

USER'S MANUAL

INLINE RECTANGULAR FANS VKP SERIES

VENTS VKP / VKPI / VKPF / VKPFI / VKP EC / VKPI EC SERIES



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**THE PRODUCT MUST BE COLLECTED SEPARATELY AT THE END OF SERVICE LIFE.
DO NOT DISPOSE OF AS UNSORTED MUNICIPAL WASTE.**



APPLICATION

Inline rectangular fans are intended for supply and exhaust ventilation of residential, public and industrial premises (production and storage facilities, sport halls, water pools, large auditoriums, conference halls, etc.). The fans are designed for mounting into rectangular ducts.

The fans are rated for continuous operation always connected to power mains.

Ingress protection rating is IPX4.

The transporting medium must not contain dust, solid impurities, sticky substances or fibrous materials.

Due to constant improvements the design of some models may slightly differ from those described in this manual.

DELIVERY SET

The delivery set includes:

- fan;
- user's manual;
- packing box.



FAN DESIGNATION KEY

VKP X X X X XXXxXXX X

Motor type

_: asynchronous motor

EC: electronically commutated motor

Rectangular duct size

**400x200, 500x250, 500x300, 600x300, 600x350,
700x400, 800x500, 900x500, 1000x500**

Phase

E: single-phase; **D:** three-phase

Number of the motor poles:

2, 4, 6, 8

Fan casing

_: no extra sound insulation

I: sound-insulated casing

Impeller design

_: backward curved blades

F: forward curved blades

Fan name

VKP: rectangular inline fan

Designation key example:

VKPF 4E 400x200 – rectangular inline fan equipped with single-phased 4-pole motor and impeller with forward curved blades for mounting into 400x200 mm air duct.




VKP 800x500 EC – rectangular inline fan equipped with EC-motor and impeller with backward curved blades for mounting into 800x500 mm air duct.



BASIC TECHNICAL DATA

VKPF / VKPFI




technical data:

	VKPF / VKPFI 4E 400x200	VKPF / VKPFI  4D 400x200	VKPF / VKPFI  4E 500x250	VKPF / VKPFI  4D 500x250	VKPF / VKPFI 6E 500x250
Voltage [V / 50 Hz]	1~ 230	3~ 400	1~ 230	3~ 400	1~ 230
Power [W]	295	282	535	570	244
Current [A]	1.32	0.60	2.49	0.94	1.22
Max. air capacity [m ³ /h]	1440	1470	1750	1850	1460
RPM [min ⁻¹]	1350	1300	1250	1270	910
Noise level at 3 m [dBA]	50 / 42*	52 / 43*	53 / 44*	54 / 44*	45 / 37*
Transported air temperature [°C]	-25 +40	-25 +45	-20 +40	-20 +40	-20 +50
Protection rating	IPX4	IPX4	IPX4	IPX4	IPX4

* parameter applicable for VKPFI fan

	VKPF / VKPFI 6D 500x250	VKPF / VKPFI 4E 500x300	VKPF / VKPFI 4D 500x300	VKPF / VKPFI 6E 500x300	VKPF / VKPFI 6D 500x300
Voltage [V / 50 Hz]	3~ 400	1~ 230	3~ 400	1~ 230	3~ 400
Power [W]	274	710	855	283	303
Current [A]	0.67	3.10	1.70	1.59	0.8
Max. air capacity [m ³ /h]	1490	2350	2350	1550	1620
RPM [min ⁻¹]	930	1230	1300	890	910
Noise level at 3 m [dBA]	45 / 38*	57 / 47*	56 / 47*	47 / 39*	51 / 41*
Transported air temperature [°C]	-20 +60	-25 +70	-20 +50	-20 +70	-20 +60
Protection rating	IPX4	IPX4	IPX4	IPX4	IPX4

* parameter applicable for VKPFI fan

	VKPF / VKPFI  4E 600x300	VKPF / VKPFI  4D 600x300	VKPF / VKPFI 6E 600x300	VKPF / VKPFI  6D 600x300	VKPF / VKPFI 4E 600x350
Voltage [V / 50 Hz]	1~ 230	3~ 400	1~ 230	3~ 400	1~ 230
Power [W]	1240	1560	419	397	2840
Current [A]	6.45	2.73	2.05	0.78	13.90
Max. air capacity [m ³ /h]	2950	3740	2260	2320	4260
RPM [min ⁻¹]	1210	1310	870	920	1260
Noise level at 3 m [dBA]	59 / 51*	57 / 50*	50 / 42*	49 / 41*	59 / 51*
Transported air temperature [°C]	-25 +50	-25 +65	-20 +70	-20 +70	-20 +40
Protection rating	IPX4	IPX4	IPX4	IPX4	IPX4

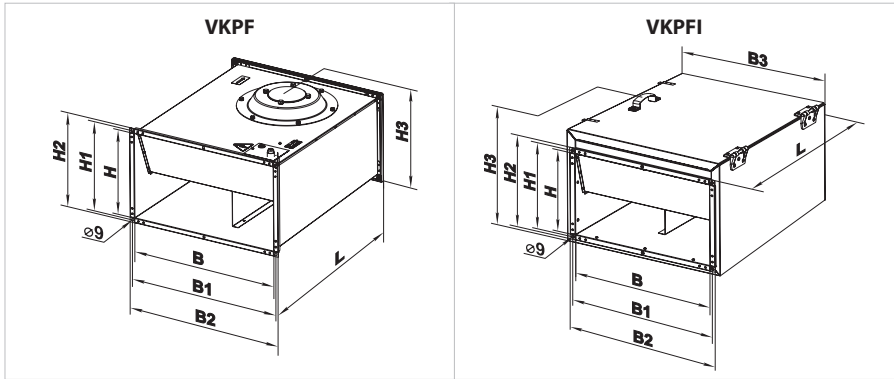
technical data:

	VKPF / VKPFI 4D 600x350	VKPF / VKPFI 6E 600x350	VKPF / VKPFI 6D 600x350	VKPF / VKPFI 4D 700x400
Voltage [V / 50 Hz]	3~ 400	1~ 230	3~ 400	3~ 400
Power [W]	2460	720	743	3630
Current [A]	3.93	3.6	1.47	6.00
Max. air capacity [m ³ /h]	5020	2755	3310	6450
RPM [min ⁻¹]	1300	820	940	1320
Noise level at 3 m [dBA]	60 / 52*	51 / 43*	55 / 46*	65 / 56*
Transported air temperature [°C]	-20 +40	-20 +60	-20 +70	-25 +40
Protection rating	IPX4	IPX4	IPX4	IPX4

	VKPF / VKPFI 6D 700x400	VKPF / VKPFI 4D 800x500	VKPF / VKPFI 6D 800x500	VKPF / VKPFI 8D 800x500
Voltage [V / 50 Hz]	3~ 400	3~ 400	3~ 400	3~ 400
Power [W]	1150	5850	2790	1377
Current [A]	2.3	9.35	5.18	3.40
Max. air capacity [m ³ /h]	4050	8120	7610	5620
RPM [min ⁻¹]	890	1140	830	710
Noise level at 3 m [dBA]	58 / 49*	67 / 61*	59 / 53*	58 / 49
Transported air temperature [°C]	-20 +70	-25 +40	-20 +50	-20 +40
Protection rating	IPX4	IPX4	IPX4	IPX4

	VKPF / VKPFI 6D 900x500	VKPF / VKPFI 8D 900x500	VKPF / VKPFI 6D 1000x500	VKPF / VKPFI 8D 1000x500
Voltage [V / 50 Hz]	3~ 400	3~ 400	3~ 400	3~ 400
Power [W]	3870	2000	3870	2000
Current [A]	7.0	4.1	7.0	4.1
Max. air capacity [m ³ /h]	9540	7175	9540	7175
RPM [min ⁻¹]	930	680	930	680
Noise level at 3 m [dBA]	61 / 55*	59 / 50*	61 / 55*	59 / 51*
Transported air temperature [°C]	-20 +55	-20 +40	-20 +55	-20 +40
Protection rating	IPX4	IPX4	IPX4	IPX4

* parameter applicable for VKPFI fan



Fan overall dimensions:

Type	Dimensions [mm]								Weight [kg]
	B	B1	B2	H	H1	H2	H3	L	
VKPF 4E 400x200	400	420	440	200	220	240	255	500	17.5
VKPF 4D 400x200	400	420	440	200	220	240	255	500	17.5
VKPF 4E 500x250	500	520	540	250	270	290	335	640	24
VKPF 4D 500x250	500	520	540	250	270	290	335	640	24
VKPF 6E 500x250	500	520	540	250	270	290	335	640	24
VKPF 6D 500x250	500	520	540	250	270	290	335	640	24
VKPF 4E 500x300	500	520	540	300	320	340	365	680	33
VKPF 4D 500x300	500	520	540	300	320	340	365	680	33
VKPF 6E 500x300	500	520	540	300	320	340	365	680	33
VKPF 6D 500x300	500	520	540	300	320	340	365	680	33
VKPF 4E 600x300	600	620	640	300	320	340	375	680	35
VKPF 4D 600x300	600	620	640	300	320	340	375	680	35
VKPF 6E 600x300	600	620	640	300	320	340	375	680	35
VKPF 6D 600x300	600	620	640	300	320	340	375	680	35
VKPF 4E 600x350	600	620	640	350	370	390	425	735	49.5
VKPF 4D 600x350	600	620	640	350	370	390	425	735	49.5
VKPF 6E 600x350	600	620	640	350	370	390	425	735	49.5
VKPF 6D 600x350	600	620	640	350	370	390	425	735	49.5
VKPF 4D 700x400	700	720	740	400	420	440	480	780	60
VKPF 6D 700x400	700	720	740	400	420	440	480	780	56
VKPF 4D 800x500	800	820	840	500	520	540	580	820	74
VKPF 6D 800x500	800	820	840	500	520	540	580	820	70
VKPF 8D 800x500	800	820	840	500	520	540	580	820	70
VKPF 6D 900x500	900	920	940	500	520	540	580	954	90
VKPF 8D 900x500	900	920	940	500	520	540	580	954	90
VKPF 6D 1000x500	1000	1020	1040	500	520	540	580	954	95
VKPF 8D 1000x500	1000	1020	1040	500	520	540	580	954	95













Fan overall dimensions:

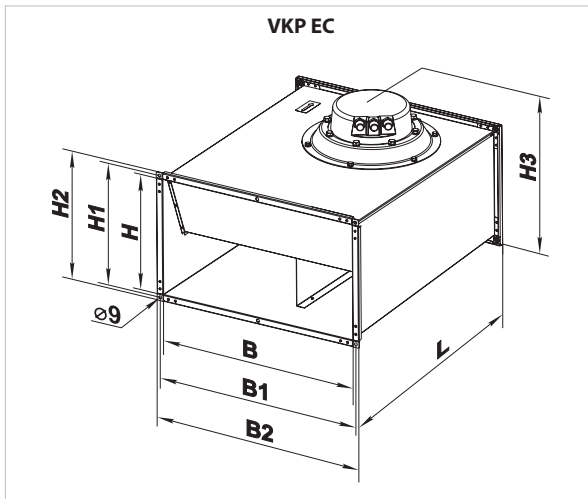
Type	Dimensions [mm]									Weight [kg]
	B	B1	B2	B3	H	H1	H2	H3	L	
VKPF 4E 400x200	400	420	440	470	200	220	240	360	500	29
VKPF 4D 400x200	400	420	440	470	200	220	240	360	500	29
VKPF 4E 500x250	500	520	540	570	250	270	290	410	640	40.5
VKPF 4D 500x250	500	520	540	570	250	270	290	410	640	40.5
VKPF 6E 500x250	500	520	540	570	250	270	290	410	640	40.5
VKPF 6D 500x250	500	520	540	570	250	270	290	410	640	40.5
VKPF 4E 500x300	500	520	540	570	300	320	340	460	680	52.5
VKPF 4D 500x300	500	520	540	570	300	320	340	460	680	52.5
VKPF 6E 500x300	500	520	540	570	300	320	340	460	680	52.5
VKPF 6D 500x300	500	520	540	570	300	320	340	460	680	52.5
VKPF 4E 600x300	600	620	640	670	300	320	340	480	680	56
VKPF 4D 600x300	600	620	640	670	300	320	340	480	680	56
VKPF 6E 600x300	600	620	640	670	300	320	340	480	680	56
VKPF 6D 600x300	600	620	640	670	300	320	340	480	680	56
VKPF 4E 600x350	600	620	640	670	350	370	390	530	735	72
VKPF 4D 600x350	600	620	640	670	350	370	390	530	735	72
VKPF 6E 600x350	600	620	640	670	350	370	390	530	735	72
VKPF 6D 600x350	600	620	640	670	350	370	390	530	735	72
VKPF 4D 700x400	700	720	-	800	400	420	-	620	880	103
VKPF 6D 700x400	700	720	-	800	400	420	-	620	880	99
VKPF 6D 800x500	800	820	-	900	500	520	-	720	935	120
VKPF 4D 800x500	800	820	-	900	500	520	-	720	935	127
VKPF 8D 800x500	800	820	-	900	500	520	-	720	935	120
VKPF 6D 900x500	900	920	-	1000	500	520	-	720	1000	142
VKPF 8D 900x500	900	920	-	1000	500	520	-	720	1000	142
VKPF 6D 1000x500	1000	1020	-	1100	500	520	-	720	1000	150
VKPF 8D 1000x500	1000	1020	-	1100	500	520	-	720	1000	150



VKP EC

Technical data:

	VKP   600x300 EC	VKP   600x350 EC	VKP   700x400 EC	VKP   800x500 EC	VKP   900x500 EC	VKP   1000x500 EC
Voltage [V / 50/60 Hz]	1~ 200-277	3~ 380-480	3~ 380-480	3~ 380-480	3~ 380-480	3~ 380-480
Power [kW]	0.48	0.99	1.70	2.95	2.98	2.98
Current [A]	3.10	1.70	2.60	4.60	4.60	4.60
Max. air capacity [m ³ /h]	3350	4550	6300	8900	10850	10850
RPM [min ⁻¹]	2300	2580	2600	2500	2040	2040
Noise level at 3 m [dBA]	58	60	63	65	69	69
Transported air temperature [°C]	-25 +60	-25 +50	-25 +40	-25 +40	-25 +40	-25 +40
Protection rating	IPX4	IPX4	IPX4	IPX4	IPX4	IPX4















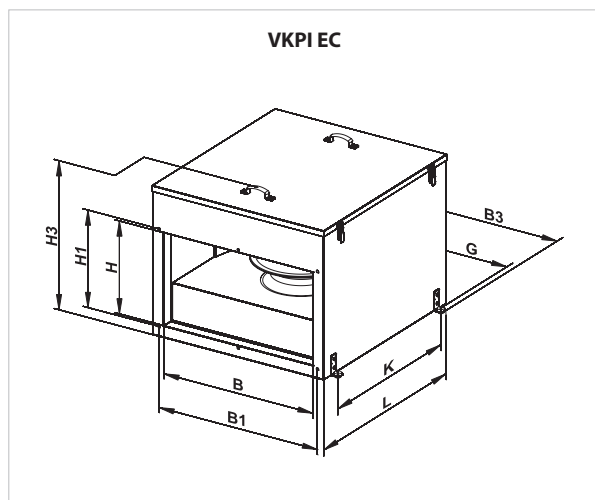
Fan overall dimensions:

Type	Dimensions [mm]								Weight [kg]
	B	B1	B2	H	H1	H2	H3	L	
VKP 600x300 EC	600	620	640	300	320	340	430	680	35.0
VKP 600x350 EC	600	620	640	350	370	390	480	735	49.5
VKP 700x400 EC	700	720	740	400	420	440	540	780	60.0
VKP 800x500 EC	800	820	840	500	520	540	640	880	68.8
VKP 900x500 EC	900	920	940	500	520	540	640	954	90.0
VKP 1000x500 EC	1000	1020	1040	500	520	540	640	954	95.0

VKPI EC

Technical data:

	VKPI   600x300 EC	VKPI   600x350 EC	VKPI   700x400 EC	VKPI   800x500 EC	VKPI   900x500 EC	VKPI   1000x500 EC
Voltage [V / 50/60 Hz]	1~ 200-277	3~ 380-480	3~ 380-480	3~ 380-480	3~ 380-480	3~ 380-480
Power [kW]	0.48	0.99	1.70	2.95	2.98	2.98
Current [A]	3.10	1.70	2.60	4.60	4.60	4.60
Max. air capacity [m ³ /h]	3350	4550	6300	8900	10850	10850
RPM [min ⁻¹]	2300	2580	2600	2500	2040	2040
Noise level at 3 m [dBA]	49	51	54	57	60	60
Transported air temperature [°C]	-25 +60	-25 +50	-25 +40	-25 +40	-25 +40	-25 +40
Protection rating	IPX4	IPX4	IPX4	IPX4	IPX4	IPX4












Fan overall dimensions:

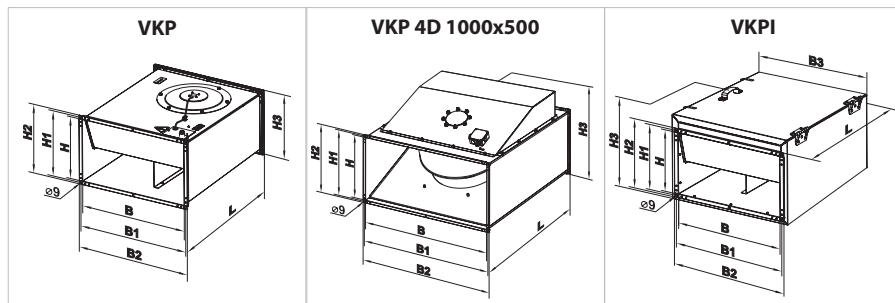
Type	Dimensions [mm]									Weight [kg]
	B	H	B1	H1	B3	H3	L	G	K	
VKPI 600x300 EC	600	300	620	320	775	530	752	745	500	55.0
VKPI 600x350 EC	600	350	620	370	775	630	802	745	500	65.0
VKPI 700x400 EC	700	400	720	420	875	690	880	845	742	90.0
VKPI 800x500 EC	800	500	820	520	975	810	935	945	800	124.1
VKPI 900x500 EC	900	500	920	520	1075	810	1000	1045	800	128.0
VKPI 1000x500 EC	1000	500	1020	520	1175	810	1000	1145	800	129.0

VKP / VKPI

Technical data:

	 VKP / VKPI 2E 400x200		 VKP / VKPI 2E 500x250		 VKP / VKPI 4E 500x300		 VKP / VKPI 4D 500x300	
Voltage [V]	1~ 220-240		1~ 220-240		1~ 220-240		3~ 400	
Frequency [Hz]	50	60	50	60	50	60	50	60
Power [W]	138	200	305	380	140	165	136	165
Current [A]	0.60	0.88	1.32	1.65	0.57	0.53	0.34	0.53
Max. air capacity [m³/h]	930	1070	1720	1850	1700	1620	1380	1620
RPM [min⁻¹]	2600	2850	2550	2830	1390	1530	1360	1600
Noise level at 3 m [dBA]	59 / 51*	71/63*	61 / 53*	78 / 67*	53 / 45*	55 / 46*	53 / 45*	55 / 46*
Transported air temperature [°C]	-25 +45		-25 +45		-25 +45		-25 +55	
Protection rating	IPX4		IPX4		IPX4		IPX4	
	 VKP / VKPI 4E 600x300		 VKP / VKPI 4D 600x300		 VKP / VKPI 4E 600x350			
Voltage [V]	1~ 220-240		3~ 400		1~ 220-240			
Frequency [Hz]	50	60	50	60	50	60		
Power [W]	220	310	230	235	470	700		
Current [A]	0.9	1.38	0.52	0.53	2.37	3.15		
Max. air capacity [m³/h]	2470	2510	2530	2630	2950	3515		
RPM [min⁻¹]	1400	1450	1360	1600	1370	1460		
Noise level at 3 m [dBA]	55 / 47*	55 / 57*	53 / 46*	53 / 46*	67 / 59*	68 / 59*		
Transported air temperature [°C]	-25 +45		-25 +70		-40 +80			
Protection rating	IPX4		IPX4		IPX4			
	 VKP / VKPI 4D 600x350				 VKP 4D 1000x500			
Voltage [V]	3~ 400 Δ		3~ 400 Y		3~ 400			
Frequency [Hz]	50	60	50	60	50			
Power [W]	510	750	380	515	3800			
Current [A]	1.41	1.44	0.7	0.93	6.6			
Max. air capacity [m³/h]	2970	3410	2660	2730	15000			
RPM [min⁻¹]	1415	1610	1235	1220	1360			
Noise level at 3 m [dBA]	64 / 55*	64 / 55*	63 / 55*	63 / 55*	70			
Transported air temperature [°C]	-40 +60		-40 +80		-40 +40			
Protection rating	IPX4		IPX4		IPX4			

* parameter applicable for VKPI fan



Fan overall dimensions:

Type	Dimensions [mm]								Weight [kg]
	B	B1	B2	H	H1	H2	H3	L	
VKP 2E 400x200	400	420	440	200	220	240	240	500	11.25
VKP 2E 500x250	500	520	540	250	270	290	290	640	17.88
VKP 4E 500x300	500	520	540	300	320	340	340	680	19.80
VKP 4D 500x300	500	520	540	300	320	340	340	680	19.80
VKP 4E 600x300	600	620	640	300	320	340	342	680	27.77
VKP 4D 600x300	600	620	640	300	320	340	342	680	27.77
VKP 4E 600x350	600	620	640	350	370	390	390	735	36.38
VKP 4D 600x350	600	620	640	350	370	390	390	735	36.38

Type	Dimensions [mm]								Weight [kg]
	B	B1	B2	H	H1	H2	H3	L	
VKP 4D 1000x500	1000	1020	1040	500	520	540	720	1150	126.0

Type	Dimensions [mm]									Weight [kg]
	B	B1	B2	B3	H	H1	H2	H3	L	
VKPI 2E 400x200	400	420	440	500	200	220	240	360	500	24.5
VKPI 2E 500x250	500	520	540	600	250	270	290	410	640	27.6
VKPI 4E 500x300	500	520	540	600	300	320	340	460	680	37.2
VKPI 4D 500x300	500	520	540	600	300	320	340	460	680	37.2
VKPI 4E 600x300	600	620	640	700	300	320	340	460	680	43.5
VKPI 4D 600x300	600	620	640	700	300	320	340	460	680	43.5
VKPI 4E 600x350	600	620	640	700	350	370	390	530	735	56.2
VKPI 4D 600x350	600	620	640	700	350	370	390	530	735	56.2

SAFETY REQUIREMENTS

Disconnect the fan from power mains prior to any connection, adjustment, maintenance and repair operations.

Mounting and wireworks are allowed only by a duly qualified electrician with valid electrical work permit for electric units up to 1000 V after careful reading of the present user's manual.

The fans are not ready-to-use products and are allowed for operation only after connection to air ducts and installation of protecting grilles.

Connect air ducts on both sides of the fan.

In case of the fan mounting outside protect the fan against water ingress.

For example, install the fan under the protecting outer hood.

Before connecting the fan to power mains make sure of no visible damages of the fan impeller, casing, grille and no foreign objects inside the casing that can damage the impeller blades. Misuse of the fan or any unauthorized modifications are not allowed. Do not use the fan for explosive and fire-hazardous media. Take steps to prevent gas backdrafting from the devices that operate with gas or open flame. The fan may have sharp edges. Make steps to avoid being cut.



INSTALLATION AND SAFETY GUIDELINES

The fan is designed for mounting and operation in any position. In case of ceiling mounting the fan is recommended to be mounted with the motor cover downwards to facilitate access to the terminal box.

Check the fan power cables for integrity and make sure the impeller has smooth rotation prior to mounting.

Install flexible connectors on both sides of the fan. Air flow direction in the system must match the direction of the arrow on the fan casing.

Remember to mount the fan on the additional internal brackets to avoid load transfer to the flexible connectors. The most suitable mounting option is fixation of the fan to the ceiling with anchor bolts or suspension of the fan to the perforated metal plates. Apply self-adhesive sealer on the fan end surfaces prior to mounting. Connect the fan to air ducts with M8 bolts and nuts.

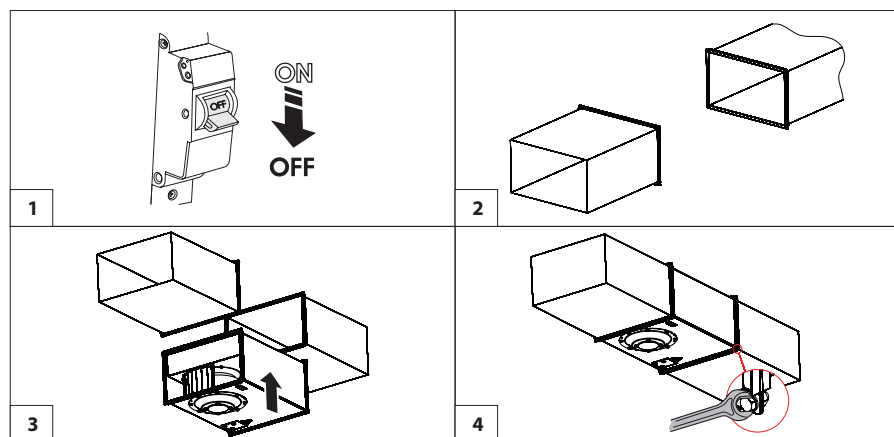
Provide reliable mounting of the fan!



Connect the terminal PE to the ground circuit.

Due to constant improvements the design of some models may slightly differ from those described in this manual.

FAN INLINE RECTANGULAR DUCT MOUNTING EXAMPLE



CONNECTION TO POWER MAINS

Disconnect the fan from power mains prior to any operations with the fan.

Connection of the fan to power mains by duly a professional electrician only!

The rated electric parameters of the fan are shown on the factory sticker.

Any tempering with internal connection is not allowed and will void warranty.

Depending on the fan type it is rated either for single-phase ac 230 V/50/60 Hz or three-phase ac 380-400 V/50/60 Hz power mains.

Connect the fan to power mains through insulated, durable and thermal resistant conductors (cables, wires).

The automatic circuit breaker incorporated into the fixed network that breaks all the phases must be installed at the external electric input 230V/50/60 Hz or 380-400 V/50/60 Hz. The external circuit breaker QF location must provide free and unhampered access to the fan for quick switching off in case of need.

The overcurrent protection must match the rated current consumption of the fan. The recommended rated current of the automatic circuit breaker and wire cross section of various fan types are stated in the table stated on page 16. The stated wire cross sections are for reference only. The actually required wire cross section depends on the cable type, insulation, length and its layout way - open, channel or wall mounting.

Connect EC-fans to power mains on the terminal block located in the external or integrated terminal box following the wiring diagram and terminal designation. The sticker with the terminal designation is inside the terminal box.

The terminals TW1, TW2 (TK1,TK2) are the lead-out terminals of the overheating thermostat normally closed contact. Connect this terminal in series to the power circuit of the magnetic starter KM1 that starts the motor after pressing the button S1. In case of the motor overheating the motor contact breaks and switches the starter coil off to de-energize and stop the motor.

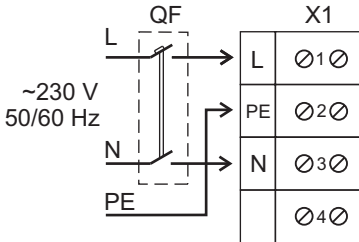
The automatic circuit breaker QF, the magnetic starter KM1, the control buttons S1 and S2 are not included into the delivery set and are to be mounted by the customer.



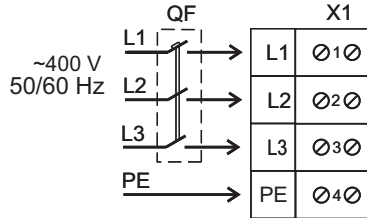
The recommended rated current of the automatic circuit breaker and the wire cross section

Fan type	Automatic circuit breaker current [A]	Recommended cable, n x S, where n means number of wires, S means cross section [mm ²]
VKP, VKPI 2E 400x200	1	3 x 0.75
VKP, VKPI 2E 500x250	2	3 x 0.75
VKP, VKPI 4E 500x300	1	3 x 0.75
VKP, VKPI 4D 500x300	1	5 x 0.75
VKP, VKPI 4E 600x300	1.6	5 x 0.75
VKP, VKPI 4D 600x300	1	5 x 0.5
VKP, VKPI 4E 600x350	4	3 x 0.75
VKP, VKPI 4D 600x350	2	5 x 0.75
VKP 4D 1000x500	8	5 x 1.0
VKP, VKPI 600x300 EC	4	3 x 0.75
VKP, VKPI 600x350 EC	2	5 x 0.75
VKP, VKPI 700x400 EC	4	5 x 0.5
VKP, VKPI 800x500 EC	6	5 x 1.0
VKP, VKPI 900x500 EC	6	5 x 1.0
VKP, VKPI 1000x500 EC	6	5 x 1.0
VKPF, VKPFI 4E 400x200	2	3 x 0.75
VKPF, VKPFI 4D 400x200	1	5 x 0.75
VKPF, VKPFI 4E 500x250	4	3 x 0.75
VKPF, VKPFI 4D 500x250	1.6	5 x 0.75
VKPF, VKPFI 4E 500x300	4	3 x 0.75
VKPF, VKPFI 4D 500x300	2	5 x 0.75
VKPF, VKPFI 4E 600x300	8	3 x 1.5
VKPF, VKPFI 4D 600x300	5	5 x 0.75
VKPF, VKPFI 4E 600x350	16	3 x 2.5
VKPF, VKPFI 4D 600x350	5	5 x 1.0
VKPF, VKPFI 4D 700x400	8	5 x 1.5
VKPF, VKPFI 4D 800x500	10	5 x 1.5
VKPF, VKPFI 6D 800x500	6	5 x 1.0
VKPF, VKPFI 6D 900x500	8	5 x 1.5
VKPF, VKPFI 6D 1000x500	8	5 x 1.5

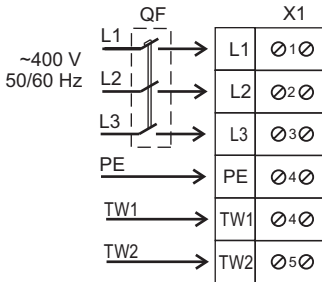
**Wiring diagram of the fan
VKP/VKPI 2E 400x200; VKP/VKPI 2E 500x250;
VKP/VKPI 4E 500x300; VKP/VKPI 4E 600x300;
VKP/VKPI 4E 600x350 with a single-phase motor
to the alternating current power supply**



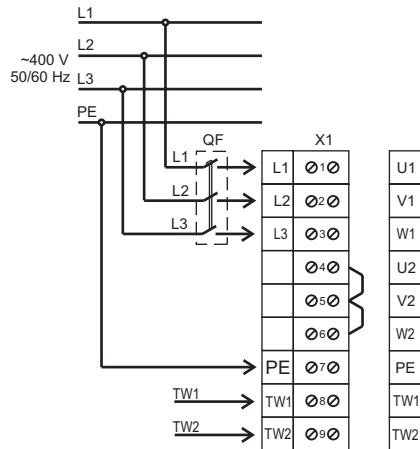
**Wiring diagram of the fan
VKP/VKPI 4D 500x300 (first option) with
a three-phase motor to the alternating current
power supply**



**Wiring diagram of the fan
VKP/VKPI 4D 500x300 (second option),
VKP/VKPI 4D 600x300 with a three-phase
motor to the alternating current
power supply**

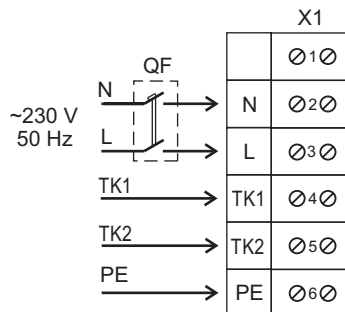


**Wiring diagram of the fan
VKP/VKPI 4D 600x350 with a three-phase
motor to alternating current power
supply**

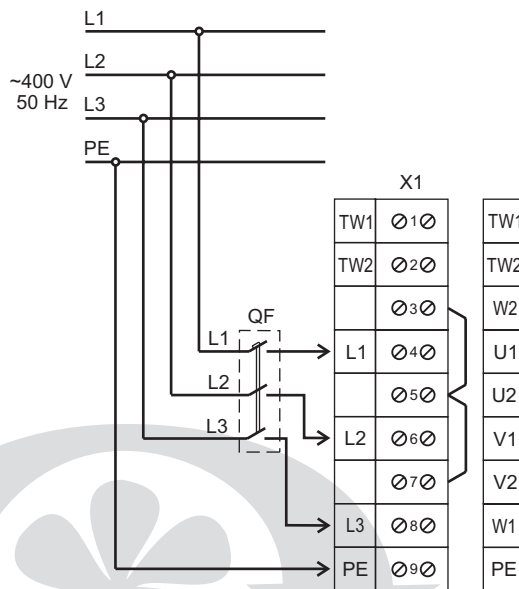


where X1 is a terminal block, QF is an automatic circuit breaker (not included into the delivery set).

Wiring diagram of the fans VKPF, VKPFI with a single-phase motor to the alternating current power supply



Wiring diagram of the fans VKPF, VKPFI with a three-phase motor to the alternating current power supply



where X1 is a terminal block, QF is an automatic circuit breaker (not included into the delivery set).

Wiring diagram of the fans VKP 600x300 EC, VKPI 600x300 EC



Contact	Connection	Colour	Purpose / Function
1	L	Black	Power supply 50/60 Hz, phase
	N	Blue	Power supply 50/60 Hz, zero
	PE	Green/Yellow	Ground cable
	NC	White 1	Fault relay, normally closed contact
	COM	White 2	Fault relay, COMMON
2	+ 10 V	Red	Voltage efficiency +10 V (no more 1.1 mA)
	0-10 V/PWM	Yellow	Control input 0-10 V / PWM (total resistance 100 kohm)
	GND	Blue	Ground

Wiring diagram for the fans VKP 600x350 EC, VKPI 600x350 EC

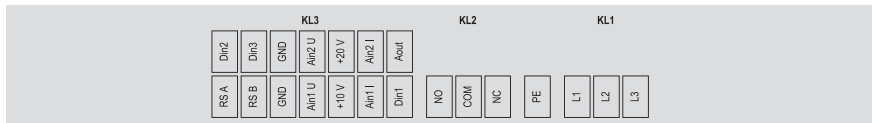


Terminal	Connection	Purpose / Function
PE	PE	Ground cable
KL1	L3	Net, L3
	L2	Net, L2
	L1	Net, L1
KL2	NC	Alarm relay, normally-closed contact
	COM	Alarm relay, COMMON (2A, 250V, AC1)
	NO	Alarm relay, normally-open contact

Terminal	Connection	Purpose / Function
KL3	OUT	Master output 0-10V, max. 3 mA
	GND	GND (Ground)
	0-10 V / PWM	Actual value input / control input (total resistance 100 kohm)
	+10 V	External potentiometer supply, 10 V (+10 %) max. 10 mA
	+20 V	External sensor supply, 20 V (+20 %) max. 50 mA
	4-20 mA	Actual value input / control input
	0-10 V / PWM	Actual value input / control input
	GND	GND (Ground)
	RSB	interface RS485 for ebmBUS; RS B
	RSA	interface RS485 for ebmBUS; RS A
	RSB	interface RS485 for ebmBUS; RS B



Wiring diagram for the fans VKP 700x400 EC, VKPI 700x400 EC



Terminal	Connection	Purpose / Function
KL1	L3	Net, L3
	L2	Net, L2
	L1	Net, L1
PE	PE	Ground cable
KL2	NC	Alarm relay, normally-closed contact
	COM	Alarm relay, COMMON (2A, 250V, Ac1)
	NO	Alarm relay, normally-open contact

Terminal	Connection	Purpose / Function
KL3	Din1	Digital input 1 (electronics unblocking/blocking) Unblocking: Pin is opened or set voltage 5...50 V GND or set voltage block < 1V
	Ain1 I	Analogue input of set values, 4-20 mA (resistance 100 kohm), exclusively optionally Ain1 I is used for connection
	+10 V	External potentiometer supply, 10 V ($\pm 3\%$) max. 10 mA
	Ain1U	Analog input of set 0-10V (resistance 10 kOm) use Ain1 only as alternate input
	GND	GND (Ground)
	RSB	interface RS485 for ebmBUS; RS B
	RSA	interface RS485 for ebmBUS; RS A
	Aout	Analogue output 0-10 V max. 5mA, output of actual rpm / actual motor speed control factor
	Ain2 I	Analogue input of actual values, 4-20 mA (resistance 100 kohm), exclusively optionally Ain2 U is used for connection
	+20 V	External sensor voltage, 20 V (+25% / - 10%) max. 40 mA
	Ain2 U	Analogue input of actual values, 0-10 mA (resistance 100 kohm), exclusively optionally Ain2 I is used for connection
	GND	GND (Ground)
	Din3	Digital input 3 (normal / reverse changeover). The pre-set parameters of the integrated controller may be selected through interface or digital input normal / reverse normal: Pin is open or set voltage is 5...50 V reverse: jumper to GND or set voltage < 1V
	Din2	Digital input 2 (changeover day/night) Pre-set parameters may be selected through interface or digital input normal / reverse Day: Pin is open or set voltage 5...50 V Night: jumper to GND or set voltage < 1V

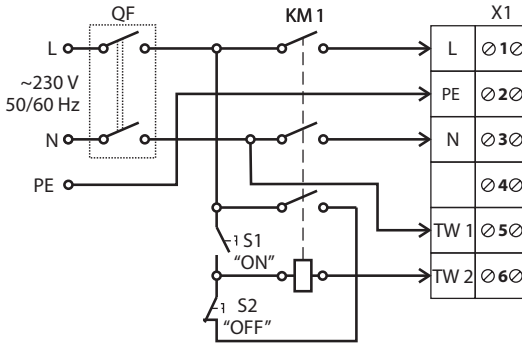
Wiring diagram for the fans VKP 800x500 EC, VKP 900x500 EC, VKP 1000x500 EC, VKPI 800x500 EC, VKPI 900x500 EC, VKPI 1000x500 EC



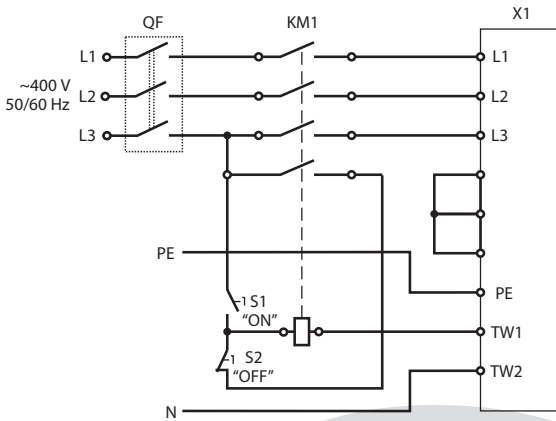
Terminal	Connection	Purpose / Function
PE	PE	Ground cable
KL1	L3	Net, L3
	L2	Net, L2
	L1	Net, L1
KL2	NC	Alarm relay, normally-closed contact
	COM	Alarm relay, COMMON (2A, 250V, Ac1)
	NO	Alarm relay, normally-open contact

Terminal	Connection	Purpose / Function
KL3	OUT	Master output 0-10V, max. 3 mA
	GND	GND (Ground)
	0-10 V / PWM	Actual value input / control input (total resistance 100 kohm)
	+10 V	External potentiometer supply, 10 V (+10%) max. 10 mA
	+20 V	External sensor supply, 20 V (+20%) max. 50 mA
	4-20 mA	Actual value input / control input
	0-10 V / PWM	Actual value input / control input
	GND	GND (Ground)
	RSB	interface RS485 for ebmBUS; RS B
	RSA	interface RS485 for ebmBUS; RS A
	RSB	interface RS485 for ebmBUS; RS B
	RSA	interface RS485 for ebmBUS; RS A

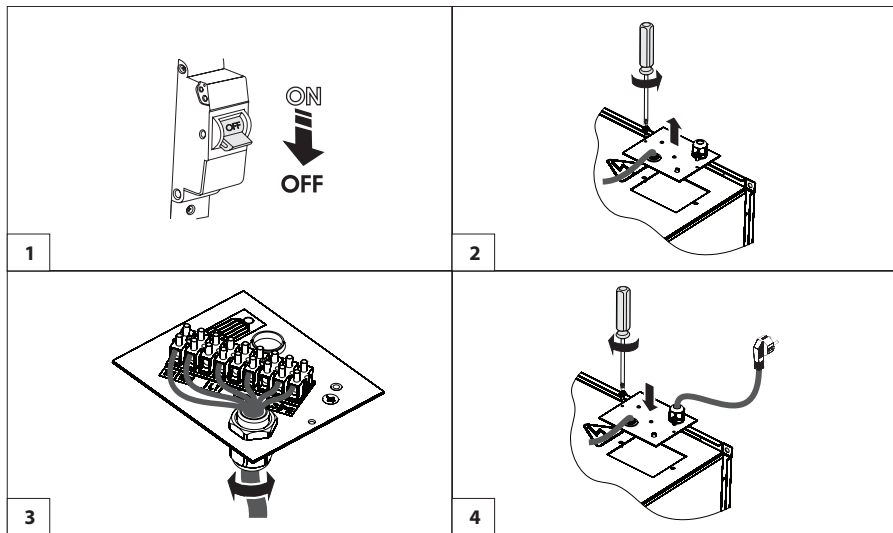
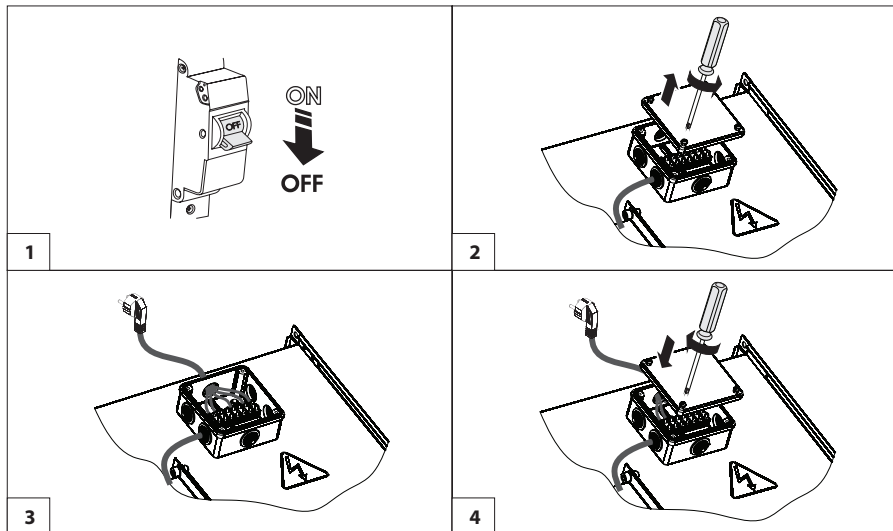
Recommended wiring diagram for connection of the single-phase motor with overheating protection



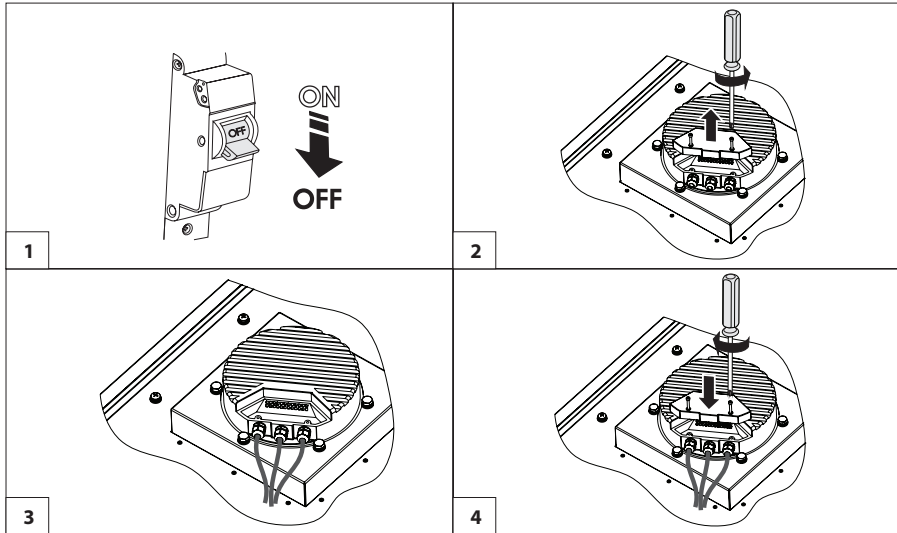
Recommended wiring diagram for connection of the three-phase motor with overheating protection



where X1 is a terminal block, QF is an automatic circuit breaker, KM1 is a magnetic starter, S1, S2 are control buttons (QF, KM1, S1, S2 are not included in the delivery set).

VKP, VKPI, VKPF, VKPFI 400x200, 500x250, 500x300, 600x300, 600x350

VKPF, VKPFI 700x400, 800x500, 900x500, 1000x500
VKP 600x300 EC, VKPI 600x300 EC, VKP 1000x500


VKP 600x350 EC, VKP 700x400 EC, VKP 800x500 EC, VKP 900x500 EC,
 VKP 1000x500 EC, VKPI 600x350 EC, VKPI 700x400 EC, VKPI 800x500 EC,
 VKPI 900x500 EC, VKPI 1000x500 EC



MAINTENANCE

Disconnect the fan from power mains and make sure the rotating parts do not move prior to any maintenance and repair operations.

Maintenance means regular cleaning of the fan surfaces from dust and dirt.

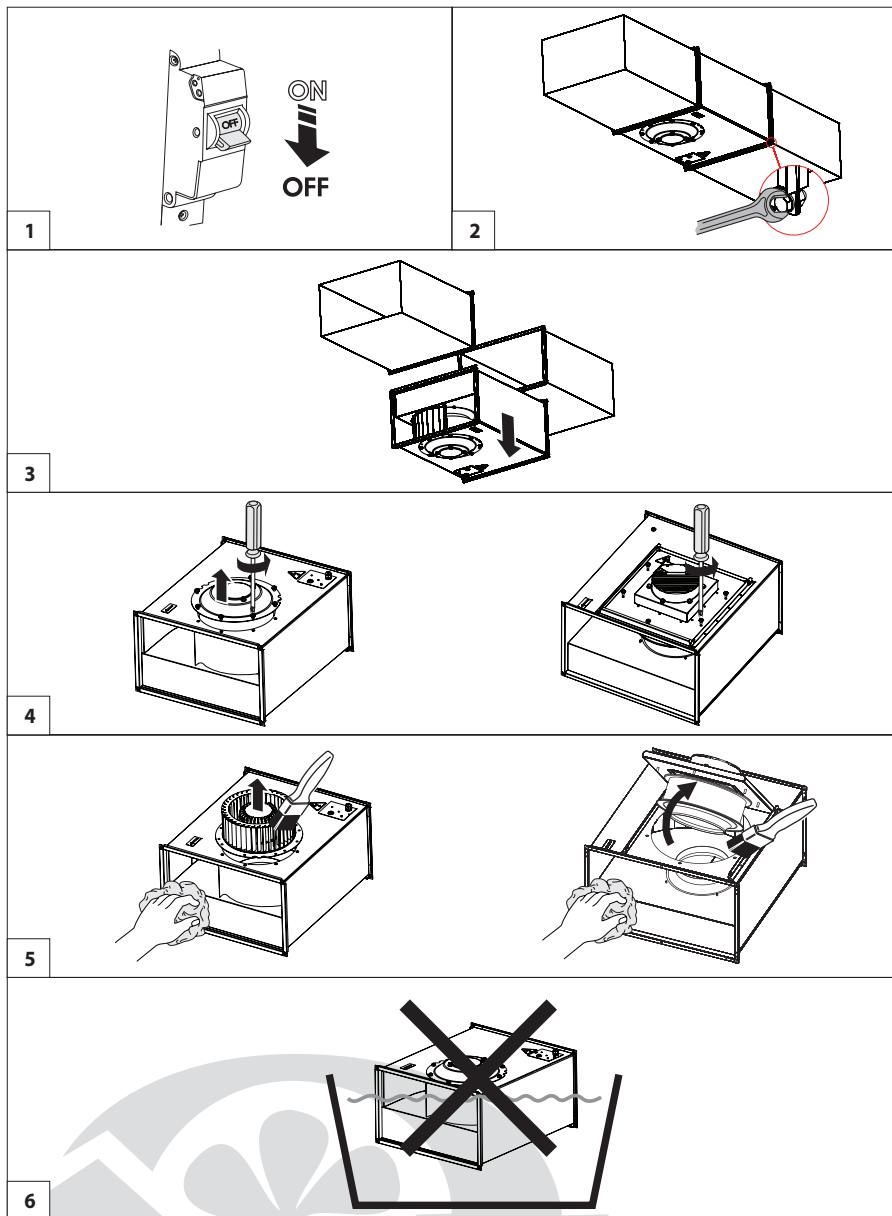
Use a soft brush or compressed air to remove dust from metal surfaces of the fan; use a vacuum cleaner to remove dust from the sound insulating surface. The impeller blades require thorough cleaning once in 6 months.

Detach air ducts from the fan before starting maintenance works. Clean the fan impeller blades with water and mild detergent solution. Avoid water dripping on the motor!

Wipe the fan surfaces dry after cleaning.

While cleaning the fan make sure the balance counterweights are not shifted and the impeller is not misaligned.





TROUBLES AND TROUBLESHOOTING

Fault	Possible reasons	Fault handling
The fan does not operate	No power supply	Check the automatic circuit breaker. Check the electric connections.
Noisy operation	Impeller misbalance	Clean the impeller.

STORAGE RULES

Store the fan in manufacturer's packaging in a ventilated room at temperatures between +5 °C and +40 °C and relative humidity not more than 80 % at +20 °C.

MANUFACTURING WARRANTY

The product is in compliance with EU norms and standards on low voltage guidelines and electromagnetic compatibility. We hereby declare that the product complies with the provisions of Electromagnetic Council Directive 2014/30/EU, Low Voltage Directive 2014/35/EU and CE-marking Directive 93/68/EEC.

Assessment of compliance of the product with the requirements relating to electromagnetic compatibility was based on the following standards.

While purchasing the product the Customer accepts the following warranty terms:

Manufacturer hereby guarantees trouble-free operation 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 assemblies and components of a faulty product (warranty claimed product) that were replaced during the warranty period inherit the warranty period and the warranty terms applied to the entire product. Neither the said components nor the product in general are covered with an extendable or renewable warranty period.

In case of failure due to faulty equipment during warranty period due to manufacturing defects, contact the Seller for the product replacement.

Replacements are offered at Seller.

The accessories operated together with the fan, both included and not included into the delivery list as well as other equipment that operates jointly with the fan are not covered by the warranty.

No warranty for compatibility of the fans with other producers' goods.

The warranty covers manufacturing defects only. All the defects and faults resulting from mechanical effect during operation process or natural wear and tear shall not be covered by the warranty.

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

No liability for related damages:

The manufacturer is not responsible for any mechanical or physical damages resulting from the manual requirements violence, the product misuse or gross mechanical interference. Indirect damages such as re-installation or re-connection of the fan, direct or indirect losses etc. related to the fan replacement shall not be indemnified.

The warranty does not cover operations on mounting/dismantling, connection/disconnection and setting-up of the fan. The contractor in charge for mounting, electric and adjustment operations shall be responsible for warranty of these works.

In any case the indemnity amount shall not exceed the actually paid value for the defective fan that incurred losses.





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