

Pinemont Technologies Inc.

Balanced Double Barrel Tubing Pump

An Economical Pump designed to Lift Deep Water

This tubing pump is based on the simple “U” tube fluid principals. The weight of the fluid on one side of the tubing string (regardless of depth) = the weight of the fluid on the other side, thus balanced.

In order to stroke the plunger, simply add a small amount of pressure on one side to displace the fluid on the other side.

By releasing the pressure on the stroke side and applying it to the production side, the bottom plunger is forced down and the top plunger is recharged and ready for the next up stroke.

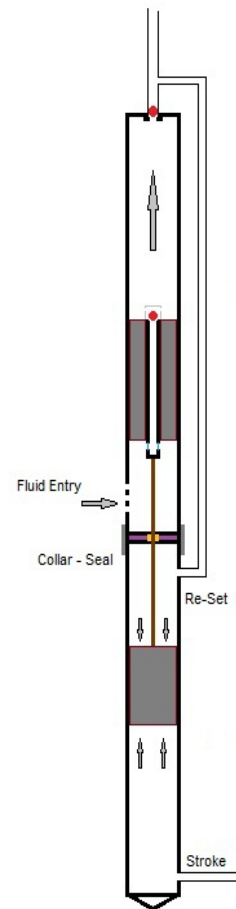
At the surface a pressurized tank of fluid is connected to a valve that will direct the fluid flow either to the stroke side or to the reset side of the tubing going down hole.

The pressure in the drive tank is maintained by either a small fluid pump or a small compressor making the pump extremely efficient and cost effective for lifting fluid from deep aquifers. This efficiency is a result of a perfectly balanced pump that is only working to lift the fluid equal to one stroke of the pump. For example the pump will move 100 gallons per 3' stroke, then the work applied is only the work needed to lift 100 gallons 3'.

Conventional “balanced” beam tubing rod pumps attempt to balance the weight of the fluid and rods with large counter weights requiring huge gear boxes to manage all the weight. Inevitably the pump is never balanced “perfectly” - this along with friction of the gear box and the rods rubbing results in a very inefficient, costly and unnecessary pumping unit.

The balanced double barrel pump of Pinemont Technologies is cost effective in that it reduces the cost to maintain, and operate the pump. The pump is designed around conventional down hole tubing pump equipment, allowing easy repair.

Relatively very little power is needed to lift deep water – in most cases a small solar panel array will get the job done. The pump can be easily be sized for the need at hand.



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