

# AUDCO Plug Valves

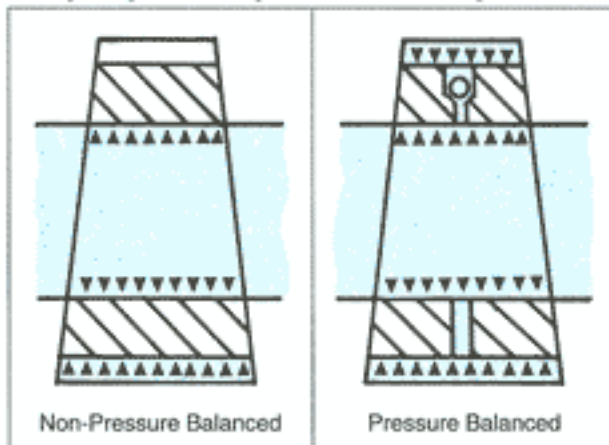
## SUPER-H

Class 400  
Regular & Venturi Patterns

AUDCO SUPER-H Pressure Balanced Plug Valves have been developed to reduce the operating torque in plug valves without compromising on 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 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 valve pressure balancing is achieved by providing two holes in the plug connecting the chambers at each end of the plug. The chambers, one fitted with a non-return valve acts as a balancing mechanism for the plug. The pressure in the large end chamber always equals line pressure and the pressure in



the small end chamber is always equal to or greater than the line pressure, minimising the resultant force. Pressure balancing eliminates out of balance forces and consequent taper locking. The Figure shows clearly how a balanced position is reached when line pressure is allowed to equalise the pressure acting on each end of the plug.

### SUPER LoMu

Plug and Stem of Super-H Pressure Balanced plug valves are treated with an antifriction agent based on PTFE which we call as "Super LoMu". This provides greater wear resistance and ensures low consistent operating torque.

### FIRE SAFE

Super-H Pressure Balanced Plug valves are designed to meet fire test standards. The features incorporated in the valve make the valves seal and operate effectively even after being subjected to fire of varying temperatures and duration resembling fire accidents.

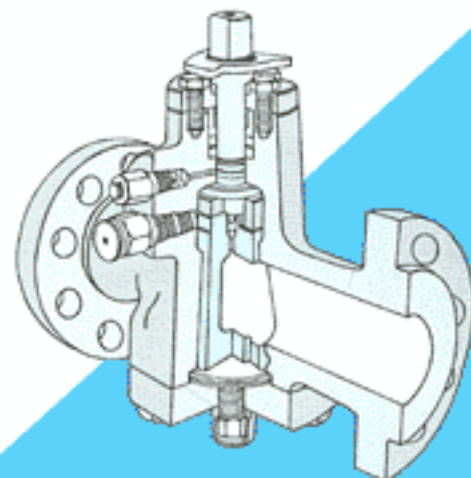
### STANDARDS

Valve Design	API 6D
Face to Face dimensions & drilling	ASME/ANSI B16.10 and BS 2080
Inspection & Testing	API 6D and BS 6755 Part 1
Fire tests	API 6FA

### OPERATION AND MAINTENANCE

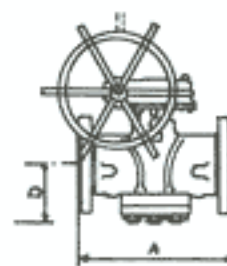
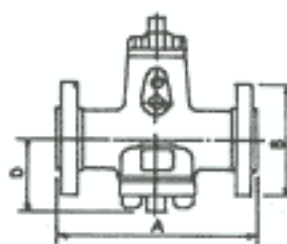
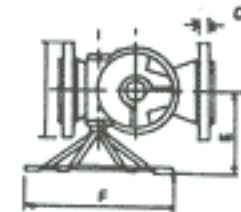
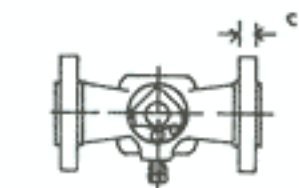
Super-H Pressure Balanced Plug valves generally need very little attention on installation. However, for trouble free operation sealant injection as recommended is to be carried out. Please refer to "Installation, Operation & Maintenance Manual of Super-H Pressure Balanced Plug valves" for details.

As a standard, Super-H Pressure Balanced Plug valves are supplied with AUDCO 733 Plug Sealant suitable for most hydrocarbon services in a temperature range of -40 to 480° F. On request, plug 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 plug sealant for a new service.



## MATERIAL SPECIFICATION

Name of part	Specification
Body	ASTM A 216 Gr. WCB
Plug	ASTM A 216 Gr. WCB Case Hardened & Super LoMu treated
Cover	ASTM A 216 Gr. WCB
Bolting Studs	ASTM A 193 Gr. B7
Nuts	ASTM A 194 Gr. 2H
Packing	Graphite



Sizes : 2" & 4"

Sizes : 6" & above

For ease of adjustment, it is desirable that 6" (150mm) clearance be maintained around the pressure screw, located at the bottom of the valve.

## TEST PRESSURE

	Max. CWP at -20 to 100°F		Hydrostatic			
	psig	bar	Shell		Seat	
			psig	bar	psig	bar
Cl. 400	990	68	1500	103	1091	75

## DIMENSIONS (mm)

Size		Pattern	A		B	C	D	E	Wrench	Wrench Length	Gear Unit	F
Inch	mm		RF	RTJ								
2	50	R	292	295	165	25.4	120	—	B4	494	—	—
4	100	R	406	409	235	35.1	170	—	B5S	684	—	—
6	150	V	495	498	318	41.1	180	307	—	—	27M3	578
8	200	V	597	600	381	47.8	205	307	—	—	27M3	578
12	300	V	762	765	521	57.2	325	421	—	—	G400M1	700
14	350	V	826	829	584	60.5	370	421	—	—	G400M1	700
16	400	V	902	905	648	63.5	405	437	—	—	5B	787

RF height of 6.4 mm and RTJ face height of 7.9 mm excluded from flange thickness.

## CATALOGUE NUMBER

A familiarity with our catalogue number is not necessary when specifying or ordering our valves. If full description of the valve could be provided we will translate this into a catalogue number formulated as per the following system.

<b>50</b>	<b>H</b>	<b>R</b>	<b>W</b>	<b>4 3 3</b>	<b>C</b>	<b>C</b>		
Size	Super-HI	Pattern	Operation	1st digit Press. Rating	2nd & 3rd Digit End Connection each ends	Body Material	Plug Material	Options
50 mm		R - Regular V - Venturi	W - Wrench G - Gear A - Actuator	4 - Class 400	3 - Flanged RF 5 - Flanged RTJ	C - Carbon Steel	C - Case Hardened Carbon Steel E - Electroless Nickel Plated	Nil - Standard S - Slurry N - NACE

As we continuously endeavour to improve our products, the data given herein are subject to change.



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Marketed by

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