

# Recipe Studio

The screenshot displays the Recipe Studio interface for configuring a batch process. The main window shows a graphical flowchart starting with a 'START' node, followed by a 'BEGIN\_PRC' transition. The process then branches into three parallel steps: 'UP\_A1\_FILL\_TK-1100:1', 'UP\_A1\_FILL\_TK-1200:1', and 'UP\_A1\_FILL\_TK-1300:1'. These steps converge at a 'FILL\_CMPLT' transition, which leads to two parallel steps: 'UP\_RDY\_TO\_XFR:1' and 'UP\_A1\_CHRG\_PTK\_XFR\_STRG:1'. The process concludes at an 'XFR\_READY' transition. The interface includes a left-hand palette with various PFC items like 'Sequence', 'Step', 'Termination', and 'Transition'. A bottom table lists parameters for the recipe.

Parameter	Description	HIGH MATERIA...	HIGH MATERIA...	HIGH MATERIA...	STANDARD
AGITATE_TE	Agitation Time	<10>	<10>	<10>	<10>
AGITATE_TIME	Agitation Time	17	14	14	<10>
MAT1_AMOUNT	Amount of Feed Tank 1 Material to Charge to Prep Tank	144	144	50	50
MAT2_AMOUNT	Amount of Feed Tank 2 Material to Charge to Prep Tank	20	100	100	50
MAT3_AMOUNT	Amount of Feed Tank 3 Material to Charge to Prep Tank	20	18	14	20
OPER_PROMPTS	Issue Prompt for Agitation Time	<1>	<1>	<1>	<1>
SYNCADE	Indicates Whether Syncade is Being Used or Not	<False>	<False>	<False>	<False>
TK1_LEVEL	Feed Tank 1 Fill Level	<700>	<700>	450	500

Batch configuration using industry standard control language and controls with Recipe Studio.

- Builds your recipes graphically
- ISA-88.01 and IEC 61131-3 Design Foundation
- Single, system-integrated configuration database

## Introduction

Are you ready to configure your batch your way? Eliminate complicated configuration applications that limit your batch processing capability. Replace those applications with a single system designed to easily configure your recipes.

Recipe Studio gives you powerful tools to create, modify, and troubleshoot your recipes. The graphical configuration tools in the DeltaV™ system simplify the overall engineering effort and reduce the development and testing time required.

Even users without computer programming expertise can construct batch control strategies quickly and easily without extensive product training.

## Benefits

**Build your recipes graphically.** Recipe Studio allows you to create and maintain flexible and reusable recipes. Developing your recipes is a quick and easy task, *you point and click* on the tools to build the recipe in a graphical display.

**ISA-88.01 and IEC 61131-3 Design Foundation.** DeltaV batch is built on *current industry standards*. Procedural control models, as well as terminology used throughout the system are based on the *ISA-88.01* batch manufacturing standard. Procedures, unit procedures, and operations are constructed graphically using *IEC 61131-3* compliant Sequential Function Charts (SFCs).

**Single integrated configuration database.** A *single, object-oriented* database eliminates the need for managing and synchronizing configuration data across multiple configuration databases.

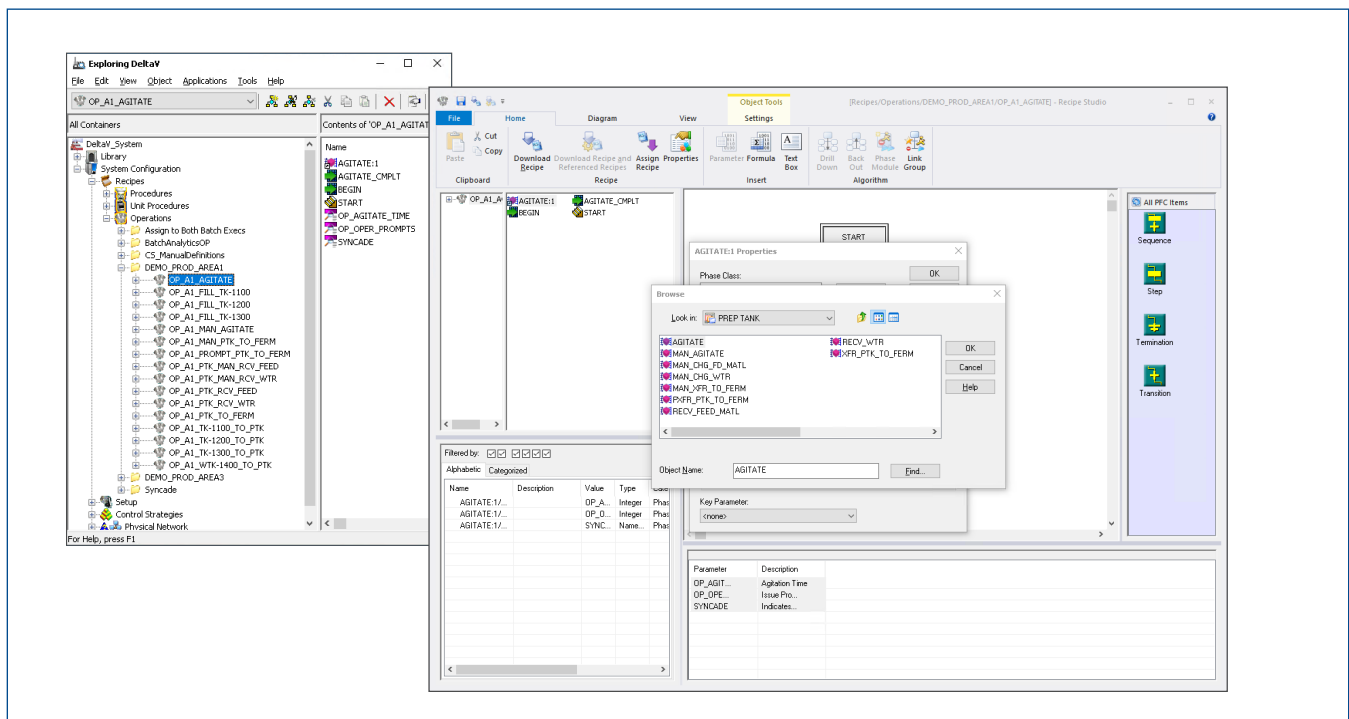
## Product Description

In Recipe Studio, you define recipe configurations (procedures, unit procedures, and operations) in an offline environment. The DeltaV *built-for-batch* architecture provides an integrated batch engineering environment.

Procedural elements are configured with similar tools and techniques used to construct basic level process control strategies. Drag-and-drop, point-and-click, and simple browsing tools help you easily maneuver in the recipe application. Hierarchical and object attribute views offer additional information to the user and bring more power to the engineer while making configuration easier.

Recipe Studio is an object-oriented technology. All items in an SFC are *context-sensitive*. Link a step within a unit procedure to an operation with a simple right-click of the mouse. Object help, properties, and other editing tools are also accessible here. Recipe Studio allows a user to design an unlimited number of procedures, unit procedures, and operations.

Whether running on a ProfessionalPLUS Station, Professional Station, Operator Station or Base Station, Recipe Studio accesses the single configuration database used by the entire DeltaV system. With this client-server architecture, multiple Recipe Studio applications may be opened simultaneously in a single system.



Open, edit, drag and drop, browse, and integrate all your recipe elements.

## Ordering Information

Description	Model Number
Recipe Studio	VE2164

\* *Recipe Studio is included in the ProfessionalPLUS Station, Professional Station, and DeltaV Engineering Seat Software Suite(s). However, to execute recipes created with Recipe Studio, the prerequisites shown below must be satisfied.*

\*\* *When the Recipe Studio license is assigned to an Operator or Base Station node type (or Remote Client Session), the Configuration Software Suite license (VE2162) must also be assigned in order to modify recipe configurations (including saving recipe changes).*

## Related Products

- **DeltaV Batch Software Suites.** Basic, Advanced, and Professional Batch software suites provide the DeltaV Batch software needed to operate, historize, and integrate your systems.
- **Advanced Unit Management Software.** Provides class-based Unit Modules and aliasing to make developing unit-relative equipment strategies simple.
- **Batch Executive.** The batch engine which coordinates all batch processing activity, creates detailed batch history records and schedules recipes and resources.
- **Batch Historian.** Automatically collects and stores batch recipe execution data from the DeltaV Batch Executive and process alarm and event data from the DeltaV Event Chronicle.
- **Campaign Manager.** Creates and manages a campaign by specifying the recipe, formula, equipment, and number of batches that are to be run within the campaign. A Service-Oriented Architecture Web Service is available to enable production-scheduling packages to initiate the creation of campaigns in the DeltaV system.
- **Recipe Exchange.** Provides an open, programmatic interface to the DeltaV recipe management system. Recipe Exchange uses a Service-Oriented Architecture Web Service.
- **Batch Analytics.** Detects faults and predicts end of batch quality in real time using multi-variate models based on historical batch data.
- **Batch Redundancy.** Enables redundant DeltaV Batch capabilities for the Batch Executive and Campaign Manager, including automatic switchover to protect your batch operations from disruptions.
- **DeltaV Discovery.** Provides control and monitoring of Life Science laboratory applications in a single DeltaV workstation.
- **DeltaV Live.** Emerson’s modern, built-for-purpose operator interface. DeltaV Live delivers a high performance HTML5-based operations experience and simplified graphics configuration, all in an intuitive and customizable format with out-of-the-box simplicity.
- **DeltaV Operate.** High performance operator graphics, trends and alarms offered in standard operating layouts and utilizing system-wide built-in security.
- **Syncade™ Smart Operations Management Suite.** A new class of real-time production management software, provides an easy, flexible, integrated solution that increases plant performance by efficiently managing plant materials and equipment, coordinating production operations, improving quality operations and integrating plant information.
- **Configuration Audit Trail.** A powerful tool that tracks changes and manages revision information for any item in the DeltaV configuration database, including Safety Instrumented System (SIS) items.
- **Configuration Software Suite.** Makes it easy to create Control Strategies and System Graphics to get your plant up and running quickly and efficiently.

## Prerequisites

- One ProfessionalPLUS Station is required for each DeltaV system. Refer to the ProfessionalPLUS Station Software Suite Product Data Sheet.
- The Advanced Unit Management software control license is required. Refer to the Advanced Unit Management Software Product Data Sheet.
- A minimum of 1 DeltaV Batch Executive is required. Refer to the Batch Executive Product Data Sheet for details.

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