



**ROTAREX**  
VALVES - FITTINGS - REGULATORS



**PRESSURE REGULATORS**  
EUROPE



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All Rotarex regulators are produced in Europe in accordance with international standards (ISO; CGA....) and are guaranteed to provide safe and reliable performance in operation. All locations are ISO 9001.

## SPECIALTY GASES

## SINGLE STAGE HIGH PRESSURE REGULATORS

**SERIES  
SC 280 - SC 380**

P. 018

|                                                       |                                                       |
|-------------------------------------------------------|-------------------------------------------------------|
| <b>Technology</b>                                     | Diaphragm + cartridge                                 |
| <b>Inlet Pressure</b>                                 | 200/300 bar<br>2900/4350 psi                          |
| <b>Outlet Pressure</b>                                | 1,5/4/10/16/35/50 bar<br>21.75/58/150/250/508/725 psi |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 1/2/10/20/30                                          |
| <b>Material</b>                                       | Chrome-plated brass<br>Stainless steel                |

**SERIES S 220**

P. 020

|                                                       |                                      |
|-------------------------------------------------------|--------------------------------------|
| <b>Technology</b>                                     | Diaphragm                            |
| <b>Inlet Pressure</b>                                 | 200 bar<br>2900 psi                  |
| <b>Outlet Pressure</b>                                | 3/15/25/50 bar<br>44/218/360/725 psi |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 5/25/50/50                           |
| <b>Material</b>                                       | Stainless steel                      |

**SERIES S 400**

P.022

|                                                       |                                        |
|-------------------------------------------------------|----------------------------------------|
| <b>Technology</b>                                     | Piston                                 |
| <b>Inlet Pressure</b>                                 | 300 bar<br>4350 psi                    |
| <b>Outlet Pressure</b>                                | 60/200 bar<br>870/2900 psi             |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 10/30                                  |
| <b>Material</b>                                       | Chrome plated brass<br>Stainless steel |

**SERIES S 800**

P. 024

|                                                       |                                                     |
|-------------------------------------------------------|-----------------------------------------------------|
| <b>Technology</b>                                     | Diaphragm + Balanced-Valve                          |
| <b>Inlet Pressure</b>                                 | 300 bar<br>4350 psi                                 |
| <b>Outlet Pressure</b>                                | 10/16/25/50 bar<br>145/232/363/725 psi              |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 50/50/50/100                                        |
| <b>Material</b>                                       | Raw brass<br>Chrome plated brass<br>Stainless steel |

## DUAL STAGE HIGH PRESSURE REGULATORS

**SERIES  
DC 280 - DC 380**

P. 26

|                                                       |                                                |
|-------------------------------------------------------|------------------------------------------------|
| <b>Technology</b>                                     | Diaphragm + cartridge                          |
| <b>Inlet Pressure</b>                                 | 200/300 bar<br>2900/4350 psi                   |
| <b>Outlet Pressure</b>                                | 1,5/4/10/16/35 bar<br>21.75/58/145/232/508 psi |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 1/2/10/20/30                                   |
| <b>Material</b>                                       | Chrome-plated brass<br>Stainless steel         |

**SERIES D 230**

P. 028

|                                                       |                                        |
|-------------------------------------------------------|----------------------------------------|
| <b>Technology</b>                                     | Piston/Bellow                          |
| <b>Inlet Pressure</b>                                 | 200 bar<br>2900 psi                    |
| <b>Outlet Pressure</b>                                | 1/3/10 bar<br>14.5/44/145 psi          |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 2/2,5/3,5                              |
| <b>Material</b>                                       | Chrome plated brass<br>Stainless steel |

**SERIES  
D 230-0.1**

P. 030

|                                                       |                                        |
|-------------------------------------------------------|----------------------------------------|
| <b>Technology</b>                                     | Piston/Diaphragm                       |
| <b>Inlet Pressure</b>                                 | 200 bar<br>2900 psi                    |
| <b>Outlet Pressure</b>                                | 0,01-0,1 bar<br>0.14-1.4 psi           |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 0,5                                    |
| <b>Material</b>                                       | Chrome plated brass<br>Stainless steel |

# SPECIALTY GASES

## LOW PRESSURE REGULATORS



**SERIES S 10** P. 032

|                                 |                                        |
|---------------------------------|----------------------------------------|
| <b>Technology</b>               | Diaphragm + Balanced-Valve             |
| <b>Inlet Pressure</b>           | 25 bar<br>362.5 psi                    |
| <b>Outlet Pressure</b>          | 3/8 bar<br>44/116 psi                  |
| <b>Flow Rate<br/>Nm³/h (N₂)</b> | 4,5/12                                 |
| <b>Material</b>                 | Chrome plated brass<br>Stainless steel |



**SERIES S 15** P. 034

|                                 |                                        |
|---------------------------------|----------------------------------------|
| <b>Technology</b>               | Diaphragm + Balanced-Valve             |
| <b>Inlet Pressure</b>           | 25 bar<br>362.5 psi                    |
| <b>Outlet Pressure</b>          | 10 bar<br>145 psi                      |
| <b>Flow Rate<br/>Nm³/h (N₂)</b> | 50                                     |
| <b>Material</b>                 | Chrome plated brass<br>Stainless steel |



**SERIES S 20** P. 036

|                                 |                                        |
|---------------------------------|----------------------------------------|
| <b>Technology</b>               | Bellow                                 |
| <b>Inlet Pressure</b>           | 50 bar<br>725 psi                      |
| <b>Outlet Pressure</b>          | 1/3/10 bar<br>14.5/44/145 psi          |
| <b>Flow Rate<br/>Nm³/h (N₂)</b> | 2/2,5/3,5                              |
| <b>Material</b>                 | Chrome plated brass<br>Stainless steel |



**SERIES S 20-0.1** P. 038

|                                 |                                        |
|---------------------------------|----------------------------------------|
| <b>Technology</b>               | Diaphragm                              |
| <b>Inlet Pressure</b>           | 50 bar<br>725 psi                      |
| <b>Outlet Pressure</b>          | 0,01-0,1 bar<br>0.14-1.4 psi           |
| <b>Flow Rate<br/>Nm³/h (N₂)</b> | 0,5                                    |
| <b>Material</b>                 | Chrome plated brass<br>Stainless steel |



**SERIES S 55** P. 040

|                                 |                                            |
|---------------------------------|--------------------------------------------|
| <b>Technology</b>               | Diaphragm                                  |
| <b>Inlet Pressure</b>           | 50 bar<br>725 psi                          |
| <b>Outlet Pressure</b>          | 3/8/10/16/35 bar<br>44/116/145/323/508 psi |
| <b>Flow Rate<br/>Nm³/h (N₂)</b> | 2,5/3/3,5/5,5/10                           |
| <b>Material</b>                 | Chrome plated brass<br>Stainless steel     |



**SERIES DC 50** P. 042

|                                 |                                  |
|---------------------------------|----------------------------------|
| <b>Technology</b>               | Diaphragm + Balanced-Valve       |
| <b>Inlet Pressure</b>           | 50 bar<br>725 psi                |
| <b>Outlet Pressure</b>          | 8/15/40 bar<br>116/217/580 psi   |
| <b>Flow Rate<br/>Nm³/h (N₂)</b> | 150/300/300                      |
| <b>Material</b>                 | Raw brass<br>Chrome plated brass |

## POINT OF USE REGULATOR | MOUNTED VERSION



**SERIES S 21** P. 044

|                                 |                                        |
|---------------------------------|----------------------------------------|
| <b>Technology</b>               | Bellow                                 |
| <b>Inlet Pressure</b>           | 50 bar<br>725 psig                     |
| <b>Outlet Pressure</b>          | 1/3/10 bar<br>14.5/44/116 psig         |
| <b>Flow Rate<br/>Nm³/h (N₂)</b> | 2/2,5/3,5                              |
| <b>Material</b>                 | Chrome plated brass<br>Stainless steel |



**LABLINE 22** P. 046

|                                 |                                        |
|---------------------------------|----------------------------------------|
| <b>Technology</b>               | Bellow                                 |
| <b>Inlet Pressure</b>           | 50 bar<br>725 psi                      |
| <b>Outlet Pressure</b>          | 1/3/10 bar<br>14.5/44/116 psi          |
| <b>Flow Rate<br/>Nm³/h (N₂)</b> | 2/2,5/3,5                              |
| <b>Material</b>                 | Chrome plated brass<br>Stainless steel |

## SPECIALTY GASES

## POINT OF USE REGULATOR | INTEGRATED VERSIONS

**LINESTAR C795**

P. 048

|                                                   |                                                                                                      |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------|
| <b>Technology</b>                                 | Diaphragm                                                                                            |
| <b>Inlet Pressure</b>                             | 50bar (725 psi)<br>C <sub>2</sub> H <sub>2</sub> : 20 bar (290 psi)                                  |
| <b>Outlet Pressure</b>                            | 1,5 / 5,5 / 10 bar<br>21.75 / 79.75 / 145 psi<br>C <sub>2</sub> H <sub>2</sub> : 1,5 bar (21.75 psi) |
| <b>Flow Rate Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 1,2 / 2 / 9                                                                                          |
| <b>Material</b>                                   | Body: brass<br>Cover: resistant plastic                                                              |

**MONO  
SERIES S 15**

P. 050

|                                                   |                             |
|---------------------------------------------------|-----------------------------|
| <b>Technology</b>                                 | Diaphragm + Balanced-Valve  |
| <b>Inlet Pressure</b>                             | 25 bar<br>362.5 psi         |
| <b>Outlet Pressure</b>                            | 10 bar<br>145 psi           |
| <b>Flow Rate Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 50                          |
| <b>Material</b>                                   | Aluminum<br>Stainless steel |

**MONO  
SERIES S 20**

P. 052

|                                                   |                               |
|---------------------------------------------------|-------------------------------|
| <b>Technology</b>                                 | Bellow                        |
| <b>Inlet Pressure</b>                             | 50 bar<br>725 psi             |
| <b>Outlet Pressure</b>                            | 1/3/10 bar<br>14.5/44/145 psi |
| <b>Flow Rate Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 2/2,5/3,5                     |
| <b>Material</b>                                   | Aluminum<br>Stainless steel   |

## ON DEMAND!

## SPECIAL APPLICATION | CALIBRATION GAS REGULATORS

**SERIES S 75**

P. 054

|                                                   |                                        |
|---------------------------------------------------|----------------------------------------|
| <b>Technology</b>                                 | Piston                                 |
| <b>Inlet Pressure</b>                             | 200 bar<br>2900 psi                    |
| <b>Outlet Pressure</b>                            | 3,5/6 bar<br>50/87 psi                 |
| <b>Flow Rate Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 0,3-15 lpm                             |
| <b>Material</b>                                   | Nickel plated brass<br>Stainless steel |

**SERIES S 70**

P. 056

|                                                   |                                        |
|---------------------------------------------------|----------------------------------------|
| <b>Technology</b>                                 | Piston                                 |
| <b>Inlet Pressure</b>                             | 200 bar<br>2900 psi                    |
| <b>Outlet Pressure</b>                            | 4,13/2,06 bar<br>30/60 psi             |
| <b>Flow Rate Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 0,25-7 lpm                             |
| <b>Material</b>                                   | Nickel plated brass<br>Stainless steel |

# TECHNICAL GASES

## SINGLE STAGE HIGH PRESSURE REGULATORS



**SERIES S 800** P. 058

|                                                       |                                                     |
|-------------------------------------------------------|-----------------------------------------------------|
| <b>Technology</b>                                     | Diaphragm + Balanced-Valve                          |
| <b>Inlet Pressure</b>                                 | 300 bar<br>4350 psi                                 |
| <b>Outlet Pressure</b>                                | 10/16/25/50 bar<br>145/232/363/725 psi              |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 50/50/50/100                                        |
| <b>Material</b>                                       | Raw brass<br>Chrome plated brass<br>Stainless steel |



**SERIES TGD 250** P. 060

|                                                       |                     |
|-------------------------------------------------------|---------------------|
| <b>Technology</b>                                     | Diaphragm           |
| <b>Inlet Pressure</b>                                 | 200 bar<br>2900 psi |
| <b>Outlet Pressure</b>                                | 20 bar<br>290 psi   |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (N<sub>2</sub>)</b> | 250                 |
| <b>Material</b>                                       | Raw brass           |

## ACETYLENE APPLICATION REGULATORS



**SERIES S 20 AD** P. 054

|                                                                    |                      |
|--------------------------------------------------------------------|----------------------|
| <b>Technology</b>                                                  | Bellow               |
| <b>Inlet Pressure</b>                                              | 20 bar<br>290 psi    |
| <b>Outlet Pressure</b>                                             | 1,5 bar<br>21.75 psi |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (C<sub>2</sub>H<sub>2</sub>)</b> | 1                    |
| <b>Material</b>                                                    | Chrome plated brass  |



**SERIES S 25 AD** P. 056

|                                                                    |                      |
|--------------------------------------------------------------------|----------------------|
| <b>Technology</b>                                                  | Bellow               |
| <b>Inlet Pressure</b>                                              | 20 bar<br>290 psi    |
| <b>Outlet Pressure</b>                                             | 1,5 bar<br>21.75 psi |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (C<sub>2</sub>H<sub>2</sub>)</b> | 1                    |
| <b>Material</b>                                                    | Chrome plated brass  |



**SERIES LABLINE 22 AD** P. 058

|                                                                    |                      |
|--------------------------------------------------------------------|----------------------|
| <b>Technology</b>                                                  | Bellow               |
| <b>Inlet Pressure</b>                                              | 20 bar<br>290 psi    |
| <b>Outlet Pressure</b>                                             | 1,5 bar<br>21.75 psi |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (C<sub>2</sub>H<sub>2</sub>)</b> | 1                    |
| <b>Material</b>                                                    | Chrome plated brass  |



**MONO SERIES S 20 AD** P. 060

|                                                                    |                      |
|--------------------------------------------------------------------|----------------------|
| <b>Technology</b>                                                  | Bellow               |
| <b>Inlet Pressure</b>                                              | 50 bar<br>725 psi    |
| <b>Outlet Pressure</b>                                             | 1,5 bar<br>21.75 psi |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (C<sub>2</sub>H<sub>2</sub>)</b> | 1                    |
| <b>Material</b>                                                    | Aluminum             |



**SERIES DC 50 AD** P. 070

|                                                                    |                                  |
|--------------------------------------------------------------------|----------------------------------|
| <b>Technology</b>                                                  | Diaphragm + Balanced-Valve       |
| <b>Inlet Pressure</b>                                              | 1,5 bar<br>21.75 psi             |
| <b>Outlet Pressure</b>                                             | 0,8 bar<br>12 psi                |
| <b>Flow Rate<br/>Nm<sup>3</sup>/h (C<sub>2</sub>H<sub>2</sub>)</b> | 10                               |
| <b>Material</b>                                                    | Raw brass<br>Chrome plated brass |

LINE VALVES



SERIES VD P. 072

|           |                                        |
|-----------|----------------------------------------|
| Pressure  | 50/200/300 bar                         |
| CV        | 0.12                                   |
| Material  | Chrome plated brass<br>Stainless steel |
| Type      | Diaphragm                              |
| Handwheel | ¼ turn                                 |



SERIES VM 20 P. 073

|           |                                        |
|-----------|----------------------------------------|
| Pressure  | 50 bar                                 |
| CV        | 0.14                                   |
| Material  | Chrome plated brass<br>Stainless steel |
| Type      | Diaphragm                              |
| Handwheel | ¼ turn/Multi-turn                      |



SERIES VM 45 P. 074

|           |                                        |
|-----------|----------------------------------------|
| Pressure  | 45 bar                                 |
| CV        | 0.58                                   |
| Material  | Chrome plated brass<br>Stainless steel |
| Type      | Diaphragm                              |
| Handwheel | ¼ turn/Multi-turn                      |



SERIES RD 10 P. 075

|           |                                        |
|-----------|----------------------------------------|
| Pressure  | 60 bar                                 |
| CV        | 0.116                                  |
| Material  | Chrome plated brass<br>Stainless steel |
| Type      | Needle valve                           |
| Handwheel | Multi-turn                             |

ACCESSORIES



CYLINDER CONNECTORS P. 076



GAS CYLINDER HOLDER P. 078

## NOTES

## TECHNOLOGY OVERVIEW

Rotarex uses 4 main technologies to achieve a stable and reliable pressure regulation:

### DIAPHRAGM

- Our most-used technology (cylinder regulation, line, supply panel...)
- Compact design
- Good precision

### BELLOW

- High precision of outlet pressure
- Less sensitive to the pressure increase at the outlet
- Mainly used for applications like chromatography

### PISTON

- Stable outlet flow
- Used for regulator where the pressure outlet is close to the inlet pressure
- Used as the 1<sup>st</sup> stage for a dual stage regulator
- Used for calibration regulator

### BALANCED-VALVE

- Best-in-class pressure stability
- Minimizes the effect of inlet pressure fluctuations on outlet pressure
- Increases regulator lifetime and reduces cost of ownership by reducing seat effort
- Diaphragm technology only

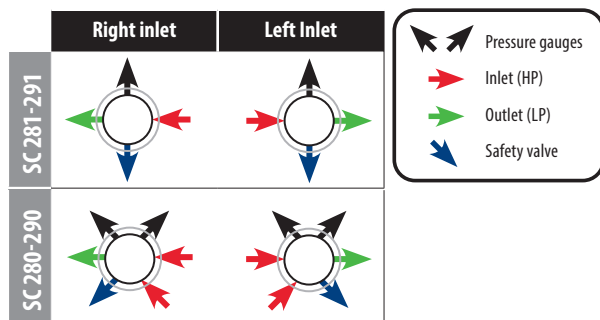
## SINGLE STAGE REGULATOR

A **single stage regulator** will reduce the inlet pressure to the outlet pressure in one step. By turning the hand wheel we can adjust the outlet pressure. Due to the design of single stage regulators, the outlet pressure increases as cylinder pressure decreases. The outlet pressure can be re-adjusted by the hand wheel.

Because of this small pressure rise, single stage regulators are recommended for applications that do not require a constant outlet pressure.

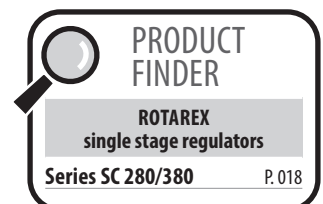
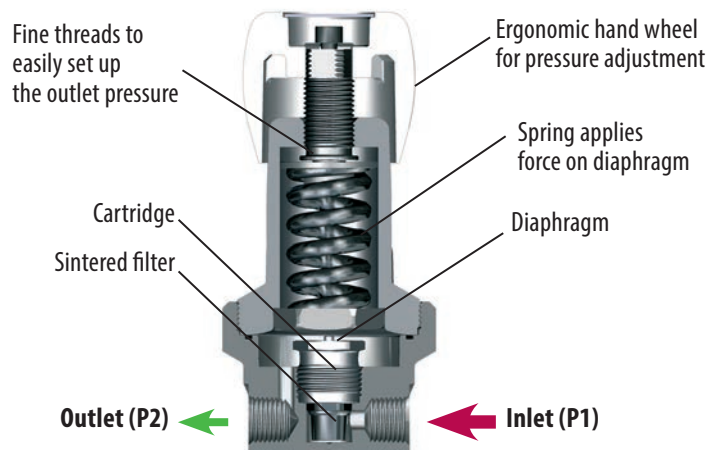
Single stage regulators are also recommended for liquefied gas service such as CO<sub>2</sub>, Propane, LPG, cryogenic gases and other gases that are liquid in the cylinder.

## CARTRIDGE REGULATOR



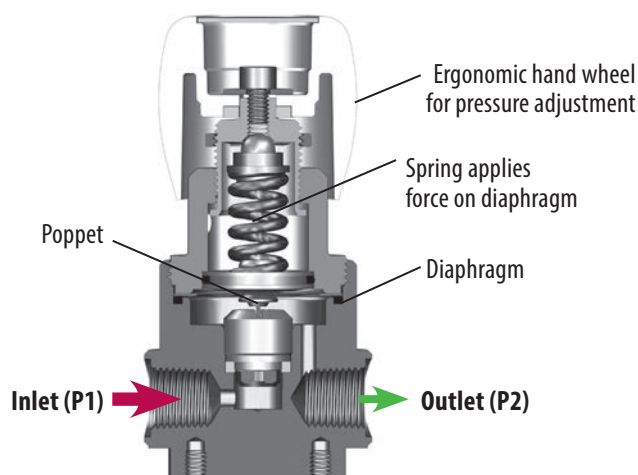
### Superior technical performance with cartridge technology:

- Better outlet pressure stability due to the cartridge design. Outlet pressure remains stable despite any fluctuation of inlet pressure.
- Longer product life due to less impingement on the diaphragm.
- Compact design with reduction of dead volume (minimal purge requirements)
- Sintered inlet filter provides better filtration without restricting flow.



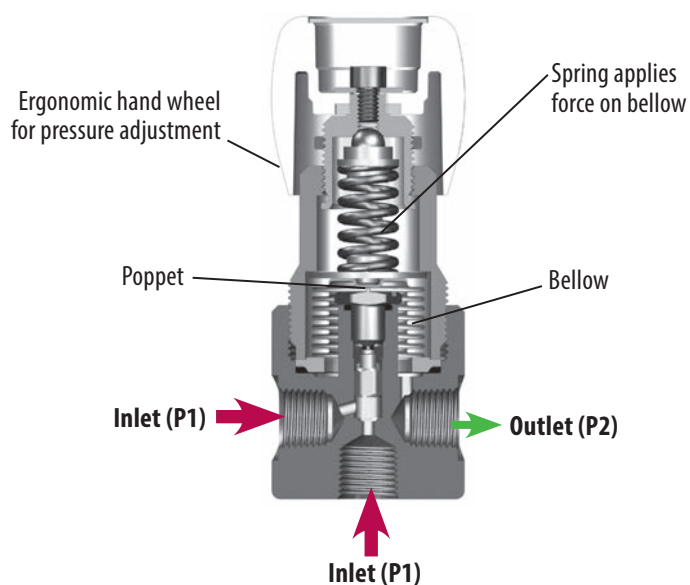
## TECHNOLOGY OVERVIEW (continued)

### DIAPHRAGM REGULATOR



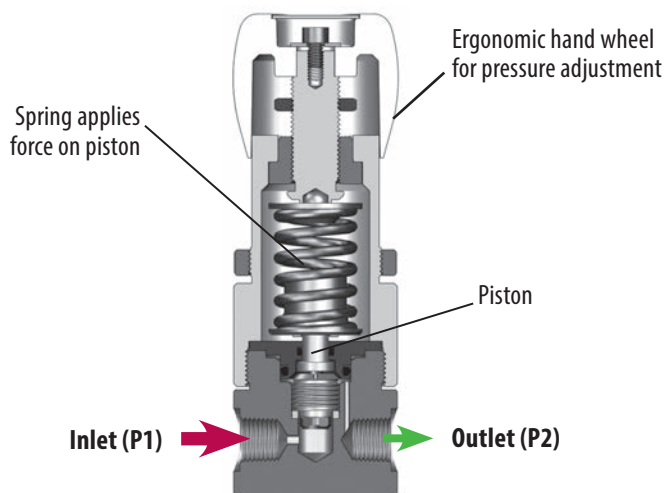
| PRODUCT FINDER               |        |
|------------------------------|--------|
| ROTAREX diaphragm regulators |        |
| Series S 220                 | P. 020 |
| Series TGD 250               | P. 062 |
| Series S 20-0.1              | P. 038 |
| Series S 55                  | P. 040 |

### BELLOW REGULATOR



| PRODUCT FINDER            |        |
|---------------------------|--------|
| ROTAREX bellow regulators |        |
| Series S 20               | P. 036 |
| Labline 22                | P. 048 |
| Mono Series S 20          | P. 054 |
| Series S 20 AD            | P. 064 |
| Series S 25 AD            | P. 066 |
| Labline 22 AD             | P. 068 |

### PISTON REGULATOR



| PRODUCT FINDER            |        |
|---------------------------|--------|
| ROTAREX piston regulators |        |
| Series S 400              | P. 022 |

## TECHNOLOGY OVERVIEW (continued)

### DUAL STAGE REGULATORS

A **dual stage regulator** is basically two single stage regulators in a single body. This dual configuration provides superior pressure and flow stability vs. single stage regulators.

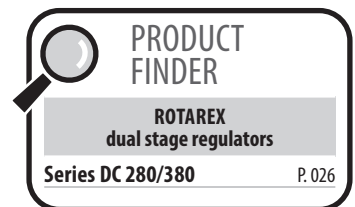
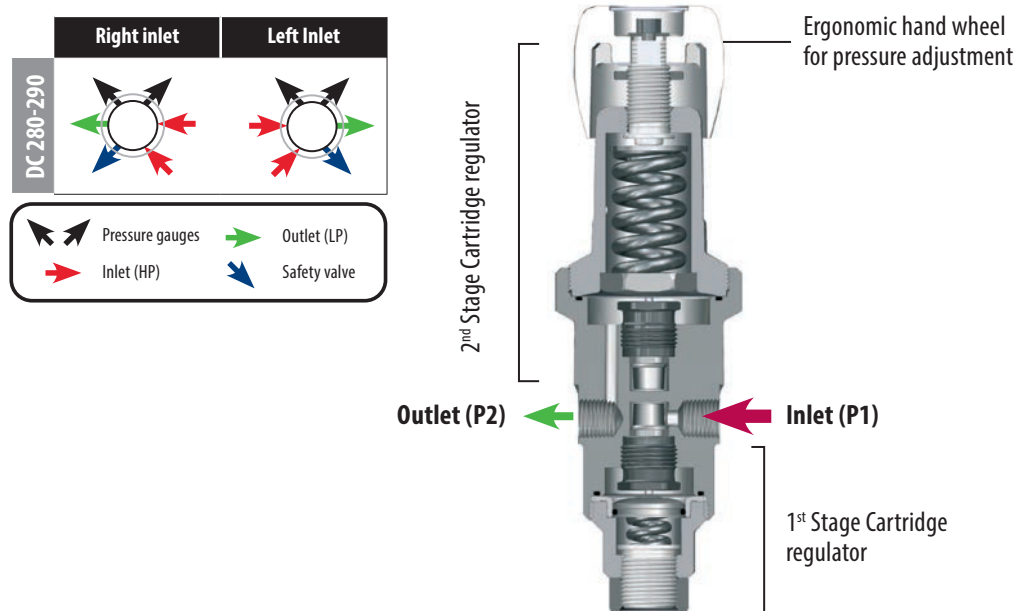
The first stage is preset to an intermediate pressure. This intermediate pressure acts as the inlet pressure to the second stage, which is adjustable.

Because the pressure has been reduced to the intermediate pressure by the first stage, the pressure feeding the second stage of the regulator

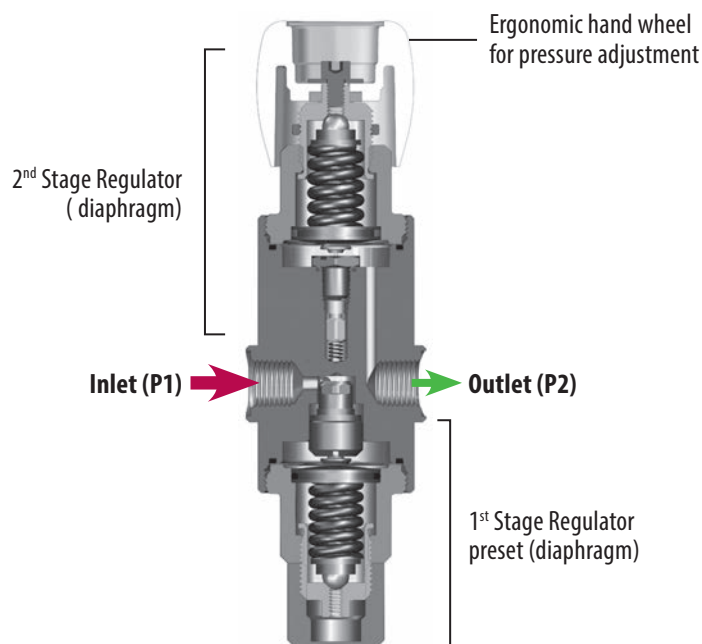
remains constant, thereby insuring a constant outlet pressure to the application regardless of cylinder pressure. This technology avoids having to frequently adjust the outlet pressure as the cylinder pressure drops.

Applications would be laboratory, gas chromatography but also in the industry for precision welding.

### CARTRIDGE REGULATOR

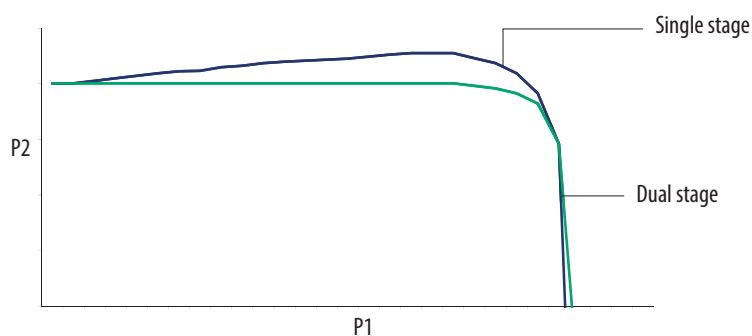


### DIAPHRAGM/DIAPHRAGM REGULATOR

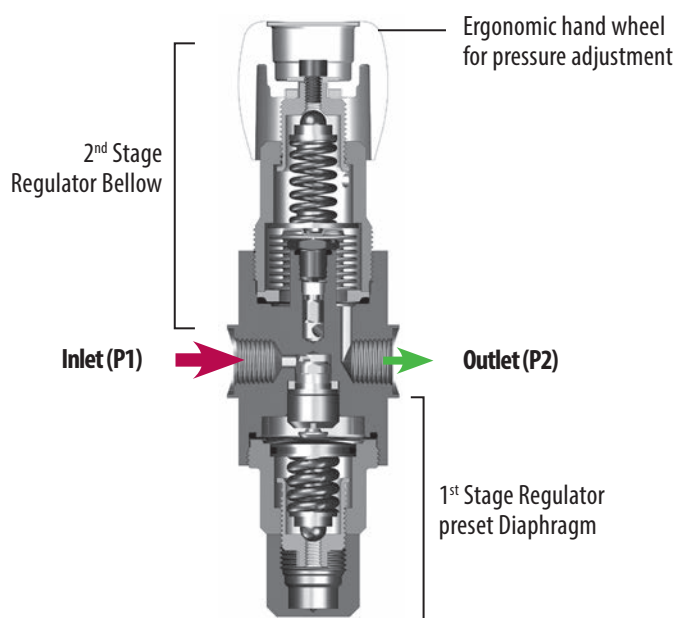


## TECHNOLOGY OVERVIEW (continued)

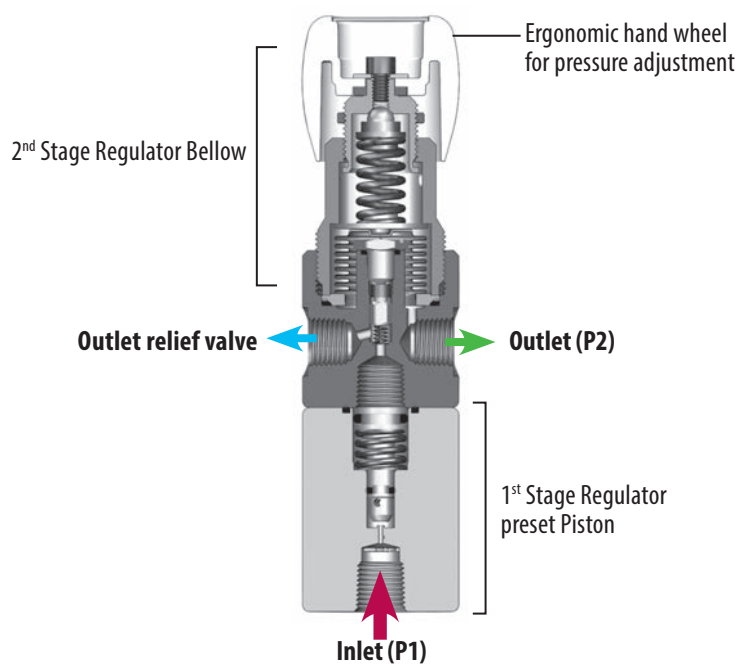
### COMPARISON OF DUAL STAGE VS. SINGLE STAGE REGULATOR



### DIAPHRAGM/BELLOW REGULATOR



### PISTON/BELLOW REGULATOR



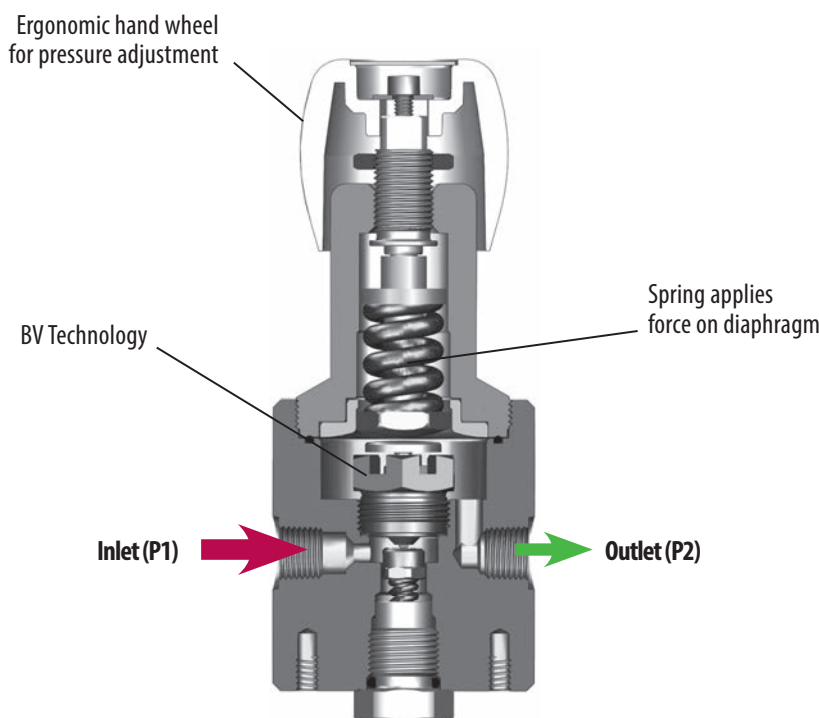
TECHNOLOGY OVERVIEW (continued)

BALANCED-VALVE TECHNOLOGY

**Balanced-Valve (BV-technology) regulator** gives best-of-class pressure stability due to its proprietary design of components in the high pressure zone. It is able to balance the internal forces within the regulator and virtually eliminate the effects of decreasing inlet pressure on the outlet pressure. This means that the regulator balances and compensates for any pressure fluctuation on the inlet and provides a constant outlet pressure like a dual stage regulator.

This regulator type also functions as a LINE REGULATOR for a 2<sup>nd</sup> regulation and can equip our switch over boards. Switch over boards equipped with this technology don't need any line regulator afterwards and can be connected directly to the application.

BALANCED-VALVE TECHNOLOGY

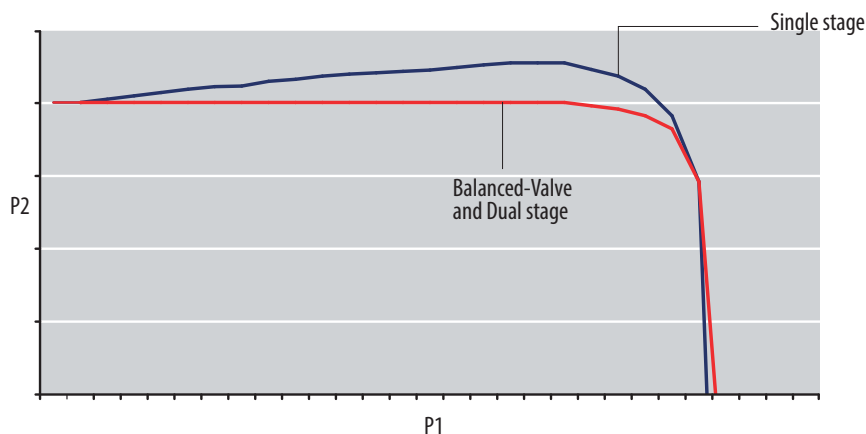


**PRODUCT FINDER**

**ROTAREX**  
balanced-valve regulators

|                     |        |
|---------------------|--------|
| <b>Series S 800</b> | P. 024 |
| <b>Series S 10</b>  | P. 032 |
| <b>Series S 15</b>  | P. 034 |
| <b>Series DC 50</b> | P. 042 |

COMPARISON OF BALANCED-VALVE TECHNOLOGY VS. DUAL AND SINGLE STAGE REGULATORS

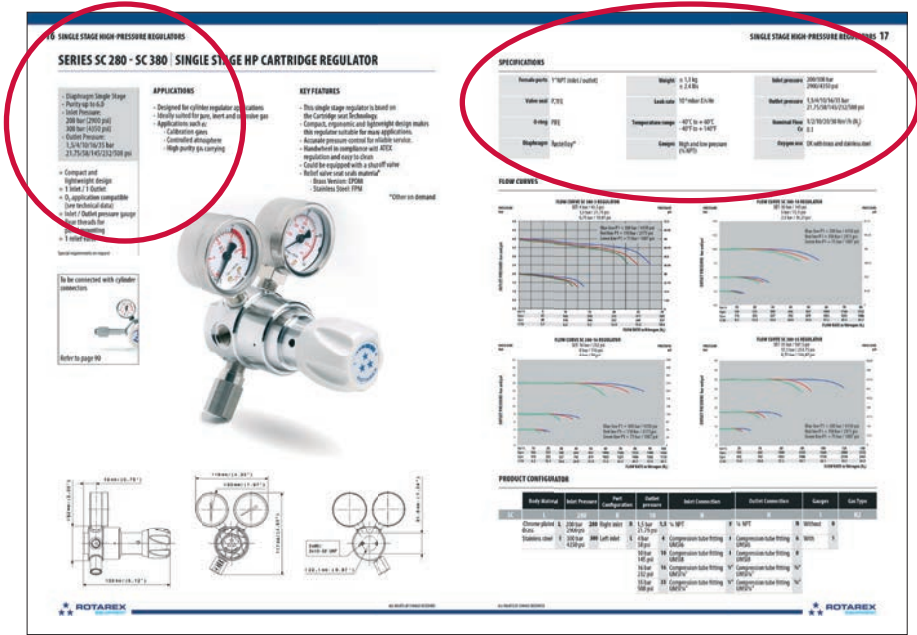


# SELECTING THE RIGHT REGULATOR

To choose the right regulator for your application, and to get the best results, you should identify the following technical parameters:

| TECHNICAL PARAMETER            | EXAMPLES                                                                     |
|--------------------------------|------------------------------------------------------------------------------|
| Gas                            | Inert, flammable, oxidizing, corrosive, toxic                                |
| Purity                         | UHP, HP, industrial, medical, diving                                         |
| Nominal inlet pressure         | bar or psi                                                                   |
| Nominal outlet pressure        | bar or psi                                                                   |
| Nominal flow (N <sub>2</sub> ) | Nm <sup>3</sup> /h, Nlpm Slpm or SCFM                                        |
| Single stage or dual stage ?   | Dual stage or BV Technology are needed where pressure stability is essential |
| Product                        | Regulator, point of use, supply board, switch over board                     |
| Material                       | Brass, chrome plated brass, stainless steel                                  |
| Inlet connection               | Country of use, standard, connection                                         |
| Outlet connection              | G 3/8, 1/4 NPT, male, female                                                 |
| Gauges                         | Low pressure, high pressure                                                  |
| Safety device                  | Yes / no                                                                     |
| Vacuum                         | Yes / no                                                                     |
| Application                    | Food, electronic, medical, welding, industrial, diving...                    |
| Outdoor or indoor use          | Environment                                                                  |
| Temperature range              | -20°C to + 60°C / -4°F to + 140°F                                            |
| Atex use                       | Yes / no                                                                     |
| Preset outlet pressure         | If yes, which pressure ?                                                     |
| Marking                        | CE, TPED, PI                                                                 |

Each product page is designed to provide you the essential technical information at a glance :



## SELECTING THE RIGHT REGULATOR (continued)

### BODY MATERIALS

Most Rotarex pressure regulators are available in stainless steel 316L or chrome plated brass, and on some models, raw brass or aluminum. Which material is best for your installation?

**Stainless steel 316L:** The recommended option for corrosive gases and high to ultra high purity applications due to its superior resistance, non-reactivity, exceptional durability and high-surface finish properties. It is compatible with most gas types and low-velocity oxygen applications.

Rotarex uses Stainless steel type 316L, an austenitic chromium nickel stainless steel containing Molybdenum. It offers:

- Exceptional corrosion resistance - particularly against sulfuric, hydrochloric; acetic, formic and tartaric acids, acid sulfates and alkaline chlorides;
- resistance to pitting from chloride-ion solutions; and
- outstanding strength even at elevated temperatures

**Chrome plated or Raw brass:** The most commonly used material for industrial and high velocity oxygen applications due to its cost effectiveness versus stainless steel, good strength, resistance and low-friction flow properties.

Need more information? You can find more detail about optional materials on our website: [www.rotarex.com](http://www.rotarex.com). Additionally, one of our material engineers would be happy to discuss the pros and cons of each option to help you choose the best solution.



Gas Compatibility: make sure the body material is compatible with the gas type you will be using. Consult the gas compatibility reference chart on page 96.

### O-RING MATERIALS

For many regulators, a choice of O-ring seal materials is available:

EPDM: Ethylene Propylene Rubber  
 NBR: Nitrile Butadiene Rubber  
 FPM: Fluorocarbon Rubber (VITON®)

For Cartridge:

PTFE: Polytetrafluoroéthylène



Gas Compatibility: make sure the O-ring material is compatible with the gas type you will be using. Consult the gas compatibility reference chart on page 96.

### INLET / OUTLET PRESSURE

Different models are designed for different inlet and outlet pressure performance. The available options are clearly indicated on each product page. Please specify required inlet and outlet pressures when ordering. We can also accommodate special requests.

### CYLINDER CONNECTORS

Specific cylinder valve connections are required for each gas type. The standard available connections are NPT 1/4" male and 16 x 1.336 male which represent the most common connection types. Other standards and dimensions are available on request.

### GAUGES

Most Rotarex regulators are equipped with pressure gauges. However, you can specify with or without gauges when ordering. Check the product configurator table on each product page. Pressure Gauges are in accordance with EN837.



# SERIES SC 280 - SC 380 | SINGLE STAGE HP CARTRIDGE REGULATOR

- Diaphragm Single Stage
- Purity up to 6.0
- Inlet Pressure:  
200 bar (2900 psi)  
300 bar (4350 psi)
- Outlet Pressure:  
1,5/4/10/16/35/50 bar  
21.75/58/145/232/508/  
725 psi

- ★ Compact and lightweight design
- ★ 1 Inlet / 1 Outlet
- ★ O<sub>2</sub> application compatible (see technical data)
- ★ Inlet / Outlet pressure gauge
- ★ Rear threads for panel mounting
- ★ 1 relief valve

Special requirements on request

## APPLICATIONS

- Designed for cylinder regulator applications
- Ideally suited for pure, inert and corrosive gas
- Applications such as:
  - Calibration gases
  - Controlled atmosphere
  - High purity gas carrying

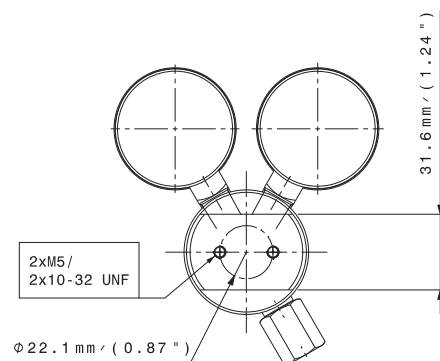
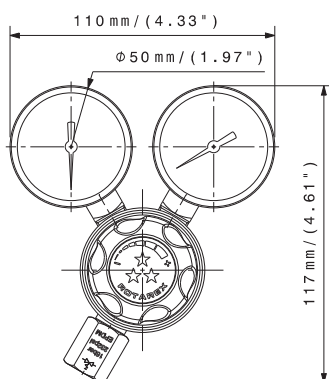
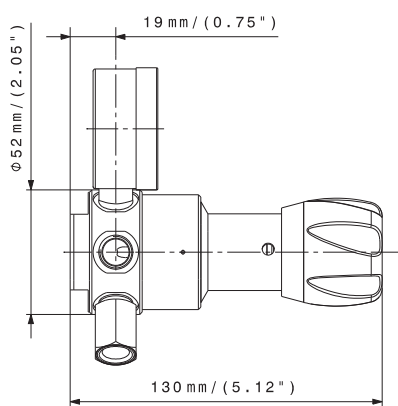
## KEY FEATURES

- This single stage regulator is based on the Cartridge seat Technology.
- Compact, ergonomic and lightweight design makes this regulator suitable for many applications.
- Accurate pressure control for reliable service.
- Handwheel in compliance with ATEX regulation and easy to clean
- Could be equipped with a shut off valve
- Relief valve seat seals material\*
  - Brass Version: EPDM
  - Stainless Steel: FPM

\*Other on demand



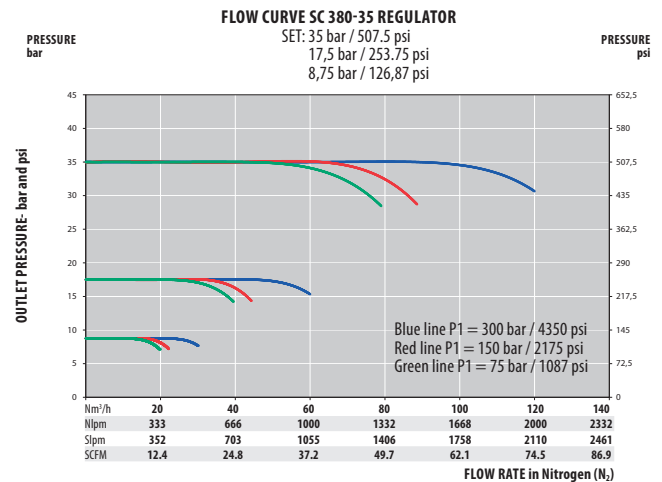
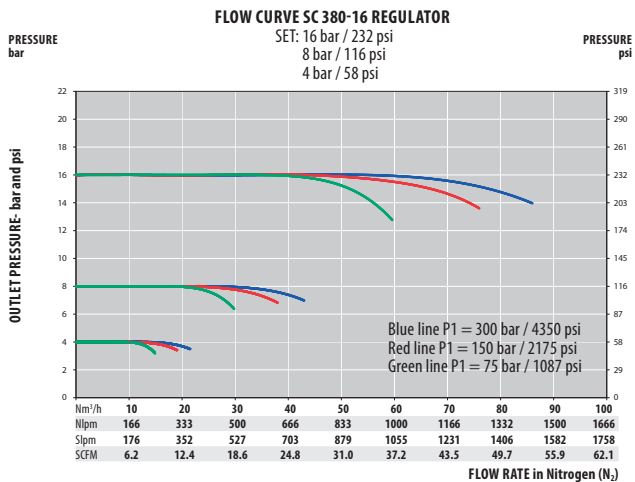
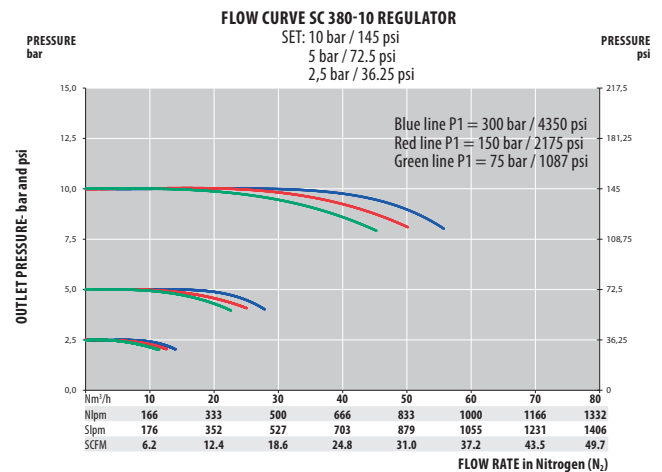
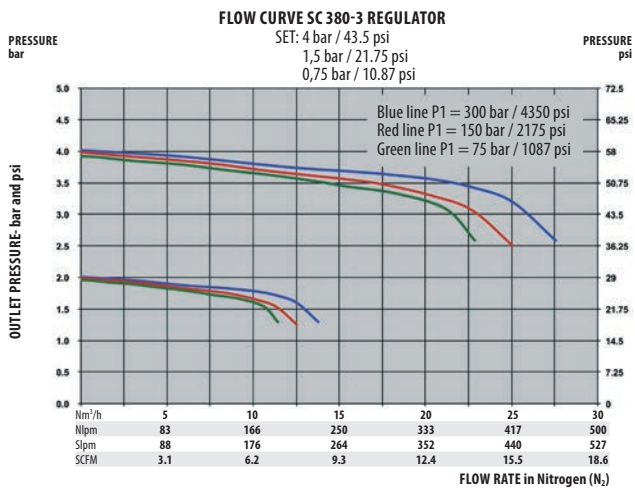
To be connected with cylinder connectors



## SPECIFICATIONS

|                     |                         |                          |                                       |                        |                                                       |
|---------------------|-------------------------|--------------------------|---------------------------------------|------------------------|-------------------------------------------------------|
| <b>Female ports</b> | ¼" NPT (inlet / outlet) | <b>Weight</b>            | ± 1,1 kg<br>± 2.4 lbs                 | <b>Inlet pressure</b>  | 200/300 bar<br>2900/4350 psi                          |
| <b>Valve seal</b>   | PCTFE                   | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar l/s He          | <b>Outlet pressure</b> | 1,5/4/10/16/35/50 bar<br>21.75/58/145/232/508/725 psi |
| <b>O-ring</b>       | PTFE                    | <b>Temperature range</b> | - 40°C to + 60°C<br>- 40°F to + 140°F | <b>Nominal Flow Cv</b> | 1/2/10/20/30 Nm³/h (N <sub>2</sub> )<br>0.1           |
| <b>Diaphragm</b>    | Hastelloy®              | <b>Gauges</b>            | High and low pressure<br>(¼ NPT)      | <b>Oxygen use</b>      | OK with brass<br>and stainless steel                  |

## FLOW CURVES



## PRODUCT CONFIGURATOR

|    | Body Material       | Inlet Pressure     | Port Configuration | Outlet pressure     | Inlet Connection | Outlet Connection | Gauges | Gas Type |
|----|---------------------|--------------------|--------------------|---------------------|------------------|-------------------|--------|----------|
| SC | L                   | 280                | R                  | 10                  | N                | N                 | 1      | N2       |
|    | Chrome plated brass | L 200 bar 2900 psi | 280 Right inlet    | R 1,5 bar 21.75 psi | 1,5 ¼ NPT        | N ¼ NPT           | N With | 1        |
|    | Stainless steel     | I 300 bar 4350 psi | 380 Left inlet     | L 4 bar 58 psi      |                  |                   |        |          |
|    |                     |                    |                    | 10 bar 145 psi      |                  |                   |        |          |
|    |                     |                    |                    | 16 bar 232 psi      |                  |                   |        |          |
|    |                     |                    |                    | 35 bar 508 psi      |                  |                   |        |          |
|    |                     |                    |                    | 50 bar 725 psi      |                  |                   |        |          |

## SERIES S 220 | SINGLE STAGE HP REGULATOR

- Diaphragm single stage
- Purity up to 6.0
- Inlet pressure:  
200 bar (2900 psi)
- Outlet pressure:  
3/15/25/50 bar  
44/218/360/725 psi

- ★ 1 Inlet / 1 outlet
- ★ Rear thread for panel mounting
- ★ O<sub>2</sub> application compatible (with inlet pressure max 30 bar)
- ★ Inlet/outlet pressure gauges

Special requirements on request

### APPLICATIONS

- Designed for cylinder regulator applications.
- Ideally suited for corrosive gases in ultra high purity applications and for fundamental research laboratories.
- Suitable for corrosive liquid gases.

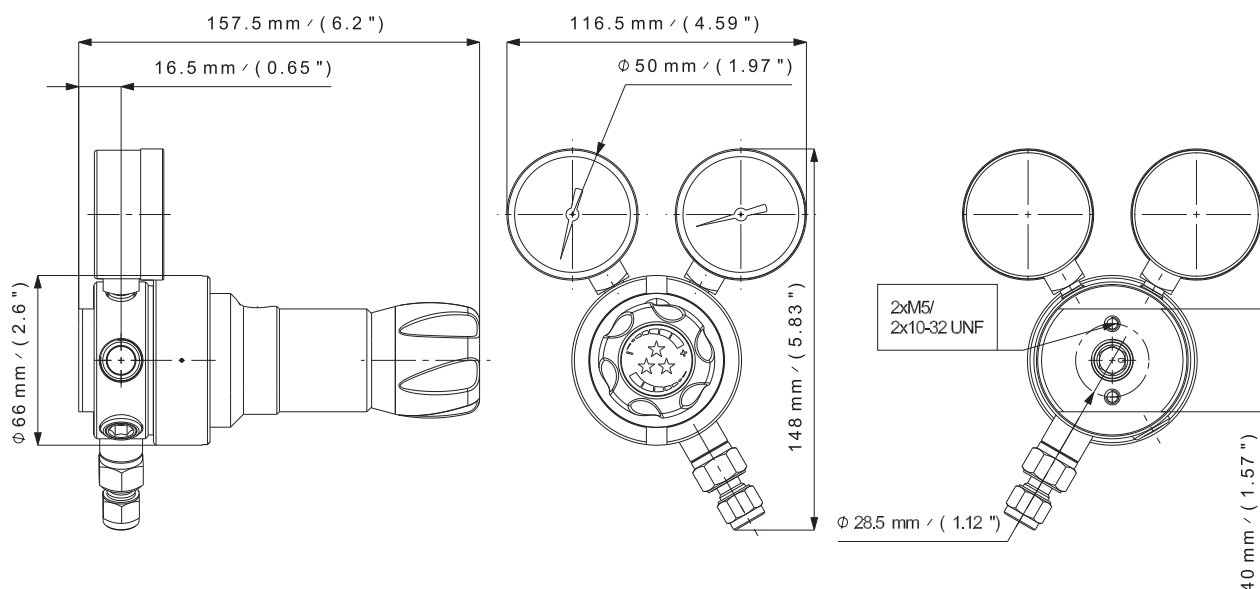
### KEY FEATURES

- No contamination risk due to its threadless and springless design.
- Low dead volume, which guarantees a good purge of the regulator.
- Ergonomic handwheel for exceptional control.
- Panel mounting possible due the rear threads.
- Can also be equipped with a shut off or needle valve at the outlet.

To be connected with cylinder connectors



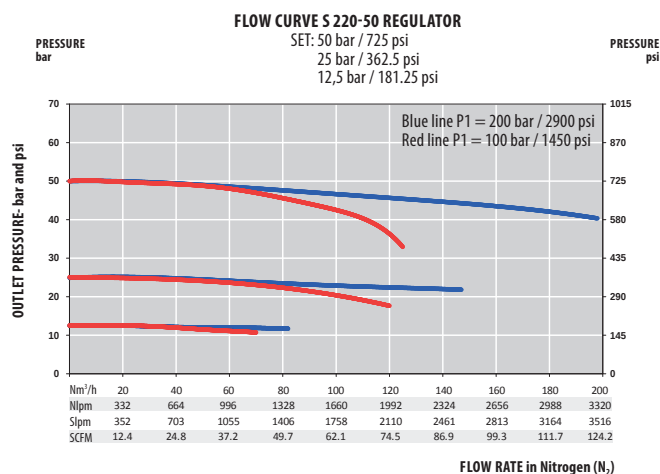
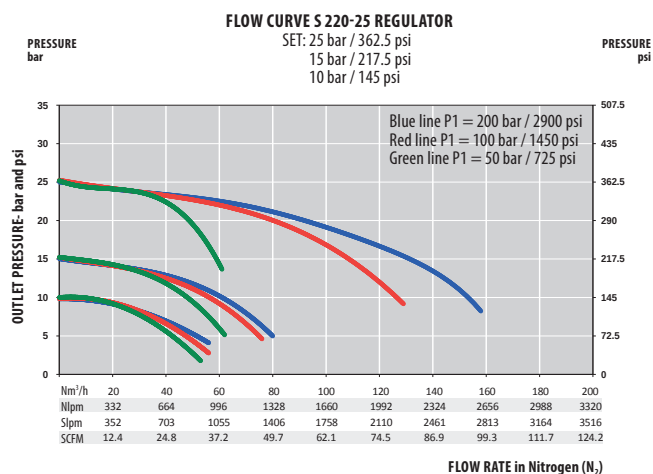
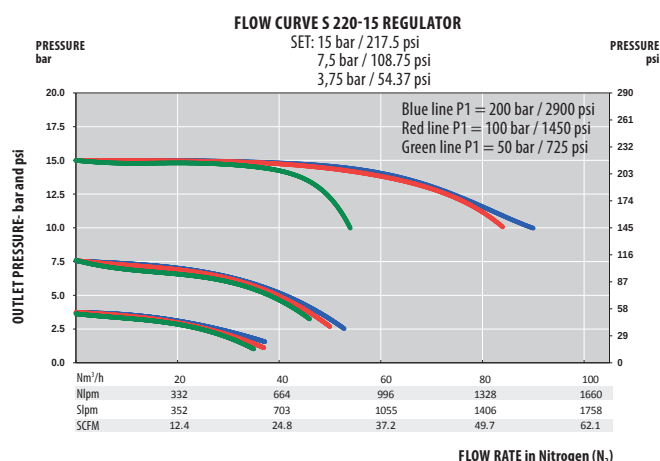
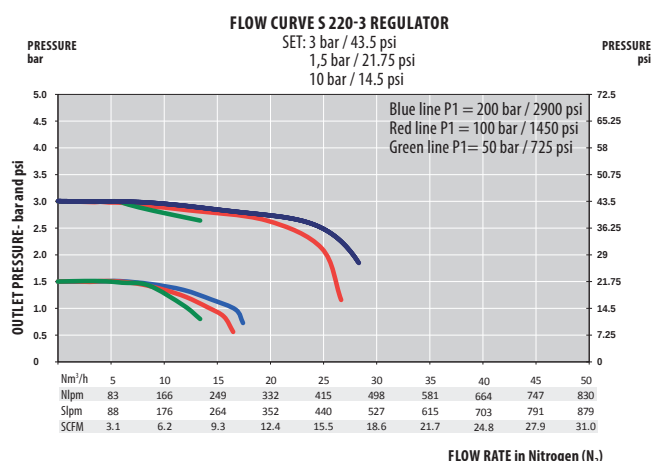
Refer to page 90



## SPECIFICATIONS

|                     |                                                                     |                          |                                               |                        |                                                    |
|---------------------|---------------------------------------------------------------------|--------------------------|-----------------------------------------------|------------------------|----------------------------------------------------|
| <b>Female ports</b> | 16 x 1.336 (inlet) - G 3/8 (outlet)<br>or<br>1/4 NPT (inlet/outlet) | <b>Weight</b>            | ± 2,0 kg<br>± 4.4 lbs                         | <b>Inlet pressure</b>  | 200 bar<br>2900 psi                                |
| <b>Seat seal</b>    | PCTFE                                                               | <b>Leak rate</b>         | 3.10 <sup>-9</sup> mbar ℓ/s He                | <b>Outlet pressure</b> | 3/15/25/50 bar<br>44/218/360/725 psi               |
| <b>O-ring</b>       | FPM - Standard<br>EPDM                                              | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F          | <b>Nominal Flow</b>    | 5/25/50/50<br>Nm <sup>3</sup> /h (N <sub>2</sub> ) |
| <b>Diaphragm</b>    | Hastelloy®                                                          | <b>Gauges</b>            | High and low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | OK with inlet pressure ≤ 30<br>bar max             |

## FLOW CURVES



## PRODUCT CONFIGURATOR

|   | Body Material   |     | Outlet Pressure   |    | End Connections    |    | O-ring Materials (relief valve) |      | Gauges |                       | Ports Configuration |
|---|-----------------|-----|-------------------|----|--------------------|----|---------------------------------|------|--------|-----------------------|---------------------|
| S | I               | 220 | 15                |    | N                  |    | FPM                             |      | 1      |                       | A                   |
|   | Stainless steel | I   | 3 bar<br>44 psi   | 3  | 16 x 1.336 - G 3/8 | 16 | FPM - Standard                  | With | 1      | Standard              | A                   |
|   |                 |     | 15 bar<br>218 psi | 15 | 1/4 NPT - 1/4 NPT  | N  | EPDM                            |      |        | Reverse Inlet/outlet* | R                   |
|   |                 |     | 25 bar<br>360 psi | 25 |                    |    |                                 |      |        |                       |                     |
|   |                 |     | 50 bar<br>725 psi | 50 |                    |    |                                 |      |        |                       |                     |

\*Only available for NPT version

## SERIES S 400 | SINGLE STAGE HP REGULATOR

- Piston single stage
- Purity up to 6.0
- Inlet pressure:  
300 bar (4350 psi)
- Outlet pressure:  
200 bar (2900 psi)

- ★ 1 inlet / 1 outlet
- ★ Rear thread for panel mounting
- ★ O<sub>2</sub> application compatible with brass version only
- ★ Inlet/outlet pressure gauges

Special requirements on request

### APPLICATIONS

- Designed for cylinder regulator applications.
- Ideally suited to put vessels under pressure, leak detection and purge of pipe work.

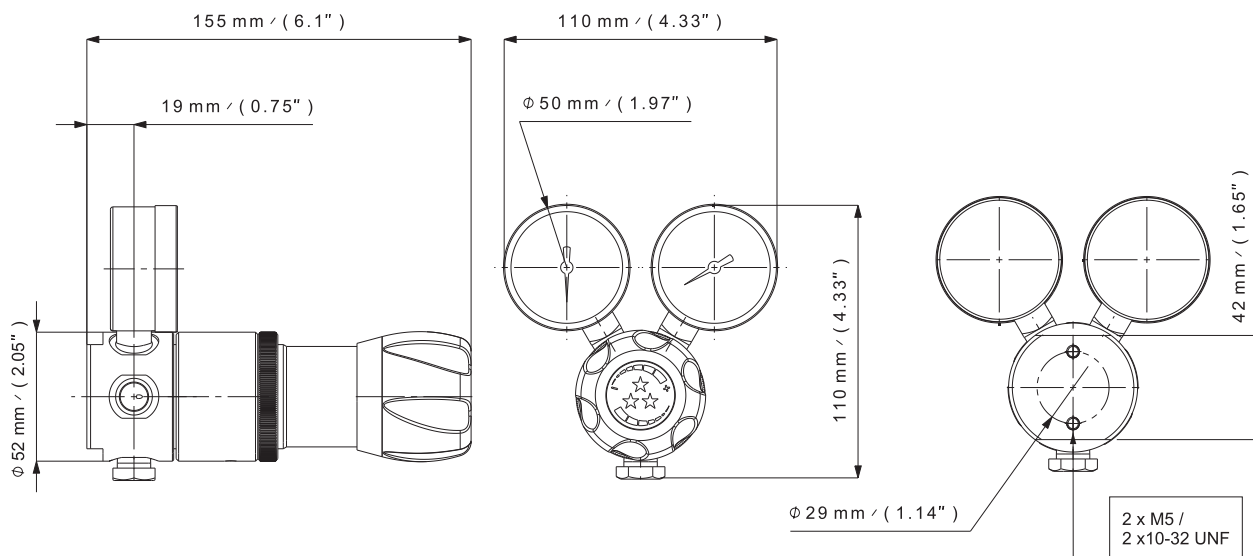
### KEY FEATURES

- Similar to the series S250 but with a higher possible outlet pressure (200 bar)
- Decompression of the downstream regulation system possible by turning the hand wheel counter-clockwise (SL 400).
- Accurate pressure control for reliable service.
- The SLS 400 version has a connection available so that a relief valve can be installed.
- Panel mounting possible due the rear threads.
- Can also be equipped with a shut off valve at the outlet.

To be connected with cylinder connectors



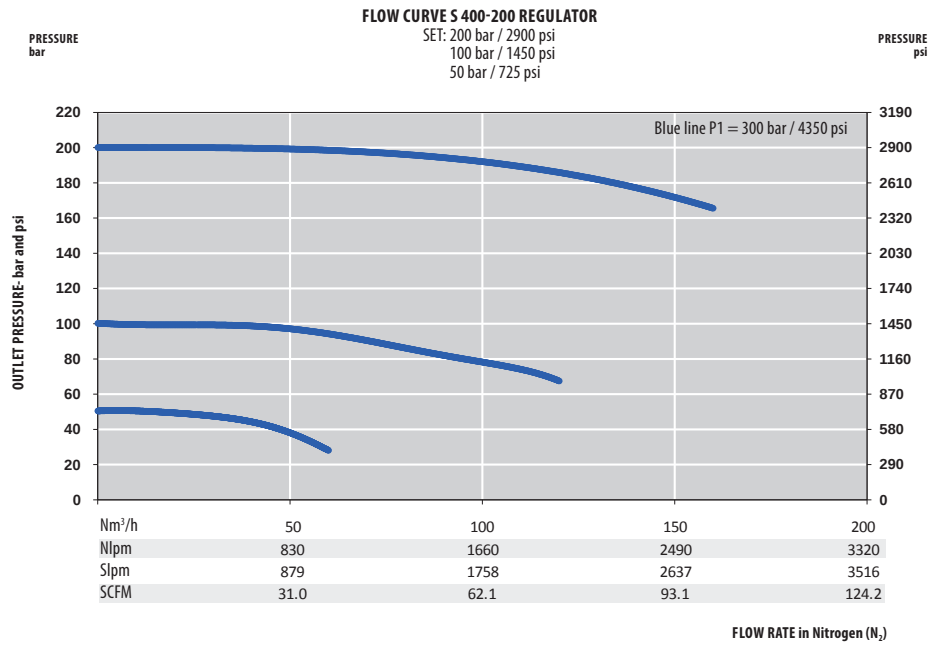
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# SPECIFICATIONS

|                     |                                                               |                          |                                               |                        |                     |
|---------------------|---------------------------------------------------------------|--------------------------|-----------------------------------------------|------------------------|---------------------|
| <b>Female ports</b> | 16 x 1.336 (inlet) - G 3/8 (outlet) or 1/4 NPT (inlet/outlet) | <b>Weight</b>            | ± 1,6 kg<br>± 3.5 lbs                         | <b>Inlet pressure</b>  | 300 bar<br>4350 psi |
| <b>Seat seal</b>    | PCTFE                                                         | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He                  | <b>Outlet pressure</b> | 200 bar<br>2900 psi |
| <b>O-ring</b>       | NBR<br>EPDM - Standard<br>FPM                                 | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F          | <b>Nominal Flow</b>    | 30 Nm³/h (N₂)       |
| <b>Piston</b>       | AISI 316L                                                     | <b>Gauges</b>            | High and low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | Brass only          |

# FLOW CURVES



# PRODUCT CONFIGURATOR

|          | Body Material       |          | Safety Relief Valve Configuration        |          | End Connections    |           | O-ring Material | Gauges   |          |
|----------|---------------------|----------|------------------------------------------|----------|--------------------|-----------|-----------------|----------|----------|
| <b>S</b> | <b>L</b>            |          | <b>-</b>                                 |          | <b>400</b>         | <b>N</b>  |                 | <b>1</b> |          |
|          | Chrome plated brass | <b>L</b> | With decompression system                | <b>-</b> | 16 x 1.336 - G 3/8 | <b>16</b> | NBR             | With     | <b>1</b> |
|          | Stainless steel     | <b>I</b> | With a safety valve connection available | <b>S</b> | 1/4 NPT - 1/4 NPT  | <b>N</b>  | EPDM - Standard |          |          |
|          |                     |          |                                          |          |                    |           | FPM             |          |          |

## SERIES S 800 | SINGLE STAGE HP REGULATOR

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 6.0
- Inlet pressure:  
300 bar (4350 psi)
- Outlet pressure:  
10/16/25/50 bar  
145/232/363/725 psi

- ★ Reduce ownership cost
- ★ 1 inlet / 1 outlet
- ★ Rear thread for front panel mounting
- ★ O<sub>2</sub> application compatible, up to 200 bar inlet pressure for stainless steel version
- ★ Inlet/outlet pressure gauges
- ★ 1 relief valve

Special requirements on request

To be connected with cylinder connectors



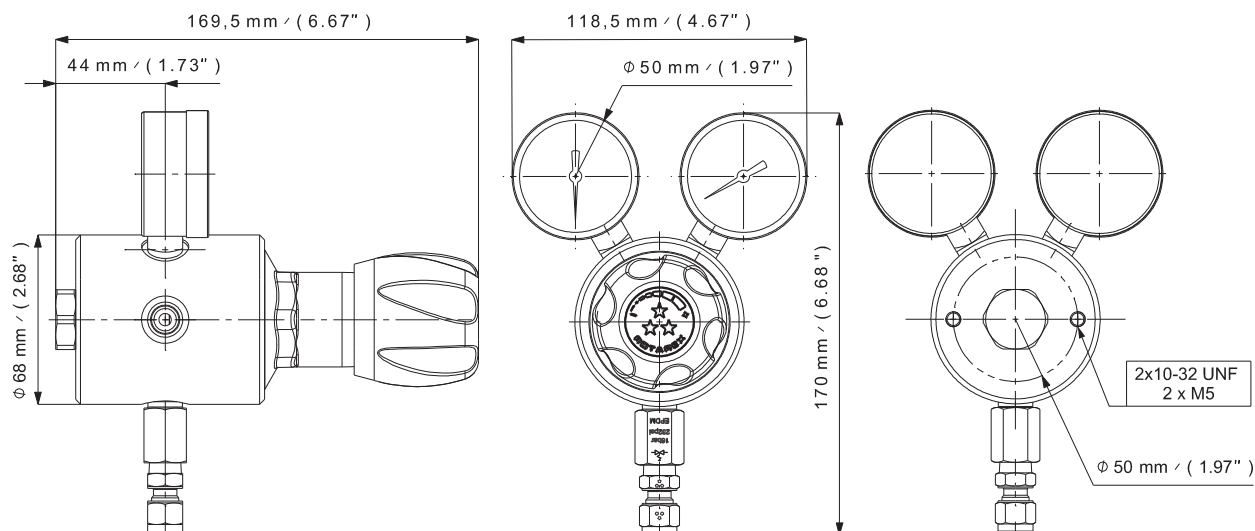
Refer to page 90

### APPLICATIONS

- Designed for application as a cylinder regulator.
- Ideally suited for high purity gases and high-pressure applications requiring high flow and precise outlet pressure, such as for laser applications.
- Used also in nuclear research department where the precision of the outlet pressure and high flow are essential.

### KEY FEATURES

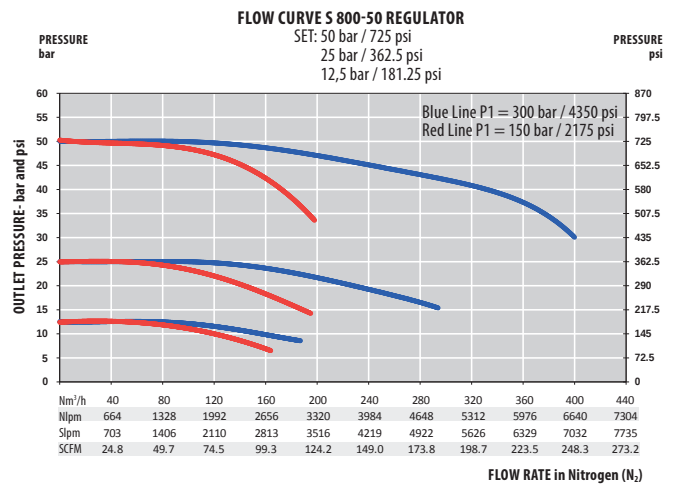
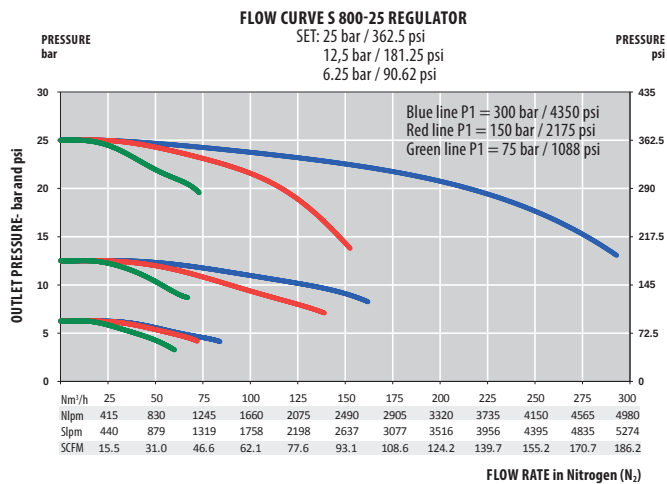
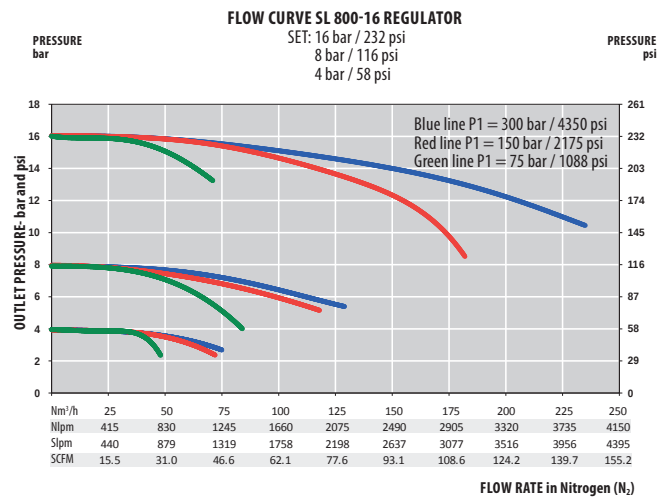
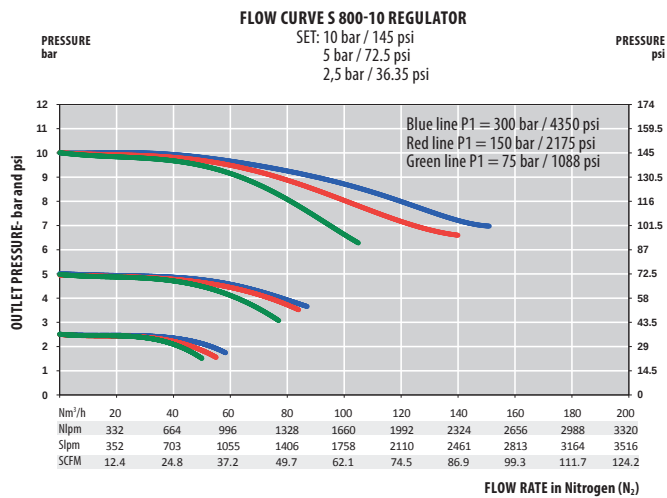
- Best-in-class pressure control with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure are minimized. The BV-technology enables the delivery of a very stable outlet pressure and flow even with high flow.
- BV Technology also increases the useful lifetime of the regulator and reduces ownership cost.



## SPECIFICATIONS

|                     |                                                                     |                          |                                               |                        |                                                                           |
|---------------------|---------------------------------------------------------------------|--------------------------|-----------------------------------------------|------------------------|---------------------------------------------------------------------------|
| <b>Female ports</b> | 16 x 1.336 (inlet) - G 3/8 (outlet)<br>or<br>1/4 NPT (inlet/outlet) | <b>Weight</b>            | ± 2,4 kg<br>± 5.3 lbs                         | <b>Inlet pressure</b>  | 300 bar<br>4350 psi                                                       |
| <b>Seat seal</b>    | PCTFE                                                               | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He                  | <b>Outlet pressure</b> | 10/16/25/50 bar<br>145/232/363/725 psi                                    |
| <b>O-ring</b>       | EPDM - Standard<br>FPM                                              | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F          | <b>Nominal Flow</b>    | 50/50/50/100 Nm <sup>3</sup> /h (N <sub>2</sub> )                         |
| <b>Diaphragm</b>    | AISI 304<br>Hastelloy® (25/50 bar)                                  | <b>Gauges</b>            | High and low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | Brass version: OK<br>Stainless steel version: inlet<br>pressure ≤ 200 bar |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| S | Body Material       |    | 800 | Outlet Pressure     |    | End Connections    |    | O-ring Material |          | Gauges |   |
|---|---------------------|----|-----|---------------------|----|--------------------|----|-----------------|----------|--------|---|
|   | L                   | LB |     | 16                  | 10 | N                  | 16 | EPDM            | Standard | With   | 1 |
|   | Raw brass           | LB |     | 10 bar<br>145 psi   | 10 | 16 x 1.336 - G 3/8 | 16 | EPDM - Standard |          |        |   |
|   | Chrome plated brass | L  |     | 16 bar<br>232 psi   | 16 | 1/4 NPT - 1/4 NPT  | N  | FPM             |          |        |   |
|   | Stainless steel     | I  |     | 25 bar<br>362.5 psi | 25 |                    |    |                 |          |        |   |
|   |                     |    |     | 50 bar<br>725 psi   | 50 |                    |    |                 |          |        |   |

## SERIES DC 280 - DC 380 | DUAL STAGE HP CARTRIDGE REGULATOR

- Diaphragm Dual Stage
- Purity up to 6.0
- Inlet Pressure:  
200 bar (2900 psi)  
300 bar (4350 psi)
- Outlet Pressure:  
1,5/4/10/16/35 bar  
21.75/58/145/232/508 psi

- ★ Compact and lightweight design
- ★ 1 Inlet / 1 Outlet
- ★ O<sub>2</sub> application compatible (see technical data)
- ★ Inlet / Outlet pressure gauge
- ★ 1 relief valve

Special requirements on request

To be connected with cylinder connectors



Refer to page 90

### APPLICATIONS

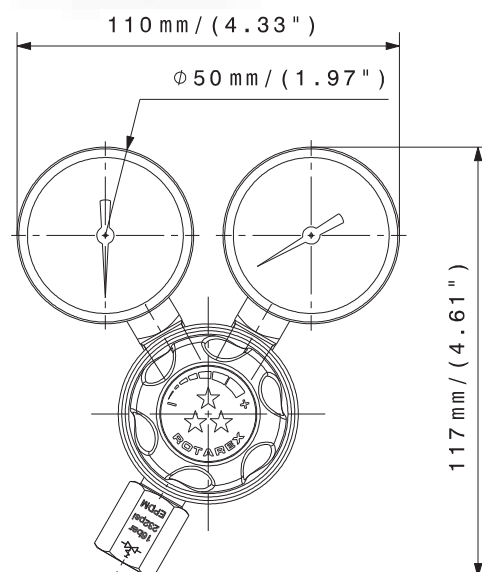
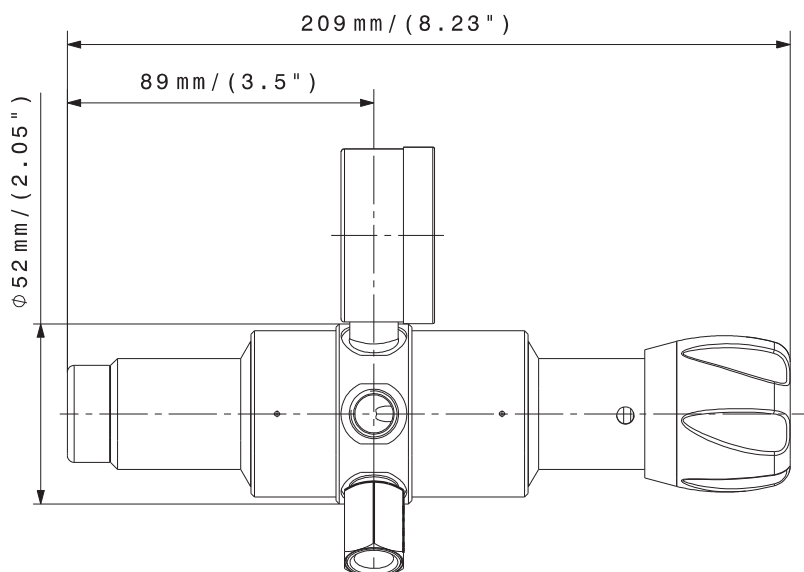
This regulator is ideally suited as cylinder regulator for pure, inert and corrosive gas applications such as analytical instrumentation.

- Gas Chromatograph
- Carrying gas
- Calibration gas

### GENERAL

- This dual stage regulator is based on the Cartridge seat Technology.
- Compact, ergonomic and lightweight design makes this regulator suitable for many applications.
- Accurate pressure control for reliable service.
- Handwheel in compliance with ATEX regulation and easy to clean
- Could be equipped with a shut off valve
- Relief valve seat seals material\*
  - Brass Version: EPDM
  - Stainless Steel: FPM

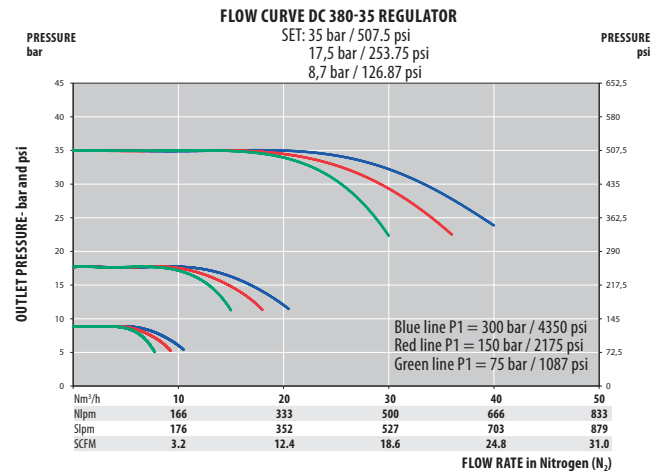
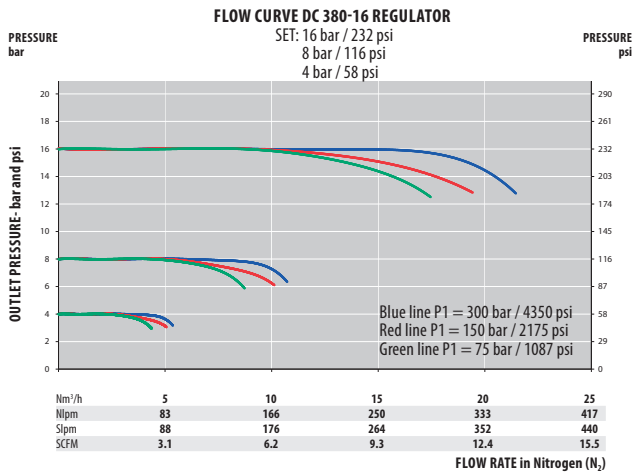
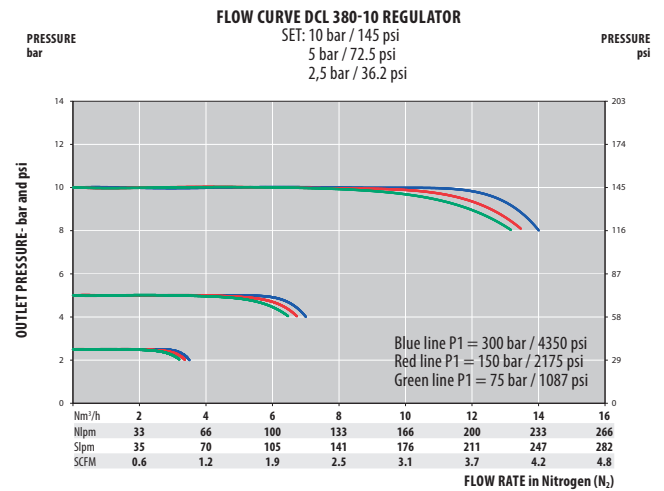
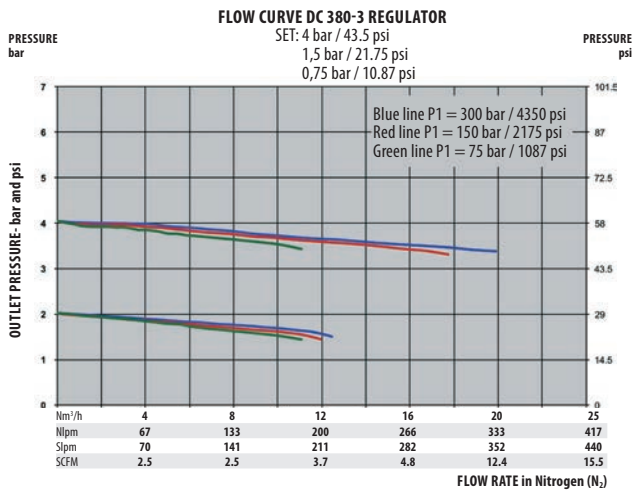
\*Other on demand



## SPECIFICATIONS

|                     |                         |                          |                                       |                        |                                                |
|---------------------|-------------------------|--------------------------|---------------------------------------|------------------------|------------------------------------------------|
| <b>Female ports</b> | 1/4" NPT (Inlet/Outlet) | <b>Weight</b>            | ± 1,5 kg<br>± 3.3 lbs                 | <b>Inlet pressure</b>  | 200/300 bar<br>2900/4350 psi                   |
| <b>Valve seal</b>   | PCTFE                   | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar l/s He          | <b>Outlet pressure</b> | 1,5/4/10/16/35 bar<br>21.75/58/145/232/508 psi |
| <b>O-ring</b>       | PTFE                    | <b>Temperature range</b> | - 40°C to + 60°C<br>- 40°F to + 140°F | <b>Nominal Flow Cv</b> | 1/2/10/20/30 Nm³/h (N₂)<br>0.06                |
| <b>Diaphragm</b>    | Hastelloy®              | <b>Gauges</b>            | High and low pressure<br>(1/4 NPT)    | <b>Oxygen use</b>      | OK with brass and stainless steel              |

## FLOW CURVES



## PRODUCT CONFIGURATOR

|    | Body Material       | Inlet Pressure       | Port Configuration | Outlet pressure       | Inlet Connection | Outlet Connection | Gauges | Gas Type |
|----|---------------------|----------------------|--------------------|-----------------------|------------------|-------------------|--------|----------|
| DC | L                   | 280                  | R                  | 10                    | N                | N                 | 1      | N2       |
|    | Chrome plated brass | L 200 bar / 2900 psi | 280 Right inlet    | R 1,5 bar / 21.75 psi | 1/4 NPT          | N 1/4 NPT         | With   | 1        |
|    | Stainless steel     | I 300 bar / 4350 psi | 380 Left inlet     | L 4 bar / 58 psi      |                  |                   |        |          |
|    |                     |                      |                    | 10 bar / 145 psi      |                  |                   |        |          |
|    |                     |                      |                    | 16 bar / 232 psi      |                  |                   |        |          |
|    |                     |                      |                    | 35 bar / 508 psi      |                  |                   |        |          |

## SERIES D 230 | DUAL STAGE HP REGULATOR

- Piston/bellow dual stage
- Purity up to 6.0
- Inlet pressure:  
200 bar (2900 psi)
- Outlet pressure:  
1/3/10 bar  
14.5/44/145psi

- ★ Compact and light-weight design
- ★ 1 inlet / 2 outlets
- ★ O<sub>2</sub> application compatible (brass only)
- ★ Inlet/outlet pressure gauges
- ★ 1 relief valve

Special requirements on request

### APPLICATIONS

- Designed for cylinder regulator applications.
- Ideally suited for pure, inert and mildly corrosive gas applications requiring a very stable outlet pressure together with a very sensitive set up of this outlet pressure.

### KEY FEATURES

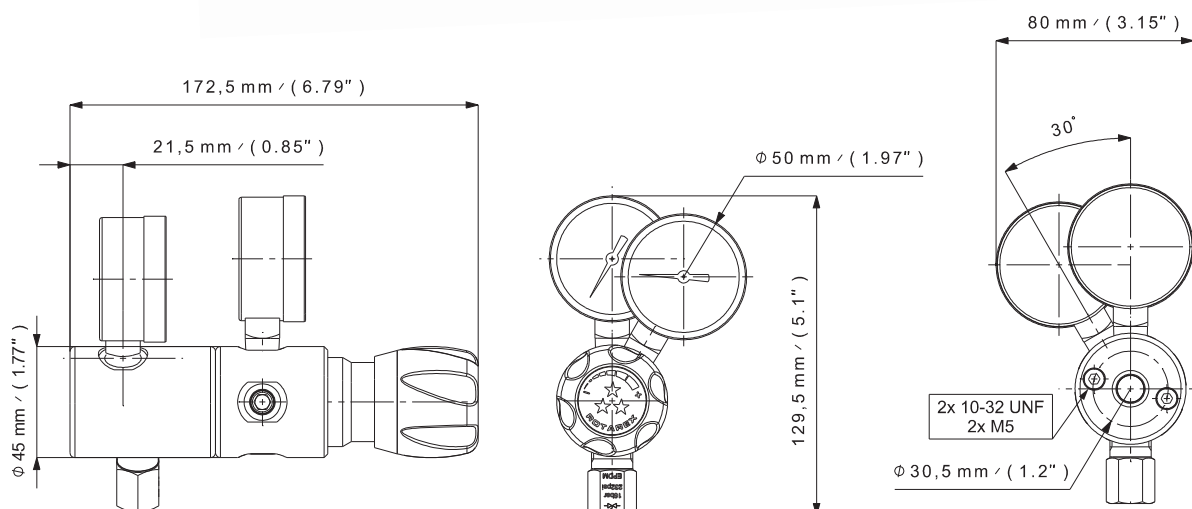
- The D 230 regulator is based on the S 20 proven bellow technology.
- Accurate pressure control for reliable service and guarantees a stable outlet pressure due to the combination of the piston and bellow technology.
- Compact and lightweight design.
- Fixed outlet pressure version available.



To be connected with cylinder connectors



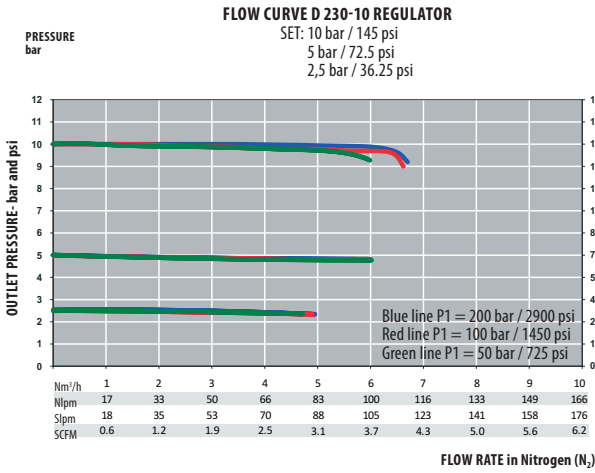
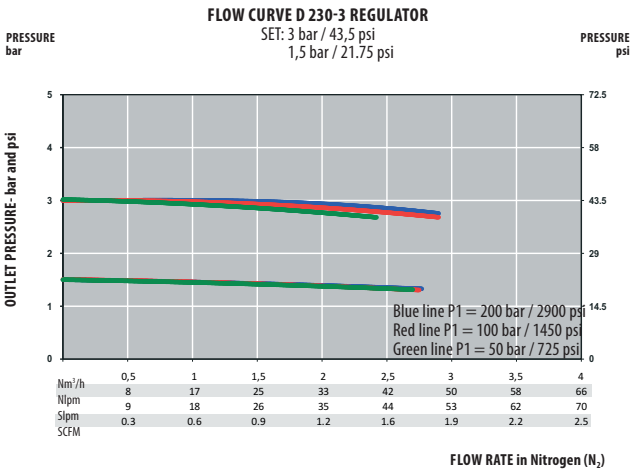
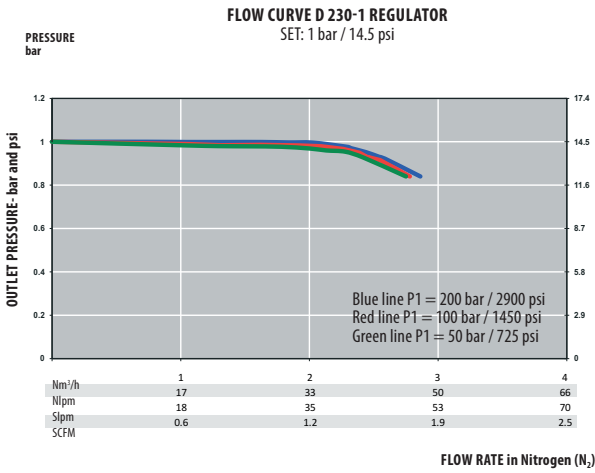
Refer to page 90



# SPECIFICATIONS

|                     |                                                                     |                          |                                               |                        |                                                   |
|---------------------|---------------------------------------------------------------------|--------------------------|-----------------------------------------------|------------------------|---------------------------------------------------|
| <b>Female ports</b> | 16 x 1.336 (inlet) - G 3/8 (outlet)<br>or<br>1/4 NPT (inlet/outlet) | <b>Weight</b>            | ± 1,6 kg<br>± 3.5 lbs                         | <b>Inlet pressure</b>  | 200 bar<br>2900 psi                               |
| <b>Seat seal</b>    | PTFE                                                                | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He                  | <b>Outlet pressure</b> | 1/3/10 bar<br>14.5/44/145 psi                     |
| <b>O-ring</b>       | EPDM - Standard<br>FPM                                              | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F          | <b>Nominal Flow</b>    | 2/2,5/3,5<br>Nm <sup>3</sup> /h (N <sub>2</sub> ) |
| <b>Piston</b>       | Brass (Brass version)<br>AISI 316L (SS version)                     | <b>Gauges</b>            | High and low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | Brass only                                        |
| <b>Below</b>        | Bronze or<br>AISI 316L (SS version)                                 |                          |                                               |                        |                                                   |

# FLOW CURVES



# PRODUCT CONFIGURATOR

|   | Body Material       |   |     | Outlet Pressure   |    | End Connections            |    | O-ring Material |      | Gauges |                 | Handwheel |  |
|---|---------------------|---|-----|-------------------|----|----------------------------|----|-----------------|------|--------|-----------------|-----------|--|
| D | L                   |   | 230 | 10                |    | N                          |    | EPDM            |      | 1      |                 | H         |  |
|   | Chrome plated brass | L |     | 1 bar<br>14.5 psi | 1  | In: 16 x 1.336<br>Out: G ¾ | 16 | EPDM - Standard | With | 1      | With - standard | H         |  |
|   | Stainless steel     | I |     | 3 bar<br>44 psi   | 3  | ¼ NPT                      | N  | FPM             |      |        |                 |           |  |
|   |                     |   |     | 10 bar<br>145 psi | 10 |                            |    |                 |      |        |                 |           |  |

## SERIES D 230-0.1 | DUAL STAGE HP REGULATOR

- Piston/diaphragm dual stage
- Purity up to 6.0
- Inlet pressure:  
200 bar (2900 psi)
- Outlet pressure:  
0,01 - 0,1 bar  
0.14 - 1.45 psi

- ★ Compact and lightweight design
- ★ 1 inlet / 2 outlets
- ★ O<sub>2</sub> application compatible (brass only)
- ★ Inlet/outlet pressure gauges
- ★ 1 safety relief valve

Special requirements on request

### APPLICATIONS

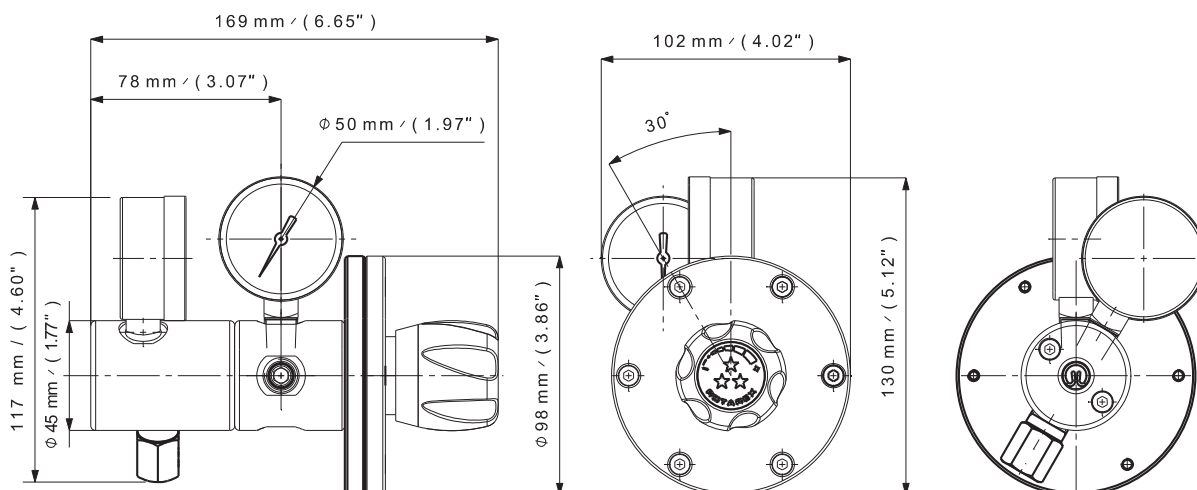
- Designed for cylinder regulator applications.
- Ideally suited for pure, inert and mildly corrosive gas applications requiring a very stable, very sensitive and very low outlet pressure.

### KEY FEATURES

- The DL 230-0.1 regulator is based on the SL 20-0.1 proven low pressure regulator.
- Guarantees a stable low flow due to the combination of the piston and diaphragm technologies.
- The rear threads can be used for wall mounting.
- Can also be equipped with a needle or shut off valve at the outlet.



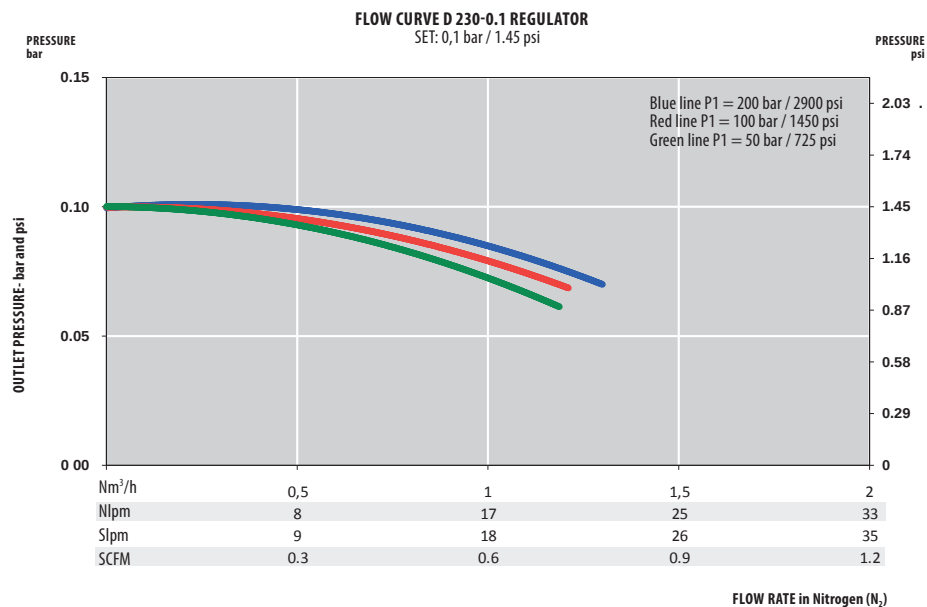
Rear inlet view - with cylinder connector



## SPECIFICATIONS

|                     |                                                               |                          |                                               |                        |                                          |
|---------------------|---------------------------------------------------------------|--------------------------|-----------------------------------------------|------------------------|------------------------------------------|
| <b>Female ports</b> | 16 x 1.336 (inlet) - G 3/8 (outlet)<br>1/4 NPT (inlet/outlet) | <b>Weight</b>            | ± 1,5 kg<br>± 3.3 lbs                         | <b>Inlet pressure</b>  | 200 bar<br>2900 psi                      |
| <b>Seat seal</b>    | PTFE                                                          | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He                  | <b>Outlet pressure</b> | 0,01/0,1 bar<br>0.14/1.45 psi            |
| <b>O-ring</b>       | EPDM - Standard<br>FPM                                        | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F          | <b>Nominal Flow</b>    | 0,5 Nm <sup>3</sup> /h (N <sub>2</sub> ) |
| <b>Piston</b>       | Brass (Brass version)<br>AISI 316L (SS version)               | <b>Gauges</b>            | High and low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | Brass only                               |
| <b>Diaphragm</b>    | AISI 304                                                      |                          |                                               |                        |                                          |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| Body Material |                     |   |     | End Connections |                              | O-ring Material |                 | Gauges |      |   |
|---------------|---------------------|---|-----|-----------------|------------------------------|-----------------|-----------------|--------|------|---|
| D             | L                   |   | 230 | 0.1             | N                            |                 | EPDM            |        | 1    |   |
|               | Chrome plated brass | L |     |                 | In: 16 x 1.336<br>Out: G 3/8 | 16              | EPDM - standard |        | With | 1 |
|               | Stainless steel     | I |     |                 | NPT 1/4<br>(inlet/outlet)    | N               | FPM             |        |      |   |

## SERIES S 10 | LINE REGULATOR

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 6.0
- Inlet pressure:  
25 bar (360 psi)
- Outlet pressure:  
3 bar (44 psi)  
or 8 bar (116 psi)

- ★ Compact design
- ★ Reduce the ownership cost
- ★ Front panel mounting
- ★ O<sub>2</sub> application compatible

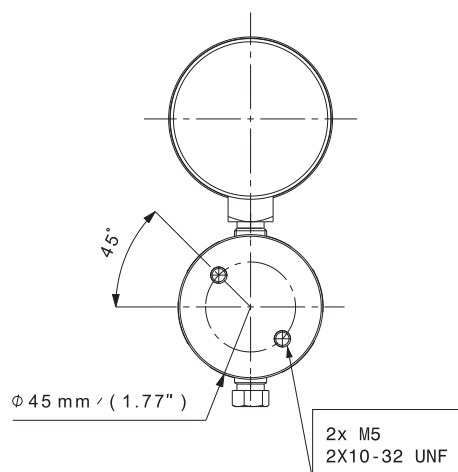
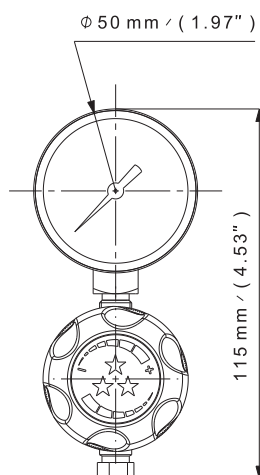
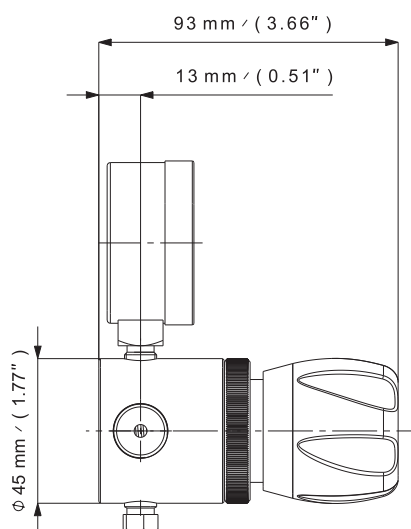
Special requirements on request

### APPLICATIONS

- Designed as a second stage line regulator for laboratory applications such as: gas delivery to inductive plasma spectrometer, protection and support gas for chromatograph, environmental emission monitoring, industrial hygiene or safety monitors and trace impurity analyzers.
- Ideally suited as a NH<sub>3</sub> line regulator (EPDM stainless steel version).

### KEY FEATURES

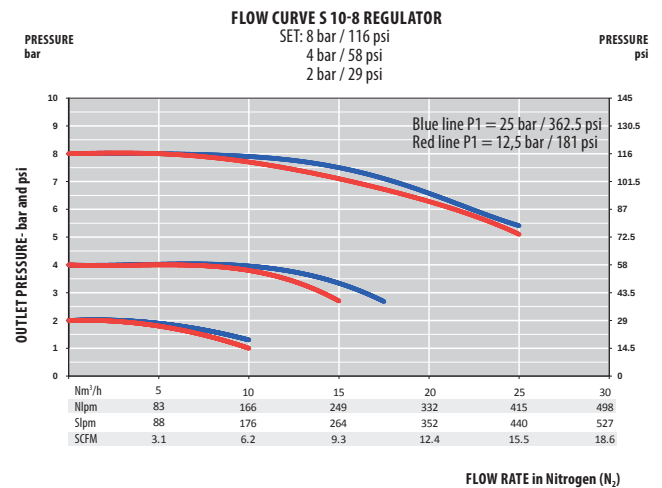
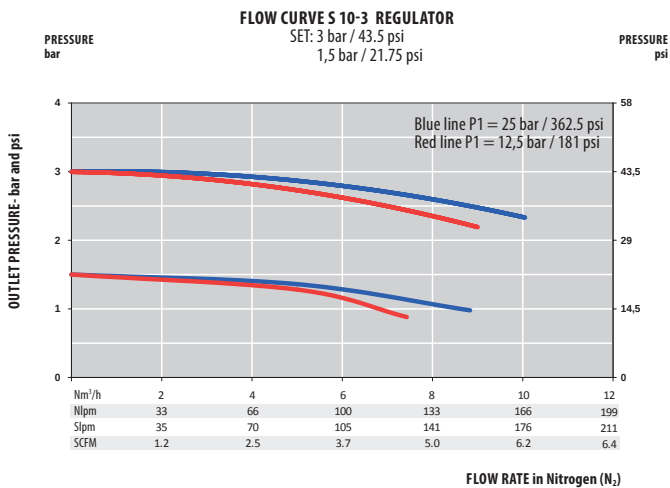
- As a second level of regulation, the SL 10 will supply a precise outlet pressure to the process. It can be used for many applications that need a high flow.
- Flexible wall or panel mounting possible with its compact design, the rear threads and fixing ring.
- Best-in-class pressure control with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure are minimized. BV-technology delivers an exceptionally stable outlet pressure and flow even with high flow line regulators.
- Longer useful regulator lifetime and lower total ownership cost.



## SPECIFICATIONS

|                     |                                                     |                          |                                      |                           |                                  |
|---------------------|-----------------------------------------------------|--------------------------|--------------------------------------|---------------------------|----------------------------------|
| <b>Female ports</b> | G 3/8 or 1/4 NPT (inlet/outlet)                     | <b>Weight</b>            | ± 0,6 kg<br>± 1.32 lbs               | <b>Inlet pressure max</b> | 25 bar<br>360 psi                |
| <b>Seat seal</b>    | FPM<br>EPDM                                         | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He         | <b>Outlet pressure</b>    | 3/8 bar<br>44/116 psi            |
| <b>O-ring</b>       | FPM<br>EPDM                                         | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F | <b>Nominal Flow</b>       | 4,5/12 Nm³/h (N₂)                |
| <b>Diaphragm</b>    | AISI 304 (brass version)<br>Hastelloy® (SS version) | <b>Gauges</b>            | Low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>         | OK for brass and stainless steel |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| Body Material |                     | 10 | Outlet Pressure  |   | End Connections   |   | O-ring Material |  | Gauges |   | Mounting            |     | Ports Configuration    |   |
|---------------|---------------------|----|------------------|---|-------------------|---|-----------------|--|--------|---|---------------------|-----|------------------------|---|
| S             | L                   |    | 8                |   | G                 |   | EPDM            |  | 1      |   | FR0                 |     | A                      |   |
|               | Chrome plated brass | L  | 3 bar<br>44 psi  | 3 | G 3/8 - G 3/8     | G | EPDM - Standard |  | With   | 1 | Without Fixing Ring | FR0 | Standard Configuration | A |
|               | Stainless steel     | I  | 8 bar<br>116 psi | 8 | 1/4 NPT - 1/4 NPT | N | FPM             |  |        |   | With Fixing Ring    | FR1 | Reverse inlet/outlet   | R |

## SERIES S 15 | LINE REGULATOR

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 6.0
- Inlet pressure:  
25 bar (360 psi)
- Outlet pressure:  
10 bar (145 psi)

- ★ Reduce the ownership cost
- ★ Front panel mounting
- ★ O<sub>2</sub> application compatible

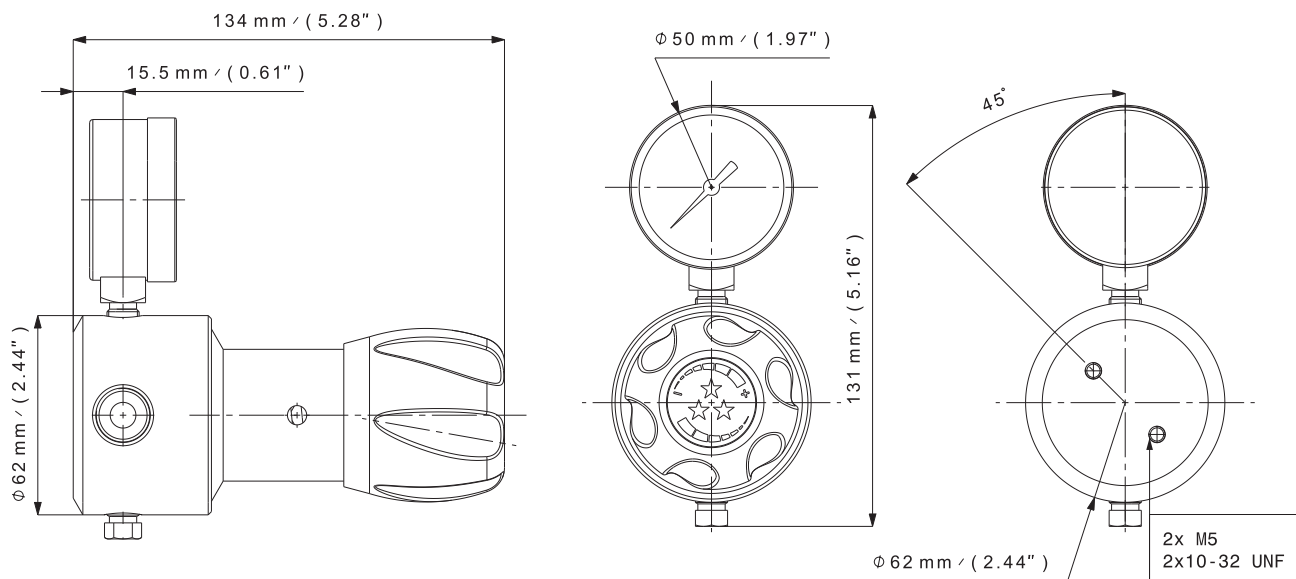
Special requirements on request

### APPLICATIONS

- Used as a line regulator for high-flow industrial or lab applications.

### KEY FEATURES

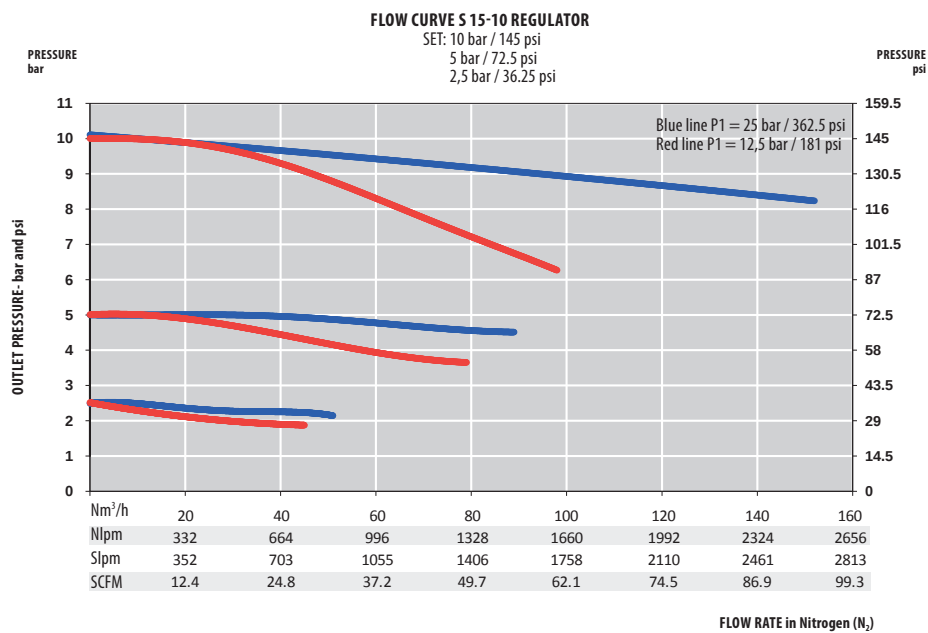
- As a second level of regulation the S 15 will supply a precise outlet pressure to the process.
- Can be used for wall or panel mounting with its compact design, the rear threads and fixing ring.
- Best-in-class pressure stability with Balanced-Valve Technology (Balanced-Valve Technology): the effect of inlet pressure fluctuations on outlet pressure are minimized. BV-technology delivers an exceptionally stable outlet pressure and flow even with high flow line regulators.
- Longer useful regulator lifetime and lower total ownership cost.



## SPECIFICATIONS

|                     |                                                     |                          |                                      |                        |                                  |
|---------------------|-----------------------------------------------------|--------------------------|--------------------------------------|------------------------|----------------------------------|
| <b>Female ports</b> | G 3/8 or 1/4 NPT (inlet/outlet)                     | <b>Weight</b>            | ± 1,2 kg<br>± 2.64 lbs               | <b>Inlet pressure</b>  | 25 bar<br>360 psi                |
| <b>Seat seal</b>    | FPM<br>EPDM                                         | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He         | <b>Outlet pressure</b> | 10 bar<br>145 psi                |
| <b>O-ring</b>       | FPM<br>EPDM                                         | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F | <b>Nominal Flow</b>    | 50 Nm³/h (N₂)                    |
| <b>Diaphragm</b>    | AISI 304 (brass version)<br>Hastelloy® (SS version) | <b>Gauges</b>            | Low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | OK for brass and stainless steel |

## FLOW CURVES



## PRODUCT CONFIGURATOR

|          | Body Material       |           | Outlet Pressure   |           | End Connections   | O-ring Material | Gauges   | Ports Configuration |                        |
|----------|---------------------|-----------|-------------------|-----------|-------------------|-----------------|----------|---------------------|------------------------|
| <b>S</b> | <b>L</b>            | <b>15</b> | <b>10</b>         | <b>10</b> | <b>G</b>          | <b>EPDM</b>     | <b>1</b> | <b>A</b>            |                        |
|          | Chrome plated brass | <b>L</b>  | 10 bar<br>145 psi |           | G 3/8 - G 3/8     | EPDM - Standard | With     | 1                   | Standard Configuration |
|          | Stainless steel     | <b>I</b>  |                   |           | 1/4 NPT - 1/4 NPT | FPM             |          |                     | Reverse inlet/outlet   |

## SERIES S 20 | LINE REGULATOR

- Bellow single stage
- Purity up to 6.0
- Inlet pressure:  
50 bar (725 psi)
- Outlet pressure:  
1/3/10 bar  
14.5/44/145 psi

- ★ Accurate pressure delivery
- ★ Compact design
- ★ 2 inlets / 2 outlet
- ★ Rear Inlet for panel mounting
- ★ O<sub>2</sub> application compatible  
(see technical data)

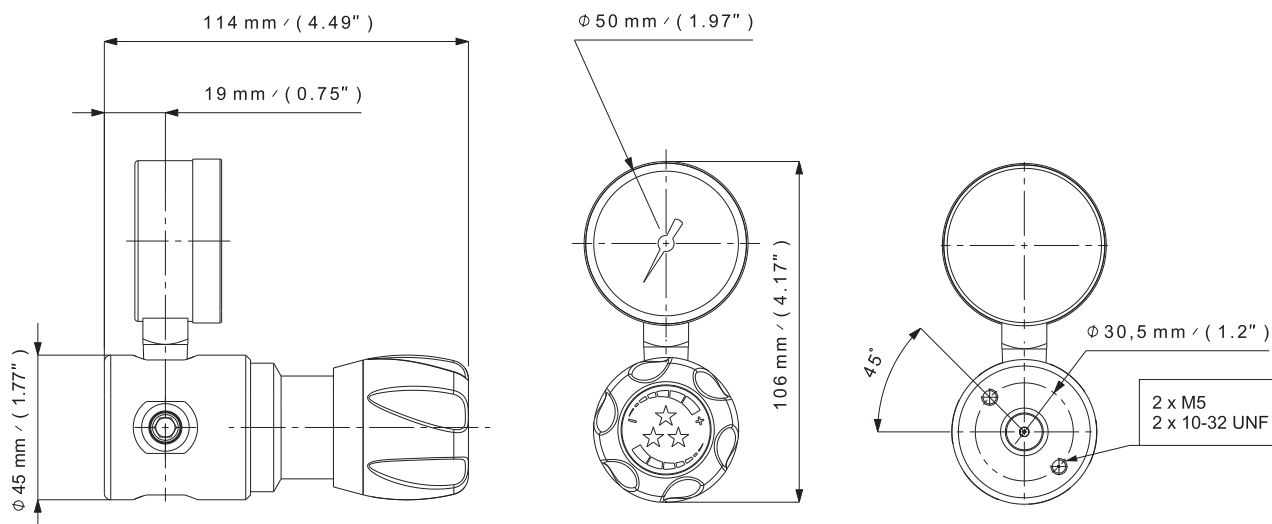
Special requirements on request

### APPLICATIONS

- Used as a line or point of use regulator for specialty gas applications requiring very precise repeatability and a high precision of outlet pressure
- Ideally suited for laboratory applications like: gas delivery to inductive plasma spectrometer, protection and support gas for chromatograph.

### KEY FEATURES

- Bellow technology provides a large range of accurate outlet pressures in a compact design.
- With its compact design, the rear threads and its fixing ring (option) it can be used for wall or panel mounting.
- Acetylene version available: Series S 20 AD & S 25 AD (See pages 66 and 68)



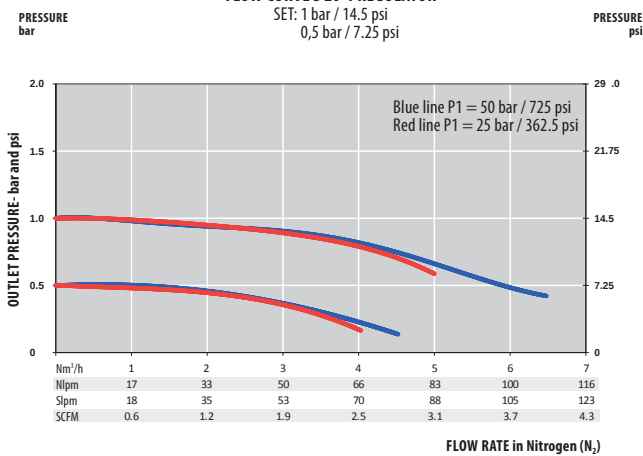
Drawing for 1/4 NPT version

## SPECIFICATIONS

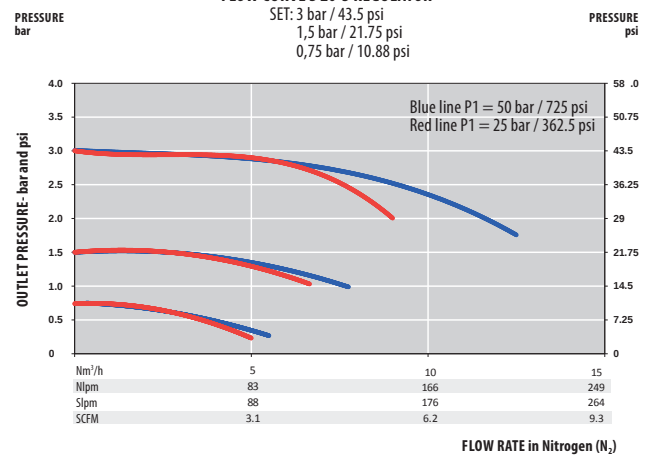
|                     |                                     |                          |                                      |                        |                                                               |
|---------------------|-------------------------------------|--------------------------|--------------------------------------|------------------------|---------------------------------------------------------------|
| <b>Female ports</b> | G 3/8 or 1/4 NPT (inlet/outlet)     | <b>Weight</b>            | ± 0,5 kg<br>± 1.1 lbs                | <b>Inlet pressure</b>  | 50 bar<br>725 psi                                             |
| <b>Seat seal</b>    | EPDM                                | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He         | <b>Outlet pressure</b> | 1/3/10 bar<br>14.5/44/145 psi                                 |
| <b>O-ring</b>       | EPDM - Standard<br>FPM              | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F | <b>Nominal Flow</b>    | 2/2,5/3,5 Nm <sup>3</sup> /h (N <sub>2</sub> )                |
| <b>Bellow</b>       | Bronze or<br>AISI 316L (SS version) | <b>Gauges</b>            | Low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | inlet pressure ≤ 30 bar max.<br>for brass and stainless steel |

## FLOW CURVES

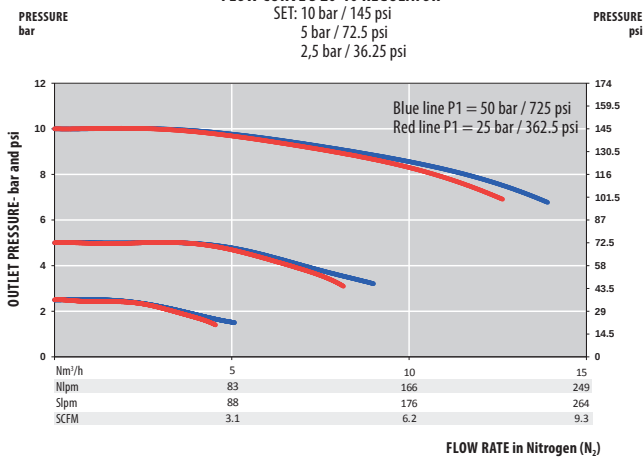
FLOW CURVE S 20-1 REGULATOR

SET: 1 bar / 14.5 psi  
0,5 bar / 7.25 psi

FLOW CURVE S 20-3 REGULATOR

SET: 3 bar / 43.5 psi  
1,5 bar / 21.75 psi  
0,75 bar / 10.88 psi

FLOW CURVE S 20-10 REGULATOR

SET: 10 bar / 145 psi  
5 bar / 72.5 psi  
2,5 bar / 36.25 psi

## PRODUCT CONFIGURATOR

| Body Material |                     |   | Outlet Pressure |                   | End Connections |               | O-ring Material |                 | Gauge |   | Mounting            |     | Ports Configuration    |   |  |
|---------------|---------------------|---|-----------------|-------------------|-----------------|---------------|-----------------|-----------------|-------|---|---------------------|-----|------------------------|---|--|
| S             | L                   |   | 20              | 10                |                 | G             |                 | EPDM            |       | 1 |                     | FR0 |                        | A |  |
|               | Chrome plated brass | L |                 | 1 bar<br>14.5 psi | 1               | G ¾ - G ¾     | G               | EPDM - Standard | With  | 1 | Without Fixing Ring | FR0 | Standard Configuration | A |  |
|               | Stainless steel     | I |                 | 3 bar<br>44 psi   | 3               | ¼ NPT - ¼ NPT | N               | FPM             |       |   | With Fixing Ring    | FR1 | Reverse inlet/outlet   | R |  |
|               |                     |   |                 | 10 bar<br>145 psi | 10              |               |                 |                 |       |   |                     |     |                        |   |  |

## SERIES S 20-0.1 | LINE REGULATOR

- Diaphragm single stage
- Purity up to 6.0
- Inlet pressure:  
50 bar (725 psi)
- Outlet pressure:  
0,01 - 0,1 bar  
0.14 - 1.45 psi

- ★ Very low outlet pressure
- ★ 2 inlets / 2 outlet
- ★ Rear inlet
- ★ Rear threads for panel mounting
- ★ High accuracy due to large diaphragm
- ★ O<sub>2</sub> application compatible (see technical data)

Special requirements on request



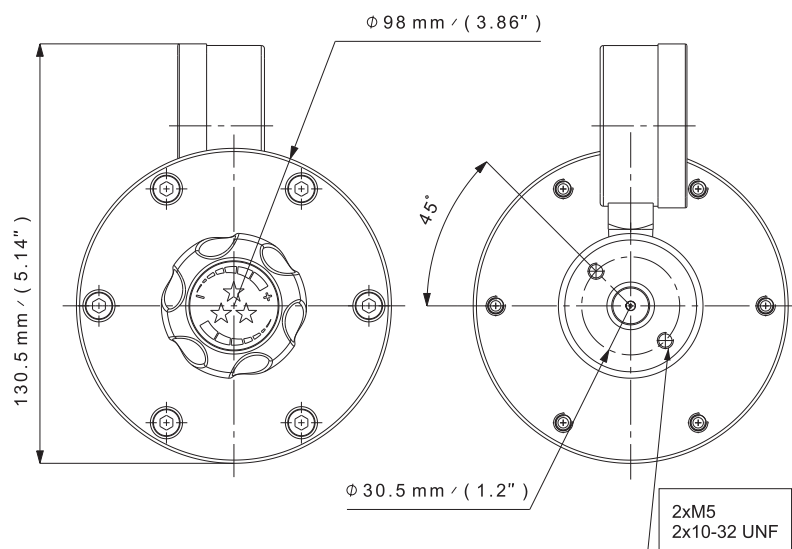
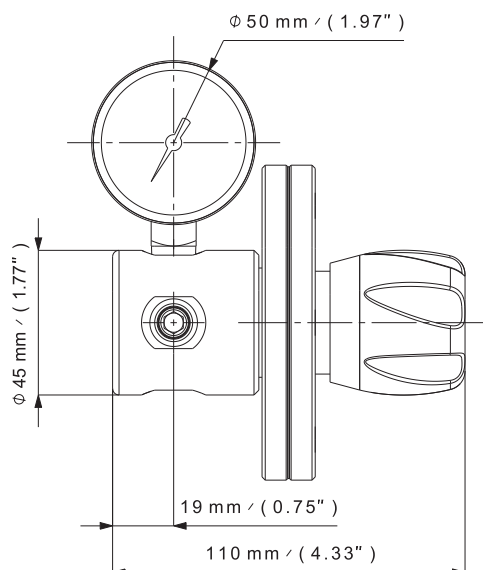
Rear inlet view

### APPLICATIONS

- The Series S 20-0.1 is used as a line regulator for lab applications requiring a low outlet pressure less than 100 mbar (1.45 psi).

### KEY FEATURES

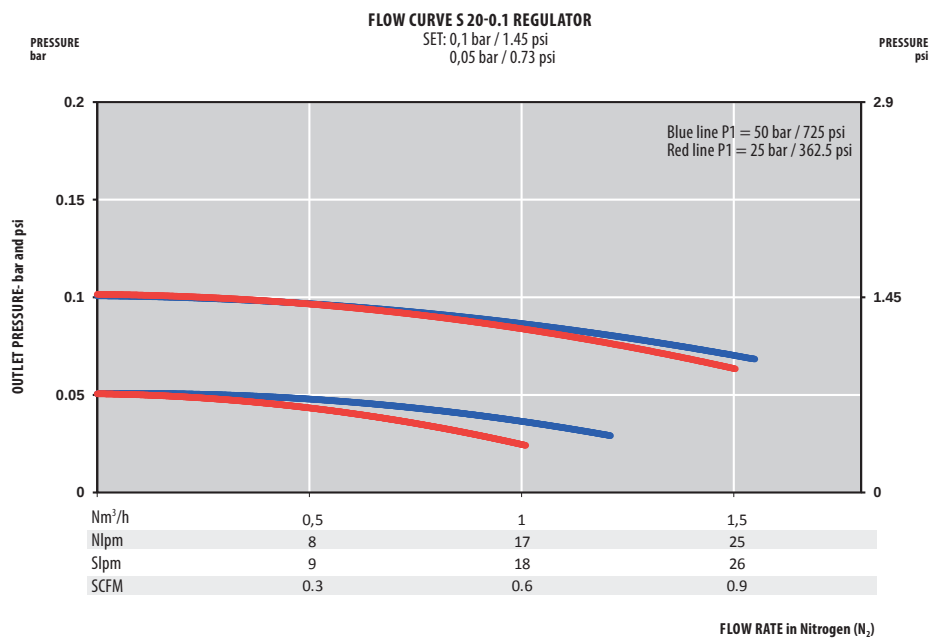
- With the rear threads, it can be used for wall mounting.



## SPECIFICATIONS

|                     |                                 |                          |                                      |                        |                                                               |
|---------------------|---------------------------------|--------------------------|--------------------------------------|------------------------|---------------------------------------------------------------|
| <b>Female ports</b> | G 3/8 or 1/4 NPT (inlet/outlet) | <b>Weight</b>            | ± 0,6 kg<br>± 1.32 lbs               | <b>Inlet pressure</b>  | 50 bar<br>725 psi                                             |
| <b>Seat seal</b>    | EPDM                            | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He         | <b>Outlet pressure</b> | 0,01 - 0,1 bar<br>0.14 - 1.45 psi                             |
| <b>O-ring</b>       | EPDM - Standard<br>FPM          | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F | <b>Nominal Flow</b>    | 0,5 Nm <sup>3</sup> /h (N <sub>2</sub> )                      |
| <b>Diaphragm</b>    | AISI 304                        | <b>Gauges</b>            | Low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | inlet pressure ≤ 30 bar max.<br>for brass and stainless steel |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| Body Material |                     |   |  | End Connections |     | O-ring Material   | Gauges |                 | Ports Configuration    |   |
|---------------|---------------------|---|--|-----------------|-----|-------------------|--------|-----------------|------------------------|---|
| S             | L                   |   |  | 20              | 0.1 | G                 | EPDM   | 1               | A                      |   |
|               | Chrome plated brass | L |  |                 |     | G 3/8 - G 3/8     | G      | EPDM - Standard | With                   | 1 |
|               | Stainless steel     | I |  |                 |     | 1/4 NPT - 1/4 NPT | N      | FPM             |                        |   |
|               |                     |   |  |                 |     |                   |        |                 | Standard Configuration | A |
|               |                     |   |  |                 |     |                   |        |                 | Reverse inlet/outlet   | R |

## SERIES S 55 | LINE REGULATOR

- Diaphragm single stage
- Purity up to 6.0
- Inlet pressure:  
50 bar (725 psi)
- Outlet pressure:  
3/10/16/35 bar  
44/145/232/508 psi

- ★ Accurate pressure delivery
- ★ Compact design
- ★ 2 inlets / 2 outlets
- ★ Rear Inlet for panel mounting
- ★ O<sub>2</sub> applications compatible (see technical data)

Special requirements on request

### APPLICATIONS

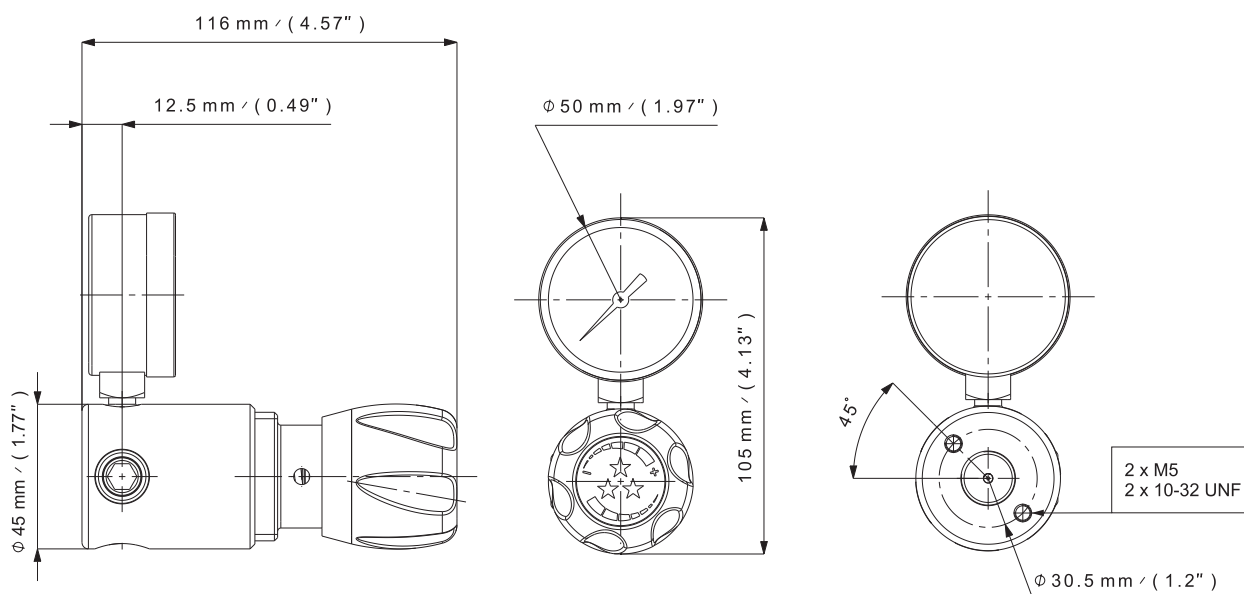
- Designed for line regulator applications in petrochemical, industrial and laboratory environments.
- Used in calibration gas mixtures for petrochemical industry; environmental emission monitoring, industrial hygiene or safety monitors and trace impurity analyzers.
- Also commonly used to oxygenate fish-breeding tanks.

### KEY FEATURES

- With its compact design, the rear threads and its fixing ring it can be used for wall or panel mounting.
- Multiple mounting possibilities due to its inlet/outlet.



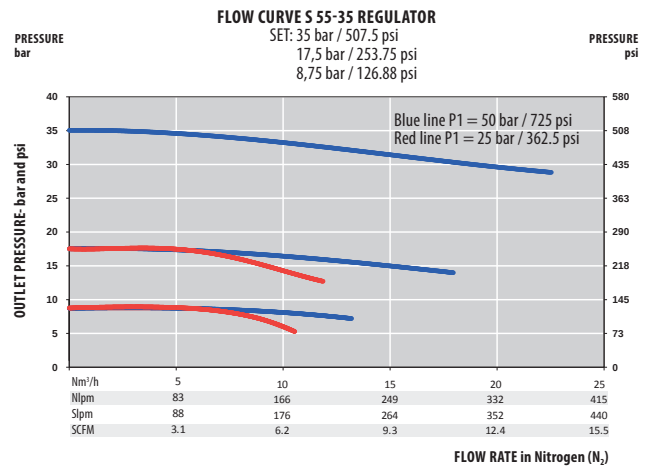
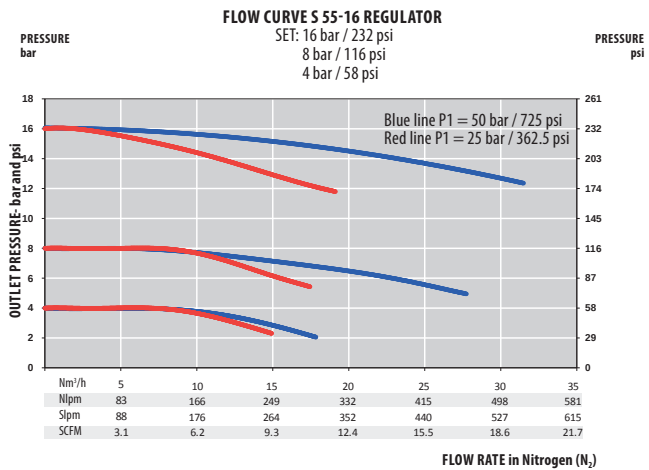
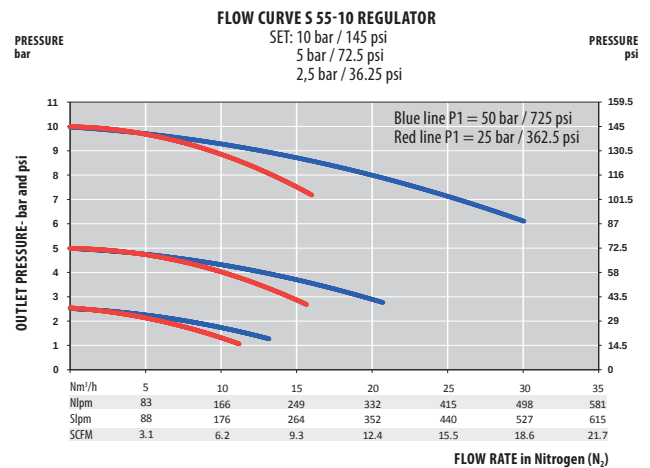
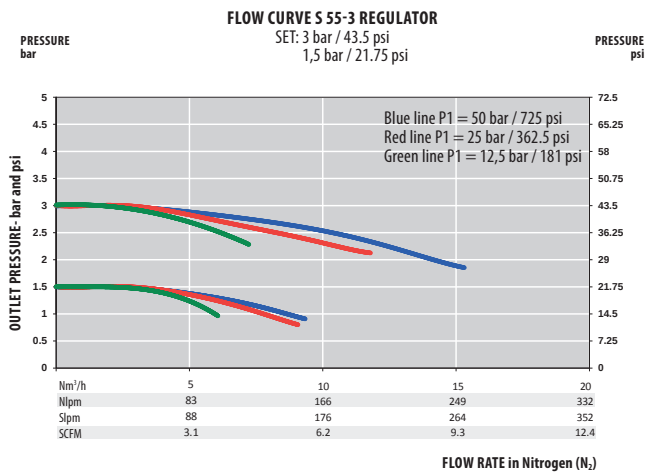
Rear inlet view



## SPECIFICATIONS

|                     |                                                 |                          |                                      |                        |                                                               |
|---------------------|-------------------------------------------------|--------------------------|--------------------------------------|------------------------|---------------------------------------------------------------|
| <b>Female ports</b> | G 3/8 or 1/4 NPT (inlet/outlet)                 | <b>Weight</b>            | ± 0,8 kg<br>± 1.8 lbs                | <b>Inlet pressure</b>  | 50 bar<br>725 psi                                             |
| <b>Seat seal</b>    | EPDM                                            | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He         | <b>Outlet pressure</b> | 3/10/16/35 bar<br>44/145/232/508 psi                          |
| <b>O-ring</b>       | EPDM - Standard<br>FPM                          | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F | <b>Nominal Flow</b>    | 2,5/3,5/5,5/10 Nm³/h (N₂)                                     |
| <b>Diaphragm</b>    | AISI 304 (3/8/10 bar)<br>Hastelloy® (16/35 bar) | <b>Gauges</b>            | Low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | inlet pressure ≤ 30 bar max.<br>for brass and stainless steel |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| Body Material |                     |   | 55                | Outlet Pressure |                   | End Connections |                 | O-ring Material | Gauges |                     | Mounting |                        | Ports Configuration |  |
|---------------|---------------------|---|-------------------|-----------------|-------------------|-----------------|-----------------|-----------------|--------|---------------------|----------|------------------------|---------------------|--|
| S             | L                   |   |                   | 35              |                   | G               |                 | EPDM            | 1      |                     | FR1      |                        | A                   |  |
|               | Chrome plated brass | L | 3 bar<br>44 psi   | 3               | G 3/8 - G 3/8     | G               | EPDM - Standard | With            | 1      | Without Fixing Ring | FR0      | Standard configuration | A                   |  |
|               | Stainless steel     | I | 10 bar<br>145 psi | 10              | 1/4 NPT - 1/4 NPT | N               | FPM             |                 |        | With Fixing Ring*   | FR1      | Reverse inlet/outlet   | R                   |  |
|               |                     |   | 16 bar<br>232 psi | 16              |                   |                 |                 |                 |        |                     |          |                        |                     |  |
|               |                     |   | 35 bar<br>508 psi | 35              |                   |                 |                 |                 |        |                     |          |                        |                     |  |

\* FR1 not available with the 35 bar version

## SERIES DC 50 | HIGH FLOW LINE REGULATOR

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 5.0
- Inlet pressure:  
50 bar (725 psi)
- Outlet pressure:  
8/15/40 bar  
116/217/580 psi
- Acetylene version (AD - C<sub>2</sub>H<sub>2</sub>):  
P1=1,5 bar (21.75 psi)  
P2=0,8 bar (12 psi)

- ★ 1 inlet / 1 outlet
- ★ Rear thread for panel mounting
- ★ O<sub>2</sub> application compatible
- ★ High flow

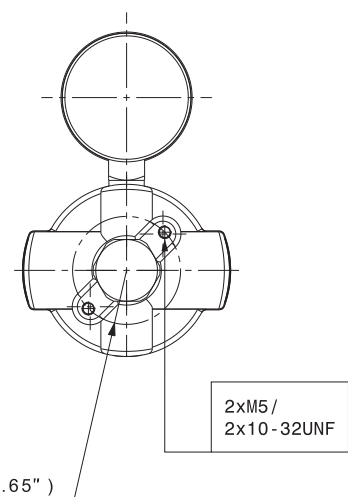
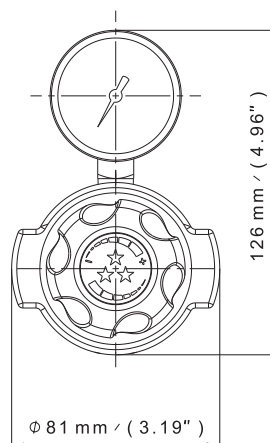
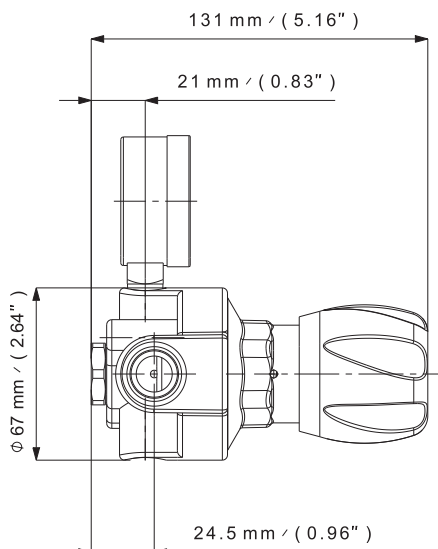
Special requirements on request

### APPLICATIONS

- For all applications requiring a low pressure with high flow.
- Ideally suited as line regulator in combination either with MOD supply board or CEN switch over board.

### KEY FEATURES

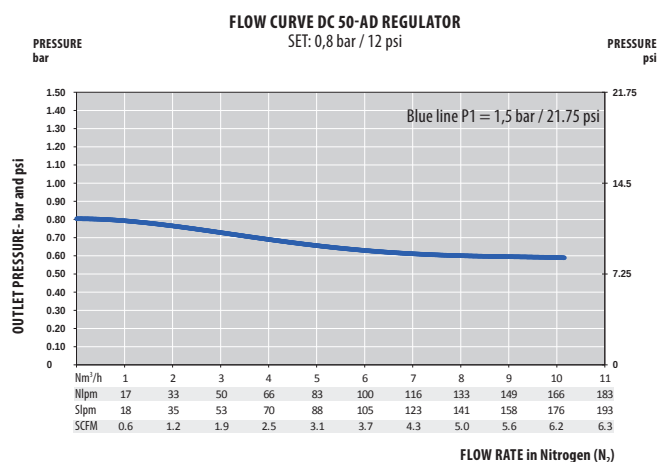
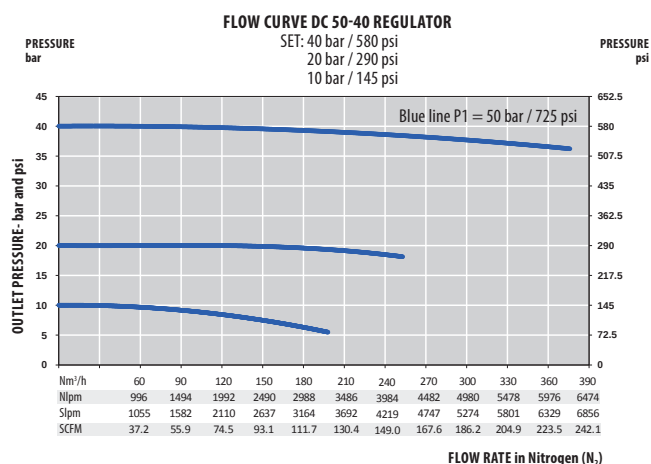
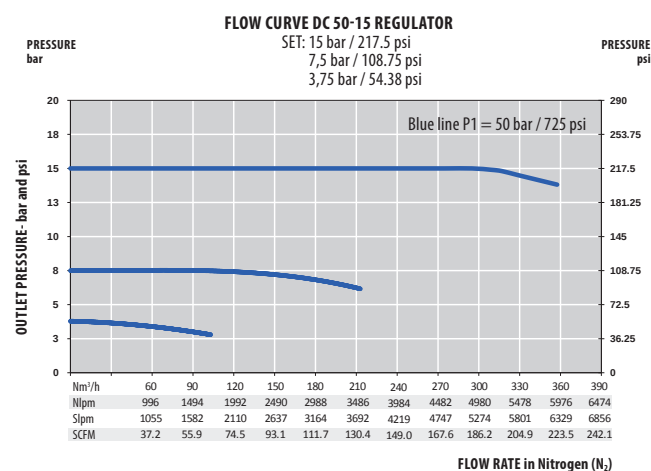
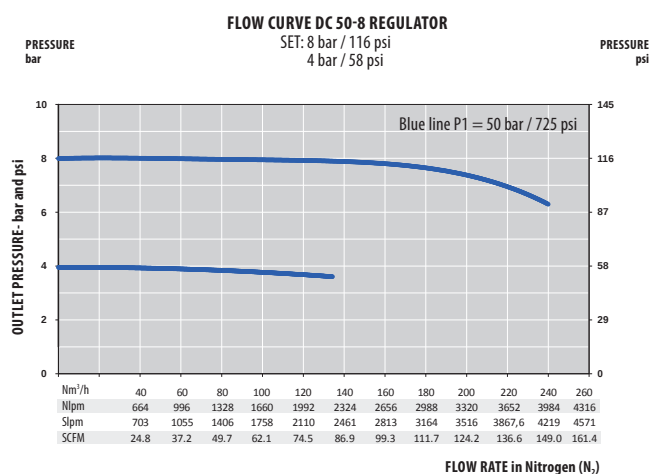
- Low pressure regulator with high flow, without vibration.
- Best-in-class pressure stability with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure is minimized. BV-technology enables the delivery of a very stable outlet pressure and flow even with high flow line regulators.
- reduced strain on the seat increases regulator life and reduces the ownership cost.
- Acetylene version available:  
P1=1,5 bar/P2=0,8 bar/Q=10 Nm<sup>3</sup>/h
- For use with acetylene this product must be installed with a flash back arrestor complying with the standard EN 730 located downstream.



## SPECIFICATIONS

|                     |                             |                          |                                      |                        |                                                     |
|---------------------|-----------------------------|--------------------------|--------------------------------------|------------------------|-----------------------------------------------------|
| <b>Female ports</b> | G ½ or ½ NPT (inlet/outlet) | <b>Weight</b>            | ± 1,4 kg<br>± 3.1 lbs                | <b>Inlet pressure</b>  | 50 bar (725 psi)<br>AD: 1,5 bar (21.75 psi)         |
| <b>Seat seal</b>    | EPDM                        | <b>Leak rate</b>         | 10 <sup>-3</sup> mbar ℓ/s He         | <b>Outlet pressure</b> | 8/15/40 - 0,8 bar (AD)<br>116/217/580 - 12 psi (AD) |
| <b>O-ring</b>       | EPDM - Standard<br>FPM      | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F | <b>Nominal Flow</b>    | 150/300/300 Nm³/h (N₂)<br>10 Nm³/h (AD)             |
| <b>Diaphragm</b>    | EPDM                        | <b>Gauges</b>            | Low pressure<br>(G ¼ or ¼ NPT)       | <b>Oxygen use</b>      | OK                                                  |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| D | C | 50 | Outlet Pressure                       | End Connections | O-ring Material | Body Material       | Gauges |
|---|---|----|---------------------------------------|-----------------|-----------------|---------------------|--------|
|   |   |    | 40                                    | G               | EPDM            | L                   | 1      |
|   |   |    | 8 bar<br>116 psi                      | 8               | G ½ - G ½       | EPDM - Standard     | With   |
|   |   |    | 15 bar<br>217 psi                     | 15              | ½ NPT - ½ NPT   | FPM                 | 1      |
|   |   |    | 40 bar<br>580 psi                     | 40              |                 | Chrome plated brass |        |
|   |   |    | Acetylene version<br>0,8 bar (12 psi) | AD              |                 | Raw brass           |        |

## SERIES S 21 | POINT OF USE

- Bellow single stage
- Purity up to 6.0
- Inlet pressure:  
50 bar (725 psi)
- Outlet pressure:  
1/3/10 bar  
14.5/44/145 psi
- Acetylene version (AD - C<sub>2</sub>H<sub>2</sub>):  
P1 = 20 bar (290 psi)  
P2 = 1,5 bar (21.75 psi)

- ★ Precise pressure delivery
- ★ Compact design
- ★ 2 inlets / 1 outlet
- ★ Rear Inlet for panel mounting
- ★ Integrated ¼ turn shutoff valve
- ★ O<sub>2</sub> applications compatible (see technical data)

Special requirements on request

### APPLICATIONS

- Used as a line regulator or point of use for specialty gas applications.

### KEY FEATURES

- Based on the Series S 20 technology.
- Bellow technology provides a large range of accurate outlet pressures in a compact design.
- With the rear threads and fixing ring (option) it can be used for wall or panel mounting.
- Acetylene version also available.
- For use with acetylene, this product must imperatively be installed with a flash back arrestor complying with standard EN 730 located downstream.
- The inlet shut off valve reduces the risk of gas dispersion when closed.



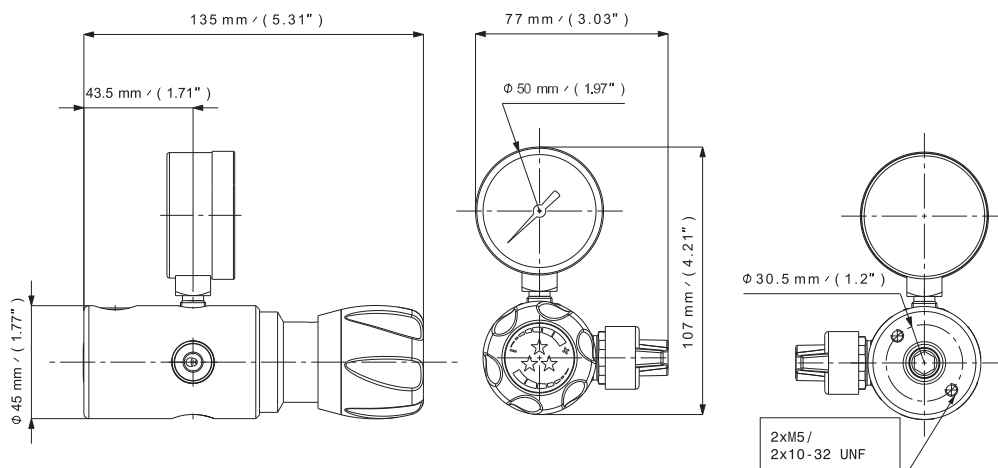
Acetylene version



¼ turn valve



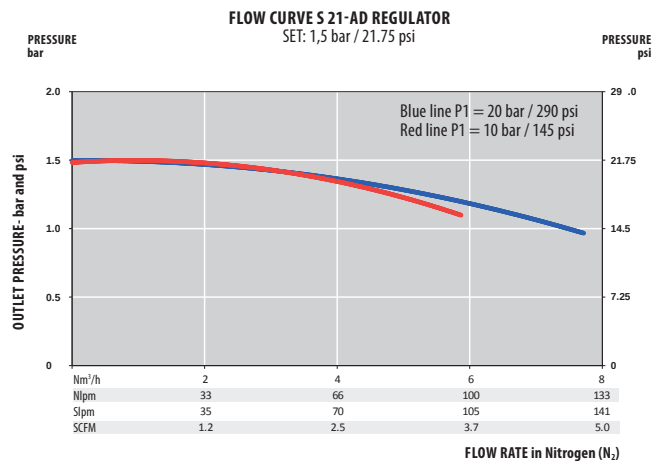
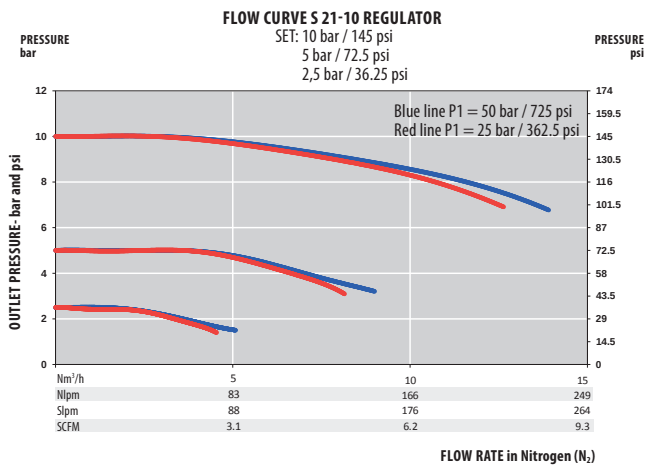
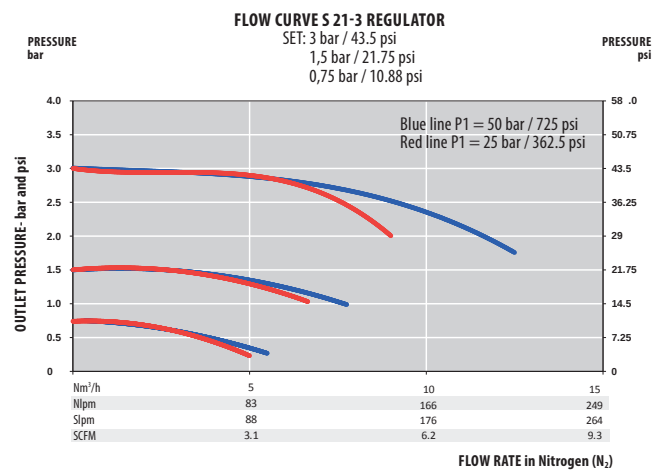
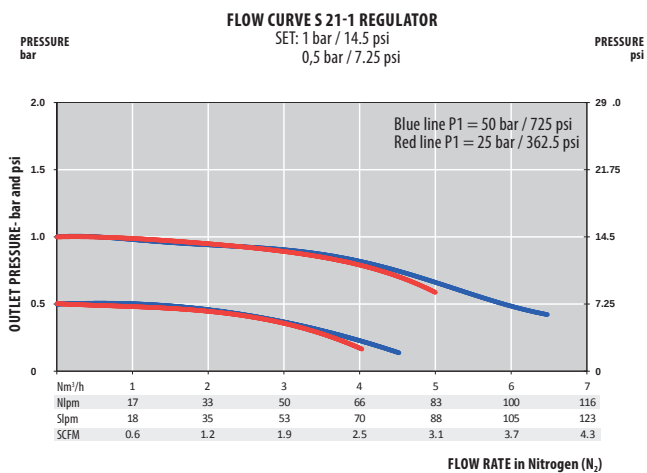
RD10 needle valve



## SPECIFICATIONS

|                          |                                                      |                          |                                      |                        |                                                                            |
|--------------------------|------------------------------------------------------|--------------------------|--------------------------------------|------------------------|----------------------------------------------------------------------------|
| <b>Female ports</b>      | G 3/8 (inlet/outlet)<br>or<br>1/4 NPT (inlet/outlet) | <b>Weight</b>            | ± 0,9 kg<br>± 2.0 lbs                | <b>Inlet pressure</b>  | 50 bar (725 psi)<br>AD: 20 bar (290 psi)                                   |
| <b>Seat seal</b>         | EPDM                                                 | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He         | <b>Outlet pressure</b> | 1/3/10 bar<br>14.5/44/145 psi<br>AD: 1,5 bar (21.75 psi)                   |
| <b>O-ring</b>            | EPDM - Standard<br>FPM                               | <b>Temperature range</b> | -20°C to + 60°C<br>-4°F to + 140°F   | <b>Nominal Flow</b>    | 2/2,5/3,5 Nm <sup>3</sup> /h (N <sub>2</sub> )<br>AD: 1 Nm <sup>3</sup> /h |
| <b>Diaphragm (Valve)</b> | Hastelloy®                                           | <b>Gauges</b>            | Low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | inlet pressure ≤ 30 bar max.<br>for brass and stainless steel              |
| <b>Bellow</b>            | Bronze (Brass version)<br>AISI 316L (SS version)     |                          |                                      |                        |                                                                            |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| Body Material |                     | S 21 | Outlet Pressure                          |    | End Connections   |   | O-ring Material |         | Gauge |  | Plate            |     |
|---------------|---------------------|------|------------------------------------------|----|-------------------|---|-----------------|---------|-------|--|------------------|-----|
| S             | L                   |      | 10                                       |    | G                 |   | EPDM            |         | 1     |  | STD              |     |
|               | Chrome plated brass | L    | 1 bar<br>14.5 psi                        | 1  | G 3/8 - G 3/8     | G | EPDM - standard | Without | 0     |  | Without plate    | STD |
|               | Stainless steel     | I    | 3 bar<br>44 psi                          | 3  | 1/4 NPT - 1/4 NPT | N | FPM             | With    | 1     |  | With metal plate | M   |
|               |                     |      | 10 bar<br>145 psi                        | 10 |                   |   |                 |         |       |  |                  |     |
|               |                     |      | Acetylene version<br>1,5 bar (21.75 psi) | AD |                   |   |                 |         |       |  |                  |     |

# LABLINE S 22 | MODULAR POINT OF USE

- Bellow single stage
- Purity up to 6.0
- Inlet pressure:  
50 bar (725 psi)
- Outlet pressure:  
1/3/10 bar  
14.5/44/145 psi
- Acetylene version (AD - C<sub>2</sub>H<sub>2</sub>):  
P1 = 20 bar (290 psi)  
P2 = 1,5 bar (21.75 psi)

- ★ Accurate pressure delivery
- ★ Compact design
- ★ 1 inlet / 2 outlets
- ★ Modular concept
- ★ O<sub>2</sub> applications compatible  
(see technical data)

Special requirements on request



SLS22-EMB-10-G-EPDM-1-MV version



Acetylene version

## APPLICATIONS

- A terminal point of use for specialty gas applications in a laboratory or in a workshop.

## KEY FEATURES

- Based on the Series 20 platform
- Bellow technology provides a large range of accurate outlet pressures in a compact design.
- Acetylene version also available.
- For use with acetylene, this product must imperatively be installed with a flash back arrestor complying with standard EN 730 located downstream.
- With the inlet shut off valve the regulator is independent from the installation and can be easily removed.



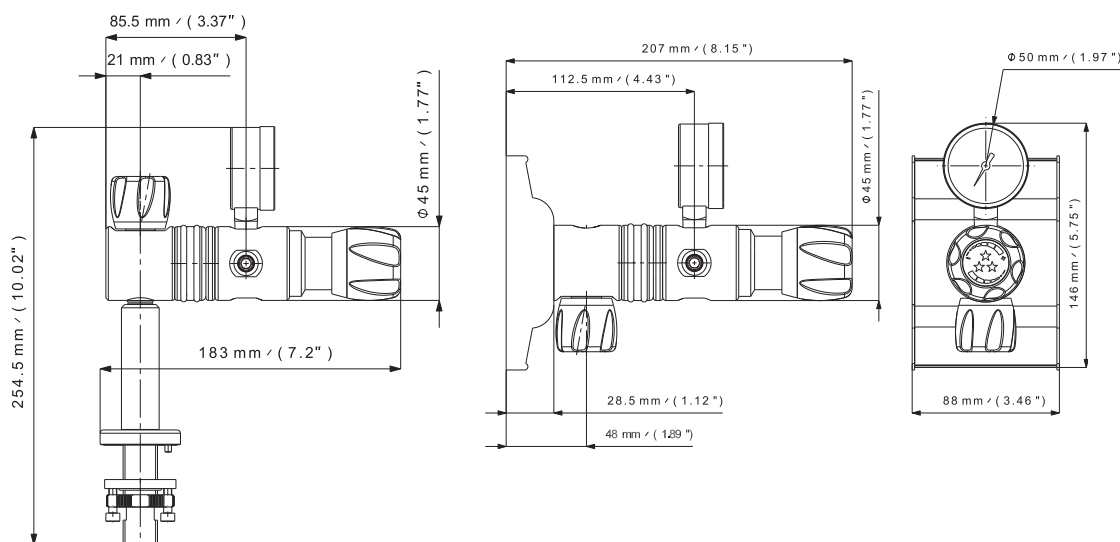
M version w/ 1/4V valve



EMB version w/ MV valve



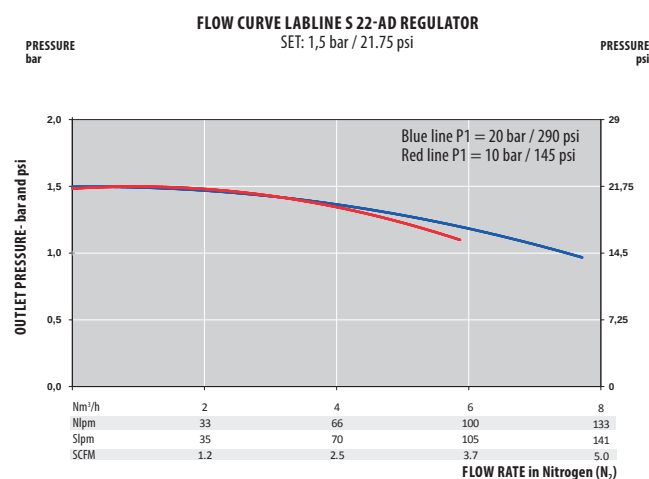
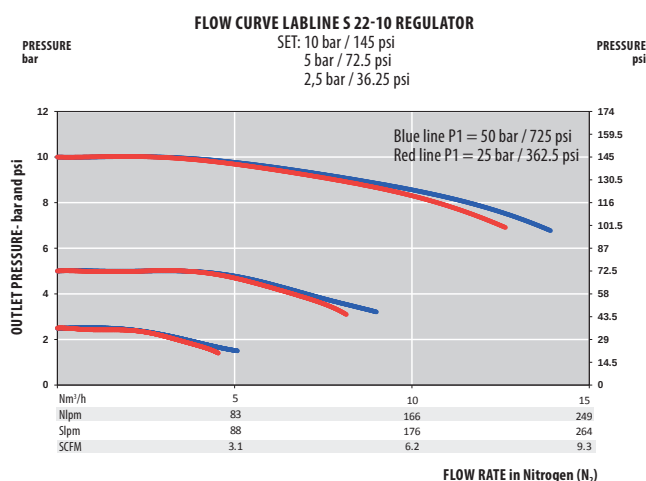
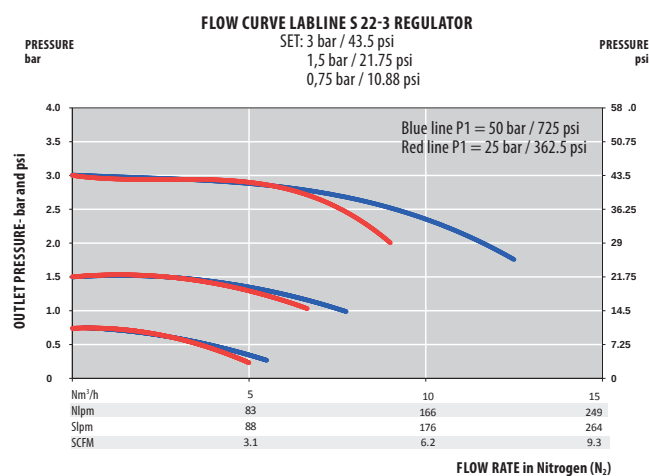
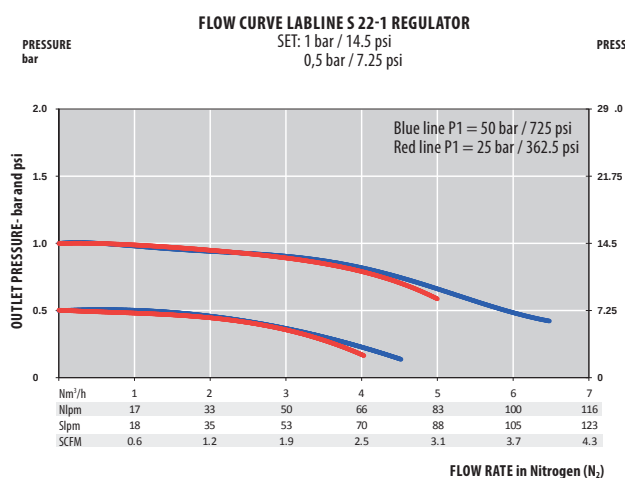
COL version w/ MV valve



## SPECIFICATIONS

|                     |                                                                             |                          |                                    |                        |                                                               |
|---------------------|-----------------------------------------------------------------------------|--------------------------|------------------------------------|------------------------|---------------------------------------------------------------|
| <b>Female ports</b> | F: G ¼ (inlet-COL version)<br>G ¾ or ¼ NPT (inlet)<br>G ¾ or ¼ NPT (outlet) | <b>Weight</b>            | ± 1,5 kg<br>± 3.3 lbs              | <b>Inlet pressure</b>  | 50 bar (725 psi)<br>AD: 20 bar (290 psi)                      |
| <b>Seat seal</b>    | EPDM                                                                        | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He       | <b>Outlet pressure</b> | 1/3/10 bar<br>14.5/44/145<br>AD: 1,5 bar (21.75 psi)          |
| <b>O-ring</b>       | EPDM - Standard<br>FPM                                                      | <b>Temperature range</b> | -20°C to + 60°C<br>-4°F to + 140°F | <b>Nominal Flow</b>    | 2/2,5/3,5 Nm³/h (N₂)<br>AD: 1 Nm³/h                           |
| <b>Diaphragm</b>    | Hastelloy®                                                                  | <b>Gauges</b>            | Low pressure<br>(M10 x 1 or ¼ NPT) | <b>Oxygen use</b>      | inlet pressure ≤ 30 bar max.<br>for brass and stainless steel |
| <b>Bellow</b>       | Bronze or<br>AISI 316L (SS version)                                         |                          |                                    |                        |                                                               |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| Body Material               |                     |   | Version |                     | Outlet Pressure |                                        | End Connection |                                  | O-ring Material | Gauges          |      | Valve |              |                  |
|-----------------------------|---------------------|---|---------|---------------------|-----------------|----------------------------------------|----------------|----------------------------------|-----------------|-----------------|------|-------|--------------|------------------|
| S                           | L                   |   | S22     | EMB                 | 10              |                                        | G              |                                  | EPDM            | 1               |      | ¼V    |              |                  |
|                             | Chrome plated brass | L |         | With Metal Plate    | M               | 1 bar<br>14.5 psi                      | 1              | G ¾ - Female (outlet)            | G               | EPDM - standard | With | 1     | ¼ turn valve | ¼V               |
|                             | Stainless steel     | I |         | With Aluminum stand | EMB             | 3 bar<br>44 psi                        | 3              | ¼ NPT (outlet)                   | N               |                 |      |       | FPM          | Multi-turn valve |
|                             |                     |   |         | With pillar*        | COL             | 10 bar<br>145 psi                      | 10             | Note: inlet G ¼ with COL version |                 |                 |      |       |              |                  |
|                             |                     |   |         |                     |                 | Acetylene version<br>1,5 bar 21.75 psi | AD             |                                  |                 |                 |      |       |              |                  |
| *only with multi-turn valve |                     |   |         |                     |                 |                                        |                |                                  |                 |                 |      |       |              |                  |

\*only with multi-turn valve

## C795 | LINESTAR POINT OF USE INTEGRATED

- LINESTAR Integrated version is designed for the best and most compact integration into the lab furniture and fume hoods panels.
- This compact version enables laboratory configurations with many pure gases under the same fume hood.

- ★ Accurate pressure delivery
- ★ Compact design
- ★ 1 inlet / 1 outlet
- ★ Integrated shutoff valve: QUICK VALVE
- ★ O<sub>2</sub> applications compatible (Brass only)

Additional accessories available



See catalogue POU-EN-0216

Available with fixation plate



### MAIN ADVANTAGES:

#### Simplified Integration

- Pressure gauge integrated into the pressure regulator
- Compact design, enabling higher density set-ups, up to one POU every 8cm horizontally

#### High Technology

- Fully compatible with 6.0 gas purity : diaphragm technology on pressure regulator and shut-off valve
- Optimized design to reduce dead-space volumes and purging, for less risk of gas contamination
- Improved chemical compatibility : acetone-resistant pressure regulator window, acids & alkaline resistant covers to increase durability with PTFE/PCTFE joints, HDPE plastics and Hastelloy® diaphragm

#### Cleanliness & quality :

- all gas-wetted components are cleaned according to our Rotarex 3-STAR quality process
- Each POU is 100% tested with Helium

### INSTALLATION ADVANTAGES:

- **The O-ring joints:** On inlet and outlet hold tightly in the fittings and won't fall down during installation, for a cleaner and quicker installation
- **Filter :** the 60µm mesh filter in the inlet prevents contamination of the regulator by particles during installation

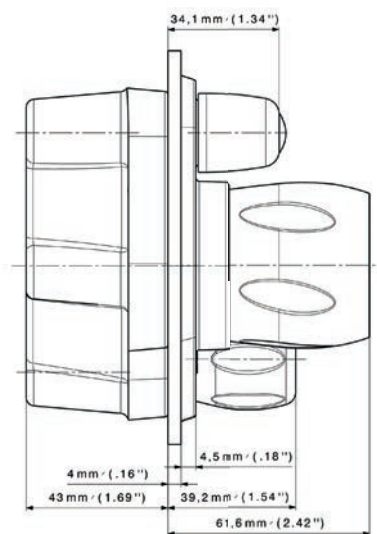
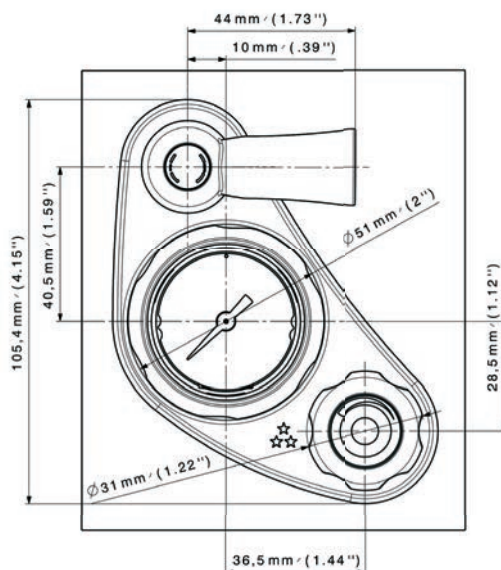
### "IN USE" ADVANTAGES:

#### Look & Feel :

- New redesigned ergonomic pressure regulator and flow-control valves
- 360° visibility of the ¼ turn shut-off valve on top of the POU, for easy checking of the valve opening from far away
- High contrast colors to clearly differentiate the controls from the fixed parts
- Stickers with gas indications enables optimized information transmission

#### Durability & resistance to chemicals :

- HDPE strong plastic covers, resistant to shocks, scratches, chemicals and solvents
- Acetone-resistant pressure gauge window to prevent blurring over time



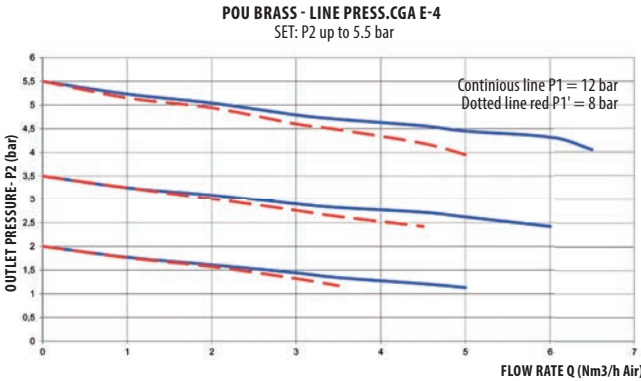
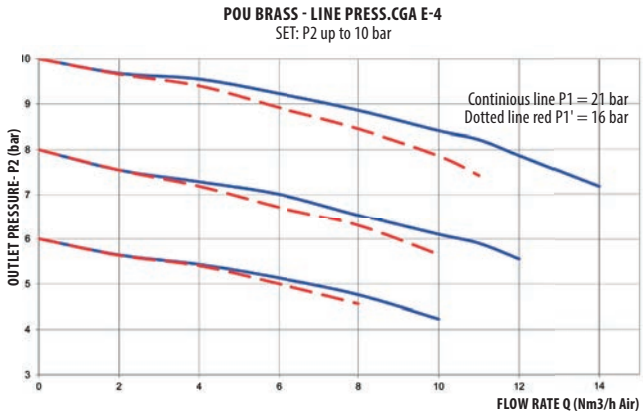
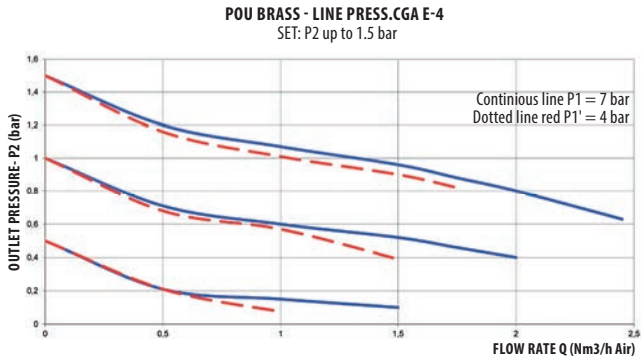
# SPECIFICATIONS

|                          |                                                      |                           |                                  |                        |                                                                                                      |
|--------------------------|------------------------------------------------------|---------------------------|----------------------------------|------------------------|------------------------------------------------------------------------------------------------------|
| <b>Female ports</b>      | Inlet : 1/4"NPT<br>Outlet : G1/4 / 1/4"NPT w/adaptor | <b>Plastic parts body</b> | PP                               | <b>Inlet pressure</b>  | 50bar (725 psi)<br>C <sub>2</sub> H <sub>2</sub> : 20 bar (290 psi)                                  |
| <b>Seat seal</b>         | PCTFE                                                | <b>Weight</b>             | 900g (Brass or 316L)             | <b>Outlet pressure</b> | 1,5 / 5,5 / 10 bar<br>21.75 / 79.75 / 145 psi<br>C <sub>2</sub> H <sub>2</sub> : 1,5 bar (21.75 psi) |
| <b>O-ring</b>            | EPDM (brass)<br>FPM (316L)                           | <b>Leak rate</b>          | 10 <sup>-8</sup> mbar l/s He     | <b>Nominal Flow</b>    | 1,2 / 2 / 9 m <sup>3</sup> /h Air                                                                    |
| <b>Diaphragm (valve)</b> | HASTELLOY®                                           | <b>Temperature range</b>  | -20°C to +60°C<br>-4°F to +140°F | <b>Oxygen use</b>      | Inlet pressure ≤ 30 bar<br>(max for brass only)                                                      |

**EASY INSTALLATION:**

- 1 SCREW THE LINESTAR CORE BEHIND THE FRONT PANEL**
- 2 ADD THE COVER PLATE AND HANDWHEELS ON FRONT SIDE**
- 3 ADD THE 3 LABELS TO FINALISE**

# FLOW CURVES



# PRODUCT CONFIGURATOR

| Version name             | Material                  | Outlet Pressure | Needle valve        | Fixation plate           | Inlet & outlet connection |
|--------------------------|---------------------------|-----------------|---------------------|--------------------------|---------------------------|
| <b>C795</b>              | <b>B</b>                  | <b>1,5</b>      | <b>1</b>            | <b>1</b>                 | <b>G</b>                  |
| Integrated valve version | C795 Brass                | B 1,5 1,5       | With needle valve 1 | With fixation plate 1    | G1/4" G                   |
|                          | Stainless Steel (pending) | SS 5,5 5,5      |                     | Without fixation plate 0 | 1/4 NPT N                 |
|                          |                           | 10 10           |                     |                          |                           |



| GAS TYPES PRECISION* |    |                |                               |                |    |                 |                |     |
|----------------------|----|----------------|-------------------------------|----------------|----|-----------------|----------------|-----|
| AR                   |    |                |                               |                |    |                 |                |     |
| AR                   | HE | O <sub>2</sub> | C <sub>2</sub> H <sub>2</sub> | N <sub>2</sub> | CA | CO <sub>2</sub> | H <sub>2</sub> | RTX |

\*Always order together: 1 regulator + Gas types precision for stickers

## MONO SERIES S 15 | COMPACT POINT OF USE

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 6.0
- Inlet pressure:  
25 bar (360 psi)
- Outlet pressure:  
10 bar (145 psi)

- ★ Compact design
- ★ Reduction of connection (avoid leakage)
- ★ High Flow
- ★ 2 inlets/ 2 outlets
- ★ Rear inlet for front panel mounting
- ★ O<sub>2</sub> application compatible

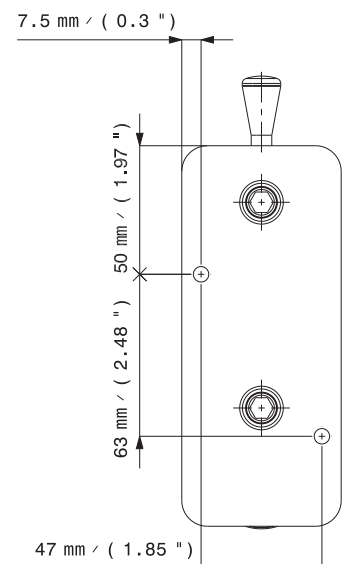
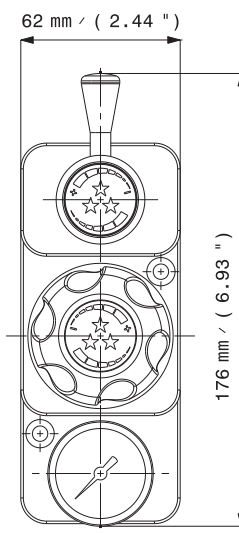
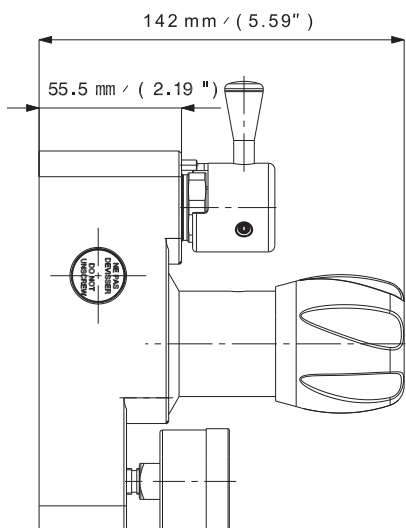
Special requirements on request

### APPLICATIONS

- A terminal point of use for specialty gas applications in a laboratory or in a workshop.

### KEY FEATURES

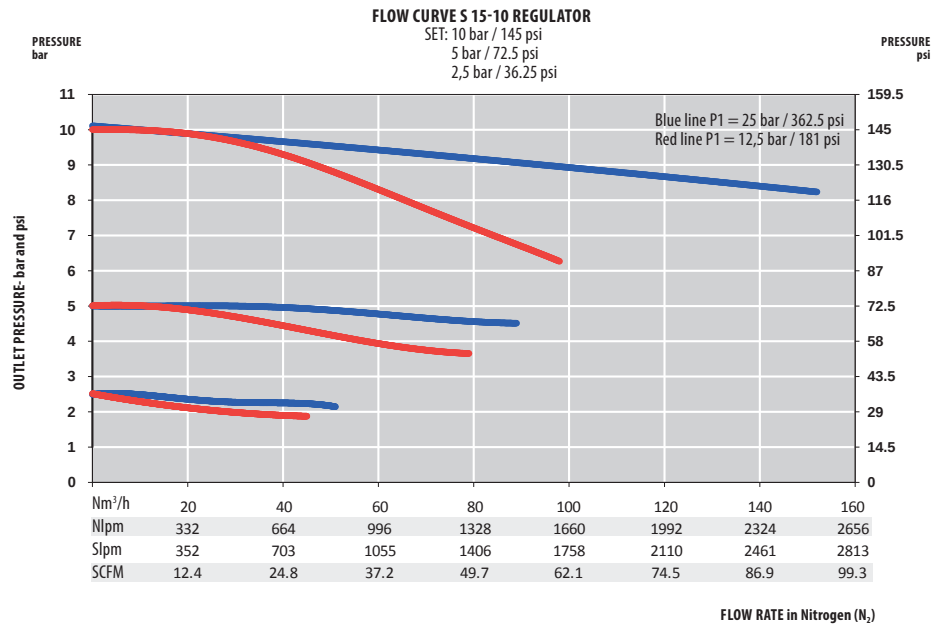
- Made up with a Series S 15 type regulator and a VLM 200 valve.
- Best-in-class pressure stability with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure are minimized. BV-technology enables the delivery of a very stable outlet pressure and flow even with high flow line regulators.
- Reduces the strain on the seat to increase regulator life and reduce the ownership cost.
- Compact outline dimensions and ergonomic design make this point of use suitable for laboratory furniture.



SPECIFICATIONS

|                     |                                                        |                          |                                                                            |                        |                   |
|---------------------|--------------------------------------------------------|--------------------------|----------------------------------------------------------------------------|------------------------|-------------------|
| <b>Female ports</b> | G 3/8 (inlet/outlet)<br>or<br>1/4 NPT (inlet/outlet)   | <b>Weight</b>            | Aluminum: ± 1,86 kg (± 4.10 lbs)<br>Stainless steel: ± 3,8 kg (± 8.37 lbs) | <b>Inlet pressure</b>  | 25 bar<br>360 psi |
| <b>Seat seal</b>    | EPDM                                                   | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He                                               | <b>Outlet pressure</b> | 10 bar<br>145 psi |
| <b>O-ring</b>       | EPDM - Standard<br>FPM                                 | <b>Temperature range</b> | -20°C to + 60°C<br>-4°F to + 140°F                                         | <b>Nominal Flow</b>    | 50 Nm³/h (N₂)     |
| <b>Diaphragm</b>    | AISI 304 (aluminum version)<br>Hastelloy® (SS version) | <b>Gauges</b>            | Low pressure<br>(M10 x 1)                                                  | <b>Oxygen use</b>      | OK                |

FLOW CURVES



PRODUCT CONFIGURATOR

|   |   | Body Material   |    | Outlet Pressure   |    | End Connections   |   | O-ring Material | Configuration          |   |
|---|---|-----------------|----|-------------------|----|-------------------|---|-----------------|------------------------|---|
| M | S | A               | 15 | 10                | 10 | G                 | G | EPDM            | A                      | A |
|   |   | Aluminum        | A  | 10 bar<br>145 psi |    | G 3/8 - G 3/8     | G | EPDM - standard | Standard configuration | A |
|   |   | Stainless steel | I  |                   |    | 1/4 NPT - 1/4 NPT | N | FPM             |                        |   |

\*Inlet Down - outlet Top

## MONO SERIES S 20 | COMPACT POINT OF USE

- Bellow single stage
- Purity up to 6.0
- Inlet pressure:  
50 bar (725 psi)
- Outlet pressure:  
1/3/10 bar (14.5/44/145 psi)
- Acetylene version (AD - C<sub>2</sub>H<sub>2</sub>):  
P1 = 20 bar (290 psi)  
P2 = 1,5 bar (21.75 psi)

- ★ Accurate pressure delivery
- ★ Compact design
- ★ 2 inlets / 2 outlets
- ★ Rear inlet for front panel mounting
- ★ O<sub>2</sub> application compatible (see technical data)

Special requirements on request



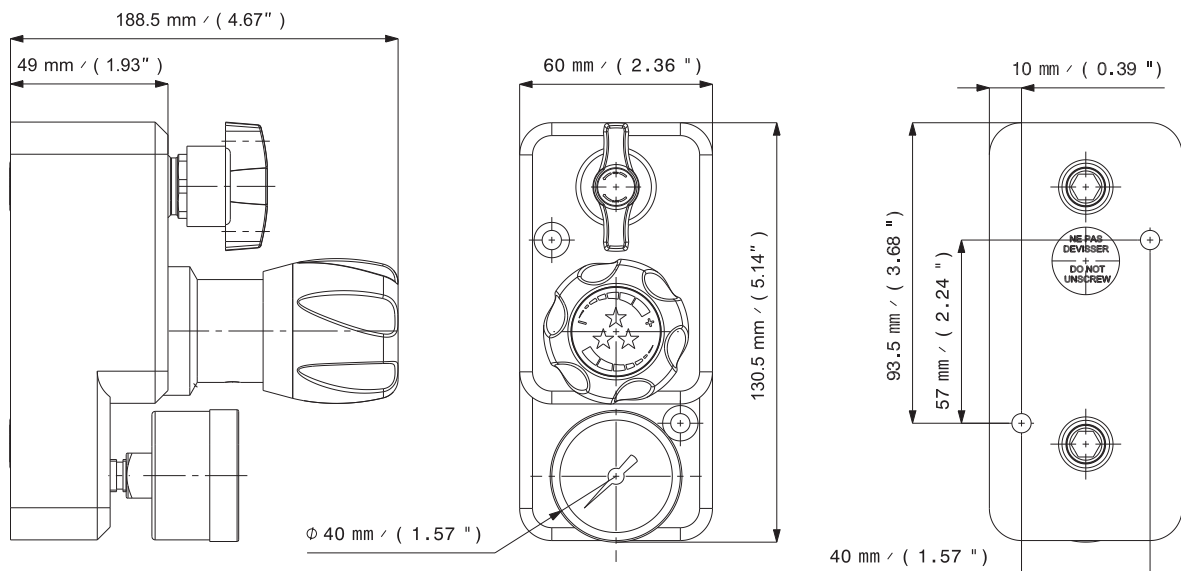
Acetylene version

### APPLICATIONS

- A terminal point of use for specialty gas applications in a laboratory or a workshop.

### KEY FEATURES

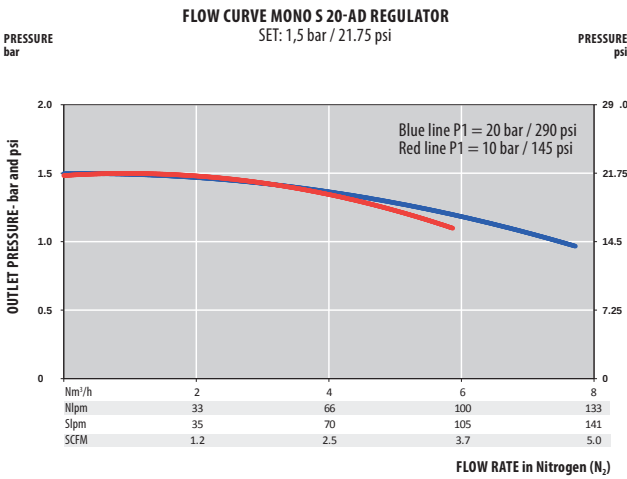
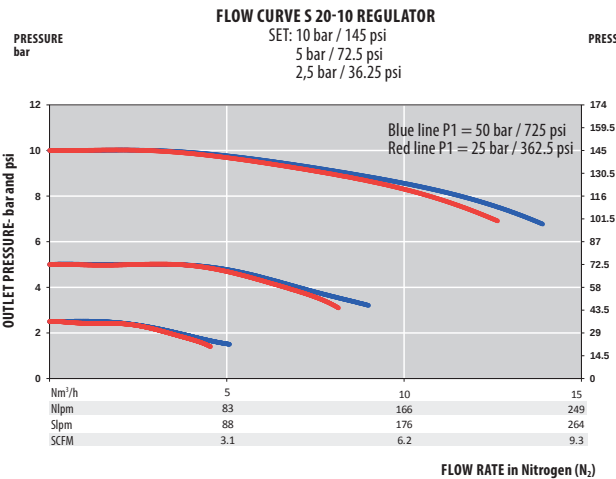
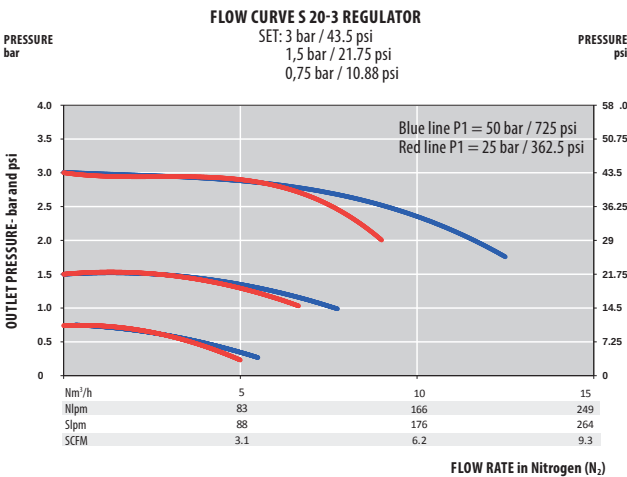
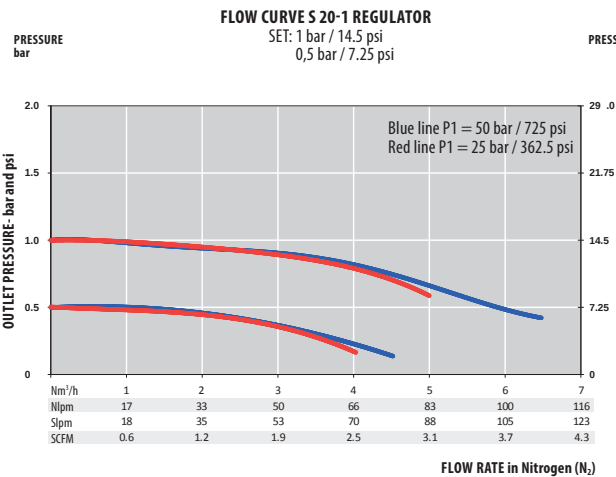
- Made up with a Series S 20 type regulator and a VM 20 valve.
- Compact outline dimensions and ergonomic design make this point of use suitable for laboratory furniture.
- Acetylene version also available.
- For use with acetylene, this product must imperatively be installed with a flash back arrestor complying with standard EN 730 located downstream.
- The Mono S 20 can be integrated easily on furniture due to its compact design



# SPECIFICATIONS

|                          |                                                      |                          |                                                                          |                        |                                                                  |
|--------------------------|------------------------------------------------------|--------------------------|--------------------------------------------------------------------------|------------------------|------------------------------------------------------------------|
| <b>Female ports</b>      | G 3/8 (inlet/outlet)<br>or<br>1/4 NPT (inlet/outlet) | <b>Weight</b>            | Aluminum: ± 1,25 kg (± 2.75 lbs)<br>Stainless steel: ± 2,75 (± 6.06 lbs) | <b>Inlet pressure</b>  | 50 bar (725 psi)<br>AD: 20 bar (290 psi)                         |
| <b>Seat seal</b>         | EPDM                                                 | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He                                             | <b>Outlet pressure</b> | 1/3/10 bar<br>14.5/44/145 psi<br>AD: 1,5 bar (21.75 psi)         |
| <b>O-ring</b>            | EPDM - Standard<br>FPM                               | <b>Temperature range</b> | -20°C to + 60°C<br>-4°F to + 140°F                                       | <b>Nominal Flow</b>    | 2/2,5/3,5 Nm³/h (N₂)<br>AD: 1 Nm³/h                              |
| <b>Diaphragm (valve)</b> | Hastelloy®                                           | <b>Gauges</b>            | Low pressure<br>(M10 x 1)                                                | <b>Oxygen use</b>      | inlet pressure ≤ 30 bar max. for<br>aluminum and stainless steel |
| <b>Bellow</b>            | Bronze or<br>AISI 316L (SS version)                  |                          |                                                                          |                        |                                                                  |

# FLOW CURVES



# PRODUCT CONFIGURATOR

|   |   | Body Material   |   | Outlet Pressure                          |    | End Connections   |   | O-ring Material | Configuration          |   |
|---|---|-----------------|---|------------------------------------------|----|-------------------|---|-----------------|------------------------|---|
| M | S | A               |   | 10                                       |    | G                 |   | EPDM            | A                      |   |
|   |   | Aluminum        | A | 1 bar<br>14.5 psi                        | 1  | G 3/8 - G 3/8     | G | EPDM - standard | Standard configuration | A |
|   |   | Stainless steel | I | 3 bar<br>44 psi                          | 3  | 1/4 NPT - 1/4 NPT | N | FPM             |                        |   |
|   |   |                 |   | 10 bar<br>145 psi                        | 10 |                   |   |                 |                        |   |
|   |   |                 |   | Acetylene version<br>1,5 bar (21.75 psi) | AD |                   |   |                 |                        |   |

\*Inlet Down - outlet Top

## SERIES S 75 | CONSTANT FLOW REGULATOR

- Piston single stage
- Purity up to 6.0
- Inlet pressure: 200 bar (2900 psi)
- Outlet pressure: 3,5 (50 psi)
- Rear inlet
- Flow selector (0,3 - 15 lpm)

- ★ Extremely accurate flow delivery
- ★ Compact design
- ★ 1 inlet / 1 outlet
- ★ O<sub>2</sub> application compatible (brass only)

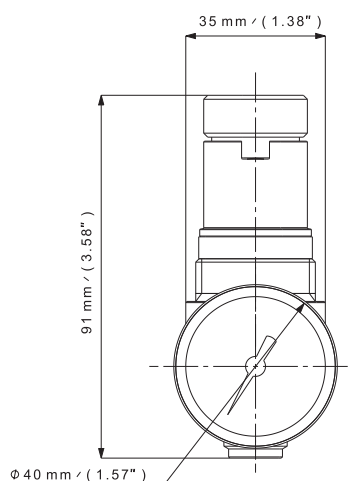
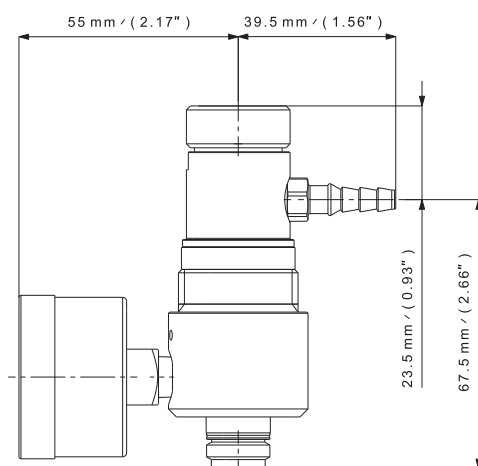
Special requirements on request

### APPLICATIONS

- Designed for calibration applications where predetermined pressure and adjustable flow are required, and for portable cylinder use.

### KEY FEATURES

- Piston technology allows having a very stable flow outlet pressure.
- Equipped with a flow selector (10 positions) with 3 different maximum outlet flows (3 - 5 - 15 lpm).
- Compact, light weight design, ideal for portability.
- Integrated relief valve.



## SPECIFICATIONS

|                     |                                                                      |                          |                                  |                        |                              |
|---------------------|----------------------------------------------------------------------|--------------------------|----------------------------------|------------------------|------------------------------|
| <b>Female ports</b> | Inlet: C 10 or ¼ NPT<br>Outlet: Hose barb or DR 6 or ¼" tube fitting | <b>Weight</b>            | ± 0,70 kg<br>± 1.54 lbs          | <b>Inlet pressure</b>  | 200 bar<br>2900 psi          |
| <b>Seat seal</b>    | PCTFE                                                                | <b>Leak rate</b>         | 10 <sup>-4</sup> mbar ℓ/s He     | <b>Outlet pressure</b> | 3,5 bar (50 psi) - standard  |
| <b>O-ring</b>       | FPM - Standard<br>EPDM                                               | <b>Temperature range</b> | -20°C to +60°C<br>-4°F to +140°F | <b>Nominal Flow</b>    | Preset from<br>0,3 to 15 lpm |
| <b>Piston</b>       | Brass (brass version)<br>AISI 316L (SS version)                      | <b>Gauges</b>            | High pressure<br>(⅛ NPT)         | <b>Oxygen use</b>      | Brass only                   |

## NOMINAL FLOW SETTINGS (lpm)

| B03 | B05  | B15 |
|-----|------|-----|
| 0,3 | 0,5  | 1   |
| 0,5 | 0,75 | 1,5 |
| 0,7 | 1    | 2   |
| 0,9 | 1,5  | 3   |
| 1,2 | 2    | 4   |
| 1,5 | 2,5  | 5   |
| 2   | 3    | 8   |
| 2,5 | 4    | 10  |
| 3   | 5    | 15  |



## PRODUCT CONFIGURATOR

| Body Material       |   | 75 | Outlet Pressure              |     | Inlet Connection |     | Outlet Connection    |     | Flow Selector    |     | O-ring Material | Gauge        |   |
|---------------------|---|----|------------------------------|-----|------------------|-----|----------------------|-----|------------------|-----|-----------------|--------------|---|
| S                   | L |    | 3.5                          |     | C10              |     | HB                   |     | B05              |     | FPM             | 2            |   |
| Nickel plated brass | L |    | 3.5 bar<br>50 psi - standard | 3.5 | ⅝" x 18 UNF      | C10 | Hose barb (standard) | HB  | 3 lpm            | B03 | FPM - standard  | With 315 bar | 2 |
| Stainless steel     | I |    |                              |     | ¼ NPT            | N   | 6 mm tube fitting    | DB6 | 5 lpm - standard | B05 | EPDM            |              |   |
|                     |   |    |                              |     |                  |     |                      |     | 15 lpm           | B15 |                 |              |   |

# SERIES S 70 | CALIBRATION GAS REGULATORS

- Piston single stage
- Purity up to 6.0
- Inlet pressure:  
200 bar (2900 psi)
- Outlet pressure:  
4,13 bar (60 psi)
- Rear inlet

- ★ Extreme accurate flow delivery
- ★ Compact design
- ★ 1 inlet / 1 outlet
- ★ O<sub>2</sub> application compatible

Special requirements on request

## APPLICATIONS

- Designed for calibration applications where predetermined pressure and flow are required, and for portable cylinder use.

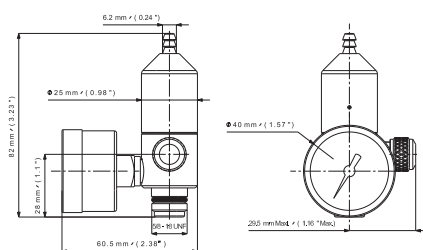
## KEY FEATURES

- This piston regulator has 1 inlet/1 outlet.
- Exist as single (S 70)
- Compact, light weight design, ideal for portability.
- Hand tightened assembly to cylinder is excellent for field applications.
- Actuation with control knob or push button.
- Please indicate, on any order, the maximum inlet pressure, the setting pressure and the set flow.

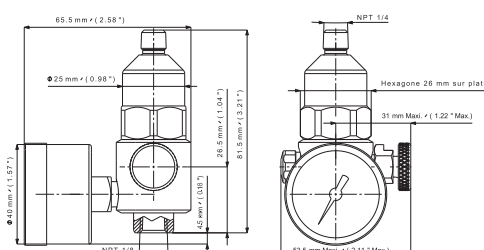


S 70 single stage

## CK - CONTROL KNOB



## PB - PUSH BUTTON



## SPECIFICATIONS

|                     |                                                       |                          |                                    |                        |                                                            |
|---------------------|-------------------------------------------------------|--------------------------|------------------------------------|------------------------|------------------------------------------------------------|
| <b>Female ports</b> | Inlet: C10 or 1/8 NPT<br>Outlet: Hose barb or 1/8 NPT | <b>Weight</b>            | ± 0,31 kg<br>± 0.83 lbs            | <b>Inlet pressure</b>  | 200 bar<br>2900 psi                                        |
| <b>Seat seal</b>    | PCTFE                                                 | <b>Leak rate</b>         | 1.10 <sup>-4</sup> mbar l/s He     | <b>Outlet pressure</b> | 4,13 bar (60 psi) - standard<br>2,06 bar (30 psi) - option |
| <b>O-ring</b>       | FPM - Standard<br>EPDM                                | <b>Temperature range</b> | -20°C to + 60°C<br>-4°F to + 140°F | <b>Nominal Flow</b>    | preset from 0,25 to 7 lpm                                  |
| <b>Piston</b>       | Brass (brass version)<br>AISI 303 (SS version)        | <b>Gauges</b>            | High pressure<br>1/8 NPT           | <b>Oxygen use</b>      | OK for brass and stainless steel                           |
| <b>Actuation</b>    | Control knob<br>or Push button                        |                          |                                    |                        |                                                            |

## PRODUCT CONFIGURATOR

|   | Body Material       |   |    | Outlet Pressure              |    | Inlet Connection |     | Outlet Connection |    | Actuation             | O-ring Material | Gauge         |   |
|---|---------------------|---|----|------------------------------|----|------------------|-----|-------------------|----|-----------------------|-----------------|---------------|---|
| S | L                   |   | 70 | 60                           |    | C10              |     | HB                |    | CK                    | FPM             | 1             |   |
|   | Nickel plated brass | L |    | 4,13 bar (60 psi) - standard | 60 | 5/8" x 18 UNF    | C10 | Hose barb         | HB | Control Knob standard | CK              | With 1000 psi | 1 |
|   | Stainless steel     | I |    | 2,06 bar (30 psi)            | 30 | 1/8 NPT - Female | N   | 1/8 NPT - Female  | N1 | Push Buton            | PB              | With 3000 psi | 2 |
|   |                     |   |    |                              |    |                  |     | 1/8 NPT - Male    | N2 |                       |                 | With 4000 psi | 3 |
|   |                     |   |    |                              |    |                  |     |                   |    |                       |                 | With 315 bar  | 4 |

## NOTES

## SERIES S 800 | SINGLE STAGE HP REGULATOR

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 6.0
- Inlet pressure:  
300 bar (4350 psi)
- Outlet pressure:  
10/16/25/50 bar  
145/232/363/725 psi

- ★ Reduce ownership cost
- ★ 1 inlet / 1 outlet
- ★ Rear thread for front panel mounting
- ★ O<sub>2</sub> application compatible, up to 200 bar inlet pressure for stainless steel version
- ★ Inlet/outlet pressure gauges
- ★ 1 relief valve

Special requirements on request

To be connected with cylinder connectors



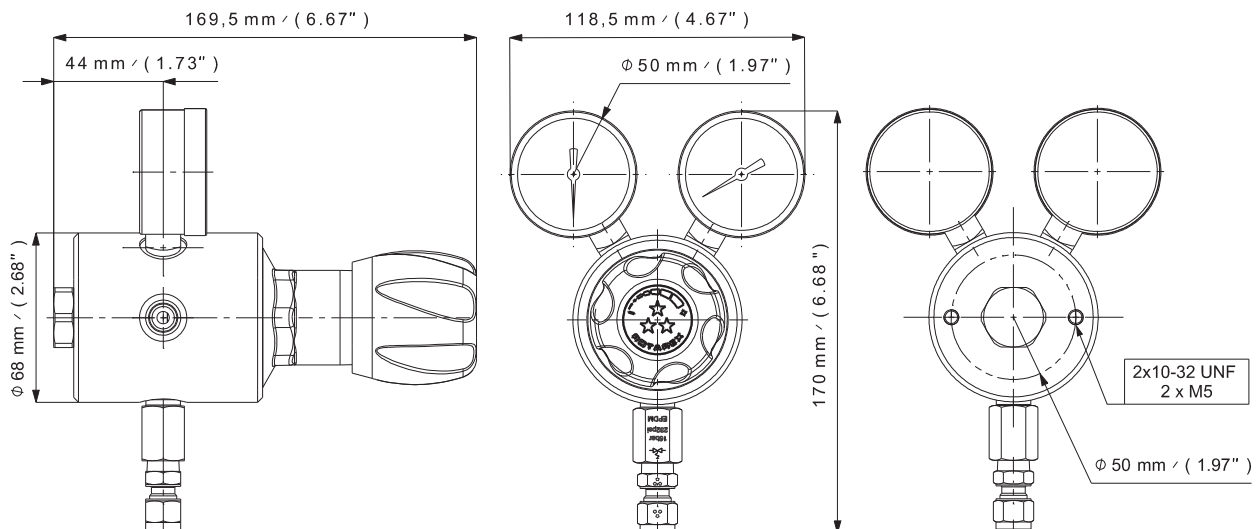
Refer to page 90

### APPLICATIONS

- Designed for application as a cylinder regulator.
- Ideally suited for high purity gases and high-pressure applications requiring high flow and precise outlet pressure, such as for laser applications.
- Used also in nuclear research department where the precision of the outlet pressure and high flow are essential.

### KEY FEATURES

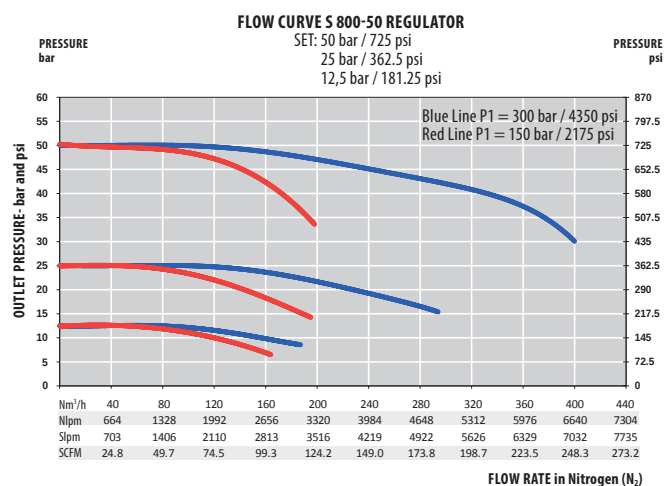
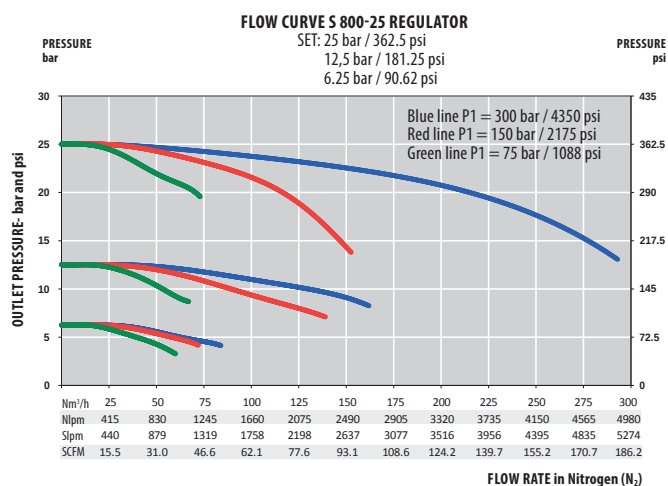
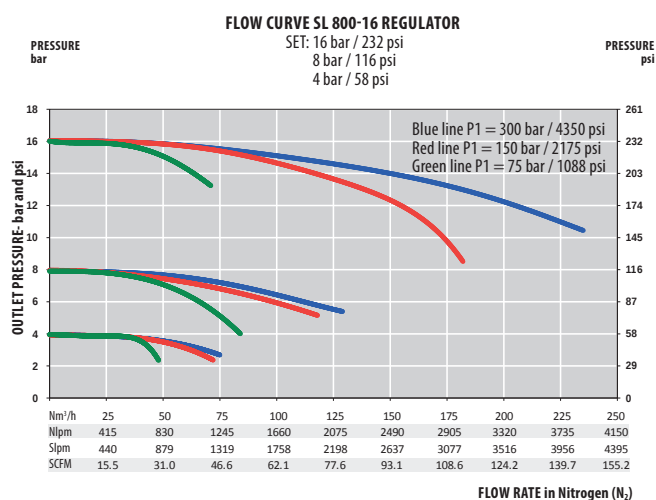
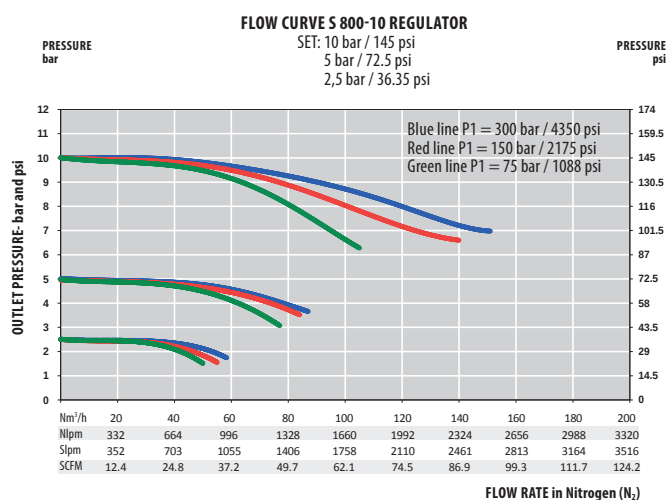
- Best-in-class pressure control with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure are minimized. The BV-technology enables the delivery of a very stable outlet pressure and flow even with high flow.
- BV Technology also increases the useful lifetime of the regulator and reduces ownership cost.



## SPECIFICATIONS

|                     |                                                                     |                          |                                               |                        |                                                                           |
|---------------------|---------------------------------------------------------------------|--------------------------|-----------------------------------------------|------------------------|---------------------------------------------------------------------------|
| <b>Female ports</b> | 16 x 1.336 (inlet) - G 3/8 (outlet)<br>or<br>1/4 NPT (inlet/outlet) | <b>Weight</b>            | ± 2,4 kg<br>± 5.3 lbs                         | <b>Inlet pressure</b>  | 300 bar<br>4350 psi                                                       |
| <b>Seat seal</b>    | PCTFE                                                               | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He                  | <b>Outlet pressure</b> | 10/16/25/50 bar<br>145/232/363/725 psi                                    |
| <b>O-ring</b>       | EPDM - Standard<br>FPM                                              | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F          | <b>Nominal Flow</b>    | 50/50/50/100 Nm <sup>3</sup> /h (N <sub>2</sub> )                         |
| <b>Diaphragm</b>    | AISI 304<br>Hastelloy® (25/50 bar)                                  | <b>Gauges</b>            | High and low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | Brass version: OK<br>Stainless steel version: inlet<br>pressure ≤ 200 bar |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| S | Body Material       |    | 800 | Outlet Pressure     |    | End Connections    |    | O-ring Material |      | Gauges |   |
|---|---------------------|----|-----|---------------------|----|--------------------|----|-----------------|------|--------|---|
|   | L                   | LB |     | 16                  | 10 | N                  | 16 | EPDM            | With | 1      | 1 |
|   | Raw brass           | LB |     | 10 bar<br>145 psi   | 10 | 16 x 1.336 - G 3/8 | 16 | EPDM - Standard | With | 1      |   |
|   | Chrome plated brass | L  |     | 16 bar<br>232 psi   | 16 | 1/4 NPT - 1/4 NPT  | N  | FPM             |      |        |   |
|   | Stainless steel     | I  |     | 25 bar<br>362.5 psi | 25 |                    |    |                 |      |        |   |
|   |                     |    |     | 50 bar<br>725 psi   | 50 |                    |    |                 |      |        |   |

# SERIES TGD 250 | SINGLE STAGE HP HIGH FLOW REGULATOR

- Diaphragm single stage
- Purity up to 5.5
- Inlet pressure:  
230 bar (3336 psi)
- Outlet pressure:  
20 bar (290psi)

- ★ High flow regulator
- ★ 1 inlet / 1 outlet
- ★ O<sub>2</sub> application compatible
- ★ Inlet/outlet pressure gauges

Special requirements on request

## APPLICATIONS

- Ideally suited for distribution of gases in industrial applications requiring very high flow like feeding of welding machines

## KEY FEATURES

- Exceptionally durable
- Medical CE version available (see Meditec catalogue).

To be connected with cylinder connectors



Refer to page 90



140 mm / ( 5.51" )

113 mm / ( 4.45" )

288 mm / ( 11.34" )

122 mm / ( 4.8" )

160 mm / ( 6.3" )

Ø 64 mm / ( 2.52" )

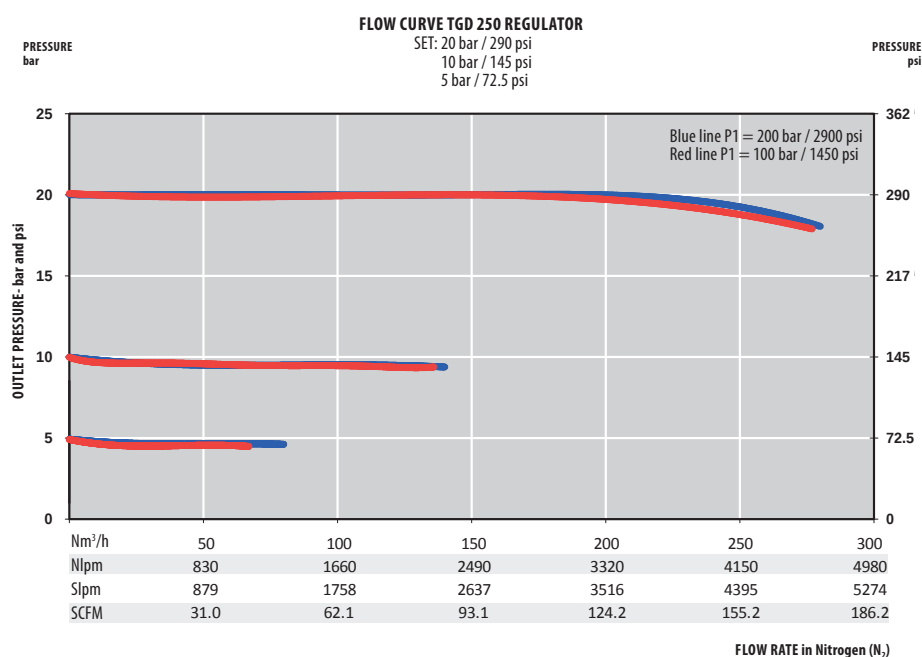
Ø 120 mm / ( 4.72" )

124 mm / ( 4.88" )

## SPECIFICATIONS

|                      |                                                        |                          |                                      |                        |                                          |
|----------------------|--------------------------------------------------------|--------------------------|--------------------------------------|------------------------|------------------------------------------|
| <b>Ports</b>         | inlet: 16 x 1.336 (Female)<br>outlet: M20 x 1,5 (Male) | <b>Weight</b>            | ± 4,6 kg<br>± 10.1 lbs               | <b>Inlet pressure</b>  | 230 bar<br>3336 psi                      |
| <b>Seat seal</b>     | PCTFE                                                  | <b>Leak rate</b>         | 10 <sup>-3</sup> mbar ℓ/s He         | <b>Outlet pressure</b> | 20 bar<br>290 psi                        |
| <b>Diaphragm</b>     | Butyl                                                  | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F | <b>Nominal Flow</b>    | 250 Nm <sup>3</sup> /h (N <sub>2</sub> ) |
| <b>Body Material</b> | Raw brass                                              | <b>Gauges</b>            | High and low pressure<br>(M10 x 1)   | <b>Oxygen use</b>      | OK                                       |

## FLOW CURVES



## PRODUCT CONFIGURATOR

|     |     | Inlet Connection |    | Gauges |   |
|-----|-----|------------------|----|--------|---|
| TGD | 250 | 16               | 16 | 1      | 1 |
|     |     | 16 x 1.336       | 16 | With   | 1 |

## SERIES S 20 AD | LINE REGULATOR FOR ACETYLENE (C<sub>2</sub>H<sub>2</sub>)

- Bellow single stage
- Purity up to 6.0
- Inlet pressure:  
20 bar (290 psi)
- Outlet pressure:  
1,5 bar (21.75 psi)

- ★ Accurate pressure delivery
- ★ Compact design
- ★ 2 inlets / 2 outlets
- ★ Rear inlet  
for panel mounting
- ★ Acetylene applications

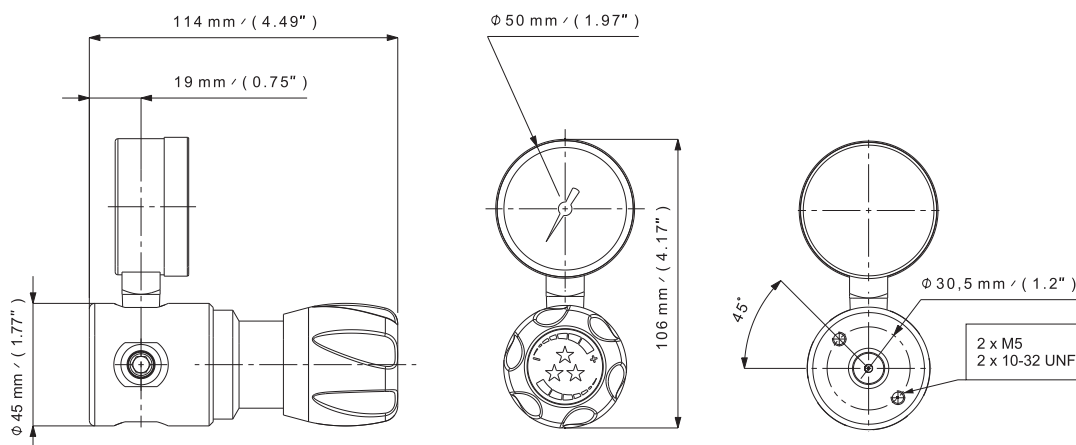
Special requirements on request

### APPLICATIONS

- The Series S 20 AD is used as line regulator or point of use for acetylene applications such as atomic absorption analyzers.

### KEY FEATURES

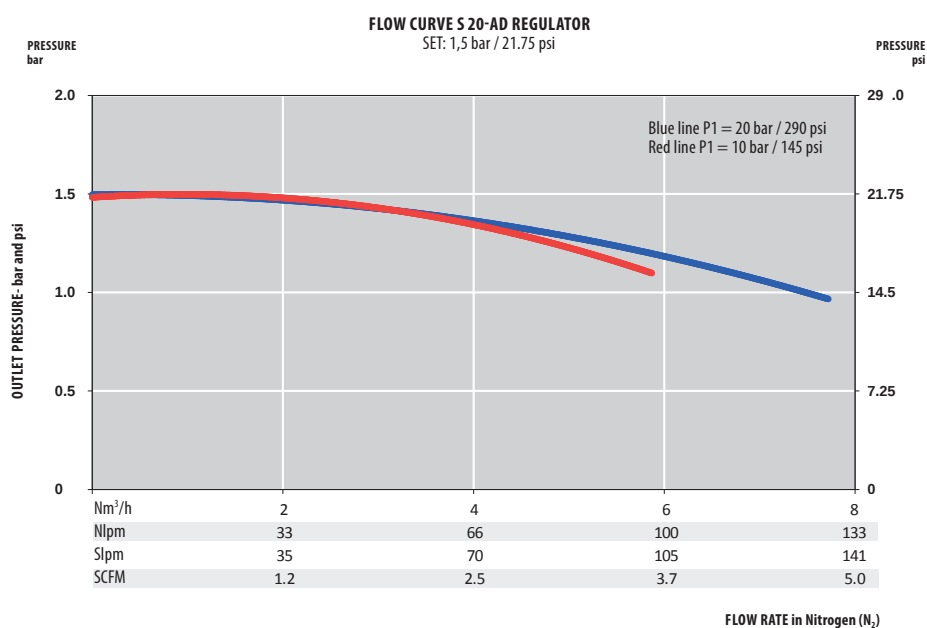
- Bellow technology provides a large range of accurate outlet pressures in a compact design.
- With its compact design, the rear threads and its fixing ring (option) it can be used for wall or panel mounting.
- Multiple mounting positions possible due to multiple inlet ports.
- For use with acetylene: this product must imperatively be installed with a flash back arrestor complying with standard EN 730 located downstream.



## SPECIFICATIONS

|                     |                                 |                          |                                      |                        |                                                         |
|---------------------|---------------------------------|--------------------------|--------------------------------------|------------------------|---------------------------------------------------------|
| <b>Female ports</b> | G 3/8 or 1/4 NPT (inlet/outlet) | <b>Weight</b>            | ± 0,5 kg<br>± 1.1 lbs                | <b>Inlet pressure</b>  | 20 bar<br>290 psi                                       |
| <b>Seat seal</b>    | EPDM                            | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He         | <b>Outlet pressure</b> | 1,5 bar<br>21.75 psi                                    |
| <b>O-ring</b>       | EPDM                            | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F | <b>Nominal Flow</b>    | 1,5 Nm <sup>3</sup> /h (C <sub>2</sub> H <sub>2</sub> ) |
| <b>Bellow</b>       | AISI 316L                       | <b>Gauges</b>            | Low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | No                                                      |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| Body Material |                     |    | End Connections |                   |      | Gauges |   | Ports Configuration    |   | Mounting            |     |
|---------------|---------------------|----|-----------------|-------------------|------|--------|---|------------------------|---|---------------------|-----|
| S             | L                   | 20 | AD              | G                 | EPDM | 1      |   | A                      |   | FR0                 |     |
|               | Chrome plated brass | L  |                 | G 3/8 - G 3/8     | G    | With   | 1 | Standard Configuration | A | Without Fixing Ring | FR0 |
|               |                     |    |                 | 1/4 NPT - 1/4 NPT | N    |        |   | Reverse inlet/outlet   | R | With Fixing Ring    | FR1 |

## SERIES S 25 AD | CYLINDER REGULATOR FOR ACETYLENE (C<sub>2</sub>H<sub>2</sub>)

- Bellow single stage
- Purity up to 6.0
- Inlet pressure:  
20 bar (290 psi)
- Outlet pressure:  
1,5 bar (21.75psi)

- ★ Accurate pressure delivery
- ★ Compact design
- ★ 1 inlet / 2 outlets
- ★ Rear Inlet with cylinder connection
- ★ Acetylene applications

Special requirements on request

### APPLICATIONS

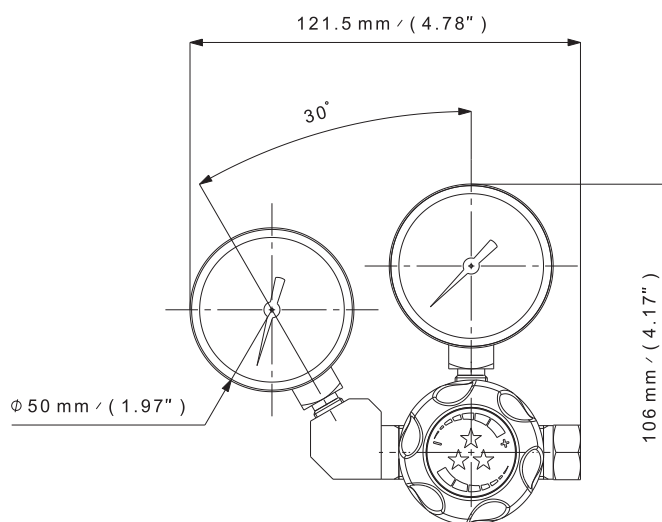
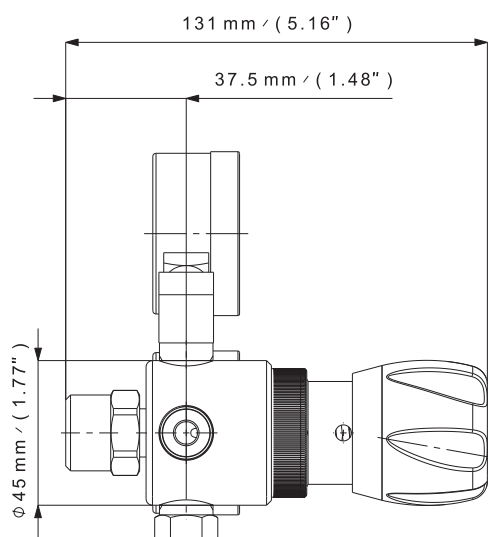
- Used as a cylinder regulator for acetylene applications such as atomic absorption analyzers.

### KEY FEATURES

- Bellow technology provides a large range of accurate outlet pressures in a compact design.
- The Series S 25 could be equipped with several cylinder connection types.
- 2 gauges for high and low pressure.
- For use with acetylene, this product must imperatively be installed with a flash back arrestor complying with standard EN 730 located downstream.



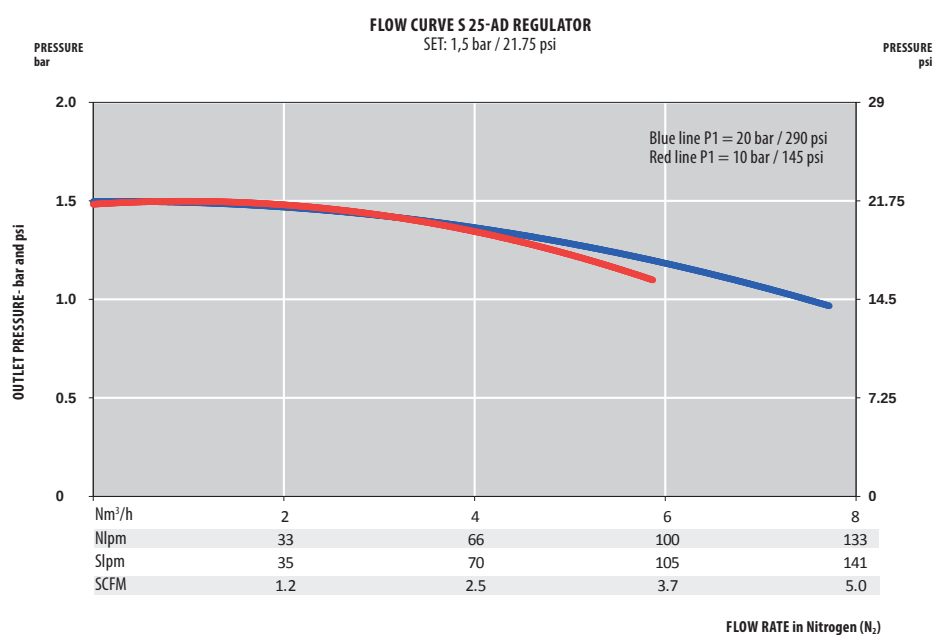
Right view



## SPECIFICATIONS

|                     |                                                                             |                          |                                             |                        |                                                         |
|---------------------|-----------------------------------------------------------------------------|--------------------------|---------------------------------------------|------------------------|---------------------------------------------------------|
| <b>Inlet ports</b>  | C <sub>2</sub> H <sub>2</sub> Cylinder connection in accordance to standard | <b>Weight</b>            | ± 0,5 kg<br>± 1.1 lbs                       | <b>Inlet pressure</b>  | 20 bar<br>290 psi                                       |
| <b>Outlet ports</b> | G 3/8 or 1/4 NPT                                                            | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He                | <b>Outlet pressure</b> | 1,5 bar<br>21.75 psi                                    |
| <b>Seat seal</b>    | EPDM                                                                        | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F        | <b>Nominal Flow</b>    | 1,5 Nm <sup>3</sup> /h (C <sub>2</sub> H <sub>2</sub> ) |
| <b>O-ring</b>       | EPDM                                                                        | <b>Gauges</b>            | High / Low pressure<br>(M10 x 1 or 1/4 NPT) | <b>Oxygen use</b>      | No                                                      |
| <b>Bellow</b>       | AISI 316L                                                                   |                          |                                             |                        |                                                         |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| S | L | 25 | AD | Inlet Connection                | Outlet Connection | EPDM | Gauges                            | Mounting            |
|---|---|----|----|---------------------------------|-------------------|------|-----------------------------------|---------------------|
|   |   |    |    | H                               | G                 |      | 1                                 | FR0                 |
|   |   |    |    | AFNOR H Type (cylind. connect.) | G 3/8             |      | With high and low pressure gauges | Without Fixing Ring |
|   |   |    |    | British Standard                | 1/4 NPT           |      |                                   | With Fixing Ring    |
|   |   |    |    | CGA Standard                    | 510               |      |                                   |                     |
|   |   |    |    | DIN Standard                    | 477-12            |      |                                   |                     |

# LABLINE S 22 | MODULAR POINT OF USE

- Bellow single stage
- Purity up to 6.0
- Inlet pressure:  
50 bar (725 psi)
- Outlet pressure:  
1/3/10 bar  
14.5/44/145 psi
- Acetylene version (AD - C<sub>2</sub>H<sub>2</sub>):  
P1 = 20 bar (290 psi)  
P2 = 1,5 bar (21.75 psi)

- ★ Accurate pressure delivery
- ★ Compact design
- ★ 1 inlet / 2 outlets
- ★ Modular concept
- ★ O<sub>2</sub> applications compatible  
(see technical data)

Special requirements on request



SLS22-EMB-10-G-EPDM-1-MV version



Acetylene version

## APPLICATIONS

- A terminal point of use for specialty gas applications in a laboratory or in a workshop.

## KEY FEATURES

- Based on the Series 20 platform
- Bellow technology provides a large range of accurate outlet pressures in a compact design.
- Acetylene version also available.
- For use with acetylene, this product must imperatively be installed with a flash back arrestor complying with standard EN 730 located downstream.
- With the inlet shut off valve the regulator is independent from the installation and can be easily removed.



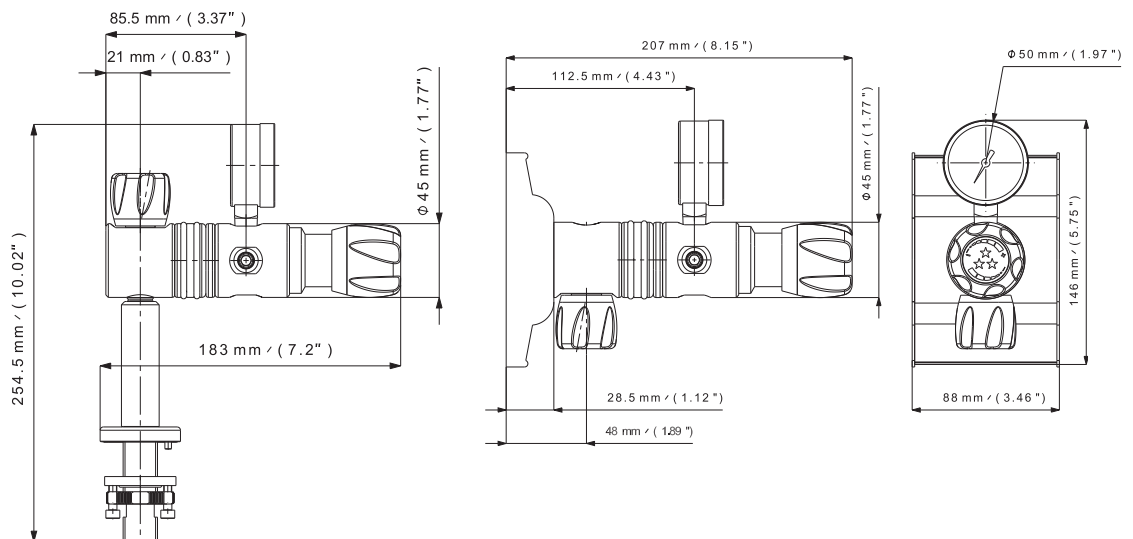
M version w/ 1/4V valve



EMB version w/ MV valve



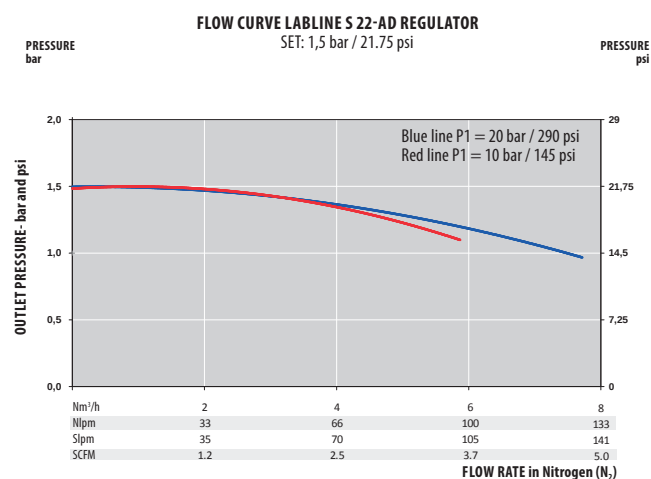
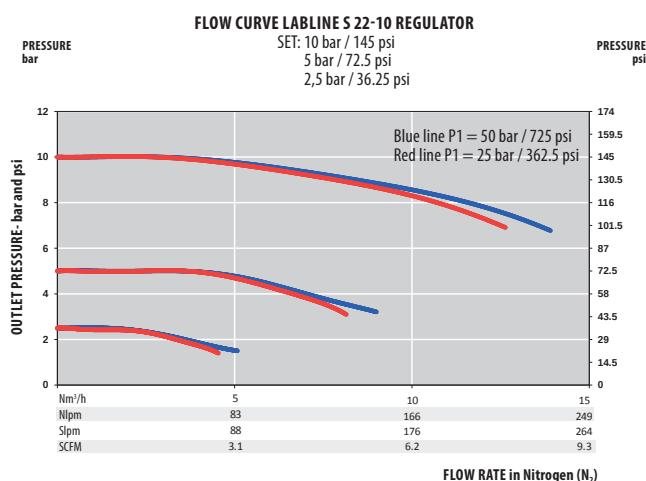
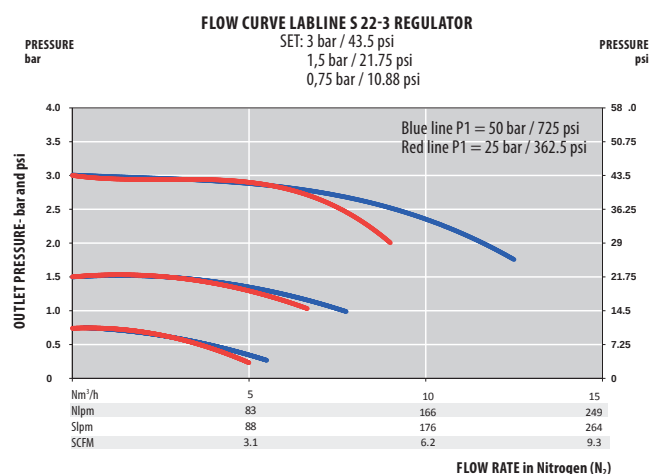
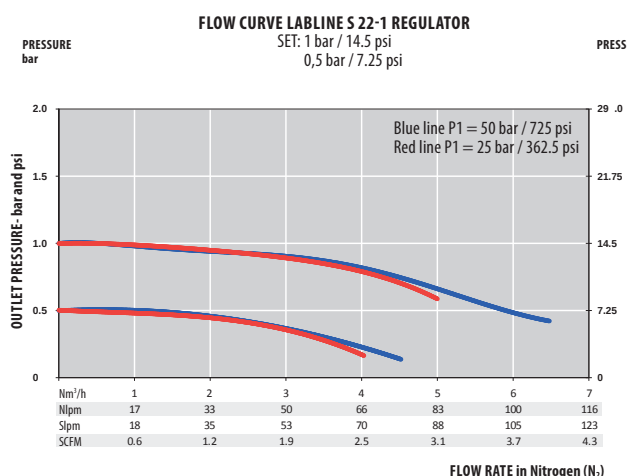
COL version w/ MV valve



## SPECIFICATIONS

|                     |                                                                             |                          |                                    |                        |                                                               |
|---------------------|-----------------------------------------------------------------------------|--------------------------|------------------------------------|------------------------|---------------------------------------------------------------|
| <b>Female ports</b> | F: G ¼ (inlet-COL version)<br>G ¾ or ¼ NPT (inlet)<br>G ¾ or ¼ NPT (outlet) | <b>Weight</b>            | ± 1,5 kg<br>± 3.3 lbs              | <b>Inlet pressure</b>  | 50 bar (725 psi)<br>AD: 20 bar (290 psi)                      |
| <b>Seat seal</b>    | EPDM                                                                        | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He       | <b>Outlet pressure</b> | 1/3/10 bar<br>14.5/44/145<br>AD: 1,5 bar (21.75 psi)          |
| <b>O-ring</b>       | EPDM - Standard<br>FPM                                                      | <b>Temperature range</b> | -20°C to + 60°C<br>-4°F to + 140°F | <b>Nominal Flow</b>    | 2/2,5/3,5 Nm³/h (N₂)<br>AD: 1 Nm³/h                           |
| <b>Diaphragm</b>    | Hastelloy®                                                                  | <b>Gauges</b>            | Low pressure<br>(M10 x 1 or ¼ NPT) | <b>Oxygen use</b>      | inlet pressure ≤ 30 bar max.<br>for brass and stainless steel |
| <b>Bellow</b>       | Bronze or<br>AISI 316L (SS version)                                         |                          |                                    |                        |                                                               |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| Body Material |                     |   |                     |     | Version                                |    | Outlet Pressure                  |   | End Connection  |      | O-ring Material | Gauges           |    | Valve |  |
|---------------|---------------------|---|---------------------|-----|----------------------------------------|----|----------------------------------|---|-----------------|------|-----------------|------------------|----|-------|--|
| S             | L                   |   | S22                 |     | EMB                                    |    | 10                               |   | G               |      | EPDM            | 1                |    | ¼V    |  |
|               | Chrome plated brass | L | With Metal Plate    | M   | 1 bar<br>14.5 psi                      | 1  | G ¾ - Female (outlet)            | G | EPDM - standard | With | 1               | ¼ turn valve     | ¼V |       |  |
|               | Stainless steel     | I | With Aluminum stand | EMB | 3 bar<br>44 psi                        | 3  | ¼ NPT (outlet)                   | N | FPM             |      |                 | Multi-turn valve | MV |       |  |
|               |                     |   | With pillar*        | COL | 10 bar<br>145 psi                      | 10 | Note: inlet G ¼ with COL version |   |                 |      |                 |                  |    |       |  |
|               |                     |   |                     |     | Acetylene version<br>1,5 bar 21.75 psi | AD |                                  |   |                 |      |                 |                  |    |       |  |

## MONO SERIES S 20 | COMPACT POINT OF USE

- Bellow single stage
- Purity up to 6.0
- Inlet pressure:  
50 bar (725 psi)
- Outlet pressure:  
1/3/10 bar (14.5/44/145 psi)
- Acetylene version (AD - C<sub>2</sub>H<sub>2</sub>):  
P1 = 20 bar (290 psi)  
P2 = 1,5 bar (21.75 psi)

- ★ Accurate pressure delivery
- ★ Compact design
- ★ 2 inlets / 2 outlets
- ★ Rear inlet for front panel mounting
- ★ O<sub>2</sub> application compatible (see technical data)

Special requirements on request



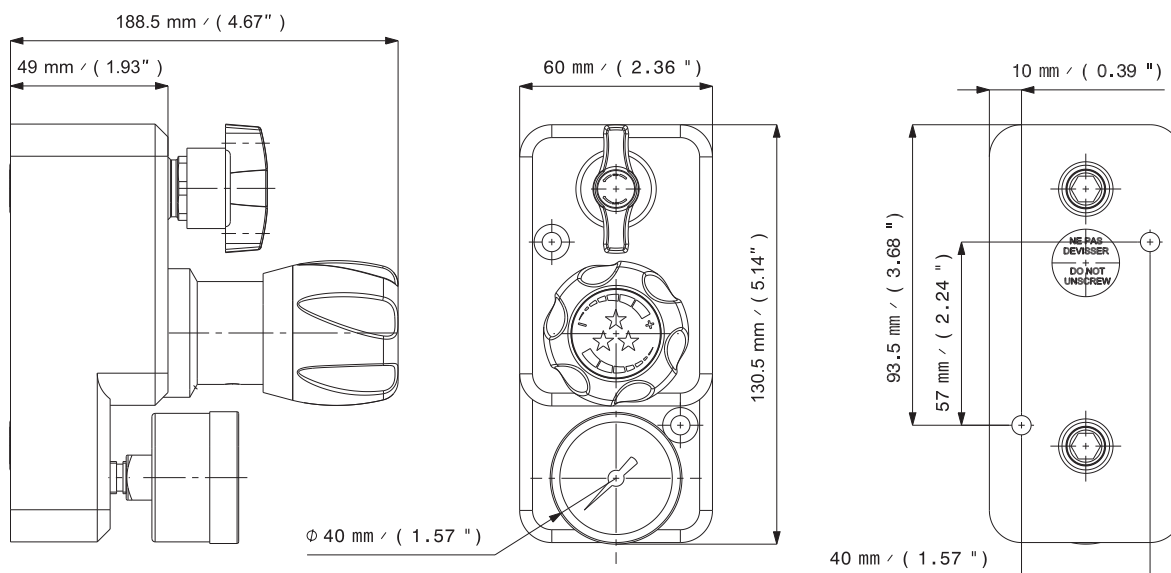
Acetylene version

### APPLICATIONS

- A terminal point of use for specialty gas applications in a laboratory or a workshop.

### KEY FEATURES

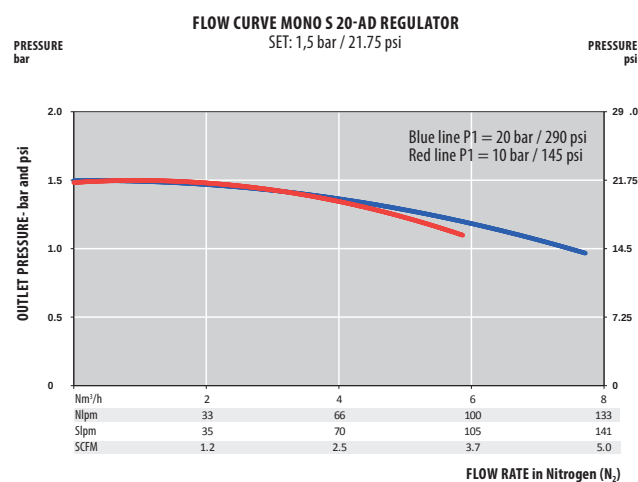
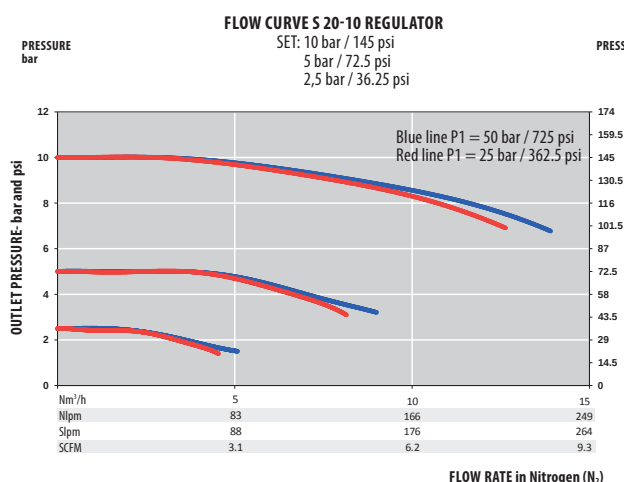
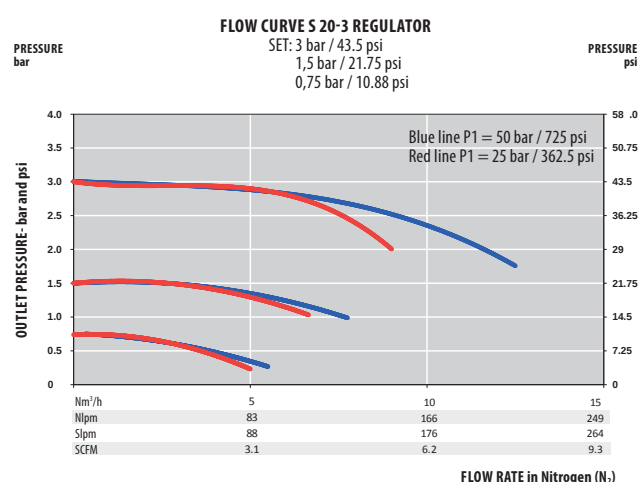
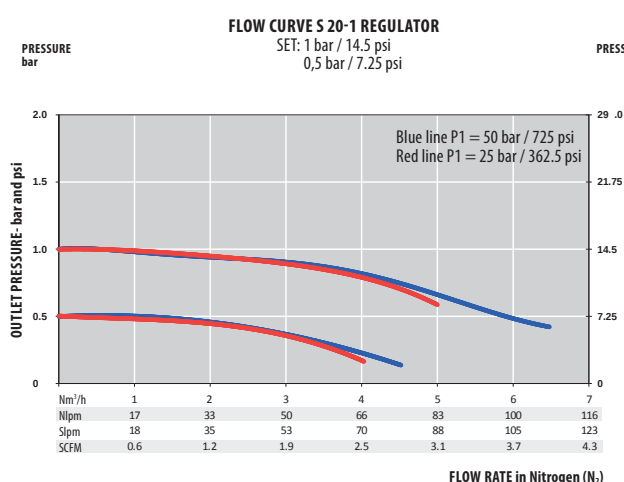
- Made up with a Series S 20 type regulator and a VM 20 valve.
- Compact outline dimensions and ergonomic design make this point of use suitable for laboratory furniture.
- Acetylene version also available.
- For use with acetylene, this product must imperatively be installed with a flash back arrestor complying with standard EN 730 located downstream.
- The Mono S 20 can be integrated easily on furniture due to its compact design



## SPECIFICATIONS

|                          |                                                      |                          |                                                                          |                        |                                                                            |
|--------------------------|------------------------------------------------------|--------------------------|--------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------|
| <b>Female ports</b>      | G 3/8 (inlet/outlet)<br>or<br>1/4 NPT (inlet/outlet) | <b>Weight</b>            | Aluminum: ± 1,25 kg (± 2.75 lbs)<br>Stainless steel: ± 2,75 (± 6.06 lbs) | <b>Inlet pressure</b>  | 50 bar (725 psi)<br>AD: 20 bar (290 psi)                                   |
| <b>Seat seal</b>         | EPDM                                                 | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He                                             | <b>Outlet pressure</b> | 1/3/10 bar<br>14.5/44/145 psi<br>AD: 1,5 bar (21.75 psi)                   |
| <b>O-ring</b>            | EPDM - Standard<br>FPM                               | <b>Temperature range</b> | -20°C to + 60°C<br>-4°F to + 140°F                                       | <b>Nominal Flow</b>    | 2/2,5/3,5 Nm <sup>3</sup> /h (N <sub>2</sub> )<br>AD: 1 Nm <sup>3</sup> /h |
| <b>Diaphragm (valve)</b> | Hastelloy®                                           | <b>Gauges</b>            | Low pressure<br>(M10 x 1)                                                | <b>Oxygen use</b>      | inlet pressure ≤ 30 bar max. for<br>aluminum and stainless steel           |
| <b>Bellow</b>            | Bronze or<br>AISI 316L (SS version)                  |                          |                                                                          |                        |                                                                            |

## FLOW CURVES



## PRODUCT CONFIGURATOR

|   |   | Body Material   |   | Outlet Pressure                          |    | End Connections   |   | O-ring Material | Configuration          |   |
|---|---|-----------------|---|------------------------------------------|----|-------------------|---|-----------------|------------------------|---|
| M | S | A               |   | 10                                       |    | G                 |   | EPDM            | A                      |   |
|   |   | Aluminum        | A | 1 bar<br>14.5 psi                        | 1  | G 3/8 - G 3/8     | G | EPDM - standard | Standard configuration | A |
|   |   | Stainless steel | I | 3 bar<br>44 psi                          | 3  | 1/4 NPT - 1/4 NPT | N | FPM             |                        |   |
|   |   |                 |   | 10 bar<br>145 psi                        | 10 |                   |   |                 |                        |   |
|   |   |                 |   | Acetylene version<br>1,5 bar (21.75 psi) | AD |                   |   |                 |                        |   |

\*Inlet Down - outlet Top

## SERIES DC 50 | HIGH FLOW LINE REGULATOR

- Diaphragm single stage
- Balanced-Valve Technology
- Purity up to 5.0
- Inlet pressure:  
50 bar (725 psi)
- Outlet pressure:  
8/15/40 bar  
116/217/580 psi
- Acetylene version (AD - C<sub>2</sub>H<sub>2</sub>):  
P1=1,5 bar (21.75 psi)  
P2=0,8 bar (12 psi)

- ★ 1 inlet / 1 outlet
- ★ Rear thread for panel mounting
- ★ O<sub>2</sub> application compatible
- ★ High flow

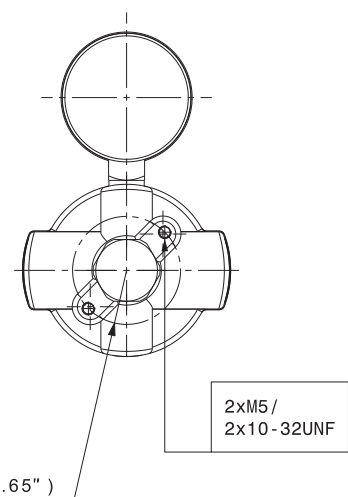
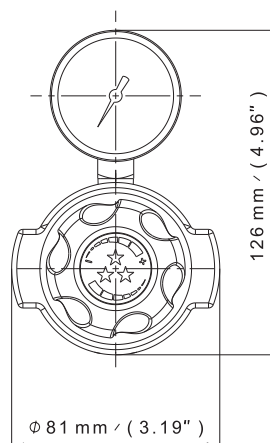
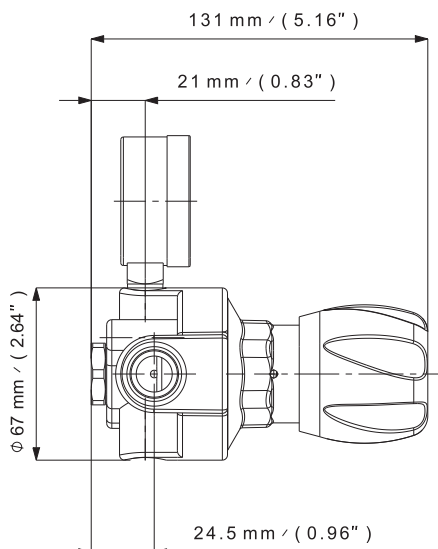
Special requirements on request

### APPLICATIONS

- For all applications requiring a low pressure with high flow.
- Ideally suited as line regulator in combination either with MOD supply board or CEN switch over board.

### KEY FEATURES

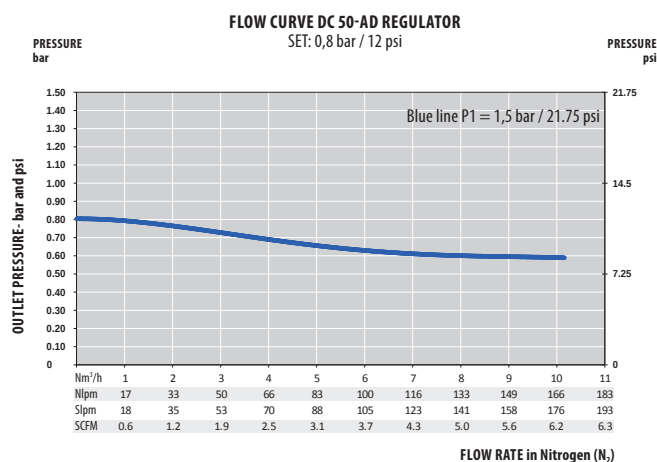
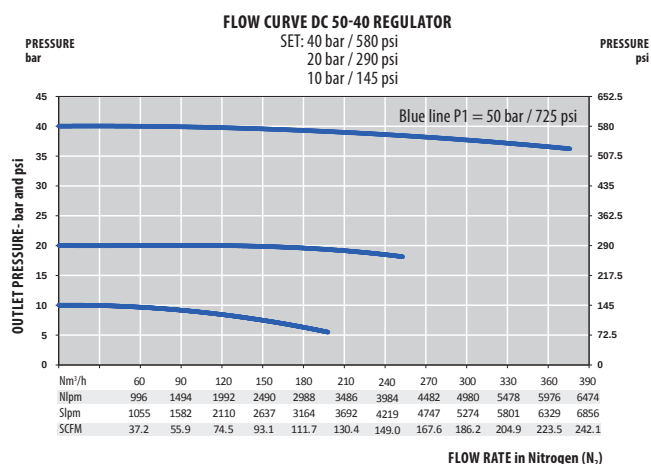
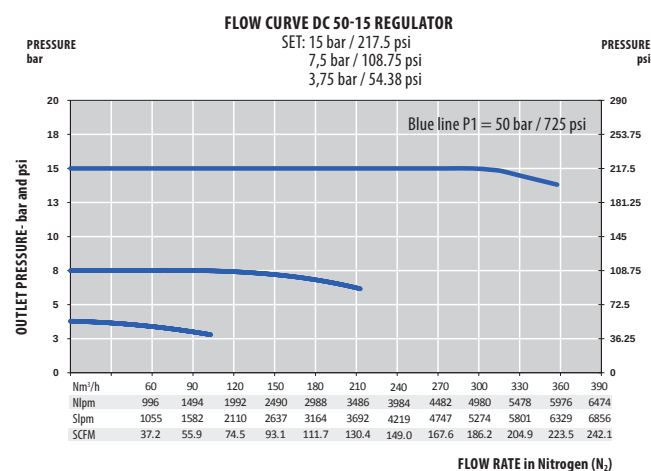
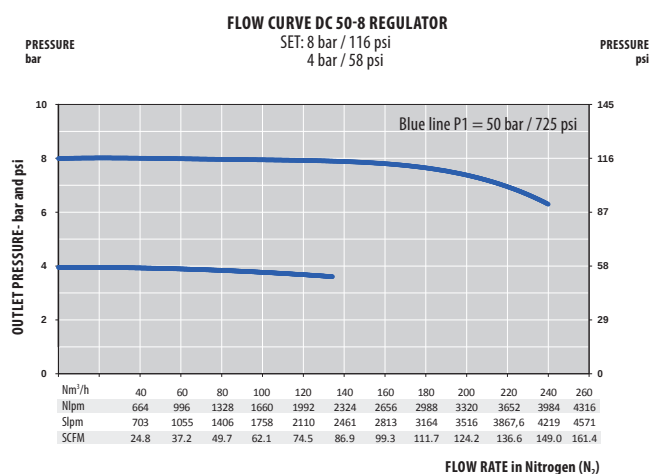
- Low pressure regulator with high flow, without vibration.
- Best-in-class pressure stability with Balanced-Valve Technology: the effect of inlet pressure fluctuations on outlet pressure is minimized. BV-technology enables the delivery of a very stable outlet pressure and flow even with high flow line regulators.
- reduced strain on the seat increases regulator life and reduces the ownership cost.
- Acetylene version available:  
P1=1,5 bar/P2=0,8 bar/Q=10 Nm<sup>3</sup>/h
- For use with acetylene this product must be installed with a flash back arrestor complying with the standard EN 730 located downstream.



## SPECIFICATIONS

|                     |                             |                          |                                      |                        |                                                     |
|---------------------|-----------------------------|--------------------------|--------------------------------------|------------------------|-----------------------------------------------------|
| <b>Female ports</b> | G ½ or ½ NPT (inlet/outlet) | <b>Weight</b>            | ± 1,4 kg<br>± 3.1 lbs                | <b>Inlet pressure</b>  | 50 bar (725 psi)<br>AD: 1,5 bar (21.75 psi)         |
| <b>Seat seal</b>    | EPDM                        | <b>Leak rate</b>         | 10 <sup>-3</sup> mbar ℓ/s He         | <b>Outlet pressure</b> | 8/15/40 - 0,8 bar (AD)<br>116/217/580 - 12 psi (AD) |
| <b>O-ring</b>       | EPDM - Standard<br>FPM      | <b>Temperature range</b> | - 20°C to + 60°C<br>- 4°F to + 140°F | <b>Nominal Flow</b>    | 150/300/300 Nm³/h (N₂)<br>10 Nm³/h (AD)             |
| <b>Diaphragm</b>    | EPDM                        | <b>Gauges</b>            | Low pressure<br>(G ¼ or ¼ NPT)       | <b>Oxygen use</b>      | OK                                                  |

## FLOW CURVES



## PRODUCT CONFIGURATOR

| D | C | 50 | Outlet Pressure                       | End Connections | O-ring Material | Body Material       | Gauges    |
|---|---|----|---------------------------------------|-----------------|-----------------|---------------------|-----------|
|   |   |    | 40                                    | G               | EPDM            | L                   | 1         |
|   |   |    | 8 bar<br>116 psi                      | 8               | G ½ - G ½       | EPDM - Standard     | With      |
|   |   |    | 15 bar<br>217 psi                     | 15              | ½ NPT - ½ NPT   | Chrome plated brass | 1         |
|   |   |    | 40 bar<br>580 psi                     | 40              | N               | FPM                 | Raw brass |
|   |   |    | Acetylene version<br>0,8 bar (12 psi) | AD              |                 | LB                  |           |

## SERIES VD | DIAPHRAGM LINE VALVE

- Low to high-pressure line valves for various pure gas
- High leak tightness through diaphragm sealing
- a consistent design for all versions

### SHUT-OFF VALVE

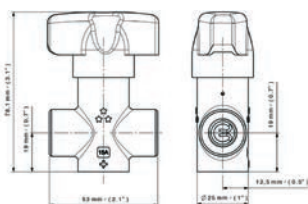
- ★ From 50 to 300 bar inlet pressure
- ★ Diaphragm seal
- ★ ¼ turn handwheel
- ★ O<sub>2</sub> compatible (only with Brass version)

### KEY FEATURES

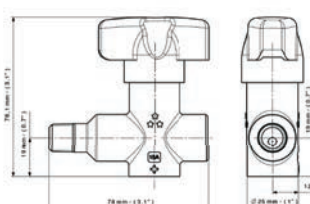
- For gas purity up to 6.0
- Hastelloy® diaphragm for tightness and gas compatibility
- ¼ turn ergonomic handwheel
- Chrome-plated brass or stainless steel
- 3 versions : 50, 200 and 300bar inlet working pressure
- 3 orientations : female-female, male-female, female-male
- Available with 1/4NPT or G3/8 connections
- With rear threads for panel mounting



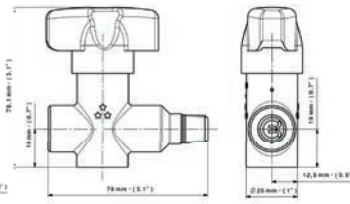
¼ NPT FF & G¾" FF



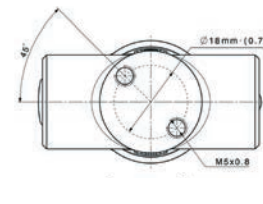
¼ NPT MF



¼ NPT FM



REAR MOUNTING



### SPECIFICATIONS

|                       |                                |                          |                              |                              |                                       |
|-----------------------|--------------------------------|--------------------------|------------------------------|------------------------------|---------------------------------------|
| <b>Ports</b>          | ¼ NPT : FF, MF or FM<br>G¾: FF | <b>Weight</b>            | 310g                         | <b>Inlet pressure</b>        | 50 / 200 / 300 bar                    |
| <b>Seat seal</b>      | PCTFE                          | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar l/s He | <b>Flow coefficient (Kv)</b> | 0,17 Kv / 0,2 Cv                      |
| <b>Diaphragm</b>      | Hastelloy®                     | <b>Temperature range</b> | -20° to +60 °C               | <b>Oxygen use</b>            | Ok up to 310 bar (brass version only) |
| <b>Bottom tapered</b> | OK 2x M5 at Ø18mm              | <b>Seat orifice size</b> | Ø 4mm                        |                              |                                       |

### PRODUCT CONFIGURATOR

|   |   | Body Material       |   | Inlet Pressure |     | Orientation                    |    | Connection |   | Handwheel |    |
|---|---|---------------------|---|----------------|-----|--------------------------------|----|------------|---|-----------|----|
| V | D | B                   |   | 50             |     | FF                             |    | N          |   | ¼T        |    |
|   |   | Chrome plated brass | B | 50 bar         | 50  | Female-Female                  | FF | ¼NPT       | N | ¼ turn    | ¼T |
|   |   | Stainless steel     | S | 200 bar        | 200 | Male - Female (only with ¼NPT) | MF | G¾         | G |           |    |
|   |   |                     |   | 310 bar        | 310 | Female - Male (only with ¼NPT) | FM |            |   |           |    |

## SERIES VM 20 | LINE VALVE

- Low-pressure shut off valve for various pure gases.
- High leak tightness through diaphragm sealing.

## SHUT-OFF VALVE

- ★ Low-pressure
- ★ Diaphragm seal
- ★ Straight or 90° version
- ★ O<sub>2</sub> application compatible  
(see technical data)

Special requirements on request

## KEY FEATURES

- Purity up to 6.0
- «Straight» version
- «Right-angle» version (VLM 20 E / VIM 20 E)
- «Wall-mounted» version (VLM 20 M / VIM 20 M)
- Rear thread for panel mounting (VLM 20 E / VIM 20 E)

## OPTIONS

- ¼ turn version
- M: G ¾" inlet
- Panel mounting board
- Point of use regulator
- Many inlet / outlet fittings available

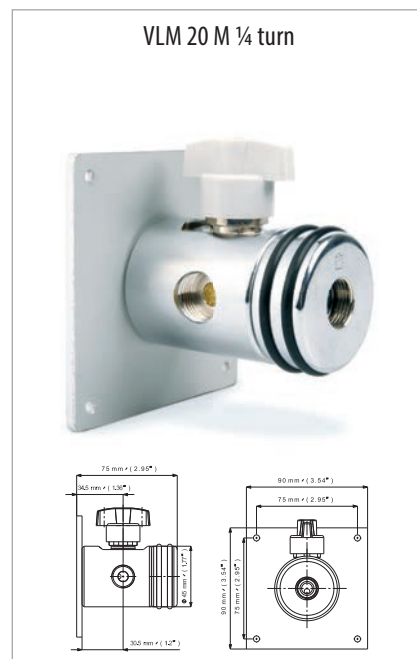
VLM 20 E ¼ turn



VLM 20 E Multi-turn



VLM 20 M ¼ turn



## SPECIFICATIONS

|                       |                        |                          |                                    |                         |                                                                      |
|-----------------------|------------------------|--------------------------|------------------------------------|-------------------------|----------------------------------------------------------------------|
| <b>Seat seal</b>      | PCTFE / EPDM           | <b>Weight</b>            | ± 0,95 kg<br>± 2.10 lbs            | <b>Flow coefficient</b> | Cv 0.14<br>Kv 0,12                                                   |
| <b>O-ring</b>         | EPDM - Standard<br>FPM | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar ℓ/s He       | <b>Inlet pressure</b>   | 50 bar<br>725 psi                                                    |
| <b>Bottom tapered</b> | OK                     | <b>Temperature range</b> | -20°C to + 50°C<br>-4°F to + 122°F | <b>Ports</b>            | G 3/8<br>(inlet/outlet)                                              |
| <b>Diaphragm</b>      | Hastelloy®             | <b>Seat orifice size</b> | Ø 4 mm                             | <b>Oxygen use</b>       | Brass: OK<br>Stainless steel: only E / M<br>versions with side inlet |

## PRODUCT CONFIGURATOR

|   | Body Material       |      | Version     |   | End Connections |   | O-ring Material | Hand wheel |     |
|---|---------------------|------|-------------|---|-----------------|---|-----------------|------------|-----|
| V | LM20                |      | M           |   | G               |   | EPDM            |            | ¼ T |
|   | Chrome plated brass | LM20 | right angle | E | G ¾             | G | EPDM - standard | ¼ turn     | ¼   |
|   | Stainless steel     | IM20 | with plate  | M | ¼ NPT on demand | N | FPM             | Multi turn | MT  |

## SERIES VM 45 | LINE VALVE

- Low-pressure line valve for various pure gases.
- High leak tightness through diaphragm sealing and high flow through 8mm orifice.

### SHUT-OFF VALVE

- ★ Low-pressure
- ★ High flow
- ★ Diaphragm seal
- ★ Multi-turn or ¼ turn
- ★ O<sub>2</sub> application compatible

Special requirements on request

### KEY FEATURES

- Purity up to 6.0
- Multi-turn or ¼ turn versions
- Chrome plated brass or stainless steel
- Standard inlet/outlet: G ¾ - Female
- Fixing ring for flush-mounting in panel
- Rear thread for panel mounting

### OPTIONS

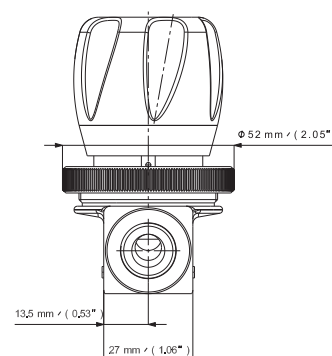
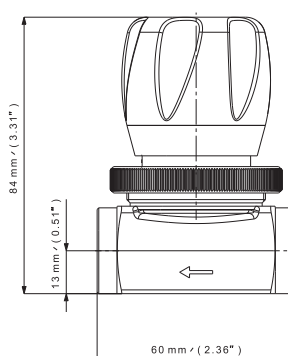
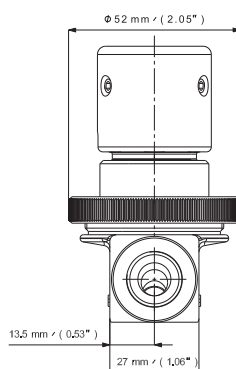
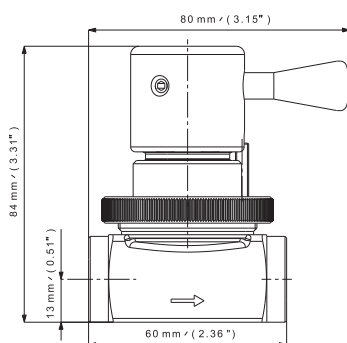
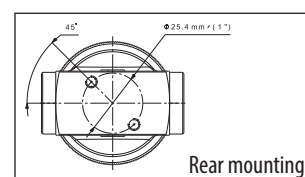
- Choice of two inlet/outlet connections available (see configurator)



¼ turn version



Multi-turn version



### SPECIFICATIONS

|                       |                             |                          |                                  |                         |                                  |
|-----------------------|-----------------------------|--------------------------|----------------------------------|-------------------------|----------------------------------|
| <b>Female ports</b>   | G ¾ or ¼ NPT (inlet/outlet) | <b>Leak rate</b>         | 10 <sup>-8</sup> mbar l/s He     | <b>Inlet pressure</b>   | 45 bar<br>650 psi                |
| <b>Seat seal</b>      | PCTFE                       | <b>Temperature range</b> | -20°C to +50°C<br>-4°F to +122°F | <b>Flow coefficient</b> | Cv 0.58<br>Kv 0.50               |
| <b>Diaphragm</b>      | Hastelloy®                  | <b>Seat orifice size</b> | Ø 8 mm                           | <b>Oxygen use</b>       | OK for brass and stainless steel |
| <b>Bottom tapered</b> | OK                          |                          |                                  |                         |                                  |
| <b>Weight</b>         | ± 0,75 kg<br>± 1.65 lbs     |                          |                                  |                         |                                  |

### PRODUCT CONFIGURATOR

| Body Material |                     |   |    | End Connections |   | Hand wheel |     |
|---------------|---------------------|---|----|-----------------|---|------------|-----|
| V             | L                   | M | 45 | G               | G | ¼ T        | ¼ T |
|               | Chrome plated brass | L |    | G ¾ - Female    | G | ¼ turn     | ¼ T |
|               | Stainless steel     | I |    | ¼ NPT - Female  | N | Multi-turn | MT  |

# RD 10 | METERING VALVE

- Needle valve for various pure gases.
- This metering valve has a very precise flow setting and is ideally suited for use on regulators outlet.

## NEEDLE VALVE

- ★ Low-pressure
- ★ With needle
- ★ Multi-turn

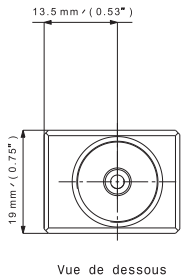
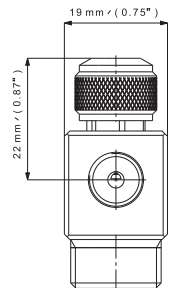
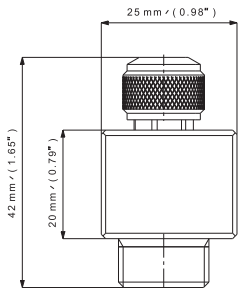
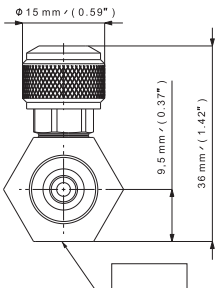
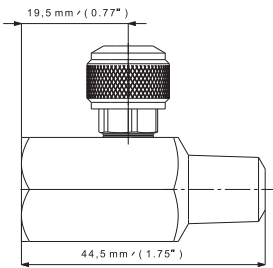
Special requirements on request

## KEY FEATURES

- Purity up to 6.0
- Multi-turn version
- Straight or right angle versions
- Chrome plated brass or stainless steel
- Small size
- Low torque operation
- Very precise setting
- Delivered with light grey handwheel
- Not to be used as a shut off valve

## OPTIONS

- Many inlet/outlet fittings available
- NBR or FPM O-ring
- For acetylene use, this valve must imperatively be installed with a flash back arrestor complying with standard EN 730 located downstream



Vue de dessous

## SPECIFICATIONS

|                       |                                                                  |                                       |                                    |                         |                                                         |
|-----------------------|------------------------------------------------------------------|---------------------------------------|------------------------------------|-------------------------|---------------------------------------------------------|
| <b>Ports</b>          | Male inlet : G 3/8 or 1/4 NPT<br>Female outlet: G 1/8 or 1/4 NPT | <b>Max of turns open for max flow</b> | 3 turns                            | <b>Inlet pressure</b>   | 60 bar<br>870 psi                                       |
| <b>Seat seal</b>      | Metal / metal                                                    | <b>Weight</b>                         | ± 0,085 kg<br>± 0.19 lbs           | <b>Flow coefficient</b> | Cv 0.116. Kv 0,10 (straight)<br>Cv 0.174. Kv 0,15 (90°) |
| <b>O-ring</b>         | EPDM - Standard<br>FPM                                           | <b>Temperature range</b>              | -20°C to + 50°C<br>-4°F to + 122°F | <b>Oxygen use</b>       | OK with P1=30 bar max                                   |
| <b>Bottom tapered</b> | No                                                               | <b>Seat orifice size</b>              | Ø 2,5 mm                           |                         |                                                         |

## PRODUCT CONFIGURATOR

| RD | Body Material       |   | 10 | End Connections                             |    | Version      |   | O-ring Material |
|----|---------------------|---|----|---------------------------------------------|----|--------------|---|-----------------|
|    | L                   |   |    | G                                           |    | D            |   | EPDM            |
|    | Chrome plated brass | L |    | In: G 3/8 - Male<br>Out: G 1/8 - Female     | G  | Straight     | D | EPDM - standard |
|    | Stainless steel     | I |    | In: 1/4 NPT - Male<br>Out: 1/4 NPT - Female | N  | Right angle* | E | FPM             |
|    |                     |   |    | In: G 3/8 - Male<br>Out: 1/4 NPT - Female   | GN |              |   |                 |

\*Only available with end connections "G"

## CYLINDER CONNECTORS

Connects regulators, supply boards or switch over boards to gas cylinders directly, or via a flexible hose or pigtail

### CYLINDER FITTINGS

- ★ High pressure
- ★ 200 bar or 300 bar version
- ★ Chrome plated brass or stainless steel

Special requirements on request

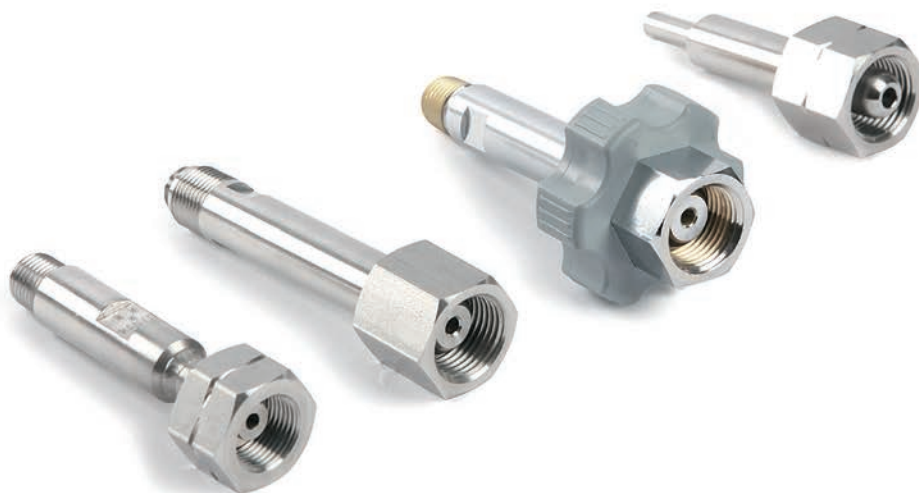


### KEY FEATURES

- Cylinder connector according to the following standards: AFNOR, DIN, BS, CGA, NEN, UNI, FTSC 300 bar ...
- Other connections on demand
- Outlet connection: 16 x 1.336 - Male or 1/4 NPT - Male
- Material: chrome plated brass or stainless steel

### OPTIONS

- 300 bar (FTSC) version
- Mounted on flexible hose or pigtail

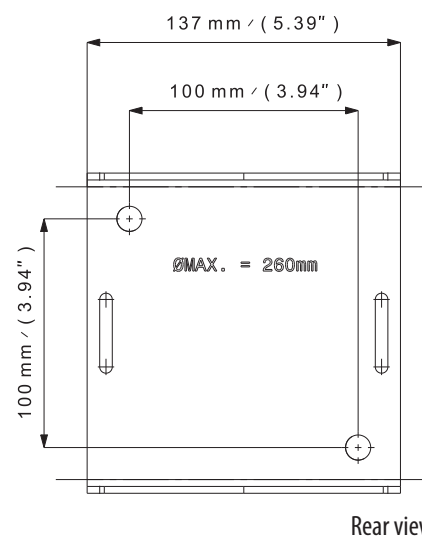
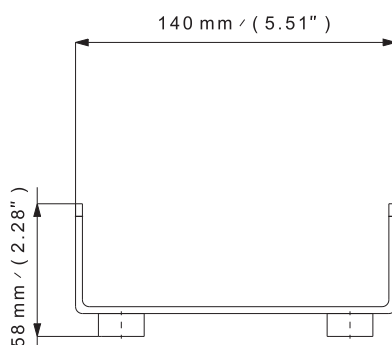
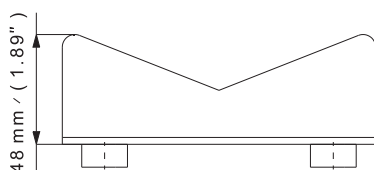


## GAS CYLINDER HOLDER

Designed for the storage of one or large number of gas cylinders in an appropriate area

- ★ Can be fixed permanently to the wall
- ★ Securely holds cylinder in place
- ★ Allows permanent designation of appropriate cylinder storage area
- ★ Delivered with a fixing belt
- ★ Many cylinder holders can be used together, side by side
- ★ Part number: 202500000007

Special requirements on request



## NOTES

[illegible]

## NOTES

## GAS COMPATIBILITY

### KEY TO GAS COMPATIBILITY:

Locate your gas type in the below chart and see the gas compatibility of each standard material type. Only select materials that are compatible with your gas type.

### GAS COMPATIBILITY WITH MATERIALS (AT 20°C ROOM TEMPERATURE)

| GAS                  |             | B or SS 316L | PA 6.6                                                          | PTFE | PCTFE | NBR | FPM (VITON®) | EPDM |
|----------------------|-------------|--------------|-----------------------------------------------------------------|------|-------|-----|--------------|------|
| Acetylene            | $C_2H_2$    | B            |                                                                 | OK   | OK    |     |              | OK   |
| Argon                | Ar          | B            | OK                                                              | OK   | OK    | OK  | OK           | OK   |
| Butane               | $C_4H_{10}$ | B            | OK                                                              | OK   | OK    | OK  | OK           |      |
| Carbon dioxide       | $CO_2$      | B            | OK                                                              | OK   | OK    |     |              | OK   |
| Carbon monoxide      | CO          | B            | OK                                                              | OK   | OK    | OK  |              | OK   |
| Ethane               | $C_2H_6$    | B            | OK                                                              | OK   | OK    | OK  | OK           |      |
| Helium               | He          | B            | OK                                                              |      | OK    | OK  | OK           | OK   |
| Hydrogen             | $H_2$       | B            | OK                                                              |      | OK    | OK  | OK           | OK   |
| Krypton              | Kr          | B            | OK                                                              | OK   | OK    | OK  | OK           |      |
| Methane              | $CH_4$      | B            | OK                                                              | OK   | OK    | OK  | OK           |      |
| Nitric Oxide         | NO          | SS 316L      | Please consult - depends on proportion of NO in the mixture     |      |       |     |              |      |
| Nitrogen             | $N_2$       | B            | OK                                                              | OK   | OK    | OK  | OK           | OK   |
| Nitrous Oxide        | $N_2O$      | SS 316L      | Please consult - depends on proportion of $N_2O$ in the mixture |      |       |     |              |      |
| Oxygen               | $O_2$       | B            |                                                                 |      |       |     | OK           | OK   |
| Propane              | $C_3H_8$    | B            | OK                                                              | OK   | OK    | OK  |              |      |
| Silane               | $SiH_4$     | SS 316L      |                                                                 | OK   | OK    |     | OK           |      |
| Ammonia              | $NH_3$      | SS 316L      | OK                                                              | OK   | OK    |     |              | OK   |
| Ethylene             | $C_2H_4$    | B            | OK                                                              | OK   | OK    |     |              |      |
| Hydrogen Sulfide     | $H_2S$      | SS 316L      | OK                                                              | OK   | OK    |     | OK           | OK   |
| Sulphur Dioxide      | $SO_2$      | SS 316L      |                                                                 | OK   | OK    |     |              | OK   |
| Sulphur Hexafluoride | $SF_6$      | B            | OK                                                              | OK   | OK    | OK  | OK           | OK   |

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# CONVERSION CHARTS

## FLOW CONVERSION

|                        | m <sup>3</sup> /h      | l/h                     | foot <sup>3</sup> /min   | l/s                      | cm <sup>3</sup> /s |
|------------------------|------------------------|-------------------------|--------------------------|--------------------------|--------------------|
| m <sup>3</sup> /h      | 1                      | 1 x 10 <sup>3</sup>     | 0.589                    | 0,2778                   | 277,78             |
| l/h                    | 1 x 10 <sup>-3</sup>   | 1                       | 5.885 x 10 <sup>-4</sup> | 2,778 x 10 <sup>-4</sup> | 0,2778             |
| foot <sup>3</sup> /min | 1,69                   | 1,699 x 10 <sup>3</sup> | 1                        | 0,4719                   | 471,95             |
| l/s                    | 3,6                    | 3,6 x 10 <sup>3</sup>   | 2.119                    | 1                        | 10 <sup>3</sup>    |
| cm <sup>3</sup> /s     | 3,6 x 10 <sup>-3</sup> | 3,6                     | 2.119 x 10 <sup>-3</sup> | 10 <sup>-3</sup>         | 1                  |

## PRESSURE CONVERSION

|      | bar                     | mbar            | kPa             | MPa                      | atm                      | psi                     |
|------|-------------------------|-----------------|-----------------|--------------------------|--------------------------|-------------------------|
| bar  | 1                       | 10 <sup>3</sup> | 100             | 0,1                      | 0,987                    | 14.5                    |
| mbar | 10 <sup>-3</sup>        | 1               | 0,1             | 10 <sup>-4</sup>         | 9,869 x 10 <sup>-4</sup> | 14.5 x 10 <sup>-3</sup> |
| kPa  | 10 <sup>-2</sup>        | 10              | 1               | 10 <sup>-3</sup>         | 9,869 x 10 <sup>-3</sup> | 0.145                   |
| MPa  | 10                      | 10 <sup>4</sup> | 10 <sup>3</sup> | 1                        | 9,869                    | 145                     |
| atm  | 1,013                   | 1013            | 101,3           | 1,013 x 10 <sup>-1</sup> | 1                        | 14.69                   |
| psi  | 6,89 x 10 <sup>-2</sup> | 68,9            | 6,89            | 6,89 x 10 <sup>-3</sup>  | 6,8 x 10 <sup>-2</sup>   | 1                       |

## LEAK RATE

|                          | Atm.cc/sec | mbar.l/sec | Atm.mm <sup>3</sup> /sec | Atm.cc/min | Atm.L/min | Atm.m <sup>3</sup> /min | Atm.cu.ft/yr | torr.l/sec |
|--------------------------|------------|------------|--------------------------|------------|-----------|-------------------------|--------------|------------|
| Atm.cc/sec               | 1          | 1.013      | 1000                     | 60         | 0.06      | 6.00E-05                | 1116         | 0.759      |
| mbar.l/sec               | 0.987      | 1          | 987                      | 59.23      | 0.059     | 5.90E-05                | 1101         | 0.75       |
| Atm.mm <sup>3</sup> /sec | 0.001      | 0.001      | 1                        | 0.06       | 6.00E-05  | 6.00E-08                | 1.116        | 0.0007     |
| Atm.cc/min               | 0.0167     | 0.017      | 16.67                    | 1          | 0.001     | 1.00E-06                | 18.6         | 0.012      |
| Litre/min                | 16.67      | 16.88      | 16667                    | 1000       | 1         | 0.001                   | 18601        | 12.67      |
| Atm.m <sup>3</sup> /min  | 16667      | 16883      | 16666667                 | 1000000    | 1000      | 1                       | 18601190     | 12664      |
| cu ft/yr                 | 0.0009     | 0.0009     | 0.896                    | 0.054      | 5.37E-05  | 5.37E-08                | 1            | 0.0007     |
| torr.l/sec               | 1.316      | 1.33       | 1316                     | 78.96      | 0.0789    | 7.89E-05                | 1468         | 1          |

## TEMPERATURE

| C°   | F°   | K°   | R°   |
|------|------|------|------|
| -20  | -4   | 253  | 456  |
| -10  | 14   | 263  | 474  |
| 0    | 32   | 273  | 492  |
| 10   | 50   | 283  | 510  |
| 20   | 68   | 293  | 528  |
| 30   | 86   | 303  | 546  |
| 40   | 104  | 313  | 564  |
| 50   | 122  | 323  | 582  |
| 60   | 140  | 333  | 600  |
| 70   | 158  | 343  | 618  |
| 80   | 176  | 353  | 636  |
| 90   | 194  | 363  | 654  |
| 100  | 212  | 373  | 672  |
| 200  | 392  | 473  | 852  |
| 300  | 572  | 573  | 1032 |
| 400  | 752  | 673  | 1212 |
| 500  | 932  | 773  | 1392 |
| 600  | 1112 | 873  | 1572 |
| 700  | 1292 | 973  | 1752 |
| 800  | 1472 | 1073 | 1932 |
| 900  | 1652 | 1173 | 2112 |
| 1000 | 1832 | 1273 | 2292 |

## DIMENSION

| metric | inches | inch fractional | inch decimal | metric (mm) |
|--------|--------|-----------------|--------------|-------------|
| 3      | 0.135  | 1/16"           | 0.063        | 1,59        |
| 6      | 0.270  | 1/8"            | 0.125        | 3,18        |
| 8      | 0.360  | 3/16"           | 0.188        | 4,76        |
| 10     | 0.450  | 1/4"            | 0.250        | 6,35        |
| 12     | 0.540  | 5/16"           | 0.313        | 7,94        |
| 14     | 0.630  | 3/8"            | 0.375        | 9,53        |
| 16     | 0.720  | 1/2"            | 0.500        | 12,70       |
| 18     | 0.810  | 7/16"           | 0.438        | 11,11       |
| 20     | 0.900  | 5/8"            | 0.625        | 15,88       |
| 22     | 0.990  | 3/4"            | 0.750        | 19,05       |
| 25     | 1.125  | 7/8"            | 0.875        | 22,23       |
|        |        | 1"              | 1.000        | 25,40       |

# A FULL LINE OF GAS CONTROL SOLUTIONS



## COMPLETE SOLUTIONS FROM SOURCE TO PROCESS.

ROTAREX is helping engineers worldwide to get better gas results: from ultra high purity production and medical care facilities to industrial and LPG applications, as well as alternative energy vehicles, fire suppression, diving, aerospace, cryogenics, laboratory, petro-chemical and welding. ROTAREX applies almost 100 years of know-how and experience to custom design, develop and manufacture the high performance valves, regulators and fittings to suit your needs, all in one hand. Discover the difference ROTAREX can make in your world.

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