

ANVILStar™

Fire Products Division of Anvil® International



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MERIT®

Outlet Fittings for Fire Protection

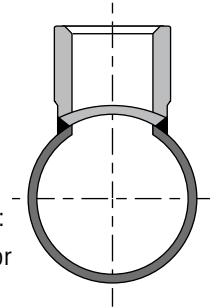


Weld-Miser™ Tee-Let®

Welding Outlet Fittings

Unified Design™ Series

Merit's Unified Design Series carries all important design considerations into its entire line of welding branch outlet fittings. Merit® Weld-Miser™ Tee-Lets® are designed and Manufactured to reduce the amount of weld required to install the Tee-Lets on thin wall or proprietary flow pipe. Typically only one weld-pass completes the installation. Merit Tee-Lets install with less weld volume than any other brand of welding outlet fittings for fire sprinkler applications. To accomplish this:



- The contoured end of the fittings employs a reduced outside diameter. Two major advantages are immediately apparent:
- The thinner wall on the contoured end permits welding temperatures to be matched to the thickness of the branch line or main thereby insuring complete penetration without cold welds, weld roll-off, burn-through or excessive distortion.
- On smaller sizes a heavier section is maintained on the threaded end of the fitting. This protects the threads from damage during shipping and handling prior to installation as well as from weld distortion.
- Each outlet size 1½" and larger, whether male or female threaded, cut grooved or beveled requires the same hole size in the header pipe. This simplifies the installation process.

General Specifications

- Tee-Let welding outlet fittings are manufactured from highly weldable steel which conforms to the chemical and physical requirements of ASTM A-53, Grades A or B, Type E. Ease of installation is assured when automatic welding equipment is used to install Merit Tee-Lets.
- Threads are cut in accordance with the requirements of ANSI B1.20.1, national standard for tapered pipe threads, or ISO-7-1 threads are available.
- Tee-Let threaded and grooved welding outlet fittings are UL/ULC Listed and FM Approved for use in the fire sprinkler systems installed in accordance with the requirements of NFPA Bulletin 13. They are rated for 300 PSI operation in fire sprinkler systems, and higher pressures in other non-critical piping systems.
- Tee-Lets are offered in a wide variety of header sizes. The consolidated header sizes shown in the following charts allow the fittings to be installed on more than one header size, permitting the first size listed to fit the header perfectly, while a small gap along the longitudinal center line of the header will appear for the second size listed.
- Merit® Weld-Miser™ Tee-Lets® are identified by a lot number that provides full traceability per ISO 9000 specifications.

For Your Piping Systems Specify Weld-Miser™ Tee-Let®

Branch Outlet Fittings shall be Merit Weld-Miser Tee-Let, Lightweight forged steel, employing low weld volume profile to provide for full penetration welds with minimum burn through and pipe distortion on Schedule 5 thru 10, proprietary thin wall, and standard wall pipe. Threads are to be ANSI B1.20.1, or ISO-7-1, and the bore of the fittings calculated to improve flow. Welding outlets to be UL Listed, FM Approved for use conforming to NFPA, Bulletin 13 and pressure rated for 300 PSI maximum.

How to Order - Use either of the following methods for ordering Merit® Weld-Miser™ Tee-Let®.

Method No. 1

Specify quantity desired followed by the part number shown in the "dimensions" chart for the type and size of outlet desired.

Method No. 2

Use the following system:

Quantity	Part Number	Quantity	Outlet Size	Header Size	Weight	Type End	Merit Tee-Let	Steel Material
		Always order a few more than actually required for the job.	Column "A" of Chart	Insert size consolidation from Column "B" of chart.	Sch. 10 Standard	A - Female Thread B - Male Thread C - Cut Groove C/R - Roll Groove		



Weld-Miser™ Tee-Let® Welding Outlet Fittings



For Fire Protection & Other Low Pressure Piping Systems

Merit Weld-Miser™ Tee-Let® Welding Branch Outlet Fittings offer the user a high strength, low cost forged threaded and grooved line of fittings specifically designed and manufactured to be installed on Schedules 5 thru 10, proprietary thin wall flow pipe and standard wall pipe.

Merit Tee-Lets are forged steel welding outlet fittings. The material used in manufacture meets the chemical and physical requirements of ASTM A 53, Grades A or B, Type E, A-135, A-795, Tee-Lets employ a low weld volume design to provide for either a partial or full penetration weld employing a single pass with minimum burn-through and pipe distortion. Weld Miser Tee-Lets are recommended for use on proprietary thin wall, Schedules 5, 10 and 40 pipe. Threads comply with ANSI B1.20.1 or ISO7/1. They are UL Listed and FM Approved for use conforming to the requirements of Bulletin 13 1999 of the National Fire Protection Association. When used in fire sprinkler systems, Tee-Lets are rated for 300 psi. When used in mechanical systems, maximum pressures are calculated using criteria developed for ASME B31 piping code.



TEE-LET WELDED OUTLET FITTING (UL VIZU — EX6032, FM APPROVAL GUIDE CHAPTER 1 — PIPE FITTINGS)			
Outlet Model	Outlet Pipe Size (Inch)	Header Pipe Size (Inch)	Rated Pressure (psig)
Tee-Let Type A (F-Threaded End)	1/2, 3/4, 1	1/2 - 8 (Sch. 10, 40)	300
	1 1/4, 1 1/2, 2, 2 1/2, 3, 4	1/2 - 4 (Sch. 5, DynaFlow)	
	2	4 (EZ-Flow)	
	2, 4	6 (EZ-Flow)	
Tee-Let Type C (Grooved End)	1 1/4 - 8	1 1/4 - 8 (Sch. 10, 40)	300
	2 1/2 - 8	1/2 - 4 (Sch. 5, DynaFlow)	
Tee-Let Type C/R (Roll Grooved End)	1 1/4 - 6	1 1/4 - 8 (All Schedules)	300

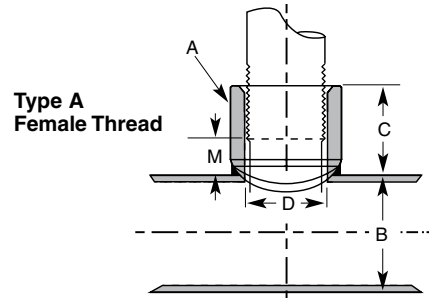
1) Size-on-size (i.e. 2 x 2) Tee-Lets are not FM Approved.

2) FM rated working pressure when welded on Sch. 5 or non-threadable lightwall pipe is 175 psi.



Weld-Miser™ Tee-Let®

Welding Outlet Fittings



WELD-MISER™ TEE-LET® DIMENSIONS & PART NUMBERS

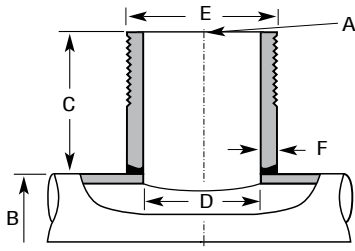
Part Number	Nominal Outlet A	Nominal Header B	Outlet Length C	Inside Diameter D	Make Up M	Weight Each
<i>NPT (BSPT)</i>	<i>In (mm)</i>	<i>In (mm)</i>	<i>In (mm)</i>	<i>In (mm)</i>	<i>In (mm)</i>	<i>Lb. (kg)</i>
1002002	1/4 x	1 1/4 - 8				0.080
-	6 x	6 - 200				0.04
1005012	1/2 x	1 1/4 - 1 1/2	1.063	0.700	0.500	0.171
-		32 - 40	27.0	17.8	12.7	0.08
1005015		1 1/2 - 2	1.063	0.700	0.500	0.171
-		40 - 50	27.0	17.8	12.7	0.08
1005020		2 - 2 1/2	1.063	0.700	0.500	0.171
-	50 - 65	27.0	17.8	12.7	0.08	
1005025	2 1/2 - 8	1.063	0.700	0.500	0.169	
-	65 - 200	27.0	17.8	12.7	0.08	
1007012	3/4 x	1 1/4 - 1 1/2	1.125	0.900	0.500	0.260
-		32 - 40	28.6	22.9	12.7	0.12
1007015		1 1/2 - 2	1.125	0.900	0.500	0.260
-		40 - 50	28.6	22.9	12.7	0.12
1007020		2 - 2 1/2	1.125	0.900	0.500	0.260
-	50 - 65	28.6	22.9	12.7	0.12	
1007025	2 1/2 - 8	1.125	0.900	0.500	0.256	
-	65 - 200	28.6	22.9	12.7	0.12	
1010012	1 x	1 1/4 - 1 1/2	1.250	1.145	0.500	0.331
110012		32 - 40	31.8	29.1	12.7	0.15
1010015		1 1/2 - 2	1.250	1.145	0.500	0.331
110015		40 - 50	31.8	29.1	12.7	0.15
1010020		2 - 2 1/2	1.250	1.145	0.500	0.320
110020		50 - 65	31.8	29.1	12.7	0.15
1010025		2 1/2 - 3	1.250	1.145	0.500	0.314
110025		65 - 80	31.8	29.1	12.7	0.14
1010030		3 - 4	1.250	1.145	0.500	0.309
110030		80 - 100	31.8	29.1	12.7	0.14
1010050	5 - 8	1.250	1.145	0.500	0.291	
110050	125 - 200	31.8	29.1	12.7	0.13	
1012012	1 1/4 x	1 1/4 - 1 1/2	1.375	1.490	0.500	0.432
1112012		32 - 40	34.9	37.8	12.7	.019
1012015		1 1/2 - 2	1.375	1.490	0.500	0.421
1112015		40 - 50	34.9	37.8	12.7	.019
1012020		2 - 2 1/2	1.375	1.490	0.500	0.421
1112020		50 - 65	34.9	37.8	12.7	.019
1012025		2 1/2 - 3	1.375	1.490	0.500	0.411
1112025		65 - 80	34.9	37.8	12.7	.019
1012030		3 - 4	1.375	1.490	0.500	0.389
1112030		80 - 100	34.9	37.8	12.7	.018
1012050	5 - 8	1.375	1.490	0.500	0.389	
1112050	125 - 200	34.9	37.8	12.7	.018	
1015015	1 1/2 x	1 1/2	1.625	1.610	0.875	0.477
1115015		40	41.3	40.9	22.2	.022
1015020		2	1.625	1.610	0.875	0.477
1115020		50	41.3	40.9	22.2	.022
1015025		2 1/2	1.625	1.610	0.875	0.477
1115025		65	41.3	40.9	22.2	.022
1015030		3 - 4	1.625	1.610	0.875	0.477
1115030		80 - 100	41.3	40.9	22.2	.022
1015040		4	1.625	1.610	0.875	0.477
1115040		100	41.3	40.9	22.2	.022
1015050	5 - 8	1.625	1.610	0.875	0.477	
1115050	125 - 200	41.3	40.9	22.2	.022	

WELD-MISER™ TEE-LET® DIMENSIONS & PART NUMBERS

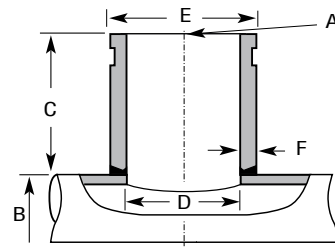
Part Number	Nominal Outlet A	Nominal Header B	Outlet Length C	Inside Diameter D	Make Up M	Weight Each
<i>NPT (BSPT)</i>	<i>In (mm)</i>	<i>In (mm)</i>	<i>In (mm)</i>	<i>In (mm)</i>	<i>In (mm)</i>	<i>Lb. (kg)</i>
1020020	2 x	2	1.750	2.067	0.875	0.857
1120020		50	44.5	52.5	22.2	0.38
1020025		2 1/2	1.750	2.067	0.875	0.829
1120025		65	44.5	52.5	22.2	0.38
1020030		3	1.750	2.067	0.875	0.829
1120030		80	44.5	52.5	22.2	0.39
1020040		4	1.750	2.067	0.875	0.800
1120040		100	44.5	52.5	22.2	0.36
1020050		5	1.750	2.067	0.875	0.743
1120050		125	44.5	52.5	22.2	0.34
1020060	6	1.750	2.067	0.875	0.743	
1120060	150	44.5	52.5	22.2	0.34	
1020080	8	1.750	2.067	0.875	0.743	
1120080	200	44.5	52.5	22.2	0.34	
1025025	2 1/2 x	2 1/2	2.215	2.469	1.125	1.250
1125025		65	54.0	62.7	28.6	0.55
1025030		3	2.215	2.469	1.125	1.200
1125030		80	54.0	62.7	28.6	0.55
1025040		4	2.215	2.469	1.125	1.150
1125040		100	54.0	62.7	28.6	0.52
1025050		5	2.215	2.469	1.125	1.150
1125050		125	54.0	62.7	28.6	0.52
1025060		6	2.215	2.469	1.125	1.150
1125060		150	54.0	62.7	28.6	0.52
1025080	8	2.215	2.469	1.125	1.150	
1125080	200	54.0	62.7	28.6	0.52	
1030030	3 x	3	2.500	3.068	1.500	1.750
-		80	63.5	77.9	38.1	0.79
1030040		4	2.500	3.068	1.500	1.700
-		100	63.5	77.9	38.1	0.77
1030050		5	2.500	3.068	1.500	1.700
-		125	63.5	77.9	38.1	0.77
1030060		6	2.500	3.068	1.500	1.650
-		150	63.5	77.9	38.1	0.75
1030080		8	2.500	3.068	1.500	1.650
-		200	63.5	77.9	38.1	0.75
1040040	4 x	4	3.000	4.026	2.000	3.000
-		100	76.2	102.3	50.8	1.36
1040050		5	3.000	4.026	2.000	2.900
-		125	76.2	102.3	50.8	1.32
1040060		6	3.000	4.026	2.000	2.800
-		150	76.2	102.3	50.8	1.27
1040080	8	3.000	4.026	2.000	2.800	
-	200	76.2	102.3	50.8	1.27	

Note:
 Part #1002002 is not UL Listed or FM Approved.
 All size-on-size (i.e. 2 x 2) Tee-Lets are not FM Approved.

Type B
Male Thread
Standard Weight



Type C
Cut Groove
Standard Weight



Weld-Miser™ Tee-Let®

Welding Outlet Fittings

WELD-MISER™ TEE-LET® - DIMENSIONS (NOMINAL SIZES 1" THRU 2")

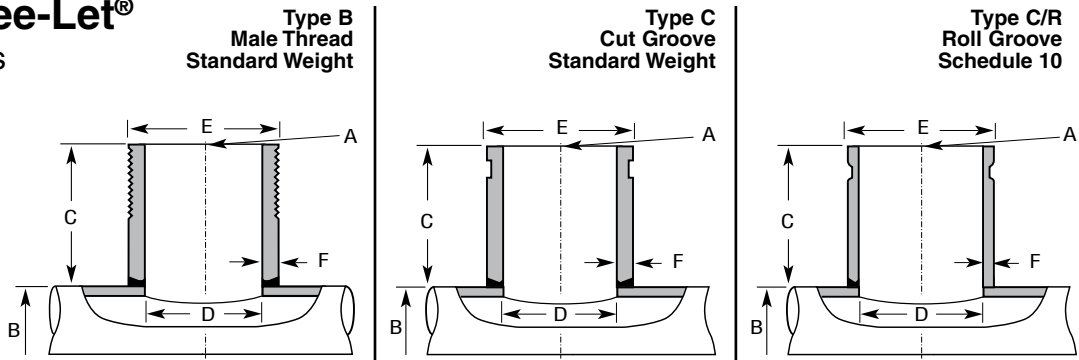
Male Thread Std. Wt.	Cut Groove Std. Wt.	Nominal Outlet A	Nominal Header B	Outlet Length C	Inside Diameter D	Outside Diameter E	Wall Thickness F
<i>NPT (BSPT)</i>	<i>NPT (BSPT)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>
1310012	2010012	1 x 25 x	1¼ - 1½ 32 - 40	3 80	1.049 26.6	1.315 33.4	0.133 3.4
1310015	2010015		1½ - 2 40 - 50	3 80	1.049 26.6	1.315 33.4	0.133 3.4
1310020	2010020		2 - 2½ 50 - 65	3 80	1.049 26.6	1.315 33.4	0.133 3.4
1310025	2010025		2½ - 4 65 - 100	3 80	1.049 26.6	1.315 33.4	0.133 3.4
1310050	2010050		5 - 8 125 - 200	3 80	1.049 26.6	1.315 33.4	0.133 3.4
1312012	2012012	1¼ x 32 x	1¼ 32	3 80	1.368 34.7	1.660 42.2	0.140 3.6
1312015	2012015		1½ 40	3 80	1.368 34.7	1.660 42.2	0.140 3.6
1312020	2012020		2 - 2½ 50 - 65	3 80	1.368 34.7	1.660 42.2	0.140 3.6
1312025	2012025		3 - 4 80 - 100	3 80	1.368 34.7	1.660 42.2	0.140 3.6
1312050	2012050		5 - 8 125 - 200	3 80	1.368 34.7	1.660 42.2	0.140 3.6
1315015	2015015	1½ x 40 x	1½ 40	3 80	1.610 40.9	1.900 48.3	0.145 3.7
1315020	2015020		2 50	3 80	1.610 40.9	1.900 48.3	0.145 3.7
1315025	2015025		2½ 65	3 80	1.610 40.9	1.900 48.3	0.145 3.7
1315030	2015030		3 - 4 80 - 100	3 80	1.610 40.9	1.900 48.3	0.145 3.7
1315050	2015050		5 - 8 125 - 200	3 80	1.610 40.9	1.900 48.3	0.145 3.7
1320020	2020020	2 x 50 x	2 50	3 80	2.067 52.5	2.375 60.3	0.154 3.9
1320025	2020025		2½ 65	3 80	2.067 52.5	2.375 60.3	0.154 3.9
1320030	2020030		3 80	3 80	2.067 52.5	2.375 60.3	0.154 3.9
1320035	2020035		4 100	3 80	2.067 52.5	2.375 60.3	0.154 3.9
1320050	2020050		5 125	3 80	2.067 52.5	2.375 60.3	0.154 3.9
1320060	2020060		6 150	3 80	2.067 52.5	2.375 60.3	0.154 3.9
1320080	2020080		8 200	3 80	2.067 52.5	2.375 60.3	0.154 3.9

Note: Tee-Lets are manufactured to fit size-on-size, that is the contoured shape on a given Tee-Let is made to fit perfectly on the first listed header size. If installed on the second header size marked on the fitting, a slight gap of approximately 1/32" will appear along the longitudinal centerline of the header. For example, a 1" x 2 - 2½" Tee-Let, is a 1" outlet fitting manufactured to fit perfectly on the 2" header size listed, while leaving a 1/32" gap along the longitudinal centerline of the 2½" size. If a perfect fit is required for a 2½" header pipe, then a 1" x 2½ - 3" Tee-Let would be ordered. Size consolidations are employed to reduce inventory and provide for greater flexibility.



Weld-Miser™ Tee-Let®

Welding Outlet Fittings

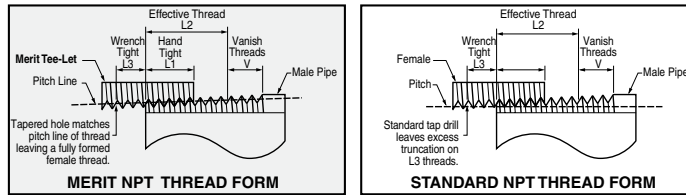


WELD-MISER™ TEE-LET® - DIMENSIONS (NOMINAL SIZES 2½" THRU 8")

Male Thread Std. Wt.	Cut Groove Std. Wt.	Roll Groove Sch. 10	Nominal Outlet A	Nominal Header B	Outlet Length C	Inside Diameter - D		Outside Diameter E	Wall Thickness - F		
						Standard Weight	Schedule 10		Standard Weight	Schedule 10	
<i>NPT (ISO-7-1)</i>	<i>NPT (ISO-7-1)</i>	<i>NPT (ISO-7-1)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>	<i>In.(mm)</i>	
1325025	2025025 <i>2125025</i>	2225025	2½ x 65 x	2½ 65	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	
1325030	2025030 <i>2125030</i>	2225030		3 80	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	
1325035	2025035 <i>2125035</i>	2225035		4 100	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	
1325050	2025050 <i>2125050</i>	2225050		5 125	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	
1325060	2025060 <i>2125060</i>	2225060		6 175	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	
1325080	2025080 <i>2125080</i>	2225080		8 200	3 80	2.469 62.7	2.635 67.0	2.875 76.2	0.203 5.0	0.120 3.0	
1330030	2030030	2230030		3 x 80 x	3 80	3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0
1330035	2030035	2230035			3½ 85	3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0
1330040	2030040	2230040	4 100		3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0	
1330050	2030050	2230050	5 125		3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0	
1330060	2030060	2230060	6 150		3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0	
1330080	2030080	2230080	8 200		3 80	3.068 78.0	3.260 83.0	3.500 88.0	0.216 5.0	0.120 3.0	
1340040	2040040	2240040	4 x 100 x		4 100	4 100	4.026 102.0	4.260 108.0	4.500 114.0	0.237 6.0	0.120 3.0
1340050	2040050	2240050			5 125	4 100	4.026 102.0	4.260 108.0	4.500 114.0	0.237 6.0	0.120 3.0
1340060	2040060	2240060		6 150	4 100	4.026 102.0	4.260 108.0	4.500 114.0	0.237 6.0	0.120 3.0	
1340080	2040080	2240080		8 200	4 100	4.026 102.0	4.260 108.0	4.500 114.0	0.237 6.0	0.120 3.0	
-	2060060	2260060	6 x 150 x	6 150	4 100	6.065 155.0	6.357 161.5	6.625 168.3	0.280 7.1	0.134 3.0	
-	2060080	2260080		8 200	4 100	6.065 155.0	6.357 161.5	6.625 168.3	0.280 7.1	0.134 3.0	
-	2080080	-	8 x 200 x	8 200	4 100	7.981 203.0	8.329 212.0	8.625 213.0	0.322 8.0	0.148 3.0	

Note: Tee-Lets are manufactured to fit size-on-size, that is the contoured shape on a given Tee-Let is made to fit perfectly on the first listed header size. If installed on the second header size marked on the fitting, a slight gap of approximately 1/32" will appear along the longitudinal centerline of the header. For example, a 1" x 2 - 2½" Tee-Let, is a 1" outlet fitting manufactured to fit perfectly on the 2" header size listed, while leaving a 1/32" gap along the longitudinal centerline of the 2½" size. If a perfect fit is required for a 2½" header pipe, then a 1" x 2½ - 3" Tee-Let would be ordered. Size consolidations are employed to reduce inventory and provide for greater flexibility.

Threading Practice

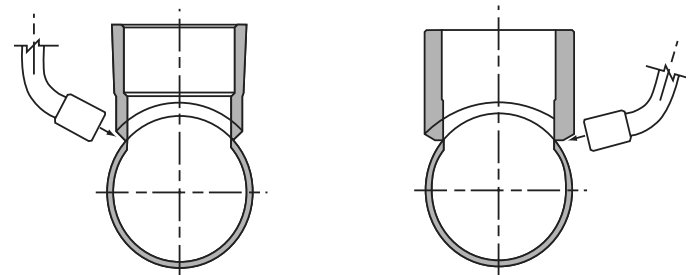


Weld-Miser™ Tee-Let® Installation Welding Outlet Fittings

NPT TAPERED PIPE THREADS									
Drop Nipple or Tee-Let Outlet Size	L1 Hand Tight		L3 Wrench Tight		Total L1 - L3 Length		L2 Effective Threads		
In. (mm)	In. (mm)	Threads	In. (mm)	Threads	In. (mm)	Threads	In. (mm)	Threads	
1/2"	0.320	4.48	0.214	3.00	0.534	7.48	0.534	7.47	
15	8.1	4.48	5.4	3.00	13.6	7.48	13.6	7.47	
3/4"	0.339	4.75	0.214	3.00	0.553	7.75	0.546	7.64	
20	8.6	4.75	5.4	3.00	14.0	7.75	13.9	7.64	
1"	0.400	4.60	0.261	3.00	0.661	7.60	0.683	7.85	
25	10.2	4.60	6.6	3.00	16.8	7.60	17.3	7.85	
1 1/4"	0.420	4.83	0.261	3.00	0.681	7.83	0.707	8.13	
32	10.7	4.83	6.6	3.00	17.3	7.83	18.0	8.13	
1 1/2"	0.420	4.83	0.261	3.00	0.697	7.83	0.724	8.32	
40	10.7	4.83	6.6	3.00	17.7	7.83	18.4	8.32	
2"	0.436	5.01	0.261	3.00	0.706	8.01	0.757	8.70	
50	11.1	5.01	6.6	3.00	17.9	8.01	19.2	8.70	
2 1/2"	0.682	5.46	0.250	2.00	0.932	7.46	1.138	9.10	
65	17.3	5.46	6.4	2.00	23.7	7.46	28.9	9.10	
3"	0.766	6.13	0.250	2.00	1.016	8.13	1.200	9.60	
80	19.5	6.13	6.4	2.00	25.8	8.13	30.5	9.60	
4"	0.844	6.75	0.250	2.00	1.094	8.75	1.300	10.40	
100	21.4	6.75	6.4	2.00	27.8	8.75	33.0	10.40	

Tee-Let® thread form is consistent with Aeronautical National Form (ANPT) AS71051. The thread is fully formed over both the L-1 hand tight and L-3 wrench tight threads. NPT tapered threads are typically gauged only over the L-1 threads. This makes Tee-Lets more forgiving of field cut threaded pipe that may only marginally conform to the specification. Fewer leaks translate into lower costs.

Ease of Installation



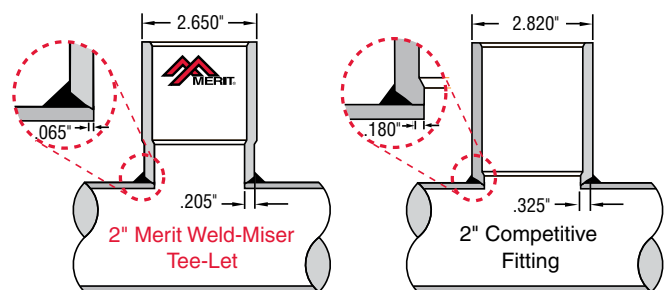
Merit Manufacturing Tee-Lets are designed to sit higher on the pipe, thereby requiring less weld and eliminating burn through. Tee-Lets sit higher on the header or branch line pipe than competitive fittings. This allows the welding torch to remain in an optimum position for welding. In addition, 1 1/2" and larger Type A female threaded and Type C grooved Tee-Lets require the same hole size for installation. This results in fewer change overs when installed using automatic welders.

Domestic Manufacture

Increasingly, federal, state, municipal, and quasi municipal authorities require domestic content for fire sprinkler systems. Merit® Tee-Lets® meet these requirements. The need to maintain dual inventories; one domestic; one import is eliminated.

Welding Practice

When measured with respect to linear inches of weld required for installation, Tee-Lets require up to 15% less weld than competitive fittings. This reduces time and savings over time are substantial. The diameter of the contoured end of Type A Tee-Lets has been reduced so that the wall thickness more nearly matches the header or branch line pipe wall thickness. Therefore, current and voltage settings required for welding are set to provide for adequate penetration without burn through and cold shutting. Also, weld volume required for installation is lower for Tee-Lets than most other fittings. Typically, Tee-Lets require one-weld pass for attachment.



WELDING PRACTICE

Outlet Size	MERIT WELD-MISER TEE-LET				COMPETITIVE FITTING			
	WELD VOLUME*		LINEAR WELDING		WELD VOLUME*		LINEAR WELDING	
In. (mm)	Cross Sec. Area	%less	In. (mm)	%less	Cross Sec. Area	%more	In. (mm)	%less
1"	0.051 sq. in. 32.9 sq mm	12%	2.48 62.9	0%	0.058 sq. in. 37.4 sq mm	12%	2.48 62.9	0%
1 1/4"	0.032"	48%	73.1	4%	0.063 40.6	48%	76.4	4%
1 1/2"	0.036"	40%	79.2	10%	0.060 38.7	40%	87.8	10%
2"	0.040"	62%	95.7	15%	0.106 68.3	62%	112.0	15%



Weld-Miser™ Tee-Let® Installation (cont.)

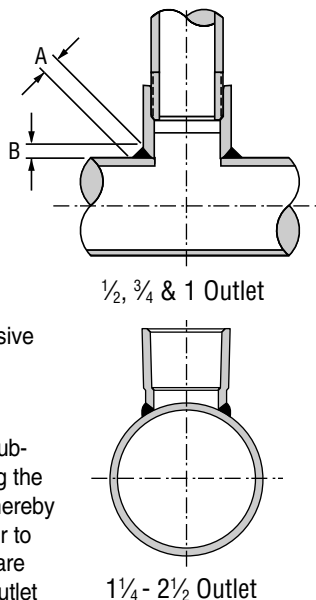
Welding Outlet Fittings

Recommended Installation Procedures

Merit Weld-Miser Tee-Let Welding Outlet Fittings are designed and manufactured to reduce the cost of installation from both the standpoint of labor required and energy consumed. In addition, by following the recommended installation procedures, many of the problems associated with installing welding outlet fittings on standard weight or light weight pipe are eliminated, including burn through and excessive shrinkage resulting in pipe distortion.

Recommended Hole Sizes

The hole cut in the branch or header pipe can be cut prior or subsequent to attachment of the Tee-Let. One advantage of cutting the hole after welding is that the pipe is left intact during welding thereby reducing shrinkage and possible distortion. If holes are cut prior to welding, as some codes require, then the following hole sizes are recommended. Note that the same hole diameter for a given outlet size is required for both Type A and Type C Tee-Lets 1-1½" larger.



RECOMMENDED AMOUNT OF WELD		
Outlet Size	A	B
In./mm	In./mm	In./mm
1/2 13	1/4 7	3/16 5
3/4 19	1/4 7	3/16 5
1 25	1/4 7	3/16 5
1 1/4 31	1/4 7	3/16 5
1 1/2 38	5/16 8	1/4 7
2 50	5/16 8	1/4 7
2 1/2 63	5/16 8	1/4 7
3 75	3/8 10	5/16 5
4 100	3/8 10	5/16 5

Recommended Welding Procedures

Merit Weld-Miser Tee-Lets are designed to be installed on standard weight or light weight pipe with one weld pass on Type A outlet sizes from 1/2" through 2 1/2" inclusive, and on Type C outlet sizes through 4". Moreover, the wall thickness at the weld end of the fitting approximately matches standard weight pipe. Accordingly, heat setting can be made to optimize penetration on both the fitting and the pipe which it is being welded. Aside from reducing the likelihood of burn through and distortion resulting from excessive heat, the amount of weld required for adequate penetration is significantly reduced.

Merit Tee-Lets are manufactured from continuous cast aluminum killed steel with a carbon range of from 0.05 to 0.25. Merit specifies that residuals, such as chrome, nickel and other metals resident in the scrap used for production of the steel be reported and kept to a minimum. On the other hand, certain grades of carbon steel pipe are manufactured from skelp whose chemical composition is not specified. When the metal inert gas shield (MIG) welding process is employed, certain residuals may cause excessive porosity, spatter or lack of penetration. Specifically, gases released during the welding process do not escape before the molten puddle sets up. When porosity or lack of penetration occurs, one approach is to slightly increase the heat in order to give the gases time to escape from the puddle. A flux cored wire can also be used. This wire contains scavengers which allow gases in the molten weld puddle to escape before the weld solidifies. The following recommended settings for welding therefore may need to be adjusted slightly higher if any of the above mentioned adverse conditions exist.

As a general rule, the weld should be only as hot as required to allow the weld to penetrate the materials being welded while concomitantly allowing gases developed in the welding process to escape. Every effort must be made to avoid welding too hot or overheating both the pipe and the Tee-Let. **Excessive heat may cause the wrench tight threads (those in the bottom of the Tee-Let near the weld zone) to distort while also causing the branch pipe to bend.** It should be noted that Merit Tee-Lets have been subjected to exhaustive testing and evaluation, and only negligibly distort when subjected to excessive heat. The threads, on the other hand, may not return to their gauged form after cooling if excessive heat causes them to expand. The following is intended only as a guide, and assumes that the welding equipment is properly calibrated and functioning normally and the operator is qualified.

RECOMMENDED TEE-LET HOLE SIZES		
Tee-Let Size	Type	Recommended Hole Size
In./mm		In./mm
1/2 13	Type A	5/8 16
3/4 19	Type A	7/8 22
1 25	Type A	1 1/8 28
1 1/4 31	Type A	1 1/2 38
1 1/4 31	Type C	1 3/8 35
1 1/2 38	Type A or C	1 5/8 41
2 50	Type A or C	2 50
2 1/2 63	Type A or C	2 1/16 61
3 75	Type A or C	3 75
4 100	Type A or C	4 100

Holes may be cut employing mechanical means—including hole sawing, mechanical flame cutting (oxy-acetylene or propane), and air plasma cutting (constricted tungsten arc) machines. Merit offers a simple approach to cutting the hole. Hand-held templates are sized to match your plasma cutter.



Weld-Miser™ Tee-Let® Installation (cont.) Welding Outlet Fittings

RECOMMENDED SETTINGS FOR MICROWIRE WELDING PROCESS, CONTINUED ON NEXT PAGE

Header Size	Pipe Wall Thickness	Tee-Let Types A, B, C	Electrode Size	Welding Current	Arc. Volts	Wire Feed	Travel Speed
<i>In./mm</i>	<i>In./mm</i>	<i>In./mm</i>		<i>AMPS-DC</i>	<i>POS.</i>	<i>IPM</i>	<i>IPM</i>
1½ - 2 31-50	0.065 2	½ - 2 13-50	0.035	100-130	16-20	210	25-30
		2½ - 4 63-100	0.035	115-150	17-21	270	20-25
	0.109 3	½ - 2 13-50	0.035	110-140	18-22	220	25-30
		2½ - 4 63-100	0.035	120-160	19-22	290	20-25
2½ - 4 63-100	0.083 2.5	½ - 2 13-50	0.035	110-140	17-20	210	20-25
		2½ - 4 63-100	0.035	120-150	17-20	270	20-25
	0.120 3	½ - 2 13-50	0.035	120-160	19-22	290	20-25
		2½ - 4 63-100	0.035	130-160	19-22	240	20-25
5-6 125-150	0.109 3	½ - 2 13-50	0.035	120-150	17-20	210	20-25
		2½ - 4 63-100	0.035	130-150	18-20	270	15-20
	0.134 3.5	½ - 2 13-50	0.035	130-160	19-22	290	20-25
		2½ - 4 63-100	0.035	140-160	20-22	270	15-20
8 200	0.109 3	½ - 2 13-50	0.035	120-150	17-20	240	20-25
		2½ - 4 63-100	0.035	130-150	18-20	260	15-20
		2½ - 4 63-100	0.045	170-220	18-22	290	12-18
	0.148 3.5	½ - 2 13-50	0.035	130-160	19-22	240	20-25
		2½ - 4 63-100	0.035	140-160	20-22	260	15-20
		2½ - 4 63-100	0.045	180-225	20-24	290	12-18

Shielding Gas Flow (FOR ALL SIZES) 20-25 CFH

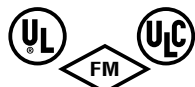
- 1.) Co₂ - Deeper penetration, faster welding, low cost.
- 2.) 25% - Argon, 75% - Co₂, Recommended for .134 wall and lighter, high welding speeds without melt through, minimum distortion and spatter, good penetration.

Merit assumes no liability for any consequential damages resulting from the improper use of its Tee-Let Welding Outlet Fittings, nor for any recommendations made with respect to installation procedures.



Eliminator

Adjustable Drop Nipples



APPROVED

For listing/approval details contact your AnvilStar™ Representative.



PRODUCT APPROVALS					
Eliminator Adjustable Drop Nipple : (UL VGSQ – EX6033, FM Approval Guide Chapter 1 - Adjustable Sprinkler Fittings VdS Certificate #G4930033 BSA: 886-86-SA)					
Adjustable Drop Model	Inlet x Outlet Size	Adjustment	Equivalent Length	Rated Pressure	Max. Ceiling Ambient Temperature
<i>NPT</i>	<i>In. (mm)</i>	<i>In. (mm)</i>	<i>Ft. (M)</i>	<i>psig</i>	<i>F (C)</i>
MR1.150 or M1.150	1 x 1/2 25 x 13	1 25.4	1 0.3	300	300° 148°
M3.150	1 x 1/2 25 x 13	3 76.2	1 0.3		
M3.175	1 x 3/4 25 x 19	3 76.2	2.6 0.8		
ME3.150	1 x 1/2 25 x 13	3 76.2	1 0.3		
F1.150	1 x 1/2 25 x 13	1 25.4	4.2 1.3		
F2.150	1 x 1/2 25 x 13	2 50.8	1.3 0.4		
F3.150	1 x 1/2 25 x 13	3 76.2	1.5 0.5		
F3.175	1 x 3/4 25 x 19	3 76.2	2.9 0.9		

Merit Eliminator Adjustable Drop Nipples provide the user with the ability to adjust fire sprinkler assemblies (concealed, recessed, or pendent) to fit flush to the finished ceiling without having to cut a drop nipple or drain the system.

- Available in two models, female or male thread inlet, with three standard lengths with adjustment up to 3" (7.62 cm)
- UL Listed, FM Approved, and BSA-NYC Approved for installation to NFPA Bulletin 13 requirements. VdS Approved for the European market.
- Cold formed from steel conforming to ASTM Grade.
- Inner nipples employ two (2) "O-Rings" to provide added assurance of sealing. The "F" Model is designed to keep "O-Rings" from impinging upon the one inch (1") inlet threads when fully retracted.
- The bore of the outer nipple is precision formed to a close tolerance while held to a microfinish of 50 to provide for positive sealing of the "O-Rings".
- Each unit is hydrostatically tested to insure "O-Ring" integrity prior to shipment.
- Each unit is marked with a lot number to insure full traceability.
- Qualifying tests on all models are performed at 1500 PSI, while the various models are rated for 300 PSI operation.
- Threads are cut to be better than or equal to the requirements of ANSI B1.20.1, NPT or ISO-7-1 threads.

Model Number	Part #	Inlet	Outlet	Minimum Length	Maximum Length	Maximum Adjustment	Maximum Sprinkler Orifice	Weight
	<i>NPT/ISO</i>	<i>NPT/ISO</i>	<i>NPT/ISO</i>	<i>In. (mm)</i>	<i>In. (mm)</i>	<i>In. (mm)</i>	<i>In. (mm)</i>	<i>Lbs.(kg)</i>
M1.150*	531150 551150	1" Male 25mm Male	1/2" Female 13mm Female	4.125 104.8	5.125 130.2	1.00 25.4	0.531 13.5	1.00 0.45
M3.150	533150 553150	1" Male 25mm Male	1/2" Female 13mm Female	6.125 155.6	9.125 231.8	3.00 76.2	0.531 13.5	1.25 0.57
ME3.150*	543150 563150	1" Male 25mm Male	1/2" Female 13mm Female	7.875 200.0	10.875 276.2	3.00 76.2	0.531 13.5	1.50 0.68
F1.150	501150 511150	1" Female 25mm Female	1/2" Female 13mm Female	3.500 88.9	4.500 114.3	1.00 25.4	0.625 15.9	0.80 0.36
F2.150*	502150 512150	1" Female 25mm Female	1/2" Female 13mm Female	4.500 114.3	6.500 165.1	2.00 50.8	0.625 15.9	1.00 0.45
F3.150	503150 513150	1" Female 25mm Female	1/2" Female 13mm Female	5.500 139.7	8.500 215.9	3.00 76.2	0.531 13.5	1.25 0.57
F3.175	503175 513175	1" Female 25mm Female	3/4" Female 19mm Female	7.350 186.7	10.350 262.9	3.00 76.2	0.625 15.9	1.40 0.64

* Special Order
Length Tolerance ± 1/4"

Installation

- A) For use in wet and dry pipe automatic sprinkler systems installed in accordance with all applicable standards or codes. (See item 4)
- B) Before starting the job of making sprinklers into steel threads of the above fittings, count the number of fully developed male threads on the brand of sprinkler to be installed into the fittings. If seven (7) perfect threads are counted, the sprinkler should thread into the $\frac{1}{2}$ " or $\frac{3}{4}$ " thread from three (3) to four (4) threads hand tight. If five (5) to six (6) threads are counted, the sprinkler should thread into the $\frac{1}{2}$ " or $\frac{3}{4}$ " thread from two (2) to three (3) threads hand tight.
- C) Use an anaerobic pipe thread sealant for thread make-up. Apply pipe thread sealant only to male threads on the nipple and sprinkler only.
- D) If either of the above fails to allow the sprinkler to make-up to a minimum of from five (5) to six (6) full threads, do not overtighten the sprinkler. Instead back the sprinkler out of the fitting. Clean any debris and/or pipe sealant from both the male and female threads. Gauge both the male threads of the sprinkler and the female threads of the Adjustable Drop Nipple for compliance with ANSI B1.2.1. Specification for Tapered Pipe Threads. The same procedure would apply if a leak has been detected.
- If within tolerance, reapply the anaerobic pipe sealant and make-on to the required length. Allow twenty-four hours for setting.
- E) Connect the Adjustable Drop Nipple assembly to the sprinkler system by wrenching on the make-up area on the Drop Nipple. **DO NOT WRENCH ON THE BARREL PORTION OF THE UNIT OR SPRINKLER.** Damage to the Adjustable Drop Nipple or Sprinkler may result.
- F) After the ceiling has been installed adjust the sprinkler to its final position by using the sprinkler wrench and assemble the escutcheon plate to the inner support ring. It is recommended that the system pressure be relieved when adjusting, however it is not necessary to drain the system.

1) GENERAL DESCRIPTION

Merit Eliminator Adjustable Drop Nipples Models "M" and "F" are the screw type consisting of an outer case which has one (1) inch N.P.T. or ISO-7 male or female thread on the inlet, and an inner case which has either a one-half inch ($\frac{1}{2}$ ") or a three-quarter inch ($\frac{3}{4}$ ") N.P.T. sprinkler connection. The inner case employs O-Ring Seals and adjusts either in or out over the range of the adjustment.

Merit Eliminator Adjustable Drop Nipples are designed for use in automatic fire sprinkler systems installed in accordance with all applicable standards or codes. (See item 4).

The purpose of these fittings is to allow for the final adjustment of the drop nipple between a branch line and a pendant sprinkler by eliminating the need to re-cut the existing drop nipple in order to fit-up flush to the ceiling. Merit Eliminator Adjustable Drop Nipples do not require any secondary locking following final adjustment and they will not extend as a result of vibrations or pressure surges in the system.

2) APPROVALS AND STANDARDS

Merit Eliminator Adjustable Drop Nipples are listed by the Underwriters Laboratories, Inc. (UL Listing Number 57SO) and approved by the Factory Mutual Research Corporation (FM). In addition, Model "M" and "F" Adjustable Drop Nipples are approved by the New York Board of Materials and Equipment Standard (BSA-886-86-5A) and verband der Schadenversicherer e.V., (Vds).

3) TECHNICAL DATA

Merit Adjustable Drop Nipples are rated for use at a maximum temperature of 300° F, and a maximum service pressure of 300 psi.

The approximate friction loss based on the Hazen and Williams Formula expressed in equivalent length of one (1) inch, schedule 40 pipe (where C= 120) is 1' for $\frac{1}{2}$ " outlet Model "M", 2.6' for $\frac{3}{4}$ " outlet Model "M", 4.2' for F1, 1.3' for F2, 1.5' for F3.150, and 2.9' for F3.175.

Merit Eliminator Drop nipples maximum sprinkler orifice size for Models M3.150, ME3.150, M1.150, and F3.150 is $\frac{7}{32}$ " and Models F1.150, F2.150, F3.175 and M3.175 is $\frac{5}{8}$ ".

The inlet and outlet threads conform to ANSI B1.20.1 / ISO-7R/RC.

The O-Ring seals used in the manufacture are an ethylene propylene elastomer (EPDM). The outer and inner casings are manufactured from high strength carbon Steel.

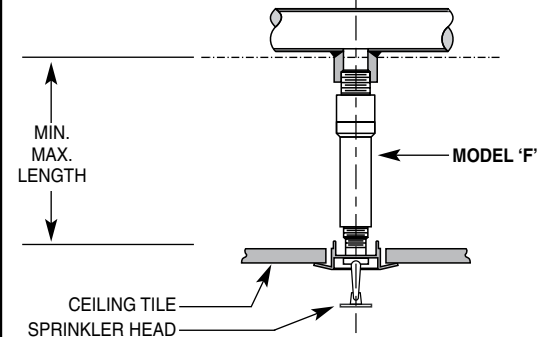
All Model "M" and "F" Adjustable Drop Nipples are hydrostatically tested for O-ring integrity prior to shipment.

4) WARNING

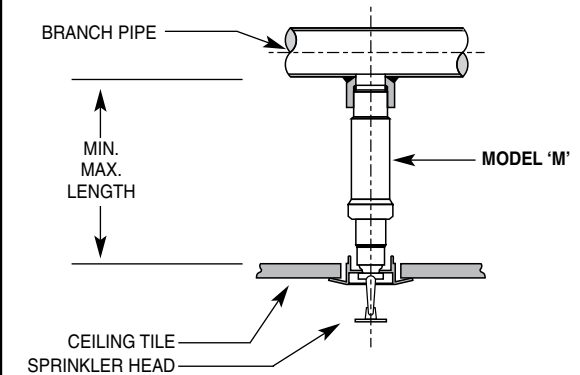
Adjustable Drop Nipples described herein must be installed and maintained in compliance with this document as well as the applicable standards of the National Fire Protection Association in addition to the standards for any other authorities having jurisdiction. **DO NOT USE ANY PETROLEUM BASED LUBRICANTS ON THE O-RING SEALS.** Petroleum based lubricants are incompatible with EPDM and will impair serviceability of the unit.

Eliminator Adjustable Drop Nipples

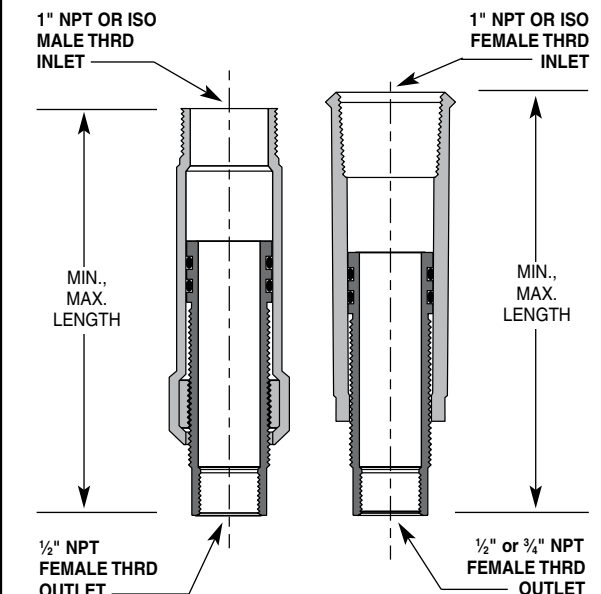
• MODEL 'F' INSTALLATION



• MODEL 'M' INSTALLATION



• DRAWING OF MODEL 'M' & 'F'





Longneck™ Manufactured Drop Nipples



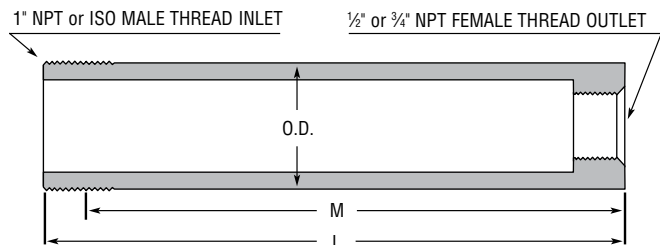
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- Provides an integral 1/2" or 3/4" NPT threaded outlet.
- Eliminates threaded reducing couplings and labor make-up costs.
- Reduces the hole diameter in the ceiling tile for a neater installation.
- Available with 1/2" or 3/4" outlets on both ends for field cutting, threading and installation.
- Stocked lengths from 6" through 24", longer lengths available.
- Prompt delivery on special lengths on request.

Specifications

- Manufactured from standard weight pipe conforming to ASTM Grade.
- UL Listed, FM Approved and VdS Approved - rated for 300 PSI.
- Tapered threads to ANSI B1.20.1 NPT or ISO7-1.



Part Number/Model			Nominal Size In. (mm)	Length L Actual In. (mm)	O.D. In. (mm)	Made Up M* In. (mm)	Equiv. Length LN/LNP Only Ft. (m)	Approx. Ship Wgt. Ea. Lbs. (kg)	
LN Thrd. NPT/ISO	LNP Plain End	DLN Double End						LN/LNP	DLN
70100506 72100506	71100506	73100506	1 x 1/2 x 6 25 x 13 x 152	6.675 169.5	1.315 33.4	6.0 152	4.2 1.28	0.9 0.4	0.9 0.4
70100508 72100508	71100508	73100508	1 x 1/2 x 8 25 x 13 x 203	8.675 220.3	1.315 33.4	8.0 203	4.2 1.28	1.2 0.6	1.4 0.6
70100510 72100510	71100510	73100510	1 x 1/2 x 10 25 x 13 x 254	10.675 271.1	1.315 33.4	10.0 254	4.2 1.28	1.5 0.7	1.8 0.8
70100512 72100512	71100512	73100512	1 x 1/2 x 12 25 x 13 x 305	12.675 321.9	1.315 33.4	12.0 305	6.5 1.98	1.8 0.8	1.9 0.9
70100518 72100518	71100518	73100518	1 x 1/2 x 18 25 x 13 x 457	18.675 474.3	1.315 33.4	18.0 457	2.6 0.79	2.7 1.2	2.7 1.2
70100524 72100524	71100524	73100524	1 x 1/2 x 24 25 x 13 x 610	24.675 626.7	1.315 33.4	24.0 610	3.9 1.19	3.5 1.6	3.6 1.6
70100530 72100530	71100530	73100530	1 x 1/2 x 30 25 x 13 x 762	30.675 779.1	1.315 33.4	30 762.0	4.2 1.28	4.5 2	4.6 2.1
70100536 72100536	71100536	73100536	1 x 1/2 x 36 25 x 13 x 914	36.675 931.5	1.315 33.4	36 914.4	4.7 1.43	5.3 2.4	5.4 2.5
70100706 72100706	71100706	73100706	1 x 3/4 x 6 25 x 19 x 152	6.675 169.5	1.315 33.4	6.0 152	4.2 1.28	0.9 0.4	0.9 0.4
70100708 72100708	71100708	73100708	1 x 3/4 x 8 25 x 19 x 203	8.675 220.3	1.315 33.4	8.0 203	4.2 1.28	1.2 0.6	1.4 0.6
70100710 72100710	71100710	73100710	1 x 3/4 x 10 25 x 19 x 254	10.675 271.1	1.315 33.4	10.0 254	4.2 1.28	1.5 0.7	1.8 0.8
70100712 72100712	71100712	73100712	1 x 3/4 x 12 25 x 19 x 305	12.675 321.9	1.315 33.4	12.0 305	6.5 1.98	1.8 0.8	1.9 0.9
70100718 72100718	71100718	73100718	1 x 3/4 x 18 25 x 19 x 457	18.675 474.3	1.315 33.4	18.0 457	2.6 0.79	2.7 1.2	2.7 1.2
70100724 72100724	71100724	73100724	1 x 3/4 x 24 25 x 19 x 610	24.675 626.7	1.315 33.4	24.0 610	3.9 1.19	3.5 1.6	3.6 1.6
70100730 72100730	71100730	73100730	1 x 3/4 x 30 25 x 19 x 762	30.675 779.1	1.315 33.4	30 762.0	4.2 1.28	4.5 2	4.6 2.1
70100736 72100736	71100736	73100736	1 x 3/4 x 36 25 x 19 x 914	36.675 931.50	1.315 33.4	36 914.4	4.7 1.43	5.2 2.4	5.4 2.5

*Double end configure make up varies to installation.

**Longer lengths available special order.

Flanges

Steel Welding Flanges



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For listing/approval details contact
your AnvilStar™ Representative.

Steel Welding Flanges are manufactured to comply with the American Water Works Association C207, Table 1, Class D specification for steel plate flanges. In those sizes not covered by AWWA C207, design data was extracted from the specification and employed for sizes 3" and smaller. All sizes manufactured are UL Listed and FM Approved for 175 psi at ambient temperature up to and including 12" sizes, while sizes over 12" are rated for 150 psi at ambient temperature. National Steel Plate Flanges have the same diameter and bolt hole drilling as class 125 cast iron flanges per ANSI, B16.1. For size 24" and smaller, National Steel Plate Flanges also match ANSI B16.5, 150-pound class. Steel plate flanges, aside from lower initial cost, are generally considered to be easier to install during make-up and final installation.

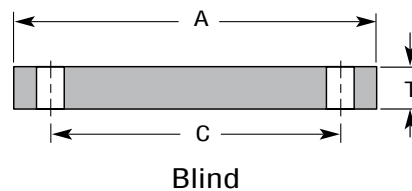
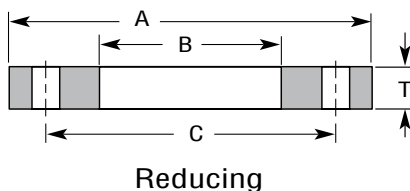
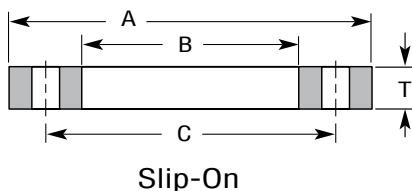
Available Slip-On, Reducing and Blind.

- Pressure rating at ambient temperature for sizes 2" - 12" — 175 psi.
- Flanges have the same diameter and drilling as Class 125 cast-iron flanges (ANSI 16.1).
- Priced significantly lower than forged steel welding flanges.
- UL Listed and FM Approved.
- Conform to AWWA C207 Class D.

NATIONAL STEEL FLANGES (NATIONAL FITTINGS LISTINGS: UL HKOK – EX5222, FM APPROVAL GUIDE CHAPTER 1 - PIPE FITTINGS)			
Model	Configuration	Size (Inch)	Rated Pressure (psig)
PFB	Blind Flange	2, 2 ½, 3, 4, 5, 6, 8, 10 & 12	175
PFS	Slip-On Flange (Ring Type)	2, 2 ½, 3, 4, 5, 6, 8, 10 & 12	
PFR	Reducing Flange	4 x 2, 4 x 2½, 4 x 3, 6 x 3, 6 x 4, 8 x 4, 8 x 6	

Flanges

Steel Welding Flanges



Part Number/Model		Nominal Size	Reducing Pipe Size	O.D. A	Inside Diameter B In. (mm)		Bolt Circle C	Thickness T	Number of Bolts Required	Bolt Hole Diameter	
Slip-On	Blind	Reducing	In. (mm)	In. (mm)	In. (mm)	Slip on	Reducing	In. (mm)	In. (mm)	In. (mm)	In. (mm)
400200	410200	-	2* 50	- -	6 152.4	3 76.2	2.44 62.0	4.75 120.7	.5 15.9	4 -	.750 19
400250	410250	42025020	2½* 65	2½ x 2 65 x 50	7 177.8	3 76.2	2.44 62.0	5.5 139.7	.5 15.9	4 -	.750 19
400300	410300	42030020	3* 80	3 x 2 80 x 50	8 190.5	3.6 91.4	2.44 62.0	6 152.4	.5 15.9	4 -	.750 19
		42030025	3* 80	3 x 2½ 80 x 65	8 190.5	3.6 91.4	2.97 75.4	6 152.4	.5 15.9	4 -	.750 19
400400	410400	42040020	4 100	4 x 2 100 x 50	9 228.65	4.6 116.1	2.44 62.0	7.5 190.5	.625 15.9	8 -	.750 19
-	-	42040025	4 100	4 x 2½ 100 x 65	9 228.65	4.6 116.1	2.97 75.4	7.5 190.5	.625 15.9	8 -	.750 19
		42040030	4 100	4 x 3 100 x 80	9 228.65	4.6 116.1	3.6 91.4	7.5 190.5	.625 15.9	8 -	.750 19
400500	410500	-	5 125	- -	10 254	5.7 143.8	- -	8.5 215.9	.625 15.9	8 -	.875 22
			5 125	- -	10 254	5.7 143.8	- -	8.5 215.9	.625 15.9	8 -	.875 22
			5 125	- -	10 254	5.7 143.8	- -	8.5 215.9	.625 15.9	8 -	.875 22
			5 125	- -	10 254	5.7 143.8	- -	8.5 215.9	.625 15.9	8 -	.875 22
400600	410600	42060020	6 150	6 x 2 150 x 50	11 279.4	6.7 170.7	2.44 62.0	9.5 241.3	.688 17.5	8 -	.875 22
		42060025	6 150	6 x 2½ 150 x 65	11 279.4	6.7 170.7	2.97 75.4	9.5 241.3	.688 17.5	8 -	.875 22
		42060030	6 150	6 x 3 150 x 80	11 279.4	6.7 170.7	3.60 91.4	9.5 241.3	.688 17.5	8 -	.875 22
		42060040	6 150	6 x 4 150 x 100	11 279.4	6.7 170.7	4.57 116.1	9.5 241.3	.688 17.5	8 -	.875 22
400800	410800	42080030	8 200	8 x 3 200 x 80	14 342.9	8.7 221.5	2.97 75.4	11.75 298.5	.688 17.5	8 -	.875 22
		42080040	8 200	8 x 4 200 x 100	14 342.9	8.7 221.5	4.57 116.1	11.75 298.5	.688 17.5	8 -	.875 22
		42080060	8 200	8 x 6 200 x 150	14 342.9	8.7 221.5	6.72 170.7	11.75 298.5	.688 17.5	8 -	.875 22
401000	411000	42100060	10 250	10 x 6 250 x 150	16 406.4	11 276.4	6.72 170.7	14.25 362.0	.812 20.6	12 -	1 25
		42100080	10 250	10 x 8 250 x 200	16 406.4	11 276.4	8.70 221.5	14.25 362.0	.812 20.6	12 -	1 25
401200	411200		12 300	- -	19 482.6	13 327.2	--	17 431.8	.938 23.8	12 -	1 25



Merit® Hand-Held Hole Templates are sized to be used with air plasma cutting systems with standard torch cups measuring 1.1" (28mm) in diameter. If used with other torches, slight variations in the hole diameter required for Merit® Tee-Lets® may occur.

- Low cost hand-held hole templates fit on a range of branch or header pipes.
- Templates are sized for Merit Type A Threaded and Type C Grooved Tee-Lets.
- Unit includes bubble-type level and "V"-Block Mounting.
- Manufactured from non-conductive NEMA C Rated, glass impregnated, impact resistant plastic.

HOLE TEMPLATES		
Part Number	Outlet	Header
<i>NPT</i>	<i>In. (mm)</i>	<i>In. (mm)</i>
61050710	1½ ¾ - 1 <i>13, 19 - 25</i>	ALL <i>All</i>
611215	1¼ <i>32</i>	1½ - 2 <i>40 - 50</i>
611225	1¼ <i>32</i>	2½ - 4 <i>65 - 100</i>
611520	1½ <i>40</i>	2 - 2½ <i>50 - 65</i>
611530	1½ <i>40</i>	3 - 4 <i>80 - 100</i>
612025	2 <i>50</i>	2½ - 3 <i>65 - 80</i>
612040	2 <i>50</i>	4 - 8 <i>100 - 200</i>
612530	2½ <i>65</i>	3 - 4 <i>80 - 100</i>
612560	2½ <i>65</i>	6 - 8 <i>150 - 200</i>



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