

Clarke®

PUMP

**OPERATING & MAINTENANCE
INSTRUCTIONS**



**SUBMERSIBLE
WATER PUMPS**

**Model Nos.
HIPPO-3 and 3A**

CE

6/97

Thank you for purchasing this CLARKE, HIPPO Submersible Pump.

These highly efficient pumps are designed for pumping clean water only, and are ideally suited for draining ornamental ponds, swimming pools etc. Water temperature must not **exceed 35° C**.

The HIPPO-3A differs from the HIPPO-3 in that it incorporates a float switch, which automatically switches the pump OFF and ON when the water reaches a pre-determined level. The minimum suction level being 5mm. Both models are available for use with 110V and 230V supply's. Please take note of the information regarding Electrical Installation .

Before attempting to operate your pump, please read this instruction manual thoroughly and follow all directions carefully. This is for your own safety and that of others around you, and to help you achieve long and trouble free service from your pump.

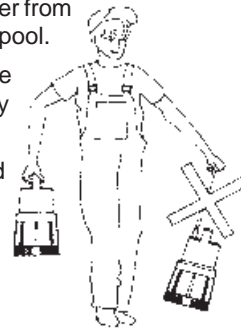
GUARANTEE

This product is guaranteed against faults in manufacture for 12 months from purchase date. Keep your receipt as proof of purchase. This guarantee is invalid if the product has been abused or tampered with in any way, or not used for the purpose for which it is intended. The reason for return must be clearly stated. This guarantee does not affect your statutory rights.

Please note that dismantling this pump will invalidate the guarantee

SAFETY PRECAUTIONS

1. These pumps are designed to pump **CLEAN WATER ONLY**. Never use for pumping flammable liquids or chemicals.
2. Never run the pump dry.
3. An approved Residual Current Device (RCD) **MUST** be used when pumping from ponds or swimming pools.
4. Your submersible pump may **ONLY** be used for pumping water from a swimming pool when there is no person or animal in the pool.
5. Always disconnect the pump from the electrical supply before placing it into, or removing it from the water, and before any cleaning or maintenance of the pump.
6. Always use the moulded handle with a rope or cord attached when lifting the pump. **NEVER** lift the pump by the mains cable, or, where fitted, the float switch cable.
7. **DO NOT** run the pump with the body exposed for longer than 10 minutes.
8. **DO NOT** install the pump on ground which is likely to shift.
9. Do not use the pump if the water is liable to freeze, as this can cause damage to the pump. Remove the pump from the water and store it in a frost free location.



ELECTRICAL CONNECTIONS

230V models should have their mains lead connected to a standard 230Volt (50Hz) electrical supply through an approved plug or a suitably fused isolator switch.

110V models should have their mains lead connected to a suitable 110V supply (50Hz) through an approved plug or suitably fused isolator switch, or to a suitable portable 110V transformer.

We recommend that these pumps be fitted with a Residual Current Device (RCD).

If the pump is to be connected to an outdoor electrical supply, make sure that both the plug and the socket are of a BS approved waterproof design.

In the event that the pump is hard wired into the electrical system, it must be carried out in accordance with IEE regulations.

If used for draining swimming pools or ponds, the pump **MUST** be fitted with a Residual Current Device (RCD), with a rated residual operating current of no greater than 30mA.

WARNING: THIS APPLIANCE MUST BE EARTHED

230V only

IMPORTANT: The wires in the mains lead are coloured in accordance with the following code:

Green & Yellow	-	Earth
Blue	-	Neutral
Brown	-	Live

As the colours of the flexible cord of this appliance may not correspond with the coloured markings identifying terminals in your plug proceed as follows:

Connect **GREEN & YELLOW** cord to plug terminal marked with a letter "E" or Earth symbol "⏏" or coloured **GREEN** or **GREEN & YELLOW**.

Connect **BROWN** cord to plug terminal marked with a letter "L" or coloured **RED**

Connect **BLUE** cord to plug terminal marked with a letter "N" or coloured **BLACK**

FUSE RATING

The fuse in the plug for this appliance must be rated at **13 amps**.

If this appliance is fitted with a plug which is moulded onto the electric cable (i.e. non-rewirable) please note:

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from your local dealer or most electrical outlets
5. The fuse in the plug must be replaced with one of the same rating (**13 amps**) and this replacement must be ASTA approved to BS1362.

IMPORTANT: If you are in any doubt regarding electrical installation, you should consult a qualified electrician.

FEATURES

The pumps are of rugged and durable construction, designed for long lasting continuous operation, and the motor is provided with a built in overload protector.

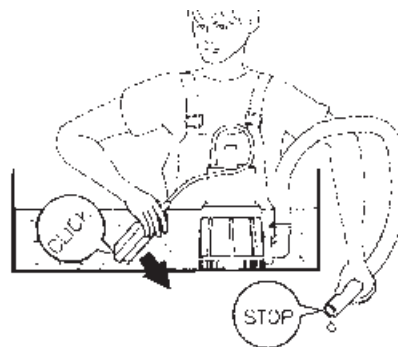
For your information, the chart on page 7 illustrates the flow rate at various heads. (HEAD is the distance, or height, from the pump outlet to the highest point of discharge)

All models are designed for pumping **CLEAN WATER ONLY** and will pump down to a water level of 5mm.

Automatic Pumps, i.e. those fitted with a Float Switch, denoted by an 'A' suffix to their model number, are suitable for permanent or semi-permanent installations, eg. installations where it is necessary to maintain a water at a particular level.

As the water level rises, the switch will float, and start the pump. As the water level falls, so will the float switch, until it stops the pump.

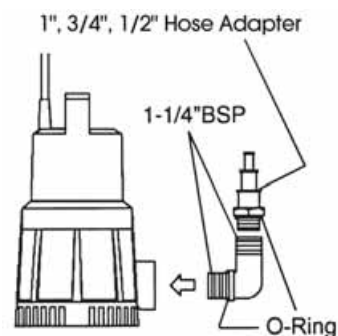
Float switches are factory set to provide the correct ON-OFF switching mode, however, you can adjust the level at which the pump cuts out by sliding the float switch cable, in its clip attached to the handle, to either shorten or lengthen it as the case may be. The shorter it is, the earlier it will cut out and therefore, the deeper will be the water at this point.



INSTALLATION

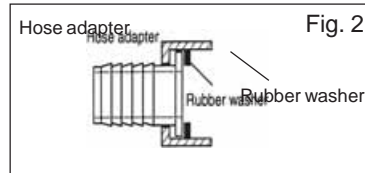
An Elbow Outlet is provided with a 1-1/4" BSP thread at either end as shown in the diagram opposite. Ensure the end provided with an O-Ring is screwed into the pump outlet. Screwed into the other end of the elbow, is a multi hose connector capable of accepting 1", 3/4" Or 1/2" hose. Simply attach a suitable hose to your preferred connector with a worm drive clip.

If the pump is to be used for drainage purposes, or in situations that demand maximum efficiency, we strongly recommend that you connect a 1" dia. hose



to the multi hose adapter, preferably cutting off the other two stages at the groove at the end of the 1" dia. step.

Alternatively, you may remove the multi adapter altogether, and screw on a 1-1/4" BSP hose adapter as shown in fig.2.



The pump is completely submersible, and should be placed in a vertical position, on a solid flat surface. If this is not available, sit the pump a solid surface, eg. house bricks, but ensure they are not likely to shift.

IMPORTANT:

ALWAYS raise and lower the pump using a rope attached to the lifting handle, **NEVER** by the power cable.

Automatic versions should be placed in a sump which has adequate dimensions so as not to restrict the movement of the float switch.

Take all necessary precautions as described on page 2 before plugging in, and switching ON.

SUITABLE HOSE, and SPARE/REPLACEMENT MULTI HOSE ADAPTERS ARE AVAILABLE FROM YOUR CLARKE DEALER

MAINTENANCE

WARNING

Before checking the condition of the pump, ensure it is unplugged from the mains supply. If the unit is hard wired, ensure the circuit breaker is open.

Check the pump installation regularly to ensure the base inlet is clear of leaves or other debris.

If the pump has been used for pumping salt water, ensure it is flushed with clean mains water thoroughly before storing.

Note that these pumps are fitted with automatic thermal overload protection. If the pump overheats due to an obstruction in the pump, or pumping warm water for example, it will shut off automatically. Switch the pump OFF and disconnect from the mains supply. Check for blockages and allow the motor to cool (at least 5 minutes) before attempting to re-start.

These pumps should require no maintenance other than regular cleaning. If the pump starts to show signs of wear or damage, contact your CLARKE dealer for advice. Do not use the pump if there is any damage to the mains supply cable, or to the float switch or its cable. Do not attempt to repair the pump yourself, as you may damage the waterproof seal and invalidate your guarantee. Repairs must be carried out by your CLARKE dealer, or contact the CLARKE Service Department, on 020 8988 7400

TROUBLE SHOOTING

A. PUMP WILL NOT START

1. Manual type (i.e. without float switch)

- 1.1 Check to ensure Power is switched on.
- 1.2 Check fuse (consult an electrician if in doubt).
- 1.3 If extension lead is fitted, check connections (consult an electrician if in doubt).
- 1.4 Internal thermal cut-out has not re-set. Leave for 5 minutes and try again.
- 1.5 The Impeller may be jammed. Disconnect from the mains supply, and remove any objects that may be obstructing the impeller and try again. If the pump still fails to start, consult your CLARKE dealer for advice.

2. Automatic Type (with float switch)

- 2.1 Check all above.
- 2.2 Float switch may be jammed against side wall, or prevented from moving.
- 2.3 Water level too low - float switch in OFF position - Lift float to check switch.

B. PUMP WILL START BUT NOT PUMP

1. Water level too low - below the minimum suction level (Manual type).
2. Check to ensure strainer is not blocked.
3. Discharge tube clogged or obstructed.
4. The head may be too great, i.e. you are trying to lift the water too great a distance for the pump to cope with. (See specification chart page 7).
5. Air bubble in the pump, produced during the plunge. Plunge the pump again, at an angle, and shake it whilst lowering to remove any air trapped in the system.
6. Impeller may be damaged - Consult your CLARKE dealer

C. AUTOMATIC PUMP WILL NOT STOP

1. Float switch may be prevented from moving to the fully down position.
2. Float switch may be faulty. Consult your CLARKE dealer for advice.

D. PUMP STOPS RUNNING

1. Thermal overload has operated. If this condition persists, investigate the cause. REMEMBER: DO NOT attempt to pump anything other than CLEAN water.
2. Pump has run dry, or float switch has cut in.
3. A foreign object has jammed the impeller.