

# *freeAir* 100

## **Operating Manual**

**[ G ] General**

**[ O ] Operation**

**[ I ] Installation**

**[ S ] Service**

## Quick Start Guide

### Switching On / Off

Press the on switch.

Start-up routine and self check can take a few minutes – turning it off can take a few seconds. All LEDs will blink (all colors).





### Comfort Level

Press the  - Button repeatedly to change the Comfort Level.

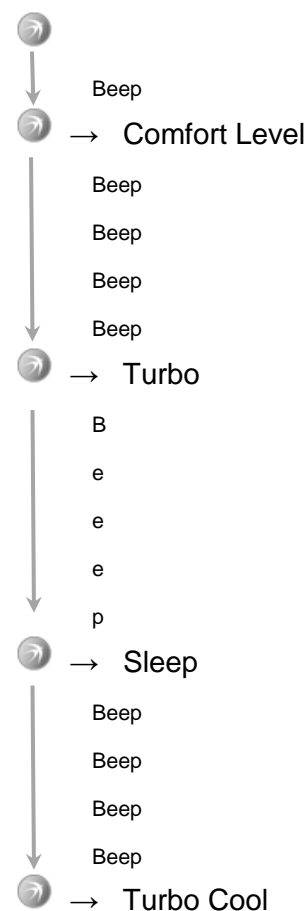
More blue LEDs mean a more active operation (minimum ventilation, humidity, CO2, cooling ... etc.). However, a change in Comfort Level does not have to lead to the immediate increase in fan speed.

Blinking or flashing blue LEDs indicate Service or Dehumidification Operation.

### Turbo / Sleep / Turbo Cool

Push the  - Button until you hear 4 short beeps. This should be selected if you wish to air out rooms at the highest device setting for 30 minutes. Push and hold the  - Button longer and your freeAir100 will pause for 90 minutes.

To start Turbo Cool Function for a maximum duration of 3 hours push and hold the button yet longer for.



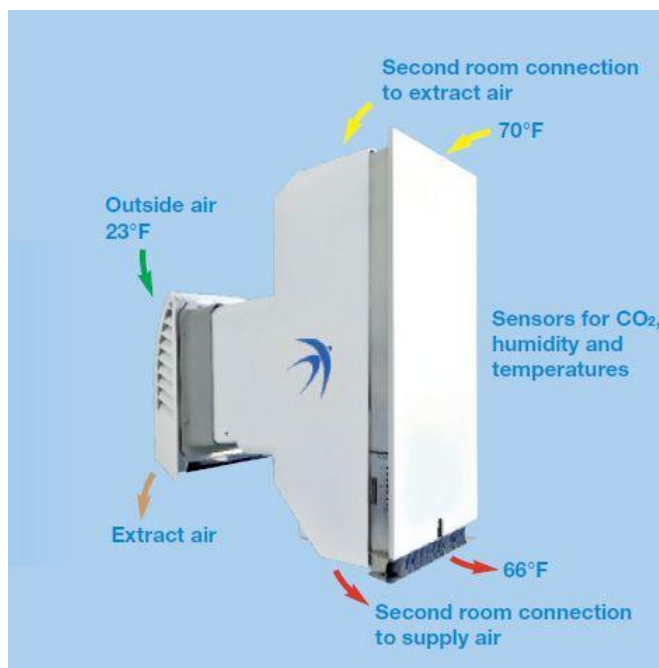
Dear customer

We thank you for choosing the freeAir ventilation system. Please thoroughly read and follow this manual.

After successful installation please select the desired Comfort Level to activate the device. Proper operation is now taken care of by the sensors and the intelligent controller of your freeAir.

Enjoy the ambiance offered by the right amount of fresh air.

Your bluMartin-Team



## General

### Safety – General

This manual is only valid for the fresh air system freeAir100.

This manual is delivered as part of the device. Please keep this manual readily available.

Please make sure all persons operating the device are familiar with this manual. Please observe all instructions given in this manual.

Installation, commissioning and servicing must only be performed by sufficiently qualified persons.

Neglect to adhere to this manual will void the warranty.

Please also observe our general terms and conditions. Please see [www.bluMartin.de/cos](http://www.bluMartin.de/cos) .

### Safety – Icon

**DANGER** 

This sign indicates danger by potentially deadly electrical shock.

**DANGER** 

This sign indicates that instructions must be followed precisely in order to prevent personal or material damage.

**Warning** 

To avoid any property damage please pay special attention to this sign.

**Notes**

This sign emphasizes important information.

**Safety indications**

**DANGER** 

- The device uses electrical power. Some parts of the device carry line voltage even several minutes after unplugging the device.
- Never open the device while appliance is plugged in.
- Electrical installation as well as electrical service work must only be performed by qualified personnel.
- Electrical installation has to be in accordance with the appropriate national association or electrical code.
- The device may only be operated in good condition and unaltered condition.
- All instructions and notes with respect to maintenance (see Service paragraph) are to be implicitly followed.
- Only operate if device is in good technical order.

In case of error or damages that constitute a safety issues turn the device off.

Prevent the device from being turned back on by unauthorized persons, and have the device immediately repaired by a qualified technician.

- Use original bluMartin GmbH repair and service parts only.

## Intended use

The freeAir100 is a decentralized fresh air ventilation system with heat recovery. The purpose of the device is to ventilate one or more rooms in apartments or houses. The device is installed in an outside wall.

Expended air is drawn from the room the device is installed in. The air is drawn from other rooms (such as kitchen or bathroom) in case the 2nd room extract option is installed.

Fresh and filtered air is returned to the room the device is installed in. The addition of the 2nd room supply option enables fresh and filtered air return to an additional room for instance a bed room.

## Inappropriate use

The device is exclusively to be used for ventilation purposes.

**DANGER** 

Only air not containing flammable, explosive or corrosive components or air not containing any other dangerous or hazardous components must be used for ventilating purposes.

## Disposal

Dispose of the freeAir100 in accordance with your local rules, regulations or guide lines.

Please pay special attention to correctly sorted metal, plastics and electronics.

## Transport and Storage

Components of the freeAir100 may only be transported in the intended packaging. To protect the device from mechanical shock the freeAir100 has to be shipped in its original packaging and strapped to a pallet. Packaging must be protected from moisture.

## Included in Shipping



freeAir 100



Front plate



Outside hood



Bare brickwork set

## Technical Data (freeAir100s)

Dimensions inside front	28 x 58 cm
Wall thickness	32 to 53 cm incl. stuck (under 40 cm => deeper hood; over 53 cm => extension)
Air stream	20 to 100 m <sup>3</sup> /h
Heat supply gradient	87 % (by PHI criteria and EN 13141-8)
Heat recovery	94 % (at 50 % relative humidity)
Heat exchanger type	Counter current flow; Aluminum
Line voltage	95 to 265 V AC
Line fuse	3 A quick (on motherboard)
Line frequency	45 to 65 Hz
Energy usage	Standby → 1 W; 20 m <sup>3</sup> /h → 4 W; 50 m <sup>3</sup> /h → 13 W; 100 m <sup>3</sup> /h → 40 W (max. tube length; F7)
Weight	10 kg
Noise level in room	20 m <sup>3</sup> /h → 17 dB (A) (distance of 1 m); 30 m <sup>3</sup> /h → 22 dB (A); 50 m <sup>3</sup> /h → 34 dB (A); 100 m <sup>3</sup> /h → 51 dB (A)
Noise dampening	Standby → 52 dB; Operation → 46 dB (DIN EN 20140-10; D <sub>n, e, w</sub> )
Control	Intelligent 5-step Comfort Control
Air stream control	Automatic; 8 speeds; volume constant; balanced ventilation
CO <sub>2</sub> control	Automatic
Dehumidification	Automatic and special operation
Summer cooling	Automatic and with Turbo Cool
Anti freeze protection	Automatic bypass-control at about -5°C outside
Temperature range	-40 to +50°C outside and 0 to +40°C inside
Filter – supply air	Fine particle filter M5 (pollen protection) or F7 (allergy)
Filter – exhaust air	Fine particle filter M5 (EN 779)
Color	Front plate primer (ready to paint or arrange)
DIBt license	Z-51.3-287



## Operation

### DANGER

Respect all references regarding safety and use of the freeAir100 in part General [G]!

## Display- and Operating Elements

### on Main Switch

Use for turning the freeAir on or off.

All LEDs will blink slow during start and self-test operation.

Firmware version is indicated by individual non-illuminating LEDs (digitally starting from the bottom).


During a controlled „Shut Down“ LEDs will blink fast. Vent flaps are being shut.



### - Button

Operation of your freeAir100 is so simple – you only need this button as the only control element.

With this button you can control Comfort Level, start or stop the Turbo, select Sleep or Dehumidification mode (see below).

You can change the Comfort Level by pushing  - Button several times fast. The more blue LEDs are lit the more active the instrument controls (minimum ventilation, CO<sub>2</sub>, humidity, cooling...).

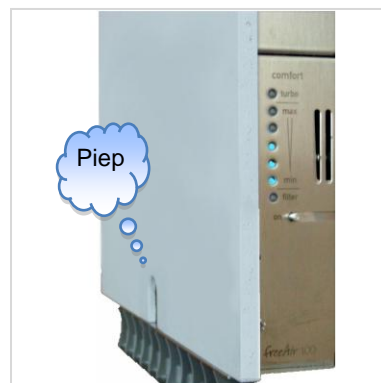
Changing Comfort Level may not immediately change fan speed.



### Audible Signals

A continuous beep-sound indicates occurrence of excessive temperatures or harmful CO<sub>2</sub>-Concentrations.

(See part [S] Service).



### Yellow LED

This LED will blink slowly during Turbo operation.

Continuous illumination indicates:

- reduced minimum ventilation due to active defrost function eliminating room air humidification, or
- the freeAir pauses,
  - because outside air is so humid that room air condensation could occur,
  - because outside temperatures are below -22°C (-30°F).
- this LED will blink fast during Turbo Cool operation.




### Blue LEDs

The number of illuminated blue LEDs indicates the selected Comfort Level.

These LEDs will blink slowly during Sleep mode.

These LEDs will flash during Dehumidification mode.

#### Note

Blue LEDs will go dark after 3 minutes so as not to disturb you. Push the  - Button to "wake" them up.



### Red LED

A fast blinking red LED indicates that the last filter change has been more than 8,000 hours ago (~ 1 year).

A slow blinking red LED indicates that the air stream through a dirty and partially clogged filter is impaired. A slow blinking red LED can also indicate air stream obstructions such as inappropriately dimensioned openings between spaces of supply and extract air.

Continuous illumination indicates control error. (See appendix [S] Service).



### DANGER

- An overly dirty filter (indicated by the red LED) can reduce supply and extract air flow. This in turn can lead to diminished air quality and over or under pressure in connected rooms.
- Diminished oxygen levels can pose a health risk.
- A dirty filter can also grow germs.

### USB Port

The USB port on the left side of the device serves as a connection to the (free to our customers) freeAir-Connect software and respective updates.

### Note

Please visit our website at [www.bluMartin.de](http://www.bluMartin.de) for updates under Service / Downloads.

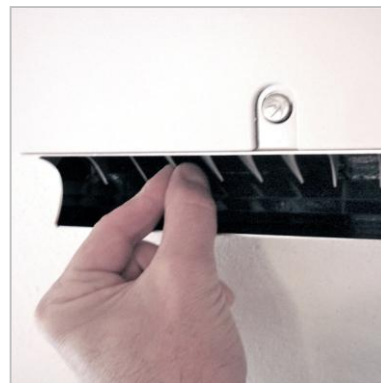


### Louver

The louver in the left part of the air output side can be rotated to accommodate any desired blow direction.

**DANGER** ⚠

Do not insert any foreign objects into the supply opening.




### Notes

- Due to the optional 2<sup>nd</sup> room air supply connection - air is only supplied from the left part of the air discharge.
- In case the included supply air outlet for wide through results in drafty condition alternative supply air outlet hardware is available.

## Comfort Operation



After switching it on the freeAir100 will operate in Comfort mode. In this mode the device will operate automatically:

If installed correctly the device will supply all connected living areas with the right amount of fresh air. Minimum air flow, CO<sub>2</sub> content, relative and absolute humidity inside and out are all taken into account.


Push the - Button several times to select Comfort Level 1 (one LED). This is the quietest level and should be selected if you like a quiet setting for instance for bed rooms.

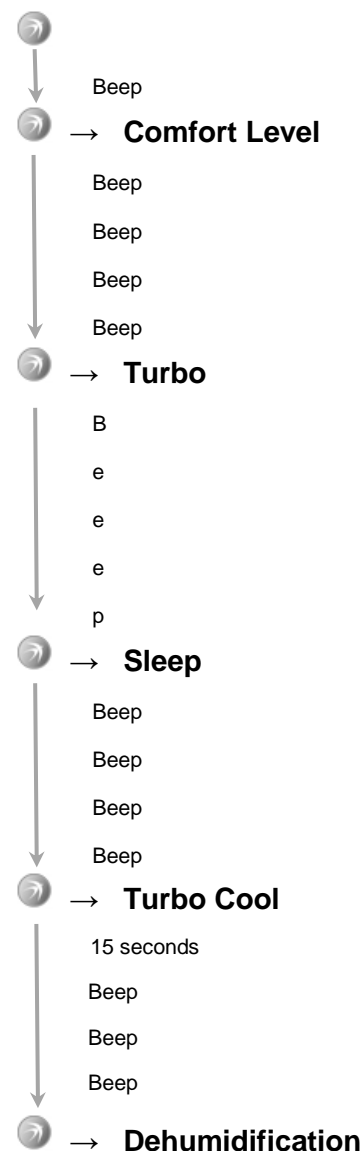
Level 3 (3 LEDs are lit) is the normal setting for living rooms.

## Turbo Operation


Push the - Button until you hear 4 short beeps. This mode should be selected if you wish to air out rooms at the highest device setting for 30 minutes. Comfort operation will be restored automatically after 30 minutes. Comfort Level can also be restored via the - Button.

## Sleep Mode

Push and hold the - Button until you hear 4 short beeps followed by a very long beep. Your freeAir100 will pause for 90 minutes before switching back to Comfort mode.




## Turbo Cool Operation

Start Turbo Cool operation by pushing and holding the  - Button till you hear 4 short beeps followed by a long beeps followed again by 4 short beeps. This will open the bypass flap and switch the device to its highest power setting for 3 hours. In this setting your living space can be cooled down noticeably by fresh evening and night air after a hot day.

Turbo Cool operation is switched off automatically when outside air temperature is too hot.

## Dehumidification Operation

Push and hold the  - Button for 15 seconds to activate this mode. This operation can be used in case of an application where the usual dehumidification level provided by the Comfort mode is not sufficient (for instance in a basement room). The freeAir100 will beep three times and blue LEDs will flash. Dehumidification will work at humidity levels as low as 45 % relative humidity. Dehumidification is optimally controlled through constant measuring of absolute humidity both inside and outside effectively suppressing humidity import through outside air.

## Installation

**DANGER** ⚠

Please see part General [G] for safety notes. Observe all notes with respect to safety and use of the freeAir100.

### 2<sup>nd</sup> Room Connections

- Please select the correct connector for a device designed for 2<sup>nd</sup> room connection:
  - Connecting ducting, conduits and valves must have low air stream resistance.
  - For 2<sup>nd</sup> room connection the below stated decrease in pressure must not be exceeded.
  - The supply air conduits must not exceed the below noted length.



Type of Conduit	Max. Air Flow for 2 <sup>nd</sup> Room Exhaust (= DIP switch setting)	Max. Pressure drop 2 <sup>nd</sup> Room Exhaust (at max. air flow)	=> Max. Length (pressure drop for turns and valves included)
1 x Flat-Flex 51 x 138 mm	30 m <sup>3</sup> /h	15 Pa	ca. 8 m
1 x Round-Flex Ø 75 mm	30 m <sup>3</sup> /h	15 Pa	ca. 2.5 m
2 x Round-Flex Ø 75 mm	60 m <sup>3</sup> /h	55 Pa	ca. 10 m
3 x Round-Flex Ø 75 mm	100 m <sup>3</sup> /h	65 Pa	ca. 10 m
1 x Round Ø 100 mm	100 m <sup>3</sup> /h	65 Pa	ca. 12 m

### Notes

- The freeAir compensates for air stream resistance, due to connected conduit or dirty filter, by increasing fan speed.
- Therefore supply and exhaust air stream remain constant and balanced.
- “Dirty Filter” error will be indicated once maximum fan speed is reached.
- Longer supply ducting will result in a change in balance between the air flow of the 1<sup>st</sup> and 2<sup>nd</sup> room in favor of the 1<sup>st</sup> room (normal 1 : 1).

2. Cut out the appropriate passage and attach the appropriate ducting or connector taking care to use an O-ring or sealant.



3. Use the included adapter if you wish to connect the 3x Round-Flex 75 mm to the 2<sup>nd</sup> Room Exhaust port.





4. Allow for sufficient openings between rooms (clearance between door frame and door leaf) and sufficiently sized supply and exhaust valves:

Air Flow	Minimal Cross Section Area
30 m <sup>3</sup> /h	30 cm <sup>2</sup> (Valve Ø 125 mm)
60 m <sup>3</sup> /h	60 cm <sup>2</sup> (Valve Ø 125 mm, fully opened)
100 m <sup>3</sup> /h	100 cm <sup>2</sup> (Valve Ø 200 mm)



### Installation Side

#### **DANGER** ⚠

- The freeAir100 must not be installed in immediate vicinity of flammable material or harmful chemicals.
- During planing consider all relevant local building, safety and fire codes. Especially in situations where indoor air is used for combustion (wood stove, fire place...etc.).

Select installation location that allows condensing moisture to flow off freely while preventing any danger through the formation of icicles and/or icy spots on the ground.



#### **Notes**

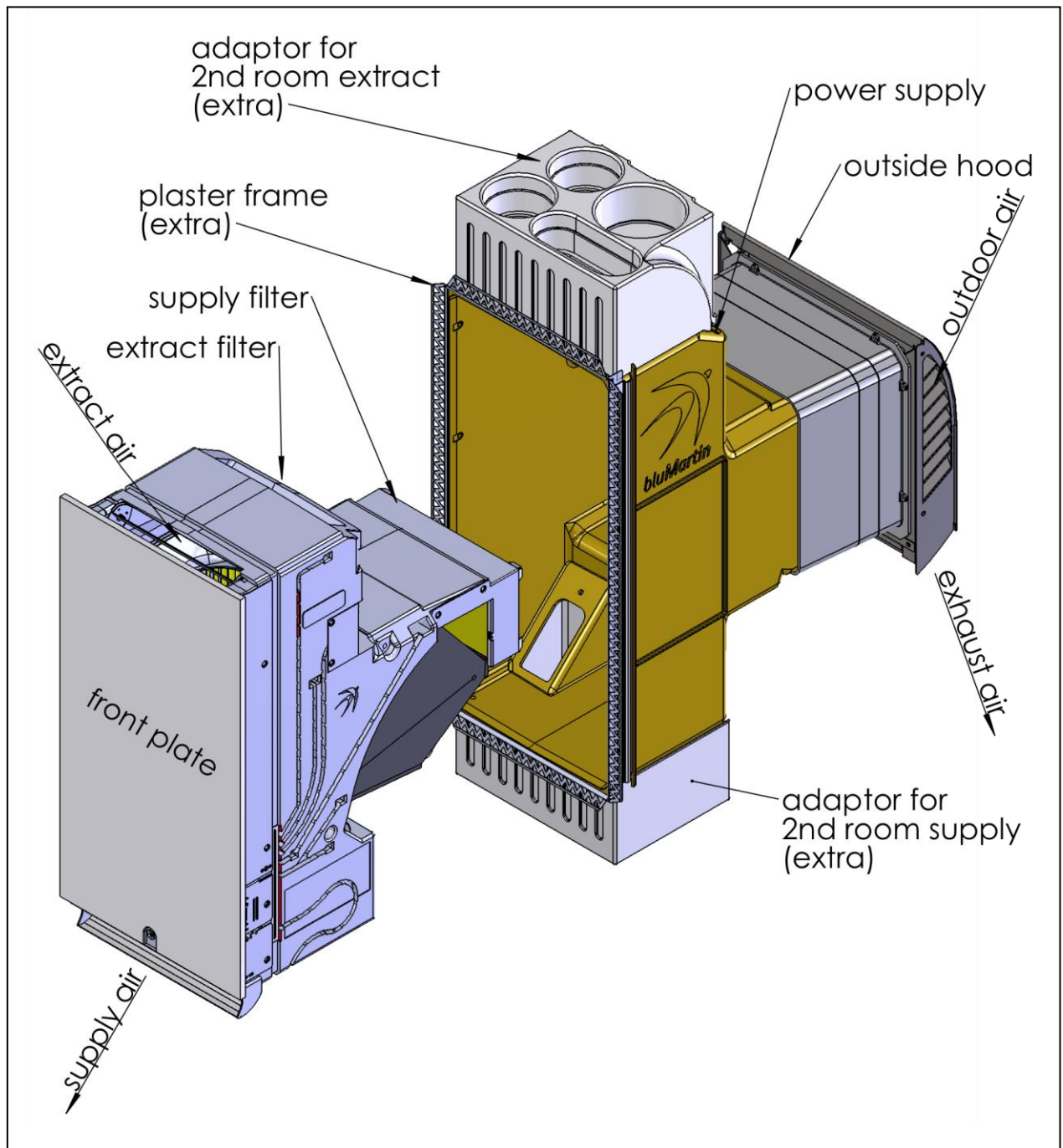
- The condensate may be drained through a hose with the extra Condensate drain outside article FA00.2005 (outside between wall and insulation or inside).
- The formation of ice can be reduced with the software option de-icing (only with the permission of the owner of the building).

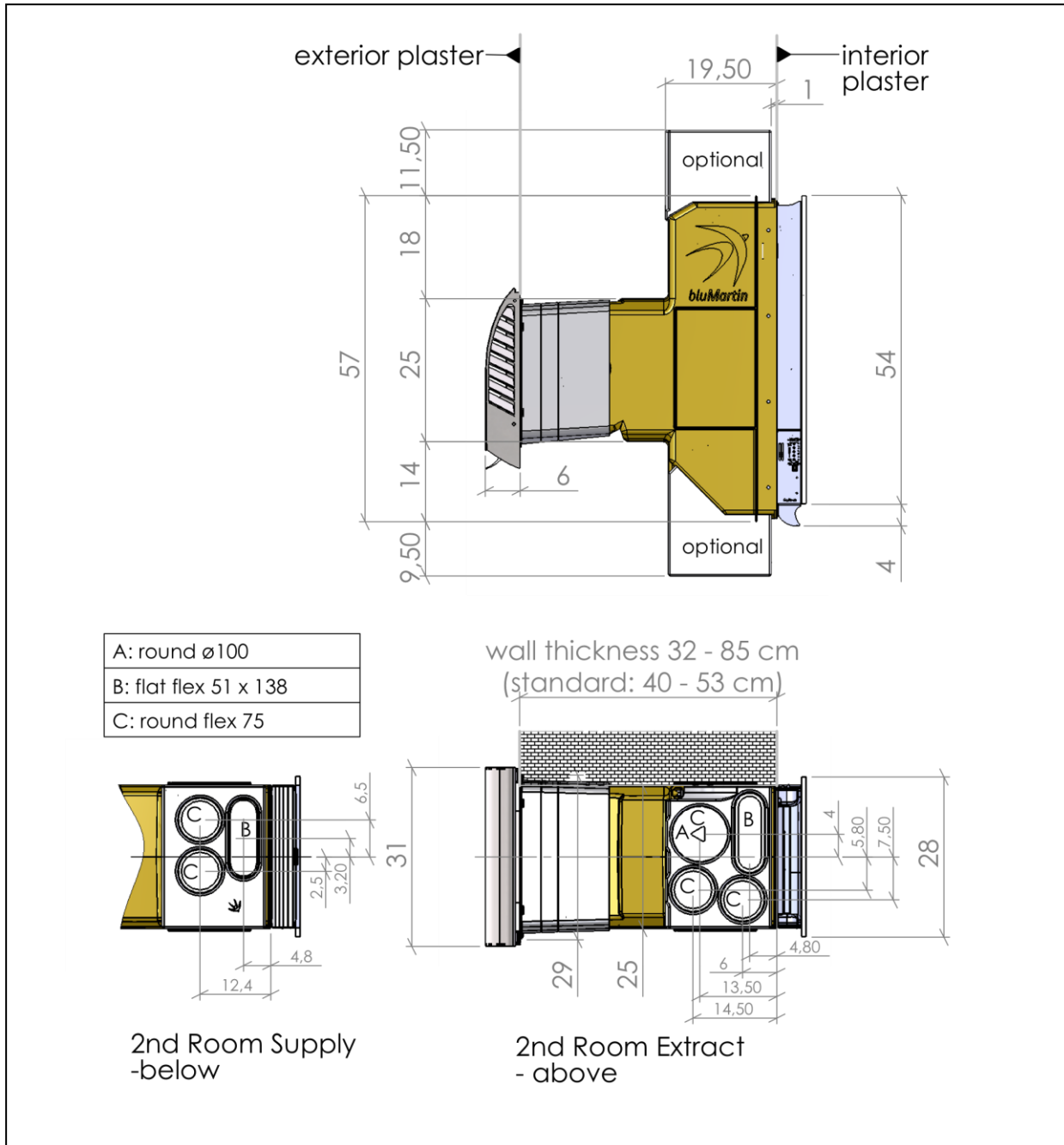
**Warning** 

The freeAir100 is not 100% suitable for tropical locations with high humidity. In such locations condensate could result on the inside part of the device (the freeAir will pause in these cases). The system has jet no design features allowing drainage from the inside.

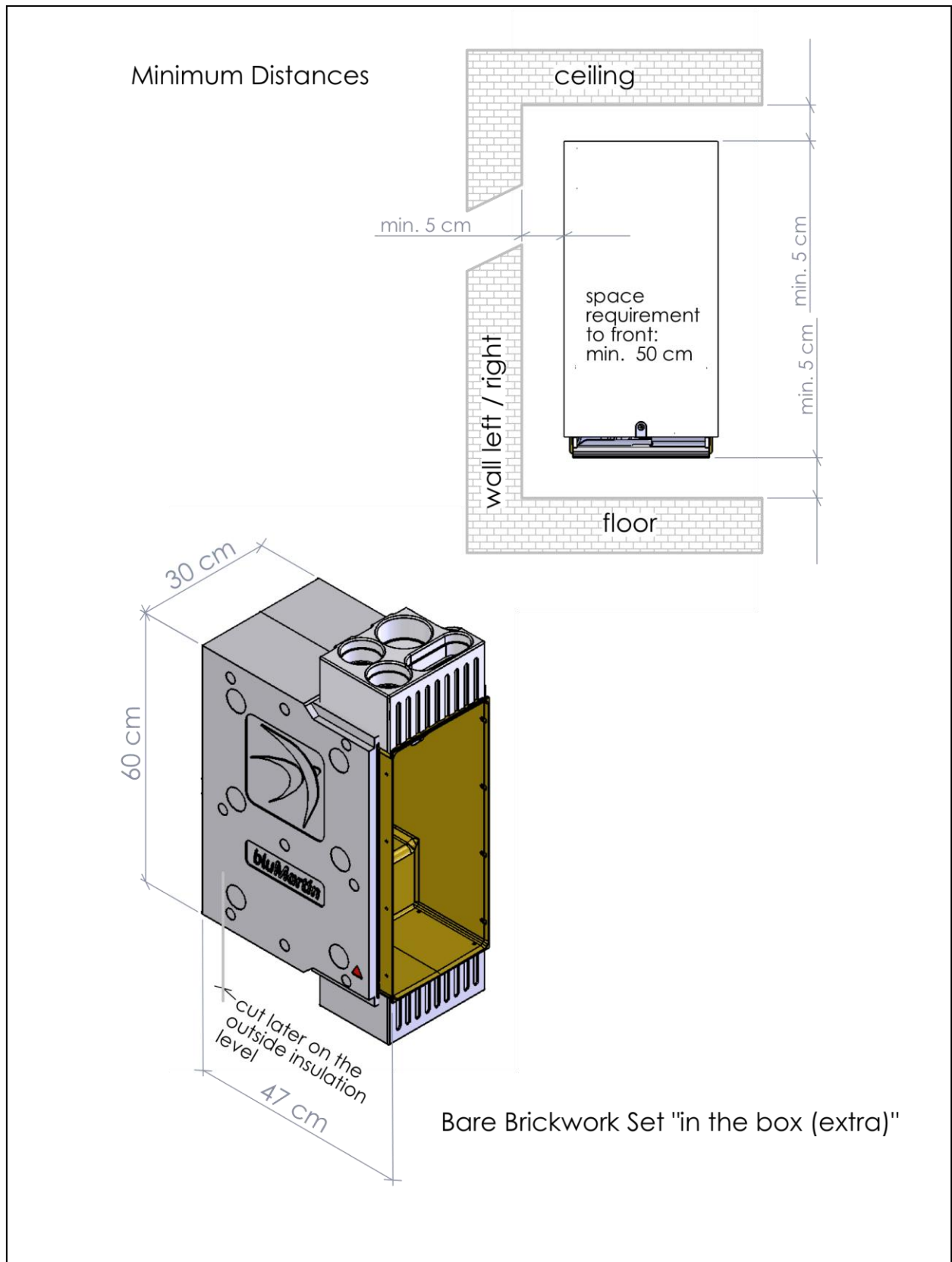
Room temperature during operation should be between 0°C and 40°C. Outside temperature should be between -40°C and +50°C.

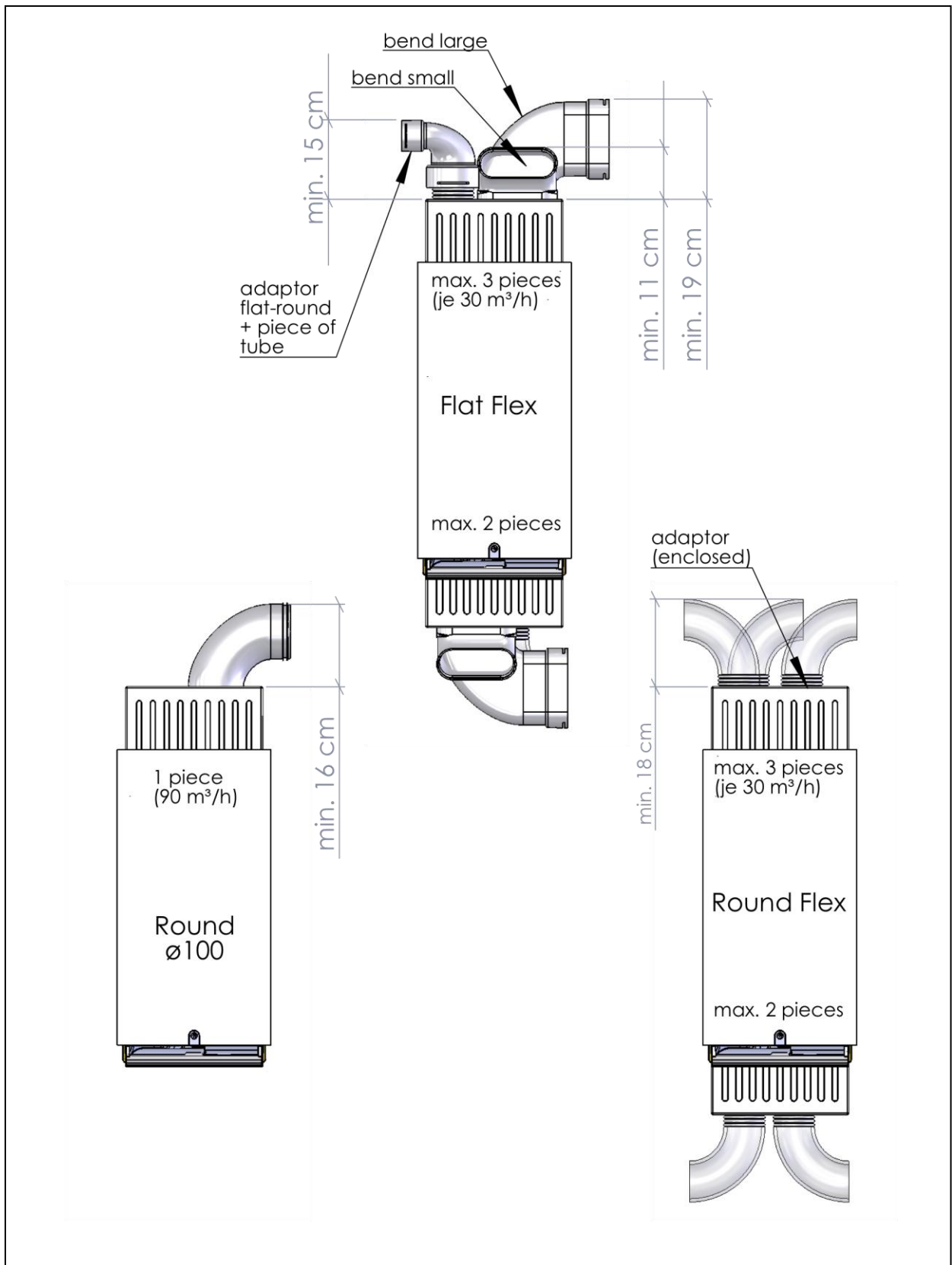
Drawings

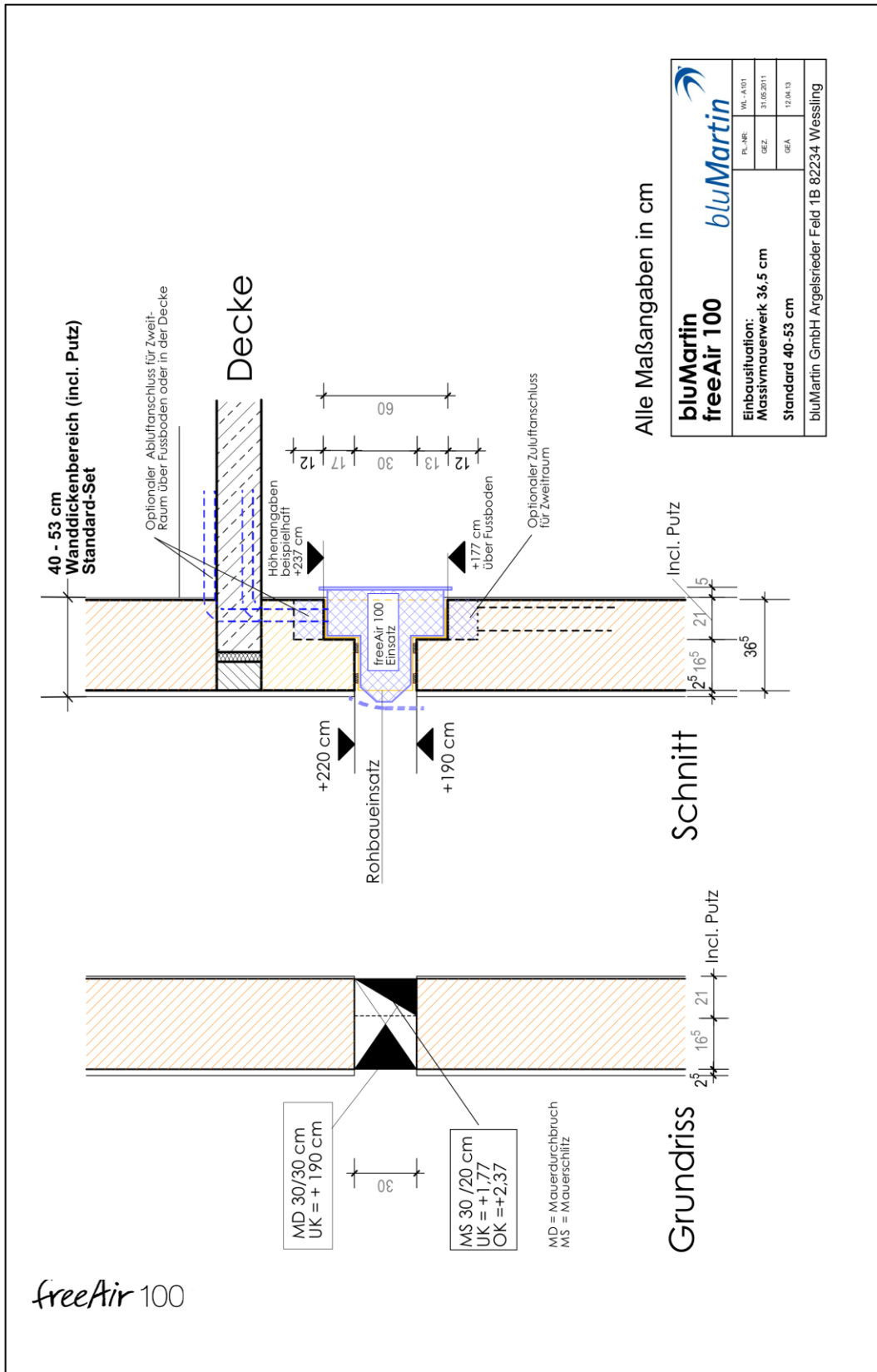




- FA00.1012/5 Outside hood - normal – Wall thickness 40 to 53 cm
- FA00.1020/2 Outside hood - deep – Wall thickness 35 to 40 cm
- FA00.1025/7 Outside hood - extra deep – Wall thickness 32 to 40 cm
- FA00.1030 Outside hood - basement – Wall thickness 32 to 46 cm
- FA00.2003 Extension (1x/2x) – Wall thickness 53 to 85 cm

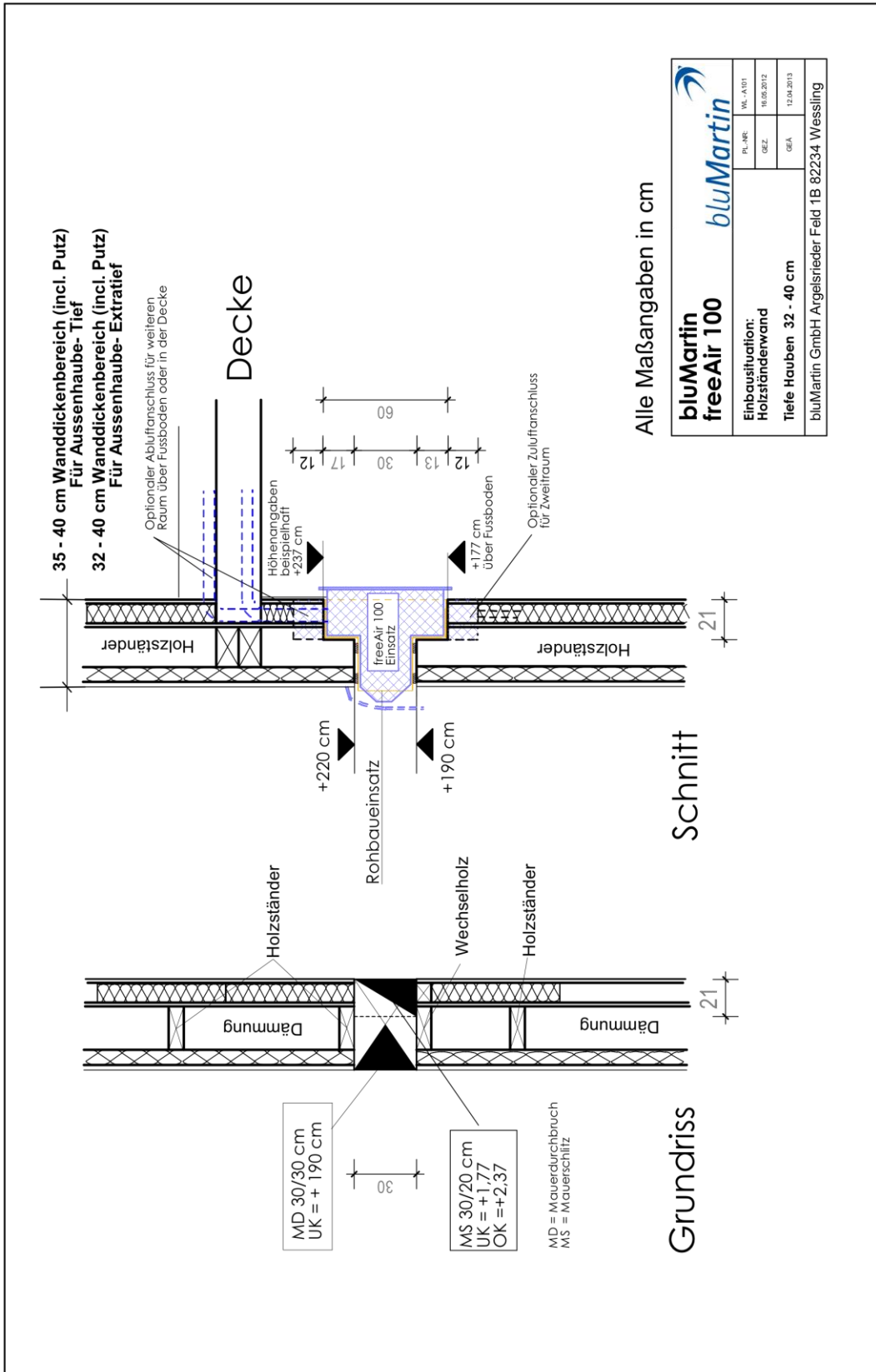






freeAir 100



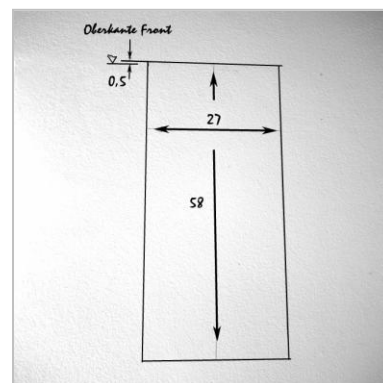


## Bare Brickwork

1. Sketch a wall cut-out of 27 x 58 cm minimum on the appropriate spot on the wall.

**Note**

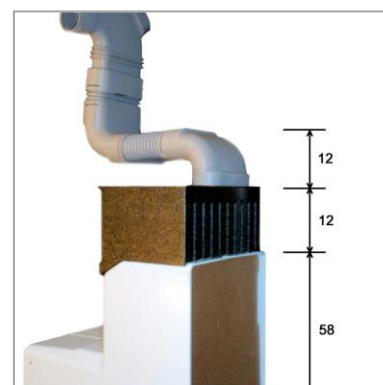
Technically speaking the higher up on the wall the device is installed the better the performance. However for best aesthetics we recommend installing the device such that the top edge is level with the top edge of your window lintel.



2. An additional 12 cm space in height is required for the 2<sup>nd</sup> Room adapter and duct connection.

**Note**

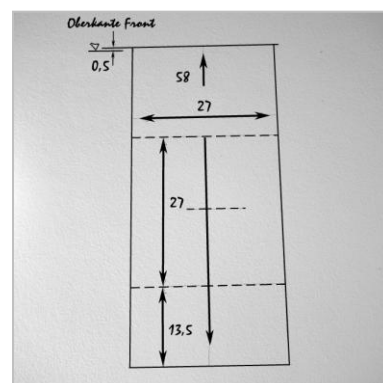
During construction protect the inside (air connections and cable ends) of all ducting from dust.



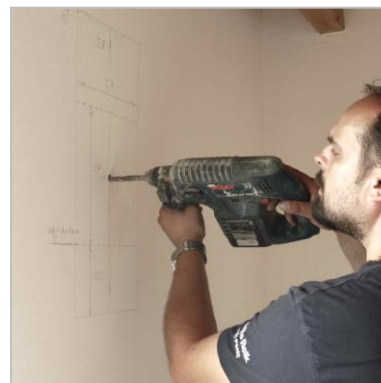
3. Sketch up the inside wall cut-out of 27 x 27 cm.

**Note**

27 cm is the minimum width.



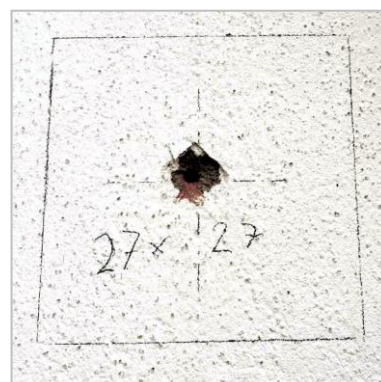
4. One option is to drill one or 4 pilot holes.



5. Sketch up the wall cut-out on the outside wall of 27 x 27 cm .

### Notes

- The flange width of the telescopic adapter is 30 cm.
- If you want to hang up the flange exactly on the plaster, the opening is 27.5 x 24.5 cm.



6. Shorten the telescopic adapter in case your wall thickness (including stucco) is less than 45 cm.

### Note

You will need a deep or extra deep hood for wall thicknesses of less than 40 cm.



7. The standard separating plate is pre-assembled for wall thicknesses (including stucco) of up to 44 cm.



32 - 44 cm

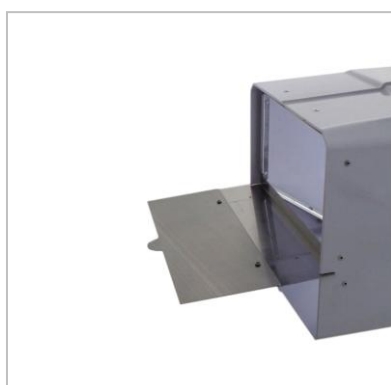
8. Attach the extension for the separating plate in the correct position in case existing walls are thicker than 44 cm (including stucco).

**Note**

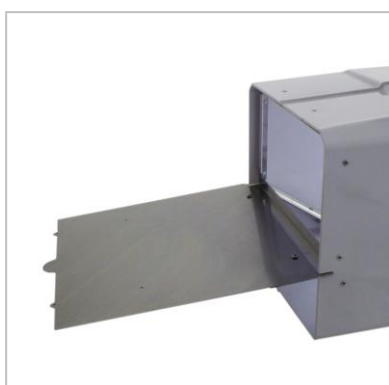
You will need additional telescopic adapter extensions for wall thicknesses of over 53cm. The part number is FA00.2003.



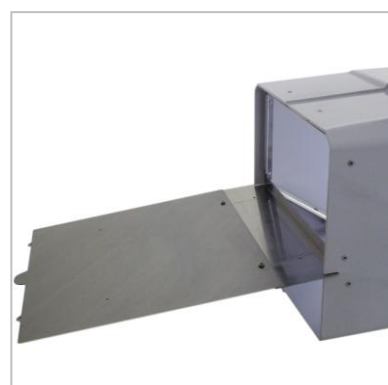
44 - 49 cm



49 - 53 cm



1x extension:  
53 - 57 cm (middle plate)  
61 - 65 cm (long plate)



57 - 61 cm (middle plate)  
65 - 69 cm (long plate)

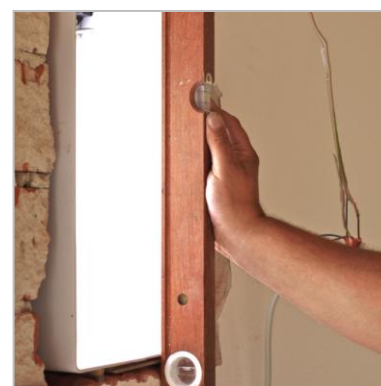
9. The use of the plaster frame is recommended especially in dry-wall construction. Assemble the frame, bend over the 4 flags and attach the frame to the wall box using 8 countersunk screws.

### Note

The plaster frame may protrude up to 5 mm above the wall box.



10. After the wall cut-out is completed install the electrical cable (3 x 1.5 mm<sup>2</sup>) in the upper part of the wall box. Affix the wall box flush with plaster and secure with wedges.



11. Use appropriate polyurethane foam to fasten corners of wall box.  
Once the foam has hardened add additional layers of foam.  
Take care not to allow expanding foam to deform the box.  
Leave box bracing in place!



### WARNING

- The wall box must be placed with millimeter accuracy, so the freeAir100 will fit tightly sealed.
- Leading edge of the wall box must sit flush with plaster.
- Use sealing tape to assure a vapor proof connection between wall box and wall.



12. Push in the finger tabs to remove box bracing.

### Note

The electrical connector (located inside) is attached to the brace.



13. Only an authorized Electrician should connect the electrical wire (3 x 1,5 mm<sup>2</sup>) to power mains.

### ATTENTION

Metal tab and connector must be installed straight to allow the trouble free installation of the freeAir100 during a later installation step.



14. Remove the protective cover from the outside cap after all plaster and painting work is done.



15. The outside protective cap can now be removed.



16. Install telescoping adapter flush with stucco. Use water prove sealant as shown.





17. Seal the gap between the wall box and the telescoping adapter using a water prove sealant.

**ATTENTION** ⚠

Only use sealants approved for ventilation systems such as Ottocoll M500 or similar.



18. When installing the metal outside air divider make sure that the metal lip of the outside air divider seals properly against the interior air stream divider.



19. The metal outside air divider is attached to the telescoping adapter via 6 metal screws.





20. Hook-in the outside hood and attach with 2 M4 raised head screws.



21. Clip the drip hook into the metal brace below the drip edge of the telescope adapter.  
This assures that condensing water drips away from the house wall.



**Note**

Please see part Service [S] for installation of the freeAir100.

## Service

### Notes

- The annual filter change does not require any tools.
- Original bluMartin replacement filters are available from the installer, from us ([info@bluMartin.de](mailto:info@bluMartin.de)) or from Amazon.
- You need a Torx-10- and a Torx-20 screw driver for installation and service tasks.

### DANGER

Observe all references to safety and use of the freeAir100 in part General [G].

### Device Test

After correct installation turn the freeAir100 on and wait a few minutes while the device executes a test routine.

Test Turbo operation once either only blue LEDs or no LEDs are illuminated.

### Connect Software

For control of device functions and for any update, we recommend:

- Laptop (Windows 7 or 8)
- USB cable (A on B)
- Our free software freeAir-Connect and free updates for freeAir100 ([www.bluMartin.de/service/downloads](http://www.bluMartin.de/service/downloads)).



## Change of filter (annually or if required)

1. Pull your freeAir100 gently with both hands at the same time left and right at the center of the panel from the wall box and set it onto the floor.

### Note

When removing the freeAir100 from the wall box it is possible that some remaining condensate water will flow from the heat exchanger.

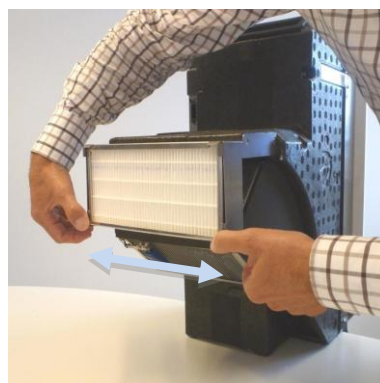


2. Push the two metal flaps apart and remove the dirty supply filter.

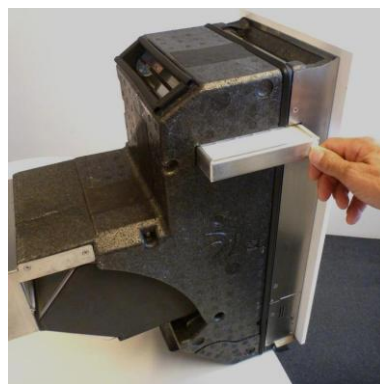
Please only use original bluMartin- filters.

### Note

For allergy sufferers are also filter class F7 available (increased air resistance → some more noise).



3. Pull the extract filter out of the side of the device and replace with original bluMartin-filter.



4. Clean the wall box with soapy water. Also remove any glue, plaster or paint residue, so the freeAir100 will slide easily back into the wall box.

Before replacing the unit use the (included with the filter) silicone lubricant and apply a thin film to the seal at the leading edge of the wall box and at the gasket.




5. Support the appliance with your right hand in front and bottom and slide it straight into the box. Slide by pressing the front panel on the unit until it stops.


**Note**

The device will only be operational if seated completely inside the wall box (if necessary beat with your hand on the front panel).

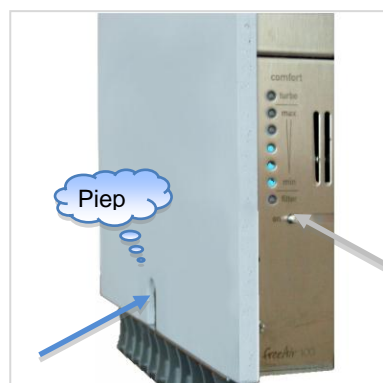


6. To reset the filter hour counter shortly change into Service mode. To do that turn first the device off.

Push and hold the -button and switch the device on again.

Keep the -button pushed until you hear a short beep.

After that switch the device off once more, wait till all LEDs have gone dark and switch the device on again.



## DIP Switches

### 1<sup>st</sup> Room Extract (m<sup>3</sup>/h)

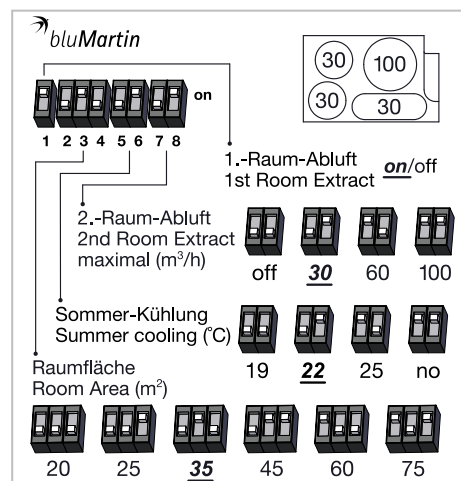
In case of 2<sup>nd</sup> Room Extract option (= 4<sup>th</sup> flap) this will allow the user to deactivate the hourly switch of extract air from 2<sup>nd</sup> to 1<sup>st</sup> room.

This makes sense in case your freeAir100 is installed inside e.g. a closet.

#### Note

The deactivation is possible only when the 2<sup>nd</sup> Room Extract is adjusted to 100 m<sup>3</sup>/h.

This feature is only available in devices with a serial number of 3000 or higher.



### 2<sup>nd</sup> Room Extract (m<sup>3</sup>/h)

The additional 2<sup>nd</sup> Room Extract module enables adjustment of max air flow of ventilation for exhaust of the 2<sup>nd</sup> room. Diameter, length and number of turns in the ducting as well as air inlet size limit the air stream (see table above):

- off: No exhaust ducting installed or extract opening blocked
- 30: One flex-duct connected (with extract valve Ø 125)
- 60: Two flex-ducts installed (with extract valve Ø 125 and completely open)
- 100: Three flex-ducts or spiral-seam pipe DN100 installed (with extract valve Ø 200)

#### Note

Incorrect adjustment or high air friction coefficient will lead to higher noise level and premature filter error warning.

### Summer Cooling (°C)

A special feature of your freeAir100 is the active summer cooling. In the warm season the device automatically activates a bypass in order to (mostly at night) cool down rooms with fresh outside air. The amount of air will be increased, if necessary.

Select your desired temperature for the supply air room.

#### Note

This feature is only available in devices with a serial number of 2000 or higher.  
Temperature is set to 22°C in older devices.

### Room Area (m<sup>2</sup>)

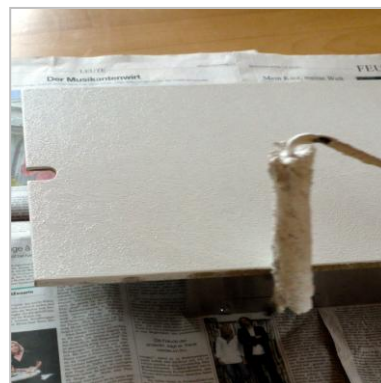
Enter here the number of square meters to be ventilated. Please factor in all connected rooms. This input is the basis for minimum ventilation calculations.

#### Notes

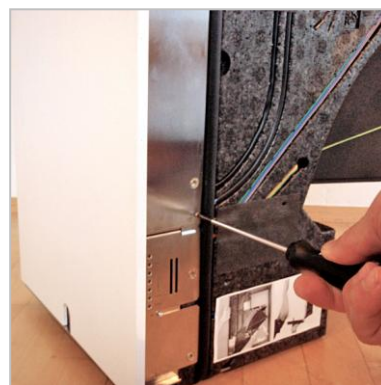
- If you find the intermittent operation bothersome adjust the room area to less than 60 m<sup>2</sup> at Comfort Level 1 or to less than 35 m<sup>2</sup> at Comfort Level 3.
- Adjust the Room Area to 60 or 75 m<sup>2</sup> to guaranty a level of minimum ventilation of 20 m<sup>3</sup>/h for humidity control according to DIN 1946-6.

## Front Plate Installation

1. Paint the front plate with the color of your choice (interior paint or lacquer).



2. Carefully slide the front plate onto the device (don't damage cables). Attach the included M3 screws for grounding of the front panel. Then attach the front plate with 4 counter sunk (4 x 20) wood screws.



### Note

Please make sure to adjust the DIP-switches first (see above in this section).

### DANGER

A missing grounding screw in the front plate can cause injury or death by electrical shock.

## Air Outlet Installation

1. Slide the air outlet into the device. Press the EPP foam body with a finger a little bit down.



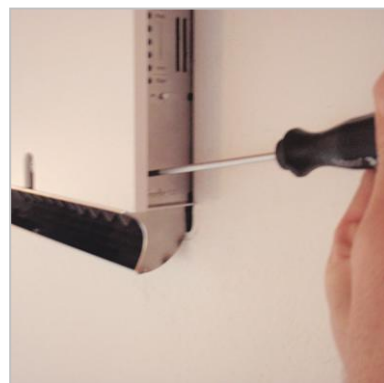
2. Attach the metal sheet using two M3 raised head screws.

### Notes

The supply air outlet is designed to guide air into the room as far as possible.

Air direction can be changed by adjusting the air paddles.

Air outlets guiding air downward are available as an extra.



## Filter Installation



Attach the metal bracket for the inlet air filter using four 4x20 flat head screws.






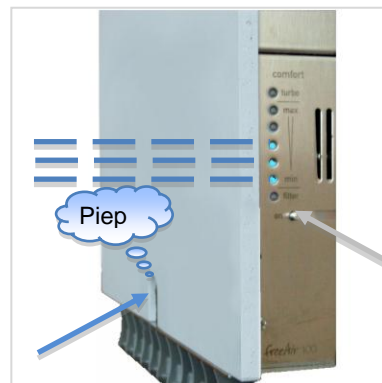
## Service – Operation

To change to the service operation switch off the device using the main power switch.


Push and hold the -button and turn the device back on at the main power switch. Keep holding the -Button until a short beep is audible.

LEDs will blink in Service Mode.

Instead of the Comfort Level, alternative air flow can be selected to 20, 30, 40, 50, 60, 70, 80 or 100 m<sup>3</sup>/h by using the -Button.

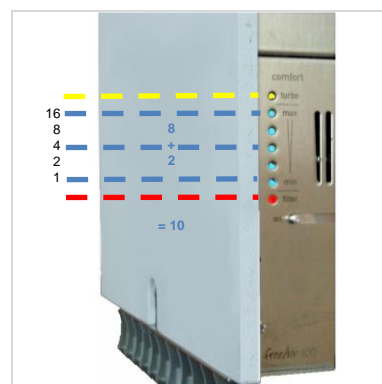


### Notes

- Selecting the Service Operation will reset the filter hour counter to zero.
- After switching the device off and back on all functions will be restored to Comfort or Dehumidification operation.
- Prolonged holding of the -Button will launch Test Operation (the upper middle as well as the lower blue LEDs will be on).
- In Service Operation some functions such as defrost are not available. Therefore this operation should only be used during maintenance work.

While switching the device on – none illuminated LEDs indicate the firm ware version digitally from the bottom up.

Here is an example for version 1.10.



## Error Messages

### Filter Run Time

Indicates that it has been more than 8.000 operational hours (or roughly one year) since the last filter change.

#### Note

After filter has been replaced select Service Operation to reset the hour counter.



### Filter Contamination

One or both fans indicate an error because the air flow is restricted due to a dirty filter.

This error message can also be triggered by other air flow obstructions such as (under dimensioned opening between supply and extract air, DIP-switch setting for extract air is set too high or simultaneous operation of a kitchen vent hood while windows are closed).



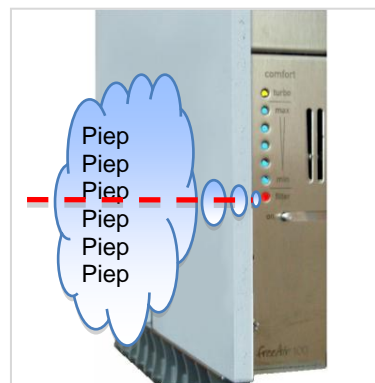
### CO<sub>2</sub> Content

CO<sub>2</sub>-content is measured to be above 3500 ppm.  
An acoustic warning will sound for 30 seconds.




**Fire Alarm**

A temperature sensor indicates a temperature of above 80°C.  
The device will power down and close air flaps.



**Control Error**

The device will power down and close air flaps.  
Red LED is illuminated – yellow LED will flash:  
By pushing the -Button the following described error causes are indicated.




**Note**

Error messages will be erased by switching the device off and back on at the main power switch.

## Control Error Analysis

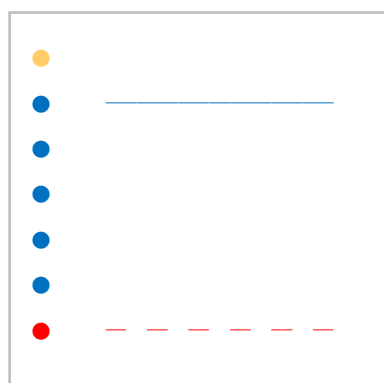
1. Control-Error will be indicated.



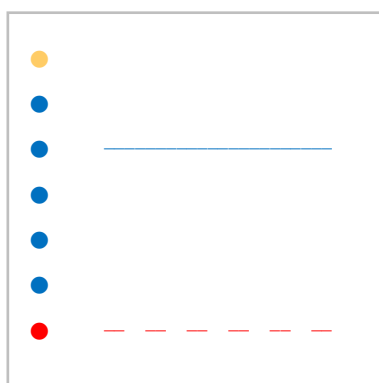
2. Push and hold -Button.



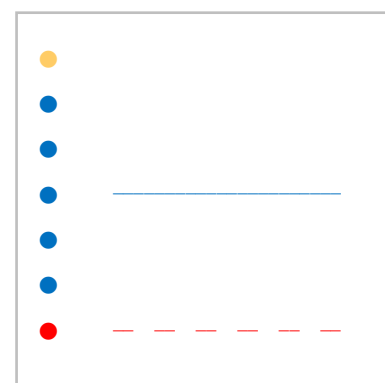
3. Cause of error display:



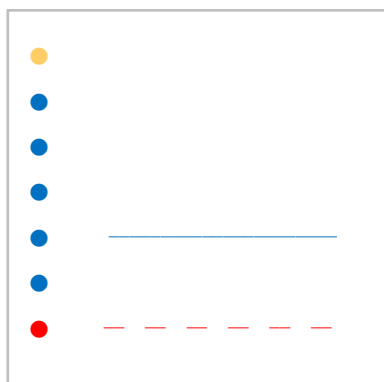
CO2 Sensor



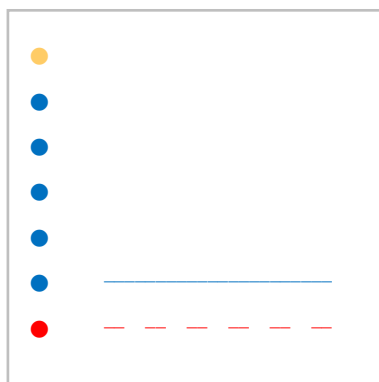
Temperature Sensor Outside Air



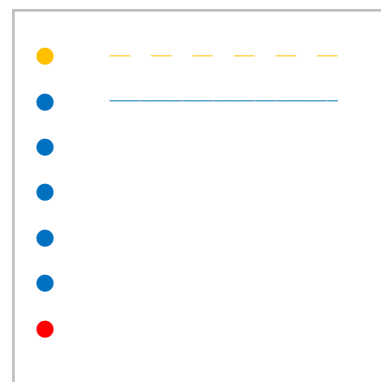
Temperature Sensor Exhaust



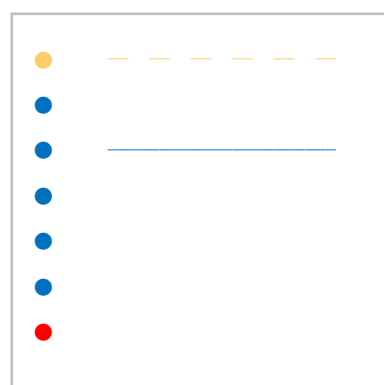
Temp. Sensor Extract Air



Temp. Sensor Supply Air



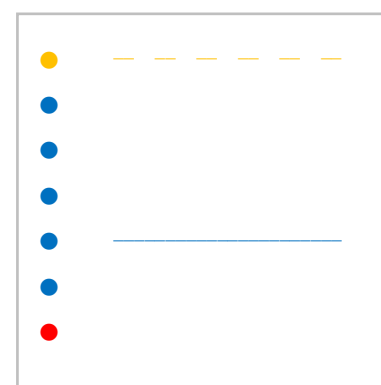
Humid Sensor Outside Air



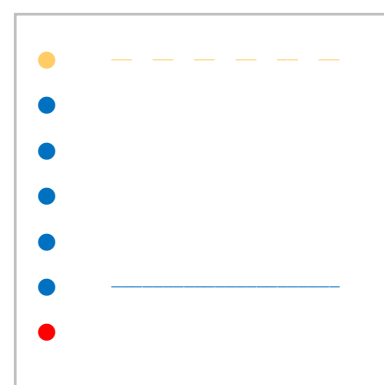
Humidity Sensor Extract



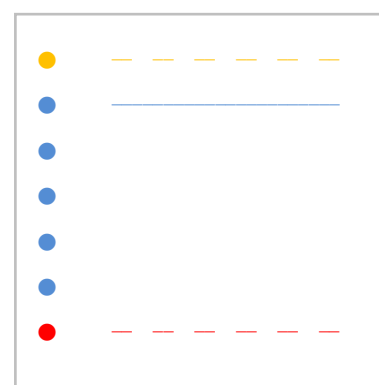
Air Pressure Sensor



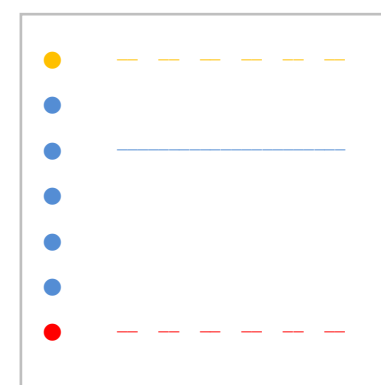
Fan Extract Air  
>> See error correction



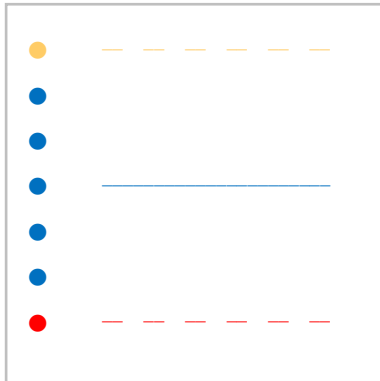
Fan Supply Air  
>> See error correction



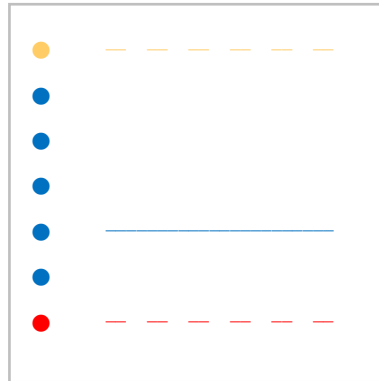
Extract Flap



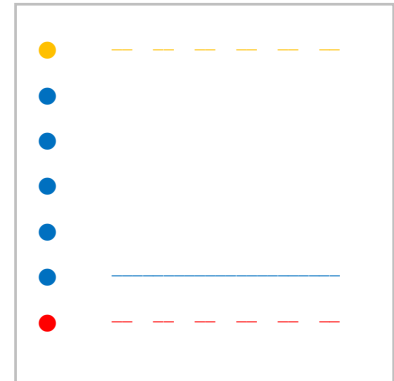
2<sup>nd</sup> Room Extract Flap



Supply Air Flap



Bypass Flap



DIP Switch

>> See error correction

4. Notify your service partner in case an error can't be cleared.  
Indicate error cause as well as the freeAir100 serial number.

**Note**

Returning the device has to be coordinated with your service partner. The device has to be shipped using the appropriate packaging.

## Error Correction

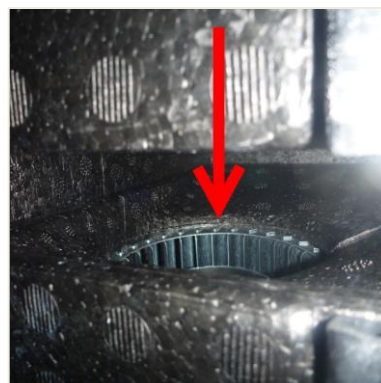
### Device can't be switched on

The freeAir must be installed flush with the wall box. Clean the wall box and tap the front plate of the device to assure a tight fit. In case the device still does not turn on wait several minutes before switching the device back on.





### Fan does not move (knocking sound every 30 seconds)

Fan is jammed due to improper transportation. Remove the extract filter and carefully push the blade wheel downward. For the supply air fan – loosen the 4 outer flat head screws and lift up the motor plate by 10mm.



### Blue LEDs blinking (continuously)

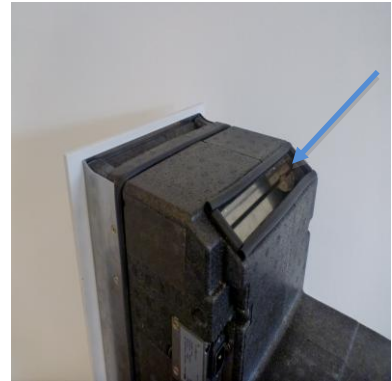
Service- or Dehumidifying operation is active. Service operation is activated by pushing and holding the -Button while the device is switched on. This can happen by accident or because of a mechanical jamming. Uninstall the front cover and free the -Button. Leave Service operation by switching the device off and back on.



### DIP Switches

Check to see whether a 2<sup>nd</sup> Room Extract connection had been selected even though the device is not equipped with one (no 4<sup>th</sup> air flap and seal present).

Also check to see whether 1<sup>st</sup> room extract is deselected even though the 2<sup>nd</sup> Room Extract is not set to 100 m<sup>3</sup>/h?



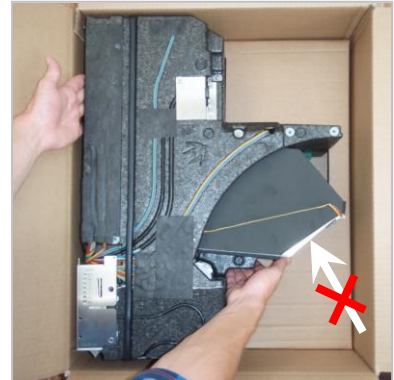


## Packaging

To extract the device from the packaging use your right hand to reach under the EPP-Foam body.

### Note

Take care not to reach into the fragile fins of the heat exchanger.



## Transport and Storage

Components of the freeAir100 must only be transported in the correct packaging. The freeAir100 must be shipped on a pallet to protect it from shock. The freeAir100 and packaging must be protected from moisture.

Commissioning

Date:    Serial number:  
Company:                                      Phone number:    Signature:

Annual Filter Change Service Log

Date:    Signature:  
Date:    Signature:  
Date:    Signature:  
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Date:    Signature:

Note: Filter Run Time counter has to be reset



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