

Charge Top-Off Procedure

Models Covered:

P or PFC-200
P or PFC-400
P or PFC-500/550
P or PFC-650/660
P or PFC-1000/1100

Note: This information predates the PFC-330 or 552, 662, 672, 1102 series units but the information provided will be virtually identical to their PFC-400, 500, 660, 1100 counterparts.

This procedure is for refrigeration unit series 200, 400, 500, 650, 660, 1000 & 1100.
This procedure explains how to add refrigerant mixture to model PFC and P units.

Do not use this procedure for model PCT units.

Contents of kit:

- Polycold® Top-Off charge (cylinder)
- Material Safety Data Sheet

Personnel and items needed to recharge the unit:

- Qualified Type 2, High Pressure refrigeration technician
- Refrigeration hose
- Valve wrench
- 8-inch adjustable wrench
- Pressure gauge that measures 0-250 psig (0-1725 kPa) and has a 1/4-inch SAE male flare fitting

1. Before you start:

Repair any leak before adding refrigerant to the unit.

Only use this procedure if the refrigeration unit is not contaminated and contains most of its original refrigeration charge. See the minimum pressures below.

- For 1100s & 1000s: 130 psig
- For 660s: 115 psig
- For 650s & 550s: 95 psig
- For 500s: 95 psig
- For 400s & 200s: 95 psig

For 1100s and 1000s, allow the refrigeration unit to remain off for 48 hours. For smaller units, allow the refrigeration unit to remain off for 24 hours.

2. Check the pressure in the cylinder:

Connect the pressure gauge to the refrigeration hose. Connect the refrigeration hose to the cylinder containing the top-off charge.

Open the cylinder's valve. Compare the tank pressure to the balance pressure of the refrigeration unit. The tank pressure must be sufficiently above the refrigeration unit's balance pressure to charge the unit.

Note: The following pressure drop in the cylinder will increase the refrigeration unit's balance pressure by 1 psig.

- For 1100s & 1000s, 4psig
- For 660s & 650s, 3 psig
- For 550s & 500s, 2.5 psig
- For 400s & 200s, 1.5 psig

3. Connect the cylinder to the refrigeration unit.

Remove the pressure gauge. Connect the cylinder to the evacuation (charging) valve on the refrigeration unit. Open the evacuation (charging) valve about 2-3 turns.

Purge air from the refrigeration hose by loosening the hose connection at the cylinder for 1-2 seconds. Leave the cylinder's valve closed.

4. Add refrigerant to the unit.

Open the cylinder's valve until the refrigeration unit reaches the appropriate balance pressure. The appropriate balance pressure for each size unit is as follows.

- For 1100s & 1000s: 160-175 psig
- For 660s: 145-160 psig
- For 650s & 550s: 115-125 psig
- For 500s: 110-115 psig
- For 400s & 200s: 115-125 psig

Wait 5 minutes and check the refrigeration unit's balance pressure. If the balance pressure has dropped, then repeat the step until the balance pressure remains in the appropriate range.

Note: It is not unusual to repeat this step several times. There is a restrictive tube between the evacuation (charging) valve and the unit's expansion tank.

5. Prepare the refrigeration unit for operation.

Make certain all valves are closed. Remove the refrigeration hose. Re-install the protective caps on the evacuation (charging) valve and on the cylinder's Valve.