PREMIER INDUSTRIES

5050PDL SERIES

Dome Loaded, Piston Sensed, High Flow
Pressure Reducing Regulators

The Premier 5050PDL Series is a dome loaded, single stage, high flow, piston sensed pressure reducing regulator rated for inlet and outlet pressures up to 1500 PSIG (103.4 BAR) with a Cv of 5.0.

The dome loaded design allows remotely adjustable outlet pressure control for automated pressure control systems. A 1:1 dome-load ratio, with a maximum dome load pressure of 1510 PSIG (104.1 BAR), supports direct dome-to-outlet pressure control. A balanced stem design reduces supply pressure effect, while the piston sensed design supports repeatable operation in high-pressure, high-flow applications.

FEATURES

- High flow capacity, Cv 5.0
- 1500 PSIG *(103.4 BAR)* max inlet/outlet pressure
- Balanced stem for increased outlet pressure stability
- Piston sensed
- 1:1 dome load ratio
- Non-venting
- Machined bar stock body 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:**
  - 1500 PSIG *(103.4 BAR)*
- **OUTLET PRESSURE RANGE:**
  - 0-1500 PSIG *(0-103.4 BAR)*
- **MAX DOME LOAD:**
  - 1510 PSIG MAX *(104.1 BAR)*
- **LOAD RATIO:** 1:1**
  ***DOME PRESSURE MUST EXCEED THE DESIRED OUTLET PRESSURE BY APPROXIMATELY 4-8 PSIG TO OVERCOME INTERNAL VALVE AND FRICTION FORCES.*
- **FLOW (CV):**
  - 5.0 MAX

MATERIALS OF CONSTRUCTION

- **BODY, BONNET, BACK CAP:**
  - 316 Stainless Steel
  - 303 Stainless Steel
  - 6061-T6 Aluminum, Clear Anodize
- **PISTON:**
  - SAE 360 Brass
    (aluminum body)
  - 303 Stainless Steel
    (303 Stainless Steel body)
  - 316 Stainless Steel
    (316 Stainless Steel body)
- **MAIN VALVE:**
  - 316 Stainless Steel
- **MAIN VALVE SPRING:**
  - 316 Stainless Steel
- **O-RING SEALS/SEAT OPTIONS:**
  - Buna-N seals, Buna-N seat
  - Viton®seals, Viton seat
  - EPDM seals, EPDM seat
  - FFKM seals, PTFE seat
  - Polyurethane seals, polyurethane seat

PORTING

- **INLET/OUTLET PORT OPTIONS:**
  - 1/2" FNPT
  - 3/4" FNPT
  - 1" FNPT (STANDARD)
  - 1" SAE AS5202
- **OPTIONAL GAUGE PORT:**
  - 1/4" FNPT
- **DOME LOAD PORT:**
  - 1/4" FNPT
- **OPTIONAL EXTERNAL SENSING PORT:**
  - 1/4" FNPT

OPTIONS

- Private labeling
- Mounting bracket

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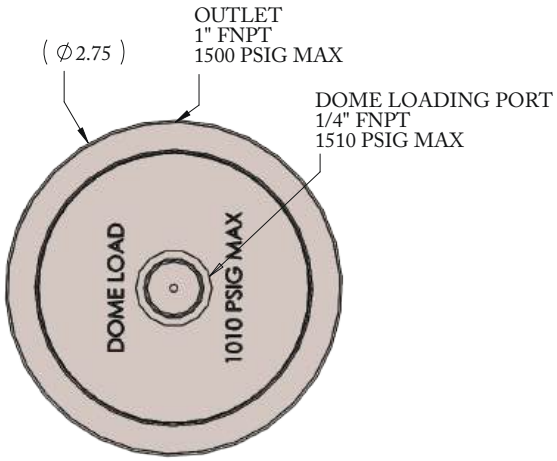
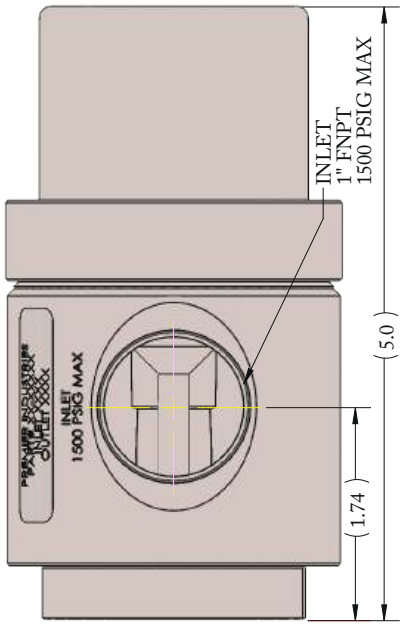
PART NUMBER: 50-12858





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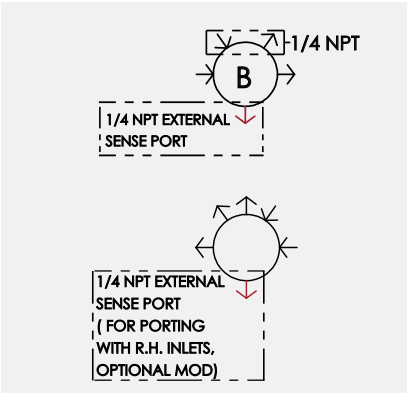
PART NUMBER	-	1	2	-	3	4	-	MODS
50-12858	-			-			-	

1	BODY/BONNET/BACK CAP MATERIAL *AND FINISH*
1	303 STAINLESS STEEL, *CLEANED PER SPEC #515*
2	316 STAINLESS STEEL, *CLEANED PER SPEC #515*
3	6061-T6 ALUMINUM, *CLEAR ANODIZE*
2	**SEAL/SEAT MATERIAL**
1	BUNA-N SEALS BUNA-N SEAT
2	VITON-A SEALS VITON-A SEAT
3	FKM SEALS PTFE SEAT
4	EPDM SEALS EPDM SEAT
5	POLYURETHANE SEALS POLYURETHANE SEAT

3	PORTING
1	S — 1" NPT
2	S* — 3/4" NPT
3	C — 1/4" NPT, 1" NPT
4	A — 1/4" NPT, 1" NPT
5	S** — 1/2" NPT DERATE TO CV 3.5
6	B — 1/4" NPT, 1" NPT
7	C* — 1/4" NPT, 1/2" NPT DERATE TO CV 3.5
8	S*** — 1" SAE (AS5202-16) BODY OD = 3.48"
9	S**** — 1" SAE (SAE J1926-16) BODY OD = 3.48"

4	GAUGES
0	NO GAUGES
1	INCLUDE GAUGES (N/A ON S/S*/S**/S***)
MODIFICATIONS	
BLANK	NONE
B	ADDITIVELY MANUFACTURED MOUNTING BRACKET
E	EXTERNAL SENSING PORT

EXTERNAL SENSING