



JDV
CONTROL
VALVES



JBT-C/JBT-CM Type

3/4-Way Trunnion Type **Soft Metal** Seat Ball Valve



*We link all you need
and more than you expect.*

JBT-C / JBT-CM

3/4-Way Trunnion Type **Soft Metal** Seat Ball Valve

T/L-Port Full Bore Flanged Ends ASME CLASS 150/300 DIN PN16/40

The JBT-C/JBT-CM Trunnion-mounted 3/4-way ball valves are designed for the most complex flow control equations. Our unique 4-seat design with many alternatives of soft and metal seats allows the JBT-C/JBT-CM Type to withstand the toughest operating conditions in the fields of Oil & Gas, Refineries, Power Generation, Pulp & Paper, Mining, Petrochemical and Chemical industries, etc.

Applicable Standards

- Body Material : Standard in WCB, CF8,CF8M Other materials are available according to requirements.
- Nominal Size : 1-1/2" to 12" (DN40 to DN300) are on request.
- Pressure Rating : ASME CLASS 150/300 DIN PN16/40
- End Connections : RF
- Temperature Range : Soft Seat : -20~356°F (-29~180°C)
Metal Seat: -20~932°F (-29~500°C)
- Flange Dimensions : ASME B16.5 / EN 1092-1
- Body Pressure Test : API 598
- Seat Leakage Test : Soft Seat : API 598
Metal Seat : ANSI I FCI7O-2 CLASS V
- Casting : MSS-SP-25 / MSS-SP-55

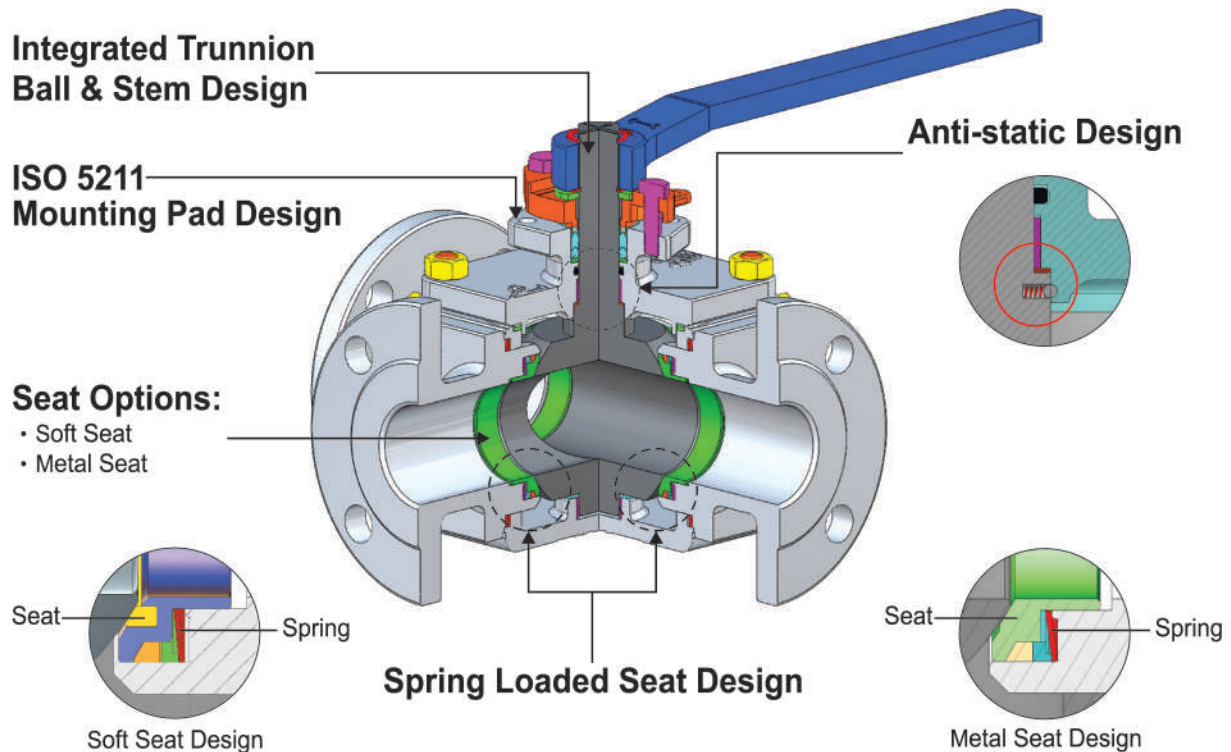


Product features:

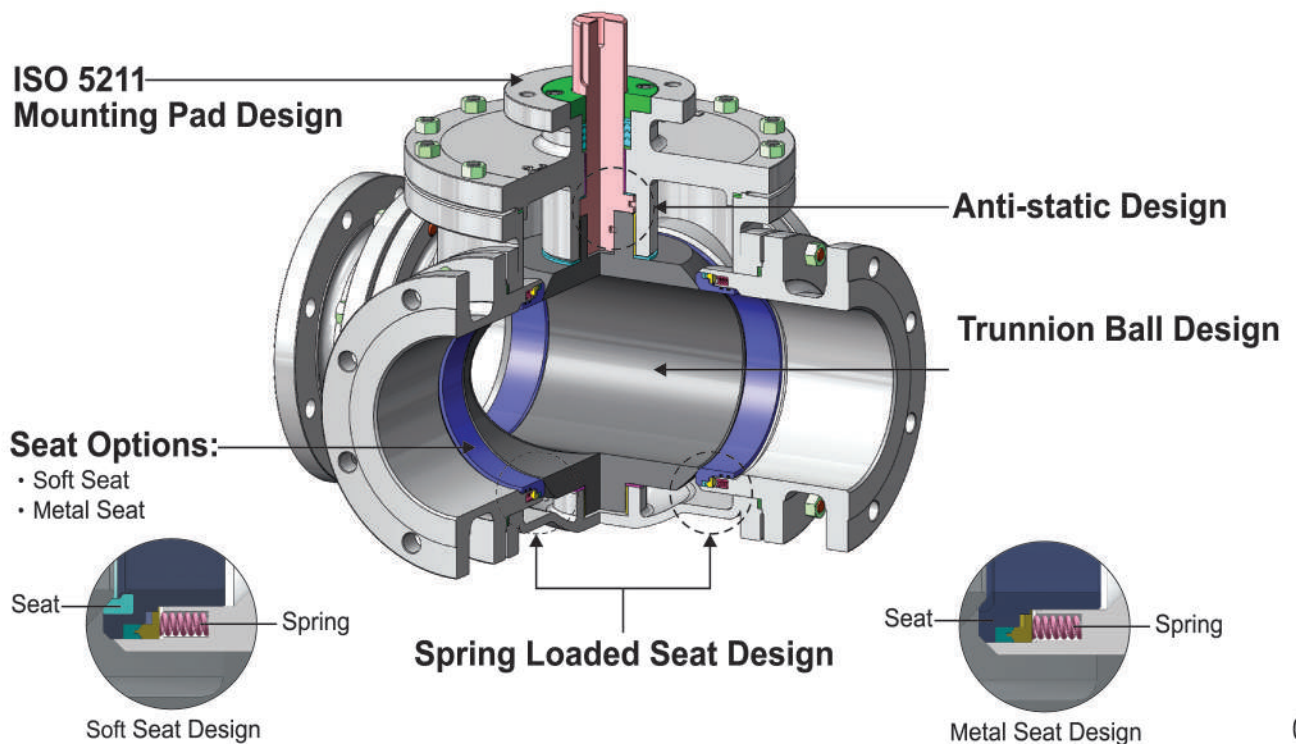
1. Trunnion ball design keeping the torque stable and low, even at a high pressure drop.
2. Robust 1-PC trim combining ball & stem (size 4" and below), to increase the valve life cycle.
3. Oversized stem design preventing any deformation from high pressure or high temperature.
4. Unique 4-seats design ensuring a perfect balance and an optimum position of the ball.
5. Spring loaded design keeping the seat in tight contact with the ball, even at a low pressure.
6. Many options of soft and metal seats to meet the requirements of all using conditions.
7. Fire safe design.
8. Anti-blowout stem design.
9. Anti-static design.
10. ISO 5211 Mounting Pad design.

Design & Structure

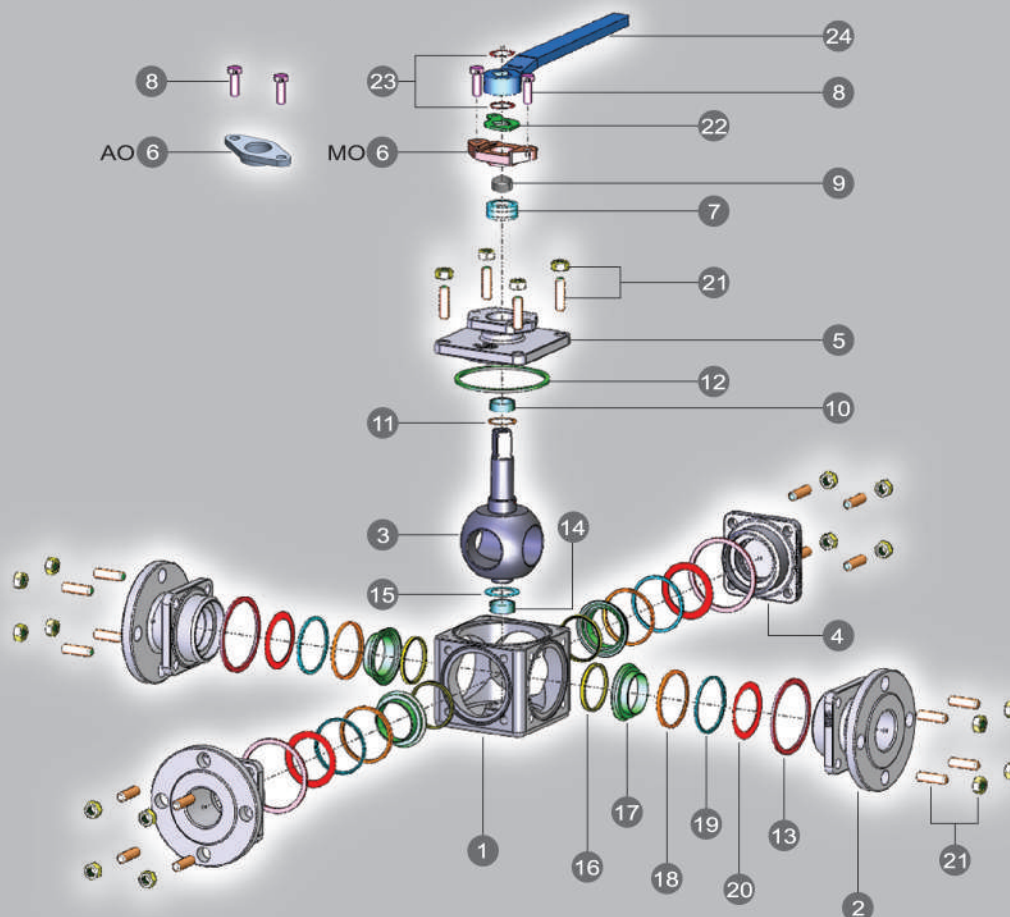
JBT-C/JBT-CM Type DN40~DN100 (1-1/2"~4")



JBT-C/JBT-CM Type DN125~DN200 (5"~8")



JBT-C Type 1-1/2"~4" (DN40~DN100)



Technical Specifications

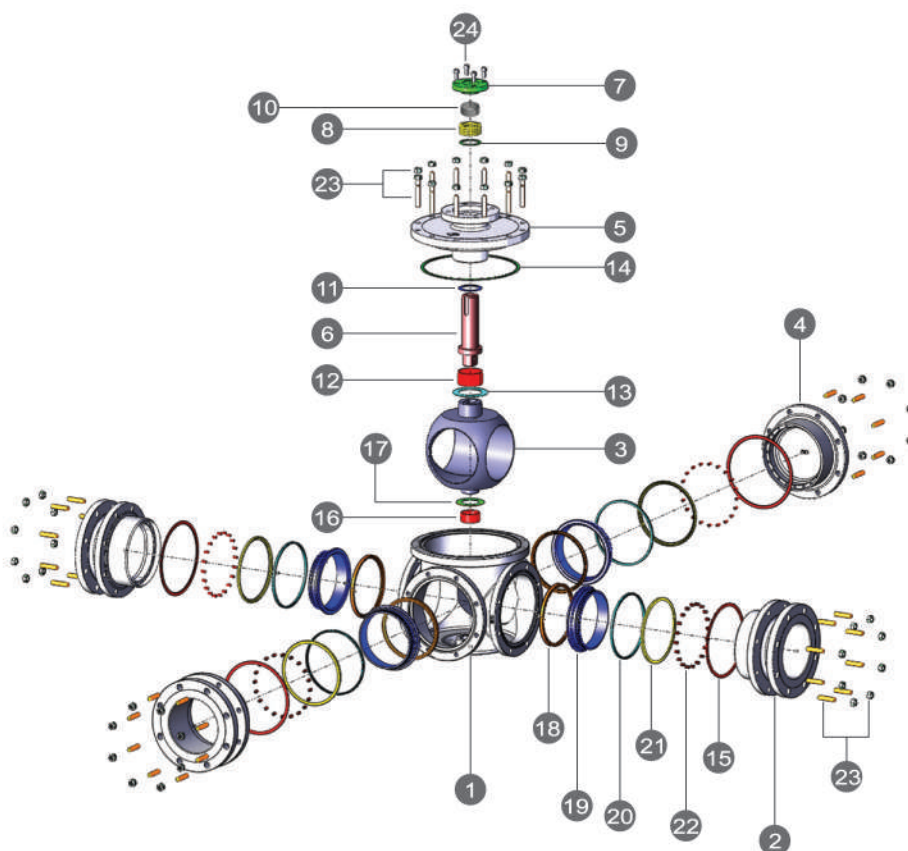
STANDARD MATERIALS

NO	PART NAME	WCB	CF8	CF8M
1	BODY	A216-WCB	A351-CF8	A351-CF8M
2	CAP	A216-WCB	A351-CF8	A351-CF8M
3	BALL & STEM	A351-CF8		A351-CF8M
4	SIDE COVER	A216-WCB	A351-CF8	A351-CF8M
5	TOP COVER	A216-WCB	A351-CF8	A351-CF8M
6	GLAND ⁽¹⁾	A351-CF8		
7	GLAND PACKING	PTFE/GRAPHITE		
8	GLAND BOLT	STAINLESS STEEL		
9	GLAND BEARING	G-PTFE		
10	STEM BEARING	A240-316+PTFE		
11	STEM THRUST WASHER	G-PTFE		
12	TOP COVER GASKET	316SS+GRAPHITE		
13	BODY GASKET	316SS+GRAPHITE		
14	TRUNNION BEARING	A240-316+PTFE		
15	TRUNNION WASHER	G-PTFE		
16	SEAT	PTFE / R-PTFE / TFM-1600 / PEEK		
17	SEAT RING	A351-CF8	A351-CF8M	
18	SEAT RING SEAL	GRAPHITE		
19	SEAT RING RETAINER	A351-CF8	A351-CF8M	
20	SPRING	INCONEL® X-750		
21	BOLT & NUT	A193-B7 & A194-7	A193-B8 & A194-8	
22	TRAVEL STOP ^(MO)	A240-304		
23	SNAP CATCH ^(MO)	AISI-420		
24	HANDLE ^(MO)	FCD(1-1/2"~2") / FCD+SGP(2-1/2"~4")		

NOTES:

(1) Options: AO:Automation / MO:Manual

JBT-C Type 5"~8" (DN125~DN200)



STANDARD MATERIALS

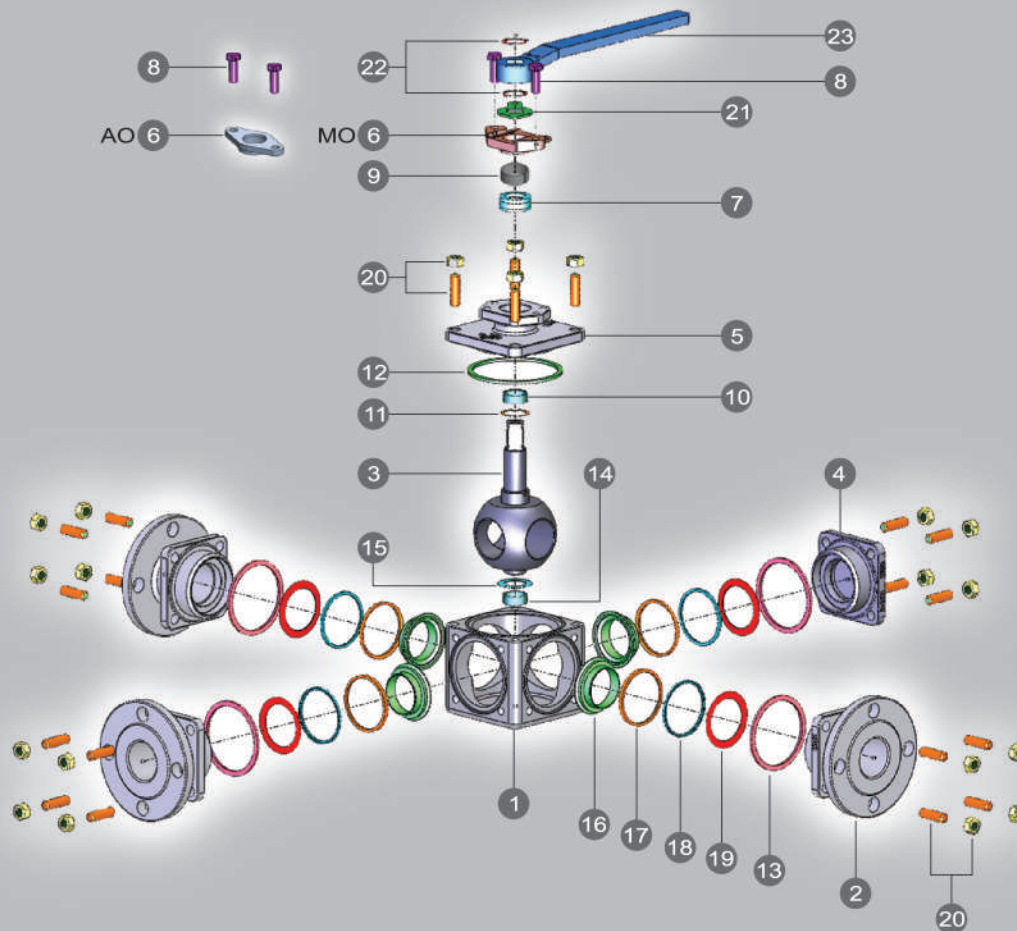
NO	PART NAME	WCB	CF8	CF8M
1	BODY	A216-WCB	A351-CF8	A351-CF8M
2	CAP	A216-WCB	A351-CF8	A351-CF8M
3	BALL	A351-CF8		A351-CF8M
4	SIDE COVER	A216-WCB	A351-CF8	A351-CF8M
5	TOP COVER	A216-WCB	A351-CF8	A351-CF8M
6	STEM	A276-304		A276-316
7	GLAND	A216-WCB	A351-CF8	A351-CF8M
8	GLAND PACKING	GRAPHITE		
9	GLAND THRUST WASHER	G-PTFE		
10	GLAND BEARING	G-PTFE		
11	STEM THRUST WASHER	G-PTFE		
12	TOP TRUNNION BEARING	A240-316+PTFE		
13	TOP TRUNNION WASHER	G-PTFE		
14	TOP COVER GASKET	316SS+GRAPHITE		
15	BODY GASKET	316SS+GRAPHITE		
16	TRUNNION BEARING	A240-316+PTFE		
17	TRUNNION WASHER	G-PTFE		
18	SEAT	PTFE / R-PTFE / TFM-1600 / PEEK		
19	SEAT RING	A351-CF8	A351-CF8M	
20	SEAT RING SEAL	GRAPHITE		
21	SEAT RING RETAINER	A351-CF8	A351-CF8M	
22	SPRING	INCONEL® X-750		
23	BOLT & NUT	A193-B7 & A194-7	A193-B8 & A194-8	
24	GLAND BOLT	STAINLESS STEEL		

The above materials may be changed with different using conditions.



JDV CONTROL VALVES

JBT-CM Type 1-1/2"~4" (DN40~DN100)



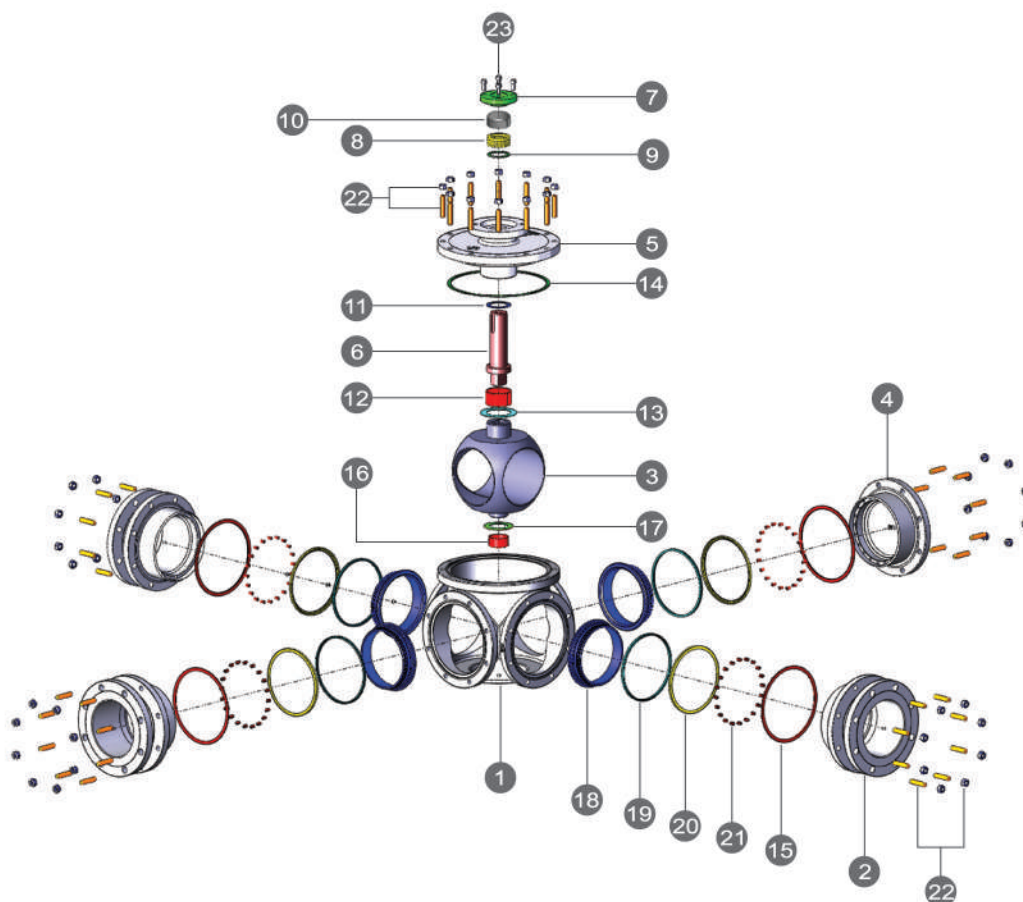
STANDARD MATERIALS

NO	PART NAME	SM			SH		
		-20~661°F (-29~350°C)			-20~797°F (-29~425°C)	-20~932°F (-29~500°C)	
1	BODY	A216-WCB	A351-CF8	A351-CF8M	A216-WCB	A351-CF8	A351-CF8M
2	CAP	A216-WCB	A351-CF8	A351-CF8M	A216-WCB	A351-CF8	A351-CF8M
3	BALL & STEM	A351-CF8+HCR ⁽²⁾		A351-CF8M+HCR	A351-CF8+TC ⁽²⁾ / CRC ⁽²⁾		A351-CF8M+TC / CRC
4	SIDE COVER	A216-WCB	A351-CF8	A351-CF8M	A216-WCB	A351-CF8	A351-CF8M
5	TOP COVER	A216-WCB	A351-CF8	A351-CF8M	A216-WCB	A351-CF8	A351-CF8M
6	GLAND ⁽¹⁾	A351-CF8					
7	GLAND PACKING	GRAPHITE					
8	GLAND BOLT	STAINLESS STEEL					
9	GLAND BEARING	A240-316+PTFE					
10	STEM BEARING	METAL+HARD FACE					
11	STEM THRUST WASHER	METAL+HARD FACE					
12	TOP COVER GASKET	316SS+GRAPHITE					
13	BODY GASKET	316SS+GRAPHITE					
14	TRUNNION BEARING	METAL+HARD FACE					
15	TRUNNION WASHER	METAL+HARD FACE					
16	SEAT	A351-CF8+STELLITE ®		A351-CF8M+STELLITE®	A351-CF8+TC/CRC		A351-CF8M+TC/CRC
17	SEAT RING SEAL	GRAPHITE					
18	SEAT RING RETAINER	A351-CF8		A351-CF8M	A351-CF8		A351-CF8M
19	SPRING	INCONEL ® X-750					
20	BOLT & NUT	A193-B7 & A194-7	A193-B8 & A194-8		A193-B7 & A194-7	A193-B8 & A194-8	
21	TRAVEL STOP ^(MO)	A240-304					
22	SNAP CATCH ^(MO)	AISI-420					
23	HANDLE ^(MO)	FCD (1-1/2"~2") / FCD45+SGP (2-1/2"~4")					

NOTES:

(1) Options: AO:Automation / MO:Manual (2) HCR=Hard Chrome TC=Tungsten Carbide CRC=Chrome Carbide

JBT-CM Type 5"~8" (DN125~DN200)

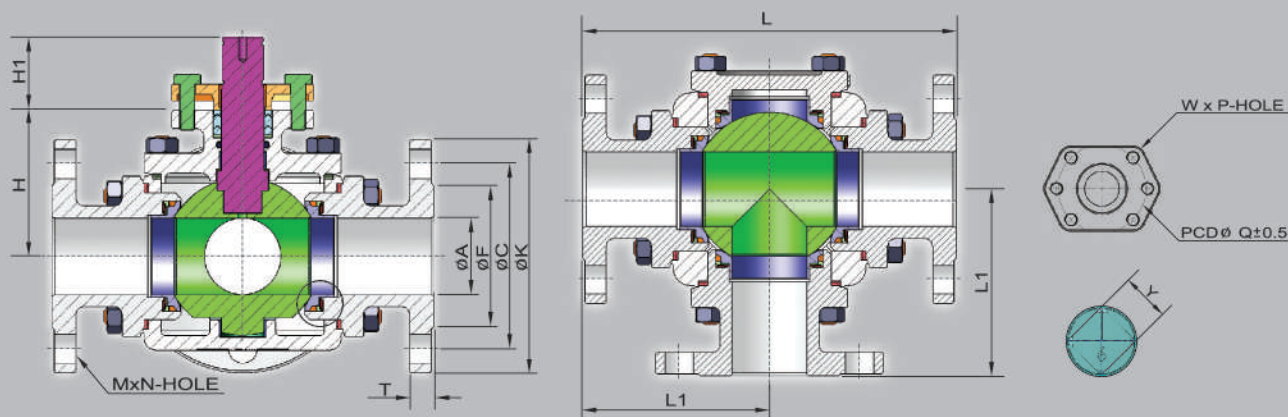


STANDARD MATERIALS

NO	PART NAME	SM			SH		
		-20~661°F (-29~350°C)			-20~797°F (-29~425°C)	-20~932°F (-29~500°C)	
1	BODY	A216-WCB	A351-CF8	A351-CF8M	A216-WCB	A351-CF8	A351-CF8M
2	CAP	A216-WCB	A351-CF8	A351-CF8M	A216-WCB	A351-CF8	A351-CF8M
3	BALL	A351-CF8+HCR		A351-CF8M+HCR	A351-CF8+TC/CRC		A351-CF8M+TC/CRC
4	SIDE COVER	A216-WCB	A351-CF8	A351-CF8M	A216-WCB	A351-CF8	A351-CF8M
5	TOP COVER	A216-WCB	A351-CF8	A351-CF8M	A216-WCB	A351-CF8	A351-CF8M
6	STEM	A564-630 (H1150)		A638-S66286	A638-S66286		
7	GLAND	A216-WCB	A351-CF8	A351-CF8M	A216-WCB	A351-CF8	A351-CF8M
8	GLAND PACKING	GRAPHITE					
9	GLAND THRUST WASHER	METAL+HARD FACE					
10	GLAND BEARING	A240-316+PTFE					
11	STEM THRUST WASHER	METAL+HARD FACE					
12	TOP TRUNNION BEARING	METAL+HARD FACE					
13	TOP TRUNNION WASHER	METAL+HARD FACE					
14	TOP COVER GASKET	316SS+GRAPHITE					
15	BODY GASKET	316SS+GRAPHITE					
16	TRUNNION BEARING	METAL+HARD FACE					
17	TRUNNION WASHER	METAL+HARD FACE					
18	SEAT	A351-CF8+STELLITE ®		A351-CF8M+STELLITE®	A351-CF8+TC/CRC		A351-CF8M+TC/CRC
19	SEAT RING SEAL	GRAPHITE					
20	SEAT RING RETAINER	A351-CF8		A351-CF8M	A351-CF8		A351-CF8M
21	SPRING	INCONEL ® X-750					
22	BOLT & NUT	A193-B7 & A194-7	A193-B8 & A194-8		A193-B7 & A194-7	A193-B8 & A194-8	
23	GLAND BOLT	STAINLESS STEEL					

The above materials may be changed with different using conditions.

JBT-C/JBT-CM Type DN40~DN100 (1-1/2" ~4")



DIMENSION (ANSI-150LB FLANGED)

(M.M.)

SIZE	A	F	C	K	L	L1	T	H	H1	M	N	Q	W	P	Y
40 1-1/2"	38	73	98.5	127	230	115	14.3	80	42	16	4	70	M8	4	17
50 2"	50	92	120.5	152	257	128.5	15.9	95.5	47	19	4	70	M8	4	20
65 2-1/2"	65	105	139.5	178	291	145.5	17.5	142	52	19	4	102	M10	4	27
80 3"	76	127	152.5	190	334	167	19.1	155	52	19	4	102	M10	4	27
100 4"	100	157	190.5	229	392	196	23.9	172	57	19	8	125	M12	4	32

DIMENSION (ANSI-300LB FLANGED)

(M.M.)

SIZE	A	F	C	K	L	L1	T	H	H1	M	N	Q	W	P	Y
40 1-1/2"	38	73	114.5	156	260	130	20.6	80	42	22	4	70	M8	4	17
50 2"	50	92	127	165	265	132.5	22.3	95.5	47	19	8	70	M8	4	20
65 2-1/2"	65	105	149.5	190	321	160.5	25.4	142	52	22	8	102	M10	4	27
80 3"	76	127	168	210	360	180	28.6	155	52	22	8	102	M10	4	27
100 4"	100	157	200	254	420	210	31.8	172	57	22	8	125	M12	4	32

DIMENSION (DIN PN16 FLANGED)

(M.M.)

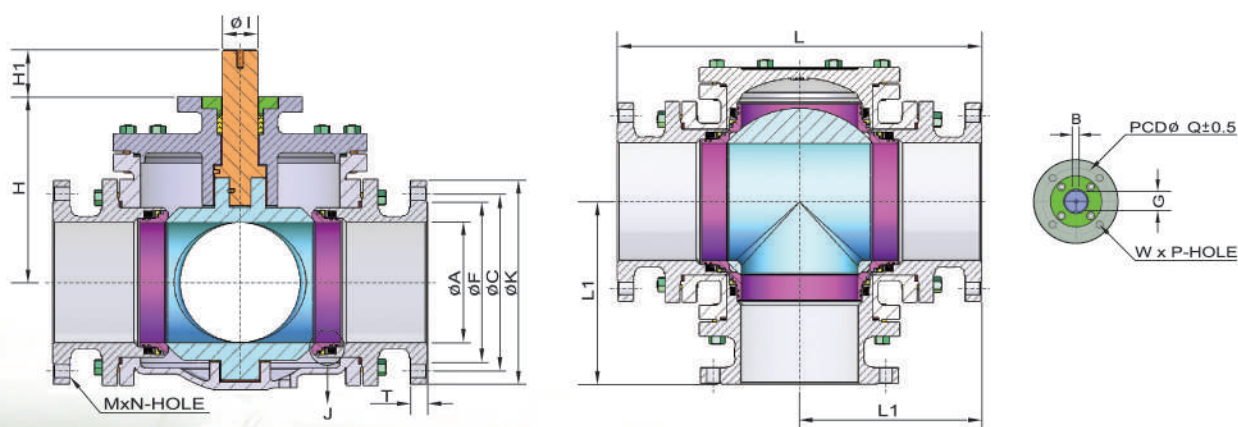
SIZE	A	F	C	K	L	L1	T	H	H1	M	N	Q	W	P	Y
40 1-1/2"	38	88	110	150	245	122.5	16	80	42	18	4	70	M8	4	17
50 2"	50	102	125	165	257	128.5	18	95.5	47	18	4	70	M8	4	20
65 2-1/2"	65	122	145	185	292	146	18	142	52	18	4	102	M10	4	27
80 3"	76	138	160	200	330	165	20	155	52	18	8	102	M10	4	27
100 4"	100	158	180	220	380	190	20	172	57	18	8	125	M12	4	32

DIMENSION (DIN PN40 FLANGED)

(M.M.)

SIZE	A	F	C	K	L	L1	T	H	H1	M	N	Q	W	P	Y
40 1-1/2"	38	88	110	150	250	125	18	80	42	18	4	70	M8	4	17
65 2-1/2"	65	122	145	185	308	154	22	142	52	18	4	102	M10	4	27
80 3"	76	138	160	200	350	175	24	155	52	18	8	102	M10	4	27
100 4"	100	162	190	235	404	202	24	172	57	22	8	125	M12	4	32

JBT-C/JBT-CM Type DN125~DN200 (5" ~8")



DIMENSION (ANSI-150LB FLANGED)

(M.M.)

SIZE	A	F	C	K	L	L1	T	H	H1	M	N	Q	W	P	I	G	B
125 5"	125	186	216	254	450	225	24	222	89	22	8	140	M16	4	48	37	14
150 6"	152	216	241.5	279.5	504	252	25.4	246.5	80.5	22	8	140	M16	4	48	37	14
200 8"	203	270	298.5	343	630	315	28.5	311.5	80	22	8	165	M20	4	60	48	16

DIMENSION (ANSI-300LB FLANGED)

(M.M.)

SIZE	A	F	C	K	L	L1	T	H	H1	M	N	Q	W	P	I	G	B
125 5"	125	186	235	280	530	265	35.5	222	89	22	8	140	M16	4	48	37	14
150 6"	152	216	270	318	590	295	36.6	246.5	80.5	22	12	140	M16	4	48	37	14
200 8"	203	270	330	381	750	375	41.5	311.5	80	25	12	165	M20	4	60	48	16

DIMENSION (DIN PN10/16 FLANGED)

(M.M.)

SIZE	A	F	C	K	L	L1	T	H	H1	M	N	Q	W	P	I	G	B
125 5"	125	188	210	250	450	225	22	222	89	18	8	140	M16	4	48	37	14
150 6"	152	212	240	285	504	252	22	246.5	80.5	22	8	140	M16	4	48	37	14
200 8"	203	268	295	340	630	315	24	311.5	80	22	8	165	M20	4	60	48	16

DIMENSION (DIN PN40 FLANGED)

(M.M.)

SIZE	A	F	C	K	L	L1	T	H	H1	M	N	Q	W	P	I	G	B
125 5"	125	188	210	250	450	225	22	222	89	18	8	140	M16	4	48	37	14
150 6"	152	212	240	285	504	252	22	246.5	80.5	22	8	140	M16	4	48	37	14
200 8"	203	268	295	340	630	315	24	311.5	80	22	12	165	M20	4	60	48	16

CERTIFICATES



ISO 9001

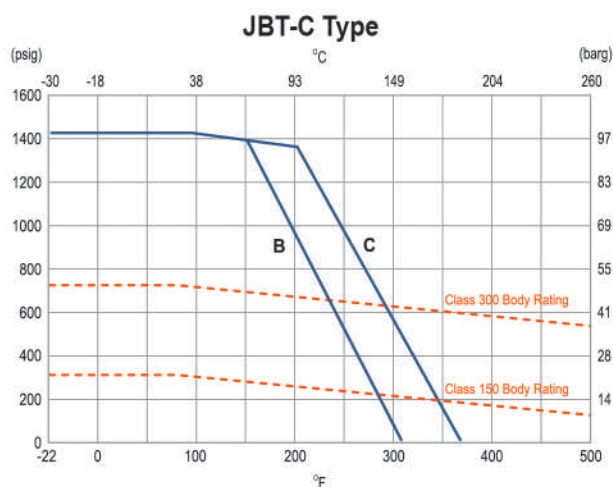
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High Temperature Testing

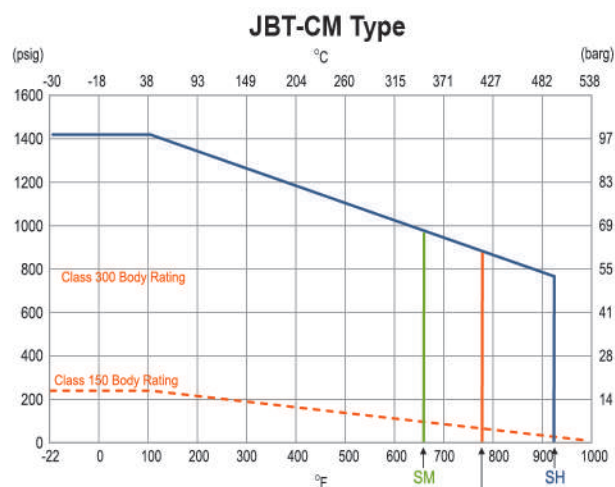
Cv VALUES

Size	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200
	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"
Cv	268	501	804	1158	2118	3412	5074	9337

TEMPERATURE & PRESSURE DIAGRAM



B= Glass Fiber PTFE
C= Carbon Fiber PTFE



SM= Max Temperature 661°F (350°C)
SH= Max Temperature 932°F (500°C)
Carbon Steel Max Temperature 797°F (425°C)

PORT TYPE

T-PORT : 90°				L-PORT : 90°			
A Type		B Type		E Type		F Type	
AL	AR	BL	BR	EL	ER	FL	FR
							
Air In Turn Left	Air In Turn Right	Air In Turn Left	Air In Turn Right	Air In Turn Left	Air In Turn Right	Air In Turn Left	Air In Turn Right
C Type		D Type		G Type		H Type	
CL	CR	DL	DR	GR		HL	
							
Air In Turn Left	Air In Turn Right	Air In Turn Left	Air In Turn Right	Air Failure Air In Turn Right		Air In Turn Left Air Failure	

HOW TO ORDER

JBT-C → **A** → **B** → **C** → **D** → **E** → **F** → **G** → **H**

Ex: **JBT-C** → **C1** → **04** → **C** → **G** → **00** → **100** → **FIH** → **DL**

A. SPECIFICATION	B. BODY MAT'L	C. BALL MAT'L	D. SEAT MAT'L	E. STEM MAT'L
C1 ASME CLASS 150	02 WCB (1.0619)	A CF8	P PTFE	00 1-1/2"~4" SAME AS BALL MAT'L
C2 ASME CLASS 300	03 CF8 (1.4308)	C CF8M	G G-PTFE (15% GLASS FIBER+PTFE)	02 304
D2 DIN PN16	04 CF8M (1.4408)	D CF3	C C-PTFE (15% CARBON+PTFE)	03 316
D4 DIN PN40	05 CF3 (1.4306)	E CF3M	S S-PTFE (50% 316+PTFE)	05 317
	06 CF3M (1.4404)	F CG8M	T TFM-1600 ®	07 304L
	07 CG8M (1.4412)		E PEEK	08 316L
	11 LCB (1.1138)			
	12 LCC (1.7219)			

F. SIZE	G. OPTION	H. PORT TYPE
040 1-1/2"	F FIRE SAFE	AL T-Port AL
050 2"	L EXTENDED STEM	AR T-Port AR
065 2-1/2"	I LIVE LOADING	BL T-Port BL
080 3"	H LEVER	BR T-Port BR
100 4"	G GEAR	CL T-Port CL
125 5"	A BARE SHAFT	CR T-Port CR
150 6"		DL T-Port DL
200 8"		DR T-Port DR
250 10"		EL L-Port EL
300 12"		ER L-Port ER
		FL L-Port FL
		FR L-Port FR
		GR L-Port GR
		HL L-Port HL

JBT-CM → **A** → **B** → **C** → **D** → **E** → **F** → **G** → **H**

Ex: **JBT-CM** → **C2** → **04** → **C** → **26** → **150** → **LIA** → **SH1** → **BL**

A. SPECIFICATION	B. BODY MAT'L	C. BALL & SEAT MAT'L	D. STEM MAT'L	E. SIZE
C1 ASME CLASS 150	02 WCB (1.0619)	A CF8	00 1-1/2"~4" SAME AS BALL MAT'L	040 1-1/2"
C2 ASME CLASS 300	03 CF8 (1.4308)	C CF8M	10 S31803	050 2"
D2 DIN PN16	04 CF8M (1.4408)	D CF3	22 630	065 2-1/2"
D4 DIN PN40	05 CF3 (1.4306)	E CF3M	26 S66286	080 3"
	06 CF3M (1.4404)	F CG8M		100 4"
	07 CG8M (1.4412)			125 5"
	11 LCB (1.1138)			150 6"
	12 LCC (1.7219)			200 8"
				250 10"
				300 12"

F. OPTION	G. TEMPERATURE	H. PORT TYPE
F FIRE SAFE	SM -20~661°F (-29~350°C) BALL W/HCR SEAT W/STELLITE ®	AL T-Port AL
L EXTENDED STEM	SH1 -20~842°F (-29~450°C) BALL W/TC SEAT W/TC	AR T-Port AR
I LIVE LOADING	SH2 -20~932°F (-29~500°C) BALL W/CRC SEAT W/CRC	BL T-Port BL
H LEVER		BR T-Port BR
G GEAR		CL T-Port CL
A BARE SHAFT		CR T-Port CR
		DL T-Port DL
		DR T-Port DR
		EL L-Port EL
		ER L-Port ER
		FL L-Port FL
		FR L-Port FR
		GR L-Port GR
		HL L-Port HL

HOW TO
ORDER



■ HEADQUARTERS

NO. 6-1, QINGNIAN RD., YANGMEI DIST., TAOYUAN CITY 326, TAIWAN

TEL +886-3-4965066 FAX +886-3-4963526 E-MAIL: sales@jdv.com.tw

