



The M4000A pneumatic precision regulator is a direct acting proportional regulator for overpressure with control ranges of 0,035 to 17 bar and flow ranges of 4200 NI/min at 7 bar primary pressure.

- Pneumatic Precision Regulator for Pressure
- Pressure Control Ranges from 0,035 to 17 bar
- Flow Range up to 4200 NI/min at 7 bar Supply Pressure
- Response Sensivity better than 1,25 mbar
- Non bleeding, (No Bleed Design)
- Outlets for Standard Pressure Manometers

Technical Description

Between the spring diaphragm system and the counteracting output pressure arises a force balance, which keeps the outlet pressure almost constant for large input pressure changes. This is supported by the continuous bleeding of a small amount of air through a relief valve, which prevents the regulator from friction caused pausing. In addition to small pressure dependency the regulator therefore shows high control sensitivity and fast response behaviour.

Specifications

Pressure Control Ranges

Upper Limits of Output or Set -Point Pressure: 0,7 / 2 / 4 / 10 / 17 bar
Input or Primary Pressure: > 150 % F.S. (max. 17 bar)

Response Behaviour

Response Sensivity: 1/2" Water Column
Supply Pressure Effect: Less than 7 mbar @ 7 bar change in supply pressure

Operating Conditions

Input Pressure: 0 to 18 bar over pressure
Temperature: Operation: -20 ... +70°C
Storage: -40 ... + 90°C
Humidity: 0 ... 90 % R.H. (non-condensing)
Medium: Air

Media Compatibility

Clean, dry, oil-free air; humidity non-condensing.

Flow Behaviour

Air Mass Flow at 7 bar Primary Pressure and 1,5 bar Set-Point Pressure: 4200 NI/min
Exhaust Capacity with Output Pressure 0,35 bar over Set Point Pressure 1,5 bar: 1100 NI/min
Approximated flows with fully opened valve for standard conditions (1013 mbar abs., 0 °C, 0 % R.H.) .

Enclosure

Dimensions Knob Height incl.: 115 x 205 mm (ØxH)
Material Housing: Aluminium, anodised
Control Knob: Plastic
Valve Assembly: Zinc-plated steel, brass
Diaphragm: Buna-N auf Dacron
Weight: Total: ≈ 1000 g

Process Connections

Pressure Standard: 3/8"i NPT (2 x)
Optional: 1/2"i NPT (2 x) or 3/4"i NPT (2 x)
Manometer: 1/4"i NPT (2 x)

Mounting Options

Pipe- or panel mounting

Special Features

- Non bleeding, without air consumption.
- A balanced supply valve minimizes the effect of supply pressure variation.
- An Aspirator Tube compensates downstream pressure droop under flow conditions.
- A separate Control Chamber isolates the diaphragm from the main flow to eliminate hunting and buzzing.
- Unit construction lets you service the M4000A without removing it from the line.

Ordering Information

Part No. Structure: M4000A-40ab-Acde

a Control Range

2 0,035...0,7 bar
3 0,035...2,0 bar
4 0,07...4,0 bar
6 0,15...10,0 bar
7 0,35...17,0 bar

b Pressure Connection

3 3/8"FNPT (std.)
4 1/2"FNPT (std.)
6 3/4"FNPT (std.)

A Options

c, d, e Multiple options possible

E Tapped exhaust
H BSPP (G straight parallel thread) instead of NPT
J Viton elastomere
T Tamper Proof
U BSPT (R conical thread) instead of NPT

By ordering multiple options, please specify in alphabetic order.

Compatible manometers on demand