

ashford
instrumentation



Process, Industrial & Utility



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.

Process, Industrial and Utility

Ashford Instrumentation are specialist suppliers of measurement equipment to markets as diverse as pharmaceutical, chemical, petrochemical, pneumatic, hydraulic, food, dairy, power generation and water treatment.

Our product range includes both electronic and mechanical pressure & temperature instrumentation as well as level switches and instruments for continuous level measurement. From our offices in Ashford, Kent, we offer a wealth of application and product knowledge with export sales to over 30 countries worldwide.



Diving, Marine and Subsea

Depth, Pneumo, Caisson & Submersible Instrumentation for the Commercial Diving, Marine and Subsea Industries




HVAC

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



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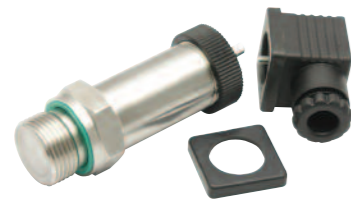
 Certain products within this brochure may be available certified to the ATEX 94/9 CE directive. Speak to our technical team with your specific requirements.



Standard Compact Pressure Transmitter

Fixed range general purpose transmitter for gas, vapour & liquid applications

- Compact design with stainless steel housing
- Proven silicon sensor technology
- Available in gauge or absolute pressure ranges up to 4000 Bar
- Optional 4 digit LED display and HART protocol on certain models
- ATEX version available



Sanitary Transmitter with Flush Diaphragm

For applications with viscous process media

- Compact design with stainless steel housing and sensor
- Available in gauge or absolute pressure ranges up to 200 Bar
- Optional 4 digit LED display and ATEX approval



Hygienic Transmitter

Supplied with a hygienic fitting for dairy and food applications

- Compact transmitter with proven sensor technology
- Pressure ranges up to 40 Bar
- All standard hygienic fittings available
- Optional ATEX certification



High Pressure Transmitter

For use in applications for hydraulics, pneumatics, water cutting engineering and diesel engine technology

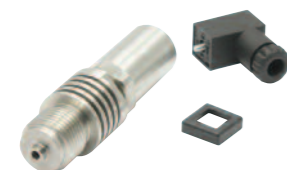
- Compact design with stainless steel housing and sensor
- Available in pressure ranges up to 4000 Bar
- Optional ATEX certification



Precision Transmitter

Applications include medical technology, hydraulics / pneumatics and plant engineering, testing & laboratory work

- High accuracy
- Stainless steel housing
- Option of stainless steel and silicon sensor
- Available in gauge or absolute pressure ranges up to 2000 Bar



High Temperature Transmitter

For use in the automotive industry, hydraulics / pneumatics, sterilising and plant engineering

- Compact design with stainless steel housing and sensor
- Available in gauge or absolute pressure ranges up to 2000 Bar
- Suitable for temperatures up to +160°C

Pressure Transmitter with Local LCD Display

Accurate measurement of gas, vapour or liquid pressure in process and chemical engineering applications

- Designed for field mounting with an accuracy of <0.1% of range
- Proven ceramic and silicon technology (depending on model)
- Optional 10:1 turndown and PC or HART configuration
- Optional double switch output
- Flush mounting diaphragm option available
- Primary 5 digit display
- Secondary 8 digit display with incremental bar graph



Differential Pressure Transmitter with Local LCD Display

Accurate measurement of gas, vapour or liquid pressure in process and chemical engineering applications

- Designed for field mounting with an accuracy of <0.1% of range
- Optional double switch output
- Optional 100:1 turndown and PC or HART configuration
- Primary 5 digit display, 8 digit secondary display
- 360 degree rotational display for easy reading



Our process industry and differential pressure transmitters can be fitted to our range of chemical and hygienic seals allowing measurement of media not compatible with stainless steel, or where the process media can solidify or crystallise.

Process and differential pressure transmitters can also be used for liquid tank level measurement when combined with a suitable chemical seal. Process transmitters can be used on vented tanks, but non-vented tanks require the use of differential pressure transmitters.

5 Valve Manifolds for Differential Pressure Instrumentation

Specifically designed for use with differential pressure transmitters or gauges

- Allows for isolation, bleeding / venting or equalisation of a differential pressure system
- Kidney flanges also available for use with manifold fitting



Digital Gauge, Transmitter & Switch

Multifunction digital instrument allowing highly accurate pressure measurement (IP65 standard)

- Piezoresistive sensor technology with stainless steel or PTFE wetted parts
- High resolution display showing peak values and temperature
- Double digital alarm capability
- Ranges from 0 – 100 mbar to 0 – 1600 Bar
- Accuracy of <0.1% (400 Bar and below) and <0.25% (401 Bar and above)



Specialist Pressure Transmitters



Submersible Liquid Level Transmitter

Suitable for vented tanks, bore holes and open water applications

- Measures head of liquid and converts into a 4 – 20mA output signal for level measurement
- IP68 sealed cable and suitable weights allow transmitter to be safely secured to tank bottom
- We recommend differential pressure transmitter systems for hermetically sealed (non vented) tanks, since this compensates for vacuum or pressure build up above the liquid at the top of the tank



Mobile Hydraulics Pressure Transmitter

For use in the automotive industry (braking systems, hydraulics, diesel and natural gas engine technology)

- Stainless steel housing and sensor
- Available in ranges up to 4000 Bar
- Compact, robust design



Combined Temperature and Pressure Transmitter

Ideal for hydraulics / pneumatics, refrigeration, heating systems and automation technology

- Single process connection for dual measuring
- Stainless steel housing with internal or external temperature sensor
- Pressure ranges up to 1000 Bar
- Temperature ranges up to 200°C



LED Display Module

- Plug-on display works with standard DIN plug transmitters
- Includes 4 digit red LED display powered by transmitter – no further power source required
- Display value from -1999 to +9999
- Customer programmable using buttons
- Rotatable display option to ensure easy reading



Panel Mounted Digital Display

- Wide range of DIN standard or customised sizes available
- Models accept all standard instrument inputs and power supplies
- LED and LCD options available with independent switching functions
- Can be used to power transmitters and resend input signals
- Fully programmable or supplied pre-configured for ease of use

Temperature Monitoring and Hand Held Devices

Food Hygiene Thermometer Kit

For use in the food and catering industries

- Kit includes a hand held thermometer and thermocouple probe for temperature measurement
- Easy to read LCD display with open circuit and low battery indicator
- Wide temperature ranges measured and thermometer housed in robust case
- Kit also includes a varied selection of alternative use probes and probe wipes, all housed in a protective ABS carry case
- Supplied with certificate of calibration



Legionnaires' Thermometer

For monitoring water temperature to prevent Legionella growth

- Includes hand held digital thermometer with wide temperature range
- Large, easy to read LCD display and powered by 3 x AAA batteries
- Housed in a protective ABS carry case
- Kit also includes alternative probes, countdown timer and probe wipes
- Supplied with certificate of calibration



Infrared Thermometer with Plug-in-Probe

For applications requiring measurement of air, liquid and surface temperatures

- Simple 'aim & pull' trigger for non-contact temperature reading
- Battery powered, compact, lightweight & easy to use
- Infrared range -60 to +500°C
- Supplied with penetration probe (temperature range of -20°C to +250°C)
- ABS carry case & anti-bacterial wipes



Portable pH Meter

For use across a wide range of process industries to monitor acidity or alkalinity

- Hand held meter measures pH and temperature simultaneously (also measures mV)
- Clear LCD display and easy to use keypad
- pH range from 0 – 14pH and temperatures from 0 – 99.9°C
- Kit includes pH electrode, temperature probe and buffer solutions all housed in PVC carry case



Universal Digital Thermometer

Hand held thermometer for use in food, catering and general industrial applications

- Hand held device with detachable stainless steel penetration probe
- Large, easy read LCD display (open circuit and low battery indicators)
- Temperature range from -49.9 to +199.9°C
- Selection of probe and wire sensors available

Waterproof Digital Thermometer

Submersible thermometer for use in hygienic food processing environments

- IP66/67 approved thermometer in robust waterproof ABS housing
- Temperature range from -199.9 to +400°C
- Easy to read LCD display with optional back lighting
- Supplied with thermocouple and penetration probe
- Optional accessories include anti-bacterial probe wipes





OEM Temperature Transmitter

Specifically designed for the high volume OEM market

- Sensor input PT100 3-wire
- Output 4 – 20mA or 0-10V (factory set)
- Accuracy 0.02% of span PT100 (range limits -200 to +850°C)
- Optional HART communication



Process Industrial Temperature Transmitter

Specifically designed for general purpose & process industry applications

- Sensor input RTD or thermocouple (2, 3 or 4 wire)
- Output 4 – 20mA 2-wire (HART optional)
- Accuracy <0.02% of span PT100 (range limits -200 to +850°C)
- Galvanic Isolation 2000 VAC
- PC configurable with optional HART version



Dual Sensor Temperature Transmitter

Dual sensor input RTD or thermocouple for independent reading, sensor redundancy (backup), average reading or differential temperature reading

- Sensor input 2 x RTD or thermocouple (2, 3 or 4 wire)
- Output 4 – 20mA 2-wire (HART optional)
- Accuracy <0.02% of span PT100 (range limits -200 to +850°C)
- Galvanic Isolation 2000 VAC
- PC configurable with optional HART version



Rail Mounted Temperature Transmitter

Specifically designed for general purpose & process industry applications

- Sensor input RTD or thermocouple (2, 3 or 4 wire)
- Output 4 – 20mA 2-wire (HART optional)
- Accuracy <0.02% of span PT100 (range limits -200 to +850°C)
- Galvanic Isolation 2000 VAC
- PC configurable with optional HART version
- Optional dual sensor version available

Field HART Temperature Transmitter with Local Display

Specifically designed for general purpose & process industry applications in the field

- Sensor input RTD or thermocouple (2, 3 or 4 wire)
- Output 4 – 20mA 2-wire (HART optional)
- Accuracy <0.02% span PT100 (range limits -200 to +850°C)
- Galvanic Isolation 2000 VAC
- 5 digit LCD display with backlight
- PC configurable with optional HART version



Thermocouples & RTD Assemblies

- Full range of simplex or duplex platinum resistance thermometers and all thermocouple sensor types
- Bespoke and customer designed assemblies available
- Supplied with flying leads, terminal block connectors or complete with our full range of head mounted transmitters
- Options include aluminium, stainless steel or plastic connection heads & ATEX / Exd Certification



Thermowells

Ashford Instrumentation offer a full range of screw connection and flange mounted thermowells in a wide range of materials including brass, stainless steel, hastelloy, monel and tantalum amongst others

- Flanged thermowells supplied with various protective coatings such as PTFE & PFA
- Full penetration welding with dye penetration testing
- Wake frequency calculations & hydrostatic testing are also available



Hygienic Thermowells

Designed especially for food, dairy and pharmaceutical applications

- We can offer a range of highly polished thermowells with hygienic tri-clamp connections

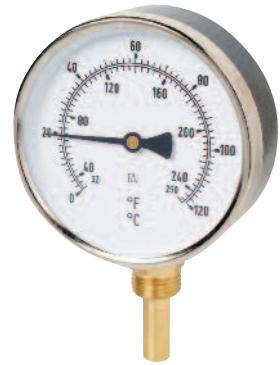


Communication Devices & Calibration Software

Our process industry temperature transmitters are fully programmable, some supplied with optional HART protocol

Whilst we usually supply preconfigured models to our customers' exact requirements, we can support field programming by providing a range of USB port configurators along with the necessary software for PC programming.





Standard Thermometer

- Available in 100mm and 160mm diameter
- Black steel case, chrome bezel and brass thermowell
- Class 2 DIN 16203 with bottom or back entry
- Connections 1/2 inch BSP male with immersion of 50 & 100mm under hex
- Ranges of -30 to +60°C, 0 – 160°C & 0 – 250°C



Stainless Steel Thermometer (Bi-metallic)

For applications requiring thermometer to be located outdoors (chilled water systems, steam systems, air conditioning)

- Stainless steel case, bezel, stem and thermowell with bi-metallic helix measuring element
- Direct back or bottom mounting with plastic window
- Instrument connection 3/8 inch BSP male and process connection 1/2 inch BSP male
- Class 2 DIN 16023 and ranges from -30 to +60°C or 0 – 120°C



Pipe Clip Thermometer

Designed for small diameter pipe work, where it is not possible to use an immersion style thermometer

- 63mm diameter with plastic window
- Galvanised sheet steel case, nickel plated sheet steel bezel and bi-metal helix measuring element
- Universal spring clamp mounting
- Class 2 DIN 16023 and ranges from -30 to +60°C, 0 – 120°C, 0 – 160°C, 0 – 250°C & 0 – 400°C
- For use on pipe work from 3/8 to 1.5 inches diameter



Thermowells and Pockets

Wide range of flanged, screwed and welded connections for mechanical and electrical thermometers

- Available in brass, 316 stainless steel, monel, hastelloy, titanium, incoloy, tantalum, teflon or PTFE coating
- Fabricated and solid drilled designs are available
- Screw connections supplied as 3/8 or 1/2 inch BSP or NPT male thread and flange connections available for all industry standard forms

Gas Filled or Bi-Metallic Thermometer

For use in chemical, petrochemical and pharmaceutical applications

- Available in 100mm and 160mm diameter with instrument glass window
- Stainless steel case and bezel with brass movement and aluminium black pointer
- Bottom or back entry direct mounting with pressurised gas filling
- Class 1 accuracy with 100 x 10mm plain connection
- Ranges of -20 to +60°C to 0 – 800°C available
- Options include alternative connections and mounting arrangements, special scales, glycerine filling and electrical contacts



Gas Filled System Thermometer with Capillary

For use in remote reading applications

- Available in 63mm, 80mm, 100mm and 160mm diameter
- Stainless steel case, bezel, movement and measuring element
- Complies with DIN EN 13190 with ranges from -50 to +800°C
- Mounting options include surface or panel mount with flange or clamp fixing
- Material and calibration certification available



Every Angle Thermometer (Gas Filled or Bi-Metallic)

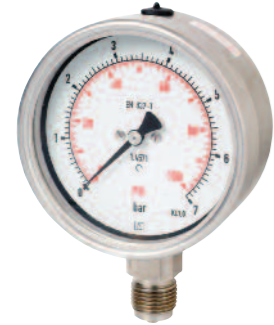
- Rotates through 360 degrees to allow thermometer to be easily viewed regardless of tapping point
- Available in 100mm, 125mm and 160mm diameter with instrument glass or plastic window
- Stainless steel case and stem
- 50 to 500mm immersion with variety of process connections depending on range
- Range from -30 to +500°C (minimum span of 60°C)
- Can be supplied with screwed, welded or flanged thermowells (fabricated or solid drilled)





HD Series Industrial Pressure Gauge

- Available in 63mm, 100mm or 160mm diameter
- 304 stainless steel case and bezel (IP65) with brass wetted parts and glass window
- Accuracy class 1 (1% FSD)
- Wide variety of process connections
- Direct mount bottom or back entry, surface mount and panel mount
- Options include glycerine filling, customised dials and logo, alarm contact modules and drag pointers



HD Series Process Industry Pressure Gauge

- 63mm, 100mm or 160mm diameter with laminated glass window
- 304 stainless steel case and bezel (IP65) with 316 stainless steel wetted parts
- Accuracy class 1 (1% FSD)
- Ranges from full vacuum to 1000 Bar
- Can be fitted to our extensive range of chemical seals
- Other options include glycerine filling, panel or surface mounting, drag pointer, alarm contacts & switch functions, alternative connections, customised dials and logo



HD Series Full Safety Pattern Pressure Gauge

(Meets all requirements for the offshore, oil and petrochemical industries where 'S3' safety features are required)

- Available in 63mm, 100mm & 160mm diameter with laminated safety glass window
- 316 stainless steel case, bayonet lock bezel and wetted parts
- Accuracy class 1 with internal solid baffle wall and full 'blowout' back
- Versions suitable for oxygen and acetylene application
- Other options include monel wetted parts to NACE, accuracy class 0.5, glycerine filling, panel or surface mounting, alternative connections, customised dials and logo



HD Series ATEX Pressure Gauge

- Supplied complete with ATEX certification
- 63mm, 100mm and 160mm versions available
- Standard design with 'blowout' device and Full Safety Pattern S3 options
- Additional options include glycerine filling, customised dials, varied mounting possibilities and a wide range of process connections



MX Series Industrial Pressure Gauge

- Designed for the OEM user (minimum order quantities may apply)
- Deep or slim line stainless steel case
- Brass or 316 stainless steel wetted parts
- Full customised design service
- Options include glycerine filling, panel or surface mounting, customised logos and a wide range of process connections

Capsule Pressure Gauge

Suitable for gaseous media only

- 63mm, 100mm & 160mm diameter
- Painted steel or stainless steel case with brass or stainless steel wetted parts
- Push-fit plastic or glass window
- Range 0 – 25 mbar to 0 – 1000 mbar, accuracy class 1.6 (1.6 % FSD)
- Direct mount bottom or back entry with wide range process connections
- Options include panel or surface mounting, restrictor screw and customised dials and logo



Schaeffer Diaphragm Gauge

Suitable for highly viscous media or those with solids in suspension

- Mechanical link from diaphragm to movement requiring no fill fluid
- 100mm or 150mm diameter with glass or clear acrylic window
- Stainless steel case and wetted parts with stainless steel diaphragm
- Accuracy class 1.6
- Range from 0 – 25 mbar to 25 Bar pressure and vacuum
- Screwed or flanged connections available
- Direct mount bottom or back entry
- Glycerine filled case
- Other options include PTFE wetted parts and diaphragm, flanged and customised connections



Turret Style Safety Pattern Process Industry Gauge

- 5 inch diameter dial with phenolic resin case
- Screwed bezel and 316 stainless steel wetted parts
- Accuracy class 0.5 per ANSI B40 with internal solid baffle wall and 'blowout' back
- Connections 1/2 inch BSP or NPT and direct mount bottom or back entry as standard
- Glycerine filled and surface mountable as standard
- Other options include brass or monel wetted parts, throttle screw, drag pointer, alarm contacts, alternative connections and laminated safety glass window



High Pressure Gauge (EN837-1/S3 & ASME B40.1)

- 100mm or 160mm diameter & laminated safety glass window
- 304 stainless steel case and duplex stainless steel measuring element
- 316 stainless steel connector block & accuracy class 1.0 (1% FSD)
- Ranges of 0 – 1400 Bar, 0 – 2000 Bar, 0 – 2800 Bar or 0 – 4000 Bar
- Direct mount bottom entry with standard connection 9/16 – 18 UNF-2B (also known as HF4 or 1/4)
- Connection compatible with 1/4 inch F250C Autoclave, 1/4 inch HF4-HIP, 1/4 inch Newport AMINCO HP & 1/4 inch HP Butech





Piston Style Differential Pressure Gauge (Compact Design)

- Low cost, compact design
- 80mm or 100mm diameter with instrument glass window
- Stainless steel case & bezel, piston & spring
- Plastic covered piston housing and accuracy class +/- 3% FSD
- Maximum static / overpressure 100 Bar
- Direct mount side entry with connections 2 x 1/4 inch BSP (female)
- Options include glycerine filling, panel or surface mounting, 250 or 400 Bar maximum static / overpressure, 1 or 2 electrical reed switches and plastic window



'ECHO' Series Differential Pressure Gauge (Opposing Bourdon Tubes)

- 100mm diameter with instrument glass window
- Black painted steel or stainless steel case and bezel with brass wetted parts
- Direct mount bottom entry with 2 x 1/2 inch BSP connections
- Options include surface mounting and 316 stainless steel wetted parts
- Duplex version with dual pointer showing both pressure inputs available
- Static pressure limited to differential pressure range



'ALFA' Series Differential Pressure Gauge

- 100mm diameter with laminated safety glass window
- 304 stainless steel case and bezel with brass wetted parts (viton diaphragm movement)
- Ranges from 250 mbar to 6 Bar
- Maximum static / overpressure 25 Bar and accuracy class of 2.5% FSD
- Direct mount bottom entry with 2 x 1/2 inch BSP connections
- Options include surface mounting, stainless steel wetted parts and alternative connections



'BRAVO' Series Differential Pressure Gauge

- 100mm diameter with laminated safety glass window
- Stainless steel case, bezel and wetted parts
- Differential pressure ranges from 250 mbar to 25 Bar
- Maximum static / overpressure 25 Bar
- Direct mount bottom entry with connections 2 x 1/2 inch BSP (female)
- Options include alarm contacts and alternative connections

High Static Pressure Gauge

- Available in 100mm and 160mm diameter
- Maximum static overload up to 400 Bar
- Class +/- 1.6% FSD
- Stainless steel case and wetted parts (others available on request)
- Can be supplied in conjunction with our wide range of flanged or screwed chemical seals
- Options for wall or pipe mounting brackets as required



Low Pressure Differential Gauge

- For use on gas or air only – capsule element design
- Suitable for differential pressure ranges from 4 to 400 mbar (depending on diameter)
- Diameter 63mm, 100mm and 160mm
- Over pressure to full scale value only
- Black painted steel or stainless steel case
- Brass or stainless steel wetted parts



OUTPUT & SWITCH CONTACTS FOR GAUGES AND THERMOMETERS

Single, double or treble electrical alarm contacts can be supplied configured to either make on rise (break on fall) or break on rise (make on fall). There are 3 basic designs:

Electromechanical (Magnetic Spring Contact)

Magnetic spring contacts have a permanent magnet screwed to the red setting pointer on the contact carrier arm. To close the circuit the contact pin is attracted by the magnet as it is carried to the contact point by the instrument indicating pointer and the contact closes. The snap action effect of the magnet reduces arcing between the contacts allowing for a greater switch rating. Due to the increased contact force, the magnetic contact is also less sensitive to vibration.



Inductive Contact

Inductive contacts are used in connection with a switching amplifier which supplies the control head with direct voltage. As the control flag mounted on the instrument indicating pointer reaches the control head the internal resistance in the control head increases. This causes the current to change and is used to control the switching amplifier. The amplifier converts the input signal into a binary output signal.

Due to the non-contacting switching function this design of switch offers high switching accuracy and long service life. This design is particularly recommended for applications where a high switching frequency or high reliability is required. Assuming a suitable isolating switching amplifier is used, this instrument can be used on intrinsically safe applications.



4 – 20mA Transmitter Output

Standard bourdon tube pressure gauge with transmitter module giving 4-20mA output.



Pneumatic Pressure Gauge

- Available in 40mm, 50mm and 63mm diameter
- Black painted steel or plastic casing with brass wetted parts and 'snap fit' plastic window
- Accuracy 2.5%
- Connections 1/8 or 1/4 inch BSP, BSPT and NPT
- Direct mount bottom or central back entry as standard
- Options include panel mounting, different connections and customised dials and logo



Utility Pressure Gauge

- Available in 100mm & 160mm diameter
- Black steel case with chrome bezel and option of glass or plastic window
- Accuracy 1.6%
- 3/8 and 1/2 inch BSP connections and direct mount bottom or back entry as standard
- Red reference pointer available



Hydraulic Glycerine Filled Pressure Gauge

- 63mm diameter with plastic window
- 304 stainless steel case and crimped bezel with brass wetted parts (stainless steel option available)
- Accuracy 1.6%
- Connections 1/4 inch BSP, BSPT or NPT and direct mount bottom or back entry as standard
- Options include panel or surface mounting, alternative connections, customised dials and logo



Refrigeration Industry and Differential Pressure Gauge

Intended to measure the pressure and temperature of refrigeration plants

- Available in 63mm, 80mm, 100mm & 160mm diameter in both gauge and differential pressure
- Housed in either black enamel steel or stainless steel case – measuring element can be stainless steel, brass or bronze
- Standard ranges from -1 to +12 Bar or -1 to +25 Bar (other ranges on request)
- Mounting options include direct (bottom or back), surface (3 hole back flange) or panel (3 hole front flange or clamp fixing)
- Options include customised dials and alarm contacts

Chlorine Series Pressure Gauge

For use with arduous and demanding chlorine applications such as dosing, water & wastewater treatment & chlorine systems

- Available in 63mm, 100mm & 160mm diameter
- Epoxy coated case and monel wetted parts (protection against corrosive chlorine vapour & process media)
- IP65 rated (dry case) and degreased (tested on nitrogen)
- Internal membrane in electrical connection block
- Options of restrictor screw, alarm contacts and diaphragm seal assemblies (screwed or flanged connections)



Paper, Pulp & Lacquer Industry Gauge

For paper industry applications where product cannot enter the 'dead leg' of a conventional bourdon tube design gauge

- Available in 100mm & 160mm diameter with safety glass window
- All stainless steel gauge with DN48 seal and loose retaining flange seal fitted
- Accuracy class 1 with pressure range of up to 40 Bar
- Direct mounting with bottom or back entry
- Options of plastic window, glycerine filling, electrical alarm contacts and customised dials available



SF6 Gas Density Pressure Gauge

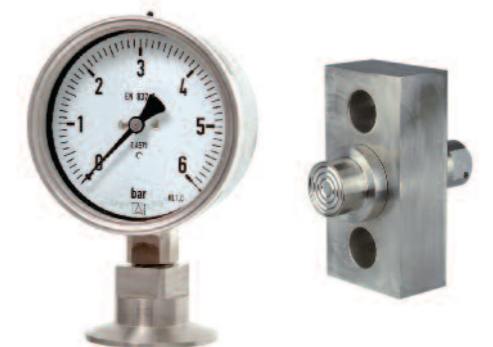
Designed for the control of voltage switchgear systems, particularly high voltage circuit breakers & gas insulated high voltage cables and transformers

- Each gauge is manufactured for specific applications and therefore accurate information is required prior to manufacture (filling pressure, calibration pressure, switch points and dial markings)
- 100mm diameter with full scale reading
- Stainless steel case, bezel, movement and measuring element with safety glass window
- 1/2 inch BSP connection and direct mount bottom or back entry
- Ranges measured as standard are: -1 to +5 Bar & -1 to +9 Bar (other ranges available on request)
- Options include alternative mounting and connection possibilities with silicon oil filling on request



Hygienic Diaphragm & Homogeniser Gauges

- Available in 63mm, 100mm & 160mm diameter
- 316 stainless steel case and wetted parts
- Direct or capillary mount
- Standard hygienic fittings: Tri-clamp : 1, 1.5 & 2 inch
IDF : 1, 1.5 & 2 inch
SMS: 1.5 & 2 inch (male and female)
RJT: 1, 1.5, 2 & 2.5 inch
DIN: 25, 32, 40, 50 & 80
- Homogeniser seals available for pressure ranges up to 1600 Bar
- Options include in-line engineering and electro-polishing of wetted parts
- 3A rating optional extra



Screw Connection Diaphragm Seals



Mini Gauge & Seal

- Suitable for 63mm diameter pressure gauge
- Process connection of 1/4 inch BSP, BSPT or NPT
- Accuracy class 1.6
- All stainless steel construction



Standard Diaphragm Seal Gauge

Ideal for applications with viscous process media

- Available in 100mm & 160mm diameter
- Stainless steel case and wetted parts
- Accuracy 1.0% FSD
- Connections 1/2 inch BSP or NPT male
- Direct mount bottom entry with 10mm bore connections
- Available in all standard Bar or PSI ranges



Bolted Design Chemical / Diaphragm Seal

- Stainless steel body and wetted parts
- Threaded process connection
- Direct or capillary mount to instrument
- Options include alternative wetted parts and ANSI or DIN flange connections



PVC Body Diaphragm Seal

- Stainless steel diaphragm
- Pressure ranges 10 Bar maximum (at 20°C)
- BSP or NPT female process connection
- Options include PFA coated diaphragm and male thread connections

Flange Connection Diaphragm Seals

Flush Diaphragm Seal (Flange Type)

- 316 stainless steel body and wetted parts
- ANSI and DIN ratings
- Direct or capillary mount to instrument
- Standard wetted parts can be supplied in monel, tantalum and PTFE lined diaphragm materials
- See below for a full list of alternative wetted parts materials



Flush Diaphragm with Extended Neck

- 316 stainless steel body and wetted parts
- ANSI and DIN ratings
- Direct or capillary mount to instrument
- Standard wetted parts can be supplied in monel, tantalum and PTFE lined diaphragm materials
- Customer specific neck extension lengths and alternative wetted parts materials available (see list below)



Inline Diaphragm Seal

- 316 stainless steel body and wetted parts
- ANSI and DIN ratings
- Capillary mount to instrument
- Options include alternative wetted parts
- Screwed or flanged connections



Chemical Seals can be supplied with the following wetted parts materials:

- 316 stainless steel
- Brass
- Hastelloy C276
- Hastelloy B2
- Titanium
- Nickel
- Monel 400
- Tantalum
- Incolloy 825
- Inconel 600
- Silver
- PTFE
- PVA
- Customer specified materials possible





Tank Contents Gauge (Battery or Mains Powered)

For use on water, heating oil, paraffin & all liquids compatible with either PVC, stainless steel or brass

- 160mm surface mount gauge (optional square version 180mm x 180mm)
- Battery operated 'Push to Read', adjustable automatic timer or mains powered for continuous reading
- Measures tank depths up to 8 metres with maximum capillary length of 200 metres
- Through tank top balance chamber with 1 or 1.5 inch BSP screw fitting
- Typical scales in litres, imperial gallons, US gallons, tonnes, kilograms or percentage
- Customised scales available on request



'Bubbler' Tank Contents Gauge with Hand Pump

Hydrostatic gauge for use on water and heating oil

- 160mm surface mount gauge (optional square version 180mm x 180mm)
- Manual hand pump for reading
- Measures tank depths up to 8 metres with maximum capillary length of 30 metres
- Through tank top balance chamber with 1 or 1.5 inch BSP screw fitting
- Customised scales available on request



Overfill High Level Alarm System

Designed primarily for diesel, oil or water tanks

- Helps avoid liquid spillage with continuous tank monitoring
- Mains powered - simple installation
- Built-in sounder with mute function



Tank Monitoring System Pump Controller

Provides an effective control of two levels and is mostly used in diesel, oil or water storage tanks

- Surface mounted control box
- Two separate float switches for independent measurement
- Mains powered & with volt free changeover contacts
- Control for high level in two separate tanks or high & low level in a single tank

Tank Liquid Level Transmitter 1

- Low range pressure transmitter
- Measures hydrostatic head in liquid level tanks



Tank Liquid Level Transmitter 2

- Low range pressure transmitter
- Local LCD display for the measurement of hydrostatic head in liquid level tanks

Submersible Liquid Level Transmitter

- Measures head of liquid and converts into a 4 – 20mA output signal for level measurement
- IP68 sealed cable and suitable weights allow transmitter to be safely secured to tank bottom
- We recommend differential pressure transmitter systems for hermetically sealed (non vented) tanks, since this compensates for vacuum or pressure build up above liquid at the top of the tank



Vibrating Fork Level Switch

- Designed for use with liquids and some solid applications
- Combines electronic frequency and amplitude for outstanding performance, even in demanding applications
- Stainless steel body with 69mm – 3000mm probe length
- Wide variety of fittings available



Mechanical Flow Indicating Gauge

- Continuously monitors flow rate and with optional electrical switches can signal specified flow rate
- Uses a spring-loaded valve plate mechanism which allows high flow range (0 – 4 to 0 – 800 litres / minute)
- All metal construction with no need for preceding 'straight pipe run'
- 8mm – 200mm sizes with screwed or flanged connections acting as a non-return valve



Flow Sight Glass

- Uses a plain spout cast body ideal for checking liquid presence where there is intermittent flow, partial line fill or entrained air
- For vertical or horizontal line application
- Stainless steel or carbon steel body can be supplied with toughened soda lime glass or borosilicate window
- CE marked & PED compliant, with or without rotating indicator
- Options include flow switch, variable process connections and optional lining materials for corrosive applications





Test Series Gauge

- Available in 160mm, 250mm or 300mm diameter with instrument glass window
- 304 stainless steel case with brass wetted parts
- Standard accuracy class 0.25%
- 0.1% on 8 inch model only
- Direct mount bottom or back entry, knife edge pointer and anti-parallax mirror dial
- Supplied complete with calibration certificate



Digital Test Gauge

- Available in 100mm diameter dial with 4 digit display
- Stainless steel case, bezel, measuring element and wetted parts with plastic window
- Ranges from 0.5 to 400 Bar with 0.2% accuracy
- Direct mount bottom or back entry as standard with 1/4, 3/8 or 1/2 inch BSP (male) connections
- Options include battery or mains power supply, 4 – 20mA output, ATEX certification, panel or surface mounting & minimum / maximum pressure logging function



Deadweight Tester (Primary Reference Standard)

- Oil operated primary standard for accurate measurement of pressure
- Used to generate test pressure for calibration of numerous pressure instruments / hydrostatic tests
- Repeated stability and accuracy (0.015%) with stainless steel body
- Adaptor set includes 1/8, 1/4, 3/8 & 1/2 inch BSP fittings
- Supplied complete with calibration certificate



Hydraulic Comparator Pump Bench Mounted 1400 Bar

- For pressure generation when calibrating pressure gauges or transmitters against master test equipment
- Pressure connection of 3/8 inch BSP male with adaptors in brass of 1/8, 1/4, 3/8 & 1/2 inch BSP female
- Uses hydraulic oil with maximum generating pressure of 1400 Bar



Dry Well Temperature Calibrator

Portable temperature heat source for checking thermometer accuracy

- Small and lightweight heat source for checking accuracy of digital thermometers and temperature probes
- Temperature range of 33 – 300°C and stabilisation time of five minutes
- Various probe sizes available and easy to read digital display included (+ / - 0.5 to 1% accuracy)



Precision Thermometer

Allows comparison checking of calibration accuracy in other thermometers

- High accuracy PT100 sensor instrument
- Measures a large temperature range (-199.99 to +199.99°C)
- Easy read LCD display with +/- 0.05% accuracy
- Permanent probe allows high accuracy with generous length lead between probe and thermometer

Temperature & Humidity Data Loggers

PC programmable, easy to use IP67 portable data loggers for temperature and temperature/humidity recording with local display

Model TD temperature logger with LCD display & internal sensor

- Range -30 to +85°C with 10mm LCD display
- Accuracy +/- 0.5°C with alarm
- Memory 4000 readings
- Sample rate 0.1 to 255 minutes

Model TD1F temperature logger with LCD and internal / external sensor

- Temperature range -30 to +85 or +125°C
- Accuracy +/- 0.5°C with alarm
- Memory 2 x 2000 readings
- Sample rate 0.1 to 255 minutes

Model TDTH temperature & humidity logger with LCD and internal sensor

- Temperature range -30 to +85°C
- Humidity range 0-100% rh
- Accuracy +/- 0.5°C and +/-2%rh with alarm
- Memory 2 x 8000 readings
- Sample rate 0.1 to 255 minutes



Standard Chart Recorder

- Spring wound or battery powered chart recorder for recording temperature and pressure
- Stainless steel case and wetted parts with brass movement and plexiglass window
- Various dimension and scale options with 1/2 inch BSP or NPT connections
- Surface or panel mounting with a portable option (see below) and customised charts available



Portable Chart Recorder

- Mechanical and battery driven chart operates with 1, 2 & 3 pen recording for pressure and / or temperature
- Housed in a PELI case (impact resistant reinforced lightweight polyethylene, which is water and air tight)
- Temperature resistant between -23 and +99°C and simple to install and maintain
- Stainless steel wetted parts with polycarbonate window and 8 or 24 hour duration ability
- Supplied with 100 charts (either 223mm or 300mm diameter) and other options include varied BSP and NPT connections with mechanical wound spring or battery operated drive





Gate Valves

- Brass, stainless steel, bronze & cast iron
- 1/2 inch to 6 inch & DN50 to DN300 diameters, full bore
- Flanged, screwed & compression ends



Ball Valves

- One piece or three piece, two way & three way
- WRAS approved & gas approved options
- 1/4 inch to 4 inch screwed connections, reduced & full bore
- Connections threaded, flanged (T port & L port options)
- Brass, stainless steel, carbon steel, bronze, cast iron



Check Valves

- Designs: wafer, swing, spring, lift
- 3/8 inch to 12 inch
- Brass, stainless steel, bronze, cast iron



Globe Valves

- Stainless steel & bronze
- 1/2 inch to 2 inch diameters
- Screwed & flanged connections



Butterfly Valves

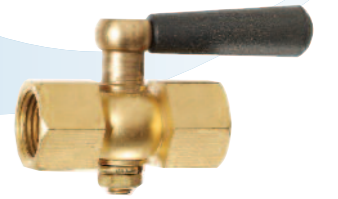
- Cast iron, ductile iron
- Wafer, lugged & tapped designs,
- Epoxy coat finish
- 316 stainless steel or plated ductile disc
- Size DN50 to DN300
- Optional WRAS approval
- Optional actuators available



Y Strainer

- Brass, stainless steel, bronze & cast iron
- Screwed connection
- Stainless steel mesh
- 1/4 inch to 4 inch diameters

Please note that the above information is a brief overview of the products available.
Not all materials and designs are available in all the sizes indicated.



Gauge Cock

- Cost effective method of isolating a pressure gauge
- Made of brass with 1/4, 3/8 or 1/2 inch BSP connections
- Maximum pressure 20 Bar and maximum temperature 60°C



Three-Piece Ball Valve

- For use in standard applications where full or reduced bore design is required (bespoke 'special build' options also available)
- Stainless steel body and mounting platform ensure valve integrity and ease of use
- Wide range of seat materials and connections
- Option of standard pressure rating or high pressure version (up to 345 Bar)



Needle Valve

- Stainless steel valves used for isolation of pressure gauges and regulation / throttling of flow within a pressure system
- T-Bar handle operation with pressure ratings of either 400 Bar or 700 Bar
- 1/8, 1/4, 3/8, 1/2, 3/4 or 1 inch BSP or NPT connections
- Seals available in PTFE or grafoil



2 Valve Manifold

- Designed in single block form with inlet and outlet ports combining isolation valve and vent / calibration valve
- Used on static pressure transmitters, switches or pressure gauges
- Stainless steel body and stem with 1/4, 3/8 and 1/2 inch connection
- Pressure rating of 400 Bar and degreased for oil applications
- Options include mounting bolts and monel or hastelloy body material



3 & 5 Valve Manifold

Specifically designed for differential pressure transmitters (compact design for use in limited space)

- 316 stainless steel body & PTFE packing material as standard - degreased for oil free applications
- 1/4 and 1/2 inch NPT connection with 1/4 inch NPT plug and optional drain valve
- Maximum pressure of 400 Bar
- Options include hastelloy or monel body material, graphite packing material and mounting bolts on request





Syphon

- Condenses steam and reduces process temperature prior to reaching a pressure gauge
- Mild steel, brass or stainless steel material with 'U' (swan neck) or 'Ring' (pig tail) design
- 1/4, 3/8 or 1/2 inch BSP connections available with male / male locking nuts
- Maximum pressure 40 Bar and maximum temperature for brass 200°C



Snubber

- Screw adjustment used to minimise pressure spikes
- Dampens the effect of pulsation
- Stainless steel construction with maximum pressure of 250 Bar
- 1/4, 3/8 or 1/2 inch BSP or NPT male connections
- Male / female adjustment screw protected with dust cap



No-Loss Connector

- 'Check valve' allows gauge to be safely removed without system pressure loss (ideal for sprinkler systems)
- Brass body and stainless steel spring
- 1/2 inch BSP connection with self-sealing thread
- Gauge connection of 3/8 inch (female) with maximum pressure of 26 Bar



Over Range Protector Valve

- Designed to protect an instrument or part of a pressure circuit from exposure to excessive pressure
- Valve automatically closes at a set pressure and re-opens once the pressure drops
- Body, diaphragm and poppet made from stainless steel with viton seals
- 1/4, 3/8 or 1/2 inch BSP or NPT process connections
- Low range (200 – 2500 mbar) or high range (25 – 400 Bar) options available

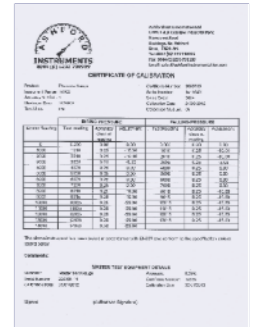


Rubber Gauge Cover

- Available in 50mm, 63mm & 100mm diameter designed to protect pressure gauges from damage when in the field
- Black supplied as standard – other colours on request

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 also available



'In House' Workshop Capability

- Calibration of pressure and temperature instrumentation
- Wide range of repairs to equipment possible
- Fitting of chemical seals

Logo Dials

- Allows personalisation of an installation, company name or logo on the dial face of our pressure gauges and thermometers at the point of manufacture
- Any colours and complexity of logo can be reproduced, as well as special dials with colour segments or markings
- Please ring us with your requirements, since in many instances, these can be applied free of charge



Standards and Compliances

Many of our products are compliant with the following standards:

Compliance to directives of Economic European Community

Compliance to ATEX 94/9/CE directive (EEC)

Compliance to 74-02 standard of 3 association (Sanitary Standards Symbol Administrative Council – USA)

Compliance to GOST standards (Russia)

Certification for the quality management system in compliance with ISO 9001

UDT pattern approval (Poland)

Compliance to FDA standards (USA)

Chinese Pattern Approval (China)

Compliance to CAN/CSA (Canada) and to UL (USA) standards



ashford instrumentation



'Measurably different'...



Innovative

Bespoke

Dependable

Understanding



ashford instrumentation

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