

# THERMAL EXPANSION VALVE

## INSTALLATION INSTRUCTIONS

### A. INTRODUCTION

Thermal expansion valve (TXV) can be used on both heat pump and air conditioning applications. All TXVs have a built-in check valve making them heat pump compatible. All are externally equalized with non-adjustable superheat and are available with non-bleed construction. Hard start capability for outdoor units is required when non-bleed valve is used. The external equalizer line attached to the TXV has a female flare nut with built in Schrader valve depressor that attaches to the Schrader valve port provided on most DX coils.

### B. APPLICATION DATA

TXV3 - A KIT	15% - BLEED	1.5-3 TON
INLET MALE ROTALOCK		
OUTLET FEMALE SWIVEL NUT		
TXV3 - B KIT	15% - BLEED	3-5 TON
INLET MALE ROTALOCK		
OUTLET FEMALE SWIVEL NUT		

### C. INSTALLATION NOTES

With reference to Figure 1 the TXV assembly is to be installed between the flowrator distributor body and the existing liquid line attached to the distributor assembly.

#### WARNING

**COIL IS PRESSURIZED!**  
RELIEVE PRESSURE BEFORE  
INSTALLING TXV BY DEPRESSING  
SCHRADER VALVE ON COIL MANIFOLD.

### D. INSTALLATION STEPS ARE AS FOLLOWS:

1. After coil pressure has been relieved, turn the female swivel nut counter-clockwise to remove.
2. Remove the piston from the flowrator distributor fitting using a small diameter wire or paper clip (ALWAYS REMOVE THE PISTON FROM DISTRIBUTOR BODY WHEN TXV IS INSTALLED).
3. Attach the TXV by connecting the female swivel nut on TXV outlet to the flowrator distributor (aligning Teflon seal first) and torque swivel nut to 10-30 ft. lb.
4. Attach liquid line with female swivel nut to male rotalock fitting on TXV inlet (aligning Teflon seal first) and torque swivel nut to 10-30 ft. lb.
5. Remove the cap on Schrader valve port on coil suction manifold. Attach equalizer tubing with 1/4" female flare nut that includes depressor to this male Schrader port. Torque flare nut to 10-30 ft. lb.
6. Secure the TXV bulb to the suction manifold of coil or the suction line using the bulb clamp(s) furnished with kit. Install the bulb so that the tube connecting the bulb to the TXV is pointed up.

- a. Bulb should be installed on a horizontal run of the manifold if possible. On line under 7/8" OD the bulb may installed on top of the line. With 7/8" OD and over, the bulb should be installed in a position of about 4 or 8 o'clock.
- b. If bulb installation is made on a vertical run, the bulb should be located at least 6 inches from any bend, and on the tubing side opposite the plane of the bend. On vertical bulb installations, the bulb should be positioned with bulb capillary tube at the top.
- c. The bulb should be insulated using thermal insulation to protect it from the effect of the surrounding ambient temperature.

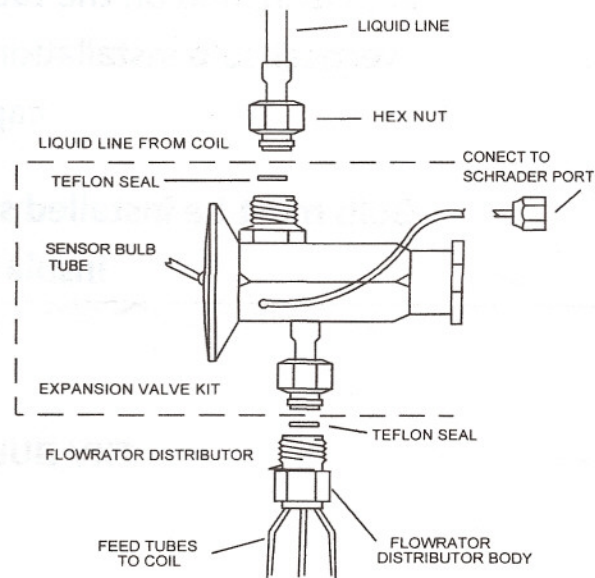


Figure 1

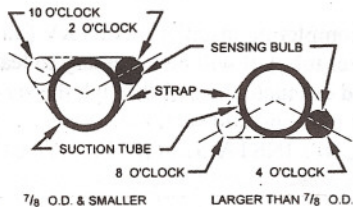
7. After completing installation of TXV (including equalizer tube), it will be necessary to leak check the coil and evacuate the coil through the service access fittings of liquid and suction line valves. SEE COIL AND UNIT INSTALLATION INSTRUCTIONS.

# Thermal Expansion Valve Bulb Location

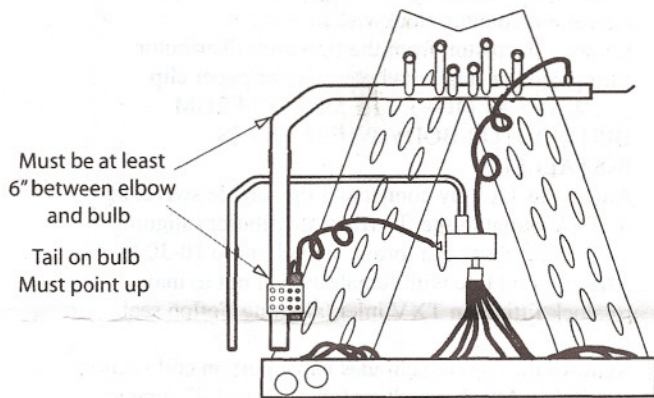
The sensing bulb should be installed on a horizontal run of the manifold if possible. On 7/8" OD line and smaller, the bulb may be installed in a position of about 2 or 10 o'clock. On line larger than 7/8" OD, the bulb should be installed in a position of 4 or 8 o'clock. If bulb installation is made on a vertical run, the bulb should be located at least 6 inches from any bend, and on the tubing side opposite the plane of the bend. On vertical bulb installations, the bulb should be positioned with bulb capillary tube at the top.

**Bulb must be installed securely using provided clamp and properly insulated for correct operation.**

## TXV BULB LOCATION DIAGRAM



Horizontal Bulb Locations



Vertical Riser Application