

Title (en)

METHOD OF USING A THERMAL EXPANSION VALVE DEVICE, EVAPORATOR AND FLOW CONTROL MEANS ASSEMBLY, AND REFRIGERATING MACHINE

Publication

EP 0378933 A3 19900822 (EN)

Application

EP 89403410 A 19891208

Priority

FR 8816207 A 19881209

Abstract (en)

[origin: EP0378933A2] The expansion valve 103 of the refrigerating machine is controlled by the difference between the pressure in a bulb 104 containing a fixed amount of fluid and the pressure in the evaporator 2. The bulb is mounted in the discharge pipe 1 of the evaporator and is heated by a resistor. In the absence of droplets of liquid refrigerant in the flow through the discharge pipe, i.e. when the refrigerant flow rate tends to become too low with respect to the cold demand, the resistor heats up the fluid in the bulb, the pressure in the bulb increases and moves the expansion valve to a more opened position. As soon as droplets hit the bulb in the discharge pipe, said droplets cool down the bulb despite the heating effect of the resistor and the expansion valve is moved to a more closed position. Thus, the flow rate control uses variations in heat transfer coefficients in the discharge pipe rather than superheat temperature in the discharge pipe. The evaporator may be small-sized because it does not have to produce superheat.

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IPC 8 full level

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F25B 41/335 (2021.01 - EP US); **F25B 2341/0681** (2013.01 - EP); **F25B 2500/15** (2013.01 - EP); **F25B 2600/21** (2013.01 - EP)

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