

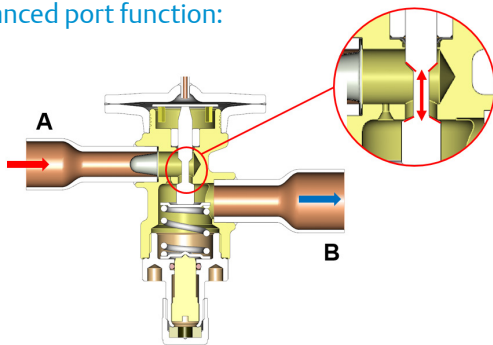
Did you know?



Thermo™ – Expansion Valves Series TIH

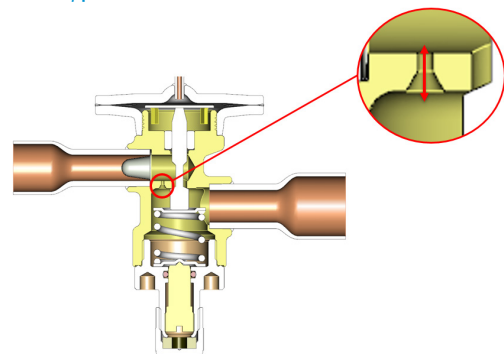
TIH series of Thermo™-Expansion Valves are designed for air conditioning, heat pumps and commercial refrigeration applications. The TIH is ideal for those applications requiring hermetic/compact size combined with stable and accurate control over wide load and evaporating temperature ranges.

The new TIH valves features:
Balanced port function:



Balanced port enables superheat control and prevents shifting of superheat caused by variation of condensing pressure. *(Only in normal flow)*

Bleed hole/port function:



Provides the equalization between high and low side pressure during “off” cycle, so that the motor of the compressor can start with minimum torque. *(On request)*

Applications

Heat pump application

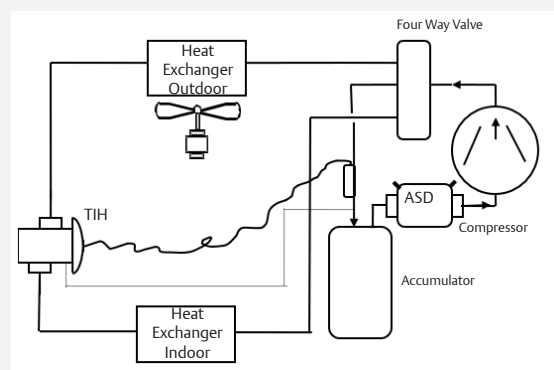
There are several ways to apply an expansion valve in a heat pump. The following figure is showing the most popular application:

Bi-flow application

When installing a Bi-flow TIH, as single expansion valve in heat pumps, the following subjects need to be considered:

- TIH is balanced port only in normal flow direction but not in reverse flow direction.
- Inlet pressure in reverse flow acts on the valve pin as a closing force. This effect is more significant at higher inlet pressure and lower evaporating temperature.
- This effect will prevent the valve from operating within the right opening percentage in reverse flow. This percentage depends on the port size of the valve, the inlet pressure and the evaporating temperature.

Based on the above facts, it is necessary to evaluate the selection of TIH in Bi-flow application.



System with single Bi-flow expansion valve and EMERSON suction filter dryer ASD.