

TracWater Portable water quality analyser

The **Game CHANGER**

in cloud-based robotic
water quality monitoring



Nothing beats a TracWater® portable water quality analyser for real-time cloud-based water quality monitoring

Compact, battery powered and wireless - The TracWater TWP-3A is a powerful remote Plug & Play network monitoring solution. Superior quality and performance meets the highest expectations.

With 4G wireless communications, the TracWater® Portable water quality analyser makes robotic, autonomous water quality measurements 24/7. The TracWater® Portable analyser can perform up to 2,800 water quality measurements per day for unprecedented improvements in analysis and verification of distribution network

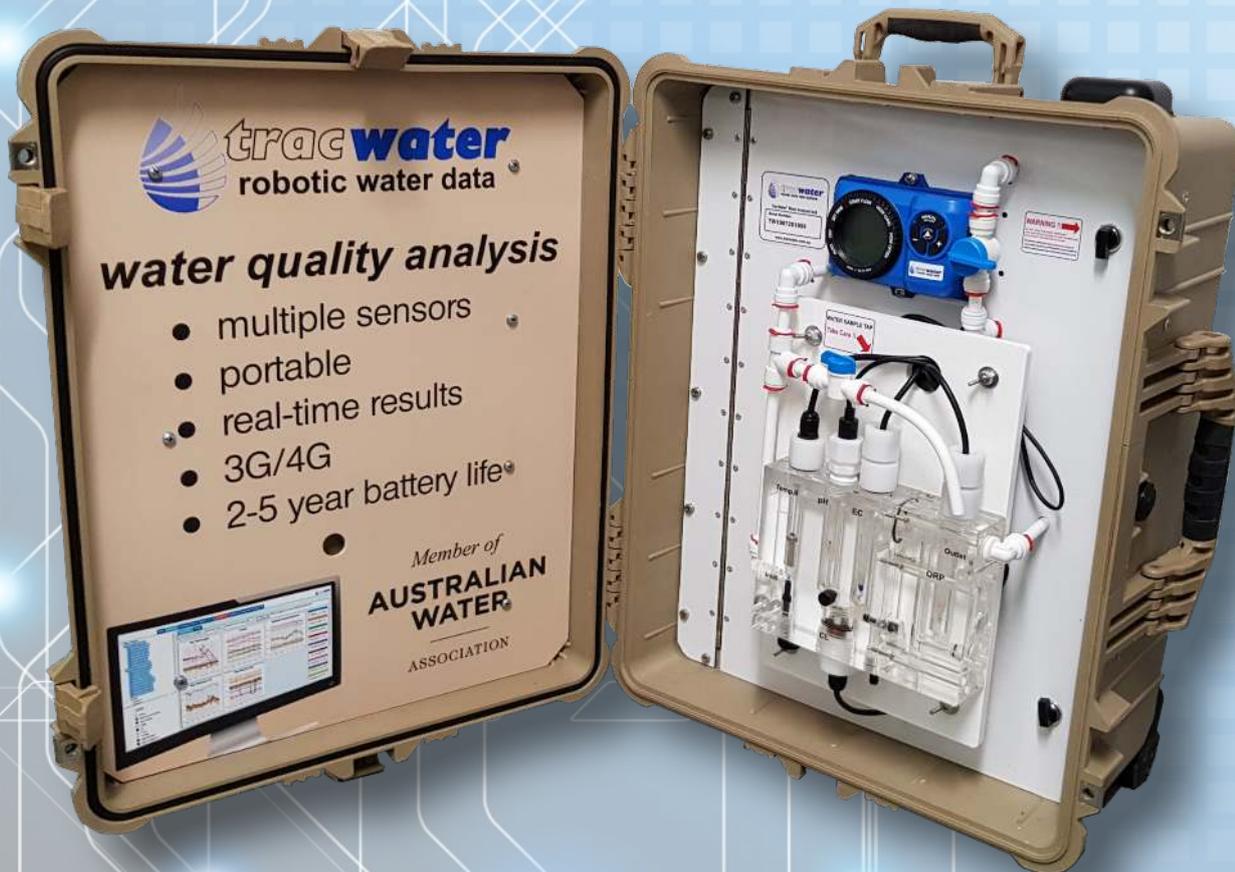


Take it anywhere, fast...

- Military tough, autonomous field monitoring devices
- Seamlessly integrated with a secure cloud communication system
- Purpose built, super high-speed data engines with machine learning
- A user-friendly and immersive interactive visual platform - TracWater IaaS
- Accessible anywhere in the world

TracWater® Portable TWP-3A

No other portable remote robotic water quality analyser can match this:



- Measures Free Chlorine, pH, Temperature, Conductivity, Pressure and Flow as standard
- Optional ORP, Salinity, Transient Pressure events
- Robust, reagent-free field sensors, non-buffered - no accuracy compromises
- Easy to install, operate and move from site to site
- Transient pressure senses at 1,000 times/second and measures at 100 times/second on the cloud
- Wireless 4G communications
- Simple and fast field calibration
- Water saver option - sample flow and measurement frequency can be reduced
- Plug & Play - automatically connects to TracWater® IaaS - Information as a Service platform
- Configured and calibrated in the factory prior to shipment
- 2 year battery life - with sensors set to measure every 5 minutes and report every 2 hours (remote user configurable on IaaS dashboard)
- Designed and built in Queensland Australia

Online water quality monitoring is essential

Ageing infrastructure, use of alternative water sources such as desalination and recycled water, pollution, contamination threats, and duty of care issues bring new challenges to water distribution and water quality assurance worldwide.

Every city, town and village with water infrastructure built decades ago experiences issues such as increasing water quality hazards, water shortages, leakage and infrastructure cost increases. The true economic damage of water quality incidents is severe.

Today for a safe and secure supply of drinking water, the quality of the water in the water distribution network needs to be monitored in real time. To be assured of safe and healthy water, the water quality must be monitored throughout the network and not just at the post-treatment plant stage of water processing.

The TracWater[®] Solution

Seamlessly integrated network capable field devices

TracWater is one of Australia's leading utility cloud-solution technology companies. User interactive high-speed big data on the cloud is what we do. TracWater build award winning fully cloud-integrated equipment and sensor solutions for real-time measurement and control of water, gas and power applications.

Our vision is to continue to be the trail-blazing Aussie tech company at the forefront of research and development of cloud-based solutions for the utilities sector. We began our journey in cloud data engineering when the term Big Data was new. Our focus today is delivering high quality data to improve operational interaction. We give network optimisation teams the data they need for critical decision making, the tools to reduce operational costs and the confidence that comes with the support they receive.

TracWater® Secure Data:

Complies with the Federal Government Australian Signals Directorate's cloud computing security risk profiles

The connected future is unstoppable



Information and applications are spreading to the cloud across the globe in all industries. Most governments now require that all critical data is to be maintained securely on-shore. TracWater® IaaS water quality data, which we supply as an Information as a Service package, is the convergence of electronic security with cyber security. It is a specialised area of information and telecommunication technology that we take care of seamlessly for our clients. Keeping track of data security threats and deploying solutions to protect data infrastructure and operations requires skilful resources in emerging cyber security streams. We leverage the economic advantages of cloud computing to deliver high quality capabilities to all of our customers.

Using TracWater® Information as a Service we aim to:

- Eliminate all of the data risks associated with using overseas based servers which are constantly subjected to malicious intent by attackers, malware, viruses and physical security threats.
- Maintain compliance with the Australian Government's Australian Signals Directorate cloud computing security risk profiles, which evolve at the same rate that new data security threats emerge
- Ensure up-to-date protection is maintained over our clients' data and our cloud infrastructure
- We deploy multiple strategies at every data layer to minimise exposure risks including private cloud networks, private addresses for TracWater® water quality assets and devices, military grade encryption and secure socket layers (SSL) for inter-network connections.

TracWater® IaaS Information-as-a-Service Platform

Around the clock, high-resolution water quality monitoring requires high level technical understanding of the cloud and big data management systems. Most Australian utilities are not sufficiently resourced to be able to do this 24/7. Yet every Australian expects clean and healthy water at their tap. The TracWater IaaS platform is a FULL SERVICE offer to water utilities to help them to ensure that their water quality is being managed in real-time across the water distribution network.

TracWater has proven strengths in innovative high-speed cloud-based utility systems which enable the TracWater IaaS field-proven data solution for Australian water utilities:

- Fully user-interactive cloud-based data and historical trending for up to 3 years
- Accessible from any web enabled devices
- Alarms and threshold notifications sent via SMS or Email
- Automatically generated customised reports
- Real-time data can be delivered to existing SCADA systems
- Supported by thousands of hours of fault-free water quality monitoring operations
- Also available for industrial and building automation

TracWater® TWP-3A Portable water quality analysers are built tough and perform faultlessly in severe conditions



The TracWater® family of cloud-based, battery powered solutions reduce the cost of remote water quality testing

TracWater® DMA model sensor systems have operated remotely in the field for over 520,000 fault free hours. No TracWater® measurement data has ever been lost even during the most severe floods and cyclonic weather events.

Designed for a twenty year operational life by engineers with real experience in the field, every TracWater® robotic water analyser is strongly built.

All internal parts and systems are modular and field serviceable and cabinets are constructed to maximise equipment security and minimise damage by vandals.

TracWater® robotic analysers make up to 2,800 live, user-interactive cloud-based water quality reports every day.

Each report consists of 6-10 measured water quality parameters and advanced units can make up to 4,800 measurements per day.

The operational cost for a cloud-based TracWater® remote water analyser system can be far less than the cost of traditional grab-sampling and thousands of times faster.



TracWater® Portable TWP-3A

for early warning detection of key water quality parameters at distant parts of the

TracWater® also provides a unique early warning contamination detection system for water distribution networks and public infrastructure.

This combines TracWater's highly sensitive optical and amperometric sensors with dedicated event detection algorithms and automatic SMS and email notification of alarm events. Self-contained TracWater® robots can provide an economically viable online early warning sensor network that can be deployed anywhere in the water distribution grid.

Testing water samples for specific substances, using water samples collected and transported to a laboratory, remains an important component in the integrated approach to assure water quality. However measurement of key chemical and physical water quality indicators can be made easier, faster, and much more cost-effectively using TracWater® water analysis systems fitted with a wide range of sensors.

TracWater® offers a flexible and affordable platform for the real-time measurement of specific substances and physical properties of the water flowing in the water distribution grid. TracWater® robotic water analysers do not need any connection to mains power or solar power. They can be installed indoors or outdoors anywhere that a pressurised low-volume water supply can be obtained. Cabinets and portable cases are rated at IP66 or IP67 while all electronic components, sensors, and military specification wiring connections are rated at IP68 meaning that they must be able to operate submerged under water.

Integration with other legacy systems

Real time TracWater® water quality measurement data can be integrated with most existing SCADA systems, building management systems BMS and other legacy control systems. TracWater® DMA remote water quality analysers can easily extend the data reach of existing legacy control systems without the need to resort to expensive SCADA system replacement or upgrades.

TracWater® real-time measurement data can provide an operational window into the distant and hidden parts of the water network that fixed in place systems can never reach. Water grab sampling don't capture the same information measurement in real-time can.



TracWater® Portable TWP-3A analysers can be used just about anywhere





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Low maintenance and non-polluting

Using a mix of amperometric and optical sensors the TracWater® family of analysers use no reagents or chemicals whatsoever during measurement operations. No harmful chemicals ever need to be stored on-site or replaced in TracWater® robotic water analysers and ongoing operating and maintenance costs are minimised.

TracWater® sensor design ensures long life between calibrations and good stability of real-time sensor measurements. Normal calibration checks are reduced to 2-4 times a year for our TracWater® Basic model. Some TracWater® robots with very sophisticated sensor arrays do require calibration at more regular intervals. Sensor calibration is easily performed on-site using secondary test instrumentation and certified calibration standard solutions.

TracWater[®] sensor technology raises the bar for remote real-time water quality analysis

All sensors and components in TracWater[®] systems are designed with a view to perfect interaction. Features like automatic communication and power testing, remote configuration capabilities and operational alarms and alerts sent by SMS and email are major advantages in a remote robotic water quality measurement system that is also simple to use.

Secure cloud-based communication protocols guarantee consistent data security. TracWater[®] robots can be programmed to learn to recognise when water supply quality fails. When this happens they can automatically switch into a high-speed measurement and data communication mode and send an alert or alarm message directly from the TracWater[®] analyser at the remote site to a relevant person anywhere in the world.

Online water quality monitoring is essential

Decaying water infrastructure, use of alternative water sources such as desalination and recycled water, pollution, contamination threats, and duty of care issues bring new challenges to water distribution and water quality assurance worldwide.

Every city, town and village with water infrastructures built decades ago experiences issues such as increasing water quality hazards, water shortages, leakage and infrastructure cost increases. The true economic damage of water quality incidents is severe.

Today for a safe and secure supply of drinking water, the quality of the water in the water distribution network needs to be monitored in real time. To be assured of safe and healthy water the water quality must be monitored throughout the network and not just at the post- treatment plant stage of water processing.

Cloud-based networked TracWater[®] robotic water analysis is the most cost-effective solution

TracWater[®] is a wholly-owned Australian company. We manufacture intelligent battery-powered robots for onsite water analysis integrated with forward-thinking, high-speed, cloud-based “information as a service” for use in networked water infrastructures and in commercial and industrial applications.

TracWater’s integrated robotic water analysis systems and purpose-built, high-speed, cloud-based, big data software solutions enable our clients to extract the best value, service and efficiency from their existing water distribution infrastructure, operations and investments.

For the past decade we have served water utilities, industry, and owners of private and public buildings around the world with real-time, cloud-based, cost-effective products and solutions to safeguard the production and distribution and management of potable water, power and gas.

APAC **CIO** Outlook TOP 10
UTILITIES
TECHNOLOGY 
SOLUTION PROVIDERS - 2017

Operating Specifications

Measurement Type	Basic	Basic Plus	Advanced
Flow	●	●	●
Temperature	●	●	●
Electrical Conductivity	●	●	●
pH	●	●	●
Free Chlorine	●	●	●
Water Pressure	●	●	●
Transient Pressure (Real-time)	●	●	●
Oxidation Reduction Potential ORP	○	●	●
Features	Basic	Basic Plus	Advanced
Plug & Play	●	●	●
Self Powered	●	●	●
Remote Set Sample Time & Flow Rate	●	●	●
Transport Case with Wheels & Handle	●	●	●
Lock Points on Case	2	2	2
Measurement @ 5 Minute Intervals	2880/day	3000/day	4000/day
Heartbeat Monitoring	Basic	Basic Plus	Advanced
Communications Signal Strength	●	●	●
3G/4G Network Operation	●	●	●
Low Battery Power Alert	●	●	●
Sample Water Flow Alarm	●	●	●
Door Lock Security Alarm	●	●	●
Water Pressure Alarm	●	●	●
Transient Pressure Alarm	●	●	●
Dimensions (cm)	Height	Width	Depth
	63	55	32
Weight (Kg)	Basic	Basic Plus	Advanced
	28	28	28

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