



GUIDELINES FOR BUILDING SWIMMING POOLS WITH EPS BUILDING BLOCKS

EPS building blocks are relatively easy to cut with a handsaw or filament. All built-in components such as skimmer, inlet nozzles, counterflow pump and underwater lighting etc. can thus be installed very accurately and effortlessly.

Before starting work it is advisable to read the installation instructions.

GENERAL:



The concrete foundation is placed level. Your pool must be placed above the groundwater level to prevent damage to the foil, fleece and insulation.

When placing on a slope, it is essential to work with a retaining wall. (Ask a structural engineer for advice).

Your swimming pool may not exceed 50 cm above ground level. Ask an architectural engineer for advice if this is deviated from.



The pool filter system and any other devices are connected to electricity.

All installation work of electrical equipment must be carried out by a recognized installer in accordance with the applicable regulations. The electrical installation must be carried out in such a way that earthing is ensured in the event of overload and short-circuit. Take account of voltage loss due to longer cabling to the pool.

An earth leakage circuit breaker with a nominal residual current of up to 30 mA must be used. Earthing of the electrical appliances must be applied. Stainless steel mounting material must be connected to a ground wire.

THE EXTENSION:

Count the size of the well using the following factors.

The internal dimensions of the planned pool, plus a minimum of 120 cm.

B.V.: With a pool size of 8.0 mx 4.0 m, excavated 9.2 mx 5.2 m

The excavated pit must be secured against collapse.

The depth to be excavated is determined by the concrete base thickness plus a possible base plate with loose gravel. The floor slab thickness depends on the substrate (20-25 cm). The thickness of the floor slab and the foundation must be added to the total installation depth.

The floor plate must be level.

CORNER TEMPLATE

It is advisable to make a corner template with wooden slats of 3, 4 and 5m to form a triangle, so you have a perfect right angle (set of Pythagoras). It is recommended to measure the expanded surface diagonally.

Foundations

Due to the differences in the subsurface (soil structure, groundwater, slopes), no general guideline can be given for the specification of the floor slab.

To do this, you must consult with an architect, constructor, engineer beforehand to define the necessary reinforcement strength and reinforcement. The reinforcement described below only provides an idea of how the basic structure should look like.

The required area for the foundation slab is calculated by oversizing the pool dimensions plus 2 x the thickness of the pool wall plus at least 2 x 20 cm.

Example: pool size 8.0 m x 4.0 m

Length: $800 \text{ cm} + 2 \times 25 \text{ cm} + 2 \times 20 \text{ cm} = 890 \text{ cm}$

Width: $400 \text{ cm} + 2 \times 25 \text{ cm} + 2 \times 20 \text{ cm} = 490 \text{ cm}$

For stable soil, a 20 cm thick foundation slab is usually poured concrete quality C20 / 25 XC3 F4 with reinforcement mats Ø8-150 below and above and spacers by means of support beams.

To install a floor drain in the bottom slab, please follow the notes further in the text.

Two diffusion holes (preferably in the corners) with a diameter of 25 mm should be used in the base plate. If this is not possible (clay, groundwater etc.) we advise to lay a pipe to a drain. (Otherwise, there is the possibility of condensate formation)

After the required formwork for the foundation plate has been installed and the iron mats have been laid. The floor drain with pipes has to be fixed in advance with wire in the lower iron mat. The formwork can be filled with concrete. The concrete is evenly and evenly distributed with a slat. Then the concrete surface is mechanically compacted and smoothly finished.

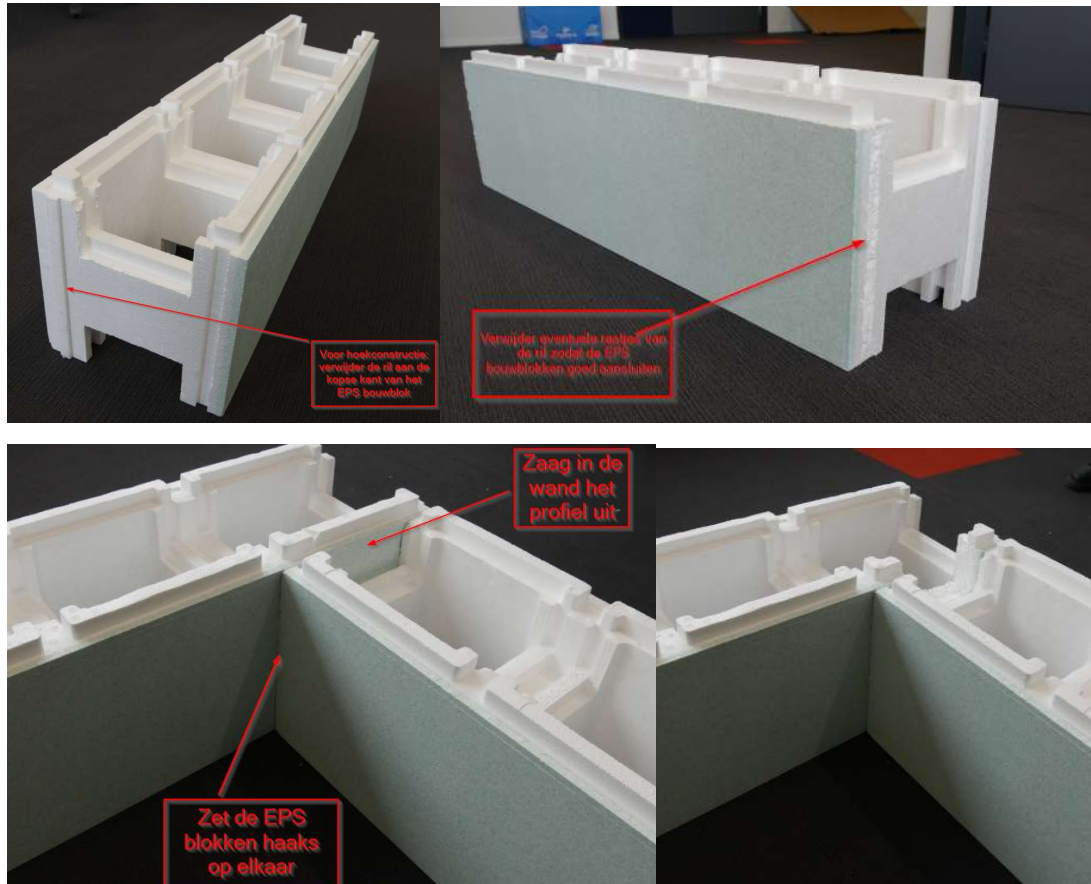
SWIMMING POOL WALL CONSTRUCTION UP TO 1.5 METRES

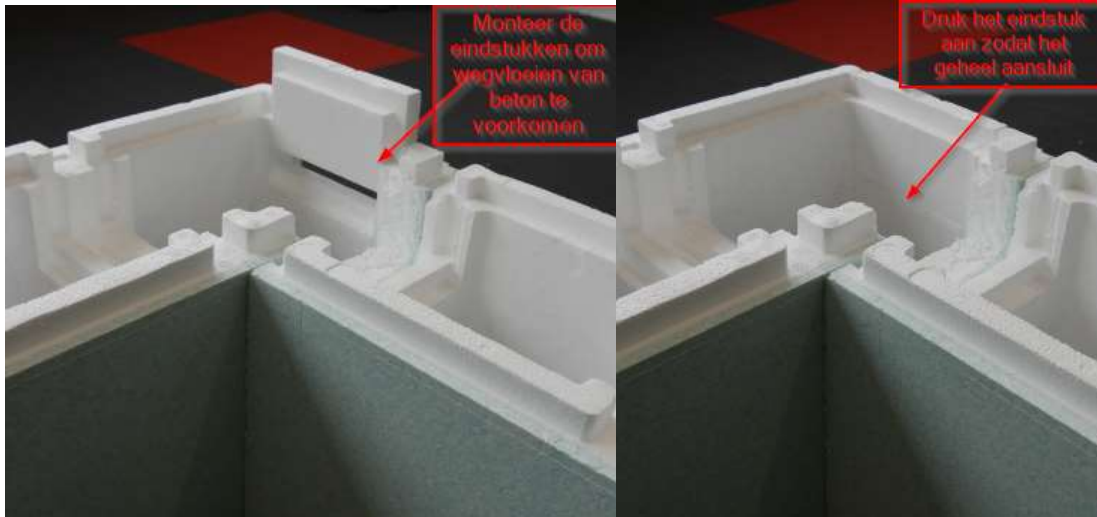
Due to the different conditions (soil structure, groundwater level, slopes, etc.), general guidelines for the construction of the walls cannot be given.

Prior to building, you should consult a professional (architect, constructor, etc.) to define the necessary reinforcement strength and reinforcement.

If the foundation slab of your swimming pool can be walked on, you can start building the pool walls. Now place the template accurately and use a smudge cord. The pool blocks are now placed evenly and straight along this line. The end pieces supplied with the cornerstones are used to prevent leakage of the concrete. Use vertical reinforcement!

Ensure that the building blocks are stacked perpendicularly in accordance with the specific dimensions and right angles. Also check that the walls in the swimming pool are exactly parallel. This ensures that no problems occur when placing the liner.

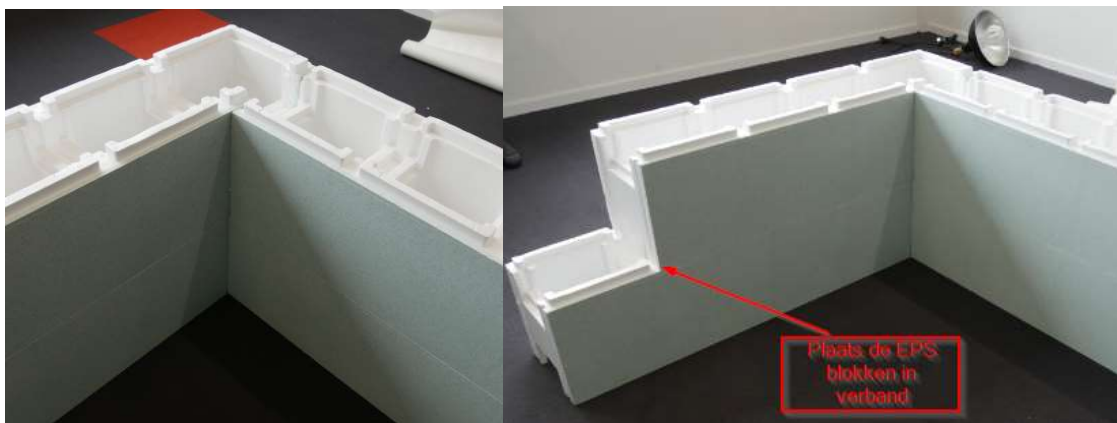




Secure the first layer of blocks with PU (polyurethane) glue. When the first layer of blocks is placed, place around reinforcement steel ($d = 10$ mm). The vertical reinforcement must be connected with the iron of the base plate or glued! The overlap of the reinforcing steel must be at least 30 cm. (Connect with iron wire.)

Pour the first layer of blocks full of concrete, beginning in the corners, that prevents the blocks from breaking up.

Then the second and third row of blocks can be placed in relation. Ensure that the building blocks are glued with PU glue when building the second and third rows.



Insert reinforcing steel 1 x 10 mm in each row. In the third row, we recommend 2 x 10 mm horizontal reinforcement. These must be at right angles to the vertical reinforcement.



Once the last row of the pool walls has been placed, the blocks can be filled with concrete. The maximum rise speed is 75 cm / hour. Flatten the top of the wall with a circular motion. Bear in mind the possible profile for the liner. Excess EPS parts can be cut off.

Make sure that the positioning of your mounting material for injectors, skimmers, lighting, etc. is provided during the building of the pool walls. The holes for the components to be installed, such as wall ducts, skimmers, etc., can be made with a jigsaw or scrubbing saw.

The pool side of the building blocks is provided with an impact-resistant lining (P80) and therefore a levelling layer is not required. In order to keep the blocks in place, we recommend installing the building blocks with PU (polyurethane) adhesive both inside and outside.



Important instructions for the building block construction!

Filling the pool blocks is preferably done manually, using concrete C20 / 25 XC3 F4 4/16. If the pool blocks are filled with a concrete pump, a fall breaker is absolutely necessary. For example, the pressure of the concrete pump does not immediately end up in the pool blocks. Improper filling can cause bursting of the pool blocks. The compacting of the poured concrete is not desirable. When filling, the circumference must be carefully and evenly filled with concrete.



The use of a poker needle is not allowed.

The end blocks are fitted with retractable end pieces, so that the concrete cannot flow through. Never forget to place the steel horizontally in advance in every position of the building blocks. In the last two rows, we recommend placing 2 x 10 mm rebar steel horizontally.

The individual layers of the EPS blocks must be permanently connected to a reinforcing bar 10 mm, otherwise the static strength is not guaranteed.



During assembly you must ensure that the installation components are placed at the correct height. At the locations of these built-in parts, it can happen that the building blocks are weakened. For stability we recommend reinforcing the cut cross connections on both sides with planks

If damage to the swimming pool blocks is caused during the work, or PU (polyurethane) mounting foam can be used for the attachment of built-in parts.



If chemical additives are added, then it must be checked in advance whether they are compatible with the EPS building blocks.

Order concrete with flux at the concrete plant to make the concrete liquid. Refuse the addition of water just before pouring, because that can crack some blocks of the first and / or second row.



If you do not respect these guidelines, blocks in the bottom rows could burst. In case of doubt, you can reinforce the formwork with formwork shelves or with well-secured slats at the bottom of the walls, on the inside and outside.

STEPS

The building blocks can also be used for creating internal steps.

If the staircase is made of concrete, it is important that it is completely plastered. Steps must be performed accurately horizontally and vertically (90 ° angles)

IMPORTANT TIPS

After the concrete has hardened, the walls of the pool can be supplemented with filler material (grain size up to 16 / 32mm). Under no circumstances should you fill the pad mechanically, this can cause damage to the wall. Make sure that pipes are stress-free in a sand bed.



IMPORTANT FOR INSTALLATION OF THE INSTALLATION COMPONENTS

- The plastic wall ducts can be collapsed.
- The installation clipper without flange collapsing.
- The built-in lamps without flange collapse. Note: Attach the cable protection tube of the lamp to the housing of the lamp.
- The installation kit for counterflow / massage equipment can also be collapsed.
- Important! Cover all screw holes of the built-in fasteners for pouring the concrete.
- If floor insulation is not installed, foundation plate up to the top of the floor drain must be finished flat. Warning: the bottom plate must be sanded or smoothed (screed). When using

floor insulation, the top of the bottom well must protrude depending on the thickness of the insulation.

- Stainless steel parts must be grounded according to regulations.

These guidelines apply as advice for working with EPS building blocks. No rights can be derived from it.

For the correct construction a calculation of a manufacturer is necessary.