



The Swegon Cube is a roof-integrated comfort ventilation unit with the Euro certification ECO Design A+



Swegon CUBE

SWISS  MADE



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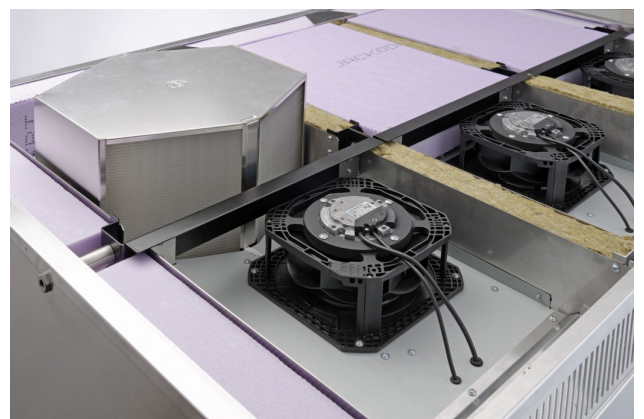
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THE ADVANTAGES

- A high suitability for Housing
- Maximum system efficiency
- Continuous insulation between the building and the plate heat exchanger that is installed in the unit
- More room in the housing
- No technical rooms necessary in the housing
- Low investment costs
- Short assembly and installation time
- Only one crane hoist is needed per climbing zone
- Individual unit per flat assembled into one compact overall unit per riser zone
- Possibility of maintenance, servicing and repair and at any given time without the need to have access to the Apartments
- Euro ECO Design A+ certification
- Sound emission of the unit outside the house

AIR VOLUME RANGE

- (Application range) from 50m³/h to 300m³/h
- External pressure max. 300Pa
- EC centrifugal fans
- Plastic plate exchanger
- Regulated electric preheater
- external air filter F7 and exhaust air filter M5
- external leakage max. 1,99%
- internal leakage max. 1,13%
- pre-wired ventilation unit
- The supply and control cables must be routed to the control cabinet of the unit. Fuse protection via separate fuse. No FLS
- Electrical conduit of 1.5m length attached to the unit
- Inner side of the unit made of galvanized sheet steel and V2A
- Outside of the device made of aluminum
- 100mm insulation XPS
- Condensate drainage directly to the roof
- mounting bracket included
- acoustic flexible sound insulation hoses dim. 125mm
 - Type SONO Combidec
 - Insulation 20mm
- plastic surface, shrink hose for optimal sealing
- frame insulated with 80mm PUR
 - made of 1,5 mm galvanized steel
 - incl. wooden cover



FRAME ASSEMBLY



1. Lay the air and electric cables through the holes in the panel. Only in a steel conduit! Do not lay the cables.
2. Shorten the air pipes to 5cm above the plate. No connecting nipple is needed only the Pipe dimension!



1. Leave about 1m in length of the empty pipes
2. Place the upstand over the pipes.
3. Tighten the upstand with the anchors that has been supplied.

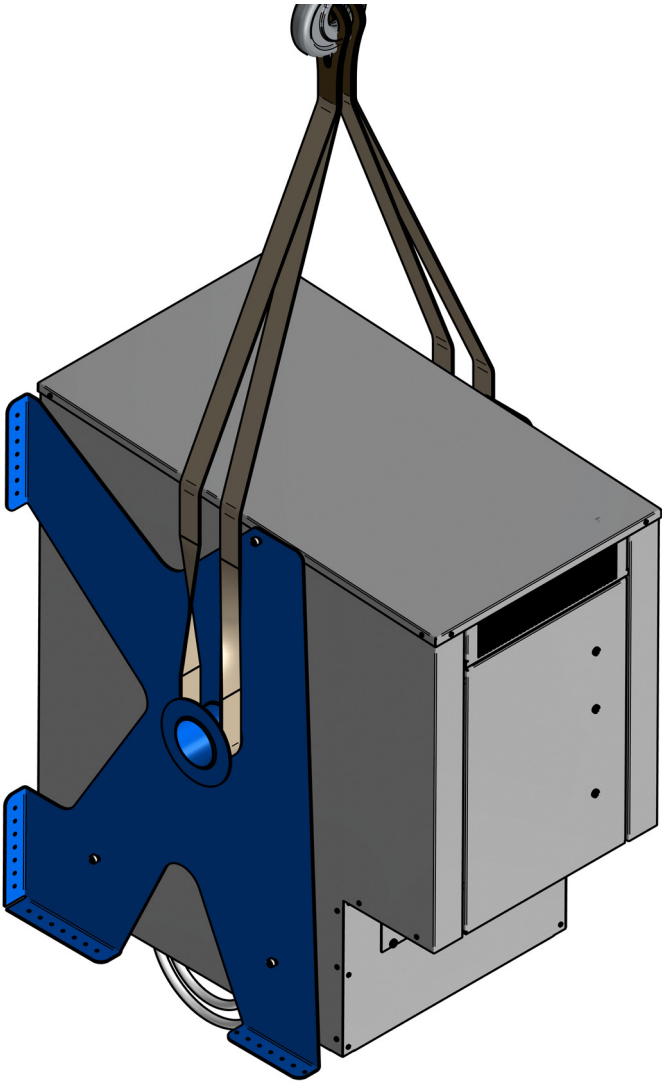
TRANSFER OF THE CUBE



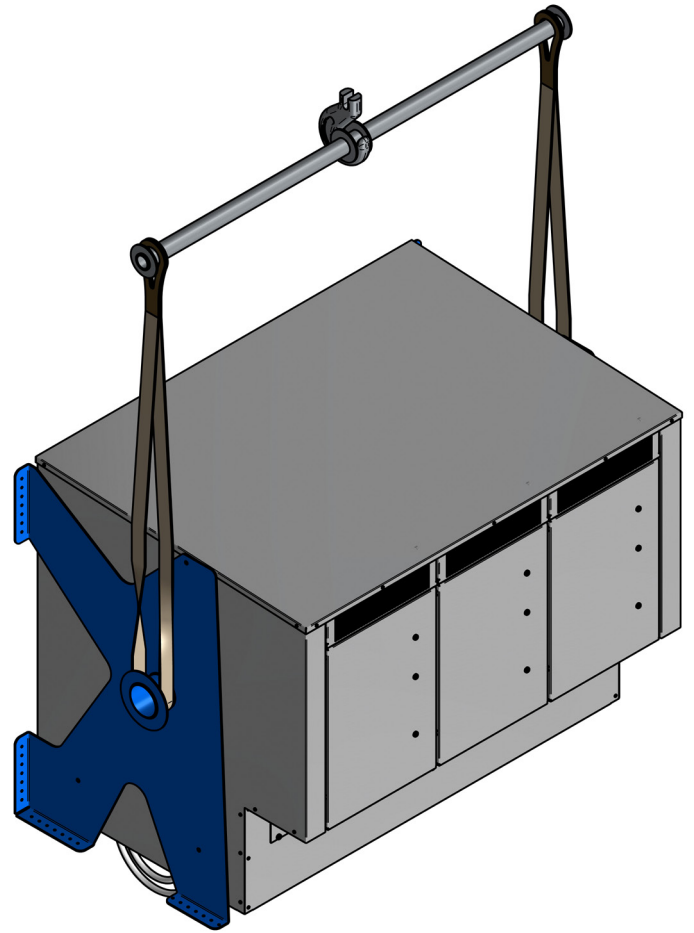
1. Remove the wooden cover from the frame
2. Remove the sheet metal bracing in the frame.



LIFTING OF THE CUBE



1 CUBE with mounting bracket
Lift with the straps



2-5 Cube with mounting bracket
Lift the CUBE with a bar or belts of at least 6m in length

WARNING:

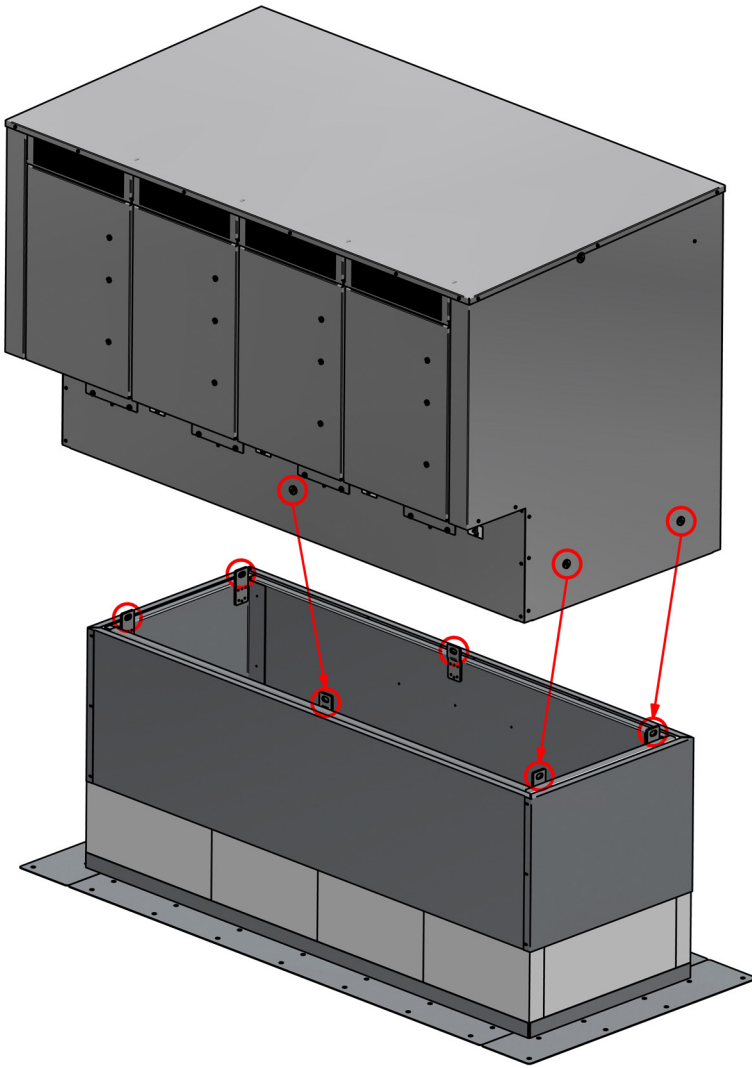
When moving the CUBE, it is mandatory that the electrician is on site.



IMPORTANT:

A deposit is charged for the transport tools and the wooden covers on the frames.

PLACEMENT OF THE CUBE

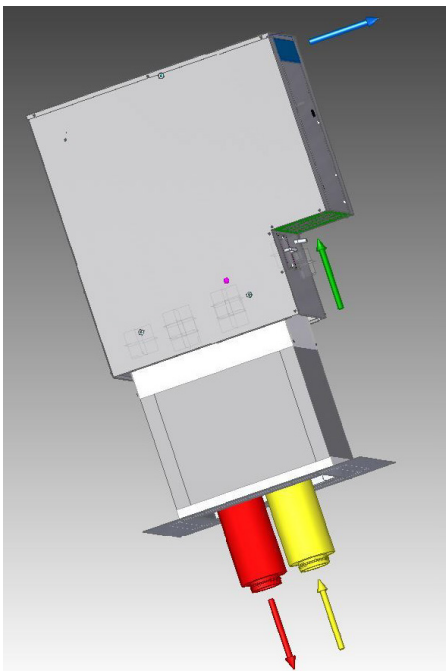


Disassemble the transportation tools

Tighten the Allen screws (with a 4mm wrench) at the red points that are marked with approx. 7 turns.

*Dispose the Allen screws from the transport lock. Do not screw it in again otherwise rust will begin to form.

AIRFLOW



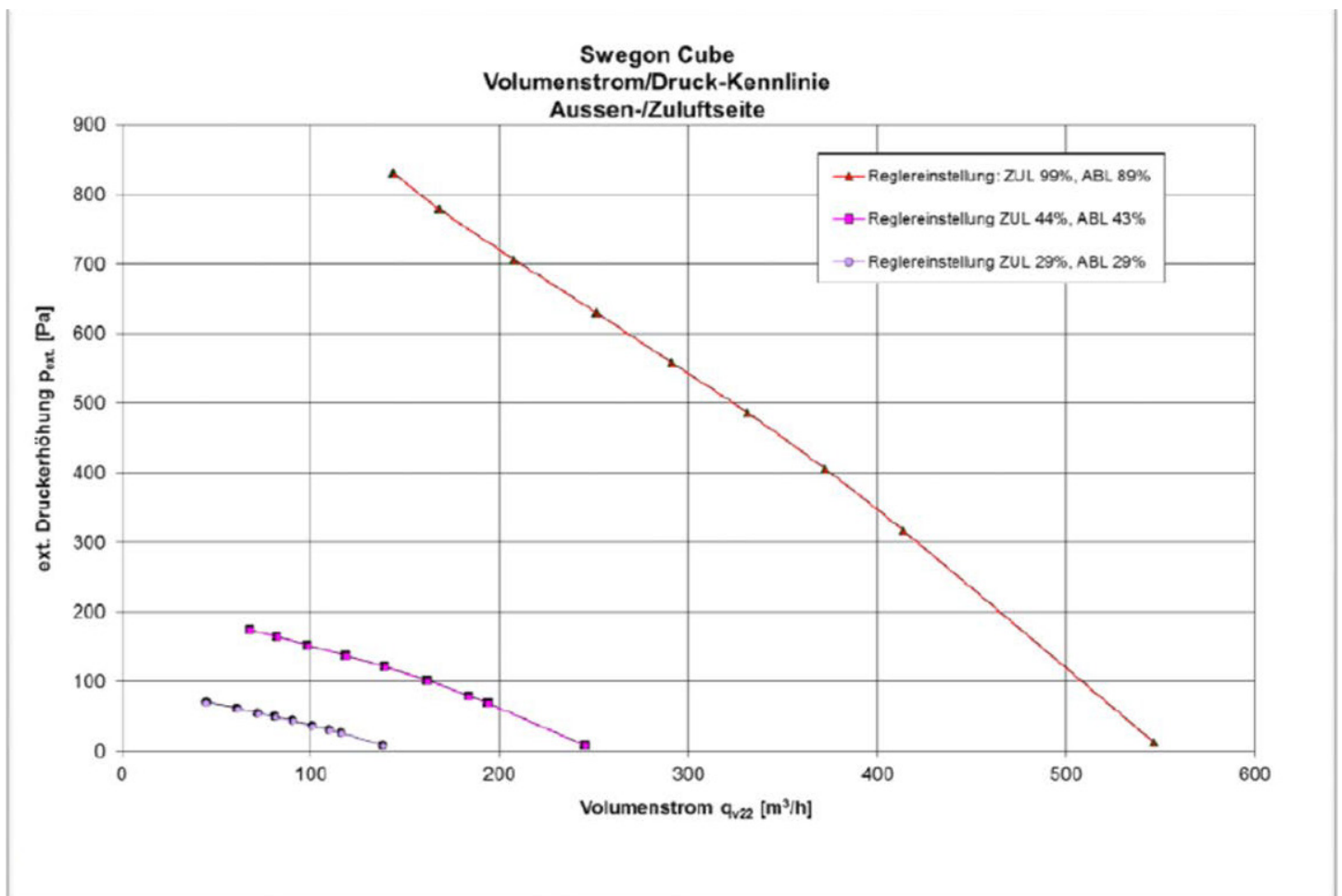
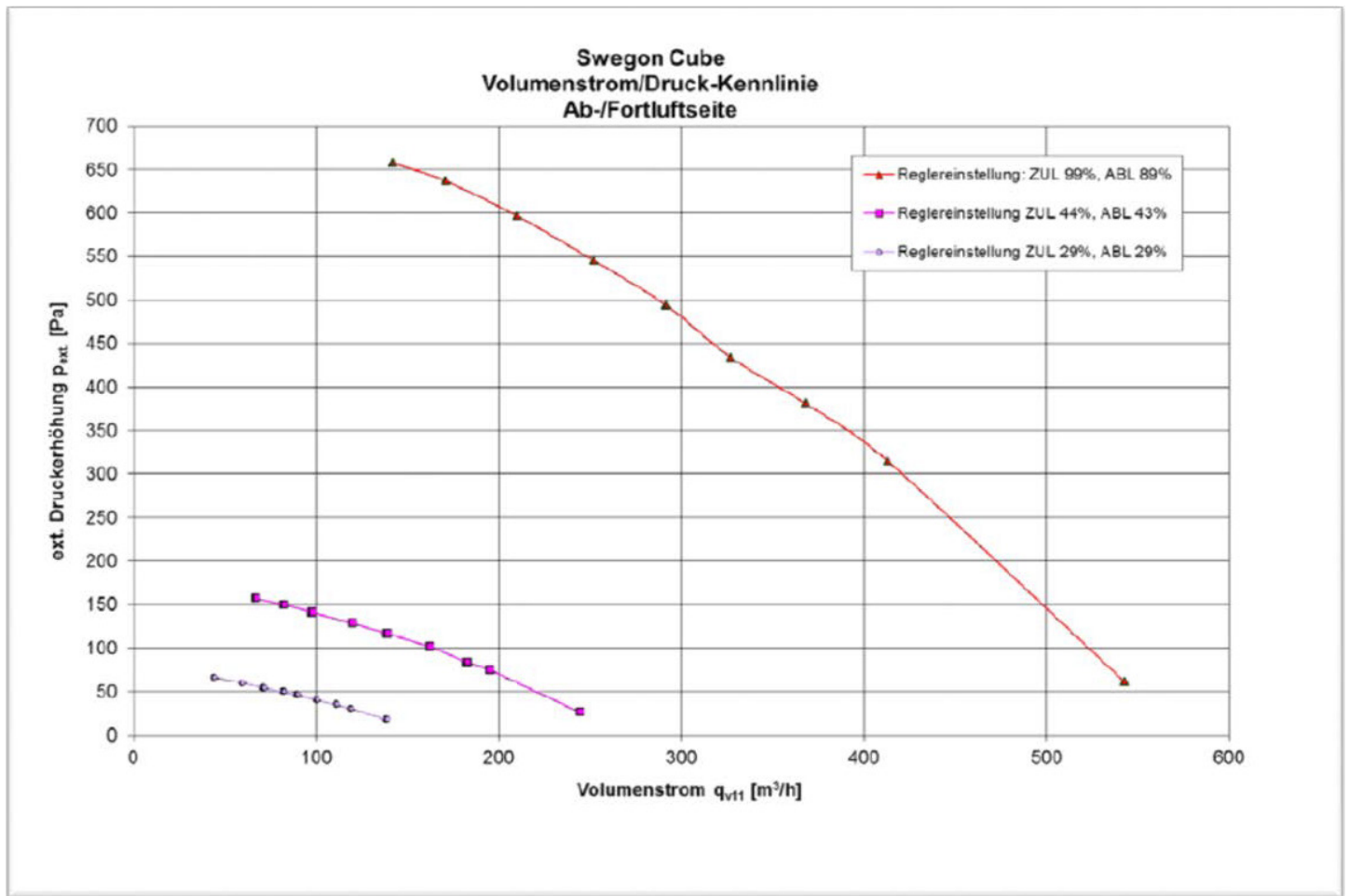
Fresh Air →

Supply air connection →

Exhaust air →

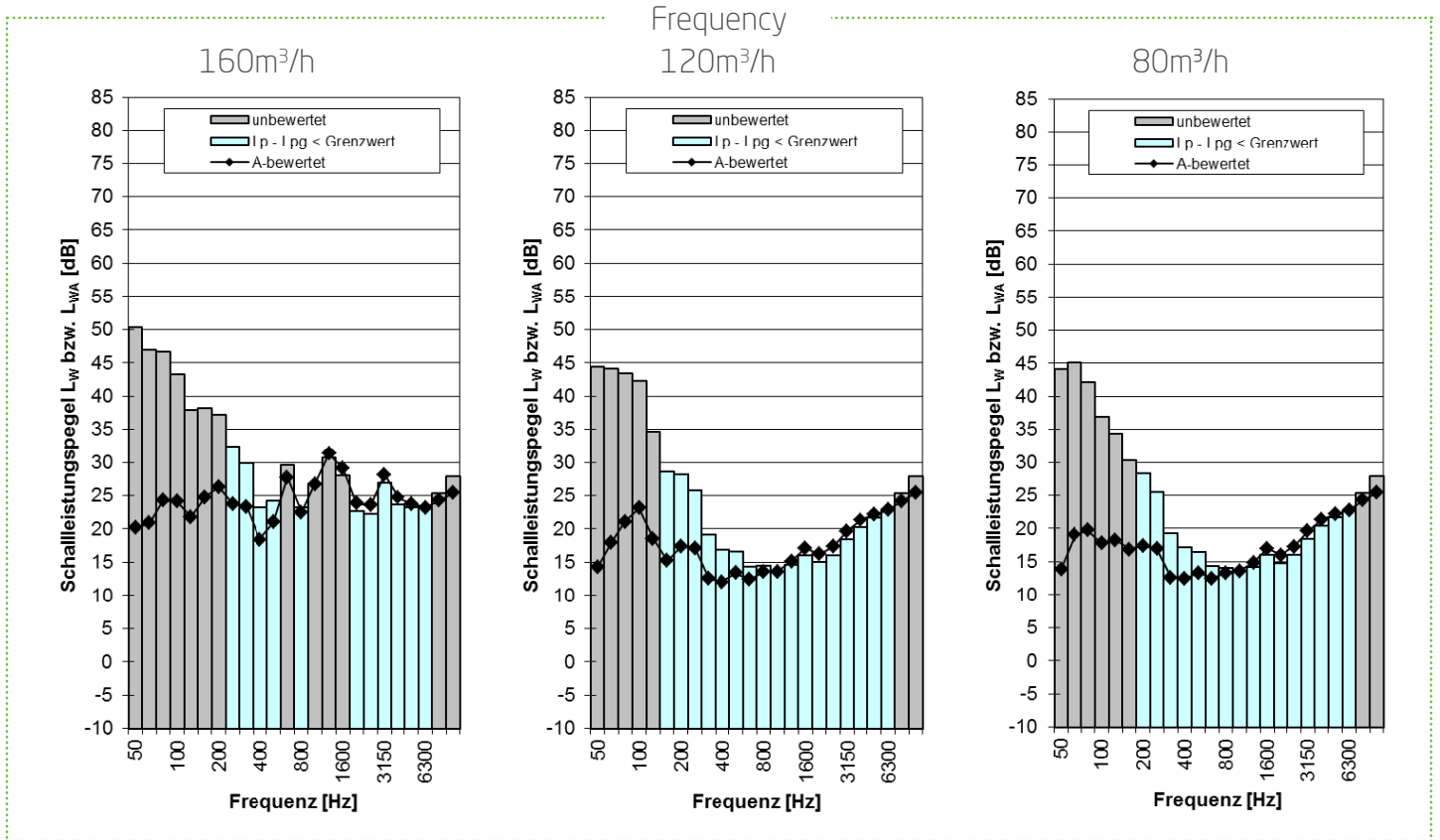
Exhaust air connection →

VENTILATION DIAGRAM

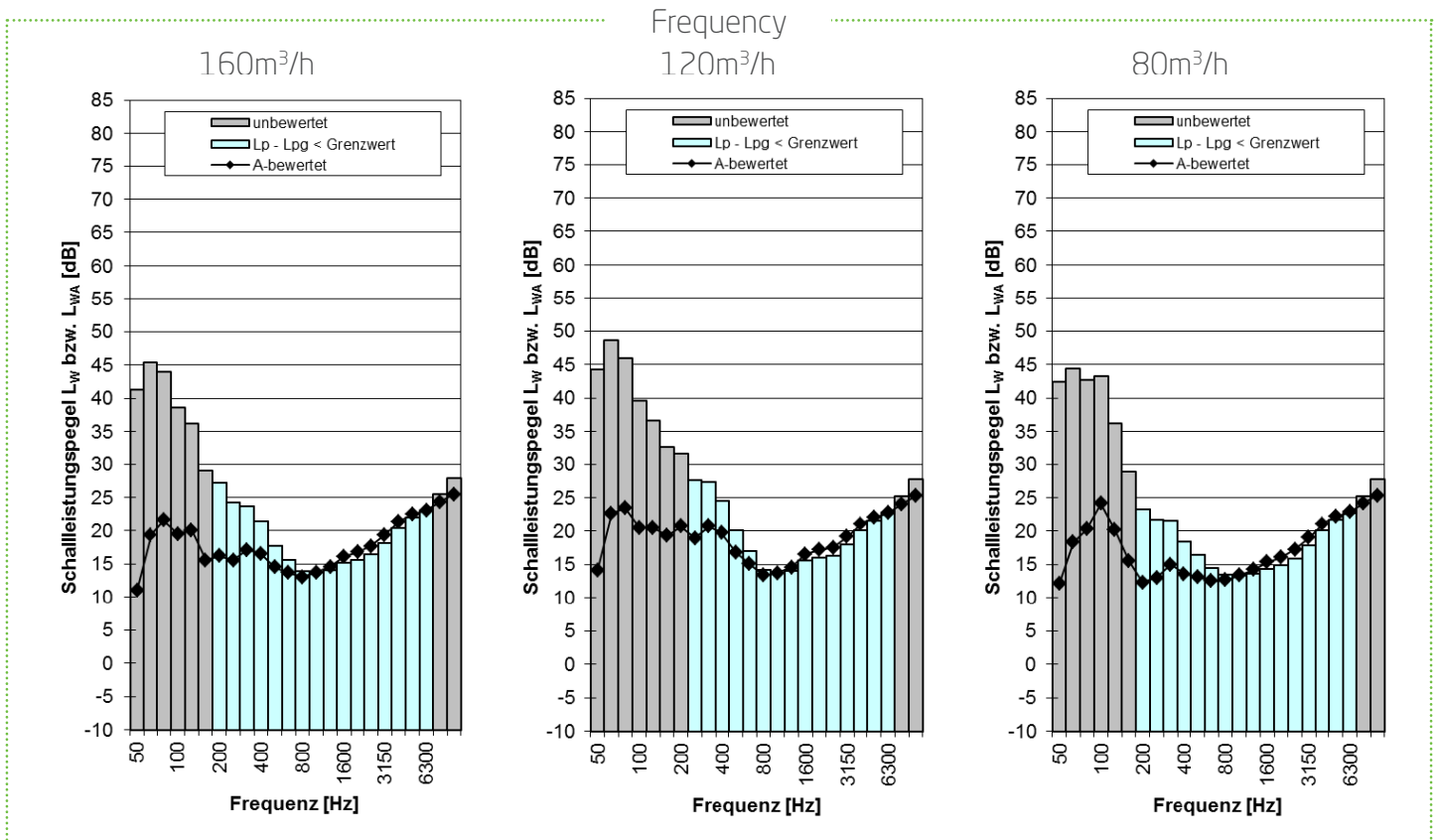


SOUND PERFORMANCE

SOUND PERFORMANCE IN THE EXHAUST DUCT FLEXIBLE PIPE WITH 1.0 M SOUND INSULATION

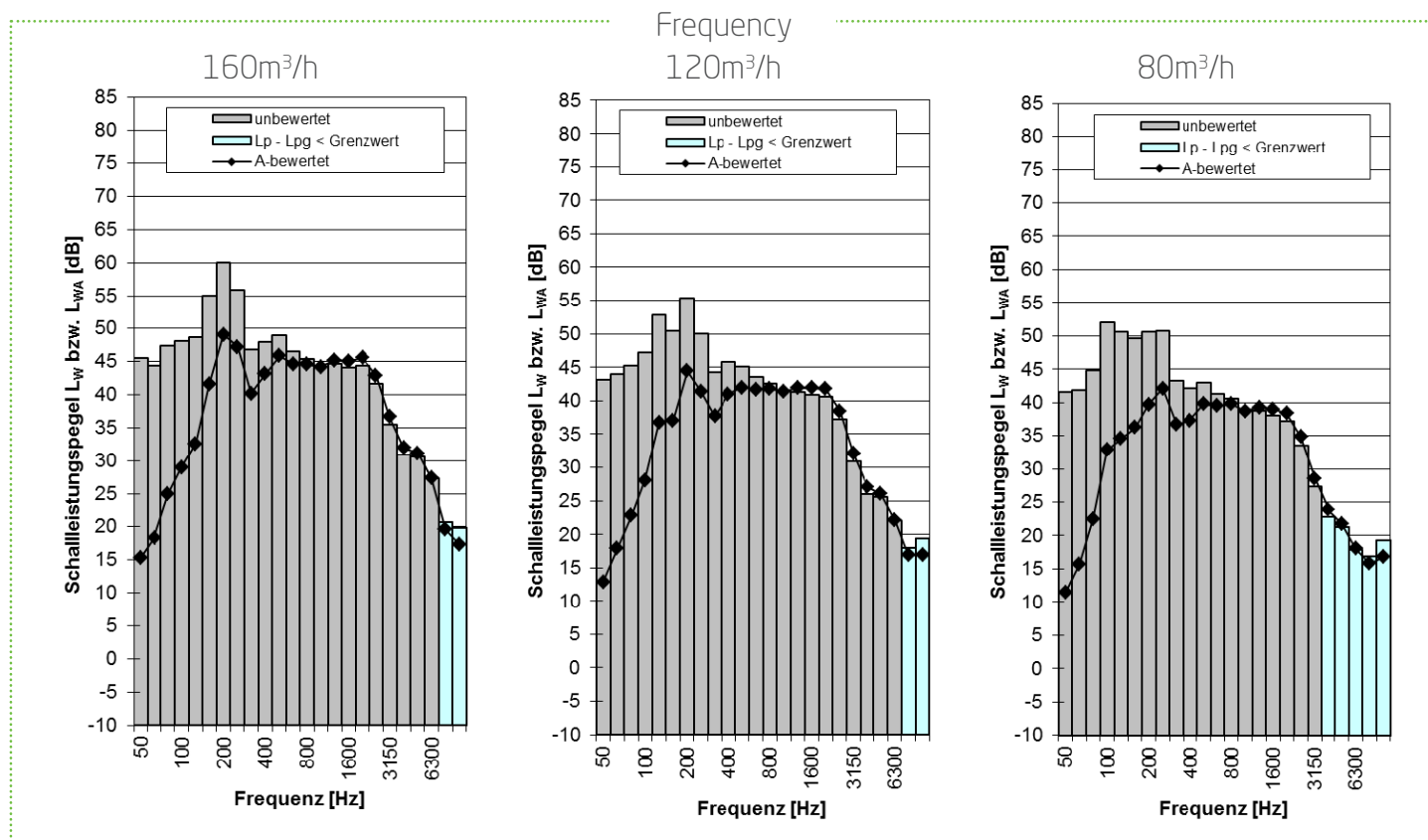


SOUND PERFORMANCE IN THE EXHAUST DUCT FLEXIBLE PIPE WITH 1.0 M SOUND INSULATION



SOUND PERFORMANCE

SOUND POWER UNIT RADIATION (OUTSIDE) *



POWER CONSUMPTION

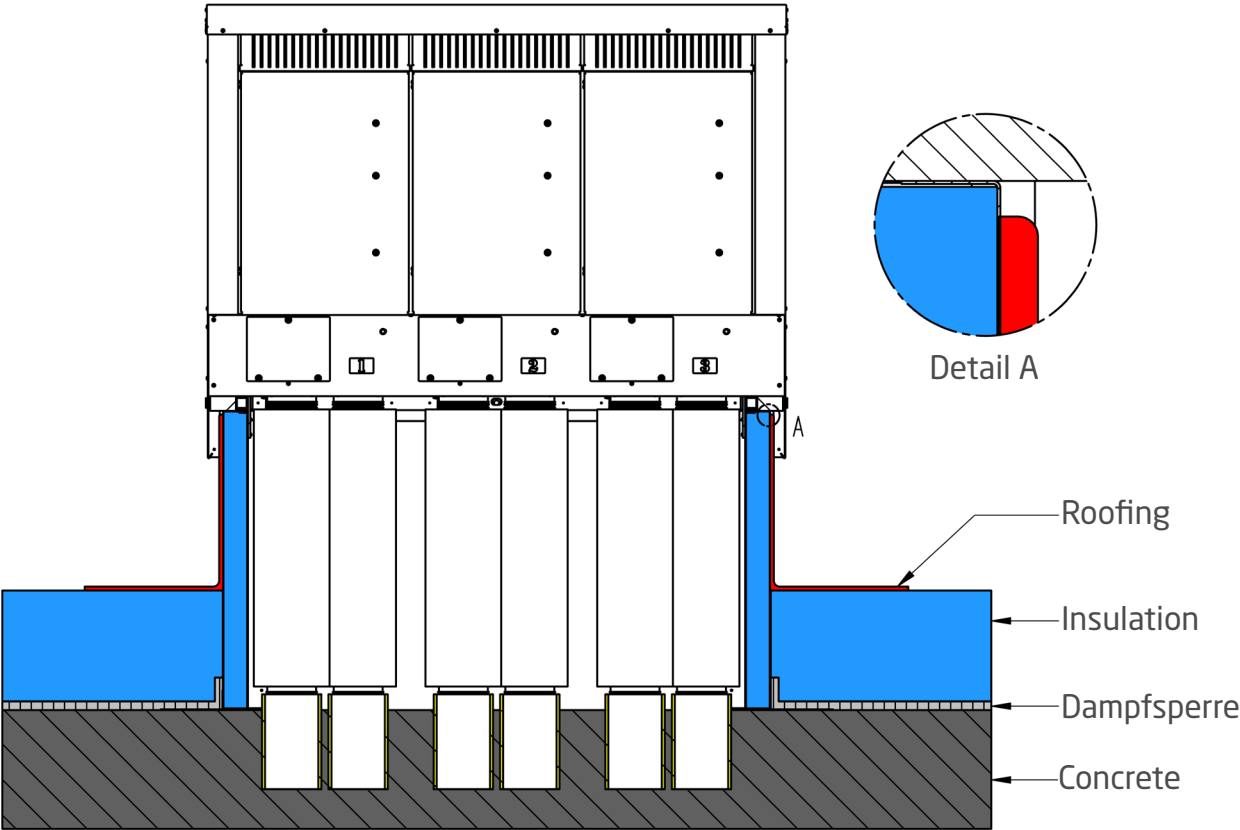
| | Total electrical power consumption (Both fans) | Efficiency |
|----------------------|---|------------|
| | W | % |
| 80m ³ /h | 19.5 | 92 |
| 120m ³ /h | 26.5 | 89 |
| 160m ³ /h | 33.7 | 86 |

Measurement conditions according to EN 13141-7:2010

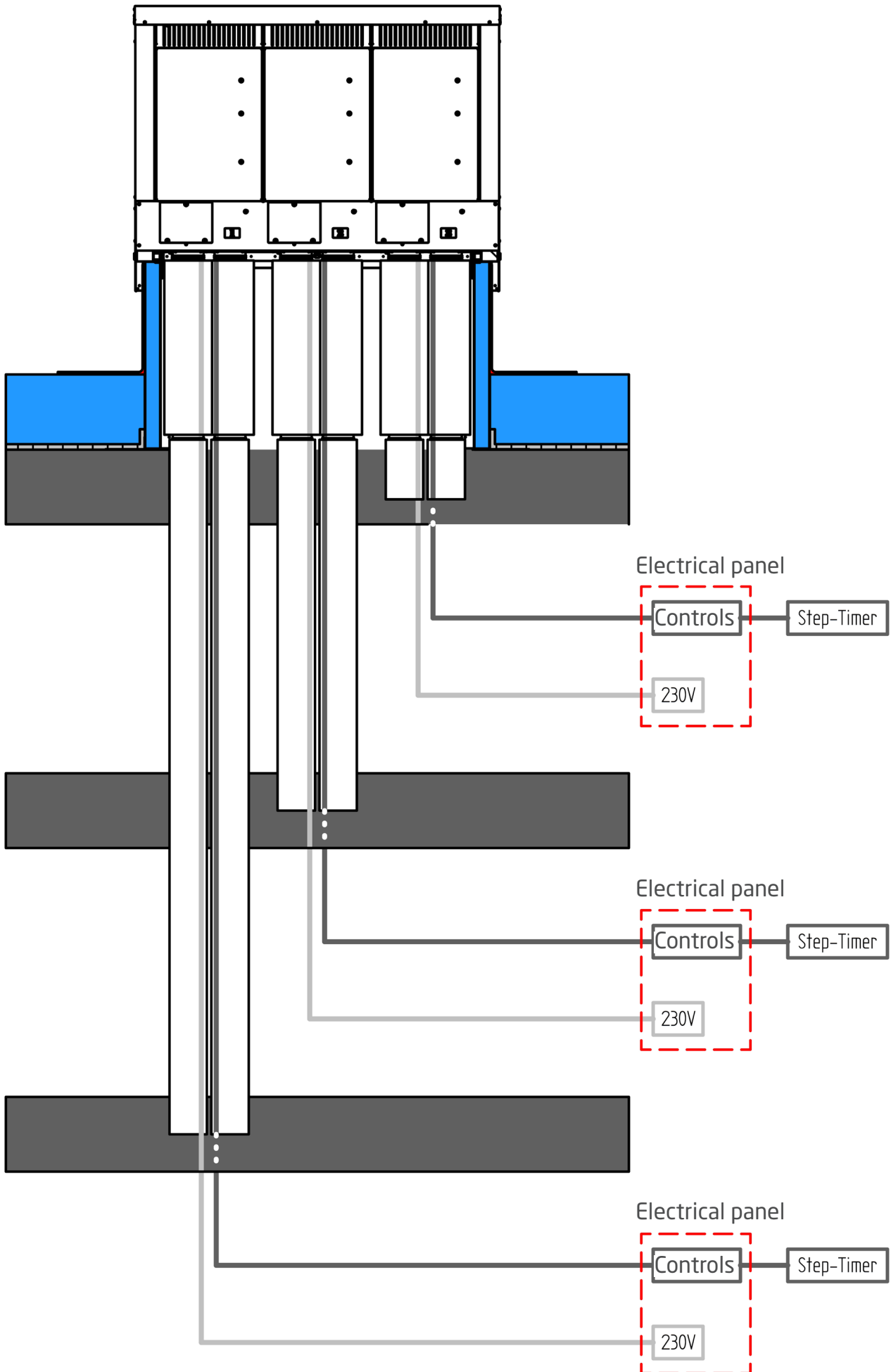
- Exhaust air temperature 20 C
- Outside air temperature 7C
- Outside air pressure 85700 Pa

*Laboratory conditions with 0m distance

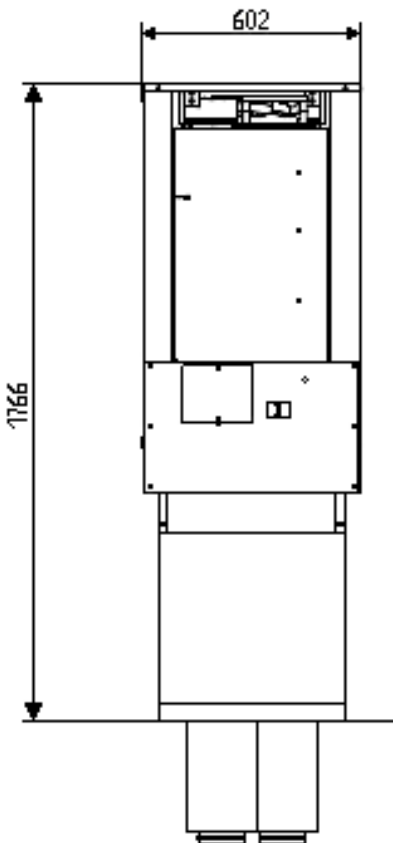
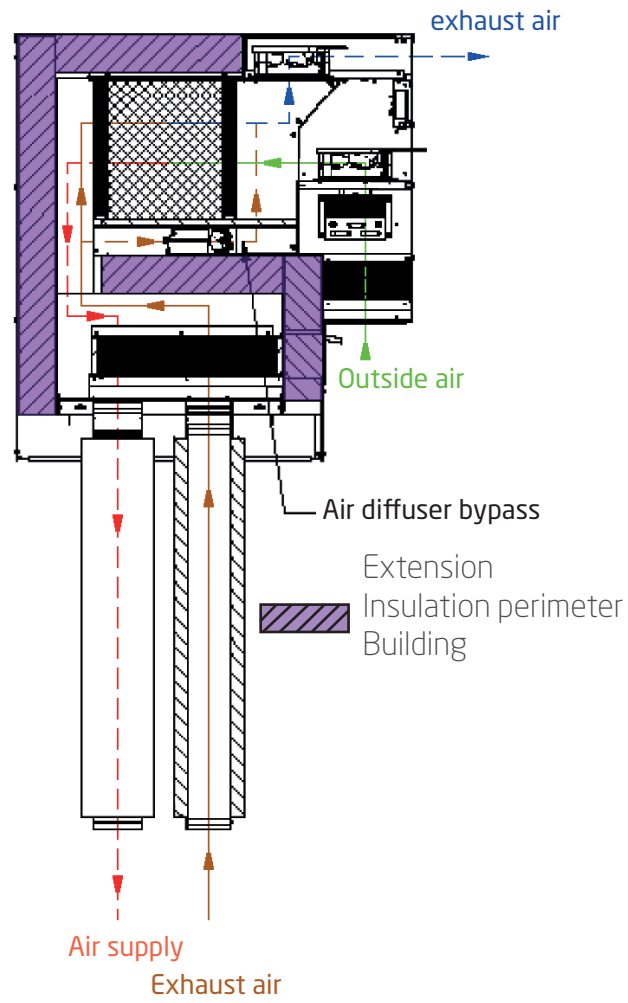
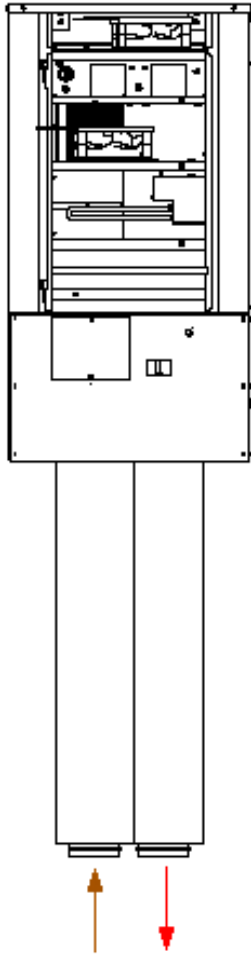
ISOLATION COURSE



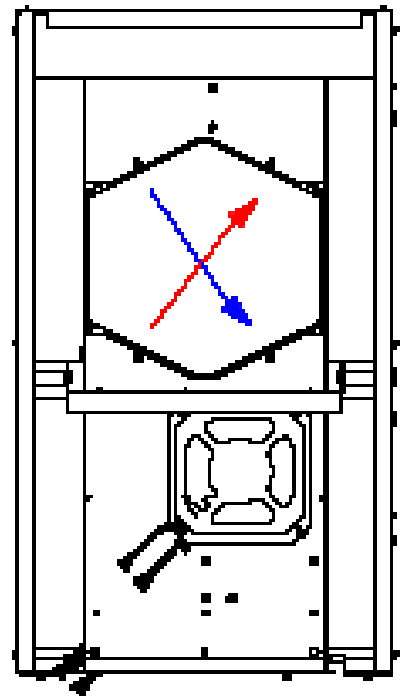
SYSTEM CONFIGURATION



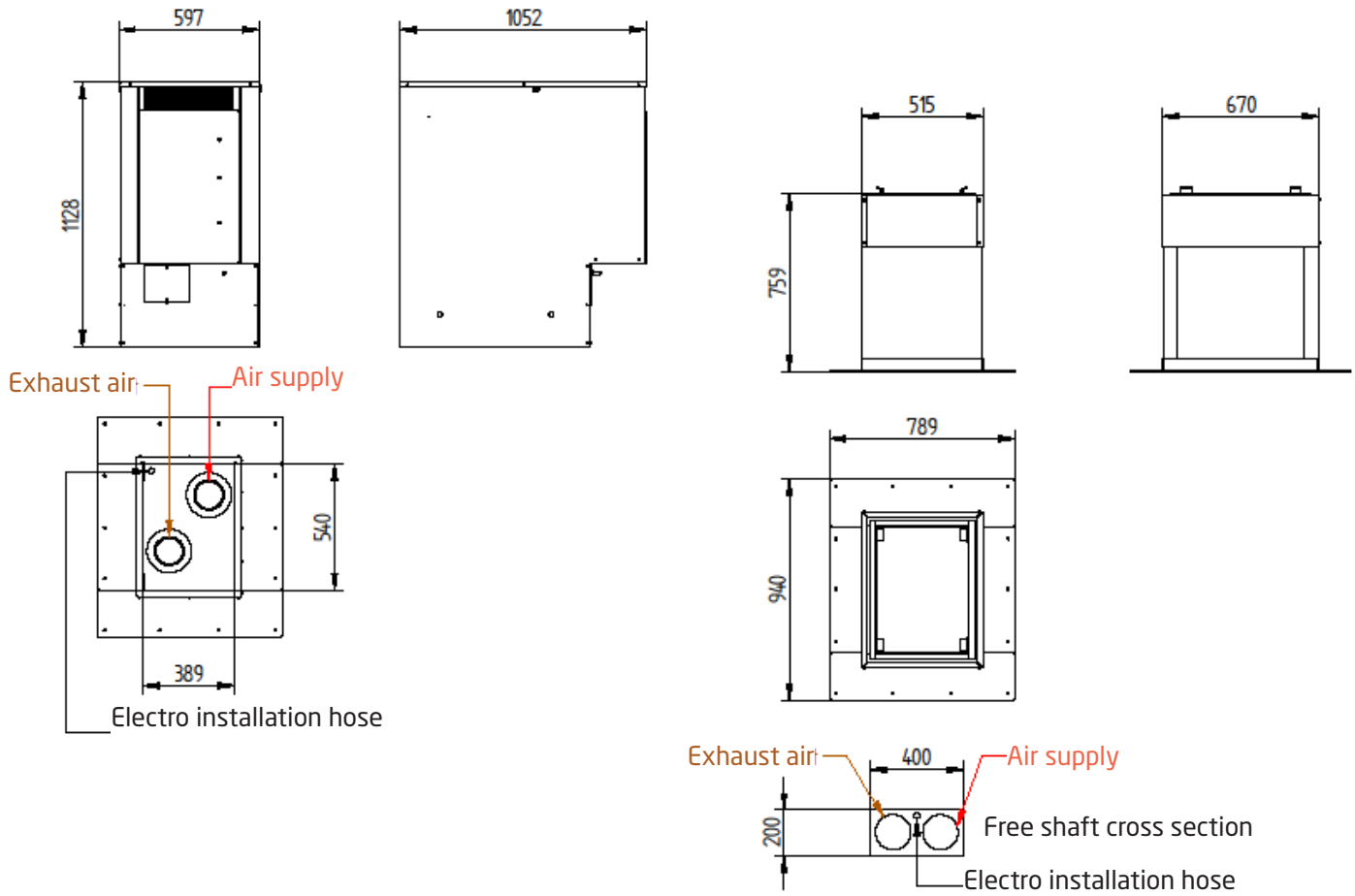
STRUCTURE OF THE DEVICE



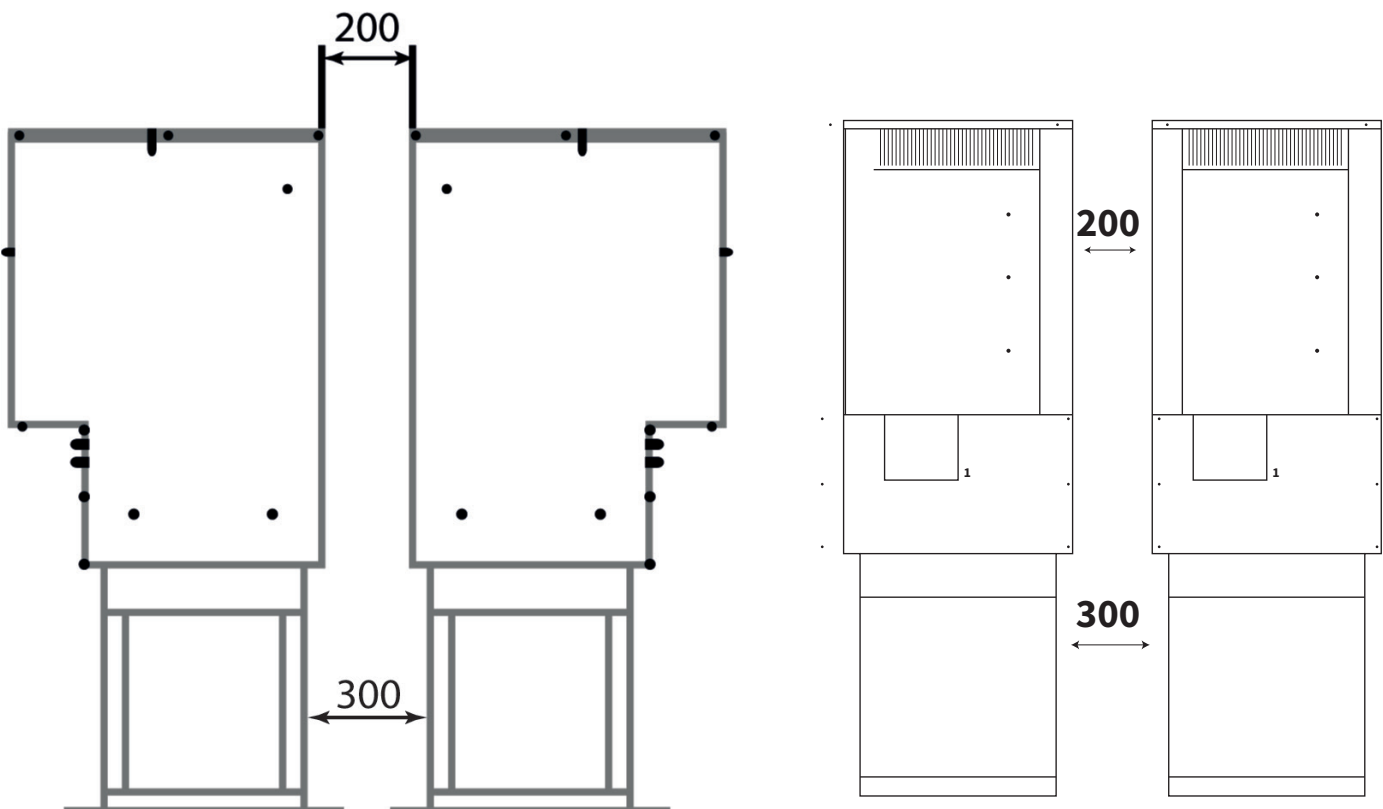
Standard height 1766 mm.
Measured from the bare concrete lid



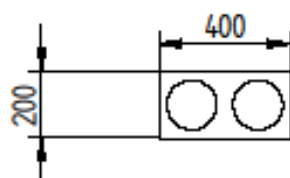
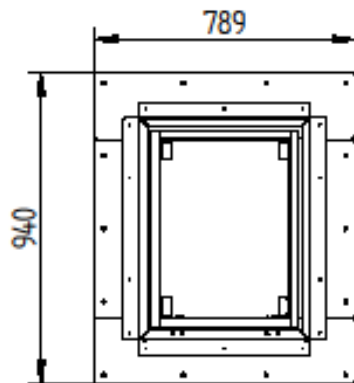
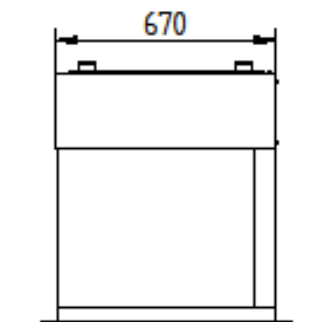
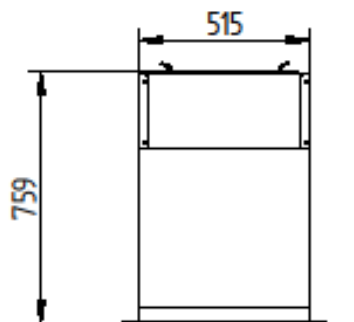
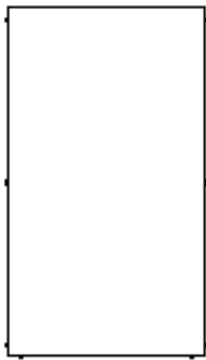
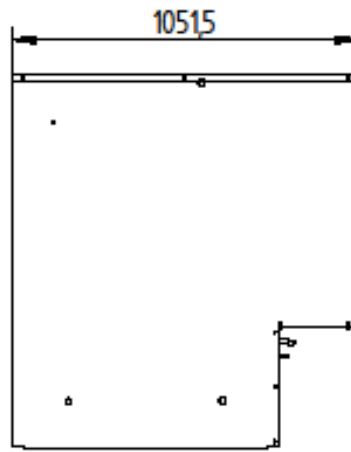
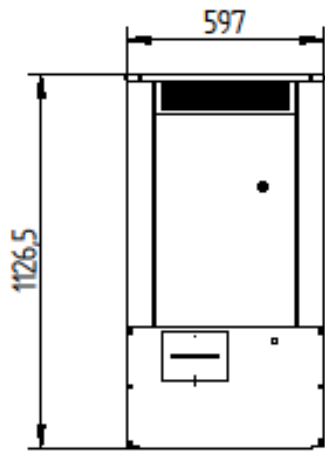
DIMENSIONS



MONTAGE BACK TO BACK

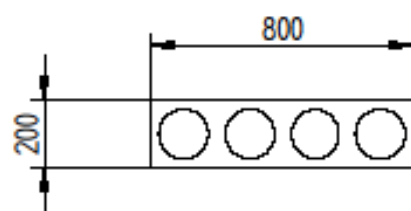
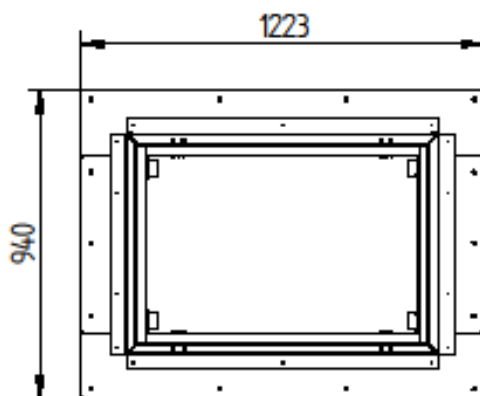
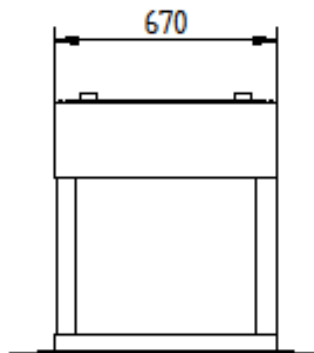
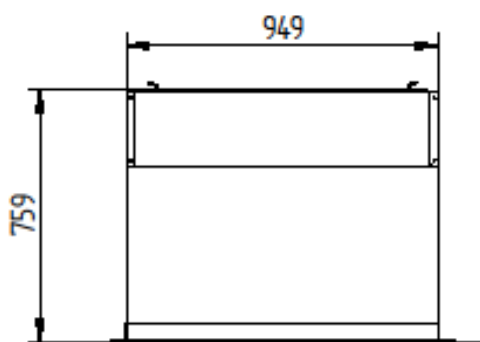
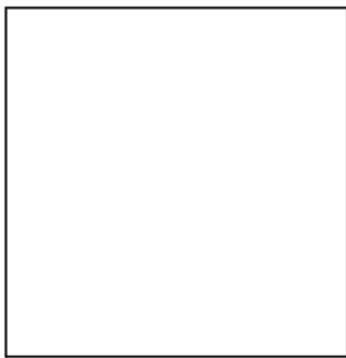
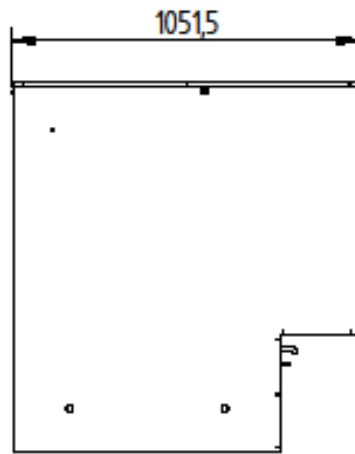
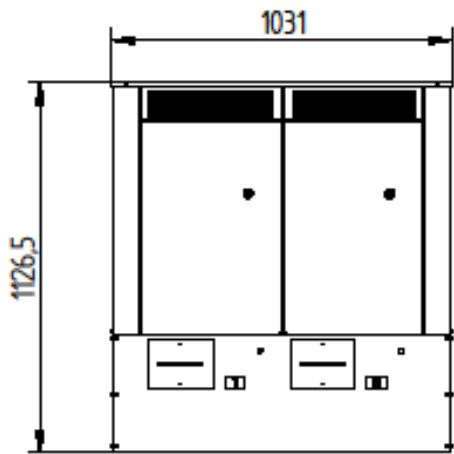


EINER CUBE



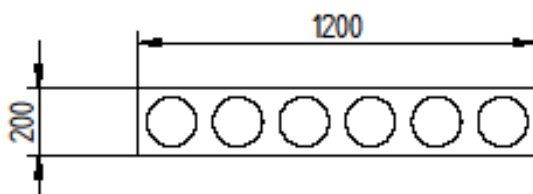
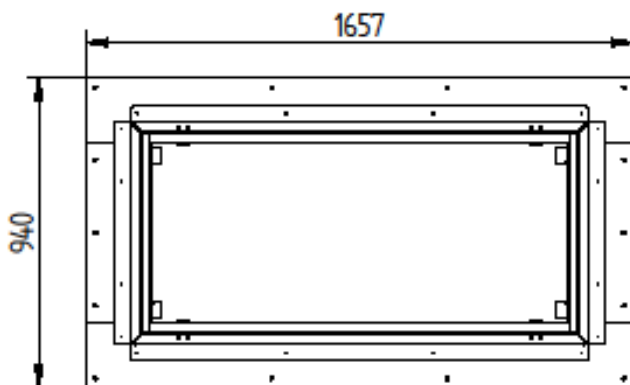
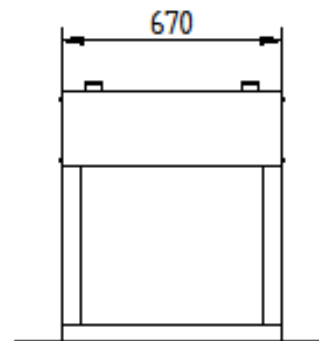
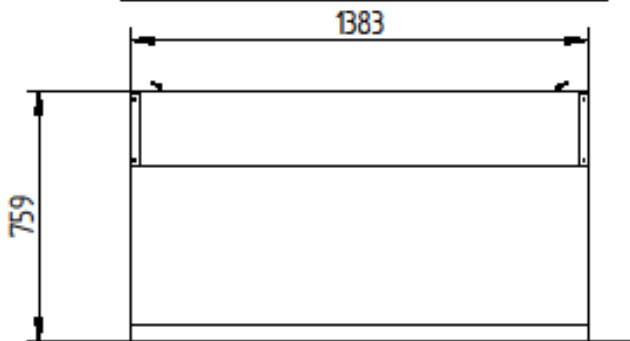
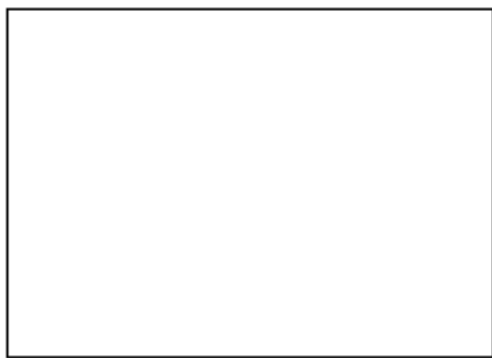
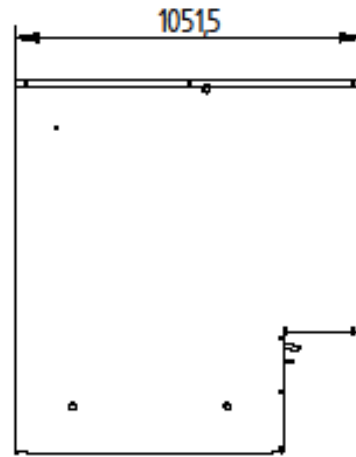
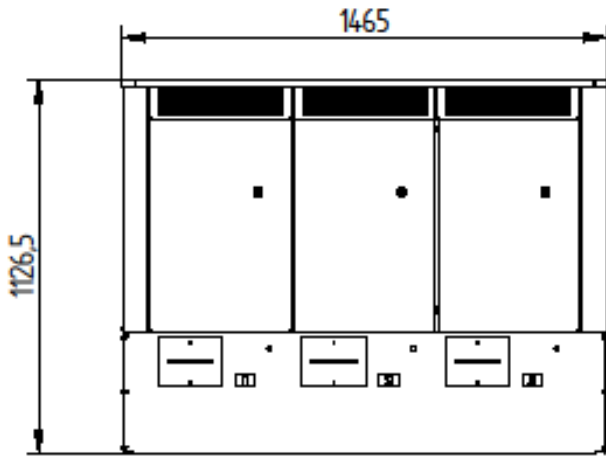
For dimension Ø125mm

ZWEIER CUBE



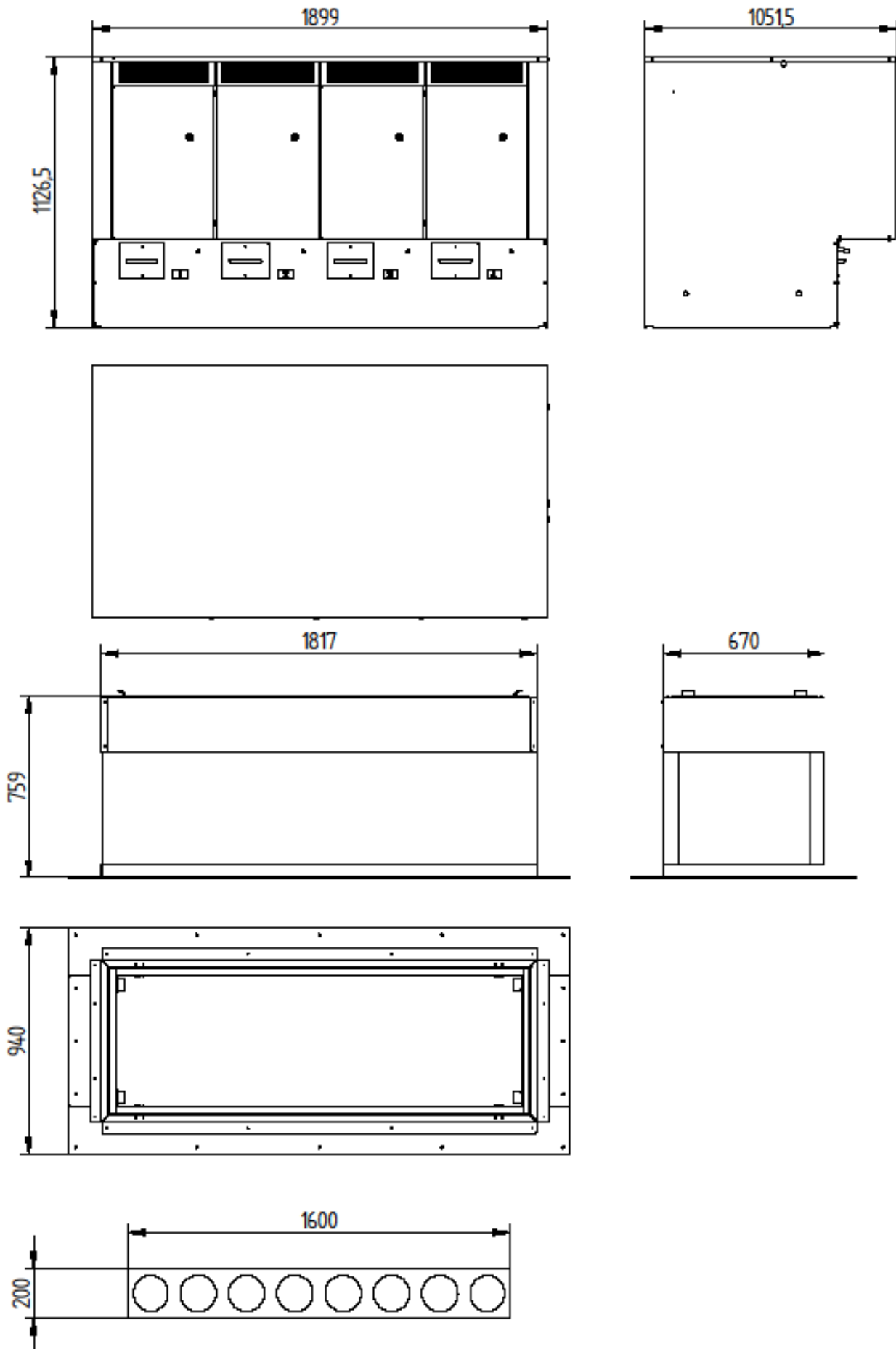
For dimension Ø125mm

DREIER CUBE



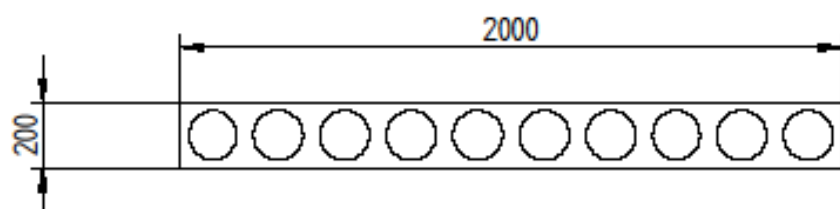
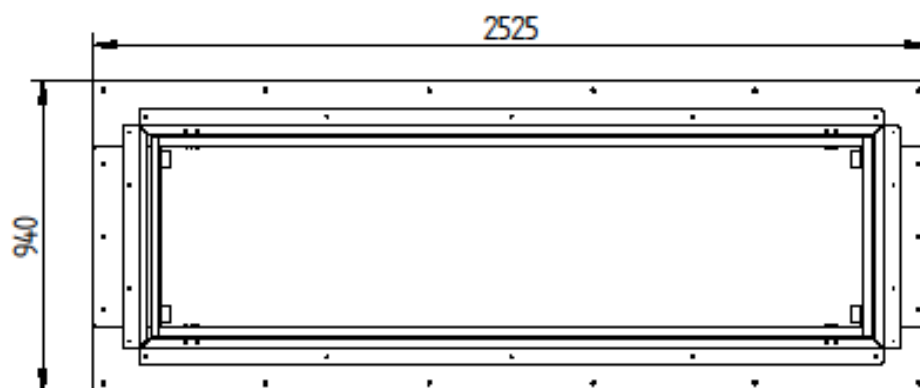
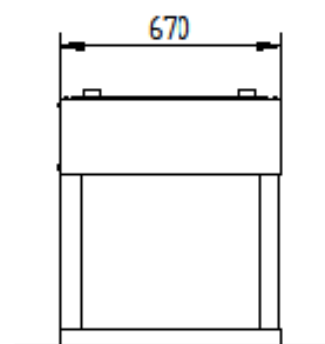
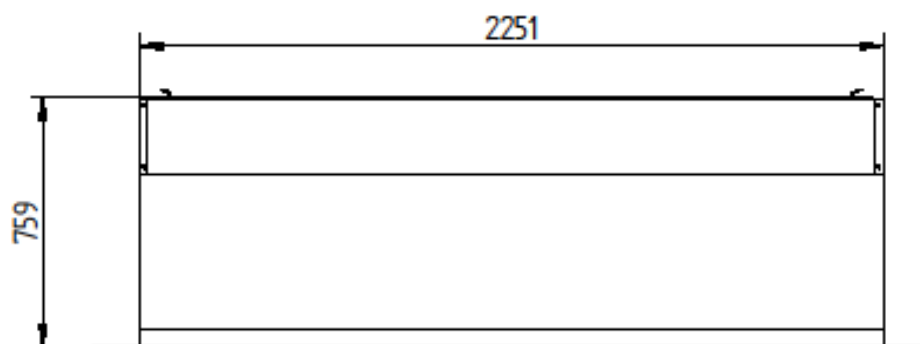
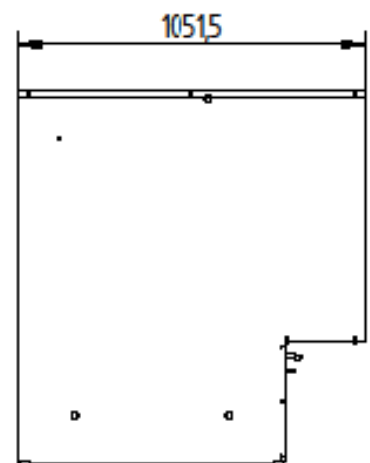
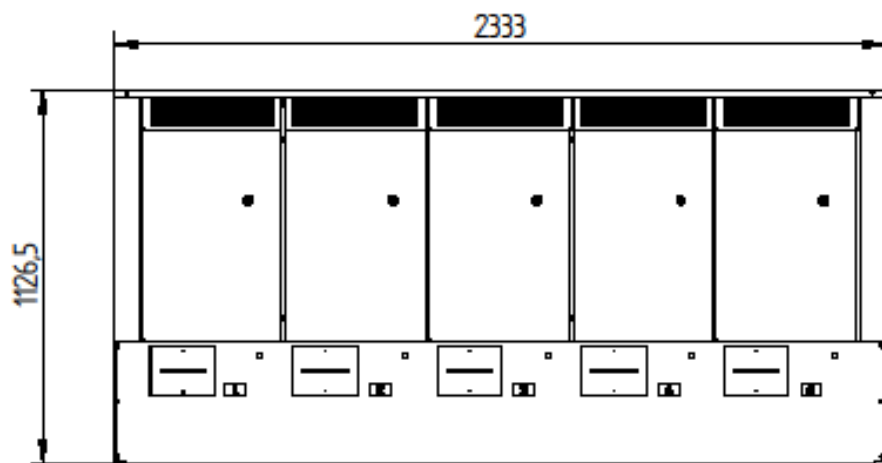
For demension $\varnothing 125\text{mm}$

VIERER CUBE



For dimension $\varnothing 125\text{mm}$

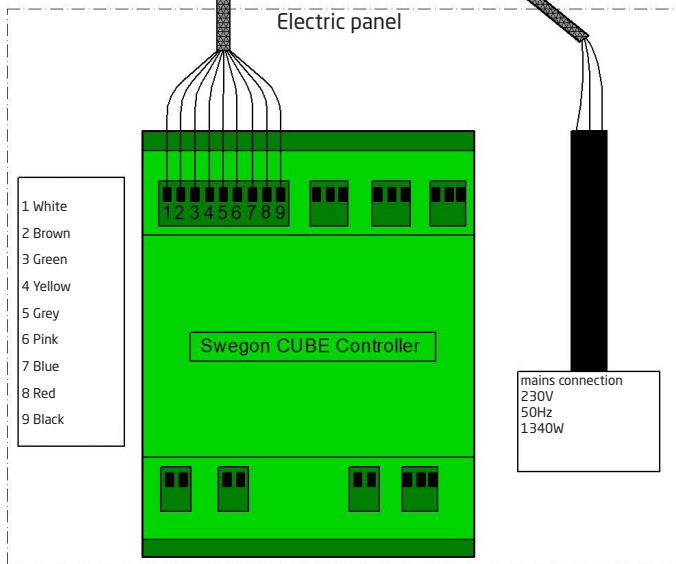
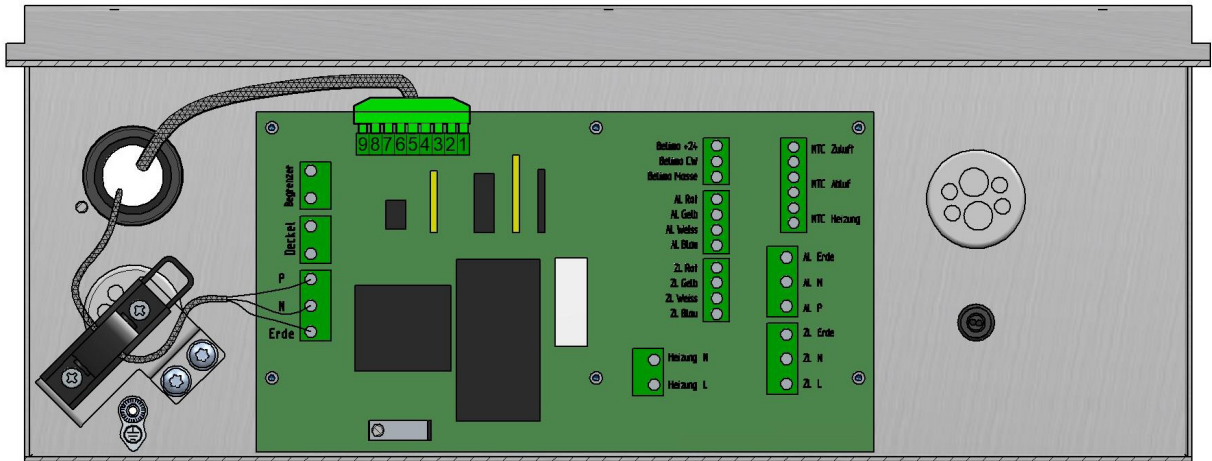
FÜNFER CUBE



For dimension $\varnothing 125\text{mm}$

CUBE ON THE ROOF

Wiring of the flat panel with the 10A 1.5mm² fuse of the CUBE module



IN THE BUILDING

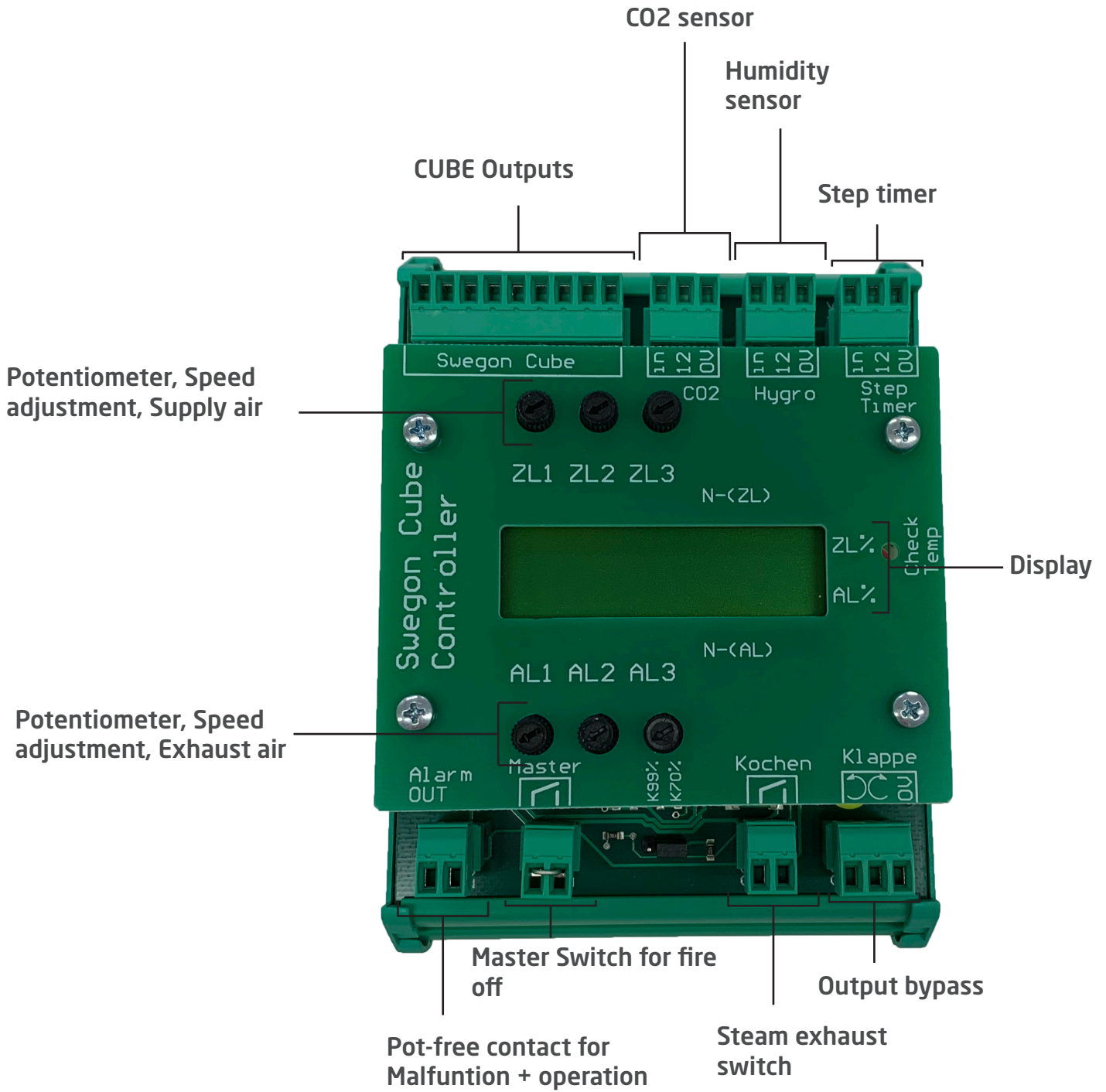
Width 90mm, height 125mm
CE Rails to click onto electric panel

* With separate fuse
No fault-current circuit
breaker or fuses!

CONTROLS

COMPONENTS

CONTROLLER:



DESCRIPTION OF THE CONTROLLERS

Humidity sensor



CO2 sensor



3-step timer



Setting the ventilation stages

- The speed of the supply and exhaust fans can be set individually for each of the three fan stages.
- The setting is made using six keys on the control unit.
- The set speed is displayed in percent (15-99%).

9-pin connection cable

- To connect the control box to the control panel of the CUBE on the roof
- Recommended cable: 9 x 0.5 mm or 9 x 0.75 mm

DESCRIPTION OF THE CONTROL

Control

- The control is installed by the electrician in the respective apartment.
- With the control you can freely choose between 3 ventilation levels
 - Incl. 24VDC power supply in the CUBE
 - Incl. 3-step switch Feller Edizio or Hager Kalysto
- By pressing the button on the control, the measured temperature values are displayed in the rood control pane

Additional/alternative Control unit:

- Control via the «Hygro» input
 - When the humidity exceeds a certain threshold, the device switches to the higher speed.
- Regulation via CO₂ input
 - When the CO₂ concentration exceeds a certain threshold, the device switches to the higher speed.

Swegon CUBE controls

- Power supply
- Attention! Power supply must be DC
- Control inputs
- Input characteristic «StepTimer»:
 - Level 1: 0V-3V Level 2: 3V-5.5V Level 3: 5.5V-10V
- Input characteristic «Hygro»:
 - Level 1: 0V-1V Level 2: 1V-1.5V Level 3: 1.5V-10V
- Input characteristic «CO₂»:
 - Level 1: 0V-1V Level 2: 1V-1.5V Level 3: 1.5V-10V
- This corresponds to:
 - Level 1: 0-999ppm Level 2: 1000-1499ppm Level 3: >1500ppm

Summer Bypass

- The summer bypass (night cooling) will activate when:
 - The outside temperature is >15C (If it is winter, the cooling is off)
 - And the room temperature is > 25C
 - And the outside temperature is at least 3 degrees lower than the room temperature

Digital input 1 (master)

- External enable 30V 100mA Contact open = OFF

Digital input 2 (cooking)

- Extractor fan ON «Cooking», Max. 30V 100mA. Contact open = normal operation

Digital output 1 (damper)

- Extractor ON «Cooking» to open the air damper in the extractor and the additional air damper in the supply air - The bypass in the CUBE is open.

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Feel good **inside**



in cations.

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