DESCRIPTION

REFRIGERATION APPARATUS

TECHNICAL FIELD

The present invention relates to a refrigeration apparatus.

BACKGROUND ART

As described in PTL 1 (Japanese Unexamined Patent Application Publication No. 2016-128734), there is a known refrigeration apparatus that uses carbon dioxide as a refrigerant and includes a two-stage compression mechanism including a low-stage side compressor and a high-stage side compressor. This refrigeration apparatus is used to cool the air in a target space by a heat absorbing action of an evaporator for a refrigerant installed in the target space.

SUMMARY OF THE INVENTION

<Technical Problem>

When the above-described refrigeration apparatus is used in an environment in which there is a large difference between the set temperature of the target space and the outside air temperature, the pressure of the refrigerant on the high-pressure side needs to be maintained high during a pull-down operation in which the difference between the temperature of the target space and the outside air temperature is small and a high refrigerating capacity is required. However, since the pressure of the refrigerant in a gas-liquid separator needs to be lower than the critical pressure of the refrigerant, the compression ratio of the low-stage side compressor may decrease during the pull-down operation in which the evaporation temperature of the refrigerant is high, and the refrigerating capacity may decrease.

<Solution to Problem>

A refrigeration apparatus according to a first aspect includes a refrigerant circuit in which a first compressor, a second compressor, a first heat exchanger, an expansion mechanism, and a second heat exchanger are sequentially connected. The first heat exchanger functions as a radiator of a refrigerant compressed by the first compressor or the second compressor. The second heat exchanger functions as a heat absorber for a refrigerant