Standard Specification

QMax™ FTS (Fluid Tracing System) is a high-performance heat tracing system used to maintain process temperatures or minimum pipe (or tank) wall temperatures. The unique design of **QMax FTS** maximizes the heat input of regular stainless steel or copper tube tracer and offers consistent results. First, **QMax** transforms the nature of the tracer from inefficient convective heat transfer to high-efficiency conductive heat transfer. Second, the heating surface area is increased to two inches using highly conductive aluminum. A single tracer with the addition of **QMax FTS** can achieve the same results as multiple tube tracers or even jacketed pipe. The fact that **QMax FTS** is installed underneath standard tubing allows for maximum flexibility when designing and installing the system. It also makes the selection and installation of the tubing system important.

1) Tubing Selection:

It is critical to follow company or project specifications when selecting the tubing material, size and wall thickness. The company or project specifications shall adhere to ANSI/ASME Code standards for tubing material, size and wall thickness for the given application.

QMax FTS is designed for use with tube tracing of any material of construction. The recommended material of construction is 304 or 316 stainless steel to avoid issues with corrosion, particularly at higher temperatures (over 365 °F).

- Stainless steel tubing shall follow ASTM Standard Specification A249, A269 and A213.
- Minimum Rockwell Hardness of tubing shall be 90 HRB.
- Minimum wall thickness of tubing shall be specified as:

    - 3/8” diameter tubing x 0.032” wall thickness
    - 1/2” diameter tubing x 0.035” wall thickness
    - 5/8” diameter tubing x 0.035” wall thickness
    - 3/4" diameter tubing x 0.049” wall thickness

2) Tubing Installation:

QMax FTS is intended to install with standard tube tracing. It is critical to follow company or project specifications while installing **QMax FTS**. It is also very important to review the **QMax FTS** installation guidelines (***FTS-Install***) before installing the tube tracing so that all accommodations can be made for the **QMax FTS** while installing the tubing.

3) QMax™ FTS Selection:

QMax™ Industries, Inc. does not use charts or graphs showing how many QMax strips to use for a given pipe size, process or temperature. Instead, each **QMax FTS** system is specifically designed for each application using thermal modeling software developed by QMax Industries, Inc. We ask our customers to complete a system evaluation questionnaire for every application (***FTS-EQ***), which can be found on our webpage.

The profile of **QMax FTS** is also unique for each pipe and tubing size. Before installation of any system, the fit of the QMax FTS should be verified. Below is a list of standard profiles for **QMax FTS**. Other sizes are available upon request:

Pipe Size	Tubing Size		
	3/8"	1/2"	5/8"
1"	x	x	
1.5"	x	x	
2"	x	**x**	x
3"	x	**x**	x
4"	x	**x**	x
6"	x	**x**	x
8"	x	**x**	x
10" - 14"	x	x	x
16" - up"	x	x	x

4) QMax™ FTS Installation:

The simplicity of **QMax FTS** is one of its many benefits. As with any system, if the system is not installed properly, it may not function as intended. It is important to review and follow the **QMax FTS** Installation Procedures (***FTS-Install***) and inspect the system to ensure a successful installation.

5) QMax™ FTS Product Information:

- Dimensions:
  - Width = **1 inch** wide for 1" NPS pipe, **1.5 inch** wide for 1.5" NPS pipe, **2 inches** wide for all other pipe sizes
  - QMax FTS adds 0.125 inches to the OD of tubing when installed
  - QMax FTS is offered in 4.5 ft lengths (other lengths available)
- Material: 6063-T6 Aluminum (mill finish)
- Thermal Conductivity: 1390 BTU(in)/hr ft^2 °F (200 W/m-°K)
- Maximum Temperature Limitation: 750 °F (399 °C)
- Weight: **0.60 lb/ft** (.89 kg/m) *(without tubing, HTC or Banding)*
- Standard tube/pipe sizes: See Chart Above *(custom designs are available upon request)*