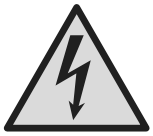
FAN INSTRUCTION MANUAL

NOTICE

Please read carefully the following instruction manual before unpacking, fitting or any other activity performed on the fan! **AWENTA company shall not be liable for damage ensuing from incorrect service, use contrary to the equipment's purpose or unauthorized repairs or alterations.**
This manual is a part of this product and contains important technical information and instruction regarding safe work of fans. The manual should be carefully read and kept at hand in an available place for future reference.

Warnings
The following symbols are warning signs concerning technical safety. To avoid the risk of injury and emergencies please follow all safety rules and symbols contained in this document!


Caution - Danger!


Shock hazard - high voltage!


Caution - rotating parts!

Safety recommendations

Special rules apply to using, connecting and operation; in case of doubts, put forward your inquiry. Other information can be found in relevant norms and acts.
When working on a ventilation fan please abide by all the generally accepted work safety rules and rules concerning accidents at work!
• Follow the rules below whenever carrying out cleaning, maintenance and installation or before opening the service line area:
- Unplug the device from the power grid completely and secure from being reconnected!
- Wait until all rotating parts stop moving!

- After all the rotating parts stop moving wait another 3 minutes because of integrated internal condensers - dangerous voltage may be present!
• Follow all safety rules concerning the appliance! Abide by the national regulations as well!
• Avoid contact with rotating parts.
• Ensure even air access and undisturbed air outflow!
• When using hearth which uses a chimney make sure that in all operating conditions the ventilated area has adequate air supply (please seek chimneysweep's advice). Conform to valid local regulations and acts!
• Installation, electrical connection and starting of the device can be performed only by a trained specialist (as defined in DIN EN 50 110, IEC 364). The appliance is not intended to be used by persons (including children) with reduced physical, motor or mental capabilities or lacking experience and / or knowledge.
• It is forbidden to introduce unauthorized alterations or modifications to the appliance.
• Before fitting the appliance please check the load capacity of construction elements to which the appliance will be fitted, since inadequate fitting may lead to damage or failure of the appliance, as well as pose danger to people near it.
• This ventilation fan can be used by children who

are at least 8 years old. Persons with reduced physical, metal or sensory capabilities or lacking experience and knowledge of the appliance may operate it only when supervised or instructed on safe use of the appliance so that all dangers are well comprehended. Children should not play with the appliance.



The appliance may become dangerous if used contrary to its intended purpose or installed by an unqualified person.

Scope of application

• Exhaust fans are intended to pump regular air or air with little dust (particle size < 10 um), hardly aggressive and humid, in moderate climate and within the range defined in efficiency description; see catalogue. It is only permitted for use as a fixed installation inside a building. Maximum permissible center and ambient temperature is 40°C. Exhaust fans comply with IPX4 protection rating, II class protection and can be installed according to PN-IEC 60364-7-701:2006 in zone 2 in humid rooms.
• Use the fan only in accordance with its intended purpose within power range indicated on the data plate or in accordance with the local power grid!
• The fan cannot be used to blow air which has sticky particles which may stick to the appliance, in particular on the rotor.
• The fan cannot be used to blow air which has caustic particles which may have negative influence on the appliance.
• The fan is not a suitable appliance for blowing air contaminated with a mixture of inflammable substances in the form of gases, vapour, mist or dust which when combined with air may create an explosive atmosphere.
• The appliance is fitted with ball bearings with a lifespan of at least 30 000 hours.

Technical parameters of the fans are shown on the packaging.

Working conditions

• Do not operate the fan in explosive atmosphere.
• Switching on and off frequency: do not allow extreme work of the fan with frequent switching on and off.
• The fan can be used with a thyristor speed governor.

ADDITIONAL EQUIPMENT

Available options:

Terminal block (standard, index without additional designation).
Models with terminal block should be connected according to the connection diagram as shown in Picture 1.
The fan is turned on after the light or other separate switch is turned on.

Pull switch (index ends with letter "W").
Models with pull cord switch should be connected according to the connection diagram as shown in Picture 3.
The pull cord switch is used to switch the fan on and off.

Pull switch and cord (index ends with letters "WP").
Models with pull cord switch and power lead should be directly plugged to a 230V socket.

Timer (index ends with letter "T").

Models with timer (time off delay) should be connected according to the connection diagram as shown in Picture 2.

The delay may be adjusted via potentiometer which can be found in the electronic control system. The minimum value of the delay is 3 minutes if the potentiometer is turned counterclockwise. To make the delay longer the potentiometer should be turned clockwise. Maximum delay is 30 minutes. The adjustment of the turn off delay is a stepless adjustment.

The time off delay of the fan is counted from the moment the light is turned off or other separate switch if turned off to which the appliance is connected.

Humidistat (index ends with letter "H").

Models with humidity sensor (humidistat) should be connected according to the connection diagram as shown in Picture 2 or 3.

Humidity sensor senses humidity within range from 40% to 90% of relative humidity. The system is additionally equipped with a timer. The functioning of the appliance depends on how it is connected to power supply. If it is connected in accordance with Picture 3 the fan will start automatically when humidity level exceeds the defined value. It turns off when the humidity level falls below the defined value and after a time defined on the potentiometer counted from the moment the humidity level drops to the desired level.

If the connection is made in accordance with Picture 2 then apart from automatic start there exists a possibility of starting the fan manually via light switch or separate fan switch. After switching off the light or turning the fan switch off the appliance will turn off, just like in the first case, after the time defined on the potentiometer passes.

NOTICE: If the humidity level is always higher than 90% / or lower than 40% - the fan will never automatically turn off / turn on.

Motion sensor (index ends with letter "R").

Models with motion sensor should be connected according to the connection diagram as shown in Picture 3.

Models with motion sensor start after detecting movement in the room. The turning off is automatic with adjustable delay from 3 to 30 minutes after the last movement detected by the sensor. The sensitivity of motion detector can be adjusted by means of potentiometer in the electronic control system. It is possible to adjust the time off delay of the fan when the fan is working - the sensor will turn off after the newly defined time.

The diagram of wires and motion sensor range is shown in Picture 4.

Control (index ends with letters "CTR").

The appliance should be connected according to the connection diagram as shown in Picture 2.

Models with Control option are equipped with a processor which enables speed adjustment which influences fan parameters that are related to it (efficiency, power consumption, noise level) and time off delay. The adjustment is made via touch buttons at the bottom part of the front panel (Picture 5). Next to them are four diodes which indicate the mode of work.

Adjustment of work parameters: the fan can work in four speed settings. LED diodes signal which setting is used.

Time off delay setting is available in two options: **minutes** (5, 10, 20 and 30 minutes) and **hours** (from 1 to 10 hours, in one hour intervals). The change of setting from minutes to hours and the other way round takes place after keeping Time button pressed for 7 seconds. In the time off delay mode the time is counted from the moment the light is turned off or some other separate switch is turned off to which the appliance is connected. LED diodes signal the time of the delay. **Minute mode:** LED1 diode (first from the left) - 5 min., LED2 - 10 min., LED3 - 20 min., LED4 - 30 min.

Hour mode:

Work time [h]	LED diode [No]	Work time [h]	LED diode [No]
1	1	6	1+2+3
2	2	7	1+2+4
3	1+2	8	1+3+4
4	1+3	9	2+3+4
5	2+3	10	1+2+3+4

Control (CTR)	Ø100				Ø125			
Speed	I	II	III	IV	I	II	III	IV
m^3/h	40	70	85	102	50	90	140	175
W	4	6	8	14	6	8	10	16
dB	21	26	32	35	22	26	33	37

INSTALLATION



Installation, electrical connection and activation can be carried out only by qualified staff trained in accordance with valid regulations!!



Awenta company exhaust fans are made in series and supplied with parts which protect users from touching the appliance where the air is sucked in. Depending on the installation conditions it may be sometimes necessary to provide protection where the air is exhausted. There exists a possibility of supplying as an additional option protecting parts to be fitted on the exhaust side. Fans are protected as a result of the way they are installed (for example in ventilation ducts and do not require protective guards if such safety is guaranteed. However, it should be noted that the use is responsible for complying with the valid norms and may be liable for accidents resulting from lack of protective elements.
Before installing the fan please complete the following steps:
- remove alien bodies from inside the fan;
- check if the rotor rotates freely by setting it in motion with your hand;
It is recommended to connect the fan to the duct system using a flexible tube!

Electrical connection

DANGER! The rotating rotor may crush your fingers. Before starting the appliance put on the protective cover!

- Electrical connection and initial start of the appliance may be carried out only by an authorized specialist electrician who is following the data in the connection diagram.
- Relevant norms, safety regulations and technical conditions regarding connections of the company supplying electrical power need to strictly adhered to!
- In other cases it is necessary to use multi-pole disconnect switch for the grid/isolation switch with a contact hole which measures 3 mm (PN-EN 60335-1:2012)!
- The type of power grid, voltage and frequency need to comply with the data on the data plate.
• Carefully guide the cable through the seal wire (prepare a place by cutting it out beforehand).
• Connect according to the connection diagram to the installed model.
• Check the seal of the connection cable and the mounting of the conductor clamp in the terminal
• If in the lead the seal wire does not evenly cover the lead in sheath then additionally seal, for example using silicone. Otherwise the IP protection does not work.
• The connection cable should be secured so that in case of flooding the water cannot penetrate along the cable. It is forbidden to bend the cable over sharp edges!
• Check if the way the fan is being used complies with its intended purpose!
• Compare the network voltage with the data on the data plate.
• Check if the fan is firmly mounted and electrical installation professionally done.
• Check if the rotor rotates freely
• Check if there are no loose parts
• Make sure that the protective cover to prevent touching of the mechanism was installed. The appliance may be started only with the protective cover in place!
• During test run check the fan for vibrations and noise
• Compare power consumption with the data on the data plate.
Starting the appliance can only take place when all safety precautions have been checked and hazards ruled out. After start check if the appliance works evenly and the air flows in the right direction (from the duct to the outside).
Check the work of the fan (noise, vibrations, power consumption, possibility to adjust rotation speed).

Installation method

Before you begin the installation carefully determine the place where the fan is going to be installed.

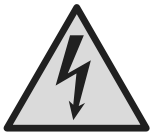
Fan dimensions [mm] are shown in the technical drawings on the packaging of the product.
The drawings present the structure of the fan and concern the following models:
Pic. A - WA, WAVE, BASIC, CLASSIC, RING, DISK, VECCO
Pic. B - other

Installation of the fan should begin with the removal of the masking front cover (**1**) and fan body cover (**4**)* - both parts are fitted by pressing them in and secured with screws.
Insert the power lead: depending on the model of the fan the lead should be guided through the opening (**7**) by breaking in (**6**)*. Press the fan body (**10**) into the previously prepared opening in the wall or ceiling and secure with screws through the mounting holes (**11**). Then, unscrew the screw or screws (**2**) and remove dome (**3**) to gain access to the control plate (**5**).
Connect wires according to the connection diagram depending on the type of fan equipment.
Versions T, H and R: *Set the time off delay value and sensor sensitivity (humidity or motion) using a screwdriver (**8**)* or a tool with a stiff, flat non-conducting bar.*
Place the dome (**3**) on the central part of the fan body and secure with screws (**2**). Put the cover (**4**)* and masking cover on (**1**).
**parts not available in some models*

MAINTENANCE AND CLEANING

Keeping the appliance in good condition - maintenance.
Work related to keeping the appliance in good technical condition should be entrusted only to trained specialists.
• All maintenance work must comply with safety norms and health and safety regulations (PN-IEC 60364-3:2000).
• Before starting any work with the fan disconnect the power supply and secure from being reconnected!
• Air ducts of the fan need to be free from alien bodies - expelled items may pose danger!
• Do not perform maintenance tasks when the fan is operating!
• Pay attention to keep the work free from unnecessary vibrations!
• Intervals between technical maintenance depend on the cleanliness of the rotor!
• Thanks to using ball bearings with "lifespan lubrication" the motor does not require lubrication. After the period of using grease (technical data) it is necessary to replace the bearings. In such case or in case of any other damage (e.g. concerning winding or electronics) please contact the manufacturer.

Cleaning.



In case of damaging the insulation there is shock hazard!
Before cleaning disconnect the power supply from the fan completely and secure it from being reconnected!!

• Clean the front, mesh and visible cover parts with a damp cloth
• Do not use aggressive varnish dissolving agents!
• It is forbidden to use high pressure cleaner or water jets!
• During cleaning pay attention so that the liquid from the damp cloth does not reach the inside of the electronic motor or junction box.
• After finishing cleaning the fan should be turned on and left working continuously for at least two hours - set to from 80% to 100% of maximum revolutions so that the fan becomes dry.
The maintenance of the fan should be performed once every year. Mechanical and electrical connections should be checked every three months. Additionally, if you hear or notice that the appliance is malfunctioning then it should be checked. Keep the mesh of the fan cover clean.

GUARANTEE TERMS AND CONDITIONS

1. The guarantee covers the efficient functioning of the fan for the period of 2 or 5 years – depending on the type of model (information on the packaging) - counting from the date of purchase.
2. The guarantee without required purchase documents (receipt, invoice) is invalid.

3. The guarantee covers all faults and damage which occurred by fault of the manufacturer.
4. The damaged appliance should be delivered to the manufacturer or to the place of purchase.
5. The manufacturer shall repair the appliance or replace it with a new one within 14 days from the day the complaint was filed.
6. The manufacturer shall not be liable for damage which occurred by fault of the user as a result of incorrect installation, installation performed by unauthorized persons, operation against intended use, incorrect transport, storage and maintenance, damage resulting from unauthorized repairs and mechanical damage.
7. Installation and maintenance is not covered by this guarantee.
8. The condition for efficient functioning of the appliance and keeping guarantee terms and conditions binding is performing periodic maintenance by authorized persons at least twice a year.
9. For matters not provided in this guarantee the regulations of the Polish Civil Code shall apply (Article 577-582).