

Styles 920 and 920N *Mechanical-T* Bolted Branch Outlets



⚠ WARNING

- Read and understand all instructions before attempting to install any Victaulic products.
- Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, depressurized, and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
- Wear safety glasses, hardhat, and foot protection.

Failure to follow these instructions could result in death or serious personal injury and property damage.

⚠ WARNING

- For proper installation, some new sizes of Style 920N products require a different hole size than the Style 920 or Style 921 they replace. Verify that the proper size hole is prepared for the size and style being installed (refer to the table below for requirements).
- **STYLE 920 AND STYLE 920N HOUSINGS CANNOT BE MATED TO EACH OTHER TO ACHIEVE CROSS CONNECTIONS.**

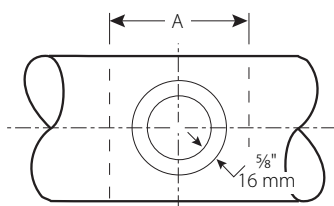
Failure to follow these instructions could result in death or serious personal injury and property damage.

PIPE PREPARATION FOR *MECHANICAL-T* OUTLET INSTALLATION

NOTICE

- Victaulic hole-cutting tools are recommended for proper hole preparation.
- Cross connections can be made **ON METAL PIPE ONLY** by using two upper housings of the same size. Different branch sizes are allowable. **DO NOT** make cross assemblies on HDPE pipe.

1. Proper preparation of the hole is essential for sealing and performance. Verify that the correct hole saw size is being used. Refer to the “Style 920/920N *Mechanical-T* Outlet Pipe Preparation Dimensions” table to the right for the proper hole saw size.
2. Holes shall be drilled on the centerline of the pipe.
3. Verify that a 5/8-inch/16-mm area around the hole is clean, smooth, and generally free from indentations and/or projections that could affect gasket sealing (refer to the sketch below). Remove any burrs or rough edges from the hole. Burrs and rough edges might affect assembly, proper seating of the locating collar, flow from the outlet, or gasket sealing.
4. The pipe around the entire circumference within the “A” dimension shall be generally free of any dirt, scratches, abrasions, or projections that might prevent the housing from seating fully on the pipe. Refer to the “Style 920/920N *Mechanical-T* Outlet Pipe Preparation Dimensions” table to the right for the “A” dimension.



Style 920/920N *Mechanical-T* Outlet Pipe Preparation Dimensions

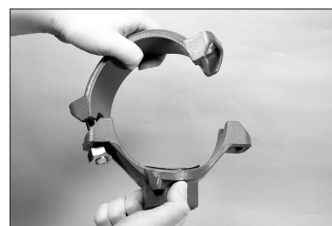
Nominal Outlet Size in/mm	Hole Dimensions in/mm		Surface Preparation “A” Dimension in/mm
	Minimum Hole Diameter/ Hole Saw Size	Maximum Allowable Diameter	
All 1/2-inch/ 21.3 outlets	1 1/2 38	1 3/8 41	3 1/2 89
All 3/4-inch/ 26.9 outlets	1 1/2 38	1 3/8 41	3 1/2 89
All 1-inch/ 33.7 outlets	1 1/2 38	1 3/8 41	3 1/2 89
All 1 1/4-inch/ 42.4 outlets	1 3/4 44	1 7/8 48	4 102
All 1 1/2-inch/ 48.3 outlets <i>Except for</i> 920N 2 x 1 1/2-inch/ 60.3 x 48.3 outlets	2 51 1 3/4 44	2 1/8 54 1 7/8 48	4 102 4 102
All 2-inch/ 60.3 outlets <i>Except for</i> 920 8 x 2-inch/ 219.1 x 60.3 outlets	2 1/2 64 2 3/4 70	2 5/8 67 2 7/8 73	4 1/2 114 4 1/2 114
All 2 1/2-inch/ 73.0 outlets	2 3/4 70	2 7/8 73	5 127
All 76.1-mm outlets	2 3/4 70	2 7/8 73	5 1/2 140
All 3-inch/ 88.9 outlets	3 1/2 89	3 3/8 92	5 1/2 140
All 4-inch/ 114.3 outlets	4 1/2 114	4 3/8 118	6 1/2 165
All 108.0-mm outlets	4 1/2 114	4 3/8 118	6 1/2 165

MECHANICAL-T INSTALLATION

⚠ CAUTION

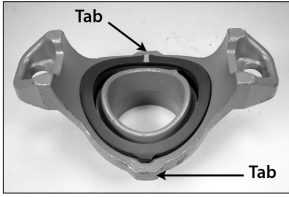
- Verify that pipe is prepared properly in accordance with the instructions on this page.

Failure to prepare pipe according to these instructions could cause improper gasket sealing, resulting in property damage.



- 1. ASSEMBLE HOUSINGS:**
Insert a bolt into the two housings. Thread a nut loosely onto the end of the bolt.

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2. CHECK GASKET: Check the gasket to verify that it is suitable for the intended service. The color code identifies the material grade. Refer to Victaulic publication 05.01 for the color code chart, which can be downloaded at victaulic.com.

Inspect the sealing surface of the gasket to verify that no debris is present. For Style 920N Mechanical-T Outlets, it is not necessary to remove the gasket from the housing. **GASKETS FOR THE STYLE 920 ARE NOT INTERCHANGEABLE WITH GASKETS FOR THE STYLE 920N. THE CORRECT GASKET IS SHIPPED WITH THE APPROPRIATE PRODUCT.**

Style 920 Gaskets have a narrower gasket sealing area and two pronounced alignment tabs for proper positioning inside the housing. Style 920N gaskets have a wider gasket sealing area. Refer to the above photos for differences between the gaskets.

3: LUBRICATE GASKET: Lubricate the exposed sealing surface of the gasket using a thin coat of compatible lubricant. Always consult the pipe manufacturer for lubricant compatibility requirements.

⚠ CAUTION

- A thin coat of a compatible lubricant shall be applied to the gasket sealing surface to help prevent pinching, rolling, or tearing during installation.
- DO NOT use excessive lubricant.

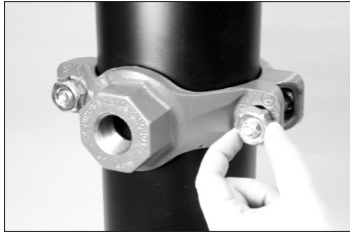
Failure to use a compatible lubricant may cause gasket damage, resulting in joint leakage and property damage.



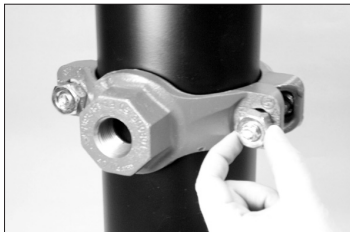
4. INSTALL HOUSINGS: Rotate the lower housing so that it is positioned approximately 90° to the upper (outlet) housing, as shown above. The upper housing's collar shall be placed into the outlet hole. Rotate the lower housing around the pipe.



5. CHECK COLLAR: Verify that the locating collar engages the outlet hole properly. Check this engagement by rocking the upper (outlet) housing in the hole.



6. INSTALL REMAINING BOLT/NUT: Insert the remaining bolt. Thread a nut onto the bolt finger-tight. **NOTE:** Verify that the oval neck of each bolt seats properly in the bolt hole.



7. TIGHTEN NUTS: Verify that the locating collar is still positioned properly in the outlet hole. Tighten the nuts evenly by alternating sides until the upper (outlet) housing contacts the pipe completely.

7a. For Metal Pipe: The nuts shall be torqued to 50ft-lbs/68N•m with even gaps between the bolt pads. **DO NOT** exceed 70ft-lbs/95N•m of torque on the nuts.

7b. For HDPE Pipe: The nuts shall be torqued to 50ft-lbs/68N•m. **NOTE:** On HDPE pipe, it is normal for bolt pads to contact when the nuts are tightened to 50ft-lbs/68N•m. **DO NOT** exceed 70ft-lbs/95N•m of torque on the nuts.

⚠ WARNING

- Nuts shall be torqued to 50 ft-lbs/68 N•m.
- DO NOT exceed 70 ft-lbs/95 N•m of torque on the nuts. Increased bolt torque will not improve sealing and may cause product failure.

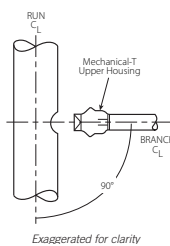
NOTICE

- For grooved outlets, refer to the applicable coupling installation instructions.
- For threaded outlets, complete the assembly using standard threading practices.

BRANCH CONNECTIONS

If a branch connection is made to the upper housing before the Mechanical-T is installed on the pipe, verify that the branch connection is 90° to the pipe run before completing the tightening sequence of the Mechanical-T assembly.

- When the Mechanical-T is used as a transition piece between two runs, it shall be assembled onto the runs before the branch connection is made.
- Victaulic female threaded products are designed to accommodate standard ANSI male pipe threads only. Use of male threaded products with special features, such as probes, dry pendent sprinkler heads, etc., should be verified as suitable for use with this Victaulic product. Failure to verify suitability in advance may result in assembly issues or leakage, which can compromise the integrity of the system and/or cause property damage.



STYLE 920 OR STYLE 920N MECHANICAL-T CROSSES

- Cross connections can be made **ON METAL PIPE ONLY** by using two upper housings of the same size and style. Different branch sizes are allowable. **DO NOT make cross assemblies on HDPE pipe.**
- Install the cross connection in accordance with the instructions on this page. Verify that the locating collar on each side is positioned securely inside the hole. Nuts shall be torqued to 50ft-lbs/68N•m, with even gaps between the bolt pads, to ensure the cross assembly is rigid. **DO NOT** exceed 70ft-lbs/95N•m of torque on the nuts.
- DO NOT MIX STYLE 920 OUTLETS WITH STYLE 920N OUTLETS WHEN MAKING CROSS ASSEMBLIES.**



For complete contact information, visit victaulic.com

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