

Installation

DANGER ⚠

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

2nd Room Connections

- Please select the correct connector for a device designed for 2nd room connection:
 - Connecting ducting, conduits and valves must have low air stream resistance.
 - For 2nd 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 nd Room Exhaust (= DIP switch setting)	Max. Pressure drop 2 nd 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 ³ /h	15 Pa	ca. 8 m
1 x Round-Flex Ø 75 mm	30 m ³ /h	15 Pa	ca. 2.5 m
2 x Round-Flex Ø 75 mm	60 m ³ /h	55 Pa	ca. 10 m
3 x Round-Flex Ø 75 mm	100 m ³ /h	65 Pa	ca. 10 m
1 x Round Ø 100 mm	100 m ³ /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 1st and 2nd room in favor of the 1st 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 2nd 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 ³ /h	30 cm ² (Valve Ø 125 mm)
60 m ³ /h	60 cm ² (Valve Ø 125 mm, fully opened)
100 m ³ /h	100 cm ² (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

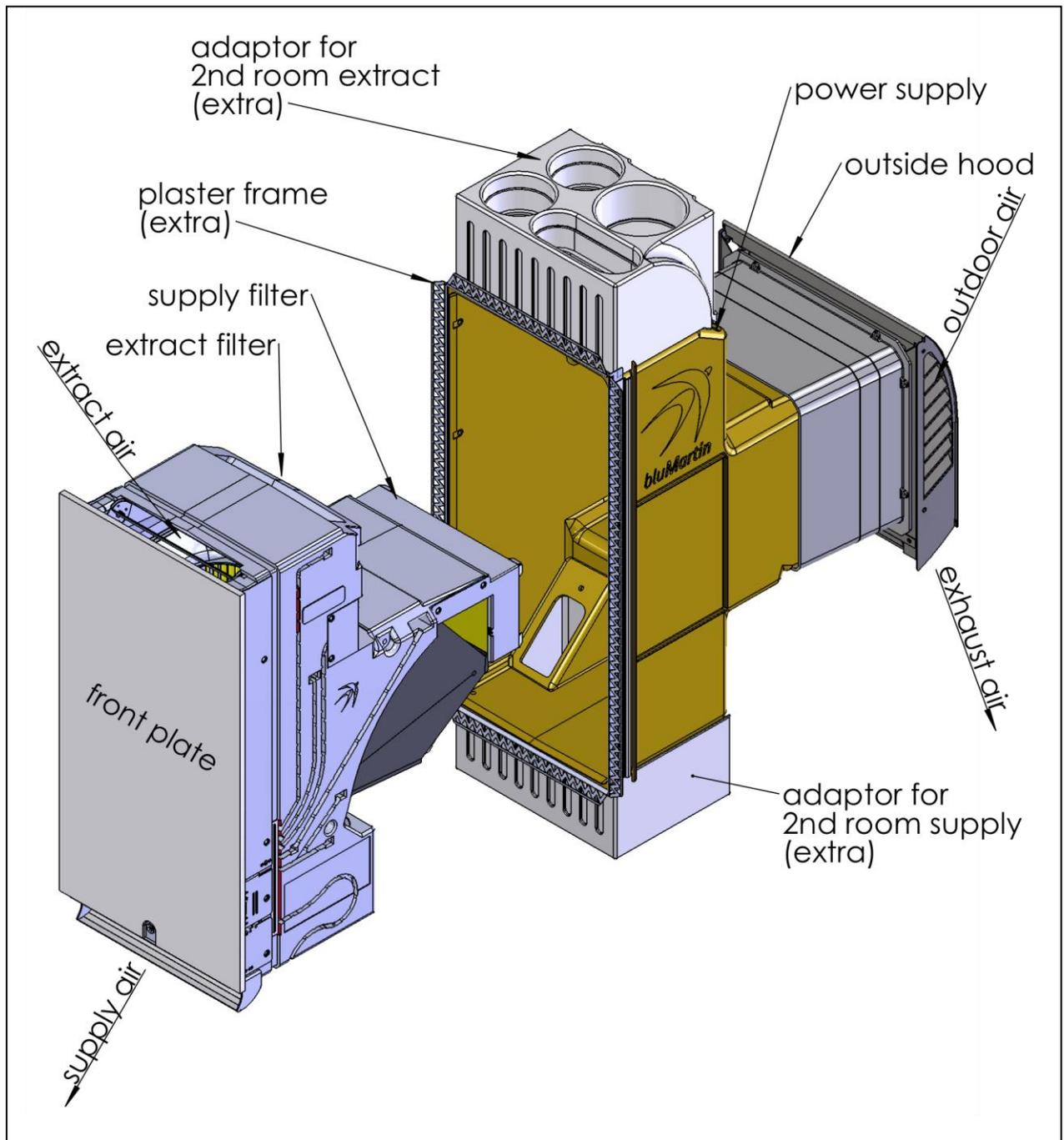
- The condensate may be drained through a hose with the extra Condensate drain outside article FA00.2005 (outside between wall and insulation or inside).
- The formation of ice can be reduced with the software option de-icing (only with the permission of the owner of the building).

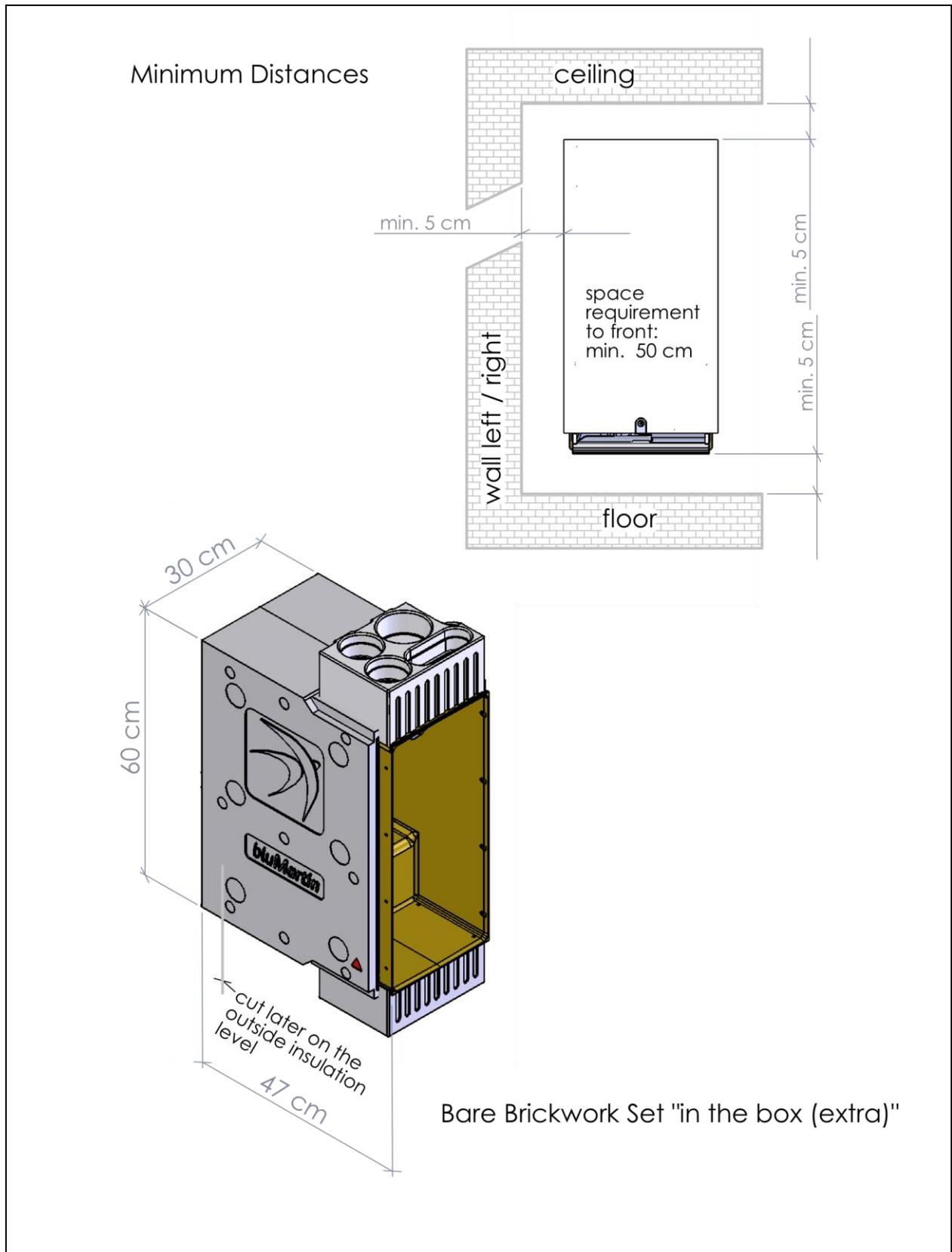
Warning 

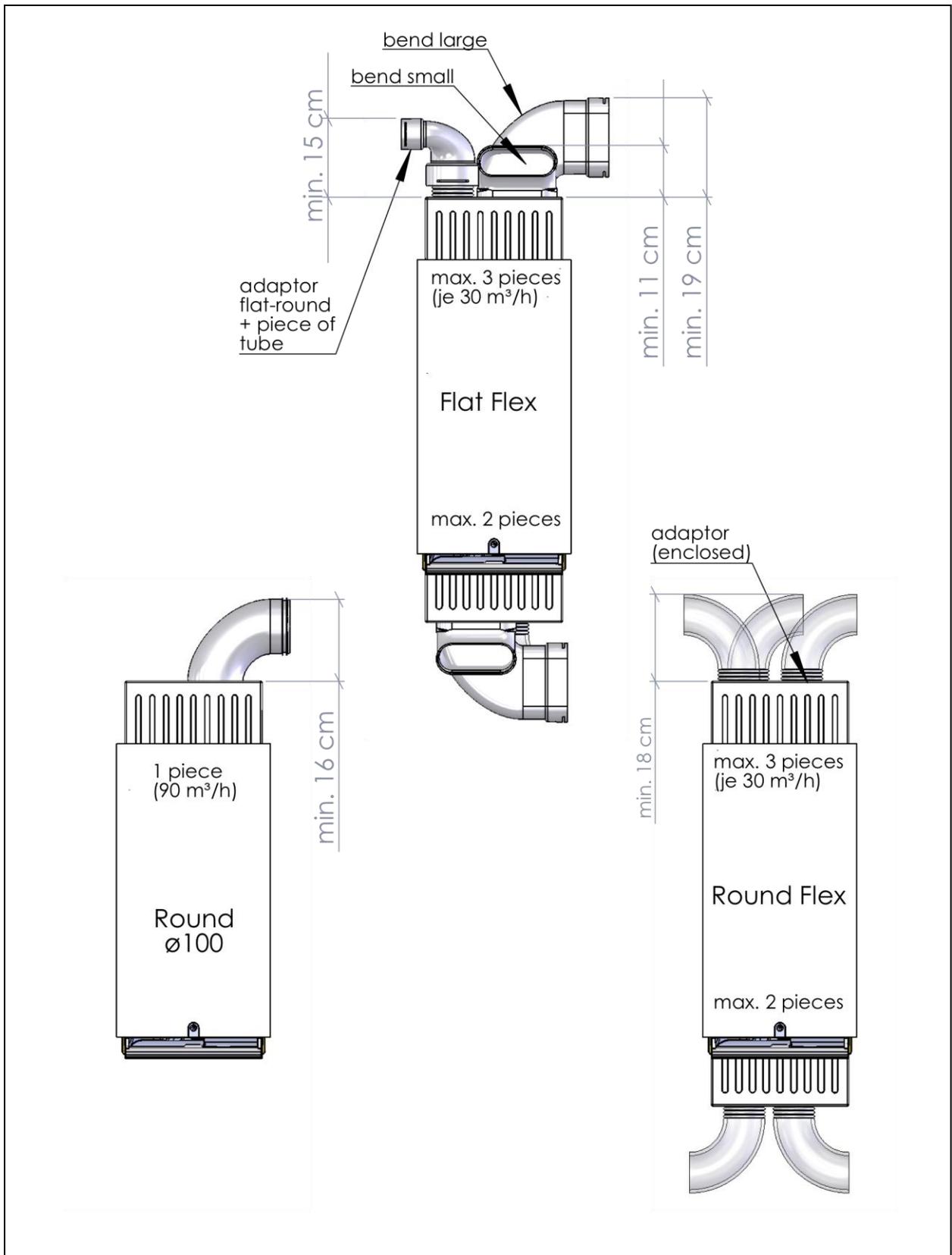
The freeAir100 is not 100% suitable for tropical locations with high humidity. In such locations condensate could result on the inside part of the device (the freeAir will pause in these cases). The system has jet no design features allowing drainage from the inside.

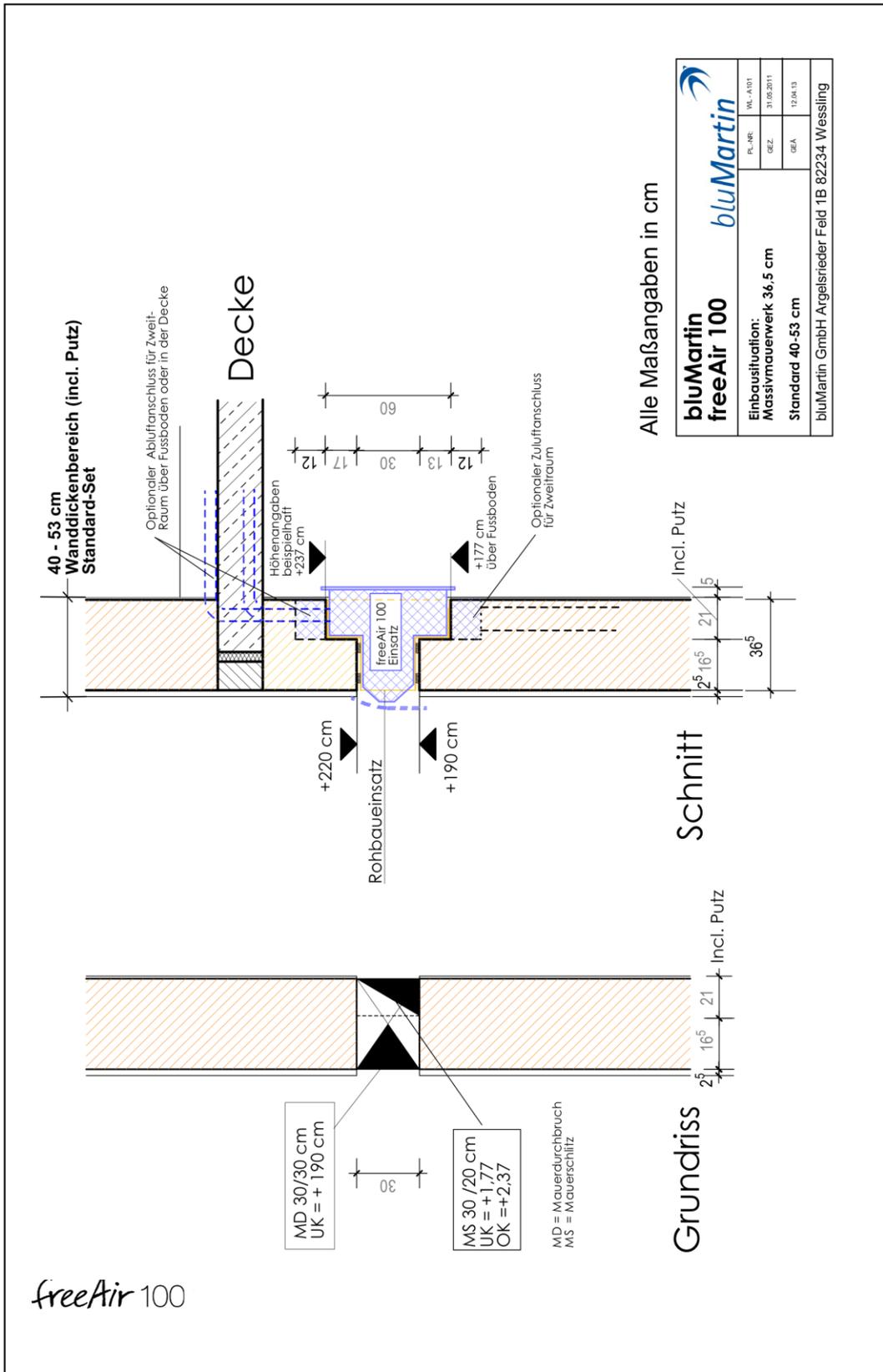
Room temperature during operation should be between 0°C and 40°C. Outside temperature should be between -40°C and +50°C.

Drawings

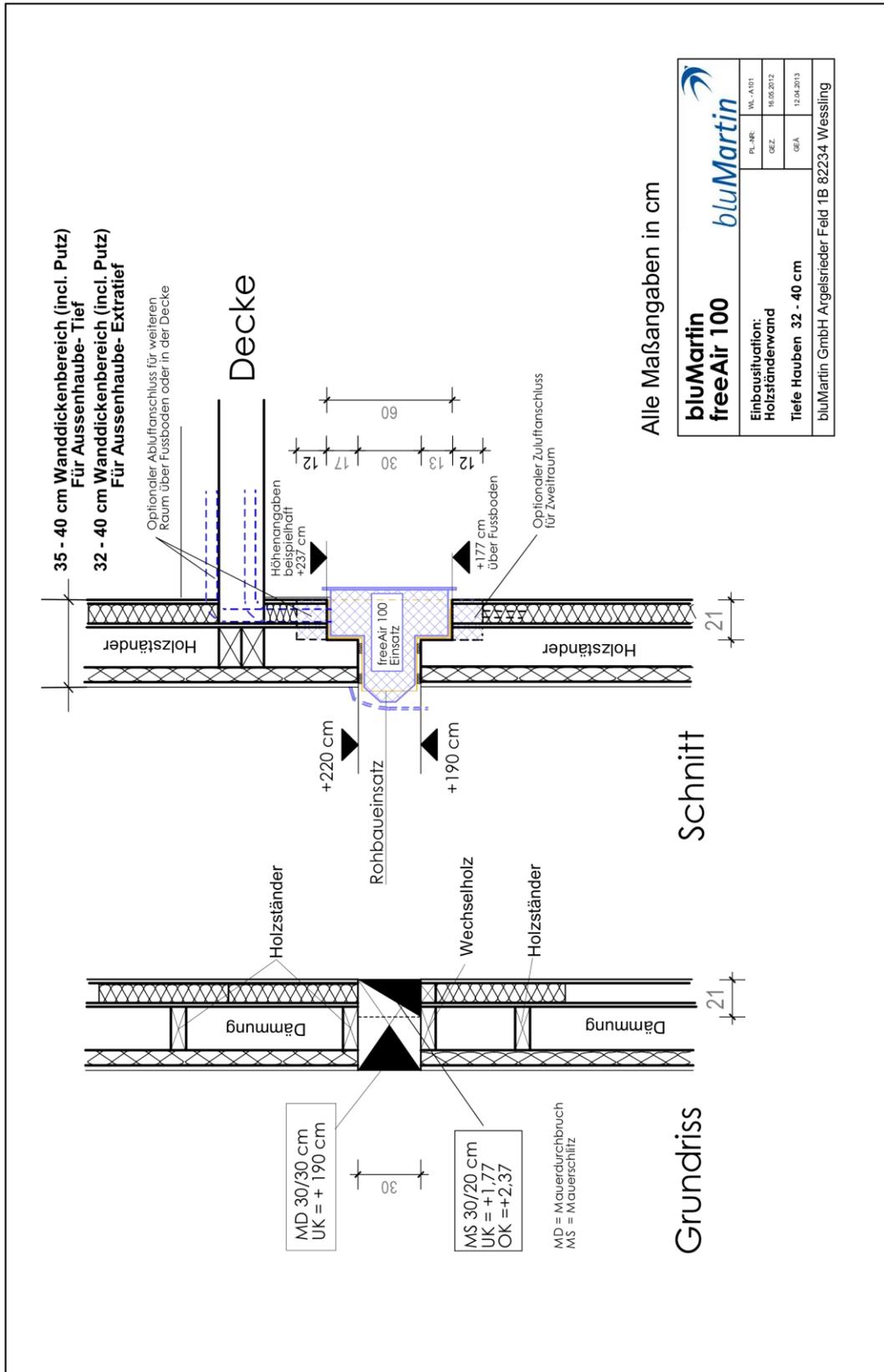








freeAir 100

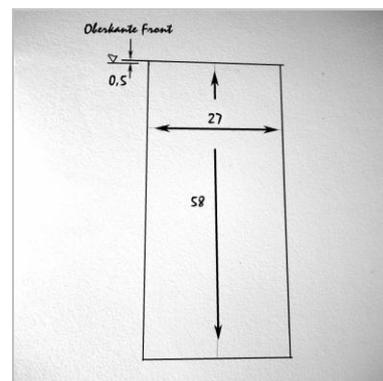


Bare Brickwork

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

Note

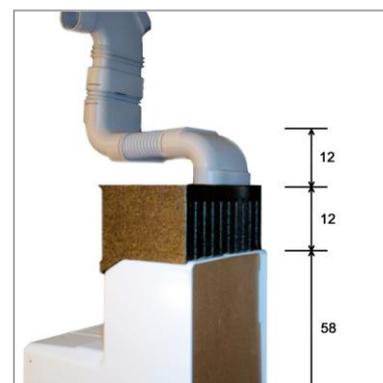
Technically speaking the higher up on the wall the device is installed the better the performance. However for best aesthetics we recommend installing the device such that the top edge is level with the top edge of your window lintel.



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

Note

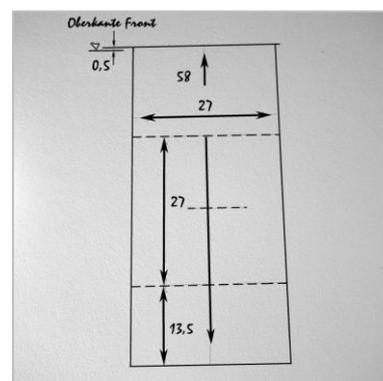
During construction protect the inside (air connections and cable ends) of all ducting from dust.



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

Note

27 cm is the minimum width.



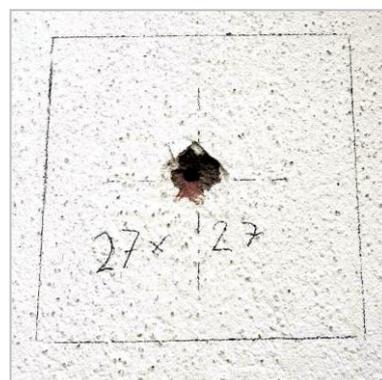
4. One option is to drill one or 4 pilot holes.



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.



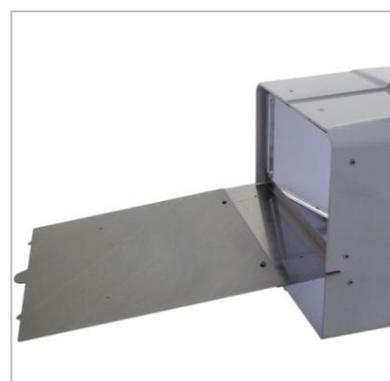
44 - 49 cm



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 mm²) 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 mm²) 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.