

REFRIGERATION DEVICE AND COOLING SYSTEM

ABSTRACT

A refrigeration device according to an embodiment includes a compressor 11, a compressor downstream-side heat exchanger 12, an expander 21, and an expander downstream-side heat exchanger 22. The compressor 11 and the expander 21 are coupled to each other by a common drive shaft 18A. The compressor downstream-side heat exchanger 12 cools the natural refrigerant flowing out of the compressor 11, and the expander downstream-side heat exchanger 22 exchanges heat between the natural refrigerant flowing out of the expander 21 and a temperature control target. The compressor downstream-side heat exchanger 12 and the expander downstream-side heat exchanger 22 are then arranged to be aligned in a direction parallel to an axial direction Ax of the drive shaft 18A.

Fig. 1