

SPECIFICATIONS

FIGURE 233A

STAINLESS STEEL BALL VALVES



3-WAY DIVERTER STANDARD PORT 1000 CWP

FEATURES

- 1000 PSI CWP non-shock
- 150 PSI WSP
- Threaded NPT ends
- Standard port
- Blowout-proof stem
- Live loaded packing
- Anti-static design
- Investment cast body
- Four-seat design
- RTFE seats
- Stainless steel handle
- Locking lever
- Direct mounting pad
- Vacuum rated to 26.967"Hg (75 Torr)*
- Manufactured silicone-free
- Replacement locking handle kits available (1/2"-2")



PRODUCT SPECIFICATIONS

Standards

- Design: MSS SP-110
- End connections: ASME B1.20.1
- Seat/Shell test: MSS SP-110
- Mounting pad: ISO 5211
- Corrosion resistance: NACE MR0103 and MR0175
- Fugitive emissions: ISO 15848-1 and TA-Luft

* Vacuum measurements are often made in inches of mercury below atmospheric pressure. The values calculated here assume standard atmospheric pressure of 29.92 inches of mercury.

ACCESSORIES/OPTIONS



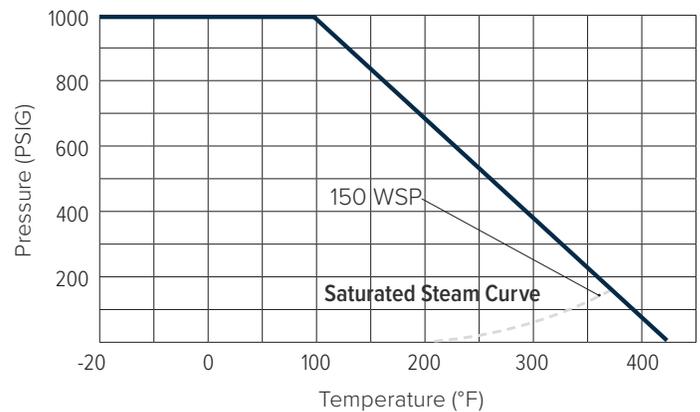
Replacement Locking Handle Kits (1/2"-2")

FIGURE NUMBER MATRIX

FNW 233A	
SIZE CODE (IN.)	
1/2 = D	1-1/4 = H
3/4 = F	1-1/2 = J
1 = G	2 = K

KIT CODES

FNW 233A		
KIT TYPE	KIT SIZE (IN.)	
Locking Handle = LHK	1/2 = D	1-1-1/4 = GH
	3/4 = F	1-1/2-2 = JK



SPECIFICATIONS

FIGURE 233A

STAINLESS STEEL BALL VALVES



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REPAIR KITS

FNW 233ARK	
SIZE CODE (IN.)	
1/2 = D	1-1/4 = H
3/4 = F	1-1/2 = J
1 = G	2 = K

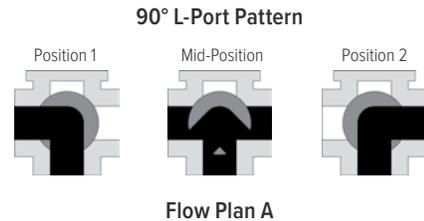
CV & WEIGHTS

Size (in.)	CV	Wt (lbs)
1/4	10	0.15
3/8	10	0.25
1/2	12	0.43
3/4	16	0.64
1	18	1.00
1-1/4	36	1.52
1-1/2	48	1.98
2	58	3.27

TORQUE (IN-LBS)

Size /ΔP	150 psig	300 psig	1000 psig
	10 Bar	20 Bar	63 Bar
1/2	57	57	57
3/4	69	69	69
1	114	126	126
1-1/4	150	173	218
1-1/2	218	254	299
2	334	368	437

Note: 30% safety factor is recommended when sizing actuator.



REFERENCE CHART

Size (in.)	Dimensions (in.)														
	ØD	L	H1	H	M	W	ØB1	ØB2	ØA1	ØA2	F	P	ISO	K(UNF)	B
1/2	0.43	3.11	1.65	2.76	0.35	5.79	1.65	1.42	0.24	0.24	1.56	0.35	F03/F04	7/16-20	1.06
3/4	0.59	3.46	1.93	3.03	0.35	5.79	1.97	1.42	0.28	0.24	1.73	0.35	F03/F05	7/16-20	1.34
1	0.79	4.25	2.34	3.43	0.43	6.95	1.97	1.65	0.28	0.24	2.13	0.43	F04/F05	9/16-18	1.61
1-1/4	0.98	4.88	2.48	3.66	0.43	6.95	2.76	1.65	0.35	0.24	2.44	0.43	F04/F07	9/16-18	1.97
1-1/2	1.26	5.31	2.89	4.06	0.55	8.46	2.76	1.97	0.35	0.28	2.66	0.55	F05/F07	3/4-16	2.20
2	1.57	6.46	3.26	4.45	0.55	8.46	2.76	1.97	0.35	0.28	3.23	0.55	F05/F07	3/4-16	2.76

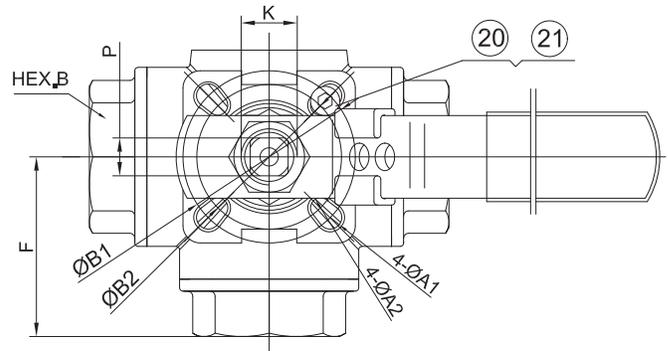
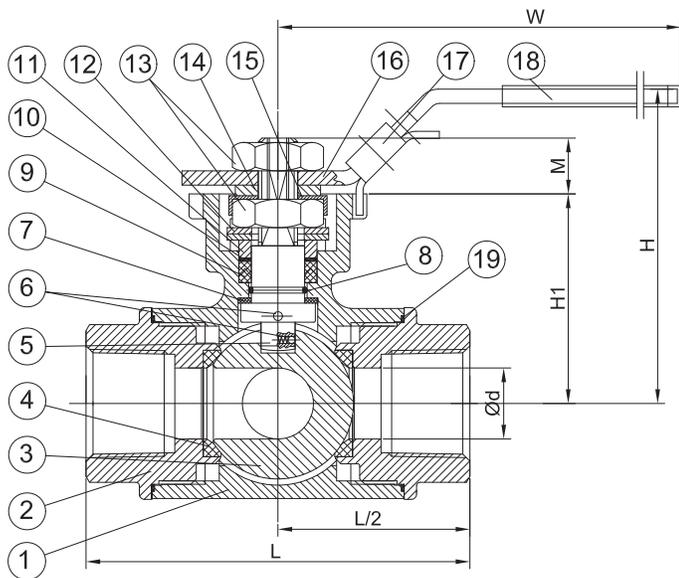
FIGURE 233A

STAINLESS STEEL BALL VALVES



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PARTS DIAGRAM



PART MATERIALS & QUANTITY

Ref #	Description	Material	Qty
1	Body	ASTM A351 Gr. CF8M Stainless	1
2	End Cap	ASTM A351 Gr. CF8M Stainless	3
3	Ball	316SS Stainless	1
4	Seat	RTFE	4
5	Stem	316SS Stainless	1
6	Anti-static Device	316SS Stainless	2
7	Thrust Washer	PTFE	1
8	O-Ring	FKM	1
9	V-Ring Packing	PTFE	1 set
10	Bushing	50% Stainless+50% PTFE	1

Ref #	Description	Material	Qty
11	Gland	316SS Stainless	1
12	Belleville Washer	301SS Stainless	2
13	Stem Nut	ASTM A194-8 Stainless	2
14	Handle Gland	304SS Stainless	1
15	Stop-Lock-Cap	304SS Stainless	1
16	Handle	304SS Stainless	1
17	Lock Device	304SS Stainless	1
18	Handle Sleeve	Vinyl Plastic	1
19	Body Gasket	PTFE	3
20	Stop Bolt	ASTM A193-B8 Stainless	1
21	Stop Nut	ASTM A194-8 Stainless	1