



TITUS

GROOVED TECHNICAL BULLETINS

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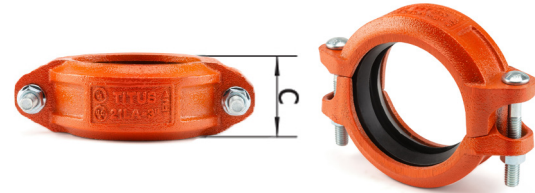
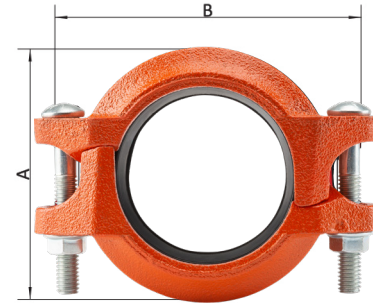
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21LA LIGHT WEIGHT RIGID COUPLING

ANGLE-PAD DESIGN

- Maximum working pressure up to 300psi (34.5 bar). MWP varies based on coupling size and pipe schedule
- Branded with TITUS or T
- Gasket: Pre-Lubricated Grade E – EPDM with operating temperature of -30F to 230F (-34C to 110C) and is marked by a green stripe
- Bolts are SAE J429 Grade 5
- All Groove dimensions conform to AWWA-C606
- All coupling housings conform to ASTM A-536 Grade 65-45-12
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- Designed to meet metal to metal when properly installed
- For current listing/approval details contact a Titus representative



C - Style

C-Style gasket is recommended for wet and dry fire protection applications. Petroleum free silicone lubricant is required in freezing applications.



Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	Max.End Load Lbs/KN	Axial Displacement in/mm	Dimensions			Bolts Size in/mm
					A in/mm	B in/mm	C in/mm	
1	1.327	300	405	0-0.06	2.20	3.78	1.85	3/8x2-1/8
25	33.7	20	1.80	0-1.6	56	96	47	M10x55
1-1/4	1.669	300	656	0-0.06	2.52	4.17	1.85	3/8x2-3/8
32	42.4	20	2.92	0-1.6	64	106	47	M10x60
1-1/2	1.9	300	852	0-0.06	2.72	4.45	1.85	3/8x2-3/8
40	48.3	20	3.79	0-1.6	69	113	47	M10x60
2	2.375	300	1327	0-0.06	3.46	4.80	1.85	3/8x2-3/8
50	60.3	20	5.91	0-1.6	88	122	47	M10x60
2-1/2	2.875	300	1945	0-0.06	3.94	5.39	1.85	3/8x2-3/4
65	73	20	8.66	0-1.6	100	137	47	M10x70
2-1/2	3	300	2114	0-0.06	3.94	5.39	1.85	3/8x2-3/4
65	76.1	20	9.41	0-1.6	100	137	47	M10x70
3	3.5	300	2885	0-1.7	4.57	6.06	1.85	3/8x2-3/4
80	88.9	20	12.84	0-1.6	116	154	47	M10x70
4	4.5	300	4769	0-0.16	5.59	7.40	2.05	1/2x3
100	114.3	20	21.22	0-4.1	142	188	52	M12x75
5	5.5	300	7124	0-0.16	6.69	8.62	2.05	1/2x3-1/8
125	139.7	20	31.70	0-4.1	170	219	52	M12x80
5	5.563	300	7288	0-0.16	6.69	8.62	2.05	1/2x3-1/8
125	141.3	20	32.43	0-4.1	170	219	52	M12x80
6	6.25	300	9229	0-0.16	7.72	9.61	2.05	1/2x3-1/8
150	159	20	41.06	0-4.1	196	244	52	M12x80
6	6.5	300	9950	0-0.16	7.76	9.61	2.05	1/2x3-1/8
150	165.1	20	44.27	0-4.1	197	244	52	M12x80
6	6.625	300	10340	0-0.16	7.83	9.69	2.05	1/2x3-1/8
150	168.3	20	46.00	0-4.1	199	246	52	M12x80
8	8.625	300	17524	0-0.16	10.31	12.68	2.60	5/8x4-3/4
200	219.1	20	77.97	0-4.1	262	322	66	M16x120
10	10.75	300	27206	0-0.16	12.80	15.75	2.60	3/4x6-7/10
250	273	20	121.05	0-4.1	325	400	66	M20x170
12	12.75	300	38297	0-0.16	14.80	18.43	2.64	7/8x7-1/4
300	323.9	20	170.39	0-4.1	376	468	67	M22x190
14	14	300	46150	0-0.16	16.14	19.69	2.95	7/8x7-1/2
350	355.6	20	198.53	0-4.1	410	500	75	M22x190
16	16	300	60280	0-0.16	18.07	21.65	2.95	7/8x7-1/2
400	406.4	20	259.30	0-4.1	459	550	75	M22x190

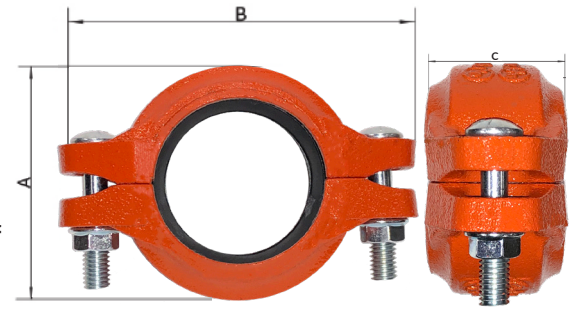
- Working pressure and/or end load are based on schedule 7/10/40 steel pipe, cut or roll grooved.
- For a one time field test, working pressure may be increased 1.5 times the figures listed above.
- For bolt torque recommendation, see installation instructions or technical data sheets.

GROOVED COUPLINGS



21LF LIGHT WEIGHT FLEXIBLE COUPLING

- Maximum working pressure up to 300psi (34.5 bar). MWP varies based on coupling size and pipe schedule
- Branded with TITUS or T
- Gasket: Pre-Lubricated Grade E – EPDM with operating temperature of -30F to 230F (-34C to 110C) and is marked by a green stripe
- Bolts are SAE J429 Grade 5
- All Groove dimensions conform to AWWA-C606
- All coupling housings conform to ASTM A-536 Grade 65-45-12
- Finish available in standard orange paint or hot dipped galvanized (ASTA-153)
- For current listing/approval details contact a Titus representative



C-Style

C-Style gasket is recommended for wet and dry fire protection applications. Petroleum free silicone lubricant is required in freezing applications.



- Working pressure and/or end load are based on schedule 7/10/40 steel pipe, cut or roll grooved.
- For a one time field test, working pressure may be increased 1.5 times the figures listed above.
- For bolt torque recommendation, see installation instructions or technical data sheets.

Nominal Size in/mm	Actual O.D. in/mm	Max. Working Pressure PSI/Bar	Max. End Load Lbs/KN	Axial Displacement in/mm	Angular Movement		Dimensions			Bolt Size in/mm
					Per Coupling Degree (°)	Per Pipe ft/in	A in/mm	B in/mm	C in/mm	
1	1.327	300	405	0.0625	2°-45°	48	2.17	3.82	1.77	3/8x1-1/2
25	33.7	20	1.80	1.6		0.58	55	97	45	M10x40
1-1/4	1.669	300	656	0.0625	2°-10°	38	2.50	4.23	1.77	3/8x1-3/4
32	42.4	20	2.92	1.6		0.46	63.5	107.5	45	M10x45
1-1/2	1.9	300	852	0.0625	1°-54°	33	2.72	4.49	1.77	3/8x1-3/4
40	48.3	20	3.79	1.6		0.4	69	114	45	M10x45
2	2.375	300	1327	0.0625	1°-31°	27	3.29	4.88	1.81	3/8x2-1/8
50	60.3	20	5.91	1.6		0.32	83.6	124	46	M10x55
2-1/2	2.875	300	1945	0.0625	1°-15°	22	3.86	5.39	1.81	3/8x2-1/8
65	73	20	8.66	1.6		0.26	98	137	46	M10x55
2-1/2	3	300	2114	0.0625	1°-12°	21	3.86	5.47	1.81	3/8x2-1/8
65	76.1	20	9.41	1.6		0.25	98	139	46	M10x55
3	3.5	300	2885	0.0625	1°-02°	18	4.49	6.14	1.81	3/8x2-1/8
80	88.9	20	12.84	1.6		0.22	114	156	46	M10x55
4	4.25	300	4258	0.125	1°-42°	30	5.43	7.32	1.97	1/2x2-5/8
100	108	20	18.94	3.2		0.36	138	186	50	M12x65
4	4.5	300	4769	0.125	1°-36°	28	5.59	7.44	1.97	1/2x2-5/8
100	114.3	20	21.22	3.2		0.34	142	189	50	M12x65
5	5.25	300	6457	0.125	1°-23°	24	6.46	8.39	1.97	1/2x2-5/8
125	133	20	28.73	3.2		0.29	164	213	50	M12x65
5	5.5	300	7124	0.125	1°-18°	23	6.69	8.74	1.97	1/2x2-5/8
125	139.7	20	31.70	3.2		0.27	170	222	50	M12x65
5	5.563	300	7288	0.125	1°-18°	23	6.69	8.58	1.97	1/2x2-5/8
125	141.3	20	32.43	3.2		0.27	170	218	50	M12x65
6	6.25	300	9229	0.125	1°-09°	20	7.56	9.61	1.97	1/2x2-5/8
150	159	20	41.06	3.2		0.24	192	244	50	M12x65
6	6.5	300	9950	0.125	1°-07°	20	7.72	9.61	1.97	1/2x2-5/8
150	165.1	20	44.27	3.2		0.24	196	244	50	M12x65
6	6.625	300	10340	0.125	1°-05°	19	7.80	9.88	1.97	1/2x2-5/8
150	168.3	20	46.00	3.2		0.23	198	251	50	M12x65
8	8.515	300	17079	0.125	0°-50°	15	10.00	13.39	2.44	3/4x3-1/2
200	216.3	20	75.99	3.2		0.18	254	340	62	M20x90
8	8.625	300	17524	0.125	0°-50°	15	10.08	12.44	2.36	5/8x3-1/8
200	219.1	20	77.97	3.2		0.18	256	316	60	M16x80
10	10.527	300	26101	0.125	0°-50°	12	12.32	15.75	2.52	3/4x3-1/2
250	267.4	20	116.13	3.2		0.14	313	400	64	M20x90
10	10.75	300	27206	0.125	0°-50°	12	12.56	15.47	2.52	3/4x3-1/2
250	273.0	20	121.05	3.2		0.14	319	393	64	M20x90
12	12.539	300	37031	0.125	0°-50°	10	14.49	18.27	2.52	7/8x4-1/3
300	318.5	20	164.76	3.2		0.12	368	464	64	M22x110
12	12.75	300	38297	0.125	0°-50°	10	14.72	17.83	2.56	3/4x4-1/3
300	323.9	20	170.39	3.2		0.12	374	453	65	M20x110
14	14	300	46150	0.125	0°-31°	4.5	16.14	20.08	2.95	7/8x4-1/3
350	355.6	20	198.53	3.2		0.06	410	510	75	M22x110
14	14.843	300	51883	0.125	0°-29°	4.5	16.85	20.47	2.95	7/8x5-1/2
350	377	20	230.84	3.2		0.06	428	520	75	M22x140
16	16	300	60280	0.125	0°-27°	4	18.07	21.85	2.95	7/8x5-1/2
400	406.4	20	259.30	3.2		0.05	459	555	75	M22x140
16	16.771	300	66246	0.125	0°-25°	4	18.90	22.52	2.95	7/8x5-1/2
400	426	20	294.74	3.2		0.05	480	572	75	M22x140
18	18	300	76300	0.125	0°-24°	3.5	20.31	23.86	3.07	7/8x5-1/2
450	457.2	20	327.89	3.2		0.04	516	606	78	M22x140
18	18.9	300	84106	0.125	0°-22°	3	21.26	24.84	3.07	7/8x6-1/3
450	480.0	20	374.20	3.2		0.04	540	631	78	M22x160
20	20	300	113980	0.125	0°-19°	3	22.32	26.54	3.07	7/8x5-1/2
500	508.0	20	490.60	3.2		0.04	567	674	78	M22x140
22	22	300	135640	0.125	0°-18°	2.5	24.49	28.66	3.07	7/8x5-1/2
550	558.8	20	584.20	3.2		0.03	622	728	78	M22x140
24	24	300	159190	0.125	0°-17°	2.5	26.54	30.63	3.07	1x5-9/10
600	609.6	20	684.72	3.2		0.03	674	778	78	M24x150

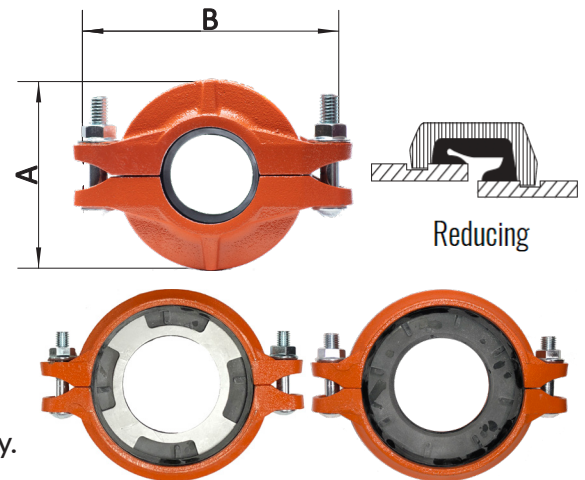
* Deflection or angular movement is the maximum value that a coupling allows under no internal pressure.

GROOVED COUPLINGS



21RC REDUCING COUPLING

- Maximum working pressure up to 300psi (34.5 bar). MWP varies based on coupling size and pipe schedule
- Branded with TITUS or T
- All Groove dimensions conform to AWWA-C606
- All coupling housings conform to ASTM A-536 Grade 65-45-12
- Finish available in standard orange paint or hot dipped galvanized (ASTA-153)
- The steel washer (optional) prevents telescoping of the smaller pipe inside larger pipe. Only recommended during vertical system assembly.
- For current listing/approval details contact a Titus representative



• Working pressure and/or end load are based on schedule 7/10/40 steel pipe, cut or roll grooved.

• For a one time field test, working pressure may be increased 1.5 times the figures listed above.

• For bolt torque recommendation, see installation instructions or technical data sheets.

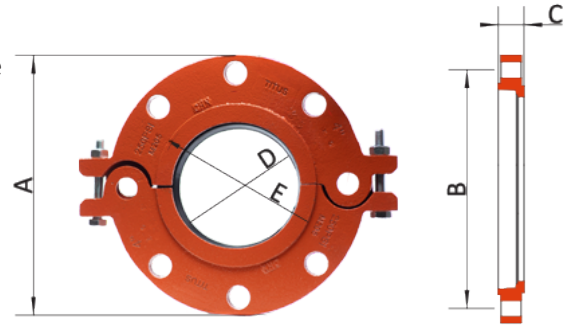
Nominal Size in/mm	Actual O.D. in/mm	Max. Working Pressure PSI/Bar	Max. End Load Lbs/KN	Axial Displacement in/mm	Deflection*		Dimensions			Bolt Size in/mm
					Degree Per Coupling(°)	Pipe in/ft mm/m	A in/mm	B in/mm	C** in/mm	
1-1/2x1-1/4 40x32	1.9x1.669 48.3x42.4	300 20	852 3.79	0.0625 1.6	1°-54'	33 0.4	2.76 70	4.45 113	1.77 45	3/8x2 M10x50
2x1-1/2 50x40	2.375x1.9 60.3x48.3	300 20	1327 5.91	0.0625 1.6	1°-31'	27 0.32	3.23 82	5.12 130	1.81 46	3/8x2-1/8 M10x55
2-1/2x1 65x25	2.875x1.327 73x33.7	300 20	1945 8.66	0.0625 1.6	1°-15'	22 0.26	3.82 97	5.94 151	1.81 46	3/8x2-1/8 M10x55
2-1/2x1-1/4 65x32	2.875x1.669 73x42.4	300 20	1945 8.66	0.0625 1.6	1°-15'	22 0.26	3.82 97	5.94 151	1.81 46	3/8x2-1/8 M10x55
2-1/2x1-1/2 65x40	2.875x1.9 73x48.3	300 20	1945 8.66	0.0625 1.6	1°-15'	22 0.26	3.82 97	5.94 151	1.81 46	3/8x2-1/8 M10x55
2-1/2x2 65x50	2.875x2.375 73x60.3	300 20	1945 8.66	0.0625 1.6	1°-15'	22 0.26	3.82 97	5.94 151	1.81 46	3/8x2-1/8 M10x55
2-1/2x2 65x50	3x2.375 76.1x60.3	300 20	2114 9.41	0.0625 1.6	1°-12'	21 0.25	3.82 97	5.94 151	1.81 46	3/8x2-1/8 M10x55
2-1/2x2-1/2 65x65	3x2.875 76.1x73	300 20	2114 9.41	0.0625 1.6	1°-12'	21 0.25	3.82 97	5.94 151	1.81 46	3/8x2-1/8 M10x55
3x1-1/2 80x40	3.5x1.9 88.9x48.3	300 20	2885 12.84	0.0625 1.6	1°-02'	18 0.22	4.41 112	6.56 166.6	1.81 46	1/2x2-5/8 M12x65
3x2 80x50	3.5x2.375 88.9x60.3	300 20	2885 12.84	0.0625 1.6	1°-02'	18 0.22	4.41 112	6.56 166.6	1.81 46	1/2x2-5/8 M12x65
3x2-1/2 80x65	3.5x3 88.9x76.1	300 20	2885 12.84	0.0625 1.6	1°-02'	18 0.22	4.49 114	6.56 166.6	1.81 46	1/2x2-5/8 M12x65
4x2 100x50	4.5x2.375 114.3x60.3	300 20	4769 21.22	0.125 3.2	1°-36'	28 0.34	5.55 141	7.87 200	1.97 50	1/2x2-5/8 M12x65
4x2-1/2 100x65	4.5x2.875 114.3x73.0	300 20	4769 21.22	0.125 3.2	1°-36'	28 0.34	5.55 141	7.87 200	1.97 50	1/2x2-5/8 M12x65
4x2-1/2 100x65	4.5x3.0 114.3x76.1	300 20	4769 21.22	0.125 3.2	1°-36'	28 0.34	5.95 151.2	7.87 200	1.97 50	1/2x2-5/8 M12x65
4x3 100x80	4.5x3.5 114.3x88.9	300 20	4769 21.22	0.125 3.2	1°-36'	28 0.34	5.58 141.8	7.87 200	1.97 50	1/2x2-5/8 M12x65
5x4 125x100	5.5x4.5 139.7x114.3	300 20	7124 31.70	0.125 3.2	1°-18'	23 0.27	6.65 169	9.25 235	2.05 52	5/8x3-1/8 M16x80
5x4 125x100	5.563x4.5 141.3x114.3	300 20	7288 32.43	0.125 3.2	1°-18'	23 0.27	6.57 167	9.06 230	2.05 52	5/8x3-1/8 M16x80
6x3 150x80	6.5x3.5 165.1x88.9	300 20	9950 44.27	0.125 3.2	1°-07'	20 0.24	7.76 197	10.83 275	2.05 52	5/8x3-1/8 M16x80
6x4 150x100	6.5x4.5 165.1x114.3	300 20	9950 44.27	0.125 3.2	1°-07'	20 0.24	7.76 197	10.83 275	2.05 52	5/8x3-1/8 M16x80
6x2-1/2 150x65	6.525x2.875 168.3x73	300 20	10340 46.00	0.125 3.2	1°-06'	19 0.23	7.85 199.4	10.83 275	2.05 52	5/8x3-1/8 M16x80
6x3 150x80	6.525x3.5 168.3x88.9	300 20	10340 46.00	0.125 3.2	1°-06'	19 0.23	7.85 199.4	10.83 275	2.05 52	5/8x3-1/8 M16x80
6x4 150x100	6.525x4.5 168.3x114.3	300 20	10340 46.00	0.125 3.2	1°-06'	19 0.23	7.85 199.4	10.83 275	2.05 52	5/8x3-1/8 M16x80
6x5 150x100	6.625x5.563 168.3x141.3	300 20	10340 46.00	0.125 3.2	1°-06'	19 0.23	7.85 199.4	10.83 275	2.05 52	5/8x3-1/8 M16x80
6x6 150x150	6.625x6.5 168.3x165.1	300 20	10340 46.00	0.125 3.2	1°-06'	19 0.23	7.85 199.4	10.83 275	2.05 52	5/8x3-1/8 M16x80
8x4 200x100	8.625x4.5 219.1x114.3	300 20	17524 77.97	0.125 3.2	0°-50'	15 0.18	10.08 256	13.23 336	2.28 58	3/4x4-1/3 M20x110
8x6 200x150	8.625x6.525 219.1x168.3	300 20	17524 77.97	0.125 3.2	0°-50'	15 0.18	10.08 256	13.23 336	2.28 58	3/4x4-1/3 M20x110

* Deflection or angular movement is the maximum value that a coupling allows under no internal pressure.

** Dimension C is axial thickness of coupling.

31FH GROOVED HINGED FLANGE ADAPTER

- Maximum working pressure 250 psi (17 bar) depending on flange size and schedule of pipe
- Matches flange dimensions of Class 125/150, latch bolts included
- Branded with TITUS or T
- Gasket: Grade E – EPDM with operating temperature of -30F to 230F (-34C to 110C) and is marked by a green stripe
- Bolts are SAE J429 Grade 5
- All Groove dimensions conform to AWWA-C606
- All Ductile Iron housing materials conform to ASTM A-536 Grade 65-45-12
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- Steel adapter insert required when used against wafer/lug valves, with rubber or irregular surfaces
- For current listing/approval details contact a Titus representative

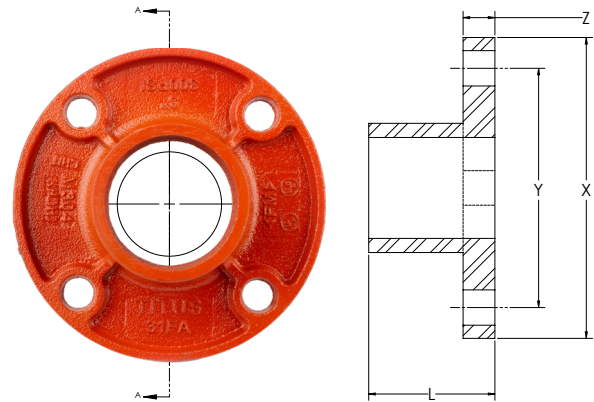


Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	Max. End Load Lbs/KN	Dimensions					Bolt	
				A in/mm	B in/mm	C in/mm	D in/mm	E in/mm	No.	Size in/mm
2	2.375	300	1330	6.10	4.74	0.98	2.36	3.07	4	5/8
50	60.3	20	5.71	155	120.5	25	60	78		M16
2.5	2.875	300	1950	7.09	5.51	0.98	2.87	3.66	4	5/8
65	73.0	20	8.37	180	140	25	73	93		M16
3	3.500	300	2880	7.48	6.02	0.98	3.50	4.21	4	5/8
80	88.9	20	12.41	190	153	25	89	107		M16
4	4.500	300	4770	9.06	7.52	0.98	4.49	5.16	8	5/8
100	114.3	20	20.51	230	191	25	114	131		M16
5	5.563	300	7290	10.04	8.50	0.98	5.55	6.18	8	3/4
125	141.3	20	31.35	255	216	25	141	157		M20
6	6.625	300	10340	11.02	9.49	0.98	6.61	7.28	8	3/4
150	168.3	20	44.47	280	241	25	168	185		M20
8	8.625	300	17520	13.58	11.77	1.06	8.62	9.21	8	3/4
200	219.1	20	75.37	345	299	27	219	234		M20
10	10.750	300	27210	15.94	14.25	1.18	10.75	11.57	12	1
250	273.0	20	164.71	405	362	30	273	294		M24
12	12.75	300	38280	19.09	17.01	1.26	12.76	13.43	12	1
300	323.9	20	164.71	485	432	32	324	341		M24

- Working pressure and/or end load are based on schedule 7/10/40 steel pipe, cut or roll grooved.
- For a one time field test, working pressure may be increased 1.5 times the figures listed above.
- For bolt torque recommendation, see installation instructions or technical data sheets.

31FA GROOVED X FLANGE ADAPTER

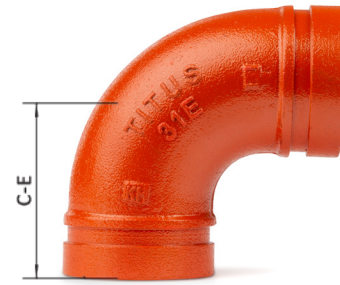
- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	X in/mm	Y in/mm	Z in/mm	L in/mm	Bolts Size in/mm	Bolts No.
2	2.375	300	6.10	4.74	0.63	2.56	5/8	4
50	60.3	20	155	120.5	16	65	M16	4
2-1/2	2.875	300	7.09	5.51	0.63	2.56	5/8	4
65	73.00	20	180	140	16	65	M16	4
3	3.50	300	7.48	6.02	0.71	2.56	5/8	4
80	88.90	20	190	153	18	65	M16	4
4	4.50	300	9.06	7.52	0.87	2.76	5/8	8
100	114.30	20	230	191	22	70	M16	8
5	5.563	300	10.04	8.50	0.87	2.76	3/4	8
125	141.3	20	255	216	22	70	M20	8
6	6.625	300	11.02	9.49	0.87	2.76	3/4	8
150	168.30	20	280	241	22	70	M20	8
8	8.625	300	13.58	11.77	0.98	3.15	3/4	8
200	219.1	20	345	299	25	80	M20	8
10	10.75	300	15.94	14.25	1.02	3.35	7/8	12
250	273	20	405	362	26	85	M22	12
12	12.75	300	19.09	17.01	1.10	3.54	7/8	12
300	323.9	20	485	432	28	90	M22	12

31E 90° ELBOW

- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	90° Elbow Standard in/mm
			C- E
1	1.327	300	2.24
25	33.7	20	57
1-1/4	1.669	300	2.76
32	42.4	20	70
1-1/2	1.9	300	2.76
40	48.3	20	70
2	2.375	300	3.27
50	60.3	20	83
2-1/2	2.875	300	3.74
65	73	20	95
2-1/2	3	300	3.74
65	76.1	20	95
3	3.5	300	4.25
80	88.9	20	108
4	4.25	300	5
100	108	20	127
4	4.5	300	5
100	114.3	20	127
5	5.25	300	5.51
125	133	20	140
5	5.5	300	5.51
125	139.7	20	140
5	5.563	300	5.51
125	141.3	20	140
6	6.25	300	6.5
150	159	20	165
6	6.5	300	6.5
150	165.1	20	165
6	6.625	300	6.5
150	168.3	20	165
8	8.625	300	7.76
200	219.1	20	197
10	10.75	300	9.02
250	273	20	229
12	12.75	300	10
300	323.9	20	254

31F 45° ELBOW

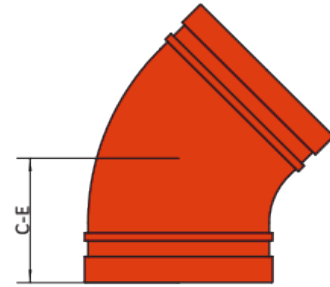
- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	45° Elbow Standard in/mm
			C- E
1	1.327	300	1.77
25	33.7	20	45
1-1/4	1.669	300	1.77
32	42.4	20	45
1-1/2	1.9	300	1.77
40	48.3	20	45
2	2.375	300	2.01
50	60.3	20	51
2-1/2	2.875	300	2.44
65	73	20	62
2-1/2	3	300	2.44
65	76.1	20	62
3	3.5	300	2.76
80	88.9	20	70
4	4.25	300	2.99
100	108	20	76
4	4.5	300	2.99
100	114.3	20	76
5	5.25	300	3.27
125	133	20	83
5	5.5	300	3.27
125	139.7	20	83
5	5.563	300	3.27
125	141.3	20	83
6	6.25	300	3.50
150	159	20	89
6	6.5	300	3.50
150	165.1	20	89
6	6.625	300	3.50
150	168.3	20	89
8	8.625	300	4.25
200	219.1	20	108
10	10.75	300	4.76
250	273	20	121
12	12.75	300	—
300	323.9	20	—

31TT 22-1/2° ELBOW

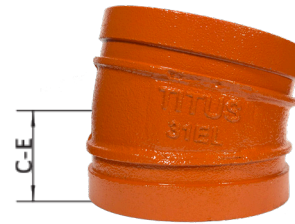
- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	22-1/2° Elbow in/mm
			C- E
1	1.327	300	1.77
25	33.7	20	45
1-1/4	1.669	300	1.77
32	42.4	20	45
1-1/2	1.9	300	1.77
40	48.3	20	45
2	2.375	300	1.89
50	60.3	20	48
2-1/2	2.875	300	2.01
65	73	20	51
2-1/2	3	300	2.01
65	76.1	20	51
3	3.5	300	2.24
80	88.9	20	57
4	4.25	300	2.87
100	108	20	73
4	4.5	300	2.87
100	114.3	20	73
5	5.25	300	2.87
125	133	20	73
5	5.5	300	2.87
125	139.7	20	73
5	5.563	300	2.87
125	141.3	20	73
6	6.25	300	3.11
150	159	20	79
6	6.5	300	3.11
150	165.1	20	79
6	6.625	300	3.11
150	168.3	20	79
8	8.625	300	3.86
200	219.1	20	98
10	10.75	300	4.88
250	273	20	124
12	12.75	300	—
300	323.9	20	—

31EL 11-1/4° ELBOW

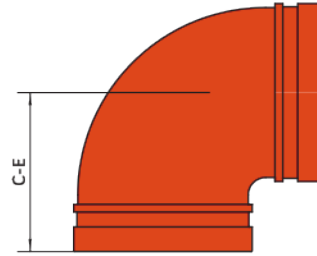
- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



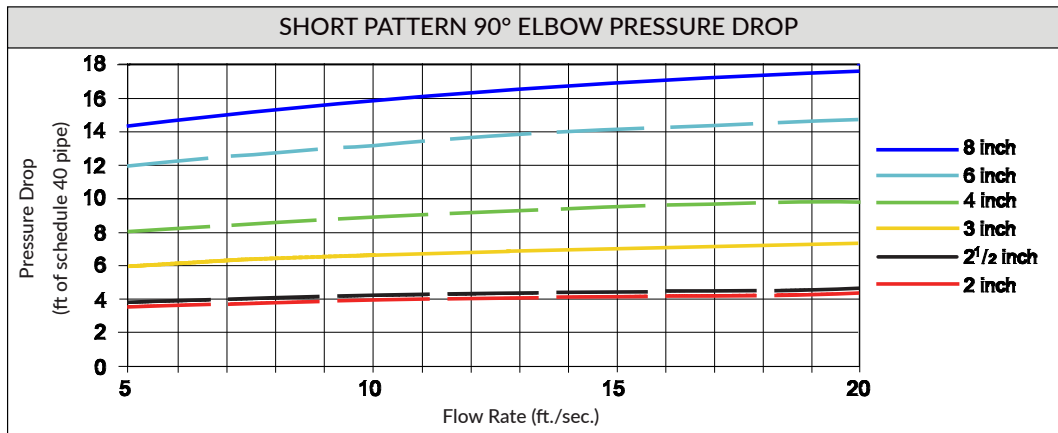
Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	11-1/4° Elbow in/mm
			C- E
1	1.327	300	1.38
25	33.7	20	35
1-1/4	1.669	300	1.38
32	42.4	20	35
1-1/2	1.9	300	1.38
40	48.3	20	35
2	2.375	300	1.50
50	60.3	20	38
2-1/2	2.875	300	1.50
65	73	20	38
2-1/2	3	300	1.50
65	76.1	20	38
3	3.5	300	1.50
80	88.9	20	38
4	4.25	300	1.77
100	108	20	45
4	4.5	300	1.77
100	114.3	20	45
5	5.25	300	2.01
125	133	20	51
5	5.5	300	2.01
125	139.7	20	51
5	5.563	300	2.01
125	141.3	20	51
6	6.25	300	2.01
150	159	20	51
6	6.5	300	2.01
150	165.1	20	51
6	6.625	300	2.01
150	168.3	20	51
8	8.625	300	2.01
200	219.1	20	51
10	10.75	300	2.24
250	273	20	57
12	12.75	300	—
300	323.9	20	—

31E+ SHORT PATTERN 90° ELBOW

- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative

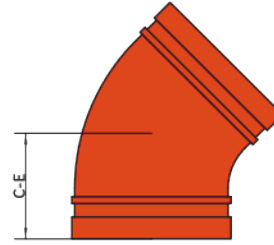


Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	SR 90° Elbow
			C- E (in/mm)
2	2.375	300	2.76
50	60.3	20	70
2-1/2	2.875	300	2.99
65	73	20	76
2-1/2	3	300	2.99
65	76.1	20	76
3	3.5	300	3.35
80	88.9	20	85
4	4.25	300	4.02
100	108	20	102
4	4.5	300	4.02
100	114.3	20	102
5	5.25	300	4.76
125	133	20	121
5	5.5	300	4.76
125	139.7	20	121
5	5.563	300	4.76
125	141.3	20	121
6	6.25	300	5.12
150	159	20	130
6	6.5	300	5.12
150	165.1	20	130
6	6.625	300	5.51
150	168.3	20	140
8	8.625	300	6.89
200	219.1	20	175
10	10.75	300	8.46
250	273	20	215
12	12.75	300	8.66
300	323.9	20	220

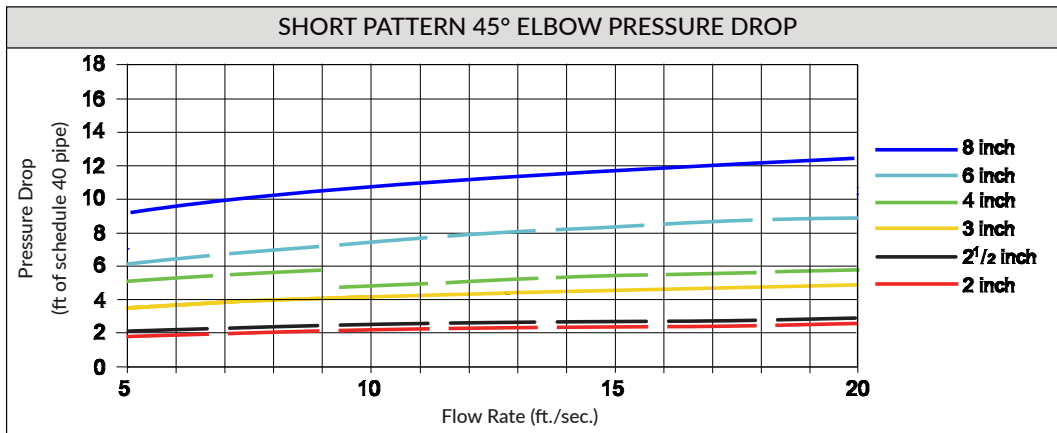


31F+ SHORT PATTERN 45° ELBOW

- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative

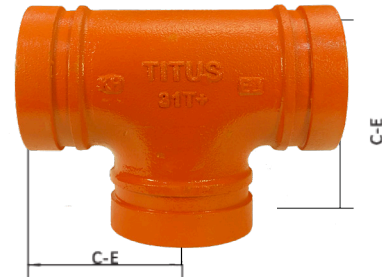


Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	45° Elbow
			C- E (in/mm)
2	2.375	300	—
50	60.3	20	—
2-1/2	2.875	300	1.89
65	73	20	48
2-1/2	3	300	1.89
65	76.1	20	48
3	3.5	300	2.09
80	88.9	20	53
4	4.25	300	2.36
100	108	20	60
4	4.5	300	2.36
100	114.3	20	60
5	5.25	300	2.68
125	133	20	68
5	5.5	300	2.68
125	139.7	20	68
5	5.563	300	2.68
125	141.3	20	68
6	6.25	300	2.97
150	159	20	75.5
6	6.5	300	2.97
150	165.1	20	75.5
6	6.625	300	2.97
150	168.3	20	75.5
8	8.625	300	3.74
200	219.1	20	95
10	10.75	300	4.41
250	273	20	112
12	12.75	300	5.31
300	323.9	20	135

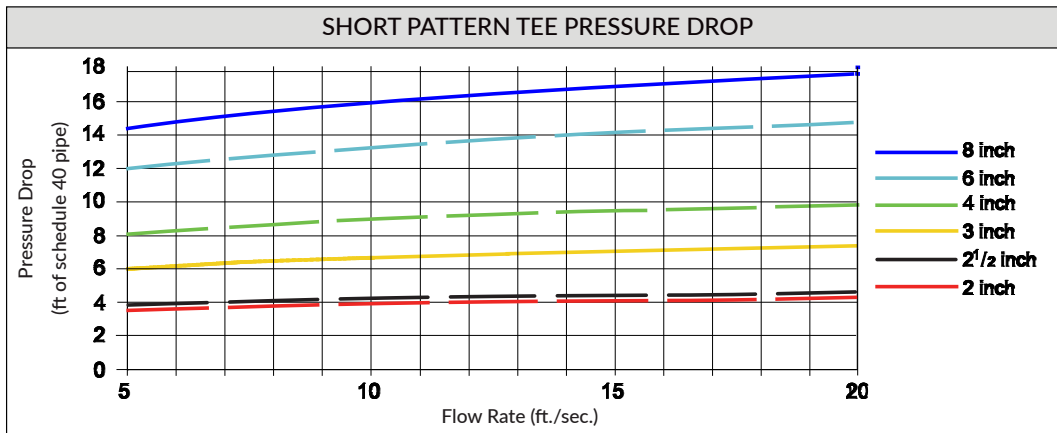


31T+ SHORT PATTERN TEE

- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative

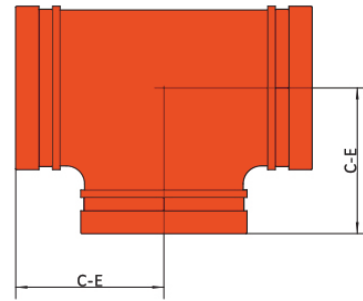


Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	SR Straight Tee
			C- E (in/mm)
2	2.375	300	2.76
50	60.3	20	70
2-1/2	2.875	300	2.99
65	73	20	76
2-1/2	3	300	2.99
65	76.1	20	76
3	3.5	300	3.35
80	88.9	20	85
4	4.25	300	4.02
100	108	20	102
4	4.5	300	4.02
100	114.3	20	102
5	5.25	300	4.76
125	133	20	121
5	5.5	300	4.76
125	139.7	20	121
5	5.563	300	4.76
125	141.3	20	121
6	6.25	300	5.12
150	159	20	130
6	6.5	300	5.12
150	165.1	20	130
6	6.625	300	5.51
150	168.3	20	140
8	8.625	300	6.89
200	219.1	20	175
10	10.75	300	8.46
250	273	20	215
12	12.75	300	8.66
300	323.9	20	220



31T STRAIGHT TEE

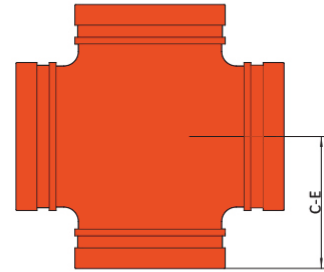
- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	Tees
			C- E
1	1.327	300	2.24
25	33.7	20	57
1-1/4	1.669	300	2.76
32	42.4	20	70
1-1/2	1.9	300	2.76
40	48.3	20	70
2	2.375	300	3.31
50	60.3	20	84
2-1/2	2.875	300	3.74
65	73	20	95
2-1/2	3	300	3.74
65	76.1	20	95
3	3.5	300	4.25
80	88.9	20	108
4	4.25	300	5.00
100	108	20	127
4	4.5	300	5.00
100	114.3	20	127
5	5.25	300	5.51
125	133	20	140
5	5.5	300	5.51
125	139.7	20	140
5	5.563	300	5.51
125	141.3	20	140
6	6.25	300	6.50
150	159	20	165
6	6.5	300	6.50
150	165.1	20	165
6	6.625	300	6.50
150	168.3	20	165
8	8.625	300	7.76
200	219.1	20	197
10	10.75	300	9.02
250	273	20	229
12	12.75	300	10.00
300	323.9	20	254

31X GROOVED CROSS

- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



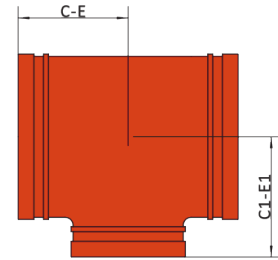
Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	Cross
			C- E
1	1.327	300	—
25	33.7	20	—
1-1/4	1.669	300	—
32	42.4	20	—
1-1/2	1.9	300	—
40	48.3	20	—
2	2.375	300	2.76
50	60.3	20	70
2-1/2	2.875	300	2.99
65	73	20	76
2-1/2	3	300	2.99
65	76.1	20	76
3	3.5	300	3.39
80	88.9	20	86
4	4.25	300	4.02
100	108	20	102
4	4.5	300	4.02
100	114.3	20	102
5	5.25	300	4.76
125	133	20	121
5	5.5	300	4.76
125	139.7	20	121
5	5.563	300	4.76
125	141.3	20	121
6	6.25	300	5.12
150	159	20	130
6	6.5	300	5.12
150	165.1	20	130
6	6.625	300	5.51
150	168.3	20	140
8	8.625	300	6.85
200	219.1	20	174
10	10.75	300	8.46
250	273	20	215
12	12.75	300	9.65
300	323.9	20	245

GROOVED FITTINGS



31RT GROOVED REDUCING TEE

- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



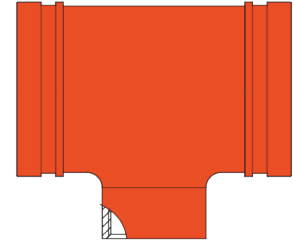
Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	Dimensions		Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	Dimensions	
			C-E in/mm	C1-E1 in/mm				C-E in/mm	C1-E1 in/mm
2x1-1/4	2.375x1.669	300	2.76	2.76	6x2	6.5x2.375	300	5.12	5.12
50x32	60.3x42.4	20	70	70	150x50	165.1x60.3	20	130	130
2x1-1/2	2.375x1.9	300	2.76	2.76	6x2-1/2	6.5x3	300	5.12	5.12
50x40	60.3x48.3	20	70	70	150x65	165.1x76.1	20	130	130
2-1/2x1-1/4	2.875x1.669	300	2.99	2.99	6x3	6.5x3.5	300	5.12	5.12
65x32	73x42.4	20	76	76	150x80	165.1x88.9	20	130	130
2-1/2x1-1/2	2.875x1.9	300	2.99	2.99	6x4	6.5x4.5	300	5.12	5.12
65x40	73x48.3	20	76	76	150x100	165.1x114.3	20	130	130
2-1/2x2	2.875x2.375	300	2.99	2.99	6x5	6.5x5.5	300	5.12	5.12
65x50	73x60.3	20	76	76	150x125	165.1x139.7	20	130	130
2-1/2x1-1/4	3x1.669	300	2.99	2.99	6x2	6.625x2.375	300	5.51	5.51
65x32	76.1x42.4	20	76	76	150x50	168.3x60.3	20	140	140
2-1/2x1-1/2	3x1.9	300	2.99	2.99	6x2-1/2	6.625x3	300	5.51	5.51
65x40	76.1x48.3	20	76	76	150x65	168.3x76.1	20	140	140
2-1/2x2	3x2.375	300	2.99	2.99	6x3	6.625x3.5	300	5.51	5.51
65x50	76.1x60.3	20	76	76	150x80	168.3x88.9	20	140	140
3x1-1/4	3.5x1.669	300	3.39	3.39	6x4	6.625x4.5	300	5.51	5.51
80x32	88.9x42.4	20	86	86	150x100	168.3x114.3	20	140	140
3x1-1/2	3.5x1.9	300	3.39	3.39	6x5	6.625x5.5	300	5.51	5.51
80x40	88.9x48.3	20	86	86	150x125	168.3x139.7	20	140	140
3x2	3.5x2.375	300	3.39	3.39	8x2-1/2	8.625x3	300	6.85	6.85
80x50	88.9x60.3	20	86	86	200x65	219.1x76.1	20	174	174
3x2-1/2	3.5x2.875	300	3.39	3.39	8x3	8.625x3.5	300	6.85	6.85
80x65	88.9x73	20	86	86	200x80	219.1x88.9	20	174	174
3x2-1/2	3.5x3	300	3.39	3.39	8x4	8.625x4.5	300	6.85	6.85
80x65	88.9x76.1	20	86	86	200x100	219.1x114.3	20	174	174
4x1-1/4	4.5x1.669	300	3.54	3.86	8x5	8.625x5.5	300	6.85	6.85
100x32	114.3x42.4	20	90	98*	00x125	219.1x139.7	20	174	174
4x1-1/2	4.5x1.9	300	3.54	3.86	8x6	8.625x6.25	300	6.85	6.85
100x40	114.3x48.3	20	90	98*	200x150	219.1x159	20	174	174
4x2	4.5x2.375	300	4.02	4.02	8x6	8.625x6.5	300	6.85	6.85
100x50	114.3x60.3	20	102	102	200x150	219.1x165.1	20	174	174
4x2-1/2	4.5x2.875	300	4.02	4.02	10x3	10.75x3.5	300	7.48	7.48
100x65	114.3x73	20	102	102	250x80	273x88.9	20	190	190
4x2-1/2	4.5x3	300	4.02	4.02	10x4	10.75x4.5	300	7.48	7.48
100x65	114.3x76.1	20	102	102	250x100	273x114.3	20	190	190
4x3	4.5x3.5	300	4.02	4.02	10x5	10.75x5.25	300	7.48	7.48
100x80	114.3x88.9	20	102	102	250x125	273x133	20	190	190
5x2	5.5x2.375	300	4.13	4.13	10x5	10.75x5.5	300	7.48	7.48
125x50	139.7x60.3	20	105	105	250x125	273x139.7	20	190	190
5x2-1/2	5.5x3	300	4.13	4.13	10x5	10.75x5.563	300	7.48	7.48
125x65	139.7x76.1	20	105	105	250x125	273x141.3	20	190	190
5x3	5.5x3.5	300	4.13	4.13	10x6	10.75x6.25	300	7.48	7.48
125x80	139.7x88.9	20	105	105	250x150	273x159	20	190	190
5x4	5.5x4.25	300	4.13	4.13	10x6	10.75x6.5	300	7.48	7.48
125x100	139.7x108	20	105	105	250x150	273x165.1	20	190	190
5x4	5.5x4.5	300	4.13	4.13	10x6	10.75x6.625	300	7.48	7.48
125x100	139.7x114.3	20	105	105	250x150	273x168.3	20	190	190
5x5	5.5x5.25	300	4.13	4.13	10x8	10.75x8.625	300	7.48	7.48
125x125	139.7x133	20	105	105	250x200	273x219.1	20	190	190
5x2	5.563x2.375	300	4.13	4.13	12x6	12.75x6.25	300	8.66	8.66
125x50	141.3x60.3	20	105	105	300x150	323.9x159	20	220	220
5x2-1/2	5.563x2.875	300	4.13	4.13	12x6	12.75x6.5	300	8.66	8.66
125x65	141.3x73	20	105	105	300x150	323.9x165.1	20	220	220
5x3	5.563x3.5	300	4.13	4.13	12x6	12.75x6.625	300	8.66	8.66
125x80	141.3x88.9	20	105	105	300x150	323.9x168.3	20	220	220
5x4	5.563x4.5	300	4.13	4.13	12x8	12.75x8.625	300	8.66	8.66
125x100	141.3x114.3	20	105	105	300x200	323.9x219.1	20	220	220
6x2-1/2	6.25x3	300	4.33	4.72	12x10	12.75x10.75	300	8.66	8.66
150x65	159x76.1	20	110	120*	300x250	323.9x273	20	220	220
6x3	6.25x3.5	300	4.33	4.72					
150x80	159x88.9	20	110	120*					

GROOVED FITTINGS



21RTS THREADED REDUCING TEE

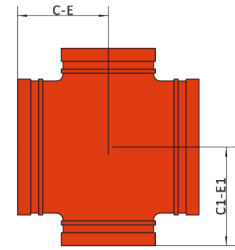
- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	Dimensions		Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	Dimensions	
			C-E in/mm	C1-E1 in/mm				C-E in/mm	C1-E1 in/mm
2x1	2.375x1.327	300	2.76	2.76	5x1-1/2	5.5x1.9	300	4.13	4.13
50x25	60.3x33.7	20	70	70	125x40	139.7x48.3	20	105	105
2x1-1/4	2.375x1.669	300	2.76	2.76	5x2	5.5x2.375	300	4.13	4.13
50x32	60.3x42.4	20	70	70	125x50	139.7x60.3	20	105	105
2x1-1/2	2.375x1.9	300	2.76	2.76	5x2-1/2	5.5x3	300	4.13	4.13
50x40	60.3x48.3	20	70	70	125x65	139.7x76.1	20	105	105
2-1/2x1	2.875x1.327	300	2.99	2.99	5x3	5.5x3.5	300	4.13	4.13
65x25	73.0x33.7	20	76	76	125x80	139.7x88.9	20	105	105
2-1/2x1-1/4	2.875x1.669	300	2.99	2.99	5x4	5.5x4.5	300	4.13	4.13
65x32	73.0x42.4	20	76	76	125x100	139.7x114.3	20	105	105
2-1/2x1-1/2	2.875x1.9	300	2.99	2.99	5x1-1/2	5.563x1.9	300	4.13	4.13
65x40	73.0x48.3	20	76	76	125x40	141.3x48.3	20	105	105
2-1/2x2	2.875x2.375	300	2.99	2.99	5x2	5.563x2.375	300	4.13	4.13
65x50	73.0x60.3	20	76	76	125x50	141.3x60.3	20	105	105
2-1/2x1	3x1.327	300	2.99	2.99	5x2-1/2	5.563x3	300	4.13	4.13
65x25	76.1x33.7	20	76	76	125x65	141.3x76.1	20	105	105
2-1/2x1-1/4	3x1.669	300	2.99	2.99	5x3	5.563x3.5	300	4.13	4.13
65x32	76.1x42.4	20	76	76	125x80	141.3x88.9	20	105	105
2-1/2x1-1/2	3x1.9	300	2.99	2.99	5x4	5.563x4.5	300	4.13	4.13
65x40	76.1x48.3	20	76	76	125x100	141.3x114.3	20	105	105
2-1/2x2	3x2.375	300	2.99	2.99	6x1-1/2	6.25x1.9	300	4.33	4.72
65x50	76.1x60.3	20	76	76	150x40	159.0x48.3	20	110	120*
3x1	3.5x1.327	300	3.39	3.39	6x2	6.25x2.375	300	4.33	4.72
80x25	88.9x33.7	20	86	86	150x50	159.0x60.3	20	110	120*
3x1-1/4	3.5x1.669	300	3.39	3.39	6x2-1/2	6.25x3	300	4.33	4.72
80x32	88.9x42.4	20	86	86	150x65	159.0x76.1	20	110	120*
3x1-1/2	3.5x1.9	300	3.39	3.39	6x3	6.25x3.5	300	4.33	4.72
80x40	88.9x48.3	20	86	86	150x80	159.0x88.9	20	110	120*
3x2	3.5x2.375	300	3.39	3.39	6x4	6.25x4.5	300	4.33	4.72
80x50	88.9x60.3	20	86	86	150x100	159.0x114.3	20	110	120*
3x2-1/2	3.5x3	300	3.39	3.39	6x1-1/2	6.5x1.9	300	4.33	4.72
80x65	88.9x76.1	20	86	86	150x40	165.1x48.3	20	110	120*
4x1-1/2	4.25x1.9	300	3.54	3.86	6x2	6.5x2.375	300	4.33	4.72
100x40	108.0x48.3	20	90	98*	150x50	165.1x60.3	20	110	120*
4x2	4.25x2.375	300	3.54	3.86	6x2-1/2	6.5x3	300	4.33	4.72
100x50	108.0x60.3	20	90	98*	150x65	165.1x76.1	20	110	120*
4x2-1/2	4.25x3	300	3.54	3.86	6x3	6.5x3.5	300	4.33	4.72
100x65	108.0x76.1	20	90	98*	150x80	165.1x88.9	20	110	120*
4x3	4.25x3.5	300	3.54	3.86	6x4	6.5x4.5	300	4.33	4.72
100x80	108x88.9	20	90	98*	150x100	165.1x114.3	20	110	120*
4x1	4.5x1.327	300	3.54	3.86	6x1-1/2	6.625x1.9	300	4.33	4.72
100x25	114.3x33.7	20	90	98*	150x40	168.3x48.3	20	110	120*
4x1-1/4	4.5x1.669	300	3.54	3.86	6x2	6.625x2.375	300	4.33	4.72
100x32	114.3x42.4	20	90	98*	150x50	168.3x60.3	20	110	120*
4x1-1/2	4.5x1.9	300	3.54	3.86	6x2-1/2	6.625x3	300	4.33	4.72
100x40	114.3x48.3	20	90	98*	150x65	168.3x76.1	20	110	120*
4x2	4.5x2.375	300	3.54	3.86	6x3	6.625x3.5	300	4.33	4.72
100x50	114.3x60.3	20	90	98*	150x80	168.3x88.9	20	110	120*
4x2-1/2	4.5x3	300	3.54	3.86	6x4	6.625x4.5	300	4.33	4.72
100x65	114.3x76.1	20	90	98*	150x100	168.3x114.3	20	110	120*
4x3	4.5x3.5	300	3.54	3.86	8x2	8.625x2.375	300	5.75	5.75
100x80	114.3x88.9	20	90	98*	200x50	219.1x60.3	20	146	146
5x2	5.25x2.375	300	4.13	4.13	8x2-1/2	8.625x3	300	5.75	5.75
125x50	133.0x60.3	20	105	105	200x50	219.1x60.3	20	146	146
5x2-1/2	5.25x3	300	4.13	4.13	8x3	8.625x3.5	300	5.75	5.75
125x65	133.0x76.1	20	105	105	200x80	219.1x88.9	20	146	146
5x3	5.25x3.5	300	4.13	4.13	8x4	8.625x4.5	300	5.75	5.75
125x80	133.0x88.9	20	105	105	200x100	219.1x114.3	20	146	146
5x4	5.25x4.5	300	4.13	4.13					
125x100	133.0x114.3	20	105	105					

31X GROOVED REDUCING CROSS

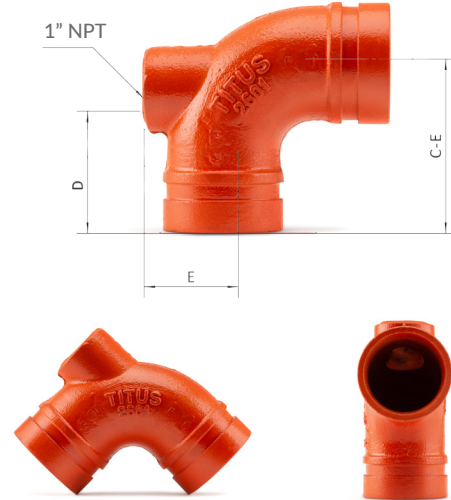
- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	Dimensions		Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	Dimensions	
			C-E in/mm	C1-E1 in/mm				C-E in/mm	C1-E1 in/mm
2-1/2x1-1/4	2.875x1.669	300	2.99	2.99	5x4	5.563x4.25	300	4.13	4.13
65x32	73x42.4	20	76	76	125x100	141.3x108	20	105	105
2-1/2x1-1/2	2.875x1.9	300	2.99	2.99	5x4	5.563x4.5	300	4.13	4.13
65x40	73x48.3	20	76	76	125x100	141.3x114.3	20	105	105
2-1/2x2	2.875x2.375	300	2.99	2.99	6x2-1/2	6.25x3	300	4.33	4.72
65x50	73x60.3	20	76	76	150x65	159x76.1	20	110	120
2-1/2x1/4	3x1.669	300	2.99	2.99	6x3	6.25x3.5	300	4.33	4.72
65x32	76.1x42.4	20	76	76	150x80	159x88.9	20	110	120
2-1/2x1-1/2	3x1.9	300	2.99	2.99	6x4	6.25x4.25	300	4.33	4.72
65x40	76.1x48.3	20	76	76	150x100	159x108	20	110	120
2-1/2x2	3x2.375	300	2.99	2.99	6x4	6.25x4.5	300	4.33	4.72
65x50	76.1x60.3	20	76	76	150x100	159x114.3	20	110	120
3x1-1/4	3.5x1.669	300	3.39	3.39	6x5	6.25x5.25	300	4.33	4.72
80x32	88.9x42.4	20	86	86	150x125	159x133	20	110	120
3x1-1/2	3.5x1.9	300	3.39	3.39	6x2	6.5x2.375	300	4.33	4.72
80x40	88.9x48.3	20	86	86	150x50	165.1x60.3	20	110	120
3x2	3.5x2.375	300	3.39	3.39	6x2-1/2	6.5x3	300	4.33	4.72
80x50	88.9x60.3	20	86	86	150x65	165.1x76.1	20	110	120
3x2-1/2	3.5x3	300	3.39	3.39	6x3	6.5x3.5	300	4.33	4.72
80x65	88.9x76.1	20	86	86	150x80	165.1x88.9	20	110	120
4x2	4.25x2.375	300	3.54	3.86	6x4	6.5x4.25	300	4.33	4.72
100x50	108x60.3	20	90	98	150x100	165.1x108	20	110	120
4x2-1/2	4.25x3	300	3.54	3.86	6x4	6.5x4.5	300	4.33	4.72
100x65	108x76.1	20	90	98	150x100	165.1x114.3	20	110	120
4x3	4.25x3.5	300	3.54	3.86	6x5	6.5x5.25	300	4.33	4.72
100x80	108x88.9	20	90	98	150x125	165.1x133	20	110	120
4x1-1/4	4.5x1.669	300	3.54	3.86	6x5	6.5x5.5	300	4.33	4.72
100x32	114.3x42.4	20	90	98	150x125	165.1x139.7	20	110	120
4x1-1/2	4.5x1.9	300	3.54	3.86	6x2	6.625x2.375	300	4.33	4.72
100x40	114.3x48.3	20	90	98	150x50	168.3x60.3	20	110	120
4x2	4.5x2.375	300	3.54	3.86	6x2-1/2	6.625x3	300	4.33	4.72
100x50	114.3x60.3	20	90	98	150x65	168.3x76.1	20	110	120
4x2-1/2	4.5x3	300	3.54	3.86	6x3	6.625x3.5	300	4.33	4.72
100x65	114.3x76.1	20	90	98	150x80	168.3x88.9	20	110	120
4x3	4.5x3.5	300	3.54	3.86	6x4	6.625x4.25	300	4.33	4.72
100x80	114.3x88.9	20	90	98	150x100	168.3x108	20	110	120
5x2-1/2	5.25x3	300	4.13	4.13	6x4	6.625x4.5	300	4.33	4.72
125x65	133x76.1	20	105	105	150x100	168.3x114.3	20	110	120
5x3	5.25x3.5	300	4.13	4.13	6x5	6.625x5.25	300	4.33	4.72
125x80	133x88.9	20	105	105	150x125	168.3x133	20	110	120
5x4	5.25x4.25	300	4.13	4.13	6x5	6.625x5.5	300	4.33	4.72
125x100	133x108	20	105	105	150x125	168.3x139.7	20	110	120
5x4	5.25x4.5	300	4.13	4.13	8x2-1/2	8.625x3	300	5.75	5.75
125x100	133x114.3	20	105	105	200x65	219.1x76.1	20	146	146
5x2	5.5x2.375	300	4.13	4.13	8x3	8.625x3.5	300	5.75	5.75
125x50	139.7x60.3	20	105	105	200x80	219.1x88.9	20	146	146
5x2-1/2	5.5x3	300	4.13	4.13	8x4	8.625x4.25	300	5.75	5.75
125x65	139.7x76.1	20	105	105	200x100	219.1x108	20	146	146
5x3	5.5x3.5	300	4.13	4.13	8x4	8.625x4.5	300	5.75	5.75
125x80	139.7x88.9	20	105	105	200x100	219.1x114.3	20	146	146
5x4	5.5x4.25	300	4.13	4.13	8x5	8.625x5.25	300	5.75	5.75
125x100	139.7x108	20	105	105	200x125	219.1x133	20	146	146
5x4	5.5x4.5	300	4.13	4.13	8x5	8.625x5.5	300	5.75	5.75
125x100	139.7x114.3	20	105	105	200x125	219.1x139.7	20	146	146
5x2	5.563x2.375	300	4.13	4.13	8x6	8.625x6.25	300	5.75	5.75
125x50	141.3x60.3	20	105	105	200x150	219.1x159	20	146	146
5x2-1/2	5.563x2.875	300	4.13	4.13	8x6	8.625x6.5	300	5.75	5.75
125x65	141.3x73	20	105	105	200x150	219.1x165.1	20	146	146
5x3	5.563x3.5	300	4.13	4.13					
125x80	141.3x88.9	20	105	105					

2601 DRAIN ELBOW

- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	Dimensions		
			C - E in/mm	D in/mm	E in/mm
2	2.375	300	3.27	2.76	1.48
50	60.3	20	83	70	37.5
2-1/2	2.875	300	3.74	2.76	1.77
65	73	20	95	70	45
3	3.5	300	4.25	2.76	2.17
80	88.9	20	108	70	55
4	4.5	300	5.00	2.76	2.70
100	114.3	20	127	70	68.5
5	5.563	300	5.51	2.76	3.23
125	141.3	20	140	70	82
6	6.625	300	6.50	2.76	3.76
150	168.3	20	165	70	95.5

31AE REDUCING END OF LINE ELBOW

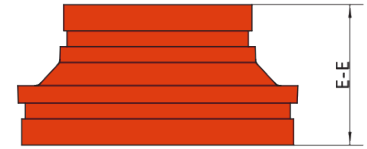
- Ductile Iron ASTM A-536 Grade 65-45-12.
- Female NPT Threads conform to ASME B1.20.1
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	BSP/NPT	Max.Working Pressure PSI/Bar	C - E in/mm
1-1/4x1/2 32x15	1/2 15	300 20	2.40 61
1-1/4x3/4 32x20	3/4 20	300 20	2.40 61
1-1/4x1 32x25	1 25	300 20	2.40 61
1-1/2x1/2 40x15	1/2 15	300 20	2.52 64
1-1/2x3/4 40x20	3/4 20	300 20	2.52 64
1-1/2x1 40x25	1 25	300 20	2.52 64
2x1/2 50x15	1/2 15	300 20	2.76 70
2x3/4 50x20	3/4 20	300 20	2.76 70
2x1 50x25	1 25	300 20	2.76 70
2-1/2x1/2 65x15	1/2 15	300 20	2.99 76
2-1/2x3/4 65x20	3/4 20	300 20	2.99 76
2-1/2x1 65x25	1 25	300 20	2.99 76

21CR GROOVED CONCENTRIC REDUCER

- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative

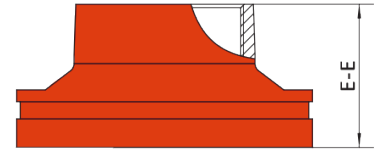


Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	E - E in/mm
1-1/2x1-1/4	1.9x1.669	300	2.52
40x32	48.3x42.4	20	64
2x1-1/4	2.375x1.669	300	2.52
50x32	60.3x42.4	20	64
2x1-1/2	2.375x1.9	300	2.52
50x40	60.3x48.3	20	64
2-1/2x1-1/4	2.875x1.669	300	2.52
65x32	73x42.4	20	64
2-1/2x1-1/2	2.875x1.9	300	2.52
65x40	73x48.3	20	64
2-1/2x2	2.875x2.375	300	2.52
65x50	73x60.3	20	64
2-1/2x1-1/2	3x1.9	300	2.52
65x40	76.1x48.3	20	64
2-1/2x2	3x2.375	300	2.52
65x50	76.1x60.3	20	64
3x1-1/4	3.5x1.669	300	2.52
80x32	88.9x42.4	20	64
3x1-1/2	3.5x1.9	300	2.52
80x40	88.9x48.3	20	64
3x2	3.5x2.375	300	2.52
80x50	88.9x60.3	20	64
3x2-1/2	3.5x2.875	300	2.52
80x65	88.9x73	20	64
3x2-1/2	3.5x3	300	2.52
80x65	88.9x76.1	20	64
4x1-1/4	4.5x1.669	300	2.99
100x32	114.3x42.4	20	76
4x1-1/2	4.5x1.9	300	2.99
100x40	114.3x48.3	20	76
4x2	4.5x2.375	300	2.99
100x50	114.3x60.3	20	76
4x2-1/2	4.5x2.875	300	2.99
100x65	114.3x73	20	76
4x2-1/2	4.5x3	300	2.99
100x65	114.3x76.1	20	76
4x3	4.5x3.5	300	2.99
100x80	114.3x88.9	20	76
5x2	5.25x2.375	300	3.35
125x50	133x60.3	20	85
5x2	5.5x2.375	300	3.35
125x50	139.7x60.3	20	85
5x2-1/2	5.5x2.875	300	3.35
125x65	139.7x73	20	85
5x2-1/2	5.5x3	300	3.35
125x65	139.7x76.1	20	85
5x3	5.5x3.5	300	3.35
125x80	139.7x88.9	20	85
5x4	5.5x4.25	300	3.35
125x100	139.7x108	20	85
5x4	5.5x4.5	300	3.35
125x100	139.7x114.3	20	85
5x2	5.563x2.375	300	3.35
125x50	141.3x60.3	20	85
5x2-1/2	5.563x2.875	300	3.35
125x65	141.3x73	20	85
5x2-1/2	5.563x3	300	3.35
125x65	141.3x76.1	20	85
5x3	5.563x3.5	300	3.35
125x80	141.3x88.9	20	85
5x4	5.563x4.5	300	3.35
125x100	141.3x114.3	20	85
6x2	6.25x2.375	300	3.35
150x50	159x60.3	20	85
6x4	6.25x4.25	300	3.35
150x100	159x108	20	85

Nominal Size in/mm	Pipe O.D. in/mm	Max.Working Pressure PSI/Bar	E - E in/mm
6x4	6.25x4.5	300	3.35
150x100	159x114.3	20	85
6x5	6.25x5.5	300	3.35
150x125	159x139.7	20	85
6x2	6.5x2.375	300	3.35
150x50	165.1x60.3	20	85
6x2-1/2	6.5x2.875	300	3.35
150x65	165.1x73	20	85
6x2-1/2	6.5x3	300	3.35
150x65	165.1x76.1	20	85
6x4	6.5x4.25	300	3.35
150x100	165.1x108	20	85
6x4	6.5x4.5	300	3.35
150x100	165.1x114.3	20	85
6x5	6.5x5.25	300	3.35
150x125	165.1x133	20	85
6x5	6.5x5.5	300	3.35
150x125	165.1x139.7	20	85
6x2	6.63x2.375	300	3.35
150x50	168.3x60.3	20	85
6x2-1/2	6.625x2.875	300	3.35
150x65	168.3x73	20	85
6x2-1/2	6.625x2.375	300	3.35
150x65	168.3x76.1	20	85
6x3	6.625x3.5	300	3.35
150x80	168.3x88.9	20	85
6x4	6.625x4.5	300	3.35
150x100	168.3x114.3	20	85
6x5	6.625x5.5	300	3.35
150x125	168.3x139.7	20	85
8x2-1/2	8.63x3	300	3.35
200x65	219.1x76.1	20	85
8x3	8.625x3.5	300	3.35
200x80	219.1x88.9	20	85
8x4	8.625x4.5	300	3.35
200x100	219.1x114.3	20	85
8x5	8.625x5.5	300	3.35
200x125	219.1x139.7	20	85
8x6	8.625x6.25	300	3.35
200x150	219.1x159	20	85
8x6	8.63x6.5	300	3.35
200x150	219.1x165.1	20	85
8x6	8.625x6.63	300	3.35
200x150	219.1x168.3	20	85
10x4	10.75x4.5	300	3.54
250x100	273x114.3	20	90
10x5	10.75x5.5	300	3.54
250x125	273x139.7	20	90
10x6	10.75x6.25	300	3.54
250x150	273x159	20	90
10x6	10.75x6.5	300	3.54
250x150	273x165.1	20	90
10x8	10.75x8.625	300	3.54
250x200	273x219.1	20	90
12x4	12.75x4.5	300	3.54
300x100	323.9x114.3	20	90
12x5	12.75x5.5	300	3.54
300x125	323.9x139.7	20	90
12x6	12.75x6.25	300	3.54
300x150	323.9x159	20	90
12x6	12.75x6.625	300	3.54
300x150	323.9x165.1	20	90
12x8	12.75x8.63	300	3.54
300x200	323.9x219.1	20	90
12x10	12.75x10.75	300	3.54
300x250	323.9x273	20	90

21MG THREADED CONCENTRIC REDUCER

- Ductile Iron ASTM A-536 Grade 65-45-12
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	E - E in/mm
2x1	2.375x1.327	230	2.52
50x25	60.3x33.7	16	64
2x1-1/4	2.375x1.669	230	2.52
50x32	60.3x42.4	16	64
2x1-1/2	2.375x1.9	230	2.52
50x40	60.3x48.3	16	64
2-1/2x1	2.875x1.327	230	2.52
65x25	73x33.7	16	64
2-1/2x1-1/4	2.875x1.669	230	2.52
65x32	73x42.4	16	64
2-1/2x1-1/2	2.875x1.9	230	2.52
65x40	73x48.3	16	64
2-1/2x2	2.875x2.375	230	2.52
65x50	73x60.3	16	64
2-1/2x1	3x1.327	230	2.52
65x25	76.1x33.7	16	64
2-1/2x1-1/4	3x1.669	230	2.52
65x32	76.1x42.4	16	64
2-1/2x1-1/2	3x1.9	230	2.52
65x40	76.1x48.3	16	64
2-1/2x2	3x2.375	230	2.52
65x50	76.1x60.3	16	64
3x1	3.5x1.327	230	2.52
80x25	88.9x33.7	16	64
3x1-1/4	3.5x1.669	230	2.52
80x32	88.9x42.4	16	64
3x1-1/2	3.5x1.9	230	2.52
80x40	88.9x48.3	16	64
3x2	3.5x2.375	230	2.52
80x50	88.9x60.3	16	64
3x2-1/2	3.5x3	230	2.52
80x65	88.9x76.1	16	64
4x1	4.25x1.327	230	2.99
100x25	108.0x33.7	16	76
4x1-1/4	4.25x1.669	230	2.99
100x32	108.0x42.4	16	76
4x1-1/2	4.25x1.9	230	2.99
100x40	108.0x48.3	16	76
4x2	4.25x2.375	230	2.99
100x50	108.0x60.3	16	76
4x2-1/2	4.25x3	230	2.99
100x65	108.0x76.1	16	76
4x3	4.25x3.5	230	2.99
100x80	108x88.9	16	76
4x1	4.5x1.327	230	2.99
100x25	114.3x33.7	16	76
4x1-1/4	4.5x1.669	230	2.99
100x32	114.3x42.4	16	76
4x1-1/2	4.5x1.9	230	2.99
100x40	114.3x48.3	16	76
4x2	4.5x2.375	230	2.99
100x50	114.3x60.3	16	76
4x2-1/2	4.5x2.875	230	2.99
100x65	114.3x73	16	76
4x2-1/2	4.5x3	230	2.99
100x65	114.3x76.1	16	76
4x3	4.5x3.5	230	2.99
100x80	114.3x88.9	16	76
5x1	5.5x1.327	230	3.35
125x25	139.7x33.7	16	85
5x1-1/4	5.5x1.669	230	3.35
125x32	139.7x42.4	16	85
5x1-1/2	5.5x1.9	230	3.35
125x40	139.7x48.3	16	85
5x2	5.5x2.375	230	3.35
125x50	139.7x60.3	16	85

Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	E - E in/mm
5x2-1/2	5.5x3	230	3.35
125x65	139.7x76.1	16	85
5x3	5.5x3.5	230	3.35
125x80	139.7x88.9	16	85
5x4	5.5x4.5	230	3.35
125x100	139.7x114.3	16	85
5x1	5.563x1.327	230	3.35
125x25	141.3x33.7	16	85
5x1-1/4	5.563x1.669	230	3.35
125x32	141.3x42.4	16	85
5x1-1/2	5.563x1.9	230	3.35
125x40	141.3x48.3	16	85
5x2	5.563x2.375	230	3.35
125x50	141.3x60.3	16	85
5x2-1/2	5.563x2.875	230	3.35
125x65	141.3x73	16	85
5x3	5.563x3.5	230	3.35
125x80	141.3x88.9	16	85
5x3	5.563x4.5	230	3.35
125x100	141.3x114.3	16	85
6x1	6.5x1.327	230	3.35
150x25	165.1x33.7	16	85
6x1-1/4	6.5x1.669	230	3.35
150x32	165.1x42.4	16	85
6x1-1/2	6.5x1.9	230	3.35
150x40	165.1x48.3	16	85
6x2	6.5x2.375	230	3.35
150x50	165.1x60.3	16	85
6x2-1/2	6.5x3	230	3.35
150x65	165.1x76.1	16	85
6x3	6.5x3.5	230	3.35
150x80	165.1x88.9	16	85
6x4	6.5x4.5	230	3.35
150x100	165.1x114.3	16	85
6x1	6.625x1.327	230	3.35
150x25	168.3x33.7	16	85
6x1-1/4	6.625x1.669	230	3.35
150x32	168.3x42.4	16	85
6x1-1/2	6.625x1.9	230	3.35
150x40	168.3x48.3	16	85
6x2	6.625x2.375	230	3.35
150x50	168.3x60.3	16	85
6x2-1/2	6.625x2.875	230	3.35
150x65	168.3x73	16	85
6x2-1/2	6.625x3	230	3.35
150x65	168.3x76.1	16	85
6x3	6.625x3.5	230	3.35
150x80	168.3x88.9	16	85
6x4	6.625x4.5	230	3.35
150x100	168.3x114.3	16	85
8x1	8.625x1.327	230	3.35
200x25	219.1x33.7	16	85
8x1-1/4	8.625x1.669	230	3.35
200x32	219.1x42.4	16	85
8x1-1/2	8.625x1.9	230	3.35
200x40	219.1x48.3	16	85
8x2	8.625x2.375	230	3.35
200x50	219.1x60.3	16	85
8x2-1/2	8.625x2.875	230	3.35
200x65	219.1x73	16	85
8x2-1/2	8.625x3	230	3.35
200x65	219.1x76.1	16	85
8x3	8.625x3.5	230	3.35
200x80	219.1x88.9	16	85
8x4	8.625x4.5	230	3.35
200x100	219.1x114.3	16	85

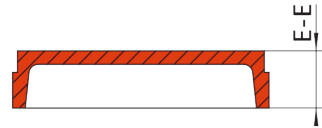
21C GROOVED END CAP

- Ductile Iron ASTM A-536 Grade 65-45-12.
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	E - E in/mm
1	1.327	300	0.94
25	33.7	20	23.8
1-1/4	1.669	300	0.94
32	42.4	20	23.8
1-1/2	1.9	300	0.94
40	48.3	20	23.8
2	2.375	300	0.94
50	60.3	20	23.8
2-1/2	3	300	0.94
65	76.1	20	23.8
3	3.5	300	0.94
80	88.9	20	23.8
4	4.25	300	1.00
100	108	20	25.4
4	4.5	300	1.00
100	114.3	20	25.4
5	5.25	300	1.00
125	133	20	25.4
5	5.5	300	1.00
125	139.7	20	25.4
5	5.563	300	1.00
125	141.3	20	25.4
5	6.25	300	1.00
150	159	20	25.4
6	6.5	300	1.00
150	165.1	20	25.4
6	6.625	300	1.00
150	168.3	20	25.4
8	8.625	300	1.19
200	219.1	20	30.2
10	10.750	300	1.26
250	273	20	32
12	12.75	300	1.26
300	323.9	20	32

31DC ECCENTRIC DRAIN CAP

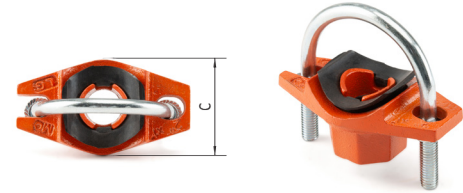
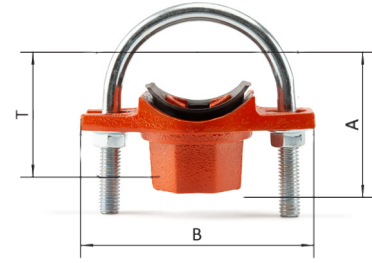


Nominal Size Grooved X Threaded in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	E - E in/mm
2x1	2.375x1.327	300	0.94
50x25	60.3x33.7	20	23.8
2x1-1/4	2.375x1.669	300	0.94
50x32	60.3x42.4	20	23.8
2x1-1/2	2.375x1.9	300	0.94
50x40	60.3x48.3	20	23.8
2-1/2x1	2.875x1.327	300	0.94
65x25	73x33.7	20	23.8
2-1/2x1-1/4	2.875x1.669	300	0.94
65x32	73x42.4	20	23.8
2-1/2x1-1/2	2.875x1.9	300	0.94
65x40	73x48.3	20	23.8
2-1/2x2	2.875x2.375	300	0.94
65x50	73.0x60.3	20	23.8
2-1/2x1	3x1.327	300	0.94
65x25	76.1x33.7	20	23.8
2-1/2x1-1/4	3x1.669	300	0.94
65x32	76.1x42.4	20	23.8
2-1/2x1-1/2	3x1.9	300	0.94
65x40	76.1x48.3	20	23.8
2-1/2x2	3x2.375	300	0.94
65x50	76.1x60.3	20	23.8
3x1	3.5x1.327	300	0.94
80x25	88.9x33.7	20	23.8
3x1-1/4	3.5x1.669	300	0.94
80x32	88.9x42.4	20	23.8
3x1-1/2	3.5x1.9	300	0.94
80x40	88.9x48.3	20	23.8
3x2	3.5x2.375	300	0.94
80x50	88.9x60.3	20	23.8
4x1	4.5x1.327	300	1.00
100x25	114.3x33.7	20	25.4
4x1-1/2	4.5x1.669	300	1.00
100x32	114.3x42.4	20	25.4
4x1-1/2	4.5x1.9	300	1.00
100x40	114.3x48.3	20	25.4
4x2	4.5x2.375	300	1.00
100x50	114.3x60.3	20	25.4
5x2	5.5x2.375	300	1.00
125x50	139.7x60.3	20	25.4
5x2	5.563x2.375	300	1.00
125x50	141.3x60.3	20	25.4
6x1	6.5x1.327	300	1.00
150x25	165.1x33.7	20	25.4
6x2	6.5x2.375	300	1.00
150x50	165.1x60.3	20	25.4
6x1-1/4	6.625x1.669	300	1.00
150x32	168.3x42.4	20	25.4
6x1-1/2	6.63x1.9	300	1.00
150x40	168.3x48.3	20	25.4
6x2	6.63x2.375	300	1.00
150x50	168.3x60.3	20	25.4
8x2	8.625x2.375	300	1.19
200x50	219.1x60.3	20	30.2

41 SADDLE-LET OUTLET TEE

U BOLT MECHANICAL TEE

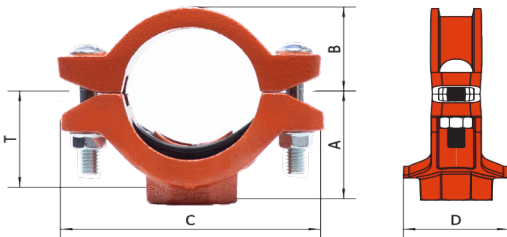
- Ductile Iron ASTM A-536 Grade 65-45-12.
- Female NPT Threads conform to ASME B1.20.1
- Finish available in electro zinc plated or orange epoxy paint
- Gasket: Grade E – EPDM with operating temperature of -30F to 230F (-34C to 110C) and is marked by a green stripe
- Bolts are SAE J429 Grade 5
- Pressure rated up to 300p
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Hole Dia. \bar{F} +0.04,-0 / +1,-0	Dimensions - in/mm			Take-Out T in/mm	Bolt Size in	Bolt Torque Lbs-Ft/N-M
		A	B	C			
1x1/2 25x15	0.95 24	1.81 46	2.91 74	1.73 44	1.57 40	U-Bolt 5/16 Φ	18-22 25-30
1x3/4 25x20	0.95 24	1.81 46	2.91 74	1.73 44	1.57 40	U-Bolt 5/16 Φ	18-22 25-30
1-1/4x1/2 32x15	1.18 30	2.09 53	3.50 89	2.20 56	1.73 44	U-Bolt 3/8 Φ	22-29 30-40
1-1/4x3/4 32x20	1.18 30	2.09 53	3.50 89	2.20 56	1.73 44	U-Bolt 3/8 Φ	22-29 30-40
1-1/4x1 32x25	1.18 30	2.20 56	3.50 89	2.20 56	1.85 47	U-Bolt 3/8 Φ	22-29 30-40
1-1/2x1/2 40x15	1.18 30	2.17 55	3.50 89	2.20 56	1.81 46	U-Bolt 3/8 Φ	22-29 30-40
1-1/2x3/4 40x20	1.18 30	2.17 55	3.50 89	2.20 56	1.81 46	U-Bolt 3/8 Φ	22-29 30-40
1-1/2x1 40x25	1.18 30	2.28 58	3.50 89	2.20 56	1.93 49	U-Bolt 3/8 Φ	22-29 30-40
2x1/2 50x15	1.18 30	2.52 64	3.86 98	2.20 56	2.09 53	U-Bolt 3/8 Φ	22-29 30-40
2x3/4 50x20	1.18 30	2.52 64	3.86 98	2.20 56	2.09 53	U-Bolt 3/8 Φ	22-29 30-40
2x1 50x25	1.18 30	2.64 67	3.86 98	2.20 56	2.20 56	U-Bolt 3/8 Φ	22-29 30-40
2-1/2x1/2 65x15	1.18 30	2.72 69	4.37 111	2.20 56	2.28 58	U-Bolt 3/8 Φ	22-29 30-40
2-1/2x3/4 65x20	1.18 30	2.72 69	4.37 111	2.20 56	2.28 58	U-Bolt 3/8 Φ	22-29 30-40
2-1/2x1 65x25	1.18 30	2.83 72	4.37 111	2.20 56	2.40 61	U-Bolt 3/8 Φ	22-29 30-40
3x1 80x25	1.18 30	3.17 80.5	5.04 128	2.20 56	2.64 67	U-Bolt 3/8 Φ	22-29 30-40

31MT MECHANICAL TEE - THREADED

- Ductile Iron ASTM A-536 Grade 65-45-12.
- Female NPT Threads conform to ASME B1.20.1
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- Gasket: Grade E – EPDM with operating temperature of -30F to 230F (-34C to 110C) and is marked by a green stripe
- Bolts are SAE J429 Grade 5
- Pressure rated up to 300psi
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D.	Hole Dia. F +0.13,-0 /+3.2,-0	Dimensions - in/mm					Bolt Size in/mm
			T±	A	B	C	D	
2x1/2	2.375x0.825	1.50	1.97	2.20	1.65	4.72	2.99	3/8x2-3/8
50x15	60.3x21.3	38	50	56	42	120	76	M10x60
2x3/4	2.375x1.05	1.50	1.97	2.20	1.65	4.72	2.99	3/8x2-3/8
50x20	60.3x26.7	38	50	56	42	120	76	M10x60
2x1	2.375x1.327	1.50	1.85	2.20	1.65	4.72	2.99	3/8x2-3/8
50x25	60.3x33.7	38	47	56	42	120	76	M10x60
2x1-1/4	2.375x1.669	1.75	2.05	2.68	1.65	4.72	3.31	3/8x2-3/8
50x32	60.3x42.4	44.5	52	68	42	120	84	M10x60
2x1-1/2	2.375x1.9	1.75	2.05	2.80	1.65	4.72	3.31	3/8x2-3/8
50x40	60.3x48.3	44.5	52	71	42	120	84	M10x60
2-1/2x1/2	2.375x0.825	1.50	2.20	2.42	1.85	5.63	2.99	1/2x2-5/8
65x15	73x21.3	38	56	61.5	47	143	76	M12x65
2-1/2x3/4	2.875x1.05	1.50	2.20	2.42	1.85	5.63	2.99	1/2x2-5/8
65x20	73x26.7	38	56	61.5	47	143	76	M12x65
2-1/2x1	2.875x1.327	1.50	2.09	2.42	1.85	5.63	2.99	1/2x2-5/8
65x25	73.0x33.7	38	53	61.5	47	143	76	M12x65
2-1/2x1-1/4	2.875x1.669	1.75	2.28	2.89	1.85	5.63	3.31	1/2x2-5/8
65x32	73.0x42.4	44.5	58	73.5	47	143	84	M12x65
2-1/2x1-1/2	2.875x1.9	2.00	2.28	2.89	1.85	5.63	3.50	1/2x2-5/8
65x40	73.0x48.3	50.8	58	73.5	47	143	90	M12x65
2-1/2x1/2	3x0.825	1.50	2.20	2.42	1.89	5.63	2.99	1/2x2-5/8
65x15	76.1x21.3	38	56	61.5	48	143	76	M12x65
2-1/2x3/4	3x1.05	1.50	2.20	2.42	1.89	5.63	2.99	1/2x2-5/8
65x20	76.1x26.7	38	56	61.5	48	143	76	M12x65
2-1/2x1	3x1.327	1.50	2.09	2.42	1.89	5.63	2.99	1/2x2-5/8
65x25	76.1x33.7	38	53	61.5	48	143	76	M12x65
2-1/2x1-1/4	3x1.669	1.75	2.28	2.89	1.89	5.63	3.31	1/2x2-5/8
65x32	76.1x42.4	44.5	58	73.5	48	143	84	M12x65
2-1/2x1-1/2	3x1.9	2.00	2.28	2.95	1.89	5.63	3.54	1/2x2-5/8
65x40	76.1x48.3	50.8	58	75	48	143	90	M12x65
3x1/2	3.5x0.825	1.50	2.52	2.74	2.17	6.22	2.99	1/2x2-5/8
80x15	88.9x21.3	38	64	69.5	55	158	76	M12x65
3x3/4	3.5x1.05	1.50	2.48	2.74	2.17	6.22	2.99	1/2x2-5/8
80x20	88.9x26.7	38	63	69.5	55	158	76	M12x65
3x1	3.5x1.327	1.50	2.40	2.74	2.17	6.22	2.99	1/2x2-5/8
80x25	88.9x33.7	38	61	69.5	55	158	76	M12x65
3x1-1/4	3.5x1.669	1.75	2.56	3.19	2.17	6.22	3.31	1/2x2-5/8
80x32	88.9x42.4	44.5	65	81	55	158	84	M12x65
3x1-1/2	3.5x1.9	2.00	2.80	3.19	2.17	6.22	3.54	1/2x2-5/8
80x40	88.9x48.3	50.8	71	81	55	158	90	M12x65
3x2	3.5x2.375	2.50	2.76	3.19	2.17	6.22	3.98	1/2x2-5/8
80x50	88.9x60.3	63.5	70	81	55	158	101	M12x65
4x1	4.250x1.327	1.50	2.87	2.99	2.44	6.57	2.99	1/2x2-5/8
100x25	108.1x33.7	38	73	76	62	167	76	M12x65
4x1-1/4	4.25x1.669	1.81	3.07	2.99	2.44	6.57	3.27	1/2x2-5/8
100x32	108.0x42.4	46	78	76	62	167	83	M12x65
4x1-1/2	4.25x1.9	2.09	3.27	2.99	2.44	6.57	3.54	1/2x2-5/8
100x40	108.0x48.3	53	83	76	62	167	90	M12x65
4x2	4.25x2.375	2.52	3.27	3.07	2.44	6.57	3.94	1/2x2-5/8
100x50	108.0x60.3	64	83	78	62	167	100	M12x65
4x2-1/2	4.25x3	3.15	2.87	4.13	2.44	6.57	4.61	1/2x2-5/8
100x65	108.0x76.1	80	73	105	62	167	117	M12x65
4x1/2	4.5x0.825	1.50	3.03	3.11	2.56	7.13	2.99	1/2x2-3/4
100x15	114.3x21.3	38	77	79	65	181	76	M12x70
4x3/4	4.5x1.05	1.50	2.99	3.11	2.56	7.13	2.99	1/2x2-3/4
100x20	114.3x26.7	38	76	79	65	181	76	M12x70
4x1	4.5x1.327	1.50	2.87	3.23	2.56	7.13	2.99	1/2x2-3/4
100x25	114.3x33.7	38	73	82	65	181	76	M12x70
4x1-1/4	4.5x1.669	1.75	3.07	3.70	2.56	7.13	3.31	1/2x2-3/4
100x32	114.3x42.4	44.5	78	94	65	181	84	M12x70
4x1-1/2	4.5x1.9	2.00	3.27	3.70	2.56	7.13	3.54	1/2x2-3/4
100x40	114.3x48.3	50.8	83	94	65	181	90	M12x70
4x2	4.5x2.375	2.50	3.27	3.70	2.56	7.13	3.98	1/2x2-3/4
100x50	114.3x60.3	63.5	83	94	65	181	101	M12x70
4x2-1/2	4.5x3	2.76	2.87	3.90	2.56	7.13	4.61	1/2x2-3/4
100x65	114.3x76.1	70	73	99	65	181	117	M12x70
4x3	4.5x3.5	3.50	3.31	3.94	2.56	7.13	5.35	1/2x2-3/4
100x80	114.3x88.9	89	84	100	65	181	136	M12x70
5x1	5.250x1.327	1.50	3.35	3.50	2.91	8.07	2.99	1/2x3
125x25	133.0x33.7	38	85	89	74	205	76	M12x75
5x1-1/4	5.25x1.669	1.81	3.54	3.50	2.91	8.07	3.27	1/2x3
125x32	133.0x42.4	46	90	89	74	205	83	M12x75
5x1-1/2	5.25x1.9	2.09	3.74	3.50	2.91	8.07	3.54	1/2x3
125x40	133.0x48.3	53	95	89	74	205	90	M12x75

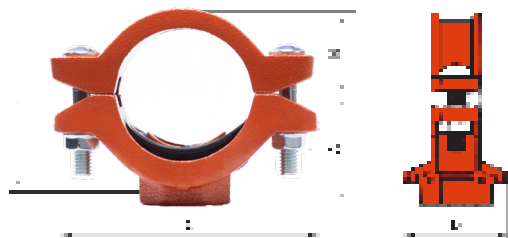
MECHANICAL TEES



31MT

MECHANICAL TEE - THREADED

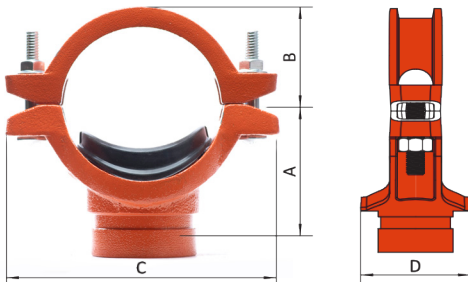
(CONTINUED)



Nominal Size in/mm	Pipe O.D.	Hole Dia.† +0.13,-0 /+3.2,-0	Dimensions - in/mm					Bolt Size in/mm
			T‡	A	B	C	D	
5x2	5.25x2.375	2.52	3.74	3.50	2.91	8.07	3.94	1/2x3
125x50	133.0x60.3	64	95	89	74	205	100	M12x75
5x2-1/2	5.25x3	3.15	3.82	3.62	2.91	8.07	4.61	1/2x3
125x65	133.0x76.1	80	97	92	74	205	117	M12x75
5x3	5.25x3.5	3.62	4.17	3.70	2.91	8.07	5.08	1/2x3
125x80	133.0x88.9	92	106	94	74	205	129	M12x75
5x1	5.5x1.327	1.50	3.82	3.80	3.03	8.62	2.99	5/8x3-1/3
125x25	139.7x33.7	38	97	96.5	77	219	76	M16x85
5x1-1/4	5.5x1.669	1.75	3.82	4.21	3.03	8.62	3.31	5/8x3-1/3
125x32	139.7x42.4	44.5	97	107	77	219	84	M16x85
5x1-1/2	5.5x1.9	2.00	4.02	4.21	3.03	8.62	3.54	5/8x3-1/3
125x40	139.7x48.3	50.8	102	107	77	219	90	M16x85
5x2	5.5x2.375	2.50	4.02	4.25	3.03	8.62	3.98	5/8x3-1/3
125x50	139.7x60.3	63.5	102	108	77	219	101	M16x85
5x2-1/2	5.5x3	2.76	3.62	4.53	3.03	8.62	4.61	5/8x3-1/3
125x65	139.7x76.1	70	92	115	77	219	117	M16x85
5x3	5.5x3.5	3.50	3.82	4.65	3.03	8.62	5.35	5/8x3-1/3
125x80	139.7x88.9	89	97	118	77	219	136	M16x85
5x1	5.563x1.327	1.50	3.03	3.80	3.03	8.62	2.99	5/8x3-1/3
125x25	141.3x33.7	38	77	96.5	77	219	76	M16x85
5x1-1/4	5.563x1.669	1.75	3.03	4.21	3.03	8.62	3.31	5/8x3-1/3
125x32	141.3x42.4	44.5	77	107	77	219	84	M16x85
5x1-1/2	5.563x1.9	2.00	3.27	4.21	3.03	8.62	3.54	5/8x3-1/3
125x40	141.3x48.3	50.8	83	107	77	219	90	M16x85
5x2	5.563x2.375	2.50	3.27	4.25	3.03	8.62	3.98	5/8x3-1/3
125x50	141.3x60.3	63.5	83	108	77	219	101	M16x85
5x2-1/2	5.563x3	2.76	3.66	4.53	3.03	8.62	4.61	5/8x3-1/3
125x65	141.3x76.1	70	93	115	77	219	117	M16x85
5x3	5.563x3.5	3.50	3.82	4.65	3.03	8.62	5.35	5/8x3-1/3
125x80	141.3x88.9	89	97	118	77	219	136	M16x85
6x1	6.250x1.327	1.50	4.45	4.00	3.58	9.17	2.99	9/16x3
150x25	159.0x33.7	38	113	101.5	91	233	76	M14x75
6x1-1/4	6.250x1.669	1.81	4.45	4.00	3.58	9.17	3.27	9/16x3
150x32	159.0x42.4	46	113	101.5	91	233	83	M14x75
6x1-1/2	6.250x1.9	2.09	4.41	4.00	3.58	9.17	3.54	9/16x3
150x40	159.0x48.3	53	112	101.5	91	233	90	M14x75
6x2	6.250x2.375	2.52	4.37	4.00	3.58	9.17	3.94	9/16x3
150x50	159.0x60.3	64	111	101.5	91	233	100	M14x75
6x2-1/2	6.250x3	3.15	4.37	4.15	3.58	9.17	4.61	5/8x3-1/3
150x65	159.0x76.1	80	111	105.5	91	233	117	M16x85
6x3	6.250x3.5	3.62	4.33	4.15	3.58	9.17	5.08	5/8x3-1/3
150x80	159.0x88.9	92	110	105.5	91	233	129	M16x85
6x4	6.250x4.5	4.65	3.81	4.33	3.58	9.17	6.18	5/8x3-1/3
150x100	159.0x114.3	118	96.8	110	91	233	157	M16x85
6x1	6.5x1.327	1.50	3.90	4.27	3.7	9.76	2.99	5/8x3-1/3
150x25	165.1x33.7	38	99	108.5	94	248	76	M16x85
6x1-1/4	6.5x1.669	1.75	4.41	4.72	3.7	9.76	3.31	5/8x3-1/3
150x32	165.1x42.4	44.5	112	120	94	248	84	M16x85
6x1-1/2	6.5x1.9	2.00	4.41	4.72	3.7	9.76	3.54	5/8x3-1/3
150x40	165.1x48.3	50.8	112	120	94	248	90	M16x85
6x2	6.5x2.375	2.50	4.37	4.76	3.7	9.76	3.98	5/8x3-1/3
150x50	165.1x60.3	63.5	111	121	94	248	101	M16x85
6x2-1/2	6.5x3	2.76	4.33	4.98	3.7	9.76	4.61	5/8x3-1/3
150x65	165.1x76.1	70	110	126.5	94	248	117	M16x85
6x3	6.5x3.5	3.50	4.33	5.10	3.7	9.76	5.35	5/8x3-1/3
150x80	165.1x88.9	89	110	129.5	94	248	136	M16x85
6x4	6.5x4.5	4.49	3.82	5.35	3.7	9.76	6.38	5/8x3-1/3
150x100	165.1x114.3	114	97	136	94	248	162	M16x85
6x1	6.625x1.327	1.50	4.41	4.27	3.82	9.76	2.99	5/8x3-1/3
150x25	168.3x33.7	38	112	108.5	97	248	76	M16x85
6x1-1/4	6.625x1.669	1.75	4.41	4.72	3.82	9.76	3.31	5/8x3-1/3
150x32	168.3x42.4	44.5	112	120	97	248	84	M16x85
6x1-1/2	6.625x1.9	2.00	4.41	4.72	3.82	9.76	3.54	5/8x3-1/3
150x40	168.3x48.3	50.8	112	120	97	248	90	M16x85
6x2	6.625x2.375	2.50	4.37	4.76	3.82	9.76	3.98	5/8x3-1/3
150x50	168.3x60.3	63.5	111	121	97	248	101	M16x85
6x2-1/2	6.625x3	2.76	4.33	5.04	3.82	9.76	4.61	5/8x3-1/3
150x65	168.3x76.1	70	110	128	97	248	117	M16x85
6x3	6.625x3.5	3.50	4.33	5.16	3.82	9.76	5.35	5/8x3-1/3
150x80	168.3x88.9	89	110	131	97	248	136	M16x85
6x4	6.625x4.5	4.49	3.82	5.49	3.82	9.76	6.38	5/8x3-1/3
150x100	168.3x114.3	114	97	139.5	97	248	162	M16x85
8x1	8.625x1.327	1.50	5.98	5.35	1.92	12.68	2.99	5/8x3-1/2
200x25	219.1x33.7	38	152	136	125	322	76	M20x90
8x1-1/4	8.625x1.669	1.75	5.98	5.79	1.92	12.68	3.31	5/8x3-1/2
200x32	219.1x42.4	44.5	152	147	125	322	84	M20x90
8x1-1/2	8.625x1.9	2.00	5.98	5.79	1.92	12.68	3.54	5/8x3-1/2
200x40	219.1x48.3	50.8	152	147	125	322	90	M20x90
8x2	8.625x2.375	2.50	5.43	5.79	1.92	12.68	3.98	5/8x3-1/2
200x50	219.1x60.3	63.5	138	147	125	322	101	M20x90
8x2-1/2	8.625x3	2.76	5.08	6.14	1.92	12.68	4.61	5/8x3-1/2
200x65	219.1x76.1	70	129	156	125	322	117	M20x90
8x3	8.625x3.5	3.50	5.31	6.24	1.92	12.68	5.35	5/8x3-1/2
200x80	219.1x88.9	89	135	158.5	125	322	136	M20x90
8x4	8.625x4.5	4.49	4.80	6.57	1.92	12.68	6.38	5/8x3-1/2
200x100	219.1x114.3	114	122	167	125	322	162	M20x90

31MG MECHANICAL TEE - GROOVED

- Ductile Iron ASTM A-536 Grade 65-45-12
- All grooved dimensions conform to ASME B1.20.1
- Finish available in standard orange paint or hot dipped galvanized (ASTM A-153)
- Gasket: Grade E – EPDM with operating temperature of -30F to 230F (-34C to 110C) and is marked by a green stripe
- Bolts are SAE J429 Grade 5
- Pressure rated up to 300psi
- For current listing/approval details contact a Titus representative



Nominal Size in/mm	Pipe O.D.	Hole Dia. F +0.13, -0 / +3.2, -0	Dimensions - in/mm				Bolt Size in/mm
			A	B	C	D	
2x1	2.375x1.327	1.50	2.83	1.65	4.72	2.99	3/8x2-3/8
50x25	60.3x33.7	38	72	42	120	76	M10x60
2x1-1/4	2.375x1.669	1.75	2.85	1.65	4.72	3.31	3/8x2-3/8
50x32	60.3x42.4	44.5	72.5	42	120	84	M10x60
2x1-1/2	2.375x1.9	1.75	2.85	1.65	4.72	3.31	3/8x2-3/8
50x40	60.3x48.3	44.5	72.5	42	120	84	M10x60
2-1/2x1	2.875x1.327	1.50	3.07	1.85	5.63	2.99	1/2x2-5/8
65x25	73x33.7	38	78	47	143	76	M12x65
2-1/2x1-1/4	2.875x1.669	1.75	3.09	1.85	5.63	3.31	1/2x2-5/8
65x32	73x42.4	44.5	78.5	47	143	84	M12x65
2-1/2x1-1/2	2.875x1.9	2.00	3.09	1.85	5.63	3.54	1/2x2-5/8
65x40	73x48.3	50.8	78.5	47	143	90	M12x65
2-1/2x1	3x1.327	1.50	3.13	1.89	5.63	2.99	1/2x2-5/8
65x25	76.1x33.7	38	79.5	48	143	76	M12x65
2-1/2x1-1/4	3x1.669	1.75	3.15	1.89	5.63	3.31	1/2x2-5/8
65x32	76.1x42.4	44.5	80	48	143	84	M12x65
2-1/2x1-1/2	3x1.9	2.00	3.15	1.89	5.63	3.54	1/2x2-5/8
65x40	76.1x48.3	50.8	80	48	143	90	M12x65
3x1	3.5x1.327	1.50	3.37	2.17	6.22	2.99	1/2x2-5/8
80x25	88.9x33.7	38	85.5	55	158	76	M12x65
3x1-1/4	3.5x1.669	1.75	3.39	2.17	6.22	3.31	1/2x2-5/8
80x32	88.9x42.4	44.5	86	55	158	84	M12x65
3x1-1/2	3.5x1.9	2.00	3.39	2.17	6.22	3.54	1/2x2-5/8
80x40	88.9x48.3	50.8	86	55	158	90	M12x65
3x2	3.5x2.375	2.50	3.43	2.17	6.22	3.98	1/2x2-5/8
80x50	88.9x60.3	63.5	87	55	158	101	M12x65
4x2	4.25x2.375	2.52	3.64	2.44	6.77	3.54	1/2x2-5/8
100x50	108x60.3	64	92.5	62	172	90	M12x65
4x2-1/2	4.25x3	3.15	3.64	2.44	6.77	4.21	1/2x2-5/8
100x65	108x76.1	80	92.5	62	172	107	M12x65
4x1	4.5x1.327	1.50	3.86	2.56	7.13	2.99	1/2x2-3/4
100x25	114.3x33.7	38	98	65	181	76	M12x70
4x1-1/4	4.5x1.669	1.75	3.90	2.56	7.13	3.31	1/2x2-3/4
100x32	114.3x42.4	44.5	99	65	181	84	M12x70
4x1-1/2	4.5x1.9	2.00	3.90	2.56	7.13	3.54	1/2x2-3/4
100x40	114.3x48.3	50.8	99	65	181	90	M12x70
4x2	4.5x2.375	2.50	3.90	2.56	7.13	3.98	1/2x2-3/4
100x50	114.3x60.3	63.5	99	65	181	101	M12x70
4x2-1/2	4.5x2.875	2.76	3.90	2.56	7.13	4.61	1/2x2-3/4
100x65	114.3x73	70	99	65	181	117	M12x70
4x2-1/2	4.5x3	2.76	3.90	2.56	7.13	4.61	1/2x2-3/4
100x65	114.3x76.1	70	99	65	181	117	M12x70
4x3	4.5x3.5	3.50	3.90	2.56	7.13	5.35	1/2x2-3/4
100x80	114.3x88.9	89	99	65	181	136	M12x70
5x1-1/2	5.25x1.9	2.09	4.15	2.91	8.07	3.54	1/2x3
125x40	133x48.3	53	105.5	74	205	90	M12x75
5x2	5.25x2.375	2.52	4.15	2.91	8.07	3.94	1/2x3
125x50	133x60.3	64	105.5	74	205	100	M12x75
5x2-1/2	5.25x3	3.15	4.15	2.91	8.07	4.61	1/2x3
125x65	133x76.1	80	105.5	74	205	117	M12x75
5x3	5.25x3.5	3.62	4.15	2.91	8.07	5.08	1/2x3
125x80	133x88.9	92	105.5	74	205	129	M12x75
5x1-1/4	5.5x1.669	1.75	4.41	3.03	8.62	3.31	5/8x3-1/3
125x32	139.7x42.4	44.5	112	77	219	84	M16x85
5x1-1/2	5.5x1.9	2.00	4.41	3.03	8.62	3.54	5/8x3-1/3
125x40	139.7x48.3	50.8	112	77	219	90	M16x85
5x2	5.5x2.375	2.50	4.45	3.03	8.62	3.98	5/8x3-1/3
125x50	139.7x60.3	63.5	113	77	219	101	M16x85
5x2-1/2	5.5x2.875	2.76	4.45	3.03	8.62	4.61	5/8x3-1/3
125x65	139.7x73	70	113	77	219	117	M16x85
5x2-1/2	5.5x3	2.76	4.45	3.03	8.62	4.61	5/8x3-1/3
125x65	139.7x76.1	70	113	77	219	117	M16x85
5x3	5.5x3.5	3.50	4.45	3.03	8.62	5.35	5/8x3-1/3
125x80	139.7x88.9	89	113	77	219	136	M16x85

MECHANICAL TEES



31MG

MECHANICAL TEE - GROOVED (CONTINUED)

Nominal Size in/mm	Pipe O.D.	Hole Dia. F +0.13,-0 /+3.2,-0	Dimensions - in/mm				Bolt Size in/mm
			A	B	C	D	
5x1-1/2	5.563x1.669	1.75	4.41	3.03	8.62	3.31	5/8x3-1/3
125x40	141.3x42.4	44.5	112	77	219	84	M16x85
5x1-1/2	5.563x1.9	2.00	4.41	3.03	8.62	3.54	5/8x3-1/3
125x40	141.3x48.3	50.8	112	77	219	90	M16x85
5x2	5.563x2.375	2.50	4.45	3.03	8.62	3.98	5/8x3-1/3
125x50	141.3x60.3	63.5	113	77	219	101	M16x85
5x2-1/2	5.563x2.875	2.76	4.45	3.03	8.62	4.61	5/8x3-1/3
125x65	141.3x73	70	113	77	219	117	M16x85
5x2-1/2	5.563x3	2.76	4.45	3.03	8.62	4.61	5/8x3-1/3
125x65	141.3x76.1	70	113	77	219	117	M16x85
5x3	5.563x3.5	3.50	4.45	3.03	8.62	5.35	5/8x3-1/3
125x80	141.3x88.9	89	113	77	219	136	M16x85
6x2	6.25x2.375	2.52	4.65	3.58	9.17	3.94	9/16x3
150x50	159x60.3	64	118	91	233	100	M14x75
6x2-1/2	6.25x3	3.15	4.65	3.58	9.17	4.61	9/16x3
150x65	159x76.1	80	118	91	233	117	M14x75
6x3	6.25x3.5	3.62	4.65	3.58	9.17	5.08	9/16x3
150x80	159x88.9	92	118	91	233	129	M14x75
6x4	6.25x4.25	4.09	4.70	3.58	9.17	5.63	9/16x3
150x100	159.0x108.0	104	119.5	91	233	143	M14x75
6x4	6.25x4.5	4.37	4.70	3.58	9.17	6.02	9/16x3
150x100	159.0x114.3	111	119.5	91	233	153	M14x75
6x1-1/4	6.5x1.669	1.75	4.92	3.7	9.76	3.31	5/8x3-1/3
150x32	165.1x42.4	44.5	125	94	248	84	M16x85
6x1-1/2	6.5x1.9	2.00	4.92	3.7	9.76	3.54	5/8x3-1/3
150x40	165.1x48.3	50.8	125	94	248	90	M16x85
6x2	6.5x2.375	2.50	4.92	3.7	9.76	3.98	5/8x3-1/3
150x50	165.1x60.3	63.5	125	94	248	101	M16x85
6x2-1/2	6.5x2.875	2.76	4.92	3.7	9.76	4.61	5/8x3-1/3
150x65	165.1x73	70	125	94	248	117	M16x85
6x2-1/2	6.5x3	2.76	4.92	3.7	9.76	4.61	5/8x3-1/3
150x65	165.1x76.1	70	125	94	248	117	M16x85
6x3	6.5x3.5	3.50	4.92	3.7	9.76	5.35	5/8x3-1/3
150x80	165.1x88.9	89	125	94	248	136	M16x85
6x4	6.5x4.25	4.49	5.08	3.7	9.76	6.38	5/8x3-1/3
150x100	165.1x108	114	129	94	248	162	M16x85
6x4	6.5x4.5	4.49	5.08	3.7	9.76	6.38	5/8x3-1/3
150x100	165.1x114.3	114	129	94	248	162	M16x85
6x1-1/4	6.625x1.669	1.75	4.92	3.82	9.76	3.31	5/8x3-1/3
150x32	168.3x42.4	44.5	125	97	248	84	M16x85
6x1-1/2	6.625x1.9	2.00	4.92	3.82	9.76	3.54	5/8x3-1/3
150x40	168.3x48.3	50.8	125	97	248	90	M16x85
6x2	6.625x2.375	2.50	4.92	3.82	9.76	3.98	5/8x3-1/3
150x50	168.3x60.3	63.5	125	97	248	101	M16x85
6x2-1/2	6.625x2.875	2.76	5.00	3.82	9.76	4.61	5/8x3-1/3
150x65	168.3x73	70	127	97	248	117	M16x85
6x2-1/2	6.625x3	2.76	5.00	3.82	9.76	4.61	5/8x3-1/3
150x65	168.3x76.1	70	127	97	248	117	M16x85
6x3	6.625x3.5	3.50	5.00	3.82	9.76	5.35	5/8x3-1/3
150x80	168.3x88.9	89	127	97	248	136	M16x85
6x4	6.625x4.5	4.49	5.08	3.82	9.76	6.38	5/8x3-1/3
150x100	168.3x114.3	114	129	97	248	162	M16x85
8x2	8.625x2.375	2.50	5.98	1.92	12.68	3.98	5/8x3-1/2
200x50	219.1x60.3	63.5	152	125	322	101	M20x90
8x2-1/2	8.625x2.875	2.76	6.06	1.92	12.68	4.61	5/8x3-1/2
200x65	219.1x73	70	154	125	322	117	M20x90
8x2-1/2	8.625x3	2.76	6.06	1.92	12.68	4.61	5/8x3-1/2
200x65	219.1x76.1	70	154	125	322	117	M20x90
8x3	8.625x3.5	3.50	6.06	1.92	12.68	5.35	5/8x3-1/2
200x80	219.1x88.9	89	154	125	322	136	M20x90
8x4	8.625x4.25	4.49	6.14	1.92	12.68	6.38	5/8x3-1/2
200x100	219.1x108	114	156	125	322	162	M20x90
8x4	8.625x4.5	4.49	6.14	1.92	12.68	6.38	5/8x3-1/2
200x100	219.1x114.3	114	156	125	322	162	M20x90

