

IR5000W Series

316L SS, Single Stage, General Purpose,
High Sensitivity, Internally Threadless,
Welded Regulator



Customer Value Proposition:

The IR5000W Series regulator offers high pressure reducing capability with a maximum inlet pressure up to 3,500 psig. The larger convoluted Hastelloy C-22® diaphragm provides greater sensitivity for precise outlet pressure control over the operational range of the regulator.

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.
- Internally threadless design reduces particle generation. Low internal volume reduces purge times.
- Cleaned for O₂ service is standard.
- Positive upward and downward stops increase cycle life by preventing over stroking of the diaphragm.
- Captured bonnet allows for safety venting
- Selection of seat materials for media compatibility and temperature applications.

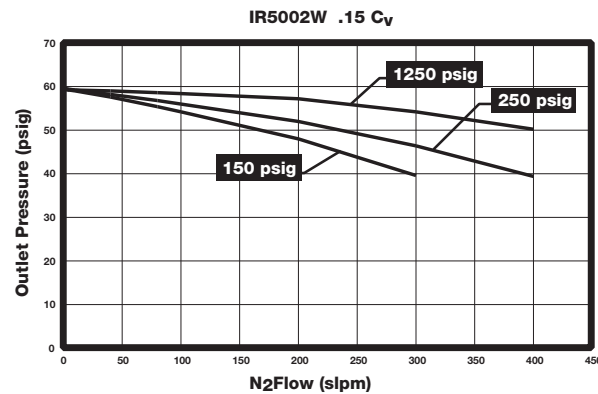
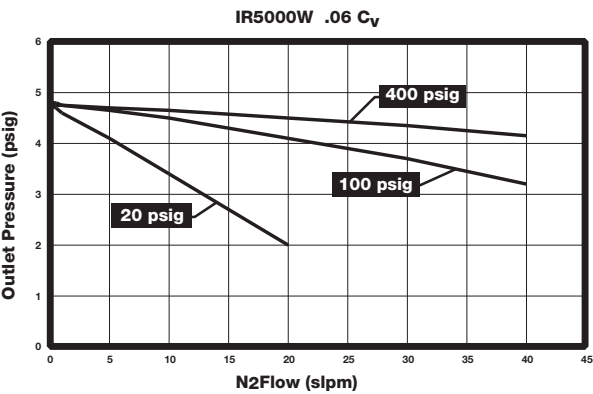
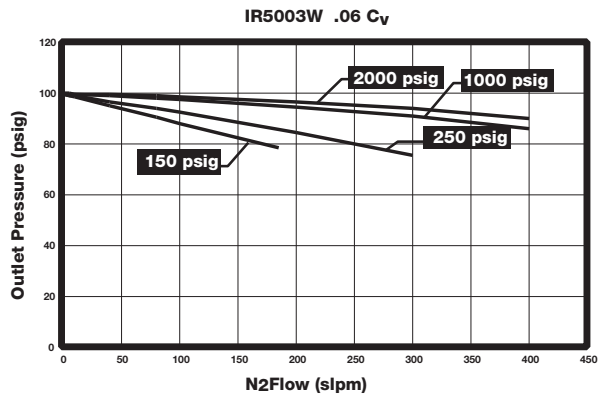


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IR5000W SERIES

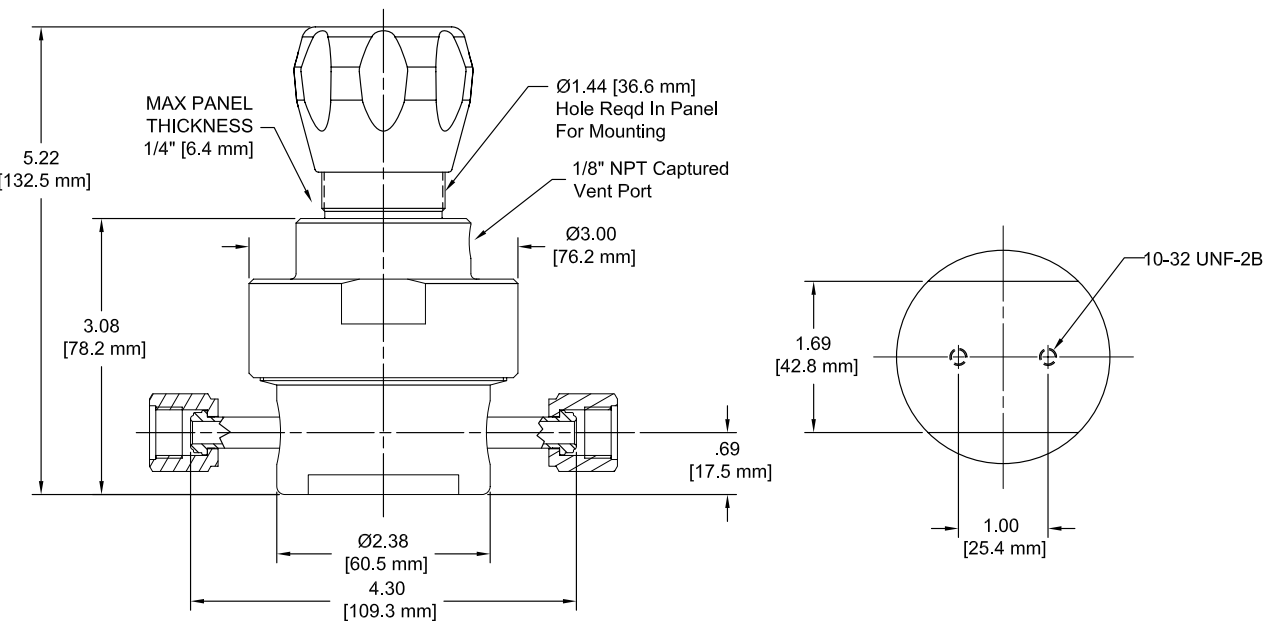
Flow Curves

Additional flow curves available upon request



| Basic Model | Max Inlet PSIG | | |
|-------------|---------------------|---------------------|---------------------|
| | 0.06 C _v | 0.02 C _v | 0.15 C _v |
| IR5000W | 400 | 400 | 400 |
| IR5001W | 3500 | 3500 | 1250 |
| IR5002W | 3500 | 3500 | 1250 |
| IR5003W | 3500 | 3500 | 1250 |
| IR5004W | 3500 | 3500 | 1250 |

Dimensional Drawing



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

IR5000W SERIES

Ordering Information

Build an IR5000W Series regulator by replacing the numbered symbols with an option from the corresponding tables below.

1

2

3

4

5

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11

12

Sample:

IR50

01

W

K

3P

X

FS

MMM

A

L

Finished Order:

IR5001WK3PXFSMMMAL

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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 |

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Body Material

W = 316L Stainless Steel

3

Flow Capacity

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

4

Seat Material

K = PCTFE
P = PEEK™
V = Vespel®

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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*
5P = 5 Ports *Two X's for gauge ports*

See Regulator Porting Guide for additional options and port layouts

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Outlet Gauge

| Outlet Gauge | Basic Series |
|-------------------|--------------|
| 03 = 0 - 30 psig | IR5000W |
| OL = 0 - 60 psig | IR5001W |
| 01 = 0 - 100 psig | IR5002W |
| 2 = 0 - 200 psig | IR5003W |
| 4 = 0 - 400 psig | IR5004W |
| X = No Gauge | |

Additional ranges available upon request

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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

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Port Style

4T = 1/4" A-LOK®
6T = 3/8" A-LOK®
8T = 1/2" A-LOK®
FS = 1/4" Face Seal
FS8 = 1/2" Face Seal
TS = 1/4" Tube Stub
TS6 = 3/8" Tube Stub
TS8 = 1/2" Tube Stub

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Port Style *Face Seal Only*

M = Male
F = Female
I = Internal
*1/4" FSM Gauge Ports are standard.
1/4" NPT Ports are standard for compression ends.*

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Port Mounting

A = 0.69 (17.5mm) port height
w/1.00 (25.4mm) mounting

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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*
R = Relief Valve *4PB and 5P Only*
T = Hastelloy Trim *Includes carrier and back-up washer*
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.

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Industrial CGA#

320, 330, 350, 510, 580
590 or 660

DISS CGA#

634, 716, 718, 724, or 728
Do not exceed the rated pressure of the CGA connection.

Note: A gas with low molecular weight, such as Hydrogen and Helium, may cause flow vibration.

IR5000W Series

Specifications

| Materials of Construction | | Functional Performance | |
|---------------------------|---|-------------------------------|---|
| Wetted | | Design | |
| Body | 316L Stainless Steel | Burst Pressure | 5,250 psig (362 barg) |
| Compression Member | Inconel 625® | Proof Pressure | 10,500 psig (724 barg) |
| Diaphragm | Hastelloy C-22® | Flow Capacity | |
| Poppet | Hastelloy C-276® | C _V Options | C _V 0.06 (std), C _V 0.02, C _V 0.15 |
| Poppet Spring | Inconel X-750® | Leak Rate | <i>Inboard Test Method</i> |
| Seat Options | PCTFE, Vespel® or PEEK™ | Internal | ≤ 4 x 10 ⁻⁸ cc/sec He |
| Carrier Options | 316L Stainless Steel (std) or Hastelloy C-22® | External | ≤ 2 x 10 ⁻⁸ cc/sec He |
| Washer Back-up Options | 316 Stainless Steel (std) or Hastelloy C-276® | Supply Pressure Effect | <i>Based upon C_V Option</i> |
| O-ring Back-up Options | FKM (std) or PTFE | 0.02 C _V | 0.12 psig/100 psig (0.008 barg/7 barg) |
| Poppet Screen | Hastelloy C-22® (76µm) | 0.06 C _V | 0.3 psig/100 psig (0.02 barg/7 barg) |
| Non-wetted | | 0.15 C _V | 0.75 psig/100 psig (0.05 barg/7 barg) |
| Cap Options | Nickel Plated Brass (std) or Stainless Steel | Internal Volume | 11.9 cc without fittings |
| Nut | Stainless Steel | Approx. Weight | 4.5 lbs. (2.1 kg) |
| Knob Options | ABS (std) (ambient temp) or Aluminum | Operating Conditions | |
| | | Maximum Inlet | Refer to Range Table for specific information |
| | | Outlet Options | 0-5 psig (0.3 barg), 1-30 psig (2 barg), 2-60 psig (4 barg), 3-100 psig (7 barg) or 10-250 psig (17 barg) |
| | | Temperature | |
| | | Standard IR5000W | <i>Based upon seat material choice</i> |
| | | 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 IR5000W (P) | -40°F to 150°F (-40°C to 66°C) |

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

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