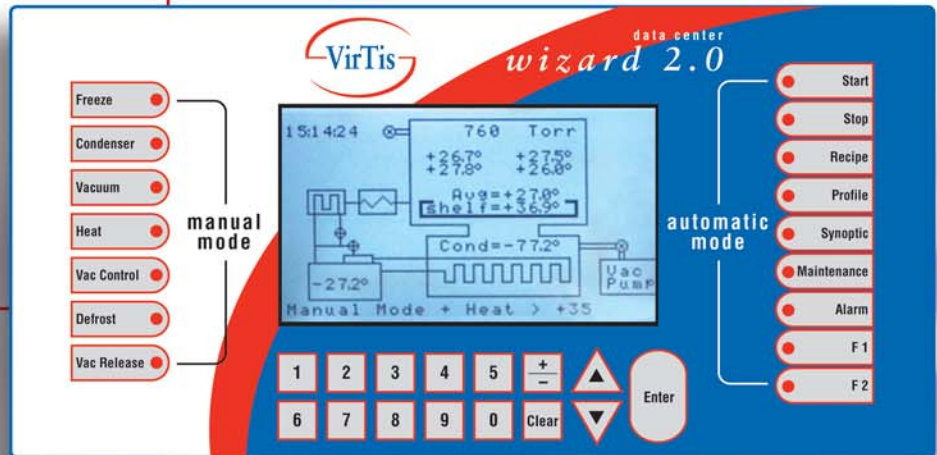


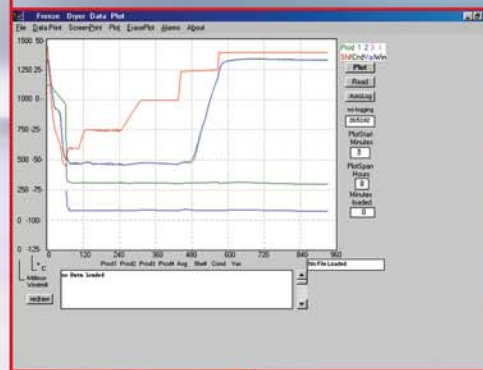
# Wizard 2.0 Controller



## Total Control the Easy Way

- Full numeric keyboard and large, easy-to-read backlit liquid crystal display allows instant communication with the system
- Easy-to-use program and store feature stores multiple freeze-drying recipes for easy access
- Freeze assist mode keeps product at low temperatures during evacuation and condenser cooling to ensure product integrity
- Full synoptic display gives up-to-the-second status of all major equipment functions
- Rugged control panel resists dust, oils, and spills
- Power outage protection includes product recovery routines
- Full process system alarms provide fast diagnostics
- Printer output port for optional line printer to produce hard copy of data
- Wizard 2.0 Controller displays vacuum in a choice of units, millitorr, microbar, or pascals
- Optional computer workstation captures graphs/data and manages recipes
- Optional validation guide ensures fast path to productivity
- In equipment with an optional isolation valve, Wizard 2.0 allows a P-Rise test to periodically check progress at any point in the drying run

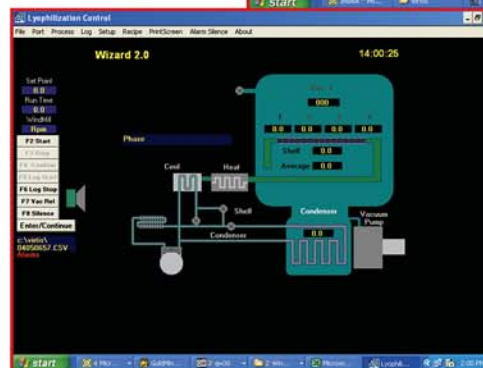
## Optional Wizard Workstation Screens



Historical Trend Screen

Step	Temp	Time	Pressure	Power
Step 1	40	120	100	1
Step 2	20	120	100	1
Step 3	20	120	100	1
Step 4	40	120	100	1
Step 5	20	120	100	1
Step 6	20	120	100	1
Step 7	20	120	100	1
Step 8	20	120	100	1
Step 9	20	120	100	1
Step 10	20	120	100	1
Step 11	20	120	100	1
Step 12	20	120	100	1
Step 13	20	120	100	1
Step 14	20	120	100	1
Step 15	20	120	100	1
Step 16	20	120	100	1
Step 17	20	120	100	1
Step 18	20	120	100	1
Step 19	20	120	100	1
Step 20	20	120	100	1

Recipe Screen



Synoptic Screen



Committed to Product Excellence  
...and Continuous Support

# Two Sure Ways to Improve on a Good Thing... Make it Easier to Use and More Reliable

## VirTis Wizard 2.0 Freeze Dryer Control System Does Just That

Building on the proven success of the Wizard Control System, Wizard 2.0 again exceeds the control power and user-friendliness of any other embedded micro-processor control system. With complete recipe management and full alarming, it provides full process automation for the VirTis freeze dryer line, including AdVantage, Genesis, and Ultra Lyophilizers.

Wizard 2.0 handles single or multiple refrigeration compressor applications and boasts a long schedule of options. Its powerful microprocessor is fast enough to accommodate multiple temperature transducers, while providing instantaneous alarming for out-of-designed-cycle conditions.

Select any of 16 recipes and a new, larger center-stage LCD display precisely plots the profile of the directed shelf temperature, while providing a cycle progress bar graph. The display continually scans all configured transducers. If an alarm occurs, the display indicates the out-of-tolerance condition.

To minimize warming during the condenser and vacuum phases, the Wizard 2.0 control can be configured in a special freeze assist mode. Once configured, the control can keep the product at the obtained freeze temperature until primary drying conditions are achieved.

### Two Methods of Control

The Wizard 2.0 unique configuration and validatable software allows the freeze-drying cycle to be either shelf-driven or product-driven, depending on which best suits the application.

In the product-driven mode, Wizard 2.0 uses the product temperature average to determine if freeze conditions have been achieved and when to advance from primary to secondary drying. When shelf-driven, the Wizard 2.0 directs drying through a shelf temperature profile. Product temperature probes can be utilized to monitor cycle conditions.

Wizard also gives you:

- Up to 8 type-T thermocouple product probes to monitor uniform temperature throughout the chamber
- Time, temperature, and 16 pressure (vacuum) control steps linked to each primary drying step
- Standard inert gas bleed, vacuum pump control or power saver pressure control
- Synoptic screen with full system status at a glance
- Drying cycle profile with progressive bar graph
- Alarm status window for easy troubleshooting
- Up to 16 primary drying steps with "shelf hold" or "shelf rate" control plus secondary drying step
- Door preseal routine to perform a unit vacuum integrity check with safety alarm notification
- Maintenance status screen for systems evaluation
- Prompts user to lyophilization termination routine (including vacuum release)
- Printer output for optional line printer capability

### Wizard 2.0 Workstation Extends Capabilities

Users desiring more functions can add on the powerful Wizard Workstation. This option includes an exceptionally user-friendly recipe manager that easily reads and downloads recipes by name; an interactive synoptic screen; and a historical trending package that works with Windows® 98, NT or 2000, ME or XP.



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