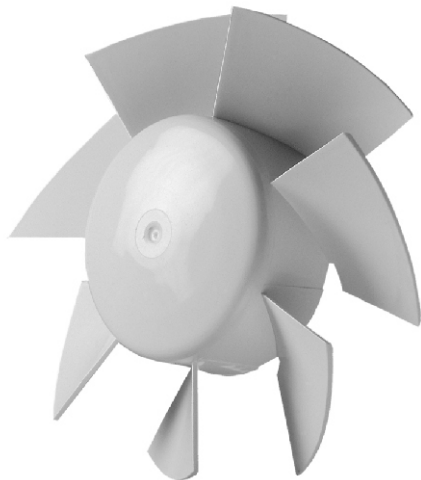


Electrical fan for domestic use  
"VV"and "VVR" series

# MANUAL

2008



## FUNCTIONS

Fans are designed to be used in domestic areas (such as living quarters, offices, shops, garages, kitchens, toilets and other quarters, that are heated in the winter season).

Mentioned fans are of an exhaust (VV models) and a draft-or-exhaust (VVR models) type, and should be mounted on or inside of the walls, or in windows.

VV and VVR fans has adjustable draft damper, operated by an electrical servomotor.

The fans are designed to be used in temperature range of 0°C to 45°C.

Operation life minimum is 5 years.

The fans' design is being continuously improved, so some of the models may differ from their description in this manual.

## GENERAL TECHNICAL CHARACTERISTICS

The fans' markings, parameters, overall dimensions and structural specifications are given in tables 1 and 2, and on figure 1.

The fans work from a power supply network with a voltage of 220-240 V AC and a frequency of 50 Hz.

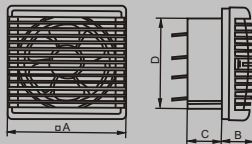
| Type                                     | VV 180  | VVR 180 |                 | VV 230  | VVR 230 |                 |
|--|---------|---------|-----------------|---------|---------|-----------------|
|  | exhaust | exhaust | draft           | exhaust | exhaust | draft           |
| Rotation direction                       | left    | left    | right (reverse) | left    | left    | right (reverse) |
| Exhaust pipe diameter, mm                | 177     | 177     |                 | 237     | 237     |                 |
| Voltage, V AC, with a frequency of 50 Hz | 220-240 |         |                 |         |         |                 |
| Power, W                                 | 25      | 25      | 25              | 30      | 30      | 30              |
| Capacity, m <sup>3</sup> /h              | 212     | 212     | 176             | 455     | 455     | 290             |
| Pressure, Pa                             | 35      | 35      | 30              | 38      | 38      | 30              |
| Rotation frequency, min <sup>-1</sup>    | 1400    | 1400    | 1400            | 1300    | 1300    | 1300            |
| Noice, dB(A), 3 m                        | 31      | 31      | 31              | 32      | 32      | 32              |

table 1

VV 180  
VV 230

VVR 180  
VVR 230

figure 1



| Type    | A   | B  | C  | D   |
|---------|-----|----|----|-----|
| VV 180  | 230 | 65 | 87 | 177 |
| VVR 180 |     |    |    |     |
| VV 230  | 295 | 74 | 85 | 237 |
| VVR 230 |     |    |    |     |

table 2

## DELIVERY SET

Delivery set includes the following:

- fan - 1 item;
- certificate;
- package box;
- screws - 4 items;
- dowel - 4 items;
- joint - 1 item.

## SAFETY REQUIREMENTS

Electric shock protection of the fans is a class 1.

Protection from a contact with dangerous parts and water intrusion is on the IPX4 level.

The equipment should be mounted and maintained only by persons, who had read this manual and who has a right to independently service equipment with voltages over 1000 V.

Do not install and use these fans in places with air temperatures, which exceed the stated temperature range, as well as in an atmosphere, that contains corrosive vapors.

Never use the product, if any objects, capable of damaging the fan blades, have got into an air intake.

## INSTALLATION

Make an opening  $D1$  in a wall or in a glass:

for fans **VV/VVR 180**,  $D1=185 - 188$  mm; for fans **VV/VVR 230**,  $D1=247 - 250$  mm.

Install the fan in the opening and secure it with the securing bars (figure 2) or with 4 screws, which fix the fan to the wall by the dowels.

Then, install an exterior panel of the fan.

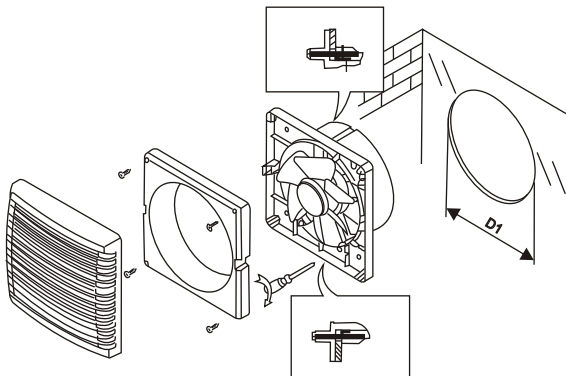


figure 2

## FANS' STRUCTURE AND SETTING-UP PROCEDURES

**WARNING!** All maintenance and installation works are to be performed with the main power off.

The air flow direction must be in a direction, that an arrow on the fan case shows.

For a VV series fan a power source connection scheme is shown on figure 3.

When using a VVR series fan, it is possible to reverse an air flow direction.

To connect such a fan and make use of its reverse function, a switch S may be used, as shown on a figure 4; or else, the switching may be performed using the cable connections:

- when power cable is connected to an L2 terminal, the fan operates in an exhaust mode;
- when power cable is connected to an L1 terminal, the fan operates in an intake mode.

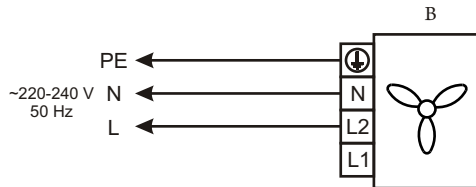


figure 3

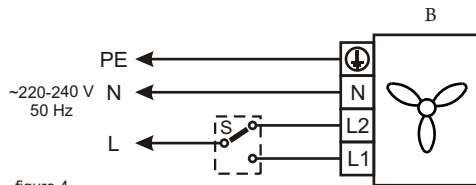


figure 4

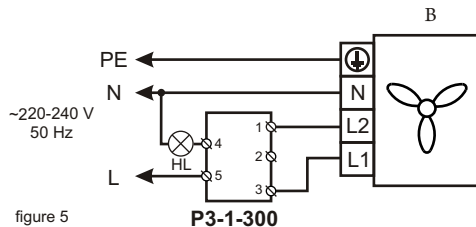


figure 5

## TECHNICAL SERVICING

The fan should be serviced only when the main power is off.

Technical servicing consists of a periodical cleaning of the dust and dirt from the surfaces. The cleaning should be done, using a soft cloth and soap water, and then wiped dry.

## STORAGE CONDITIONS

The fan should be stored in a ventilated room, with air temperature of +5°C to +40°C and humidity less than 80 % (at T=25°C), in a manufacturer's package.

## MANUFACTURER'S WARRANTY

Manufacturer hereby guarantees normal performance of the fan over 60 months since the date of its sale via retail commercial network subject to adherence to the rules of transportation, storage, assembling and operation. In case of unavailability of indication of the fan's sale date, the warranty term is calculated from the date of manufacture. In case of occurrence of faults in operation of the fan through the fault of the Manufacturer within the warranty term, consumer shall be eligible for free replacement. Warranty replacement is performed by Seller.

## TECHNICAL SERVICING

The fan is ready for operation

| Model   |                          |
|---------|--------------------------|
| VV 180  | <input type="checkbox"/> |
| VVR 180 | <input type="checkbox"/> |
| VV 230  | <input type="checkbox"/> |
| VVR 230 | <input type="checkbox"/> |

check the right one

Manufacture date

Sold

**Sellers' name, shop's stamp**

Acceptance stamp

Sale date