

# BOISWOOD

GAS AND LIQUID CONTROL TECHNOLOGIES

Pressure & Vacuum

Flow

Level & Temperature

Tube & Fittings

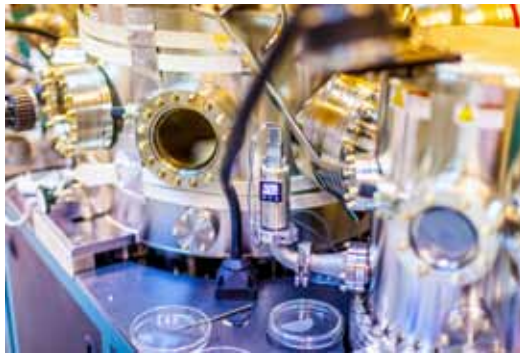
HVAC/R

Custom Services

**Cryogenics**  
Products & Services Catalogue



CAUTION



## 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.

# BOISWOOD

GAS AND LIQUID CONTROL TECHNOLOGIES

## ALWAYS IN EXTREME CONTROL

Boiswood have worked in partnership with the respected German manufacturer, STÖHR, for many years, and our expert team have in-depth knowledge of both their product range and capabilities for controlling the extremes of low and high temperature media. Rewarded with the seal of quality for “Innovation by Research” by the Founding Association of German Sciences, STÖHR specialise in cryogenic valves, components and custom-made equipment, and have been developing and manufacturing high precision products since 1938.

## NOT JUST A ONE-HIT WONDER

The cryogenic products we supply, service and support can be used in a wide range of applications, from cryostats and helium recovery systems, to cooling systems and air separation units/plants. Our products can also be constructed for use in vacuum insulated pipework, and if required, we offer thermal design calculations and ancillary additions such as sensors, filters/strainers and various actuation packages ensuring we have the right solution for your application.

## WE'RE TRUSTED BY...



## 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



## LOCKS SERIES

Cryogenic Tank Globe Valves



STÖHR

The K900 Series is a manual or pneumatically actuated stop globe valve with replaceable bellows sealing, dedicated to low pressures at cryogenic temperatures.

### TECHNICAL DATA:

100% Functional & Helium Leak Test Performed • Sustainable metallic bellows for high leak tightness ratings • Visual open/close indicator • Up to 100 BAR Pressure • -196°C to +250°C Temperature Range • 100% Degreased for Oxygen Use

### FEATURES & BENEFITS:

Fully customisable • Individual serial number for full traceability • Assembled in Class ISO 4 Cleanroom

## BALANS 7100 SERIES

Cryogenic Globe Valves



STÖHR

The HP9000 Series is a manual or pneumatically actuated stop globe valve with replaceable bellows sealing, dedicated to low pressures at cryogenic temperatures.

### TECHNICAL DATA:

100% Functional & Helium Leak Test Performed • Sustainable metallic bellows for high leak tightness ratings • Visual open/close indicator • Up to 100 BAR Pressure • -196°C to +250°C Temperature Range • 100% Degreased for Oxygen Use

### FEATURES & BENEFITS:

Fully customisable • Recommended for Liquid Nitrogen and Liquid Oxygen • Suitable for Combustible, Oxidising, Corrosive, Radioactive or Noble Gases and Liquids

## AXIUS 1400 SERIES

Pneumatic Cryogenic Globe Valves



STÖHR

The Axius 1400 is a straight through valve designed for high pressure use. Compact and space-saving with integrated axial bellow actuator with stainless body makes it perfect for use on any media.

### TECHNICAL DATA:

Pneumatic Bellow Actuated (Single Acting) • -269°C to +50°C Operating Temperature Range • Variety of service fluids • Custom DN and PN values on request

### FEATURES & BENEFITS:

Stainless Steel bellow allows for a long life span • High leak-tightness to atmosphere.

## B-CRYO SERIES Cryogenic Solenoid Valves



The B-Cryo Series is a 2-way miniature cryogenic valve designed and built for service down to liquid nitrogen temperatures.

### TECHNICAL DATA:

MOPD of 900 PSI • CV Ranges of 0.045 – 0.440 • 9 Watts • Service down to -196°C • Configured for LN2 or LCO2 • PTFE Coated Plungers • Encapsulated Coils

### FEATURES & BENEFITS:

Depending on your application requirements it can be configured to a range of service fluids with a variation of construction materials • Designed for OEM applications

## MMA SERIES Resistance Thermometers



The MMA insertion resistance thermometer is an economically-priced unit with a screw-in temperature sensor, integrated transmitter and an optional plug-on display.

### TECHNICAL DATA:

-198°C to +250°C Measuring Range • Stainless Steel Construction • DIN43650 or M12 Electrical Connections • PT100 Sensor Class A • Great Immunity to Vibration

### FEATURES & BENEFITS:

Economically priced • Good immunity to vibration • PC Configurable Range by Software

## PR9 SERIES Extreme Service Pressure Regulator



The PR9 series extreme temperature service regulator is designed for the pressure control of gases and liquids from -200°C up to +540°C.

### TECHNICAL DATA:

Gas or Liquid Service • Inlet Pressures up to 3,000 PSIG • Outlet Pressures from 10 to 250 PSIG • -200°C to +540°C Temperature Ranges • 347 Stainless Steel Seat Material • Tantalum Diaphragm • 0.06 or 0.20 CV (Flow Coefficient)

### FEATURES & BENEFITS:

All Metal Construction with No Elastomers • Metal-to-Metal Seal • Extreme Temperature Ranges

# Product Solutions



## PRESSURE GAUGES

Including Mechanical and Digital Pressure Gauges and Indicators



## INSTRUMENTATION VALVES

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



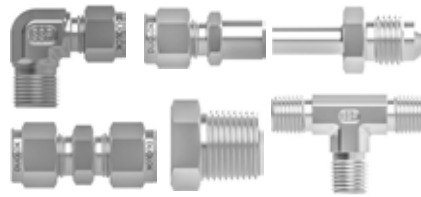
## MANIFOLD VALVES

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.

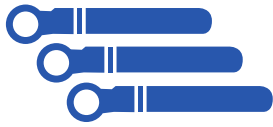


## CUSTOM SOLUTIONS

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

## Cryogenic Valves Checklist

BASIC VALVE DETAILS	1	Actuation Type	<input type="checkbox"/> Manual <input type="checkbox"/> Pneumatic <input type="checkbox"/> Electric <input type="checkbox"/> Solenoid				
	2	Valve Type	<input type="checkbox"/> Globe (On/Off) <input type="checkbox"/> Control				
	3	Body Type	<input type="checkbox"/> Straight Pattern (180°) <input type="checkbox"/> Angle Pattern (90°)				
			MIN	NORM	MAX	UNITS	
	4	Nominal Pressure				PSIG/BARG	
	5	Flow Rate (Q)				SCFM/LPM	
	6	Temperature (T)				°C/°F	
	7	Media (M)					
	8	Pipework Size	_____ in / DN _____				
	9	Pipework Material					
	10	Installation Position Required	_____				
	11	Installation Location	<input type="checkbox"/> Indoors <input type="checkbox"/> Outdoors				
	120	Preferred Connection Size	_____ in / DN _____				
ACTUATOR DETAILS	13	Preferred Connection Type	<input type="checkbox"/> NPT <input type="checkbox"/> BSPP <input type="checkbox"/> BSPT <input type="checkbox"/> Tube OD Compression <input type="checkbox"/> VCR <input type="checkbox"/> DN Flanged <input type="checkbox"/> ANSI Flanged <input type="checkbox"/> Socket Weld <input type="checkbox"/> Butt Weld <input type="checkbox"/> Other (Please Specify) _____				
	14	Actuation Pressure	<input type="checkbox"/> 6 BAR <input type="checkbox"/> Other (Please Specify) _____				
	15	Electrical Power Required	_____ Volts AC/DC				
	16	Fail Safe Position	<input type="checkbox"/> None <input type="checkbox"/> NC <input type="checkbox"/> NO				
	17	Mounting Parts	<input type="checkbox"/> Not Required <input type="checkbox"/> Pilot Valve <input type="checkbox"/> Limit Switches <input type="checkbox"/> IP Regulator <input type="checkbox"/> Air Filter				
	OPTIONAL DETAILS	18	Required Flow Rate	<input type="checkbox"/> Not Required   Other (Please Specify) _____			
		19	Required Control Characteristic	<input type="checkbox"/> Not Required <input type="checkbox"/> Linear <input type="checkbox"/> Equal Percentage			
20		Welding Flange for Vacuum Jacket	<input type="checkbox"/> Not Required <input type="checkbox"/> Yes				
21		Surface Treatment	<input type="checkbox"/> Polished <input type="checkbox"/> Electropolished (Please Specify) _____				
22		Purge Connections/Valves	<input type="checkbox"/> Not Required <input type="checkbox"/> Yes				
23		Special Requirements/Application Details					

## Need Help?

If you can't find what you are looking for we would be happy to discuss with you a custom solution specific to your application. We can help you to size and design a custom valve based on your operating parameters. Just some of our special options include:



LIMIT SWITCHES



ACTUATORS



SOLENOID VALVES



POSITIONERS



SEALING & BODY MATERIALS



WELDING FLANGES



FILTER REGULATORS



MLI VACUUM JACKETING



SURFACE TREATMENTS



### BESPOKE VALVE DESIGNS 1

From standard valves to completely bespoke solutions, we can help you find the right valve for your application.



### VALVE SIZING 2

We can assist with providing intuitive sizing calculations and functional valve data with the help of our expert partners.



### QUALITY THAT LASTS 3

We offer valves that ensure long operational lifespan and functional reliability, made with the highest quality materials available.

# Products in Action



## Univers Series Cryogenic Valves

The Univers range of cryogenic globe valves are available in manual, pneumatic and electric configurations, with a choice of on/off or modulating control actuation in linear or equal percentage characteristics. With body machining from one single piece of solid Stainless Steel, the Univers series are the ultimate solution for any high quality cryogenic application.

### Scientific R&D Facility Application

Our customer is a leader in bespoke design, build and commissioning projects for thermal energy and process cooling applications.

### Customer Requirements

The customer required a selection of completely bespoke pneumatic globe valves for a new cryostat system.

### Why Boiswood Was Successful

We offered a completely custom set of cryogenic pneumatic globe valves, designed and manufacturer specifically with the customers operating parameters and unique application requirements in mind.





## 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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CAUTION