

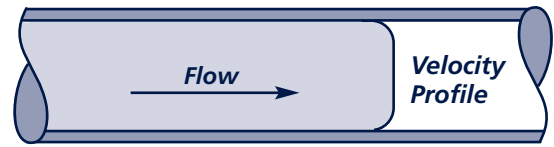
# Installation Guidelines



Digiflow® FlowX3 flow meters measure liquids only. No air bubbles should be present and the pipe must always be full. The sensors will not work properly in laminar or transitional flow applications. Minimum Reynolds number required is 4500.

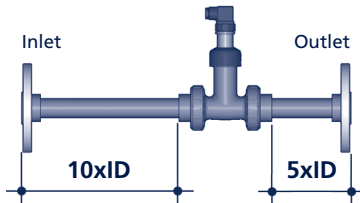
For accurate flow measurement there must be a developed turbulent velocity profile at the sensor location. This requires a straight run pipe with a minimum number of pipe diameters distance upstream and downstream of the flow sensor. These distances depend on the type of piping element (i.e. valves, elbows, reducers etc.) causing the disturbance.

To ensure maximum accuracy, the following guidelines should be observed when installing.

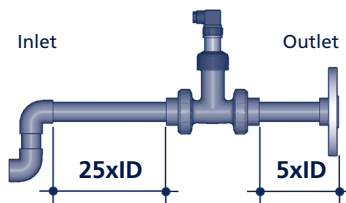


*Developed Turbulent Flow*

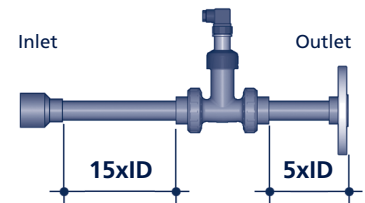
### Socket Flange



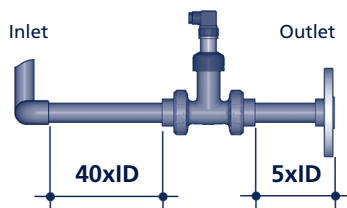
### 2 x 90° Elbow



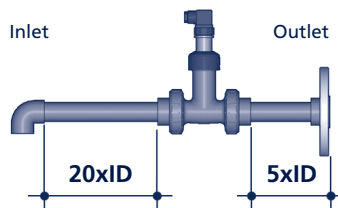
### Reducer



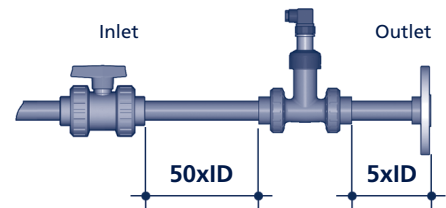
### 2 x 90° Elbow - 3 Dimensional



### 90° Elbow

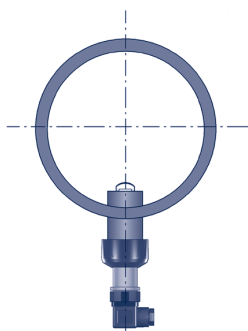


### Valve



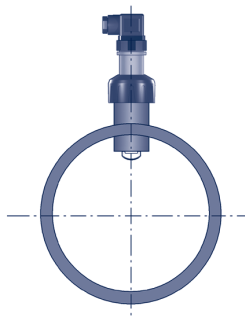
## ■ Installation Positions

Figure 1



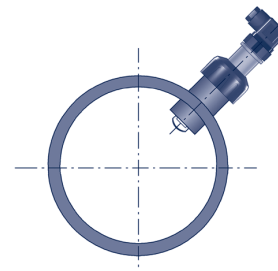
OK if no sediments are present

Figure 2



OK if no air bubbles are present

Figure 3



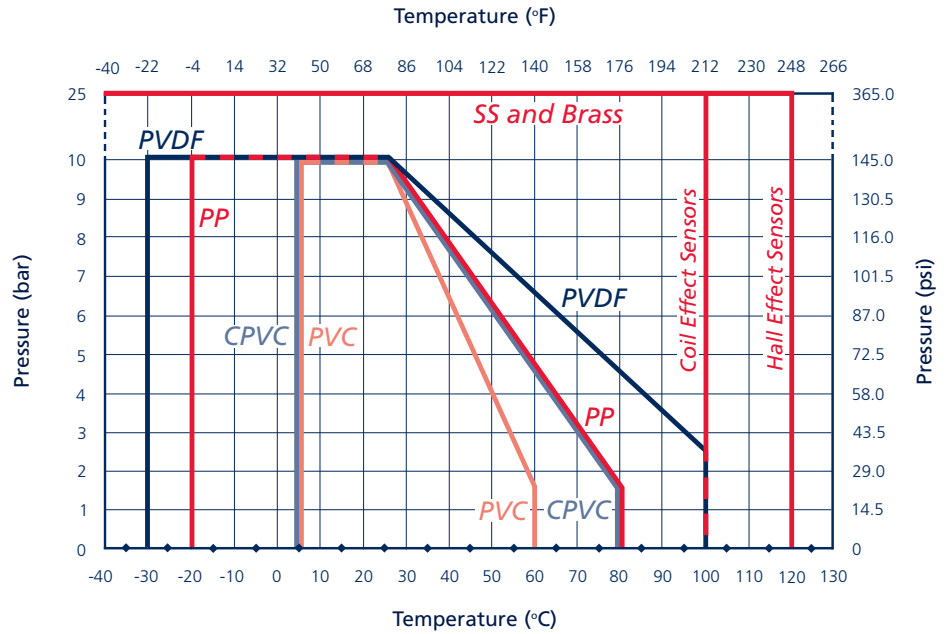
Preferred installation if sediments\* or air bubbles may be present

\* Maximum % Solids: 10% with particle size not exceeding 0.5 mm cross section or length.

# Working Pressure vs. Temperature

## For Paddle Wheel Flow Sensors and Installation Fittings

To determine maximum recommended pressure at a given temperature check maximum pressure ratings of the sensor as well as installation fittings selected. The lower pressure rating applies.



### ■ Temperature Ranges

Material	Temperature Range
PVC:	Polyvinyl Chloride 5 to 60°C (41 to 140°F)
CPVC:	Chlorinated Polyvinyl Chloride 5 to 80°C (41 to 176°F)
PP:	Polypropylene -20 to 80°C (-4 to 176°F)
PVDF:	Polyvinylidene Fluoride -30 to 100°C (-22 to 212°F)
316L SS & Brass:	Allowable temperature range is limited by the sensor's electronics Hall Sensors: -30 to 120°C (-22 to 248°F) Coil Sensors: -30 to 100°C (-22 to 212°F)