



# MODEL – YMC<sup>2</sup> MOD B

## START-UP CHECKLIST

TO: \_\_\_\_\_ JOB NAME: \_\_\_\_\_  
 \_\_\_\_\_ LOCATION: \_\_\_\_\_  
 \_\_\_\_\_  
 JCI TEL NO: \_\_\_\_\_ JCI ORDER NO: \_\_\_\_\_

CHILLER MODEL NO: \_\_\_\_\_ SERIAL NO: \_\_\_\_\_  
 The work (as checked below) is in process and will be completed by: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
Month Day Year

The following work must be completed in accordance with installation instructions:

### A. GENERAL

Review the Installation Checklist (Form 160.84-CL1) to validate the attributes have been completed. Attach a completed copy for records.

Water connection inlet and outlet are at proper locations, have hangers nearby that would support their weight and show no visible strain on chiller nozzles .....

Relief piping is complete and puts NO strain on the relief valves .....

Wiring is complete per 160.84-PW1 and power feed terminations in the VSD are tight .....

Confirm any field control wiring modifications are in accordance with Form 160.84-PW2 .....

Verify the chiller is charged with refrigerant (pressures match R134a saturation for ambient temp) .....

Verify Evaporator pressure transducer isolation valve is open .....

Verify Condenser pressure transducer isolation valve is open .....

Verify the Discharge pressure transducer (stall transducer) isolation valve is open .....

Verify Compressor Discharge Isolation valve is open .....

Verify Liquid Line Isolation valve is open .....

Verify Hot Gas Bypass Line Isolation valve (if hot gas is present) is open .....

Verify the motor liquid cooling angle valve just above the shells, from the liquid line is open .....

Verify the motor stator liquid cooling strainer service capped ball valve below the motor is open .....

Verify the VSD and Power Panel shipping antifreeze solution is drained and fill with inhibited water that shipped with the chiller, per OptiSpeed VSD Service Manual .....

Verify electrical connections in the VSD are tight, especially motor leads to terminals .....

If an Optional Circuit Breaker was provided for the VSD, ensure its settings are proper according to OptiSpeed VSD Service Manual .....

Check the chiller for refrigerant leaks at joints .....

Ensure jumper installed on OptiView TB6 terminal 24 to 25 .....

Power the Chiller and ensure the Battery disconnect switch on the Power Panel is closed to top up the battery charge (12.8 Vdc required for startup) .....

**B. CONTROL PANEL**

Login at SERVICE level access to ensure access to the necessary setpoints. The setpoints that are be site-specific are listed and should be verified to the desired values. They are grouped by the screen in which they appear. Enter the as-left value in the corresponding box for each setpoint.

Start by navigating to the Capacity Control - Setpoints Screen and accept the default capacity control and level control setpoints with the DEFAULT SETPOINTS button on the bottom bar. Return to Home and navigate to each of the following screens.

**Setpoints:**

- Leaving Chilled Local Setpoint .....
- Remote Range.....
- Shutdown Offset .....
- Restart Offset.....
- Local Input Current Limit.....
- Pulldown Demand Limit .....
- Pulldown Demand Time .....
- Remote Analog Input Range.....

**Setpoints: Setup**

- Clock .....
- Enter Clock Time and Date.....
- Line Voltage .....
- Line Frequency .....
- Chilled Liquid Pump Operation .....
- Head Pressure Control .....
- Hot Gas Bypass.....
- Flow Switch.....
- Power Failure Restart.....

**Setpoints: Setup: Schedule**

- Enable or Disable Scheduled Operation..
- Set up Site Schedule if required and Enabled .....

**Setpoints: Setup: User**

- Data Display Mode.....
- System Language .....
- Date Format.....

**Setpoints: Setup: Comms**

- Chiller ID .....

**Setpoints: Setup: Sales Order**

- Enter Commissioning Date (*record here*) ..
- Compressor Model must be entered exactly and needs verified against the compressor model on the compressor nameplate.....
- Condenser Model must be entered exactly and match the control panel nameplate .....
- Ensure Data is entered and obtain a Sales Order print (Done).....

**Setpoints: Setup: Operations**

- Control Source.....

**Evaporator**

- Refrigerant .....
- Smart Freeze .....

**Condenser**

- High Pressure Warning Threshold.....

**Condenser: Refrigerant Level Control**

Refr Level Setpoint .....

Startup Position .....

Startup Delay .....

Ramp Time .....

**Compressor: Surge Protection**

Shutdown .....

Count Window .....

Count Limit .....

Surge Sensitivity .....

**Compressor: VGD Actuator**

VGD Stroke Calibration Complete LED on .....

VGD Feedback Calibrated LED on .....

**Variable Speed Drive**

Input Job Full Load Amps .....

**C. CHILLER SYSTEM**

Evaluate cooler and condenser water flow indication compared to design information found on the sales order. If shell pressure drop is used, it should be within +/- 15% of the rating information .....

As the chiller is started, verify the refrigerant level sensor tracks level from empty condenser to fully flooded level sensor probe over the range of <10% to nearly 100% (160.84-M2 if it needs serviced) .....

Adjust condenser refrigerant liquid level setpoint to a value that covers the subcooler top by 1/2 to 1 inch and provides proper Evaporator performance (160.84-M1) with the chiller running steady. Update value in Section B. ....

After the chiller is at full load at design Leaving Chilled Liquid Temperature, capture the Operating Data to print or save to text file (160.84-OM1 or 160.84-M2 explains how to capture data from the panel). ....

**D. CHILLER SETPOINTS PRINT**

Capture the chiller setpoints to print or text file from the Setpoints-Print command. ....



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