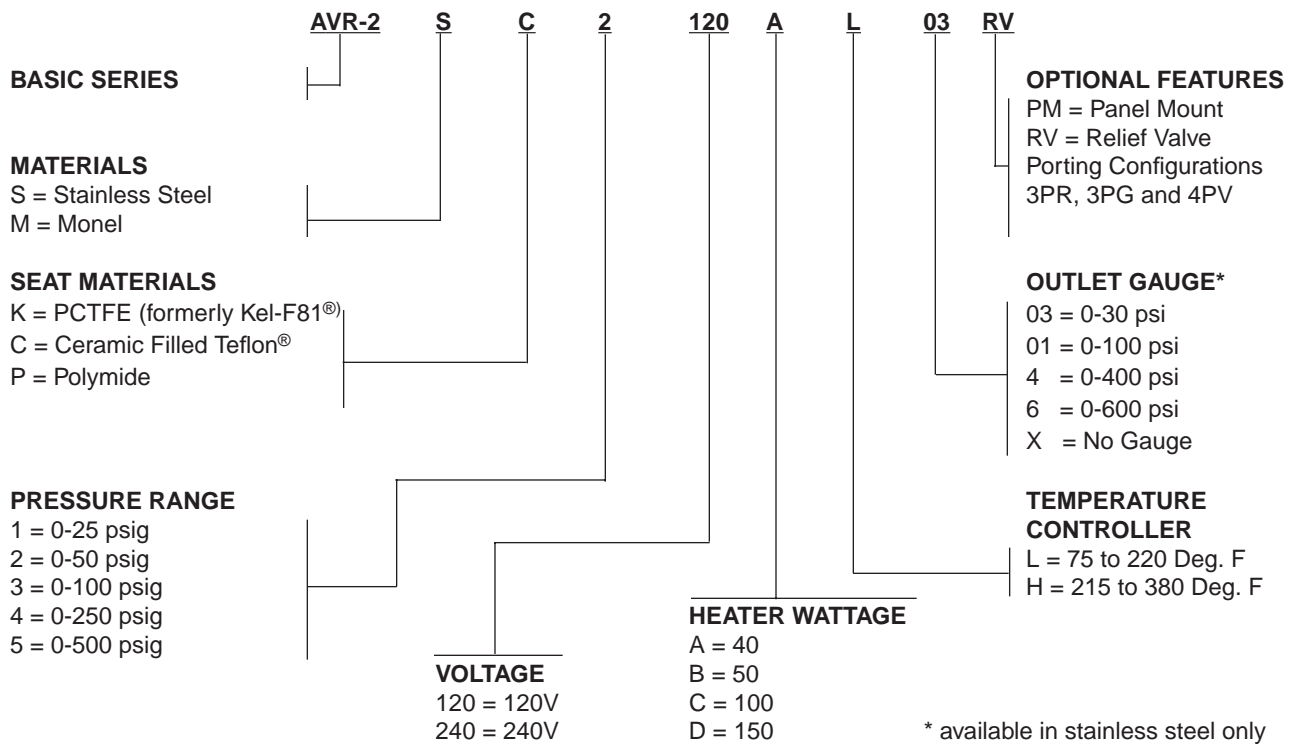


Series AVR-2

Ordering Information



Kel-F81® is a registered trademark of 3M Company
Hastelloy C22® is a registered trademark of Haynes



technological leadership by design
an iso 9001 certified company

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Revision #2 • Date 3/8/96

Series AVR-2

Pressure Reducing Regulator



technological
leadership
by design
an ISO 9001
certified company

Electrically Heated Vaporizing Pressure Reducing Regulator

The AVR-2 Series electrically heated vaporizing regulator is designed to heat and/or vaporize a gas or liquid sample before entering an analyzer system.



features

- ▶ Low internal volume
- ▶ Standard Hastelloy C22® diaphragm for superior strength and corrosion resistance
- ▶ Convoluted diaphragm provides outlet pressure stability with changes in flow
- ▶ Integral diaphragm stop provides additional safety measure
- ▶ Meets NACE standard MR-01-75
- ▶ CSA and Cenelec certified

materials of construction

Wetted

Pressure control and heat exchanger Bodies 316L stainless steel or monel
Seat PCTFE
(formerly known as Kel-F81®),
ceramic filled Teflon® or Polyimide®
Seals Teflon® and Peek
Diaphragm Hastelloy C22®
Poppet Hastelloy C22®
Poppet spring Inconel®

Non-Wetted

Cap 303 stainless steel
Adjusting screw 416 Stainless Steel
Condulet Cast iron and aluminum

electrical specifications

Power requirements 120V or 240V,
50/60 Hz
Heater wattage 40, 50, 100 or 150 watt
Temperature controller Proportional,
75 to 220°F or 215 to 380°F ranges
Condulet Crouse Hinds, UL and CSA listed
Class 1, Groups A,B,C,D Class 2, Groups E,F,G

operating conditions

Inlet pressure 3500 psi (241.0 bar)
maximum
Outlet pressure 0-25 psi (0-1.7 bar)
0-50 psi (0-3.5 bar), 0-100 psi (0-7.0 bar)
0-250 psi (0-17.2 bar), 0-500 psi (0-35.0bar)
Temperature of flow media -40°F to
500°F (-40°C to 260°C)

functional performance

Design proof pressure 7000 psi
Design burst pressure 11,500 psi
Flow capacity Cv 0.06
(ANSI/ISA S 75. 02 1988 using water)
Supply pressure effect7 psi per 100 psi

Leakage

Outboard 1 x 10⁻⁹ scc/sec He
Inboard 1 x 10⁻⁹ scc/sec He
Internal volume Inlet 2.6 cc, Total 7.7cc

standard connections

1/4" outlet, 1/8" inlet, female pipe threads (NPT)

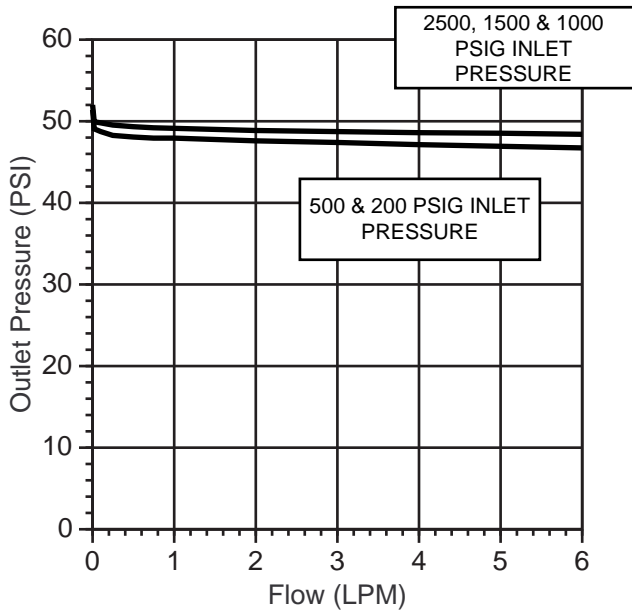
approximate weight

4.4 lbs (2.0 kgm)

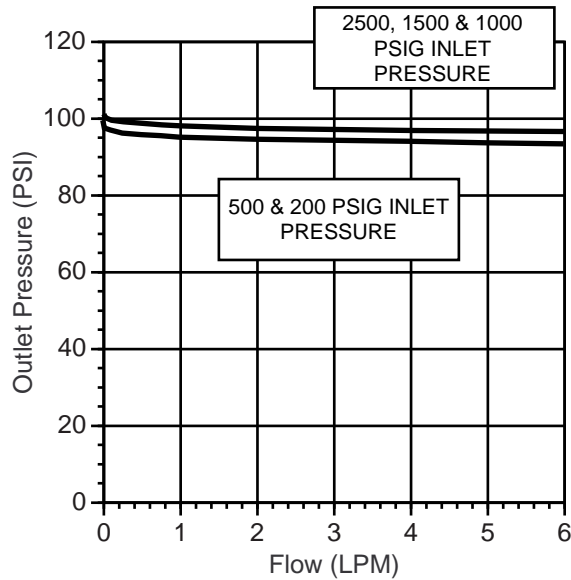
Series AVR-2

Flow Information

AVR-2, 0-50 psig outlet range Cv .06, Air



AVR-2, 0-250 psig outlet range Cv .06, Air



Seat Operating Parameters

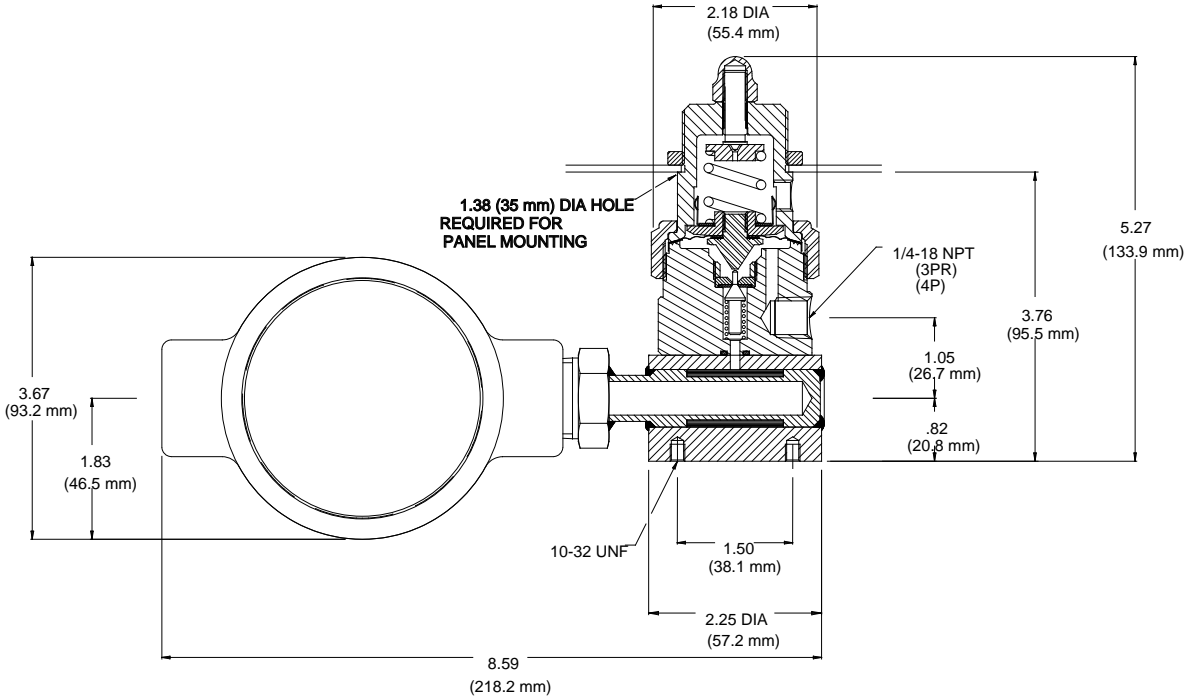
Maximum Operating Limits

Seat Material	Temperature	Inlet Pressure
PCTFE (formerly Kel-F 81®)	150°F (66°C)	3500 psig (241 bar)
Ceramic filled Teflon®	275°F (135°C)	3500 psig (241 bar)
Polyimide	600°F (315°C)	3500 psig (241 bar)

The above temperatures are that of the flow media. If the ambient temperature exceeds 400°F (204°C), please consult the factory for advice. Polyimide is not suitable for steam service or streams containing ammonia. Materials of construction are listed on page 1 of this bulletin. If there are questions regarding chemical compatibility of any of these materials, please consult the factory for advice.

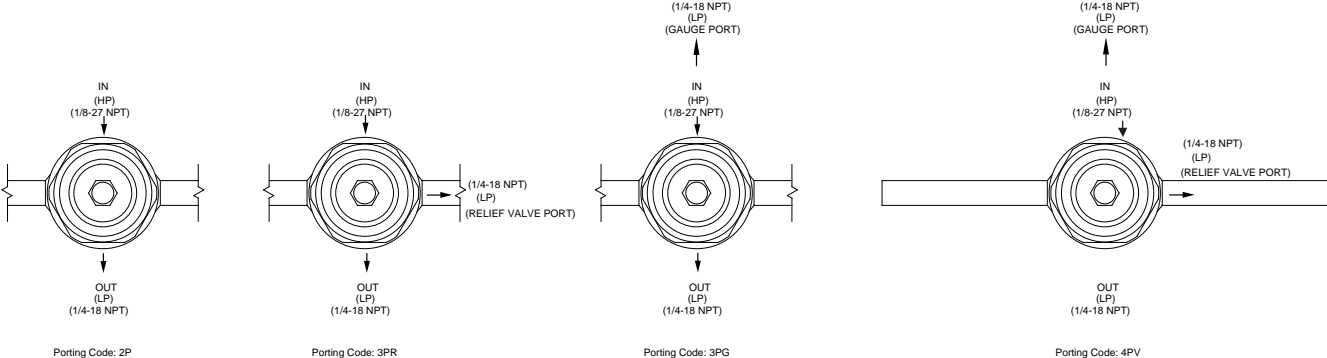
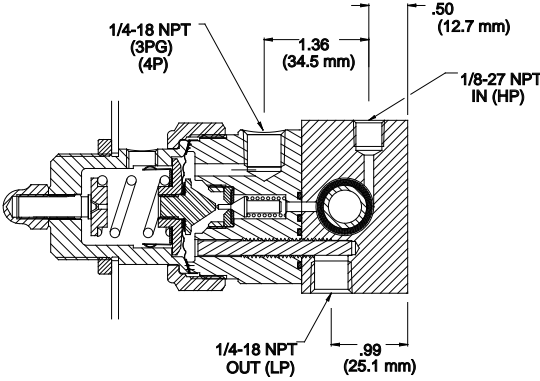
Series AVR-2

Cross Sectional View and Installation Dimensions



Porting Configurations

Below are the standard porting configurations that are available. One of these will need to be selected for the ordering information on page four of this bulletin. The standard unit is equipped with a 1/8" NPT inlet port and a 1/4" NPT outlet port, located in the bottom section of the unit (2P). Extra outlet ports are 1/4" NPT. The cross sectional drawings above illustrate the location of the extra outlet port(s) in the top section of the unit.



Porting Code: 2P

Porting Code: 3PR

Porting Code: 3PG

Porting Code: 4PV