

14.0 Warranty

- 14.1 The warranty period commences on the date of original purchase of the equipment. Evidence of this date of original purchase must be provided when claiming repairs under warranty. It is recommended you retain all receipts in a safe place.
- 14.2 Shah Pneumatics products are warranted to the original user only to be free of defects in material and workmanship for a period of 12 months from date of manufacture. Shah Pneumatics' liability under this warranty shall be limited to repairing or replacing at Shah Pneumatics' option, without material charge however we may levy service charges, FOB Shah Pneumatics' Mumbai distribution center or authorized service agent. Shah Pneumatics will not be liable for any costs of removal, installation, transport or any other charges that may arise in connection with the warranty claim.
- 14.3 This warranty is subject to due compliance by the original purchaser with all directions and conditions set out in the Installation and Operating Instructions. Failure to comply with these Instructions, damage or breakdown caused by fair wear and tear, negligence, misuse, incorrect installation, inappropriate chemicals or additives in the water, inadequate protection against freezing, rain or other adverse weather conditions, corrosive or abrasive water, lightning or high voltage spikes or through unauthorized persons attempting repairs are not covered under warranty.
- 14.4 Shah Pneumatics shall not be liable for any loss of profits or any consequential, indirect or special loss, damage or injury of any kind whatsoever arising directly or indirectly from the product or any defect, and the purchaser shall indemnify Shah Pneumatics against any claim by any other person whatsoever in respect of any such loss, damage or injury.
- 14.5 This warranty applies to all states and territories of India only.
- 14.6 For effective warrantee user must produce copy of invoice/ warrantee page/ card.
- 14.7 No warrantee will be given if the above conditions are not met with the decision of Flowmatics/Shah Pneumatics in relation of any claims or dispute over the warrantee is final.

Shah Pneumatics has a continuous policy of product development and although the Company reserves the right to change specifications, it attempts to keep customers informed of any alterations. This publication is for general information only and customers are requested to contact our Sales Department for detailed specifications and advice on a product's suitability for specific applications. All products are sold subject to the Company's standard conditions of sale.

Flowmatics is a trademark of Shah Pneumatics

WATER MANAGEMENT SYSTEMS

Shah Pneumatics

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FOR DISTRIBUTOR STAMP

101 HORIZONTAL SINGLE STAGE SWIMMING POOL CENTRIFUGAL PUMPS WITH PRE FILTER - SP

Flowmatics™

WATER MANAGEMENT SYSTEMS

SP SERIES



**HORIZONTAL SINGLESTAGE SWIMMING POOL
CENTRIFUGAL PUMPS WITH PREFILTER**

INSTALLATION OPERATION & MAINTENANCE MANUAL

DEALER: This manual must be given to the user of the pump

USER: Before using this pump, read this entire manual and
save for future reference



For more information regarding Flowmatics products,
parts & services, please visit www.shah-pneumatics.com

WARNING:

1. Periodic inspection and maintenance of pumps is essential
2. Transfer of toxic, dangerous, flammable or explosive substances using Flowmatics products is at user's risk
3. Inspection, maintenance & installation of pumps must be made only by experienced, trained & qualified personnel
4. Use of strainer in the suction of the pump is a must for ensuring longer life of pump

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Congratulations for your purchase of Flowmatics pump / products.

We appreciate your trust while opening / unpacking the product, make sure that there is no transit damage, if any, it must be reported to the dealer.

We take no responsibilities in the case of accidents or damages on the basis of carelessness or disregard to the instructions and reject every responsibilities for the damages which originate from the improper use of the pumps.

The purchaser must correctly fill in and mail the last page within 10 days from the date of purchase. No warrantee will be given for incomplete warrantee. (provide invoice no./ date / dealers name & add with stamp & signature on last page.)

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13.0 Maintenance Record**Purchase Details**

Date of Purchase :

From: Name :

Address :

Tel. No. :

Fax No. :

Pump Details

Pump Model No.:

Pump Connection :

Installation Details

Date of Installation :

Location :

Strainer Details

Estimated Date of Strainer Cleaning :

Estimated Date of Strainer Change :

Bill No. :

Bill Date :

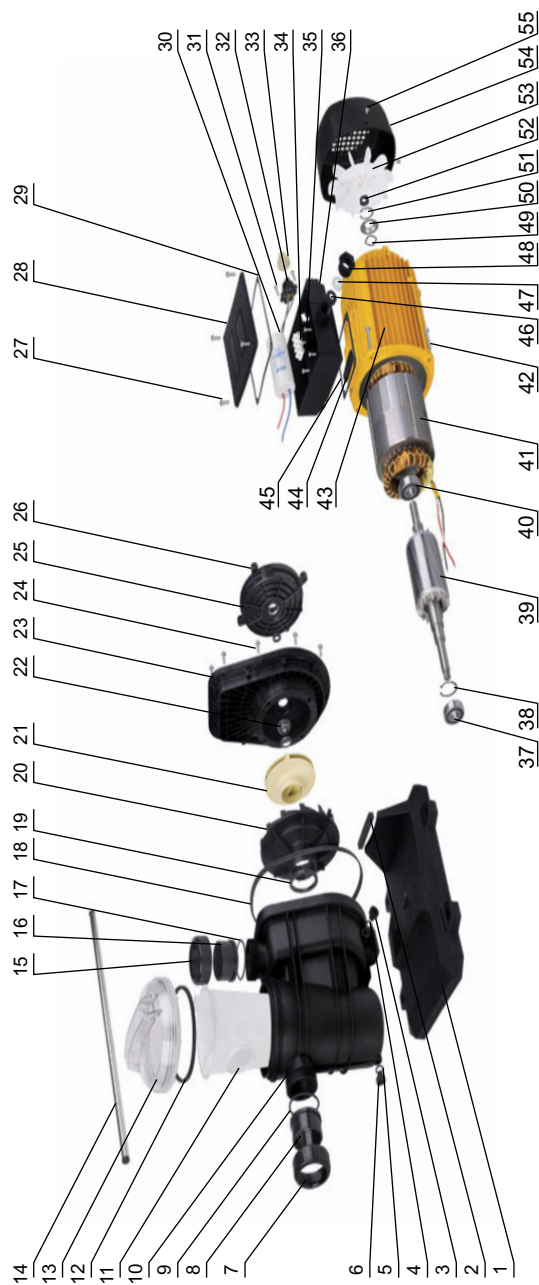
Serial No:

Manuf. Dt :

DEALERS STAMP

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12.0 Part Explosion Diagram



No.	Part Name	No.	Part Name	No.	Part Name	No.	Part Name
1	Pump Base	12	"O" Ring	23	Pump Cover	34	Terminal Block
2	Support Block	13	Transparent Cover	24	Screw	35	Screw
3	Exhaust Screw	14	Handle	25	Drop Guard	36	Terminal Box
4	"O" Ring	15	Outlet Nut	26	Front cover	37	Front Bearing
5	"O" Ring	16	Outlet Pipe	27	Screw	38	Snap Ring
6	Exhaust Screw	17	Outlet "O" Ring	28	Terminal Box Cover	39	Rotor
7	Inlet Nut	18	Sealed Ring	29	Terminal Cover Seal	40	End Bearing
8	Inlet Pipe	19	Sealed Ring	30	Capacitor	41	Stator
9	Inlet "O" Ring	20	Diffuser	31	Screw	42	Screw
10	Pump Body	21	Impeller	32	Overload Protector	43	Motor Body
11	Filter	22	Mechanical Seal	33	Overload Protector Cover	44	Washer
45	Terminal Base Seal	46	Seal Ring	47	Fair Lead	48	Terminal Box Plug Screw
49	Spring Washer	50	Bearing Guard	51	Snap Ring	52	Washer
53	Fan	54	Fan Cover	55	Screw		

IOM HORIZONTAL SINGLE STAGE SWIMMING POOL CENTRIFUGAL PUMPS WITH PREFILTER - SP

1.0 Features

The SP Horizontal Single Stage Swimming Pool Centrifugal Pump with pre-filter are manufactured in glass loaded polypropylene, where pump body, pump foot and diffuser are made from plastic, mechanical seal is used as the shaft seal, which make the pumps have the features of light weight, graceful appearance, material saving, and high efficiency.

2.0 Applications

The pumps are suitable for transporting clean water and industrial media which are non-aggressive to polymer, such as swimming pool recycling & filtering of water, circulation systems of sauna and reservoirs supplying and emptying.

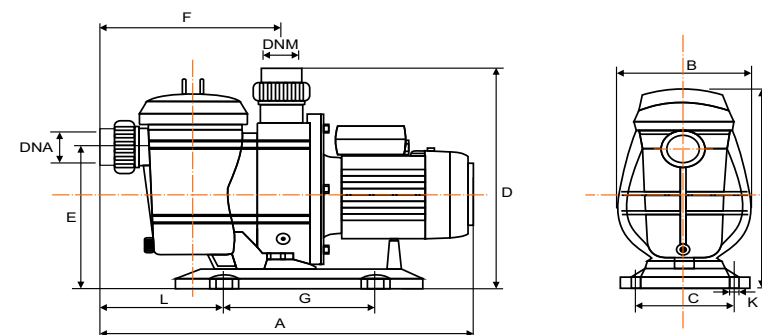
3.0 Model Ordering Code Instructions

SP	-	1100	-	D	-	2
↑		↑		↑		↑
Series		Power		Phase		Type
SP - Horizontal Swimming Pool Centrifugal Pump		370 - 0.37 kW 550 - 0.55 kW 750 - 0.75 kW 1100 - 1.10 kW 1500 - 1.50 kW 2200 - 2.20 kW		D - Single Blank - Three		2 - Type 2 Blank - Type 1

4.0 Working Conditions

- 4.1 Ambient temperature +40 °C max.
- 4.2 Maximum working temperature: upto 60 °C
- 4.3 Maximum working pressure: Upto 6 kg/cm²g

5.0 Outline Diagram & Dimensions



Model	Dimensions (mm)												Weight Kg.
	A	B	C	D	E	F	G	H	L	K	DNA	DNM	
SP-370D	550	238	160	345	225	262	170	330	205	Ø10 x4	50(2")	50(2")	8.7
SP-550D	550	238	160	345	225	262	170	330	205	Ø10 x4	50(2")	50(2")	9.3
SP-750D	550	238	160	345	225	262	170	330	205	Ø10 x4	50(2")	50(2")	10.4
SP-1100D2	570	238	160	345	225	262	170	330	205	Ø10 x4	50(2")	50(2")	11.9
SP-1100D	707	275	230	482	295	367	200	430	270	Ø10 x4	63(2½")	63(2½")	16.6
SP-1500D	707	275	230	482	295	367	200	430	270	Ø10 x4	63(2½")	63(2½")	19
SP-2200D	707	275	230	482	295	367	200	430	270	Ø10 x4	63(2½")	63(2½")	18.3

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6.0 Installing the Pump

- 6.1 Check the pump input voltage is identical to the one on the nameplate. Max.voltage fluctuation $\pm 5\%$
- 6.2 Seat the pump on a level place, as close to the source of water as possible & away from children's reach..
- 6.3 In avoiding any damage of internal parts, check and tighten any possible loose tightening-parts and remove any possible foreign particles inside the pump body prior to installation.
- 6.4 Connections of pipe work must be sealed properly, poor sealing on the pipe work may cause air-leak and give bad performances.
- 6.5 When pumping water from a lower source, fix a non-return foot valve at the send of suction hose to avoid water draws back when stopping pumping.
- 6.6 Hold the pipe work with supports, the pump should not stand the weight of pipe work.
- 6.7 Pump should be effectively earthed, or provided with a creepage breaker.
- 6.8 Inlet diameter of the pipe must never be smaller than that of outlet pump connection.

7.0 Pump Electrical Connection

- 7.1 Check voltage, frequency and phase of power source are identical to the corresponding data on the pump nameplate.
- 7.2 A wiring diagram can be seen inside the cover of terminal box. The pump must be effectively earthed in accordance with local electric regulations. It is recommended that earth-leakage protection be provided by connection of a residual current circuit breaker.

8.0 Starting, Operating and Stopping the Pump

- 8.1 Run the motor fan by hand to check whether pump is running freely and quietly. Start up the pump for a second to check the rotational direction, the correct way is always in clockwise when viewing the motor fan from the motor end.
- 8.2 Switch open the suction valve, remove the priming plug on the top of the pump casing and fill the pump body with water till it overflows, then put the plug on and tighten it up. Never run the pump dry, it would cause serious damages of internal parts.
- 8.3 Start up the pump and set the discharge valve to control the pressure to the required duty point.
- 8.4 When stopping pumping, close the discharge valve and switch off power.
- 8.5 Frequent start-up and stop of pump or prolonged operation of pump with the discharge valve closed may cause damage.
- 8.6 If the pump is to remain inactive for a long period, empty it completely and wash it with clean water, to prevent breakage of the pump body when there is a risk of frost.
- 8.7 If strange noises make by the pump are hard, stop pumping and check the causes.

9.0 Maintenance

- 9.1 Make sure the power is shut off before maintenance.
- 9.2 Maintenances of the splined shaft and shaft seal are not necessary.
- 9.3 When the temperature of the transported liquid is lower than its freezing temperature, make sure the liquid is not frozen inside the pump before starting the pump. During frost season, always drain the pump completely after using the pump.
- 9.4 Under normal working condition pumps requires no servicing until 2000hrs of operation.

10.0 Attention

- 10.1 It is strictly forbidden to operate the pump without water inside the pump body.
- 10.2 Avoid frequent starting and stopping of the pump. Switch off the pump if the power is interrupted.
- 10.3 It is forbidden to control capacity by setting the valve on the suction pipe.
- 10.4 Switch off power when the pumped water is interrupted or there is lack of water.
- 10.5 If strange noise made by the pump are heard, stop pumping immediately and check the cause.
- 10.6 When the pump is to remain inactive for a long period, drain the water from the pump body by unscrewing the draining plug and filling plug. Wash the pump body with clean water and make sure the pump body is completely drained to avoid breakage by frozen water in winter times.

11.0 Troubleshooting

Type of fault	Cause	Remedy
Pump can not start up.	1. No electric power. 2. Wrong electric connection. 3. Motor shaft blocked. 4. Stuck mechanical seal faces. 5. Damaged motor or bearing.	– Check and correct wiring in the terminal box. – Clean it up. – Run the shaft by hand to split them. – Repair or replace motor or bearing.
Pump can not lift water or insufficient capacity.	1. Voltage drops. 2. Motor runs at wrong. 3. Pump not filled with water. 4. Too great resistance of pipe work system. 5. Foot valve blocked. 6. Air-leak on suction pipes. 7. Too great suction height. 8. Too low water level.	– Correct wiring in the terminal box. – Fill up pump body with water. – Check the rationality of pipe work. – Clean the foot valve. – Seal the leakage. – Place pump on a lower position. – Stretch pipe into water.
Insufficient head	1. Vaporloss 2. Damaged impeller.	– Lower water temperature – Replace impeller.
Over current (overload)	1. Damaged ejector Blocked impeller to run. 2. Damaged bearing.	– Replace ejector. – Replace bearing.
Vibration and noise	1. Wrong connections of pipes. 2. Damaged bearing. 3. Motor fan blocked.	– Correct the connections. – Replace bearing. – Clean it up.