BORES/WELLS

DAMS

DE-WATERING

CIRCULATION

AERATION

Cleaning out silted bores/wells

BRUMBY PUMPS

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BRUMBY PUMPS

Keep on Kickin'

Simple, Tough, Versatile

Air Operated

Maintenance free

Submersible Pump

Self Installation Guide

Congratulations on choosing the Amazing Brumby Pump

The Brumby pump uses low pressure compressed air to lift liquids – from bores, wells, landfills, sumps and mines. No priming required. If water depth is over 1m, you can fit a Brumby (Submersion/Lift ratio has to be over 0.3).

The Brumby is also excels at cleaning silt, sand abd gravel out of choked up bores/wells, as it easily handles sand, grit and other solids

The Brumby can be used to **Aerate water** while supplying or circulating fish ponds.

The Brumby can **assist with high iron concentrations**, which quickly block up and destroy regular pumps.

If you **forget to switch the pump off, no worries!** It can't burn out. If the water runs out, it will simply continue to deliver air, so no need for low level sensors, alarms and cut-outs to complicate operation and add to the cost.

Maintenance-Free

Built from non-corroding, specially selected tough plastics the Brumby pump has no moving parts apart from a special ball, so there is nothing to repair.

All additional system components are located above ground level to be easily accessible.

Use Brumby Pump to clean out silted bore/well

Brumby Pumps are unique in that they can easily clean out silted up bores/wells to re-gain original depth and increase water production, as long as the water depth/lift above the water is adequate (25 to 30% water depth minimum).
A slight modification is required, that will just take a minute:
1.) Pry the cap off the bottom of the pump. The cap is slightly glued on in 2 spots, but a whack with a screw driver should get it off. If bottom of strainer is slightly damaged, that doesn't matter.
2.) Using wide water proof tape, tape up the slots in the strainer, so all the water and silt enters the very bottom, not through the sides of the strainer
3.) Connect air and water delivery pipes as normal and lower the pump down into the well/bore. Ensure that there is some extra piping at the top, as the pump will go down deeper than it was.
4.) Start compressor and work the pump up and down into the bottom of the bore/well. If there is silt in the bottom, the pump will bring it up and will keep going down deeper until all lose silt is out
5.) When you have cleaned it all out, pull the pump back up by the piping, while the compressor is still running.
6.) If re-installing the Brumby Pump for delivering water for regular use, please ensure you remover the tape from the strainer again and replace the cap if not too damaged.

BRUMBY PUMPS

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Installation - quick and easy

To install the Brumby pump in the quickest, simplest and cheapest way, use **poly (HDPE) piping** for the delivery pipe and possibly even the air line. Ensure the pressure rating of the air line is sufficient, depending on submersion depth and lift.

Poly is available in long rolls, so will just feed into the well/bore without the need to join many lengths of pipe together.

What you need:

Compressed air. (Pressure depends on submersion depth and lift height – 1**00psi air pressure allows for around 50m (165ft) submersion in water)**, an ***air hose***, a ***water delivery pip***e with ***suitable coupling*** and ***suitable fastenings***, such as Stainless Steel hose clamps.

The Brumby Pump is a sealed unit with fittings for the water delivery pipe and the air line.

1.) Connect the delivery pipe to the large outlet at the top with a suitable coupling

2.) Slide the air line onto the nipple and tighten with

1 or 2 offset hose clamps

3.) Tie the pipes together ever 2 or 3 meters to avoid kinking

4.) Lower the pump into the bore/well/water as deep as possible. (max 50m for a 100psi compressor). The submersion depth and consequently delivery rate are limited by the available air pressure

5.) Fasten the delivery pipe securely to the top of the bore/well casing. If not possible, weigh the pump down, keeping it close to vertical, or it will rise once air is supplied.

6.) Connect the other end of the air line to the compressor outlet

7.) Start the compressor and water will come up in bursts.

That's it. Quick and simple.

Remove the pump from a bore or well

Should you ever want to remove the pump from a Bore/well, do it with the compressor running. The buoyancy of the pump filled with air will make it rise.

1.) Start the compressor

2.) Undo pipe at the top of the well/bore

3.) Pull it up while compressor is running. This will blow water out of pump and piping and help raise the empty pump and piping

FREQUENTLY ASKED QUESTIONS

How deep should I submerse my Brumby Pump?

If water depth is less than about 50m (165ft), put it down as deep as you can, but leave a little clearance at the bottom to avoid lifting unwanted silt. The deeper you submerse the pump in liquid, the more the pump delivers. If you have more than 50m (165ft) water depth, you may go a bitn deeper if your compressor can make enough pressure..

How do I stop my pump pumping my bore/well dry?

The Brumby Pump won't empty the bore/well. They will pump the level down to find an equilibrium. However, if it gets to where water delivery gets very slow, switch the compressor off from time to time to let the bore/well refill. Try set ting it on a 24hr timer, with intervals set depending on bore/well performance.

Not delivering water. What could be wrong?

No water in the bore/well? See above.

If there definitely is water, check air supply, condition of hose, connections, etc. Check condition of water delivery pipe.

Your air supply pressure may be too low. Increase the air pressure. If this does not work, try a stronger compressor (more psi).

If above measures do not solve the problem, contact your supplier or our technical team.

Power Supply: The Brumby Airlift

The Brumby Pump operates on low pressure compressed air.

There are no underwater or down hole electrics – just an air supply hose from a compressor.

Therefore you not only avoid safety issues, but also the high cost of electric cabling to the pump site. The compressor can be located a long way away – depending on where your existing power source is.

The compressor can be powered by an internal combustion engine, electric, solar, battery or wind.

The power requirement is modest. A compressor delivering from 2 to 20cfm at 80-150psi will usually be more than enough – depending on the submersion in water, lifting height, your flow requirements and bore/well production rate. The more air you supply, the faster you can deliver the water (to a point). Also, the deeper the pump is submersed in water, the more it delivers, but higher air pressure is required.

The air pressure self regulates. You just need to ensure you have enough pressure available to start the pumping. Once flowing, the pressure falls.

COMPRESSOR TYPES AND TIPS

The Brumby airlift system is an open system. This means the **flow of air and water must be unrestricted**.

A small compressor will operate the pump. (An air tank or regulator is not required, but ok to have)

The compressor needs to deliver pressure depending on lift/ submersion in liquid and volume depending on required delivery rate. The start-up pressure required depends on the submersion depth of the pump in water. Around 2 psi per meter (3 ft) of submersion in water is required to start, depending on piping sizes. The XS1c needs a bit less. Once flowing, the pressure falls.

- To reduce restriction and load on the compressor you can remove the plug on the end of the air tank (if it has one) and place a suitable hose fitting and possibly a ball valve so that you have a free air flow. The compressor will always supply the pressure the pump requires.
- We suggest running an electric compressor at between 600 and 1000rpm to reduce heat and wear. You may lower the compressor speed to the recommended range by adjusting the pulley / drive belt arrangement – eg. fit a smaller pulley on the motor. This reduces the load on the compressor and motor and extends the service life. It does however also reduce the air volume (cfm) it can deliver.