SUBMITTAL PACKAGE
GROOVED PIPING PRODUCTS

1/13/2021

GROOVED COUPLINGS - STANDARD RIGID
Model 101

The ARGCO Model 101 is an angle-pad design standard rigid coupling for moderate pressure piping services including fire mains, long straight runs and value connections.
The angle-pad design allows the coupling housings to slide along the bolt pads when tightened. The result is an offset clamping action which provides a rigid joint which resists so-called 'snaking' of a long straight run. Support and hanging requirements correspond to ANSI B31.1, B31.9 and NFPA 13. With the removal of only one bolt you can make a fast and easy 'swing-over' installation.

Available Sizes
• 1" through 12" (25 through 300 mm)
Pipe Material
• Carbon steel, Schedule 10, Schedule 40.

Maximum Working Pressure
• Up to 365 psi/2517 kPa.
Function
• Joins carbon steel pipe.
• Provides a rigid pipe joint designed to restrict axial or angular movement.
CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

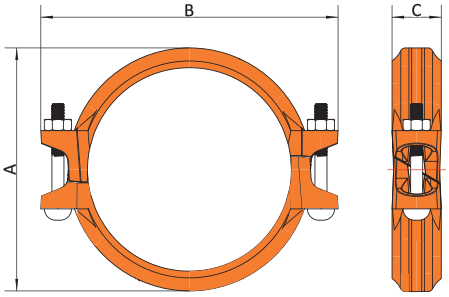
Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

Gasket:
Standard: Pre-Lubricated Grade E EPDM (Type A)
ARGCO's products are listed by Underwriters Laboratories UL Canada and Approved by Factory Mutual for we and dry (oil free air) sprinkler services within the rated working pressure.

Bolts and Nuts
Standard: Carbon Steel oval neck track bolts meeing ASTM A449 and ISO 898-1. Carbon steel hex nuts meet ASTM A563 Grade B.
Nuts and Bolts are zinc electroplated per ASTM B633 NZ/FE5, finish Type III.
Available: Stainless Steel. Meets ASTM F593, Group 2 (316 stainless steel), condition CW.
Hex nuts meets ASTM F594, Group 2 (316 stainless steel), condition CW, with galling-resistant coating.

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GROOVED COUPLINGS - STANDARD RIGID
Model 101



ARGCO Grooved Couplings are suitable for fire protection systems, water supply systems, and other process systems of higher working pressure.

Item #	Nominal Size in/mm	Maximum Working Pressure psi/kPa	Maximum End Load lb/N	Axial Displacement in/mm	Dimensions A inches mm	Dimensions B inches mm	Dimensions C inches mm	Bolt inches mm
7010001	1"	300	405	0-0.06	2.20	3.78	1.85	3/8" x1-1/2"
	25	20	1.80	0-1.6	56	96	47	M10x40
7010002	1-1/4"	300	656	0-0.06	2.52	4.17	1.85	3/8" x1-3/4"
	32	20	2.92	0-1.6	64	106	47	M10x45
7010003	1-1/2"	300	852	0-0.06	2.72	4.45	1.85	3/8" x1-3/4"
	40	20	3.79	0-1.6	69	113	47	M10x45
7010004	2"	300	1327	0-0.06	3.46	5.39	1.85	3/8" x 2-1/8"
	50	20	5.91	0-1.6	88	137	47	M10x55
7010005	2-1/2"	300	1945	0-0.06	3.94	5.39	1.85	3/8" x 2-1/8"
	65	20	8.66	0-1.6	100	137	47	M10x55
7010006	3"	300	2885	0-0.06	3.94	6.06	1.85	3/8" x 2-1/8"
	80	20	12.84	0-1.6	100	154	47	M10x55
7010007	4"	300	4258	0-0.16	5.59	7.40	2.05	1/2" x 2-5/8"
	100	20	18.94	0-4.1	142	188	52	M12x65
7010008	5"	300	6457	0-0.16	6.69	8.62	2.05	1/2" x 2-5/8"
	125	20	28.73	0-4.1	170	219	52	M12x65
7010009	6"	300	9229	0-0.06	7.72	9.61	2.05	1/2" x 2-5/5"
	150	20	41.06	0-4.1	196	244	52	M12x65
7010010	8"	300	17079	0-0.16	10.31	12.68	2.60	3/4" x3-1/2 "
	200	20	75.99	0-4.1	262	322	66	M16x90
7010011	10"	300	26101	0-0.16	12.80	15.75	2.60	3/4" x3-1/2"
	250	20	116.13	0-4.1	325	400	66	M20x90
7010012	12"	300	37031	0-0.16	14.80	18.43	2.64	7/8" x4-1/3"
	300	20	164.76	0-4.1	376	468	67	M22x110
7010013	14"	300	46150	0-0.16	16.14	19.69	2.95	7/8" x4-1/3"
	350	20	198.53	0-4.1	410	500	75	M22x110
7010014	16"	300	60280	0-0.16	18.07	21.65	2.95	7/8" x4-1/3"
	400	20	259.30	0-4.1	459	550	75	M22x110

- Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard roll or cut grooved in accordance with ARGCO specifications.
- The allowable pipe separation dimension shown is for system layout purposes only. ARGCO couplings are considered rigid connections and will not accommodate expansion or contraction of the piping system.
- When assembling ARGCO couplings onto end caps, take additional care to make certain the end cap is fully seated against the gasket end stop.

GROOVED COUPLINGS - STANDARD FLEXIBLE
Model 104

Available Sizes
• 1" through 12" (25 through 300 mm)
Pipe Material
• Carbon steel, Schedule 10, Schedule 40.
For use with alternative materials and wall thicknesses please contact ARGCO.
Maximum Working Pressure
• Up to 365 psi/2517 kPa.
Function
• Joins carbon steel pipe.
• Provides a rigid pipe joint designed to restrict axial or angular movement.
CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

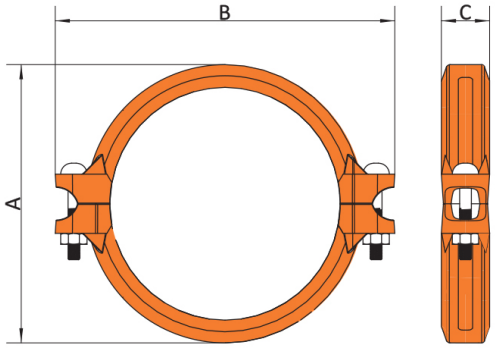
Gasket:
Standard: Grade E EPDM (Type A)
ARGCO's products are listed by Underwriters Laboratories UL Canada and Approved by Factory Mutual for we and dry (oil free air) sprinkler services within the rated working pressure.

Bolts and Nuts
Standard: Carbon Steel oval neck track bolts meeing ASTM A449 and ISO 898-1. Carbon steel hex nuts meet ASTM A563 Grade B.
Nuts and Bolts are zinc electroplated per ASTM B633 NZ/FE5, finish Type III.
Available: Stainless Steel. Meets ASTM F593, Group 2 (316 stainless steel), condition CW.
Hex nuts meets ASTM F594, Group 2 (316 stainless steel), condition CW, with galling-resistant coating.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

GROOVED COUPLINGS - STANDARD FLEXBILE
Model 104



ARGCO Grooved Couplings are suitable for fire protection systems, water supply systems, and other process systems of higher working pressure.

Item #	Nominal Size in/mm	Maximum Working Pressure psi/kPa	Maximum End Load lb/N	Axial Displacement in/mm	Angular Movement per coupling degrees	Angular Movement per pipe in/ft, mm/m	Dimensions A inches mm	Dimensions B inches mm	Dimensions C inches mm	Bolt inches mm
7010015	1"	300	405	0.0625	5° - 30'	0.71	2.17	3.82	1.77	3/8" x1-1/2"
	25	20	1.80	1.6		58	55	97	45	M10x40
7010016	1-1/4"	300	656	0.0625	4° - 20'	0.58	2.50	4.23	1.77	3/8" x1-3/4"
	32	20	2.92	1.6		48	63.5	107.5	45	M10x45
7010017	1-1/2"	300	852	0.0625	3° - 48'	0.45	2.72	4.49	1.77	3/8" x1-3/4"
	40	20	3.79	1.6		38	69	114	45	M10x45
7010018	2"	300	1327	0.0625	3° - 01'	0.4	3.29	4.88	1.81	3/8" x 2-1/8"
	50	20	5.91	1.6		33	83.6	124	46	M10x55
7010019	2-1/2"	300	1945	0.0625	2° - 30'	0.31	3.86	5.39	1.81	3/8" x 2-1/8"
	65	20	8.66	1.6		26	98	137	46	M10x55
7010020	3"	300	2885	0.0625	2° - 04'	0.21	4.49	6.14	1.81	3/8" x 2-1/8"
	80	20	12.84	1.6		18	114	156	46	M10x55
7010021	4"	300	4258	0.125	3° - 14'	0.34	5.43	7.32	1.97	1/2" x 2-5/8"
	100	20	18.94	3.2		28	138	186	50	M12x65
7010022	5"	300	6457	0.125	2° - 53'	0.27	6.46	8.39	1.97	1/2" x 2-5/8"
	125	20	28.73	3.2		23	164	213	50	M12x65
7010023	6"	300	9229	0.125	2° - 18'	0.23	7.56	9.61	1.97	1/2" x 2-5/8"
	150	20	41.06	3.2		19	192	244	50	M12x65
7010024	8"	300	17079	0.125	1° - 40'	0.18	10.00	13.39	2.44	3/4" x 3-1/2"
	200	20	75.99	3.2		15	254	340	62	M20x90
7010025	10"	300	26101	0.125	1° - 20'	0.14	12.32	15.75	2.52	3/4" x3-1/2"
	250	20	116.13	3.2		12	313	400	64	M20x90
7010026	12"	300	37031	0.125	1° - 08'	0.12	14.49	18.27	2.52	7/8" x4-1/3"
	300	20	164.76	3.2		10	368	464	64	M22x110

Note: Allowable Axial Displacement figures are for roll grooved standard steel pipe. Values for cut grooved pipe will be double that of roll grooved. These values are maximums; for design and installation purposes these figures should be reduced by: 50% for ¾" – 3½"; 25% for 4" and larger to compensate for jobsite conditions.

- Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard roll or cut grooved in accordance with ARGCO specifications.
- When assembling ARGCO couplings onto end caps, take additional care to make certain the end cap is fully seated against the gasket end stop.

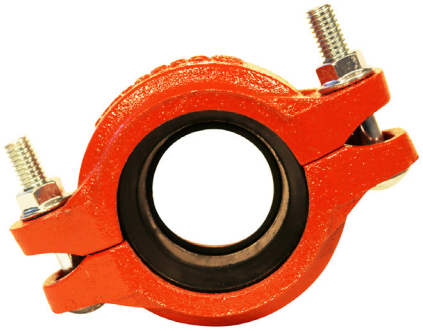
The NFPA 13 defines a flexible coupling as;

"a listed coupling or fitting that allows axial displacement, rotation, and at least 1 degree of angular movement of the pipe without inducing harm on the pipe. For pipe diameters of 8 in. and larger, the angular movement shall be permitted to be less than 1 degree but not less than 0.5 degrees." (NFPA 13- 2007 3.5.4)

For sprinkler systems, NFPA 13 specifies the use of flexible couplings to protect the system against damage from earthquakes and sets some specific examples of how and where they should be used. Designers and installers should design their fire protection systems in compliance with this standard.

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GROOVED REDUCING COUPLINGS
Model 105



The ARGCO Model 105 reducing coupling allows for direct reduction on a piping run and eliminates the need for a concentric reducer and couplings. The specially designed rubber gasket helps prevent small pipe from telescoping into larger pipe during vertical assembly.

Caution: Model 105 couplings should not be used with an end cap, as the end may be sucked into the pipe when draining the system.

Pipe Material
- Carbon steel, Schedule 10, Schedule 40.
  For use with alternative materials and wall thicknesses please contact ARGCO.

Maximum Working Pressure
- Up to 365 psi/2517 kPa.

Function
- Joins carbon steel pipe.
- Provides a rigid pipe joint designed to restrict axial or angular movement.

CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

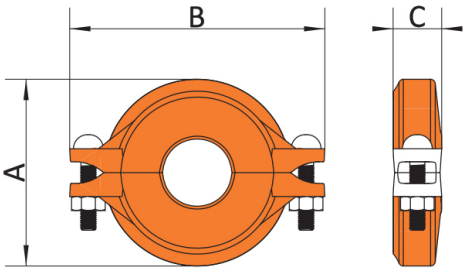
Gasket:
Standard: Grade E EPDM (Type A)
ARGCO's products are listed by Underwriters Laboratories UL Canada and Approved by Factory Mutual for we and dry (oil free air) sprinkler services within the rated working pressure.

Bolts and Nuts
Standard: Carbon Steel oval neck track bolts meeing ASTM A449 and ISO 898-1. Carbon steel hex nuts meet ASTM A563 Grade B.
Nuts and Bolts are zinc electroplated per ASTM B633 NZ/FE5, finish Type III.
Available: Stainless Steel. Meets ASTM F593, Group 2 (316 stainless steel), condition CW.
Hex nuts meets ASTM F594, Group 2 (316 stainless steel), condition CW, with galling-resistant coating.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

GROOVED REDUCING COUPLINGS
Model 105



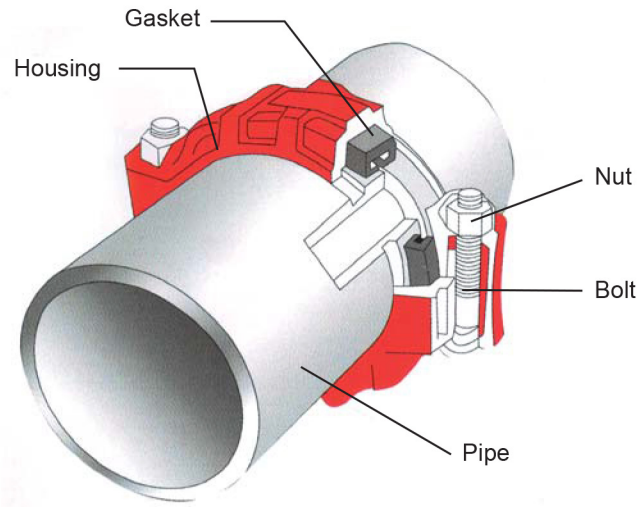
ARGCO Grooved Couplings are suitable for fire protection systems, water supply systems, and other process systems of higher working pressure.

						Deflection		Dimensions			
Item #	Nominal Size in/mm	Actual O.D. in/mm	Max.Working Pressure psi/Bar	Max. End Load Lbs/KN	Axial Displacement in/mm	Degree Per Coupling (°)	Pipe in/ft mm/m	A inches mm	B inches mm	C inches mm	Bolt Size inches mm
7010109	1-1/2 x1-1/4	1.9 x 1.669	300	852	0.0625	1° - 54'	33	2.76	4.45	1.77	3/8 x 2
	40 x 32	48.3 x 42.4	20	3.79	1.6	1° - 54'	0.4	70	113	45	M10 x 50
7010110	2 x 1-1/4										
7010111	2 x 1-1/2	2.375 x 1.9	300	1327	0.0625	1° - 31'	27	3.23	5.12	1.81	3/8 x 2-1/8
	50 x 40	60.3 x 48.3	20	5.91	1.6	1° - 31'	0.32	82	130	46	M10 x 50
7010112	2-1/2 x 2	2.875 x 2.375	300	1945	0.0625	1° - 15'	22	3.82	5.94	1.81	3/8 x 2-1/8
	65 x 50	73 x 60.3	20	8.66	1.6	1° - 15'	0.26	97	151	46	M10 x 50
7010113	3 x 2	3.5 x 2.375	300	2885	0.0625	1° - 02'	18	4.41	6.56	1.81	1/2 x 2-5/8
	80 x 50	88.9 x 60.3	20	12.84	1.6	1° - 02'	0.22	112	166.6	46	M12 x 65
7010114	3 x 2-1/2	3.5 x 2.875	300	2885	0.0625	1° - 02'	18	4.41	6.56	1.81	1/2 x 2-5/8
	80 x 65	88.9 x 73.0	20	12.84	1.6	1° - 02'	0.22	112	166.6	46	M12 x 65
7010115	4 x 2	4.5 x 2.375	300	4769	0.125	1° - 36'	28	5.55	7.87	1.97	1/2 x 2-5/8
	100 x 50	114.3 x 2.375	20	21.22	3.2	1° - 36'	0.34	141	200	50	M12 x 65
7010116	4 x 2-1/2	4.5 x 2.875	300	4769	0.125	1° - 36'	28	5.55	7.87	1.97	1/2 x 2-5/8
	100 x 65	114.3 x 73.0	20	21.22	3.2	1° - 36'	0.34	141	200	50	M12 x 65
7010117	4 x 3	4.5 x 3.5	300	4769	0.125	1° - 36'	28	5.58	7.87	1.97	1/2 x 2-5/8
	100 x 80	114.3 x 88.9	20	21.22	3.2	1° - 36'	0.34	141.8	200	50	M12 x 65
7010118	5 x 4	5.5 x 4.5	300	7124	0.125	1° - 18'	23	6.65	9.25	2.05	5/8 x 3-1/8
	125 x 100	139.7 x 114.3	20	31.70	3.2	1° - 18'	0.27	169	235	52	M16 x 80
7010119	6 x 4	6.5 x 4.5	300	9950	0.125	1° - 07'	20	7.76	10.83	2.05	5/8 x 3-1/8
	150 x 100	165.1 x 114.3	20	44.27	3.2	1° - 07'	0.24	197	275	52	M16 x 80
7010120	8 x 6	8.625 x 6.525	300	17524	0.125	1° - 50'	15	10.08	13.23	2.28	3/4 x 4-1/3
	200 x 150	219.1 x 168.3	20	77.97	3.2	1° - 50'	0.18	256	336	58	M20 x 110

- Deflection or angular movement is the maximum value that a coupling allows under no internal pressure.
- Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard roll or cut grooved in accordance with ARGCO specifications.
- The allowable pipe separation dimension shown is for system layout purposes only. ARGCO couplings are considere rigid connections and will not accommodate expansion or contraction of the piping system.

GROOVED COUPLINGS
INSTALLATION INSTRUCTIONS:

STANDARD RIGID COUPLING
Depressurize and drain the piping system before attempting to install, remove, or adjust any piping products.
Wear safety glasses, hardhat, and foot protection.



1. CHECK PIPE ENDS:
The outside surface of the pipe from the pipe end to the groove must be smooth and free from indentations, projections (including weld seams), and roll marks to ensure a leaktight seal for the gasket. All oil, grease, loose paint, and dirt must be removed.

2. CHECK GASKET AND LUBRICATE :
Check the gasket to make sure it is suitable for the intended service. Apply a thin coat of Tuf-Lube Gasket Grease Lubricant to the gasket lips and exterior.

3. POSITION GASKET:
Position the gasket over the pipe end. Make sure the gasket does not overhang the pipe end.

4. JOIN PIPE ENDS:
Align and bring the two pipe ends together. Slide the gasket into position, and make sure it is centered between the grooves in each pipe.
Make sure no portion of the gasket extends into the groove in either pipe.

5. ASSEMBLE HOUSINGS:
Insert one bolt into the housings, and thread the nut loosely onto the bolt (nut should be flush with end of bolt) .

6. INSTALL HOUSINGS:
Install the housings over the gasket. Make sure the housings' keys engage the grooves properly on both pipes.

Torque Value
When a torque value is specified for coupling installation, this torque MUST be applied to the nuts in order to achieve proper installation. However, torque beyond specified values will not improve sealing.
Exceeding the specified torque by more than 25% may cause damage to the product, resulting in pipe-joint failure.

SPECIFIED TORQUE (LB/FT.)

SIZE	MIN	MAX
1”	30	45
1-1/4”	30	45
1-1/2”	30	45
2”	80	100
2-1/2”	80	100
3”	80	100
3-1/2”	100	130
4”	100	130

Using Impact Wrenches
When using an impact wrench, the speed of assembly may require extra care to ensure nuts are tightened evenly by alternating sides until proper assembly is complete.
Impact wrenches do not provide the installer with direct “wrench feel” or torque to judge nut tightness. Since some impact wrenches are capable of high output, it is important to develop a familiarity with the impact wrench to avoid damaging or fracturing bolts or coupling bolt pads during installation.
DO NOT continue to use an impact wrench after the visual installation guidelines for the coupling are achieved.
Perform trial assemblies with the impact wrench and socket or torque wrenches to help determine the capability of the impact wrench. Using the same method, periodically check additional nuts throughout the system installation.
In addition, verify that proper impact grade sockets are being used for coupling installation.

GROOVED ELBOWS
Models 201, 208, 205 +, 207

c UL us LISTED

FM APPROVED

Available Sizes
• 1" through 12" (25 through 300 mm)

Pipe Material
• Carbon steel, Schedule 10, Schedule 40.
For use with alternative materials and wall thicknesses please contact ARGCO.

Maximum Working Pressure
• Up to 300 psi/20 bar

Function
• Joins carbon steel pipe.
• Provides a rigid pipe joint designed to restrict axial or angular movement.

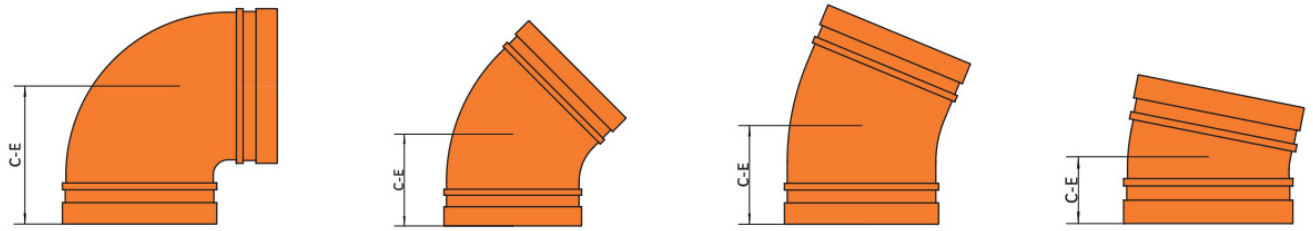
CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GROOVED ELBOWS
Models 201, 208, 205 + , 207



Nominal Size in/mm	Pipe O.D. in/mm	Max Working Pressure psi/Bar	Model 201 90° Elbow Standard Item #	Model 201 C-E inches mm	Model 208 45° Elbow Item #	Model 208 C-E inches mm	Model 206 22.5° Elbow Item #	Model 206 C-E inches mm	Model 207 11.25° Elbow Item #	Model 207 C-E inches mm
1-1/4"	1.669	300	7010041	2.76	7010062	1.77	7010073	1.77	7010245	1.38
32	42.4	20		70		45		45		35
1-1/2"	1.9	300	7010042	2.76	7010063	1.77	7010074	1.89	7010246	1.38
40	48.3	20		70		45		48		35
2"	2.375	300	7010043	3.27	7010064	2.01	7010075	2.01	7010247	1.50
50	60.3	20		83		51		51		38
2-1/2"	2.875	300	7010044	3.74	7010065	2.44	7010076	2.01	7010248	1.50
65	73	20		95		62		51		38
3"	3.5	300	7010045	4.25	7010066	2.76	7010077	2.87	7010249	1.77
80	88.9	20		108		70		73		45
4"	4.25	300	7010046	5	7010067	2.99	7010078	2.87	7010250	1.77
100	108	20		127		76		73		45
5"	5.25	300	7010047	5.51	7010068	3.27	7010079	2.87	7010251	2.01
125	133	20		140		83		73		51
6"	6.25	300	7010048	6.25	7010069	3.50	7010080	3.11	7010252	2.01
150	159	20		165		89		79		51
8"	8.265	300	7010049	7.76	7010070	4.25	7010081	4.37	7010253	2.13
200	219.1	20		197		108		111		54
10"	10.75	300	7010050	9.02	7010071	4.76	7010082	4.88	7010254	2.24
250	273	20		229		121		124		57
12"	12.75	300	7010051	10	7010072	---	7010083	---	7010255	---
300	323.9	20		254		---		---		---

- Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard roll or cut grooved in accordance with ARGCO specifications.
- The allowable pipe separation dimension shown is for system layout purposes only. ARGCO couplings are considere rigid connections and will not accommodate expansion or contraction of the piping system.
- When assembling ARGCO couplings onto end caps, take additional care to make certain the end cap is fully seated against the gasket end stop.

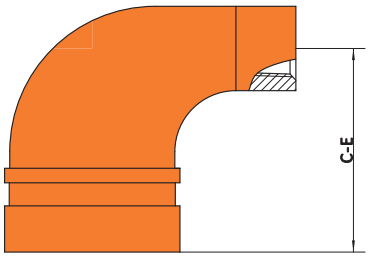
GROOVED END OF RUN REDUCING ELBOW (ADACAP)
MODEL 7091

Ductile iron 90° grooved-end elbow with base support, designed for installation at the bottom of a riser system. An anchor can be placed in conjunction with the base to support the weight of the pipe, coupling and fluid.

Pipe Material
• Carbon steel, Schedule 10, Schedule 40.

Maximum Working Pressure
• Up to 300 psi/20 bar

Function
• Joins carbon steel pipe grooved pipe to threaded.



CERTIFICATIONS/LISTINGS
Underwriters Laboratories,
Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections:
Ductile Iron conforming to
ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped
Galvanized

Item #	Nominal Size in/mm	NPT BSP	Max Working Pressure psi/Bar	C-E inches mm
7010260	1-1/4" x 1/2"	1/2"	300	2.40
	32 x 15	15	20	61
7010261	1-1/4" x 3/4"	3/4"	300	2.40
	32 x 20	20	20	61
7010262	1-1/4" x 1"	1"	300	2.40
	32 x 25	25	20	61
7010263	1-1/2" x 1/2"	1/2"	300	2.52
	40 x 15	15	20	64
7010264	1-1/2" x 3/4"	3/4"	300	2.52
	40 x 20	20	20	64
7010265	1-1/2" x 1"	1"	300	2.52
	40 x 25	25	20	64
7010266	2" x 1/2"	1/2"	300	2.52
	50 x 15	15	20	64
7010267	2" x 3/4"	3/4"	300	2.76
	50 x 20	20	20	70
7010268	2" x 1"	1"	300	2.76
	50 x 25	25	20	70

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GROOVED SHORT RADIUS ELBOWS & TEES
Model 202, 302

ARGCO short radius fittings, while primarily designed for fire protection applications, can also be used for general service requirements

Available Sizes
- 2" through 12" (50 through 300 mm)

Pipe Material
- Carbon steel, Schedule 10, Schedule 40.
  For use with alternative materials and wall thicknesses please contact ARGCO.

Maximum Working Pressure
- Up to 300 psi/20 bar

Function
- Joins carbon steel pipe.
- Provides a rigid pipe joint designed to restrict axial or angular movement.

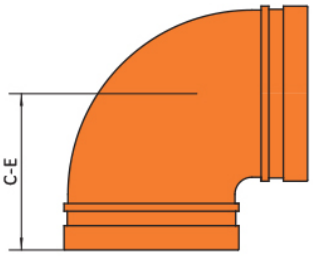
CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

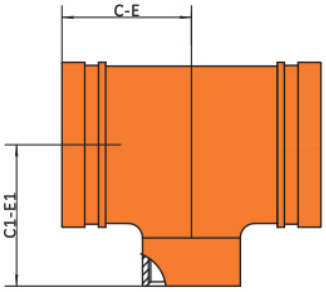
SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GROOVED SHORT RADIUS ELBOWS & TEES
Model 202, 302





			Model 202 90° Elbow Short			Model 302 Tee Short	
Nominal Size in/mm	Pipe O.D. in/mm	Max Working Pressure psi/Bar	Item #	C-E inches mm		Item #	C-E inches mm
2"	2.375	300	7010032	2.76		7010085	2.76
50	60.3	20		70			70
2-1/2"	2.875	300	7010033	2.99		7010086	2.99
65	73	20		76			76
3"	3.5	300	7010034	3.35		7010087	3.35
80	88.9	20		85			85
4"	4.25	300	7010035	4.02		7010088	4.02
100	108	20		102			102
5"	5.25	300	7010036	4.76		7010089	4.76
125	133	20		121			121
6"	6.25	300	7010037	5.12		7010090	5.12
150	159	20		130			130
8"	8.625	300	7010038	5.12		7010091	6.89
200	219.1	20		130			175

- Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard roll or cut grooved in accordance with ARGCO specifications.

User Responsibility for Product Selection and Suitability
Each user bears final responsibility for making a determination as to the suitability of ARGCO products for a particular end-use application, in accordance with industry standards and project specifications, and the applicable building codes and related regulations as well as ARGCO performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any ARGCO employee, shall be deemed to alter, vary, supersede, or waive any provision of Allied Rubber and Gasket Company's standard conditions of sale, installation guide, or this disclaimer.
Note
All products to be installed in accordance with current ARGCO installation/assembly instructions. ARGCO reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.
Installation
Reference should always be made to the ARGCO installation instructions of the product you are installing.
Warranty
Refer to the Warranty section of the current Price List or contact ARGCO for details.

GROOVED STANDARD RADIUS TEES
Model 301

Available Sizes
• 2" through 12" (50 through 300 mm)

Pipe Material
• Carbon steel, Schedule 10, Schedule 40.
For use with alternative materials and wall thicknesses please contact ARGCO.

Maximum Working Pressure
• Up to 300 psi/20 bar

Function
• Joins carbon steel pipe.
• Provides a rigid pipe joint designed to restrict axial or angular movement.

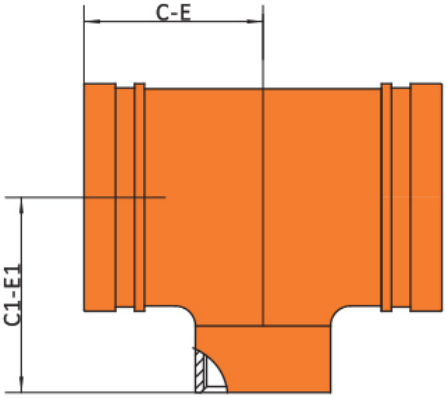
CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GROOVED STANDARD RADIUS TEES
Model 301



Item #	Nominal Size in/mm	Pipe O.D. in/mm	Max Working Pressure psi/Bar	C-E inches mm
7010092	1-1/4"	1.669	300	2.76
	32	42.4	20	70
7010093	1-1/2"	1.9	300	2.76
	40	48.3	20	70
7010094	2"	2.375	300	3.31
	50	60.3	20	84
7010095	2-1/2"	2.875	300	3.74
	65	73	20	95
7010096	3"	3.5	300	4.25
	80	88.9	20	108
7010097	4"	4.25	300	5.00
	100	108	20	127
7010098	5"	5.25	300	5.51
	125	133	20	140
7010099	6"	6.25	300	6.50
	150	159	20	165
7010100	8"	8.625	300	7.76
	200	219.1	20	197
7010101	10"	10.75	300	9.02
	250	273	20	229
7010102	12"	12.75	300	10.00
	300	323.9	20	254

• Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard roll or cut grooved in accordance with ARGCO specifications.

GROOVED CROSSES SHORT RADIUS
Models 401

Available Sizes
• 2" through 12" (50 through 300 mm)

Pipe Material
• Carbon steel, Schedule 10, Schedule 40.
For use with alternative materials and wall thicknesses please contact ARGCO.

Maximum Working Pressure
• Up to 300 psi/20 bar

Function
• Joins carbon steel pipe.
• Provides a rigid pipe joint designed to restrict axial or angular movement.

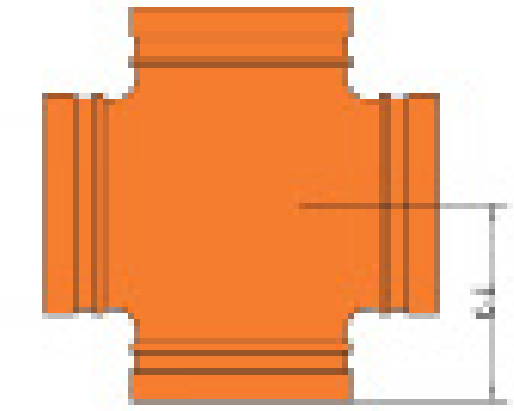
CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GROOVED CROSSES SHORT RADIUS
Models 401



Item #	Nominal Size in/mm	Pipe O.D. in/mm	Max Working Pressure psi/Bar	C-E inches mm
7010224	2"	2.375	300	2.76
	50	60.3	20	70
7010225	2-1/2"	2.875	300	2.99
	65	73	20	76
7010226A	3"	3	300	3.39
	80	76.1	20	86
7010227	4"	3.5	300	4.02
	100	88.9	20	102
7010228	5"	5.25	300	4.76
	125	133	20	121
7010229	6"	6.25	300	5.12
	150	159	20	130

• Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard roll or cut grooved in accordance with ARGCO specifications.

GROOVED REDUCING TEES
Model 303

Pipe Material
• Carbon steel, Schedule 10, Schedule 40.
For use with alternative materials and wall thicknesses please contact ARGCO.

Maximum Working Pressure
• Up to 300 psi/20 bar

Function
• Joins carbon steel pipe.
• Provides a rigid pipe joint designed to restrict axial or angular movement.

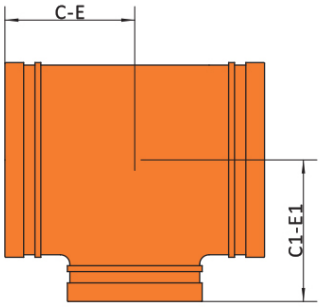
CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GROOVED REDUCING TEES
Model 303



Item #	Nominal Size in/mm	Pipe O.D. in/mm	Max Working Pressure psi/Bar	Dimensions C1-E1 inches mm	Dimensions C-E inches mm
7010500	2 x 1-1/4	2.375 X 4.669	300	2.76	2.76
	50 x 32	60.3 x 42.4	20	70	70
7010501	2 x 1-1/2	2.375 x 1.9	300	2.76	2.76
	50 x 40	60.3 x 48.3	20	70	70
7010502	2-1/2 x 1-1/4	2.875 x 1.669	300	2.99	2.99
	65 x 32	73 x 42.4	20	76	76
7010503	2-1/2 x1-1/2	2.875 x 1.9	300	2.99	2.99
	65 x 40	73 x 48.3	20	76	76
7010504	2-1/2 x 2	2.875 x 2.375	300	2.99	2.99
	65 x 50	73 x 60.3	20	76	76
7010505	3 x 1-1/4	3.5 x 1.669	300	3.39	3.39
	80 x 32	88.9 x 42.4	20	86	86
7010506	3 x 1-1/2	3.5 x 1.9	300	3.39	3.39
	80 x 40	88.9 x 48.3	20	86	86
7010507	3 x 2	3.5 x 2.375	300	3.39	3.39
	80 x 50	88.9 x 60.3	20	86	86
7010508	3 x 2-1/2	3.5 x 2.875	300	3.39	3.39
	80 x 65	88.9 x 73	20	86	86
7010509	4 x 1-1/4	4.5 x 1.669	300	3.54	3.86
	100 x 32	114.3 x 42.4	20	90	98*
7010510	4 x 1-1/2	4.5 x 1.9	300	3.54	3.86
	100 x 40	114.3 x 48.3	20	90	98*
7010511	4 x 2	4.5 x 2.375	300	4.02	4.02
	100 x 50	114.3 x 60.3	20	102	102
7010512	4 x 2-1/2	4.5 x 2.875	300	4.02	4.02
	100 x 65	114.3 x 73	20	102	102
7010513	4 x 3	4.5 x 3.5	300	4.02	4.02
	100 x 80	114.3 x 88.9	20	102	102
7010514	5 x 2	5.5 x 2.375	300	4.13	4.13
	125 x 50	139.7 x 60.3	20	105	105
7010515	5 x 2-1/2	5.5 x 3	300	4.13	4.13
	125 x 65	139.7 x 76.1	20	105	105
7010516					
7010517					
7010518	5 x 3	5.5 x 3.5	300	4.13	4.13
	125 x 80	139.7 x 88.9	20	105	105
7010519	5 x 4	5.5 x 4.25	300	4.13	4.13
	125 x 100	139.7 x 108	20	105	105

Item #	Nominal Size in/mm	Pipe O.D. in/mm	Max Working Pressure psi/Bar	Dimensions C1-E1 inches mm	Dimensions C-E inches mm
7010520	6 x 2				
7010521					
7010522					
	6 x 2-1/2				
7010523	150 x 65	6.25 x 3	300	4.33	4.72
	6 x 3	159 x 76.1	20	110	120*
7010524	150 x 80	6.25 x 3.5	300	4.33	4.72
	6 x 4	159 x 88.9	20	110	120*

GROOVED END CAP, END CAP WITH HOLE
Model 601, 602

ARGCO Model 602 End Cap with Hole is an ideal transition fitting when a large reduction is required such as 6”×1”, 4”×1” etc.
The Model 602 can be used as an alternave to expensive swaged nipples.

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FM APPROVED

Pipe Material
• Carbon steel, Schedule 10, Schedule 40.
For use with alternative materials and wall thicknesses please contact ARGCO.

Maximum Working Pressure
• Up to 300 psi/20 bar

Function
• Joins carbon steel pipe.
• Provides a rigid pipe joint designed to restrict axial or angular movement.

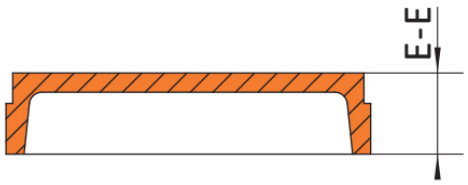
CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

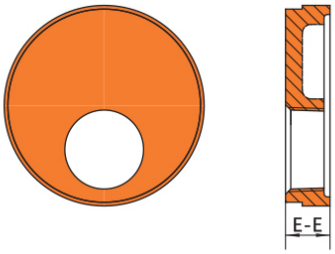
SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GROOVED END CAP, END CAP WITH HOLE
Model 601, 602





Item #	Nominal Size in/mm	Pipe O.D. in/mm	Max Working Pressure psi/Bar	E-E inches mm
7010125	1-1/4	1.669	300	0.94
	32	42.4	20	2.38
7010126	1-1/2	1.9	300	0.94
	40	48.3	20	2.38
7010127	2	2.375	300	0.94
	50	60.3	20	2.38
7010128	2-1/2	3	300	0.94
	65	76.1	20	2.38
7010129	3	3.5	300	0.94
	80	88.9	20	2.38
7010130	4	4.25	300	1.00
	100	108	20	25.4
7010131	5	5.25	300	1.00
	125	133	20	25.4
7010132	6	6.5	300	1.00
	150	165.1	20	25.4
7010133	8	8.625	300	1.19
	200	219.1	20	30.2
7010134	10	10.75	300	1.19
	250	273	20	30.2
7010135	12	12.75	300	1.19
	300	323.9	20	30.2

Item #	Nominal Size in/mm	Pipe O.D. in/mm	Max Working Pressure psi/Bar	E-E inches mm
7010136	2-1/2 x 1	2.875 x 1.327	300	0.94
	65 x 25	73 x 33.7	20	23.8
7010136A	2 x 1	2.375 x 1.327	300	0.94
	50 x 25	60.3 x 33.7	20	23.8
7010137	3 x 1	3.5 x 1.327	300	0.94
	80 x 25	88.9 x 33.7	20	23.8
7010138	4 x 1	4.5 x 1.327	300	1.00
	100 x 25	114.3 x 33.7	20	25.4
7010139	5 x 1			
7010140	6 x 1	6.5 x 1.327	300	1.00
	150 x 25	165.1 x 33.7	20	25.4
7010141	8 x 1			
7010142	10 x 1			
7010143	12 x 1			

User Responsibility for Product Selection and Suitability
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Note
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Installation
Reference should always be made to the ARGCO installation instructions of the product you are installing.

Warranty
Refer to the Warranty section of the current Price List or contact ARGCO for details.

GROOVED CONCENTRIC REDUCER
MODEL 701

Pipe Material
• Carbon steel, Schedule 10, Schedule 40.
For use with alternative materials and wall thicknesses please contact ARGCO.
Maximum Working Pressure
• Up to 300 psi/20 bar
Function
• Joins carbon grooved pipe system to flange components

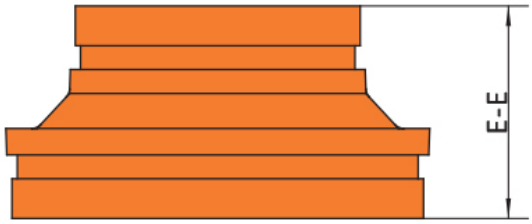
CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GROOVED CONCENTRIC REDUCER
MODEL 701



Item #	Nominal Size in/mm	Pipe O.D. in/mm	E-E in/mm
7010150	1-1/2" x 1-1/4" 40 x 32	1.9" x 1.669" 48.3 x 42.4	2.52 64
7010151	2" x 1"	2.375" x 1.669" 60.3 x 42.4	2.52 64
7010152	2" x 1-1/4" 50 x 32		2.52 64
7010153	2" x 1-1/2" 50 x 40	2.375"x 1.9" 60.3 x 48.3	2.52 64
7010154	2-1/2" x 1-1/4" 65 x 32	2.875" x 1.669" 73 x 42.4	2.52 64
7010155	2-1/2" x 1-1/2" 65 x 40	2.875" x 1.9" 73 x 48.3	2.52 64
7010156	2-1/2" x 2" 65 x 50	2.875" x 2.375" 73 60.3	2.52 64
7010157	3" x 1-1/4" 80 x 32	3.5" x 1.669" 88.9 x 42.4	2.52 64
7010158	3" x 1-1/2" 80 x 40	3.5" x 88.9 x 48.3	2.52 64
7010159	3" x 2" 80 x 50	3.5" x 2.375" 88.9 x 60.3	2.52 64
7010160	3" x 2-1/2" 80 x 65	3.5 x 2.875" 88.9 x 73	2.52 64
7010161	4" x 2" 100 x 50	4.5" x 2.375" 114.3 x 60.3	2.99 76
7010162	4" x 2-1/2" 100 x 65	4.5" x 2.875" 114.3 x 73	2.99 76
7010163	4" x 3" 100 x 80	4.5" x 3.5" 114.3 x 88.9	2.99 76

Item #	Nominal Size in/mm	Pipe O.D. in/mm	E-E in/mm
7010164	5" x 2" 125 x 50	5.25" x 2.375" 133 x 60.3	3.35 85
7010165	5" x 3" 125 x 80	5.5" x 3.5" 139.7 x 88.9	3.35 85
7010166	5" x 4" 125 x 100	5.5" x 4.25" 139.7 x 108	3.35 85
7010168	6" x 3"		3.35 85
7010169	6" x 4" 150 x 100	6.25" x 4.25" 159 x 108	3.35 85
7010170	6" x 5" 150 x 125	6.25" x 5.5" 159 x 139.7	3.35 85
7010172	8" x 4" 200 x 100	8.625" x 4.5" 219.1 x 114.3	3.35 85
7010173	8" x 5" 200 x 125	8.625" x 5.5" 219.1 x 139.7	3.35 85
7010174	8" x 6" 200 x 150	8.625" x 6.25" 219.1 x 159	3.35 85
7010176	10" x 6" 250 x 150	10.75" x 6.25" 273 x 159	3.54 90
7010177	10" x 8" 250 x 200	10.75" x 8.625" 273 x 219.1	3.54 90
7010179	12" x 6" 300 x 150	12.75" x 6.25" 323.9 x 159	3.54 90
7010180	12" x 8" 300 x 200	12.75" x 8.63" 323.9 x 219.1	3.54 90
7010181	12" x 10" 300 x 250	12.75" x 10.75" 323.9 x 273	3.54 90

User Responsibility for Product Selection and Suitability
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Note
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Installation
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Warranty
Refer to the Warranty section of the current Price List or contact ARGCO for details.

MECHANICAL TEE (THREAD)
Model 403

The Model 403 Mechanical Tee provides a fast and easy mid-pipe threaded branch outlet. It eliminates the need for welding or mulple fittings. The mechanical tee utilizes ductile iron housings, a grade E moulded gasket and heat-treated carbon steel track bolts and nuts. Pressure rated to 300 psi (20 bar).

Pipe Material
- Carbon steel, Schedule 10, Schedule 40.
  For use with alternative materials and wall thicknesses please contact ARGCO.

Maximum Working Pressure
- Up to 300 psi/20 bar

Function
- Joins carbon steel pipe.
- Provides a rigid pipe joint designed to restrict axial or angular movement.

CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

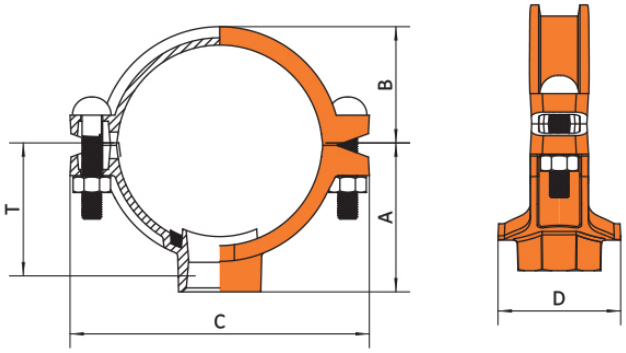
Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

Gasket:
Standard: Grade E EPDM (Type A)
ARGCO's products are listed by Underwriters Laboratories UL Canada and Approved by Factory Mutual for we and dry (oil free air) sprinkler services within the rated working pressure.

Bolts and Nuts
Standard: Carbon Steel oval neck track bolts meeing ASTM A449 and ISO 898-1. Carbon steel hex nuts meet ASTM A563 Grade B.
Nuts and Bolts are zinc electroplated per ASTM B633 NZ/FE5, finish Type III.
Available: Stainless Steel. Meets ASTM F593, Group 2 (316 stainless steel), condition CW.
Hex nuts meets ASTM F594, Group 2 (316 stainless steel), condition CW, with galling-resistant coating.

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

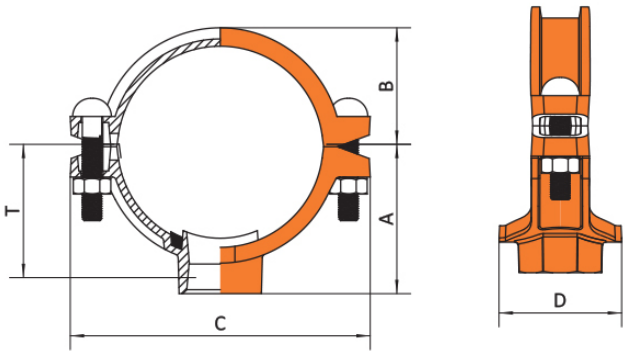
MECHANICAL TEE (THREAD)
Model 403



Item #	Nominal Size in/mm	Pipe O.D.	Hole Dia. ∓ +3.2,-0 /+0.13,-0	Dimensions - in/mm					Bolt Size in/mm
				T‡	A	B	C	D	
7010302	2 x 3/4	2.375 x 1.05	1.50	1.97	2.20	1.65	4.72	2.99	3/8 x 2-3/8
	50 x 20	60.3 x 26.7	38	50	56	42	120	76	M 10 x 60
7010303	2-1/2 x 3/4	2.875 x 1.05	1.50	2.02	2.42	1.85	5.63	2.99	1/2 x 2-5/8
	65 x 20	73 x 26.7	38	56	61.5	47	143	76	M 12 x 65
7010304	2 x 1	2.375 x 1.327	1.50	1.85	2.20	1.65	4.72	2.99	3/8 x 2-3/8
	50 x 25	60.3 x 33.7	38	47	56	42	120	76	M 10 x 60
7010305	2 x 1-1/4	2.375 x 1.669	1.75	2.05	2.68	1.65	4.72	3.31	3/8 x 2-3/8
	50 x 32	60.3 x 42.4	44.5	52	68	42	120	84	M 10 x 60
7010306	2 x 1-1/2	2.375 x 1.9	1.75	2.05	2.80	1.65	4.72	3.37	3/8 x 2-3/8
	50 x 40	60.3 x 48.3	44.5	52	71	42	120	84	M 10 x 60
7010307	2-1/2 x 1	2.875 x 1.327	1.50	2.09	4.42	1.85	5.63	2.99	1/2 x 2-5/8
	65 x 25	73.0 x 33.7	38	53	61.5	47	143	76	M 12 x 65
7010308	2-1/2 x 1-1/4	2.875 x 1.669	1.75	2.28	2.89	1.85	5.63	3.31	1/2 x 2-5/8
	65 x 32	73.0 x 42.4	44.5	58	73.5	47	143	84	M 12 x 65
7010309	2-1/2 x 1-1/2	2.875 x 1.9	2.00	2.28	2.89	1.85	5.63	3.54	1/2 x 2-5/8
	65 x 40	73.0 x 48.3	50.8	58	73.5	47	143	90	M 12 x 65
7010311	3 x 1	3.5 x 1.327	1.50	2.40	2.74	2.17	6.22	2.99	1/2 x 2-5/8
	80 x 25	88.9 x 33.7	38	61	69.5	55	158	76	M 12 x 65
7010312	3 x 1-1/4	3.5 x 1.669	1.75	2.56	3.19	2.17	6.22	3.31	1/2 x 2-5/8
	80 x 32	88.9 x 42.4	44.5	65	81	55	158	84	M 12 x 65
7010313	3 x 1-1/2	3.5 x 1.9	2.00	2.80	3.19	2.17	6.22	3.54	1/2 x 2-5/8
	80 x 40	88.9 x 48.3	50.8	71	81	55	158	90	M 12 x 65
7010314	3 x 2	3.5 x 2.375	2.50	2.76	3.19	2.17	6.22	3.98	1/2 x 2-5/8
	80 x 50	88.9 x 60.3	63.5	70	81	55	158	101	M 12 x 65
7010315	4 x 1	4.250 x 1.327	1.50	2.87	2.99	2.44	6.57	2.99	1/2 x 2-5/8
	100 x 25	108.1 x 33.7	38	73	76	62	167	76	M 12 x 65
7010316	4 x 1-1/4	4.25 x 1.669	1.81	3.07	2.99	2.44	6.57	3.27	1/2 x 2-5/8
	100 x 32	108.0 x 42.4	46	78	76	62	167	83	M 12 x 65
7010317	4 x 1-12	4.25 x 1.9	2.09	3.27	2.99	2.44	6.57	3.54	1/2 x 2-5/8
	100 x 40	108.0 x 48.3	53	83	76	62	167	90	M 12 x 65
7010318	4 x 2	4.25 x 2.375	2.50	3.27	3.07	2.44	6.57	3.94	1/2 x 2-5/8
	100 x 50	108.0 x 60.3	63.5	83	78	62	167	100	M 12 x 65
7010319	4 x 2-1/2	4.25 x 3	2.76	2.87	4.13	2.44	6.57	4.61	1/2 x 2-5/8
	100 x 65	108.0 x 76.1	70	73	105	62	167	117	M 12 x 65
7010320									

Continued on next page

MECHANICAL TEE (THREAD)
Model 403



Item #	Nominal Size in/mm	Pipe O.D.	Hole Dia. ∓ +3.2,-0 /+0.13,-0	Dimensions - in/mm					Bolt Size in/mm
				Tŧ	A	B	C	D	
7010321	4 x 3	4.5 x 3.5	3.50	3.31	3.94	2.56	7.13	5.35	1/2 x 2-3/4
	100 x 80	114.3 x 88.9	89	84	100	65	181	136	M 12 x 70
7010322	5 x 1	5.250 x 1.327	1.50	3.35	3.50	2.91	8.07	2.99	1/2 x 3
	125 x 25	133.0 x 33.7	38	85	89	74	205	76	M 12 x 75
7010323	5 x 1-1/4	5.25 x 1.669	1.81	3.54	3.50	2.91	8.07	3.27	1/2 x 3
	125 x 32	133.0 x 42.4	46	90	89	74	205	83	M 12 x 75
7010324	5 x 1-1/2	5.25 x 1.9	2.09	3.74	3.50	2.91	8.07	3.54	1/2 x 3
	125 x 40	133.0 x 48.3	53	95	89	74	205	90	M 12 x 75
7010325	5 x 2	5.25 x 2.375	2.52	3.74	3.50	2.91	8.07	3.94	1/2 x 3
	125 x 50	133.0 x 60.3	64	95	89	74	205	100	M 12 x 75
7010326	5x 2-1/2	5.25 x 3	3.15	3.82	3.62	2.91	8.07	4.61	1/2 x 3
	125 x 65	133.0 x 76.1	80	97	92	74	205	117	M 12 x 75
7010327	5 x 3	5.25 x 3.5	3.62	4.17	3.70	2.91	8.07	5.08	1/2 x 3
	125 x 80	133.0 x 88.9	92	106	94	74	205	129	M 12 x 75
7010328	6 x 1	6.250 x 1.327	1.50	4.45	4.00	3.58	9.17	2.99	9/16 x 3
	150 x 25	159 x 33.7	38	113	101.5	91	233	76	M 14 x 75
7010329	6 x 1-1/4	6.250 x 1.669	1.81	4.45	4.00	3.58	9.17	3.27	1/2 x 3
	150 x 32	159.0 x 42.4	46	113	101.5	91	233	83	M 12 x 75
7010330	6 x 1-1/2	6.250 x 1.9	2.09	4.41	4.00	3.58	9.17	3.54	1/2 x 3
	150 x 40	159.0 x 48.3	53	112	101.5	91	233	90	M 12 x 75
7010331	6 x 2	6.250 x 2.375	2.52	4.37	4.00	3.58	9.17	3.94	1/2 x 3
	150 x 50	159.0 x 60.3	64	111	101.5	91	233	100	M 12 x 75
7010332	6 x 2-1/2	6.250 x 3	3.15	4.37	4.15	3.58	9.17	4.61	5/8 x 3-1/3
	150 x 65	159.0 x 76.1	80	111	105.5	91	233	117	M 16 x 85
7010333	6 x 3	6.250 x 3.5	3.62	4.33	4.15	3.58	9.17	5.08	5/8 x 3-1/3
	150 x 80	159.0 x 88.9	92	110	105.5	91	233	129	M 16 x 85
7010334	8 x 1	8.625 x 1.327	1.50	5.98	5.35	1.92	12.68	2.99	5/8 x 3-1/2
	200 x 25	219.1 x 33.7	38	152	136	125	322	76	M 20 x 90
7010335	8 x 1-1/4	8.625 x 1.669	1.75	5.98	5.79	1.92	12.68	3.31	5/8 x 3-1/2
	200 x 32	219.9 x 42.4	44.5	152	147	125	322	84	M 20 x 90
7010336	8 x 1-1/2	8.625 x 1.9	2.00	5.98	5.79	1.92	12.68	3.54	5/8 x 3-1/2
	200 x 40	219.1 x 48.3	50.8	152	147	125	322	90	M 20 x 90
7010337	8 x 2	8.625 x 2.375	2.50	5.43	5.79	1.92	12.68	3.98	5/8 x 3-1/2
	200 x 50	219.1 x 60.3	63.5	138	147	125	322	101	M 20 x 90
7010338	8 x 2-1/2	8.625 x 3	2.76	5.08	6.14	1.92	12.68	4.61	5/8 x 3-1/2
	200 x 65	219.1 x 76.1	70	129	156	125	322	117	M 20 x 90
7010339	8 x 3	8.625 x 3.5	3.50	5.31	6.24	1.92	12.68	136	5/8 x 3-1/2
	200 x 80	219.1 x 88.9	89	135	158.5	125	322	5.35	M 20 x 90

SADDLE-LET SMALL MECHANICAL TEE (THREAD)
Model 502

The Model 502 Saddle-Lets provides a direct branch connection at any location where a hole can be cut in the pipe.

•Available as female threaded outlet

•Sizes from 1¼ – 2½" | 25 – 76.1 mm

•Pressures up to 300 psi | 2068 kPa | 21 bar

Provides a convenient method of incorporating outlets for directly connecting sprinklers, drop nipples, sprigs, gauges, drains and other outlet products.

No need for welding, just cut or drill a hole at the desired outlet location.

The Saddle-Let allows full bore flow and is pressure rated to 300 psi (20 bar).

Pipe Material
• Carbon steel, Schedule 10, Schedule 40.

Maximum Working Pressure
• Up to 300 psi/20 bar

Function
• Joins carbon steel pipe.
• Provides a rigid pipe joint designed to restrict axial or angular movement.

CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

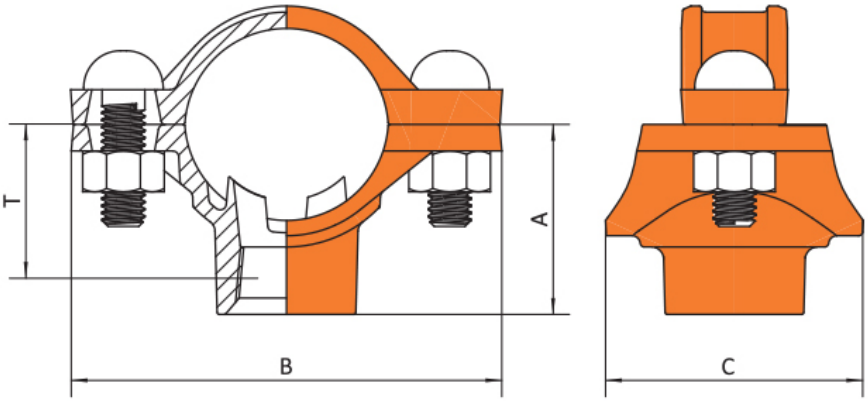
Gasket:
Standard: Grade E EPDM (Type A)
ARGCO's products are listed by Underwriters Laboratories UL Canada and Approved by Factory Mutual for we and dry (oil free air) sprinkler services within the rated working pressure.

Bolts and Nuts
Standard: Carbon Steel oval neck track bolts meeing ASTM A449 and ISO 898-1. Carbon steel hex nuts meet ASTM A563 Grade B.
Nuts and Bolts are zinc electroplated per ASTM B633 NZ/FE5, finish Type III.
Available: Stainless Steel. Meets ASTM F593, Group 2 (316 stainless steel), condition CW.
Hex nuts meets ASTM F594, Group 2 (316 stainless steel), condition CW, with galling-resistant coating.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

SADDLE-LET SMALL MECHANICAL TEE (THREAD)
Model 502



Item #	Nominal Size in/mm	Hole Dia. T +0.04, -0 +1, -0	Dimensions A inches mm	Dimensions B inches mm	Dimensions C inches mm	Take-Out T/D in/mm	Bolt Size in	Bolt Torque N-M/Lbs-Ft
7010300	1 x 1-1/2	0.95	1.10	3.66	1.89	1.14	3/8	22-29
100050		24	28	93	48	29		30-40
7010300	1-1/4 x 1/2	1.18	1.77	3.86	2.56	1.30	3/8	22-29
125050	35 x 15	30	45	98	65	33		30-40
7010300	1-1/4 x 3/4	1.18	1.77	3.86	2.56	1.28	3/8	22-29
125075	32 x 20	30	45	98	65	32.5		30-40
7010300	1-1/4 x 1	1.18	2.13	3.86	2.20	1.52	3/8	22-29
125100	32 x 25	30	54	98	56	38.6		30-40
7010300	1-1/2 x 1/2	1.18	1.89	3.86	2.20	1.42	3/8	22-29
150050	40 x 15	30	48	98	56	36.1		30-40
7010300	1-1/2 x 3/4	1.18	1.89	3.86	2.20	1.40	3/8	22-29
150075	40 x 20	30	48	98	56	35.6		30-40
7010300	1-1/2 x 1	1.18	2.24	3.86	2.20	1.64	3/8	22-29
150100	40 x 25	30	57	98	56	41.7		30-40
7010300	2 x 1/2	1.18	2.13	3.86	2.20	1.66	3/8	22-29
200050	50 x 15	30	54	98	56	42.2		30-40
7010300	2 x 3/4	1.18	2.13	3.86	2.20	1.64	3/8	22-29
200075	50 x 20	30	54	98	56	41.7		30-40
7010300	2 x 1	1.18	2.44	3.86	2.20	1.88	3/8	22-29
200100	50 x 25	30	62	98	56	47.8		30-40
7010300	2-1/2 x 1/2	1.18	2.40	3.86	2.20	1.91	3/8	22-29
250005	65 x 15	30	61	98	56	48.5		30-40
7010300	2-1/2 x 3/4	1.18	2.40	3.86	2.20	1.89	3/8	22-29
250075	65 x 20	30	61	98	56	48		30-40
7010300	2-1/2 x 1	1.18	2.80	3.86	2.20	2.13	3/8	22-29
250100	65 x 25	30	71	98	56	54.1		30-40

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

MECHANICAL TEE (GROOVE)
Model 402

The Model 402 Mechanical Tee provides a fast and easy mid-pipe grooved branch outlet. The mechanical tee utilizes ductile iron housings, a grade E gasket and heat-treated carbon steel track bolts and nuts. Maximum working pressure: 300 psi (20 bar).

Pipe Material
- Carbon steel, Schedule 10, Schedule 40.
  For use with alternative materials and wall thicknesses please contact ARGCO.

Maximum Working Pressure
- Up to 300 psi/20 bar

Function
- Joins carbon steel pipe.
- Provides a rigid pipe joint designed to restrict axial or angular movement.

CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

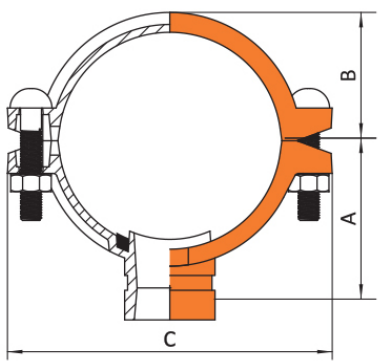
Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

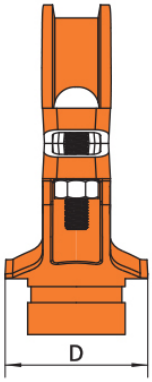
Gasket:
Standard: Grade E EPDM (Type A)
ARGCO's products are listed by Underwriters Laboratories UL Canada and Approved by Factory Mutual for we and dry (oil free air) sprinkler services within the rated working pressure.

Bolts and Nuts
Standard: Carbon Steel oval neck track bolts meeing ASTM A449 and ISO 898-1. Carbon steel hex nuts meet ASTM A563 Grade B.
Nuts and Bolts are zinc electroplated per ASTM B633 NZ/FE5, finish Type III.
Available: Stainless Steel. Meets ASTM F593, Group 2 (316 stainless steel), condition CW.
Hex nuts meets ASTM F594, Group 2 (316 stainless steel), condition CW, with galling-resistant coating.

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

MECHANICAL TEE (GROOVE)
Model 402





Item #	Nominal Size in/mm	Pipe O.D.	Hole Dia. ∓ +3.2,-0 /+0.13,-0	Dimensions - in/mm A	B	C	D	Bolt Size in/mm
7010415	2 x 1-1/4	2.375 x 1.669	1.75	2.85	1.65	4.72	3.31	3/8 x 2-3/8
	50 x 32	60.3 x 42.4	44.5	72.5	42	120	84	M 10 x 60
7010416	2 x 1-1/2	2.375 x 1.9	1.75	2.85	1.65	4.72	3.31	3/8 x 2-3/8
	50 x 40	60.3 x 42.4	44.5	72.5	42	120	84	M 10 x 60
7010417	2-1/2 x 1-1/4	2.875 x 1.669	1.75	3.09	1.85	5.63	3.31	1/2 x 2-5/8
	65 x 32	73 x 42.4	44.5	78.5	47	143	84	M 12 x 65
7010418	2-1/2 x 1-1/2	2.875 x 1.9	2.00	3.09	1.85	5.63	3.54	1/2 x 2-5/8
	65 x 40	73 x 48.3	50.8	78.5	47	143	90	M 12 x 65
7010420	3 x 1-1/4	3.5 x 1.669	1.72	3.39	2.17	6.22	3.31	1/2 x 2-5/8
	80 x 32	88.9 x 42.4	44.5	86	55	158	84	M 12 x 65
7010421	3 x 1-1/2	3.5 x 1.9	2.00	3.39	2.17	6.22	3.54	1/2 x 2-5/8
	80 x 40	88.9 x 48.3	50.8	86	55	158	90	M 12 x 65
7010422	3 x 2	3.5 x 2.375	2.50	3.43	2.17	6.22	3.98	1/2 x 2-5/8
	80 x 50	88.9 x 60.3	63.5	87	55	158	101	M 12 x 65
7010423	4 x 1-1/4	4.5 x 1.669	1.75	3.90	2.56	7.13	3.31	1/2 x 2-3/4
	100 x 32	114.3 x 42.4	44.5	99	65	181	84	M 12 x 70
7010424	4 x 1-1/2	4.5 x 1.9	2.00	3.90	2.56	7.13	3.54	1/2 x 2-3/4
	100 x 40	114.3 x 48.3	50.8	99	65	181	90	M 12 x 70
7010425	4 x 2	4.25 x 2.375	2.52	3.64	2.44	6.77	3.54	1/2 x 2-5/8
	100 x 50	108 x 60.3	64	92.5	62	172	90	M 12 x 65
7010426	4 x 2-1/2	4.25 x 3	3.15	3.64	2.44	6.77	4.21	1/2 x 2-5/8
	100 x 65	108 x 76.1	80	92.5	62	172	107	M 12 x 65
7010427	4 x 3	4.5 x 3.5	3.50	3.90	2.56	7.13	5.35	1/2 x 2-3/4
	100 x 80	114.3 x 88.9	89	99	65	181	136	M 12 x 70
7010428	5 x 1-1/4	5.5 x 1.669	1.75	4.41	2.91	8.62	3.31	5/8 x 3-1/3
	125 x 32	139.7 x 42.4	44.5	112	74	219	84	M 16 x 85
7010429	5 x 1-1/2	5.25 x 1.9	2.09	4.15	2.91	8.07	3.54	1/2 x 2
	125 x 40	133 x 48.3	53	105.5	74	205	90	M 12 x 75
7010430	5 x 2	5.25 x 2.375	2.52	4.15	2.91	8.07	3.94	1/2 x 2
	125 x 50	133 x 60.3	64	105.5	74	205	100	M 12 x 75
7010431	5 x 2-1/2	5.25 x 3	3.15	4.15	2.91	8.07	4.61	1/2 x 2
	125 x 65	133 x 76.1	80	105.5	74	205	117	M 12 x 75
7010432	5 x 3	5.25 x 3.5	3.62	4.15	2.91	8.07	5.08	1/2 x 2
	125 x 80	133 x 88.9	92	105.5	74	205	129	M 12 x 75
7010433	6 x 1-1/4	6.5 x 1.669	1.75	4.92	3.7	9.76	3.31	9/16 x 3
	150 x 32	165 x 42.4	44.5	125	94	248	84	M 14 x 75

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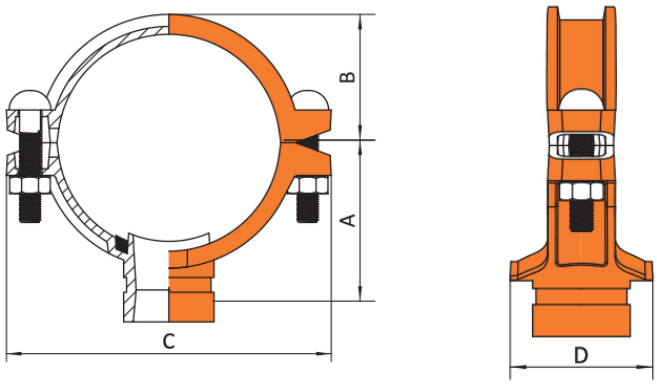
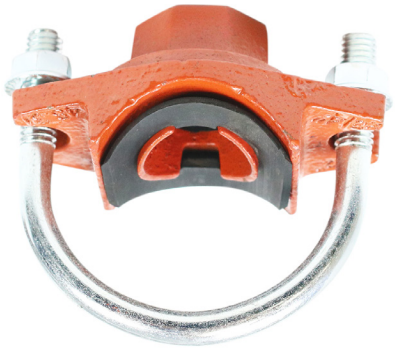
MECHANICAL TEE (GROOVE)
Model 402



Item #	Nominal Size in/mm	Pipe O.D.	Hole Dia. ∓ +3.2,-0 /+0.13,-0	Dimensions - in/mm A	B	C	D	Bolt Size in/mm
7010436	6 x 1-1/2	6.5 x 1.9	2.00	4.92	3.7	9.76	3.54	5/8 x 3-1/3
	150 x 40	165.1 x 48.3	50.8	125	94	248	90	M 16 x 85
7010437	6 x 2	6.25 x 2.375	2.52	4.65	3.58	9.71	3.94	9/16 x 3
	150 x 50	159 x 60.3	64	118	91	233	100	M 14 x 75
7010438	6 x 2-1/2	6.25 x 3	3.15	4.65	3.58	9.17	4.61	9/16 x 3
	150 x 65	159 x 76.1	80	118	91	233	117	M 14 x 75
7010439	6 x 3	6.25 x 3.5	3.62	4.65	3.58	9.17	5.08	9/16 x 3
	150 x 80	159 x 88.9	92	118	91	233	129	M 14 x 75
7010440	6 x 4	6.25 x 4.25	4.09	4.70	3.58	9.17	5.63	9/16 x 3
	150 x 100	159.0 x 108.0	104	119.5	91	233	143	M 14 x 75
7010443	8 x 2	8.625 x 2.375	2.50	5.98	1.92	12.68	3.98	5/8 x 3-1/2
	200 x 50	219.1 x 60.3	63.5	152	125	322	101	M 20 x 90
7010444	8 x 2-1/2	8.625 x 2.875	2.76	6.06	1.92	12.68	4.61	5/8 x 3-1/2
	200 x 65	219.1 x 60.3	70	154	125	322	117	M 20 x 90
7010445	8 x 3	8.625 x 3.5	3.50	6.06	1.92	12.68	5.35	5/8 x 3-1/2
	200 x 80	219.1 x 88.9	89	154	125	322	136	M 20 x 90
7010446	8 x 4	8.625 x 4.25	4.49	6.14	1.92	12.68	6.38	5/8 x 3-1/2
	200 x 100	219.1 x 108	114	156	125	322	162	M 20 x 90

U-BOLT MECHANICAL TEE (SADDLE-LET)
Model 501



The Model 501 Saddle-Lets is the ideal outlet fitting for direct connecons to sprinkler heads, drop nipples and or gauges. No need for welding, just cut or drill a hole at the desired outlet location. Posion the Saddle-Let so that the locating collar fits within the hole and secure with the U-bolt and nuts. The Saddle-Let allows full bore flow and is pressure rates to 300 psi (20 bar).

Pipe Material
- Carbon steel, Schedule 10, Schedule 40.
  For use with alternative materials and wall thicknesses please contact ARGCO.

Maximum Working Pressure
- Up to 365 psi/2517 kPa.

Function
- Joins carbon steel pipe.
- Provides a rigid pipe joint designed to restrict axial or angular movement.

CERTIFICATIONS/LISTINGS
Underwriters Laboratories, Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

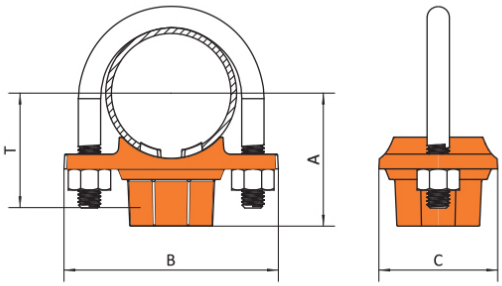
Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

Gasket:
Standard: Grade E EPDM (Type A)
ARGCO's products are listed by Underwriters Laboratories UL Canada and Approved by Factory Mutual for we and dry (oil free air) sprinkler services within the rated working pressure.

Bolts and Nuts
Standard: Carbon Steel oval neck track bolts meeing ASTM A449 and ISO 898-1. Carbon steel hex nuts meet ASTM A563 Grade B.
Nuts and Bolts are zinc electroplated per ASTM B633 NZ/FE5, finish Type III.
Available: Stainless Steel. Meets ASTM F593, Group 2 (316 stainless steel), condition CW.
Hex nuts meets ASTM F594, Group 2 (316 stainless steel), condition CW, with galling-resistant coating.

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

U-BOLT MECHANICAL TEE (SADDLE-LET)
Model 501



Item #	Nominal Size in/mm	Hole Dia. T +0.04, -0 +1, -0	Dimensions A inches mm	Dimensions B inches mm	Dimensions C inches mm	Take-Out T/D in/mm	Bolt Size in	Bolt Torgue N-M/Lbs-Ft
7010285	1-1/4 x 1/2	1.18	2.09	3.50	2.20	1.73	3/8	22-29
	35 x 15	30	53	89	56	44	U-Bolt	30-40
7010286	1-1/4 x 3/4	1.18	2.09	3.50	2.20	1.73	3/8	22-29
	32 x 20	30	53	89	56	44	U-Bolt	30-40
7010287	1-1/4 x 1	1.18	2.20	3.50	2.20	1.85	3/8	22-29
	32 x 25	30	56	89	56	47	U-Bolt	30-40
7010288	1-1/2 x 1/2	1.18	2.17	3.50	2.20	1.81	3/8	22-29
	40 x 15	30	55	89	56	46	U-Bolt	30-40
7010289	1-1/2 x 3/4	1.18	2.17	3.50	2.20	1.81	3/8	22-29
	40 x 20	30	55	89	56	46	U-Bolt	30-40
7010290	1-1/2 x 1	1.18	2.28	3.50	2.20	1.93	3/8	22-29
	40 x 25	30	58	89	56	49	U-Bolt	30-40
7010291	2 x 1/2	1.18	2.52	3.86	2.20	2.09	3/8	22-29
	50 x 15	30	64	98	56	53	U-Bolt	30-40
7010292	2 x 3/4	1.18	2.52	3.86	2.20	2.09	3/8	22-29
	50 x 20	30	64	98	56	53	U-Bolt	30-40
7010293	2 x 1	1.18	2.64	3.86	2.20	2.20	3/8	22-29
	50 x 25	30	67	98	56	56	U-Bolt	30-40
7010294	2-1/2 x 1/2	1.18	2.72	4.37	2.20	2.28	3/8	22-29
	65 x 15	30	69	111	56	58	U-Bolt	30-40
7010295	2-1/2 x 3/4	1.18	2.72	4.37	2.20	2.28	3/8	22-29
	65 x 20	30	69	111	56	58	U-Bolt	30-40
7010296	2-1/2 x 1	1.18	2.83	4.37	2.20	2.40	3/8	22-29
	65 x 25	30	72	111	56	61	U-Bolt	30-40

FLANGE ADAPTER
Model 902

c UL us LISTED

FM APPROVED

The Model 902 Flange Adapter allows for direct connection of a grooved system to ANSI class 125/150 flanged components

SPECIFICATIONS - MATERIAL

Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

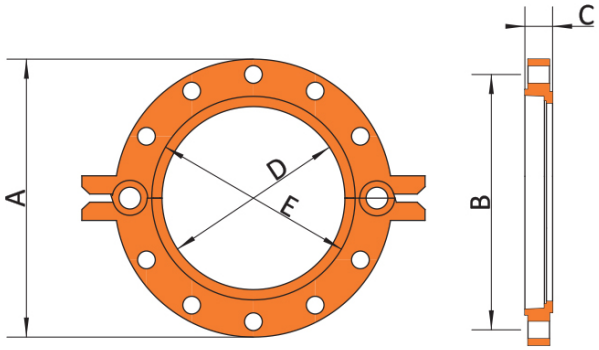
Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized

Pipe Material
• Carbon steel, Schedule 10, Schedule 40.

Maximum Working Pressure
• Up to 300psi/20 bar

Function
• Joins carbon grooved pipe system to flange components

Bolts and Nuts
Standard: Carbon Steel oval neck track bolts meeing ASTM A449 and ISO 898-1. Carbon steel hex nuts meet ASTM A563 Grade B.
Nuts and Bolts are zinc electroplated per ASTM B633 NZ/ FE5, finish Type III.



Item #	Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	Max. End Load Lbs./KN	A inches mm	B inches mm	C inches mm	D inches mm	E inches mm	Bolt Holes No.	Bolt Size in/mm
7010450	2	2.375	250	1330	6.10	4.74	0.98	2.36	3.07	4	5/8
	50	60.3	17	5.71	155	120.5	25	60	78	4	M16
7010451	2-1/2	2.875	250	1950	7.09	5.51	0.98	2.87	3.66	4	5/8
	65	73.0	17	8.37	180	140	25	73	93	4	M16
7010452	3	3.500	250	2880	7.48	6.02	0.98	3.50	4.21	8	5/8
	80	88.9	17	12.41	190	153	25	89	107	8	M16
7010453	4	4.500	250	4770	9.06	7.52	0.98	4.49	5.16	8	5/8
	100	114.3	17	20.51	230	191	25	114	131	8	M16
7010454	5	5.563	250	7390	10.04	8.50	0.98	5.55	6.18	8	3/4
	125	141.3	17	31.35	255	216	25	141	157	8	M20
7010455	6	6.625	250	10340	11.02	9.49	0.98	6.61	7.28	8	3/4
	150	168.3	17	44.47	280	241	25	168	185	8	M20
7010456	8	8.625	250	17520	13.58	11.77	1.06	8.62	9.21	8	3/4
	200	219.1	17	75.37	345	299	27	219	234	8	M20
7010457	10	10.750	250	27210	15.94	14.25	1.18	10.75	11.57	12	1
	250	237.0	17	164.71	405	362	30	273	294	12	M24
7010458	12	12.75	250	38280	19.09	17.01	1.26	12.76	13.43	12	1
	300	323.9	17	164.71	485	432	32	324	341	12	M24

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

FLANGE ADAPTER NIPPLE
Model 802

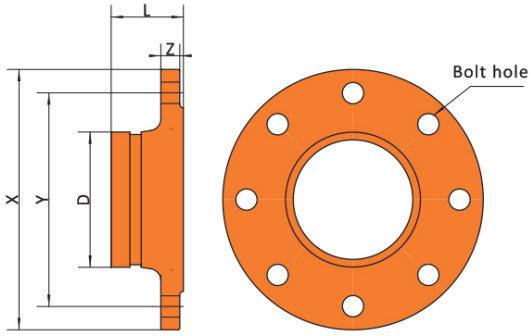
The Model 802 Flange Adapter Nipple provides a rigid transition from a flanged component to a grooved system.

Pipe Material
• Carbon steel, Schedule 10, Schedule 40.
Maximum Working Pressure
• Up to 300 psi/20 bar
Function
• Joins carbon grooved pipe system to flange components

CERTIFICATIONS/LISTINGS
Underwriters Laboratories,
Underwriters Laboratories Canada, Factory Mutual.

SPECIFICATIONS - MATERIAL
Housing Sections: Ductile Iron conforming to ASTM A 536, Grade 65-45-12.

Housing Coating:
Standard: Orange Enamel
Available: Hot Dipped Galvanized



Item #	Nominal Size in/mm	Pipe O.D. in/mm	Max. Working Pressure PSI/Bar	Dimensions X inches mm	Y inches mm	Z inches mm	L inches mm	Bolt Holes No.	Bolt Size in/mm
	2	2.375	300	6.10	4.74	0.63	2.56	4	5/8
	50	60.3	20	155	120.5	16	65	4	M16
7010630	2-1/2	2.875	300	7.09	5.51	0.63	2.56	4	5/8
	65	73.0	20	180	140	16	65	4	M16
7010631	3	3.50	300	7.48	6.02	0.71	2.65	4	5/8
	80	88.90	20	190	153	18	65	4	M16
7010632	4	4.50	300	9.06	7.52	0.87	2.76	8	5/8
	100	114.30	20	230	191	22	70	8	M16
7010633	5	5.563	300	10.04	8.50	0.87	2.76	8	3/4
	125	141.3	20	255	216	22	70	8	M20
7010634	6	6.625	300	11.02	9.49	0.87	2.76	8	3/4
	150	168.30	20	280	241	22	70	8	M20
7010635	8	8.625	300	13.58	11.77	0.98	3.15	8	3/4
	200	219.1	20	345	299	25	80	8	M20
7010636	10	10.75	300	15.94	14.25	1.02	3.95	12	1
	250	273	20	405	362	26	85	12	M24
7010637	12	12.75	300	19.09	17.01	1.10	3.95	12	1
	300	323.9	20	485	432	28	90	12	M24

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

GASKET SELECTION GUIDE FOR GROOVED

GASKET SELECTION GUIDE

ARGCO utilizes the finest gasket materials available in our products. Over the past 50 year great advances have been made in synthetic elastomer technologies, allowing us to offer a full range of synthetic rubber gasket materials for a wide variety of piping applications. ARGCO gaskets are engineered and designed to meet and exceed standards such as ASTM D2000, AWWA C606, NSF61 and IAPMO. Our own stringent internal laboratory testing confirms this. Our continual research, development and testing are designed to advance the elastomer field and to develop better solutions for our ever changing industry.

Chemical resistance is primarily determined by the grade and or the compound of the gasket. The color coding identifies the gasket grade and or compound. Always verify that the gasket selected is correct for the intended service. Service temperature is controlled by factors including the gasket compound, fluid medium (air, water, oils, etc.), and continuity (continuous or intermittent) of service. Under no circumstances should gaskets be exposed to temperatures above or below their individual ratings.

Standard Gaskets

Compound	Grade	Color Dode	Recommended Services	Maximum Temp. Range
EPDM	**E**	Green Stripe	Good for cold & hot water up to +230°F (+110°C). Also good for services for water with acid, water with chlorine, deionizzed water, seawater and waste water, dilute acids, oil-free air and many chemicals. Not recommended for petroleum oils, solvents and aromatic hydrocarbons.	-29°F (-34°C) to +230°F (+110°C)
Nitrile	**T**	Orange Stripe	Good for petroleum oils, mineral oils, vegetable oils, aromatic hydrocarbons, many acids and water ≤ +150°F (+65°C).	-20°F (-29°C) to +180°F (+82°C)
White Nitrile	**A**	White Gasket	Good for oily and greasy food products and processing, as well as pharmaceutical and cosmetics manufacturing. Compounded from FAD approved ingrediients (CFR Title 21 Part 177.2600).	-20°F (-7°C) to +180°F (+82°C)
Silicone	**L**	Red Stripe	Good for dry, hot air without hydrocarbons and some high temperature chemical services. May also be used for fire protection dry systems.	-29°F (-34°C) to +350°F (+177°C)
Fluoro-elastomer (Viton)	**O**	Blue Stripe	Good for many oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids and air with hydrocarbons to +300°F (+149°C).	-20°F (-7°C) to +300°F (+149°C)

Warranty:

We warrant all Argco Brand Grooved products to be free from defects in materials and workmanship under normal conditions of use and service. Our obligation under this warranty is limited to repairing at our option at our factory or designated facility any product which shall within 10 years after delivery to the original buyer be returned with transportation charges prepaid, and which our examination and inspection shall show to our satisfaction to have been defective.

This warranty is made expressly in lieu of any other warranties, express or implied, including any implied warranty of merchantability or fitness for a particular purpose. The buyer's sole and exclusive remedy shall be for the replacement or repair of defective products as provided herein. The buyer agrees that no other remedy (including but not limited to), incidental or consequential damages for lost profits, lost sales, injury to person or property or any other incidental or consequential loss shall be available to him/her.

Argco neither assumes nor authorizes any person to assume for it any other liability in connection with the sale of such products.

This warranty shall not apply to any product which has been the subject to misuse, negligence or accident, which has been repaired or altered in any manner outside of Argco's factory or designated facility or which has been used in a manner contrary to Argco's instructions, recommendations or generally accepted practices. Argco shall not be responsible for design errors due to inaccurate or incomplete information supplied by the buyer or his representatives.

BOLT TORQUE FOR GROOVED

ARGCO couplings and mechanical tees are supplied complete with factory bolts and nuts. The bolt and nut torque is primarily a function of the bolt and nut size. The following table shows guidelines for nut and bolt torque and can be used when setting the torque on power drivers

Bolt Size in	N-m Lbs - ft
5/16	15 - 20
M8	11 - 15
3/8	25 - 30
M10	18 - 22
1/2	50 - 68
M12	37 - 50
5/8	80 - 120
M16	60 - 90

Bolt Size in	N-m Lbs - ft
3/4	1100 - 135
M20	74 - 100
7/8	170 - 275
M22	125 - 200
1	275 - 400
M24	200 - 300

Do not exceed the design torque guidelines by more than 25%, as excessive torque could lead to joint failure. Always tighten nuts evenly and equally by alternating sides to prevent the gasket from being pinched and always check to make sure the coupling keys are fully engaged in the grooves.

FLEXIBLE COUPLINGS

The bolt pads on flexible couplings have been designed to meet metal to metal when properly installed. Bolt pad gaps regardless of their size, are not acceptable on flexible couplings. The listed values in the table 1 are guideline torque values listed by the coupling size. Please note these are only guidelines and that the actual torque value may be less than those listed to achieve a proper assembly. Actual torques for assembly of flexible couplings are normally as little as 15-20 N-m (11-15 Lbs-) for the bolt size of M10 (3/8") and 30-40 N-m (22 to 30 Lbs-) for the M12 (1/2") bolt size.

Do not attempt to add further torque after the bolt pads make metal to metal contact. If the bolt pads do not make full metal to metal contact, increase the torque to the listed guideline in table 1. Do not exceed the listed torque by more than 25%, as excessive torque could lead to joint failure. If bolt pad gaps still exist after bolts and nuts have been tightened to the guideline torque, then this would indicate a problem in the assembly, pipe and or groove dimensions.

Table 1
Flexible Coupling Torque Guidelines

Bolt Size in	XGQT2 N-m/Lbs-ft	1212 N-m/Lbs-ft
1	60-70	---
	45-50	---
1-1/4	60-70	60-70
	45-50	45-50
1-1/2	60-70	60-70
	45-50	45-50
2	60-70	60-70
	45-50	45-50
2-1/2	60-70	90-100
	45-50	65-75
3	60-70	90-100
	45-50	65-75
4	90-100	90-100
	65-75	65-75
5	90-100	200-230
	65-75	145-170
6	90-100	200-230
	65-75	145-170
8	200-230(JIS216 270-300)	270-300
	145-170(JIS216 200-220)	200-220
10	270-300	270-300
	200-220	200-220
12	270-300	270-300
	200-220	200-220
14	270-300	---
	200-220	---
16	270-300	---
	200-220	---
18	270-300	---
	200-220	---
20	270-300	---
	200-220	---
22	270-300	---
	200-220	---
24	320-340	---
	235-250	---

ANGLE PAD RIGID COUPLINGS

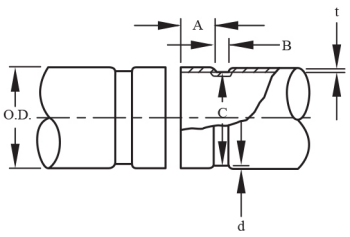
The bolt pads on angle-pad rigid couplings and butt-joint rigid couplings have been designed to meet metal to metal when properly installed. In addition as the bolts are tightened the bolt pads will slide against one another creating a slight offset. This offset should be equal on each side and is your visual indication that the coupling has been installed properly for a rigid connection. Bolt pad gaps, regardless of their size, are not acceptable on angle-pad coupling. The listed values in the table 2 are guideline torque values listed by the coupling size. Please note these are only guidelines and that the actual torque value may be less than those listed to achieve a proper assembly.

Table 2
Torque Guidelines for Angle-pad Rigid Couplings

Size in	1512 N-m/Lbs-ft	GKS N-m/Lbs-ft	XGQT4 N-m/Lbs-ft
1	---	60-70	60-70
	---	45-50	45-50
1-1/4	60-70	60-70	60-70
	45-50	45-50	45-50
1-1/2	60-70	60-70	60-70
	45-50	45-50	45-50
2	60-70	60-70	60-70
	45-50	45-50	45-50
2-1/2	90-100	60-70	60-70
	65-75	45-50	45-50
3	90-100	60-70	90-100
	65-75	45-50	65-75
4	90-100	90-100	90-100
	65-75	65-75	65-75
5	200-230	90-100	90-100
	145-170	65-75	65-75
6	200-230	90-100	200-230
	145-170	65-75	145-170
8	270-300	200-230	200-230
	200-220	145-170	145-170
10	270-300	270-300	---
	200-220	200-220	---
12	270-300	270-300	---
	200-220	200-220	---

ROLL GROOVE SPECIFICATIONS

Standard Roll Groove for ANSI B36.10 and Other IPS Pipe



1	2			3	4	5	6	7	8
Nominal Size mm/in	Pipe O.D.			A ±0.76 ±0.030	B ±0.76 ±0.030	C +0.00 +0.000	Min. Wall t mm/in	Groove Depth d (ref.) mm/in	Max. Allowed Flare Dia. mm/in
	Basic mm/in	Tolerances							
20	26.7	+0.25	-0.25	15.88	7.14	23.83-0.38	1.65	1.42	29.2
0.75	1.050	+0.010	-0.010	0.625	0.281	0.938-0.015	0.065	0.056	1.15
25	33.4	+0.33	-0.33	15.88	7.14	30.23-0.38	1.65	1.60	36.3
1	1.315	+0.013	-0.013	0.625	0.281	1.190-0.015	0.065	0.063	1.43
32	42.2	+0.41	-0.41	15.88	7.14	38.99-0.38	1.65	1.60	45.0
1.25	1.660	+0.016	-0.016	0.625	0.281	1.535-0.015	0.065	0.063	1.77
40	48.3	+0.48	-0.48	15.88	7.14	45.09-0.38	1.65	1.60	51.1
1.5	1.900	+0.019	-0.019	0.625	0.281	1.775-0.015	0.065	0.063	2.01
50	60.3	+0.61	-0.61	15.88	8.74	57.15-0.38	1.65	1.60	63.0
2	2.375	+0.024	-0.024	0.625	0.344	2.250-0.015	0.065	0.063	2.48
65	73.0	+0.74	-0.74	15.88	8.74	69.09-0.46	2.11	1.98	75.7
2.5	2.875	+0.029	-0.029	0.625	0.344	2.720-0.018	0.083	0.078	2.98
80	88.9	+0.89	-0.79	15.88	8.74	84.94-0.46	2.11	1.98	91.4
3	3.500	+0.035	-0.031	0.625	0.344	3.344-0.018	0.083	0.078	3.60
90	101.6	+1.02	-0.79	15.88	8.74	97.38-0.51	2.11	2.11	104.1
3.5	4.000	+0.040	-0.031	0.625	0.344	38.34-0.020	0.083	0.083	4.10
100	114.3	+1.14	-0.79	15.88	8.74	110.08-0.51	2.11	2.11	116.8
4	4.500	+0.045	-0.031	0.625	0.344	4.334-0.020	0.083	0.083	4.60
125	141.3	+1.42	-0.79	15.88	8.74	137.03-0.56	2.77	2.11	143.8
5	5.563	+0.056	-0.031	0.625	0.344	5.395-0.022	0.109	0.083	5.66
150	168.3	+1.60	-0.79	15.88	8.74	163.96-0.56	2.77	2.16	170.9
6	6.625	+0.063	-0.031	0.625	0.344	6.455-0.022	0.109	0.085	6.73
200	219.1	+1.60	-0.79	19.05	11.91	214.40-0.64	2.77	2.34	223.5
8	8.625	+0.063	-0.031	0.750	0.469	8.441-0.025	0.109	0.092	8.80
250	273.0	+1.60	-0.79	19.05	11.91	268.27-0.69	3.40	2.39	277.4
10	10.750	+0.063	-0.031	0.750	0.469	10.562-0.027	0.134	0.094	10.92
300	323.9	+1.60	-0.79	19.05	11.91	318.29-0.76	3.96	2.77	328.2
12	12.750	+0.063	-0.031	0.750	0.469	12.531-0.030	0.156	0.109	12.92
350	355.6	+1.60	-0.79	23.83	11.91	350.04-0.76	3.96	2.77	358.1
14	14.000	+0.063	-0.031	0.938	0.469	13.781-0.030	0.156	0.109	14.10
400	406.4	+1.60	-0.79	23.83	11.91	400.84-0.76	4.19	2.77	408.9
16	16.000	+0.063	-0.031	0.938	0.469	15.781-0.030	0.165	0.109	16.10
450	457.2	+1.60	-0.79	25.40	11.91	451.64-0.76	4.19	2.77	461.3
18	18.000	+0.063	-0.031	1.000	0.469	17.781-0.030	0.165	0.109	18.16
500	508.0	+1.60	-0.79	25.40	11.91	502.44-0.76	4.78	2.77	512.1
20	20.000	+0.063	-0.031	1.000	0.469	19.781-0.030	0.188	0.109	20.16
550	558.8	+1.60	-0.79	25.40	12.70	550.06-0.76	4.78	4.37	563.9
22	22.000	+0.063	-0.031	1.000	0.500	21.656-0.030	0.188	0.172	22.20
600	609.6	+1.60	-0.79	25.40	12.70	600.86-0.76	4.78	4.37	614.7
24	24.000	+0.063	-0.031	1.000	0.500	23.656-0.030	0.188	0.172	24.20

Pipe OD (Column 2): Maximum allowable tolerances from square cut ends is 0.03" for size up to 3 1/2"; 0.045" for 4" thru 6"; and 0.060" for size 8" and above.

Gasket Sealing Surface (Column 3): The gasket sealing surface shall be free from deep scores, marks, or ridges that could prevent a positive seal.

Groove Width (Column 4): Groove width is to be measured between vertical flanks of the groove side walls.

Groove Diameter (Column 5): The "C" diameters are average values. The groove must be of uniform depth around the entire pipe circumference.

Minimum Wall Thickness (Column 6): The "t" is the minimum allowable wall thickness that may be roll-grooved.

Groove Depth (Column 7): The "d" is for reference use only. The groove dimension shall be determined by the groove diameter "C".

Flare Diameter (Column 8): The pipe end that may flare when the groove is rolled shall be within this limit when measured at the extreme end of the pipe.