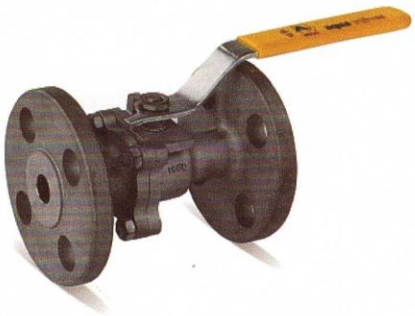
INTERVALVE® (INDIA) LTD.

POONAWALLA GROUP

Ball Valves Series V1F

Class 150, Regular/Full port, Flanged Ends, Floating design.



2/3PIECE BALL VALVES / 2-WAY.

- Maintenance free live loaded double sealing stem packing ensures high cycles life and positive sealing.
- Blow-Out Proof Stem.
- ISO5211 Mounting Pad Allows for mounting of actuator.

These are high performance ball valves in Class 150 - 2 PC construction. With the floating seal design, the ball diameter is greatest in the close position and the seat is free to expand on closing and contract on opening. This continuos ball to seat contact ensures proper adjustment and continual sealing. Since the seat is allowed to float in open position, fluids and debris do not accumulate around and behind the seat. This results in self-cleaning action, reduced wear and smoother operation. These valves are with built in. antistatic features & double seal design and can be offered in soft Seated as well as metal Seated design.

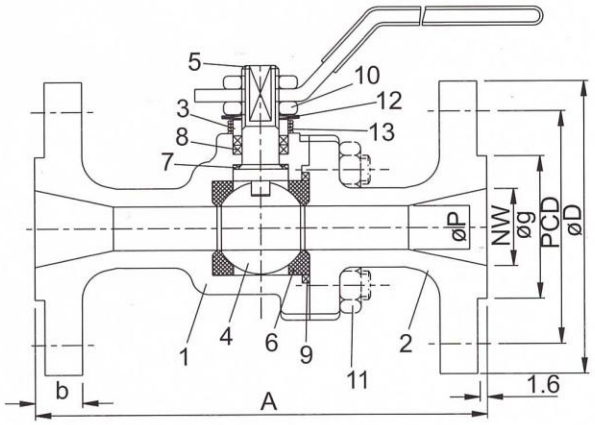
Conformity to codes & standards:

General design & manufacturing.	:	EN 17292, API-6D.
Valve dimensions.	:	ANSI B 16.10 / B 16.5.
Valve inspection & testing	:	EN 12266 Hydro shell: 31 kg/sq.cm Seat test : 23 kg/sq.cm Air seat : 7kg/sq.cm Fire Fire safe to API-607 / 6FA
Special features	:	Metal to Metal Seats

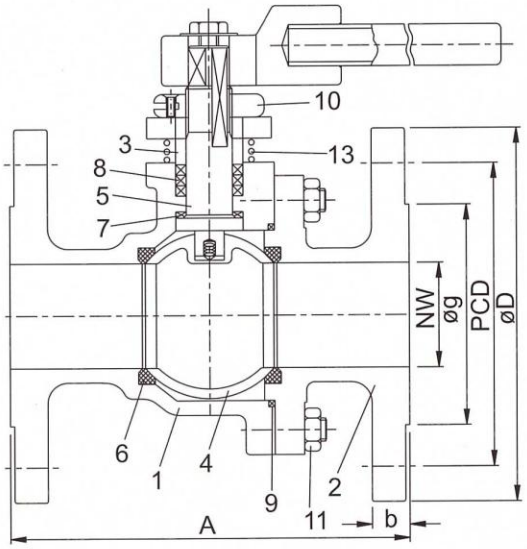
Technical specification:

Valve type	:	Floating design ball valve.
Body type	:	2pc. / 3Pc.
Seat Type	:	Soft/Metal
End connection	:	Flanged.
Size range	:	15NB to 300NB
Pressure rating	:	Class 150.
seat leakage	:	Class Vl-Soft seat, Class V-Metal seat.
Operation	:	Hand lever / Gear /Actuator (Electrical/Pneumatic)

CLASS 150 FLOATING DESIGN BALL VALVE



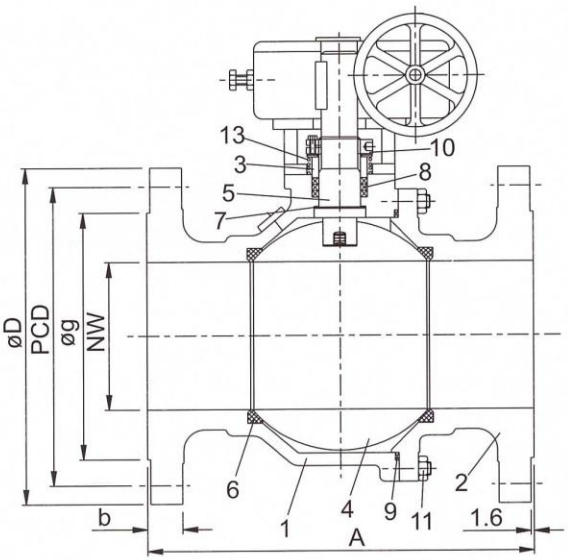
REDUCED PORT



FULL PORT

Dimensional Data In mm

Size	A	NW	øP	øD	b	øg	PCD	Holeø	No.of Holes
15	108	13	9.5	89	11.5	35	60.5	16	4
20	117	19	13	98	13	43	70	16	4
25	127	25	19	108	11.5	51	79.5	16	4
32	140	32	25	117	13	64	89	16	4
40	165	38	32	127	14.5	73	98.5	16	4
50	178	50	38	152	16	92	120.6	20	4
65	190	65	50	178	17.5	105	139.7	20	4
80	203	76	58	191	19.5	127	152.4	20	4
100	229	98	76	229	24	157	190.5	20	8
150	267	148	98	279	25.5	216	241.3	23	8
200	292	198	144	343	29	270	298.4	23	8
250*	330	254	187	406	30.5	324	362	26	12
300*	610	305	228	483	32	381	431.8	26	12



FULL PORT-GEAR OPERATED

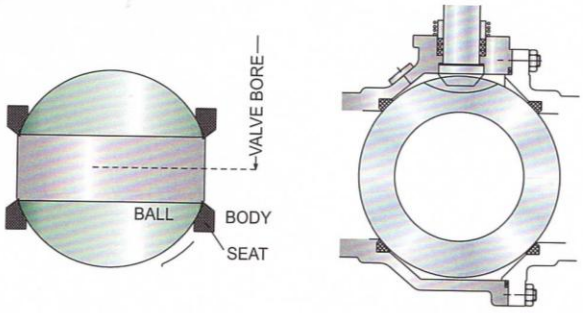
Standard material of construction:

1.Body	:	A105, WCB, CF8, CF8M, CF3, CF3M, F304,F316, CN7M.	6. Seat	:	PTFE, GFT, CFT/ Metal to Metal/ Delrin, Nylon.
2. Pipe end	:	A105, WCB, CF8, CF8M, CF3, CF3M, F304, F316, CN7M.	7. Stem seal	:	GFT
3. Gland	:	ANSI410, 304, 316, 316L, MONEL, ALLOY20, HAST-B, C.	8. Gland Packing	:	PTFE, Grafoil.
4. Ball	:	ANSI410, 304, 316, 316L, MONEL, ALLOY20, HAST-B, C.	9. Body seal	:	PTFE, Grafoil.
5. Stem	:	ANSI410, 304, 316, 316L, MONEL, ALLOY20, HAST-B, C.	10. Gland nut	:	Carbon steel.
			11. Body stud/nut	:	B7/2H, B8/B8M.
			12. Belleville spring	:	Spring steel
			13. Antistatic spring	:	SS 304

NOTE: Valves upto 50 mm with lever.
All sizes of ball valves can also be provided with Gear, Actuator (Electrical/ Pneumatic).

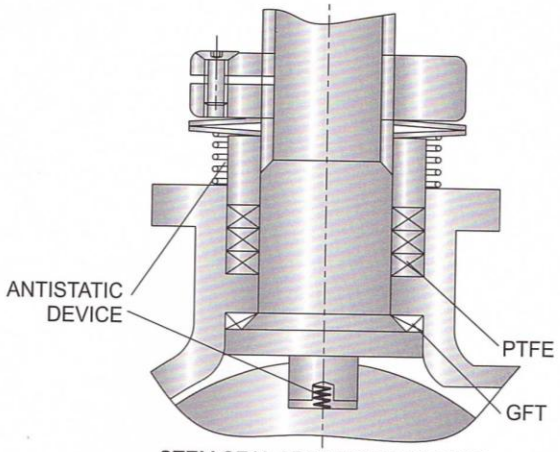
Ball Valves

Salient design features and benefits of our range .



Trunion Mounted design

Trunion mounted design offers precise locational accuracy for the ball within the upstream and downstream seat, which ensures leaktight sealing with lower operative torques. The sealing takes place by allowing the seats to move towards the ball. This design ball valves can hold very high pressures.



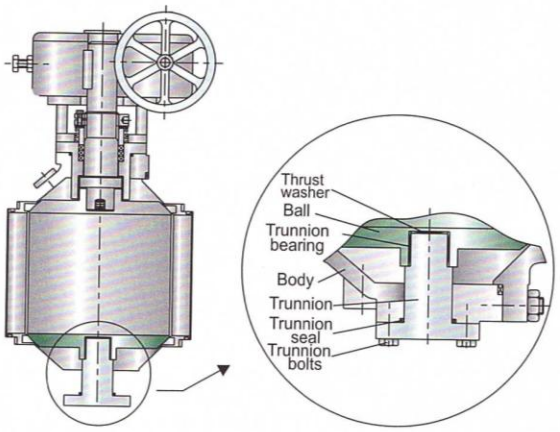
STEM SEAL ARRANGEMENT FOR EMERGENCY STEM SEAL.

Fire-safe

Valves exposed to the risk of accidental external fire need to have additional secondary metal sealing system to make it fire safe. Special design features are built into the valve to ensure continued sealing performance even after burn out of the soft sealing parts of the valve. A metal seat located on the body comes in direct contact with the ball on burnout of the soft parts ensuring continued sealing. Full range approved as per latest edition

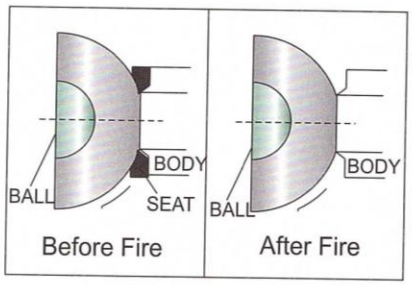
Floating design

A floating ball design offers efficient sealing with simple construction. As the name indicates, the ball has some freedom to move along the axis of the pipeline, which offers efficient downstream sealing. When line pressure is applied to the closed ball, it moves slightly (or floats) downstream to maintain contact with the downstream seat where primary sealing occurs. A quarter turn motion from full open to full close ensures quick open-close action, an inherent advantage for automatic remote control application. Floating ball valve offers effective bidirectional sealing.



Anti static design feature

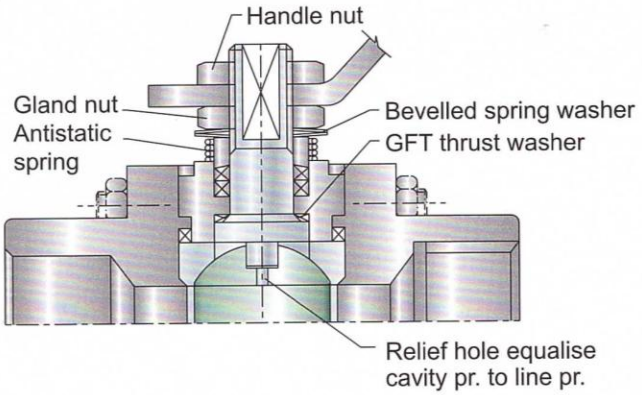
Anti-static design feature provided in the valve prevents any accidental fire due to static electric discharge. With the low resistance short circuit path created between the ball and the valve body, any build up of static electric charge on the ball due to constant rubbing within the PTFE seat is prevented. The ball valve is completely conductive between ball and body in which no static electricity may develop - a requirement essential to the treatment of such low flashing point fluids as gasoline, natural liquefied gas, propane gas etc.



Valve in Closed conditon.

Blow out proof and Self-compensating stem

IV Ball valves have safe blow out proof stem assembly, which eliminates the possibilities of hazards. With GFT thrust washer the stem is inserted through the valve body cavity and rests against a shoulder machined in the valve body. PTFE / Graphoil gland packings above the shoulder are held in place by a gland which is machined taper to give sealing between stem and packing.



Block and bleed

This is a function for providing seal of fluids by upstream and downstream seats with the valve in close positionand for draining the fluids accumulated in the body cavity. The benefits are:

Leaks and damage to the seats are checked in advance

Contamination caused during changing fluid types is minimized.

Parts of the gland seal can be changed under pressure.

Metal seated ball valve

The metal seated ball valves are available in all ranges. Its quality starts with the sphericity of the ball and the surface finish. The ball is of mirror quality finish. This provides outstanding smoothness and roundness, resulting in a prime contribution to low torque and reduced leakage up to class V. The metal seated ball valves typically can be used for higher temperature ranges & abrasive service.

Key Lock

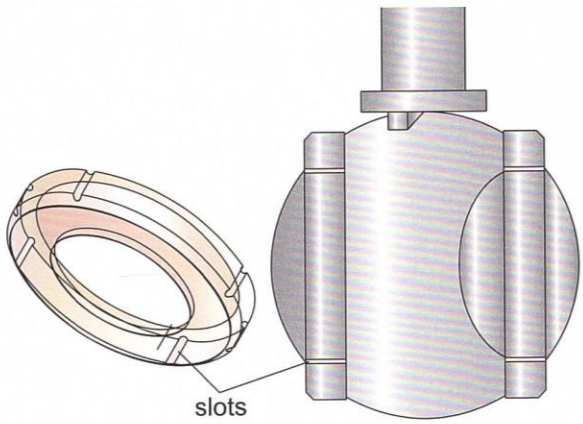
Especially when installed outdoors, to prevent the valve from wrong operation, it is lockable with a pad lock at two points fully closed or fully open positions. In other words, an operation of the valve is limited to protect it against the possibilities that an outsider may accidentally operate the lever or the valve may be opened or closed due to vibrations, especially when an inflammable petroleum product or chemicals are handled.

Self-compensating stem

Above the gland two belleville washers (disc springs) and gland nut are provided. The gland nut allows gland-packing adjustment, and disc spring automatically compensates for normal wear as well as seal expansion and contraction from temperature fluctuations. The gland nut is provided below the handle permitting the handle to be removed without disturbing the stem adjustment or causing an unsafe condition.

Pressure relief slots

If the pressure of the fluid inside the valve body cavity exceeds the line pressure due to thermal expansion of the liquids entrapped in the valve body, seats provide automatic pressure relief, without the aid of the safety or vent valve. During closing of the valve, the maximum surge pressure occurs, during which the downstream seat can be forced to intrude into the ball port and valve can become inoperative. The pressure relief slots prevent this potential failure. When pressure causes the upstream seat to move against the ball and the ball moves downstream, the pressure simply leaks in to the ball port through the relief slot.

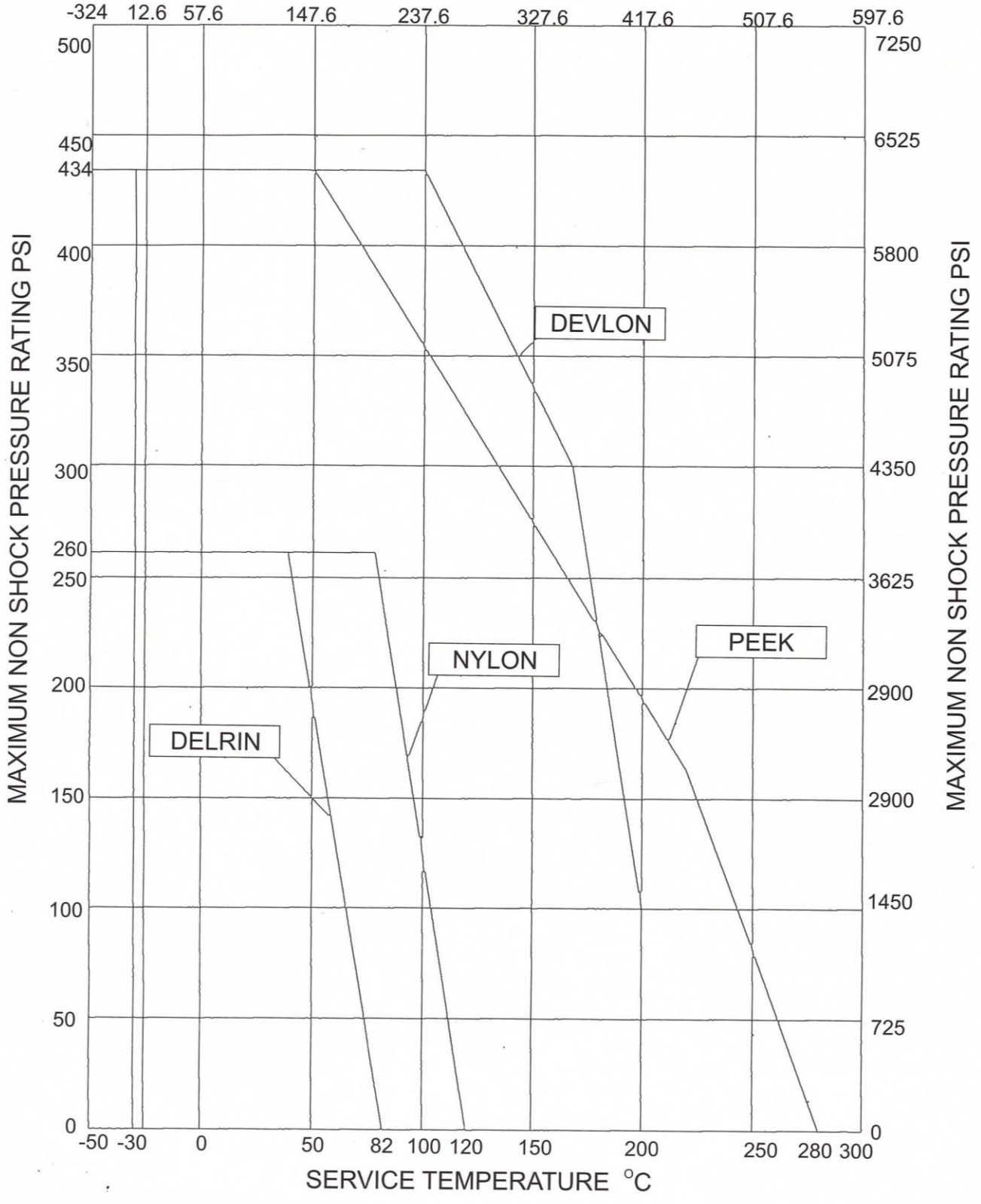


In addition to this we also provide

- Single-seal and double-seal system.
- Sealant injection system can be provided on request.
- Ball valves for cryogenic service, oxygen, chlorine service.
- Jacketed & V-notch ball valves
- Tungustan Carbide & Chromium Carbide coating is available for ball & seat.

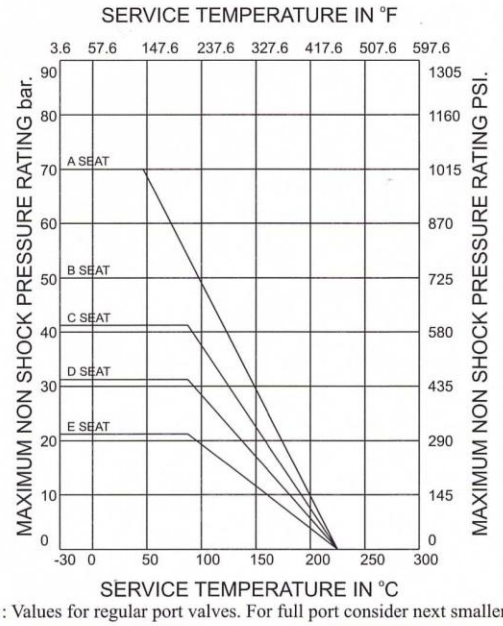
The PRESSURE - Temperature rating given below is for reference only.
For other Temperature / Pressure consult factory

SERVICE TEMPERATURE



Ball valves Pressure - Temperature Characteristics

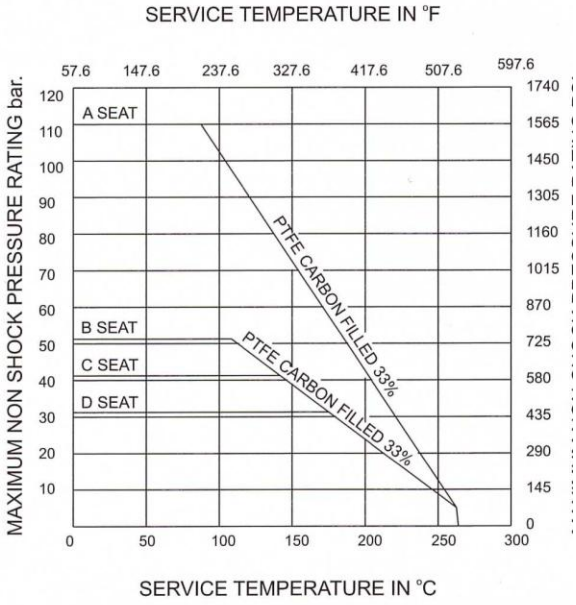
Variation of max. non shock pressure w.r.t service temperature.



Note : Values for regular port valves. For full port consider next smaller size.

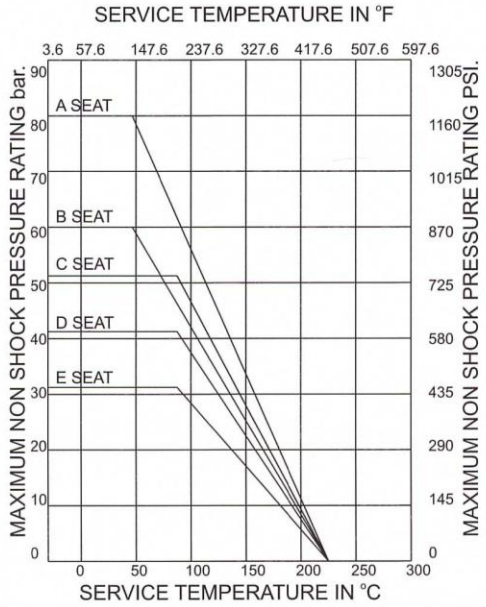
Seat Symbol	Nominal Valve Size	Seat Symbol	Nominal Valve Size
A	8 to 25 RP	D	200 & 250 RP
B	32 to 80 RP		
C	100 & 150 RP	E	300 RP

PTFE seats.



Seat Symbol	Nominal Valve Size	Seat Symbol	Nominal Valve S
A	8 to 50	D	200 to 300
B	65 to 100		
C	150	E	---

CFT seats.



Note : Values for regular Port valves. For full port consider next smaller size.

Seat Symbol	Nominal Valve Size	Seat Symbol	Nominal Valve Size
A	8 to 25 RP	D	200 & 250 RP
B	30 to 80 RP		
C	100 & 150 RP	E	300 RP

25% GFT seats.