

# CENTRIFUGAL IN-LINE FAN

## USER'S MANUAL

V.2.5-29.2-30637114-007-2004

2007



## FUNCTION

The centrifugal in-line fans VENTS VK having the rotor diameter from 190 to 280 mm, hereinafter referred to as the fans, are designed to ventilate domestic and commercial premises (residential rooms, offices, shops, garages, kitchens, lavatories and other premises heated during winter time). They are manufactured in compliance with the Technical Requirements V.2.5-29.2-30637114-007-2004.

Fanned air should not contain dust and other solid additives as well as sticky substances and fiber materials. The temperature of ambient air should not be higher than the values indicated in the Table 1.

The fans are installed in horizontal and in vertical positions in ventilation ducts and may be used for both exhaust and input ventilation.

The fans are designed for long-term operation without disconnection from power supply.

According to their type electro safety, the fans fall into the equipment of Class II.

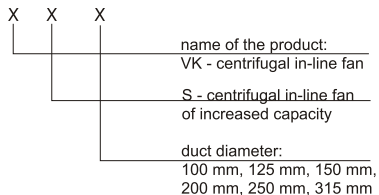
The level of protection from access to dangerous parts and from water penetration is IPX4.

The climate design of the fan is UHL 4.2 under the State Standard GOST 15150.

## BASIC PERFORMANCE SPECIFICATION

Ventilators' symbols, their characteristics and connection dimensions are specified in Tables 1, 2 and in Figure 1.

Structure chart of the centrifugal in-line fans' graphical symbol.



The model with duct diameter of 150 mm may be installed in air duct of 150 or 160 mm diameter.

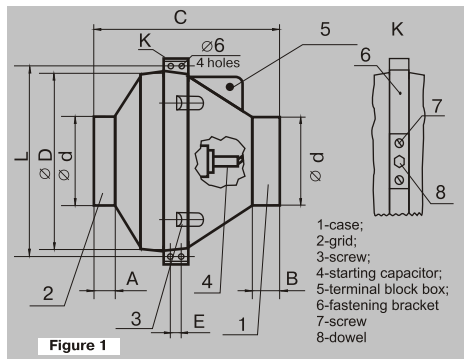
Sample denomination of the fan identification in the air duct of 100 mm: 100 VK.

\*Supply-line voltage allowance = 10% of rating value.



Tab. 1

Fan type	Dimensions, mm							Weight (kg)
	$\varnothing d$	$\varnothing D$	C	A	B	L	E	
VK 100	100	250	230	27	30	270	30	2,15
VK 125	125	250	218	27	30	270	30	2,2
VK 150	150/160	300	286	30	30	320	30	2,6
VK 200	200	340	280	30	30	354	40	4,0
VKS 200	200	340	280	30	30	354	40	4,3
VK 250	250	340	265	30	30	354	40	4,5
VK 315	315	400	280	40	40	414	40	5,1
VKS 315	315	400	280	40	40	414	40	5,2



Tab. 2

Fan type	Capacity (m <sup>3</sup> /h)	Pressure (Pa)	R.P.M	Consumption current (A)	Supply voltage (V)	Power (W)	Capacity (mFa)	Noise level (dBa)	Frequency (Hz)	Ambient temperature C <sup>o</sup>
VK 100	250	372	2500	0,26	230	59	2	47	50	65
VK 125	365	320	2500	0,27	230	61	2	47	50	65
VK 150	495	315	2500	0,28	230	64	2	46	50	65
VK 200	790	410	2400	0,48	230	110	3	49	50	55
VKS 200	1100	580	2500	0,61	230	140	4	51	50	55
VK 250	1150	555	2500	0,74	230	170	5	50	50	50
VK 315	1325	515	2400	0,67	230	155	5	50	50	45
VKS 315	1700	700	2400	0,98	230	225	7	51	50	45

## SAFETY REQUIREMENTS

The fan VENTS complies with the requirements according to the EU norms and directives.

In case if a fan with the level of protection that corresponds to the second distinctive number IP X4 is used in humid conditions, it is necessary to provide additional protection in order to prevent moisture access. Possible protection means:

1. If a fan is installed in a horizontal position, the duct length on both side should be not less than 1m.
2. In any fan position it is necessary to install a cap on the suction branch tube.

Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other open-fire appliances.

Installation and connection of the fan should be done by skilled electrician in compliance with the effective normative documents.

Fan's maintenance and repair are allowed only when it has been disconnected from power supply.

Prior to connecting the fan to power supply, it is necessary to make sure that there is no visible faults on the rotor, case, grid and that there are no foreign items in airflow part of the case, which may damage rotor's blades.

**CAUTION:** Do not use the fan in highly explosive environment.



## FAN DESIGN AND ITS CONNECTION TO POWER SUPPLY

The fan (figure 1) consists of:

Case 1 with installed electric motor with impeller;  
capacitor 4, installed inside of the case 1;  
grille 2, which is attached to the case using  
screw 3 (diameter of pipes of case and grille  
corresponds to diameter of installing duct); cover of  
terminal block 5 for connecting of the fan to  
single-phase circuit;

Connecting of the fan to single-phase circuit  
(figure 3) is done through switch, built-in to fixed  
wiring. Connection of fans to electric power supply  
must be performed only through switch with  
actuation length not less than 3 mm at all poles.  
The fan is installed vertically or horizontally.  
Direction of air-charging is to comply with direction  
of arrow on the fan case.

Mount the fan on the wall or ceiling, it is necessary  
to make the following actions:  
Screw out from each side of the case 1 of the fan  
dowel 8 and install brackets, ensuring coincidence  
of holes in the brackets with screw heads 3.

Attach brackets to the case of the fan with dowels 8.  
Perforate ceiling (wall) for dowels according  
mounting holes of the support and mount the fan  
using screws.

Connect ducts of corresponding diameter to the fan  
and fix them using clamps.

Connecting the fan having single-phase electric motor to  
an alternating current power line, where M is motor

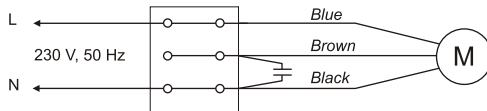


Figure 3

### THE FAN IS COMPLETED WITH

The complete set includes:

- Fan:.....1 unit;
- Galvanized steel brackets .....2 units;
- User's manual;
- Packaging.

## MAINTENANCE

Maintenance work may be done only after the fan has been disconnected from the power supply.

Service includes regular cleaning of the fan surface from dust and dirt after the fan has been disconnected from power supply. A soft dry brush or pressed air should be used to remove dust.

The blades of rotor should be thoroughly cleaned every 6 months.

In order to do it, release the screws 3 (fig. 1) and detach the grille 2 from the case 1. Use detergent dissolved in water to clean the rotor blades. Avoid the liquid getting on the motor.

## STORAGE RULES

The fan should be stored in manufacturer's packaging in ventilated room at air temperature room +5°C to +40°C and relative air humidity not exceeding 80% (at T=25°C).

Presence of acid alkali and other aggressive substances vapours in the air is not permitted.

## MANUFACTURER'S WARRANTY

The manufacturer, "VENTILATION SYSTEMS" JSC, guarantees normal operation of the fan during 24 months after the date of its sale through retail network on condition that the rules for its transportation, storage, installation and operation are followed.

In case of absence of the entry specifying the date of sale, the warranty period is calculated from the date of manufacture. In case any fan's malfunction occurs during the warranty period through the fault of manufacturer, the respective customer shall be entitled to replacement of the fan at the manufacturer's location pursuant Article 14 paragraph 9 of the Law of Ukraine "On Protection of Consumers Rights".

The warranty replacement is done at:

1, ul. Mikh.Kotsubinskogo,  
Kiev, 01030 Ukraine



## ACCEPTANCE CERTIFICATE

The ventilator "VENTS" complies with the technical requirements V.2.5-29.2-30637114-007-2004 and acknowledged as being ready for operation.

Model  
"VENTS"

Date of manufacturing

Quality control stamp

Sold  
**name of trade enterprise, shop stamp**

Date of sale