

PBV

Forged Ball Valves

P136 Series
P138 Series
C6415 Series

Available With Flanged,
Threaded and Socket Weld Ends
In Full and Reduced Port,
Classes 150, 300, 600 and 1500.

For Petroleum, Petrochemicals,
Chemicals, and Gas Applications.



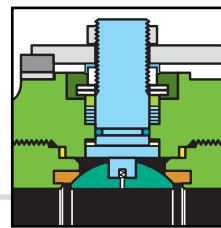
Their Options Are Our Standards

Designed for Versatility, Forged for Durability

The PBV® Series P136 and P138 Threaded and Socket Weld Forged Floating Ball Valves

Standard Features

- 316 Stainless Steel Trim
- Three-piece construction
- Locking Devices for added security
- Meets NACE MR0175 Latest Edition and ASME/ANSI B16.34
- Available in Full and Reduced Port Configurations
- Fire tested to API 607 and BS 6755 Part 2
- BS 5351 for steel ball valves in the petroleum, petro chemical and allied industries
- ISO 5211 Actuator Mounting Pads
- Blowout proof stem design
- Antistatic device
- Encapsulated Seats

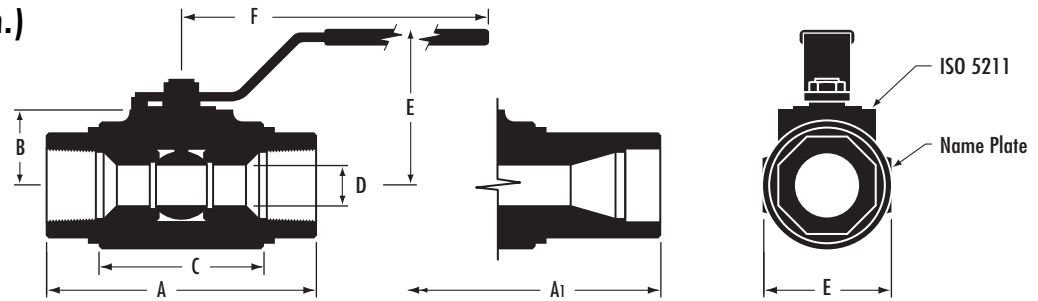


Blow-out-proof backseated Stem for added safety:

Tack welded for complete security and no disengagement of the body to adapter connection.



Dimensional Data (in.)



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Series P136, A105 Forged Steel, Reduced Port

Valve Sz (In)	Press (psi)	A	A1*	B	C	D	E	F	G	Wt (Lbs)	Wt A1* (Lbs)
1/2	5000	3.35	5.00	.94	2.24	.44	2.66	5.98	1.65	2.43	2.86
3/4	4600	3.88	5.51	1.06	2.36	.56	2.76	5.98	1.81	2.87	3.30
1	4000	4.25	6.00	1.32	2.76	.83	3.15	7.60	2.24	5.07	5.10
1 1/4	4000	4.65	6.50	1.50	2.83	1.00	3.62	7.60	2.76	7.05	7.90
1 1/2	3600	5.39	7.00	1.71	3.43	1.25	3.94	8.86	3.15	9.48	10.30
2	3000	5.91	7.50	1.87	3.62	1.50	4.45	8.86	3.70	12.79	13.60
2 1/2	2400	6.25	8.50	2.30	4.25	1.93	4.65	8.86	4.25	22.05	22.00
3	2000	7.24	9.50	2.76	4.65	2.50	5.31	14.17	5.20	29.76	37.40
4	1440	8.74	11.12	3.46	5.51	2.99	5.91	19.69	6.30	38.58	60.50

Series P138, A105 Forged Steel, Full Port

Valve Sz (In)	Press (psi)	A	A1*	B	C	D	E	F	G	Wt (Lbs)	Wt A1* (Lbs)
1/4	5000	3.35	5.00	.94	2.24	.44	2.66	5.98	1.65	2.43	3.10
3/8	5000	3.35	5.00	.94	2.24	.44	2.66	5.98	1.65	2.43	3.10
1/2	4600	3.88	5.51	1.06	2.36	.56	2.76	5.98	1.81	2.87	3.50
3/4	4000	4.25	6.00	1.32	2.76	.83	3.15	7.60	2.24	5.07	5.30
1	4000	4.65	6.50	1.50	2.83	1.00	3.62	7.60	2.76	7.05	8.40
1 1/4	3600	5.39	7.00	1.71	3.43	1.25	3.94	8.86	3.15	9.48	10.80
1 1/2	3000	5.91	7.50	1.87	3.62	1.50	4.45	8.86	3.70	12.79	14.70
2	2400	6.25	8.50	2.30	4.25	1.93	4.65	8.86	4.25	22.05	25.30
2 1/2	2000	7.24	9.50	2.76	4.65	2.50	5.31	14.17	5.20	29.76	40.30
3	1440	8.74	11.12	3.46	5.51	2.99	5.91	19.69	6.30	38.58	64.50

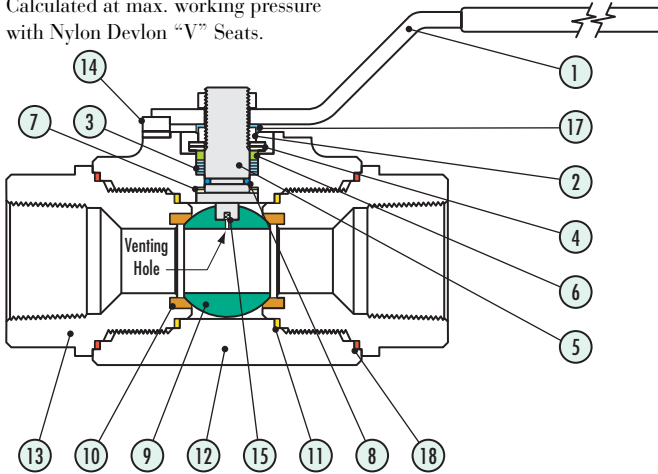
*For Socket Weld or Male ends.

P136/P138 Thrd. and SW Engineering Data

Break Torques (ft.-lb.)

Size	Torque RP	Torque FP	Size	Torque RP	Torque FP
1/4	—	15	1 1/2	48	71
3/8	—	15	2	71	96
1/2	15	19	2 1/2	96	126
3/4	19	26	3	126	163
1	26	34	4	163	—
1 1/4	34	48			

Calculated at max. working pressure with Nylon Devlon "V" Seats.



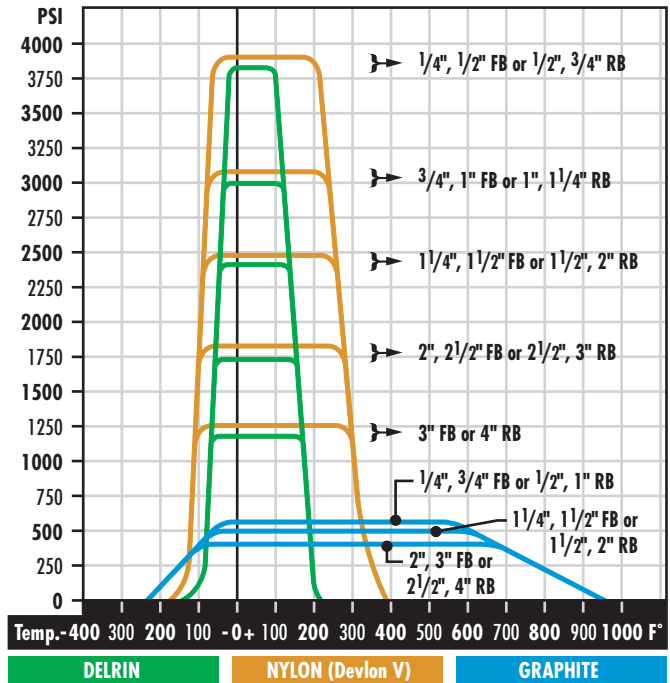
Parts & Materials

Item No.	Description	Materials A105/316	Materials LF2/316	Materials 316/316
NP	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel
1	Handle	CS Zinc Plated + Plastic	CS Zinc Plated + Plastic	CS Zinc Plated + Plastic
2**	Handle Nut	CS Zinc Plated	Stainless Steel	Stainless Steel
3*	Packing Ring	Graphite	Graphite	Graphite
4**	Spring Washer	Special SS for Springs	Special SS for Springs	Special SS for Springs
5**	Stem	316 SS	316 SS	316 SS
6	Gland Packing	316 SS	316 SS	316 SS
7*	Thrust Washer	Reinforced PTFE	Reinforced PTFE	Reinforced PTFE
8*	Stem O-Ring	V-B-R	V-B-R	V-B-R
9**	Ball	316 SS	316 SS	316 SS
10*	Seats	N-D-R-P	N-D-R-P	N-D-R-P
11*	First Body Seal	V-B-R	V-B-R	V-B-R
12	Body	ASTM A105N	ASTM A350 LF2	ASTM A182 F316
13	End Connection	ASTM A105N	ASTM A350 LF2	ASTM A182 F316
14	Stop Pin	CS Zinc Plated	Stainless Steel	Stainless Steel
15	Antistatic Device	AISI 316	AISI 316	AISI 316
17**	Stop Washer	Stainless Steel	Stainless Steel	Stainless Steel
18*	Emergency Body Seal	Graphite	Graphite	Graphite

*Recommended spare parts after two years service. **Recommended spare parts after five years service.

NOTE: We reserve the right to change materials and specifications.

Pressure Temperature



Specifying Series P136 and P138 Threaded and Socket Weld Valve Figure Numbers

Follow the example and use the figure number charts below to specify the valve you need.

Series	Material	Design	Port	Seats	Stem Seals	End Connections
P	1	3	6	D	V	SC
PBV	ASTM A105N	Standard	Reduced Port	Devlon	Viton®	Male x Female
	2		8	R	B	SC
	ASTM A350 LF2		Full Port	Delrin	Buna	Screwed End
	3			P	R	SW
	ASTM A182 F316			Peek	Low Temp Buna	Socket Weld Ends
						SS
						Screwed x Socket Weld

Example: 2" P136-DV-SC

This number represents a 2" P Series with ASTM A105 Forged Steel Construction, Standard Design in Reduced Port configuration with Devlon Seats and Viton® Stem Seals, Screwed End Connections, no modifications.

Depend On Series P136-ML/138-ML for All Your Flanged Applications

The PBV® Series P136-ML and P138-ML Flanged Forged Floating Ball Valves

Standard Features

- Full and Reduced Port Design
- 316 Stainless Steel Trim
- Locking Devices for added security
- Fire tested to API 607 and BS 6755 Part 2
- ISO 5211 Actuator Mounting Pads
- Meets NACE MR0175 Latest Edition and ASME/ANSI B16.34
- Flanged Oil Field Design in Classes 150, 300, and 600
- Three-piece construction
- Blowout proof stem design
- Antistatic device and Encapsulated Seats

Series P138-ML

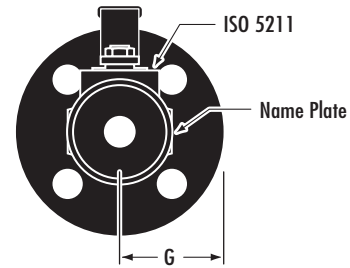
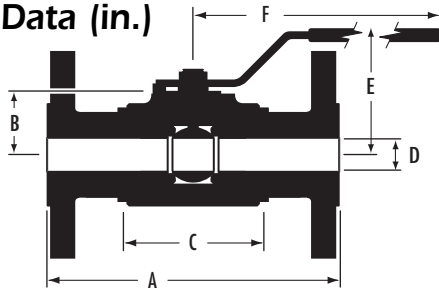


Forged product for superior performance.

Black Oxide coatings assure superior corrosion resistant properties for oilfield applications.

Series P136-ML

Dimensional Data (in.)



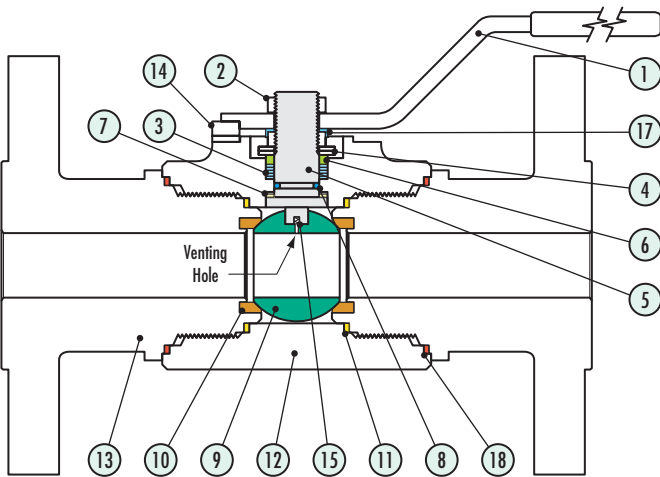
P136-ML, A105 Forged Steel, Reduced Port									
Valve Sz (In)	Class	A	B	C	D	E	F	G	Wt (Lbs)
1/2	150	4.25	0.94	2.24	0.44	2.66	5.98	1.65	5.73
	300	5.50	0.94	2.24	0.44	2.66	5.98	1.65	6.61
	600	6.50	0.94	2.24	0.44	2.66	5.98	1.65	7.05
3/4	150	4.63	1.06	2.36	0.56	2.76	5.98	1.81	7.05
	300	6.00	1.06	2.36	0.56	2.76	5.98	1.81	8.82
	600	7.50	1.06	2.36	0.56	2.76	5.98	1.81	10.58
1	150	5.00	1.32	2.76	0.83	3.15	7.60	2.24	9.70
	300	6.50	1.32	2.76	0.83	3.15	7.60	2.24	12.79
	600	8.50	1.32	2.76	0.83	3.15	7.60	2.24	14.99
1 1/4	150	5.50	1.50	2.83	1.00	3.62	7.60	2.76	13.23
	300	7.01	1.50	2.83	1.00	3.62	7.60	2.76	18.74
	600	9.00	1.50	2.83	1.00	3.62	7.60	2.76	42.99
1 1/2	150	6.50	1.71	3.43	1.25	3.94	8.86	3.15	17.64
	300	7.50	1.71	3.43	1.25	3.94	8.86	3.15	25.35
	600	9.49	1.71	3.43	1.25	3.94	8.86	3.15	29.76
2	150	7.01	1.87	3.62	1.50	4.45	8.86	3.70	24.25
	300	8.50	1.87	3.62	1.50	4.45	8.86	3.70	30.86
	600	11.50	1.87	3.62	1.50	4.45	8.86	3.70	37.48
2 1/2	150	7.50	2.30	4.25	1.93	4.65	8.86	4.25	34.17
	300	9.49	2.30	4.25	1.93	4.65	8.86	4.25	39.68
	600	12.99	2.30	4.25	1.93	4.65	8.86	4.25	44.09
3	150	7.99	2.76	4.65	2.50	5.31	14.17	5.20	46.30
	300	11.12	2.76	4.65	2.50	5.31	14.17	5.20	52.91
	600	14.00	2.76	4.65	2.50	5.31	14.17	5.20	58.42
4	150	9.00	3.46	5.51	2.99	5.91	19.69	6.30	57.32
	300	12.01	3.46	5.51	2.99	5.91	19.69	6.30	63.93
	600	17.01	3.46	5.51	2.99	5.91	19.69	6.30	77.16

P138-ML, A105 Forged Steel, Full Port									
Valve Sz (In)	Class	A	B	C	D	E	F	G	Wt (Lbs)
1/2	150	4.25	1.06	2.36	.56	2.76	5.98	1.81	5.51
	300	5.50	1.06	2.36	.56	2.76	5.98	1.81	6.61
	600	6.50	1.06	2.36	.56	2.76	5.98	1.81	9.04
3/4	300	6.00	1.32	2.76	.83	3.15	7.60	2.24	9.70
	600	7.50	1.32	2.76	.83	3.15	7.60	2.24	13.01
	150	5.00	1.50	2.83	1.00	3.62	7.60	2.76	8.82
1	300	6.50	1.50	2.83	1.00	3.62	7.60	2.76	12.13
	600	8.50	1.50	2.83	1.00	3.62	7.60	2.76	17.20
	300	7.01	1.71	3.43	1.25	3.94	8.86	3.15	15.87
1 1/4	600	9.00	1.71	3.43	1.25	3.94	8.86	3.15	23.81
	150	6.50	1.87	3.62	1.50	4.45	8.86	3.70	17.64
	300	7.50	1.87	3.62	1.50	4.45	8.86	3.70	20.94
1 1/2	600	9.49	1.87	3.62	1.50	4.45	8.86	3.70	33.07
	150	7.01	2.30	4.25	1.93	4.65	8.86	4.25	37.48
	300	8.50	2.30	4.25	1.93	4.65	8.86	4.25	41.89
2	600	11.50	2.30	4.25	1.93	4.65	8.86	4.25	46.30
	300	9.49	2.76	4.65	2.50	5.31	14.17	5.20	55.12
	600	12.99	2.76	4.65	2.50	5.31	14.17	5.20	61.73
2 1/2	300	9.49	2.76	4.65	2.50	5.31	14.17	5.20	55.12
	600	12.99	2.76	4.65	2.50	5.31	14.17	5.20	61.73
	300	11.12	3.46	5.51	2.99	5.91	19.69	6.30	70.55
3	600	14.00	3.46	5.51	2.99	5.91	19.69	6.30	81.57

Order Figure Numbers

Valve Series/ Size (In)	Order Figure Numbers		
	Class 150	Class 300	Class 600
P136-ML / 1/2 - 4	P136-150-ML	P136-300-ML	P136-600-ML
P138-ML / 1/2 - 4	P138-150-ML	P138-300-ML	P138-600-ML

P136-ML/P138-ML Flanged Engineering Data



Break Torques (ft.-lb.)

Size	Torque RP	Torque FP	Size	Torque RP	Torque FP
1/2	12	15	2	54	72
3/4	15	20	2 1/2	72	95
1	20	26	3	95	123
1 1/4	26	36	4	123	—
1 1/2	36	54			

Parts & Materials

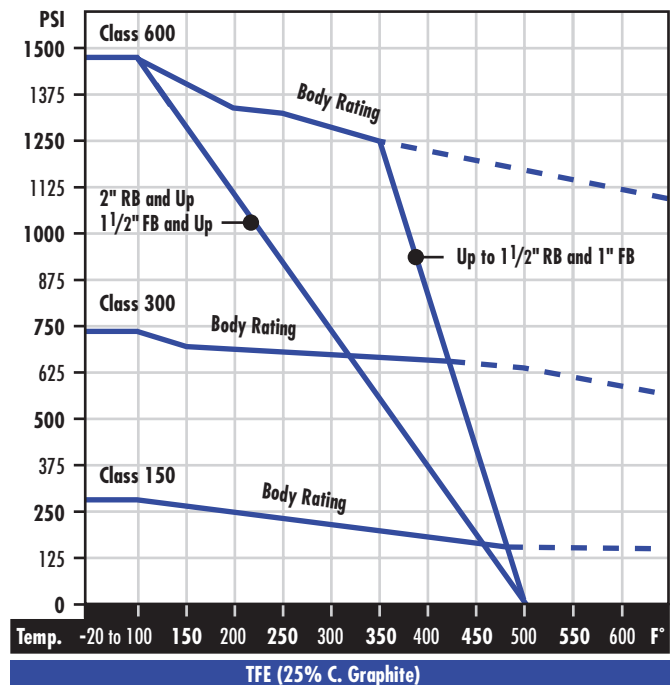
Item No.	Description	Materials A105/316
NP	Name Plate	Stainless Steel
1	Handle	CS Zinc Plated + Plastic
2**	Handle Nut	CS Zinc Plated
3*	Packing Ring	Graphite
4**	Spring Washer	Special SS for Springs
5**	Stem	316 SS
6	Gland Packing	316 SS
7*	Thrust Washer	Reinforced PTFE
8*	Stem O-Ring	Viton®
9**	Ball	316 SS
10*	Seats	TFE 25% C. Graphite
11*	First Body Seal	Viton®
12	Body	ASTM A105N
13	End Connection	ASTM A105N
14	Stop Pin	CS Zinc Plated
15	Antistatic Device	AISI 316
17**	Stop Washer	Stainless Steel
18*	Emergency Body Seal	Graphite

*Recommended spare parts after two years service.

**Recommended spare parts after five years service.

NOTE: We reserve the right to change materials and specifications.

Pressure Temperature



Specifying Series P136 and P138 Flanged Valve Figure Numbers

Follow the example and use the figure number charts below to specify the valve you need.

Series	Material	Port	Class	Seats	Stem Seals
P	13	6	150	M	L
P	13	6	150	M	L
PBV	Carbon Steel/316 SS	Reduced Port	ANSI 150 (275 psi MWP)	TFE 25% C. Graphite	Graphite
		8	300		
		Full Port	ANSI 300 (740 psi MWP)		
			600		
			ANSI 600 (440 psi MWP)		

Example: 2" P136-150-ML

This number represents a 2" P Series with Carbon Steel/316 SS Construction in Reduced Port configuration, Class 150, TFE 25% C. Graphite Seats and Graphite Stem Seals, Flanged End Connections, no modifications.

The Series C6415 Is Your Solution To Class 1500 Applications

The PBV® Series C6415 Flanged Two-Piece Bolted Body Forged Floating Ball Valves

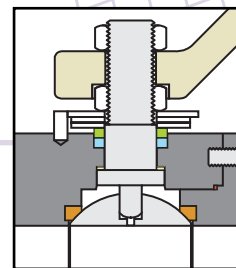
Standard Features

- Flanged Oil Field Design in Class 1500
- 316 Stainless Steel Trim
- Fire tested to API 607 and BS 6755 Part 2
- ISO 5211 Actuator Mounting Pads
- Two-piece bolted construction
- Meets NACE MR0175 Latest Edition and ASME/ANSI B16.34
- Available in Full Port Only
- Blowout proof stem design
- Encapsulated Seats



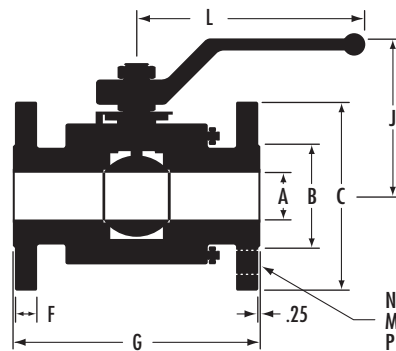
Series C6415

Superior materials include Devlon seats, Stainless Steel trim and forged bodies for tough demands in oil field applications.



Both RF and RTJ ends allow for customer specific connections.

Dimensional Data (in.)



N • No. Bolts
M • Bolt Dia.
P • Bolt Center Dia.

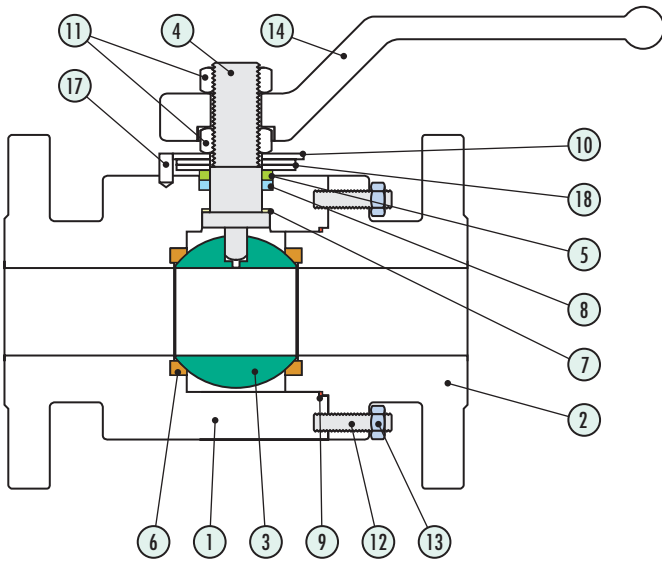
C6415, A105 Forged Steel, Full Port

Valve Sz (In)	Class	A	B	C	F	G	J	L	N	M	P	Wt (Lbs)
1/2	1500	.55	1.38	4.75	.88	8.5	3.94	6.7	4	.88	3.25	19.84
3/4	1500	.75	1.69	5.12	1.00	9.0	4.33	6.9	4	.88	3.50	22.05
1	1500	1.00	2.00	5.88	1.12	10.0	4.72	8.5	4	1.00	4.00	32.62
1 1/2	1500	1.50	2.88	7.00	1.25	12.0	6.10	12.4	4	1.12	4.88	59.52
2	1500	2.00	3.62	8.50	1.50	14.5	6.30	12.4	8	1.00	6.50	103.61

All PBV® Valves Are Manufactured in Strict Conformance with these Standards.

- ASME B16.34 Valves-Flanged, Threaded and Welding End
- ASME B16.5 Pipe Flanges and Flanged Fittings
- ASME Section VIII Division 1 Boiler and Pressure Vessel Code
- CSA #Z245.15 Steel Valves
- Canadian Registration Number (CRN) Products Registered in all Provinces and Territories
- ISO 9001 Quality System
- NACE MR0175 Latest Edition Sulfide Stress Cracking Resistant Metallic Materials for Oil Field Equipment

Class 1500 C6415 Flanged Engineering Data



Parts & Materials

Item No.	Description	Materials
1	Body	ASTM A105/LF2
2	Cap	ASTM A105/LF2
3	Ball	ASTM A479 TP316L
4	Stem S/A	ASTM A479 TP316
5	Gland	AISI 303 SS
6	Seat	Devlon
7	Thrust Washer	PTFE
8	Stem Packing	Graphite
9	Body Gasket	Graphite
10	Lock Plate	ASTM A611
11	Stem Nut	Carbon Steel
12	Body Stud	ASTM A320 L7M
13	Body Hex Nut	ASTM A194 Gr. 7M
14	Handle	ASTM A570 Gr. 50
15*	Name Plate	Stainless Steel
16*	Drive Screw	Stainless Steel
17	Stop Pin	AISI 1060
18	Spring Disc	AISI 6150

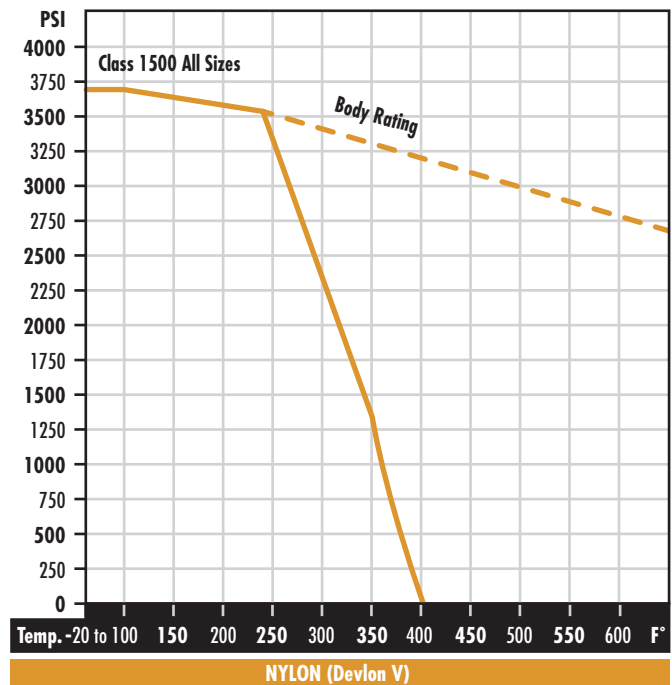
*Not illustrated. NOTE: We reserve the right to change materials and specifications.

Break Torques (ft.-lb.)

Size	Torque
1/2	23
3/4	23
1	109
1 1/2	218
2	318

NOTE: All values are full bore valves and are effective without safety factor. (Generally this factor is about torque values plus 25%).

Pressure Temperature



Specifying Series C6415 Flanged Valve Figure Numbers

Follow the example and use the figure number charts below to specify the valve you need.

Example: 2" PC-6415-31-2236-DL-NL This number represents a 2" P Series Floating Ball Valve with Carbon Steel A105/LF2 Construction in Full Port configuration, ANSI Class 1500, Fire Safe, Raised Face Flanged Ends, A105/LF2 Body/Cap, 316 SS Ball and Stem, Devlon Seats, Graphite Stem Seal Packing, NACE Conformance with Lever Handle, no modifications.

Series	Material	Port	Class	Rating	Connection	Body/Closure Material	Ball/Stem	Seat	Stem Seal	NACE	Actuation
P	C	64	15	3	1	22	36	D	L	N	L
P PBV	C Carbon Steel A105/LF2 S 316F	64 Full Port Floating Design	15 ANSI 1500	3 Fire Safe to API 6FA	1 RF 3 RTJ	22 A105/LF2 36 316F	36 316 SS 00 Same As Body	D Devlon	L Graphite Packing	N MR0175	L Lever Handle G Gear Operated B Bare Stem

Warranty

The warranty described below applies only to new or unused goods, or goods reconditioned by ZY-TECH GLOBAL INDUSTRIES (Seller). The Seller specifically disclaims any warranty for used goods or goods sold "as is". For a period of one (1) year after date of purchase of any of the goods described herein, Seller warrants such goods shall remain free from failure due to defects in workmanship and materials incorporated therein by or for Seller provided such failure shall not have been caused or contributed to, by improper usage, service or application, improper installation or maintenance, repairs, alterations, or modifications effected by or for the user, misuse, negligence or accident.

In the event of failure for which Seller has assumed warranty obligations hereunder, and provided written notification of such failure shall be immediately given to Seller, it agrees to repair, or at its option, to replace the goods sold at its sold expense.

Apart from the warranty and undertaking above set forth, Seller assumes no obligation or liability for losses, expense or damages, direct or consequential, suffered or incurred as a result of any failure of, or defect in, the goods described herein, including but not limited to, such costs, expenses or damages as may result from the necessity to remove, replace, restore or transport the goods from any location or service in which they may be used, regardless of the cause of such failure or defect.

There are not other warranties, express or implied, of any kind given with respect to the goods, their merchantability, fitness for any particular purpose or usage, or otherwise, nor is any person authorized to extend on behalf of Seller any form of warranty other than that above set forth.

The goods described herein are not sold or distributed by Seller for personal, family or household purposes, nor are they normally suited for use as such.



Contact your local PBV® representative for more information about other PBV® Brand flow control products, or learn more about other fine PBV® products by visiting www.zy-tech.com.

Your Local Representative



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