

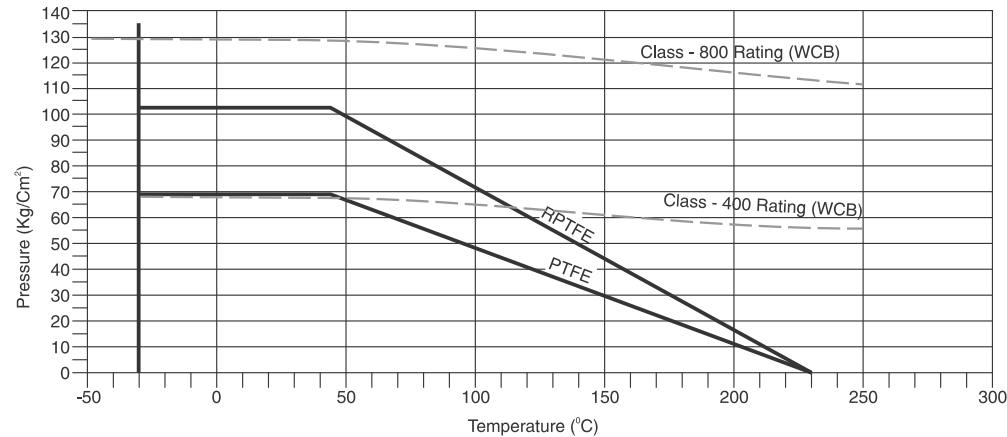
Test Specifications for WCB/A105

Test	Medium	Class - 400		Class - 800	
		kg/cm ²	psi	kg/cm ²	psi
Shell	Water	105	1494	209	2973
Seat	Water	77	1096	153*	2177*
Seat	Air	6	85	6	85

* Seat test pressure shall be as per the value indicated in the table above or 1.1 times the rated seat pressure given in the Pressure/Temp. Graph, whichever is less.

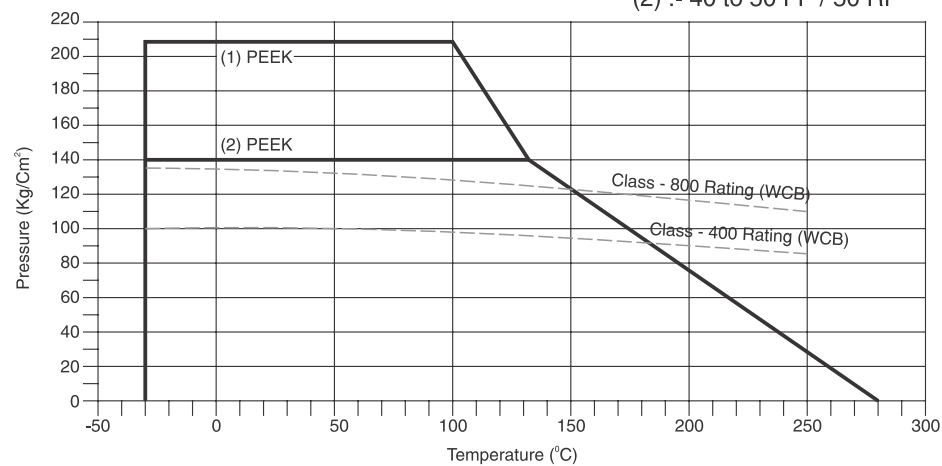
Pressure Temperature Graphs

Pressure Temperature Rating : PTFE / RPTFE Seat



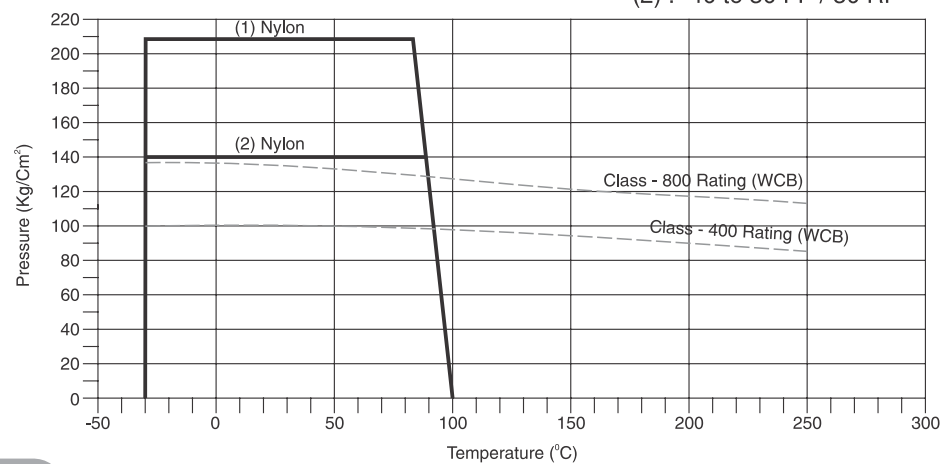
Pressure Temperature Rating : Peek Seat

(1) :- 15 to 25 FP / 15 to 40 RP
(2) :- 40 to 50 FP / 50 RP



Pressure Temperature Rating : Nylon / Delrin Seat

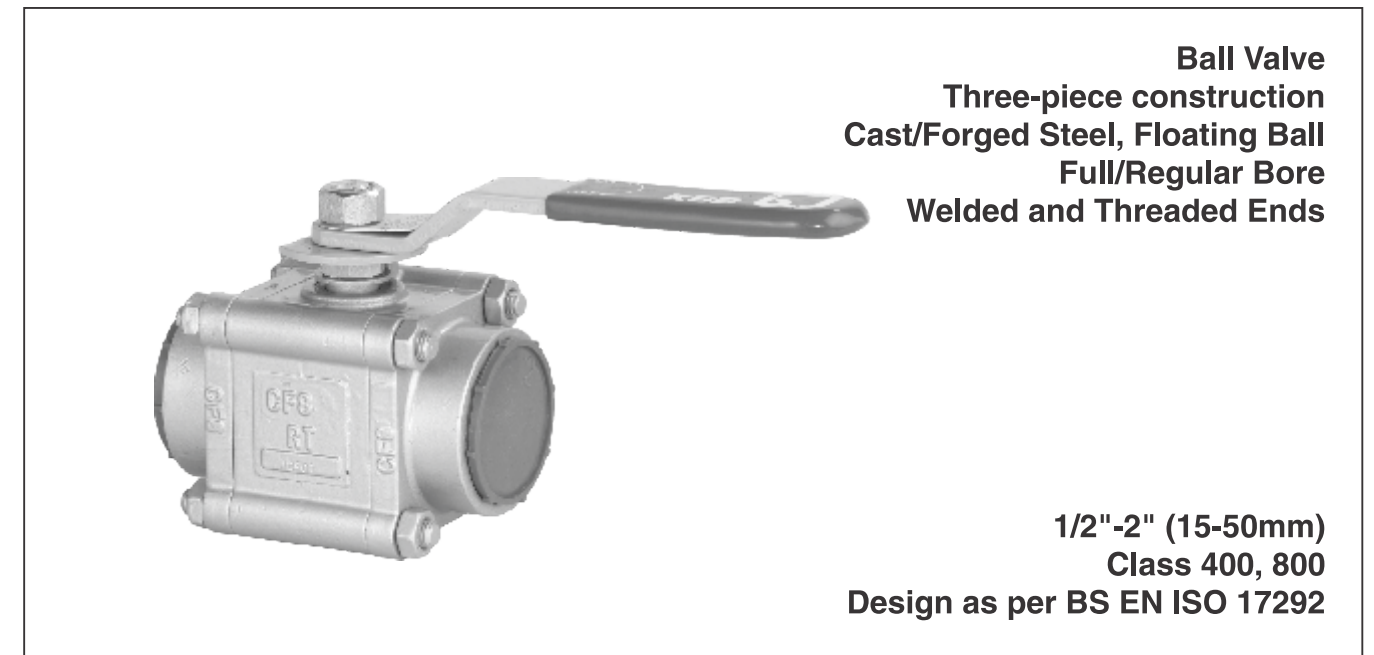
(1) :- 15 to 25 FP / 15 to 40 RP
(2) :- 40 to 50 FP / 50 RP



Technical matter subject to change without prior notice.



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Applications

- Process and general industry
- For water, steam, gas, oil and other media
- Further applications on request

Operating data

- Maximum allowable pressure 1975 psi (136 bar)
- Maximum allowable temperature 392°F (200°C)
- Pressure/Temperature rating as per ASME B 16.34 or seat Pressure/temperature rating, whichever is less

Body Materials

- ASTM A 216 WCB Carbon Steel (Cast)
- ASTM A 351 CF8 Type 304 Stainless Steel
- ASTM A 351 CF8M Type 316 Stainless Steel
- ASTM A 105 Carbon Steel (Forged)

Ball Materials

- ASTM A 351 CF8 Type 304 Stainless Steel
- ASTM A 351 CF8M Type 316 Stainless Steel

Seat Material

- PTFE (400#)
- RPTFE (800#)

Design

- As per BS EN ISO 17292
- Pressure, Temperature rating as per ASME B 16.34
- Socket weld ends as per ASME B 16.11
- Threaded ends to NPT/BSP as per ASME B 1.20.1 / BS 2779
- Blowout proof stem
- Solid ball

Variants on Request

- Fire safe configuration
- IBR (SEAT IN RPTFE)
- Alternate Seats in RPTFE, PTFE + Graphite, Peek, Nylon, Acetal Resin
- Flanged Ends (150-300)
- Buttweld Ends

Remarks :

Other Type Series Booklets

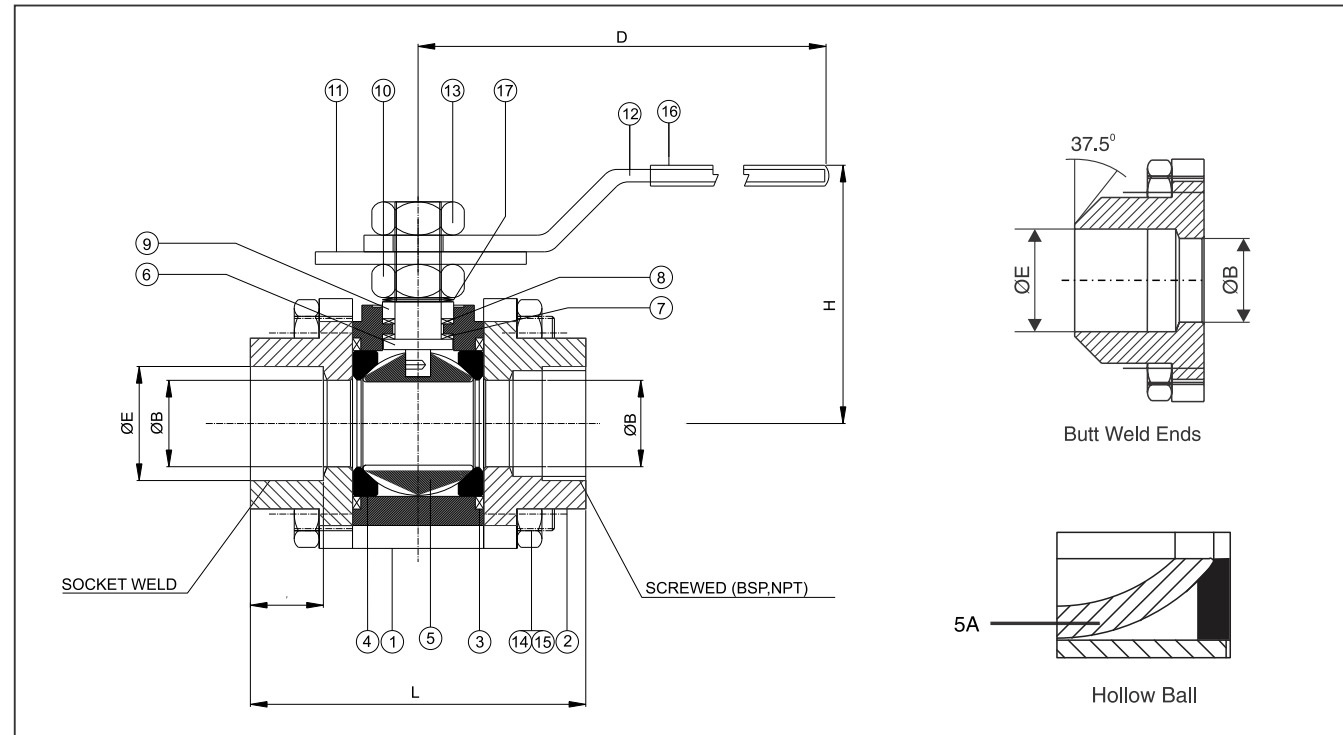
ECOLINE BLT-S 150-300
ECOLINE BLD-S 150-300
ECOLINE BLN-S 150-300
Operating Instructions

On all enquiries/orders please specify :

1. Valve type
2. ANSI pressure class
3. Size
4. Design pressure
5. Design temperature
6. Operating temperature
7. Differential pressure-shut off
8. Flow medium
9. Material of construction
10. Variants
11. Type Series Booklet no.
12. Valve data sheet (if applicable)

When ordering spares, indicate valve serial number.





Design Specifications

- General valve design : BS EN ISO 17292
- Pressure, temperature rating : ASME B 16.34 (within the limits of the provided seat material).
- Socket weld : ASME B 16.11
- Butt weld : ASME B 16.9
- End to end / : Manufacturer Standard
- Face to face dimension : Manufacturer Standard
- Testing standard : BS EN 12266 / API 598

Dimensions in mm

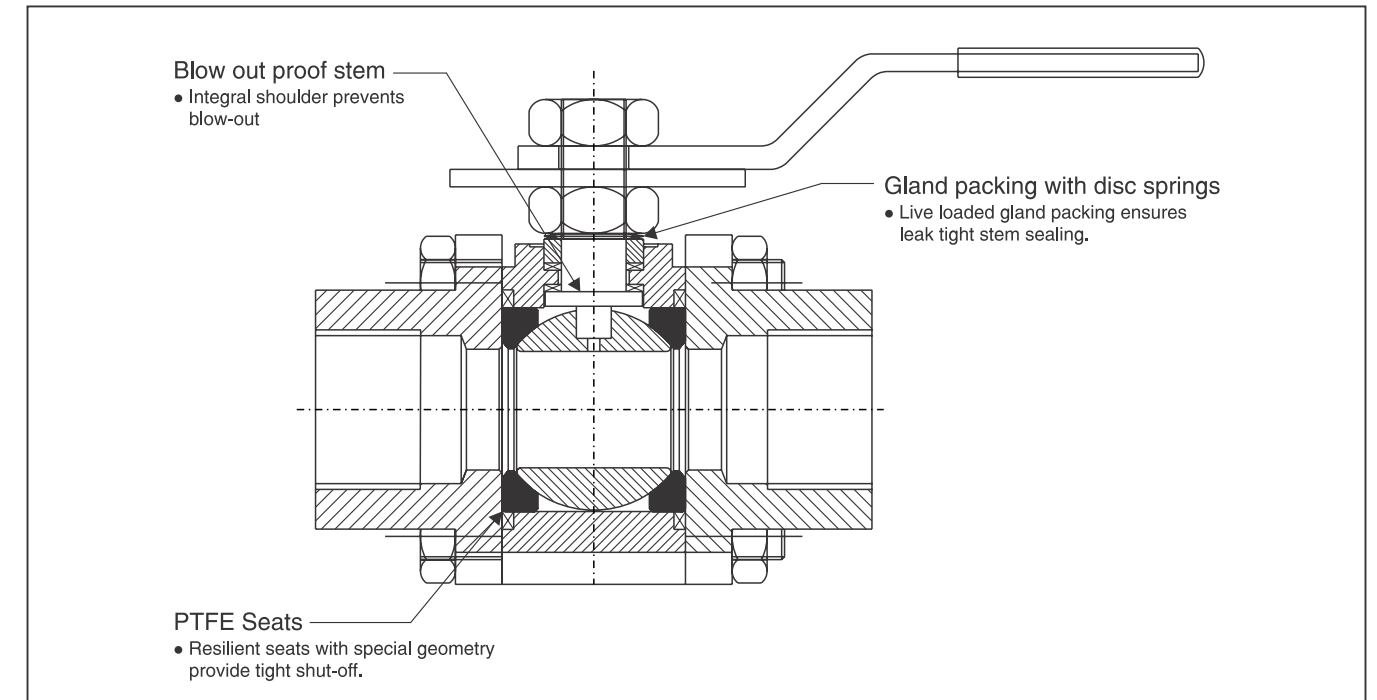
Size	Class - 400 & 800								E(min.)	F
	Full Port		Regular Port							
	L	B	H	D	L	B	H	D		
15 mm 1/2 in	72	14	48	118	69	11	45	118	21.8	14
20 mm 3/4 in	94	20	59	152	72	14	48	118	27.2	14
25 mm 1 in	101	25	65	152	94	20	59	152	33.9	17.5
32 mm 1 1/4 in	113	32	75	197	101	25	65	152	42.7	18
40 mm 1 1/2 in	127	38	81	197	113	32	75	197	48.8	18.5
50 mm 2 in	133	50	101	278	124	38	81	197	61.2	20
50 mm 800#	154	50	114	278	-	-	-	-	61.2	20

Material

Part No.	Description	Material			
1	Body	ASTM A 216 WCB	ASTM A 351 CF8	ASTM A 351 CF8M	ASTM A 105
2	Body Connector				
3	Body Seal	PTFE	PTFE	PTFE	★ SWG
4	Ball Seat	PTFE	PTFE	PTFE	RPTFE
5	♦ Ball	CF8M	CF8	CF8M	CF8M
6	Stem	SS316	SS304	SS316	SS316
7	Stem Seal	CFT	CFT	CFT	CFT
8	Gland Packing	CFT	CFT	CFT	CFT
9	Gland	SS316	SS304	SS316	SS316
10	Gland Nut	A194-2H	A194-8	A194-8M	A194-2H
11	Lock Plate	MS. Cd. Plated	MS. Cd. Plated	MS. Cd. Plated	MS. Cd. Plated
12	Lever	MS. Cd. Plated	MS. Cd. Plated	MS. Cd. Plated	MS. Cd. Plated
13	Lever Nut	A194-2H	A194-2H	A194-2H	A194-2H
14	Body Stud	A193-B7	A193-B8	A193-B8M	A193-B7
15	Body Nut	A194-2H	A194-8	A194-8M	A194-2H
16	Lever Sleeve	PVC	PVC	PVC	PVC
17	Disc Spring	Spring Steel	Spring Steel	Spring Steel	Spring Steel

♦ Hollow ball for 400# (5A) 40mm to 150mm FP and 50mm RP ★ PTFE in 15mm RP/FP and 20mm RP and 800

Product features to our customer benefit

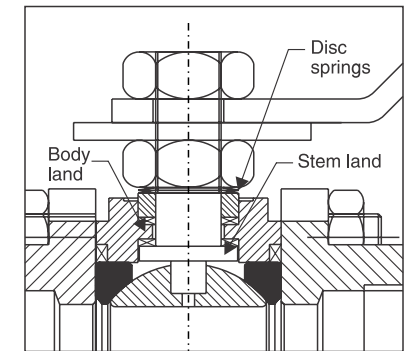


Blow-out Proof stem

Valves are of bottom entry stem design. The stem is inserted from inside the body and stem collar sits on the integral land provided in the body. Higher the line pressure, tighter will be the seal. This is a safety feature and does not allow stem to come out and eliminates possible accidents.

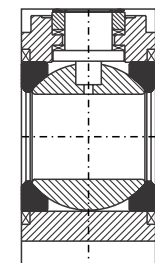
Stem seal with Belleville washer

Stem packing consists of stem seal and gland packing rings (as per design requirement) which ensures leak tight stem sealing. Disc springs are pre-compressed and ensure that gland packing load is maintained on the stuffing box. This compensates the varying forces on the sealing gland due to changes in pressure and temperature. It also gives excellent thermal conductivity.



Floating Ball

In closed position, when the line pressure is acting on the upstream side ball, it moves/floats freely towards the down stream side seat giving effective tight sealing. In the open position, the fluid gets trapped in the body cavity and builds up the pressure. Hole provided on the ball prevents this and ensures no damage to the seats.



Antistatic Feature

During operation, constant rubbings of the ball and PTFE seats may generate static electricity which can lead to fire hazard especially when the service medium is of inflammable nature. A spring and a small ball fitted between ball and stem ensures electrical continuity. For smaller size valves below 40 mm, carbon filled PTFE stem seals provides/meets this continuity.

