

90-411* (revised 04/04)

Questions regarding this form should be directed to one of the following:

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27 MODULAR SERIES REGULATOR

Installation Instructions, Operating Instructions and Parts List

Application:

The Modular Series Regulator is constructed of lightweight aluminum in a compact configuration, combining ease of installation with superior system design flexibility. Each unit is adaptable for conversion to duo or trio systems either with clamps which connect without disturbing existing piping or with standard nipples. A modular distribution block allows a portion of the air supply to be directed to a branch line or device.

Options and Accessories:

Options*:	Suffix
Gauge	G
High Pressure Spring (0 - 200 PSI)	H
Extra Low Pressure Spring (0 - 20 PSI)	J
Low Pressure Spring (0 - 60 PSI)	L
Panel Mount	P

Accessories:	Model No.
Mounting Bracket	27RBA
Panel Nut	27RPA
Recommended Standard Pressure Gauge:	
0 - 160 PSI with 2" dial	8800-160
Recommended Optional Pressure Gauge:	
0 - 300 PSI with 2" dial	8800-300
0 - 60 PSI with 2" dial	8800-60
Connecting Clamp Kit (includes two connecting clamps, two screws, one o-ring and one allen wrench)	27MB01
Wall Mount Connecting Clamp Kit (includes one wall mount connecting clamp, one connecting camp, two screws, one o-ring and one allen wrench)	27MB02
Distribution Block	27DB01



Technical Data:

Maximum Supply Pressure:..... 300 PSIG

Maximum Operating Temperature: .. 250° F

Pressure Range:

Standard	 0 - 125 PSI
Option	 0 - 200 PSI
Option	 0 - 25 PSI
Option	 0 - 60 PSI

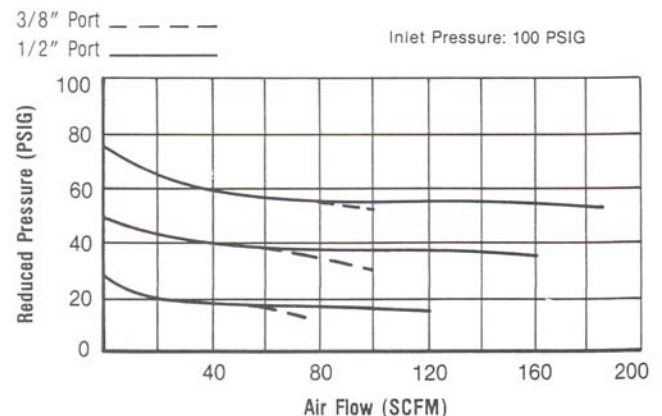
Material:

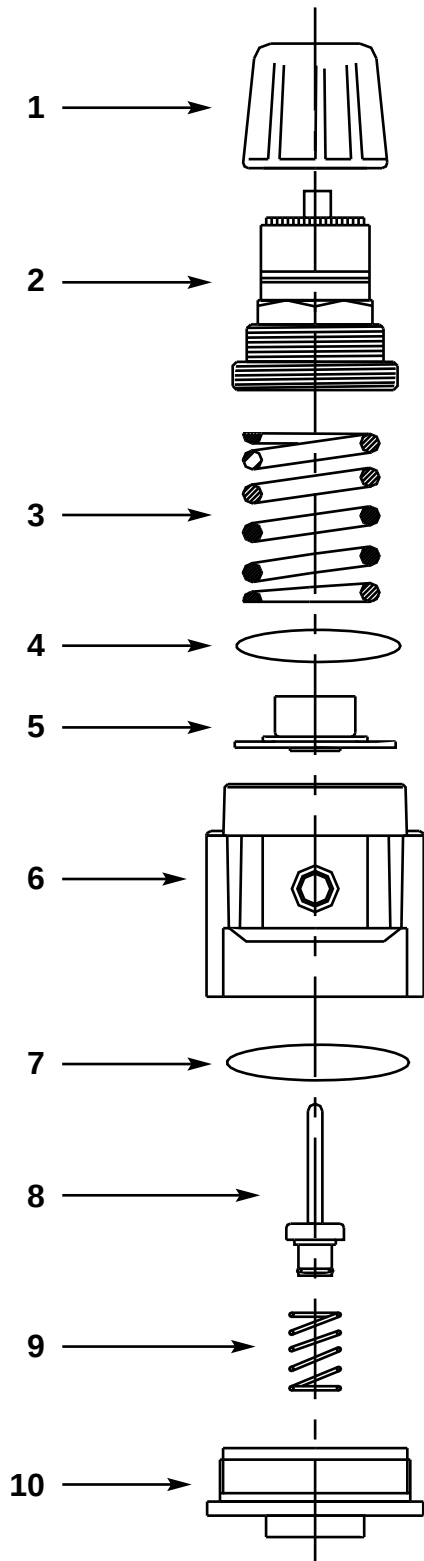
Body	 Die Cast Aluminum
Adjusting Knob	 High Impact Plastic

Dimensions and Weights:

Height	 5 1/2"
Width	 2 3/4"
Weight	 1 3/4 lbs.

Performance Data:





Rebuilding Kit

The Regulator Repair Kit includes items 4, 5, 7, 8 and 10. Use Model No. **27RK01** to order.

We reserve the right to make engineering changes in design or materials without notification.

General Description of Operation

High pressure filtered air flows through the annular orifice around the poppet valve (8) toward the outlet. Downstream pressure is directed to the bottom of the diaphragm (5). As downstream pressure increases, the diaphragm (5) is forced upward, compressing the adjustment spring (3). When the diaphragm (5) moves, the bottom spring (9) pushes the poppet valve (8) upward to throttle the annular orifice. If downstream pressure exhausts, the mechanical sequence reverses and the poppet valve (8) opens the annular orifice until the set pressure is reached again. The poppet valve (8) normally blocks the relieving orifice in the center of the diaphragm (5). High excessive pressure lifts the diaphragm (5) off the poppet valve (8) and air bleeds through the orifice and out the bonnet (2) vent until the system returns to set pressure.

Pressure Adjustment

Turning the adjustment knob in a clockwise direction will increase the pressure setting, while turning it counterclockwise will decrease the pressure setting.

The downstream pressure should always be adjusted to approximately 10 PSI above the required working pressure, even in the event of pressure fluctuation. It is advisable to adjust the setting under constant pressure conditions (unit not operating), as a changing flow rate affects the set value.

To avoid readjustment after making a change in pressure setting, we recommend approaching the required setting from a lower pressure. When adjusting from a higher to a lower setting, reduce the pressure to a point below what is required, then adjust upward to the desired pressure setting.

Cleaning and Maintenance

A clean supply of air to the regulator will assure long periods of uninterrupted service. Dirt in the poppet valve assembly will lead to erratic operation or loss of regulation. When cleaning becomes necessary, air line should be shut off and depressurized. The regulator should be disassembled using the parts drawing on this page as a guide. All assembly parts should be cleaned with a mild household detergent and the regulator body should be blown out with compressed air.

For proper reassembly, the poppet valve assembly must be firmly in place and the poppet stem must fit into the center hole of the diaphragm assembly. The bonnet assembly should be tightened slightly more than hand tight (approximately 40 foot pounds torque.)

Components:

Item No.	Description	Model No.
1	Adjusting Knob	27R-12A
2	Bonnet / Adjustable Screw Assembly	27R-14A
3	Adjusting Spring 125 PSI	27R-15
—	Adjusting Spring 0 - 250 PSI	27R-15H
—	Adjusting Spring 0 - 25 PSI	27R-15J
—	Adjusting Spring 0 - 60 PSI	27R-15L
4	Spacer Ring-Diaphragm	27R-16
5	Diaphragm Assembly	27R-17
6	3/8" NPT Body	27FC3-1
—	1/2" NPT Body	27FC4-1
—	3/4" NPT Body	27FC6-1
7	Spacer Ring-Diaphragm	27R-16
8	Poppet Valve Assembly	27R-18
9	Bottom Spring	27R-19
10	Bottom Plug	27R-20