FC ORIFICE PLATES

INTRODUCTION

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

APPLICATIONS

TRENT FC Orifice Plates are designed for the measurement of full pipe flow of water, waste water, sludge, gases, steam and etc.

DESIGN FEATURES

Sizes

2in. and above

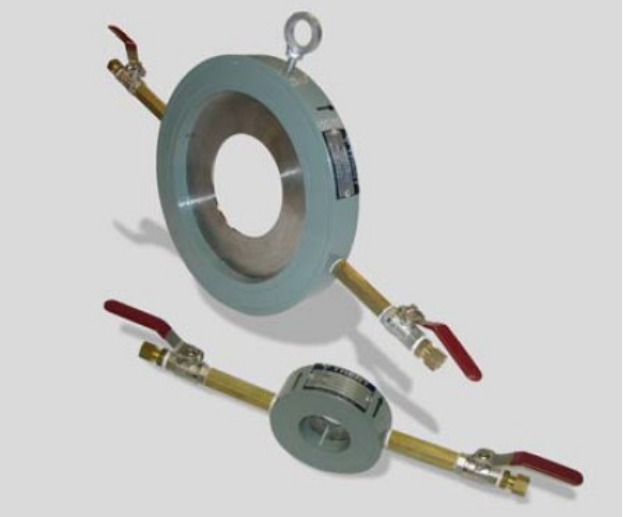
50mm and above

Materials 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 three coatings of non-toxic epoxy-polyamide with mid-grey top coat. Orifice plate of sizes smaller than 125mm (5in.) is also available in one piece cast bronze.

Mounting

TRENT FC Orifice Plates are a precisely machined wafer type flowmeter that is installed between two flanges to BS, ANSI or any other standards to suit customer's requirements.



Drain Holes

Standard TRENT FC 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 independent of beta ratio and at the same time allows 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.

Flow Data

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

SPECIFICATIONS

Maximum operating pressure	16bar standard Higher pressure optional
Maximum operating 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 loss of the orifice plates expressed as a percentage of the differential produced is shown in figure 1
Accuracy	Within the specified flow range and piping configuration, the orifice plates shall produce measurement accuracy of ± 1.00%

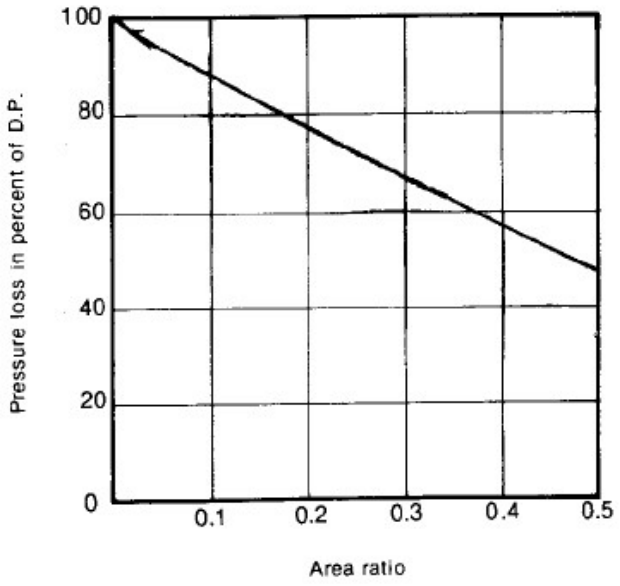


Fig.1-Pressure Loss vs Area Ratio

INSTALLATION

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

Standard Accessories

- 2 nos. ⅜in. ball valve for both upstream and downstream tappings.
- 2 nos. air vent for both upstream and downstream air venting points.

QUOTATION/ORDERING PROCEDURE

Required ordering data:

- 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 are available
- Actual flow calibration for sizes below 200mm (8in.) diameter are available upon request

Manufactured by :

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