

## BatchEM™ CIP Solution

### CIP HIDDEN COSTS

For many years pharmaceutical, biotechnology, and food and beverage companies have been purchasing skid based CIP (Clean in Place) systems to address their equipment cleaning needs. While manufacturing processes continue to experience dynamic changes, CIP skid software automation technology has fallen behind. Increasingly, these systems are viewed as cumbersome to use, difficult to modify, and lacking conformance to current industry standards and customer expectations.

### CIP BOTTLENECKS

Out-of-date CIP automation technology translates into hidden cost to customers due to production bottlenecks, longer cycle times, and deviation investigations caused by nuisance alarms and inconsistent cycles. Additionally, sequence changes require expensive programming specialists.



Photo Courtesy of  
Holland Applied Technology

### BATCHEM™ CIP SOLUTION

Cascade Solutions has addressed this industry issue by combining leading edge control design with an innovative recipe management layer, **BatchEM™** allowing users to configure CIP recipes, not re-program them.

### DECREASE CYCLE DEVELOPMENT TIME

Cascade Solutions' innovative engineering approach disassembles the typical CIP sequence into small, stand alone Equipment Modules such as: Rinse, Wash, Blow Down, and Drain. With **BatchEM™**, the process modules can be flexibly accessed and independently executed with an easy-to-use interface for cycle development and optimization.

**“...with Cascade Solutions' BatchEM™ CIP Solution we were able to finish cycle development and optimize in one day! I was amazed at how easy it was...”**

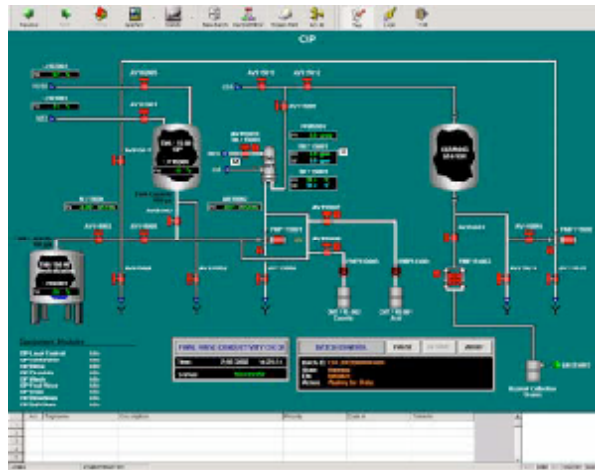
**— BIOTECH PROCESS ENGINEER**

### KEY FEATURES

**BatchEM™** CIP Solution offers the operators and engineers a rich and comprehensive environment to design, commission, operate, and validate the CIP Process. The following describes the solution's key features:

- Run process modules independently or within a recipe
- Point and click recipe changes and process set points
- Drag and drop recipe creation
- Easy to use batch creation wizard
- Batch message window
- Automatically assigns BatchID for batch reporting and racking
- Intuitive operator interface

- Comprehensive data management package for batch reports and audit trails
- Adheres to industry standards 21 CFR Part 11 and ISA S88
- Perfect skid solution, yet scaleable



Developed by Process Engineers for Process Engineers

**“...the majority of the problems associated with CIP skids are software issues not process or mechanical...”**

*— FORMER AMGEN PROCESS ENGINEER*

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