

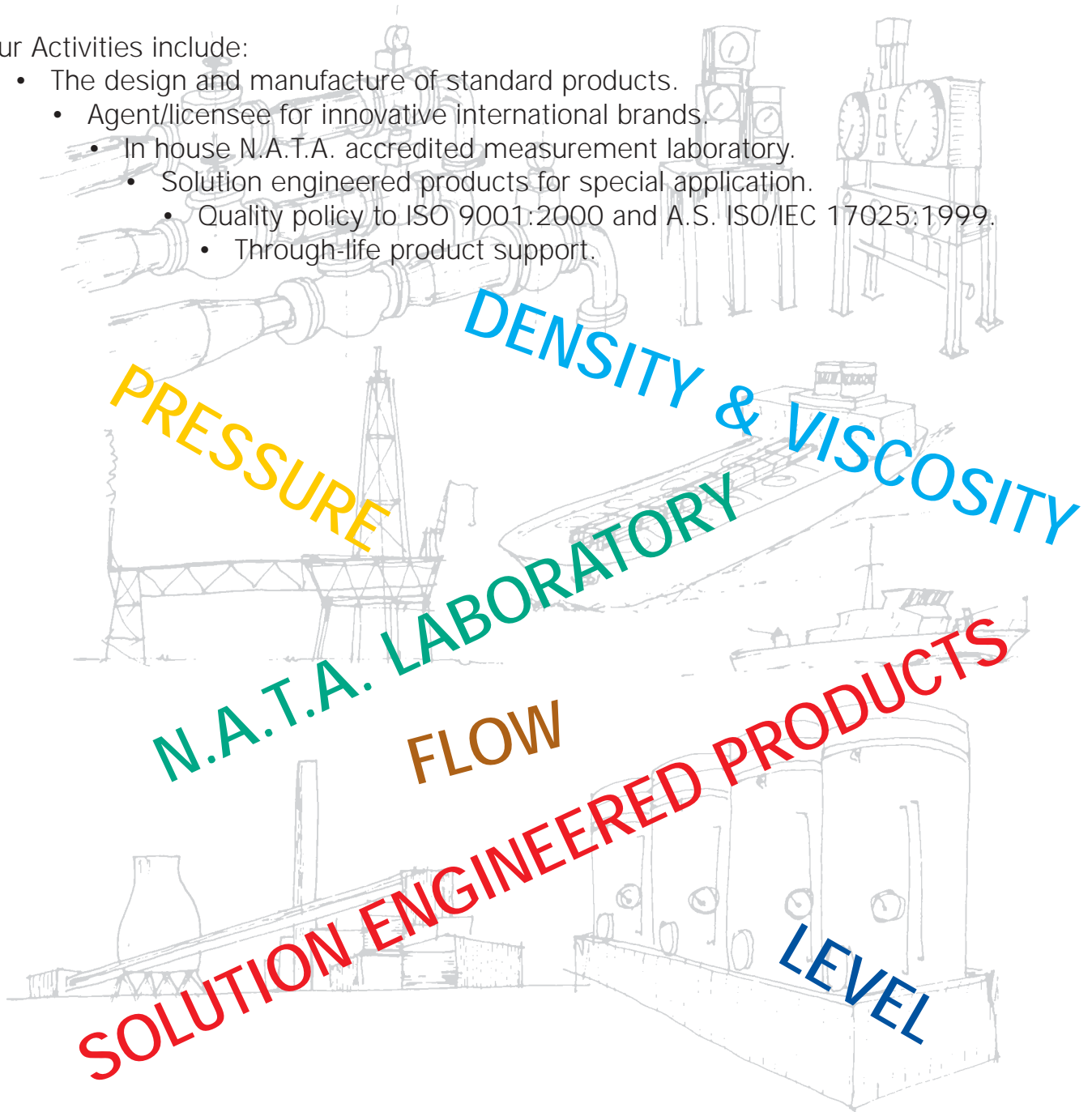


Product and Service Guide:

A specialist Australian manufacturing, distribution and service company.

Our Activities include:

- The design and manufacture of standard products.
- Agent/licensee for innovative international brands.
- In house N.A.T.A. accredited measurement laboratory.
- Solution engineered products for special application.
- Quality policy to ISO 9001:2000 and A.S. ISO/IEC 17025:1999.
- Through-life product support.



We are committed to the development, manufacture and distribution of innovative measurement and control solutions for the process and marine industries. Our market is Australasia and Asia. We regard quality of customer service and products as prime objectives.

Website: www.measurement-resources.com.au

THE MAIN INDUSTRIES WE SERVE



MARINE

A significant marine contractor, we design, manufacture and test to both military and commercial standards. Our products range from simple sensors to intelligent systems. Our support extends throughout South East Asia.



WATER DISTRIBUTION AND TREATMENT

We supply engineering solutions designed to suit site conditions, an example the giant 3 gigalitre per day flowmeter used to meter and dose 80% of Sydney's drinking water. Full on site support.



OIL AND GAS

Our on-line density and viscosity transmitters are used in the production and distribution of hydrocarbon products. Flow computers are used for oil and gas custody. Level measurement and contents gauging for process and storage vessels.



BUILDING SERVICES

Fuel and water tank contents gauging. Air and chilled water flow metering. Sensors. Integrated into a software control and reporting package. We supply products with high local content fully supported.



MINING AND MINERALS

A wide range of level, flow and density transmitters is supplied to mine and processing plants. Special duty specific approvals have been gained for some mining hazardous areas.



LEVEL MEASUREMENT

Continuous level and contents measurement of liquid and solid products. From self powered gauges with local read-out through, hydrostatic, float, ultrasonic and radar transmitters. Tank farm management and control via Internet and wireless remote monitoring.



SELF POWERED CONTENTS GAUGE

Wide use on industrial, vehicular and marine duties. Low cost of ownership. Choice of tank mounted sensors. Simple operation, no power needed. Manufactured with dials marked to suit customer tank details. Totally safe for use in all hazardous areas.

MAGNETIC LEVEL INDICATING TRANSMITTERS

The extensive KSR range extends from simple bypass and tank top indicators to in tank float level transmitters and switches. International approvals from leading food, safety and marine bodies.



MAGNETIC LEVEL SWITCHES

A complete range of horizontal and vertical liquid level switches for alarm and control applications. With both reed and high rated electrical contact options direct in tank or external chamber mounting. Wide range of pressure, temperature and S.G. rating.

HYDROSTATIC LEVEL TRANSMITTER

The well-proven 200A Series is in volume use across industry. Versions include submersible, hygienic, flanged or screwed sensors. It features remote electronics and is intrinsically safe, holds mines and marine approvals. 4-20mA two-wire output. 3:1 range turn down. Hastelloy diaphragm welded to 316 St. St body Teflon® suspension cable. Meets international standards for surge immunity.

Teflon® is a registered trademark of Dupont.



INTELLIGENT CERAMIC TRANSMITTER

Unique innovative level and pressure transmitter. New generation micro-electronics. Digital and 4-20mA analogue output. Digital sensing multi-drop comms. 50:1 rangeability $\pm 0.1\%$ accuracy - submersible option. This is a P.S.M. patented product assembled under agreement.



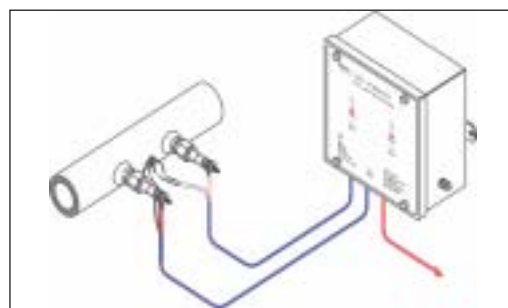
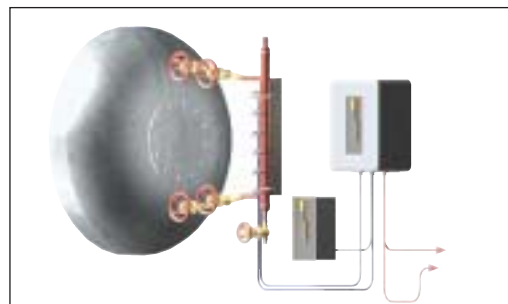
ULTRASONIC AND RADAR

Two families of transmitters. The Ultrasonic being a 2-wire loop powered ideal for simple liquid application. The radar can address the difficult vapours agitated low dielectric liquids and solid duties using F.M.C.W. to give premium performance.



WATER/STEAM BOILER DRUM MONITORING SYSTEMS

Internationally approved boiler drum level/steam/water detection system. Dual redundancy circuits for ultra reliability. Electrode type sensors with local indicator and remote 4-20mA signal.



MONITORS



Process monitors are offered for use with any of our transmitters. Several application specific models are offered. Usually the monitor powers the transmitter and gives digital and bar graph read-out with switch, analogue and digital comms. output.



PRESSURE MEASUREMENT

Covering the vacuum, gauge, absolute and differential pressure spectrum. We supply indicators, switches, transmitters and test equipment products and systems. Engineering services include - the supply and fitting of an extensive range of isolating diaphragm seals. Suitable for our own, and other proprietary products with appropriate fill medium for food, hi-low temperature and chlorine service.

SMART PRESSURE AND TEMPERATURE TRANSMITTERS

This Smart Hart® range of transmitters provide "state of the art" features including

- 100:1 range turn down
- $\pm 0.075\%$ Accuracy
- E Prom stored sensor data
- 4-20 mA and Hart® output
- Self diagnostics

High quality finish and interchangeability fitting and connection with older products.



ST/ST SAFETY GAUGE

316 St/St pressure element and case. Full safety pattern construction. Embodies a unique internal sack, which allows the gauge when liquid filled to absorb temperature expansion without damage.

DIFFERENTIAL PRESSURE GAUGE

Flow-head loss duties, metal pressure elements, over load protected St/St or Bronze construction. Dials marked to suit application flow, head loss or pressure.



ISOLATING DIAPHRAGM SEALS

Seals designed and manufactured to suit the application with attention to materials compatibility, pressure, temperature and sensitivity. Fitted using high vacuum techniques, which minimise drift and temperature errors. Backed by our N.A.T.A laboratory.



PRESSURE SWITCHES AND GAUGES WITH ISOLATING SEALS

For pressure indication/switching where hygiene, corrosion, viscosity or solidification are a factor. We fit integral or remote via capillary, isolating diaphragm seals to suit the process interface.



DENSITY AND VISCOSITY MEASUREMENT

From the highest accuracy fiscal metering through process and hygienic application, tube meters are the industry standard.

Fork type insertion meters are a more cost-effective meter suitable for tanks and pipelines where ultra accuracy is not needed.

Viscosity using vibrating fork or variable speed rotation is now on-line, real time measurement specifically for controlling the process fluid at flowing conditions.

IN LINE TUBE DENSITY TRANSMITTERS

Liquid density tube meters for fiscal metering, corrosive and general process measurement. 4-20mA digital comms and switch outputs.

Accuracy from $\pm 0.15\text{kg/m}^3$ to $\pm 0.35\text{kg/m}^3$



INSERTION FORK DENSITY TRANSMITTER

Continuous measurement of density in tanks and pipes. On-node electronics all signal conditioning calculation and diagnostic with transmitter. Stem lengths to 4000mm fluids to 20 000cP. Digital and analog (4-20mA) output. Picture shows interface detection on multi product pipeline.

GAS DENSITY AND SPECIFIC GRAVITY

For gas density and gas specific gravity measurement we offer transmitters designed to meet the requirements of fiscal metering, energy management and blending duties.



IN LINE VISCOSITY TRANSMITTERS

Used in applications to provide real time measurement for true dynamic and kinematic viscosity measurement. Applications include spraying, atomising, coating or dipping where viscosity is the process control variable. Turbine meter (K Factor) correction and polymerisation are promising new applications.

THROUGH-LIFE SUPPORT



We provide a range of services to ensure customers gain full benefit of ownership. Services can be tailored to operational needs covering factory rebuild - field service - service contract - NATA testing.



FLOW MEASUREMENT

Ranging from simple mechanical switches through glass and steel tube rotameter, orifice plates and self-averaging pitot flow primary elements. Ultrasonic liquids flowmeter to fiscal transfer of oil and gas. Large-scale river and water distribution gauging.



GLASS AND METAL TUBE ROTAMETERS

Provide local indication of flow rates of liquids and gases. The meters can be supplied in customer-preferred units. The quick release tubes allow removal for cleaning and tube/float replacements.

Metal tube used on opaque or hazardous fluids or flow at high pressure. Their compact sturdy construction makes the metal tube meters ideal for arduous applications. Switch and analogue outputs available.

CLAMP-ON LIQUID METERS

A range of transit time ultrasonic liquid flow meters covering pipes from 13mm to 5000mm at flow velocities from 0.02m/sec to 12m/sec. The range includes monitors for permanent installations typical water treatment plants or as an energy meter. Also portable battery powered versions typically for service/commissioning engineer's integral data logging and digital outputs.



FLOW COMPUTERS

A powerful family of flow computers for oil and gas applications with single and multi-stream capability. The software library supports a wide range of sensors to allow calculations to international metering standards. Prover systems, gas blending and tanker loading applications are also supported.

SELF AVERAGING PITOT FLOW SENSORS

Accurate metering for gas, liquids and steam. The patented design with unique features including square sensor profile. Multiple sensing ports both up and down stream. Symmetrical sensor for bi-directional flow safelock mounting for safety and reliability. Options include pipe or duct mounting. Integral valve manifold.



SOLUTION ENGINEERED PRODUCTS

Some process control needs cannot be met by standard catalogue products. In those situations our experience together with our manufacturing and calibration facilities allow us to precisely engineer an innovation solution.



Duplex St/St and Hastelloy Transmitter



Purge System



Marine Duty Depth Gauge



Military Specification Pressure Gauges Dials Application Specific



Valve Seat Leak Indicator Panel



Package Gas Density Panel



Fuel Tank Monitor



Pressure Calibrator

PROJECTS AND PARTNERS

Over recent years the company has acted as a supplier or contractor for major projects including Defence Department work. Contracted supplier to Sydney Water Board. Density Measurement for offshore gas and metering, and multi-product pipelines. For products more appropriate to import or assemble under licence alliances have been formed with:

- ◆ AUTROL – Electronic Pressure & Temperature Transmitters
- ◆ KSR – Level Indicators
- ◆ PSM – Level Measurement
- ◆ ROTOTHERM – Pressure & Temperature
- ◆ SIKA – Temperature & Flow
- ◆ SOLARTRON MOBREY – Density/Viscosity, Flow, Flow Computers & Hydrastep



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DISTRIBUTOR: