

IR4000W Series

316L Stainless Steel High Pressure
Internally Threadless, Welded Regulator



Customer Value Proposition:

The IR4000W Series regulator offers high pressure capability with an inlet pressure up to 4,000 psig. The large convoluted Hastelloy C-22[®] diaphragm provides stable 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 to atmosphere.
- 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.
- Selection of seat materials for media compatibility and temperature applications.

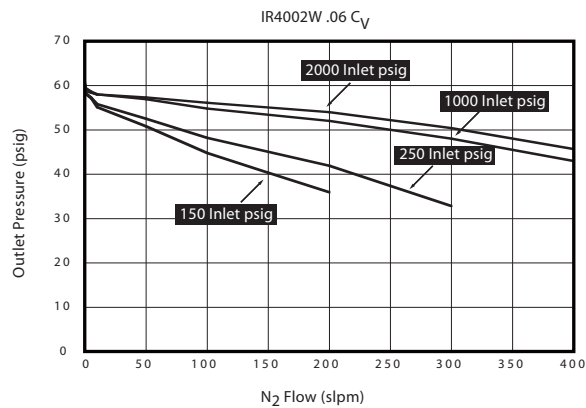
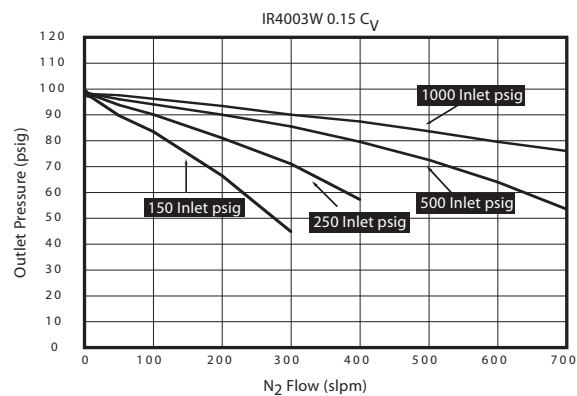
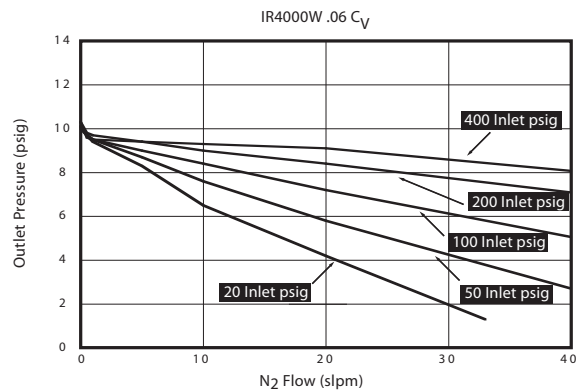


ENGINEERING YOUR SUCCESS.

IR4000W 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
IR4000W	400	400	400
IR4001W	4000	4000	1250
IR4002W	4000	4000	1250
IR4003W	4000	4000	4000*
IR4004W	4000	4000	1250
IR4005W	4000	4000	1250
IR4015W	4000	4000	4000*

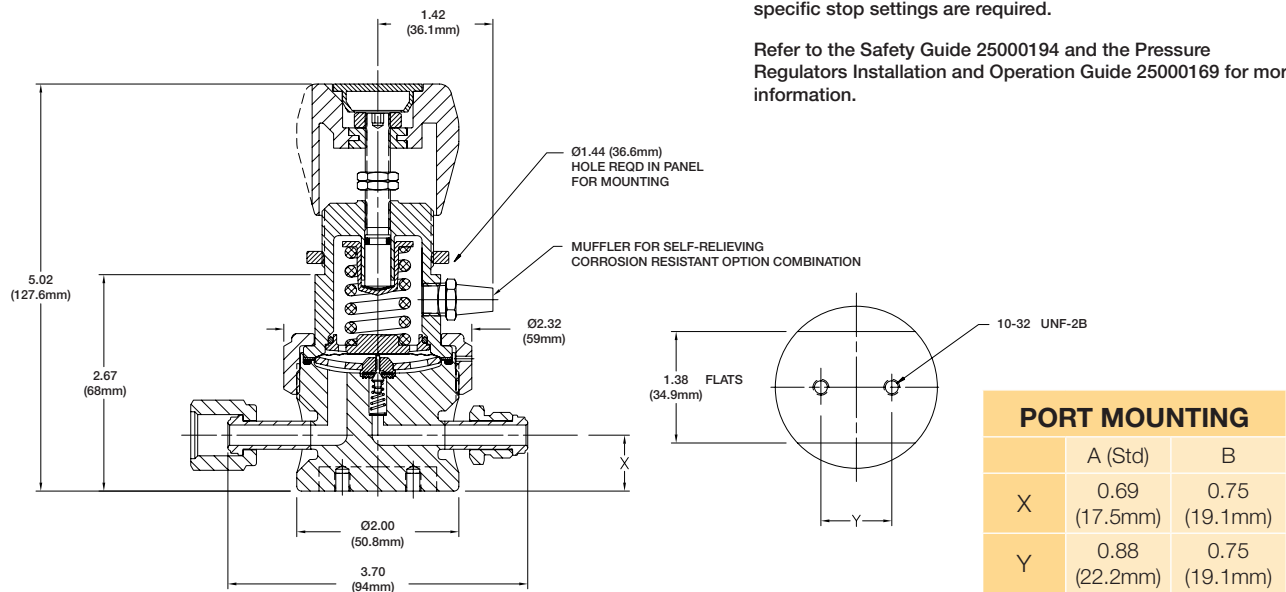
* 4000 PSIG max inlet pressure for PCTFE seats only (HP option).
1250 PSIG max inlet pressure for PEEK and Vespel seats.

When setting the delivery pressure, ensure that the maximum outlet pressure of the regulator is not exceeded for any operating condition including increases in delivery pressure due to flow shutoff and supply pressure effect. Supply pressure effect will result in a significant rise in outlet pressure as the inlet pressure decreases.

The stop settings will be adjusted to accommodate typical inlet and outlet pressure ranges. Please contact the factory if specific stop settings are required.

Refer to the Safety Guide 25000194 and the Pressure Regulators Installation and Operation Guide 25000169 for more information.

Dimensional Drawing



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

IR4000W SERIES

Ordering Information

Build an IR4000W Series regulator by replacing the numbered symbols with an option from the corresponding tables below.

Sample: **IR40 01 W K 3P X FS MMM A L**
 Finished Order: **IR4001WK3PXFSMMMML**

1

Basic Series

Range	Outlet Gauge
00 = 0 - 10 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
15 = 5 - 150 psig	0 - 200 psig
04 = 10 - 250 psig	0 - 400 psig
05 = 20 - 500 psig	0 - 600 psig

2

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®

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

See Regulator Porting Guide for more information

6

Outlet Gauge

Outlet Gauge	Basic Series
03 = 0 - 30 psig	IR4000W
OL = 0 - 60 psig	IR4001W
01 = 0 - 100 psig	IR4002W
2 = 0 - 200 psig	IR4003W
4 = 0 - 400 psig	IR4004W
6 = 0 - 600 psig	IR4005W
X = No Gauge	

Additional ranges available upon request

7

Inlet Gauge

X = No Gauge
 30 = 3000 psig *Standard*
 4 = 400 psig *with the 10 psig range*
 20 = 2000 psig *with the 0.15 Cv option*
 40 = 4000 psig

Additional ranges available upon request

8

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

9

Port Style

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

10

Port Mounting

A = 0.69 (17.5mm) port height
 w/0.88 (22.2mm) mounting
Standard
 B = 0.75 (19.1mm) port height
 w/0.75 (19.1mm) mounting

11

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*
 M = Metal Knob (Black) *Not available with D or G options*
 L = PTFE Backup O-Ring *PCTFE and PEEK™ Seats Only*
 R = Relief Valve *4PB and 5P Only*
 S = Self Relieving *Temperature rating -40°F to 150°F (-40°C to 66°C)*
 T = Hastelloy Trim *Includes carrier and back-up washer. Option is for std with Hastelloy® and Monel® bodies*
 HP = 4000 psig Max Inlet Pressure *For .15 Cv IR4003 and IR4015 with PCTFE seats only*

Vent Muffler is standard for the Self-Relieving(S) Corrosion Resistant(C) option combination.

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.

12

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.

IR4000W Series

Specifications

Materials of Construction		Functional Performance	
Wetted		Design	
Body	316L Stainless Steel	Burst Pressure	12,000 psig (828 barg)
Compression Member	Inconel 625®	Proof Pressure	6,000 psig (414 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	
Seat Options	PCTFE (std), Vespel® or PEEK™	<i>Inboard Test Method</i>	
Carrier Options	316L Stainless Steel (std) or Hastelloy C-22®	Internal	≤ 4 x 10 ⁻⁸ cc/sec He
Washer Back-up Options	316 Stainless Steel (std) or Hastelloy C-276®	External	≤ 2 x 10 ⁻⁸ cc/sec He
O-ring Back-up Options	FKM (std) or PTFE	Supply Pressure Effect	
Poppet Screen	Hastelloy C-22® (76 µm)	<i>Based upon C_V Option</i>	
Self Relieving Seat	PEEK™	0.02 C _V	0.23 psig/100 psig (0.016 barg/7 barg)
Non-wetted		0.06 C _V	0.6 psig/100 psig (0.04 barg/7 barg)
Cap Options	Nickel Plated Brass (std) or Stainless Steel	0.15 C _V	1.5 psig/100 psig (0.1 barg/7 barg)
Nut	Stainless Steel	Internal Volume	
Knob Options	ABS (std) (ambient temp) or Aluminum	Approx. Weight	
		1.5 lbs. (0.7 kg)	
Operating Conditions			
Maximum Inlet		Refer to Range Table for specific information	
Outlet Options		0-10 psig (.7 barg), 1-30 psig (2 barg), 2-60 psig (4 barg), 3-100 psig (7 barg), 5-150 psig (10 barg), 10-250 psig (17 barg), or 20-500 psig (35 barg)	
Temperature		<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)	
Self Relieving Option		-40°F to 150°F (-40°C to 66°C)	

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

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