# ABB Optimize[IT] PVC Reaction Optimizer

**A PVC process optimization solution that delivers new value and additional production capacity for producers.**

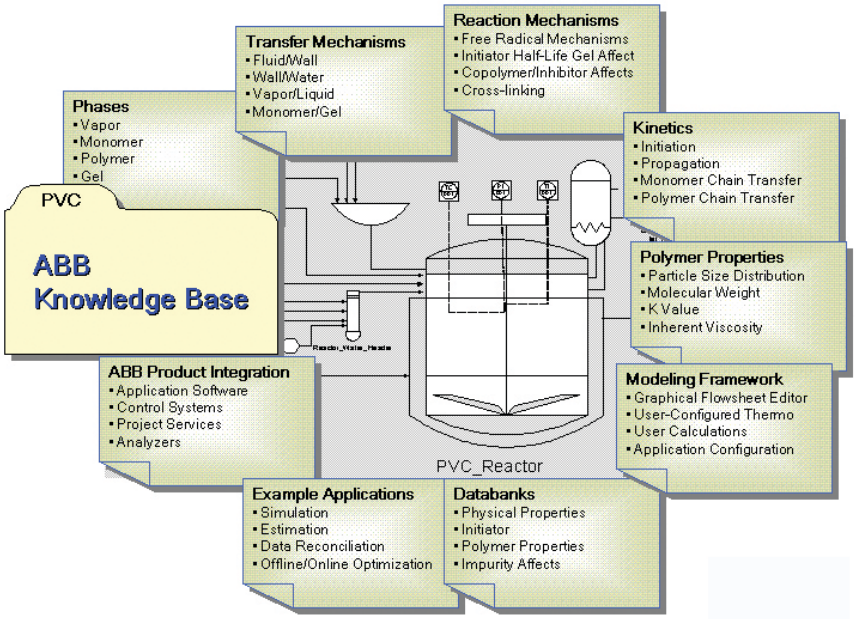



**ABB Industrial[IT] for the Chlor-alkali industry.**

***Showing the way to peak performance.***

## ABB announces Optimize[IT] PVC Reaction Optimizer

This solution for the PVC industry is built with ABB's Optimize[IT] Dynamic Solutions and ABB's best-in-class dynamic modeling suite offering dynamic data reconciliation.

The optimizer tool has been specifically developed for use by people involved in research and development, engineering, process control and production.

The first release includes:

- **Process studies**
  - Explore new methods of operation
  - Optimize the initiator charge to meet varying conditions and operate closer to production limits
  - Make predictions about product yield and quality
- **Pre-batch optimization**
  - Incorporate data from previous batches
  - Determine optimum initiator quantities and ratios
  - Control batch temperature profile
- **Closed loop real-time optimization**
  - On-line real-time optimization
  - Cold shot injection
  - Reaction end stop prediction
- **On-line simulation**
  - Identify runaway reactions

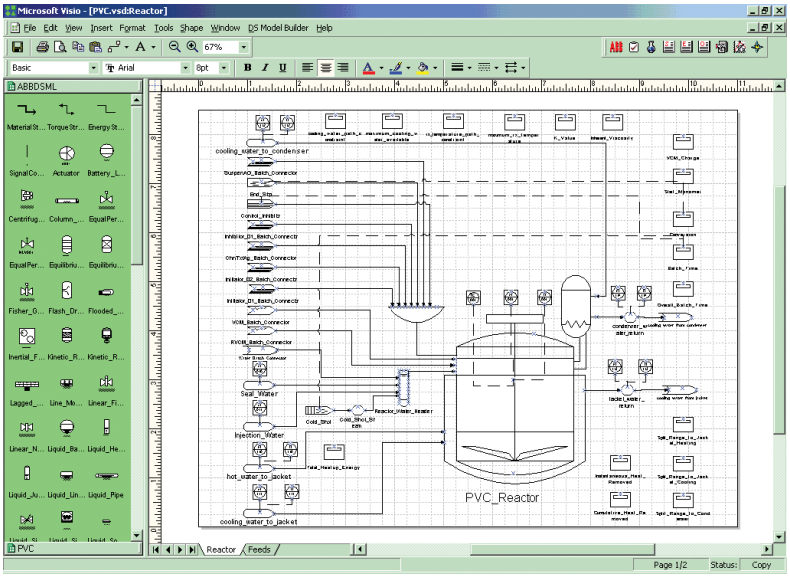
ABB's Optimize[IT] PVC Reaction Optimizer enables producers to optimize reactor performance and make decisions that will improve process through-put, reduce waste, and provide early warning of potential runaway reactions while enabling producers to meet the highest industry environmental standards.

ABB's Optimize[IT] Dynamic Solutions recognize the benefit of higher fidelity models in day-to-day process operations. The solution combines ABB's Optimize[IT] suite with best-in-class rigorous dynamic models developed by ABB's Central Research Center.

Industrial[IT] enabled™

ABB

## Features of Optimize$^{IT}$ PVC Reaction Optimizer




- Incorporates the fundamental equations for S-PVC kinetics and proprietary domain knowledge that ABB has gained through long term experience in the process industries.
- The only model solution with the capability to calibrate itself on-line to an operating plant in both steady state and dynamic operating states.
- Data is automatically and continuously reconciled matching the model to the process and correcting any contradictory data
  - Corrections applied to the model and estimates made of unmeasured variables
  - Adjustments to the bias and model coefficients
  - Actual and predicted variables are displayed
- Model operates in a separate PC work station
- Standard OPC connection to plant control system

## Benefits of Optimize$^{IT}$ PVC Reaction Optimizer

- Increased plant capacity by 3 to 5% or more depending on existing operations by
  - Matching initiator charge to the heat removal capacity, without jeopardizing safety, enables closer operation to the constraints
  - Optimizing the ratio of initiators to achieve square heat generation profiles
  - Maximizing production through stopping the reaction at the optimum time
- Reduce the cost of utilities and raw materials
- Reduction in the frequency of “short stopped” batches
- Optimization of reactor cleaning frequency

Optimize$^{IT}$ PVC Reaction Optimizer is part of a comprehensive suite of products that ABB offers the chlor-alkali industry encompassing power systems, control systems, process and analytical measurement, feedback and advanced control, automation and management solutions integrated in a single architecture, Industrial$^{IT}$.

To learn more about this S-PVC reaction optimization solution from ABB, please contact your local ABB sales office or email john.woodall@gb.abb.com.

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