



SBS INSTALLATION AND OPERATING MANUAL

for cold storage and deep-freeze rooms

EN | Last amended: 05/2021

Table of Contents

1. SIGNS AND SYMBOLS	2
2. GENERAL INFORMATION	3 – 4
3. INSTALLATION OF COLD STORAGE AND DEEP-FREEZE ROOMS	4
4. INSTALLATION OF FLOORLESS COLD STORAGE ROOMS	5
5. INSTALLATION OF UNDERFLOOR VENTILATION	6
6. LABELLING OF ELEMENTS	7
7. CONNECTION OF ELEMENTS	8
8. INSTALLATION OF FLOOR ELEMENTS	9
9. INSTALLATION OF WALL PANELS	10
10. PARTITION WALLS	11
11. INSTALLATION OF CEILING PANELS	11
12. INSTALLATION OF THE THRESHOLD PLATE	12
13. ADJUSTMENT OF HINGED DOORS	13
14. SEALING	14
15. FINAL TOUCHES	14
16. ELECTRICAL INSTALLATION	14
17. CARE AND MAINTENANCE	15

1. Signs and symbols



CAUTION / Please note!



Tip / Useful information!

2. General information

DELIVERY

Upon delivery, check that the consignment is complete and in a good condition; note any deviations on the delivery note.

INSTALLATION

Follow the installation instructions. Deviations from these instructions during installation may lead to the technical underperformance of the cold storage or deep-freeze room. Due to manufacturing tolerances, joint dimensions may vary slightly.

Cold storage and deep-freeze rooms may only be used in accordance with their intended purpose, and are usually intended for installation inside. The sole intended purpose of the cold storage and deep-freeze rooms is to store food and other similarly sensitive products.

Please check the physical conditions at the installation site. A high ambient temperature or air humidity may cause condensation. For this reason, there should be a gap of at least 5 cm between the cold storage or deep-freeze room and the wall of the building so that air can circulate between them. Otherwise mould may appear on the wall of the building, as well as on and in the cold storage or deep-freeze room. If condensation appears even if the gap is sufficiently wide, forced ventilation can alleviate the problem. Consider carefully which products are to be stored in our cold storage and deep-freeze rooms. Unpackaged foods, fish, lettuce and flowers in particular may create a lot of moisture. In order to prevent mould growth, be sure to reduce moisture levels as much as possible.

Make sure that cold storage and deep-freeze room floors are installed on even, level ground. Smooth out any uneven patches with a suitable material before installing cold storage and deep-freeze rooms. Doors to the cold storage and deep-freeze rooms may not close properly if floors are installed on uneven ground. Leakages may also occur in this case. Cold storage and deep-freeze room floors will be unable to take the specified weight if they are installed on uneven ground.

OPERATION

Safety-relevant facilities such as the emergency release system of the door lever may not be deactivated when using the room; inspect these facilities regularly and document each inspection. In the case of deep-freeze rooms, it is important to make sure that the pressure equalisation valve works properly. A vacuum is created when the door to the deep-freeze room is closed. If the pressure equalisation valve is not working properly, you may be unable to open the door immediately. If this happens, keep calm and wait a while until you are able to open the door again. To prevent such an occurrence, it is essential that the pressure equalisation valve is fully functional and maintained regularly by an expert (for maintenance details, see Section 17). If the pressure equalisation valve is defective, the vacuum may also damage the deep-freeze room.



DISPOSAL

Comply with the legal provisions when disposing of the packaging material. Only approved electricians may dismantle electrical components, etc.

2. General information

REMARKS

Observe the Accident Prevention Regulations (DGUV Regulation 3). Make sure that the working area poses no risk.

Make sure that parts are protected from damage during storage and installation, and that they are unable to fall off or tip over.

Remove the top element from the pile by lifting it up. Do not slide it across the element below to prevent damage to the surface.

Elements are wrapped in a protective film. Peel back the film around 10 cm from the edge before installation. This will make it easier to seal the elements. If a knife or any other sharp object is used to cut the film, make sure that it does not damage the surface.

3. Installation of cold storage and deep-freeze rooms

The SBS system ensures the quick and easy installation of cold storage and deep-freeze rooms. The practical, technologically efficient tongue and groove joint system, featuring foamed-in-place cam toggle-type fasteners, means that SBS cold storage and deep-freeze rooms can be installed quickly and easily.

Provided, of course, that you comply with the specifications and instructions in this installation manual and familiarise yourself with the assembly drawing provided beforehand.

Each delivery of a cold storage or deep-freeze room comes with an accessory pack. An assembly drawing showing the individual elements is also enclosed with the delivery note.

Be sure to comply with the numbering of the elements.



Do NOT connect electrical components of the cold storage or deep-freeze room to the power supply before you have finished installing it. The electrical installation must be carried out by an electrician (for details, see Section 16).

4. Installation of floorless cold storage rooms

Floorless cold storage rooms come with U-profiles for mounting. The U-profiles are made to measure (length, width, rectangularity). Use nail plugs to fasten the U-profiles onto the ground at the installation site through the cold separation cut or drilled holes. Always seal the area between the U-profile and the ground to prevent the entry of moisture. Detect and level out any height differences. After installing the door and corner elements, attach them to the U-profile using VA cup rivets.



Apply silicone to the bottom side of the U-profile.



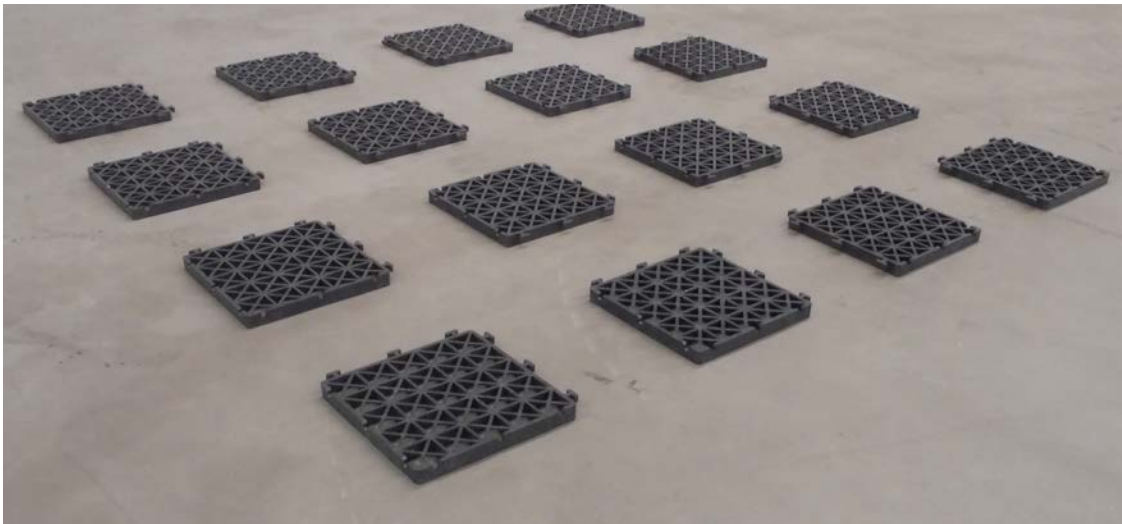
Dowel profiles tightly to the ground.

5. Installation of underfloor ventilation

The standard for ventilating SBS deep-freeze rooms with floor are X 30 underfloor ventilation panels.

Chalk the outline of the deep-freeze room on the assembly floor (see production drawing for dimensions).

Loosely place the underfloor ventilation panels 200 – 300 mm apart. Make sure that the panel exterior and the panel joints are positioned on top of the underfloor ventilation panels. If the ground is uneven, adjust the height of the underfloor ventilation panels to prevent the technical underperformance of the deep-freeze room. Use adjusting plates (not included in the scope of delivery) to adjust the height of underfloor ventilation panels. Start adjusting at the highest point.



6. Labelling of elements

Elements are labelled.

EBN-...	End floor element groove
EBF-...	End floor element tongue
EDN-...	End ceiling panel groove
EDF-...	End ceiling panel tongue
B-...	Middle floor element
D-...	Middle ceiling panel
E-...	Corner element
S-...	Side panel
TS-...	Door side panel
TE-...	Door corner panel
TST-...	Door side partition wall
LE-...	Hatch panel
DE-...	Double corner
SE-...	Special corner
IE-...	Inner corner
ST-...	Side partition wall
SD-...	Side double element (make sure locks are in the right position.)
KS-...	Headpiece
FS-...	Base

7. Connection of elements

Elements of cold storage and deep-freeze rooms are connected by foamed-in-place cam toggle-type fasteners. Before installing, make sure that the elements' toggle-type fasteners are open (i.e. that the hook has disappeared completely in the element). Toggle-type fasteners have a 12 mm tightening path. In the case of deep-freeze rooms, we recommend that all joint gaps are sealed/siliconised.



Note that **final locking** of the cam toggle-type fasteners may only take place once all elements have been installed.



When opening toggle-type fasteners, hooks must be swung back again completely so that they insert flush into the opening of the cam lock.

8. Installation of floor elements

First lay an end floor element (EBN-...).

Then mount all middle floor elements (B-...) and connect them to each other by clockwise rotation of the cam locks using an Allen key.



Ensure horizontal installation at all times. Uneven installation may lead to the problems mentioned in Section 2. General information – Installation (see above).



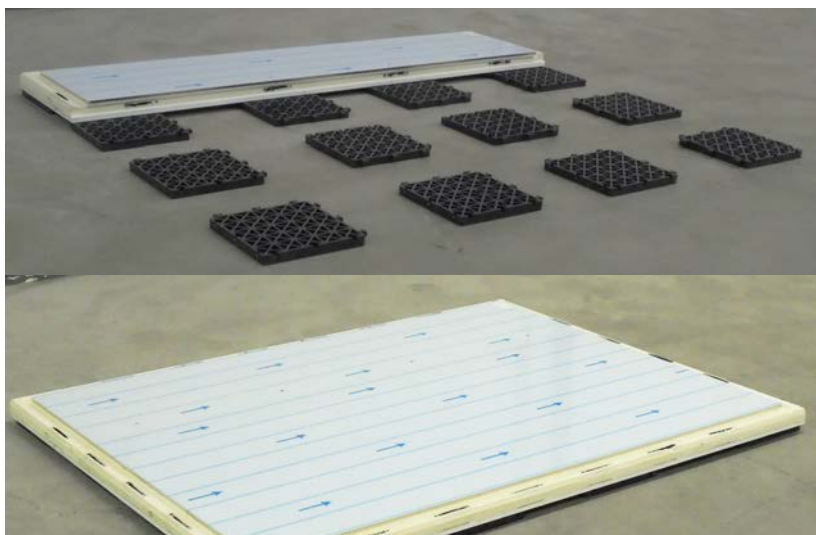
Fixing the end floor element, e.g. to a wall at the installation site, makes it easier to position the middle floor elements. Then position the floor so that the cold storage or deep-freeze room stands around 5 cm from the wall. Note the information provided in Section 2. General information – Installation (see above).



If cold storage and deep-freeze rooms are to be cleaned using a damp cloth or used for storing liquids, we recommend that all joint gaps are sealed/siliconised.



Always peel back the protective film around 10 cm from the outer edges of the element before installing. This is important for ensuring proper sealing, after which the protective film can easily be removed entirely.



9. Installation of wall panels

When installing wall panels, always start with a corner element (E-...).

All other side panels (S-...) are installed in the order shown in the assembly drawing (numbers printed on the bottom foam edge of the panel).

The last wall panel to be installed should be a corner element (E-...).

Unless otherwise stated, lock holes are always on the inner side of the panel.



Use silicone to glue together door side (TS-...) and door corner (TE-...) panels.
Door elements (TS-... and TE-...) are installed the same way as side panels.



Ensure that wall panels are perpendicular to floor elements, otherwise it will not be possible to install the ceiling properly.



When fitted loosely, it is easy to adjust the position of elements, if necessary.



Cam locks should not be tightened completely at this point, because it would make the remaining installation work more difficult.



In the case of deep-freeze rooms, we recommend that all gaps are sealed/siliconised, because a difference in vapour pressure may cause condensation.



10. Partition walls

For partition walls, a groove the width of the thickness of the partition walls is worked into the floor elements, ceiling panels and wall panels. Install the partition wall elements according to the positions shown. Tongue and groove joints with turnbuckles are intended for perpendicular wall connections.



The hooks of toggle-type fasteners emerge from the top on one side, and from the bottom on the other side.

The floor and the ceiling connections come without turnbuckles, and must be sealed with silicone during installation.

Seal as described for the side elements. To ensure the permanent adhesion of silicone, provision is made for a gap of approx. 3 mm between the wall and the floor and between the wall and the ceiling.

The food-safe silicone included in the scope of delivery inhibits the growth of fungi.

11. Installation of ceiling panels

First install an end ceiling panel (EDN-...) in the position shown in the drawing. Then insert the middle ceiling panels (D-...).

Note that piggy-back cooling devices need to be inserted before the ceiling can be installed.

There are various ways to insert the last end ceiling panel (EDF-...).

A

Position the last middle ceiling panel (D-...) and the end ceiling panel (EDF-...) in the shape of a roof at the joint and lower them slowly into the tongues.

B

Loosen the front side panels (S-...) enough to be able to insert the end ceiling panel (EDF-...) horizontally. The side panels (S-...) are finally installed by lifting the end ceiling panel (EDF-...) slightly.



When fitted loosely, it is easy to adjust the position of elements, if necessary.



In the case of deep-freeze rooms, we recommend that all gaps are sealed/siliconised, because a difference in vapour pressure may cause condensation.

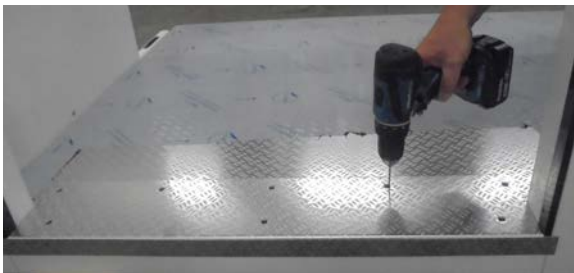
12. Installation of the threshold plate

A threshold plate is used for cold storage and deep-freeze rooms with floor elements. During installation, place and align the threshold plate mid-way between the reveal. After checking for exact fit, apply silicone liberally to the threshold plate to prevent the entry of moisture. Insert the mounting screws provided into the countersunk holes.

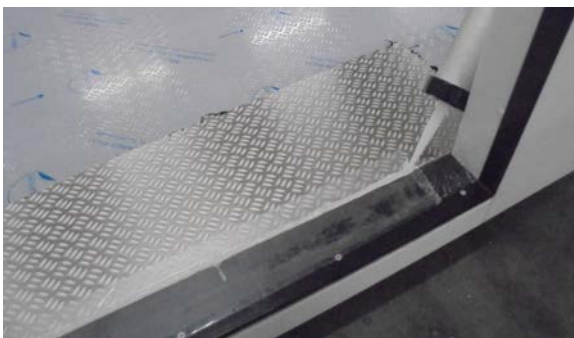


CAUTION: Do not drill any additional holes in the reveal (there may be heating cables underneath it that could be damaged.).

Smooth and wipe off any excess silicone.



Place the threshold plate in the doorway and mark the holes in the threshold plate on the floor element (3 mm).



Remove any drilling chips, and use silicone to seal the joint between the floor element and the wall element.

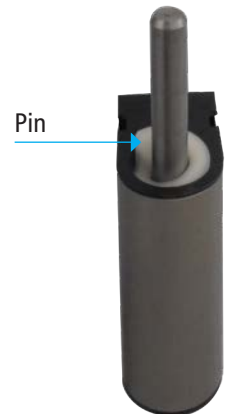


Glue the threshold plate securely (wipe off any excess silicone after installation).

13. Adjustment of hinged doors

HEIGHT ADJUSTMENT

- Remove the door leaf
- Raise the cylindrical pin and turn it in the frame part of the hinge



-
- Door DIN with left hinge: turning the pin clockwise will raise the door
 - Door DIN with right hinge: turning the pin clockwise will lower the door
 - Remount the door leaf
 - Note: If the door is adjusted too high, the inner shell of the door will hit the frame at the top
 - If the door is adjusted too low, it will drag too much against the floor seal
 - CAUTION: Do not turn the cylindrical pin too far because it may block the door

MAKING THE DOOR FIT MORE SNUGLY

- Remove the door leaf
- Re-align the frame part of the hinges using the black, rectangular underlay plates (not included in the scope of delivery)
- Remount the door leaf

IF THE DOOR LEAF SAGS

- Remove the door leaf
- Use the black, rectangular underlay plates (not included in the scope of delivery) to align the door leaf hinges
- Remount the door leaf

14. Sealing

Our system allows for deep-freeze rooms, in particular, and very humid cold storage rooms to be sealed with silicone after installation. To ensure the permanent adhesion of silicone, provision is made for a gap of approx. 3 mm between the wall and the floor and between the wall and the ceiling. The food-safe silicone included in the scope of delivery inhibits the growth of fungi.

Sealing cavities are maintenance joints that need to be checked and maintained at regular intervals, depending on use.

After installing the cold storage room, let it air for around one day.

15. Final touches

Remove protective foil from the elements and dispose properly. Press lock plugs into lock holes using the plugs provided.

Check that the door fits snugly. The door hinges rise, i.e. the door leaf lifts slightly when opened. When the door is closed, the door leaf is lowered and the threshold seal makes the system airtight.

16. Electrical installation

Electrical installations such as frame heaters, lighting, pressure equalisation valves and cooling devices may only be connected by an electrician.

Electrical devices must be checked in accordance with DGUV Regulation 3 (formerly Health and Safety Regulation BGV 3A [Section 5 Tests]).

Cooling units may only be installed, maintained, repaired and decommissioned by a specialist.

17. Care and maintenance



When cleaning cold storage and deep-freeze rooms, switch off the refrigeration unit, disconnect electrical equipment (e.g. lighting and frame heaters) from the power supply, and make sure they cannot be switched back on. Only reconnect components to the power supply after cleaning has been completed, otherwise there is risk of electrocution.

CLEANING:

Steam cleaners and high pressure cleaners may not be used to clean the cold storage and deep-freeze rooms. They would affect and damage surfaces, joints and any electrical components.

Do not pour water into the cold storage and deep-freeze rooms. The floors are not suitable for jet water or accumulations of water.

Use commercial cleaning agents that do not harm surfaces to clean the cold storage and deep-freeze rooms. Always wipe dry the rooms and floors. Do not use a microfibre cloth. Do not use scouring agents.

SURFACES OF THE COLD STORAGE OR DEEP-FREEZE ROOM:

Use soapy water to clean coated galvanised steel plate (usually in RAL 9010 white). Wipe with a damp cloth, then wipe dry.

CHROMIUM-NICKEL STEEL (CN S 1.4301):

Clean using a stainless steel cleaner (follow the instructions of the cleaning agent manufacturer). Wipe the inside of the cold storage or deep-freeze room, let it dry and air well.

SEALING:

Use a mild cleaning agent or soapy water to wipe down the door seal, and rub dry.

REGULAR MAINTENANCE (EVERY SIX MONTHS):

- Cooling devices need to be maintained regularly by a refrigeration specialist.
- Check that the door seal fits snugly; if damaged, have it repaired as quickly as possible.
- Check to see whether frame heaters and pressure equalisation valves become warm. If this is not the case, have them repaired by an expert immediately.
- Do not block pressure equalisation valves from the inside or outside..

Important note: It is particularly important that the pressure equalisation valve of deep-freeze rooms works properly. A vacuum is created when the door to the deep-freeze room is closed. If the pressure equalisation valve is not working properly, you may be unable to open the door immediately. If this happens, keep calm and wait a while until you are able to open the door again.



- Check that the door latch and emergency release work properly.
- Check that the door hinges are firmly in place and tighten screws if necessary. (Each door hinge is mounted with two screws. Only one can be tightened if the pivot has been removed.)
- Have damage to paintwork repaired by an expert immediately to avoid corrosion.
- Check that silicone joints are intact and have them repaired if necessary.