



water, sewage and sludge technology
pumps for life ...

An ISO 9001:2008 certified company by 

Instruction Manual

SLUDGE PUMPS

SLD Series 50Hz 4Pole



* We reserve the right to amend specification without prior notice.

INDRA HYDRO TECH PUMPS PVT. LTD.

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Declaration of Conformity

Company Name **Indra Hydro Tech Pumps Pvt. Ltd.**

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hereby declare that **the following Sludge pump models**

Models	Phase	Pole	Solids Size	Models	Phase	Pole	Solids Size
SLD-353	3 ϕ	4	22mm	SLD-3156	3 ϕ	4	25mm
SLD-3754	3 ϕ	4	22mm	SLD-3206	3 ϕ	4	38mm
SLD-3104	3 ϕ	4	22mm	SLD-3306	3 ϕ	4	38mm

Year **is in conformity with the following directives with amendments:**

- ♦ **Low Voltage Directive 2006/95/EC**
- ♦ **EMC Directive 2004/108/EC**
- ♦ **Machinery Directive 2006/42/EC**



(ARVIND MOHAN)
Managing Director
Indra Hydro-Tech Pvt. Ltd.

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1. Safety

1.1 Important Information

Please read carefully and reserve the instruction manual for future use so that the information listed will be easily accessible while the equipment is operated. If there are any trouble, failure in the pump, please contact the IHP authorised distributor / the sales representative of your location / the head office of IHP given in this instruction manual to check the pump.

⚠ Caution: The equipment shall not be used for applications other than the information listed in the instruction manual. Failure to take notice of precautions may lead to property damage, personal injury and other accidents. In the event of property damage and hazards, the manufacturer will not be responsible for any liability.

1.2 Warning Signs

WARNING!

Indicates that special procedures must be followed to avoid severe personal injury.

CAUTION!

Indicates that special procedures must be followed to avoid damage to the pump.

NOTE!

Indicates important information to simplify or clarify.

⚠ General warning

⚠ Dangerous electrical voltage

1.3 Safety Precautions

⚠ Warning: Be sure to ground the pump properly before operation and install the circuit breaker and overload protector to prevent the motor from burning out. Failure to follow the precaution may lead to hazards if current leaked or electric shock occur.

1. The supply voltage should be within $\pm 5\%$ of the rated voltage.
2. The pump should be immersed in water surface to advance cooling the motor while the temperature should be kept between 0~40°C.
3. Never attempt to replace the built-in protective device.

⚠ Caution: Do not extend the length of the power cable without consulting your supplier. The insulation resistance could be reduced significantly and cause electric shock. If the power cable is extended, do not immerse the splice in water.

4. DO NOT use the pump for application of food or drinking water.
5. DO NOT use the pump in an explosive or flammable environment or for pumping.

2. Installation

2.1 Unpacking / Delivery

The instruction manual is part of the delivery. Study the instructions carefully. The standard delivery does not include the test certificate. This can be supplied on request. All the SLD series pumps are very heavy. Therefore, IHP recommends the use of a lifting crane when handling the pump.

Step 1

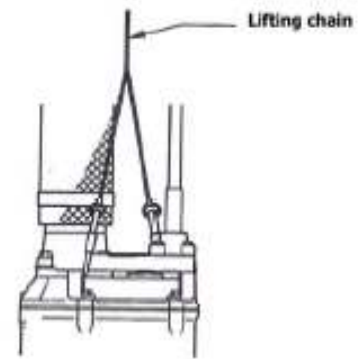
Always use a lifting crane when handling the pump

⚠ CAUTION

IHP cannot be held responsible for incorrect unpacking

Check the delivery for:

1. Complete pump.
2. Delivery note.
3. Motor instructions.
4. Test certificate, if ordered.



Step 2

Remove possible packing materials from the outlet.

Avoid damaging the outlet and the electrical cable.

Step 3

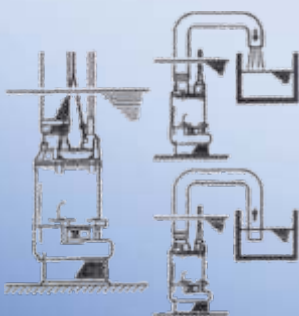
Inspect the pump for visible transport damages

Step 4

Always remove the transit bolt if provided before lifting the pump.

2.2 Installation

- Do not run pump dry. Doing so will result in damaging the pump and possibly a short circuit and / or electric shocks.
- Hoses, pipes and valves should be measured correctly according to the specification of the pump. Incorrectly sized accessories could lead to leakage and malfunctioning of the pump.
- Ensure that you only install the pump in places where there is a sufficient water level.
- When installing the pump to fitted pipes, ensure the following conditions are met:



- ☞ The discharge pipe should be as short as possible with a minimum of bends.
- ☞ Ensure that the discharge of the pipe has a free outflow. Should the discharge end of the pipe be submerged, there is a possibility that when the pump is stopped the water will flow backwards towards the pump.
- ☞ If the discharge is lower than the pump unit, there is a possibility that the water will continue to flow, even when the pump has been turned off.
- ☞ Users will need to prepare their own pipes or hoses. Pipes and hoses are not standard accessories delivered together with this pump.
- ☞ When pumping liquids with a high content of solids, this could lead to excessive wear and tear. This in turn could lead to leakage and electric shocks.

3. Operation

3.1 Operation / Control

This pump is designed to handle dirty water that contains some solids. It is not designed to pump volatile or flammable liquids. Do not attempt to pump any liquids which may damage the pump or endanger personnel as a result of pump failure.

Applications

- ♦ Harbour construction ♦ Ash transfer ♦ Silt removal ♦ Sand and gravel pumping
- ♦ Barge and tank clean out ♦ Lime slurry ♦ Coal runoff sumps ♦ Food waste

⚠ Warning: DO NOT operate the pump while anybody is in water, electric shock could occur during electric leakage.

- a. Make sure the pump is operating in water and water level is maintained higher than pump body.
- b. If the overload protector has tripped, the pump will stop and restart automatically when it has cooled down.

⚠ Caution: Do not run pump in dry condition.

Pump liquid should not exceed a maximum temperature of 100°C.

Never place the pump on loose or soft ground. The pump may sink, preventing water from reaching the impeller. Place on a solid surface or suspend the pump with a lifting rope/chain. The SLD Series pumps are provided with a suction strainer to prevent large solids from clogging the impeller. Any spherical solids which pass through the strainer should pass through the pump.

For maximum pumping capacity, use the proper size non-collapsible hose or rigid piping. A check valve may be installed after the discharge to prevent back flow when the pump is shut off.

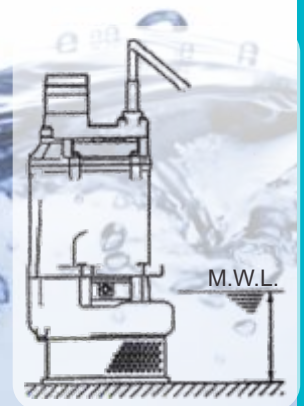
⚠ Warning: DO NOT operate the pump where explosive vapors or flammable material exists. Death or serious injury will result.

⚠ Caution: Never run the pump with a lower water level than the allowed minimum water level (MWL). Neglect could lead to damage to the pump, power leakage and electric shocks.

Stopping - To stop the pump (manual and automatic mode), unplug it from the power source, turn off the breaker, or turn the power source off (generator).

Automatic Operation SLD series need a separate control box* with float(s) for automatic operation.

* Use of IHP Digital Power Pro Control Panel (with or without Variable Frequency Drive) preferred.

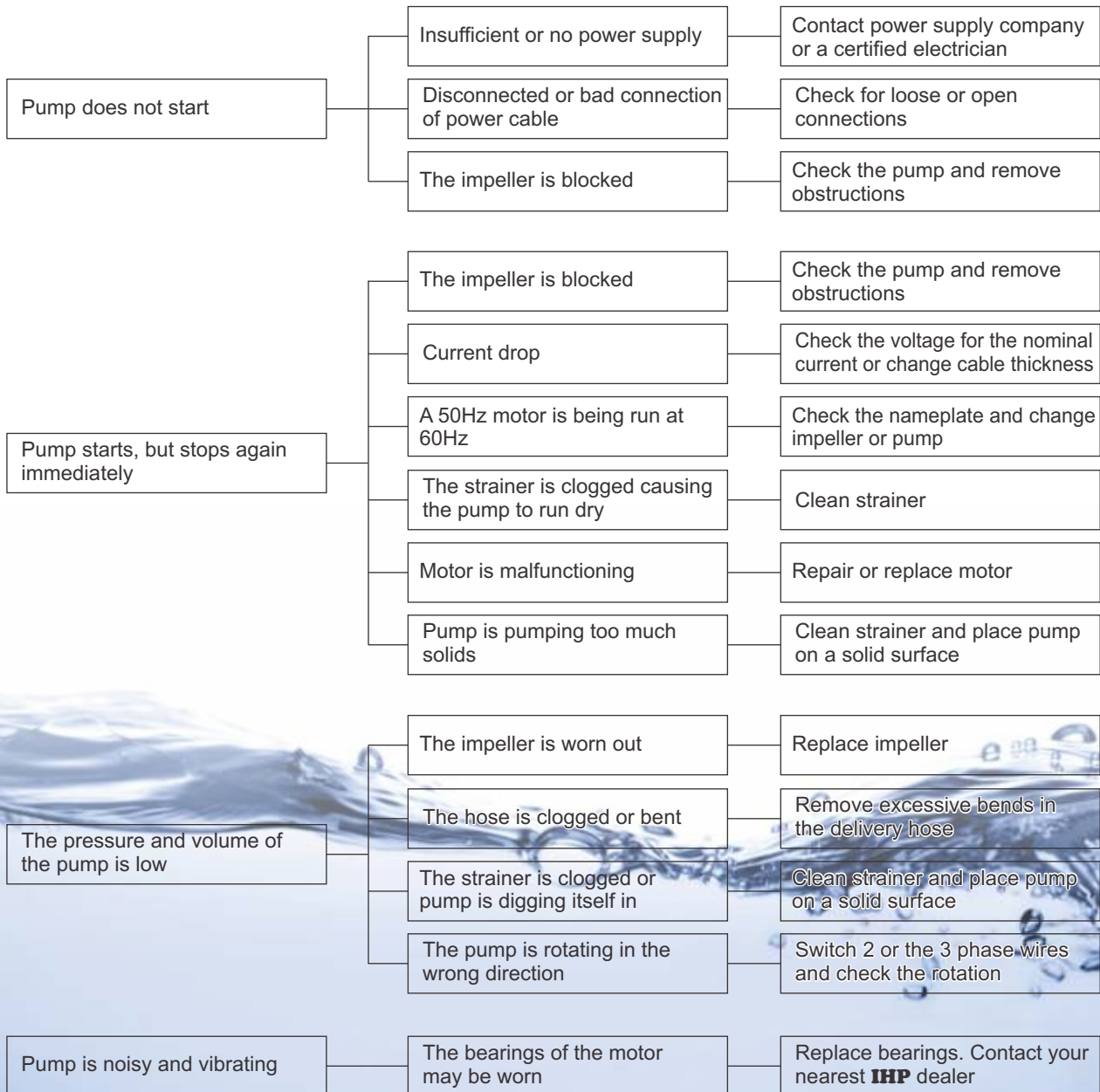


Note: The maximum recommended starts should not exceed 10 times per hour
The maximum allowable temperature of the medium pumped is 100°C

3.2 Trouble Shooting

⚠ Caution: Before attempting any maintenance of checks, please ensure that the pump has been disconnected from the power source. Neglecting to do so, may result in serious injury, damage, electrical shocks or fire.

Before attempting any repair, please study this complete manual carefully. Should the pump not function correctly after a 2nd inspection, please contact your nearest **IHP** dealer immediately.




Lubrication oil characteristics		
Model No.	Measurement in litres	Nature of oil
SLD 353, SLD 3754, SLD 3104	1.45	ISO32 NSF Food grade mineral oil*
SLD 3156, SLD 3206	3.7	ISO32 NSF Food grade mineral oil*
SLD 3306	6.3	ISO32 NSF Food grade mineral oil*

* Shell recommends to use Shell S32 oil

4. Maintenance

4.1 General Maintenance

Always read the instruction manual thoroughly.

-  **Caution** • Always disconnect the power supply when servicing the pump.
- All scrap must be stored / disposed of in accordance with current rules / directives
 - Never service the pump when it is hot.
 - Never service the pump with the pipelines under pressure.
 - Fit the electrical connections correctly if they have been removed from the motor during service.
1. Pump should be inspected at regular intervals.
 2. More frequent inspections are required if the pump is used in a harsh environment.
 3. Preventive maintenance should be performed to reduce the chance of premature failure.
 4. Worn impellers and lip seals should be replaced.
 5. Cut or cracked power cords must be replaced. **(Never operate a pump with a cut, cracked or damaged power cord).**
 6. Seal oil should be checked once per year.
 7. Maintenance should always be done when taking a pump out of operation before storage.
 - ♦ Clean pump of dirt and other build up.
 - ♦ check condition of oil around the shaft seals.
 - ♦ Check hydraulic parts, check for wear
 - ♦ Inspect power cable. Make sure that it is free of nicks or cuts.

4.2 Changing Seal Oil

- Make sure that the pump cable is disconnected from the power source.
- Lay the pump down on its side.
- Remove the screws that hold the bottom plate in place.
- Remove bottom plate.
- Remove screws holding the suction cover.
- Remove the suction cover.
- Remove the impeller.
- Remove the inspection screw for the oil chamber (Part No. 9). Pour out a small sample of the oil. If it is milky white, or contains water, then the oil and the mechanical seal should be changed.
- If an oil change is needed, remove the screws that hold the oil chamber cover in place and remove the oil.
- Replace the mechanical seal if necessary.
- Replace the oil.
- Assemble the pump.

4.3 Changing Seals

- Make sure that the pump cable is disconnected from the power source.
- Lay the pump down on its side.
- Remove the oil inspection bolt from the oils seal chamber.
- Drain out all the contents inside the oil seal chamber.
- Remove the bolts holding the stand.
- Remove the stand.
- Remove the bolts holding the suction cover.
- Remove the suction cover.
- Remove the agitator.
- Remove the impeller, impeller key and shims.
- Remove the bolts holding the pump housing.
- Remove the pump housing.
- Remove the shaft sleeve. Note the shaft sleeve direction.
- Remove the bolts holding the oil cover.
- Remove the oil cover.
- Remove the screws holding the seal retainer.
- Remove the seal retainer.
- Remove the mechanical seal.
- Replace the mechanical seal, lip seal and o-rings.
- Assemble the pump.
- Fill with recommended new oil.
- Replace the oil inspection bolt o-ring.
- Secure the oil inspection bolt.

4.4 Spare parts

- Please refer the exploded view of the pump in chapter 5 for a list of spare parts.
- The spare parts of all our products will be available for a period of 12 years.
- The spare parts are available to any part of the globe within the shortest time using modern logistics methods.
- Fast-wearing spare parts will be available with all our distributors/authorised service centres at any given time.

Consumer Warranty

Indra Hydro Tech Pumps (P)Ltd warrants that, when this product is used for the purpose it was designed, is correctly housed and protected from weather, vermin and dust etc, that it will be free from material and manufacturing defects at the time of the original purchase.

Our products comes with guarantee that cannot be excluded under Indian Consumer Laws . You are entitled to a replacement or refund for major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have products repaired or replaced if goods fail to be of acceptable quality and failure doesn't amount to major failure

How to claim warranty

Before doing so, study the instruction booklet provided with the product, and ensure it has been correctly installed. Remember, we as manufacturer has built thousands of identical units , they have been extensively tested and in field use for many years. Failure of this products to work correctly, 99% of the time relates to installation, operating or application faults. In the event of a possible warranty problems, contact nearest distributor or manufacturer

Indra Hydro Tech Pumps (P) Ltd
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Bangalore - 560 058
Karnataka State
INDIA

Phone: +91 80 28362916 **Fax:** +91 80 28363048.

Email: service@ihpindia.in and contact@ihpindia.in

To assist the distributor or Indra Hydro Tech Pumps (P) Ltd to address your request for warranty, could you please provide:

- Product
- The product must be delivery to IHP's authorized distributor or dealer or Indra Hydro Tech Pumps Pvt Ltd (as per above address) inspection / repairs
- Proof of date of original purchase must be supplied
- The serial number of the product if any
- Full contact details including name, full address and telephone or mobile number or SKYPE IDs.





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