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Instruction Sheet

Subject: Danfoss Expansion Valve

REPLACEMENT PROCEDURE

Before replacing TXV, verify the following

1. TXV sensing bulb insulation is secure, airtight, and sealed on all sides.
2. TXV sensing bulb is securely mounted and correctly positioned.
   A. Expansion valve bulb position must be at 10 or 2 o'clock on the suction line.
   B. Shine a flashlight between the suction line and the bulb. If light is visible, secure the bulb and recheck operation.
   C. Grasp bulb with fingers and attempt to rotate. If loose, secure the bulb and recheck operation.
   D. Weigh the refrigerant charge out of the ice machine when recovering refrigerant and compare to refrigerant charge data on the model/serial nameplate.

NOTE: Low refrigerant charge symptoms will resemble a starving TXV.

Overview of Valve Replacement

Danfoss stainless steel expansion valves (TXV) require a slightly different brazing technique than brass-bodied valves.

- Copper clad stainless steel does not require as much flame contact as copper tubing.
- Heat will need to be applied to the copper tubing first and then the TXV socket.
- Use 15% silver solder.
- Flux is not needed.
- J tube must be installed on ice machines that have expansion valves installed in the horizontal position.

Importantl

Replacement valves must be installed with the TXV dome above the valve body

- Valve is preset at the factory and is nonadjustable.
- Your expansion valve kit may contain two copper straps (one for 1/2" OD tubing and one for 5/8" OD tubing). Match the copper strap size to the suction line (1/2" OD or 5/8" OD) and discard the second strap.
- Insulated boots are available for the TXV and sensing bulb.
- A reducer may be needed on the outlet of the expansion valve and is included with valve kits when required.

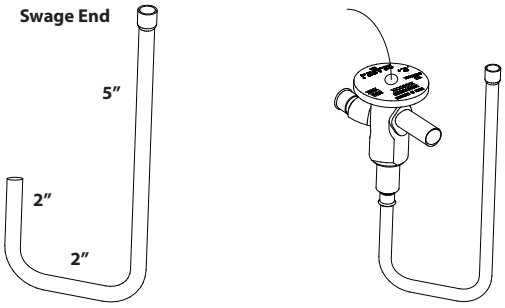
Important

The use of cork or foam tapes will result in a flooding TXV. Refer to the parts manual for the correct expansion valve body and sensing bulb insulation for your model.

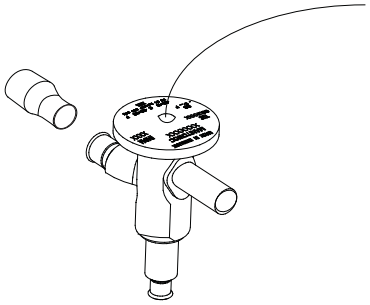
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Brazing Procedure

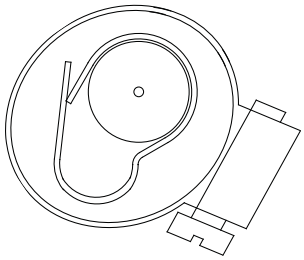
1. Wrap valve with a wet rag.
2. Fabricate and install J tube when necessary. Install valve with the TXV dome in an upright position above the valve body.



3. When required install supplied reducer on TXV outlet.



4. Purge nitrogen through system while brazing to prevent oxidation of copper tubing.
5. Apply heat to copper tubing first and move flame toward valve socket.
   A. Heat copper tubing for approximately 10 to 15 seconds and then direct the heat to the TXV socket.
   B. Heat the TXV socket for 2 to 5 seconds and apply silver solder to joint.
   C. Do not attempt to fill TXV flange with solder. Solder will draw into socket.
6. Install new liquid line drier.
7. Pressure test system with 150-psig nitrogen.
8. Clean suction line with sand cloth before installing TXV bulb.
9. Mount sensing bulb at the 10 o'clock or 2 o'clock position.
   A. Mount sensing bulb with convex side touching suction line.
   B. Use the enclosed copper bulb-mounting strap and secure with the existing stainless steel hose clamp.
   C. Align stainless steel clamp worm gear on the flat side of copper strap.
   D. Tighten until the bulb will not twist on the suction line. Do not over tighten and deform suction tubing.



10. Insulate bulb and seal airtight. Condenser air must not be allowed to contact the bulb; over feeding of the TXV will result.
11. Insulate expansion valve to prevent condensation.
12. Verify system operation and refer to service manual for complete specifications.