

## UL Listed Cylinder Gas Regulators for Industrial Service

Regulators for use with compressed air, and inert gases such as carbon dioxide, argon helium, krypton, neon, nitrogen, and xenon.

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R44 Miniature Pressure Regulator, 250 psig max.pressure, 1/8" and 1/4" PTF Port Sizes .....	ALE-11-2
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**R44**  
Low pressure,  
secondary regulator



**R83**  
High pressure, primary  
regulator

## UL Listed Miniature Pressure Regulator Compressed Air, Carbon Dioxide, Inert Gases 1/8" or 1/4" PTF Port Sizes

- Underwriters Laboratories, Inc. listed (file number SA1089) for use with air, carbon dioxide, and inert gases. For use with other gases, including oxygen, consult Norgren.
- Compact design
- Brass, zinc, or aluminum bodies with plastic bonnet; brass body also available with brass bonnet
- Plastic bonnet equipped with low torque, non-rising pressure adjusting knob. Snap action knob locks pressure setting when pushed in. Brass bonnet equipped with pressure adjusting screw
- Non-relieving and relieving models. Relieving models allow reduction of outlet pressure even when the system is dead-ended
- Can be disassembled without the use of tools or removal from the air line



**Ordering Information.** Models listed include PTF threads, relieving diaphragm, 5 to 100 psig (0.3 to 7 bar) outlet pressure adjustment range†, and without gauge.

Body	Bonnet	Medium	Port PTF	Model	Flow* scfm (dm <sup>3</sup> /s)	Weight lb (kg)
Aluminum	Plastic	Air, inert gases	1/8"	R44-100-RNKA	10 (4.7)	0.23 (0.11)
			1/4"	R44-200-RNKA	10 (4.7)	0.23 (0.11)
Brass	Plastic	Air, CO <sub>2</sub> , inert gases	1/8"	R44-121-RNKA	10 (4.7)	0.45 (0.21)
			1/4"	R44-221-RNKA	10 (4.7)	0.45 (0.21)
Zinc	Plastic	Air, inert gases	1/8"	R44-122-RNKA	10 (4.7)	0.31 (0.14)
			1/4"	R44-222-RNKA	10 (4.7)	0.31 (0.14)
Brass	Brass	Air, CO <sub>2</sub> , inert gases	1/8"	R44-133-RNKA	10 (4.7)	0.54 (0.25)
			1/4"	R44-233-RNKA	10 (4.7)	0.54 (0.25)

### Alternative Models

R 4 4 - ★ ★ ★ - ★ ★ ★ ★

Port Size	Substitute
1/8"	1
1/4"	2

Body/Bonnet	Substitute
Aluminum/Plastic	00
Brass/Plastic	21
Zinc/Plastic	22
Brass/Brass	33

Threads	Substitute
PTF	A

Outlet Pressure Adjustment Range†	Substitute
1 to 10 psig (0.1 to 0.7 bar)	A
5 to 50 psig (0.3 to 3.5 bar)	E
5 to 100 psig (0.3 to 7 bar)	K

Gauges	Substitute
With	G
Without	N

Diaphragm	Substitute
Relieving	R
Non relieving	N

\* Approximate flow with 100 psig (7 bar) inlet pressure, 90 psig (6.3 bar) set pressure and a 15 psig (1 bar) droop from set.

† Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.

See Section ALE-25 for Accessories



## Technical Data

Fluid: Compressed air, carbon dioxide, inert gases

Maximum pressure: 250 psig (17 bar)

Operating temperature: -30° to 150°F (-34° to 66°C) \*

\* Air supply must be dry enough to avoid ice formation at temperatures below 35°F (2°C).

Typical flow at 100 psig (7 bar) inlet pressure, 90 psig (6.3 bar) set pressure and a droop of 15 psig 1 bar() from set: 10 scfm (4.7 dm<sup>3</sup>/s)

Gauge ports: 1/8" PTF

Materials

Body and bonnet

R44-100/-200: Aluminum body; acetal plastic bonnet

R44-121/-221: Brass body; acetal plastic bonnet

R44-122/-222: Zinc body; acetal plastic bonnet

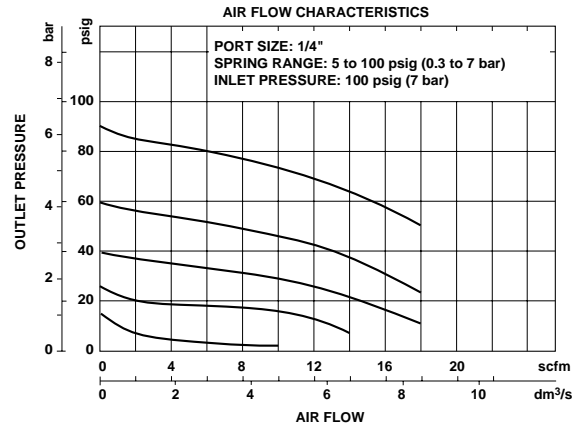
R44-133/-233: Brass body; brass bonnet

Valve: Brass/nitrile

Valve seat: Acetal

Elastomers: Nitrile

## Typical Performance Characteristics



## Service Kits

Item	Type	Part number
Service kit	Relieving	3407-02
	Non relieving	3407-01

Service kit includes slip ring, diaphragm, standard valve seat with seal, valve, valve spring.

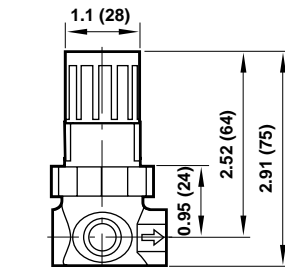
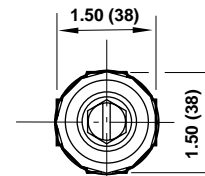
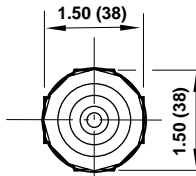
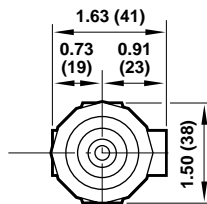
All Dimensions in Inches (mm)

Panel mounting hole diameter:

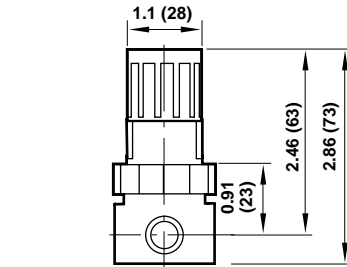
Models with plastic bonnet: 1.19" (30 mm)

Models with brass bonnet: 0.81" (21mm)

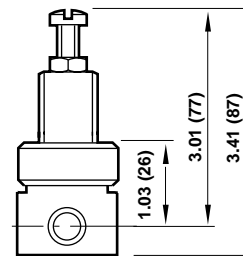
Maximum panel thickness: 0.25" (6 mm)



Models R44-122/-222  
(Zinc Body and Plastic Bonnet)



Models R44-100/-200 and R44-121/-221  
(Aluminum or Brass Body and Plastic Bonnet)



Models R44-133/-233  
(Brass Body and Brass Bonnet)

**UL Listed Pressure Regulator for Industrial Cylinder Gas 1/4" PTF Port Size**

- Underwriters Laboratories, Inc. listed (file number SA1089) for use with air, argon, carbon dioxide, helium, krypton, neon, nitrogen, xenon. For use with other gases, including oxygen, consult Norgren.
- Non-relieving and relieving models. Relieving models allow reduction of outlet pressure even when the system is dead-ended
- Two high pressure inlet ports and two regulated pressure outlet ports
- Diametrically opposite inlet ports provide easy manifolding of several regulators
- Easily replaceable valve cartridge contains valve, valve seat, valve spring, and filter element



**Ordering Information.** Models listed include PTF threads, relieving diaphragm, 5 to 125 psig (0.3 to 8.5 bar) outlet pressure adjustment range<sup>†</sup>, and without gauge.

Port	Model	Flow * scfm dm <sup>3</sup> /s()	Weight lb (kg)
1/4"	R83-200-RNLA	11 (5.2)	1.3 (0.59)

**Alternative Models**
**R 8 3 - 2 0 0 - ★ N ★ A**

Diaphragm	Substitute
Relieving	R
Non relieving	N

Outlet Pressure Adjustment Ranges <sup>†</sup>	Substitute
2 to 50 psig (0.1 to 3.5 bar)	E
5 to 125 psig (0.3 to 8.5 bar)	L
10 to 175 psig (0.7 to 12 bar)	N

\* Approximate flow with 1000 psig (69 bar) inlet pressure, 60 psig (4 bar) set pressure and a 5 psig (0.35 bar) droop from set.

† Outlet pressure can be adjusted to pressures in excess of, and less than, those specified. Do not use these units to control pressures outside of the specified ranges.

**See Section ALE-25 for Accessories**



## Technical Data

Fluid: Air, argon, carbon dioxide, helium, krypton, neon, nitrogen, and xenon. For use with other gases, including oxygen, consult Norgren. Do not use the R83 regulator in beverage dispensing applications. Other Norgren regulators (R81 for soft drink, R82 for beer, R84 for carbonators) are available for use in dispensing systems.

Maximum pressure: 3000 psig (207 bar)

Operating temperature: -30° to 140°F (-34° to 60°C) \*

\* Fluid must be dry enough to avoid ice formation at temperatures below 35°F (2°C).

Typical flow at 1000 psig (69 bar) inlet pressure, 60 psig (4 bar) set pressure and a droop of 5 psig (0.35 bar) from set: 11 scfm (5.2 dm<sup>3</sup>/s)

### Materials

Body: Brass

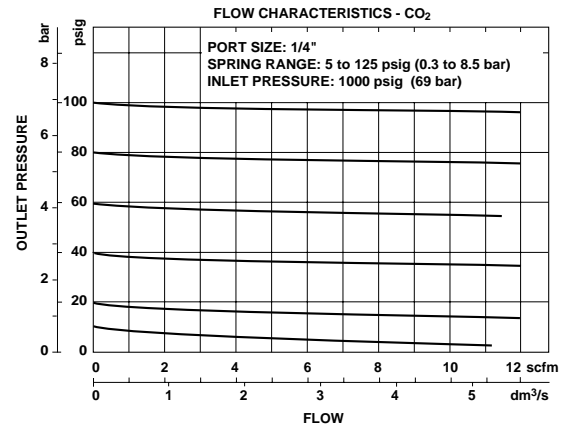
Bonnet: Zinc

Cartridge valve: Teflon, brass, stainless steel

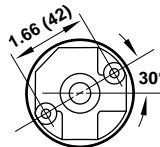
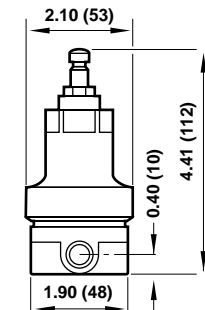
Diaphragm: Acetal and nitrile

Seals: Nitrile

## Typical Performance Characteristics



All Dimensions in Inches (mm)



Mounting Holes (2 Places)  
0.18" (4.6mm) dia. by 0.39" (10mm) deep.  
Use 10-32 thread forming screws.

## Service Kits

Item	Type	Part number
Service kits	Diaphragm, relieving	570-51
	Diaphragm, non relieving	570-10
	Valve cartridge	5086-55

Valve cartridge includes the sealed cartridge and cartridge o-ring.

## Warning

These products are intended for use with industrial compressed air, argon, carbon dioxide, helium, krypton, neon, nitrogen, and xenon. Do not use these products where pressures and temperatures can exceed those listed under 'Technical Data'.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult Norgren.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

**System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.**

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.