

ashford  
instrumentation



Diving, Marine & Subsea



[www.ashfordinstrumentation.com](http://www.ashfordinstrumentation.com)

Ashford Instrumentation Ltd was established in 2003 and specialises in Pressure, Temperature, Level and Flow Measurement. We work in conjunction with many of the largest organisations within the instrumentation field and can therefore find a solution to meet just about any measurement requirement you may have. Our Technical Team has a wealth of application knowledge upon which we can draw when the process demands.

## Diving, Marine & Subsea

Our Diving, Marine & Subsea division has established a product range which is arguably the most comprehensive in the world.

We specialise in the supply of Depth, Pneumo, Caisson & Subsea Instrumentation.

Our comprehensive stock and short lead times provide customers with the support they require when the situation demands.



## Process, Industrial & Utility

Pressure, Level, Temperature and Flow Instrumentation for the Process and OEM Industries



## HVAC

Pressure, Level, Temperature and Flow Instrumentation for the HVAC Engineer

Specifications and photographs shown in this brochure are representative of our engineering capabilities at the time of printing. We reserve the right to change any product or product details without prior notice. Images, text and product descriptions in this brochure have been used in good faith and to the best of our knowledge do not infringe good business practice. Please contact our sales office for full technical specification of all items prior to ordering.

## Pneumo Gauges

Premium Pneumo Gauge, Miniature Pneumo Gauge, Direct Drive Helical Movement Gauge, Digital Pneumo Gauge

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## Caisson Gauges

Premium Caisson Gauge, Standard Caisson Gauge, Miniature Caisson Gauge

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## Monitoring Instrumentation

Premier Gauge for O2 & Mixed Gas Breathing, Standard Gauge for O2 & Mixed Gas Breathing, Standard Gauge for Non O2 & Mixed Gas Systems, Valves Warm Water Feed Thermometer, Subsea Pumping Gauge, Liquid & Air Variable Flowmeters

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## Submersible Instrumentation

Dive Bell Gauge, Standard Subsea Gauge, Ultra Deep Gauge Compensated Subsea Gauge, Submersible Transmitter, Diver 'Bail Out' Gauge, Submersible Thermometer

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## Calibration Equipment

Portable Calibration Lab, Deadweight Tester, Digital Calibrator, Certification

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## Bespoke Engineered Solutions

Bespoke Engineered Solutions

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This symbol indicates that this instrument is issued with a calibration certificate as standard



This symbol indicates that certain ranges of this instrument are generally available Ex-Stock

## Pneumo Gauges



### Premium Pneumo Gauge **EX-Stock**

- Available in 6, 8, 10 & 12 inch diameter with +/- 0.25% accuracy
- Black steel case with Full Safety Pattern, solid baffle & 'blowout' back
- 1/4 inch NPT thread standard (other options on request) with 3 hole fixing front flange for panel mount
- Zero adjustment through window
- Dial / Ranges marked in metres or feet of sea water with mirror band, knife edge pointer
- Other mounting arrangements, customer logo & coloured dial options



### Miniature Pneumo Gauge

- Available in 4 inch diameter with +/- 0.25% FSD accuracy (0.6% as an option)
- Stainless steel case and bayonet bezel with safety 'blowout' device in rear of case
- 1/4 inch NPT thread and back entry panel mounting via 3 hole front flange as standard (other options on request)
- Dial / Ranges marked in metres or feet of sea water with mirror band, knife edge pointer
- Other mounting arrangements, customer logo & coloured dial options



### Direct Drive Helical Movement Gauge **EX-Stock**

- Available in 4, 6 & 8.5 inch diameter with high repeatable accuracy (0.25%)
- Stainless steel movement with black ABS Case as standard (other options available)
- Ranges measured 0-21, 0-76 & 0-300 metres of sea water dual scale (other ranges on request)
- Oxygen cleaned
- Customer logo options available



### Digital Pneumo Gauge **EX-Stock**

- Transmitter has 316Ti stainless steel wetted parts and body with 1/4 inch BSP / NPT connection
- Digital display developed in conjunction with a major international diving contractor and fits existing panels
- Display has 4 red LED digits (38mm high) which range from - 999 to 9999
- Input of 0-20mA or 4-20mA programmable
- GL and DNV approved

## Caisson Gauges

### Premium Caisson Gauge **EX-Stock**

- Available in 6, 8, 10 & 12 inch diameter
- Standard 'tried and tested' pressure gauge option – pressure acts within bourdon tube for maximum precision with large sealed internal reference chamber pressure tested for greater stability and safety
- Standard 1/4 inch NPT male thread (other options on request)
- Simple zero pointer adjustment through window for fast, easy set up
- Measures system pressures within chamber (rather than just chamber pressure)
- Calibration via bench Deadweight Tester



### Standard Caisson Gauge

- Available in 6 or 8 inch diameter (same uses as Premium Caisson Gauge)
- Standard 'tried and tested' pressure gauge operation – pressure acts within bourdon tube for maximum precision
- Open vented case with sealed internal reference chamber set to atmospheric pressure via a manually adjustable valve located at bottom of the gauge
- Different ranges and customer logo options available



### Miniature Caisson Gauge **EX-Stock**

- For use in hyperbaric chambers since gauge is sealed and unaffected by atmospheric pressure
- Case and bezel made of marine bronze and ranges from 1-1000 Bar
- 1/8 or 1/4 inch BSPP, BSPT or NPT thread options
- Brass / bronze wetted parts and mounted via screw thread panel ring
- Window made of 1.2mm float glass
- Oil free gauge with S2 'blowout' device
- Bottom entry also available





## Premium Gauge for O<sub>2</sub> & Mixed Gas Breathing **EX-Stock** (Industry Standard)

- 63mm diameter with Full Safety Pattern ('S3' safety features included)
- Class 1.6 bourdon tube pressure gauge made from 316 stainless steel
- Laminated safety glass window
- Solid baffle wall behind dial and full safety 'blowout' back
- Back or bottom entry panel mounting and personalised logo options



## Standard Gauge for O<sub>2</sub> & Mixed Gas Breathing **EX-Stock**

- 63mm diameter standard design class ('S2' safety features included)
- Stainless steel or brass wetted parts available
- Ranges from 0-1.1 Bar to 0-280 Bar (dual scale PSI)
- Perspex window and rear 'blowout' disc



## Standard Gauge for Non O<sub>2</sub> & Mixed Gas Systems **EX-Stock**

- 63mm diameter for use in applications where brass or stainless steel wetted parts are suitable
- Designed according to EN837-1 and should not be used on gas / air applications above 25 bar or on any oxygen applications
- Standard Bar / PSI ranges to EN-837-1
- Options for glycerine filling, direct bottom or back entry mount



## Valves **EX-Stock**

- Options of Three-Piece 1/4 turn Ball Valve, Bar Stock Needle Valve or 3 and 5 valve manifolds available
- Standard materials used are brass and stainless steel, but more exotic materials available if required
- Contact us with your exact requirements and specification

## Warm Water Feed Thermometer **EX-Stock** (Diving Suit Thermometer)

- Range of 0-100°C
- Bimetallic measuring element
- All stainless steel construction (Class 1)
- Direct back entry mounting with 1/2 inch NPT thread
- Stem measures 42mm below thread and is 8mm in diameter



## Subsea Pumping Gauge

- 100mm diameter with 1.0% FSD accuracy
- Ranges from -4 to +2 Bar (-40 to +20 MSW)
- 1/4 inch NPT bottom connection with surface mounting via 3 hole fixing back flange
- 316Ti stainless steel wetted parts
- Oxygen cleaning and alarm contact options available
- Glycerine filling possible, but NOT to be used with oxygen or mixed gas media



## Liquid & Air Variable Flowmeters

- Available with 83 or 120mm mounting centres
- Brush finished stainless steel chassis with stainless steel end blocks (nickel plated brass optional)
- Simple mechanism with easy to read window, even at low flow rates
- +/- 3% accuracy for calibrated scales with wide range of flow rates for both air and water measurement





## Dive Bell Gauge **EX-Stock**

- For use on dive bells (internal or external) to monitor on board gas pressure (to depths of 450 metres of water)
- Case and bezel made of marine bronze and ranges from 1-1000 Bar
- 1/8 or 1/4 inch BSPP, BSPT or NPT thread options
- Brass / bronze wetted parts and mounted via screw thread panel ring
- Bottom entry also available
- Window made of 12mm float glass
- Oil free gauge with S2 'blowout' device



## Standard Subsea Gauge

- Withstands depths of up to 1200 metres of water (option of 2000 metres available)
- Ranges between 0-6 to 0-1000 Bar
- Pressure tight solid bar stock 316 stainless steel case and wetted parts
- 1/4 inch NPT connection (other options available)
- Armoured 19mm window (25mm on 2000 metre option)
- Calibration certificate, glycerine filling and further mounting options available



## Ultra Deep Subsea Gauge

- Withstands depths of up to 4000 metres
- Ranges between 0-6 to 0-1000 Bar
- Pressure tight solid bar stock 316 stainless steel case and wetted parts
- 1/2 inch NPT connection (other options available)
- Armoured 35mm window
- Calibration certificate, glycerine filling and further mounting options available

## Compensated Subsea Gauge

- Liquid filled case allows internal workings of gauge to be pressurised in equal part to external pressure – no need for expensive reinforced case
- 100 & 160 mm diameter with no limit to maximum depth
- Accurate to 1%
- Stainless steel case, movement and measuring element with ranges from -1 Bar vacuum to 0-2500 Bar
- Lexan Polycarbonate safety window



## Submersible Transmitter

- Used to measure ROV depth, diver depth & system pressure monitoring at depth (maximum 1000 metres sea water)
- Pressure ranges from 1-50 to 1-700 Bar
- 25mm diameter with stainless steel body
- Range of thread sizes available and supplied with either flying lead or wetcon connector
- 4 – 20 mA output signal and is accurate to 0.25%



## Diver 'Bail Out' Gauge **EX-Stock**

- Measures contents of breathing tanks and is degreased for oxygen service (Group 1)
- Luminous dial & selection of thread connections to suit hose
- Marine bronze case (for maximum corrosion resistance) and toughened float glass window
- Removable bezel for serviceability
- Individual serial number for traceability and satisfies requirements of EN837-1 & Pressure Equipment Directive (PED)
- EC Declaration of Conformity denoting suitability for Group 1 Gas Applications (required by PED)



## Submersible Thermometer

- 63 and 100mm diameter and can be used to depths of up to 2000 metres of sea water
- Stainless steel case, bezel and stem for direct bottom or back mounting connections
- Gas filled system with float glass window
- NPT connection as standard, but others available on request
- Range measured from -50 to +600°C





## Portable Calibration Lab

- Includes everything needed to accurately calibrate all pneumo, caisson and pressure gauges on site, even comprehensive details on how to take into account variations in sea water specific gravity around the world
- Accurate to 0.025%
- Includes Pneumatic Pressure Pump & full set of Instrument adaptors contained in a robust plastic case
- Suitable for ranges from 14 MSW to 350 MSW



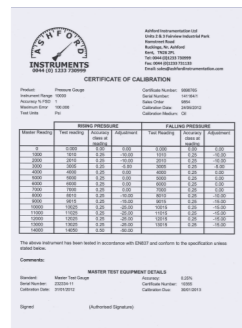
## Deadweight Tester

- Bench mounted Deadweight Testers and Comparators available
- Please contact us with your specific requirements



## Digital Calibrator

- Built with two pressure sensors (Low & High Pressure) to accurately measure pressure up to 300 Bar
- Accuracy reading of 0.05% and suitable for use on gas and liquids
- Uses 9 volt battery as power supply with aluminium pressure connections of 1/8 inch NPT female as standard
- Supplied with soft carry case
- Options for UKAS Certification, stainless steel pressure connections and display units of PSI, Bar or kPa



## Certification

- Available on our range of Pressure and Temperature Instrumentation
- Instruments can be supplied with a standard test certificate or a more comprehensive 'point to point' option
- Both are directly traceable to National Standards
- Certificates can be issued for instruments used on clean gas and oxygen systems
- Material Certification can be supplied to 3.1b

If you cannot see the exact instrument for your application, please feel free to call us with your specific requirements:

- **Coloured Bezels (available on our Pneumo gauge range)**
- **Optional Scales**
- **Bespoke Dials (with Company name or logo - occasionally free of charge)**
- **Thread types**
- **Mounting configurations**
- **Materials of construction**



# ashford instrumentation



'Measurably different'...



*Innovative*

*Bespoke*

*Dependable*

*Understanding*



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