

AIRSET TYPE AS-1 SERIES ADJUSTABLE AIR REGULATOR



AIRSET TYPE ASG-1

DESCRIPTION

Leslie Airset AS-1 pressure regulators are reliable precision units for instrumentation and general purpose.

Test data for these regulators shows excellent performance characteristics. The regulators are generally superior in regulated pressure vs. flow, forward-to-reverse flow offset, supply pressure sensitivity, repeatability and stability.

They are sturdily designed and constructed with housings of die cast aluminum. Every regulator is pressure and leak tested prior to shipment from the factory.

Careful design and quality materials throughout assure long, trouble free operation in the most difficult industrial environments. A rubberized, soft seat valve stem provides positive shutoff and "forgives" dirt or other foreign matter. An aspirator maintains downstream pressure and compensates for droop when high flow occurs. The full flow gauge port is convenient for gauge installation and also can be used as an additional full flow outlet. The regulator includes a unique sintered bronze filter that can be easily removed for cleaning.

The design of these regulators is especially well suited to pilot controllers, instruments, actuators and a wide range of industrial pneumatic systems and equipment.

- Superior Regulation Characteristics
- Adjusting Knobs Included
- Rugged, Corrosion-Resistant Construction
- Excellent Stability and Repeatability
- Self-Relieving
- Low Droop at High Flow
- Several Mounting Options
- Low Cost

PRINCIPLE OF OPERATION

Once set to a desired pressure the Leslie Airset AS-1 maintains this setting until re-adjusted. The range spring, which is compressed by the adjustment screw, causes the pin to move downward, opening the supply valve and allowing air flow. The downstream pressure builds up against the control diaphragm forcing it up 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 increase — Any 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 value, 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.

MODELS

AS-1 - Adjustable Air Regulator

ASG-1 - includes gauge

SPECIFICATIONS

Flow capacity @ 100 psig (700 kPa) supply, 20 psig (140 kPa) outlet: 8 SCFM (13.4 m³/hr)

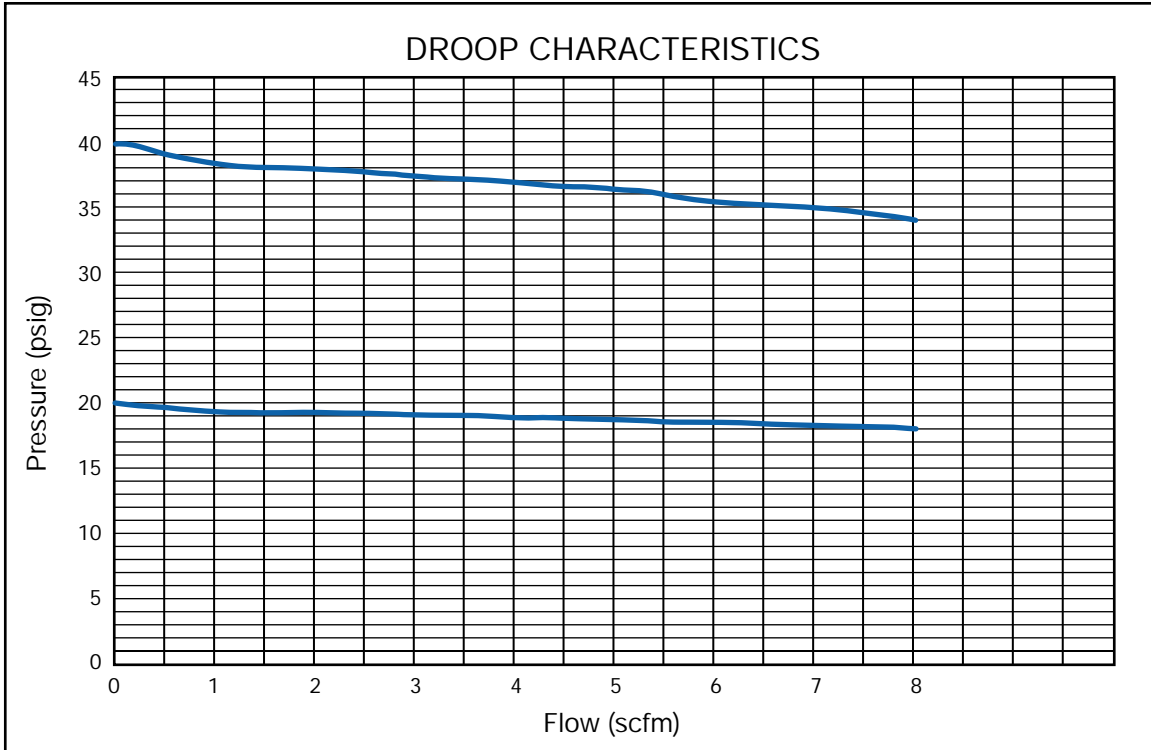
Exhaust capacity @ downstream pressure 5 psig (35 kPa) above setpoint: 0.1 SCFM (0.17 m³/hr)

Sensitivity: 1" (2.5 cm) of water

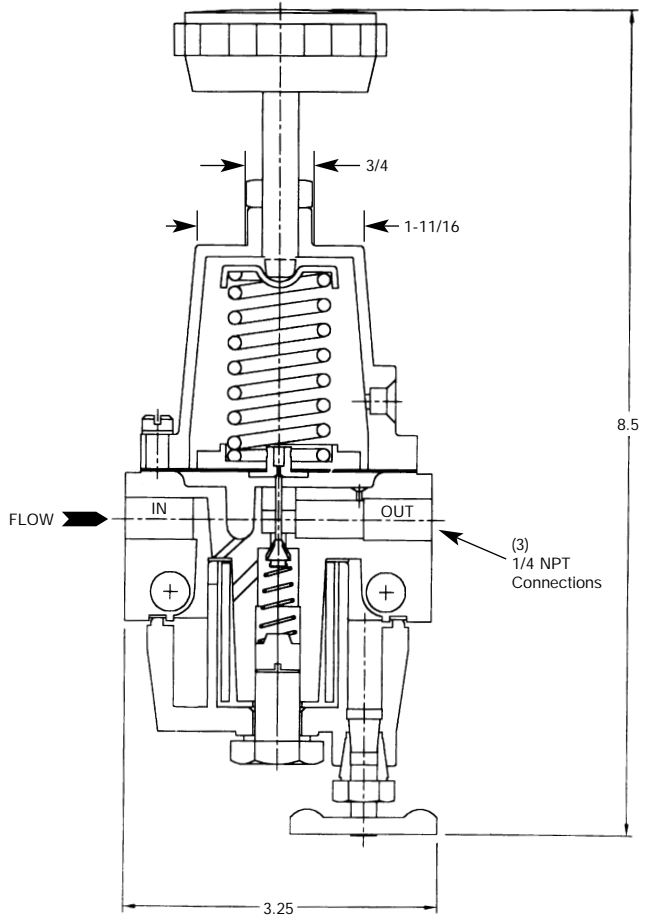
Effect of supply pressure variation: Less than .2 psig (1.4 kPa) for 25 psig (170 kPa)

Supply pressure: 150 psig (1000 kPa) maximum

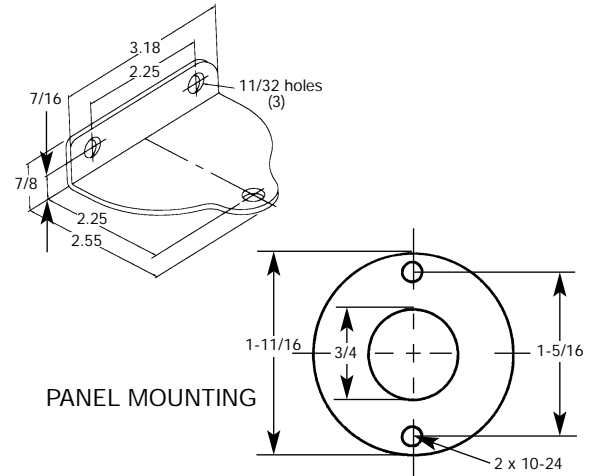
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SECTION



MOUNTING BRACKET



The filter element is readily accessible by removing the dripwell bowl and can be cleaned by dipping in kerosene or any similar solvent. The Airset has a drain cock at the bottom edge of the dripwell which permits drainage when the unit is mounted in vertical or panel-mounted horizontal position.

PART NUMBER	RANGE
AS-1 A80472	0.5-30 psi
AS-1 A80473	0.5-60 psi
AS-1 A80474	0.5-100 psi
ASG-1 A81070	0.5-30 psi
ASG-1 A81071	0.5-60 psi
ASG-1 A81072	0.5-100 psi