



Technical Specification Sheet

Cellar 120x120

Natural Fridge[®]



This card contains a description of the basic technical features of the Cellar 120x160 Natural Fridge made of plastic with a top entrance, as well as the method of installation and use.

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



Length 120 cm

Width 120 cm

Height 140 cm

Volume 1.2 m³

Weight 135kg

External dimensions 70x 100

cm

Shelf area 1.1 m²

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

Equipment

Interior equipment

Shelves made of waterproof plywood- 2 Rows,

1. Floor made of waterproof plywood,
2. Telescopic ladder- 1 Piece,
3. Supply ventilation - 1 Piece,
4. Double cover (access)- 2 Pieces.



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 object does not require additional sealing or protection against corrosion.

The lower part of the cellar should be buried at a depth of about 135 cm below the ground surface. At such depth, very large soil pressure forces act on the cellar body. These forces can be even higher in the case of high groundwater levels 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 required for burying and installing the Natural Fridge cellar:



- mixture of dry concrete B15-B25 - 2 m³
- polystyrene (styrofoam) for foundations - 8-10 sheets

Excavation dimensions

The width and length of the excavation for the installation/assembly of the cellar should be 20 cm larger than the width and length of the cellar from each side. The excavation should be deep enough so that after placing the cellar on a dry concrete bedding, the lower edge of the hatch cover is 5-10 cm above ground level. This is to prevent rainwater or meltwater from entering the interior of the cellar. The walls of the excavation should be made vertically, maintaining the appropriate dimensions throughout the height. This will greatly facilitate the enclosure of the cellar walls with dry concrete.

Installation in sandy soil

In sandy soils and with a low groundwater level (at least 1.5 m below the surface), the installation of the cellar on a layer of dry concrete with a height of 10-15 cm is allowed. The body of the cellar is surrounded with dry concrete up to a height of 50-60 cm from the bottom, ensuring a minimum layer thickness of 20 cm around each wall. Then the cellar is covered with sand.

Installation at a high groundwater level

If the groundwater is already at a depth of 1 m below the surface or in clay soil, the cellar is placed on a previously poured reinforced concrete slab at the bottom of the excavation and secured to the slab with coupling straps (not included in the equipment). The cellar should be placed centrally on the reinforced concrete slab. Then it is secured to the slab with coupling straps or rope and surrounded on all sides with dry concrete. Each layer of concrete with a height of 25 cm should be moistened with water to allow the dry concrete to harden faster. The body of the cellar is surrounded with dry concrete up to a height of 50-60 cm from the bottom, ensuring a minimum layer thickness of 20 cm around each wall. Then the cellar is covered with sand.

If groundwater quickly enters the excavation, the cellar can be mounted on a concrete slab on the ground surface, secured with straps, and introduced into the excavation along with the concrete slab. The bottom of the excavation should be leveled horizontally.



Assembly of the upper part

To reduce temperature fluctuations inside the cellar, it is recommended to use an insulating material with a thickness of 5-10 cm (styrodur or similar) on the vertical entrance side surfaces, on the top plane of the cellar body, and on the side surfaces of the cellar body up to a height of 0.5 m from the bottom of the cellar. The thermal insulation should be covered with geotextile.

The ventilation pipe should be extended to a height of 50-60 cm above ground level.

In winter, at very low temperatures (below $-25\text{ }^{\circ}\text{C}$) and in summer at high temperatures (above $+30\text{ }^{\circ}\text{C}$), the airflow (inlet hole) should be restricted to reduce the flow of cold and warm air (closing the air supply).

Attention

When backfilling the cellar body with soil, construction machinery must not be used within a distance of less than 1 m from the body. Vehicle movement within a distance of less than 1 m from the cellar along its entire perimeter is prohibited.

Within a few weeks after installation, the polyethylene walls of the underground cellar will be pressed against the steel frame and the shelves of the underground cellar under the pressure of the surrounding earth. There may be a slight bulging of the walls, especially on longer sections between scaffolding elements.

In case of large temperature differences, condensation may appear on the entrance doors or walls. The condensation evaporates on its own 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 a layer of insulation foam.

Warranty Conditions

During the warranty period, the buyer has the right to free repair of the product due to manufacturing defects.

The warranty covers the operation of fittings, the quality of food-safe material, the base and shelves, mechanical and welded connections.

Warranty Exclusions

The manufacturer's warranty covers only manufacturing defects and does not include the following cases:

- Normal wear and tear of all parts and components, natural aging, and damage to coatings and surfaces caused by normal use and wear, environmental influences, including aggressive substances, industrial pollution, chemicals, 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 the structural dimensions specified in this product passport, resulting from the properties of rotationally molded products).
- Damage caused by natural disasters, fires, household factors, and other unforeseen events.
- Damage caused by third-party actions, including during delivery or installation of the product, which were carried out contrary to the installation instructions for the plastic cellar.
- Damage and deformations of products caused after installation works due to changes in geometric dimensions and product construction.
- Corrosion caused by scratches and paint chips on the frame as well as various parts and connections.

The warranty becomes void if the product is repaired or serviced by persons (companies) without prior consultation with the manufacturer.

Warranty period: 24 months.

Expected lifespan: at least 50 years.

Product manufacturer

BPR-PLASTECH LIMITED LIABILITY COMPANY

Company address: Konduktorska No. 18, apt 7, 02-775 Warsaw, Poland

Mailing address: ul. Bruzdowa 125 A /12, 02-991 Warsaw, Poland

Tax Identification Number PL9662114813, REGON: 368194329, National Court Register: 0000693472

Phone: +48 732 081 306 E-mail: info@ziemianka.com.pl

Website: nfridge.eu

© 2023

