

Installation manual

Environmental Walk-in Chambers WIC

for stability tests and storage

Model	Model version	Art. No.
WIC 1	WIC1230V	9800-0011
WIC 2	WIC2230V	9800-0012
WIC 3	WIC3230V	9800-0013

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1. Safety

1.1 Service personnel qualifications

	 WARNING Risk of malfunctions due to incorrect maintenance or repair. Injuries, damage to the unit and samples. ➤ General maintenance may only be carried out by qualified electricians or qualified personnel. ➤ Maintenance work on the refrigeration system may only be carried out by qualified personnel who have received training in accordance with DIN EN 13313:2011 (e.g. refrigeration system engineer or mechatronics technician for refrigeration technology with certificate of expertise according to regulation 303/2008). Follow national legal requirements.
	NOTICE Risk of incorrect refrigeration operation after incorrect calibration and adjustment. Damage to samples, incorrect test results. ➤ Perform the calibration and, if necessary, the adjustment regularly and carefully.

Only persons who are familiar with the operation, maintenance, repair, calibration and adjustment of the chamber are qualified to carry out work on the WIC. Sufficient qualification is achieved by:

- Electrical training
- Technical training by BINDER GmbH
- Familiarization with this installation manual
- Familiarization with the current operating manual version
- Experience in performing service work on comparable devices

Maintenance, repair and inspection of the refrigeration system may only be carried out by qualified personnel who have been certified in accordance with EC Regulation 303/2008 and have expertise in accordance with DIN EN 13313:2011.

All work (repairs, maintenance, etc.) must be documented in the associated system logbook.

1.2 Installation manual

This installation manual is part of the scope of delivery. Always keep them within easy reach near the chamber. If selling the unit, hand over the installation manual to the purchaser.

To avoid personal injury and material damage, observe the safety instructions in the installation manual. Failure to follow instructions and safety precautions can lead to significant risks.

	 DANGER Dangers if safety regulations and instructions are not observed. Serious bodily injury and equipment defects. Danger of death. ➤ Observe the safety instructions in this installation manual. ➤ Follow the operating procedures in this installation manual. ➤ Read the installation manual of the chamber completely and carefully before installing the chamber. ➤ Keep the installation manual for future reference.
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This installation manual is supplemented and updated as needed. Always use the most recent version of the installation manual. If in doubt, call the BINDER Service Hotline to find out whether this installation manual is up to date and valid.

1.3 Legal notice

This installation manual contains the necessary information for correct and safe installation.

Familiarity with and compliance with the instructions contained in this installation manual are a prerequisite for safe use as well as safety during operation and maintenance. Images are to provide basic understanding. They may deviate from the actual version of the unit. The actual scope of delivery can, due to optional or special design, or due to recent technical changes, deviate from the information and illustrations in these instructions. This installation manual cannot take every conceivable application into account. Should you require further information, or should particular problems arise which are not dealt with in sufficient detail for you in this installation manual, then please request the information you require from your specialist dealer or directly from us, e.g. via the telephone number given on the first page of this manual.

In addition, we would like to point out that the content of this installation manual does not form part of or modify any previous or existing agreement, promise or legal relationship. All obligations of BINDER GmbH result from the respective purchase contract, which also contains the complete and solely valid warranty regulation and the General Terms and Conditions, as well as the legal regulations valid at the time of the conclusion of the contract. These contractual warranty provisions are neither extended nor restricted by the explanations in this installation manual.

1.3.1 Intellectual property

This operating manual is protected by copyright. Any unauthorized copying or disclosure to third parties is strictly prohibited. We reserve the right to take legal action and, if necessary, to assert claims for damages in the event of infringement.

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1.4 General guidelines

This manual describes the assembly of the WIC (assembly of the chamber and installation of the conditioner) and is intended for service personnel who are responsible for the assembly.

Installations on the refrigeration system must only be performed by service personnel who have special qualifications and tools.

Information on the required qualification of the service personnel can be found in chap 1.1.

The equipment code of the components in the chamber corresponds to the specifications in the circuit diagram. The equipment code may differ for other unit sizes. For this reason, always use the circuit diagram that matches the unit.

Additional options are indicated in the text.

This instruction manual will be supplemented and updated as necessary. Always use the latest version of the service manual. In case of doubt, contact the BINDER Service Hotline (see imprint) to find out whether these instructions are up to date and valid.

All information about commissioning, normal operation, cleaning and alarm and error messages can be found in the relevant operating manual delivered with the WIC.

During the assembly of the chamber, ensure consistent photo documentation in order to be able to prove proper assembly.

1.5 Structure of the safety instructions

In this operating manual, the following safety definitions and symbols indicate dangerous situations following the harmonization of ISO 3864-2 and ANSI Z535.6.

1.5.1 Signal word panel

Depending on the probability of serious consequences, potential dangers are identified with a signal word, the corresponding safety color, and if appropriate, the safety alert symbol.

 DANGER
Indicates an imminently hazardous situation that, if not avoided, will result in death or serious (irreversible) injury.

 WARNING
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious (irreversible) injury.

 CAUTION
Indicates a potentially hazardous situation which, if not avoided, may result in moderate or minor (reversible) injury.

NOTICE
Indicates a potentially hazardous situation which, if not avoided, may result in damage to the product and/or its functions or of a property in its proximity.

1.5.2 Safety alert symbol



Use of the safety alert symbol indicates a **risk of injury**.

Observe all measures that are marked with the safety alert symbol in order to avoid death or injury.

1.5.3 Pictograms

Warning signs			
			
Electrical hazard	Explosive atmosphere	Stability hazard	Lifting hazard
			
Risk of cutting injuries	Risk of suffocation due to lack of oxygen	Danger from electrostatic discharge	
Mandatory action signs			
			
Mandatory regulation	Read operating instructions	Disconnect the power plug	Lift with several persons
			
Lift with mechanical assistance	Wear protective gloves	Wear safety goggles	
Prohibition signs			
			
Do NOT touch	Do NOT spray with water	Do not climb	



Notes that you should observe for optimal function of the unit.

1.6 General safety regulations for the installation and operation of the chambers

With regard to operating the chambers and to the installation location, please observe the local and national regulations relevant for your country (for Germany: DGUV guidelines 213-850 on safe working in laboratories, issued by the employers' liability insurance association).

BINDER GmbH is only responsible for the safety-related properties of the chamber if the installation is carried out by qualified electricians or qualified personnel authorized by BINDER and if components that influence the safety of the chamber are replaced with original spare parts in the event of failure.

	NOTICE
	Danger of overheating due to lack of ventilation. Damage to the chamber. ⊘ Do NOT install the chamber in unventilated recesses. ➤ Ensure sufficient ventilation for dispersal of the heat. ➤ Observe the prescribed minimum distances when installing the chamber.

Do not install or operate the chamber in hazardous locations.

	 DANGER
	Danger of explosion due to combustible dusts or explosive mixtures in the vicinity of the chamber. Serious injury or death from burns and / or explosion pressure. ⊘ Do NOT operate the chamber in potentially explosive areas. ➤ KEEP combustible dust or air-solvent mixtures AWAY from the chamber.

	 DANGER
	Electrical hazard by water entering the chamber. Deadly electric shock. ⊘ The chamber must NOT become wet during operation, cleaning, or maintenance. ⊘ Do NOT install the chamber in damp areas or in puddles. ➤ Set up the chamber in a way that it is splash-proof.

 	 DANGER
	Electrical hazard during live maintenance and repair work. Deadly electric shock. ➤ Switch off the unit and disconnect it from the mains before starting the repair work described. ➤ Take all precautionary measures to ensure that a unit which is disconnected from the power supply cannot be inadvertently reconnected. ➤ If certain tasks require the unit to be switched on: Make sure that a second person is present who can switch off the unit in case of an emergency.

 	 CAUTION Risk of injury from sharp edges of the sheet metal components. Cutting injuries. ➤ Wear protective gloves when assembling and disassembling inner chamber parts and housing parts, as the sheet metal parts are sharp-edged.
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	NOTICE Risk of damage to electronic components due to improper handling and electrostatic discharges Malfunctions and damage to the electronics. ➤ Before working on electronic components, take suitable protective measures against electrostatic discharges. Wearing ESD shoes and a grounding bracelet have shown to be useful. ➤ To discharge the ESD on your body, touch a grounded metal object before opening the lock and controller casing. ➤ Prior to work at the electrical equipment check identity of the components with the aid of the wiring diagram. The order of the electrical equipment may be different from the description in this service manual. ⊘ NEVER let components hang on electric cables. Electric cables are not suitable for holding large components and could be damaged.
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2. Preparation for installation

2.1 Installation site

The installation site must be dry and well ventilated. In order to ensure sufficient air circulation, make sure to maintain the following distances between the chamber and the masonry or to another chamber:

Minimum distances

- Wall clearances: to the rear (behind the conditioner) 500 mm, side 100 mm.
- Wall clearance on the door side: 1.5 m
- Maintain a free distance of at least 1.5 m from the body above the device; 500 mm is sufficient during operation.
- Minimum ceiling height: 2,59 m.

Ceiling load

- The chamber ceiling is not suitable for additional loads other than the chamber's own weight.
- If an inspection is necessary on site or for installation reasons, a static safety device and additional reinforcement must be provided.



Observe the detailed information in the operating manual, chapter 3.3 on ambient conditions and further requirements

Provide the following free areas around the conditioner:

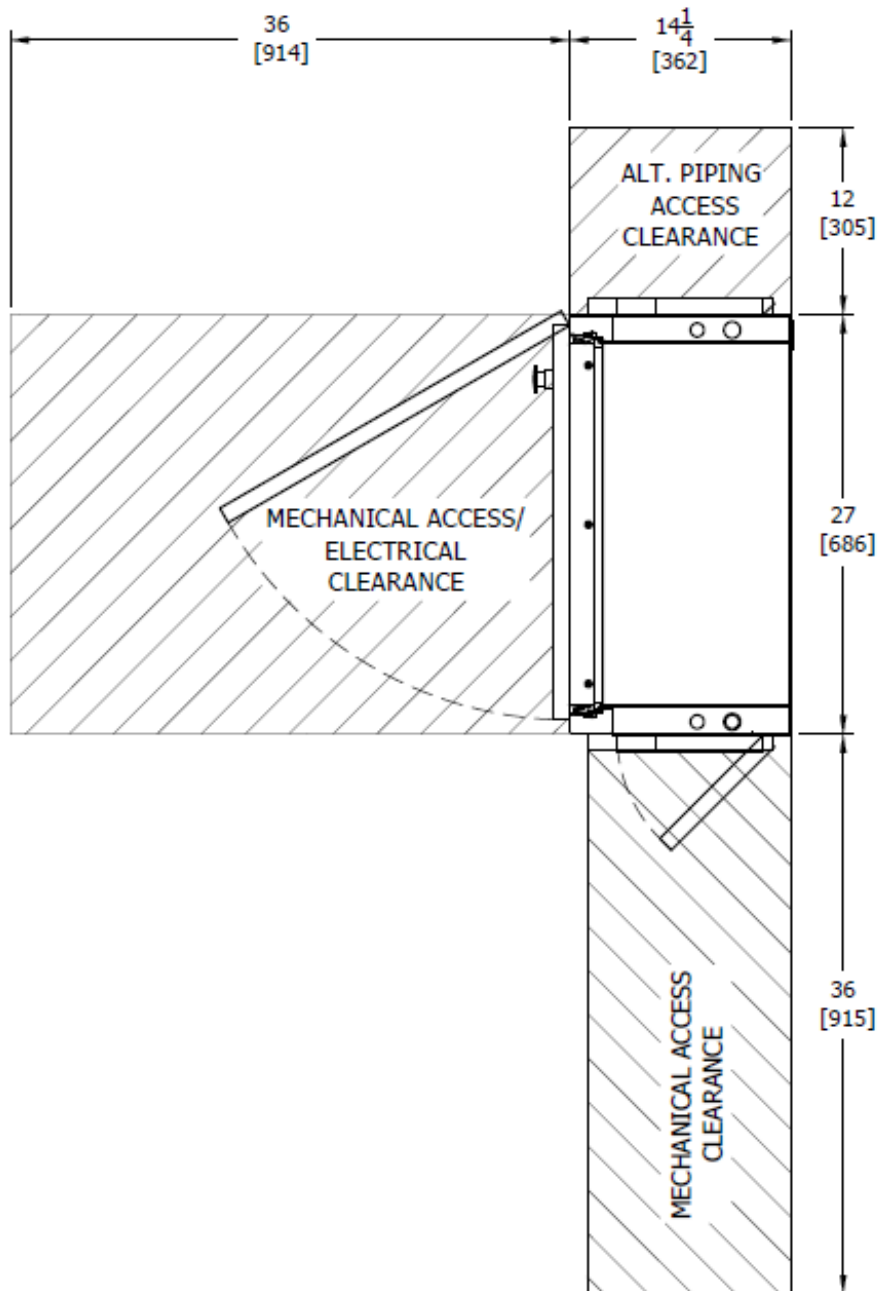


Figure 1: Required free space for access to the conditioner, dimensions in inch [mm]

2.2 Floor conditions of the installation site

The installation location (flat, level and stable floor) must be able to support the weight of the unit: 0.75 kg/cm³.

Make sure that the floor elements are only laid on a horizontal and smooth floor in accordance with the applicable VOB regulations.

Ensure that the flatness tolerances according to line 4 of the table below are observed

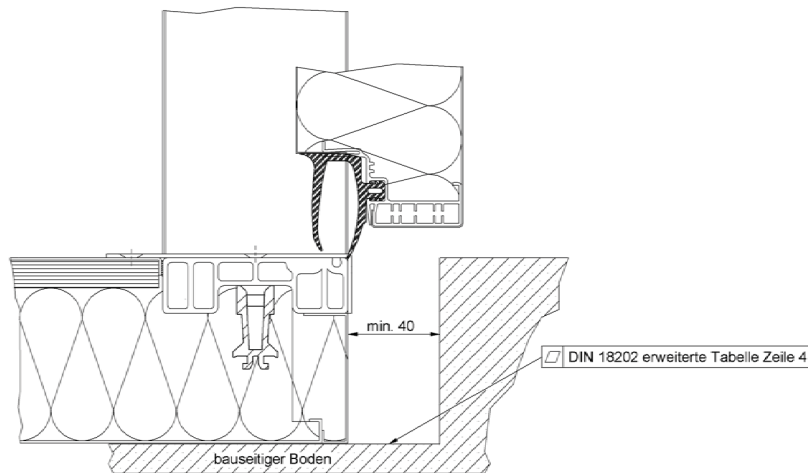


Figure 2: Floor conditions of the installation site

Table: Flatness tolerances (from DIN 18202 extended table)

Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Row	Applicable to	Position deviations as limit values, in mm, for distances between measuring points, in m												
		0.1*	0.6	1*	1.5	2	2.5	3	3.5	4*	6	8	10*	15*
1	unfinished upper surfaces of floors, subfloors and concrete bases	10	13	15	16	17	18	18	19	20	22	23	25	30
2	Unfinished upper surfaces of floors, subfloors and concrete bases subject to more stringent requirements (e.g. to receive floating screed, industrial floors, tile flooring and bonded screed), and finished surfaces for minor purposes (e.g. in storerooms or basements)	5	7	8	9	9	10	11	12	12	13	14	15	20
3	Finished floors (e.g. screed as wearing courses or screed to receive a flooring, tiled floorings, troweled or bonded floorings)	2	3	4	5	6	7	8	9	10	11	11	12	15
4	As for row 3, but subject to more stringent requirements	1	2	3	4	5	6	7	8	9	10	11	12	15
5	Unfinished walls and unfinished ceilings	5	8	10	11	12	13	13	14	15	18	22	25	30

Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Row	Applicable to	Position deviations as limit values, in mm, for distances between measuring points, in m												
		0.1*	0.6	1*	1.5	2	2.5	3	3.5	4*	6	8	10*	15*
6	Finished walls and soffits (e.g. plastered walls, wall claddings and linings, suspended ceilings)	3	4	5	6	7	8	8	9	10	13	17	20	25
7	As for row 6, but subject to more stringent requirements	2	2	3	4	5	6	6	7	8	10	13	15	20

● Minimum tolerance BINDER GmbH

* Values for these distances between measuring points are included in Table 3 of DIN 18202. The values for the other distances are interpolated.

Source: Manual for the Screed and Flooring Trade Zentralverband Deutsches Baugewerbe (Central Association of German Construction Sector)

2.3 Position of the chamber

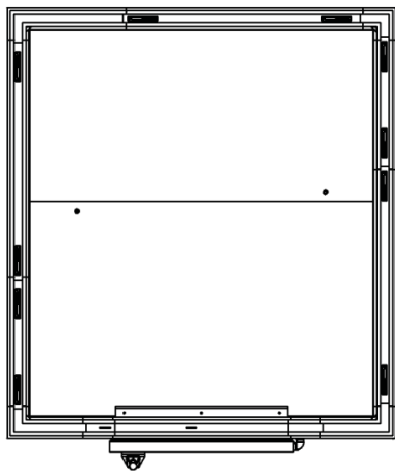


Figure 3: Chamber floor plan



Figure 4: Marking the chamber corners

- Mark the outer dimensions of the chamber on the intended surface with chalk or other suitable material
- The surface required to install the chamber must be clean and solid.
- Level the floor if necessary

3. Required tools and accessories

These are not included.

- Torx screwdriver
- Slotted screwdriver
- Open-end wrench, 13 mm
- Torque wrench
- Allen key, 8 mm
- Knife
- Multi-purpose pliers
- Electric blind riveting gun
- Electric silicone tip
- Drilling machine
- Step and ladder
- D 2.9 steel drill bit
- D 3.8 steel drill bit
- D 12 drill with at least 110mm spiral flute length
- D 16 drill with at least 110mm spiral flute length
- D 5-6 drills with at least 110mm spiral flute length for pre-drilling
- Hole saw 62 mm for the optional passage
- Water hose for fresh water connection and condensate drain, with connections and hose clamps
- Blind rivet nut setting tool suitable for $\varnothing 8$ pull-in nuts

4. Scope of Delivery

4.1 WIC chamber

4.1.1 Elements of the WIC chamber

- Door with handle and locking components
- Door frame (incl. heating and temperature limiter and sensor)
- Wall element
- Floor element front/rear
- Front/rear ceiling element
- Intermediate floor element
- Intermediate ceiling element
- Corner element for air conditioner
- Right corner element
- Left corner element
- 4 to 6 air baffles depending on the size of the chamber, chap. 5.10.1
- Control panel cover
- Lighting incl. lamp, light, motion sensor

4.1.2 Mounting Material

- White paint pen with brush and mixing ball
- 6-point offset screwdriver
- Cove plug-in profile 2. (grey)
- Stainless steel locking screws D 3.5 x 25 mm for multi-part floor pan
- Cleanroom silicone permanently elastic S68, 310ml
- RZB Planox ECO LED light with motion detector, IP66, 37W, 4950 lumen, -20 to +50 °C
- Temperature limiter Jumo ATH-70
- Pt 100 temperature sensor
- Air conduction system, 4 parts
- Controller housing incl. holder
- G GK 1018 cable routing duct LFG 40*60/2000 mm
- Connection elements (rivets, connection plates, toothed lock washers and grounding cable) for equipotential bonding

4.2 Components and tools, supplied accessories

4.2.1 Connection box

Art. no. 5001-0055

- Pre-assembled device junction box with main power switch and connecting cables
- 2 x M 25 cable glands for control sensor (chap. 5.12.2)
- 2 x M 16 cable glands for the lighting equipment (chap. 5.13)
- 2 x multiple sealing insert
- 2 x Distribution boxes for 230 V and 24 V (chap.5.11.1)
- Distribution box cable retaining rings

4.2.2 BINDER WIC accessory pack

Depending on chamber size: WIC 1 Art. no. 8009-1123 / WIC 2 Art. no.8009-1172 / WIC 1 Art. no.8009-1201

The accessory pack contains:

- Cable tie 200mm with base (Art. No. 6007-0074)
- Plug for silicon access port d50 (Art. No. 6016-0032)
- Sealing ring for silicon access port d50 (Art. No. 6016-0031)
- Silicon access port d50 (Art. No. 6016-0056)
- M20 cable gland 5-10mm (Art. No. 6002-0329)
- Screw ISO14585-C T20 3,9x9,5 A2 (Art. No. 3001-0198)
- Standard EJOT thin sheet metal screw 40x9.5 T20 galvanized (Art. no. 3001-0112)
- Washers DIN125-A 4.3 A2 140HV for standard EJOT thin sheet metal screw (controller) (Art. no. 3003-0005)

- EJOT thin sheet metal screw 50x19 T25 galvanized CONLOC (Art. no. 3001-0240)
- Screw DIN933 M8x70-8.8 galvanized (Art. No. 3001-0110)
- Washer DIN440-R 9 steel galvanized 100HV for M8 screws (Art. no. 3003-0008).

The following stickers are also included:

- BINDER - Logo WIC label 600 mm
- Grounding label D 12,5mm 6001-0054
- UKCA label
- Service label
- WIC chamber type plate
- Equipotential bonding label D 20mm

Overview of fastening elements

Basic package	3001-0198	3001-0240	3001-0112
Vertical air baffle 1	14		
Vertical air baffle 2	12		
Horizontal air baffle 1	15		
Horizontal air baffle 2	8		
Controller housing + mounting plate		14	
Electrical components			
Emergency Off (EMO)			2
Controller			4
Limiter			2
Distribution box			4
Junction box			4
Cable duct			10
Lamp	4		
Σ	53	14	26
Expansion package			
Horizontal air baffle 2	8		
Σ	8	0	0



Grounding lugs are riveted, connecting elements are provided by Narr.

4.3 Conditioner

Art.no. 6011-0228

5. Assembly of the WIC chamber

5.1 Assembly of floor elements

- Lay out the floors according to the following figures, and check that they are horizontal.

Push the floor elements together and tighten the eccentric locks by turning them clockwise with a size 8 Allen key.

Self-sealing stainless steel threaded plugs are enclosed.

Once all floor elements have been fitted and locked, the eccentric lock holes are closed with the threaded plugs using a suitable screwdriver.

The equipotential bonding between the floor elements is then established (chap. 5.1.1).



Figure 5: Distance 300 mm

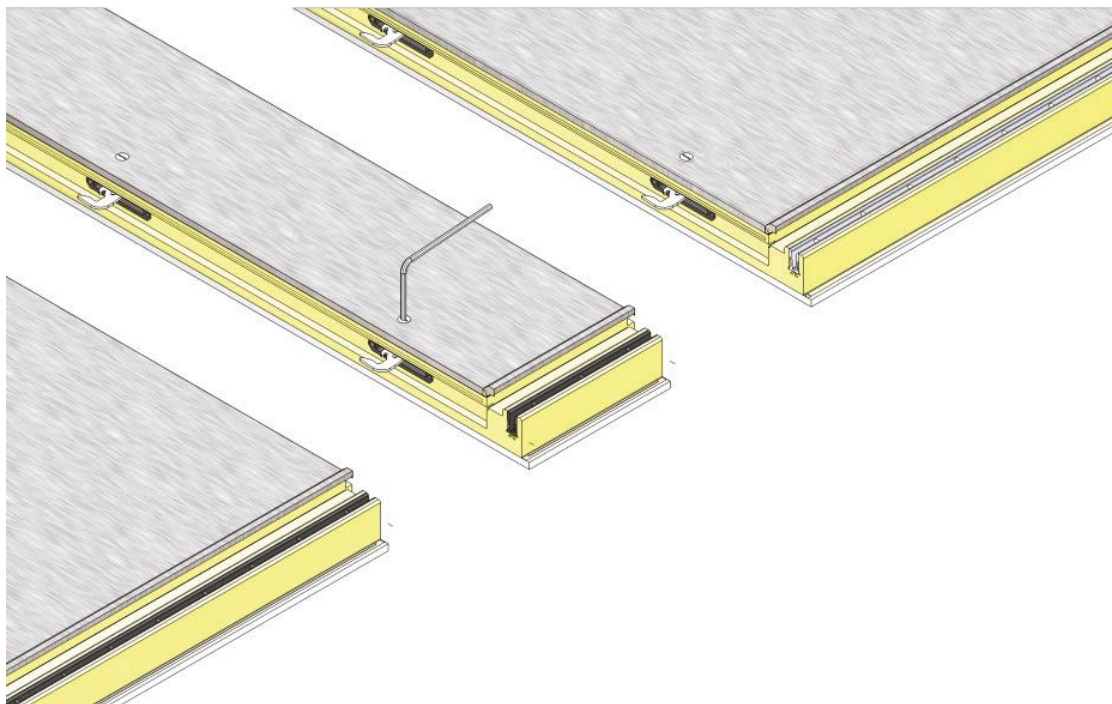


Figure 6: Tighten the eccentric locks with a size 8 Allen key by turning clockwise



Figure 7: Installed chamber floor

5.1.1 Equipotential bonding between the floor elements



Before making the connection, be sure to peel off the film locally. Otherwise, the equipotential bonding is not effective!

To ensure continuous grounding of the chamber, all wall, floor and ceiling elements must be electrically connected to one another. The supplied grounding elements are used for this (rivets, connection plates, toothed lock washers and grounding cable).

The first thing to do is ground the floor elements. To do this, drill D3 holes in adjacent floor elements, peel off the film locally, connect them using the connecting plates with toothed washer and rivet them in place.



Figure 8: Connection between floor elements

5.2 Assembly sequence of wall and ceiling elements



Proceed with assembly in the order shown below.

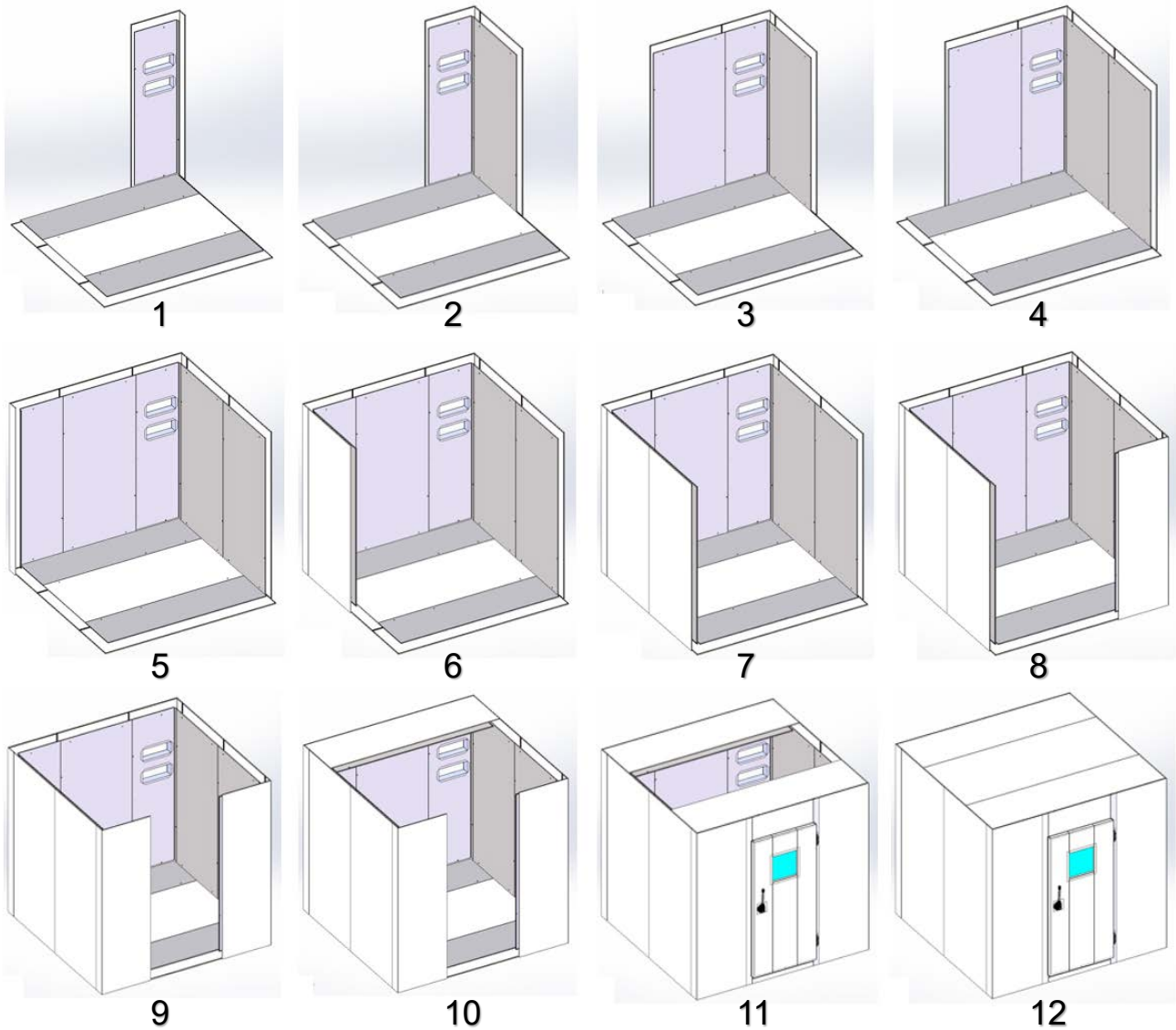


Figure 9: Order of assembly of wall and ceiling elements

5.3 Installation of the wall elements

- Start at the rear of the chamber with a wall corner element and insert it into the tongue and groove joint.
- Start with the corner element for mounting the conditioner, placing it either in the front left or rear right.



Tip: Due to the drying time of the silicone, we recommend attaching the seal for connecting the conditioner if necessary now, see chap. 5.8.

- Remove the protective film from the front sides of all wall elements by approx. 100 - 150 mm.

Protective film



Figure 10: Partially removed protective film during assembly of the wall elements

- Tip: When assembling the wall/door elements, close the locks between the wall and ceiling/floor only last, i.e. when all the wall/door elements have been connected to one another
- The door element consists of a door frame and door leaf. It is delivered assembled and can be installed like a wall element.



Close the eccentric locks (hook locks) on the inside of each element.

- Tighten the eccentric locks by turning them clockwise with a size 8 Allen key.

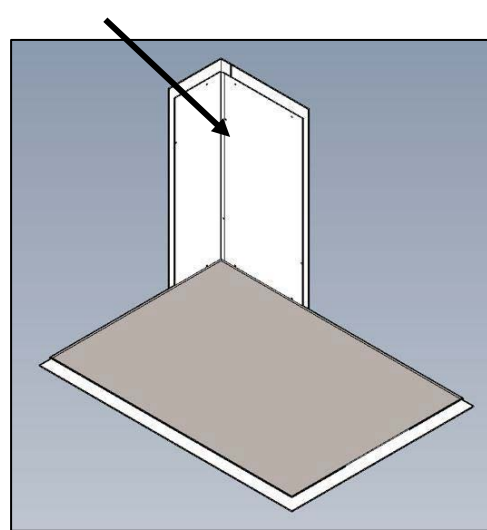
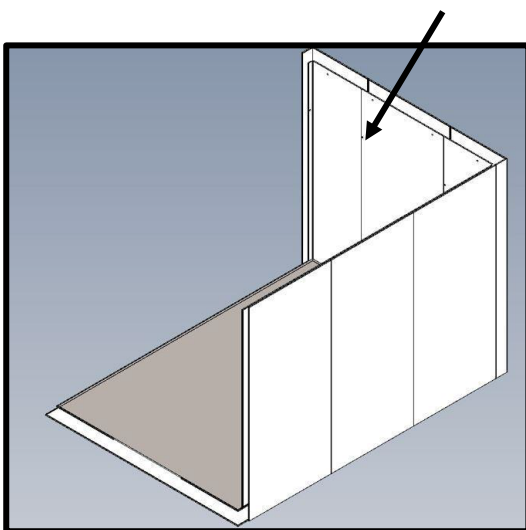


Figure 11: Eccentric lock positions

Leave an opening so that the ceiling elements can be optimally transported into the chamber.

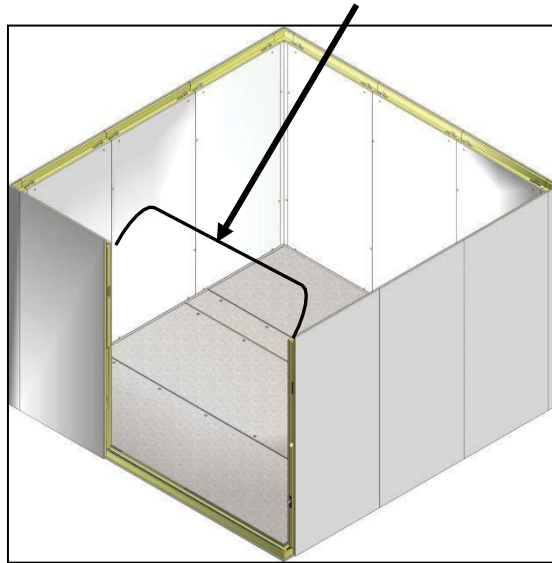


Figure Figure 12: Preparation for installation of ceiling elements

Before the ceiling elements are installed, the equipotential bonding between the wall elements is established (chap. 5.3.1), as well as the equipotential bonding between the wall and floor elements (chap. 5.3.1).

5.3.1 Equipotential bonding between base plate and wall panels

Before installing the last wall elements, establish an electrical connection between the wall and floor elements:



Figure 13: Connection of the base plate to the wall elements

5.3.2 Equipotential bonding between the wall elements

Before installing the ceiling elements, connect all wall elements to one another in the same way as the floor elements. There are already holes for this in the top of the ceiling elements. When grounding the wall elements, toothed lock washers must be used in addition to connection plates.



Before making the connection, be sure to peel off the film locally. Otherwise the equipotential bonding is not effective!

5.4 Installation of the ceiling elements

- Remove the protective film from the front sides of all ceiling elements by approx. 100 - 150 mm.
- Install the ceiling elements from behind and place the last ceiling element on the assembled chamber ceiling. Now you can install the remaining wall elements.

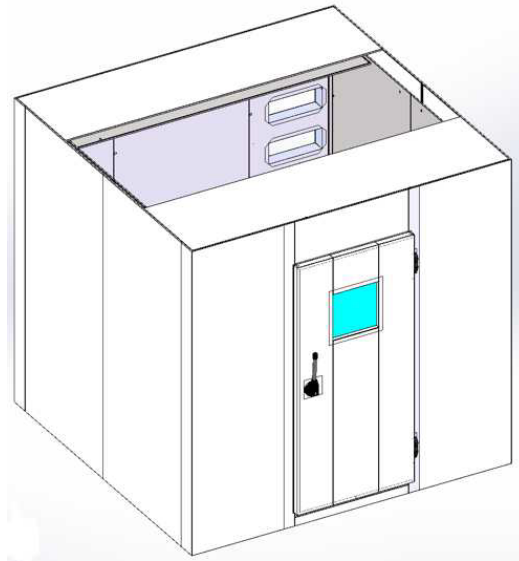


Figure 14: Installation of the ceiling elements

Open the lock on both last elements so that the last ceiling element can be installed.



Figure 15: Assembling the last ceiling elements



Important: After assembling the chamber, silicone all wall butt joints with the silicone supplied.

The joints are only to be siliconized in the wall. Plastic profiles supplied must be fitted to the floor and ceiling.

5.4.1 Equipotential bonding between the ceiling elements



Before making the connection, be sure to peel off the film locally. Otherwise the equipotential bonding is not effective!



Figure 16: Connection of the ceiling elements

5.4.2 Equipotential bonding between ceiling elements and wall elements

An electrical connection between the wall elements and ceiling elements must be made at one point.



Before making the connection, be sure to peel off the film locally. Otherwise the equipotential bonding is not effective!

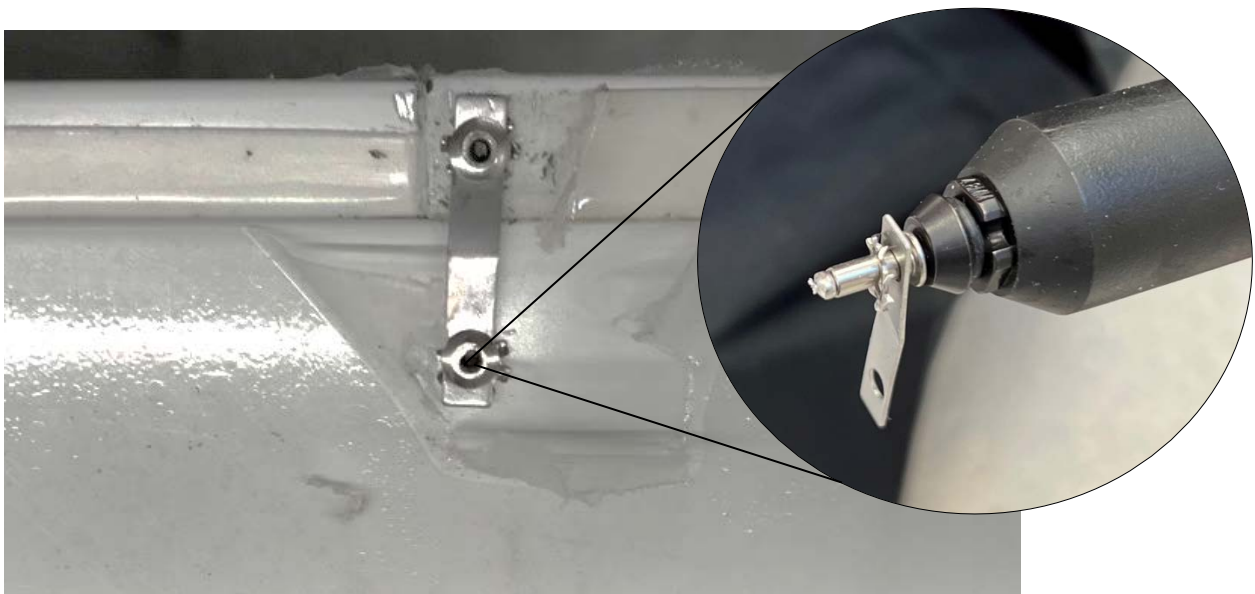


Figure 17: Connection between ceiling elements and wall elements

5.5 Adjustment of the revolving door

First remove the cover caps. These can only be removed when the door is open, using a pin or Allen key.

Check the function of the door (fine adjustment if necessary), if necessary correct the door height by adjusting the height.

Then replace the caps.

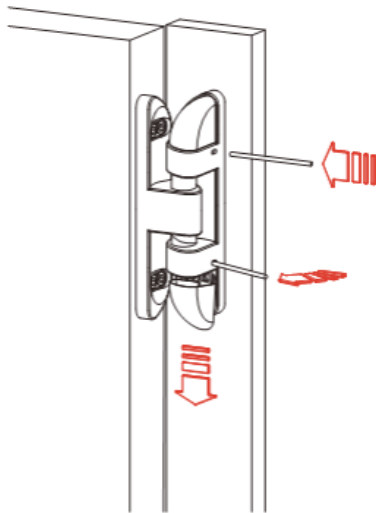
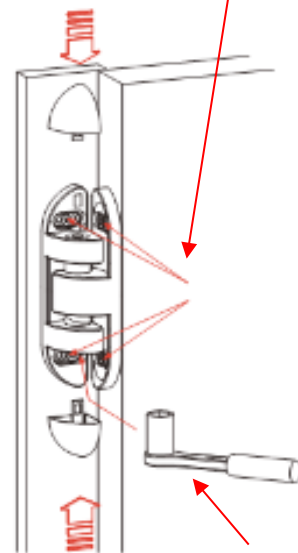


Figure 18: Disassembling the cover

Fine adjustment of contact pressure



Height fine adjustment

Figure 19: Adjusting the height and gap size of the door leaf

When the door is closed, the caps are secured (burglar-resistant)

Finely adjust the closing piston through the slotted holes until the door seals tightly

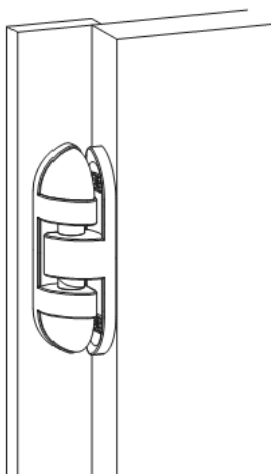


Figure 20: Cap protector

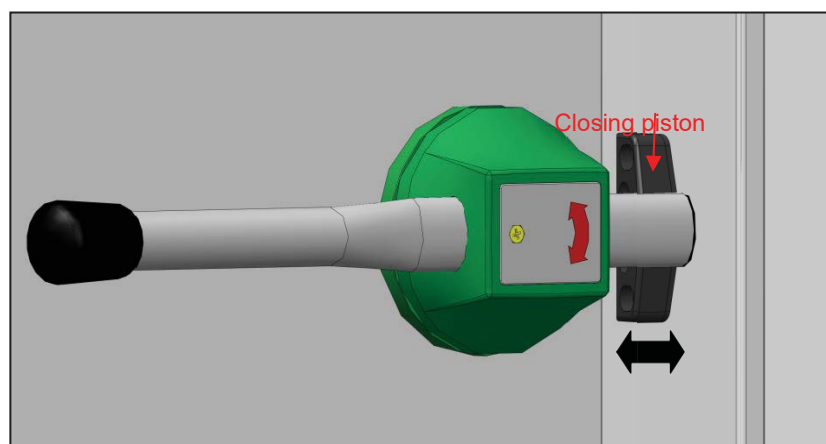


Figure 21: Fine adjustment of the closing piston

5.6 Mounting the sheet metal cover

(without optional door ramp)

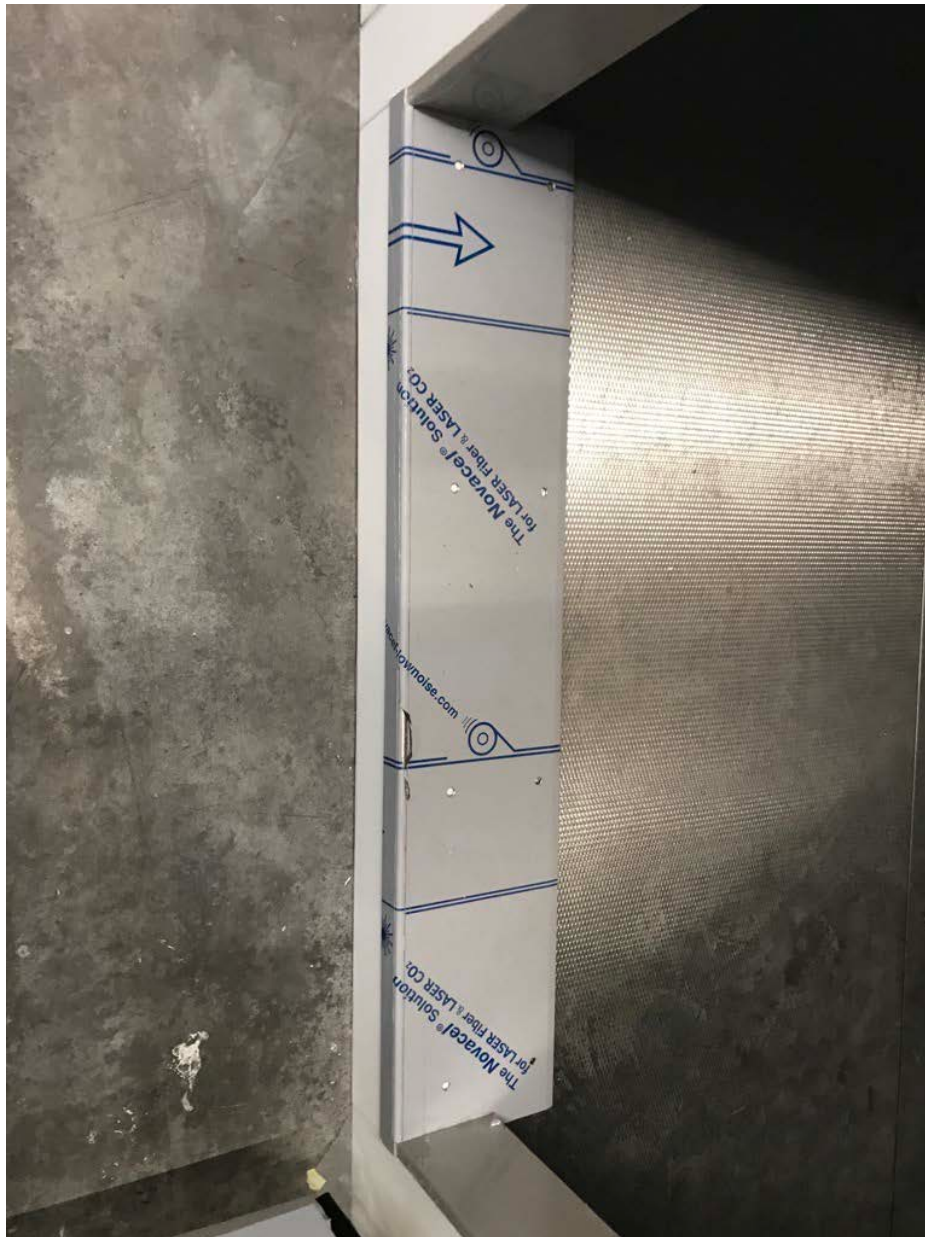


Figure 22: Sheet metal cover, mounted

To fix the sheet metal cover to the inside of the chamber, pre-drill through the top layer (stainless steel and pressure distribution plate) with a Ø 3.2 mm drill bit

For the connection, recut the stainless steel top layer with a galvanized screw.

Then screw the ramp in place with screws of diameter of 4.2 x 25 mm.

5.7 Installing the door sill ramp (option)

To fix the door sill ramp to the inside of the chamber, pre-drill through the top layer (stainless steel and pressure distribution plate) with a Ø 3.2 mm drill bit

For the connection, recut the stainless steel top layer with a galvanized screw.

Then screw the ramp in place with Ø 4.2 x 25 mm screws.

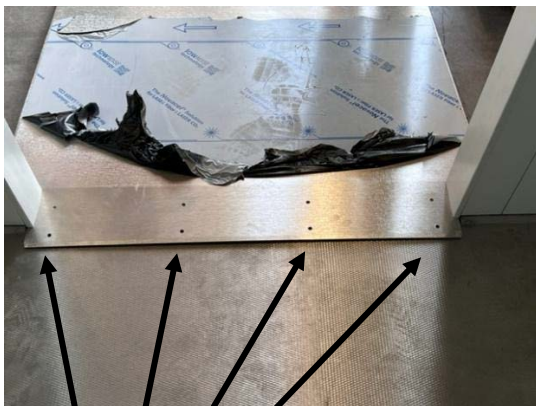
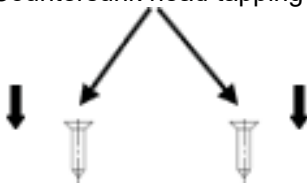


Figure 23: Installing the door sill ramp

Countersunk head tapping screws



DIN 7982 4.2 x 25 mm

5.8 Installing the conditioner on the chamber

5.8.1 Silicon gasket

Check the silicone seal on the back of the conditioner and if necessary, fix the seal with tube silicone. Due to the drying time of the silicone, we recommend doing this directly when assembling the corner element (chap. 5.3).



Figure 24: Back of the chamber with silicone gasket at the position of the air conditioner

5.8.2 Removing the covers of the conditioner

- First you have to open the rear panel of the air conditioner. To do this, loosen two tension locks on each side.



Figure 25: Tension lock

- Remove the sheet metal cover and slide the air filter (blue) up and out

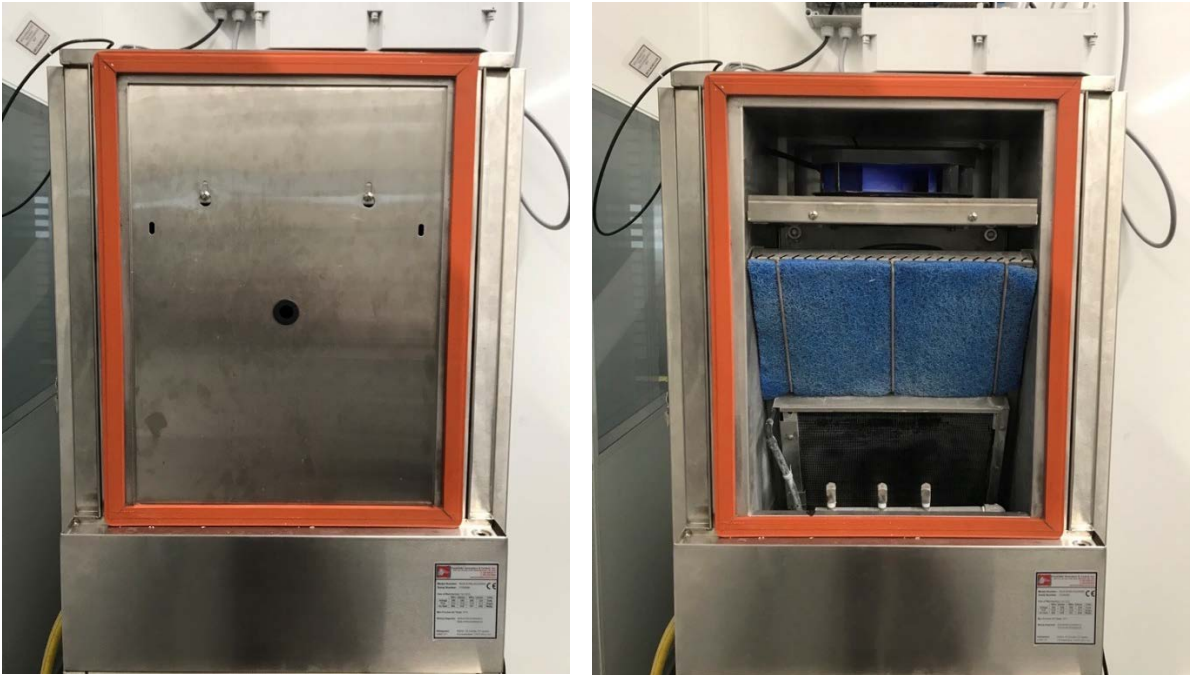


Figure 26: Rear panel of the conditioner

5.8.3 Positioning and screwing the conditioner

- Place the conditioner at the back of the chamber and position it correctly so that the hole patterns match.
- Position the 4 supplied vibration pads under the feet of the conditioner.

The conditioner is then screwed to the chamber.

After removing the filter, 4 holes for the screw connection can be seen

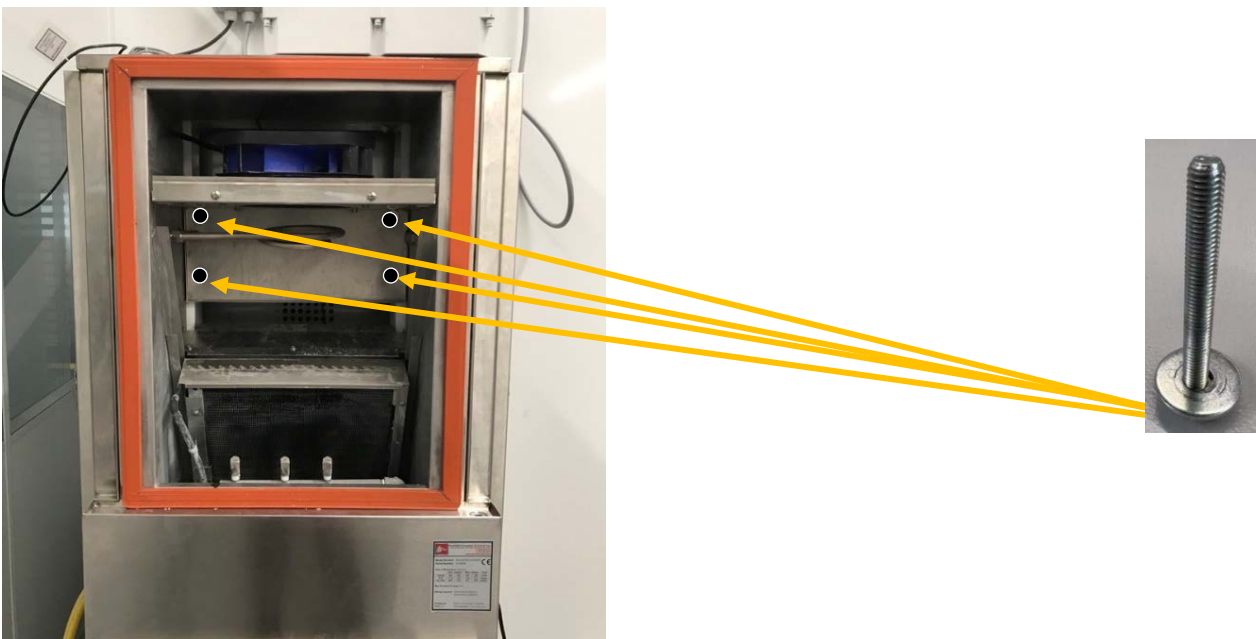


Figure 27: Position of the screws

- Then screw the conditioner to the chamber with the supplied screws
Tightening torque: 30 Nm.



Figure 28: Fully assembled screws

- Then put the filter and cover back on the conditioner.



Figure 29: Position of the conditioner at the WIC chamber

5.9 Connection of the water pipe to the conditioner

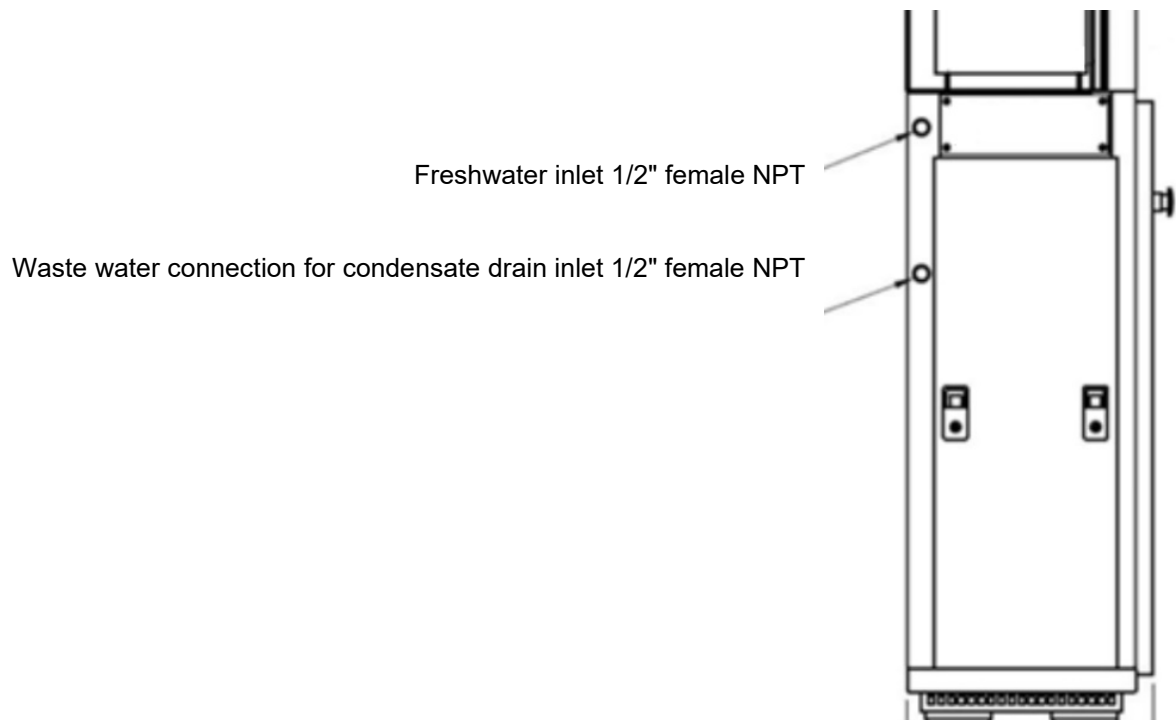


Figure 30: Positions of the water connections on the left side of the conditioner

Connect the water connections (fresh water inlet, water outlet).

Both connections have a 1/2" NPT internal thread.

Detailed information on the water connection can be found in the operating manual.



Figure 31: Tuyau d'eau connecté à l'arrivée d'eau douce

5.10 Installing the air baffles

5.10.1 Overview of the air baffles

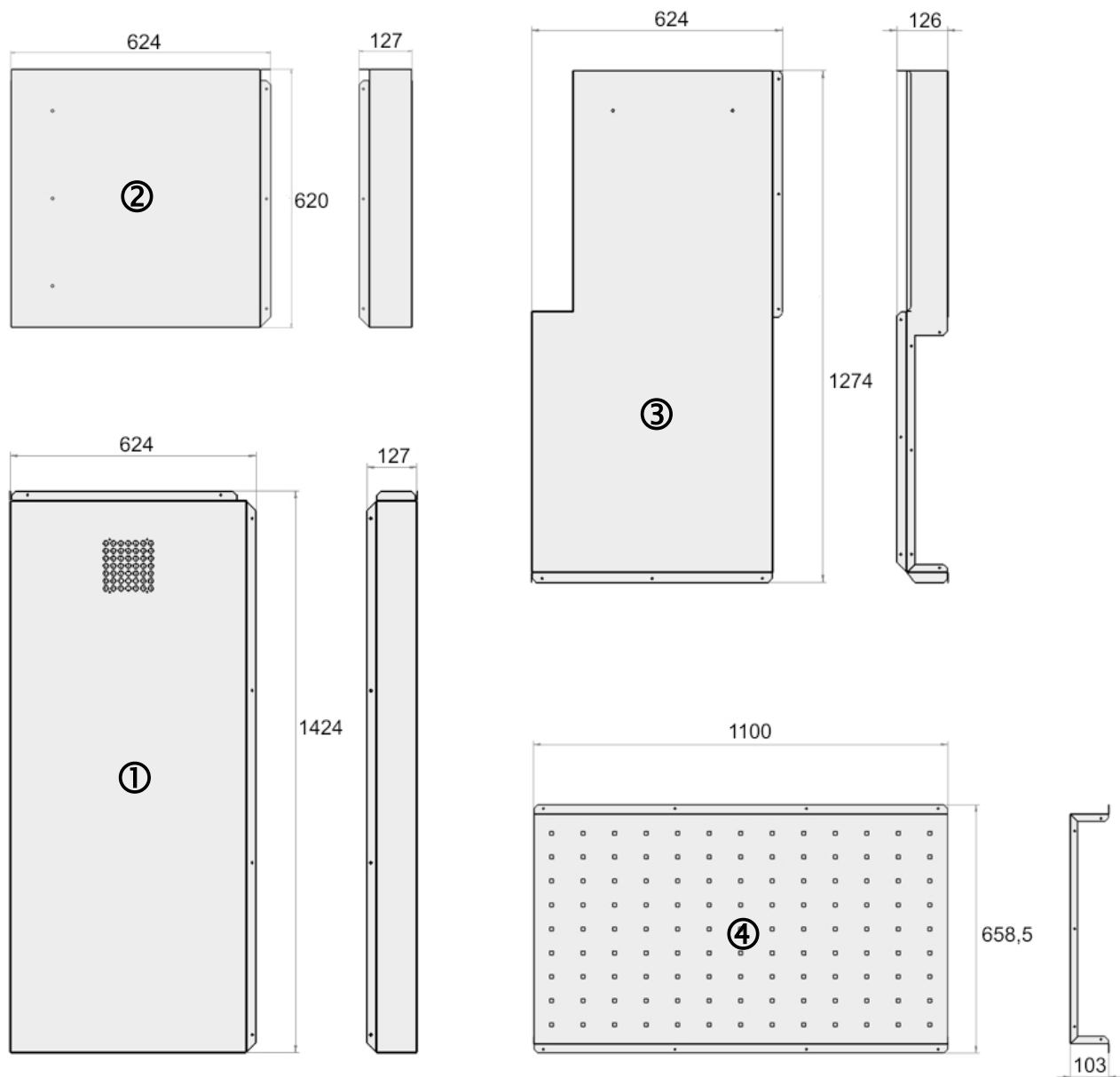


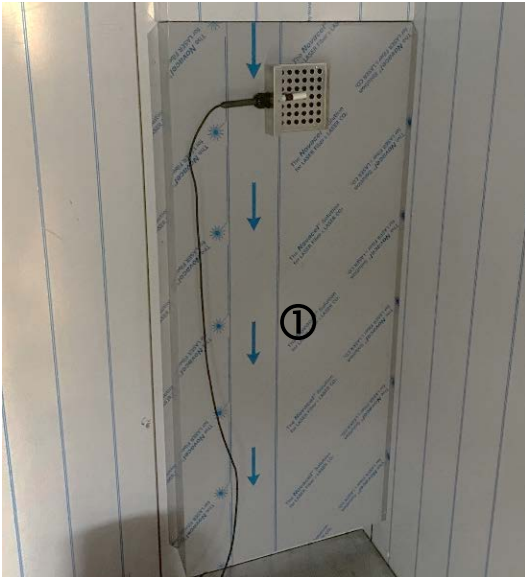
Figure 32: Overview of the air baffles

[indications in mm]

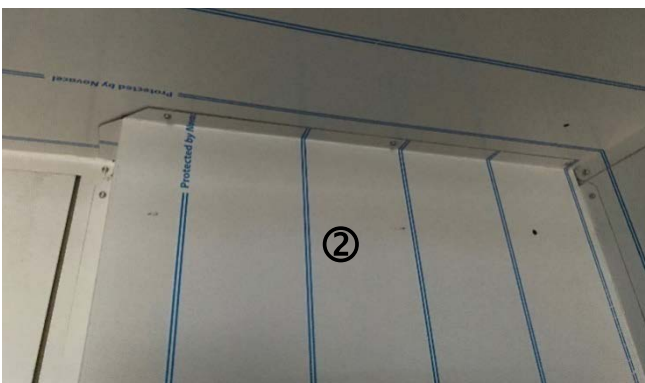
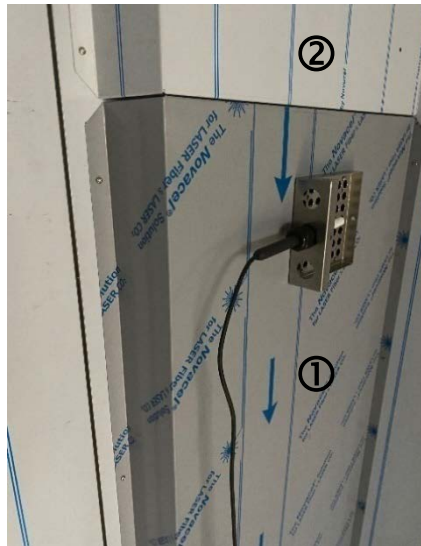
- ① Vertical air baffle with position of the sensor box
- ② Vertical air baffle
- ③ Air baffle for deflection
- ④ Air baffle for distribution (WIC 1: 1 x, WIC 2: 2 x, WIC 3: 3 x)

5.10.2 Mounting the air baffles

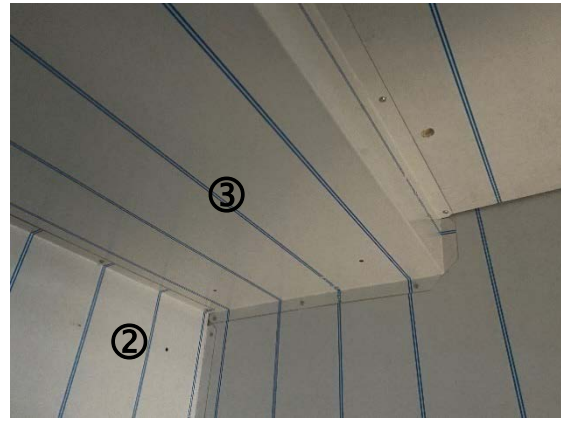
- Pull off the protective film in the area of the screw connections and the connection points from sheet to sheet
- Place the first air baffle ① in the correct position (see pre-punched holes) and screw it tight with stainless steel self-tapping screws. (The illustrations also show the assembled sensor box).



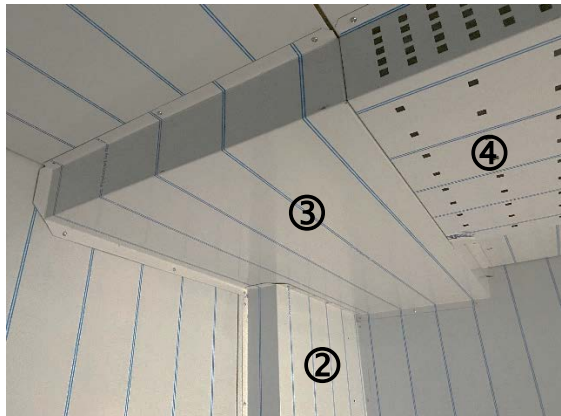
- Position the second air baffle ② on top of the first one and screw it tight with stainless steel self-tapping screws. (Art. No. 3001-0198)



- Place the third air baffle ③ in position on the ceiling and screw it to the second sheet and the ceiling.



- Install the fourth air baffle ④ on the ceiling and, depending on the chamber size, further ceiling air baffles.



- WIC 2 / WIC 3: Assemble the other air baffles ④ to the ceiling

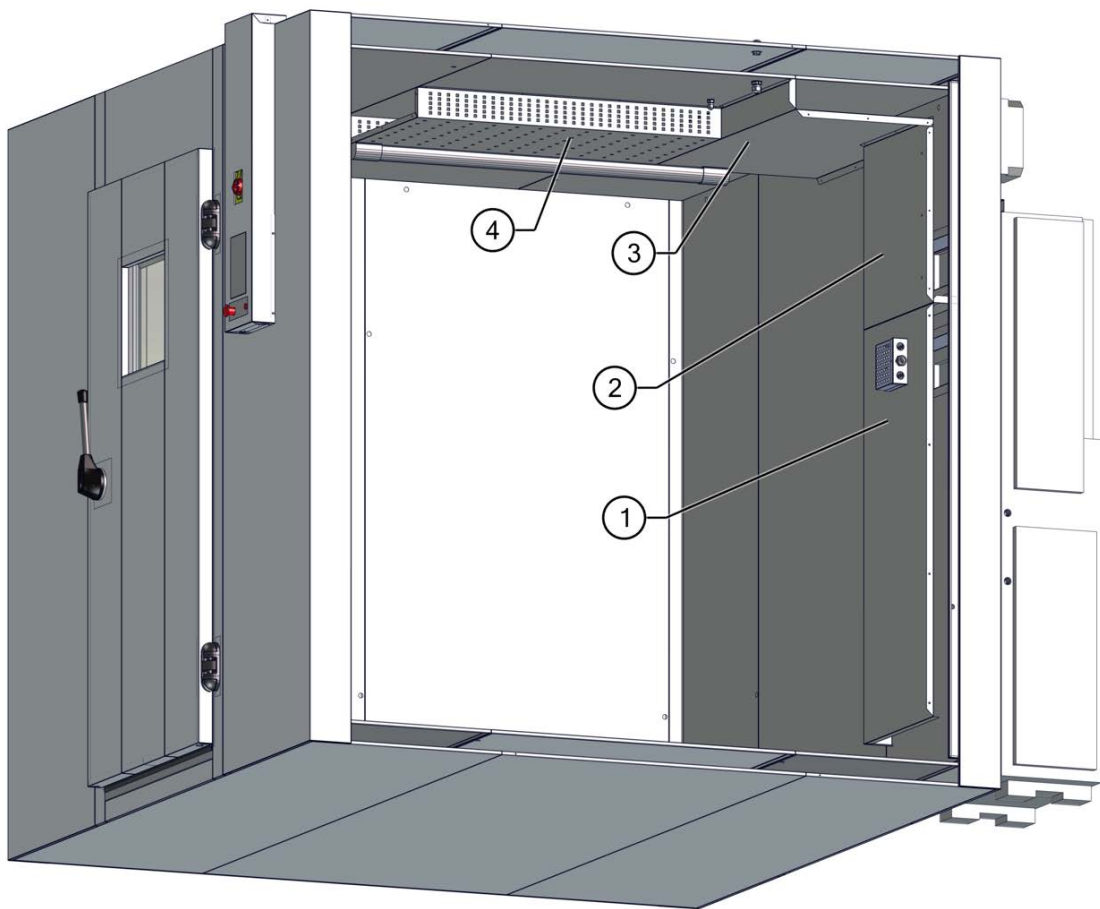


Figure 33: Overview of the mounted air baffles

5.10.3 Mounting the sensor box

- Mount the sensor box at the prepared position with a self-tapping 6 stainless steel screws on the first air baffle ①. The mounting position holes are visible through the protective film



Figure 34: Mounting the sensor box

5.11 Assembling the junction box

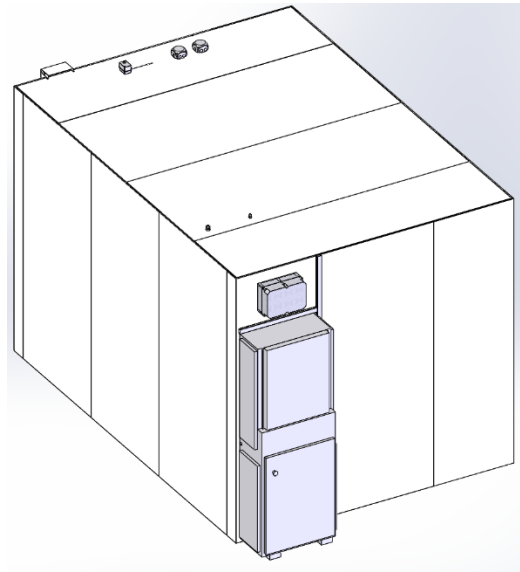


Figure 35: Position of the junction box above the conditioner

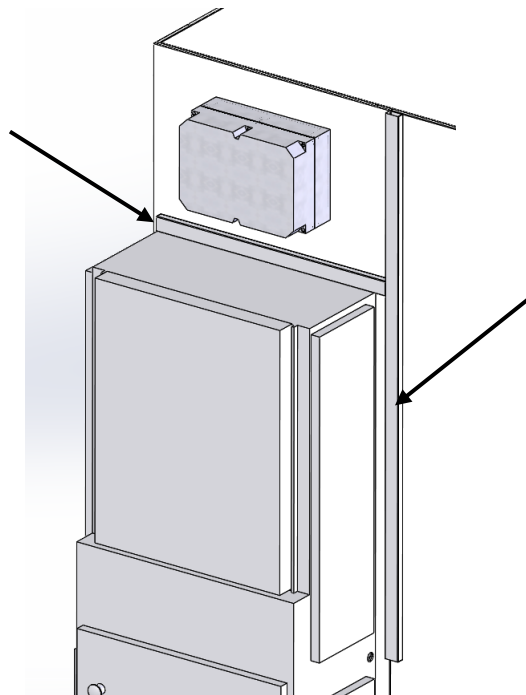


Figure 36: Position of the cable ducts on the conditioner

The connecting cables of the junction box and the conditioner must be housed in the cable ducts. To do this, attach the two cable ducts to the chamber above and to the right of the conditioner as shown in the illustration and screw them together.

The length of the horizontal cable duct corresponds to the width of the air conditioner. The remaining part (length approx. 1.5 m) is sufficient for the vertical cable duct.

5.11.1 Assembling the distribution boxes and temperature limiter

For each distribution box and for the temperature limiter, drill 2 holes each with a diameter of 2.9 mm. The distribution boxes are screwed with the standard EJOT screws.



Figure 37: Distribution boxes (as delivered)

The temperature limiter is already connected to the door module. It still has to be screwed to the ceiling element and wired du to circuit diagram accordingly.

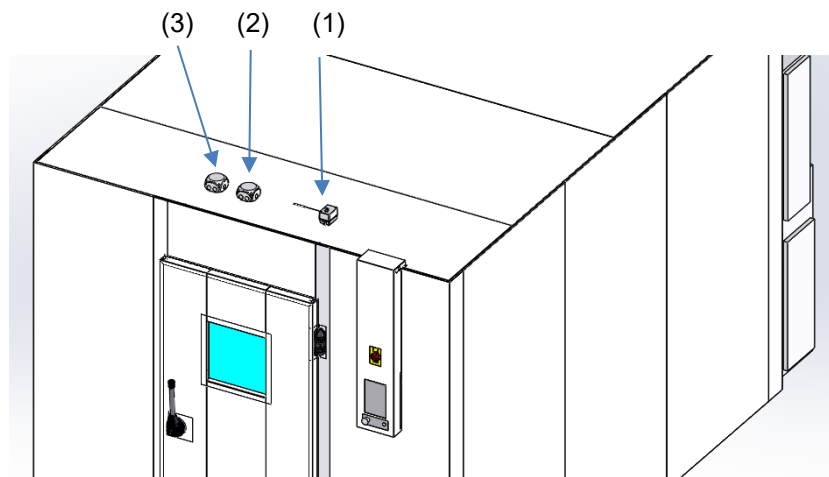


Figure 38: Temperature limiter and distribution box positions

- (1) Temperature limiter
- (2) 230V distribution box
- (3) 24V distribution box

Attach the distribution boxes at a distance of 200 mm from the front edge of the chamber and 100 mm from each other and screw them to the ceiling of the chamber with the supplied standard EJOT screws, drilling 2.9.

Screw the temperature limiter on at a distance of 200 mm from the front edge of the chamber with the supplied screws standard EJOT screws, drilling 2.9. The temperature limiter is then wired and screwed to the supplied M20 cable gland.

5.12 Installation of temperature and humidity sensor

5.12.1 Assembly of the sensor unit

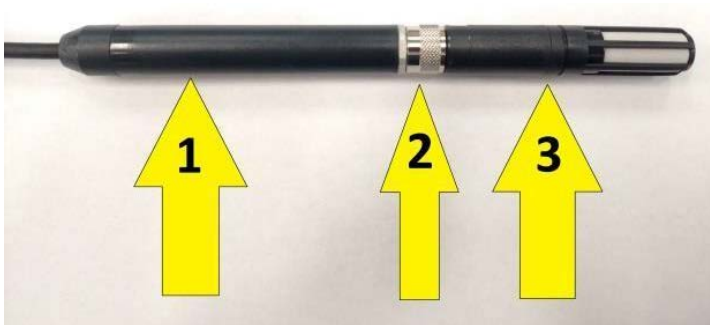


Figure 39: Sensor unit with cable connected

Arrow 1: Plug with cable

Arrow 2: Connecting piece (threaded collar)

Arrow 3: Transducer/sensor

The plug with cable is attached to the sensor via a connecting piece with threaded collar.

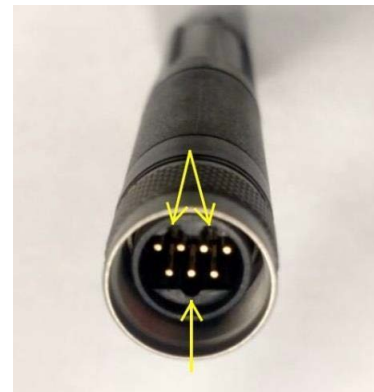
The connection piece with threaded collar is already connected to the plug with cable.

The sensor can only be connected to the connector in the correct position.

Make sure you have the right orientation: The recesses on the sensor must be arranged as shown in the adjacent figure: two at the top, one at the bottom (arrows).

Insert the sensor carefully into the connector **without twisting**.

After plugging in the sensor, turn the connector to secure the connection.



5.12.2 Installing the sensor unit in the chamber

Drill a 16 mm hole in the ceiling near the first rear air baffle.

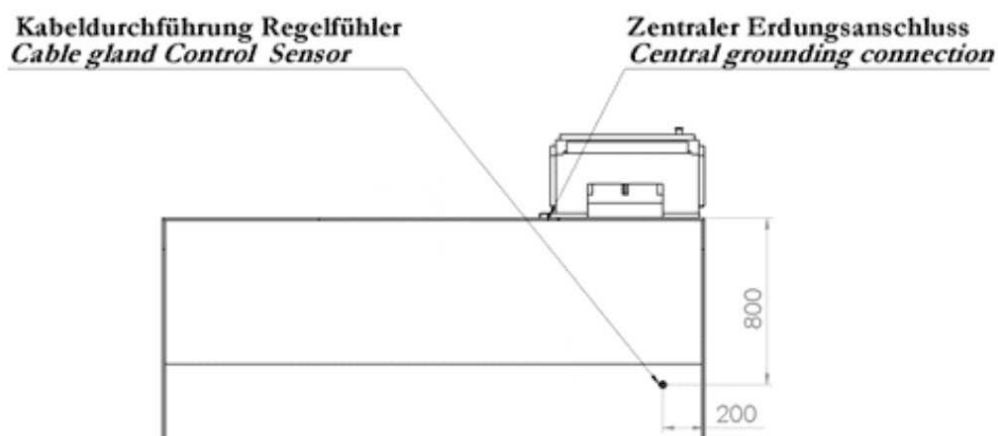


Figure 40: Position of the hole for the control sensor (view from above)

Fit the M 16 cable glands with the rubber seals on the outside and inside of the ceiling panel to pass the humidity sensor cable through.



Figure 41: M 16 cable glands with rubber seals

Guide the sensor unit through the ceiling into the interior of the chamber and mount it at the designated position on the air baffle.

Make sure that the sensor is placed in a horizontal position and that the cable allows a drip loop (see Figure 42). The cable can be routed in the air ducts using the enclosed cable ties with foot and the corresponding pre-punched holes.

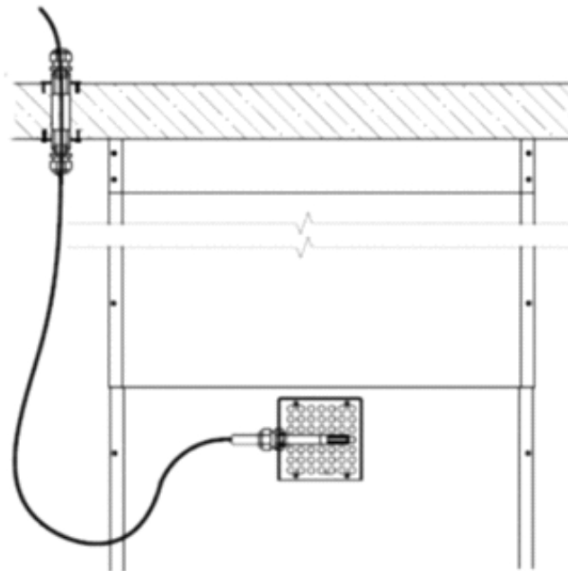


Figure 42: Installing the temperature/humidity sensor (example view)

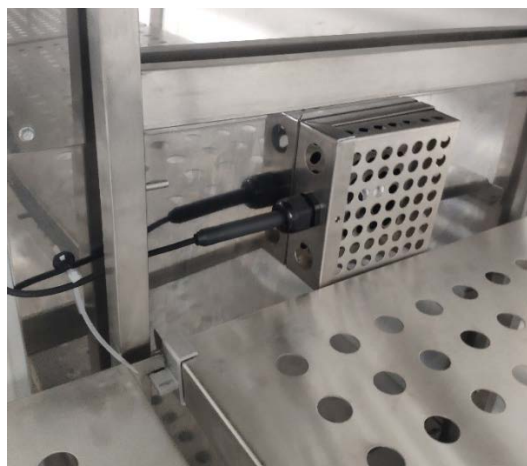


Figure 43: Temperature/humidity sensor, fully assembled (position on the first air baffle)

5.13 Installing the lighting equipment

To install the light, first attach the two mounting clips to the air duct. The mounting clips should be fitted 100mm from both ends of the lamp.

Drill a 16 mm hole in the ceiling, then guide the light cable through the cover and fasten it with a cable gland on the outside and inside of the ceiling panel.

Kabeldurchführung Regelfühler
cable gland Control Sensor

Zentraler Erdungsanschluss
Central grounding connection

Kabeldurchführung Leuchte
cable gland lighting unit

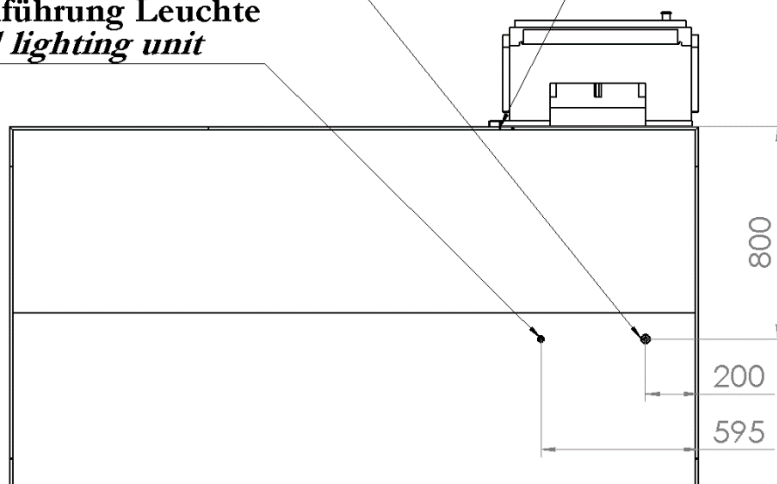
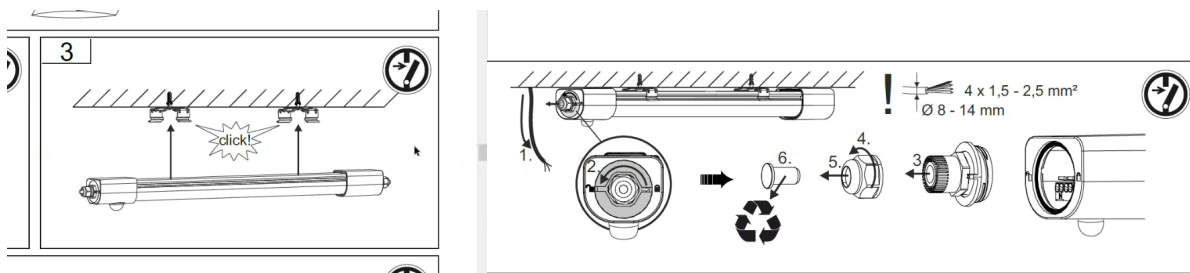


Figure 44: Position of the hole for the cable entry of the lamp (view from above)

Now you can snap the light into the clips. Tip: Wire the light first, then clip it in.



The light is then connected to the junction box (chap. 5.16.2).

The light has an integrated motion detector that functions as a switch. When installing, pay attention to the orientation of the motion detector. It makes sense to attach it near the door so that the cable is placed on the opposite side.



Figure 45: M 12 cable glands



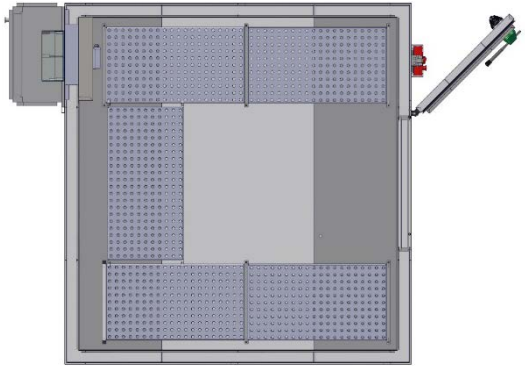
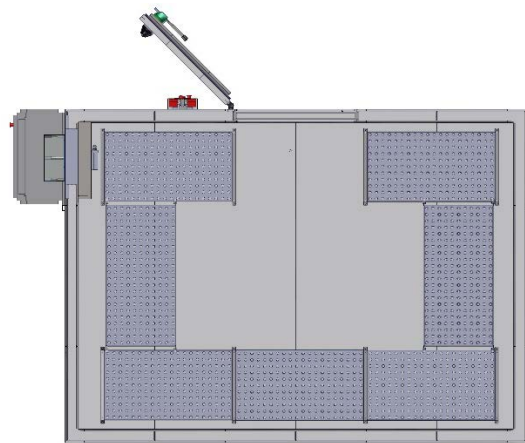
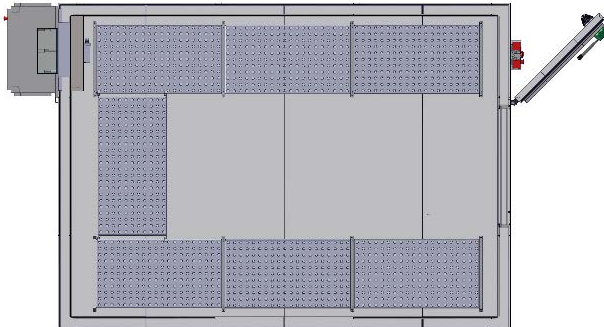
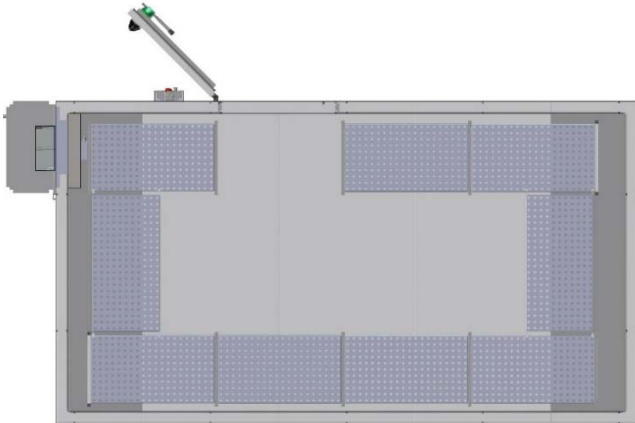
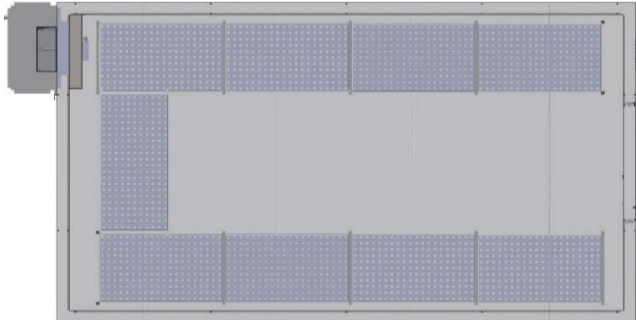
Figure 49: View of installed light

5.14 Installing the optional shelving system



Figure 50: View with installed shelves

5.14.1 Overview of the shelving systems

WIC 1 – Shelf set 8012-2240	
	
WIC 2 – Shelf set 8012-2241	
	
WIC 3 – Shelf set 8012-2242	
	

	Shelf uprights	Cross braces	Shelf, set of 4
Shelf set for WIC 1 8012-2240	Height 1,80 m 6x	Minimum 2x	5 sets in widths: 1.000 mm (1x) 1.100 mm (1x) 1.200 mm (3x)
Shelf set for WIC 2 8012-2241	Height 1,80 m 8x	Minimum 3x	7 sets in widths: 1.000 mm (1x) 1.100 mm (1x) 1.125 mm (2x) 1.200 mm (3x)
Shelf set for WIC 3 8012-2242	Height 1,80 m 10x	Minimum 5x	9 sets in widths: 1.000 mm (1x) 1.100 mm (1x) 1.125 mm (4x) 1.200 mm (3x)

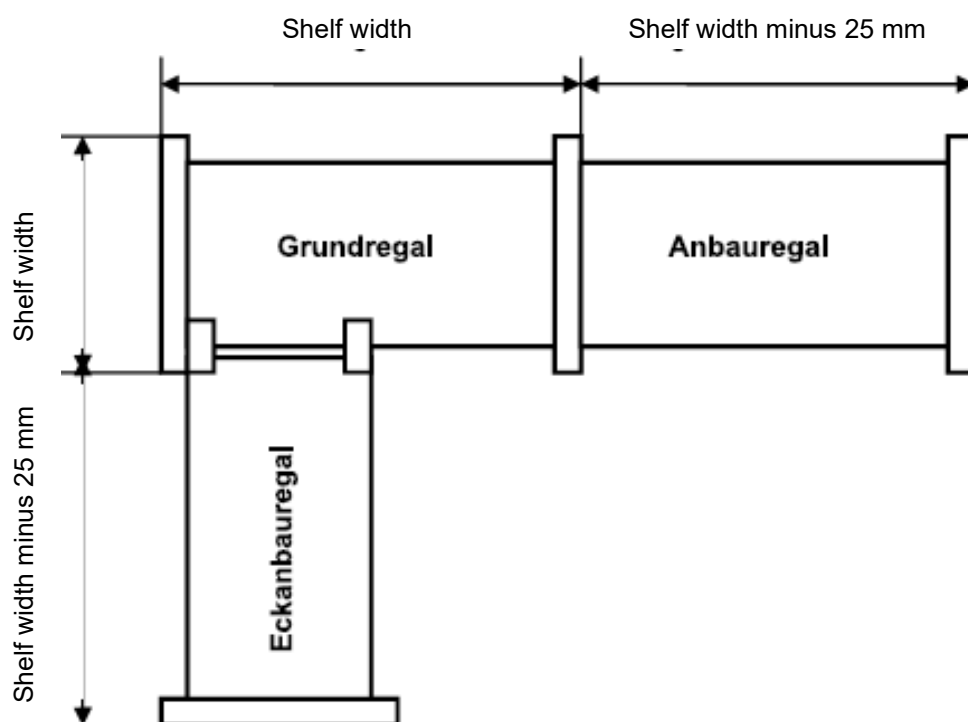


Figure 51: Assembly overview

5.14.2 Installation

Follow the illustrations. Detailed instructions are included with the shelving system.

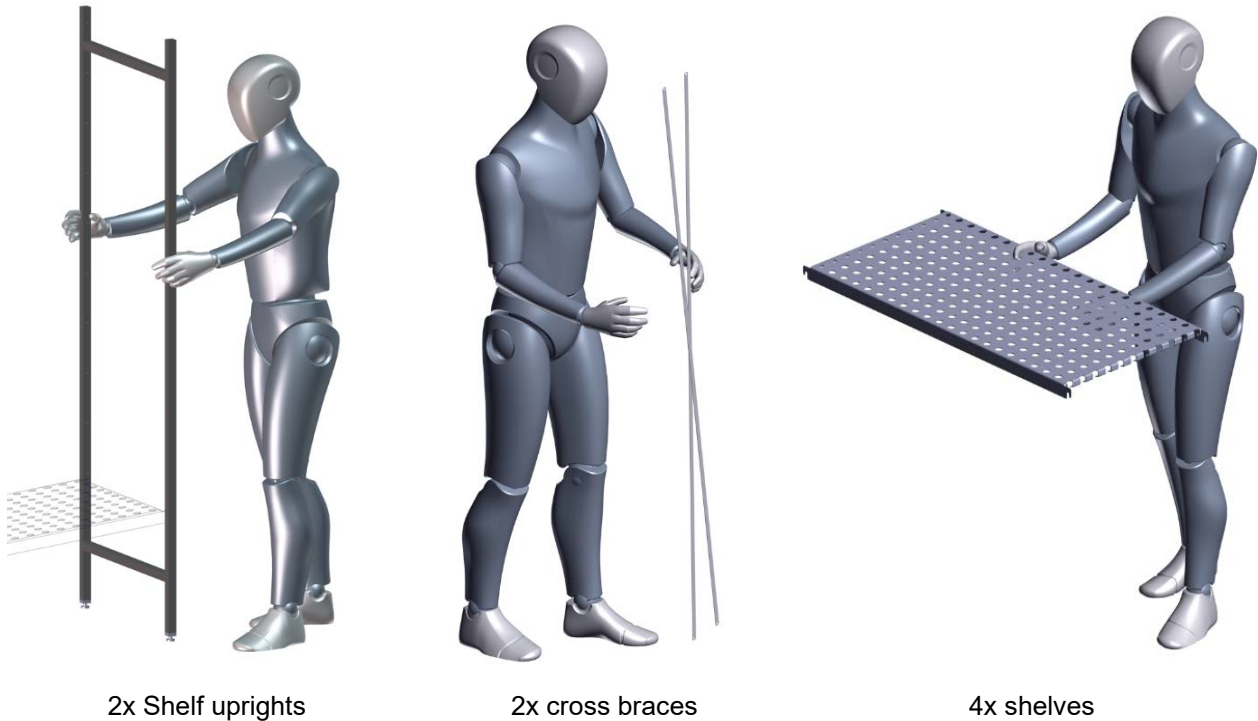


Figure 52: Elements of the shelving system

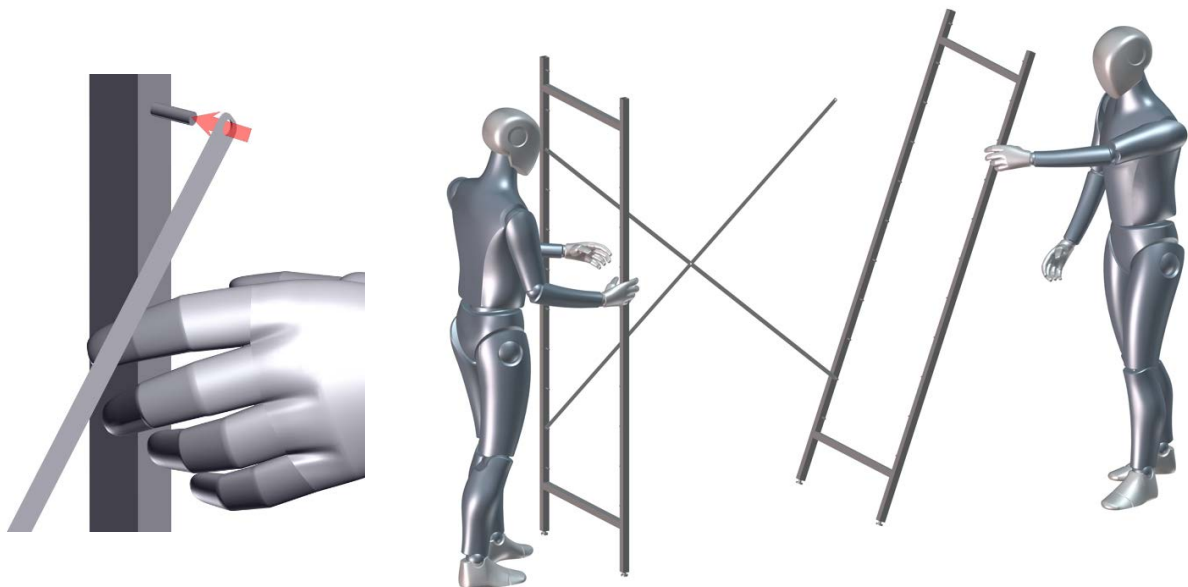


Figure 53: Assembly: Connect shelf uprights with cross braces

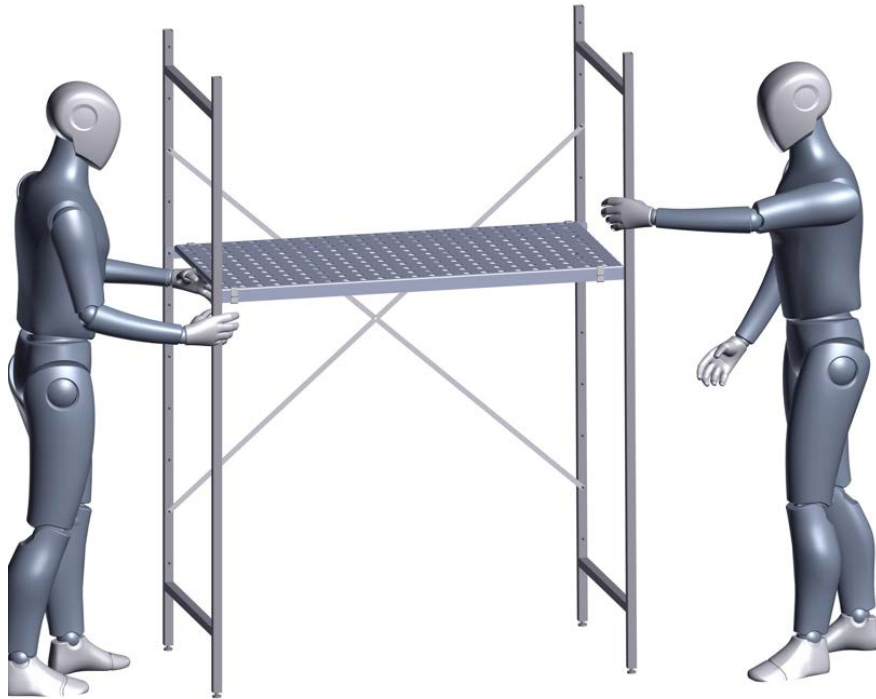


Figure 54: Assembly: Insert shelf

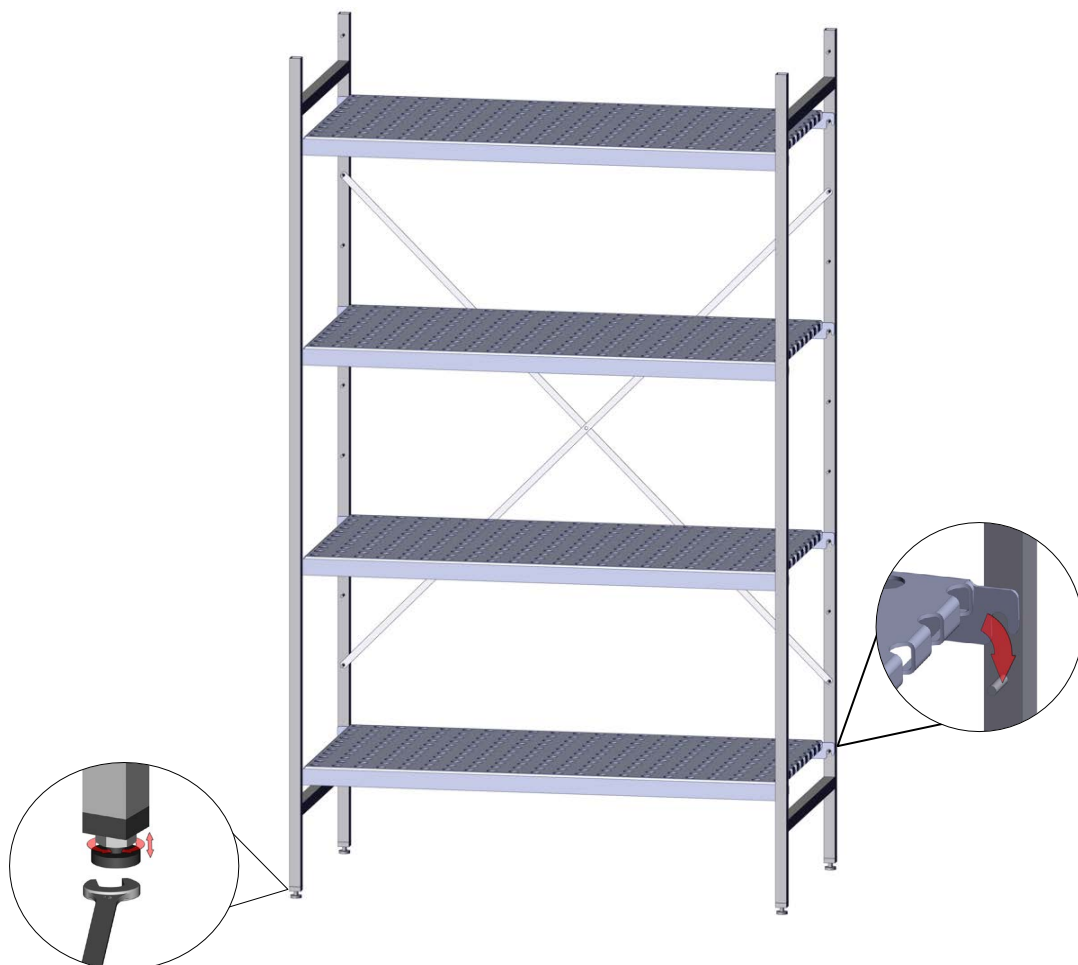


Figure 55: Adjustment the shelf structure

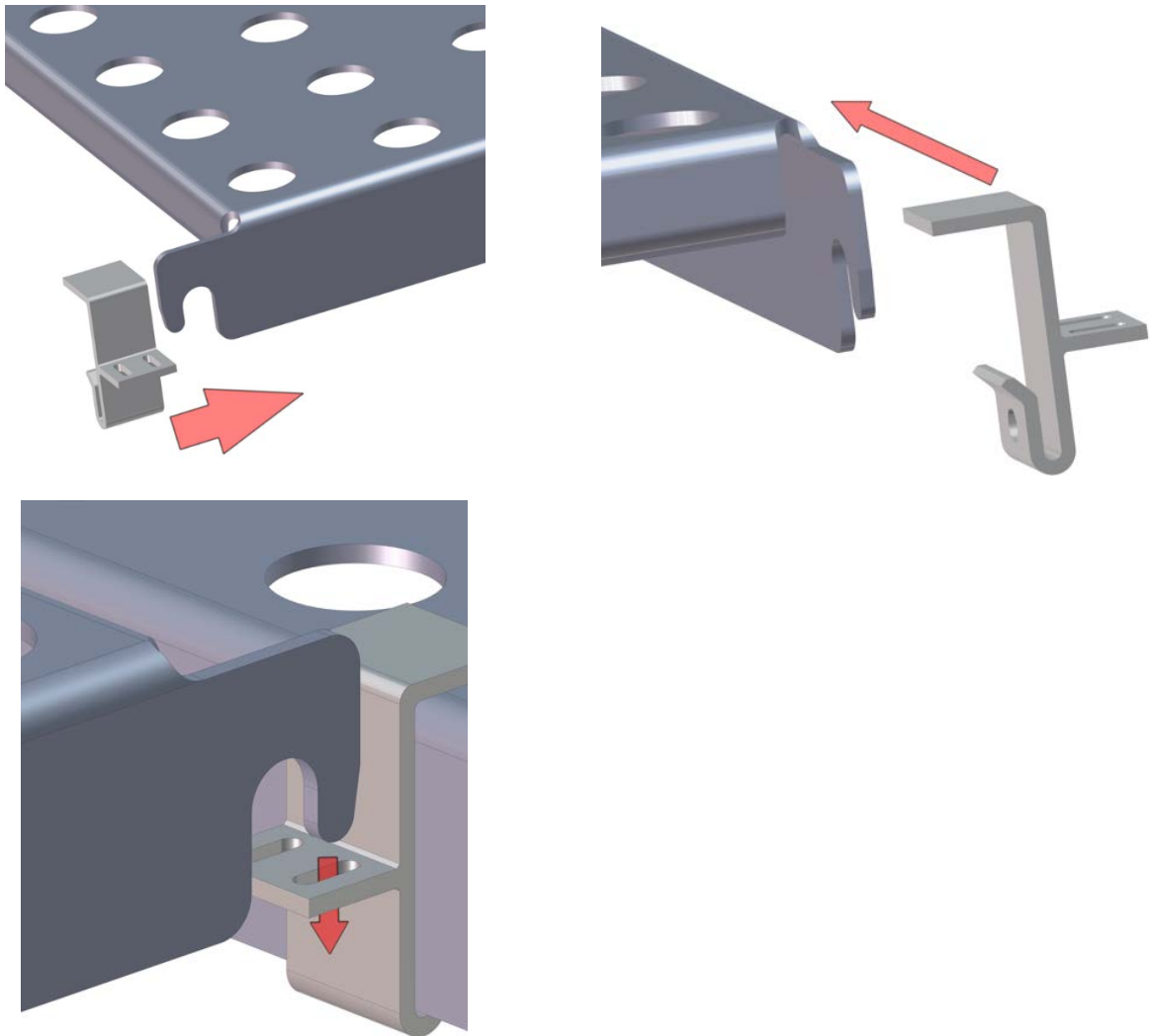


Figure 56: Hooking the shelves

5.14.3 Equipotential bonding of the shelves

Connect the corner panel/conditioner panel to the nearest shelf

To do this, drill into the lowest shelf and into the closest possible location on the corner panel/conditioner panel. The drilling diameter (3mm) is the same as for the grounding lugs for connecting the base plate to the wall elements (chap. 5.3.1, Figure 13). Then the cable can be riveted to the shelf and air baffle with lock washers.

The grounding cable and the required connecting elements are included:

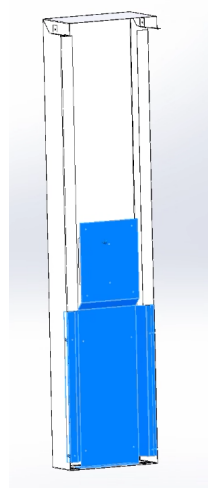
- Cables with ring terminals (chap. 5.3.1 Figure 13)
- Blind rivets (same blind rivets as for grounding lugs in the housing)
- Lock washers (same as grounding lugs in the housing)

The shelves do not need to be grounded to each other

5.15 Attaching the controller box with controller and main power switch / Emergency Off (EMO) switch to the WIC chamber

5.15.1 Placement and fastening of the mounting plate

First, the mounting plate (shown here in color) is loosely screwed to the cover. Use one of the EJOT screws with CONLOC serration.



Now attach the cover to the chamber to determine the correct position for fixation. This is important to ensure that the emergency stop switch is not accidentally activated when the door is opened.

If the position is correct when the door is opened, the switch is where the window of the door is.



The lateral distance of the cover to the side edge of the WIC chamber must be **250 mm** (arrow

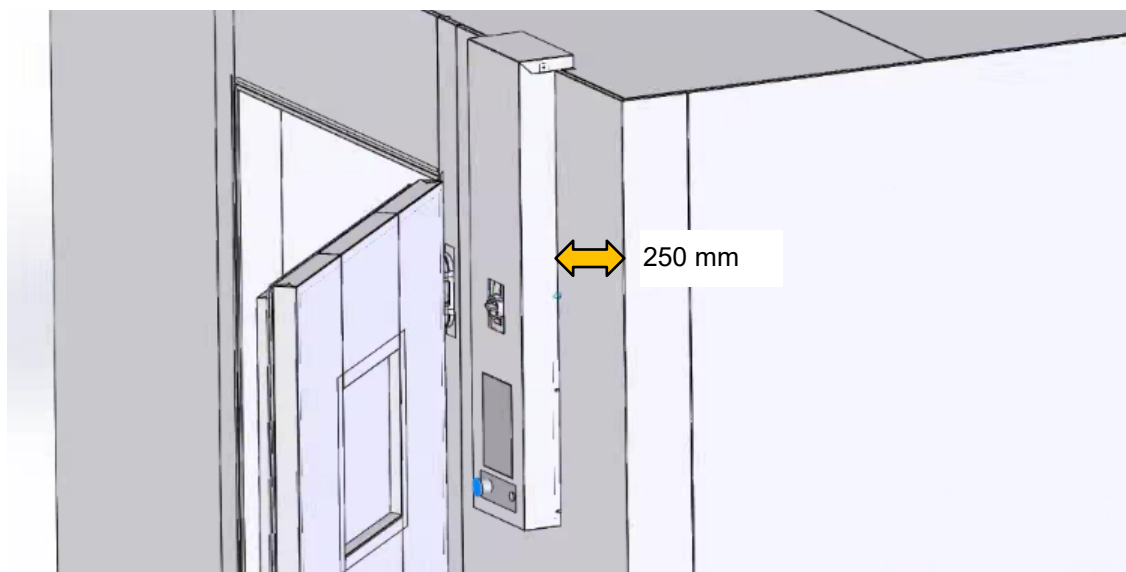
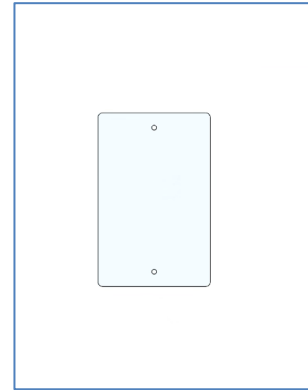


Figure 57: Correct cover position

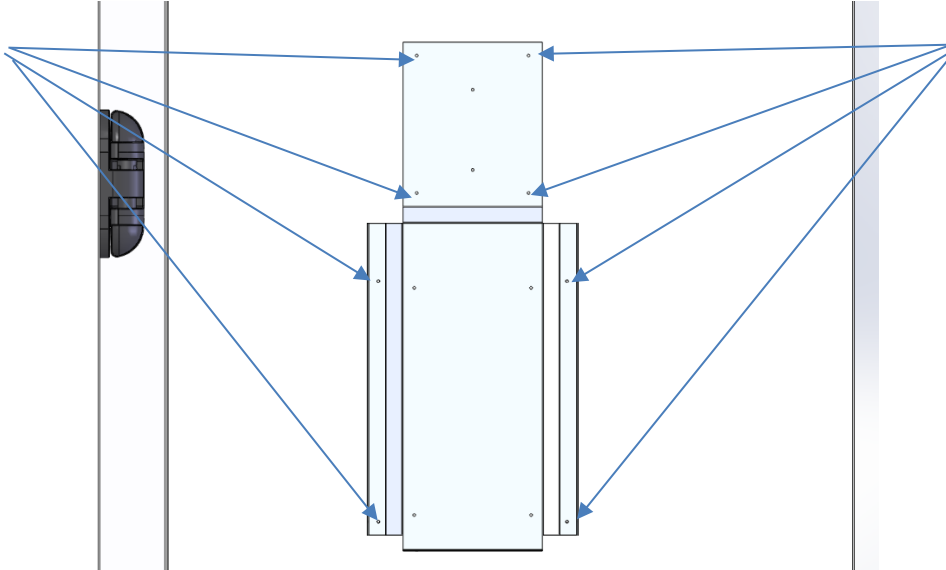
Mark the two holes in the mounting plate and drill the holes (D 2.9).



Screw at least one screw into the mounting plate (picture shows 1 screw)



Now slightly loosen the screws on the sides of the cover (2 on each side) and remove the cover. The mounting plate remains on the chamber wall.



Drill 8 holes D 3.8 and fasten the mounting plate with 8 EJOT screws with CONLOC serration.

The electrical components are then attached to the mounting plate.



5.15.2 Attaching the controller box

Unscrew the screws on the controller box cover and remove it.

Use 4 EJOT standard screws with washers to attach the controller.

The controller is connected with a cable harness to the conditioner (chap. 5.8) already mounted on the rear of the chamber. Guide the cable harness over the ceiling of the chamber.

Then screw the controller box cover back on.

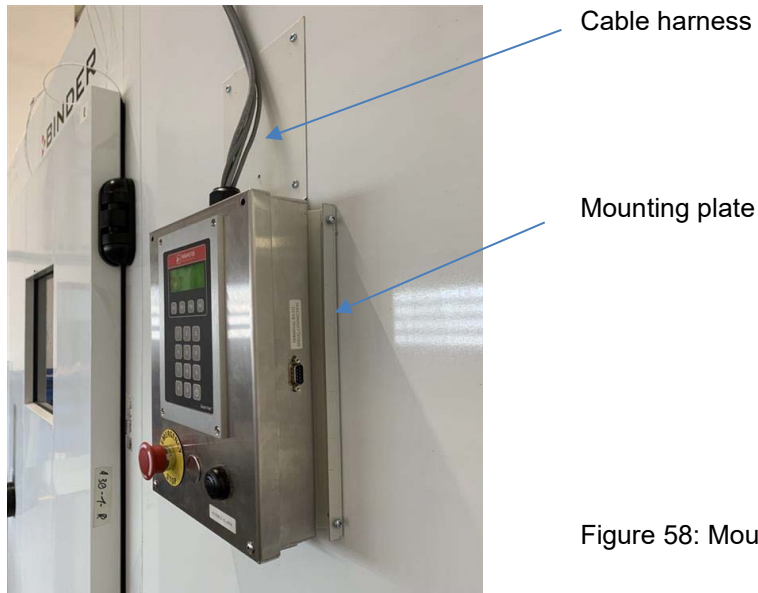


Figure 58: Mounted controller box

5.15.3 Attaching the main power switch / emergency Off switch

The two holes in the top center are used to screw in the main power switch. To do this, loosen the previously screwed-in screw.

For assembly, open the main power switch and screw it to the mounting plate with two standard EJOT screws. Then close it again.

The main power switch is already connected to the junction box via a cable, which is mounted on the rear of the device (Chap. 5.16.4). Run the cable over the ceiling of the chamber.



Figure 59: Main power switch mounted above the controller box (View without cover)

5.15.4 Installing the cover of controller box and main power switch

Place the cover over the controller box and the main power switch and tighten the 4 lateral EJOT screws with CONLOC serration on the mounting plate.

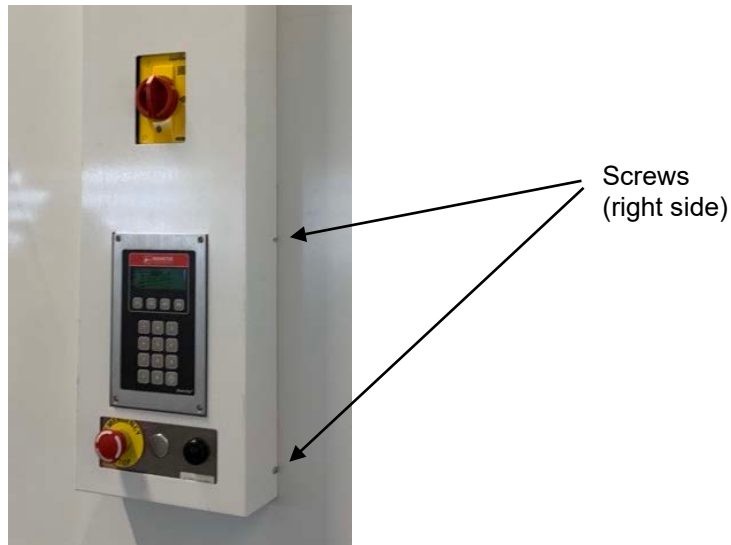


Figure 60: Position of the cover with screws

Then affix the type plate, the BINDER service sticker and the UKCA sticker below the cover.

Position: Service sticker on the left, UKCA on the right of the type plate

5.16 Electrical connections and components

5.16.1 Connecting the chamber door frame heater to the junction box

The following three components must be electrically connected:

- Door frame heater
- Pt 100 temperature sensor (control sensor)
- Temperature limiter

Door frame heater and Pt 100 temperature sensor

The door frame heater, the Pt 100 temperature sensor, and the temperature limiter are pre-assembled in the chamber door at the factory. The connection to the junction box is made using the two connection cables supplied and the distribution boxes according to the wiring diagram.

Note: The Pt100 is extended with a distribution box. Wiring according to circuit diagram.

- Extend the included PT100 using connecting terminals according to the circuit diagram:
 - Connect the two same colored wires of the PT100 to wires 2 and 3, or
 - Identify the two lines to the resistance: At 20°C, approx. 108 ohms should be measured, these two lines on wires 1 and 2, the last measuring line on wire 3.

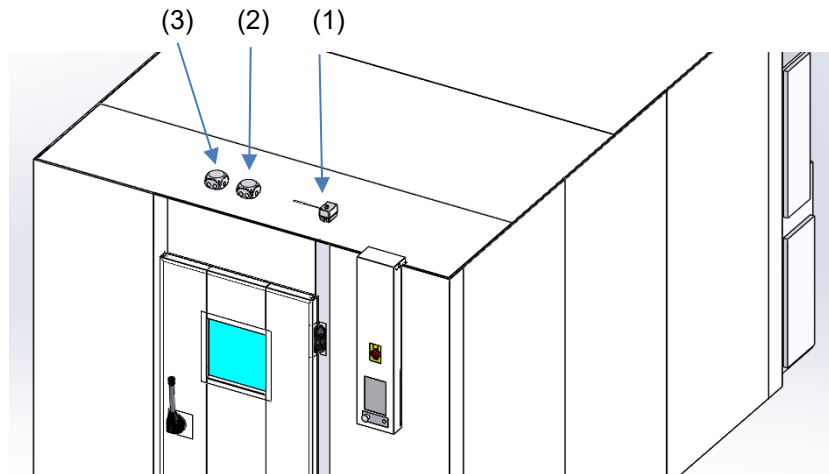


Figure 61: Temperature limiter and distribution box positions

- (1) Temperature limiter
- (2) 230V distribution box
- (3) 24V distribution box

Temperature limiter

From the cable to the light connection, cut a piece for branching to the temperature limiter

The temperature limiter is already connected to the door frame.

Route the cable into the 230 V distribution box and connect it to the cable of the door frame heater according to the circuit diagram. Tip: Cut off a piece of the cable.

Wire the temperature limiter with a short piece of wire (it's easiest to take this from the line to the light) in the junction box according to the wiring diagram. The temperature limiter is looped through and installed in series in front of the heater.

5.16.2 Connecting the chamber light to the junction box

Connect the light to the junction box according to the circuit diagram.

5.16.3 Connection of the conditioner to the junction box

Insert the mains plug of the conditioner into the socket of the junction box.



Figure 62: Connection box (blue) of the junction box

For more information about the connection, see the electrical circuit diagram.

The conditioner must be connected to an earthed electrical connection.

Turn off the main power switch to prevent accidental starting of the conditioner when the power supply is connected.

5.16.4 Connection of the junction box to the customer's power supply

No connection cable is supplied for this purpose; a cable to the junction box must be supplied.

Nominal voltage +/-10% at specified mains frequency	Type of current	Fuse
230 V at 50 Hz 230 V at 50/60 Hz	1N~	16A

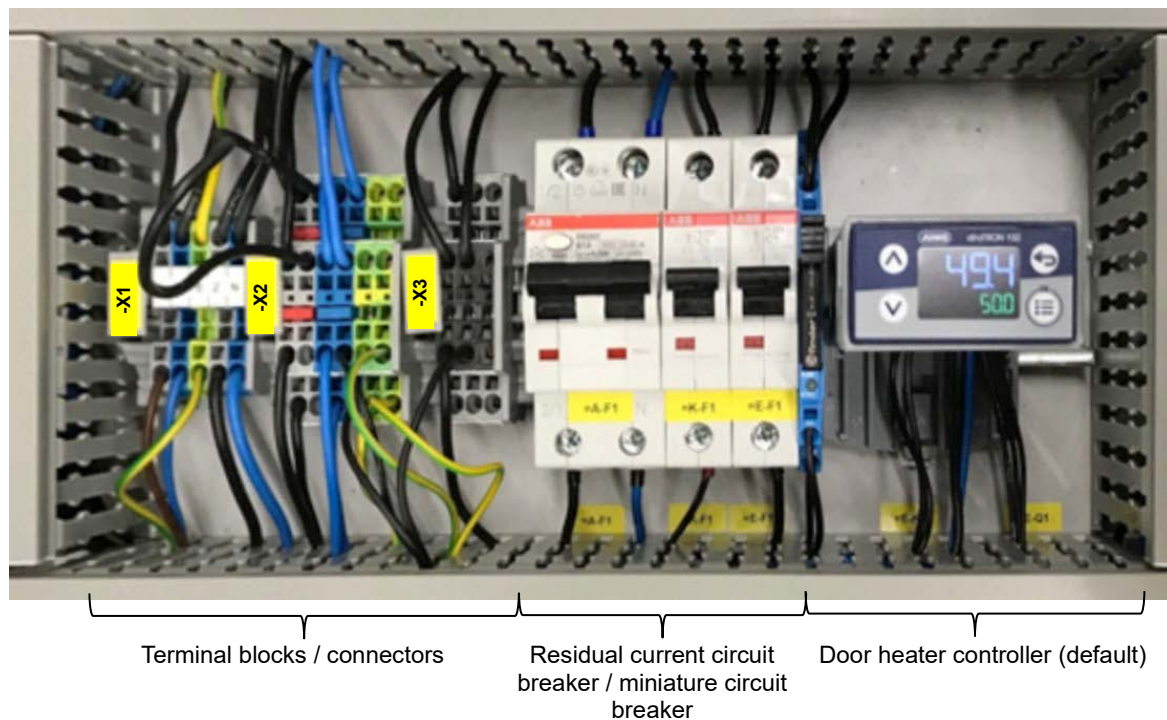


Figure 63: View into the junction box

- Connect the mains connection cable with the conductors L, N, PE according to the circuit diagram to the three free places on the terminal strip -X1.
- The customer's connection must also have a protective earth conductor. Make sure that the connection from the protective earth conductor of the installation site to the protective earth conductor of the unit corresponds to the state of the art.

In addition, provide an additional protective conductor for the primary grounding of the chamber. A separate 6 mm² protective conductor for equipotential bonding (outside the junction box) must also be connected to the central ground connection (see figure).

	 DANGER
	Danger of electric shock due to missing protective earth connection. Fatal electric shock. ➤ Make sure that the mains cables used match and that the electrical protective electrical conductors of the unit and the installation site are securely connected. ➤ Connect an additional protective conductor for the primary grounding of the chamber.

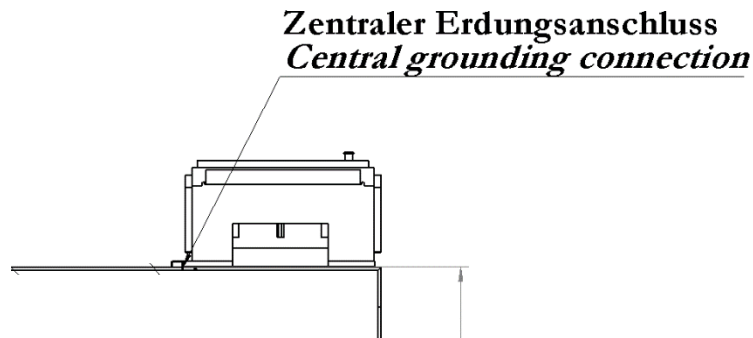


Figure 64: Central ground connection on the junction box (view from above)

- Check the mains voltage before connection and initial commissioning. Compare the values with the data on the type plate of the environmental walk-in chamber (WIC).
- When the chamber is set up for the first time, acceptance must be carried out in accordance with DIN VDE 0113-1 and documented in accordance with the test sheet (chap. 6).

	NOTICE
	Risk of incorrect mains voltage due to improper connection. Damage to the device. ➤ Check the mains voltage before connection and commissioning. ➤ Compare the mains voltage with the type plate data.

- When connecting, observe the regulations specified by the local electricity supply companies as well as the local or national electrical regulations (Germany: VDE regulations).
- Ensure sufficient power protection. We recommend the use of a residual current device in the building. We use a combined fault current/miniature circuit breaker for the entire chamber. Caution: Since the chamber has its own residual current circuit breaker, any existing residual current circuit breaker provided by the customer must be selective.
- Pollution degree pursuant to IEC 10101 2
- Surge category pursuant to IEC 10101 II

See also the operating manual for electrical data.

	The emergency off switch (8) on the front of the environmental walk-in chamber WIC is used for complete disconnection from the power supply system.
---	--

Attention! Voltage from the supply line is still present up to the main power switch / emergency Off switch (also in the connection box on terminal X1 from the supply line).

5.17 Installing the optional access port

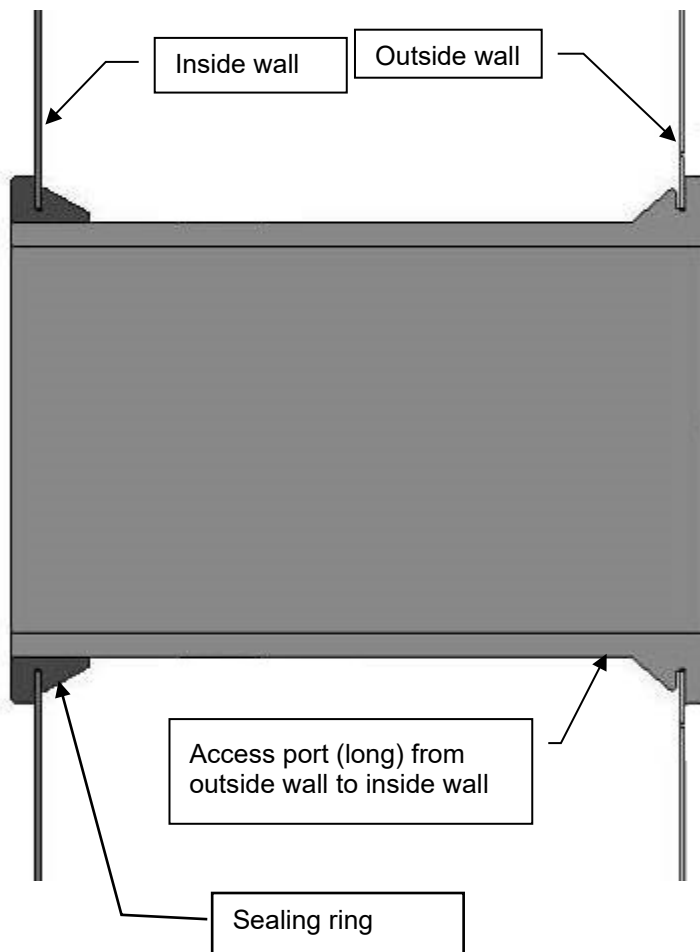


Figure 65: Cross-section of the chamber wall with access port

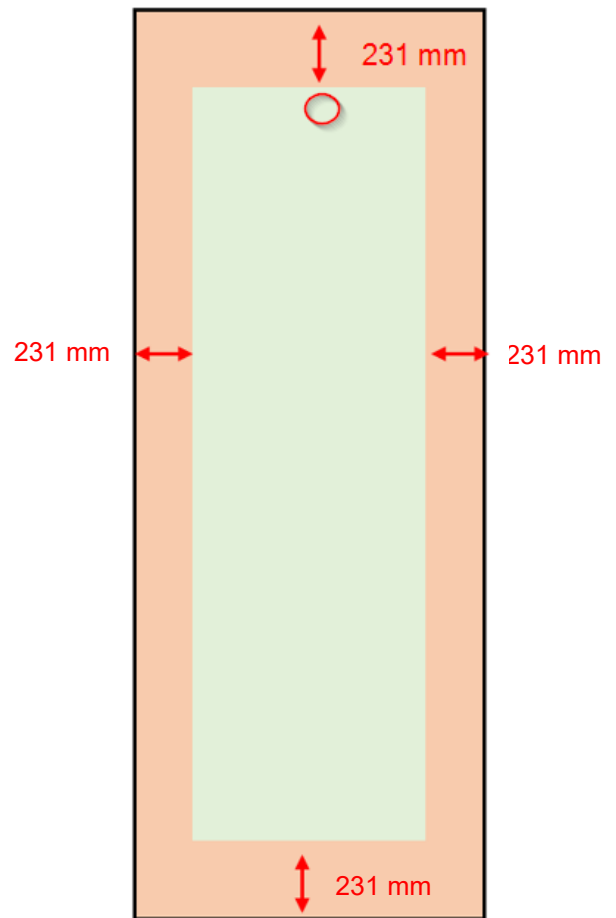


Figure 66: Distance of access port positions from the edge of the wall/ceiling element

 Note the distance of 231mm from the edge of the wall/ceiling element to the center of the hole, see figure above.

 Consider the position of the shelves inside the chamber when choosing the location for the access port.

Proceeding:

Mark and center punch the location of the access port.

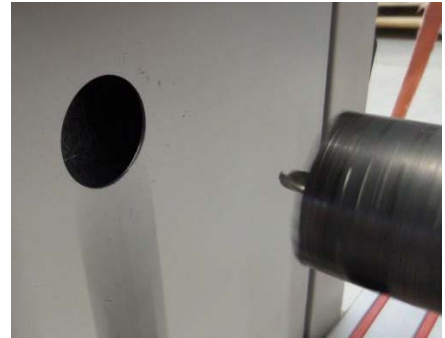


First, pre-drill with a 6 mm drill through the inside and outside wall.



Using a 64mm hole saw, drill a hole in the outside wall first.

Remove the foam behind it, then use the hole saw to drill a hole in the inside wall.



Deburr the edges and seal any bare spots with a paint stick.



Insert the access port and the sealing ring, shorten the access port to suit the wall thickness.



Close the access port with the plug provided.



6. Test sheet

Description	Tester /Date
Assemble chamber according to installation manual 1) Install panels and tighten screws. ☐ 2) Install grounding lugs and cables. ☐ 3) Insert and silicone the cover caps. ☐ 4) Install and tighten the conditioner. ☐ 5) Install air ducts correctly. ☐ 6) Mount and connect the humidity sensor. ☐ 7) Silicone the butt joints of the panels, attach plastic profiles to the floor and ceiling ☐ 8) Function test of light. ☐ 9) Optional: Install shelves and ramp. ☐	
Silicone and seal The transitions of the individual floor and ceiling elements are not silicone-coated. Only the transitions that are provided with a 4mm expansion joint are silicone-coated. ☐ This means: Circumferential on the longitudinal and transverse edges of the floor and ceiling and all vertical joints of the side elements. ☐	
Connect entire chamber electrically according to circuit diagram 1) Conditioner connected to the junction box ☐ 2) Light connected to the junction box. ☐ 3) Heater connected to the junction box. ☐ 4) Control sensor connected to the junction box. ☐ 5) Power cord connected to the junction box. ☐	
Test parameter set of door frame heater OK → Menu ↓ Menu Device info → OK → Version → OK → Version: WIC V0. ☐ Document the current version: V ☐ W:\B-Regler\Regler_diraTRON\Modell_WIC_Tuerrahmenheizung If necessary, install using the USB(A) to Micro-Usb(B) cable and the Jumo setup tool: W:\B-Regler\ARCHIV\Regler_diraTRON\Setup	
Measure resistance of door frame heater Setpoint: 372 Ohm (334 Ohm - 410 Ohm) Actual value: ☐	
Remove protective film The protective film must be removed from the air ducts and panels completely and without leaving any residue. ☐	
Visual check 1 All parts that can be touched during use must be free of burrs. ☐ 2 Completeness of screws and caps in visible area. ☐ 3 Remove film residues. ☐ 4 Check the entire chamber for paint damage, scratches and dents. ☐	
Water and wastewater hoses connected to conditioner according to installation manual	

Description	Tester /Date
Check the door adjustment 1) <u>Function test</u> → Door latch smooth (opening and closing). ☐ 2) <u>Visual inspection</u> → Door adjustment OK, etc. ☐ 3) Door frame correctly mounted, no gap visible. ☐	
Install cable and control sensor correctly: Control sensor plugged in from the left and cable connected through cable tie and bracket. ☐	
Initial testing acc. to <u>DIN VDE 0113-1</u> Follow the test report in accordance with DIN VDE 0113-1 (see below) ☐	
Set temperature limiter and check triggering Set temperature limiter to 45°C. ☐ <u>Triggering for door to be tested:</u> Switch on the heater using the circuit breaker (<u>E-F1</u>) and note the ACTUAL temperature when the controller is triggered (<u>audible click sound</u>), then reset the temperature limiter and set it to 80°C. ACTUAL temperature when triggered: _____ °C	
Function test of entire chamber and power consumption It must be ensured that the door frame heater and the light are switched off via the respective circuit breakers in the junction box (K-F1 and E-F1) during the measurement. Test equipment: Current clamp; measuring point: junction box, on the overall line <u>100% heating:</u> Set target value to 50 °C and 80% r.h. Target 8.1A (7,3A-8,9A) Actual: _____ A <u>100% cooling:</u> Set target value to 5 °C, 40% r.h. Target 5,5A (4,9A-6,1A) Actual: _____ A	
Check type plate and attach logo The information on the type plate corresponds to the size of the chamber. Place the logo above the door in the middle. . ☐	

Description	Tester /Date
Position of type plate The position of the BINDER type plate on the WIC chambers is defined as follows t: In the middle under the controller, see images. Distance to controller: 45 mm (this also corresponds to the type plate height). _____ ☐	
UKCA label 6001-0573 Label to the right of the type plate. Common baseline, distance approx. 5-10mm . _____ ☐	
Set ALL SWITCHES to “Aus” (Off) or “Null“ (zero) Delivery status = all switches are off. _____ ☐	
Service- label 6001-0104 Attach the service label to the right of the type plate. _____ ☐	
Attach grounding label Grounding label 6001–0054 on the grounding terminal of the housing, attach once to the grounding terminal on the door and to all other ground conductors. _____ ☐	
Complete cleaning The interior must be completely cleaned. _____ ☐ Cable ties, etc. must not be left behind. Wipe off any dust with glass cleaner. See 135.00.017 Cleaning schedule. _____ ☐	
Junction box 5001-0055 Scan the supplied test report and enclose it with the documents. _____ ☐	
Documents for the chamber’s continuity test The documents supplied with the chamber with the results of the continuity tests of the individual chamber elements are enclosed with the documents. _____ ☐	

Description		Tester /Date
<u>DIN VDE 0113-1</u>		
Master data Object no. _____ Quote no. _____ Order address / customer no. _____ Place of work Invoice address _____ _____ _____ Tester _____		
Machine Machine ID: _____ Designation: Walk-in Chamber Location: _____ Department: _____ Manufacturer: BINDER GmbH Type/model: _____ Serial number: _____ Inv. no.: _____		
Test Start of test: _____ Performed according to: Initial testing according to DIN VDE 0113-1 Repeat test according to DIN VDE 0105-100 / DGUV Regulation 3 + 4 Measuring device used: _____ End of test: _____ Reason for test: _____ Machine category: _____		

Description	Tester /Date
Inspection	
Supplied customer documentation available and OK (operating manual, installation manual, if applicable manual for optional components). ☐	
Circuit diagram available ☐	
Required certification and, if applicable, certificates, declarations of conformity, etc. ☐	
Unit installation, equipment, conductor cross-sections correspond to the documentation. ☐	
Double terminal assignment for PE not permitted – complied. ☐	
Ground conductor secured against loosening and corrosion. ☐	
PE star point wiring. ☐	
PE, L and N not confused. ☐	
Cover on cable ducts OK. ☐	
Sufficient connection space, cable support rail, attachment of the cable shield. ☐	
Routing of conductors, cables and lines OK. ☐	
Labelling, terminals, terminal strips OK. ☐	
Operating resources OK. ☐	
Operating resources can withstand the influences at the place of use. ☐	
Overload protection elements OK, see chap. 5.16.4. ☐	
Required IP protection class maintained. ☐	
Function of mechanical actuators OK. ☐	
Reserve wires on terminals or insulated. ☐	
Protection by insulating all live parts. ☐	
Contact protection in accordance with DIN VDE 0660–0514 OK. ☐	
No visible damage. ☐	
Testing	
Emergency stop/action in case of emergency OK. ☐	
Locks OK. ☐	
Signaling and display devices OK. ☐	
PG/M threaded connections complete and OK. ☐	
Main power switch/mains disconnecting device OK. ☐	
Protective and monitoring equipment OK. ☐	
Recording	
The test is complete. ☐	
Function and safety test passed without defects. ☐	
The system complies with the recognized rules of electrical engineering. ☐	
No mechanical hazard. ☐	
Next test: _____	
Test cycle (months): _____	
Comment: _____ _____	
Signature	
Tester: _____	

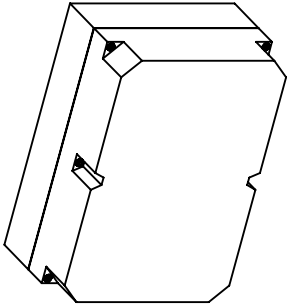
Description	Tester /Date
Category 1 – Safety-relevant defects (Danger to life and limb/immediate need for action!)	
Category 2 – Minor defects (prompt rectification of defects recommended)	
Category 3 – General information and conformity	
Images (illustration of category 1 and 2 defects)	

Description												Tester /Date
Measuring point Name of part	Characteristic	Rated current	Impedance of fault loop Zs	Short circuit current Ik	Low resistance measurement R LOW	Insulation resistance R ISO	Leakage currents	Residual current device (FI/RCD)				Passed
-	-	A	Ω	A	Ω	MΩ	mA	IN (A)	IDN (mA)	mA	ms	0/1
Supply line ZLPE 1												
Supply line ZLN 1												
PE connection												
PE housing												
PE cooling												
PE connection cooling												
RCD												
RCD												
Cooling connection												
PE side wall (connection side)												
PE ceiling												
PE door												
PE floor												
PE wall left												
PE wall right												
PE ceiling inside												
PE temp. sensor												

PositionPosArtMengeEinheitBezeichnung

1		1	Stück	RIT PK9524.000 PK-Klemmgehäuse BxHxT 361x254x165mm
2		1	Stück	RIT PK9550.000 Montageplatte 331x220mm für PK VE=4St.
3		1	Stück	ABB DS201 B13 A30 F/L S-Schalter 1+N 30mA B13A
4		2	Stück	ABB S201-C1 Sicherungsautomat 1A 1-polig
5		1	Stück	Conrad 552650 - VQ ABL Sursum 1561050 Einbau-Steckdose IP54 Blau
6		2	Stück	PHO ST 4 Zugfeder-Durchgangsklemme 4qmm gr
7		2	Stück	PHO ST 4 BU Zugfeder-Durchgangsklemme 4qmm bl
8		1	Stück	PHO ST 4-PE Zugfeder-Schutzleiterklemme 4qmm gn-ge
9		2	Stück	PHO D-ST 2,5 Deckel
10		4	Stück	PHO STTB 2,5 Doppelstock-Zugfederklemme 2,5qmm gr
11		2	Stück	PHO STTB 2,5 BU Doppelstock-Zugfederklemme 2,5qmm bl
12		2	Stück	PHO STTB 2,5-PE Doppelstock-Zugfederklemme 2,5qmm gn-ge
13		4	Stück	PHO CLIPFIX 35 Schnellmontage-Endhalter
14		3	Stück	PHO KLM 3 Klemmleistenmarker
15		1	Stück	JUMO 00680779 702110/8-0000-23/000 JUMO diraTRON
16		1	Stück	JUMO 00688236 702110/701510 Befestigung für Hutschiene
17		1	Stück	FIN 34.81 7.024.8240 Lastrelais schmal 1W 24VDC sensitiv
18		1	Stück	FIN 93.51.7.024 Relaisfassung für Relais 34.51 34.81
19		2	Stück	PLIC KV M20/16 PA 6 Kabelverschraubung M 20 Polyamid lichtgrau kurz
20		2	Stück	PLIC GGM M20 PA 6 Gegenmutter 6-kant M 20 Kunststoff Polyamid lichtgrau
21		3	Stück	PLIC GGM M16 PA 6 Gegenmutter 6-kant M 16 Kunststoff Polyamid lichtgrau
22		3	Stück	PLIC KV M16/09 PA 6 Kabelverschraubung M 16 Polyamid lichtgrau kurz
23		1	Stück	PLIC KV M12 PA 6 Kabelverschraubung M 12 Polyamid lichtgrau kurz
24		1	Stück	PLIC GGM M12 PA 6 Gegenmutter 6-kant M 12 Kunststoff Polyamid lichtgrau
25		1	Stück	SE VCFN-20GE Not-Aus Hauptschalter im Gehäuse IP55
26		9	Meter	LAPP Ölflex Classic 110 5G2,5qmm Trommel
27		9	Meter	LAPP Ölflex Classic 110 3G1,0qmm 100m-Ring
28		7	Meter	LAPP Ölflex Classic 110 3G2,5qmm
29		9	Meter	LAPP Ölflex Classic 110 3x0,5qmm ohne gnge Trommel
30		1	Satz	LICA Verdrahtungskanal
31		1	Satz	LICA Automatenentragschiene
32	Beipack	2	Stück	HEN DK 0404 W Kabelabzweigkasten 1,5-4 qmm 3phasig, 5x 3-Leiter Verbindungsklemm
33	Beipack	1	VE	HEN KHR 01 Kabelrückhalteringe KHR 01
34	Beipack	2	Stück	LAPP SKINTOP CLICK M16 RAL 7035 LGY Kabelverschraubung
35	Beipack	2	Stück	LAPP SKINTOP CLICK M25 RAL 7035 LGY Kabelverschraubung
36	Beipack	2	Stück	LAPP Skintop-DIX-M20250 Mehrfachdichteinsatz M20 2x5mm
37	Beipack	2	Stück	LAPP SKINTOP DIX-DV 5x11 Verschlussschraube

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				Norm:	LEL		
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				Gepr. F/ Appr. F:	AAR		
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						Druckdatum/ printing Date: 15.03.2023	
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Titel- / Deckblatt

Title page / cover sheet

WIC 1 230V

9800-0011

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Firma Company	Binder GmbH
Strasse Street	Im Mittleren Ösch 5
PLZ / Stadt Zip code / city	78532 Tuttlingen
Land Country	Germany
Telefon Phone	+(49) 7462 2005-0
Telefax Fax	+(49) 7462 2005-100
E-Mail E-mail	info@binder-world.com

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		► &BAB Übergeordnete Technologie - Inhaltsverzeichnis Parent Technology - table of contents	1	Inhaltsverzeichnis Table of contents
		► &BAB Übergeordnete Technologie - Inhaltsverzeichnis Parent Technology - table of contents	2	Inhaltsverzeichnis Table of contents
		► &BAC Übergeordnete Technologie - Strukturkennzeichenübersicht Parent Technology - structure identifier overview	1	Strukturkennzeichenübersicht Structure identifier overview
		► &BPC Übergeordnete Technologie - Stückliste Parent Technology - bill of materials	1	Artikelstückliste Parts list
		► &EFS Elektrotechnik - Schaltkreisdokumente Electrical engineering - circuit diagram	1	Schaltschrankübersicht Panel layout
		► &EMA1 Elektrotechnik - Klemmenplan Electrotechnology - terminal diagram	1	Klemmenplan Terminal diagram
		► &EMA1 Elektrotechnik - Klemmenplan Electrotechnology - terminal diagram	2	Klemmenplan Terminal diagram
		► &EMA1 Elektrotechnik - Klemmenplan Electrotechnology - terminal diagram	3	Klemmenplan Terminal diagram
A	Einspeisung / Verteilung / Geräteschutz Power Supply / Protection			
		► &EFS Elektrotechnik - Schaltkreisdokumente Electrical engineering - circuit diagram	1	Einspeisung Power supply
		► &EFS Elektrotechnik - Schaltkreisdokumente Electrical engineering - circuit diagram	2	Potentialausgleich Equipotential bonding

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		▶ &EFS Elektrotechnik - Schaltkreisdokumente Electrical engineering - circuit diagram	1	Türheizung Door heating
F	Verdichter Compressor			
		▶ &EFS Elektrotechnik - Schaltkreisdokumente Electrical engineering - circuit diagram	1	Kälteaggregat Chiller unit
K	Beleuchtung Lighting			
		▶ &EFS Elektrotechnik - Schaltkreisdokumente Electrical engineering - circuit diagram	1	Innenraumbeleuchtung Interior lighting

Strukturkennzeichenübersicht

Structure identifier overview

Anlage Higher-level function	Beschreibung Description
A	Einspeisung / Verteilung / Geräteschutz Power Supply / Protection
E	Wärmetechnik Heat engineering
F	Verdichter Compressor
K	Beleuchtung Lighting

Dokumentenart Document type	Beschreibung Description
BAA	Übergeordnete Technologie - Titel- / Deckblatt Parent Technology - title page / cover sheet
BAB	Übergeordnete Technologie - Inhaltsverzeichnis Parent Technology - table of contents
BAC	Übergeordnete Technologie - Strukturkennzeichenübersicht Parent Technology - structure identifier overview
BPC	Übergeordnete Technologie - Stückliste Parent Technology - bill of materials
EFS	Elektrotechnik - Schaltkreisdokumente Electrical engineering - circuit diagram
EMA1	Elektrotechnik - Klemmenplan Electrotechnology - terminal diagram

& BAC

Parent Technology - structure identifier

Page

1

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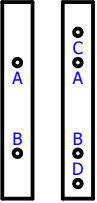
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← &BAC/1

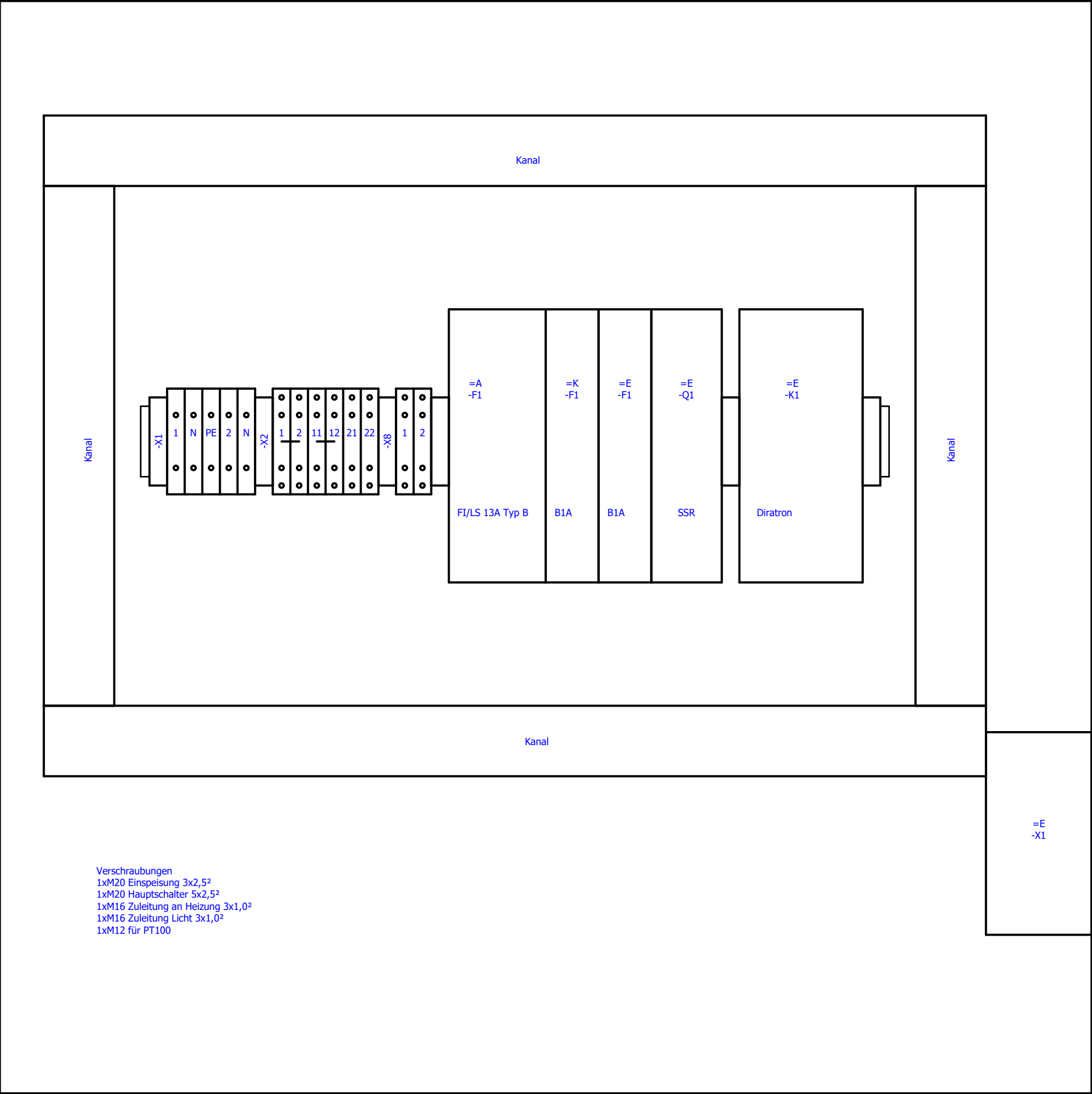
← &BAC/1

Komponenten und Einbaupositionen nur Beispielhaft
PK 9524.000 Polycarbonat-Gehäuse

Klemmenzählweise



- X1; 2 fach 4mm²
- X2; -X8; 4 fach 2,5mm²
- X1:1,2; -X2:11,12; -X8:1,2,3; beige/grau
- X1:N; -X2:21,22; blau
- X1:PE; -X2:21,22; grün-gelb



Verschraubungen
1xM20 Einspeisung 3x2,5²
1xM20 Hauptschalter 5x2,5²
1xM16 Zuleitung an Heizung 3x1,0²
1xM16 Zuleitung Licht 3x1,0²
1xM12 für PT100

Einbauschukosteckdose
analog ABL Sursum 1561050
230 Vac, 16 A, IP 54

Klemmenplan
Terminal diagram

X1																			
Verbindung Connection				Zielbezeichnung Target designation				Klemme Terminal			Zielbezeichnung Target designation				Verbindung Connection				
BMK DT	Bezeichnung Designation	Farbe / Nummer Color / Number	Querschnitt Cross-section	Funktion Function	Einbauort Mounting location	BMK DT	Anschluss Connection point	Nummer Number	Brücke Jumper	Artikelnummer Part number	Funktion Function	Einbauort Mounting location	BMK DT	Anschluss Connection point	BMK DT	Bezeichnung Designation	Farbe / Nummer Color / Number	Querschnitt Cross-section	
								b 1 a			=A		-S1	2	=A-W1		2		
								b N a			=A		-S1	4	=A-W1		4		
=A-W1		1	2,5 mm²	=A		-S1	1	b 2 a			=A		-F1	1	=		BK	2,5 mm²	
=A-W1		3	2,5 mm²	=A		-S1	3	b N a			=A		-F1	3	=		LBU	2,5 mm²	
								b PE a											

X2																			
Verbindung Connection				Zielbezeichnung Target designation				Klemme Terminal			Zielbezeichnung Target designation				Verbindung Connection				
BMK DT	Bezeichnung Designation	Farbe / Nummer Color / Number	Querschnitt Cross-section	Funktion Function	Einbauort Mounting location	BMK DT	Anschluss Connection point	Nummer Number	Brücke Jumper	Artikelnummer Part number	Funktion Function	Einbauort Mounting location	BMK DT	Anschluss Connection point	BMK DT	Bezeichnung Designation	Farbe / Nummer Color / Number	Querschnitt Cross-section	
=		BK	1,5 mm²	=A		-F1	2	b 1 a			=E		-F1	1	=		BK	1,5 mm²	
=				=F		-X1	1	d c			=K		-F1	1	=		BK	1,5 mm²	
								b 2 a											
								d c	.										
=		LBU	1,5 mm²	=A		-F1	4	b 11 a			=E		-K1	N	=		LBU	1,5 mm²	
=				=F		-X1	2	d c											
=K-W1		2 (LBU)	2,5 mm²	=K		-E1	N	b 12 a											
=E-W1		2 (LBU)				-X8.1	3	d c	.										
								b 21 a											
=				=F		-X1	PE	d c	.										

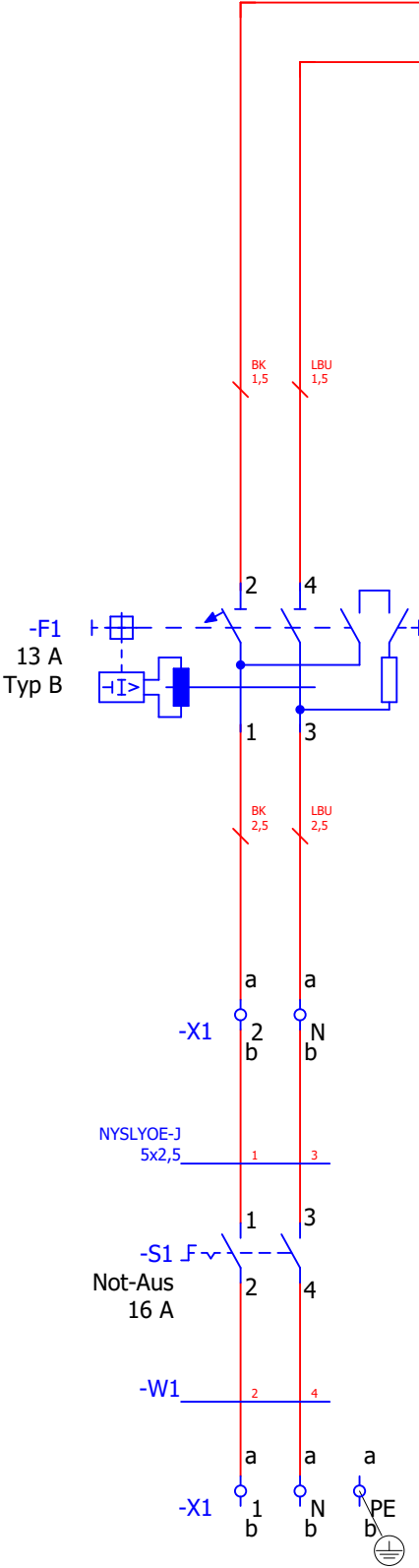
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Klemmenplan

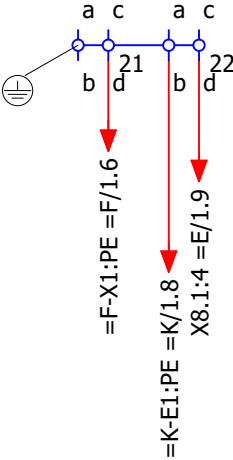
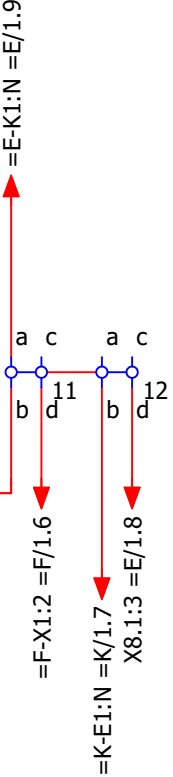
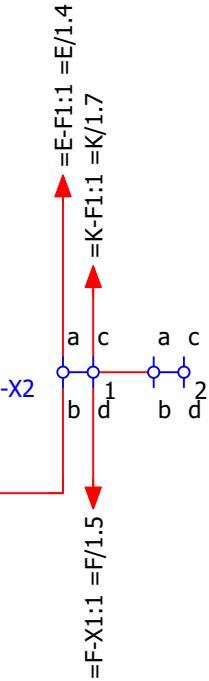
Terminal diagram

X8.1																			
Verbindung Connection				Zielbezeichnung Target designation				Klemme Terminal			Zielbezeichnung Target designation				Verbindung Connection				
BMK DT	Bezeichnung Designation	Farbe / Nummer Color / Number	Querschnitt Cross-section	Funktion Function	Einbauort Mounting location	BMK DT	Anschluss Connection point	Nummer Number	Brücke Jumper	Artikelnummer Part number	Funktion Function	Einbauort Mounting location	BMK DT	Anschluss Connection point	BMK DT	Bezeichnung Designation	Farbe / Nummer Color / Number	Querschnitt Cross-section	
=E-W2		1 (BN)	1 mm²	=E		-S1	1	1					-X8	2:b	=E-W1		1 (BN)	1 mm²	
=E-W2		2 (LBU)	1 mm²	=E		-S1	2	2			=E		-E1	x1	=E-W3		1 (BN)	1 mm²	
=E-W1		2 (LBU)				-X2	12:d	3			=E		-E1	x2	=E-W3		2 (LBU)	1 mm²	
=E-W1		GNYE				-X2	22:d	4					PE	=E-W3		GNYE	1 mm²		
=E-W2		GNYE	1 mm²	=E		-S1	PE												

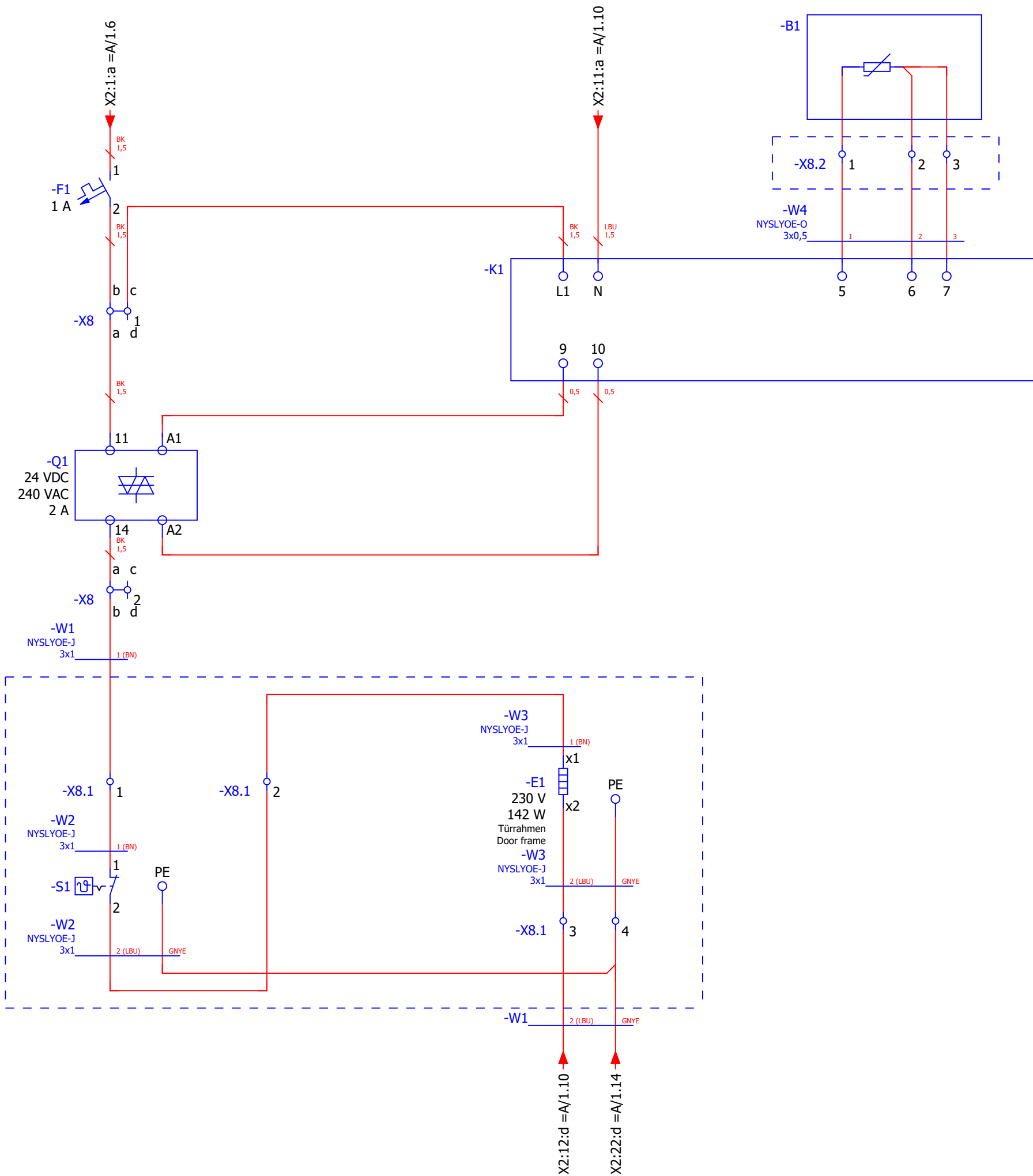
X8.2																		
Verbindung Connection				Zielbezeichnung Target designation				Klemme Terminal			Zielbezeichnung Target designation				Verbindung Connection			
BMK DT	Bezeichnung Designation	Farbe / Nummer Color / Number	Querschnitt Cross-section	Funktion Function	Einbauort Mounting location	BMK DT	Anschluss Connection point	Nummer Number	Brücke Jumper	Artikelnummer Part number	Funktion Function	Einbauort Mounting location	BMK DT	Anschluss Connection point	BMK DT	Bezeichnung Designation	Farbe / Nummer Color / Number	Querschnitt Cross-section
=E-W4		1	0,5 mm²	=E		-K1	5	1			=E		-B1		=			
=E-W4		2	0,5 mm²	=E		-K1	6	2										
=E-W4		3	0,5 mm²	=E		-K1	7	3			=E		-B1		=			



Vom Kunde
Netzeinspeisung
230 V/50 Hz
1/N/PE
min. 3x2,5 mm² oder 3xAWG12
By Customer
power supply
230 V/50 Hz
1/N/PE
min. 3x2x5mm² or 3xAWG12







← =A/2

=F/1 →

