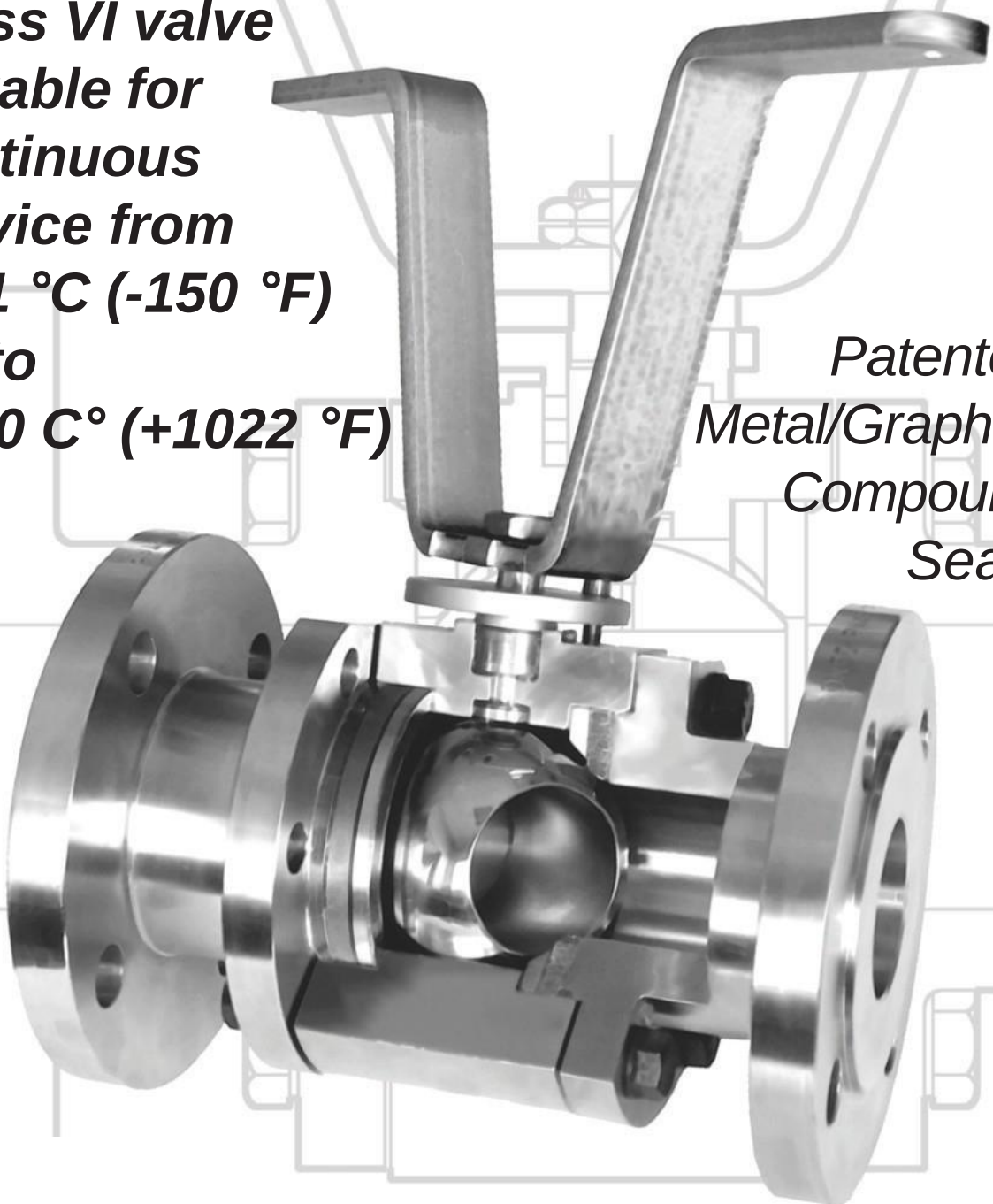


RAC[®]
BONETTI[®]

BONETTI HTB Ball Valves

*The only one
Class VI valve
suitable for
continuous
service from
-101 °C (-150 °F)
up to
+550 C° (+1022 °F)*

*Patented
Metal/Graphite
Compound
Seats*



BONETTI HTB Ball Valves

Forged - Carbon steel - Stainless steel

DIN 2401 PN 40, PN 63, PN 100 - ASME B16.34 Class 300 and 600, full rated
DN 15 to DN 100 - ½" to 4"

Description

The **BONETTI HTB** is a one way floating ball and the **only one valve suitable for continuous service from very low (-101 °C) up to very high (+550 °C) temperature.**

It's primary innovation is the **original patented semi-soft seat**. The valve is suitable for **any kind of fluid** compatible with graphite (es: water/steam even with high pressure drop), even abrasive fluid and dirty media (its packing avoids any measurable fugitive emission in the environment); the valve has an **high resistance to erosion**. The alternating metal-graphite layers of the seat sweep the ball surface cleaning it during every open close operation.

The valve is **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 autoadapt to the ball.

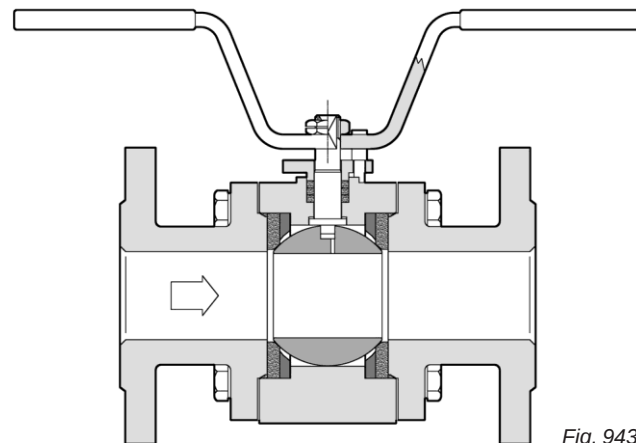


Fig. 943

Technical features

- Split body, three pieces
- Floating Ball
- Body Seat: **Patented Metal / Graphite Compound**
- Adjustable Graphite Long Life Packing
- Gland: Flanged Type - One Piece bushed
- Stem: **Anti blow-out**
- Design is intrinsically **Antistatic**
- **Low Torque** due to Special Packing, Material, Design
- Every valve, even if already installed, can be completed with an actuator (attachment according to ISO 5211)
- Nearly indefinite **bubble tight** (Class VI) seat tightness throughout the full range of operations

Sizes and connections

DN 15 to DN 100, ½" to 4"

Connections:

- Threaded NPT to ANSI B1.20.1
- SW to ANSI B16.11
- BW to ANSI B16.25 and DIN 3239

Flanged:

European Standards (UNI, DIN, AFNOR, etc.)

PN 40, PN 63 and PN 100

Flanges are supplied raised faced to UNI 2229, drilled, Face to face dimension (A) to DIN 3202-F1 (PN 40) and to DIN 3202-F2 (PN 63 and 100)

Flanged:

American Standard

ASME B16.34 Class 300 and 600

Flanges are supplied R.F. drilled to ASME B16.5

Face to face dimension (A) to ASME B16.10

Standard

This product fully complies with:

ASME B16.34, B16.5, B16.11, B16.25MSS SP 72, BS 5351
- DIN 2401, DIN 3239

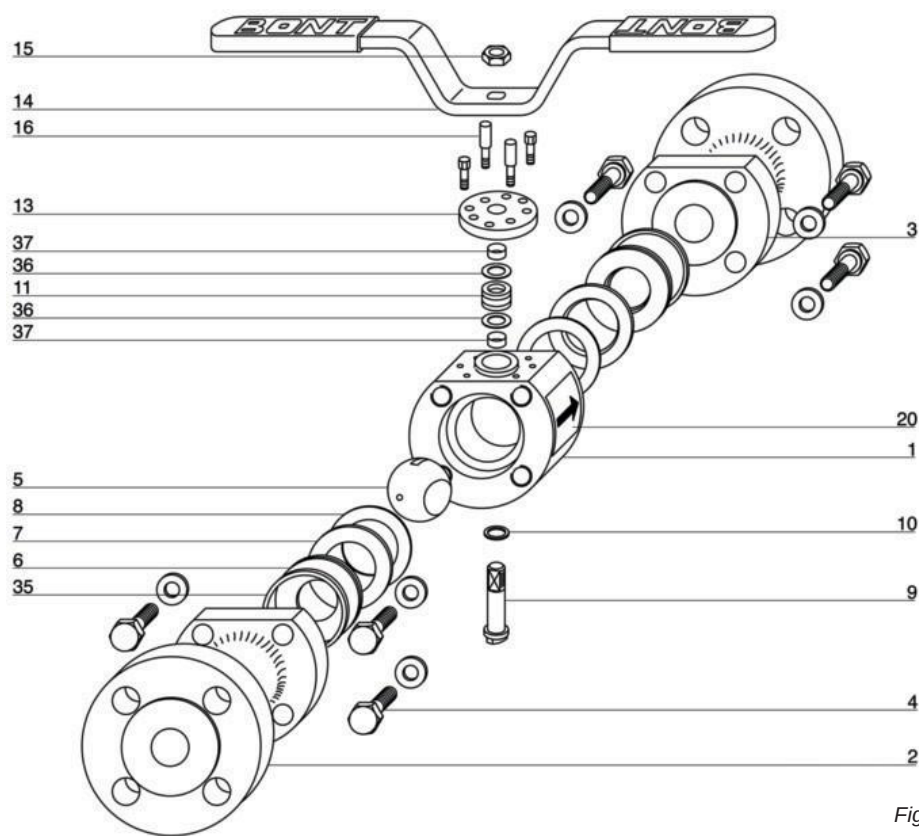


Fig. 940

Materials

No.	Part	Material (schedule 52)	Material (schedule 63)
1	Body	ASTM A105	ASTM A182 F316
2	End Connection Inlet	ASTM A105	ASTM A182 F316
3	End Connection Outlet	ASTM A105	ASTM A182 F316
4	Bolt	ASTM A193 B7	ASTM A193 B8
5	Ball	ASTM A182 F316 + S.H.	ASTM A182 F316 + S.H.
6	Seat	Graphite T1	Graphite T1
7	Cushion Plate	AISI 316	AISI 316
8	Cushion Joint	Graphite	Graphite
9	Stem	ASTM SA479 XM19	ASTM SA479 XM19
10	Bottom Stem Joint	AISI 316	AISI 316
11	Packing	Graphite T1+T4	Graphite T1+T4
13	Gland Flange	AISI 416	AISI 416
14	Handle	Carbon Steel	Carbon Steel
15	Handle Nut	ASTM A194 GR.8	ASTM A194 GR.8
16	Gland Bolt and Stop Pin	AISI 420/ASTM A193 B8	AISI 420/ASTM A193 B8
20	Name Plate	Stainless Steel	Stainless Steel
35	Autoseal Ring ♣	Graphite	Graphite
36	Spacer Ring ♦	ASTM B150 C62300	ASTM B150 C62300
37	Stem Ring ♦	Graphite	Graphite

♣, only on Full Bore $\geq$ DN 32 and $\geq \frac{1}{4}$ " and on Reduced Bore $\geq$ DN 40 and $\geq 1\frac{1}{2}$ " - ♦, only on Full Bore $\geq$ DN 20 and $\geq \frac{1}{4}$ " and on Reduced Bore $\geq$ DN 25 and ≥ 1 "

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 40 Mater. Sched. 52	Class PN 63 Mater. Sched. 63	Class PN 63 Mater. Sched. 52	Class PN 100 Mater. Sched. 63
	°C	bar	bar	bar	bar	bar
- 10 ÷ 20	40	40	63	63	100	100
120	40	40	63	63	100	100
200	35	35	50	50	80	80
250	32	32	45	45	70	70
300	28	28	40	40	60	60
350	24	24	36	36	56	56
400	21	21	32	32	50	50
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
	°C	bar	bar	bar	bar	bar
- 10 ÷ 20	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	30,4	73,9	63,1
400	6,5	6,5	34,5	29,3	69	58,9
425	5,6	5,6	28,8	29	57,5	58,3
450	4,7	4,6	20	29	40,1	57,7
500	2,8	2,8	8,8	27,3	17,6	54,8
550	-	1,6	-	23,8	-	47,8

BONETTI Ball Valves type H T B - Full Bore

DN	Dimension		Threaded or SW or BW		Flanged DIN PN 40			Flanged DIN PN 63			Flanged DIN PN 100			Flanged ASME 300			Flanged ASME 600			
	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	
½"	15	110	180	90	2,5	130	95	3,5	210	105	5	210	105	5	140	95	4,3	165	95	4,5
¾"	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
1"	25	164	270	110	5,5	160	115	7	230	140	8,1	230	140	8,1	165	124	7	216	124	7,8
1.¼"	30	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
1.½"	40	220	350	150	10,6	200	150	15,5	260	170	20,1	260	170	22,4	191	155	15,0	241	155	17,3
2"	50	230	350	170	14,7	230	165	22,5	300	180	24,2	300	195	26,5	216	165	21,9	292	165	23,6
2.½"	65	235	500	210♣	29	290	185	43,7	340	205	47,2	340	220	50,6	241	190	43,7	330	190	46
3"	80	250	500	305♣	35	310	200	50	380	215	53,8	380	230	57,5	283	209	50,0	356	209	52,9

ASME Class 150 may be supplied on request. Please note that FACE TO FACE (Dimension A) for ASME 150 are as per ASME 300 - ♣ for BW type only

BONETTI Ball Valves type H T B - Reduced Bore

DN	Dimension		Threaded or SW or BW		Flanged DIN PN 40			Flanged DIN PN 63			Flanged DIN PN 100			Flanged ASME 300			Flanged ASME 600			
	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	
¾"	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	160	115	5,5	230	140	7,5	230	140	7,5	165	124	5,8	216	124	6,6
1¼"	30	164	270	110	6	180	140	7,5	260	155	8,8	260	155	8,8	178	133	8,5	229	133	9,5
1½"	40	215	350	140	8,1	200	150	12	260	170	14,5	260	170	14,5	191	155	11,5	241	155	13,5
2"	50	220	350	150	11,2	230	165	16	300	180	20,7	300	195	23,0	216	165	17,3	292	165	19,6
2½"	65	230	350	191♣	17	290	185	24	340	205	25,9	340	220	28,8	241	190	25,3	330	190	27,6
3"	80	235	500	210♣	31	310	200	45	380	215	48,9	380	230	52,3	283	209	47,2	356	209	50,6
4"	100	250	500	305♣	38	350	235	52	430	250	55,8	430	265	59,8	305	254	54,1	423	273	57,5

ASME Class 150 may be supplied on request. Please note that FACE TO FACE (Dimension A) for ASME 150 are as per ASME 300 - ♣ for BW type only

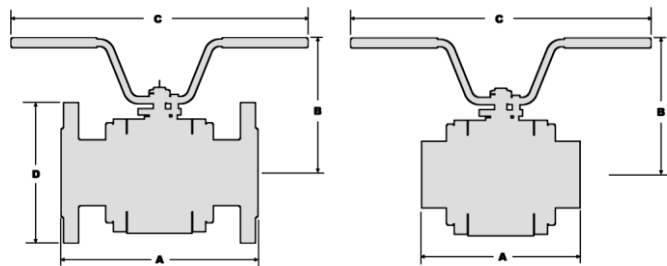


Fig. 941

Fig. 942

Option for cryogenic service

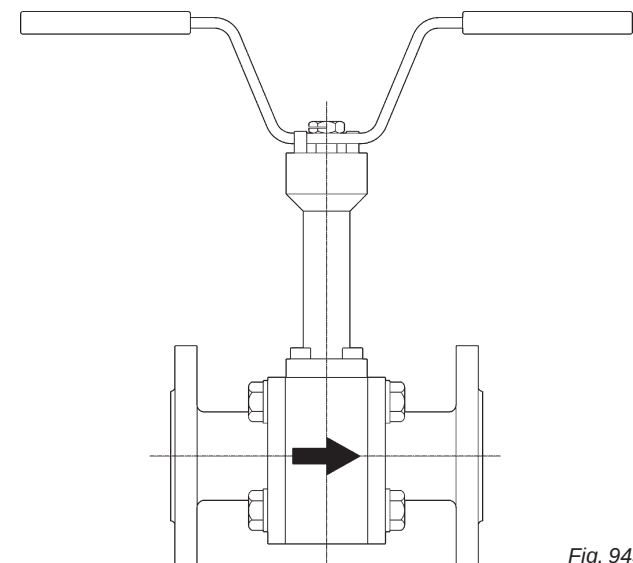


Fig. 945

Attachment to Bracket for Actuator according to ISO 5211

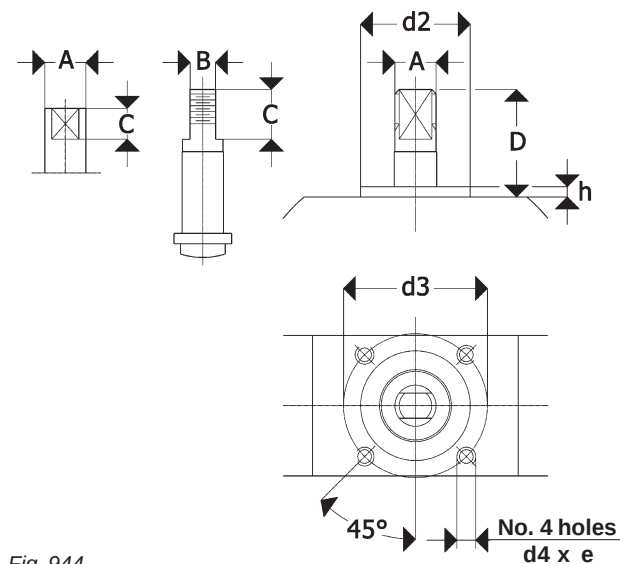
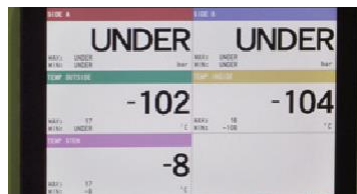


Fig. 944

Valve DN		Flange ISO 5211	Ød2	Ød3	Ød5 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
3"	4"	F07	55	70	M8x8	3	M24	18	27	61

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



Forged Steel Ball Valves

For **VERY HIGH & VERY LOW TEMPERATURE**

Continuous service **FROM -101 UP TO 550°C**

Patented **METAL/GRAPHITE COMPOUND SEATS**

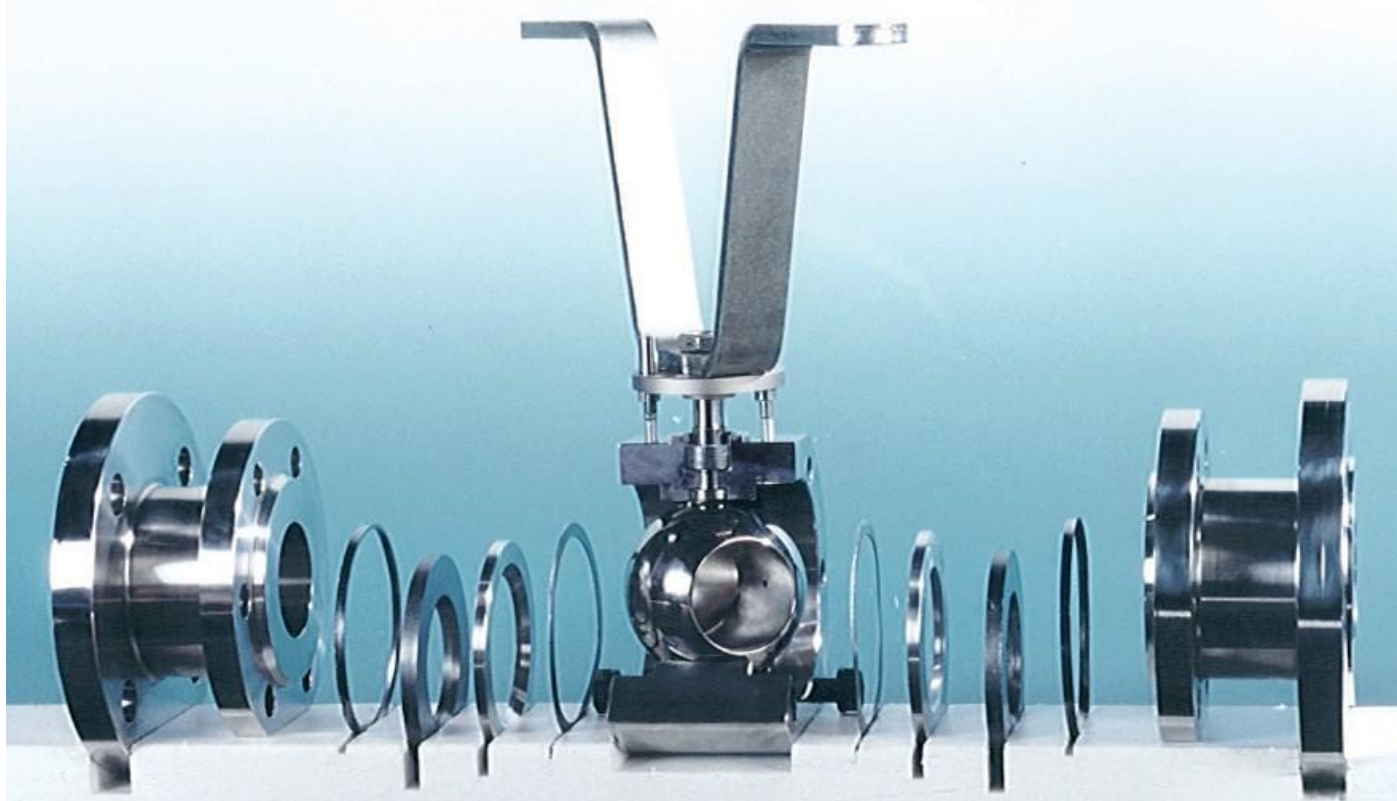
HIGH RESISTANCE to **EROSION**

MAINTENANCE FREE

ANTISTATIC device

FIRE SAFE certified

TA LUFT certified





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