



TAEvoTECH CHILLER COOLANT FILLING

Getting the chiller, and the associated piping, filled with coolant is a process of adding coolant and venting air until the entire cooling loop is completely filled with coolant and all air is purged. This may take a fair amount of time depending on the extent and complexity of the process piping, and on where the chiller is located (vertically) with respect to the equipment being cooled.

PLEASE NOTE:

- Small fittings with valves should be installed at the high point(s) of the process piping to allow venting during filling.
- Coolant must be added under pressure, using either a filling pump or city water (do not exceed 20 psig filling pressure). The chiller pump cannot be used for filling as it will not function unless the evaporator tank is full.
- A minimum of 20% inhibited glycol, designed for chilling systems (NOT automotive antifreeze) is recommended for pH stabilization. If plain water is required for the process, be sure that the chiller has the non-ferrous option.
- If the chiller is located below, or on the same level as the equipment to be cooled, then filling through the chiller tank fill/drain connection is recommended. If the chiller is installed above the cooled equipment, then provisions should be made to fill at the lowest point. This will make it easier to push air up and out through the vents as well as provide a convenient drain point.

PROCEDURE:

1. Make sure that the chiller is in stand-by mode and raise the chiller set point to a temperature high enough so that it will not start cooling (85°F).
2. Open the chiller vent port and all vent connections in the piping.
3. Attach the hose from the filling pump or city water to the chiller fill/drain port.
4. Throttle the flow to the chiller so that the system is filled slowly (this allows trapped air to find its way to the vents).
5. Close each vent when coolant appears. The chiller vent will probably need to be closed first.
6. Continue filling until the chiller pump pressure gauge reads 20 psig (1.5 bar), then close the fill valve.
7. Take the chiller out of stand-by mode. The pump will start and circulate the coolant through the process piping.
8. Trapped air will be circulated with the coolant until it accumulates in the chiller evaporator tank. When enough air accumulates, the low tank level alarm (“AEFL”) will appear and the pump will stop.
9. Open the fill valve until the chiller pump pressure gauge reads 20 psig (1.5 bar), then close the fill valve. Open the chiller vent valve (slowly) to release the air. Close the valve when coolant appears.
10. Clear the “AEFL” alarm to allow the pump to continue circulating. If the alarm cannot be cleared repeat the “fill & vent” steps until the alarm can be cleared.
11. Repeat the “fill & vent” steps until the pump operates continuously without “AEFL” alarms.
12. Please note that subsequent “AEFL” alarms may appear (and additional “fill & vent” procedures repeated) for some time (days) after start-up until all air is vented.