

Tech Tips

(March 2016)

Product Information

Chart MVE CryoSystem 6000 Full Auto

The MVE CryoSystem 6000 Full Auto combines the compact efficiency of aluminum Dewars with the monitoring capabilities and auto fill features of the TEC3000 control system. The innovative design of the CryoSystem 6000 Full Auto allows the unit to easily be used for liquid or vapor storage with a -190°C top box temperature. The TEC3000 continually monitors and records temperature and LN2 levels, initiates an auto fill when needed, and provides audible/visual alarms with remote connectivity when necessary. The CryoSystem 6000 Full Auto provides the same convenience and security of high capacity stainless steel freezers for your average-sized sample collection.

Two Year Standard Warranty
Three Year Vacuum Warranty

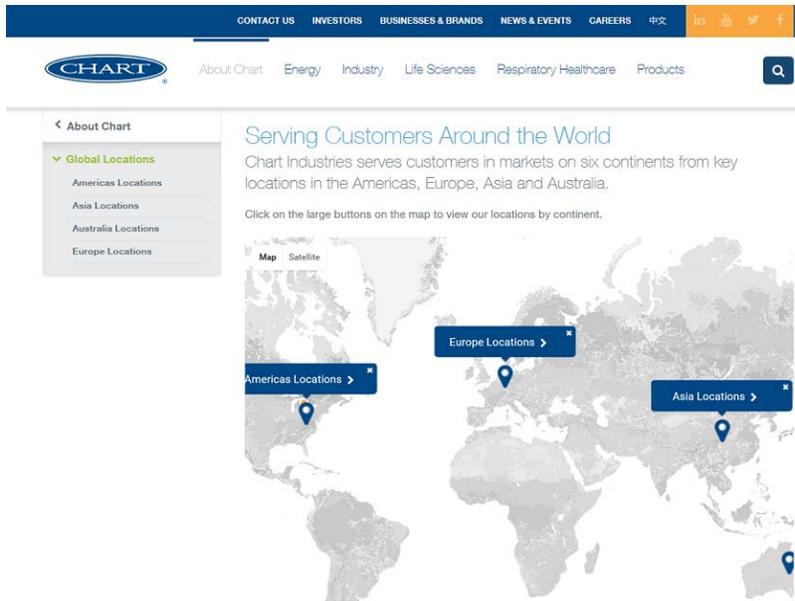
For more specifications, please reference the Cryopreservation Catalog.



Serving Customers around the World

Chart Industries serves customers in markets on six continents from key locations in the Americas, Europe, Asia and Australia. Each business unit's address and phone number may be found by searching the Global Locations section of the Chart MVE website. In order to locate this information, follow the steps below:

1. Go to www.chartindustries.com
2. Click on the "About Chart" link located on the top of the page.
3. Click on the "Global Locations" link located on the left side of the page.
4. Select location.



New Canister Insert Design and Name Change

Chart MVE has recently made a few changes to the existing cabosil canister inserts. The newly-designed inserts now use an aerogel absorbent material, and the outer shell is made up of shrink tubing as opposed to steel web. While all part numbers will remain the same, these parts are now referred to as "Absorbent Inserts" instead of "Cabosil Canister Inserts."

Absorbent Insert	
Part Number	Description
10736409	1.50" OD
10736425	2.812" OD
10736441	3.968" OD
10736417	1.843" OD
10736433	3.375" OD
11027719	3.187' OD



Old Cabosil Canister Insert



New Absorbent Insert

Absorbent Insert Charging Instructions: Do NOT remove the plastic cover. Simply place the absorbent insert into the corresponding canister, leaving all features as is.

Note: Some amount of dust is normal. It is recommended to use gloves upon handling. Use soap to wash hands afterwards.

Note: The absorbent insert can be removed if needed.

Open-Top Rotomold Lids Discontinued

Chart MVE continues to exceed our current standards and provide consistent quality products. In our continuous improvement efforts, we will transition from rotomold lids back to the original style for the MVE510, MVE616, MVE1426, and MVE1839. These new lids will have a new black finish, "Raven Texture Powder Coating." The benefits of this coating are an added resistance to light chipping and scratches, the coating should not peel if exposed to LN₂, and it will provide for a cleaner and higher quality finish. The estimated timeline for the complete transition is currently set for April 4th, 2016, but please note that this transition may be sooner. Once the transition is complete, the rotomold lids will become obsolete. Please note, as we transition, some models may already begin to receive the metal lids. More information on this transition will be released in the coming months.

Obsolete and Replaced by: RD3 and RD6 Stainless Steel Lid

Effective immediately, the stainless steel lid (PN 14004387) for the RD3 and RD6 research Dewars has been obsoleted and repla

Sanitizing and Decontaminating Chart MVE Aluminum Dewars

MVE aluminum Dewars are constructed with an aluminum inner, which utilizes a fiberglass neck support. The stainless units are constructed with an inner entirely fabricated from stainless steel sheets. Any cleaning solution that does not react with aluminum or stainless can be used in the sanitation process. In most cases, many household detergents or mild soap solutions may be suitable. The U.S. Custom Service uses a solution called EXPOR for incoming shipments from abroad. This is made of nine parts water mixed with sodium chloride and lactic acid. As mentioned above, however, most household cleaning solution can be used. These include bleach, detergents, and mild soaps. Other cleaners and disinfectants that can be safely used include hydrogen peroxide, chlorine/water and denatured alcohol.

NOTE: DO NOT USE ANY PETROLEUM BASED CLEANING SOLUTION.

After using a cleaner, it is important that the inner vessel is thoroughly rinsed with water and all cleaner residues have been removed. Spraying the solution into the inner vessel is preferred, although agitation of the solution inside the inner will suffice. Vapor shippers and Doble units will require filling the inner to its full capacity with cleaning mixture and then rinsing. Allow the unit to dry thoroughly before putting into service. With vapor shippers, we suggest placing the Dewar on end (inverted) to drain and dry.

The process is not intended for use with vapor shipper models manufactured prior to 1994. The generally accepted practice of using 10% chlorine bleach with 90% water solution still holds as the best method for decontamination. However, with some of the bovine and swine virus strains showing up today, it is the conclusion of the agricultural professors at the University of Minnesota and Texas A & M that an increased mixture of chlorine bleach to 30% and 70% water will kill all known viruses except BSE. These are still unknown to them and they are not willing to offer a solution.

To perform this sanitizing procedure, cover all inner surfaces with the solution, let stand for 30 minutes and remove. Rinse the decontaminated surfaces with clean water and remove rinse water. Allow Dewar to dry before putting into service. For vapor shippers and Doble units, place Dewar on end (inverted) and allow drying.

Note: Vapor Dewars can be used immediately after rinsing but may take longer to recharge to 100% capacity.

Contact Chart Technical Service for details and information if you have any questions concerning decontaminating Dewars.

Helpful Hints/FAQs

TEC3000 Firmware

Early models of the MVE TEC3000 controller can encounter issues when updated to firmware version 2.03. Primarily controllers manufactured from 2006-2009 may be affected. If any temperature or level calibration issues are encountered after updating a controller firmware to version 2.03, it is recommended to install firmware version 2.01.

Contact an MVE distributor or Chart MVE Technical Service before performing a firmware update to determine if an update is the appropriate course of action. Firmware updates are not required or recommended as part of routine maintenance for TEC3000 controllers that are operating normally, regardless of age.

Alternatively, a replacement TEC3000 controller can be ordered as needed using part number 13319459S (for text button display) or 13319467S (for symbolic button display). Chart also has upgrade kits available when replacing TEC2000 controllers with TEC3000 controllers. Please provide Technical Service with the Serial Number on the freezer (not the controller) to obtain the correct upgrade kit part number.

The current 2.03 firmware installer program is available at the Distributor Marketing Services page on the [Chart MVE website](#). The 2.01 firmware installation program can be made available upon request

Overall Height of Dewar with Manual Discharge Device Installed

Q: How much additional height does the Manual Discharge Device add to each of the LAB Series Dewars?

A: The Manual Discharge Device adds approximately 9" to the height of all LAB Series Dewars

Note: Sitting a LAB Series Dewar on a rollerbase will add approximately 4.5" to the overall height.

CryoSystem Round Canister

Q: Can I store round canisters in the Cryosystem 6000 and 4000?

A: Yes, the Cryosystem series come standard with square racks, but Chart MVE offers optional round canisters for the Cryosystem 4000 and 6000. The canister for the Cryosystem 4000 is PN: 11854634 and the canister for the Cryosystem 6000 is PN: 13350712. Both measure 5.96 inches (151 mm) inner diameter.

TEC3000 Event Log Interval

Q: What steps does one take to change the TEC3000 event log period?

A: The default logging interval, or the rate at which data is recorded in the memory of the TEC3000, is four hours. To adjust the event logging period, one would be required to use the

USB TEC COM Kit. Use the ASCII command, **LOGPER 120**. This would change the event logging period to 120 minutes.

Accessories

Cool Reach Sample Retrieval Tool

Chart MVE offers a Cool Reach tool that may help retrieve samples on the vapor platform or through the freezer access panel. Below are the materials needed and instructions for opening the access panel.

Materials Needed

1. Piece of Wire (Bent into a hook)
2. Cool Reach (PN: 13051579)



Cool Reach - PN 13051579

Instructions for Opening Access Panel

1. Shape a piece of wire into a hook.



2. Turn tray until the section with the access panel is located.
3. Insert the bent wire into the oval hole.



4. Lift the access panel until it is completely open.



5. Retrieve samples using the Cool Reach (PN 13051579).

Note: The Part Number for replacement cup-sets for the Cool Reach is 13051608.

Chart TEC COM Kit and TEC Connect Software

The TEC COM communications kit is used to download event logs, change settings, and install firmware updates to MVE TEC3000 and MVE Variō Pro controllers. The TEC COM kit connects one of the serial ports on the controller to a USB port on a laptop or desktop computer. The TEC Connect software is required to use the TEC COM kit. You may purchase the TEC COM Kit, pictured below, by contacting our Customer Service department and referencing Part Number 13376947. The TEC Connect Software (and firmware updates) is also available on our website under the [Distributor Marketing Services Login](#) (At this time Username/password is NOT required).



Don't Miss Out on our Upcoming Tradeshows!

Date	Show	Location
June 21-24, 2016	GGBN Biodiversity Biobanking Conference	Berlin, Germany
July 3-6, 2016	ESHRE	Helsinki, Finland
Sept 27-29, 2016	ESBB	Vienna, Austria
Oct 4-8, 2016	World Dairy Expo	Madison, WI
Oct 15-19, 2016	ASRM	Salt Lake City, UT
Oct 22-25 2016	AABB	Orlando, FL
Nov 15-18, 2016	Eurotier	Hanover, Germany
Dec 6-9, 2016	World Stem Cell Summit	West Palm Beach, FL