



INSTALLATION, ADJUSTMENT, OPERATING AND MAINTENANCE INSTRUCTIONS OF CLEANMASTER® HOODS

Contents

1. General	1
1.1 Safety at work and safe installation of the product.....	2
1.2 Receiving the goods.....	2
1.3 Warnings	2
2. Content of the Cleanmaster® hood delivery	3
3. Instructions for installation of Cleanmaster® hoods.....	3
3.1 Installation of the hood	3
3.2 Installation of the air flow sensor.....	4
3.3 Installation of the CCM control unit	4
3.4 Electrical wiring	4
3.5 Replacing the UV-lamp	5
3.6 Installation of grease filters and locking the SlideSafe safety lock.....	5
3.7 Before you start the CleanMaster® system.....	5
3.8 Starting the CleanMaster® system.....	6
4. Instructions for adjustment of Cleanmaster® hoods	6
4.1 Adjusting the supply air, exhaust air and capture air flow.....	6
4.2 Table of the K-values of CleanMaster® hoods	7
4.3 Calibration of the air flow sensor	7
5. Operating instructions for Cleanmaster® hoods	8
5.1 Functions of the control panel of the CCM control unit.....	8
5.2 Fault conditions of the CleanMaster® system.....	8
6. Instructions for maintenance of Cleanmaster® hoods	9
6.1 Cleaning the hood	9
6.2 Removing the grease filters	9
6.3 Replacing the fluorescent tubes in the lights.....	9
6.4 Replacing the UV lamp	10

1. GENERAL

These are the installation, adjustment and maintenance instructions for Climecon CleanMaster® hoods.

The model range of Climecon CleanMaster® hoods includes:

- CleanMaster® hoods
- CleanMaster® hoods with capture air
- CleanMaster® hoods with supply air and capture air

Make sure you read and understand these installation, adjustment and maintenance instructions before starting to install and use the product. If you have any questions about the installation or operation of the product, please contact the Climecon customer service.

Climecon Oy

Lämmittäjäntäti 4 A

00880 HELSINKI

Puh 020 198 6600

Fax 020 198 6609

1.1 Safety at work and safe installation of the product

Failure to observe these operating and safety instructions during operation, disregarding these instructions or using the UV equipment not as specified can result in injuries!

NOTE! The electrical connection of the CleanMaster® system may only be carried out by an authorized electrician. Warranty is subject to the condition of using Climecon spare parts and UV lamps. Only the original parts or the spare parts or UV lamps ordered from Climecon may be used in the device. The UV lamps should always be ordered from Climecon customer service (tel. 020 198 6600).

Ultraviolet radiation and ozone are hazardous to health! The areas which are especially exposed to the ultraviolet radiation are the skin and eyes. The radiation can cause burns and a long-term exposure can result in a cataract. **Always make sure that the UV lamps are turned off when removing the grease filters!**

ALWAYS wear safety goggles and safety gloves during installation for protection against quartz fragments, which can become scattered around if the UV lamp breaks.

1.2 Receiving the goods

Check that the delivered product batch is according to your order and all the parts stated in the delivery note are included. The carrier of the cargo should be informed immediately about errors in the delivery and incorrect delivery as well as possible damages occurred during transportation, and the respective notice should also be sent to Climecon or the distributor.

The term of notice is 5 days from delivery. Climecon Oy shall take no responsibility for costs arising from the replacement of products, which had not been installed according to the installation instructions.

In case of problems you should contact the Climecon customer service!

1.3 Warnings



UV light and ozone are harmful

The areas which are especially exposed to the UV light are the skin and eyes. The light can cause burns and a long-term exposure can result in a cataract; UV light damages the lens and cornea of the eyes.

**BEFORE STARTING TO REMOVE THE GREASE FILTERS,
ALWAYS MAKE SURE THAT THE UV-LAMPS ARE SWITCHED OFF!**

CAREFULLY READ THE OPERATING INSTRUCTIONS!

The warning label shown in the figure is attached to a visible place on the product already in the factory. Stick the other label included in the package next to the UV Multi control unit.



USE PROTECTIVE GLASSES AND PROTECTIVE GLOVES IN ALL INSTALLATION RELATED WORKS (rupture of a pipe can cause quartz shards)



The electrical connections of the CleanMaster® system may only be made by an authorized electrician.



Only the Climecon spare parts and UV lamps may be used in the CleanMaster® system.

2. CONTENT OF THE CLEANMASTER® HOOD DELIVERY

The delivery includes the following:

- Hood according to order confirmation
 - Grease filters
 - Grease pan(s)
- CCM control unit and possible slave units
- Air flow sensor
- UV lamps according to the system, each with a ready installed quick coupling
- Wiring diagrams according to the system
- Safety switch (delivered detached)
- Warning labels for the hood
- Installation, adjustment, operating and maintenance instructions

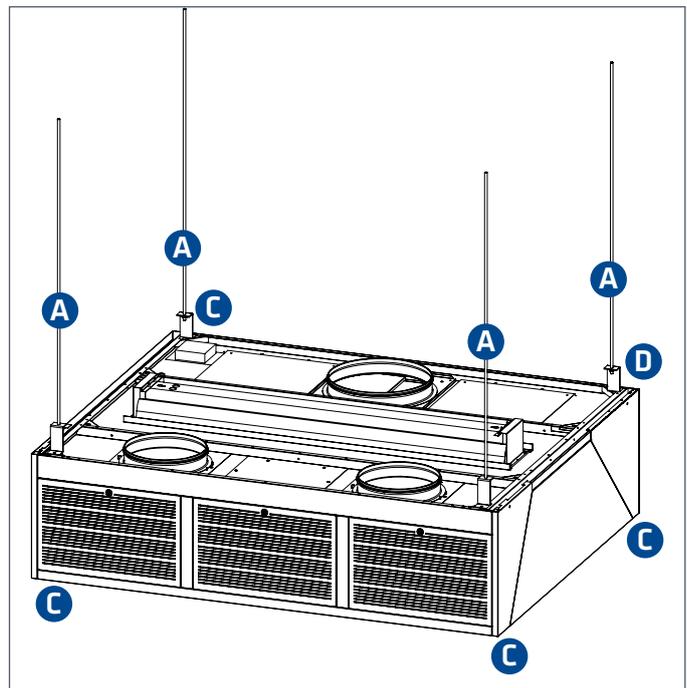
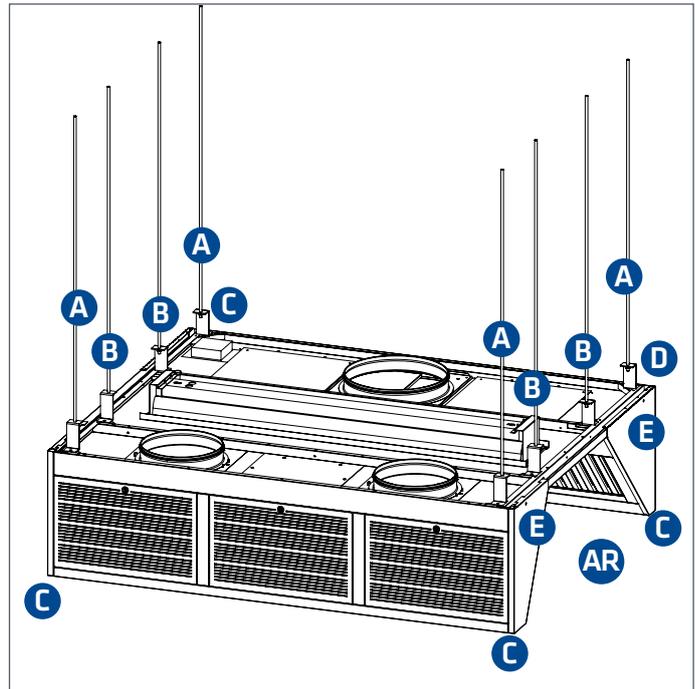
The delivery does not include:

- Voltage conductor (e.g. MMJ 3G2.5) for the UV control unit
- Voltage conductor between the UV control unit and a possible extra cabinet
- Supply of the voltage of UV lamps from the terminal block of the UV control unit to the quick couplings of the hood (e.g. control wire Ölfex 4 x 1.5mm²)
- Fasteners
- Wires for the SlideSafe safety lock

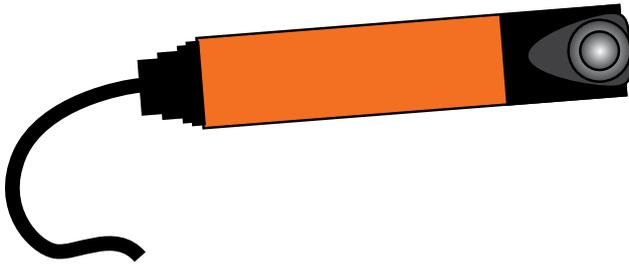
3. INSTRUCTIONS FOR INSTALLATION OF CLEANMASTER® HOODS

3.1 Installation of the hood

1. Mount the thread bars (A) to the correct positions in the ceiling. NOTE! Thread bars are not included in delivery! If the hood features an open side (AR), the hood should also be supported from the middle of the open side (B).
2. Lift the hood up from the corners (C), keeping it steady
3. Install adaptor brackets (D) to the thread bars and the hood
4. Check that the hood is horizontally
5. Remove any possible transportation supports
6. Fix adjacent hoods to one another through the holes (E) in the upper edge of each hood, using M6 bolts and nuts.



3.2 Installation of the air flow sensor



The air flow sensor is delivered together with the CCM control unit.

1. Find a suitable place for the air flow sensor in the exhaust air duct. It is recommended to install it in a straight section of the duct (less turbulence), preferably not on the bottom of the duct.
2. Drill a $\varnothing 24$ mm hole into the duct.
3. Fix the air flow sensor to a mounting plate. Adjust the installation depth according to the diameter of the exhaust air duct. It is recommended to install it in the centre of the duct (Figure 1).
4. Make sure that the air flow sensor is installed according to the air flow direction. See the arrow at the bottom of the sensor (Figure 2).
5. Drill pilot holes for the fixing screws of the mounting plate.
6. Fix the air flow sensor to the duct.

Figure 1. Installation depth of air flow sensor

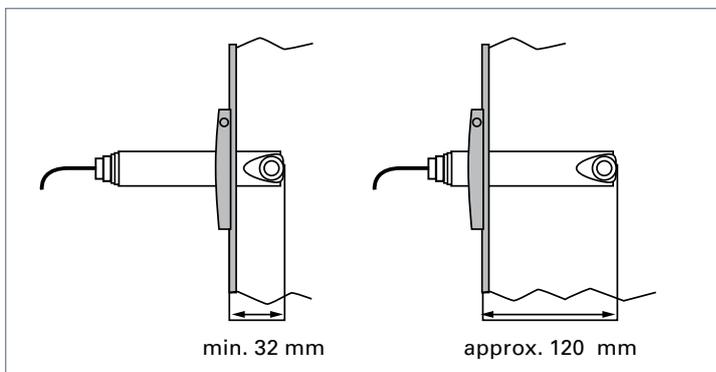
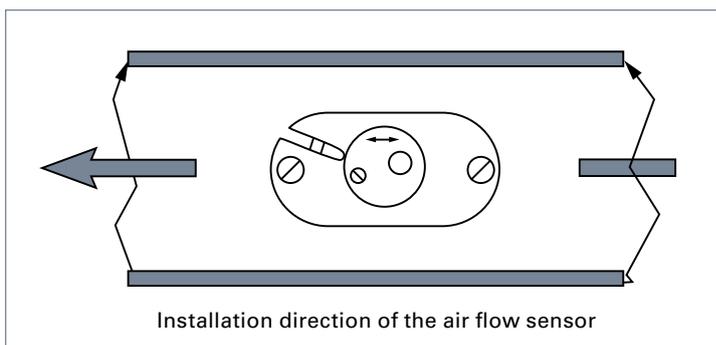


Figure 2. Installation direction of the air flow sensor



3.3 Installation of the CCM control unit

Start with the installation of the CCM control unit by looking at the wiring diagram included in the delivery.

1. The CCM control unit and possible slave units should be mounted on a wall in a visible place which can be easily accessed.
2. Mount the safety switch included in delivery on a wall near the CCM control unit, where the switch can be easily accessed.

3.4 Electrical wiring

3.4.1 Electrical wiring of the CCM control unit

1. Lead the voltage supply to the safety switch.
2. From the safety switch lead the voltage supply to the CCM control unit and to possible slave units.
3. Connect the conductors coming out from the CCM control unit to the UV lamp, following the wiring diagram provided at the end of these instructions.
4. Connect the conductors of the SlideSafe safety lock of the hoods to the CCM control unit or a slave unit.

3.4.2 Connecting the CCM control unit with the automation system of the building

The CCM control unit gives the possibility to send operational information to the automation system of the real estate, and to request starting permission, if necessary. Detailed information is provided in the wiring diagram at the end of these instructions.

Output:

Operating status

- The system functions normally. A green light is lit in the control panel.

Common alarm

- Alarm, the system has switch off. A red light is lit in the control panel.

Warning

- Warning, action by the user is required. The system still functions. A yellow light is lit in the control panel.

Input:

External control

- The building automation has not given the permission for operation. A red light is lit in the control panel.

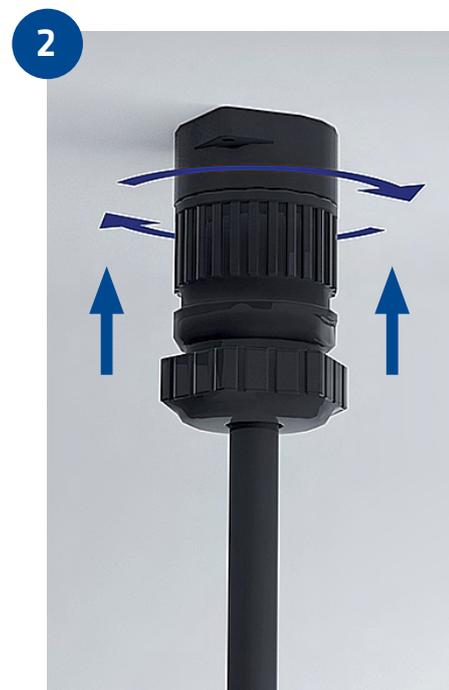
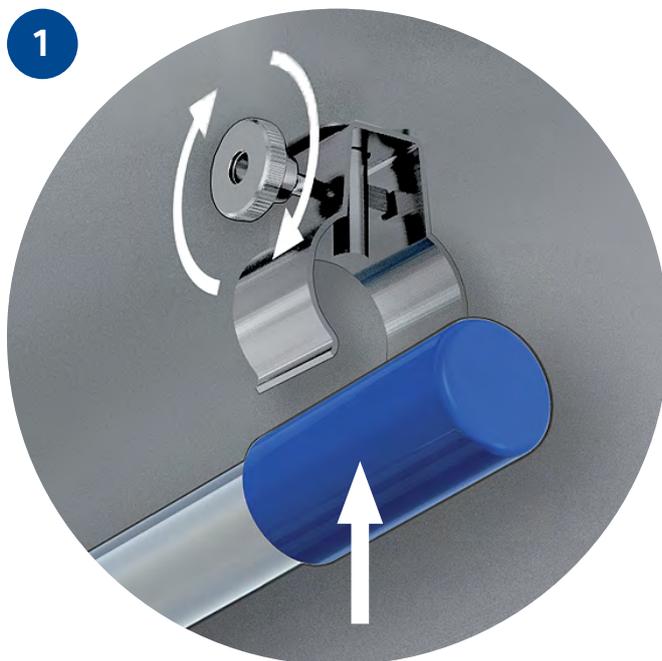
3.5 Replacing the UV-lamp

1. Carefully secure the UV lamp to the holders in the grease chamber of the hood.

Note! The holders should remain in the centre of the blue plastic parts of the lamp. Tighten the holders with the fixing screws.

2. Connect the quick connector of the electricity conductor of the lamp to the counter piece in the ceiling of the hood. Turn the locking ring of the connector.

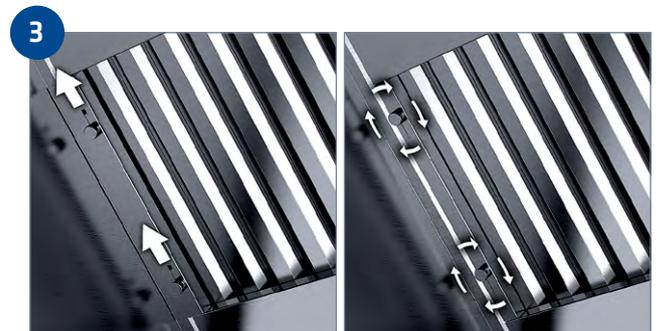
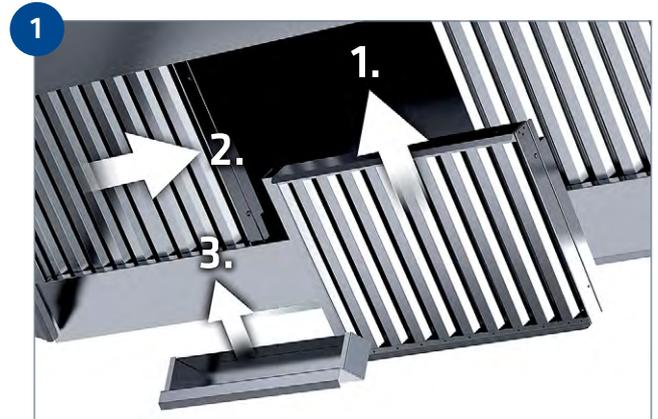
Note! Attach the labels about UV lamp replacement and maintenance instructions of the hood, which were included in the delivery, to a visible place close to the CCM control unit.



3.6 Installation of grease filters and locking the SlideSafe safety lock

1. First install the grease filters at far edges, leaving the second grease filter from the left as the last. Install also the grease pans at the bottom of the exhaust air chamber.
2. Move the grease filter on far left more to the right.
3. Lock the SlideSafe safety lock by first lifting the hand screws to the upper position and then tightening the screws.

NOTE! The CleanMaster® system will not start, when the SlideSafe safety lock has not been properly locked.



3.7 Before you start the CleanMaster® system

Check the following points before starting the CleanMaster® system:

- UV lamps are correctly installed
- Wires led from the UV lamps are connected through their quick connections to sockets in the hood, and tightened
- The wires of UV lamps and SlideSafe safety lock from the UV control unit to the terminal block box of the hood are fixed from both ends with a screw
- The air flow sensor has been installed in the ventilation duct and adjusted
- A maintenance / safety switch has been installed to supply voltage line before the UV control unit
- All grease filters have been installed and the safety lock of grease filters has been locked
- The labels about UV lamp replacement and maintenance instructions of the hood, which were included in the delivery, have been attached to a visible place near the hood

3.8 Starting the CleanMaster® system

Start the CleanMaster® system by turning the main switch of the CCM control unit to ON-position.

After the start, the text «restart» appears on the display of the UV system, after which in about 60 seconds the starters of UV lamps become active (starting delay of the air flow sensor).





When the UV system has been switched on, the UV lamps are preheated for 12 seconds.

During the preheating a yellow LED is illuminated on the right side of the display.



After the preheating, the UV system starts to function normally.

At this stage all UV lamps are on and a green LED is illuminated on the right side of the display.



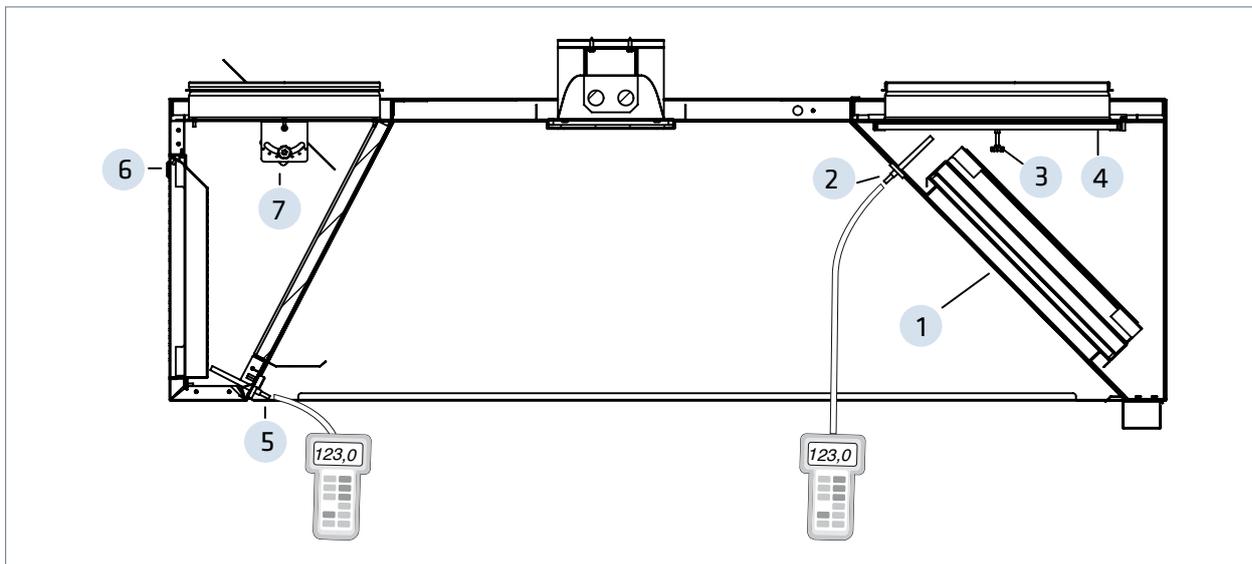
If any of the UV lamps stops working due to a defect or a fault, the UV system display informs about the lamp fault.

At this stage the faulty UV lamp should be checked and replaced, if necessary.

New UV lamps should always be ordered directly from Climecon customer service!

4. INSTRUCTIONS FOR ADJUSTMENT OF CLEANMASTER® HOODS

4.1 Adjusting the supply air, exhaust air and capture air flow



Adjusting the supply air flow

- First measure the pressure drop at the measuring connection (5) of the supply air chamber
- Remove supply air modules (6), using a screwdriver
- Adjust the supply air by turning the adjusting damper (7) inside the supply air chamber
- Lock the adjusting damper with a locking screw
- Re-install the supply air modules (6) to their places
- Measure the pressure drop at the measuring connection (5) of the supply air chamber
- Repeat the above procedure, if necessary

Adjusting the exhaust air flow

- Carefully remove the grease filter cartridge (1) by pushing its bottom edge inwards while lifting the upper edge up and away from the mounting groove
- Open the locking screw (3) of the adjusting damper (4)
- Increase or decrease the suction opening by moving the damper in its sliding rails
- Install properly the filter cartridge(s)
- Measure the pressure drop at the measuring connection (2) of the chamber
- Repeat the above procedure, if necessary
- Finally lock the damper with a locking screw and check that the filter cartridges are properly in position

Adjusting the capture air

The thrust length of capture air can be adjusted. You can adjust the thrust by first turning the hand screws of the capture air unit, then moving the screws sideways and finally locking in position by tightening the hand screws.



4.2 Table of the K-values of CleanMaster® hoods

Hood model	Exhaust air / Amount of grease filters (pcs)											
	1	2	3	4	5	6	7	8	9	10	11	12
CleanMaster®	18,5	37	55,5	74	92,5	111	129,5	148	166,5	185	203,5	222
StandardPlus, grease	21,6	43,2	64,8	86,4	108	129,6	151,2	172,8	194,4	216	237,6	259,2
StandardPlus, condensate	22,7	45,4	68,1	90,8	113,5	136,2	158,9	181,6	204,3	227	249,7	272,4

Height of the hood	Supply air / Width of the hood (mm)					
	800	1000	1500	2000	2500	3000
H=560 mm	28	45	67	90	112	135
H=400 mm	22	42	64	85	106	127
H=300 mm	22	33	49	66	82	99

Adjustment position	Capture air / Width of the hood (mm)					
	800	1000	1500	2000	2500	3000
Maksimi (Fully open)	1,4	2,8	4,2	5,6	7,0	8,4
Minimi (Fully open)*	0,6	1,2	1,8	2,4	3,0	3,6

*Is only recommended if the pressure of the supply air is over 15Pa.

4.3 Calibration of the air flow sensor

Before you start calibrating the air flow sensor, check that

- the CCM control unit is installed
- ventilation has been adjusted and functions normally

1. Switch on the CCM control unit.
2. The air flow sensor measures the air flow for 60 seconds, during which both of the signal lights are illuminated. When measuring is completed, one of the lights goes off.

a) If a red light is illuminated:

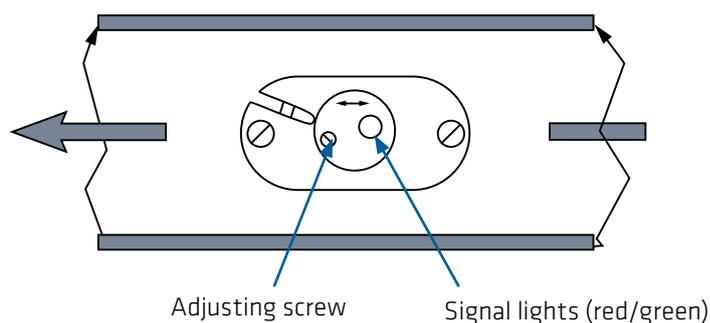
Turn the adjusting screw slowly to the right, until the red light goes off and the green led is illuminated. Then turn the adjusting screw a further 1/2 round to the right.

b) If a green light is illuminated:

Turn the adjusting screw slowly to the left, until the green light goes off and the red light is illuminated. Then turn the adjusting screw a further 1/2 round to the right, until the green light is illuminated.

When the air flows change in the system, repeat the calibration of the air flow sensor.

Figure 1. Calibration of the air flow sensor



5. OPERATING INSTRUCTIONS FOR CLEANMASTER® HOODS

5.1 Functions of the control panel of the CCM control unit

Functions of the keys:

- INFO**
- changes the display screens (Main Menu, filtering hours/operating time/hours, meter screen, depending on settings)
 - cursor up in menu
 - changes values (higher)

- ON/OFF**
- to On/Off menu
 - cursor to the right

- ARROW DOWN**
- cursor down in menu
 - changes values (lower)

- MENU**
- to menus
 - selection of a function
 - confirms a change

- REMOTE**
- local/remote operation (NOTE! the display should read "local")
 - cursor to the left



5.2 Fault conditions of the CleanMaster® system

In a fault situation, the colour of the display of the CCM control unit and the colour of LED lights change into yellow or red, depending on the situation:

● YELLOW LIGHT

Text on the screen: lamp age warning

The service hours of the UV lamp are approaching the end.

Order a new UV lamp from the Climecon customer service, tel. 020 198 6600.

Text on the screen: lamp age exceeded

The service hours of the UV lamp have been exceeded. Replace the old UV lamp with a new UV lamp ordered from Climecon. *See the instructions for replacing the UV lamp in subsection 6.4.*

● RED LIGHT

Text on the screen: lamp age exceeded

The service hours of the UV lamp have been exceeded. Replace the old UV lamp with a new UV lamp ordered from Climecon. *See the instructions for replacing the UV lamp in subsection 6.4.*

5. OPERATING INSTRUCTIONS FOR CLEANMASTER® HOODS

5.1 Functions of the control panel of the CCM control unit

Functions of the keys:

- INFO**
- changes the display screens (Main Menu, filtering hours/operating time/hours, meter screen, depending on settings)
 - cursor up in menu
 - changes values (higher)

- ON/OFF**
- to On/Off menu
 - cursor to the right

- ARROW DOWN**
- cursor down in menu
 - changes values (lower)

- MENU**
- to menus
 - selection of a function
 - confirms a change

- REMOTE**
- local/remote operation (NOTE! the display should read "local")
 - cursor to the left



5.2 Fault conditions of the CleanMaster® system

In a fault situation, the colour of the display of the CCM control unit and the colour of LED lights change into yellow or red, depending on the situation:

● YELLOW LIGHT

Text on the screen: lamp age warning

The service hours of the UV lamp are approaching the end.

Order a new UV lamp from the Climecon customer service, tel. 020 198 6600.

Text on the screen: lamp age exceeded

The service hours of the UV lamp have been exceeded. Replace the old UV lamp with a new UV lamp ordered from Climecon. *See the instructions for replacing the UV lamp in subsection 6.4.*

● RED LIGHT

Text on the screen: lamp age exceeded

The service hours of the UV lamp have been exceeded. Replace the old UV lamp with a new UV lamp ordered from Climecon. *See the instructions for replacing the UV lamp in subsection 6.4.*

6. INSTRUCTIONS FOR MAINTENANCE OF CLEANMASTER® HOODS

Due to hygiene and fire safety in the kitchen, but also to ensure that the ventilation functions it is important to keep the kitchen equipment clean. The cleaning interval of Climecon CleanMaster® hoods depends on their use and should be determined on the basis of the level of use.

The hoods can be cleaned with cleaning agents, which are suitable for cleaning stainless steel. Extremely strong alkali (pH > 11) should be avoided. The Climecon UV lamps do not need cleaning in case of normal use.

6.1 Cleaning the hood

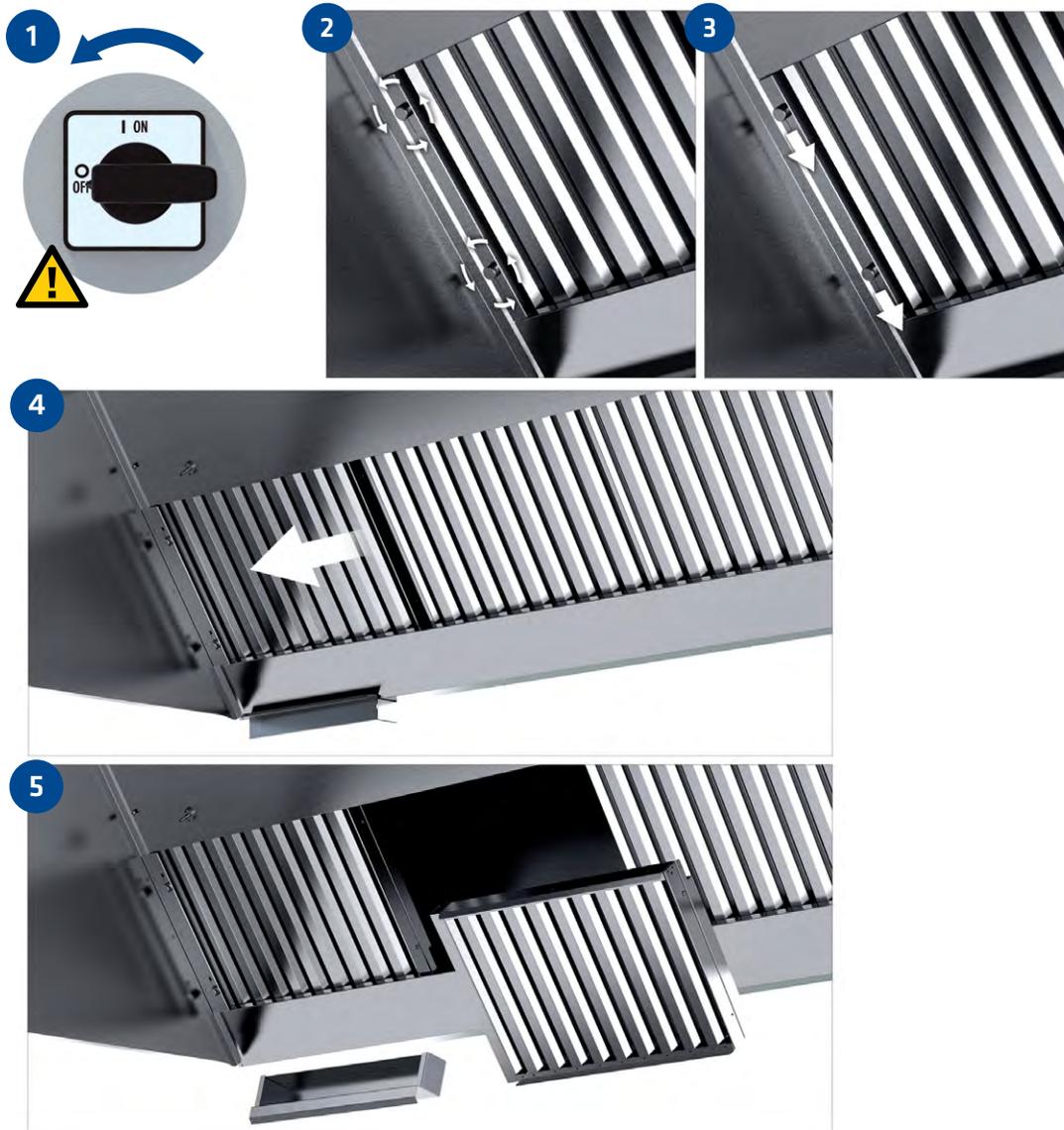
1. The surfaces of the hood should be cleaned by wiping lightly.
2. Clean the side troughs and grease pans of the hood. Grease pans are machine-washable.
3. Gently wipe the covering glass of lights, if necessary.
4. Clean the exhaust air chamber, if necessary.
See the instructions for removing the grease filters in subsection 6.2 Removing the grease filters.
5. Clean the supply air modules, if necessary.

Supply air modules can be easily removed by opening first the fixing mechanism at the top of the module with the help of a screwdriver and then pulling the supply air module away from the supply air unit.



Supply air modules are machine-washable.

6.2 Removing the grease filters



1. Shut down the CleanMaster® system by turning the main switch of the CCM control system to OFF position.
2. Open the safety locking of grease filters by loosening the hand screws on the left side of the filters.
3. Slide the hand screws to the lower position. NOTE! If the CleanMaster® system was not shut down from the CCN control unit as instructed, the CleanMaster® system will now shut down automatically.
4. Move the grease filter on far left more to the left.
5. First remove the second grease filter from the left and then the other grease filters. Grease filters are machine-washable. Clean the exhaust air chamber if necessary.

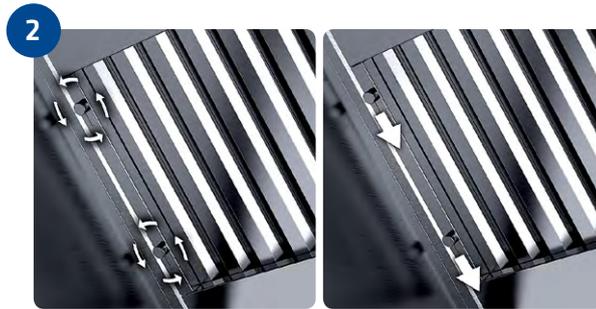
6.3 Replacing the fluorescent tubes in the lights

1. Open the covering glass of the lights by opening the fixing screws.
2. Replace the fluorescent tubes.
3. Check that the gaskets are in good condition.
4. Re-install the covering glass.

6.4 Replacing the UV lamp



Shut down the CleanMaster® system by turning the main switch of the CCM control unit to OFF position.



Open the SlideSafe safety lock by loosening the hand screws and moving these to the lower position.



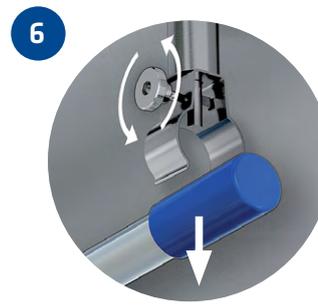
Move the grease filter on the far left to the left.



First remove the second grease filter from the left and then the other grease filters.



Remove the electrical connector (quick connector) of the UV lamp from the ceiling of the hood by turning the connector counter clockwise.



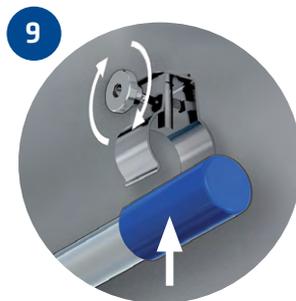
Turn the hand screws of the supports of the UV lamp counter clockwise and remove the UV lamp from the supports.



Deliver the old UV lamp to the recycling station of fluorescent lamps.



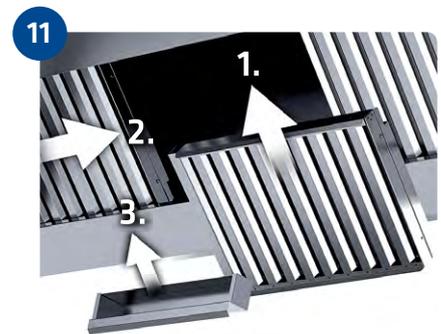
Replace the UV lamp with a new lamp. Only Climecon UV lamps may be used in the CleanMaster® system. Order the new UV lamp from the Climecon customer service.



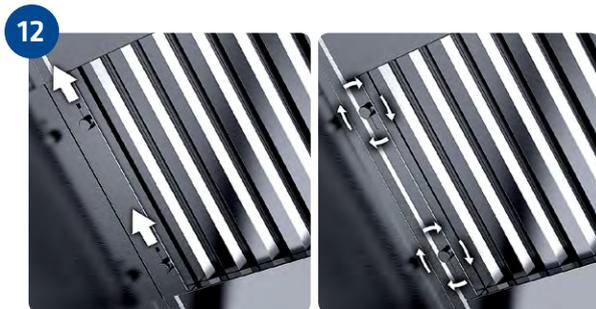
Mount the new UV lamp to the holders and tighten the hand screws clockwise.



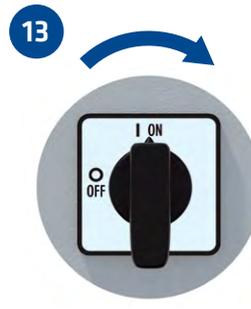
Attach the electrical connector (quick connector) of the UV lamp to the ceiling of the hood and tighten clockwise.



Install all the grease filters back into the hood. First install the grease filters at far edges, leaving the second grease filter from the left as the last.



Lock the SlideSafe safety lock by first lifting the hand screws to the upper position and then tightening the screws. **NOTE!** The CleanMaster® system will not start, when the SlideSafe safety lock has not been properly locked.



Switch on the CleanMaster® system from the operating switch of the CCM control unit.



Always when in doubt, contact the Climecon customer service by calling 020 198 6600.