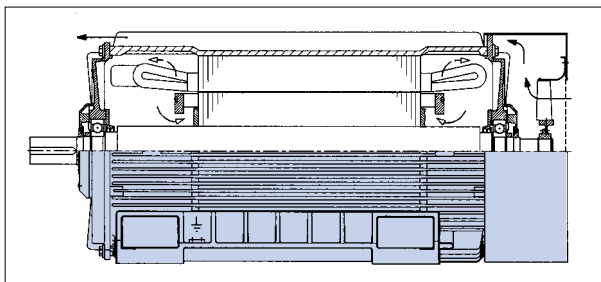


# Ventilation and noise

## The ventilation system

This is characterised by the shape of the fan, the fan cowl, and the arrangement of the ribs, all combining to provide an optimum flow of cooling air. The uni-directional external fan is arranged at the N-end and is protected by a sheet-steel fan cowl. For internal cooling of core and endwindings, vanes are provided on the short-circuiting rings.

**The ventilation system ensures a uniformly low temperature level in the entire active part.**



Cross-section showing air flow (Frame size 500)



Fan and fan cowl

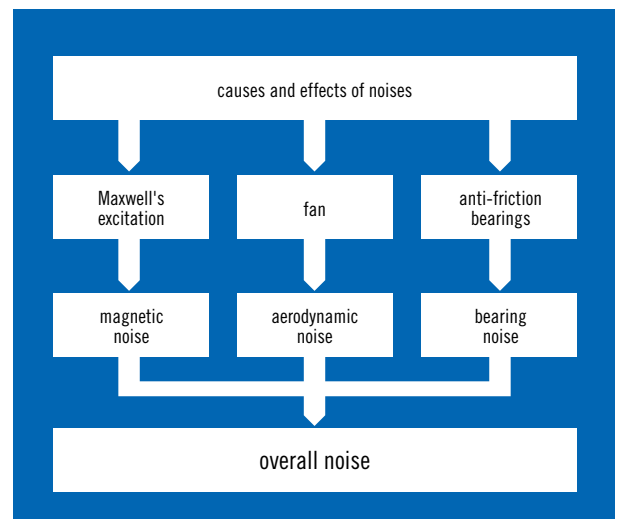
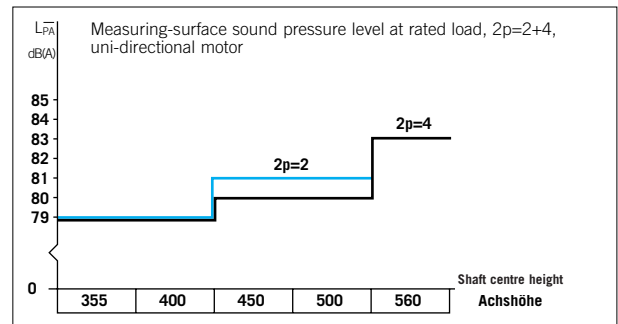
## Noise

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

**For extreme low-noise requirements, additional noise reduction measures can be taken.**



Sources of noise in electrical machines