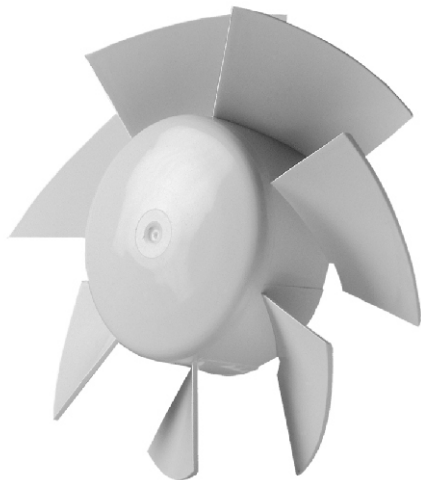


Electrical fan for domestic use
"VV"and "VVR" series

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.

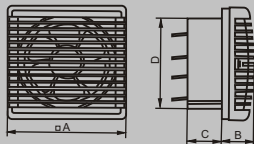
Type	VV 180	VVR 180		VV 230	VVR 230	
	exhaust	exhaust	draft	exhaust	exhaust	draft
Rotation direction	left	left	right (reverse)	left	left	right (reverse)
Exhaust pipe diameter, mm	177	177		237	237	
Voltage, V AC, with a frequency of 50 Hz	220-240					
Power, W	25	25	25	30	30	30
Capacity, m ³ /h	212	212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

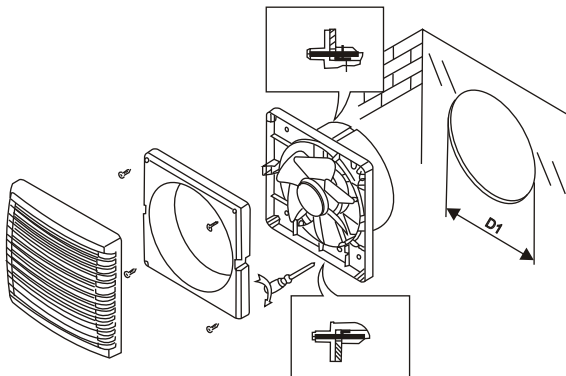


figure 2

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.

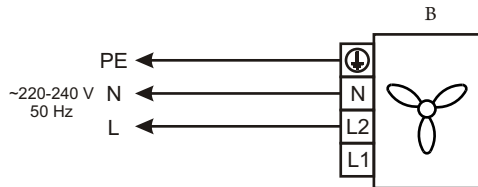


figure 3

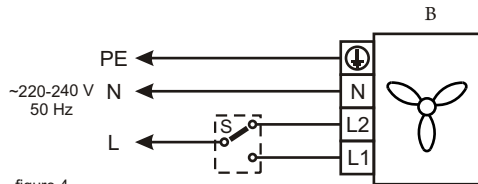


figure 4

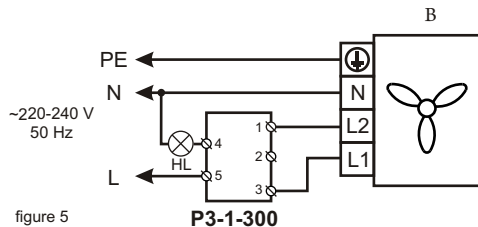


figure 5

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