

USER'S MANUAL

30637114.006.1PS

ELECTRICAL AXIAL INDUSTRIAL FANS

VENTS OV/ OVK/ OV1/ OV1R/ OVK1/ VKF/ VKOM series



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PURPOSE

VENTS axial fans with impeller diameter from 200 to 630 mm for VKF, OV, OVK fans and from 150 to 315 mm for VKOM, OV1, OV1R, OVK1 further referred as fans, are designed for direct air exhaust outside or for air supply to the rooms.

The transported medium aggressivity to ordinary carbon steel shall be no more than the air aggressivity at the temperature from -25°C up to $+40-60^{\circ}\text{C}$.

Content of dust and other solid admixtures, sticky substances and fibrous materials in the transported medium is not allowed.

Protection rating from access to dangerous parts and water penetration is

IP24 for OV, OVK, OV1, OV1R, OVK1
IPX4 for VKF, VKOM fans.

DELIVERY SET

The delivery set includes:

for OV, OVK, OV1, OV1R, OVK1 fans:

- fan;
- user's manual.

for VKOM fan:

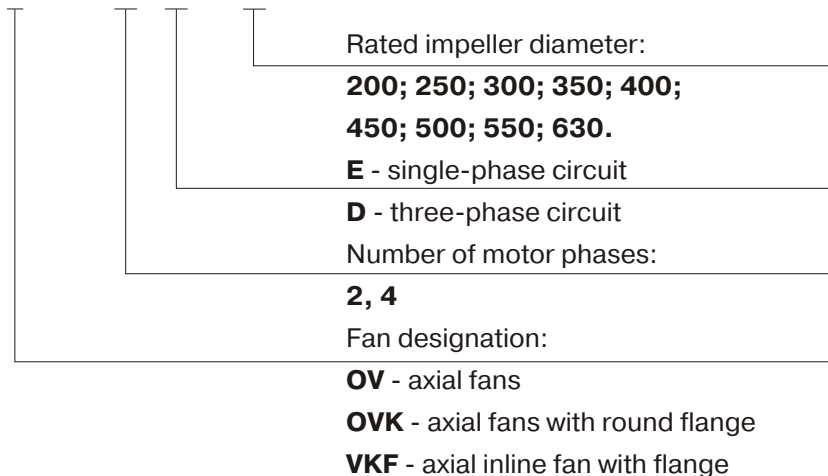
- fan;
- user's manual;
- internal fastening elements - 2 pcs.

BASIC TECHNICAL CHARACTERISTICS

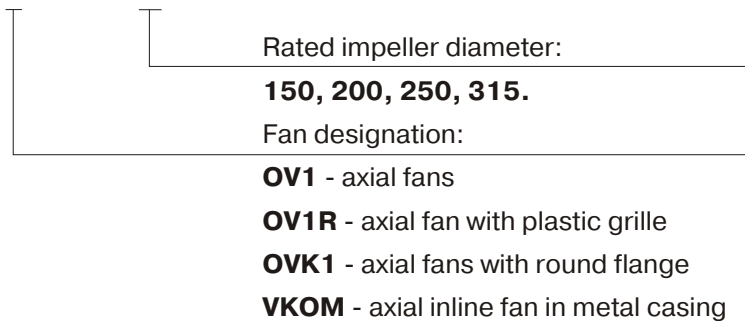
Fan designation, their parameters and connecting dimensions are shown in the tables 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and in fig. 1, 2, 3, 4, 5, 6, 7.

DESIGNATION KEY

XX/XXX X X XXX

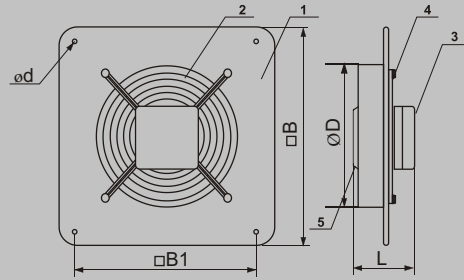


XX/XXX XXX

**Designation key:**

VENTS OVK1 150 - axial fan with round flange and impeller diameter 150 mm.

VENTS OV 2E 250 - axial fan with round flange and single-phase two-pole motor with impeller diameter 250 mm.



- 1 - casing
- 2 - grille
- 3 - terminal box;
- 4 - bolt;
- 5 - electric motor with impeller.

Figure 1

Fan type	Dimensions [mm]					Weight [kg]
	∅D	∅d	B	B1	L	
OV 2E 200	210	7	312	260	145	3,0
OV 2E 250	260	7	370	320	155	4,0
OV 4E 250	260	7	370	320	155	3,5
OV 2E 300	326	9	430	380	195	6,1
OV 4E 300	326	9	430	380	195	5,0
OV 4E 350	388	9	485	435	200	7,8
OV 4E 400	417	9	540	490	240	8,8
OV 4E 450	465	11	576	535	250	10,5
OV 4E 500	520	11	655	615	260	14,0
OV 4E 550	570	11	725	675	280	16,5
OV 4E 630	650	11	800	710	295	20,0
OV 2D 250	260	7	370	320	155	4,0
OV 4D 250	260	7	370	320	155	3,5
OV 2D 300	326	9	430	380	155	5,4
OV 4D 300	326	9	430	380	155	5,4
OV 4D 350	388	9	485	435	200	7,8
OV 4D 400	417	9	540	490	240	8,8
OV 4D 450	465	11	576	535	250	10,5

table 1

- 1 - casing**
2 - grille
3 - terminal box;
4 - bolt;
5 - electric motor with impeller.

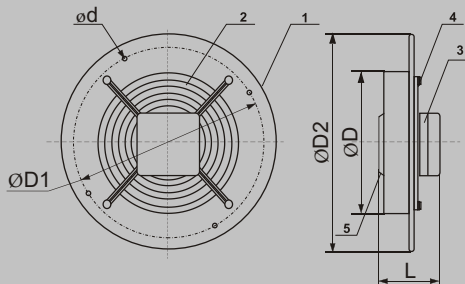


figure 2

Fan type	Dimensions [mm]					Weight [kg]
	ØD	ØD1	ØD2	ød	L	
OVK 2E 200	210	250	280	7	145	2,8
OVK 2E 250	260	295	320	7	155	3,8
OVK 4E 250	260	295	320	7	155	3,4
OVK 2E 300	326	380	397	9	195	5,9
OVK 4E 300	326	380	397	9	195	5,0
OVK 4E 350	388	442	460	9	200	7,5
OVK 4E 400	417	504	528	9	240	8,5
OVK 4E 450	465	578	607	11	250	10,0
OVK 4E 500	520	590	655	11	260	14,0
OVK 4E 550	570	645	710	11	280	16,5
OVK 4E 630	650	760	800	11	295	20,0
OVK 2D 250	260	295	320	7	155	3,8
OVK 4D 250	260	295	320	7	155	3,4
OVK 2D 300	326	380	397	9	155	5,1
OVK 4D 300	326	380	397	9	155	5,1
OVK 4D 350	388	442	460	9	200	7,5
OVK 4D 400	417	504	528	9	240	8,5
OVK 4D 450	465	578	607	11	250	10,0

table 2

Fan type	Current consumption [A]	Power consumption [W]	Voltage [V] at 50 Hz	Maximum operating temperature [°C]
OV 2E 200/OVK 2E 200	0,26	55	230	-30+60
OV 2E 250/OVK 2E 250	0,40	80	230	-30+60
OV 4E 250/OVK 4E 250	0,22	50	230	-30+40/60
OV 2E 300/OVK 2E 300	0,66	145	230	-30+40/60
OV 4E 300/OVK 4E 300	0,35	75	230	-30+60
OV 4E 350/OVK 4E 350	0,65	140	230	-30+60
OV 4E 400/OVK 4E 400	0,82	180	230	-30+40/60
OV 4E 450/OVK 4E 450	1,20	250	230	-30+40/60
OV 4E 500/OVK 4E 500	1,95	420	230	-30+60
OV 4E 550/OVK 4E 550	2,55	550	230	-30+60
OV 4E 630/OVK 4E 630	3,50	750	230	-30+60
OV 2D 250/OVK 2D 250	0,22	80	400	-30+60
OV 4D 250/OVK 4D 250	0,17	60	400	-30+60
OV 2D 300/OVK 2D 300	0,25	145	400	-30+60
OV 4D 300/OVK 4D 300	0,22	75	400	-30+40/60
OV 4D 350/OVK 4D 350	0,38	140	400	-30+60
OV 4D 400/OVK 4D 400	0,47	180	400	-30+60
OV 4D 450/OVK 4D 450	0,60	250	400	-30+60

table 3

Fan type	Current consumption [A]	Power consumption [W]	Voltage [V] at 50 Hz	Maximum operating temperature [°C]
OV1 150/OVK1 150/OV1R 150	0,26	36	230	-30+40
OV1 200/OVK1 200/OV1R 200	0,28	43	230	-30+40
OV1 250/OVK1 250/OV1R 250	0,48	68	230	-30+40
OV1 315/OVK1 315	0,75	110	230	-30+40

table 4

- 1 - casing
2 - grille
3 - terminal box;
4 - bolt;
5 - electric motor with impeller.

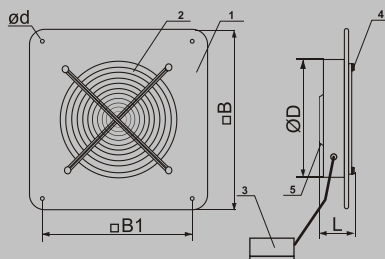


figure 3

Fan type	Dimensions [mm]					Weight [kg]
	ØD	Ød	B	B1	L	
OV1 150	162	7	250	210	120	2,5
OV1 200	208	7	312	260	120	3,0
OV1 250	262	7	370	320	140	3,5
OV1 315	312	9	430	380	170	6,1

table 5

- 1 - casing
2 - grille
3 - terminal box;
4 - bolt;
5 - electric motor with impeller.

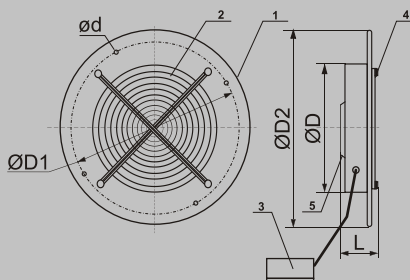


figure 4

Fan type	Dimensions [mm]					Weight [kg]
	ØD	ØD1	ØD2	Ød	L	
OVK1 150	162	190	220	7	120	2,5
OVK1 200	208	270	300	7	120	2,5
OVK1 250	262	330	360	7	140	3,0
OVK1 315	312	390	420	9	170	5,1

table 6

- 1 - casing
- 2 - terminal box
- 3 - frame
- 4 - terminal box;
- 5 - electric motor with impeller.

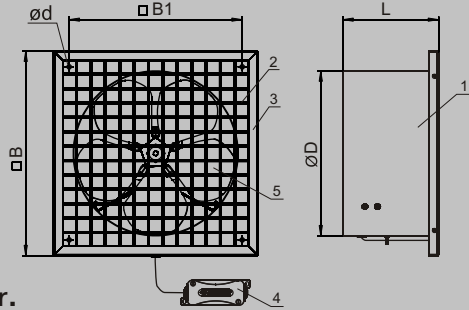


figure 5

Fan type	Dimensions [mm]					Weight [kg]
	øD	ød	B	B1	L	
OV1R 150	162	7	325	275	127	2,5
OV1R 200	208	7	325	275	127	3,0
OV1R 250	262	7	325	275	152	3,5

table 7

- 1 - casing
- 2 - fastening brackets
- 3 - internal fastening element
- 4 - electric motor with impeller

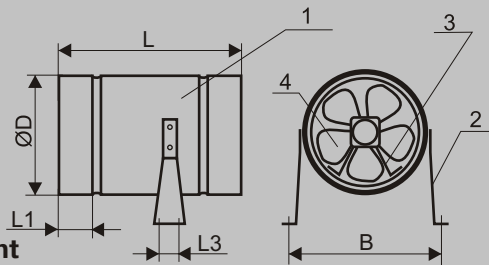


figure 6

Fan type	Dimensions [mm]					Weight [kg]
	øD	B	L	L1	L3	
VKOM 150	162	183	220	40	30	1,8
VKOM 200	208	228	220	40	30	2,4
VKOM 250	262	283	270	55	30	3,7
VKOM 315	315	337	278	55	40	4,9

table 8

- 1 - casing
2 - terminal box
3 - bolt
4 - electric motor with impeller

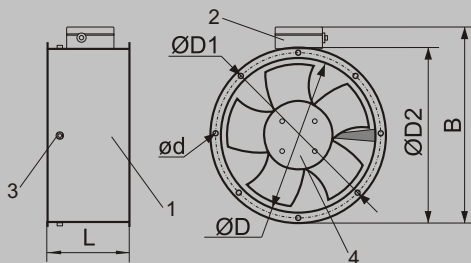


figure 7

Fan type	Dimensions [mm]						Weight [kg]
	ØD	ØD1	ØD2	ød	B	L	
VKF 2E 200	205	250	280	7	290	120	3,1
VKF 2E 250	260	295	320	7	340	150	4,0
VKF 4E 250	260	295	320	7	340	150	4,1
VKF 2E 300	310	380	397	9	420	160	6,5
VKF 4E 300	310	380	397	9	420	160	6,5
VKF 4E 350	362	442	460	9	480	160	8,1
VKF 4E 400	412	504	528	9	550	170	9,1
VKF 4E 450	462	578	607	11	630	200	10,6
VKF 4E 500	515	600	650	11	635	220	12,8
VKF 4E 550	565	650	700	13	685	230	15,5
VKF 4E 630	645	740	790	13	780	230	18,5
VKF 2D 250	260	295	320	7	340	150	4,0
VKF 4D 250	260	295	320	7	340	150	4,1
VKF 2D 300	310	380	397	9	420	160	6,0
VKF 4D 300	310	380	397	9	420	160	6,0
VKF 4D 350	362	442	460	9	480	160	8,1
VKF 4D 400	412	504	528	9	550	170	9,1
VKF 4D 450	462	578	607	7	630	200	10,6

table 9

Fan type	Current consumption [A]	Power consumption [W]	Voltage [V] at 50 Hz	Maximum operating temperature [°C]
VKOM 150	0,26	36	230	-30+40
VKOM 200	0,28	43	230	-30+40
VKOM 250	0,48	68	230	-30+40
VKOM 315	0,75	110	230	-30+40

table 10

Fan type	Current consumption [A]	Power consumption [W]	Voltage [V] at 50 Hz	Maximum operating temperature [°C]
VKF 2E 200	0,26	55	230	-30+60
VKF 2E 250	0,40	80	230	-30+60
VKF 4E 250	0,22	50	230	-30+40/60
VKF 2E 300	0,66	145	230	-30+40/60
VKF 4E 300	0,35	75	230	-30+60
VKF 4E 350	0,65	140	230	-30+60
VKF 4E 400	0,82	180	230	-30+40/60
VKF 4E 450	1,20	250	230	-30+40/60
VKF 4E 500	1,95	420	230	-30+60
VKF 4E 550	2,55	550	230	-30+60
VKF 4E 630	3,50	750	230	-30+60
VKF 2D 250	0,22	80	400	-30+60
VKF 4D 250	0,17	60	400	-30+60
VKF 2D 300	0,25	145	400	-30+60
VKF 4D 300	0,22	75	400	-30+40/60
VKF 4D 350	0,38	140	400	-30+60
VKF 4D 400	0,47	180	400	-30+60
VKF 4D 450	0,60	250	400	-30+60

table 11

SAFETY REQUIREMENTS

All connection, adjustment, maintenance and repair works shall be performed only after the fan is disconnected from power supply network.

The fan shall be connected by duly qualified electricians authorized for independent electrical works at electrical installations with the voltage up to 1000 V only.

Before instalment make sure that the impeller, fan casing and the grille are free of any visible damages or any foreign objects inside the casing that may damage the impeller.

Misuse of the device or any unauthorized alteration or modification are prohibited.

The product is not intended for operation by any persons (including children) with reduced physical, mental or sensory capacities, lacking practical experience or expertise, not controlled or briefed on the unit operation by the person responsible for their safety.

Use of the device in the medium containing inflammables or vapours such as spirit, gasoline, insecticides and others is forbidden.

The fans are powered by single-phase AC 220 V/ 50 Hz and three-phase AC 380 V/ 50 Hz power supply.

INSTALLATION AND OPERATION GUIDELINES

The fans are mounted on the wall surface by means of a square connecting casing base for OV, OV1, OV1R fans or a round connecting casing base for OVK and OVK1 fans.

The mounting and connection sequence are shown in fig. 8-11.

The fan casing base is equipped with 4 mounting holes for OV, OV1, OV1R fan models and 6 mounting holes for OVK, OVK1 fan models for the best fan installation.

While installing the fans make sure that the arrow on the casing matches the air flow direction in the system. The installation place must provide sufficient access for maintenance, servicing or replacement operations.

VKF series fan is installed in the duct with connecting flanges (fig. 12). The fan is powered through the external terminal box.

VKOM series fan is installed in the duct with clamps. The delivery set of VKOM series fan includes fastening brackets for fastening the fan to the wall (fig. 13). The fan is powered through the external terminal box.

In case of possible water ingress inside the fan casing the equipment should be protected.

One of the protection possibilities is to install the fan under shelter or under roof (fig. 13).

The fan shall have reliable grounding:



Connect the terminal to the ground.

The fan design is regularly improved, that is why some models can slightly differ from those ones described in this manual.



OV

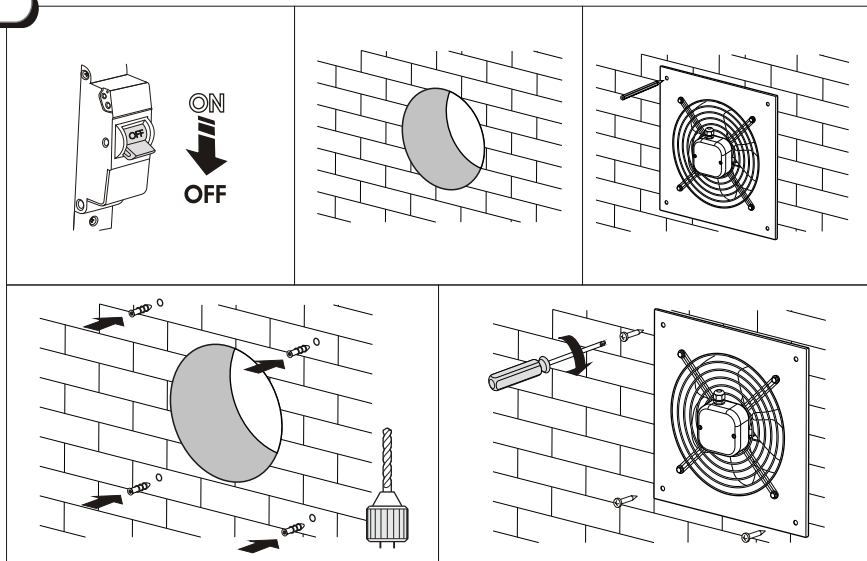


figure 8

OVK

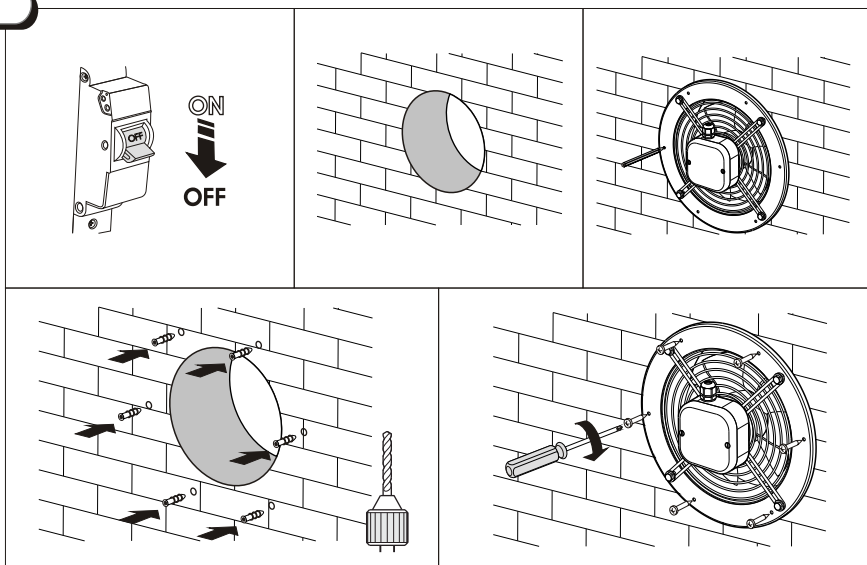


figure 9

OV1, OVK1

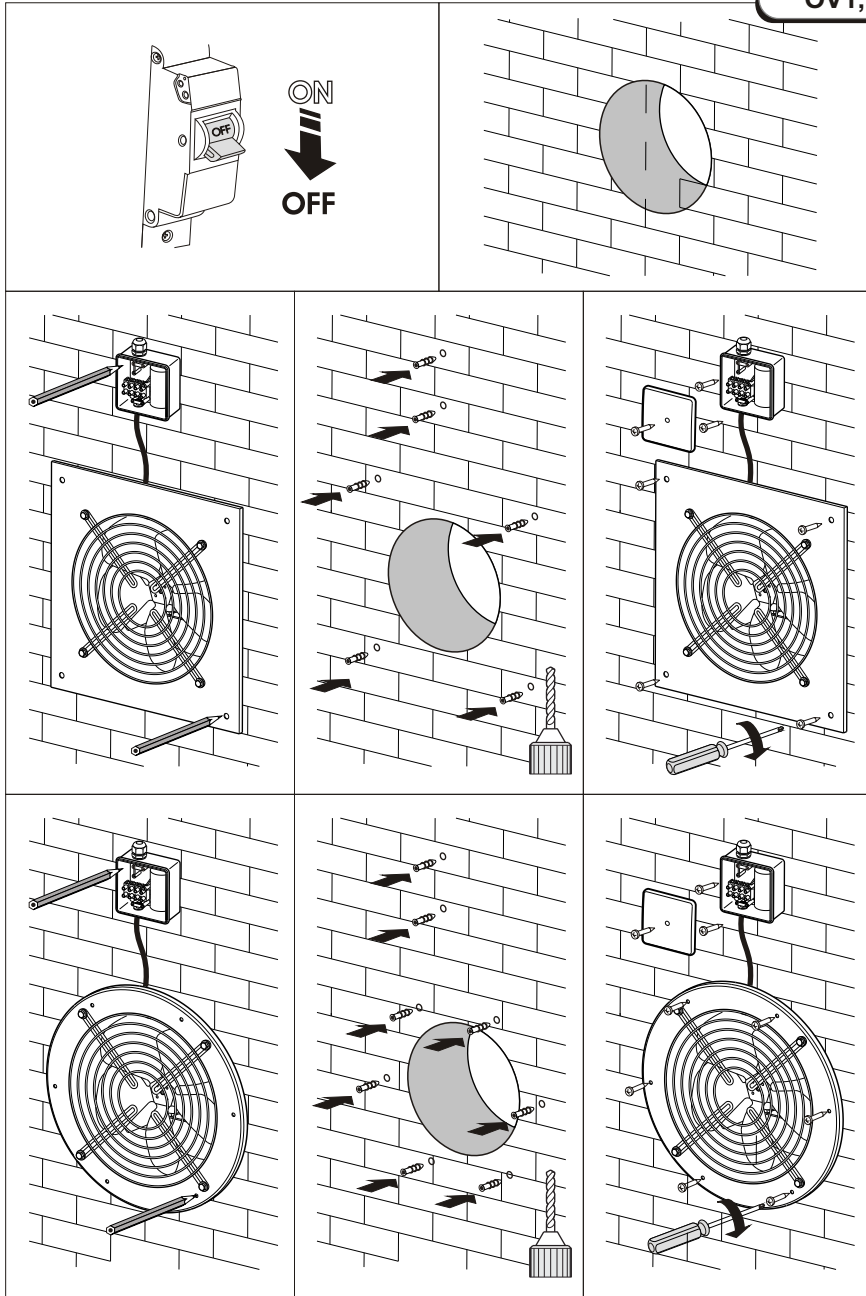


figure 10

OV1R

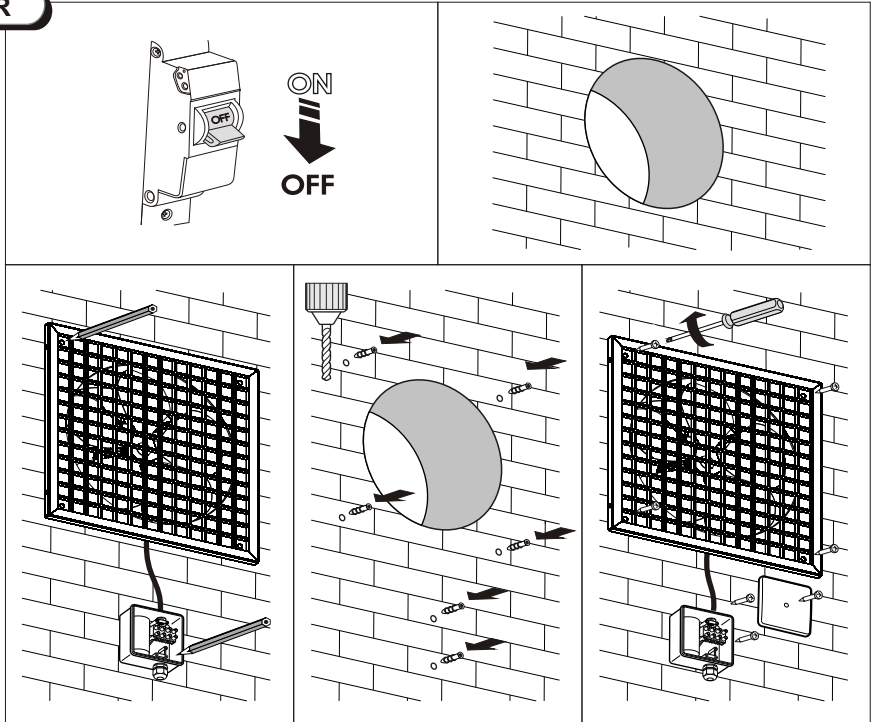


figure 11

VKF

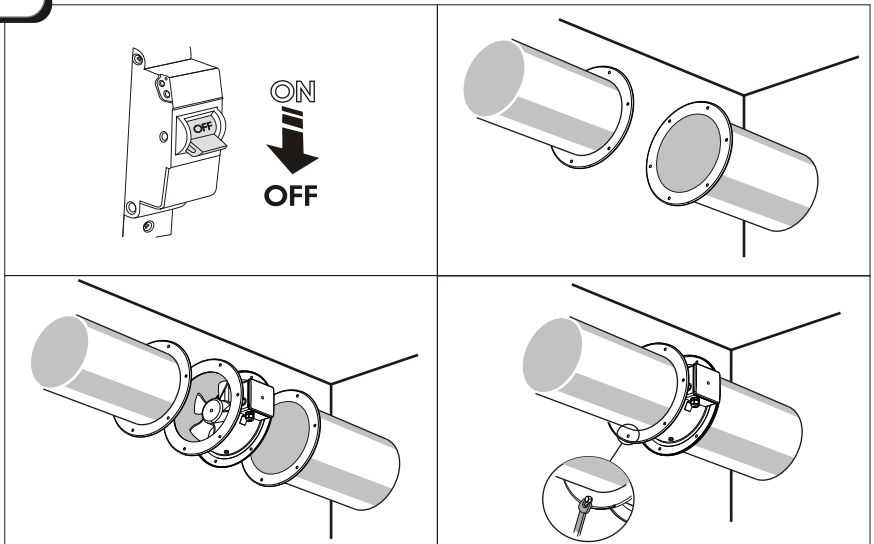


figure 12

VKOM

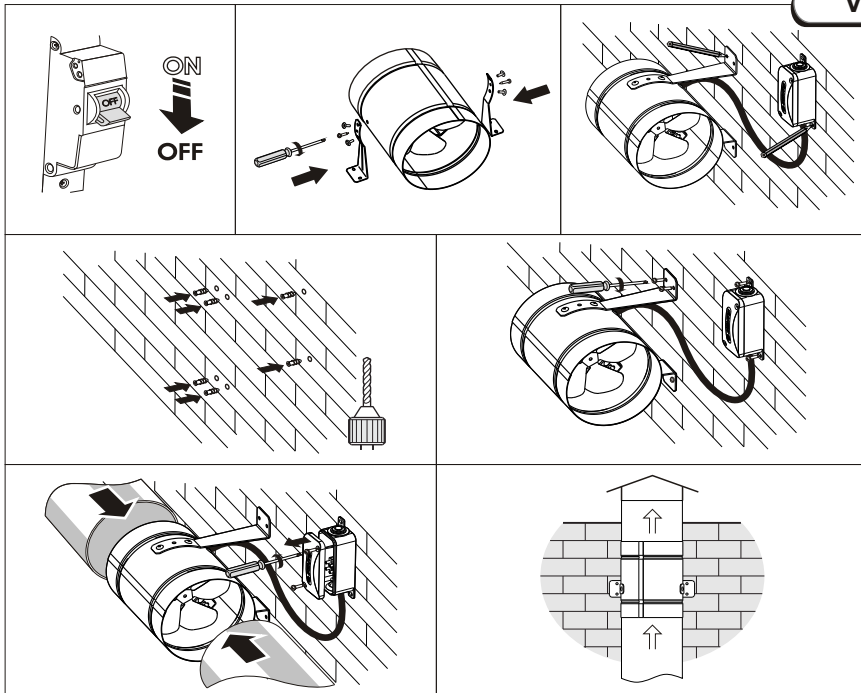


figure 13

FAN STRUCTURE

OV, OVK series fan (fig. 1 and 2) consists of the casing 1 with square or round flange with the grille 2 that is fastened to the casing with bolts 4 and assembled in one set with electric motor and impeller 5. The impeller rotation is determined by external rotor motor type.

The fastening bolts of the impeller are also used to fix the terminal box 3. Some fan models, for example, OV and OVK fan models, can be equipped with a remote external terminal box.

The fan casing incorporates a threaded opening M4 and yellow and green cables for connection to the ground circuit.

OV1, OVK1 fan (fig. 3,4) consists of the steel casing 1 with polymeric coating, the square flange for OV1 fan model or the round flange for OVK1 fan model for connection of the grille 3 through the bolts 4.

The motor and impeller 5 are fastened inside the casing with the fastening element. OV1, OVK1 fan models are equipped with the terminal box with a cord for external connection.

VKF fan (fig. 7) consists of the casing 1 with round flanges on both sides for bolt connection 4 of the cross-piece with inserted impeller 5. The impeller rotation shall be determined by the electric motor type.

The fan casing incorporates a threaded opening M4 and yellow and green cables for connection to the ground circuit.

VKOM fan (fig. 6) consists of the casing 1 with fastening brackets 2 connected to it by means of bolts. The electric motor with the impeller 4 is located inside the casing and fixed by means of an internal fastening element 3.

OV1R fan (fig. 5) consists of a steel polymer coated casing 1 with a square flange.

The motor and the impeller are installed inside the casing on the bracket.

The plastic grille 2 is installed inside the casing and fixed with a frame.

OV1 fan is equipped with a terminal box 4 fixed on a cord for remote electric connection.

FAN CONNECTION TO POWER SUPPLY

Wiring diagram for connection of **OV, OVK, VKF** fan with single-phase motor to AC power network, where
X - terminal box,
M - fan motor

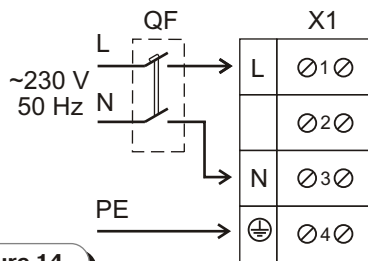


figure 14

Wiring diagram for connection of **OV, OVK, VKF** fan with three-phase motor to AC power network, where
X - terminal box,
M - fan motor

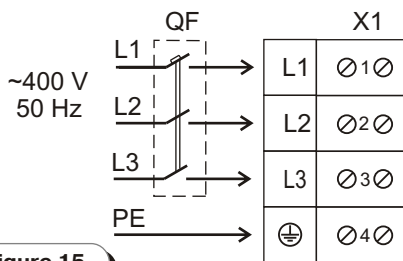


figure 15

Wiring diagram for connection of **OV, OV1R, OVK, VKOM** fan with single-phase motor to ac power network, where X - terminal box, M - fan motor

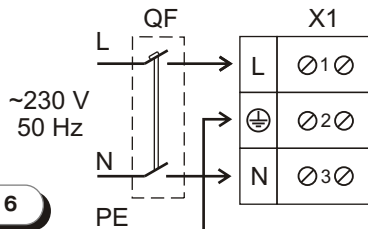


figure 16

The fan shall be connected to power supply network only by duly authorized qualified electrician. The rated electrical parameters are stated on the manufacturing label. Any modifications of the internal connections are prohibited and will void the warranty. The fan shall be connected by means of insulated, durable and heat-resistant conducts (cables, wires).

The automatic circuit breaker QF with magnetic trip shall be installed at the external input and connected to the fixed wiring system. QF circuit breaker shall be located in such a way as to ensure free and quick access to cut power supply off.

The operating current shall match the current consumption of the fan (table 3, 4, 9, 11).

The fan wiring diagrams are shown in fig. 14, 15, 16. The fans shall be connected pursuant to the fig. 17, 18, 19, 20. Cut power supply off before any works with the fan. The automatic circuit breaker QF shall be off.

OV, OVK

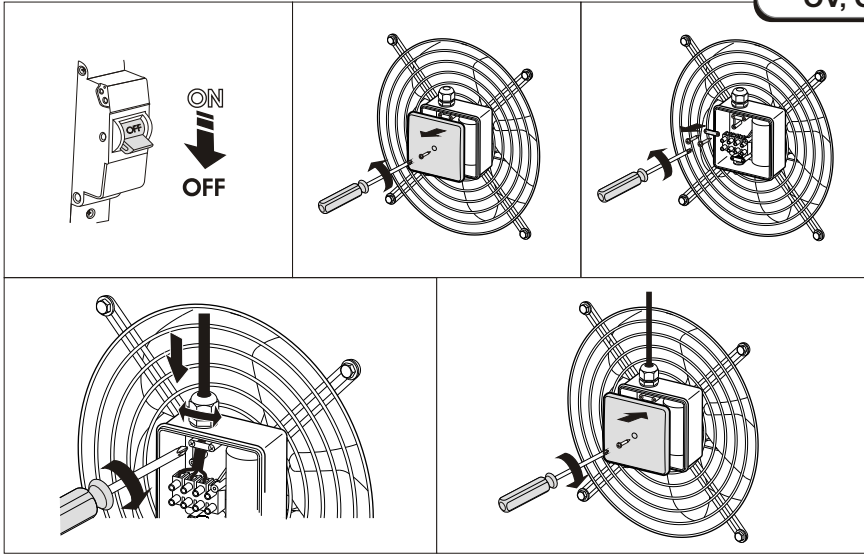


figure 17

OV1, OV1R, OVK1

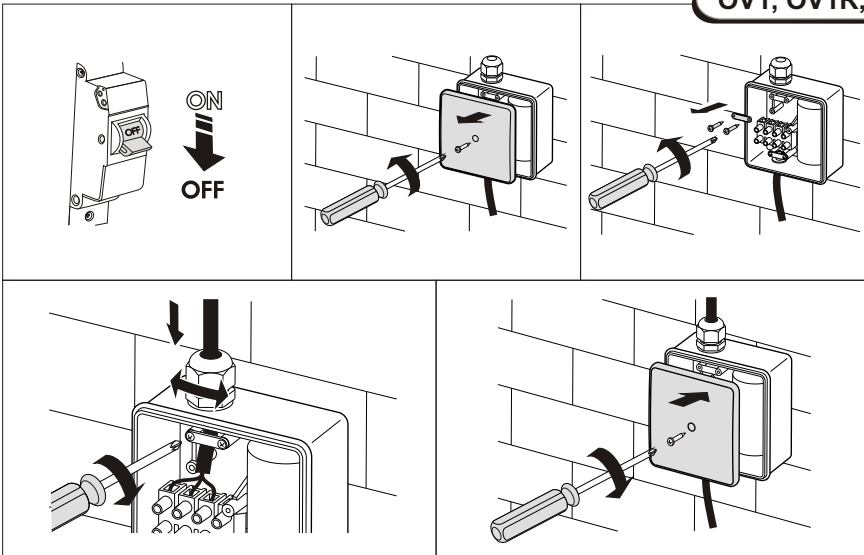


figure 18

VKF

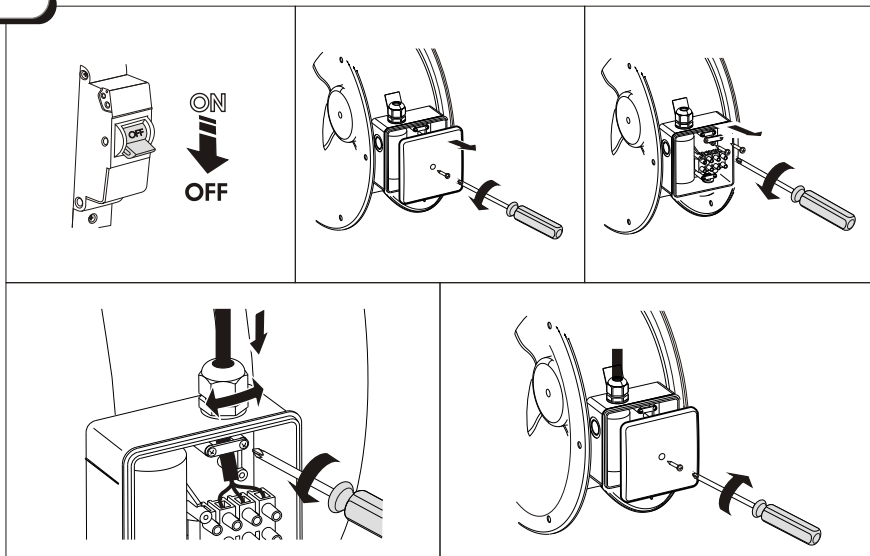


figure 19

VKOM

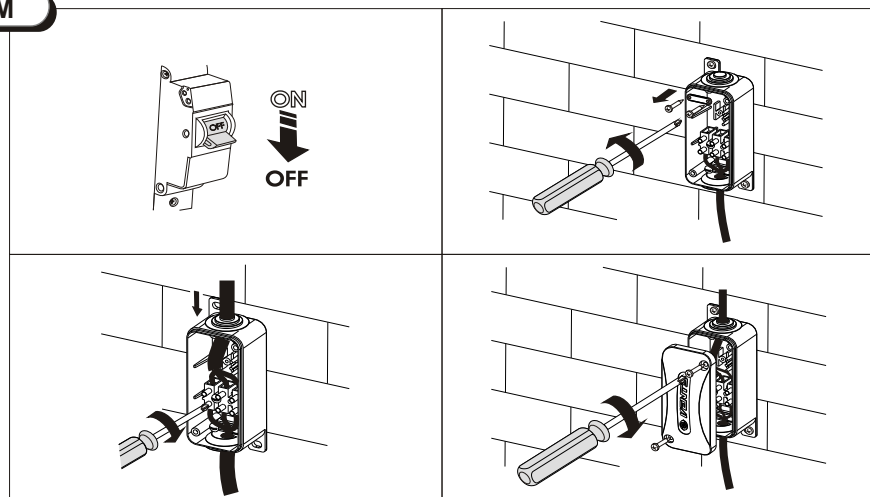


figure 20

MAINTENANCE

Maintenance of OV, OV1, OVK, OVK1, VKF, VKOM fans means periodic cleaning of the fan surfaces from dirt and dust when the fan is switched off. Use a soft dry cloth or compressed air to remove dust. Impeller blades require regular cleaning once in 6 months

For maintenance of VKF, VKOM fans remove the fans from the duct and unscrew the fastening bolts for VKOM fan models (fig. 24) or detach the fastening clamps for VKF fan models (fig. 25).

The maintenance procedure for OV, OVK fan models (fig. 21) as well as OV1, OV1R, OVK1 (fig. 22) includes turning off the bolt 4 and disconnecting the electric motor from the casing.

Use detergent water solution for all fan models to clean the blades.

Avoid penetration of liquid to the electric motor.

After cleaning wipe the surfaces dry.

STORAGE RULES

Store the fan in manufacturer's packaging in ventilated room at the temperatures between +5°C and +40°C and relative humidity not more than 80% at +25°C.

MANUFACTURER'S WARRANTY

We hereby declare that the following product complies with the essential protection requirements of Electromagnetic Council Directive 2004/108/EC, 89/336/EEC and Low Voltage Directive 2006/95/EC, 73/23/EEC and CE-marking Directive 93/68/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. This certificate is issued following test carried out on samples of the product referred to above. Assessment of compliance of the product with the requirements relating to electromagnetic compatibility was based on the following standards.

While purchasing the unit the Customer accepts the following warranty terms: Manufacturer hereby guarantees steady performance of the fan within 24 months since the date of its sale provided that all the rules of transportation, storage, assembling and operation are observed.

In case of no confirmation of sales date the warranty period is calculated from the production date.

All the units and components belonging to the faulty unit and replaced within the warranty period shall be covered by the previous warranty period and general warranty conditions. Thus the warranty period is neither extended nor renewed for the replaced components or the fan.

In case of any failures due to faulty manufacturing during warranty period, the Customer has the right to have the goods replaced at the manufacturing facility. Replacements are offered at Seller.

The accessories operated together with the unit, both included and not included into the delivery list as well as other equipment operating jointly with the unit shall not be covered by the warranty. No warranty for compatibility of the fans with other producers' goods.

Only manufacturing defects are covered by the warranty terms. All the defects and faults resulting from mechanical effect during operation process or natural wear-and-tear shall not be covered by the warranty conditions.

The malfunctions caused by violence of operation, servicing and maintenance guidelines either by Customer or third parties or caused by unauthorized design modifications shall not be covered by warranty.

NO LIABILITY FOR THE RELATED DAMAGES:

The manufacturer is not responsible for any mechanical or physical damages resulting from the manual requirements violence, the unit misuse or gross mechanical effect.

The indirect damages such as re-installation or re-connection of the unit, direct or indirect losses etc. related to the unit replacement shall not be indemnified. Mounting/dismantling, connection/disconnection and regulation of the unit shall not be covered by the warranty. The contractor in charge for quality of mounting, electric mounting and adjustment works shall be responsible for the warranty thereof.

In any case the indemnity amount shall not exceed the actually paid value for the defective unit price.

OV, OVK

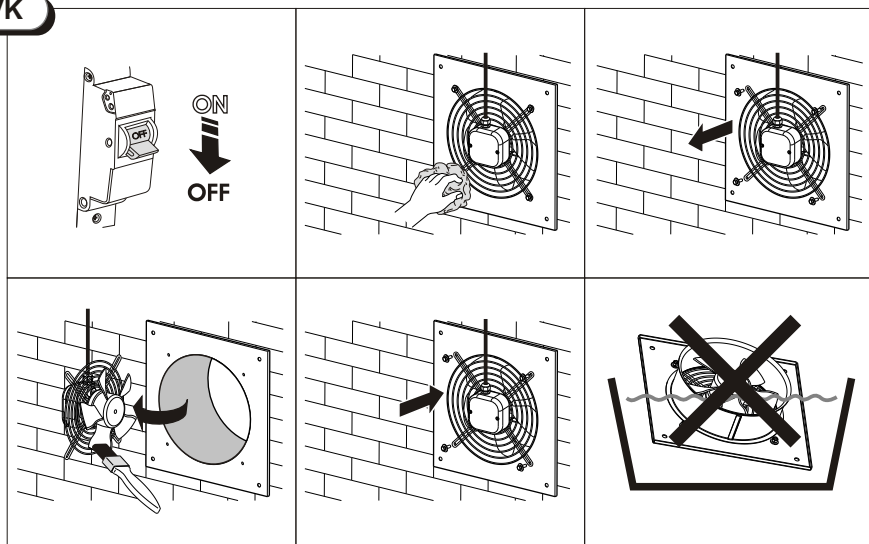


figure 21

OV1, OVK1

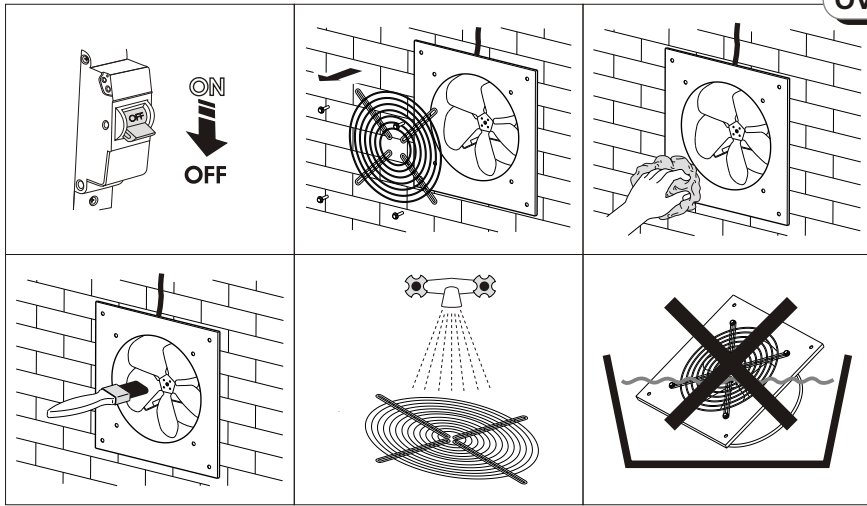


figure 22

OV1R

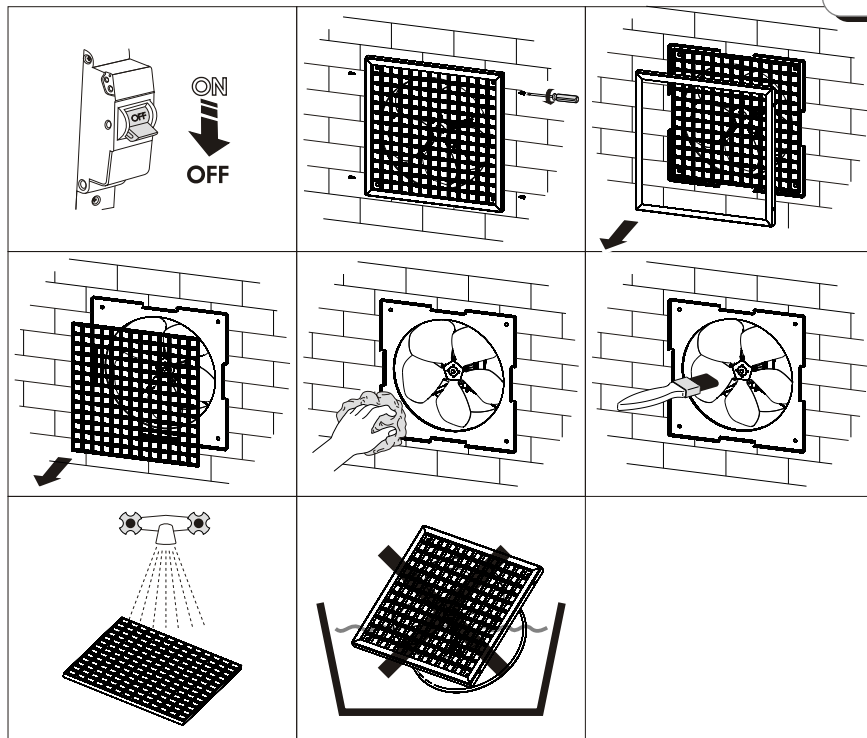


figure 23

VKOM

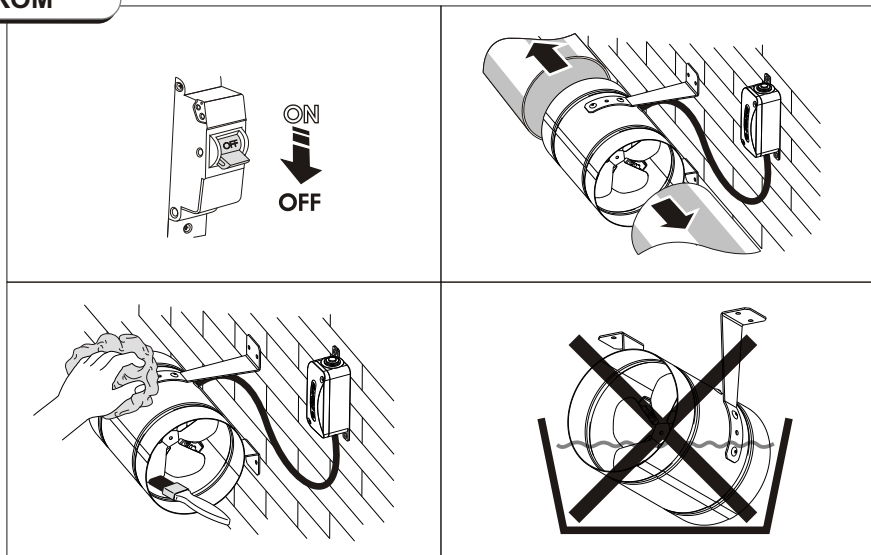


figure 24

VKF

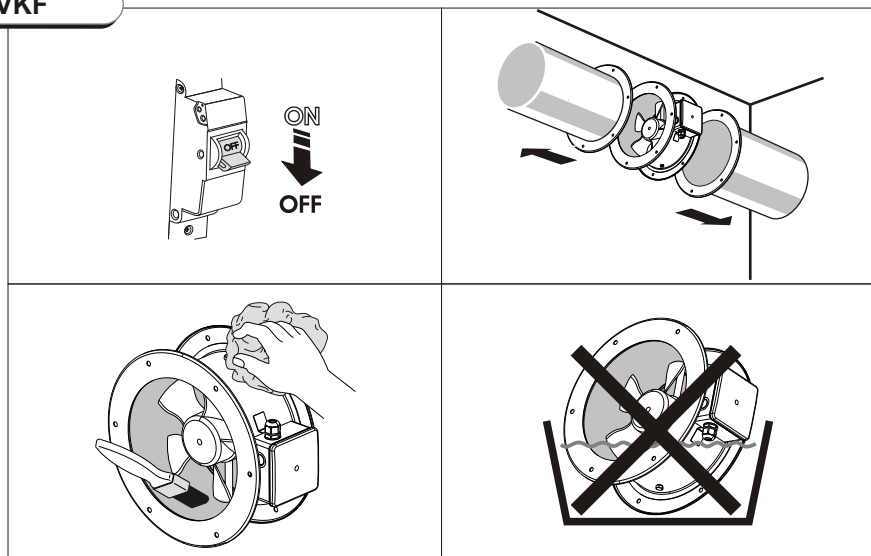


figure 25

ACCEPTANCE CERTIFICATE

The fan is recognized as serviceable.

VENTS Model

OV _____ “

OVK _____ “

OV1 _____ “

OV1R _____ “

OVK1 _____ “

VKF _____ “

VKOM _____ “

(tick the proper model and cross out non-applicable models)

Date of production

Stamp of the acceptance inspector

Sold by
(name of the vendor, stamp of the shop)

Date of sale

WARRANTY CARD

