

10 Easy Steps to Start-up Your New G&D Chiller

<u>Vertical Air Chillers</u>: GD-30H, 35H, 40H, 50H, 70H, 100H, 140H, 150H, 160H, 200H <u>Tandem Scroll Chillers</u>: GD-20T, 25T, 30T, 40T, 50T, 65T, 80T, 100T, 120T, 140T Please view install videos online at <u>www.gdchillers.com/installation-videos</u>

- 1. Your chiller includes one (1) free year of Tera service for remote control and monitoring. Internet access is needed. Run an ethernet cable from facility LAN router to electrical enclosure of chiller before proceeding
- 2. Clearance on all 4 sides of the chiller needs to be equal to one full width of the condenser. Electrical code may dictate greater clearance. There should be no obstructions above the chiller. Anchoring required. Refer to the CHILLER CLEARANCE REQUIREMENTS page for more details.
- 3. Install Wye-strainer (required) one size larger than mainline and purge valve on return line at chiller.
- 4. With the door switches in the OFF position, ensure all breakers are in the ON position. The chiller must then be supplied with power for at least 4 hours. Verify there is a visible oil level in compressor sight glasses before proceeding.
- 5. Flush all piping lines with water, then fill reservoir and piping with a 35% glycol/water mixture. The chiller start/stop door switch must remain OFF during this step.
 - a. Open supply valve, close return valve, and open purge valve on return line. Ensure all glycol pump isolation valves are open.
 - b. Fill reservoir with water. Turn control power door switch ON, then process pump door switch ON, and **verify** correct pump rotation.
 - c. Flush facility piping loop. Add water while flushing system (keep chiller reservoir topped-up). Once all debris has been flushed out, remove as much water from system as possible
 - d. Open return valve and close purge valve on return line.
 - e. Fill reservoir/piping loop with 35% propylene glycol mixture. **Inhibited glycol is required** to prevent rust and corrosion in the system.
- 6. Temporarily close the supply valve and **confirm glycol pressure is at 20 PSI** (refer to #10 if a lower pump pressure is required). Open supply valve and circulate glycol through entire piping loop for at least 30 minutes. Re-verify glycol mixture using a refractometer. The glycol MUST be 35%-40%. Correct as needed before proceeding.
- 7. Re-verify oil levels in the compressor sight glasses. Do not proceed unless an oil level is visible in the sight glass of every compressor in the chiller.
- 8. **Open all service valves/refrigerant ball valves in chiller marked with tags:** Suction/discharge of each compressor and refrigerant ball valves at receiver. Models with remote condensers will have additional valves. Contact us for more details as needed.
- Turn chiller start/stop door switch to the RUN position. Compressors should start to run. Fans to follow shortly. <u>Scroll chiller models only:</u> Verify correct scroll compressor rotation. Use the Carel controller to check refrigerant pressures. When compressor turns on, suction pressure should decrease and discharge pressure should increase.
- 10. Adjusting set points on the Carel controller: Press the up/down arrows until SET displays in bottom right corner. Press enter and change temperature to desired set point. Pump pressure adjustment for the VFD is also located here. If decreasing glycol pressure is required for tank jacket ratings, do so using the Carel controller at this time.

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*G&D Chillers welcomes any and all questions or concerns. We can be reached at 800-555-0973 or 541-345-3903

CHILLER CLEARANCE REQUIREMENTS

Air cooled units must sit outside and be anchored to a solid level surface. A concrete pad is recommended. Location should be free of grass and other debris that could plug condenser fins.

Ensure minimum clearance* between condenser intake side and any buildings, walls, etc.

No walls or obstructions in front of the unit: Louvered access side must be open to free air. No roofs or overhangs above chiller condenser.

Liquid cooled chillers may be installed on a concrete pad outdoors. A properly sized pump and liquid cooling system for the chiller condenser must be supplied by the end user. Contact G&D Chillers for additional information and assistance with sizing.



*MINIMUM CLEARANCE REQUIREMENTS (W)	
45.25"	GD-30H, 35H, 40H, 50H
90.5"	GD-70H, 80H, 100H, 140H, 150H, 160H, 200H

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