CLAIMS

1. A refrigeration apparatus for transport, comprising:

a condenser (32) having a rectangular tubular shape, and having an outward surface serving as an air entrance surface (32a) and an inward surface serving as an air exit surface (32b), the condenser (32) configured to allow air to flow from the air entrance surface (32a) toward the air exit surface (32b); and

a box (36) arranged on a lateral side of the condenser (32) and houses an inverter board (70), wherein,

the condenser (32) includes a first flat portion (101) and a second flat portion (102) each extending in a horizontal direction and includes a third flat portion (103) and a fourth flat portion (104) each extending in a vertical direction,

the box (36) has an opposing plate (36e) that faces a portion of the air entrance surface (32a) of the condenser (32), the portion being formed by the fourth flat portion (104), and

the refrigeration apparatus for transport includes a heat sink (75) that is provided on the opposing plate (36e) and exposed to an outside of the box (36) to cool a heat-producing component (71) on the inverter board (70).

2. The refrigeration apparatus for transport of claim 1, further comprising:

a duct (80) that forms an air passage (85) in which the heat sink (75) is arranged.

3. The refrigeration apparatus for transport of claim 2, wherein

the duct (80) has an air inlet (83) opening downward.

4. The refrigeration apparatus for transport of claim 2 or 3, wherein

the duct (80) has an air outlet (84) opening toward the air entrance surface (32a) of the condenser (32).

5. The refrigeration apparatus for transport of any one of claims 2 to 4, wherein the duct (80) has a first portion (81) having an air inlet (83) and extending in a predetermined direction, and a second portion (82) having an air outlet (84), the second portion (82) being continuous with the first portion (81) and extending in a direction intersecting with the predetermined direction.

6. The refrigeration apparatus for transport of any one of claims 2 to 5, wherein the heat sink (75) includes: a plate-shaped substrate (76) having a mounting surface (77) that makes contact with the heat-producing component (71); and a plurality of plate-shaped fins (78) protruding from a surface of the substrate (76) different from the mounting surface (77), and

the fins (78) divide the air passage (85) formed by the duct (80) into a plurality of flow paths (86).

7. The refrigeration apparatus for transport of claim 6, wherein

the fins (78) of the heat sink (75) extend in an up-down direction.

8. The refrigeration apparatus for transport of any one of claims 1 to 7, further comprising:

a control board (72) that is housed in the box (36) and controls the refrigeration apparatus for transport.

9. The refrigeration apparatus for transport of claim 8, further comprising:

a divider plate (90) provided in the box (36) to separate a space (37a) housing the inverter board (70) and a space (37b) housing the control board (72) from each other and reduce noise propagation from the inverter board (70) to the control board (72).

10. The refrigeration apparatus for transport of claim 9, wherein

through holes (93) are formed in upper and lower portions of the divider plate (90).

11. The refrigeration apparatus for transport of any one of claims 1 to 10, further comprising:

a reactor (74) housed in the box (36) and arranged above the inverter board (70).

12. The refrigeration apparatus for transport of any one of claims 1 to 11, wherein the condenser (32) has a refrigerant outlet (137) at one end, and

air that has passed through the heat sink (75) passes near the other end of the condenser (32).

13. The refrigeration apparatus for transport of any one of claims 1 to 12, further comprising:

a fork pocket (150) that is provided above the box (36) and receives a fork for lifting the refrigeration apparatus for transport, wherein

a space (S23) between the box (36) and the fork pocket (150) communicates with an internal space (153) of the fork pocket (150) and a space (S21) upstream of the condenser (32).

14. A transport container, comprising: the refrigeration apparatus for transport

(10) of any one of claims 1 to 13; and

a container body (2).