

3100 SERIES

High Pressure, Piston Sensed
Back Pressure Regulators



Premier 3100 Series high pressure, single stage, piston sensed, back pressure regulators are rated for control pressures up to 10000 PSIG (*689.48 bar*) and Cv 0.03, 0.06, 0.14, or 0.20.

They are used to regulate to a broad range of non-corrosive and corrosive media (based on materials of construction) Premier 3100 Series regulators can be supplied with a wide range of inlet and outlet configurations.

FEATURES

- Control pressures up to 10000 PSIG (*689.48 bar*) max
- Cv: 0.03, 0.06, 0.14, or 0.20
- Economical pricing
- Multiple mounting options (*bracket / panel nuts*)
- Machined bar stock body, bonnet and piston eliminates porosity found in castings
- Numerous materials & optional features available.

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

SPECIFICATIONS

- **MAXIMUM INLET PRESSURE (brass):**
 - 6000 PSIG (413.69 bar)
- **MAXIMUM INLET PRESSURE (SS):**
 - 10000 PSIG (689.48 bar)
- **CONTROL PRESSURE RANGES:**
 - 5-500 PSIG (0.34 - 34.5 bar)
 - 5-800 PSIG (0.34 - 55.16 bar)
 - 10-1500 PSIG (0.69 - 103.42 bar)
 - 15-2500 PSIG (1.03 - 172.37 bar)
 - 25-4000 PSIG (1.72 - 275.79 bar)
 - 50-6000 PSIG (3.45 - 413.69 bar)
 - 100-10000 PSIG (6.89 - 689.48 bar)
- **FLOW (Cv):** 0.03, 0.06, 0.14 or 0.2
- **AMBIENT OPERATING TEMP **:**
 - -15°F/-26°C to 165°F/74°C (BUNA-N)
 - -4°F/-20°C to 165°F/74°C (Viton®)
 - -65°F/-54°C to 165°F/74°C (EPDM)
 - 15°F/-9°C to 165°F/74°C (AFLAS®)
 - -50°F/-45°C to 165°F/74°C (Nitrile, Lo-temp)

MATERIALS OF CONSTRUCTION

- **BODY & BONNET OPTIONS:**
 - 316 Stainless Steel and 17-4 Stainless Steel
 - SAE 360 Brass
- **VALVE SEAT OPTIONS:**
 - Vespel®
 - PEEK®
 - PCTFE *see page 3 for special instructions*
- **MAIN VALVE STEM:**
 - 17-4 Stainless Steel
- **O-RING MATERIAL:**
 - Viton®
 - BUNA-N
 - AFLAS®
 - EPDM
 - FFKM *(Contact Premier for pricing)*
 - Nitrile, Lo-temp
- **BACK-UP RINGS:**
 - PTFE
 - PCTFE
- **WETTED, OTHER:**
 - 316 Stainless Steel
 - 17-4 Stainless Steel
- **STANDARD LUBRICANT:**
 - Krytox GPL 206

PORTING

- **INLET & OUTLET PORT OPTIONS:**
 - 1/4" FNPT, SAE J1926, SAE AS5202**, NPTF or medium pressure
 - 3/8" FNPT, SAE J1926, SAE AS5202**, NPTF or medium pressure
 - 1/2" FNPT, SAE J1926, SAE AS5202**, or NPTF
 - 9/16" medium pressure
 - 3/4" FNPT, SAE J1926, SAE AS5202**, NPTF or medium pressure
- **GAUGE PORTS:** 1/4" FNPT

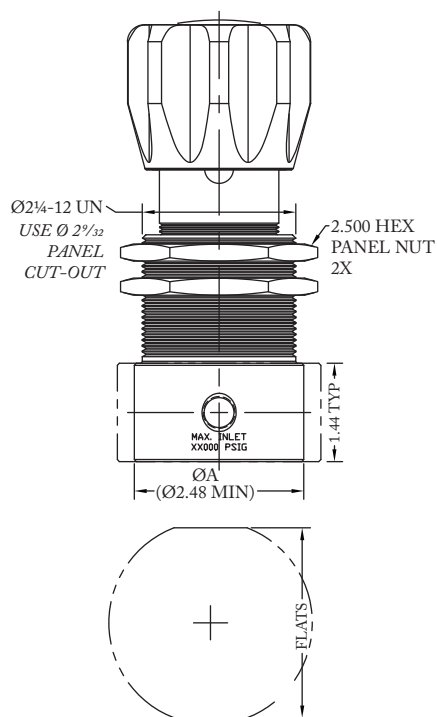
OPTIONS

- Gauges
- Private label
- Surface mount
- Panel mounting bracket: P/N: 30-10059
(Ø2.15 panel hole)
- Panel mounting nuts: P/N: 30-10189
(Ø2.28 panel hole)

*Viton® and Vespel are registered trademarks of E.I. duPont de Nemours and Company.
Krytox® is a registered trademark of The Chemours Company FC, LLC.
AFLAS® is a registered trademark of Asahi Glass Co., Ltd
Contact factory for material certifications. Fees may apply.*

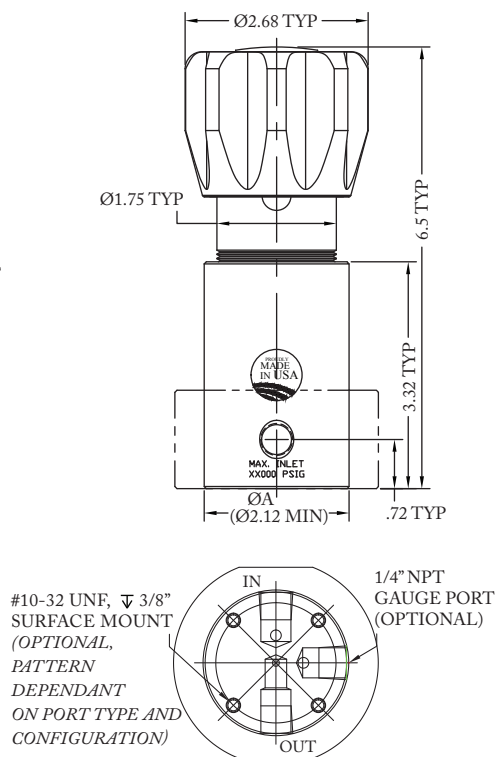
PART NUMBER: 30-10066G

PANEL NUT STYLE



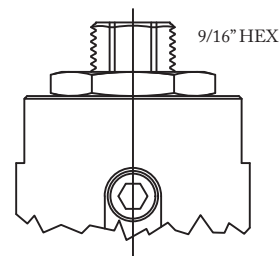
PANEL NUT BODY		
PORT TYPE	ØA	FLATS
NPT, NPTF	Ø2.48	—
1/4" OTHER	Ø2.48	2.36
3/8" M.P.	Ø2.48	2.36
3/8" SAE	Ø2.73	2.58
1/2" SAE	Ø2.98	2.78
9/16" M.P.	Ø2.98	2.78

PANEL MOUNTING BRACKET STYLE



MOUNTING BRACKET BODY		
PORT TYPE	ØA	FLATS
1/4 & 3/8 NPT, NPTF	Ø2.12	—
1/4" M.P.	Ø2.12	1.98
1/2" NPT, NPTF	Ø2.48	—
1/4" SAE	Ø2.48	2.36
3/8" M.P.	Ø2.48	2.36
3/8" SAE	Ø2.73	2.58
1/2" SAE	Ø2.98	2.81
9/16" M.P.	Ø2.98	2.81
3/4" NPT, NPTF	Ø2.98	—

TAMPER RESISTANT WRENCH ADJUST (OPTIONAL)



PART #	1	2	-	3	4	5	6	7	-	8	9	10	-	MODS
30-10066G			-						-				-	

316 STAINLESS STEEL BODY
17-4 STAINLESS STEEL BONNET STANDARD

1 2	MOUNTING STYLE
MB	Mounting bracket style body
PN	Panel nut style body (panel nuts included)
3	CONTROL PRESSURE
1	5-500 PSIG (0.34-34.5 Bar)
2	5-800 PSIG (0.34-55.2 Bar)
3	10-1500 PSIG (0.69-103.4 Bar)
4	15-2500 PSIG (1.0-172.4 Bar)
5	25-4000 PSIG (1.7-275.8 Bar)
6	50-6000 PSIG (3.4-413.7 Bar)
7	100-10000 PSIG (6.9-689.5 Bar) (stainless steel only)
4	MAIN VALVE Cv
A	Cv 0.03
0	Cv 0.06
1	Cv 0.14
2	Cv 0.20

5	PORTING CONFIG.
H	
S	 (STANDARD)
6	PORT SIZE
4	1/4"
6	3/8"
8	1/2"
9	9/16"
T	3/4"
*1/2" ports not available in medium pressure **9/16" ports only available in medium pressure GAUGE PORTS: 1/4" FNPT	

7	PORT TYPE IN/OUT								
1	NPT								
2	SAE J1926								
3	SAE AS5202 (MS33649**)								
4	MEDIUM PRESSURE								
**SAE AS5202 supersedes MS33649									
8	VALVE SEAT								
0	VespeI®								
3	PEEK®								
4	PCTFE*** see table below								
<table border="1"> <tr> <th>*** PCTFE SEATS</th><th>MAX CONTROL PRESSURE</th></tr> <tr> <td>Cv 0.03, 0.06</td><td>6000 PSIG</td></tr> <tr> <td>Cv 0.14</td><td>4000 PSIG</td></tr> <tr> <td>Cv 0.20</td><td>3000 PSIG</td></tr> </table> PCTFE SEAT MAXIMUM CONTROL PRESSURES SUPERCEDE BODY MATERIAL MAXIMUM CONTROL PRESSURES		*** PCTFE SEATS	MAX CONTROL PRESSURE	Cv 0.03, 0.06	6000 PSIG	Cv 0.14	4000 PSIG	Cv 0.20	3000 PSIG
*** PCTFE SEATS	MAX CONTROL PRESSURE								
Cv 0.03, 0.06	6000 PSIG								
Cv 0.14	4000 PSIG								
Cv 0.20	3000 PSIG								

9 10	O-RINGS
00	BUNA-N
01	AFLAS®
02	VITON®
05	EPDM
11	FFKM (Contact Premier for pricing)
12	NITRILE, LO-TEMP
MODIFICATIONS Separate multiple mods with a dash	
AC	Krytox 240AC
B	SAE 360 Brass body & bonnet (6000 psig / 413.69 bar max)
N	NACE MR0175 compatible option
SM	Surface mount Surface mounting holes: pattern dependant on port type & configuration
WA	Wrench adjust

NOTE MAXIMUM CONTROL PRESSURE:

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

Viton® is a registered trademark of E.I. du Pont de Nemours and Company.
Krytox® is a registered trademark of The Chemours Company FC, LLC.
AFLAS® is a registered trademark of Asahi Glass Co., Ltd

Contact factory for material certifications. Fees may apply.