

Lyophilization Control Systems

Encore Control System

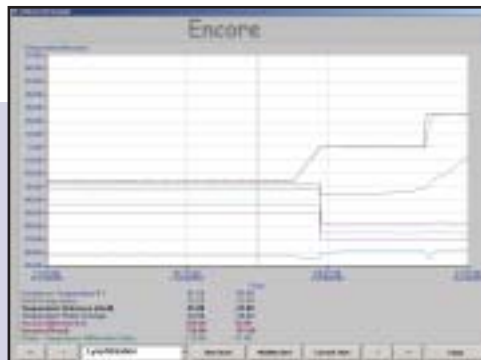
A PLC based control system designed for pilot to industrial freeze dryers.

Features:

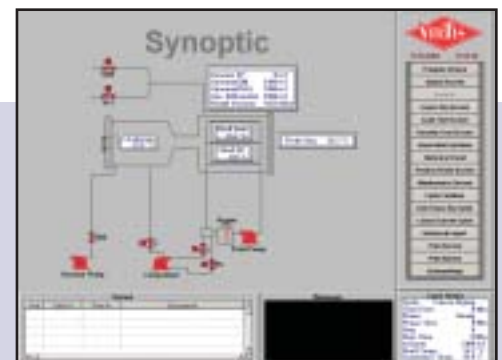
- Allen Bradley Micro PLC utilizing 32 bit technology
- Thermal Treatment (pre-freeze), ramp/soak capability
- Sixteen step rate/hold control routine in primary drying.
- Extensive library of conditional and emergency alarms provided to protect product and equipment.
- Eight type "T" product thermocouples.
- One shelf temperature probe.
- Pirani/convection vacuum transducer.
- Computer workstation with Windows and Microsoft Office.



VirTis Encore



Encore historical data screen



Synoptic screen

The Encore Control System can handle up to four of the following options:

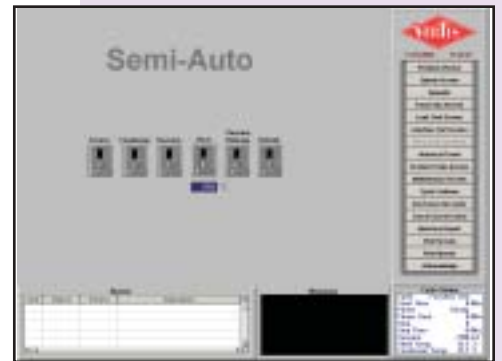
- Smart-E Eutectic Monitoring Device.
- Additional Pirani/Convectron vacuum transducer and interfacing
- Capacitance monometer vacuum transducer in place of standard Pirani vacuum transducer.
- Capacitance manometer in addition to Pirani gauge.
- Pirani gauge capacitance manometer differential feedback end point determination. Compares the Pirani reading to CM reading to determine if product is dry enough to proceed to the next step.

Additional Options:

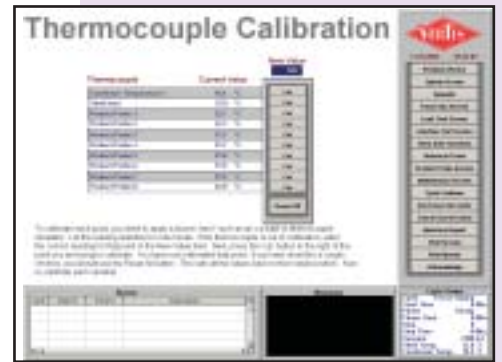
- Barometric endpoint and pressure rise advance/hold software. Requires external condenser and isolation valve.
- Additional four product temperature probes and interfacing.
- Remove View option allows full dial-up operation from any remote PC location. Includes PC Anywhere™ software installed on resident PC with 56K modem card also installed.
(Modem for home computer not included.)
- Stoppering pressure setting - Allows partial breaking of vacuum for stoppering at a set pressure.
- Uninterrupted power supply for PLC and workstation. This System assures that power interruption will not occur. All data points can be collected and documented during a black out.
- Security Option 1 - 3 levels
 - Guest - Can view the Main Menu only.
 - Operator - Can view most screens and change some setpoints.
 - Supervisor - Can perform all functions - has access to all back ground tasks.



Historical Data Export screen



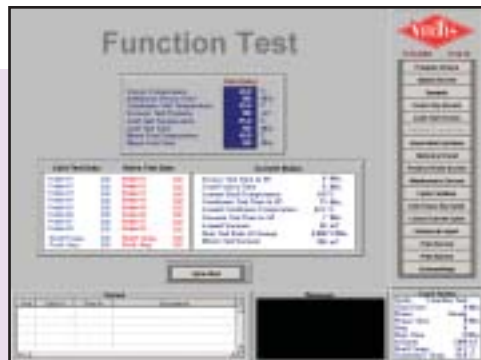
Semi-Auto Screen



Thermocouple Calibration Screen



Recipe screen



Function Test screen



Leak Test screen

