

FE-SIZING

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Project . BINAK

ISO Orifice Plate - Concentric - Flange Taps - Gas Flow

Tag number FE-2211

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Input data

Fluid	GAS
Maximum gas flow	53.78 kg/h
Normal gas flow	50.03 kg/h
Meter inlet pressure	8 barg
Differential range	250 mbar
Flow temperature	60 degC
Molecular weight	28.02
Cp/Cv specific heat ratio	1.398
Viscosity @ FTP	.01 cp
Pipe inside diameter	2 in
Density @ FTP	1.583 kg/m3
Critical pressure	bara
Critical temperature	degC
Base pressure	14.69595 psia
Base temperature	59 degF
Barometric pressure	14.7 psia
Element material	301 stainless steel
Pipe material	Carbon steel

Output data

Orifice diameter	10.6584 mm
Beta ratio	.20981
Normal flow differential	216.4 mbar
Uncertainty percent	.7026 percent
Reynolds number	34811
Max pressure loss	231.3 mbar
Max power loss	.2935 hp
Flow status	
Minimum plate thickness	3.175 mm
Thermal expansion factor	1.00062
Discharge coefficient	.598455
Gas expansion factor	.992955
Base pressure factor	1
Base temperature factor	1

English mass units

Source - ISO 5167-2:2003. Orifice plates

InstruCalc Ver.9.0.3.

Deviations from ISO 5167 size limits

Orifice diameter must be greater than 12.7 mm

Notes