



Batch Distillation Software

The only software to trust for your batch distillation processes.

WHY SHOULD YOU USE CC-BATCH?

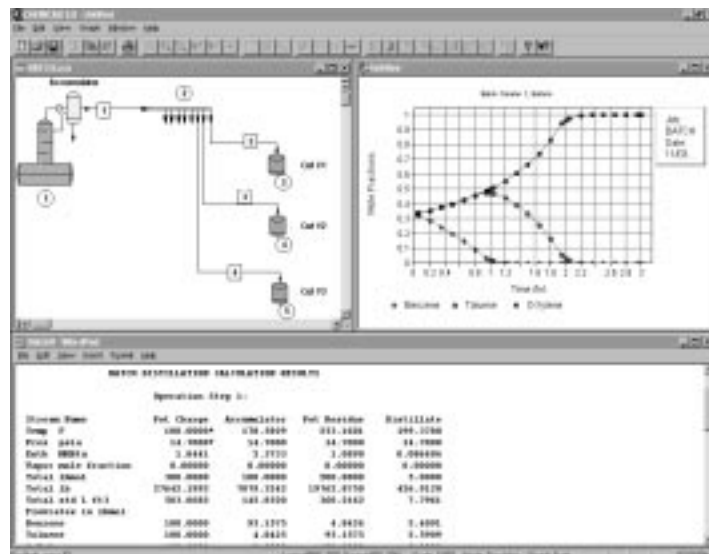
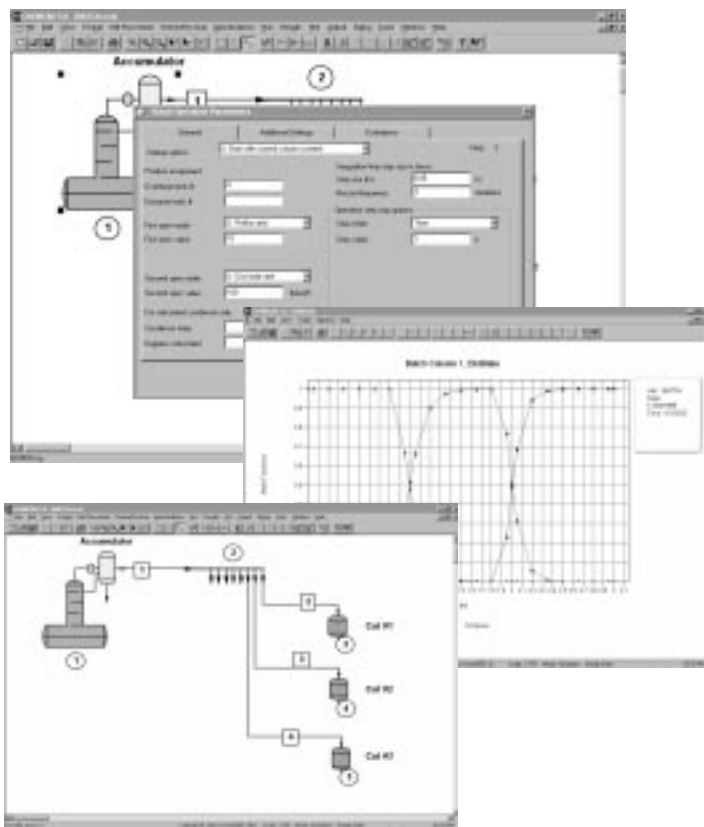
- Short learning curve and very little re-learning required
- Unique interface allows intuitive set up of your batch distillation process
- Batch distillation processes may be integrated into CHEMCAD flowsheets
- Rigorous use of built-in thermodynamic models and thermophysical property data
- Flexible flowsheet set up and operational procedures allows most any batch distillation process to be simulated

WHAT ARE SOME COMMON APPLICATIONS OF CC-BATCH?

- Model existing batch column equipment
- Explore alternative processes for existing products
- Design new equipment
- Validate thermodynamic using laboratory batch column equipment
- Predict minimum boiling ternary azeotropes quickly

WHY SHOULD YOU CONSIDER CHEMSTATIONS?

- Chemstations' mission is to provide the chemical processing industry increased profitability, productivity, and safety via powerful, easy to use engineering software.
- Chemstations' development team is dedicated to creating the best available products through continuous improvement.
- Chemstations' technical support team is willing to stand behind our products and help you achieve your goals.
- Chemstations' global sales and marketing team is positioned to develop long term partnerships by creating opportunities through process solutions.
- Over 400 leading chemical companies have selected CHEMCAD as their primary process simulation software tool, with approximately 90 percent of Chemstations' customers renewing their maintenance agreement year after year.



HOW DO YOU ACTUALLY USE CC-BATCH?

- Draw your flowsheet
- Choose your chemical components
- Choose your thermodynamic model
- Specify the column/charge/additional feeds
- Define the operational procedures
- Run the calculations
- Generate the plots and reports



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www.chemstations.net



Batch Distillation Software

GENERAL FEATURES

- Graphical user interface
- Customized reports and PFDs
- Interactive operation
- Users may add their own thermodynamics, components, and/or graphics symbols
- Online help
- Extensive data checking
- Graphical plotting of results
- Online, real-time display of results during calculation
- Calculation interrupt
- Integration into CHEMCAD flowsheets
- Flexible engineering units

THERMODYNAMICS' GENERAL FEATURES

- Vapor phase association
- Vapor-liquid and liquid-liquid equilibrium
- Physical properties estimation of undefined components

K-VALUE OPTIONS

- Hydrocarbons: Peng-Robinson, Soave-Redlich-Kwong. API SRK, Grayson-Streed, Maxwell-Bonnell, BWRS, K-Charts, Regular Solution
- Chemicals: NRTL, UNIQUAC, Wilson, UNIFAC, Margules, Van Laar, Chien-Null, 4-parameter equation of state
- Polymers: UNIFAC for polymers, Flory-Huggins
- Special Systems: amines, sour water, methanol, ethane-ethylene, propane-propylene, partial-pressure (ionic)
- Others: Henry's Gas Law, vapor pressure, User K-tables
- Polynomial K-values, user subroutine
- Equation of state for Hydrogen-bonding compounds

ENTHALPIES

- Hydrocarbon and Petrochemical: BWRS, Peng-Robinson, SRK, API SRK, Redlich-Kwong, Lee-Kessler
- Chemicals: Latent heat, integral heat of solution
- Water: Steam tables
- Other: amines, polynomial, H tables, user subroutine, mass balance only

REGRESSION

- Pure component physical properties regression
- Multiple component VLE and LLE regression
- Regression from UNIFAC
- Regression from infinite dilution data
- Regression of electrolyte data

ENGINEERING DATA

- Physical properties databank for pure components
- BIP database for activity coefficient equations
- Electrolytes database
- Vapor phase association databank
- Interface to corporate databases

ELECTROLYTES

- Pitzer and MNRTL methods for strong and weak electrolyte solutions, including the addition of temperature dependent interaction parameters
- Binary and ternary interaction parameters database.
- Electrolyte reaction equilibrium database; calculated from Gibbs

COLUMN FEATURES

- Any number of operating steps
- Up to 100 stages
- Reservoir feeds
- Side product accumulators
- Stage heaters and coolers
- Calculation of ambient heat loss
- Stage and condenser hold-ups
- Choice of convergence algorithms

OPERATING STEP(S) OPTIONS

- Start-up from total reflux or from fixed liquid on all stages
- Operating step specifications may include a variety of specifications for the distillate, boil-up, reflux, condenser, and heat duties.
- Dump accumulators at any time
- Add materials at any time
- Stop criterion may be based on the accumulator, distillate, residual charge, or time
- User-defined pressure profile (linear or non-linear)
- Alternate stop criteria permitted

HARDWARE REQUIREMENTS

- Windows 95, 98, and NT
- Math Co-Processor
- Optional:
 - Printer
 - Plotter
- Network version available



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