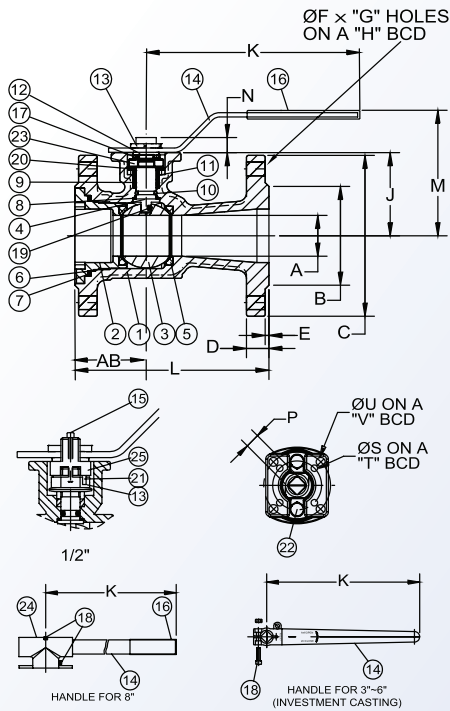




# MFV9D MATERIALS LIST



NO.	PART NAME	STANDARD MATERIALS	OPTIONAL MATERIALS	QTY.
1	Body	ASTM A351 Grade CF8M, ASTM A216 Grade WCB		1
2	Body End Cap (150# Flange)	ASTM A351 Grade CF8M, ASTM A216 Grade WCB		1
3	Ball	ASTM A351 Grade CF8M		1
4	Seat	PTFE		2
5	Body Joint Gasket	TFM™-1600		1
6	Stem	ASTM A276 316SS		1
7	Stem Seal	TFM™-1600		1
8	Stem Packing Washer	AISI 304		1
9	Stem Packing	PTFE		1
10	Stem Packing Gland	PTFE		1
11	Stem Packing Belleville Washer	AISI 301		2
12	Stem Lock Handle	AISI 304		1
13	Stem Nut	AISI 304		2
14	Stem Washer	AISI 304		1
15	Handle	AISI 304		1
16	Handle Sleeve	VINYL		1
17	Body Bolt	ASTM A193 Grade B8		*
18	Body Bolt Nut	AISI 304		*
19	Handle Stop Bolt	AISI 304		1
20	Handle Stop Bolt Nut	AISI 304		1
21	Handle Lock	AISI 304		1
22	Stem O-Ring	FKM		1
23	Handle Stop Bolt Washer			1
24	Anti-Static Device	AISI 316		2
25	Handle Adaptor Bolt	AISI 304		1
26	Handle Adaptor	AISI 304		1
27	Handle Shaft	AISI 304		1

17\* 1/2" to 2" 4 Nuts, 2-1/2" to 4": 8 Nuts, 6": 10 Nuts  
 18\* 1/2" to 2" 4 Bolts, 2-1/2" to 4": 8 Bolts, 6": 10 Bolts

## 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



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SIZE	PORT	0	15	20	30	40	50	60	70	80	90	100
1/2"	15°	0	0	0	0.1	0.2	0.3	0.5	0.8	1.1	1.5	1.9
	30°	0	0.1	0.1	0.2	0.3	0.5	0.8	1.1	1.6	2.2	2.6
	60°	0	0.1	0.1	0.3	0.5	0.9	1.4	2	3.3	4.4	6
	90°	0	0.1	0.2	0.4	0.6	0.9	1.5	2.2	3.8	5.4	6.9
3/4"	15°	0	0	0	0.1	0.3	0.6	1	1.5	2.1	2.8	3.6
	30°	0	0.1	0.2	0.5	0.7	1.1	1.8	2.4	3.3	4.5	5.4
	60°	0	0.1	0.2	0.7	1	1.7	2.8	4	6.5	9	12
	90°	0	0.2	0.4	0.8	1.2	2	3.1	4.6	8	11.3	14
1"	15°	0	0	0	0.2	0.7	1.4	2.2	3.2	4.5	6	8
	30°	0	0.1	0.3	0.8	1.3	2.3	3.5	5.1	8.5	9.8	10
	60°	0	0.2	0.4	1.1	1.8	3.4	5.3	7.9	12.3	15.3	21
	90°	0	0.2	0.6	1.8	3.4	5.1	8.1	11.4	16	21	29
1-1/4"	15°	0	0	0.03	0.6	1.4	2.4	3.6	5.2	7.1	9.4	12
	30°	0	0.2	0.4	1.1	2	3.7	5.5	8	10	13	15
	60°	0	0.2	0.6	1.8	3	5.5	9.5	12.8	19	26	39
	90°	0	0.3	0.8	2	5	8	14	19	28	39	55
1-1/2"	15°	0	0	0.3	1.2	2.4	3.9	5.7	7.9	10.7	14	18.1
	30°	0	0.3	0.6	1.6	3	5	7.5	11	14	17	20
	60°	0	0.4	0.8	2.5	4	8	13	19	27	40	52
	90°	0	0.4	0.9	3.5	7	13	20	31	42	63	78
2"	15°	0	0	0.8	2.4	4.4	7	10.2	14.1	18.8	24.4	30.9
	30°	0	0.4	1.2	3.8	6	10	15	23	31	43	60
	60°	0	0.4	1.5	4.6	9	16.5	27	39	55	83	110
	90°	0	0.5	2	6	12	22	35	45	70	105	135
2-1/2"	15°	0	0	0.8	3.9	7.1	11.2	16.2	22.3	29.8	38.3	48.1
	30°	0	0.4	1	4	8	12	18	28	37	62	75
	60°	0	0.4	1.5	5	10	21	34	53	75	103	150
	90°	0	0.5	1.7	7	14	28	48	70	106	160	218
3"	15°	0	0.4	1	3.9	7.5	13	20	31	41	58	72.2
	30°	0	0.5	1.2	4	8	14	23	33	46	65	82
	60°	0	0.5	2.5	6	14	25	40	65	91	128	165
	90°	0	0.7	3.5	8	18	35	60	90	135	205	310
4"	15°	0	0.5	1.5	5	14	25	41.5	56.4	74.7	94.5	118.9
	30°	0	0.6	2	6	15	29	48	71	100	130	159
	60°	0	0.7	3	11	25	40	59	90	141	212	356
	90°	0	1	3.5	16	40	75	125	190	265	442	670
6"	30°	0	0.9	3.2	14	33	60	103	155	220	280	350
	60°	0	2	5	22	60	110	190	285	416	586	800
	90°	0	3	8	35	90	160	280	425	650	970	1480
	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 MFV9D**

1) Series	2) Body Material	3) Connections	4) Size	5) Seat Material	6) Ball Material	7) Stem Material	8) O-Ring	9) Operators
MFV9	S - Stainless Steel C - Carbon Steel	F1 - 150# Flange	0050 - 1/2" 0075 - 3/4" 0100 - 1" 0150 - 1-1/2" 0200 - 2" 0250 - 2-1/2" 0300 - 3" 0400 - 4" 0600 - 6"	S - 50/50 STFE P - PTFE C - CTFE T - TFM™-1600 A - STFM	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	V - FKM/Viton®	B - Bare Stem