

Specifying Series 6800 Valve Figure Numbers

Example: 6" C-6830-71-2236-NV-NG ■ This number represents a 6" ANSI Class 300, Full Port, Two Piece Trunnion Ball Valve, Fire Tested with Emergency Grease Seals, with Raised Face, WCB Body Material, 316SS Trim, Nylon Seats, Viton® A Seals, for NACE MR0175 2002 Service and Gear Operated.

C - **6** **8** **30** - **7** **1** - **22** **36** - **N** **V** - **N** **G** -

Material Code	Port Config.	Valve Type	Pressure Class	Fire Tested	End Connect.	Body Material	Trim Material	Seat Material	Seal Material	NACE Option	Operator	Modifier Code
C Carbon Steel	6 Full	8 Two Piece Trunnion Type	10 150 Class 30 300 Class 60 600 Class	3 Fire Tested w/No Emergency Grease Seals 7 Fire Tested w/Emergency Grease Seals	1 RF 2 Non-Standard 3 RTJ	22 WCB/WCC 28 LCC	Same as Body 36 316SS	G Filled PTFE N Nylon	B Buna-N R Low Temp* Buna-N V Viton® A W Viton® B** Y Viton® GF	N NACE S Standard	A Actuator B Bare Stem G Gear Operator L Lever	XXX

*For Low Temperature Service. **For Explosive Decompression Service.
Other body, trim, seat and seal materials are available upon request.

Series 5700/6700/6800 ■ Flow Coefficients (C_v) For PBV® Trunnion Ball Valves

C_v, by definition, is the volume of water in gallons per minute at 60°F that will flow through a given element with a pressure drop of 1 psi.

Size	Flow Coefficients (C _v) Rating					
	Cl. 150	Cl. 300	Cl. 600	Cl. 900	Cl. 1500	Cl. 2500
2x2	500	460	400	330	330	300
3x2	180	195	180	187	187	150
3x3	1350	1150	1050	935	830	740
4x3	545	535	550	510	510	410
4x4	2500	2200	1850	1760	1660	1460
6x4	790	765	745	740	740	590
6x6	5300	5290	4460	4405	4100	2600
8x6	1945	1945	2220	2035	1930	1400
8x8	10,500	9600	8730	8475	8010	5370
10x8	4050	4040	4065	4050	3860	3050
10x10	17,500	16,750	14,250	14,205	13,310	8630
12x10	6900	7100	7050	7025	6670	5350
12x12	26,300	25,500	22,550	21,430	17,070	12,500
14x12	13,100	13,200	13,350	13,300	12,630	—
14x14	31,850	30,050	28,400	26,800	24,275	—
16x14	14,600	14,580	14,300	14,200	13,490	—
16x16	43,300	41,700	38,150	36,700	33,215	—
18x16	19,750	19,800	20,350	19,750	18,760	—
18x18	57,300	55,370	50,950	48,700	43,400	—
20x18	27,750	28,050	28,300	27,300	20,470	—
20x20	74,500	72,300	65,600	62,500	55,930	—
24x20	27,100	27,130	27,250	26,900	25,500	—
24x24	112,300	109,150	98,150	94,050	84,025	—
26x24	85,270	82,470	77,630	67,880	53,190	—

Size	Flow Coefficients (C _v) Rating					
	Cl. 150	Cl. 300	Cl. 600	Cl. 900	Cl. 1500	Cl. 2500
26x26	116,800	111,900	103,750	93,240	71,670	—
28x24	62,590	61,470	59,380	53,880	43,750	—
28x28	136,850	131,600	122,650	112,200	84,220	—
30x24	49,980	49,390	48,030	44,540	37,130	—
30x30	161,700	155,650	143,200	131,500	98,390	—
32x30	143,600	137,400	128,600	116,950	90,690	—
32x32	182,650	173,300	160,450	151,250	113,800	—
34x30	109,950	107,050	101,950	94,300	76,200	—
34x34	207,800	197,800	181,550	172,950	129,550	—
36x30	90,830	88,660	85,210	78,690	65,010	—
36x32	127,750	123,350	116,650	112,150	88,850	—
36x36	233,600	219,450	199,800	197,600	145,950	—
40x36	160,850	160,850	157,250	148,650	—	—
40x40	282,300	282,300	271,550	248,400	—	—
42x40	265,250	265,250	253,450	232,050	—	—
42x42	312,350	312,350	297,100	275,550	—	—
44x40	218,100	218,100	209,800	196,700	—	—
44x44	351,600	351,600	331,000	306,400	—	—
46x46	379,700	379,700	358,450	352,400	—	—
48x42	201,050	201,050	196,400	187,150	—	—
48x44	275,950	275,950	266,850	248,200	—	—
48x48	412,500	412,500	393,150	373,200	—	—
56x56	605,150	605,150	587,750	—	—	—

PBV®- USA Repair Kits

Spare parts are available for quick delivery. Orders with valve serial numbers will ensure the correct parts are shipped. Contact your PBV®-USA salesperson for more information.

Our Quality Commitment...

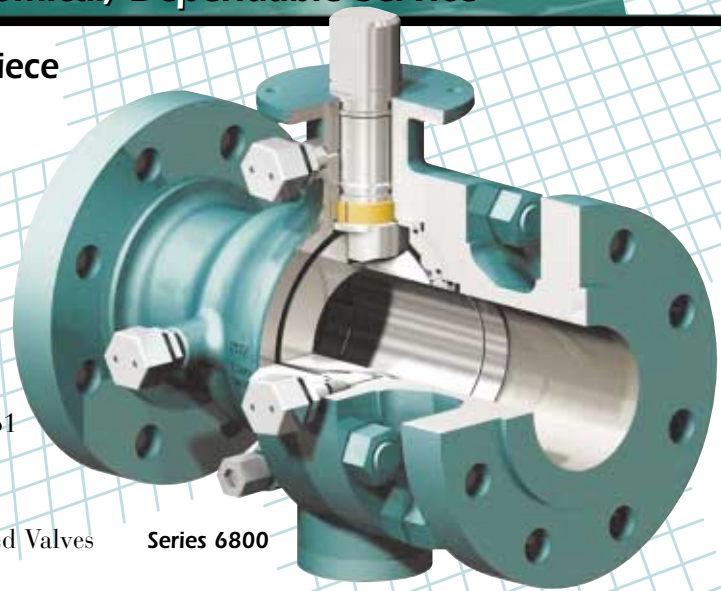
Zy-Tech Global Industries, Inc. is dedicated to continually improving their state-of-the-art engineering and manufacturing capabilities to improve the overall quality of their products and customer service. Zy-Tech's entire global network of flow control experts consist of highly trained technicians, engineers, and superior testing laboratories to ensure that all products supplied to our customers are 100% in accordance with industry standards as well as our own Quality Management System.

The Professional Choice for Economical, Dependable Service

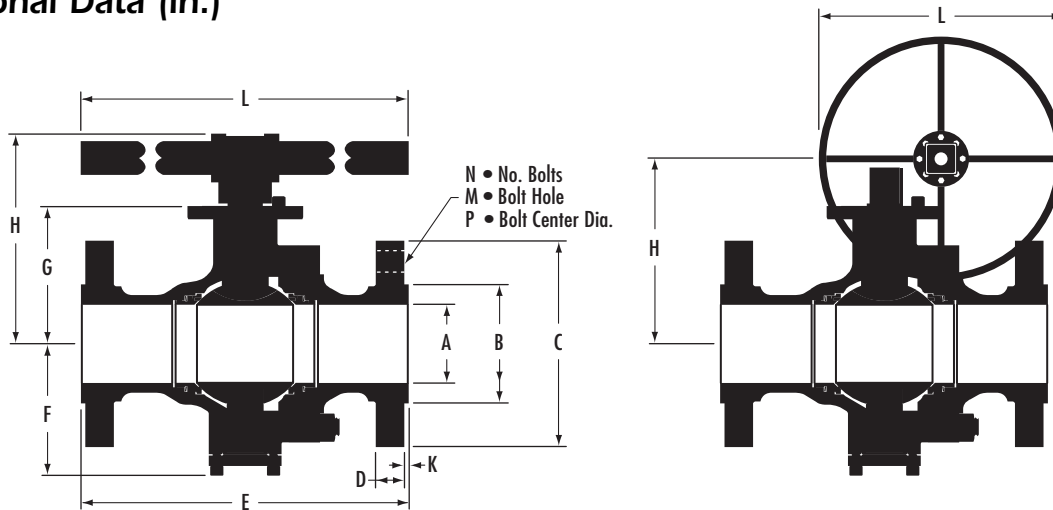
The PBV® Series 6800 Flanged, Two-Piece Cast Trunnion Supported Ball Valves

Standard Features

- WCB/WCC Cast Bodies and Adapters
- 316 Stainless Steel Standard on Internal Trim (Ball, Seat and Stems) 2" -150 thru 6" -600
- O-ring Stem Seal Design backed by Firesafe Seal
- Valves Built to API 6D
- Valves meet ASME B16.34, B16.10, B16.5 and BS 5351
- ISO 5211 Compatible Mounting Pads
- Fire tested to API 6FA
- Locking Devices Standard for Lever or Gear Operated Valves
- All Materials Meet NACE MR0175 2002



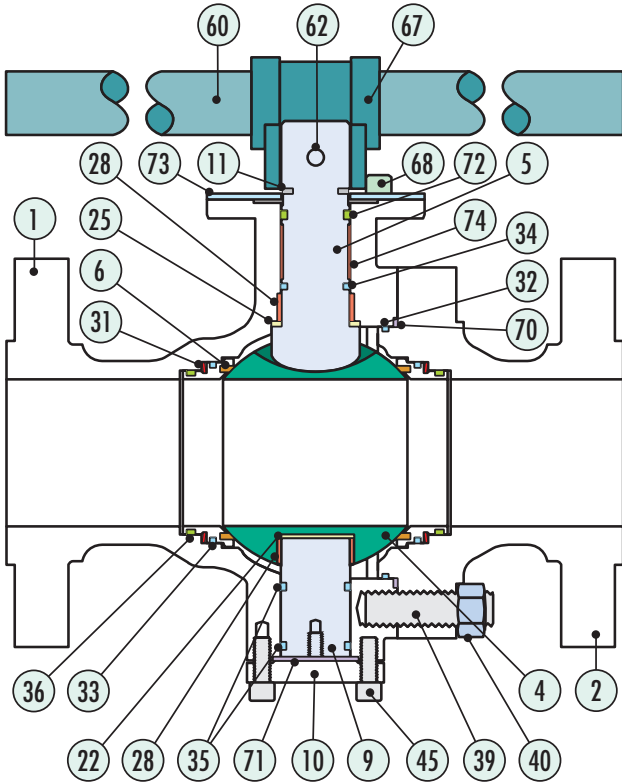
Dimensional Data (in.)



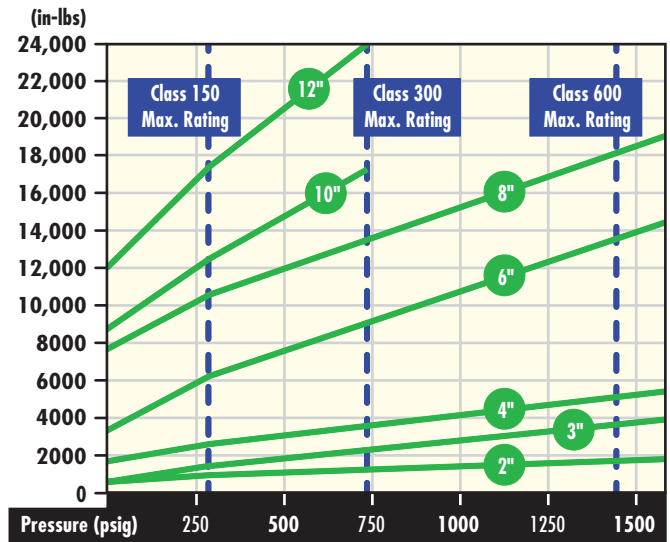
6800, Full Port

Valve Sz (in)	Class	A	B	C	D	E	F	G	H	K	N	M	P	L
2	150	2.06	3.62	6.00	0.62	7.00	4.30	3.94	6.53	0.06	4	0.75	4.75	16.62
	300	2.06	3.62	6.50	0.88	8.50	4.30	3.94	6.53	0.06	8	0.75	5.00	16.62
	600	2.06	3.62	6.50	1.25	11.50	4.30	4.13	7.43	0.25	8	0.75	5.00	19.70
3	150	3.13	5.00	7.50	0.75	8.00	5.80	4.88	8.80	0.06	4	0.75	6.00	30.00
	300	3.13	5.00	8.25	1.12	11.12	5.80	4.88	8.19	0.06	8	0.88	6.62	30.00
	600	3.13	5.00	8.25	1.50	14.00	5.80	5.38	9.28	0.25	8	0.88	6.62	30.00
4	150	4.06	6.19	9.00	0.94	9.00	6.86	6.10	10.01	0.06	8	0.75	7.50	30.00
	300	4.06	6.19	10.00	1.25	12.00	6.86	7.06	10.97	0.06	8	0.88	7.88	30.00
	600	4.06	6.19	10.75	1.75	17.00	6.86	7.06	10.97	0.25	8	1.00	8.50	30.00
6	150	6.00	8.50	11.00	1.00	15.50	8.27	8.75	10.91	0.06	8	0.88	9.50	18.11
	300	6.00	8.50	12.50	1.44	15.87	8.27	8.75	10.91	0.06	12	0.88	10.62	18.11
	600	6.00	8.50	14.00	2.13	22.00	8.27	8.75	10.91	0.25	12	1.12	11.50	18.11
8	150	8.00	10.62	13.50	1.12	18.00	10.62	10.94	13.06	0.06	8	0.88	11.75	24.02
	300	8.00	10.62	15.00	1.62	19.75	10.62	10.94	13.06	0.06	12	1.00	13.00	24.02
	600	8.00	10.62	16.50	2.44	26.00	10.62	10.94	13.06	0.25	12	1.25	13.75	24.02
10	150	10.00	12.75	16.00	1.19	21.00	12.17	12.50	14.63	0.06	12	1.00	14.25	24.02
	300	10.00	12.75	17.50	1.88	22.38	12.17	12.50	14.63	0.06	16	1.12	15.25	24.02
12	150	12.00	15.00	19.00	1.25	24.00	13.74	14.13	16.25	0.06	12	1.00	17.00	24.02
	300	12.00	15.00	20.50	2.00	25.50	13.74	14.13	16.25	0.06	16	1.25	17.75	24.02

PBV® Two-Piece Trunnion Valve Engineering Data



Stem Torque



Max Break Torques (in.-lbs.)

Pressure psig	Torque (in.-lbs.) By Size						
	2	3	4	6	8	10	12
0	540	720	1560	3180	7560	*	*
285	900	1440	2580	6120	10,560	*	*
740	1320	2460	3600	9540	13,560	*	*
1480	1620	3720	5220	13,800	18,180	—	—

*Contact your PBV® salesperson.

Parts & Materials Typical 4" Steel Valve

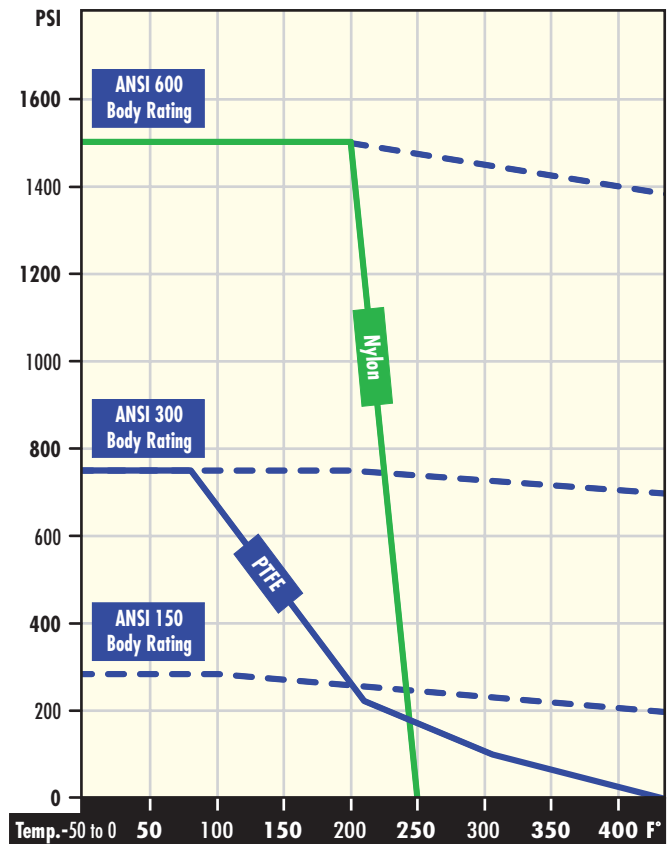
Item No.	Qty.	Description	Material/Carbon Steel Std.
1	1	Body	A216-WCB/WCC
2	1	Adapter Cap	A216-WCB/WCC
4	1	Ball	A351-CF8M
5**	1	Stem	A276-316
6*	2	Seat Assembly	Nylon/316
9	1	Trunnion	A276-316
10	1	Trunnion Plate	A352-LCC
11**	1	Snap Ring	Stainless Steel
22**	1	Bearing	TFMC
25*	1	Stem Thrust Bearing	TFMC
28*	2	Bearing Washer	Steel/PTFE
31**	2	Spring	Inconel X-750
32*	1	O-ring, Body	Viton® A
33*	2	O-ring, Seat	Viton® A
34*	1	O-ring, Stem	Viton® A
35*	2	O-ring, Trunnion	Viton® A
36*	—	Packing	Graphite
39	See Dim.	Stud	A193-B7M
40	See Dim.	Nut	A194-2HM
45	4	Cap Screw, Trunnion	A574
60	1	Handle	Carbon Steel
62	1	Handle Screw	F912
67	1	Handle Adapter	Ductile Iron
68	1	Cap Screw, Stop	A574
70*	1	Gasket, Body	Graphite
71*	1	Gasket, Trunnion	Graphite
72*	—	Packing, Stem	Graphite
73**	1	Stop Plate	Carbon Steel
74**	1	Stem Bearing	PTFE

*Recommended spare parts after two years service.

**Recommended spare parts after five years service.

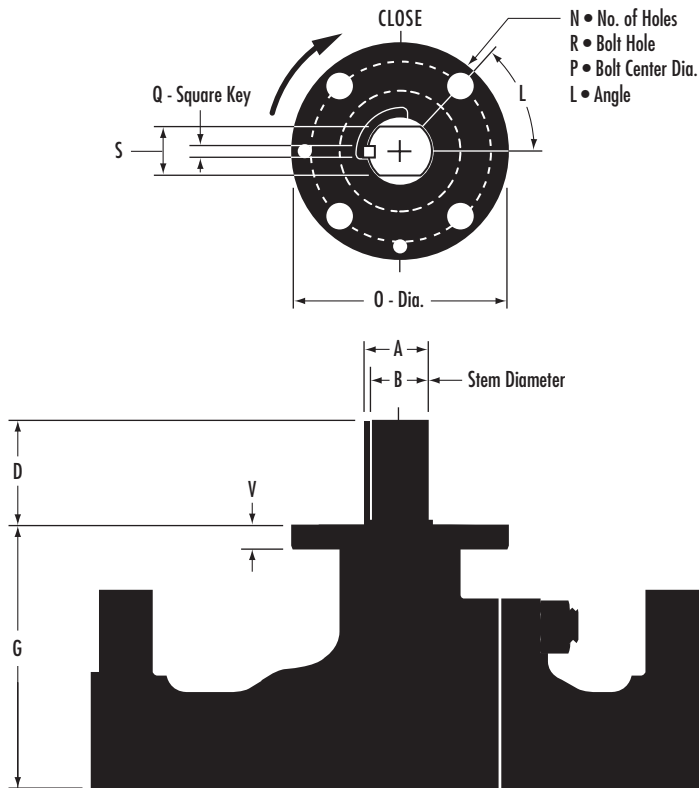
NOTE: We reserve the right to change materials and specifications.

Pressure Temperature



Data contained below is based on ball bore size and not end flange bore size. All dimensions are given in inches.

Dimensions may be changed without notice. Contact PBV® with **valve serial numbers** for exact dimensions.



Class 150 (in.)

Size	2	3	4	6	8	10	12
A	—	—	—	1.987	2.630	2.630	2.630
B	0.905	1.280	1.875	1.772	2.362	2.362	2.362
D	1.29	1.81	2.16	2.57	3.38	3.38	3.29
G	3.94	4.88	5.10	8.75	10.94	12.50	14.13
L	45°	45°	45°	45°	45°	45°	45°
N	4	4	4	4	4	4	4
O	3.54	3.54	5.91	6.80	8.27	8.27	8.27
P	2.75	2.75	4.92	5.51	6.50	6.50	6.50
Q	—	—	—	0.500	0.625	0.625	0.625
R	0.39	0.39	0.57	0.81	0.81	0.81	0.81
S	0.669	0.906	1.250	1.376	—	—	—
V	0.35	0.35	0.51	0.72	0.78	0.69	0.78

Class 600 (in.)

Size	2	3	4	6	8
A	—	—	—	1.987	2.630
B	1.280	1.870	1.870	1.772	2.362
D	1.84	2.13	2.13	2.87	3.37
G	4.12	5.38	7.03	8.75	10.93
L	45°	45°	45°	45°	45°
N	4	4	4	4	4
O	3.54	5.00	5.91	6.89	8.26
P	2.75	4.02	4.92	5.51	6.50
Q	—	—	—	0.500	0.625
R	0.39	0.45	0.57	0.81	0.81
S	0.906	1.250	1.250	1.376	—
V	0.39	0.37	0.53	0.72	0.78

Class 300 (in.)

Size	2	3	4	6	8	10	12
A	—	—	—	1.507	2.032	2.032	2.032
B	0.905	1.280	1.870	1.772	2.362	2.362	2.362
D	1.29	1.81	2.13	2.87	3.38	3.38	3.29
G	3.94	4.88	7.06	8.75	10.94	12.50	14.13
L	45°	45°	45°	45°	45°	45°	45°
N	4	4	4	4	4	4	4
O	3.54	3.54	5.91	6.69	8.27	8.27	8.27
P	2.75	2.75	4.92	5.51	6.50	6.50	6.50
Q	—	—	—	0.500	0.625	0.625	0.625
R	0.39	0.39	0.57	0.81	0.81	0.81	0.81
S	0.669	0.906	1.250	1.376	—	—	—
V	0.35	0.35	0.53	0.72	0.78	0.69	0.78