

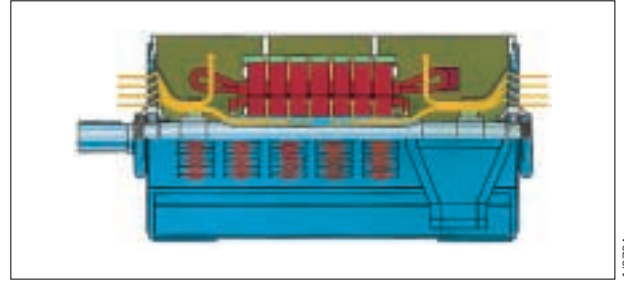
Ventilation and noise

Ventilation system

Machines to degree of protection IP23 and IP24W are internally ventilated, i.e. ambient air is routed through the machine. Motors with top-mounted air/air or air/water heat exchanger have a closed-circuit internal air circulating system.

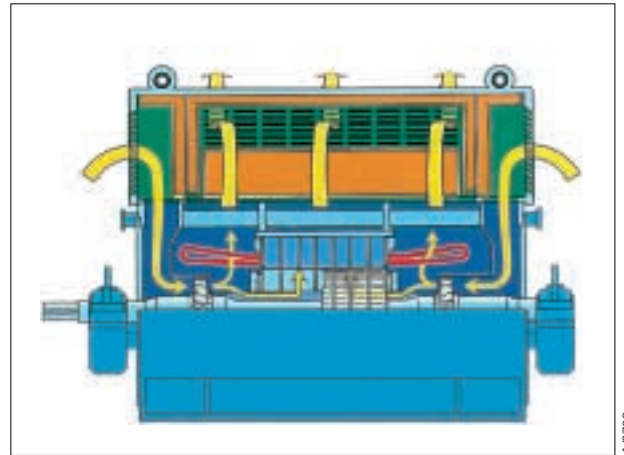
All machines are ventilated from both ends. Axial air ducts in the shaft and radial air ducts in the active part ensure a near uniform temperature distribution in the motor.

Hot spots cannot occur, and the thermal life of the winding is prolonged.



Air circulation in a compact-design motor

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Air circulation with top-mounted air guide cover

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Noise

In view of ever more stringent regulations concerning protection of the environment and safety at work, the noise reduction of electrical machines is of particular importance.

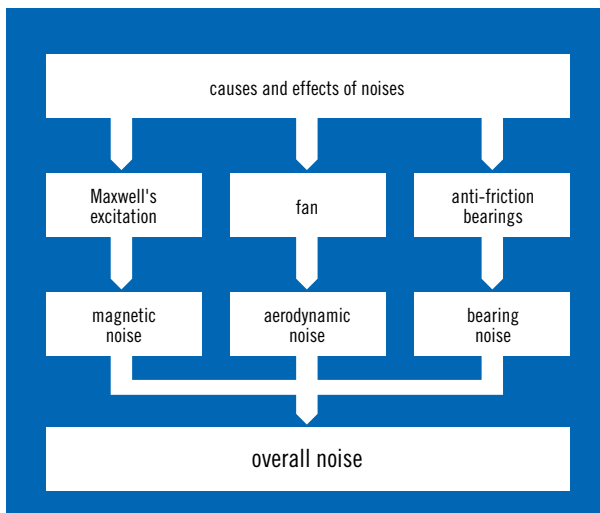
From the outset, i. e. already in the basic design, our machines are designed as low-noise machines. This is achieved by an interactive design of all components, such as:

- Frame
- Ventilation System
- Electro-magnetic design
- Bearings

Noise reduction

Where extreme noise requirements are to be met, various additional measures can be taken.

Depending on the number of poles and the size of the machine, acoustically treated air guide covers or special acoustic enclosures are used.



Sources of noise in electrical machines



Machine with top-mounted tube-type air/air heat exchanger and flanges for the connection of air inlet and outlet ducts.

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