

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")



ACCESSORIES



Replacement Locking Handle Kits (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.

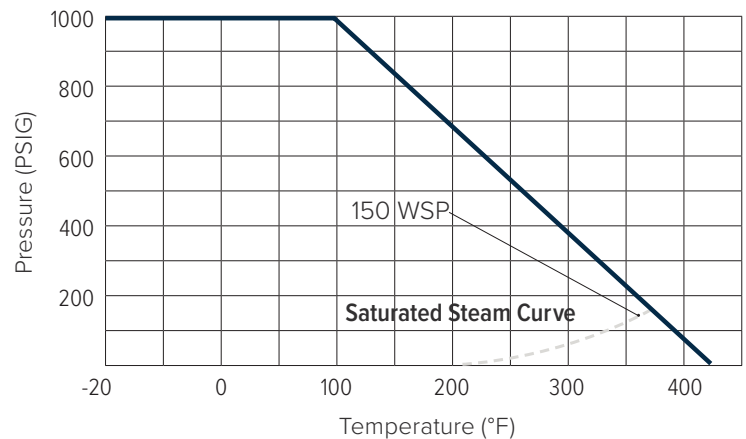


FIGURE NUMBER MATRIX

FNW 233A	
Size Code	
1/2" = D	1-1/4" = H
3/4" = F	1-1/2" = J
1" = G	2" = K

HANDLE KIT CODES (ORDER SEPARATELY)

FNW 233A	
Kit Type	Size Code
Locking Handle = LHK	1/2" = D
	3/4" = F
	1"-1-1/4" = GH
	1-1/2"-2" = JK

REPAIR KITS (ORDER SEPARATELY)

FNW 233ARK	
Size Code	
1/2" = D	1-1/4" = H
3/4" = F	1-1/2" = J
1" = G	2" = K

TORQUE (IN-LBS)

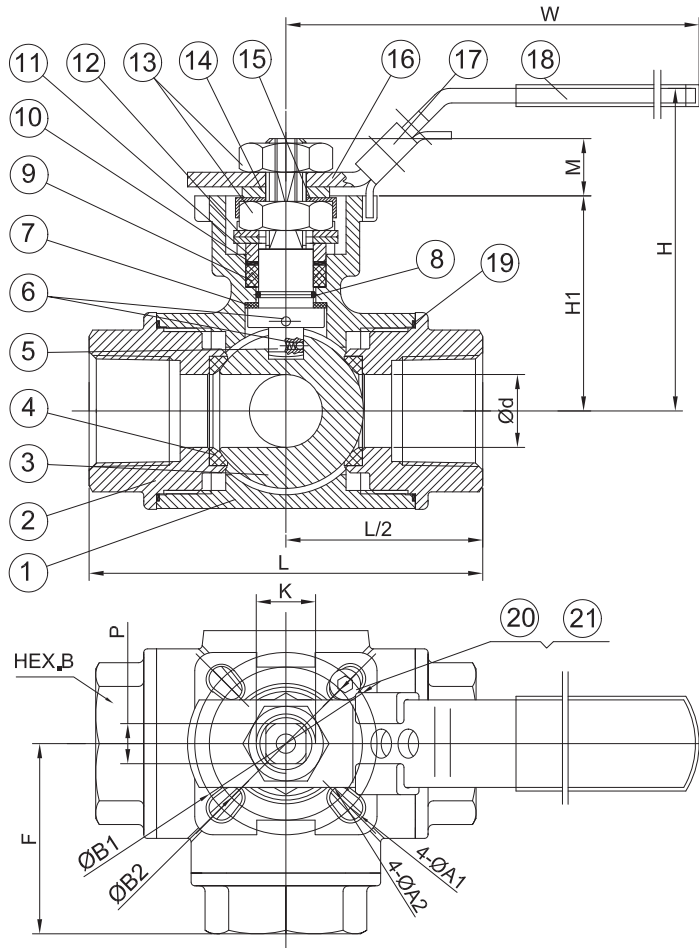
Size /ΔP	150 psig	300 psig	1000 psig
	10 Bar	20 Bar	63 Bar
1/2	57	57	57
3/4	69	69	69
1	114	126	126
1-1/4	150	173	218
1-1/2	218	254	299
2	334	368	437

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

FIGURE 233A STAINLESS STEEL BALL VALVES



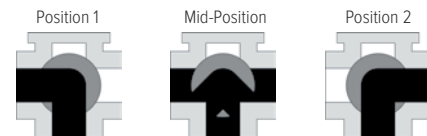
3-WAY DIVERTER STANDARD PORT 1000 CWP



STANDARD MATERIALS

Ref. No.	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
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

90° L-Port Pattern



Flow Plan A

DIMENSIONS (INCHES)

SIZE	Ød	L	H1	H	M	W	ØB1	ØB2	ØA1	ØA2	F	P	ISO 5211	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

CV & WEIGHT

Size	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