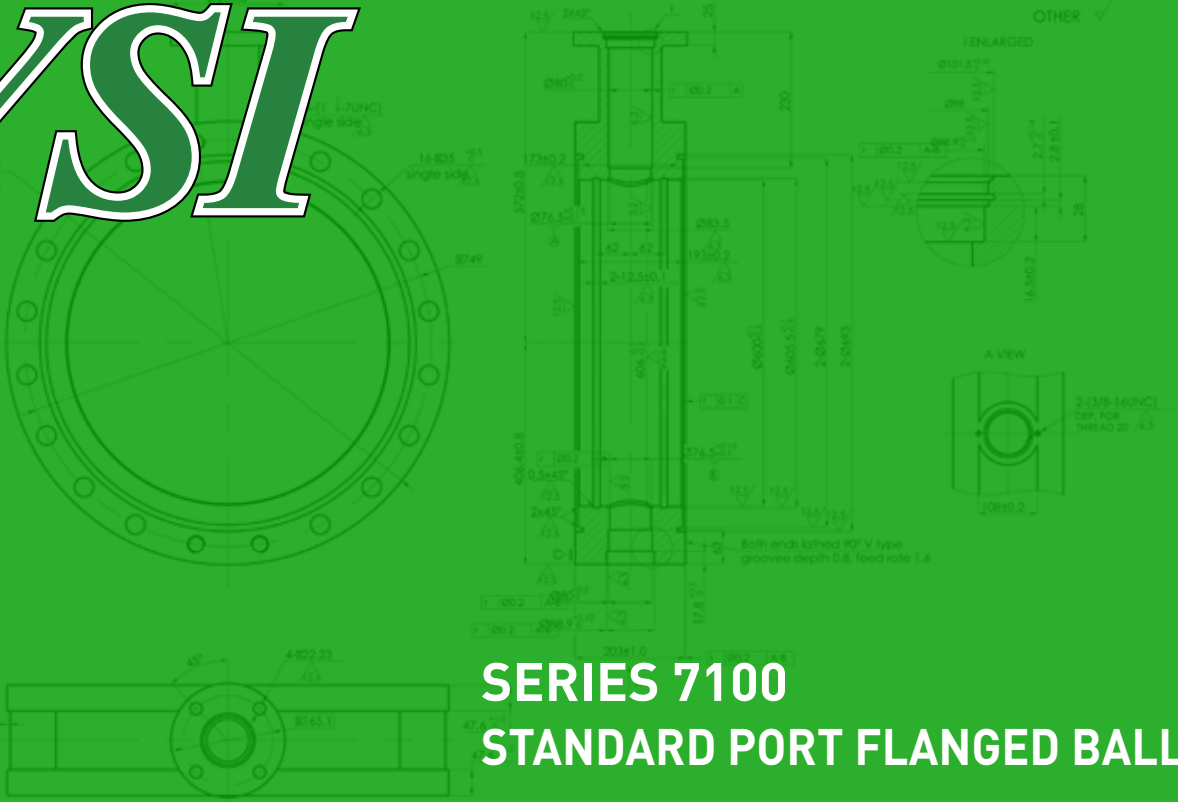


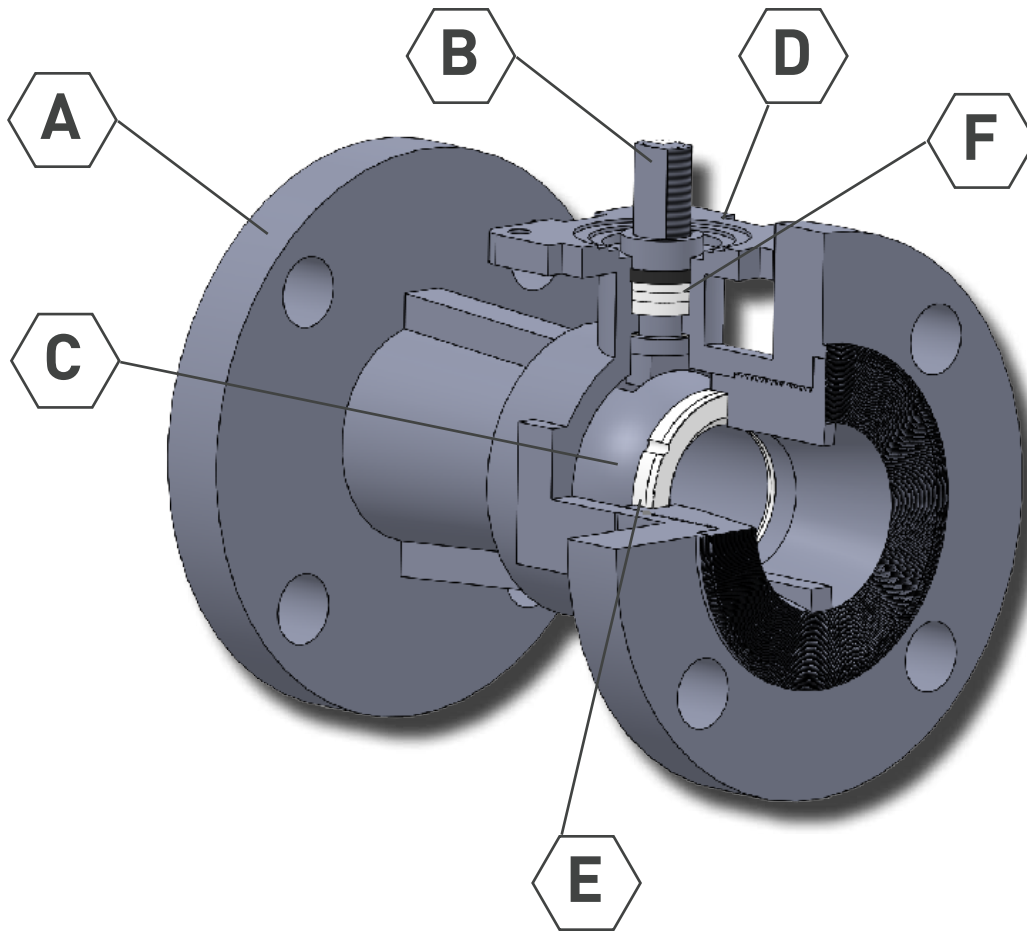
# VSI



## SERIES 7100 STANDARD PORT FLANGED BALL VALVES 1"-8"



### DESIGN FEATURES



#### [A] BODY

- Stainless Steel (A351-CF8M)
- Carbon Steel (A216-WCB)

The Series 7100 ball valve features a single piece investment cast body with a threaded insert seat retainer. This design minimizes the number of leak paths and provides the maximum structural strength. This design comes with flanges that conform to the ASME B16.5 standard and are available in ASME Class 150 and 300.

#### [B] ANTI-STATIC STEM

The stem is designed with an anti-static ball device that maintains constant metal contact with body and ball/stem assembly. This constant contact eliminates the possibility of static spark, if the body and pipe are properly grounded

#### [C] BALL

- 316 Stainless Steel

Each investment cast Stainless Steel 316 ball is precision machined before being mirror polished to lower operating torque and extend seat life. A hole in the stem slot helps equalize pressure between the body cavity and the line media.

#### [D] ISO 511 MOUNTING PLATE

The integrally cast mounting plate is designed to the ISO 5211 standard for the direct mounting of actuators, most gear operators and accessories.



## DESIGN FEATURES (CONTINUED)

### [E] SEATS

- TFM\*
- RPTFE
- PEEK
- ALTA

The Series 7100 features double seats and a bi-directional seating design. Seats designs are bubble tight even at low temperatures or vacuum.

### [F] PACKING

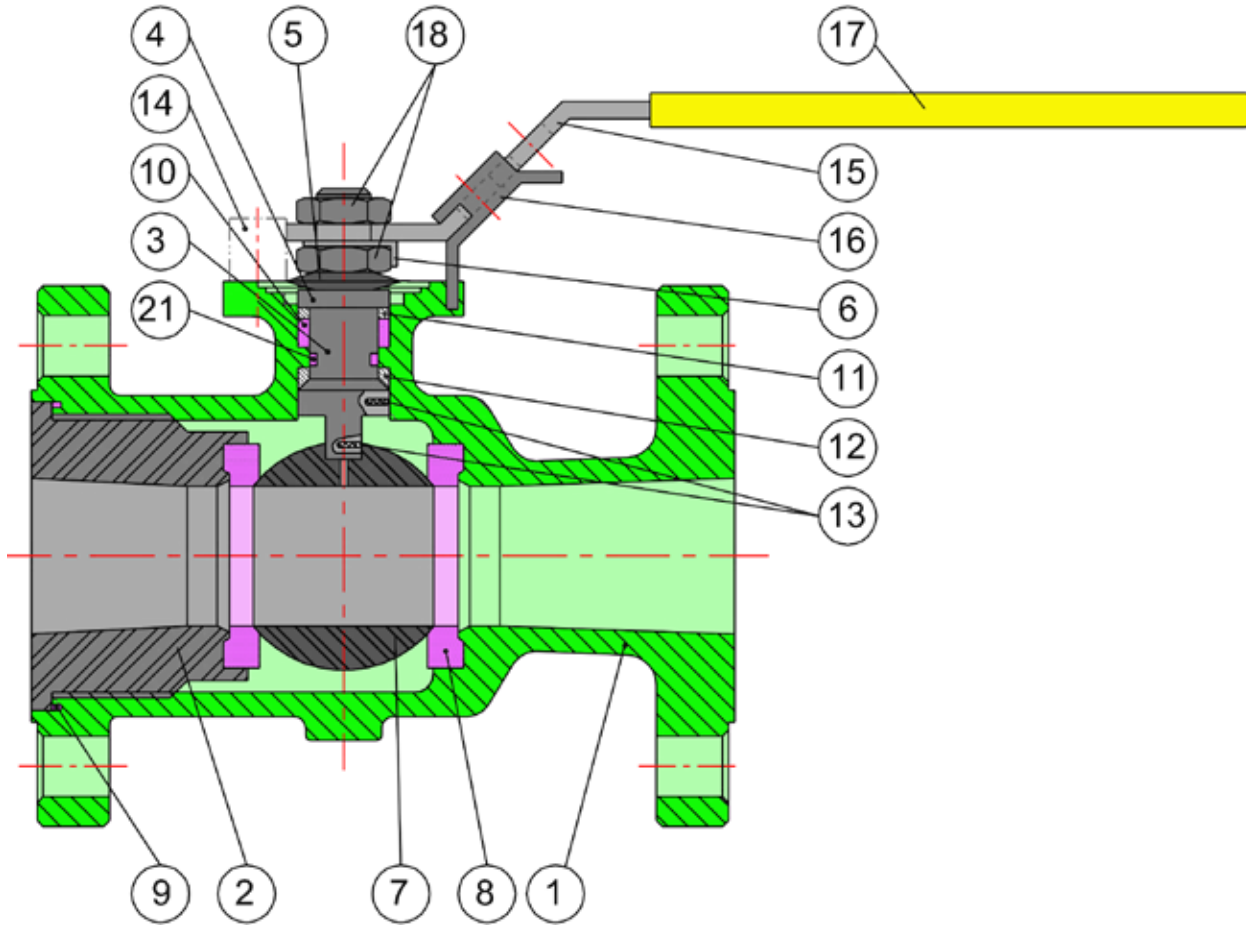
- PTFE\*
- Graphite

The packing offers proper alignment for the stem in the valve body and reduces the torque of the valve. The V-cup packing design offers great sealing properties with the stem and body. All packing sets are adjustable for long life and field replaceable. Firesafe and auxiliary secondary packings are available for extreme service

## DESIGN STANDARDS

Size Range	1"-8" Double Flanged
Connections	ANSI B16.5 Class 150 ANSI B16.5 Class 300
Design	ANSI B16.34 NACE MR0175 MSS-SP-110 API 607 (when equipped with firesafe option)
Lay Length	ASME B16.10
Testing	API 598 MSS SP-72
Leakage	ANSI FCI 70-2 Class VI
Shutoff	285 PSI CWP (Carbon Steel CL150) 275 PSI CWP (Stainless Steel CL150) 740 PSI CWP (Carbon Steel CL300) 720 PSI CWP (Stainless Steel CL300)
Temperature	See Pressure/Temperature Table
Bonnet	ISO 5221

### MATERIALS OF CONSTRUCTION 1"-2"



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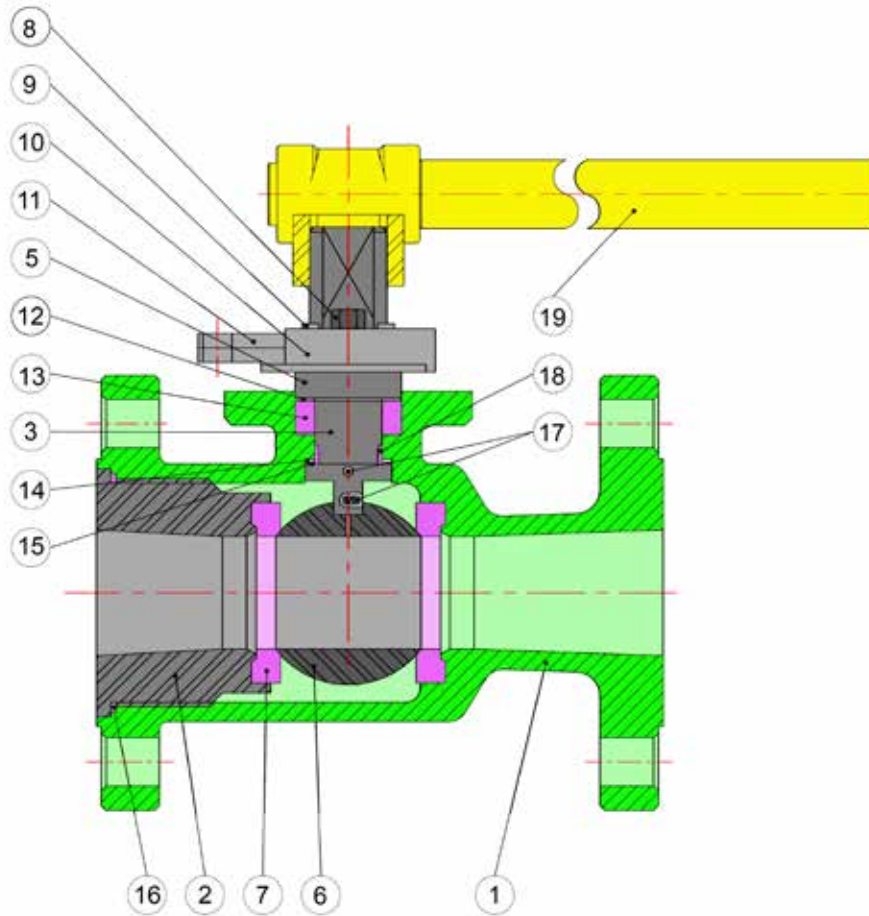
Item	Description	Materials Available	Standard
1	Body	Carbon Steel	ASTM A216 WCB <sup>(1)</sup>
		Stainless Steel 316	ASTM A351 CF8M
2	Cap	Same as Body	
3	Stem	Stainless Steel 316	ASTM A276 316
4	Packing Gland	Stainless Steel 304	ASTM A276 304
5	Belleville Washer	Stainless Steel 304	Commercial
6	Lock Washer	Stainless Steel 304	Commercial
7	Ball	Stainless Steel 316	ASTM A351 CF8M
		TFM*	
		RPTFE	
		PEEK	
		ALTA	
8	Seat	PEEK	
		ALTA	
		PTFE	

Item	Description	Materials Available	Standard
9	Body Seal	RPTFE	Commercial
10	Packing	RPTFE*	Commercial
		Graphite	Commercial
11	Packing Washer	50%PTFE/50%SS316	
12	Stem Bearing	RPTFE	Commercial
13	Anti-Static Device	Stainless Steel 316	ASTM A276 316
14	Travel Stop	Stainless Steel 304	Commercial
15	Handle	Stainless Steel 304	Commercial
16	Lever Lock	Stainless Steel 304	Commercial
17	Handle Cover	Vinyl	Commercial
18	Stem Nut	Stainless Steel 304	ASTM A276 304

\* Standard material option  
1. Phosphate Coated

Additional material options available as special order

## MATERIALS OF CONSTRUCTION 3"-8"



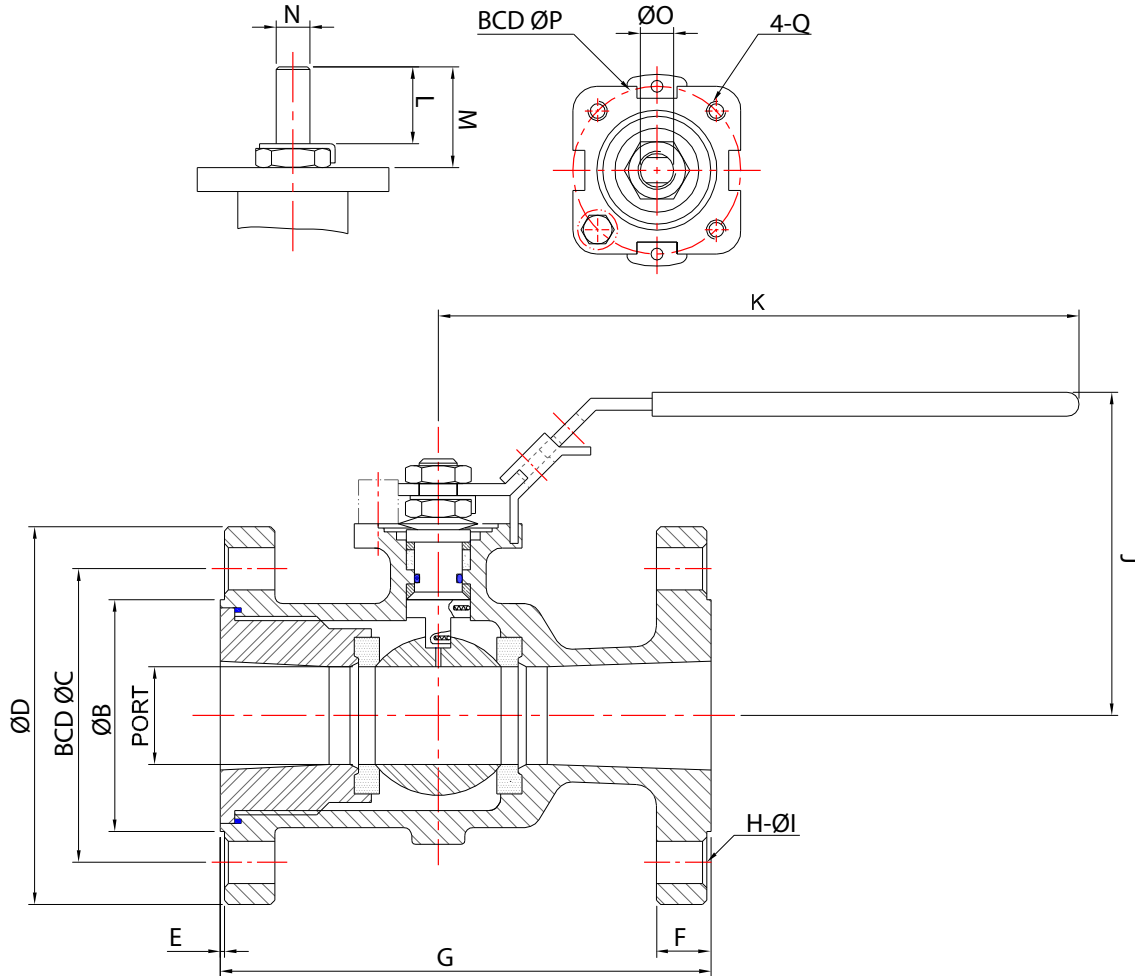
Item	Description	Materials Available	Standard
1	Body	Carbon Steel	ASTM A216 WCB <sup>(1)</sup>
		Stainless Steel 316	ASTM A351 CF8M
2	Cap	Same as Body	
3	Stem	Stainless Steel 316	ASTM A276 316
4	Packing Gland	Same as Body	
5	Packing Sleeve	Stainless Steel 304	Commercial
6	Ball	Stainless Steel 316	ASTM A351 CF8M
		TFM <sup>(2)(3)</sup>	
		RPTFE	
		PEEK	
		ALTA	
7	Seat	PTFE	
8	Gland Bolt	Stainless Steel 316	Commercial

Item	Description	Materials Available	Standard
9	Snap Ring	Nickel Plated Carbon Steel	
10	Gland	Same as Body	
11	Travel Stop	Plated Steel <sup>(2)</sup>	Commercial
		Stainless Steel 304 <sup>(3)</sup>	Commercial
12	Packing Washer	50%PTFE/50%SS316	
13	Packing	RPTFE <sup>(2)(3)</sup>	Commercial
		Graphite	Commercial
14	Thrust Washer 1	RPTFE	
15	Thrust Washer 2	50%PTFE/50%SS316	
16	Body Seal	RPTFE	Commercial
17	Anti-Static Device	Stainless Steel 316	ASTM A276 316
18	Stem Bearing	RPTFE	Commercial
19	Handle	Head-Iron, Pipe-Carbon Steel	

- 1. Phosphate Coated
  - 2. Standard material option for Carbon Steel Body valves
  - 3. Standard material option for Stainless Steel Body valves
- Additional material options available as special order



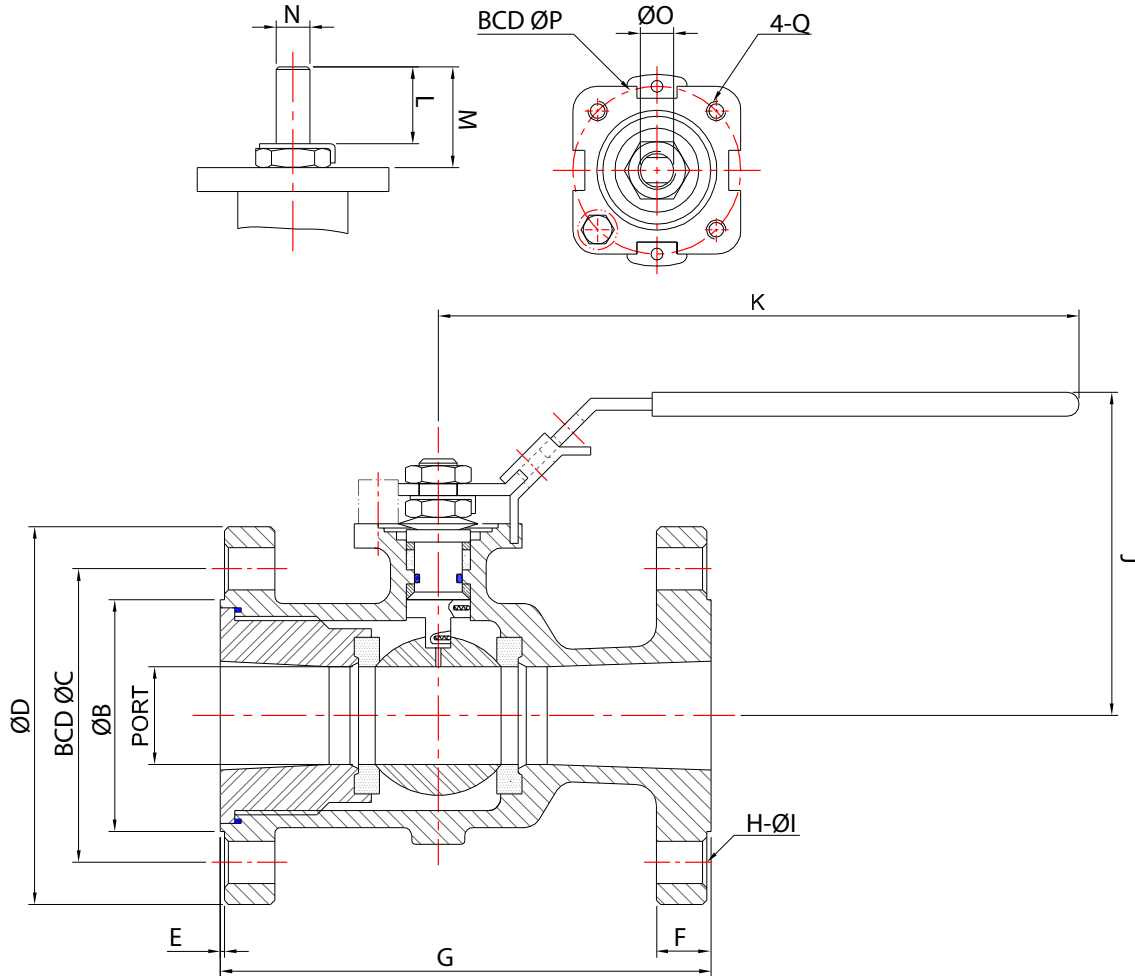
### 1"-2" CL150 DIMENSIONS



SIZE	PORT	B	C	D	E	F	G	H	I
1"	0.79	2.01	3.13	4.25	0.06	0.54	5.00	4	0.63
1½"	1.26	2.87	3.88	5.00	0.06	0.69	6.50	4	0.63
2"	1.50	3.62	4.74	5.98	0.06	0.75	7.00	4	0.75

SIZE	J	K	L	M	N	O	ISO	P	Q
1"	2.91	6.50	0.35	0.52	0.250	0.37	F04	1.65	M5x0.8
1½"	3.62	7.87	0.47	0.73	0.315	0.43	F05	1.97	M6x1.0
2"	4.13	10.43	0.55	0.88	0.374	0.63	F07	2.76	M8x1.25

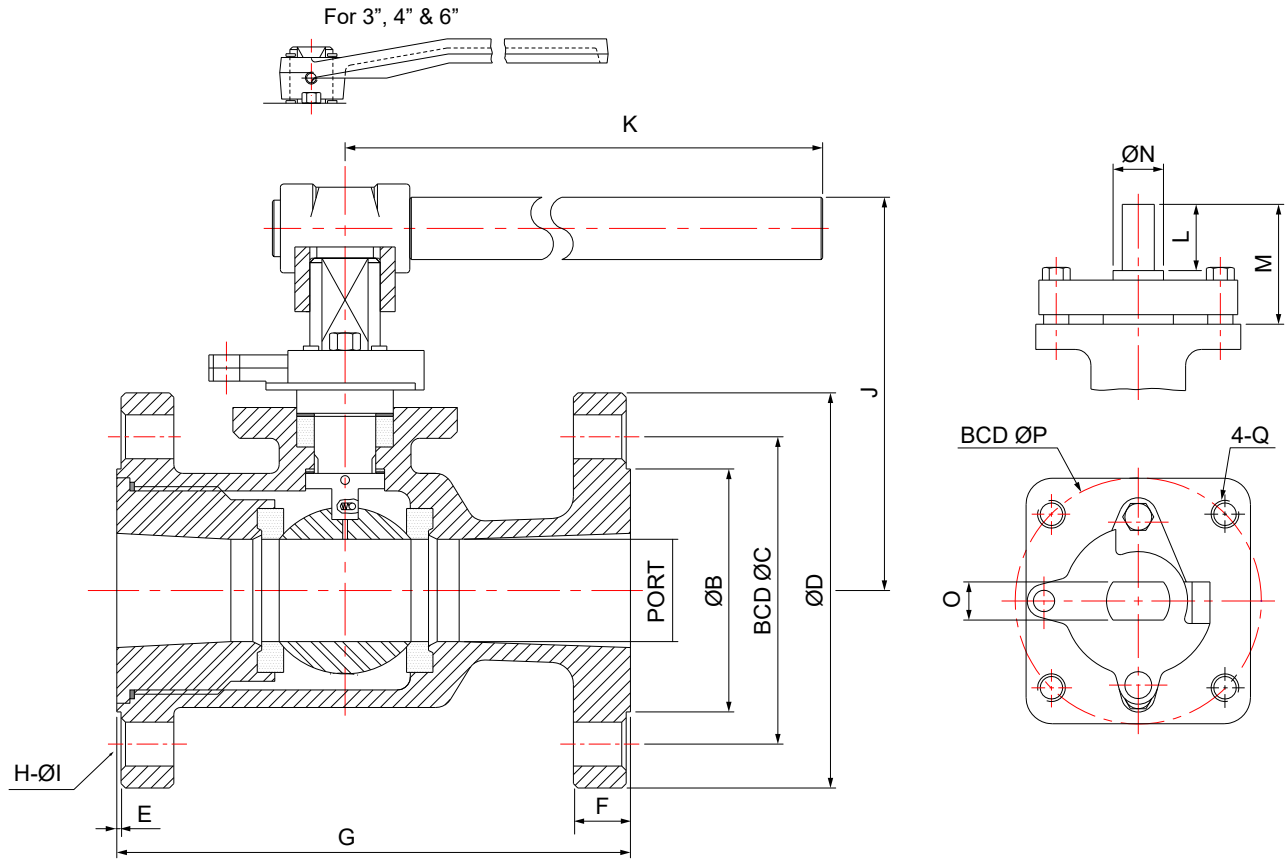
## 1"-2" CL300 DIMENSIONS



SIZE	PORT	B	C	D	E	F	G	H	I
1"	0.79	2.01	3.50	4.88	0.06	0.69	6.50	4	0.75
1½"	1.26	2.87	4.50	6.14	0.06	0.81	7.48	4	0.87
2"	1.50	3.62	5.00	6.50	0.06	0.88	8.50	8	0.75

SIZE	J	K	L	M	N	O	ISO	P	Q
1"	2.91	6.50	0.31	0.55	0.250	0.37	F04	1.63	M5x0.8
1½"	3.62	7.87	0.43	0.75	0.315	0.43	F05	1.97	M6x1.0
2"	4.13	10.43	0.55	0.91	0.374	0.62	F07	2.76	M8x1.25

3"-8" CL150 DIMENSIONS



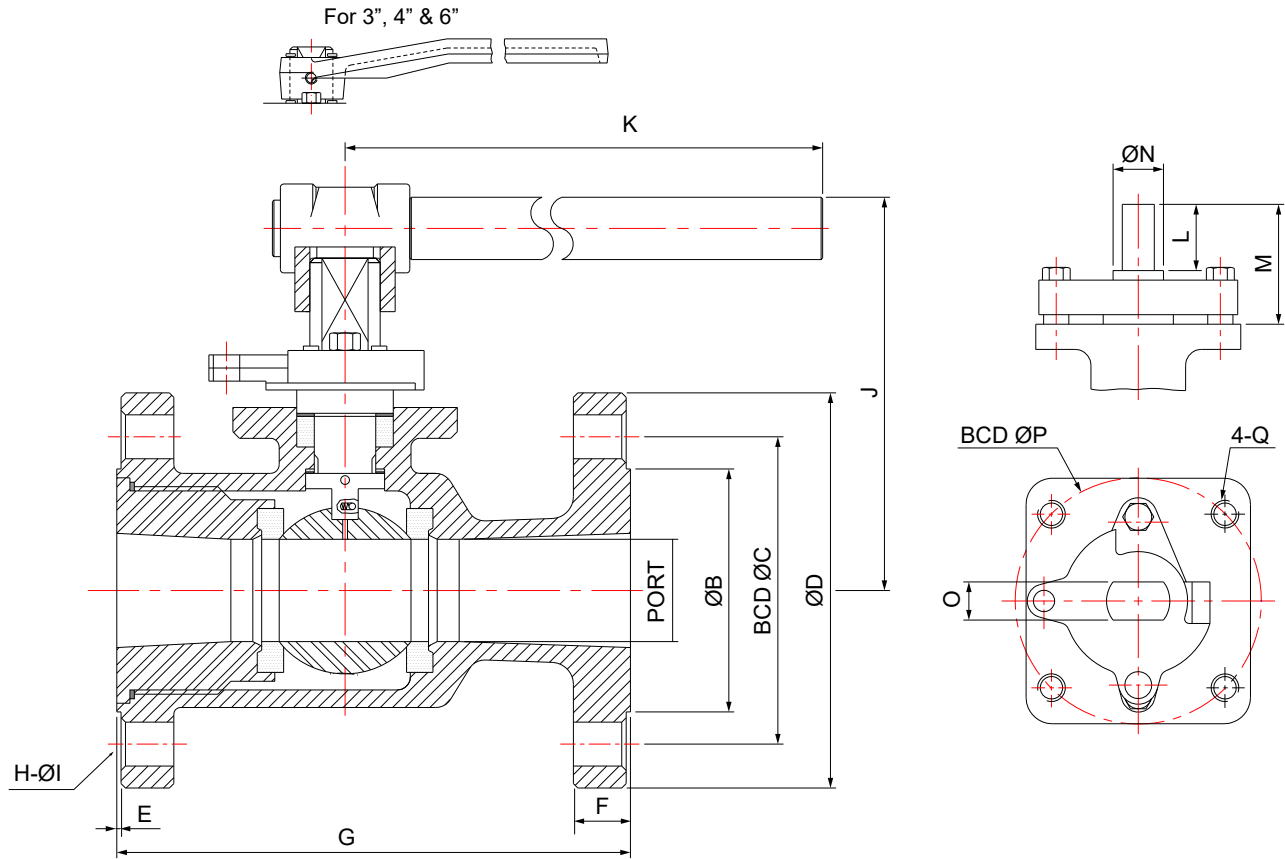
PAGE 8

SIZE	A	B	C	D	E	F	G	H	I
3"	2.56	5.00	6.00	7.50	0.06	0.79	8.00	4	0.75
4"	2.99	6.18	7.50	9.02	0.06	0.94	9.00	8	0.75
6"	3.94	8.50	9.51	10.98	0.06	1.00	10.50	8	0.87
8"	5.98	10.63	11.75	13.50	0.06	1.13	11.50	8	0.87

SIZE	J	K	L	M	N	O	ISO	P	Q
3"	6.38	15.35	0.93	2.97	1.10	0.669	F10	4.02	M10x1.5
4"	6.93	15.35	1.40	3.07	1.10	0.669	F10	4.02	M10x1.5
6"	7.60	15.35	1.40	3.07	1.10	0.669	F10	4.02	M10x1.5
8"	11.93	25.59	1.65	3.58	1.71	1.024	F12	4.92	M12x1.75



## 3"-8" CL300 DIMENSIONS



SIZE	A	B	C	D	E	F	G	H	I
3"	2.56	5.00	6.61	8.27	0.06	1.13	11.14	8	0.87
4"	2.99	6.18	7.87	10.00	0.06	1.25	12.00	8	0.87
6"	3.94	8.50	10.63	12.52	0.06	1.44	15.88	12	0.87
8"	5.91	10.63	12.99	15.00	0.06	1.63	16.50	12	0.98

SIZE	J	K	L	M	N	O	ISO	P	Q
3"	6.38	15.35	1.75	3.07	1.10	0.669	F10	4.02	M10x1.5
4"	6.93	15.35	1.75	3.07	1.10	0.669	F10	4.02	M10x1.5
6"	7.60	15.35	1.75	3.07	1.10	0.669	F10	4.02	M10x1.5
8"	11.93	25.59	1.65	3.58	1.71	1.102	F12	4.92	M12x1.75



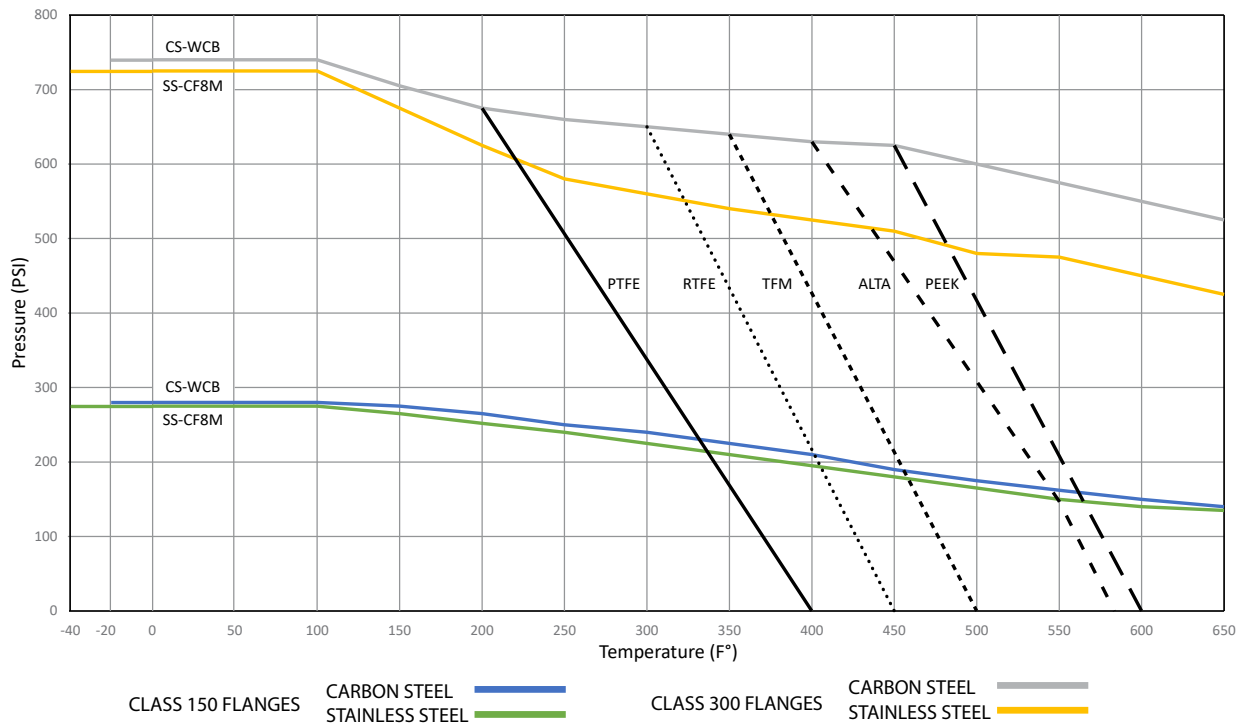
### VALVE WEIGHTS (LBS)

SIZE	CLASS 150	CLASS 300
1"	5.5	10
1½"	10.5	82
2"	16.5	120
3"	31	55
4"	52	75
6"	83	135
8"	300	300

### VALVE TORQUES (IN-LBF)

SIZE	CLASS 150	CLASS 300
1"	65	80
1½"	110	170
2"	180	285
3"	520	600
4"	725	850
6"	1500	2600
8"	3250	5300

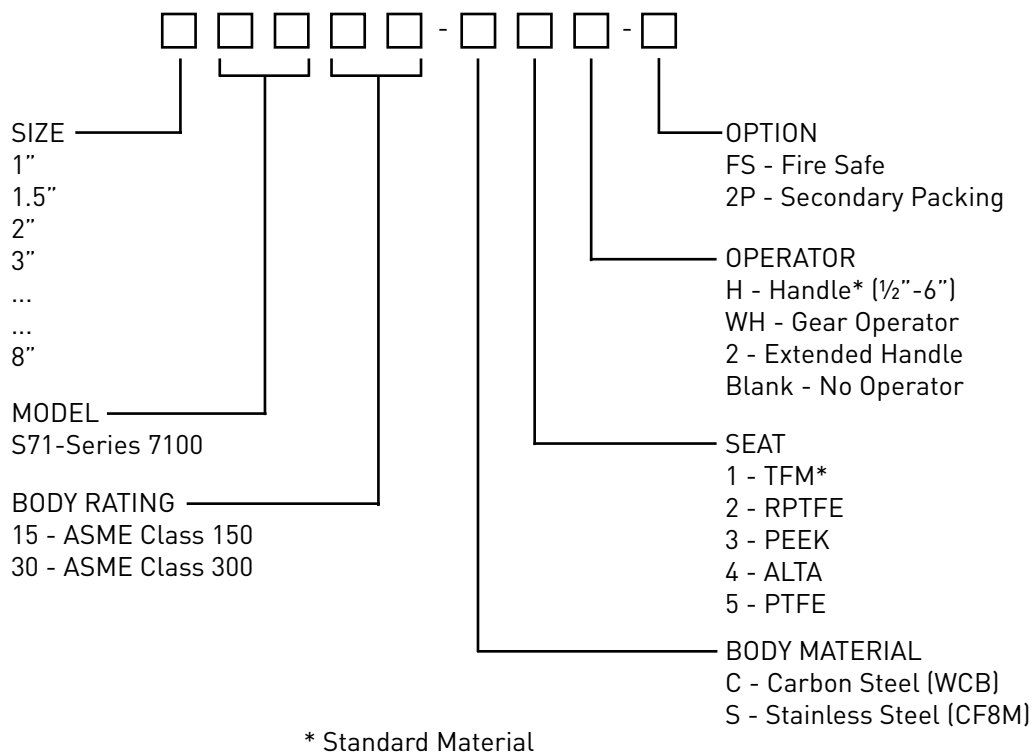
### SEAT PRESSURE/TEMPERATURE RATINGS



### SEAT TEMPERATURE RATINGS

MATERIAL	TEMPERATURE RATING °F [°C]
TFM	-4°F to 500°F [-20°C to 260°C]
RPTFE	-4°F to 450°F [-20°C to 232°C]
PEEK	-4°F to 600°F [-20°C to 315°C]
ALTA	-4°F to 575°F [-20°C to 302°C]
PTFE	40°F to 250°F [4°C to 121°C]

## PART NUMBER MATRIX



**EXAMPLE:**  
3"S7115-S1H-FS  
 A 3" Series 7100, ASME Class 150, SS316 body, TFM seat, Handle operator, with firesafe accommodation

## OTHER PART NUMBER INFORMATION

### ASSEMBLIES

The part numbers above represent only the part number for the valve without any actuator or accessories. When purchased with an actuator as part of an assembly the entire part number will be formatted as the valve part number, forward slash, then the actuator and accessory part numbers.

Example: 3"S7115-S1/C-SR160/ALS-100

The above valve is a 3" valve model S7115 with a C-SR160 spring return pneumatic actuator and ALS-100 switch-box

### MANUAL OPERATORS

Sizes 1/2" to 8" are available with a locking lever operator, add a "H" suffix. The 8" valves are available with a worm gear and handwheel operator, add a "WH" suffix.



## WARRANTY

This limited warranty applies in the United States to products manufactured by VSI, LLC. VSI, LLC. warrants the product purchased from it or its authorized reseller to be free from defects in material and workmanship under normal use during the two year warranty period from the date of its purchase. Other products not manufactured by VSI, LLC. which are provided as part of an assembly may carry additional warranties from that manufacturer or supplier.

During the warranty period, VSI, LLC. will repair or replace defective parts of the product, or, at VSI, LLC. sole option, issue a credit for the original purchase price of the product. Repaired or replaced product will be warranted hereunder only for the remaining portion of the original warranty period. All exchanged products under this Limited Warranty will become the property of VSI, LLC. A proper Return Material Authorization (RMA) number will have to be obtained for all products to be returned under this Limited Warranty. Any claim under this Limited Warranty must include a description of the problem encountered and any relevant information that may assist VSI, LLC. in the replication or resolution of the problem.

This Limited Warranty is transferable during its term to the end user of the product. Any transfer shall not extend or alter the terms of this Limited Warranty.

This Limited Warranty extends only to products purchased from VSI, LLC. or its authorized reseller and does not extend to any product that has been damaged or rendered defective as a result of (a) modification, repair, alteration or improper installation by any person other than VSI, LLC. or its authorized representative; (b) unreasonable or improper use or storage, use beyond rated conditions, operation other than per VSI, LLC. or the manufacturer's instructions, or being otherwise subjected to improper maintenance, negligence or accident; or (c) any use of the product after purchaser has knowledge of any defect in the product.

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## NOTES

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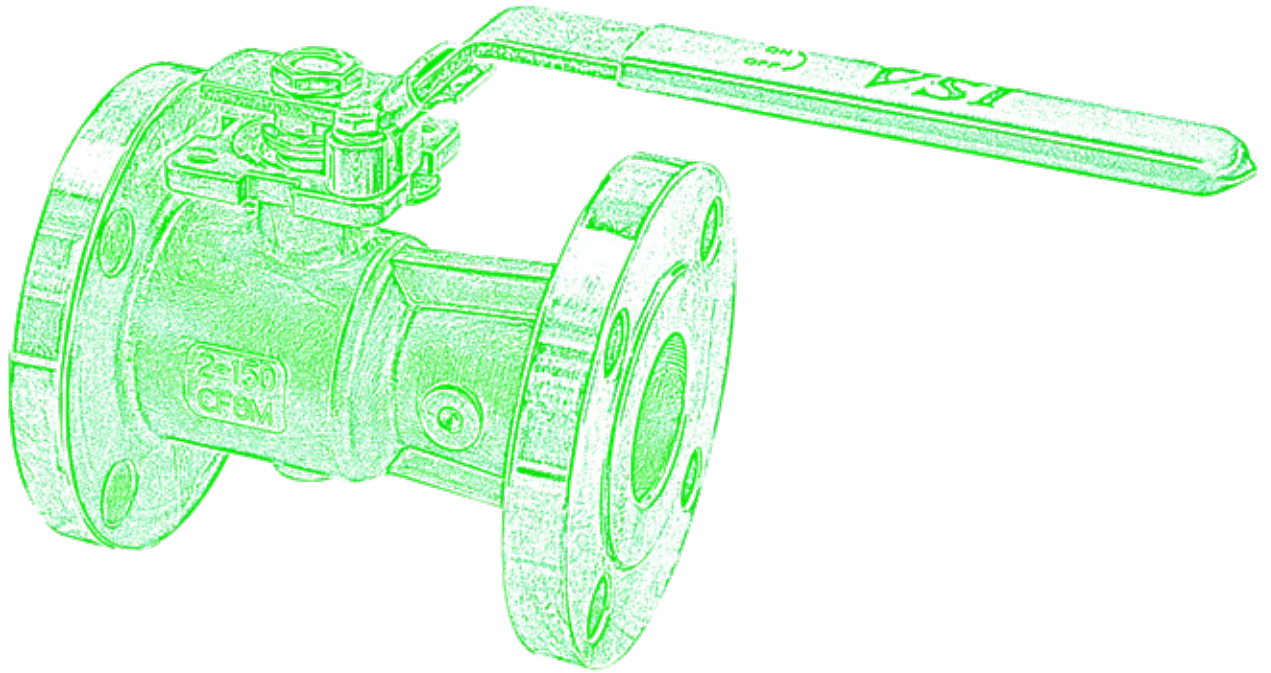
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**VSI**

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