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INSTALLATION & OPERATING INSTRUCTIONS



SEWAGE PUMPS

SDW SERIES

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INSTALLATION AND OPERATING INSTRUCTIONS

1. GUIDELINES

Please follow the instructions given in this manual before the installation & maintain your SDW pump to get reliable operation.

When you order spare parts in future, please inform the nameplate details i.e. Serial Number, Pump Type and other data.

SHAKTI PUMPING LIFE	
MODEL:	
POWER:	CURRENT:
VOLTAGE:	SPEED:
FREQUENCY:	OUTLET DIA:
HEAD:	FLOW:
MATERIAL CODE:	SERIAL NO:
CE	INDIA

Fig 1 - Name Plate

2. SAFETY

The SDW pump must be only operated in observance of the following safety regulation.

- Operate the pump only under water.
- Check the electrical system and fusing before switching on.
- Protect electrical system and fusing before switching on.
- Maximum water temperature +40°C, higher temperature only with derated motors

With generator operation always unload the generator first, i.e.

Start : First the generator, then the pump

Switch-off : First the motor, then the generator

After powering the system check :

Operating current of the motor at each phase

Mains voltage with the pump running

Level of the medium to be pumped

Switch off the motor immediately if :

Name plate current is exceeded

Voltage tolerances of more than +6% / -10%

Compared to the rated voltage on the motor are measured

Dry run is imminent

INSTALLATION AND OPERATING INSTRUCTIONS



3. APPLICATION

SDW pump is applicable for the domestic civil & industrial applications where the water such as ground water, surface water and sewage water contains suspended solids upto $\phi 45$ mm

*Refer technical catalog

3.1 Transportation

All lifting equipment must be rated for the purpose and checked for damage before any attempts to lift the pump. The lifting equipment rating must under no circumstances be exceeded. The pump weight is stated on the nameplate.

Warning

Always lift the pump by its lifting bracket or by means of a fork-lift truck if the pump is fixed on a pallet. Never lift the pump by means of the motor cable or the hose/pipe. The plug prevents water from penetrating into the motor via the motor cable.

4. DELIVERY & STORAGE

SDW pump are supplied from the factory in proper packing in which they should remain until they are to be installed. During unpacking and prior to installation, care must be taken when handling the pump to ensure that the pump should be placed vertically.

The pump may be transported and stored in a Vertical or horizontal position. Make sure that it Cannot roll or fall over.

For long periods of storage, the pump must be protected against moisture and heat.

After a long period of storage, the pump should be inspected before it is put into operation. Make sure that the impeller can rotate freely. Pay special attention to the shaft seals and the cable entry

5. INSTALLATION

5.1. OPERATING CONDITION

Attention

- Maximum immersion Depth : 10 m
- Maximum liquid temp : +40°C
- Solid passage
 - Up to 20 mm - SDW50-10-10-0.75kW
 - Up to 20 mm - SDW65-25-10-1.5kW
 - Up to 20 mm - SDW65-25-15-2.2kW
 - Up to 25 mm - SDW65-25-28-4kW
 - Up to 30 mm - SDW100-65-15-5.5kW
 - Up to 45 mm - SDW150-150-10-7.5kW

The motor's revealing out of the level can't exceed $\frac{1}{2}$ highness of the motor.

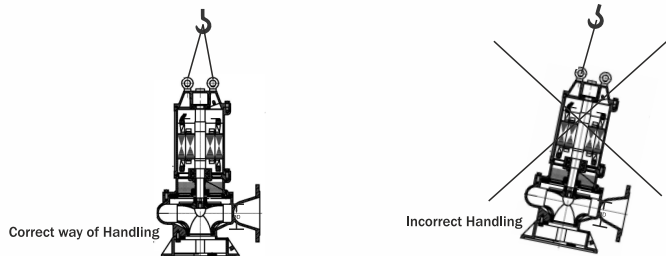
The average density is not exceed 12kg/m³, The pH value is 5 to 9

INSTALLATION AND OPERATING INSTRUCTIONS

5.2. GUIDELINES FOR PUMP INSTALLATION.

⚠ Attention

- 1) Before starting work on the pump, make sure that electricity supply has been switched off and that it cannot be accidentally switched on.
- 2) Provide earth leakage circuit breaker in the panel board to avoid electric shock in case of earth leakage. Provide proper earth to the pump.
- 3) Ensure to connect with appropriate power supply
- 4) Ensure correct direction of rotation. Before installation, if found wrong reverse the direction of rotation.
- 5) Don't keep the power supply terminals exposed to sun and rain.
- 6) For Pumps supplied with a level switch, the difference in level between start & stop can be set by adjusting the free cable between the levels switch and the pump handle. The longer the lengths of free cable the larger the difference in level between start & stop.
- 7) Don't be in the water when pump is running.
- 8) If cable found cut, damaged & punctured, don't run the pump. Replace the Cable.
- 9) Don't lift the pump by using cable. Use handle or rope to lift the pump.
- 10) Don't support the pump with power cable.
- 11) Use supporting ropes or chain to hang the pump.
- 12) Position the pump, the suction strainer should not be blocked or partly blocked by sludge mud or similar material. In case of permanent installation, the pit must be cleared of sludge, pebbles etc. before the pump installed.
- 13) Don't service the pump when the power supply is on.
- 14) Don't touch the pump when it is hot. Properly clean and store the pump after every usage.
- 15) Pump should be lifted by means of nylon straps and shackles or a hook as shown on figure.



INSTALLATION AND OPERATING INSTRUCTIONS



5.3 TECHNICAL SPECIFICATION:

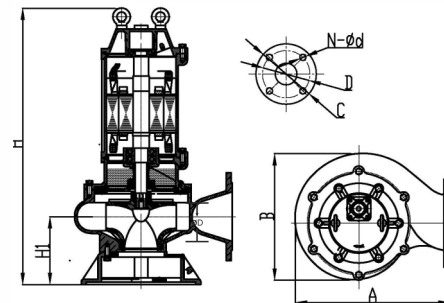
DESCRIPTION	VALUE
Model	3ϕ - 0.75/7.5 kW
Voltage Range	3ϕ - 380 V
Frequency Tolerance	± 2%
Voltage Tolerance	+6/-10% of rated voltage
Speed	Appx. 2900 RPM, 50 Hz.
Start Alternatives	Direct Starting.
Switching Frequency	Max 20 Switching action per hour with a minimum off time of 90 S
Protection	IP 68
Insulation Class	F
Liquid Temperature	MAX 40°C
Immersion Depth	Max 5 m. Min 0.320 m
Sound Pressure Level	≤ 70 dB (A)

6. DISPOSAL

Disposal of this product or parts of it must be carried out according to the following guidelines:

1. Use the local public or private waste collection service.
2. In case such waste collection service does not exist or cannot handle the materials used in the product, please deliver the product or any hazardous materials from it to your nearest Shakti service workshop.

7. OUTLINE DIMENSION



INSTALLATION AND OPERATING INSTRUCTIONS

OUTLINE DIMENSION IN MM

MODEL	H	H1	A	B	C	D	N-ØD	ØD
SDW50-10-10-0.75kW-380V	450	70	195	150	140	110	4-Ø14	50
SDW65-25-10-1.5kW-380V	570	110	240	187	160	130	4-Ø14	65
SDW65-25-15-2.2kW-380V	560	110	245	200	160	130	4-Ø14	65
SDW65-25-28-4kW-380V	610	160	330	270	160	130	4-Ø14	65
SDW100-65-15-5.5kW-380V	680	160	330	260	210	170	4-Ø18	100
SDW150-150-10-7.5kW-380V	860	200	460	350	265	225	8-Ø18	150

8. PERFORMANCE TABLE

MODEL	POWER		Q												
	kW	HP		m³/h	0	2	4	6	8	10	12	14	15		
				l/min	0	33	67	100	133	167	200	233	250		
SDW50-10-10-0.75	0.75	1	HEAD (M)		14	13.0	12.0	11.0	10.0	9.5	8	6	4.0		

MODEL	POWER		Q	m³/h l/min	0	3	7	14	21	28	32	33	42	49	56
	kW	HP			0	50	117	233	350	467	533	550	700	816	933
SDW65-25-15-2.2	2.2	3	HEAD (M)		20	19.5	18.5	17.0	15.5	13.5	11				
SDW65-25-10-1.5	1.5	2			16.5	16.0	15.5	14.0	11.5	8.0	6.0	5.0			
SDW65-25-28-4.0	4	5.5			32	31.0	30.5	29.5	28	25.0	24.5	24.0	20.0	16.0	6

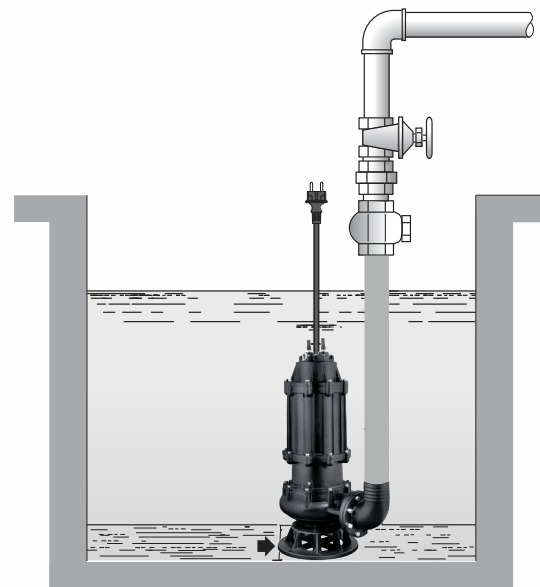
MODEL	POWER		Q	m³/h	0	8	16	24	32	40	48	56	64	72
	kW	HP		l/min	0	133	267	400	533	667	800	934	1067	1200
SDW100-65-15-5.5	5.5	7.5	HEAD (M)	25	23.0	21.0	20.5	20.0	19.0	18	17	15.0	11.0	

MODEL	POWER		Q												
	kW	HP		m³/h	0	17	34	51	68	85	102	119	136	153	163
				l/min	0	283	567	850	1134	1417	1700	1984	2267	2551	2717
SDW150-150-10-7.5	7.5	10	HEAD (M)	17	15.5	14.5	14.0	13.0	12.0	11.5	11	9.5	8.0	7.0	

INSTALLATION AND OPERATING INSTRUCTIONS



9. TECHNICAL DATA



MODEL	Voltage		Motor Power		Outlet	Guide Rial Fitting		Duty Point		Speed	Solid Size	N.W.
	V	kW	HP	mm		mm	Head (m)	Dis. (m³/hr)	RPM			
SDW50-10-10-0.75	380	0.75	1	50	50-50	9	9	2900	20	18		
SDW65-25-10-1.5	380	1.5	2	65	50-65	10	25	2900	20	26		
SDW65-25-15-2.2	380	2.2	3	65	65-65	14	25	2900	20	42		
SDW65-25-28-4.0	380	4.0	5.5	65	65-65	20	42	2900	25	61		
SDW100-65-15-5.5	380	5.5	7.5	100	100-100	17	56	2900	30	79		
SDW150-150-10-7.5	380	7.5	10	150	150-150	11	120	1450	45	163		

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10. FAULT FINDING THE PRODUCT

Fault	Cause	Remedy
The motor does not start, the fuses blow or the motor protector trips immediately. Caution: Do not try to start again.	1. Power supply failure, short circuit or earth leakage in the cable or the motor winding.	Have the cable and motor checked and repaired by a qualified electrician.
	2. The fuses blow due to use of wrong type of fuse.	Fit fuses of the correct type.
	3. The impeller is blocked by impurities.	Clean the impeller.
	4. Level pickup, float switch or electrode is out of adjustment or defective.	Check the level pickups, float switches or electrodes.
	5. Motor phase malfunction.	Inspect the motor and the connections.
The pump operates, but the motor protector trips after a short while.	1. The setting of the thermal relay in the motor protector is low.	Set the relay in accordance with the specifications on the pump nameplate.
	2. Increased current consumption due to large voltage drop.	Measure the voltage between two motor phases. Tolerance: - 5 %/+ 5 %.
	3. The impeller is blocked by impurities.	Clean the impeller.
	4. The direction of rotation is wrong.	Check the direction of rotation and possibly interchange any two phases in the power supply.
The thermal switch of the pump trips after a short while.	1. The liquid temperature is too high. Inadequate cooling.	Improve cooling or lower the liquid temperature.
	2. The viscosity of the pumped liquid is too high.	Dilute the pumped liquid.
	3. Fault in the electrical connection. (Y-connection of pump to D-connection results in considerable undervoltage).	Check and correct the electrical connection.
The pump operates at below-standard performance and power consumption.	1. The impeller is blocked by impurities.	Clean the impeller.
	2. The direction of rotation is wrong.	Check the direction of rotation and possibly interchange any two phases in the power supply.
The pump operates, but gives no liquid.	1. There is air in the pump.	Vent the pump twice.
	2. The outlet valve is closed or blocked.	Check the outlet valve and open and/or clean it if necessary.
	3. The non-return valve is blocked.	Clean the non-return valve.
The pump is clogged.	1. The liquid contains large particles.	Select a pump with a larger size of passage.
	2. A float layer has formed on the surface.	Install a mixer in the pit.

INSTALLATION AND OPERATING INSTRUCTIONS

11. MAINTENANCE AND SERVICE

- ⚠ Warning**
Before starting work on the pump, make sure that the fuses have been removed or the mains switch has been switched off. Make sure that the power supply cannot be accidentally switched on. All rotating parts must have stopped Moving
- ⚠ Warning**
Except for service on the pump parts, all other service work must be carried out by Shakti pumps or a service workshop authorized by Shakti pumps. Flush the pump thoroughly with clean water before maintenance and service. Rinse the pump parts in water after dismantling.
- ⚠ Warning**
When loosening the screws of the oil chamber, note that pressure may have built up in the chamber. Do not remove the screws until the pressure has been fully relieved.

INSTALLATION AND OPERATING INSTRUCTIONS

WARRANTY CERTIFICATE

Dear Customer,
Congratulation, for purchasing our product.

Pump and Motor are warranted against defects in workmanship and material under normal use, service & specified duty conditions. We provide one time warranty service for twelve months from the date of purchase by the first user.

Shakti Pumps (I) Ltd warrants this product to be free from damage/ defects in material and workmanship under normal use and service for Twelve Months from the date of purchase by the first user. The user shall produce valid and original copy of invoice for availing warranty. The user shall carry defective pump set to nearest authorized service center

This warranty does not cover any loss or damage/ defect of any nature resulting from wrong product selection/ improper installation or installation by unauthorized/ untrained person/ sandy condition/ dry running and improper use of the pump sets.

The warranty also does not cover consequential losses/ damages arising due to failure of pump/ motor.

Our obligation is limited t to recycling or repairing or replacing product/ parts ex-factory. Equipment for repairs should be returned free of cost to us.

The forgoing is subject to the provision that the user does not open the unit and make any change or repair without prior approval of authorized service center during the warranty period.

This warranty excludes every condition whether statutory or otherwise, whatsoever not herein expressly set out.

Customer name: Customer's phone:.....

Customer Address:

Invoice number: Invoice date:.....

Model Name: Model Serial Number:.....

Dealer's Name: Dealer's phone:.....

Dealer's

Address:.....

APPROVED BY:
ISSUE

DATE OF

INSTALLATION AND OPERATING INSTRUCTIONS



INSTALLATION REPORT

Customer's Name: - _____

Customer's Address: - _____

Customer's Ph. No.: _____

Dealer's Name: - _____

Dealer's Address: _____

Dealer's Ph. No. _____

Pump Model:- _____ S.L.No: _____

Project/Application: _____

Pressure In Kg:- _____ Flow in m³/hr: _____

Liquid:- _____ Temp.: _____

Voltage:- _____ Current: _____

Packing Condition:- _____

Remarks: _____

Date:- _____

Customer's Signature

BOOK-POST

To,
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Stamp



