

MBH[®] PUMPS

**Installation, Operation and
Maintenance Manual**

WASTE WATER SUBMERSIBLE PUMPS

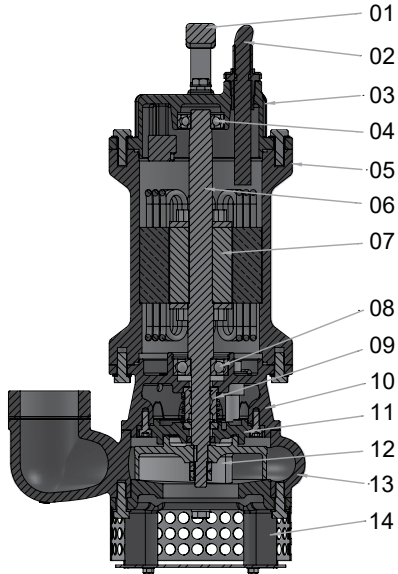
**PST Series • PSC Series
PSGF Series • PSNCV Series**



**ISO 9001
Certified Company**

A Mark of Quality

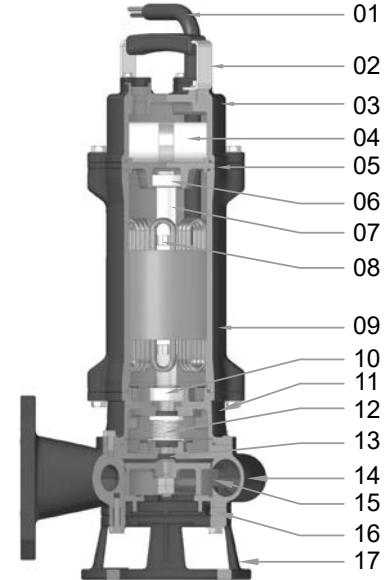
Cross Section • PST Series



Portable Submersible Dewatering Pumps

NO.	DESCRIPTION	MATERIAL
01	HANDLE	ALLOY STEEL
02	POWER AND CONTROL CABLE	PVC. INSU. SHEATHED
03	TOP COVER	C.I IS-210, FG260
04	BALL BEARING (N.D.E)	FAG. (GREASE LUB)
05	MOTOR BODY	C.I IS-210, FG260
06	ROTOR SHAFT	S.S-410
07	ROTOR COMPLETE	ALU. DYE CAST
08	BALL BEARING (D.E)	FAG. (GREASE LUB)
09	DUAL MECHANICAL SEAL	TC / TC
10	OIL CHAMBER	C.I IS-210, FG260
11	SEAL PLATE	C.I IS-210, FG260
12	IMPELLER	C.I. / S.S.
13	VOLUTE CASING	C.I IS-210, FG260
14	SPIRAL PLATE CUM STAND WITH STRAINER	C.I IS-210, FG260 / S.S.
#	FASTENER	S.S 304
Note: M.O.C. SHOWING MAJOR PARTS ONLY		

Cross Section • PSC Series

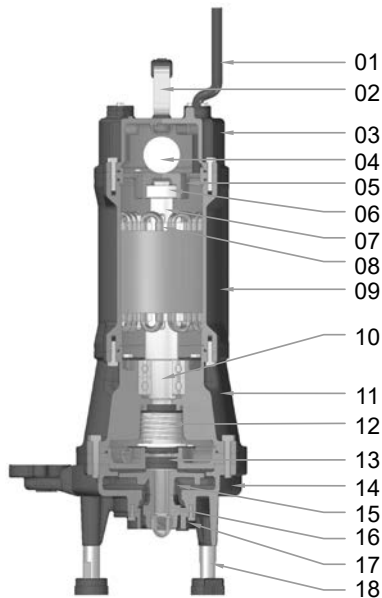


Submersible Cutter Pumps

NO.	DESCRIPTION	MATERIAL
01	POWER & CONTROL CABLE	PVC. INSU. SHEATHED
02	LIFTING HANDLE	S.S.
03	TOP COVER	CI IS-210, FG260
04	CAPACITOR *	REPUTED MAKE
05	TOP BEARING PLATE	CI IS-210, FG260
06	BEARING	FAG. (GREASE LUB.)
07	ROTOR SHAFT	S.S. 410
08	ROTOR	ALU. DYE-CAST
09	MOTOR BODY	CI IS-210, FG260
10	BEARING	FAG. (GREASE LUB.)
11	OIL CHAMBER	CI IS-210, FG260
12	MECHANICAL SEAL	CA/CE & SIC/SIC
13	OIL SEAL	NITRILE RUBBER
14	VOLUTE	CI IS-210, FG260
15	IMPELLER	CI IS-210, FG260
16	SPIRAL PLATE	CI IS-210, FG260
17	STAND	CI IS-210, FG260
#	FASTENER	S.S. 304 / S.S. 316
Note: M.O.C. SHOWING MAJOR PARTS ONLY		

* Item No. 04 Capacitor not applicale in three phase pumps

Cross Section • PSGF Series

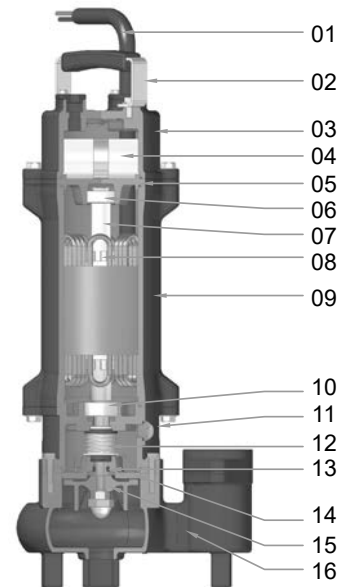


Submersible Grinder Pumps

No.	DESCRIPTION	MATERIAL
01	POWER & CONTROL CABLE	PVC. INSU. SHEATHED
02	LIFTING HANDLE	S.S.
03	TOP COVER	CI IS-210, FG260
04	CAPACITOR	-
05	TOP BEARING PLATE	CI IS-210, FG260
06	BEARING (6304)	FAG. (GREASE LUB.)
07	ROTOR SHAFT	S.S 410
08	ROTOR	ALU. DYE-CAST
09	MOTOR BODY	CI IS-210, FG260
10	BEARING (6307)	FAG. (GREASE LUB.)
11	OIL CHAMBER	CI IS-210, FG260
12	MECHANICAL SEAL	CA/CE & SIC/SIC
13	OIL SEAL	NITRILE RUBBER
14	VOLUTE	CI IS-210, FG260
15	IMPELLER	CI IS-210, FG260
16	RADIAL CUTTER	SUS440C
17	CUTTER RING	SUS440C
18	FOOTTING LEG	S.S. 304
#	FASTENER	S.S. 304 / S.S. 316
Note: M.O.C. SHOWING MAJOR PARTS ONLY		

* Item No. 04 Capacitor not applicale in three phase pumps

Cross Section • PSNCV Series



Submersible Sewage Pumps (Vortex Design)

NO.	DESCRIPTION	MATERIAL
01	POWER & CONTROL CABLE	PVC. INSU. SHEATHED
02	LIFTING HANDLE	S.S.
03	TOP COVER	CI IS-210, FG260
04	CAPACITOR	REPUTED MAKE
05	TOP BEARING PLATE	CI IS-210, FG260
06	BEARING (6203)	FAG. (GREASE LUB.)
07	ROTOR SHAFT	S.S. 410
08	ROTOR	ALU. DYE-CAST
09	MOTOR BODY	CI IS-210, FG260
10	BEARING (6303)	FAG. (GREASE LUB.)
11	OIL CHAMBER	CI IS-210, FG260
12	MECHANICAL SEAL	CA/CE & SIC/SIC
13	OIL SEAL	NITRILE RUBBER
14	SEAL PLATE	CI IS-210, FG260
15	IMPELLER	CI IS-210, FG260
16	VOLUTE	CI IS-210, FG260
#	FASTENER	S.S. 304 / S.S. 316
Note: M.O.C. SHOWING MAJOR PARTS ONLY		

* Item No. 04 Capacitor not applicale in three phase pumps

Construction of Portable Submersible Pump Set

MBH Portable submersible pumps are of close coupled compact design and have pump below and motor above construction hence sump cleaning is possible to the minimum level.

These are powered by squirrel cage induction dry motor suitable for operation at 230 Volts & 400 / 440 Volts, 1 Phase / 3 Phase, 50 Hz., A.C. Supply. Being a submersible pump it saves a lot of cost of construction as compare to other conventional pumps & also provides noise free operation. Pumps are fitted with high efficiency free flow impeller for smooth and economical pumping operation. Since these pumps work under pumping liquid suction and are always flooded hence there is no need of priming or suction pipe. Pumps are fitted with double mechanical seal to separate motor chamber from oil chamber and oil chamber from liquid being pumped. Only single phase pumps are provided with float for water level control.

Recommendations

1. Follow maintenance schedule strictly, so as to avoid costly repairs in the long run.
2. Ensure that pump set is connected properly to the control panel.
3. Portable installation of pump can be done with the help of flexible hose pipe and pump is supposed to pump out liquid.
4. If pumping media available is falling short of the pump capacity, it will result in spurt, which is harmful for the pump. In such a case reduce discharge by throttling.
5. Ensure that pump rotates in correct direction (clockwise). Counter clockwise rotation will result in lower discharge and increased wear. At the instant the pump is started, it should give an anticlockwise jerk. The rotation of impeller should match the arrow on the pump casing. In case of reverse rotation the current consumption will rise and the pump set will produce unwanted noise.
6. Avoid too many creases in the hosepipe, which results in the increase friction losses. Use the shortest possible delivery line.
7. Protect cable from damage during storage, transportation and operation. A damaged cable may give shock or burn the motor.

8. Always earth the unit, before starting.
9. Never hoist the pump set up or down by the connecting cable.
10. Use NRV if pipe length is more than 4.5 mtr.

Precautions for Long Storage

Clean the pumping set with fresh water and wipe the cable. Put pump set in a cool, dry place in vertical position and cable wrapped be put on top of the pump. Do not leave cable on the floor where it is likely to get damaged.

Warning

1. Ensure that pump set rotates in the correct direction of rotation.
2. Always operate pump set with the original control panel supplied by the manufacturer.
3. Protect the cable from damage.
4. Ensure proper earthing of the pump set before starting.

Maintenance

MBH made portable submersible pump set is totally maintenance free. However oil in the seal chamber is to be checked every six months and needs to be replaced if quality gets deteriorated or it is to be changed after one year or 5000 working hours whichever is early.

List of Standard Oil is as Under

- BPCL - Hydrol 46 / Turblo 46
- HPCI - Hylube 30 / milcy 40
- IOC - Servo Super 10



Trouble Shooting Chart

Pump fails to deliver	The discharge is too low	The line current is excessive	The total head is too low	The power consumption is excessive	Noisy operation of pump	WASTE WATER SUBMERSIBLE PUMPS PST Series PSC Series PSGF Series PSNCV Series	
						CAUSE	REMEDY
	•		•			The pump delivers against an excessively high discharge pressure	Open the isolating valve further, until the duty point conditions have been attained
•						The pump and / or piping are incompletely vented	Vent the pump & system completely
	•		•		•	Suction line or impeller clogged	Remove deposits in the pump & piping
	•	•	•	•	•	Reverse rotation	Change over two of the phase leads of the power supply cable
	•	•	•	•	•	Excessive wear of the pump internals	Replace worn components by new one
		•				Operating Voltage too low	Check the supply terminals
		•	•			The motor is running on two phase only	Replace the defective fuse, check the cable connection
					•	The rotor is out of balance	Clean the rotor, Rebalance the rotor dynamically
•						The motor refuses to run because there is no voltage	Check the electrical system, inform the supply authority
•						The pump is silted up	Clean out the inlet, Pump components & check valve
•	•		•			Defective motor or cable	Please consult our works
•	•		•			Defective riser pipe	Replace defective lengths of riser pipe by new ones, fit new gasket
	•					Excessive drop in liquid level during operation	Please consult our works
	•					The isolating valve in the discharge line is not fully open	Open the valve fully
	•		•		•	Excessive amount of air or gas in the liquid pumped	Check the operating parameters with reference to duty point. & correctness of submergence
		•				Defective Ammeter	Replace with new one
		•		•	•	Defective radial bearing in the motor	Please consult our works
					•	Vibration caused by installation	Correct the installation

MBH® PUMPS

WARRANTY

Waste Water Submersible Pumps

The Pump is warranty against defects in material and workmanship under normal use and service for the period of 15 months from the date of purchase or 12 months from the date of commissioning whichever is less.

The General terms and conditions for above warranty are :

1. The warranty is valid only if the pump is operated strictly as per the instructions given in the user guide attached herewith.
2. Our obligation is limited to rectifying; repairing or replacing defective items, ex-works / service station / Authorized Service Center, provided the purchaser has given immediate written notice. The equipment for repairs should be returned to us duly packed, on pre-paid freight basis.

Model : _____

Pump Sr. No.: _____

Customer Name : _____

Address : _____

Date of Purchase / Bill No.: _____

Dealers Name : _____

Signature : _____ Date : _____

mbh pumps (gujarat) pvt. ltd.

14, G.I.D.C. Naroda Indl. Estate, Ahmedabad-382 330, India.

Phone : +91-79-2282 3066 / 2282 1018

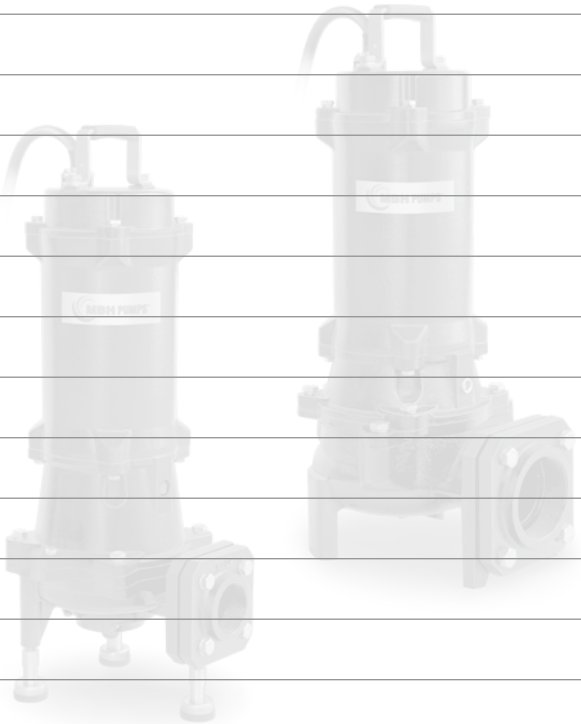
E-mail : marketing@mbhpumps.com / exports@mbhpumps.com

Website : www.mbhumps.com

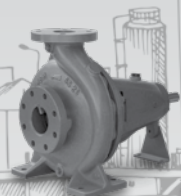
NOTE



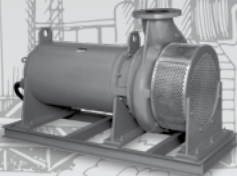
NOTE



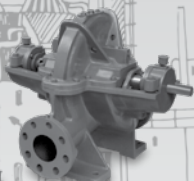
OTHER PRODUCTS



**CENTRIFUGAL
BACKPULL OUT PUMPS**



**SUBMERGED
CENTRIFUGAL PUMPS**



**HORIZONTAL
SPLIT CASING PUMPS**



**SUBMERSIBLE
SEWAGE PUMPS**



**DEWATERING
PUMPS**



**POLDER
PUMPS**

MBH[®] PUMPS

mbh pumps (gujarat) pvt. ltd.

14, G.I.D.C. Naroda Indl. Estate, Ahmedabad-382 330, India.

Phone : +91-79-2282 3066 / 2282 1018

E-mail : marketing@mbhpumps.com

exports@mbhpumps.com

Website : www.mbhpumps.com



IRCLASS
Indian Register of Shipping



A Mark of Quality

This is the property of mbh pumps (gujarat) pvt. ltd.