

Biostat STR® Generation 3 for Emerson’s DeltaV™

Introduction

The Biostat STR® Generation 3 for Emerson’s DeltaV™ hardware, software toolkit, and consumables comprise a state-of-the-art, single-use biomanufacturing platform developed for easy, fast, and seamless native integration into plant DCS. The platform is specifically designed with DeltaV™ and other preferred components featuring native EtherNet/IP™ communications at the device level while fully leveraging the proven bioreactor | bag design and technology of the STR® family for commercial manufacturing. Biostat STR® bioreactors and Flexsafe STR® bags range in size from 50 to 2,000 L and are engineered to maximize the flexibility and scalability of your operations. Engineered for quality, precision, and seamless scalability, the Biostat STR® family supports the fast development of robust processes, enabling the reliable production of biotherapeutics for patients worldwide.



Features

- True native integration into plant DeltaV™.
- Designed for DeltaV™ Batch with CHARMS IO.
- Pre-engineered, modular, and scalable design of STR® for commercial manufacturing.
- Native Ethernet for devices eliminates cumbersome serial communications of scales, pumps, sensors, MFCs, and stirrer.
- North America-preferred components: Brooks MFCs, Watson Marlow pumps, etc.
- Software toolkit: S88 batch library based on Emerson PCSD with templated SUB unit operation software as example.

Benefits

- **Improve Efficiency**
Easy, fast, and seamless integration into plant DeltaV™. Leverage inherent functionality and built-in DeltaV™ diagnostics.
- **Simplify Scalability**
Leverages the modular design of the STR® family, meaning users can rely on Sartorius’ scalable upstream solutions from Ambr® to STR® and Process Insights® to SIMCA® for advanced scaling.
- **Fast Delivery**
Pre-engineered hardware from a single source offers faster delivery and eliminates multiple vendor management while also providing a good price-to-value ratio.
- **Future-proof**
Native EtherNet/IPTM for devices offers easy integration, less wiring, expandability, and reliable, robust, and faster communication with automation systems. Reducing the need to modernize later enhances the longevity of the capital investment.
- **Reduce Maintenance Costs**
North America-preferred components reduce in-house inventory, service, and training efforts.
- **Increase Productivity**
Accelerate packaged unit SUB software development and its integration into plant DeltaV™ using Software toolkit.

Technical Details

CHARMs IO Cabinet (HART & EtherNet/IP™ Transmitters with local display)



- Tower**
 - CHARMs IO
 - Hart & EtherNet/IP™ Transmitters with local displays for process sensors and bag weight
 - Multi- and single-use sensors for pH, DO, pCO2
 - PreSens optical SU pH and DO
 - Stirrer with EtherNet/IP™
 - Optional PK controller
 - High | low voltage segregation

Bag Holder (50, 200, 500, 1,000, 2,000 L)



- Valve Box**
 - For exhaust and harvest valves

- Connection Box***
 - CHARMs IO

Integrated TCU

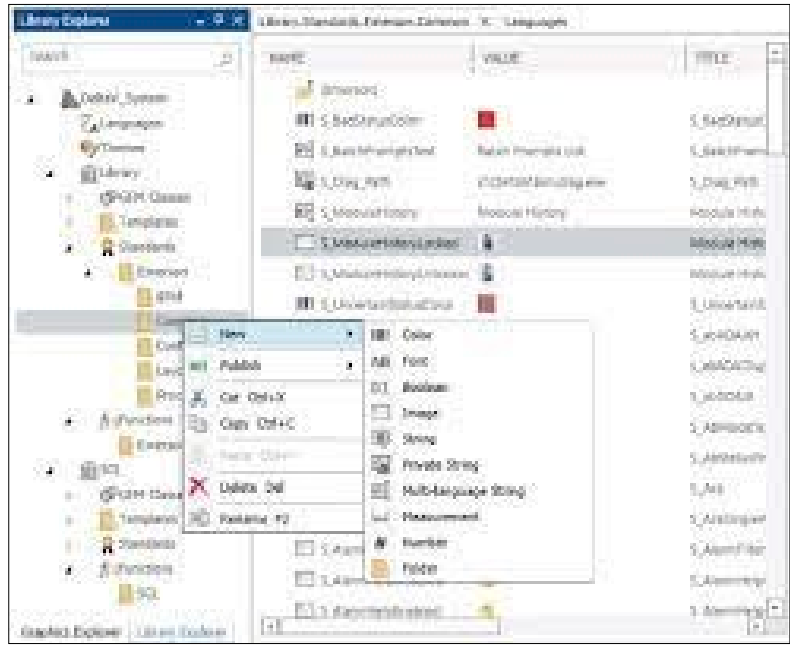
- Gas Mix Box***
 - 8 Brooks MFCs with EtherNet/IP™

Media Control Hub



Feed balances and pumps with EtherNet/IP™

Software Toolkit



- Sartorius DeltaV™ S88 Batch Library**
 - Based on Sartorius FS and Emerson PCSD
 - Co-developed with Emerson

Template Example of a SUB Unit Operation

Value Proposition

Pre-engineered, Modular & Scalable True Native Integration Solution for Easy, Fast and Seamless Native Integration into plant DeltaV™ DCS

- Specifically designed with DeltaV™ components to leverage inherent functionality and built-in diagnostics
- North America preferred components for reduced maintainance costs
- Scalability of Sartorius Upstream portfolio
- Components stocked for fast delivery
- Native EtherNet/IP™ for devices offers easy integration, less wiring, expandability and reliable, robust as well as faster communication with automation systems. Future-proof your investment by reducing the need to modernize later.
- Wide compatibility with Controllers (PK, S and M) and DeltaV™ SW versions (11.3.1 and above) to support installed base & new systems

Questions | Interests

If you have any questions or are interested in learning more, contact your Sartorius sales representative.

* For 2,000 L SUB Connection Box and Gas Mix Box contents swapped to accommodate larger Brooks’ MFCs
EtherNet/IP™ is a trademark of ODVA, Inc. For more information regarding ODVA, visit www.odva.org