

# SUPER-H - Class 150 - Short & Venturi Patterns

AUDCO SUPER-H Pressure Balanced Plug Valves have been developed to reduce the operating torque in plug valves without compromising the in-line maintenance capability. The plug and body seating surfaces, which are lapped and matched, are not exposed to the line fluid while valves are in open condition; this confines inevitable corrosion and erosion to less critical areas. Sealing is further enhanced by specially developed plug sealants charged evenly around the seating surfaces. The plug is impregnated with PTFE based anti-friction agent - 'SUPER LoMu' which provides greater wear resistance and ensures consistent operating torque.

## PRESSURE BALANCED PLUG

In a standard taper plug valve the line fluid finds its way into the large end chamber of the plug. The resultant force pushes the plug into its taper seat causing taper locking and possibly valve seizure. This resultant force persists when the subsequent line pressure remains high or is reduced. To unseat the taper locking and keep the valve operational frequent sealant injection is required.

In pressure balanced plug valves, pressure balancing is achieved by providing two holes in the plug connecting the chambers at each end of the plug. The chambers, one

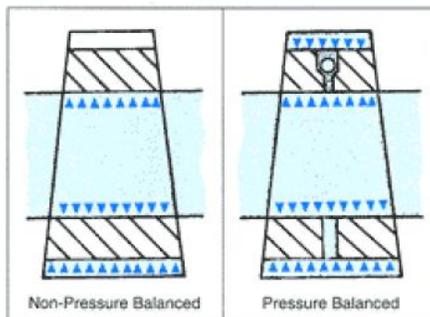
Pressure balancing eliminates out of balance and consequent taper locking. The Fig. shows clearly how a balanced position is reached when line pressure is allowed to equalise the pressure acting on each end of the plug.

## FIRE SAFE

SUPER-H plug valves are designed to meet standards for fire test. The features incorporated in the valve make the valve seal and operate effectively even after being subjected to varying temperatures and duration resembling fire accidents.

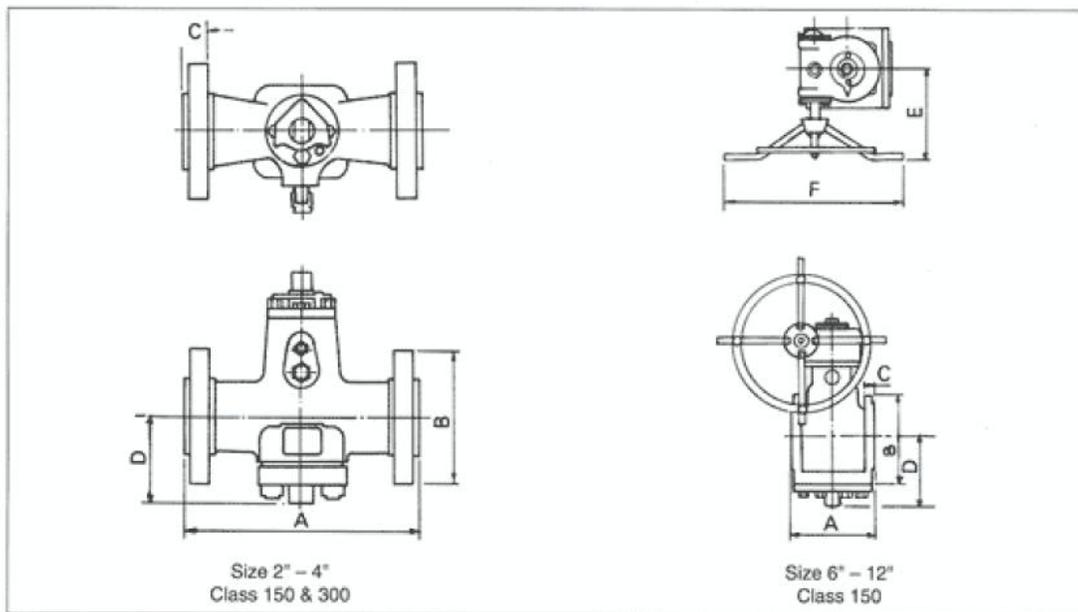
## OPERATION AND MAINTENANCE

SUPER-H plug valves generally need very little attention after installation. However for trouble free operation sealant injection as recommended is to be carried out. Please refer to "Installation, Operation & Maintenance manual for SUPER-H Pressure Balanced Plug valves" for details. For ease of adjustment, it is desirable that 6" (150 mm) clearance be maintained around the pressure screw, located at the bottom of the valve.



fitted with a non-return valve acts as a balancing mechanism for the plug. The pressure in the large end chamber always equals the line pressure and the pressure in the small end chamber is always equal to or greater than the line pressure, minimising the resultant force.

As a standard, SUPER-H plug valves are supplied with AUDCO 733 sealant which is suitable for most hydrocarbon services. On request, sealant from a wide range offered, can be supplied to suit the nature of service. It is recommended that you consult us before selecting the sealant for a new service.

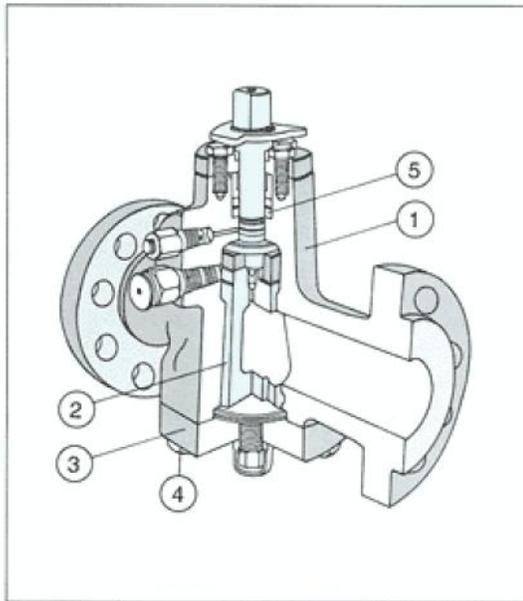


**DIMENSIONS**

Inches mm

**CLASS 150**

Valve Size	Pattern	Face to Face	Flange		CL to Bottom	CL to H/W Face	Wrench Gear Unit	Wrench Length/ HW Dia	No. of Tapping per Flange	Tapping detail
			OD	Thickness						
		A	B	C	D	E		F		
2	S	7.00	6.00	0.62	4.72	—	B4	19.45	—	—
50	—	178	152	15.70	120	—	—	494	—	—
3	S	8.00	7.50	0.75	6.50	—	B5S	26.93	2	5/8"-11 UNC
80	—	203	191	19.10	165	—	—	684	—	—
4	S	9.00	9.00	0.94	7.28	—	B5S	26.93	2	5/8"-11 UNC
100	—	229	229	23.90	185	—	—	684	—	19mm deep
6	S	10.50	11.00	1.00	6.69	12.09	27M3	22.76	2	3/4"-10 UNC
150	—	267	279	25.40	170	307	—	578	—	22 mm deep
8	S	11.50	13.50	1.12	7.68	12.09	27M3	22.76	2	3/4"-10 UNC
200	—	292	343	28.40	195	307	—	578	—	22 mm deep
10	S	13.00	16.00	1.19	10.04	12.09	27M5	22.76	2	7/8"-9 UNC
250	—	330	406	30.20	255	307	—	578	—	22 mm deep
12	S	14.00	19.00	1.25	11.02	12.09	27M5	22.76	2	7/8"-9 UNC
300	—	356	483	31.80	280	307	—	578	—	22 mm deep
14	V	27.00	21.00	1.38	14.76	17.20	3H	30.98	—	—
350	—	686	533	35.10	375	437	—	787	—	—
16	V	30.00	23.50	1.44	13.98	13.31	G400	22.76	—	—
400	—	762	597	36.60	355	338	—	578	—	—
18	V	34.00	25.00	1.56	15.16	16.57	G400	27.56	—	—
450	—	864	635	39.60	385	421	—	700	—	—
20	V	36.00	27.50	1.69	18.11	17.20	5B	30.98	—	—
500	—	914	699	42.90	460	437	—	787	—	—
24	V	42.00	32.00	1.88	18.70	20.71	3MS	30.98	—	—
600	—	1067	813	47.80	475	526	—	787	—	—
26	V	45.00	34.25	2.70	23.60	22.80	9AS	25.60	—	—
650	—	1143	870	68.40	600	580.00	—	650	—	—
28	V	51.00	36.50	2.81	26.00	22.80	9AS	25.60	—	—
700	—	1295	927	71.40	666	580.00	—	650	—	—
30	V	51.00	38.75	2.94	26.0	22.80	9AS	25.60	—	—
750	—	1295	986	75	660	580	—	650	—	—



### MATERIAL SPECIFICATION

Name of part		Specification
1. Body		ASTM A216 Gr.WCB
2. Plug		ASTM A216 Gr.WCB case hardened and Super LoMu treated
3. Cover		ASTM A216 Gr.WCB
4. Bolting	Studs	ASTM A193 Gr. B7
	Nuts	ASTM A194 Gr. 2H
5. Packing		Graphite

### STANDARDS

Valve Design	API 6D
Shell wall thickness	BS5353
Face to face dimensions	ANSI/ASME B16.10 and BS 2080
Flange dimensions and drilling	ANSI/ASME B16.5
Inspection and Testing	API 6D and BS 6755 part I
Fire test	API 6FA

### TEST PRESSURE

	Hydrostatic			
	Shell		Seat	
	bar	psig	bar	psig
Class 150	31	450	22	315
Class 300	78	1125	56	815