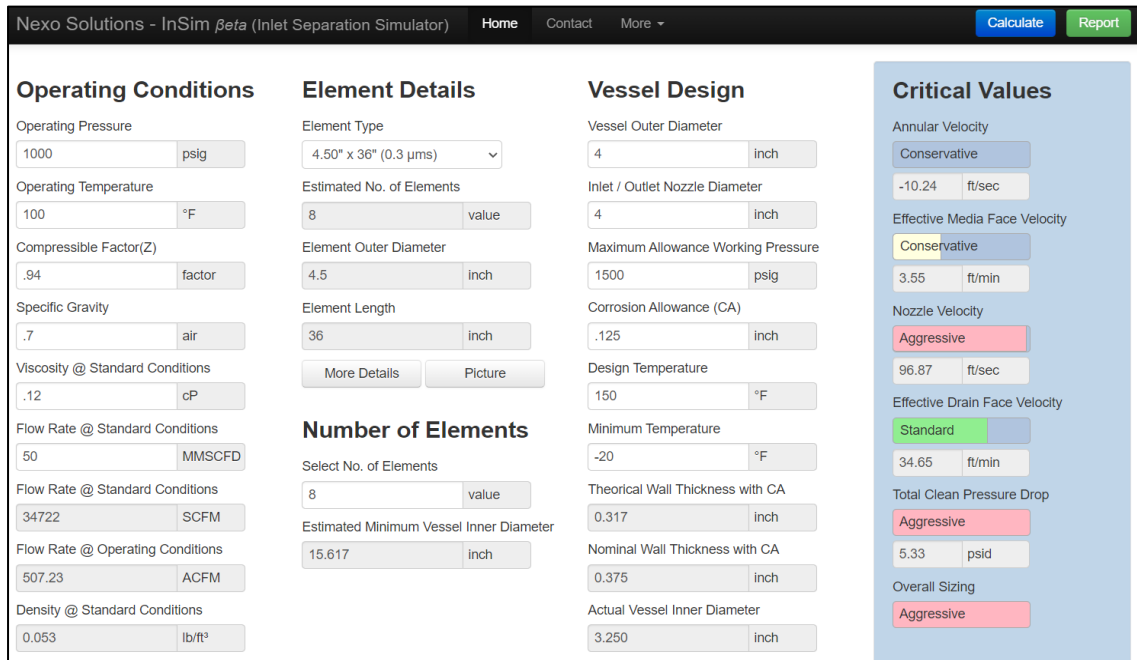


InSim™ Advanced Inlet Separator Simulator

InSim™ simulator provides engineers and operators with a means to correctly design or evaluate gas separation equipment. The advanced algorithms and evaluation criteria utilized within the software allows plants to accurately calculate, compute and determine expected performance of their systems and then improve those systems with the results and interpretation provided. InSim™ not only simulates models and tracks separation system performance, it also provides additional key parameters of the system and reveals areas of deficiency in both vessel design and operating efficiency. This output gives users the knowledge and information as well as the data and justification needed to optimize and improve upon their equipment and operations.



The screenshot displays the InSim beta software interface with the following sections:

- Operating Conditions:** Operating Pressure (1000 psig), Operating Temperature (100 °F), Compressible Factor(Z) (.94 factor), Specific Gravity (.7 air), Viscosity @ Standard Conditions (.12 cP), Flow Rate @ Standard Conditions (50 MMSCFD), Flow Rate @ Standard Conditions (34722 SCFM), Flow Rate @ Operating Conditions (507.23 ACFM), Density @ Standard Conditions (0.053 lb/ft³).
- Element Details:** Element Type (4.50" x 36" (0.3 µms)), Estimated No. of Elements (8 value), Element Outer Diameter (4.5 inch), Element Length (36 inch). Includes buttons for 'More Details' and 'Picture'.
- Number of Elements:** Select No. of Elements (8 value), Estimated Minimum Vessel Inner Diameter (15.617 inch).
- Vessel Design:** Vessel Outer Diameter (4 inch), Inlet / Outlet Nozzle Diameter (4 inch), Maximum Allowance Working Pressure (1500 psig), Corrosion Allowance (CA) (.125 inch), Design Temperature (150 °F), Minimum Temperature (-20 °F), Theoretical Wall Thickness with CA (0.317 inch), Nominal Wall Thickness with CA (0.375 inch), Actual Vessel Inner Diameter (3.250 inch).
- Critical Values:** Annular Velocity (Conservative, -10.24 ft/sec), Effective Media Face Velocity (Conservative, 3.55 ft/min), Nozzle Velocity (Aggressive, 96.87 ft/sec), Effective Drain Face Velocity (Standard, 34.65 ft/min), Total Clean Pressure Drop (Aggressive, 5.33 psid), Overall Sizing (Aggressive).

The InSim™ Advanced Inlet Simulator includes:

Gas Filters

- Filter Vessel Sizing Calculations
- Number of Internals Simulation
- Flow Calculations, Clean Pressure Drop
- Extensive Filter Element Databases
- Design and Operational Optimization

Gas Coalescers

- Filter Vessel Sizing Calculations
- Number of Internals Simulation
- Flow Calculations, Clean Pressure Drop
- Extensive Coalescer Element Database
- Design and Operational Optimizations

Key Parameters

- Exit Gas Velocity
- Media Velocity
- Maximum Recommended Flow
- Maximum Liquid Drain Velocity
- Maximum Nozzle Velocities

Specialized Simulation Features

- Personalized User Inputs and Interfaces
- Data Manipulation and Tracking Capabilities
- Customized & Adjustable Optimization Criteria
- Individual or Company-wide User Licenses
- Reporting using electronic PDF for

For additional information please contact us via email at support@NexoSolutions.com

Technical Information