

BOISWOOD

GAS AND LIQUID CONTROL TECHNOLOGIES

Pressure & Vacuum

Flow

Level & Temperature

Tube & Fittings

HVAC/R

Custom Services

Industrial & Speciality Gases

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.

Providing integral products and components to the industrial gases sector since 1989, we have served customers including gas refineries for helium production, multinational gas companies, regional production and bottling plants of bulk gases.

As a result, we fully understand that reliability, durability and ease of operation are crucial to the safe operation of the assets and for the efficient usage of hydrocarbon resources around the world.

FROM POTENTIAL TO PRODUCTION

With this industry involving high pressure environments, it is imperative that the monitoring

of industrial gases pressure and flow is accurate and dependable, which is why we partner with global leaders to offer unbeatable quality.

The products we supply are expertly designed and engineered with a keen eye on quality and ease of maintenance in the field, as we understand keeping downtime low is of paramount importance in these industries. We offer a broad range of pressure regulators, filters, heated/vaporising regulators, auto changeover manifolds, self-acting control valves, flow meters and gas mixers that can all be used to cover a wide range of applications.

WE'RE TRUSTED BY...



Product Solutions

PR1 SERIES

Instrumentation Pressure Regulators



GO REGULATOR

In Stock

The PR1 Series is a versatile pressure reducing regulator designed to fulfil a wide range of needs in instrumentation sample systems and other applications.

TECHNICAL DATA:

Gas or Liquid Service • Inlet Pressures up to 6,000 PSIG • Outlet Pressures from 10 to 750 PSIG • -40°C to +260°C Temperature Ranges • Five Seat Material Options • 20 Micron Inlet Filter • Range of CV values up to 0.50

FEATURES & BENEFITS:

Range of standard configurations in stock • Easily field maintainable • Long-life span • Training Services available

CYL-20 SERIES

Dual Stage Pressure Regulators



GO REGULATOR

In Stock

The CYL-20 Series offers precision pressure control with less than 0.01% outlet pressure change with varying inlet pressures, and is designed for use in gas calibration systems and cylinder applications.

TECHNICAL DATA:

Gas or Liquid Service • Inlet Pressures up to 6,000 PSIG • Outlet Pressures from 10 to 500 PSIG • -40°C to +260°C Temperature Ranges • Five Seat Material Options • 20 Micron Inlet Filter • Range of CV values up to 0.50

FEATURES & BENEFITS:

Range of standard configurations in stock • Easily field maintainable • Long-life span • Training Services available

HPR2 SERIES

Heated Pressure Regulators



GO REGULATOR

The HPR2 series electrically or steam heated pressure regulator is designed to supply heat to samples entering instrumentation systems.

TECHNICAL DATA:

Gas or Liquid Service • Inlet Pressures up to 6,000 PSIG • Outlet Pressures from 10 to 500 PSIG • Five seat material options • Range of CV values up to 0.20 • Available in 120 or 240 VAC v CSA and ATEX Approved

FEATURES & BENEFITS:

Unique spiral wrapped heat exchange element provides up to 100 square inches of transfer area • Modular pressure control and heat exchanger assemblies for easy maintenance

3100 SERIES

Thin Film Pressure Transducers



The 3100 Series is ideal for OEMs that require consistent high levels of performance, reliability and stability utilising the sputtered thin film technology.

TECHNICAL DATA:

Pressure Ranges from 0 – 7 BAR up to 2,200 BAR • High Proof Pressures • Broad Choice of Outputs and Pressure Ports • Pressure and Temperature Measurement Combination • RoHS Compliant • From -40 to +125°C Temperature Ranges

FEATURES & BENEFITS:

Unbeatable Price/Performance Ratio • Compact Design • OEM Discount Available

PAD SERIES

Differential Pressure Transmitters



The PAD series is a micro-processor based high performance transmitter, with flexible calibration and output configurations.

TECHNICAL DATA:

Up to 413.7 BAR Measuring Range • 310 BAR Max. Static Pressure • Up to +120°C Temperature • Various Output and Connection options • Differential, Gauge or Absolute pressure types • $\pm 0.075\%$ High Accuracy

FEATURES & BENEFITS:

Digital communication with HART® Protocol • ATEX Version Available

PAS SERIES

Standard Pressure Transmitters



The PAS series is available as a piezo-resistive pressure transmitter capable of measuring gauge and absolute pressures.

TECHNICAL DATA:

Up to 600 BAR Measuring Range • Up to +120°C Temperature Range • Various output and connection options • Gauge or Absolute pressure types • $\pm 0.075\%$ High Accuracy

FEATURES & BENEFITS:

Digital communication with HART® Protocol • ATEX Version Available • Self-diagnostic function (sensor, memory A/D converter, power)

Product Solutions

S75 SERIES

Constant Flow Regulators



★ ROTAREX
★ VALVES • FITTINGS • REGULATORS

The S75 series constant flow regulator was designed for calibration applications where predetermined pressure and adjustable flow are required, and for portable cylinder use.

TECHNICAL DATA:

Inlet Pressure up to 200 BAR • Outlet Pressure up to 3.5 BAR • 0.3 – 15 LPM Flow Selector (3 different max. outlets) • Rear inlet connection • FPM or EPDM O-Rings • Nickel Plated Brass or Stainless Steel Materials

FEATURES & BENEFITS:

Piston technology allows having a very stable flow outlet pressure • Equipped with a flow selector (10 positions) • Compact, lightweight design

LPH SERIES

Non-Adjustable Flow Monitors



ChemTec

The LPH series non-adjustable flow monitor provides a cost-effective solution for all applications.

TECHNICAL DATA:

Available from 50 up to 45,300 SCC/M (Air) or 1 to 2,200 ML/M (Water) • 1/8" – 1/4" FNPT Ports (as Standard) • Stainless Steel, Brass, Acrylic or Teflon® Construction • Electrical Conduit Optional • Range of Switch Options

FEATURES & BENEFITS:

Compact Design • Economical Pricing (OEM) • Close On/Off Differential • No Seals Required • Visual Indication (with Acrylic model) • In-line vertical plumbing

UNIFLUX SERIES

Variable Area Flowmeters



INFLUX

The Uniflux direct-reading variable area flowmeters combine versatility, practicality and accuracy for the measurement of gas and liquid flow rates.

TECHNICAL DATA:

5 cc/min up to 100 L/min (Air) • Scaled for many different media options • Up to 20 BARG Pressure • Class 2.5 VDI/VDE Accuracy • -15°C to +120°C Temperature • Optional 4 – 20 mA Transmitter • Optional Integral Needle Valve • Brass or Stainless Steel

FEATURES & BENEFITS:

Panel mounting as standard • In-line or rear facing connections • Standard scales available for fast delivery • Cost-effective solution

DM505 SERIES

Universal Process Pressure Regulators



MANKENBERG

The DM505 Series is a self-acting pressure reducer offering simple and accurate control, whilst being extremely easy to install and maintain.

TECHNICAL DATA:

Gas and Liquid Service • Up to 3,600 PSIG Inlet Pressure • Adjustable Outlet Pressures of up to 290 PSIG and down as low as 0.07 PSIG • Operating Temperatures from -35°C to +130°C

FEATURES & BENEFITS:

Fast Delivery • Fully Customisable • Ease of Maintenance • Long Life Span • Precise Control Ranges • Adjusting Screw Externally Visible • BGV Compliant for Combustible and Aggressive Media

DM762 SERIES

Millibar Control Valves



MANKENBERG

The DM762 pressure reducing valve is a diaphragm-controlled spring-load proportional control valve, for low outlet pressures and large volumes, perfect for tank blanketing applications.

TECHNICAL DATA:

Gas and Liquid Service • Up to 16 BAR Inlet Pressure • Control ranges from 0.002 – 0.52 BAR • Sizes from DN15-50 and G1/2-2 • KVS Values from 0.2 – 28 m³/h • Temperatures up to +130°C • ATEX Version Available

FEATURES & BENEFITS:

Long Operational Lifespan • Highly Accurate Control • Tight Valve Closure at Low Pressures • Easy to Clean • Minor Control Deviation • BGV Compliant for Combustible and Dangerous Media

DM555 SERIES

Universal Pressure Reducing Valves



MANKENBERG

The DM555 series is a self-acting pressure reducing valve, with a modular spring-loaded design for a universal range of applications where small to medium flow rates are required.

TECHNICAL DATA:

DN15 to DN50 Connections • Up to 40 BAR Inlet Pressure • 0.5 to 16 BAR Outlet Ranges • 1.3 to 7.5 m³/h KVS Values • Up to +130°C Temperature • For Liquids and Gases • Available in BSPP or Flanged Connections

FEATURES & BENEFITS:

Modular construction to EN or ASME Compliance • Long Operational Lifespan • Easy to Adapt Connections • Fast Delivery • Non-rising adjusting screw • Corrosion resistant materials

Product Solutions

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

AS2 SERIES

Gas and Liquid Separators



MANKENBERG

The AS2 series centrifugal separators use the cyclone principle to automatically separate liquids, solids and steam from gas flows whilst the system is pressurised.

TECHNICAL DATA:

DN15 to DN50 or G1/2 to G2" Connections • 16 BAR Nominal Pressure • 0 – 13 BAR Operating Pressures • Up to 1,200 L/hr Collection Efficiency • Up to +190°C Temperature • For Gases and Steam

FEATURES & BENEFITS:

Inline Design with Drain Outlet • Built-In Steam Trap • Compact and Lightweight Design • Corrosion Resistant Stainless Steel • Up to 99% Separation Performance • Suitable for Vacuum Systems

RP814 SERIES

Pilot Operated Pressure Reducing Valves



MANKENBERG

The RP814 pressure reducing valves are pilot-controlled control valves of tubular design.

TECHNICAL DATA:

DN100 to DN800 Connections • 16 to 25 BAR Nominal Pressure • Up to +130°C Temperature • 60 to 2,100 m³/h KVS Values • Min. 2 BAR Differential Pressure • Up to 25 BAR Inlet Pressure • 1 to 20 BAR Outlet Pressures • For Use on Liquids and Gases

FEATURES & BENEFITS:

Long operational life span • Very high control accuracy without auxiliary energy • Optimal control behaviour using throttle units • Compact design • Special designs for extreme applications

UNIVERS 1200 SERIES Cryogenic Globe Valves



STÖHR



The Univers 1200 is a high quality stainless steel valve designed for gaseous and liquid media. Straight or angle configuration is available with a wide range of end connections suited for your application.

TECHNICAL DATA:

Available in Manual, Pneumatic and Electric versions • -269°C to +50°C Operating Temperature Range • Up to 40 BAR Nominal Pressure • Available in DN10 – DN300 • Variety of service fluids • Position Indicators, IP Regulators and Limit Switches Optional

FEATURES & BENEFITS:

Stainless Steel bellow allows for a long life span • High leak-tightness to atmosphere • Valve body machined from one piece of stainless steel • Fully Customisable • Check Valve and Filter Versions Available

STICKS 900 SERIES Cryogenic Globe Valves



STÖHR



The Sticks 900 is a straight or angle valve for vacuum insulated cryogenic systems.

TECHNICAL DATA:

Available in Manual, Pneumatic, Control, Regulating and Filter versions • -269°C to +50°C Operating Temperature Range • Position Indicators, IP Regulators and Limit Switches Optional • 25 - 45 BAR Nominal Pressure • Available in DN10 – DN50

FEATURES & BENEFITS:

Stainless Steel bellow allows for a long life span • High leak-tightness to atmosphere • Valve body machined from one piece of stainless steel • Fully Customisable • Filter Version Available

MAGROS 1500 SERIES Cryogenic Check Valves



STÖHR



The Magros 1500 is a reliable and high-quality springless non-return valve made from stainless steel for gaseous and liquid media for cryogenic systems with low pressure drop in an open position.

TECHNICAL DATA:

-269°C to +50°C Operating Temperature Range • ≤0.03 BAR Minimum Opening Pressure • Metal or Soft Seal • 40 BAR Nominal Pressure • Available in DN6 – DN100

FEATURES & BENEFITS:

Very low opening pressure • Valve body machined from one piece of stainless steel

500 SERIES Safety Relief Valves



The 500 series threaded and flanged safety relief valves were designed for process and thermal expansion applications.

TECHNICAL DATA:

Up to 300 BAR Set Pressure • Available in Carbon Steel, Stainless Steel or Brass • DN08 to DN50 Connections • Plug Tight With/Without Lever Design • Range of soft seat options suitable for any media

FEATURES & BENEFITS:

Fast Delivery • Available with PTFE Internal Parts or Electropolishing • Special designs available • ATEX and PED Approved • Technical/Quality File provided Free of Charge with each valve

CT76 SERIES Modular Systems



GO REGULATOR



The CT76 series modular platform, combined with diaphragm valve technology, provides a low dead-volume and compact design system, fully customised according to your requirements.

TECHNICAL DATA:

Completely bespoke designs according to your requirements • Utilises our full range of valves and fittings • 0.231cc very low internal volume • No Dynamic O-rings • Pressures from Vacuum to 500 PSIG • Wide choice of materials for virtually all applications

FEATURES & BENEFITS:

Drop and Drop Microsoft Visio Design Tool • Surface Mount ANSI/ISA-76 Compliant • Metal-to-Metal Seals to Prevent Leakage • Stacked Diaphragms for Extended Service Life

GAS MIXERS Standard and Bespoke Gas Mixers



LT GASESTECHNIK
beyond standards



Our range of over 72 different standardised serial gas mixers including associated process control and analysis technology. In addition to these, we can provide completely customised solutions.

TECHNICAL DATA:

From 15 up to 10,000 Nm³/h Gas Mixture Performance • Up to 25 BAR Working Pressure • 2 to 4 Gases • From -40 to +60°C Temperature Ranges • Down to ±0.2% Accuracy • Custom Solutions on Request

FEATURES & BENEFITS:

Custom Solutions on Request

Products in Focus



PRESSURE GAUGES

Including Mechanical and Digital Pressure Gauges and Indicators



INSTRUMENTATION VALVES

Including Ball, Needle, Plug, Check, Toggle, Relief and Quick Connects



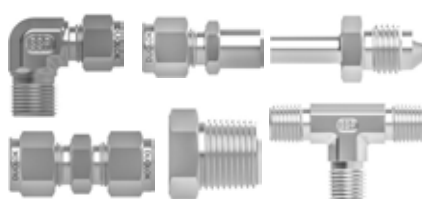
MANIFOLD VALVES

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



LT GASETECHNIK
beyond standards

Gas Mixers

Our partner, L+T Gasetechnik, are designers and manufacturers of high-performance gas installations, gas mixers and customised control solutions. From concept to commissioning, we supply systems and components for a wide variety of gas engineering applications.

We have 72 different standardised serial gas mixers for flammable or non-flammable, corrosive or toxic gases, including associated process control and analysis technology. In addition to these, we can provide completed customised solutions built for your application.



Model	Smart	Comfort	Advanced
Max. Gas Mixture Performance	15 Nm ³ /h 50 Nm ³ /h 100 Nm ³ /h	15 Nm ³ /h, 25 Nm ³ /h 50 Nm ³ /h, 100 Nm ³ /h 200 Nm ³ /h, 300 Nm ³ /h, 500 Nm ³ /h, 1,000 Nm ³ /h	Customer Specified Up to 10,000 Nm ³ /h Possible
Pressure Rating	PN10	PN25	PN10 (Higher Options Available)
Max. Amount of Gases	2	2 or 3	Typically 2 or 4 (More Available)
Types of Gases	Technical Gases, Flammable and Non-Flammable	Technical Gases, Flammable and Non-Flammable	Technical Gases, Flammable and Non-Flammable, Toxic and Corrosive
Operating Temperatures	From -20 to +50°C	From -40 to +60°C	From 0 to +55°C (-10 to +60°C Optional)
Suitability of Pressurised Metallic Components for Low Temperatures	Subzero Toughness	Down to -196°C	Subzero Toughness
If Gas Mixer is Designed with Buffer Vessel	Stainless Steel, 10 BARG, Synchronised Filling with Pressure Switch	Stainless Steel, 25 BARG, Synchronised Filling with Pressure Switch	Buffer Vessel is Not Required Performance acc. to Withdrawal by Mass Flow Controller (MFC)
Gas Mixer Setup	Static Gas Mixer, Setting via Metering Valves, With Data Reading via Pressure Gauge and Flow Meter	Static Gas Mixer, Setting via Metering Valves, With Data Reading via Pressure Gauge and Flow Meter	Dynamic Gas Mixer, Setting Electronically and Reproducible via Local Operating Unit and Data Transfer from Central Control System, Automatic Compensation of Pressure and Temperature Changes
Accuracy	±0.5%	±0.5%	±0.2%
Features and Benefits	Durable, Safe, Easy to Maintain, Max. 9 BARG Outlet Pressure	Durable, Safe against Cold Gas Breakthrough, Easy to Maintain, Max. 22 BARG Outlet Pressure	Adjustable at Integrated Touch-Screen, Integrated Gas Analyser, Comprehensive Documentation, Optional Remote Control, Compact Size, High Accuracy

*For special options not listed please contact us.

Design

Always top performance – due to the special design of our gas mixers the specified performance is continuously provided, regardless of the outlet pressure range required.

Highest reproducibility – our gas mixers guarantee a reproducibility of $\leq \pm 0.5\%$ Vol at temperature uniformity of individual gases.

Different inlet pressures – even with significantly different inlet pressures, a constant, reproducible mix ratio is guaranteed at all times. Installation of additional pressure controllers is not necessary.

Design for 25 BARG – our standard gas mixers are designed for 25 BARG, taking care of the pressure conditions in the gas tanks.

Safety

High quality fittings and gas pipes – our gas mixers are always equipped with high quality valves and accessories. To avoid embrittlement, hoses are not used at all. Process and control pipes are in copper only. These are brazed or screwed for permanent leak-tightness.

Cryogenic Metallic Material – as a preventative measure, only cryogenic metallic materials are used in our gas mixers, suitable for temperatures down to -196°C .

Proven interlocking and safety concept – the constant pressure controller of the input lines can be controlled pneumatically by the carrier gas stream. If the carrier gas pressure drops, the additive gas is tracked proportionally. On total failure of the carrier gas, all gas lines are shut-off.

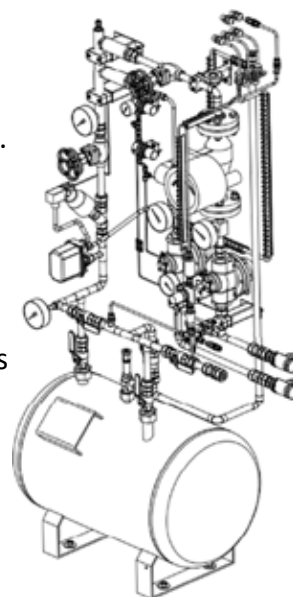
Equipment

No Universal Valves – All metering valves used are tailored to each required flow capacity and are carefully selected, to ensure we deliver a high degree of accuracy in the gas mixture setting.

Visual Displays for Easy Reading – our gas mixers have flow meters with an optical display in the carrier gas and additive gas line to provide constant and reliable data readings.

Buffer Bypass Pipe – the buffer vessel can be optionally equipped with a full-size bypass, for precise analysis of the flowing gas mixture if necessary.

Easy Maintenance – the gas mixers offer an easy access to all installations with a front door. Main valves are mounted on detachable connections, and filters/dome-loaded pressure regulators can be serviced in-situ.



Products in Focus

Standard Solutions

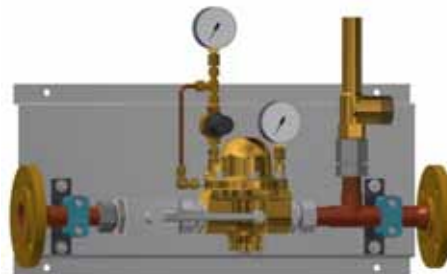
For central gas supply and EC&I and analysis, we have a huge range of standard solutions available to order with predetermined configurations:



Dome-Loaded Regulators



Pressure Control Stations



Manifold Systems



Gas Analysers



Flashback Arrestors & Safety Devices



Gas Filters

Bespoke Gas Systems

We can help with completely bespoke gas systems for pressure and/or volume flow control, or as a gas mixing solution. From individual consultation, to concept and detailed engineering and design, through to manufacturing, testing and commissioning, we have you covered:



Shield Gas Humidification

System Humidification of shield gas (N₂/H₂) with vapourised deionized water for dew point control in the annealing furnace for heating and soaking zones.



Gas Mixing Plant in

Container Dynamic gas mixing system in a container with redundant process control system, gas analysis and gas mixing lines for the generation of shield gas to supply a float-glass bath.



Static Gas Mixing Process Plant

Static gas mixing plant for generation of protective gas (N₂/H₂), fitted with horizontal 500L buffer tank, gas analyser and assembled completely in a steel frame.



On-Site Installation

Our engineers successfully completed an on-site installation for a custom gas mixing solution. The project specific requirements were as follows:

- 10 BARG Inlet Pressure (Max. 25 BARG)
- 3 BARG Outlet Pressure
- 12 Nm³/h = 200 NL/min Flow Rate
- Nitrogen/Hydrogen Mix (95/5% Vol)
- 0 to +30°C Ambient Temperature
- -5 to +40°C Gas Temperature
- All ATEX Zone 1 Devices
- Small Junction Box Installed
- Suitable for Wall Mounting
- Sun and Weather Protection

Ancillary Equipment

We also were able to provide automatic changeover manifolds, wall-mountable and ready to plug straight into the customers' bottle bank supply.

Each crossover manifold was fitted with pressure indicating gauges, ATEX rated electronic pressure transducers (to feed to PLC) and flexible hoses from the Nitrogen and Hydrogen bottles to the pressure regulator inlet ports, and a single flexible house out to 18mm standpipe connections to connect straight into the gas mixer.



Gas Safety Training

During the on-site installation, we were able to offer our customer in-depth product use and safety training.

Our manufacturer certified engineers can help with installation of your customised gas mixing solutions and supporting ancillary equipment required to get your facility setup.

For more details on previous work and installations, please feel free to get in touch with us to talk through some of our application successes.

Products in Focus

How to Switch Fitting Supplier

Customers seek out new tube fitting suppliers for many reasons such as delays, the inability to meet production specifications and inconsistent product performance. When deciding to switch, effective evaluation of other suppliers and switching seamlessly can be difficult. Selecting the correct

supplier that you trust is important to keeping your instrumentation systems running smoothly. In this short article, we will guide you in the right direction on how to assess tube fitting suppliers based on their resource availability, product performance, safety assurance and overall reliability.



1. Assess Safety and Resource Availability

Safety should be your top priority when looking to switch suppliers. Material quality and ample resources to help with the right installation of tube fittings are some of the considerations that should be made.

Make sure that there are clear and easy instructions for the installation of each tube fitting that include the product’s material, size and type. These instructions should avoid malfunctions or leaks. Your supplier should assist you from start to finish to guide you through the installation process.

training, along with more in-depth explanations.

It is important that you go for a supplier who are flexible and offer fittings that are exact to each of your design specifications and materials. The supplier must meet high production standards, such as maintaining a low Defects Per Million Opportunities (DPMO) count across individual product lines, having top quality safety protocols and benchmarking quality to six sigma measurements.

The supplier should provide installation courses and data sheets that provide some additional help and

Before finalising your decision, look at the supplier’s interchange and intermix policy.



TREATMENT PROCESSES 1

Patented and proprietary Expanite surface treatment process.



LOWER MAKE-UP TORQUE 2

Lower initial make-up torque versus leading competitor brands.



MARKING OF NUTS 3

All nuts are marked with the tubing size to avoid mixing imperial and metric.



PRODUCT PACKAGING 4

Fittings individually bagged for cleanliness and quality control.



LIFETIME WARRANTY 5

Guarantee that every single component is free from defects in material.



PROVEN TO INTERCHANGE 6

Designed to be totally interchangeable with competitor brands.

2. Product Quality

Look for these indications of high-quality production:

- In-house testing to find and remove poor quality products or designs.
- Full reports of products performance during endurance tests, pressure tests, hydraulic impulse pressure tests and vibration stress tests.
- Internal, in-house resolution processes, such as tracking RMA response times and corrective action reports to improve production and raise standards.
- Have third-party testing services.
- Trusted companies always have testimonials and references to prove and support their track record.

3. Evaluate Reliability

Finally, it is important to consider whether a supplier offers quick and reliable delivery and can help answer your questions in a timely manner.

Businesses that need consistency and transparency should be going with a supplier who can meet delivery targets.



Product Gaugeability

Consistently gaugeable and work to geometry to ensure each fitting installed is completely leak-tight.



Heatcode Traceability

All of our tube fittings are fully traceable with each component marked with a 3-digit code.



Valve End Connections

All tube fitting end connections are available on our full range of instrumentation valves.



Working Pressures

When correctly installed, our tube fittings will hold the burst pressure of your tubing without leakage.

I SS D 4 UT

I (Instrumentation), SS (Stainless Steel), D (Duolok Twin Ferrule), 4 (1/4" Size), UT (Union Tee)

Easy Part Numbering

Ordering our tube fittings with part numbers is easier and more logical than leading competitor brands.



Applied Teflon Tape

All tube fittings with male tapered threads are available to purchase with pre-applied factory PTFE tape.



MAKE YOUR SWITCH TO BOISWOOD

Safety, product quality and reliability are the three most important factors Boiswood provides. Our ethos is based on a genuine commitment to hands-on service and support, whenever and wherever this is required. We work hard to provide high-quality services whilst being transparent and connected to our clients.

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.



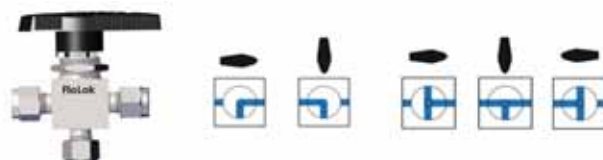
Is directional control required?

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.



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.

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.

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

Products in Focus

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.





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

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