

JDV

| JSB Series V-Port Segment Control Ball Valves

Valves for Flow Control
ASME Classes 150-300



The Optimal Control Solution

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The JDV Story

JDV was founded in Taiwan in 1975, and from its inception has focused on developing technically superior flow control products. It has steadily expanded its product portfolio since its founding, and now has a wide product offering with a focus on research and development, and new technology adoption. JDV's product portfolio now encompasses everything from commodity valves to its flagship engineered products: Metal-seated ball valves, Metal-seated triple offset butterfly valves, and control valves.

JDV has made a name for itself with excellence in metal-seated technologies; with in-house HVOF and other hardfacing capabilities that allow it to design valves to handle the most severe high-temperature, corrosive and erosive applications.

The JSB Series V-Port Segment Control Ball Valve are the most cutting-edge engineered products in the JDV portfolio, and JDV has commercialized this product with Computer-Aided Drafting & Design, Finite Element Analysis, all verified and validated by rigorous prototyping and extensive design testing in its Research & Development Center. The result is a robust, thoughtful, feature-rich design that we are confident will exceed the expectations of even the most challenging flow control applications.



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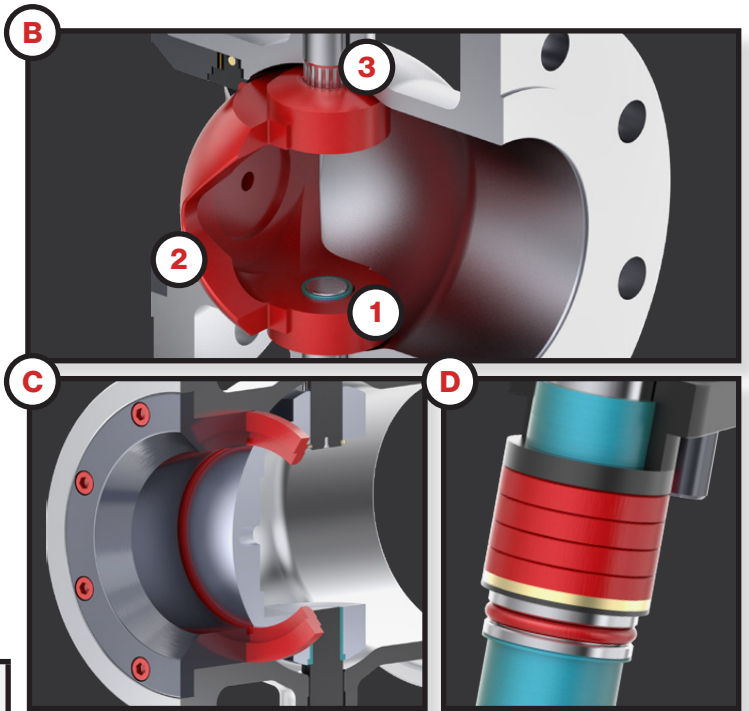
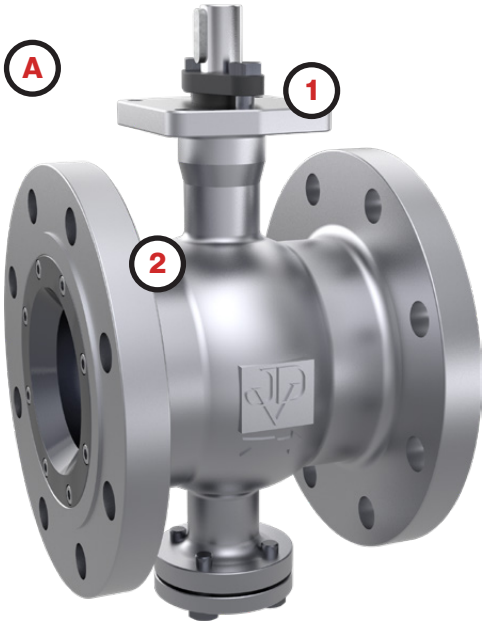
Applications

- > **Flow Control**
- > **Pressure Control**
- > **Slurries of Viscous Mediums**
- > **Other Unique Mediums**
 - Mediums containing powders or particles
 - Mediums with chips or fibers especially in the pulp & paper industry

INDUSTRIES WE SERVE



JSB Series V-Port Segment Control Ball Valve



Product Scope

Size Range: NPS 1 through NPS 20
Maximum Temp Soft Seat: +356°F (180°C) S01 Type Seat: +661°F (350°C) S02 Type Seat: +446°F (230°C)
Design Standard: ASME B16.34, ISA S75.04 (Face-to-Face), API 598 (Shell Test) Soft Seat: ANSI/FCI 70-2 Class VI Metal Seat: ANSI/FCI 70-2 Class IV (Seat Leakage), ISO 5211 (Actuator Mounting)
Available Body Materials: A216 WCB, A352 LCC, A351 CF8M, A351 CF8, A351 CG8M, A995 CD3MN Other materials available on request
Pressure Class Range: ASME 150 - 300
Available End Connections: RF (ASME B16.5), Wafer
Available Trim Materials Soft: 316SS Metal: 17-4PH, F51 Other materials available on request
Available Seat Materials Soft: 50% SS-filled PTFE, 15% Glass-filled PTFE, TFM, PEEK Metal: Hard Chrome Segment w/ Stellite Seat, Tungsten Carbide Segment & Seat, Chrome Carbide Segment & Seat

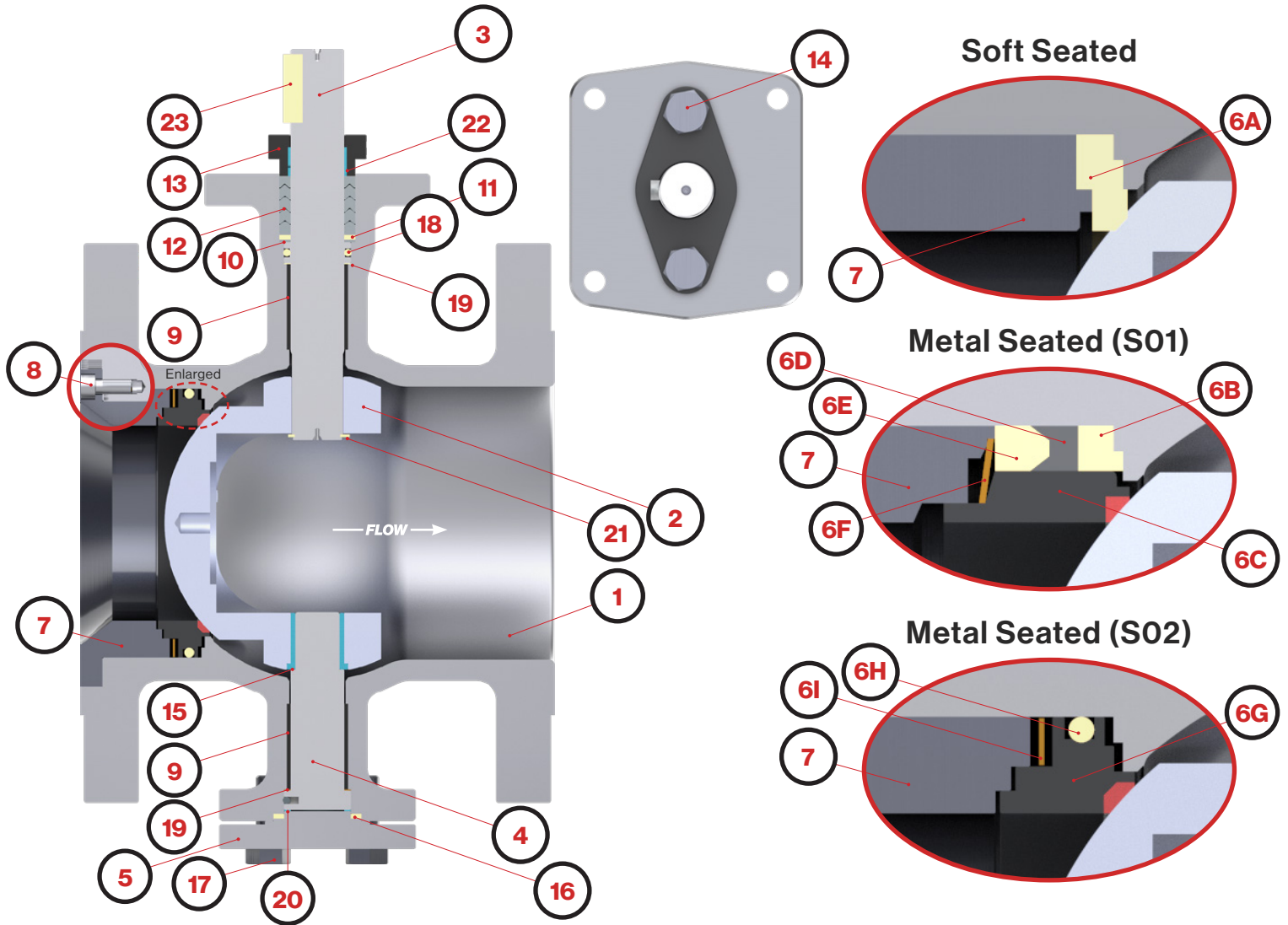
Features and Benefits

- > **Integral ISO 5211 Mounting Pad (Fig A/1)**
For ease of actuation
- > **1-PC Body Design (Fig A/2)**
Eliminates body flange leak path
- > **V-Segment Ball (Fig B/1)**
Gives a combination of precise control and high Cv
- > **V-Notch In Segment (Fig B/2)**
Provides a shearing function for superior performance in slurries and viscous media, powder and particulate media, and fibrous media
- > **Splined Stem Design (Fig B/3)**
Offers precise control of segment
- > **Swappable Seats & Easy-To-Remove Cap (Fig C)**
For ease of maintenance
- > **Low-E Stem Packing (Fig D)**
Stem Packing is designed and tested for long-term reliable low fugitive emissions performance

Options

- High Temperature Bonnet available for applications up to 661°F (350°C).
- 3 Plate Attenuator, for high-pressure applications, cuts noise and cavitation to ensure efficient maintenance.
- S01 Type Metal Seat is designed without elastomers for suitability to services up to 661°F (350°C).
- S02 Type Metal Seat is designed with an o-ring to reduce torque and enhance control performance.
- Double packing design with lantern ring and injection fitting.

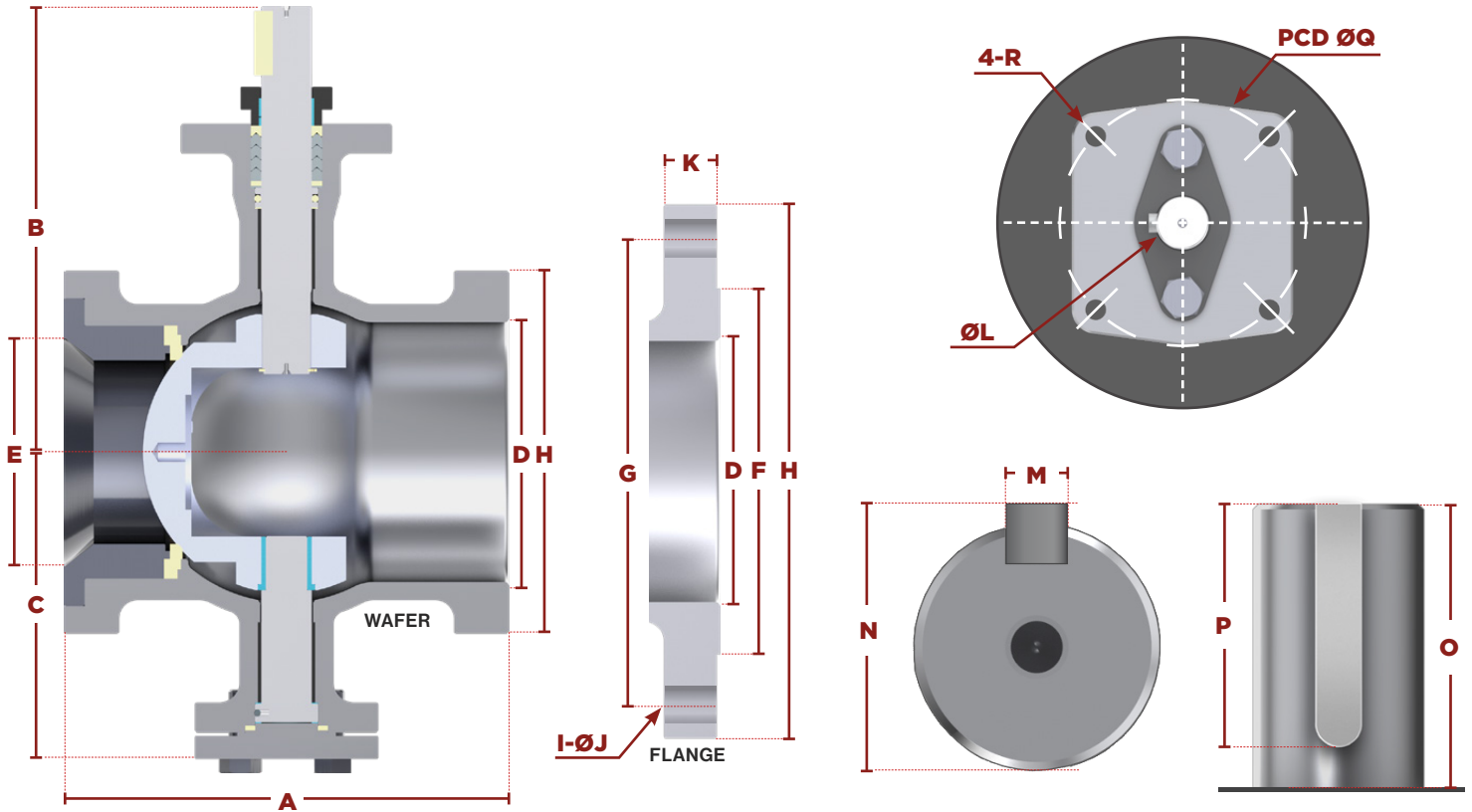
JSB – Parts & Materials



NO	PART NAME	MATERIALS
1	BODY	A216-WCB A351-CF8 A351-CF8M
2	SEGMENT	SOFT A351-CF8 A351-CF8M
		METAL(1"-8") A351-CF8+HCR A351-CF8M+HCR
		METAL(1"-16") A351-CF8+TC/CRC A351-CF8M+TC/CRC
3	STEM	SOFT & S02 A276-304 A276-316
		S01 A564-630(HH1150)
4	SHAFT	SOFT & S02 A276-304 A276-316
		S01 A564-630(HH1150)
5	END COVER	AISI-1045 A276-304 A276-316
6A	SEAT	SOFT G-PTFE
6B	SEAT SUPPORT	A351-CF8 A351-CF8M
6C	SEAT	A351-CF8+STELLITE / TC / CRC A351-CF8M+STELLITE / TC / CRC
6D	PACKING	S01 GRAPHITE
6E	SEAT GLAND	A351-CF8 A351-CF8M
6F	SPRING	INCONEL X-750
6G	SEAT	A351-CF8+STELLITE / TC / CRC A351-CF8M+STELLITE / TC / CRC
6H	O-RING	S02 FKM
6I	SPRING	INCONEL X-750

NO	PART NAME	MATERIALS
7	CAP	A351-CF8 A351-CF8M
8	BOLT	STAINLESS STEEL
9	THRUST BEARING	A240-316+PTFE
10	WASHER	G-PTFE
11	WASHER	A240-316+HCR
12	GLAND PACKING	G-PTFE / GRAPHITE
13	GLAND	A351-CF8
14	GLAND BOLT	STAINLESS STEEL
15	SUPPORT	A276-304 A276-316
16	COVER GASKET	G-PTFE / GRAPHITE
17	COVER BOLT	STAINLESS STEEL
18	STEM O-RING	FKM
19	WASHERS	SOFT & S02 TFE COMP.
		S01 A240-316+HCR
20	WASHERS	SOFT & S02 TFE COMP.
		S01 GRAPHITE
21	C-CLIP	304SS
22	GLAND BEARING	G-PTFE / A240-316+PTFE
23	PIN	AISI-1045

JSB Series Dimensional Data



Dimensions - ASME 150 / 300

SIZE		A		B		C		D		E		F		G				H				I-ØJ					
DN	NPS	CL 150 FLANGE		CL 300 FLANGE		CL 150 FLANGE		CL 300 FLANGE		WAFER		CL 150 FLANGE		CL 300 FLANGE		CL 150 FLANGE		CL 300 FLANGE		CL 150 FLANGE		CL 300 FLANGE					
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in				
25	1"	102	4.02	108	4.25	70	2.76	33	1.30	25	0.98	51	2.01	79.5	3.13	89	3.50	108.0	4.25	124	4.88	64.0	2.52	4-16	4-0.63	4-19	4-0.75
40	1½"	114	4.49	134	5.28	84	3.31	49	1.93	40	1.57	73	2.87	98.5	3.88	114.5	4.51	127.0	5	156	6.14	82.0	3.23	4-16	4-0.63	4-22	4-0.87
50	2"	124	4.88	142	5.59	92	3.62	60	2.36	50	1.97	92	3.62	120.5	4.74	127	5.00	152.0	5.98	165	6.50	100.0	3.94	4-19	4-0.75	8-19	8-0.75
65	2½"	140	5.51	151	5.94	101	3.98	73	2.87	65	2.56	105	4.13	139.5	5.49	149	5.87	178.0	7.01	190	7.48	118.0	4.65	4-19	4-0.75	8-22	8-0.87
80	3"	165	6.50	164	6.46	112	4.41	89	3.50	80	3.15	127	5.00	152.5	6.00	168	6.61	190.0	7.48	210	8.27	131.0	5.16	4-19	4-0.75	8-22	8-0.87
100	4"	194	7.64	194	7.64	134	5.28	113	4.45	100	3.94	157	6.18	190.5	7.50	200	7.87	229.0	9.02	254	10.00	158.0	6.22	8-19	8-0.75	8-22	8-0.87
125	5"	254	10.00	215	8.46	154	6.06	140	5.51	125	4.92	186	7.32	216	8.50	235	9.25	254.0	10	279.4	11.00	185.0	7.28	8-22	8-0.87	8-22	8-0.87
150	6"	229	9.02	232	9.13	171	6.73	160	6.30	132	5.20	216	8.50	241.5	9.51	267.9	10.55	279.0	10.98	318	12.52	216.0	8.5	8-22	8-0.87	12-22	12-0.87
200	8"	243	9.57	279	10.98	199	7.83	203	7.99	200	7.87	270	11.00	298.5	11.75	330	12.99	343.0	13.5	381	15.00	267.0	10.51	8-22	8-0.87	12-25	12-1.00
250	10"	297	11.69	326	12.83	234	9.21	252	9.92	250	9.84	324	12.76	362	14.25	387.5	15.26	406.0	15.98	445	17.52	-	-	12-25	12-1.00	16-29	16-1.13
300	12"	338	13.31	386	15.20	272	10.71	300	11.81	285	11.22	381	15.00	431.8	17.00	451	17.76	483.0	19.02	521	20.51	-	-	12-25	12-1.00	16-32	16-1.25
350	14"	400	15.75	450	17.72	340	13.39	350	13.78	336	13.23	413	16.26	476.3	18.75	514.4	20.25	533.0	20.98	584	22.99	-	-	12-29	12-1.13	20-32	20-1.25
400	16"	400	15.75	505	19.88	373	14.69	400	15.75	380	14.96	470	18.50	539.8	21.25	571.5	22.50	597.0	23.5	648	25.51	-	-	16-29	16-1.13	20-35	20-1.38

Dimensions - ASME 150 / 300

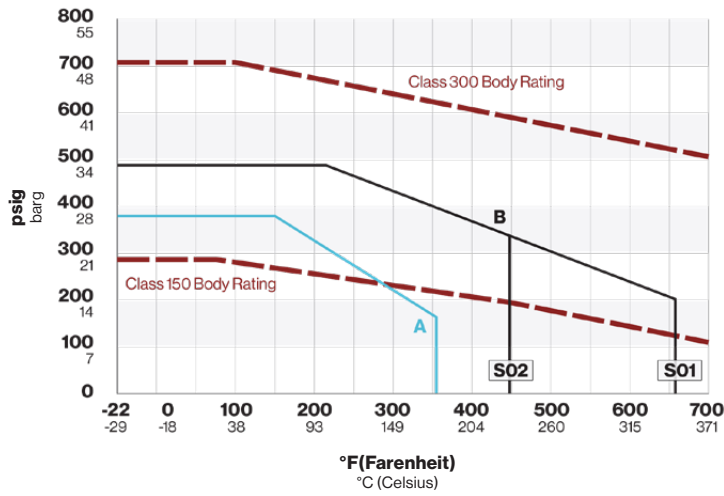
SIZE		K				L		M		N		O		P		Q		R		WEIGHT							
DN	NPS	CL 150 FLANGE		CL 300 FLANGE		mm		in		mm		in		mm		in		mm		in		CL 150 FLANGE		CL 300 FLANGE		WAFER	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lbs	kg	lbs	kg	lbs
25	1"	14.3	0.56	17.5	0.69	15.5	0.61	5	0.20	17.5	0.69	33	1.30	20	0.79	50	1.97	M6	3.4	7.5	5.8	12.79	2.5	8.16	-	-	
40	1½"	17.5	0.69	20.6	0.81	15.5	0.61	5	0.20	17.5	0.69	45	1.77	30	1.18	70	2.76	M8	5.4	11.9	8.9	19.62	3.75	12.79	-	-	
50	2"	19.1	0.75	22.3	0.88	15.5	0.61	5	0.20	17.5	0.69	44	1.73	30	1.18	70	2.76	M8	7.2	15.87	12.8	28.22	4.8	16.53	-	-	
65	2½"	22.3	0.88	25.4	1.00	15.5	0.61	6	0.24	17.5	0.69	45	1.77	30	1.18	70	2.76	M8	11	24.25	16	35.27	5.51	26.01	-	-	
80	3"	23.9	0.94	28.6	1.13	22	0.87	8	0.31	25	0.98	45	1.77	30	1.18	70	2.76	M8	14.5	31.97	19.8	43.65	9.11	28.22	-	-	
100	4"	23.9	0.94	31.8	1.25	22	0.87	8	0.31	25	0.98	51	2.01	30	1.18	102	4.02	M10	21.8	48.06	32.8	72.31	14.85	50.71	-	-	
125	5"	23.9	0.94	35.1	1.38	25	0.98	8	0.31	31	1.22	52	2.05	30	1.18	102	4.02	M10	30	66.14	42	92.59	25.9	69.45	-	-	
150	6"	25.4	1.00	36.6	1.44	25	0.98	8	0.31	31	1.22	52	2.05	30	1.18	102	4.02	M10	36	79.37	51	112.44	28.22	83.78	-	-	
200	8"	28.6	1.13	41.2	1.62	30	1.18	8	0.31	36	1.42	70	2.76	45	1.77	140	5.51	M16	59	130.07	86.5	190.7	45.2	137.79	-	-	
250	10"	30.2	1.19	47.7	1.88	36.3	1.43	14	0.55	46.3	1.82	76	2.99	55	2.17	140	5.51	M16	98.6	217.38	143.3	315.92	-	-	-	-	
300	12"	31.8	1.25	50.8	2.00	48	1.89	14	0.55	61	2.40	86	3.39	67	2.64	165	6.50	M20	165	363.76	210.6	464.29	-	-	-	-	
350	14"	35	1.38	54	2.13	67	2.64	20	0.79	76	2.99	115	4.53	80	3.15	165	6.50	M20	255	562.18	340	749.57	-	-	-	-	
400	16"	36.6	1.44	57	2.24	67	2.64	20	0.79	76	2.99	135	5.31	100	3.94	165	6.50	M20	340	749.57	450	992.08	-	-	-	-	

Face to Face dimensions L according to ISA S74.05 *Not in ISA standard

Pressure & Temperature Ratings

P/T Charts

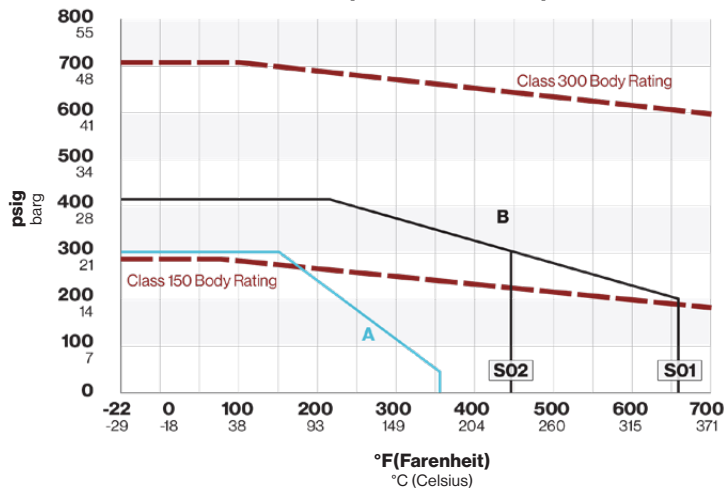
1" - 4" (DN25-DN100)



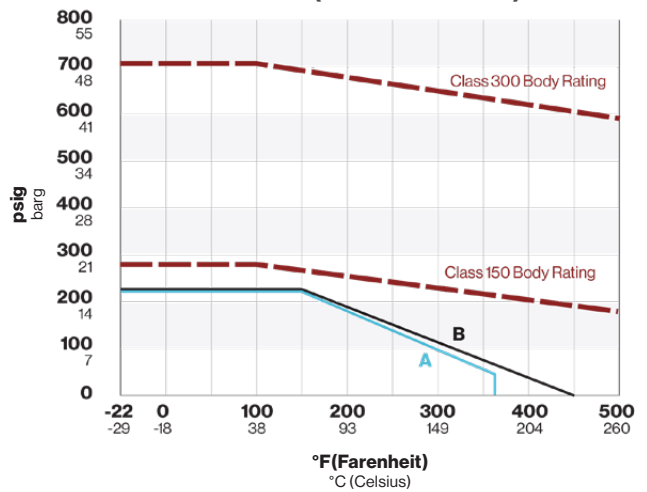
A = S/PTFE Seat
B = Metal Seat S01/S02



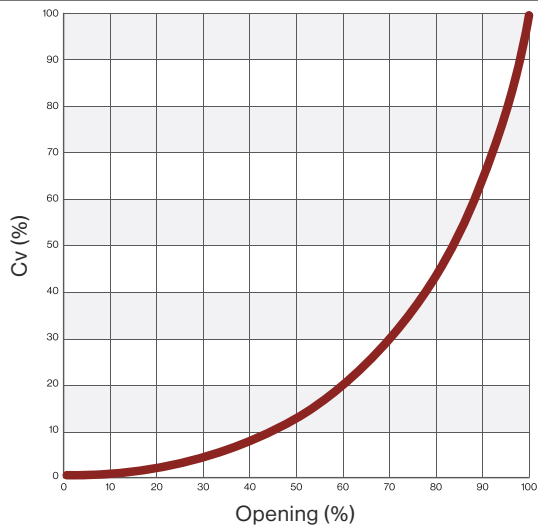
6" - 8" (DN150-DN200)



10"-16" (DN250-DN400)



INHERENT FLOW CHARACTERISTICS



Cv VALUES

SIZE	OPENING %									
	10	20	30	40	50	60	70	80	90	100
1"	0.01	0.52	1.66	3.44	5.87	9.11	13.36	18.83	27.54	40.50
1½"	0.02	1.06	3.35	6.95	11.85	18.38	26.96	38.00	55.55	81.70
2"	0.04	1.68	5.30	11.00	18.75	29.10	42.67	60.12	87.90	129.30
2½"	0.06	2.79	8.80	10.23	31.10	40.26	70.78	99.74	145.86	214.50
3"	0.10	4.54	14.30	29.67	50.62	78.50	115.20	162.30	237.40	349.10
4"	0.15	6.57	20.70	43.00	73.30	113.70	166.80	235.0	343.70	505.50
5"	0.23	10.20	32.10	66.64	113.70	176.40	258.70	360.60	533.00	784.00
6"	0.38	16.70	52.70	109.30	186.50	289.50	424.54	598.20	874.80	1286.50
8"	0.50	21.90	69.00	143.00	244.10	378.90	555.68	783.00	1145.00	1683.90
10"	0.93	39.58	124.85	258.80	441.50	685.13	1004.80	1416.00	2040.00	3045.00
12"	1.29	55.96	176.50	366.00	624.20	968.60	1420.60	2001.80	2927.40	4305.00
14"	1.73	75.30	237.40	492.20	839.50	1302.00	1910.70	2663.40	3937.00	5790.00
16"	2.27	98.30	310.20	643.00	1097.00	1702.00	2497.00	3480.00	5145.00	7566.00

How To Order Guide

NPS 2	Size			
	NPS 1 - NPS 20			
1	Pressure Class			
	1 = ASME Class 150		3 = ASME Class 300	
JSBM	Valve Type			
	JSBF = V-Port Segment Control Ball Valve, Soft-Seated		JSBM = V-Port Segment Control Ball Valve, Metal-Seated	
...	Body Configuration * = Omit if Not Required			
	ATT = 3-Plate Internal Attenuator			
RF	End Connection			
	RF = Raised Face		W = Wafer	
CF8M	Body Material			
	WCB = A216 WCB	LCC = A352 LCC	CF8M = A351 CF8M	CF8 = A351 CF8 CG8M = A351 CG8M
2	Trim Material			
	2 = 316SS Trim	00 = Same as Body Material		X = Special Trim
63	Stem Material * = Omit if Not Required			
	63 = 17-4PH Stem		51 = A182 F51 Stem	
HCR/STL	Seating Material			
	SP = 50% SS Powder-Filled PTFE	GP = 15% Glass-Filled PTFE	R = TFM	PE = PEEK
	CRC = Chrome Carbide Coated Segment & Seat	TC = Tungsten Carbide Coated Segment & Seat	HCR/STL = Hard Chrome Segment & Stellite Seat	
VA	Stem Seal			
	VA = FKM A Seal	G = Graphite Packing	X = Special Stem Seal	
N	NACE * = Omit if Not Required			
	N = NACE Compliant			
BS	Operator			
	G = Gear	BS = Bare Stem	A = Actuator	
S02	Configuration * = Omit if Not Required			
	S01 = S01 Type Metal Seat (-20°F to +661°F)		S02 = S02 Type Metal Seat (-20°F to +446°F)	



NPS 2 1-JSBM-RF-CF8M-2-63-HCR/STL-VA-N-BS-S02

Example: NPS 2 JSBM Series, CI 150, RF, CF8M Body, 316SS Trim, 17-4PH Stem, HCR Segment & Stellite Seats, FKM A Seals, NACE, Bare Stem, S02 Type Seat, Design: ASMEB16.34, Test: API598 Shell, ANSI/FCI 70-2 Class IV Seat



THE OPTIMAL CONTROL SOLUTION



JDV-JSB-0324