

735 Series

Two-Stage, Tied Diaphragm Regulator

High Pressure • Stainless Steel



Value Proposition:

The two-stage, tied diaphragm design of Parker's 735 Series regulator provides constant outlet pressure regardless of inlet pressure fluctuations. Corrosive or hazardous gases are shut off in the event a leak across the seat occurs. Unique compression member loading eliminates threads in the wetted area, thus reducing particle entrapment.

Product Features:

- Tied Diaphragm for added safety
- Unique compression member loads the seal to body eliminating threads in the wetted area
- Metal-to-metal diaphragm-to-body seal assures high leak integrity

Specifications:

Functional Performance	
Design	
Burst Pressure	10,500 psig (724 barg)
Proof Pressure	5,250 psig (362 barg)
Flow Capacity	
C _v Options	C _v 0.04
Leak Rate	
Internal	Bubble Tight
External	Bubble Tight
Supply Pressure Effect	
0.04 C _v	0.2 psig/100 psig (0.01 barg/7 barg)
Internal Volume	10.10 cc without fittings
Approximate Weight	3.5 lbs. (1.6 kg)

Operating Conditions	
Maximum Inlet	3,500 psig (240 barg)
Outlet Options	1 - 30 psig (2 barg) 3 - 100 psig (7 barg)
Temperature	-40°F to 150°F (-40°C to 66°C)

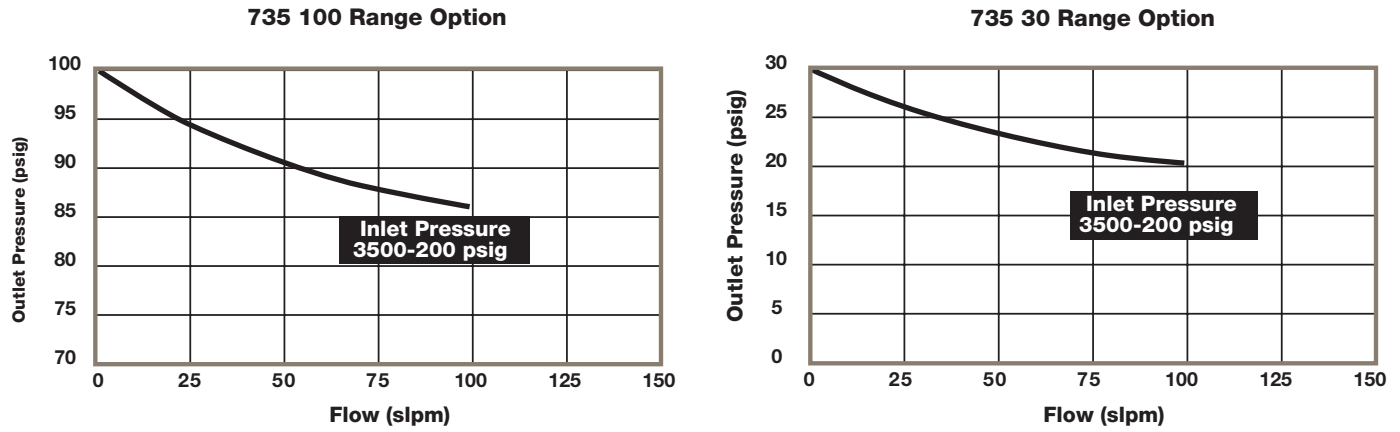
Material of Construction	
Wetted (see Note 3 on Page 3)	
Body Options	316L Stainless Steel (std)
Compression Member	316L Stainless Steel
Diaphragm Options	316L Stainless Steel and Hastelloy C-22®
Poppet Options	316L Stainless Steel
Poppet Spring Options	Inconel X750®
Poppet Screen	316L Stainless Steel
Seat Options	PCTFE (std) or Vespel®
Carrier Options	316L Stainless Steel (std) or Hastelloy C-22®
Inlet Screen	316 Stainless Steel
Non-Wetted	
Cap Options	Nickel Plated Brass
Nut	316L Stainless Steel
Knob	ABS

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

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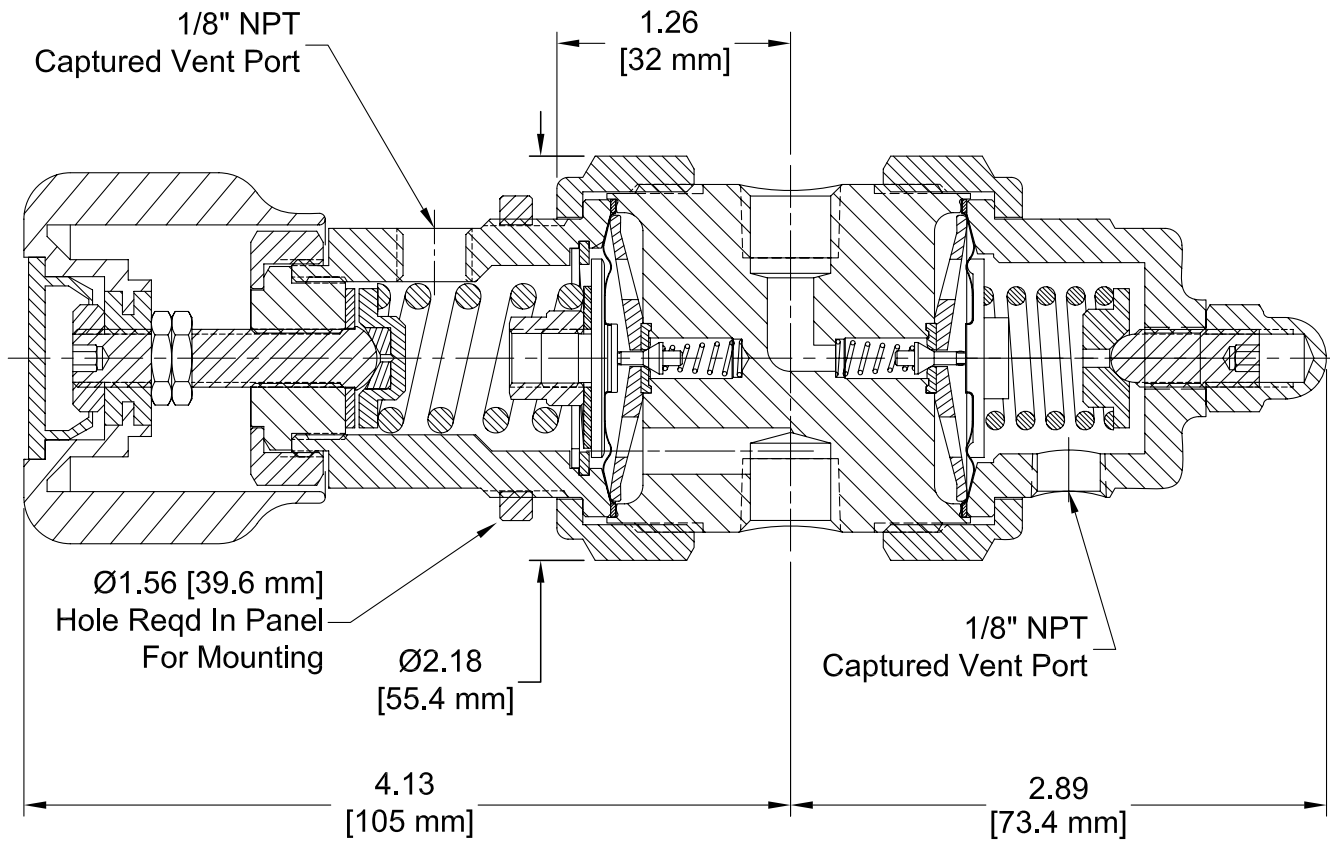
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Flow Curve:



These tests were performed using Nitrogen at ambient conditions.

Dimensional Drawing:



Specialty Regulators

735 Series

Ordering Information:

Building a Part Number: *Example: 73530S4POL304PM*

Example Part Number:	735	30	S	4P	OL	30	4	PM
Ordering Parameters/Options:	Regulator	Range	Body Material	Porting	Outlet Gauge	Inlet Gauge	Port Style	Optional Features
Table Reference: (see below)	A	B	C	D	E	F	G	H

A - Regulator	
735	735 Series Regulator

B - Range	
30	1-30 psig
100	3-100 psig

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

D - 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)
5P	5 Ports (One X for gauge ports)
7P	7 Ports (Two X for gauge ports)
See Regulator Porting Guide for additional options and port layouts	

E - Outlet Gauge / Basic Series	
03	0-30 psig
OL	0-60 psig
01	0-100 psig
X	No Gauge

F - Inlet Gauge	
X	No Gauge
30	3,000 psig
4	400 psig
40	4,000 psig

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

H - Optional Features (This section can have multiple options)	
PM	Panel Mount
VESP	Vespel® Seat (Recommended for N ₂ O service)

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Parker Instrumentation Products Division reserves the right to plug NPT ports