

Assembly of CELLTHERM Coldrooms

Coldrooms by CELLTHERM consist of frameless, self-supporting modular panels. All panel edges consist of male and female foam profiling, stepped at halfway and can even be assembled in a mirror-inverted manner, preventing incorrect mounting and guaranteeing accurate panel line-up. The foam-to-foam camlocked panels assure tight joining and structural strength preventing ingress of moisture. In addition, the integrated cam locks enable a fast assembly of the coldroom.

As assembly errors can only be rectified by means of lengthy procedures, please make sure that you strictly observe the following instructions. The instructions apply to all insulation thicknesses.

Preparation

Please verify by means of the included coldroom diagram that all components have been delivered. Each individual panel is numbered by the manufacturer in accordance with the following code:

Identification	Meaning
W	= Wall panel
WE	= Wall-corner panel
WEE	= Wall-corner-corner panel
WO	= Wall panel for cell without floor
BK	= Floor panel complete
BM	= Floor center
BE	= Floor panel end/beginning
BEO	= Floor panel top/end/beginning
BEM	= Floor panel center/end/beginning
BEU	= Floor panel bottom/end/beginning
BMO	= Floor panel center/top/bottom
BMM	= Floor panel center/center
DK	= Ceiling panel complete
DM	= Ceiling panel center
DE	= Ceiling panel end/beginning
DEO	= Ceiling panel top/end/beginning
DEM	= Ceiling panel center/end/beginning
DEU	= Ceiling panel bottom/end/beginning
DMO	= Ceiling panel center/top/bottom
DMM	= Ceiling panel center/center

In addition, this code also includes the panel-specific number that details the thickness of the insulation as well as the width/height of the panel.

Installation

The installation is generally performed from the inside to the outside. Corner elements are an exception. They can also be installed from the outside to the inside. The 8 mm hexagonal wrench included in the delivery is used for firmly connecting the integrated cam locks. Slight hammer blows at the hexagonal wrench simplify the positioning of the wrench.

Important:

Prior to starting the installation, verify that the installation space is suitable for holding the coldroom (interior height!).

Assembly

Always start with the installation of the floor panels. For coldrooms without floor: Start by attaching the U profile on the structural ground.

Coldrooms without Floor

The U profile holds the wall panels. Use a level to verify the flatness of the ground. In cases of bumps, determine the highest point. Use this point to start the compensating work. The U profile must be entirely level under all circumstances to prevent problems during the following steps of the installation of the coldrooms. We recommend to initially attach the U profile in a level manner on the ground. Individual panels are to be leveled by means of underfilling if necessary. Ensure that all angles align at 90° and the U profile is fixed to the ground at intervals of 30 to 40 cm.

Coldrooms with Floor

Before Installation

Generally, we recommend underfloor aeration by means of underfloor aeration rings. The rings are made of plastic; their diameter is 210mm. The rings always come on the same pallet as the panels. They enable the fast assembly of the floor panels.

Please take care that the floor panels are put onto the ridge of the upper side of the ring. In addition, the floor space onto which the coldroom is to be placed, must be absolutely even and free of residual materials.

Installation of the floor with underaeration rings

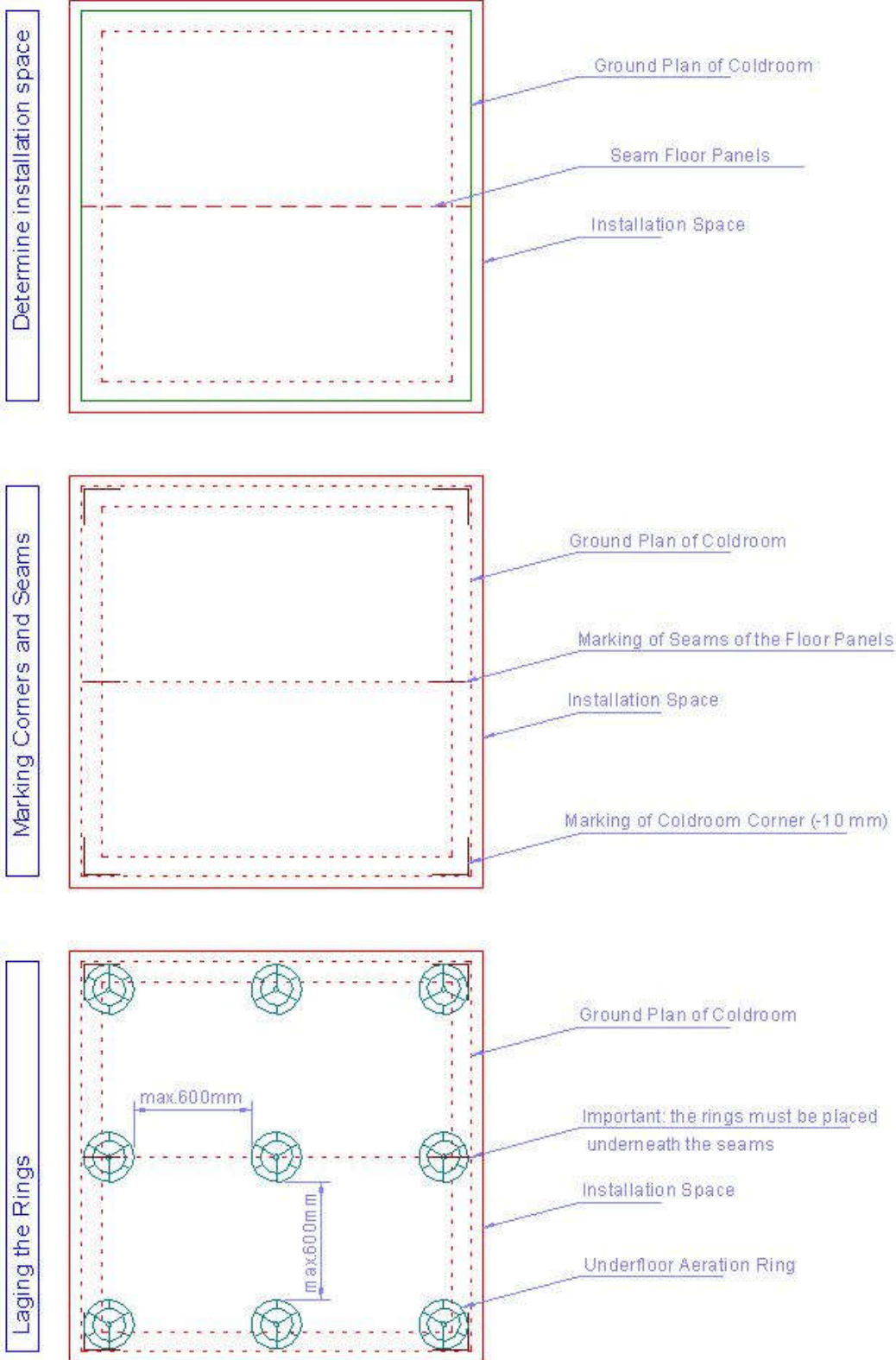
1. Mark the outline of the coldrooms by means of a marker or chalk on the ground of the installation space. Remember to maintain a distance of the coldroom to any adjacent walls of the installation space (not less than 50 mm all around).
2. Make sure that the ground is strong enough, entirely level and flat.
3. In cases of bumps, determine the highest point and use it as origin for the aeration rings (if applicable).

4. Put the first ring on the highest point.
5. Drill a whole through the channel in the center of the ring into the concrete ground by using a 5 mm driller.
6. Push a suitable dowel (S 5) through the ring's channel into the drilling.
7. Now push a nail through the ring's channel, or use a full-countersunk screw in order to fix the ring to the concrete floor.
8. Now align the other rings to the first ring, and fix them as described under 5.-7. Level out differences by using metal sheets or similarly suited materials.
- 9. Important: Place the rings according to the following sketch (see next page). The maximum distance between two rings shall not exceed 600 mm.**
10. Now place the floor panels onto the rings, and install the coldroom according to the installation guideline.

Installation of the floor without underfloor aeration rings

1. We generally recommend the use of underfloor aeration rings in order to improve air ventilation around the coldroom and to prevent the accumulation of condensing water.
2. Mark the outline of the coldroom by means of a marker or chalk on the ground of the installation space. Remember to maintain a distance of the coldroom to any adjacent walls of the installation space (not less than 50 mm all around).
3. Make sure that the building's ground is strong enough, entirely level and flat.
4. It is absolutely necessary to level out wrinkles in the building's floor.
5. It is advisable to start the installation with the floor panels at the access/door side of the coldroom for reasons of practicality.
6. After that, assemble the floor panels in accordance with the plan of the coldroom. Tighten the camlocks clockwise to the stop position using the 8 mm hexagonal wrench included in the delivery.
7. After the floor panels have been assembled, once again verify their horizontal arrangement by means of a level. Adjust by wedging, if necessary.

Installation with underfloor aeration rings



Assembly of the Wall Panels

Assemble exactly in accordance with the plan of the coldroom!

Always proceed from the inside to the outside. We recommend to start at the left front corner and proceed to the right in the following sequence: left wall – rear wall – right wall. Tighten the outside locks of the corner panels in counter-clockwise direction.

As soon as these coldrooms walls are assembled, continue with the assembly of the left front side and simultaneously install the door. Always make sure that the panels are evenly spaced. If cells exhibit interior measurements exceeding 330 cm, two or more panels are arranged on top of each other. In that context, the lower ring of panels must be entirely completed prior to adding the upper ring.

Partition Walls

Install the partition wall prior to installing the outer and/or side panels.

Attention

If the exterior dimensions of the coldrooms are reasonably close to the dimensions of the installation space, generally preassemble the two rear corners and push them as complete corners to the rear! This is important because each corner connection must be locked twice from the outside.

Assembly of the Ceiling Panels

Ceiling without Ceiling Support

Please observe the panel sequence; refer to the coldroom diagram.

Cells with Ceiling Support (Ceiling Carrier)

1. Screw or bolt the carrier consoles to the wall panels. Bolting requires a pilot hole with a diameter of 3.5 mm. Minimum distance to vertical seams = 4 cm
2. Fit the ceiling support
3. Complete assembly in accordance with the plan of the coldroom

Coldrooms with Ceiling Support (Ceiling Suspension)

1. Attach the mounting rail to the provided ceiling panels (refer to the plan of the coldroom). Use the threaded nylon bolts included in the delivery for the attachment.
2. Test the load-bearing capacity of the mount at the structural ceiling prior to the attachment.
3. Connect the coldroom ceiling and the structural ceiling in a vertical manner by means of the tensioning cable.
4. Complete assembly in accordance with the plan of the coldroom

Special Accessories

Deliveries of sliding doors and/or doors of special dimensions include separate assembly instructions.

Comments

1. Remove the protective foil only immediately prior to the initial operation of the coldrooms to prevent scratches.
2. If the coldroom will be used for meat, the seams must be sealed with silicon rubber.
3. In cases of freezers, do not forget the pressure relief valve!
4. The white sealing plugs included in the delivery are used for walls and ceilings, the grey ones for stainless steel and GFK floors.