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1. GENERAL INFORMATION

The fans are intended for mechanical exhaust ventilation in residential buildings. They are the basis for the entire ventilation installation, which includes a duct network, fire dampers, exhaust grilles, diffusers and other components.

Unlike standard fans, the working specifications of HAT are adapted for compatibility with HIGRO® systems.

HD automation

Integrated into the HAT fan, the HIGROdynamic automated system adapts the fan speed to the opening degree of the HIGRO® AERECO diffusers and grilles. This means that the electronic system lowers the fan speed at low flow volumes, adapting to the lower airflow resistance in the ducts, and increases the fan speed at higher airflow volumes caused by the open dampers of the hygroregulated grilles. The HIGROdynamic automated system prevents improper operation of the ventilation system, in particular excessive noise from grilles and diffusers at low humidity. The automated regulation of operating parameters reduces the fan's energy consumption.

In addition the HD/PD/MD automated system can be equipped with the day/night function - TS, which is activated by connecting an external control signal from the ACC.DN2 automated system. This allows for the fan speed to be lowered during the night hours.

In addition to the savings in electricity consumption, the automated control of fan performance enables better acoustic performance of the exhaust grilles and a reduction in the noise emitted by the fan.

In contrast to decentralized ventilation systems (a fan in each auxiliary room), the HIGRO® systems enables the reduction of investment costs and minimises noise, as the fan which is the main source of noise is distant from the room and additionally silenced with the acoustic silencer SAS-1200. The fans are intended for pressing clean ventilation air free of dust, corrosive substances and explosive mixtures. Using the fan for purposes other than intended voids the warranty.

ATTENTION!!!

The compact design minimises the necessary installation space on the roof. The fans, thanks to their flexible work and adaptation to the network parameters, can be used both in tall and short buildings.

2. FAN INSTALLATION

The fans are suitable for outdoor use.

- All fans must be placed on AERECO vibration isolators and connected to the system with SAS-1200 silencer.
- When mounting the fan on the SBC-250 / SBC-250-S roof base, make sure that the fan housing fits the base gasket properly. The gasket is supplied with the base. For mounting, use sealing washers for the screws fixing the fan mounting plate to the roof base. It is recommended to connect the SBC-250 / SBC-250-S base to the installation with the SAS-1200 silencer.
- When installing the fan without the SBC-250 / SBC-250-S roof base, a flexible connector between the fan and the suction duct as well as vibration isolators must be used. In addition, it is necessary to provide an additional pressure measurement point and to connect a silicone automation tube to it. The pressure measuring point should be located in the ventilation duct, but not closer than 1.5 D (D= diameter of the ventilation duct) from the inlet of the fan.
- All works inside the fan casing and connected to the power supply and fan automated system must be carried out after the power supply has been disconnected. The installer is responsible for the compliance with all applicable safety regulations for electrical connections and protection against accidental contact.
- Clearance must be provided around the fan, the automated system and the measuring stub to allow for future maintenance.
- The automated control system must be located in an easily accessible place.
- During installation and storage of the automated equipment, it must be protected against the ingress of water.
- During all works connected with the fan service one should
 - use protective gloves,
 - use tools intended for maintenance works.

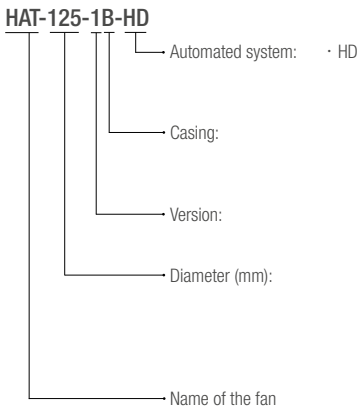
ATTENTION!!!

- *Disconnect the fan from the mains supply before carrying out any installation or maintenance work.*

ATTENTION!!!

- *Before switching on, the fan must be connected to the ducting network. The installation must be performed in such a way that no contact with moving parts of the fan is possible. Installation may only be carried out by qualified personnel.*
- *Before starting the fan, check that there are no foreign objects blocking the impeller.*

3. FAN MODELS



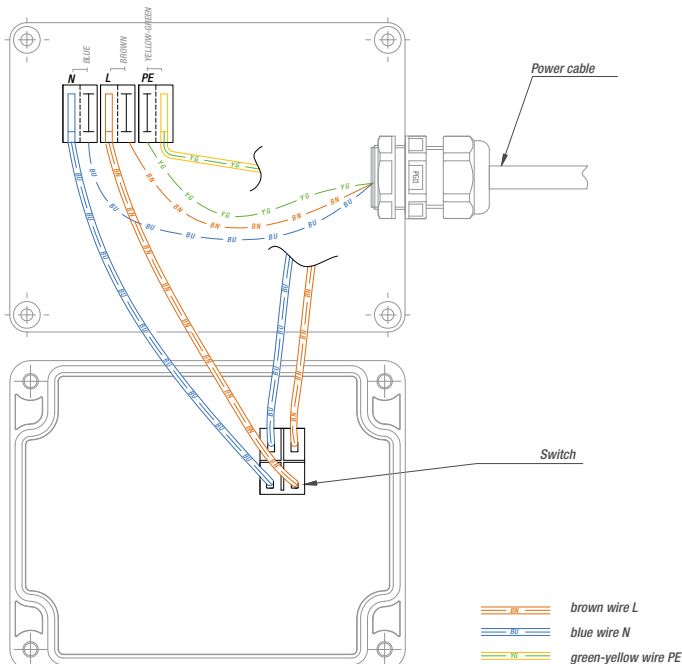
* diameter available in casing size B
 ** diameter available in casing size B and C
 *** diameter available in casing size C
 **** diameter available in casing size C and D

4. ELECTRICAL SPECIFICATIONS AND CONNECTIONS

Type	Power supply	I max. [A]	P max. [W]
HAT-100-B	230 VAC/50Hz	1.7	170
HAT-125-B	230 VAC/50Hz	1.7	170
HAT.160.B.	230 VAC/50Hz	1.7	170
HAT-160-C	230 VAC/50Hz	1.7	170
HAT-200-C	230 VAC/50Hz	1.7	170
HAT-250-C	230 VAC/50Hz	1.7	170
HAT-250-D	230 VAC/50Hz	1,75	170

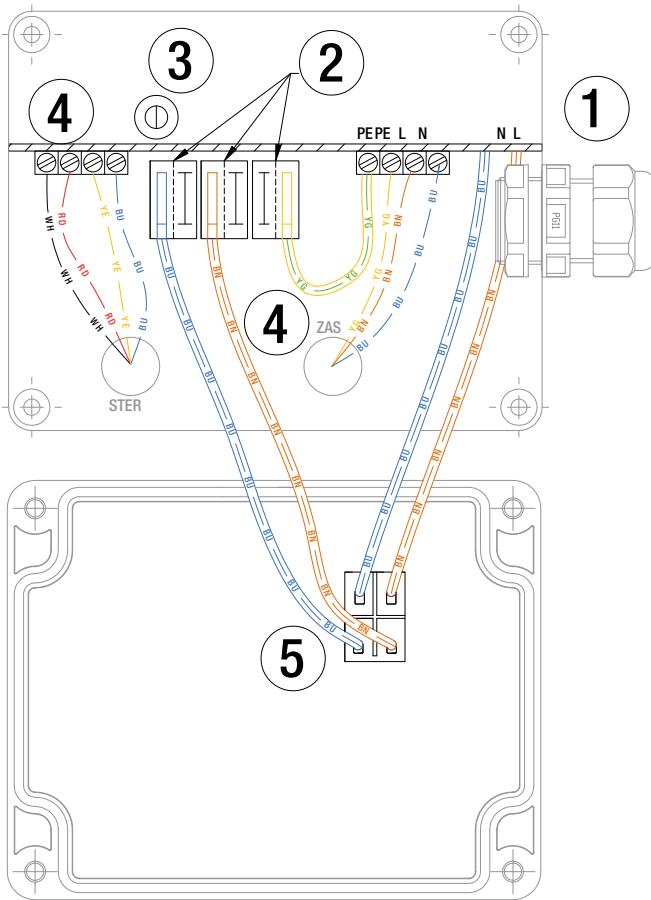
Connecting the HD automated system

The power supply for the fan with a HD automated system should be connected as shown in the drawing.



ATTENTION!!!

- Each fan shall have individual overcurrent protection.
- Each fan and overcurrent protection shall be identically labelled.



To open the housing of HD automated unit use a screwdriver. Do not use a power screwdriver because of the danger of damaging the screws and loss of tightness of the casing.

1 PG11 cable gland enables connection of 1x230 V power supply. The power wires should be connected to the corresponding terminal blocks **2**, in accordance with point 4 of the technical and propulsion documentation. The potentiometer **3** is used to change the setting of the base pressure. The base pressure is preset at the factory. Do not change the default connections **4**. The automated system is equipped with a switch **5**. The switch button is located on the lid of the casing.

ATTENTION!!!

After connecting the power supply, mount the cover of the automated system and tighten it with screws with 0.8 Nm force.

5. START-UP

- Incorrect start-up can lead to damage of the fan.
- The start-up can be carried out by the AERECO service with prior agreement.

Before applying voltage you have to check that:

- installation materials, possible waste and tools have been removed from inside the fan,
- the fan impeller turns easily without rubbing or jamming,
- the fan is securely mounted,
- the direction of air flow through the fan corresponds to the installation design,
- electrical connections have been made correctly,
- the wire fixing is secure and made using the correct materials,
- electric wires connected to the fan are properly fastened, without risk of breaking or fraying due to vibrations,
- the protective (earthing) conductor and possibly also the equipotential bonding conductor are correctly connected to the fan and to the grounding point (busbar)
- safety devices have been installed and they comply with the general safety regulations and the requirements of section 4 of the documentation,
- the voltage supply corresponds to the rated values within the tolerances: max. voltage + 6%, - 10% according to EN 60038:2012 (unless other tolerances are indicated on the nameplate of the fan).

After applying voltage you have to check that:

- the fan works without any abnormal sounds.

ATTENTION!!!

- *Start-up must be documented by an entry in the warranty card.*

- *Causing damage to the fan as a result of installation error or the use of inappropriate electrical protection is grounds for invalidating the guarantee.*

6. USE

The fans require periodical service twice a year which must include checking the general condition and cleaning the impeller and the housing. Before operation, service or repair of the device, it is necessary to make sure that

- the employee performing the inspection has been trained and knows the safety rules,
- the power supply is disconnected (circuits of all poles) and that it is not possible for third parties to switch on the fan,
- the fan impeller is no longer rotating.
- The fan bearings do not require lubrication and should be replaced if faulty.
- Do not use pressurised equipment (compressed air or pressurised water) to clean the fans.
- When cleaning, make sure that the weights balancing the impeller are in place and the impeller is not deformed.
- After cleaning, make sure that the fan works without any abnormal noises.
- Check that the impeller is not jammed and that the motor protection is not loosened.

ATTENTION!!!

- *Service notifications should be made via the website:*
www.serwis.aereco.pl

- *Start-up must be documented by an entry in the warranty card.*

ATTENTION!!!

- *Failure to carry out the inspection will result in the loss of warranty.*

7. TRANSPORT AND STORAGE

HAT fans are factory packed in appropriate cardboard boxes. It is recommended to leave the fans in their original packaging during the whole transport to the place of installation.

During transport, the fans should not be thrown, knocked over or additionally weighted.

Prior to mounting, the fans should be stored in dry and well-ventilated spaces.

AERECO S.A. RESERVES THE RIGHT TO MAKE CHANGES TO THIS TECHNICAL MANUAL WITHOUT NOTICE.

**Declaration of conformity
no 20200401/HAT-HD/ErP**

1. Selling company:

Aereco S.A.

**62 rue de Lamirault – Collégien
77615 – Marne-la-Vallée Cedex 3
France**

2. Product name:

Fans HAT-HD:

**- 100-1B; 125-1B; 160-1B; 160-1C; 200-1C; 250-1C; 250-1D
- 100-3B; 125-3B; 160-3B; 160-3C; 200-3C; 250-3C; 250-3D**

3. We declare the conformity of the product with the following directives, standards and documents:

Directive 2014/30/EU

Directive 2014/35/EU

Directive 2006/42/EC

European Commission Regulation 1253/2014

Łomna Las, 01 April 2020

Marcin Gasiński



Technical and Energy
Requirements Specialist



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