October 2010

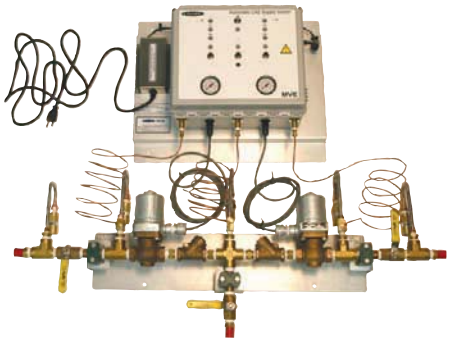
1536 PD Updates: Level Monitoring and Charging Instructions

The 1536 PD will now use the MVE Datalogger to monitor temperature during shipments. The Planer Shipslog no longer is standard.

We have received requests for charging instructions for the 1536 PD. The steps for this procedure are attached.

Automated Tank Switch Power Supply

Chart currently offers two tank switchers. One is offered in Europe, meets CE regulations, and has 1/4” solenoids (PN: 11207040). The other is not CE marked, thus is not offered in Europe, and offers 1/2” solenoids (PN: 13934911). The non CE marked tank switcher has been equipped with a new power supply. The previous power supply (PN: 1179508) is UL recognized while, the new one is UL Listed. Please use part number 10995355 to order the new 30 Watt UL listed power supply.

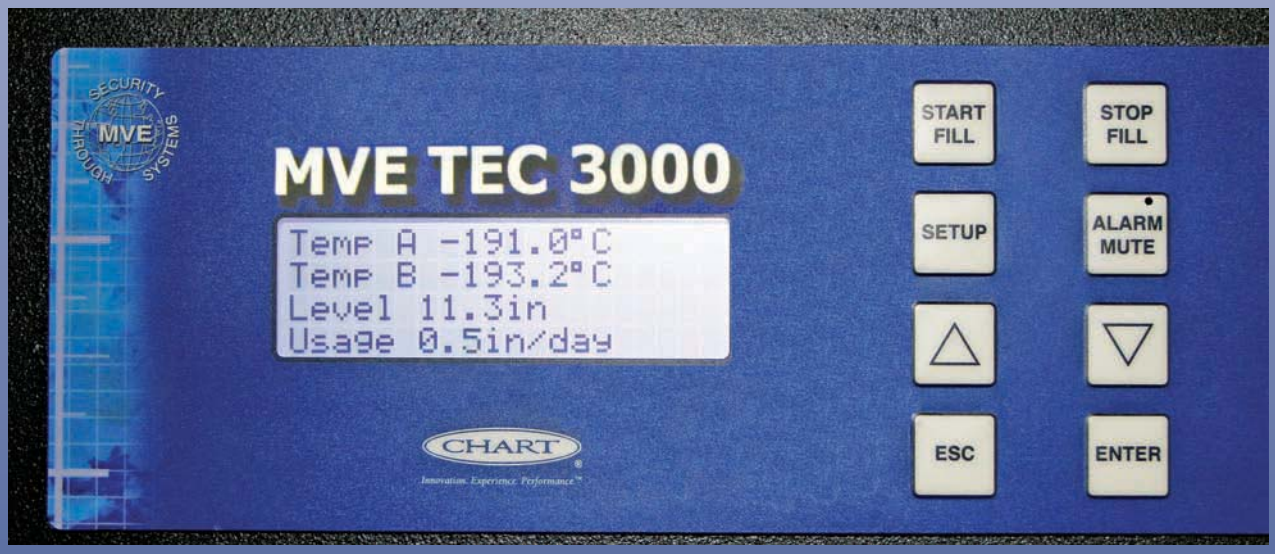


T2 to T3 Upgrade Instruction Sheet

PART: TEC 2000 to TEC 3000 Upgrade Instruction Sheet (PN: 13319601)

MODELS: TEC 3000 Upgrade Kits for MDC TEC 2000 Non-Cabinet (PN: 13319512)

DETAILS: On May 8, 2009 the wiring configuration for the TEC 2000 to TEC 3000 wire harness adapter was changed (see Service Bulletin PN 14372702 Rev A). The battery backup pins, 9 and 10, were reversed so that pin 9 is positive and pin 10 is negative. If an upgrade kit was purchased for a non-cabinet MDC TEC 2000 after May 8, 2009, please make sure you have the most up dated instruction sheet that reflect this change. If the battery is incorrectly wired, the TEC 3000 can be damaged. The instructions should read PN 13319601 Rev A. If it does not, please discard those instructions and use the attached document.



MVE 1536PD-150 CHARGING INSTRUCTIONS

1. Connect an LN2 supply via transfer hose to the fill/drain valve located behind the hinged panel on the left side of the skid as viewed from the front of the unit
2. Open the fill/drain valve and the supply valve at the LN2 supply
3. Allow the unit to fill until LN2 can be seen through the holes in the rotating tray inside the unit.
    a. Approximately 320 liters of LN2 are required to fill the unit to this level.
4. Close the valve at the LN2 supply
5. Loosen the transfer hose at the fill/drain valve but do not remove.
6. Close the fill/drain valve
7. Remove the transfer hose.
8. Allow the unit to sit overnight to allow the absorbent to saturate with LN2.
9. Place the unit on a loading dock or other suitable location where drained LN2 can be discharged in a safe location.
10. Connect a phase separator to a transfer hose.
11. Connect the transfer hose to the fill/drain valve
12. Place the hose end with the phase separator over the edge of the dock or otherwise position it so that discharged LN2 will not present a safety hazard.
13. Open the fill/drain valve
    a. Since the drainable contents of the unit are not under pressure, it may take several minutes for draining LN2 to cool down the hose and begin to flow from the phase separator.
14. Allow the unit to drain until no LN2 is discharged from the phase separator.
15. Close the fill/drain valve.
16. Disconnect the transfer hose.

INSTRUCTIONS FOR CONVERSION OF MICRODYNAMICS TEC2000 STAND ALONE CONTROLLED FREEZERS TO TEC3000 CONTROL.

READ INSTRUCTIONS COMPLETELY BEFORE PROCEEDING.

UNITS AFFECTED

This kit and procedure applies to freezers originally equipped with the MicroDynamics TEC2000 stand alone controller.

PARTS SUPPLIED

PART #	Description	QTY.
13319459	TEC3000 W/TEXT DISPLAY	1
13319598	WIRE HARNESS T2 TO T3 ADPTR	1
11943012	UPGRADE KIT 110V MDC TO JEROME	1
13319601	INSTR UPGRD MDC TO T3000	1
13289481	MNL QK START TEC 3000 ENGLISH	1

TOOLS REQUIRED

Screw Driver Phillips #2
Adjustable wrench

GENERAL

This modification replaces the existing MicroDynamics stand alone controller with a TEC3000 controller. If the freezer is already equipped with the current production Jerome power supply, the Jerome upgrade kit can be returned for credit. Contact Chart Customer/Technical Service at 770-721-7759 or 800-482-2473 for an RMA. The existing temperature sensors will be retained.

DISCONNECT THE POWER CORD FROM THE WALL OUTLET.

SHUT OFF THE LN2 SUPPLY AND DISCONNECT THE TRANSFER HOSE FROM THE FREEZER.

CONVERSION PROCEDURE

1. Disconnect the input power cable from the bottom of the existing controller.
2. Remove the existing power supply.
   - 2.1. If the freezer is equipped with the current production Jerome power supply, it can be used with the TEC3000, and so you will not need to remove it. Contact customer service for an RMA to return the Jerome upgrade kit for credit

NOTE: The earlier MicroDynamics power supply in the galvanized steel enclosure cannot be used with the

TEC3000. It provides 24VAC output to the TEC2000 controller, and may damage the new TEC3000 controller.

3. Disconnect wire harness, temperature sensors, and tubing from the controller.
4. Remove the existing controller and mounting bracket from the freezer.
5. Remove the controller from the bracket.
6. Install the new controller on the bracket.
7. Re-install the mounting bracket on the freezer.
8. Connect the new adapter harness to the base of the controller. Reference Figure 1 and Figure 2
9. Plug the phoenix connector from the existing wire harness into the inline phoenix receptacle on the adapter harness.
    - 9.1. Reference the pin configuration shown in the table of Figure 2, and make sure that the existing harness connector is plugged in correctly. The receptacle on the adapter harness is 10 pin to accept the existing 8 pin connector in addition to the 2 pin battery backup connector if so equipped. So be careful not to misalign the connections.
    - 9.2. If the freezer is equipped with a battery backup, check the polarity of the existing 2 pin connector and confirm that it matches the polarity of the adapter harness before plugging it in.
10. Connect the new temperature sensors to the base of the controller. Reference Figure 1
11. Connect the level sensor tube to the hose barb on the base of the new controller. Reference Figure 1
12. Connect the 30VDC input cable from the power supply to the receptacle on the base of the new controller. Reference Figure 1.
13. Connect the mains power cord provided to the new power supply.
14. Follow the instructions in the new quick start manual provided for startup check out and programming.

For additional technical information on the new TEC3000 control system, contact Chart customer/technical service at 770 721-7759 or 800 482-2473 and order the technical manual P/N 13289499.

INSTRUCTIONS FOR CONVERSION OF MICRODYNAMICS TEC2000 STAND ALONE CONTROLLED FREEZERS TO TEC3000 CONTROL.

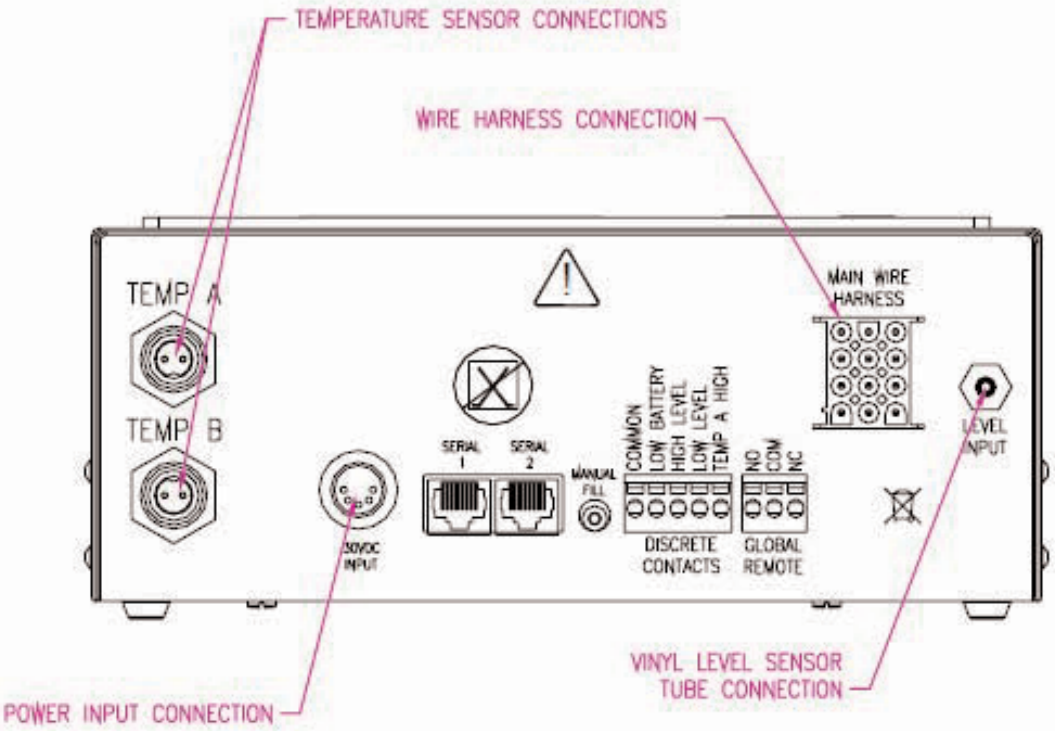


Figure 1, TEC3000 CONTROLLER CONNECTIONS

10 PIN PHOENIX	Description
1	– Purge Valve
2	+ Purge Valve
3	– Fill Valve
4	+ Fill Valve
5	– Bypass Valve
6	+ Bypass Valve
7	– Bypass Sensor
8	+ Bypass Sensor
9	+ Battery Backup
10	– Battery Backup

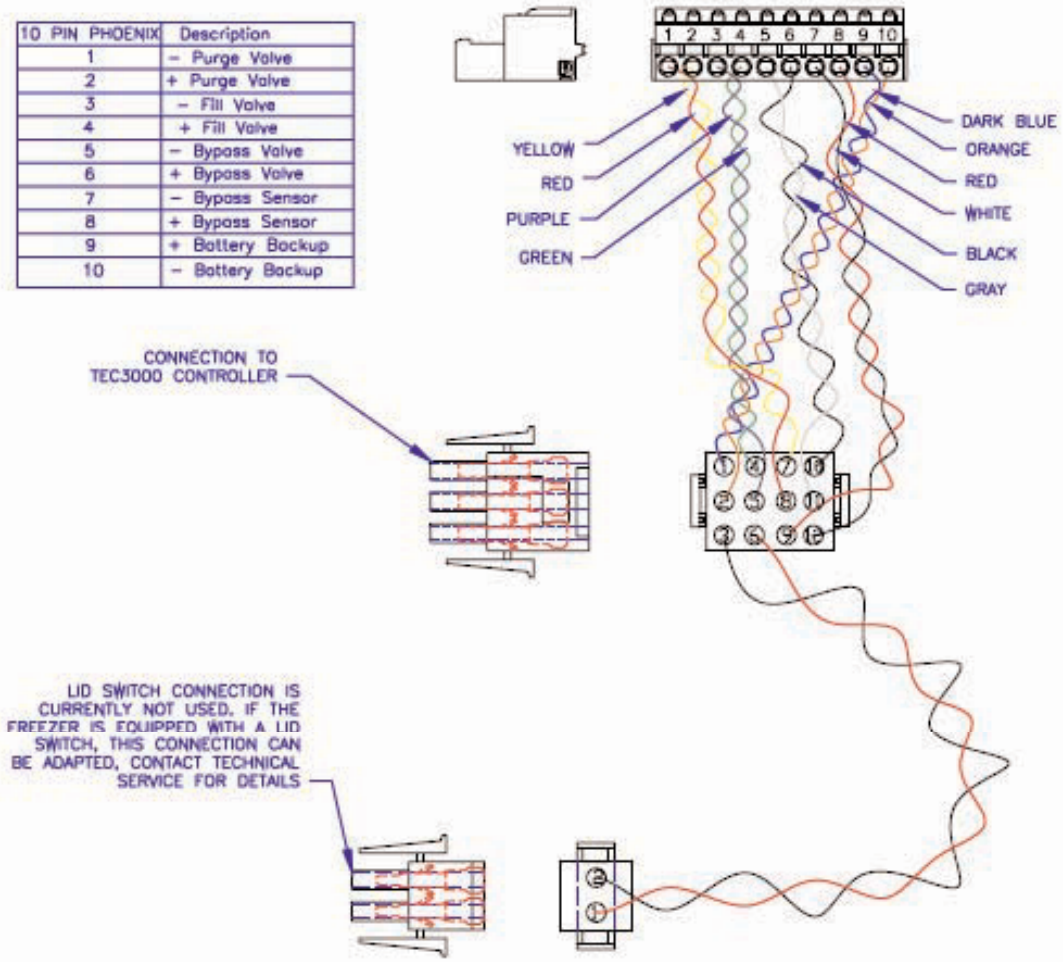


Figure 2, ADAPTER WIRING HARNESS.