

R44 Miniature UL Listed Pressure Regulator

Compressed Air, Carbon Dioxide, or Inert Gas Service

Installation & Maintenance Instructions

NIP-239
February 1997
Supersedes March, 1988

Models Covered

MODEL NUMBERS			Port Size PTF	Materials	
1 to 10 psig (0.1 to 0.7 bar)	Outlet Pressure Adjustment Range*	5 to 50 psig (0.3 to 3.5 bar)		Body	Bonnet
R44-100-RNAA	R44-100-RNEA	R44-100-RNKA	1/8	Aluminum	Plastic
R44-200-RNAA	R44-200-RNEA	R44-200-RNKA	1/4	Zinc	Plastic
R44-122-RNAA	R44-122-RNEA	R44-122-RNKA	1/8		
R44-222-RNAA	R44-222-RNEA	R44-222-RNKA	1/4		
R44-121-RNAA	R44-121-RNEA	R44-121-RNKA	1/8	Brass	Plastic
R44-221-RNAA	R44-221-RNEA	R44-221-RNKA	1/4	Brass	Plastic
R44-133-RNAA	R44-133-RNEA	R44-133-RNKA	1/8		
R44-233-RNAA	R44-233-RNEA	R44-233-RNKA	1/4		

*Outlet pressure adjustment ranges are not minimum or maximum outlet pressure limits. Regulators can be adjusted to zero psig outlet pressure and, generally, to pressures in excess of those specified. The use of these regulators to control pressures outside of the specified ranges is not recommended.

Specifications

Fluid: Compressed Air, Carbon Dioxide, and Inert Gases
Inlet Pressure: 250 psig (17.3 bar) maximum
Temperature Range: 0° to 140°F (-18° to 60°C) with dewpoint of supply fluid less than air temperature below 35°F (°2C).
Type: Diaphragm
Gauge Ports: 1/8 PTF

Materials of Construction

Body & Bonnet: See *Models Covered* table.
Valve Seat: Acetal Plastic
Elastomers: Nitrile

Installation

1. Install regulator as close as possible to the device being serviced. Regulator can be installed at any angle.
2. In systems with a cyclic demand, install regulator upstream of cycling control valves.
3. Line piping should be same size as regulator ports.
4. Connect piping to proper ports using pipe thread sealant on male threads only. Do not allow sealant to enter interior of regulator. Sealant must be compatible with gases involved. Flow direction is indicated by arrow on bottom of body, or the inlet port is indicated by the word IN.

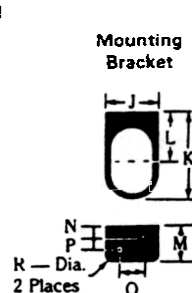
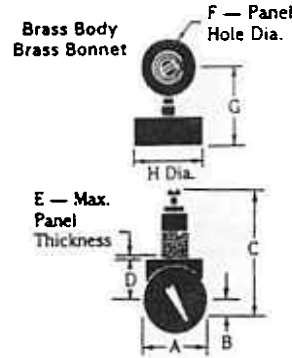
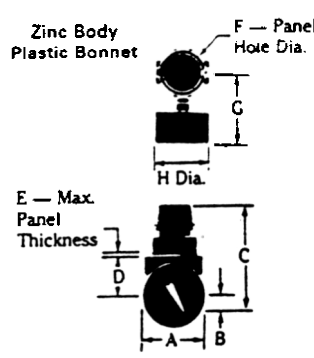
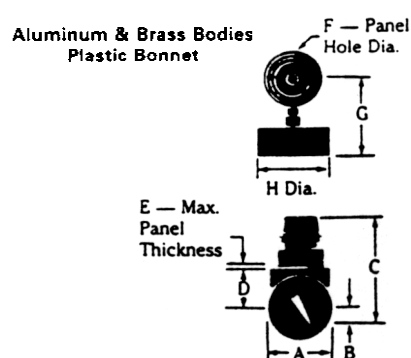
All dimensions in inches (millimeters).

5. If desired, connect outlet pressure gauge to one of the gauge ports on side of regulator body. Gauge ports in units with a zinc body can also be used as additional outlets for regulated pressure. Plug unused ports.

Adjustment

1. Before turning on system pressure, turn regulator adjustment fully counterclockwise.
2. Turn on system pressure.
3. Turn regulator adjustment clockwise until the desired outlet pressure is reached.
4. To avoid minor readjustment after making a change in pressure setting, always approach the desired pressure from a lower pressure. When reducing from a higher to a lower setting, first reduce to some pressure less than that desired, then bring up to the desired point.
5. On regulators with plastic bonnet, push locking on adjusting knob downward to lock pressure setting. To release, pull locking upward. Pressure setting can be made tamper resistant by installing a seal wire (see Accessories) in groove above locking.
6. On regulators with brass bonnet, tighten jam nut on adjusting screw to lock pressure setting.

Bonnet Type	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R
Aluminum & Brass Bodies With Plastic Bonnet	1.50 (38)	0.40 (10)	2.76 (70)	0.96 (24)	0.25 (6)	1.19 (30)	2.13 (54)	1.65 (42)	1.50 (38)	2.47 (63)	1.41 (36)	1.00 (25)	0.38 (10)	0.69 (18)	0.31 (8)	0.22 (6)
Zinc Body Plastic Bonnet	1.63 (41)	0.40 (10)	2.76 (70)	0.96 (24)	0.25 (6)	1.19 (30)	2.13 (54)	1.65 (42)	1.50 (38)	2.47 (63)	1.41 (36)	1.00 (25)	0.38 (10)	0.69 (18)	0.31 (8)	0.22 (6)
Brass Body Brass Bonnet	1.50 (38)	0.40 (10)	3.38 (86)	1.03 (26)	0.25 (6)	0.81 (21)	2.13 (54)	1.65 (42)	1.38 (35)	2.41 (61)	1.43 (36)	1.00 (25)	0.38 (10)	0.69 (18)	0.31 (8)	0.22 (6)



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Disassembly

1. Shut off inlet pressure and reduce pressure in inlet and outlet lines to zero.
2. Turn adjustment counterclockwise until all load is removed from spring (5). Regulator can be disassembled without removal from pipe.
3. Unscrew the bonnet (2 or 3), then remove springrest (4 — brass bonnet only), regulating spring (5), and slippin and diaphragm (6 & 7). Unscrew the valve seat and gasket assembly (8), then remove valve (9) and valve spring (10).

Cleaning

1. Clean parts using warm water and soap.
2. Inspect all parts.
3. Replace damaged parts.

Reassembly

1. At reassembly, apply a small amount of Lubriplate 110 evenly to full length of threads and tip of adjusting screw (1) or to adjusting screw threads inside bonnet (2).
2. Torque valve seat (8) to 4-to-6 inch-pounds. Valve pin must slide freely through valve seat after valve seat is torqued into body. Torque bonnet (2 or 3) to 60-to-70 inch-pounds torque.

Repair Kits

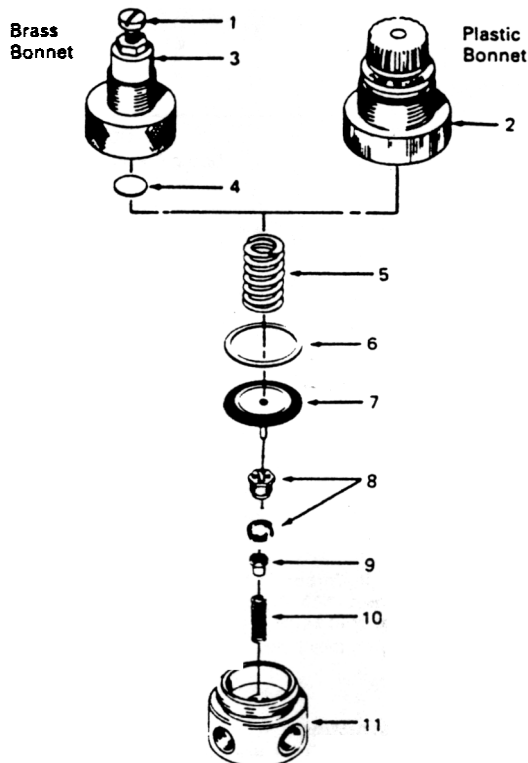
Nonrelieving Regulators (items 6 thru 10) 3407-01
Relieving Regulators (items 6 thru 10) 3407-02

Repair Parts

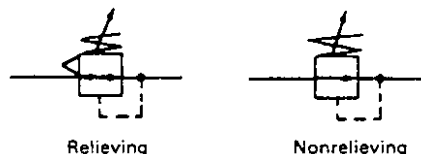
Regulating spring (item 5) —
1 to 10 psig (color code brown) 2069-02
5 to 50 psig (color code green) 613-03
5 to 100 psig (color code yellow) 2960-04
Diaphragm assembly (item 7) —
Nonrelieving 3410-20
Relieving 3410-21
Valve assembly (item 9) 2959-50
Valve seat and gasket assembly (item 8) 3402-51

Accessories

	Plastic Bonnet	Brass Bonnet
Mounting Bracket (includes panel mounting nut)	18-025-003	18-001-020
Panel Mounting Nut	2962-89	616-01
Tamper Resistant Seal Wire	2117-01	—



Graphic Symbols



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Warning

These regulators are intended for use in industrial compressed air, carbon dioxide, or inert gas systems only. Do not use these regulators where pressure or temperature can exceed those listed under **Specifications**.

If outlet pressure in excess of the regulator pressure setting could cause downstream equipment to rupture or malfunction, install a pressure relief device downstream of the regulator. The relief pressure and flow capacity of the relief device must satisfy system requirements.

The accuracy of the indication of pressure gauges can change, both during shipment (despite care in packaging) and during the service life. If a pressure gauge is to be used with these products and if inaccurate indications may be hazardous to personnel or property, the gauge should be calibrated before initial installation and at regular intervals during use. For gauge standards refer to ANSI B40.1-1974.

Before using with fluids other than those specified, for nonindustrial applications, or for life support systems consult NORGREN.