

# Vtek

## Controls™

### SERIES 3F

#### 3 Way Flanged Ball Valve



Series 3F - 3 Way Flanged

#### Design Specifications

- Full Port Sizes : 1/4" – 8"
- Body Materials: WCB / CF8M
- Seats: PTFE / TFM1600 / TFM4215
- ISO 5211 Direct Mounting
- Pressure rating : ANSI 150 / 300
- End Caps: BW/ SW/ Flanged / Threaded
- Trunnion Design
- Blow-out Proof Stem
- General & Industrial Applications

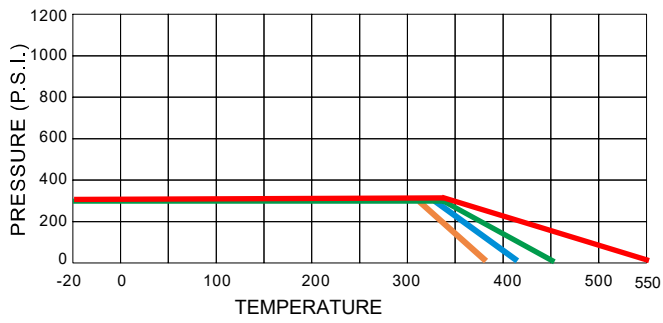
#### Standards

- ASME B16.34, B16.50, MSS SP-55, EN 12516-1
- Quality Assurance: ISO 9001, 5209
- Inspection and Test: API 598
- NACE: MR-01-75

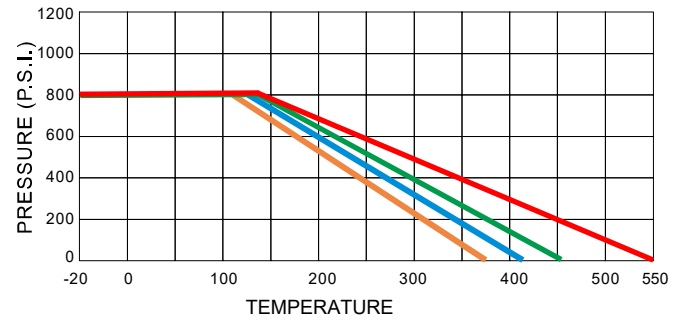
# Data:

## Pressure Vs. Temperature Chart

### PRESSURE/ TEMPERATURE ANSI 150

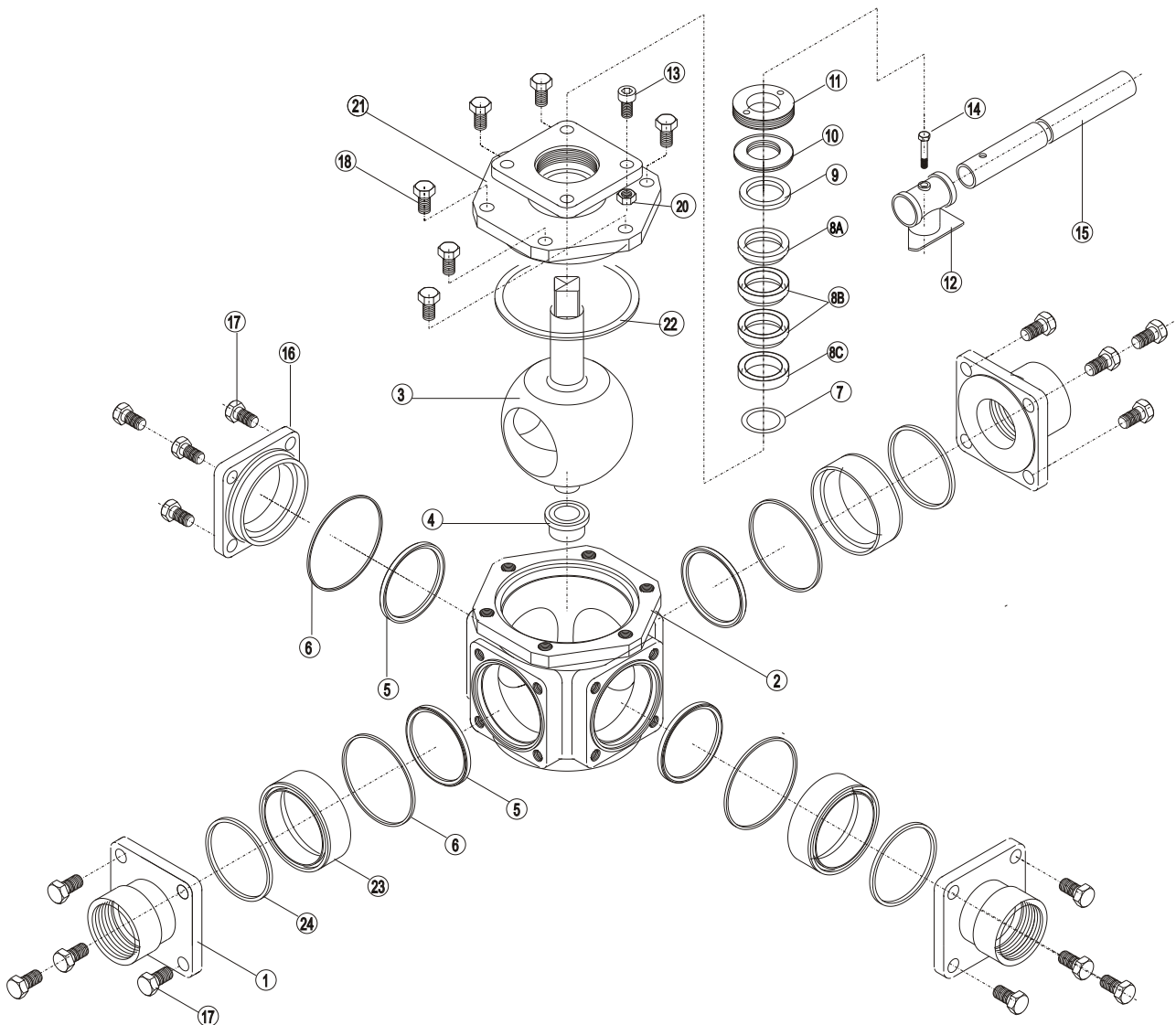


### PRESSURE/ TEMPERATURE ANSI 300



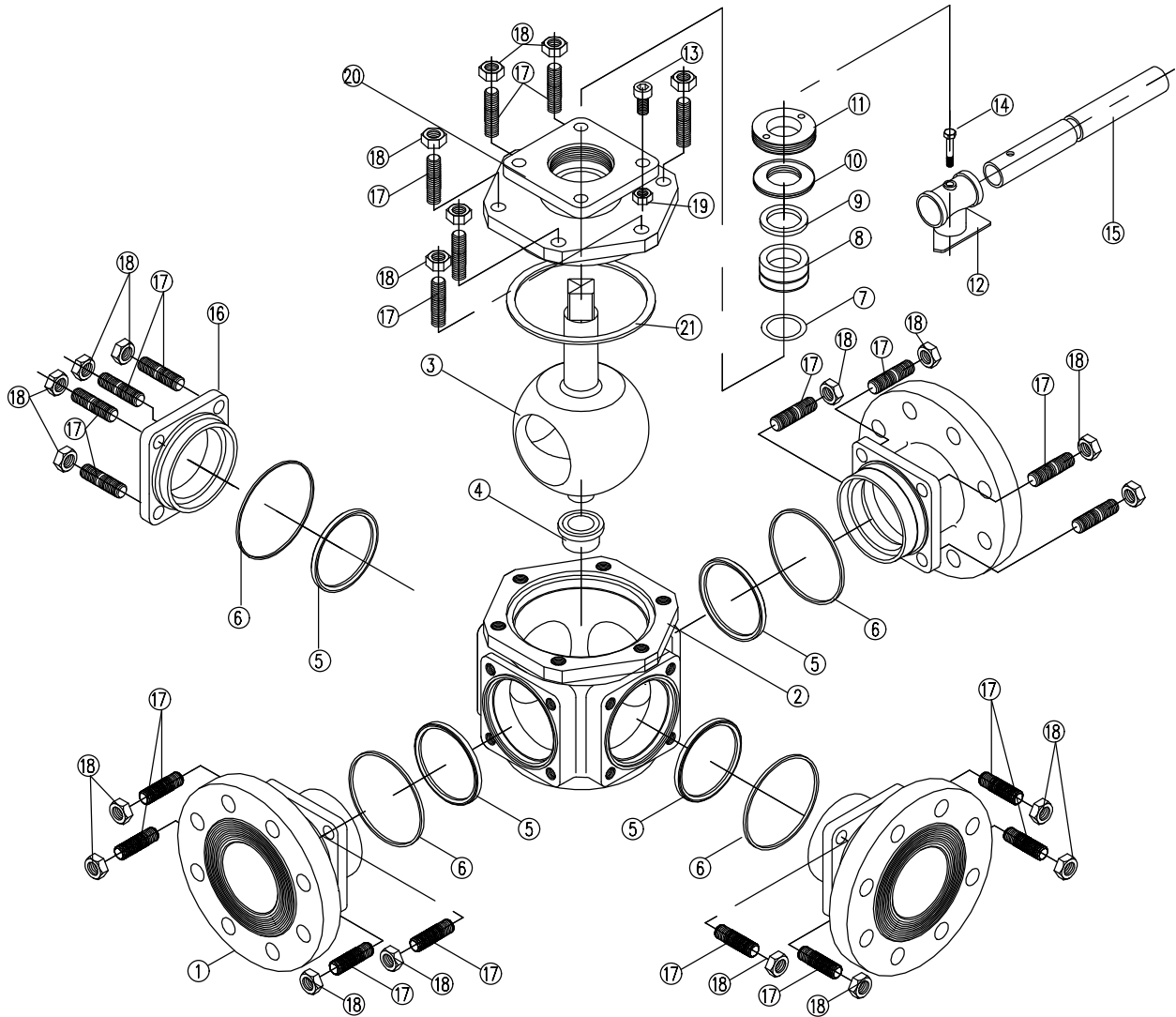
PTFE RPTFE (PTFE+15% Glass) TFM (TFM1600) TFM4215

## Exploded View 1/4" to 4":



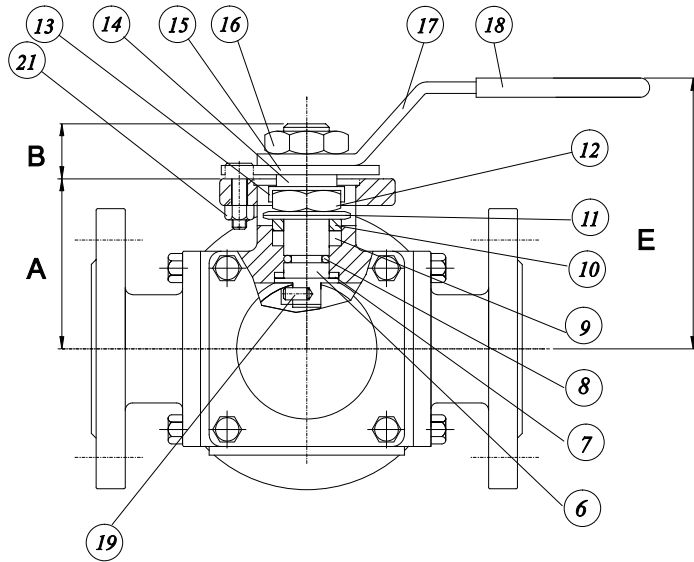
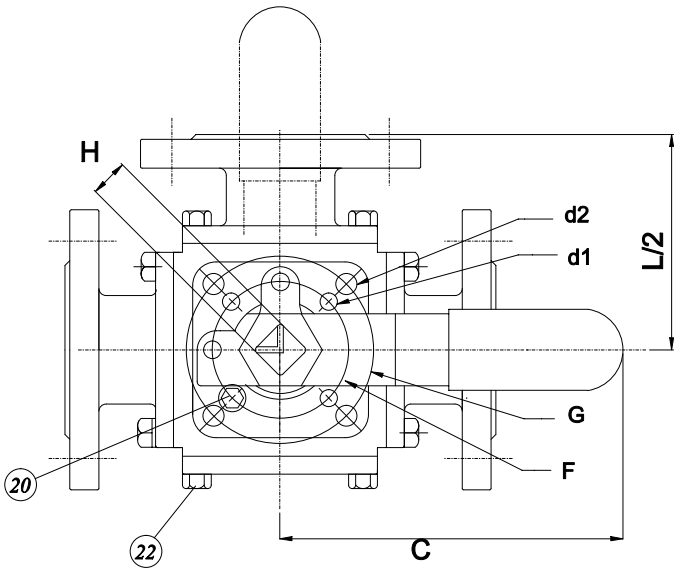
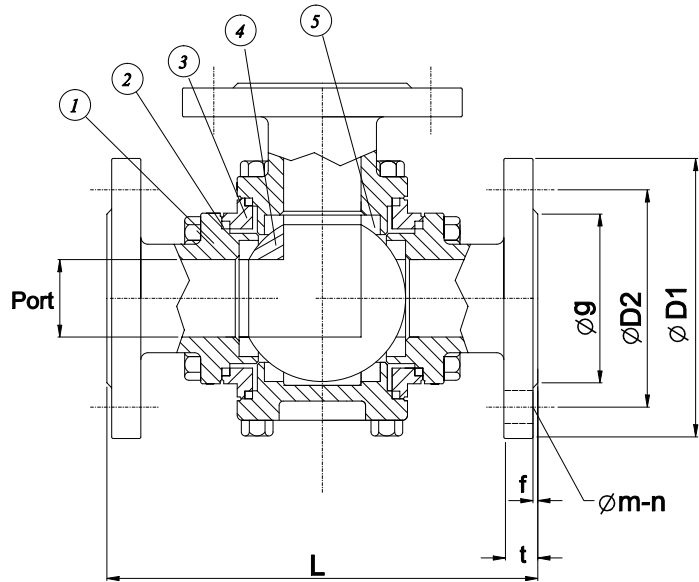
NPT Ends (Shown)  
ANSI150 / 300 RF Ends Available

Exploded View 5" to 8":



# Dimensions:

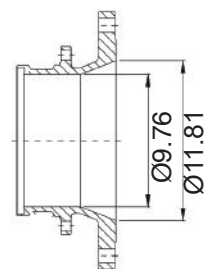
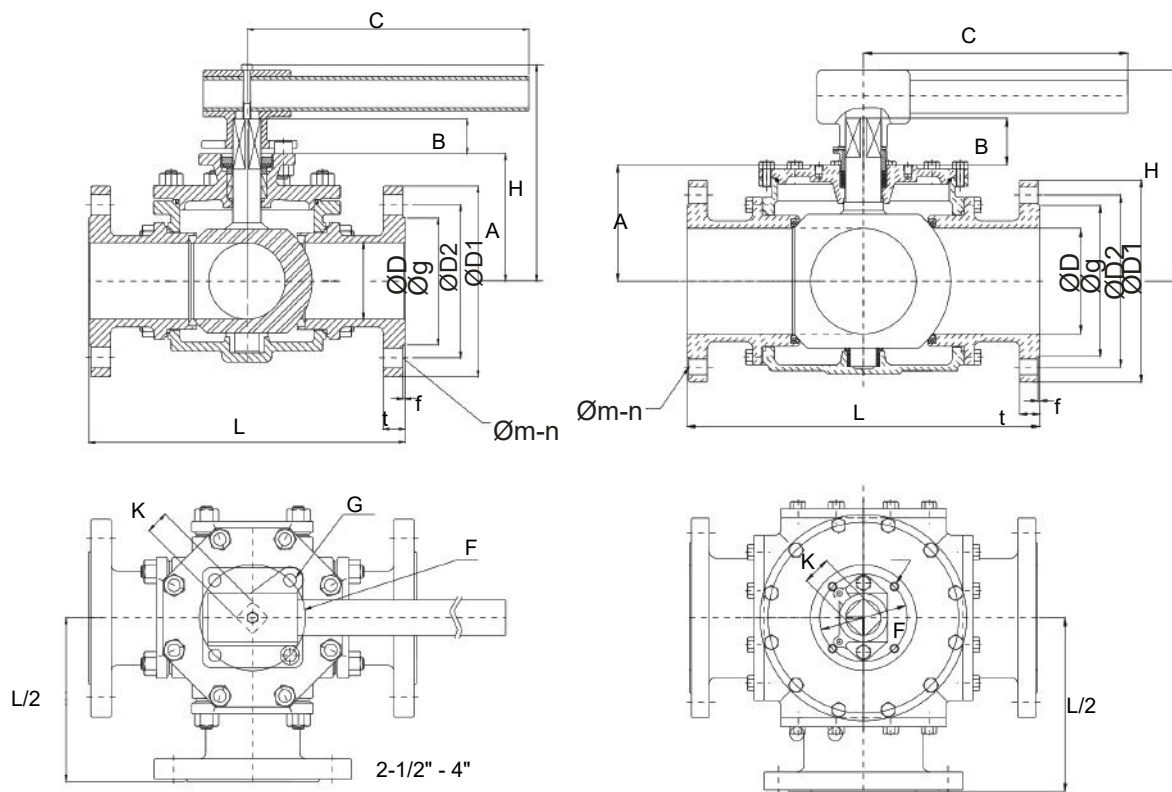
No	PART	MATERIAL	QTY
1	FLANGE END	CF8M / WCB	1
2	GASKET	TFM1600 / TFM4215	1
3	BODY	CF8M / WCB	1
4	BALL	SS 316 / SS 304	3
5	SEAT	PTFE / TFM1600/ TFM4215	4
6	THRUST WASHER	RPTFE	3
7	STEM	SS 316 / SS 304	1
8	O-RING	VITON	1
9	STEM PACKING	TFM1600 / GRAPHITE	1
10	PACKING GLAND	SS 304	1
11	DISC (BELLEVILLE) WASHER	SS 301	1
12	STEM NUT	SS 304	1
13	STOP NUT	SS 304	1
14	STEM SPACER	SS 304	1
15	STOPPER PLATE	SS 304	1
16	HANDLE NUT	SS 304	2
17	HANDLE	SS 304	1
18	SLEEVE	PLASTIC	1
19	INSERT PIN	SS 304	1
20	TRAVEL STOP PIN	SS 304	1
21	TRAVEL STOP PIN NUT	SS 304	1
22	BODY BOLTS	SS 304	1



Size	A	B	C	d1	d2	E	F	G	H	Port
1/2"	1.61	0.43	5.12	.24	0.24	2.44	1.42	1.65	0.35	0.59
3/4"	1.93	0.55	6.50	0.24	0.28	3.23	1.65	1.97	0.43	0.79
1"	2.17	0.55	6.50	0.24	0.28	3.50	1.65	1.97	0.43	0.98
1-1/4"	2.48	0.67	8.07	0.28	0.36	3.86	1.97	2.76	0.55	1.26
1-1/2"	2.91	0.63	8.07	0.28	0.36	4.25	1.97	2.76	0.55	1.50
2"	3.66	0.63	12.80	0.36	0.45	5.51	2.76	4.02	0.67	1.97

Size	CLASS 150								CLASS 300							
	D1	D2	g	t	f	m	n	L	D1	D2	g	t	f	m	n	l
1/2"	3.50	2.38	1.38	0.44	0.06	0.63	4	5.98	3.74	2.62	1.38	0.57	0.06	0.63	4	6.30
3/4"	3.86	2.76	1.69	0.44	0.06	0.63	4	6.57	4.61	3.25	1.69	0.63	0.06	0.75	4	6.97
1"	4.25	3.13	2.01	0.44	0.06	0.63	4	7.48	4.88	3.50	2.01	0.69	0.06	0.75	4	7.87
1-1/4"	4.61	3.50	2.52	0.50	0.06	0.63	4	8.19	5.28	3.88	2.52	0.81	0.06	0.75	4	8.19
1-1/2"	5.00	3.88	2.87	0.56	0.06	0.63	4	8.66	6.14	4.51	2.87	0.89	0.06	0.87	4	9.21
2"	5.98	4.74	3.62	0.62	0.06	0.63	4	9.96	6.50	5.00	3.62	1.00	0.06	0.75	8	10.75

Dimensions:



Size	A	B	C	D	F	G	H	K
2-1/2"	4.67	0.98	15.8	2.44	4.02	0.43	8.27	0.87
3"	5.37	0.98	19.7	2.99	4.02	0.43	8.98	0.87
4"	6.16	0.98	25.6	3.78	4.02	0.43	9.76	0.87
5"	5.53	2.32	33.9	4.92	4.92	M12	10.0	1.06
6"	6.28	2.44	47.2	5.91	4.92	M12	11.6	1.42
8"	7.91	2.44	59.1	7.87	4.92	M12	13.2	1.42
10"	9.92	3.66	78.7	9.76	5.51	M16	16.1	1.42
12"	9.92	3.66	78.7	9.76	5.51	M16	16.1	1.42

Size	CLASS 150								CLASS 300							
	D1	D2	g	t	f	m	n	L	D1	D2	g	t	f	m	n	l
2-1/2"	7.01	5.49	4.13	0.70	0.06	0.75	4	11.8	7.48	5.87	4.13	1.00	0.06	0.87	8	11.81
3"	7.48	6.00	5.00	0.75	0.06	0.75	4	12.0	8.27	6.61	5.00	1.13	0.06	0.87	8	13.01
4"	9.02	7.50	6.18	0.94	0.06	0.75	8	14.5	10.0	7.87	6.18	1.26	0.06	0.87	8	15.50
5"	10.0	8.50	7.32	0.94	0.06	0.87	8	16.5	-	-	-	-	-	-	-	-
6"	11.0	9.51	8.50	1.00	0.06	0.87	8	16.8	12.5	10.6	8.50	1.46	0.06	0.87	12	18.43
8"	13.5	11.8	10.6	1.13	0.06	0.87	8	20.9	-	-	-	-	-	-	-	-
10"	16.0	14.3	12.8	1.19	0.06	1.00	12	26.0	-	-	-	-	-	-	-	-
12"	19.0	17.0	15.0	1.28	0.06	1.02	12	26.0	-	-	-	-	-	-	-	-

# Ball Type / Flow Patterns:

## BALL TYPES



L-Horizontal



T-Horizontal



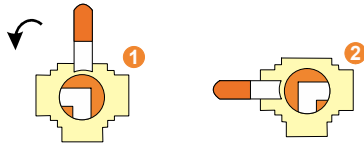
I-Port



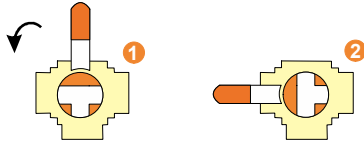
X-Port (Double L)

### 3-WAY

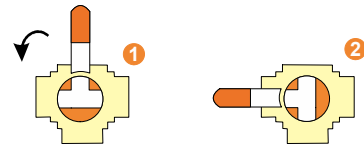
L3-90  
STANDARD



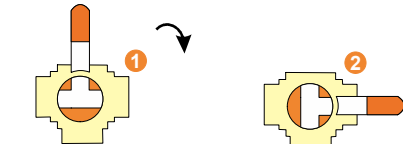
T3-90



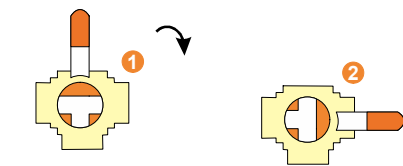
T4-90  
STANDARD



T5-90

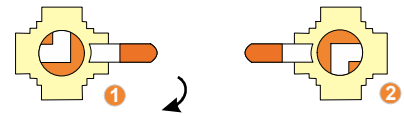


T6-90

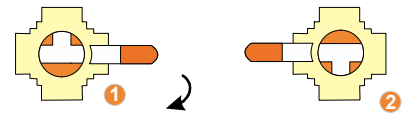


### 4-WAY

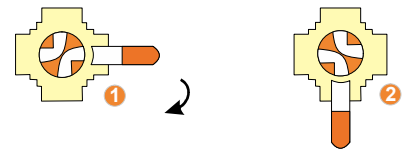
L5-180



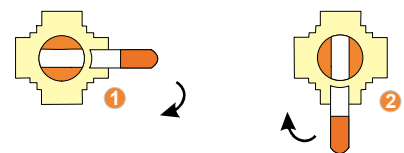
T5-180



X-90



I-90



T-port 90 operation (T4/ T5/ T6) can be suitable for 4-way valve.

- 1 Starting Position
- 2 End Position

## Cv Value:

Size	3-Way, L-Port, Full Bore	3-Way, T-Port (Through), Full Bore	3-Way, T-Port (Branch), Full Bore	4-Way, X-Port, Full Bore
1/4"	7	15	6	-
3/8"	7	15	6	-
1/2"	13	25	9	7
3/4"	23	46	20	12
1"	35	70	25	18
1-1/4"	54	109	47	28
1-1/2"	81	162	62	42
2"	153	309	112	80
2-1/2"	186	376	140	97
3"	290	589	248	151
4"	466	941	414	243
6"	1595	3222	1140	832
8"	2162	4368	1751	1128
10"	3105	6272	2585	1620

## Break Torque Value:

Size	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"	12"
Liquids	91	91	113	136	221	306	489	635	1192	1305	2100	3983	4222	5160	7789
Gases	136	136	142	170	266	363	545	851	1133	2214	2838	-	-	-	12834

## Options:

Options:

Cavity Filled



Fugitive Emissions / Extended



180 Deg Travel Stop



## Ordering:

Series	Port	Body Material	Ball	Stem	End Connection	Size
3F 4F	L - Full Port T - Full Port X - (LL) Full Port I - Full Port	S - Stainless Steel C - Carbon Steel	S - 316 SS 0 - 304 SS	S - 316 SS	TN - Threaded SW - Socket Weld BW - Butt Weld F1 - ANSI 150 RF F3 - ANSI 300 RF	0025 - 1/4" 0038 - 3/8" 0050 - 1/2" 0075 - 3/4" 0100 - 1" 0125 - 1-1/4" 0150 - 1-1/2" 0200 - 2" 0250 - 2-1/2" 0300 - 3" 0400 - 4" 0600 - 6" 0800 - 8" 1000 - 10" 1200 - 12"
Seats	Packing	Body Seal	Operator	Options	Stem O-ring	
R - RTFE T - TFM™-1600 F - TFM4215 M - Metal Seat	P - PTFE T - TFM™-1600 G - GRAPHITE	T - TFM™-1600 G - GRAPHITE F - TFM4215	Blank - Bare Stem L - Locking Handle O - Oval Handle	Blank - No Options O - Oxygen Cleaned F - Fugetive Emissions Bonnet	Blank - Viton Standard 4 - Kalrez E - EPDM S - Silicone	

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