

**CAST IRON**

## PILOT CONTROLLED METALLIC DIAPHRAGM TYPE PRESSURE REDUCING VALVE

**OPERATES PERFECTLY  
UNDER DIFFERENT CONDITIONS**

**DESCRIPTION :**

'WJ' Cast Iron Pilot Controlled Metallic Diaphragm Type Pressure Reducing Valve with flanged ends to BS-10 Table 'F' are suitable for 185 PSIG (13 Kg/Cm<sup>2</sup>g) Max. working pressure at 428°F (220°C) Temp. and are Tested to 370 PSIG (26 Kg/Cm<sup>2</sup>g) Hydraulic Pressure. These Valves are available in three reduced pressure ranges of 5/60, 20/80 and 40/125 on the down stream side.

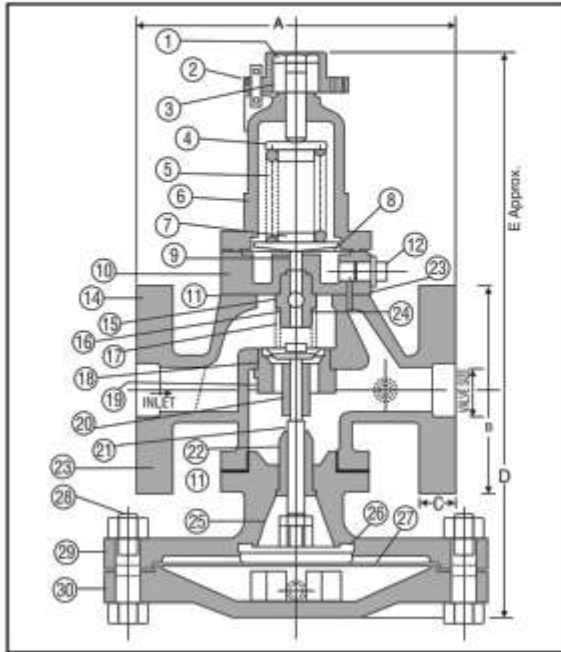
**INSTRUCTIONS FOR INSTALLATION :**

1. The Valves should be installed in a horizontal pipe line.
2. Stop valves should be installed at inlet & outlet sides of reducing valve.
3. A safety valve should be installed on the down stream side of reducing valve.
4. A steam trap & a strainer should be installed on the upstream side just before the reducing valve.
5. Clean all scale and jointing material from the pipe line before installing the reducing valve.

**TESTING AND CERTIFICATION :**

All reducing valves are tested at double the max. working pressure. Each valve is supplied with IBR Test Certificate in Form III-C issued by The Director of Boilers, Punjab.





DIMENSIONS					
Nominal Size	A	B	C	D	E
25mm (1")	168	120.7	12.7	130	200
40mm (1½")	203	139.7	15.88	140	235
50mm (2")	248	165.1	19.05	160	300
65mm (2½")	280	184.15	19.05	180	345
80mm (3")	300	203.2	19.05	200	350

**MATERIALS**

PART No.	NAME OF PART	MATERIAL	SPECIFICATION
1.	Adjusting Screw	M.S.	----
2.	Locking Guard	C.I.	IBR-86 To 93 Gr. A
3.	Locking Lever	M.S.	----
4.	Upper Disc	M.S.	----
5.	Spring	Spring Steel	----
6.	Spring Chamber	C.I.	IBR-86 To 93 Gr. A
7.	Bottom Spring Disc	M.S.	----
8.	Diaphragm	S.S.	AISI-304
9.	Pilot Stem	S.S.	AISI-410
10.	Bonnet	C.I.	IBR-86 To 93 Gr. A
11.	Gasket	Steam Jointing	----
12.	Side Plug	Bronze	IBR-282 (a) IV Gr. B
13.	Nipple	S.S.	AISI-410
14.	Ball	S.S.	AISI-304
15.	Pilot	S.S.	AISI-410
16.	Spring	S.S.	AISI-410
17.	Pilot Nut	Bronze	IBR-282 (a) IV Gr. B
18.	Body Seat Ring	S.S.	AISI-410
19.	Disc Guide	Bronze	IBR-282 (a) IV Gr. B
20.	Valve Disc	S.S.	AISI-410
21.	Extension Stem	S.S.	AISI-410
22.	Guide Sleeve	Bronze	IBR-282 (a) IV Gr. B
23.	Body	C.I.	IBR-86 To 93 Gr. A
24.	Spring	Spring Steel / S.S.	----
25.	Nut	M.S.	----
26.	Diaphragm Disc	Bronze	IBR-282 (a) IV Gr. B
27.	Diaphragm	S.S.	AISI-304
28.	Bolts & Nuts	M.S.	----
29.	Diaphragm Chamber	C.I.	IBR-86 To 93 Gr. A
30.	Cover Flange	C.I.	IBR-86 To 93 Gr. A
31.	Union Nipple	Bronze	IBR-282 (a) IV Gr. B
32.	Pipe Connector	Bronze	IBR-282 (a) IV Gr. B
33.	Copper Pipe	Copper	----
34.	Union Nuts	Brass Rod	----
35.	T-Connection	Bronze	IBR-282 (a) IV Gr. B
36.	Studs & Nuts	M.S.	----
37.	Studs & Nuts	M.S.	----

**CAPACITIES OF 'WJ' PRESSURE REDUCING VALVES  
FOR STEAM IN Kg. PER HOUR**

SET PRESSURE Kg. / Cm <sup>2</sup> g	OUTLET PRESSURE Kg. / Cm <sup>2</sup> g	VALVE SIZE				
		25 mm (1")	40 mm (1½")	50 mm (2")	65 mm (2½")	80 mm (3")
2	0.75	190	520	920	1360	2000
	1.5	300	820	1470	2150	3100
4	2.75	275	740	1290	1950	2800
	2.0	385	1020	1850	2720	3900
6	3.5	350	920	1650	2420	3530
	3.5	490	1275	2275	3365	5000
7	4	475	1230	2190	3280	4790
	6	375	980	1750	2560	3740
	4	600	1590	2820	4140	6140
9	6	555	1485	2620	3840	5650
	7	465	1230	2180	3180	4770
	5	710	1800	3250	4950	7000
10	7	650	1720	3035	4520	6550
	9	500	1300	2550	3450	4950
	6	850	2210	3900	5720	8230
13	7	810	2180	3760	5720	8000
	9	715	1920	3400	5050	7230
	10	550	1465	2610	3840	5480



**CAST IRON FULL LIFT SINGLE POST SAFETY VALVE DISCHARGE CAPACITY FOR SATURATED STEAM (Kg/hr.) AT 10% OVER PRESSURE**

**CONSTANT 'C' = 0.4**

SIZE OF VALVES	ORIFICE DIA	SET PRESSURE (Kg/Cm <sup>2</sup> )		
		3.5	7.0	10.54
25 mm (1")	20 mm	600	1075	1550
40 mm (1½")	28 mm	1179	2109	3050
50 mm (2")	38 mm	2172	3884	5618
65 mm (2½")	48 mm	3467	6198	8965
80 mm (3")	57 mm	4889	8740	12647
100 mm (4")	70 mm	7333	13182	19065