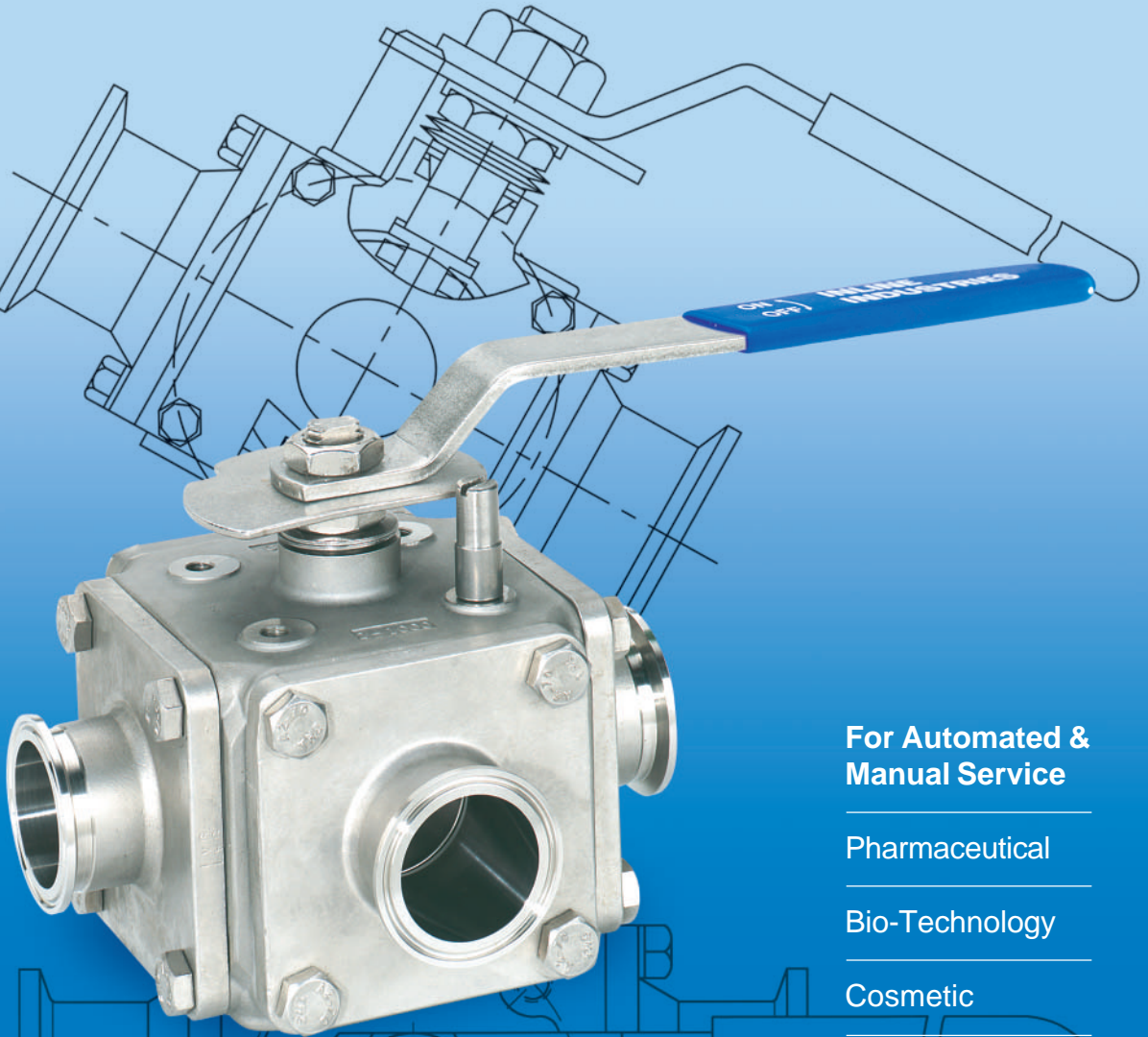


# 507F Multi-Port Sanitary Ball Valve

Full Port  
ISO 5211 Mounting Pad



For Automated &  
Manual Service

Pharmaceutical

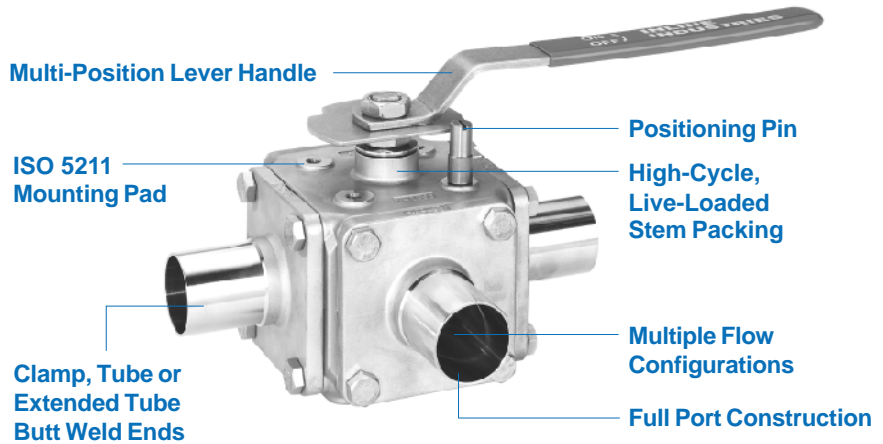
Bio-Technology

Cosmetic

Food & Beverage

# The 507F Series 3/4/5-Way Sanitary Ball Valve

The 507F is a true multi-way ball valve with balanced seat construction. Porting and shut-off capabilities can reduce the number of process valves required in a piping system. This full port valve is available in a number of flow configurations with both clamp and tube butt weld end connections.



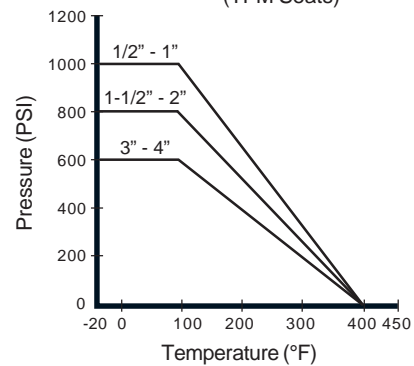
## Standard Features and Benefits

- 1 **Balanced 4-Seat or 5-Seat Construction**  
Unlike two-seated diverter valves and other multi-port valves on the market, the 507F series has four seats (five seats in bottom entry valves) for positive shut-off in the closed position. This true multi-port function can reduce the number of valves required in a process system, and provides engineers greater design flexibility
- 1 **Trunnion Mounted Ball (1 1/2" - 4")**  
Lateral forces in a 3-way valve can cause unwanted seat distortion. Stem/ball isolation prevents side loading and wear of downstream seats improving performance and service life
- 1 **ISO 5211 Mounting Pad**
- 1 **High-Cycle, Live-Loaded Stem Packing**  
Dynamic loading on stem packing ensures a tight seal through varying pressure and temperature conditions, extending service life and reducing maintenance costs
- 1 **Blow-Out-Proof Stem**  
Stem is bottom loaded to prevent removal when valve is in service
- 1 **Full Port Design**  
Full port construction improves flow characteristics for greater process efficiencies
- 1 **25 Ra Internal Surface Finish**

## Options

- 1 4- or 5-way construction with multiple flow patterns
- 1 Clamp, tube butt weld, extended tube butt weld, or compression end connections
- 1 Finer internal surface finishes available

507F Pressure / Temperature Chart (TFM Seats)



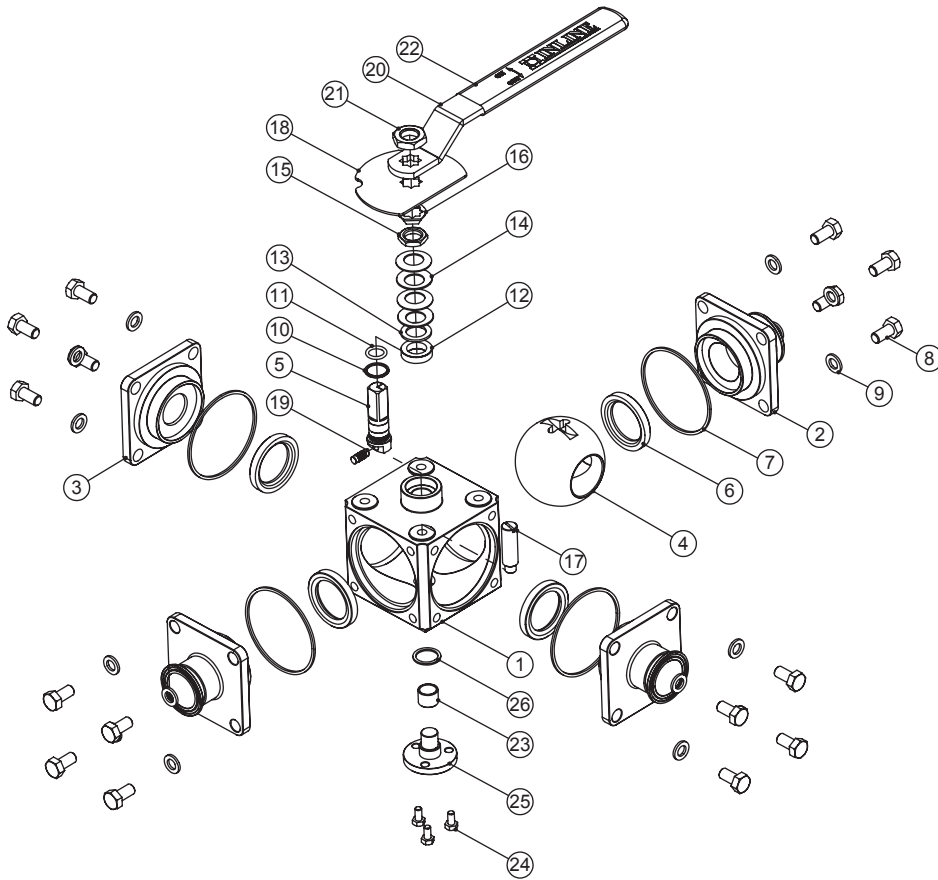
## Operating Conditions

- 1 Temperature range (TFM):  
-20°F ~ 400°F
- 1 Maximum pressure (TFM):  
1000 PSI (1/2" - 1"),  
800 PSI (1-1/2" - 2")  
600 PSI (3" - 4")

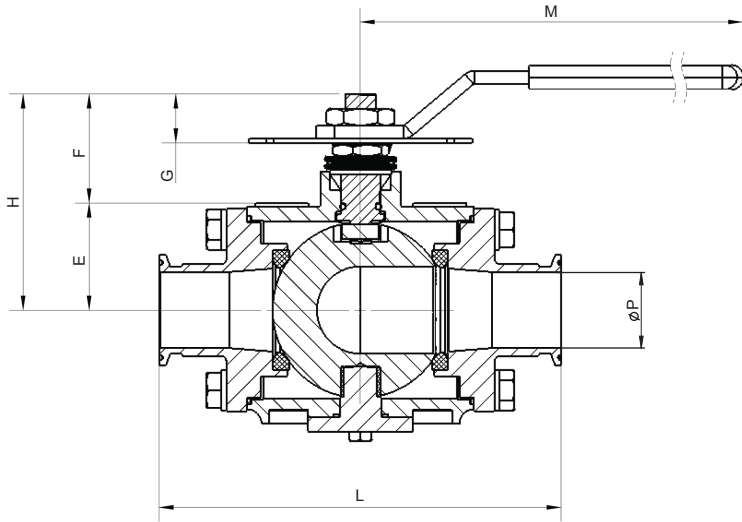
## Specifications

- 1 All valves shell and seat tested to ANSI/ASME B16.34 and API 598
- 1 All materials comply with applicable ASTM material specifications
- 1 All soft wetted parts comply with FDA CFR Title 21 Part 177

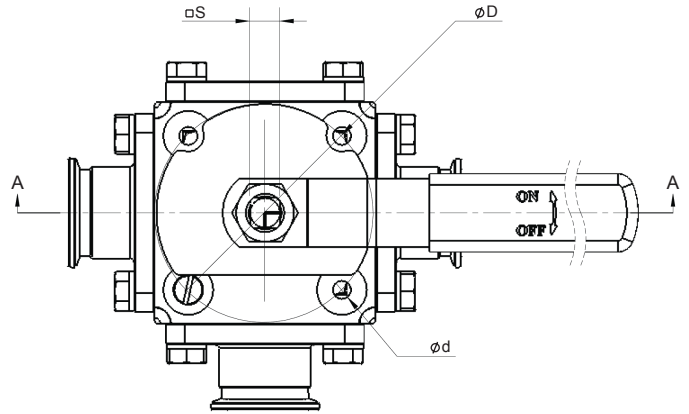
1/2" ~ 2"



Valve Components			
#	Part Name	Material	Qty.
1	Body	A351 Gr. CF8M	1
2	End Cap	A351 Gr. CF8M	3
3	Blind End Cap	A351 Gr. CF8M	1
4	Ball	316SS	1
5	Stem	316SS	1
6	Seat	TFM	4
7	Body Seal	TFM	4
8	Body Bolt	304SS	16
9	Body Bolt Washer	304SS	16
10	Thrust Washer	PEEK	1
11	Stem O-Ring	Viton 90	1
12	Stem Packing Set	TFM	1
13	Packing Gland	304SS	1
14	Belleville Washer	301SS	4
15	Gland Nut	304SS	1
16	Gland Nut Lock Washer	304SS	1
17	Stop Pin	304SS	1
18	Stop Plate	304SS	1
19	Stem Set Pin	316SS	1
20	Handle	304SS	1
21	Handle Nut	304SS	1
22	Handle Cover	Vinyl	1
23	Trunnion Bearing	TFM	1
24	Trunnion Bolt	304SS	3
25	Trunnion	316SS	1
26	Trunnion Gasket	TFM	1

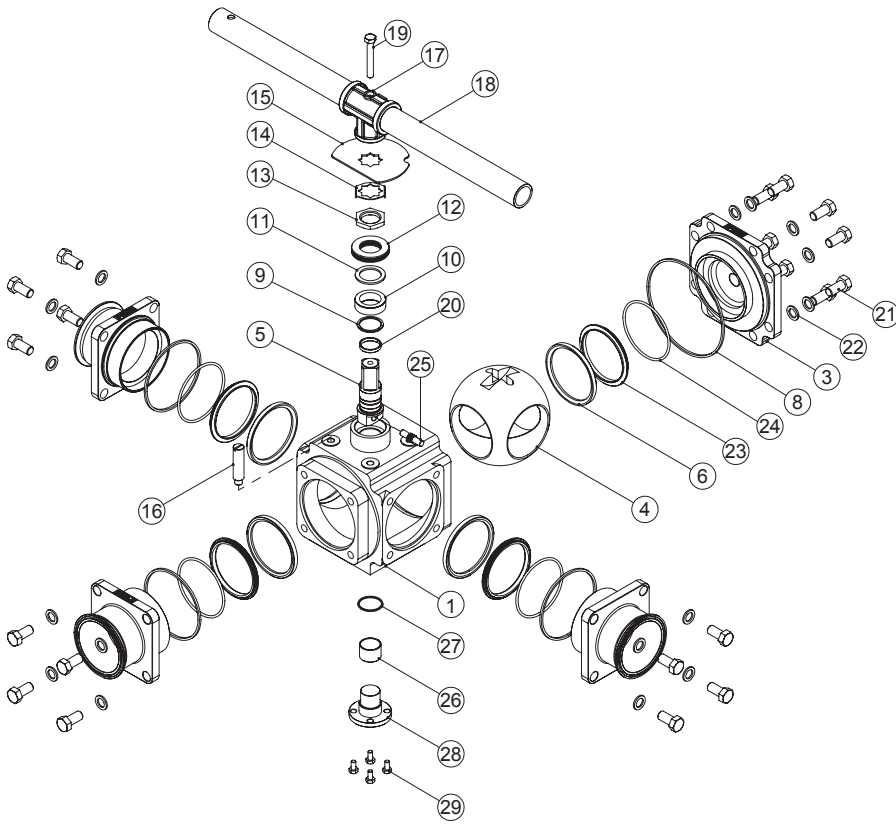


SECTION A-A

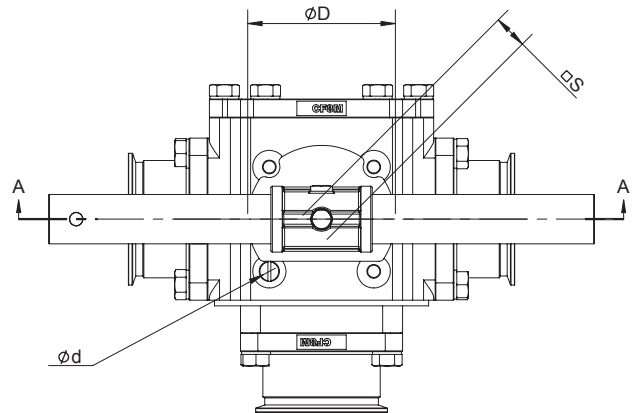
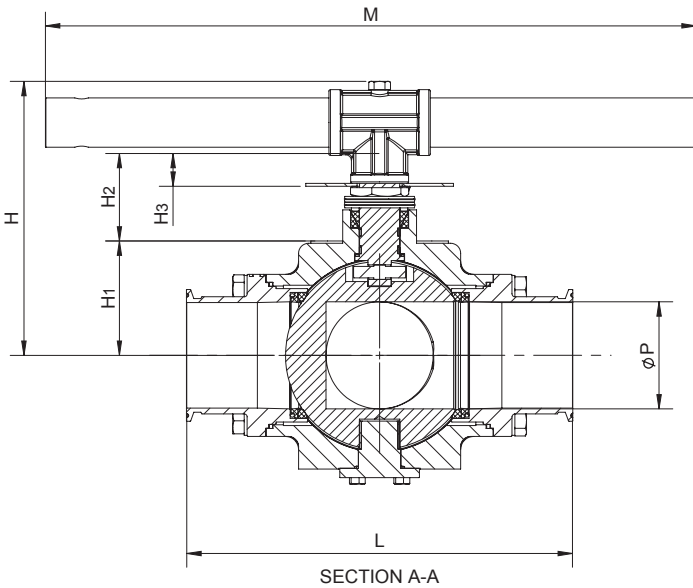


Dimensions (Inches)													
Size	L		M	P	H	E	F	G	D	d	S	ISO 5211 Pattern	Weight (lbs)
	CL / BW	EW											
1/2	4.00	5.89	5.8	0.43	2.4	0.93	0.91	0.44	1.97	0.20	0.35	F05	3.1
3/4	5.06	7.14	6.6	0.59	2.7	1.12	0.93	0.50	1.97	0.27	0.35	F05	5.1
1	6.06	9.00	7.7	0.98	3.6	1.42	1.46	0.65	2.76	0.27	0.43	F07	9.1
1 1/2	7.24	9.99	9.9	1.57	4.5	1.91	1.98	0.86	4.02	0.33	0.55	F10	20.9
2	8.50	11.00	12.3	1.97	5.3	2.34	2.14	0.84	4.02	0.33	0.67	F10	35.2

3" ~ 4"



Valve Components			
#	Part Name	Material	Qty.
1	Body	A351 Gr. CF8M	1
2	End Cap	A351 Gr. CF8M	3
3	Blind End Cap	A351 Gr. CF8M	1
4	Ball	316SS	1
5	Stem	316SS	1
6	Seat	TFM	4
7	Body Seal (small)	TFM	3
8	Body Seal (large)	TFM	1
9	Thrust Washer	PEEK	1
10	Stem Packing Set	TFM	1
11	Packing Gland	304SS	1
12	Belleville Washer	301SS	4
13	Gland Nut	304SS	1
14	Gland Nut Lock Washer	304SS	1
15	Stop Plate	304SS	1
16	Stop Pin	304SS	1
17	Handle Drive Coupling	304SS	1
18	Pipe Handle	304SS	1
19	Handle Bolt	304SS	1
20	Stem Bearing	PEEK	2
21	Body Bolt	304SS	20
22	Body Bolt Washer	304SS	20
23	Seat Housing	316SS	4
24	Seat Housing O-Ring	Viton 90	4
25	Stem Set Pin	316SS	1
26	Trunnion Bearing	PEEK	1
27	Trunnion Seal	PEEK	1
28	Trunnion	316SS	1
29	Trunnion Bolt	304SS	4



Dimensions (Inches)													
Size	L		M	P	H	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	D	d	S	ISO 5211 Pattern	Weight (lbs)
	CL / BW	EW											
3	10.51	12.00	22.00	2.91	7.45	3.11	2.38	0.89	4.02	0.34	0.87	F10	52.17
4	12.48	14.00	32.00	3.78	8.20	3.86	2.34	0.84	4.02	0.34	0.87	F10	90.23

# Flow Pattern Options

3 Way - Side Entry, T-Port (5T)			3 Way - Side Entry, L-Port (5L)						
No.	Turn	Positions	Diagram		No.	Turn	Positions	Diagram	
01	90°	A & B			01	90°	A & B		
02	90°	B & C							
03	90°	C & D							
04	90°	D & A							
12	180°	A & B & C							
23	180°	B & C & D							
34	180°	C & D & A							
41	180°	D & A & B							
00	360°	All							

3 Way - Bottom Entry, 180° L-Port (3A)			3 Way - Bottom Entry, 90° Angle Port (4A)						
No.	Turn	Positions	Diagram		No.	Turn	Positions	Diagram	
01	90°	A & B			01	90°	A & B		
02	90°	B & C							
12	180°	A & B & C							

4 Way - Bottom Entry, L-Port (6A)			4 Way - Side Entry, Double L-Port (7D)						
No.	Turn	Positions	Diagram		No.	Turn	Positions	Diagram	
01	90°	A & B			01	90°	A & B		
02	90°	B & C							
12	180°	A & B & C							
00	360°	All							

4 Way - Bottom Entry, Double L-Port (6Y)			5 Way - Bottom Entry, Angle Port (8A)						
No.	Turn	Positions	Diagram		No.	Turn	Positions	Diagram	
01	90°	A & B			01	90°	A & B		

3 Way - Bottom Entry, 180° T-Port (3B)			3 Way - Bottom Entry, 180° Double L-Port (3Y)						
No.	Turn	Positions	Diagram		No.	Turn	Positions	Diagram	
01	90°	A & B			01	90°	A & B		



Direct Mount Products



Automation Systems

## 507F Ordering Information

Example: 2" Multi-Port Ball Valve, Full Port, 316SS Body and Trim, TFM Seats and TFM Seals, Clamp Ends, 3-Way Side Entry, L-Port, 25 Ra Max Mech. Polish, Flow Pattern 01\*

Valve Series	Valve Size	Body Material	End Material	Ball Material	Stem Material	Seat	Seal	End Connections <sup>1</sup>	Port Config.	Ball Config.	Surface Finish	Flow Pattern*
507F - Full Port	5 1/2" 7 3/4" A 1" C 1 1/2" D 2" F 3" G <sup>†</sup> 4"	6 - A351 Gr. CF8M (316)	6 - A351 Gr. CF8M (316)	6 - A351 Gr. CF8M (316)	6 - A351 Gr. CF8M (316)	M - TFM T - PTFE	M - TFM T - PTFE	C - Clamp O - Tube Butt Weld E - Extended Tube Butt Weld P - Compression Ends**	3 - 3 Way 180° Bottom Entry 4 - 3 Way 90° Bottom Entry 5 - 3 Way Side Entry 6 - 4 Way Bottom Entry 7 - 4 Way Side Entry 8 - 5 Way Bottom Entry	A - Bottom Entry L - Port Y - Bottom Entry Double L - Port D - Side Entry Double T - Side Entry T - Port B - Bottom Entry T - Port	None - 25 Ra Max, Mech. Polish SFV1 - 20 Ra Max, Mech. Polish SFV4 - 15 Ra Max, Electropolish SFV5 - 20 Ra Max, Electropolish	99 - Adjust in Field 01 (Std.) 00 02 03 04 12 23 34 41

<sup>†</sup> Not available in 4-way Side-Entry Double L-port (7D)

Due to continuous product development, information may change without notice.

\*\* 1/4" to 1"

<sup>1</sup> Extended Tube and Butt Weld ends are A351 Gr. CF3M (316L)

\* See Flow Pattern Options.

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