



CYLINDER REGULATORS

EDITION 1/2014

SERIES SPECIFIC DATA

BODY MATERIAL

Stainless steel 316L (1.4404) specially cleaned and electro-polished or brass CW614 (CuZn39Pb3) specially cleaned, nickel-plated and chrome-plated.

SEAL MATERIAL

PCTFE, FKM, EPDM, etc., dependant on gas specification and purity requirements. Material is specified in "Technical data".

INNER PARTS

Pressure regulator unit with integrated mesh filter from 10 µm mesh opening at inlet and 100 µm at outlet.

DIAPHRAGM

Good protection against burst and corrosion due to diaphragm material Hastelloy.

PERFORMANCE DATA

See chart chapter at the end of this catalog, for different performance data please contact GCEDruVa.

GUARANTEED LEAKAGE RATES

< 1×10^{-9} mbar l/s Helium (body).
< 1×10^{-6} mbar l/s Helium (seat).

WORKING TEMPERATURES

-25 °C to +70 °C / -13 °F to 158 °F

PURITY

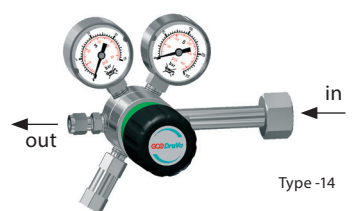
≤ 6.0

CYLINDER / INLET CONNECTIONS

Compliant with German national standards: DIN 477 and other connections as US-Norm CGA, British Standard BS etc. are available upon request.

*Differing data of specific components of the series 500 are listed in product "Technical data".

CYLINDER PRESSURE REGULATORS FMD 530-14/-16/-18



Type -14



Type -16



Type -18

**Single-stage,
for inert, reactive, flammable and oxidizing gases and
gas mixtures,
purity max. 6.0,
cylinder pressure 300 bar/ 4350 psi,
downstream pressure range 0.5 - 200 bar / 7 - 2900 psi**

SPECIAL FEATURES

- For 300 bar cylinders
- Diaphragm regulator
- ATEX compliant adjustment knobs

DESCRIPTION

The FMD 530-14 consists of a cylinder connection, pressure regulator body, upstream and downstream pressure gauges, relief valve (by downstream pressure >50bar RV on request) and outlet tube fittings. The use of contact gauge (accessories) in conjunction with alarm box (accessories) facilitates the monitoring of gas reserves.

APPLICATION

The cylinder pressure regulator series FMD 530 has a broad range of uses and excellent performance.

Type-14 is the basic model for independent gas supply with 300 bar cylinder.

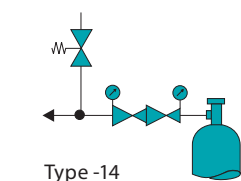
The type-16 allows shut-off/opening of the gas flow while maintaining the pressure regulator's adjustment and type-18 allows for pressure regulating as well as a finer control of gas flow.

TECHNICAL DATA

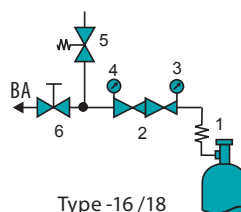
Body:	stainless steel 316L (1.4404) specially cleaned and electro-polished or Brass
	2.0401.26 specially cleaned, nickel-plated and chrome-plated
Seat seals:	PCTFE
Body seals:	PCTFE (Stainless steel), PVDF (Brass)
Relief valve:	Outlet NPT1/4"f, for downstream pressure >50bar AV*
Relief valve seat seals:	SS: FKM, (EPDM, FFKM)*, Brass: EPDM, (FKM)*,
Performance data:	see chapter 5
Basic design aspects:	see page 11
Pressure gauge range:	-1 - 10 bar (-15 - 145 psi)
	0 - 25 bar (0 - 365 psi)
	0 - 40 bar (0 - 600 psi)
	0 - 80 bar (0 - 1150 psi)
	0 - 300 bar (0 - 4350 psi)
	0 - 400 bar (0 - 5800 psi)
Weight:	approx. 1.5 kg (type -14), 1.8 kg (type -16/18)
Dimensions (w×h×d):	approx. 225×140×125 mm
Outlet:	NPT 1/4"f. optional tube fitting
Cylinder connections:	according to gas type, see chapter 5

*on request

FLOW SCHEMATIC



Type -14



Type -16/18

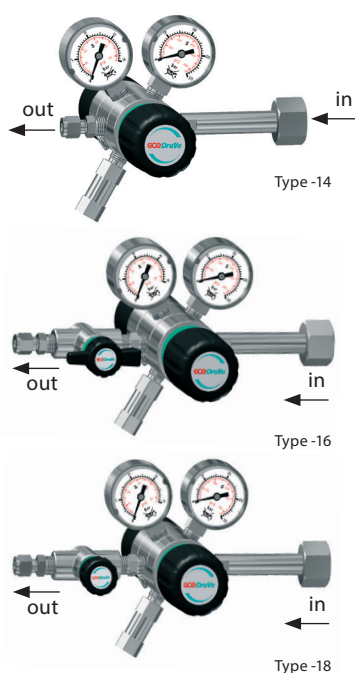
- 1 Cylinder connection
 - 2 Pressure regulator
 - 3 Upstream pressure gauge
 - 4 Downstream pressure gauge
 - 5 Relief valve
 - 6 Downstream shut-off valve (Type -16)
/ regulating valve (Type -18)
- BA Process gas outlet

ORDER CODE

Type	Material	Upstream pressure	Downstream pressure	Inlet	Outlet	Contact gauge	Gas type
FMD 530-14	BC	G	14	DIN	CL6 BC	Ki	GAS
FMD 530-14	BC = brass	G = 300 bar	6 = 0.5 - 6 bar / 7 - 85 psi	DIN	N14 = NPT 1/4"f	0 = without	Please
FMD 530-16	chrome-plated	/4350 psi	14 = 1 - 14 bar/15 - 150 psi	ANSI	CL3**	Ki = with	specify
FMD 530-18	SS = stainless steel		28 = 2.5 - 28 bar / 35 - 400 psi	AFNOR	CL6 (standard)		
			50 = 2.5 - 50 bar/35 - 720 psi	NBN	CL 1/8"		
			200 = 10 - 200 bar	BS 341	CL 1/4"		
			/150 - 2900 psi (not Type -18)	CGA	NO6		
				NEN			
				UNI			

** Outlet: CL3 = tube fitting for 3 mm outside diameter.

CYLINDER PRESSURE REGULATORS FMD 532-14/-16/-18



**Dual-stage,
for inert, reactive, flammable and oxidizing gases and gas mixtures,
not for oxygen,
purity max. 6.0,
cylinder pressure 300 bar/ 4350 psi,
downstream pressure range 0.2 - 10.5 bar/ 3 - 150 psi**

SPECIAL FEATURES

- For 300 bar cylinders
- Downstream pressure is independent of the upstream pressure due to the dual-stage design
- Higher reliability through the use of a relief valve

DESCRIPTION

The FMD 532 consists of a cylinder connection, pressure regulator body, upstream and downstream pressure gauges, relief valve and downstream regulating valve (FMD 532-18) or shut off valve (FMD 532-16). The use of contact gauge (accessories) in conjunction with alarm box (accessories) facilitates the monitoring of gas reserves.

APPLICATION

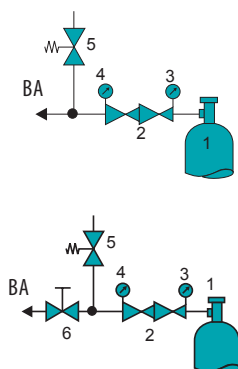
The cylinder pressure regulator series FMD 532 has a broad range of uses and excellent performance. The FMD 532-14 is the basic model for location-independent gas supply with 300 bar cylinder. The FMD 532-16 allows shut-off/opening of the gas flow while maintaining the pressure regulator's adjustment. The FMD 532-18 allows for pressure regulating as well as a finer apportioning of gas flow.

TECHNICAL DATA

Body:	stainless steel 316L (1.4404) specially cleaned and electro-polished or brass
	2.0401.26 specially cleaned, nickel-plated and chrome-plated
Dimensions (w×h×d):	approx. 175×139×206 mm
Seat seals:	PCTFE
Body seals:	PCTFE (Stainless steel), PVDF (Brass)
Relief valve seat seals:	SS: FKM, (EPDM, FFKM)*, Brass: EPDM, (FKM)*,
Performance data:	see chapter 5
Basic design aspects:	see page 11
Pressure gauge range:	0 - 400 bar (0 - 5800 psi)
	-1 - 5 bar (-15 - 73 psi)
	-1 - 10 bar (-15 - 145 psi)
	-1 - 18 bar (-15 - 260 psi)
Weight:	approx. 2.1kg (type-14), 2.4kg (type-16/18)
Dimensions (w×h×d):	approx. 139×206 mm, 175 mm (-14), 223 mm (-16 and -18)
Cylinder connections:	according to gas type, see chapter 5
Outlet:	NPT 1/4" f, optional tube fitting

*on request

FLOW SCHEMATIC

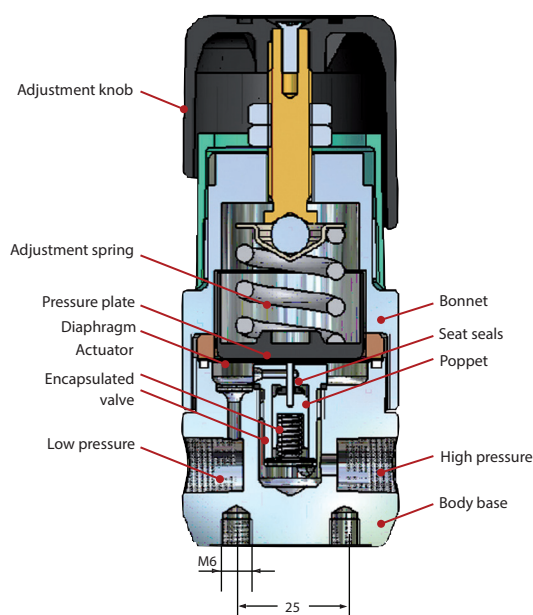
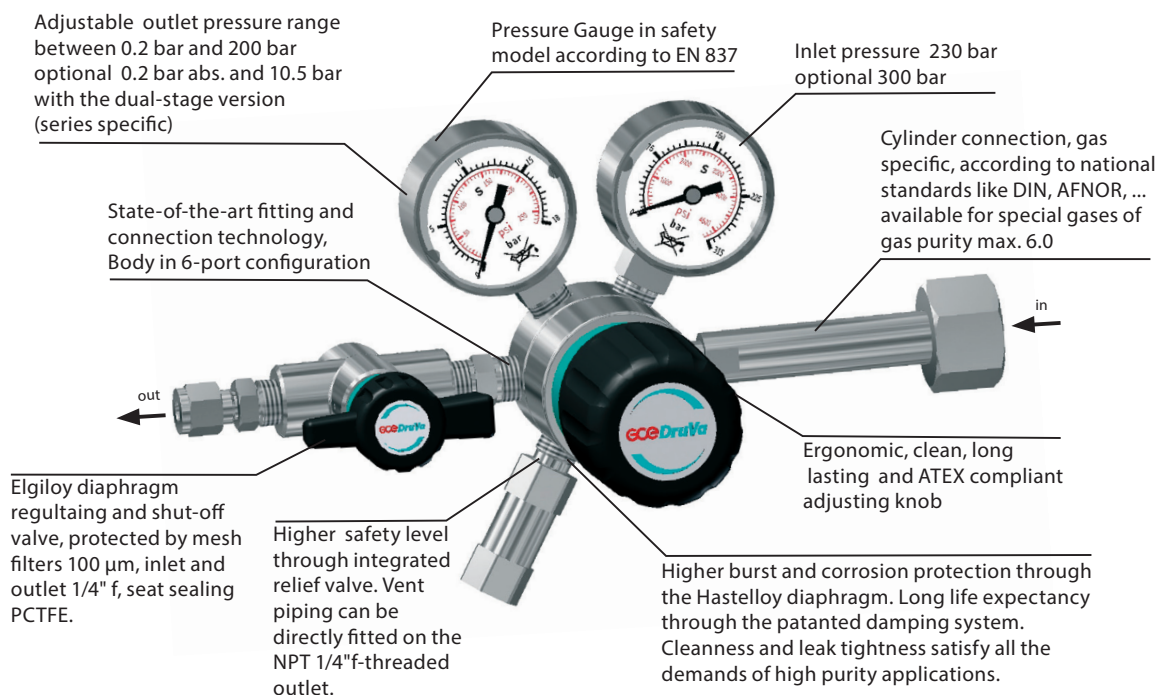


- 1 Cylinder connection
 - 2 Pressure regulator
 - 3 Upstream pressure gauge
 - 4 Downstream pressure gauge
 - 5 Relief valve
 - 6 Downstream shut-off valve (type -16)
/ regulating valve (type -18)
- BA Process gas outlet

ORDER CODE

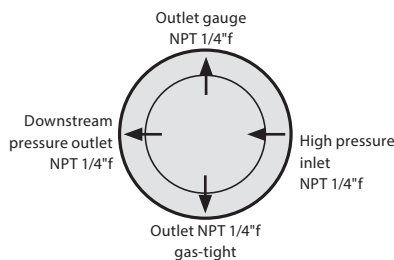
Type	Material	Upstream pressure	Downstream pressure	Inlet	Outlet	Contact gauge	Gas type
FMD 532-14	BC	G	10	DIN	CL6	Ki	Gas
FMD 532-14	BC = brass	G = 300 bar	3 = 0.2 - 3 bar / 3 - 45 psi	DIN	N14 = NPT 1/4" f	0 = without	Please
FMD 532-16	chrome-plated	/4350 psi	6 = 0.5 - 6 bar / 7 - 85 psi	ANSI	CL6 (standard)	Ki = with	specify
FMD 532-18	SS = stainless steel		10 = 1 - 10.5 bar / 15 - 150 psi	AFNOR	CL 1/8"		
				NBN	CL 1/4"		
				BS 341	NO6		
				CGA			
				NEN, UNI			

HIGH PURITY REGULATORS SERIES 500

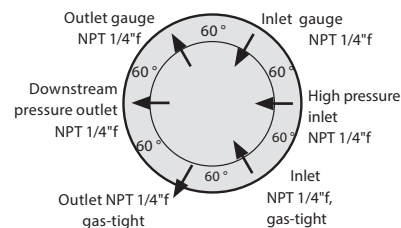


CROSS-SECTION MD

CONNECTIONS 4-PORT-VERSION (FRONTAL VIEW)



CONNECTIONS 6-PORT-VERSION (FRONTAL VIEW)



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Gas Control Equipment