

# O2 3016AL SERIES

Air Loaded, High Pressure, High Flow, Oxygen  
Pressure Reducing Regulators



Premier O2 3016AL Series high pressure, high flow, piston sensed, pressure reducing regulators are rated for inlet and outlet pressures up to 6000 PSIG / 413.69 bar (*dependent on part number*) and Cv 1.0 or 2.0.

O2 3016 Series regulators are designed for use in Oxygen applications; they are available with a wide range of inlet and outlet configurations. Captured venting is standard.

## FEATURES

- Designed for use with Oxygen
- Captured venting standard
- Cv 1.0 or 2.0
- Compatible with electro-pneumatic controllers
- Economical pricing
- Machined bar stock body, bonnet and piston eliminates porosity found in castings

**SOME APPLICATIONS WILL REQUIRE A CUSTOM SOLUTION.**  
CONTACT PREMIER INDUSTRIES TO REQUEST A MODIFICATION  
OR A CUSTOM DESIGN.

## SPECIFICATIONS

- **MAXIMUM INLET PRESSURE:**
  - P/N Oy30-10225AL: 6000 PSIG (413.7 bar)
  - P/N Oy30-10227: 4000 PSIG (275.8 bar)
- **CONTROL PRESSURE:**
  - 1500 PSIG (103.4 Bar)
  - 2500 PSIG (172.4 Bar)
  - 4000 PSIG (275.8 Bar)
  - 6000 PSIG (413.7 Bar) *Oy30-10225AL only*
- **FLOW (Cv):** 1.0 or 2.0
- **VENT VALVE Cv:** 0.06

## MATERIALS OF CONSTRUCTION

- **BODY:**
  - SAE 360 Brass
- **WETTED, OTHER:**
  - Monel®
- **SEAL OPTIONS:**
  - Viton®
  - Kalrez® *contact factory for pricing*
- **BACK-UP RINGS:**
  - PTFE or PCTFE
- **MAIN VALVE SEAT :**
  - PCTFE
- **VENT VALVE SEAT :**
  - Vespel® SP-21
- **HOUSING, AIR ACTUATOR:**
  - 6061-T6 Aluminum, Clear Anodized
- **DIAPHRAGM, AIR ACTUATOR:**
  - Neoprene, nylon fabric-reinforced

## PORTING

- **INLET/OUTLET OPTIONS | Oy30-10225AL:**
  - 3/8", 1/2" FNPT
  - 3/8", 1/2" SAE J1926
  - 3/8", 1/2" SAE AS5202\*
  - 9/16" MEDIUM PRESSURE
  - \* SAE AS5202 supersedes MS33649*
- **INLET/OUTLET OPTIONS | Oy30-10227:**
  - 1/2", 3/4", 1" FNPT
  - 1/2", 3/4", 1" SAE J1926
  - 1/2", 3/4", 1" SAE AS5202\*
  - 9/16", 3/4", 1" MEDIUM PRESSURE
  - \* SAE AS5202 supersedes MS33649*
- **OPTIONAL GAUGE PORTS:**
  - 1/4" FNPT
  - (Unless port type uniform modifier (PTU) is specified)*
- **VENT PORT:**
  - 1/4" inlet/outlet port type
- **AIR LOADER PORT:**
  - 1/4" FNPT (*Standard*)
  - 1/8" FNPT
  - 1/4" SAE J1926
  - 1/4" SAE AS5202\*
  - \* SAE AS5202 supersedes MS33649*

## OPTIONS

- Gauges
- Private label
- Panel mounting bracket (**Oy30-10225AL only**):  
*P/N: 30-10059 (Ø2.15 panel hole)*
- Surface mount
- Non-venting modification

*Vespel® Viton® and Kalrez® are registered trademarks of E.I.duPont de Nemours and Company.*

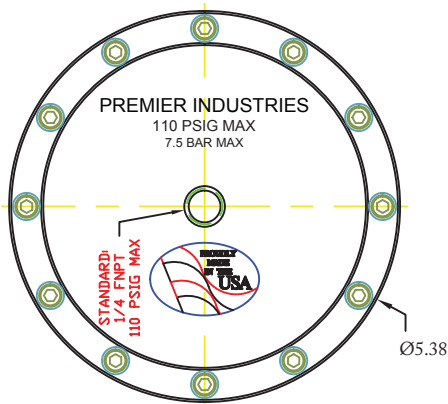
*Monel® is a registered trademark of Special Metals Corporation*

*Contact factory for material certifications. Fees may apply.*

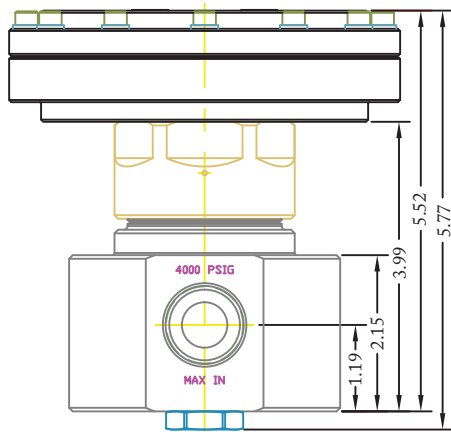
# O2 3016AL SERIES

Air Loaded, High Pressure, High Flow, Oxygen  
Pressure Reducing Regulators

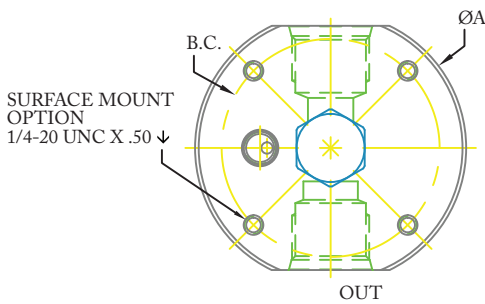
PART NUMBER: Oy30-10227



BODY DIMENSIONS			
PORT SIZE & TYPE	ØA	FLATS	B.C.
1/2" & 3/4" NPT	Ø2.98	—	Ø2.50
1/2" SAE	Ø3.23	3.05	Ø2.63
1" NPT	Ø3.48	—	Ø2.75
9/16" M.P.	Ø3.48	3.30	Ø2.75
3/4" SAE J1926	Ø3.73	3.36	Ø3.00
3/4" SAE AS5202	Ø3.98	3.72	Ø3.25
3/4" M.P.	Ø3.98	3.72	Ø3.25
1" SAE	Ø3.98	3.72	Ø3.25



DIAPHRAGM Ø4.0"	AREA	RATIO-CALCULATED
DIAPHRAGM Ø4.0"	12.5664 IN <sup>2</sup>	
SENSOR Ø1.000	0.7854 IN <sup>2</sup>	16/1
SENSOR Ø0.750	0.4418 IN <sup>2</sup>	28/1
SENSOR Ø0.500	0.1964 IN <sup>2</sup>	64/1

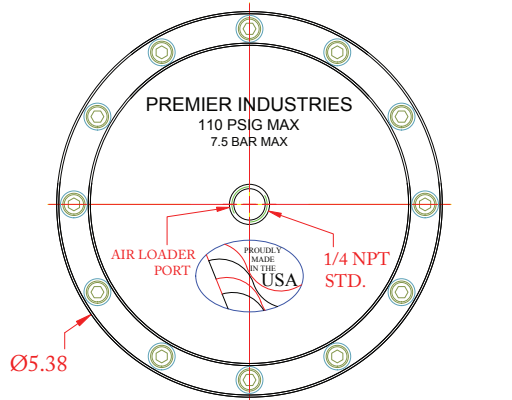


3/4 SAE J1926 PORTS SHOWN

# O2 3016AL SERIES

Air Loaded, High Pressure, High Flow, Oxygen  
Pressure Reducing Regulators

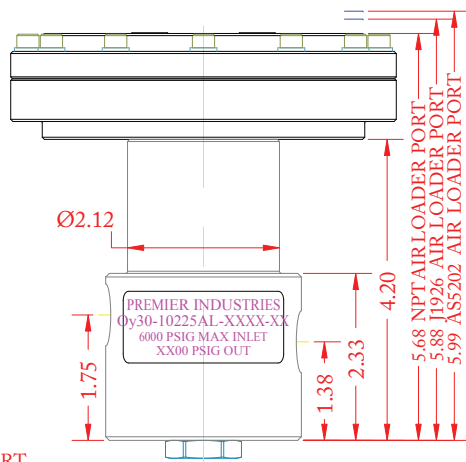
PART NUMBER: Oy30-10225AL



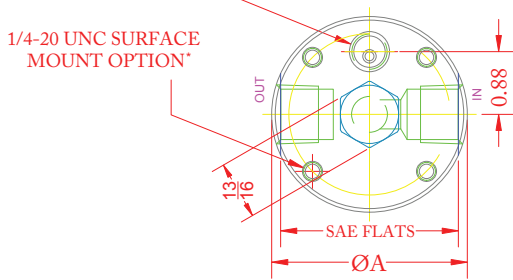
	AREA	RATIO-CALCULATED
DIAPHRAGM Ø4.0"	12.5664 IN <sup>2</sup>	
SENSOR Ø1.000	0.7854 IN <sup>2</sup>	16/1
SENSOR Ø0.750	0.4418 IN <sup>2</sup>	28/1
SENSOR Ø0.500	0.1964 IN <sup>2</sup>	64/1
SENSOR Ø0.375	0.1104 IN <sup>2</sup>	114/1

PORT TYPE	ØA	FLATS	BODY
NPT	Ø2.73	—	
SAE J1926	Ø3.23	3.05	
3/8 SAE AS5202	Ø3.23	3.05	
1/2 SAE AS5202	Ø3.48	3.30	
9/16 MED. PRESS.	Ø3.48	3.30	

'L' CONFIGURATION BODIES REQUIRE A LARGER ØA



1/4" VENT PORT  
(IN/OUT PORT TYPE)

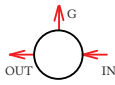
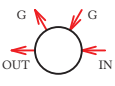
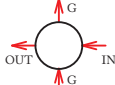



# O2 3016AL SERIES

Air Loaded, High Pressure, High Flow, Oxygen  
Pressure Reducing Regulators

PART #	-	1	2	3	4	-	5	6	-	MODS
Oy30-10227	-					-			-	

**Cv 2.0 MODEL**

1	OUTLET PRESSURE
3	10-1500 PSIG (0.69 - 103.42 bar) <i>Diameter: 1.000"</i> <i>Area: 0.7854 in<sup>2</sup></i> <i>Ratio: 1<sup>6</sup>/<sub>1</sub> **</i>
4	15-2500 PSIG (1.03 - 172.37 bar) <i>Diameter: 0.750"</i> <i>Area: 0.4418 in<sup>2</sup></i> <i>Ratio: 2<sup>8</sup>/<sub>1</sub> **</i>
6	50-4000 PSIG (3.45 - 275.79 bar) <i>Diameter: 0.500"</i> <i>Area: 0.1964 in<sup>2</sup></i> <i>Ratio: 6<sup>4</sup>/<sub>1</sub> **</i>
<i>** 4.0" diameter diaphragm</i> <i>Diaphragm area: 12.5664 in<sup>2</sup></i>	
2	PORTING CONFIGURATIONS
A	
C	
L	
S	

3	PORT SIZE
8	1/2"
9	9/16"
T	3/4"
W	1"
<i>*1/2" ports not available in medium pressure</i> <i>**9/16" ports only available in medium pressure</i> <b>GAUGE PORTS: 1/4" FNPT</b> <b>VENT PORT: 1/4" inlet/outlet port type</b>	
4	PORT TYPE (IN/OUT/VENT)
N	NPT
J	SAE J1926
A	SAE AS5202**
M	MEDIUM PRESSURE
<i>**SAE AS5202 supersedes MS33649</i>	

5 6	O-RING MATERIAL
02	VITON-A®
11	KALREZ® <i>(contact factory for pricing)</i>
MODIFICATIONS <i>Separate multiple mods with a dash</i>	
Blank	None
AS	1/4 SAE AS5202 loader port
E	1/8 NPT air loader port
J	1/4 SAE J1926 loader port
NV	Non-venting
PTU	Port type uniform
SM	Surface mount

**4000 PSIG MAX INLET**

*The end user is responsible to ensure adequate fittings are used to connect regulator to plumbing.*

*Kalrez® & Viton® are registered trademarks of E.I. duPont de Nemours and Company*

*Contact factory for material certifications. Fees may apply.*

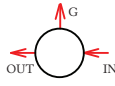
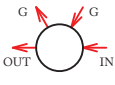
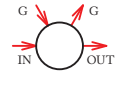
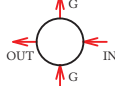

# O2 3016AL SERIES

Air Loaded, High Pressure, High Flow, Oxygen  
Pressure Reducing Regulators

PART #	-	1	2	3	4	-	5	6	-	MODS
Oy30-10225AL	-					-			-	

**Cv 1.0 MODEL**

1	OUTLET PRESSURE
3	10-1500 PSIG (0.69 - 103.42 bar) Diameter: 1.000" Area: 0.7854 in <sup>2</sup> Ratio: 16/1 **
4	15-2500 PSIG (1.03 - 172.37 bar) Diameter: 0.750" Area: 0.4418 in <sup>2</sup> Ratio: 28/1 **
6	50-6000 PSIG (3.45 - 413.69 bar) Diameter: 0.500" Area: 0.1964 in <sup>2</sup> Ratio: 64/1 **
** 4.0" diameter diaphragm Diaphragm area: 12.5664 in <sup>2</sup>	

2	PORTING CONFIGURATIONS
A	
C	
D	
L	
S	
3	PORT SIZE
6	3/8"*
8	1/2"*
9	9/16"**
GAUGE PORTS: 1/4" FNPT VENT PORT: 1/4" inlet/outlet port type	
NOTE: *3/8" and 1/2" not available in medium pressure **9/16 only available in medium pressure	

4	PORT TYPE (IN/OUT/VENT)
N	NPT
J	SAE J1926
A	SAE AS5202** <small>**SAE AS5202 supersedes MS33649</small>
M	MEDIUM PRESSURE
5 6	O-RING MATERIAL
02	VITON-A®
11	KALREZ® <i>(contact factory for pricing)</i>
MODIFICATIONS	
<i>Separate multiple mods with a dash</i>	
Blank	None
AS	1/4 SAE AS5202 loader port
E	1/8 NPT air loader port
J	1/4 SAE J1926 loader port
PTU	Port type uniform
NV	Non-venting
SM	Surface mount

### 10000 PSIG MAX INLET

The end user is responsible to ensure adequate fittings are used to connect regulator to plumbing.

Kalrez® & Viton® are registered trademarks of E.I. duPont de Nemours and Company

Contact factory for material certifications. Fees may apply.