

Title (en)
Refrigeration system with refrigerant flow controlling valve and method of conserving energy in the operation of a compressor-condensor-evaporator type refrigeration system.

Title (de)
Kälteanlage mit einem Regelventil für das Kältemittel und Verfahren zur Energieeinsparung beim Betrieb einer Kompressor-Kondensator-Verdampfer-Kälteanlage.

Title (fr)
Installation de réfrigération à soupape de contrôle de courant réfrigérant et procédé de conservation d'énergie d'une installation réfrigérante du type compresseur-condenseur-évaporateur.

Publication
EP 0060315 A1 19820922 (EN)

Application
EP 81102013 A 19810318

Priority
EP 81102013 A 19810318

Abstract (en)
A refrigeration system is disclosed having a compressor (12), a condenser (14), an evaporator (18), a refrigerant expansion device (16), a control (22) for cycling the compressor (12) on and off according to a sensed condition, and a refrigerant flow controlling valve (30). For conserving energy in operation the flow controlling valve (30) blocks the flow of refrigerant between the condenser (14) and the evaporator (18) when the compressor (12) is cycled off and enables refrigerant flow between the condenser (14) and the evaporator (18) when the compressor (12) is cycled on. The flow control valve (30) includes a refrigerant pressure responsive member (34) movable to condition the valve (30) to block refrigerant flow in response to changes in refrigerant pressure caused by the compressor cycling off and movable to condition the valve (30) to enable refrigerant flow in response to changes in refrigerant pressure caused by the compressor cycling on.

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CPC (source: EP US)
F25B 41/20 (2021.01 - EP US)

Citation (search report)

- US 2986899 A 19610606 - SCHENK JOHN A, et al
- CH 188957 A 19370131 - SULZER AG [CH]
- US 2364459 A 19441205 - MCGRATH WILLIAM L
- US 3769808 A 19731106 - KRAMER D
- CH 406261 A 19660131 - TRANE CO [US]
- DE 358875 C 19220916 - DER MASCHINENFABRIKEN ESCHER A, et al
- US 2882695 A 19590421 - JOSEPH ZWICKL
- US 2453439 A 19481109 - HUBBARD ALBERT B

Cited by
US10378533B2

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