

SPECIALTY GAS PRESSURE REGULATOR



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All Rotarex regulators are manufactured in Europe in compliance with international standards (ISO, CGA, etc.) and have been specially designed to ensure safe, reliable operation. All production sites comply with ISO 9001 standards.

A STRONG SPIRIT OF INNOVATION AND QUALITY

- 4 research and development centers
- In-house testing laboratories
- 13 university collaborations
- Simulation Department
- All the quality standards you need

SINGLE-STAGE HIGH-PRESSURE REGULATORS



**SERIES SC280
SC380** p.20



S SERIES 220 p.22



S SERIES 400 p.24



S SERIES 800 p.26

Technology	Cartridge	Diaphragm	Piston	Diaphragm + balanced valve
Inlet pressure	200/300 bar 2.900/4.350 psi	200 bar 2.900 psi	300 bar 4.350 psi	300 bar 4.350 psi
Outlet pressure (max)	1.5/4/10/16/35/50 bar 21.75/58/145/232/508/725 psi	3/15/25/50 bar 44/218/362.5 /725 psi	20 to 200 bar 290 to 2,900 psi	10/16/25/50 bar 145/232/362.5 /725 psi
Flow rate Nm³/h(N₂)	1/2/10/20/30	5/25/50	30	50/100
Material	Chrome-plated brass Stainless steel	Stainless steel	Chrome-plated brass Stainless steel	Chrome-plated brass



SC SERIES 290 F (Food) p.68



SL 800 F SERIES p.70

Technology	Cartridge	Balanced valve
Inlet pressure	200 bar 2,900 psi	200 bar 2,900 psi
Outlet pressure	16/35 bar 232/508 psi	16/50 bar 232/725 psi
Flow rate Nm³/h(N₂)	50/75	50/100
Material	Chrome-plated brass	Chrome-plated brass

DUAL-STAGE HIGH-PRESSURE REGULATORS



**SERIES DC 280
DC 380** p.28



D SERIES 230 p.30



SERIES D 230-0.1 p.32

Technology	Diaphragm + cartridge	Piston/bellows	Piston/diaphragm
Inlet pressure	200/300 bar 2,900/4,350 psi	200 bar 2.900 psi	200 bar 2.900 psi
Outlet pressure	1.5/4/10/16/35 bar 21.75/58/145/232/508 psi	1/3/10 bar 14.5/44/145 psi	0.01 -0.1 bar 0.14 -1.45 psi
Flow rate Nm³/h(N₂)	1/2/10/20/30	2/2.5/3.5	0.5
Material	Chrome-plated brass Stainless steel	Chrome-plated brass Stainless steel	Chrome-plated brass Stainless steel

LOW-PRESSURE REGULATORS



SI SPECYL SERIES p.34



S SERIES 10 p.36



S SERIES 15 p.38



S SERIES 20 p.40

Technology	Diaphragm	Diaphragm + balanced valve	Diaphragm + balanced valve	Bellows
Inlet pressure	25 bar 362.5 psi	25 bar 362.5 psi	25 bar 362.5 psi	50 bar 725 psi
Outlet pressure	3/8 bar 44/116 psi	3/8 bar 44/116 psi	10 bar 145 psi	1/3/10 bar 14.5/44/145 psi
Flow rate Nm³/h(N₂)	5/12.5	4.5/12	50	2/2.5/3.5
Material	Stainless steel	Chrome-plated brass Stainless steel	Chrome-plated brass Stainless steel	Chrome-plated brass Stainless steel
Option		Fastening ring		Fastening ring



S SERIES 20-0.1 p.42



S SERIES 55 p.44



DC 50 SERIES p.46



DC 50 F SERIES (Food) p.72

Technology	Diaphragm	Diaphragm	Diaphragm + balanced valve	Diaphragm
Inlet pressure	50 bar 725 psi	50 bar 725 psi	50 bar 725 psi	20 bar 290 psi
Outlet pressure	0.01 - 0.1 bar 0.14 - 1.45 psi	3/10/16/35 bar 44/145/323/508 psi	8/15/40 bar 116/217/580 psi	8/15 bar 116/217 psi
Flow rate Nm³/h(N₂)	0.5	2.5/3.5/5.5/10	150/300/300	75/120
Material	Chrome-plated brass	Chrome-plated brass Fastening ring* for	Chrome-plated brass	Chrome-plated brass

*Not available with 35 bar version



S SERIES 15 F (Food) p.74

Technology	Diaphragm + balanced valve
Inlet pressure	25 bar 362.5 psi
Outlet pressure	10 bar 145 psi
Flow rate Nm³/h(N₂)	50
Material	Chrome-plated brass

POINTS OF USE | MOUNTED VERSIONS



S SERIES 21 p.48 **LABLINE 22** p.50

Technology	Bellows	Bellows
Inlet pressure	50 bar 725 psi	50 bar 725 psi
Outlet pressure	1/3/10 bar 14.5/44/145 psig	1/3/10 bar 14.5/44/145 psig
Flow rate Nm³/h(N₂)	2/2.5/3.5	2/2.5/3.5
Material	Chrome-plated brass Stainless steel	Chrome-plated brass Stainless steel
Option	Metal plate Stainless steel	Metal plate (1/4-turn valve) Aluminum baseplate Aluminum column (1/4-turn valve)

POINTS OF USE | INTEGRATED VERSIONS



MS15 p.52 **MS20** p.54 **MS15 F (Food)** p.76

Technology	Diaphragm + Cartridge	Bellows	Diaphragm + balanced valve
Inlet pressure	25 bar 362.5 psi	50 bar 725 psi	25 bar 362.5 psi
Outlet pressure	10 bar 145 psi	1/3/10 bar 14.5/44/145 psi	10 bar 145 psi
Flow rate Nm³/h(N₂)	50	2/2.5/3.5	50
Material	Aluminum Stainless steel	Aluminum Stainless steel	Aluminum

SPECIAL APPLICATION | REGULATORS FOR CALIBRATION GASES



S SERIES 75 p.56

Technology	Piston
Inlet pressure	200 bar 2,900 psi
Outlet pressure	3.5 bar 50 psi
Flow rate Nm³/h(N₂)	3-5 lpm
Material	Nickel-plated brass

SINGLE-STAGE HIGH-PRESSURE REGULATORS



TGD 250 SERIES p.58

Technology	Diaphragm
Inlet pressure	200/230 bar 2,900/3,336 psi
Outlet pressure	2 to 20 bar 29 to 290 psi
Flow rate Nm³/h(N₂)	250
Material	Raw brass



IN-LINE VALVES



VD SERIES p.60



VM 20 SERIES p.61



VM 45 SERIES p.62



RD 10 SERIES p.63

Operating pressure	50/230/300 bar 725/ 3.336/4.350 psi	50 bar 725 psi	45 bar 652 psi	60 bar 870 psi
CV	0.2	0.14	0.58	0.116
Material	Chrome-plated brass Stainless steel	Chrome-plated brass Stainless steel	Chrome-plated brass	Chrome-plated brass Stainless steel
Type	Diaphragm	Diaphragm	Diaphragm	Needle valve
Steering wheel	¼ turn	¼ turn/multiturn	¼ turn " or " multiturn	Multitours



VDB 230 F p.78

Operating pressure	50/230 bar 725/ 3.336 psi
CV	0.2
Material	Chrome-plated brass
Type	Diaphragm
Steering wheel	¼ turn

ACCESSORIES



BOTTLE CONNECTORS p.64



GAS CYLINDER HOLDER p.64



PIGTAILS F p.79



FLEX HOSES FX06 F p.80

For all our products: Gaskets available on request, depending on gas compatibility (see p.66)

TECHNOLOGY OVERVIEW

INTRODUCTION

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

DIAPHRAGM

- Most widely used technology (cylinder control, in-line control, expansion module...)
- Compact design
- High precision

BELLOWS

- High outlet pressure accuracy
- Less sensitive to outlet pressure rise
- Mainly used for applications such as chromatography

PISTON

- Stable outlet pressure
- Used for regulators with outlet pressure close to inlet pressure
- Used as the 1st stage of a dual-stage regulator
- Used for calibration regulators

BALANCED VALVE

- Ensures excellent outlet pressure stability
- Minimizes the effect of inlet pressure fluctuations on outlet pressure
- Extends valve life and reduces operating costs by reducing stress on the seat
- Diaphragm technology only

SINGLE-STAGE PRESSURE REGULATOR

A **single-stage pressure regulator** reduces inlet pressure to outlet pressure in a single step. The outlet pressure can be adjusted by turning the handwheel. Due to the design of single-stage regulators, outlet pressure increases as cylinder pressure decreases. Outlet pressure can be readjusted by turning the handwheel.

Because of this slight pressure increase, single-stage regulators are recommended for applications that do not require constant outlet pressure.

Single-stage regulators are also recommended for use with liquefied gases such as CO₂, propane, LPG and other gases in liquid form in the cylinder.

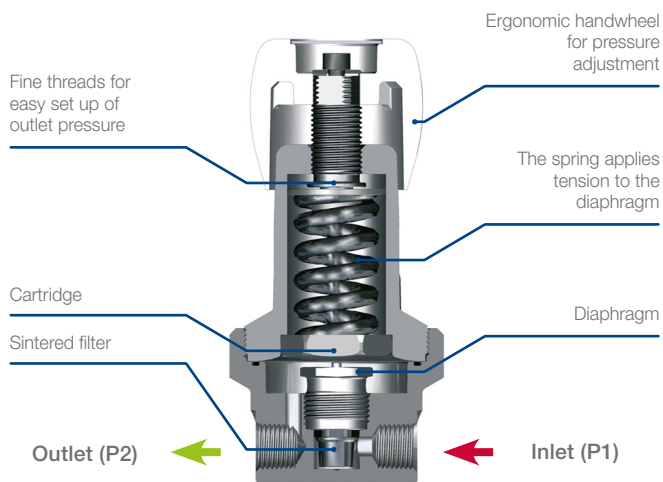
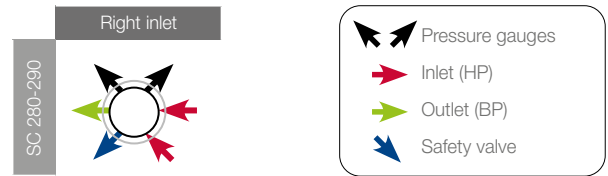
TECHNOLOGY OVERVIEW

CONTINUED

CARTRIDGE REGULATOR

Superior technical performance thanks to cartridge technology:

- Better outlet pressure stability thanks to cartridge design. Outlet pressure remains stable despite fluctuations in inlet pressure.
- Longer product life thanks to less encroachment on the diaphragm.
- Compact design with reduced dead volume (minimum purge requirements)
- The sintered inlet filter offers improved filtration without limiting flow.



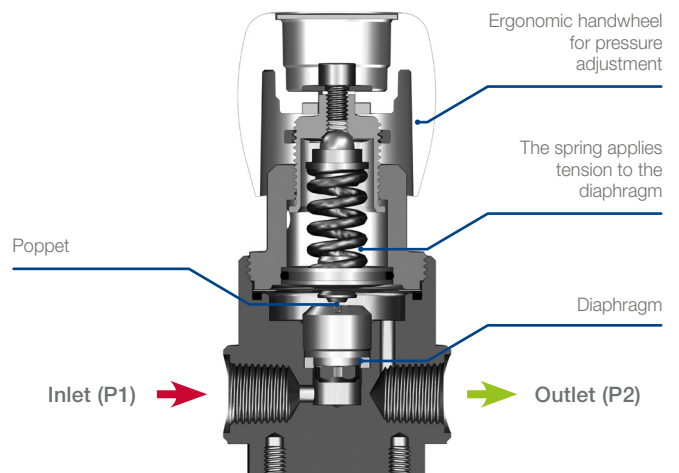
PRODUCT SEARCH

SC 280/380 series p.20

DIAPHRAGM PRESSURE REGULATOR

PRODUCT SEARCH

Serie S 220	p.22
TGD 250 series	p.58
Serie S 20-0.1	p.42
Serie S 55	p.44



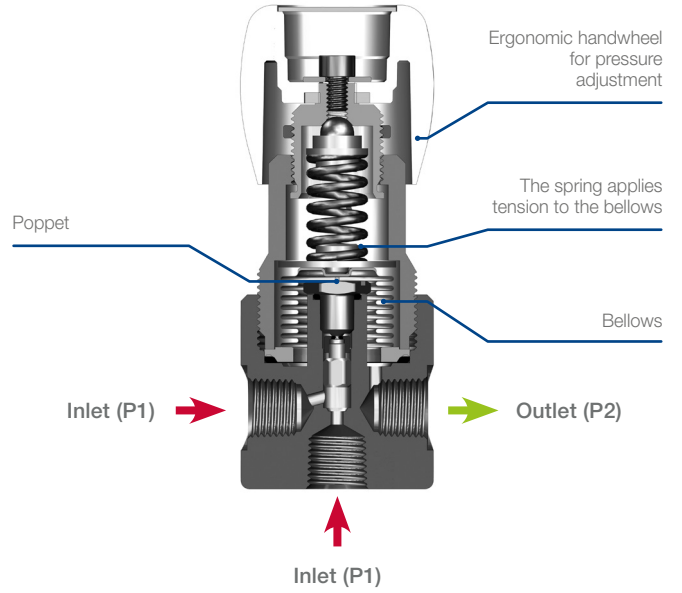
TECHNOLOGY OVERVIEW

CONTINUED

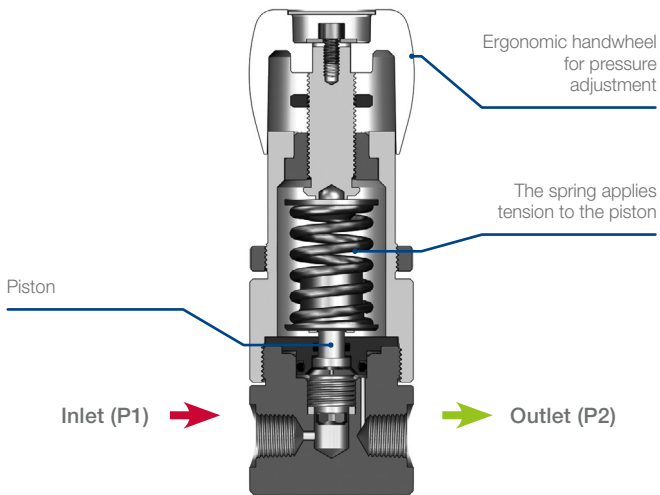
BELLOWS REGULATOR

PRODUCT SEARCH

Serie S 20	p.40
Mono Serie 20	p.54



PISTON REGULATOR



PRODUCT SEARCH

S 400 series	p.24
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TECHNOLOGY OVERVIEW

CONTINUED

DUAL-STAGE PRESSURE REGULATOR

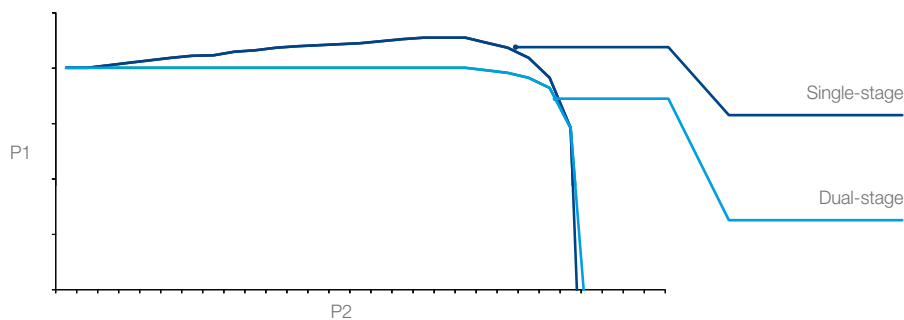
Basically, a **Dual-stage regulator** consists of two single-stage regulators in a single body. This dual configuration provides better pressure and flow stability than single-stage regulators.

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

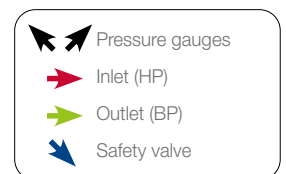
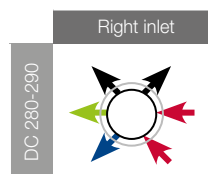
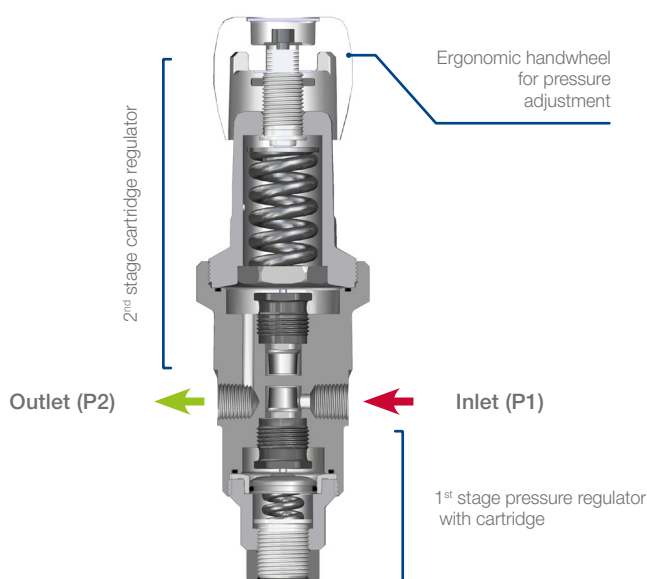
As the pressure has been reduced to the intermediate pressure by the first stage, the pressure supply to the second stage of the regulator remains constant, ensuring a constant outlet pressure for the application, whatever the cylinder pressure. This technology eliminates the need to frequently adjust outlet pressure every time cylinder pressure drops.

Applications include laboratories, gas chromatography and the precision welding industry.

DUAL-STAGE REGULATOR VS. SINGLE-STAGE REGULATOR FLOW CURVE



DUAL-STAGE CARTRIDGE REGULATOR



PRODUCT SEARCH

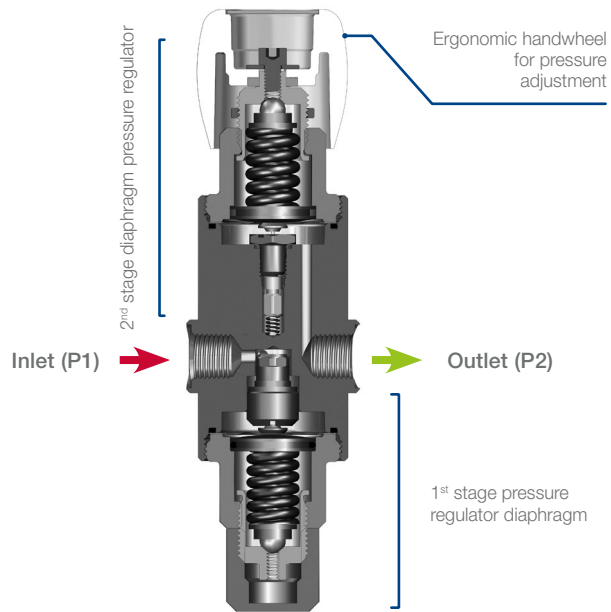
DC 280/380 series

p.28

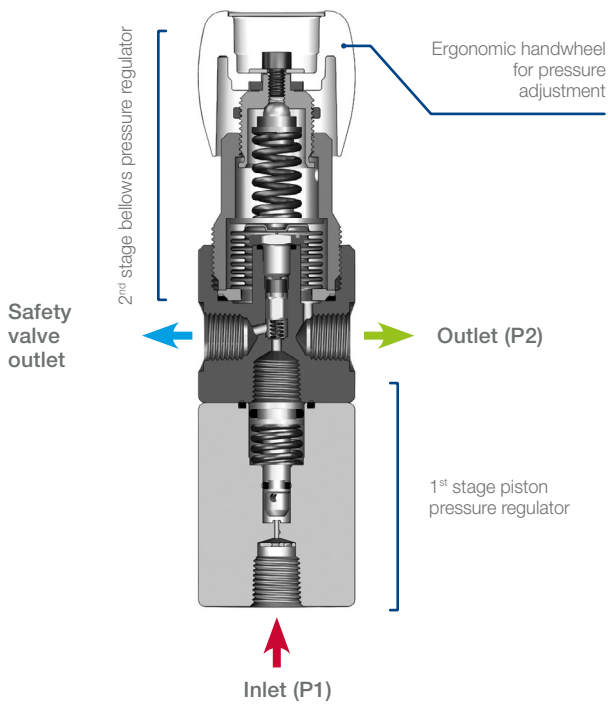
TECHNOLOGY OVERVIEW

CONTINUED

DUAL-STAGE DIAPHRAGM REGULATOR



PISTON/BELLOWS REGULATOR



PRODUCT SEARCH

Series D 230

p.30



TECHNOLOGY OVERVIEW

CONTINUED

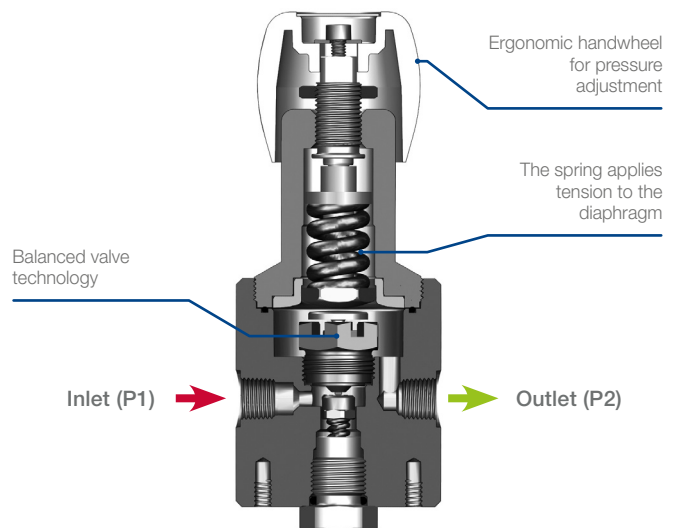
BALANCED VALVE TECHNOLOGY

The **balanced valve regulator (bv technology)** guarantees state-of-the-art pressure stability thanks to the unique design of the components within the high-pressure zone. It is able to balance the internal forces within the regulator and eliminate the effects of reduced inlet pressure on outlet pressure. This means that the regulator balances and compensates for any fluctuation in inlet pressure, and provides a constant outlet pressure, just like a two-stage regulator.

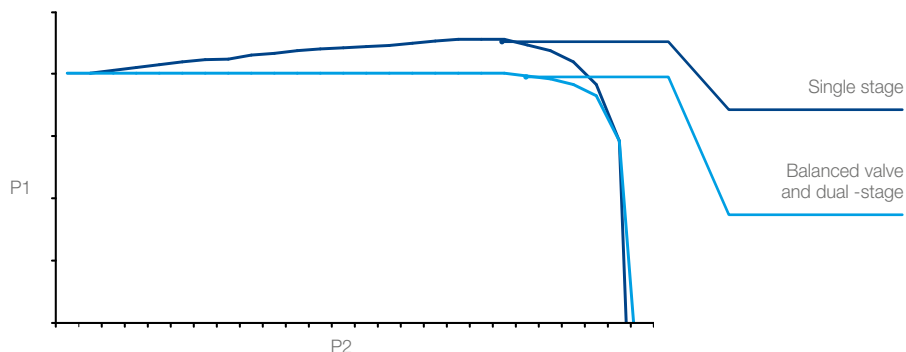
This type of regulator also functions as a line regulator for a 2nd regulator and can be fitted to our inversion units. Reversing units equipped with this technology do not require a downstream line regulator, and can be connected directly to the application.

PRODUCT SEARCH

S 800 series	p.26
Serie 10	p.36
Serie S 15	p.38
DC 50 series	p.46



DUAL-STAGE REGULATOR VS. SINGLE-STAGE REGULATOR



SELECT THE RIGHT REGULATOR

CONTINUED

BODY MATERIALS

Most Rotarex regulators are available in 316L stainless steel or chrome-plated brass, while some models are available in raw brass or aluminum. What's the best material for your system?

316L stainless steel: The recommended option for corrosive gases and high or ultra-high purity applications, due to its superior strength, non-reactivity, exceptional durability and excellent surface finish. It is compatible with virtually all gas types and low-velocity oxygen applications.

Rotarex uses type 316L stainless steel, an austenitic nickel-chromium stainless steel containing molybdenum. It guarantees:

- Outstanding corrosion resistance - particularly against sulphuric, hydrochloric, acetic, formic and tartaric acids, acid sulphates and alkaline chlorine;
- Resistance to stinging by chloride ion solutions; and
- Outstanding resistance even at high temperatures

BODY MATERIALS

For many regulators, you can choose between several O-ring materials:

- EPDM: ethylene propylene rubber
- NBR: nitrile rubber
- FPM: fluorocarbon synthetic rubber (VITON®)

For the cartridge:

- PTFE: polytetrafluoroethylene

CYLINDER CONNECTIONS

Specific cylinder valve connections are required for each type of gas. Default fittings are NPT 1/4" male and 16 x 1.336 male, representing the most common types. Other standards and dimensions are available on request.

Chrome-plated or raw brass: The most commonly used material for industrial and high-speed oxygen applications due to its excellent cost-effectiveness, high strength and low coefficient of friction compared with stainless steel.

Need more information? Find out more about our material options on our website: www.rotarex.com. In addition, one of our materials engineers will be happy to discuss the pros and cons of each option to help you choose the best solution.

INLET/OUTLET PRESSURE

Several models are designed for different inlet and outlet pressure performances. Available options are clearly indicated on each product page. When ordering, please specify inlet and outlet pressures required. We can also meet special requirements.

GAUGES

Most Rotarex regulators are equipped with pressure gauges. See the product configurator table on each product page.



Gas compatibility: ensure that the body material is compatible with the type of gas you will be using. Refer to the gas compatibility reference table on page 66.

SELECT THE RIGHT REGULATOR

CONTINUED

RELIEF VALVE

Relief valves are a standard component on most Rotarex regulators and are matched to the type of gas.

DIAPHRAGM MATERIAL

All cartridge regulators are equipped with a Hastelloy® diaphragm, ideally suited to high-purity applications and compatible with all types of gas; it features exceptional elasticity and high corrosion resistance. As a result, this diaphragm is far superior to conventional stainless steel diaphragms in terms of pressure stability and longevity.

OTHER OPTIONS

Many product solutions feature additional options specific to a given application, such as mounting options, bottom scale, valve type, etc. These options are clearly indicated in the product configuration table on each product page. These options are clearly indicated in the product configuration table on each product page.

SEAT MATERIAL

For all cartridge regulators, the seat gasket is made of PCTFE, ensuring high chemical compatibility, good temperature resistance and better dimensional stability than conventional gaskets.


FILTER MATERIAL

Rotarex cartridge regulators use a sintered filter in 316L for stainless steel models and bronze for brass versions.

- The purpose of this filter is to protect the regulator against foreign particles from the gas or from installation work. In all cases, a filter must be installed on the line according to your cleanliness requirements.

SÉRIE SC 280 - SC 380

DETENDEUR À CARTOUCHE SIMPLE ETAGE HP



APPLICATIONS

- Conçu pour les applications nécessitant des pressions de haute précision
- Préalablement réglé avec gaz purs, inertes et corrosifs
- Exemples d'applications:
 - Gaz et étalonnage
 - Atmosphères corrosives
 - Gaz porteur haute pureté

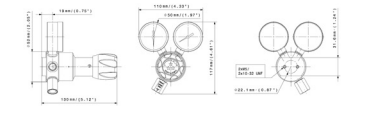
PRINCIPALES CARACTÉRISTIQUES

- Principales cartouches, ergonomiques et légères
- Contrôle précis de la pression pour un service fiable
- Valve conçue à la régénération ATOX et facile à nettoyer
- Plus d'un espace valve d'arrêt
- Matériau des joints de siège de la soupape de décharge: Venton en laiton (EPDM), acier inoxydable (PTFE)

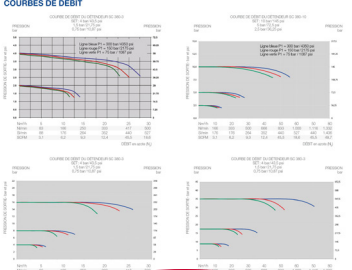
RECORDS

CARACTÉRISTIQUES TECHNIQUES

Raccord femelle	1/2" NPT (sauf sur les modèles à 220 bar)	Poids	± 1,1 kg (2,4 lb)	Pression d'entrée	200-300 bar (2890-4350 psi)
Joint de valve	107 sans laiton	Taux de fuite	10 ⁻¹⁰ ans/cm ³	Pression de sortie réglable	2,5-100 bar (36-1450 psi)
Joint torique	PTFE	Température de service	-40°C à +65°C (-40°F à +149°F)	Débit nominal	1,2 (10-20) Nm ³ /h (50-700 psi)
Membrane	Hastelloy®	Manomètres	Haute et basse pression (1/2" NPT)		



COURBES DE DÉBIT



PRODUCT CONFIGURATOR

Matériau de corps	Pression d'entrée	Configuration des joints	Pression de sortie	Raccord d'entrée	Raccord de sortie	Manomètres
SC	200	107	10	1/2" NPT	1/2" NPT	Haute et basse
SC	200	107	10	1/2" NPT	1/2" NPT	Haute et basse
SC	200	107	10	1/2" NPT	1/2" NPT	Haute et basse
SC	200	107	10	1/2" NPT	1/2" NPT	Haute et basse
SC	200	107	10	1/2" NPT	1/2" NPT	Haute et basse
SC	200	107	10	1/2" NPT	1/2" NPT	Haute et basse
SC	200	107	10	1/2" NPT	1/2" NPT	Haute et basse
SC	200	107	10	1/2" NPT	1/2" NPT	Haute et basse
SC	200	107	10	1/2" NPT	1/2" NPT	Haute et basse
SC	200	107	10	1/2" NPT	1/2" NPT	Haute et basse

CLEANING

Whatever the gas application, all products are cleaned to remove traces of residue and grease, using the same procedures as for O₂. There is no need to specify special cleaning when ordering.

SC 280 - SC 380 SERIES

SINGLE-STAGE HP CARTRIDGE REGULATOR



APPLICATIONS

- Designed for applications requiring cylinder regulators
- Perfectly suited to pure, inert and corrosive gases
- Application examples:
 - Calibration gas
 - Controlled atmosphere
 - High-purity carrier gas

KEY FEATURES

- Compact, ergonomic, lightweight design
- Precise pressure control for reliable service
- Handwheel complies with ATEX regulations and is easy to clean
- Can be fitted with a shut-off valve
- Valve seat gasket material: Brass version (EPDM), stainless steel (FPM)

Bottle connection available as an option



TECHNICAL DATA

Female connections

1/4" NPT (inlet/outlet)

Seat gasket

PCTFE

O-ring seal

PTFE

Diaphragm

Hastelloy®

Weight

± 1.1 kg
± 2.4 lbs

Leakage rate

10⁻⁹ mbar l/s He

Operating temperature

-40 °C to +60 °C
-40 °F to +140 °F

Pressure gauges

High and low pressure (1/4" NPT)

Inlet pressure

200/300 bar
2,900/4,350 psi

Adjustable outlet pressure

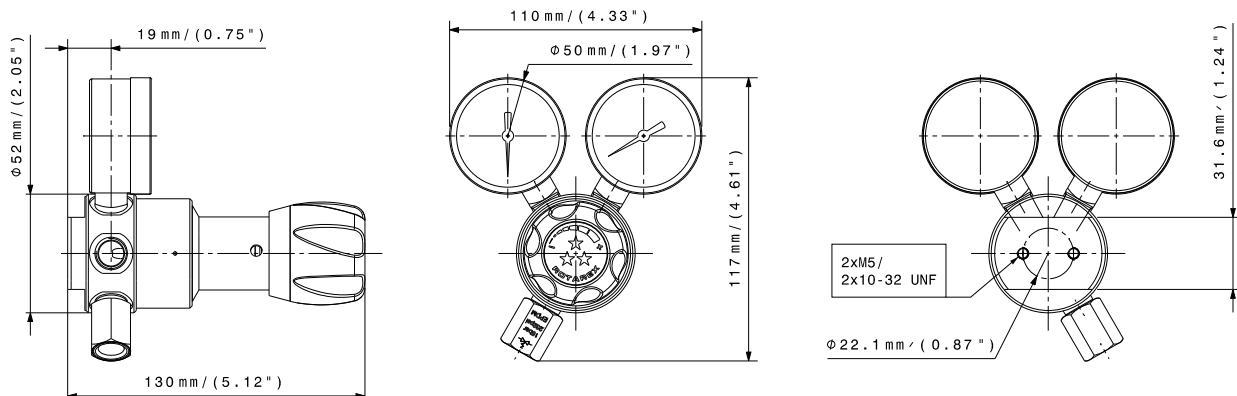
1.5/4/10/16/35/50 bar
21.75/58/145/232/508/725 psi

Nominal flow

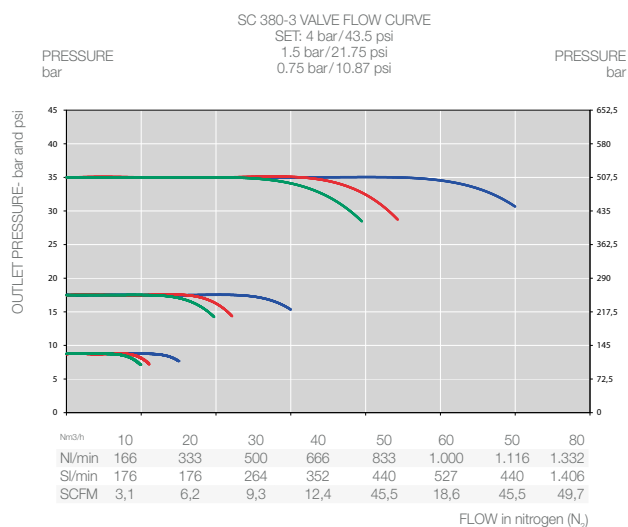
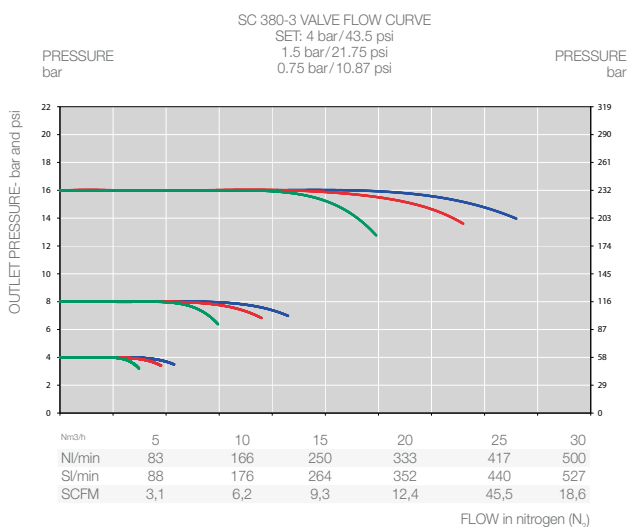
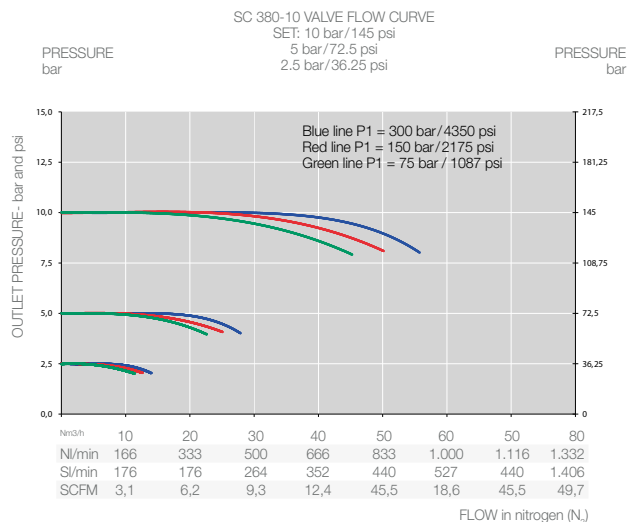
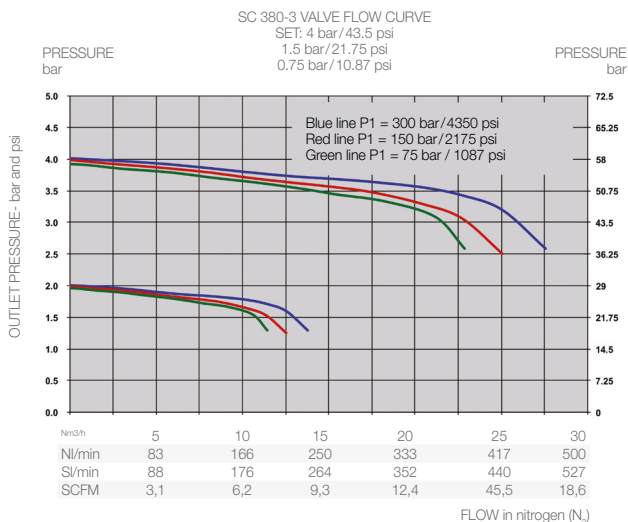
1/2/10/20/30 Nm³/h(N₂)
Cv: 0.1

Oxygen use

OK with brass and stainless steel



FLOW CURVES

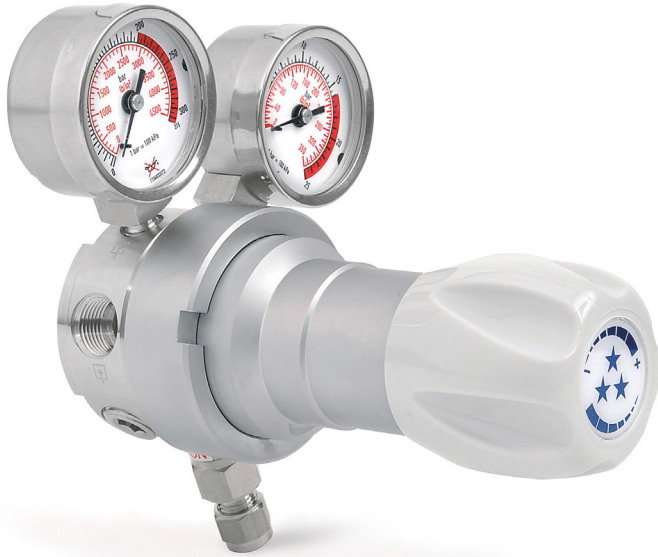


PRODUCT CONFIGURATOR

	Body material	Inlet pressure	Port configuration	Outlet pressure	Inlet connection	Outlet connection	Pressure gauges
SC	L	280	R	10	N	N	1
	Chrome-plated brass	L 200 bar 2,900 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 4,350 psi	380	4 bar 58 psi	4		
				10 bar 145 psi	10		
				16 bar 232 psi	16		
				35 bar 508 psi	35		
				50 bar 725 psi	50		

SI 220 SERIES

SINGLE-STAGE HP PRESSURE REGULATOR



APPLICATIONS

- Designed for applications requiring cylinder regulators
- Perfectly suited to corrosive gases in ultra-high-purity applications and fundamental research laboratories

KEY FEATURES

- No risk of contamination thanks to threadless, springless design
- Low dead volume to ensure proper purging of the regulator
- Ergonomic steering wheel for exceptional control
- Can be panel-mounted thanks to rear thread
- Can be fitted with shut-off valve or needle valve at outlet

Bottle connection available as an option



TECHNICAL DATA

Female connections

16 x 1.336 (inlet) - G 3/8 (outlet)

Seat gasket

PCTFE

O-ring seal

FPM

Diaphragm

Hastelloy®

Inlet position

Left*

Weight

± 2.0 kg / ± 4.4 lbs

Leakage rate

3.10⁻⁹ mbar l/s He

Operating temperature

-20 °C to +60 °C / -4 °F to +140 °F

Pressure gauges

High and low pressure (M10 x 1 or ¼" NPT)

Outlet position

Right*

Inlet pressure

200 bar / 2,900 psi

Adjustable outlet pressure

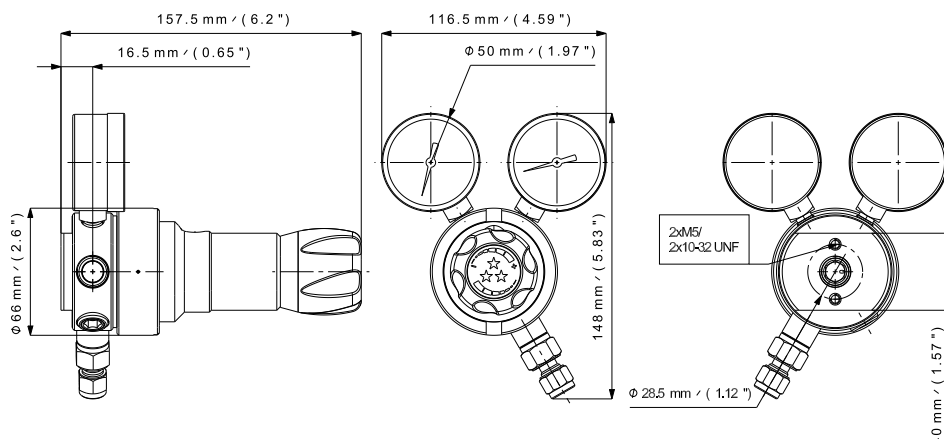
3 / 15 / 25 / 50 bar
44 / 218 / 360 / 725 psi

Nominal flow

5 / 25 / 50 / 50 Nm³/h (N₂)

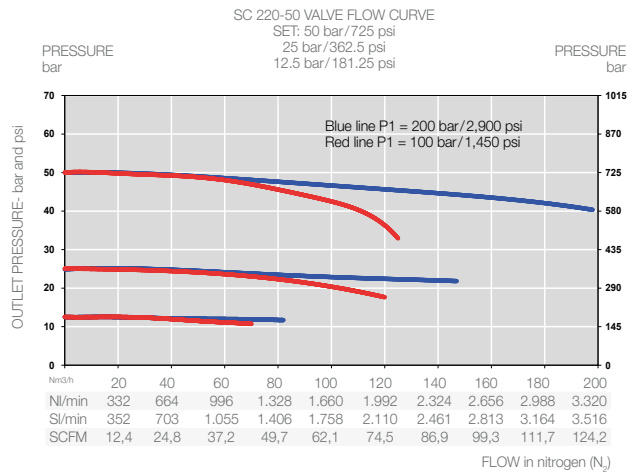
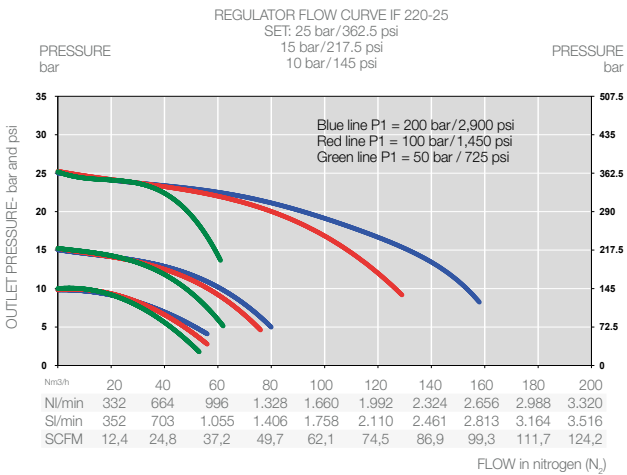
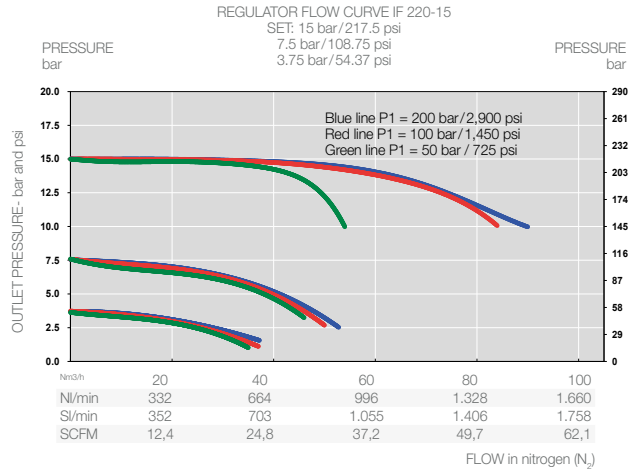
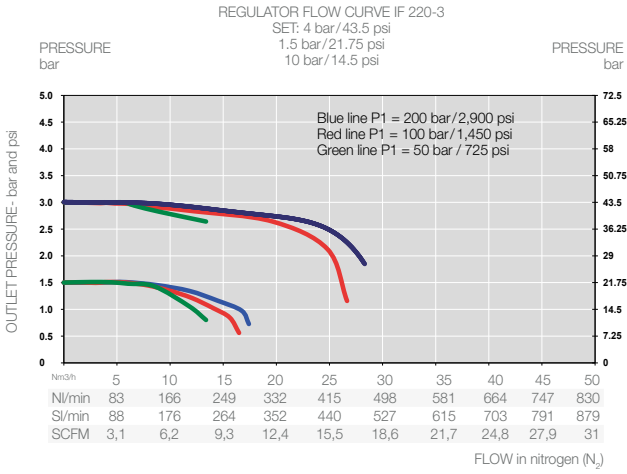
Oxygen use

Stainless steel version:
OK with inlet pressure ≤ 30 bar max.



*Inlet: Right / Outlet: Left -> on request

FLOW CURVES



PRODUCT CONFIGURATOR

	Body material		Outlet pressure		Connections		Materials O-ring (safety valve)		Pressure gauges		Port configuration		
S	I		220		15		N		FPM		1		RL
	Stainless steel	I	3 bar 44 psi	3	16 x 1.336 - G 3/8	16	FPM	With	1	Inlet on the right, outlet on the left	RL		
			15 bar 218 psi	15						Left outlet	A		
			25 bar 360 psi	25									
			50 bar 725 psi	50									

S 400 SERIES

SINGLE-STAGE HP PRESSURE REGULATOR



APPLICATIONS

- Designed for applications requiring cylinder regulators
- Ideal for pressurizing tanks, detecting leaks and venting pipes

KEY FEATURES

- Decompresses the downstream control system by turning the handwheel anti-clockwise
- Precise pressure control for reliable service
- Possibility of connecting a safety valve
- Can be panel-mounted thanks to rear thread
- Can be fitted with an outlet shut-off valve

Bottle connection available as an option



TECHNICAL DATA

Female connections

16 x 1.336 (inlet) - G 3/8 (outlet)
or 1/4" NPT (inlet/outlet)

Seat gasket

PCTFE

O-ring seal

EPDM

Piston

AISI 316L

Inlet position

Left*

Weight

± 1.6 kg / ± 3.5 lbs

Leakage rate

3·10⁻⁸ mbar ℓ/s He

Operating temperature

-40 °C to +60 °C / -40 °F to +140 °F

Pressure gauges

High and low pressure (M10 x 1 or 1/4" NPT)

Outlet position

Right*

Inlet pressure

300 bar / 4,350 psi

Adjustable outlet pressure

20 to 200 bar
290 to 2,900 psi

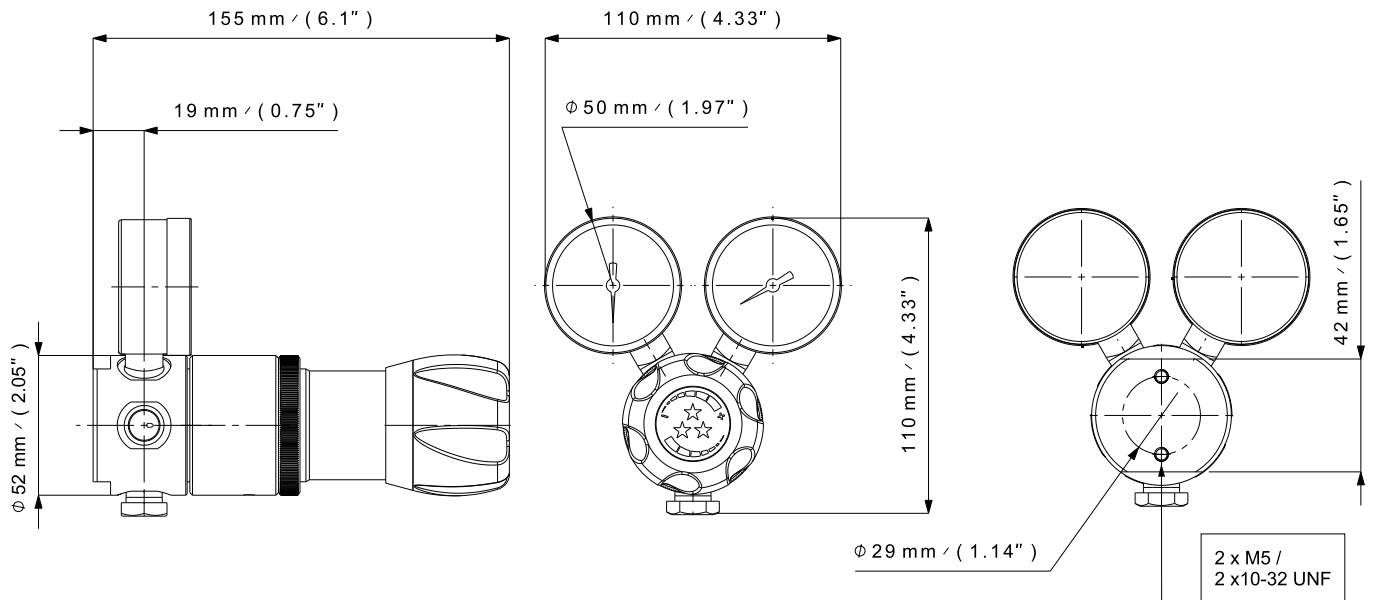
Nominal flow

30 Nm³/h(N₂)

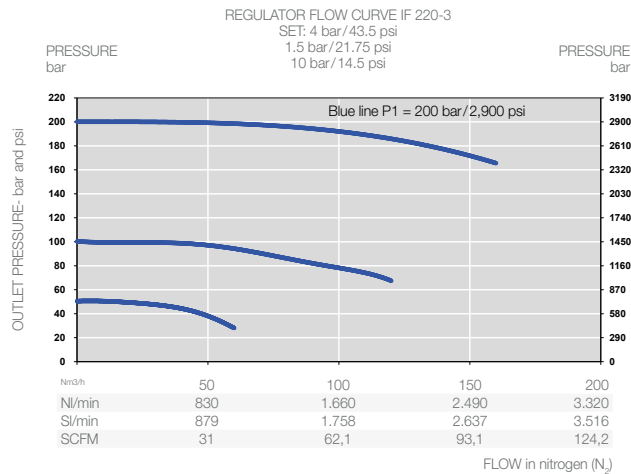
Oxygen use

Brass only

*Inlet: Right / Outlet: Left -> on request



FLOW CURVES



PRODUCT CONFIGURATOR

Body material	Safety valve configuration	Connections	Materials O-ring	Pressure gauges
S L	-	400 N	EPDM	1
Chrome-plated brass	L With pressure relief system	- 16 x 1.336 - G 3/8	16 EPDM	With 1
Stainless steel	I Available with safety valve connection	S 1/4" NPT - 1/4" NPT	N	

S 800 SERIES

SINGLE-STAGE HP PRESSURE REGULATOR



APPLICATIONS

- Designed for use as a high-pressure regulator
- Perfectly suited to high-purity gases and high-pressure applications requiring high flow rates and precise outlet pressure, e.g. laser applications
- Also used in nuclear research departments requiring precise outlet pressure and high flow rates

KEY FEATURES

- Best-in-class pressure control thanks to balanced valve technology for: minimizing the effect of inlet pressure fluctuations on outlet pressure
- Highly stable outlet pressure and flow rate, even at high flow rates
- Increased controller service life

Bottle connection available as an option



TECHNICAL DATA

Female connections

16 x 1.336 (inlet) - G 3/8 (outlet)
or 1/4" NPT (inlet/outlet)

Seat gasket

PCTFE

O-ring seal

EPDM

Diaphragm

AISI 304
Hastelloy® (25/50 bar)

Outlet position

Right*

Weight

± 2.4 kg / ± 5.3 lbs

Leakage rate

3·10⁻⁸ mbar ℓ/s He

Operating temperature

-40°C to +60°C / -40°F to +140°F

Pressure gauges

High and low pressure (M10 x 1 or 1/4" NPT)

Inlet pressure

300 bar / 4,350 psi

Adjustable outlet pressure

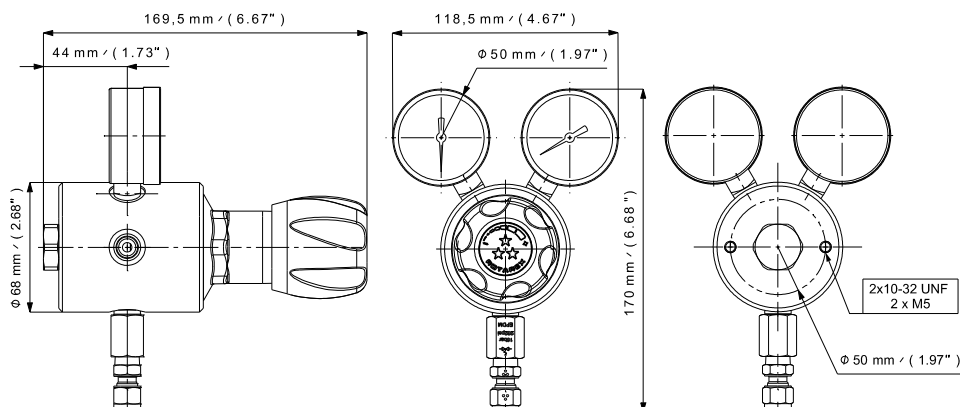
10/16/25/50 bar
145/232/363/725 psi

Nominal flow

50/50/50/100 Nm³/h(N₂)

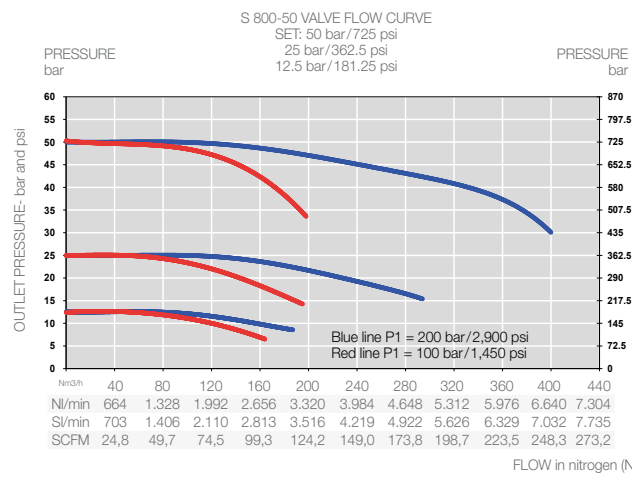
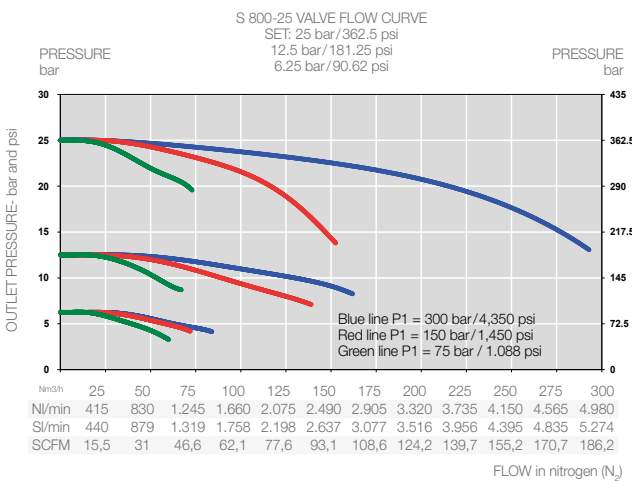
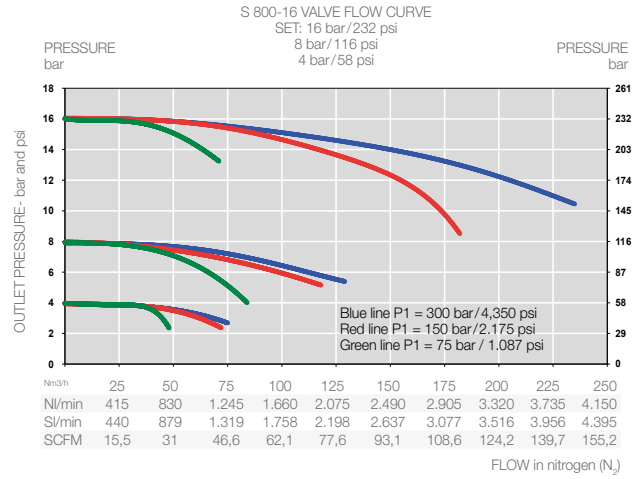
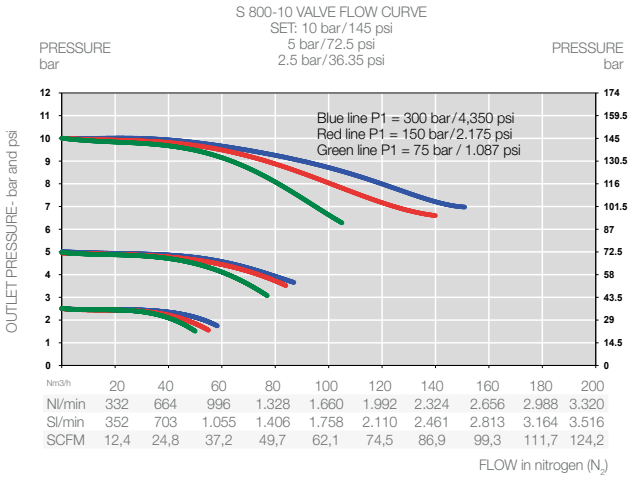
Inlet position

Left*



*Inlet: Right / Outlet: Left -> on request

FLOW CURVES



PRODUCT CONFIGURATOR

	Body material		Outlet pressure		Connections		Materials O-ring		Pressure gauges
S	L	800	16		N		EPDM		1
	Chrome-plated brass	L	10 bar 145 psi	10	16 x 1.336 - G 3/8	16	EPDM	With	1
			16 bar 232 psi	16	¼" NPT - ¼" NPT	N			
			25 bar 362.5 psi	25					
			50 bar 725 psi	50					

*On request

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DC 280 - DC 380 SERIES

DUAL-STAGE HP CARTRIDGE REGULATOR



APPLICATIONS

- This regulator is ideally suited as a cylinder regulator for pure, inert and corrosive gas applications, such as analytical instrumentation
 - Gas chromatography
 - Carrier gas
 - Calibration gas

KEY FEATURES

- This two-stage regulator is based on cartridge seat technology
- Precise pressure control for reliable service
- Compact, ergonomic, lightweight design
- Handwheel complies with ATEX regulations and is easy to clean
- Can be fitted with a shut-off valve
- Relief valve seat gasket material: Brass version (EPDM), stainless steel (FPM)

Bottle connection available as an option



TECHNICAL DATA

Female connections

1/4" NPT (inlet/outlet)

Weight

± 1.5 kg / ± 3.3 lbs

Inlet pressure

200/300 bar
2,900/4,350 psi

Seat gasket

PCTFE

Leakage rate

10^{-8} mbar ℓ /s He

Adjustable outlet pressure

1.5/4/10/16/35 bar
21.75/58/145/232/508 psi

O-ring seal

PTFE

Operating temperature

-40 °C to +60 °C / -40 °F to +140 °F

Nominal flow

1/2/10/20/30 Nm³/h(N₂)
Cv: 0.06

Diaphragm

Hastelloy®

Pressure gauges

High and low pressure (1/4" NPT)

Oxygen use

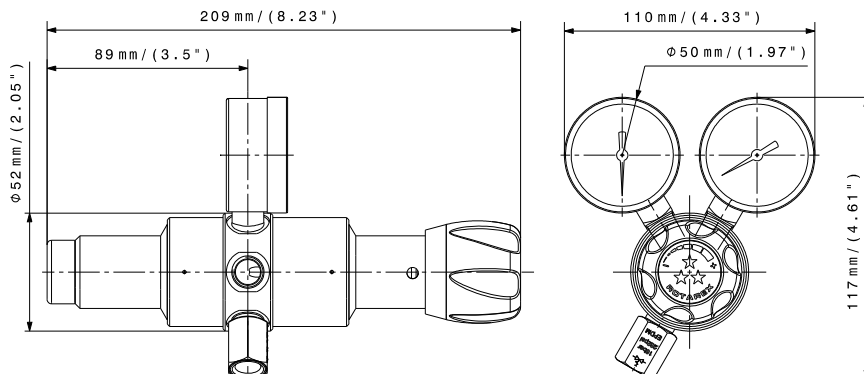
OK with brass and stainless steel

Inlet position

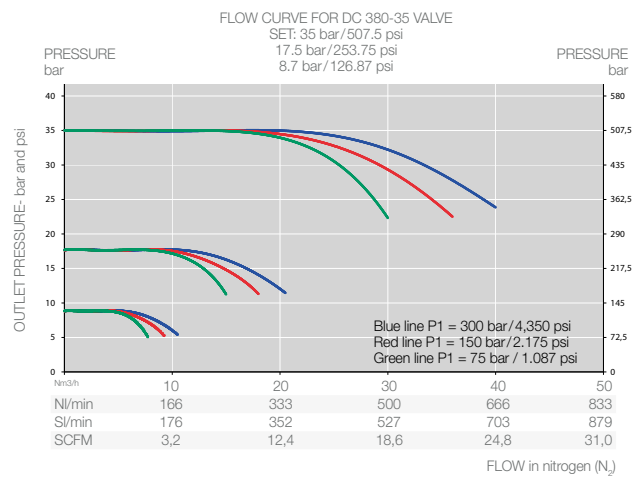
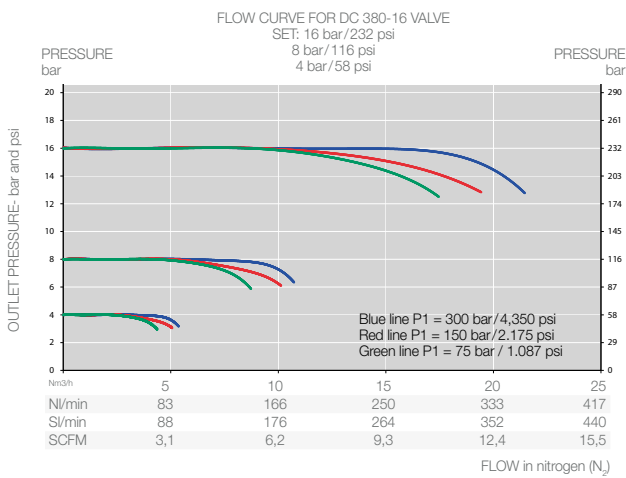
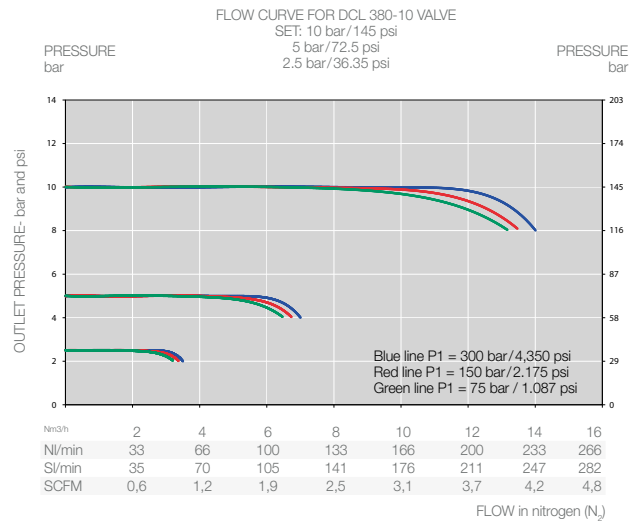
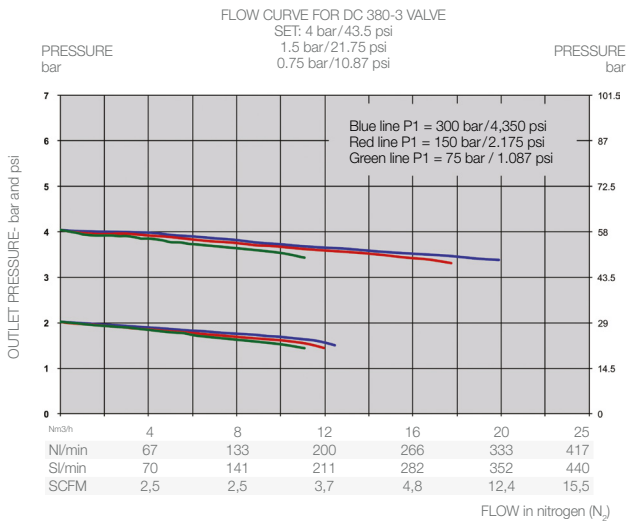
Left

Outlet position

Right



FLOW CURVES



PRODUCT CONFIGURATOR

	Body material	Pressure inlet	Port configuration	Outlet pressure	Inlet connection	Outlet connection	Pressure gauges
DC	L	280	R	10	N	N	1
	Chrome-plated brass	L 200 bar / 2,900 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 / 4,350 psi	380	4 bar / 58 psi	4		
				10 bar / 145 psi	10		
				16 bar / 232 psi	16		
				35 bar / 508 psi	35		

D 230 SERIES

DUAL-STAGE HP REGULATOR



APPLICATIONS

- Designed for applications requiring cylinder regulators
- Perfectly suited to pure, inert and slightly corrosive gas applications requiring exceptionally stable outlet pressure, as well as highly sensitive parameterization of the same outlet pressure

KEY FEATURES

- Based on proven S 20 bellows technology
- Exceptionally precise pressure control and stable outlet pressure thanks to combined piston and bellows technology
- Compact, ergonomic and lightweight



TECHNICAL DATA

Female connections

16 x 1.336 (inlet) - G 3/8 (outlet)
or 1/4" NPT (inlet/outlet)

Seat gasket

PTFE

O-ring seal

EPDM

Piston

Brass (brass version)
AISI 316L (SS version)

Bellows

Bronze or AISI 316L (SS version)

Weight

± 1.6 kg / ± 3.5 lbs

Leakage rate

10^{-8} mbar ℓ /s He

Operating temperature

-20°C to +60°C / -4°F to +140°F

Pressure gauges

High and low pressure (M10 x 1 or 1/4" NPT)

Inlet position

Rear

Inlet pressure

200 bar / 2,900 psi

Adjustable outlet pressure

1/3/10 bar
14.5/44/145 psi

Nominal flow

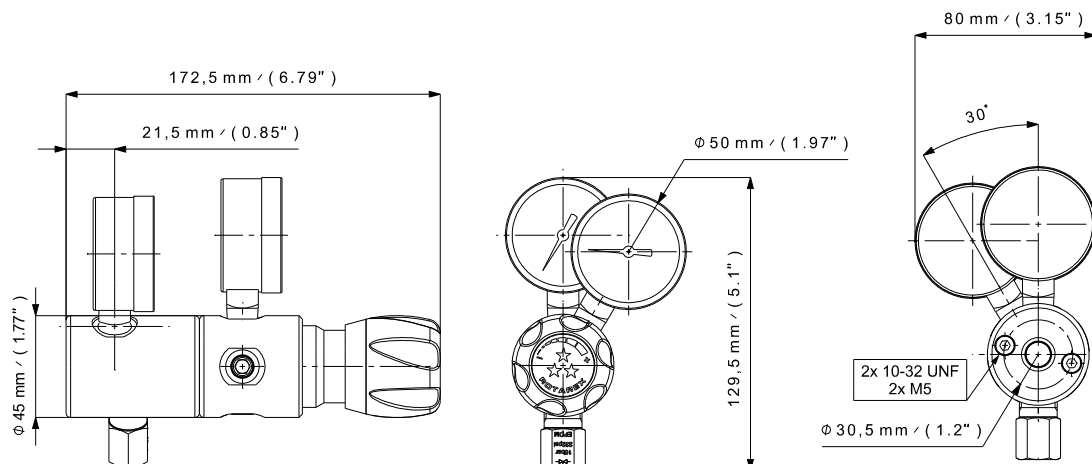
2/2.5/3.5 Nm³/h(N₂)

Oxygen use

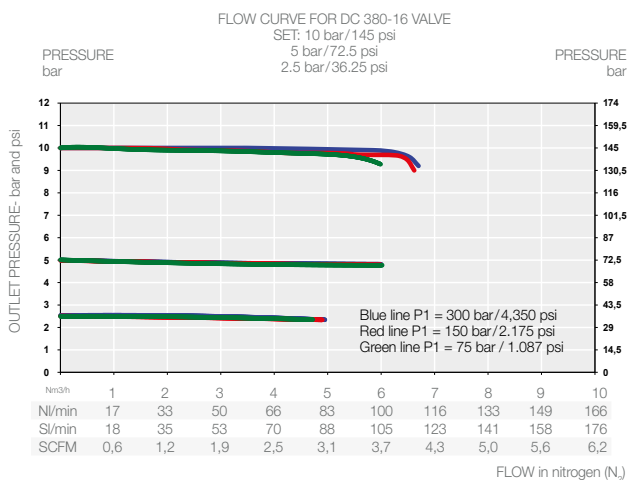
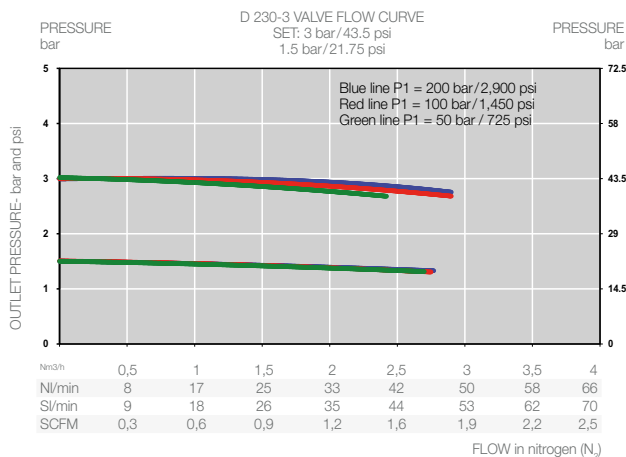
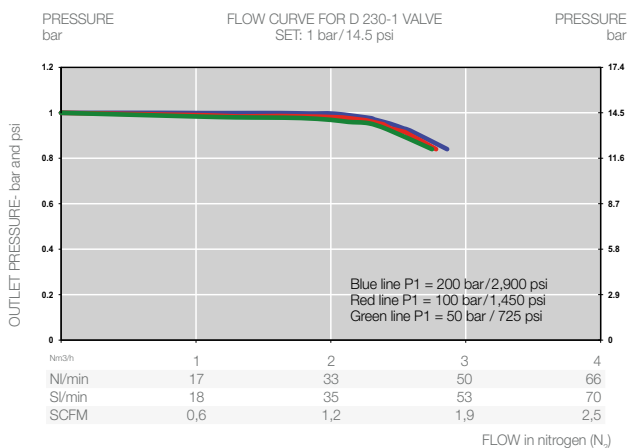
Brass only

Outlet position

Right



FLOW CURVES



PRODUCT CONFIGURATOR

	Body material		Outlet pressure		Connection		O-ring material		Pressure gauges		Steering wheel
D	L	230	10		N		EPDM		1		H
	Chrome-plated brass	L	1 bar 14.5 psi	1	Inlet: 16 x 1.336 Outlet: G 3/8	16	EPDM	With	1	With	H
	Stainless steel	I	3 bar 44 psi	3	1/4" NPT - 1/4" NPT	N					
			10 bar 145 psi	10							

*Left entrance on request



SERIES D 230 - 0.1

DUAL-STAGE HP REGULATOR



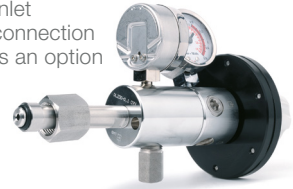
APPLICATIONS

- Designed for applications requiring cylinder regulators
- Perfectly suited to pure, inert and slightly corrosive gas applications requiring very stable, sensitive and low outlet pressure

KEY FEATURES

- Based on the proven SL20 - 0.1 low-pressure regulator
- Ensures low, stable flow thanks to a combination of piston and diaphragm technologies
- Rear thread can be used for wall mounting
- Can be fitted with needle valve or stopcock at outlet

View of rear inlet with bottle connection available as an option



TECHNICAL DATA

Female connections

16 x 1.336 (inlet) - G 3/8 (outlet)
or 1/4" NPT (inlet/outlet)

Seat gasket

PTFE

O-ring seal

EPDM

Piston

Brass (brass version)
AISI 316L (SS version)

Diaphragm

AISI 304

Weight

± 1.5 kg / ± 3.3 lbs

Leakage rate

10⁻⁹ mbar ℓ/s He

Operating temperature

-20 °C to +60 °C / -4 °F to +140 °F

Pressure gauges

High and low pressure (M10 x 1 or 1/4" NPT)

Inlet position

Rear

Inlet pressure

200 bar / 2,900 psi

Adjustable outlet pressure

0.01 / 0.1 bar
0.14 / 1.45 psi

Nominal flow

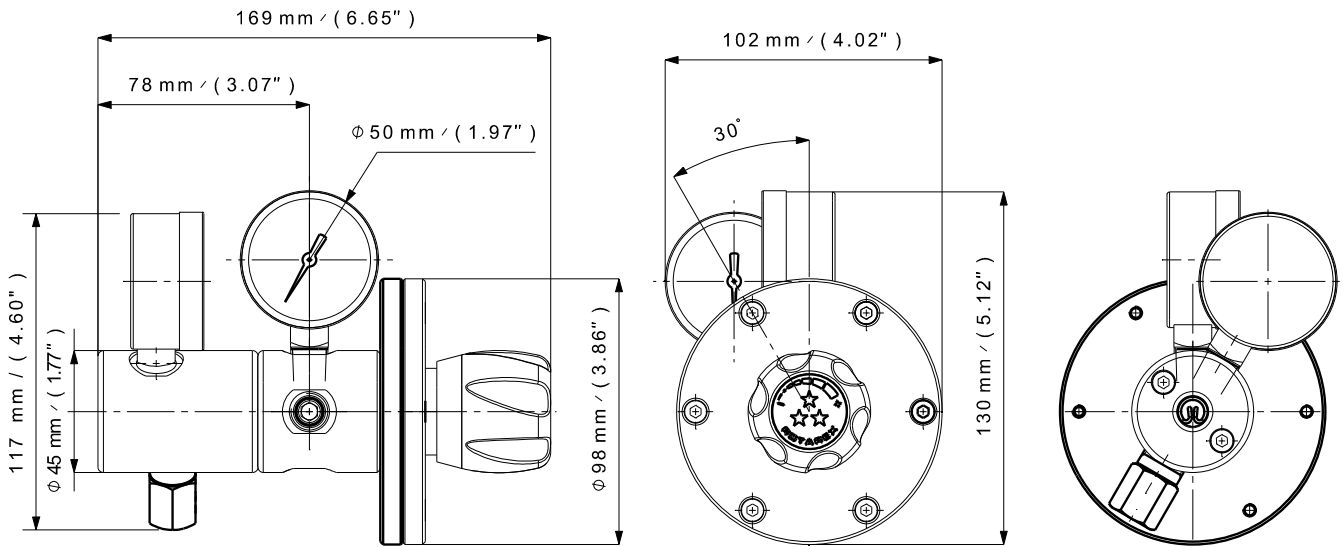
0.5 Nm³/h(N₂)

Oxygen use

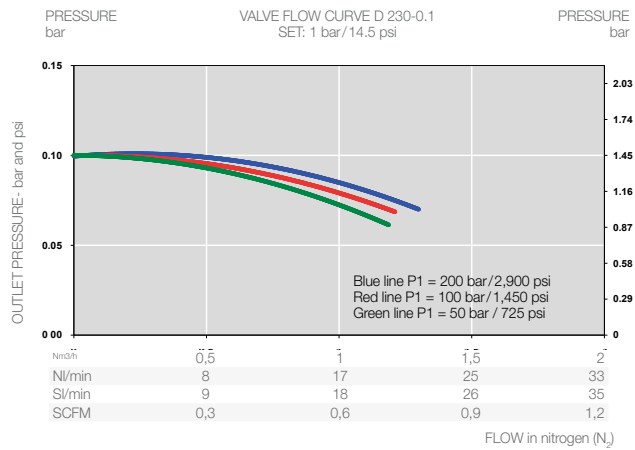
Brass only

Outlet position

Right



FLOW CURVES



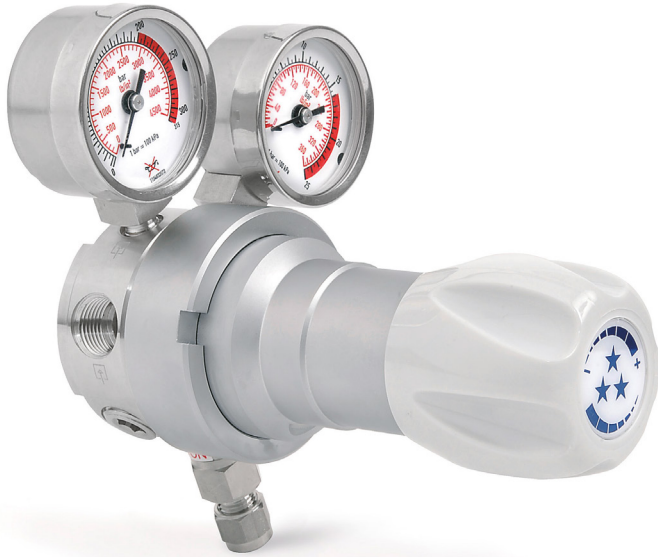
PRODUCT CONFIGURATOR

Body material		Connection		O-ring material	Pressure gauges	
D	L	230	0.1	N	EPDM	1
Chrome-plated brass	L	Inlet: 16 x 1,336 Outlet: G 3/8		16	EPDM	With
Stainless steel*	I	1/4" NPT		N		1

* Stainless steel version only with NPT connection

SPECYL 25 SERIES

SINGLE-STAGE BP REGULATOR



APPLICATIONS

- Designed for applications requiring cylinder regulators
- Perfectly suited to corrosive gases in ultra-high-purity applications and fundamental research laboratories
- Suitable for corrosive liquid gases

KEY FEATURES

- No risk of contamination thanks to threadless, springless design
- Low dead volume to ensure proper purging of the regulator
- Ergonomic steering wheel for exceptional control
- Can be panel-mounted thanks to rear thread
- Can be fitted with shut-off valve or needle valve at outlet

Bottle connection available as an option



TECHNICAL DATA

Female connections

1/4 NPT (inlet outlet)

Seat gasket

PCTFE

O-ring seal

EPDM

Diaphragm

Hastelloy®

Inlet position

Left*

Weight

± 2.0 kg / ± 4.4 lbs

Leakage rate

3.10⁻⁹ mbar l/s He

Operating temperature

-40 °C to +60 °C / -40 °F to +140 °F

Pressure gauges

High and low pressure (1/4" NPT)

Outlet position

Right*

Inlet pressure

25 bar / 363 psi

Adjustable outlet pressure

3/8 bar
44 / 116 psi

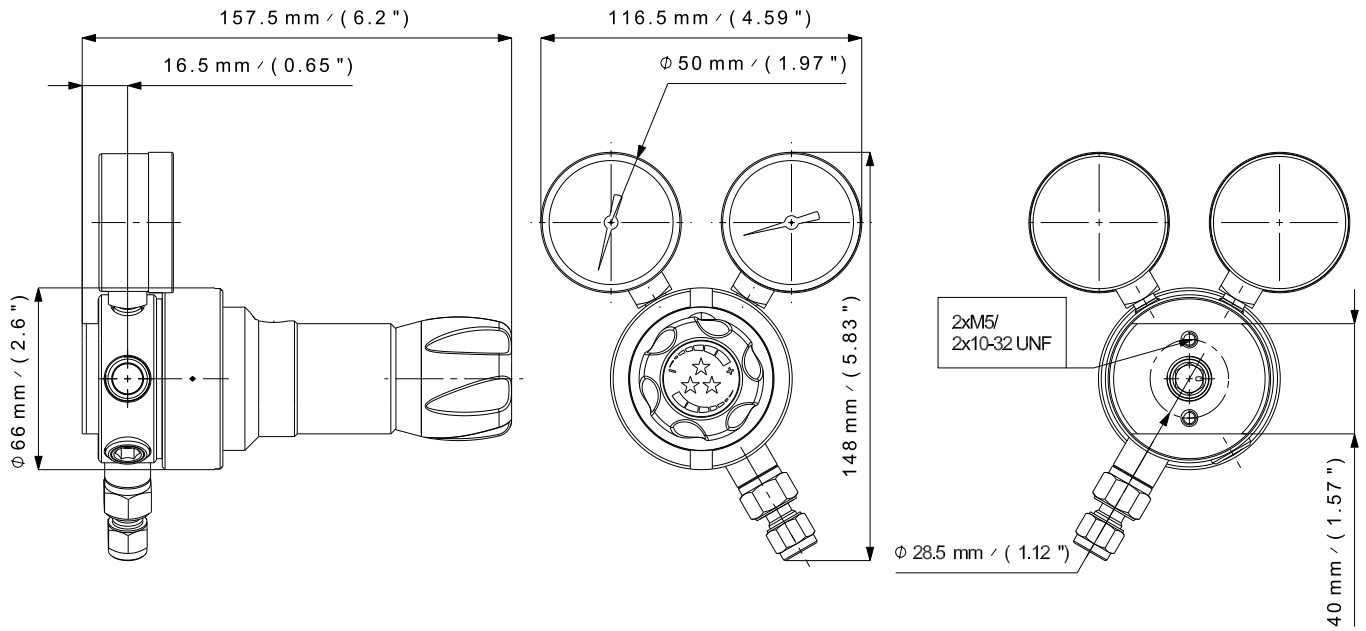
Nominal flow

5 / 12.5 Nm³/h (N₂)

Oxygen use

Only brass ≤ 25 bar max.

*Inlet: Right / Outlet: Left -> on request



PRODUCT CONFIGURATOR

S	Body material		Outlet pressure		Connections		Materials O-ring (safety valve)		Pressure gauges		Port configuration
	I	SPECYL	15		N		EPDM		1		LR
	Stainless steel	I	3 bar 44 psi	3	¼ NPT	N	EPDM	With	1	Standard	LR
			8 bar 116 psi	8							

S SERIES 10

LINE REGULATOR



APPLICATIONS

- Designed as a second-stage line regulator for laboratory applications such as gas supply for inductively coupled plasma spectrometers, shielding and carrier gases for chromatography, environmental emission monitoring, industrial hygiene or safety monitoring and trace impurity analyzers.

KEY FEATURES

- Excellent pressure consistency thanks to balanced valve technology
- Can be used for many applications requiring high flow rates
- Wall or panel mounting possible thanks to compact design, rear thread and mounting ring
- Longer valve life and lower total cost of ownership

TECHNICAL DATA

Female connections

G 3/8 or 1/4" NPT (inlet/outlet)

Seat gasket

FPM/EPDM

O-ring seal

EPDM

Diaphragm

AISI 304 (brass version)
Hastelloy® (SS version)

Inlet position

Left

Weight

± 0.6 kg / ± 1.32 lbs

Leakage rate

10⁻⁹ mbar l/s He

Operating temperature

-20 °C to +60 °C / -4 °F to +140 °F

Pressure gauges

Low pressure (M10 x 1 or 1/4" NPT)

Outlet position

Right

Max. inlet pressure

25 bar / 362.5 psi

Adjustable outlet pressure

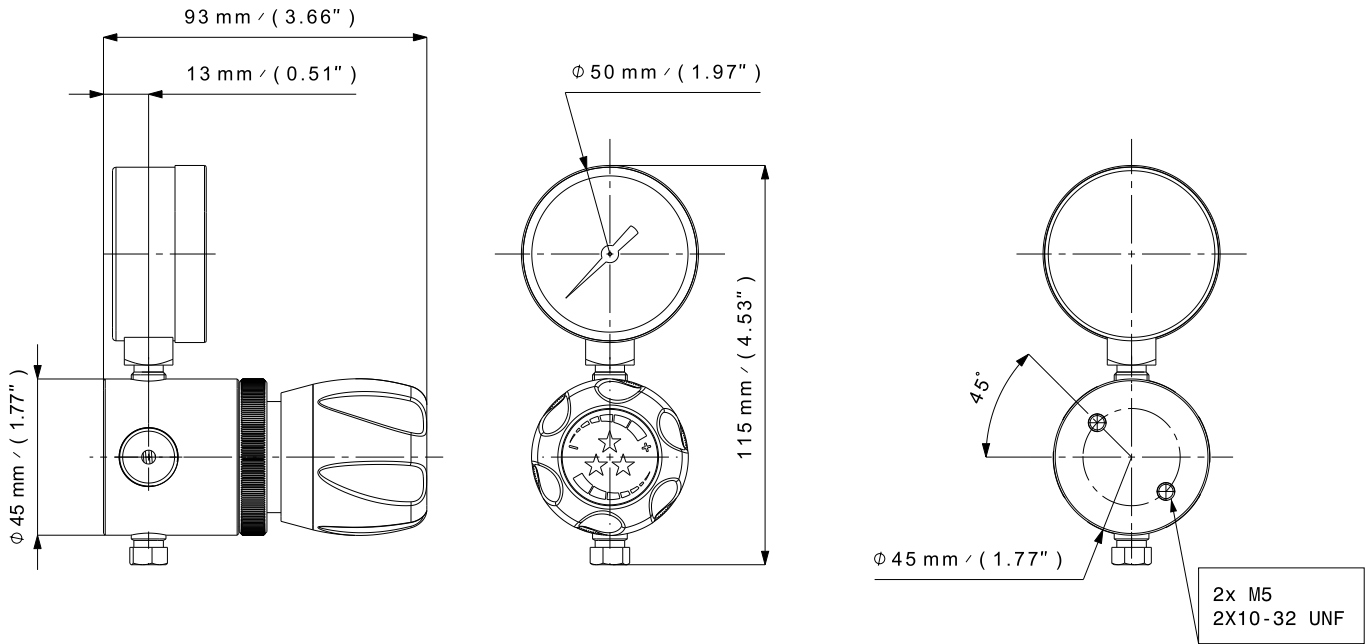
3/8 bar
44 / 116 psi

Nominal flow

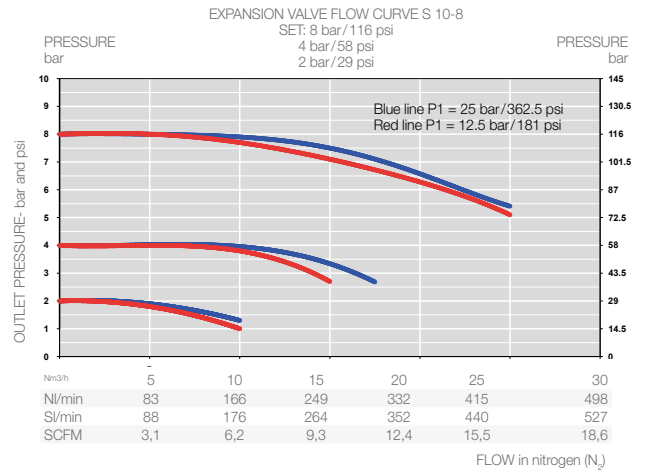
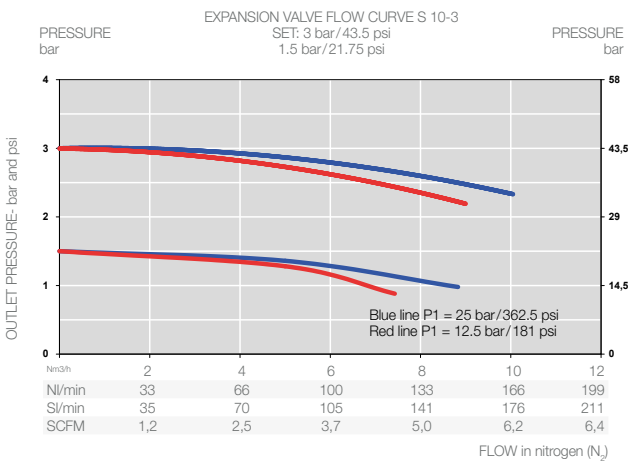
4.5 / 12 Nm³/h(N₂)

Oxygen use

OK with brass and stainless steel



FLOW CURVES



PRODUCT CONFIGURATOR

Body material		Outlet pressure		Connection	O-ring material	Pressure gauges	Assembly	
S	L	10	8	G	EPDM	1	EN0	
Chrome-plated brass	L	3 bar 44 psi	3	G 3/8 - G 3/8	G EPDM	With	1 Without ring fastening	FR0
Stainless steel	I	8 bar 116 psi	8	¼" NPT - ¼" NPT	N		With fixing ring*	FR1

*Optional

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S SERIES 15

LINE REGULATOR



APPLICATIONS

- Use as a line regulator for industrial or laboratory applications at high flow rates.

KEY FEATURES

- Excellent pressure consistency thanks to balanced valve technology
- Can be used for many applications requiring high flow rates
- Can be wall- or panel-mounted thanks to compact design and rear thread
- Longer valve life and lower total cost of ownership

TECHNICAL DATA

Female connections

G 3/8 or 1/4" NPT (inlet/outlet)

Seat gasket

FPM/EPDM

O-ring seal

EPDM

Diaphragm

AISI 304 (brass version)
Hastelloy® (SS version)

Inlet position

Left

Weight

± 1.2 kg / ± 2.64 lbs

Leakage rate

10⁻⁹ mbar l/s He

Operating temperature

-20 °C to +60 °C / -4 °F to +140 °F

Pressure gauges

Low pressure (M10 x 1 or 1/4" NPT)

Outlet position

Right

Max. inlet pressure

25 bar / 362.5 psi

Adjustable outlet pressure

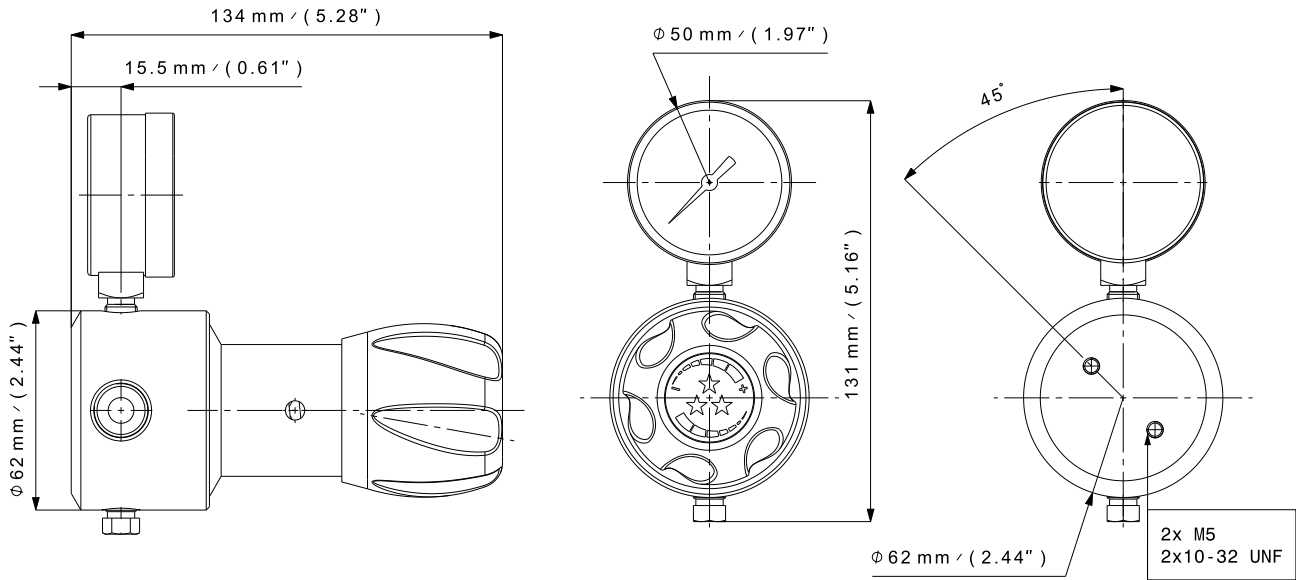
10 bar / 145 psi

Nominal flow

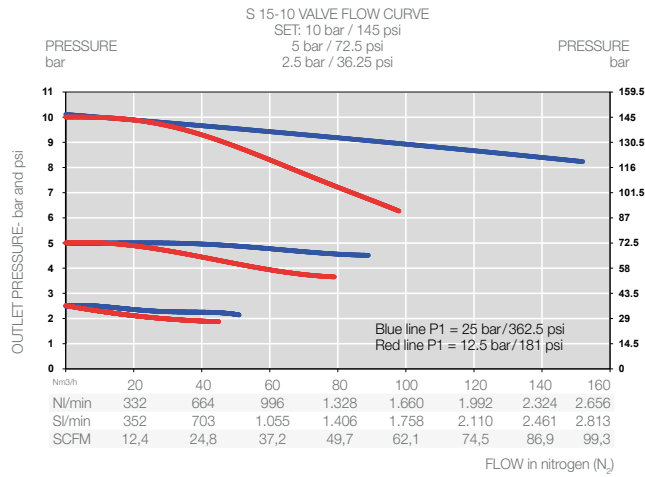
50 Nm³/h(N₂)

Oxygen use

OK with brass and stainless steel



FLOW CURVES



PRODUCT CONFIGURATOR

	Body material		Outlet pressure		Connection		O-ring material		Pressure gauges		Port configuration
S	L	15	10		G		EPDM		1		L
	Chrome-plated brass	L	10 bar / 145 psi	10	G 3/8 - G 3/8	G	EPDM	With	1	Entrance on the left	L
	Stainless steel	I			1/4" NPT - 1/4" NPT	N				Entrance on the right	R

*Optional

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S SERIES 20

LINE REGULATOR



APPLICATIONS

- Used as a line or point-of-use regulator for specialty gas applications requiring very precise repeatability and high-precision outlet pressure.
- Perfectly suited for laboratory applications such as: gas supply for inductively coupled plasma spectrometer, shielding gas and chromatography support gas.

KEY FEATURES

- Bellows technology provides a wide range of precise outlet pressures in a compact design.
- Can be used for wall or panel mounting thanks to its compact design, rear threads and fixing ring (optional).
- Acetylene version available: S 20 AD & S 25 AD series

TECHNICAL DATA

Female connections

G 3/8 or 1/4" NPT (inlet/outlet)

Seat gasket

EPDM

O-ring seal

EPDM

Bellows

Bronze or AISI 316L (SS version)

Inlet position

Standard rear* inlet

Weight

± 0.5 kg/± 1.1 lbs

Leakage rate

10⁻⁸ mbar ℓ/s He

Operating temperature

-20°C to +60°C / -4°F to +140°F

Pressure gauges

Low pressure (M10 x 1 or 1/4" NPT)

Outlet position

Low standard outlet* (standard)

Max. inlet pressure

50 bar/725 psi
AD: 20 bar/290 psi

Adjustable outlet pressure

1/3/10 bar
14.5/44/145 psi
AD: 1.5 bar/21.75 psi

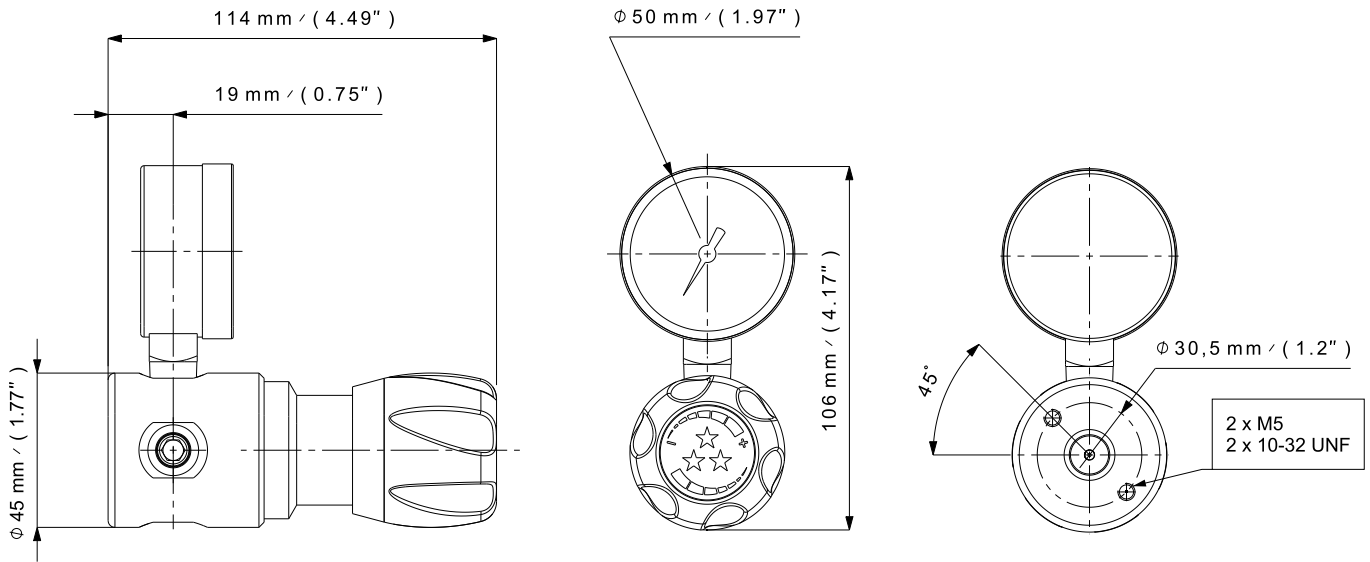
Nominal flow

2/2.5/3.5 Nm³/h(N₂)
AD: 1.5 Nm³/h(N₂)

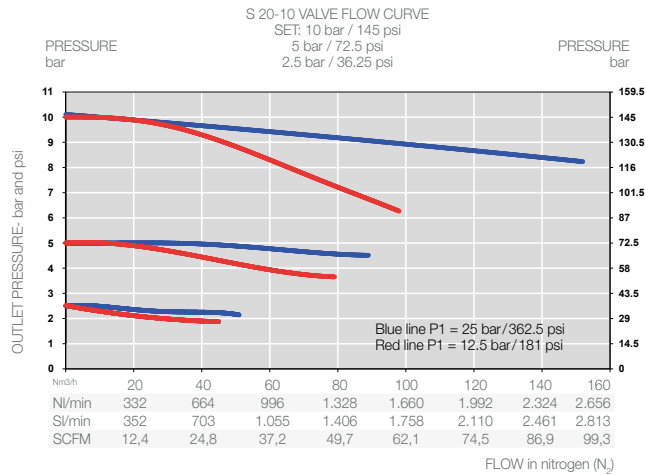
Oxygen use

Inlet pressure less than or equal to 30 bar





FLOW CURVES



PRODUCT CONFIGURATOR

	Body material	Outlet pressure	Connection	O-ring material	Pressure gauges	Assembly	Port configuration						
S	L	20	10	G	EPDM	1	EN0	A					
	Chrome-plated brass	L	1 bar / 14.5 psi	1	G 3/8 - G 3/8	G	EPDM	With	1	Without fixing ring	FR0	Standard configuration	A
	Stainless steel	I	3 bar / 44 psi	3	1/4" NPT - 1/4" NPT	N				With fixing ring	FR1	Entrance on the right	R
			10 bar / 145 psi	10									
			Acetylene version	AD									
			1.5 bar (21.75 psi)										

*Optional

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S 20 SERIES - 0.1

LINE REGULATOR



APPLICATIONS

- The S 20 - 0.1 series is used as a line regulator for laboratory applications requiring low outlet pressures below 100 mbar (1.45 psi).

KEY FEATURES

- Very low outlet pressure
- Rear thread for wall mounting

Rear entrance view



TECHNICAL DATA

Female connections

G 3/8 or 1/4" NPT (inlet/outlet)

Seat gasket

EPDM

O-ring seal

EPDM

Diaphragm

AISI 304

Outlet position

Right

Weight

± 0.6 kg / ± 1.32 lbs

Leakage rate

10⁻⁸ mbar ℓ/s He

Operating temperature

-20 °C to +60 °C / -4 °F to +140 °F

Pressure gauges

Low pressure (M10 x 1 or 1/4" NPT)

Max. inlet pressure

50 bar / 725 psi

Adjustable outlet pressure

0.01 / 0.1 bar
0.14 / 1.45 psi

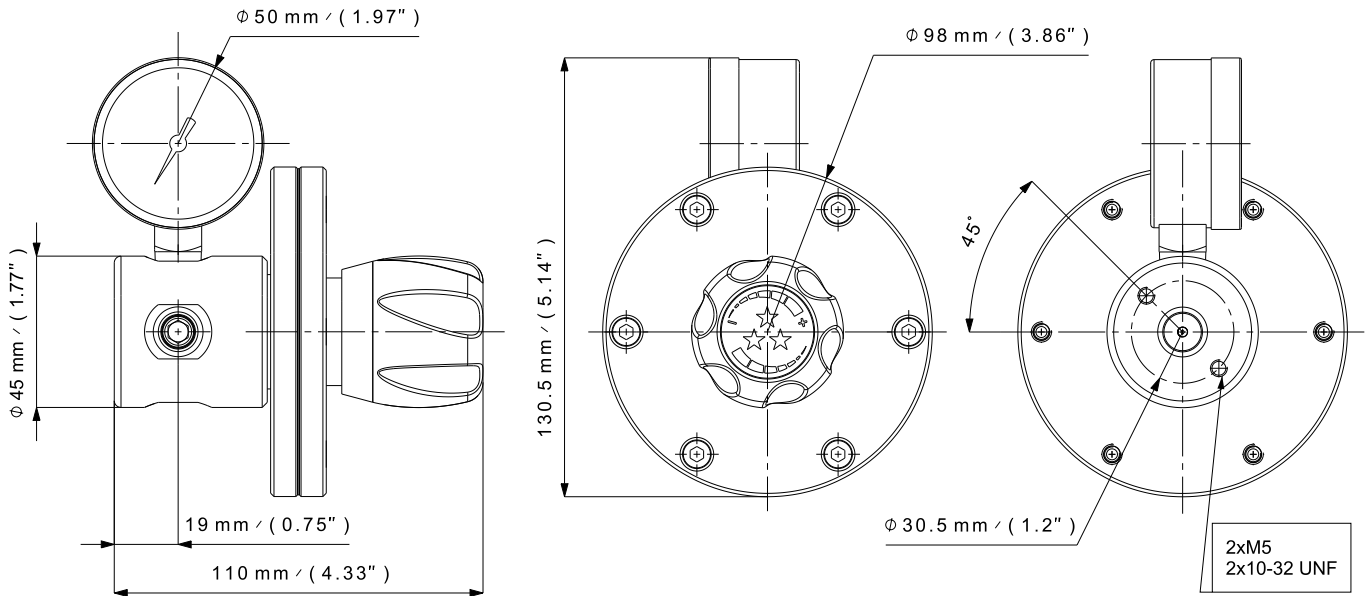
Nominal flow

0.5 Nm³/h(N₂)

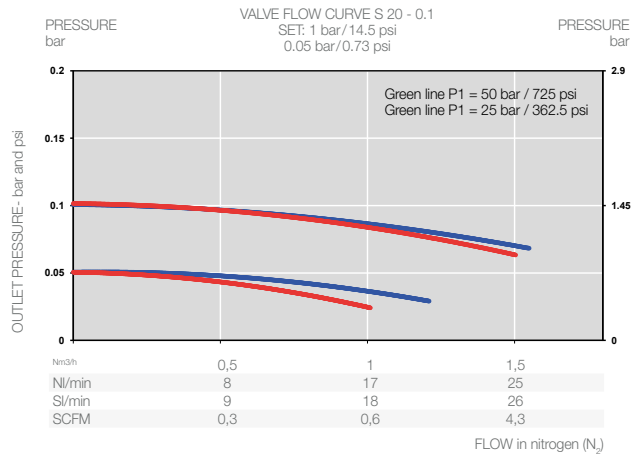
Inlet position

Rear*

*Right-hand entrance on request



FLOW CURVES



PRODUCT CONFIGURATOR

Body material				Connection	O-ring material	Pressure gauges	Port configuration	Assembly
S	L	20	0.1	G	EPDM	1	A	FRO
Chrome-plated brass	L			G 3/8 - G 3/8	G EPDM	With	1 Configuration standard	A Without ring fastening
Stainless steel*	I			1/4" NPT - 1/4" NPT	N		Entrance on the right	R

* Stainless steel version only with NPT connection

S SERIES 55

LINE REGULATOR



APPLICATIONS

- Designed for line regulator applications in petrochemical, industrial and laboratory environments
- Used in calibration gas mixtures for the petrochemical industry; environmental emissions monitoring, industrial hygiene or safety and trace impurity analyzers
- Also often used to supply oxygen to fish breeding tanks

KEY FEATURES

- Exceptionally precise pressure
- Flexible wall or panel mounting options
- Compact, low-ownership design

Rear entrance view



TECHNICAL DATA

Female connections

G 3/8 or 1/4" NPT (inlet/outlet)

Seat gasket

EPDM

O-ring seal

EPDM

Diaphragm

AISI 304 (3/8/10 bar)
Hastelloy® (16/35 bar)

Inlet position

Rear

Weight

± 0.8 kg / ± 1.8 lbs

Leakage rate

10⁻⁸ mbar l/s He

Operating temperature

-20°C to +60°C / -4°F to +140°F

Pressure gauges

Low pressure (M10 x 1 or 1/4" NPT)

Outlet position

Bottom

Max. inlet pressure

50 bar / 725 psi

Adjustable outlet pressure

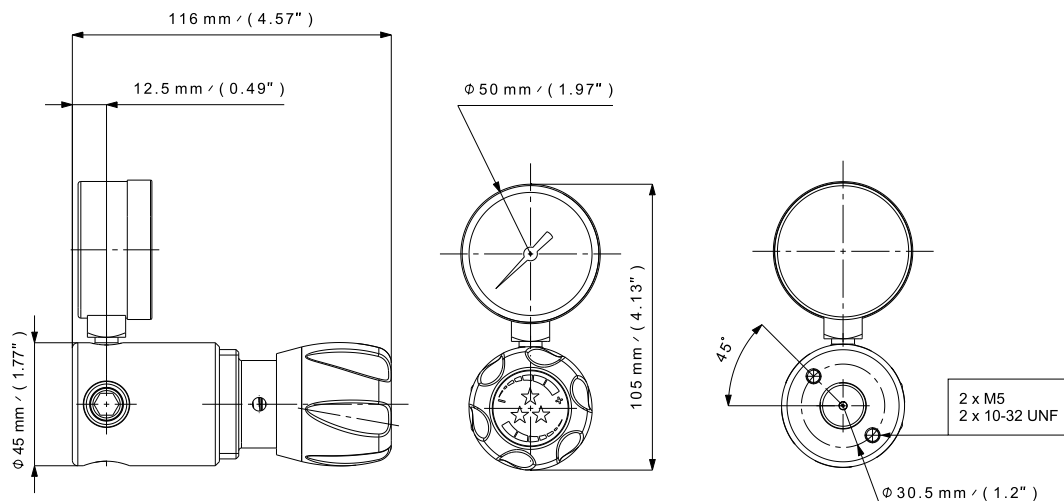
3/10/16/35 bar
44/145/232/508 psi

Nominal flow

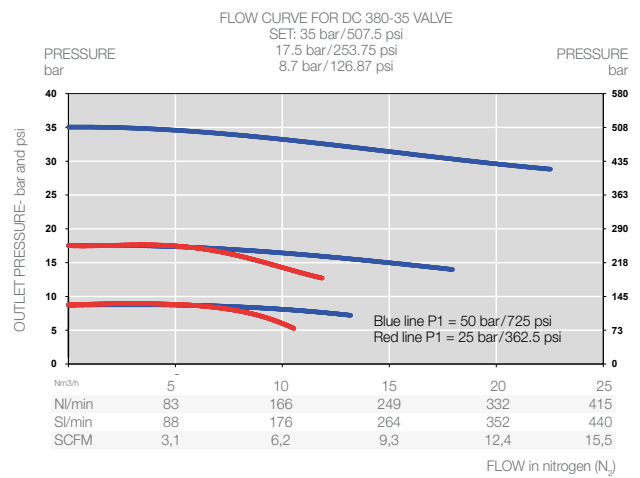
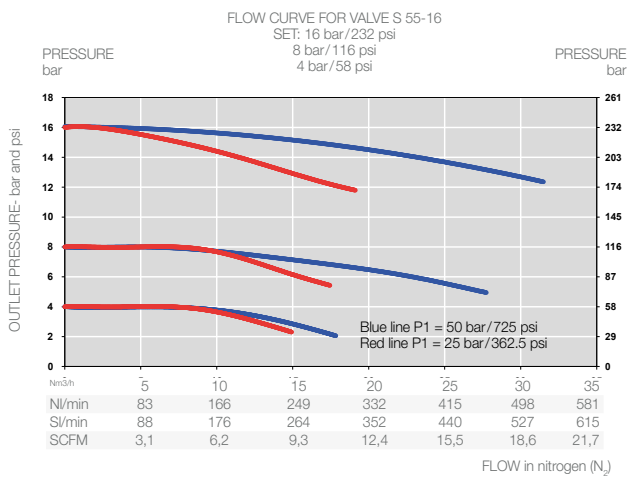
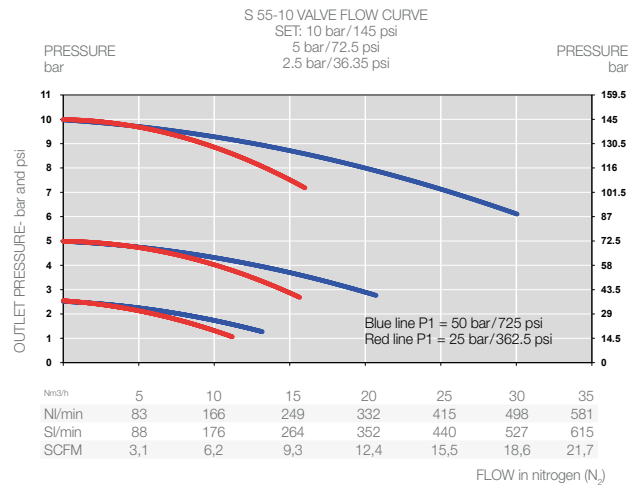
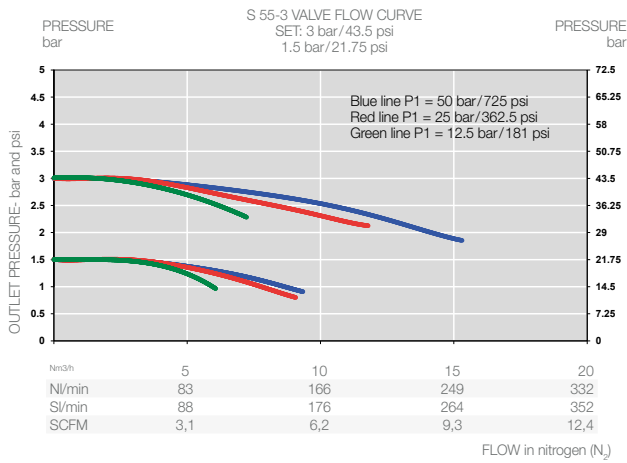
2.5/3.5/5.5/10 Nm³/h(N₂)

Oxygen use

Inlet pressure ≤ 30 bar max.
for brass version



FLOW CURVES



PRODUCT CONFIGURATOR

Body material		Outlet pressure		Connection		O-ring material	Pressure gauges	Assembly	Port configuration
S	L	55	35	G		EPDM	1	FR1	A
Chrome-plated brass	L	3 bar/44 psi	3	G 3/8 - G 3/8	G	EPDM	With	1 Without fixing ring	FRO Configuration standard
		10 bar/145 psi	10	1/4" NPT - 1/4" NPT	N			With fixing ring*	FR1
		16 bar/232 psi	16						
		35 bar/508 psi	35						

*FR1 not available with 35 bar version



DC 50 SERIES

HIGH-FLOW LINE REGULATOR



APPLICATIONS

- For all low-pressure applications requiring high flow rates
- Perfectly suited for use as a line regulator in conjunction with a MOD expansion module or a CEN central inversion unit

KEY FEATURES

- Excellent pressure consistency thanks to balanced valve technology
- Longer service life and lower cost of ownership
- Must be installed with flashback arrestor for use with acetylene
- Acetylene version available (AD)

TECHNICAL DATA

Female connections

G ½" or ½" NPT (inlet/outlet)

Seat gasket

EPDM

O-ring seal

EPDM

Diaphragm

EPDM

Inlet position

Left

Weight

± 1.4 kg/± 3.1 lbs

Leakage rate

10⁻³ mbar l/s He

Operating temperature

-20°C to +60°C / -4°F to +140°F

Pressure gauges

Low pressure (G ¼ or ¼ NPT)

Outlet position

Bottom

Max. inlet pressure

50 bar/725 psi
AD: 1.5 bar (21.75)

Adjustable outlet pressure

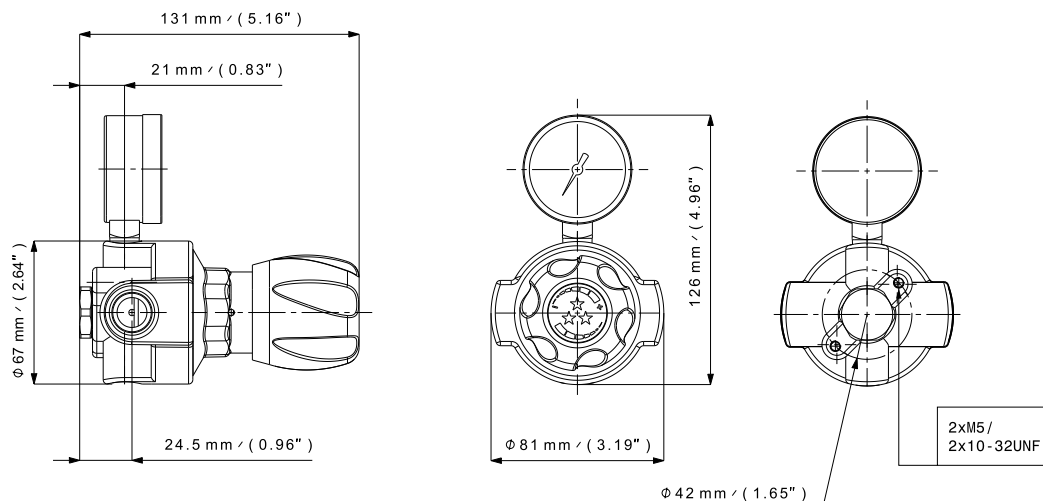
8/15/40 bar
116/217/580 psi
AD: 0.8 bar (12 psi)

Nominal flow

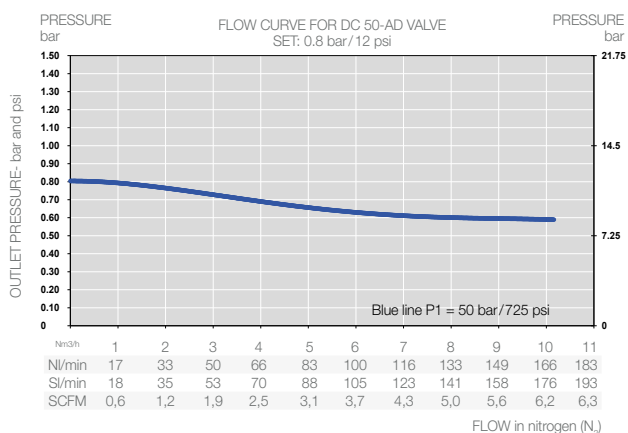
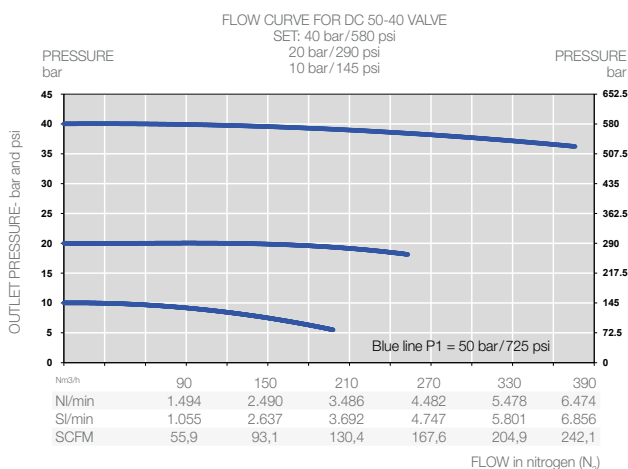
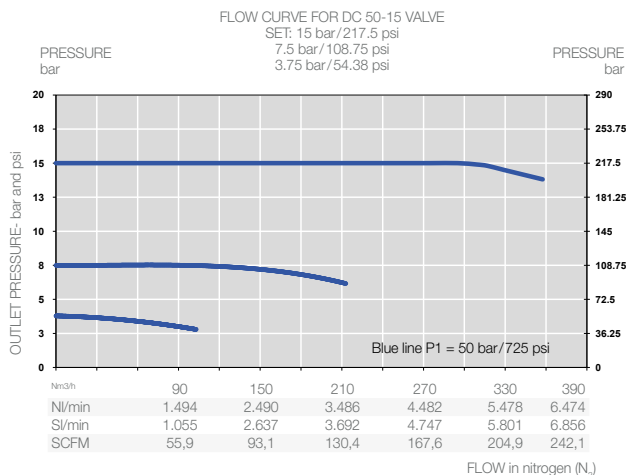
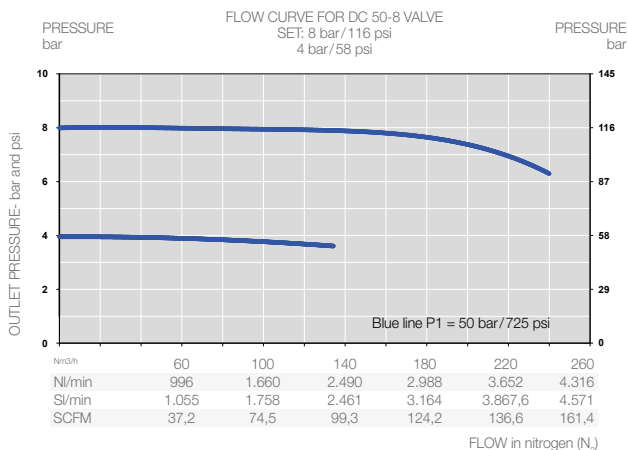
150/300/300 Nm³/h (N₂)
10 Nm³/h (AD)

Oxygen use

Ok



FLOW CURVES



PRODUCT CONFIGURATOR

		Outlet pressure	Connection	O-ring material	Body material	Pressure gauges
D	C	50	40	G	EPDM	L
		8 bar/116 psi	8 G 1/2"	G	EPDM	Chrome-plated brass
		15 bar/217 psi	15 1/2" NPT - 1/2" NPT	N		L With
		40 bar/580 psi	40			
		Acetylene version 0.8 bar (12 psi)	AD			

SERIES S 21

POINT OF USE



APPLICATIONS

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

KEY FEATURES

- Bellows technology enables a wide range of precise outlet pressures in a compact design
- Flexible wall or panel mounting options
- Must be installed with flashback arrestor for use with acetylene
- Acetylene version available (AD)



TECHNICAL DATA

Female connections

G 3/8 or 1/4" NPT (inlet/outlet)

Seat gasket

EPDM

O-ring seal

EPDM

Diaphragm

EPDM - standard/FMP

Inlet position

Left

Weight

+/- 0.9 kg / +/- 2.0lbs

Leakage rate

10^{-3} mbar ℓ /s He

Operating temperature

-20°C to +60°C / -4°F to +140°F

Pressure gauges

Low pressure (G 1/4 or 1/4 NPT)

Outlet position

Bottom

Max. inlet pressure

50 bar / 725 psi
AD: 20 bar (290 psi)

Adjustable outlet pressure

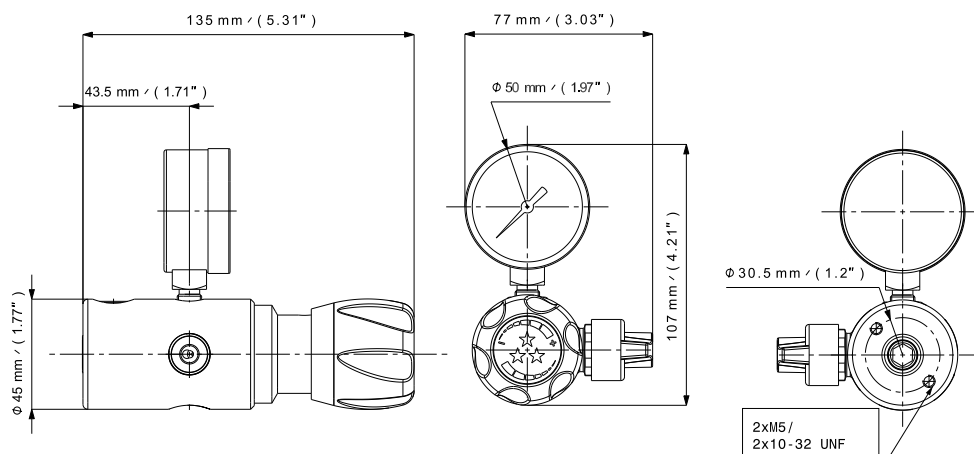
1/3/10 bar
14.5/44/145 psi
AD: 1.5 bar (21.75 psi)

Nominal flow

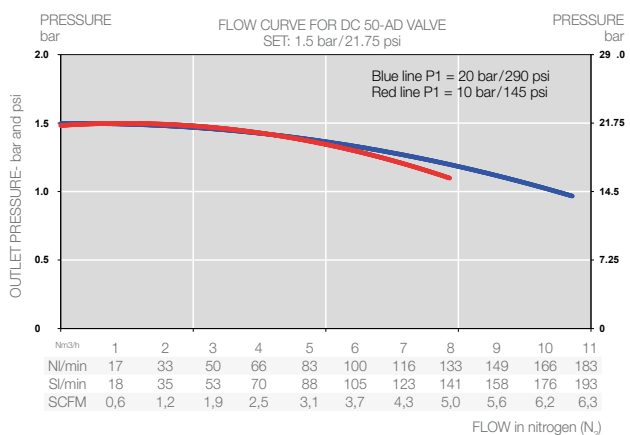
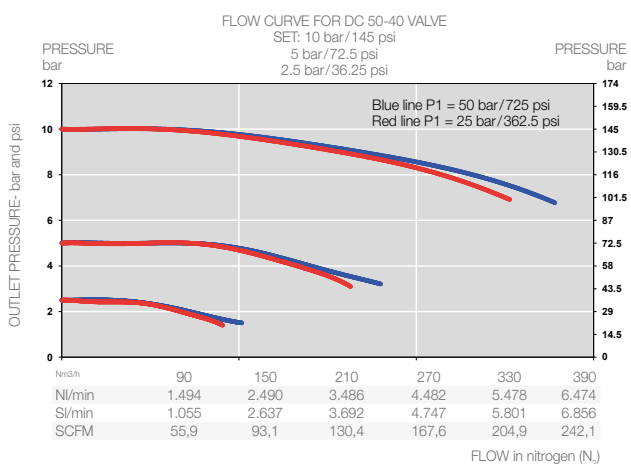
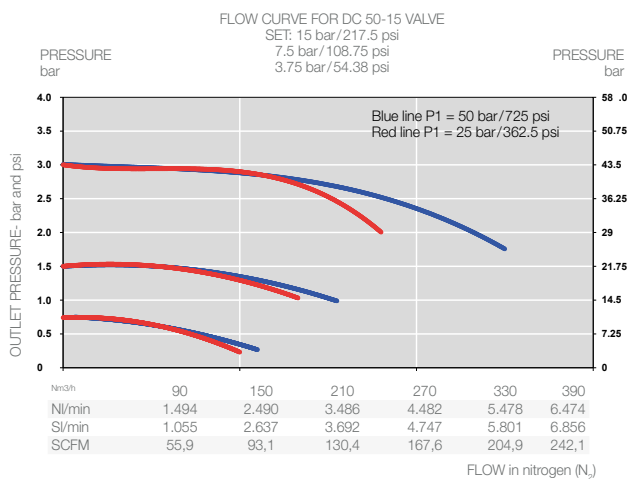
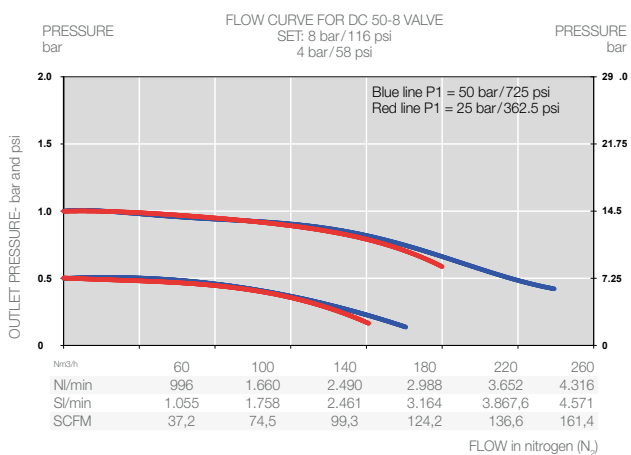
2/2.5/3.5 Nm³/h (N₂)
AD: 1 Nm³/h

Oxygen use

Oxygen use: OK with inlet pressure \leq 30 bar max.



FLOW CURVES



PRODUCT CONFIGURATOR

Body material		Outlet pressure	Connection	O-ring material	Pressure gauges	Plate			
S	L	S 21	10	G	EPDM	1	STD		
Chrome-plated brass	L	1 bar/14.5 psi	1	G 3/8" - G 3/8"	EPDM	With	1	Without plate	STD
Stainless steel	I	3 bar/44 psi	3	1/4" NPT - 1/4" NPT	N			With metal plate*	M
		10 bar/145 psi	10						
		Acetylene version 1.5 bar (21.75 psi)	AD						

*Optional

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S SERIES 22

MODULAR POINT-OF-USE



APPLICATIONS

- A point of use or end of line

KEY FEATURES

- Bellows technology offers a wide range of precise outlet pressures in a compact design
- Modular concept with 3 different configurations available
- Must be installed with flame arrestor for use with acetylene
- Acetylene version available (AD)



TECHNICAL DATA

Female connections

F: G 1/4" (COL inlet version) G3/8" or 1/4" NPT (outlet), G3/8" (Inlet/Outlet), 1/4" NPT (Inlet/Outlet)

Seat gasket

EPDM

O-ring seal

EPDM

Diaphragm

Hastelloy®

Bellows

Bronze or AISI 316L (SS version)

Weight

± 1.5 kg / ± 3.3 lbs

Leakage rate

10⁻⁸ mbar l/s He

Operating temperature

-20°C to +60°C / -4°F to +140°F

Pressure gauges

Low pressure (M10 x 1 or 1/4" NPT)

Inlet position

Rear (COL) or Top (EMB)

Max. inlet pressure

50 bar / 725 psi
AD: 20 bar (290)

Adjustable outlet pressure

1/3/10 bar
14.5/44/145 psi
AD: 1.5 bar (21.75 psi)

Nominal flow

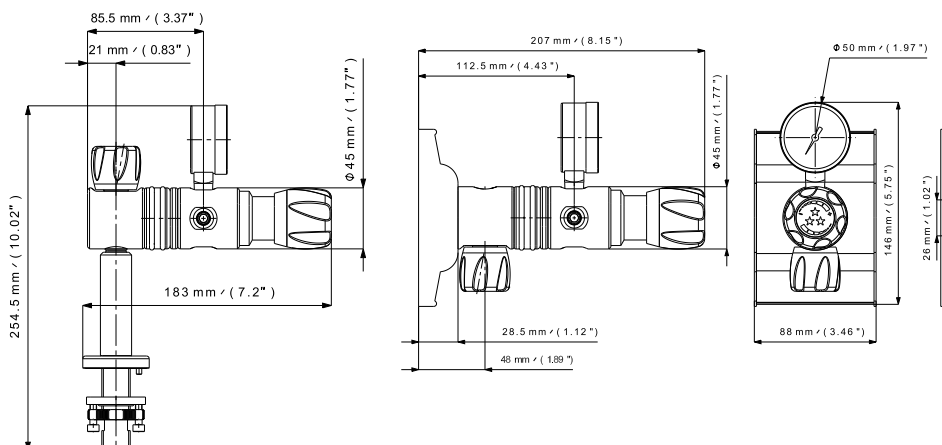
2/2.5/3.5 Nm³/h (N₂)
AD: 1 Nm³/h

Oxygen use

Inlet pressure ≤ 30 bar max. for brass and stainless steel versions*

Outlet position

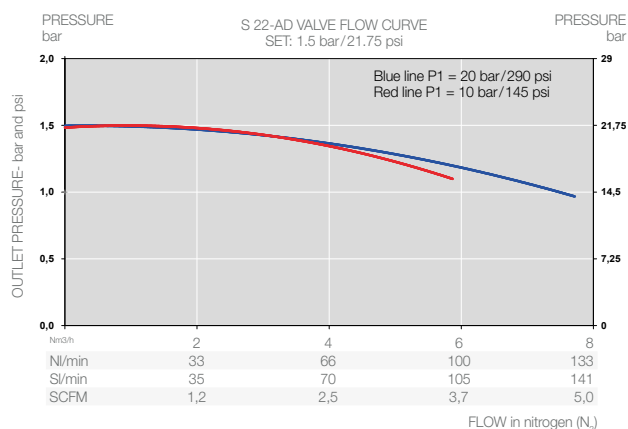
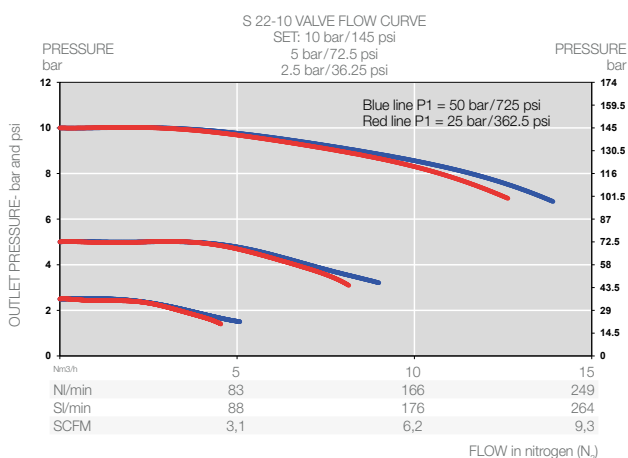
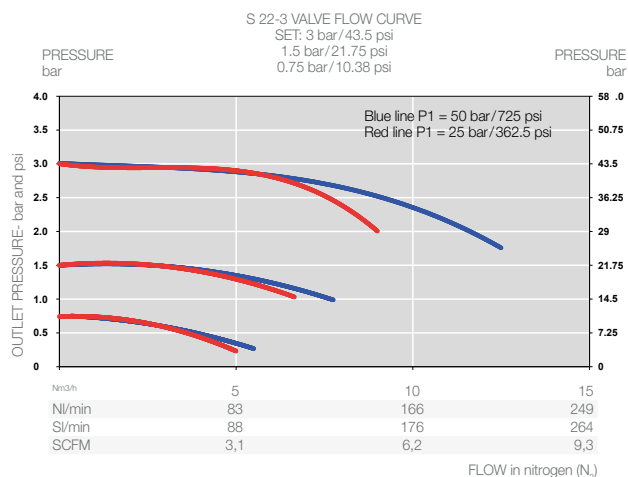
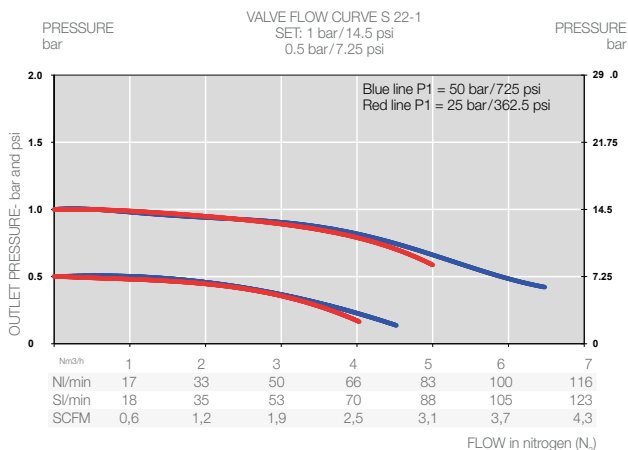
Left (COL) or Right (EMB)



* Acetylene version:
Inlet: Back
Outlet: Bottom



FLOW CURVES



PRODUCT CONFIGURATOR

Body material		Version	Outlet pressure	Connection	O-ring material	Pressure gauges	Valve					
S	L	S 22	EMB	10	G	EPDM	1	¼V				
Chrome-plated brass	L	With metal plate	M	1 bar/14.5 psi	1	G 3/8" - G 3/8"	G	EPDM	With	1	¼ turn valve	¼V
Stainless steel	I	With aluminum support	EM B	3 bar/44 psi	3	¼" NPT - ¼" NPT	N				Multi-turn valve* (MV)	MV
		With pillar	CO L	10 bar/145 psi	10	Note: G ¼ inlet with COL version						
			Acetylene version	1.5 bar (21.75 psi)	AD							

*Multiturn valve (MV) only with pillar (COL)



MS 15 SERIES

MODULAR POINT-OF-USE



APPLICATIONS

- A point of use or end of line

KEY FEATURES

- Bellow technology offers a wide range of precise outlet pressures in a compact design
- Modular concept with 3 different configurations available
- Must be installed with flame arrestor for use with acetylene
- Acetylene version available (AD)

TECHNICAL DATA

Female connections

G 3/8 (inlet/outlet) or 1/4" NPT (inlet/outlet)

Seat gasket

EPDM

O-ring seal

EPDM

Diaphragm

AISI 304 (aluminum version)
Hastelloy® (SS version)

Inlet position

Top

Weight

Aluminium: ± 1.86 kg (± 4.10 lbs)
Stainless steel: ± 3.8 kg (± 8.37 lbs)

Leakage rate

10⁻⁹ mbar ℓ/s He

Operating temperature

-20 °C to +60 °C / -4 °F to +140 °F

Pressure gauges

Low pressure (M10 x 1)

Outlet position

Bottom

Max. inlet pressure

25 bar / 362.5 psi

Adjustable outlet pressure

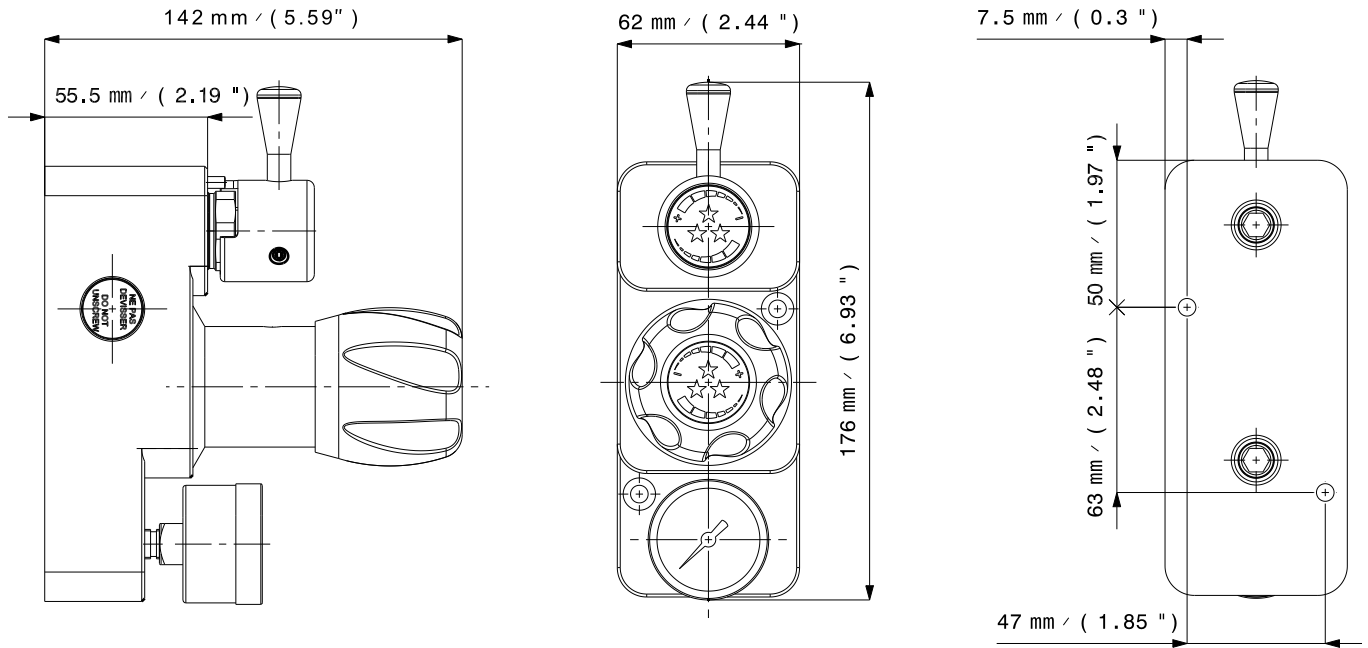
0.1 to 10 bar
14.5 to 145 psi

Nominal flow

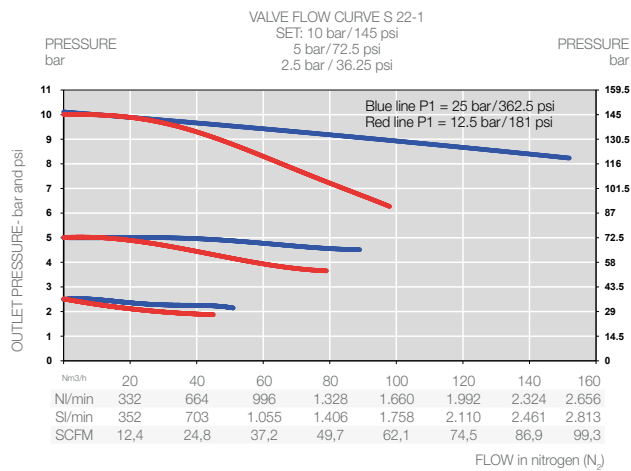
50 Nm³/h (N₂)

Oxygen use

Ok



FLOW CURVES



PRODUCT CONFIGURATOR

		Body material	Outlet pressure	Connection	O-ring material	Configuration				
M	S	A	15	10	G	EPDM	A			
		Aluminum	A	10 bar / 145 psi	10	G 3/8" - G 3/8"	G	EPDM	Configuration standard	A
		Stainless steel*	I			¼" NPT - ¼" NPT	N			

Note: G ¼ inlet with COL version

*Stainless steel version only with G3/8 connection

MS 20 SERIES

COMPACT POINT-OF-USE



APPLICATIONS

- One point of use or end of line for special gas applications in the laboratory or workshop

KEY FEATURES

- Bellows technology enables a wide range of precise outlet pressures in a compact design
- Flexible wall or panel mounting options
- Acetylene version available (AD)

Acetylene version



TECHNICAL DATA

Female connections

G 3/8 (inlet/outlet) or 1/4" NPT (inlet/outlet)

Seat gasket

EPDM

O-ring seal

EPDM

Diaphragm

Hastelloy®

Bellows

Bronze or AISI 316L (SS version)

Weight

Aluminium: ± 1.25 kg (± 2.75 lbs)
Stainless steel: ± 2.75 kg (± 6.06 lbs)

Leakage rate

10⁻⁹ mbar l/s He

Operating temperature

-20 °C to +60 °C / -4 °F to +140 °F

Pressure gauges

Low pressure (M10 x 1)

Inlet position

Rear

Max. inlet pressure

50 bar / 725 psi
AD: 20 bar (290 psi)

Adjustable outlet pressure

1/3/10 bar
14.5/44/145 psi
AD: 1.5 bar (21.75 psi)

Nominal flow

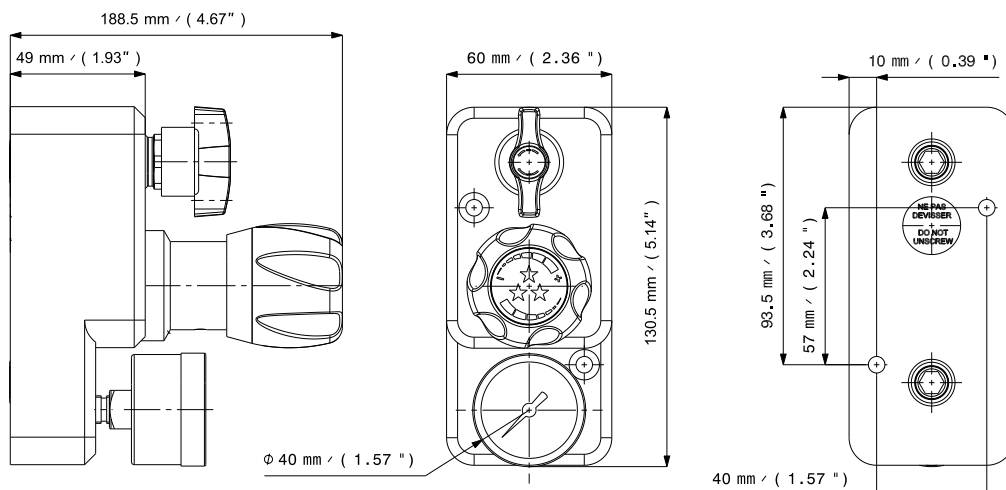
2/2.5/3.5 Nm³/h(N₂)
AD: 1 Nm³/h

Oxygen use

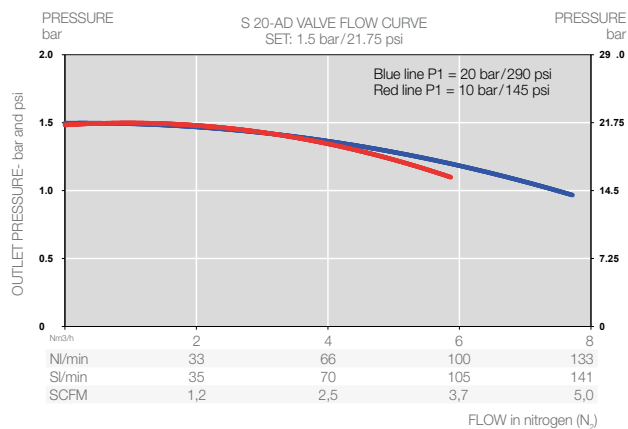
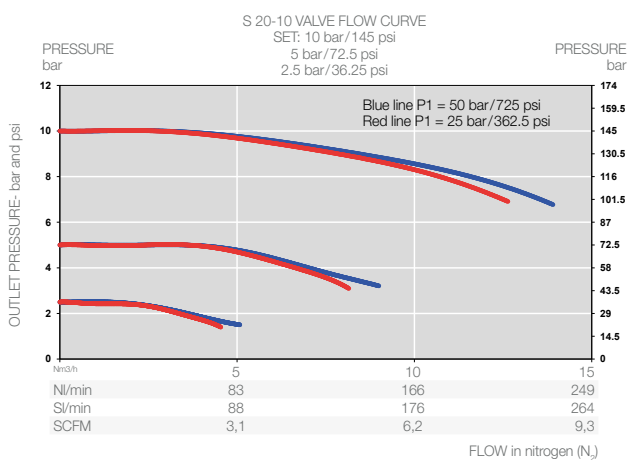
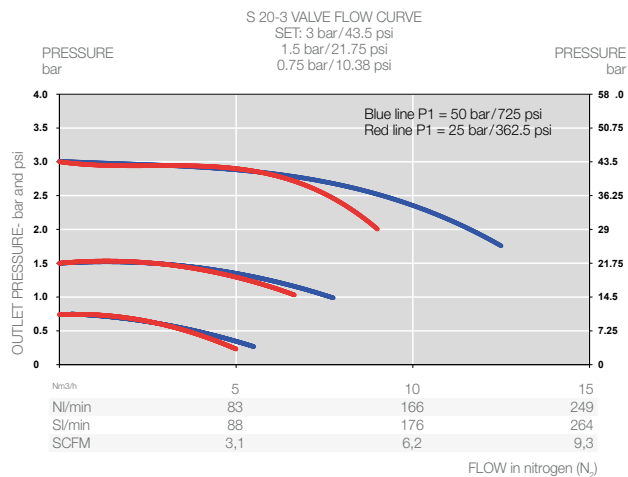
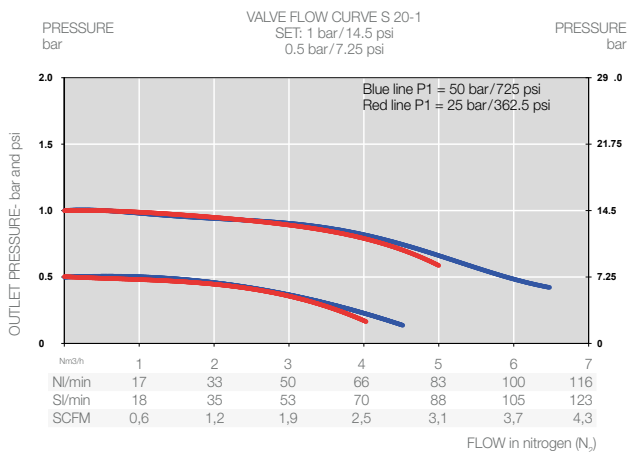
Inlet pressure ≤ 30 bar max.
for aluminium and steel versions
stainless

Outlet position

Bottom



FLOW CURVES



PRODUCT CONFIGURATOR

Body material		Outlet pressure		Connection		O-ring material		Configuration	
M	S	A	20 10	G		EPDM		A	
	Aluminum	A	1 bar / 14.5 psi	1	G 3/8" - G 3/8"	G	EPDM	Configuration standard	A
	Stainless steel	I	3 bar / 44 psi	3	1/4" NPT - 1/4" NPT	N			
			10 bar / 145 psi	10					
			Acetylene version 1.5 bar (21.75 psi)	AD					

S SERIES 75

CONSTANT FLOW REGULATOR



APPLICATIONS

- Designed for calibration applications requiring preset pressure and adjustable flow, as well as for use with a portable cylinder

KEY FEATURES

- Piston technology for highly stable flow outlet
- equipped with a flow selector (10 positions) with 2 different maximum outlet rates (3/5 lpm)
- Compact, lightweight design, ideal for transportation
- Piston regulator 1 inlet / 1 outlet
- Integrated safety valve

TECHNICAL DATA

Female connections

Inlet: C 10 or 1/4 NPT
 Outlet: Barbed fitting or DR 6
 or 1/4" tube fitting

Seat gasket

PCTFE

O-ring seal

FPM

Piston

Hastelloy®

Inlet position

Left

Weight

± 0.70 kg / ± 1.54 lbs

Leakage rate

10⁻⁴ mbar l/s He

Operating temperature

-20°C to +60°C / -4°F to +140°F

Pressure gauges

High pressure (1/8 NPT)

Outlet position

Bottom

Max. inlet pressure

200 bar / 2,900 psi

Adjustable outlet pressure

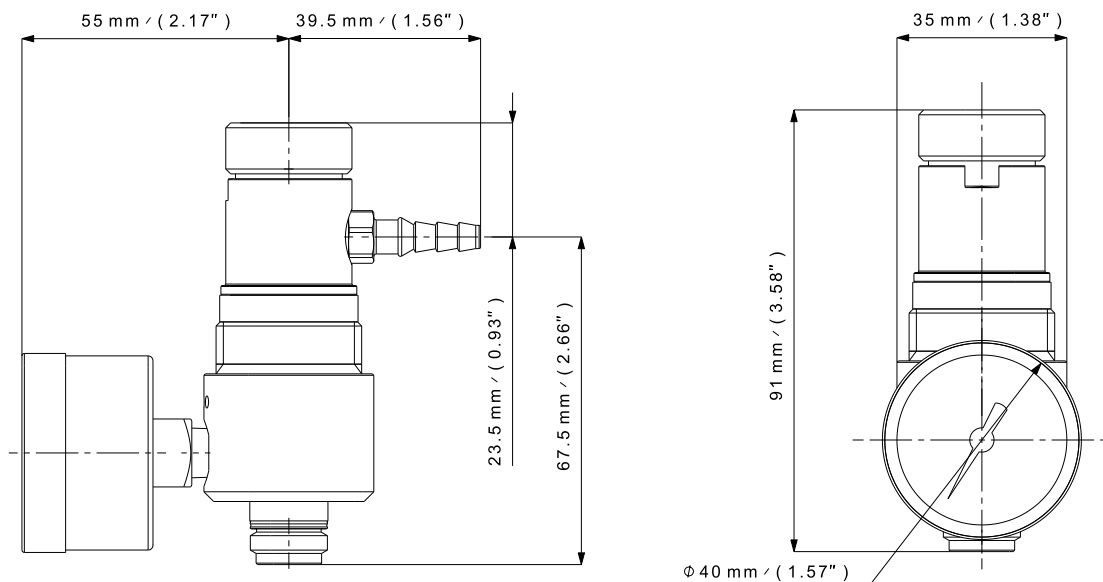
3.5 bar / 50 psi - standard

Nominal flow

3 - 5 lpm

Oxygen use

Brass only



NOMINAL FLOW PARAMETERS (LPM)

B03	B05
0.3	0.5
0.5	0.75
0.7	1
0.9	1.5
1.2	2
1.5	2.5
2	3
2.5	4
3	5



PRODUCT CONFIGURATOR

Body material		Outlet pressure		Inlet connection		Outlet connection		Flow selector		O-ring material		Pressure gauge	
S	L	75	3,5	N		HB		B05		FPM		2	
Nickel-plated brass		L	3.5 bar/50 psi	3,5	¼" NPT	N	Hose barb	HB	3 lpm	B03	FPM	With 315 bar	2
									5 lpm - standard	B05			

TGD 250 SERIES

SINGLE-STAGE HIGH FLOW REGULATOR HP



APPLICATIONS

- Ideal for gas distribution in industrial applications requiring very high flow rates, e.g. to supply welding machines.

KEY FEATURES

- Exceptionally durable

Bottle connection available as an option



TECHNICAL DATA

Female connections

Inlet: 16 x 1.336 (female)
Outlet: M20 x 1.5 (male)

Seat gasket

PCTFE

Diaphragm

Butyl

Body material

Raw brass

Inlet position

Front

Weight

± 4.6 kg/± 10.1 lbs

Leakage rate

10⁻³ mbar l/s He

Operating temperature

-20 °C to +60 °C/ -4 °F to +140 °F

Pressure gauges

High and low pressure (M10 x 1)

Outlet position

Right

Max. inlet pressure

200/230 bar
2.900/3.336 psi

Adjustable outlet pressure

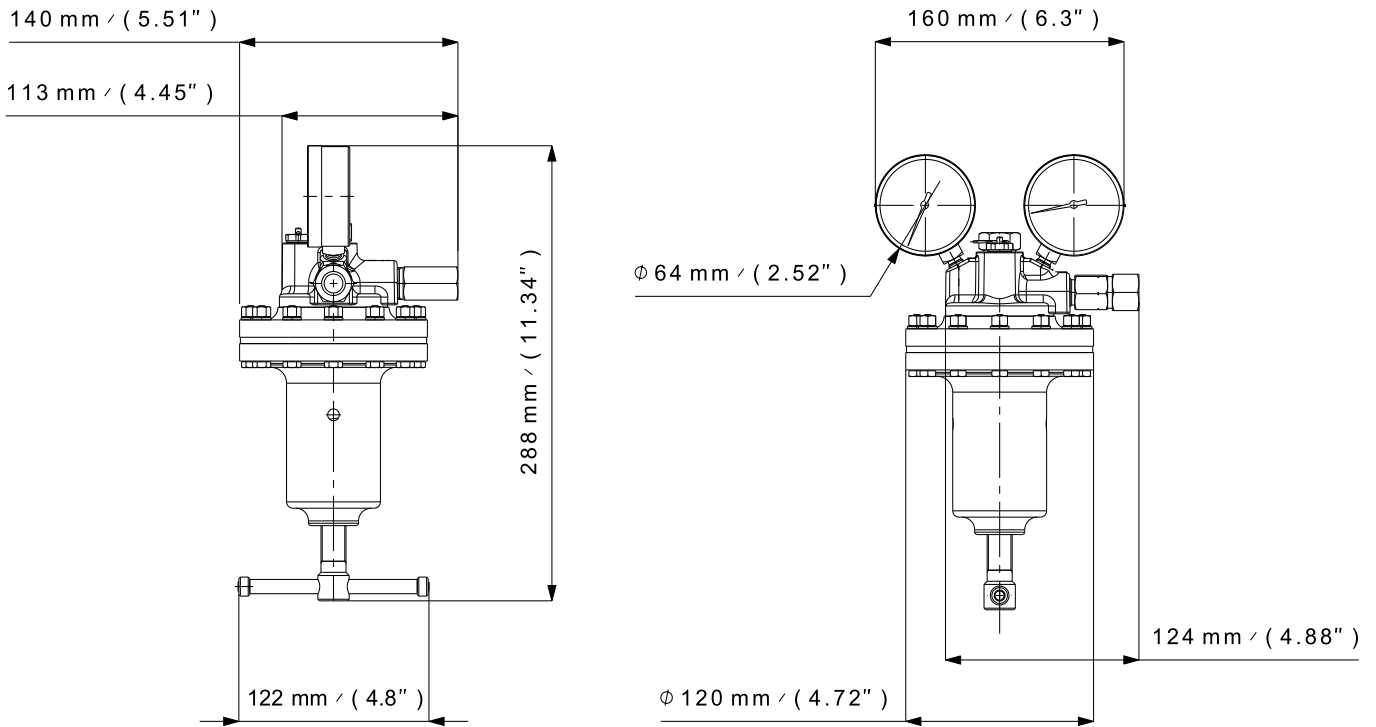
2 to 20 bar
29 to 290 psi

Nominal flow

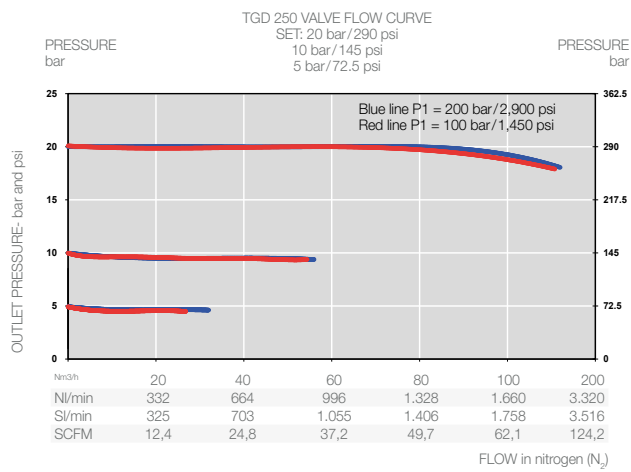
250 Nm³/h(N₂)

Oxygen use

Ok



FLOW CURVES



PRODUCT CONFIGURATOR

		Inlet connection	Pressure gauges
TGD	250	16	1
		16 x 1,336	16 With A

VD SERIES

IN-LINE DIAPHRAGM VALVE



KEY FEATURES

- Hastelloy® diaphragm for sealing and gas compatibility
- Ergonomic 1/4-turn steering wheel
- 3 versions: 50, 230 and 300 bar inlet working pressure
- 3 configurations: female-female, male-female, female-male
- With rear thread for panel mounting

TECHNICAL DATA

Female connections

1/4" NPT: FF, MF or FM
G3/8: FF

Seat gasket

PCTFE

Diaphragm

Hastelloy®

Conical inlet

OK 2x M5 to Ø18mm

Inlet position

Left

Weight

310g

Leakage rate

10⁻⁸ mbar l/s He

Operating temperature

-20 °C to +60 °C

Orifice size

Ø 4mm

Outlet position

Right

Max. inlet pressure

50/230/300 bar
725/3,335/4,350 psi

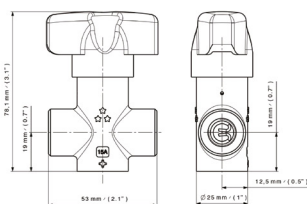
Flow coefficient (Kv)

0.17 Kv/0.2 Cv

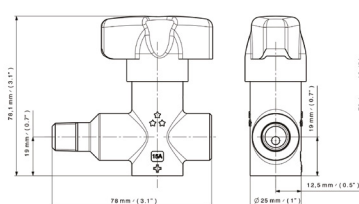
Oxygen use

Ok up to 310 bar
(brass version only)

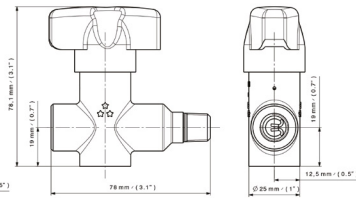
1/4" NPT FF & G3/8" FF



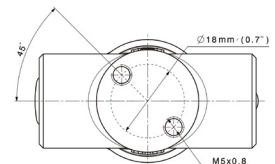
1/4" NPT MF



1/4" NPT FM



REAR MOUNTING



PRODUCT CONFIGURATOR

		Body material	Inlet pressure	Orientation	Connections	
V	D	B	50	FF	N	
		Chrome-plated brass	B 50 bar / 725 psi	50 Female - Female	FF 1/4" NPT	N
		Stainless steel	S 230 bar / 3,335 psi	200 Male - Female (only with 1/4NPT)	MF G3/8	G
			300 bar / 4,350 psi	300		



VM 20 SERIES

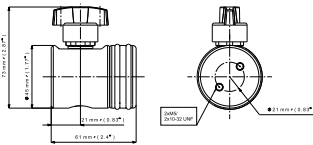
LINE VALVE

KEY FEATURES

- Hastelloy® diaphragm for watertightness and gas compatibility
- 3 versions available: "right", "right angle" and "wall mount".
- Compatible with O₂ applications
- Numerous inlet/outlet connections available

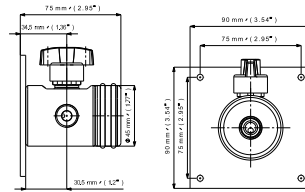
VLM 20 E ¼" TURN

Version E without cover



VLM 20 M ¼" TURN

Version M with plate



TECHNICAL DATA

Seat gasket

PCTFE/EPDM

O-ring seal

EPDM

Conical inlet

Ok

Diaphragm

Hastelloy®

Inlet position

Left

Weight

± 0.95 kg / ± 2.10 lbs

Leakage rate

10⁻⁹ mbar ℓ/s He

Operating temperature

-20 °C to +50 °C / -4 °F to +122 °F

Orifice size

Ø 4mm

Outlet position

Right

Max. inlet pressure

50 bar / 725 psi

Flow coefficient

Cv 0.14 / Kv 0.12

Oxygen use

Brass: OK
Stainless steel: only E/M versions with side entry

PRODUCT CONFIGURATOR

	Body material	Version	Connections	O-ring material	Steering wheel
V	LM20	M	G	EPDM	¼T
	Chrome-plated brass	LM 20 Without plate	E G3/8	G EPDM	¼" turn
	Stainless steel	IM 20 With plate	M ¼" NPT on request	N	¼T

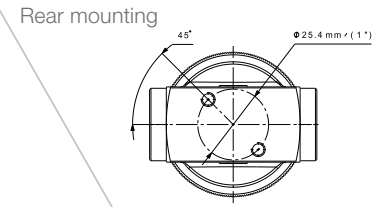
VM 45 SERIES

VALVE IN LINE



KEY FEATURES

- Available in multi-turn version
- Fastening ring for flush mounting in panel
- Rear thread for panel mounting



TECHNICAL DATA

Female connections

G 3/8 or 1/4 NPT (inlet/outlet)

Seat gasket

PCTFE

Diaphragm

Hastelloy®

Conical inlet

OK

Weight

± 0.75 kg / ± 1.65 lbs

Operating temperature

-20 °C to +50 °C / -4 °F to +122 °F

Orifice size

Ø 8mm

Inlet position

Left

Max. inlet pressure

45 bar / 650 psi

Flow coefficient (Kv)

Cv 0.58 / Kv 0.50

Oxygen use

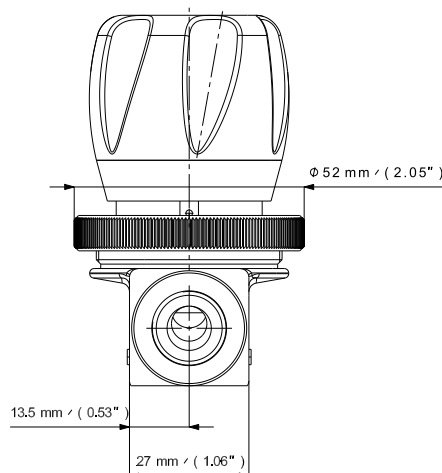
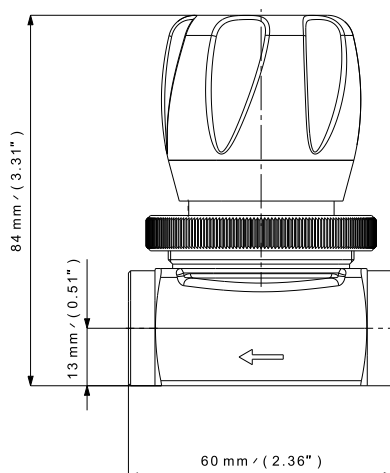
OK with brass and stainless steel

Outlet position

Right

PRODUCT CONFIGURATOR

Body material				Connections		Steering wheel	
V	L	M	45	G		MT	
Chrome-plated brass		L		G 3/8 - female	G	Multitours	MT
				1/4 NPT - female	N		



RD 10 SERIES

NEEDLE VALVE



KEY FEATURES

- Available in straight or 90° versions
- Low-torque operation
- Multi-turn adjustment knob
- High-precision flow
- Ideal for controller outlets
- Must be installed with a flame arrester when using acetylene



TECHNICAL DATA

Ports

Male inlet: G 3/8" or 1/4" NPT
Female outlet: G 1/8" or 1/4" NPT

Seat gasket

Metal/metal

O-ring seal

Hastelloy®

Conical inlet

No

Max. turns for opening max. flow

3 turns

Weight

± 0.085 kg / ± 0.19 lbs

Operating temperature

-20 °C to +50 °C / -4 °F to +122 °F

Orifice size

Ø 2.5mm

Inlet pressure

60 bar / 870 psi

Flow coefficient

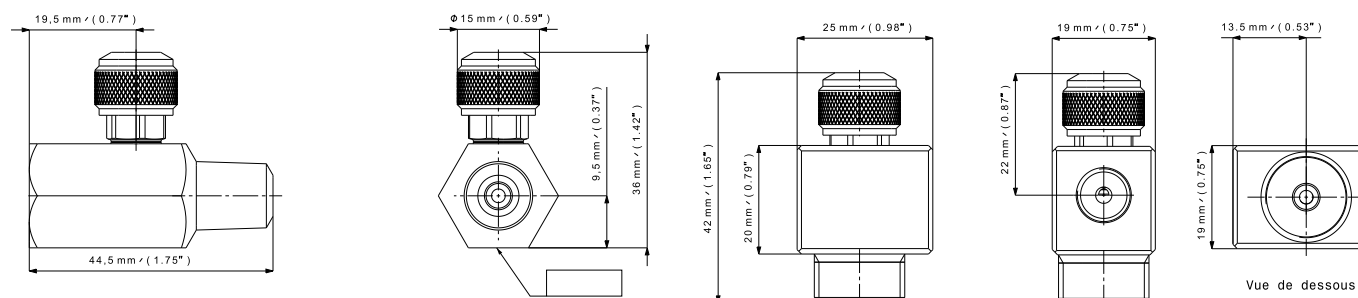
Cv 0.116. Kv 0.10 (straight)
Cv 0.174. Kv 0.15 (90°)

Oxygen use

OK with P1=30 bar max.

PRODUCT CONFIGURATOR

Body material		Connections		Version		O-ring material	
RD	L	10	G	D		EPDM	
Chrome-plated brass	L	Inlet: G 3/8 - male Outlet: G 1/8 - female	G	Law	D	EPDM	
Stainless steel	I	Inlet: 1/4" NPT - male Outlet: 1/4" NPT - female	N				

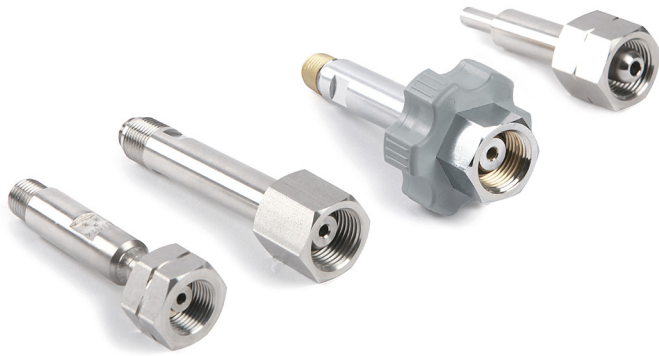


*Only available with "G" fittings.

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CYLINDER CONNECTIONS



KEY FEATURES

- Cylinder connection to the following standards: AFNOR, DIN, BS, CGA, NEN, UNI, FTSC 300 bar...
- Other fittings on request
- Outlet connection: 16 x 1.336 - male or 1/4" NPT - male
- Material: Chrome-plated brass or stainless steel

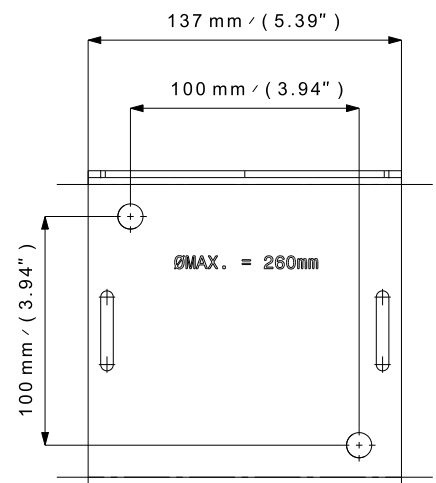
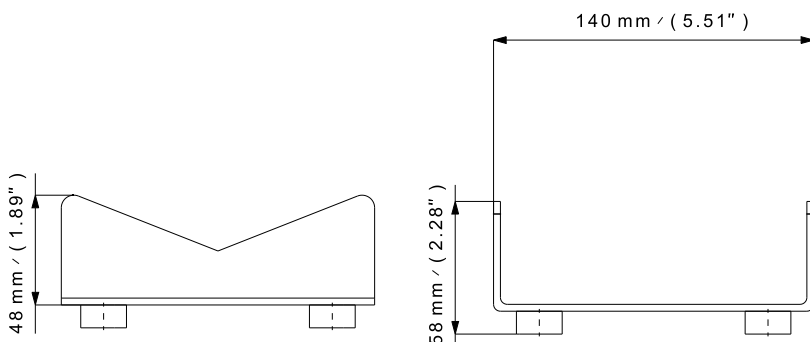
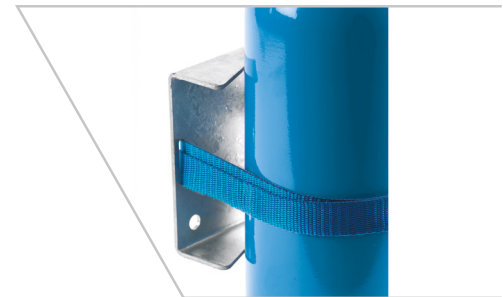


GAS CYLINDER HOLDER



KEY FEATURES

- Mounts to the wall and holds cylinders securely in place with an adjustable fixing belt
- Several cylinder racks can be placed side by side
- A best practice in safety



BOTTLE FITTINGS

	Model (fitting kit)	Material (stem)	Material (nut)	Connection	Tightening type	Gasket
AFNOR version - brass - M:16x1.336	Ent.Chr.Type B (M:16x1.336)	BC	SS 303	M:16x1.336	Manual	EPDM/EPDM
	Ent.Chr.Type C (M:16x1.336)	BC	SS 303	M:16x1.336	Manual	EPDM/EPDM
	Ent.Chr.Type D (M:16x1.336)	BC	BC	M:16x1.336	Manual	EPDM/EPDM
	Ent.Chr.Type E (M:16x1.336) EPDM	BC	SS 303	M:16x1.336	Manual	EPDM/EPDM
	Ent.Chr.Type E FPM (M:16x1.336)	BC	SS 303	M:16x1.336	Manual	FPM/FPM
	Ent.Chr.Type F (M:16x1.336)	BC	SS 303	M:16x1.336	Manual	EPDM/EPDM
AFNOR version - stainless steel - M:16x1.336	Ent.Chr.Type G (M:16x1.336)	BC	BC	M:16x1.336	Wrench	EPDM/TEFLON
	Ent.Chr.Type B (M:¼NPT)	BC	SS 303	M:¼NPT	Wrench	Metal/Metal
	Ent.Chr.Type C (M:¼NPT) - Manual	BC	SS 303	M:¼NPT	Manual	EPDM
	Ent.Chr.Type E (M:¼NPT) - Keyed	BC	SS 303	M:¼NPT	Wrench	PTCE
	Ent.Chr.Type F (M:¼NPT)	BC	SS 303	M:¼NPT	Wrench	Metal/Metal
	Ent.Chr.Type G (M:¼NPT)	BC	SS 303	M:¼NPT	Wrench	Metal/Metal
AFNOR version - stainless steel - M:¼NPT	Ent.Inox Type C (M:16x1.336)	SS	SS 303	M:16x1.336	Wrench	PTFCE/PTFCE
	Ent.Inox Type D (M:16x1.336)	SS	SS 316L	M:16x1.336	Manual	EPDM/EPDM
	Ent.Inox Type E (M:16x1.336)	SS	SS 303	M:16x1.336	Wrench	PTFCE/PTFCE
	Ent.Inox Type F (M:16x1.336)	SS	SS 303	M:16x1.336	Manual	EPDM/PTFCE
	Ent.Inox Type G (M:16x1.336)	SS	SS 303	M:16x1.336	Wrench	EPDM/TEFLON
	Ent. Stainless steel Type C (M:¼NPT)	SS	SS 303	M:¼NPT	Wrench	PTCE
DIN477-1 standard - brass - M:16x1.336	Ent. Stainless steel Type E (M:¼NPT)	SS	SS 303	M:¼NPT	Wrench	PTCE
	Ent. Stainless steel Type F (M:¼NPT)	SS	SS 303	M:¼NPT	Wrench	Metal/Metal
	Ent.chr.din 1 (M:16x1.336)	BC	BC	M:16x1.336	Wrench	EPDM/PTFCE
	Ent.chr.din 6 (M:16x1.336)	BC	BC	M:16x1.336	Wrench	EPDM/PTFCE
	Ent.chr.din 7 (M:16x1.336)	BC	BC	M:16x1.336	Wrench	EPDM/PTFCE
	Ent.chr.din 8 (M:16x1.336) Long	BC	BC	M:16x1.336	Wrench	EPDM/PTFCE
DIN477-1 standard - stainless steel - M:16x1.336	Ent.chr.din 9 (M:16x1.336)	BC	BC	M:16x1.336	Wrench	EPDM/PTFCE
	Ent.chr.din 10 (M:16x1.336)	BC	BC	M:16x1.336	Wrench	EPDM/PTFCE
	Ent.chr.din 11 (M:16x1.336) Long	BC	BC	M:16x1.336	Wrench	EPDM/PTFCE
	Ent.chr.din 13 (M:16x1.336) Long	BC	BC	M:16x1.336	Wrench	EPDM/PTFCE
	Ent.chr.din 14 (M:16x1.336) Long	BC	BC	M:16x1.336	Wrench	EPDM/PTFCE
	Ent.chr.din 1 (M:¼NPT) LG100	BC	BC	M:¼NPT	Wrench	PTCE
DIN477-1 standard - stainless steel - M:¼NPT	Ent.chr.din 6 (M:¼NPT) LG100	BC	BC	M:¼NPT	Wrench	PTCE
	Ent.chr.din 9 (M:¼NPT) LG100	BC	BC	M:¼NPT	Wrench	PTCE
	Ent.chr.din 10 (M:¼NPT)	BC	BC	M:¼NPT	Wrench	PTCE
	Ent.chr.din 14 (M:¼NPT)	BC	BC	M:¼NPT	Wrench	PTCE
	Ent.inox din 1 (M:16x1.336)	SS 316L	SS 303	M:16x1.336	Wrench	PTCE
	Ent.inox din 5 (M:16x1.336) Long	SS 316L	SS 316L	M:16x1.336	Wrench	PTCE
DIN477-1 standard - stainless steel - M:16x1.336	Ent.inox din 6 (M:16x1.336)	SS 316L	SS 303	M:16x1.336	Wrench	PTCE
	Ent.inox din 7 (M:16x1.336) Long	SS 316L	SS 316L	M:16x1.336	Wrench	PTCE
	Ent.inox din 8 (M:16x1.336) Long	SS 316L	SS 316L	M:16x1.336	Wrench	PTCE
	Ent.inox din 9 (M:16x1.336)	SS 316L	SS 303	M:16x1.336	Wrench	PTCE
	Ent.inox din 10 (M:16x1.336)	SS 316L	SS 303	M:16x1.336	Wrench	PTCE
	Ent.inox din 13 (M:16x1.336) Long	SS 316L	SS 316L	M:16x1.336	Wrench	PTCE
DIN477-1 standard - stainless steel - M:¼NPT	Ent.inox din 14 (M:16x1.336)	SS 316L	SS 316L	M:16x1.336	Wrench	PTCE
	Ent.inox din 1 (M:¼NPT)	SS 316L	SS 303	M:¼NPT	Wrench	PTCE
	Ent.inox din 6 (M:¼NPT)	SS 316L	SS 303	M:¼NPT	Wrench	PTCE
	Ent.inox din 8 (M:¼NPT) Long	SS 316L	SS 316L	M:¼NPT	Wrench	PTCE
	Ent.inox din 9 (M:¼NPT)	SS 316L	SS 303	M:¼NPT	Wrench	PTCE
	Ent.inox din 10 (M:¼NPT) LG100	SS 316L	SS 303	M:¼NPT	Wrench	PTCE
BS - brass - M:16x1.336	Ent.inox din 13 (M:¼NPT)	SS 316L	SS 316L	M:¼NPT	Wrench	PTCE
	Ent.inox din 14 (M:¼NPT)	SS 316L	SS 316L	M:¼NPT	Wrench	PTCE
	BS 341/3 brass	BC	Brass	M:16x1.336	Wrench	EPDM
	BS 341/3 brass	BC	Brass	M:16x1.336	Wrench	EPDM
BS - brass - M:¼NPT	BS 341/3 brass LG100	BC	Brass	M:¼NPT	Wrench	Metal/Metal
	BS 341/3 brass LG75	BC	Brass	M:¼NPT	Wrench	Metal/Metal
	BS 341/4 brass LG75	BC	Brass	M:¼NPT	Wrench	Metal/Metal
BS standard - stainless steel - M:16x1.336	341/3 stainless steel	SS	SS 316L	M:16x1.336	Wrench	EPDM
	341/4 stainless steel	SS	SS 316L	M:16x1.336	Wrench	EPDM
BS standard - stainless steel - M:¼NPT	341/4 stainless steel LG75	SS	SS 316L	M:¼NPT	Wrench	Metal/Metal

GAS COMPATIBILITY

CODE FOR GAS COMPATIBILITY

Identify the gas type in the table below, then check the gas compatibility of the various standard materials. Select only materials compatible with the gas type.

GAS COMPATIBILITY WITH MATERIALS

(AT ROOM TEMPERATURE 20°C)

Gas		B or SS 316L	PA 6.6	PTFE	PCTFE	NBR	FPM (VITON®)	EPDM
Acetylene	C_2H_2	B		OK				OK
Argon	Ar	B	OK	OK	OK	OK	OK	OK
Butane	C_4H_{10}	B	OK		OK			
Carbon dioxide	CO_2	SS	OK	OK	OK	OK	OK	OK
Carbon monoxide	CO	B	OK	OK	OK	OK	OK	OK
Ethane	C_2H_6	B	OK	OK	OK	OK	OK	OK
Helium	He	B	OK	OK	OK	OK	OK	OK
Hydrogen	H_2	B	OK	OK	OK	OK	OK	OK
Krypton	Kr	B	OK	OK	OK	OK	OK	OK
Methane	CH_4	B	OK	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						
Propane	C_3H_8	B	OK	OK	OK	OK	OK	OK
Silane	SiH_4	SS 316L						
Ammonia	NH_3	SS 316L	OK	OK	OK	OK	OK	OK
Ethylene	C_2H_4	B	OK	OK	OK	OK	OK	OK
Hydrogen Sulfide	H_2S	SS 316L	OK	OK	OK	OK	OK	OK
Sulphur Dioxide	SO_2	SS 316L						
Sulphur Hexafluoride	SF_6	B	OK	OK	OK	OK	OK	OK

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Hastelloy® is a registered trademark of HAYNES INTERNATIONAL Inc.



CONVERSION TABLES

FLOW CONVERSION

	m ³ /h	l/h	foot ³ /min	l/s	cm ³ /s
m ³ /h	1	1x10 ³	0,589	0,2778	277,78
l/h	1x10 ⁻³	1	5,885x10 ⁻⁴	2,778x10 ⁻⁴	0,2778
foot ³ /min	1,69	1,699x10 ³	1	0,4719	471,95
l/s	3,6	3,6x10 ³	2,119	1	10 ³
cm ³ /s	3,6x10 ⁻³	3,6	2,119x10 ⁻³	10 ⁻³	1

PRESSURE CONVERSION

	bar	mbar	kPa	MPa	atm	psi
bar	1	10 ³	100	0.1	0.987	14.5
mbar	10 ⁻³	1	0.1	10 ⁻⁴	9.869x10 ⁻⁴	14.5x10 ⁻³
kPa	10 ⁻²	10	1	10 ⁻³	9.869x10 ⁻³	0.145
MPa	10	10 ⁴	10 ³	1	9.869	145
atm	1.013	1013	101.3	1.013x10 ⁻¹	1	14.69
psi	6.89x10 ⁻³	68.9	6.89	6.89x10 ⁻²	6.8x10 ⁻²	1

LEAK RATE

	Atm.cc /sec	mbar.l /sec	Atm.mm ³ /sec	Atm.cc /min	Atm.L /min	Atm.m ³ /min	Atm.cu.ft /yr	torr.l /sec
Atm.cc /sec	1	1.013	1.000	60	0.06	6.00E-05	1.116	0.759
mbar.l /sec	0.987	1	987	59.23	0.059	5.90E-05	1.101	0.75
Atm.mm ³ /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
Atm.L /min	16.67	16.88	16.667	1,000	1	0.001	18.601	12.67
Atm.m ³ /min	16,667	16,883	16,666,667	1,000,000	1,000	1	18,601,190	12,664
Atm.cu.ft /yr	0.0009	0.0009	0.896	0.054	5.37E-08	5.37E-08	1	0.0007
torr.l /sec	1.316	1.33	1.316	78.96	0.0789	7.89E-05	1.468	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	1.032
400	752	673	1.212
500	932	773	1.392
600	1.112	873	1.572
700	1.292	973	1.752
800	1.472	1.073	1.932
900	1.652	1.173	2.112
1.000	1.832	1.273	2.292

DIMENSIONS

metric	inches	fraction inch	decimal inch	metric (mm)
3	0.118	1/16"	0.063	1.59
6	0.236	1/8"	0.125	3.18
8	0.315	3/16"	0.188	4.76
10	0.394	1/4"	0.250	6.35
12	0.472	5/16"	0.313	7.94
14	0.551	3/8"	0.375	9.53
16	0.630	1/2"	0.500	12.70
18	0.709	7/16"	0.438	11.11
20	0.787	5/8"	0.625	15.88
22	0.866	3/4"	0.750	19.05
25	0.984	7/8"	0.875	22.23
		1"	1.000	25.40

SC SERIES 290 F

SINGLE-STAGE HP CARTRIDGE REGULATOR



APPLICATIONS

- Food industry version, perfect material compatibility
- Ideal for applications requiring high-pressure regulators

KEY FEATURES

- This single-stage regulator is based on cartridge seat technology
- Precise pressure control for reliable service
- Can be fitted with a shut-off valve
- Valve seat gasket material discharge: Brass version (EPDM), stainless steel (FPM)
- Complies with EC regulation 1935/2004

TECHNICAL DATA

Female connections

1/4" NPT (inlet/outlet)

Seat gasket

PCTFE

O-ring seal

PTFE

Diaphragm

Hastelloy®

Weight

± 1.4 kg
± 3.0 lbs

Leakage rate

10⁻⁹ mbar l/s He

Operating temperature

-40 °C to +60 °C
-40 °F to +140 °F

Pressure gauges

High and low pressure(1/4" NPT)

Inlet pressure

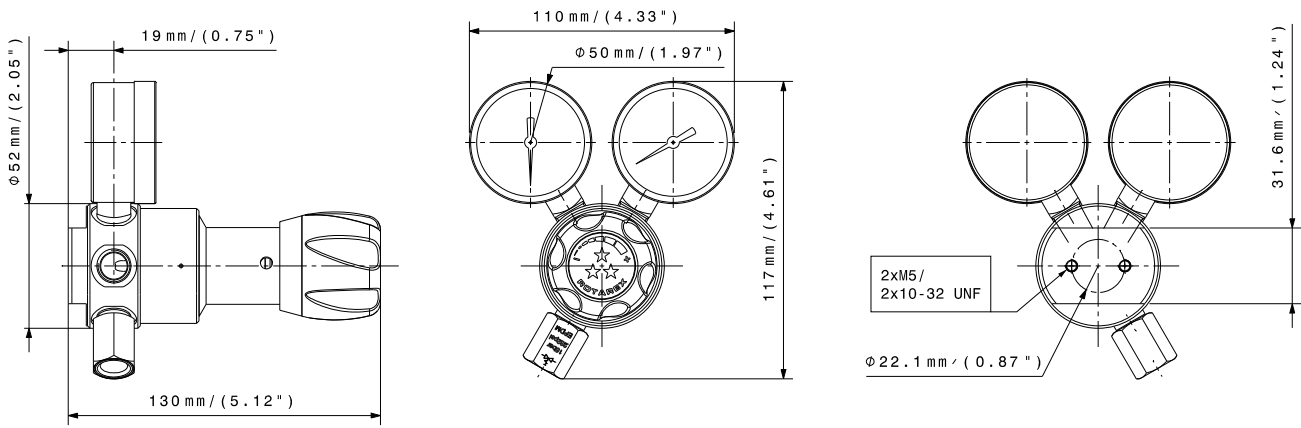
200 bar
2,900 psi

Adjustable outlet pressure

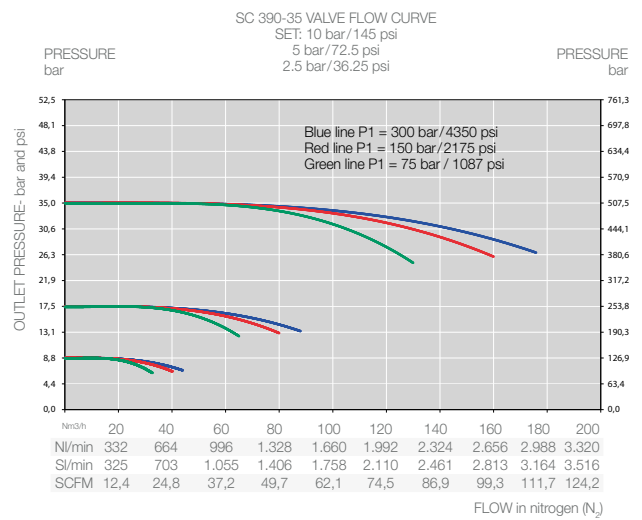
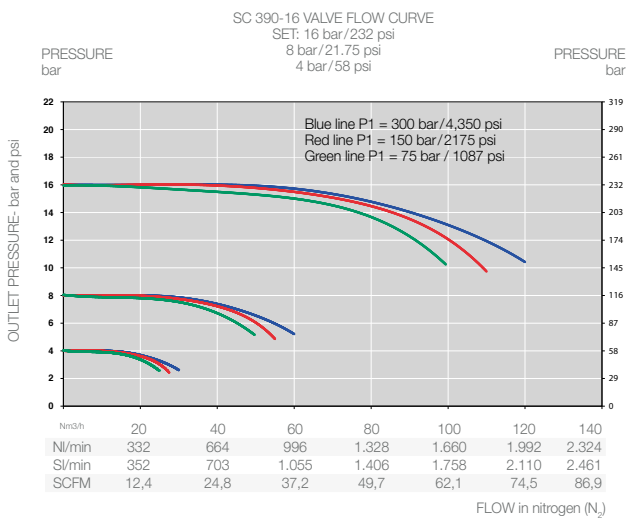
16/35 bar
232/508 psi

Nominal flow

50/75 Nm³/h(N₂)
Cv: 0.2



FLOW CURVES



PRODUCT CONFIGURATOR

	Body material	Inlet pressure	Port configuration	Outlet pressure	Inlet connection	Outlet connection	Pressure gauges	
SC	L	290	F	L	16	N	N	1
	Chrome-plated brass	L 200 bar 2,900 psi	290 Left inlet	L 16 bar 232 psi 35 bar 508 psi	16 1/4" NPT 35	N 1/4" NPT	N With	1

S 800 F SERIES

SINGLE-STAGE PRESSURE HP REGULATOR



APPLICATIONS

- Food industry version, perfect material compatibility
- Designed for use as a high-pressure regulator
- Ideal for high-pressure applications requiring precise outlet pressure at high flow rates

KEY FEATURES

- Best-in-class pressure control thanks to Balanced-Valve technology
- Extremely stable outlet pressure and flow rate, even at high flow rates
- Rear thread for front panel mounting
- Compatible with O₂ application
- Complies with EC regulation 1935/2004

TECHNICAL DATA

Female connections

1/4" NPT (inlet/outlet)

Seat gasket

PCTFE

O-ring seal

EPDM

Diaphragm

AISI 304
Hastelloy® (25/50 bar)

Inlet position

Left*

Weight

± 2.4 kg / ± 5.3 lbs

Leakage rate

10⁻⁸ mbar ℓ/s He

Operating temperature

-40°C to +60°C / -40°F to +140°F

Pressure gauges

High and low pressure (M10 x 1 or 1/4" NPT)

Outlet position

Right*

Inlet pressure

200 bar / 2,900 psi

Adjustable outlet pressure

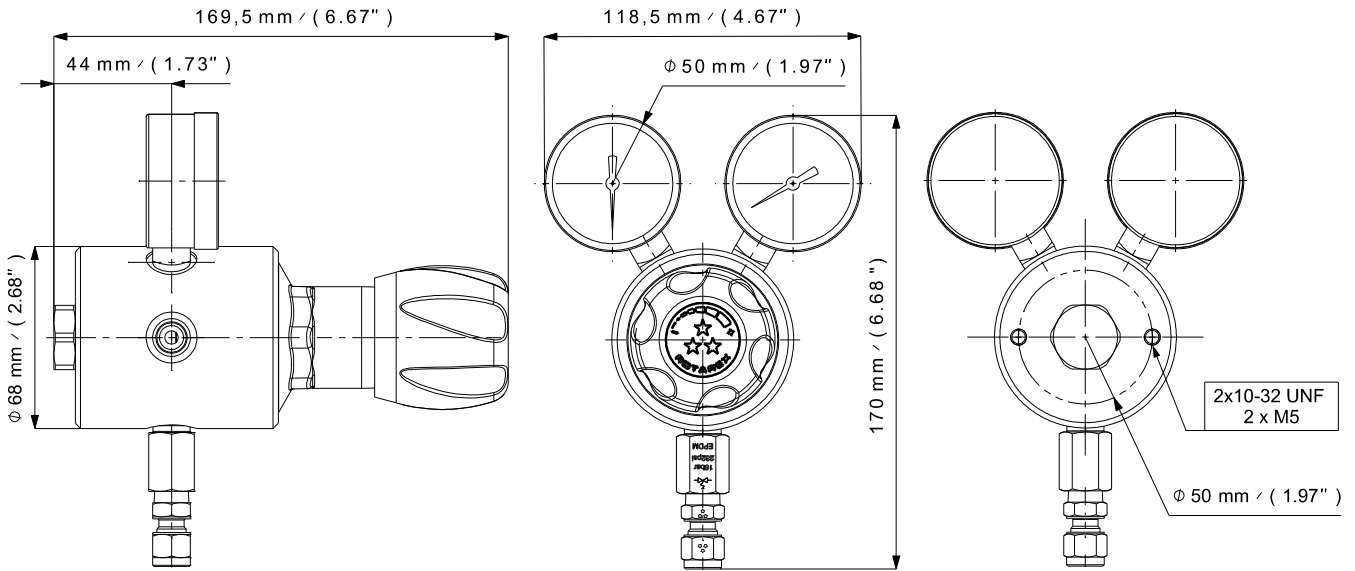
16/50 bar
232/725 psi

Nominal flow

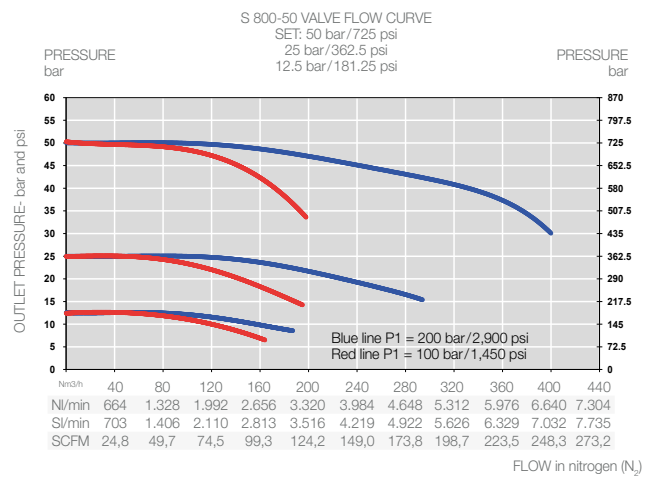
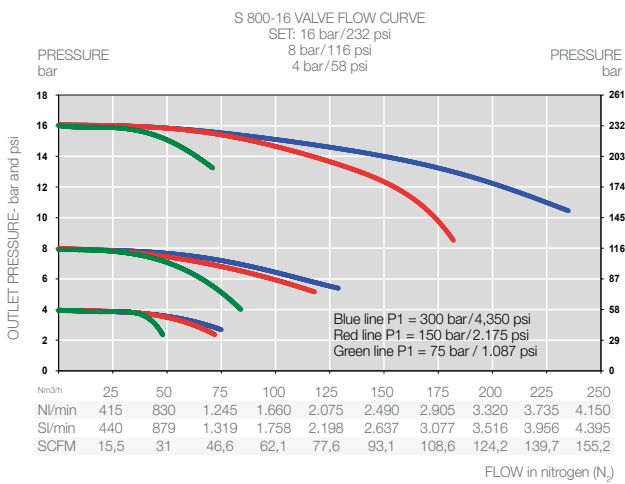
50/100 Nm³/h(N₂)

Oxygen use

Brass version: OK



FLOW CURVES



PRODUCT CONFIGURATOR

S	Body material	Inlet pressure	Outlet pressure	Connections	O-ring material	Pressure gauges
S	L	800	F 16	N	EPDM	1
	Chrome-plated brass	L	16 bar 232 psi	16 1/4" NPT - 1/4" NPT	N EPDM	With
			50 bar 725 psi	50		1

DC 50 F SERIES

HIGH-FLOW LINE REGULATOR



APPLICATIONS

- Food industry version, perfect material compatibility
- For all low-pressure applications requiring high flow rates
- Perfectly suited for use as a line regulator in conjunction with a MOD expansion module or a GEN central inversion unit

KEY FEATURES

- Ideally suited as a line controller in combination with a feeder or switchgear panel
- Better outlet pressure stability thanks to balanced valve technology
- Reduced seat stress increases controller life and reduces cost of ownership
- Complies with EC regulation 1935/2004
- High flow rate improves operator safety during cylinder replacement
- The switchgear can be fitted with an alarm box to indicate source status by means of contact gauges

TECHNICAL DATA

Female connections

1/2" NPT (inlet/outlet)

Seat gasket

EPDM

O-ring seal

EPDM

Diaphragm (expansion valve)

EPDM

Weight

± 1.4 kg / ± 3.1 lbs

Leakage rate

1.10⁻³ mbarl/s He

Operating temperature

-20°C to +60°C / -4°F to +140°F

Pressure gauges

Low pressure (G1/4" or 1/4" NPT)

Inlet pressure

20 bar / 290 psi

Adjustable outlet pressure

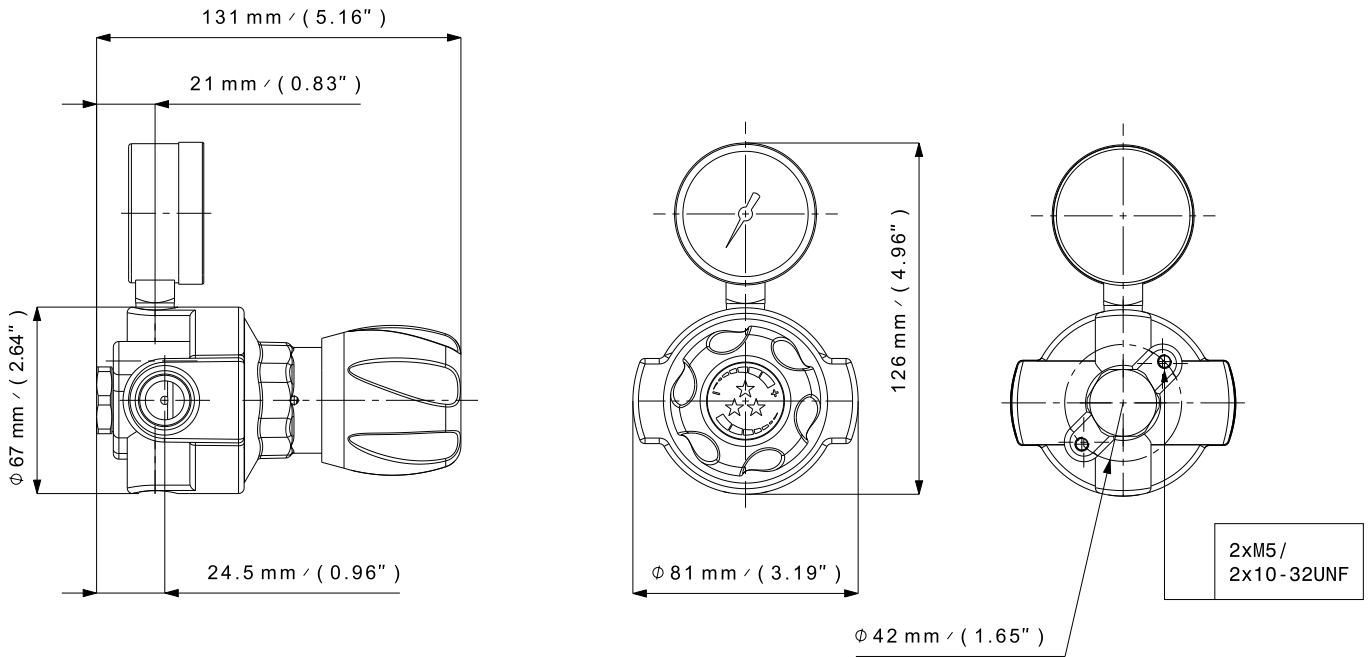
8/15 bar
116/217 psi

Nominal flow 200 bar version

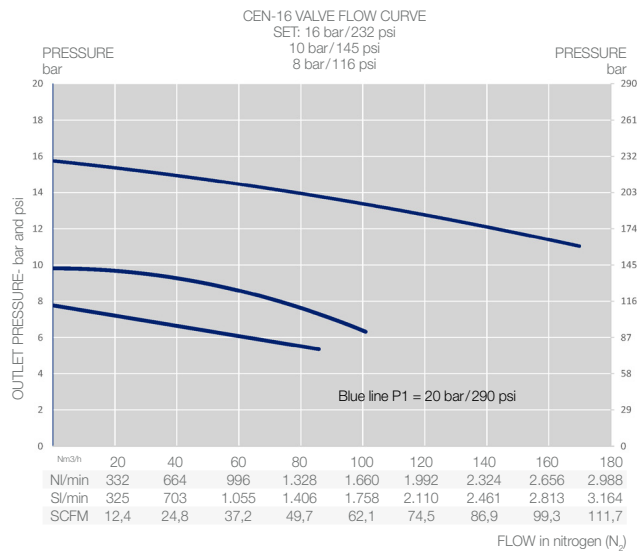
75 Nm³/h(N₂) (8 bar)
120 Nm³/h(N₂) (15 bar)

Oxygen use

OK



FLOW CURVES



PRODUCT CONFIGURATOR

		Inlet pressure	Connections	O-ring material	Body material	Pressure gauges				
DC	50	F	8	G	EPDM	L	1			
		8 bar 116 psig	8	½" NPT - ½" NPT	N	EPDM	Chrome-plated brass	L	With	1
		15 bar 217 psi	15							

S SERIES 15 F

LINE REGULATOR



APPLICATIONS

- Food industry version, perfect material compatibility
- For all low-pressure applications requiring high flow rates
- Perfectly suited for use as a line regulator in conjunction with a MOD expansion module or a GEN central inversion unit

KEY FEATURES

- Ideally suited as a line controller in combination with a feeder or switchgear panel
- Better outlet pressure stability thanks to balanced valve technology
- Reduced seat stress increases controller life and reduces cost of ownership
- Complies with EC regulation 1935/2004
- High flow rate improves operator safety during cylinder replacement
- The switchgear can be fitted with an alarm box to indicate source status by means of contact gauges

TECHNICAL DATA

Female connections

1/4" NPT (inlet/outlet)

Seat gasket

EPDM

O-ring seal

EPDM

Diaphragm

AISI 304 (brass version)
Hastelloy® (SS version)

Weight

± 1.2 kg / ± 2.64 lbs

Leakage rate

1.10⁻⁹ mbarl/s He

Operating temperature

-20 °C to +60 °C / -4 °F to +140 °F

Pressure gauges

Low pressure (M10 x 1 or 1/4" NPT)

Inlet pressure

25 bar / 360 psi

Adjustable outlet pressure

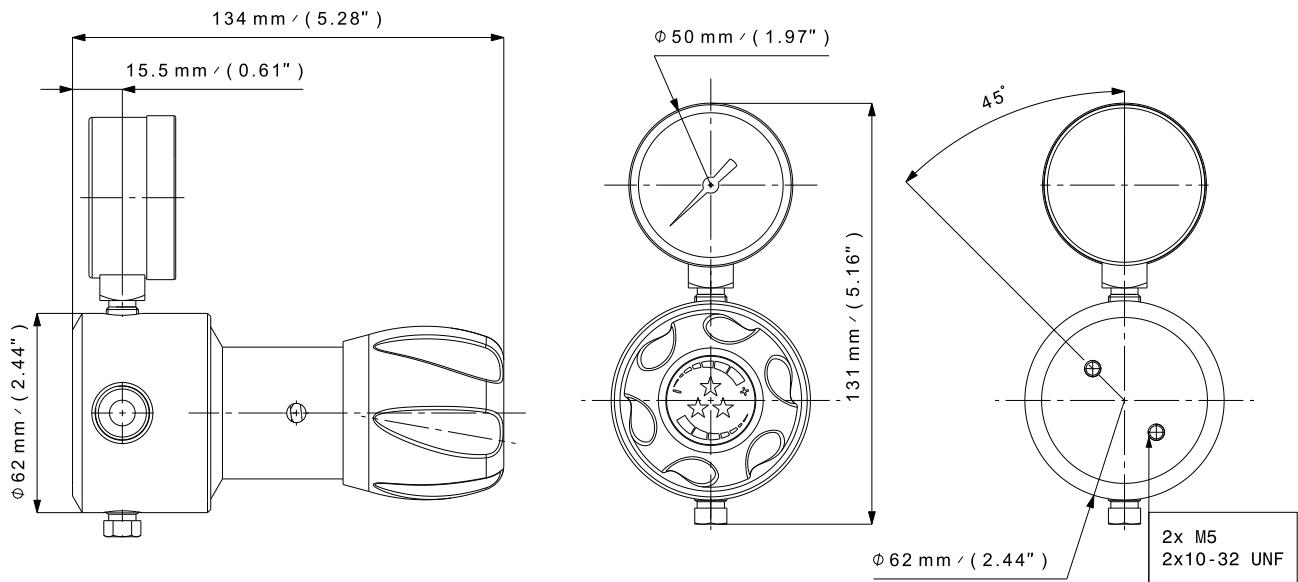
10 bar / 145 psi

Nominal flow

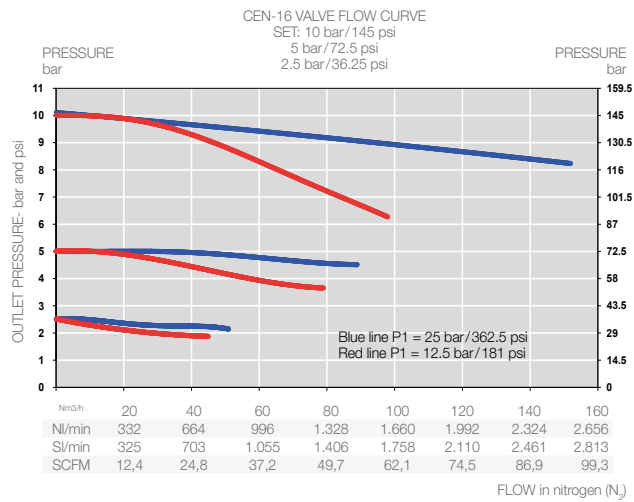
50 Nm³/h(N₂)

Oxygen use

OK for brass



FLOW CURVES



PRODUCT CONFIGURATOR

	Body material		Outlet pressure	Connections	O-ring material	Pressure gauges	Port configuration	
S	L	15	F	10	N	EPDM	1	A
	Chrome-plated brass	L	10 bar / 145 psig	8 1/4" NPT	N EPDM	With	1 Configuration standard	A

MS 15 F SERIES

LINE REGULATOR



APPLICATIONS

- Food industry version, perfect material compatibility
- A point of use or end of line

KEY FEATURES

- Excellent pressure consistency thanks to Balanced Valve technology
- Can be used for wall or panel mounting thanks to its compact design, rear thread and mounting ring
- Complies with EC regulation 1935/2004
- High flow rate

TECHNICAL DATA

Female connections

1/4" NPT (inlet/outlet)

Seat gasket

EPDM

O-ring seal

EPDM - standard

Diaphragm

AISI 304 (aluminum version)

Weight

Aluminium: ± 1.86 kg / ± 4.10 lbs

Leakage rate

$1 \cdot 10^{-9}$ mbarl/s He

Operating temperature

-20 °C to +60 °C / -4 °F to +140 °F

Pressure gauges

Low pressure (M10 x 1)

Inlet pressure

25 bar / 362.5 psi

Adjustable outlet pressure

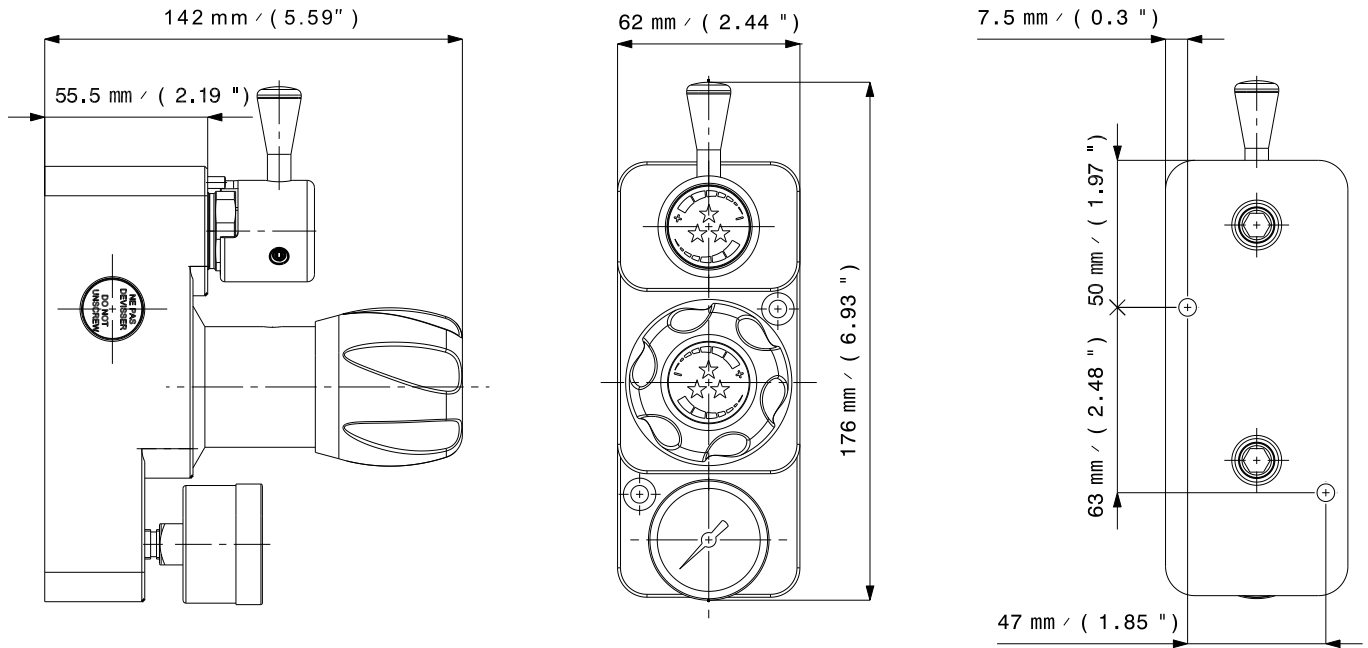
10 bar / 145 psi

Nominal flow

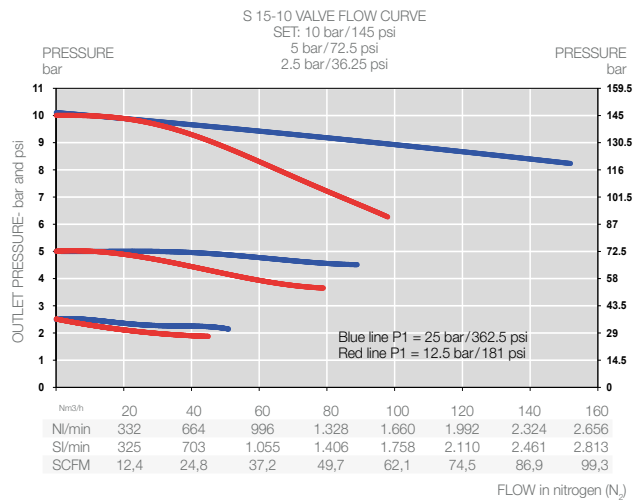
50 Nm³/h(N₂)

Oxygen use

OK



FLOW CURVES



PRODUCT CONFIGURATOR

	Body material		Outlet pressure	Connections	O-ring material	Port configuration	
MS	A	15	F	10	N	EPDM	A
	Aluminum	A	10 bar 145 psig	10 ¼" NPT - ¼" NPT	N EPDM - standard	Standard configuration	A

VD SERIES

IN-LINE DIAPHRAGM VALVE



KEY FEATURES

- Version dedicated to the food industry, perfect material compatibility.
- For gas purities up to 6.0
- Hastelloy® diaphragm for tightness and gas compatibility
- Ergonomic ¼-turn steering wheel
- Chrome-plated brass
- 2 versions: Inlet operating pressure 50 and 230 bar
- 3 configurations: female-female, male-female, female-male
- Available with 1/4NPT or G3/8 connections
- With rear threads for panel mounting

TECHNICAL DATA

Female connections

¼" NPT: FF, MF or FM
G3/8: FF

Seat gasket

PCTFE

Diaphragm

Hastelloy®

Orifice size

Ø 4mm

Weight

310g

Leakage rate

10⁻⁸ mbar ℓ/s He

Operating temperature

-20 °C to +60 °C

Inlet position

Left

Max. inlet pressure

50/230 bar
725/3.335 psi

Flow coefficient (Kv)

0.17 Kv/0.2 Cv

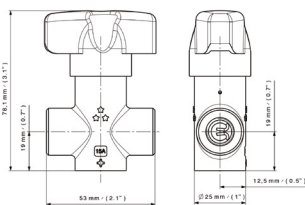
Conical inlet

OK 2x M5 to Ø18mm

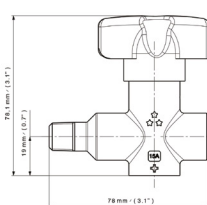
Outlet position

Right

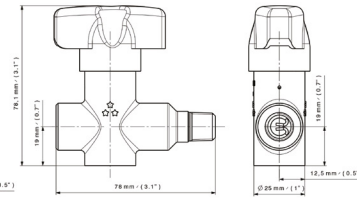
¼" NPT FF & G3/8" FF



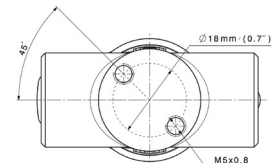
¼" NPT MF



¼" NPT FM



REAR MOUNTING



PRODUCT CONFIGURATOR

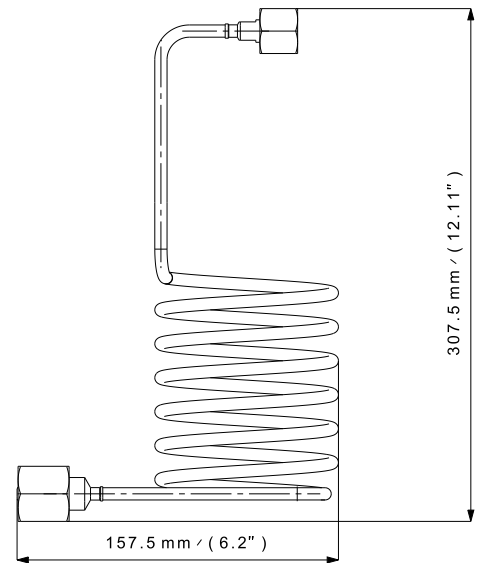
		Body material	Inlet pressure		Orientation	Connections	Steering wheel		
V	D	B	50	F	FF	N	1/4T		
		Chrome-plated brass	B	50 bar / 725 psi	50 Female - Female	FF ¼" NPT	N ¼" turn	1/4 T	
			230 bar / 3.335 psi	230 Male - Female (only with ¼NPT)	N G3/8	G			
				Female - Male (only with ¼NPT)	N				



I LYRES F

KEY FEATURES

- Cylinder connections to the following standards;
 - AFNOR
- Other connections: on request
- Outlet connections: G 3/8 - female
- Material: stainless steel



LT	Part Number	Type	Material	Connection	Nominal Pressure (bar)
C	202597990092	Straight	SS	G3/8	300

FX 06 F

FLEXIBLE PIPES



KEY FEATURES

- Stainless steel hose (FX 06)
- Compatible with neutral and corrosive gases, depending on hose type
- The hose consists of a double braid, an inner core and stainless steel end fittings
- The standard hose is fitted with a stainless steel safety cable

TECHNICAL DATA

Female connections

¼" NPT: FF, MF or FM
G3/8: FF

Seat gasket

PCTFE

Diaphragm

Hastelloy®

Orifice size

Ø 4mm

Weight

310g

Leakage rate

10⁻⁹ mbar l/s He

Operating temperature

-20 °C to +60 °C

Inlet position

Left

Max. inlet pressure

50/230 bar
725/3.335 psi

Flow coefficient (Kv)

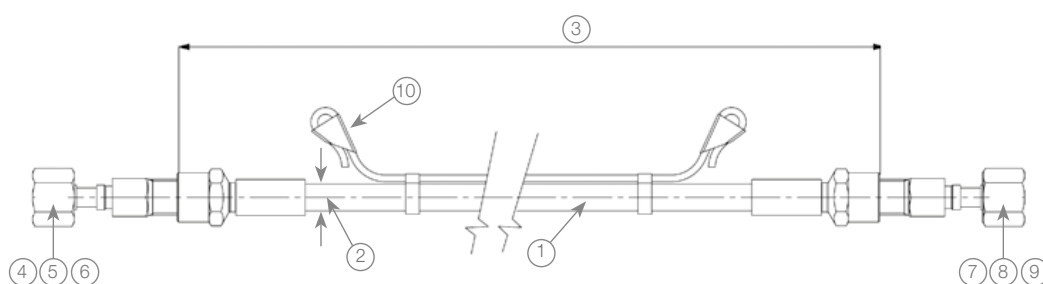
0.17 Kv/0.2 Cv

Conical inlet

OK 2x M5 to Ø18mm

Outlet position

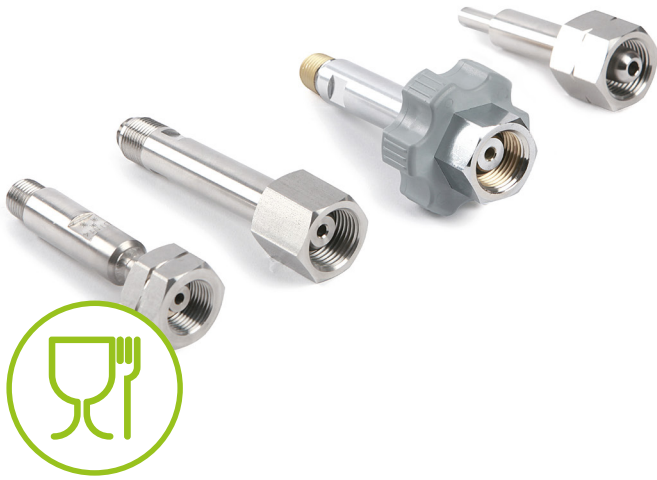
Right



PRODUCT CONFIGURATOR

Type	Internal diameter	Length	Connection type	Connection size	Thread	Options		
FX06	F	DN¼	1500	NF	C	G6	B	
Stainless steel 316L/304	FX 06 ¼"	DN ¼	1.500 mm	15 00 AFNOR	Type C Type E Type F	C E F	G 3/8 - Female with rotating nut G6 Elbow on side of bottle	B

■ CYLINDER CONNECTIONS



KEY FEATURES

- Cylinder connection to the following standards; AFNOR, DIN, BS, UNI...
- Other fittings on request
- Outlet connection: 16 x 1.336 - male or 1/4" NPT - male
- Material: Chrome-plated brass or stainless steel



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Rotarex SRG is a pioneer in LPG, butane & propane valves and pressure regulators for gas tank and gas cylinders used in the industry, at home, or for vehicles & forklifts.



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Rotarex Solutions offers a wide range of components and systems for beverages carbonation and nitrogenation to offer new drinking sensations at home, in a bar or at work.



Automotive

Clean energies are the future of transportation. Rotarex offer a wide range of valves and regulators for hydrogen, LPG and CNG vehicles that meet the automotive requirements combining safety, lightness & performances.





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