

Installation Hardware Instructions

Standard Installation Kit For 1" Copper Tube

(Complies with NSF61)

For F-1100 Series Insertion Turbine Flow Meters



For Use With Kit INSTL81

This kit must be installed prior to filling the system, or into a section of pipe that is isolated from pressure and flow. Once installed, this kit allows for insertion and removal of the flow meter without a system shutdown.

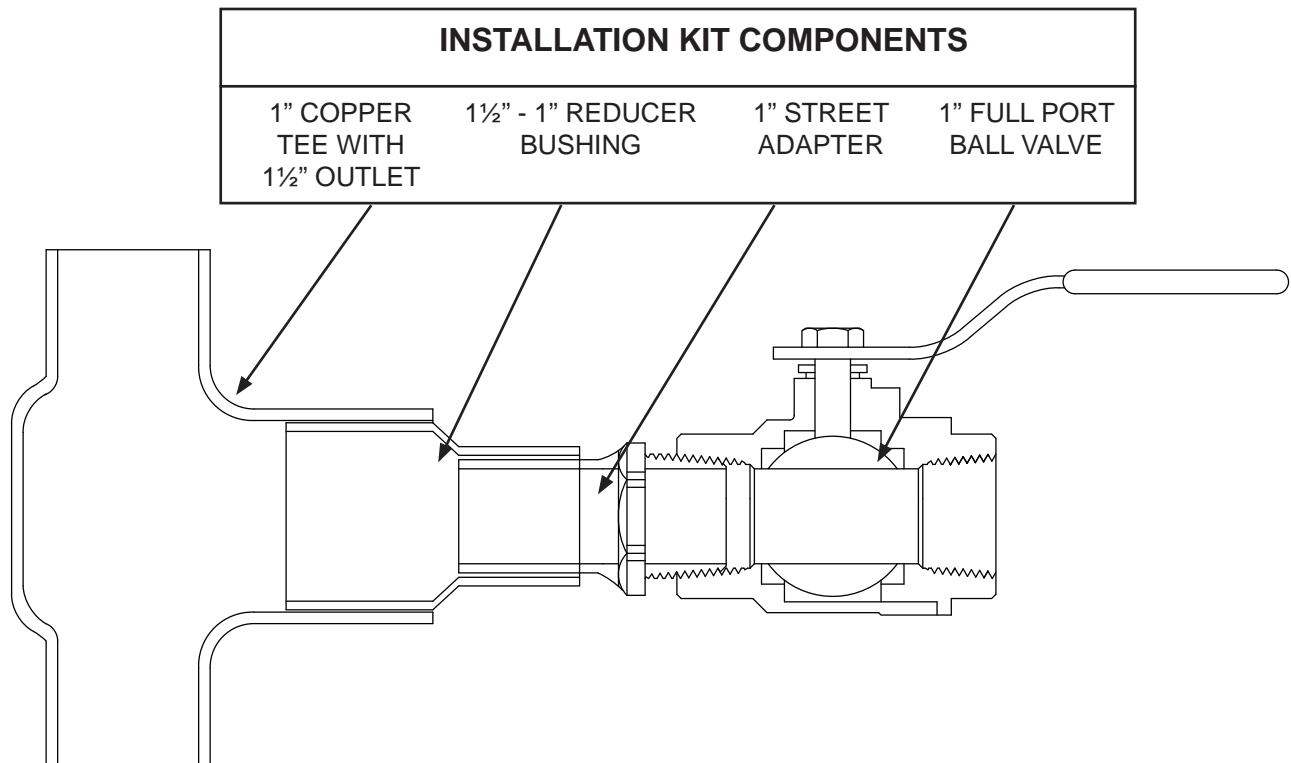
Directions:

1. Identify an appropriate location for the flow meter (see next page).
2. Solder or braze the copper tee and adapters provided.
3. Install the ball valve as shown below. Use a paste type thread sealant. **DO NOT** use Teflon[®] tape.
4. Flush and fill the system prior to installing the meter.

NOTE: Before installing the flow meter, read the entire installation manual.

Important Note

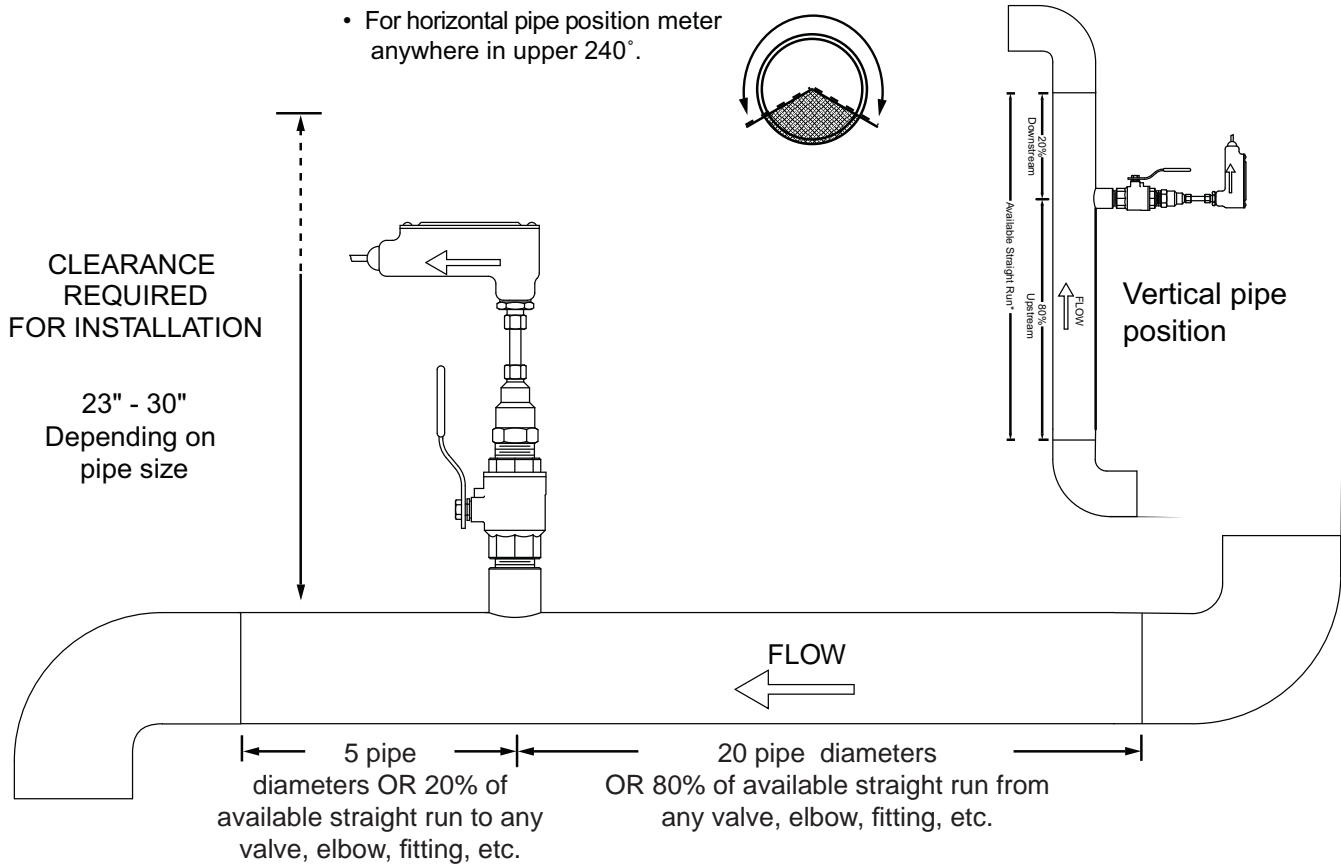
ONICON insertion flow meters are precision measuring devices that must be installed according to the instructions contained in this document in order to maintain their accuracy and reliability. Failure to follow these instructions will result in erratic operation and reduced accuracy.



FLOW METER SITE SELECTION GENERAL GUIDELINES



- Install in vertical or horizontal pipe.
- For horizontal pipe position meter anywhere in upper 240°.



EVALUATING UPSTREAM PIPING CONDITIONS

Better ↑ ↓ Worse	Straight Pipe
	Single Bend
	Pipe Reduction or Enlargement
	Outflowing Tees
	Multiple Bends in Same Plane
	Multiple Bends Out of Plane
	Inflowing Tees
Control Valves	

How to determine the available straight pipe diameters:

For each application, locate the longest straight, unobstructed section of pipe (no bends, tees, valves, other insertion probes, size transitions). The longest straight pipe run in inches divided by nominal pipe size in inches equals "diameters of straight pipe." For closed loop applications, consider both the supply and return lines as possible locations.

GENERAL PRACTICES

1. For best results, install the flow meter in a straight run of pipe, free of bends, tees, valves, transitions, and obstructions for a distance of 20 pipe diameters upstream and 5 diameters downstream.
2. Longer straight runs may be required in applications where the meter is placed downstream from devices which cause unusual flow profile disruption or swirl, for example, modulating valves or two elbows in close proximity and out of plane, etc.
3. If there is sufficient straight run, allow 80% of the run upstream and 20% of the run downstream. If the total length of straight run is less than 20 diameters, performance may seriously degrade, and consideration should be given to changing to the F-3000 Series Inline Electromagnetic Flow Meter.