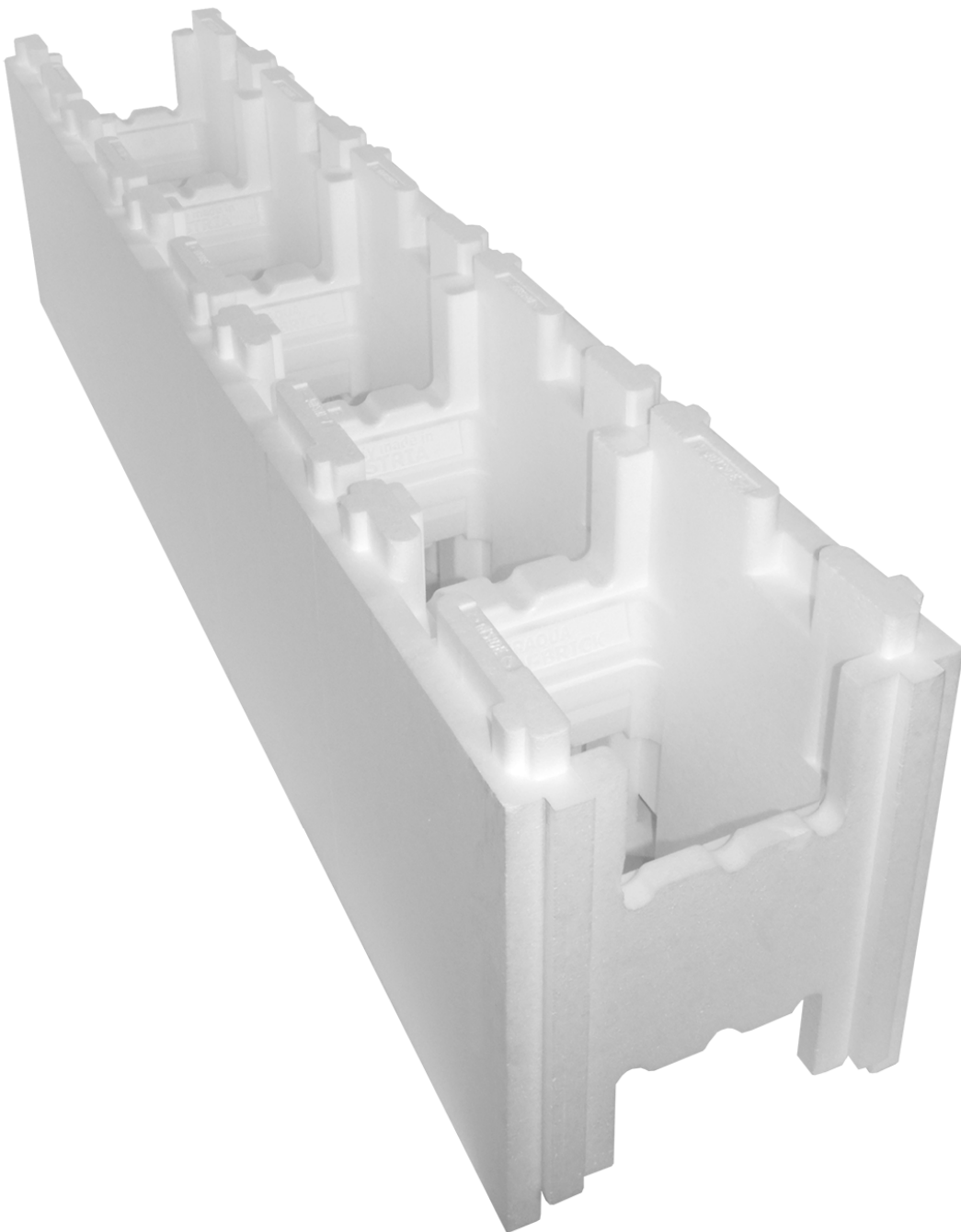


PERAQUA®

OCEAN® BRICK

100% Made in Austria



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Introduction

Congratulations on your purchase of our high quality Ocean® Brick system tile developed and manufactured in Austria. In order to process our high-quality products correctly, please read our instructions in detail.



A specialist must check the statics in advance - we do not accept any liability for this! These instructions do not claim to be complete. Specialist companies should be consulted regarding earthworks, reinforcement and other local regulations. On request, you can also obtain our structural design of the Ocean® Brick formwork block.

Do you dream of having your own pool? With the Ocean® Brick formwork block, this is child's play! Thousands of customers worldwide trust this construction method every year. Over the years, this Ocean® Brick system has become the front-runner in the national and international pool industry, as a high-quality pool system can be implemented at a reasonable price level with personal effort.

Working with the Ocean® Brick

The Ocean® Brick is a "styrofoam brick" designed for swimming pool construction. Thanks to the properties of the styrofoam, it is no problem to cut the Ocean® Brick to the desired length using a foxtail or knife. (The Ocean® Brick can be shortened every 25cm - every 25cm the formwork brick has a mark to make this process even easier. This helps to stack the Ocean® Brick staggered every 25cm, what ensures an optimal connection.



Pool inner wall

We recommend netting and filling the inside of the pool. (approx. 1-2 mm as for an exterior facade). The use of an intermediate layer of fleece (we recommend 400g for the walls and for the floor) avoids the individual dividing lines of the Ocean® Brick to become visible due to the water pressure. The Ocean® Brick is equipped with a tongue and groove system and therefore we can guarantee a very high stability.

Why use the Ocean® Brick system brick and not a normal concrete construction swimming pool?

The advantage of Ocean® Brick is the elasticity of the walls, which means that they do not have any stresses at different temperatures. Tension = cracks. This protects and increases the life span of the ABS/V4A pool components, PVC foil and PVC piping.

Optimal insulation

Since in recent years a "feel-good pool water temperature" of 26-28°C during the bathing season is assumed, the ground only has approx. 14°C. We recommend insulating the walls and the floor, because most of the heat is lost through the surface. Of course, a well-insulated pool has a shorter heating time at the beginning of the season. So the ambient energy is used exclusively to heat up the pool medium. To achieve an even higher insulation value, we also recommend a pool cover (e.g. sliding shed or roller shutter cover) to minimize heat loss via the surface. Our Ocean® Brick has a U-value of 0.29 (for comparison: a concrete wall has a U-value of up to 1.0 depending on its composition).

The advantages in summary:

1. Simple, robust plug-in system with the possibility of personal contribution.
2. More cost-effective option than a concrete stainless steel or polyester pool.
3. Simple & quick processing thanks to the tongue and groove system.
4. Easy & flexible installation of the built-in parts (cut out with a foxtail or saw and foamed in with PU foam)
5. For the pool bottom, we recommend a 5cm thick EPS board (tread-proof), which also need to be glued in place.
6. Optimal insulation with a U-value of 0.29.
7. The Ocean® Brick formwork blocks are to be filled with ready-mixed concrete by machine (do not use a shaker under any circumstances!!).
8. Optionally, you can use the Ocean® Brick system to build access steps and technical shafts on and in the pool.
9. Developed & produced in Austria, ensures short transport routes and protects the environment.
10. Above-average durability of the Ocean® Brick system brick wall.

General

It is important to clarify the legal situation before starting construction (building authority, municipality or competent office). If you are not familiar with the soil conditions, we advise to consult a pool building expert to determine the soil conditions (to be able to exclude any risks). Please get informed about the height of your groundwater table and the maximum size of the pool built in your municipality.

How should I concrete the Ocean® Brick?

The Ocean® Brick can be filled by machine or by hand. We recommend filling the Ocean® Brick with concrete in 3 phases. (3x approx. 50cm = 150cm pool height) to ensure stability and minimize risks.



Installation guidelines

The Ocean® Brick should be laid in a clockwise direction. The advantage, you can lay it continuously and thus have little or no waste (savings). If, for example, a 50 cm Ocean® Brick remains in the first row, you can start the next row with the cut off Ocean® Brick.

Attention: Ocean® Brick formwork blocks with a length of 25cm must not be used any more, as the Ocean® Brick formwork blocks need an exact overlap of 25cm to ensure stability, what won't be possible with an Ocean® Brick with a length of 25cm. 25cm piece = waste. Note: when laying, also pay attention to the markings on the top of the Ocean® Brick "INSIDE" + "OUTSIDE".

Peraqua® also recommends cross-linking and plugging up (1-2 mm) the inside of the Ocean® Brick to obtain a smooth and firm surface.



CORRECT EXCAVATION / BAGGING of the excavation pit

If we assume a pool with the dimensions of 8.0 x 4.0 x 1.5 m (1 block has a height of 30 cm = 5 rows)

Length of the excavation pit: Pool length inside dimension + 100 cm = 900 cm

Width of the excavation pit: Basin width inside dimension + 100 cm = 500 cm

The 100cm larger layout is important and very useful that all trades can work properly. We recommend concreting the brine 10-15cm larger on each side to allow installation on the brine. (for an 8mx4m pool, the brine would then be approx. 8.3mx4.3m).

Required excavation depth: 190cm. This is made up of: 20cm gravel 20cm bottom plate and 150cm pool height. For pools with 5cm ground insulation, a height of 195cm is required.

If the technical shaft is connected to the pool, Peraqua® recommends making the base plate approx. 155cm longer. (155cm - 25cm Ocean® Brick = 130cm clear technical shaft).



CONCRETE FLOOR PLATE

Please determine the geological conditions with an expert in advance. Concrete quality and formation of the base plate depend on the thickness of the base plate. Work with our Ocean® Brick on uncompacted or backfilled surfaces under no circumstances

The base plate requires a sub-base of gravel or crushed stone. The concrete quality must be at least B25 or better (check with the construction company to find out what is best in this case), and in case of grown soil, often fibre concrete is used.

The floor slab should be precisely levelled with a horizontal slat and equipped with at least two layers of structural steel mesh. Before concreting, make sure that you have an exactly right angle everywhere. (Measure diagonal)

Floor drain

Two variants have proven effective, for the installation of the floor drain:

1. Make a recess in the area of the floor drain (25x25cm) + a conduit to the floor drain (PVC empty pipe with 100mm diameter) When moving the floor drain, the recess is then opened and the floor drain is installed and piped. The advantage of this variant is that the floor drain is still height-adjustable and cannot slip during concreting.
2. The floor drain is fixed to the reinforcement before concreting and installed and connected at the correct height. However, please note that if the pool floor is insulated, the floor drain may be too deep for the thickness of the insulation.

Do I need an incline to the floor drain?

Here we recommend concreting the brine straight. Brief explanation: when emptying the pool, the self-priming pool pump is used -> it sucks in the medium. The last residue can be sucked up with a wet vacuum cleaner, thus removing coarse dirt at the same time.

Placement of the Ocean® Brick shuttering blocks

The Ocean® Brick is 125cm long, 25cm wide and 30cm high. The 30cm height results in exactly 1.50m of 5 rows (standard pool height). The pool attaches to the base plate by means of a sling. It is important to pay attention to the dimensions and to observe the 90° angles. (Pythagoras' theorem is very helpful here: 3m long 4m wide diagonal =5m -> right angle). In addition, you should take care to choose a kind of vanishing point in order to achieve a visually attractive picture. (parallel to a fence, house wall)

THE OCEAN® BRICK MAY ONLY BE CUT DOWN EVERY 25cm AT THE MAKINGS!



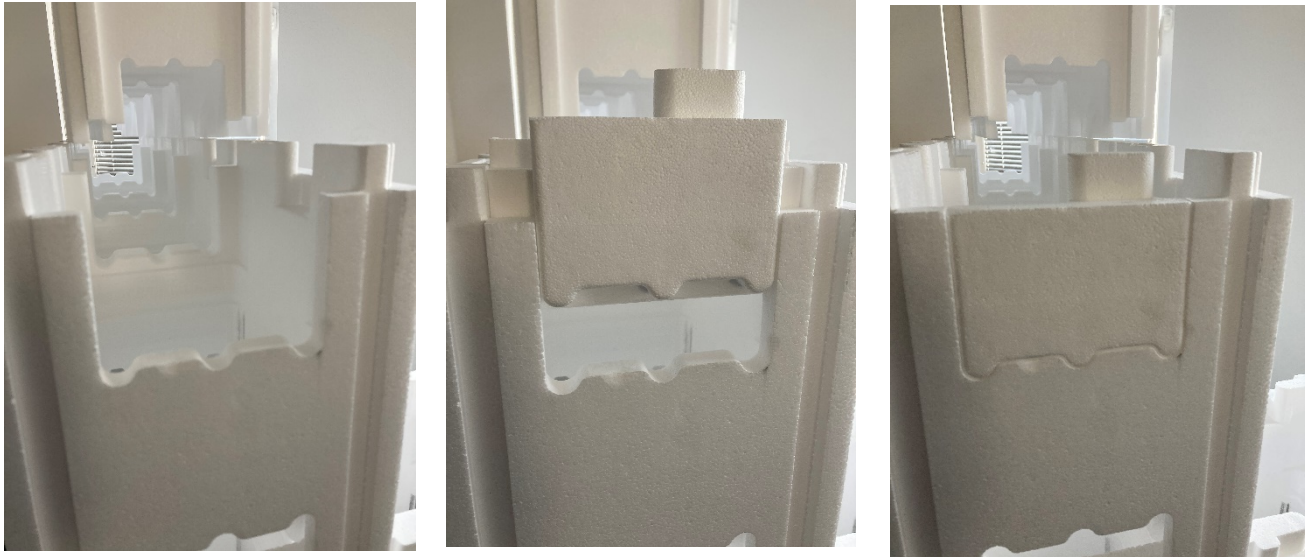
Next, drill an 8mm (=every 50cm) hole in every second chamber of the base plate - this is for the vertical reinforcement. We recommend cutting the 8mm bars to a length of 150cm and inserting them into the holes provided. If you take the 150cm bars, the vertical reinforcement is already finished and you do not need to tie a short piece of bar every second layer. If you assume a pool depth of 150cm, the 150cm long irons will fit perfectly. (10cm into the brine and 140cm outside the bottom plate).

Now we come to the horizontal reinforcement. For inground pools you need at least one layer of 8mm concrete irons, we recommend an overlap of approx. 15-20cm. It is also recommended to fix the irons into each other with a wire. Outside the ground, use at least two layers of iron. Never use the Ocean® Brick for a slope or retaining wall.

When you start the next row of Ocean® Brick, make sure that the bricks are always staggered by 25 cm.

IMPORTANT! At the ends or beginnings, it is essential to insert the slide-in inserts into the Ocean® Brick, otherwise holes would appear and the concrete would escape. In addition, the Ocean® Brick must be cut that there is room for the reinforcement in the corners - an additional benefit of this is the concrete can spread in a smooth way.

CHECK! After the second row, we once again recommend to measure and align the diagonals, if there are any deviations.



ATTENTION: Ocean® Brick formwork blocks are not designed for detached pools and slopes. A structural engineer must be consulted for this type of pool installation, as well as designing separate reinforcement plans.

Dimensional deviations?

Due to the production process, there may be slight dimensional deviations, but the Ocean® Brick cannot be shortened randomly (every 25cm). The OCEAN® BRICK GIVES THE MEASURE!

Concrete wreath yes or no?

We recommend placing a 5 cm concrete ring at the end. This must be formed separately and is best concreted at the same time as the last row of Ocean® Brick. The concrete ring also serves to ensure that the foil sheets or foil can be installed properly. In addition, the concrete ring can also be used to level the pool level and ensures you reach your final pool water depth of 150 cm by using the 5 cm EPS floor slabs. If a pool water depth of 145 cm is sufficient for you, you can dispense with the concretewreath. However, make sure the top row of the Ocean® Brick is concreted and covered perfectly with concrete.

Technical shaft with Ocean® Brick formwork blocks

What are the advantages of building the technical shaft with the Ocean® Brick? It makes sense to build the technical room with Ocean® Brick right away; it is completely the same construction as for the pool walls - i.e. all can be done at the same time (drilling iron, laying reinforcement, no long distances to the technical shaft). Additionally, the technical shaft is insulated very well with our Ocean® Brick formwork block. If you prepare well, you can also concrete the ceiling for the technical shaft at the same time as concreting the walls, whereby the recess for access to the technical shaft must be observed. This is usually large enough to allow the filter diameter and pool technology to pass through this opening. Depending on the pool size, this can be between 75 - 100cm. ATTENTION: The walls must be concreted 3 times! (3x 50cm layers). In the technical shaft, please consider a drainage shaft in the base plate so that dirty "residual pool water" can be drained off after the winter. Ensure that there is adequate drainage.

During construction, consider sufficient ventilation and exhaust using d160 or d225 pipes & 90 degree angles to reduce the formation of too much moisture and condensation in the technical shaft. This extends the lifespan of the pool technology in the technical shaft.



You want an alternative to the normal heat-sealed commercial films?

The ready-made PVC film bag (commercially available with 0.8 or 1.0 mm) is a very good alternative here. It is a very inexpensive solution. Normally, the ready-made film bags last between 8-10 years - in contrast to a 1.5 PVC commercial film, which has a service life of up to 20 years. Of course, there are now also 3D and stone-look films available here, which give the Ocean® Pool System an even higher-quality appearance. With both variants, UV light and sunscreen will sooner or later cause discoloration or fading at and above the waterline. We therefore recommend regular cleaning with commercially available pool edge care products. In the case of foil pools, holes must also be drilled in the bottom plate at the lowest points in order to be able to drain off the condensation water.

Installation parts

When placing the ABS or V4A built-in parts (skimmer, jets, floor drain, counter-current system, massage jets, underwater lighting), pay attention to the necessary accuracy (straight and correct height). In this way, you avoid unnecessary corrective work. The more accurate you are, the easier it is to place the built-in parts. All built-in parts are installed in a flush way with the Ocean® Brick. We recommend our Ocean® ABS or V4A high water level skimmer, as this achieves the highest possible water line. When filling the walls, make sure that the flange holes are not glued with filler. This makes it more difficult mounting the flanges when installing the foil.



Quantity table

Pool Size m	Required pieces*	ISO Items m ²	EPS Plates** m ²	Lining m ²	Edge lfm
5 x 3 x 1,5	68	25,5	15	40,5	16
5 x 3,5 x 1,5	72	27	17,5	44,5	17
5 x 4 x 1,5	76	28,5	20	48,5	18
6 x 3 x 1,5	76	28,5	18	46,5	18
6 x 3,5 x 1,5	80	30	21	51	19
6 x 4 x 1,5	84	31,5	24	55,5	20
7 x 3 x 1,5	84	31,5	21	52,5	20
7 x 3,5 x 1,5	88	33	24,5	57,5	21
7 x 4 x 1,5	92	34,5	28	62,5	22
8 x 3,5 x 1,5	96	36	28	64	23
8 x 4 x 1,5	100	37,5	32	69,5	24
9 x 4 x 1,5	108	40,5	36	76,5	26
9 x 5 x 1,5	116	43,5	45	88,5	28
10 x 4 x 1,5	116	43,5	40	83,5	28
10 x 5 x 1,5	124	46,5	50	96,5	30

For each pool size 40 pcs. Ocean® inserts are required.

Concrete volume = 54 liter / 0,054 m³ per brick

Static calculations regarding necessary iron quantities are to be provided by a qualified contractor, as these static requirements may vary from pool location (e.g.: level site or slope, groundwater, etc.).

* The quantities given do not include any additional elements. The quantities of elements required for the construction of the technical shaft and access stairs must be calculated and ordered separately.

** non-slip version for the pool floor area, 100 x 500 x 5 cm