

GLOOR

Pressure regulators



Pressure regulators for a wide range of applications

Pressure regulators are used to reduce a gas from a higher input pressure (p_1) to a lower output pressure (p_2). They are used everywhere where compressed gas from tank systems or high-pressure cylinders has to be reduced to a particular working pressure. Important quality features of our pressure regulators include high regulation accuracy at various gas outlet rates (V) together with an automatic response to the reduction in inlet pressure as the cylinder contents decrease.

GLOOR pressure regulators can be supplied for all non-aggressive gases and can be fitted with any of the standard international gas connections. The most important areas of application for pressure regulators are:

- Gas Welding and Cutting
- Inert gas-shielded welding
- Compressed air technology
 - Foodstuffs industry
- Beverages industry / Gastro-technology
 - Medicinal technology
- Laboratory applications
- etc

Our pressure regulators conform to the valid European (EN) and international (ISO) standards, and represent state-of-the-art technology. The entire company is certified to ISO 9001 and to ISO 13485. A comprehensive final check guarantees both your safety and the superior quality of our products.

If you cannot find the pressure regulator you are looking for in this brochure, please contact us. Alongside our standard models, we also manufacture a large selection of special models manufactured to customer specifications.

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General information

The flow rates quoted for the individual pressure regulators are for compressed air, unless otherwise stated. For all other technical gases, the flow rate can be calculated from the values for compressed air using the following conversion factors:

Conversion factor:	Argon	0.85	Nitrogen	1.02
	Oxygen	0.95	Methane	1.40
	Carbon dioxide	0.81	Hydrogen	3.79
	Helium	2.77	Nitrous oxide	0.81

Example: Compressed air 40 Nm³ / h
Flow rate for Argon $40 \times 0.85 = 34 \text{ Nm}^3 / \text{h}$

Pressure regulators for acetylene are generally designed for an inlet pressure of 17 bar (at 15°C) and a working pressure of max. 1.5 bar.

The working pressure values given in the table are those of the standard model. Other working pressure ranges (other than for acetylene) can be obtained on request.

All pressure values given are excess pressure values.

When ordering, please state both the gas to be used and, for hose outlets, the type of hose connection (for 5, 6, or 8 mm internal hose diameter).

Except as noted otherwise, our pressure regulators are available in versions for the following gases:

-acetylene (A)	-formation gas (NH)
-argon (AR)	-nitrous oxide (NO)
-carbon dioxide (C)	-nitrogen (N)
-compressed air (DL)	-oxygen (O)
-hydrogen (H)	-propane (P)
-helium (HE)	-mixture combustible (LG)
-natural gas / methane (M)	-mixture non combustible (RG)

Pressure Regulators for General Use

Pressure Regulators for High Pressure

The standard single-stage pressure regulators are characterised by a very robust construction and an extremely constant pressure. These standard pressure regulators are mainly used in industry and trade. The ergonomic operating elements and the easily-read gauge contribute to a high level of user-friendliness. Without exception, all pressure-bearing parts are manufactured from brass. In the standard version, the pressure regulators are marked with the identification colour code of the corresponding gas, or are available in chrome or nickel finish. They are suitable for all gases and mixtures of gases at levels of technical purity (2.0).

Due to their consistent performance these single-stage regulators are in most cases also suitable for applications where two-stage regulators are normally used. For extremely accurate requirements at constant pressure, or where very small pressures are involved, two pressure regulators (high-pressure - low-pressure) can also be combined to form a two-stage pressure regulator.

TYP 51 Standard Pressure Regulator with pressure and contents gauges

This pressure regulator with pressure and contents gauges (diameter 63 mm) is of a very robust and solid construction and is suitable for most applications. The regulator is outstanding, both for accuracy of regulation and excellent pressure consistency. A sinter filter made of chrome-nickel steel protects the regulating valve from impurities and is an important contributory factor to the reliability of the regulator. Diaphragm made of EPDM. The ergonomically formed control knob allows a smooth and effortless pressure adjustment.

Pressure Regulators with Pressure Indication

Art. 5100



With pressure and contents gauges, integrated safety valve and shut-off valve in the outlet.

Connection: screw connector for cylinder
 Outlet: hose connector 3/8", 1/4", 1/2"
 Gases: all according table page 4

Art. Nr. 5100	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	10
Flow rate (Nm ³ /h)	30

Also available with working pressure ranges up to 6 bar, 4 bar, or 1.5 bar
 Version without shut-off valve Art. Nr. 5130 (hose connector 3/8", 1/4")

Art. 5160



This pressure regulator has the same construction as Art. Nr. 5100. Modifications to both spring and cover permit working pressures up to 60 bar.

Connection: screw connector for cylinder
 Outlet: threaded connector 3/8", 1/4", 1/2"
 Gases: AR, C, DL, HE, N, O, H

Art. No. 5160	5160-20	5160-40	5160-60
	compr. air	compr. air	compr. air
Inlet pressure (bar)	200	200	200
Working pressure (bar)	20	40	60
Flow rate (Nm ³ /h)	40	50	60

Art. 5180



This pressure regulator has the same construction as Art. Nr. 5100 and is suitable as a central pressure regulator for small gas supply systems. Also available with working pressure up to 60 bar. With pipeaway facility fitted to safety valve for venting gases to atmosphere.

Connection: screw connector (gas specific)
 Outlet: for pipeline installation (1/2" or soldered nipple)
 Gases: all according table page 4

Art. No. 5180	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	10
Flow rate (Nm ³ /h)	30

Flow rate for acetylene 5 m³/h

Pressure Regulators with Flow Indication

Art. 5150



Pressure regulator with contents gauge and with built-on flowmeter. Integral safety valve and shut-off valve on flowmeter. The flowmeter design ensures a clear reading of the delivered flow rate. Accuracy of measurement of the flowmeter $\pm 10\%$. Available in three flow rates (see below).

Connection: screw connector for cylinder

Outlet: hose connector 3/8", 1/4"

Gases: AR, C, DL, N, O, NH

Art. No. 5150	
Inlet pressure (bar)	200
Working pressure (bar)	4 (preset)
Flow rate (l/min)	0–3
	0–16
	0–32

When ordering, please state the gas and the desired range of flow rate.

Art. 5150-EC



Pressure regulator ECO with built-on flowmeter and integrated gas economizer. The pressure regulator ECO was especially designed to minimise the non-productive gas consumption which occurs at the beginning of every welding operation with MIG, MAG and WIG welding and hence reduce the costs of inert gas arc welding. The shorter the welding intervals, the greater the savings. The gas consumption can be reduced by more than 50% by using the integrated gas economizer. A higher weld quality is also obtained as a result of the uniform gas flow. Accuracy of measurement of the flowmeter $\pm 10\%$.

Connection: screw connector for cylinder

Outlet: hose connector 3/8", 1/4"

Gases: shielding gas, AR, C and their mixtures

Art. Nr. 5150-EC	
Inlet pressure (bar)	200
Working pressure (bar)	4 (preset), through gas economizer dynamic pressure of 0.9 bar at 10 l/min dynamic pressure of 1.2 bar at 16 l/min dynamic pressure of 2 bar at 32 l/min
Flow rate (l/min)	0–16
	0–32

The pressure regulator ECO is also available as a version for inlet pressure 300 bar.

Art. 5140

Pressure regulator with flow gauge, i.e. with indication l/min on secondary gauge. Integral safety valve. This pressure regulator is a cost effective alternative to Art.5150. With this system the flow is regulated by adjusting the secondary pressure (also via a throttle valve in the outlet).

Connection: screw connector for cylinder

Outlet: hose connector 3/8", 1/4"

Gases: AR, C, N, NH, O, DL

Art. Nr. 5140	
Inlet pressure (bar)	200
Working pressure (bar)	variable
Flow rate (l/min)	4-24/32 (0-7.9 bar)

Accessories:

rubber protection for gauges in red, blue, black or grey

Art.5120

TYP 66 Pressure regulator Flowcontrol with integrated flow selector

Extremely compact and robust pressure regulator with integrated flow selector for the exact measuring of the flow-rate. The working pressure is fixed at 4.5 bar. The amounts to be withdrawn can be selected according the version in steps of 0.5-5 l/min, 1-15 l/min or 4-25 l/min.

Art. 6689

Very simple handling by setting of the desired flow-rate on the flow selector. High level of accuracy of measurement irrespective of the cylinder pressure. With integrated safety valve and gauge with indication of the cylinder pressure. The field of application is mainly in TIG, MIG, WIG and MAG welding.

Connection: screw connector for cylinder

Outlet: connector for hose (for hose 6mm) or 1/4" inner thread

Gases: AR, C, N, O, DL

Art. Nr. 6689	
Inlet pressure (bar)	200
Working pressure (bar)	4.5 (firmly fixed)
Flow rate (l/min)	0.5 – 5 l/min 1 – 15 l/min 4 – 25 l/min

TYP 42 Standard Pressure Regulator compact type

This pressure regulator features a special construction with built-in gauges. Because of this construction the gauges are particularly well protected against external influences and the pressure regulator has a very compact form. The characteristics and applications are the same as for Type 51.

Pressure Regulator with Pressure Indication

Art. 4200



Pressure regulator with built-in gauges, integral safety valve and shut-off valve in the outlet.

Connection: screw connector for cylinder
Outlet: hose connector 3/8", 1/4", 1/2"
Gases: all according table page 4

Art. No. 4200	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	10
Flow rate (Nm ³ /h)	30

Version without shut-off valve Art. Nr. 4230 (hose connector 1/4", 3/8")

Pressure Regulator with Flow Indication

Art. 4250



With fitted flowmeter and gauge showing cylinder contents. Integral safety valve and shut-off valve on flowmeter. Accuracy of measurement of flowmeter +/-10%. Available in three different flow rates (see below).

Connection: screw connector for cylinder
Outlet: hose connector 3/8", 1/4"
Gases: AR, C, DL, N, O, NH

Art. No. 4250	
Inlet pressure (bar)	200
Working pressure (bar)	4 (preset)
Flow rate (l/min)	0-3 0-16 0-32

When ordering, please state the gas and the desired flow rate.

TYP 67 Mini Pressure Regulator with pressure and contents gauges

This Mini Pressure Regulator with pressure and contents gauges (diameter 50 mm), thanks to its compact design and small size, is particularly suitable for use on small cylinders (e.g. for mobile kits). Integral safety valve. A sintered filter made of chrome-nickel steel protects the regulating valve from impurities and is an important contributory factor to the reliability of the regulator. Diaphragm made of NBR. Instead of a lateral inlet and outlet, this pressure regulator has the inlet at the rear and the outlet at the front.

Pressure Regulator with Pressure Indication

Art. 6700



Mini pressure regulator with pressure and contents gauges (including rubber protection) and integrated safety valve.

Connection: screw connector for cylinder

Outlet: hose connector 3/8", 1/4"

Gases: all according table page 4

Art. No. 6700	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	10
Flow rate (Nm ³ /h)	15

Pressure Regulator with Flow Indication

Art. 6740



Mini pressure regulator with flow gauge, i.e. with indication l/min on secondary gauge. Integral safety valve. The flow is adjusted on the regulating screw by changing the secondary pressure and through a throttle valve in the outlet.

Connection: screw connector for cylinder

Outlet: hose connector 3/8", 1/4"

Gases: AR, C, O, DL, NH

Art. No. 6740	
Inlet pressure (bar)	200
Working pressure (bar)	variable
Flow rate (l/min)	1.6–16/22

TYP 68 Small Pressure Regulator with inlet pressure gauge only

Small pressure regulator made of brass with one pressure gauge. This regulator is particularly suited for applications with a preset working pressure (e.g. for small kits or as balloon filling valve). Diaphragm made of Neoprene 63; sinter filter made of bronze.

Pressure Regulator with Pressure Indication

Art. 6800



Pressure regulator with high pressure gauge (diameter 40 mm) for the indication of the cylinder content. With preset working pressure up to 8 bar (as required). Integral safety valve.

Connection: screw connector for cylinder

Outlet: fixed hose connectors 5, 6 or 8 mm

Gases: C, DL, H, HE, N, O, AR

Art. No. 6800	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	up to 8 (preset)
Flow rate (Nm ³ /h)	17

Art. 6825

Same as Art. 6800, but with preset working pressure at 2,5 bar.

Connection: screw connector for cylinder
 Outlet: fixed hose connectors 5, 6 or 8 mm
 Gases: C, DL, H, HE, N, O, AR

Art. No. 6825	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	2.5 (preset)
Flow rate (Nm3/h)	4

Balloon filling devices**Art. 6814**

Same as Art.6800, but with fitted balloon filling valve. Simple operation (but not suited for foil balloons).

Connection: screw connector for cylinder
 Outlet: balloon filling nipple
 Gases: HE, mixtures of helium and air

Art. No. 6814	helium
Inlet pressure (bar)	200
Working pressure (bar)	3.5 (preset)
Flow rate (Nm3/h)	–

Art. 6815

This device for filling balloons is very easy to use (but not apt for foil balloons). The balloon is put over the nipple on the end of the hose and by slightly bending the hose the valve opens so that the balloon can be filled up to the desired size. After having reached the desired size, the valve is closed again by releasing the hose. Seal off the balloon with a string or fastener and pull off the balloon from the nipple.

Art. 6816

The balloon filling device is available in two versions, i.e. with cylinder content gauge Art.6816 and without gauge Art.6815.

Connection: screw connector for cylinder
 Outlet: balloon filling nipple
 Gases: HE, mixtures of helium and air

Art. Nr. 6815 / 6816	helium
Inlet pressure (bar)	200
Working pressure (bar)	–
Flow rate (Nm3/h)	–

TYP 79 Main station pressure regulator for high flow rates

Single stage, high flow rate pressure regulator for high flow capacities. With working pressure and contents gauges (diameter 63 mm). All parts which are in contact with high pressure are made of brass; the bonnet of aluminium. The material of the diaphragm is CR, the material of the valve seat is POM. A sinter filter made of chromnickel steel in the inlet protects the regulator from impurities. This pressure regulator is particularly suitable as a central pressure regulator in central gas supply systems of a certain size (cylinder manifold or rack of cylinders). With highly variable working pressure and low inlet pressure, the addition of a second pressure regulator (Art.7901) may be advisable.

Pressure Regulator with Pressure Indication

Art. 7900



With working pressure and contents gauges and integral safety valve. With pipeaway facility fitted to safety valve for venting gases to atmosphere. Standard version with working pressure up to 10 bar. Also available with working pressure up to 20 or 30 bar (see below).

Connection: screw connector (gas specific)

Outlet: 3/4", 1/2"

Gases: all according table page 4

Art. No. 7900	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	10
Flow rate (Nm ³ /h)	180

Flow rate for acetylene 35 Nm³/h

for working pressure up to 20 bar

Art. No. 7900-20

Flow rate 230 Nm³/h

for working pressure up to 30 bar

Art. No. 7900-30

Flow rate 270 Nm³/h

Pressure Regulator for high working Pressure (up to 100, resp. 200 bar)

This new product line of pressure regulators was developed in particular for applications which require a very high working pressure. Piston pressure reducing valve which guarantees for a precise and stable setting of the secondary pressure. The resistance of the inlet pressure and outlet pressure chamber are tested analog EN ISO 7291. A safety valve for the protection of the pressure regulator is due to the high testing pressure (540 bar) not necessary.

Art. 7902



The pressure regulator is available in version for working pressure up to 100 bar or up to 200 bar. The working pressure is infinitely adjustable on the handwheel between 10 – 100 bar, resp. between 10 – 200 bar. For an easy pressure adjustment the handwheel shows at the front a hexagon, so that the pressure adjustment can also be made by means of a socket wrench 8 mm.

Connection: screw connector (gas specific)

Outlet: inner thread G 3/8", as option with thread nipple
W21, 8x1/14W male thread for high pressure hose or
Swagelok shut-off valve 1/4"

Gases: AR, DL, H, M, N, O

Art. Nr. 7902	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	100 (Art. 7902-1) 200 (Art. 7902-2)
Flow rate(at p ₁ : 200 bar)	p ₂ : 20 bar = 66m ³ /h, p ₂ : 50 bar = 380 m ³ /h

Pressure Regulators for inlet pressure 300 bar

The following pressure regulators were especially developed for the 300 bar cylinders which are only recently on the market. The regulators are available in different versions (one stage / two stage) and with working pressure gauge or with flowmeter.

Art. 5300



Standard pressure regulator (construction same as Art. 5100, but for inlet pressure up to 300 bar) with excellent pressure constancy. Equipped with pressure and contents gauges, integral safety valve and shut-off valve in the outlet.

Connection: screw connector for cylinder (to ISO 5145)

Outlet: hose connector 3/8", 1/4", 1/2"

Gases: all according table page 4

Art. No. 5300	compressed air
Inlet pressure (bar)	300
Working pressure (bar)	10
Flow rate (Nm ³ /h)	30

Also all other versions of Typ 51 regulators (see page 5) are available with inlet pressure 300 bar.

Art. 6900



Pressure regulator with pressure and contents gauges, integral safety valve and shut-off valve in the outlet. Inlet at the rear, pressure adjusting screw at the front. Material: brass, nickel plated. Sintered filter in bronze, diaphragm made of Neoprene EFFBE.

Outlet : hose connector 1/4"

Gases: AR, C and their mixtures

Art. No. 6900	compressed air
Inlet pressure (bar)	300
Working pressure (bar)	0–10
Flow rate (Nm ³ /h)	16

Art. 6917



Two-stage pressure regulator 300 bar. Thanks to its two-stage construction, this pressure regulator has a very high pressure constancy, and is particularly suitable for applications which require a very stable secondary pressure.

Connection: screw connector for cylinder (to ISO 5145)

Outlet : hose connector 1/4"

Gases: AR, C and their mixtures

Art. No. 6917	compressed air
Inlet pressure (bar)	300
Working pressure (bar)	0.5–3 bar (preset)
Flow rate (Nm ³ /h)	2

Art. 6914

Pressure regulator with fitted flowmeter with fine regulation spindle (serves at the same time as shut-off valve) and safety valve. Accuracy of measurement of flowmeter $\pm 10\%$. Available for three different flow rates (see below).

Connection: screw connector for cylinder (to ISO 5145)

Outlet: hose connector 1/4", 3/8"

Gases: AR, C and their mixtures

Art. No. 6914	compressed air
Inlet pressure (bar)	300
Working pressure (bar)	4 bar (preset)
Flow rate (l/min)	0–3 0–16 0–32

The pressure regulator is also available as a version with two fitted flowmeters
Art. 6916

Art. 7950

High flow rate pressure regulator (construction same as Art. 7900, but for inlet pressure up to 300 bar). With working pressure and contents gauges and integrated safety valve. Standard version with working pressure up to 10 bar. Also available with working pressure up to 20, resp. 30 bar (s.below).

Connection: screw connector for cylinder (to ISO 5145)

Outlet: 3/4", 1/2"

Gases: all according table page 4

Art. No. 7950	compressed air
Inlet pressure (bar)	300
Working pressure (bar)	10
Flow rate (Nm ³ /h)	180

For working pressure up to 20 bar
performance 230 Nm³/h

Art. No. 7950-20

for working pressure up to 30 bar
performance 270 Nm³/h

Art. No. 7950-30

Art. 7903

Pressure regulator for high working pressure up to 100, resp. 200 bar (construction same as Art. 7902, but for inlet pressure 300 bar). Piston pressure reducing valve which guarantees for a precise and stable setting of the secondary pressure.

The pressure regulator is available in version for working pressure up to 100 bar or up to 200 bar. The working pressure is infinitely adjustable on the handwheel between 10 – 100 bar, resp. between 10 – 200 bar. For an easy pressure adjustment the handwheel shows at the front a hexagon, so that the pressure adjustment can also be made by means of a socket wrench 8 mm.

Connection: screw connector for cylinder (to ISO 5145)

Outlet: Inner thread G 3/8", as option with thread nipple
W21, 8x1/14W male thread for high pressure hose or
Swagelok shut-off valve 1/4"

Gases: AR, DL, H, M, N, O

Art. Nr. 7903	compressed air
Inlet pressure (bar)	300
Working pressure (bar)	100 (Art. 7903-1) 200 (Art. 7903-2)
Flow rate (at p ₁ : 200 bar)	p ₂ : 20 bar = 66m ³ /h, p ₂ : 50 bar = 380 m ³ /h

Pressure Regulators for Low Pressure

Low pressure regulators are used with an inlet pressure up to 40 bar and are suitable for precision regulation at the workplace in gas distribution systems. It is also possible to use them together with a high pressure regulator as a second stage. This makes particular sense with a highly variable inlet pressure and the need for a very stable working pressure.

Type 79 Low Pressure Regulator for high flow rates

Pipeline pressure regulator for precision regulation of the working pressure with high flow rates. With sinter filter made of chrome nickel steel in the inlet; the material of the diaphragm is CR, the material of the valve seat is POM.

Art. 7901-10



Low pressure regulator Type 79 for very high flow rates with an inlet pressure up to 40 bar. With working pressure gauge and adjusting screw for the precise regulation of the working pressure at the workplace.

Connection: for pipeline installation

Outlet: 3/4", 1/2"

Gases: all according table page 4

Art. No. 7901-10	compressed air
Inlet pressure (bar)	40
Working pressure (bar)	0–10
Flow rate (Nm ³ /h)	180

Working pressure up to 20 bar

Art. No. 7901-20

Flow rate 200 Nm³/h

Working pressure up to 30 bar

Art. No. 7901-30

Flow rate 230 Nm³/h

Low Pressure Regulator for High Flowrate

The application of this single-stage regulator is everywhere, where in spite of a low inlet pressure a high flowrate is required. This is particularly the case in distribution pipelines from liquid tanks with subsequent vaporization. The regulator is a diaphragm regulator which is characterized by a high flowrate (depending on pressure ratio up to 450 Nm³/h) even with a relatively small difference between inlet and outlet pressure. And this with a high pressure constancy. Thanks to the compact design, the regulator is light in weight, very robust and therewith not susceptible for breakdowns. The regulator is suited for oxygen (burn-out test for oxygen BAM).

Art. 7905-20



Low pressure regulator with mounted working pressure gauge and regulating screw for the adjustment of the working pressure. Diaphragm made of NBR, filter in the inlet made of sinter bronze.

Connection: G 1/2" outer thread

Outlet: G 1/2" inner thread, as a option with nipple 1/2" outer thread

Gases: all according table page 4 (except acetylene)

Art. Nr. 7905-20	compressed air
Inlet pressure (bar)	50
Working pressure (bar)	20
Flow rate (Nm ³ /h)	400 m ³ /h (at p ₁ = 50 bar, p ₂ = 20 bar)

Art. 7905-40

Low pressure regulator with mounted working pressure gauge and regulating screw for the adjustment of the working pressure up to 40 bar. Diaphragm made of NBR, filter in the inlet made of sinter bronze.

Connection: G 1/2" outer thread

Outlet: G 1/2" inner thread, as a option with nipple 1/2" outer thread

Gases: all according table page 4 (except acetylene)

Art. Nr. 7905-40	compressed air
Inlet pressure (bar)	50
Working pressure (bar)	40
Flow rate (Nm ³ /h)	450 m ³ /h (at p ₁ = 50 bar, p ₂ = 40 bar)

TYP 56 Standard Low Pressure Regulator

Universally applicable pipeline regulator for the precision regulation of the working pressure at the workplace. With sintered filter made of chrome nickel steel in the inlet; diaphragm and valve seat made of NBR.

Pressure Regulators with Pressure Indication**Art. 5600**

Low pressure regulator with gauge (diameter 63 mm) and pressure adjusting screw for the precise regulation of the working pressure.

Connection: screw connector 1/2" R or L, alternatively 3/8" R or L

Outlet: hose connector 3/8", 1/4"

Gases: all according table page 4

Art. No. 5600	compressed air
Inlet pressure (bar)	max. 40
Working pressure (bar)	0–10
Flow rate (Nm ³ /h)	20

Also available with working pressure up to 1.5 bar.

Art. 5610

Low pressure regulator for higher delivery rates, with gauge and adjusting screw for regulating the working pressure.

Connection: screw connector 1/2" R or L, alternatively 3/8" R or L

Outlet: screw connector 3/8", 1/4"

Gases: all according table page 4 (except acetylene)

Art. No. 5610	compressed air
Inlet pressure (bar)	max. 40
Working pressure (bar)	0–6
Flow rate (Nm ³ /h)	30

Art. 5620

Low pressure regulator for higher working pressures, with gauge and adjusting screw for the regulation of the working pressure.

Connection: screw connector 1/2" R or L, alternatively 3/8" R or L

Outlet: screw connector 3/8", 1/4"

Gases: all according table page 4

Art. No. 5620	compressed air
Inlet pressure (bar)	max. 40
Working pressure (bar)	0–20
Flow rate (Nm ³ /h)	20

Pressure Regulators with Flow Indication

Art. 5650



Low pressure regulator with built-on flowmeter with shut-off valve. The flowmeter design ensures a clear reading of the delivered flow rate. Accuracy of measurement of flowmeter $\pm 10\%$. Available for three flow rates (see below). Also available with ventilation valve on outlet.

Connection: screw connector 1/2" R or L

Outlet: hose connector 3/8", 1/4"

Gases: AR, C, DL, N, O, NH

Art. No. 5650	
Inlet pressure (bar)	max. 40
Working pressure (bar)	4 (preset)
Flow rate (l/min)	0–3
	0–16
	0–32

Art. 5650-EC



Low pressure regulator ECO with built-on flowmeter and integrated gas economizer. The pressure regulator ECO was especially designed to minimise the non-productive gas consumption which occurs at the beginning of every welding operation with MIG, MAG and WIG welding and hence reduce the costs of inert gas arc welding. The shorter the welding intervals, the greater the savings. The gas consumption can be reduced by more than 50% by using the integrated gas economizer. A higher weld quality is also obtained as a result of the uniform gas flow. Accuracy of measurement of flowmeter $\pm 10\%$.

Connection: screw connector for cylinder

Outlet: hose connector 3/8", 1/4"

Gases: shielding gas, AR, C and their mixtures

Art. Nr. 5650-EC	
Inlet pressure (bar)	max. 40
Working pressure (bar)	4 (preset), through gas economizer dynamic pressure of 0.9 bar at 10 l/min dynamic pressure of 1.2 bar at 16 l/min dynamic pressure of 2 bar at 32 l/min
Flow rate (l/min)	0–16
	0–32

Art. 6621



Flowmeter only, accuracy of measurement $\pm 10\%$, with shut-off valve. Calibrated to a preset inlet pressure of 4 bar; available for three flow rates: 0–3, 0–16 or 0–32 l/min.

Connection: 1/4"

Outlet: hose connector 3/8", 1/4"

Gases: AR, C, DL, N, O, NH

Art. No. 6621	
Inlet pressure (bar)	4
Flow rate (l/min)	0–3
	0–16
	0–32

Same as Art.6621, but nickel plated version

Art. 6620

Art. 5640

Low pressure regulator with flow gauge, i.e. with indication of the output flow in l/min on the gauge. The flow rate is regulated by adjusting the secondary pressure.

Connection: screw connector 1/2" R or L
 Outlet: hose connector 3/8", 1/4"
 Gases: AR, C, DL, N, O, NH and their mixtures

Art. No. 5640	
Inlet pressure (bar)	40
Working pressure (bar)	adjustable
Flow rate (l/min)	4–24/32

TYP 28 Precision Pressure Regulator for very low pressures

Pressure regulator for the precision regulation of the working pressure. Also suitable as second stage regulator for the precise regulation of very low working pressures. Material of diaphragm and valve seat is NBR.

Art. 2850/2860

With working pressure gauge (diameter 50 mm) with 1/10 bar division on scale range and lockable pressure adjusting screw.

Connection: 3/8" left or right
 Outlet: hose connector 3/8" left or right
 Gases: DL, O, N, A, P, H

Art. No. 2850	
Inlet pressure (bar)	max. 20
Working pressure (bar)	0–0.7

Version for fuel gas Art. 2860
 inlet pressure 1 bar, working pressure 0–0.7 bar

Pressure Regulators for propane and butane

Art. 6200

Pressure regulator with working pressure gauge, compact and robust construction. Suitable for applications where propane and oxygen are used in combination. Material of diaphragm and valve seat is NBR.

Connection: W 21.8 x 1/14" L
 Outlet: hose connector 3/8" left

	Art. No. 6200	Art. No. 6202
Test pressure (bar)	30	30
Working pressure (bar)	0–2	0–4
Flow rate (kg/h)	18	30

Version with angle in the outlet Art. 6200-W
 Art. 6202-W

Art. 6201

Pressure regulator without working pressure gauge, compact and robust. Suitable for applications where propane only is used or in combination with ambient air.

Connection: W 21,8 x 1/14" L

Outlet: hose connector 3/8" left

Art. No. 6201	
Test pressure (bar)	30
Working pressure (bar)	0–4
Flow rate (kg/h)	30

Version with angle in the outlet

Art. 6201-W

Version for cylinders with submerged tube (liquid gas),
cylinder connection 3/4" L

Art. 6201-3/4L

Pressure Regulators for Special Applications

Pressure Regulators for protective gas and laboratory applications

New range of pressure regulators in very compact and attractive design. Brass, nickel plated. With sintered filter made of chrome-nickel steel. Diaphragm made of CR; valve seat POM; upon request also available with Teflon coated diaphragm. Sintered filter made of brass. This range is particularly suitable for use with protective gas welding and in laboratories.

Art. 6613

Pressure regulator with contents gauge for indication of cylinder pressure, but without working pressure gauge; with preset working pressure and integral safety valve. A fine regulation spindle enables a precise regulation of small quantities of gas (also for the aeration of aquariums).

Connection: screw connector for cylinder

Outlet: hose connector 1/2"

Gases: AR, C, DL, HE, N, O

Art. No. 6613	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	4 (preset)
Flow rate (Nm ³ /h)	2

Art. 6617

Two-stage pressure regulator with indication of cylinder content and working pressure. Particularly suitable for applications requiring a very constant secondary pressure. Working pressure preset from 0.5 to 3 bar (as required). Also available with Teflon coated diaphragm for analysis equipment.

Connection: screw connector for cylinder
 Outlet: hose connector 1/2", 3/8", 1/4"
 Gases: AR, C, DL, HE, N, O

Art. No. 6617	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	0.5 to 3 (preset)
Flow rate (Nm ³ /h)	2

Design as above, but with adjustable working pressure between 0.5 to 3 bar. Art. 6618

Art. 6614

Pressure regulator with contents gauge and fitted flowmeter; integral safety valve. The flowmeter design ensures a clear reading of the delivered flow rate. Diaphragm made of Neoprene EFFBE; also available with Teflon coated diaphragm upon request.

Connection: screw connector for cylinder
 Outlet: hose connector 1/4", 3/8"
 Gases: AR, C, DL, N, O, NH

Art. Nr. 6614	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	4 (preset)
Flow rate (Nm ³ /h)	0-3 0-16 0-32

As an option, also available with ventilation valve.

Art. 6616

Same as Art.6614, but with two fitted flowmeters for the simultaneous connection of two pieces of equipment.

Connection: screw connector for cylinder
 Outlet: hose connector 1/4", 3/8"
 Gases: AR, C, DL, N, O, NH

Art. No. 6616	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	4 (preset)
Flow rate (l/min)	0-3 0-16 0-32

Pressure Regulators for disposable gas bottles

These small pressure regulators are suitable for all gases that are supplied in disposable gas bottles (cartridges, cans). Applications are in particular in the field of test gases, which are supplied in disposable gas containers with filling pressure up to 11 bar for applications in laboratory and industry. Pressure regulation through NBR 75 Shore diaphragm. Also available with Teflon coated diaphragm.

Art. 2910



Pressure regulator with cylinder contents gauge. Flow rate with fully opened pressure adjusting screw alternatively 0.25, 0.5, 1.5 or 2.5 l/min. The pressure adjusting screw serves also as a shut-off valve. Particularly suitable for applications in which a precisely defined flow rate and secondary pressure are required.

Connection: screw connector for disposable gas bottle (UNEF 7/16" x 1/28)

Outlet: - for synthetic hose 2.5 up to 6 mm
- spout 1/4" x 20 mm for Swagelok

Gases: all (except corrosive and aggressive gases)

Art. No. 2910	compressed air
Inlet pressure (bar)	11
Working pressure (bar)	max. 0.6
Flow rate (l/min)	4 versions: 0.25, 0.5, 1.5, 2.5

When ordering, please indicate the desired flow rate and the outlet for hose Art. 2910-U or spout for Swagelok Art. 2910-S.

Art. 2920/2930



Pressure regulator with cylinder contents gauge and alternatively with flow gauge or working pressure gauge. Pressure and flow rate are adjustable in the ranges stated.

Connection : screw connector for disposable gas bottle (UNEF 7/16" x 1/28)

Outlet: - for synthetic hose 2.5 up to 6 mm
- spout 1/4" x 20 mm for Swagelok

Gases: all (except corrosive and aggressive gases)

Art. No. 2920	compressed air
Inlet pressure (bar)	11
Working pressure (bar)	max. 1.5
Flow rate (l/min)	0–1.5 0–2.5

Art. No. 2930	compressed air
Inlet pressure (bar)	11
Working pressure (bar)	0–1.5

When ordering, please indicate the desired outlet for hose

for Swagelok Art. 2920-U / 2930-U or
Art. 2920-S / 2930-S.

Pressure Regulators for high purity gases

This range of pressure regulators is suitable for all gases and gas mixtures of a purity up to 6.0, with the exception of corrosive gases. The pressure regulators are suitable for an operating temperature of -20 to + 60°C. The leakage rate for helium is $< 1 \cdot 10^{-6}$ mbar . l . s⁻¹. The pressure regulators and change-over stations are of modular construction and can be supplied according to customer requirements. Please ask for our special catalogue and the configuration leaflets.

Single Stage Pressure Regulator for high purity gases

Art. 7810



High pressure regulator for high purity gases (6.0). Pressure regulation through metal diaphragm. The pressure regulator is made of brass; the outer parts are chrome plated (sealing material CU flat seal and O-ring at metal diaphragm in FPM). With inlet and outlet pressure gauge and integral safety valve. In versions for wall-mounting with or without purging block (high pressure shut-off valve with integrated purging set-up) or for connection to cylinder. The pressure regulator is of modular construction and can be supplied in different versions according to the range of application.

Options for connection :

- Inlet : left, right or from the rear
- Cylinder connection :
- gas specific
- union for high pressure hose with shut-off valve

Outlet options :

- Outlet left/right or downwards, internal thread G 1/4". The outlets can be used as useful outlet or as purging outlet.

Gases: AR, C, N, O, H and their mixtures

Art. No. 7810	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	0-4 0-6 0-10
Flow rate (Nm ³ /h)	12/14/16

Two-Stage Pressure Regulator for high purity gases

Two-stage cylinder pressure reducing valve for the accurate control of the working pressure of high purity gases and gas mixtures of a purity up to 6.0. The two-stage control guarantees an extremely constant working pressure. The pressure is reduced to 20 bar in the first pressure stage; in the standard version the working pressure can be set at the second pressure stage to between 0 – 10 bar. Also available in 0-6 bar, 0-4 bar and 0-1.5 bar versions. It is also optionally available with a fixed working pressure setting.

Art. 7815



The pressure regulator is fitted with a high pressure gauge (cylinder pressure) and a low pressure gauge for indicating the set working pressure of the second stage, an in-built sinter filter and a safety valve. Pressure regulation through stainless steel diaphragm. The application of the pressure regulator is particularly in the field of resonator gases of laser cutting equipment and as well everywhere in laboratories where gases with very stable working pressures are required. The pressure regulator has two outlets with G 1/4" inner thread which are used as useful outlet and purging outlet. As an option also available with pre-assembled cutting-ring union. Where only one outlet is required, the other is to be sealed with a blanking screw.

Connection: gas and country specific screw connector
 Outlet: G 1/4" inner thread, lateral and downward
 Gases: all high purity gases and gas mixtures with exception of corrosive gases

Art. Nr. 7815	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	0–1.5 0–4 0–6 0–10
Flow rate	$Q_1 = 18 \text{ Nm}^3/\text{h}$ / $Q_{\text{max}} = 32 \text{ Nm}^3/\text{h}$ (Ask for the flowchart)

Low Pressure Regulator for High Purity Gases

Art. 7820



Low pressure regulator for high purity gases (6.0). Sintered filter in inlet. Pressure regulation through metal diaphragm. Working pressure fully variable as required from 0–4 or 0–10 bar.

Connection: from rear G1/4" inner thread union nut
 Outlet: downward, 1/4" inner thread
 Gases: AR, C, N, O, H and their mixtures

Art. No. 7820	compressed air
Inlet pressure (bar)	20
Working pressure (bar)	0–4 0–10
Flow rate Nm ³ /h)	5/15

Also available combined with pipeline shut-off valve mounted on wall bracket as laboratory take-off station for one or two gases. Please ask also for our special leaflet for cylinder batteries for high purity gases.

Manual change-over switching station for High Purity Gases

Art. 7850



Manual change-over switching station for high purity gases with purity up to 6.0, consisting of two high pressure shut-off valves for alternate cylinder operation, main pressure regulator with safety valve, including purging valve. All parts fixed on an aluminium baseplate with specific gas identification.

- Option:
- On useful outlet and purging outlet with Swagelok shut-off valve for cutting-ring union
 - with two purging blocks (high pressure shut-off valves with integrated purging set-ups) instead of the two shut-off valves
- Gases: AR, C, N, O, H and their mixtures

Art. No. 7850	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	0–4 0–6 0–10
Flow rate (Nm3/h)	12/14/16

Automatic change-over switching station for high purity gases

Art. 7860



Automatic change-over switching station for high purity gases (up to 6.0), consisting of two high pressure shut-off valves with integral purging outlets, two combined high pressure regulators with cylinder pressure gauges as well as integral safety valve and working pressure gauge. The system operates on the basis of the differential pressure. With the change-over lever the side in operation is selected. If the cylinder pressure drops below the adjusted pipeline pressure, the pipeline is fed from the other side through the differential pressure.

By operating the change-over lever, the system is reset to its normal status and the differential pressure is removed. The pipeline pressure can be adjusted between 3 and 10 bar. All parts fixed on an aluminium baseplate with specific gas identification.

Gases: AR, C, N, O, H and their mixtures

As option the semi-automatic change-over switching station can also be equipped with an external alarm. This can be effected either with two pressure switches on the high pressure side with connection to a signal box or with a contact gauge on the low pressure side and connection to a signal box.

Art. No. 7860	compressed air
Inlet pressure (bar)	200
Working pressure (bar)	3–10
Flow rate Nm3/h)	max. 16

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GAS WELDING - PRESSURE REGULATION EQUIPMENT

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