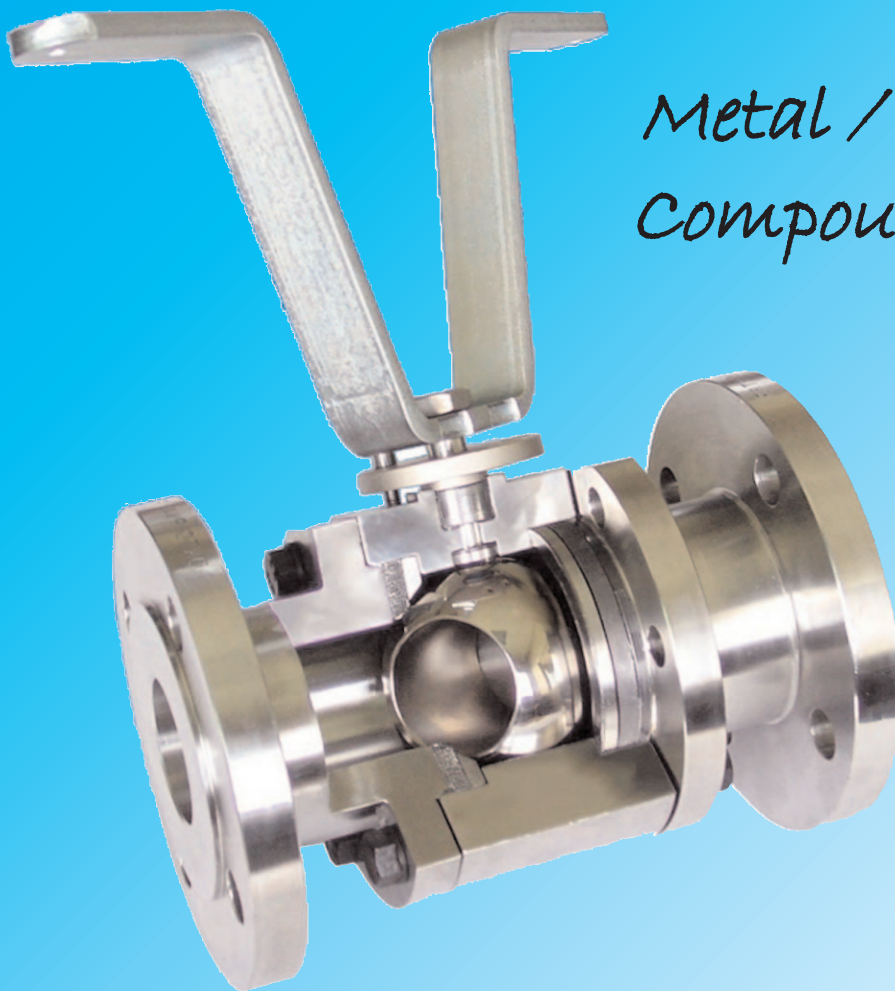


# BONETTI®



## **BONT® HTB Ball Valves**



*Metal / Graphite  
Compound Seats*

*up to 550 °C - 1022 °F*

# BONT® Ball Valves - Forged Steel

**Carbon Steel – Stainless Steel**

**Type HTB, for High Temperature**

**Rating DIN 2401 PN 40, PN 63 and PN 100**

**Rating ASME B16.34 Class 300 and 600, full rated**

**Size DN 15 to DN 80 1/2" to 3"**

– This Valve is **ONE WAY** Valve. Do ensure that the flow direction is the same showed by the arrow on the body.

– Temperature for continuous service up to 550 °C (1022 °F).

– Size: 1/2" to 3"

– Design Standards: ASME B16-34, B16-5  
B16-11, B16-25  
MSS SP 72, BS 5351  
DIN 2401, DIN 3239

– Fire Safe: API 6FA and BS 6775 certified

– TA LUFT certified

– Split body, three piece

– Floating Ball

– Body Seat: Patented Metal / Graphite Compound

– Packing: Adjustable Graphite Long Life Packing

– Gland: Flanged Type - One Piece bushed

– Stem: Anti blow-out

– Antistatic Device: Design is intrinsically Antistatic

– Torque: Low Torque due to Special Packing, Material and Design

– Every valve can be completed, even if already installed, with an actuator. Valve actuator attachment according to ISO 5211

– Connections:  
– Threaded NPT to ANSI B1.20.1  
– SW to ANSI B16.11  
– BW to ANSI B16.25  
– BW to DIN 3239

– Flanged:  
According to European Standards (UNI, DIN, AFNOR, etc.) PN 40  
Flanges are supplied raised faced to UNI 2229, drilled, Face to face dimension (A) to DIN 3202-F1

According to European Standards (UNI, DIN, AFNOR, etc.) PN 63 and PN 100  
Flanges are supplied raised faced to UNI 2229, drilled, Face to face dimension (A) to DIN 3202-F2

According to American Standard ASME B16.34 Class 300  
Flanges are supplied R.F. drilled to ASME B16.5 Face to face dimension (A) to ASME B16.10

According to American Standard ASME B16.34 Class 600  
Flanges are supplied R.F. drilled to ASME B16.5 Face to face dimension (A) to ASME B16.10

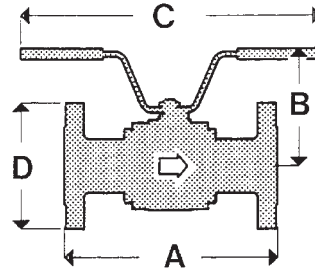


Fig. 941

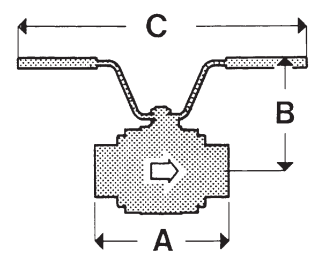


Fig. 942

## BONT® Ball Valves type HTB - Full Bore

DN	Dimension		Threaded or SW or BW		Flanged DIN PN 40			Flanged DIN PN 63			Flanged DIN PN 100			Flanged ASME 300 lb			Flanged ASME 600 lb		
	B	C	A	Weight	A	D	Weight	A	D	Weight	A	D	Weight	A	D	Weight	A	D	Weight
	mm	mm	mm	kg	mm	mm	kg	mm	mm	kg	mm	mm	kg	mm	mm	kg	mm	mm	kg
1/2"	15	110 180	90	2.5	130	95	3,5	210	105	5.0	210	105	5,0	140	95	4.3	165	95	4,5
3/4"	20	140 210	100	3.2	150	105	4,7	230	130	6,7	230	130	6,7	152	117	5.4	191	117	6.0
1"	25	165 270	110	5.5	160	115	7,0	230	140	8.1	230	140	8,1	165	124	7,0	216	124	7,8
1.1/4"	32	215 350	140	7.6	180	140	11,6	260	155	14.4	260	155	14,4	178	133	10,5	229	133	11.4
1.1/2"	40	220 350	150	9.2	200	150	13,5	260	170	17.5	260	170	19.5	191	155	13,0	241	155	15,0
2"	50	235 350	170	12.8	230	165	19,5	300	180	21.0	300	195	23,0	216	165	19,0	292	165	20,5
2.1/2"	65	235 500	-	-	290	185	38,0	340	205	41.0	340	220	44,0	241	190	38,0	330	190	40,0

ASME class 150 lbs may be supplied on request. Please note that FACE TO FACE (Dimension A) for ASME 150 lbs are as per ASME 300 lbs

## BONT® Ball Valves type HTB - Reduced Bore

DN	Dimension		Threaded or SW or BW		Flanged DIN PN 40			Flanged DIN PN 63			Flanged DIN PN 100			Flanged ASME 300 lb			Flanged ASME 600 lb		
	B	C	A	Weight	A	D	Weight	A	D	Weight	A	D	Weight	A	D	Weight	A	D	Weight
	mm	mm	mm	kg	mm	mm	kg	mm	mm	kg	mm	mm	kg	mm	mm	kg	mm	mm	kg
3/4"	20	110 180	90	2,9	150	105	3,9	230	130	5,3	230	130	5,3	152	117	4,6	191	117	4,8
1"	25	140 210	100	4.0	160	115	5.5	230	140	7.5	230	140	7.5	165	124	5.8	216	124	6.6
1.1/4"	32	164 270	110	6.0	180	140	7.5	260	155	8.8	260	155	8.8	178	133	8.5	229	133	9.5
1.1/2"	40	215 350	140	8.1	200	150	12.0	260	170	14.5	260	170	14.5	191	155	11.5	241	155	13.5
2"	50	235 350	150	9.7	230	165	14.0	300	180	18.0	300	195	20,0	216	165	15,0	292	165	17,0
2.1/2"	65	235 350	-	-	290	185	21.0	340	205	22.5	340	220	25,0	241	190	22,0	330	190	24,0
3"	80	235 500	-	-	310	200	39.5	380	215	42.5	380	230	45.5	283	209	41,0	356	209	44,0

ASME class 150 lbs may be supplied on request. Please note that FACE TO FACE (Dimension A) for ASME 150 lbs are as per ASME 300 lbs

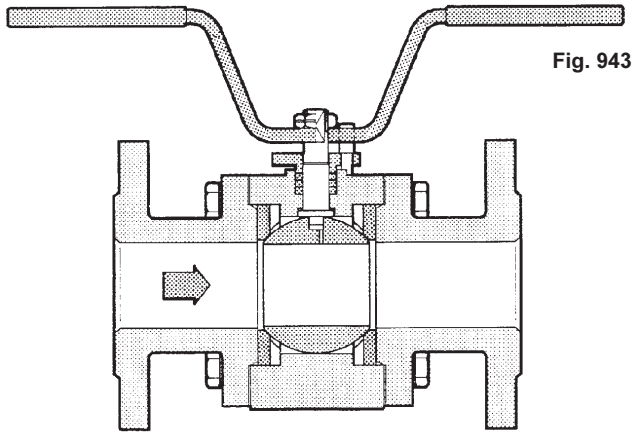


Fig. 943

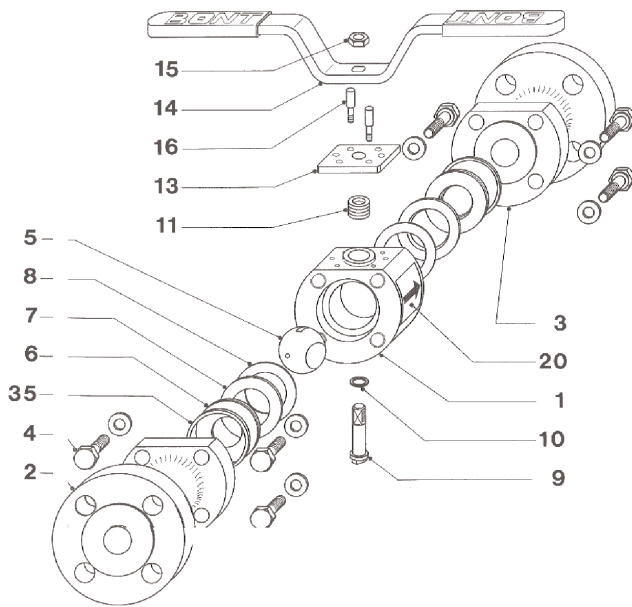


Fig. 940

**BONT HTB Ball valve is a valve for high temperature. The primary innovation of this valve resides in the original seat design. It is not the usual metal seat but an original semi-soft seat.** The main characteristics of HTB are the following:

- suitable for any kind of fluid compatible with graphite. Particularly suitable for application on water/steam even with high pressure drop.
- Nearly indefinite bubble tight seat tightness throughout the full range of operations.
- High resistance to erosion.
- Very effective in the handling of abrasive containing fluid and any dirty media. The alternating metal-graphite layers of the seat sweep the ball surface cleaning it during every open-close operation.
- Packing characteristics avoids any measurable fugitive emission in the environment.
- Maintenance Free. However if, for any reason, maintenance is ever required, the seat replacement is simple and inexpensive thanks to the low cost of the seat rings and their ability to auto-adapt to the ball. Thus eliminating the need to replace the complete ball and seat assembly as it is normally done in metal seated ball valves.
- **FIRE TEST** - Certificate No. MLN9901225/1-2. It is important to remark that the breakaway torque difference before and after fire test is negligible.
- **TA LUFT TEST** - Certificate No. 86T409. To be remarked:
  - No need of packing retightening during tests, although allowed.
  - Checked leakages of some order of magnitude inferior to the admitted ones.
  - Test temperature has been limited to 427 °C (800 °F) due to the valve body material. Tests at temperature of 550 °C with different body material have been made, with satisfactory results.

Material Schedule	Material used for	
	Body and End connections	Ball and stem
52	ASTM A105	ASTM A182 F316 + S.H.
63	ASTM A182 F316	ASTM A182 F316 + S.H.

Item	Part	Item	Part
1	Body	10	Cushion Ring
2	End Connection Inlet	11	Packing
3	End Connection Outlet	13	Gland Flange
4	Bolt	14	Handle
5	Ball	15	Handle Nut
6	Seat	16	Gland Bolt and Stop Pin
7	Cushion Plate	20	Name Plate
8	Cushion Joint	35	Autoseal Ring

**RATING for the Materials mentioned in this Bulletin**

Max operating TEMPERATURE to DIN	Max. Operating PRESSURE to DIN 2401			
	Class PN 40 Mater. Sched. 52	Class PN 40 Mater. Sched. 63	Class PN 63/100 Mater. Sched. 52	Class PN 63/100 Mater. Sched. 63
	bar	bar	bar	bar
- 10 ÷ 20	40	40	63	63
120	40	40	63	63
200	35	35	50	50
250	32	32	45	45
300	28	28	40	40
350	24	24	36	36
400	21	21	32	32
425	-	-	-	-
450	-	-	-	-
500	-	-	-	-
550	-	-	-	-

Max operating TEMPERATURE to ASME and API	Max. Operating PRESSURE to ASME					
	Class 150 Mater. Sched. 52	Class 150 Mater. Sched. 63	Class 300 Mater. Sched. 52	Class 300 Mater. Sched. 63	Class 600 Mater. Sched. 52	Class 600 Mater. Sched. 63
	bar	bar	bar	bar		
- 29 ÷ 38	19.6	19.0	51.1	49.6	102.1	99.3
100	17.7	16.2	46.4	42.2	92.8	84.5
200	14.0	13.7	43.8	35.7	90.5	71.2
250	12.1	12.1	41.7	33.4	83.4	66.7
300	10.2	10.2	38.7	31.6	77.5	63.1
350	8.4	8.4	37.0	30.4	73.9	63.1
400	6.5	6.5	34.5	29.3	69.0	58.9
425	5.6	5.6	28.8	29.0	57.5	58.3
450	4.7	4.6	20.0	29.0	40.1	57.7
500	2.8	2.8	8.8	27.3	17.6	54.8
550	-	1.6	-	23.8	-	47.8

## Attachment to Bracket for Actuator according to ISO 5211

Valve DN		Flange ISO 5211	Ød2 f8	Ød3	Ød4 x e	h	A	B	C	D
Full Bore	Red.Bore									
1/2"	3/4"	F03	25	36	M5X6.5	2	Ø9.8	6	4.5	10.5
3/4"	1"	F03	25	36	M5x8	3	M12	7.4	10	23.0
1"	1.1/4"	F04	30	42	M5x8	3	M12	7.4	14.5	30.5
1.1/4"	1.1/2"	F05	35	50	M6x8	3	M14	8.8	16	35
1.1/2"	2"	F05	35	50	M6x8	3	M14	8.8	16	35
2"	2.1/2"	F05	35	50	M6x8	3	M14	8.8	16	35
2.1/2"	3"	F07	55	70	M8x8	3	M24	18	27	61

Relevant Break-away Torque will be communicated on request, based on the process condition.

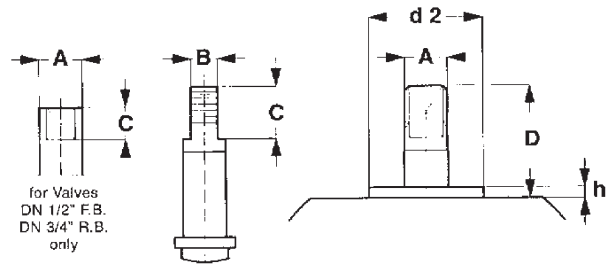
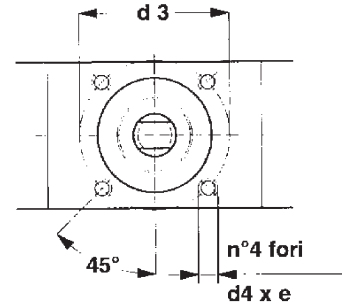


Fig. 944



## Option for insulating service

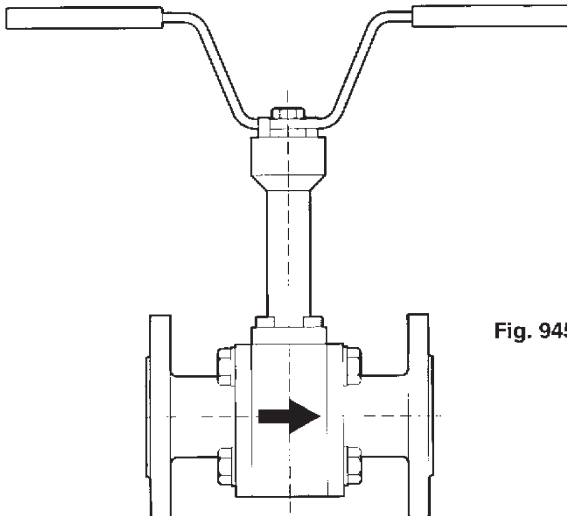


Fig. 945



This catalogue is exclusive property of Cesare Bonetti S.p.A. Any unauthorized reproduction, in total or in part, of this catalogue shall be prosecuted. Products and data sheets on this catalogue reflect current standard production. Cesare Bonetti S.p.A. reserves the right to carry out amendments to products and materials.

Amendment or modification to drawings and materials can be done also to comply with particular Customer's requests or technical specifications.



# CESARE BONETTI S.p.A.

I-20024 GARBAGNATE MILANESE (Italy)  
Via Cesare Bonetti 17  
Telephone: +3902 990721- Telefax: +3902 9952483  
Internet: <http://www.cesare-bonetti.it>

Export sales: Telephone +3902 99072444  
Telefax +3902 99072400  
E-mail: [export@cesare-bonetti.it](mailto:export@cesare-bonetti.it)

Germany

Bonetti Armaturen GmbH

In den Fritzenstücker 4 - D 65549 LIMBURG / LAHN  
Tel. +49 06431 72041 Fax +49 06431 72066  
E-mail: [bonetti-germany@t-online.de](mailto:bonetti-germany@t-online.de)

Australia - New Zealand

Bonetti Australia Pty Ltd

136 Union Street (P.O. Box 170) BRUNSWICK, 3056  
(Australia) Tel. +61 3 3874311 - Fax +61 3 3880698  
E-mail: [dtsbont@hotmail.net.au](mailto:dtsbont@hotmail.net.au)