

# EXH

## Self-Relieving High Pressure Regulator

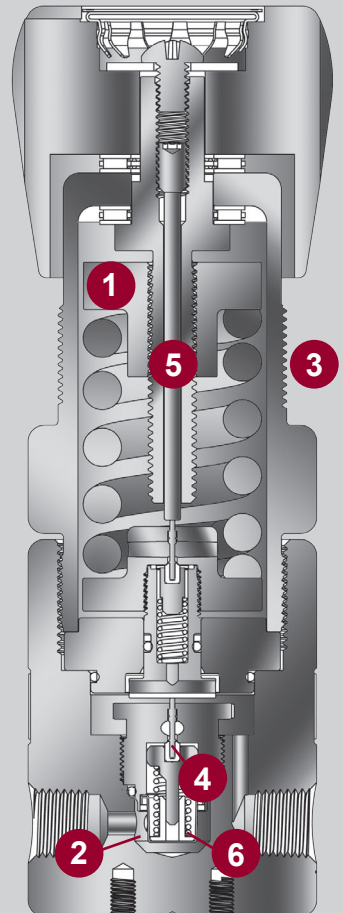


The AURA EXH self-relieving high pressure regulator provides primary pressure control of non-corrosive gas or liquid for delivery pressures up to 4500 psig. Ensuring reliable pressure control, the EXH vents excess downstream pressure to atmosphere through the bonnet as the delivery pressure is decreased. AURA's encapsulated seat design consolidates the numerous moving internal components of a standard regulator design into one single piece, allowing for ease of maintenance and minimizing potential failure points. Protected by a 10-micron 360° filter, the encapsulated seat provides significantly more filtration of impurities than the standard pressed-in disk filter. The encapsulated seat also filters damaging particles from all ports rather than just the pipeline port. Available with multiple seat materials and orifice sizes, the EXH's capsule provides optimum performance in any application.

The EXH's high-load marginal spring provides reliable control to enable steady delivery pressures even at high flow rates. With its minimal installation requirements, the EXH allows the end-user the flexibility to easily panel or surface mount the regulator. When not self-relieving, the EXH provides positive shut-off enabling a helium leak-tight seal. Additionally, the EXH undergoes multiple flow and function tests as a completed assembly, including optional peripherals, to ensure the highest levels of durability and performance.

### EXH Features

- 1. Self-relieving standard**
  - Steady downstream pressure
- 2. 10-micron 360° filter**
  - Significantly more filtration of impurities than disk
- 3. Threaded bonnet with minimal installation requirements**
  - Easily panel mounted
- 4. Multiple seat materials**
  - Ensures reliability by eliminating reaction with media
- 5. Non-rising stem design**
  - Minimal space requirements
- 6. High load marginal spring**
  - Tighter pressure control between flowing and non-flowing conditions



# EXH

## Self-Relieving High Pressure Regulator Technical Data and Product Specifications

### EXHS Materials of Construction

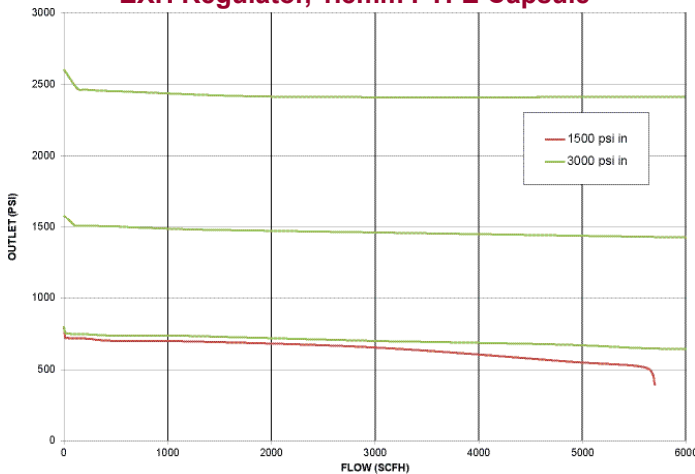
<b>Body</b>	316L stainless steel
<b>Bonnet</b>	304 stainless steel
<b>Piston</b>	316L stainless steel
<b>Seat</b>	PTFE, PCTFE, PEEK
<b>10-micron 360° filter</b>	316L stainless steel
<b>Nozzle</b>	316L stainless steel
<b>Cylinder</b>	316L stainless steel

<b>Seat holder</b>	316L stainless steel
<b>Spring plate</b>	316L stainless steel
<b>Piston spring</b>	17-7 stainless steel
<b>Piston O-ring</b>	PCTFE
<b>O-ring seals</b>	Viton
<b>Piston back-up ring</b>	PTFE

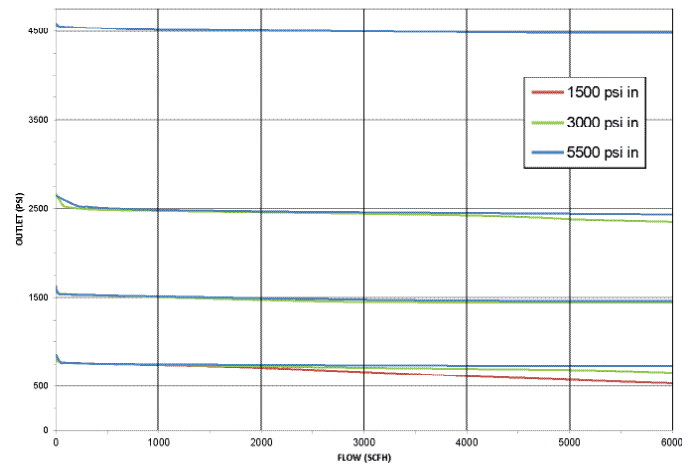
### Functional Specifications

<b>Design Pressure</b>	<ul style="list-style-type: none"> <li>Working pressure: 3000 psig PTFE</li> <li>Working pressure: 5500 psig PCTFE</li> <li>Working pressure: 6000 psig PEEK</li> <li>Burst pressure: &gt; 4x Working pressure</li> </ul>	<b>Temperature</b>	<ul style="list-style-type: none"> <li>PTFE: -40°F to 140°F (-40°C to 60°C)</li> <li>PCTFE: -40°F to 150°F (-40°C to 66°C)</li> <li>PEEK: -40°F to 275°F (-40°C to 135°C)</li> </ul>
<b>Maximum Inlet Pressure</b>	<ul style="list-style-type: none"> <li>PTFE (3000 psig maximum inlet pressure)</li> <li>PCTFE (5500 psig maximum inlet pressure)</li> <li>PEEK (6000 psig maximum inlet pressure)</li> </ul>	<b>Weight (bare body)</b>	<ul style="list-style-type: none"> <li>4lbs 12oz (2.15 kg)</li> </ul>
<b>Leak Rate</b>	<ul style="list-style-type: none"> <li>External: <math>1 \times 10^{-7}</math> He ccs</li> <li>Seat: <math>1 \times 10^{-7}</math> He ccs</li> </ul>	<b>Gauges (optional)</b>	<ul style="list-style-type: none"> <li>2" manufactured to ANSI/ASME B40.1</li> </ul>

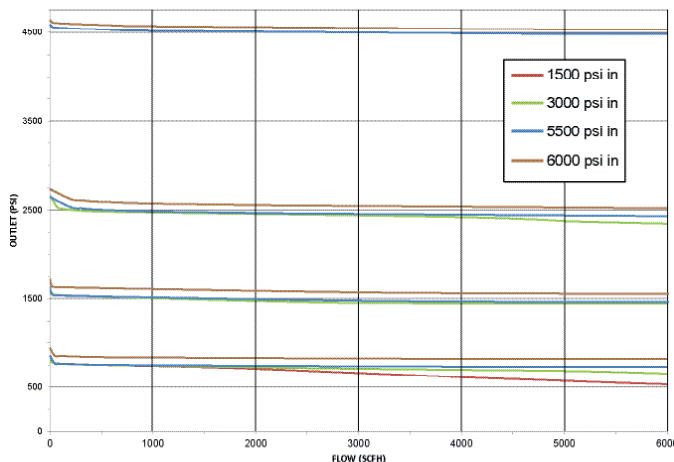
EXH Regulator, 1.8mm PTFE Capsule



EXH Regulator, 3.2mm PCTFE Capsule



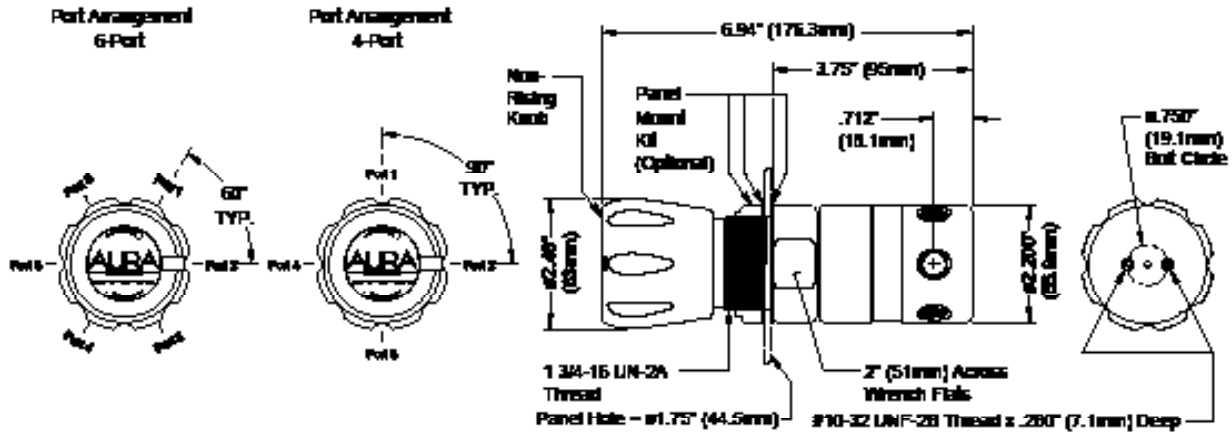
EXH Regulator, 1.8mm PEEK Capsule



#### Each EXH regulator assembly includes:

- 100% helium leak check
- 100% function test
- Silicone-free assembly
- Certificate of conformance

Mounting and Installing Information



Ordering Information

EXH 4 5 6 7 8 -01- 13 14 15 - 16 17 0

**Digit 4 - Material of Construction**

S = 316L stainless steel

**Digit 5 - Pressure Range**

- 1 = 0-750 psig
- 2 = 0-1500 psig
- 3 = 0-2500 psig
- 4 = 0-4500 psig\*

\* Not available with PTFE seat

**Digit 6 - Gauges (Major/Minor Scale)**

- 0 = None
- 1 = Inlet (psig/kPa)
- 2 = Outlet (psig/kPa)
- 3 = Both inlet and outlet (psig/kPa)
- 5 = Inlet (BAR/psig)
- 6 = Outlet (BAR/psig)
- 7 = Both inlet and outlet (BAR/psig)

**Digit 7 - Orifice Size and Seat**

- 1 = Cv .02 (1.1mm) PTFE
- 2 = Cv .06 (1.8mm) PTFE
- 3 = Cv .1 (3.2mm) PTFE
- 6 = Cv .06 (1.8mm) PCTFE
- 7 = Cv .1 (3.2mm) PCTFE
- B = Cv .06 (1.8mm) PEEK

**Digit 8 - Assembly**

See the EXH Port Configuration Table on the back of this brochure for choice of assembly.

**Digits 13-15 - Inlet Fitting**

- Cylinder Connection\*
- 000 = None (1/4" female NPT)
- M06 = 6mm ss compression tube fitting
- M12 = 12mm ss compression tube fitting
- TF2 = 1/8" ss compression tube fitting
- TF4 = 1/4" ss compression tube fitting
- TF6 = 3/8" ss compression tube fitting
- TF8 = 1/2" ss compression tube fitting

**Digit 16 - Valve Assembly**

- 0 = No valve
- 1 = Diaphragm valve (not available in 0-4500 psig outlet range)

**Digit 17 - Outlet Fitting**

- 0 = None (1/4" female NPT)
- 1 = 1/4" male NPT fitting
- 2 = 1/8" ss compression tube fitting
- 3 = 1/4" ss compression tube fitting
- 4 = 3/8" ss compression tube fitting
- 5 = 1/2" ss compression tube fitting
- 6 = 6mm ss compression tube fitting
- 7 = 8mm ss compression tube fitting
- 8 = 10mm ss compression tube fitting
- 9 = 12mm ss compression tube fitting

**Accessories:**

- Panel mount kit  
EPXA0004-01-000-000
- Stainless steel control station  
EXPV0004-01-000-1SH

**Key:**

ss = Stainless steel

**NOTE:** If you are unable to find a configuration specific to your application's needs, call AURA Gas Controls directly at 800.582.2565.

\*AURA Supports all major international cylinder connections including: CGA, BS 341, DIN 477, JIS B 8246, and others available



1501 Harpers Road, Virginia Beach, Virginia 23454

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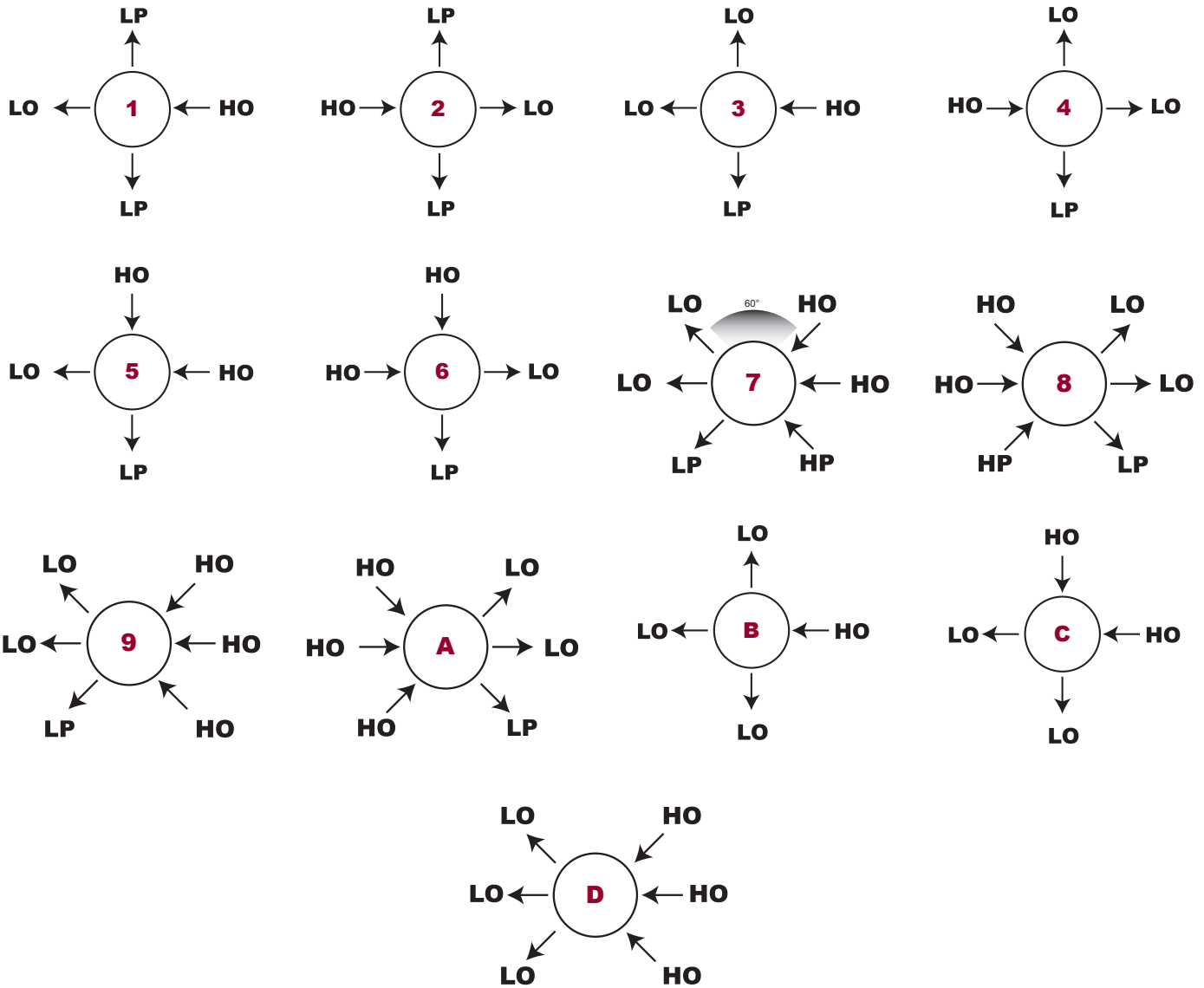
www.AURACONTROLS.com

Registered ISO 9001



# EXH

## Self-Relieving High Pressure Regulator Technical Data and Product Specifications



**Key:**

- LO - Low Pressure Open
- LP - Low Pressure Plugged
- HO - High Pressure Open
- HP - High Pressure Plugged



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