

# R31000

Stainless steel AISI 316L high pressure regulator,  
suitable for compressed air, gas and liquid



## FEATURES

High pressure regulator, standard version inlet pressure up to 220 bar (3190 psi), higher pressure for special versions

Suitable for industrial applications that require high flow rates.

Inlet and outlet connections 1" - M.  
Other connections available on request.

Outlet pressure up to 15 bar (218 psi) is controlled by a diaphragm; greater outlet pressures are controlled by a piston.

Balanced main valve, for outlet pressure up to 50 bar, to provide constant outlet pressure regardless of inlet pressure variations.

Available the ATEX version

Brand  $\text{CE} \text{ II 2GDc IICX}$ .

For use in potentially explosive atmospheres zones:

1, 21, 2, 22 (not for mines and zone 0).

The product complies with the directive 97/23/CE (PED).

## **SPECIFICATIONS**

Inlet and outlet pressure gauges: accuracy class 1.6

Diaphragm regulator weight: ~14,5 kg (~32 lb)

Piston regulator weight: ~16,5 kg (~36 lb)

Standard version operating temperature  $-20\text{ °C} \div +60\text{ °C}$  ( $-4\text{ °F} \div +140\text{ °F}$ )

Main valve leakage classification: VI (bubble tight)

Flow coefficient:  $K_v = 2.5\text{ Nm}^3/\text{h}$  ( $C_v = 2.93\text{ US gal/min}$ )

Degree of protection: IP25

Gauges ports: G 1/4 – F

Big dimension upstream filter

## **MATERIALS**

Body and bonnet: stainless steel AISI 316 L

Internal parts: stainless steel AISI 316 L

Main valve spring: C85 nickel-plated NiP/Fe 15  $\mu\text{m}$  (not in contact with the fluid)

Adjusting spring: AISI 302 or C85 nickel-plated NiP/Fe 15  $\mu\text{m}$  (not in contact with the fluid)

Diaphragm (for inlet pressure up to 15 bar): stainless steel AISI 316 L

Piston (for greater outlet pressure): stainless steel AISI 316 L

O-ring: EPDM or FPM according to the fluid (other compounds available on request)

Main valve gasket: PTFE + carbon

## **ACCESSORIES**

Wall mounting bracket (mod. HA, HB, HC, HD): M1B304

Wall mounting bracket (mod. HF): M1B305

Dome loaded version: outlet pressure to be controlled by a pilot pressure

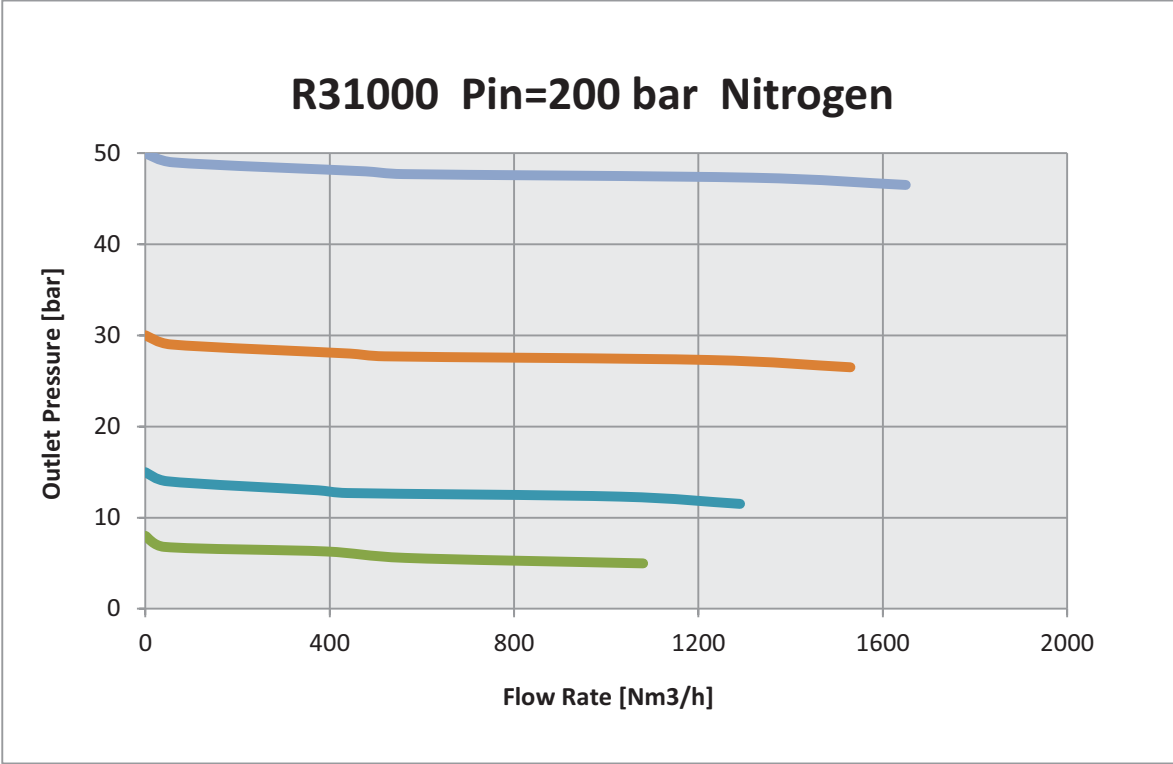
## **SPARE PARTS**

Gauges

Overpressure valve

Complete kit: filter cartridge, complete main valve, o-rings, assembled diaphragm

flow charts



## available model types

### Regolatori di pressione per alta pressione / High pressure regulators

#### Regolatori di pressione per alta pressione

in acciaio inox 316L, idonei per aria compressa, gas tecnici e liquidi

Pressure regulators for high pressure,

made of stainless steel 316L, for compressed air technical gases and liquids

Corpo da lavorazione di barra tonda, attacco entrata G 1-M (per linea)

Body by machining round bar, inlet connection G 1-M (for line service)

TYPE	PS bar	P.Out bar	CONNECTION IN	CONNECTION OUT	CODE	MEDIUM
						<b>R31000</b>
R31000 MA	80	0,8-8	G 1-M	G 1-M	31000#	CO2
R31000 MB	80	1,5-15	G 1-M	G 1-M	31000#	CO2
R31000 MC	80	3-30	G 1-M	G 1-M	31000#	CO2
R31000 HA	220	0,8-8	G 1-M	G 1-M	31000#	H2 - CH4 Aria - N2 - Ar - He
R31000 HB	220	1,5-15	G 1-M	G 1-M	31000#	H2 - CH4 Aria - N2 - Ar - He
R31000 HC	220	3-30	G 1-M	G 1-M	31000#	H2 - CH4 Aria - N2 - Ar - He
R31000 HD	220	5-50	G 1-M	G 1-M	31000#	H2 - CH4 Aria - N2 - Ar - He
R31000 HF	220	20-200	G 1-M	G 1-M	31000#	H2 - CH4 Aria - N2 - Ar - He

#### ATTACCHI DIVERSI DA STANDARD / CONNECTION DIFFERENT FROM STANDARD

Attacchi in/out diversi da standard (nipples esterni 1"NPT-M) / Connections different from standard (external nipples 1"NPT-M)

Attacchi in/out diversi da standard (nipples esterni 1"NPT-F) / Connections different from standard (external nipples 1"NPT-F)

Attacchi flangiati / Connections with flanges

#### ESECUZIONI DIVERSE DA STANDARD / EXECUTIONS DIFFERENT FROM STANDARD

Pressione ingresso 250 bar / Inlet pressure 250 bar

Pressione ingresso 300 bar / Inlet pressure 300 bar

Pressione uscita pretarata / Pre-set outlet pressure

Pressione uscita tarata fissa, vite con dado cieco / Fixed outlet pressure, screw with cap nut

O-ring secondo FDA / O-ring according to FDA

O-ring FPM / O-ring FPM

O-ring speciali / Special O-ring

Convogliamento su campana e Valvola di sovrappressione / Venting on bonnet and over pressure Valve

Versione idonea per liquidi / Execution for liquid

Versione regolatore pilotato / Dome loaded version

Stampigliatura su specifica del cliente / Not standard branding

Versione ATEX / ATEX version

Temperature diverse da standard / Special temperature range

Sgrassato uso O2 / Degreased for O2

#### ACCESSORI / ACCESSORIES

Kit staffa + viti (mod. HA, HB, HC, HD) M1B304 / Bracket with screws (mod. HA, HB, HC, HD) M1B304

Kit staffa + viti (mod. HF) M1B305 / Bracket with screws (mod. HF) M1B305

## generating the product code

<b>R31000 AISI316</b>			
<b>AA BB CC DD E F GG</b>			
AA	Attacchi / Connections	01	1" NPT-F
		R0	G 1-M
		Y0	1" NPT-M
BB	Pressione ingresso / Inlet pressure	J0	220 bar H
		L0	80 bar L
CC	Intervallo uscita / Outlet range	D0	A - Pout 0,8 - 8 bar
		E0	B - Pout 1,5 - 15 bar
		F0	C - Pout 3 - 30 bar
		G0	D Pout 5 - 50 bar
		V0	F Pout 20 - 200 bar
DD	Tipologia di fluido / Fluid type	94	FPM PED CLASSE III
		98	EPDM
E	Pilotato / Pilot operated	N	Non pilotato
		P	Pilotato
F	Marchiato / Marked	I	ID
		Z	Dir ATEX 94/9 CE
GG	Accessori / Accessories	00	Nessun accessorio

### CODE COMPOSITION EXAMPLE

**31000# 01 J0 E0 98 N I 00**

**31000#:** R31000 stainless steel AISI 316 L regulator

**01:** connections 1" NPT - F

**J0:** Inlet pressure 220 bar

**E0:** Outlet pressure 1,5-15 bar

**98:** EPDM gaskets

**N:** Not dome loaded

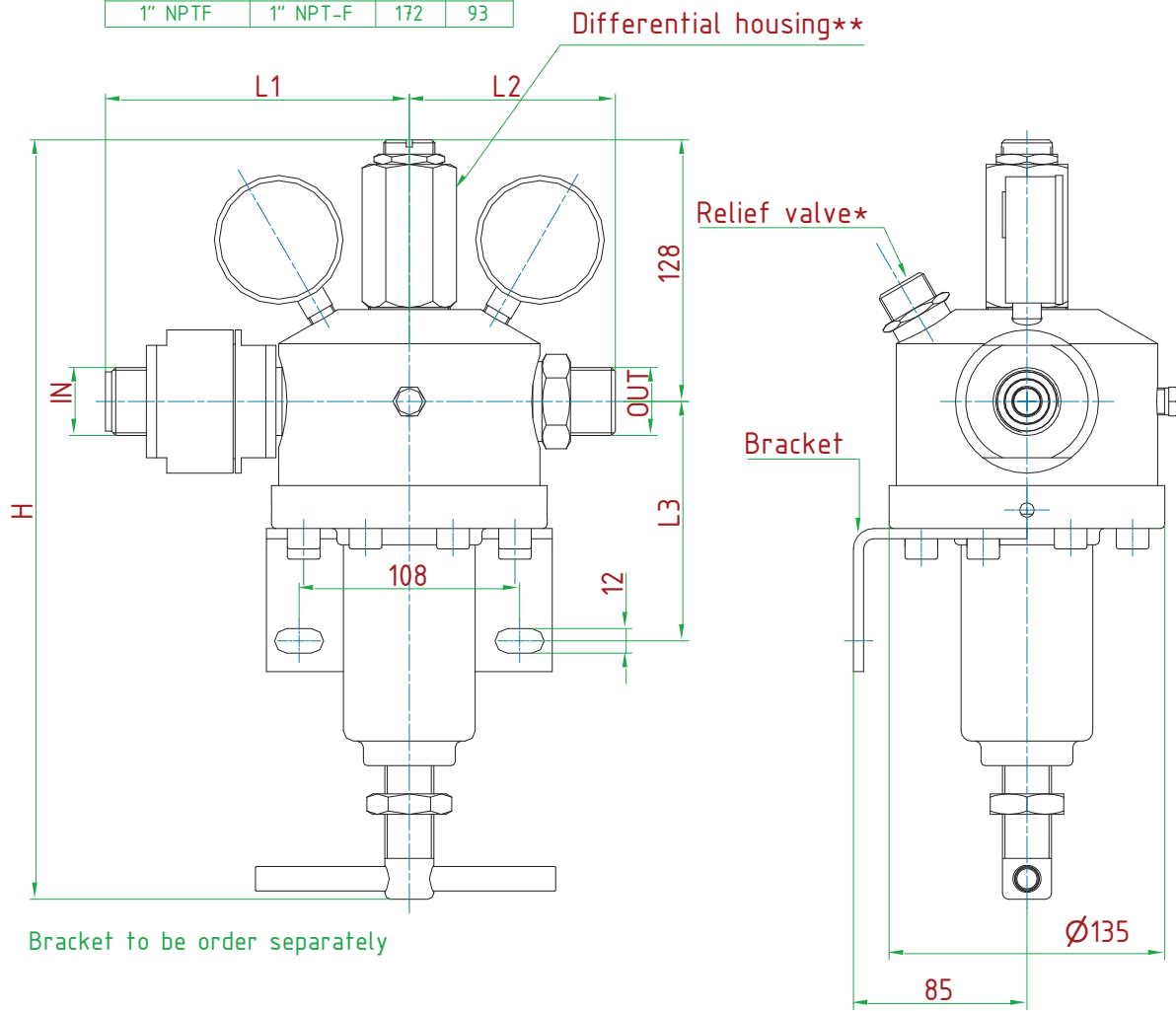
**I:** Insert Deal

**00:** No accessories

# technical drawings (all dimensions in mm)

- \* No Relief valve for type piston 200 bar
- \*\* No differential housing for type piston 200 bar

CONNECTION	IN/OUT	L1	L2
1" GM	G1-M	149	101
1" NPTM	1" NPT-M	156	106
1" NPTF	1" NPT-F	172	93



TYPE	OUTLET PRESSURE	OUTLET GAUGE CODE	OUTLET GAUGE RANGE	H	L3	BRACKET, KIT ORDER NUMBER
A	0,8÷8	0AANEC07	0÷16	~371	117	M1B304
B	1,5÷15	0AANEC08	0÷25	~371	117	M1B304
C	3÷30	0AANEC09	0÷63	~410	158	M1B304
D	5÷50	0AANEC10	0÷100	~410	158	M1B304
F	20÷200	0AANEC12	0÷315	~390	158	M1B305