

BASIC INSTRUCTIONS FOR CONSTRUCTION OF SKIMMER POOL

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1/ Position of Pool

- Place with maximum sunlight.
- Place protected from falling leaves and away from high presence of insects.
- Place with solid undersoil, the backfill must be thickened perfectly.
- Place with room for retracting future enclosure behind the pool (ideally, space of 250–300 cm behind the pool).
- Location near established technology due to pressure and heat loss – maximum up to 10 m (utility shaft, cellar, garden shed etc.)

Note:

We recommend placing the technology below the water level; after consultation with a technician, it may be placed above the water level.

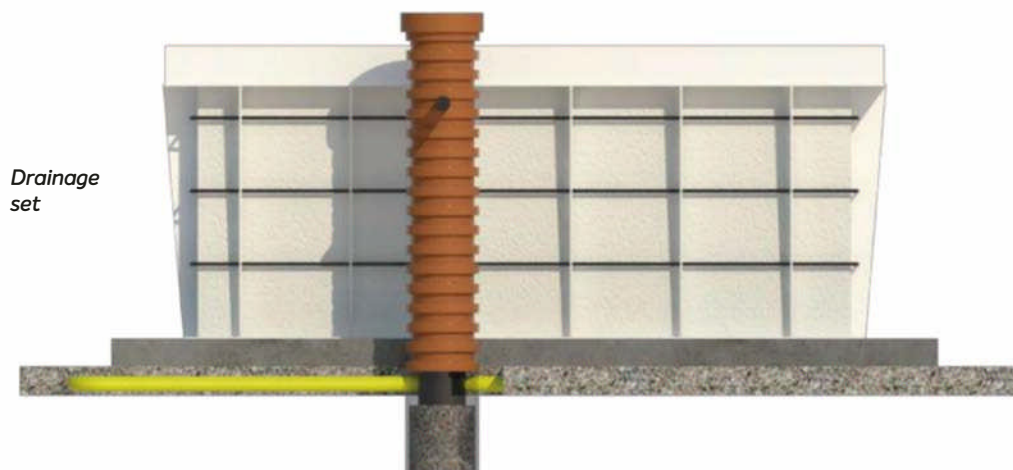


The technology can be placed outside the utility shaft, e. g. in the cellar or garden shed as per their technical possibilities. The utility shaft is not necessary.

2/ Pool Excavation and Foundation Under the Pool and Utility Shaft

2.1 Drainage Undersoil

- Grave undersoil of 16–32 mm grain at the height of 15 cm.
- Drainage of the foundation is necessary! The drainage flexi tubes of D80 mm, wrapped in a permeable geotextile Filtek, are placed along perimeter of the pool foundation and utility shaft into the layer of gravel. The tube is positioned with a minimum gradient of 0.5% to the drainage spot. If the drainage cannot be placed in the drainage spot with a gradient, it is necessary to install a drainage set.

**Note:**

The drainage set is comprised of a pipe of D300 mm positioned in perpendicular to the foundation. The bottom of the tube is 50 cm below the pool foundation and serves as a collector of ground and rainwater. Fill the bottom of the tube with 15 cm of gravel onto which a submersible pump will be placed and permanently electrically powered. (The pump needs to be connected by a ground cable).

For the purpose of electrical installation:

All conductive joints and parts need to be connected in zones 0, 1, 2 under the ČSN 33-2000-4-41 standard. All embedded meshes, steel rebar, stainless steel handle or pool ladder should also be connected in this way.

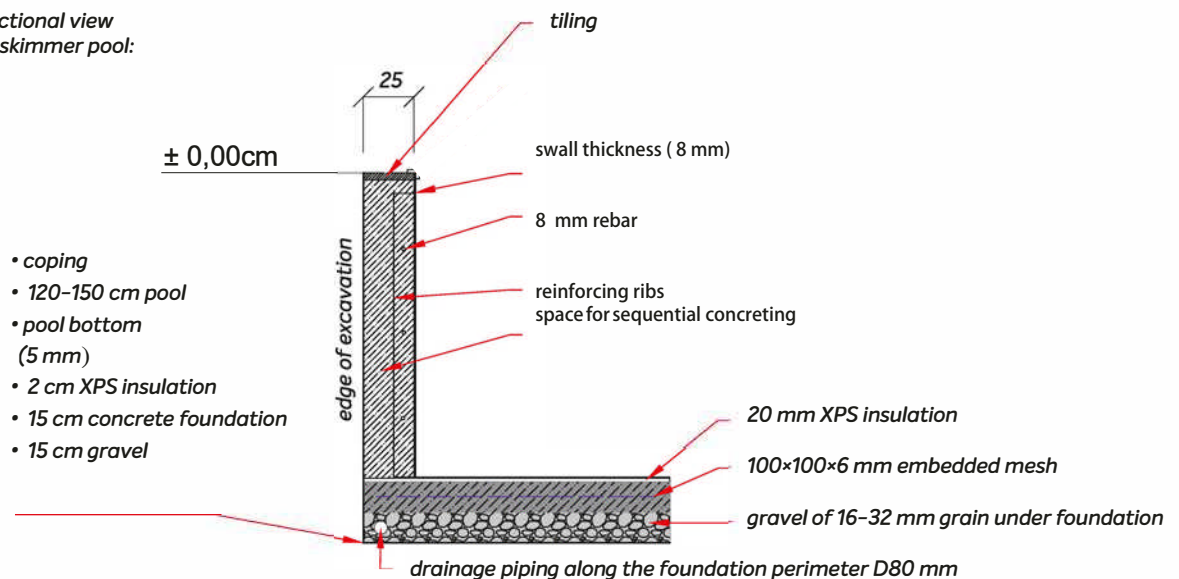
2.2 Pool and Enclosure Foundation

- We can calculate the height of the foundation by the sum of bottom insulation, pool bottom thickness and pool height. The resulting height of the tiling may be affected by the selected coping of the pool (see detail of coping).
- The size of foundation and excavation is calculated as follows: inner size of pool + 25 cm on each side.

Example:

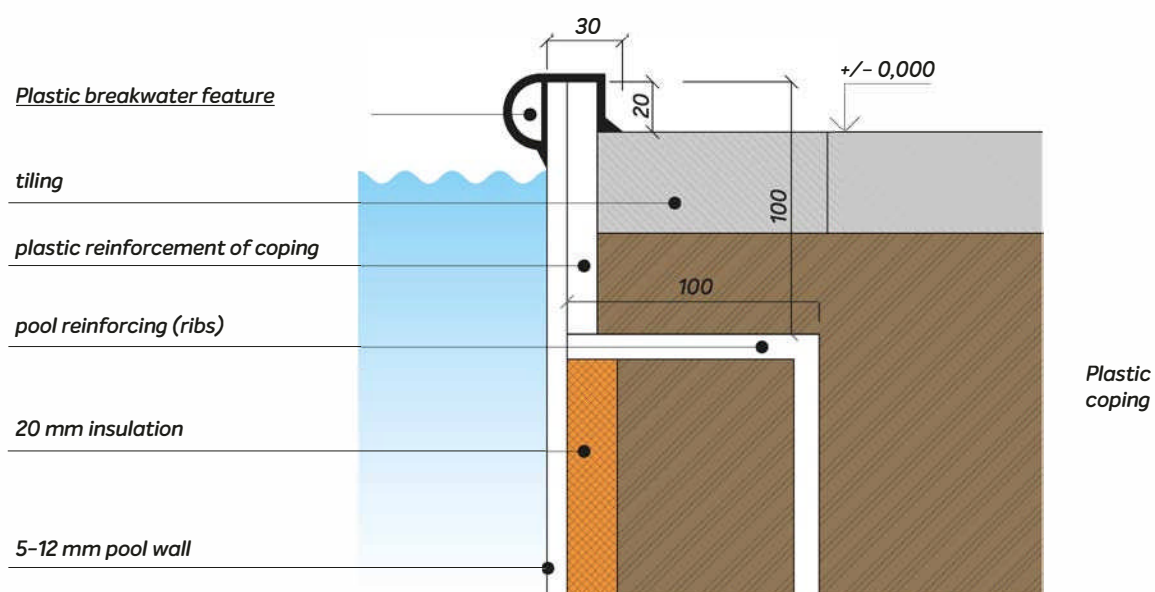
Inner pool of dimensions (dimensions of water level) 6×3 m should have excavation and foundation of 6.5×3.5 m.

Sectional view
of skimmer pool:



- 15-cm-thick foundation and the recommended quality of concrete of C20/25.
- Foundation of exact dimensions according to the drawing of the pool and utility shaft.
- Foundation reinforced with an embedded mesh of 100×100×6 mm at mid-height of foundation.
- Completely level foundation – skimmer pools tolerate +/- 5 mm along the entire length of foundation.
- Perfectly smooth foundation.

If the soil is not compact or the pool is positioned in a gradient, lost shuttering of 50×20×25 cm must be used. In this case, the same inner minimum parameters must be maintained and the excavation must be bigger.





While excavating, one must take into account individual parts of the pool which may stick out of the pool shell plan. In particular, skimmer (see detail), counterflow, piping or lighting. These details will be specified further in the drawings attached.

Detail of Skimmer During Excavation

2.3 Pipeline Connection with Technology

If the technology is not part of the pool excavation (e.g. in a plastic utility shaft), it is necessary to prepare a groove between the pool and the technology for placing the pipes (or electric cable). The gradient of the pipes depends on the position of technology.

Technology below water level – the gradient from pool to technology.

Technology above water level – the gradient from technology to pool.

The delivery may include other technology requiring piping in the ground, such as heat pump: it is also necessary to prepare a groove from technology location to place the pipes in the ground.

3/ Pool and Utility Shaft Placement in Excavation

- Upon placing the pool in the excavation, the foundation must be set, smooth, dry and clean.
- The foundation is covered with non-absorbent insulation .
- The plastic pool now goes on the insulation (the customer is responsible for its positioning) .
- We place the utility shaft on the foundation.

Placing the pool using a crane:

If possible, we recommend this method. The pool placement requires a crane with a hook which will carry the straps and the braced pool (the supplier provides the straps and bracing and the customer provides the crane). The pool is placed in the excavation under the supervision of the supplier's employee.

Placing the pool manually:

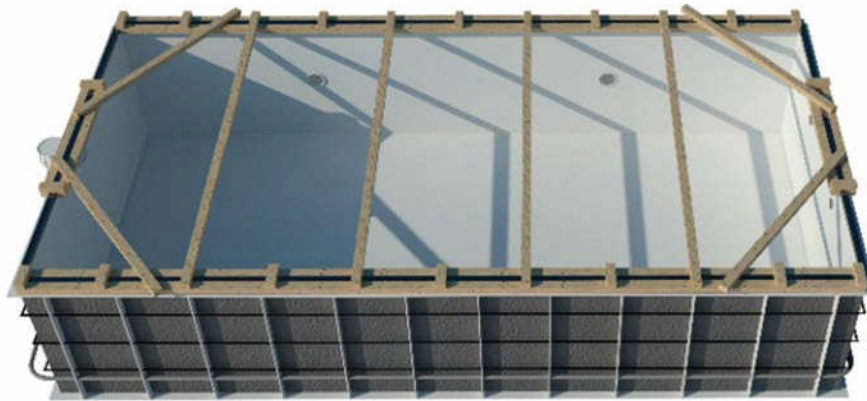
If the use of a crane is not possible, the pool can be positioned with a sufficient number of people. These people are provided by the customer and their number specified by the supplier. When the pool is positioned manually, the soil or gravel may collapse under the pool. We recommend putting planks over the excavation in order to place the pool onto them and arrange for a smoother placement. The pool is then lifted, the planks are removed and then the pool can be lowered in the excavation.

After the pool is placed, its exact location (e.g. in relation to the house) is measured and 20 cm of water is poured in to weigh down the pool bottom.

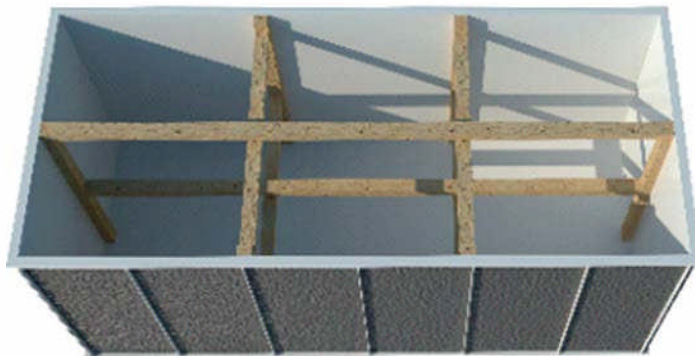
3.1 Bracing and Reinforcing of Pool and Enclosure

Before concreting the pool walls, its upper edge must be braced to maintain the desired shape. For example, using 60×80 mm wooden logs, while the transverse laths should be placed no more than 150 cm apart. Brace the shorter sides diagonally to the longitudinal sides. In order to prevent damage to the pool while bracing it, wrap the parts in question in geotextile or Mirelon insulation. We recommend bracing the pool at the point of the vertical rib where the wall is reinforced. If needed, the pool may also be braced from the outside against the excavation.

If the technological utility shaft is included in the delivery, it must also be braced transversely at two levels before using concrete.



Bracing skimmer pool and utility shaft



Recommendation:

The pool wall also contains a longitudinal 8 mm reinforcing steel bar. We recommend reinforcing the concrete of the entire perimeter of the pool wall with an embedded mesh of 150×150×6 mm which can be added to an existing rebars.

4/ Concreting Pools

The polypropylene pool and utility shaft are not self-supporting and they need to be covered in concrete. The space between the excavation/lost shuttering and the pool/utility shaft wall is to be filled with dry concrete along the pool perimeter. The height of one concrete layer is 30 cm maximum. A new concrete layer may only be started once the previous layer is set. The pool wall is to be concreted at least 10 cm below the upper edge of the pool, depending on the final tiling (see A4 ab drawings of pool coping). While concreting, always keep the water level 20 cm above the level of concrete (ensure sufficient water supply). The piping system must be protected against sedimentation of soil which could damage the pipes. The pipes are to be covered by soil or dry concrete (when using concrete, you may sand in the pipes). Never tamp the concrete near the pool wall, rather spread it loosely.

While concreting, periodically check the vertical walls and the diagonal of pool; if a deviation is identified, the concreting must be suspended and the walls aligned using the bracing struts.

Make sure the piping is connected properly and sealed before irrigating the counterflow, jets or skimmer in order to avoid water leakage.

We recommend lining the skimmer along its perimeter with 10–20 mm polystyrene to allow for dilatation.

Once concreted and filled with water, the pool is ready for operation.