

# VELAN VALVAC

## *General Purpose Ball Valves*



**CERTIFIED  
TO ISO 9002  
QUALITY  
STANDARDS**

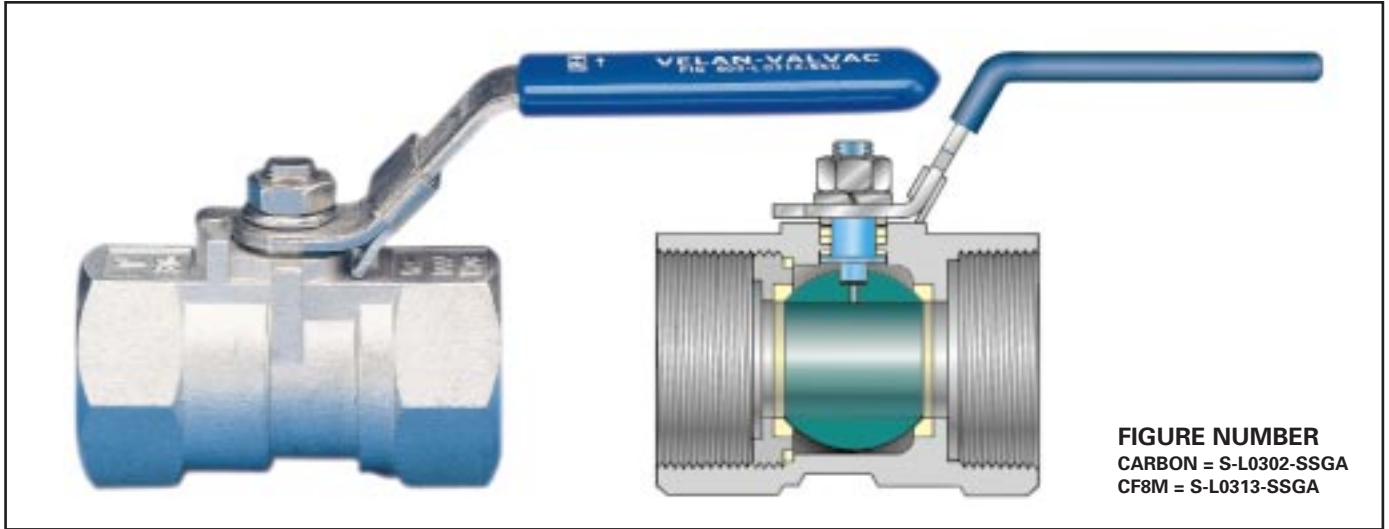




# VOP-1000 ONE-PIECE REDUCED PORT GENERAL PURPOSE BALL VALVE

1/4 – 2" (8–50 mm)

CARBON OR STAINLESS STEEL BODY, RPTFE SEATS



**FIGURE NUMBER**  
 CARBON = S-L0302-SSGA  
 CF8M = S-L0313-SSGA

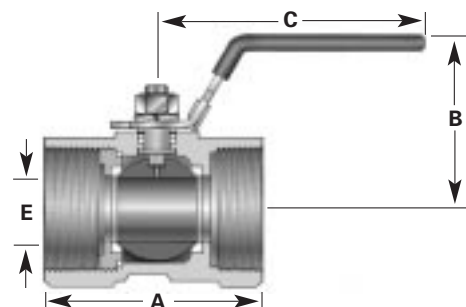
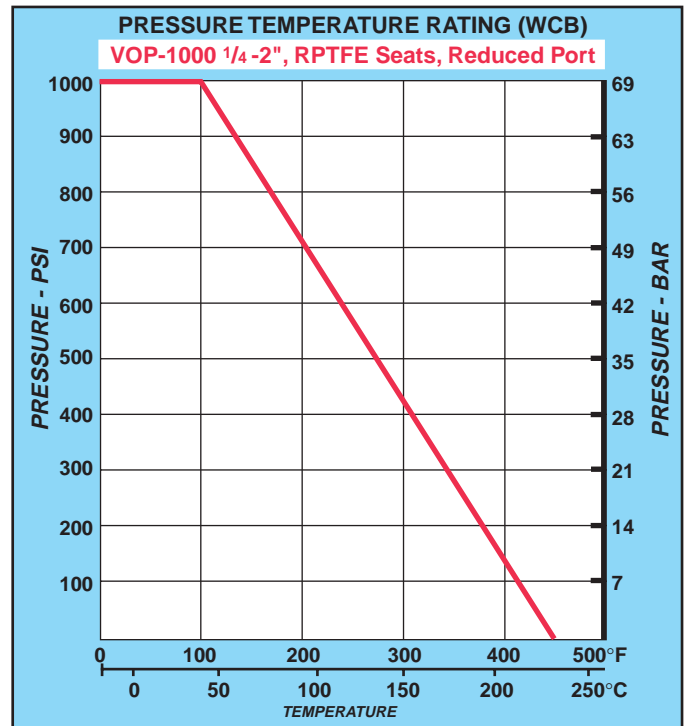
## STANDARD MATERIALS

PART	STAINLESS STEEL	CARBON STEEL <sup>(1)</sup>
Body	CF8M	WCB
Seat	RPTFE	RPTFE
Ball	SS 316	SS 316
Stem	SS 316	SS 316
Seat retainer	SS 316	Carbon steel
Thrust washer	RPTFE	RPTFE
Body seal	RPTFE	RPTFE
Stem packing	PTFE	PTFE
Stem washer	SS 304	SS 304
Stem nut	SS 304	SS 304
Gland follower	SS 304	SS 304
Handle / latch <sup>(2)</sup>	SS 304	SS 304

(1) 1/4" and 3/8" sizes available only in SS body.  
 (2) latch lock available only on 1/2" – 2" sizes.

## DIMENSIONS AND WEIGHTS

SIZE in mm	VOP-1000 MANUAL				Cv Value	WEIGHT lb/kg
	A	B	C	E		
1/4 8	1.73 44.0	1.38 35.0	2.64 67.0	0.24 6.1	2.5	0.18 0.08
3/8 10	1.89 48.0	1.57 39.9	3.19 81.0	0.33 8.4	3.5	0.24 0.11
1/2 15	2.36 60.0	1.69 42.9	3.74 95.0	0.36 9.1	4.8	0.44 0.20
3/4 20	2.40 61.0	1.93 48.9	3.74 95.0	0.49 12.4	9.5	0.57 0.26
1 25	2.91 74.0	2.32 58.9	4.33 110.0	0.63 16.0	14.0	0.93 0.42
1 1/4 32	3.07 78.0	2.52 64.0	4.33 110.0	0.79 20.1	33.0	1.48 0.67
1 1/2 40	3.39 86.0	2.64 67.1	5.71 145.0	0.96 24.4	45.0	2.00 0.91
2 50	4.02 102.0	3.03 77.0	5.71 145.0	1.26 32.0	58.0	3.31 1.50

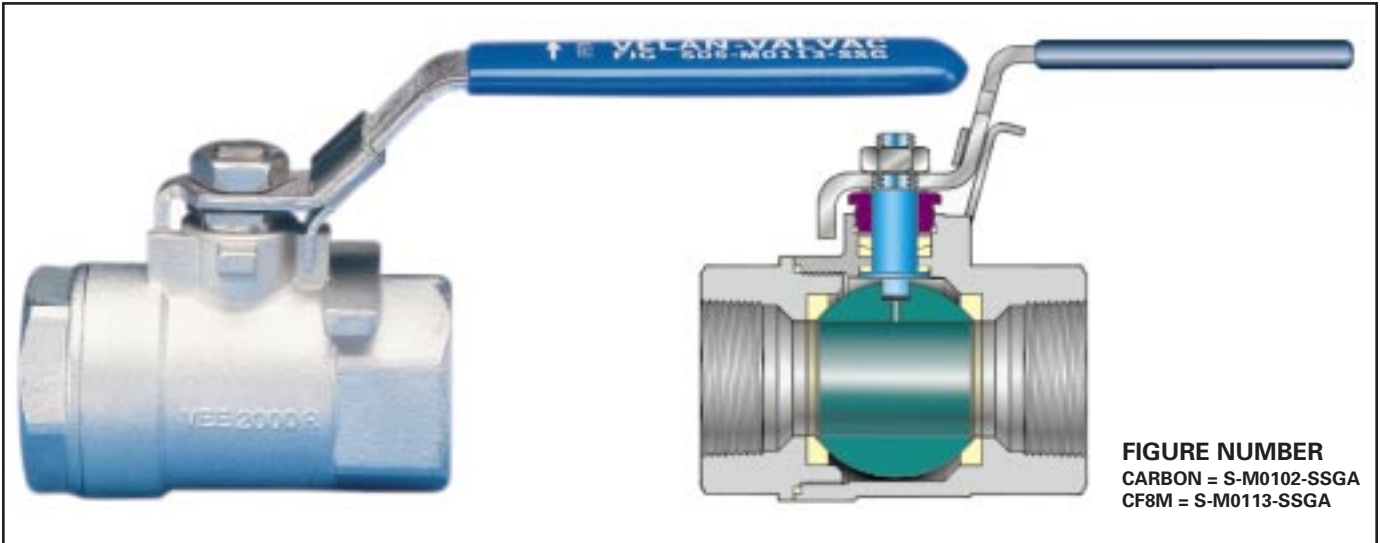




# VEE-2000 REGULAR PORT END-ENTRY GENERAL PURPOSE BALL VALVE

1/4 – 2" (8–50 mm)

CARBON OR STAINLESS STEEL BODY, RPTFE SEATS

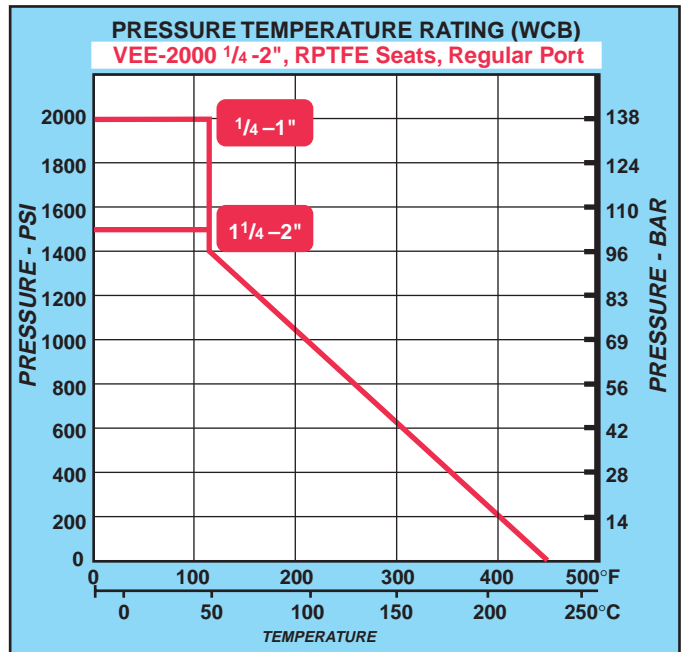


**FIGURE NUMBER**  
CARBON = S-M0102-SSGA  
CF8M = S-M0113-SSGA

### STANDARD MATERIALS

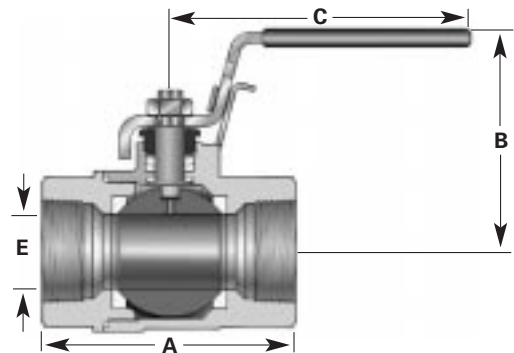
PART	STAINLESS STEEL	CARBON STEEL <sup>(1)</sup>
Body	CF8M	WCB
End cap	CF8M	WCB
Seat	RPTFE	RPTFE
Ball	SS 316	SS 316
Stem	SS 316	SS 316
Thrust washer	RPTFE	RPTFE
Body seal	PTFE	PTFE
Packing ring	PTFE or RPTFE	PTFE or RPTFE
Packing nut	SS 304	SS 304
Handle	SS 304	SS 304
Handle / latch	SS 304	SS 304
Handle nut	SS 304	SS 304

(1) in sizes 1/4" and 3/8" available only in SS body.



### DIMENSIONS AND WEIGHTS

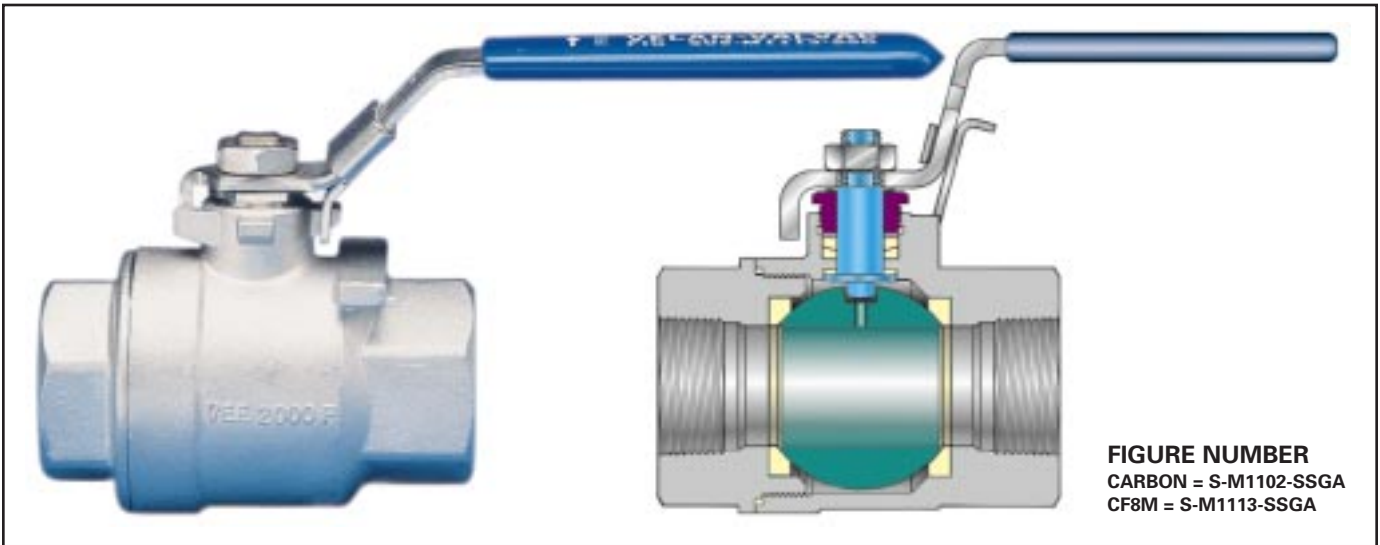
SIZE in mm	VEE-2000R		MANUAL		Cv Value	WEIGHT lb/kg
	A	B	C	E		
1/4 8	2.17 55	2.28 58	4.65 118	0.44 11.1	8	0.66 0.30
3/8 10	2.17 55	2.28 58	4.65 118	0.44 11.1	10	0.62 0.28
1/2 15	2.3 59.7	2.28 54	4.65 116	0.44 11.1	12	0.62 0.28
3/4 20	2.85 72.5	2.52 64	5.24 133	0.50 12.7	15	1.10 0.50
1 25	3.31 84	2.83 72	5.94 151	0.75 19.0	35	1.70 0.77
1 1/4 32	4.02 102	3.39 86	8.27 210	1.00 25.4	64	3.53 1.60
1 1/2 40	4.37 111	3.66 93	8.27 210	1.25 32.0	87	4.50 2.04
2 50	5.39 137	3.78 96	8.27 210	1.50 38.1	112	6.22 2.82





**VEE-2000 FULL PORT END-ENTRY  
GENERAL PURPOSE BALL VALVE**  
1/4 – 2" (8–50 mm)

CARBON OR STAINLESS STEEL BODY, RPTFE SEATS

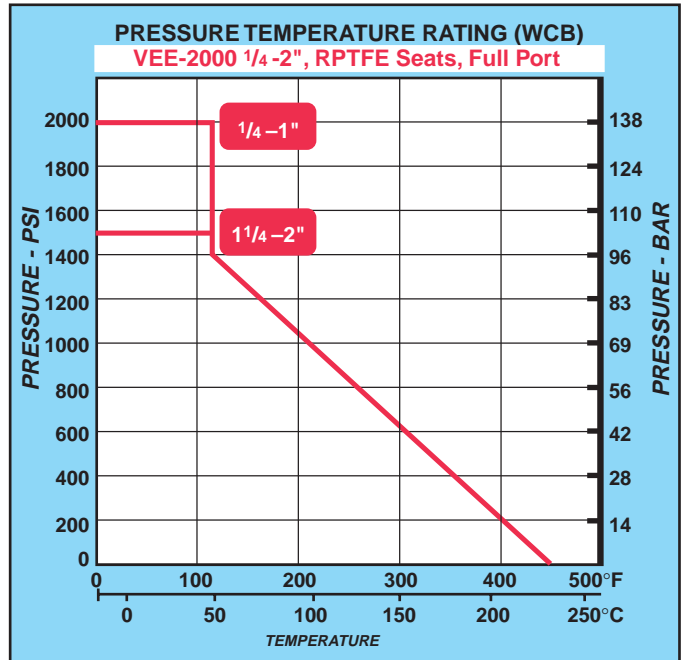


**FIGURE NUMBER**  
CARBON = S-M1102-SSGA  
CF8M = S-M1113-SSGA

**STANDARD MATERIALS**

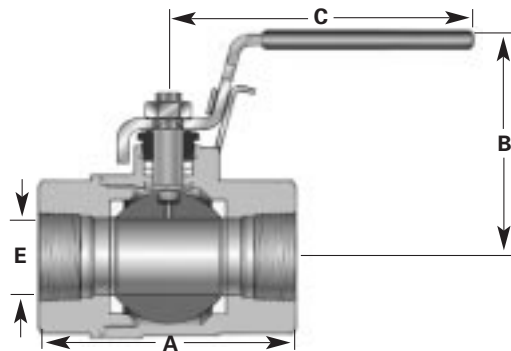
PART	STAINLESS STEEL	CARBON STEEL <sup>(1)</sup>
Body	CF8M	WCB
End cap	CF8M	WCB
Seat	RPTFE	RPTFE
Ball	SS 316	SS 316
Stem	SS 316	SS 316
Thrust washer	RPTFE	RPTFE
Body seal	PTFE	PTFE
Packing ring	PTFE or RPTFE	PTFE or RPTFE
Packing nut	SS 304	SS 304
Handle	SS 304	SS 304
Handle / latch	SS 304	SS 304
Handle nut	SS 304	SS 304

(1) 1/4" and 3/8" sizes available only in SS body.



**DIMENSIONS AND WEIGHTS**

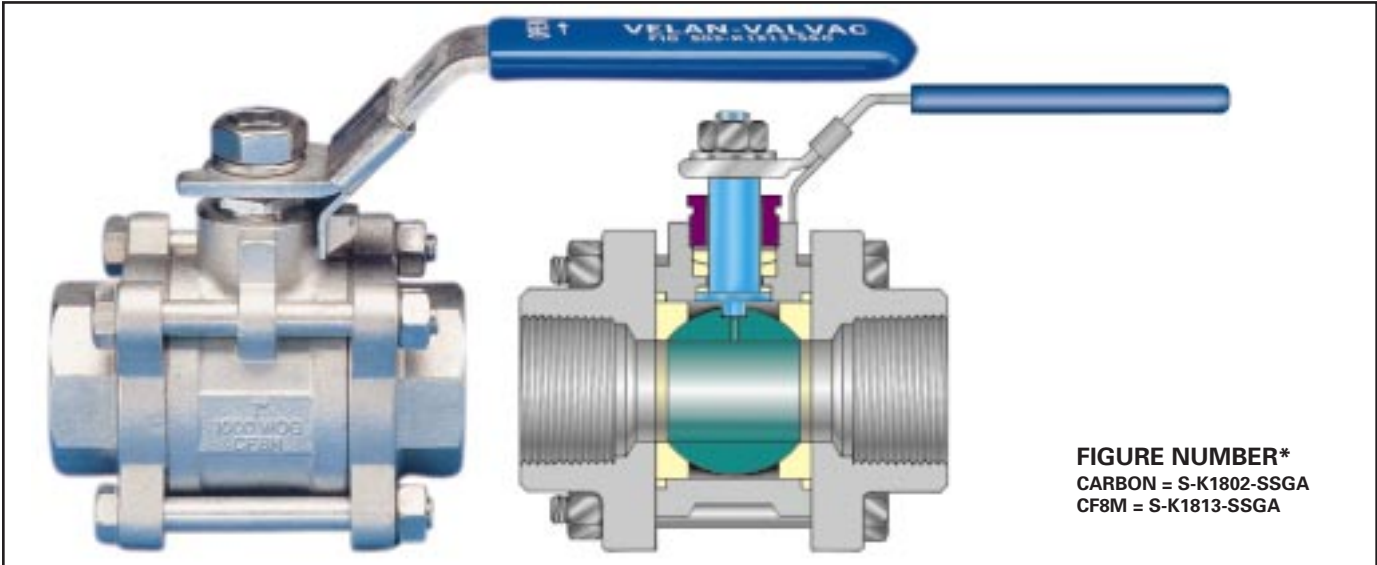
SIZE in mm	VEE-2000F		MANUAL		Cv Value	WEIGHT lb/kg
	A	B	C	E		
1/4 8	2.17 56	2.28 53.3	4.65 116	0.44 11.1	8	0.66 0.30
3/8 10	2.17 56	2.28 53.3	4.65 116	0.44 11.1	10	0.62 0.28
1/2 15	2.38 60.5	2.40 61	4.65 118	0.50 12.7	13	0.62 0.30
3/4 20	3.01 76.5	2.76 70	5.87 149	0.81 20.7	50	1.41 0.64
1 25	3.62 92	2.99 76	5.87 149	1.00 25.4	93	2.27 1.03
1 1/4 32	3.98 101	3.58 91	8.27 210	1.26 32.0	170	3.73 1.69
1 1/2 40	4.37 111	3.74 95	8.27 210	1.50 38.1	250	4.87 2.21
2 50	4.96 126	4.09 104	8.27 210	2.00 50.8	450	7.59 3.44





# V3P-1000 THREE-PIECE FULL PORT GENERAL PURPOSE BALL VALVE 1/4 – 2" (8 – 50 mm)

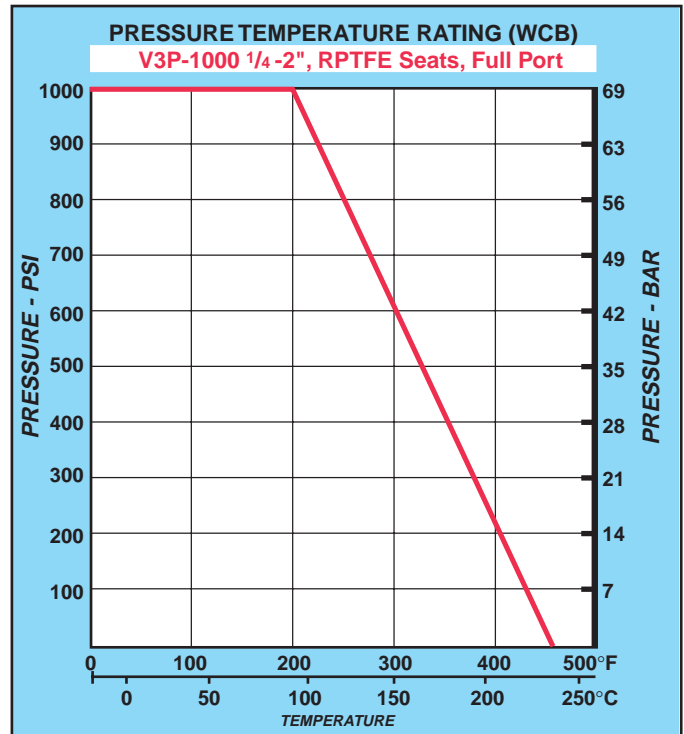
CARBON OR STAINLESS STEEL BODY, RPTFE SEATS,  
THREADED OR WELD ENDS



**FIGURE NUMBER\***  
CARBON = S-K1802-SSGA  
CF8M = S-K1813-SSGA

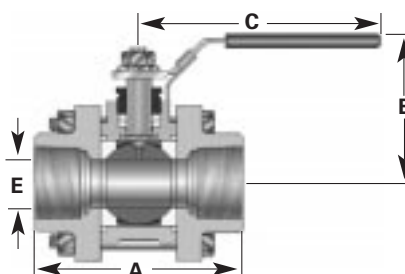
## STANDARD MATERIALS

PART	STAINLESS STEEL	CARBON STEEL
Body	CF8M	WCB
End cap	CF8M	WCB
Seat	RPTFE	RPTFE
Ball	SS 316	SS 316
Stem	SS 316	SS 316
Stem packing	RPTFE	RPTFE
Thrust washer	RPTFE	RPTFE
Body Seal	PTFE	PTFE
Body nuts & bolts	SS 304	B7
Packing nut	SS 304	SS 304
Handle nut	SS 304	SS 304
Handle/latch	SS 304	SS 304
Packing washer	SS 304	SS 304



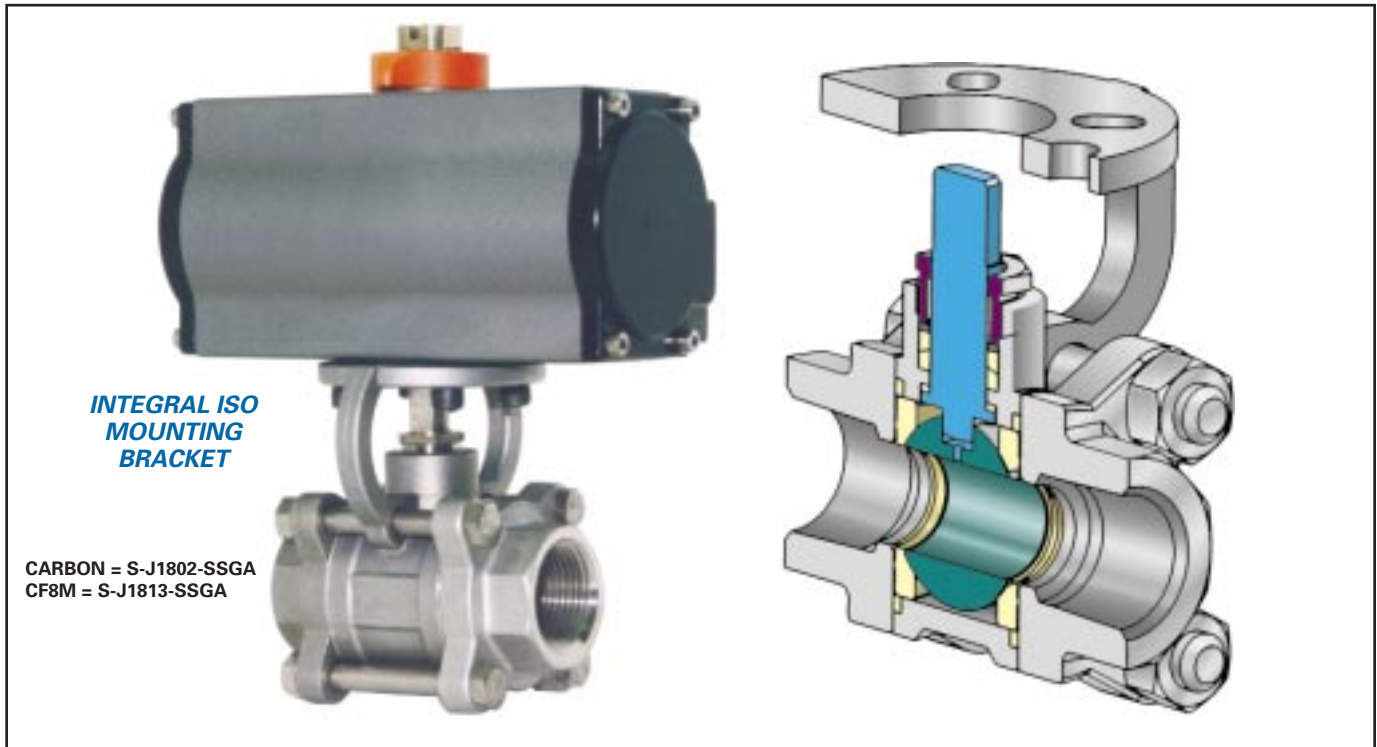
## DIMENSIONS AND WEIGHTS

SIZE in mm	V3P-1000		MANUAL		Cv Value	WEIGHT lb/kg
	A	B	C	E		
1/4 8	2.52 64	2.01 51	4.02 102	0.44 11.1	8	0.99 0.45
3/8 10	2.52 64	2.01 51	4.02 102	0.44 11.1	10	0.99 0.45
1/2 15	2.76 70	2.13 54	4.76 121	0.55 14.0	13	1.46 0.66
3/4 20	3.27 83	2.36 60	4.76 121	0.79 20.0	50	1.98 0.90
1 25	3.62 92	2.99 76	5.63 143	1.0 25.4	93	3.09 1.40
1 1/4 32	4.37 111	3.46 88	5.63 143	1.26 32.0	170	4.85 2.20
1 1/2 40	4.88 124	3.62 92	8.07 205	1.5 38.1	250	6.84 3.10
2 50	5.43 138	4.02 102	8.07 205	2.0 50.8	450	10.14 4.60



\* Figure number shown is for threaded end valves, see "How to Order Chart" on page 10 for other end connections.

# THREE-PIECE GENERAL PURPOSE BALL VALVE WITH AN INTEGRAL ISO MOUNTING PAD



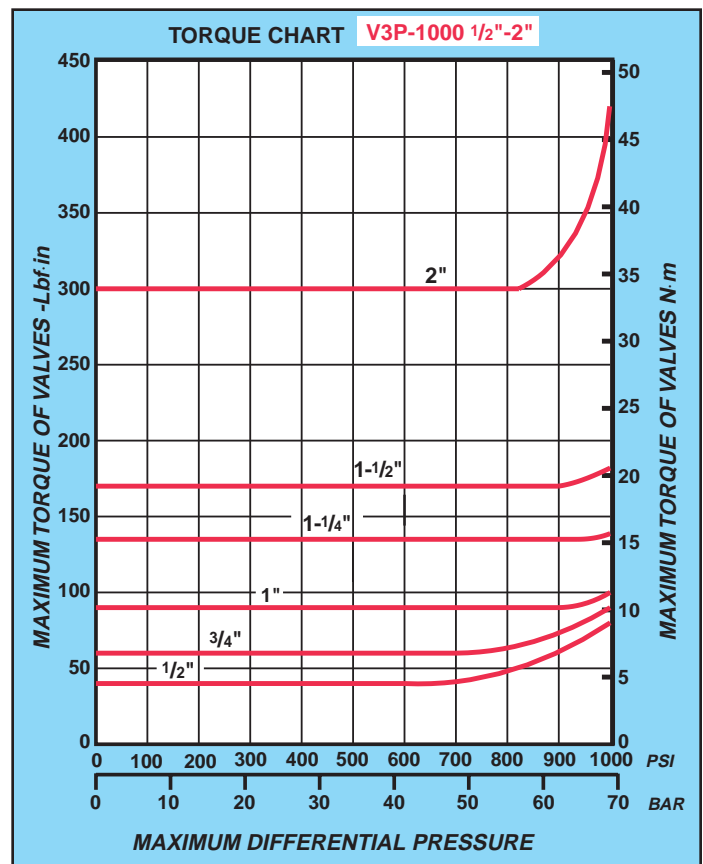
The Velan Valvac three-piece ball valve with integral ISO mounting pad is a rugged, low-cost ball valve for many industrial, commercial and OEM automated applications. The ISO mounting pad will allow quick and easy direct mounting of ISO compatible quarter-turn actuators. A key feature of this valve is the ability to easily adjust the packing without the removal of the actuator.

## DESIGN FEATURES:

- Multiple solid cup and cone type Teflon packing - adjustable.
- Thrust washer prevents galling, reduces torque and provides secondary stem seal.
- Adjustable packing with self-locking gland nut complete with protective metal packing washer.
- 4-bolt bracket to ISO standard for automation.
- Blowout-proof stem.
- Threaded or socket weld ends.

## OPTION AVAILABLE:

- Cavity Fillers - Excellent for batch operations.
- Manual lever.
- Combination Ends.

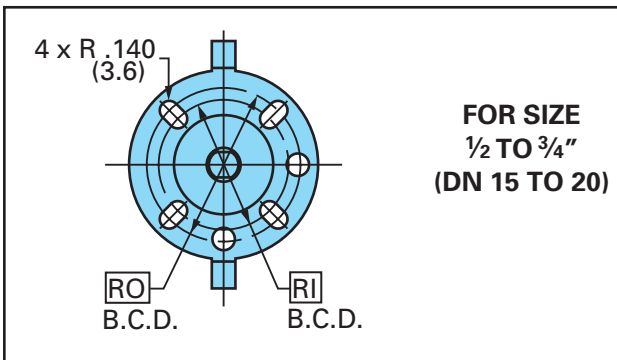


# THREE-PIECE GENERAL PURPOSE BALL VALVE TECHNICAL INFORMATION

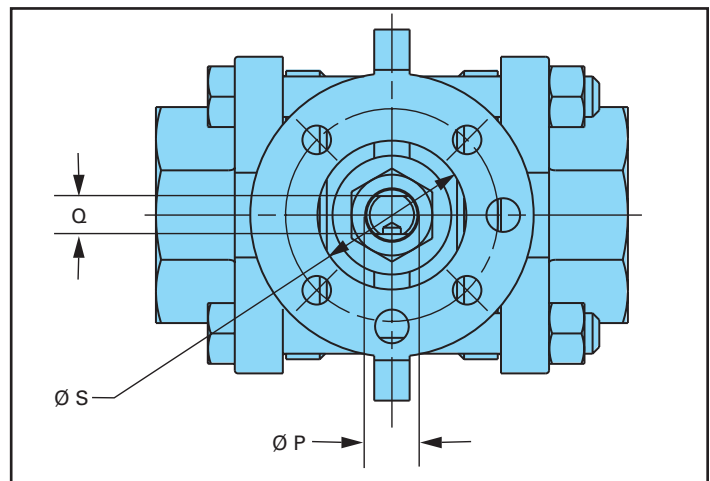
1000 WOG

SIZE in mm	C	D	G	H	J	ØK	ØP	Q	R B.C.D.	RI B.C.D.	RO B.C.D.	ØS
1/2	1.38	2.76	2.12	1.82	0.45	2.25	0.430	0.250	—	1.42	1.65	0.98
15	35.0	70.0	53.9	46.2	11.4	57.2	10.9	6.4	—	36	42	25
3/4	1.64	3.27	2.31	2.04	0.49	2.25	0.430	0.250	—	1.42	1.65	0.98
20	41.5	83.0	58.7	51.8	12.4	57.2	10.9	6.4	—	36	42	25
1	1.81	3.62	2.69	2.47	0.57	2.62	0.470	0.352	1.97	—	—	1.38
25	46.0	92.0	68.3	62.7	14.5	66.6	11.9	8.9	50	—	—	35
1 1/4	2.18	4.37	2.90	2.69	0.57	2.62	0.470	0.352	1.97	—	—	1.38
32	55.5	111.0	73.7	68.3	14.5	66.6	11.9	8.9	50	—	—	35
1 1/2	2.44	4.88	3.31	3.08	0.65	2.75	0.622	0.370	1.97	—	—	1.38
40	62.0	124.0	84.1	78.2	16.5	69.9	15.8	9.4	50	—	—	35
2	2.72	5.44	3.75	3.41	0.65	3.42	0.622	0.370	—	1.97	2.76	1.38
50	69.0	138.0	95.3	86.6	16.5	86.9	15.8	9.4	—	50	70	35

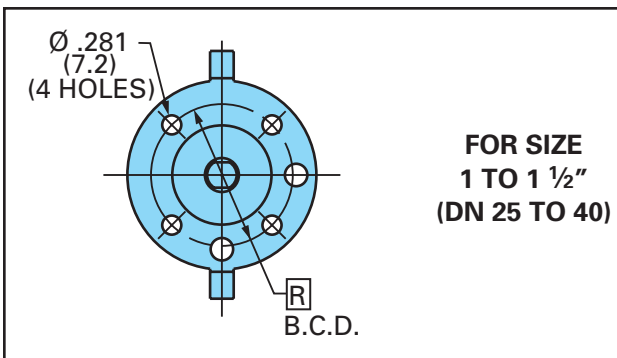
## ISO F03/F04 BOLTING STYLE



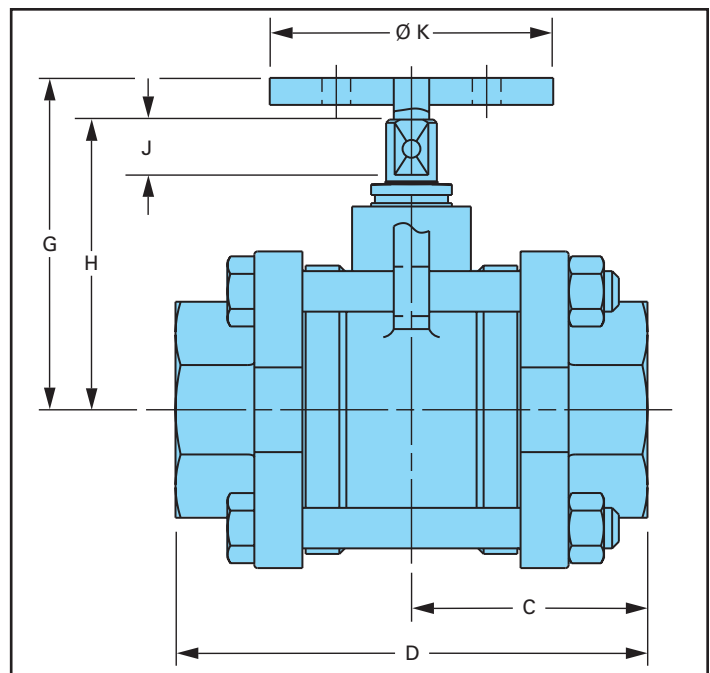
## TOP VIEW



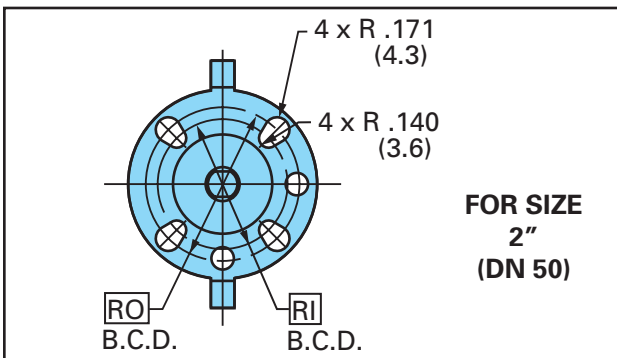
## ISO F05 BOLTING STYLE



## SIDE VIEW

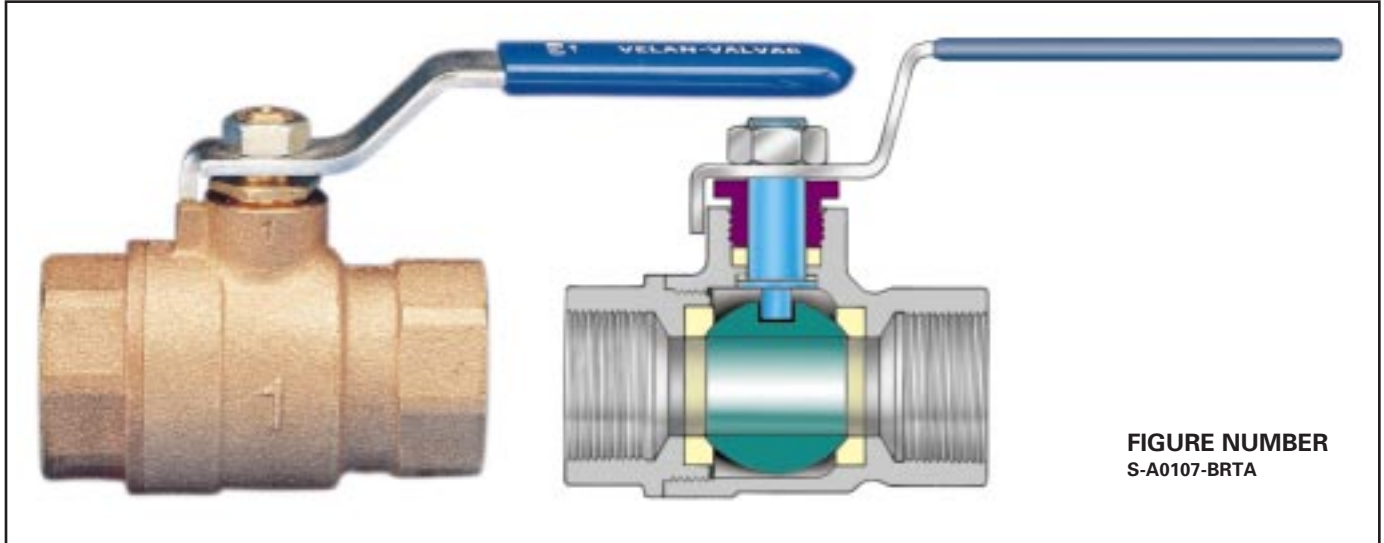


## ISO F05/F07 BOLTING STYLE





**VEE-600 END-ENTRY BRONZE REGULAR PORT  
GENERAL PURPOSE BALL VALVE**  
1/4 – 2" (8–50 mm)  
STANDARD PTFE SEATS



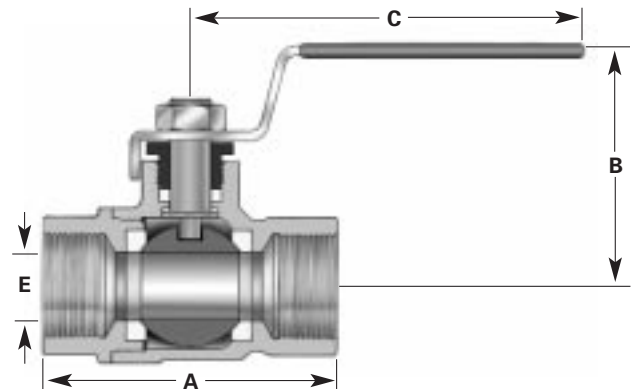
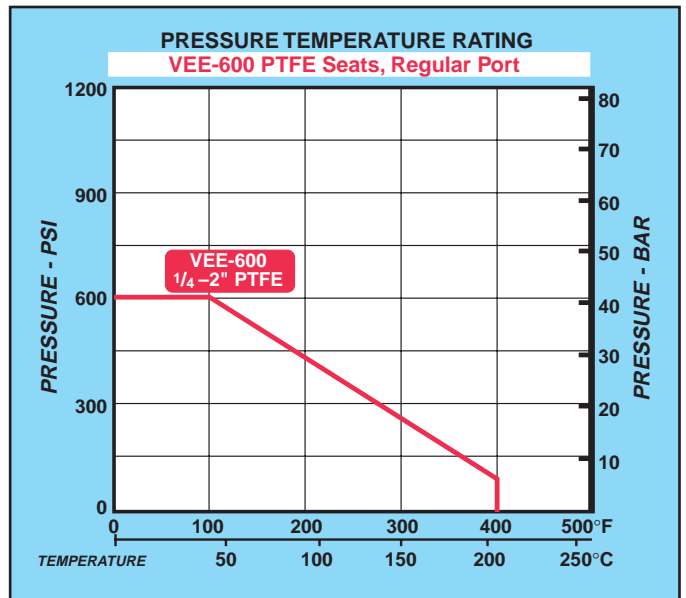
**FIGURE NUMBER**  
S-A0107-BRTA

**STANDARD MATERIALS**

PART	MATERIAL
Body	ASTM B584 Alloy 844
End cap	ASTM B584 Alloy 844
Seat	PTFE
Ball	Brass Ni-Cr. plating
Stem	ASTM B16
Thrust washer	PTFE
Packing nut	ASTM B16
Packing Ring	PTFE
Handle	ASTM 107-1020, zinc plating
Handle nut	ASTM 107-1020, zinc plating
Sleeve	Vinyl

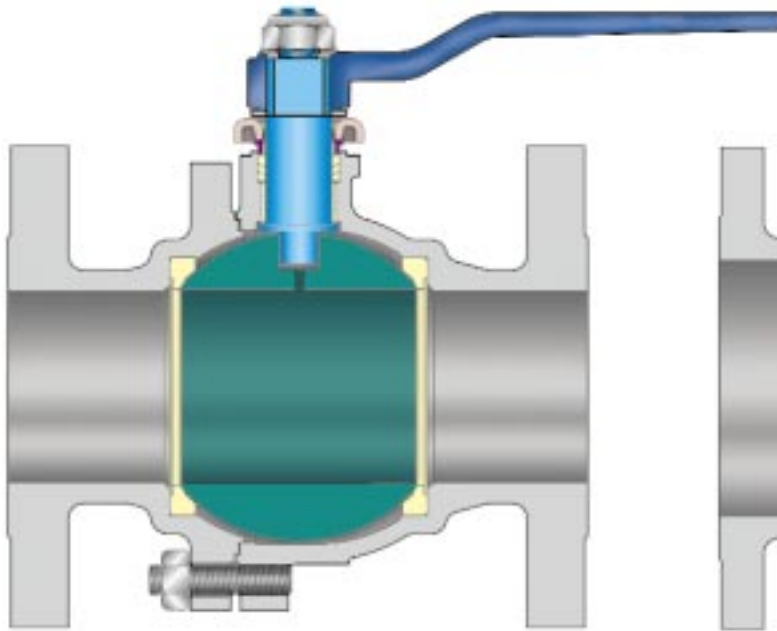
**DIMENSIONS AND WEIGHTS**

SIZE in mm	VEE-600		MANUAL		Cv Value	WEIGHT lb/kg
	A	B	C	E		
1/4 8	1.85 47.0	1.81 46.0	3.27 83.0	0.39 10	6	0.40 0.18
3/8 10	1.85 47.0	1.81 46.0	3.27 83.0	0.39 10	6	0.40 0.18
1/2 15	2.28 58	1.81 46.0	3.27 83.0	0.50 12.7	10	0.51 0.23
3/4 20	2.56 65.0	2.56 55.0	4.05 103	0.70 17.7	24	0.82 0.37
1 25	3.11 79.0	2.36 60.0	4.05 103	0.88 22.3	38	1.52 0.69
1 1/4 32	3.39 86.0	2.68 66.0	4.05 103	1.00 25.4	45	1.70 0.77
1 1/2 40	3.66 93.0	2.83 72.0	6.22 158	1.25 31.8	73	2.67 1.21
2 50	4.37 111	3.01 76.5	6.22 158	1.50 38.1	102	4.04 1.83

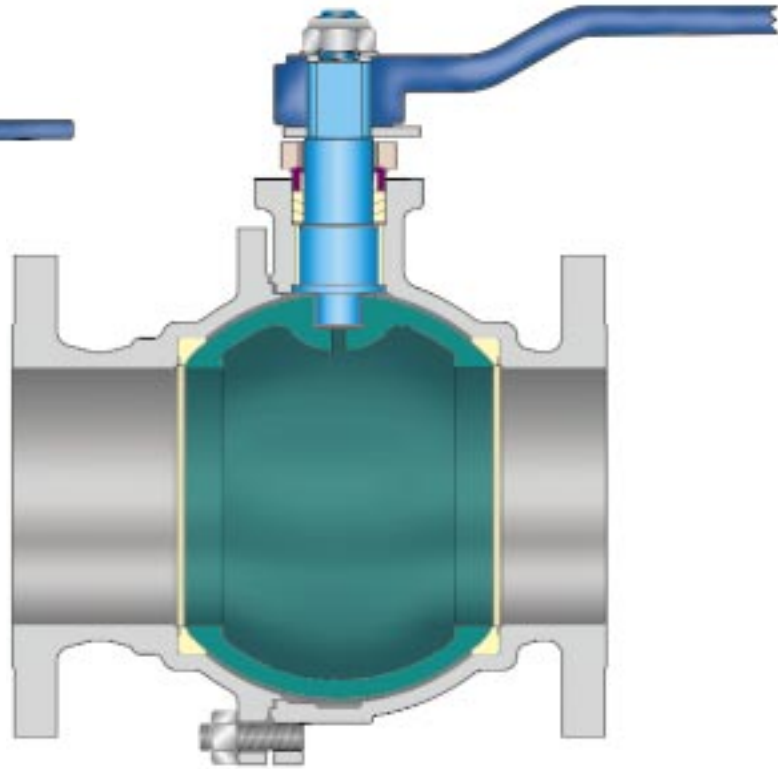




**1/2–4" (15–100 mm)  
 FREE-FLOATING BALL**

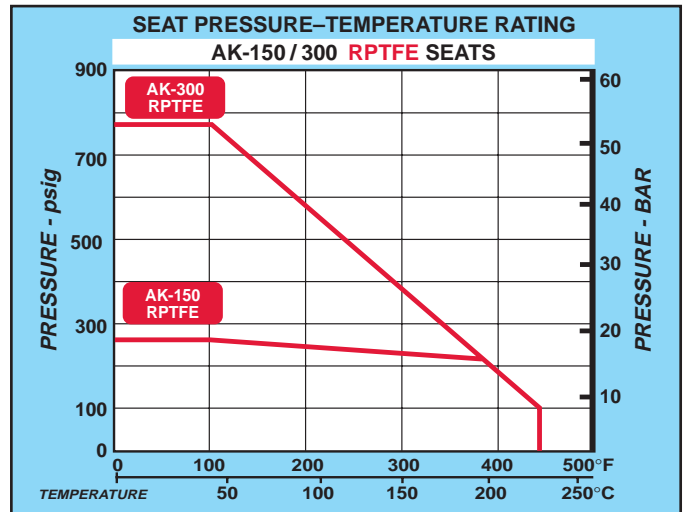


**6–8" (150–200 mm)  
 FREE-FLOATING BALL**

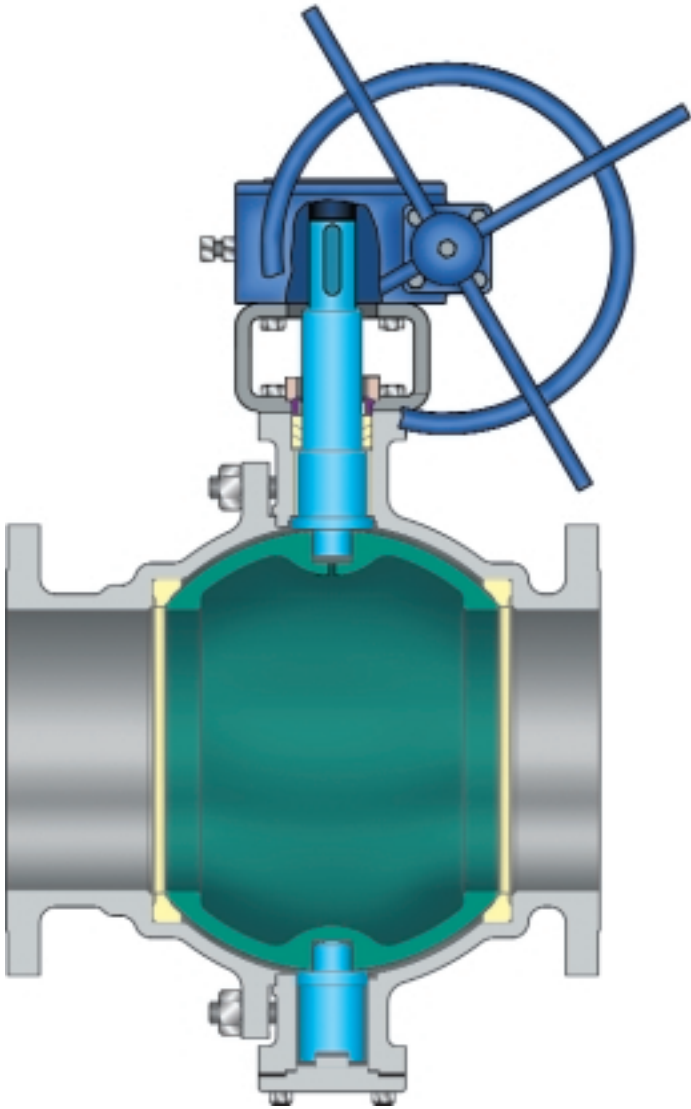


**DESIGN FEATURES:**

- Meets ASME B16.5 and B16.34
- Face-to-face dimensions meet ASME B16.10 long pattern
- Flexible lip seat
- Fully-guided stem preventing side loads
- Blowout-proof stem
- Stem thrust washer
- Free-floating ball in sizes 1/2–8" (15–200 mm)
- Trunnion-mounted balls in sizes 10" and 12" (250 and 300 mm)
- Flanged packing gland
- Stainless trim on WCB valves
- Lever handle with locking device in sizes 1/2–6" (15–150 mm)
- Gear operated in sizes 8–12" (200–300 mm)



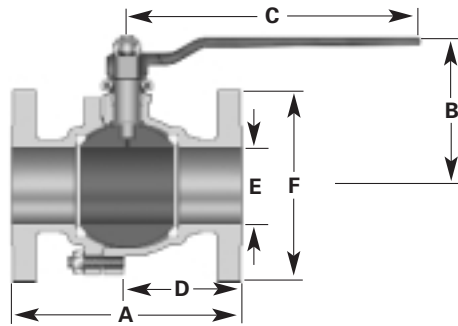
# 10-12" (250-300 mm) TRUNNION-MOUNTED BALL



## STANDARD MATERIALS

PART	CARBON STEEL	STAINLESS STEEL
Body	WCB	CF8M
Body end	WCB	CF8M
Stem	SS 316	SS 316
Ball	CF8M	CF8M
Thrust washer	PTFE	PTFE
Stem bushing	PTFE	PTFE
Seat	RPTFE	RPTFE
Packing flange	WCB	CF8M
Gland bushing	SS 316	SS 316
Packing ring	PTFE	PTFE
Body studs	Gr. B7	Gr. B8M, Class 2
Body nuts	Gr. 2H	Gr. 8M
Hex. soc. head cap screw	Alloy Steel	SS 304
Gland bushing sleeve	PTFE	PTFE
Body seal	PTFE or SS/Graphite (1)	
Handle	Malleable iron	Malleable iron
Stop plate	SS 304	SS 304
Hex. head cap screw	Gr. B7	Cast steel (plated)
Washer	Cast steel	Cast steel
Packing washers	PTFE	PTFE
Packing washers	SS 316	SS 316
Nameplate	Stainless steel	Stainless steel
Tag plate	Stainless steel	Stainless steel

1) Firesafe design with SS Graphite Body Seal



## DIMENSIONS AND WEIGHTS

SIZE in mm	SB-150 FULL PORT						TOTAL WEIGHT lb kg
	A	B	C	D	E	F	
1/2 15	4.25 108	3.49 89	5.31 135	1.62 41	0.50 13	3.50 89	4 2
3/4 20	4.63 118	4.09 104	5.56 141	1.75 445	0.75 19	3.88 99	7 3.2
1 25	5.00 127	4.21 107	5.56 141	2.05 52	1.00 25	4.25 108	8 3.6
1 1/2 40	6.50 165	4.85 123	7.81 198	2.55 65	1.50 38	5.00 127	15 7
2 50	7.00 178	4.87 124	10.38 264	2.95 75	2.00 51	6.00 152	22 10
3 80	8.00 203	6.72 171	11.91 302	3.78 96	3.00 76	7.50 191	47 21
4 100	9.00 229	9.56 243	19.88 505	4.57 116	4.00 102	9.00 229	81 37
6 150	15.50 394	11.42 290	36.75 933	6.22 158	6.00 152	10.00 279	176 80
8 200	18.00 457	14.92 379	65.00 1651	8.00 203	8.00 203	13.50 343	378 172
10 250	21.00 533	17.20 437	80.00 2032	9.48 241	10.00 254	16.00 406	686 312
12 300	24.00 610	20.28 515	100.00 2540	12.00 305	12.00 305	19.00 483	1026 466

## DIMENSIONS AND WEIGHTS

SIZE in mm	SB-300 FULL PORT						TOTAL WEIGHT lb kg
	A	B	C	D	E	F	
1/2 15	5.50 140	3.49 89	5.31 135	2.06 52	0.50 13	3.75 95	6 3
3/4 20	6.00 152	4.09 104	5.56 141	2.55 65	0.75 19	4.63 118	10 4.5
1 25	6.50 165	4.21 107	5.56 141	2.61 66	1.00 25	4.88 124	12 5.4
1 1/2 40	7.50 191	4.85 123	7.81 198	2.92 74	1.50 38	6.13 156	23 10
2 50	8.50 216	4.87 124	10.38 264	3.82 97	2.00 51	6.50 165	29 13
3 80	11.13 283	6.72 171	11.91 302	5.33 136	3.00 76	8.25 210	68 31
4 100	12.00 305	9.56 243	19.88 505	6.00 152	4.00 102	10.00 254	112 51
6 150	15.88 403	11.42 290	36.75 933	6.89 175	6.00 152	12.50 318	229 104
8 200	19.75 502	14.92 379	65.00 1651	8.78 223	8.00 203	15.00 381	461 209
10 250	22.38 568	17.20 437	80 2032	10.15 257	10.00 254	17.50 446	857 389
12 300	25.50 648	20.28 515	100 2540	12.75 324	12.00 305	20.50 512	1407 640

# HOW TO ORDER

## VELAN VALVAC GENERAL PURPOSE BALL VALVES

The figure numbers shown on this key cover essential features of Velan Valvac valves.  
Please use these figure numbers to ensure prompt and accurate processing of your order.



### A TYPE OF CONNECTION

B - Butt weld F - Flanged, B16.5 S - Threaded W - Socket weld

### B SIZE OF CONNECTION\*

Customers have the choice of specifying valve size as part of the valve figure ("B") using the numbers below, or indicating valve size separately.

Examples: ½" S-L0302-SSGA (valve size is shown separately)  
S03-L0302-SSGA (valve size is part of figure number)

01 - ¼"      04 - ¾"      07 - 1½"      12 - 4"      16 - 10"  
02 - ⅜"      05 - 1"      08 - 2"      14 - 6"      18 - 12"  
03 - ½"      06 - 1¼"      10 - 3"      15 - 8"

### C MODEL NUMBER

A - VEE-600      J - V3P-1000-ISO MTG pad      L - V0P-1000  
M - VEE-2000      K - V3P-1000

### CLASS

0 - 150      1 - 300

### D PORT

0 - Reduced/regular port      1 - Full port

### E TYPE

1 - End-entry (two-piece)      G - Split-body 2 - 12"  
3 - One-piece/unibody      4 - Split-body ½ - 1½"  
8 - Three-piece valve

### F BODY MATERIAL

02 - A105, WCB      07 - Bronze B-62 or B-584      13 - Stainless steel  
F316, CF8M

### G TRIM MATERIAL

CODE	BALL	STEM
SS	SS 316	SS 316
BR	Brass CR plated	Brass

### H SEAT MATERIAL

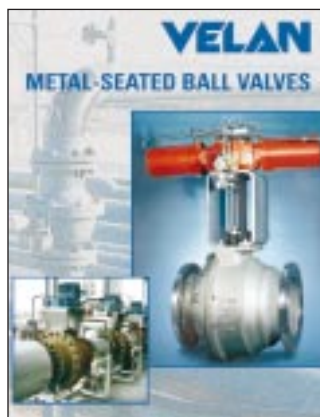
T - PTFE      G - RPTFE

### I SPECIAL SERVICE OR DESIGN

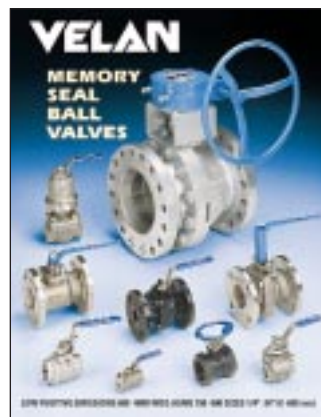
A - Standard

**NOTE:** Actual pressure-temperature ratings are the lesser of the seat ratings shown on page 8 or ASME B16.34.

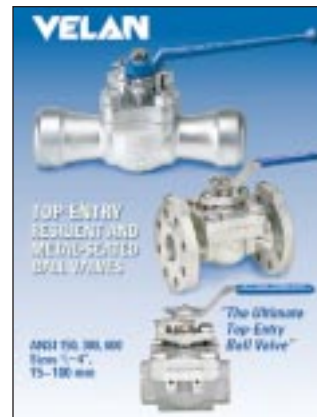
Velan offers a full line of patented resilient & metal-seated ball valves in sizes up to 24". For information contact the nearest sales office.



VEL-MS



VEL-BV



VEL-TE



VEL-BDC