

Delta Tube®

STEAM KIT SELECTION GUIDE

This guide allows the selection of Delta Tubes and Delta Taps for steam service that will conform to ASME Code (ANSI/ASME B31.1) for Pressure Piping. In addition, it will provide for the selection of the appropriate steam kit, which is required for proper operation of the instrumentation in a steam system. The purpose of the steam kit is twofold: 1. It allows for safe isolation and shut off of the instrumentation and 2. It provides for establishing and maintaining a constant condensate head on the instrumentation, so that maximum accuracy may be maintained, while protecting the instrumentation from the high steam temperature.

It is essential that the maximum system temperature and pressure are accurately determined when selecting the appropriate Delta Tube. This is required to insure proper, safe system operation.

The steam kit consists of OS&Y isolation valves which include integral ports to allow filling the instrument legs with water. Typical installations are shown in figures 1, 2 & 3. **All steam kits are rated at class 2500.**

NOTE: The instrument should be located below the steam line. The steam take-offs should also be located below the horizontal centerline of the pipe, on horizontal pipe runs. Note also that on vertical pipe runs, the Model 300 Delta Tube **may not** be used.

The use of an optional three valve manifold is recommended. The manifold provides local instrument shut-off, together with a means to balance the instrument on start-up.

SELECTION AND/OR VERIFICATION PROCEDURE

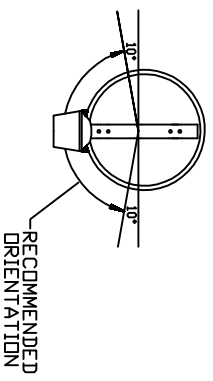
1. Establish the maximum system temperature and pressure.
2. Select the appropriate Delta Tube model using Table 4 in the latest version of "APPLICATION & SYSTEM DESIGN DATA" (Bulletin ASDE). **All steam kit models meet or exceed the pressure and temperature ratings of all Delta Tubes.**
3. If you require a Delta Tap model, **please contact the factory.**
4. Perform the required calculations to assure the unit is within safe operating parameters for differential pressure, maximum and minimum flow conditions and resonance. Modify model selection if safe operating parameters are exceeded.
5. Select appropriate Steam Kit from the table below:

Steam Kit Model	Delta Tube Model	Delta Tube Attaching Hardware
SK-1	300	C.S.
SK-2	300	316 S.S.
SK-3	All Others	C.S.
SK-4	All Others	316 S.S.

Mid-West® Instrument

6500 Dobry Dr., Sterling Heights, MI 48314 (586) 254-6500 Fax: (586) 254-6509

E-mail: sales@midwestinstrument.com Website: www.midwestinstrument.com



INSTRUMENT ISOLATION MULTI-PORT VALVE
DS&Y NEEDLE VALVES

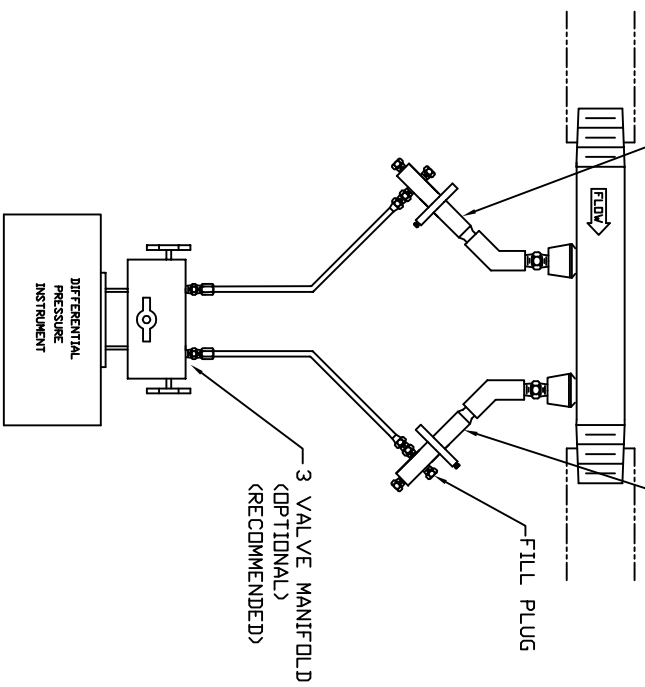
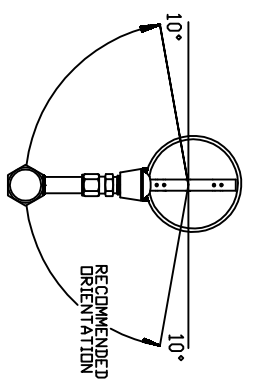
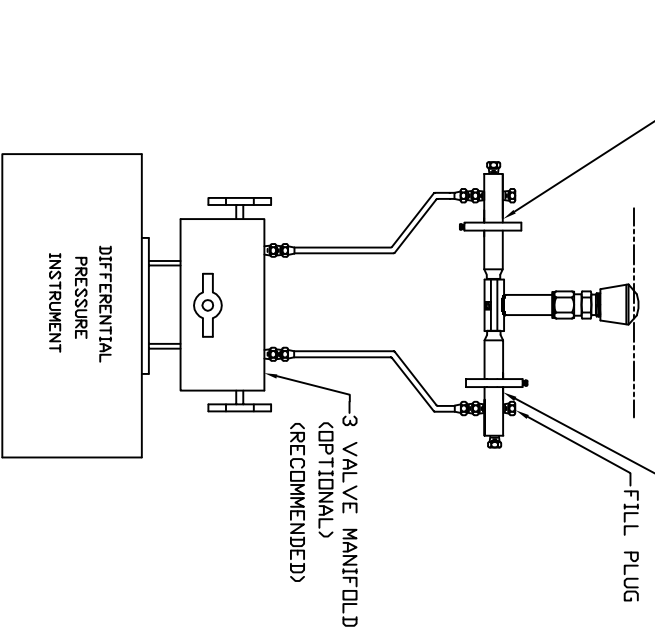


FIGURE 1

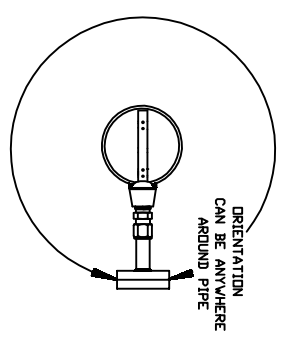


INSTRUMENT ISOLATION MULTI-PORT VALVE
DS&Y NEEDLE VALVES

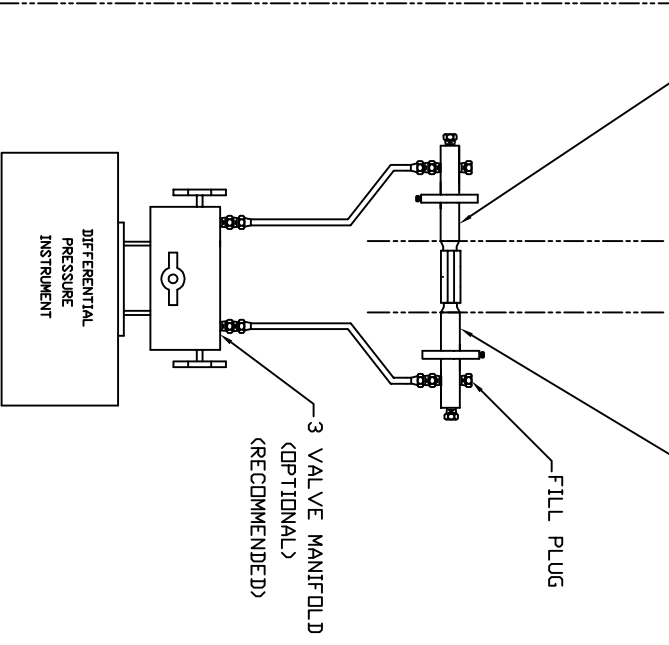


HORIZONTAL LINE APPLICATION
TYPICAL INSTALLATION (EXCEPT MODEL 300)

FIGURE 2



INSTRUMENT ISOLATION MULTI-PORT VALVE
DS&Y NEEDLE VALVES



VERTICAL LINE APPLICATION
TYPICAL INSTALLATION (EXCEPT MODEL 300)
DELTA TUBE INSTRUMENT CONNECTIONS
WILL BE POSITIONED 90 DEGREES FROM STANDARD

FIGURE 3