

## RO-SIZING

5/31/2022

Project . BINAK

### Thick Restriction Orifice Plate - Gas Flow

Tag number RO-2141

By A.KHAJEVAND

#### Input data

Fluid	GAS
Normal gas flow	1722 kg/h
Meter inlet pressure	62 barg
Discharge pressure	7 barg
Flow temperature	60 degC
Molecular weight	24.56
Cp/Cv specific heat ratio	1.262
Viscosity @ FTP	.011 cp
Pipe inside diameter	2 in
Density @ FTP	8.302 kg/m3
Element material	301 stainless steel
Pipe material	Carbon steel

#### Output data

Orifice diameter	7.65248 mm
Beta ratio	.150639
Reynolds number	1089785
Max pressure loss	28.19 bar
Max power loss	218.5 hp
Minimum plate thickness	7.652 mm

Modified Mass English

Source - The Flow Measurement Engineering Handbook. Third Edition. Table 13.13

InstruCalc Ver.9.0.3.

Notes