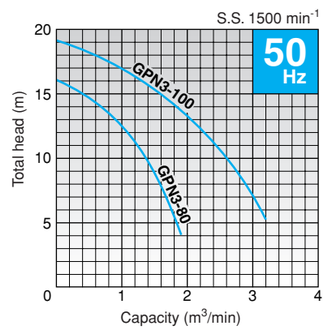
NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cabtyre Cable	49	Buttom Plate
6	Stuffing Box	50	Motor Bracket
20	Pump Casing	52A	Upper Bearing
21	Impeller	52B	Lower Bearing
22	Suction Cover	53	Motor Protector
23	Strainer Stand	54	Shaft
24	Stirrer	55	Rotor
25	Mechanical Seal	56	Stator
26	Oil Seal	60	Bearing Housing
29	Oil Casing	64	Motor Frame
32	Hose Coupling	65	Outer Cover
35	Oil Plug	68	Handle
36	Lubricant	71	Shaft Sleeve
46	Air Release Valve		

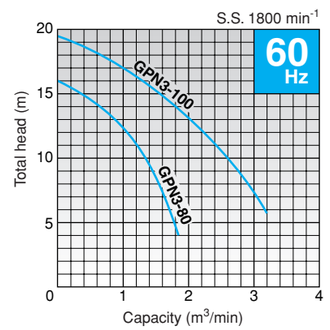
• Oil Lifter is not illustrated.

A special-steel impeller and suction plate have greatly increased the pump's life.

GPN

Performance Curves





Standard Specifications 50/60Hz

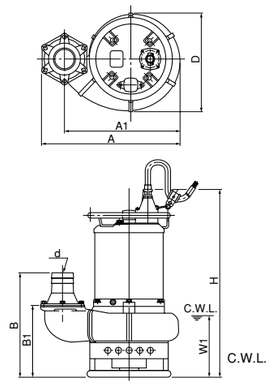
Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
80	**GPN3-80**	5.5	Three-phase	12	1.1	D.O.L.	145	8
100	**GPN3-100**	11	Three-phase	15	1.6	D.O.L.	217	8

• Dry weight excluding cable

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	Structure	Impeller	Semi-open	
		Shaft seal	Mechanical seal	
		Bearing	Shielded ball bearing	
	Materials	Impeller	Chromium iron casting	
		Casing	Grey iron casting	
		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	Chromium molybdenum steel	
		Cable	Chloroprene rubber	
Discharge connection			Hose coupling	

Dimensions Unit:mm



C.W.L. : Continuous Running Water Level

Specific Installation

(Contact your nearest dealer for more information)

Guide Rail Fitting System

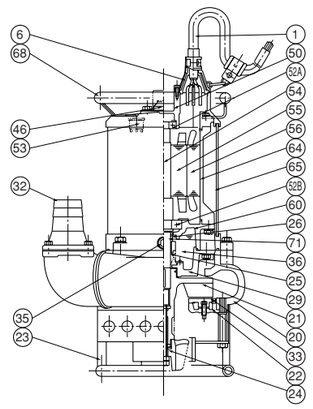
The guide rail fitting system connects the pump to and from the piping easily just by lowering and hoisting the pump, allowing easy maintenance and inspection without the need to enter the pit.

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

Standard Accessory

● Hose coupling ..... 1pc.

Cross-Section



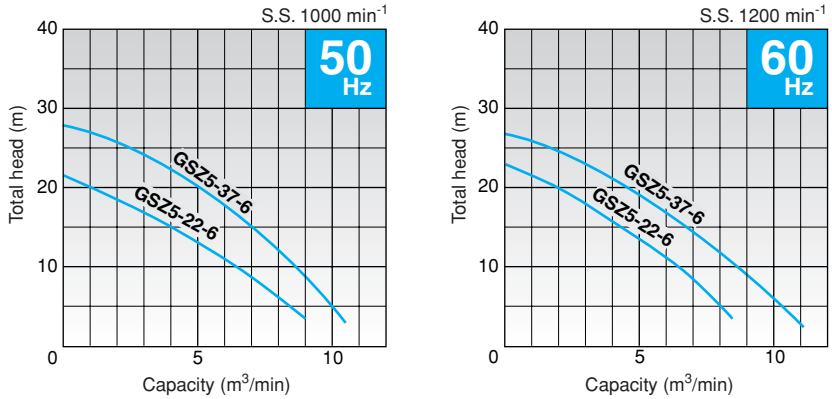
NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cabtyre Cable	46	Air Release Valve
6	Stuffing Box	50	Motor Bracket
20	Pump Casing	52A	Upper Bearing
21	Impeller	52B	Lower Bearing
22	Suction Cover	53	Motor Protector
23	Strainer Stand	54	Shaft
24	Stirrer	55	Rotor
25	Mechanical Seal	56	Stator
26	Oil Seal	60	Bearing 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
		Suction plate	Chromium iron casting
		Shaft seal (mechanical seal)	Silicon carbide
Motor	Type, Poles		Dry-type submersible induction motor, 6 poles
	Insulation		Class F
	Phase / Voltage		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	Stainless steel #420
		Cable	PVC Chloroprene rubber
Discharge connection			JIS10K Flange

Standard Accessory

- Discharge pipe (JIS10K Flange) ..... 1pc.

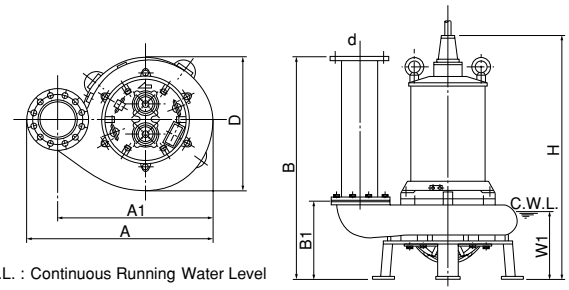
Standard Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
200	**GSZ5-22-6**	22	Three-phase	15	4.0	D.O.L.	750	10
200	**GSZ5-37-6**	37	Three-phase	20	5.0/4.5	Star-Delta	850	10

• Dry weight excluding cable

Dimensions

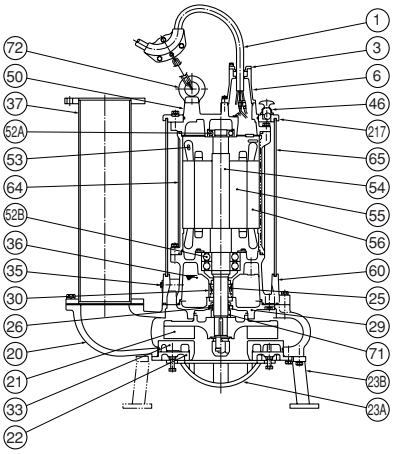
Unit : mm



C.W.L. : Continuous Running Water Level

Model	d	A	A1	B	B1	D	H	W1
GSZ5-22-6	200	965	800	1202	474	720	1360	350
GSZ5-37-6	200	1047	882	1283	430	804	1421	370

Cross-Section



NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cabtyre 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

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