



Installation manual

Garden cellar 130 × 160



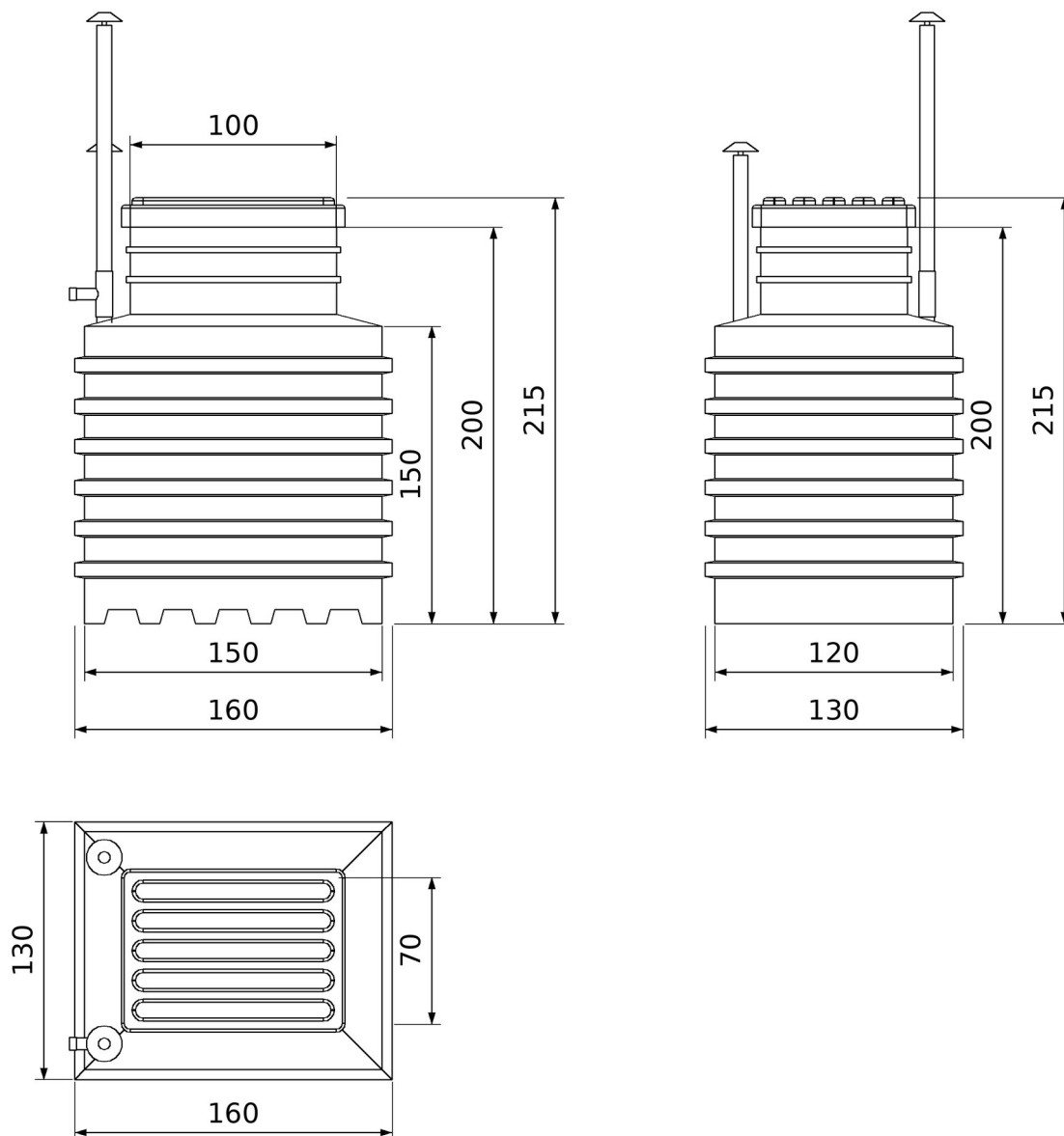
1. Intended use and product description

The Natural Fridge garden cellar 130 × 160 is a ready-made plastic cellar with a vertical entrance for storing vegetables, fruit, drinks, preserves and other packaged food. The cellar is supplied fully ready for installation in the ground.

The body is made by rotational moulding from food-grade polyethylene as a one-piece structure and is strengthened with stiffening ribs. Inside there is a strong steel frame, which also reinforces the walls of the body. The body needs no additional waterproofing or corrosion protection.

The entrance is vertical, measuring 70 × 100 cm, and is closed by an external plastic lid with a lock. Inside there are three shelf levels, a floor of moisture-resistant plywood and a folding telescopic ladder 2 m high. Natural ventilation — two Ø75 mm pipes: a 1.0 m supply pipe and a 1.5 m extract pipe. A rechargeable LED torch is supplied for lighting.

Dimensioned drawing



Garden cellar 130 × 160 — three views, dimensions in centimetres

Actual dimensions may differ from those shown on the drawing by ±3 % due to shrinkage of the polyethylene.

Main dimensions

Parameter	Value
Body dimensions, length × width	160 × 130 cm
Height to the top of the entrance	200 cm
Height including the external lid	215 cm
Entrance opening	70 × 100 cm
Internal volume	3.0 m ³
Shelves	3 levels, area 2.5 m ²
Ventilation pipes	extract Ø75 mm — 1.5 m; supply Ø75 mm — 1.0 m
Pit, length × width × depth	200 × 170 × 205 cm
Weight of the body	approx. 350 kg

Caution

The ground level over the cellar must be below the top of the entrance. Do not place large stones over the body. When laying paving over the cellar, do not use a vibrating plate compactor.

2. Scope of delivery

- Cellar body with steel frame — 1 pc
- Shelves of moisture-resistant plywood — 3 levels
- Floor of moisture-resistant plywood — 1 set
- Folding telescopic ladder, 2 m high — 1 pc
- External plastic lid with lock — 1 pc
- Ventilation pipe Ø75 mm, 1.5 m, with cowl — 1 pc
- Ventilation pipe Ø75 mm, 1.0 m, with cowl — 1 pc
- Tee 75 × 50 × 75 mm for the cable entry — 1 pc
- Rechargeable LED torch — 1 pc

Not included in the delivery

Dry concrete, XPS insulation, geotextile, sand and soil for backfilling.

Earthworks, crane or loader crane for setting the body in place.

3. Installation and materials required

The lower part of the cellar is buried about 1.95 m below ground level. At this depth the body is subjected to high earth pressure. It is higher still with a high groundwater level and in clay soils, which move when they freeze. Therefore install the cellar strictly in accordance with this manual. Before starting work, establish the groundwater level and the soil type on the site.

3.1. Materials per unit

Material	Quantity
Soil excavated from the pit	7.0 m ³
Dry concrete for the bedding layer 200 × 170 × 5–10 cm	0.17–0.34 m ³
Dry concrete around the body up to 58 cm high	0.95 m ³
Dry concrete, total	approx. 1.5 m ³
XPS 50 mm — entrance, top of the body, walls 60 cm down	7.09 m ² — 10 boards 0.6 × 1.2 m
Geotextile or heavy-duty membrane	approx. 11 m ²
Sand for backfilling	approx. 1.2 m ³
Light topsoil over the insulation	approx. 0.8 m ³

The quantities are taken from the 3D model of the product and include no allowance for waste. Add 5–10 % when ordering.

3.2. Dry concrete

Use ready-mixed semi-dry (dry) concrete of class C8/10–C12/15 (GEN1–GEN2 / ST1–ST2). The mix is placed in layers; each layer is evenly wetted with water and compacted so that the dry concrete gains strength faster.

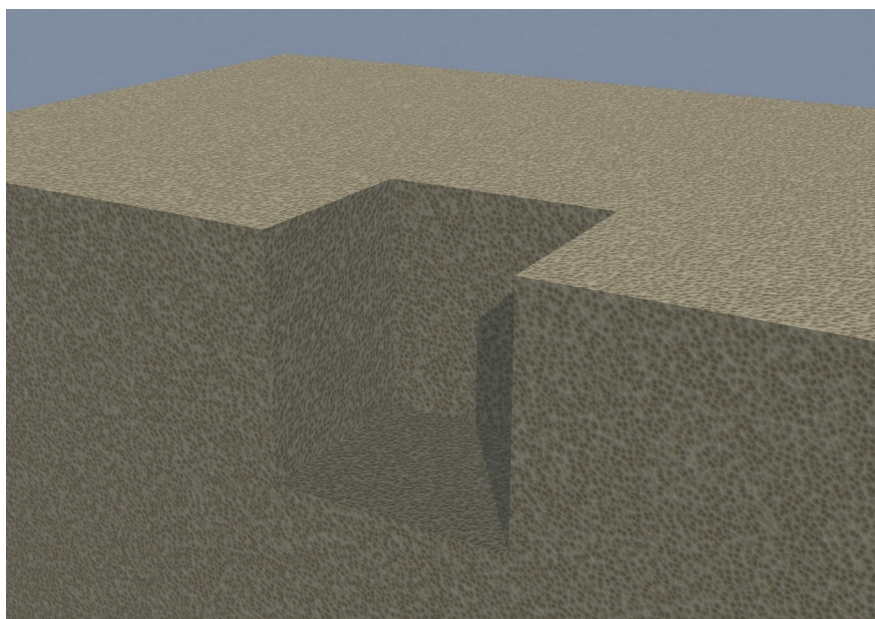
3.3. Tools and safety

Construction machinery must not be used within 1 m of the body when backfilling the cellar. No vehicle traffic is permitted within 1 m of the cellar around its entire perimeter. Compact the backfill next to the walls with hand tools only.

3.4. Installation steps

Step 1. Pit

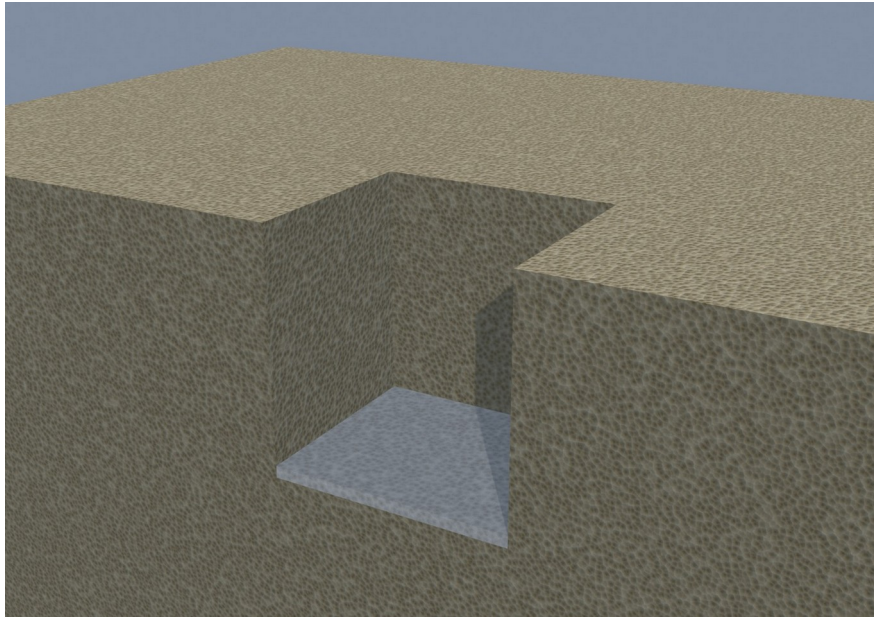
The pit measures 200 × 170 cm at the bottom, with a depth of 205 cm from ground level for a 10 cm bedding layer. The pit is 20 cm larger than the body on every side. This depth gives a burial in which the bottom edge of the external lid stays about 5 cm above ground level, so that rain and meltwater cannot enter the cellar. Keep the pit walls vertical — this makes the dry concrete surround easier. Volume of excavated soil about 7.0 m³.



Step 1. Pit 200 × 170 cm, depth 205 cm

Step 2. Dry concrete bedding layer

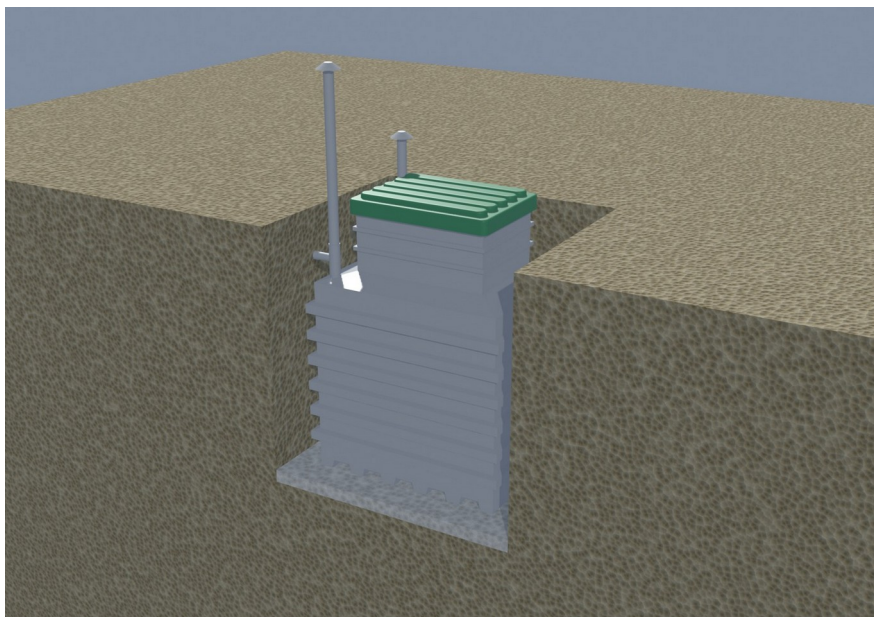
The bottom of the pit is levelled horizontally and a 5–10 cm dry concrete bedding layer is laid over the whole area of the pit. No reinforcement is needed. The bedding layer is compacted and levelled. Dry concrete required — 0.17–0.34 m³.



Step 2. Dry concrete bedding layer 5–10 cm

Step 3. Setting the body

The body is lowered onto the bedding layer and placed in the centre of the pit. Check that the body is level.



Step 3. Body placed on the bedding layer

Step 4. Ventilation

Both Ø75 mm ventilation pipes stand at the edges of the end of the body, behind the opening lid. The pipes are fitted vertically into the spigots on the top surface of the body and closed with cowls.

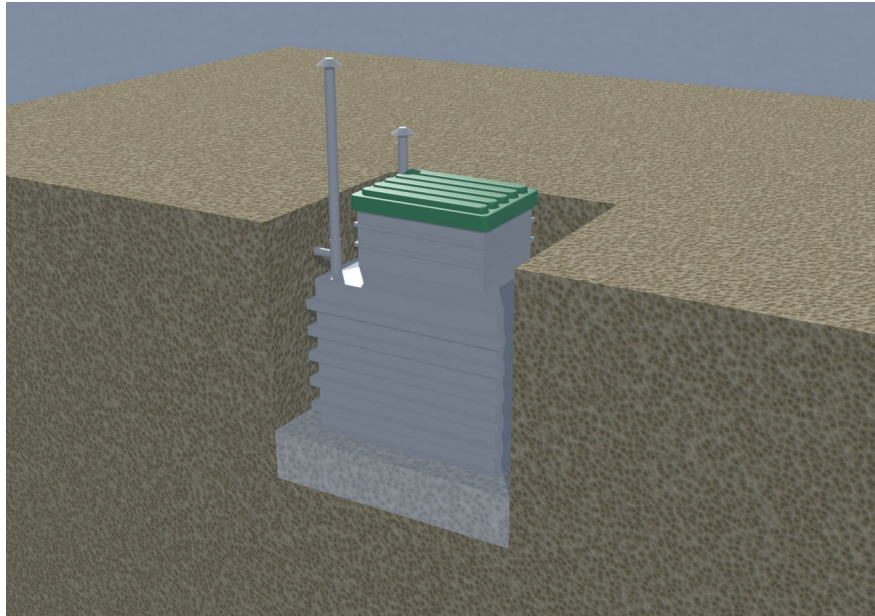
The extract pipe, 150 cm high, projects about 1 m above ground level and removes air from the upper part of the cellar. A 75 × 50 × 75 mm tee is fitted at its base: the electrical cable is led into the cellar through its side branch. The supply pipe, 100 cm high, projects about 0.4 m above ground level and brings fresh air into the cellar.

In winter during severe frost (below –25 °C) and in summer during hot weather (above +30 °C), restrict the

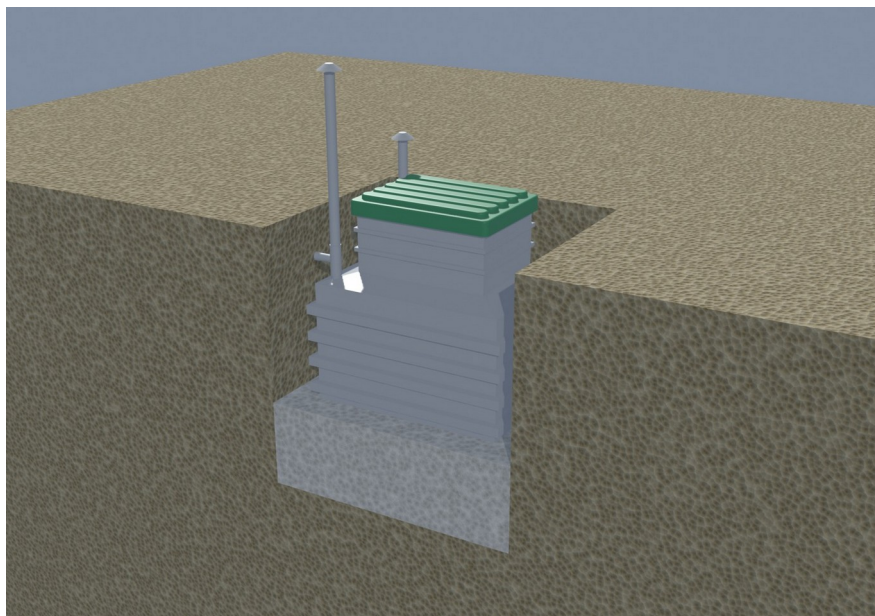
air intake by partly closing the supply pipe. Insulating the extract pipe is recommended to prevent condensation forming inside it.

Step 5. Dry concrete surround to the body

A dry concrete surround to the lower part of the body is mandatory when installing this cellar: it counteracts the uplift force of groundwater. The body is surrounded on all sides with dry concrete in 25–30 cm layers; each layer is wetted with water and compacted. The dry concrete around each wall must be at least 20 cm thick. The surround is taken up to about 58 cm from the bottom of the body. Quantity required — 0.95 m³.



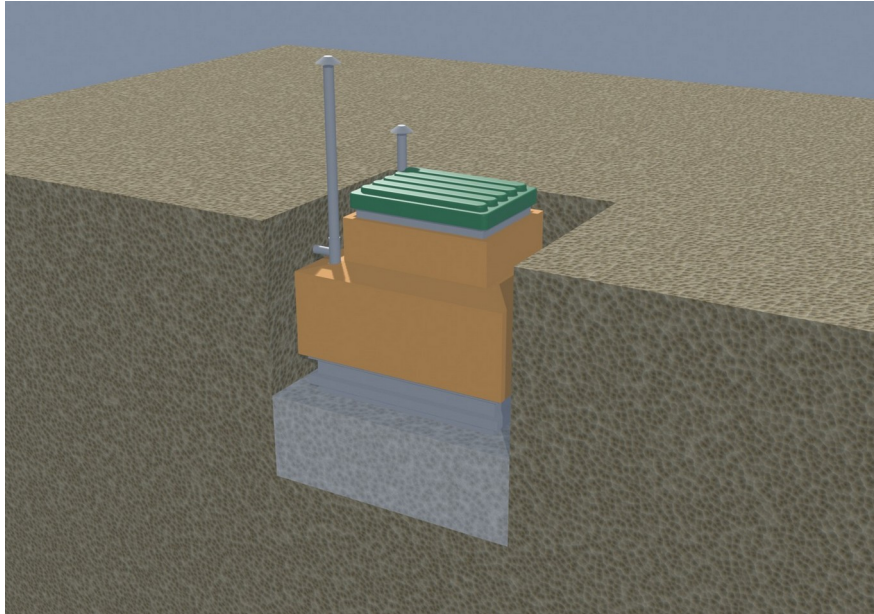
Step 5. First layer of dry concrete, 30 cm



Step 5. Dry concrete surround up to 58 cm high

Step 6. Insulation

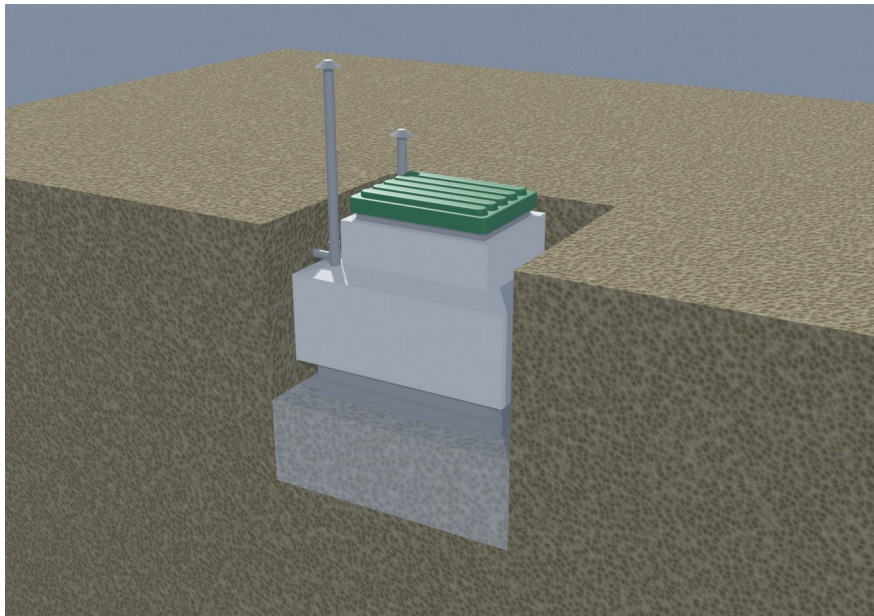
To reduce temperature fluctuations inside the cellar and spread the soil load on the body, the cellar is insulated with 50 mm extruded polystyrene (XPS). The side walls of the entrance, the whole top surface of the body and the side walls of the body are insulated — recommended 60 cm down from the top surface. The top boards cover the end faces of the side boards, and holes are cut in the board around the ventilation pipes. Total 7.09 m², 10 boards 0.6 × 1.2 m.



Step 6. Insulation of the entrance, top and walls 60 cm down, XPS 5 cm

Step 7. Geotextile

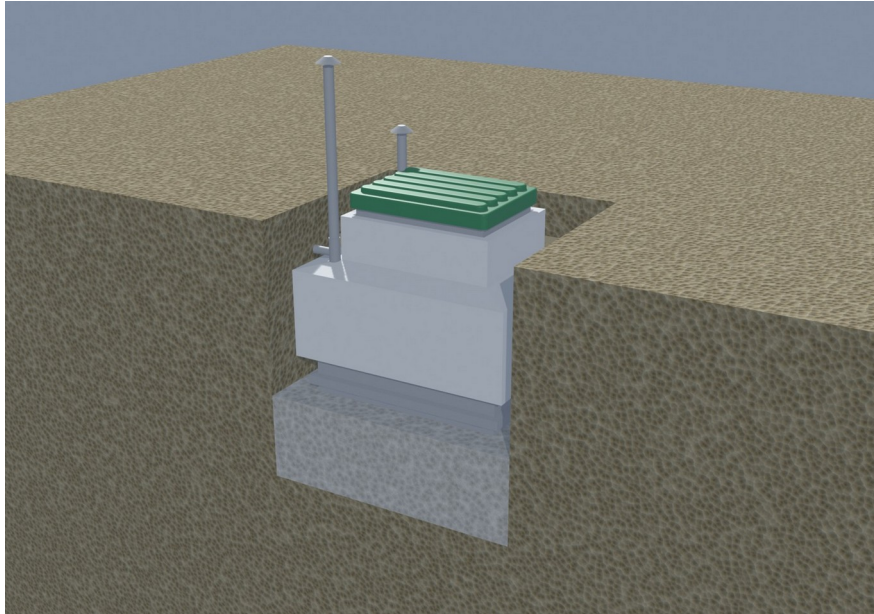
All the insulation is covered with geotextile or heavy-duty membrane, with the sheets overlapping by 10–15 cm. This protects the insulation and stops soil from clogging the joints. Quantity required approx. 11 m².



Step 7. Insulation covered with geotextile

Step 8. Backfilling with sand

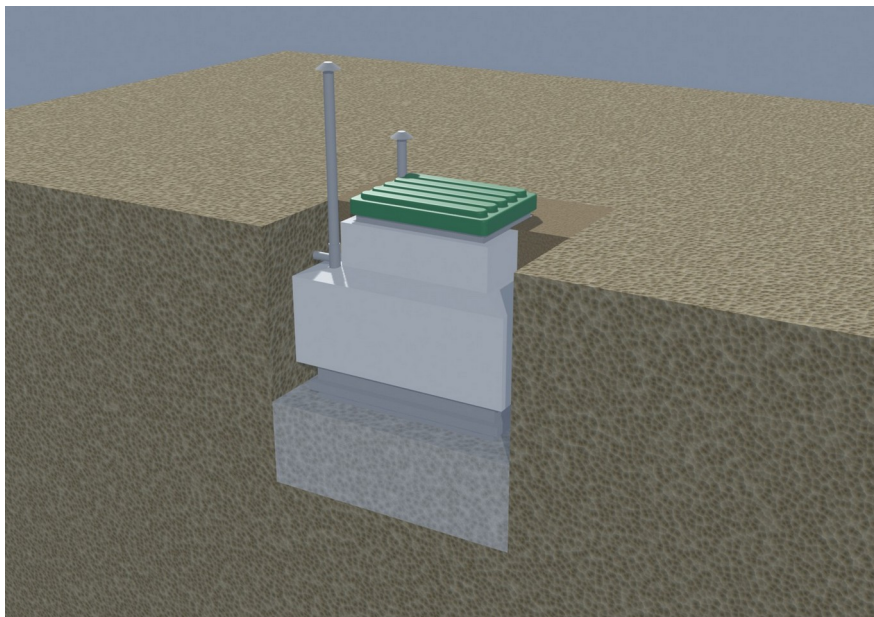
The working space around the body is backfilled with sand up to the top of the insulation in 20–30 cm layers, compacted with hand tools. Stones and clay must not be used for backfilling. Volume of sand approx. 1.2 m³.



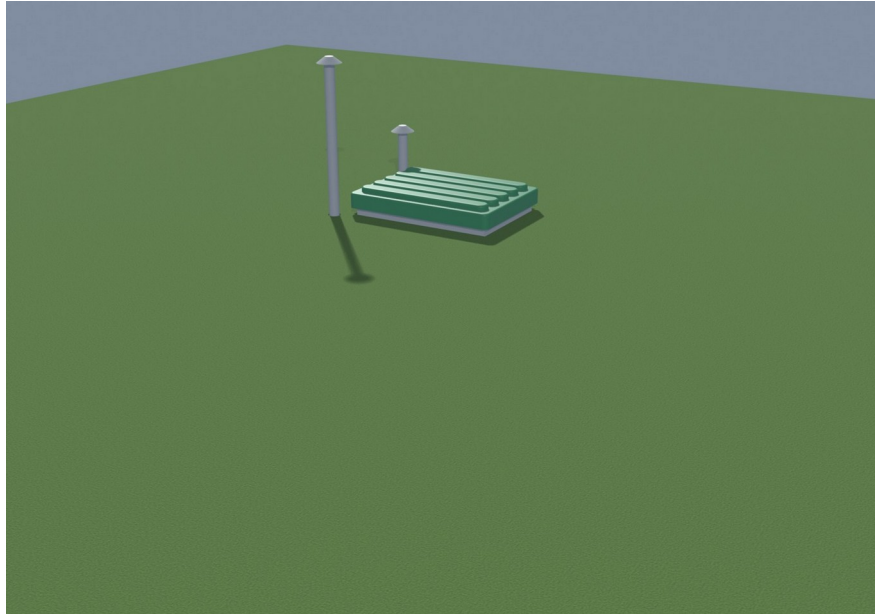
Step 8. Backfilling with sand, shown in section

Step 9. Topsoil and lawn

Light topsoil is placed over the insulation up to ground level in a 30–35 cm layer — about 0.8 m³. The ground level over the cellar must be below the top of the entrance: about 5 cm of the entrance, the external lid and the two ventilation pipes with their cowls remain above ground.



Step 9. Backfilling with soil, shown in section



The finished cellar after backfilling and restoring the lawn

After installation

Within a few weeks of installation, soil pressure will press the body walls against the frame and shelves; between the frame members the walls may bow inwards slightly. This is normal.

With large temperature differences, condensation may form on the lid and walls. It evaporates by itself and does not need to be removed. In severe frost, hoarfrost may appear on the inside of the lid; if this happens often, insulate the lid on the inside with insulating foam.

We recommend photographing the installation steps and keeping the photos for the whole warranty period.

4. Warranty conditions

During the warranty period the buyer is entitled to free repair of the product in the event of manufacturing defects. The warranty covers the operation of the fittings, the quality of the food-grade material of the body, the floor and shelves, mechanical joints and welds.

The warranty is limited to manufacturing defects and does not cover:

- normal wear of parts, natural ageing, damage to paint and surfaces caused by use and the environment, including aggressive substances, weather conditions, industrial pollution, chemicals, plant sap, stones and salt
- minor geometric deviations that do not affect the quality of the product, including dimensional deviations resulting from the rotational moulding process
- damage caused by natural disasters, fire, domestic factors and force majeure
- damage caused by third parties, including during delivery or installation not in accordance with this manual
- damage and deformation resulting from changes in geometry after installation is complete
- corrosion arising from scratches and chips in the paint on the frame and joints

The warranty is void if the product has been repaired, or repair has been attempted, by persons (companies) without prior consultation with the manufacturer.

Item	Period
Product as a whole	24 months
Expected service life	at least 50 years

Keep this manual

The manual will be needed for servicing the product and for any warranty claim.

Manufacturer

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