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# **MVE Chart Tech Tips**

#### PRODUCT INFORMATION

#### Part Number Update for Vacuum Jacketed Transfer Hose

Chart offers two vacuum jacketed transfer hoses in 6ft lengths and we have updated their part numbers. One is a spiral type design and the other is a braided type design. Both are available.

The braided VJ transfer hose is PN: 0606B-8SE-8SE. Its specifications will be the same as PN 10670059.

3/8"Inside Diameter x 1.5"Outside Diameter x 6'Long, 37° Flare

The spiral VJ hose is PN 0606S-8SE-8SE, and will have the same specifications as the previous hose part number.



Figure 1 - Braided (top) and Spiral (bottom) vacuum jacketed transfer hose

## **Discharge Device Gauge Information**

Chart offers a replacement gauge for the manual discharge device, PN 20533104. This gauge has a 1.5" Dial and displays pressures 0- 15psi. The manual discharge device operates at approximately 5psi. This is the replacement gauge for all manual discharge devices.

## **HELPFUL HINTS / FAQ's**

Q: How do I install the battery backup into the HEco 1500 Series Freezer?

#### **HEco 1500 Series**

- 1. Before installing the battery backup on the freezer, measure the voltage at the end connector for approximately 24VDC to 27VDC. Please reference Figure 1.
  - 1.1. If no voltage is present, the included fuse must be installed before connecting the battery to the main wire harness.
  - 1.2. Open the battery enclosure and unscrew the fuse harness.
  - 1.3. Install the fuse.
  - 1.4. Close the fuse harness and the battery enclosure.



Figure 1 - Battery Backup Fuse

- 2. The battery backup will be placed on the 4 studs already located on the freezer. These are located on the side of the workstation platform.
  - 2.1 Open the workstation platform where the controller panel is located by loosening the two Phillips head screws in Figure 2. This is the panel on the right when facing the front of the freezer. Reference Figure 3.



Figure 2 - Phillips Head Screws to Remove

Note: This picture is for reference only. This is the 1800 Series Freezer.



Figure 3 - Screw Location for HEco 1500 Series

2.2. Remove the back control panel by removing the 4 screws holding it in place on the back of the workstation (white). See Figure 4.



Figure 4 - Back Control Panel

2.3. Find the mounting location to install the battery backup. It will mount to the studs in Figure 5 below. This is on the side of the Plumbing Stack Cover.



Figure 5 - Location to mount the battery backup

- 2.4. Remove nuts from studs.
- 2.5. Place the battery backup on the studs with the washers between he battery backup and the platform. Position the battery backup and the platform. Position with the pigtail facing towards the front of the freezer.

Note: The battery backup is capable of being positioned with the pigtail facing forwards or backwards. It is recommended that the pigtail faces forward so the batteries inside the housing remain in an upright position.

- 2.6. Fasten nuts to studs. This will secure the battery backup to the workstation on the freezer.
- 2.7. Reinstall the back control panel.
- 3. Verify that the TEC 3000 Controller will power on using the AC Power Supply only.

NOTE: Do not connect the battery backup to the main wire harness until the AC Power Supply has been verified to power up the controller.

4. Connect the battery backup to the proper connector on the TEC

3000 Wiring Harness. See Figure 6.



Figure 6 - Battery Backup Connector. Black - from the Battery Backup. Dark Blue/Orange - from the TEC 3000 Wiring Harness

5. Please reference the TEC 3000 Technical Manual in the Additional Feature Settings Section to view and adjust the TEC 3000 settings and to enable the battery backup feature.

### **ACCESSORIES**

# **Rigid Dippers**

Rigid Dippers are used to scoop out liquid nitrogen for the Lab Series and are available for order via the following part numbers:

| Part Number | Description                    | Overall Length |
|-------------|--------------------------------|----------------|
| 9711569     | LAB 5                          | 18.25"         |
| 9711589     | LAB 10                         | 21.63"         |
| 9711619     | LAB 20 or LAB 30               | 23.75"         |
| 9711669     | LAB 50                         | 30.25"         |
| 11555669    | Dipper W/ Extended Cup (3.5oz) | 21.75"         |
| 20593015    | Swivel (Piccasso) Dipper       | 21.25"         |



# **Liquid Level Measuring Stick**

Chart offers a liquid level measuring stick, PN: 20561020. This measuring stick measures the level of liquid nitrogen in the freezer, and it is supplied with each MVE freezer. This procedure can be found in the TEC 3000 Manual. The dimensions of the measuring stick are 47"L by 1.25"W.

