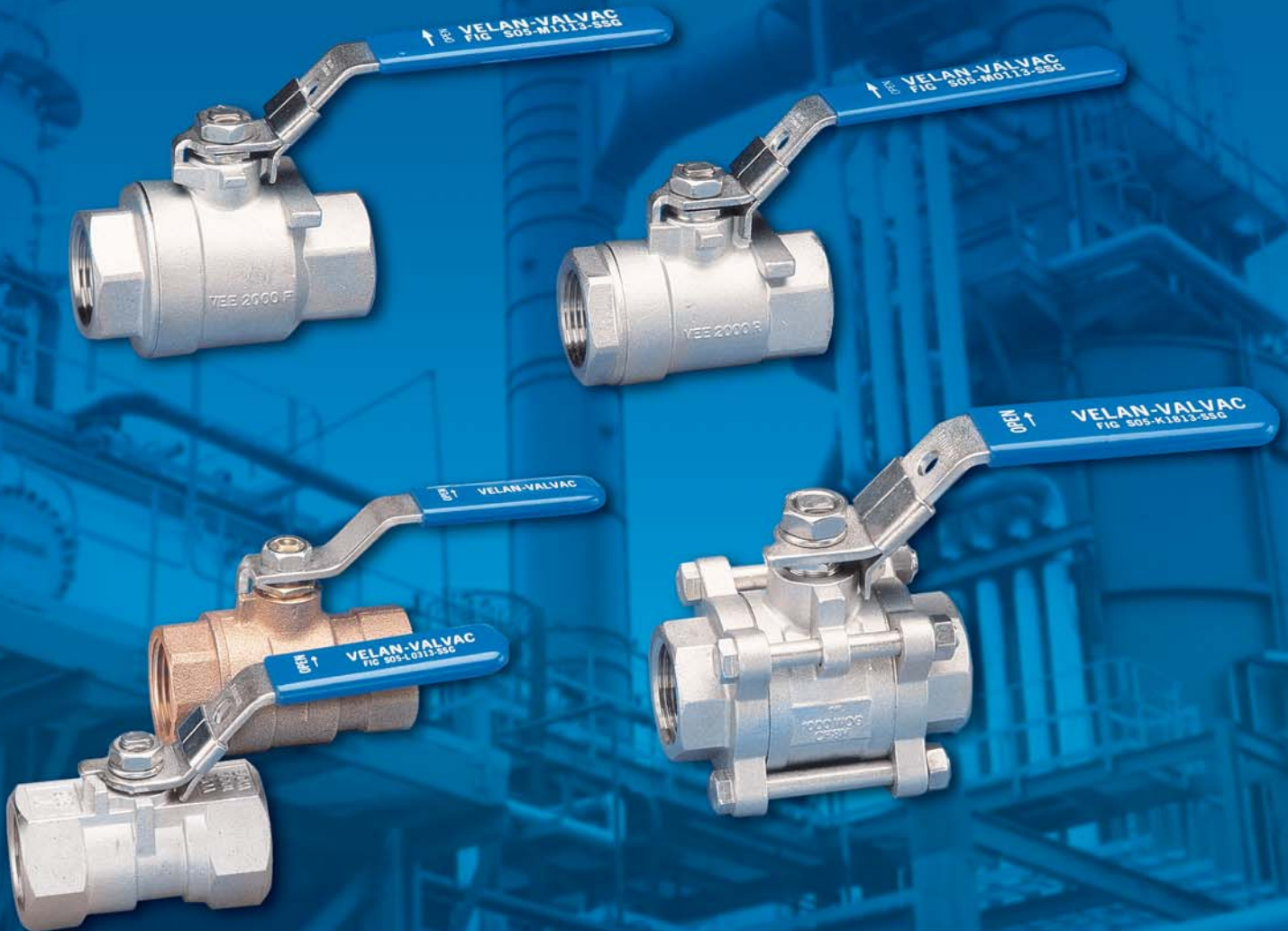


# VELAN

## VALVAC

# General Purpose Ball Valves



Catalogs

**Pressure Rating: up to 2000 psi • Sizes: 1/4-2" (8-50 mm)**

# VELAN COMPANY PROFILE

Velan is one of the world's leading manufacturers of industrial steel valves, supplying gate, globe, check, ball, butterfly and knife gate valves for critical applications in the chemical, petrochemical, oil and gas, fossil and nuclear power, cogeneration, pulp and paper and cryogenic industries. See the back cover of this catalog for a summary of the many quality products that Velan designs and manufactures.

Founded in 1950, Velan earned a reputation for excellence as a major supplier of forged valves for nuclear power plants and the U.S. Navy. Velan Inc. pioneered many designs which became industry standards, including bellows seal valves, all stainless steel knife gate valves and forged valves up to 24".

Velan valves are manufactured in 12 specialized manufacturing plants, including five in Canada and U.S.A., four in Europe and three in Asia. We have over 1,700 employees, the majority of whom are located in our North American operations.

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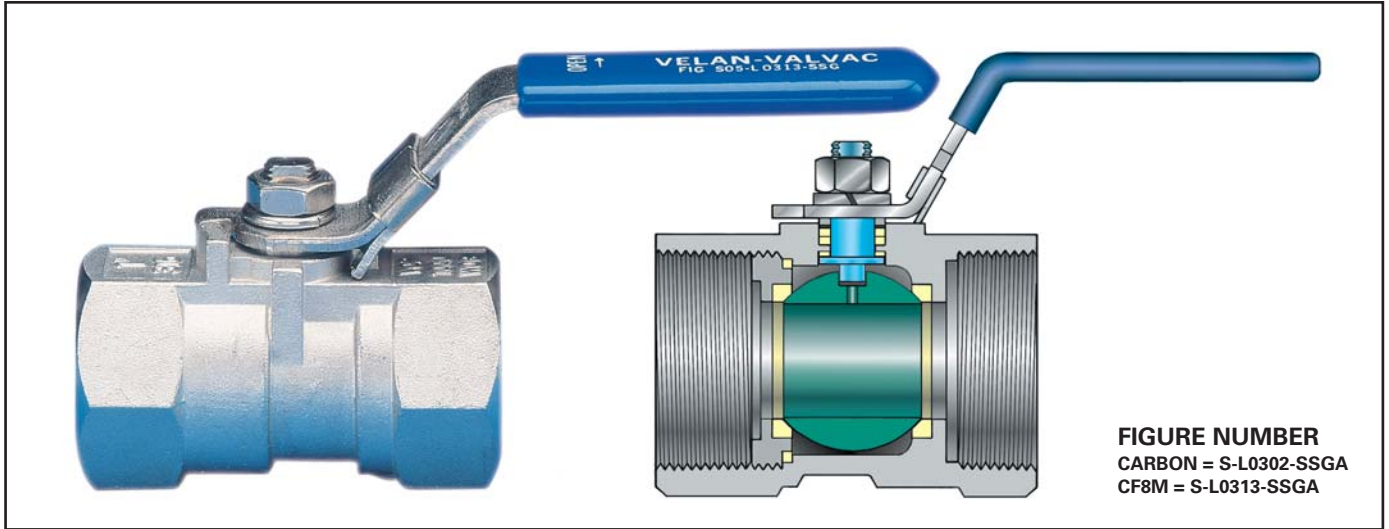
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# VOP-1000 ONE-PIECE REDUCED PORT GENERAL PURPOSE BALL VALVE

1/4 – 2" (8 – 50 mm)

CARBON OR STAINLESS STEEL BODY, RPTFE SEATS

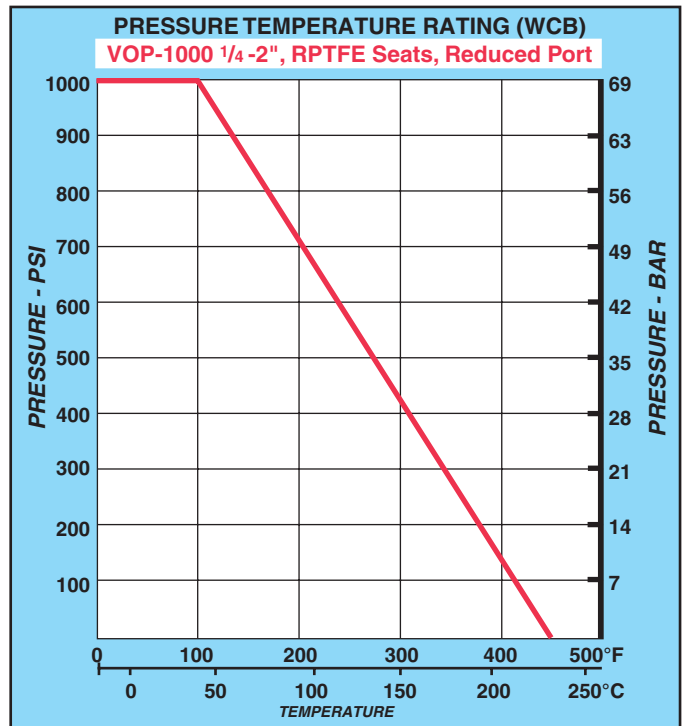


**FIGURE NUMBER**  
 CARBON = S-L0302-SSGA  
 CF8M = S-L0313-SSGA

### STANDARD MATERIALS

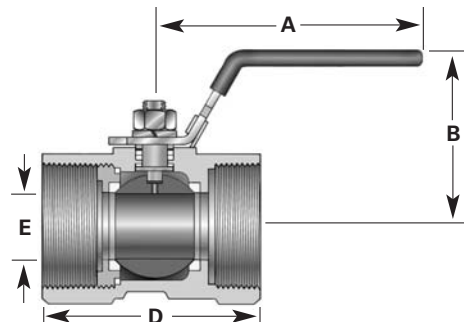
PART	STAINLESS STEEL	CARBON STEEL <sup>(1)</sup>
Body	CF8M	WCB
Seat	RPTFE	RPTFE
Ball	SS 316	SS 316
Stem	SS 316	SS 316
Seat retainer	SS 316	Carbon steel
Thrust washer	RPTFE	RPTFE
Body seal	RPTFE	RPTFE
Stem packing	PTFE	PTFE
Stem washer	SS 304	SS 304
Stem nut	SS 304	SS 304
Gland follower	SS 304	SS 304
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	D	E		
1/4 8	2.64 67.0	1.38 35.0	1.73 44.0	0.24 6.1	2.5	0.18 0.08
3/8 10	3.19 81.0	1.57 39.9	1.89 48.0	0.33 8.4	3.5	0.24 0.11
1/2 15	3.74 95.0	1.69 42.9	2.36 60.0	0.36 9.1	4.8	0.44 0.20
3/4 20	3.74 95.0	1.93 48.9	2.40 61.0	0.49 12.4	9.5	0.57 0.26
1 25	4.33 110.0	2.32 58.9	2.91 74.0	0.63 16.0	14.0	0.93 0.42
1 1/4 32	4.33 110.0	2.52 64.0	3.07 78.0	0.79 20.1	33.0	1.48 0.67
1 1/2 40	5.71 145.0	2.64 67.1	3.39 86.0	0.96 24.4	45.0	2.00 0.91
2 50	5.71 145.0	3.03 77.0	4.02 102.0	1.26 32.0	58.0	3.31 1.50

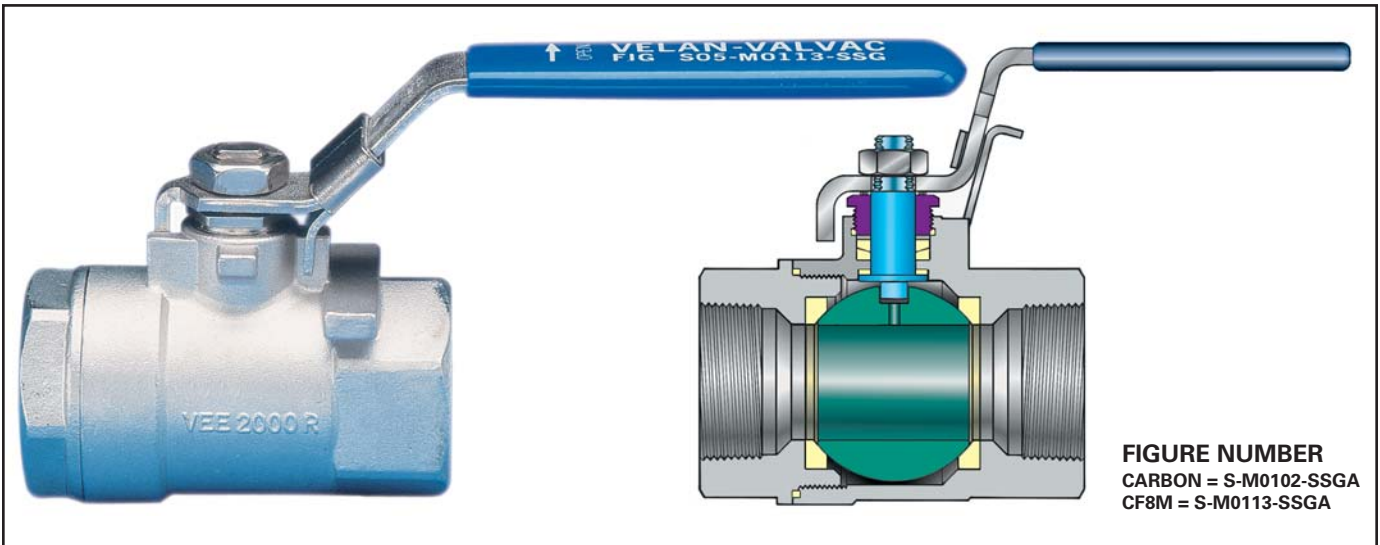




# VEE-2000 REGULAR PORT END-ENTRY GENERAL PURPOSE BALL VALVE

1/4 - 2" (8-50 mm)

CARBON OR STAINLESS STEEL BODY, RPTFE SEATS

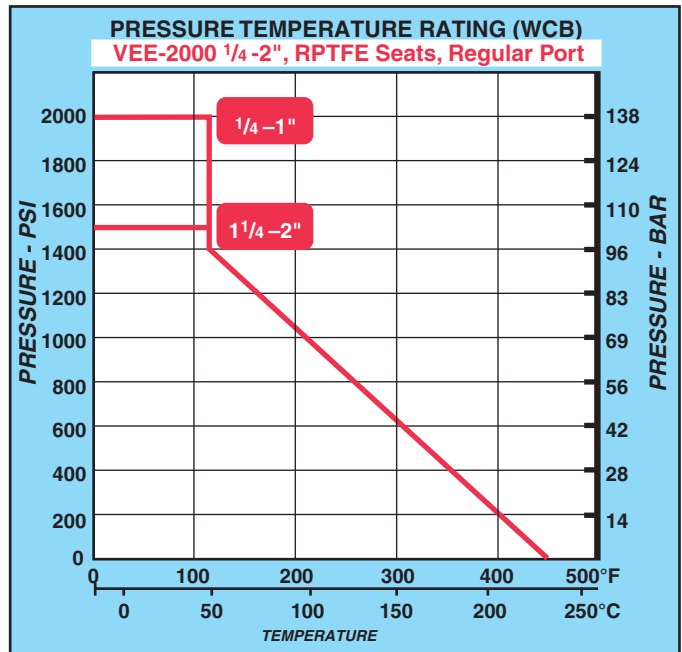


**FIGURE NUMBER**  
 CARBON = S-M0102-SSGA  
 CF8M = S-M0113-SSGA

### STANDARD MATERIALS

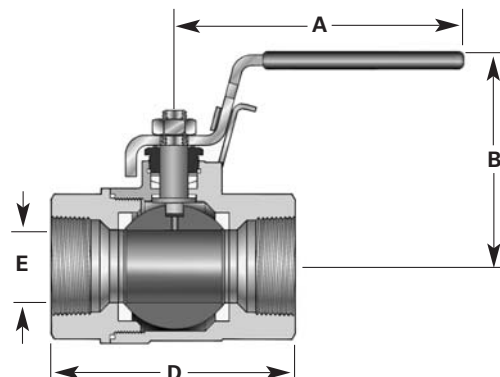
PART	STAINLESS STEEL	CARBON STEEL <sup>(1)</sup>
Body	CF8M	WCB
End cap	CF8M	WCB
Seat	RPTFE	RPTFE
Ball	SS 316	SS 316
Stem	SS 316	SS 316
Thrust washer	RPTFE	RPTFE
Body seal	PTFE	PTFE
Packing ring	PTFE or RPTFE	PTFE or RPTFE
Packing nut	SS 304	SS 304
Handle	SS 304	SS 304
Handle / latch	SS 304	SS 304
Handle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

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



### DIMENSIONS AND WEIGHTS

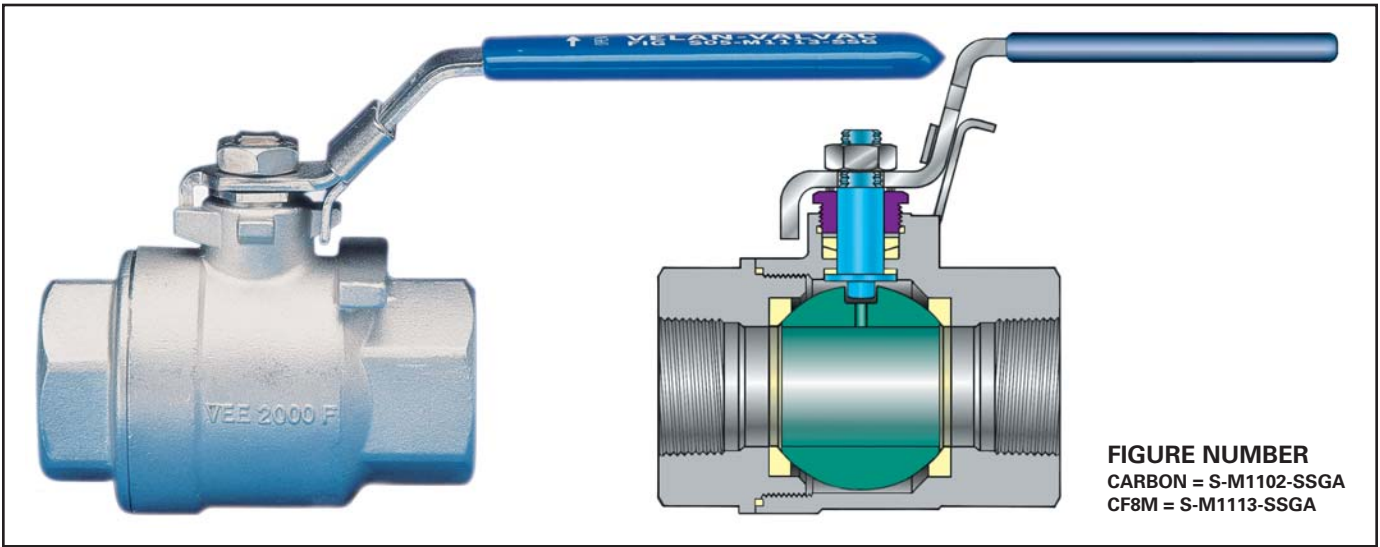
SIZE in mm	VEE-2000R		MANUAL		Cv Value	WEIGHT lb/kg
	A	B	D	E		
1/4 8	4.65 118	2.28 58	2.17 55	0.44 11.1	8	0.66 0.30
3/8 10	4.65 118	2.28 58	2.17 55	0.44 11.1	10	0.62 0.28
1/2 15	4.65 118	2.28 54	2.3 59.7	0.44 11.1	12	0.62 0.28
3/4 20	5.24 133	2.52 64	2.85 72.5	0.50 12.7	15	1.10 0.50
1 25	5.94 151	2.83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

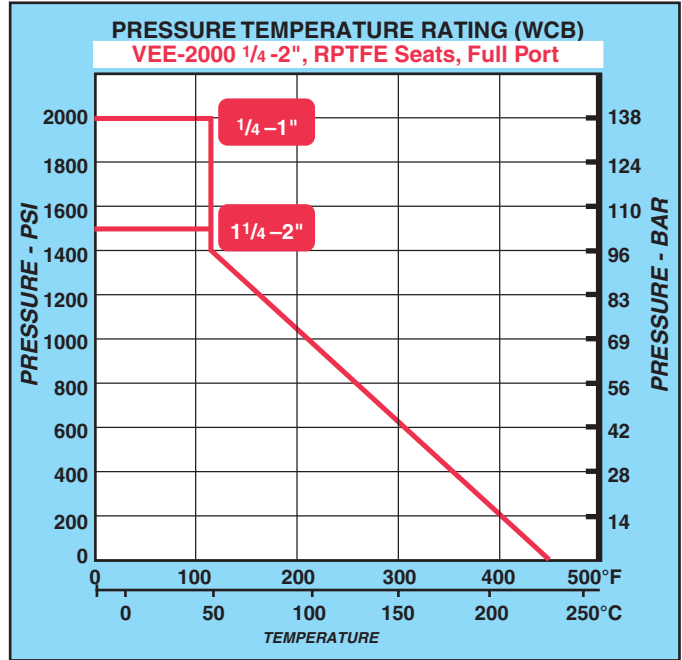
CARBON OR STAINLESS STEEL BODY, RPTFE SEATS



**STANDARD MATERIALS**

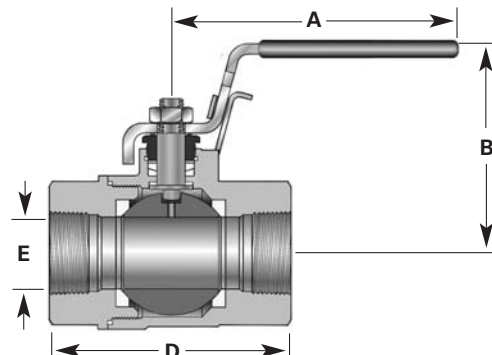
PART	STAINLESS STEEL	CARBON STEEL <sup>(1)</sup>
Body	CF8M	WCB
End cap	CF8M	WCB
Seat	RPTFE	RPTFE
Ball	SS 316	SS 316
Stem	SS 316	SS 316
Thrust washer	RPTFE	RPTFE
Body seal	PTFE	PTFE
Packing ring	PTFE or RPTFE	PTFE or RPTFE
Packing nut	SS 304	SS 304
Handle	SS 304	SS 304
Handle / latch	SS 304	SS 304
Handle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

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



**DIMENSIONS AND WEIGHTS**

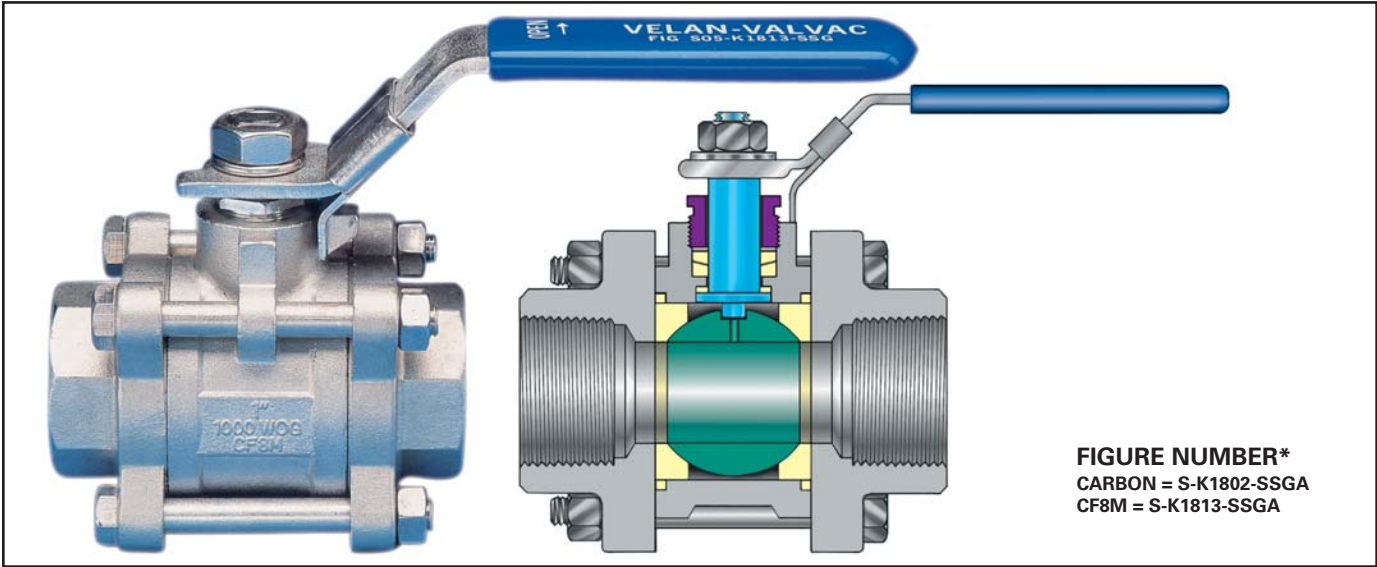
SIZE in mm	VEE-2000F		MANUAL		Cv Value	WEIGHT lb/kg
	A	B	D	E		
1/4 8	4.65 118	2.28 53.3	2.17 56	0.44 11.1	8	0.66 0.30
3/8 10	4.65 118	2.28 53.3	2.17 56	0.44 11.1	10	0.62 0.28
1/2 15	4.65 118	2.40 61	2.38 60.5	0.50 12.7	13	0.62 0.30
3/4 20	5.87 149	2.76 70	3.01 76.5	0.81 20.7	50	1.41 0.64
1 25	5.87 149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

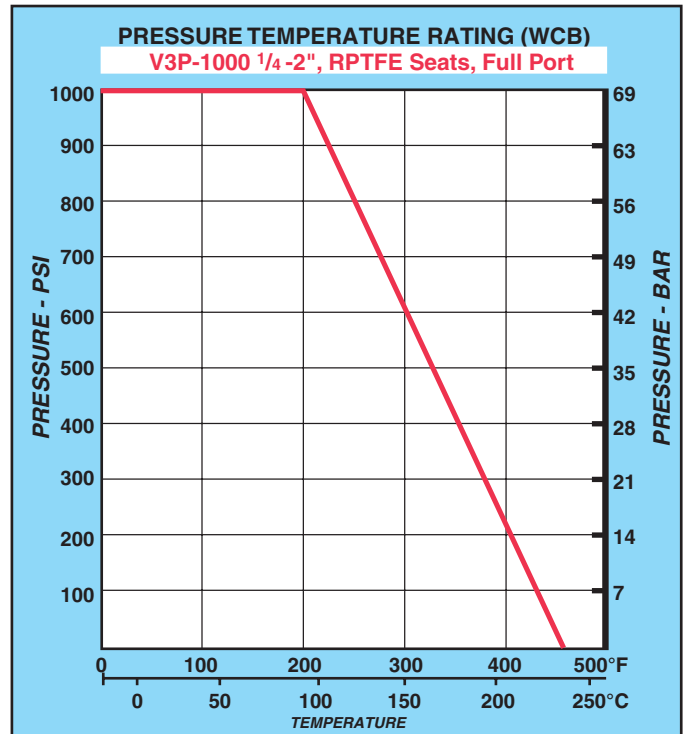
CARBON OR STAINLESS STEEL BODY, RPTFE SEATS, THREADED OR WELD ENDS



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

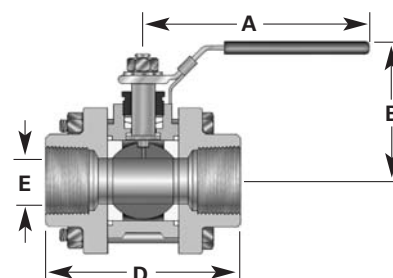
## STANDARD MATERIALS

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



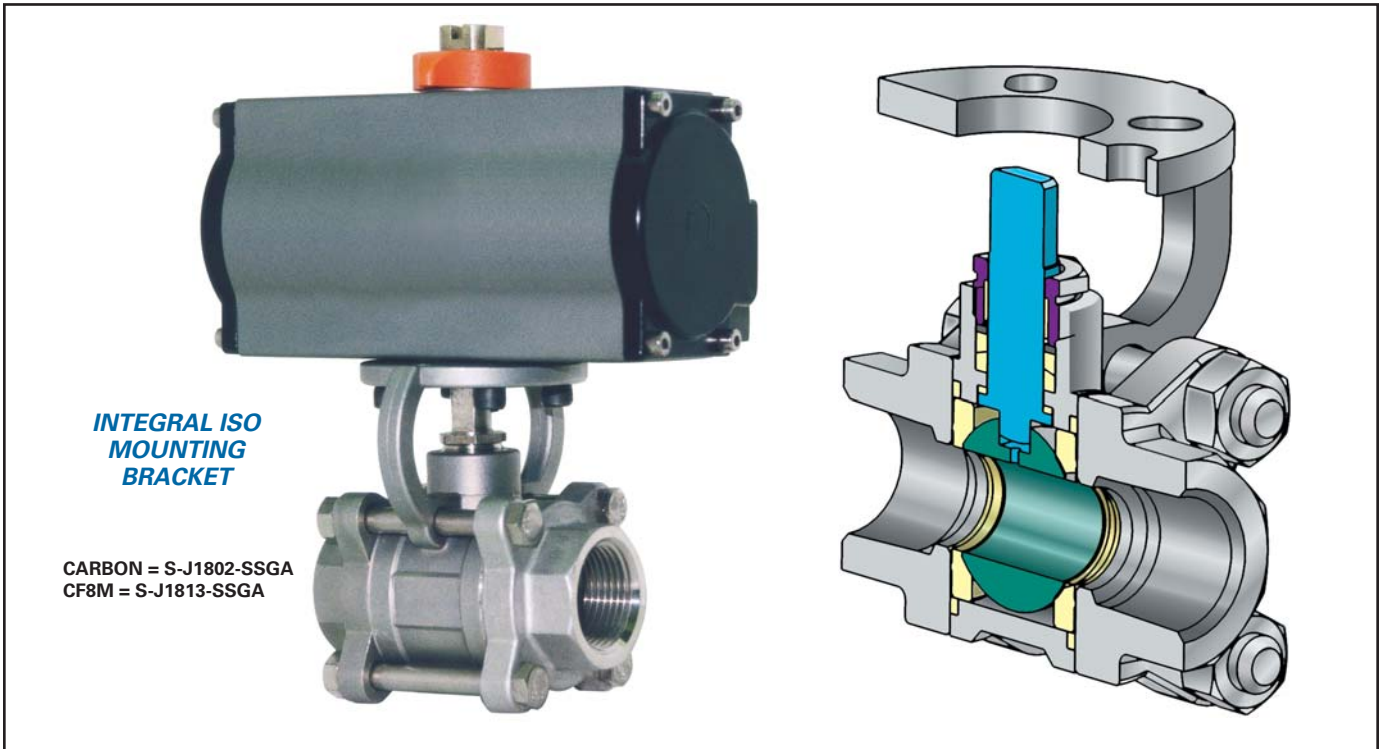
## DIMENSIONS AND WEIGHTS

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



\* Figure number shown is for threaded end valves, see "How to Order Chart" on page 11 for other end connections.

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



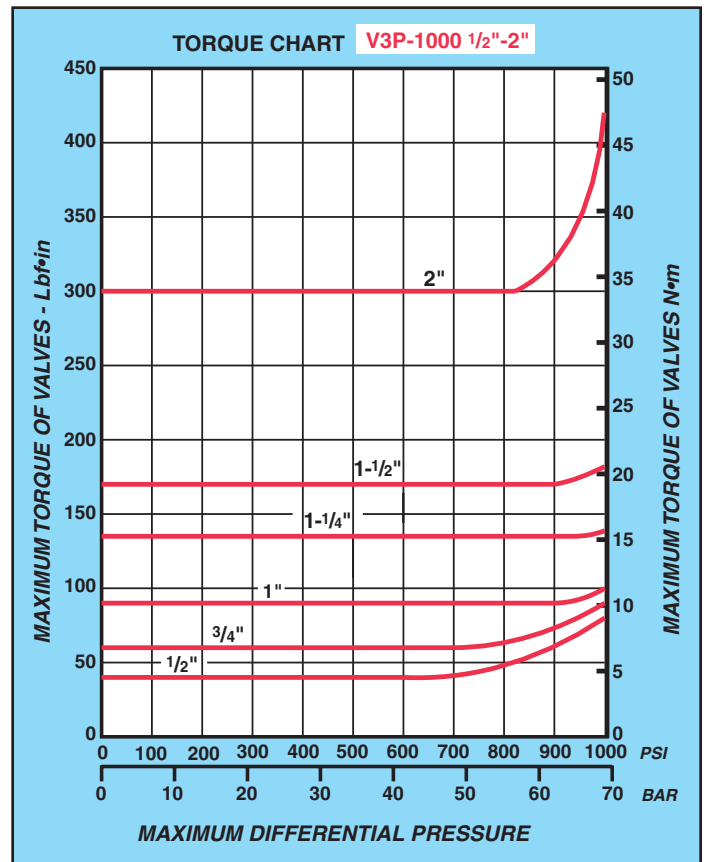
The Velan Valvac three-piece ball valve with integral ISO mounting pad is a rugged, low-cost ball valve for many industrial, commercial and OEM automated applications. The ISO mounting pad will allow quick and easy direct mounting of ISO compatible quarter-turn actuators. A key feature of this valve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

## DESIGN FEATURES:

- Multiple solid cup and cone type PTFE 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.

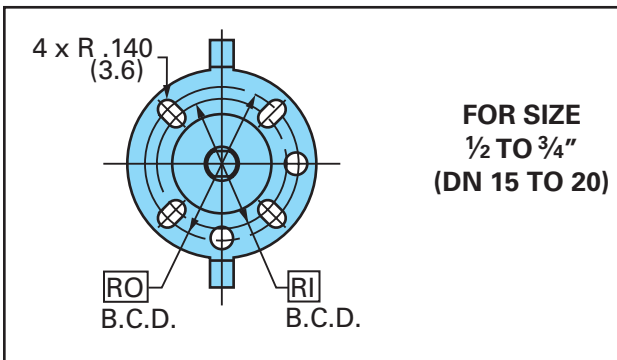


# THREE-PIECE GENERAL PURPOSE BALL VALVE TECHNICAL INFORMATION

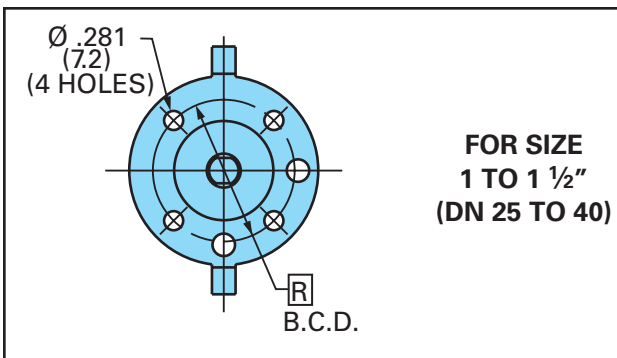
1000 WOG

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

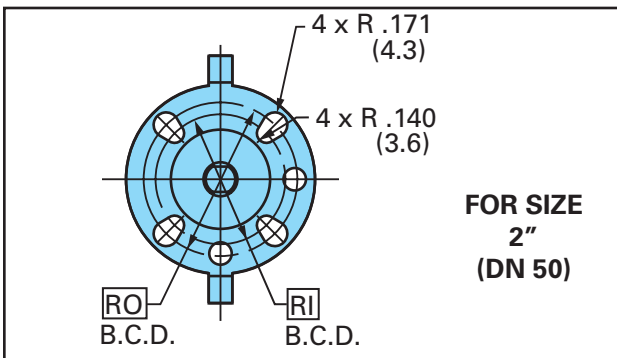
## ISO F03/F04 BOLTING STYLE



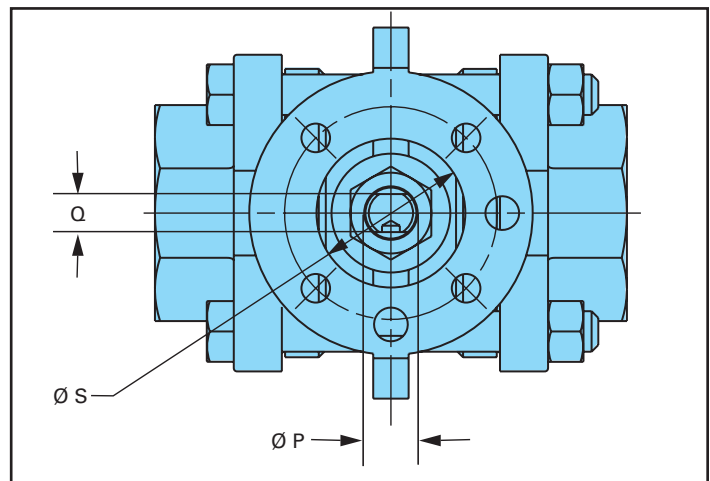
## ISO F05 BOLTING STYLE



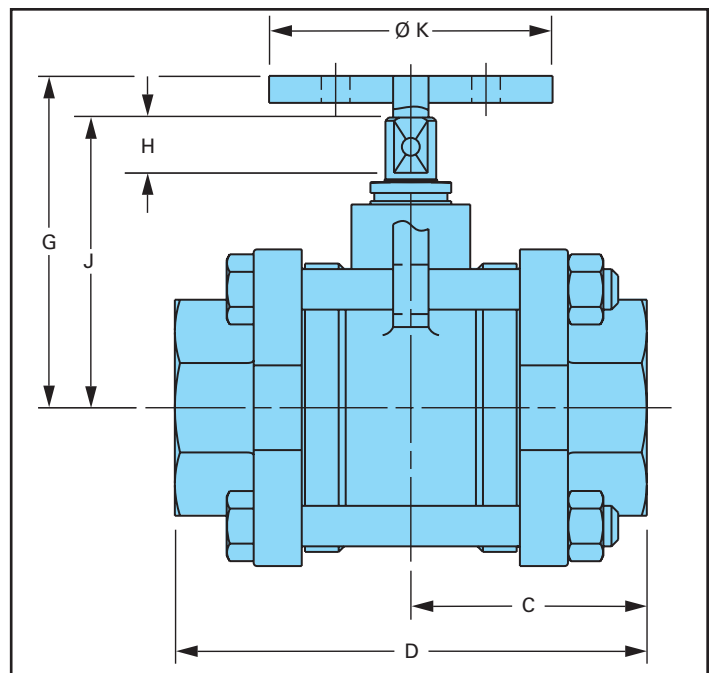
## ISO F05/F07 BOLTING STYLE



## TOP VIEW



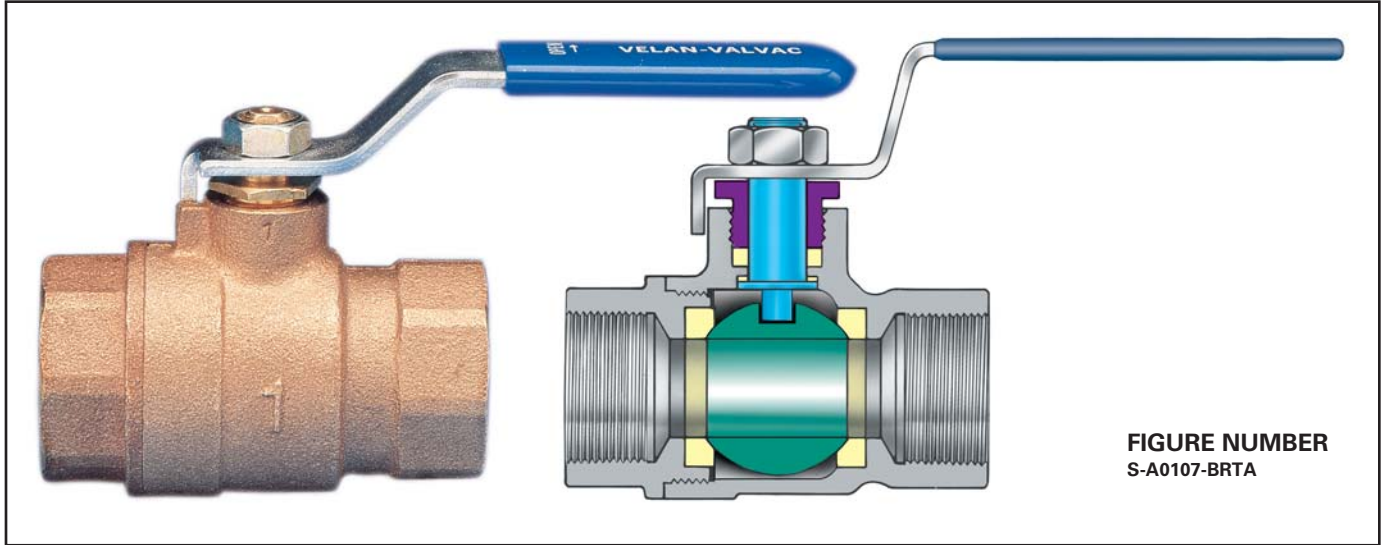
## SIDE VIEW







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



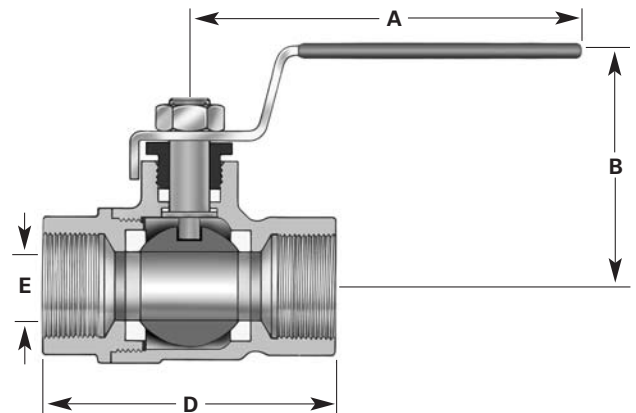
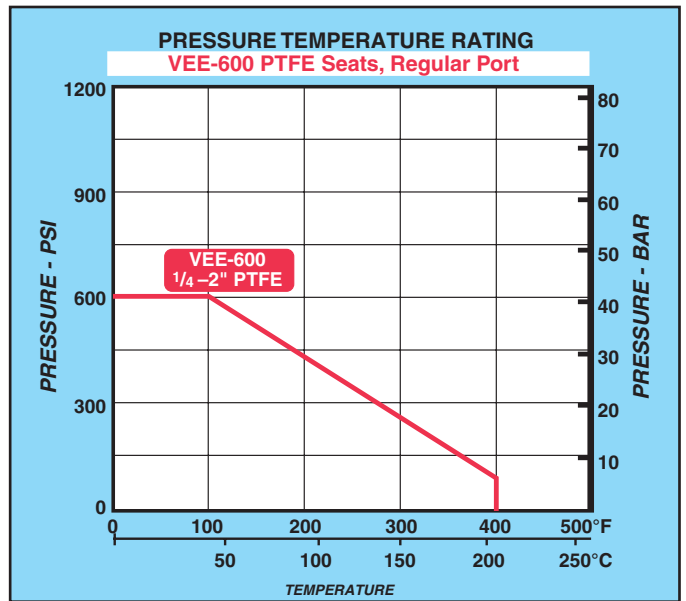
**FIGURE NUMBER**  
S-A0107-BRTA

**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**

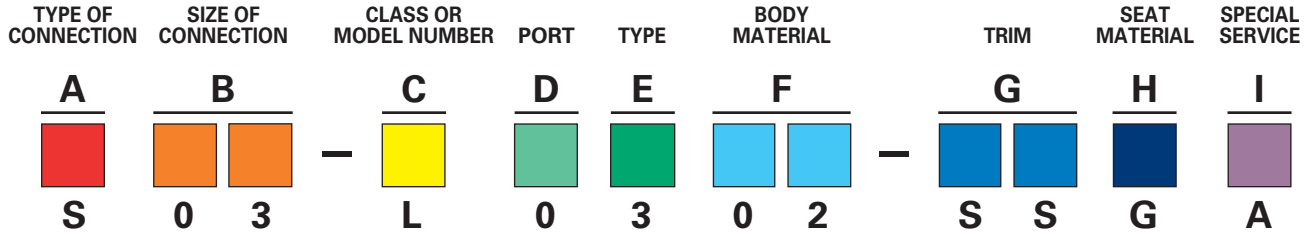
SIZE in mm	VEE-600		MANUAL		Cv Value	WEIGHT lb/kg
	A	B	D	E		
1/4 8	3.27 83.0	1.81 46.0	1.85 47.0	0.39 10	6	0.40 0.18
3/8 10	3.27 83.0	1.81 46.0	1.85 47.0	0.39 10	6	0.40 0.18
1/2 15	3.27 83.0	1.81 46.0	2.28 58	0.50 12.7	10	0.51 0.23
3/4 20	4.05 103	2.56 65.0	2.56 65.0	0.70 17.7	24	0.82 0.37
1 25	4.05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



# 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.



*Example: 1", threaded, HB-2000, standard port valve in carbon steel with stainless steel trim and glass-filled Teflon seat for standard service.*

<b>A TYPE OF CONNECTION</b>			
<b>B</b> - Butt weld		<b>S</b> - Threaded	
<b>F</b> - Flanged B16.5 (B16.47 series A)		<b>W</b> - Socket weld	
<b>B SIZE OF CONNECTION</b>			
Customers have the choice of specifying valve size as part of the valve figure number ( <b>B</b> ) using the numbers below, or indicating valve size separately.			
<b>EXAMPLES:</b>			
S03-L0302-SSGA (valve size is part of figure number)			
1/2"S-L0302-SSGA (valve size is shown separately)			
<b>01</b> - 1/4" (8 mm)	<b>03</b> - 1/2" (15 mm)	<b>05</b> - 1" (25 mm)	<b>07</b> - 1 1/2" (40 mm)
<b>02</b> - 3/8" (10 mm)	<b>04</b> - 3/4" (20 mm)	<b>06</b> - 1 1/4" (32 mm)	<b>08</b> - 2" (50 mm)
<b>C MODEL NUMBER / CLASS</b>			
<b>A</b> - VEE-600	<b>K</b> - V3P-1000	<b>M</b> - VEE-2000	
<b>J</b> - V3P-1000-ISO	<b>L</b> - VOP-1000		
<b>CLASS:</b>			
<b>0</b> - 150		<b>1</b> - 300	

<b>D PORT</b>					
<b>0</b> - Regular or reduced port					
<b>1</b> - Full port					
<b>E TYPE</b>					
<b>1</b> - End-Entry (two-piece)			<b>4</b> - Split-Body		
<b>3</b> - One-Piece/Unibody			<b>8</b> - Three-Piece valve (bolted)		
<b>F BODY MATERIAL</b>					
<b>02</b> - A105, WCB			<b>13</b> - CF8M		
<b>07</b> - Bronze B-584					
<b>G TRIM</b>					
CODE	BALL	STEM	CODE	BALL	STEM
<b>BR</b>	Brass CR plated	Brass	<b>SS</b>	316	316
<b>H SEAT MATERIAL</b>					
<b>G</b> - Glass reinforced PTFE			<b>T</b> - PTFE		
<b>I SPECIAL SERVICE</b>					
<b>A</b> - Standard					