

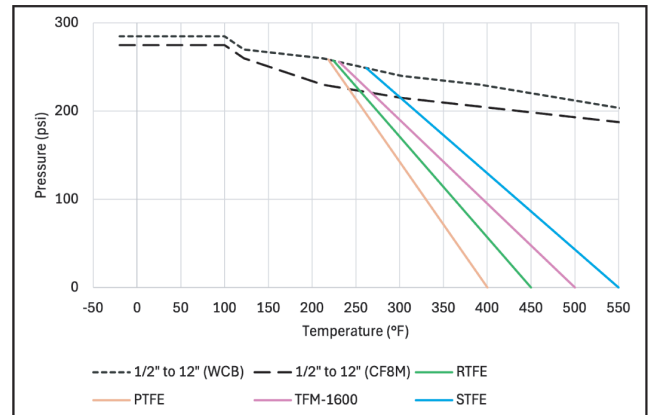


# SERIES MF9D

## Firesafe Direct Mount Split Body Ball Valves 1/2" to 12" Full Port ASME Class 150



### PRESSURE VS. TEMPERATURE SERIES MF9D 1/2" TO 12"



### DESIGN ADVANTAGES

- For general industrial and chemical applications.
- Split body design.
- Iso 5211 actuator mounting pad.
- Blow-out proof stem.
- Pyramidal stem packing.
- Available in stainless steel, carbon steel and alloys.
- Lockable manual handle.

### STANDARDS

**DESIGN & CONSTRUCTION:** ASME B16.34 | API 6D | DIN 3202 F1/F4  
ASME B16.10 | ISO 5211

**THREAD & CONNECTION INTERFACES:** EN 1092-1 | ASME B16.5

**TESTING & QUALIFICATION:** API 598 | MSS SP-55

**PERFORMANCE & ENV. COMPLIANCE:** NACE MR0175 / ISO 15156 | SIL 3  
TA-Luft | ATEX 2014/34/EU

**IDENTIFICATION & MARKING:** ISO 5209

**CERTIFICATION & DOCUMENTATION:** EN 10204-3.1  
CE 0343 PED 2014/68/EU Cat. II Mod. D1 | EN 10204-3.1

### END CONNECTIONS

- Flanged Ends

### SPECIFICATIONS

**CONSTRUCTION:** Split Body

**SIZE:** 1/2" to 12"

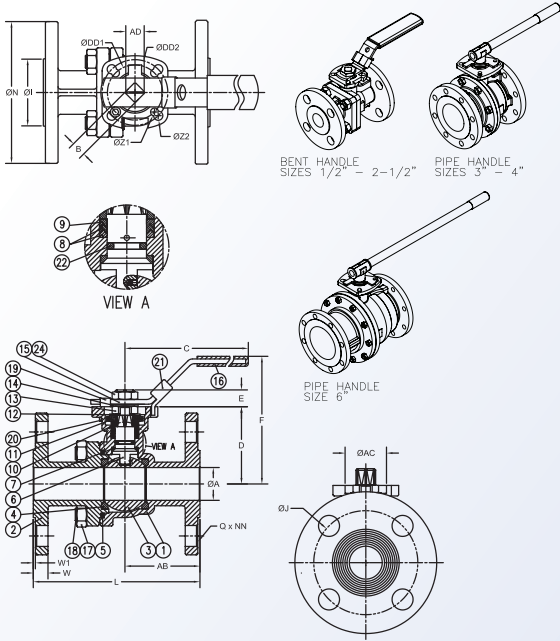
**BODY:** CF8M / WCB

**BALL:** CF8M

**STEM:** 316 S.S.

**SEAT:** TFM-1600

# MF9D MATERIALS LIST



NO.	COMPONENT	STANDARD MATERIALS	OPTIONAL MATERIALS	QTY.
1	Body	ASTM A351 Grade CF8M, ASTM A216 Grade WCB	ASTM A351 Grade CN7M (Alloy 20)	1
2	Body End Cap (150# Flange)	ASTM A351 Grade CF8M, ASTM A216 Grade WCB	ASTM A351 Grade CN7M (Alloy 20)	1
3	Ball	ASTM A351 Grade CF8M	ASTM A351 Grade CN7M (Alloy 20), ASTM B575 UNS N10276 (Hastelloy C-276), Monel, Hard Coated (HMF)	1
4	Seat	TFM™-1600	RTFE, PTFE, UHMWPE, STFE, CTFE, MG1241, STFM, PEEK	2
5	Body Joint Gasket	Graphite		1
6	Stem	ASTM A276 316SS		1
7	Stem Seal	TFM™-1600		1
8	Stem Packing Washer	25% Glass Fiber Filled PTFE		1
9	Stem Packing	Graphite		1
10	Stem Packing Gland	AISI 304		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	ASTM A194 Grade 8		*
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	AISI 304		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 Bolts, 2-1/2" to 4": 8 Bolts, 6": 10 Bolts  
 18\* 1/2" to 2" 4 Nuts, 2-1/2" to 4": 8 Nuts, 6": 10 Nuts

## DIMENSIONS (IN)

SIZE	A	B	C	D	E	F	I	J	L	N	Q	NN	W	W1	AB	AC	AD	DD1	DD2	Z1	Z2	ISO 5211	LBS
1/2"	0.59	0.433	6.5	1.84	0.39	3.3	1.38	2.38	4.26	3.5	0.63	4	0.44	0.06	1.84	1.26	0.55	1.654	1.969	0.26	0.28	F04/F05	4
3/4"	0.79	0.433	6.5	2.02	0.39	3.45	1.69	2.74	4.62	3.88	0.63	4	0.44	0.06	2.18	1.26	0.55	1.654	1.969	0.26	0.28	F04/F05	5
1"	0.98	0.433	6.5	2.31	0.41	3.81	2	3.12	5	4.25	0.63	4	0.44	0.06	2.21	1.26	0.55	1.654	1.969	0.26	0.28	F04/F05	7
1-1/2"	1.5	0.669	10.32	3.51	0.75	5.6	2.88	3.88	6.5	5	0.63	4	0.56	0.06	2.83	2.09	0.94	2.756	4.016	0.39	0.47	F07/F10	14.5
2"	1.97	0.669	10.32	3.8	0.75	5.78	3.62	4.75	7.02	6	0.75	4	0.63	0.06	3.38	2.09	0.94	2.756	4.016	0.39	0.47	F07/F10	20.5
2-1/2"	2.56	0.669	10.32	4.57	0.75	6.75	4.12	5.5	7.48	7	0.75	4	0.69	0.06	3.06	2.09	0.94	2.756	4.016	0.39	0.47	F07/F10	31
3"	3.15	0.866	14.37	5.22	0.91	8.05	5	6	8.01	7.5	0.75	4	0.75	0.06	4.01	2.55	1.18	4.016	4.921	0.47	0.55	F10/F12	41
4"	3.94	0.866	14.37	6.18	0.91	9	6.19	7.5	9	9	0.75	8	0.94	0.06	4.07	2.55	1.18	4.016	4.921	0.47	0.55	F10/F12	67.5
6"	5.91	1.063	29.53	8.28	1.12	12.5	8.5	9.5	15.5	11	0.87	8	1	0.06	7	2.97	1.41	4.921	5.511	0.55	0.71	F12/F14	145

## HOW TO ORDER

1) Series	2) Body Material	3) Connection	4) Size	5) Seats
M9D	S - Stainless Steel C - Carbon Steel A - Alloy 20	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" 0800 - 8" 1000 - 10" 1200 - 12"	T - TFM™-1600 P - PTFE U - UHMWPE S - 50/50 STFE C - CTFE R - RTFE M - MG1241 A - STFM F - PTFE Cavity Filler H - TFM Cavity Filler J - STFE Cavity Filler E - RTFE Cavity Filler Z - PEEK
6) Ball	7) Stem	8) O-Ring	9) Operator	
X - Stainless Steel A - Alloy 20 T - Hastelloy C-276 R - Monel H - Hard Coated (HMF) V - SST Vented	X - Stainless Steel A - Alloy 20 T - HASTELLOY C-276 R - MONEL B - 17-4 PH®	V - FKM/Viton®	X - Manual Handle G - Gear Operator L - Stem Extension S - Spring Return Handle B - Bare Stem	

### Breakaway Torque (TFM 1600) & Cv Value

SIZE	MAX	CV
1/2"	45	15
3/4"	73	40
1"	91	70
1-1/2"	230	250
2"	297	430
2-1/2"	535	700
3"	768	1100
4"	1250	2000
6"	3000	5400
8"	6500	9800
10"	13000	16400
12"	26000	23800

How to Order: {1}{2}{-3}{-4}{-5}{6}{7}{8}{-9}  
 Example: MF9DS-F1-0050-TXXV-X



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 513-499-3820  
 www.m-zcontrols.com

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# SERIES MF9D AUTOMATED ASSEMBLIES

## DOUBLE ACTING

### 60 PSI | STAINLESS STEEL

SIZE	Part Number
1/2"	MF9DS-F1-0050-TXXV/ZPD2DABA-XX
3/4"	MF9DS-F1-0075-TXXV/ZPD2DABA-XX
1"	MF9DS-F1-0100-TXXV/ZPD2DABA-XX
1-1/2"	MF9DS-F1-0150-TXXV/ZPD5DABA-XX
2"	MF9DS-F1-0200-TXXV/ZPD5DABA-XX
2-1/2"	MF9DS-F1-0250-TXXV/ZPD6DABA-XX
3"	MF9DS-F1-0300-TXXV/ZPD8DABX-XX
4"	MF9DS-F1-0400-TXXV/ZPD8DABX-XX
6"	MF9DS-F1-0600-TXXV/ZPDADABX-XX
8"	MF9DS-F1-0800-TXXV/ZPDDDABX-XX

### 80 PSI | STAINLESS STEEL

SIZE	Part Number
1/2"	MF9DS-F1-0050-TXXV/ZPD2DABA-XX
3/4"	MF9DS-F1-0075-TXXV/ZPD2DABA-XX
1"	MF9DS-F1-0100-TXXV/ZPD2DABA-XX
1-1/2"	MF9DS-F1-0150-TXXV/ZPD5DABA-XX
2"	MF9DS-F1-0200-TXXV/ZPD5DABA-XX
2-1/2"	MF9DS-F1-0250-TXXV/ZPD5DABA-XX
3"	MF9DS-F1-0300-TXXV/ZPD8DABX-XX
4"	MF9DS-F1-0400-TXXV/ZPD8DABX-XX
6"	MF9DS-F1-0600-TXXV/ZPDADABX-XX
8"	MF9DS-F1-0800-TXXV/ZPDCDABX-XXt

## SPRING RETURN

### 60 PSI | STAINLESS STEEL

SIZE	Part Number
1/2"	MF9DS-F1-0050-TXXV/ZPD2S4BA-XX
3/4"	MF9DS-F1-0075-TXXV/ZPD3S4BA-XX
1"	MF9DS-F1-0100-TXXV/ZPD4S4BA-XX
1-1/2"	MF9DS-F1-0150-TXXV/ZPD6S4BA-XX
2"	MF9DS-F1-0200-TXXV/ZPD7S4BX-XX
2-1/2"	MF9DS-F1-0250-TXXV/ZPD8S4BX-XX
3"	MF9DS-F1-0300-TXXV/ZPDAS4BX-XX

### 80 PSI | STAINLESS STEEL

SIZE	Part Number
1/2"	MF9DS-F1-0050-TXXV/ZPD2S5BA-XX
3/4"	MF9DS-F1-0075-TXXV/ZPD3S5BA-XX
1"	MF9DS-F1-0100-TXXV/ZPD3S5BA-XX
1-1/2"	MF9DS-F1-0150-TXXV/ZPD6S5BA-XX
2"	MF9DS-F1-0200-TXXV/ZPD6S5BA-XX
2-1/2"	MF9DS-F1-0250-TXXV/ZPD8S5BX-XX
3"	MF9DS-F1-0300-TXXV/ZPD9S5BX-XX
4"	MF9DS-F1-0400-TXXV/ZPDAS5BX-XX
6"	MF9DS-F1-0600-TXXV/ZPDDS5BX-XX



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MF9D/Q1-26

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# SERIES MF9D AUTOMATED ASSEMBLIES

## ELECTRIC

### ON/OFF | STAINLESS STEEL

SIZE	Part Number
1/2"	MF9DS-F1-0050-TXXV/ZE2XXX-XX
3/4"	MF9DS-F1-0075-TXXV/ZE2XXX-XX
1"	MF9DS-F1-0100-TXXV/ZE2XXX-XX
1-1/2"	MF9DS-F1-0150-TXXV/ZE3XXX-XX
2"	MF9DS-F1-0200-TXXV/ZE3XXX-XX
2-1/2"	MF9DS-F1-0250-TXXV/ZE3XXX-XX
3"	MF9DS-F1-0300-TXXV/ZE6XXX-XX
4"	MF9DS-F1-0400-TXXV/ZE6XXX-XX
6"	MF9DS-F1-0600-TXXV/ZE7XXX-XX
8"	MF9DS-F1-0800-TXXV/ZE9XXX-XX

### MODULATING | STAINLESS STEEL

SIZE	Part Number
1/2"	MF9DS-F1-0050-TXXV/ZE2XXX-MX
3/4"	MF9DS-F1-0075-TXXV/ZE2XXX-MX
1"	MF9DS-F1-0100-TXXV/ZE2XXX-MX
1-1/2"	MF9DS-F1-0150-TXXV/ZE3XXX-MX
2"	MF9DS-F1-0200-TXXV/ZE3XXX-MX
2-1/2"	MF9DS-F1-0250-TXXV/ZE3XXX-MX
3"	MF9DS-F1-0300-TXXV/ZE6XXX-MX
4"	MF9DS-F1-0400-TXXV/ZE6XXX-MX
6"	MF9DS-F1-0600-TXXV/ZE7XXX-MX
8"	MF9DS-F1-0800-TXXV/ZE9XXX-MX



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