



Neon  
Controls

SERIES 20

*“Go Brighter. Go Neon.”*

## Series 20

Pressure regulator



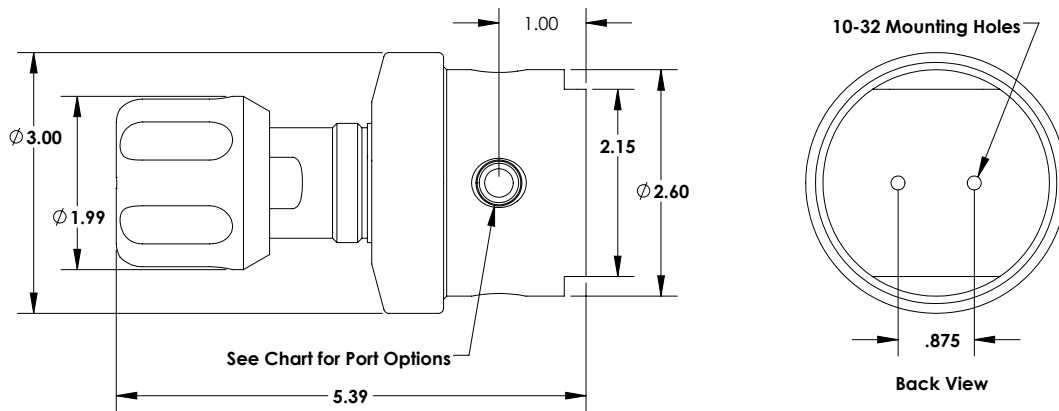
### Features and Benefits

- 316L stainless steel standard construction
- 316L stainless steel diaphragm
- Optional panel mount
- Minimal droop with large flow increases
- Extreme sensitivity with low Cv options
- Outlet ranges of up to 500 psig
- 1/8" to 1/2" connection options
- Max Cv of 1.12, Min Cv of 0.03

Designed for applications with low inlet pressures or higher flows, the Series 20 can handle inlet pressures as high as 6000 psig. Even with large changes of flow, the regulator can closely hold to its set outlet pressure, making this regulator a good choice as a primary regulator feeding another downstream regulator.

When used with optional low Cv values the Series 20 becomes a super-sensitive regulator, where the high diaphragm to Cv ratio gives excellent control, even to very low pressures in inches of water column.

Designed to offer many choices to match your specific needs, the Series 20 is available in different body materials, Cv values, porting options, and seat materials. Contact one of our specialists for help in finding the right regulator for your requirements.



Series 20



## Specifications

For questions about this product, please contact Neon Controls.

### Operating Parameters

Pressure rating per criteria of CGA E-4; ASME B31; ASME BPVC

#### Maximum Inlet Pressure

6000 psig / 415 Bar

#### Maximum Outlet Pressure

2, 10, 25, 50, 100, 250, 500 psig

70, 175, 345, 690, 1725, 3450, 5170, 6895 kPa

.7, 2, 4, 7, 20, 35, 50, 70 Bar

#### Design Proof Pressure

150% of rated pressure

#### Leakage

Internal: Bubble tight

External: Designed to meet  $< 2 \times 10^{-8}$  atm/cc He

#### Operating Temperature

-40°F to 185°F / -40°C to 85°C

#### Flow Capacity

0.03, 0.07, 0.24, 0.3, 0.35, 0.58, 1.12

### Wetted Materials

#### Body

316L Stainless Steel. Others upon request

#### Filter

10 micron 316L Stainless Steel

#### Seat

PCTFE, PEEK, Teflon, Tefzel, Viton

#### Diaphragm

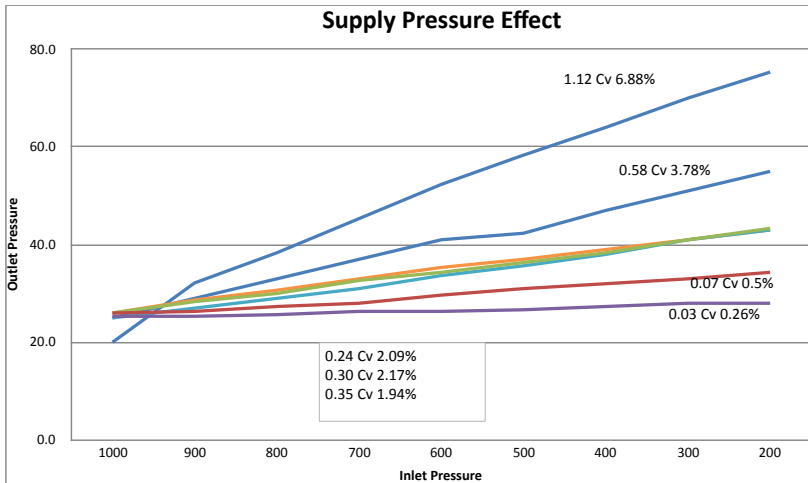
316L Stainless Steel with Teflon liner

#### Spring Housing

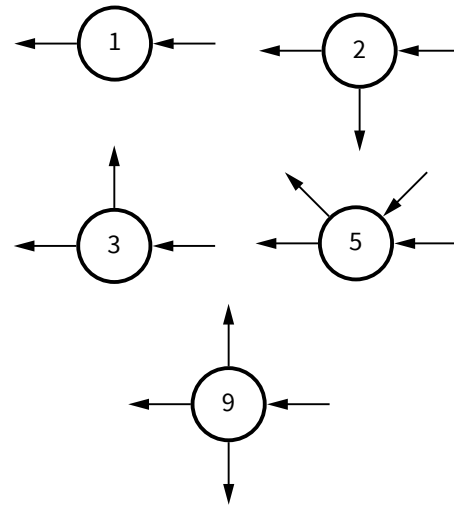
316L Stainless Steel

#### Remaining Parts

Inconel

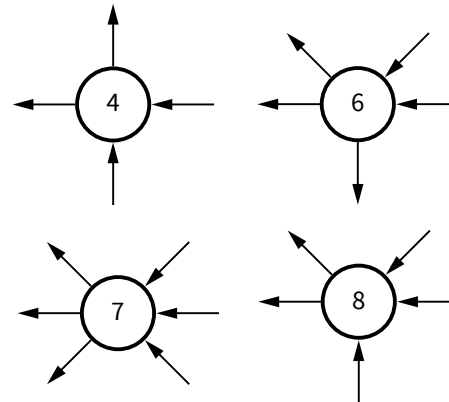


## Standard Porting Configuration (Chart A)



15	-	2	4	5	B	1
Series	-	Body Mtl	Outlet Range	Porting	Connection	Gauges
20		2 - 316L SS	J-0-30 PSIA 0 - 2 PSIG 1 - 10 PSIG 2 - 25 PSIG 3 - 50 PSIG 4 - 100 PSIG 5 - 250 PSIG 6 - 500 PSIG	See Chart A	A - 1/8" B - 1/4" C - 3/8" D - 1/2"	1 - with gauges 2 - no gauges 3 - customer supplied

## Special Order Porting Configuration (Chart A)



-	2	A	Z	1	580
-	Cv	Diaphragm	Seat	Cap	CGA
1 - 0.03	2 - 0.07	B - 316L SS w/Teflon Liner	F - PCTFE [standard]	2 - 316L SS	Insert 3 digit portion of CGA number [optional]
3 - 0.24	4 - 0.30	C - 316L SS w/Viton Liner	K - Peek	5 - 316L SS PM	
6 - 0.35	7 - 0.58		Z - Tefzel	V - 316L SS w/T-Handle	
9 - 1.12			V - Viton	Y - 316L SS w/T-Handle PM	
			T - Teflon	Tamper-proof options available	

All 1/8" and 3/8" portings special order

Pressure and Temperature Rating for Seats				
Code	Material	Pressure in PSI Minimum	Pressure in PSI Maximum	Temperature Maximum
F	PCTFE	10	3600	150°F
Z	TEFZEL	10	2400	150°F
K	PEEK	50	6000	150°F
K	PEEK	50	3600	250°F
T	TEFLON	10	1000	150°F
V	VITON	10	300	250°F

Special Options	
15	Outlet valve - packed
16	Outlet valve - packless
73	Helium Leak Test
74	Liquid Service Filter

For other options contact factory

## How To Videos

Available 24/7

Smartphone & Tablet Compatible

<http://youtube.com/neoncontrols>



### Warranty

Precision Instrumentation warrants each Neon regulator to be free from defects in materials and workmanship for two years after manufacture date.

In the unlikely event that a Neon regulator is defective in workmanship or materials, Precision Instrumentation will, at its discretion, repair or replace the regulator free of charge.

The selling distributor must process all warranty claims. If the original purchaser suspects a defect in a Neon regulator, the regulator, together with proof of purchase, must be returned to the selling distributor for evaluation and disposition.

This warranty applies only under conditions of use for which each regulator is designed and does not cover cosmetic damage or damage due to misuse, abuse, neglect, accident, improper installation, or acts of God. This warranty does not extend to or apply to any regulator that has been repaired or altered by any party other than Precision Instrumentation or its authorized distributors.

This warranty is in lieu of and excludes all other warranties, expressed or implied, including the warranties of merchantability and fitness for a particular purpose. Precision Instrumentation will not be liable for any special or consequential damages, or for any loss, damage or expense directly or indirectly arising from use of or inability to use any regulator, either separately or in combination with any other equipment or material, or from any other case.

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