

PRODUCTS GUIDE



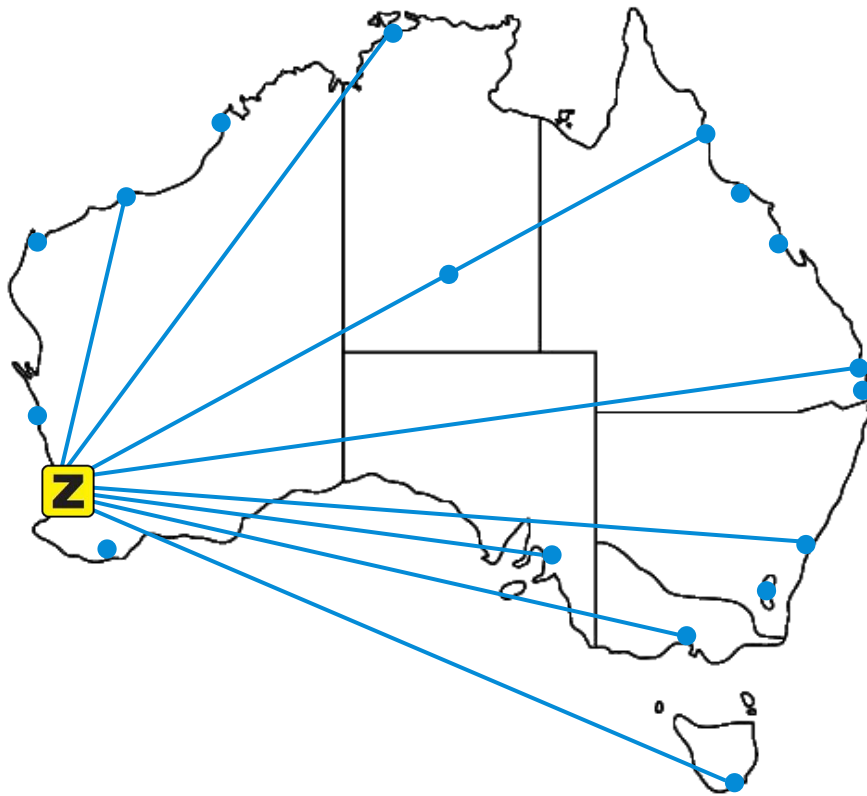
ZEDFLO
AUSTRALIA



Excellence in Calibration
40+ years - Est. 1982

NATA accredited ISO 17025 calibration laboratory, accreditation #20391

Australia wide shipping



*Excellence in Calibration
40+ years - Est. 1982*



Process Control Instrumentation Pty Ltd T/A **Zedflo Australia**

ABN 58 120 609 814

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The Zedflo Advantage

- 40+ years of experience, Zedflo was established in 1982.
- Extensive range of products and stock in our warehouse ready for immediate dispatch.
- We can provide training and demonstrations for many instruments, available in store or online.
- NATA accredited ISO 17025 calibration services. We have achieved some of the best uncertainty of measurements in the country, we can look after all your ongoing calibration requirements for your equipment with fast turn around times.
- Zedflo are authorised repair agents for Metrel and Additel, offering a wide range of services from pump refurbishment & seal replacement to micro soldering PCB repairs.
- Guarantee to offer professional, impartial advice for your calibration, test or measurement application



Zedflo Wangara store frontage



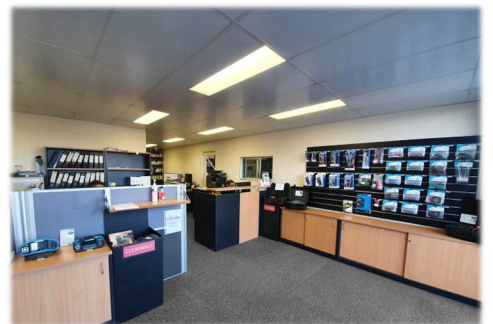
Training and demonstration area



Our warehouse



Calibration laboratory



Front office and showroom



History

For over 40 years (Since 1982), Zedflo Australia have been supplying process calibrators (pressure, electrical and temperature), electrical testers and field instrumentation to the oil & gas, process, mining, chemical and other major industries throughout Australia. Our long term industry partnerships empowers excellent service standards.



Quality

Zedflo provides calibration and repair services for most instruments we supply. We have a NATA accredited laboratory with some of the best uncertainties of measurement in the country. Our 40 years of experience in the industry means you get expert advice and ensures you get the best equipment for the job.



Fast & Easy

Our extensive stock holding of calibration and test & measurement equipment means fast delivery and less down time for our customers. Our expert advice ensures you get the best equipment for the job. Local pickup and fast delivery options are available, stocked product are usually dispatched same or next business day

Zedflo Company Profile

Company Profile Overview - All About Zedflo

Zedflo Australia is a Western Australian company established in 1982 based in Perth. We are proud of the excellent reputation and strong relationships we have developed with industry over the last 40+ years and continue to strive to build new relationships.

Zedflo offers NATA Accredited pressure and electrical calibration service and authorised service of Metrel and Additel products. Zedflo supplies a comprehensive range of process calibrators, electrical test & measurement, clamp-on ultrasonic flow meters and process control field Instrumentation, providing solutions to the oil, gas, process, mining and chemical industries.

What brands do we represent?

- Additel – Process calibrators and digital gauges
- Asco – Solenoid valves
- Baumer – Pressure gauges
- Besta – Level switches
- Beko – Compressed air management
- Cerlic – Waste water treatment & controls
- Dinel – Level and flow measurement
- East Hills instruments - Pressure calibration
- Gems Sensors – Pressure, level and flow sensors
- Gentos pFlow – Clamp-on ultrasonic flow meters
- ITT Neo-Dyn – Pressure & temperature switches
- Lucifer – Solenoid valves
- McDonnell Miller – Flow switches
- Metrel – Electrical test and measurement
- Permacal – Severe service pressure gauges
- Rototherm – Gauges and chart recorders
- Shako – Solenoids, filters, regulators & lubricators
- Siemens – Flow and level instruments
- Tokyo Keiki – Clamp-on ultrasonic flow meters
- Weka – magnetic level indicators

Extensive stock of many products we represent

Zedflo are one of Australia's largest stockists of test & measurement products. As we represent a large number of manufacturers, we are able to supply products directly from our extensive warehouse stock or on short lead times from our suppliers.



High spec calibration laboratory

We proudly offer calibration services with uncertainty of measurement capabilities among the best in Australia. We have invested in high-performance equipment across our laboratory, and are well prepared to meet most calibration needs. Our NATA accreditation is an independent testament to our attention to detail, commitment to working to international standards in quality and technical management and metrological traceability. Our in house facility means we can also look after all your ongoing calibration requirements for most of our product range.



Process Calibration & Test Equipment



Zedflo stocks one of the largest range of pressure test equipment in Australia, backed by the Additel corporation and various others we provide excellent products and support. We also operate a NATA accredited ISO 17025 calibration laboratory so we can manage all your ongoing calibration requirements.

Pressure Gauges



- High accuracy digital pressure gauges
- Options for IECEx Intrinsically safe
- Options for datalogging
- IP67 versions available
- Various accuracies as low as 0.02% FS

Pressure Calibrators / Controllers



- Fully automatic calibrators with built-in pump and controller up to 100,000 kPa
- Can be used with external modules as a calibrator up to 420MPa
- Handheld or portable models
- Battery or mains powered

Test & Calibration Pumps



- Various models available range dependant
- Models with hand tight quick test fittings
- Quick pre pressurisation and stabilisation
- Models for use with air, oil, or water
- Handheld or benchtop operation models

Recorders, Loggers & Software



- ADT260EX
- ADT282
- ADT286
- aCAL calibration software
- Additel Link software

Temperature



- Temperature calibrators & furnaces
- Temperature baths/dry blocks
- Liquid baths
- Various options to automate the process
- Temperature probes and thermometers

Other



- Multifunction process calibrators
- Documenting calibrators
- Loop/signal calibrators
- Adapter sets, manifolds, and accessories

Digital Pressure Gauges

An overview of our product range

Additel | Digital Pressure Gauges

ADT681A / ADT681AEX

- Pressure ranges to 420,000 kPa (60,000 psi)
- 0.02% or 0.05% FS accuracy
- Gauge or absolute Pressure
- % pressure indication with fan-shaped graphic
- Fully temperature compensated accuracy (-10 to 50°C), and IP67
- Bluetooth and Communication with Additel's Link Mobile app
- Large easy-to-read display
- Intrinsically safe version (681AEx)
- Data logging (up to 10,000,000 records)



ADT680A / ADT680AEX

- Pressure ranges to 420,000 kPa (60,000 psi)
- 0.1% or 0.2% FS accuracy
- Intrinsically safe (ADT680AEx)
- IP67, Stainless steel shell, fully welded sensor
- Battery life up to 4,000 hours
- Large, easy-to-read display
- Backlit display
- Bluetooth and RS232 capable
- Communication with Additel's Link Mobile App
- Data logging (up to 800,000 records)



ADT601EX

- Pressure ranges to 100,000 kPa (15,000 psi)
- Most basic economical gauge in the range with 0.5% FS Accuracy
- Fully temperature compensated accuracy (-20 to 50°C)
- Bluetooth communication
- Intrinsically safe
- Stainless steel case, fully welded sensor
- IP67 rated
- Battery life up to 9,000 hours



ADT680P (Panel mount version)

- Pressure ranges to 420,000 kPa (60,000 psi)
- 0.2% , 0.1%, 0.05% & 0.02% FS accuracy
- Stainless Steel Housing
- Backlight Display
- Intrinsically safe (ADT680PEX)
- IP67 rated
- Can be externally powered
- 800,000 data logging records
- Backlit display



ADT686 Advanced Digital Pressure Gauge

The new ADT686 utilizes a modern smart phone like interface which brings a new and refreshing experience to pressure calibration work, additionally Additel link app gives users the ability to remotely monitor their gauges from the convenience of a mobile phone. With an abundance of options to choose from, you can configure these pressure gauges to precisely fit your specific pressure calibration and measurement needs.

- Pressure ranges to 420,000 kPa (60,000 psi)
- 0.02%, 0.05% FS or 0.1% RD Accuracy
- Colour touchscreen display with IP67 rated case
- Every model measures gauge or absolute pressure
- IP67 rated
- Intuitive smartphone like interface
- ISO 17025-accredited calibration included
- BT and USB Comms
- Data logging (up to 10,000,000 Records) and Wi-Fi (optional)



Pressure Calibrators

An overview of our product range

Additel | Automatic Pressure Calibrators

ADT760 Handheld Automatic Calibrator

- Fully automatic calibrator with inbuilt pump and controller to 2,000 kPa
- Switchable internal pressure modules
- Accuracy up to 0.02% FS
- Less than 1.8KG
- Very fast and easy to use



ADT761A Automatic Pressure Calibrator

Offers fully automatic and self-contained generation and control to 7,000 kPa, accuracy up to 0.01%FS, removable internal pressure modules, increased speed to pressure, ability to read two external pressure modules, touch screen display, HART/PROFIBUS, Wi-Fi, Bluetooth, Ethernet, double the original battery life and more!



ADT762 / ADT762W Automatic Pressure Calibrators

Complete turnkey solution for automation of pressure calibration work up to 100,000 kPa

- Designed for use in both the field and the laboratory, the portability and accuracy of this state-of-the-art product will quickly become the favourite go-to calibrator for lab personnel and field technicians alike.
- With fully automated support for calibration of pressure transmitters, switches, dial and digital gauges and sensors, including HART/PROFIBUS devices in conjunction with a fully integrated task feature, data collection and Wi-Fi connectivity.



Additel | Portable Digital Pressure Calibrators

AD273Ex Handheld Pressure Calibrator

Additel's 273Ex is an Intrinsically safe handheld multifunctional pressure calibrator with a colour touchscreen, smartphone like interface, built-in quick test tasks and optional HART communications capability. This innovative Additel product drastically improves explosion-proof field testing and calibration. The Additel 273Ex has a built-in atmospheric pressure sensor, so that absolute pressure and gauge pressure are easily facilitated.

- 0.02%, 0.05% FS Accuracy
- IECEx Intrinsically Safe
- Field Switchable Pressure Module
- Dual Digital Pressure Module Inputs
- Colour Touchscreen Display
- Built-in Quick Test Task Feature
- Built-in Barometer
- Intuitive Smartphone Like Interface
- Bluetooth and USB Communication
- Optional HART Communication
- Communicates with Additel's Link Mobile App



ADT673 Digital calibrator with HART

The all new modern menu structure and control interface brings a new and refreshing experience to pressure calibration work. The handy Additel Link app gives users the ability to remotely monitor these calibrators from the convenience of a mobile phone. With an abundance of options to choose from, you can configure these pressure calibrators to precisely fit your specific pressure calibration and measurement needs.

- Pressure ranges to 420,000 kPa (60,000 psi)
- 0.02%, 0.05% FS or 0.1% RD Accuracy
- Colour Touchscreen Display
- Built-in Barometer, every model measures Gauge or Absolute Pressure
- Intuitive Smartphone Like Interface
- Bluetooth and USB Communication
- Wi-Fi (optional)
- Measure mA or V, and with 24V loop power
- Full HART Field Communicator (Optional)
- Data logging
- Communicates with Additel's Link Mobile App



Pressure Controllers & Lab gear

An overview of our product range

Additel | Automatic Pressure Controllers

ADT773 - for low pressure work

- Optimized for low pressure work from -95 to 100 kPa
- Two removable internal pressure modules
- 0.02%FS accuracy with Control stability of 0.003%FS
- Ultra-High speed pressure generation and control
- Optional barometric pressure module
- Built-in pressure generator
- Large 7" colour touch screen
- Multi-automatic test functions: pressure switch, test, leak test, PSV test, etc.
- Modular design for easy maintenance



ADT783 - high speed controller

- Optimised for high speed to pressure without compromising accuracy and stability.
- Pressure ranges from -0.99 to 25,000 kPa (3600 psi)
- Two removable internal pressure modules with multi-range selection
- 0.02% FS, 0.01% FS, and 0.011% RD accuracies available
- Control stability of 0.003%FS
- Ultra-High speed pressure control
- Absolute and Gauge Pressure
- Large 7" colour touch screen



ADT793 - for high pressure work

- Dual pressure control range to 100,000 kPa (15,000 psi)
- Interchangeable pressure module
- Oil and water versions available
- Accuracy of 0.02%FS, 0.01%FS or 0.01%RD
- Control stability 0.005%FS
- Ultra-High speed pressure generation and control
- No external pressure source required
- Control using internal or external pressure modules
- External reservoir support
- Easy maintenance



ADT151

Additel's 151 pressure modules have been designed with flexibility and efficiency in mind and can easily be swapped out as needed to meet changing needs and workloads.

- Pressure ranges to 100,000 kPa (15,000 psi)
- Accuracy of 0.02%FS, 0.01%FS or 0.01%RD
- Fully temperature compensated accuracy
- Two pressure ranges per module
- Advanced temperature compensation
- ISO17025 accredited calibration and data included
- Optional calibration fixture with software



Additel | Laboratory Equipment

Zedflo proudly represents one of Australia's largest and best quality calibration equipment range. With Additel Corporation we provide excellent products and support.

If you are setting up a new laboratory or workshop, seeking upgrades to your equipment or looking to improve your capabilities or efficiencies, turn to Zedflo for our comprehensive range of test and measurement equipment.

We also operate a NATA accredited ISO 17025 calibration laboratory of our own, we have direct experience in the field so know what works well, get in touch with us today to discuss your requirements and we can put together a competitive package to suit your needs.

And of course through our high spec laboratory with some of the best uncertainties in the country, we can manage any ongoing recalibration requirements for your own equipment.



Calibration hand pumps

An overview of popular models in our product range

Additel | Pneumatic Pressure Pumps

ADT901B

- Generate vac –40 kPa to 40 kPa
- Portable, only 1.6 kg
- Minimal maintenance
- Hand-tight quick connectors
- Great stability and high resolution (0.1 pa)



ADT912A

- Generate vac –95 kPa to 400 kPa
- Hand-tight quick connectors
- Handle for rapid pre-pressurisation, then two stages of fine adjustment. This pump also uses an isothermal bellows chamber so the pump provides incredible stability and adjustment resolution (0.1 pa)



ADT916A

- Generate –95 kPa to 4,000 kPa (600 psi)
- Portable, only 2.7 kg
- Great stability and high resolution
- Minimal maintenance
- Hand-tight quick connectors



ADT918

- Generate –95 kPa to 10,000 kPa (1,500 PSI)
- Very stable for this pressure with 0.1 mbar adjustment resolution
- High pressure range with no need for oil
- Hand-tight quick connectors



ADT919A

- Generate 14,000 kPa (2,000 psi) in 30 seconds
- Minimal maintenance
- Hand-tight quick connectors
- Adjustment resolution up to 0.001 psi (10 Pa, 0.1 mbar).



ADT920 / ADT920HV

- Generate 20,000 kPa (3,000 psi) in 40 seconds
- HV model for high volume use
- Minimal maintenance
- Hand-tight quick connectors
- Adjustment resolution up to 0.001 psi (10 Pa, 0.1 mbar).



East Hills | Hand Held Scissor Style Pressure Pumps

MVP600 Pneumatic Hand Pump

- Light weight (~0.9 kg), a highly portable hand held size pump
- Vacuum –95 kPa to 4,000 kPa
- Connections (2 ports) 1/4" and 1/8" NPT/BSP



M10 Hydraulic Hand Pump

- Hydraulic calibration hand pump utilizes a fully adjustable stroke control to allow for quick priming, easy pumping, and fast pressure generation up to 70,000 kPa.
- Connections (2 ports) 1/4" NPT/BSP
- Shatter proof reservoir and SS construction



Additel | Hydraulic Pressure Pumps

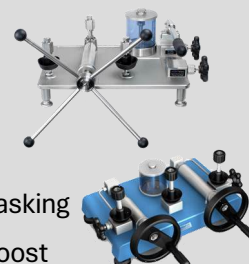
ADT928

- Generate up to 100,000 kPa (15,000 psi)
- Suitable for use with oil or water
- 1 mbar adjustment resolution
- Light weight and portable
- Hand-tight quick connectors



ADT 946A / 959A / 960

- Generate –86 kPa vac to 420 MPa
- 1 mbar adjustment resolution
- Models suitable for oil or water
- Multiple quick test fittings for multitasking
- Option of using external source to boost



Temperature

An overview of our product range

Additel | Temperature Calibration Equipment

ADT878 - Reference Dry Well Calibrator

- Three models to choose from, ranging from -40 to 700°C
- Reference level performance in accuracy, stability and uniformity
- Quick to temperature
- Two-channel readout measures RTDs and TCs, and provides task documentation
- Full HART communicator (Process Calibrator option) adds an external reference input, a two-channel readout for UUT's



ADT875 - Standard Dry Well Calibrator

- Three models to choose from, ranging from -40 to 660°C and a unique 'choose your own range' option
- Portable, rugged, and quick to temperature
- Metrology-level performance in stability, uniformity, accuracy and loading effect
- Dual-zone control
- Full HART field communicator



Automation Features

Most models are Bluetooth or Wi-Fi Capable and can be remotely controlled with Additel Link phone app.

Traditionally, dry wells were used predominantly as a stable heat source; with the addition of automation features the Reference Dry Wells can now be used as a highly stable heat source, a triple point of water maintenance apparatus, and annealing furnace.

When combined with ADT878-TPW-KIT, the ADT878-160 Reference Dry Well can be used to automatically realize and maintain a triple point of water cell.

ADT87X-1210- Thermocouple Calibration Furnaces

- Temperature control from 100°C to 1210°C
- Two models to choose from: Reference (ADT878) and Standard (ADT875)
- Display Accuracy of $\pm 1.5^\circ\text{C}$ (ADT878)
- 4 on-board measurement channels (PC option)
- Patented multi-zone temperature control which provides highly stable and uniform heat source



ADT850-1200 Thermocouple furnace

The new ADT850 laboratory thermocouple calibration furnace is packed with features and a performance you will not find anywhere else. The ADT850 horizontal furnace covers a range of 300 to 1200°C and is commonly used in a multitude of industries such as energy, calibration laboratories, aerospace and metallurgy to name a few. It is generally used by calibration laboratories to calibrate noble and base metal thermocouples with the lowest possible uncertainties. Additel's ADT850 is the most accurate, stable and versatile furnace available!

- Stability of $\pm 0.1^\circ\text{C}$
- Radial/Axial uniformity of $\pm 0.25^\circ\text{C}$ @ 1200°C
- Multi-zone temperature control



Temperature probes

With decades of experience in metrology, and full control of the design and manufacturing process, Accumac Technology has developed a line of high-accuracy temperature probes and sensors, including Standard Platinum Resistance Thermometers (SPRTs), Secondary PRTs and Precision Industrial PRTs, and Resistance Temperature Detectors (RTDs). All of these sensors are fully compatible with Additel temperature products and software.

- Available in various styles perfectly designed to work with Additel calibration equipment
- Each probe includes a ISO17025 calibration cert



Recorders, Loggers & Software

An overview of our product range

Additel | Readouts and monitoring

ADT260EX Reference Recorder

- Handheld design, up to 8 measurement channels (2 x temperature)
- Pressure to 0.02% FS, Temp 0.01% RD
- Intrinsically safe with built-in barometer
- Field switchable pressure module
- Data logging with Real-time Graphical Trending with colour touchscreen



ADT282 Reference thermometer

- Reference level accuracies
- Dual measurement channels
- RTD and TC Inputs
- Smart style probe connections
- Large smartphone like touchscreen
- Differential measurement technology



ADT286 - Multifunction Reference Thermometer Readout

Combines the capabilities of a high-end reference thermometer with a highly capable data acquisition system and 8.5 digit multimeter. The ADT286 is capable of scanning and recording up to 82 channels at 10 channels per second. Users can easily configure the ADT286 to perform field calibrations and uniformity studies as well as use the unit in the lab as a precision thermometer and 8.5 digit multimeter. Run automated calibrations With the ADT286 and any heat source.

The Additel 286 Multifunction Reference Thermometer Readout has preinstalled drivers to control Additel and other manufacturer's heat sources. Simply connect to one or more heat sources via a communication cable, Ethernet or wireless and now it will automatically control to the set point and desired stability.



Additel | Software

aCAL Calibration Software

Additel ACal is a powerful software package designed to automate or semi-automate calibrations and manage your laboratory. ACAl combines the pressure and temperature automation features with lab and asset management functions to help make your job easier and more productive. ACAl comes in three versions to suit any budget

- Supports multi-users and network environments
- Calibration and asset management
- Simple user interface
- Can calibrate several instruments at a time
- Calibration planning and scheduling



Additel Link

Additel Link is a control utility designed to allow you to remote control and view the state of your Additel products.

- Free app available on iOS and Android
- Connect to various Additel products remotely via Bluetooth or Wi-Fi to view live readings
- Particularly useful for use with temperature calibrations, The added productivity will help free up your time, and allow you to get more work done.
- Help you monitor calibrators when you're away.



Multifunction Process Calibrators

And some of our popular Additel pressure calibration accessories

Additel | Multifunction Process Calibrators

ADT226 (EX) / ADT227 (EX) Process Calibrators

- Sourcing, simulating and measuring pressure, temperature and electrical signals
- Built-in Barometer
- IP67, with IECEx Intrinsically safe models available
- Large Smartphone like touchscreen user experience
- USB Type-C and Bluetooth communications
- High Voltage Measurement Capability (± 300 VAC)
- True RMS Voltage Meter Capability
- Dual channel pressure module ports

In addition to above, the **ADT227** adds Task management and documenting, higher accuracy measurement, and full HART communication for setting up, commissioning or adjusting pressure and temperature transmitters.



ADT209/210 - Loop Calibrators

The Additel 209 and 210 loop calibrator series combine ease of use and functionality, making them the ideal tools to troubleshoot your process loop. The ADT209 has an accuracy of 0.03% of reading whereas the ADT210 holds an accuracy of 0.01% of reading. If you want to source, simulate or simply measure, the Additel Loop calibrator series will fit your need. The ADT209 and ADT210 allow for measurement of current, voltage and a switch. You can also simulate or source mA or a process transmitter. With a push of a button, you can switch to zero and span values, auto ramp, and auto step throughout the range. Each loop calibrator has a large, easy to read screen which simultaneously displays the measurement with the % of span.

- Accuracy to 0.01% of reading
- Measure, source, or simulate loop current and measure DC volts
- Simultaneously mA and % span display
- Switch functionality
- Selectable ramp and step functions



Additel | Accessories

Adaptor sets and fittings

Various fitting kits available to suit many applications and uses.

- ADT102 a wide selection of male/male & male/female adaptors
- ADT103 Various adaptors to various quick test connectors
- ADT104 Various high pressure connectors
- Come packaged in a rugged hard carry case with a removable insert, to mount in a draw or cabinet if required.
- Individual fittings can also be purchased
- One of our customer's favourite features is the hand-tightened quick connect fittings. Easy and leak free sealing with no tools required!



Pressure Manifolds

Pressure manifolds for adding test ports to your calibration solution with hand tight quick connectors

- Additel 121 used for pneumatic pressure calibration up to 25,000 kPa (3,600 psi)
- Additel 123 used for hydraulic pressure applications up to 100,000 kPa (15,000 psi)



Other Accessories - Various accessories available

- Hose test kits to suit many applications, ratings and fittings.
- Several filter options which can be used to filter between pressure sources and connected UUT's
- Specially designed hard carry cases with custom cut foam inserts, for safe transport of your equipment



Electrical Test & Measurement



We stock a wide range of Metrel products. Metrel have established themselves as a market leader in measuring and testing equipment through years of experience and have appointed Zedflo as an authorized distributor, repair and calibration center. We can tailor a testing package for your requirements.



Installation & EVSE Testers

- Testers suitable for checking electrical installations
- We stock common models in the Australian market such as MI 3155XD, MI 3152XC, and MI 3125



Appliances & Switchgear Testers

- Portable appliance testers, standalone or in a full print kit
- Adaptor options for 3 phase testing
- Switchgear and electrical testers



Earth, Step Touch & Transformer Testers

- Portable, battery or mains powered
- Perform all types of earth measurements
- We offer various models depending on your requirements, these typically come in sets to suit your application



Insulation, PQA, MicroOhm testers

- Various models available range dependent, up to 15 kV
- Battery powered with Class A accuracy
- Robust units with CAT IV protection
- Suited for industrial environments



Solar PV Testers

- Testers for up to 1500V systems
- 20A & 40A options with I/V curve
- Insulation test to 1500v
- Isc & Voc tests



Other instruments

- Digital Multimeters
- Clamp meters and voltage probes
- Equipment for laboratories and schools

Installation and EVSE testers

An overview of our product range

Metrel | Installation Testers

MI3125 Installation Tester

A multifunction installation tester, replacing a multimeter, insulation tester, RCD tester, loop impedance tester and phase sequence tester in a single portable instrument. This is a last generation tester but provides incredible value for money while providing 9 tests, pass/fail indication for installation verification and compliance testing, and tests sockets in seconds without a trailing lead.



MI3152 Installation Tester

New generation of Metrel's multifunctional measuring instruments providing the already well known functions like complete installation safety testing according to AS/NZS-3017. Pre-Programmed AUTO SEQUENCE testing of TN, TT and IT earthing systems, but now with a new interface based on large colour touch screen.



MI3155 Installation Tester

The flagship of Metrel's most advanced line of multi-functional measuring instruments, it offers some additional functions over other models in the range, including:

- User defined Auto Sequences allow users to combine multiple tests into a single key press. (MI 3152 has pre programmed Auto Sequences which cannot be user defined)
- User defined Inspections allows users to generate their own visual and functional inspections and check lists stored with the results, replacing paper-based checklists
- Various measurement improvements and functions including a pro plus software license



Metrel | - EV vehicle testers

MI3132 EVSE Tester

A portable, battery-powered test instrument with excellent IP protection designed especially for electric vehicle testing. Supports the latest standard UN ECE R100 Annex 4A, 4B, intended to measure insulation resistance for electric vehicles.

Common applications include:

- Electric vehicle high voltage cables insulation and resistance test
- Battery insulation check
- EV chassis and components bonding test
- EV safety tests
- Mode 3 charging cables insulation and resistance test
- Electric vehicle after crash safety check
- Electrical troubleshooting
- For electric vehicle services, workshops and production facilities
- Test at Periodic Technical Inspections



Metrel | EVSE Adaptors & Accessories

We have various adapters and accessories for EVSE testing applications.

A1632 is designed to thoroughly test the charging station on both the installation and the output sides. It can test Mode 2 and Mode 3 cables and monitor communication between station and car.

A1832 - Mode 3 Charging cable adapter is used for electrical safety testing of Mode 3 EV charging cables with Type 2 connectors together with supported METREL or third-party testers.

A1532 XA is the entry level accessory for testing charging stations. It simulates a car to test the function of Control Pilot and Proximity Pilot performing electrical tests on its output socket. It is intended for testing Mode 3 EV supply equipment with a type 2 connector



Appliances & Switchgear Testers

An overview of our product range

Metrel | Appliance Testers & Medical Testers

MI3309 DeltaPAT Portable appliance testing kit

Metrel's best selling complete appliance testing package, the Delta aPAT Pro Print Pack is an advanced Portable Appliance Testing solution, with incredible features that'll transform how you test and tag.

It includes the highly comprehensive DeltaPAT 3309 BT tester, a Zebra ZQ521 printer for printing high quality test tags with custom logos and advanced aPAT android interface for effortless data entry. All of this will come contained in a custom built heavy duty case, making it easy to transport with you.

Easily create pdf reports straight out of the app or import into PC software for analysis.



MI3365 OmegaEE Portable Appliance Tester

The MI3365 delivers four instrument variants for professional use in the most challenging of environments and scenarios, this can cater to a wide variety of testing fields, such as medical appliances or portable appliances

Specifically designed for long-term testing, with the memory structure allowing for a simple search through the archive of devices, and a quick re-execution of tests.

We also have a range of adapters available for 3 phase testing.



Metrel | Multifunction Electrical Testers

MI3325 Multifunction Switchboard & Electrical Tester

- Ideal system for a range of testing including switchboard and PAT testing
- High resolution colour touch screen, 4.3" TFT.
- Pre-defined AUTOSEQUENCE®s: enable the user simple and quick execution of test sequence for the chosen device in accordance to AS61439
- Hi-pot: high voltage AC (5.1 kV @ 250 VA)
- Advanced memory organizer including large SD card storage media
- PC SW Metrel ES Manager: enables creation of test structures, user-defined AUTOSEQUENCE®s, professional test reports and data transfer for archiving.



MI3394 MultiTesterXA - Machine and switchboard tester

The MI 3394 CE MultiTesterXA is a portable instrument intended for electrical safety testing and CE certification of electrical appliances, machines and switchboards during the production. The instrument features in strong data management facility enabling the user to create custom auto-tests with predefined limits for pass/fail evaluation, to import predefined structure including test sequences or complete projects from PC software, plus strong memory organizer. The PC software MES-Manager enables the upload of automated test sequences, projects, downloading of test results to the PC. Key features include:

- Multiple test terminals: different test terminals enabling the user to choose from performing single tests or autosequences from single test socket.
- Colour display: 3.4" colour LCD display with touch screen.
- Hi-pot: high voltage AC (5.1kV at 500VA) and DC (6kV) test.
- Continuity: 4 – wire continuity test with selectable test current (0.2 A, 4 A, 10A, 25A) enabling precise measurements.



Earth, Step Touch & Transformers

An overview of our product range

Metrel | Earth Testers

MI3290 Earth Analyser

- Possibility of performing all types of earth measurements with a single instrument
- Analysis of earth impedance as a function of the frequency due to a wide measurement frequency band (55 Hz ... 15 kHz)
- A wide variety of measuring clamps: from iron clamps to flex clamps 10m long
- PC software for measurement pre and post processing and reporting
- Available in various sets of different accessories and measurement functions



MI3288 Earth & Insulation Tester

MI 3288 Earth Insulation Tester is a portable, battery powered test instrument with excellent IP protection. It can measure earth resistance, specific earth resistance, earth potential, step and touch voltages, insulation resistance and continuity of protection conductors of various objects. The MI 3288 Earth Insulation Tester also supports 4-wire earth resistance measuring method in combination with one clamp, two clamps earth resistance measurement, 4-wire specific earth resistance measurement and TRMS current measurement.



MI3295 Step contact voltage measuring

Step Contact Voltage Measuring System is a voltage measuring system intended for testing and verification of protective earthing of power stations, substation and other power systems. The system consists of Station for current generation and autonomous voltage Meter.

- High accuracy of the measurements (10 μ V resolution) due to a high current of up to 55A
- Autonomous Step Voltage meter, save results for later analysis and reporting with PC software
- Weight of the Station is only 29.5 kg



Metrel | Transformer Testers

MI3280 Windings & ratio analyser

- A portable battery (Li-ion) Digital Transformer Analyser intended for diagnosing of turn ratio, phase deviation, excitation current and winding resistance of single and three phase transformers
- Turn ratio measurement single and three phase transformers, phase deviation, winding resistance measurement
- User friendly menu driven operation with built in help reference screens
- Hard case with excellent IP protection, allowing use of the instrument in harsh environments



MI3281 Winding Resistance Analyser

The MI 3281 Winding Resistance Analyser (WR Analyser) is a portable test instrument intended for diagnosing of winding resistance of single and three phase transformers with manual or automatic tap changer test and demagnetization of tested transformer. Selectable test current in range from 10mA to 20A. The operation is straightforward and clear to enable the user to operate the instrument without the need for special training. For advanced users the AUTO SEQUENCES and visual tests are available.

APPLICATIONS: • Three phase and single phase power transformers • Voltage transformers • Current transformers.



Insulation, PQA, MicroOhm testers

An overview of our product range

Metrel | Microohm Meters

MI3250 MicroOhm 10A



- Bidirectional resistance measurement from $0,1\mu\Omega$ - 2000Ω with current to 10A
- On screen resistance bar graph.
- Battery powered, more than 1,000 measurements with 10 A test current can be performed from 1 charge and it has a portable, lightweight ~3 kg design

MI3252 MicroOhm 100A



- Resistance measurement with adjustable test current (100 mA ... 100 A)
- Voltage drop measurement
- Accurate: $1\text{ n}\Omega$ best resolution with 0.25% of reading accuracy
- Portable: rugged carrying case

Metrel | Power Quality Analysis Meters & Loggers

5 models to suit any requirement & budget



MI 2893



The Metrel power quality analysis range allows automatic voltage and power quality analysis, they can be used as a troubleshooting and maintenance tool to discover voltage sags and swells, resonant states, high neutral conductor currents, asymmetry harmonics and transients.

The **MI 2883 Energy Master** is the most basic and economically priced version Single & 3 phase power quality analyser, it offers basic operation with 3 voltage measuring inputs. Next in the range is the **MI 2884 Energy Master** which while still being economically priced it adds waveforms and transients recording. Next in the line is the **MI 2885 Master Q4** which adds the extra functionality of 4 voltage inputs, waveform recording,

inrush currents and variable frequency drives, as well as extra comms ports and GPS synchronisation. The **MI 2892 Power Master** is a class A 0.1% option and introduces transients measurement at $>49,000$ samples/sec and includes temperature measurement as standard.

Then finally the new top of the range **MI 2893 Power Master XT** improves the sampling rate to $>1,000,000$ samples/sec. These units can be used for long-term logging to uncover hard-to-find or intermittent issues at a site and can later be analysed with included PC software.



Metrel | Insulation testers

MI3205 - 5kV Range



- Insulation resistance up to $15\text{ T}\Omega$
- Adjustable test voltage (50 V...5 kV) 50V and 100 V step
- High voltage breakdown detection
- PC software for analysing results
- Custom defined tests

MI3210 - 10kV Range



- Insulation resistance up to $20\text{ T}\Omega$
- Adjustable test voltage (50 V...10 kV) 50 V and 100 V step
- Mains and rechargeable battery power supply
- PC software for the stored results can be downloaded to PC where they can be reviewed, analysed and reported

MI3211 - 10 kV Range



- For diagnosing of Insulation Resistance by using high DC test voltages of up to 10 kV.
- Insulation res. measurements up to $20\text{ T}\Omega$
- Robust (CAT IV) with high immunity to radiated EM fields it is best suited for demanding industrial environment.
- PC software for analysing results

MI3215 - 15kV Range



- For diagnosing of Insulation Resistance by using high DC test voltages of up to 15 kV.
- Insulation res. measurements up to $35\text{ T}\Omega$
- Robust (CAT IV) with high immunity to radiated EM fields it is best suited for demanding industrial environment.
- PC software for analysing results

Solar PV & Testing Tools

An overview of our product range

Metrel | Solar Testers

MI3108 / MI3109

The **MI3108** is a combined PV and installation tester. The unit can perform all standard measurements on DC and AC sides of the PV system as well as electrical installation testing. Included PC software allows downloading, uploading, review, analyses and printing of test results.

The **MI3109 EurotestPV lite** tester is specifically optimized for PV installation testing. You can perform a complete set of tests needed by pressing only one button.

These testers suit up to 1000 V installations, the MI 3108 being a complete test and measurement solution with support for line and loop impedance testing, type A, AC, B RCD testing, power and energy measurements; while the MI3109 is a more streamlined testing tool for simplified assessment of PV installations.



MI3115 - 1500V (20 A) solar PV tester

Test 1,500 V photovoltaic systems in style. The MI 3115 PV Analyser offers testing in accordance with the IEC 62446 standard and supports all category 1 and category 2 tests and measurements. Like insulation resistance measurements of PV strings, I/U characteristic measurements, and the conversion of measured values to STC values and comparison with nominal values given by the PV modules manufacturers. The irradiation and cell temperature are measured in real time with the wireless remote unit.



COMING SOON

New models MI3114 & MI3116 (40A)

Metrel | Electrical Essentials - Clamp Meters, Non Contact Voltage Detectors



While most electricians prefer multimeters as their go-to troubleshooting tool for quick current and voltage measurements, some individuals, particularly those who work with high current electrical equipment and installations, don't go to work without a clamp meter in their pocket. The benefits of the latter are obvious, the chief ones being the ability to measure current without breaking the circuit.

Metrel has several clamp meters in its product portfolio, differing mainly in the jaw size and highest current they can measure and advanced functionalities some of them have. These include the ability to measure both AC and DC current (with additional test probes), temperature (with additional temperature probe) and 3-phase power and energy.

Electrician essentials:

MD106, MD116 and MD126 Non-contact voltage detectors:

- Quick checking for live voltage on wires, sockets, switches and energized circuits
- Pocket sized with a tough case boasting an IP65 rating.
- Phase rotation (on MD126 model)

The **MD1160** two-pole voltage detector supports:

- Voltage measurement
- Continuity measurement
- Single pole test
- Phase rotating field test
- LED Torch function for dark areas.



Metrel | Multi Meters

MD9055 Industrial DMM



Versatility in a small package. It's been made a staple in both industrial and laboratory environments by its 60,000 counts display supporting a wide array of measurements, including auto-hold of the measurement for working in confined spaces. It's a popular choice in electronic repairs, field services and HVAC industries

MD9070 DMM with Insulation Test



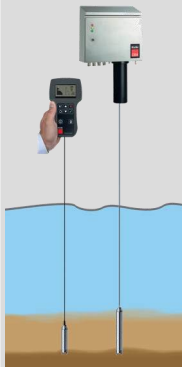
- Measurement functions includes: AC/DC voltage and current, acoustic continuity, resistance, capacitance, diode test, temperature measurement, Insulation resistance, earth bond/continuity
- TRMS measurement
- 1kV Insulation resistance measurement

Water & Wastewater Treatment



Zedflo have partnered with some of the biggest and best names in the water treatment industry, including Cerlic who is a Swedish company founded in 1977. "Our objective at Cerlic is to contribute globally to minimize pollution to lakes, rivers and seas by developing, manufacturing and implementing measuring and control instrumentation that makes industrial and municipal processes more efficient"

CBX Automatic Sludge Blanket Monitor



- Uses reliable suspended solids technology
- Early warning of settling problems in the clarifier
- Measures both 'blanket' and 'fluff' levels for better control of clarifier
- Prevention of sludge wash out, alleviates effluent TSS problems
- Blanket can be more accurately controlled which gives more consistent RAS concentrations
- Higher and more consistent RAS/WAS concentrations helps dewatering operate more effectively
- Real time measurement, 24 hours per day, 365 days a year

Multi-Tracker Portable Monitor



- Quick and reliable measurement of sludge blanket/profile, suspended solids and dissolved oxygen
- Built in log up to 250 measurements
- Large graphical display and PC sync

CMC Microwave Suspended Solids



- Low installation and ongoing lifecycle cost
- Single point calibration for all solids
- Not effected by process and media changes
- Reliable and accurate with wide TS concentration range, up to 30% TS

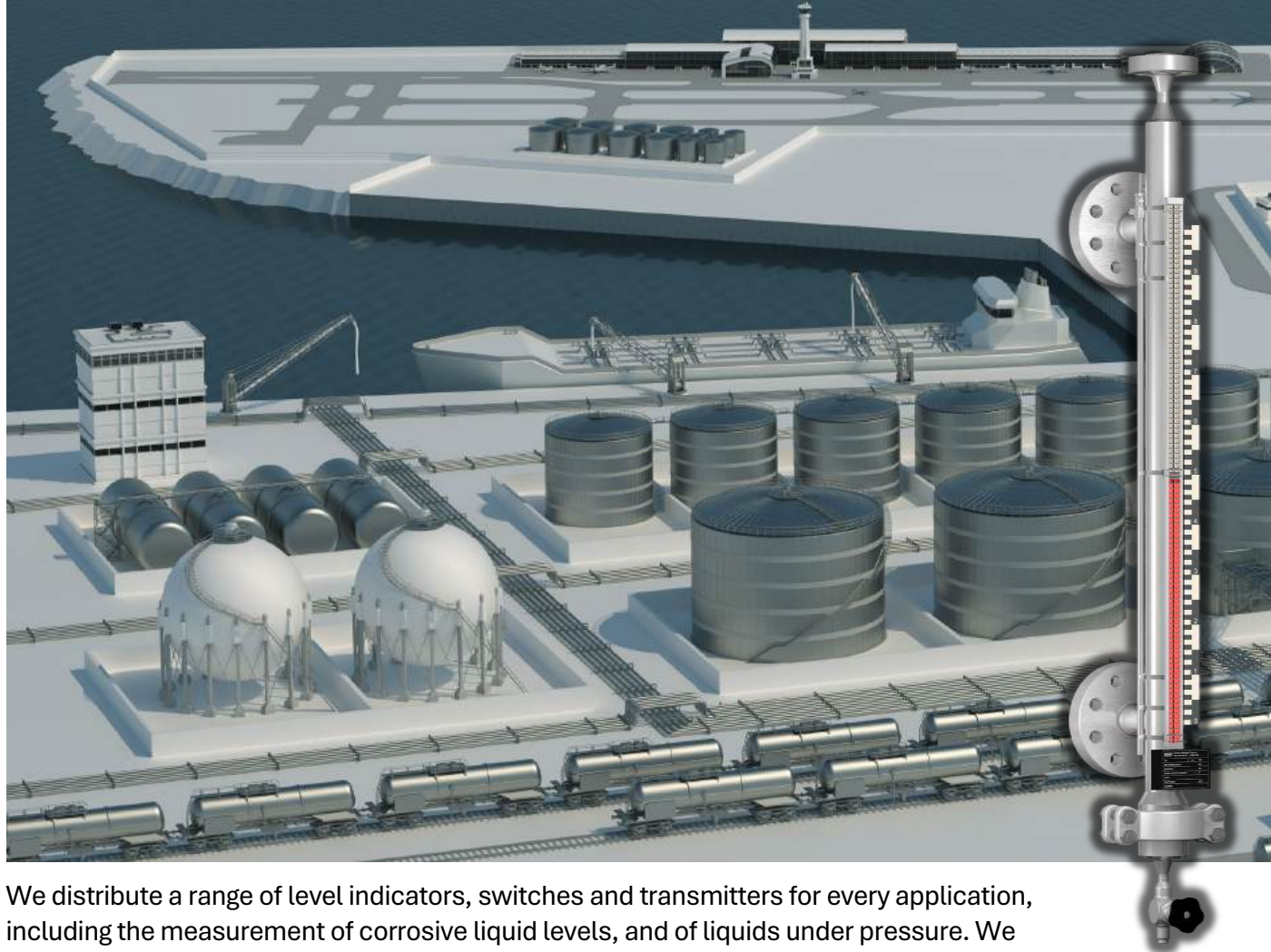
Other instruments



- Cerlic O2X DUO dissolved oxygen sensor
- Cerlic pHx (pH) & ReX (ORP or redox) sensors
- Centralised Transmitters / Sensor Controllers
- Suspended / Total Solids Sensors



Level Indicators & Switches



We distribute a range of level indicators, switches and transmitters for every application, including the measurement of corrosive liquid levels, and of liquids under pressure. We have a world class selection of instruments to offer from the most trusted manufacturers.



Magnetic Level Indicators

- Versatile, high visibility, made under license in Australia to customer specs
- Selection of wetted materials to suit the application with chambers up to 6m
- Side or top mount with switch outputs
- Flanged, screwed or custom fittings



Float Level Switches

- 316 Wetted parts standard
- ANSI flange optional
- Plastic options available for corrosive applications
- Hazardous area versions available



Ultrasonic Level transmitters

- For continuous non-contact level measurement of liquids (even if polluted)
- Easy configuration and adjustment of min and max measuring range by two buttons
- Current or voltage outputs
- Threaded or flanged versions available



Capacitive Level Transmitters

- Miniature capacitive level sensor for sensing various types liquids
- Direct mounting into various containers, vessels, tanks, etc.
- High temperature performance



Hydrostatic level transmitters

- For continuous level measurement of clean, lightly soiled, or sludge water in non-pressure reservoirs, boreholes, tanks etc.
- Precise customer choice of the measurement range up to 100m
- Current or voltage outputs



Other instruments

- Radar level sensors
- Capacitive point level switches
- Conductivity point level sensors
- Options for Hazardous areas

Flow Meters

Ultrasonic and Inline



We offer a range of economical to advanced clamp on flow meter options to suit your budget and measurement requirements. There are wall mount and portable models with various options such as data logging, high-temp transducers, 4-20mA outputs to integrate with BMS systems and more.

Product in focus - pFlow P117



The P117 portable ultrasonic flowmeter features state of the art advanced non-invasive technology which enables the user to check flow rates at many points in a flow process without the need for a permanent installation. It is clamped to the outside of the pipe without the need to cut into or stop the process.

This flow meter's compact size, light weight ergonomic handheld design and intuitive interface significantly simplifies setup. The unique clamp-on fixture design makes the installation very simple, requiring no special skills or tools. It includes onboard data logging which could be used for applications like leak detection over time, to find intermittent faults in a flow process, or flow measurement surveys. This flow meter offers high precision, reliability, and capability at an economical price point.

FEATURES:

- Inbuilt rechargeable battery (up to 10 hours run time)
- 3.5" TFT backlit digital display
- Data logging - Large capacity memory and data download function.
- Due to the non-invasive nature of clamp-on transducers, there is no pressure drops, no moving parts, no leaks, and no risk of contamination.
- Lightweight and easily transportable in rugged carry case
- For measurement of clean liquids (not clear, so even oils can be measured)



Ultrasonic flow meters

Popular models at a glance

pFlow | Ultrasonic Clamp On Flow Meters

pFlow P117



- Compact, hand held design
- Battery operated up to 10hr run time
- Simple configuration and data logging
- Works with most clean liquids, with flow velocities up to 6 m/s
- Works on pipe sizes from 25-1200mm

pFlow P118



- Compact, hand held advanced model
- Battery operated up to 10hr run time
- Simple configuration and data logging
- Works with most clean liquids, with flow velocities up to 12 m/s
- Works on pipe sizes from 15-6000mm

F3 Mini direct mount smart flow meter



Another new product from the pFlow range of ultrasonic flow meters is the F3 mini. This flow meter is a highly compact all in one direct one mount flow meter.

These are to suit small pipes and ordered to specific pipe sizes ranging from DN20 to DN80. It's smart meter capability includes cloud data storage and analysis.

pFlow D118



- Fixed wall mount design
- More advanced and more functions and capability over D116
- Works on pipe sizes from 25 to 5000mm
- Non intrusive, clamps outside of pipe

TOKYO KEIKI | Ultrasonic Clamp On Flow Meters

Tokyo Keiki UFW-100



- Wall mountable for permanent installs, water proof and made in Japan
- Simple menu driven configuration
- Variety of outputs
- High accuracy as low as 1%
- Pipes 25mm to 600mm

Tokyo Keiki UFP-20



- A Portable water proof unit which is made in Japan with renowned reliability
- Simple menu driven menus
- Variety of outputs
- High accuracy and repeatability
- Wide range, for 13 to 5000mm pipes

SIEMENS | Ultrasonic Clamp On & Inline Magflo Flow Meters

Siemens FS230



- Wall mount enclosure, 1- or 2-path
- IP66/67, NEMA 4X rating
- IECEx option
- Market-leading accuracy and repeatability, accuracy of 0.5 to 1%
- Pipe sizes from 12.7 mm to a massive 10m

Siemens FS220



- Provides the most essential flow measurement functionalities, an economical option over the FS230 with ease of use.
- 1% accuracy for velocities ≥ 0.3 m/s
- IP65 (NEMA 4X) Single channel meter

Siemens SITRANS MAGFLO



Inline options suitable for all water applications such as ground water, drinking water, cooling water, waste water, sewage or sludge, used in conjunction with a transmitter which is engineered for high performance, easy installation, commissioning and maintenance. The transmitters are truly robust, cost-effective and suitable for all-round applications.

- Electromagnetic technology
- High-precision volume measurement
- Accuracy up to 0.2%
- Drinking water approvals
- Welded or flanged mounting options
- Direct or remote mount transmitter options

Flow sensors

Indicators & Switches



Our range of flow sensors, indicators & switches come from the worlds top manufacturers Gems, McDonnell & Miller, AW-LAKE and Dinel. They are suitable for use in a wide variety of applications, including water treatment systems, pumps systems, cooling systems and many more.

Variable area flow meters



- Ideal for monitoring pump performance and oil or water flows
- Low cost alternative to other flow meters
- Aluminium, brass or stainless steel bodies
- Maintenance-free performance

Straight-Through Flow Switches



- Accurate flow detection, with up to 1% repeatability over a broad range of flowrates
- Durable construction for long-life reliability
- Generous flow paths for low pressure drop
- An ordinary, flat-blade screwdriver is all that's required for the actuation adjustment

Open Channel Ultrasonic Flow Meter



- Measures flow rate in an open channel
- Combines an ultrasonic flow rate meter with a microwave level gauge
- Accurate & stable flow rate
- Suitable for use on agricultural water, river water, process water & industrial effluents

Paddle and Diaphragm Flow Switches



- Switches to sense liquid flow in either direction to monitor flow/no-flow conditions
- Trim down paddles so users can cut to size
- As flow increases in a pipe, the paddle of the switch pivots to move out of the liquid path
- Minimal pressure drop

Visual Flow indicators



- Paddlewheel design with high visibility rotors
- Simple, direct and reliable
- Accurate flow rate output
- Various port size options available
- Body can be Brass, SS, or Polypropylene

Thermal Dispersion Flow Switches



- For limit and continuous flow rate sensing of liquid media and monitoring of temperature
- For installation inside of pipes
- Flow rate measurement is shown by LED's
- Outputs available such as 4-20mA

Pressure Temperature, and Switches



Zedflo specializes in supplying high quality pressure gauges to the Australian oil, gas, mining and chemical industries. We stock pressure gauges and process calibration equipment from leading international manufacturers, such as Perma-cal and Neo-Dyn, all of which are designed to offer high performance and operational reliability.

Industrial Pressure Gauges



- Helical bourdon tube for severe service use
- Process & Test Gauges (various accuracies)
- Diaphragm Seal Option
- Differential Pressure gauge options
- Perma-cal gauges are made in the USA

General use Pressure Gauges



- Large selection of stock available
- Most with SS wetted parts & case
- Available in many common fittings
- Lots of pressure range options to suit your application

Pressure Switches



- Ideal for high vibration and processes with pulsations or spikes
- Variety of wetted materials
- Differential Pressure switches
- ANSI Flanged and sanitary connections

Temperature gauges



- Direct mount and capillary
- Bi-metallic or filled thermal systems
- Bottom, back or any angle entry
- Available with various dial sizes and fittings

Temperature switches



- Direct mount and capillary
- Ideal for high vibration applications
- Direct mount and capillary
- Weather proof or explosion proof
- All 316 stainless steel construction available



Process Solenoid Valves & Air Control



We stock a range of process control equipment from stainless steel solenoid valves, compressed air condensate drains, filter regulators and more. We can organize quick and efficient delivery anywhere in Australia. Designed for high performance and long operating life, our industrial range is suitable for use in extreme working conditions.



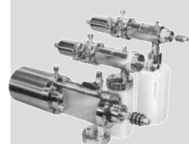
Solenoid Valves

- 2, 3 & 5 port
- NAMUR
- Stainless steel or brass
- Hazardous area approvals
- High pressure applications



Compressed Air

- Electronic condensate drains
- Provides no loss of compressed air when draining
- Air/Oil separators
- Filters



Process samplers

- Liquid & Slurry Samplers designed for use across a variety of industries such as process sampling, petrochemicals, mining, waste and effluent, pharmaceuticals and food.
- Powder samplers suitable for almost any powder or granule stream
- Various sizes are available and custom designs are possible

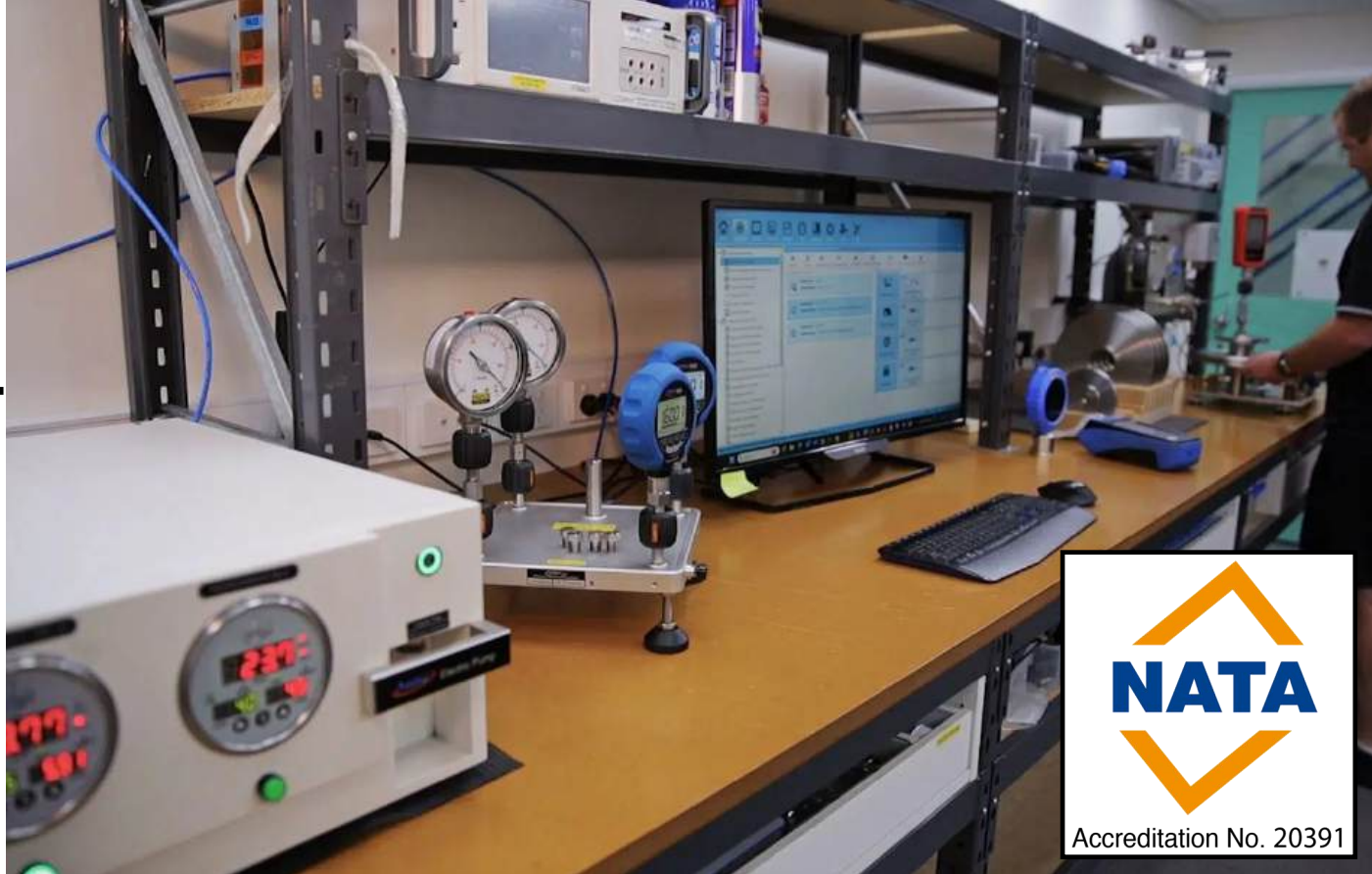


316 Stainless Steel Filter Regulators

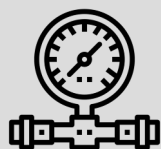
- FRL (Filter, Regulator, Lubricator) in 316 or 316L stainless steel
- Inlet pressure to 4500 kPa
- Sizes up to 1 inch
- Manual or auto drains available



Calibration & Repair Services

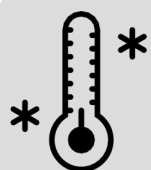


We proudly offer calibration services with uncertainty of measurement capabilities among the best in Australia. We have invested in high-performance equipment across our laboratory, and are well prepared to meet most calibration needs. Our NATA accreditation is an independent testament to our attention to detail, commitment to working to international standards in quality and technical management and metrological traceability.



Pressure (NATA accredited)

- Analogue pressure gauges
- Digital pressure gauges
- Pressure transmitters
- Pressure transducers
- Pressure calibrators
- Pressure switch setting
- Pressure recorders
- Pressure modules



Temperature (traceable only)

- Temperature calibrators
- RTD's
- Temperature gauges/Thermometers
- Thermocouples to 1200c
- Temperature probes, drywell's & more



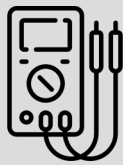
Flow (limited - traceable only)

- Clamp on ultrasonic flow meters

Our in house calibration flow rig has 33mm, 60mm, and 89mm OD pipes within its loop that we can make flow measurements on, if your flow meter can operate on these pipe sizes we should be able to calibrate it.

Accreditation & Approvals

- NATA Accredited Laboratory operating in accordance with ISO/IEC 17025
- Approved Metrel Service and Calibration Centre
- Certified Additel Service and Calibration Centre



Electrical (NATA accredited)

- Portable appliance testers
- Clamp & Multi meters
- Power quality meters
- Installation testers
- RCD testers
- Insulation testers
- Loop impedance
- Earth testers
- Process calibrators
- Loop calibrators



Repairs

We are an authorised repair and calibration centre for Metrel and Additel.

We can perform in house repairs down to PCB component level and stock an extensive range of spare components for many products.

Additionally many other products that we offer we can perform servicing and repairs if required. For example our range of pressure pumps contain seals which can wear over time, we can perform servicing as required which includes stripping them down, cleaning, greasing, and fitting seal kit.



Excellence in Calibration
40+ years - Est. 1982



Process Control Instrumentation Pty Ltd T/A **Zedflo Australia**

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