

Abstract:

An outdoor heat exchanger (23), an indoor heat exchanger (24), a compression/expansion unit (30), and other circuit components are connected in a refrigerant circuit (20). The compression/expansion unit (30) includes a compression mechanism (50), an electric motor (45), and an expansion mechanism (60). In addition, the refrigerant circuit (20) has an injection pipeline (26). When an injection valve (27) is opened, a portion of high pressure refrigerant after heat dissipation flows into the injection pipeline (26) and is introduced into an expansion chamber (66) of the expansion mechanism (60) in the process of expansion. In the expansion mechanism (60), power is recovered from both high pressure refrigerant introduced into the expansion chamber (66) from an inflow port (34) and high pressure refrigerant introduced into the expansion chamber (66) from the injection pipeline (26).