October 2015

MVE Chart Tech Tips

PRODUCT INFORMATION

MVE 800 Series -190°C High Efficiency Freezer

The MVE 800 Series -190°C freezers provide stable cryogenic storage for up to 19,500 1.2 / 2.0 ml vials. These freezers provide maximum storage density and provide the industry's longest hold time.

Features include:
* Dry sample storage
* -190°C top box temperature
* Lowest liftover height
* Largest LN2 capacity below turn tray

MVE 800 2-Tier Step Assembly

The 2-Tier step assembly enables user's easy access, insertion, and removal of taller rack systems on the MVE815, MVE818 and MVE819 Series freezers.

MVE 800 Removable 2-Tier Step assembly, PN 20820733

We will still offer the single step assembly for the MVE800 Series.

MVE 800 Removable Single Step assembly, PN 13082551

All MVE Vapor Shippers and Cryoblock Inserts to Now Contain Aerogel

As of 23 March 2015, Chart introduced Advanced QWick technology to decrease preparation time when shipping samples in vapor, without sacrificing hold time. All MVE Vapor shipper Series, Doble Series and Cryoblock inserts manufactured contain aerogel in place of Cab-o-sil. This Advanced QWick material will provide equal or better hold times when compared to the Vapor series, and significantly better hold times when compared with the QWick series, while also providing charge times of less than two hours. These newer shippers can be identified by a label that reads "Advanced QWick Charge Technology". The previous QWick series shippers have been discontinued.

HELPFUL HINTS / FAQ's

Q: How do we determine in the field if the Vapor Shipper is equipped with the Advanced QWick?

A: Look on the unit for the Advanced QWick Technology label pictured below.

Q: What is a Stuck Valve Alarm?

A: This stuck valve alarm feature and functionality is available on HEco/Vario models.When the freezer is supposed to be filling, if the controller does not see an appropriate decrease in temperature, within the delay time entered in the menu, a stuck closed valve alarm will be initiated. After the freezer is supposed to have stopped filling, if the controller does not see an appropriate increase in temperature, within the delay time entered in the menu, a stuck open valve alarm will be initiated. For the TEC3000, the stuck valve settings are located by navigating to the Add on menus, then to the hot gas bypass menu. For the Vario, it is found in the Temperature menus, then in the Inlet temp menus. This will allow enabling and disabling of these alarms and setting the time delays. These alarms are enabled together. They cannot be selectively enabled / disabled.

Q: What is the preferred humidity for freezers and what is the impact if the humidity is more?

A: MVE cryogenic freezers are designed to be operated in environments near room temperature (65°F - 80°F, 18°C - 27°C) and relative humidity below 50%. Due to the large gradient between LN2 and ambient temperatures, an additional change of a few degrees will not have a significant impact on the freezer performance. Although temperature changes will affect the open top MVE and MVE Stock series freezers to a greater degree, it again will not be a significant effect. The relative humidity should be maintained low enough so that condensation does not form on the TEC 3000. Elevated humidity levels can lead to excessive condensation and frost on and around the lid. In situations where the relative humidity is high and uncontrollable, the lid should be routinely wiped dry to prevent ice formation. Should significant ice formation develop, thaw as necessary. Refer to the Preventative Maintenance procedures located in the TEC 3000 Manual.

Q: What does the low battery alarm indicate on the TEC 3000?

A: This alarm indicates the backup battery voltage has dropped below 21 VDC. Verify AC power supply and the TEC 3000 has not been operating for more than 48 hours on the backup battery. To test any suspect Battery Backup, disconnect the AC power and allow freezer to run for 30 mins; the power failure alarm should trigger. While it is still in PF alarm allow freezer to perform a fill still using the Battery Backup and once it reached its high level set point measure the Battery Backup voltage. If the voltage measures 24 - 27 VDC the batteries are good. The best approached is to replace a suspect battery or if the Battery Backup Voltage has dropped below 21 VDC.

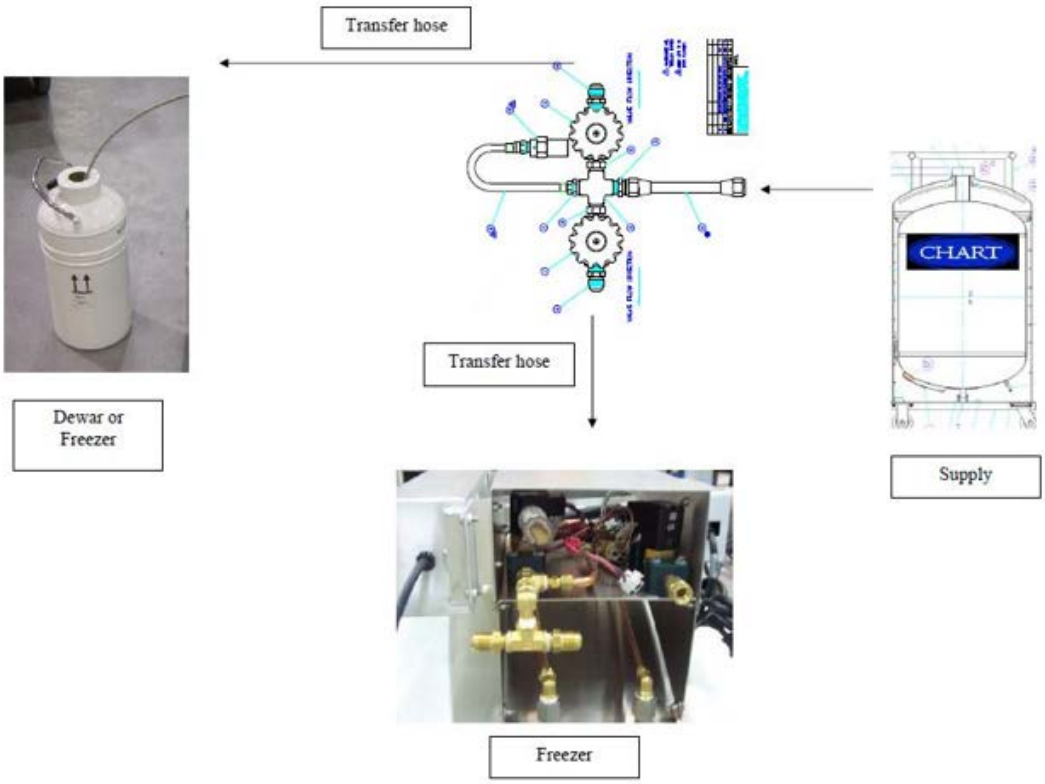
Note: New batteries may need to be charged for several hours before it is able to power the TEC 3000.

ACCESSORIES

Tee Valve Assembly

Tee valve can connect to one supply tank enabling connection for multiple transfer hoses

TEE Fitting Primary use



Dippers

Type	Size	Length	Part Number	Used with
Swivel (Picasso) Dipper	17 mL approx .5 oz	21.25"lg	9711679	Any
Rigid Dippers	45mL approx 1.5 oz	16.25"lg	9711569	Lab 5
Rigid Dippers	45mL approx 1.5 oz	19.625"lg	9711589	Lab 10
Rigid Dippers	45mL approx 1.5 oz	21.75"lg	9711619	Lab 20, 30
Rigid Dippers	45mL approx 1.5 oz	28.25"lg	9711669	Lab 50
Extended Rigid Dipper	103mL approx 3.5 oz	22.75"lg	11555669	Any

Epoxy Kit

Used for attaching canister ring to dewar or cork to cover

PN: 0010143 9 oz. resin and hardener