



FC Orifice Plates

INTRODUCTION

TRENT FC Orifice plates are differential pressure producing flow elements that will accurately and repeatedly measure the flow of fluids & gases in fully filled closed pipes. Standard FC Orifice plates are designed to BS1042 with other standard as optional. The Orifice plates are available in both metric or imperial standards.

APPLICATION

TRENT FC Orifice plates are designed for the measurement of full pipe flow of water, wastewater, sludge, gases, steam etc.

DESIGN FEATURES

Sizes :

2 inch and above
50 mm and above

Material of Construction :

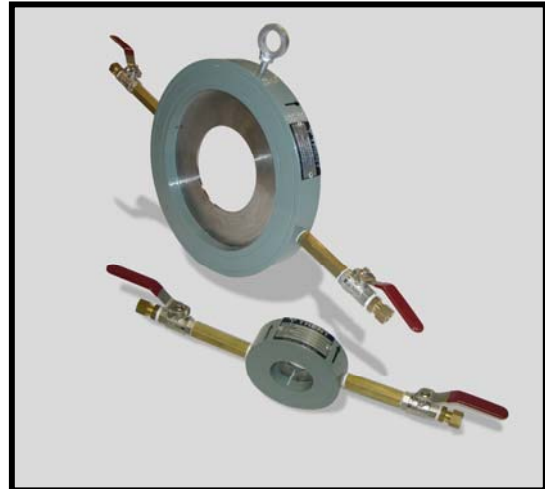
TRENT FC Orifice plates are available in stainless steel with mild steel carrier. The mild steel carrier of standard units are coated with 3 coats of non-toxic epoxy-polyamide with mid-grey top coat. Orifice plates of sizes smaller than 125mm (5 inch) are also available in one piece cast bronze.

Mounting :

TRENT FC Orifice plates are precisely machined wafer type flowmeter that installed between 2 flanges to BS, ANSI or any other standards to suit customer requirements.

Drain holes :

Standard TRENT FC series orifice plates are furnished with drain holes flush with mating pipe internal diameter for draining of gas or liquid bubble through the pipe line.



Hydraulic Configuration :

TRENT FC Orifice plates are individually designed flow measuring elements that provide a coefficient of discharge in dependent of Beta ratio and at the same time allow the adiabatic expansion to be calculated accurately.

Flow Direction Indication:

An arrow is engraved on the orifice plate carrier to indicate the flow direction.

Calibrated Name Plate Details:

Each orifice plate is furnished with a calibrated name plate detailing its pipe ID, throat bore and flow rate etc.

Flow Data:

Each orifice plate shall be furnished with a copy of flow data detailing all necessary information.

SPECIFICATIONS

Maximum working pressure :

16 bar standard
Higher pressure as optional.

Maximum working temperature :

150°C (320°F) for dry air
60°C (140°F) for liquid.

Beta ratio :

0.4 to 0.75

Pressure loss:

The permanent pressure loss of TRENT FC Orifice plates expressed as a percentage of the differential produced is shown in fig 1

Accuracy:

Within the specified flow range and piping configuration, the TRENT FC Orifice plates shall produce measurement accuracy of $\pm 1.00\%$.

INSTALLATION

TRENT FC Orifice plates can be either horizontally or vertically mounted. General practice requires the pipe be maintained full and the upstream piping be sufficient to develop good velocity profiles.

Standard Accessories :

2 Nos 3/8" Ball valves for both upstream and downstream tappings.

2 Nos Air vents for both upstream and downstream air venting points.

QUOTATION/ORDERING PROCEDURE

Required Ordering Date :

- Measured bore of mating pipe.
- Maximum flow (if volume, state whether reduced or actual)
- Reduction condition if flow stated at reduced conditions.
- Operating pressure and temperature
- Fluid density at operating condition.
- Required differential pressure.
- Viscosity at operating condition.
- Type of fluid measured.
- Flange standard.

OPTIONS

- Dry Calibration certificate from internationally recognised third party inspection body for all sizes available.
- Actual flow calibration for sizes below 200mm (8 inch) diameter available upon request.

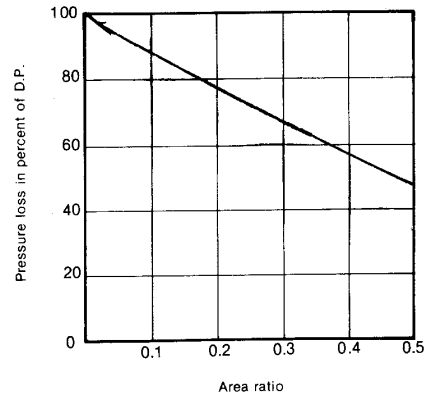


Fig. 1-Pressure loss vs Area Ratio

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