

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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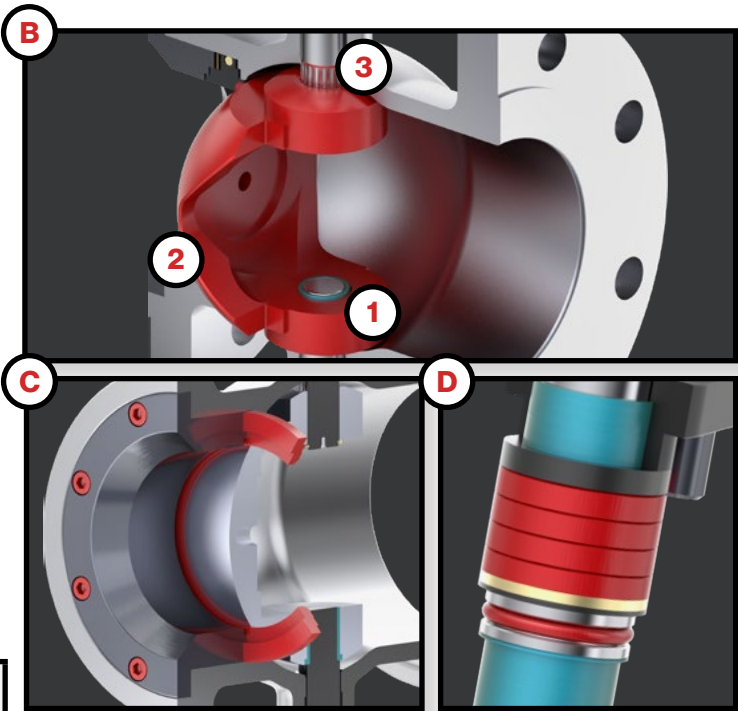
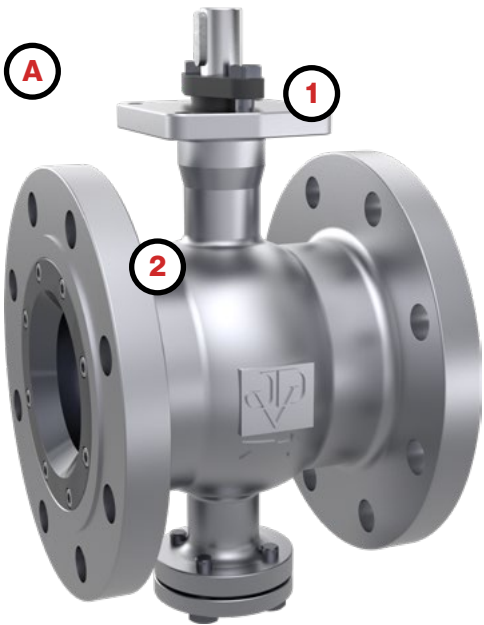
Applications

- > 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

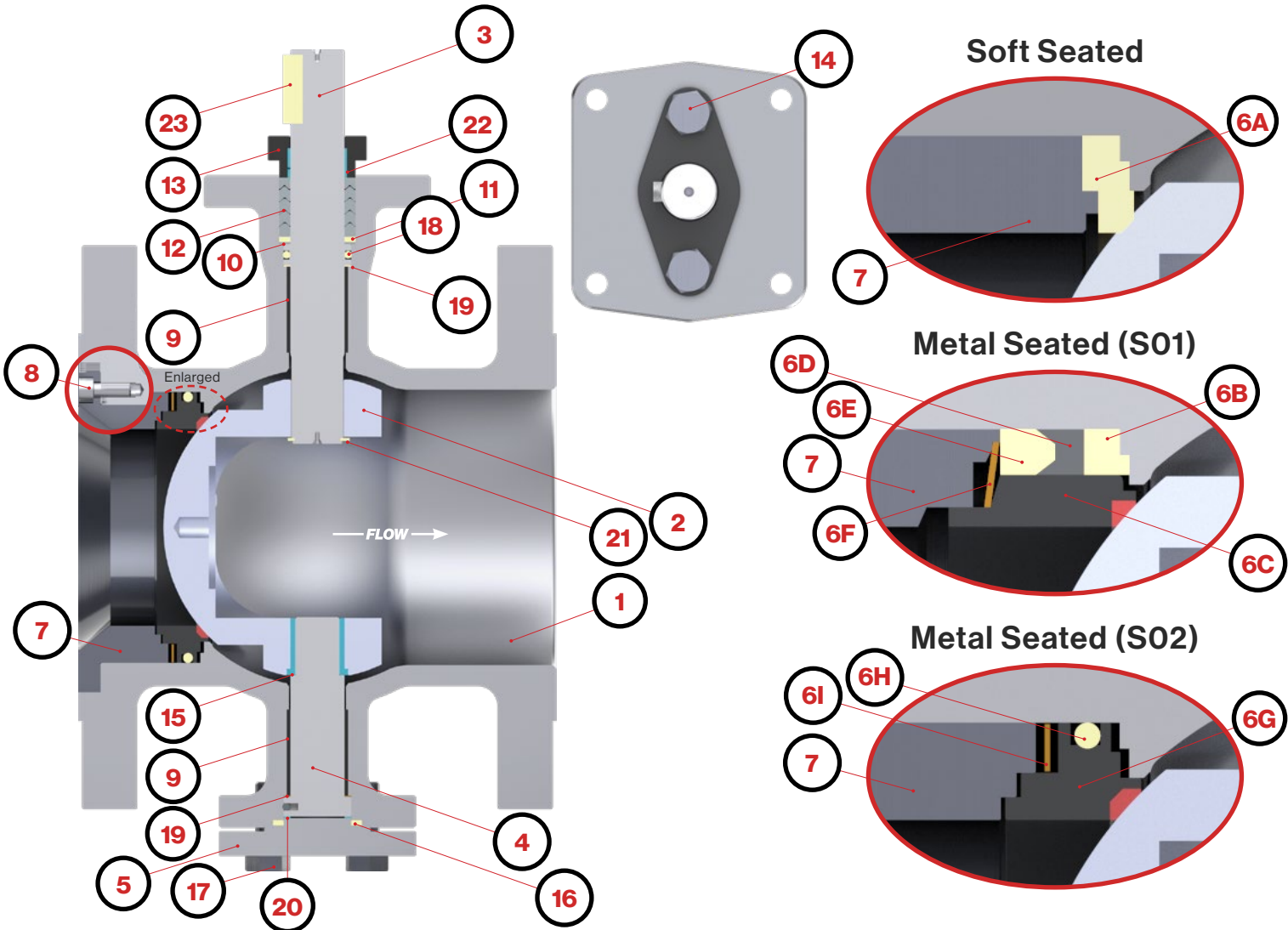
Size Range: NPS 1 through NPS 20
Maximum Temp Soft Seat: +356°F (180°C) S01 Type Seat: +661°F (350°C) S02 Type Seat: +446°F (230°C)
Design Standard: ASME B16.34, ISA S75.04 (Face-to-Face), API 598 (Shell Test) Soft Seat: ANSI/FCI 70-2 Class VI Metal Seat: ANSI/FCI 70-2 Class IV (Seat Leakage), ISO 5211 (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

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.

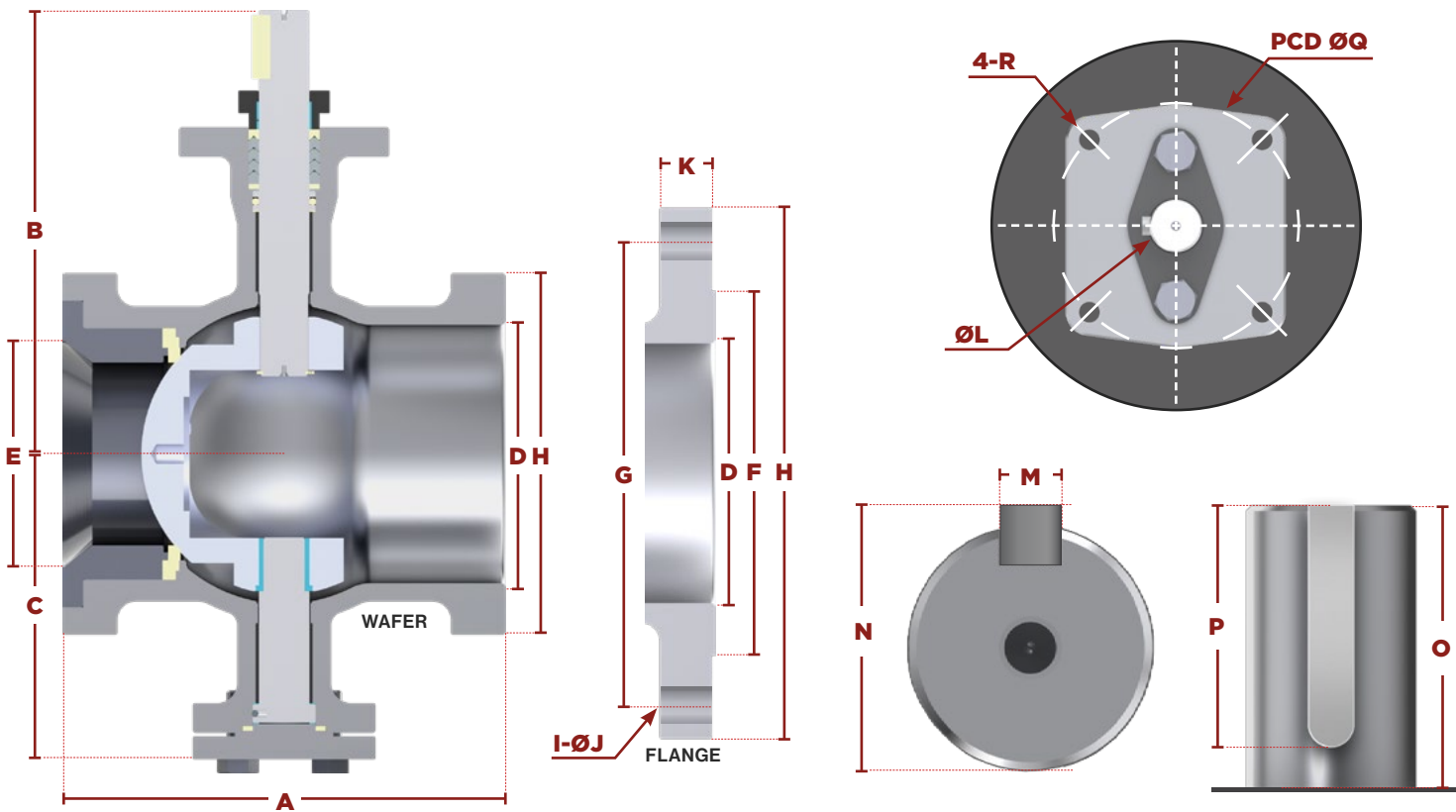
Features and Benefits

- > 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



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	S01	A351-CF8	A351-CF8M	
6C	SEAT		A351-CF8+ STELLITE / TC / CRC	A351-CF8M+ STELLITE / TC / CRC	
6D	PACKING		GRAPHITE		
6E	SEAT GLAND		A351-CF8	A351-CF8M	
6F	SPRING	S02	INCONEL X-750		
6G	SEAT		A351-CF8+ STELLITE / TC / CRC	A351-CF8M+ STELLITE / TC / CRC	
6H	O-RING		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	

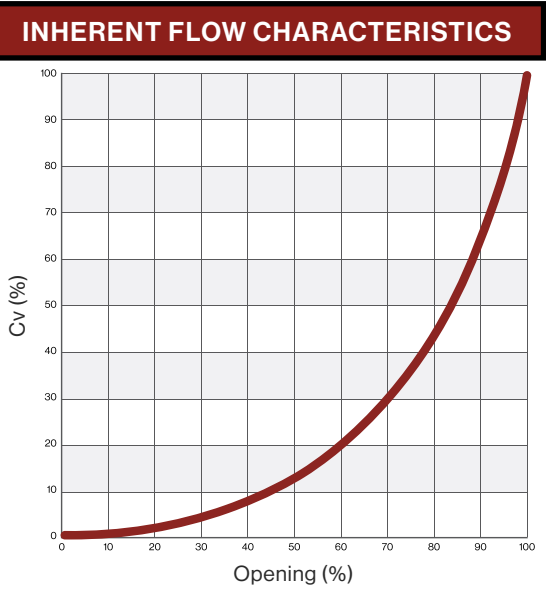
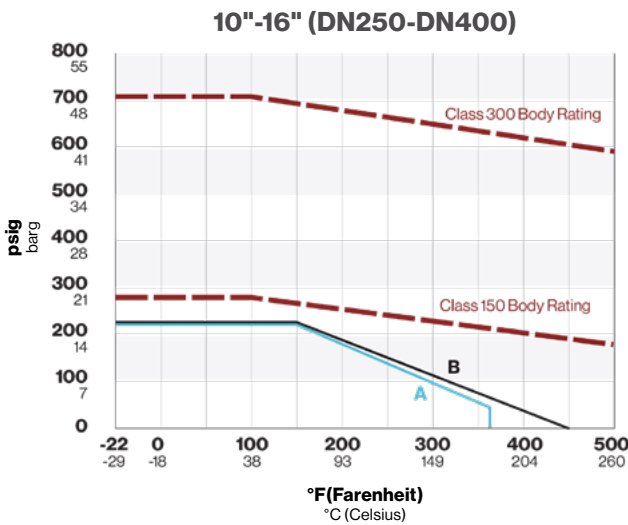
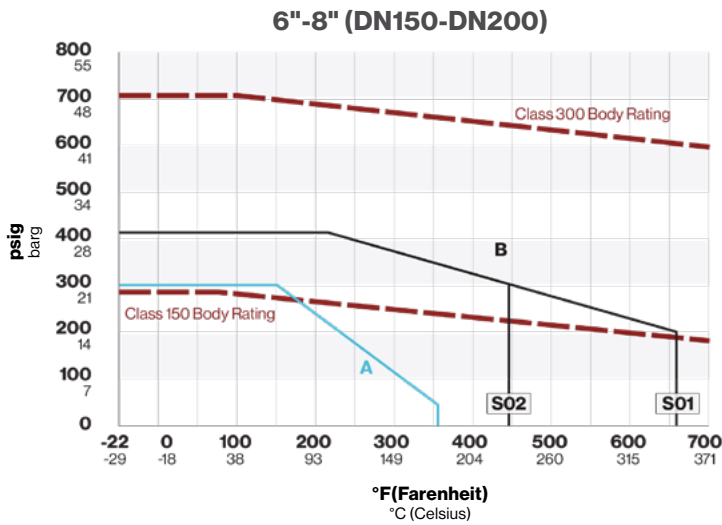
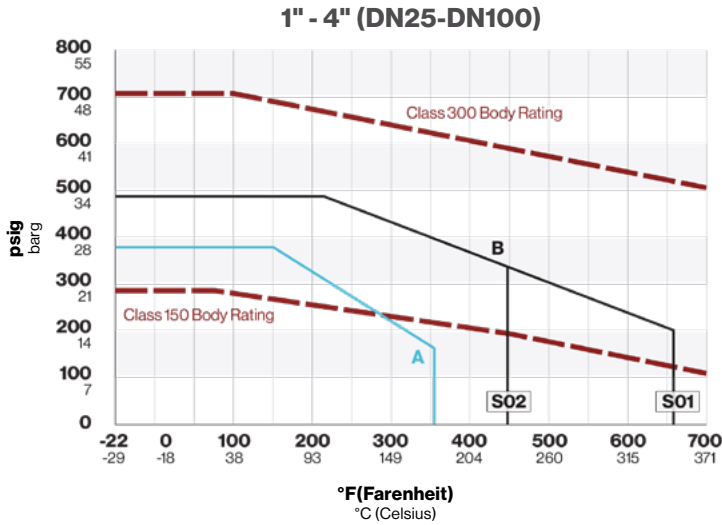


Dimensions - ASME 150 / 300																												
SIZE		A		B		C		D		E		F		G				H						I-J				
		DN	NPS	mm	in	mm	in	mm	in	mm	in	mm	in	CL150 FLANGE		CL300 FLANGE		CL150 FLANGE		CL300 FLANGE		WAFER		CL150 FLANGE		CL300 FLANGE		
														mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	
25	1"	102	4.02	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	CL150 FLANGE		CL300 FLANGE		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in		CL150 FLANGE		CL300 FLANGE		WAFER	
		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	816
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	118	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	118	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	118	70	2.76	M8	11	24.25	16	35.27	5.51	26.01
80	3"	23.9	0.94	28.6	113	22	0.87	8	0.31	25	0.98	45	1.77	30	118	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	118	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	118	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	118	102	4.02	M10	36	79.37	51	112.44	28.22	83.78
200	8"	28.6	113	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	119	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	213	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

P/T Charts



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	

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				
	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				
	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
VA	Stem Seal				
	VA = FKM A Seal	G = Graphite Packing		X = Special Stem Seal	
N	NACE				
	N = NACE Compliant				
BS	Operator				
	G = Gear	BS = Bare Stem		A = Actuator	
S02	Configuration				
	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