

AIRWELL GROUP

pumping solutions for all applications



LEACHATE PUMPING SOLUTIONS PRESENTATION

WHO IS AIRWELL GROUP

- Australian owned and operated total fluids management company
- 25 years experience in providing pumping solutions for environmental applications
- Manufacturer of unique direct air displacement pumping systems
- Leachate Recovery Equipment on Landfills across Australia
- Worked on some of the largest pollution recovery projects in Australia.
- Supplier of many other pump types and brands
- WA based with representation in VIC , QLD and NSW
- Wide range of services and expertise



A SNAPSHOT OF SOME OF AIRWELL'S ENVIRONMENTAL SERVICES

- Landfill Leachate Recovery
- Remote Monitoring and SCADA Control
- Bubbler Tube Systems and Monitoring
- Groundwater/Bore Sampling
- Pump/Flow Testing
- Pollution Recovery and Site Remediation
- Electric Submersible Sales and Service

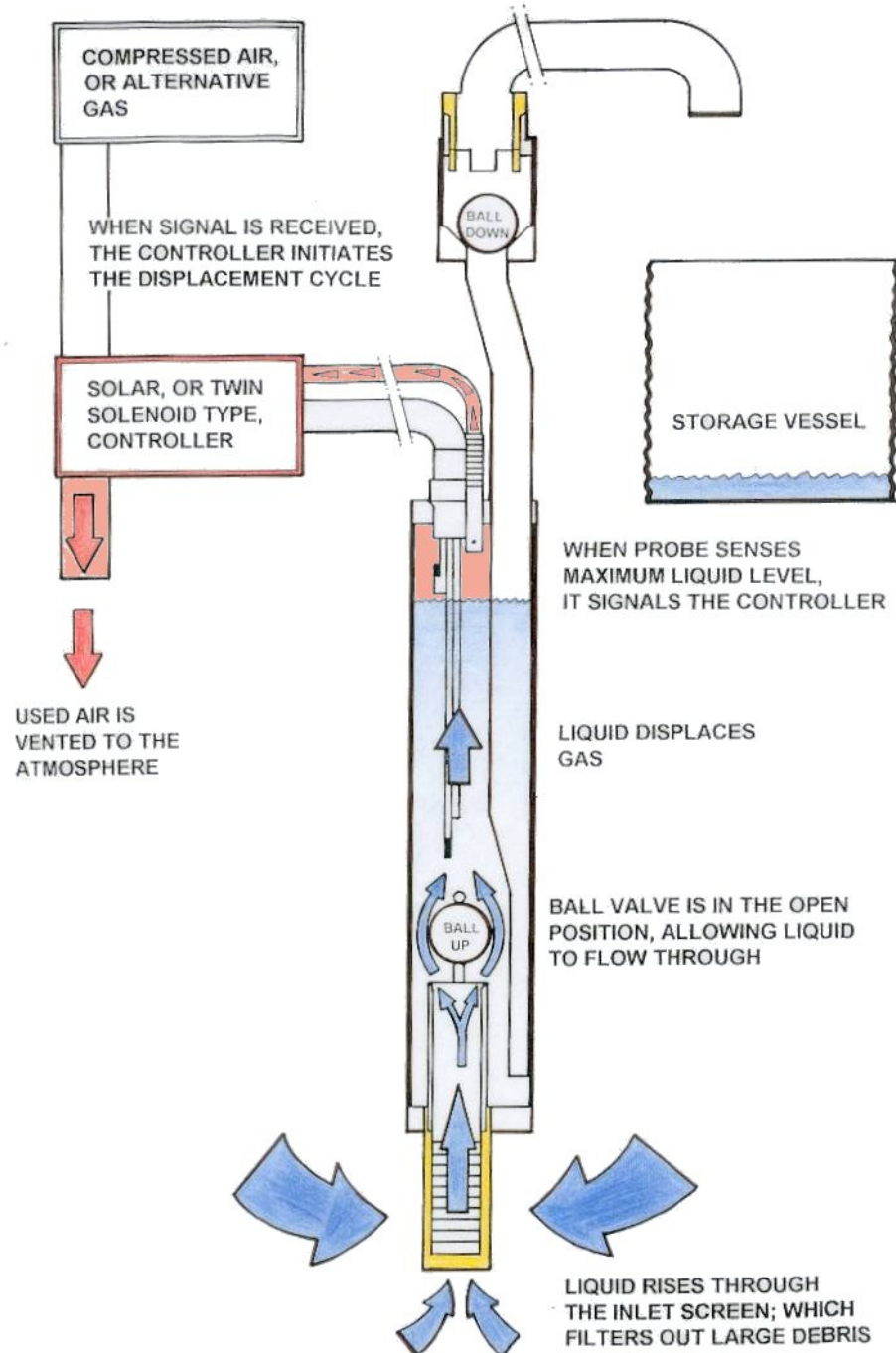


THE AIRWELL PUMPING SYSTEM

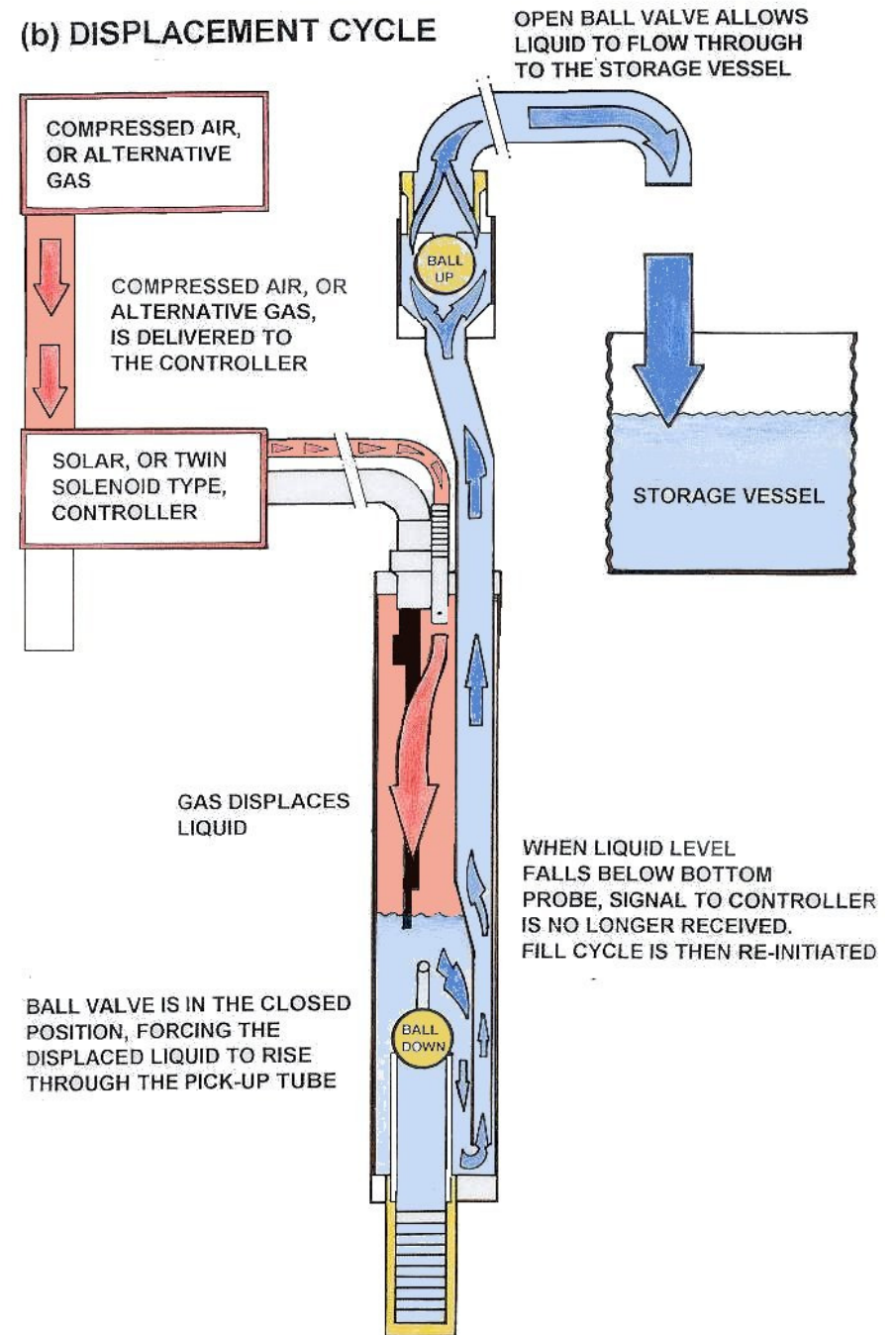
- Top & bottom filling direct air displacement pumps available in intrinsic safe & non-intrinsic safe options
- 24/7 operation remote from power
- Will exactly match the production of the bore
- Ability to handle large amounts of suspended contaminates and corrosive fluids without the risk of damage to the pump
- Long service life with low maintenance characteristics due to few mechanical/moving parts
- Full automation, control & telemetry available



(a) FILL CYCLE



(b) DISPLACEMENT CYCLE



LEACHATE RECOVERY

- Airwell pumping systems are used extensively in leachate recovery in Australia.
- Uses include the detection and recovery from leaks in residue ponds, tailings dams and landfill sites.
- We have experience in developing systems for both hazardous and non-hazardous environments.
- Recent focus on telemetry and monitoring systems



LANDFILL LEACHATE RECOVERY

- The low flow capabilities of the Airwell system allow it to match the production of any leachate without any damage to the pumping equipment
- The Airwell's ability to handle grit, silt and iron oxide bacteria make it ideally suited to landfill leachate recovery applications.
- Not only does the Airwell system recover leachate, it also acts as a leachate detector as the pump will only operate when there is leachate present.
- Airwell have an ability to design custom equipment to suit various landfill sumps and bores depending on requirements



AIRWELL LANDFILL LEACHATE RECOVERY SYSTEMS



REMOTE MONITORING AND SCADA CONTROL

- Growing area in the landfill industry
- Airwell skid control systems allow for remote monitoring and control of pumping systems
- Ability to monitor and report on leachate levels, volume of fluid pumped and rate of pumping.
- Compatible with Airwell and existing pump systems and equipment.
- Information and data is controlled and owned by the client
- SCADA Dashboard easy to use interface and allows clients to generate reporting data easily in excel format.



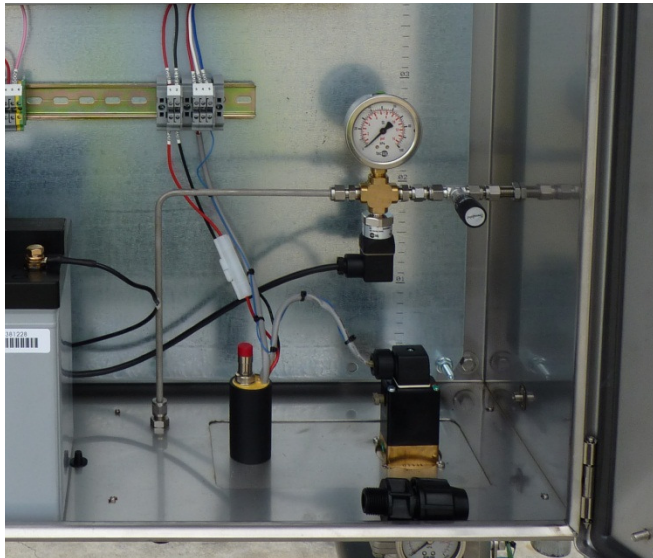


| AIRWELL PUMP CONTROL | | | |
|---|----------------|---------------|--------------------------|
| Remote Pump Run | ON OFF | ENABLED | Local Pump Run Switch ON |
| Solenoid Valve State | EXHAUST | | |
| Seconds For This Cycle | 377 Seconds | | |
| Seconds For Last Cycle | 14 Seconds | | |
| Water Flow Rate | 37,029 L / Day | | |
| Accumulated Water Today | 1,632 Litres | | |
| SUMP WATER LEVEL - IN METERS ABOVE SENSOR | | | |
| Sump Water Level | -.021 metres | | |
| RTU INFORMATION | | | |
| Board Temperature | 23 Celsius | Input Voltage | 27.7 Volts |
| | | RAM Voltage | 3,600 Millivolts |



BUBBLER TUBE SYSTEMS AND MONITORING

- Bubbler Tubes used as a replacement for pressure transducers in leachate pumping and monitoring environments
- Accurate method of liquid level measurement using compressed air
- Requires no expensive down well equipment that is damaged by leachate in the wells
- Skid monitoring or portable monitoring case



EVAPORATION SYSTEM SOLUTIONS

- Airwell Group have developed evaporation sprinkler systems as an alternative to traditional evaporators
- Floating systems or attached systems keep evaporated leachate from spreading to other areas of the landfill or nearby land
- These systems run purely off compressed air with the assistance of an Airwell pump.



GROUNDWATER/BORE SAMPLING

The Airwell Group environmental sampling equipment is designed and manufactured from the highest quality components and assembled in our Perth factory.

We offer a full range and level of bore sampling services to help our clients meet their environmental and reporting requirements to the relevant government departments.

Our Services Offered Are:

- **Complete sampling service:** Supply of all pumping equipment, 4wd vehicle and trained operator to complete your sampling requirements
- **Dry Hire of equipment:** Supply of all pumping equipment required to complete your sampling.
- **Purchase Options:** Outright purchase of an Airwell bore sampling unit.



PUMP / FLOW TESTING SERVICES

Airwell is fully equipped to undertake pump/flow tests ranging from 0 to 30 litres per second and from depths up to 150 meters.

Testing outside of these parameters is available subject to negotiation.

We offer:

- A selection of electric submersible pumps to achieve your required flow rates.
- Mine site ready vehicles
- Trained and experienced operators with previous mine site exposure.
- Equipment meets major mine site safety requirements for staff not to have to remain at the pump site for prolonged periods (minimum exposure to risk)
- Prompt and Efficient service
- Highly accurate results
- Modern and up to date testing equipment



ELECTRIC SUBMERSIBLE PUMPING EQUIPMENT

- As well as its own systems, Airwell can specify, design and install a full range of conventional pumps
- Airwell is an agent for the Franklin Electric range of pumping equipment.
- Airwell can supply not just Franklin Electrical submersibles but also Franklin Artificial lift systems and Franklin Solar pumps.
- Airwell can also supply a range of other pumping products and brands
- Airwell has experienced installers of electric submersible pumping equipment



Franklin Electric



SELECTION OF OUR CLIENTS

Bore Sampling

- Fortescue Metals Group
- Kimberley Diamonds
- MMG Golden Grove
- Troy Resources
- Iluka Resources
- Xstrata Copper

Site Remediation

- Orica
- BP
- Alcoa Kwinana and Pinjarra
- URS
- AECOM

Flow Testing

- Newmont Boddington Gold
- ALCOA Kwinana
- GHD

Landfill Leachate Recovery

- Run Energy
- East Metropolitan Regional Council
- Mindarie Regional Council
- Transpacific
- SITA
- Veolia
- City of Mt Gambier
- Logan City Council



MORE INFORMATION

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