



FRIGOR TEC
Heating to the point

FrigorTec GmbH • Germany



DEBUGGER DB 09 – natural bedbug control



Advantages of the DEBUGGER method:

- Guaranteed to kill insects at all stages of development
- No chemical substances required
- Operates quietly, odourless
- Economical, easy to implement
- Simple assembly and disassembly



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DEBUGGER	DB 09
Air performance [m ³ / h]	1,200
Connected load [kW]	9.0
Power rating [kW]	0 % / 50 % / 100 %
Max. current consumption [A]	14.5
Electrical connection ¹⁾ [A]	16.0
Dimensions [L x W x H in mm]	490 x 430 x 620 ³⁾
Weight ²⁾ [kg]	26.0

DEBUGGER DB 09 technical features:

- Connection cable with CEE plug
- Room thermostat
- Temperature controller, safety temperature limit
- Fan guard

DEBUGGER DB 09 options:

- Intake hose 3 m
- Chassis with swivelling mechanism
- Push rod
- High-temperature extension cable, 25 m
- Infrared thermometer

All figures are valid for 400 V-3 Ph-50 Hz.

¹⁾ In accordance with CEE

²⁾ Including cable and plug

³⁾ Without telescopic rod and hose

Subject to technical changes.

Insect heat treatment using the DEBUGGER method

The principle behind insect heat treatment

Pests cannot transpire and therefore cannot cool themselves down. Their body temperature rises in line with the ambient temperature. Most pests display high levels of activity at an ambient temperature of 15°C to 35°C, with the exception of various mite strains. If an insect's body temperature rises above 45°C, enzymes decompose and the body's own proteins denature, i.e. they coagulate. The molecules lose their biological function, causing the metabolism and biosynthesis to slow to zero, resulting in the insect's death.

This natural process is exploited during insect heat treatment: the room to be disinfested is heated in a targeted manner and the elevated temperature is maintained until the pests die.

Cost-effectiveness

Pest control can be carried out on a room-by-room basis. This means that infested rooms can be treated in a targeted manner. Heating the room using the recirculation method ensures that only the room air is heated and saves energy. Effective disinfestation requires approx. 2 – 4 kWh of electricity per cubic metre of room volume.

Energy-efficient insect heat treatment is also largely dependent on the room characteristics, e.g. how well the space is insulated.

Possible applications

Pest control can be carried out in all accommodation establishments, e.g. hotels, youth hostels, holiday apartment complexes, collective accommodation, sleeping carriages or train compartments.

Insect heat treatment process

Preparation

If thermal pest control is carried out correctly, the temperature does not rise to an extent that could cause damage to the building fabric or furnishings.

Nevertheless, the room should be prepared and any critical objects removed. The preparatory measures include:

- Removing sensitive electronic devices
- Checking whether any permanently installed components can withstand ambient temperatures of 60°C
- Removing food, cosmetics and wax products
- Switching off refrigerators/freezers
- Removing fire extinguishers
- Removing pictures, antiques, CDs, plants, etc.
- Removing flammable objects such as paper
- Taking smoke and fire alarms out of operation

Implementation and duration

The duration of the insect heat treatment depends on the space to be treated and the intensity of the pest infestation. As a rule, it is sufficient to maintain a room temperature of between 50°C and 60°C for 48 hours. During the disinfestation process, the temperature should be continuously monitored to ensure that the target temperature range is not only reached, but is maintained for a sufficient period.

The room can be used again as soon as it has cooled down. It is advisable to carry out thorough cleaning to remove any pests that have been killed.

