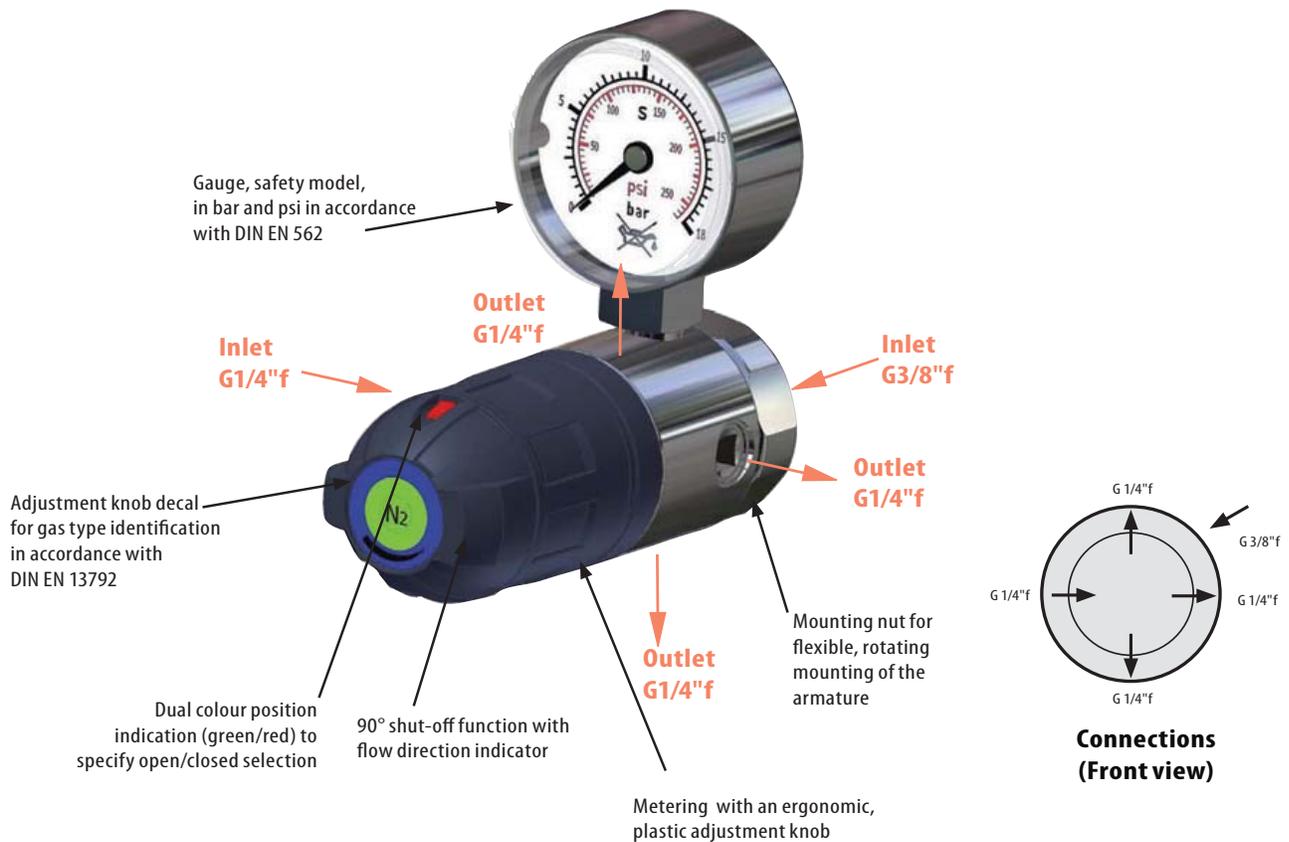


## Laboratory pressure regulator EMD 3100



### Pressure regulator with shut-off function

This highly compact version of a pressure regulator combines, in a very small space, pressure regulation and shut-off function of gas flow. This is achieved through a successful combination of the pressure regulator parts with few extra shut-off components. Thereby reducing the pressure regulator and shut-off valve, normally as separate components, to a minimum. The structural size achieves the minimum dimensions. With this construction the inlet and outlet can be attached and interchanged with the greatest flexibility. The use of perfected, core components of the Series 400, available since decades, together with a few new elements ensures the performance and high quality of this construction from the beginning.

### Series specific Data\*

#### Version

Single-stage pressure regulator with high performance values (see chapter 5).

Inlet pressure 40 bar.

Downstream pressure range 0.2 - 10.5 bar / 7 - 150 psi,

Analysis version (EMD 3104) 0.1 - 2.2 bar / 1.5 - 33 psi.

#### Material

Stainless steel 316L (1.4404) specially cleaned and electro-polished or brass 2.0401.26 nickel-plated and chrome-plated.

#### Seal material

Seat: FKM and FFKM with stainless steel, FKM and EPDM with brass.

Seals: PCTFE with stainless steel and PVDF with brass in dependent upon gas used. Material is specified in each case in the "Technical Data".

#### Inner parts

Low-maintenance, easy to service, pressure regulating unit, with particle-filter in stainless steel and 50 µm mesh at inlet G3/8" f eg. 100µm at inlet G1/4" f.

### Modular system for maximum flexibility of configuration and scope of application

The basic version is available in the form of flush or surface wall mounting, bench mounted or hanging version. The use of system components from the similar series 400 further allowing for countless variations in the combination possibilities with the configurations of inlets and outlets, which can be tailored to the customers wishes: with regulating valve in elbow and straight versions (DN5), with additional inlet shut-off valve (in elbow or straight form), with flow meter or with diverse wall adaptors.

In this modular form this point-of-use system is particularly compatible and suitable for all lab applications and lab furnishings.

#### Diaphragm

Increased safety against burst and corrosion defects with the Hastelloy diaphragm.

#### Guaranteed leakage rates

< 1×10<sup>-9</sup> mbar l/s Helium (outboard),

< 1×10<sup>-6</sup> mbar l/s Helium (seat)

#### Purity

Purity and leakage rates comply with the requirements for applications with high gas purity ≤ 6.0.

#### Working temperature

-25 °C to +70 °C / -13 to 160 °F.

#### Inlet / Outlet connections

Inlet G 3/8" f, adaptors for other connections. Outlet connection for 6 mm tube, others upon request.

\*Differing data of the individual products in this section are listed in each case under "Technical Data".

## Laboratory pressure regulators EMD 3100

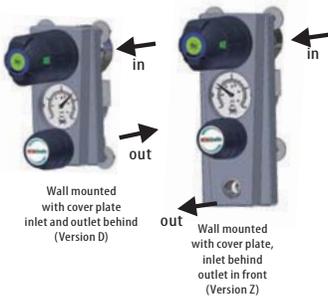
Single-stage,  
for inert, reactive, flammable and oxidizing gases  
and gas mixtures,  
purity max. 6.0,

**EMD 3100: Inlet pressure 40 bar, downstream pressure 0.1-10 bar**

**EMD 3104 (analysis version): Inlet pressure 12 bar,  
Downstream pressure 0.1-4.4 bar**



Basic Body



### Special features

- Pressure regulator with integrated shut-off function
- Coloured identification of shut-off positions
- Highly compact form
- ECD-compliant
- Ergonomic positioning of the operational elements
- User-friendly system solutions for laboratory applications through optimum arrangement of components with one another
- Gas type specific adjustment knob identification according to DIN EN 13792
- Analysis version optionally available

### Description

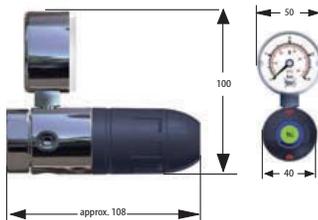
The basic version of this pressure regulator with gauge includes an integrated quick-closing function. The gas type is indicated on the front side of the pressure regulator with the appropriate decal. The flush mounted version is mounted complete with cover, regulating valve with shut-off function and gauge, whereby the gauge, can be rotated 90° each way depending on the mounting orientation for reading. The wall mounting is achieved using a wall adapter and wall mounting plate, the gas supply is brought in through the wall. Further installation versions (on mounting plates) allow for the gas supply to come from the top or the bottom. The bench mounting or the wallmounted version is simply and flexibly accomplished with the help of the same adaptor (delivered accordingly mounted). Numerous other variations are possible, see separate data sheet.



### Application

This highly compact, space saving designed laboratory point-of-use regulator is suitable for flush or surface wall mounting, for installation on tables or a wallmounted version as well as the installation in diverse supply channels. This systems versatile configuration options cover all the customary lab applications and fits to all laboratory furnishings. An analysis version (LAB 3104) is specially designed for low pressure applications and offers extremely fine adjustment possibilities for pressure and flow rate.

### Dimensions



### Technical Data

Body:	Stainless steel 316L (1.4404) specially cleaned and electro-polished or brass CW614 (CuZn39Pb3) specially cleaned, nickel-plated and chrome-plated
Gauge:	safety gauge according to EN 562 Nominal width 50 mm, class of accuracy 2.5
Pressure gauge range:	0 - 2.5 / 6 / 16 bar , 0 - 3 / 6 bar (Type 3104)
Dimensions (w×h×d):	approx. 50×100×108 mm
Weight:	approx. 0.64 kg (Basic body)
Inlet - Outlet:	G 3/8" f or G 1/4" f or NPT1/4" f — G 1/4" (depending on version)

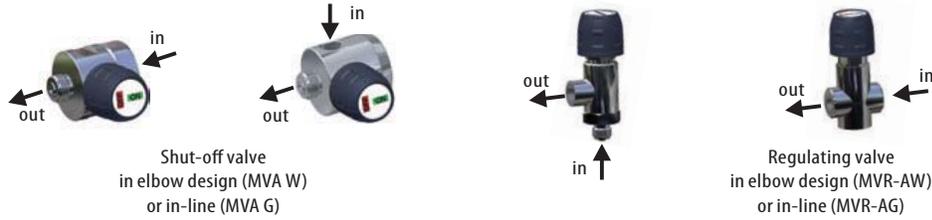
### Order code

Type	Periphery	Material	Upstream pressure	Downstream pressure	Version**	Pressure gauge adjustment knob orientation	Inlet	Outlet	Gas type
<b>EMD 3100</b>	<b>-01</b>	<b>BC</b>	<b>E</b>	<b>6</b>	<b>0</b>	<b>N</b>	<b>CL8</b>	<b>CL10SS</b>	<b>Gas</b>
Standard	-01= Pressure regulator (MD)	BC= brass	E= 40 bar D= 12 bar	1.5= 0.2-1.5 bar 6= 0.5-6 bar	<b>Surface mounted</b> 0= Basic module	N= upwards E= right	0=without *	0=without * CL8**	Please specify
Analysis version	-06= MD + HP-shut-off valve -07= MD + LP-flame arrestor -08= MD + LP-MVAR -10= MD + HP-shut-off valve + LP-MVAR	SS= stainless steel	A= 1.5 bar (only C2H2)	10= 0.5-10.5 bar	P= Mounting plate W= with backing plate adaptor T= Bench mount H= Hanging version <b>Flush mounted</b> D= inlet and outlet from behind Z= Inlet from behind, outlet front	S= down W= left (For the flush mounted version)	CL8** CL10	CL10	

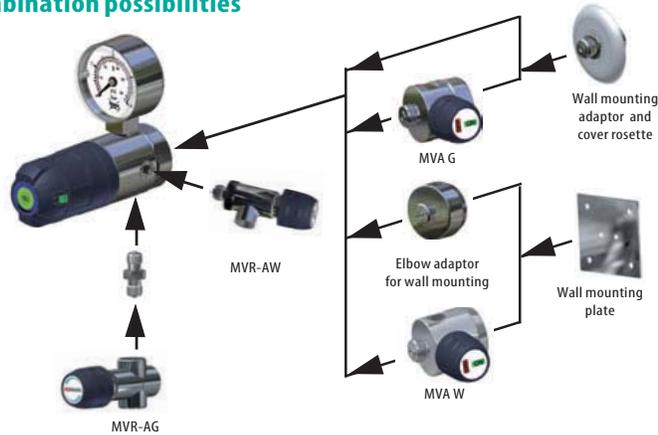
\*G1/4" F, G3/8" F or NPT1/4" F (depending on version). \*\*CL8 = tube fitting 8 mm, material as in pressure regulator. \* Versions see page 62.

## Laboratory press regulators EMD 3100 - Variations

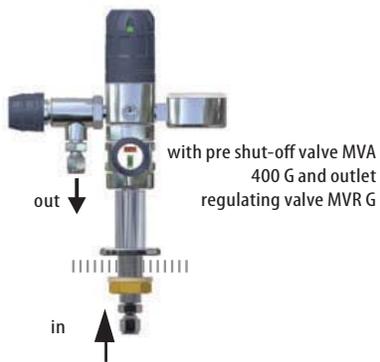
### Combinable with EMD 3100 shut-off valves and regulating valves with shut-off function



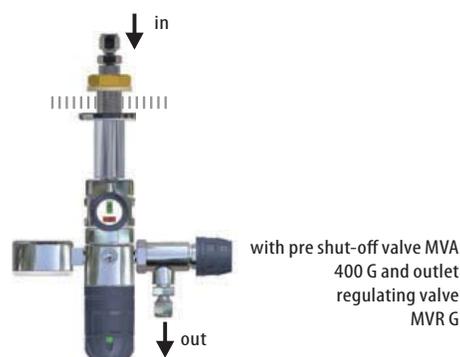
### EMD 3100 Combination possibilities



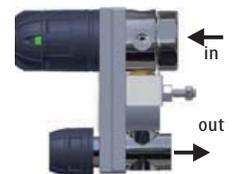
### EMD 3100 as bench mount (version T)



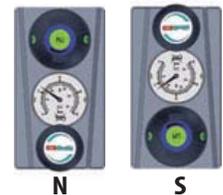
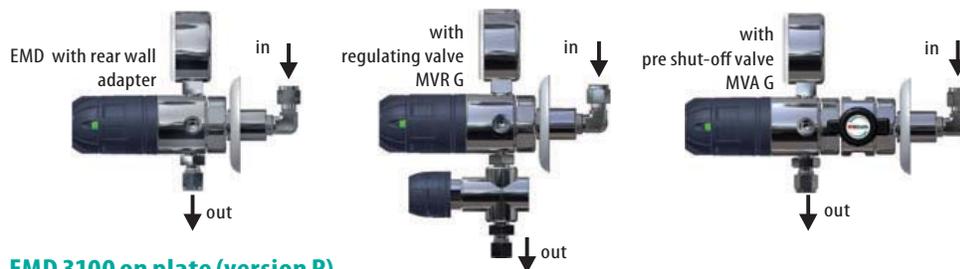
### EMD 3100 as hanging version (version H)



### EMD 3100 Wall mounted version (Z) with variable adjustment knob orientation



### EMD 3100 as surface mounted (W) with wall adaptor



### EMD 3100 on plate (version P)

