

#### Features

- Bolted body construction
- Investment cast body
- ISO 5211 actuator mounting pad
- Direct mount
- Blow-out proof stem
- 4-seat design
- Adjustable, live loaded PTFE packing
- Secondary stem seal O-ring 1/2" - 2"
- Extra deep packing chamber 2-1/2" - 4"
- Ball - seat alignment pin 1/2" - 2"; integral ball stem 2-1/2" - 4"
- Trunnion design 2-1/2" - 4"
- Locking provisions
- Optional 180° rotation available

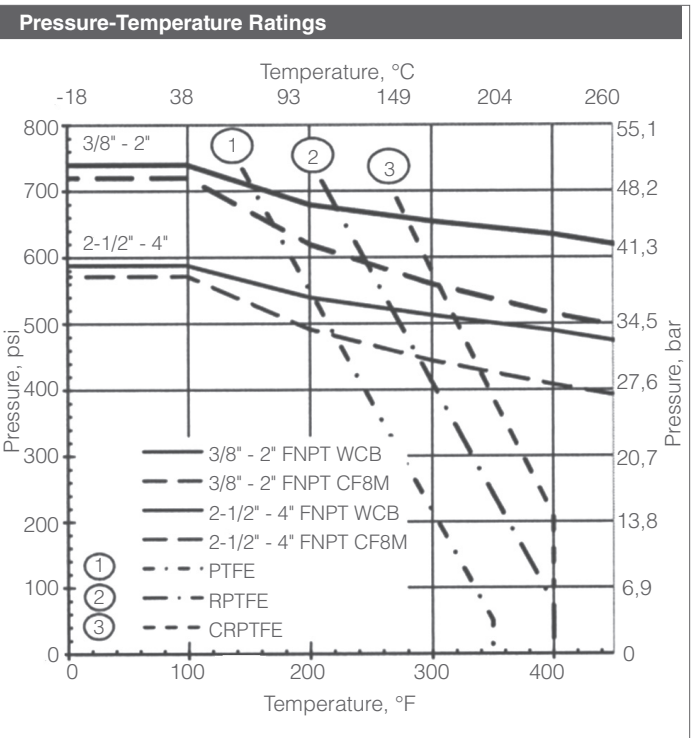
A single 3-way can replace several 2-way's. Flow may be mixed, diverted, or shut off. With side entry 3-ways there is always mixing when switching positions, which facilitates switching between safety devices or pumps.

**Seat Tightness Note:** If closed port pressure exceeds open port pressure, the ball may be forced slightly off the seat in some port configurations / ball positions. This would allow a small amount of mixing from all ports, which may or may not be a problem, depending upon sensitivity of process to mixing. Occurrence may vary depending upon flow and ambient conditions.

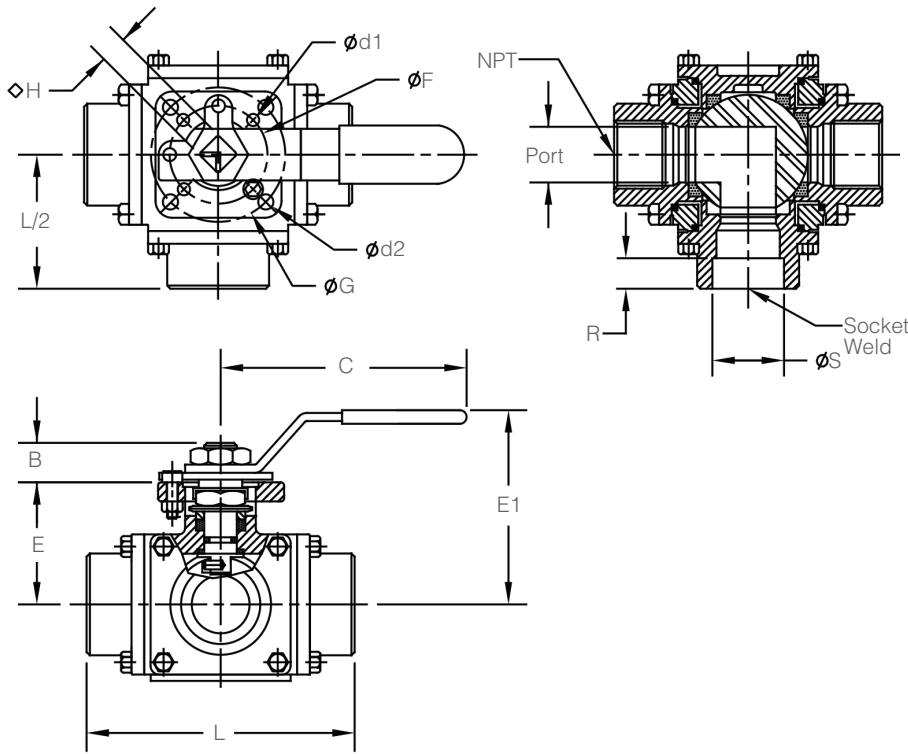
#### 3L-2100F-BA-CS Series 3L-2100F-BA-S6 Series

#### 3T-2100F-BA-CS Series 3T-2100F-BA-S6 Series

Quick Spec	
Product Scope	
Size Range	1/2" - 4" NPT or SW Ends
Port Type	Full Port
Port Type	L-Port or T-Port 3-Way
Port Orientation	Side Entry
Pressure Rating	740 psi CWP 1/2" - 2" 580 psi CWP 2-1/2" - 4"
Temperature Range	-20°F to +400°F
Materials	Carbon or SS body with SS Trim, RPTFE seats, PTFE / Viton seals
Operator	Manual Operator
Mounting Pad	ISO 5200 Direct Mount
Design Standards	
Pipe Ends	ASME B1.20.1
Testing Standards	
Pressure Testing	Shell API 598; seat 80 psi air under water
Approvals	
CE (1.25" [DN40] and larger on special order)	



**Cross Section / Dimension Drawing 1/2" - 2"**



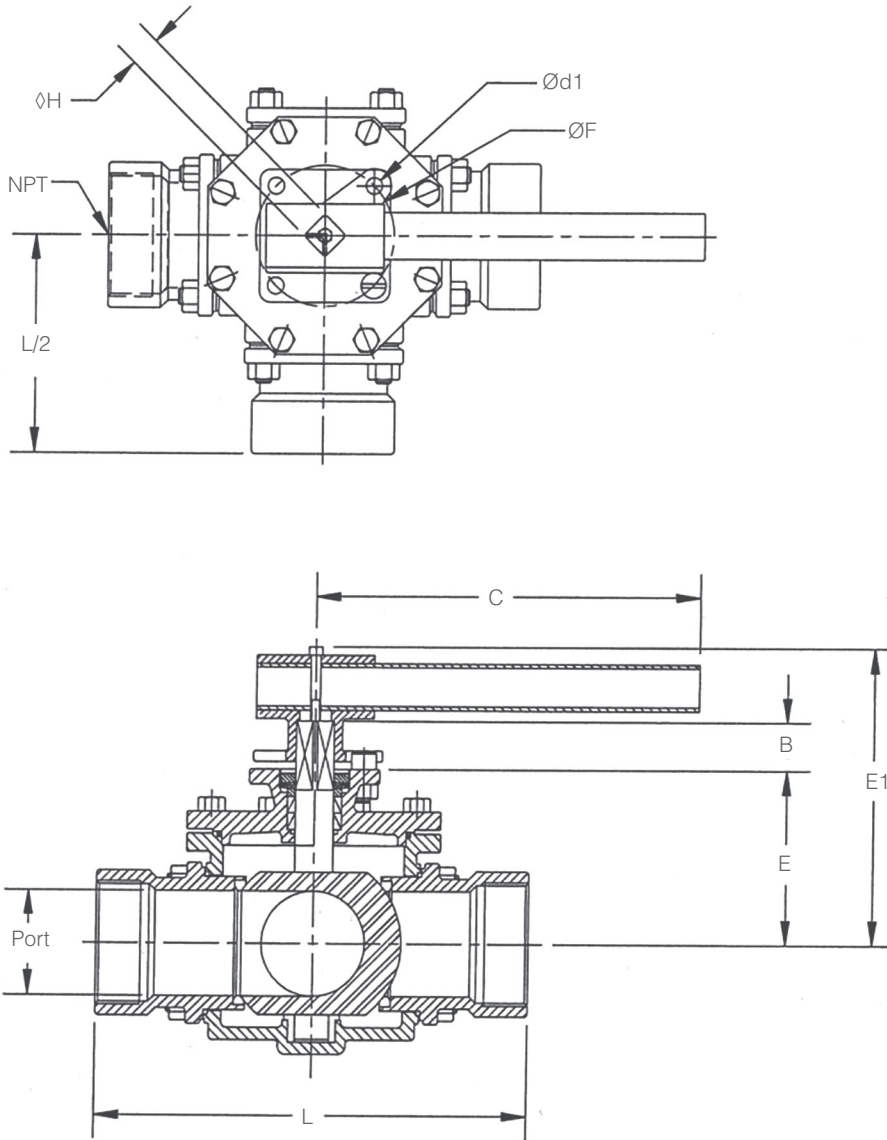
Materials of Construction (1/2" - 2")		
Part	Stainless Steel	Carbon Steel
Body	CF8M	WCB
Caps, End & Blind	CF8M	WCB
Bolts, Caps	GR. B8	Gr. B7
Gasket, Caps	PTFE	
Ball	SS 316	
Seats	RPTFE	
Stem	SS316	
Pin, Ball Alignment	SS 316	
Thrust Washer, Stem	RPTFE	
O-Ring, Stem	Viton	
Packing, Stem	PTFE	
Gland	SS 304	
Spring Washer, Gland	SS 301	
Nut, Stem	SS304	
Lockwasher, Saddle		
Spacer, Handle		
Plate, Stop		
Nut, Handle		
Handle		
Handle Sleeve		
Cover, Handle	Vinyl	
Pin, Ball Alignment	SS316	

ART1142

Dimensions, Inches																
Size	Port	L	E	B	E1	C	ISO 5211	d1	F	ISO 5211	d2	G	H	SW		Wt. Lb
														R	S	
1/2"	0.59	4.09	1.65	0.43	2.52	5.12	F03	0.24	1.42	F04	0.24	1.65	0.354	0.50	0.85	4.4
3/4"	0.79	4.37	1.91	0.55	3.23	6.50	F04	0.24	1.65	F05	0.28	1.97	0.433	0.56	1.07	5.8
1"	0.98	5.00	2.19	0.55	3.50	6.50	F04	0.24	1.65	F05	0.28	1.97	0.433	0.63	1.33	8.0
1-1/4"	1.26	5.43	2.48	0.67	3.86	8.07	F05	0.28	1.97	F07	0.36	2.76	0.551	0.69	1.67	12
1-1/2"	1.50	6.22	2.89	0.63	4.25	8.07	F05	0.28	1.97	F07	0.36	2.76	0.551	0.75	1.91	18
2"	1.97	7.48	3.64	0.83	5.51	12.80	F07	0.36	2.76	F10	0.45	4.02	0.669	0.87	2.41	34

Dimensions, mm																
Size	Port	L	E	B	E1	C	ISO 5211	d1	F	ISO 5211	d2	G	H	SW		Wt. Kg
														R	S	
DN15	15	104	42	11	64	130	F03	6,0	36	F04	6,0	42	9	12,7	21,7	2,0
DN20	20	111	48,5	14	82	165	F04	7,1	42	F05	7,1	50	11	14,3	27,1	2,6
DN25	25	127	55,5	14	89	165	F04	7,1	42	F05	7,1	50	11	15,9	33,9	3,6
DN32	32	138	63	17	98	205	F05	9,2	50	F07	9,2	70	14	17,5	42,5	5,4
DN40	38	158	73,5	16	108	205	F05	9,2	50	F07	9,2	70	14	19,1	48,6	8,3
DN50	50	190	92,5	21	140	325	F07	11,4	70	F10	11,4	102	17	22,2	61,1	15,2

**Cross Section / Dimension Drawing 2-1/2" - 4"**



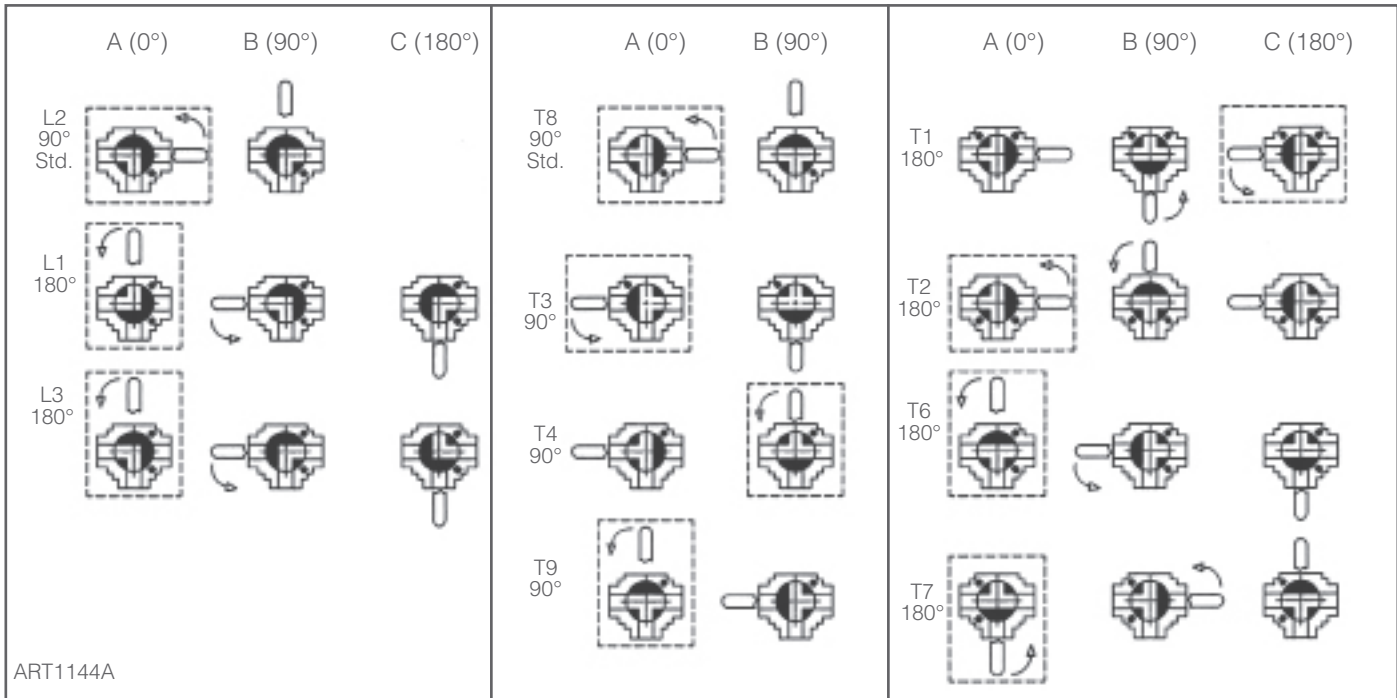
Materials of Construction (2-1/2" - 4")		
Part	Stainless Steel	Carbon Steel
Body	CF8M	WCB
Caps, End & Blind	CF8M	WCB
Bonnet	CF8M	WCB
Studs, Body & Bonnet	Gr. B8	Gr. B7
Nuts, Body & Bonnet	Gr. 8	Gr. 2H
Gasket, Caps & Bonnet	PTFE	
Ball - Stem	SS316	
Seats	RPTFE	
Bearing, Trunnion	PTFE + SS	
O-Ring, Stem	Viton	
Packing, Stem	PTFE	
Gland	SS 304	
Spring Washer, Gland	SS 301	
Nut, Packing	SS304	
Head, Handle	DI 65-45-12	
Lever	Carbon Steel	
Bolt, Handle	SS304	
Pin, Stop		
Nut, Stop Pin		

ART1143

Dimensions, Inches													
Size	Port	L	E	B	E1	C	ISO 5211	d1	F	H	SW		Wt. Lb
											R	S	
2-1/2"	2.44	11.57	4.69	0.98	7.2	19.7	F10	0.43	4.02	0.866	0.87	2.91	45
3"	2.99	12.48	5.39	0.98	8.5	23.6	F10	0.43	4.02	0.866	1.00	3.54	57
4"	3.78	14.53	6.18	0.98	8.7	29.5	F10	0.43	4.02	0.866	1.26	4.54	107

Dimensions, mm													
Size	Port	L	E	B	E1	C	ISO 5211	d1	F	H	SW		Wt. Kg
											R	S	
DN65	62	294	119	25	183	500	F10	11	102	22	22,2	73,9	20
DN80	76	317	137	25	216	600	F10	11	102	22	25,4	89,9	26
DN100	96	369	157	25	221	750	F10	11	102	22	32	115,2	48

**Port Configuration**



Dashed boxes show de-energized (start / fail) positions and arrows show sequence of positions (ABC or CBA) for UT-SR actuator with CW spring stroke, CCW air stroke.

Technical Specifications					
Valve Size	Operating Torque, in-lb		Flow Coefficient, Cv		
	285 psid	Max psid	L-Port	T-Port Run	T-Port Branch
1/2"	147	206	13	25	9
3/4"	177	249	23	46	20
1"	288	394	35	70	25
1-1/4"	398	557	54	109	47
1-1/2"	636	890	81	162	62
2"	826	1157	153	309	112
2-1/2"	1550	2170	186	376	140
3"	1698	2376	290	589	248
4"	2730	3823	466	941	414

Technical Specifications					
Valve Size	Operating Torque, Nm		Flow Coefficient, Kv		
	285 bar	Max bar	L-Port	T-Port Run	T-Port Branch
DN15	16,6	23,3	11	22	8
DN20	20,0	28,1	20	40	17
DN25	32,5	44,5	30	60	22
DN32	45,0	62,9	46	94	41
DN40	71,9	100,6	69	139	53
DN50	93,3	130,7	132	266	96
DN65	175,1	245,2	160	323	121
DN80	191,8	268,5	249	506	214
DN100	308,5	431,9	401	809	356

RPTFE seats. \*740 psi (51 bar) 1/2" - 2"; 580 psid (40 bar) 2-1/2" -4" differential pressure

Model	Size	Body Mat'l	1	2	3	4	5	6	7	8	9	10	11	12
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Model Number	
3T-2100F	3 Way Ball Valve (T Port)
3L-2100F	3 Way Ball Valve (L Port)

Size	
050	1/2"
075	3/4"
100	1"
125	1-1/4"
150	1-1/2"
200	2"
250	2-1/2"
300	3"
400	4"

Body Material	
CS	Carbon Steel
S6	Stainless Steel

1&2 Packing/Seat & End Connections	
BA	PTFE/RPTFE, FNPT (standard)
GA	Graphite/CRPTFE, FNPT

3&4 Operation	
HL	Lever Operated
NN	None
P1	UT-0A-DA STD
P2	UT-0-DA STD
P3	UT-1-DA STD
P4	UT-2-DA STD
P5	UT-2.5-DA STD
P6	UT-3-DA STD
P7	UT-3.5-DA STD
P8	UT-4-DA STD
PF	UT-4.5-DA STD
S1	UT-0-SR STD
S2	UT-1-SR STD
S3	UT-2-SR STD
S4	UT-2.5-SR STD
S5	UT-3-SR-STD
S6	UT-3.5-SR STD
S7	UT-4-SR STD
SF	UT-4.5-SR STD
S8	UT-5-SR STD
S9	UT-6-SR STD

3&4 Operation	
M1	ER-1-2.5-4 110 VAC
M2	ER-2-5-4 110 VAC
M3	ER-3-5-4 110 VAC
M8	ER-4-10-4 110 VAC
M4	ER-6-15-4 (110 VAC)
M5	ER-10-15-4 110 VAC
M9	ER-15-30-4 (110 VAC)
MA	ER-20-12-4 (110 VAC)
M7	ER-38-14-4 (110 VAC)

5&6 Actuator Pressure	
60	60 psi
80	80 psi
NN	N/A (no pneumatic actuator)
ZZ	Non-Standard

7&8 Solenoid Feature		Act. Type
00	None	
3A	3W 8551-120VAC N4 UT-0/5	SR
3C	3W EF8551-120VAc N7 UT-0/5	SR
3J	3W 8317G35-120VAC N4 UT-0/2.5	SR
3M	3W 8321G1-120VAC N4 UT-3/5	SR
3Q	3W EF8317G35-120VAC N7 UT-0/2.5	SR
3R	3W EF8321G1-120VAC N7 UT-3/5	SR
4A	4W 8551-120VAC N4 UT-0A	DA
4B	4W 8551-120VAC N4 UT-0/5	DA
4D	4W EF8551-120VAC N7 UT-0A	DA
4E	4W EF8551-120VAC N7 UT0/5	DA
ZZ	Non-Standard	

9&10 Limit Switch*	
00	None
AA	Rotork SF01200-10UA7A3 (NEMA 4) to UT-0/3
AB	Rotork SF01200-10UA7A3 (NEMA 4) to UT-3.5/7
AC	Rotork SX01200-10UA7E3 (NEMA 7) to UT-0/3
AD	Rotork SX01200-10UA7E3 (NEMA 4) to UT-3.5/7
OZ	Non-Standard

\*with (2) SPDT Mech. Switches

11&12 Start Position	
3A	T3A
3B	T3B
4A	T4A
4B	T4B
8A	T8A
8B	T8B
9A	T9A
9B	T9B
A2	L2A
B2	L2B