



Valves, Automation & Controls

Series 50  
 FULL PORT FLANGED BALL VALVES

**Design Features**

- ASME B16.34 Design**  
 Full port, split body design meets all the requirements of ASME B16.34 for Class 150 ball valves.
- Blow-Out Proof Stem**  
 The internal entry stem is machined with a heavy shoulder to prevent blowout.
- Anti-Static Configuration**  
 Anti-static devices are included at two points on the valve stem to provide continuous ball-to-stem and stem-to-body grounding, to prevent build-up of static charge in the valve.
- Live-Loaded Stem Seals**  
 Stem seals are live-loaded using Belleville washers to provide consistent sealing forces, reducing or eliminating the need for frequent seal adjustment.
- Fully Encapsulated Body Seals**  
 Provides consistent and controlled loading of the body seal compression through a full metal-to-metal contact joint design, eliminating seal extrusion and potential body joint leakage.
- Integral Mounting Pad**  
 Ideal for actuation, ISO 5211 mounting dimensions simplify fit and alignment between valve, bracketry, and actuator. Permits easy field conversion from manual operation to actuation.
- Lockable Handle**  
 Sharpe Series 50 ball valves are supplied with lever handles designed to permit locking the valve in either the open or closed position. Sizes through 2" are supplied with a latch engaged at open and closed positions to prevent inadvertent operation. Larger sizes have a lockable pipe handle.
- Slotted Seat Design**  
 Relief slots are provided at the perimeter of the seats to equalize pressure in the body cavity with the upstream line when the valve is closed, preventing upstream seat extrusion and enhancing downstream seating performance.



- Seats and Seals**  
 Seat materials are offered in RTFE or TFM. Stem packing is RTFE and body seals are PTFE.
- Floating Ball Design**  
 Precision engineered and machined solid stainless steel ball with relief hole in the stem slot prevents build-up of cavity pressure while the valve is in the open position.
- Material Traceability**  
 Body and end piece casting are marked with the heat codes providing traceability to the chemical analysis and material test reports performed at the foundry. CMTR's (Certified Material Test Reports) are available upon request.
- NACE**  
 NACE MR-0175

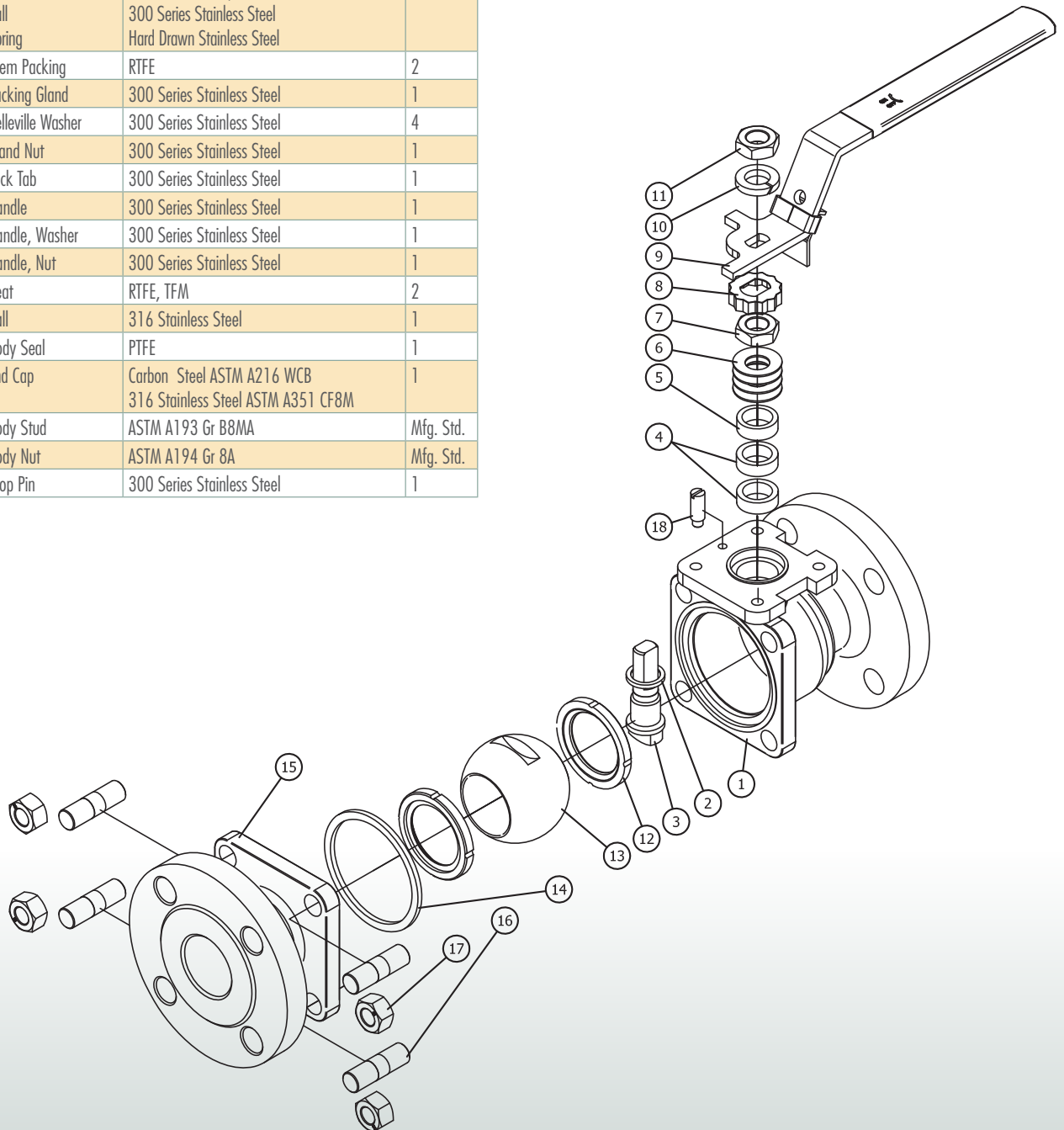


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# Series 50 FULL PORT FLANGED BALL VALVES

## Parts & Materials 1/2" - 2" Class 150

No.	Part Name	Material	Qty
1	Body	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M	1
2	Thrust Bearing	RTFE	1
3	Stem	316 Series Stainless Steel	1
3A	Anti-Static Device Ball Spring	(Located on Stem, Not Shown) 300 Series Stainless Steel Hard Drawn Stainless Steel	2
4	Stem Packing	RTFE	2
5	Packing Gland	300 Series Stainless Steel	1
6	Belleville Washer	300 Series Stainless Steel	4
7	Gland Nut	300 Series Stainless Steel	1
8	Lock Tab	300 Series Stainless Steel	1
9	Handle	300 Series Stainless Steel	1
10	Handle, Washer	300 Series Stainless Steel	1
11	Handle, Nut	300 Series Stainless Steel	1
12	Seat	RTFE, TFM	2
13	Ball	316 Stainless Steel	1
14	Body Seal	PTFE	1
15	End Cap	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M	1
16	Body Stud	ASTM A193 Gr B8MA	Mfg. Std.
17	Body Nut	ASTM A194 Gr 8A	Mfg. Std.
18	Stop Pin	300 Series Stainless Steel	1



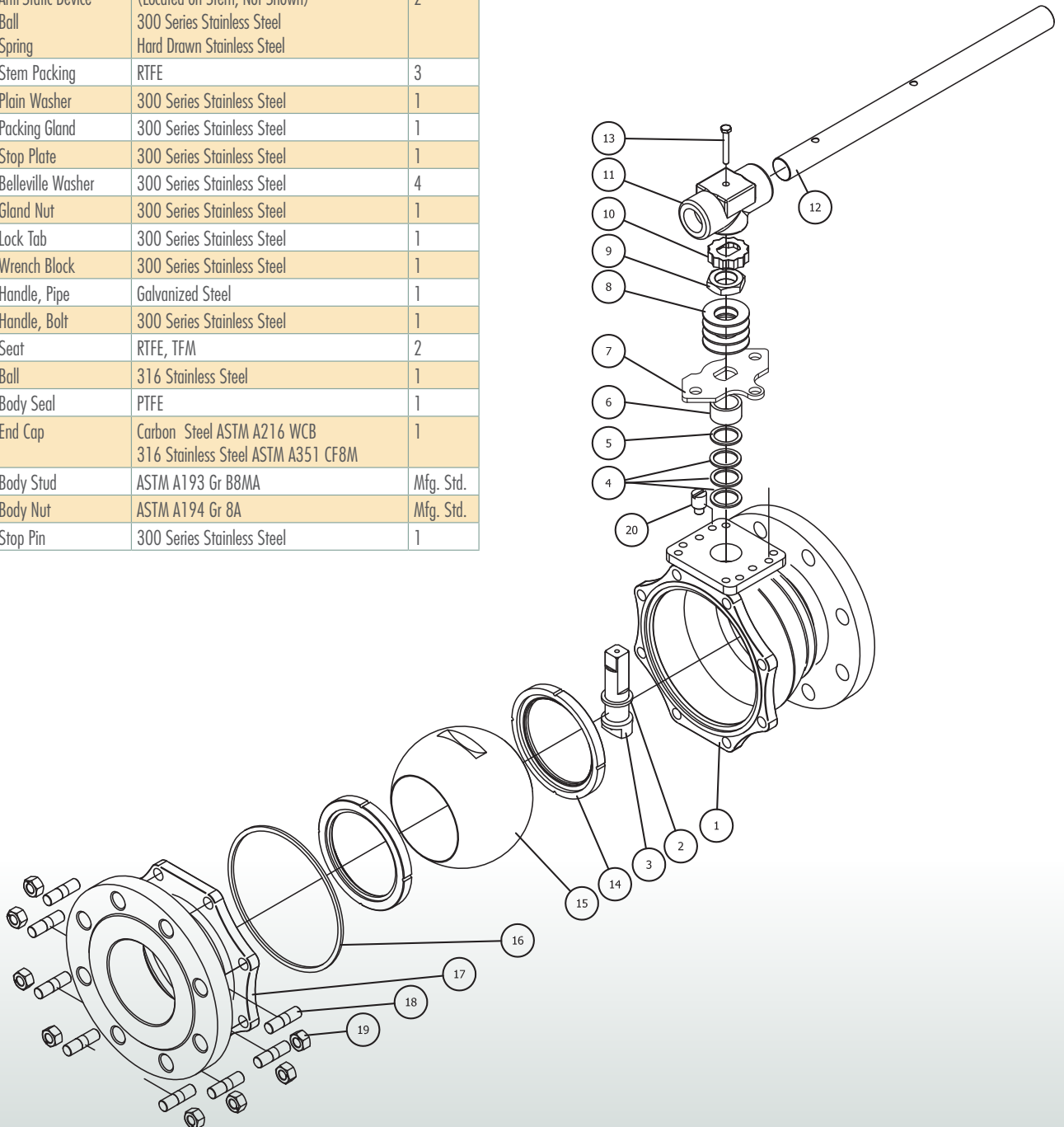


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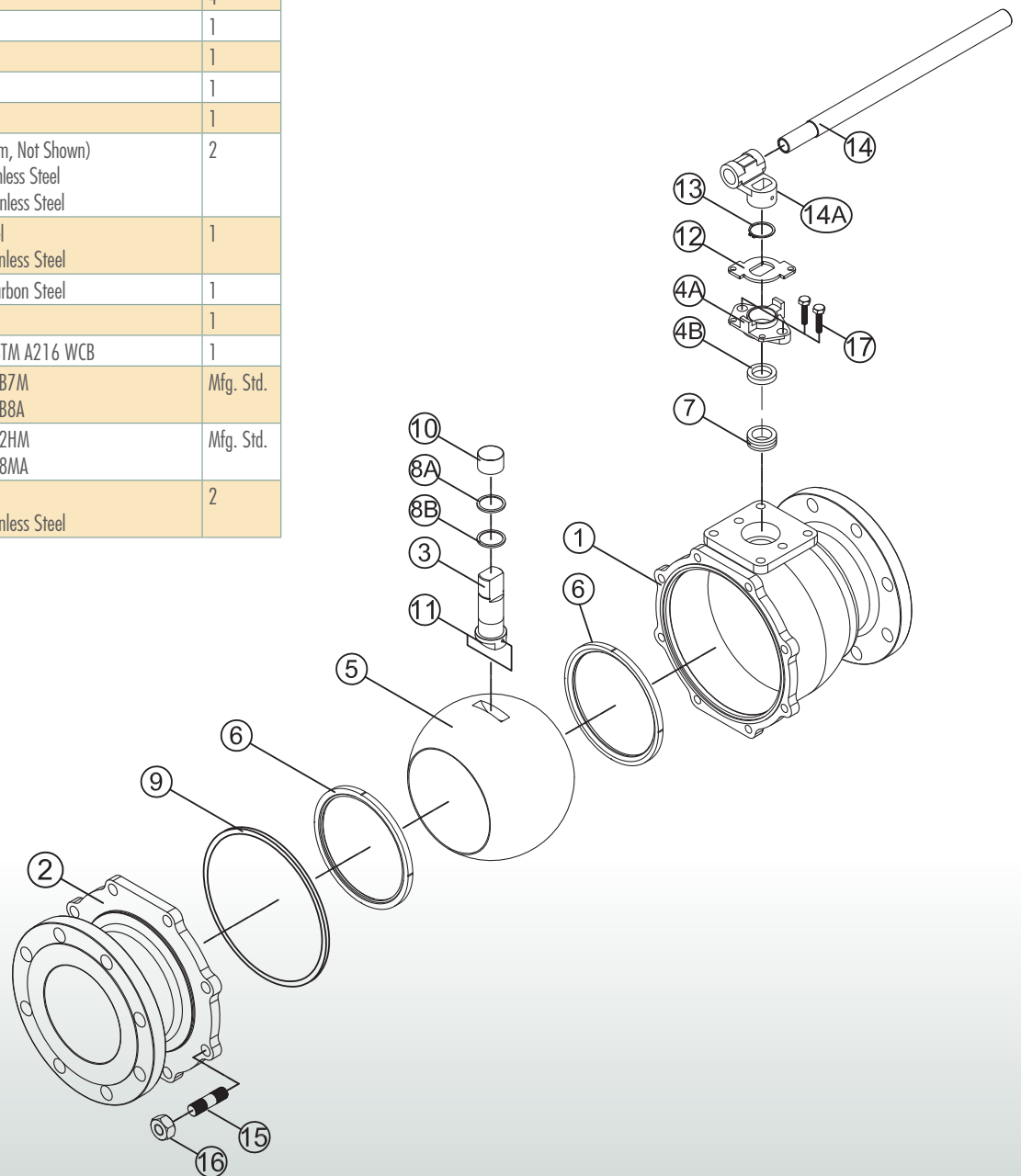
## Parts & Materials 2½" - 4" Class 150

No.	Part Name	Material	Qty
1	Body	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M	1
2	Thrust Bearing	RTFE	1
3	Stem	316 Stainless Steel	1
3A	Anti-Static Device Ball Spring	(Located on Stem, Not Shown) 300 Series Stainless Steel Hard Drawn Stainless Steel	2
4	Stem Packing	RTFE	3
5	Plain Washer	300 Series Stainless Steel	1
6	Packing Gland	300 Series Stainless Steel	1
7	Stop Plate	300 Series Stainless Steel	1
8	Belleville Washer	300 Series Stainless Steel	4
9	Gland Nut	300 Series Stainless Steel	1
10	Lock Tab	300 Series Stainless Steel	1
11	Wrench Block	300 Series Stainless Steel	1
12	Handle, Pipe	Galvanized Steel	1
13	Handle, Bolt	300 Series Stainless Steel	1
14	Seat	RTFE, TFM	2
15	Ball	316 Stainless Steel	1
16	Body Seal	PTFE	1
17	End Cap	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M	1
18	Body Stud	ASTM A193 Gr B8MA	Mfg. Std.
19	Body Nut	ASTM A194 Gr 8A	Mfg. Std.
20	Stop Pin	300 Series Stainless Steel	1



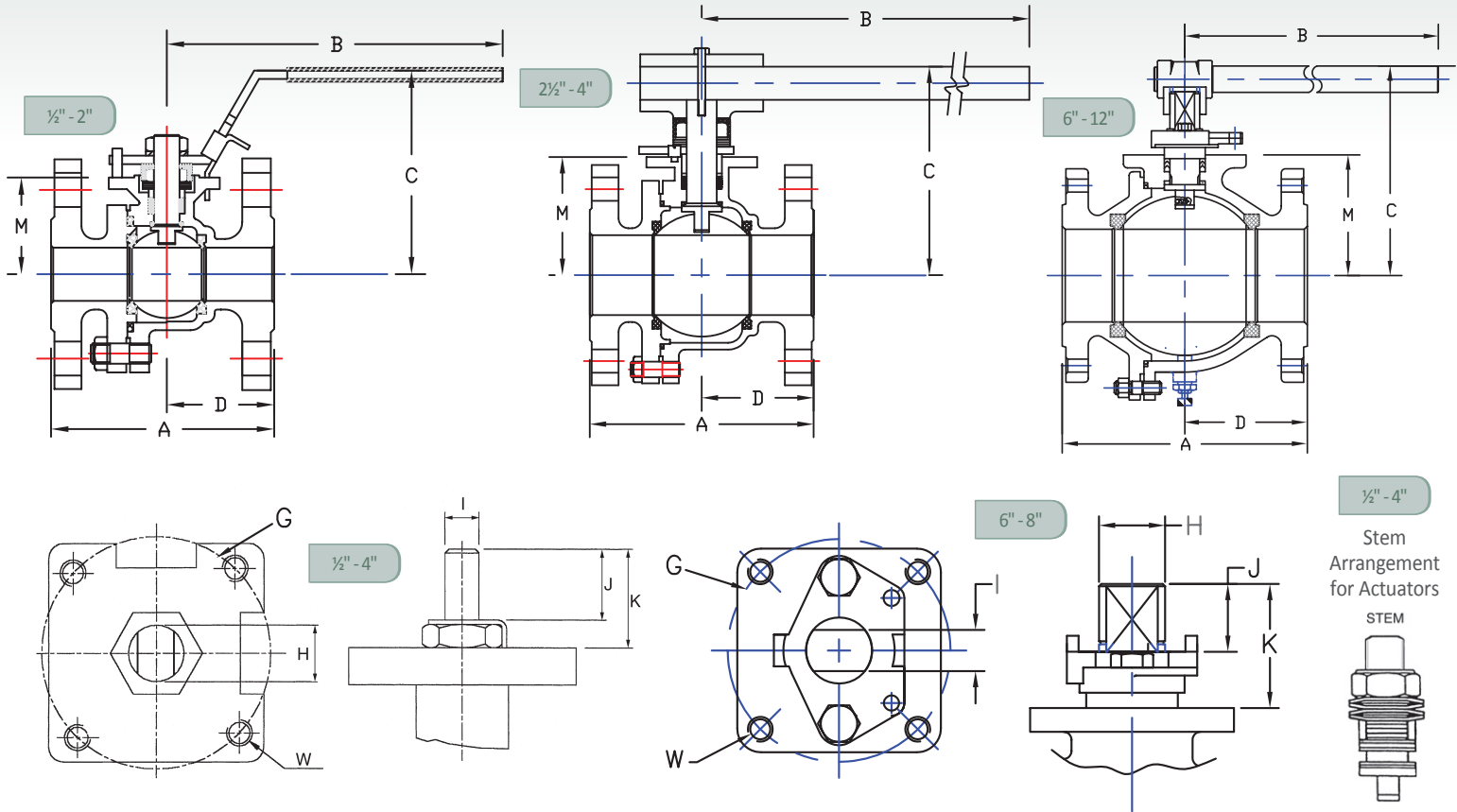
## Parts & Materials 6" - 8" Class 150

No.	Part Name	Material	Qty
1	Body	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M	1
2	End Cap	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M	1
3	Stem	316 Stainless Steel	1
4A	Gland	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M	1
4B	Sleeve	Steel 300 Series Stainless Steel	1
5	Ball	316 Stainless Steel	1
6	Seat	RTFE	2
7	Stem Packing	PTFE	4
8A	Thrust Bearing	PTFE	1
8B	Thrust Bearing	PTFE	1
9	Body Seal	PTFE	1
10	Stem Bearing	RTFE	1
11	Anti-Static Device Ball Spring	(Located on Stem, Not Shown) 300 Series Stainless Steel Hard Drawn Stainless Steel	2
12	Travel Stop	Zinc Plated Steel 300 Series Stainless Steel	1
13	Snap Ring	Nickel Plated Carbon Steel	1
14	Handle, Pipe	Ductile Iron	1
14a	Wrench Block	Carbon Steel ASTM A216 WCB	1
15	Stud	ASTM A193 Gr B7M ASTM A193 Gr B8A	Mfg. Std.
16	Nut	ASTM A194 Gr 2HM ASTM A194 Gr 8MA	Mfg. Std.
17	Gland Bolt	Steel 300 Series Stainless Steel	2



# Series 50 FULL PORT FLANGED BALL VALVES

## 1/2" - 8" Dimensions



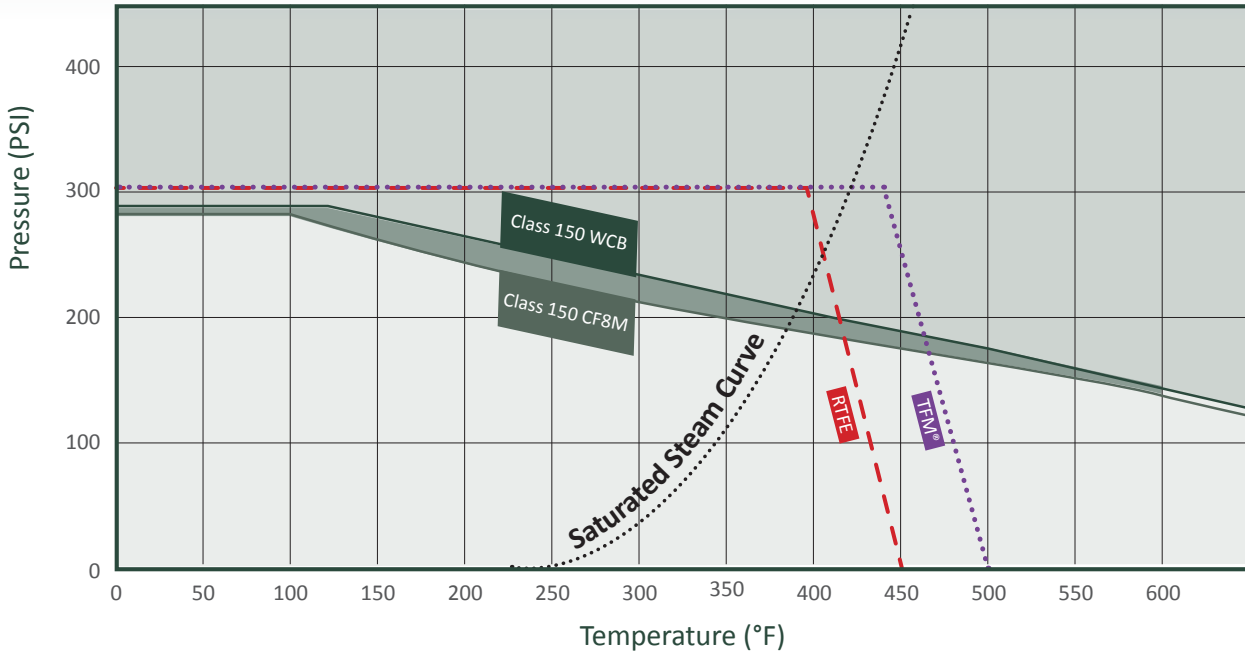
Class 150 Dimensions (Inches)

Size	Port	A	B	C	D	M	G	H	I**	J	K	W
1/2"	0.59	4.25	4.78	3.58	1.97	1.36	F03	3/8-24 UNF	0.220	0.39	0.73	M5 X 0.8P
3/4"	0.79	4.62	4.78	3.72	2.24	1.50	F03	3/8-24 UNF	0.220	0.34	0.70	M5 X 0.8P
1"	0.98	5.00	6.25	3.80	2.20	0.77	F04	7/16-20 UNF	0.291	0.60	0.85	M5 X 0.8P
1 1/2"	1.50	6.50	9.03	4.45	3.01	2.24	F05	9/16-18 UNF	0.340	0.68	1.17	M6 X 1.0P
2"	2.00	7.00	9.03	4.82	3.47	2.61	F05	9/16-18 UNF	0.340	0.61	1.15	M6 X 1.0P
2 1/2"	2.56	7.50	13.75	6.70	3.54	3.76	F10	1-14 UNF	0.748	0.61	1.87	M10 X 1.5P
3"	3.00	8.00	13.75	7.07	3.64	4.15	F10	1-14 UNF	0.748	0.61	1.87	M10 X 1.5P
4"	3.94	9.00	13.75	7.70	4.42	4.74	F10	1-14 UNF	0.748	0.65	1.91	M10 X 1.5P
6"	6.00	15.50	25.60	11.22	7.64	7.17	F12	1.72	1.018*	1.65	3.58	M12 X 1.75
8"	7.88	18.00	43.38	11.57	8.66	7.72	F12	1.72	1.018*	1.65	3.58	M12 X 1.75

The dimensions above are for informational purposes only. Please contact Sharpe Valves if you need dimensions for construction

\*\* +0.000/ -0.002 \* +.000 / -.003

## Seat Pressure -Temperature Rating



**Note:**  
 The maximum pressure/temperature ratings of the valve assemblies are limited to lowest of the body or seat material fitted.  
 The valve body ratings are based on ASME B16.34 rating for materials.  
 The graphs are based on laboratory testing and our experience in field.  
 The seat ratings depend on the material, design, application and function.

### Sharpe Seat Materials

TFM

**M - TFM® PTFE**  
 Dyneon® TFM PTFE is a second generation PTFE with improved chemical and heat resistant properties and stress recovery. Its temperature range is -100°F to 500°F (-73°C to 260°C) Color - white.

RTFE

**R - Reinforced Polytetrafluoroethylene (RTFE).**  
 PTFE's mechanical properties are enhanced by adding 15% filler material to provide improved strength, stability and wear resistance. Its temperature range is from -320°F to 450°F (-196°C to 232°C). Color-off-white.



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# Series 50 FULL PORT FLANGED BALL VALVES

## Technical Information

Size	C <sub>v</sub>	Weight (lbs.)
1/2	26	4
3/4	50	6
1	94	8
1-1/2	260	15
2	480	20
2-1/2	750	36
3	1150	45
4	2110	75
6	5070	168
8	9330	292

## Applicable Standards

Wall Thickness	ASME B16.34
Face to Face Dimensions	ASME B16.10
Flange Dimensions	ASME B16.5
NACE	MR-0175
Pressure Test	ASME B16.34, API 598 (optional)
Basic Design	ASME B16.34

## How to Order

Size	Series	Class	Body	Seat	Options
1/2	50	11 150	4 Carbon Steel	M TFM™	OH Oval Handle, Non-locking up to 2" L Lockable Stem Extension, 316SS
3/4			6 Stainless Steel	R RTFE	
1					
1-1/2					
2					
2-1/2					
3					
4					
6					
8					

3/4" - 50 - 11 - 4 - R - = 3/4" 50114-R

Example: 3/4" 50114-R,  
 3/4" Series 50 Full Port, Split Body Flanged, Raised Face, Class 150 Ball Valve,  
 Cast Carbon Steel Body with 316 Stainless Ball and Stem, RTFE Seats, PTFE Body Seal and RTFE Stem Packing.