Mounting

AM 150 I AM 300 I AM 500 I AM 800

AIRMASTER

SAFETY INSTRUCTIONS

This manual must be read before installing the Airmaster ventilation unit. Following this manual will ensure this product is operated correctly.

The installation engineer is responsible for ensuring that the unit is installed according to current regulations and standards.

When installing the ventilation unit in a room with a fire or stove drawing air from the room, all applicable provisions must be observed.

The unit should not be installed in rooms with abrasive particles or flammable or corrosive gas in the air, in wet rooms or explosion-protected rooms.

The unit should not be used without the filters specified in the Operator's Manual.

The manufacturer cannot be held liable for damage arising from use or installing in contravention of these instructions.

The manufacturer reserves the right to make changes without notice. All values stated are nominal values and can be affected by local conditions.

Failure to observe the warnings indicated by a danger symbol implies a risk of personal injury or damage to property.

This manual relates to the Airmaster unit it accompanies plus all equipment, and must be given to and saved by the unit's owner.

All necessary data and guides to network integration can be downloaded from www.airmaster-as.com.

WARNINGS

Service covers may not be opened without first disconnecting the unit's power supply and preventing use.

The unit may not be started up until all service covers and grates on duct connections have been installed.

The installer must wear personal protective safety equipment, such as safety shoes, during the installation of the unit

Place of installation and serial numbers (S/N):

Type: _____

Delivery date: _____

Place of installation: _____

S/N of Air handling unit: _____

S/N of Cooling Module: _____

Table of Contents

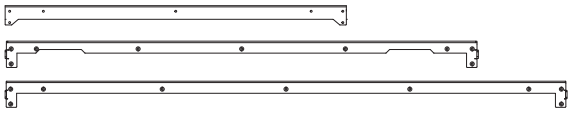
1. Scope of delivery

The Airmaster ventilation unit is packed on a pallet in one or more cardboard boxes. All individual parts can be found in the box(es), depending on the customer's order.

Please check the delivery before installation. The most important parts are shown below. The scope of delivery can be seen from the delivery note.

1. Airmaster ventilation unit - AM xxx

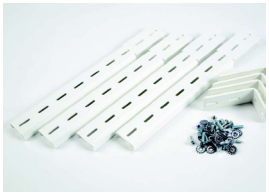
2. Wall frame
   Fitted on the ventilation unit or the cooling module.



3. Cooling module - CC xxx (optional)

4. Panel set. A set consists of one to three long panels and double that number of short panels.

5. Ceiling fittings (optional)



6. Control panel (optional)

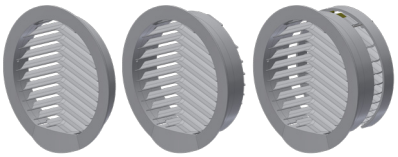
Airlinq Viva

or

Airlinq Orbit

7. Set of pipes (optional)

8. Grilles (optional)



<u>Documentation:</u>

1. Dimensional drawing

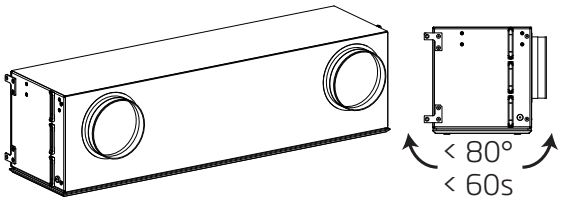
2. Operation & Maintenance manual,
   Mounting manual,
   Installation manual.

   Must be handed over to the owner.

2. Technical specifications

		AM 150	AM 300	AM 500	AM 800
Weight, standard unit	kg	53	85	108	156,5
Weight, standard unit + cooling module	kg	82	-	190,8	257,2
Colour, panel	RAL	-	-	9010	9010
Colour, case	RAL	9010	9010	7024	7024
Dimensions	mm	See the dimensional drawing			

3. Transportation of cooling modules



Cooling modules must be stored and transported on the case cover. The unit may, however, be tipped up to 80 degrees for up to 60 seconds.

If this time is exceeded, you must wait at least 2 hours before starting the compressor.

4. Installation

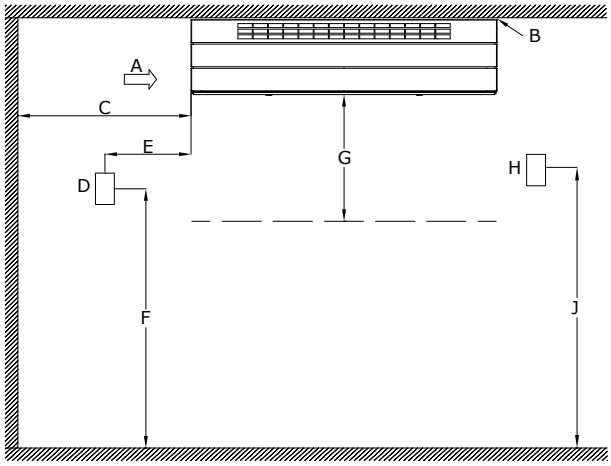
The installation engineer is responsible for ensuring that the Airmaster ventilation unit is properly secured in a horizontal position.

The installation engineer is responsible for ensuring that any existing functions in the wall/ceiling (e.g. vapour barrier) are restored and fully functional once the unit has been installed.

Read this section in full before starting the installation.

4.1. Positioning of the ventilation unit

The diagram below shows the most important dimensions relating to the positioning of the unit.



A: Extraction (may also be on the right side of the unit)

B: Distance from ceiling: Max. 50 mm

C: Min. distance from wall: 0.5 m

D: External CO_2 sensor

E: Approximately 1 m

F: Approximately 2 m

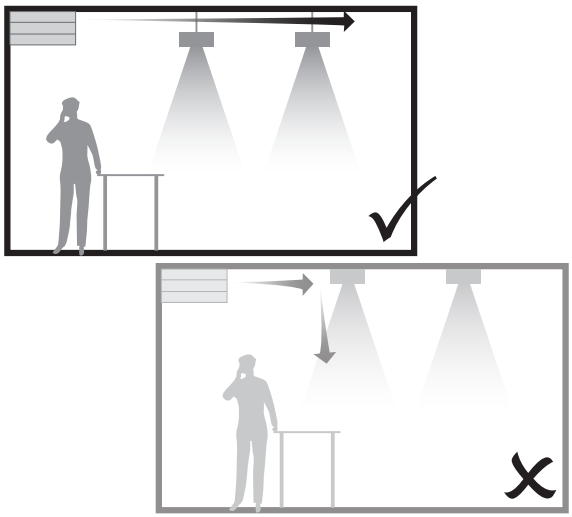
G: Free space for maintenance work min. 0.95 m

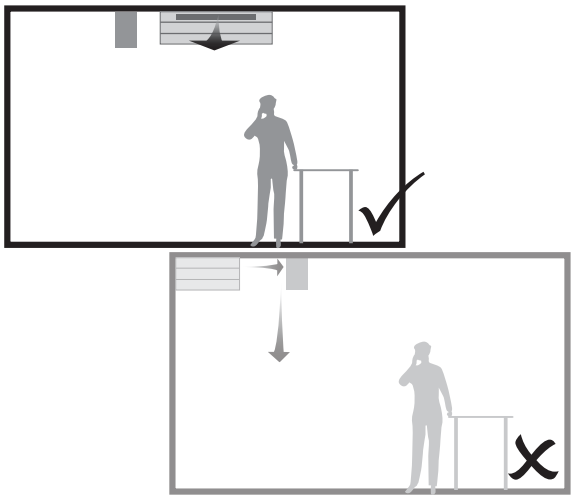
H: External PIR sensor

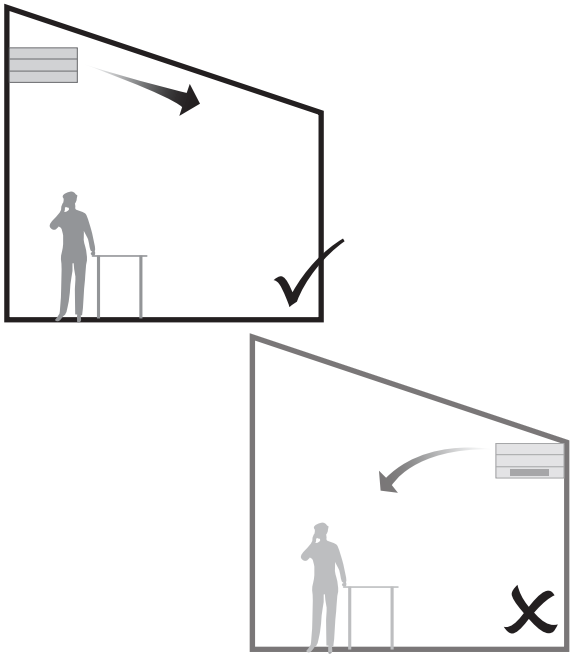
J: Approximately 2,25 m (1,8-2,5 m)

A CO_2 sensor must not be fitted close to a window or door.

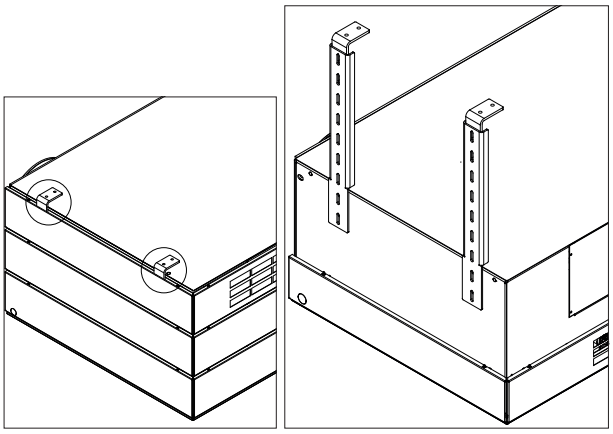
A smoke detector must not be too close to the inlet air flow and extract air flow.







4.2. Ceiling brackets



The purpose of the ceiling brackets is to hold a wall-mounted unit in place when the attachment to the wall frame alone does not provide sufficient support. This is the case, for example, when the unit is equipped with a cooling module, when the wall is not sufficiently sound or when the unit is to be fitted in a free-suspended position. Not available for AM 150 and AM 300.

The holes for securing the ceiling brackets are at the top of the unit and the cooling module on both sides. See the attached dimensional drawing.

If ceiling brackets are used, the distance from the wall frame/unit to the ceiling must be adjusted as the ceiling brackets protrude over the top edge of the unit by up to 30 mm!

4.3. Installation of wall frames and the drilling of duct holes

NB! The ventilation unit must be mounted on a solid supporting base by using all possible attachment points. If the wall itself is not sufficiently solid, the unit can be additionally fastened to the ceiling.

NB! If the unit is not properly affixed, there is a high risk of the ventilation unit disengaging from its attachment fittings and falling down. This constitutes a risk of damaging materials and/or causing serious personal injury.

NB! The attachment material will depend on the supporting base and the unit and must be suitable for properly supporting the unit's weight of up to 257 kg on the supporting base.

The wall to which the unit is fitted must have an even surface. If the surface is too uneven, fitting of the frame may be out of true. This may lead to leaks and an increased noise level during operation of the unit.

It is recommended that the duct holes be drilled 10-15 mm larger than indicated on the drawings as this will allow for subsequent insulation, will prevent direct contact with the wall, and will allow for a vapour barrier etc. to be restored.
A rubber diaphragm for restoration of the function of the vapour barrier is optional available and can be delivered by Airmaster.

NB! Duct holes in the wall must have an outward downward gradient of 1-2% to prevent heavy rain from entering the unit.

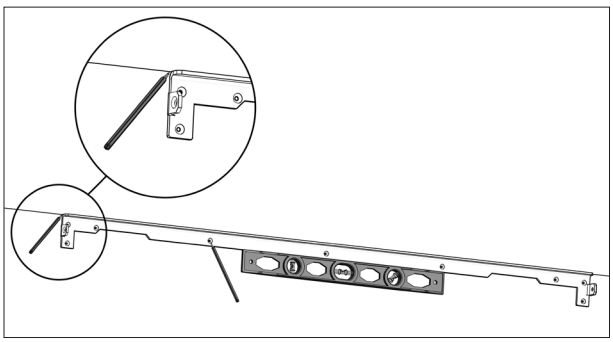
NB! The holes for the roof ducts must be made oval to be able to install the unit, please refer to the figure below:

1. Hold the wall frame against the wall under the ceiling.

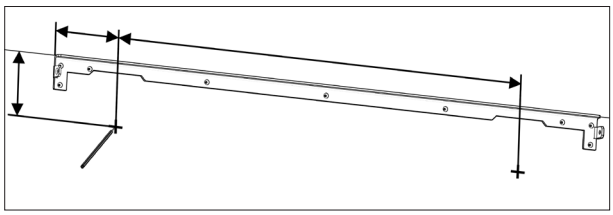
AM/AM+CC	150, 300	500, 800
Distance (A) wall frame to ceiling [mm]	0	0
Optical air gap between unit and ceiling [mm]	14	7,5

If the air gap (L) needs to be increased, e.g. if the unit is installed with ceiling fittings (see also section "Ceiling Brackets"), distance (A) should be increased.

2. Mark all holes and the top edge and left edge of the wall frame on the wall. Trial fit the wall frame if necessary.

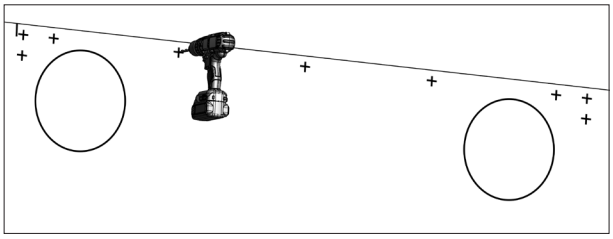


3. Mark the holes for the ducts according to the attached dimensional drawing.

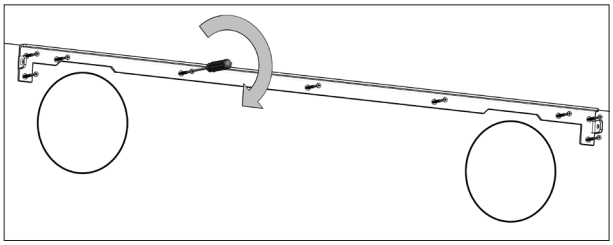


4. Drill all marked holes.

AM 150 and AM 300: See below.

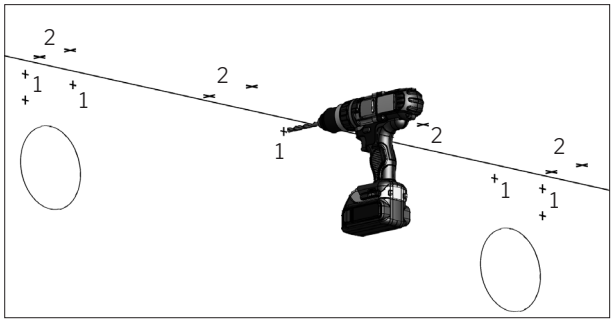


5. Fit the wall frame.



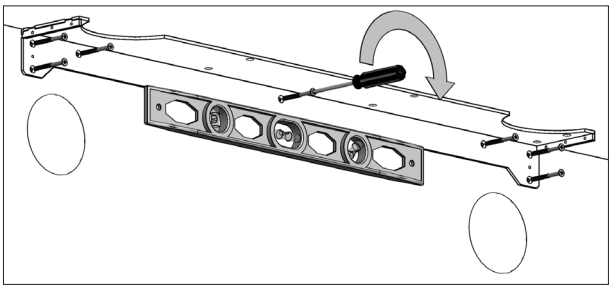
Only AM 150 and AM 300:

4. Drill the holes for the ducts and the frame (1, 2 or 1+2) in accordance with the dimensional drawings.

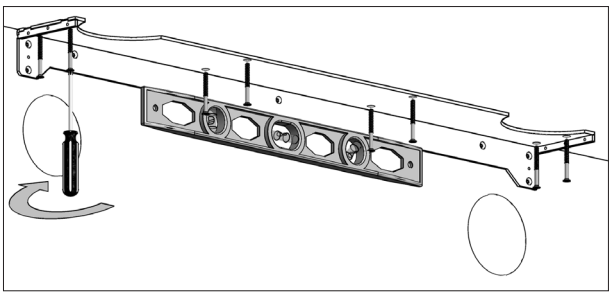


5. Fit the frame in a horizontal position. (1, 2 or 1+2).

1



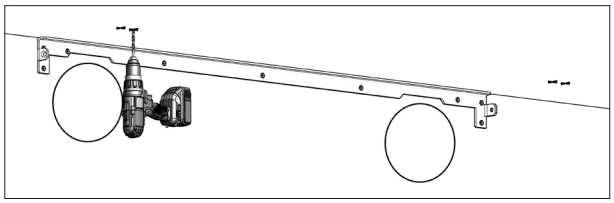
2



4.4. Installation of the cooling module CC 500 or CC 800

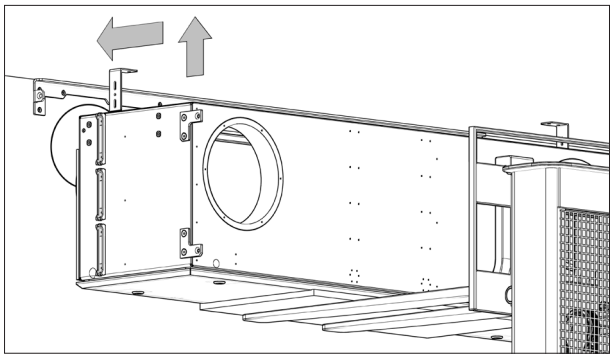
The cooling module has to be adjust into a horizontal position.

1. Drill holes for the ceiling brackets according to the dimension drawing and attach the ceiling brackets

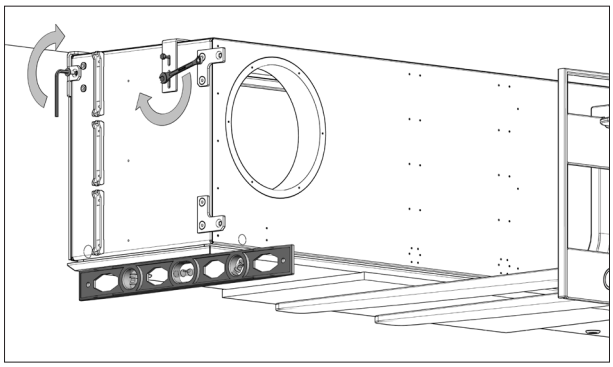


2. Appropriate lifting equipment is used to lift the cooling module into place on the wall frame.

We would point out that, when lifting the cooling module a protective underlay must be placed beneath the service cover to prevent scratches to the service cover. This underlay may for example be strong, clean cardboard or equivalent.



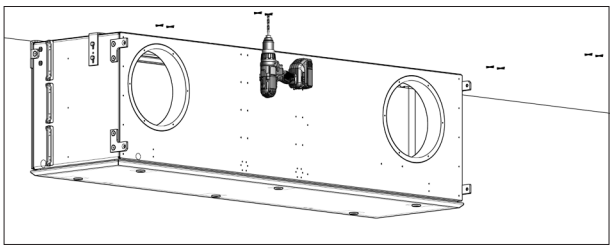
3. Press the cooling module against the wall frame and use the accompanying bolts to screw it tightly to the frame and, if relevant, to the ceiling brackets.



4.5. Installation of ventilation unit AM 500 and AM 800 to the wall frame or cooling module

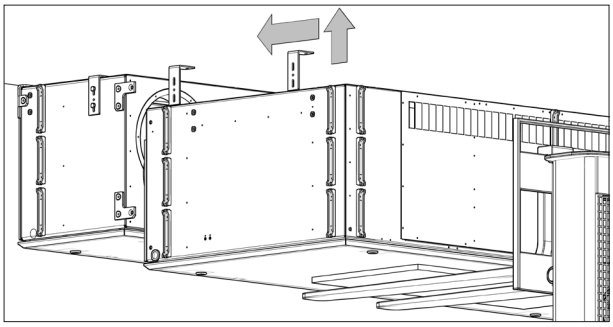
The unit has to be adjust into a horizontal position.

1. Drill the holes for the ceiling brackets in accordance with the dimensional drawing and attach the ceiling brackets.

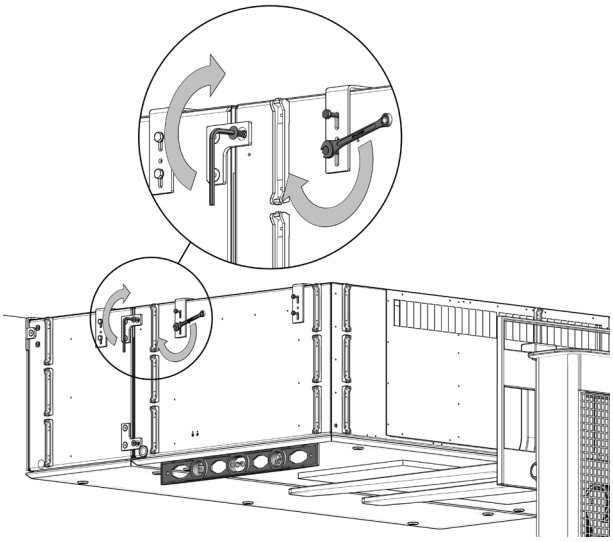


2. Lift the ventilation unit up to the cooling module/wall frame, using appropriate lifting equipment.

When lifting the unit a protective underlay must be placed beneath the service cover to prevent scratches to the service cover. This underlay may for example be strong, clean cardboard or equivalent.



3. Push the unit against the cooling module/wall frame and screw securely to the frame using the bolts provided.
4. Attach the unit to the ceiling brackets.

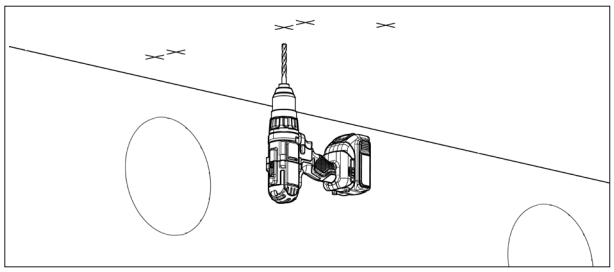


5. Draw the leads of the cooling module over to the ventilation unit.
6. Note the type, date supplied, place of installation and serial numbers (S/N) of the ventilation unit and the cooling module on page 2.

4.5.1. Installation with ceiling frame

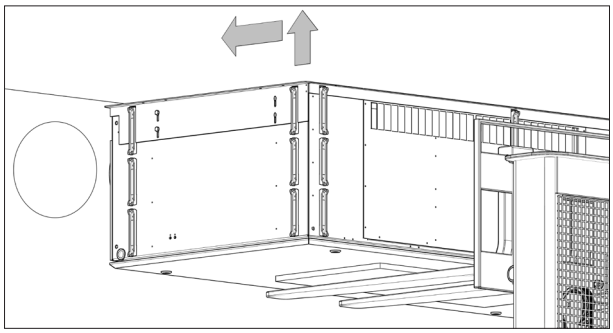
The unit has to be adjust into a horizontal position.

1. Drill the holes for the ducts and the frame in accordance with the dimensional drawing. (See also section “Wall Frame and Duct Holes”)



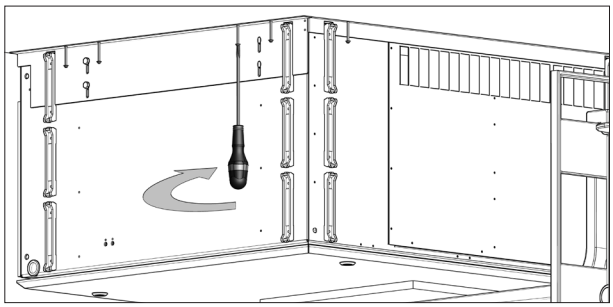
The attachment point for the ventilation unit on the ceiling frame for AM 500 and 800 is adjustable. It is possible to adjust the vertical position of the unit and the duct holes up to 20 mm.

2. Lift the ventilation unit up to the ceiling, using appropriate lifting equipment.

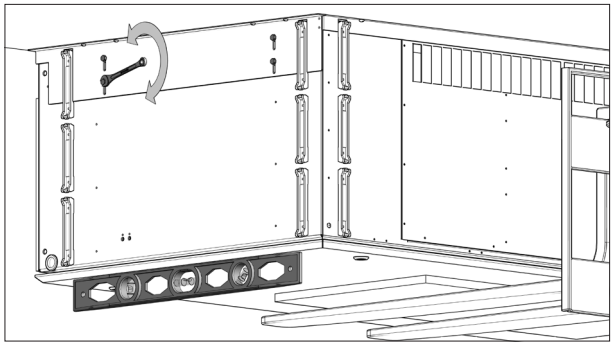


We would point out that, when lifting the unit a protective underlay must be placed beneath the service cover to prevent scratches to the service cover. This underlay may for example be strong, clean cardboard or equivalent.

3. Lift the unit to its final position and mount the ceiling frame securely to the ceiling.



4. Adjust the unit into a horizontal position and secure it to the ceiling frame.
5. Note the type, date supplied, place of installation and serial numbers (S/N) of the ventilation unit on page 2.

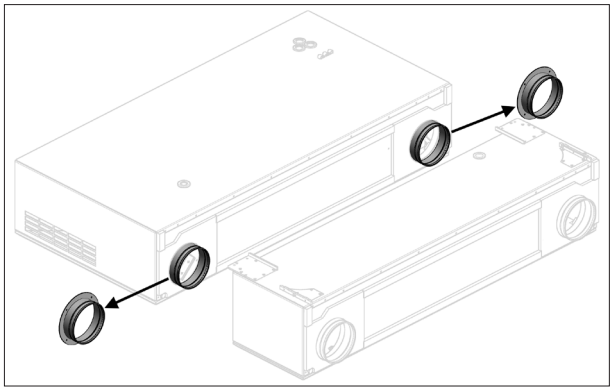


4.6. Installation of the ventilation unit AM 150, AM 150 with CC 150 (cooling module) and AM 300

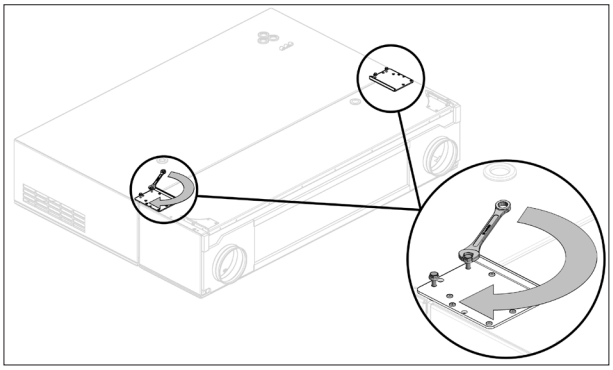
4.6.1. Assembling the AM 150 and CC 150 before installation

1. Dismantle any duct connectors from the rear side of the ventilation unit.
2. Place the cooling module behind the ventilation unit on a firm, even surface.

Place a protective underlay beneath the units to prevent scratches to the units. This underlay may for example be strong, clean cardboard or equivalent.



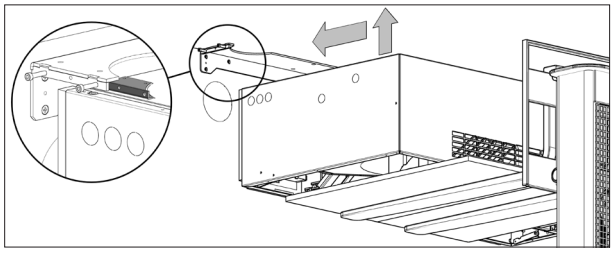
3. Press the ventilation unit and cooling module completely together.
4. Screw the cooling module's mounting fittings onto the ventilation unit. *The enclosed screws are mounted on the ventilation unit.*



4.6.2. Installation of the ventilation unit

The unit has to be adjust into a horizontal position.

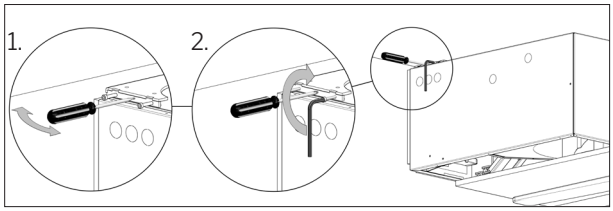
1. Lift the ventilation unit up to the frame, using appropriate lifting equipment.



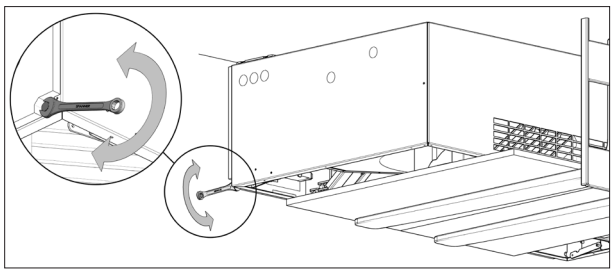
When lifting the unit a protective underlay must be placed beneath the unit to prevent scratches to the unit. This underlay may for example be strong, clean cardboard or equivalent.

2. Draw the leads and the condensate hose of the unit from the connection points past the frame.
3. Push the unit onto the frame.

Lead the mounting brackets on the unit within the frame.



4. Press the unit all the way against the wall; insert a suitably pointed object, such as an awl, through the frame's centring holes and cooling module bracket so they line up with one another. Then mount the cooling module by screwing it onto the frame.
5. Repeat on the other side.
6. Adjust the ventilation unit into a horizontal position with the adjusting screws. For AM 150 with CC 150, it may be necessary to adjust between the units.



Max pressure per adjusting screw:

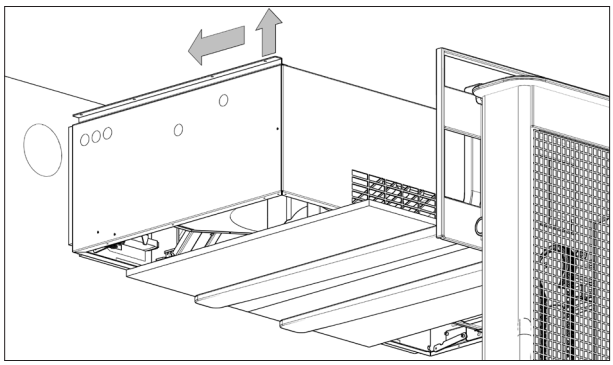
AM 150: 330 N
AM 150 + CC 150: 737 N
AM 300: 450 N

4.6.3. Installation with ceiling frame

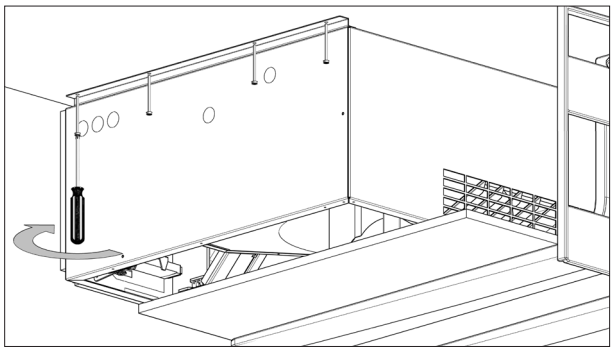
The unit has to be adjust into a horizontal position.

1. Lift the ventilation unit up to the ceiling, using appropriate lifting equipment.

When lifting the unit a protective underlay must be placed beneath the unit to prevent scratches to the unit. This underlay may for example be strong, clean cardboard or equivalent.



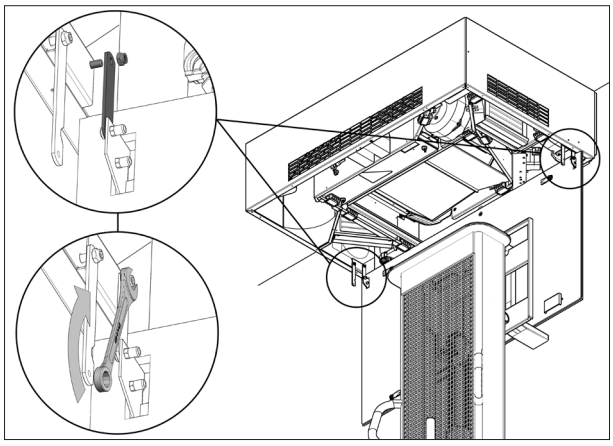
2. Draw the leads and the condensate hose of the unit from the connection points past the ceiling frame.
3. Lift the unit to its final position.
4. Push the unit into the wall and mount the ceiling frame securely to the ceiling.



4.6.4. Installation of the service cover

1. Lift the service cover up to the ventilation unit, using appropriate lifting equipment.

We would point out that, when lifting the service cover a protective underlay must be placed beneath the service cover to prevent scratches to the service cover. This underlay may for example be strong, clean cardboard or equivalent.

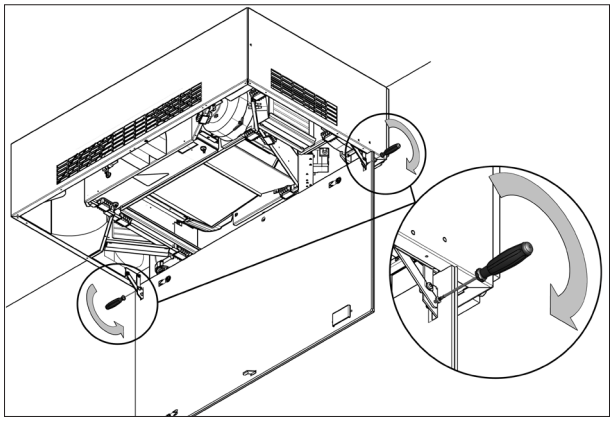


2. The short hinges mounted on the service cover are put over the bolts on the cabinet and secured using the two lock nuts provided, without tightening the hinges completely.

At the AM 150 the supply air filter must be removed.

3. The long hinges mounted on the cabinet are mounted using the two screws that are provided on the service cover.

At AM 150 the supply air filter must be mounted again.

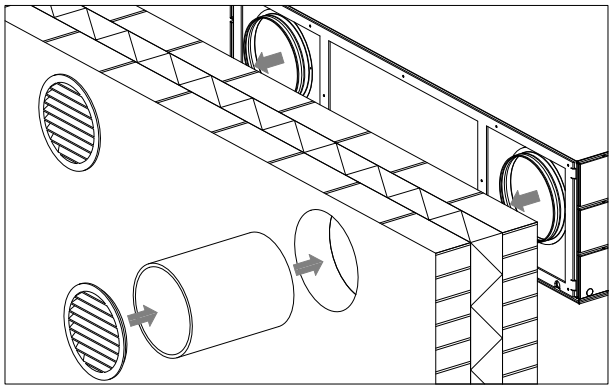


4. The earth wire has to be connected on the hinge side from the cabinet to the service cover.
5. Carefully close the service cover while it is supported.

The service cover is heavy. First close the locks on the inlet side and then the locks on the frame side.

6. Note the type, date supplied, place of installation and serial numbers (S/N) of the ventilation unit on page 2.

4.7. Ducts and grilles



The materials needed and method of fitting the ducting depend on the unit, the options chosen and the customer's order. For this reason, we can provide only general instructions for fitting the ducts.

The length of the ducting is calculated on the basis of the thickness of the wall/dimensions of the roof.

Please note that the duct holes in the wall must have an outward downward gradient of 1-2% to prevent heavy rain from entering the unit.

Exhaust air ducts and supply air ducts must be insulated against condensation on the ducts, if they are within the building envelope. The extract air ducts and inlet air ducts must be insulated against temperature loss and condensation forming inside the ducts if they are mounted outside the building envelope, or run through an unheated room.

Condensation and heat insulation should be performed according to standards and rules in effect.

Fire requirements according to standards and rules in effect must be observed.

The installation of ventilation ducts should be performed according to standards and rules in effect.

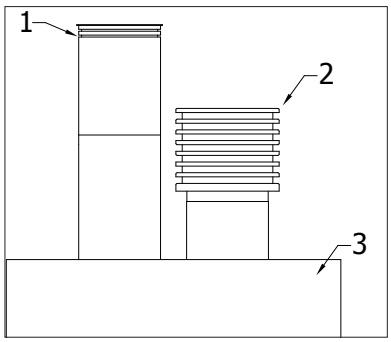
Exhaust air ducts and supply air ducts must be insulated against noise if they are visible.

Finally, fit a suitable circular grille with the slats pointing downwards on the outside of the outer wall or a roof cap up on the roof.

To avoid an increase in noise level, it is important that the ducts should not get twisted or compressed against the exhaust air spigot and supply air spigot of the unit.

Remember to seal around the penetrations. See section 'Sealing the Gaps Around Ducts".

4.8. Roof cap

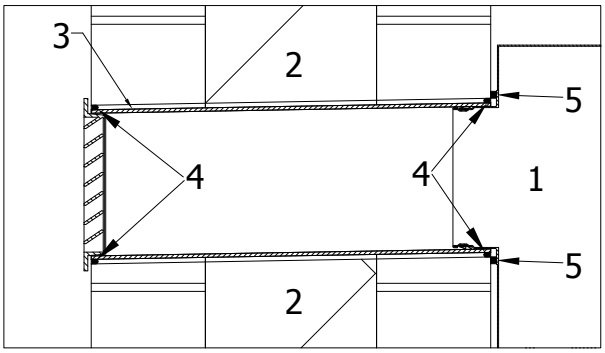


Fit roof caps on the roof to finish off the installation of exhaust and supply through a roof. Installation will depend on the roof construction (3). The illustration shows which roof caps are for exhaust (1) and intake (2).

Fire requirements for the installation of multiple systems must be observed according to the standards and rules in effect.

4.9. Sealing the gaps around ducts

Sealing of the gaps around ducts is performed as shown in the sectional drawing below.



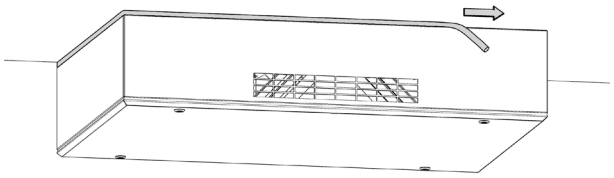
Application of a seal (shown here on a model with wall ducts) is important at the ducts (3) indside and the outside edges (4) in order to prevent draughts between the unit (1) and the wall/roof (2) as well as between the ducts (3) and the wall/roof (2).

Sealing on the inside between the pipes (3) and the wall/ceiling (2) can also be performed between the ventilation unit (1) and the wall/roof (2) at position (5) before fitting the unit.

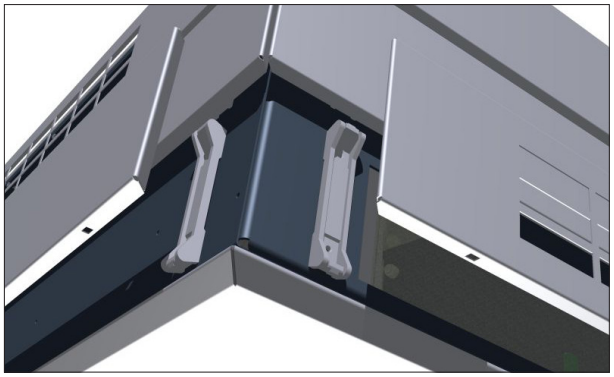
Depending on the condition of the wall/ceiling and the dimensions of the ventilation unit, a sealant that retains elasticity over the long term or expanding sealing tape can be used to obtain a flexible seal. This material is to be applied to the rear of the unit around the air connection fittings, or at the side of the duct holes on the wall to even out irregularities on the wall/ceiling.

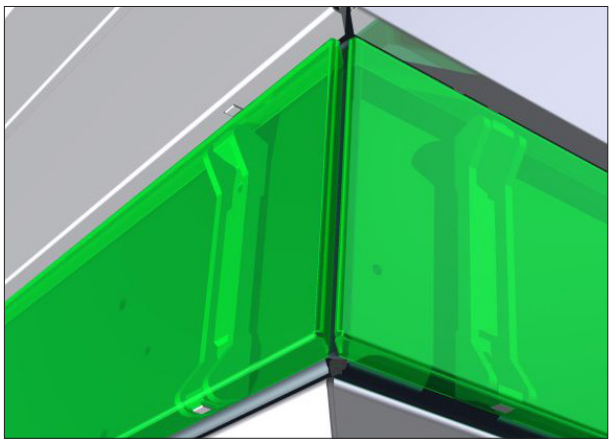
4.10. Jointing against the ceiling

Airmaster recommends jointing the gap between the unit's top plate and the ceiling if the unit is mounted in a fully visible manner. The jointing on the sides and in the front can be carried out with, for example, joint backing strip or joint strip with a suitable thickness. Jointing the back edge is not necessary.



4.11. Fitting of panels





The panels must only be fitted once the unit, complete with all equipment, has been fitted and connected, and the functions of the unit thoroughly tested. Not at the AM 150 and AM 300.

Press the panels to the clips on the unit until they attach securely to the clips.

4.12. Installation check

	yes	no
Serial numbers noted	☐	☐
Wall frame fitted	☐	☐
Cooling module fitted	☐	☐
Safety tape removed	☐	☐
Unit fitted	☐	☐
Ceiling fittings attached	☐	☐
Ducts and grilles fitted	☐	☐
Roof cap fitted	☐	☐
Screws retightened	☐	☐

Name of installation engineer:

Comment:

AIRMASTER

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