

Project 2101. BINAK

ISO Orifice Plate - Concentric - Flange Taps - Gas FlowTag number FE-2101

By A.KHAJEVAMD

Input data

Fluid	GAS
Maximum gas flow	7220.49 kg/h
Normal gas flow	6564.08 kg/h
Meter inlet pressure	7.5 barg
Differential range	250 mbar
Flow temperature	46.11 degC
Molecular weight	26.36
Cp/Cv specific heat ratio	1.23
Viscosity @ FTP	.011 cp
Pipe inside diameter	6 in
Density @ FTP	8.82 kg/m3
Critical pressure	psia
Critical temperature	degR
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	3.09858 in
Beta ratio	.51643
Normal flow differential	206.6 mbar
Uncertainty percent	.5956 percent
Reynolds number	1384279
Max pressure loss	178.8 mbar
Max power loss	5.468 hp
Flow status	
Minimum plate thickness	.125 in
Thermal expansion factor	1.0004
Discharge coefficient	.603367
Gas expansion factor	.991426
Base pressure factor	1
Base temperature factor	1

Modified Mass English, basic calculation, calculate size

Source - ISO 5167-2:2003. Orifice plates

InstruCalc Ver.9.0.3.

Notes