AnvilStar™

Fire Products Division of Anvil International

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MERIT®

Outlet Fittings for Fire Protection

BUILDING CONNECTIONS THAT LAST

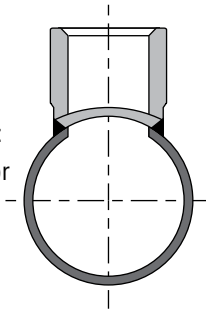
GRUVLOK · SPF/ANVIL · Catawissa PERFORMANCE UNDER PRESSURE · ANVIL EPS ENGINEERED PIPE SUPPORTS · JBS · CANVIL · MERIT · BECK · ANVIL-STRUT · SEMINOLE Tubular Products

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.

Quantity	Part Number

Method No. 2

Use the following system:

Quantity	–	Outlet Size	x	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

APPROVED

For listing/approval details contact your AnvilStar™ Representative.

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)

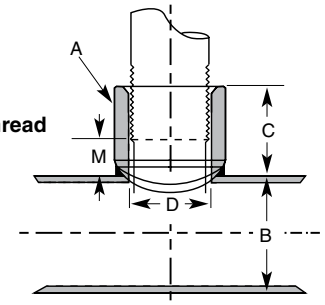
Outlet Model	Outlet Pipe Size (Inch)	Header Pipe Size (Inch)	Rated Pressure (psig)
Tee-Let Type A (F-Threaded End)	½, ¾, 1	½ - 8 (Sch.10, 40)	300
	1¼, 1½, 2, 2½, 3, 4	½ - 4 (Sch. 5, DynaFlow)	
	2	4 (EZ-Flow)	
	2, 4	6 (EZ-Flow)	
Tee-Let Type C (Grooved End)	1¼ - 8	1¼ - 8 (Sch.10, 40)	300
	2½ - 8	½ - 4 (Sch. 5, DynaFlow)	
Tee-Let Type C/R (Roll Grooved End)	1¼ - 6	1¼ - 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
NPT (BSPT)	*In (mm)*	*In (mm)*	*In (mm)*	*In (mm)*	*In (mm)*	*Lb. (kg)*
1002002 –	¼ x *6 x*	¼ - 8 *6 - 200*				0.080 *0.04*
1005012 –	½ x *13 x*	1¼ - 1½ *32 - 40*	1.063 *27.0*	0.700 *17.8*	0.500 *12.7*	0.171 *0.08*
1005015 –		1½ - 2 *40 - 50*	1.063 *27.0*	0.700 *17.8*	0.500 *12.7*	0.171 *0.08*
1005020 –		2 - 2½ *50 - 65*	1.063 *27.0*	0.700 *17.8*	0.500 *12.7*	0.171 *0.08*
1005025 –		2½ - 8 *65 - 200*	1.063 *27.0*	0.700 *17.8*	0.500 *12.7*	0.169 *0.08*
1007012 –	¾ x *19 x*	1¼ - 1½ *32 - 40*	1.125 *28.6*	0.900 *22.9*	0.500 *12.7*	0.260 *0.12*
1007015 –		1½ - 2 *40 - 50*	1.125 *28.6*	0.900 *22.9*	0.500 *12.7*	0.260 *0.12*
1007020 –		2 - 2½ *50 - 65*	1.125 *28.6*	0.900 *22.9*	0.500 *12.7*	0.260 *0.12*
1007025 –		2½ - 8 *65 - 200*	1.125 *28.6*	0.900 *22.9*	0.500 *12.7*	0.256 *0.12*
1010012 *1110012*	1 x *25 x*	1¼ - 1½ *32 - 40*	1.250 *31.8*	1.145 *29.1*	0.500 *12.7*	0.331 *0.15*
1010015 *1110015*		1½ - 2 *40 - 50*	1.250 *31.8*	1.145 *29.1*	0.500 *12.7*	0.331 *0.15*
1010020 *1110020*		2 - 2½ *50 - 65*	1.250 *31.8*	1.145 *29.1*	0.500 *12.7*	0.320 *0.15*
1010025 *1110025*		2½ - 3 *65 - 80*	1.250 *31.8*	1.145 *29.1*	0.500 *12.7*	0.314 *0.14*
1010030 *1110030*		3 - 4 *80 - 100*	1.250 *31.8*	1.145 *29.1*	0.500 *12.7*	0.309 *0.14*
1010050 *1110050*		5 - 8 *125 - 200*	1.250 *31.8*	1.145 *29.1*	0.500 *12.7*	0.291 *0.13*
1012012 *1112012*	1¼ x *32 x*	1¼ *32*	1.375 *34.9*	1.490 *37.8*	0.500 *12.7*	0.432 *.019*
1012015 *1112015*		1½ - 2 *40 - 50*	1.375 *34.9*	1.490 *37.8*	0.500 *12.7*	0.421 *.019*
1012020 *1112020*		2 - 2½ *50 - 65*	1.375 *34.9*	1.490 *37.8*	0.500 *12.7*	0.421 *.019*
1012025 *1112025*		2½ - 3 *65 - 80*	1.375 *34.9*	1.490 *37.8*	0.500 *12.7*	0.411 *.019*
1012030 *1112030*		3 - 4 *80 - 100*	1.375 *34.9*	1.490 *37.8*	0.500 *12.7*	0.389 *.018*
1012050 *1112050*		5 - 8 *125 - 200*	1.375 *34.9*	1.490 *37.8*	0.500 *12.7*	0.389 *.018*
1015015 *1115015*	1½ x *40 x*	1½ *40*	1.625 *41.3*	1.610 *40.9*	0.875 *22.2*	0.477 *.022*
1015020 *1115020*		2 *50*	1.625 *41.3*	1.610 *40.9*	0.875 *22.2*	0.477 *.022*
1015025 *1115025*		2½ *65*	1.625 *41.3*	1.610 *40.9*	0.875 *22.2*	0.477 *.022*
1015030 *1115030*		3 - 4 *80 - 100*	1.625 *41.3*	1.610 *40.9*	0.875 *22.2*	0.477 *.022*
1015040 *1115040*		4 *100*	1.625 *41.3*	1.610 *40.9*	0.875 *22.2*	0.477 *.022*
1015050 *1115050*		5 - 8 *125 - 200*	1.625 *41.3*	1.610 *40.9*	0.875 *22.2*	0.477 *.022*

Weld-Miser™ Tee-Let® Dimensions & Part Numbers

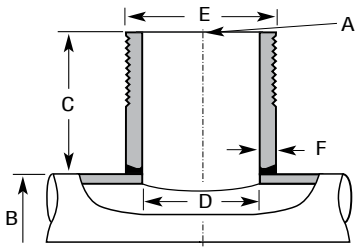
Part Number	Nominal Outlet A	Nominal Header B	Outlet Length C	Inside Diameter D	Make Up M	Weight Each
NPT (BSPT)	*In (mm)*	*In (mm)*	*In (mm)*	*In (mm)*	*In (mm)*	*Lb. (kg)*
1020020 *1120020*	2 x *50 x*	2 *50*	1.750 *44.5*	2.067 *52.5*	0.875 *22.2*	0.857 *0.38*
1020025 *1120025*		2½ *65*	1.750 *44.5*	2.067 *52.5*	0.875 *22.2*	0.829 *0.38*
1020030 *1120030*		3 *80*	1.750 *44.5*	2.067 *52.5*	0.875 *22.2*	0.829 *0.39*
1020040 *1120040*		4 *100*	1.750 *44.5*	2.067 *52.5*	0.875 *22.2*	0.800 *0.36*
1020050 *1120050*		5 *125*	1.750 *44.5*	2.067 *52.5*	0.875 *22.2*	0.743 *0.34*
1020060 *1120060*		6 *150*	1.750 *44.5*	2.067 *52.5*	0.875 *22.2*	0.743 *0.34*
1020080 *1120080*		8 *200*	1.750 *44.5*	2.067 *52.5*	0.875 *22.2*	0.743 *0.34*
1025025 *1125025*	2½ x *65 x*	2½ *65*	2.215 *54.0*	2.469 *62.7*	1.125 *28.6*	1.250 *0.55*
1025030 *1125030*		3 *80*	2.215 *54.0*	2.469 *62.7*	1.125 *28.6*	1.200 *0.55*
1025040 *1125040*		4 *100*	2.215 *54.0*	2.469 *62.7*	1.125 *28.6*	1.150 *0.52*
1025050 *1125050*		5 *125*	2.215 *54.0*	2.469 *62.7*	1.125 *28.6*	1.150 *0.52*
1025060 *1125060*		6 *150*	2.215 *54.0*	2.469 *62.7*	1.125 *28.6*	1.150 *0.52*
1025080 *1125080*		8 *200*	2.215 *54.0*	2.469 *62.7*	1.125 *28.6*	1.150 *0.52*
1030030 –	3 x *80 x*	3 *80*	2.500 *63.5*	3.068 *77.9*	1.500 *38.1*	1.550 *0.70*
1030040 –		4 *100*	2.500 *63.5*	3.068 *77.9*	1.500 *38.1*	1.450 *0.66*
1030050 –		5 *125*	2.500 *63.5*	3.068 *77.9*	1.500 *38.1*	1.450 *0.66*
1030060 –		6 *150*	2.500 *63.5*	3.068 *77.9*	1.500 *38.1*	1.450 *0.66*
1030080 –		8 *200*	2.500 *63.5*	3.068 *77.9*	1.500 *38.1*	1.450 *0.66*
1040040 –	4 x *100 x*	4 *100*	3.000 *76.2*	4.026 *102.3*	2.000 *50.8*	2.850 *1.29*
1040050 –		5 *125*	3.000 *76.2*	4.026 *102.3*	2.000 *50.8*	2.850 *1.29*
1040060 –		6 *150*	3.000 *76.2*	4.026 *102.3*	2.000 *50.8*	2.800 *1.27*
1040080 –		8 *200*	3.000 *76.2*	4.026 *102.3*	2.000 *50.8*	2.800 *1.27*

Note:
Part #1002002 is not UL Listed or FM Approved.
Part #1012012 is not FM Approved.
All size-on-size (i.e. 2 x 2) Tee-Lets are not FM Approved.

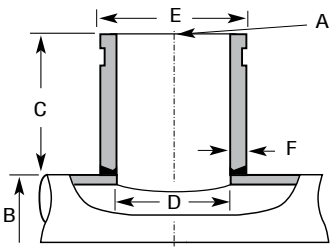
Weld-Miser™ Tee-Let®

Welding Outlet Fittings

Type B
Male Thread
Standard Weight



Type C
Cut Groove
Standard Weight



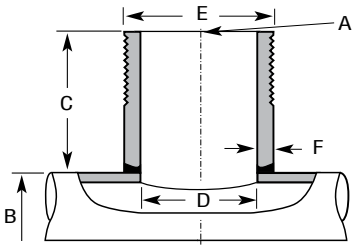
WELD-MISER™ TEE-LET® - DIMENSIONS (NOMINAL SIZES 1" THRU 2")							
Male Thread Std. Wt.	**Cut Groove Std. Wt.**	**Nominal Outlet A**	**Nominal Header B**	**Outlet Length C**	**Inside Diameter D**	**Outside Diameter E**	**Wall Thickness F**
NPT (BSPT)	*NPT (BSPT)*	*In.(mm)*	*In.(mm)*	*In.(mm)*	*In.(mm)*	*In.(mm)*	*In.(mm)*
1310012	2010012		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	1 x *25 x*	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 *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	1¼ x *32 x*	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 *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	1½ x *40 x*	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 *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	2 x *50 x*	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.

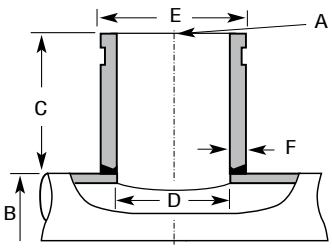
Weld-Miser™ Tee-Let®

Welding Outlet Fittings

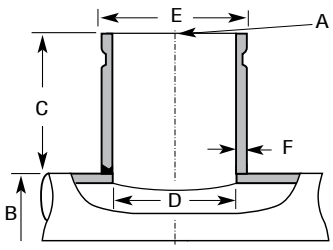
Type B
Male Thread
Standard Weight



Type C
Cut Groove
Standard Weight



Type C/R
Roll Groove
Schedule 10



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
NPT (ISO-7-1)	*NPT (ISO-7-1)*	*NPT (ISO-7-1)*	*In.(mm)*	*In.(mm)*	*In.(mm)*	*In.(mm)*	*In.(mm)*	*In.(mm)*	*In.(mm)*	*In.(mm)*
1325025	2025025 *2125025*	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 *2125030*	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 *2125035*	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 *2125050*	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 *2125060*	2225060		6 *150*	3 *80*	2.469 *62.7*	2.635 *67.0*	2.875 *76.2*	0.203 *5.0*	0.120 *3.0*
1325080	2025080 *2125080*	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*
–	2050050	–	5 x *125 x*	5 *125*	4 *100*	5.047 *128.2*	– –			– –
–	2050060	–		6 *150*	4 *100*	5.047 *128.2*	– –			– –
–	2050080	–		8 *200*	4 *100*	5.047 *128.2*	– –			– –
–	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.