

Removing and Replacing the Intellitronics™ Controller Battery for AdVantage Pro Freeze Dryers

Abstract: This application note describes how to remove and replace the Intellitronics™ controller battery for AdVantage Pro Freeze Dryers.

Overview

The Intellitronics™ controller will generate a Low Battery alarm when the controller's battery is running low. When this occurs, replace the controller's battery. If the controller's battery becomes fully drained and the controller's power is shut off, the controller will not power on until the battery is changed.

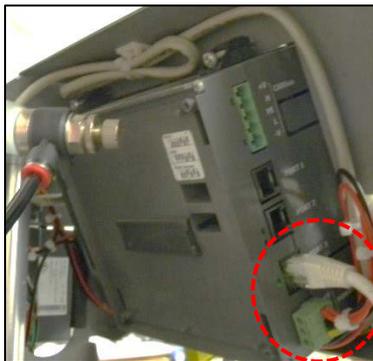
Removal

To remove the Intellitronics™ controller battery:

- 1) Verify that all freeze drying functions are stopped.
- 2) Perform a PLC Backup.

Note: Refer to the Intellitronics™ Operator's Manual for instructions.
- 3) Turn off the freeze dryer using the power switch. If applicable, turn off all auxiliary power sources (e.g., generator).
- 4) Unplug the freeze dryer.
- 5) Remove the freeze dryer's door, door seal, cover and associated components for the cover removal process.

Note: Refer to the VirTis AdVantage Pro Operator's Manual, Appendix B: Cover Removal, for complete cover removal instructions.
- 6) Locate the back panel of the Intellitronics™ controller and remove the port-connected wires.



Intellitronics™ Controller Back Panel

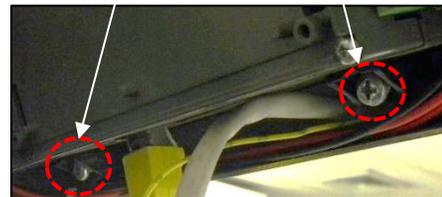
← **Port-Connected Wires**

- 7) Remove the four (4) large screws (i.e., two (2) top and two (2) bottom) securing the controller to the AdVantage Pro frame.

Two (2) Top Screws

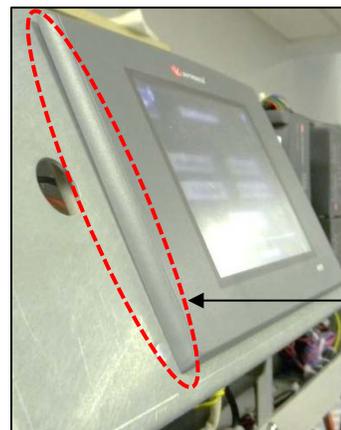


Two (2) Bottom Screws



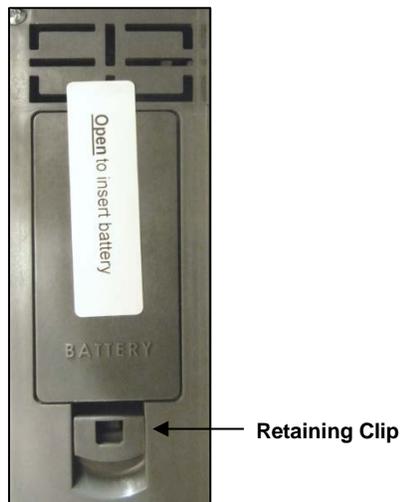
- 8) Carefully remove the controller from the front of the AdVantage Pro frame.

Note: Be cautious of any connected wires when removing the controller. The controller only needs to be removed enough to access the back panel.



← **Remove the controller by the edges of the controller's front panel**

- 9) Located on the back panel of the Intellitronics™ controller, remove the cover on the compartment labeled BATTERY by lifting the retaining clip.



- 10) Remove the battery from the BATTERY compartment.

Note: The battery should be replaced with a 3V LITHIUM RENATA CR 2450N battery or the equivalent.



Replacement

To replace the Intellitronics™ controller battery:

Note: If image references are needed, refer to the Removal steps.

- 1) Verify that the freeze dryer's power is off and the freeze dryer is unplugged.
- 2) Insert the new battery into the BATTERY compartment.
- 3) Replace the cover to the BATTERY compartment and snap the retaining clip into place.
- 4) Carefully place the controller into the AdVantage Pro frame.
- 5) Replace the four (4) large screws (*i.e.*, two (2) top and two (2) bottom) to secure the controller to the AdVantage Pro frame.
- 6) Reconnect all port-connected wires that were removed.
- 7) Replace the freeze dryer's cover and associated components involved in the cover removal process.
- 8) Plug in the freeze dryer and turn on the freeze dryer's power switch.
- 9) The controller software may need to be reloaded depending on the amount of time the battery was not functional.

Note: If the software needs to be reloaded, access the Info Mode screen. From the Info Mode screen, press the **SD** button followed by the **Full Clone** button. This will load the applicable software.