

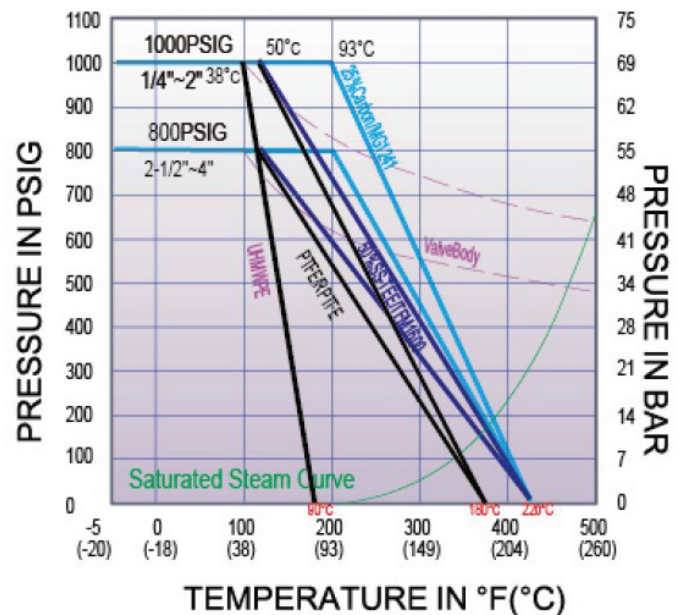


SERIES MV7B

**Three-Piece
1/2" to 4"
393/1000 PSI**



PRESSURE VS. TEMPERATURE CHART



DESIGN ADVANTAGES

- Three-piece swing out design allows for in-line repairs.
- Available in stainless steel.

END CONNECTIONS

- Sanitary clamp
- Tube O.P.

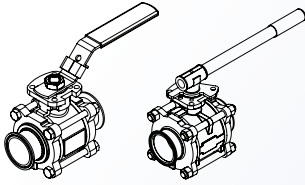
STANDARDS

- ASME B16.34
- ASME BPE-2024
- API 598
- ISO 5211

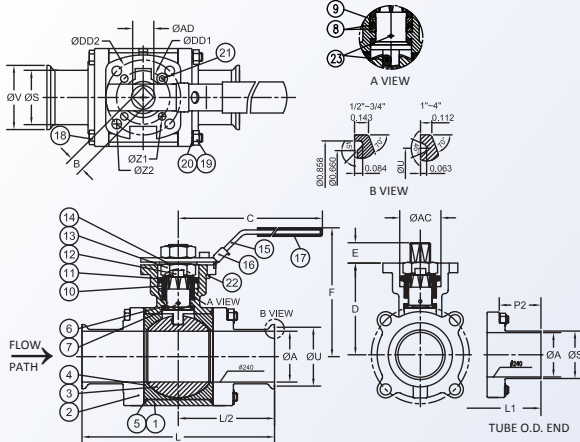
SPECIFICATIONS

CONSTRUCTION: Three-Piece Body
SIZE: 1/2" to 4" **STEM:** 316 SST
BODY: CF3M **SEAT:** PTFE
BALL: CF3M
PRESSURE RATING: 393/1000 PSI

MV7B MATERIALS LIST



BENT HANDLE SIZES 1/2" - 2"
PIPE HANDLE SIZES 2-1/2" - 4"



NO.	PART NAME	STANDARD MATERIALS	OPTIONAL MATERIALS	QTY.
1	Body	ASTM A351 Grade CF3M	ASTM B575 UNS N10276 (Hastelloy C-276), Electropolished SST, A890 Grade 5A CE3MN (Super Duplex)	1
2	Body End Cap (Sanitary Clamp)	ASTM A351 Grade CF3M	ASTM B575 UNS N10276 (Hastelloy C-276), Electropolished SST, A890 Grade 5A CE3MN (Super Duplex)	2
2	Body End Cap (Tube O.D.)	ASTM A351 Grade CF3M	ASTM B575 UNS N10276 (Hastelloy C-276), Electropolished SST, A890 Grade 5A CE3MN (Super Duplex)	2
3	Ball	ASTM A351 Grade CF3M		1
4	Stem		ASTM A276 316SST, Monel, A890 Grade 4A CD3MN (Duplex), A890 Grade 5A CE3MN (Super Duplex)	1
5	Stem Nut	AISI 304		2
6	Stem Packing Belleville Washer	AISI 301		2
7	Handle	AISI 304		1
8	Seat		RTFE, UHMEPE, TFM™-1600	2
9	Stem Packing Gland	PTFE	TFM™-1600	1
10	Stem Packing Washer	PTFE		1
11	Stem Seal	RTFE		1
12	Stem Lock Handle	AISI 304		1
13	Body Joint Gasket	PTFE	TFM™-1600	2
14	Body Bolt	AISI 304		*
15	Handle Stop Bolt	AISI 304		1
16	Handle Sleeve	VINYL		1
17	Body Bolt Nut	AISI 304		*
18	Stem Washer	AISI 304		1
19	Stem Packing	PTFE	TFM™-1600	1
20	Handle Lock	AISI 304		1
21	Anti-Static Device	ASTM A276 316SST		2
22	Handle Stop Bolt Nut	AISI 304		1
23	Body Bolt Washer	AISI 304		*
24	Stem O-Ring	FKM/Viton®		1
25	Handle Stop Bolt Washer	AISI 304		1

14* 1/2" to 2"; 4 Bolts, 2-1/2" to 3"; 4 Studs, 4"; 6 Studs
17* 1/2" to 2"; 4 Nuts, 2-1/2" to 3"; 8 Nuts, 4"; 12 Nuts
23* 1/2" to 2"; 4 Washers, 2-1/2" to 3"; 8 Washers, 4"; 12 Washers

DIMENSIONS (IN)

SIZE	A	B	C	D	E	F	H	K	L	M	T	Y	DD1	Z1	AC	AD	L1	L2	ISO 5211	LBS
1/4"	0.46	0.256	5.12	1.15	0.78	2.95	0.56	0.39	2.51	0.64	0.06	0.29	1.417	M5	0.98	0.374	2.47	5.43	F03	1.4
3/8"	0.5	0.256	5.12	1.15	0.78	2.95	0.69	0.39	2.51	0.69	0.06	0.29	1.417	M5	0.98	0.374	2.47	5.43	F03	1.4
1/2"	0.59	0.256	5.12	1.15	0.71	2.95	0.86	0.39	2.59	0.89	0.06	0.25	1.417	M5	0.98	0.374	2.59	5.43	F03	1.4
3/4"	0.79	0.256	5.12	1.28	0.8	3.03	1.07	0.51	3	1.08	0.06	0.32	1.417	M5	0.98	0.374	3	5.94	F03	1.7
1"	0.98	0.315	6.3	1.53	0.81	3.35	1.33	0.51	3.39	1.34	0.06	0.48	1.654	M5	1.18	0.433	3.39	6.46	F04	2.4
1-1/4"	1.26	0.315	6.3	1.59	0.98	3.62	1.69	0.51	4.05	1.68	0.06	0.45	1.654	M5	1.18	0.433	4.05	6.77	F04	3.7
1-1/2"	1.5	0.382	7.28	1.82	1.22	4.02	1.93	0.51	4.7	1.91	0.06	0.54	1.969	M6	1.38	0.551	4.7	6.97	F05	5.5
2"	1.97	0.382	7.28	2.15	1.22	4.33	2.41	0.63	5.17	2.38	0.06	0.54	1.969	M6	1.38	0.551	5.17	7.87	F05	8
2-1/2"	2.56	0.472	10.24	2.81	1.68	5.91	2.91	0.63	6.46	3	0.08	0.91	2.756	M8	2.17	0.748	6.46	8.86	F07	16.2
3"	3.15	0.472	10.24	3.33	1.55	6.38	3.54	0.63	7.19	3.54	0.08	0.74	4.016	M10	2.76	0.748	7.19	9.33	F10	23.5
4"	3.94	0.591	11.42	4.19	2.06	7.48	4.55	0.79	9.28	4.57	0.14	1.35	4.016	M10	2.76	0.945	9.3	10.94	F10	43.7



10080 Commerce Park Dr.
Cincinnati OH, 45246
513-499-3820
www.m-zcontrols.com

Distributed By:

Breakaway Torque (RPTFE)&Cv Value for MV7B Cv

SIZE	PORT	0	15	20	30	40	50	60	70	80	90	100
1/2"	15°	0	0	0	0	0	0.06	0.17	0.31	0.52	0.75	0
	30°	0	0	0	0.3	0	0.1	0.3	0.5	0.9	1.5	0
	60°	0	0	0	0	0	0.1	0.3	0.8	1.7	3.2	0
	90°	0	0	0	0	0	0.2	0.5	1.2	2.5	4.6	0
3/4"	15°	0	0	0	0	0.1	0.54	0.88	1.27	1.81	2.43	0
	30°	0	0	0	0.1	0.4	0.7	1.3	2	3	4.4	0
	60°	0	0	0	0.1	0.5	1.1	2	3.4	5.7	9.5	0
	90°	0	0	0	..2	0.6	1.4	2.8	5	9	15.3	0
1"	15°	0	0	0	0.2	0.5	2	2.9	4	5.3	7.1	0
	30°	0	0	0.2	0.6	1.2	2	3.1	4.5	6.5	8.3	0
	60°	0	0	0.2	0.8	1.6	3	5	8	12.3	19.7	0
	90°	0	0	0.2	0.9	2.1	3.9	7	11.9	19.6	31.1	0
1-1/2"	15°	0	0	0	0.6	1.6	4.3	6.3	8.6	11.5	15	0
	30°	0	0	0.8	2.3	4.2	6.7	9.8	14.4	20.3	29.5	0
	60°	0	0	0.9	2.6	4.9	8.3	13.6	22.4	34.2	50	0
	90°	0	0	0.9	2.9	6	10.5	18	31.2	50.4	73	0
2"	15°	0	0	0.7	2.5	5	11.2	15.7	21	27.3	35.4	0
	30°	0	0.7	2.8	5.7	9.11	13.8	20.3	28.4	38.6	54.2	0
	60°	0	0.7	3	6.4	11	17.5	28.2	43.9	65.4	104.6	0
	90°	0	0.7	3.4	7.4	13.4	22.9	38.4	62.3	98.2	157	0
2-1/2"	15°	0	0	0.1	2.4	5.5	14.6	20.6	28.7	37.8	49.6	0
	30°	0	0.1	2.6	6.5	11.7	18.4	27.9	39.6	54.3	60	0
	60°	0	0.1	2.8	7.7	14.6	24.5	40.7	64	97.1	139	0
	90°	0	0.2	3.3	9.1	18	32.3	55.4	92.4	149.9	265	0
3"	15°	0	0	0.7	3.7	8	14.2	21.1	30.1	41.1	53.8	69.6
	30°	0	0	0.7	3.9	8.6	15.4	24.3	36.3	50.7	70	96.8
	60°	0	0	0.7	4.6	11.3	21.1	35	56.4	89.4	134.2	207.1
	90°	0	0	0.8	5.7	14.4	27.7	48.1	82.5	136.1	214.7	363.6
4"	15°	0	0	3.8	9.2	16.2	25.3	35.9	49	65.1	83.1	104.1
	30°	0	0	4.3	11.3	20.9	34.9	50.2	72.9	98.6	129.6	177.1
	60°	0	0	4.9	14	27.2	46.3	73.2	112.1	170.5	251	375.3
	90°	0	0	5.7	17.4	35.1	62.1	101.1	164.2	255.8	399.9	610
	FL	0	0.96	0.95	0.94	0.93	0.92	0.9	0.88	0.86	0.82	0.75
	XT	0	0.98	0.77	0.71	0.67	0.64	0.63	0.62	0.55	0.43	0.4
	FD	0	0.6	0.65	0.71	0.79	0.89	0.92	0.93	0.95	0.97	0.98

HOW TO ORDER MV7B

1) Series	2) Body Material	3) Connections	4) Size	5) Seat Material	6) Ball Material	7) Stem Material	8) O-Ring	9) Operators
MV7	S - Stainless Steel T - HASTELLOY E - Electropolisher SST G - CE3MN	SA - Sanitary Clamp DA - Tube O.D. SD - Sanitary Clamp x Tube O.D. NE - No Ends	0050 - 1/2" 0075 - 3/4" 0100 - 1" 0150 - 1-1/2" 0200 - 2" 0250 - 2-1/2" 0300 - 3" 0400 - 4"	P - PTFE U - UHMWPE S - 50/50 STFE T - TFM™-1600 A - STFM F - PTFE Cavity Filler H - TFM Cavity Filler J - STFE Cavity Filler E - RTFE Cavity Filler	1 - Stainless Steel 15° V-Port 3 - Stainless Steel 30° V-Port 6 - Stainless Steel 60° V-Port 9 - Stainless Steel 90° V-Port	X - Stainless Steel R - MONEL D - DUPLEX SS G - SUPER DUPLEX SS	X - Not Required	B - Bare Stem