Abstract

# AIR CONDITIONER

To accurately judge whether or not a refrigerant circuit is filled with an appropriate quantity of refrigerant in an air conditioner where a heat source unit and a utilization unit are interconnected via a refrigerant communication pipe. In an air conditioner (1), a heat source unit (2) that includes a compressor (21) and a heat source heat exchanger (23) and utilization units (4, 5) that include utilization expansion valves (41, 51) and utilization heat exchangers (42, 52) are interconnected via refrigerant communication pipes (6, 7). The air conditioner is capable of switching and operating between a normal operation mode where control of the respective devices is performed depending on the operation loads of the utilization units (4, 5) and a refrigerant quantity judging operation mode where the utilization units (4, 5) perform cooling operation, the utilization expansion valves (41, 51) are controlled such that the degrees of superheating at outlets of the utilization heat exchangers (42, 52) become a positive value, and the operation capacity of the compressor (21) is controlled such that the evaporation pressures in the utilization heat exchangers (42, 52) become constant. In the refrigerant quantity judging operation mode, the air conditioner is capable of judging whether or not the refrigerant circuit (10) is filled with an appropriate quantity of refrigerant by detecting the degree of subcooling at an outlet of the heat source heat exchanger (23).