

## **THERMAL EXPANSION VALVE**

Expansion Valve, Expansion Tube, TVX. Also called the orifice tube. This component often has a mesh screen and is found in the evaporator inlet pipe (liquid line). In some cases this item is found in the outlet of the condenser. Its purpose is to limit the flow of the high pressure liquid (R12 or R134a) and thereby meter the flow of refrigerant to the evaporator as a lower pressure liquid. The screen serves the purpose of trapping metal particles that break loose from the compressor or other components. Expansion Valve come in two types, Block and Right Angle. The block valve is located at the evaporator and its purpose is to constantly check the temperature of the (R12 or R134a) and allow the proper amount of (R12 or R134a) to enter the evaporator. The right angle valve comes in two types (internal equalized and external equalized). This valve is also found before the evaporator and its purpose is to control the amount of (R12 or R134a) going into the evaporator.

Commonly used on import and aftermarket systems. This type of valve can sense both temperature and pressure, and is very efficient at regulating refrigerant flow to the evaporator. Several variations of this valve are commonly found. Another example of a thermal expansion valve is Chrysler's "H block" type. This type of valve is usually located at the firewall, between the evaporator inlet and outlet tubes and the liquid and suction lines. These types of valves, although efficient, have some disadvantages over orifice tube systems. Like orifice tubes these valves can become clogged with debris, but also have small moving parts that may stick and malfunction due to corrosion.