90-414* (revised 04/04)

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

East: 732-390-8480 (NJ)
West: 503-434-5964 (OR)
E-mail: info@coilhose.com

MINIATURE SERIES REGULATOR

Installation Instructions, Operating Instructions and Parts List

Application:

The Miniature Series Regulator is designed for applications where space is limited such as compact control panels and miniaturized circuits. These regulator units feature tough zinc body construction with either 1/8" or 1/4" in and out ports and two full-flow 1/8" gauge ports.

Options and Accessories:

Options*:	*Suffix*
Gauge	G
Extra Low Pressure Spring (0 - 20 PSI)	J
Low Pressure Spring (0 - 50 PSI)	L
Panel Mount	P

*Add a dash followed by the suffix(es) in alphabetical order to the model number.

Accessories:	*Model No.*
Mounting Bracket and Panel Nut	MR140MB
Recommended Pressure Gauge:*	
0 – 60 PSI with 1 1/2" dial	26G-60
0 – 160 PSI with 1 1/2" dial	26G-160

*When specifying low pressure spring and gauge options, 0 - 60 PSI gauge (26G-60) will be supplied.

Technical Data:

Maximum Supply Pressure: . . . . . .250 PSI

Maximum Operating Temperature: . . . .250° F

Pressure Range:

Standard	0 - 125 PSI
Option	0 - 50 PSI
Option	0 - 20 PSI

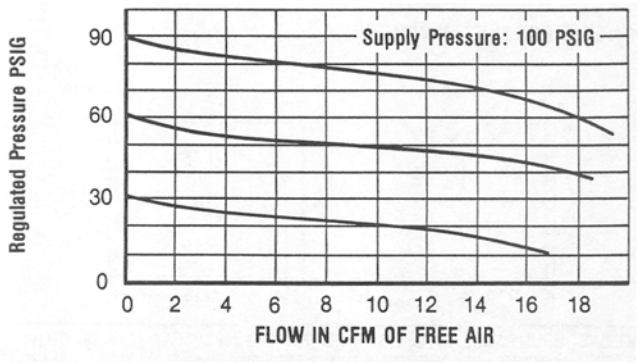
Material:

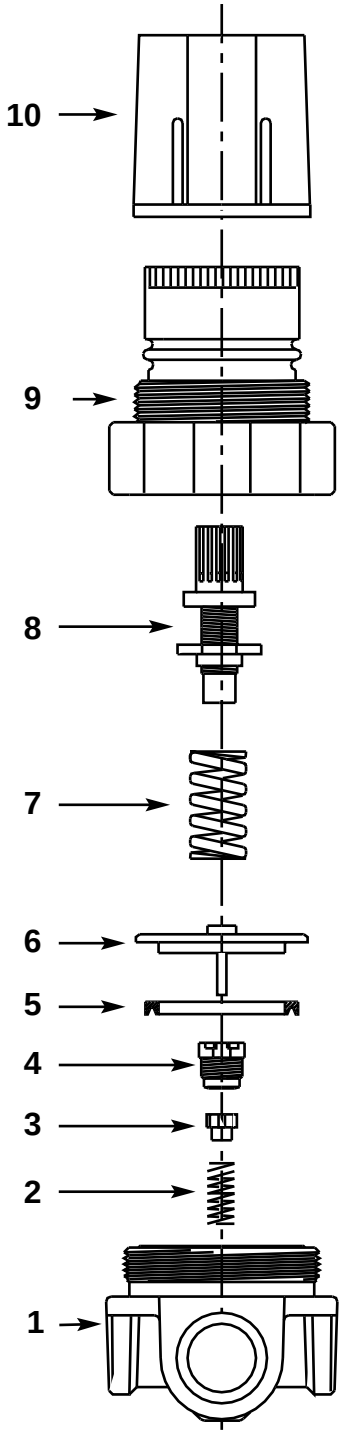
Body	Zinc Die-Cast
Adjusting Knob	High Impact Plastic

Dimensions and Weights:

Height	2 7/8"
Width	1 1/2"
Weight	1/3 lb.

Flow Characteristics / Performance Data:





General Description of Operation

High pressure air enters and flows through the poppet value (3) orifice toward the outlet. Downstream pressure is connected through an orifice to the bottom of the piston (6). As downward pressure increases, the piston (6) is forced upward, compressing the adjustment spring (7). When the piston (6) moves, the return spring (2) pushes the poppet value (3) upward to throttle the orifice. If downstream pressure exhausts, the mechanical sequence reverses and the poppet valve (3) opens the orifice until the set pressure is reached again.

Some circuits may be subject to downstream high pressure, resulting from situations such as high temperature or heavy vertical loads or cylinders. This high pressure is reduced by the self-relieving orifice in the center of the piston (6). When excessive pressure lifts the valve stem (6), the air is allowed to bleed through the piston (6) orifice and out the bonnet vent until the system returns to the set pressure.

Pressure Adjustment

To adjust pressure setting, pull up the black adjustment knob. Turning the adjusting knob in a clockwise direction will increase the pressure setting and 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 fluctuations. It is advisable to adjust the setting under constant pressure conditions (until not operating), since 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. Once the desired pressure setting is reached, push in the black adjusting knob to lock and maintain the proper setting.

Cleaning and Maintenance

If air supply is kept clean, the regulator should provide long periods of uninterrupted service. Standard procedure would be to install a filter before the regulator. When cleaning becomes necessary, the air line should be shut off and depressurized. Erratic regulator operation or loss of regulation is almost always due to dirt between the poppet valve and the valve seat (refer to drawing as a guide to disassembly and subsequent reassembly). Clean parts with household soap and blow out body with compressed air.

When reassembling, tighten valve seat hand tight, being careful not to break plastic alignment tabs. Relubricate the "U" cup seal using a silicone-based grease and tighten the adjusting knob assembly slightly more than hand tight (to 10' pounds torque).

Components:

Chart No.	*Description*	*Model No.*
1	1/4" FPT Body	MR140-1
–	1/8" FPT Body	MR180-1
2	Return Spring	8762A-31
3	Poppet Valve	17-858191
4	Valve Seat	17-858189
5	U-Cup Seal	17-855159
6	Piston Assembly	17-851552
7	Reg. Spring 0 - 125 PSI	8702-15
–	Reg. Spring 0 - 20 PSI	8702-15J
–	Reg. Spring 0 -50 PSI	8702-15L
8	Adjusting Screw	8702-13
9	Top Cap	8702-14
10	Adjusting Knob	26R-12A

Rebuilding Kit

The Mini Regulator Repair Kit includes items 2, 3, 4, 5 and 6. Use Model No. **MR140RK** to order.

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

East: 19 Kimberly Road • East Brunswick, NJ 08816 • Phone: 732-390-8480 / Fax: 732-390-9693
West: 1730 NE Miller Street • McMinnville, OR 97128 • Phone: 503-434-5964 / Fax: 503-472-1989