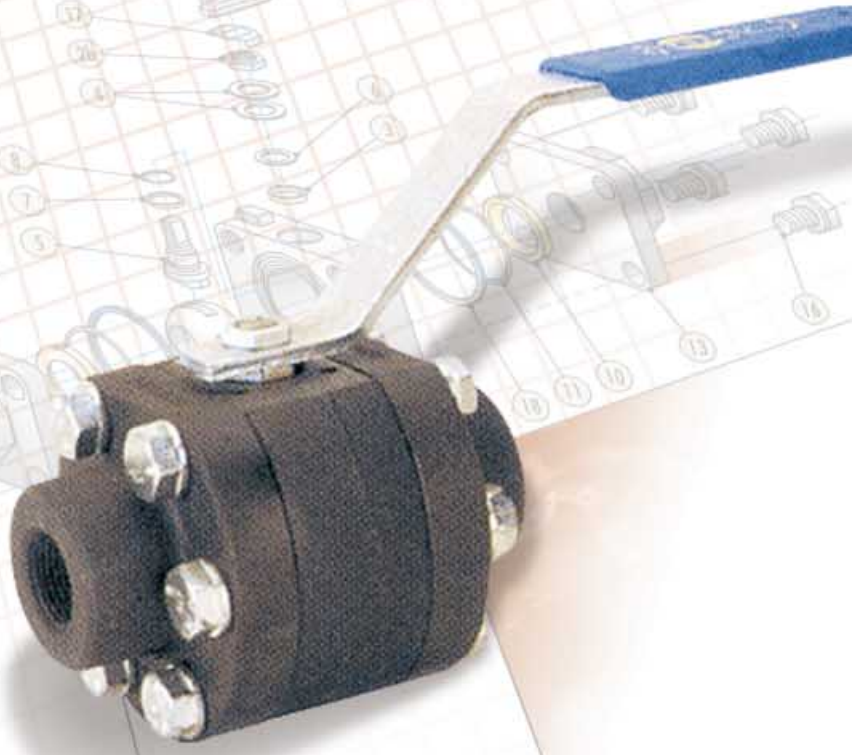
TNG

Threaded and Socketweld Ball Valves



Series 5331/6331
Series 5333/6333
5338/6338 Series
5339/6339 Series
6336 Series

CE

"Their Options Are Our Standards"

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Product Range, Maximum Pressure and ASME Class Ratings

Product Range, Size/Model Overview

Size (in.)		Forged Firesafe 3-Piece Models			Forged Multi-Port Models		
Reduced Port	Full Port	Master Star	Super Star	Mega Star	3-Way	4-Way T or L Port	4-Way X-Port
—	1/4	No. 33 5333/6333	No. 31 5331/6331 Not Available As Socketweld	No. 36 6336 Full Port Only	No. 38 5338/6338	No. 39 5339/6339	No. 39 5339/6339
1/2	3/8						
3/4	1/2						
1	3/4						
1 1/4	1						
1 1/2	1 1/4						
2	1 1/2						
2 1/2	2						
3	2 1/2						
4	3						

Maximum Pressure (WOG/CWP) Standard Seat Materials

Size (in.)		No. 33	No. 31		No. 36	No. 38	No. 39	
Reduced Port	Full Port	M Seat	M Seat	D Seat	D Seat	M Seat	T or L Port	X Port
—	1/4	2000	2200	3000	6000	1500	1500	1200
1/2	3/8	2000	2200	3000	6000	1500	1500	1200
3/4	1/2	2000	2200	3000	6000	1500	1500	1200
1	3/4	2000	2200	3000	6000	1000	1000	1000
1 1/4	1	2000	2200	3000	6000	1000	1000	1000
1 1/2	1 1/4	2000	2000	2500	4000	800	800	750
2	1 1/2	2000	2000	2500	4000	800	800	750
2 1/2	2	—	1500	1800	4000	600	600	440
3	2 1/2	—	1500	1800	—	400	400	—
4	3	—	1000	1200	—	—	—	—

ASME Class Rating with Standard Seat

Size (in.)		No. 33	No. 31		No. 36	No. 38	No. 39	
Reduced Port	Full Port	M Seat	M Seat	D Seat	D Seat	M Seat	T or L Port	X Port
—	1/4	900	900	900	2500	600	600	300
1/2	3/8	900	900	900	2500	600	600	300
3/4	1/2	900	900	900	2500	600	600	300
1	3/4	900	900	900	2500	300	300	300
1 1/4	1	900	900	900	2500	300	300	300
1 1/2	1 1/4	900	900	900	1500	300	300	300
2	1 1/2	900	900	900	1500	300	300	300
2 1/2	2	—	600	600	1500	150	150	150
3	2 1/2	—	400	400	—	150	150	—
4	3	—	400	400	—	—	—	—

Design Standards

Threaded and Socketweld Valves are designed to meet the following Industry Standards:

Item	Industry Standard	British Standard
Valve Shell Pressure - Temperature	ASME B16.34	
Seat Pressure - Temperature	See PBV Pressure Temperature Ratings	See PBV Pressure Temperature Ratings
Shell Wall Thickness	ASME B16.34	
Face-to-Face Dimensions	Manufacturers Std. ASME B16.11	
Pressure Test	API 598	
Firesafe Test	API 607 and API 6FA	BS 6755
Design Standard	API 608, ASME B16.34	
Attachment of Actuator	ISO 5211	
Pressure Equipment Directive	PED 97/23/EC	
Management System	ISO 9001	

How To Order and Seat Features & Applications

Specifying Threaded and Socketweld Ball Valve Figure Numbers

Example: 6" S-6331-38-3600-ML-NL ▪ This number represents an all Stainless Steel (316), Full Port, Threaded Type Valve, Series 31, Fire Tested, Threaded End Connections, 316 SS Body Material and Trim, 20% C with 5% Graphite filled TFE Seats, Graphite Seals, for use in NACE Applications and Lever Operated.

S	—	6	3	31	—	3	8	—	36	00	—	M	L	—	N	L

Material Code	Port Config.	Valve Type	Pressure Class	Fire Tested	End Connection	Body Material	Trim Material	Seat Material	Seal Material	NACE Option	Options
C Carbon Steel **S** Stainless Steel **N** Nickel Alloys	**5** Reduced **6** Full	**3** Threaded and SW Type	**31** Super Star **33** Master Star **36** Mega Star **38** 3-Way Multi-Port **39** 4-Way Multi-Port	**0** Non-Fire Tested, w/No Emergency Grease Seals **3** Fire Tested w/No Emergency Grease Seals	**5** BWE **7** Thrd x SW **8** Threaded **9** SW **6** NPL	**22** A105 WCB **25** LF2 **34** 304SS **36** 316SS CF8M **F9** Duplex **F51** Duplex **70** Monel®	**00** Same as Body **36** 316SS **70** Monel® **F9** Duplex **FS1** Duplex	**B** Bronze Filled TFE **D** Devlon® **G** Glass Filled TFE **K** Kel-F® TFE **M** 20% C 5% Graphite Filled TFE **P** PEEK™ **R** Delrin® **T** Virgin TFE **U** UHMWPE **Z** Special	**L** Graphite **V** Viton® **R** Low Temp. Buna N **T** Teflon® **Z** Special	**N** NACE **S** Standard	**A** Actuated **B** Bare Stem **E** Tee Handle For Insulation **I** ISO Mounting Pad **L** Lever **V** Oval Handle

Seat Features and Applications

Seat Material Code	Seat Material Description	Temperature Range °C	Temperature Range °F	Characteristics	Notes and Applications	Valve Model
B	Reinforced PTFE Bronze Filled PTFE	-100/+270	-148+518	medium pressure low/high temp	Perfect for steam applications	Master Star Super Star 3 and 4-way
R	Delrin® Acetal Resin	-70/+95	-94/+203	high pressure no temp	Hydrocarbons-NACE-CO_2 applications NOT RECOMMENDED FOR OXYGEN	Superstar Mega Star
E	Vespel Polymide	-200/+260	-328/+500	high pressure high temp	Good chemical resistance NOT RECOMMENDED FOR STEAM	Super Star Mega Star
K	Kel-F® PCTFE	-196/+150	-319/+302	high pressure low temp	Similar to PTFE but with improved resistance to nitric acid, hydrofluoric acid, and liquid oxygen	Super Star Mega Star
D	Nylon Devlon® V Polymide-Nylon	-65/+150	-50/+302	high pressure medium/low temp	Hydrocarbons and NACE applications. NOT RECOMMENDED FOR GLYCOL AND METHANOL AS WELL AS WATER APPLICATIONS	Super Star Mega Star
P	PEEK™ Polyetherketone	-80/+220	-42/+428	high pressure high temp	Hydrocarbons-NACE Particularly indicated for tobacco and nuclear environment	Super Star Mega Star
G	Reinforced PTFE	-60/+220	-51/+428	low pressure high cycle life	Higher pressure than virgin PTFE	Master Star Super Star 3 and 4-way
M	Reinforced PTFE 20% Carbon 5% Graphite	-190/+250	-310/+482	medium pressure low/high temp	Higher pressure and temperature than virgin PTFE	Master Star Super Star 3 and 4-way
T	Virgin PTFE	-196/+200	-319/+392	low pressure low torque	Mainly chemical-all services subject to temperature restrictions	Master Star Super Star 3 and 4-way
U	UHMWPE Polyethylene	-10/+80	-14/+176	low pressure low torque	Food and tobacco industries Nuclear environment	Master Star Super Star 3 and 4-way

Topworks Dimensional Data (in.)

Figure A (1/4"FP – 1"RP)

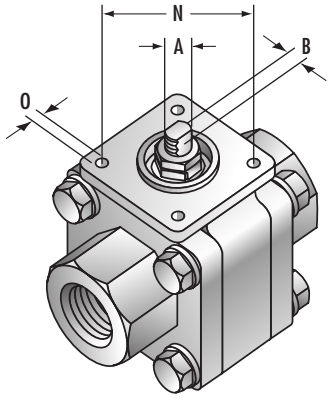
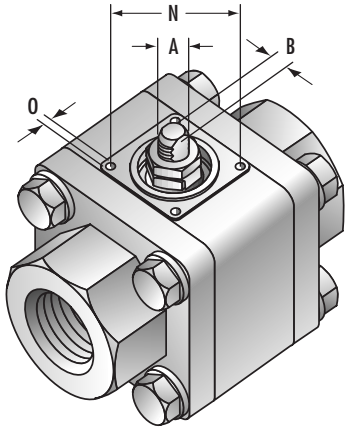


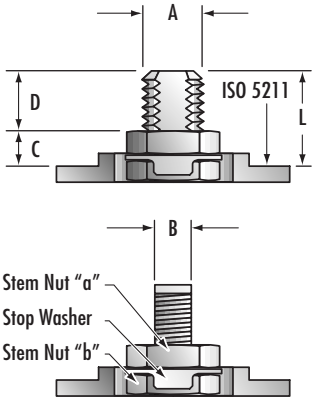
Figure B (1"FP – 4" RP)



1/4"- 4" Full Port and Reduced Port

Valve Size (in.) FP	RP	Dimensions (in.) A	B	C	D	L	N	O	ISO 5211
		Figure A							
1/4	—	M10 x 1	0.21	0.00	0.19	0.19	1.41	M5 x 8	F03
3/8	1/2	M10 x 1	0.21	0.00	0.19	0.19	1.41	M5 x 8	F03
1/2	3/4	M10 x 1	0.21	0.00	0.19	0.19	1.41	M5 x 8	F03
3/4	1	M12 x 1.25	0.29	0.20	0.35	0.55	1.65	M5 x 8	F04
		Figure B							
1	1 1/4	M12 x 1.25	0.29	0.39	0.39	0.78	1.65	M5 x 8	F04
1 1/4	1 1/2	M15 x 1.5	0.35	0.55	0.51	1.06	1.96	M6 x 10	F05
1 1/2	2	M15 x 1.5	0.35	0.55	0.55	1.10	1.96	M6 x 10	F05
2	2 1/2	M15 x 1.5	0.35	0.40	0.49	0.89	1.96	M6 x 10	F05
2 1/2	3	M22 x 1.5	0.62	0.71	0.66	1.37	2.75	M8 x 12	F07
3	4	M24 x 1.5	0.70	0.88	0.59	1.47	2.75	M8 x 12	F07

ISO 5211 Stem Detail



Torque Data For Actuated Threaded and Socketweld Ball Valves

Break Torques (in./lbs.)

Reduced Port

Valve Size (in.)	5333 (A) M Seat	5331 (A) M Seat	5331 (A) D Seat	5338 (A) M Seat	5339 (A) M Seat
1/2	104	104	135	160	160
3/4	138	138	179	254	254
1	207	207	269	372	372
1 1/4	287	287	373	425	425
1 1/2	346	346	450	532	532
2	403	403	524	637	637
2 1/2	—	576	749	956	956
3	—	863	1122	1169	1169
4	—	1036	1347	—	—

Full Port

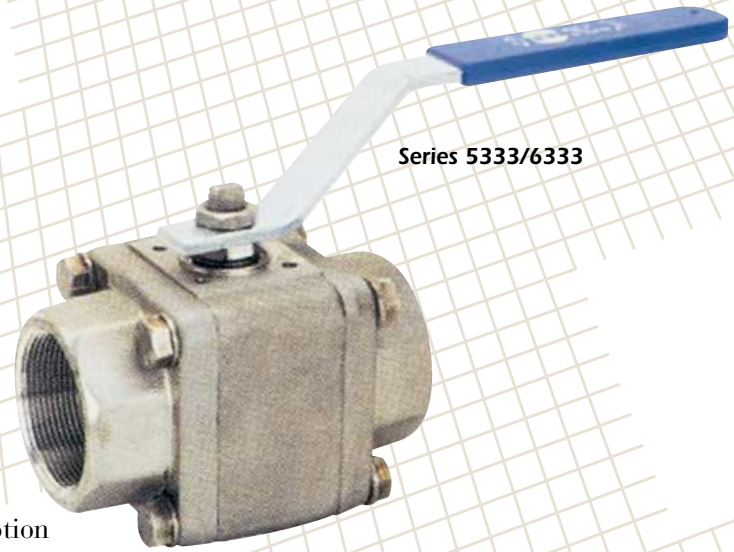
Valve Size (in.)	6333 (A) M Seat	6331 (A) M Seat	6331 (A) D Seat	6336 (C) D Seat	6338 (A) M Seat	6339 (A) M Seat
1/4	104	104	135	159	160	160
3/8	104	104	135	159	160	160
1/2	138	138	179	159	254	254
3/4	207	207	269	266	372	372
1	287	287	373	398	425	425
1 1/4	346	346	450	886	532	532
1 1/2	406	403	524	886	637	637
2	—	576	749	1150	956	956
2 1/2	—	863	1122	—	1169	1169
3	—	1036	1347	—	—	—

Notes: 1. Torques listed are max. 50 bar (725 psig) differential pressure in Clean Service.
Application Factors:
- Deduct 25% for high lubricity service.
- Add 15% for dry gas or demineralized water.
- Add 20% for slurry or abrasive service.

2. Torques listed are for Clean Service (liquid or wet gas) up to 64 bar (928 psig) differential pressure, operated at least once a week.
- Temperatures of -200˚C to +280˚C (-40˚F to +820˚F)
- For severe service, increase torques by 50% for M Seats and 15% for D Seats.

3. Torques listed are at 200 bar (2900 psig).

Series 5333 and 6333
Threaded and Socketweld Ball Valves

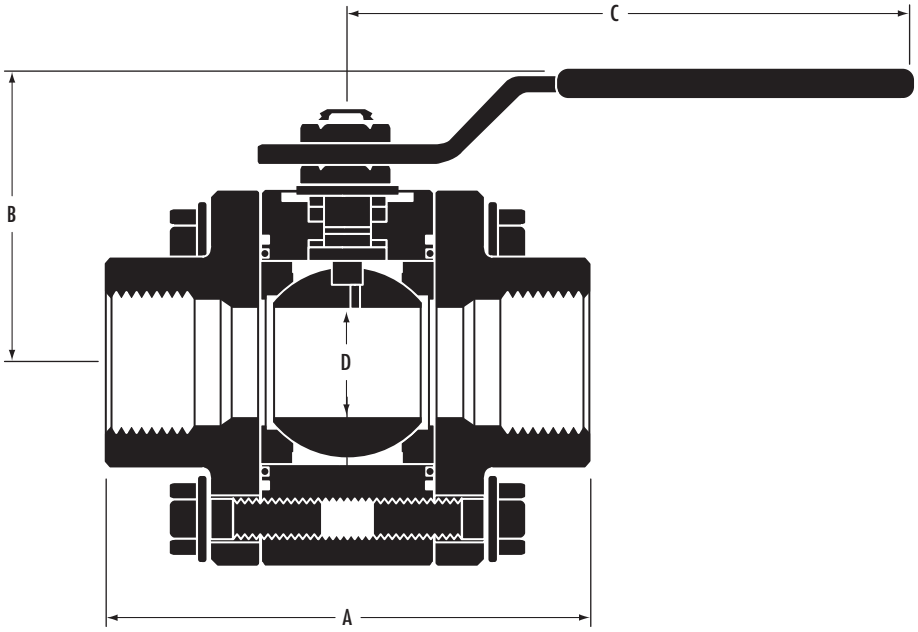

Series 5333/6333

Standard Features

Series 5333: Reduced Port 1/2" thru 2", 2000 psi
Series 6333: Full Port 1/4" thru 1 1/2", 2000 psi

- Three piece bolted construction
- Carbon filled TFE seats; Grafoil® packing
- Double body seals (Grafoil® and PTFE)
- Firesafe to API 607
- NACE MR0175
- Available in forged A105 and F316 body materials, 316 Stainless Steel ball and stem
- Welded and integral nipples available as a factory option
- ISO 5211 mounting pad available

Dimensional Data (in.)

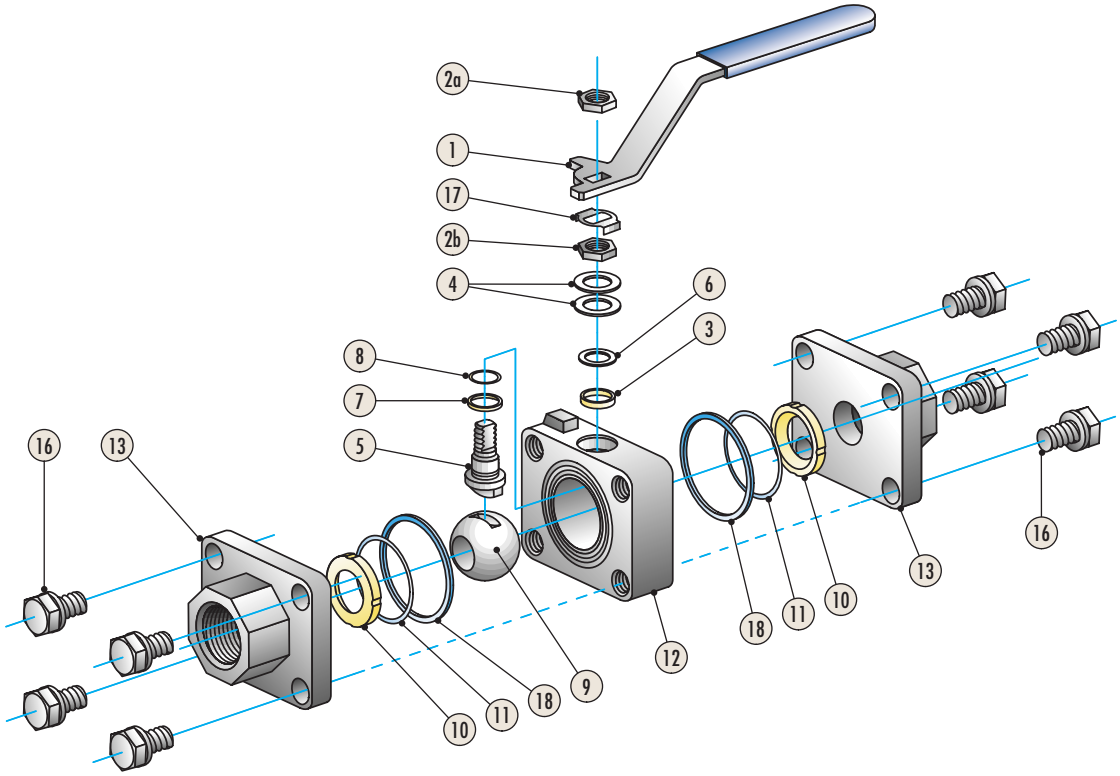


Series 5333, 1/2"-2" Reduced Port, NPT or Socketweld

Size (in.)	Dimensions A	B	C	D	Wt. (lbs.)
1/2	3.00	2.64	6.00	.44	2.2
3/4	3.15	2.76	6.00	.56	2.6
1	3.95	3.15	7.60	.83	4.8
1 1/4	4.35	3.62	7.60	1.00	6.8
1 1/2	4.75	4.25	8.85	1.25	9.2
2	5.50	4.45	8.85	1.50	12.1

Series 6333, 1/4"-1 1/2" Full Port, NPT or Socketweld

Size (in.)	Dimensions A	B	C	D	Wt. (lbs.)
1/4	3.00	2.64	6.00	.44	2.4
3/8	3.00	2.64	6.00	.44	2.2
1/2	3.15	2.75	6.00	.56	2.8
3/4	3.95	3.15	7.60	.83	5.0
1	4.35	3.62	7.60	1.10	7.0
1 1/4	4.75	4.25	8.85	1.25	9.5
1 1/2	5.50	4.45	8.85	1.50	12.8



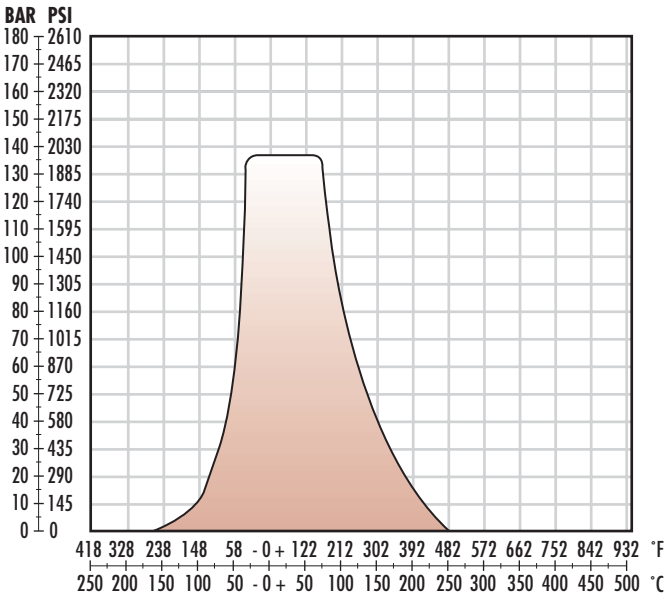
Parts & Materials

Part No.	Qty.	Description	Material, Series 5333/6333 A105	F316
1	1	Handle	C.S. Galvanized Plastic Cover	C.S. Galvanized Plastic Cover
2A/2B	2	Nut	C.S. Zinc Plated	S.S. 316
3	1	Packing Ring	Graphite	Graphite
4	2	Spring Washer	S.S. 302	S.S. 302
5	1	Antistatic Stem	S.S. 316	S.S. 316
6	1	Gland Follower	S.S. 316	S.S. 316
7	1	Thrust Washer	Reinforced PTFE	Reinforced PTFE
8	1	Stem O-Ring	Viton®	Viton®
9	1	Ball	S.S. 316	S.S. 316
10	2	Seats	Reinforced PTFE	Reinforced PTFE
11	2	Body Seal	Viton®	Viton®
12	1	Body	ASTM A105N	ASTM A182 F316
13	2	End Connections	ASTM A105N	ASTM A182 F316L
14	1	Stop-Pin	Integral or C.S.	Integral or S.S.
16	8	Bolt	ASTM A193 B7M	ASTM A193 B8M
17	1	Stop Washer	S.S. 316	S.S. 316
18	2	Body Seal	Graphite	Graphite

Soft Parts Repair Kit

Part No.	Qty.	Part Name	Material
3	1	Packing Ring	Graphite
7	1	Thrust Washer	RPTFE
8	1	Stem O-Ring	Viton®
10	2	Seats	20% C-5% GR. Filled TFE
11	2	Body Seals	Carbon Filled TFE
18	2	Body Seals	Graphite

Pressure Temperature – M Seat



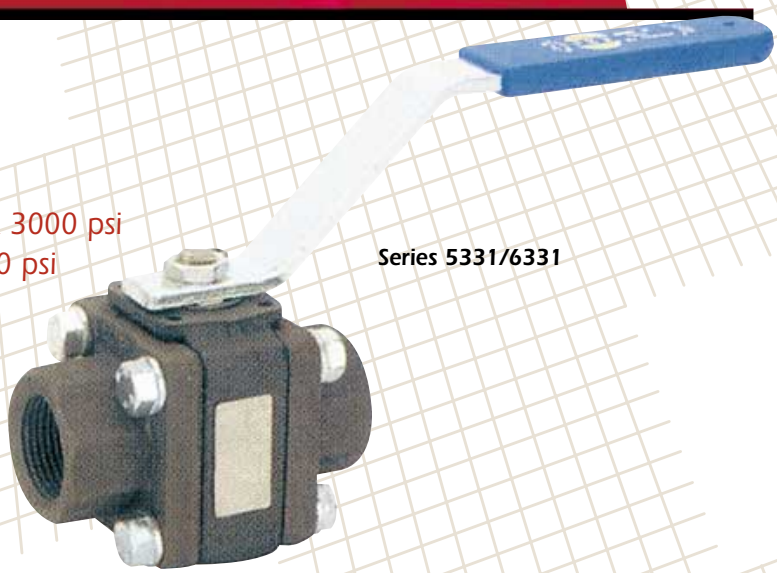
Flow Coefficient (Cv)

Size (in.) Reduced Port									
–	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
–	8	13	32	48	82	120	275	460	700

Size (in.) Full Port									
1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
8	8	12	30	45	78	115	265	445	680

Flow Data: Flow rates were determined for ball valves in fully open position and a water temperature of 60˚F (15˚C). Cv value is the full capacity flow rate through the ball valve in gallons/min. of water at 60˚F with a pressure of one PSI.

Series 5331 and 6331
Threaded Ball Valves



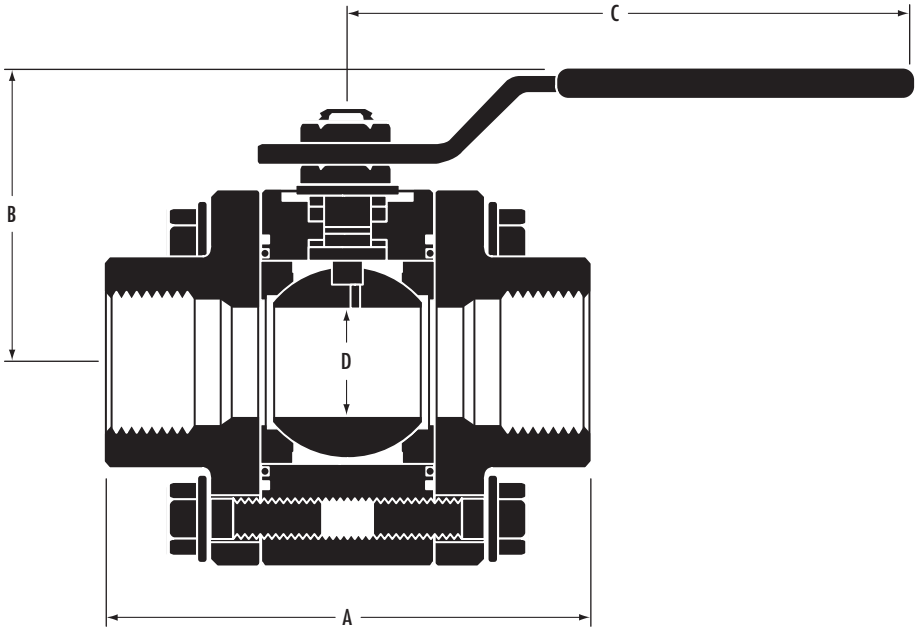
Series 5331/6331

Standard Features

Series 5331: Reduced Port 1/2" thru 4", 2000 & 3000 psi
Series 6331: Full Port 1/4" thru 3", 2000 & 3000 psi

- Encapsulated seats
- Three piece bolted construction
- Carbon filled TFE seats; Grafoil® packing
- Double body seals (Grafoil® and PTFE)
- Firesafe to API 607
- NACE MR0175
- Available in forged A105 and F316 body materials, 316 Stainless Steel ball and stem
- ISO 5211 mounting pad
- Welded or integral nipples are available for weld applications

Dimensional Data (in.)



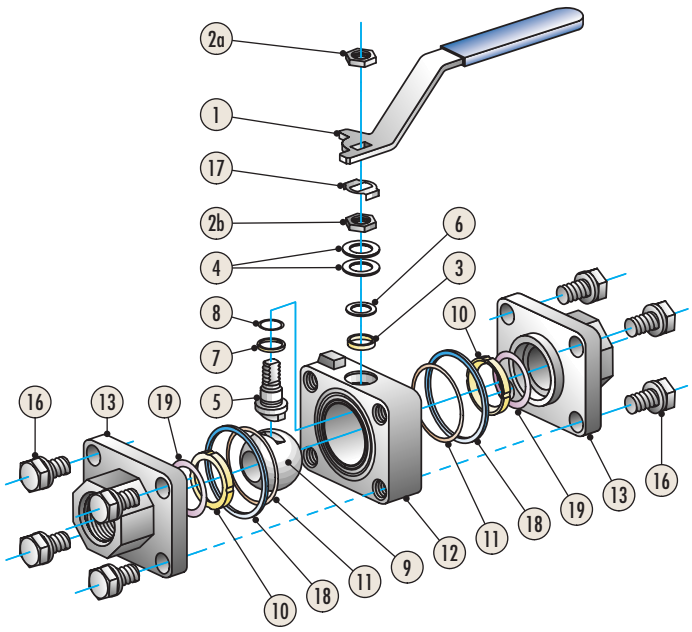
Series 5331, 1/2"-4" Reduced Port or NPT

Size (in.)	Dimensions A	B	C	D	Wt. (lbs.)
1/2	2.95	2.64	6.00	.44	2.2
3/4	3.15	2.75	6.00	.56	2.6
1	3.95	3.15	7.60	.83	4.8
1 1/4	4.25	3.62	7.60	1.00	6.8
1 1/2	4.75	4.25	8.85	1.25	9.2
2	5.50	4.45	8.85	1.50	12.1
2 1/2	5.55	4.65	8.85	1.95	19.8
3	6.70	5.35	13.75	2.45	26.4
4	9.00	5.90	19.70	3.00	35.2

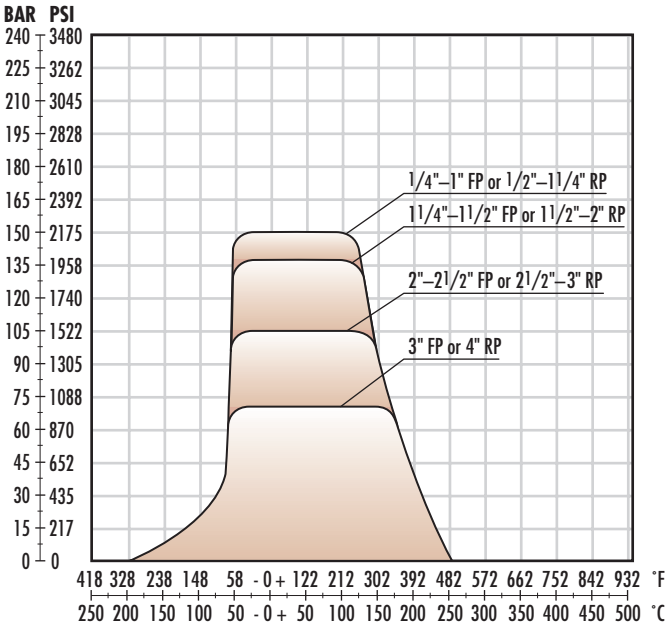
Series 6331, 1/4"-3" Full Port or NPT

Size (in.)	Dimensions A	B	C	D	Wt. (lbs.)
1/4	2.95	2.64	6.00	.44	2.4
3/8	2.95	2.64	6.00	.44	2.2
1/2	3.15	2.75	6.00	.56	2.8
3/4	3.95	3.15	7.60	.83	5.0
1	4.35	3.62	7.60	1.00	7.0
1 1/4	4.75	4.25	8.85	1.25	9.5
1 1/2	5.50	4.45	8.85	1.50	12.8
2	5.55	4.65	8.85	2.00	22.0
2 1/2	6.70	5.35	13.75	2.50	29.7
3	12.00	5.90	19.70	3.10	38.5

NOTE: Socketweld valves larger than 2 1/2" are supplied with either 4" or 6" welded nipple ends. Dimensions are available upon request. Socketweld ends without nipple extensions will result in seat damage during welding for sizes smaller than 2 1/2".



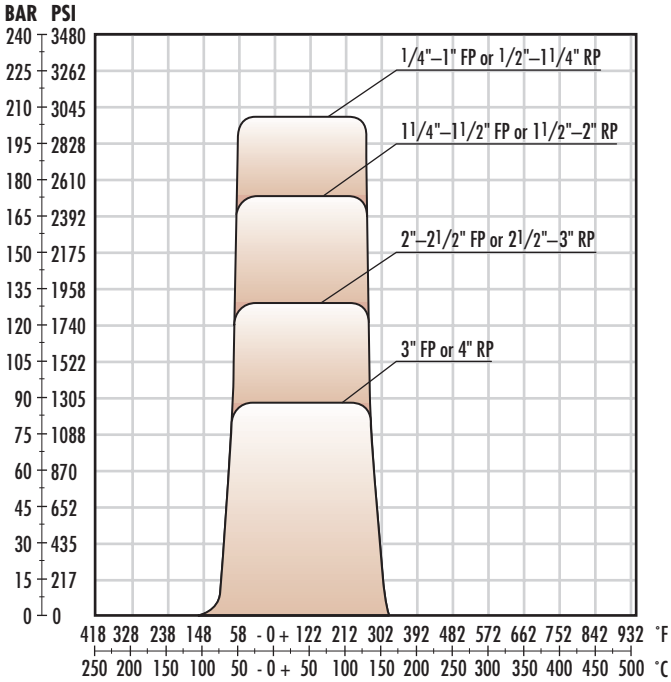
Pressure Temperature – M Seat



Parts & Materials

Part No.	Qty.	Description	Material, Series 5331/6331 A105	F316
1	1	Handle	C.S. Galvanized Plastic Cover	C.S. Galvanized Plastic Cover
2A/2B	2	Nut	C.S. Zinc Plated	S.S. 316
3	1	Packing Ring	Graphite	Graphite
4	2	Spring Washer	S.S. 302	S.S. 302
5	1	Antistatic Stem	S.S. 316	S.S. 316
6	1	Gland Follower	S.S. 316	S.S. 316
7	1	Thrust Washer	20% C 5% Graphite Filled TFE	20% C 5% Graphite Filled TFE
8	1	Stem O-Ring	Viton®	Viton®
9	1	Ball	S.S. 316	S.S. 316
10	2	Seats	Reinforced PTFE	Reinforced PTFE
11	2	Body Seal	Viton®	Viton®
12	1	Body	ASTM A105N	ASTM A182 F316
13	2	End Connections	ASTM A105N	ASTM A182 F316L
14	1	Stop-Pin	Integral or C.S.	Integral or S.S.
16	8	Bolt	ASTM A193 B7M	ASTM A193 B8M
17	1	Stop Washer	S.S. 316	S.S. 316
18	2	Body Seal	Graphite	Graphite
19	2	Seat Ring	Reinforced TFE	Reinforced TFE

Pressure Temperature – D Seat



Soft Parts Repair Kits*, M and D Seat

Part No.	Qty.	Seat Design	Description	Material
3	1	M, D	Packing Ring	Graphite
7	1	M, D	Thrust Washer	RPTFE
8	1	M, D	Stem O-Ring	Viton®
10	2	M	Seats	20% C-5% GR. Filled TFE
10	2	D	Seats	Devlon® V
11	2	M	Body Seals	Carbon Filled TFE
11	2	D	Body Seals	RTFE
18	2	M, D	Body Seals	Graphite

* M = Contents of "M" Seat Kit. ▪ D = Contents of "D" Seat Kit.

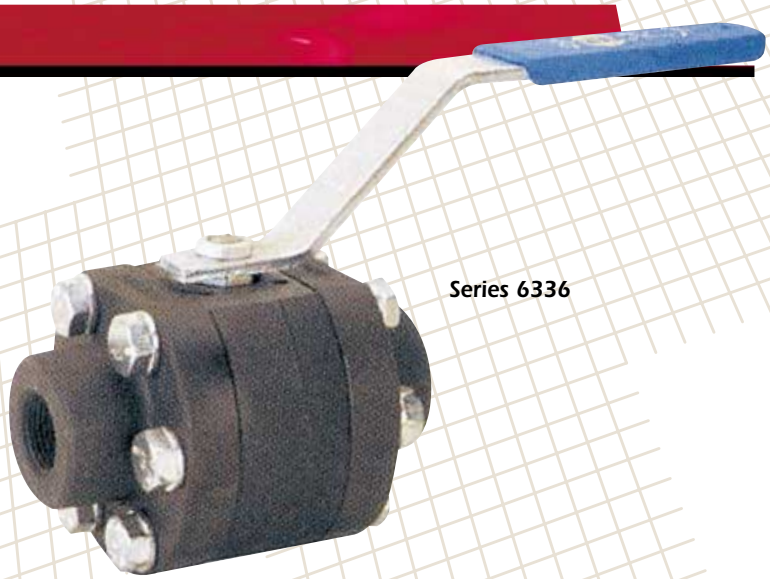
Flow Coefficient (Cv)

Size (in.) Reduced Port									
–	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
–	8	13	32	48	82	120	275	460	700

Size (in.) Full Port									
1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
8	8	12	30	45	78	115	265	445	680

Flow Data: Flow rates were determined for ball valves in fully open position and a water temperature of 60˚F (15˚C). Cv value is the full capacity flow rate through the ball valve in gallons/min. of water at 60˚F with a pressure of one PSI.

Series 6336
Threaded Ball Valves



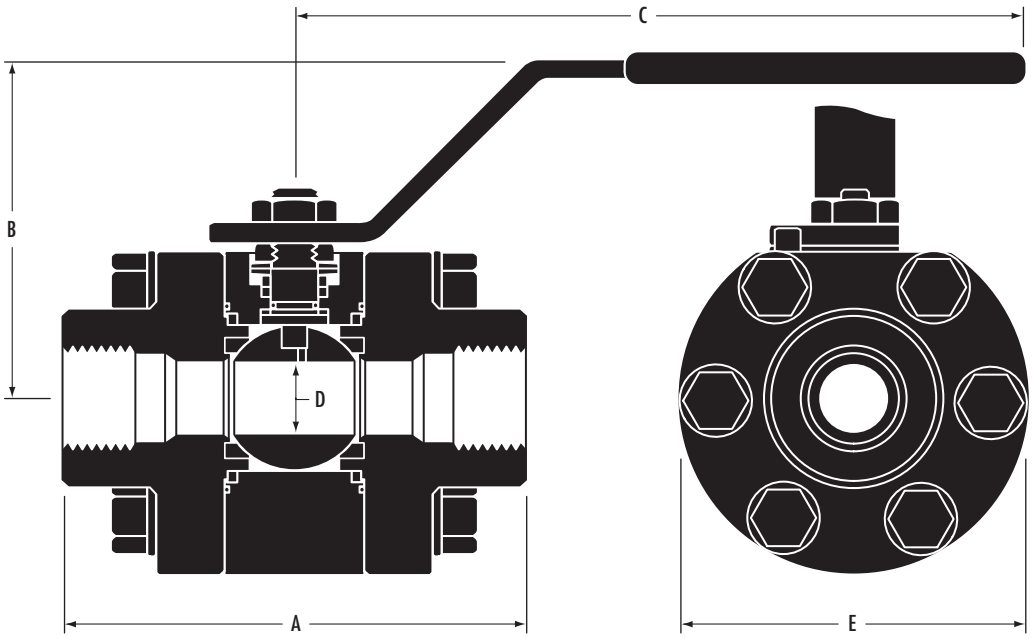
Series 6336

Standard Features

Series 6336: Full Port 1/4" thru 2", 6000 psi

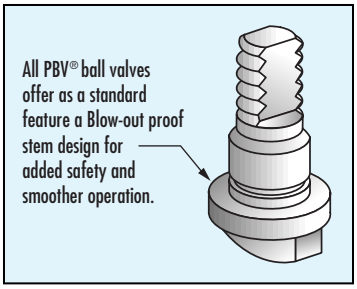
- Encapsulated Devlon® seats
- Three piece bolted construction
- Grafoil® packing
- Double body seals
- Firesafe to API 607
- NACE MR0175
- Available in forged A105 and F316 body materials, 316 Stainless Steel ball and stem
- Standard ISO 5211 mounting pad for valves 3/4" and larger

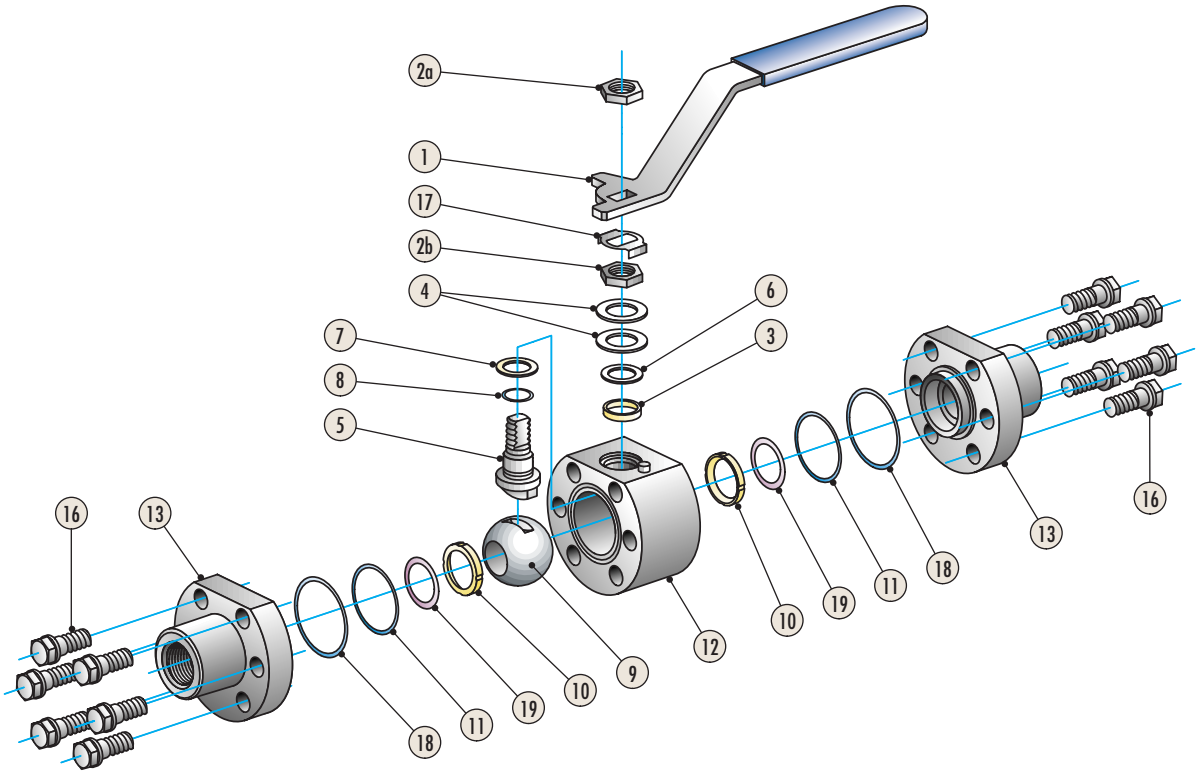
Dimensional Data (in.)



Series 6336, 1/4"-2" Full Port

Size (in.)	Dimensions A (Thrd)	A (SW)	B	C	D	E	Wt. (lbs.) Thrd	SW
1/4	4.00	8.50	3.35	7.60	.44	3.15	6.6	8.9
3/8	4.00	8.50	3.35	7.60	.44	3.15	6.6	8.9
1/2	4.00	8.50	3.35	7.60	.44	3.15	6.6	8.9
3/4	5.00	9.00	3.75	7.60	.61	3.85	2.25	14.4
1	5.50	10.00	4.33	8.85	.83	4.33	14.4	17.8
1 1/4	6.70	11.00	5.50	13.75	1.34	5.32	30.0	36.5
1 1/2	6.70	12.00	5.50	13.75	1.34	5.32	30.0	37.8
2	7.85	14.50	5.90	13.75	1.70	5.90	41.0	52.2

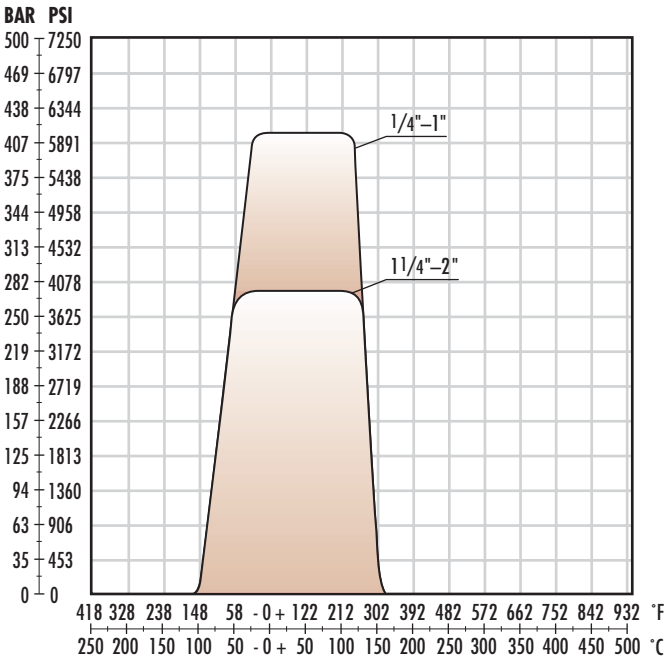




Parts & Materials

Part No.	Qty.	Description	Material, Series 6336 A105	F316
1	1	Handle	C.S. Galvanized Plastic Cover	C.S. Galvanized Plastic Cover
2A/2B	2	Nut	C.S. Cadmium Plated	S.S. 316
3	1	Packing Ring	Graphite	Graphite
4	2	Spring Washer	Stainless Steel	Stainless Steel
5	1	Antistatic Stem	S.S. 316	S.S. 316
6	1	Gland Follower	S.S. 316	S.S. 316
7	1	Thrust Washer	Reinforced PTFE	Reinforced PTFE
8	1	Stem O-Ring	Viton®	Viton®
9	1	Ball	S.S. 316	S.S. 316
10	2	Seats	Devlon® V	Devlon® V
11	2	Body Seal	Graphite	Graphite
12	1	Body	ASTM A105N	ASTM A182 F316
13	2	End Connections	ASTM A105N	ASTM A182 F316L
14	1	Stop-Pin	Carbon Steel	S.S. 304
16	6/8/10	Bolt	ASTM A193 B7M	ASTM A193 B8M
17	1	Stop Washer	Stainless Steel	Stainless Steel
18	2	Body Seal	Graphite	Graphite

Pressure Temperature – D Seat



Soft Parts Repair Kit

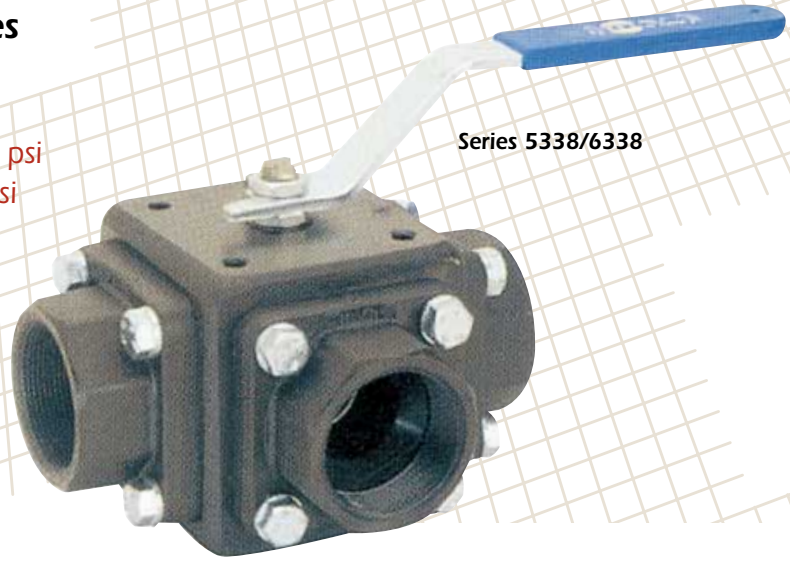
Part No.	Qty.	Part Name	Material
3	1	Packing Ring	Graphite
7	1	Thrust Washer	RPTFE
8	1	Stem O-Ring	Viton®
10	2	Seats	Devlon® V
11	2	Body Seals	Grafoil®
18	2	Body Seals	Viton®

Flow Coefficient (Cv)

Size (in.) Full Port							
1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
8	8	8	25	34	100	100	100

Flow Data: Flow rates were determined for ball valves in fully open position and a water temperature of 60˚F (15˚C). Cv value is the full capacity flow rate through the ball valve in gallons/min. of water at 60˚F with a pressure of one PSI.

Series 5338 and 6338
Threaded and Socketweld Ball Valves

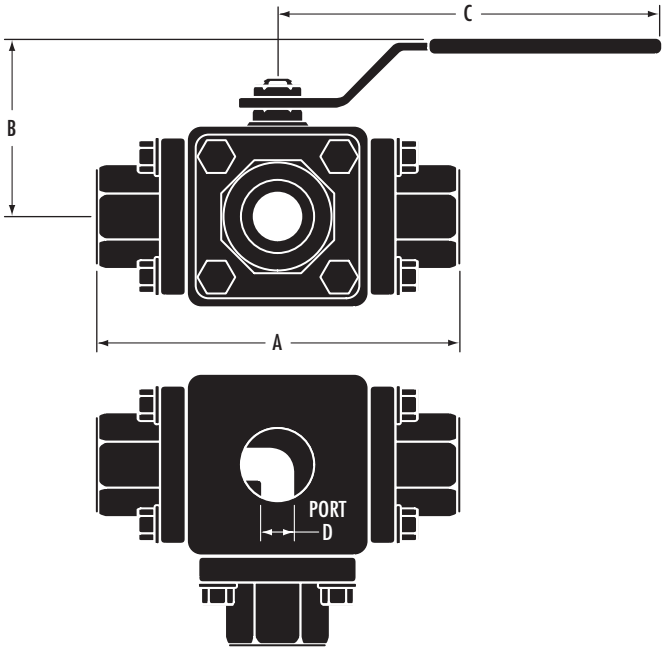

Series 5338/6338

Standard Features

Series 5338: Reduced Port 1/2" thru 3", 1500 psi
Series 6338: Full Port 1/4" thru 2 1/2", 1500 psi

- Three-way bolted construction
- Available in forged A105 and F316 body materials, 316 Stainless Steel ball and stem
- Carbon filled TFE seats
- Double body seals
- Grafoil® packing
- Standard ISO 5211 mounting pad
- NACE MR0175
- Available in T and L port configurations

Dimensional Data (in.)



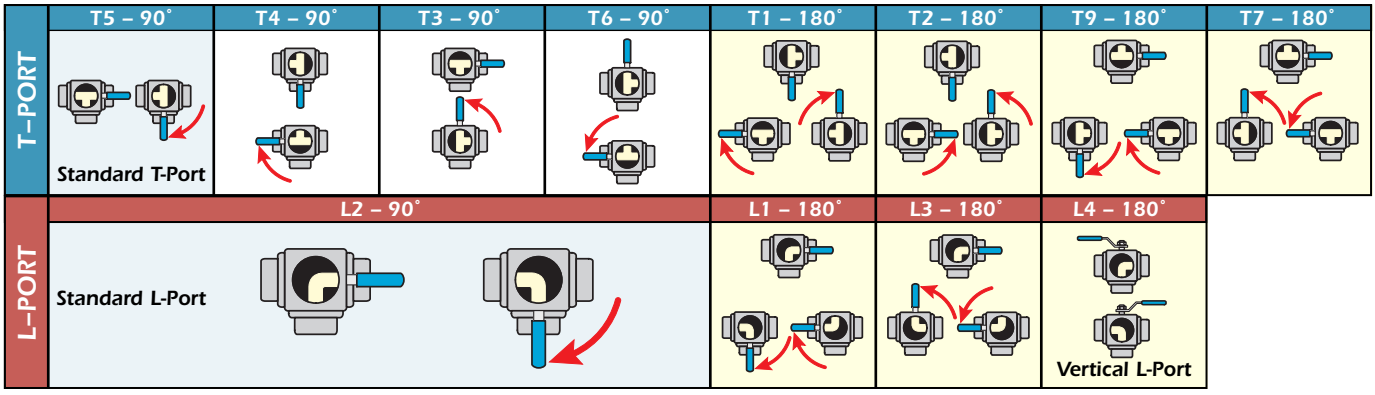
Series 5338, 1/2"-3" Reduced Port

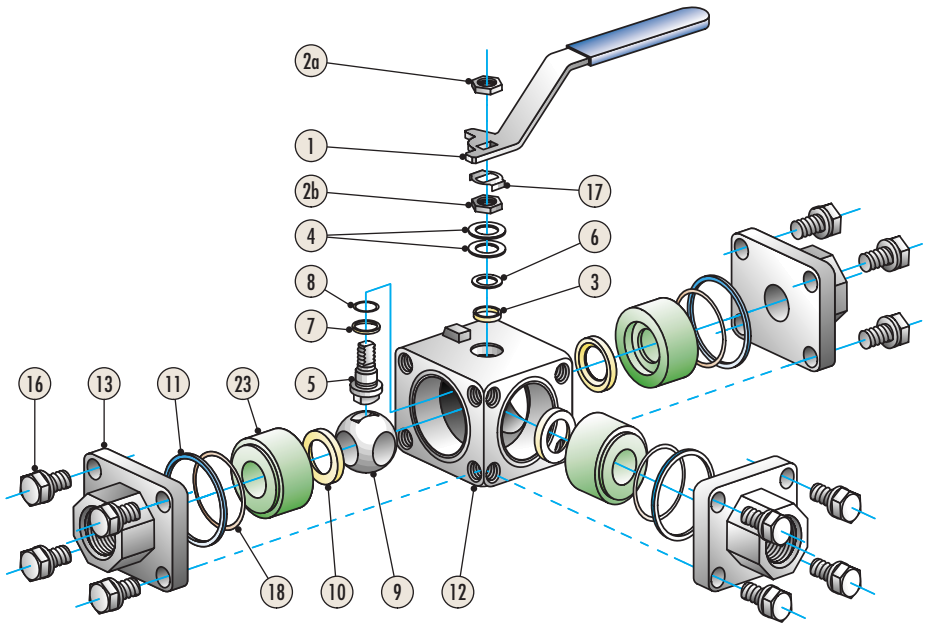
Size (in.)	Dimensions A (Thrd)	A (SW)	B	C	D	Wt. (lbs.)
1/2	4.45	4.45	2.75	6.00	.44	5.0
3/4	4.70	4.70	3.00	6.00	.56	6.6
1	5.90	5.90	3.40	7.60	.83	11.0
1 1/4	6.25	6.25	3.85	8.85	1.00	15.4
1 1/2	7.15	7.15	4.45	8.85	1.25	22.0
2	7.90	7.90	4.65	8.85	1.50	30.0
2 1/2	10.30	11.90	5.30	16.54	1.93	121.0
3	16.65	16.65	6.50	16.54	2.50	143.0

Series 6338, 1/4"-2 1/2" Full Port

Size (in.)	Dimensions A (Thrd)	A (SW)	B	C	D	Wt. (lbs.)
1/4	4.45	4.45	2.75	6.00	.44	5.0
3/8	4.45	4.45	2.75	6.00	.44	5.0
1/2	4.70	4.70	3.00	7.60	.56	6.6
3/4	6.00	6.00	3.40	7.60	.83	11.0
1	6.25	6.25	3.85	8.85	1.00	15.4
1 1/4	7.20	7.20	4.45	8.85	1.25	22.0
1 1/2	7.90	7.90	4.65	8.85	1.50	30.0
2	10.30	11.90	5.30	16.54	1.93	121.0
2 1/2	16.65	16.65	6.50	16.54	2.50	143.0

Available Port Configurations





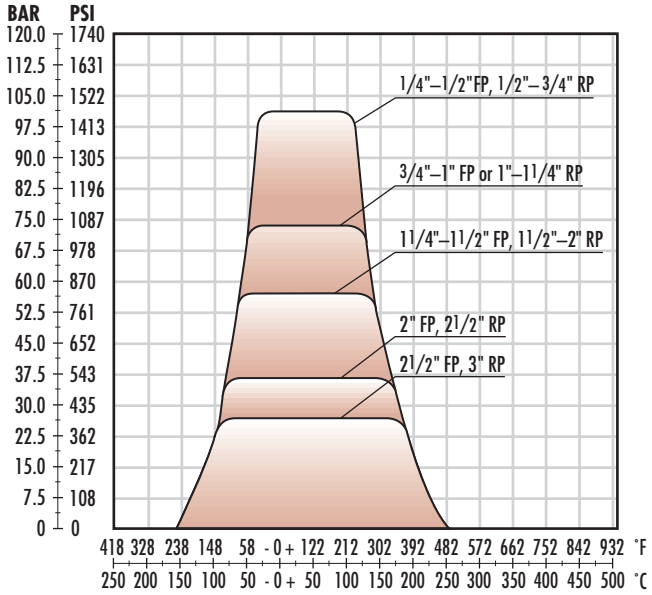
Parts & Materials

Part No.	Qty.	Description	Material, Series 5338/6338 A105/F316	F316/F316
1	1	Handle	C.S. Galvanized Plastic Cover	C.S. Galvanized Plastic Cover
2	1+1	Nut	C.S. Cadmium Plated	A194 Gr.8
3	1	Packing Ring	Graphite	Graphite
4	2	Spring Washer	S.S. 302	S.S. 302
5	1	Antistatic Stem	S.S. 316	S.S. 316
6	1	Gland Follower	ASTM A182 F316L	ASTM A182 F316L
7	1	Thrust Washer	Reinforced PTFE	Reinforced PTFE
8	1	Stem O-Ring	Viton®	Viton®
9	1	Ball	ASTM A182 F316	ASTM A182 F316
10	4	Seats	Reinforced PTFE	Reinforced PTFE
11	3	Body Seal	Graphite	Graphite
12	1	Body	A105N	ASTM A182 F316
13	4	End Connections	A105N	ASTM A182 F316L
14	1	Stop-Pin	Carbon Steel	Stainless Steel
16	12	Bolt	ASTM A193 B7M	ASTM A193 B8M
17	1	Stop Washer	S.S. ASTM A182 F316	S.S. ASTM A182 F316
18	3	Body Seal	Viton®	Viton®
23	3	Seat Retainer	A105N	A182 F316

Soft Parts Repair Kit

Part No.	Qty.	Part Name	Material
3	1	Packing Ring	Graphite
7	1	Thrust Washer	RPTFE
8	1	Stem O-Ring	Viton®
10	3	Seats	Devlon® V
11	3	Body Seals	RTFE
18	3	Body Seals	Graphite

Pressure Temperature – M Seat

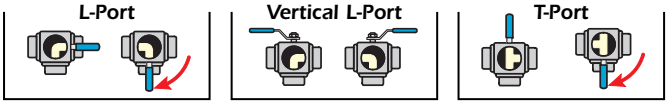


Flow Coefficient (Cv)

Size (in.) Reduced Port								
—	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
—	5.6	10.5	24.0	40.0	60.0	87.5	175.0	223.0

Size (in.) Full Port							
—	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
—	—	10.5	24.0	40.0	60.0	87.5	175.0

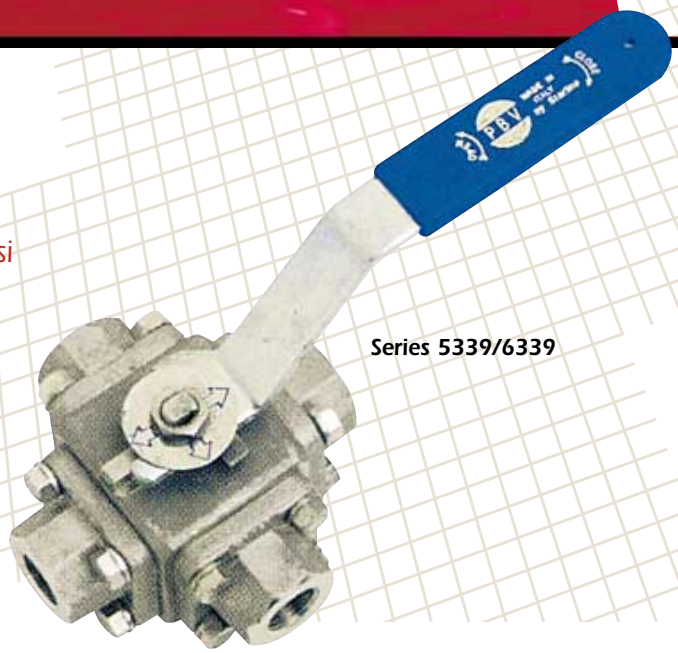
Cv values apply to the port configurations shown below:



*Flow Data: Flow rates were determined for ball valves in fully open position and a water temperature of 60˚F (15˚C). Cv value is the full capacity flow rate through the ball valve in gallons/min. of water at 60˚F with a pressure of one PSI.
Note: When T-Port works like the 2-way valves, use Cv values for PBV 5331/6331 and deduct 50%.

4-Way Multi-Port Features

Series 5339 and 6339
Threaded and Socketweld Ball Valves



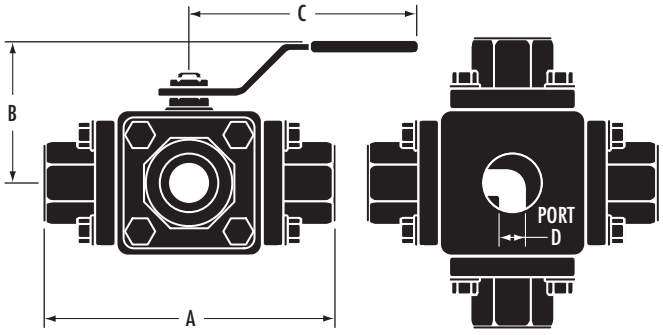
Series 5339/6339

Standard Features

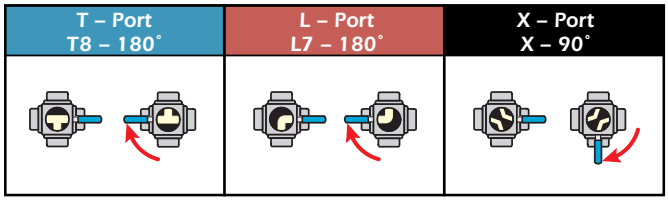
Series 5339: Reduced Port 1/2" thru 3", 1500 psi
Series 6339: Full Port 1/4" thru 2 1/2", 1500 psi

- Four-way bolted construction
- Available in forged A105 and F316 body materials, 316 Stainless Steel ball and stem
- Carbon filled TFE seats
- Double body seals
- Grafoil® packing
- Standard ISO 5211 mounting pad
- NACE MR0175
- Available in T, L or X port configurations

Dimensional Data (in.)



Available Port Configurations



T & L Port Configurations

Series 5339, 1/2"-3" Reduced Port

Size (in.)	Dimensions A (Thrd)	A (SW)	B	C	D	Wt. (lbs.)
1/2	4.45	4.45	2.75	6.00	.44	5.0
3/4	4.70	4.70	2.95	7.60	.56	6.6
1	5.90	5.90	3.40	7.60	.83	11.0
1 1/4	6.25	6.25	3.85	8.85	1.00	15.4
1 1/2	7.15	7.15	4.45	8.85	1.25	22.0
2	7.90	7.90	4.65	8.85	1.55	30.0
2 1/2	10.30	11.90	5.30	16.54	1.93	121.3
3	16.65	16.65	6.50	16.54	2.51	143.3

Series 6339, 1/4"-2 1/2" Full Port

Size (in.)	Dimensions A (Thrd)	A (SW)	B	C	D	Wt. (lbs.)
1/4	4.45	4.45	2.75	6.00	.44	5.0
3/8	4.45	4.45	2.75	6.00	.44	5.0
1/2	4.70	4.70	2.95	7.60	.56	6.6
3/4	5.90	5.90	3.40	7.60	.83	11.0
1	6.25	6.25	3.85	8.85	1.00	15.4
1 1/4	7.15	7.15	4.45	8.85	1.25	22.0
1 1/2	7.90	7.90	4.65	8.85	1.50	30.0
2	10.30	11.90	5.30	16.54	1.93	121.3
2 1/2	16.65	16.65	6.50	16.54	2.50	143.3

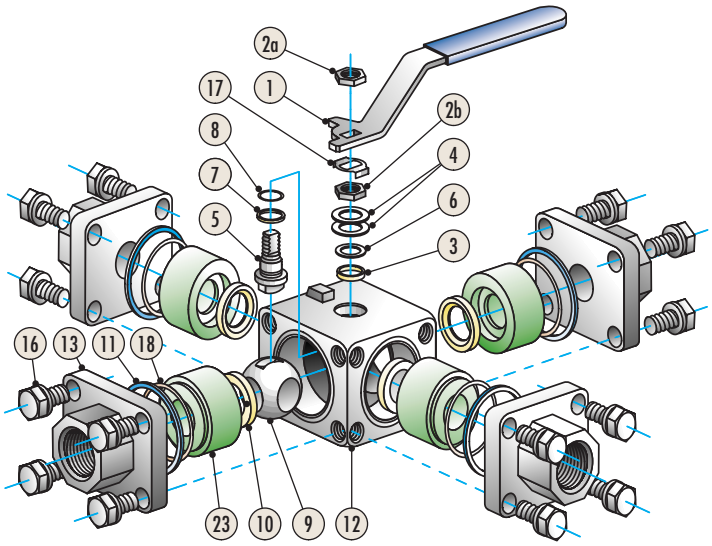
X Port Configurations

Series 5339, 1/2"-3" Reduced Port

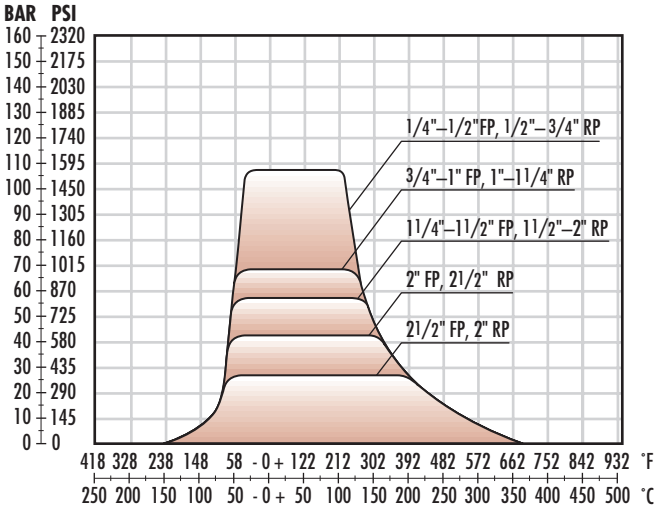
Size (in.)	Dimensions A (Thrd)	A (SW)	B	C	D	Wt. (lbs.)
1/2	4.70	4.70	2.95	7.60	.25	7.5
3/4	5.90	5.90	3.40	7.60	.47	12.0
1	6.25	6.25	3.85	8.85	.71	17.0
1 1/4	7.20	7.20	4.45	8.85	1.10	23.5
1 1/2	7.90	7.90	4.65	8.85	1.28	32.0
2	10.30	11.90	5.30	16.54	1.34	125.0
2 1/2	16.65	16.65	6.50	16.54	1.65	150.5

Series 6339, 1/4"-2 1/2" Full Port

Size (in.)	Dimensions A (Thrd)	A (SW)	B	C	D	Wt. (lbs.)
1/4	4.70	4.70	2.95	7.60	.25	7.5
3/8	4.70	4.70	2.95	7.60	.25	7.5
1/2	5.90	5.90	3.40	7.60	.47	12.0
3/4	6.25	6.25	3.85	8.85	.71	17.0
1	7.20	7.20	4.45	8.85	.83	23.5
1 1/4	7.90	7.90	4.65	8.85	1.10	32.0
1 1/2	10.30	11.90	5.30	16.54	1.34	125.0
2	16.65	16.65	6.50	16.54	1.65	150.5



Pressure Temperature – M Seat, T or L Port



Parts & Materials

Part No.	Qty.	Description	Material, Series 5339/6339 A105/F316	F316/F316
1	1	Handle	C.S. Galvanized Plastic Cover	C.S. Galvanized Plastic Cover
2	1+1	Nut	C.S. Cadmium Plated	A194 Gr. 8
3	1	Packing Ring	Graphite	Graphite
4	2	Spring Washer	S.S. 302	S.S. 302
5	1	Antistatic Stem	S.S. 316	S.S. 316
6	1	Gland Follower	ASTM A182 F316L	ASTM A182 F316L
7	1	Thrust Washer	Reinforced PTFE	Reinforced PTFE
8	1	Stem O-Ring	Viton®	Viton®
9	1	Ball	ASTM A182 F316	ASTM A182 F316
10	4	Seats	Reinforced PTFE	Reinforced PTFE
11	4	Body Seal	Graphite	Graphite
12	1	Body	A105N	ASTM A182 F316
13	4	End Connections	A105N	ASTM A182 F316L
14	1	Stop-Pin	Carbon Steel	Stainless Steel
16	16	Bolt	ASTM A193 B7M	ASTM A193 B8M
17	1	Stop Washer	S.S. ASTM A182 F316	S.S. ASTM A182 F316
18	4	Body Seal	Viton®	Viton®
23	4	Seat Retainer	A105N	A182 F316

Soft Parts Repair Kit

Part No.	Qty.	Part Name	Material T or L Port	X Port
3	1	Packing Ring	Graphite	Graphite
7	1	Thrust Washer	RPTFE	PTFE
8	1	Stem O-Ring	Viton®	Viton®
10	4	Seats	Devlon® V	20% C-5% Gr. Filled TFE
11	4	Body Seals	RTFE	Graphite
18	4	Body Seals	Graphite	Viton®

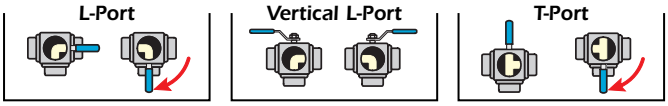
*Flow Data: Flow rates were determined for ball valves in fully open position and a water temperature of 60˚F (15˚C). Cv value is the full capacity flow rate through the ball valve in gallons/min. of water at 60˚F with a pressure of one PSI.
Note: When T-Port works like the 2-way valves, use Cv values for PBV 5331/6331 and deduct 50%.

Flow Coefficient (Cv)*

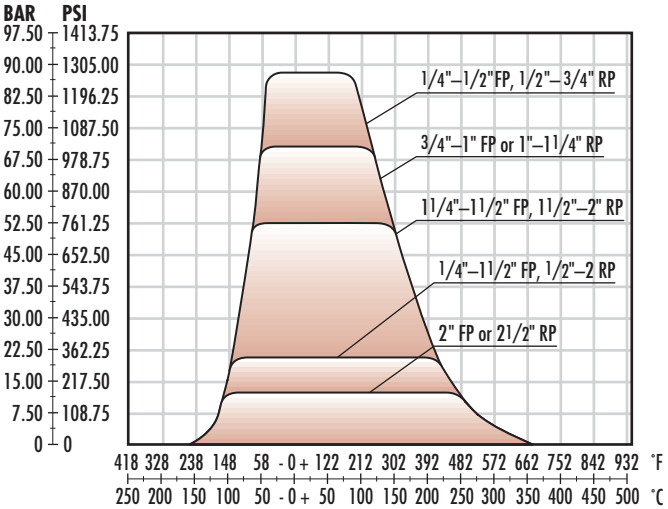
Size (in.) Reduced Port								
—	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
—	5.6	10.5	24.0	40.0	60.0	87.5	175.0	223.0

Size (in.) Full Port							
—	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
—	5.6	10.5	24.0	40.0	60.0	87.5	175.0

Cv values apply to the port configurations shown below:



Pressure Temperature – M Seat, X Port



Flow Coefficient (Cv)*

Size (in.) X Port								
1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
2.8	2.8	2.8	9.5	22.0	36.0	60.0	90.0	164.0

Cv values apply to the port configurations shown below: