

SOLUTION PROFILE

SOLID DOSAGE SUITE

MODULAR AND FLEXIBLE S88 SYSTEMS

Do you need to reduce set-up time and cost in your Solid Dose System? One way to do this is by re-using control modules in multiple production systems. Rockwell Automation's batch solution provides a modular and flexible S88 based system for the secondary pharmaceutical market that speeds implementation with less risk.

REDUCING LIFECYCLE COSTS

You may be facing the challenge of installing automation software in a variety of system units while also cutting the time and cost of design, implementation, and validation. If so, this challenge can be met with Rockwell Automation's Batch Solution for Solid Dosage Systems. The Software Solution is based on the S88 batch standard, which creates modular code that can be used in multiple units in your installation. Thus, if an Air-Handling Unit is used on a Fluid Bed Dryer or a Pan Coater, the same modules can be used in each unit. The application of re-usable modules can reduce costs by 30% or more, depending on the number of re-usable modules in the system. Maintenance costs are also controlled throughout the process because Rockwell Automation uses the same software architecture in each unit. Thus, system maintenance is easier because your maintenance staff is familiar with the coding standards as they move from one system to another. If a modification is required in one unit, the same change often can be easily incorporated into other units in the suite.

FLEXIBLE MANUFACTURING

Using the S88 batch standard allows operations to quickly modify recipes for the production of multiple products on the same secondary pharmaceutical equipment. The S88 system also allows the same product to be manufactured in multiple locations. Even if equipment varies from one site to another, the same recipe can be run at the operations level, thus providing you greater opportunity to optimize your production.



MODULAR S88 BATCH GAMP SYSTEM

Validation testing time and cost can be reduced by Rockwell Automation's System Solution, which follows the GAMP documentation lifecycle.

Control Modules are the basic building element of the S88 architecture. These modules can be used on various systems in a process. Once these modules are fully tested and validated, there is no need to repeat the testing in other units. Therefore, you incur the cost of validating the modules only during initial testing. This greatly reduces the validation cost of subsequent units.

The same is true for equipment modules. Rockwell Automation supplies a variety of equipment modules that can be used repeatedly within a Solid Dosage Suite. Re-using modules reduces design, implementation, and testing time and cost.

All modules comply with GAMP documentation guidelines. The documentation allows requirements to be traced through Installation Qualification (IQ), Operational Qualification (OQ), and Performance Qualification (PQ).

SOLID DOSAGE SUITE

PRODUCT DETAILS

CONTROLS FOR SOLID DOSAGE SYSTEMS

In a solid dosage production process, you must control a wide variety of systems. Rockwell Automation has experience controlling:

- Weigh and Dispense
- IBC Blending
- Solution Preparation
- Ribbon Blender
- Granulator
- Fluid Bed Dryer
- Fluid Bed Coater
- Roller Compactor
- Tablet Compression
- Pan Coater
- CIP/SIP Skids
- USP Water Storage and Distribution

You also need a variety of Control Modules to ensure proper operation. Rockwell Automation's Solid Dosage Suite consists of a broad range of re-usable Control Modules:

- Analog Input
- Analog Output
- Discrete Input
- Discrete Output
- Two-State Valve
- Motor
- Variable Frequency Drive
- PID
- Totalizer

Finally, you need a wide variety of equipment modules to control different processes. Equipment modules can leverage common functionality from unit to unit. Depending on the functional requirements and equipment, it may be possible to re-use entire equipment modules. Examples of common equipment modules in Solid Dosage Suites are:

- Air-Handling
- Manual Addition
- Material Addition
- Agitation
- Tank Transfer
- Tank Jacket Heating/Cooling

FEATURES & BENEFITS

Control and equipment modules from Rockwell Automation provide a single programming environment with a variety of programming languages for ease of use, including ladder, function block, sequential function charts (SFC), and structured text.

System options are available to meet processing and design requirements including:

- RSViewSE, RSViewME, RSBizWareBatch
- ControlLogix, CompactLogix, and FlexLogix controllers
- Flex™ I/O, pulse, discrete, and high resolution analog I/O
- DeviceNet, ControlNet, EtherNet/IP, and Foundation Fieldbus networks

Rockwell Automation's Integrated Architecture enables the integration of several units into one integrated solid dosage automation system.

A built-in recipe functionality enables you to specify, respond to, and track batch deviations.

Integrated data repository stores process, alarm, batch, and tracking and tracing data for full documentation of the process. Modular S88 batch functionality allows for easy recipe authoring and revision.

A single HMI design environment across the enterprise, from machine-level control to supervisory stations, eases troubleshooting and data tracking.

A true distributed client/server architecture to improve usability, flexibility, interoperability, and scalability.

Global Tag database through FactoryTalk™ Live Data provides consistent and scalable integrated solutions around the world.

Re-use of modules greatly reduces validation testing and provides flexibility in batch manufacturing for solid dosage applications.

Regulatory compliance monitored throughout the manufacturing enterprise by enforcing shop floor behavior according to 21 CFR Part 11.

Change Management utilizing RSMACC for lower risk.

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