



# *Submersible Slurry 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 agitator.

# HSD

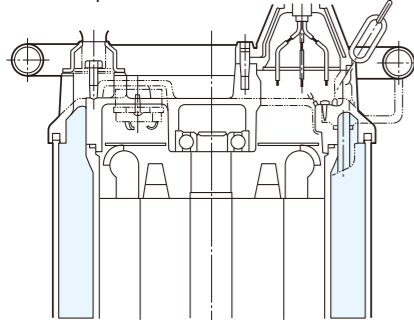
## Specification Table

◎ Standard equipment    △ Prepared to order

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

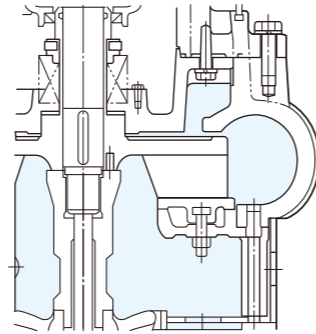
### Forced Motor Cooling

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.



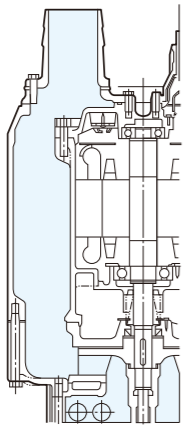
### Spiral Design

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



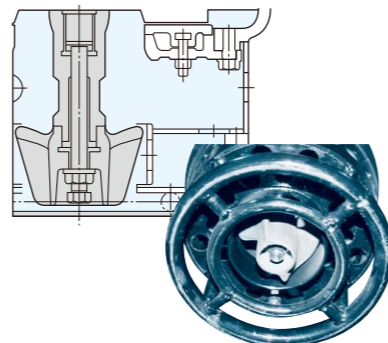
### Side Flow Design

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.

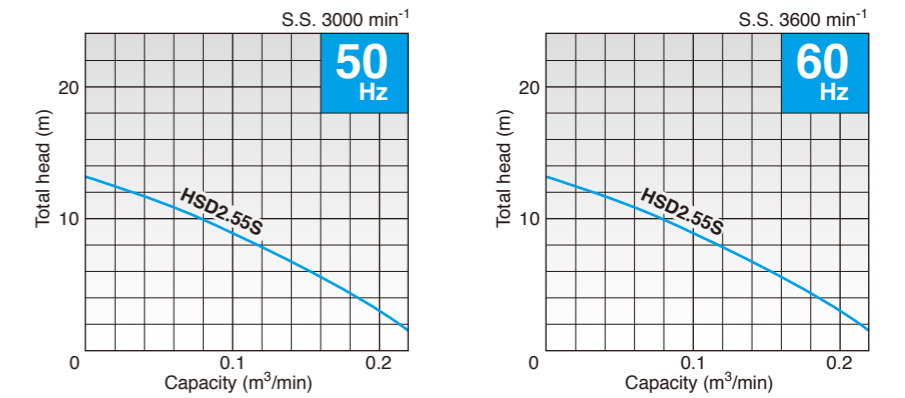


### Agitator

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



## Performance Curves



## Major Standard Specifications

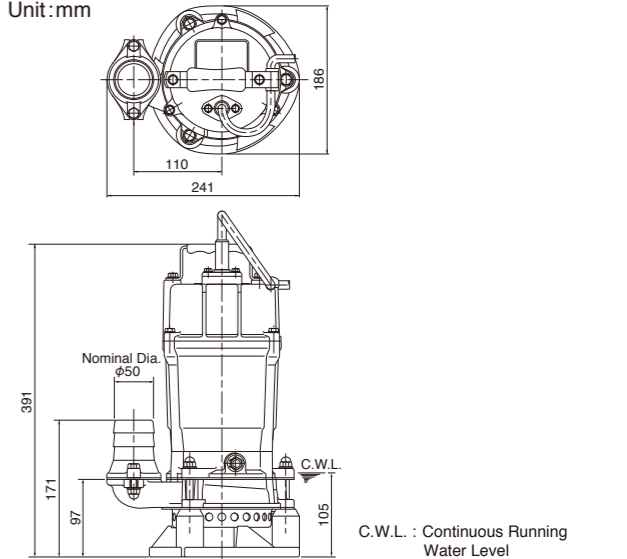
Item	Discharge bore size mm	50	
Pumping fluid	Type of fluid	Sludge, slurry, liquids containing sand and mud	
	Fluid temperature	0~40°C	
Pump	Structure	Impeller	Semi-vortex
		Shaft seal	Double mechanical seal
		Bearing	Shielded ball bearing
	Materials	Impeller	Chromium iron casting
Casing		Ductile iron 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)
		Frame	Aluminum alloy casting
Shaft		Stainless steel #403	
Materials	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	14	5

\* Dry weight excluding cable

## Dimensions Unit: mm

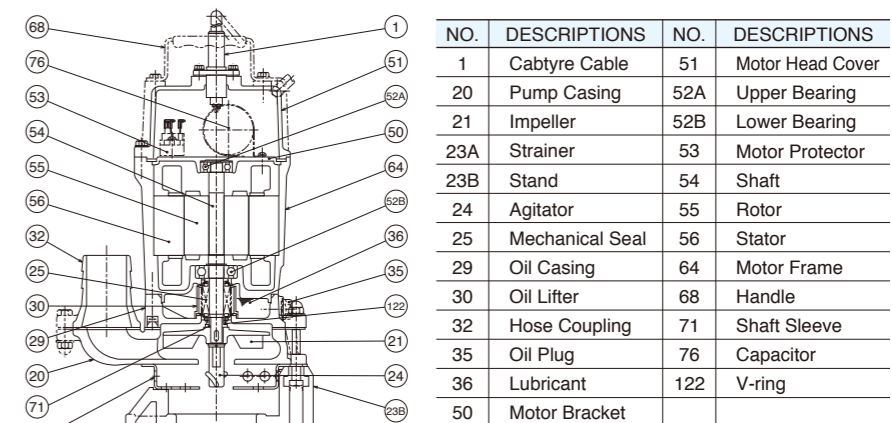


## Standard Accessories

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

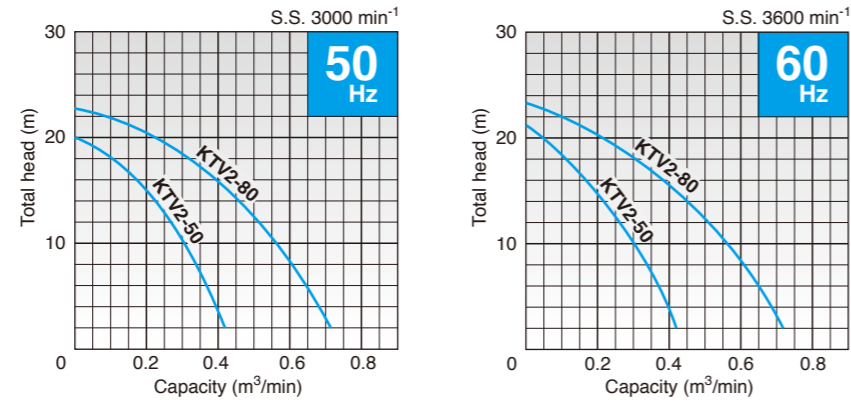


## Cross-Section





### Performance Curves



### Standard Specifications 50/60Hz

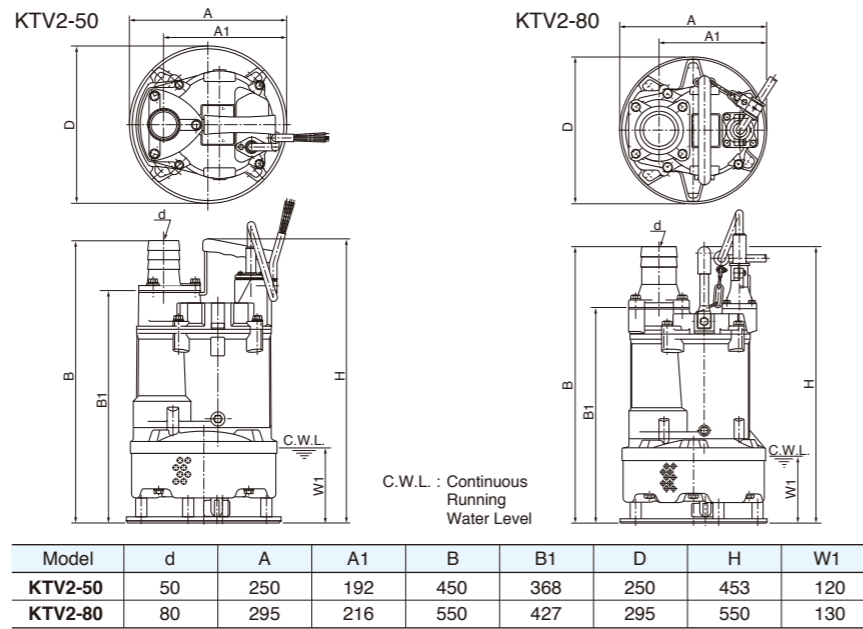
Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
50	KTV2-50	2	Three-phase	12	0.25	D.O.L.	25	8
80	KTV2-80	3	Three-phase	12	0.50	D.O.L.	38	8

\* 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	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
	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

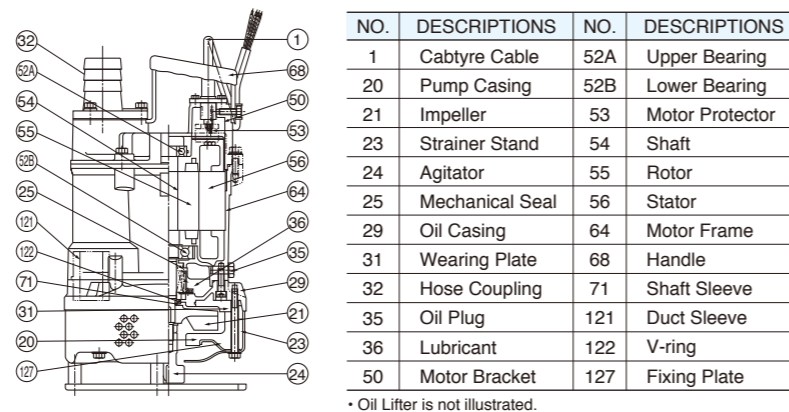


### Standard Accessory

- Hose coupling ..... 1pc.



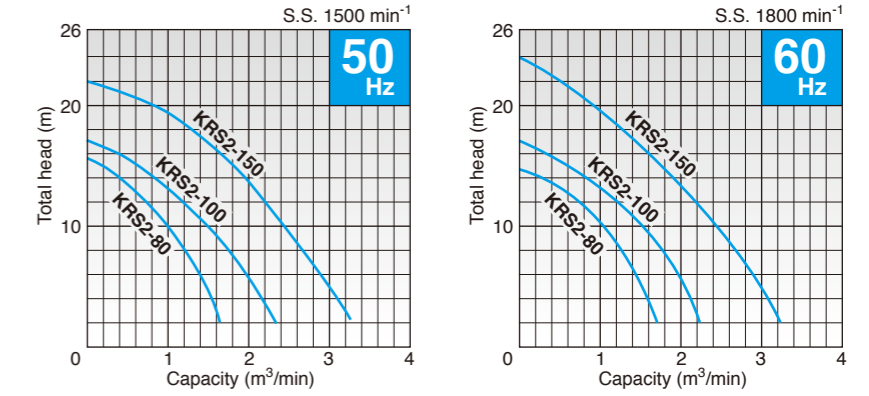
### Cross-Section



\* Oil Lifter is not illustrated.



### Performance Curves



### Standard Specifications 50/60Hz

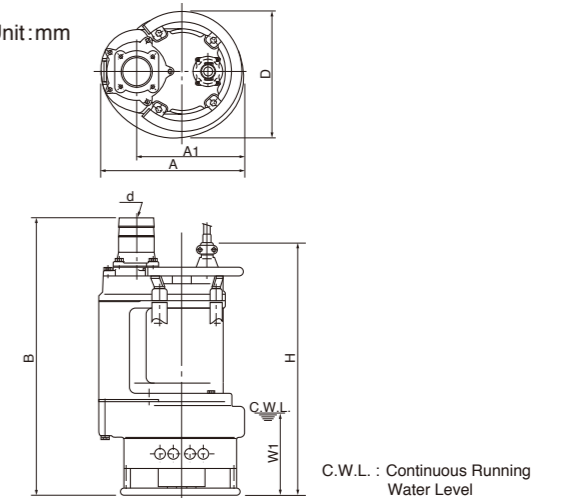
Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
80	KRS2-80	4	Three-phase	10	1.0	D.O.L.	105	8
100	KRS2-100	6	Three-phase	10	1.5	D.O.L.	143	8
150	KRS2-150	9	Three-phase	15	1.8	D.O.L.	170/162	8

\* 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	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	
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



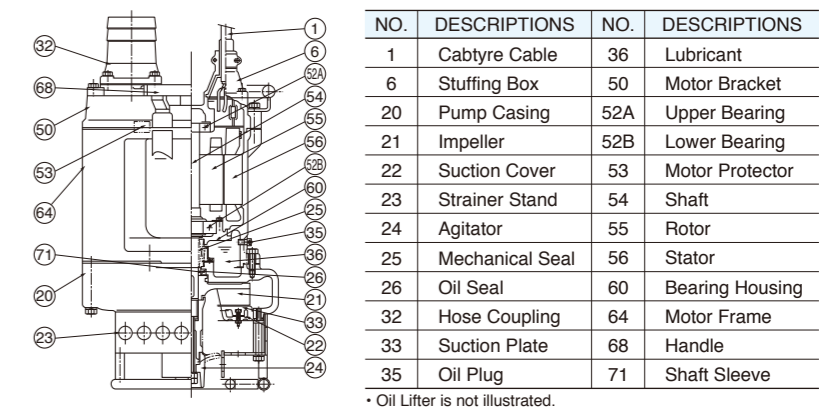
Model	d	A	A1	B	D	H	W1
KRS2-80	80	349	259	800	326	780	265
KRS2-100	100	415	305	835	374	773	270
KRS2-150 50Hz	150	433	323	898	407	830	270
KRS2-150 60Hz	150	415	305	898	374	830	270

### Standard Accessory

- Hose coupling ..... 1pc.



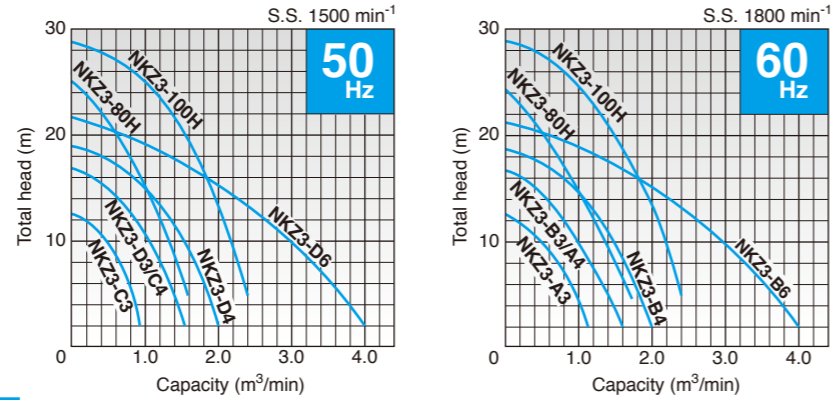
### Cross-Section



\* Oil Lifter is not illustrated.



### Performance Curves

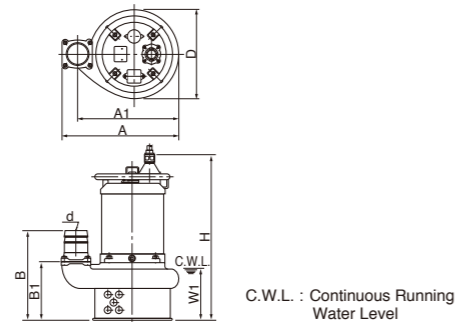


### Standard Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
80	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



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

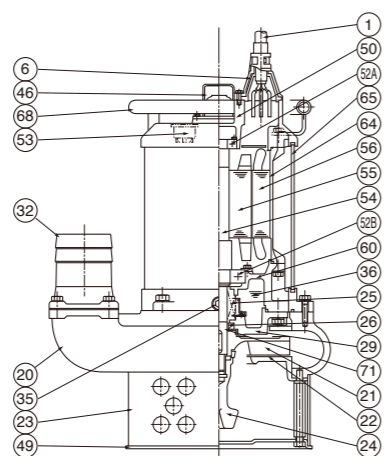
(Contact your nearest dealer for more information)

#### 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.



### 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	Agitator	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		

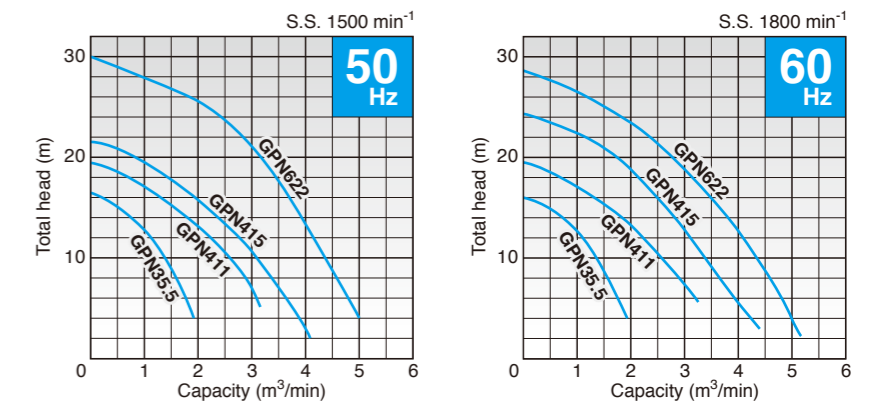
\* Oil Lifter is not illustrated.

### Standard Accessory

- Hose coupling ..... 1pc.



### Performance Curves

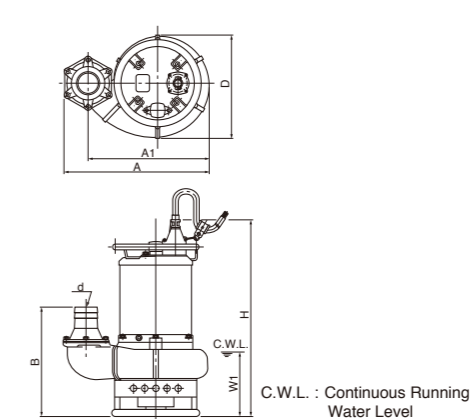


### Standard Specifications 50/60Hz

Discharge Bore mm	Model	Motor Output kW	Phase	Total Head m	Capacity m³/min	Starting Method	Dry Weight kgs	Cable Length m
80	GPN35.5	5.5	Three-phase	12	1.1	D.O.L.	145	8
100	GPN411	11	Three-phase	15	1.6	D.O.L.	217	8
100	GPN415	15	Three-phase	18/213	1.3	D.O.L.	220	10
150	GPN622	22	Three-phase	24.4/23.0	2.0	D.O.L.	415	10

\* Dry weight excluding cable

### Dimensions Unit: mm



Model	d	A	A1	B	D	H	W1
GPN35.5	80	487	425	449	390	796	290
GPN411	100	617	518	500	451	879	315
GPN415	100	617	518	500	451	879	315
GPN622	150	725	625	528	572	1102	300

### 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.

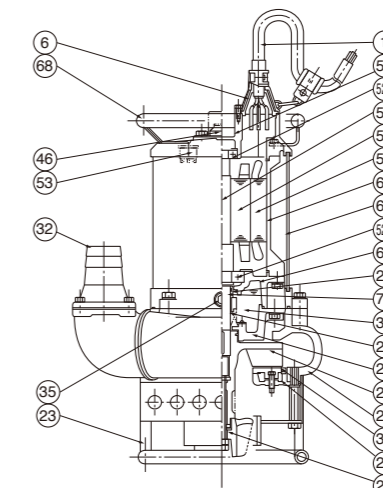


### Standard Accessory

- Hose coupling ..... 1pc.



### Cross-Section

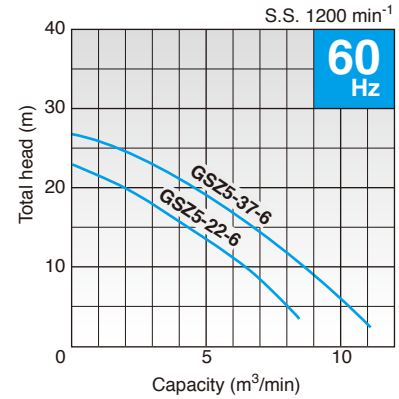
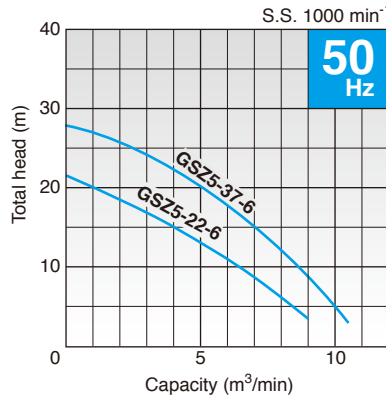


NO.	DESCRIPTIONS	NO.	DESCRIPTIONS
1	Cable	46	Air Release Valve
6	Stuffing Box	50	Motor Bracket
20	Pump Casing	52A	Upper Bearing
21	Impeller	52B	Lower Bearing
22	Suction Cover	53	Motor Protector
23	Strainer Stand	54	Shaft
24	Agitator	55	Rotor
25	Mechanical Seal	56	Stator
26	Oil Seal	60	Bearing Housing
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.



## Performance Curves



## Major Standard Specifications

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
	Materials	Bearing	Shielded ball bearing
		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	

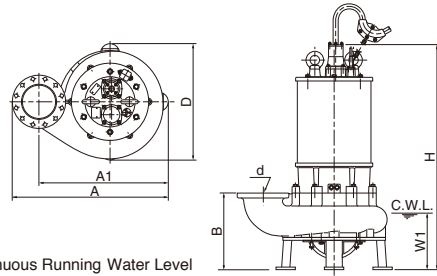
## Standard Specifications 50/60Hz

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.	685	10
200	GSZ5-37-6	37	Three-phase	20	5.0/4.5	Star-Delta	796	10

\* Dry weight excluding cable

## Dimensions

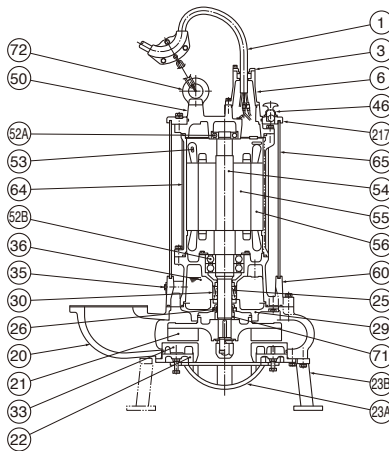
Unit: mm



C.W.L.: Continuous Running Water Level

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

## Cross-Section



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

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