

DIRECT MOUNT 4-SEAT 3-WAY/4-WAY FLANGE END BALL VALVE

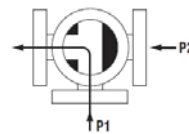
Model: Series M4F – SIL 3 Capable

- Body Material**
 ASTM CF8M, A216 WCB
 DIN1.4408, 1.0619
- Size Range**
 1/2" ~ 12" (DN15~DN300)
- Pressure Rating**
 ANSI Class 150, 300
 DIN PN16, PN40
 JIS10K, 20K
- End Connection**
 Flanged
- Inspection Standard**
 API 598, EN 12266-1
- Features**
 Investment casting body and end cap
 Self adjusting stem packing
 Anti blow-out proof stem
 L/T/X-port available
 Dual ISO 5211 direct-mounting pad
 Floating ball design for 4" (DN100) and under
 Trunnion ball design for 5" (DN125) and above
- Temperature Range**
 -4°F to 350°F (-20°C to 180°C) with PTFE seats



Application Limitation

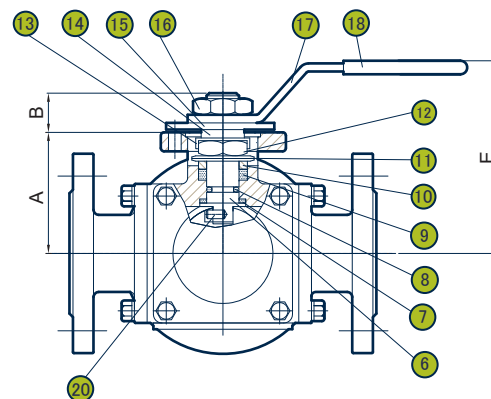
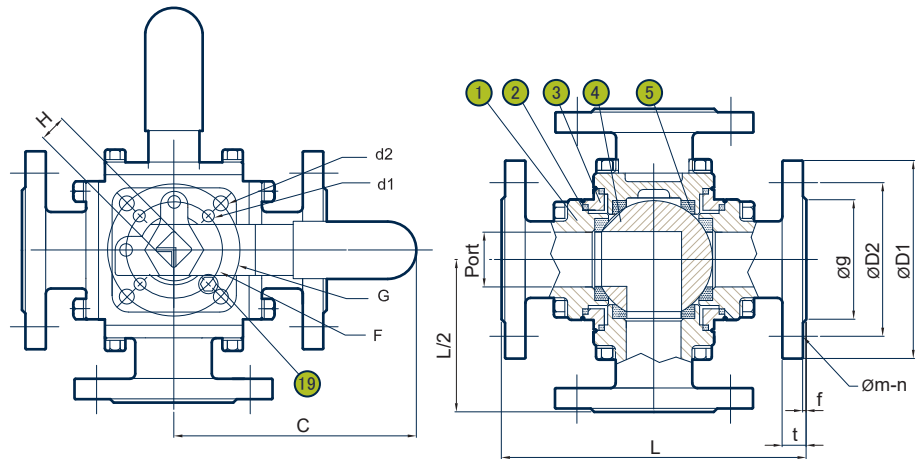
Referring to below diagram, there is a limitation to the differential pressure between flow P2 and P1. Where P2 > P1, leakage from P2 to P1 could occur. The same logic follows for other L/T flow patterns.



TURN PORT	0°	90°	180°	270°
L				
T				

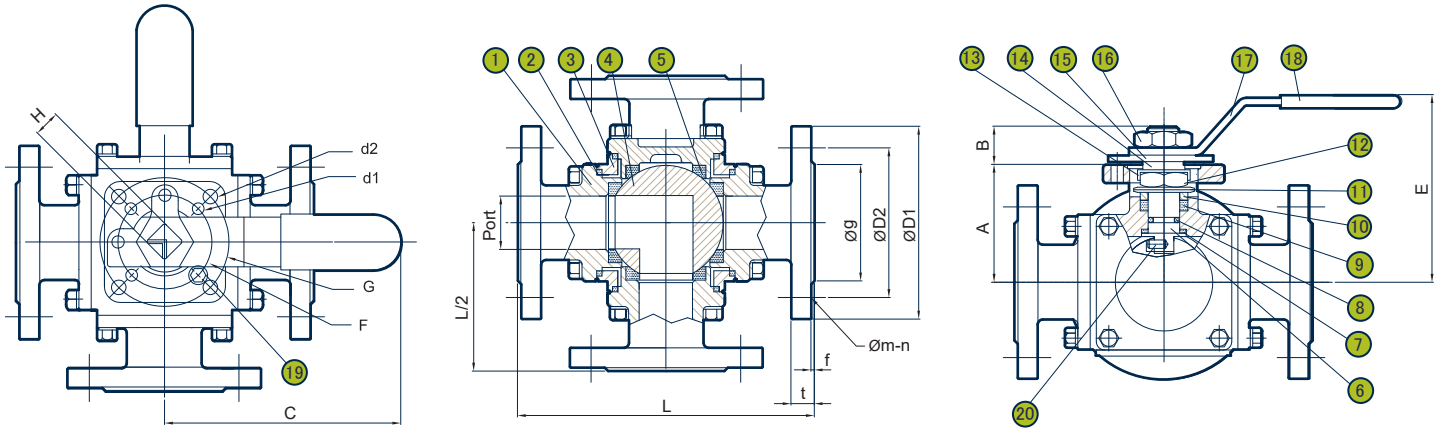
Materials List:

NO.	NAME OF PARTS	MATERIALS	OPTION
1	FLANGE END	A351 Gr. CF8M	A216 Gr. WCB
2	GASKET	PTFE	
3	BODY	A351 Gr. CF8M	A216 Gr. WCB
4	BALL	SS 316	
5	SEATS	PTFE	
6	STEM	SS 316	
7	THRUST WASHER	RPTFE	
8	O-RING	VITON	
9	STEM PACKING	PTFE	
10	GLAND	SS 304	
11	BELLEVILLE WASHER	SS 301	
12	STEM NUT	SS 304	
13	NUT STOP	SS 304	
14	SPACE WASHER	SS 304	
15	PLATER	SS 304	
16	HANDLE NUT	SS 304	
17	HANDLE	SS 304	
18	COVER	PLASTISOL	
19	STOP PIN	SS 304	
20	PIN	SS 316	



DIRECT MOUNT 4-SEAT 3-WAY/4-WAY FLANGE END BALL VALVE

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Dimensions (inch/mm):

SIZE inch DN	A	B	C	d1	d2	E	F	G	H	Port	L					
											150#	300#	PN16	PN40	J10K	J20K
1/2"	1.65	0.43	5.12	0.24	0.24	4.13	1.42	1.65	0.35	0.59	5.98	6.30	6.30	6.30	5.98	6.30
DN15	42	11	130	6.0	6.0	105	36	42	9	15	152	160	160	160	152	160
3/4"	1.91	0.55	6.50	0.24	0.28	4.33	1.65	1.97	0.43	0.79	6.57	6.97	6.97	6.97	6.57	6.97
DN20	48.5	14	165	6.0	7.1	110	42	50	11	20	167	177	177	177	167	177
1"	2.19	0.55	6.50	0.24	0.28	4.65	1.65	1.97	0.43	0.98	7.48	7.87	7.48	7.48	7.48	7.48
DN25	55.5	14	165	6.0	7.1	118	42	50	11	25	190	200	190	190	190	190
1-1/4"	2.48	0.67	8.07	0.28	0.36	4.65	1.97	2.76	0.55	1.26	8.19	8.19	8.19	8.19	8.19	8.19
DN32	63	17	205	7.1	9.2	118	50	70	14	32	208	208	208	208	208	208
1-1/2"	2.89	0.63	8.07	0.28	0.36	5.04	1.97	2.76	0.55	1.50	8.66	9.21	9.21	9.21	8.66	9.21
DN40	73.5	16	205	7.1	9.2	128	50	70	14	38	220	234	234	234	220	234
2"	3.64	0.83	12.80	0.36	0.45	5.51	2.76	4.02	0.67	1.97	9.96	10.75	10.75	10.75	9.96	10.75
DN50	92.5	21	325	9.2	11.4	140	70	102	17	50	253	273	273	273	253	273

Dimensions CLASS 150 (inch/mm):

SIZE inch DN	D1	D2	g	t	f	m	n	L-Port Weight lbs kg	T-Port Weight lbs kg
1/2"	3.50	2.38	1.38	0.44	0.06	0.63	0.16	7.63	7.58
DN15	89	60.5	35	11.2	1.6	16	4	3.46	3.44
3/4"	3.86	2.76	1.69	0.44	0.06	0.63	0.16	8.95	8.91
DN20	98	70	43	11.2	1.6	16	4	4.06	4.04
1"	4.25	3.13	2.01	0.44	0.06	0.63	0.16	13.23	13.10
DN25	108	79.5	51	11.2	1.6	16	4	6.00	5.94
1-1/4"	4.61	3.50	2.52	0.50	0.06	0.63	0.16	18.74	18.47
DN32	117	89	64	12.7	1.6	16	4	8.50	8.38
1-1/2"	5.00	3.88	2.87	0.56	0.06	0.63	0.16	27.51	27.29
DN40	127	98.5	73	14.3	1.6	16	4	12.48	12.38
2"	5.98	4.74	3.62	0.62	0.06	0.75	0.16	47.09	46.83
DN50	152	120.5	92	15.8	1.6	19	4	21.36	21.24

Dimensions CLASS 300 (inch/mm):

SIZE inch DN	D1	D2	g	t	f	m	n
1/2"	3.74	2.62	1.38	0.57	0.06	0.63	0.16
DN15	95	66.5	35	14.5	1.6	16	4
3/4"	4.61	3.25	1.69	0.63	0.06	0.75	0.16
DN20	117	82.5	43	16.0	1.6	19	4
1"	4.88	3.50	2.01	0.69	0.06	0.75	0.16
DN25	124	89	51	17.5	1.6	19	4
1-1/4"	5.28	3.88	2.52	0.77	0.06	0.75	0.16
DN32	134	98.5	64	19.5	1.6	19	4
1-1/2"	6.14	4.51	2.87	0.83	0.06	0.87	0.16
DN40	156	114.5	73	21	1.6	22	4
2"	6.50	5.00	3.62	0.89	0.06	0.75	0.31
DN50	165	127	92	22.5	1.6	19	8

Dimensions PN16 (mm):

SIZE	D1	D2	g	t	f	m	n
1/2"	95	65	45	14	2.0	14	4
3/4"	105	75	58	16	2.0	14	4
1"	115	85	68	16	2.0	14	4
1-1/4"	140	100	78	16	2.0	18	4
1-1/2"	150	110	88	16	3.0	18	4
2"	165	125	102	18	3.0	18	4

Dimensions PN40 (mm):

SIZE	D1	D2	g	t	f	m	n
1/2"	95	65	45	16	2.0	14	4
3/4"	105	75	58	18	2.0	14	4
1"	115	85	68	18	2.0	14	4
1-1/4"	140	100	78	18	2.0	18	4
1-1/2"	150	110	88	18	3.0	18	4
2"	165	125	102	20	3.0	18	4

Dimensions J10K (mm):

SIZE	D1	D2	g	t	f	m	n
1/2"	95	70	51	12	1.0	15	4
3/4"	100	75	56	14	1.0	15	4
1"	125	90	67	14	1.0	19	4
1-1/4"	135	100	76	16	2.0	19	4
1-1/2"	140	105	81	16	2.0	19	4
2"	155	120	96	16	2.0	19	4

Dimensions J20K (mm):

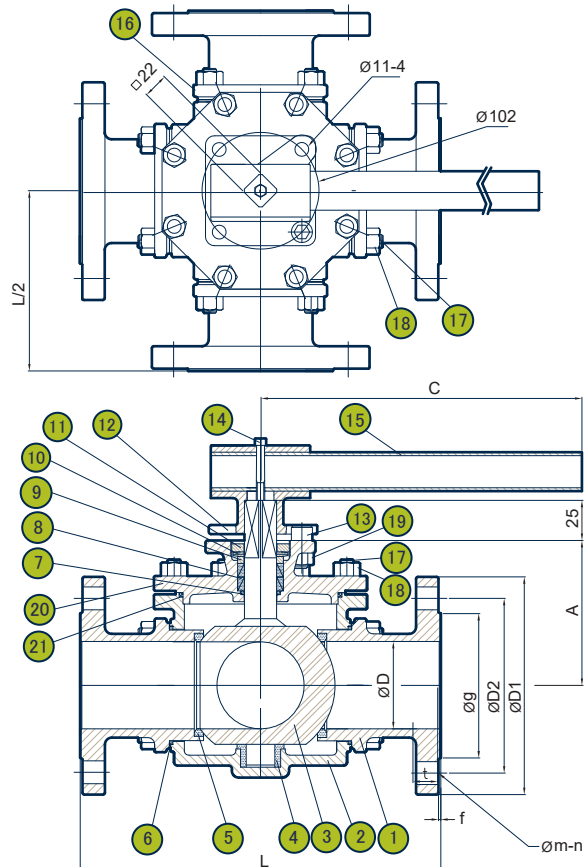
SIZE	D1	D2	g	t	f	m	n
1/2"	95	70	51	14	1.0	15	4
3/4"	100	75	56	16	1.0	15	4
1"	125	90	67	16	1.0	19	4
1-1/4"	135	100	76	18	2.0	19	4
1-1/2"	140	105	81	18	2.0	19	4
2"	155	120	96	18	2.0	19	8

DIRECT MOUNT 4-SEAT 3-WAY/4-WAY FLANGE END BALL VALVE

Model: Series M4F – SIL 3 Capable

Materials List:

NO.	NAME OF PARTS	MATERIALS
1	FLANGE END	A351 Gr. CF8M
2	BODY	A351 Gr. CF8M
3	BALL & STEM	SS 316
4	HOUSING	PTFE+STAINLESS
5	SEATS	PTFE
6	GASKET	PTFE
7	O-RING	VITON
8	STEM PACKING	PTFE
9	GLAND WASHER	SS 304
10	DISK WASHER	SS 301
11	GLAND	SS 304
12	HANDLE HEAD	A351 Gr. CF8
13	STOP PIN	SS 304
14	BOLT	SS 304
15	LEVER	CARBON STEEL
16	BLANK END	A351 Gr. CF8M
17	CONNECTION BOLTS	B8
18	BOLT NUTS	SS 304
19	STOP PIN NUT	SS 304
20	BONNET	A351 Gr. CF8M
21	BONNET GASKET	PTFE



Dimensions (inch/mm):

SIZE inch DN	A	C	D	L			
				PN16	PN40	CLASS 150	CLASS 300
2-1/2"	4.69	15.75	2.44	11.81	11.81	11.81	11.81
DN65	119	400	62	300	300	300	300
3"	5.39	19.69	2.99	12.01	12.99	12.01	12.99
DN80	137	500	76	305	330	305	330
4"	6.18	25.59	3.78	14.53	15.51	14.53	15.51
DN100	157	650	96	369	394	369	394

Dimensions CLASS 150 (inch/mm):

SIZE inch DN	D1	D2	g	t	f	m	n	L-Port Weight lbs kg	T-Port Weight lbs kg
2-1/2"	7.01	5.51	4.13	0.71	0.06	0.75	0.16	63.40	62.70
DN65	178	140	105	18	1.6	19	4	28.76	28.44
3"	7.48	6.02	5.00	0.75	0.06	0.75	0.16	78.40	75.40
DN80	190	153	127	19	1.6	19	4	35.56	34.20
4"	9.02	7.52	6.18	0.94	0.06	0.75	0.31	64.02	138.05
DN100	229	191	157	24	1.6	19	8	64.02	62.62

Dimensions PN16 (mm):

SIZE	D1	D2	g	t	f	m	n
2-1/2"	185	145	122	18	3	18	4
3"	200	160	138	20	3	18	8
4"	220	180	158	20	3	18	8

Dimensions CLASS 300 (inch/mm):

SIZE inch DN	D1	D2	g	t	f	m	n
2-1/2"	7.48	5.87	4.13	0.98	0.06	0.87	0.31
DN65	190	149	105	25	1.6	22	8
3"	8.27	6.61	5.00	1.14	0.06	0.87	0.31
DN80	210	168	127	29	1.6	22	8
4"	10.00	7.87	6.18	1.26	0.06	0.87	0.31
DN100	254	200	157	32	1.6	22	8

Dimensions PN40 (mm):

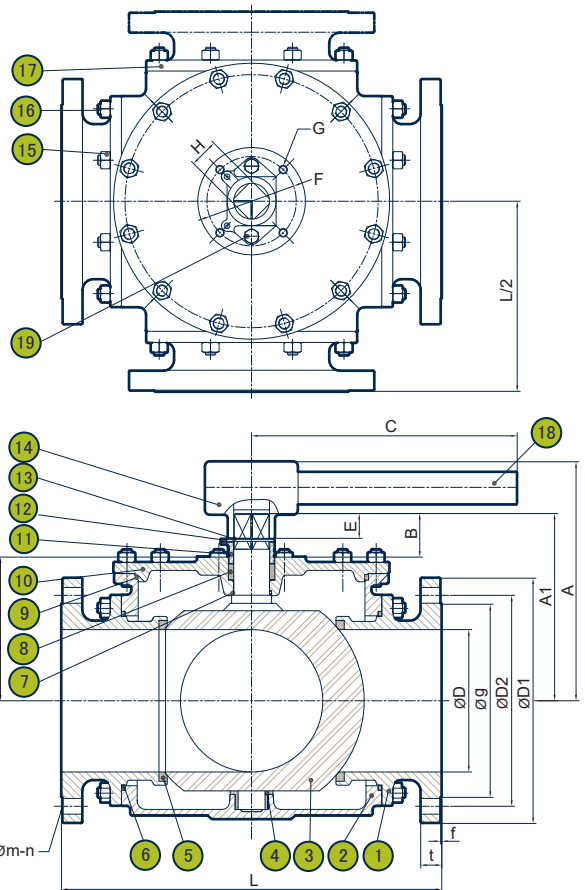
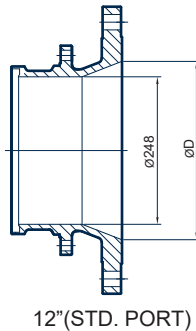
SIZE	D1	D2	g	t	f	m	n
2-1/2"	185	145	122	22	3	18	8
3"	200	160	138	24	3	18	8
4"	235	190	162	24	3	22	8

DIRECT MOUNT 4-SEAT 3-WAY/4-WAY FLANGE END BALL VALVE

Model: Series M4F – SIL 3 Capable

Materials List:

NO.	NAME OF PARTS	MATERIALS	
1	FLANGE END	ASTM A351 Gr. CF8M	ASTM A261 Gr. WCB
2	BODY	ASTM A351 Gr. CF8M	ASTM A261 Gr. WCB
3	BALL & STEM	SS 316	SS 304/SS 316
4	HOUSING	PTFE+STAINLESS	PTFE+STAINLESS
5	SEATS	PTFE	PTFE
6	GASKET	PTFE	PTFE
7	O-RING	VITON	VITON
8	STEM PACKING	PTFE	PTFE
9	BONNET GASKET	PTFE	PTFE
10	BONNET	ASTM A351 Gr. CF8M	ASTM A261 Gr. WCB
11	GLAND	ASTM A351 Gr. CF8	ASTM A261 Gr. WCB
12	STOP	SS 304	SS 304
13	STOP RING	SS 304	SS 304
14	HANDLE HEAD	ASTM 65-45-12	ASTM 65-45-12
15	BOLTS	SS 304/(B8)	CARBON STEEL/(B7)
16	NUT	SS 304/(B8)	CARBON STEEL/(B7)
17	BLANK END	ASTM A351 Gr. CF8M	ASTM A216 Gr. WCB
18	LEVER	CARBON STEEL	CARBON STEEL
19	GLAND BOLTS	SS 304/(B8)	CARBON STEEL/(B7)



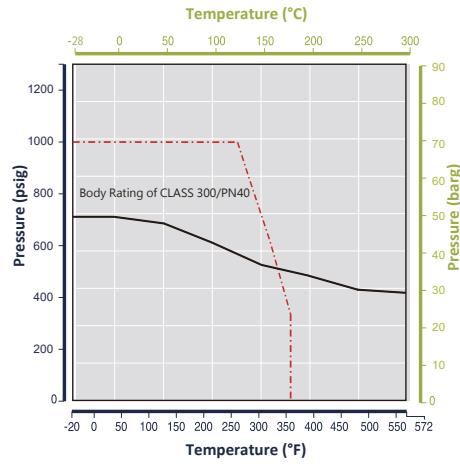
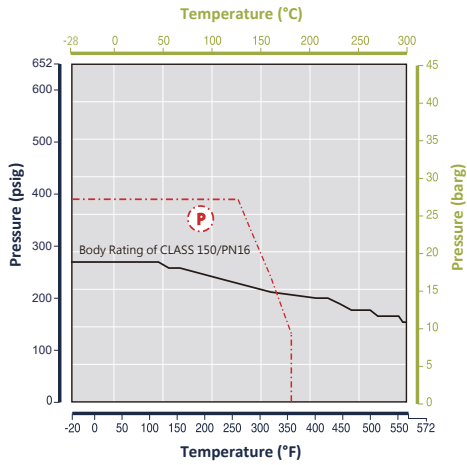
Dimensions (inch/mm):

SIZE inch DN	A	A1	B	C	D	E	F	G	H	K	L	d1	d2	g	m	t	f	n	L-Port Weight lbs kg	T-Port Weight lbs kg
5"	10.04	7.81	2.4	39.45	4.92	1.42	4.92		1.42	5.53	16.46	10	8.5	7.3	0.87	0.94	0.06	8	204.32	202.52
DN125	255	198.5	59	860	125	36	125	M12	28	140.5	418	254	215.9	186	22	23.9	1.6	8	92.68	91.86
6"	11.57	8.74	2.4	47.25	5.90	1.42	4.92		1.42	6.28	16.85	11	9.5	8.5	0.87	1	0.06	8	275.27	266.89
DN150	294	222	62	1200	150	36	125	M12	36	159.5	427	279.3	241.5	216	22	25.4	1.6	8	124.86	121.06
8"	13.19	10.35	2.4	59	7.88	1.42	4.92		1.42	7.91	20.94	13.5	11.75	10.63	0.87	1.13	0.06	8	518.97	507.72
DN200	335	263	62	1500	200	36	125	M12	36	201	532	343	298.45	270	22	28.6	1.6	8	235.40	230.30
10"	16.06	13.58	3.66	59	9.84	2.32	5.51		1.42	9.92	26	16	14.25	12.75	1.00	1.19	0.06	12	753.98	
DN250	408	345	93	2000	248	59	140	M16	36	252	660	406.4	362	324	25.4	30.2	1.6	12	342.00	
12"	16.06	13.58	3.66	59	11.81	2.32	5.51		1.42	9.92	26	19.01	17	15	1.023	1.28	0.06	12	837.76	795.87
DN300	408	345	93	2000	300	59	140	M16	36	252	660	483	432	381	26	32.5	1.6	12	380.00	361.00

STD.PORT

DIRECT MOUNT 4-SEAT 3-WAY/4-WAY FLANGE END BALL VALVE

Model: Series M4F – SIL 3 Capable



P - - - - PTFE

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This table express Seat material resistance as declared by the original manufacturers. The values are to be considered with other parameters such as size, seat design and temperature limitations as governed by relevant standards such as ASME B16.34 or EN-12516.

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