

RO

12/7/2022

Project 2141. BINAK

Thick Restriction Orifice Plate - Gas Flow

Tag number RO-2141

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Input data

| | |
|---------------------------|---------------------|
| Fluid | GAS |
| Normal gas flow | 1897 kg/h |
| Meter inlet pressure | 62 barg |
| Discharge pressure | 7 barg |
| Flow temperature | 60 degC |
| Molecular weight | 24.56 |
| Cp/Cv specific heat ratio | 1.51 |
| Viscosity @ FTP | .014 cp |
| Pipe inside diameter | 2 in |
| Density @ FTP | 69.89 kg/m3 |
| Element material | 301 stainless steel |
| Pipe material | Carbon steel |

Output data

| | |
|-------------------------|------------|
| Orifice diameter | .306533 in |
| Beta ratio | .153266 |
| Reynolds number | 943278 |
| Max pressure loss | 30.85 bar |
| Max power loss | 31.29 hp |
| Minimum plate thickness | .3065 in |

Modified Mass English, basic calculation, calculate size

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

InstruCalc Ver.9.0.3.

Notes