



FOCUS

Cabin Blowers



NEWS SEPTEMBER 2025

280 Active References

What is it?

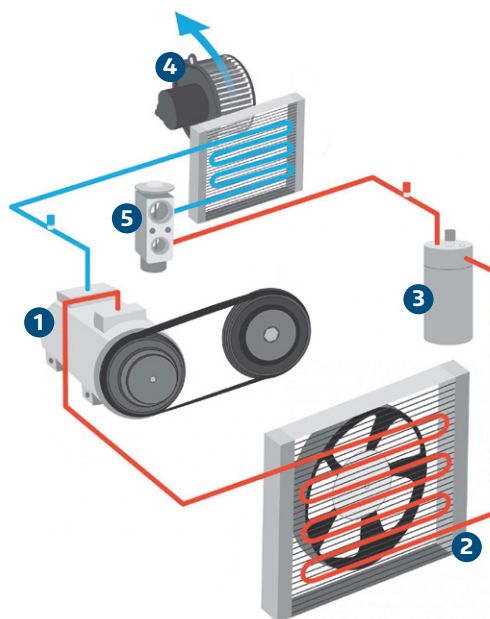
The cabin blower, also known as the HVAC blower or GMV, is a key component of the HVAC module (Heating, Ventilation, and Air Conditioning). It is responsible for **drawing in atmospheric air and channeling it through the heat exchangers**. It ensures that hot or cold air is delivered inside the cabin, thus regulating the internal temperature and defogging the windows.

It consists of a centrifugal rotating fan, directly connected to the DC motor shaft and powered at 12V or 24V. Its speed can be adjusted via the dashboard controls, which modulate the power absorbed by the blower motor using a resistor or an electronic controller.

Operation

- ❶ Compressor
- ❷ Condenser and fan
- ❸ Filter
- ❹ Evaporator and cabin blower
- ❺ Expansion valve

- High-pressure gas
- Low-pressure gas
- High-side service port
- Low-side service port





Causes of Malfunction

As a delicate component, constructed from plastic and susceptible to electrical interference, it is prone to damage.

A cabin filter **not replaced at the correct maintenance intervals may degrade**, and its fragments can get into the cabin blower, bending the fan blades and causing noise or inefficiency.

Condensation buildup, due to a clogged or poorly installed drain, can reduce the lifespan of the blower's carbon motor brushes.

A **power surge during startup** may damage the blower's electrical components.

How to intervene in case of blower malfunction

Symptom	Cause	How to Intervene
Cabin blower does not spin.	Blockage due to foreign objects, likely from the cabin filter. Fan connectors not properly attached.	Check for foreign objects, inspect the fuse, test the alternator and electrical circuit.
Cabin blower doesn't work at all speed settings.	Blower resistor is faulty.	Replace the blower resistor or regulator.
Cabin blower makes abnormal noises.	Mechanical damage from foreign object, unbalanced rotating part, motor wear, installation defect.	Replace the cabin blower.
Blower runs abnormally.	Carbon brush elements damaged.	Replace the cabin blower.

Cabin climate comfort is closely linked to the blower and its proper functioning. For this reason, Meat&Doria blowers offer:

Easy installation

Resistance to mechanical damage and wear

Minimal noise

High-precision speed control

Maximum comfort

OE-grade electronic control units and resistors

Our range also includes blowers with integrated regulators compatible with electric and hybrid vehicles, with special attention to materials and technical solutions from OEM equipment highlighting the high quality of plastics, carbon brushes, and the efficiency of integrated electronic regulators and resistors..

Advanced in-house performance, mechanical, and electrical testing ensures a high-quality, long-lasting product, delivering reliable operation, high performance, and minimal noise—compliant with ISO 7637, IATF 16949, and EMC (Electromagnetic Compatibility) standards.