

Series 20H & 20HS Pilot

The Series 20H & 20HS Flowgrid® Pilot is a high pressure version of the Series 20 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.

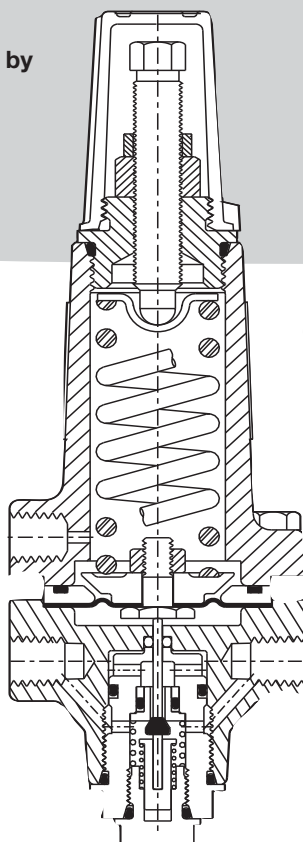
Specifications

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

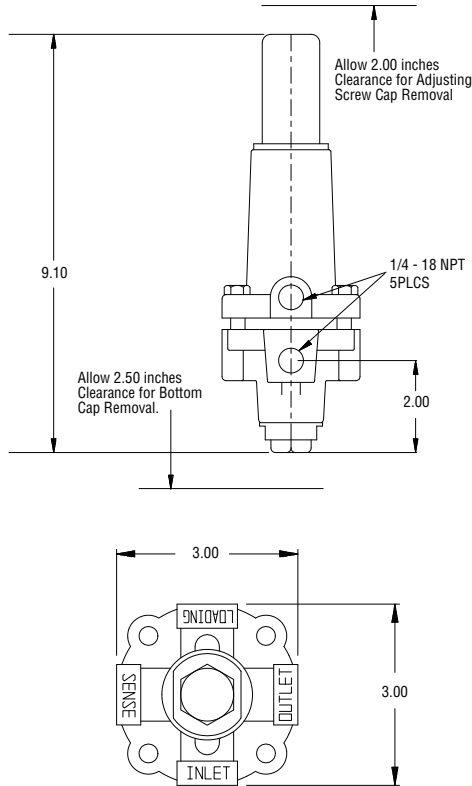


Series 20H Pilot

Materials of Construction

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

Dimensions



Trim Options

All Series 20 Pilots			
Internal Trim	Std. Construction	Option 1	Option 2
Orifice	304 Stainless	304 Stainless	Delrin
Plug/Stem	Nitrile/304 SSt	Viton/304 SSt	304 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-48	6 lbs

Series 20HS Pilot (Stainless)	Spring Color	PRV Stock	BPV Stock	Weight
200-520	Black	FP-49	FP-51	6 lbs
400-900	Green	FP-50	FP-56	6 lbs

Pilot Performance

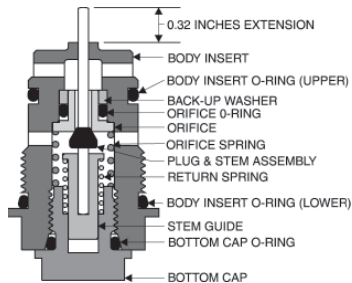
Series 20 Pilot		Pressure Reducing Mode Restrictor Set at 4			Back Pressure Mode Restrictor Set at 4	
Spring Range	Color	Lock-up (psi)	Droop (psi) @ Max. Capacity ¹	Boost @ Constant Flow (psi) ²	Build up (psi) for Max. Capacity	Lock-up (psi)
200-520	Black	10.0	4.00	1.50	+5.0	-3.0
400-900	Green	20.0	8.00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

1. Constant Inlet Pressure (P_1).
2. Per 100 psi decrease in inlet pressure (P_1).

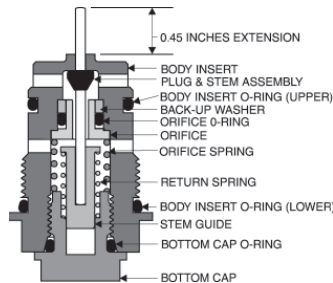
3. SST/Delrin trim required.

Cartridge Sectional View

Pressure Reducing (PRV) Mode



Back Pressure (BPV) Mode



* The difference between PRV and BPV Modes is that the Pilot Stem is inverted and the control action is reversed.

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