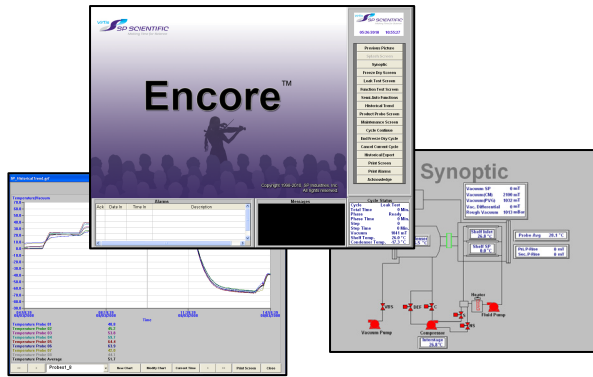


VirTis Encore™

Lyophilizer Control System



The Encore™ Control System is designed to meet the lyophilization requirements of pharmaceutical and biotechnology companies. The system utilizes the GE Fanuc Proficiency® HMI/SCADA – iFIX solution for Windows and an Allen-Bradley MicroLogix 1500 Programmable Logic Controller (PLC). The software system meets Current Good Manufacturing Practice (cGMP) standards and regulatory guidelines for computer systems used for pharmaceutical processing equipment.

The GE Fanuc operator interface is designed for ease of use as a Human-Machine Interface (HMI), while the iFIX SCADA engine is ideally suited for process-driven applications that require reliable performance and known response times. Installed on a Microsoft Windows-based PC, the software provides visualization, data acquisition and supervisory capabilities directly to the PLC.

Key Features

- GE Fanuc Proficiency iFIX HMI software.
- Graphical synoptic display with real-time system status.
- Full system alarming.
- Historical data trending.
- Comprehensive programming of up to 100 custom recipes.
- Semiautomatic and fully automatic modes of operation.

System Capabilities

- Up to sixteen (16) product temperature-monitoring probes.
- Time, temperature and vacuum level control for each step of the Primary and Secondary Drying phases.
- Up to twelve (12) Thermal Treatment (annealing) steps.
- Integrated performance and vacuum integrity testing routines.
- Door preseat routine.
- Cascade refrigeration handling with interstage control.
- Capacitance manometer vacuum gauge in addition to standard Pirani vacuum gauge.
- Single point eutectic display.
- Moisture sensor to aid in endpoint determination.
- Backfill to setpoint for highly controlled product storage.
- Up to three (3) levels of security to keep your workstation safe.
- Pirani / capacitance manometer differential endpoint determination to aid in product dryness detection.
- Isolation valve control allowing automated pressure rise testing during Primary Drying.
- Extensive alarming to protect personnel, product and equipment.
- Remote View option allowing remote monitoring and control of your lyophilizer.
- Thorough historical data trending with export function.
- Local area network (LAN)-ready.

Workstation Specifications (Minimum)

- Microsoft Windows XP, Service Pack 3.
- Intel Core 2 Duo Processor.
- 2 GB RAM.
- 500 GB Hard Disk Drive.
- CD/DVD Re-Writable & Floppy Disk Drives.
- USB Printer.
- 17-Inch Flat Screen Monitor.

Available Software Validation

- Comprehensive Installation and Operational Qualification (IQ/OQ) documentation package.
- Control System Testing (CST) to verify system operations and functions, as well as confirm hardware and software component operations under normal operating conditions.

At a Glance: VirTis Control Systems

Capabilities:	Wizard 2.0	Wizard Workstation	Encore™	Maestro™
Up to 16 Primary and 1 Secondary Drying Steps	▪	▪	▪	▪
Thermal Treatment (Annealing) Phase	▪	▪	▪	▪
4-8 Product Probes	▪	▪	▪	▪
9-16 Product Probes			▪	▪
17+ Product Probes				▪
Integrated Performance and Vacuum Integrity Testing			▪	▪
Historical Data Trending		▪	▪	▪
Eutectic Point Monitoring with Data Trending			▪	▪
Batch Reporting				▪
Manual Pressure Rise (Barometric Endpoint) Testing			▪	▪
Automated Pressure Rise (Barometric Endpoint) Testing			▪	▪
Automated Pirani/CM Differential Feedback			▪	▪
Clean-In-Place (CIP) Cycle*				▪
CIP Skid Integration*				▪
Steam Sterilization Cycle*				▪
Multi-Level Security Capability			▪	▪
Security Integration with Microsoft Windows XP				▪
21 CFR Part 11 Compliance Capability with SQL Database				▪
RS-232 Communications	▪	▪	▪	▪
Ethernet Communications				▪
Cycle Customization				▪

* Requires additional system components.