

IR5000 Series

Single Stage, High Sensitivity Pressure Regulator
Internally Threadless, Stainless Steel



Value Proposition:

The IR5000 Series regulator offers high pressure capability with an inlet pressure up to 3,500 psig. The larger convoluted Hastelloy C-22[®] diaphragm provides greater sensitivity over the operational range making this regulator ideal for precise outlet pressure control.

Close tolerances and tight alignment of moving components minimize hysteresis and improve cycle life. Convoluted, Hastelloy C-22[®] diaphragm provides high corrosion resistance and increases cycle life.



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Product Features:

- Unique compression member loads the seal to the body without requiring a threaded nozzle or additional seals
- Positive upward and downward stops increase cycle life by preventing over stroking of the diaphragm
- Internally threadless design reduces particle generation. Low internal volume reduces purge times
- Selection of seat materials for media compatibility and temperature applications
- Cleaned for O₂ service is standard
- Express Service Program available noted in *green italic print*

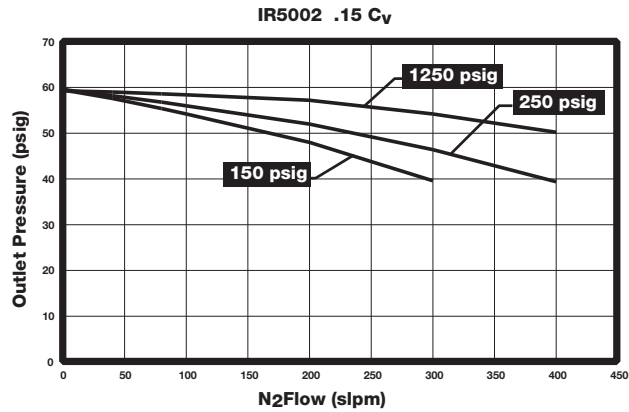
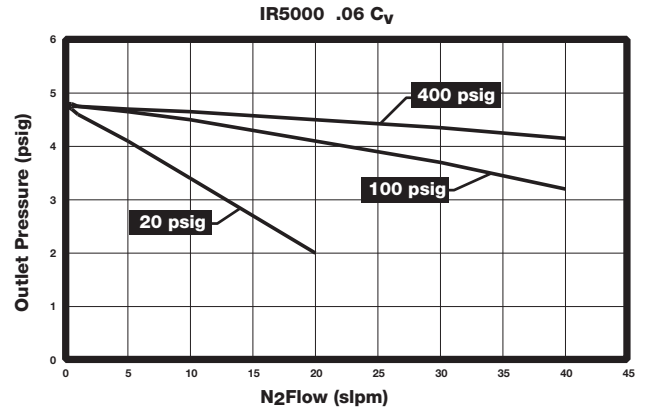
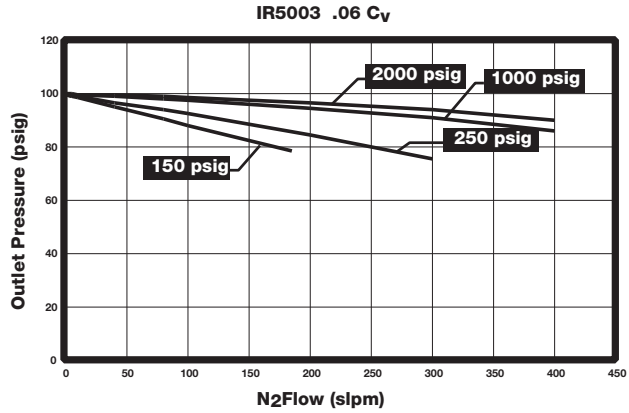


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IR5000 SERIES

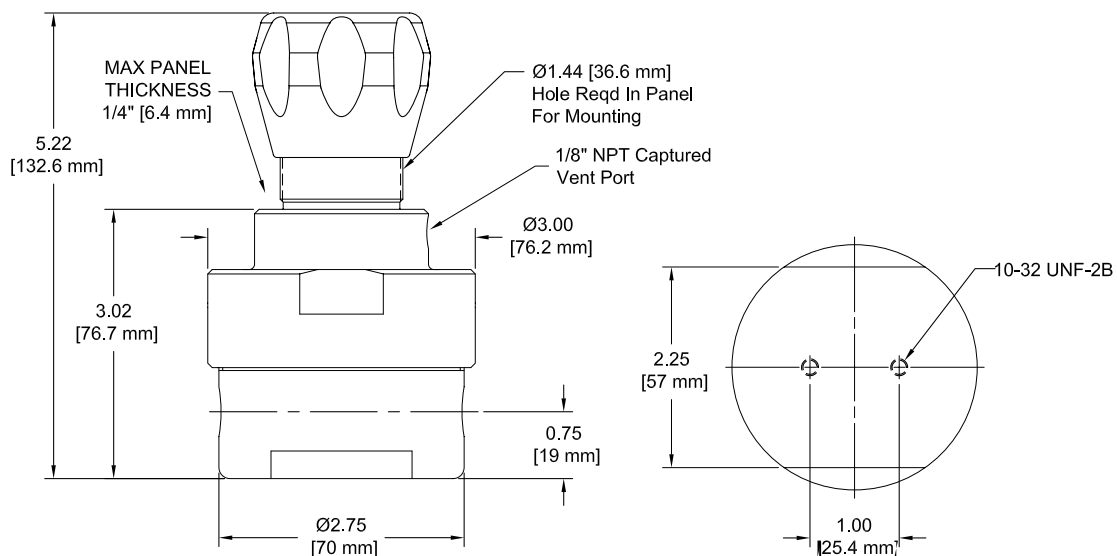
Flow Curves

Additional flow curves available upon request



| Basic Model | Max Inlet PSIG | | |
|-------------|---------------------|---------------------|---------------------|
| | 0.06 C _v | 0.02 C _v | 0.15 C _v |
| IR5000 | 400 | 400 | 400 |
| IR5001 | 3500 | 3500 | 1250 |
| IR5002 | 3500 | 3500 | 1250 |
| IR5003 | 3500 | 3500 | 1250 |
| IR5004 | 3500 | 3500 | 1250 |

Dimensional Drawing



Safety Guide and Installation and Operating Instructions available at
www.parker.com/veriflo

IR5000 SERIES

Ordering Information

Build an IR5000 Series regulator by replacing the numbered symbols with an option from the corresponding tables below.

Color Explanations: Black = Standard Lead Time Configurations
 Blue = Extended Lead Time Configurations
 Green *Italic* = Express Service Program (ESP)

For an explanation of Ordering options please reference literature 25000275 at www.parker.com/veriflo

Sample: **IR50** **02** **S** **K** **4P** **01** **30** **4** **B** **580**
 Finished Order: **IR5002SK4P01304B580**

1 Basic Series

| Range | Outlet Gauge |
|--------------------|--------------|
| 00 = 0 - 5 psig | 0 - 30 psig |
| 01 = 1 - 30 psig | 0 - 60 psig |
| 02 = 2 - 60 psig | 0 - 100 psig |
| 03 = 3 - 100 psig | 0 - 200 psig |
| 04 = 10 - 250 psig | 0 - 400 psig |

Note: Max inlet pressure is 400 psig

2 Body Material
S = 316L Stainless Steel

3 Flow Capacity

omit = 0.06 Cv Standard
 1 = 0.02 Cv
 2 = 0.15 Cv

4 Seat Material

K = PCTFE
P = PEEK™
V = Vespel® Recommended for Nitrous Oxide (N₂O) Service

5 Porting

2P = 2 Ports No X required for gauges, Inlet & outlet ports only
 3P = 3 Ports One X for gauge port
 4P = 4 Ports Two X's for gauge ports
 4PB = 4 Ports One X for gauge port
 See Regulator Porting Guide for additional options and port layouts

Note: Ports may be plugged for NPT threaded product.

6 Outlet Gauge

| Outlet Gauge | Basic Series |
|-------------------|--------------|
| 05 = 0 - 15 psig | IR5000 |
| OL = 0 - 60 psig | IR5001 |
| 01 = 0 - 100 psig | IR5002 |
| 2 = 0 - 200 psig | IR5003 |
| 4 = 0 - 400 psig | IR5004 |
| X = No Gauge | |

Additional ranges available upon request

7 Inlet Gauge

X = No Gauge
 30 = 3000 psig Standard
 4 = 400 psig with the 5 psig range
 20 = 2000 psig with the 0.15 Cv option
 40 = 4000 psig

Additional ranges available upon request

8 Port Style

2 = 1/8" NPT Female
 4 = 1/4" NPT Female
 6 = 3/8" NPT Female
 8 = 1/2" NPT Female
 4T = 1/4" A-LOK®
 6T = 3/8" A-LOK®
 8T = 1/2" A-LOK®

All Gauge ports are 1/4" NPT Female

9 Port Mounting

B = 0.75 (19.1 mm) port height w/1.0 (25.4 mm) mounting
 Standard

10 Optional Features
 This section can have multiple options

C = Corrosion Resistant External Stainless Steel Cap
 D = Dome Loaded Not available with G or M options
 G = Tamper Proof Not available with D or M options
 L = PTFE Backup O-Ring PCTFE and PEEK™ Seats Only
 M = Metal Knob Not available with D or G options. Required for temperatures above 150° F
 R = Relief Valve 4PB Only
 T = Hastelloy Trim Includes carrier and back-up washer
 V = Outlet Valve NV17SS44MF
 P = Low Pressure Only available for 5 psig and 30 psig ranges. Temperature rating: -40°F to 150°F. Max flow rating: 10 slpm Nitrogen.

Note: Panel Mount Option:
 Order Panel Nut Ring p/n: 41900363 as a separate line item.
 Vent Muffler Option:
 Order Vent Muffler p/n: 46600581 as a separate line item.

11 CGA#
 320, 330, 350, 510, 580, 590 or 660
 Do not exceed the rated pressure of the CGA connection.

Note: 1. Veriflo reserves the right to plug NPT ports. If a true ported body is required, please contact Customer Service.
 2. A gas with low molecular weight, such as Hydrogen and Helium, may cause flow vibration.

IR5000 Series

Specifications

| Materials of Construction | |
|---------------------------|---|
| Wetted | |
| Body | 316L Stainless Steel |
| Compression Member | Inconel 625® |
| Diaphragm | Hastelloy C-22® |
| Poppet | Hastelloy C-276® |
| Poppet Spring | Inconel X-750® |
| Seat Options | PCTFE (std), Vespel® or PEEK™ |
| Carrier Options | 316L Stainless Steel (std) or Hastelloy C-22® |
| Washer Back-up Options | 316 Stainless Steel (std) or Hastelloy C-276® |
| O-ring Back-up Options | FKM (std) or PTFE |
| Inlet Screen / Filter | 316 Stainless Steel (60µm mesh screen, 10µm Filter) |
| Non-wetted | |
| Cap Options | Nickel Plated Brass (std) or Stainless Steel |
| Nut | Stainless Steel |
| Knob Options | ABS (std) (ambient temp) or Aluminum |

For additional information on materials of construction, functional performance and operating conditions, see Regulator Technical Bulletin.

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| Functional Performance | |
|--|--|
| Design | |
| Burst Pressure | 10,500 psig (724 barg) |
| Proof Pressure | 5,250 psig (362 barg) |
| Flow Capacity | |
| C _v Options | C _v 0.06 (std), C _v 0.02, C _v 0.15 |
| Leak Rate | |
| Internal | Bubble Tight |
| External | Bubble Tight |
| Supply Pressure Effect | |
| <i>Based upon C_v Option</i> | |
| 0.02 C _v | 0.12 psig/100 psig (0.008 barg/7 barg) |
| 0.06 C _v | 0.3 psig/100 psig (0.02 barg/7 barg) |
| 0.15 C _v | 0.75 psig/100 psig (0.05 barg/7 barg) |
| Internal Volume | 11.9 cc without fittings |
| Approx. Weight | 4.5 lbs. (2.1 kg) |
| Operating Conditions | |
| Maximum Inlet | Refer to Range Table for specific information |
| Outlet Options | 0-5 psig (.3 barg), 1-30 psig (2 barg), 2-60 psig (4 barg), 3-100 psig (7 barg), 10-250 psig (17 barg) |
| Temperature | |
| Standard IR5000 | Metal Knob required for temperatures above 150°F |
| PCTFE | -40°F to 150°F (-40°C to 66°C) |
| PEEK™ | -40°F to 275°F (-40°C to 135°C) |
| Vespel® | -40°F to 500°F (-40°C to 260°C) |
| Low Pressure IR5000 (P) | -40°F to 150°F (-40°C to 66°C) |

OFFER OF SALE:

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