

Project . BINAK

ISO Orifice Plate - Concentric - Flange Taps - Gas Flow

Tag number FE-2102

By A.KHAJEVAND

Input data

Fluid	GAS
Maximum gas flow	12395.93 kg/h
Normal gas flow	11269.03 kg/h
Meter inlet pressure	5.5 barg
Differential range	250 mbar
Flow temperature	32 degC
Molecular weight	23.57
Cp/Cv specific heat ratio	1.261
Viscosity @ FTP	.011 cp
Pipe inside diameter	8 in
Density @ FTP	6.214 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	112.02 mm
Beta ratio	.55128
Normal flow differential	206.6 mbar
Uncertainty percent	.5977 percent
Reynolds number	1782671
Max pressure loss	170.7 mbar
Max power loss	12.72 hp
Flow status	
Minimum plate thickness	3.175 mm
Thermal expansion factor	1.00018
Discharge coefficient	.603929
Gas expansion factor	.988883
Base pressure factor	1
Base temperature factor	1

English mass units

Source - ISO 5167-2:2003. Orifice plates

InstruCalc Ver.9.0.3.

Notes