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# WATERRA OWNER'S MANUAL

HYDROLIFT-2

**waterra** Groundwater Monitoring Equipment & Supplies



**TTT Environmental**  
Instruments and Supplies

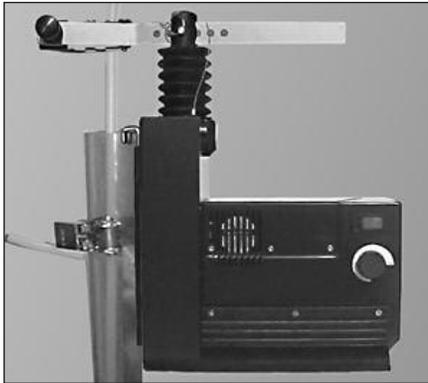
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Waterra Hydrolift-2

## Features

The **Waterra Hydrolift-2** is an electrically powered mechanical drive mechanism which pumps water by repeatedly lifting and dropping a tubing and footvalve assembly that is extended below the water surface in a well. The Hydrolift-2 components include a 700 watt (3/4 hp) electric D.C. motor integral with a 15:1 gear reducer which drives a linear pump mechanism. This drive mechanism includes a sliding post that extends beyond the pump body and supports the tubing clamp arm. The

pump is designed to hang from the protective well casing and is secured in place with a ratchet belt. All components on the pump are fully adjustable to permit operation in wells of varying diameters. The pumping speed is also fully adjustable to accommodate variable well depths and flow rate requirements.

## Safety First

**Stand clear** of the Hydrolift-2 when in use. The rapid up and down motion of the drive shaft creates a potential hazard.

Always secure your pump to the well casing securely before starting the pump, making sure that adequate clearance exists between the reciprocating shaft and the well head. Never move the pump when connected to a power source.

**Before starting** your Waterra Hydrolift-2 pump, be sure that there is enough tubing (approximately 5 feet) between the tubing clamp and the tubing discharge clamp. Also ensure that the tubing clamp and pump are positioned so that the tubing will not chafe on the well casing. Lastly, ensure that the Hydrolift-2 is firmly strapped onto the protective casing or PVC pipe and will not come loose while in operation.

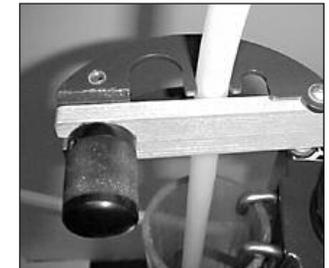
## Assembly & Operation

**When using a Waterra Hydrolift-2** pump to purge and sample a monitoring well, it is very important that the Hydrolift be firmly attached to the well. If the pump is not properly attached it may fall off the casing causing injury and possibly damaging the pump and other equipment. Hang the Hydrolift-2 on the PVC or protective casing by the front forks on the Hydrolift. The Hydrolift is supplied with a **ratchet tie-down belt**. The belt is looped through the gap behind the front forks of the Hydrolift and around the protective casing and tightened until the Hydrolift is firmly attached to the casing.

**Open the Tubing Clamp** located on the adjustable clamp arm and place the tubing in the clamp's jaws, leaving enough tubing (approximately 5 feet) above the jaws to allow the tubing to reach the tubing discharge clamp, and then tighten the clamp until the jaws are completely closed. The tubing clamp is designed to accept 1" OD, 5/8" OD and 1/2" OD polyethylene or Teflon tubing. Now position the tubing such that it will not chafe on the well casing and lock the clamp arm in place by inserting the clevis pin through the fork and the mating hole in the clamp arm.



Ratchet tie-down belt



Tubing clamp



Clevis pin and clamp arm



Discharge clamp

### Starting the Hydrolift-2

Before starting the Hydrolift-2 check again that the unit is firmly attached to the well casing and that sufficient tubing (approximately 5 feet) exists between the tubing clamp and the tubing discharge clamp. Adjust the speed control knob to the minimum setting and check that the unit is switched off before attaching the power cord.



Speed control knob, on/off switch and plug

### Hydrolift Bellows and Drive Shaft

It is important that the bellows (part #13)\* are inspected on a regular basis for holes, tears or abrasion. This part protects the mechanical components from dirt which will aggravate wear. If this part becomes worn, replace it immediately. The three fastening screws at the base of the bellows can be removed, allowing the bellows to be lifted up and providing some access to the sliding post on the sliding block (part #38)\*. The sliding post can be lubricated with white grease.

We also recommend that after every 100 hours of use, all screws be checked and tightened if loose. We recommend that you return your Hydrolift-2 pump to Waterra if it develops a mechanical problem or if it needs maintenance. Keep your pump clean, as this will improve the lift and reliability of the machine.

\*The complete Hydrolift-2 Parts Diagram can be viewed on our website [www.waterra.com](http://www.waterra.com).

**WARNING:** The Hydrolift-2 is not intended for operation in wet conditions. Waterra recommends to be sure that you are well insulated in order to avoid shocks. Use rubber gloves and rubber boots and do not splash water on the Hydrolift. Keep the extension cord dry and out of puddles.



– **Clamp Arm & Tubing Clamp Bracket**



– **Clevis Pin**



– **Ratchet Belt**



– **Bellows**

### **Warranty Information**

**Waterra Pumps Limited** warrants that each new Hydrolift-2 will be free, under normal use and maintenance, from any defects in material or workmanship for the relevant warranty period. Necessary repairs shall be made and replacement parts provided at no cost to the consumer when Waterra acknowledges that such defects are attributable to faulty material or workmanship at the time of manufacture. This warranty is not transferable.

### **Warranty Period**

All components ———— 6 months

#### **This warranty does not cover:**

- i) any repairs required as a result of collision, accident, striking an object, abuse, misuse, lack of required maintenance or use of an incorrect power source;
- ii) any repairs required as a result of any attachments, parts or devices installed or repairs done by a party other than Waterra Pumps Limited;
- iii) any Hydrolift-2 modified, altered, disassembled or remodeled; and
- iv) normal maintenance service such as: tightening screws, bolts or fittings, lubrication and the replacement of parts required for normal maintenance services including wires, fuses, belts, lubricants and other expendables susceptible to natural wear.
- v) any Hydrolift-2 used as part of a rental pool.

### **Owner's Obligation**

**The owner agrees** to follow all safety procedures outlined with this equipment and follow the maintenance schedule as indicated in the Owner's Manual. A record must be kept of regular inspections and maintenance performed.

## **Disclaimer**

**To the extent that** the law permits, Waterra Pumps Limited disclaims any responsibility for the loss of time or use of the Hydrolift-2, shipping costs or any other indirect, incidental or consequential damage, inconvenience, commercial loss or personal injury. The warranty is not valid if the product is not paid for in full within 60 days of the invoice date.

## **Returning a Hydrolift-2 to Waterra**

**Waterra requires** that all customers notify Waterra prior to returning their Hydrolift-2 under the Waterra warranty program. The Hydrolift-2 will only be accepted if it has been thoroughly cleaned and decontaminated. Hydrolifts must be properly packaged prior to shipping. Please contact Waterra in order to obtain a shipping address.

## **Contacting Waterra**

Waterra maintains a website at [www.waterra.com](http://www.waterra.com). That site will have our current phone numbers and return addresses. In addition, this manual will be maintained on the site.

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