

COMPRESSOR INCLUDING A MOTOR AND
MOTOR CONTROL IN THE COMPRESSOR HOUSING
AND METHOD OF MANUFACTURE

Abstract of the Invention

A refrigeration system to be driven by an electrical power source. A compressor mechanism in a hermetically sealed compressor housing circulates a refrigerant located within the compressor housing through a loop. A motor in the compressor housing and in contact with the refrigerant within the compressor housing is coupled with the compressor mechanism. A power supply line adapted to be connected to the electrical power source has an interior portion passing through and located within the compressor housing. The interior portion is in contact with the refrigerant in the compressor housing. A power switching circuit in the compressor housing and in contact with the refrigerant within the compressor housing connects between the power supply line and the winding for selectively applying electrical power from the electrical power source to a motor winding. An electronic commutating circuit located in the compressor housing and in contact with the refrigerant within the compressor housing connects to the power switching circuit for controlling the power switching circuit to selectively switch the power switching circuit to sequentially energize the winding. A position sensing circuit in the compressor housing and in contact with the refrigerant within the compressor housing connects to the electronic commutating circuit for indicating the position of the rotatable assembly relative to the stationary assembly. A control for such a motor, a method of manufacturing such a refrigeration system and a method of cooling the power switching circuit are also disclosed.

FIGURE 1

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