EX2

Two Stage Pressure Reducing Regulator

The AURA EX2 is designed to provide consistent primary pressure control of gas or liquid for inlets up to 6000 psig where minor fluctuations in outlet pressure due to decaying inlet pressures are not acceptable. AURA's dual encapsulated seat design consolidates the numerous moving internal components of a standard regulator 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. The encapsulated seat also filters damaging particles from all inlet ports rather than just the pipeline port. Available with multiple seat materials and orifice sizes, the EX2's capsule ensures optimum performance in any application.

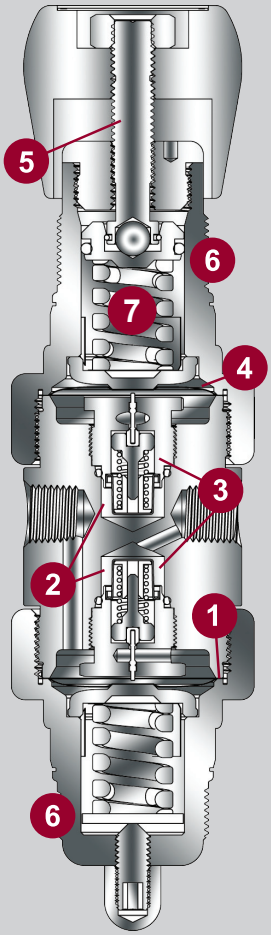
AURA's proprietary machining process enables metal to metal seals to guarantees the highest leak integrity available and yields surface finishes of 4-25 Ra designed to reduce corrosion. With its minimal internal volume, the EX2 also allows less gas to be used while purging.

The AURA EX2 is assembled in a Class 100 clean room as a complete assembly with all gauges, fittings, and valves attached. The complete assembly is cleaned for oxygen service and is 100% helium leak checked. Additionally, the EX2 undergoes multiple flow and function tests to ensure the highest level of purity and durability.

Available with Dursan® LS inert and anti-corrosive technology that provides superior corrosive resistance versus exotic metals in highly acidic or caustic applications, the EX2 is the reliable choice for critical applications.

EX2 Features

1. **Metal to metal seals**
   - $1x10^{-9}$ He ccs leak rate
2. **10-micron 360° filter**
   - Significantly more filtration of impurities than disk
3. **Encapsulated seat design**
   - Ease of maintenance
4. **Dual-surface diaphragm**
   - Extremely sensitive even at lower pressures
5. **Field access to adjusting screw**
   - Lock pressure setting
6. **Threaded front and rear bonnet**
   - Flexible installation
7. **Field access to adjusting spring**
   - Change delivery pressure ranges in the field



AURA™
GAS CONTROLS

EX2 Two Stage Pressure Reducing Regulator
Technical Data and Product Specifications

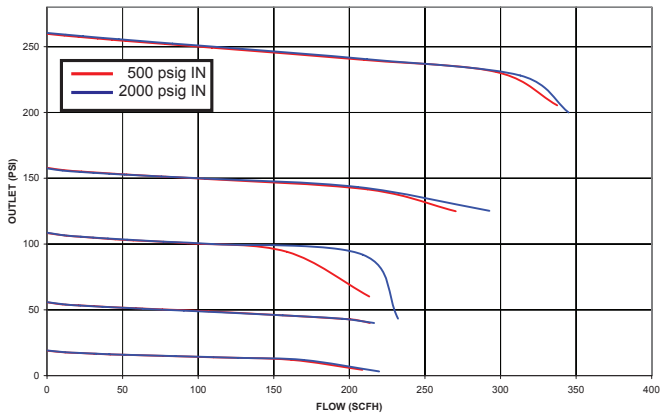
Materials of Construction

	EX2S	EX2N	EX2C	EX2G
Body	316L stainless steel	Nickel-plated brass	Chrome-plated brass	Dursan® LS
Bonnet	304 stainless steel	Nickel-plated brass	Chrome-plated brass	Dursan LS
Diaphragm	316L stainless steel	316L stainless steel	316L stainless steel	Dursan LS
Seat	PTFE, PCTFE, PEEK	PTFE, PCTFE, PEEK	PTFE, PCTFE, PEEK	PTFE, PCTFE, PEEK
10-micron 360° filter	316L stainless steel	Copper nickel	Copper nickel	Dursan LS
Nozzle	316L stainless steel	Brass	Brass	Dursan LS

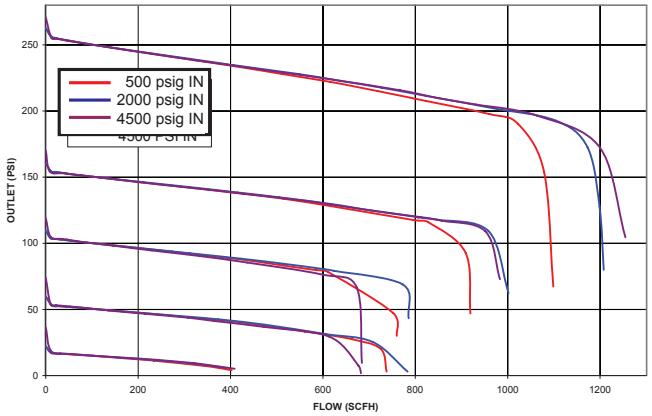
Functional Specifications

Design Pressure	• Working pressure: 3000 psig PTFE • Working pressure: 5500 psig PCTFE/PEEK • Burst pressure: > 4x Working pressure	**Temperature**	• PTFE: -40˚F to 140˚F (-40˚C to 60˚C) • PCTFE: -40˚F to 150˚F (-40˚C to 66˚C) • PEEK: -40˚F to 150˚F (-40˚C to 66˚C)
Maximum Inlet Pressure	• PTFE (3000 psig maximum inlet pressure) • PCTFE (4500 psig maximum inlet pressure) • PEEK (6000 psig maximum inlet pressure)	**Weight (bare body)**	• 3 lbs. 7.1 oz. (1.56 kg)
Leak Rate	• External: $1x10^{-9}$ He ccs • Seat: $1x10^{-7}$ He ccs	**Gauges (optional)**	• 2" manufactured to ANSI/ASME B40.1

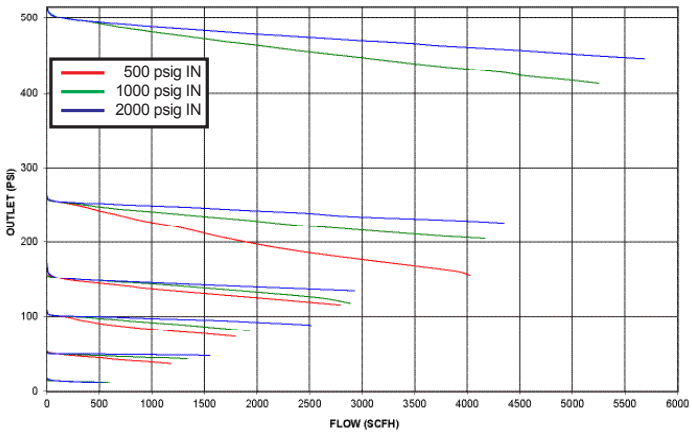
EX2 Regulator, 1.1mm PTFE Capsule®



EX2 Regulator, 1.8mm PCTFE Capsule®



EX2 Regulator, 3.2mm PTFE Capsule®

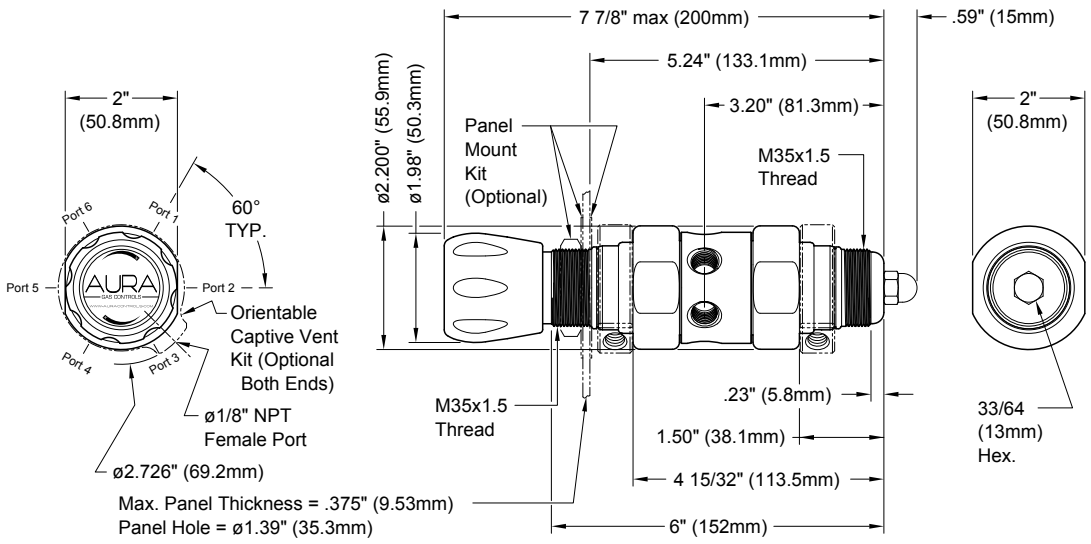


Each EX2 regulator assembly includes:

- Class 100 cleanroom assembly
- 100% helium leak check
- Cleaning for oxygen service
- 100% function test
- Silicone-free assembly
- Certificate of conformance
- Certificate of cleaning for oxygen service

AURA Products are Manufactured and Assembled in the U.S.A.

Mounting and Installing Information



Ordering Information

EX2 [4] [5] [6] [7] [8] -01- [13] [14] [15] - [16] [17] 0

Digit 4 - Material of Construction
S = 316L stainless steel
N = Nickel-plated brass
C = Chrome-plated brass
G = Dursan LS inert and anti-corrosive technology

Digit 5 - Pressure Range
1 = 0-15 psig
2 = 0-50 psig
3 = 0-100 psig
4 = 0-250 psig
7 = 0-150 psig

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 EX2 Port Configuration Table on the back of this brochure for choice of assembly.

Digits 13-15 - Inlet Port
Cylinder Connection*
000 = None (¼" female NPT)
M06 = 6mm ss compression tube fitting
M12 = 12mm ss compression tube fitting
TF2 = ⅛" ss compression tube fitting
TF4 = ¼" ss compression tube fitting
TF6 = ⅜" ss compression tube fitting
TF8 = ½" ss compression tube fitting

Digit 16 - Valve Assembly
0 = No valve (ss, ni, cp, Dursan LS)
1 = Diaphragm valve (ss, cp, Dursan LS)

Digit 17 - Outlet Fitting
0 = None (¼" female NPT)
1 = ¼" male NPT fitting
2 = ⅛" ss compression tube fitting
3 = ¼" ss compression tube fitting
4 = ⅜" ss compression tube fitting
5 = ½" 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
A = ⅜" BSP RH cp fitting
B = ⅜" BSP LH cp fitting
C = ⅛" cp compression tube fitting
D = ¼" cp compression tube fitting
E = ⅜" cp compression tube fitting
F = ½" cp compression tube fitting
G = 6mm cp compression tube fitting

Accessories:
Panel mount kit
EXPA0002-01-000-000
Mounting bracket with panel mount kit
EXPA0001-01-000-000
Bonnet orientable vent kit
EXPF0001-01-000-000
36" 316L stainless steel hose with check valve and cylinder connection, 3000 psig
EXPH0001-01-CON-000
36" 316L stainless steel hose with check valve and brass cylinder connection, 3000 psig
EXPH0002-01-CON-000
36" 316L Monel®-lined hose with cylinder connection for oxygen service, 3850 psig
EXPH0008-01-540-000
Stainless steel adjustable relief valve, 10-19 psig
EXPV0001-01-001-001
Stainless steel adjustable relief valve, 20-99 psig
EXPV0001-01-001-002
Stainless steel adjustable relief valve, 100-249 psig
EXPV0001-01-001-003
Stainless steel adjustable relief valve, 250-500 psig
EXPV0001-01-001-003
Stainless steel control station
EXPV0004-01-000-2SH
Chrome-plated brass control station
EXPV0004-01-000-2CH

Key:
ss = Stainless steel
ni = Nickel-plated brass
cp = Chrome-plated brass
RH = Right hand
LH = Left hand
CON = Cylinder Connection

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

AURA GAS CONTROLS
1501 Harpers Road, Virginia Beach, Virginia 23454
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www.AURACONTROLS.com
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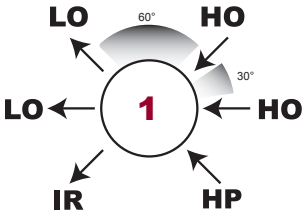
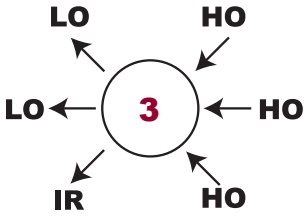
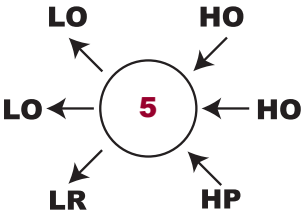
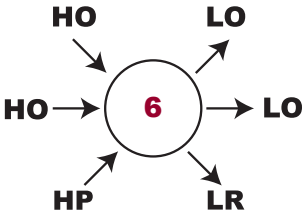
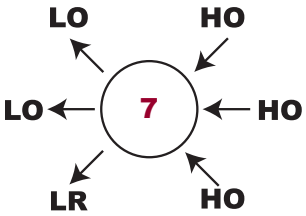
EX2 Two Stage Pressure Reducing Regulator Port Configuration Table

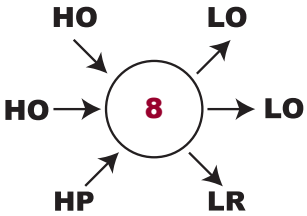


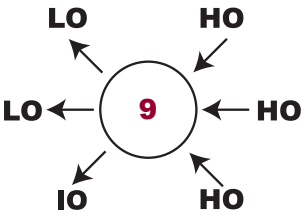


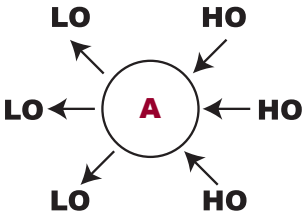


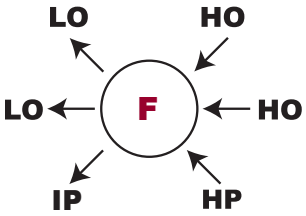


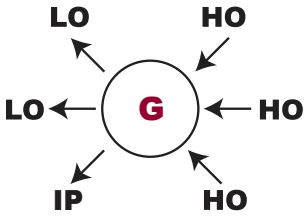


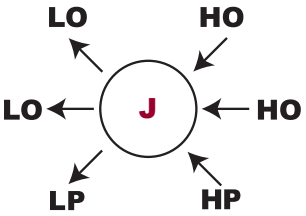


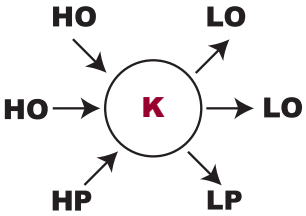


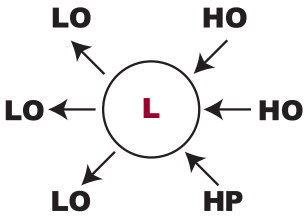


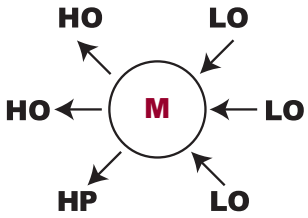












Key:
LO - Low Pressure Open
LP - Low Pressure Plugged
LR - Low Pressure with Relief Valve
HO - High Pressure Open
HP - High Pressure Plugged
IP - Interstage Pressure Plugged
IO - Interstage Pressure Open
IR - Interstage Pressure with Relief Valve

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