IR6000 Series

Two-Stage, General Purpose Pressure Regulator

Internal Threadless • Stainless Steel

Value Proposition:

With an inlet pressure up to 4,000 psig, Parker's IR6000 two-stage regulator offers high pressure capability with stable pressure control. This general-purpose series features a large, convoluted Hastelloy® diaphragm that provides high corrosion resistance. Close tolerances and tight alignment of moving components minimizes hysteresis and improves cycle life.

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.
- 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
- Oxygen cleaned in accordance with ASTM G93 Level C

Specifications:

Functional Performance	
Design	
Burst Pressure	12,000 psig (828 barg)
Proof Pressure	6,000 psig (414 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	0.01 psig/100 psig (0.0007 barg/7 barg)
0.06 C_V	0.01 psig/100 psig (0.0007 barg/7 barg)
0.15 C_V	0.02 psig/100 psig (0.001 barg/7 barg)
Internal Volume	8.1 cc without fittings
Approximate Weight	3.5 lbs. (1.6 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) 10-250 psig (17 barg)
Temperature	Metal Knob required for temperature 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)
Self-Relieving Option	-40°F to 150°F (-40°C to 66°C)

Material of Construction	
Wetted	
Body Options	316L Stainless Steel (Consult factory for Alloyed Material Availability)
Compression Member	Inconel® 625
Diaphragm	Hastelloy® C-22
Poppet	Hastelloy® C-22
Poppet Spring	Inconel® X750
Seat Options	PCTFE (std) Vespel® or PEEK™
Carrier Options	316L Stainless Steel (std) or Hastelloy® C-22
Washer Backup Options	316 Stainless Steel (std) or Hastelloy® C-22
O-Ring Backup Options	FKM (std) or PTFE
Inlet Screen/Filter	316 Stainless Steel (std) (60µm mesh screen,10µm filter) (Consult factory for alloyed body material availability)
Self Relieving Seat	PEEK™
Non-Wetted	
Cap Options	Nickel Plated Brass or Stainless Steel
Nut	Stainless Steel
Knob Options	ABS (std) or Aluminum

For additional information on materials of construction, functional performance and operating conditions, please contact factory.

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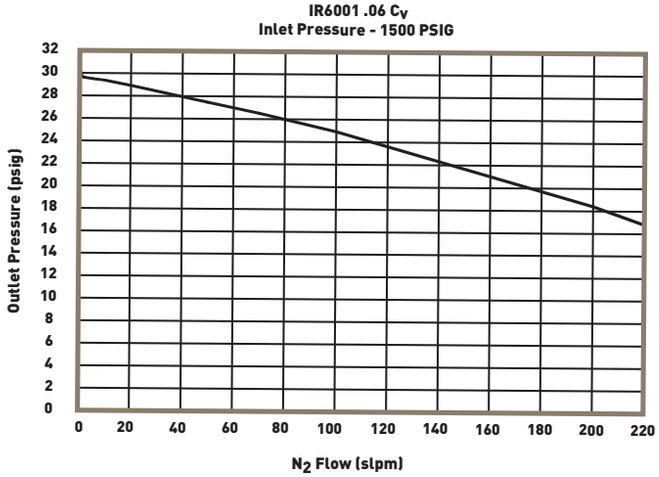
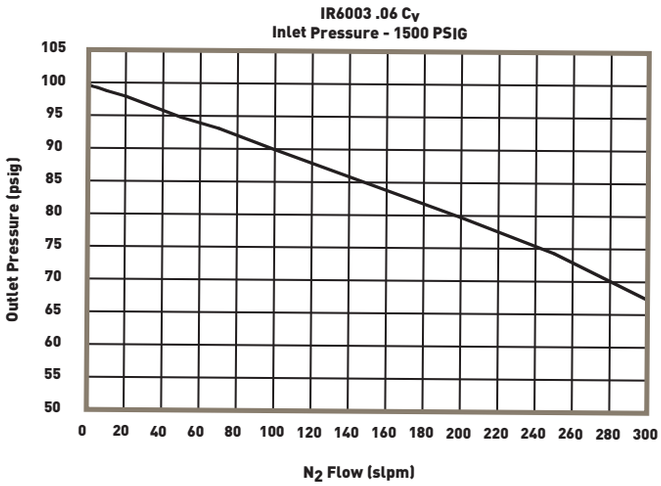
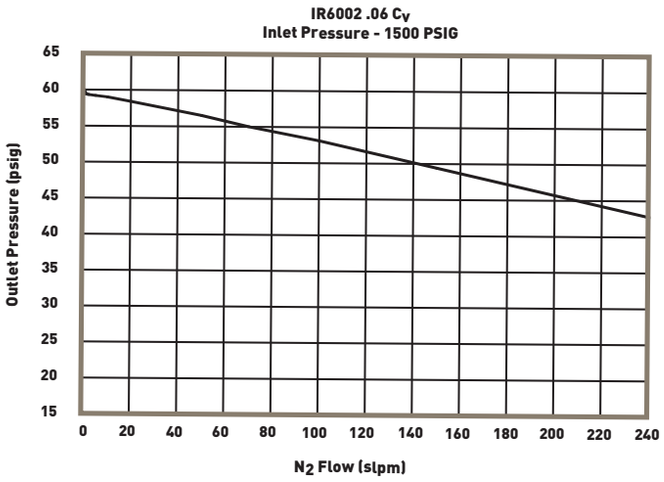
PEEK™ is a trademark of Victrex plc.
Inconel® and Monel® are registered trademarks of Special Metals Corporation.
Vespel® is a registered trademark of DuPont Performance Elastomers L.L.C.

IR6000 Series

Flow Curve:

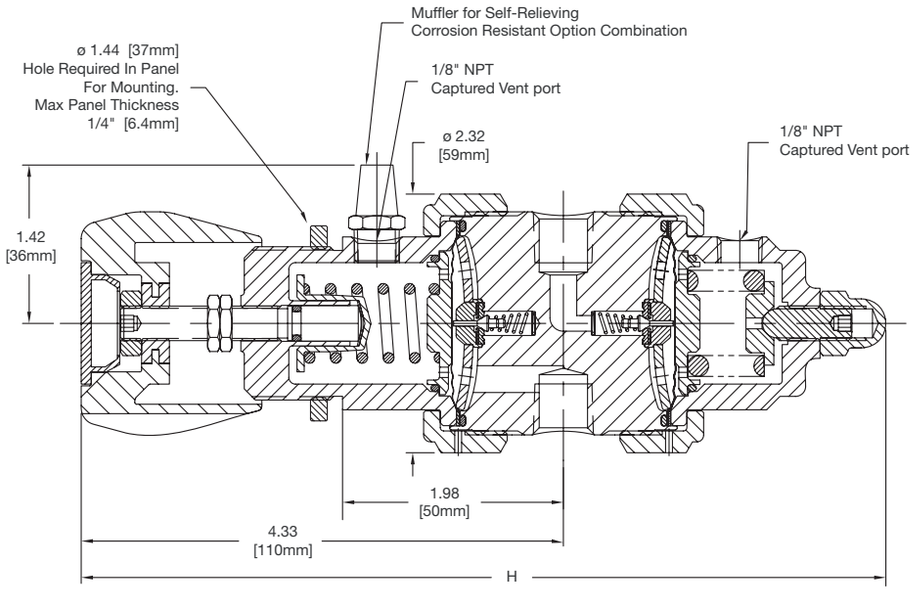






RANGE TABLE			
Basic Model	Maximum Inlet PSIG		
	0.06 Cv	0.02 Cv	0.15 Cv
IR6000	4,000	4,000	1,250
IR6001	4,000	4,000	1,250
IR6002	4,000	4,000	1,250
IR6003	4,000	4,000	1,250
IR6004	4,000	4,000	1,250

Dimensional Drawing:



OVERALL TABLE HEIGHT	
Basic Model	H
IR6000	7.22 (183.4 mm)
IR6001	7.22 (183.4 mm)
IR6002	7.22 (183.4 mm)
IR6003	7.22 (183.4 mm)
IR6004	7.22 (183.4 mm)

IR6000 Series

Ordering Information:

Building a Part Number: *Example:* **IR6002SK4P01304BS**

Example Part Number:	IR60	02	S		K	4P	01	30	4	B	S
Ordering Parameters/Options:	Regulator	Basic Series	Body Material	Flow Capacity	Seat Material	Porting	Outlet Gauge	Inlet Gauge	Port Style	Port Mounting	Optional Features
Table Reference: (see below)	A	B	C	D	E	F	G	H	I	J	K

A - Regulator	
IR60	IR6000 Series Regulator

B - Basic Series (Range / Outlet Gauge)	
00	0-10 psig (Note: Maximum inlet pressure is 400 psig)
01	1-30 psig
02	2-60 psig
03	3-100 psig
04	10-250 psig

C - Body Material (1)	
S	316L Stainless Steel (Consult factory for Alloy Material options and availability)

D - Flow Capacity	
	0.06 C_V (std)
1	0.02 C_V
2	0.15 C_V

E - Seat Material	
K	PCTFE
P	PEEK™
V	Vespel® (Recommended for Nitrous Oxide (N_20) Service)

F - Porting	
2P	2 Ports (No X required for gauges, inlet and outlet ports only)
3P	3 Ports (One X for gauge ports)
4P	4 Ports (Two X for gauge ports)
4PB	4 Ports (One X for gauge ports)
5P	5 Ports (Two X for gauge ports)
6P	6 Ports (Two X for gauge ports)
Note: Ports may be plugged for NPT threaded product.	

G - Outlet Gauge / Basic Series	
03	0-30 psig / IR6000
OL	0-60 psig / IR6001
01	0-100 psig / IR6002
2	0-200 psig / IR6003
4	0-400 psig / IR6004
X	No Gauge (Gauges may be provided by local Parker Distributor)

H - Inlet Gauge	
X	No Gauge
30	3,000 psig (std)
20	2,000 psig with the 0.15 C_V option
40	4,000 psig

I - Port Style	
4	1/4" NPT Female (All Gauges ports are 1/4" NPT Female)

J - Port Mounting	
B	Standard (No other options)

K - Optional Features (This section can have multiple options)	
C	Corrosion Resistant External (Stainless Steel Cap)
G	Tamper Proof (Not available with M option)
L	PTFE Back Up O-ring (PCTFE and PEEK™ Seats Only)
M	Metal Knob (Black: Not available with G option, required for temps. above 150° F)
S	Self Relieving (Temperature Rating)

Note:

Panel Mount Option: Order Panel Mount Nut Ring (PN: IR4-Panel-Nut-B-NP) as separate line item
Vent Muffler Option: Vent Muffler (PN: Muffler-2F-Bronze) as separate line item.
Vent Muffler is standard for the Self Relieving (S), Corrosion Resistant (C) option combination

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

Parker Instrumentation Products Division reserves the right to plug NPT ports