BOISWOOD

GAS AND LIQUID CONTROL TECHNOLOGIES

Pressure & Vacuum

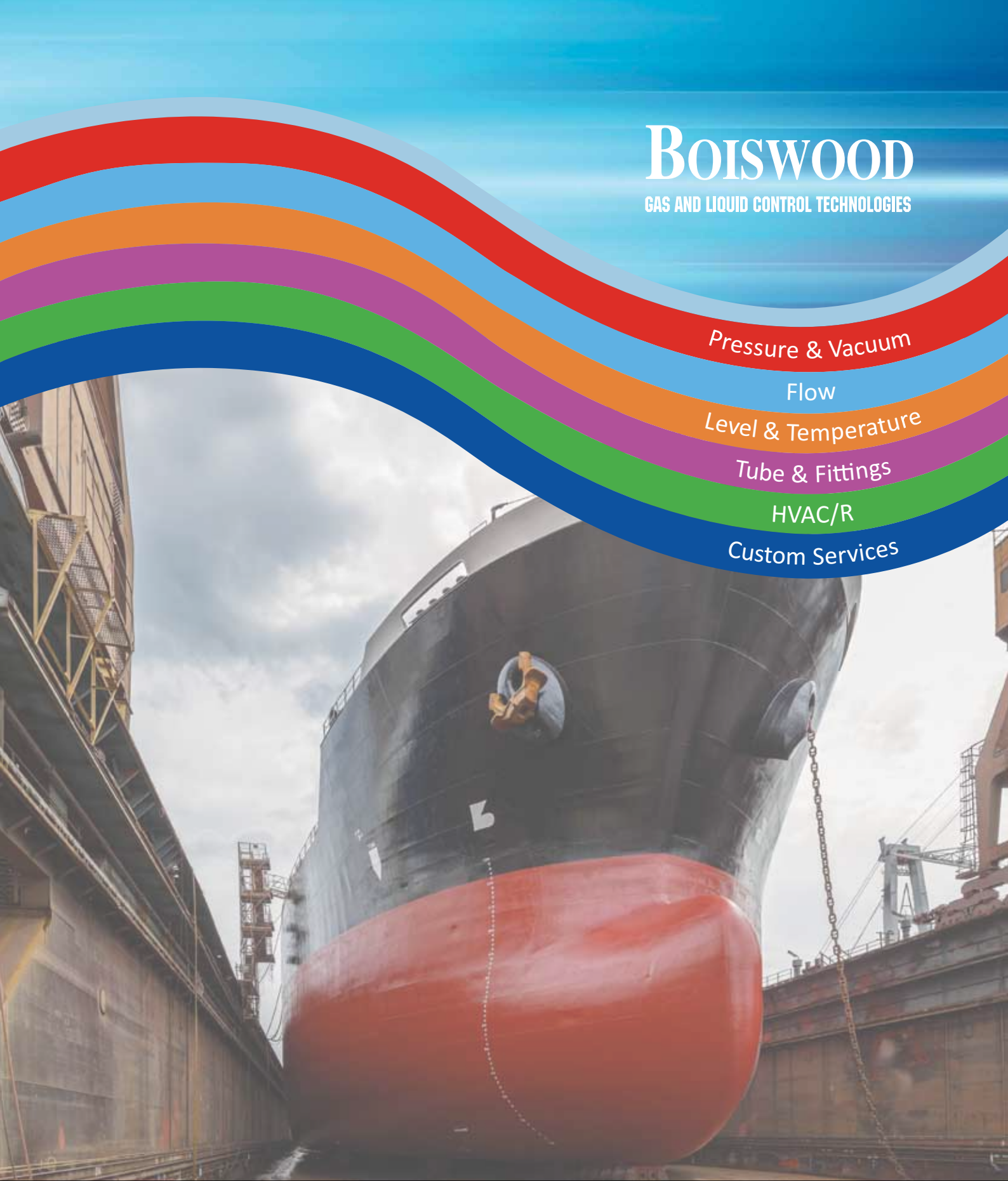
Flow

Level & Temperature

Tube & Fittings

HVAC/R

Custom Services



Marine & Defence

Products and Services Catalogue



WE'RE KNOWN FOR SELLING SOLUTIONS

Our journey started in 1989, when Boiswood was founded. As our knowledge and expertise grew, so did our vast range of products and services, and today, we are one of the country's most well respected and trusted suppliers of gas and liquid control technologies.

We are partnered with several high-quality, globally reputable manufacturers with a distinct range of products and services that offer unique features and benefits to EPC's, System Integrators, OEM's and End Users....our customers.

Our whole business culture centres around our genuine commitment to hands-on service and support, whenever and wherever this is required. We offer unparalleled advice and support, and our 'one stop shop' approach removes all the headache and hassle from our customers, ensuring you always get what you need on-time, on-budget and the perfect fit for your application.

We have over 30 years of successful experience in an extensive range of applications and processes within the markets we serve. Our visionary, technically astute and customer focused approach ensures we consistently add value. Working closely with our customers and supply partners ensures we stay up to date with the latest technologies, using our insight to facilitate the niche and specialist markets we serve.

You can rely on us to specify, supply and support all your gas and liquid control needs.

We have several renowned customers across the marine, shipbuilding and defence industries, and we've built a reputation for proven product solutions that stand the test of time, designed for even the harshest of environments.

With top notch performance crucial to the safety and success of these industries, you can count on us to offer the highest standards of certification and approvals for our products.

BOW-TO-STERN SOLUTIONS

Working closely with world-leading manufacturers, Boiswood supplies numerous instruments from our pressure, flow, level & temperature range covering almost every principle of operation available.
We are experienced in applications such as ballast water systems, bilge storage tanks, engine cooling systems, waste oil tanks and main fuel lines.
Curious? Call us.

WE'RE TRUSTED BY...

BAE SYSTEMS

condor FERRIES

TPG Maritime

P&O FERRIES

I.M.E GROUP LTD

A&P

babcock

Product Solutions

UV1.2K SERIES
Back Pressure/Overflow Valves

MANKENBERG

The UV1.2K is a piston-sensed self-acting back pressure regulator, offering simple and accurate pressure control in an easy-to-maintain design.

TECHNICAL DATA:

DN25 to DN200 Connections • 2 – 40 BAR Inlet Pressure • Up to +300°C Temperature • For use on Liquids and Gases • 6 to 125 m³/h KVS Values • Various Seal Materials suitable for any media

FEATURES & BENEFITS:

Completely customisable according to your requirements • Extremely long life span • Easy to maintain

EB1.12 SERIES
Bleeding and Venting Valves

MANKENBERG

The EB1.12 is a compact and continuous bleeding and venting valve that removes any air or gases from systems or pipelines, without requiring an external energy input.

TECHNICAL DATA:

DN25 to DN100 or G1/2 to G2 Connections • 16 BAR Nominal Pressure • Up to +130°C Temperature • For Use on Liquids • Up to 248 Nm³/h Flow Rates

FEATURES & BENEFITS:

Fast Delivery • Huge Global Install Base • DVWG and FDA Certified • Long life span • Easy to maintain • Resistant to pressure and corrosion • Reliable functionality • Suitable for Ozone

LS-270-E SERIES
Bilge Water Level Switches

Gems Sensors & Controls

The LS-270-E bilge water level switches have been designed specifically for general naval and industrial applications, utilised for low level alarms.

TECHNICAL DATA:

Stainless Steel Stem Material • Buna N Float Material • 10 BAR Max. Pressure • +80°C Max. Temperature • IP67 as standard

FEATURES & BENEFITS:

Germanischer Lloyd Approved • Cost-Effective • Fast Delivery • Various civil, military and naval approvals on hand

5000 SERIES
Low Pressure Transducers

The 5000 series features a sturdy diaphragm that detects minute pressure variations, while withstanding large pressure spikes. The unit is designed to operate in the most demanding applications.

TECHNICAL DATA:

318 Duplex Stainless Steel Case Construction • Ranges from 25 to 1,000 mBAR • Current and Voltage Outputs • Broad Range of Pressure Connections and Electrical Terminations • ATEX Zenier or Galvanic Barriers • -40 to +100°C Temperature Ranges

FEATURES & BENEFITS:

Submersible and General Purpose models available • Designed to withstand Sea Water • High Accuracy • High Proof Pressures • Detects Minute Pressure Changes

LS-800 SERIES
Multiple Point Level Sensors

The LS-800 is a general purpose multiple point level switch designed specifically for water and oil applications.

TECHNICAL DATA:

Stainless Steel or Brass Mountings • 1 to 6 Actuation Levels • Lengths to over 3.4M • Range of connections and floats

FEATURES & BENEFITS:

Fully Customisable • CSA and UL Approved

SURESITE SERIES
Visual Level Indicators

The SureSite visual level indicators are available in standard and miniature sizes, as well as LED and high performance versions for the most demanding marine applications.

TECHNICAL DATA:

Customised lengths up to 6.1M • Stainless Steel Construction • 24, 48 or 290 BAR Versions • Up to +399°C Temperature • Range of connections and accessories

FEATURES & BENEFITS:

LED Version Available • Built to your specifications

Product Solutions

CAP-300 SERIES
Capacitive Level Sensors

Gems Sensors & Controls

The CAP-300 capacitive level sensor is one of our most durable and reliable point level sensors, designed as a versatile OEM solution for specialty and off-highway vehicles

TECHNICAL DATA:

Pre-set based on required actuation condition (Wet/Dry Sink/Source) • Brass or 316L Stainless Steel • Range of Port Threads and Electrical Connections • -40°C to +125°C Temperature • Up to 100 PSIG Operating Pressure • IP67 Rated Seal Design

FEATURES & BENEFITS:

Cost-Effective Solution • Tolerates Coolant Coating • Developed for rugged aqueous applications • Zero Maintenance • Mount in Any Position • Non-Contact Versions Available

MIM SERIES
Magnetic Inductive Flowmeters

KOBOLD

Pg. 9

The MIM series was developed for measuring and monitoring small to medium sized flow of conductive liquids in pipelines.

TECHNICAL DATA:

0.03 to 3 up to 1.5 to 350 L/min (Liquids) • 16 BAR Nominal Pressure • Up to +140°C Temperature • 1/2” to 2” Connections (NPT or BSPP) • Stainless Steel Construction • 2 x Analogue, Pulse, Frequency, Alarm or IO-Link • 1 x Control Input

FEATURES & BENEFITS:

Rotatable IFT Display (Non-misting/condensation) • Compact design • Integrated PT1000 optional • Bidirectional measurement • Dosing function and grand totaliser options available

XLS-1 SERIES
Ultrasonic Level Sensors

Gems Sensors & Controls

The XLS-1 ultrasonic level sensors are compatible with water and hydrocarbon based liquids, and are perfect for applications where condensation may affect other sensing technologies.

TECHNICAL DATA:

Pre-set based on required actuation condition (Wet/Dry Sink/Source) • 316L Stainless Steel Housing • Range of Port Threads and Electrical Connections • -40°C to +125°C Temperature • Up to 250 PSIG Operating Pressure • Range of Seal Materials

FEATURES & BENEFITS:

Ignores Condensation on Sensor • Zero Maintenance • Solid-State with No-Moving-Parts • Will Not Sense Foam as Liquid • Microcontroller-Based Electronics

Alloy 400/405 & C-276

We have a complete catalogue of Monel® and Hastelloy® C-276 instrumentation valves and fittings, readily available on a “Quick Ship” program. The range includes twin ferrule compression fittings, pipe fittings and a vast range of valves for all purposes.

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DUOLOK® & TRUFIT® FITTINGS

100 & 600 SERIES NEEDLE VALVES

LN LOCKED BONNET NEEDLE VALVES

CH HIGH PRESSURE CHECK VALVES

4000 BALL POPPET CHECK VALVES

EB ENCAPSULATED BALL VALVES

FB FLOATING BALL VALVES

QC QUICK CONNECTS

FAST DELIVERY 1

Lead times as low as 1 working week for standard product selections.

SUPERIOR QUALITY 2

Products finished to tight tolerances and high quality control standards.

BROAD RANGE 3

A broad selection of products in standard fractional & metric sizes.

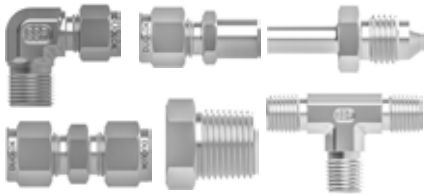
Product Solutions

PRESSURE GAUGES
Including Mechanical and Digital Pressure Gauges and Indicators

INSTRUMENTATION VALVES
Including Ball, Needle, Plug, Check. Toggle, Relief and Quick Connects

MANIFOLD VALVES
Including Block, Bleed, Vent and Gauge Manifolds

CONTROL VALVES
A range of pneumatic and electric Globe, Bellows and Control Valves



INSTRUMENTATION FITTINGS
Including Twin Ferrule Compression Tube, Pipe and Weld Fittings

HIGH PURITY FITTINGS
Including FaceSeal™, Microweld and PFA/PTFE Fittings

FILTERS, STRAINERS & SEPARATORS
A range of filters, strainers and separators for process and vacuum

BURSTING DISKS
Including forward and reverse acting bursting disks and holders

TUBING, PIPING AND HOSES
A selection of metal tubing, hoses and PTFE/PFA piping.

PRESSURE SWITCHES
Including Mechanical and Digital Pressure Switches and Sensors

SOLENOID VALVES
Including miniature, latching and cryogenic versions.

WIRES & SEALS
Including feedthroughs, sealing glands and packing glands.

CUSTOM SOLUTIONS
Boiswood have been involved in several custom build projects to meet our customers' specific requirements, please visit our website to read our application successes or feel free to ask for more details.

Many of our customers call upon us for subassembly, service, repair and testing solutions from within our manufacturer-certified headquarters.

Value Added Services

In-House Service Centre
We can offer manufacturer certified in-house evaluation, repair, testing, servicing and assembly of our products from within our Boiswood HQ.

Local Technical Support
We offer a technical helpline from our HQ as well as having a "man on the ground" for on-site support whenever and wherever this is required.

Fast Turnaround
Our local stocks allow us to quickly respond to requirements. We hold a vast range of products in stock so that they're always readily available.

Training Services
We provide a range of educational classes and training seminars that can be delivered from Boiswood HQ or on-site.

Design Services
Over the years we have been involved in many bespoke product designs and system build solutions for our customer base.

Response Times
We endeavour to provide all our customers with unrivalled service with quick responses to both technical and commercial queries.

Products in Focus

Founded in 1980 - our partner, Kobold, is today well-known as an internationally leading manufacturer in measurement and control technology.

Kobold's patentable technologies, high quality products and dedicated customer service has helped to build offices and production sites in more than 30 countries across the world. Kobold is dedicated to developing, manufacturing and delivering the best devices to monitor, measure and control physical parameters like flow, pressure, level and temperature.

Our devices are used in virtually all sectors of industry, however the variety of measurement principles available and the rapid adaptation to technical advances are what ensure that the highly demanding application-specific requirements of the Marine & Defence industries are met in full.

The strong growth of our partnership is based on the ongoing widening of the product range and our engineers, technicians and administrative staff are always happy to assist in the sizing, selection and specification of solutions for your unique application.

Commerical & Navy Marine Solutions

At Boiswood, we supply a vast range of high-quality product solutions to a selection of familiar harsh applications, including:

- Lube and Fuel Oils Tanks
- Hydraulic Systems
- Coolant, Ballast, Storage and Cargo Tanks
- Gray Water and Potable Water Tanks
- Overfill Alarm Monitoring
- Sump Tanks
- Waste Oil and Oily Waste Holding Tanks
- Expansion Tanks
- Feed Water Systems
- Bilges and Voids

ACS CONDUCTIVITY MEASURING CELLS

ACM CONDUCTIVITY TRANSMITTERS

DUK ULTRASONIC FLOWMETERS

NMT MAGNETOSTRICTIVE LEVEL METERS

NBK MINI BYPASS LEVEL INDICATORS

DVZ VORTEX FLOWMETERS

NWS LIQUID LEVEL SWITCHES

DON OVAL GEAR FLOWMETERS

SMV VARIABLE AREA FLOW SWITCHES

NGR GUIDED WAVE RADER TRANSMITTERS

PAD DIFFERENTIAL PRESSURE TRANSMITTERS

KBL ELECTRONIC DATA LOGGERS

TWL THERMOWELLS

ATA TURBIDITY MEASURING SYSTEMS

BGN VARIABLE AREA FLOWMETERS

DWF DENSITY METERS

Products in Focus

Choices can become overwhelming when selecting a valve for an instrumentation system. To name a few, there are; check valves, excess flow valves, needle valves, ball valves, relief valves, control valves, diaphragm and bellows valves. All of these are available in many configurations, materials, sizes and actuation types, making thousands of possible combinations.

Have you matched the valve type to its function?

Matching the required function to the valve type is the vital first step in the safe selection process. It can be detrimental for systems and end users if the correct valve is not specified. For example, if a check valve is not installed downstream of a critical pressure regulator or control valve, a burst of back pressure could cause major damage to the equipment.

Valve packing prevents the process media from escaping into the atmosphere where the valve body meets the stem. The cylindrical stem is surrounded by a packing material. Valves that require packing must be replaced or serviced regularly, however some valves last longer than others depending on the seal material and process conditions. Always ensure you correctly choose a seal material by checking the chemical compatibility with your media.

On the contrary, the "packless" **diaphragm valve** provides swift shut-off and rigorous actuation speeds. Usually, diaphragm valves are specified in high-purity applications in the pharmaceutical and semiconductor industries. Each valve holds a thin film plastic or metallic diaphragm ensuring a leak-tight seal.

Similarly, there is also the "packless" **bellows valve**. This is a great choice when an atmospheric seal is vital and access for maintenance is restricted. You would often find these valves operating in nuclear power plants. The inlet is entirely sealed by a metal bellows that moves up and down, fixed to a non-rotating stem.

Is directional control required?

Check valves or 3-way ball valves should be considered for directional control of flow. Within check valves, a spring-loaded poppet is opened by the upstream fluid force, allowing flow through. In the event of a back pressure build up (increase in downstream pressure), the reverse flow is stopped by the poppet being forced back into the seat.

In many **3-way ball valves**, the media enters through a single inlet and is directed to the outlets based on the selected flow path. Common flow paths include quarter turn switching, tee flow on/off and tee flow switching.

Excess flow valves stop the uncontrolled release of expensive or hazardous media into the atmosphere in the event of downstream equipment failure. Our excess flow valves utilise magnets to operate a reed switch and can be easily adjusted to the required flow set point. Utilising magnets to operate the unit allows for a completely unimpeded right-angle flow.

Is flow control essential?

Flow control valves have a rotating handle that allows the operator to control the system flow rate. The operator can adjust the valve to accurately hold at the desired flow rate. Needle, metering and plug valves are all frequently used for reliable flow control in systems.

Needle valves provide exceptional flow control and leak-tight shut-off characteristics. They have a long stem and are available with a few different highly engineered stem tips, including metering, regulating and shut-off (vee type).

Our needle valves are often used for severe service in harsh oil and gas, chemical and petrochemical and power applications. Depending on construction materials and operating pressures, these can also be used for cryogenic service.

Fine metering valves should be considered for the most precise flow control. They have a thin stem that lowers through a narrow channel, making it perfect for controlling fine graduations of flow. These are typically found in laboratory environments.

Stem Type
1. V-Type Shutoff Stem
2. Metering Stem
3. Soft Seal Stem (PCTFE)
4. Regulating Stem

Something more standard?

Quarter-turn plug valves and standard **2-way ball valves** are both economically priced utility valves. Applications with either simple on/off functionality or pressure throttling commonly will use these valves.

Pressure relief valves can be found in almost any application and are used to protect sensitive equipment. These can either vent to atmosphere or be piped away safely.

Still unsure what you need?

Once the valve type has been matched to function, you are on the right path in the valve selection process. However, many details remain.

If you need advice and guidance on selecting the right valve, contact us today and we'd be more than happy to help.

We have over 30 years experience with sizing, selection and specifying instrumentation and control valves, so you can rely on us to support you every step of the way.

Products in Action

Calculation Tools

Our calculation tools allow you to correctly select the required flow coefficient (Cv) value for your pressure reducing or back pressure regulator. These software tools will utilise your process data to calculate the Cv so that you can achieve your required flow rate. Basic operating parameters you will need to have on hand are as follows:

- Inlet/Supply Pressure
- Outlet/Control Pressure
- Flow Rate (Maximum in SCFM)
- Media
- Temperature

GO Regulator Calculation Tool

From entering the above required information, this calculation tool will produce a recommend Cv value (that must be doubled as a safety factor) for your pressure.

The calculation software can also do the reverse of this – allowing you to use a pre-selected Cv value to calculate your maximum possible flow rate.

ValvePilot by Mankenberg

This calculation and design software calculates KV/ KVS values, as well as indicating noise pressure level, nominal diameter, reduction ratio and velocity limits.

The software can also provide warnings about potential hazards such as cavitation, flashing or excess noise pressure levels. You will also receive recommends surrounding pipe size extensions.

Products in Action

Assembly & Testing
Our stocks allow us to assemble and test a variety of pressure regulators on a next-day delivery services.

Service & Repair
We can offer manufacturer certified service, repair and certification for our range of pressure regulators.

Subassembly
We can take special requests for component subassembly and control panel design solutions according to your requirements.

Pressure Regulators and Valve Selection Seminar

Selecting the correct pressure regulators and instrumentation valves to suit your needs can be a complex exercise with several factors to consider. Our seminar has been developed to help you understand more about our products and during this you will learn more about:

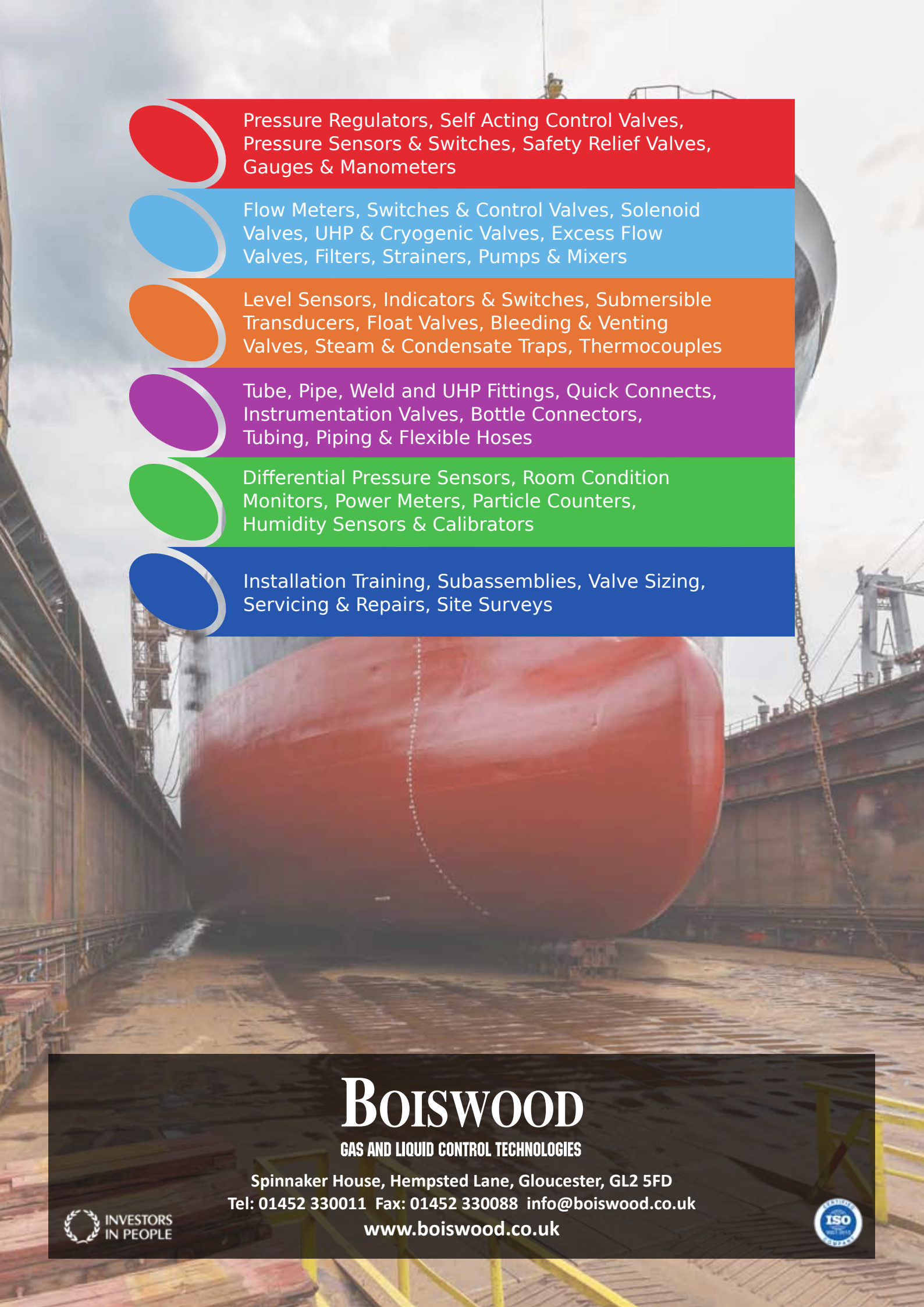
- The basic functions of pressure regulators and valves
- Analysis of different models and types
- How to correctly size and specify units
- Identifying problems and ways to rectify performance issues
- Build and repair training exercises

Tube Fittings Safe Installation Course

This challenging course will explore the many benefits of our tube fittings range and focuses on each aspect needed to achieve right-first-time installations. You will typically learn more about:

- How the Tube Fitting works
- Hands-on Tube Fitting Installation Exercises
- Typical Health & Safety Considerations
- How to Avoid Installation Problems
- Selection and Correct Handling of Tubing
- Tube Burst and Bending Exercises (Practical and Theoretical Examinations)





Pressure Regulators, Self Acting Control Valves, Pressure Sensors & Switches, Safety Relief Valves, Gauges & Manometers

Flow Meters, Switches & Control Valves, Solenoid Valves, UHP & Cryogenic Valves, Excess Flow Valves, Filters, Strainers, Pumps & Mixers

Level Sensors, Indicators & Switches, Submersible Transducers, Float Valves, Bleeding & Venting Valves, Steam & Condensate Traps, Thermocouples

Tube, Pipe, Weld and UHP Fittings, Quick Connects, Instrumentation Valves, Bottle Connectors, Tubing, Piping & Flexible Hoses

Differential Pressure Sensors, Room Condition Monitors, Power Meters, Particle Counters, Humidity Sensors & Calibrators

Installation Training, Subassemblies, Valve Sizing, Servicing & Repairs, Site Surveys

BOISWOOD

GAS AND LIQUID CONTROL TECHNOLOGIES

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INVESTORS IN PEOPLE

ISO