



HORMA PUMPS (PTY) LTD

**Pump Reconditioning and
General Engineering**

KBZ

SUBMERSIBLE DEWATERING PUMP



The body of motor and pump is made of rigid cast iron for long-lasting durability.

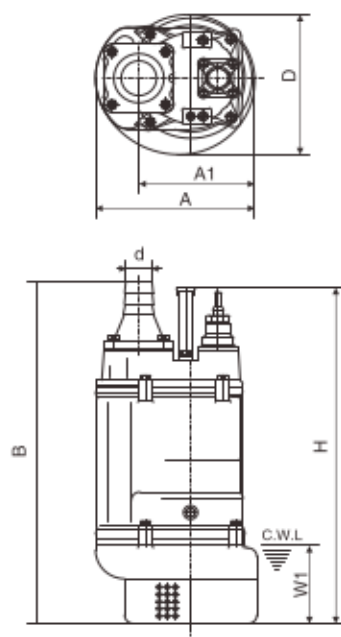
Greatly increased maximum submersion depth due to mechanical seal resistant to high pressure.

Semi-open impeller made of high chrome alloy match with wear plate (ductile iron) achieves superior durability.

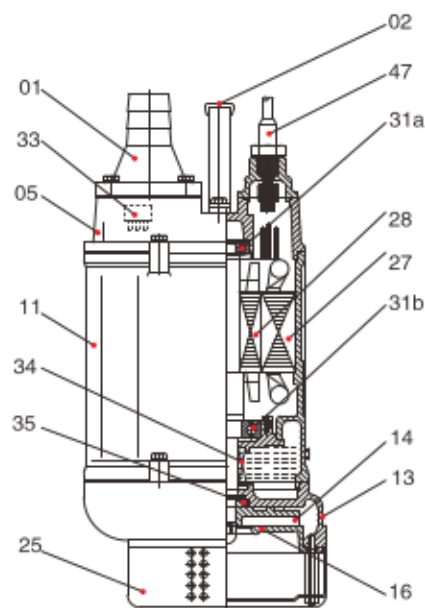
Effective motor cooling due to discharge channel cast as part of the motor housing. Space economy by a top outlet

Discharge 50mm (2") to 150mm (6"), motor 1.5kW (2HP) to 15kW(20HP).

Hermetically sealed motor equipped build-in thermal protection.



W1:Continuous running water level



Item No.	Part Name	Material	Item No.	Part Name	Material
01	Hose Coupling	Cast Iron	28	Rotor	Shaft:AISI420SS
02	Handle	Rubber & Steel	31a	Bearing	Ball Bearing
05	Upper Cover	Cast Iron	31b	Bearing	Ball Bearing
11	Motor Body	Cast Iron	33	Motor Protector	
13	Pump Body	Cast Iron	34	Mechanical Seal	SiC-SiC/Carbon-SiC(≤ 2.2kW) SiC-SiC/SiC-SiC(≥ 3.7kW)
14	Impeller	High Chrome Alloy	35	Oil Seal	
16	Inlet Plate	Ductile Iron	47	Cable	
25	Strainer	Steel			
27	Stator				

Model	d	A	A1	B	D	H	W1
KBZ21.5	50	235	173	517	216	486	120
KBZ31.5	80	235	173	517	216	486	120
KBZ22.2	50	235	173	517	216	486	120
KBZ32.2	80	235	173	517	216	486	120
KBZ23.7	50	283	208	628	252	638	150
KBZ33.7	80	283	208	628	252	638	150
KBZ43.7	100	283	208	642	252	638	150
KBZ35.5	80	306	218	671	259	598	150
KBZ45.5	100	306	218	686	259	598	150
KBZ47.5	100	330	240	764	314	676	190
KBZ411	100	373	255	807	350	695	190
KBZ67.5	150	330	240	790	314	676	190
KBZ611	150	373	255	807	350	695	190
KBZ415	100	373	255	842	350	755	190
KBZ415	100	373	255	842	350	755	190
KBZ615	150	373	255	842	350	755	190
KBZ615	150	373	255	842	350	755	190

Specification

- Capacity: up to 160 m³/h
- Head: up to 57 meters
- Power:1.5kW(2HP) to 15 kW (20HP)
- Power supply: three phase 380 V ± 10%, 50Hz
380 V ± 10% , 60Hz
- Insulation class: F
- Protection class: IP68
- Cable length: 8m
- Water temperature: up to 40°C
- Max.water depth: 25m

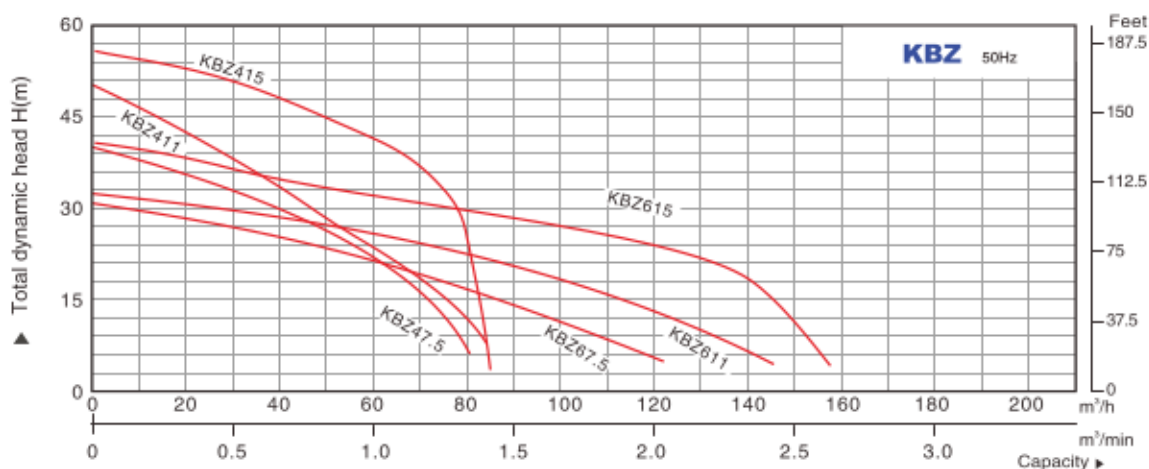
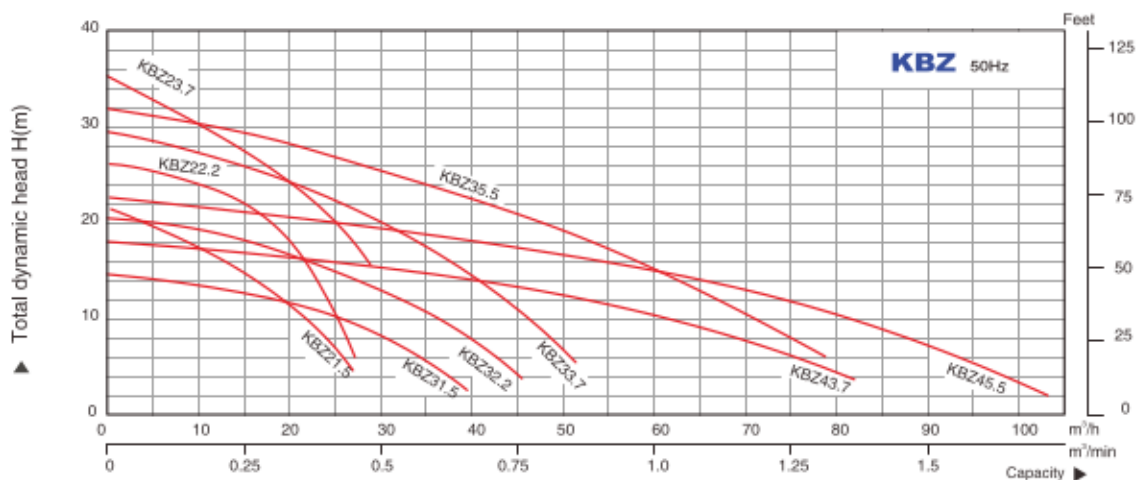
Application

- Civil engineering
- Mines, quarries, coal ore & slurries
- Sewage treatment plants
- General pumping purposes

Special features on request

- Other voltages
- The length of cable is optional

Performance curves



Model(50Hz)	Outlet	Motor power		Max head	Max capacity		Impeller passage	N.W	G.W	Packing dimension
	mm	kW	HP	m	m ³ /h	m ³ /min	mm	Kg	Kg	mm
KBZ21.5	50	1.5	2	22	27.0	0.45	8.5	34.5	37.5	585X270X270
KBZ22.2	50	2.2	3	26.0	27.0	0.45	8.5	36	39	585X270X270
KBZ23.7	50	3.7	5	34.0	29.0	0.48	8.5	60	65	685X325X300
KBZ31.5	80	1.5	2	14.5	40.0	0.67	8.5	34.5	37	585X270X270
KBZ32.2	80	2.2	3	21.0	50.0	0.83	8.5	36	39	585X270X270
KBZ33.7	80	3.7	5	29.0	55.0	0.92	8.5	60	65	685X325X300
KBZ35.5	80	5.5	7.5	32.0	70.0	1.17	8.5	77	84	725X355X370
KBZ43.7	100	3.7	5	18.0	90.0	1.50	8.5	61	66	685X325X300
KBZ45.5	100	5.5	7.5	23.0	105.0	1.75	8.5	78	85	725X355X370
KBZ47.5	100	7.5	10	40.0	84.0	1.40	11.5	105	114	805X365X390
KBZ411	100	11	15	48.5	86.4	1.44	11.5	130	140	855X415X440
KBZ415	100	15	20	56.0	86.4	1.44	11.5	142	153	895X415X440
KBZ67.5	150	7.5	10	31.0	124.8	2.08	19.5	106	114	835X365X390
KBZ611	150	11	15	32.0	147.0	2.45	19.5	133	143	855X415X440
KBZ615	150	15	20	40.0	156.0	2.60	19.5	145	156	895X415X440



HORMA PUMPS (PTY) LTD

**Pump Reconditioning and
General Engineering**

KBS

SUBMERSIBLE SLURRY PUMP



Submersible slurry pumps with a 4-pole motor for an increased lifetime and greater convenience.

KBS-based extra powered submersible slurry pumps with agitator.

Slim design with a top discharge enabling installation in smaller casings.

For bentonite mixed water in foundation works or muddy water in civil engineering works.



Specification

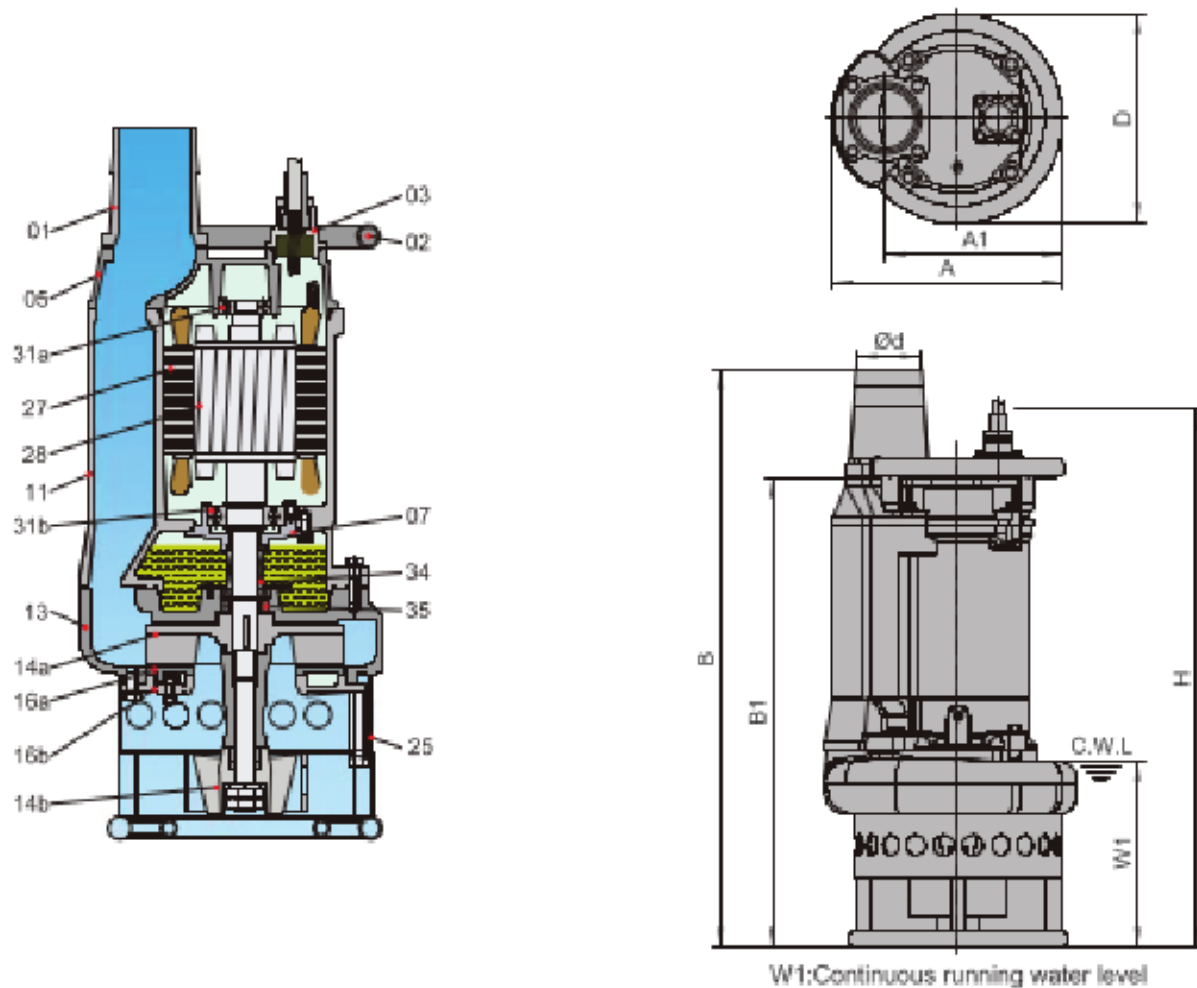
- Capacity: up to 3.25 m³/min
- Head: up to 22 m
- Discharge 80mm (3") to 150mm (6")
- Power:4Kw(5-1/3 HP)to 9Kw(12 HP)
- Power supply:three phase 380V ± 10%
- Insulation class:F
- Cable:length 8m
- Water temperature: up to 40°C
- Max.water depth:30m

Application

- Civil engineering
- Mines,quarriers,coal ore&slurries
- Sewage treatment plants
- General pumping purposes
- Pumping fluid: sludge,sludge,liquids containing mud and/orbentonite

Special features on request

- Other voltages



W1:Continuous running water level

Material of construction

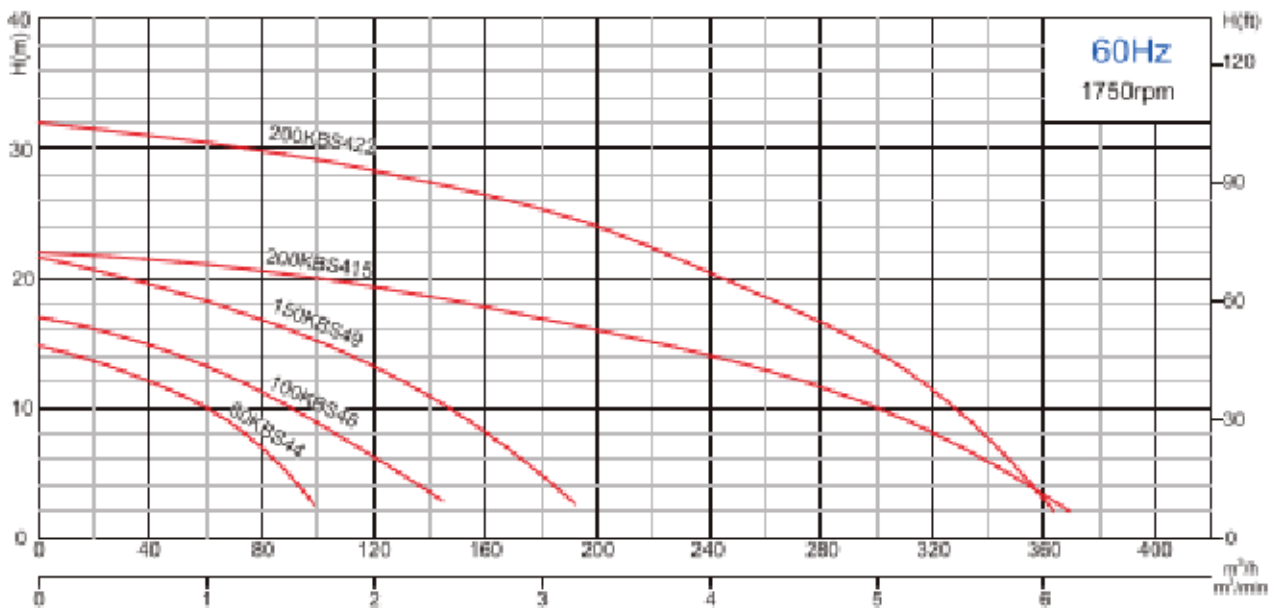
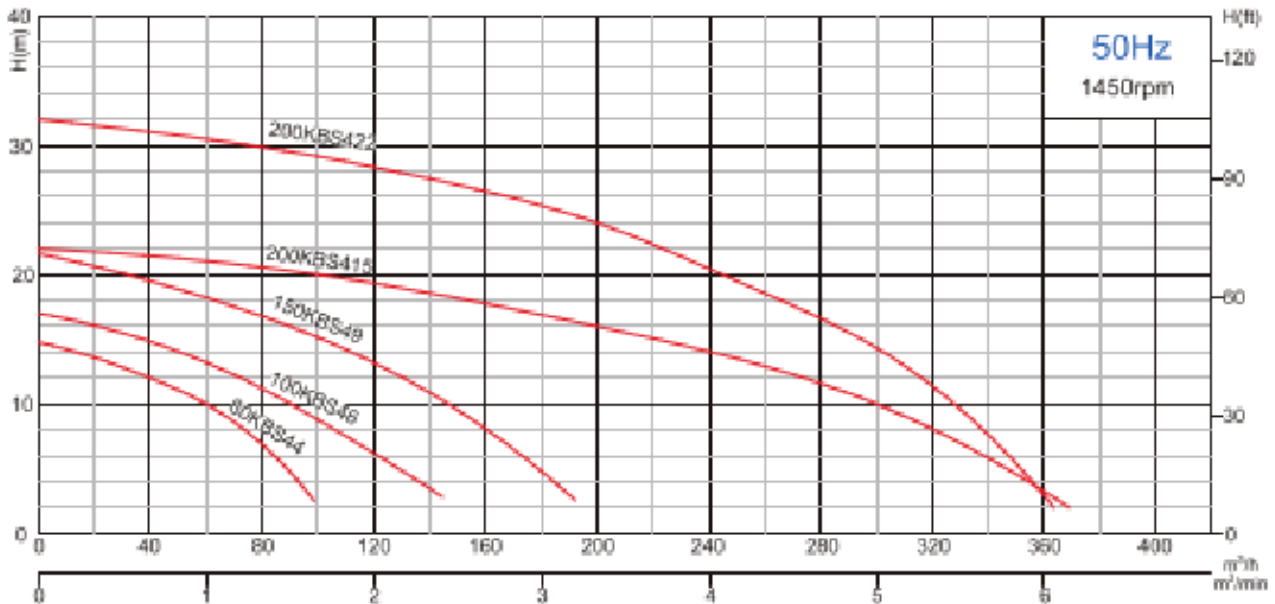
Item No.	Part name	Material	Item No.	Part name	Material
01	Hose coupling	Cast iron	25	Strainer	Steel
02	Handle	Steel	27	Stator	
05	Upper cover	Cast iron	28	Rotor	Shaft:AISI420SS
07	Bearing house	Cast iron	31a	Bearing	Ball bearing
11	Motor body	Cast iron	31b	Bearing	Ball bearing
13	Pump body	Cast iron	34	Mechanical seal	SiC-SiC/SiC-SiC Te-SiC/SiC-SiC (> 15kW)
14a	Impeller	High chrome alloy	35	Oil seal	
14b	Agitator	High chrome alloy	47	Cable	
15a	Inlet plate	High chrome alloy			
16b	Inlet plate	Cast iron			

Dimensions & weights

Model (50/60Hz)	d mm	A mm	A1 mm	B mm	B1 mm	D mm	H mm	W1 mm	N.W Kg	G.W Kg	Packing dimension mm
80KBS44	80	350	260	816	678	326	730	250	108.5	119	885x385x395
100KBS46	100	415	305	844	682	373	730	250	141	151	470x410x985
150KBS49	150	434	324	889	727	407	776	250	171	183	470x470x1045
200KBS415	200	484	352	1121	889	457	980	295	260	278	540x500x1220
200KBS422	200	578	442	1245	1015	528	1200	330	408	434	740x570x1460

KBS SUBMERSIBLE SLURRY PUMP

Performance curves



Performance table

Model (50/60Hz)	Outlet mm	Motor power kW / HP	Starting Method	Rated current (380V)	Rated capacity		Rated head	Max capacity		Max Head	Impeller Passage
				A	m³/h	m³/min	m	m³/h	m³/min	m	mm
80KBS44	80	4 / 5.5	D.O.L.	10.2	60	1.0	10	99	1.65	14.8	30
100KBS46	100	6 / 8	D.O.L.	13.8	90	1.50	10	144	2.40	16.9	30
150KBS49	150	9 / 12	D.O.L.	19.5	100	1.67	15	192	3.20	21.5	30
200KBS415	200	15 / 20	D.O.L.	30.1	200	3.33	16	372	6.20	22	30
200KBS422	200	22 / 30	Star-Delta	42	200	3.33	24	360	6	32	30

KBZE INTELLIGENT SUBMERSIBLE DRAINAGE PUMP

The body of motor and pump is made of rigid cast iron for long-lasting durability.

Greatly increased maximum submersion depth due to mechanical seal resistant to high pressure.

Semi-open impeller made of high chrome alloy match with wear plate(ductile iron) achieves superior durability.

Effective motor cooling due to discharge channel cast as part of the motor housing,Space economically by a top outlet.

The pump can operate automatically with built-in intelligent control system,thus achieve low total energy costs.

Main advantages

- Protect against reverse phase,ensuring correct impeller rotation;
- Protect against open phase or impeller jam,thus prevent accidental damage;
- Automatically stop the pump in event of overload, abnormal voltage and recovery 5 min later;
- The pump stops working at high temperature, and will automatically boots after cooling to the specified temperature;
- The water sensor's height is adjustable to control pump operation and stop;
- The pump stops working within 60s when water level is below the probe and keep downtime for 180s, after 180s,when the water level is above the probe, the pump will work again;
- Rapid assessment about the pump operation and malfunction history.



Specification

- Capacity:up to 105m³/h
- Head:up to 38 meters
- Power:1.5kW(2HP) to 5.5kW(7.5HP)
Power supply:three phase 400V ± 10%, 50Hz
380V ± 10%, 60Hz
- Insulation class:F
- Protection class:IP68
- Cable length:8m
- Water temperature:up to 40°C
- Max.water depth:25m

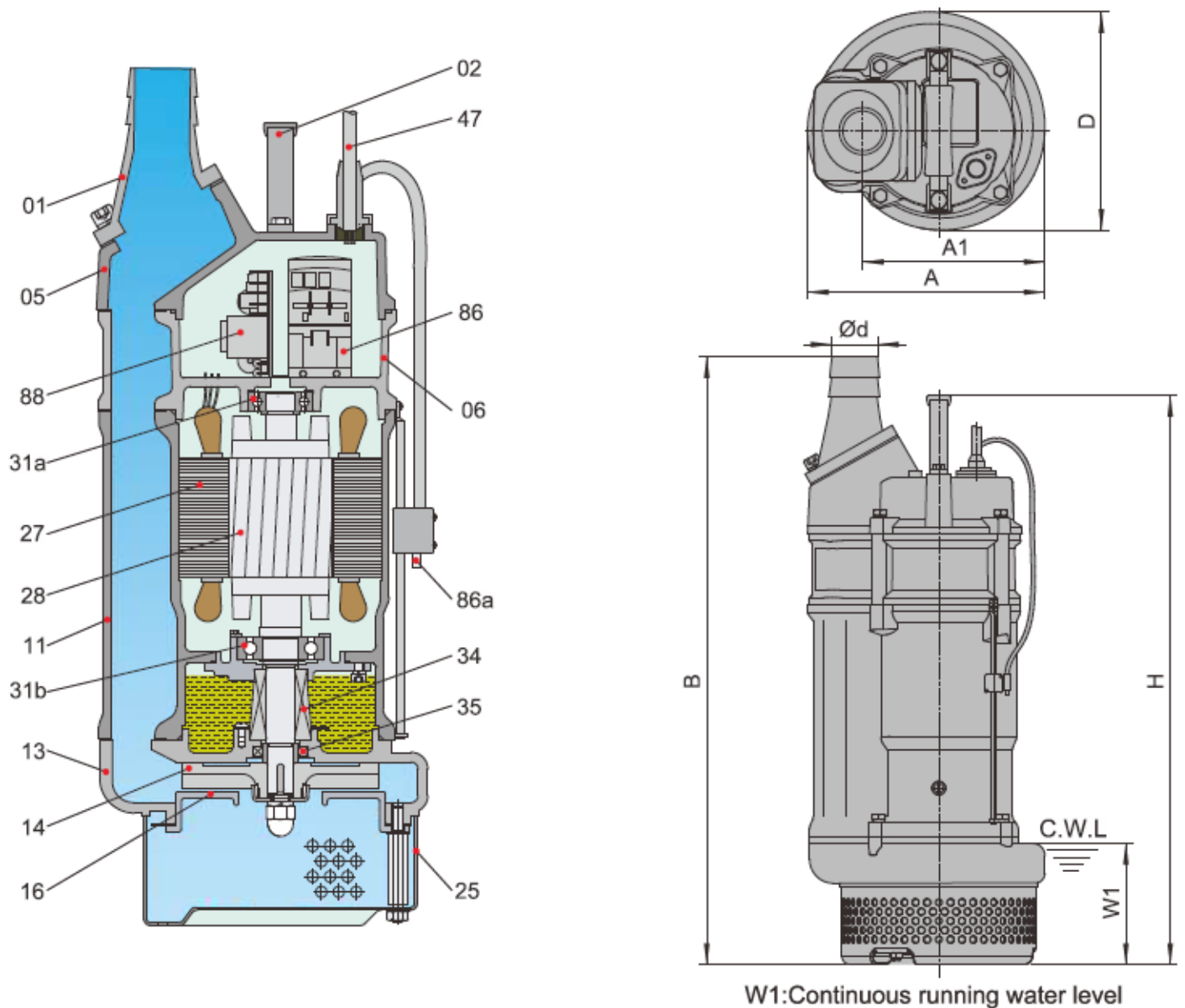
Application

- Civel engineering
- Mines,quarries,coal ore & slurries
- Sewage treatment plants
- General pumping purposes

Special features on request

- Other voltages
- The length of cable is optional

KBZE INTELLIGENT SUBMERSIBLE DRAINAGE PUMP



W1:Continuous running water level

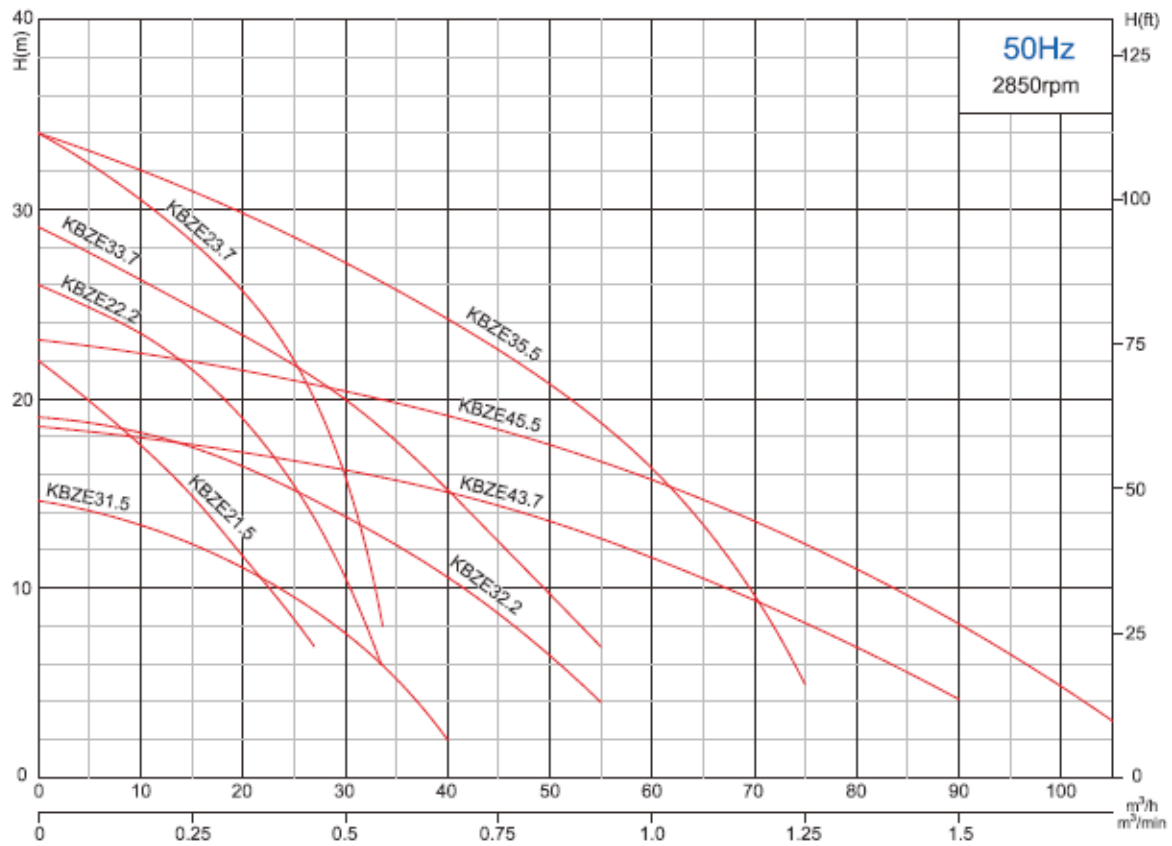
Material of construction

Item No.	Part name	Material	Item No.	Part name	Material
01	Hose coupling	Cast iron	28	Rotor	Shaft:AISI420SS
02	Handle	Rubber&steel	31a	Bearing	Ball bearing
05	Upper cover	Cast iron	31b	Bearing	Ball bearing
06	Upper support	Cast iron	34	Mechanical seal	Si ₃ N ₄ -SiC/Carbon-SiC (< 2.2kW) Si ₃ N ₄ -SiC/Si ₃ N ₄ -SiC (> 3.7kW)
11	Motor body	Cast iron	35	Oil seal	
13	Pump body	Cast iron	47	Cable	
14	Impeller	High chrome alloy	86	AC Contactor	
16	Inlet plate	Ductile iron	86a	Water level sensor	
25	Strainer	Steel	88	Controller block	
27	Stator				

Dimensions & weights

Model (50/60Hz)	d	A	A1	B	D	H	W1	N.W	G.W	Packing dimension mm
	mm	mm	mm	mm	mm	mm	mm	Kg	Kg	
KBZE21.5	50	235	190	613	216	582	120	41	45	680x265x265
KBZE31.5	80	235	190	620	216	582	120	41	45	680x265x265
KBZE22.2	50	235	190	613	216	582	120	44	48	680x265x265
KBZE32.2	80	235	190	620	216	582	120	44	48	680x265x265
KBZE23.7	50	283	223	703	252	707	150	71	76	770x320x295
KBZE33.7	80	283	223	703	252	707	150	71	76	770x320x295
KBZE43.7	100	283	223	728	252	707	150	72	77	770x320x295
KBZE35.5	80	283	223	755	252	668	150	85.5	92.5	840x350x370
KBZE45.5	100	283	223	780	252	668	150	86.5	93.5	840x350x370

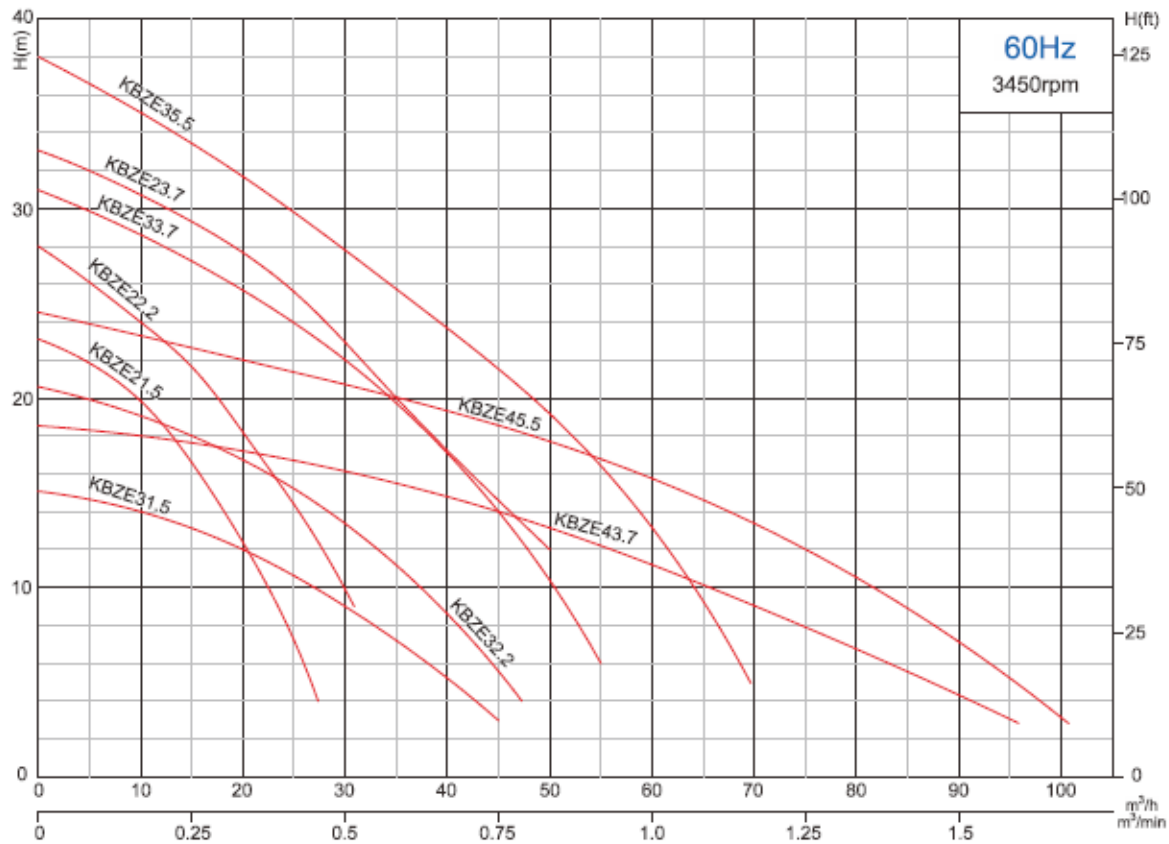
Performance curves



Performance table

Model (50Hz)	Outlet	Motor power		Rated current (400V)	Rated capacity		Rated head	Max capacity		Max Head	Impeller Passage
	mm	kW	HP	A	m³/h	m³/min	m	m³/h	m³/min	m	mm
KBZE21.5	50	1.5	2	3.5	15	0.25	15	27	0.45	22	8.5
KBZE31.5	80	1.5	2	3.5	30	0.50	8	40	0.67	14.5	8.5
KBZE22.2	50	2.2	3	5.0	18	0.30	20	33	0.55	26	8.5
KBZE32.2	80	2.2	3	5.0	36	0.60	11	55	0.92	19	8.5
KBZE23.7	50	3.7	5	7.7	12	0.20	30	33	0.55	34	8.5
KBZE33.7	80	3.7	5	7.7	30	0.50	20	55	0.92	29	8.5
KBZE43.7	100	3.7	5	7.7	60	1.0	11.5	90	1.50	18.5	8.5
KBZE35.5	80	5.5	7.5	11.4	36	0.60	25	75	1.25	34	8.5
KBZE45.5	100	5.5	7.5	11.4	60	1.0	16	105	1.75	23	8.5

Performance curves



Performance table

Model (60Hz)	Outlet	Motor power		Rated current (380V)	Rated capacity		Rated head	Max capacity		Max Head	Impeller Passage
	mm	kW	HP	A	m³/h	m³/min	m	m³/h	m³/min	m	mm
KBZE21.5	50	1.5	2	3.5	15	0.25	16.5	27	0.45	23	8.5
KBZE31.5	80	1.5	2	3.5	30	0.50	9	45	0.75	15	8.5
KBZE22.2	50	2.2	3	5.1	18	0.30	20	31	0.52	28	8.5
KBZE32.2	80	2.2	3	5.1	30	0.60	13	47	0.78	20.5	8.5
KBZE23.7	50	3.7	5	8.0	12	0.20	30	50	0.83	33	8.5
KBZE33.7	80	3.7	5	8.0	30	0.50	22	55	0.92	31	8.5
KBZE43.7	100	3.7	5	8.0	60	1.0	11.5	96	1.60	18.5	8.5
KBZE35.5	80	5.5	7.5	11.6	36	0.60	25	69	1.15	38	8.5
KBZE45.5	100	5.5	7.5	11.6	60	1.0	16	102	1.70	24.4	8.5

HS SUBMERSIBLE DRAINAGE PUMP

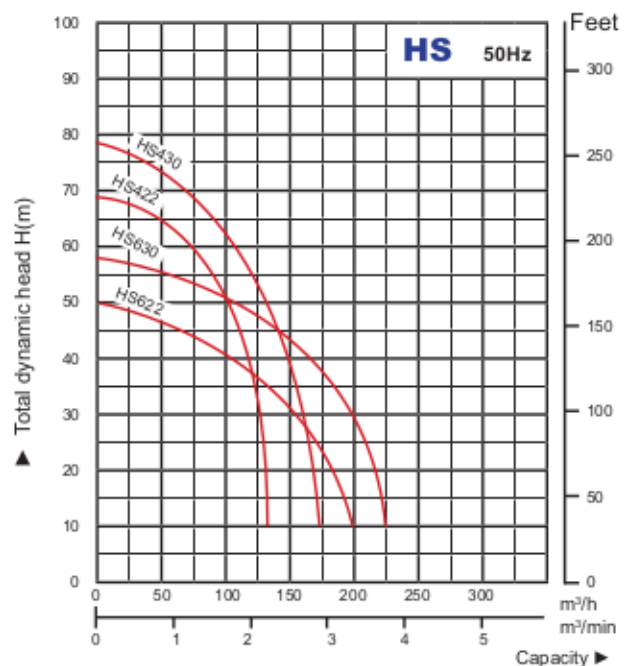
The body of motor and pump is made of rigid cast iron for long-lasting durability. Greatly increased maximum submersion depth due to double mechanical seal resistant to high pressure

Hydraulic part under the motor and motor cooled by the pumped water for safe operation also with the pump only partially immersed. Space economy by a top outlet.

Hemetically sealed motor equipped.

Discharge 100mm(4") to 150mm(6 "), motor 22kW(30HP) to 30 kW (40HP)

Motor is dry type submersible induction motor (2 poles).



Specification

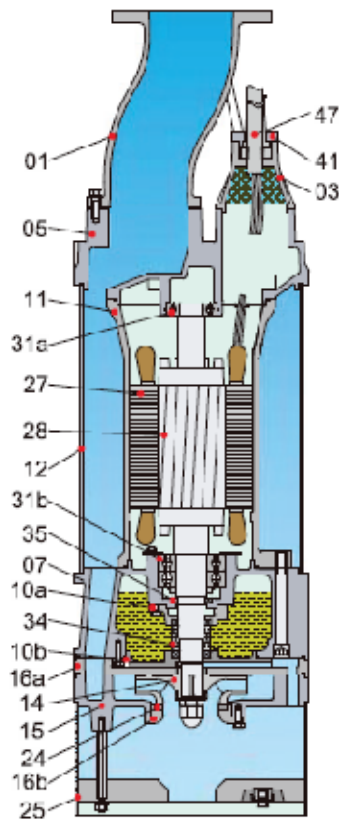
- Capacity: up to 220 m³/h
- Head: up to 78 meters
- Power : 22kW(30HP) to 30 kW (40HP)
- Supply voltage : Three Phase 400 V± 10%, 50Hz, 60Hz
- Insulation class: F
- Protection class: IP68
- Cable Length : 20m
- Water temperature: up to 40°C
- Max. water depth: 30 m

Application

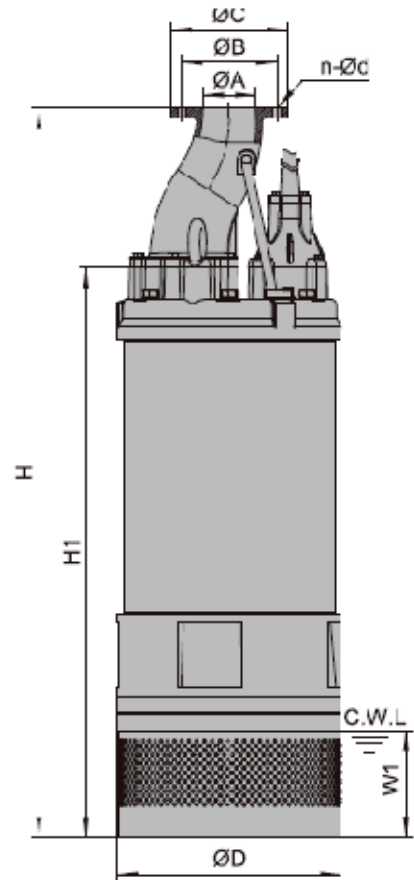
- Deep-well pre-dewatering or high-head dewatering
- Civil engineering and construction works
- Mines, quarries, coal ore & slurries
- Sewage treatment plants
- General pumping purposes

Special features on request

- Other voltages
- The length of cable is optional



HS22-30kW



W1:Continuous running water level

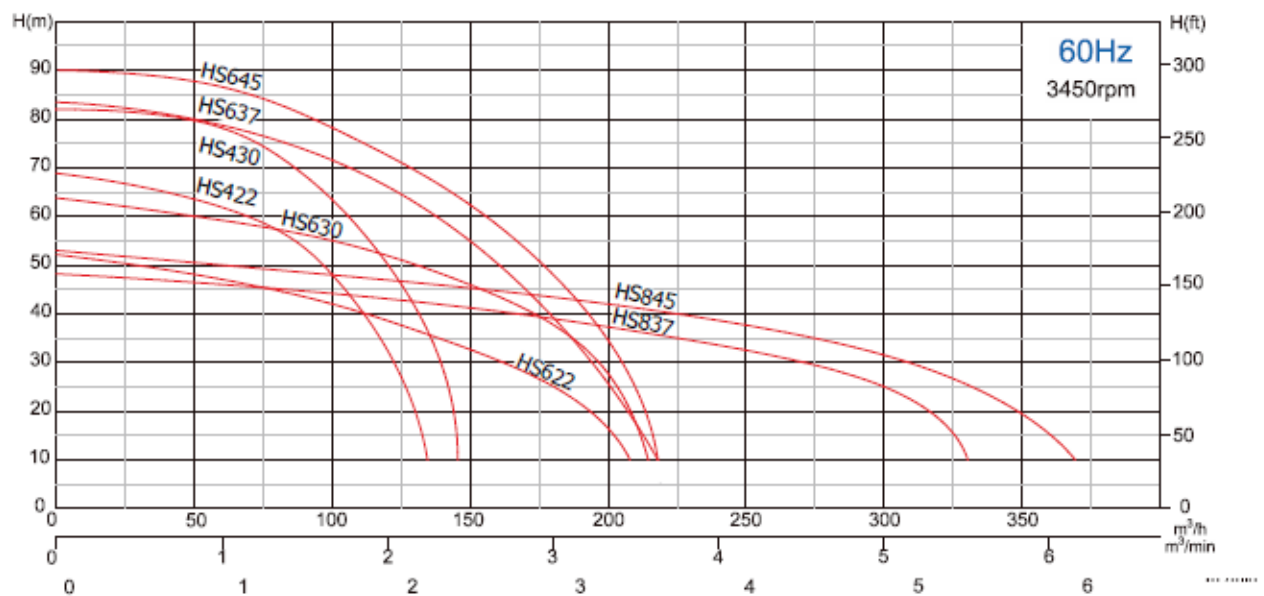
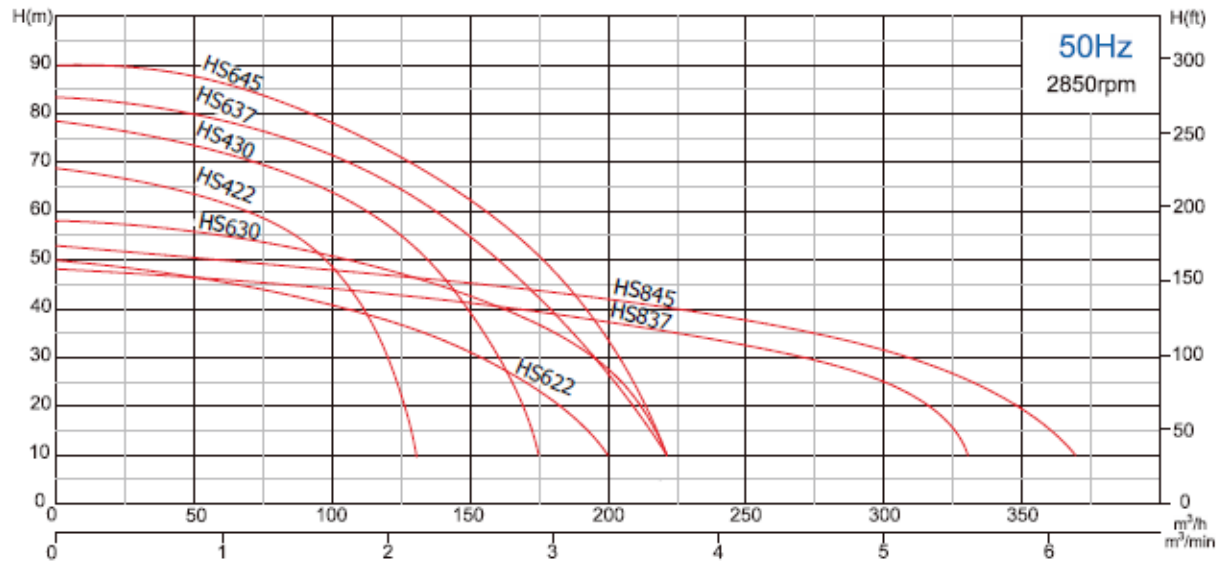
Material of construction

Item No.	Part name	Material	Item No.	Part name	Material
01	Hose coupling	Ductile iron	16b	Inlet plate	Cast iron
03	Terminal box	Cast iron	24	Neck ring	High chrome alloy
05	Upper cover	Cast iron	25	Strainer	AISI304SS
07	Bearing house	Cast iron	27	Stator	
10a	Seal bracket	Cast iron	28	Rotor	Shaft:AISI420SS
10b	Seal bracket	Cast iron	31a	Bearing	Ball bearing
11	Motor body	Cast iron	31b	Bearing	Ball bearing
12	Outer casing	Steel	34	Mechanical seal	To-SiC/SiC-SiC
14	Impeller	High chrome alloy	35	Oil seal	
15	Diffuser	Ductile iron	41	Shim	Cast iron
16a	Inlet plate	Ductile iron	47	Cable	

Dimensions & weights

Model (50/60Hz)	A	B	C	n-Ød	D	H	H1	W1	N.W	G.W	Packing dimension mm
	mm	mm	mm	mm	mm	mm	mm	mm	Kg	Kg	
HS422	100	180	220	8-Ø17.5	420	1374	1072	240	370	410	620x740x1540
HS430	100	180	220	8-Ø17.5	420	1374	1072	240	375	415	620x740x1540
HS622	150	240	285	8-Ø22	420	1434	1082	250	385	425	620x740x1600
HS630	150	240	285	8-Ø22	420	1434	1082	250	390	430	620x740x1600
HS637	150	240	285	8-Ø22	530	1424	1072	180	570	615	680x740x1650
HS645	150	240	285	8-Ø22	530	1424	1072	180	575	620	680x740x1650
HS837	200	295	340	12-Ø22	530	1474	1072	180	575	625	680x740x1700
HS845	200	295	340	12-Ø22	530	1474	1072	180	580	630	680x740x1700

Performance curves



Performance table

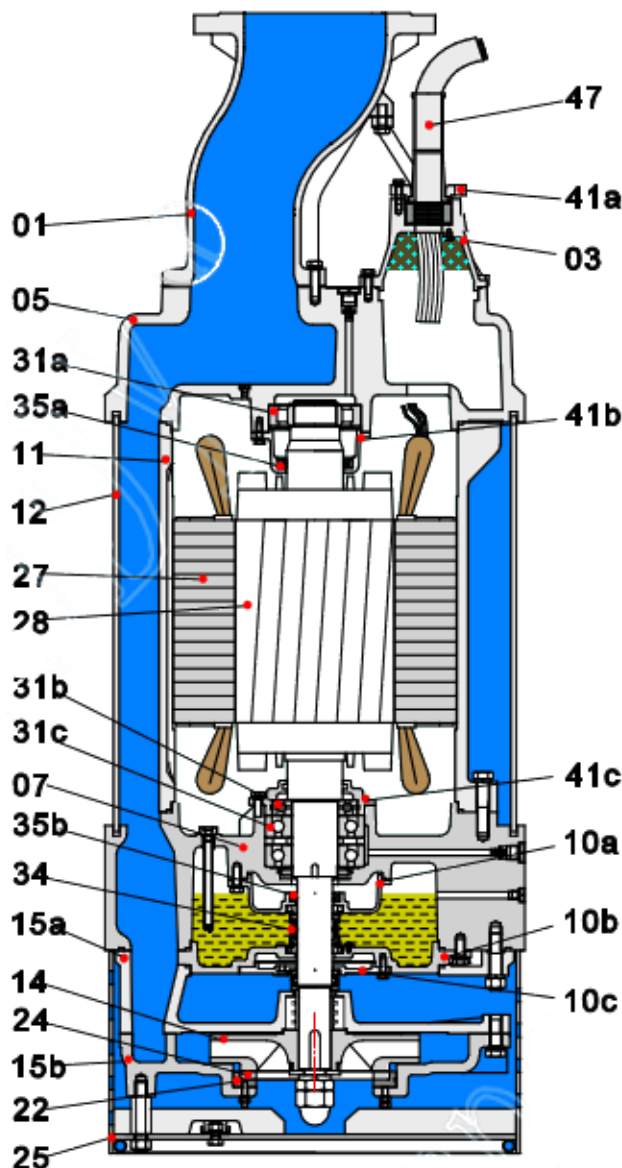
Model (50/60Hz)	Outlet	Motor power		Rated current	Rated capacity		Rated Head	Max capacity		Max Head	Impeller Passage
	mm	kW	HP	A	m³/h	m³/min	m	m³/h	m³/min	m	mm
HS422	100	22	30	41.5	66	1.1	60	130/138	2.17/2.3	68	6
HS430	100	30	40	54	72	1.2	70/75	170/144	2.83/2.4	78/82	6
HS622	150	22	30	41.5	120	2.0	37/40	200/210	3.33/3.5	50/52	15
HS630	150	30	40	54	140	2.33	45/48	220/216	3.67/3.6	58/64	15
HS637	150	37	50	66	60	1.0	80	220	3.67	83	6
HS645	150	45	60	80	84	1.4	80	220	3.67	90	6
HS837	200	37	50	66	216	3.6	35	330	5.5	48	20
HS845	200	45	60	80	270	4.5	35	372	6.2	53	20

• Starting Method: Star-Delta

SECTIONAL DRAWING

TYPE: SUBMERSIBLE DRAINAGE PUMP(HIGH HEAD)

MODEL: HS 90-110KW

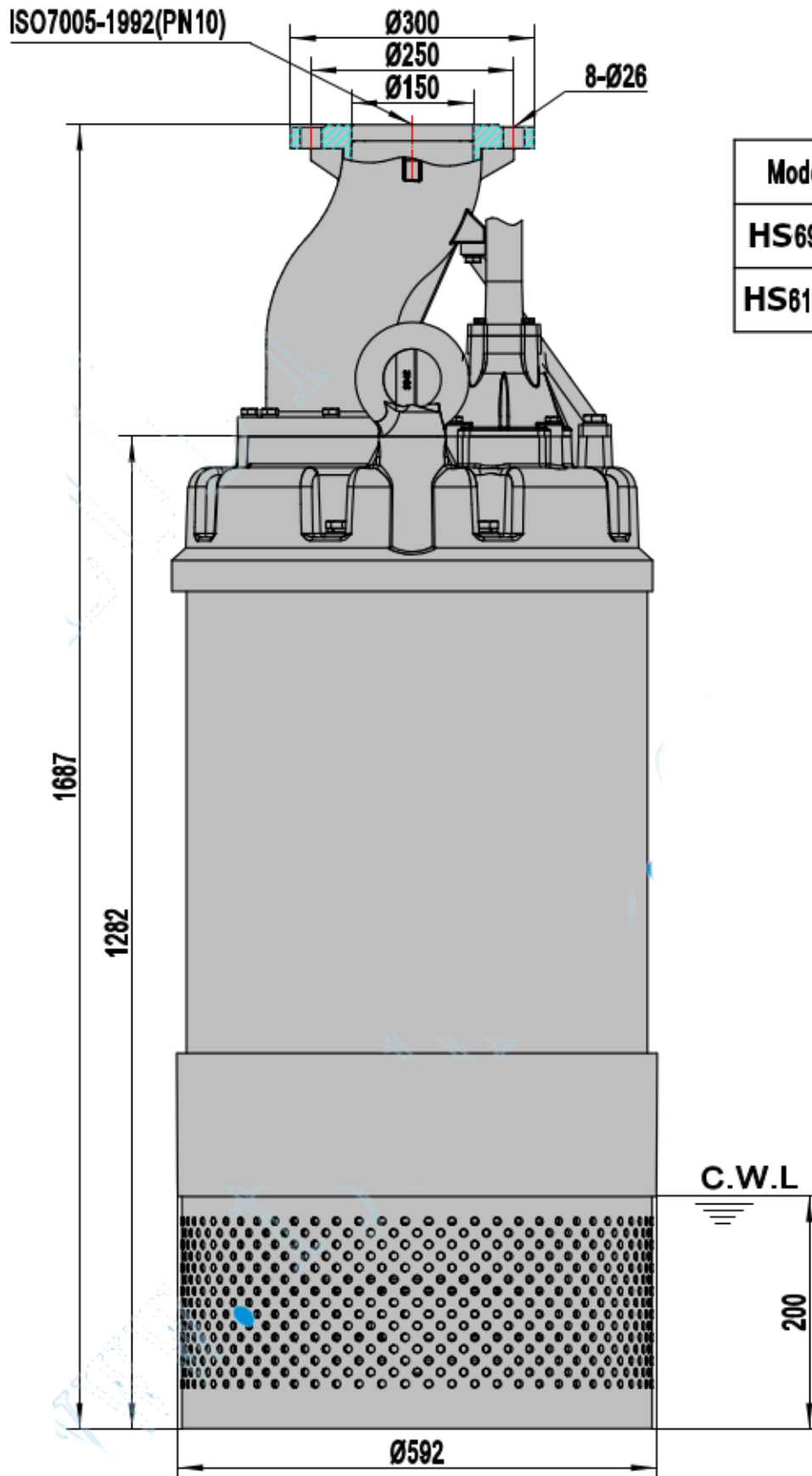


Item No.	Part name	Material	Item No.	Part name	Material
01	Hose coupling	Ductile iron	25	Strainer	AISI304SS
03	Terminal box	Cast iron	27	Stator	
05	Upper cover	Cast iron	28	Rotor	Shaft:AISI420SS
07	Bearing house	Cast iron	31a	Bearing	Cylindrical roller bearing
10a	Seal bracket	Cast iron	31b	Bearing	Angular contact bearing
10b	Seal bracket	Cast iron	31c	Bearing	Angular contact bearing
10c	Seal bracket	Cast iron	34a	Mechanical seal	Tc-Sic/Sic-Sic
11	Motor body	Cast iron	34b	Mechanical seal	Sic-Sic
12	Outer casing	Steel	35a	Oil seal	
14	Impeller	High chrome alloy	35b	Oil seal	
15a	Diffuser	Cast iron	41a	Shim	Cast iron
15b	Diffuser	Ductile iron	41b	Shim	Cast iron
22	Seat assembly	Cast iron	41c	Shim	Cast iron
24	Neck ring	High chrome alloy	47	Cable	

DIMENSION DRAWING

TYPE: SUBMERSIBLE DRAINAGE PUMP(HIGH HEAD)

MODEL: HS690,HS110



Model	N.W(kg)
HS690	1100
HS6110	1130

C.W.L:Continuous Running Water Level.

PUMP PERFORMANCE CURVES

TYPE: SUBMERSIBLE PUMP

MODEL: HS690

FREQUENCY: 50Hz

STANDARD SPECIFICATIONS

DISCHARGE BORE

150 mm

HEAD

Max: 145 m

Rated: 130 m

CAPACITY

Max: 2.7 m³/min

Rated: 2.0 m³/min

MOTOR OUTPUT

90 kW

PHASE x VOLTAGE

3 Øx 400 V

CURRENT

162 A

POLES/REVOLUTION

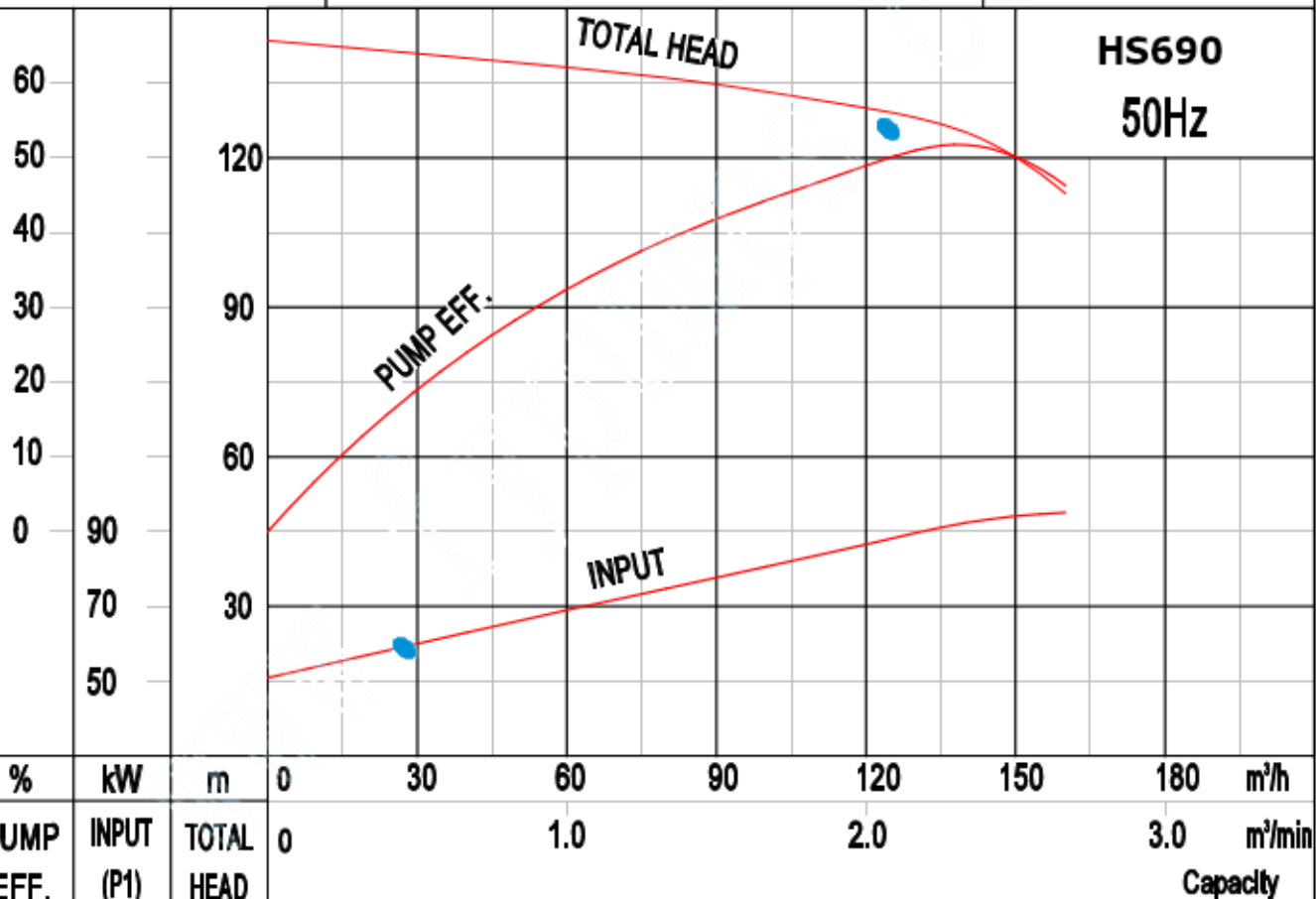
2 P/ S.S.2850 min⁻¹

STARTING METHOD

Stae-Delta start

INSULATION CLASS

F



%	kW	m	0	30	60	90	120	150	180	m ³ /h
PUMP EFF.	INPUT (P1)	TOTAL HEAD	0	1.0	2.0	3.0	Capacity			

FSM SUBMERSIBLE DRAINAGE PUMP

Semi Vortex impeller design minimize the Clogging situation for maximum durability and maintaining pump performance. Built-in shaft mounted agitator prevent the "air lock" and reduce the clogging situation .

Specification

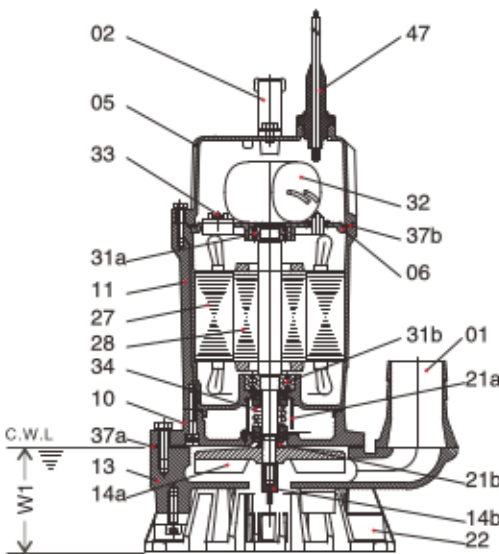
Civil engineering, building sites, basements or utility pits, rainwater, mud water and fluid with high abrasive

Application

- Water temperature: up to 40°C
- PH: 6.5 to 8.5
- Power supply: Single phase 220V ± 10%, 50Hz, 60Hz
- Insulation class: F
- Protection class: IP 68
- Maximum immersion depth: 10m
- Cable length: 8m

Special features on request

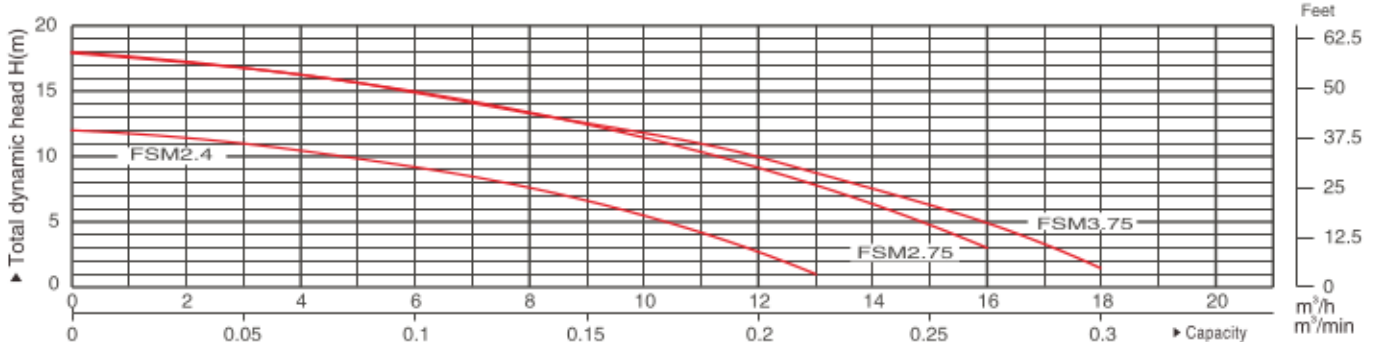
- Other voltages



W1: Continuous running water level

Materials of construction

Item No.	Part name	Material
01	Hose coupling	Cast iron
02	Handle	Rubber&AISI304SS
05	Upper cover	Aluminum die casting
06	Up-Bearing house	Cast iron
10	Seal house	Cast iron
11	Motor body	Aluminum die casting
13	Pump body	Cast iron
14a	Impeller	Ductile iron
14b	Agitator	Stainless steel
21a	Oil riser	LDPE
21b	Sand guard	NBR
22	Seat assembly	PU
27	Stator	
28	Rotor	Shaft:AISI420SS
31a	Bearing	Ball bearing
31b	Bearing	Ball bearing
32	Capacitor	
33	Motor protector	
34	Mechanical seal	Sic-Sic/Carbon-Ceramic
37a	Gasket	NBR
37b	Gasket	NBR
47	Cable	H07RN-F



Model	Outlet	Motor power		Max head	Max capacity		Impeller passage	W1	N.W	G.W	Packing dimension
	mm	kW	HP	m	m³/h	m³/min	mm	mm	Kg	Kg	mm
FSM2.4(F)	50	0.4	0.55	12	12.6	0.21	6	85	13.5	14.5	405X255X255
FSM2.75(F)	50	0.75	1	18	16	0.27	6	85	16.5	17.5	445X265X255
FSM3.75(F)	80	0.75	1	18	18	0.3	6	85	18	19	445X295X255



HORMA PUMPS (PTY) LTD

Pump Reconditioning and
General Engineering

THE SOLUTION TO GENERAL WASTE-WATER PUMPING

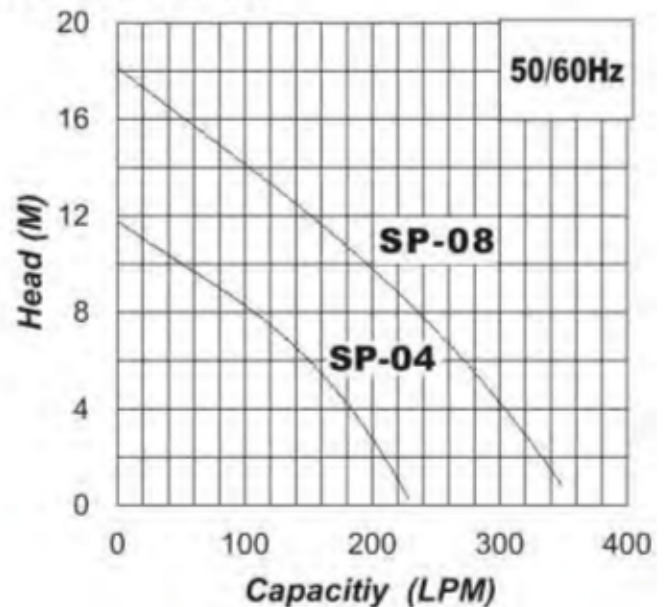


SP Series

□ Features :

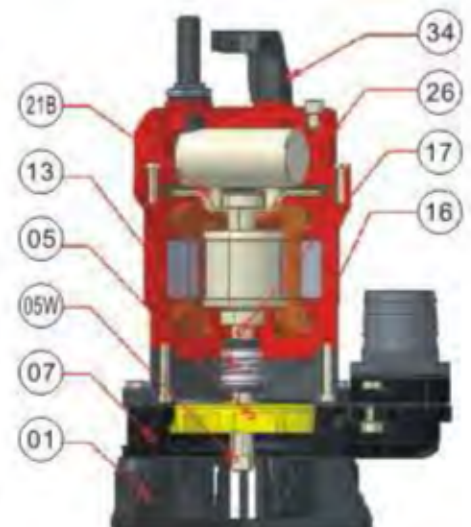
- ✓ Wear resistant construction (TPU). Ideal site pump.
- ✓ Double mechanical seals.
- ✓ Dry run motor. Thermal protector to prevent motor from overheating.
- ✓ Built-in agitator.
- ✓ Solid construction and light to carry.
- ✓ Automatic model suitable for sites, pits and emergency pumping.

□ Performance :

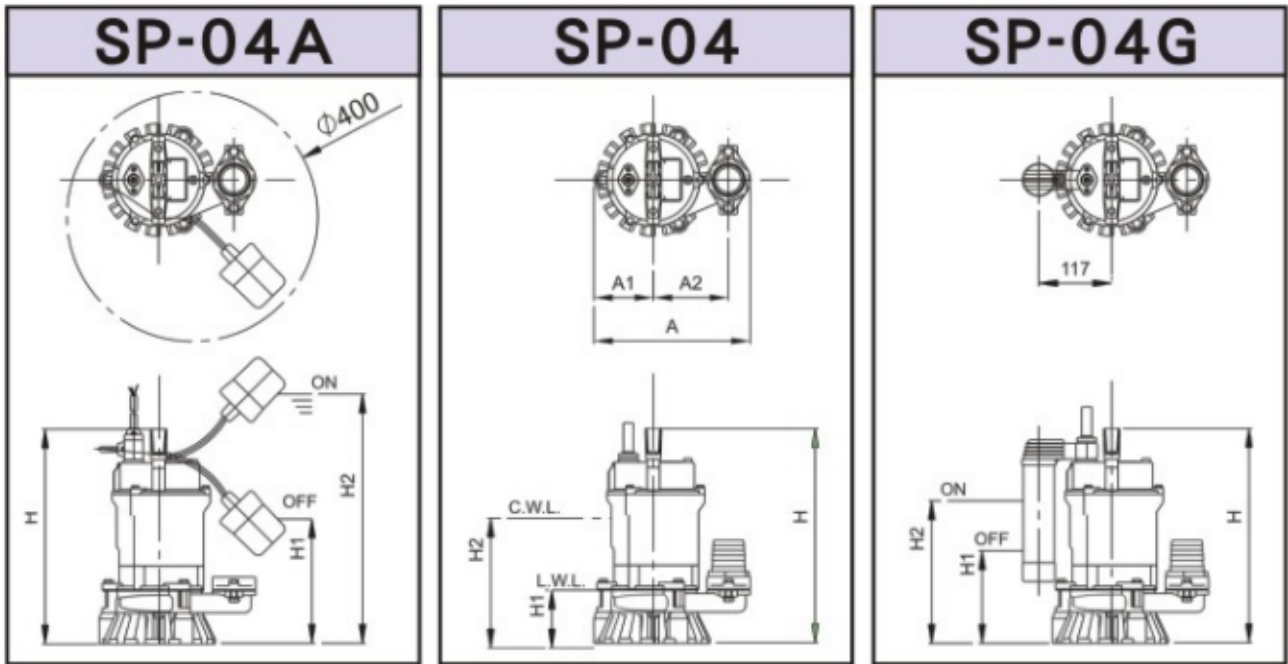


□ Constructions :

NO	Description	Material
34	Handle	Nylon6
26	Motor Cover	ADC12
21B	Bearing Cover	SECC
07	Pump Housing	FC200
05	Impellor	TPU
01	Strainer	PVC
05W	Agitator	SMF5030
13	Mechanical Seal	Sic/Sic
17	Rotor Shaft	SUS410
16	Motor Housing	ADC12



□ Dimensions :



□ Specifications :

Discharge mm	Pump	Output kW	Voltage 50HZ or 60HZ	
			1 ϕ	3 ϕ
50	SP-04	0.4	100V } 230V	200V } 460V
	SP-04A	0.4		
	SP-04G	0.4		
50(80)	SP-08	0.75		
	SP-08A	0.75		
	SP-08G	0.75		

△ 3 ϕ does not include model A&G

Discharge mm	Dimensions (mm)						Weight Kg
	A	A ₁	A ₂	H	H ₁	H ₂	
50	249	95	120	343	90	200	12
	249	95	120	343	200	400	12.3
	249	95	120	343	150	230	12.3
50(80)	279	95	120	368	90	225	16
	279	95	120	368	225	425	16.3
	279	95	120	368	175	255	16.3



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