



## Installation, Operation, and Maintenance Instructions

### MODEL 5601

March 2002

#### Specifications

Flow Capacity:	20 scfm @ 100 psig supply, 20 psig outlet
Sensitivity:	0.6 oz/in <sup>2</sup>
Supply Pressure:	250 psig maximum
Air Consumption:	Less than 6 scfh
Output:	0 – 30 psi 0 – 60 psi 0 – 125 psi

#### Operation

The pressure output is set by tightening or loosening the adjustment knob or screw. The range spring causes the pintle to move downward, opening the supply valve and allowing air to flow. The pressure builds up against the control diaphragm until the supply valve closes. This is the equilibrium or set pressure, which is closely maintained under changes in operating conditions in the following manner:

*Downstream pressure drop* – A drop in downstream pressure reduces the diaphragm pressure force, upsetting the equilibrium condition. This unbalance causes the supply valve to open until the pressure builds up once more to the equilibrium condition.

*Downstream pressure increases* – A sudden increase in downstream pressure acts on the diaphragm,

causing the relief seat in the diaphragm assembly to lift and open. The excess pressure drops almost instantaneously to the equilibrium condition, at which point the relief valve closes.

*Changes in forward flow* – Under forward flow conditions, the range spring force is balanced by the diaphragm pressure force, with the supply valve open just enough to maintain the required equilibrium pressure. When high flow occurs, a specially designed aspirator helps maintain downstream pressure and compensates for droop.

#### Rebuild Kit Installation

1. Remove dripwell by removing hex head bolt in center of dripwell.
2. Replace seal gasket on face of body.
3. Using a standard head screwdriver remove plastic screw from center of body.
4. Remove old pintle and spring. Place new spring on spring seat of new pintle.
5. Install pintle in body and secure using plastic screw.
6. Place new filter screen in dripwell with flange side down.
7. Install dripwell using hex head screw.
8. Remove spring tension. Remove four philips-head screws and remove bonnet.
9. Install new diaphragm with diaphragm plate facing up. Secure bonnet in place.