FactoryTalk® Batch

Efficient, Consistent and Predictable Batch Control for More Comprehensive Operations

PlantPAx
Distributed Control System

FactoryTalk Batch Provides:

A System that is Scalable

FactoryTalk Batch combines industry standards with proven technology that provides the flexibility needed for enterprise-wide architectures to single-unit applications.

Intuitive Interfaces for Operations

Modern interfaces and workflows allow operators to more easily navigate the system, while the option for mobile accessibility enables access to critical information from anywhere in the plant.

Faster and More Reliable Control

FactoryTalk Batch promotes responsive interactions between server and controller-based batch architectures. This allows for reliable and responsive step changes closer to the process to ensure tight control parameters can be achieved.

Secured Information

Flexible yet secured access to the system allows for adoption of a batch system in applications that require manual additions, material tracking and version control of recipes.

Overview

FactoryTalk Batch allows you to apply one control and information system across your process to improve capacity and product quality, save energy and raw materials, and reduce process variations and human intervention. It enables you to develop modern batch control strategies by supporting flexible production capabilities and standardized company procedures while accelerating product and process development.

The net result – your equipment is better utilized, product quality is improved, the need for visibility and access to actionable data is better met, and your costs are reduced.

With FactoryTalk Batch, you can:

- Create and manage recipes and execute them automatically
- Reduce the hours that are needed for validating and commissioning
- Configure physical and procedural models
- Collect electronic batch data to generate detailed reports for compliance or process improvement
- Simulate your entire batch process

LISTEN.
THINK.
SOLVE.®

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Rockwell Automation

Problem Solved

Historically, plants have used manual SOPs, custom programming, or expensive, specialized control systems for batch applications. Other control applications, such as material handling, continuous processes, palletizing and utilities, were implemented with different control systems and strategies.

To meet the need for higher level information, interfaces were maintained between these disparate systems. While this enabled data from across the enterprise to be compiled, it required timely and costly integration into the overall IT structure.

Meeting Diverse Design, Operations and Production Needs

FactoryTalk Batch supports the diverse design and production requirements needed by system integrators, skid vendors and end users and provides the technology that puts them in control.

Using ANSI/ISA-88-based functionality, recipes and processes can be developed independently of process equipment. You can easily change recipe parameters, add new batches, or define which equipment your batches use, without requiring engineering or automation system changes or revalidation.

FactoryTalk Batch is a complete batch automation environment giving companies the ability to meet the broadest suite of batch applications. It supports:
- Integration with smart instruments and devices
- Equipment allocation and arbitration to more effectively manage batch assignments
- Production history
- Material tracking
- Reporting

The Flexibility and Functionality You Need to Manage and Increase Production

Configure the Physical Model

In FactoryTalk Batch, the physical model is configured through the Batch Equipment Editor in a logical progression, starting with the area and building down to the equipment module level. Using the graphical interface in the Batch Equipment Editor, you use templates to create and maintain information about your process equipment. Once you've defined the physical model, information in that physical model is available to all other FactoryTalk Batch components.

The Equipment Editor allows you to easily:
- Scale a single recipe or procedure to adjust an overall batch size
- Choose the best equipment for particular batch requirements
- Easily manage batches across multiple pieces of equipment or multiple lines even when many pieces of equipment are involved
- Dynamically allocate and reassign equipment and processes to maintain effective control of product and better manage your resources
- Use integrated scheduling and supervisory functions to better utilize production equipment

FactoryTalk Batch can proactively assign equipment to maximize asset utilization and increase production. The system also allows you to use batch capabilities within the controller, or to integrate them with the plant-wide batch management system, depending on the complexity of equipment and material.

Define Recipes and Procedural Model

FactoryTalk Batch procedures are added in the Batch Recipe Editor, which is used to help you build recipes that define the sequences of equipment actions in a batch process. The Batch Recipe Editor provides a simple way to configure, organize, and store recipe information. As in the Batch Equipment Editor, recipes are built hierarchically and consist of procedures, unit procedures, operations, and phases. Recipes also include descriptive information, formula information, equipment requirements, and the procedures used to make the batch. Additionally, you can add comments into the recipe structure that can be viewed both in design and runtime.

Validating and Commissioning

FactoryTalk Batch provides security features designed with input from a cross segment of industry users. The security levels can be customized to meet the most demanding requirements, such as Good Manufacturing Practice (GMP) regulations.

It includes configurable electronic signature templates that represent a signature and its associated data, such as signoff level, comments, security requirements, and date and time stamps. Up to three signatures can be required for verification of runtime batch events. All signatures are stored in the event journal and are non-editable, fully supporting 21 CFR Part 11 compliance.

Material Tracking and Tracing

FactoryTalk Batch provides real-time material management and traceability in batch execution systems, improving corporate inventory solutions and allowing more effective management of raw inventory.

- Complements ERP-level resource management by collecting the detailed material and equipment tracking information needed for optimizing your supply chain
- Tracks the use of materials, vessels, containers and permanent/transient storage
- Supports recipe execution by determining which equipment must be used to meet a request

Leverage Additional Features to Meet Your Specific Batch Needs

Material Manager
Optimized Production Flows

Material Manager provides just-in-time, plant-level material management and tracking that integrates with company-wide inventory management applications. It complements your ERP systems by collecting the detailed tracking information needed for optimizing your supply chain and e-business fulfillment.

eProcedure®
Process Management for Manual Operations

The eProcedure software automates manual procedures using an interactive, web-based interface to sequence and document your manufacturing operations. eProcedure provides the consistency of automated controls in manual operations.

Use eProcedure to guide operators through manual activity or add links to production documents such as operating procedures, material safety data sheets, and equipment maintenance manuals. Enforce signoffs when required to meet 21CFR part 11 compliance.

SequenceManager™
Controller or Server Level Batch Sequencing

- Allows machine builders to develop and deliver fully tested skids that end users can integrate into their batch process, with minimal validation and commissioning effort
- FactoryTalk Batch enables batch sequencing to occur at the controller level closer to the equipment providing faster transitions for time-sensitive procedures. End-users will discover new opportunities to adopt batching methodology for equipment that previously would not tolerate lags from server-initiated step-changes or network latency
- Minimizes the rework that is required when manufacturers with small, controller-based batch systems expand to larger, server-based batch systems

Mobility and Enhanced HMI Features

- Graphics are capable of adapting to any mobile device, such as iPhone and Android
- Can be leveraged on existing FactoryTalk Batch workstations as the HMI visualization interface to the batch system
- Helps create intuitive workflows, reduces procedural steps and increases collaboration
- Access real-time information, interact with processes and secure approvals from anywhere in a plant
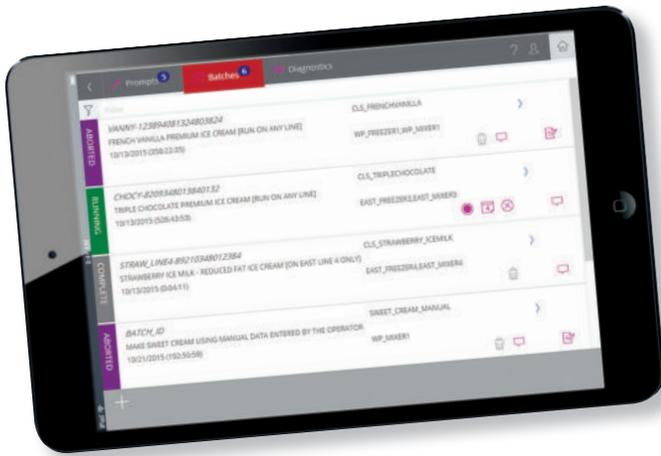
Batch Reporting

Pre-configured, open-source, web-based batch reports can help solve your most common needs including electronic batch records (EBR), track and trace genealogy and production exceptions.

Additional custom reports can be quickly configured from the following included reports:

- Batch Reports: Batch Listing, Batch Summary, Batch Detail
- Material Reports: Material Usage, Forward Tracking, Backward Tracing
- Analysis Reports: Batch Execution, Duration Comparison, Batch Exceptions

Simulation

FactoryTalk Batch provides a powerful tool that allows recipes to be tested against plant configurations without running them in the plant. It can also be configured to match your specific project and/or process-connected device.

The simulator is fully configurable and includes phase modification and changes to phase states during runtime. The simulator also supports cutover of one phase at a time, speeding the debugging process as startup approaches.

A Valued Partner

Across industries and processes, companies can leverage our global experience and the resources within our PartnerNetwork to tailor solutions and services capabilities to meet their needs. Rockwell Automation understands that a profitable, safe and sustainable operation is a primary goal for companies. We offer industry and technology-specific expertise to address unique production challenges. Our commitment is to help reduce project risk and provide solutions specific to the companies we support – executed globally and supported locally.

For more information about our modern batch solutions, please visit: *www.rockwellautomation.com/go/process*

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