

# SPECTRON

## Gas Control Systems



Product overview

# Content

Gases and gas mixtures are being used for many different applications within industrial, laboratory, medical, environmental and many other sectors. In order to meet this large variety of demands, we have developed the relevant product ranges specific to such. This guarantees that we sufficiently meet the required process parameters and the safety standards in almost every case.

Spectron is a diverse product family, which contains all the appropriate components for a wide spectrum of gases and applications. This means we can cover your requirements from a simple valve for an industrial gas up to fully automatic gas cabinets for semiconductor gases.

Spectron also provides alarm and control systems for gas applications, as well as gas purification systems to improve or maintain the purity of the gases.

Spectron - components guarantee maximum quality by using high grade materials and a quality assurance program according to ISO 9001.

To meet the gas quality specification, all gas-wetted parts of our products are cleaned by the special cleaning processes Spectro-CLEAN® and/or Mega-CLEAN® (CFC-free).

Spectron – components undergo a 100% function and (Helium) leak-test.

Our product development program continuously implements state-of-the-art technology. Our components are frequently adapted based on the latest know-how, requirements, expertise and standards.



## Spectrotec

Gas supply equipment for non corrosive industrial gases

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## Spectrocom

Gas supply equipment for non corrosive gases and gas mixtures up to quality 5.0

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## Spectrolab

Gas supply equipment for non corrosive gases and gas mixtures up to quality 6.0

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## Spectrocem

Gas supply equipment for corrosive and toxic gas & gas mixtures up to quality 6.0

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## Spectropur

Gas supply equipment for ultra high purity gases from grade 6.0

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## Spectromed

Gas supply equipment for medical gases

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## Spectrosys

Alarm- and control systems for gas supply equipment

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## Spectromol

Gas purification systems

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## Product line advantages for you

- This range covers extremely **high flow** and **high-pressure** requirements as well as **heavy duty requirements**.
- The Spectrotec product range is **versatile and flexible** by design, making it the right solution for many different customer-specific applications.
- Spectrotec components, by design and in their performance, make them a natural fit for the following applications:
  - Oxyfuel processes, such as cutting, welding, brazing, heating, metal spraying, etc.
  - Electrical welding processes such as MIG, MAG, TIG and forming
  - Melting
  - Inertization, purging
  - Water treatment
  - Controlled atmospheres (ovens, furnaces)
  - ... and many other industrial applications such as fish farming, glass production, firefighting systems etc.



## Products



### Pressure regulators

- 1- and 2-stage regulators
- flexible configurations



### Valves

- manual shut-off valves
- line and angle version



### Pressure control panels

- for single cylinder gas supply or with automatic change-over
- diaphragm or piston type pressure regulators with high control accuracy for up to 200 bar outlet pressure



### Tapping points

- compact design for single or multiple tapping points
- inlet pressure shut-off with ball valve



### Filters

- brass filter for separating dirt particles such as rust, sand, or chips carried along in gas piping
- easy change of the filter cartridges



### Accessories

- contact pressure gauges
- pressure transmitters
- flowmeters

## Product line advantages for you

- Spectrocom equipment achieves high requirements in **cleanliness, precision and reliability** by using stainless steel diaphragms.
- This range is limited to standardised and competitive products.
- Spectrocom components, by design and in their performance, make them a natural fit for the following applications:
  - Laboratory applications such as e.g. GC, HPLC, GCMS, AAS, ICP
  - Dosing of gases
  - Laser applications
  - Carbon monoxide applications

## Products



### Pressure regulators

- 1- and 2-stage regulators
- flexible configurations



### Pressure control panels

- for single cylinder gas supply or with automatic change-over
- diaphragm type pressure regulators with high control accuracy for up to 10 bar outlet pressure



### Tapping points

- tapping points for wall mounting
- optional outlet control valve



### Purge devices

- for single or double sided pressure control panels
- Non-return valve in the purge gas inlet



## Product line advantages for you

- Achieves the highest standards in **cleanliness, precision and reliability** by using stainless steel or Hastelloy diaphragms.
- The Spectrolab product range is **versatile and flexible** by design, making it the right solution for many different customer-specific applications.
- Individual configuration encompassed within a modular system **to meet your requirements**.
- A separate mounting profile **saves time and money** on installation.
- Laboratory design: components manufactured in chrome plated brass or brass and encased within special plastic covers make them a natural fit for **laboratory furniture**.
- Spectrolab components, by design and in their performance, make them a natural fit for the following applications:
  - R&D
  - Laboratory such as e.g. GC, HPLC, GCMS, AAS, ICP
  - Laser applications
  - Regulating and dosing of high purity gases in the industry



## Products



### Pressure regulators

- 1- and 2-stage regulators
- flexible configurations



### Valves

- compact diaphragm valves
- optional with pneumatic actuator for up to 300 bar

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### Pressure control panels

- for single cylinder gas supply or with automatic change-over
- diaphragm type pressure regulators with high control accuracy for up to 200 bar outlet pressure



### Laboratory tapping points

- compact design by patented concept
- integrated shut-off valve in the rear-wall connector



### Tapping points

- designed for easy installation
- modular system can be extended into multiple tapping points



### Accessories

- contact pressure gauges
- pressure transmitters
- flow meters

## Product line advantages for you

- Achieves the highest standards in **cleanliness, precision and reliability** by using stainless steel or Hastelloy diaphragms.
- The Spectrocem product range has a wide variety of unique products for **professional and safe handling** of corrosive or toxic gases or gas mixtures.
- **Patented purging devices** maintain the gas purity and can be used in combination with our Spectrosys alarm and control systems for remote control.
- Individual configuration encompassed within a modular system **to meet your requirements**.
- Laboratory design: components manufactured in stainless steel and encased within special plastic covers make them a natural fit for **laboratory furniture**.
- Spectrocem components, by design and in their performance, make them a natural fit for the following applications:
  - R&D
  - Laboratory such as e.g. GC, HPLC, GCMS, AAS, ICP
  - Regulating and dosing of high purity gases in the industry
  - Calibration



## Products



### Pressure regulators

- 1- and 2-stage regulators
- flexible configurations



### Valves

- compact diaphragm valves
- optional with pneumatic actuator for up to 300 bar



### Pressure control panels

- for single cylinder gas supply or with automatic change-over
- diaphragm type pressure regulators with high control accuracy for up to 200 bar outlet pressure



### Laboratory tapping points

- compact design by patented concept
- integrated shut-off valve in the rear-wall connector



### Tapping points

- designed for easy installation
- modular system can be extended into multiple tapping points



### Accessories

- purge devices
- contact pressure gauges
- pressure transmitters

## Product line advantages for you

- The Spectropur product range has a wide variety of unique products for **professional and safe handling of ultra-high-purity gases**.
- Spectropur components are manufactured from re-melted stainless steel with electro-polished surfaces and Hastelloy diaphragms in order to achieve the highest standards in **cleanliness, precision and reliability**.
- The **dead space optimized** components are sealed metal to metal using VCR technology.
- **Patented purging devices** maintain the gas purity and can be used in combination with our Spectrosys alarm and control systems for remote control.
- Individual configuration encompassed within a modular system **to meet your requirements**.
- Spectropur components, by design and in their performance, make them a natural fit for the following applications:
  - Semiconductor production
  - Laser applications
  - Optical fibre technology
  - Photovoltaics



## Products



### Pressure regulators

- with tied diaphragm
- flexible configurations



### Valves

- compact diaphragm valves
- optional with pneumatic actuator for up to 300 bar



### Pressure control panels

- for single cylinder gas supply or with automatic change-over
- components with VCR-connections



### Gas withdrawal units + valve manifold panels

- flexible configuration incl. pressure regulator, valves, filters, gauges and purge devices

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### Gas cabinets with control system

- flexible configuration with pressure control panels or gas withdrawal units
- complete solution



### Accessories

- vacuum generators
- contact pressure gauges
- pressure transmitters

## Product line advantages for you

- The Spectromed range includes products for **professional and safe handling** of medical gases.
- Individual configuration encompassed within a modular system **to meet your requirements**.
- Spectromed components by design and in their performance, make them a natural fit for the following applications:
  - Emergency medical services, emergency physicians, ambulances
  - Home care

## Products



### Cylinder pressure regulators (fixed)

- fixed flow rate
- light weight (560 g)



### Cylinder pressure regulators with flowmeter

- withdrawal adjustable by suspension body



### Cylinder pressure regulators with orifice selector

- Adjustment of flow by orifice selector



### Special OEM models

- Diaphragm pressure regulator with high control accuracy





## Product line advantages for you

- Spectrosys includes alarm and control systems which are specific to gas supply systems.
- The Spectrosys product range has a wide variety of unique products for **professional and safe handling** of gases by monitoring or controlling the processes and applications.
- Versions for EEX areas (flammable gases) can also be provided as standard units.
- Spectrosys products can be used for almost every gas supply system within the industrial, laboratory and research sectors:
  - Low gas control
  - Pressure and flow control
  - Emergency shut off
  - Automatic change-over
  - Automatic purging
  - Automatic process control

## Products



### FloAlarm

- for 4 or 12 digital inputs
- optional with Modbus



### FloMaster

- Management of all signals from up to 32 FloAlarm-Modbus units
- Forwarding of the alarms to a BMS or via WLAN



### FloStop

- control unit to support a pneumatic valve or 1 electrical relay
- emergency shut-off



### Accessories

- gas cylinder scales
- contact pressure gauges
- pressure transmitters



### FloSwitch

- automatic change-over for 2 gas supply systems
- low gas alarm



### FloPurge

- automatic purging
- individual programmable purge cycles before and after the cylinder change

**High purity gases** are used in many different industrial and laboratory applications. Some of these applications have a **very low tolerance to impurities** such as moisture, hydrocarbons, sulphur compounds and others. Even trace amounts of these impurities can affect certain analytical processes.

For this reason we offer a range of gas purification systems which can **remove specific impurities down to 30 ppb and lower**.

The purification system concept is modular and **user-friendly**. They are designed to be used universally, quickly and safely within laboratories and industry.

Various cartridge sizes are available, offering purification solutions for gas flows from ml/min up to 100 m<sup>3</sup>/h.

The removal processes are based on **Chemisorption** or **Physisorption**.

The size of the purification systems depends on the application parameters. Spectromol purification systems can be implemented for central gas or point-of-use purification.



## Products



### Hydrosorb®

- gas purification systems to remove moisture



### Accosorb®

- gas purification systems to remove hydrocarbons and oil vapour



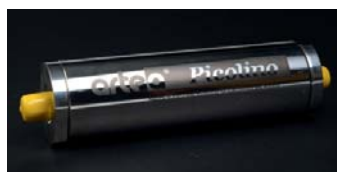
### Sulfosorb®

- gas purification systems to remove sulphur compounds



### Excisorb®-F

- systems for the disposal of purge and waste gas from excimer-laser-gas mixtures and other gas mixtures containing fluorine



### Waste gas detoxification

- detoxification of waste gas



### Accessories

- mounting systems



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