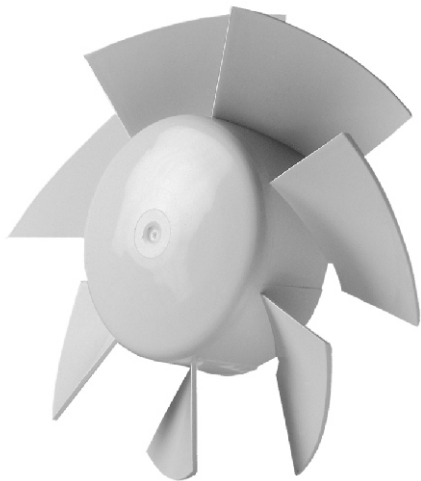


VENTS SERIES DOMESTIC ELECTRIC FANS

User's Manual

2008



DESIGNATION

"VENTS" fans are designed for ventilation of domestic and similar premises (apartments, offices, stores, garages, kitchens, bathrooms, toilets and other rooms, heated in wintertime).

Fans (but for VKO/VKO1 series) are exhaust fans and are designed for wall or ceiling mounting. MAO-series fans are to be installed in windows.

VKO/VKO1-series fans may be used for both input and output ventilation and are to be installed in ventilation ducts.

VENTS fans are designed for continuous work without switching off mains.

Design of the fans is constantly improved and updated, and some models may differ from what is described in this manual.

BASIC SPECIFICATIONS

Fans identification, diagrammatic representation of appearance, installation dimensions and peculiarities of design are given in Table 1.

The fans are designed for operation from AC power supply with voltage of 220-240 V and frequency of 50 Hz or 12 V and frequency of 50 Hz (depends upon the model).

Nominal output in terms of extract air capacity is:

- for fans with 100 mm outlet capacity: 55 - 107 m³/h (5%)
- for fans with 125 mm outlet capacity: 108 - 232 m³/h (5%)
- for fans with 150 mm outlet capacity: 220 - 348 m³/h (5%)

Nominal electric power of the fans is:

- for fans with 100 mm outlet capacity: - 5,3/22 W
- for fans with 125 mm outlet capacity: - 9,1/26 W
- for fans with 150 mm outlet capacity: - 20/32 W

Equalized sound level at 3 m distance does not exceed 40 dBA. Fans are designed for operation at air temperature within 0°C to 45°C.

Durability not less than 5 years.



IDENTIFICATION

X X X X X X X X X X X

100, 125, 150 - outlet capacity of the fan

VKO, VKO1, M, MA, M1, M3, MAO1, MAO2, K, K1 - indication

PF, PF1, D, D1, Xstar, R, R1, S, S1, F, LD, LD1, F1, X, X1 of fan series

V - supplied with switch

T - supplied with timer

TH - supplied with timer and humidity relay

TP - supplied with timer and motion sensor

K - supplied with back valve

L - motor with ball-bearings

turbo

press

12 - low voltage motor 12 V

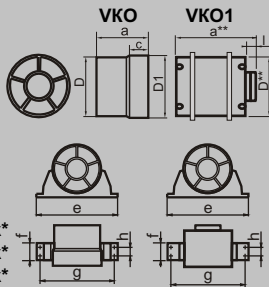
Q - quiet operation motor

Example of symbolic notation:

VENTS 125 DVTK fan with 125 mm outlet capacity, D-series, supplied with switch, timer, back valve



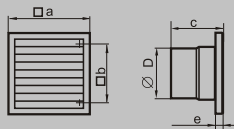
VENTS 100 VKO*
VENTS 125 VKO*
VENTS 150 VKO*
VENTS 100 VKO1*
VENTS 125 VKO1*
VENTS 150 VKO1*
VENTS 100 VKOk*
VENTS 125 VKOk*
VENTS 150 VKOk*
VENTS 100 VKO1k*
VENTS 125 VKO1k*
VENTS 150 VKO1k*



* - VKO(k) and VKO1(k) - series fans of all modifications

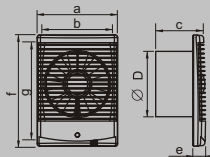
VENTS 100 K*
VENTS 125 K*
VENTS 150 K*

VENTS 100 K1*
VENTS 125 K1*



* - K and K1- series fans of all modifications

VENTS 100 M3*
VENTS 125 M3*
VENTS 150 M3*



* - M3- series fans of all modifications

table 1

Type	a/a**	D1	D/D**	c	l
100 VKO/VKO1	85/113	104	100/98	32	30
125 VKO/VKO1	85/118	129	125/123	32	30
150 VKO/VKO1	105/128	154	150/148	48	30

Mounting inside air duct connected on both sides.

** -series fans VKO1

Type	e	g	h	f
100 VKOk/VKO1k	160	144	29	45
125 VKOk/VKO1k	185	169	29	45
150 VKOk/VKO1k	200	184	29	45

Supplied with mounting corbel for mounting to flat surface.

Type	a	b	c/c**	D	e/e**
100 K/ K1	154	110	100/104	100	15/19
125 K/ K1	187	142	100/104	125	15/19
150 K	250	214	118	150	15

Mounting on air duct from air-charging side. Supplied with detachable "K" or "K1" type grille on air-suction side.

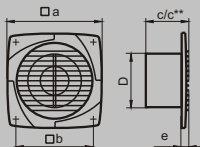
** -series fans K1

Type	a	b	c	D	e	f	g
100 M3	188	155	85	100	30	256	226
125 M3	188	155	91	125	30	256	226
150 M3	188	155	115	150	30	256	226

Mounting on air duct from air-charging side



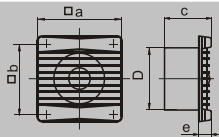
VENTS 100 D*
VENTS 125 D*
VENTS 150 D*



VENTS 100 D1*
VENTS 125 D1*
VENTS 150 D1*

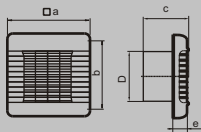
*- D and D1 -series fans of all modifications

VENTS 100 M*
VENTS 125 M*
VENTS 150 M*



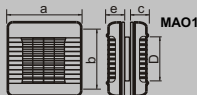
*- M -series fans of all modifications

VENTS 100 MA*
VENTS 125 MA*
VENTS 150 MA*
VENTS 100 M1*
VENTS 125 M1*
VENTS 150 M1*



*- MA and M1 -series fans of all modifications

VENTS 125 MAO1*
VENTS 150 MAO1*



VENTS 125 MAO2*
VENTS 150 MAO2*



*- MAO1 and MAO2 -series fans

table 1 of all modifications

Type	a	b	c**	D	e
100 D\D1	150	120	108/93	100	12
125 D\D1	176	140	114/96	125	13
150 D\D1	205	165	132	150	15

Mounting on air duct from air-charging side

** -series fans D1

Type	a	b	c	D	e
100 M	160	135	90	100	25
125 M	180	150	94	125	25
150 M	207	182	106	150	25

Mounting on air duct from air-charging side

Type	a	b	c	D	e
100 MA\M1	166	150	90	100	30
125 MA\M1	186	170	94	125	30
150 MA\M1	207	187	110	150	30

Mounting on air duct from air-charging side

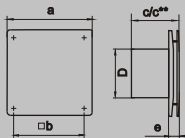
MA supplied with automatically opening louvers.

Type	a	b	e	c	D	g	h
125 MAO1	186	173	60	53	125	—	—
125 MAO2	186	173	60	—	125	123	160
150 MAO1	210	195	66	60	150	—	—
150 MAO2	210	195	66	—	150	156	183

Mounting on the windows.

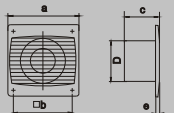


VENTS 100 LD*
 VENTS 125 LD*
 VENTS 150 LD*
 VENTS 100 LD1*
 VENTS 125 LD1*
 VENTS 150 LD1*



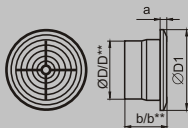
* - LD and LD1- series fans of all modifications

VENTS 100 S*
 VENTS 125 S*
 VENTS 150 S*
 VENTS 100 S1*
 VENTS 125 S1*
 VENTS 150 S1*



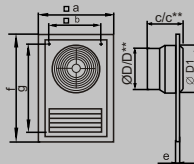
* - S and S1 - series fans of all modifications

VENTS 100 PF*
 VENTS 125 PF*
 VENTS 150 PF*
 VENTS 100 PF1*
 VENTS 125 PF1*
 VENTS 150 PF1*



* - PF and PF1 - series fans of all modifications

VENTS 100 F*
 VENTS 125 F*
 VENTS 100 F1*
 VENTS 125 F1*



* - F and F1- series fans of all modifications

table 1

Type	a	b	c/c**	D	e
100 LD\LD1	150	120	126/111	100	30
125 LD\LD1	176	140	134/116	125	30
150 LD\LD1	205	165	153	150	30

Mounting on air duct from air-charging side

** - series fans LD1

Type	a	b	c/c**	D	e
100 S\S1	150	120	108/93	100	12
125 S\S1	176	140	114/96	125	12
150 S\S1	205	165	132	150	13

Mounting on air duct from air-charging side

** - series fans S1

Type	a	b/b**	D/D**	D1
100 PF\PF1	12	99/127	100/99	141
125 PF\PF1	14	100/134	125/123	166
150 PF\PF1	15	116/146	150/146	188

Mounting on air duct from air-charging side

** - series fans PF1

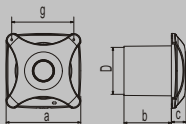
Type	a	b	c/c**	D/D**	e	D1	f	g
100 F\F1	182	160	99/127	100/99	10	141	252	226
125 F\F1	182	160	100/134	125/123	10	166	252	226

Mounting on air duct from air-charging side

** - series fans F1

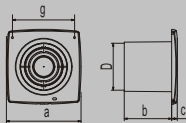


VENTS 100 X*
VENTS 125 X*
VENTS 150 X*



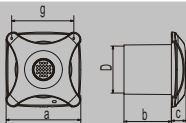
* - X- series fans of all modifications

VENTS 100 X1*
VENTS 125 X1*
VENTS 150 X1*

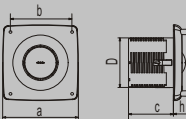


* - X1- series fans of all modifications

VENTS 100 Xstar

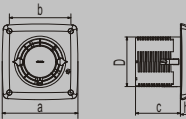


VENTS 100 R*



* - R- series fans of all modifications

VENTS 100 R1*



* - R1- series fans of all modifications

table 1

Type	a	b	c	D	g
100 X	151	96	30	100	120
125 X	178	101	30	125	140
150 X	204	117	30	150	165

Mounting on air duct from air-charging side

Type	a	b	c	D	g
100 X1	151	96	12	100	120
125 X1	178	101	13	125	140
150 X1	204	117	14	150	165

Mounting on air duct from air-charging side

Type	a	b	c	D	g
100 Xstar	151	96	31	100	120

Mounting on air duct from air-charging side

Type	a	b	c	D	h
100 R	150	122	89	98	36

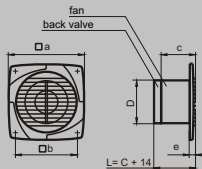
Mounting on air duct from air-charging side

Type	a	b	c	D	h
100 R1	150	122	89	98	25

Mounting on air duct from air-charging side



M, D, D1, Xstar, S, S1, M1, M3, LD, LD1, X, X1 series fans can be supplied with back valves. At that dimension of case outlet capacity of fan is 14 mm longer.



SET OF SUPPLY

The following articles are included in the supplied set:

- Fan - 1pc.;
- User's manual;
- Packing box;
- Screws: 4pcs;
(except models 100, 125, 150 VKO/VK01)
- sealing gasket - 2 pcs;
(for models 125, 150 MAO1/MAO2)
- tie-bolt - 2 pcs.
(for models 125, 150 MAO1/MAO2)

SAFETY REQUIREMENTS

The fan VENTS complies with the requirements according to the EU norms and directives, to the relevant EU-Low Voltage Equipment Directives, EU-Directives on Electromagnetic Compatibility. Level of protection from access to hazardous parts and waterproof:

IPX4 - VKO , VK01

IP24 - MA, Xstar, R, R1, MAO1, MAO2, X, X1 series

IP34 - K, K1, D, D1, M, PF, PF1,
M1, M3, F1, S, S1, F, LD, LD1 series.

Connection of fans supplied without electric cords to power supply as well as replacement of electric cord should be performed by skilled electrician.

Fan operation beyond the operational temperature range as well as in rooms with ambient air containing aggressive admixes is prohibited.

ATTENTION! Fan operation when restrictions, being able to damage or jamm blades of operation wheel, are in flowing part of case, is prohibited.

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



PREPARATION TO DEVICE OPERATION.

Attention! All maintenance works and connection of fans are to be performed only after switching off mains.

Connection of fans to electric power supply must be performed only through switch with actuation length not less than 3 mm at all poles.

Direction of air-charging is to comply with direction of arrow on the fan case.

VENTS VKO\VKO1 fans are mounting in ventilation air ducts from both ends and nipped with clamps.

VENTS MAO1/MAO2 fans are mounting on the windows .

Fans of other models are inserted in the hole of the air duct and mounted on the wall or ceiling with dowels.

If necessary, ensure conditions to prevent free access to impeller and current-carrying parts of fan by protective means from side of outcome (ventilation grille, protective cowl and so on). Connection of fans to electric power supply is shown in Fig. 1-11.

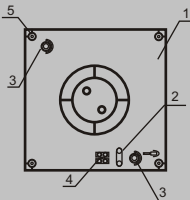
An order in which connection of fans should be made is indicated in Tab.2

Fans Identification	Operations of connection to power supply
VENTS VKO VENTS VKO1 VENTS K VENTS K1 VENTS PF VENTS PF1 VENTS F VENTS F1	Remove protective grid (except model VENTS VKO). Take away a protective cowl. Pass power supply cords through a hole 3, smooth out wire rags at length 7-8 mm to clamp terminals 4 against stop to the metal part of the clamp and tighten them with screws. Fix cords with the help of clip 2. Reinstall protective cowl and grid back.
VENTS M VENTS M1 VENTS M3 VENTS MA VENTS MAO1 VENTS MAO2	Remove protective grid and cover. Pass power supply cords through a hole 3 (having cut a thin plastic pierce on the spot of opening beforehand). Smooth out wire rags at length 7-8 mm to clamp terminals 4 against stop to the metal part of the clamp and tighten them with screws. Fix cords with the help of clip 2. Reinstall cover and protective grid back.
VENTS Xstar VENTS D VENTS D1 VENTS S VENTS S1 VENTS LD VENTS LD1 VENTS X VENTS X1	Remove protective grid and cover. Pass power supply cords through a hole 3 (having cut a thin plastic pierce on the spot of opening before hand). Smooth out wire rags at length 7-8 mm to clamp terminals 4 against stop to the metal part of the clamp and tighten them with screws. Place power supply cords into housing grooves and fix them in fastening support. Reinstall cover and protective grid back.
VENTS R VENTS R1	Take off a decorative front facia (for models R). Open a cover of terminal compartment. Put the wires through an opening 2 (having cut a thin plastic cover on the opening beforehand). Skin the ends of the wires for 5-7 mm, set them in the terminal 1 up to the stop of the isolation into metal part of the terminal and fix them with screws. Set the power wires in the terminal compartment. Close the cover of the terminal compartment. Mount the front facia (for models R).

table 2

For fans without switch, it is advisable to install power supply switch on fixed power supply wiring. Diagram of connection of fan to fixed power supply wiring is shown in Fig. 12-17

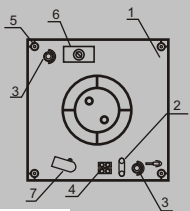




- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting.

picture 1

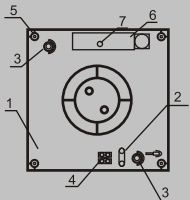
M, M3 -series fans with removed cover.



- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - timer\ timer with humidity sensor;
- 7 - pull cord switch.

picture 2

M, M3 -series fans with removed cover.
Models: T, TH, V, VT, VTH



- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - timer with motion sensor;
- 7 - potentiometer T.

picture 3

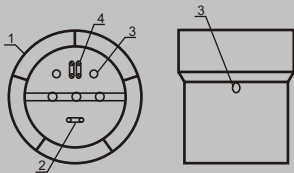
M, M3 -series fans with removed cover.
Models: TP

ATTENTION

for fans with motion sensors

The front cover of the fan must be uncovered only from the side of the motion sensor !

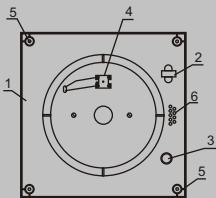




picture 4

VKO, VKO1, F1, K, K1, PF, PF1, F - series fans with removed cover.

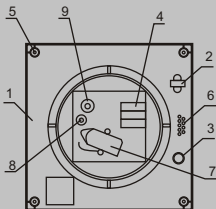
- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal.



picture 5

D, D1, S, S1, LD, LD1, X, X1, - series fans with removed cover.

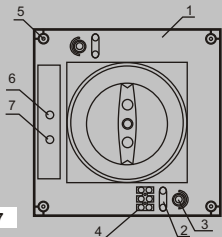
- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - lead fixing rack.



picture 6

D, D1, S, S1, LD, LD1, X, X1, - series fans with removed cover.
Models: T, TH, V, VT, VTH

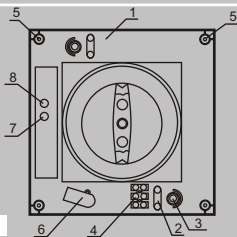
- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - lead fixing rack;
- 7 - pull cord switch;
- 8 - potentiometer T;
- 9 - potentiometer H.



picture 7

M1, MA, MAO1, MAO2 - series fans with removed cover.
Models: T, TH

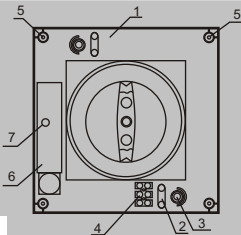
- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - potentiometer T;
- 7 - potentiometer H.



picture 8

M1, MA, MAO1, MAO2 - series fans with removed cover.
Models: V, VT, VTH

- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - pull cord switch;
- 7 - potentiometer T;
- 8 - potentiometer H.



picture 9

M1, MA, MAO1, MAO2 - series fans with removed cover.
Models: TP

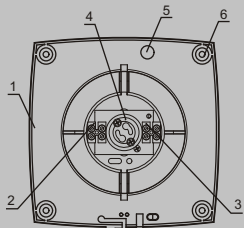
- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - timer and motion sensor;
- 7 - potentiometer T.

ATTENTION

for fans with motion sensors

The front cover of the fan
 must be uncovered only from
 the side of the motion sensor !

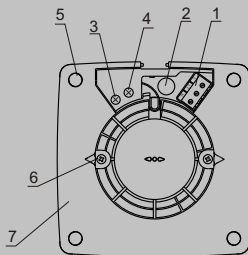




Xstar - series fans with removed cover.

- 1 - housing;
- 2 - clamp terminal;
- 3 - lamp terminal block;
- 4 - socket;
- 5 - clip of power supply cords;
- 6 - holes for fan mounting;

picture 10



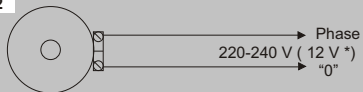
R, R1 series fans with removed decorative cover plate, fascia and gags.

Models: T, TH, V, VT, VTH

- 1 - terminal block;
- 2 - holes for power supply cords;
- 3 - potentiometer T;
- 4 - potentiometer H.
- 5 - holes for fan mounting;
- 6 - screws to fix fan into duct
- 7 - housing

picture 11

picture 12



Power supply feed circuit for fans with built-in switch

picture 13

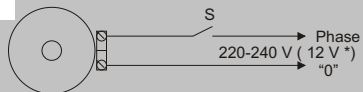


Diagram of connection of fan without built-in switch to circuit, where 8 is switch installed additionally.

picture 14

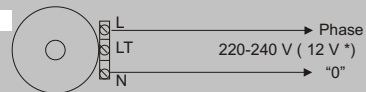


Diagram of connection of fan equipped with timer /timer with humidity relay and built-in switch.

picture 15

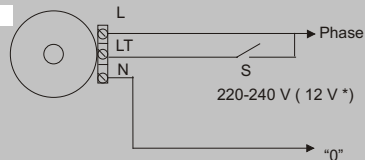
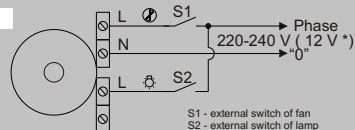


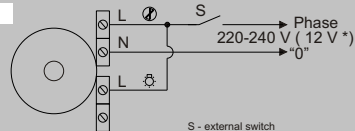
Diagram of connection of fan equipped with timer /timer with humidity relay and without built-in switch.

picture 16



Electrical connection of X star fan when fan and lighting can be switched separately

picture 17



Electrical connection of X star fan when fan and lighting can be switched at the same time.

Diagrams in Fig. 12, 14 show operation of fans, equipped with built-in switch.

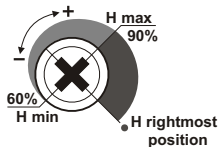
Diagrams in Fig. 13, 15 show connection of fans without built-in switch. (S - external switch).

Electrical connection of X star fan is shown in Fig.16, 17.

Fan with timer option switches on when the voltage is supplied to clamp LT. After the voltage is disconnected the fan continues working during the set time T, which is regulated from 2 till 30 min. The time T is regulated by turning the potentiometer clockwise to increase and anticlockwise to decrease the delay time.

Fan with timer and humidity sensor switches on when the voltage is supplied to clamp LT or when the definite humidity level (regulated from 60% till 90%) is exceeded. After the voltage is disconnected or humidity level H is decreased the fan continues working during the time set by timer T, which is regulated from 2 till 30 min. The options of time T and humidity H are regulated by turning the potentiometers T and H clockwise to increase and anticlockwise to decrease the delay time and humidity level respectively.

To set the maximum humidity level the potentiometer H has to be set in position H max (90%).



Attention!

If during regulation the potentiometer H is set outside of the indicated zone - rightwards from H max (see picture)- there is a probability that the fan will not switch on. In this case it is necessary to check the position of the potentiometer.

Fan with timer and movement sensor switches on when a person moves at the distance from 1 till 4 meters with viewing angle of the sensor of 100° horizontally. After the person stops moving the fan continues working during the set time T, which is regulated from 2 till 30 min. The time T is regulated by turning the potentiometer T clockwise to increase and anticlockwise to decrease the delay time.

Attention! Diagram of timer is situated under mains voltage.

Any regulations have to be made only when the fan is switched off the mains. Diagram in Fig. 15 shows connection of lighting lamp to fan's timer controlled by single switch (S is an external switch). When lightning lamp is off, fan continues working during the time set by timer.

* - only for 12 V fans (mentioned on the fan's body and fan's box).

MAINTENANCE

Fan maintenance should be performed only after switching off mains. Maintenance chiefly consists of periodic cleaning of the fan's surfaces of duct and dirt. The fan should be cleaned with soft cloth wetted in soapy water. After cleaning, the surfaces should be wiped dry

STORAGE

Fan should be stored in original manufacturer's container at a temperature within $+5^{\circ}\text{C}$ and $+40^{\circ}\text{C}$ and relative air humidity not more than 80% (at $T = 25^{\circ}\text{C}$).

WARRANTY

Fans are manufactured at the factory of "Ventilation systems", JSC in compliance with European norms and standards at force.

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 repair of the device or its replacement at manufacturing enterprise in accordance with relevant provisions of article 14(9) of the Law of Ukraine "On Protection of Consumer's Rights".

Warranty replacement is performed by Manufacturer at 01030, Kyiv, 1 M. Kotsiubynskyi Str. or by Seller.

ACCEPTANCE CERTIFICATE

The fan has been duly certified as serviceable

Model
" VENTS "

Manufactured on (date):

Approval mark

Sold

Name of trading enterprise, stamp of store

Date of sale: