

# BOISWOOD

GAS AND LIQUID CONTROL TECHNOLOGIES

Pressure & Vacuum

Flow

Level & Temperature

Tube & Fittings

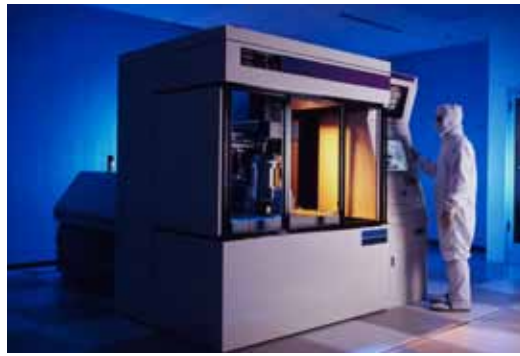
HVAC/R

Custom Services

## Semiconductor

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.

Supplying high quality, high value products to the semiconductor industry since 1989, we understand how the microscopic topography of today's silicon circuits requires the highest purity products manufactured in the cleanest facilities.

## PURE AND SIMPLE SOLUTIONS

We provide a wide variety of components that can be applied to diffusion furnaces, ion implant systems, deposition equipment and wafer etch equipment. From UHP (Ultra High Purity) regulators and pumps to PTFE and PFA sensors/switches, valves and fittings for wet bench applications we bring only the best products from the world's leading manufacturers to the table.

You may already know the product or component you need, but, if you need advice or guidance to find the most suitable solution, our technical experts are on hand with a wealth of experience.

## WE'RE TRUSTED BY...



## RX2400 SERIES

High Purity Single Stage Regulators



★ ROTAREX  
SOLUTIONS LTD

Pg.  
17

The RX2400 Series is a diaphragm controlled pressure regulator, designed for medium flow rates in high purity applications.

### TECHNICAL DATA:

100% Functional & Helium Leak Test Performed • Hastelloy Diaphragm • Low Internal Volume • Fluid Specific Seat Materials Available • Up to 240 BAR Inlet Pressure • -20°C to +65°C Temperature Range • CV values up to 0.20

### FEATURES & BENEFITS:

No Spring in Gas Flow (True UHP) • Suitable for Aggressive Media • Individual serial number for full traceability • Assembled in Class ISO 4 Cleanroom • Electropolished as per SEMI F19 UHP Grade

## M4SI SERIES

High Purity Diaphragm Valves



★ ROTAREX  
SOLUTIONS LTD

The M4SI Series is a manual or pneumatically actuated diaphragm valve, designed for medium flow rates in high purity applications.

### TECHNICAL DATA:

100% Functional & Helium Leak Test Performed • Reverse Seat Design for High Life Cycle • Constant Bleed Option Available • Up to 240 BAR Pressure • -40°C to +150°C Temperature Range • CV of 0.20

### FEATURES & BENEFITS:

Fast Delivery • LOTO Available • Individual serial number for full traceability • Assembled in Class ISO 4 Cleanroom • Electropolished as per SEMI F19 UHP Grade

## UNIVERS 1200 SERIES

Cryogenic Globe Valves



STÖHR  
SOLUTIONS LTD

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

## 125 SERIES Adjustable Flow Monitors



**ChemTec**

The 125 Series standard unobtrusive adjustable flow monitor for use on both corrosive and non-corrosive liquids and gases.

### TECHNICAL DATA:

Gas or Liquid Service • Available in 316SS, Brass or Teflon • Broad Range of Adjustability • From 30 to 16,000 SCC/M (Air) or 1 to 500 ML/M (Water) • -17 to +104°C Temperature Ranges • From 80 to 3,000 PSIG Max. Operating Pressures

### FEATURES & BENEFITS:

Unobtrusive right angle flow path • Operates via magnetic piston • Very low pressure drop • Compact Size and High Resolution • Special Designs available on request

## UPM SERIES High Purity Diaphragm Valves



**SAINT-GOBAIN**

Pg. 13

The UPM series pneumatically or manually actuated diaphragm valves provide ultimate performance for your UHP applications.

### TECHNICAL DATA:

Manual or Pneumatic Actuation • 2 or 3 Way Valves • 1/4" to 3/4" End Connections (FlareGrip™, Fusebond® or Super 300) • All virgin PTFE/PFA wetted flow paths

### FEATURES & BENEFITS:

Superior life expectancy • Assembled and double bagged in Class 100 Cleanroom • No exposed metallics • Integral swivel base for ease of mounting • Leak detection port as standard

## ASTIPURE™ II SERIES High Purity Pumps



**SAINT-GOBAIN**

Pg. 13

The Astipure™ II series pneumatically operated bellows pumps are suitable for handling the most aggressive concentrate chemicals.

### TECHNICAL DATA:

From 15 up to 60 LPM Flow Rates • 1/2" to 1" End Connections (FlareGrip™ or Tube End) • Chemical or Slurry Options • All virgin PTFE/PFA wetted flow paths

### FEATURES & BENEFITS:

No metal parts • Unique recirculating pilot air concept to improve system uptime • Stall-proof twin shuttle option available • 2-Year Warranty as standard (renewable to 6 year with maintenance)



# Product Solutions

## 730 SERIES

Vacuum Capacitance Manometers



setra

The 730 series high accuracy capacitance manometer is for measuring low vacuum pressure ranges that are critical to the control of processes in photovoltaic and semiconductor markets.

### TECHNICAL DATA:

From 10 Torr to 20 mBAR Pressure Ranges • Voltage Output • ISO NW, FaceSeal™, Tube or NPT Connections • Down to  $\pm 0.5\%$  Accuracy Available •  $0^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$  Temperature • Compatible with LD330 Display

### FEATURES & BENEFITS:

Chemical Resistive Inconel® Design • Tensioned Diaphragm Provides Superior Performance • Fast Response Time with Low Circuit Noise • Insensitive to Environmental Changes

## 225 SERIES

High Purity Pressure Transducers



setra

The 225 series is designed for high purity gas delivery systems in semiconductor processes and critical applications that require ultra-clean operating, high performance and long term stability.

### TECHNICAL DATA:

Vacuum to 200 BAR Pressure Range • Gauge, Compound and Absolute Pressure Types • NPT or FaceSeal™ Connections • Current and Voltage Outputs •  $\pm 0.25\%$  Accuracy •  $-9^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$  Temperature

### FEATURES & BENEFITS:

Superior Stability Avoids Downtime • CE & RoHS Compliant • Optional ATEX Approval • EMI/RFI Immunity Prevents False Shutdown • Sturdy Design Allows Trouble-Free Installations

## RFO & RFS SERIES

Flow Rate Monitors



Gems  
Sensors & Controls

The RFO and RFS flow rate monitors utilise paddlewheel design combining high visibility rotors with solid-state electronics compact into a neat panel mount housing.

### TECHNICAL DATA:

4.5 to 24 VDC Pulsed Output • Polypropylene, Brass and Stainless Steel Materials •  $\frac{1}{4}''$  –  $1''$  Port Sizes • NPT and BSP threaded connections • Low and High flow ranges available

### FEATURES & BENEFITS:

Unbeatable Price/Performance Ratio • OEM Discount Available • Low flow adapter supplied as standard

## MIM SERIES Magnetic Inductive Flowmeters



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

## PS61 SERIES Subminiature Pressure Switches



The PS61 series OEM subminiature pressure switches are suitable for a wide range of hydraulic and pneumatic applications including medical and semiconductor.

### TECHNICAL DATA:

0.7 to 300 BAR Pressure Ranges • -30°C to +121°C Temperature • Range of Seal Materials suitable for different media • Selection of Pressure Fittings and Electrical Terminations • Available in 12L14 Zinc-Plated Steel or 316 Stainless Steel

### FEATURES & BENEFITS:

OEM Pricing Available • Factory Pre-setting Option

## UNIFLUX SERIES Variable Area Flowmeters



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

## FOCP SERIES Fibre Optic Contact Probes



PHOTON CONTROL



These fibre optic temperature sensor probes are designed to offer industry leading accuracy, repeatability and reliability for critical sensing applications.

### TECHNICAL DATA:

-40 to +150°C Temperature Measuring Range •  $\pm 0.5^\circ\text{C}$  Standard Accuracy  
• Aluminium Tip Shaft • Spring Loaded M10 x 1.5 Thread • PEEK Shaft Material • 2M Standard Pigtail Length • 50mm Standard Installation Height

### FEATURES & BENEFITS:

Immune to RF • Highly Accurate across Full Range • Excellent Sensor to Sensor Precision • Outstanding Long-Term Repeatability • Does Not Require Recalibration • Fully Interchangeable

## LS-300 SERIES Multiple Point Level Switches



Gems  
Sensors & Controls

The LS-300 series multiple point level switches are designed for high quantity OEM requirements and are the ideal solution for shallow tanks and reservoirs.

### TECHNICAL DATA:

Lengths up to 20 inches (50cm) • 1 to 4 Actuation levels • Broad Choice of Mounting Types and Float Materials • All-Plastic Wetted Parts • Up to 21 BAR Pressure (Depending on Float) • -40 to +121°C Temperature

### FEATURES & BENEFITS:

Fully Customisable • OEM Pricing Available • UL Recognised • CSA Listed Versions Available

## LS-7 SERIES Single Point Level Switches



Gems  
Sensors & Controls

The LS-7 series compact side mounted level switches are low-cost units that are ideal for high volume use in small tanks and vessels.

### TECHNICAL DATA:

Various mounting configurations and threads • Polypropylene, Nylon, Versaplast™ and 316 Stainless Steel Materials • Range of Pressures and Temperatures to suit your requirements

### FEATURES & BENEFITS:

Low Cost OEM Pricing • High Reliability • Compact Size • FDA Compliant Materials Available



## ELS-1100TFE SERIES Electro-Optic Level Switches



The ELS-1110TFE series is a single point Teflon® level switch designed for use on ultra-pure or aggressive fluids when high purity or resistance to chemical corrosion is vital.

### TECHNICAL DATA:

Teflon® Housing and Prism • Wet and Dry Probe Condition at Current Sink  
• 1/4" NPT Prism with 3/8" NPT Conduit Connection • 150 PSI Rated •  
-17.8°C to +80°C Temperature Range

### FEATURES & BENEFITS:

OEM Discount Available • Unbeatable Price/Performance Ratio

## LS-3 SERIES Single Point Level Switches



The LS-3 small sized single point level switches are ideal for shallow tanks or restricted spaces, for any low-cost and high volume use. Engineered plastics are available in FDA compliant materials.

### TECHNICAL DATA:

Available with NPT, Straight and Metric Threads • Polysulfone, Polypropylene, Nitrile and PVDF Materials • Range of Pressures and Temperatures to suit your requirements

### FEATURES & BENEFITS:

Low Cost OEM Pricing • High Reliability • Compact Size • FDA Compliant Materials Available

## EFV SERIES Automatic Excess Flow Valves



The EFV adjustable excess flow valve is perfect for preventing uncontrolled flows of liquids and gases. Using a controlled bleed it can reset automatically and can restrict or shut off flow completely.

### TECHNICAL DATA:

Available from 0.5 up to 3681 SLPM (Air) or 0.015 to 75.7 LPM (Water)  
• 1/8" – 3/4" FNPT Ports (as Standard) • Stainless Steel or Brass Construction • Positive Shut Off Available • Fully custom models can be quoted on request

### FEATURES & BENEFITS:

Unobtrusive right angle flow path to prevent blockage in the line • Operates via magnetic piston rather than spring design • Very low pressure drop • Adjustable flow range (not fixed)

# Product Solutions

## MAO SERIES

Manual Reset Excess Flow Valves



ChemTec

The MAO series flow meter is ideal for measuring very low flow rates of corrosive and non-corrosive liquids in a variety of harsh and demanding applications.

### TECHNICAL DATA:

Available from 0 up to 3.5 ml/min (Water) • 1/2" FNPT Ports (as Standard)  
• Teflon, Stainless Steel or Brass Construction • -18 to +82°C Temperature  
• Up to 3,000 PSIG Pressure (Material Dependant)

### FEATURES & BENEFITS:

Single Moving Part • No Bearings • In-line Flow Metering • No Rotating Internals • Analogue, Digital and Current Loop Output • Measures Very Low Flows

## 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

## DVX SERIES

Electrically Actuated Solenoid Valves



SAINT-GOBAIN

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13

The DVX series solenoid valves are constructed with 100% virgin PTFE ensuring compatibility with harsh and aggressive chemicals whilst complying to the highest purity standards.

### TECHNICAL DATA:

NO, NC or 3-Way Versions • 24 or 115 VDC Voltage • 1/4" FNPT Port Sizes  
• Up to 6.9 BAR Pressure • Cv of 0.60 • Up to +95°C Temperature • 60 to 100 PSIG Actuator Pressure • 100% Virgin and Modified PTFE Construction

### FEATURES & BENEFITS:

High Forward and Back Pressure Rating provides Flexibility in System Design • Rated for 100% Duty Cycle • O-Ring Free Design • Ideal for handling Harsh and Aggressive Media

## FUDDFM SERIES Flow Control Valves



**Fujikin**

The FUDDFM is an all-metal direct diaphragm flow control valve for ultra-pure, flammable or toxic fluid lines in various semiconductor manufacturing equipment and facilities.

### TECHNICAL DATA:

Up to 145 PSI Pressure • -10°C to +150°C Temperature • 0.2 or 0.03 Cv Values • Available with FaceSeal™ or Butt Weld End Connections • Micrometer Handle as standard

### FEATURES & BENEFITS:

Dead space free performance • Compact design • Precise manual control • Metal seated design

## 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 bellows 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

## 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

# Product Solutions



## PRESSURE GAUGES

Including Mechanical and Digital Pressure Gauges and Indicators



## INSTRUMENTATION VALVES

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



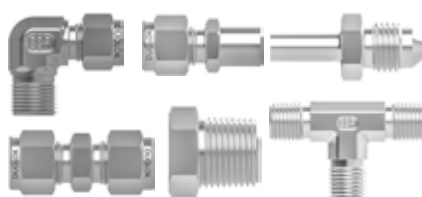
## MANIFOLD VALVES

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

## UHP Fittings & Connectors



We have a complete catalogue of ultra-high purity fittings and CGA/DISS cylinder connectors. Our range includes:



### MICRO FITTINGS

A variety of Micro fittings are available with controlled surface finishes, electropolishing and optimal cleaning according to SEMASPEC to meet UHP system requirements.



### WELD FITTINGS

We can provide type types of configuration for the weld section – with shoulder or without shoulder. Without shoulder is the optimal choice for butt welding using an automatic TIG, whereas with shoulder is better for tight spaces.



### METAL GASKET FACESEAL™ FITTINGS

Our Gazel® components offer the high purity of a metal to metal seal, providing leak-tight conditions from critical vacuum up to high pressure. Our fittings ensure high quality and reduced dead volume measurements.



### HIGH FLOW FITTINGS

We can offer a range of UHP fittings that have been specifically designed for applications with high flow rates. These fittings have a larger inner diameter to allow for a greater media flow-through.



### SPACE SAVER FITTINGS

Our space saver fittings are available as a combination of detachable and orbital weld ends for applications where space claim is critical.



### CGA/DISS CYLINDER CONNECTORS

CGA/DISS cylinder connectors are used for connecting items of gas handling equipment (such as pressure regulators) directly to the cylinder valve outlet of a semiconductor/high-purity gas cylinder.

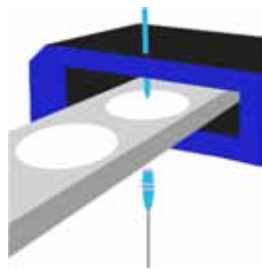
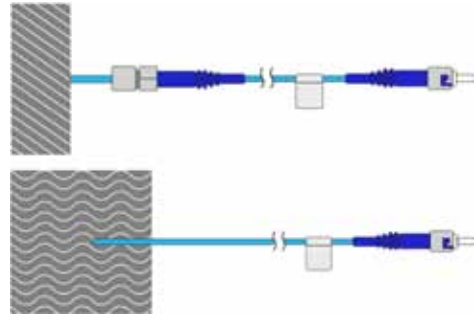
## **PHOTON CONTROL**

Our partner, Photon Control, is a leading manufacturer of fiber optic temperature and position sensors for the semiconductor and other high-tech industries requiring accurate, repeatable, and reliable sensing in harsh environments.

### Fiber Optic Temperature Sensors

Proprietary phosphor material at the tip of the probe is in close thermal contact with a solid surface (contact probe) or immersed in a gas or liquid (immersion probe), and the phosphor decay time is measured and converted to temperature.

Our expertise in phosphor materials and their application in temperature probes sets Photon Control apart from our competitors with respect to accuracy and long-term stability.



### Fiber Optic Position Sensors

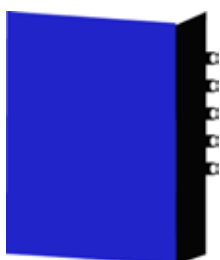
Photon Control design, develop, and manufacture fiber optic position and displacement sensors that can measure position accurately down to 10  $\mu\text{m}$ . Our products are used in wafer fabrication equipment to ensure repeatable wafer position, leveling, and wafer placement in the process chamber. This is critical for achieving high yields making accuracy of the utmost importance.



### Single Channel Temperature Converters

The single channel converter is Photon's baseline product, and is cost-effective for systems with up to two probes. With proprietary techniques for compensating for drifts in ambient temperature and intensity of the illumination source, this converter is extremely stable.

The combination of this converter and our fiber optic probes enable a stable temperature sensing system that customers can depend on to process their valuable wafers at the same temperature, wafer after wafer.



Converter

### Multi Channel Temperature Converters

The Multichannel temperature converter allows for the connection of up to five probes at once. The primary advantages of this product are, a drastic reduction in the cost per channel to our customers and a reduction in form factor for systems, both of which are advantages when there are 3 or more probes in a process chamber.

The Multichannel system features an option for Ether-CAT communication protocol and supports the need to measure more temperature points within the process chamber, which enables chipmakers to maintain or increase yield for advanced technology nodes.

# Products in Focus



Our partner, Saint Gobain, is one of the world's leading manufacturers of engineered, high-performance polymer products, and serves virtually every major industry across the globe. All Saint Gobain businesses support these key industries with advanced technology polymer products for the

most demanding applications. Backed by a product heritage of product innovation, technological expertise and market leadership, we are dedicated to working with our customers to solve today's applications and challenges.



Furon® standards for flexible operations, technical service and valve, pump and manifold design.

Furon® products include premium pumps, valves, fittings and manifolds.



Dependable, fluoropolymer-based pumps designed specifically for delivery of high-purity and or/ aggressive fluids. Distribution and dosing pumps available.



High-purity, injection molded fluoropolymer valves, including manual, pneumatic and regulating versions for ultra-pure and/or aggressive media.



High-purity fluoropolymer fittings including FlareGrip II®, FuseBond™, GrabSeal™, Dual Containment and No O-Ring Union types available.



The integrated manifold product line features multiple function components in a single, fully customized and pre-tested package that is easily installed.

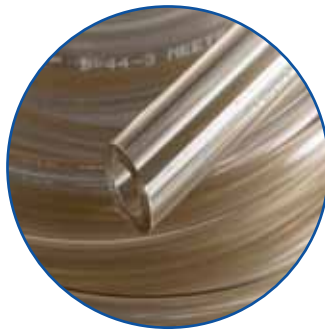
## TYGON®

Tygon® stands for flexible operations, technical service, formulating and regulatory expertise. The Tygon® range offers precision-designed tubing

and piping for peak performance and regulatory compliance, across a range of specialised fluid transfer applications.



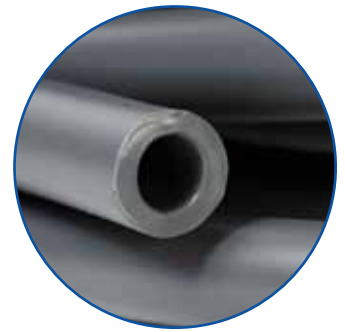
**Chemical Resistant  
Tubing**



**Food and Beverage  
Dispensing Tubing**



**Fuel and Lubricant  
Transfer Tubing**

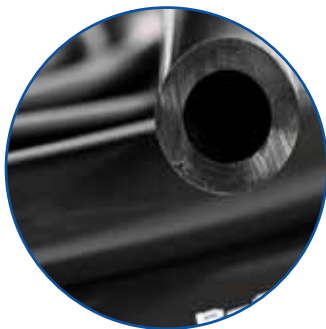


**Marine Certified  
Tubing**

## VERSILON™

Versilon™ stands for flexible operations, technical service, formulating and multi-material expertise. Versilon™ products provide premium quality

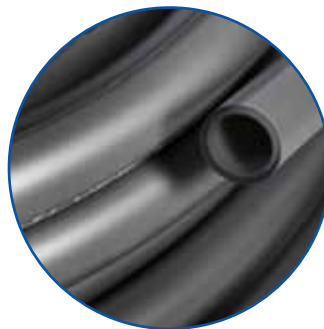
tubing, hoses and fittings, fulfilling a wide range of demanding certification, performance and safety standards.



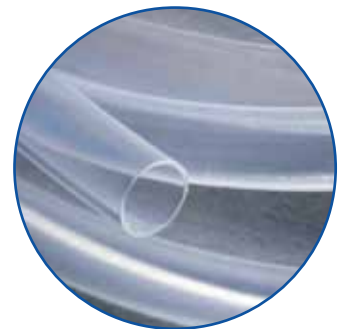
**Chemical Resistant  
Tubing**



**Food and Beverage  
Dispensing Tubing**



**Fuel and Lubricant  
Transfer Tubing**



**Marine Certified  
Tubing**



**TOP-QUALITY  
MATERIALS 1**

Tubing manufactured from only the highest quality raw materials.



**FULLY  
CERTIFIED 2**

In accordance with a range of industry specific certification standards.



**OEM  
SOLUTIONS 3**

OEM pricing, "call-off" orders and underwritten stock available.

## Selecting a UHP Regulator

**There is no compromising when it comes to ultra-high purity (UHP) gases – you need a regulator that will suffice reducing the pressure on a UHP line safely and effectively.**

UHP gases are used in the production of lots of equipment, from LEDs and photovoltaics to semiconductors, and pressure regulators must meet different specifications. Choosing the correct regulator that performs right for your application can provide challenging. Read through this guide to help you select the correct regulator:

### 1. Safety

What gas will your regulator be suited for?

UHP gases are known to be toxic, corrosive and flammable. The Rotarex pressure regulator goes through stringent helium leak tests, you can be assured that no harmful gas will leak through to atmosphere.

### 2. Purity

It is important to keep your gases uncontaminated. UHP gases that are deployed in cleanrooms, even the smallest imperfection can have a bad affect

on the whole system. The Rotarex equipment is assembled, tested and packaged in ISO 4 cleanrooms and electropolished to improve corrosion resistance.

Rotarex offers pressure regulators with no moving parts coming into contact with no gas at all. They avoid even the smallest sized particles produced by thread and spring-based mechanisms. The regulator can also receive additional surface treatment for especially pure gases.

### 3. Precision

You need to consider where on the line your UHP pressure regulator will be used. The supply pressure and maximum gas flow need to be considered for high-precision applications.

If the pressure regulator is installed just after the gas cylinder, it will need to be able to deal with extremely high inlet pressure, and effectively reduce it as it enters the much lower pressure pipes. When a pressure regulator is at the end of the line, where the inlet pressure will be low, the outlet pressure and flow will need to be considered and the flow coefficient (Cv) sized accordingly.





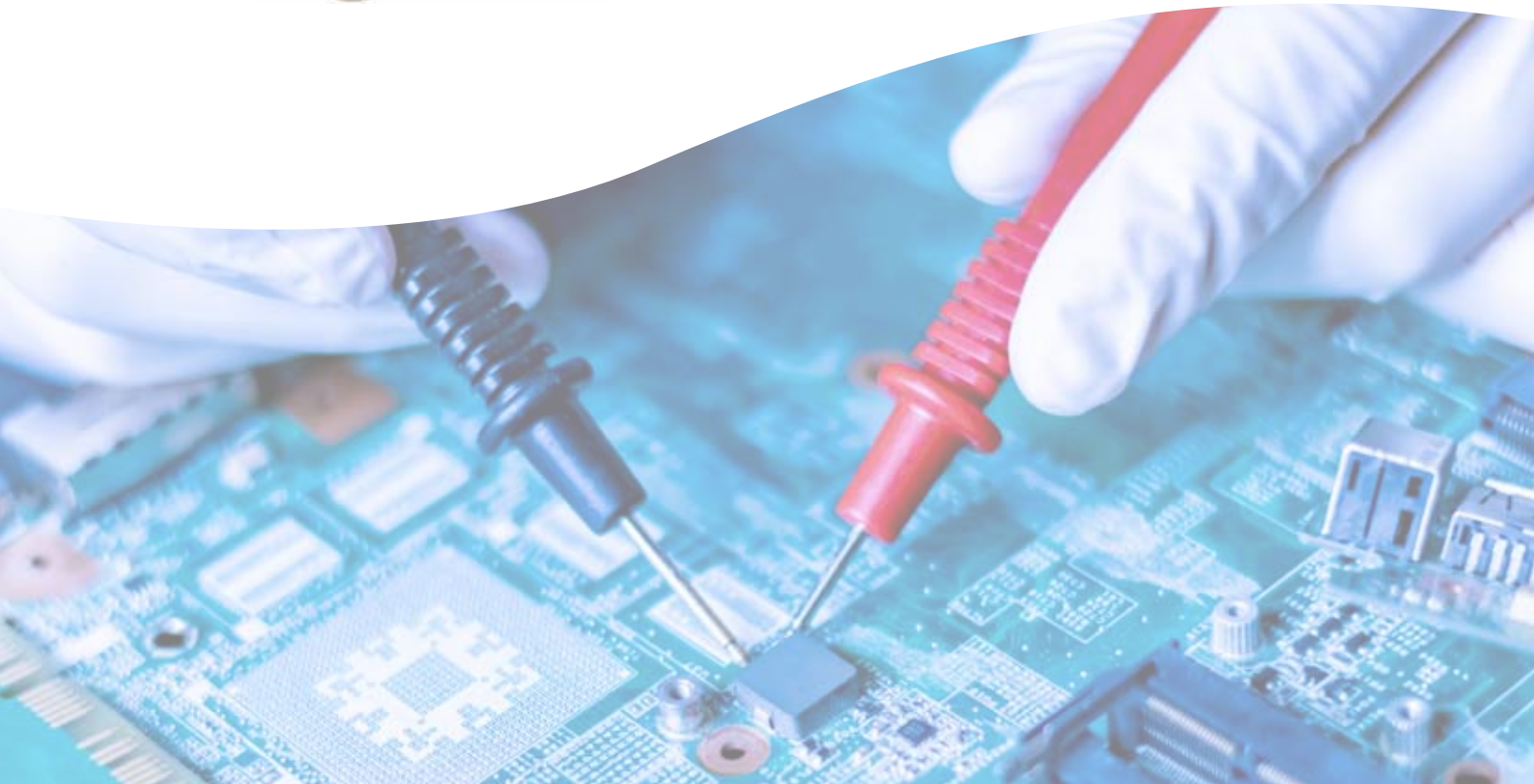
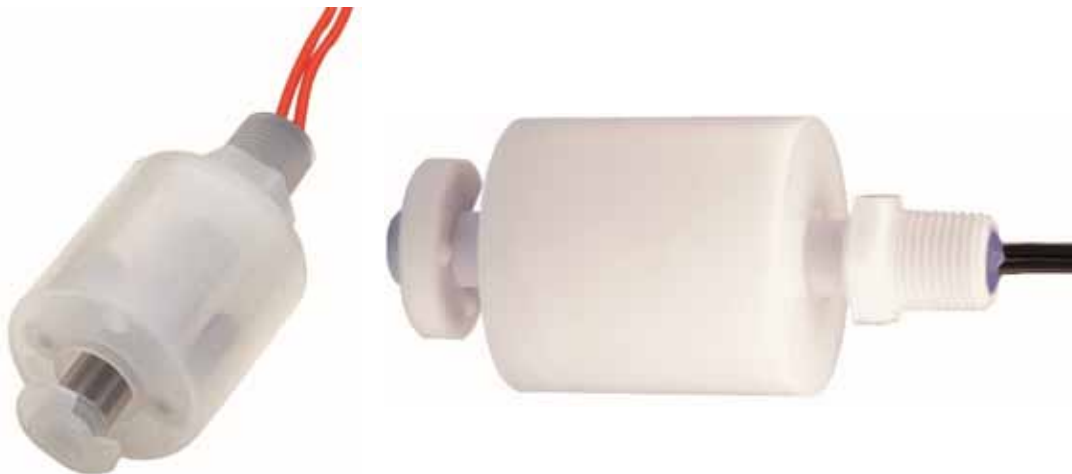
## Level Sensing Solutions

**Boiswood supported a leading global supplier of advanced wafer products and services for the semiconductor industry by providing a low-cost OEM solution to a problem involved many chemical tanks corroding existing level sensors.**

We worked directly with the design engineers and site maintenance to specify the LS-3 and LS-1700TFE single point level sensors as cost-efficient “fit and forget” solutions to the harsh and aggressive media.

The LS-3 was supplied in PVDF for high chemical resistance and was ideal for shallow tanks and restricted spaces. These units offer high reliability in a range of engineered plastics for aggressive media.

The LS-1700TFE was supplied in PTFE (as standard) and was perfect for the ultra-pure liquid media where low particle generation was a critical requirement.






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

Spinnaker House, Hempsted Lane, Gloucester, GL2 5FD  
Tel: 01452 330011 Fax: 01452 330088 [info@boiswood.co.uk](mailto:info@boiswood.co.uk)  
[www.boiswood.co.uk](http://www.boiswood.co.uk)

