



PrincetonCryo.com
Cryogenic Delivery and Storage Systems

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MVE Chart Tech Tips

PRODUCT INFORMATION

Chart MVE Serial Numbers Review

Chart MVE freezer and aluminum tank serial numbers are numerically coded. Each serial number provides the vessel code, year month, and production number of the unit manufactured. This format provides the ability to properly identify when a freezer is sold and provide technical assistance in troubleshooting, and in identifying the model and part numbers for service. There are five distinct sections of each serial number. Please reference the key below to identify these various sections of freezer serial numbers.

Sample Serial Number: CAB2111010019

The Five Distinct Sections: CA B21 11 01 0019

Key:

CA=The site of manufacture. "CA" represents the Canton, GA facility. "NP" represents the New Prague, MN facility.

B21=Chart MVE code. This code is included for internal manufacturing use only.

11=Year of manufacture. The sample above was manufactured in 2011.

01=Week of manufacture. 01 indicates that the sample above was manufactured the first week of the year.

0019=Production number. The sample above was the 19th freezer manufactured during week 01.

HELPFUL HINTS / FAQs

MVE High Efficiency and MVE Series Freezer Fill Solenoid Valves

Q: What is the best way to measure the resistance of a fill solenoid valve?

A: Measure the resistance of the fill valve by taking a VOM and connecting the two leads to one solenoid. Please note: a single valve should measure approximately 70 ohms. Plumbing circuits equipped with dual fill valves should measure approximately 35 ohms.

Changing the Maximum Fill Time in Chart MVE High Efficiency and MVE Series Freezers

Q: How can the maximum fill time be changed on the TEC3000?

A: The maximum fill time can be adjusted from 30 minutes to 240 minutes. The factory setting is 60 minutes. Follow the instructions below as to how to change the maximum fill time.

1. Press "SETUP". The controller will prompt for a password. Use the "▲/▼" keys to scroll to the appropriate number. Press "ENTER" to advance the cursor to the next field.
2. Press "ENTER". The display will read "TEMPERATURE MENUS".
3. Press "SETUP" until the display reads "ADVANCED SETTINGS".
4. Press "ENTER". The display will read "ADVANCED FILL MENUS".
5. Press "ENTER". The display will now read "TIMED FILL".
6. Press "SETUP" until the display reads "MAXIMUM FILL TIME". Use the "▲/▼" keys to adjust and press "ENTER" to save.

One may also change the maximum fill time setting by using Chart Connect 3000 (photo below). The ASCII code is:

- "FILT?" This will send a query to the controller to verify its current max fill time setting.
- "FILT [space] 120" This will change the maximum fill time to 120 minutes.

One may also change the maximum fill time setting by using Chart Connect 3000 (photo below). The ASCII code is:

- "FILT?" This will send a query to the controller to verify its current max fill time setting.
- "FILT [space] 120" This will change the maximum fill time to 120 minutes.



Q: The maximum fill time alarm continues to alarm. What could be the problem?

A: The maximum fill time alarm will activate if the TEC3000's maximum fill time has been reached and the LN2 level has not reached the high-level set-point. Please note: the factory setting is 60 minutes. If the maximum fill time alarm continues, please verify the following:

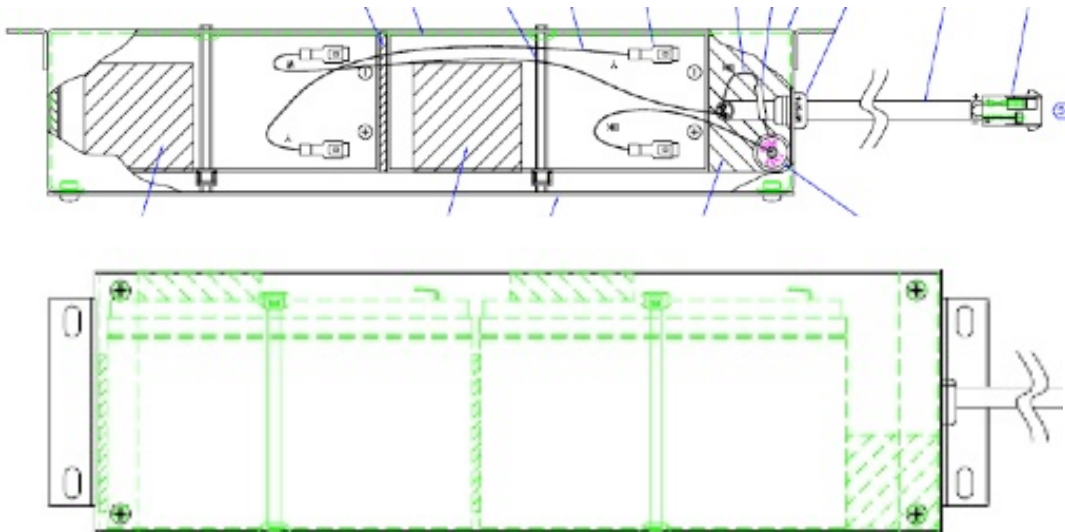
- Adequate LN2 supply
- Correctly connected LN2 supply
- Adequate LN2 source pressure
 - LN2 source pressure should be approximately 22-35 psi (1.5 to 2.5 bar)
- The inline filter is not clogged
- Proper operation of the fill solenoid valves
 - verify fill solenoid resistance
- Check fill solenoid valves for debris
- Verify current LN2 level and level control settings
- Press "START FILL" to confirm manual operation.
- Verify the lid switch is not engaged (MVE Series only)

Battery Installation

Q: What are the steps to install a new battery onto a High Efficiency freezer?

A: Please follow the steps below:

1. Disconnect the main power from the controller and disconnect the battery backup cable from the wire harness.
2. Remove the screws to the battery back-up cover to access the batteries.
3. Carefully remove the battery and foam protection. Please take note as to how the cables are connected.
4. Disconnect the wire connectors from the battery terminals.
5. Install the batteries with their appropriate foam protection.
6. Reconnect the wire connectors to the batteries in series as shown in the following diagram.
7. Test the voltage with an VOM meter 24VDC.
8. Reinstall and cover the screws.



Photos above offer a visual representation of the battery backup wiring in-series.

Please dispose of the old battery in accordance to local laws and regulations.

ACCESSORIES

Replacement Backup Batteries

Replacement backup batteries are available. Part numbers for the parts available are below.

| Part Number | Description | Freezer Models |
|--------------|-----------------------------------|------------------------|
| (2) 10718155 | Battery | All (Equipped with BB) |
| (4) 2913851 | PHPNHMS SS#10-32* 1/4" LG | All (Equipped with BB) |
| (4) 2914931 | Washer Flat SS 13/64ID87/16"OD | All (Equipped with BB) |
| (4) 11006791 | Washer Lock SS #10 18- | |

Replacement TEC3000 A/C Power Supply

To order the Replacement TEC3000 AC Power Supply, please use **P/N 11795030**. This item may be used for all freezers equipped with TEC3000.



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