



Valves, Automation & Controls

Series FS54

FIRE SAFE API 607 4TH EDITION STANDARD PORT, UNI-BODY FLANGED BALL VALVES

Design Features

- Fire Safe API 607 4TH Edition**
 Series FS54 flanged valves have been qualified by testing to API standards 607, 4th Edition. The valve design incorporates a secondary metal seat in the body, providing the required shutoff should the primary seats be destroyed by fire.
- ASME B16.34 Design**
 Standard port, Uni-body design meets all the requirements of ASME B16.34 for Class 150 and Class 300 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 FS54 ball valves are supplied with lever handles designed to permit locking the valve in either the open or closed position. Sizes through 2½" 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.
- Choice of Seats and Seals**
 Available with TFM or RTFE Seats. Stem packing and body seals are die formed flexible graphite.
- 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**
 Class 150 and Class 300 are NACE MR-0175

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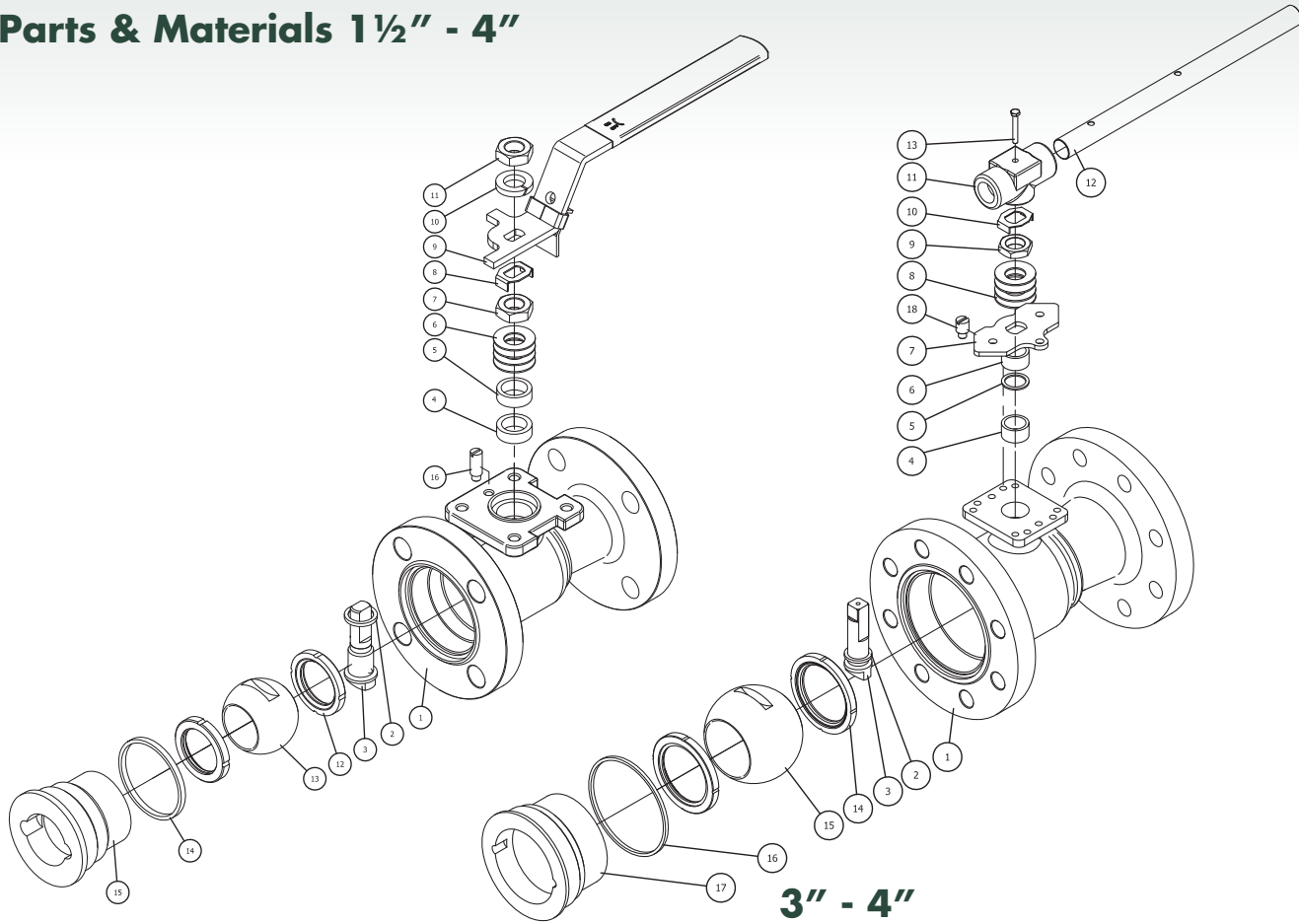


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Parts & Materials 1 1/2" - 4"



1 1/2" - 2 1/2"

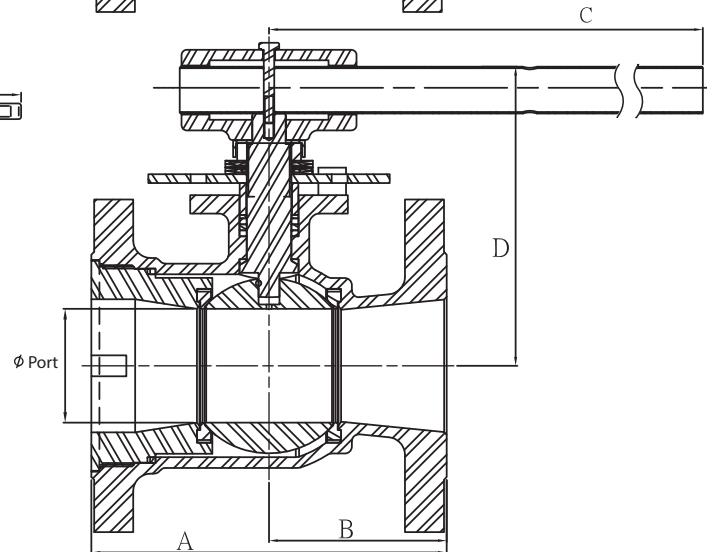
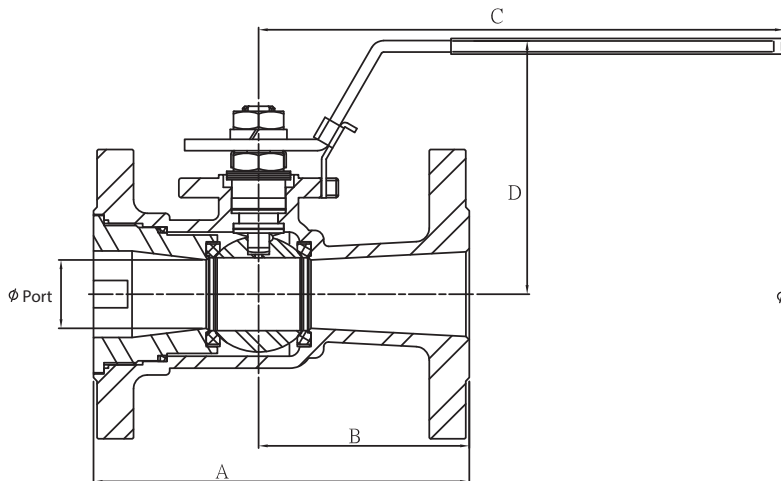
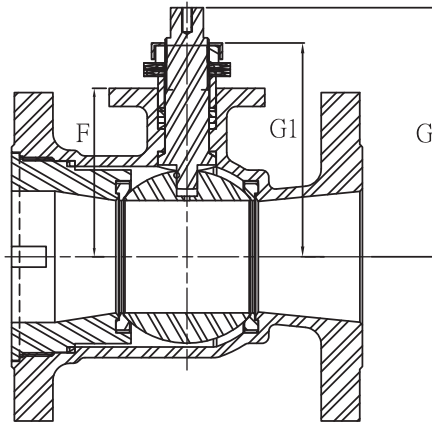
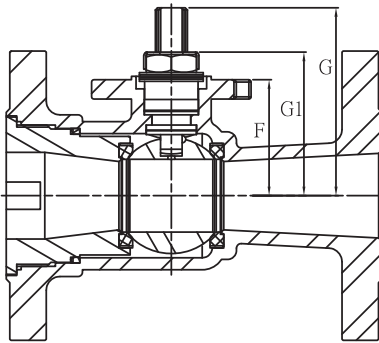
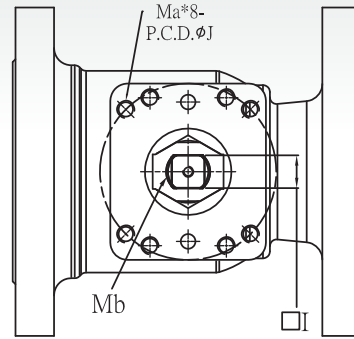
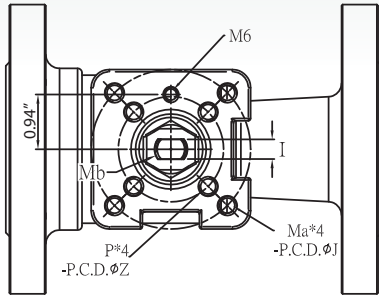
No.	Part Name	Material	Qty
1	Body	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M	1
2	Thrust Bearing	PTFE	1
3	Stem	316 Stainless Steel	1
3A	Anti-Static Devic	Located on Stem, not shown	
	Ball	300 Series Stainless Steel	2
	Spring	Hard Drawn Stainless	2
4	Stem Packing	Graphite	1
5	Packing 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	Graphite	1
15	End Cap	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M	1
16	Stop Pin	300 Series Stainless Steel	1

3" - 4"

No.	Part Name	Material	Qty
1	Body	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M	1
2	Thrust Bearing	PTFE	1
3	Stem	316 Stainless Steel	1
3A	Anti-Static Devic	Located on Stem, not shown	
	Ball	300 Series Stainless Steel	2
	Spring	Hard Drawn Stainless	2
4	Stem Packing	Graphite	1
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	Graphite	1
17	End Cap	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M	1
18	Stop Pin	300 Series Stainless Steel	1

FIRE SAFE API 607 4TH EDITION STANDARD PORT, UNI-BODY FLANGED BALL VALVES

Dimensions

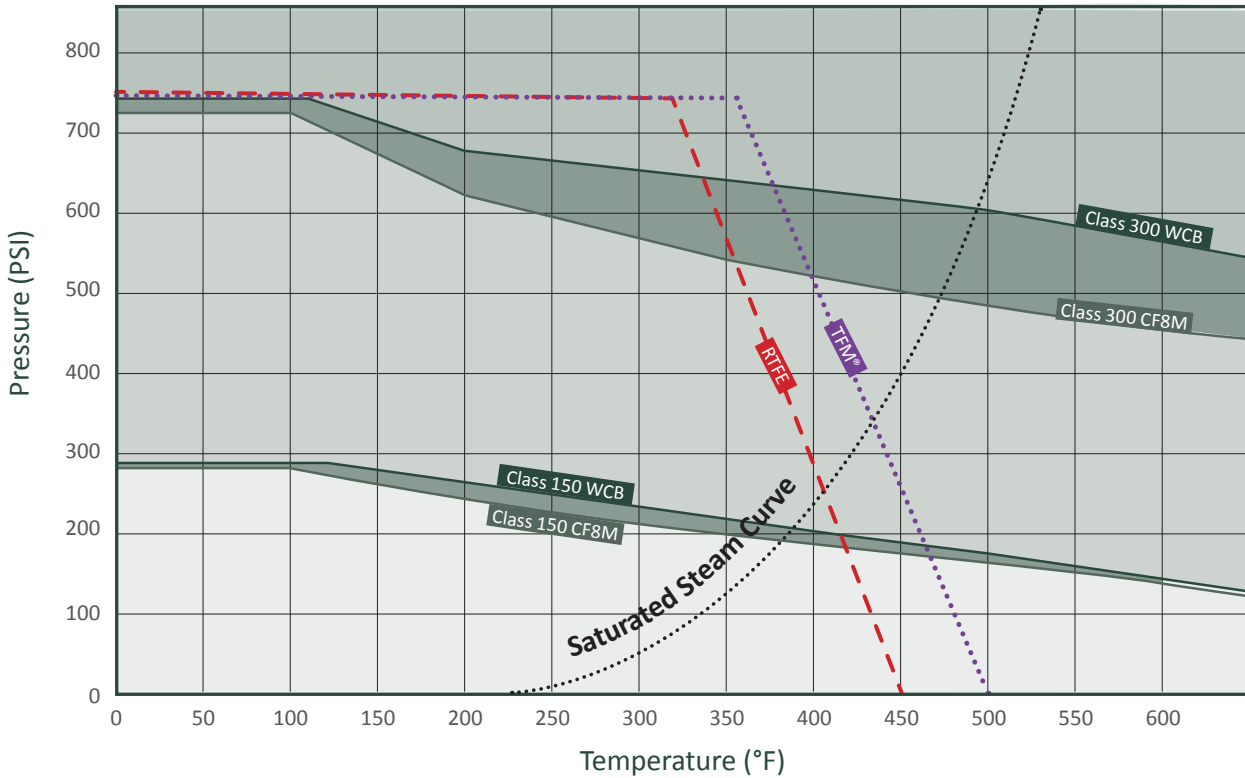


SIZE	PORT	CLASS				C	D	F	CLASS				I	J	Ma	CLASS				Mb
		150	300	150	300				150	300	150	300				150	300	150	300	
1½	1.22	6.50	7.48	3.64	4.23	8.98	4.21	2.00	3.25	3.27	2.50	2.52	0.343	F07 (2.76)	M8	M6	M6	F05 (1.97)	9/16"-18	
2	1.50	7.01	8.50	4.41	4.93	8.98	4.59	2.38	3.48	3.58	2.87	2.87	0.343	F07 (2.76)	M8	M6	M6	F05 (1.97)	9/16"-18	
2½	1.97	7.48	9.49	3.94	5.56	8.98	4.84	2.64	3.74	3.84	3.13	3.17	0.343	F07 (2.76)	M8	M6	M6	F05 (1.97)	9/16"-18	
3	2.56	7.99	11.10	4.00	6.78	13.74	6.81	3.84	5.67	5.64	5.12	5.12	0.748	F10 (4.02)	M10	-	M10	-	1"-14	
4	2.99	8.98	12.01	4.49	7.13	13.74	7.28	4.28	6.10	6.15	5.51	5.61	0.748	F10 (4.02)	M10	-	M10	-	1"-14	

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

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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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Technical Information

Size	C _v	Weight (lbs.)
1-1/2	82	16
2	120	17
2-1/2	240	26
3	350	34
4	720	56

Applicable Standards

Wall Thickness	ASME B16.34
Face to Face Dimensions	ASME B16.10
Flange Dimensions	ASME B16.5
NACE	MR-0175
Fire Safe	API 607 4th Edt.
Pressure Test	ASME B16.34, API 598 (optional)
Basic Design	ASME B16.34

How to Order

Size	Series	Class		Body		Seat		Options
1-1/2	FS54	11	150	4	Carbon Steel	M	TFM™	OH Oval Handle, Non-locking up to 2"
2		33	300	6	Stainless Steel	R	RTFE	L Lockable Stem Extension, 316SS
2-1/2								
3								
4								

4" - FS54 - 33 - 4 - R - = 4" FS54334-R

Example: 4" FS54334-R,

4" Fire Safe Series 54 Standard Port, Uni-Body Flanged, Raised Face, Class 300 Ball Valve, Cast Carbon Steel Body with 316 Stainless Ball and Stem, RTFE Seats, Graphite Body Seal and Stem Packing.