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.

Contact Information:

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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 O_2 service is standard
- Positive upward and downward stops increase cycle life by preventing over stroking of the diaphragm
- Selection of seat materials for media compatibility and temperature applications
- Express Service Program available noted in *green italic print*

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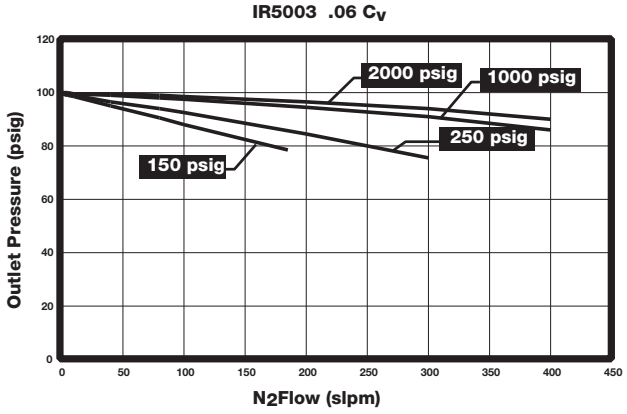
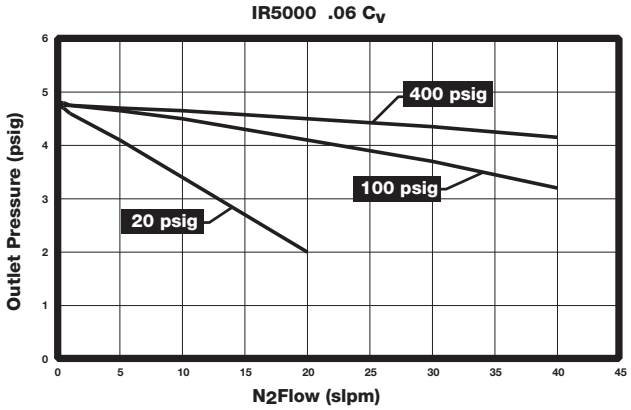
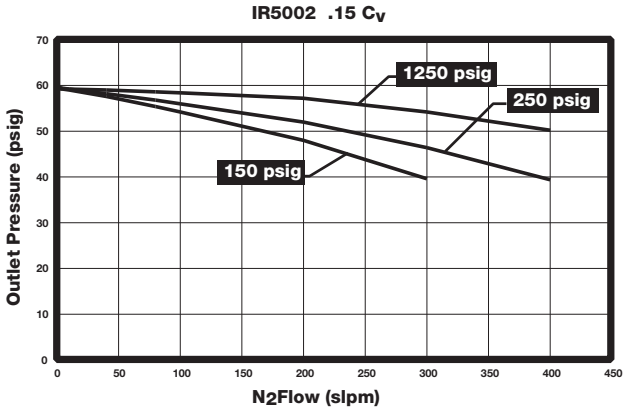
IR5000 SERIES

Flow Curves

Additional flow curves available upon request

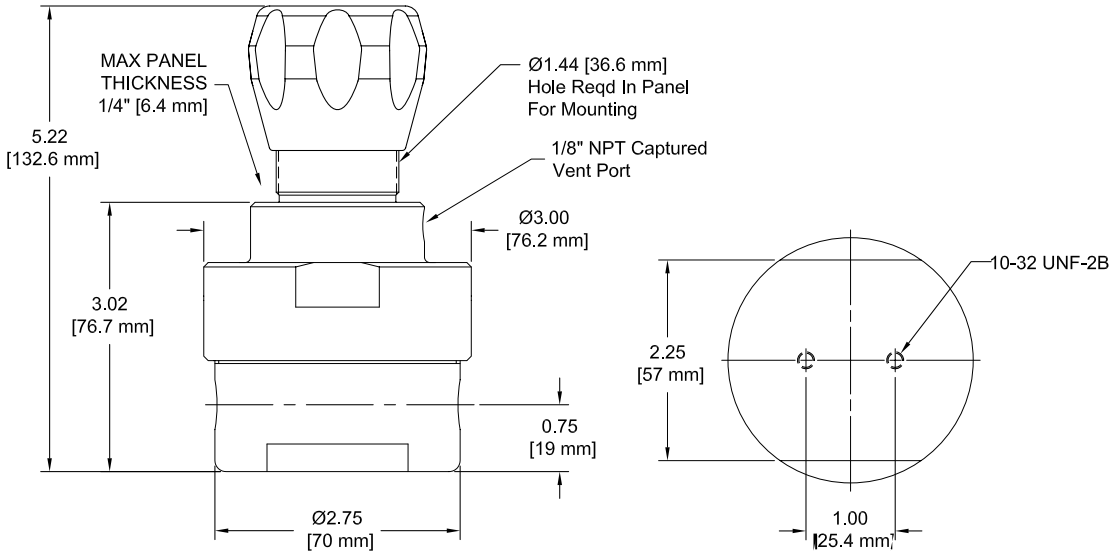






RANGE TABLE			
Basic Model	Max Inlet PSIG		
	0.06 C_V	0.02 C_V	0.15 C_V
IR5000	400	400	400
IR5001	3500	3500	1250
IR5002	3500	3500	1250
IR5003	3500	3500	1250
IR5004	3500	3500	1250

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

	1	2	3	4	5	6	7	8	9	10	11
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*

Note: Max inlet pressure is 400 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*

2 Body Material

S = 316L Stainless Steel

3 Flow Capacity

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

4 Seat Material

K = PCTFE
P = PEEK™
V = Vespel® Recommended for Nitrous Oxide (N_20) 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.

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	*Based upon C_V Option*
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)

Use mobile device to scan this QR Code.

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