

Roof fans Series VRR

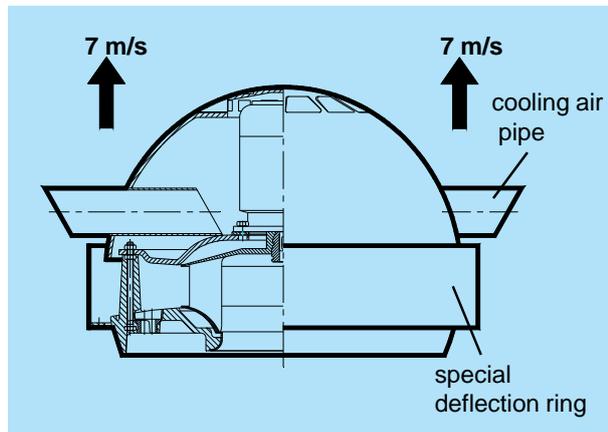
Special designs



Laboratory version LAB (VRR / 702 and VRR / 701)

In room air conditioning plants for laboratories it is customary to blow out the exhaust air vertically above the roof and above the intakes of external air. Exhaust speed should not fall below 7 m/s .

The high flow speed merges the aggressive exhaust air more intensely with the ambient air.



The special version LAB leads to the outlet speed of 7 m/sec. if the following condition is met:

size 160/200	volumetric flow greater than 900 m ³ /h
size 315	volumetric flow greater than 2 100 m ³ /h
size 400/500	volumetric flow greater than 9 500 m ³ /h

Smaller volumetric flows do not reach the speed required. Radial fans VRE are applied in such cases in combination with suitable deflector hoods.

When selecting the fans take care that the increase of blowout energy reduces the usable pressure increase Δp_{fa} by about 10 % if compared with the standard version.

The exhaust air stream is directed vertically upward by a deflector ring of special design. The motor gets its cooling air through two pipes pushed laterally into the hood after assembly.

Special demands for operation with frequency inverter

Motors with increased safety EEx e II must not be used in inverter operation.

Motors EEx de with flameproof enclosure can be employed in inverter mode if they are equipped with winding protection (design TS).

Pressure-controlled version DR (VRR/ALM)

The special version DR is an element of pressure-controlled central ventilation plants in apartment buildings, hotels, hospitals, hostels, and office buildings (see information „Central ventilation systems“).

Such plants ensure continuous fundamental ventilation and meet the minimum demands of building physics and hygiene. Changeover to ventilation on demand is possible by the user by means of electrically adjustable exhaust air guiding elements. The fan adapts its capacity to the changing demand by means of a suitable controller.

The fans contains a pressure measuring probe and a pressure pickup.

Installation is restricted to the electrical connection of the fan to the controller PTDE 6-M (see page 27) .

Pressure-controlled version DR (VRR / 702 and VRR / 701)

Also the fans VRR/702 and VRR/701 are offered in a pressure-regulated version. The regulation is taken over by a particularly modified static frequency inverter FU... A31 (see page 29).

With this system for example the pressure in the collecting duct of a laboratory exhaust plant can be kept constant and the fan capacity is adapted to the changing demand.

The fan contains a pressure measuring probe and a pressure pickup. All settings and programmings of the frequency inverter are made by the manufactures. Thus no special knowledge is necessary,

In similar way a flow rate regulation with a measuring device (e.g. orifice plate MBL) is possible. Thus for example the filter pollution in a plant can become balanced by changing the fan speed.