

# 7000 Regulators

Special Purpose Regulators for Semiconductor Process Gases



Section E – Gas Handling Equipment

## Single Stage Electropolished 316L Stainless Steel Barstock Body – Two, Three and Four Port Configurations VCR Connections

The 7002 and 7003 Series regulators are intended for secondary pressure control of the highest purity gases or as point of use pressure control in semiconductor process gas distribution systems. The 7004 Series regulators are intended for primary pressure control of semiconductor process gases as well as applications requiring constant delivery pressure control, regardless of supply pressure variations.

### Typical Applications

- Semiconductor process gases
- Gas and liquid chromatography
- Ultra high purity carrier gases
- Zero, span, and calibration gases

### Features and Benefits of the 702, 703 and 704 Series Regulators

- **Butt-Welded VCR Connections**  
Highest leak integrity available
- **316 Stainless Steel Barstock Body**  
Enhanced corrosion resistance
- **Front and Rear Panel Mountable**  
Versatile system configuration
- **Pressure Ranges 0-15 to 0-500 psig**  
Broad range of applications
- **3000 psig Inlet Pressure Rating**  
Safe use with high pressure cylinders
- **Metal-to-Metal Diaphragm Seal**  
Reduces possibility of gas contamination
- **316L Stainless Steel Diaphragm**  
No inboard diffusion
- **Orientable Captured Vent Capable**  
Safe and easy installation
- **Field Adjustable Pressure Limit**  
Safeguard downstream equipment

### Specifications

- **Operating Pressure**  
Vacuum to 500 psig (241 bar)
- **Temperature Range**  
-40 °F to 140 °F  
(-40 °C to 60 °C)
- **Ports**  
1/4" VCR
- **Helium Leak Integrity**  
1 x 10<sup>-9</sup> scc/sec
- **Cv**  
0.06




### Materials

- **Body**  
316L stainless steel
- **Bonnet**  
Chrome-plated brass barstock
- **Poppet**  
Stainless steel
- **Nozzle**  
316L stainless steel
- **Spring**  
Elgiloy®
- **Seat**  
KEL-F® 81

### Ordering Information –

Series PRS7002-ABCD, PRS7003-ABCD and PRS7004-ABCD

Highlighted selection indicates most popular model

|   | A  |   | B   | C   | D   |
|---|--|---|---|---|---|
| <b>Series 7002</b>  | <b>Outlet Pressure</b>                               | <b>Outlet Gauge</b>                               | <b>Inlet Gauge</b>                          | <b>Port Configuration</b>   | <b>Assembly/Gauges</b>  |
|  | 1: 0-15 psig<br>2: 0-50 psig<br>3: 0-100 psig        | 0: None   | 0: None                                     | 0: 1/4" Tube Stub<br>1: FVCR x MVCR<br>2: MVCR x MVCR<br>3: MVCR x FVCR<br>4: FVCR x FVCR<br>5: IFS x IFS<br>(IFS = Internal Face Seal) | 0: Bare Body<br>1: Standard Assembly  |
| <b>Series 7003</b>  | <b>Outlet Pressure</b>                               | <b>Outlet Gauge</b>                               | <b>Inlet Gauge</b>                          | <b>Port Configuration</b>   | <b>Assembly/Gauges</b>  |
|  | 1: 0-15 psig<br>2: 0-50 psig<br>3: 0-100 psig        | 30"-0-30 psig<br>30"-0-100 psig<br>30"-0-200 psig | 0: None                                     | 0: 1/4" Tube Stub<br>1: FVCR x MVCR<br>2: MVCR x MVCR<br>3: MVCR x FVCR<br>4: FVCR x FVCR<br>5: IFS x IFS                               | 0: Bare Body (Welded Gauge Ports)<br>1: Standard Assembly Welded Gauge Ports)<br>2: Bare Body (IFS Gauge Ports)<br>3: Standard Assembly (IFS Gauge Ports) |
| <b>Series 7004</b>  | <b>Outlet Pressure</b>                               | <b>Outlet Gauge</b>                               | <b>Inlet Gauge</b>                          | <b>Port Configuration</b>   | <b>Assembly/Gauges</b>  |
|  | 1: 0-15 psig<br>2: 0-50 psig<br>3: 0-100 psig        | 30"-0-30 psig<br>30"-0-100 psig<br>30"-0-200 psig | 0: None<br>3: 0-4000 psig<br>6: 0-1000 psig | 0: 1/4" Tube Stub<br>1: FVCR x MVCR<br>2: MVCR x MVCR<br>3: MVCR x FVCR   | 0: Bare Body (Welded Gauge Ports)<br>1: Standard Assembly Welded Gauge Ports)<br>2: Bare Body (IFS Gauge Ports)<br>3: Standard Assembly (IFS Gauge Ports) |
|   | Other outlet pressure ranges available upon request. |   |   |   |   |