

POWER SUPPLY AND AC MODULE WEK 1

⇒ **The aligned complete system!**

The **power supply and air conditioning module** is a combined energy supply system and intended to be installed inside or on the outside of cabin units or vehicles.



Its main functions are:

- supplying the electric consumer in the container with electricity (230V 50Hz a/c) from the mains network.
- this electricity supply takes place via an isolation transformer and therefore fulfils the requirements of DIN VDE 0100, part 717 or pr HD 60364-7-717:2003.
- air conditioning the container inside temperature at varying outside temperatures to a degree bearable for the personnel as well as safe for the built-in equipment. The difference between outside and inside temperature when cooling should not exceed 15K, for ergonomic reasons.

Technical Data:

Cooling performance	5.00 kW
Electric-heating	approx. 4.0 kW
Cabin supply	approx. 3.5 kVA

Performance of the AC module:

Capacity: The unit supplies the performance parameters at these ambient conditions:

ambient temperature	-32°C to +49°C
sea level	< 3000m MSL
air humidity	0% ... 90%

Heating period: The temperature variation when heated starting at -32°C to + 5°C, is approx. 1 hour.

Cooling period: The temperature variation when cooled down starting at 49°C with $\Delta t = 15K$, is approx. 1.5 hours.

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Technical description



Outside part

Inside part

Mains infeed case „Mini“

The condenser and the evaporator are built onto the cabin as one unit.

An **air diffuser** is installed inside the cabin with a connected air flow made of textile. Also on the inside is the **control unit**, i.e. the operator unit.

The supply of electricity takes place via the input via the **mains infeed case “mini”**. For the power part of the air conditioning an isolation transformer is not needed, because the unit is **fully protectively insulated**.

The air conditioning consists of these essential functional blocks:

- circulating air fan: with automatic admixture of approx. 80m³/h fresh air
- condenser fan: for cooling the condenser; operated from the High Pressure Pressostat
- compressor: refrigerant compressor with magnetic clutch, powered by an electric engine
- electric engine (compressor): electrical power of the compressor
- condenser
- evaporator with condensate tray
- 2 electrical heating elements 2 kW: for electrical cabin heating



Control unit

Condenser plus evaporator

Distributing cabinet