

# R133

Brass high pressure regulator,  
suitable for compressed air, gas and liquid



## FEATURES

High pressure regulator for cylinder or manifold; standard version inlet pressure up to 220 bar (3190 psi), higher pressure for special versions.

Inlet cylinder connections according to UNI standard, other connections available on request.

Outlet pressure up to 15 bar (218 psi) is controlled by a stainless steel diaphragm (AISI 316L); greater outlet pressures are controlled by a piston.

The external chrome-plated finish and the stainless steel diaphragm make the R133 series suitable for laboratory and gas analysis applications, as well as for normal industrial applications.

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, G 1/4 ports

Diaphragm version regulator weight: ~2,4 kg (~5.29 lb)

Piston version regulator weight: ~2,9 kg (~6.39 lb)

Standard version operating temperature -20 °C ÷ +60 °C (-4 °F ÷ 140 °F)

Main valve leakage classification: VI (bubble tight)

Flow coefficient: Kv= 0.05 Nm<sup>3</sup>/h (Cv = 0.06 US gal/min)

Degree of protection: IP25

## **MATERIALS**

Body and bonnet: brass, chrome-plated outside

Internal parts: OT58 brass

Main valve spring: stainless steel AISI 302

Adjusting spring: C85 (not in contact with the fluid)

Diaphragm (for outlet pressure up to 15 bar):

- standard: stainless steel AISI 316
- for liquid and air relieving: two coupled diaphragms NBR+PTFE, PTFE in contact with the fluid

Piston (for greater outlet pressure): brass

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

Main valve gasket: PA 6.6 (EPDM for maximum operating pressure Ps 15 bar)

## **ACCESSORIES**

Panel mounting ring-nut: ODU80101

Wall mounting bracket and ring-nut: M1B102

Not standard inlet and outlet connections

G 1/4 connections to pipe bonnet and overpressure valve, in case of use of dangerous fluid

Overpressure relieving function (for compressed only)

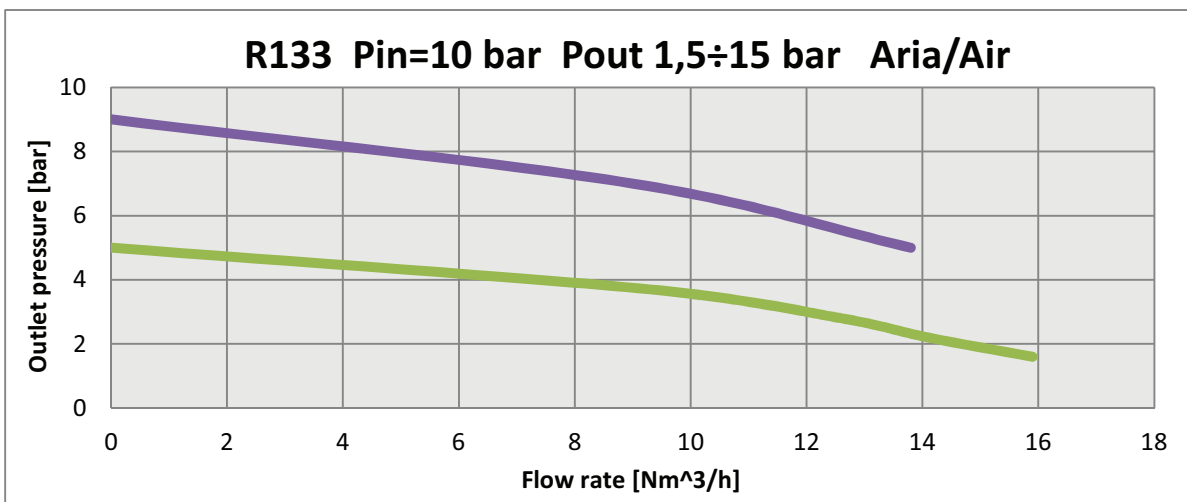
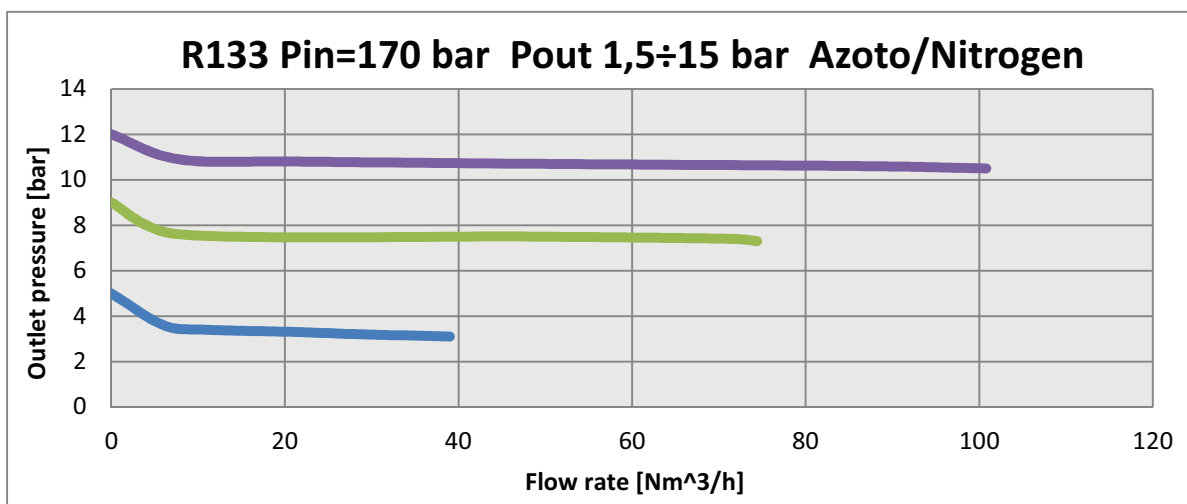
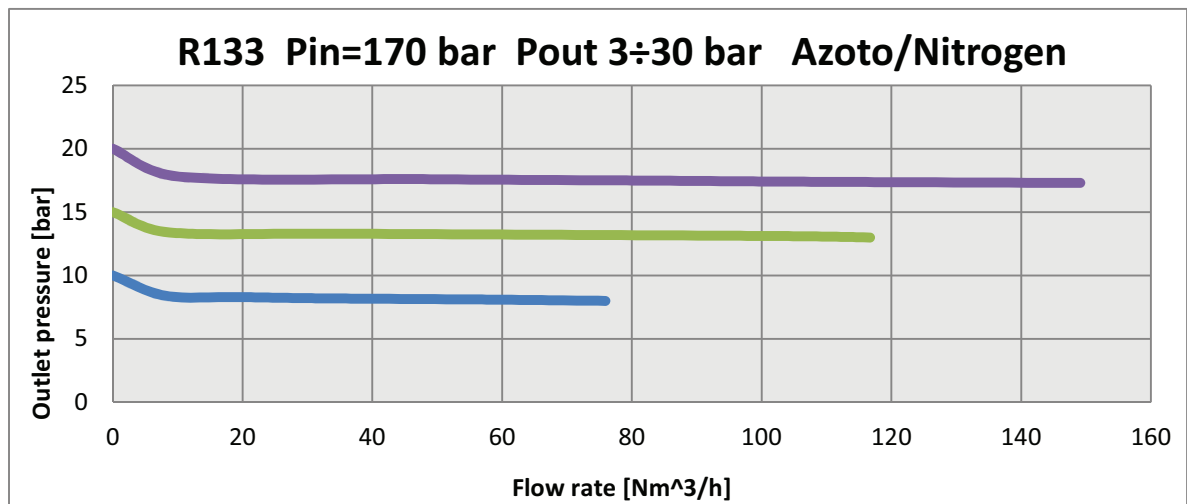
## **SPARE PARTS**

Gauges

Overpressure valve

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

## flow charts



## available model types

### Regolatori di pressione per alta pressione

in ottone, idonei per aria compressa e gas tecnici non corrosivi e liquidi

Pressure regulators for high pressure,

made of brass, for compressed air and technical, non corrosive gases and liquids

Corpo da lavorazione di barra tonda, attacco entrata per bombola a norme UNI

Body by machining round bar, inlet connection to bottle according to standard UNI

TYPE	PS bar	P.Out bar	CONNECTION OUT	CODE	MEDIUM
					<b>R133</b>
R133 LA	15	0,2-1,5	G 1/4-F	133#	C2H2
R133 MA	80	0,8-8	G 1/4-F	133#	CO2 - N2O
R133 MB	80	1,5-15	G 1/4-F	133#	CO2 - N2O
R133 MC	80	3-30	G 1/4-F	133#	CO2 - N2O
R133 MD	80	5-50	G 1/4-F	133#	CO2 - N2O
R133 HA	220	0,8-8	G 1/4-F	133#	O2
					H2 - CH4
					Aria - N2 - Ar - He
R133 HB	220	1,5-15	G 1/4-F	133#	O2
					H2 - CH4
					Aria - N2 - Ar - He
R133 HC	220	3-30	G 1/4-F	133#	O2
					H2 - CH4
					Aria - N2 - Ar - He
R133 HD	220	5-50	G 1/4-F	133#	O2
					H2 - CH4
					Aria - N2 - Ar - He
R133 HE	220	10-100	G 1/4-F	133#	O2
					H2 - CH4
					Aria - N2 - Ar - He
R133 HF	220	20-200	G 1/4-F	133#	O2
					H2 - CH4
					Aria - N2 - Ar - He

MEDIUM	CONNECTION IN	UNI
C2H2	Staffa bombola / Bracket bottle	7S-UNI 11144
	Rampa / Manifold	1H-UNI 11144
	Codolo bombola / Bottle connection	7F-UNI 11144
CO2	Bombola Rampa / Bottle Manifold	2-UNI 11144
	Bombola / Bottle	9-UNI 11144
N2O	Rampa / Manifold	2-UNI 11144
	Bombola Rampa / Bottle Manifold	2-UNI 11144
O2	Bombola Rampa / Bottle Manifold	2-UNI 11144
	Bombola / Bottle	6-UNI 11144
Aria	Rampa / Manifold	2-UNI 11144
	Bombola / Bottle	5-UNI 11144
N2	Rampa / Manifold	2-UNI 11144
	Bombola / Bottle	8-UNI 11144
Ar - He	Rampa / Manifold	2-UNI 11144
	Bombola Rampa / Bottle Manifold	1H-UNI 11144

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

Attacchi in/out diversi da standard (G 1/4-F nel corpo) / Connections different from standard (G 1/4-F in body)

Attacchi in/out diversi da standard (nipples esterni 1/4"NPT-F - 1/4"NPT-M) / Connections different from standard

Attacchi bombola diversi da standard UNI / Bottle connection different from Italian standard UNI (DIN 477, CGA, NFE 29-650, BS 341 e UNE ITC MIE)

Attacco entrata rampa, esclusi CO2, O2, H2, CH4 / inlet connection for manifold, not for CO2, O2, H2, CH4

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

Pressione ingresso 250 bar / Inlet pressure 250 bar

Pressione ingresso 300-400 bar / Inlet pressure 300-400 bar

Pressione uscita pretarata con vite a T / Pre-set outlet pressure with T screw

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

Flusso inverso: entrata a destra - uscita a sinistra / Reverse flow: right inlet - left outlet

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

Versione Relieving / Relieving version

Sgrassato uso O2 / Degreased for O2

### ACCESSORI / ACCESSORIES

Ghiera cromata 0DU80101 / Chrome-plated ring nut 0DU80101

Kit staffa + ghiera M1B102 / Kit bracket and Ring nut M1B102

Portagomma per tubo ø8 composto da: / ø8 hose tail composed of

Portagomma tubo ø8 - P54005011304 / ø8 Hose tail - P54005011304

Dado 3/8 - P28021011304 / Nut 3/8 - P28021011304

Raccordo - P29028011304 / Connection - P29028011304

O-ring 107 - 0GABC07021 / O-ring 107 - 0GABC07021

## generating the product code

<b>R133 IN Ottone</b>			
<b>AA BB CC DD E FF</b>			
AA	Attacchi / Connections	00	Vedi tipo fluido, tabella DD
BB	Pressione ingresso / Inlet pressure	B0	PS 15 bar L
		J0	PS 220 bar H
		L0	PS 80 bar M
CC	Intervallo uscita / Outlet range	A0	AQ - Pout 0,2 - 1,5 bar
		D0	AQ - Pout 0,8 - 8 bar
		E0	BQ - Pout 1,5 - 15 bar
		F0	CQ - Pout 3 - 30 bar
		G0	DQ - Pout 5 - 50 bar
		V0	FQ - Pout 20 - 200 bar
		X0	EQ - Pout 10 - 100 bar
DD	Tipologia di fluido / Fluid type	15	O2 PED CLASSE III
		98	EPDM
		99	FPM
		U1	1H - UNI 11144 PED CLASSE III
		U2	2 - UNI 11144
		U5	5 - UNI 11144
		U6	6 - UNI 11144
		U7	7S - UNI 11144 - C2H2
		U8	8 - UNI 11144
		U9	9 - UNI 11144
E	Marchiato / Marked	I	ID
		Z	Dir ATEX 94/9 CE
FF	Accessori / Accessories	00	Nessun accessorio

## CODE COMPOSITION EXAMPLE

**133# 00 J0 E0 U1 I 00**

**133#:**R133 brass regulator

**00:** Connection according to the fluid see table DD

**J0:** Inlet pressure 220 bar (3191 psi)

**E0:** Outlet pressure 1,5 - 15 bar (21,8 – 218 psi)

**U1:** Inlet connection 1H-UNI 1114

**I:** Insert Deal

**00:** No accessories

# technical drawings (all dimensions in mm)

