CHEMPRO OGC PROCESS MODELING

PRODUCT INFORMATION NOTE

CHEMPRO is an advanced chemical process simulation suite designed to enhance the design, simulation, and optimization of oil and gas (OGC) processes. From upstream oil extraction to downstream refining and petrochemical production, CHEMPRO offers engineers a comprehensive platform to model and optimize complex processes, ensuring efficient and cost–effective operations across the oil and gas industry.

WHAT IS A GAS SEPARATION PROCESS?

Gas separation isolates specific gases from mixtures using techniques like cryogenic distillation or absorption. It's vital for purifying gases in industries.

Gas Separation Challenges

- Accurate process modeling is essential for gas separation feasibility analysis.
- Rapidly evolving processes require accurate and flexible simulation tools.
- Flexibility to handle varying feed compositions.
- Efficient energy consumption is critical for cost-effective gas separation.
- Optimizing separation efficiency while maintaining product purity.

SOLUTION

CHEMPRO offers a powerful suite of customizable tools to simulate key processes in the oil and gas sector, including distillation, separation, compression, reaction systems, and heat transfer. With pre–built models for essential unit operations, CHEMPRO empowers engineers to simulate diverse operating conditions, evaluate system performance, and design oil and gas systems that maximize efficiency while minimizing operational costs.

Key Capabilities

- Customizable process flow templates for oil, gas, and chemical industries
- Flexible unit operation models for distillation, separation, and compression
- Advanced reactor and heat exchanger simulation tools
- Multiphase flow and pressure drop calculations
- Thermodynamic property packages tailored for oil, gas, and chemical processes
- Comprehensive balance–of–plant and system optimization simulations

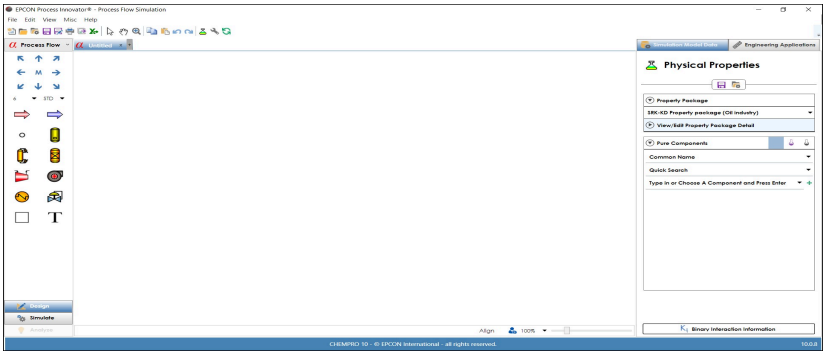
Benefits

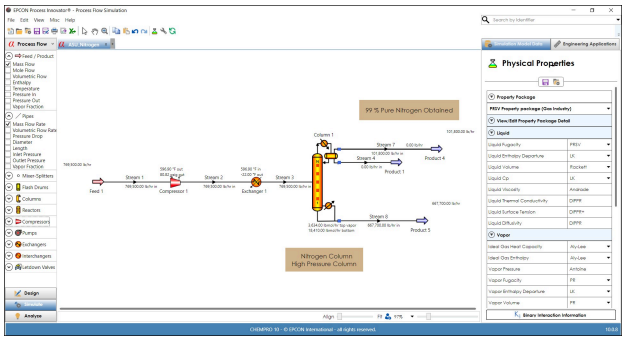
- Evaluate system–specific data for distillation, separation, and compression unit operations
- Conduct feasibility studies for process and facility design optimization
- Build balance–of–plant simulations for accurate equipment sizing and system performance

Customizable Process Flow Simulations

CHEMPRO provides flexible simulation tools to design and optimize process systems in oil, gas, and chemical industries, allowing detailed PFD creation and unit operation customization.

The system integrates diverse process units and connects to plant processes.



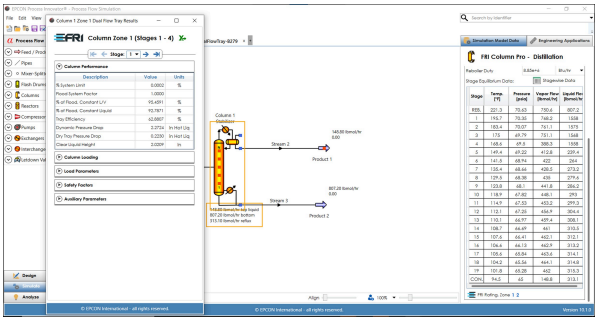


Unit Operation Models

CHEMPRO offers a range of unit operation models, including distillation, separation, compression, and heat exchange, tailored to project or licensors' data.

FRI DRP Program Integration for Column Optimization

CHEMPRO integrates with the FRI DRP Program to enhance column design. This integration enables precise hydraulic calculations for both packed and tray columns, helping engineers identify performance issues like flooding and pressure drops, while optimizing column design and process efficiency.



Thermodynamic Engine

CHEMPRO integrates advanced thermodynamic property packages, offering a comprehensive database of fluid properties for accurate modeling of complex fluids under varying pressures and temperatures, essential for optimizing processes in oil, gas, and chemical industries.

CHEMPRO Support

ENI is committed to rapidly advancing CHEMPRO's capabilities based on customer feedback, ensuring timely updates and enhancements to meet industry needs.

For More Information

Learn more about CHEMPRO Engineering Suite or contact your ENI Consultant.

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