

Project 2102. BINAK

ISO Orifice Plate - Concentric - Flange Taps - Gas FlowTag number FE-2102

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Input data

Fluid	GAS
Maximum gas flow	12395.93 kg/h
Normal gas flow	11269.03 kg/h
Meter inlet pressure	7.5 barg
Differential range	250 mbar
Flow temperature	32 degC
Molecular weight	23.57
Cp/Cv specific heat ratio	1.26
Viscosity @ FTP	.011 cp
Pipe inside diameter	8 in
Density @ FTP	8.2 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	4.13521 in
Beta ratio	.516901
Normal flow differential	206.6 mbar
Uncertainty percent	.5923 percent
Reynolds number	1782671
Max pressure loss	178.7 mbar
Max power loss	10.09 hp
Flow status	
Minimum plate thickness	.125 in
Thermal expansion factor	1.00018
Discharge coefficient	.603186
Gas expansion factor	.991629
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