



Installation Procedures

The simplicity of QMax™ FPX is one of its many benefits. As with any system, if not properly installed, it may not function as intended. Therefore, it is important to review and follow these procedures and inspect the system to ensure a successful application.

Required Equipment:

- Site-Approved Stainless Steel (or copper) tubing and tubing unions
- Thin gauge wire for temporarily holding QMax FPX and tubing in place
- Stainless Steel cutting tool
- Stainless Steel Bending Tools (tight radius and wide radius required)
- QMax FPX materials (straight sections, custom parts if applicable)
- QMax Industries, Inc. approved installation banding, buckles and tool (normally supplied with system)
- Aluminum cutting tool (band saw is preferred)

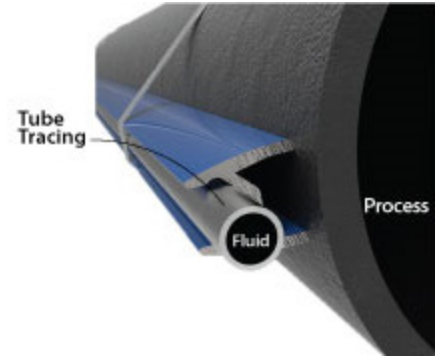


Image A

Step 1 - Tubing Preparation:

- 1) Verify the heating medium tubing fits well within the QMax FPX (**Image A**).
- 2) Begin preparation of tube tracing by bending the tubing using standard tubing benders ensuring:
 - a. Tubing is installed at proper position(s) on the pipe (refer to installation drawings for tubing positions).
 - b. Elbows follow the same radius as the pipe elbows (refer to installation drawings for tubing positions) (**Image B**, **Image C**).
 - c. Expansion loops (**Image C**) are installed at every tube joint and pinch point to allow for thermal expansion (see Supplemental 2).
 - d. All site-specific specifications are followed that do not conflict with these instructions.

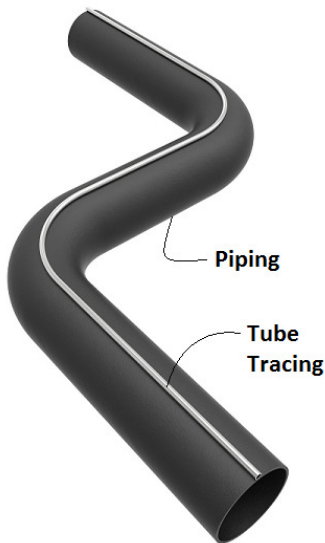


Image B



Image C

Step 2 - Installing QMax FPX:

3) Begin applying the QMax FPX in the following sequence:

- a. Measure and cut the QMax FPX straights to fit each straight section using a suitable aluminum saw (portable band saw with aluminum cutting blade works well). Remove any sharp edges after cutting to ensure a safe working environment.
- b. Install the QMax FPX on the piping by hand, and install the tubing inside the QMax FPX channel (**Image D**).
- c. Secure the QMax into place using QMax Industries, Inc. approved installation hardware (**Image D**, **Image E**):
 1. 1/2" SS Banding
 2. 1/2" SS Buckles
 3. Installation Tool
(Ratchet type tools are also available)

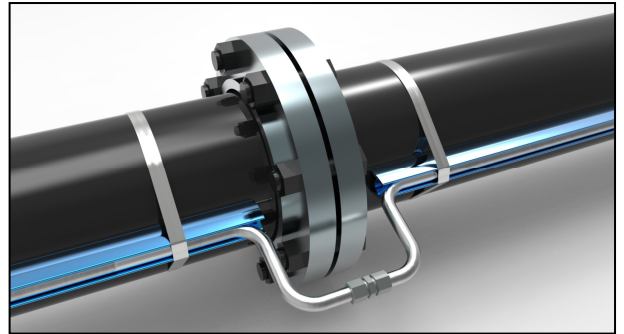


Image D

Step 3 - Inspection:

- 4) Inspect for secure installation of the entire system. Installation guidelines will vary with each project because QMax FPX is designed for each application. If no spacing guidelines have been given, the following guidelines should be adhered to:
- a. Allow ½ inch gap between all QMax FPX pieces to allow for thermal expansion of the systems.
 - b. QMax FPX shall be secured within 2 inches from the back of each flange.
 - c. Consult your QMax representative if any section of pipe or equipment has more than a 2-inch gap between QMax components.

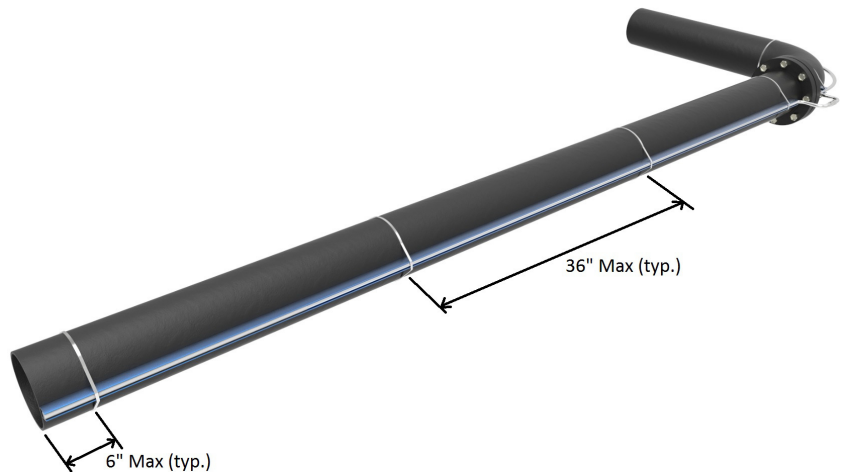
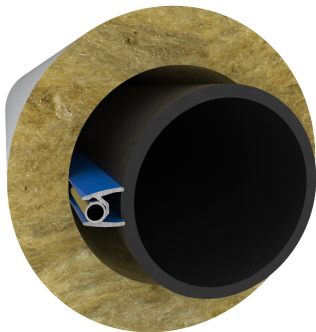


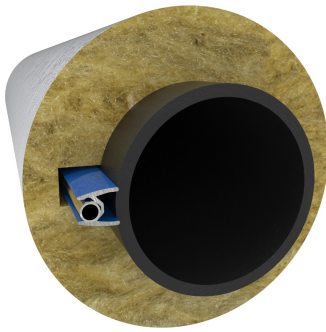
Image E

Supplemental 1 - Insulation:

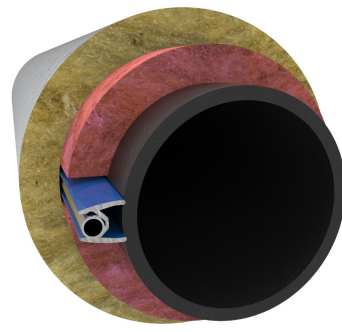
Insulation is installed over the tubing and QMax FPX in accordance with plant standards. It is necessary to accommodate the system using one of the following methods:



***Oversized
Insulation***



***Coping Standard-Size
Insulation***



***Coping 1st inch, then apply
Standard Insulation***

Insulation Notes:

- 1) Insulation should be oversized according to the number of QMax FPX tracers on the pipe. Insulation over (1) QMax FPX tracer should be oversized by 3/4 to 1 inch. Insulation over (2) or more QMax FPX tracers should be oversized 1-1/2 to 2 inches.
- 2) Tubing connections should always extend outside the insulation.

Supplemental 2 - Expansion Loop Options:



***Offset Loop
(recommended)***



***Standard Loop
(recommended at flanges)***



135° Loop

Detail Notes:

- 1) QMax installation instructions and detailed drawings should not replace plant standards without plant consent.
- 2) Details above are offered as general guidelines and should not be used to defy logic.