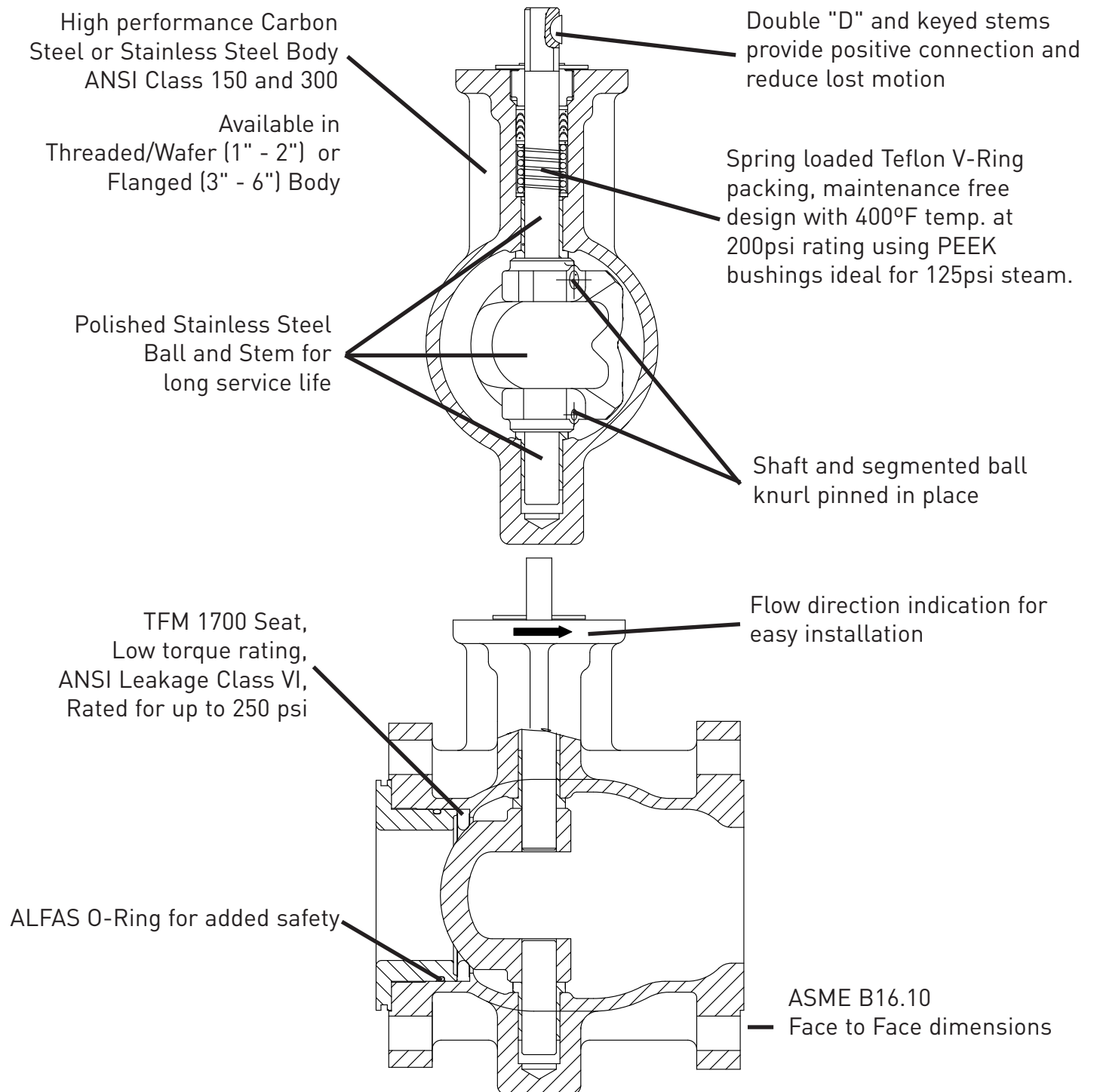


# SERIES V

# High Performance Segmented Ball Valve

## General Information

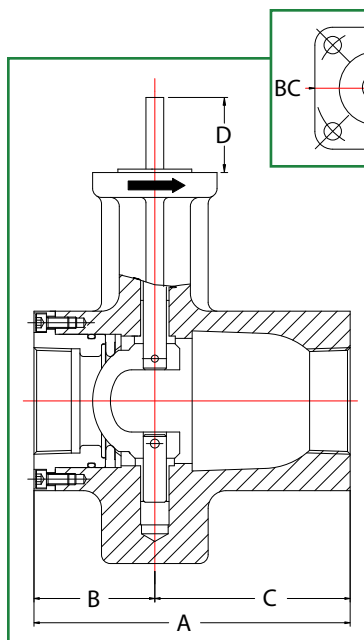
- High Rangeability: 300:1 Turn down ratio
- Flow Characteristic: Equal Percentage
- Low Pressure Recovery Rate: minimizes cavitation and excessive noise
- Body Rating: Multi-Rated ANSI 150/300
- Face to Face Dimension: ASME B16.10
- Leakage Class: ANSI Class VI



## Cv Values - Valve Sizing Coefficients (Cv)

Flow Coefficients (C <sub>v</sub> ) for V-Series Ball Valves 1" - 6"												
Flow Coefficient	Valve Size, Inches	Valve Rotation in Degrees										Torque Required @ 250 psi Close Off in-lb
		10	20	30	40	50	60	70	75	80	90	
C <sub>v</sub>	V-1 (1")	0.04	0.5	3	5	8	12	17	24	29	31	40
	V-1.5 (1.5")	0.07	3	7	12	21	29	40	55	68	73	80
	V-2 (2")	0.09	4	10	21	34	43	65	77	85	96	130
	V-3 (3")	1	12	29	49	68	117	157	207	215	270	200
	V-4 (4")	4	22	46	86	130	195	279	350	421	529	400
	V-6 (6")	5	33	79	148	230	330	440	507	575	850	650

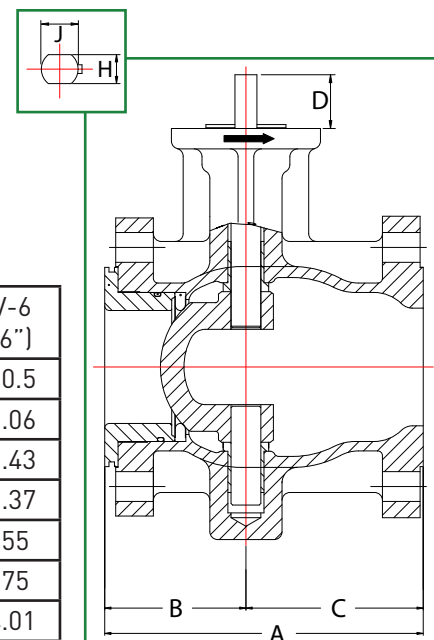
## Valve Dimensions



V-1, V-1.5, V-2

Dimension	V-1 (1")	V-1.5 (1 1/2")	V-2 (2")	V-3 (3")	V-4 (4")	V-6 (6")
A	5	6.5	7	8	9	10.5
B	1.81	2.13	2.68	3.54	4.33	5.06
C	3.19	4.37	4.33	4.45	4.69	5.43
D	1.33	1.33	1.33	1.37	1.37	1.37
H	.39	.39	.39	.55	.55	.55
J	.5	.5	.5	.75	.75	.75
BC	2.75	2.75	2.75	4.01	4.01	4.01
Weight (lb)	9	15	19	38	56	93

Dimension A has a tolerance of  $\pm .0625$  (2mm)

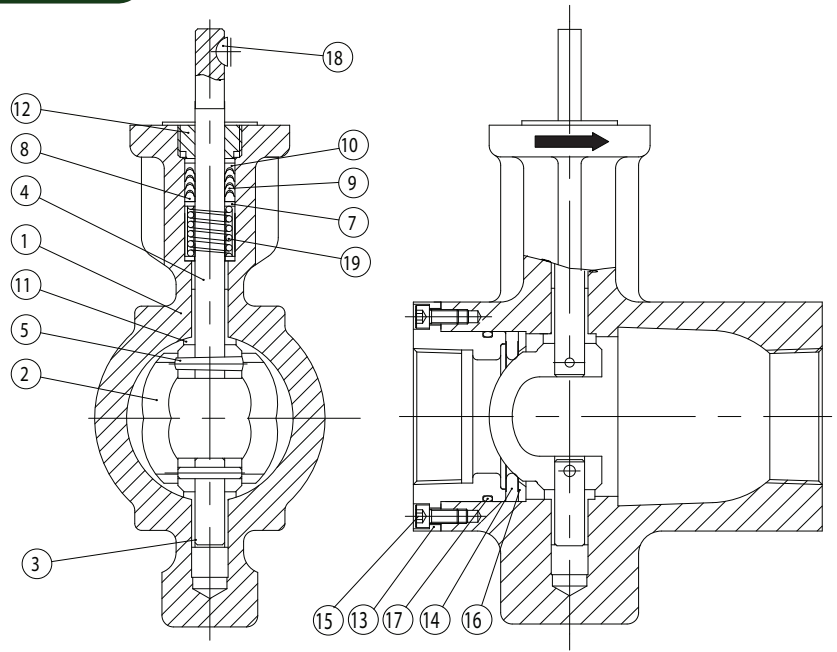


V-3, V-4, V-6

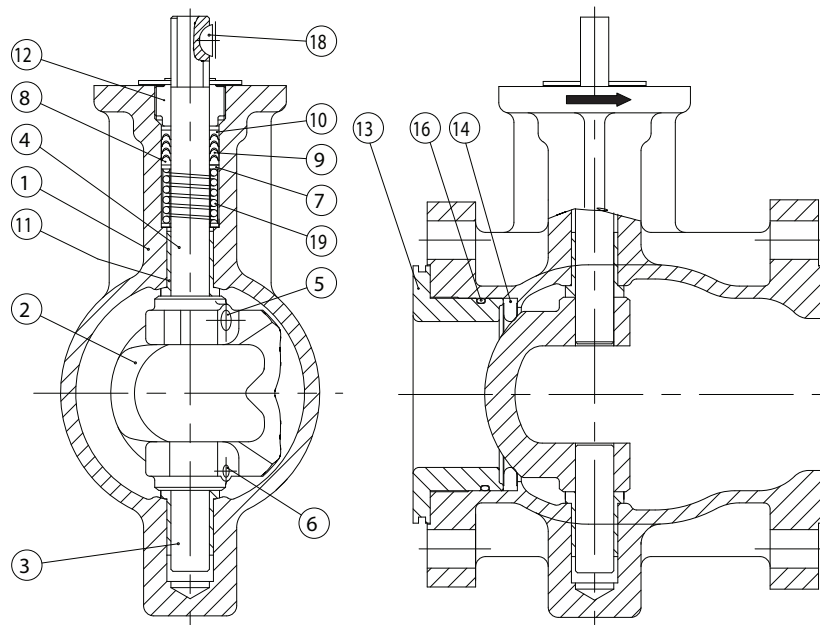
# Construction Materials

## Threaded/Wafer Series V (Sizes 1, 1.5 & 2)

NO	PART NAME	Q'TY	MATERIAL
1	VALVE BODY	1	WCC*
2	SEGMENTED BALL	1	SUS304
3	FOLLOWER SHAFT	1	SUS304
4	DRIVE SHAFT	1	SUS304
5	TAPER PIN	1	SUS304
6	TAPER PIN	1	SUS304
7	PACKING WASHER	1	SUS304
8	PACKING RINGS	1	TEFLON
9	PACKING RINGS	1	TEFLON
10	PACKING FOLLOWER	1	GRAPHITE
11	SHAFT BEARING	2	PEEK
12	PACKING FLANGE	1	C3604
13	SEAT RETAINER	1	S45C
14	BALL SEAT	1	TFM 1700
15	SEAT RETAINER SCREW	8	SUS304
16	SEAT SPACER	1	SUS304
17	SEAT RETAINER SEAL	1	ALFAS
18	WOODUFF KEY	1	SM45C
19	PACKING SPRING	1	SUS304



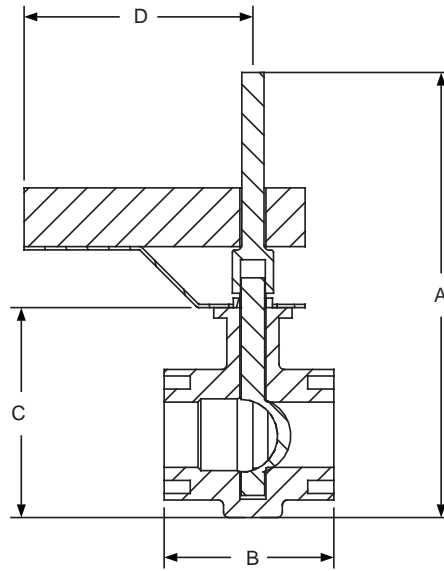
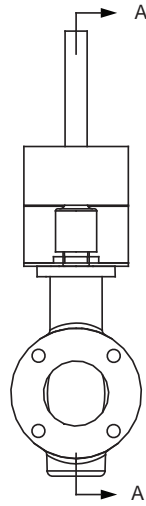
## Flanged Series V (Sizes 3, 4, & 6)



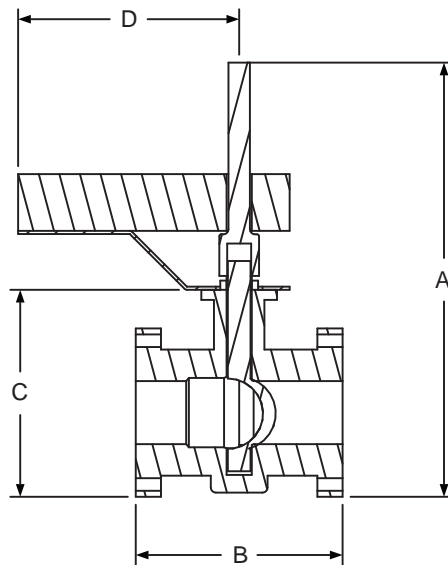
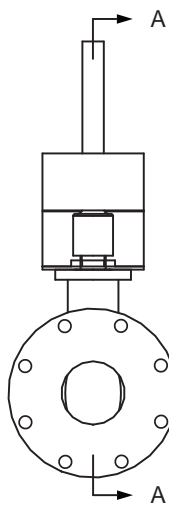
NO	PART NAME	Q'TY	MATERIAL
1	VALVE BODY	1	WCC*
2	SEGMENTED BALL	1	SUS304
3	FOLLOWER SHAFT	1	SUS304
4	DRIVE SHAFT	1	SUS304
5	TAPER PIN	1	SUS304
6	TAPER PIN	1	SUS304
7	PACKING WASHER	1	SUS304
8	PACKING RINGS	1	TEFLON
9	PACKING RINGS	1	TEFLON
10	PACKING FOLLOWER	1	GRAPHITE
11	SHAFT BEARING	2	PEEK
12	PACKING FLANGE	1	C3604
13	SEAT RETAINER	1	S45C OR WCC
14	BALL SEAT	1	TFM 1700
16	SEAT RETAINER SEAL	1	ALFAS
18	WOODUFF KEY	1	SM45C
19	PACKING SPRING	1	SUS304

\*Body is also available in Cast Stainless Steel 304 (CF8)

## 2-Way Valve Assembly Dimensions

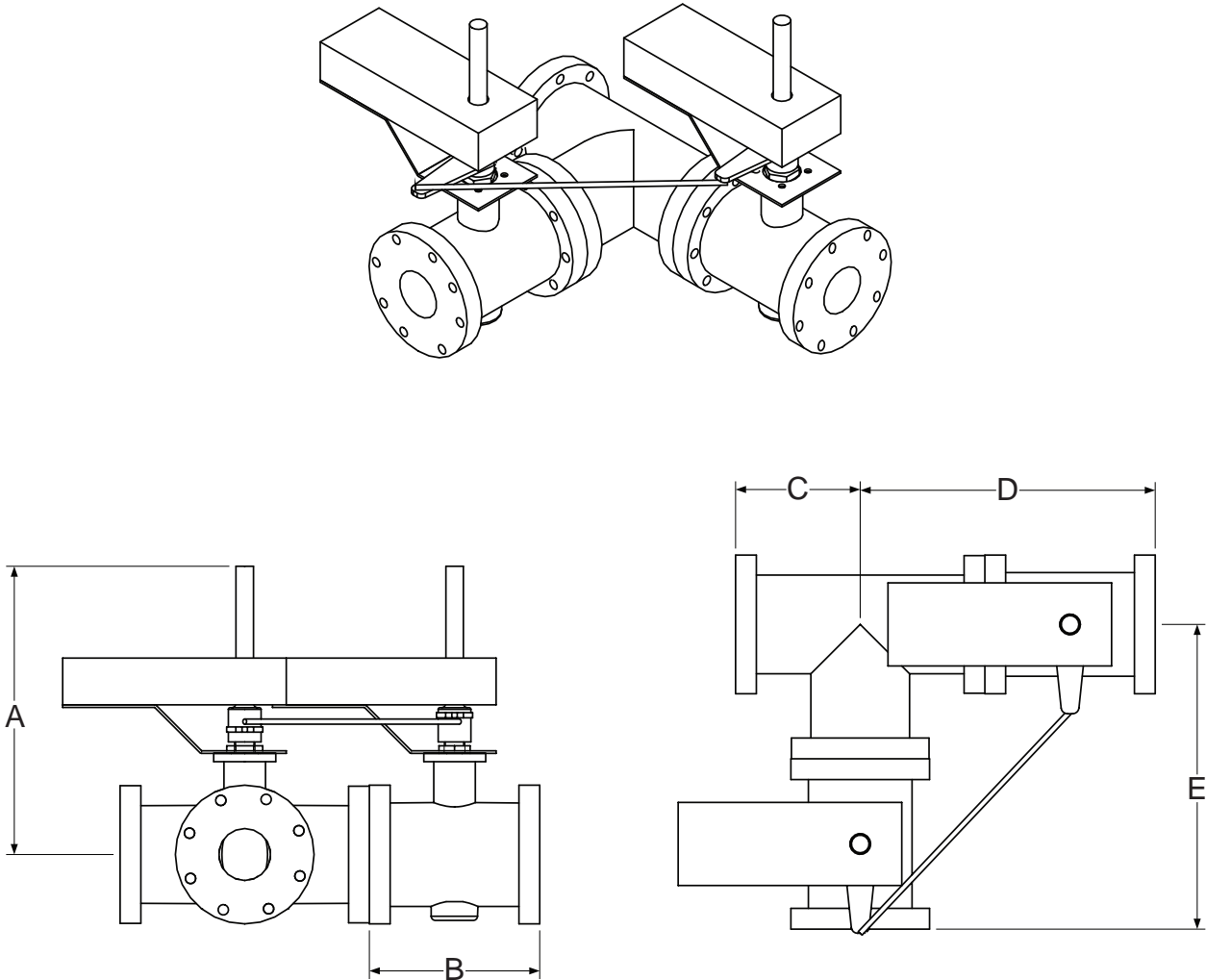


VALVE SIZE	SERIES V 2-WAY THREADED/WAFERED			
	A	B	C	D
1"	15	5	7	10
1.5"	17	6.5	8	10
2"	19	7	9	10



VALVE SIZE	SERIES V 2-WAY FLANGED			
	A	B	C	D
3"	22.5	8	10.5	10
4"	24	9	12	10
6"	26.5	10.5	14.5	10

3-Way Valve Assembly Dimensions



VALVE SIZE	SERIES V 3-WAY FLANGED			
	A	B	C	D/E
3"	18	8	5.5	13.5
4"	19	9	6.5	15.5
6"	21	10.5	8	18.5



### Engineering Specification of Actuated HVAC Control Valves

Automatic control valves for HVAC control shall be constructed of a carbon steel body, stainless steel V-notch ball and shaft, low friction bearings and a TFM 1700 ball seat. Valve sizes 1, 1.5 & 2 inches shall be ANSI Class 150/300 multi-rated and have Universal End Connections for use with NPT or ANSI Class 150/300 wafer connections. Valve sizes 3, 4, 6 inch shall have ANSI Class 150 or 300 flanges as required by application. Control valves shall be rated ANSI Class VI leakage rate, 0°F to 400°F temperature range and maximum 250 PSI allowable shutoff pressure. Valves are for use with water, steam and percentage glycol water mixes. Valves have 90 degree rotation, 300:1 rangeability with equal percentage control characteristic. Standard actuators as well as low pressure industry standard pneumatic actuators are acceptable. Valve and linkage shall carry a 3 year warranty from the date of installation. Valve shall be a Valve Solutions Series V segmented ball control valve or approved equal.





### VSI Limited Product Warranty

This limited warranty applies in the United States to products manufactured by Valve Solutions, Inc. Valve Solutions, Inc. warrants the product purchased from it or its authorized reseller to be free from defects in material and workmanship under normal use during the two year warranty period from the date of its purchase. Other products not manufactured by Valve Solutions, Inc. which are provided as part of an assembly may carry additional warranties from that manufacturer or supplier.

During the warranty period, Valve Solutions, Inc. will repair or replace defective parts of the product, or, at Valve Solutions, Inc. sole option, issue a credit for the original purchase price of the product. Repaired or replaced product will be warranted hereunder only for the remaining portion of the original warranty period. All exchanged products under this Limited Warranty will become the property of Valve Solutions, Inc. A proper Return Material Authorization (RMA) number will have to be obtained for all products to be returned under this Limited Warranty. Any claim under this Limited Warranty must include a description of the problem encountered and any relevant information that may assist Valve Solutions, Inc. in the replication or resolution of the problem.

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