

Title (en)
Starting load reducing device for refrigerant compressor

Title (de)
Vorrichtung zur Reduzierung der Startlast für Kältemittelverdichter

Title (fr)
Dispositif de réduction de la charge de démarrage pour compresseur de réfrigérant

Publication
EP 0797000 B1 20010530 (EN)

Application
EP 97301697 A 19970313

Priority
JP 6444896 A 19960321

Abstract (en)
[origin: EP0797000A1] A device for reducing the starting load which occurs when starting up the compressor for automotive air conditioning system, is disclosed. The starting load reducing device is composed of a piston, a cap like member, and a tension coil spring made of shape-memory alloy disposed between them. In the actual refrigerant circuit, the starting load reducing device may be disposed anywhere between the outlet of evaporator and inlet port of compressor. When starting up the compressor, the flow of refrigerant gas from evaporator to suction chamber of the compressor is restricted to minimum value by the device. So the starting load of the compressor is suppressed effectively. After some time has lapsed, the temperature of refrigerant from the outlet of evaporator will gradually decreases to the transformation temperature of coil spring made of shape-memory alloy, due to small amount of continued operation of compressor. Temperature decrease in the refrigerant in the device will cause the martensitic transformation of the coil spring to occur, so that at this moment a full communication between the outlet of the evaporator and the suction chamber is realized. And stationary operation of the compressor enters with this elastically soft state of coil spring in the starting load reducing device. Thus, the purpose of eliminating an uncomfortable drive feeling due to the torque shock by suppressing the starting load of a compressor is attained. <IMAGE>

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