

Authorised Dealer;
 PUSHKARNA SALES PVT LTD.
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 sales@pushkarnasales.com
 Site : www.pushkarnasales.com

Piston Valves

Description:

Forged steel piston valves provide perfect tightness and durable stability on different mediums such as steam, superheated steam, heat transfer fluid, ammonia, L.P.G., acids, alkalies etc.

Size and Pipe Connections :

- 15NB/20NB/25NB/32NB/40NB
 - 1. Screwed BSPT/NPT Ends.
 - 2. Socketweld Ends.
- IBR APPROVED VALVES AVAILABLE ON REQUEST.

Limiting Conditions:

Maximum operating conditions for Socket weld ends.	
PMO - Max. operating Pressure	78 bar g
TMO - Max. operating Temperature	427°C
Cold Hydraulic test Pressure	156 bar g
Maximum operating condition for Screwed ends	
PMO - Max. operating Pressure	31.5 bar g
TMO - Max. operating Temperature	427°C
Cold Hydraulic test Pressure	63.0 bar g

How to order:

Example: Forbes Marshall 15 NB Piston Valve with socket weld ends.

Available Spares:

Sealing Rings

How to order Spares:

Order Spares as per the code no. specified in the User Manual.

Installation:

The Valve is designed for installation in a vertical line or horizontal line with inlet as per the arrow direction. To open the valve turn hand wheel till it stops at the top and to close turn hand wheel till it touches the bonnet. If any leakage is observed during operation from the bonnet hole or at the outlet, close valve fully and tighten Opposite Nuts (7) equally half or one turn until leakage stops.

Safety Information: Pressure

Before attempting any maintenance of the Valve, ensure that pressure is isolated and safely vented to atmosphere. Do not assume that the system is depressurized even when a pressure gauge indicates zero.



15/20 NB



25 NB

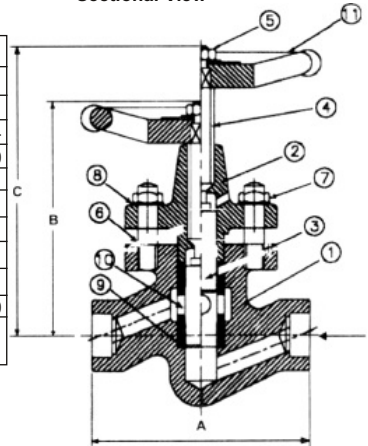


32/40 NB

Material:

No.	Part	Material	
1	Body	Forged Carbon Steel	ASTM A 105
2	Bonnet	Forged Carbon Steel	ASTM A 105
3	Piston	Stainless Steel	ASTM A 276 TP 304
4	Spindle	Stainless Steel	ASTM A 276 TP 410
5	Nut	Carbon Steel	Carbon Steel
6	Stud	Carbon Steel	ASTM A 193 B7
7	Nut	Carbon Steel	ASTM A 194 2H
8	B. Washer	Spring Steel	50Cr V4
9	Sealing Rings	S/S reinforced Graphite	
10	Spacer	Stainless Steel	ASTM A 276 TP 410
11	Handwheel	Sheet Metal / Malleable Cast Iron	

Sectional View



Dimensions: (approximate) in millimeters

Size	A	B	C
15NB	110	118	146
20 NB	110	118	146
25 NB	126	133	165
32 NB	165	175	215
40 NB	165	175	215

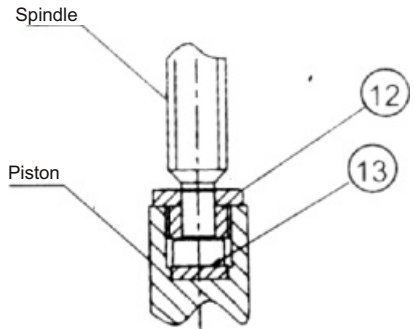
Additional Material for 32/40 NB

No.	Part	Material	
12	Split Nut	Stainless Steel	ASTM A 276 TP 410
13	Thrust Plate	Stainless Steel	ASTM A 276 TP 410

Maintenance:

Maintenance of Piston valve is very easy and can be done while the valve is in position & not in service. Remove nuts (7) and bonnet (2) remove the top sealing rings spacer and bottom sealing rings. Replace with a new set of rings and spacer in the same order. Ensure that Belleville washers are placed properly and all Nuts are tightened with equal pressure. Open isolation valve if any leakage is observed tighten opposite nut equally in close position of valve till leakage stops. Take care to tighten diagonally opposite nuts. Spindle Piston

Always Open & close valve fully



Only for 32/40 NB

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Piston Valves

Description :

Cast steel piston valves provide perfect tightness and durable stability on different mediums such as steam, superheated steam, heat transfer fluid, ammonia, L.P.G., acids, alkalies, etc.

Size and Pipe Connections :

50 NB Flanged Ends.

Flange Type : ANSI 300

IBR APPROVED VALVES AVAILABLE.

Limiting Conditions :

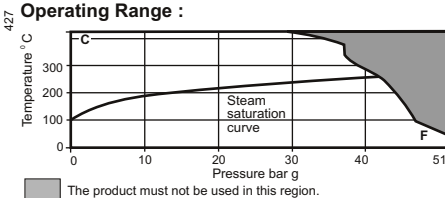
ANSI 300

Maximum operating Pressure : 51 bar g

Maximum operating temperature : 427° C

Maximum Hydraulic test Pressure : 102 bar g

Operating Range :



C - F Flanged ANSI 300

How to order :

Example : Forbes Marshall 50 NB Piston Valve with ANSI 300 Flanged connection IBR or NIBR .

Please specify medium.

Available Spares :

Sealing Rings

How to order Spares :

Order Spares as per the code no. specified in the "Use the Manual".

Installation :

The Valve is designed for installation in a vertical line or horizontal line with inlet as per the arrow direction. To open the valve turn hand wheel till it stops at the top and to close turn hand wheel till it touches the bonnet. Do not use 'F' Key. If any leakage is observed during operation from the bonnet hole or at the outlet, close valve fully and tighten Opposite Nuts (7) equally half or one turn until leakage stops.



8.2

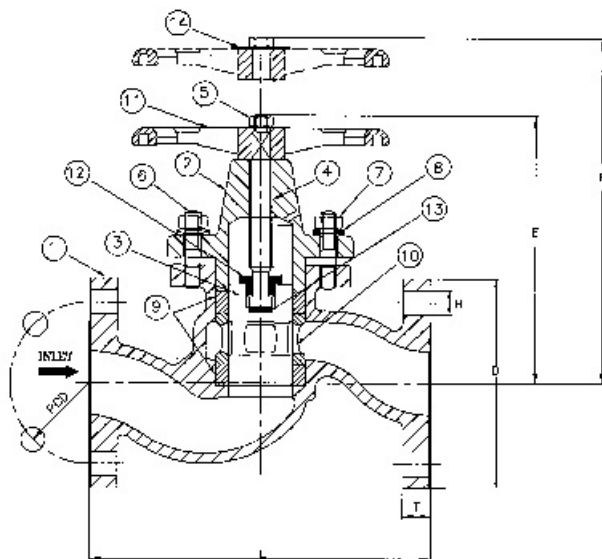
Safety Information :

Pressure

Before attempting any maintenance of the Valve, ensure that pressure is isolated and safely vented to atmosphere. Do not assume that the system is depressurized even when a pressure gauge indicates zero

Maintenance :

Maintenance of Piston valve is very easy and can be done while the valve is in position & not in service. Remove nuts (7) and bonnet (2) remove the top sealing rings, spacer and bottom sealing rings. Replace with a new set of rings and spacer in the same order. Ensure that Belleville washers are placed properly and all Nuts are tightened with equal pressure. Open isolation valve if any leakage is observed tighten opposite nut equally in fully close position of valve till leakage stops. Take care to tighten diagonally opposite nuts.



Always open & close Valve fully
Do not use Valve Key

Material

No	Part	Material	
1	Body	Cast Steel	ASTM A 216 Gr.WCB
2	Bonnet	Cast Steel	ASTM A 216 Gr.WCB
3	Piston	Stainless Steel	ASTM A 276 TP 304
4	Spindle	Stainless Steel	ASTM A 276 TP 410
5	Nyloc Nut	Carbon Steel	
6	Stud	Carbon Steel	ASTM A 193 GR B7
7	Nut	Carbon Steel	ASTM A 194 GR 2H
8	B.Washer	Spring Steel	50 CrV4
9	Sealing Ring	S/S reinforced Graphite	
10	Spacer	Stainless Steel	ASTM A 743 Gr.CA15
11	Handwheel	S.G. Iron / Malleable Iron	
12	Split Nut	Stainless Steel	ASTM A 276 TP 410
13	Thrust Plate	Stainless Steel	ASTM A 276 TP 410
14	Name Plate	Stainless Steel	

Dimensions:(approximate) in millimeters

	L	D	PCD	H	No. of Holes	T	E	F	Approx. Weight
50NB	267	Ø165	127	Ø19	8	22	225	285	17.5 Kg

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Description:

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Size and Pipe Connections :

65, 80, 100, 125 NB Flanged Ends.
 Flange Type : ANSI 300
 150 NB / 200 NB Flanged Ends.
 Flange Type : ANSI 150 / ANSI 300
 IBR APPROVED VALVES AVAILABLE.

Limiting Conditions :

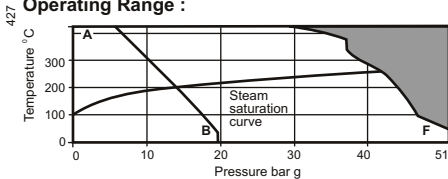
ANSI 300

Maximum operating Pressure : 51 bar g
 Maximum operating temperature : 427°C
 Maximum Hydraulic test Pressure : 102 bar g

ANSI 150

Maximum operating Pressure : 19.6 bar g
 Maximum operating temperature : 427°C
 Maximum Hydraulic test Pressure : 39.2 bar g

Operating Range :



The product must not be used in this region.

A - B Flanged ANSI 150
 A - F Flanged ANSI 300

How to order :

Example : Forbes Marshall 65 / 80 / 100 / 125 / 150 / 200 NB Piston Valve with ANSI 300 Flanged connection IBR or NIBR.

Please specify medium.

Available Spares :

Body Sealing Stack Set, Bonnet Sealing Ring & Gland Sealing Stack.

How to order Spares :

Order Spares as per the code no. specified in the "User Manual".

Installation :

The Valve is designed for installation in a vertical line or horizontal line with inlet as per the arrow direction. To open the valve turn hand wheel till it stops at the top and to close turn hand wheel till it touches the bonnet. Do



8.2

not use 'F' Key. If any leakage is observed during operation at the outlet, close valve fully and tighten Opposite Nuts (16) equally half or one turn until leakage stops. If any leakage is observed from the gland tight gland nut (13) till leakage stops.

Safety Information :

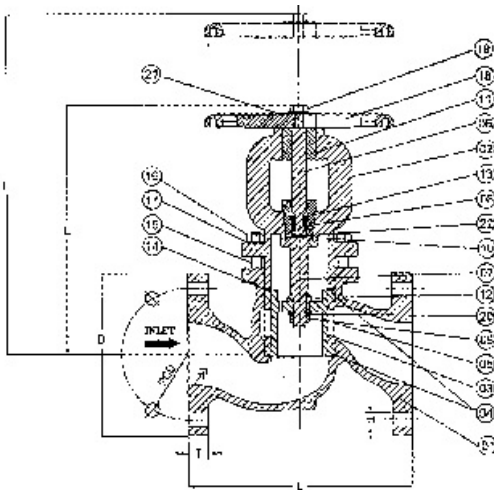
Pressure

Before attempting any maintenance of the Valve, ensure that pressure is isolated and safely vented to atmosphere. Do not assume that the system is depressurized even when a pressure gauge indicates zero.

Maintenance :

Maintenance of Piston valve is very easy and can be done while the valve is in position & not in service. Please refer 'User Manual' for replacement of Body sealing stack set, Bonnet Sealing Ring & Gland sealing stack.

Lubricate spindle regularly with Molykote M30 oil.



Always open & close Valve fully
Do not use 'F' Key

Material

No	Part	Material	
1	Body	Cast Steel	ASTM A 216 Gr. WCB
2	Bonnet	Cast Steel	ASTM A 216 Gr. WCB
3	Piston	Stainless Steel	ASTM A 351 CF8M
4	Body Sealing Stack	S/S Reinforced Graphite	
5	Spacer	Stainless Steel	ASTM A 743 CA 15
6	Spindle	Stainless Steel	ASTM A 276 TP 410
7	Stem	Stainless Steel	ASTM A 276 TP 304
8	Split Nut	Stainless Steel	ASTM A 276 TP 410
9	LH Nut	Stainless Steel	ASTM A 276 TP 304
10	Gland Sealing Stack	S/S Reinforced Graphite	
11	Threaded Bush	Ph. Bronze	
12	Back Seat	Stainless Steel	ASTM A 276 TP 410
13	Gland Nut	Stainless Steel	ASTM A 276 TP 410
14	Bonnet Sealing Ring	Graphite	
15	Stud	Carbon Steel	ASTM A 193 GR B7
16	Nut	Carbon Steel	ASTM A 194 GR 2H
17	Belleville Washer	Spring Steel	50 CrV4
18	Handwheel	S.G. Iron / Malleable Iron	
19	Nyloc Nut	Carbon Steel	
20	Washer	Stainless Steel	ASTM A 276 TP 304
21	Name Plate	Stainless Steel	
22	Thrust Plate	Stainless Steel	ASTM A 276 TP 410

Dimensions:(approximate) in millimeters

SIZES	ANSI CLASS	L	D	PCD	H	No. of Holes	T	E	F	Approx. Weight
65NB	300	292	190.5	149.2	22.2	8	25.4	335	400	26 Kg.
80NB	300	318	210	168	22	8	29	320	384	37 Kg.
100NB	300	356	254	200	22	8	32	395	479	58 Kg.
125NB	300	400		235	22	8	35	446	540	87 Kg.
150NB	300	445	318	270	22	12	36.5	486	598	117 Kg.
150NB	150	406		241	22	8	26	486	598	90 Kg.
200NB	300	555	381	330	25.4	12	41	591	728	210 Kg.
200NB	150	495	343	298.4	22	8	28.4	591	728	164 Kg.