



JDV
CONTROL
VALVES



JBF/JBFM Cryogenic Series

Floating Type **Soft** **Metal** Seat Ball Valve



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



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Floating Type Soft Metal Seat Ball Valve

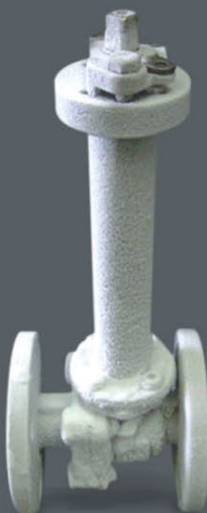
Full Bore Two-Piece Flanged Ends

JIS 10/20K ASME CLASS 150/300 DIN PN16/40

In order to satisfy the ever growing needs of high-quality cryogenic valves for a wide range of industries, our skilled engineers, who already possess an extensive experience in critical applications, designed the JBF/JBFM Cryogenic Series. Based on the successful and renowned design of the JBF/BFM Series, our cryogenic products offer an unmatched level of reliability, stability and most importantly safety, whatever the low temperature medium may be: oxygen, nitrogen, hydrogen, helium, argon, etc.

Product Features

1. Available in soft and metal seats to meet the requirements of all kinds of industries.
2. Highly precise machining enabling the seat leakage to reach the strict requirements of the BS6364 standard.
3. Extended stem protecting efficiently the actuator from the frozen temperature of the medium.
4. Spring-loaded design keeping the metal seat in tight contact with the ball, even at low pressure.
5. Design with a larger ball, to offer the best sealing efficiency.
6. Upstream relief hole on the ball, preventing any overpressure in the cavity.
7. Antistatic design
8. Anti-blowout stem design
9. ISO 5211 Mounting Pad design.



Applicable Standards

- Body Material : Standard in LCB, LCC, LC9, CF8, CF8M

Special materials are available according to requirements.

- Nominal Size : 1/2" to 6" (DN15 to DN150)
- Pressure Rating : JIS 10/20K ASME CLASS 150/300 DIN PN16/40
- End Connections : RF
- Temperature Range : Soft Seat : -321~356 °F (-196~180 °C)
Metal Seat : -321~661 °F (-196~350 °C)
- Face-To-Face Dimensions : JIS B2002 / ASME B16.10 / EN558 SERIES 14/15
- Flange Dimensions : JIS B2220 / ASME B16.5 / EN 1092-1
- Body Pressure Testing : JIS B2003 / API 598
- Seat Leakage Testing : BS6364
- Casting : MSS-SP-25 / MSS-SP-55

Industrial Fields:

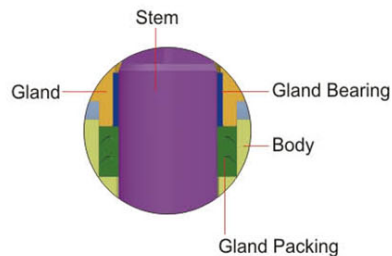
Oil & Gas	Power Plant
Refinery / Petrochemical	Steel Mill
Chemical	Food
Pulp & Paper	Mining



Cryogenic Testing according to BS6364

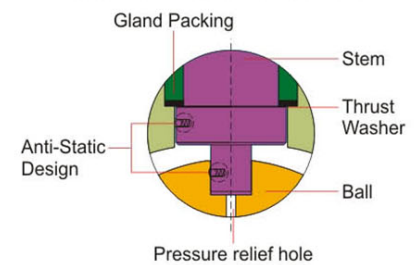
Design & Structure

Gland Packing : Flexible Graphite



Gland Packing Area
Graphite gland packing designed for Fire Safe ensures the safety under fire accident.

Stem: A276-304 / A276-316

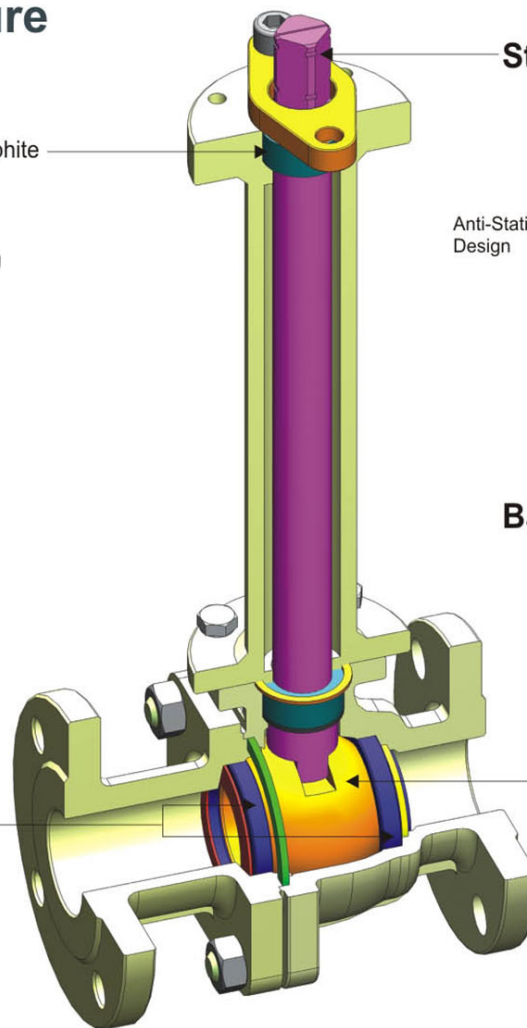


Ball: Stainless Steel
Stainless Steel + Hard Face
Upstream relief hole design

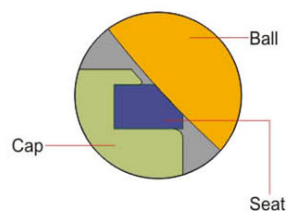


Seat Options:

Soft
Metal

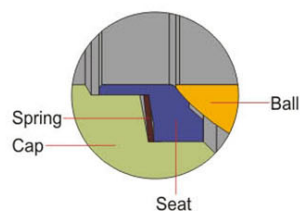


Soft Seat

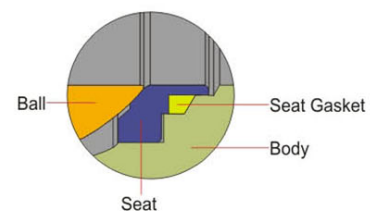


Seat Area (Upstream & Downstream Sides) - Soft Seat

Metal Seat



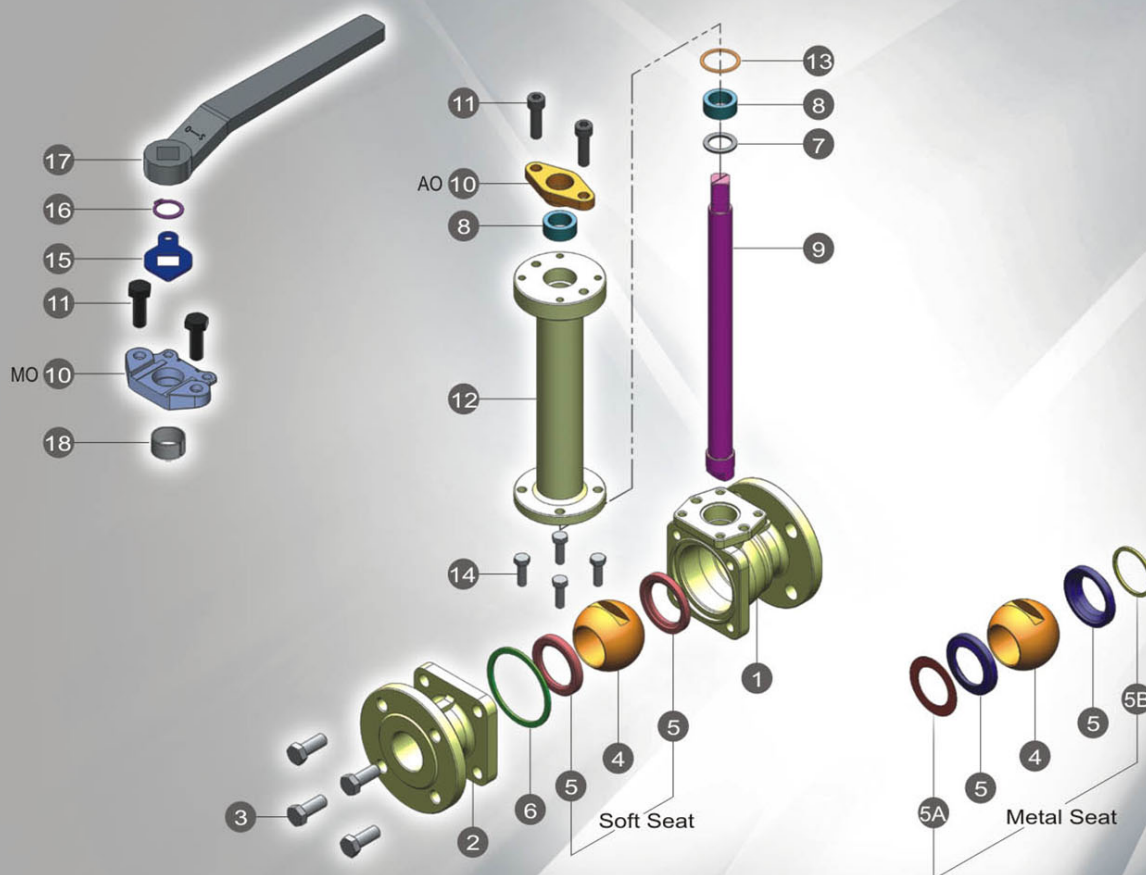
Seat Area (Upstream side) Metal Seat
Seat Spring provides flexibility to piping stress for stabilizing the operation.



Seat Area (Downstream side) Metal Seat
Seat-Gasket is Pressed-fit into the body and this provides the stability for a wide temperatures range.



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Technical Specifications

STANDARD MATERIALS

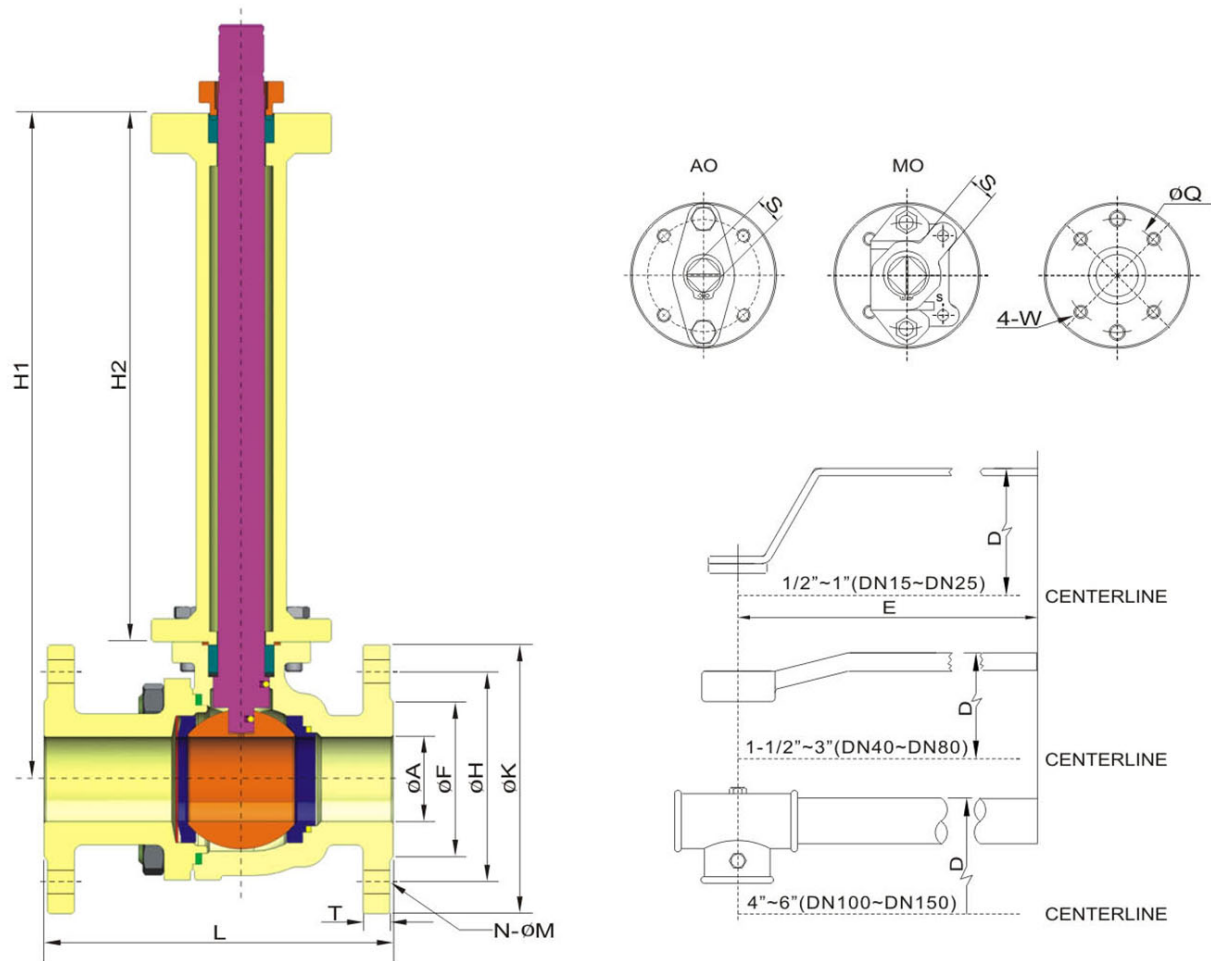
JBF SERIES							
NO	TYPE	LM			LH		
	TEMPERATURE	-40~356°F (-40~180°C)			-321~356°F (-196~180°C)		
1	BODY	A352-LCB/LCC	A351-CF8	A351-CF8M	A352-LC9	A351-CF8	A351-CF8M
2	CAP	A352-LCB/LCC	A351-CF8	A351-CF8M	A352-LC9	A351-CF8	A351-CF8M
3	BOLT&NUT	A193-B8 & A194-8					
4	SOFT SEAT	BALL	A351-CF8	A351-CF8M	A351-CF8	A351-CF8M	
5	SEAT	SEAT	TFM-1600			PCTFE	
6	BODY GASKET	SS316+GRAPHITE					
7	THRUST WASHER	METAL+HARD FACE					
8	GLAND PACKING	GRAPHITE					
9	STEM ⁽²⁾	A276-304	A276-316	A276-304	A276-316		
10	GLAND ⁽³⁾	A351-CF8					
11	GLAND BOLT	STAINLESS STEEL					
12	BONNET	A276-304	A276-316	A276-304	A276-316		
13	BONNET GASKET	GRAPHITE					
14	BONNET BOLT	STAINLESS STEEL					
15	TRAVEL STOP (MO)	A240-304					
16	SNAP CATCH (MO)	AISI 420					
17	HANDLE (MO)	A240-304(1/2"~1") / FCD45(1-1/2"~3") / FCD45+SGP(4" AND ABOVE)					
18	GLAND BEARING	A240-316+PTFE					

JBFM SERIES						
NO	TYPE		LM	LH		
	TEMPERATURE		-40~661°F (-40~350°C)	-321~661°F (-196~350°C)		
1	BODY		A352-LCB/LCC	A352-LC9	A351-CF8	A351-CF8M
2	CAP		A352-LCB/LCC	A352-LC9	A351-CF8	A351-CF8M
3	BOLT&NUT		A193-B8 & A194-8			
4	METAL SEAT	BALL	A351-CF8+HCR ⁽¹⁾ /TC ⁽¹⁾			A351-CF8M+HCR/TC
5		SEAT	A351-CF8+STELLITE®/TC			A351-CF8M+STELLITE®/TC
5A		SPRING	INCONEL® X-750			
5B		SEAT GASKET	GRAPHITE			
6	BODY GASKET		SS316+GRAPHITE			
7	THRUST WASHER		METAL+HARD FACE			
8	GLAND PACKING		GRAPHITE			
9	STEM ⁽²⁾		A276-304		A276-316	
10	GLAND ⁽³⁾		A351-CF8			
11	GLAND BOLT		STAINLESS STEEL			
12	BONNET		A276-304		A276-316	
13	BONNET GASKET		GRAPHITE			
14	BONNET BOLT		STAINLESS STEEL			
15	TRAVEL STOP (MO)		A240-304			
16	SNAP CATCH (MO)		AISI 420			
17	HANDLE (MO)		A240-304(1/2"~1") / FCD45(1-1/2"~3") / FCD45+SGP(4" AND ABOVE)			
18	GLAND BEARING		A240-316+PTFE			

The above materials may be changed with different using conditions.

NOTES:

- (1) HCR=Hard Chrome Plated, TC=Tungsten Carbide Coated
 (2) Extended stem is recommended according to using conditions.
 (3) AO:Automation MO:Manual Operation



DIMENSIONS (JBF/JBFM-A1 SERIES JIS 10K)

(mm)

SIZE	A	F	H	K	M	N	L	T	H1		H2		S	Q	W	D		E	Wt(Kg)		
									Short	Long	Short	Long				Short	Long		Short	Long	
15	1/2"	15	51	70	95	15	4	108	12	140	240	100	200	10	42	M5	200	300	150	2.6	3
20	3/4"	20	56	75	100	15	4	117	14	145	245	100	200	10	42	M5	205	305	150	3	3.4
25	1"	25	67	90	125	19	4	127	14	150	250	100	200	12	50	M6	215	315	160	4.4	5
40	1-1/2"	38	81	105	140	19	4	165	16	190	315	125	250	17	70	M8	245	370	230	8.8	10
50	2"	50	96	120	155	19	4	178	16	200	325	125	250	17	70	M8	250	375	230	11.5	12.7
65	2-1/2"	65	116	140	175	19	4	190	18	245	395	150	300	20	70	M8	295	445	325	16.8	18.5
80	3"	76	126	150	185	19	8	203	18	250	400	150	300	20	70	M8	300	450	325	21	22.7
100	4"	100	151	175	210	19	8	229	18	275	425	150	300	27	102	M10	370	520	420	34.5	37.6
150	6"	150	212	240	280	23	8	394	22	345	520	175	350	32	125	M12	445	630	565	73.3	77.8

DIMENSIONS (JBF/JBFM-A2 SERIES JIS 20K)

(mm)

SIZE	A	F	H	K	M	N	L	T	H1		H2		S	Q	W	D		E	Wt(Kg)		
									Short	Long	Short	Long				Short	Long		Short	Long	
15	1/2"	15	51	70	95	15	4	140	14	140	240	100	200	10	42	M5	200	300	150	3.3	3.7
20	3/4"	20	56	75	100	15	4	152	16	145	245	100	200	10	42	M5	205	305	150	4.3	4.7
25	1"	25	67	90	125	19	4	165	16	150	250	100	200	12	50	M6	215	315	160	6.1	6.8
40	1-1/2"	38	81	105	140	19	4	190	18	190	315	125	250	17	70	M8	245	370	230	12.3	13.5
50	2"	50	96	120	155	19	8	216	18	200	325	125	250	17	70	M8	250	375	230	14.6	15.8
65	2-1/2"	65	116	140	175	19	8	241	20	245	395	150	300	20	70	M8	295	445	325	26.0	27.7
80	3"	76	132	160	200	23	8	282	22	250	400	150	300	20	70	M8	300	450	325	34.8	36.5
100	4"	100	160	185	225	23	8	305	24	275	425	150	300	27	102	M10	370	520	420	54.3	57.4
150	6"	150	230	260	305	25	12	403	28	345	520	175	350	32	125	M12	445	630	565	109.1	113.6



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DIMENSIONS (JBF/JBFM-C1 SERIES ASME CLASS 150)

(mm)

SIZE	A	F	H	K	M	N	L	T	H1		H2		S	Q	W	D		E	Wt(Kg)		
									Short	Long	Short	Long				Short	Long		Short	Long	
15	1/2"	15	35	60.5	89	16	4	108	11.2	140	240	100	200	10	42	M5	200	300	150	2.6	3
20	3/4"	20	43	70.0	98	16	4	117	11.2	145	245	100	200	10	42	M5	205	305	150	3	3.4
25	1"	25	51	79.5	108	16	4	127	11.2	150	250	100	200	12	50	M6	215	315	160	4.4	5
40	1-1/2"	38	73	98.5	127	16	4	165	14.3	190	315	125	250	17	70	M8	245	370	230	8.8	10
50	2"	50	92	120.5	152	19	4	178	15.9	200	325	125	250	17	70	M8	250	375	230	11.5	12.7
65	2-1/2"	65	105	139.5	178	19	4	190	17.5	245	395	150	300	20	70	M8	295	445	325	16.8	18.5
80	3"	76	127	152.5	190	19	4	203	19.1	250	400	150	300	20	70	M8	300	450	325	21	22.7
100	4"	100	157	190.5	229	19	8	229	23.9	275	425	150	300	27	102	M10	370	520	420	34.5	37.6
150	6"	150	216	241.5	279	22	8	394	25.4	345	520	175	350	32	125	M12	445	630	565	73.3	77.8

DIMENSIONS (JBF/JBFM-C2 SERIES ASME CLASS 300)

(mm)

SIZE	A	F	H	K	M	N	L	T	H1		H2		S	Q	W	D		E	Wt(Kg)		
									Short	Long	Short	Long				Short	Long		Short	Long	Short
15	1/2"	15	35	66.5	95	16	4	140	14.3	140	240	100	200	10	42	M5	200	300	150	3.3	3.7
20	3/4"	20	43	82.5	117	19	4	152	15.9	145	245	100	200	10	42	M5	205	305	150	4.3	4.7
25	1"	25	51	89.0	124	19	4	165	17.5	150	250	100	200	12	50	M6	215	315	160	6.1	6.8
40	1-1/2"	38	73	114.5	156	22	4	190	20.7	190	315	125	250	17	70	M8	245	370	230	12.3	13.5
50	2"	50	92	127.0	165	19	8	216	22.3	200	325	125	250	17	70	M8	250	375	230	14.6	15.8
65	2-1/2"	65	105	149.0	190	22	8	241	25.4	245	395	150	300	20	70	M8	295	445	325	26.0	27.7
80	3"	76	127	168.0	210	22	8	282	28.6	250	400	150	300	20	70	M8	300	450	325	34.8	36.5
100	4"	100	157	200.0	254	22	8	305	31.8	275	425	150	300	27	102	M10	370	520	420	54.3	57.4
150	6"	150	216	270.0	318	22	12	403	36.6	345	520	175	350	32	125	M12	445	630	565	109.1	113.6

DIMENSIONS (JBF/JBFM-D2 SERIES DIN PN16)

(mm)

SIZE	A	F	H	K	M	N	L		T	H1		H2		S	Q	W	D		E	Wt(Kg)		
							S14	S15		Short	Long	Short	Long				Short	Long		Short	Long	
DN 15~DN 50 USE PN40																						
65	2-1/2"	65	122	145	185	18	4	170		18	245	395	150	300	20	70	M8	295	445	325	16.8	18.5
80	3"	76	138	160	200	18	8	180		20	250	400	150	300	20	70	M8	300	450	325	21	22.7
100	4"	100	158	180	220	18	8	190		20	275	425	150	300	27	102	M10	370	520	420	34.5	37.6
150	6"	150	212	240	285	22	8		350	22	345	520	175	350	32	125	M12	445	630	565	73.3	77.8

DIMENSIONS (JBF/JBFM-D4 SERIES DIN PN40)

(mm)

SIZE	A	F	H	K	M	N	L		T	H1		H2		S	Q	W	D		E	Wt(Kg)	
							S14	S15		Short	Long	Short	Long				Short	Long		Short	Long
15	1/2"	15	45	65	95	14	4	115	16	140	240	100	200	10	42	M5	200	300	150	3.3	3.7
20	3/4"	20	58	75	105	14	4	120	18	145	245	100	200	10	42	M5	205	305	150	4.3	4.7
25	1"	25	68	85	115	14	4	125	18	150	250	100	200	12	50	M6	215	315	160	6.1	6.8
40	1-1/2"	38	88	110	150	18	4	140	18	190	315	125	250	17	70	M8	245	370	230	12.3	13.5
50	2"	50	102	125	165	18	4	150	20	200	325	125	250	17	70	M8	250	375	230	14.6	15.8
65	2-1/2"	65	122	145	185	18	8	170	22	245	395	150	300	20	70	M8	295	445	325	26.0	27.7
80	3"	76	138	160	200	18	8	180	24	250	400	150	300	20	70	M8	300	450	325	34.8	36.5
100	4"	100	162	190	235	22	8	190	24	275	425	150	300	27	102	M10	370	520	420	54.3	57.4
150	6"	150	218	250	300	26	8	350	28	345	520	175	350	32	125	M12	445	630	565	109.1	113.6

Cv VALUES

SIZE	DN15	DN20	DN25	DN40	DN50	DN65	DN80	DN100	DN125	DN150
	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"
Cv	27	61	114	268	501	804	1158	2118	3412	5074

CERTIFICATES



API 6D

ISO 9001

BS6364 TESTING REPORT

HOW TO ORDER

JBF → **A** → **B** → **C** → **D** → **E** → **F** → **G**
Ex: **JBF** → **C1** → **03** → **A** → **F** → **050** → **H** → **LH**

A. SPECIFICATION	B. BODY MAT'L	C. BALL & STEM MAT'L	D. SEAT MAT'L	E. SIZE	F. OPTION	G. TEMPERATURE
A1 JIS 10K	03 CF8	A CF8	T TFM-1600	015 1/2"	F FIRE SAFE	LM -40~356°F (-40~180°C)
A2 JIS 20K	04 CF8M	C CF8M	F PCTFE	020 3/4"	I LIVE LOADING	LH -321~356°F (-196°C~180°C)
C1 ASME CLASS 150	05 CF3	D CF3		025 1"	H LEVER	
C2 ASME CLASS 300	06 CF3M	E CF3M		032 1-1/4"	G GEAR	
D2 DIN PN16	07 CG8M	F CG8M		040 1-1/2"	A BARE SHAFT	
D4 DIN PN40	11 LCB			050 2"		
	12 LCC			065 2-1/2"		
				080 3"		
				100 4"		
				150 6"		

JBFM → **A** → **B** → **C** → **D** → **E** → **F** → **G** → **H**
Ex: **JBFM** → **C1** → **04** → **C** → **C** → **050** → **G** → **LH** → **HCR**

A. SPECIFICATION	B. BODY MAT'L	C. BALL & STEM MAT'L	D. SEAT MAT'L	E. SIZE	F. OPTION	G. TEMPERATURE	H. COATING
A1 JIS 10K	03 CF8	A CF8	A CF8	015 1/2"	F FIRE SAFE	LM -40~661°F (-40~350°C)	HCR BALL W/HCR SEAT W/STELLITE®
A2 JIS 20K	04 CF8M	C CF8M	C CF8M	020 3/4"	I LIVE LOADING	LH -321~661°F (-196°C~350°C)	CR BALL W/TC SEAT W/TC
C1 ASME CLASS 150	05 CF3	D CF3	D CF3	025 1"	H LEVER		
C2 ASME CLASS 300	06 CF3M	E CF3M	E CF3M	040 1-1/2"	G GEAR		
D2 DIN PN16	07 CG8M	F CG8M	F CG8M	050 2"	A BARE SHAFT		
D4 DIN PN40	11 LCB			065 2-1/2"			
	12 LCC			080 3"			
				100 4"			
				150 6"			

HOW
TO ORDER



■ HEADQUARTERS

NO. 6-1, QINGNIAN RD., YANGMEI CITY, TAOYUAN COUNTY 326, TAIWAN
TEL +886-3-4965066 FAX +886-3-4963526 E-MAIL: sales@jdv.com.tw



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