



## FLOWSTREAM Flange Assembly

### **For Topside Flow Measurement**

#### Flow Measurement Excellence

Widely recognized by the Oil, Gas & Petrochemical industries worldwide, Solartron ISA offers more than 45 years experience in the design and manufacture of primary Differential Pressure flow meter devices.

Solartron ISA: Engineering a solution for the metering community.

#### Orifice Flange Assembly

The use of the orifice flange assembly negates the requirement for further pipe drilling. Ensuring the quality of the tapping to ISO 5167-2 and minimizing the errors of the system. Although the weld beads and condition of the upstream piping should be considered when assessing the overall accuracy of the flow meter.

The traditional orifice flange assembly consists of a pair of flanges, orifice plate, bolts, nuts, gaskets, jacking screws and plugs, (where requested). The flanges are generally weld neck design, but other options are available, such as Slip-on and threaded, although careful consideration should be taken in the location of the orifice tapplings with these designs.

Available Tapping options include:

Flange Tap Flanges tapplings

- For internal line sizes greater 50mm

Corner Tap Flanges with annular chamber tapplings

- For internal line sizes under 50mm

Corner Tap Flanges with angle tapplings

- For internal line sizes under 50mm

#### Benefits

Solartron ISA is able to advise the most suitable flow measurement solution for each application, using proven flow metering technology with Differential Pressure measurement covered in ISO 5167-2, ISO TR-15377, AGA3 and ASME MFC-3M. Improved metering uncertainty as the orifice flange ensures the orifice plate and orifice tapplings are compliant to ISO 5167-2, ISO TR-15377, AGA3 and ASME MFC-3M. These devices are low maintenance with no moving parts, and considered an economical cost effective flow measurement solution for many gas, liquid and steam applications.



#### **Applications**

- ✓ Hydrocarbon Gas & Liquids
- ✓ Process Measurement

#### **Key Parameters**

- ✓ Proven Technology
- ✓ Flow Measurement in Circular Pipes
- ✓ Quality Orifice tapplings to ISO 5167-2
- ✓ No moving parts

#### **Standards**

- ✓ ISO 5167-2
- ✓ ISO TR-15377
- ✓ ASME MFC-3M
- ✓ AGA3
- ✓ ISO 9001
- ✓ PED-97/23/EC

## FLOWSTREAM Flange Assembly

### **Specifications**

#### **Functional Specifications**

##### **Line Size**

DN15 (1/2") to DN1200 (48")

##### **Types of Plate**

Square Edge  
Conical Entrance  
Quarter Circle  
Eccentric

##### **Types of Tappings**

Flange  
Corner (Annular Chamber)  
Corner

##### **Beta Ratio**

0.15 to 0.80  
(Plate type dependent)

##### **Reynolds Number**

From 80 to an unlimited maximum  
(Dependent on design of plate)

##### **Accuracy (Flow Rate)**

$\pm 1\%$  with a calibrated spool  
Typically  $\pm 2$  to  $3\%$

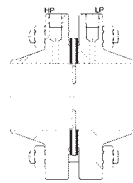
##### **Flow Turndown**

Typically  $>10:1$ , depending on  
Transmitter configuration

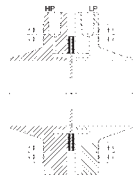
#### **Physical Specifications**

##### **Plate / Carrier Material**

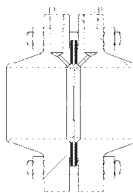
304ss / 316ss / 321ss / UNS S31803  
UNS S32760 / UNS S31254  
Alloy 400 / 625 / 825 / C276  
Titanium  
A105N / A350 LF2  
Low Alloy – A182 F1 / F5 / F9 / F11 / F22  
Others available on request



**Flange Taps**



**Corner Annular Taps**



**Corner Angle Taps**



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