

How does a High Lifter work?

Every pump needs a power source to operate. Many pumps use gasoline or electricity to operate a motor which powers the pump head. The High Lifter's pump is powered simply by water pressure and uses no fuel, electricity, wind, or solar power.

Why is only a percentage of the water which goes through the High Lifter pumped uphill?

The High Lifter is a water pressure multiplier. It uses a large amount of water under low pressure to pump a smaller amount of water under high pressure.

How much water will the High Lifter pump and how high does it lift?

The 2" High Lifter is designed for residential and light agricultural use. Output depends on fall, lift, and flow; the average is 400-800 gallons per day (GPD) and the maximum is 750-1,500 GPD. The High Lifter is capable of 950 foot lifts if the inlet pressure is 60 psi. It can operate with as little as 13 psi but will not pump nearly as high or as much.

How does the High Lifter compare with "Ram" pumps?

The High Lifter is not a ram and has many advantages over the old ram type pump. The High Lifter is a piston pump which is more energy efficient, quieter, self starting, always in tune, and often less expensive than a ram. Unlike the ram, the High Lifter can operate on very low flows and is not troublesome. It often pumps more water than a ram.. This is particularly true in situations such as limited summer flow and/or high lift, where the ram may not work at all. Also, Ram pumps are noisier than a High Lifter.

How does a High Lifter compare economically to gas or electric pumps?

For high lifts, the initial cost of the High Lifter pump is equal to or less than a gas pump. For low lifts, it may be possible to purchase a gas pump for a lower initial cost. Experience shows, however, that the whole system could cost more than the High Lifter. Gas pumps usually require an extra reservoir at the collection point, a larger diameter pipeline, gas, oil, etc. Also, overloaded gas pumps have a notoriously short service life between rebuilds. Operation and maintenance costs make almost all gas pump installations more expensive in the long run. Compared to electric pumps, the high lifter is more economical except for those having access to public power. Even for people with public power whose lifts are over 500 feet, the cost of the High Lifter is attractive.

Will the High Lifter work with a well as the water source?

No. The High Lifter needs pressurized water to operate. It will not suck water from a well. Since it multiplies water pressure, it needs water piped from a water source located above the High Lifter. The High Lifter will pump a portion of that water to a tank that's higher than the water source. See the diagram on the next page.

Can I use the High Lifter to pump water from a river?

The High Lifter cannot pump water from a "flat" river, even if the river is flowing quickly. The High Lifter must always be located at a place below the water collection point. So if you can find a place upriver where you can collect the water, put it in a pipe, and deliver it to a place that's at least 33 feet in elevation below the collection point, the High Lifter will operate.

Where are the best kinds of locations for the High Lifter?

The High Lifter is at its best in hilly areas where the water source is part way up a hill and you want to get water to a place that's higher on the hill.

What water sources are best for the High Lifter?

The best water sources are springs, ponds, and creeks on hillsides where the source can provide at least 500 gallons per day. Springs and ponds are best because the water is usually fairly clean. If you draw from a creek, you must use a settling tank or the pump will need rebuilding prematurely.

What kind of maintenance does the High Lifter require?

The filter needs to be cleaned periodically, depending of the water source, but the pump itself needs no priming. After millions of strokes (or one to three years of use) the High lifter begins to show wear on its plastic pistons, which are easily replaced by the user. After a few piston replacements, some metal parts may need to be replaced. The High Lifter is designed to be owner maintained. Also High Lifter Pump Service can repair or rebuild your High Lifter. All necessary parts are available from High Lifter Pump Service.

Do I need to remove the pump in the winter?

The pump can be damaged by freezing, just like any other pump. In cold winter areas, protect it by removing the pump and putting it in a shed, by leaving it in place and covering it with insulation, or by setting the pump in a hole in the hillside and covering with boards. If you can keep your pipes unfrozen and keep water flowing through the pump, that can also help. The amount of protection you will need to give the pump will depend on how cold it gets in the winter in your area.

What are the most common problems?

- Sometimes air bubbles get trapped in input lines where the gradient is too shallow. The best prevention is to lay the input line so that there are no air pockets.
- Low flows from springs in the late summer may limit the output of the High Lifter.
- Excessive algae buildup in pond water may necessitate cleaning the filter frequently.
- Animals chewing on lines
- Freeze damage
- Excessive wear due to not using a settling tank

Do I need a tank at the top?

It is possible to run an irrigation system without a tank on top if it's ok for the water to flow constantly on to the orchard or garden. For household use some reservoir is desirable. The High Lifter can also be set up to keep a pressure tank filled.

