

## MR Series

Ultra Miniature Pressure Regulator



The MR is an ultra-miniature pressure regulator that has many of the same features found in the time-tested design of the CPR-1 & PR-1 Series pressure regulators. Designed for surface, panel or manifold mounting, the MR offers the utmost in versatility to the systems designer. It's low internal volume of less than 2.7cc makes the MR the perfect choice for systems that require rapid purge cycles. Standard features permit using this regulator in a wide variety of services, including corrosive fluids. The MR can be tailored to virtually any application by utilizing the optional features. All of this is attainable while achieving as low as 0.2% accuracy during supply pressure fluctuations. This regulator is designed to allow the construction of compact and sophisticated analytical instrumentation where the optimum in pressure control is required and space is at a premium.

### Features & Specifications

- Gas or liquid service
- 316L stainless steel construction
- Internal volume is less than 2.7cc
- Electropolished body with better than 25 Ra finish in diaphragm cavity
- 20 micron inlet filter
- Bubble-tight shutoff
- Outlet pressure ranges are 0–10, 0–25, 0–50, 0–100, 0–250 and 0–500 psig
- Cv flow coefficient 0.025 or 0.06
- Option: surface mount (for manifolds)
- Optional INCONEL® diaphragm

pressure regulators

## How to Order

### MR -

#### BODY MATERIAL

- 1 316L stainless steel

#### PORT CONFIGURATION

- A Standard
- For more port configurations, see page 33.

#### PORT TYPE

- 0 1/8" FNPT (all ports)
- 1 Surface mount (consult factory for configurations)
- A 1/16" FNPT (all ports)
- B 1/8" FNPT inlets; 1/16" FNPT outlets

#### SURFACE FINISH OF DIAPHRAGM CAVITY

- 1 < 25 Ra

#### SEAT MATERIAL

- A Tefzel®
- H PCTFE (formerly Kel-F® 81)
- Q PEEK™

#### FLOW COEFFICIENT (Cv)

- 3 0.06
- C 0.025

#### OPTIONS

- A EB33
- B EB5
- D Helium leak test
- E Pressure test certificate
- F Certificate of Conformity
- G CMTR

#### CAP ASSEMBLY

- 1 Hand knob (0–100 psig maximum)
- 2 T-handle
- 3 T-handle, panel mount
- 4 Hand knob, panel mount (0–100 psig maximum)
- 8 Tamper-proof
- E Tamper-proof, panel mount

#### DIAPHRAGM FACING/BACKING/

#### O-RING MATERIAL

- 1 Tefzel® ring/stainless steel/PTFE
- 7 Tefzel® ring/stainless steel/Viton®
- 8 Tefzel® ring/INCONEL®/PTFE
- H Tefzel® ring/INCONEL®/Viton®

#### DIAPHRAGM TYPE

- 1 Standard, Nylon dia. slip ring (170° F maximum temperature)
- 2 Standard, Polyimide dia. slip ring (high temperature service)

#### OUTLET RANGE

- C 0–10 psig
- D 0–25 psig
- E 0–50 psig
- G 0–100 psig
- I 0–250 psig (requires T-handle or tamper-proof)
- J 0–500 psig (requires T-handle or tamper-proof)

NOTE: Contact the factory for any additional requirements.

## Maximum Temperature & Operating Inlet Pressures

SEAT MATERIAL	MAXIMUM TEMPERATURE	MAXIMUM OPERATING INLET PRESSURE
Tefzel®	150° F (66° C)	@ 3600 psig (24.82 MPa)
PCTFE (formerly Kel-F® 81)	175° F (80° C)	@ 6000 psig (41.37 MPa)
PEEK™	500° F (260° C)	@ 3600 psig (24.82 MPa)
PEEK™	175° F (80° C)	@ 6000 psig (41.37 MPa)

## Outline and Mounting Dimensions

