

# Ultra High Pressure Valve Assembly

Type HP-40 (40,000 psia)

## DESCRIPTION

The HP-40 is an ultra high pressure control valve using a tri-axially forged stainless steel body along with a solid Stellite innervalue assembly. The HP-40 can be used for both flow control as well as a Class IV shutoff valve. The versatility of the HP-40 creates a singular solution for your high pressure applications.

## APPLICATION

The HP-40 valve is used in industrial applications, research and process pilot plants on liquids and gases. The main use is in high-pressure chemical injection, which is used in the production of high-pressure low density polyethylene (HPLDPE).

## MATERIALS

<b>Body</b>	Tri-axially forged 316 stainless steel
<b>Innervalue</b>	Stellite® 6B (plug and seat)
<b>Packing</b>	Standard is Torlon®/PFA CV rings
<b>Actuator</b>	Painted carbon steel, nickel plated carbon steel and stainless steel

## ACTUATOR CHOICES

<b>Standard</b>	Air-to-open, fail close Air-to-close, fail open
<b>Effective Area</b>	35 square inches
<b>Standard Signals</b>	3-15#, 3-27#, 6-30#, 22-45#*
<b>Optional Signals</b>	With positioner, 3-9#, 9-15#
<b>Accessories</b>	Filter regulator, gauges, I/P, limit switches, handwheel on standard unit, solenoids

\*Positioner Required

## OPTIONAL FEATURES

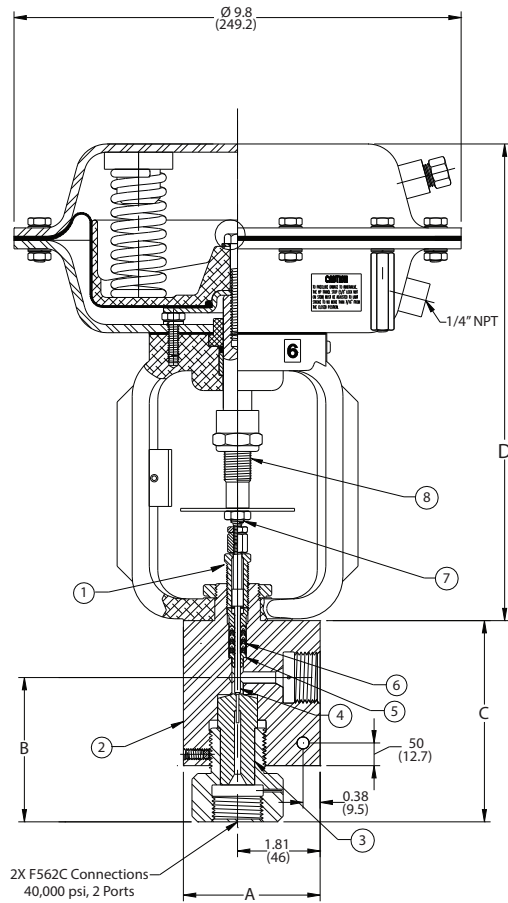
- Titanium Nitride-coated Stellite® innervalue
- Stainless steel actuator and hardware for explosion-proof requirements.



## STANDARD FEATURES

- Wide range of interchangeable trims
- Choice of linear or quick opening trims
- ANSI Class III shutoff for sizes P-1 through P-9
- ANSI Class IV shutoff for sizes K through O
- Solid Stellite® innervalue
- 9/16 in. high-pressure cone and collar fittings (F562C)
- Pressure rating of 40,000 psia (2758 bar) @ 100° F (38° C)

**DIMENSIONS**



**Items in Drawing**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Packing set	Adapter	Seat	Innervalve
<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
Body & Bonnet	Packing gland	Stem connector	Stem

**Dimensions in Inches (mm)**

PS	A	B	C	D	Stroke
1/4 inch	3.00 (76.2)	3.17 (80.6)	4.42 (112.3)	10.47 (266)	7/16 in.

**TRIM CHART**

Trim Size	Max. Cv	Orifice Dia. in. (mm)	Orifice Area (sq. in.)
I*	0.08	0.1000 (2.54)	0.0079
J*	0.05	0.1000 (2.54)	0.0079
K	0.03	0.0860 (2.18)	0.0058
L	0.02	0.0860 (2.18)	0.0058
M	0.01	0.0860 (2.18)	0.0058
N	0.006	0.0860 (2.18)	0.0058
O	0.003	0.0860 (2.18)	0.0058
P-1	0.002	0.0625 (1.59)	0.0031
P-2	0.0013	0.0625 (1.59)	0.0031
P-3	0.001	0.0625 (1.59)	0.0031
P-4	0.0006	0.0625 (1.59)	0.0031
P-5	0.0004	0.0625 (1.59)	0.0031
P-6	0.00027	0.0625 (1.59)	0.0031
P-7	0.00018	0.0625 (1.59)	0.0031
P-8	0.00012	0.0625 (1.59)	0.0031
P-9	0.00008	0.0625 (1.59)	0.0031

\* Special order

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