

# SCF 3100 SERIES

High Pressure, Piston Sensed  
Back Pressure Regulators



Premier SCF 3100 Series back pressure regulators are elastomer free, designed to stand up to the aggressive, solvent-like qualities of supercritical CO<sub>2</sub>, while providing reliable and precise pressure regulation. These single stage, piston sensed, variable control pressure regulators are rated for inlet and outlet pressures up to 10000 PSIG (*689.5 bar*) and Cv 0.03, 0.06, 0.14 or 0.20.

## FEATURES

- Designed for use with supercritical CO<sub>2</sub>
- Inlet/outlet pressures up to 10000 PSIG (*689.48 bar*) max
- Cv: 0.03, 0.06, 0.14, or 0.20
- Elastomer free
- 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.

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## SPECIFICATIONS

- **MAXIMUM INLET PRESSURE:**
  - 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:**
  - -110°F/-79°C to 165°F/74°C (PTFE)

## PORTING

- **INLET & OUTLET PORT OPTIONS:**
  - 1/4" FNPT, low pressure, medium pressure, high pressure
- **OPTIONAL HEATER CORE HOLES:**
  - 1/8" FNPT

## OPTIONS

- Private label
- Panel mounting bracket: *P/N: 30-10059*  
(Ø2.15 panel hole)

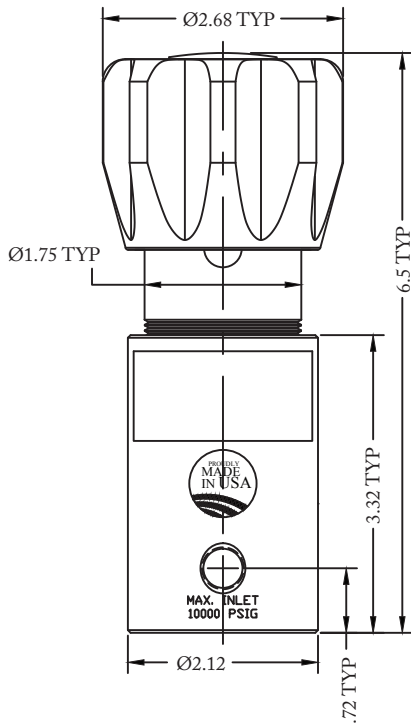
## MATERIALS OF CONSTRUCTION

- **BODY:**
  - 316 Stainless Steel
- **BONNET:**
  - 17-4 Stainless Steel
- **VALVE SEAT OPTIONS:**
  - PEEK®
  - PCTFE
- **MAIN VALVE STEM:**
  - 17-4 Stainless Steel
- **SEALS:**
  - PTFE
- **WETTED, OTHER:**
  - 316 Stainless Steel and/or 17-4 Stainless Steel

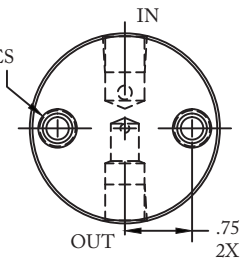
PEEK® is a registered trademark of Victrex PLC.

Contact factory for material certifications.  
Fees may apply.

PART NUMBER: 30-10066SCMB



OPTIONAL  
1/8" NPT  
HEATER  
CORE HOLES



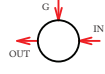

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PART #	1	2	-	3	4	5	6	7	-	8	-	MODS
30-10066SC			-						-		-	

316 Stainless Steel body and  
17-4 Stainless Steel bonnet

1 2	MOUNTING STYLE
MB	Mounting bracket style body
3	OUTLET 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	
6	PORT SIZE
4	1/4"
7	PORT TYPE (IN/OUT)
1	FNPT
7	Low pressure
4	Medium pressure
5	High pressure

8	VALVE SEAT
3	PEEK®
4	PCTFE
MODIFICATIONS	
<i>Separate multiple mods with a dash</i>	
HH	1/8 NPT HEATER HOLES (*S* PORTING CONFIGURATION ONLY)

**NOTE MAXIMUM CONTROL PRESSURE:**  
*The end user is responsible to ensure adequate fittings are used to connect regulator to plumbing.*

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