

# Series 20H & 20HS Pilot

The Series 20H & 20HS Flowgrid® Pilot is a high pressure version of the Series 20S pilot designed for set points between 200-900 psig. Both the high pressure and low pressure constructions share all the same parts except for a high pressure diaphragm assembly. The Series 20 & 20S pilot can be converted to the high pressure version simply by adding the high pressure diaphragm assembly.

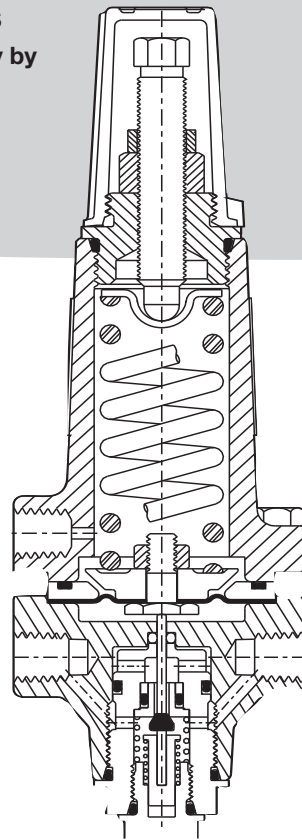
## Specifications

<b>Body Style</b>	Pressure Reducing (PRV) & Back Pressure (BPV)
<b>Orifice Size</b>	0.15 Inches (Standard) 0.17 Inches (Optional)
<b>Connections</b>	1/4" NPTF
<b>Temperature Nitrile Diaphragm &amp; O-rings</b>	Working -20°F to 150°F Emergency -40°F to 200°F
<b>Temperature Viton Diaphragm &amp; O-rings</b>	30° F to 200°F
<b>Maximum Inlet Pressure</b>	1500 psig
<b>Maximum Loading Pressure</b>	1500 psig
<b>Maximum Outlet Pressure</b>	1500 psig
<b>Maximum Emergency Sensing Pressure</b>	1000 psig
<b>Maximum Spring Housing Pressure</b>	1000 psig
<b>Set Pressure Ranges</b>	200-520 psig 400-900 psig

\* Anytime the Flowgrid® Pilot or Valve is exposed to pressures in excess of its rating it should be inspected for damage.

## Flow Coefficients and Constants

Series 20/20S/20H/20HS Pilots			
	$C_1$	MAX $C_g$	MAX $C_v$
0.15 Orifice (standard)	38	9.58	0.25
0.17 Orifice (optional)	38	11.18	0.29



Sectional View

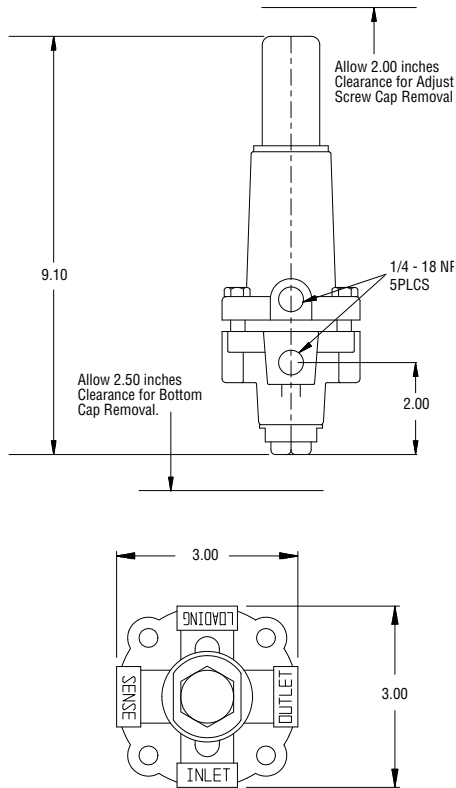


Series 20H Pilot

## Materials of Construction

<b>Body &amp; Spring Housing</b>	Forged Brass or 304 Stainless Steel
<b>Body Insert &amp; Closing Cap</b>	Brass or 304 Stainless Steel
<b>Orifice</b>	304 Stainless Steel or Delrin
<b>Plug &amp; Stem</b>	Nitrile/304 Stainless Steel Viton/304 Stainless Steel 304 Stainless Steel
<b>Diaphragm</b>	Nitrile/Nylon or Viton/Nylon
<b>O-rings</b>	Nitrile or Viton

## Dimensions



## Trim Options

All Series 20 Pilots			
Internal Trim	Std. Construction	Option 1	Option 2
Orifice	303 Stainless	303 Stainless	Delrin
Plug/Stem	Nitrile/304 SSt	Viton/304 SST	303 Stainless
Diaphragm	Nitrile/Nylon	Viton/Nylon	Nitrile/Nylon
O-ring	Nitrile	Viton	Nitrile

## Stock Numbers

Series 20H Pilot (Brass)	Spring Color	PRV Stock	BPV Stock	Weight
200-520	Black	FP-41	FP-43	6 lbs
400-900	Green	FP-42	FP-44	6 lbs

Series 20HS Pilot (Stainless)	Spring Color	PRV Stock	BPV Stock	Weight
200-520	Black	FP-49	FP-50	6 lbs
400-900	Green	FP-50	FP-52	6 lbs

## Pilot Performance

Series 20 Pilot		Pressure Reducing Mode Restrictor Set at 4			Back Pressure Mode Restrictor Set at 4	
Spring Range	Color	Lock-up (psi)	Droop (psi) @ Max. Capacity <sup>1</sup>	Boost @ Constant Flow (psi) <sup>2</sup>	Build up (psi) for Max. Capacity	Lock-up (psi)
200-520	Black	10.0	4.00	1.50	+5.0 <sup>3</sup>	-3.0
400-900	Green	20.0	8.00	1.50	+12.0 <sup>3</sup>	-5.0

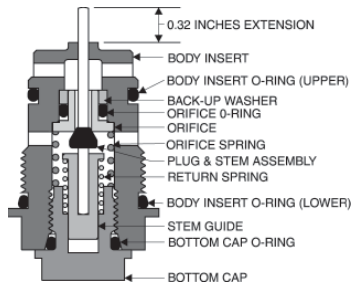
1. Inlet Pressure ( $P_1$ ).

2. Per 100 psi decrease in inlet pressure ( $P_1$ ).

3. SST/Delrin trim required.

## Cartridge Sectional View

### Pressure Reducing (PRV) Mode



### Back Pressure (BPV) Mode

