

VELAN VALVAC

General Purpose Ball Valves

Sizes: 1/4 – 2" (8 – 50 mm)

Pressure up to 2000 psi



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.

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 13 specialized manufacturing plants, including six in Canada & U.S.A., four in Europe and three in Asia. We have a total of 1,450 employees, 75% of whom are located in our North American operations.

CONTENTS

Manufacturing Plants	1
VOP-1000 One-piece	2
VEE-2000 Regular Port End-entry	3
VEE-2000 Full Port End-entry	4
V3P-1000 Three-piece	5
Three-piece - ISO Mounting Pad	6
VEE-600 End-entry Bronze Regular Port	8
How to Order.....	9

HEAD OFFICE & PLANT 5



MONTREAL, CANADA 115,000 sq. ft. (10,683 m²)
3–24" (80–600 mm) butterfly, 3/8–2" (10–50 mm) metal & resilient seated ball valves

MANUFACTURING LOCATIONS

CANADA

VELAN INC.
HEAD OFFICE & PLANT 5
7007 Côte de Liesse
Montreal, QC H4T 1G2
Tel: (514) 748-7743
Fax: (514) 748-8635

PLANT 1
2125 Ward Avenue
Montreal, QC H4M 1T6
Tel: (514) 748-7743
Fax: (514) 748-8635

PLANT 2 / 7
550 McArthur Ave.
Montreal, QC H4T 1X8
Tel: (514) 748-7743
Fax: (514) 341-3032

PLANT 4 / 6
1010 Cowie Street
Granby, QC J2J 1E7
Tel: (450) 378-2305
Fax: (450) 378-6865

PROQUIP
835 Fourth Line
Oakville, ON L6L 5B8
Tel: (905) 842-1721
Fax: (905) 849-0923

U.S.A.
VELAN VALVE CORPORATION PLANT 3
94 Avenue C
Williston, VT 05495-9732
Tel: (802) 863-2562
Fax: (802) 862-4014

ENGLAND

VELAN VALVES LTD.
Unit 1, Pinfold Road
Lakeside Business Park
Thurmaston
Leicester LE4 8AS
Tel: 44-116 269-5172
Fax: 44-116 269-3695

ITALY

VELAN SRL
Via Delle Industrie 9/5
20050 Mezzago,
Tel: (39) 039 624-1101
Fax: (39) 039 688-3357

FRANCE

VELAN S.A.S
90, rue Challemeil Lacour
F 69 367 Lyon Cedex 7
Tel: (33) 4 78 61 67 00
Fax: (33) 4 78 72 12 18

PORTUGAL

VELAN VÁLVULAS INDUSTRIAIS, LDA.
Av. Ary dos Santos
1679-018 Famoes
Tel: (351-21) 934-7800
Fax: (351-21) 934-7809

TAIWAN

VELAN-VALVAC
P.O. Box 2020
Taichung, Taiwan
R.O.C.
Tel: (04) 2792649
Fax: (886) 42750855

KOREA

VELAN LTD.
1060-4 Shingil-Dong
Ansan City,
Kyunggi-do 425-833
Tel: (82) 31-491-2811
Fax: (82) 31-491-2813

DISTRIBUTION CENTERS

U.S.A.

VELCAL
537 Stone Road, Unit "A"
Benicia, CA 94510
Tel: (707) 745-4507
Fax: (707) 745-4708

VELEAST
605 Commerce
Park Drive SE
Marietta, GA 30060
Tel: (770) 420-2010
Fax: (707) 420-7063

VELNORTH
94 Avenue C
Williston, VT 05495-9732
Tel: (802) 651-0867
Fax: (802) 865-3030

GERMANY

VELAN GmbH
Daimlerstrasse 8
D-47877 Willich
Tel: (49) 2154/4938-00
Fax: (49) 2154/4938-99

Velan has sales offices and distributors located worldwide.

Visit the Velan website at www.velan.com for an updated contact list.

GENERAL INFORMATION

Tel: (514) 748-7743
Fax: (514) 748-8635
sales@velan.com

NOTE: The material in this catalog is for general information. For specific performance data and proper material selection, consult your Velan representative. Although every attempt has been made to ensure that the information contained in this catalog is correct, Velan reserves the right to change designs, materials or specifications without notice.

MANUFACTURING PLANTS AROUND THE WORLD

PLANT 1



MONTREAL, CANADA 109,000 sq. ft. (10,126 m²)
 $\frac{1}{4}$ –4" (8–100 mm) forged gate, globe & check valves, ASME 'N' stamp

PLANT 2 & 7



MONTREAL, CANADA 170,000 sq. ft. (15,800 m²)
 2–60" (50–1500 mm) forged & cast steel gate, globe, check, ball, knife
 and 3–36" (80–700 mm) butterfly valves ASME 'N' stamp

PLANT 4 & 6



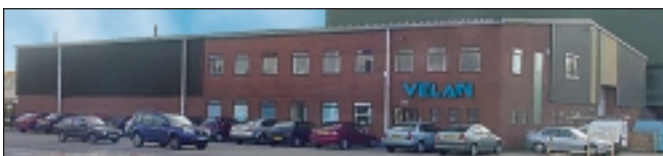
GRANBY, CANADA 186,500 sq. ft. (17,325 m²)
 2–16" (50–400 mm) cast steel gate, globe and check valves,
 $\frac{1}{4}$ –12" (8–300 mm) ball valves



TORONTO, CANADA *Velan-Proquip* 41,000 sq. ft. (3,800 m²)
 2–48" (50–1200 mm) wafer check valves,
 $\frac{1}{2}$ –24" (15–600 mm) clamp joint connectors



WILlich, GERMANY 12,000 sq. ft. (1,115 m²)



LEICESTER, ENGLAND 14,000 sq. ft. (1,300 m²)
 Steam traps, $\frac{3}{8}$ –2" (10–50 mm) bonnetless globe valves



LISBON, PORTUGAL 60,000 sq. ft. (5,600 m²)
 2–12" (50–300 mm) cast steel gate, globe & check valves

PLANT 3



WILLISTON, VERMONT, U.S.A. 155,000 sq. ft. (14,400 m²)
 2–24" (50–600 mm) forged and cast steel gate, globe and check
 valves, ASME 'N' stamp



LYON, FRANCE 160,000 sq. ft. (14,900 m²) $\frac{1}{4}$ –40" (8–1,000 mm)
 forged & cast steel gate, globe and butterfly valves



MILAN, ITALY 40,000 sq. ft. (3,700 m²)
 1–64" (25–1600 mm) API 6A & 6D trunnion mounted ball valves



ANSAN CITY, SOUTH KOREA Plant 1 30,000 sq. ft. (2,800 m²)
 components and 2–4" (50–100 mm) cast steel valves



ANSAN CITY, SOUTH KOREA Plant 2 65,000 sq. ft. (5,800 m²)
 2–12" (50–300 mm) cast steel gate, globe, check, ball and
 knife gate valves



TAICHUNG, TAIWAN *Velan-Valvac* 20,000 sq. ft. (1,840 m²)
 $\frac{1}{4}$ –2" (8–50 mm) ball valves



VOP-1000 ONE-PIECE REDUCED PORT GENERAL PURPOSE BALL VALVE 1/4 – 2" (8–50 mm)

CARBON OR STAINLESS STEEL BODY, RPTFE SEATS

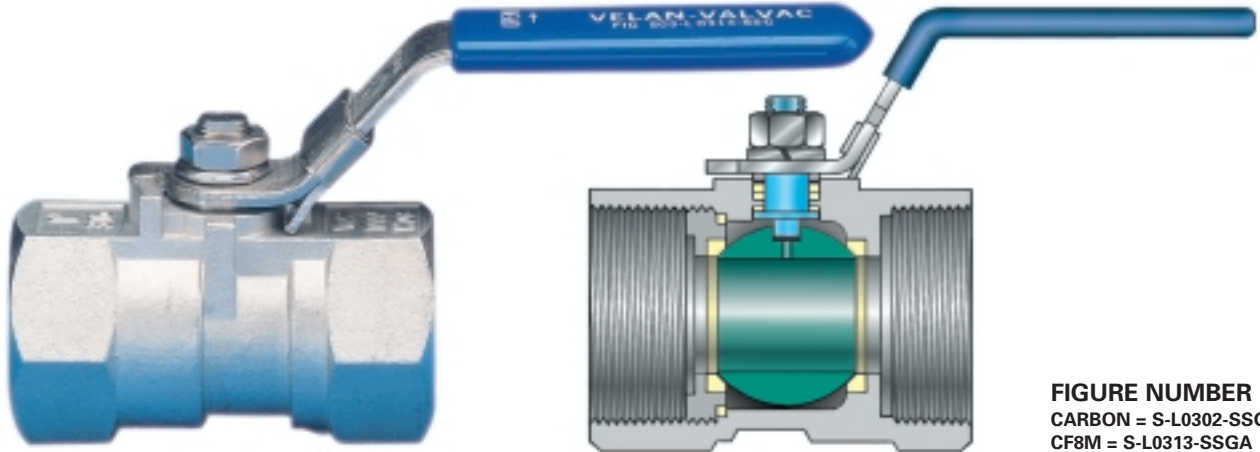


FIGURE NUMBER
CARBON = S-L0302-SSGA
CF8M = S-L0313-SSGA

STANDARD MATERIALS

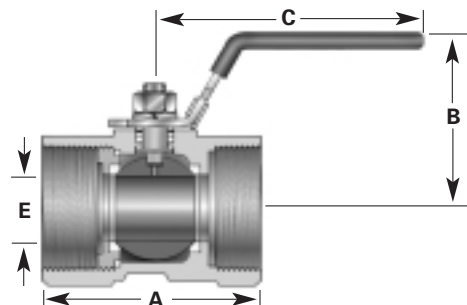
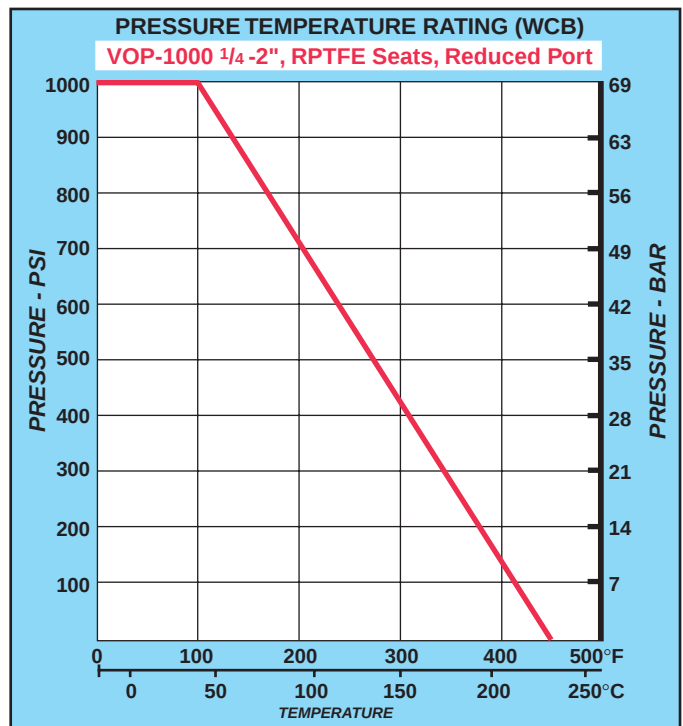
PART	STAINLESS STEEL	CARBON STEEL ⁽¹⁾
Body	CF8M	WCB
Seat	RPTFE	RPTFE
Ball	SS 316	SS 316
Stem	SS 316	SS 316
Seat retainer	SS 316	Carbon steel
Thrust washer	RPTFE	RPTFE
Body seal	RPTFE	RPTFE
Stem packing	PTFE	PTFE
Stem washer	SS 304	SS 304
Stem nut	SS 304	SS 304
Gland follower	SS 304	SS 304
Handle / latch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

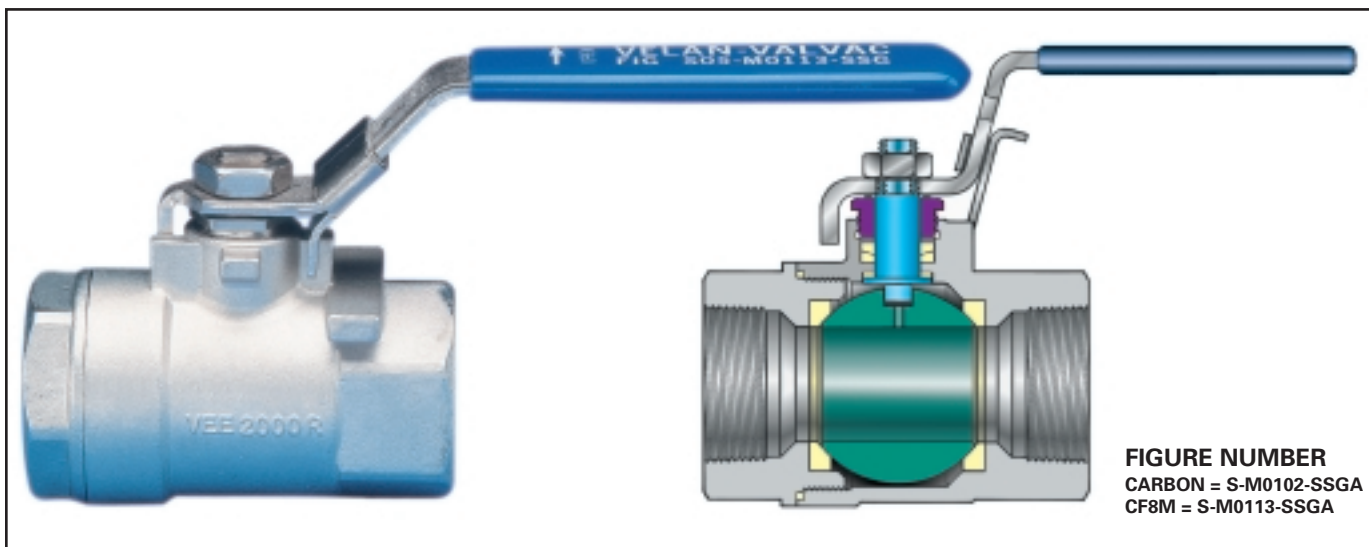


FIGURE NUMBER
CARBON = S-M0102-SSGA
CF8M = S-M0113-SSGA

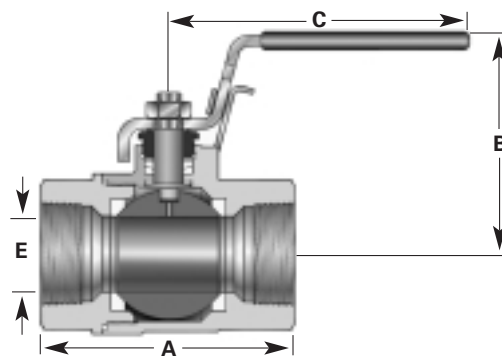
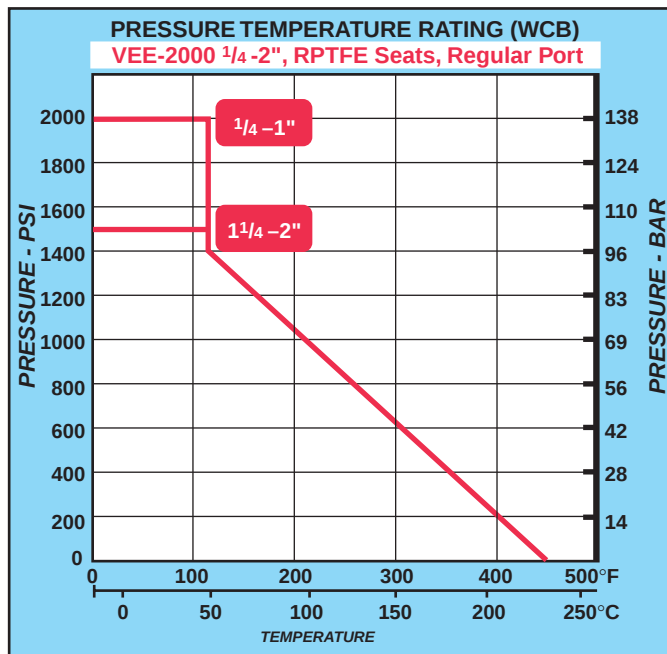
STANDARD MATERIALS

PART	STAINLESS STEEL	CARBON STEEL ⁽¹⁾
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

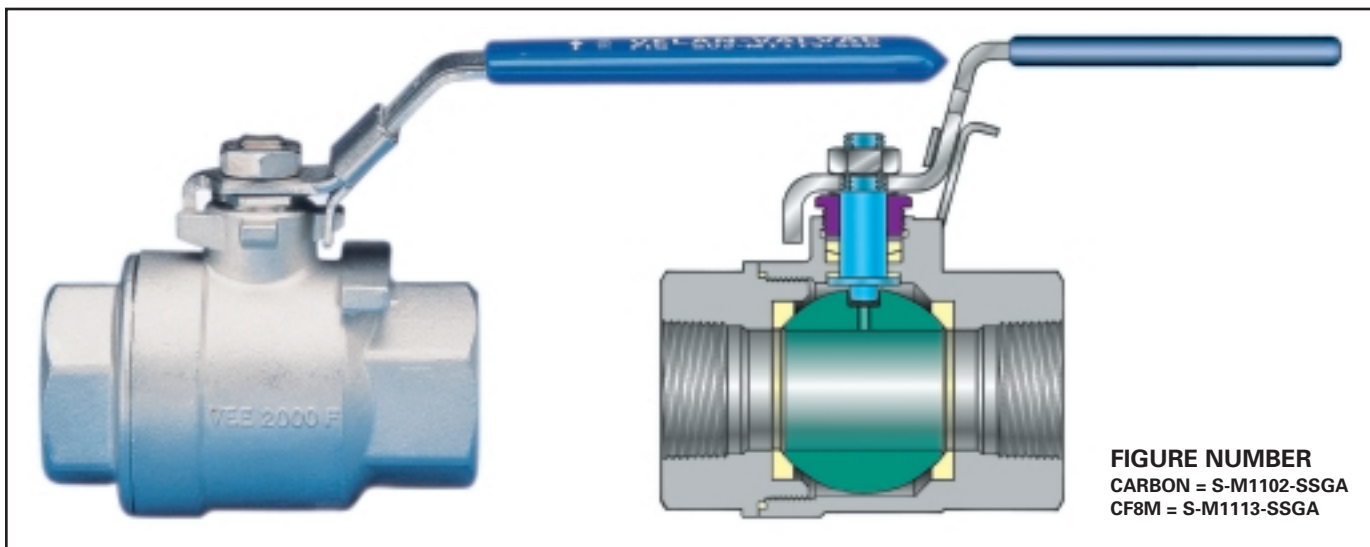


FIGURE NUMBER
CARBON = S-M1102-SSGA
CF8M = S-M1113-SSGA

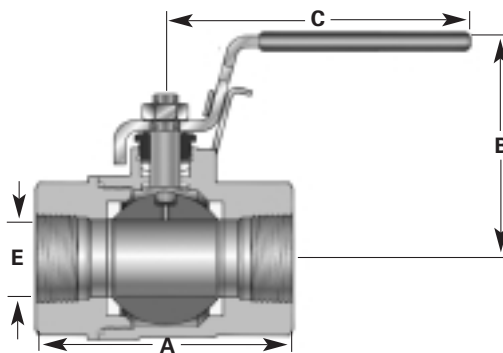
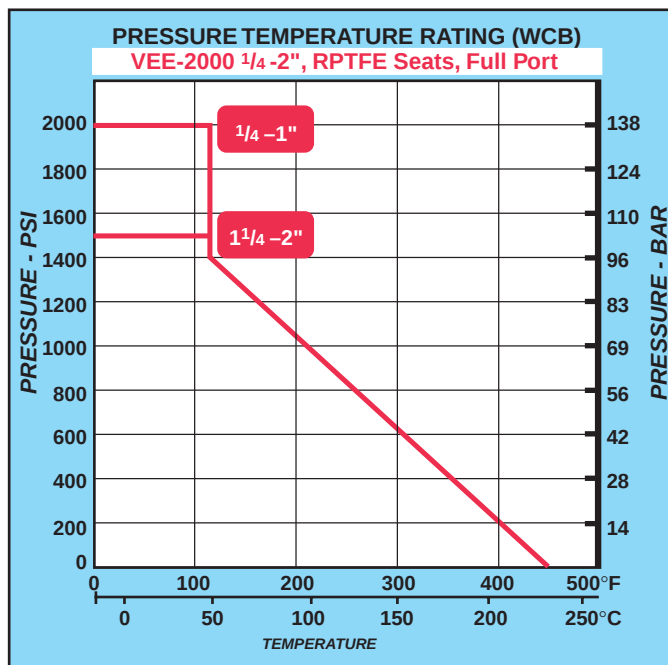
STANDARD MATERIALS

PART	STAINLESS STEEL	CARBON STEEL ⁽¹⁾
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				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

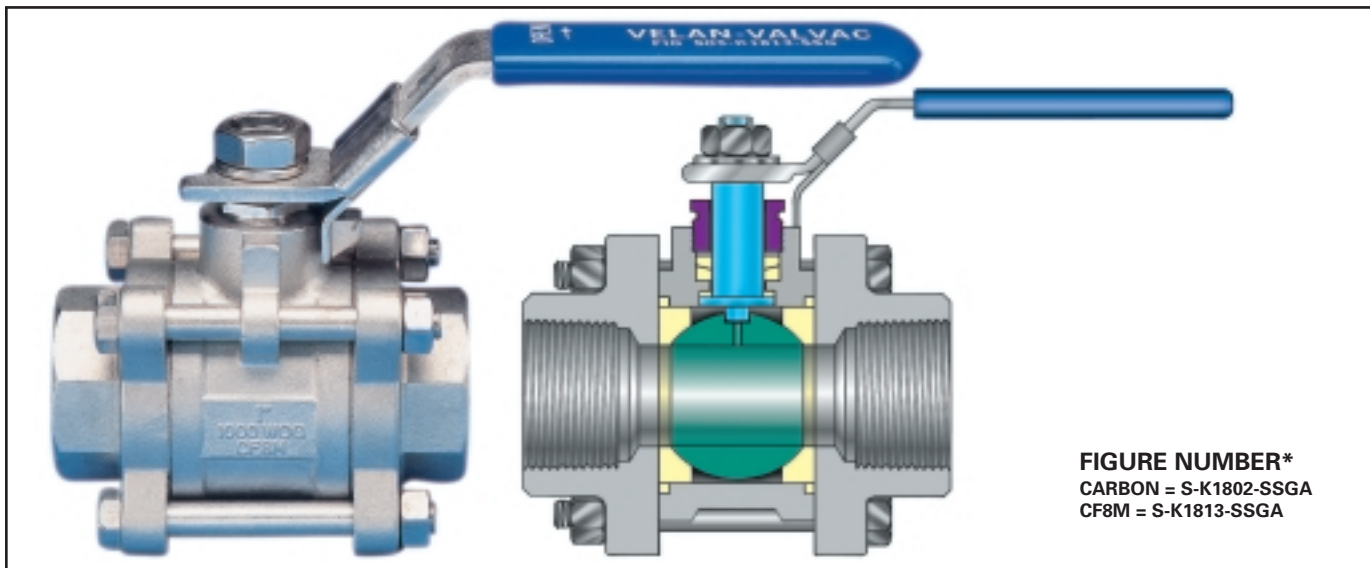


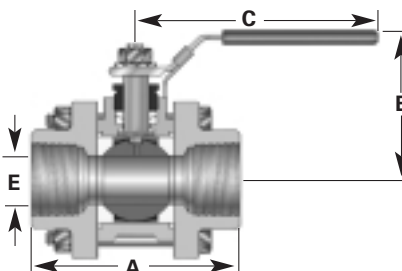
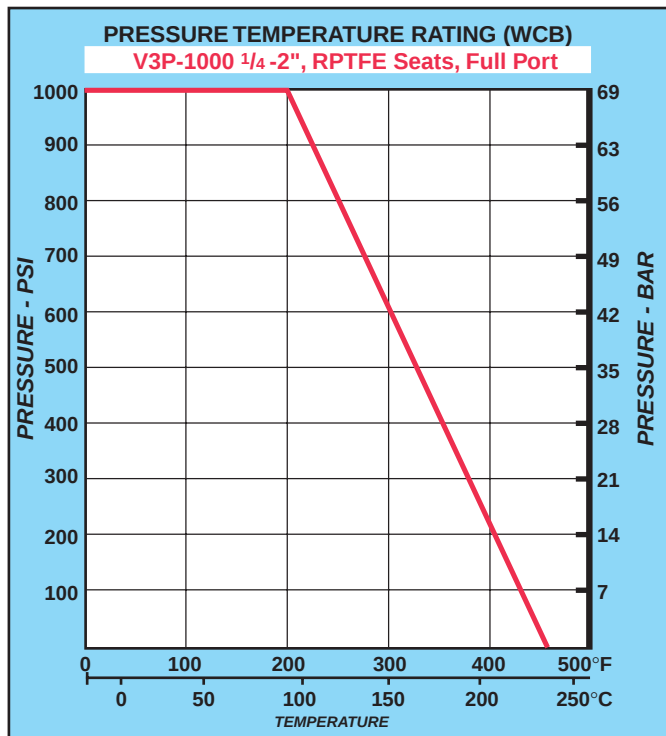
FIGURE NUMBER*
CARBON = S-K1802-SSGA
CF8M = S-K1813-SSGA

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

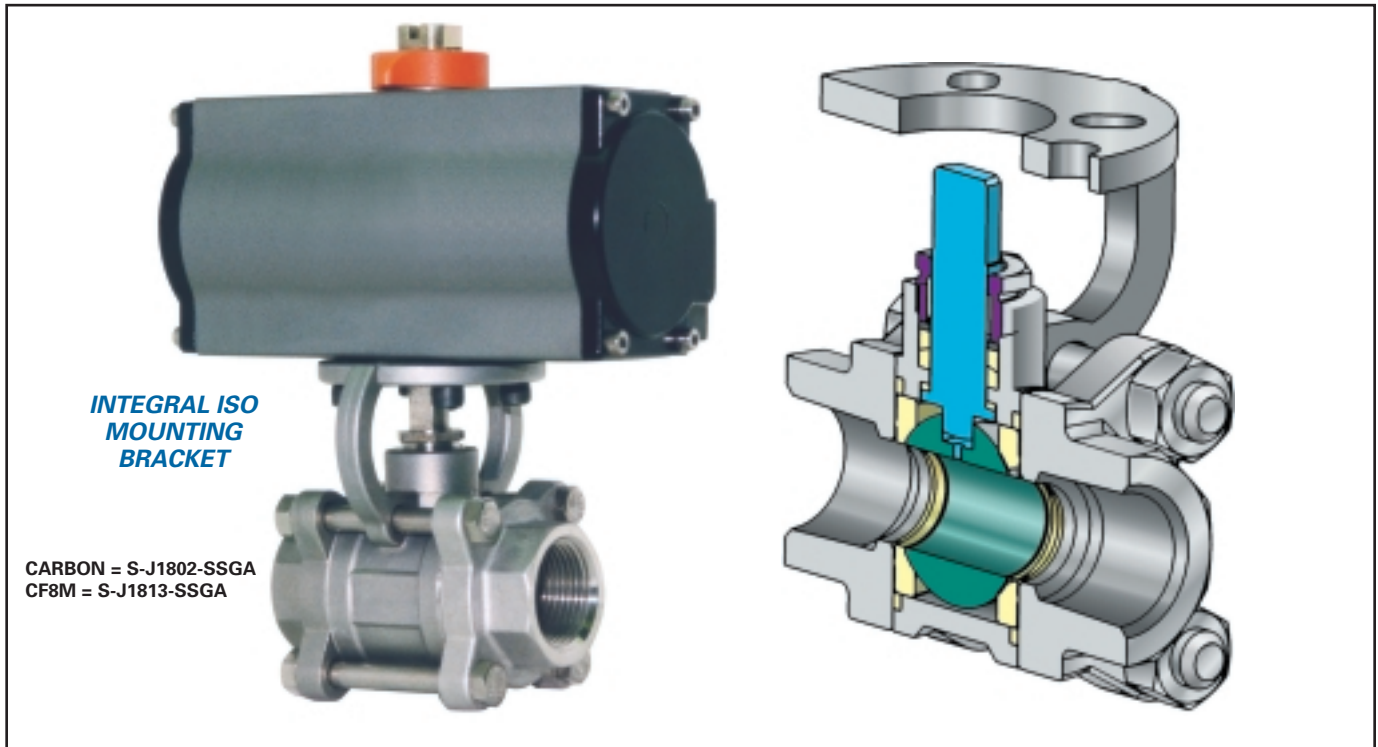
DIMENSIONS AND WEIGHTS

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



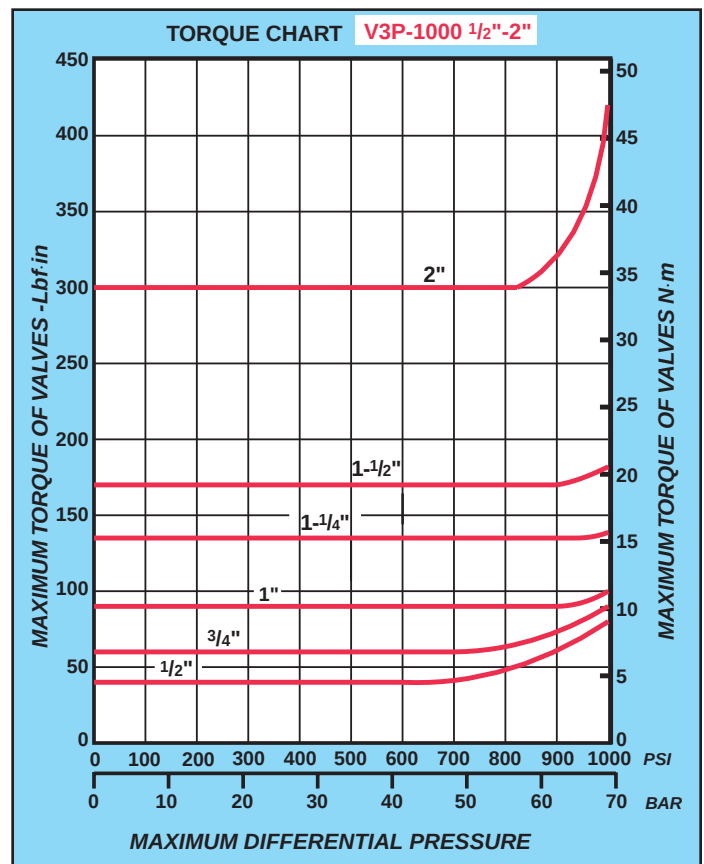
The Velan Valvac three-piece ball valve with integral ISO mounting pad is a rugged, low-cost ball valve for many industrial, commercial and OEM automated applications. The ISO mounting pad will allow quick and easy direct mounting of ISO compatible quarter-turn actuators. A key feature of this valve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

DESIGN FEATURES:

- Multiple solid cup and cone type 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.



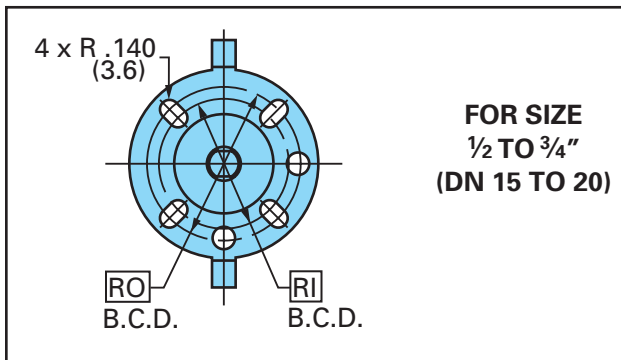
THREE-PIECE GENERAL PURPOSE BALL VALVE

TECHNICAL INFORMATION

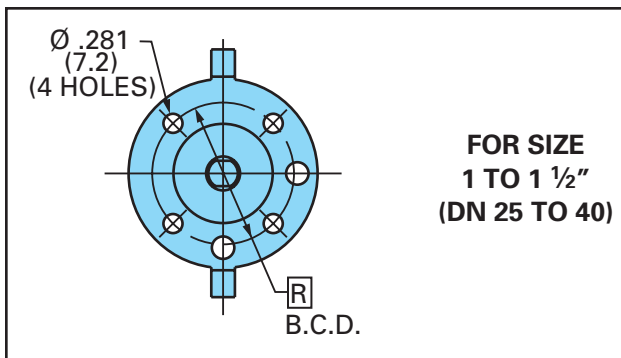
1000 WOG

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

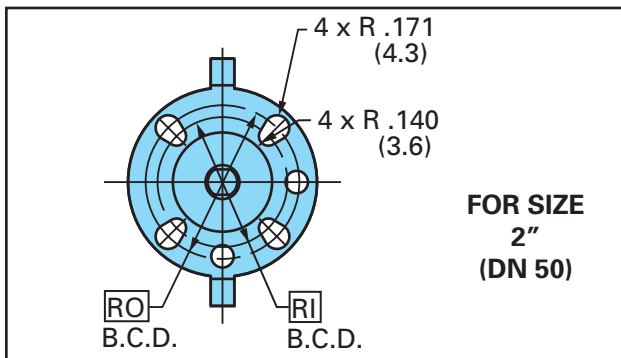
ISO F03/F04 BOLTING STYLE



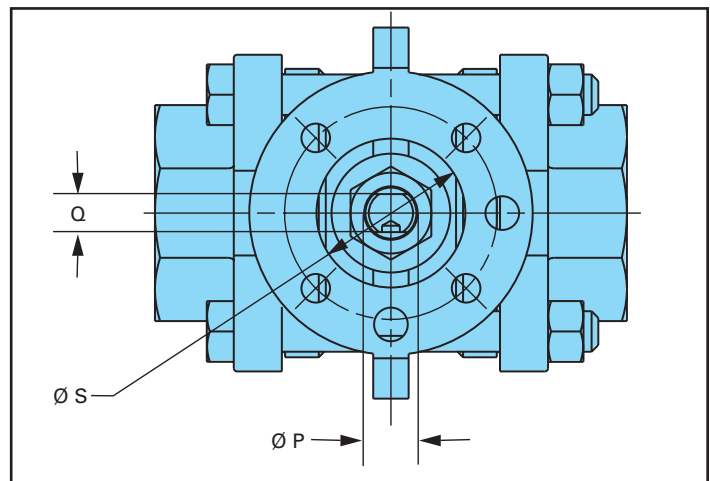
ISO F05 BOLTING STYLE



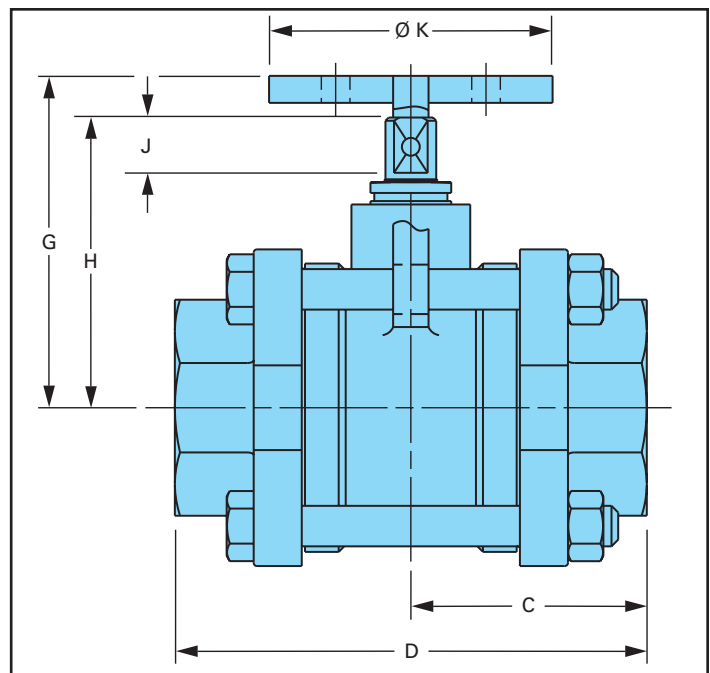
ISO F05/F07 BOLTING STYLE



TOP VIEW



SIDE VIEW





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

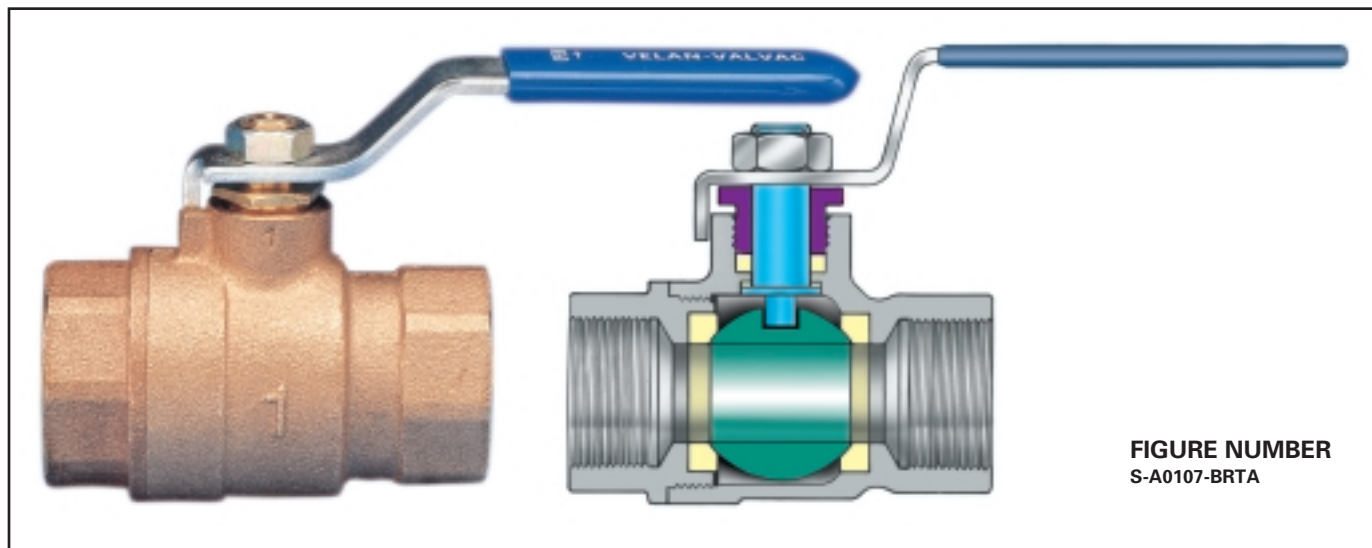


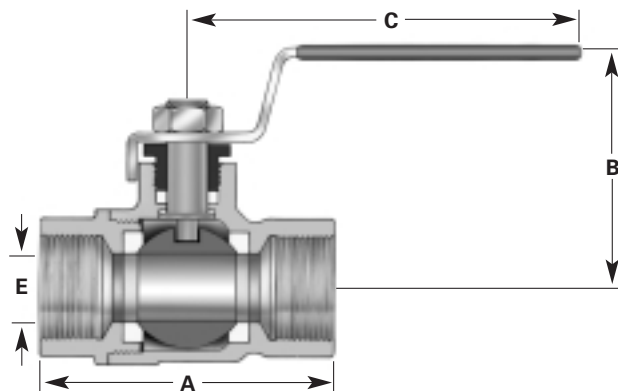
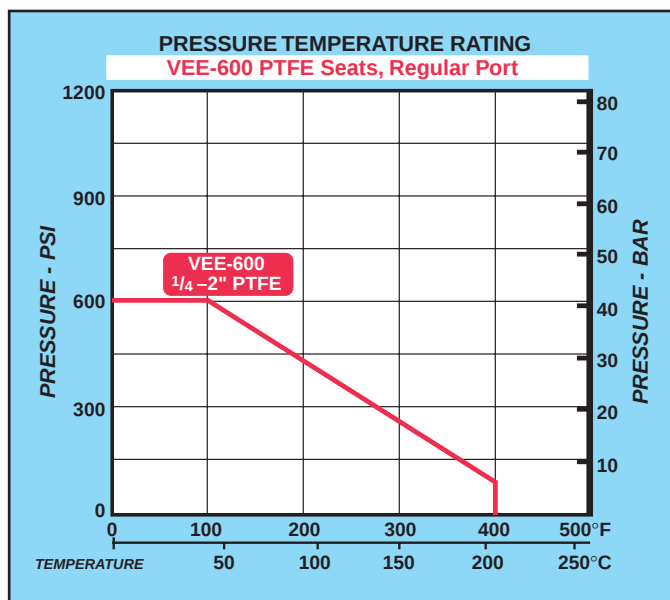
FIGURE NUMBER
S-A0107-BRTA

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	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



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.

TYPE OF CONNECTION	SIZE OF CONNECTION	CLASS OR MODEL NUMBER	PORT	TYPE	BODY MATERIAL	TRIM	SEAT MATERIAL	SPECIAL SERVICE
A	B	C	D	E	F	G	H	I
	 				 	 		
S	0 3	L	0	3	0 2	S S	G	A

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

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

D	PORT				
0 - Regular or reduced port					
1 - Full port					
E	TYPE				
1 - End-Entry (two-piece)			4 - Split-Body		
3 - One-Piece/Unibody			8 - Three-Piece valve (bolted)		
F	BODY MATERIAL				
02 - A105, WCB			13 - F316 ⁽¹⁾ , CF8M		
07 - Bronze B-62 or B-584					
G	TRIM				
CODE	BALL	STEM	CODE	BALL	STEM
BR	Brass CR plated	Brass	SS	316	316
H	SEAT MATERIAL				
G - Glass reinforced PTFE			T - PTFE		
I	SPECIAL SERVICE				
A - Standard					

(1) Material code "13" forged F316, is not suitable for temperatures above 1000°F (538°C) as it is dual certified (F316/F316L)

**THE MOST COMPREHENSIVE LINE OF INDUSTRIAL FORGED AND CAST STEEL
GATE, GLOBE, CHECK, BALL, BUTTERFLY AND KNIFE GATE VALVES**

ASME Pressure Classes 150–4500 in Carbon, Alloy and Stainless Steel



VEL-PS



VEL-BG



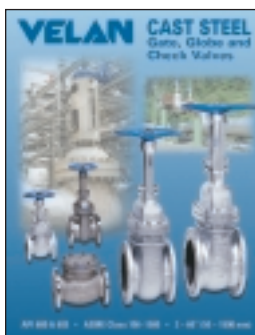
VEL-SFV



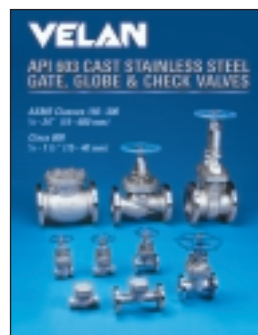
VEL-BS



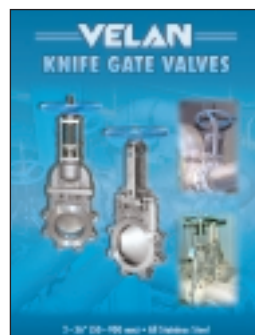
VEL-CRYO



VEL-CSV



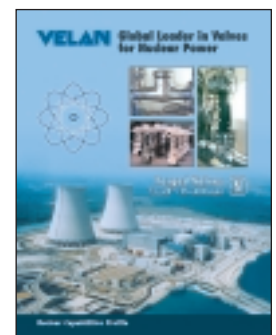
VEL-API-603



VEL-KGV



VEL-PRO-CV



VEL-NCP



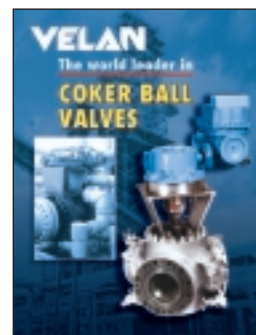
VEL-BF



VEL-MS



VEL-PBV



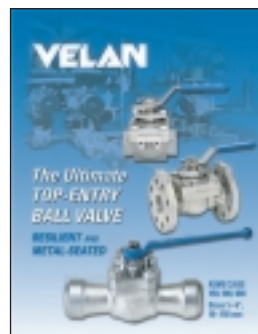
VEL-CBV



VEL-BV6D



VEL-BV



VEL-TE



VEL-GP2BV



VEL-ADCV



VEL-ST

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