



Product Technical Data Sheet

Cellar 200x350

Natural Fridge®



Product Manufacturer BPR-PLASTECH LIMITED LIABILITY COMPANY, Poland, Tax Number PL9662114813

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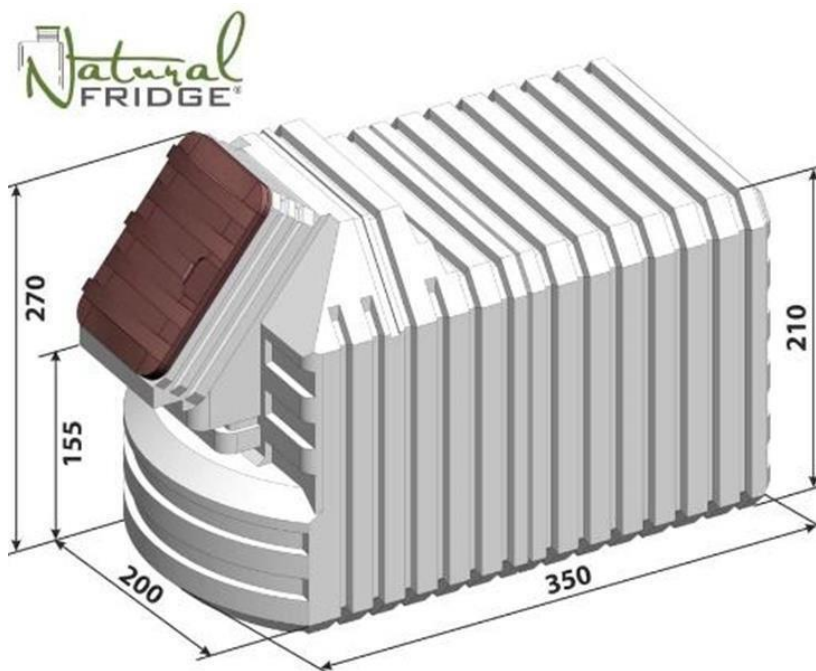
ziemianka.com.pl/pl/

garten-erdkeller.de



This technical data sheet contains a description of the basic technical characteristics of the Cellar 200x350 Natural Fridge made of plastic with a side entrance, as well as its method of assembly and use.

Plastic cellars are designed for storing vegetables, fruits, liquids, beverages, and various types of packaged food. The cellar is delivered ready to be embedded in the ground. The cellar is made of food-grade polyethylene as a monolithic structure in the rotomolding technology. It does not require additional sealing.



Dimensions 200x350 cm,
Height 270 cm
Volume 12.9 m³
Weight 1300 kg
Entrance dimensions 90 x 130
cm, Shelf width 30-35 cm, Shelf
area 9.8 m²

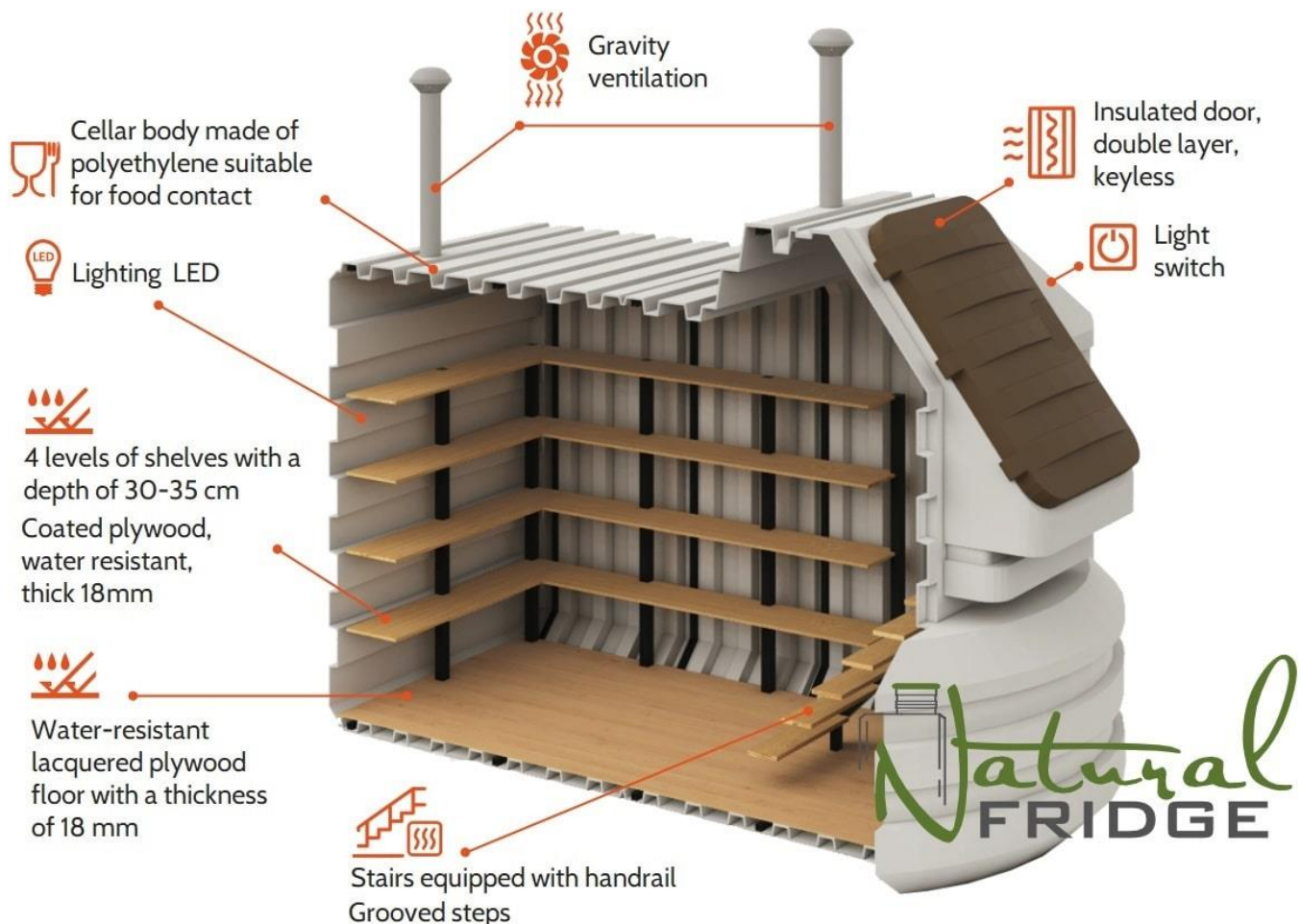
Dimensions may vary by $\pm 3\%$ due to different shrinkage of polyethylene.

Equipment

Interior equipment:

1. Shelves made of waterproof plywood - 4 rows.
2. Floor made of waterproof plywood.
3. Stairs - 1 pc.
4. Supply ventilation - 1 pc
5. Exhaust ventilation - 1 pc

6. Double cover (flap) - 1 pc
7. LED lighting - 1 pc,
8. Weather station - 1 pc.



Assembly and operation manual

The cellar body is made of food-grade polyethylene reinforced with ribbing. Inside the cellar, a strong steel frame is installed, which also serves as reinforcing ribbing for the body. The facility does not require additional sealing or protection against corrosion.

The lower part of the cellar should be buried at a depth of about 155 cm below the ground surface. At such depth, very large soil pressure forces act on the cellar body. These forces can be even higher with a high groundwater level or in the case of clay soils, which may move during freezing. Therefore, the installation of the cellar must be carried out in accordance with these instructions. Thanks to this, the aesthetic and practical cellar will serve for many years.



Before starting the installation of the cellar, it is necessary to determine the groundwater level and the type of soil on site.

Required materials

Materials needed for the installation/assembly of the underground cellar:

- Ready mix of semi-dry (dry) concrete B15-B25, 6 m³.
- Reinforcement bars 10-12 mm, 70 running meters.
- Styrofoam for foundation insulation with a thickness of 5 cm - 30 sheets.
- Underground cable 2x6mm² or 2x4mm² - from the cellar to the power connection point (220V).
- It is recommended to use a polyethylene pipe with a diameter of 20 mm for the underground cable.
- Synthetic straps with a permissible load of 4-5 tons and a length of 7 m - 2 pieces or steel cables with a polymer coating with a minimum diameter of 12 mm and a minimum length of 7 m - 2 pieces.

Excavation Dimensions

The excavation dimensions for the cellar installation should be 20 cm larger than its width and length around the entire perimeter - at least 240 x 290 cm at the bottom part. The depth of the excavation should be 165-170 cm, so that after placing the cellar on a concrete slab or dry concrete base, the lower edge of the hatch cover is 5-10 cm above the ground level. This is to prevent rainwater or meltwater from getting into the cellar. The walls of the excavation should be vertical and maintain the correct dimensions throughout their height. This will greatly facilitate the construction of cellar walls with dry concrete.

Installation

In sandy soils and at a low groundwater level (at least 1.5 m below the surface), the installation of the cellar on a layer of dry concrete 10-15 cm high with reinforcement is allowed. In clay soils or at a high groundwater level, a reinforced concrete slab with a minimum size of 240 x 290 cm and a thickness of 15 cm, containing handles for straps, should be made at the bottom of the excavation.

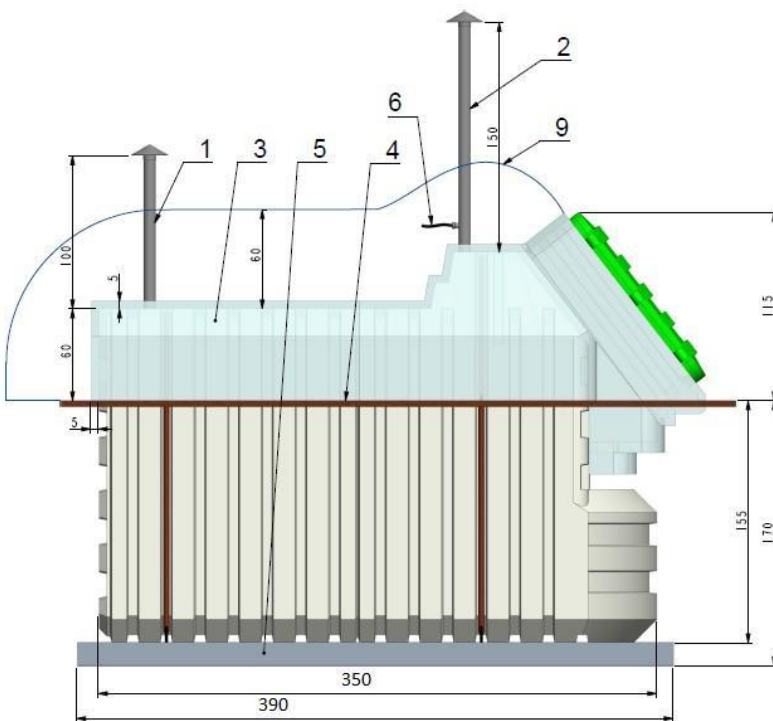
We set up the cellar on the previously poured concrete slab at the bottom of the excavation and secure it with straps (not included in the equipment). The cellar



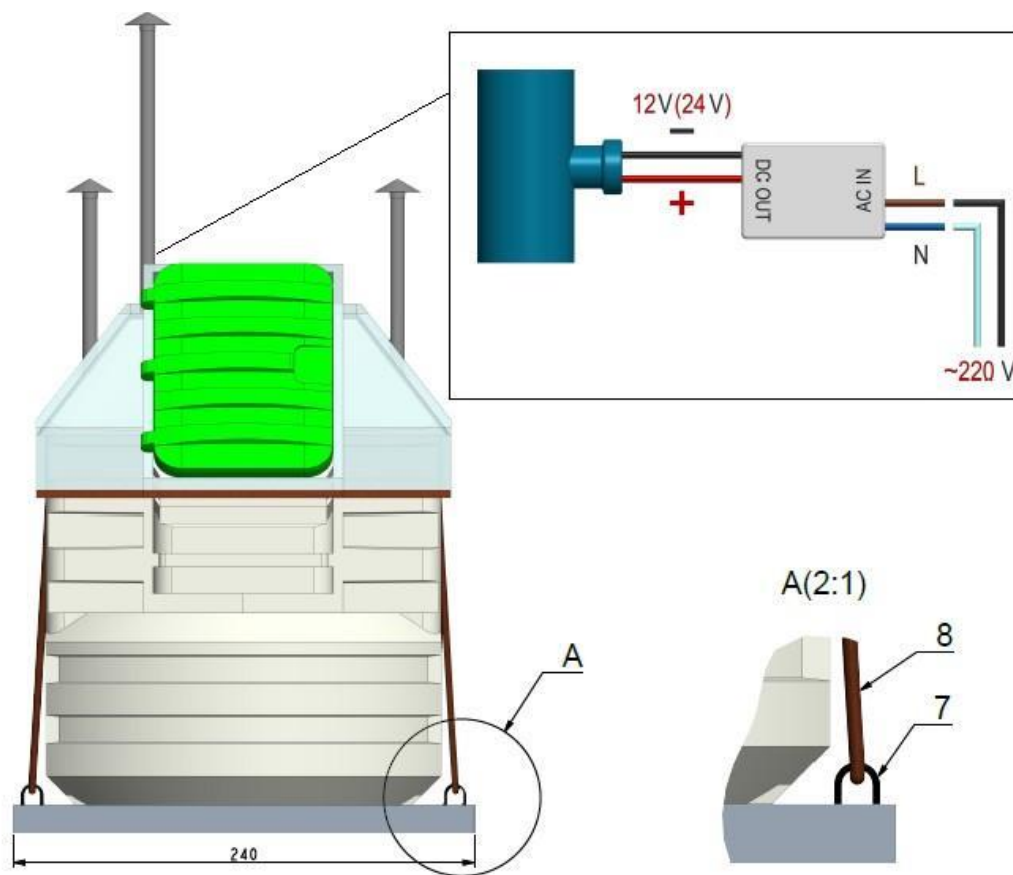
should be centered on the concrete slab. Then we attach it to the slab with straps or rope and surround it with dry concrete on all sides. Each layer of 30-40 cm height should be moistened with water so that the dry concrete hardens faster. The body of the cellar should be surrounded by dry concrete to a height of 0.6-1 m from the bottom. Then the cellar is covered with sand.

The thickness of dry concrete around each wall of the cellar should be at least 20 cm.

Diagram



1. Ventilation intake pipe
2. Ventilation exhaust pipe
3. Styrofoam insulation
4. Ground level
5. Concrete slab
6. LED power cable
7. Straps
8. Mound of earth



Assembly of the top part

To reduce temperature fluctuations inside the cellar, it is recommended to use thermal insulation material (extruded polystyrene - foam board) with a thickness of 5-10 cm (Styrofoam or similar) on the top part of the cellar (side surfaces of the entrance and the top surface of the cellar body), as well as around the chimney and side surfaces of the cellar body to a depth of 60 cm from the top plane of the cellar body. Thermal insulation should be covered with geotextile.

Ventilation pipes must be extended by 50 cm above ground level for the inlet pipe (which supplies air to the lower part of the cellar) and 100-150 cm for the exhaust pipe (removes air from the upper part of the cellar) and equipped with ventilation caps (they are included in the cellar set).

In winter, at very low temperatures (below $-20\text{ }^{\circ}\text{C}$) and in summer during heat waves (above $+30\text{ }^{\circ}\text{C}$), it is necessary to limit the flow of cold and hot air (close the air supply). It is also recommended to insulate the exhaust pipe (to avoid condensation in the pipe).



Attention

When backfilling the cellar body with soil, do not use construction machinery closer than 1 m from the body. Vehicle movement closer than 1 m from the cellar along its entire perimeter is prohibited.

Within a few weeks after installation, the polyethylene walls of the cellar will be pressed against the frame and shelves of the cellar by the pressure of the soil, and at greater distances between the frame elements, the walls may slightly bend inward. In case of large temperature differences, some condensation may appear on the entrance doors or walls. The condensation evaporates after some time and does not need to be specifically removed. At very low temperatures, frost may appear on the inside of the entrance flap. If this phenomenon occurs frequently, it is recommended to insulate the door from the inside with insulating foam.

Warranty Conditions

During the warranty period, the buyer has the right to free repair of the product in case of defects resulting from manufacturing errors.

The warranty covers the functionality of the equipment, the quality of the material safe for food, the floor and shelves, as well as mechanical and welded connections.

The following cases are excluded from the manufacturer's warranty:

- Normal wear and tear of parts and components, natural aging, as well as damage to paint and surfaces caused by normal use and environmental influences, including aggressive substances, such as chemical atmosphere, industrial pollution, plant juices, stones, salt, etc.;
- Minor geometric deviations that do not affect the quality of the plastic cellar or its components (e.g., slight deviations from structural dimensions caused by the characteristics of the rotomoulding process);
- Damage caused by natural disasters, fire, household accidents, and other force majeure events;



- Damage caused by third parties, including damage during delivery or installation of the product, which was carried out in violation of the installation instructions for the plastic cellar;

- Damage and deformations of products caused by changes in geometric dimensions that occurred after the completion of installation works and result from changes in the product design;

- Corrosion caused by scratches and chips on the paint frame as well as on various parts and connections.

The warranty becomes void if the product is repaired or attempted to be repaired by persons or companies without prior consultation with the manufacturer.

Warranty period: 24 months.

Warranty for certain components (weather station, LED lighting) is 1 year.

Expected lifespan: at least 50 years.

Product Manufacturer

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