



Option CZ, Gas Pressure Regulator Kits

INSTALLATION FORM RGM 400-GR	
APPLIES TO:	Model Series ADF/ADFH; RGB/RGBL/RPB/RPBL; PGBL; SSCBL; and DFA

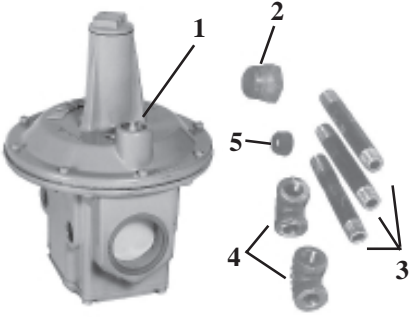


Description

The maximum gas supply pressure to the applicable Reznor Models is 1/2 psi (14" w.c.). Option CZ gas pressure regulator kits are designed to regulate the gas pressure downward if the gas supply pressure is greater than 1/2 psi but less than or equal to 5 psi. Depending on the pipe size, there are four regulator kits.

The gas regulators in these kits are the lock-up type and comply with codes using this specification. Under static conditions (no gas flow), a lock-up type regulator will allow the outlet pressure to rise slightly above the adjusted pressure but will still be low enough to protect the downstream gas controls. The regulators have an adjustable outlet gas range of 4" to 12" w.c. and are suitable for either natural or propane gas.

Option Kits include:

	Pipe Size		1"	1-1/4"	1-1/2"	2"	
	Option No.		CZ1 or CZ4A	CZ4B	CZ2 or CZ4C	CZ4D	
	Package P/N		124258	170644	124259	170646	
	Code	Components	Qty	P/N	P/N	P/N	P/N
	1	Maxitrol Regulator (see model and specifications below)	1	124254	170645	124255	170647
	2	Hex Bushing (black iron)	1	8643 3/8" x 1/8"	8643 3/8" x 1/8"	124256 3/4" x 1/8"	124256 3/4" x 1/8"
3	1/8" x 2-1/2" Brass Nipple	3	107122	107122	107122	107122	
4	1/8", 90° Brass Elbows	2	124257	124257	124257	124257	
5	Insect Screen Assembly	1	96793	96793	96793	96793	

Maxitrol Regulator Specifications

Maxitrol Model Reznor P/N	210DZ, 1" 124254	210DZ, 1-1/4" 170645	210EZ, 1-1/2" 124255	210EZ, 2" 170647
Size	1" x 1" NPT	1-1/4" x 1-1/4" NPT	1-1/2" x 1-1/2" NPT	2" x 2" NPT
Housing	High strength aluminum alloy	High strength aluminum alloy	High strength aluminium alloy	High strength aluminium alloy
Ambient Range	-40°F to 200°F	-40°F to 200°F	-40°F to 200°F	-40°F to 200°F
Maximum Pressure	5 psi	5 psi	5 psi	5 psi
Emergency Exposure	25 psi (inlet side only)	25 psi (inlet side only)	25 psi (inlet side only)	25 psi (inlet side only)
Pressure Tap	Both inlet & outlet (plugged)	Both inlet & outlet (plugged)	Both inlet & outlet (plugged)	Both inlet & outlet (plugged)
Vertical Vent	3/8" NPT	3/8" NPT	3/4" NPT	3/4" NPT
Flow Rate Capacity	See TABLE 1 on page 2	See TABLE 2 on page 2	See TABLE 3 on page 2	See TABLE 4 on page 2

WARNING: Do not install these regulator kits if gas supply is greater than 5 psi. A field-supplied regulator with adequate capacity is required.

Installation Instructions

NOTE: Pipe joint compound (pipe dope) must be resistant to the action of liquefied petroleum gas or any other chemical constituents of the gas being supplied.

1. Turn off the gas supply.
2. **Install the Regulator**

The gas regulator must be in an upright position. Exterior to the heater cabinet, connect the regulator into a horizontal section of the gas supply line.

Installation Instructions (cont'd)

3. Install Vent Line (See Figure 1)

Remove the plastic plug from the tapped vent in the top of the regulator. Starting at the regulator (tapped vent) install the vent line by connecting the pieces of pipe in the following sequence:

- Black Iron Hex Bushing
- 2-1/2" Pipe Nipple
- 90° Elbow (*pointing away from the regulator*)
- 2-1/2" Pipe Nipple
- 90° Elbow (*pointing downward*)
- 2-1/2" Pipe Nipple

Outdoor Installation - Attach plastic bug screen.

Indoor Installation - Extend vent line outdoors using 1/8" field-supplied piping; attach bug screen to outdoor end of the vent line.

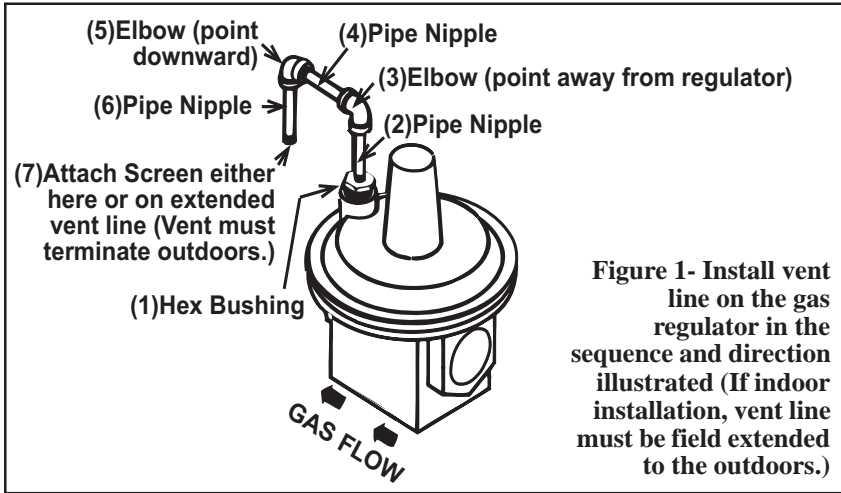


Figure 1 - Install vent line on the gas regulator in the sequence and direction illustrated (If indoor installation, vent line must be field extended to the outdoors.)

4. Leak Test the Gas Connections and Test the Gas Pressure

If the unit has a gas train that includes an inlet manual shutoff valve, close the valve. If the gas train does not include a manual shutoff valve before the main control valve, disconnect and cap the gas line.

WARNING: All components of a gas supply system must be leak tested prior to placing equipment in service. NEVER TEST WITH AN OPEN FLAME.

High pressure testing of supply lines is acceptable, provided the supply line has been disconnected from the unit and the pipe end capped.

Connect a manometer to the outlet pressure tap.

Turn on the gas supply and leak test the regulator connections. Test using a leak-detecting solution.

Check the gas pressure reading on the manometer. Outlet gas pressure must not be greater than 1/2 psi (14" w.c.). Outlet gas pressure may be adjusted between 4" w.c. and 12" w.c. at the regulator.

Capacities for Spring Loaded Gas Pressure Regulators, Maxitrol Models 210DZ and 210EZ - Cubic Feet per Hour (0.64 specific gravity - natural gas)

Inlet Pressure	Outlet Pressure ("w.c.)				
	2	4	6	9	12
8.0" w.c.	2,400	1,900	1,300		
0.5 psi	3,400	3,100	2,700	2,200	
0.75 psi	3,500	4,000	3,800	3,400	2,900
1.0 psi	3,500	4,000	4,500	4,300	3,900
1.5 psi	3,500	4,000	4,500	4,800	4,800
2.0 psi	3,500	4,000	4,500	4,800	4,800
3.0 psi	3,500	4,000	4,500	4,800	4,800
5.0 psi	3,500	4,000	4,500	4,800	4,800

Inlet Pressure	Outlet Pressure ("w.c.)				
	2	4	6	9	12
8.0" w.c.	3,000	2,400	1,700		
0.5 psi	4,000	3,900	3,400	2,700	
0.75 psi	4,000	5,000	4,700	4,200	3,700
1.0 psi	4,000	5,000	5,000	5,300	4,900
1.5 psi	4,000	5,000	5,000	6,000	6,000
2.0 psi	4,000	5,000	5,000	6,000	6,000
3.0 psi	4,000	5,000	5,000	6,000	6,000
5.0 psi	4,000	5,000	5,000	6,000	6,000

Inlet Pressure	Outlet Pressure ("w.c.)				
	2	4	6	9	12
8.0" w.c.	4,450	3,650	2,550		
0.5 psi	6,300	5,750	5,150	4,050	
0.75 psi	7,000	7,500	7,050	6,300	5,450
1.0 psi	7,000	8,800	8,500	7,950	7,250
1.5 psi	7,000	8,800	8,800	10,450	9,950
2.0 psi	7,000	8,800	8,800	10,500	10,500
3.0 psi	7,000	8,800	8,800	10,500	10,500
5.0 psi	7,000	8,800	8,800	10,500	10,500

Inlet Pressure	Outlet Pressure ("w.c.)				
	2	4	6	9	12
8.0" w.c.	5,150	4,200	2,950		
0.5 psi	7,250	6,650	5,950	4,700	
0.75 psi	8,000	8,650	8,150	7,250	6,300
1.0 psi	8,000	10,000	9,850	9,150	8,400
1.5 psi	8,000	10,000	10,000	12,000	11,500
2.0 psi	8,000	10,000	10,000	12,000	12,000
3.0 psi	8,000	10,000	10,000	12,000	12,000
5.0 psi	8,000	10,000	10,000	12,000	12,000