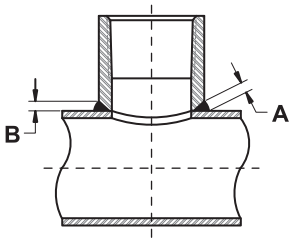
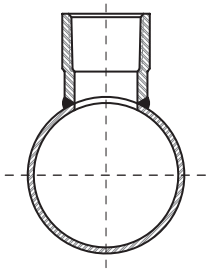
# Installation Instructions

- The hole cut in the run pipe may be done prior to welding or after welding of the outlet fitting. If holes are cut prior to welding, see recommended hole size in chart to the right.
- SPF™ Outlet Fittings are designed to be installed using only one weld pass.
- 1/2" size outlets have a heavy cross section which helps to prevent weld/heat induced distortion during installation.
- 3/4"-2" size outlets maintain a relative uniform wall thickness in the contoured section. Heat settings can easily be set to allow for full penetration welds while reducing the probability of burn through. The weld area is designed adequately distanced from the threads such that the welding process should not distort the threads.
- It is recommended that the weld temperature be only as hot as needed to fully penetrate the materials being welded. Excessive heat may cause the outlet fitting to expand excessively resulting in threads not gauging properly after cooling. The following chart lists the recommended amount of weld for each size outlet.

| Outlet Size | A (inches) | B (inches) |
|---|---|---|
| 1/2 | 1/4 | 3/16 |
| 3/4 | 1/4 | 3/16 |
| 1 | 1/4 | 3/16 |
| 1 1/4 | 1/4 | 3/16 |
| 1 1/2 | 5/16 | 1/4 |
| 2 | 5/16 | 1/4 |



1/2" Size Outlet


3/4"-2" Size Outlet

# Threaded Assembly Instructions

**THREAD INSPECTION**

A. Prior to installing a threaded branch pipe or nipple into a MT-40 outlet fitting, inspect the thread of the outlet and the nipple to insure that:
   1) No dirt or weld spatter is in the threads.
   2) No burn – through has damaged the threads.
   3) Thread length is correct.

B. Clean as needed.

**APPLICATION OF PIPE SEALANT**

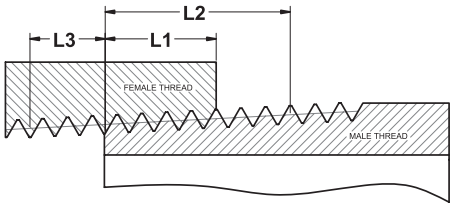
A. Use a pipe sealant that is fast drying, sets-up semi-hard and is vibration resistant. For outlets 1/2" through 1", an anaerobic pipe sealant is recommended.

B. Thread tape containing Teflon* may also be used.

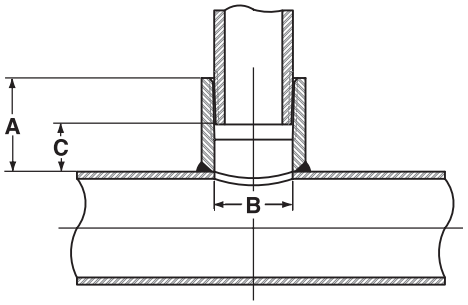
**TIGHTENING OF BRANCH PIPE**

A. For outlet sizes through 2", wrench tighten up to three (3) full turns past handtight.

*Teflon is a registered trademark of DuPont.




| NPT TAPERED PIPE THREADS ANSI/ASME B.1.20.1 Length of Effective Threads | | | | |
|---|---|---|---|---|
| Drop Nipple or Outlet Size | L1 Dim. Hand Tight in./thrds. | L3 Dim. Wrench Tight in./thrds. | Total L1+L3 Length in./thrds. | L2 Dim. Effective Threads in./thrds. |
| 1/2" | 0.320/4.48 | 0.214/3.00 | 0.534/7.48 | 0.534/7.47 |
| 3/4" | 0.339/4.75 | 0.214/3.00 | 0.553/7.75 | 0.546/7.64 |
| 1" | 0.400/4.60 | 0.261/3.00 | 0.661/7.60 | 0.683/7.85 |
| 1 1/4" | 0.420/4.83 | 0.261/3.00 | 0.681/7.83 | 0.707/8.13 |
| 1 1/2" | 0.420/4.83 | 0.261/3.00 | 0.681/7.83 | 0.724/8.32 |
| 2" | 0.436/5.01 | 0.261/3.00 | 0.697/8.01 | 0.757/8.70 |




| MT-40 WELD OUTLETS | | | | | |
|---|---|---|---|---|---|
| Outlet Size | Nominal Size | Outlet Height (inches) A | Inside Diameter (inches) B | Recommended Hole Size (inches) | Take Out (inches) C |
| 1/2 x | 1 1/4-1 1/2<br>1 1/2-2<br>2-2 1/2<br>2 1/2-8 | 1.063 | 0.700 | 5/8 (.625) | 0.531 |
| 3/4 x | 1-1 1/4<br>1 1/4-1 1/2<br>1 1/2-2<br>2-2 1/2<br>2 1/2-8 | 1.125 | 0.900 | 7/8 (.875) | 0.562 |
| 1 x | 1 1/4-1 1/2<br>1 1/2-2<br>2-2 1/2<br>2 1/2-3<br>3-4<br>5-8 | 1.250 | 1.145 | 1 1/8 (1.125) | 0.593 |
| 1 1/4 x | 1 1/4<br>1 1/2-2<br>2-2 1/2<br>2 1/2-3<br>3-4<br>5-8 | 1.375 | 1.490 | 1 1/2 (1.500) | 0.687 |
| 1 1/2 x | 1 1/2<br>2<br>2 1/2<br>3-4<br>4<br>5-8 | 1.625 | 1.610 | 1 5/8 (1.625) | 0.937 |
| 2 x | 2<br>2 1/2<br>3<br>4<br>6<br>8 | 1.750 | 2.067 | 2 (2.000) | 1.062 |