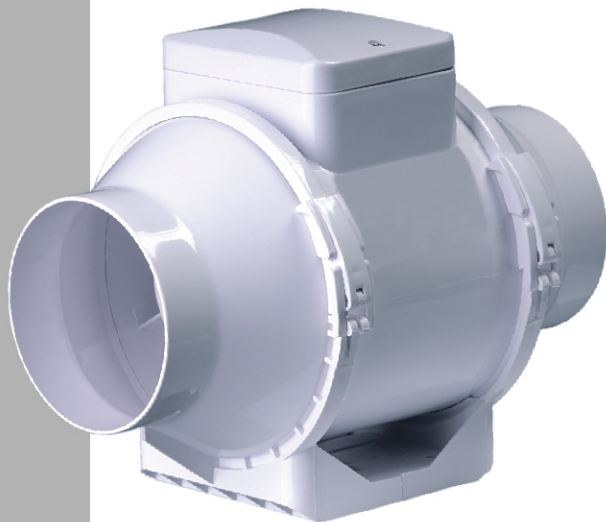


**IN-LINE
CENTRIFUGAL-AXIAL FANS
OF THE TT SERIES**

USER'S GUIDE



2009



ATTENTION

Before installation read carefully current user's guide.
Compliance of user's guide is conductive to guarantee failsafe using of product during its durability.
Please keep user's guide during durability of product, because of its service requirements.

Products are in-line mixed-flow fans compound type for inlet or exhaust ventilation, heated in winter time.

Complete set includes:

1. Fan - 1 pc.
2. Screws with dowels - 4 pc.
3. User's guide
4. Packaging box.

By type of protection from electrical shock, fans belong to the devices of Class II.

Climatic design of fans is UHL4.2.

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

Operation of fan is permitted at ambient temperatures from +5°C to +40°C. The air flow temperature must not exceed C°+45.

Please keep this product stored in it's manufacturers packaging. In a well ventilated room of temperatures between +5°C and +40°C and at humidity levels no greater than 80% (T=+25°C)

Fans are made for channels diameter 100, 125, 150, 160, 200, 250, 315 mm.
 The models "S" equipped engine with enhanced capacity.

Fans are double-speed and are designed for continuous operation without switching off mains. Fans are made of plastic.

Direction of air flow in the system must coincide with the direction of arrow on the fan body.

The construction of ventilation is constantly improving, that's why some models and its diagrams of connection and designation for terminal blocks can differ from described in guide.

Fans can be used horizontal and vertical such as individual (pic. 3) as in composition with parallel connection or series connection (pic. 3).

Details which are the part of connecting package deliver separately.

From the side of inlet delivery pipe must be installed: in case of horizontal installation of fan air duct has to be with length of at least 1 m, in case of vertical installation of fan to install shield (cowl) from the side of inlet delivery pipe. Installation is shown on pic. 4-11

Fans are intended for connection to single-phase AC mains with AC supply voltage of 220. . .240 V and frequency of 50 Hz.

Connection daigrams are shown in Pictures 12-27.

Designations in diagrams:

- L1 - low speed terminal block
- L2 - high speed terminal block
- S1 - circuit breaker (pic. 1);
- S2 - external changer (pic. 1);
- S3 - external breaker (pic. 1);
- X - input terminal block.

Designation for circuit breaker S1 on the diagram



Circuit breaker S1



Designation for external changer S2 on the diagram



External changer S2



Designation for external breaker S3 on the diagram



External breaker S3





ATTENTION

All actions related to connection, adjustment, service and repair are to be carried out only after disconnection from mains.

Connection of fan may be carried out by qualified electrician. Prior to connection of fan to the network, it is necessary to make sure that there are no visible damages of impeller, body, grille, and there are no foreign objects in streaming part of body that can damage the blades of impeller.

It is not allowed to use the product not according to its intended purpose and expose any modifications. Product is not intended to using children and persons with reduced physical, sensory or mental facilities or absence of life experience or knowledge, if they are not controlled or instructed about using kit by person responsible for them.

Connection of fan to the single-phase mains must be carried out via switch, built into stationary wiring. Gap between open contacts should be not less than 3 mm for all poles.

It is necessary to prevent penetration of flux of black gases into the premise via open chimneys or other fire protection facilities. and also exclude the capacity for penetration of generation of gas reverse-flow from the devices that use gas or open flame.

Air being pumped must not contain dust and other solid particles, adhesive substances and fibrous materials. It is not allowed to use a fan near flammable materials or fumes, such as alcohol, petrol, insecticides and other.

For optimal air pass don't close and screen inhaust and exhaust fans opening. Do not seat on the product and put on It any objects.

MANUFACTURER'S WARRANTY

Fans are manufactured in compliance with European norms and standards at force.

Manufacturer hereby guarantees normal performance of the fan over 24 months since the date of its sale via retail commercial network subject to adherence to the rules of transportation, storage, assembling and operation.

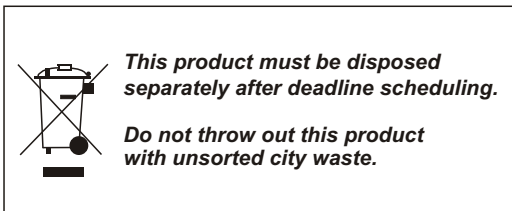
In case of unavailability of indication of the fan's sale date, the warranty term is calculated from the date of manufacture.

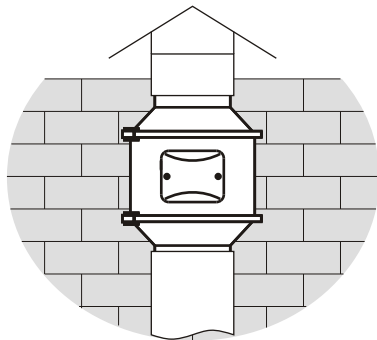
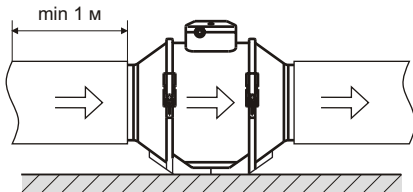
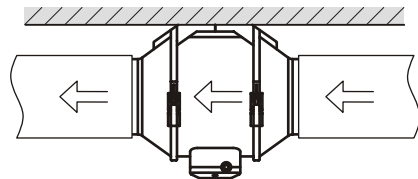
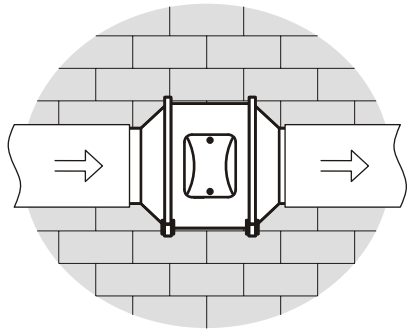
In case of occurrence of faults in operation of the fan through the fault of the Manufacturer within the warranty term, consumer shall be eligible for free repair of the device or its replacement.

Warranty replacement is performed Seller.

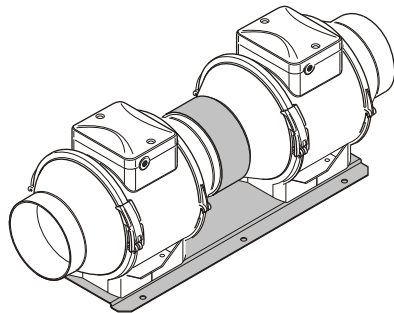
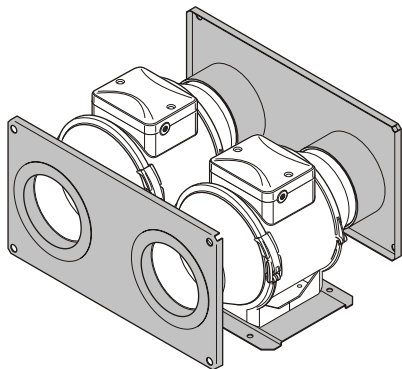
The manufacturer does not bear any responsibilities for damages, resulted from non-purpose use of fan control unit or in case of rough mechanical intrusion.

An owner of product has to follow current guide.





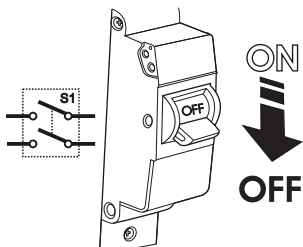
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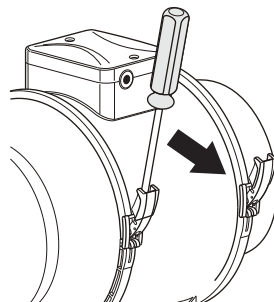
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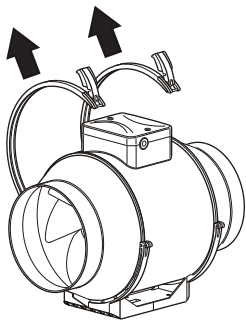
**ACTION SEQUENCE
FOR INSTALLATION**



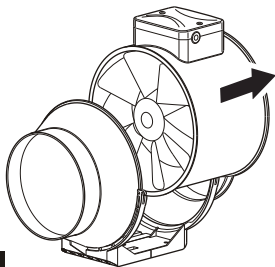
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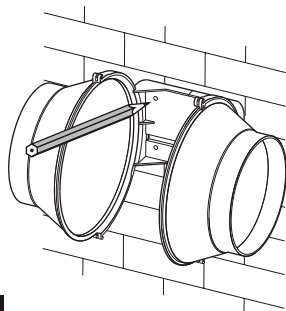
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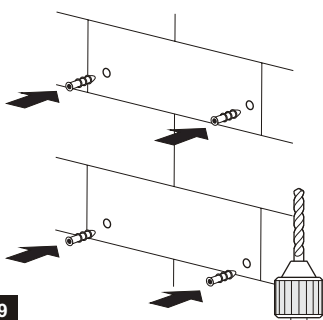
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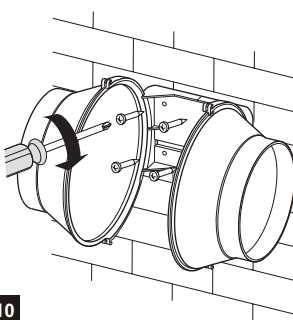
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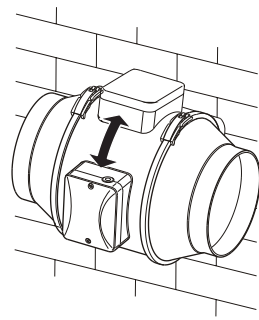
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9



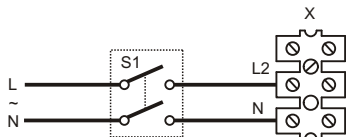
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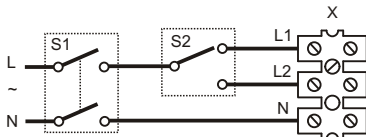
11

DIAGRAMS FOR CONNECTION OF FANS TT 100, TT 125

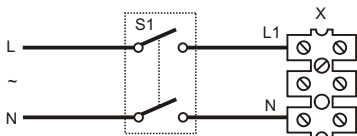
12 MAX



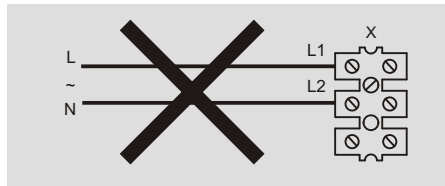
14 MAX / MIN



13 MIN

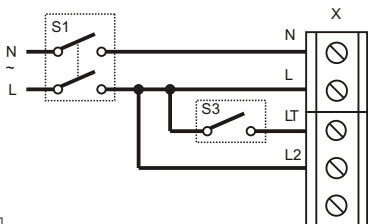


15

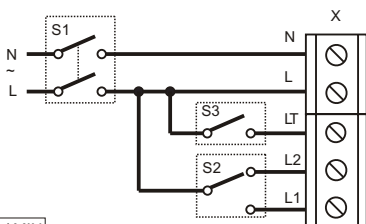


DIAGRAMS FOR CONNECTION OF FANS TT 100T, TT 125T, TT 125ST, TT 150T, TT 160T, TT 200T, TT 250T, TT 315T

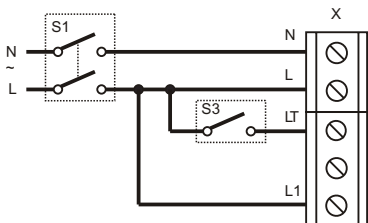
16 MAX



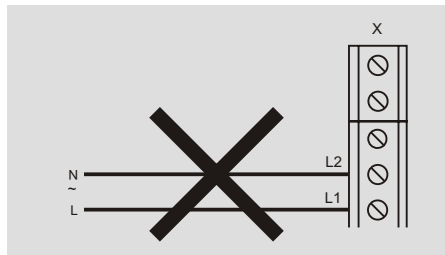
18 MAX / MIN



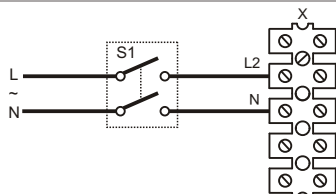
17 MIN



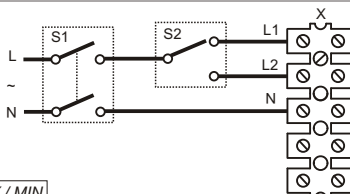
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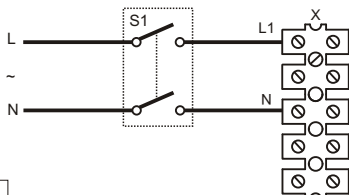
DIAGRAMS FOR CONNECTION OF FANS TT 125S, TT 150, TT 160



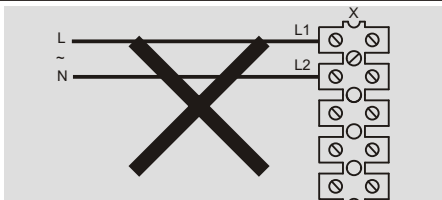
20 MAX



22 MAX / MIN

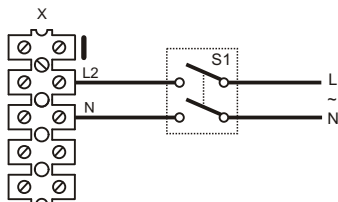


21 MIN

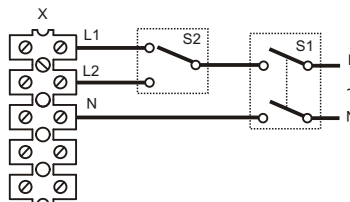


23

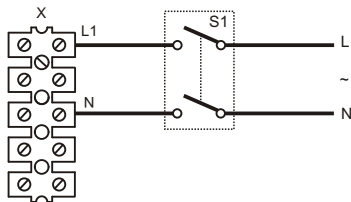
DIAGRAMS FOR CONNECTION OF FANS TT 200, TT 250, TT 315



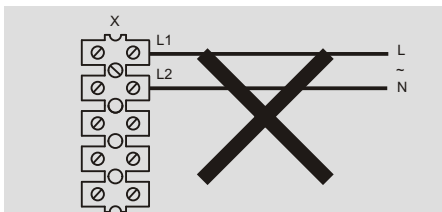
24 MAX



26 MAX / MIN



25 MIN



27

CONNECTION OF FAN WITHOUT EQUIPPED TIMER

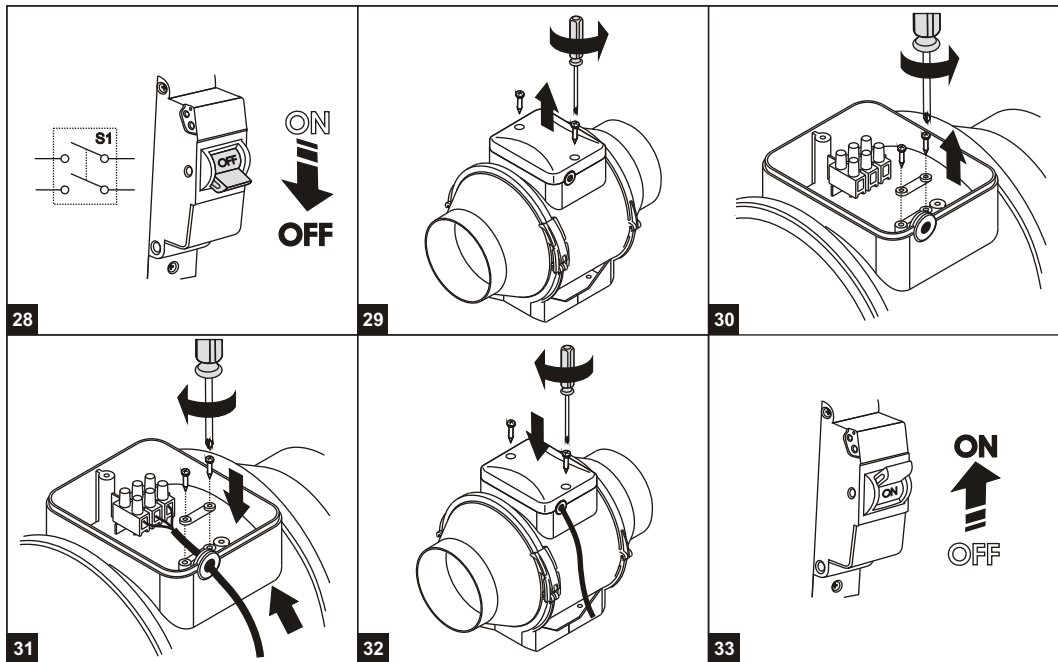
1. Turn off the power network with putting circuit breaker in OFF position (pic. 28).
2. Remove screws and take off cover of terminal block (pic. 29)
3. Remove screws of clamp bar cable and take off clamp bar (pic. 30).
4. Lay down power cable of fan into terminal block through batten and fix cable with clamp bar and screws (pic. 31).
5. Choose working layout - maximal speed, minimal or using external switch.

Connect cable wires to fans input terminal block external changer according selected connecting layout and designation of terminals inside terminal block.

It is forbidden to carry out connection in such a way that L and N are simultaneously connected to clamps L1 and L2 (pic.19)!

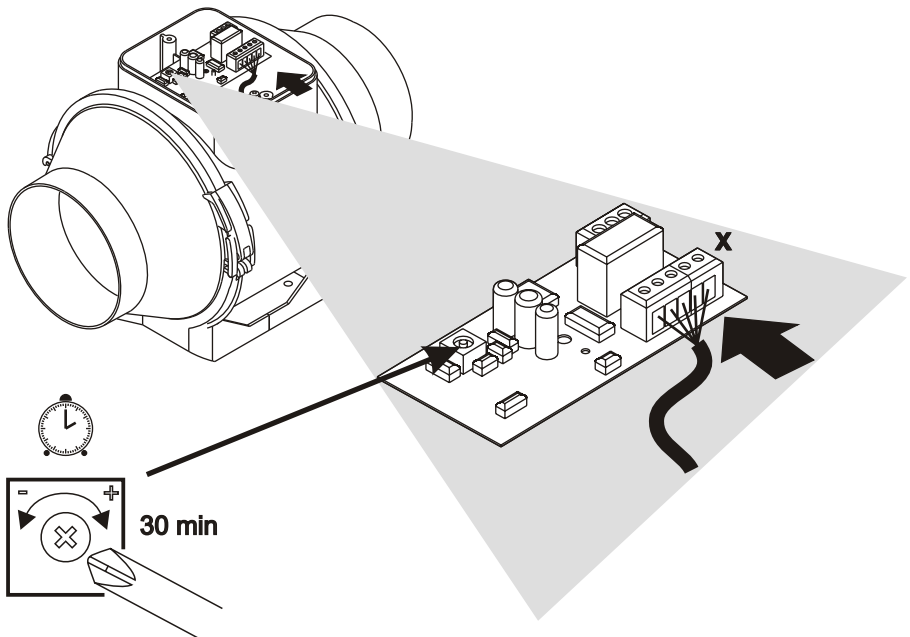
6. Place a cover of terminal block and fix it with screws (pic. 32)..
7. Switch on fan by turning circuit breaker S1 into ON position (pic. 33).

If connection is carried out correctly the fan will start to work at selected speed. If fan does not work or problems appear during its operation it is necessary to carry out its diagnostics.



CONNECTION OF FAN EQUIPPED WITH TIMER

1. Perform actions described in 1-4 items "Connection fan without equipped timer"
2. Choose working speed of fan you want - maximal, minimal or with using external switch.
- S2. Connect supply wires to input terminal block timer according to the chosen pattern of connection and marking of terminals within terminal box. It is forbidden to carry out connection in such a way that L and N are simultaneously connected to clamps L1 and L2 (pic. 19)!
3. Adjust timer by setting place of resistor (pic. 3).
4. Do the actions shown in points 6-7 in paragraph "Connecting of fan without equipped timer".



FANS WITH CABLE

The models with index «V» equipped with a three-positioned built-in speed switch.

The models with index «RV» (pic. 35) equipped with power cable with different types of plugs and three-positioned built-in speed switch and they need an installing for connection.

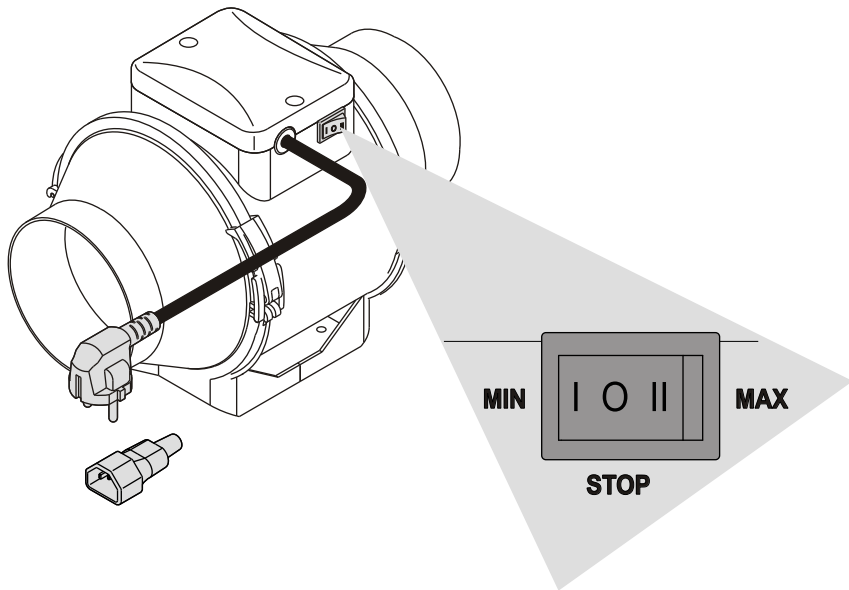
Built-in speed switch ensure functioning of fan in three modes:

“0” - OFF, fan is not working;

“I” - fan is working at minimal speed;

“II” - fan is working at maximal speed.

Models with index «V» и «RV» don't equipped with timer.



SERVICE AND MAINTENANCE

Service and maintenance of fan (pic. 36-40) consists from periodic cleaning to remove dust and grime from surfaces of switched off fan. Turbine blades must be thoroughly cleaned every 6 months.

To do this, it is necessary to remove clamps, body, and dismate fan a solution of warm water and soft detergent clean turbine blades. It is necessary to avoid contact of electric motor with water (pic.41).

POSSIBLE REASONS OF FAILURES AND ITS DISPOSALS MEANS.

1. Fan is not working - maybe power circuit is short-stopped.

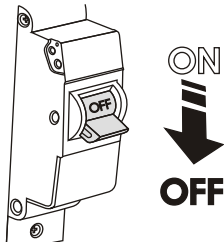
Check the connection of cable in terminal box.

2. During fans working outside noise is heard - maybe in fans channel penetrated foreign objects.

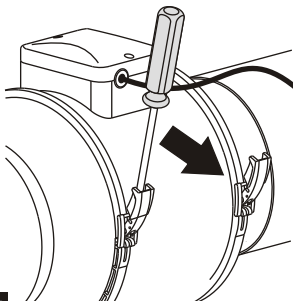
Dismantle fan (pic. 36-39) and remove foreign objects.

3. During fans working it is vibrating - maybe fan is not fixed enough rigid to wall or wall don't have enough rigid.

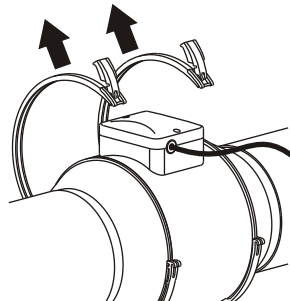
Check fastenings of fan.



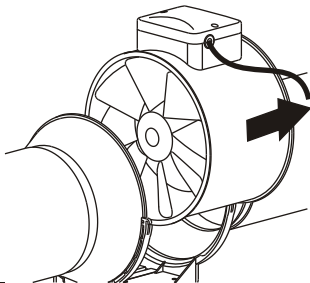
36



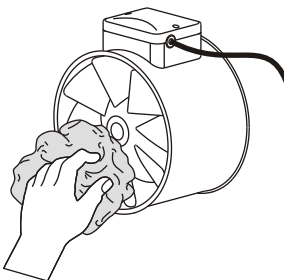
37



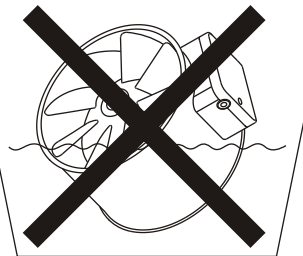
38



39



40



41

ACCEPTANCE INFORMATION

TT 100	<input type="checkbox"/>	TT 100T	<input type="checkbox"/>
TT 125	<input type="checkbox"/>	TT 125T	<input type="checkbox"/>
TT 125S	<input type="checkbox"/>	TT 125ST	<input type="checkbox"/>
TT 150	<input type="checkbox"/>	TT 150T	<input type="checkbox"/>
TT 160	<input type="checkbox"/>	TT 160T	<input type="checkbox"/>
TT 200	<input type="checkbox"/>	TT 200T	<input type="checkbox"/>
TT 250	<input type="checkbox"/>	TT 250T	<input type="checkbox"/>
TT 315	<input type="checkbox"/>	TT 315T	<input type="checkbox"/>

TT 100V	<input type="checkbox"/>	TT 100RV	<input type="checkbox"/>
TT 125V	<input type="checkbox"/>	TT 125RV	<input type="checkbox"/>
TT 125SV	<input type="checkbox"/>	TT 125SRV	<input type="checkbox"/>
TT 150V	<input type="checkbox"/>	TT 150RV	<input type="checkbox"/>
TT 160V	<input type="checkbox"/>	TT 160RV	<input type="checkbox"/>
TT 200V	<input type="checkbox"/>	TT 200RV	<input type="checkbox"/>
TT 250V	<input type="checkbox"/>	TT 250RV	<input type="checkbox"/>
TT 315V	<input type="checkbox"/>	TT 315RV	<input type="checkbox"/>

(mark necessary model)

Fan is ready for using.

Acceptance stamp

Date of production

Sold
(name of trade enterprise and stamp of the shop)

Date of sale