JDV CONTROL VALVES

QUALITY SWISS

JBF-SM Type

3-PC Threaded / Welded Metal Seat Ball Valve

TAIWAN EXCELLENCE 2018

We link all you need
and more than you expect.

JDV CONTROL VALVES

JBF-SM

Floating Type Metal Seat Ball Valve

Full Bore Three-Piece Threaded / Welded / Flanged Ends

ASME CLASS 600

To answer the growing demand of reliable and robust metal-seated threaded & welded ball valves, our experienced engineering teams designed the JBSM Series, meeting the requirements of the most challenging industries: Oil & Gas, Refineries, Petrochemical & Chemical Industries, Power Generation, Pulp & Paper, Mining, etc. Strengthened by our unique design and coated with our own High Velocity Oxygen Fuel technology, they are successfully used under the most extreme conditions, such as high temperature, high pressure, corrosive and/or abrasive fluids, slurries, etc.

Industrial Fields:

Oil & Gas
Refinery / Petrochemical
Chemical
Pulp & Paper
Power Plant
Steel Mill
Food
Mining

Product Features

- Bidirectional design (with preferred direction), adequate for any kind of backflow application.
- Oversized stem design preventing any deformation from high pressure or high temperature.
- Several alternatives of coating, suitable for slurries and very corrosive mediums.
- ASME Class 600 wall thickness design, enabling it to withstand severe operating conditions.
- Scraper seat design in option, to avoid any accumulation of fluid deposit on the ball surface.
- Design with a larger ball to provide the best sealing, in order to reduce any leakage.
- Inconel® spring design ensuring a tight contact between the ball and the seats.
- Live-loading design eliminating any stem leakage and providing a longer life cycle.
- Anti-static design.
- Anti-blowout stem design.
- ISO 5211 mounting pad.
- Fire safe design.

Applications

1. High temperature
2. High abrasion
3. Corrosion

Design & Structures

Packing Lock Washer

ISO 5211 Mounting Pad

Live-loading packing design

Stem :
- Oversized design
- Double packing design
- Anti-blow out design
- Anti-static design

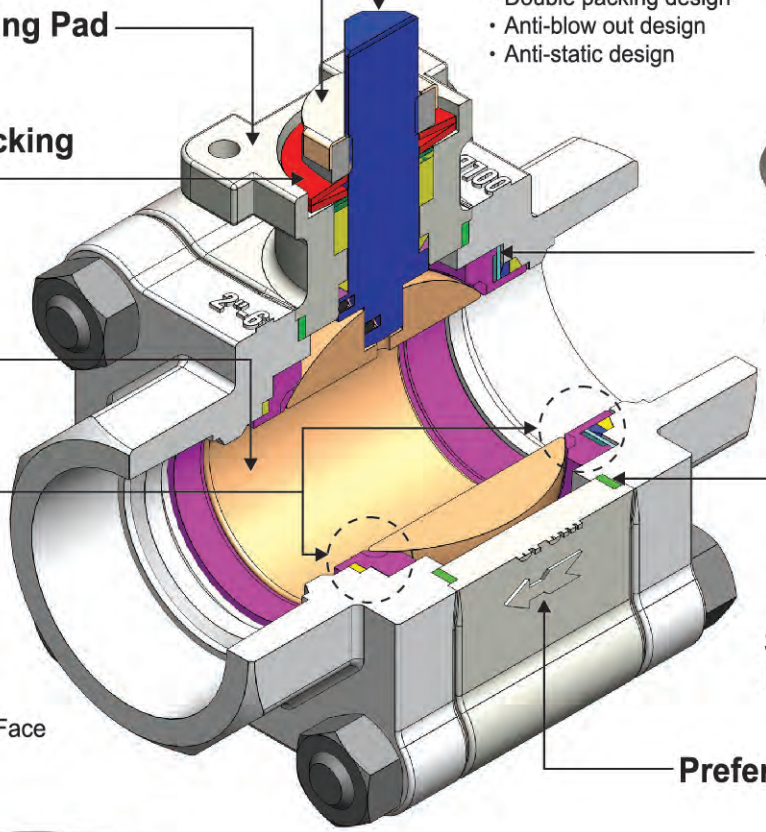
Seat Spring :

INCONEL® X750

Ball :
- Optional hard faces
- Large ball design

Seats:

Stainless Steel + Hard Face

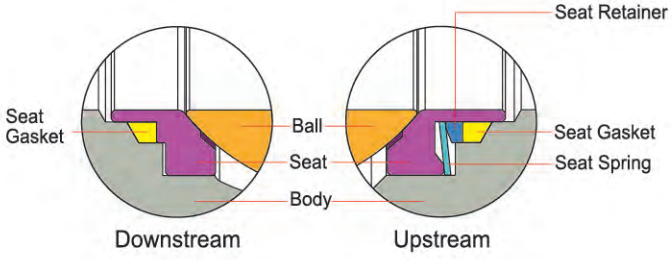


Spiral Wound Body Gasket

Preferred Direction

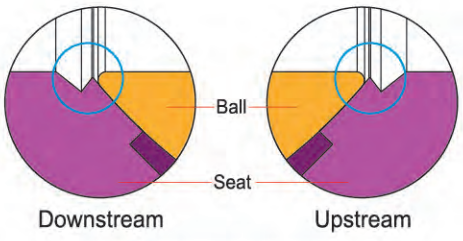
Options:

B Type : Bi-directional
Standard



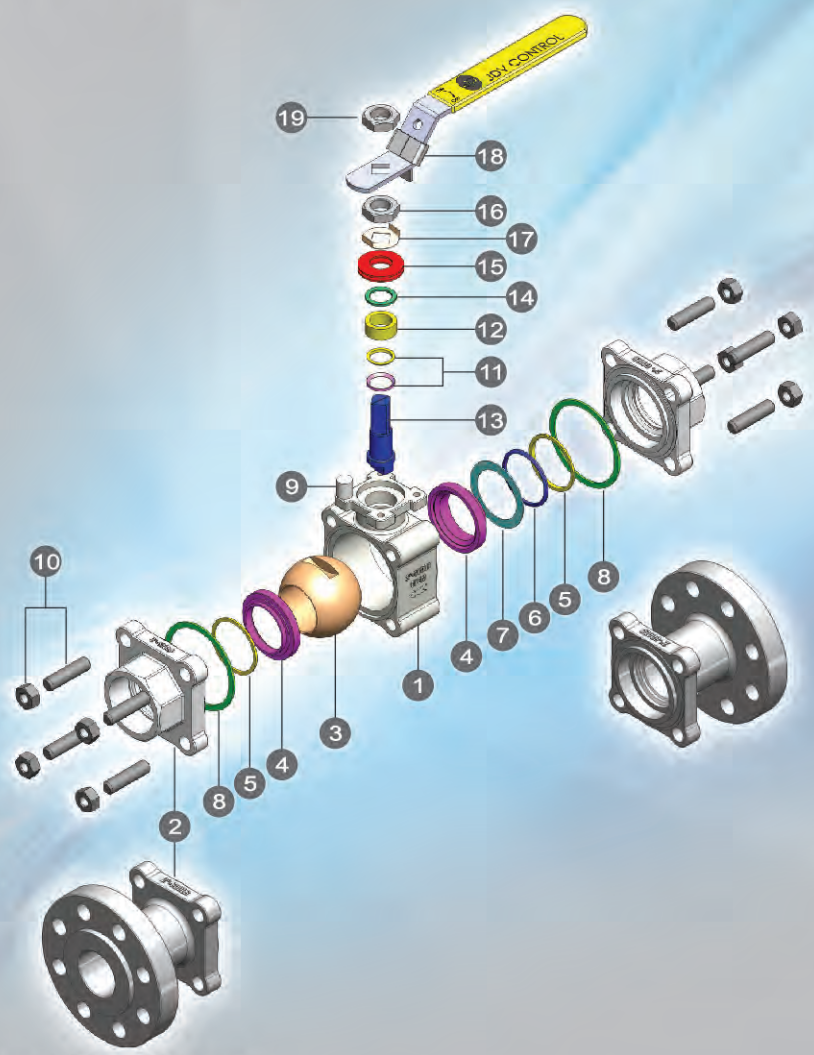
Preferred direction

S Type : Scraper
For heavy slurry such as the black liquor in Pulp & Paper industry.



Preferred direction

Downstream scraper on request for very heavy services.



Technical Specifications

STANDARD MATERIALS

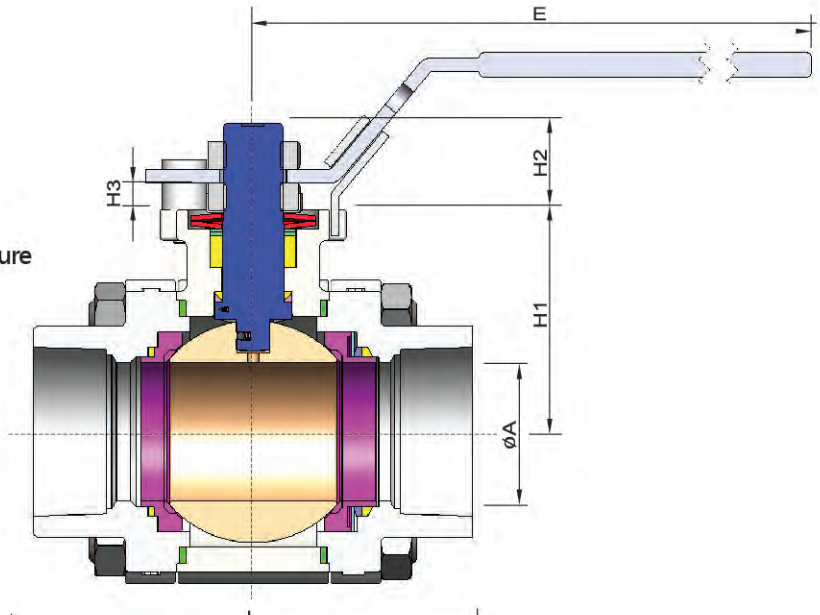
NO	PART NAME	-20~661°F (-29~350°C)	
1	BODY	A216-WCB	A351-CF8M
2	CAP	A216-WCB	A351-CF8M
3	BALL	A351-CF8M + HCR(1)/TC(1)	
4	SEAT	A351-CF8M + STELLITE® /TC	
5	SEAT GASKET	GRAPHITE	
6	SEAT RETAINER	A276-316	
7	SEAT SPRING	INCONEL® X750	
8	BODY GASKET	316SS+GRAPHITE	
9	STOPPER	A276-304	
10	BOLT & NUT	A193-B7 & A194-7	A193-B8 & A194-8
11	THRUST WASHER	A276-316 + GRAPHITE	
12	GLAND PACKING	GRAPHITE	
13	STEM	A564-630 (HH1150)	A276-XM-19
14	RING	A276-316	
15	BEVEL WASHER	INCONEL® X750	
16	NUT	A193-B8	
17	PACKING LOCK WASHER	A240-304	
18	HANDLE	A240-304	
19	HANDLE NUT	A193-B8	

NOTES:
(1) HCR = Hard Chrome TC = Tungsten Carbide

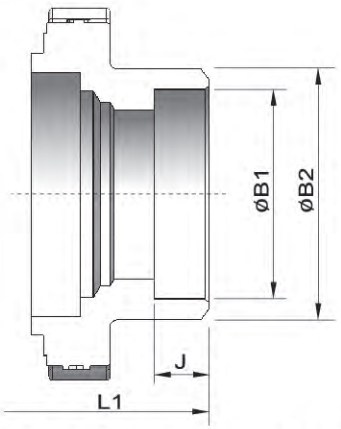
The above materials may be changed with different using conditions.

Applicable Standards

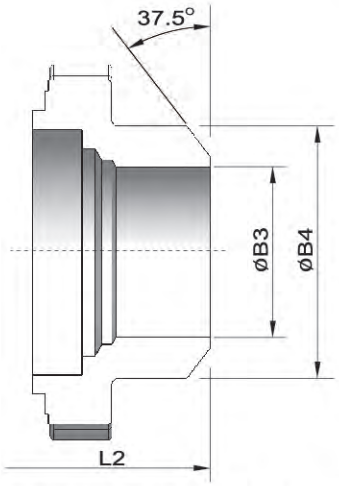
- Body Material : Standard in WCB, CF8M Other materials are available according to requirements.
- Nominal Size : 1/2" to 2" (DN15 to DN50)
- Pressure Rating : ASME CLASS 600
- End Connections : Threaded/Socket Weld Butt Weld/Flanged
- Temperature Range : -20~661°F (-29~350°C),higher temperature on request.
- Flanged Face-To-Face Dimensions : ASME B 16.1 0 / EN 558 Series 5/14
- Flanged Dimensions : ASME B16.5 / EN 1092-1
- Body Pressure Testing : ASME B16.34/API 598
- Seat Leakage Testing : ANSI/FCI 70-2 CLASS V in standard, Class VI in option.
- Casting : MSS-SP-25 / MSS-SP-55



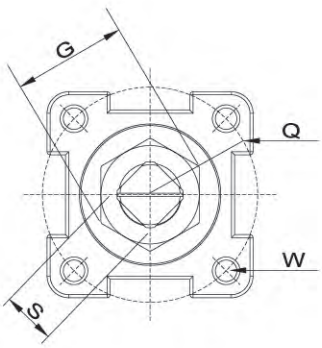
THREADED ENDS (TH)



SOCKET WELD ENDS (SW)

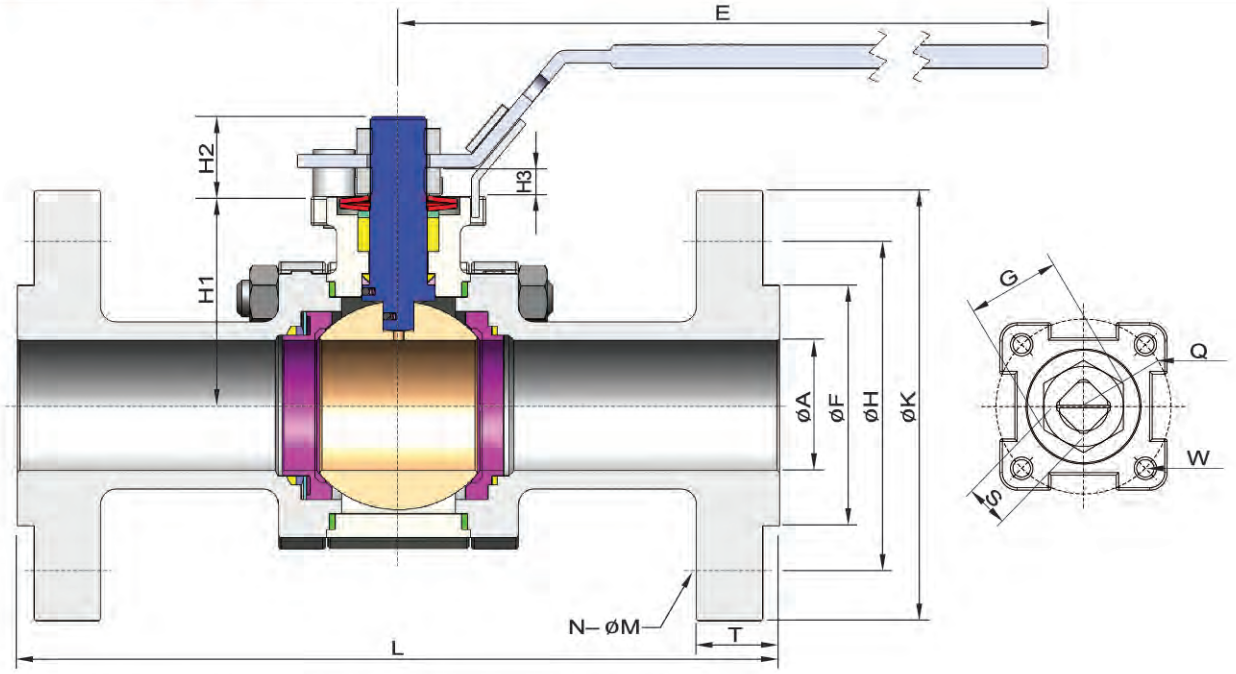


BUTT WELD ENDS (BW)



DIMENSIONS (TH/SW/BW ENDS) (mm)

SIZE		A	L	B1	B2	J	L1	B3	B4	L2	S	G	Q	W	H1	H2	H3	E	Wt (Kg)
15	1/2"	15	80.6	22.2	30	9.5	75	15	30	75	9	22	F04	M5	44.5	14	5	130	1.1
20	3/4"	20	96.6	27.6	38	12.5	90	20	38	90	9	22	F04	M5	47	14	5	130	1.5
25	1"	25	108	34.3	46	12.5	100	25	46	100	11	25.4	F05	M6	60	20	5	170	2.5
32	1-1/4"	32	127	43.1	56	12.5	110	32	56	110	11	25.4	F05	M6	64	20	5	170	3.9
40	1-1/2"	40	142	49.2	62	12.5	125	40	62	125	17	36.6	F07	M8	73	31	10	224	5.4
50	2"	50	158	61.7	74	16	150	50	74	150	17	36.6	F07	M8	80	31	10	224	7.9



DIMENSIONS (ASME CLASS 150 FLANGED ENDS) (mm)

SIZE		A	F	H	K	M	N	L	T	S	G	Q	W	H1	H2	H3	E	Wt (Kg)
15	1/2"	15	35	60.5	89	16	4	108	11.2	9	22	F04	M5	44.5	14	5	130	1.8
20	3/4"	20	43	70	98	16	4	117	11.2	9	22	F04	M5	47	14	5	130	2.2
25	1"	25	51	79.5	108	16	4	127	11.2	11	25.4	F05	M6	60	20	5	170	3.2
32	1-1/4"	32	64	89	117	16	4	140	12.7	11	25.4	F05	M6	64	20	5	170	4.3
40	1-1/2"	40	73	98.5	127	16	4	165	14.3	17	36.6	F07	M8	73	31	10	224	6.3
50	2"	50	92	120.5	152	19	4	178	15.9	17	36.6	F07	M8	80	31	10	224	9.0

DIMENSIONS (ASME CLASS 300 FLANGED ENDS) (mm)

SIZE		A	F	H	K	M	N	L	T	S	G	Q	W	H1	H2	H3	E	Wt (Kg)
15	1/2"	15	35	66.5	95	16	4	140	14.3	9	22	F04	M5	44.5	14	5	130	2.5
20	3/4"	20	43	82.5	117	19	4	152	15.9	9	22	F04	M5	47	14	5	130	3.5
25	1"	25	51	89	124	19	4	165	17.5	11	25.4	F05	M6	60	20	5	170	4.9
32	1-1/4"	32	64	98.6	133	19	4	178	19	11	25.4	F05	M6	64	20	5	170	5.4
40	1-1/2"	40	73	114.5	156	22	4	190	20.6	17	36.6	F07	M8	73	31	10	224	9.8
50	2"	50	92	127	165	19	8	216	22.3	17	36.6	F07	M8	80	31	10	224	12.2

DIMENSIONS (ASME CLASS 600 FLANGED ENDS) (mm)

SIZE		A	F	H	K	M	N	L	T	S	G	Q	W	H1	H2	H3	E	Wt (Kg)
15	1/2"	15	35	66.5	95	16	4	165	20.9	9	22	F04	M5	42	14	5	130	2.6
20	3/4"	20	43	82.5	117	19	4	190	22.3	9	22	F04	M5	45	14	5	130	4.0
25	1"	25	51	89	124	19	4	216	23.9	11	25.4	F05	M6	55	20	5	170	5.9
32	1-1/4"	32	64	98.6	133	19	4	229	26.9	11	25.4	F05	M6	59	20	5	170	9.0
40	1-1/2"	38	73	114.5	156	22	4	241	28.7	17	36.6	F07	M8	72	31	10	224	11.8
50	2"	50	92	127	165	19	8	292	31.8	17	36.6	F07	M8	80	31	10	224	16.9

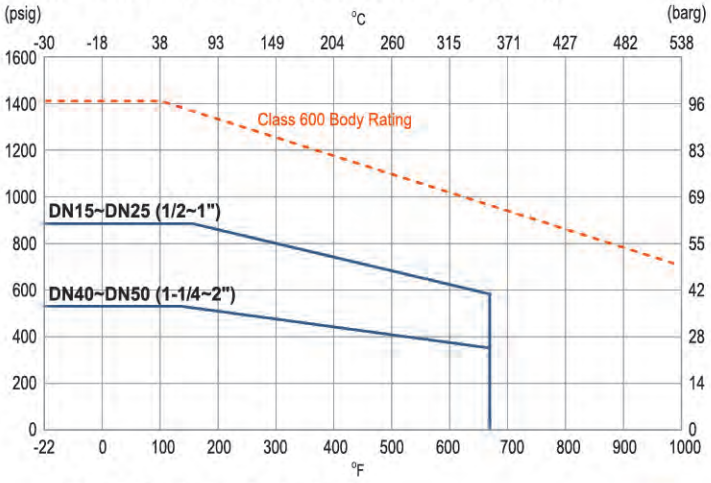
DIMENSIONS (DIN PN16/PN40 FLANGED ENDS) (mm)

SIZE		A	F	H	K	M	N	L	T	S	G	Q	W	H1	H2	H3	E	Wt (Kg)
15	1/2"	15	45	65	95	14	4	115	16	9	22	F04	M5	44.5	14	5	130	2.5
20	3/4"	20	58	75	105	14	4	120	18	9	22	F04	M5	47	14	5	130	3.5
25	1"	25	68	85	115	14	4	125	18	11	25.4	F05	M6	60	20	5	170	4.9
32	1-1/4"	32	78	100	140	18	4	130	18	11	25.4	F05	M6	64	20	5	170	6.6
40	1-1/2"	40	88	110	150	18	4	140	18	17	36.6	F07	M8	73	31	10	224	9.8
50	2"	50	102	125	165	18	4	150	20	17	36.6	F07	M8	80	31	10	224	12.2

DIMENSIONS (DIN PN100 FLANGED ENDS) (mm)

SIZE		A	F	H	K	M	N	L	T	S	G	Q	W	H1	H2	H3	E	Wt (Kg)
15	1/2"	15	45	75	105	14	4	165	20	9	22	F04	M5	44.5	14	5	130	2.6
25	1"	25	68	100	140	18	4	216	24	11	25.4	F05	M6	60	20	5	170	4.0
40	1-1/2"	40	88	125	170	22	4	241	26	17	36.6	F07	M8	73	31	10	224	5.9
50	2"	50	102	145	195	26	4	292	28	17	36.6	F07	M8	80	31	10	224	11.8

TEMPERATURE & PRESSURE DIAGRAM



MAX TEMPERATURE 661°F (350°C)

Cv VALUES

Size	DN15	DN20	DN25	DN32	DN40	DN50
	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
Cv	27	61	114	181.9	268	501

API 6D ISO 9001 CE PED 97/23/EC

HOW TO ORDER

JBF-SM → A → B → C → D → E → F → G → H

Ex: JBF-SM → C3 → 04 → C → 22 → 025 → TH → HCR → FIH

A. SPECIFICATION

C3	ASME CLASS 600 BODY

B. BODY MAT'L

02	WCB (1.0619)
03	CF8 (1.4308)
04	CF8M (1.4408)
05	CF3 (1.4306)
06	CF3M (1.4404)
07	CG8M (1.4412)

C. BALL & SEAT MAT'L

A	CF8
C	CF8M
D	CF3
E	CF3M
F	CG8M

D. STEM MAT'L

10	S31803
22	630
25	XM-19
26	S66286

E. SIZE

015	1/2"
020	3/4"
025	1"
032	1-1/4"
040	1-1/2"
050	2"

F. END CONNECTION

TH	THREAD
SW	SOCKET WELD
BW	BUTT WELD
C1	150LB FLANGED
C2	300LB FLANGED
C3	600LB FLANGED
D2	PN16 FLANGED
D4	PN40 FLANGED
D5	PN100 FLANGED

G. HARD FACE

HCR	BALL W/HCR SEAT W/STELLITE®
TC	BALL W/TC SEAT W/TC

H. OPTION

F	FIRE SAFE
L	EXTENDED STEM
I	LIVE LOADING
H	LEVER
G	GEAR
A	BARE SHAFT
S1	SINGLE SCRAPER (UPSTREAM SIDE)
S2	DOUBLE SCRAPER (UPSTREAM + DOWNSTREAM)

HOW TO ORDER

※ Alternative materials are available on request.