



# *Submersible Sand Pumps*

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



# Innovations that ensure high durability and superb wear resistance

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

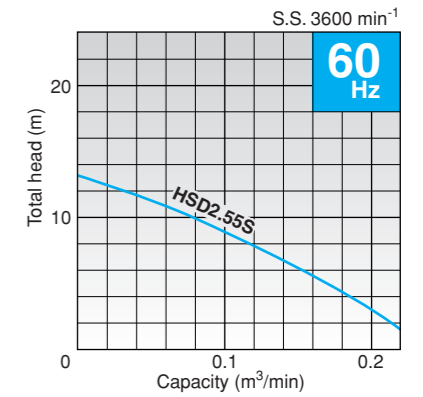
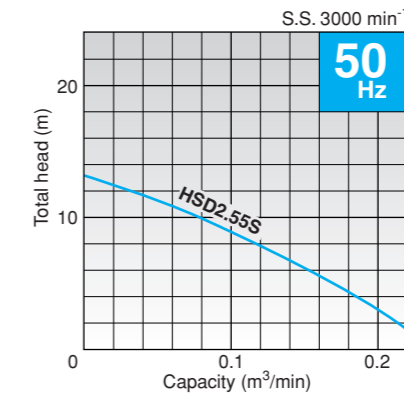


## Specification Table

◎ 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				△	△	

## 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		
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		

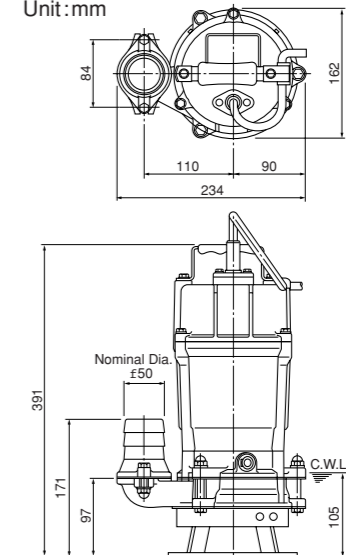
## Standard Specifications 50/60Hz

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

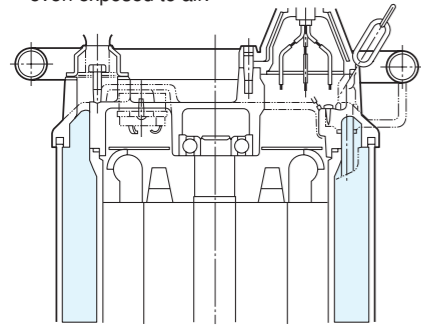
Unit: mm



C.W.L. : Continuous Running Water Level

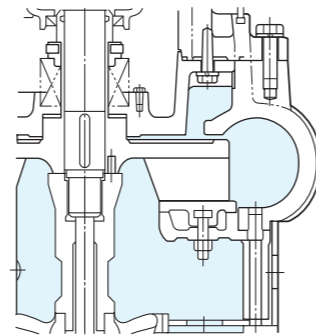
### Forced Motor Cooling

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.



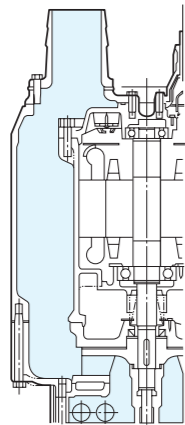
### Spiral Design

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



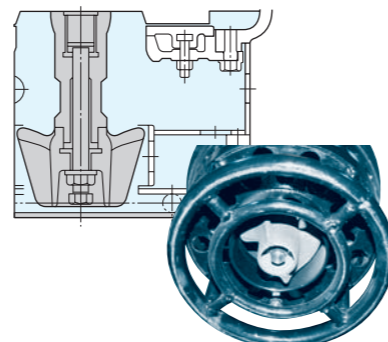
### Side Flow Design

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.

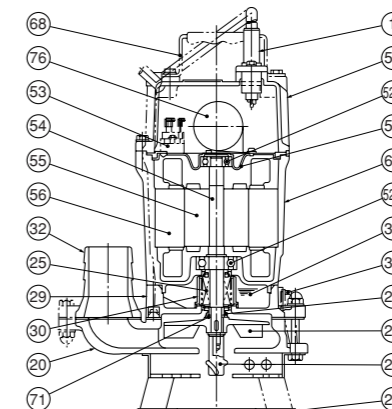


## Standard Accessories

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



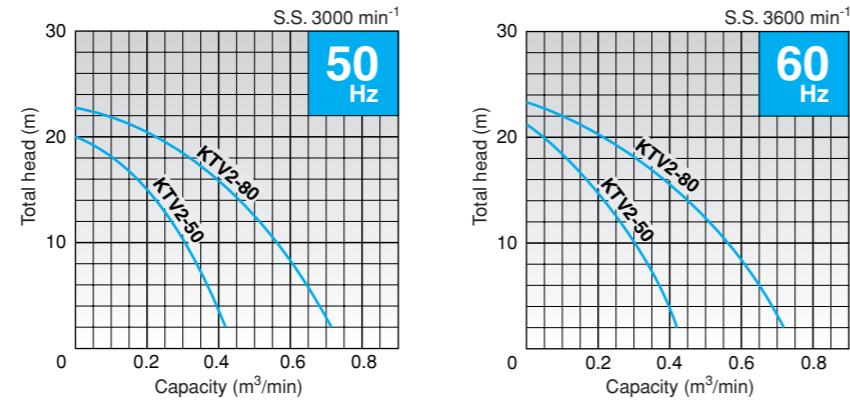
## Cross-Section



NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	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



### Performance Curves



### Standard Specifications 50/60Hz

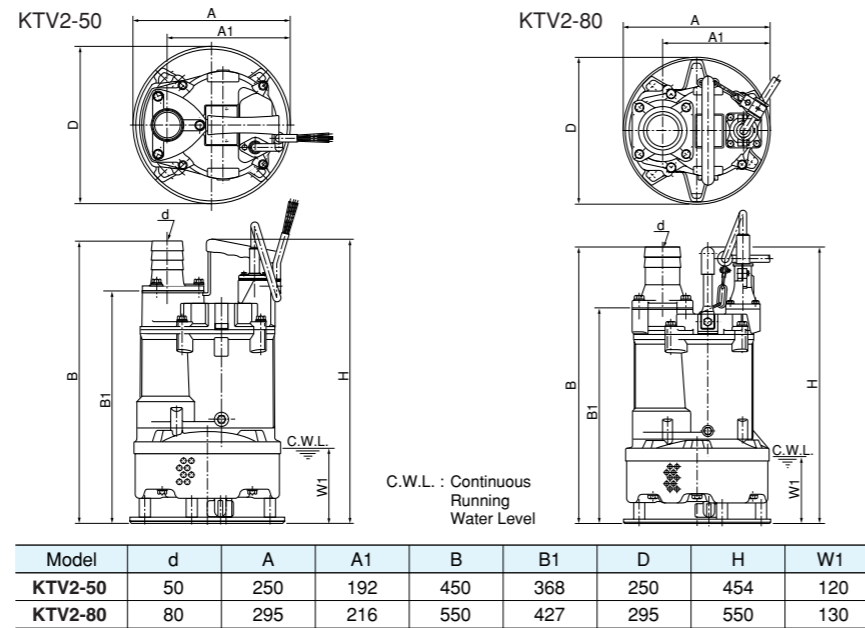
Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
50	KTV2-50	2	Three-phase	12	0.25	D.O.L.	25	8
80	KTV2-80	3	Three-phase	12	0.50	D.O.L.	38	8

• 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 Impeller: Chromium iron casting
	Materials	Casing: Synthetic rubber (with casing retainer)
		Shaft seal (mechanical seal): Silicon carbide
	Type, Poles	Dry-type submersible induction motor, 2 poles
	Insulation	Class E
Phase / Voltage	Three-phase/ 220V, 380V, 400V, 415V, 440V, 460V	
Motor	Motor protector (Built-in)	Circle thermal protector
	Lubricant	Turbine oil (ISO VG32)
		Frame: Aluminium alloy casting Shaft: Stainless steel #403
	Materials	Cable: PVC Chloroprene rubber
Discharge connection	Hose coupling	

### Dimensions Unit: mm

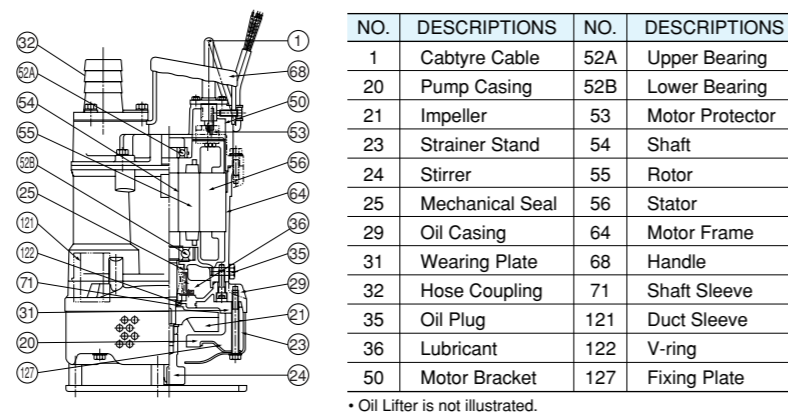


### Standard Accessory

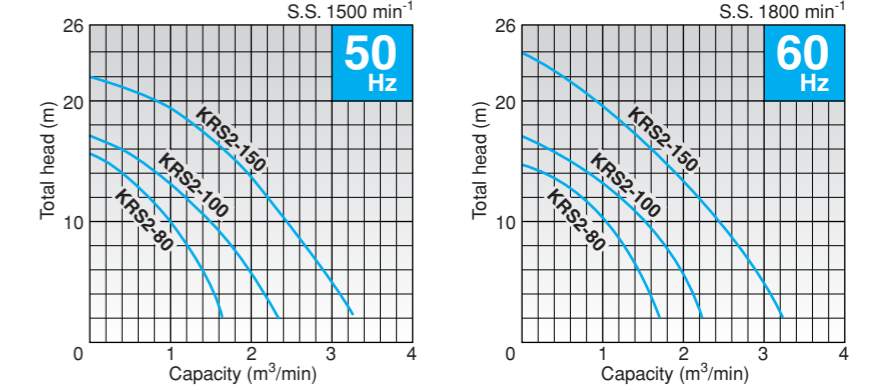
- Hose coupling ..... 1pc.



### Cross-Section



### Performance Curves



### Standard Specifications 50/60Hz

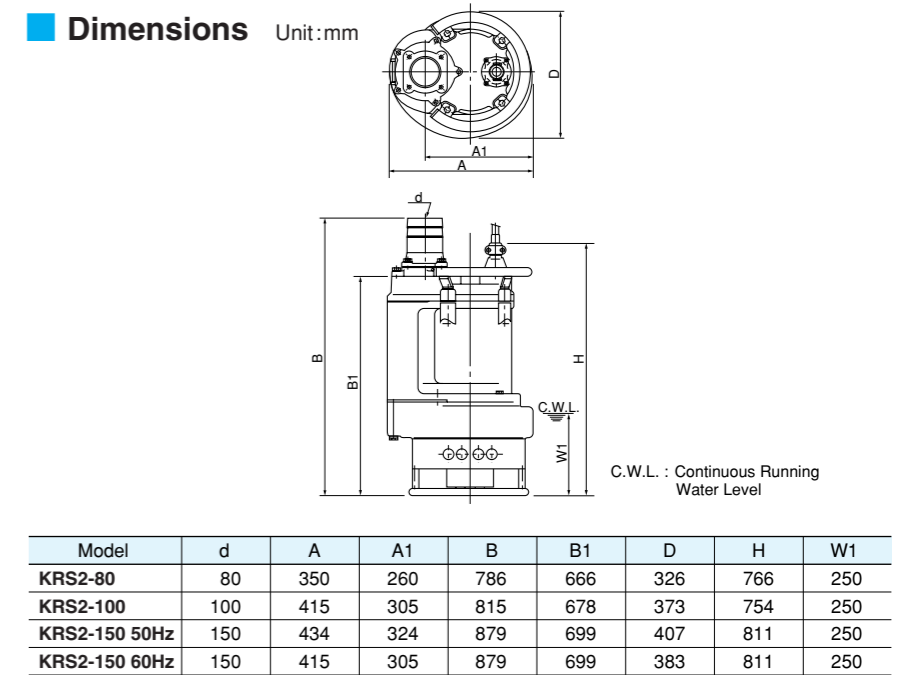
Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
80	KRS2-80	4	Three-phase	10	1.0	D.O.L.	105	8
100	KRS2-100	6	Three-phase	10	1.5	D.O.L.	143	8
150	KRS2-150	9	Three-phase	15/8	1.8/2.5	D.O.L.	170/162	8

• 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 Impeller: Chromium iron casting		
	Materials	Casing: Grey iron casting Suction plate: Chromium iron casting		
		Shaft seal (mechanical seal): Silicon carbide		
	Type, Poles	Dry-type submersible induction motor, 4 poles		
	Insulation	Class E · B		
Phase / Voltage	Three-phase/ 220V, 380V, 400V, 415V, 440V, 460V			
Motor	Motor protector (Built-in)	Circle thermal protector		
	Lubricant	Turbine oil (ISO VG32)		
		Frame: Grey iron casting Shaft: Stainless steel #420 Cable: Chloroprene rubber		
	Discharge connection	Hose coupling		

### Dimensions Unit: mm

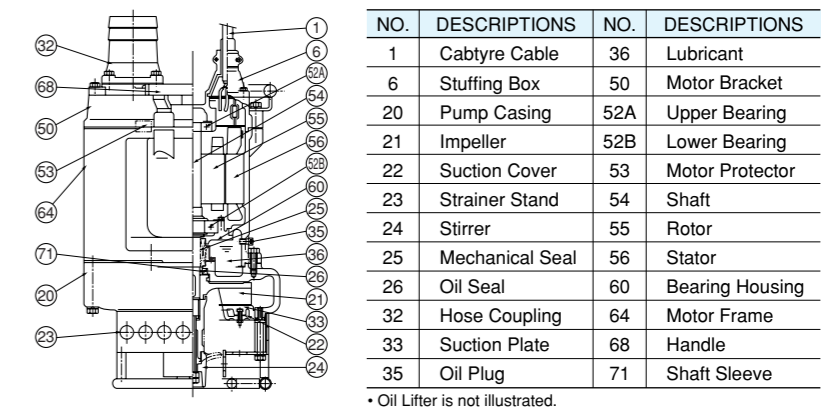


### Standard Accessory

- Hose coupling ..... 1pc.

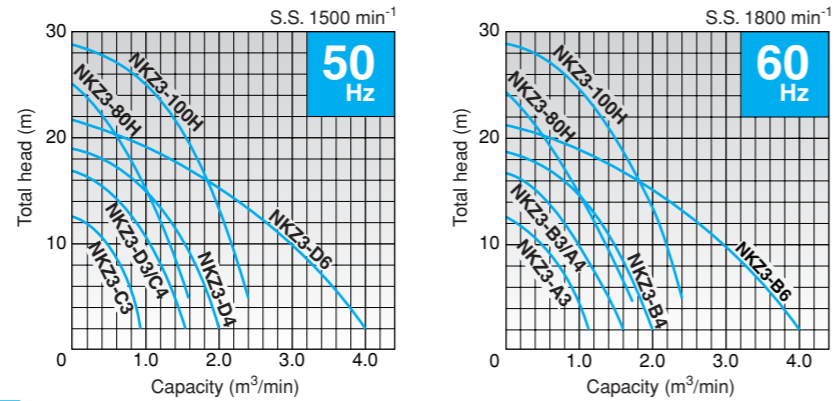


### Cross-Section





### Performance Curves

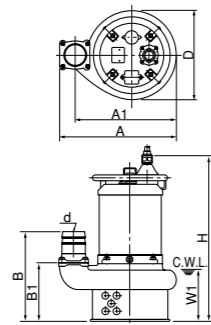


### Standard Specifications 50/60Hz

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.



### Major Standard Specifications

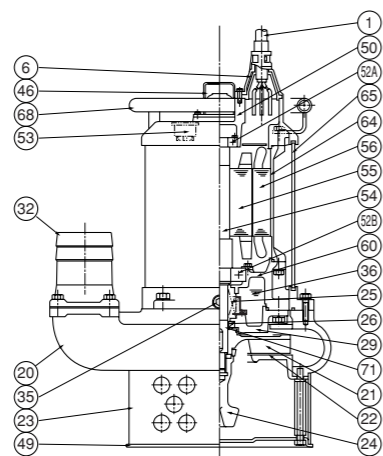
Item	Discharge bore size mm		
	80	100	150
Pumping fluid	Type of fluid	Sludge, various types of slurry, liquid containing sandy mud	
	Fluid temperature	0~40°C	
Pump	Structure	Impeller	Semi-open
	Shaft seal	Double mechanical seal	
	Bearing	Shielded ball bearing	
	Materials	Impeller	Ductile iron casting Chromium iron casting (H type)
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	
	Shaft	Stainless steel #420	
	Cable	Chloroprene rubber	
Discharge connection	Hose coupling		

### Standard Accessory

- Hose coupling ..... 1pc.



### Cross-Section

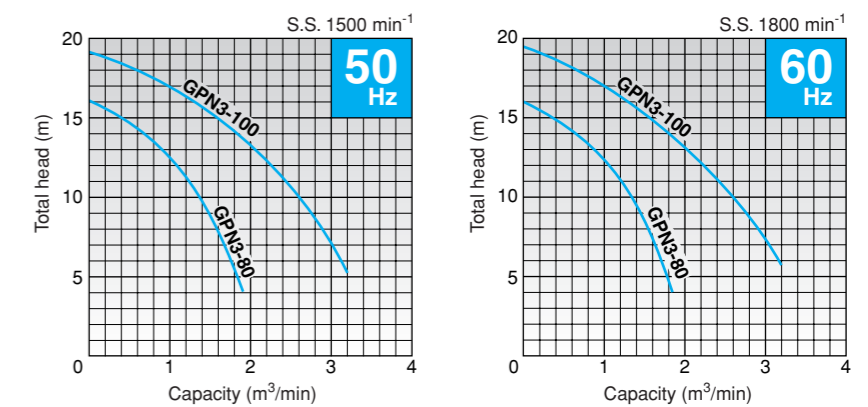


NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cable	49	Bottom Plate
6	Stuffing Box	50	Motor Bracket
20	Pump Casing	52A	Upper Bearing
21	Impeller	52B	Lower Bearing
22	Suction Cover	53	Motor Protector
23	Strainer Stand	54	Shaft
24	Stirrer	55	Rotor
25	Mechanical Seal	56	Stator
26	Oil Seal	60	Bearing Housing
29	Oil 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.



### Performance Curves



### Standard Specifications 50/60Hz

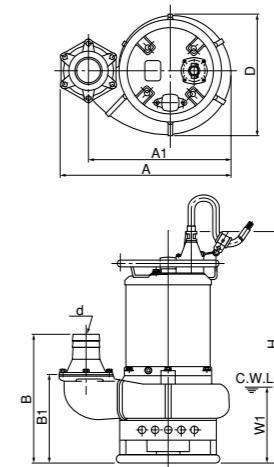
Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
80	GPN3-80	5.5	Three-phase	12	1.1	D.O.L.	145	8
100	GPN3-100	11	Three-phase	15	1.6	D.O.L.	217	8

\* 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
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

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.

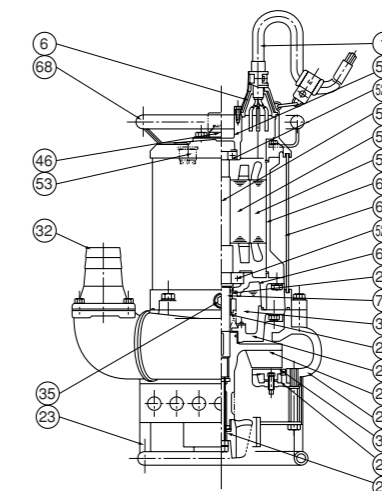


### Standard Accessory

- Hose coupling ..... 1pc.



### Cross-Section



NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	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		

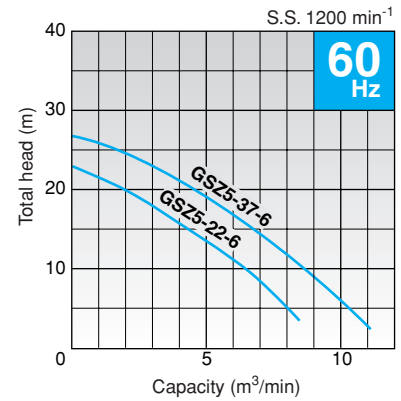
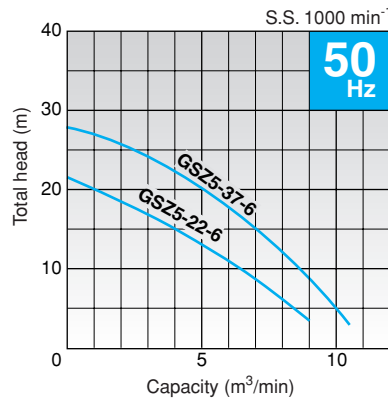
\* Oil Lifter is not installed.

# 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
Materials	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	

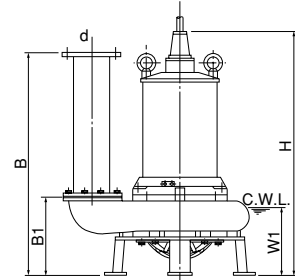
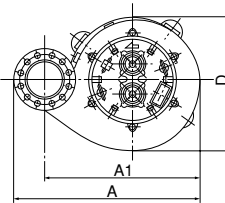
## Standard Specifications 50/60Hz

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

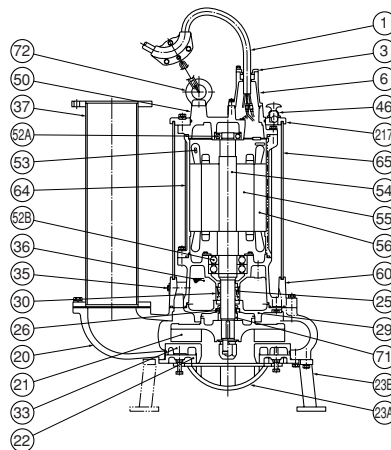
Unit: mm



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	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

## Standard Accessory

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

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

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