INSTALLATION MANUAL

SWIMMING POOL WITH MODULAR STRUCTURE IN STEEL PANELS

C.P.A. srl
Via Don Demetrio Castelli, 71 - 12060 RODDI (CN)
Tel. 0173.615693 - Fax 0173.620922
www.cpa-piscine.it
cpa@cpa-piscine.it

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The EGEO STEEL kit has its key strength in ease of installation, the installer finds in this guide a sum of the steps that will lead to the creation of a beautiful and efficient pool.

For the installation of an EGEO STEEL pool kit, it is recommended to proceed by following these instructions, in order to obtain an efficient and quality product.

SUMMARY

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Premise

In order to proceed with a quick and effective assembly, we recommend that you have the following equipment available:

- Cordless screwdriver
- Fixed keys
- Drill tessellations
- Measuring wheel
- Cutter
- Level

1. Tracing phase of the shape

The first phase consists in tracing the pool on the ground: to draw the shape you must, first of all, free the area from plants or obstacles of any kind.
Once the site has been cleaned and made viable, you need to equip yourself with: pointed wooden stakes, a string, white powder, such as lime or plaster or white cement, and a measuring wheel.
Following are the tracing patterns to be traced using tracing powder and staking out the basic geometries before proceeding with the excavation.
Once the pool is square, other poles must be used, to delimit an outermost perimeter parallel to the first, 1 meter away.
The new external posts will therefore determine the area of the excavation, consisting of 75 cm of the inside of the tank for the construction of the bed and 45 cm useful for operators to perform the work of fixing the panels and subsequently to position the recirculation pipes.
The next step consists in spreading the cord, in order to connect the innermost pegs; this string will be the trace to follow in distributing the white powder that will indicate the perimeter of the tank.
At this point, all the posts and the rope can be detached from the ground.

2. Phase The excavation and the diving

Once the tracing of the pool has been completed, proceed with the excavation, paying particular attention to the fact that it must be carried out at least 20 cm deeper than the depth foreseen for the pool: for example, if the bottom of the pool is planned at a depth of 120 cm , we will proceed to dig up to 140 cm, or by adding to the internal dimension of the pool the thickness foreseen for the slab.
If a pool with a flat bottom has been chosen, the excavation will be considered completed, otherwise, if a pool with a truncated pyramid diving pit has been chosen, the diving pit must be traced..
The procedure for tracing mirrors the previous one: once you have entered the excavation, with the aid of the stakes and the cord, the overall dimension of the pit must be traced on the ground with respect to the shape of the pool.
Complete the pit starting from the deepest and most internal area of the hole, digging up to 90 cm deep; then connect the slopes of the sloping sides. To complete the excavation works correctly, it is advisable to proceed with the beating of the ground so that the planes are normal, parallel or sloping with respect to the reference field level.

3. Phase Preparation of the site and casting of the foundation slab

The third phase consists in preparing the site for the casting of the base. First of all, following the excavation operations, it is necessary to check the plans. Then positioned the stakes against the wind to the shape, the reinforcement boards, necessary for the formwork of the casting, will be positioned. Proceed to arm the entire shape of the bottom, first inserting the posts in the generating points, both in the outer perimeter and in the corner points of the diving pit, then nailing the side boards to the various posts. In this way, a correct formwork of the base will be obtained, ready for casting the concrete. Once the aforementioned set-up operations have been completed and once again the dimensions have been checked, it is therefore possible to proceed with the drafting of the double-layer electro-welded mesh. This operation must be done by lifting the lower bed base from the ground, with spacers, so that the net is raised from the ground by at least 5 cm. Then proceed by laying the second layer of mesh on top of the previous one, also spacing it from the previous one by about 15 cm. The spacers, to keep the mesh raised from the ground, must be in an adequate number in order to avoid excessive instability during the laying of the concrete of the foundation casting. The nets, belonging to the same floor, must overlap each other by at least 30 cm. Furthermore, among them, it is advisable to have reference points to which the concrete plane will be aligned. Then insert metal pegs, to which the nets will be anchored and on which the reference planes will be beaten.

It is recommended to use a pump for the jet.

Attention: make sure that all the boards are perfectly leveled so that, by flattening with the straight edge, a perfectly flat bottom can be obtained.

The bottom drainage pit and the related flexible piping must therefore be positioned. The pit will be placed in the deepest part of the floor (diving pit if present) taking care to check its height with respect to the finished edge of the floor, so as to subsequently allow correct fixing of the sealing flange.

The pool slab can then be cast.

It is recommended to use a concrete of good consistency, so as to facilitate the operations and distribution of the same. First you need to throw the external part around the lateral axes placed outside the path inside the pool, where the walls of the pool will then be laid. For leveling the concrete it is recommended to use the straight edge: in order the flat part, the sloping walls of the pyramid trunk and lastly the bottom of the diving pit (already partially filled with the surplus concrete). Once all the concrete has been laid flat, it is necessary to smooth it out.

It is very important that the bottom is perfectly smooth, so if it is possible to use a mechanical vehicle (helicopter) for the flat part. Where this is not possible, such as for sloping parts, we recommend the use of an iron trowel.

After having dusted well with powdered cement, operate with the spatula in order to perfectly smooth the surfaces.

If it is not possible to smooth the concrete, a specific additive cementitious mortar can be used at a later time, in order to make the substrate as smooth as possible.

Remember that even the smallest imperfection will be highlighted by the PVC coating. In addition, the water will bring out any imperfections like a magnifying glass.

4. Phase Laying and assembling the panels

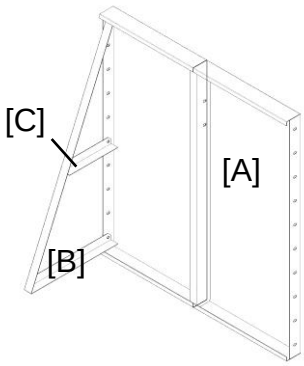
By using nails and a tracing line, redefine the internal shape of the tank. The plaster wire will serve as a guide during the assembly phases of the structure. This marking operation of the insole must be carried out using the color of which the elastic thread is soaked.

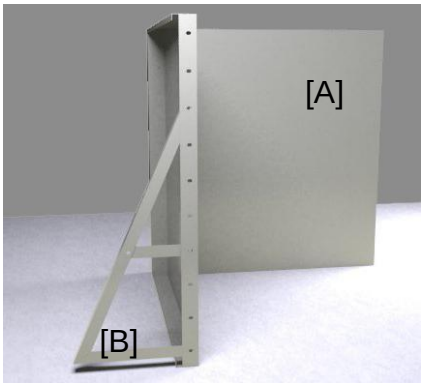
It is advisable to check the actual squaring of the shape thus defined, by measuring the diagonals and sides.

Once the verification has been carried out, it is possible to start positioning the edge panels, in compliance with the diagram supplied with the panel kit.

The kits consist of the following structural elements:

- linear and / or curved panel bodies (depending on the model) - [A]
- buttresses - [B]
- bracing braces - [C]
- corner posts (not present in free-form models) - [D].





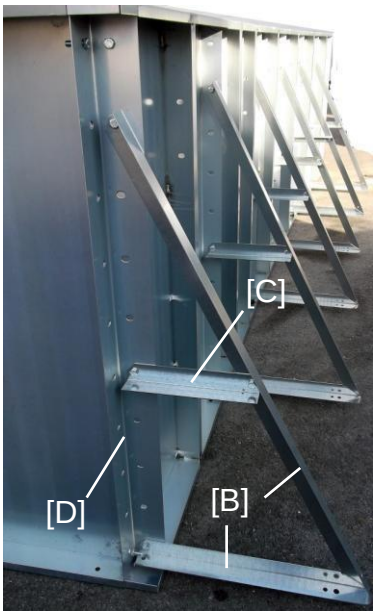


Figura I – Componenti pannello strutturale

In order not to make mistakes in the assembly, we recommend that you respect, during the assembly phase of the panels, the diagram, attached to the kit, showing the sequence and pitch of the panels, as well as the positioning point of the accessories..

Then proceed to assemble the structures of the panels. The buttresses will be positioned one per body, with the exception of the side start panels which will be bound directly to the corner pillar (only regular shapes).

We remind you to always keep the same mounting direction.

Proceed with the assembly of the bodies: bring the bodies of two sequential panels closer, respecting the tracing line, then fix the heads of the panels using the bolts and nuts supplied, remembering to position and join the buttress to the head of the panel using the bolts and the nuts supplied, in the order of two points each. Then fix the bodies and the aforementioned bracing, proceed to complete the coupling between the parts by fixing the bracing bolt. The bolt will be anchored by means of two bolts and nuts in the middle of the span of the buttress and of the height of the panel.

The buttresses will not be mounted on the corner panels to which the connecting pillars between the sides of the shape will be fixed.

Repeat this operation for the entire length of the side and then attach a corner pillar to the last head. Then proceed in the same way until the perimeter is completed.

Once all panels have been installed, check the correct alignment of the panels with the tracing wires on the slab, possibly adjusting the tightness of the nuts and bolts.

To complete the structure, all that remains is to firmly bind the buttresses to the foundation slab: this operation can be performed in the following ways:

- ✓ construction of a concrete curb to incorporate the corner of the lower part of the bracing (section min. 25 x 25 cm);
- ✓ mechanical anchoring by means of bottom pull, nut and washer and chemical anchor.

The methodological choice will be determined by the type of construction site and the practical choice of the installer.

The steps described so far can be summarized in the following sequence:

- ✓ juxtaposition of two sequential bodies respecting the tracing line
- ✓ fixing of the shells for the heads by inserting a buttress every two panels
- ✓ locking of the structure by joining it, the panels and the bolt
- ✓ verification of alignments
- ✓ mechanical fixing of the buttresses to the foundation slab.

5. Laying phase of the guide for anchoring the sheet / liner

Approach the aluminum bar of the fabric stop guide to the upper internal profile of the panel and fix it to the head of the panel by means of rivets, respecting a constant pitch between the fixing points equal to 25 cm. The guide must be positioned continuously along the entire perimeter of the pool, without interruption: to lay the guide in the corners of the pool, proceed to cut the head bars at an angle of 45 degrees, so that once coupled to the perimeter perfect continuity of the guide cloth holder seat is obtained.

6. Assembly phase of the components for the filtration and lighting of the structure

The Abs components will then be fixed to the panels in the dedicated holes.
The pieces to be fixed will be:

- Skimmer / s
- Inlet vents
- Brush sockets
- Headlights

Position the piece, for example the skimmer and the headlights, in its predisposed seat: the piece can be fixed to the panel by means of screws, as per the predisposed drilling, or by mechanical fixing with tightening of the pieces by means of a rear screw, see positioning of the outlet vents. placing.

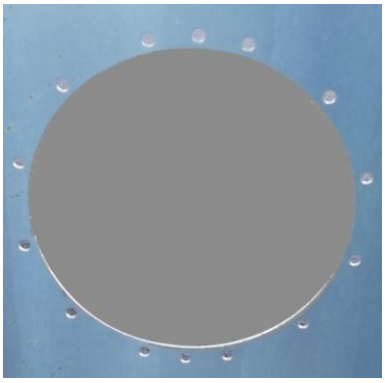


Figure II - Arrangement for housing pieces to be walled in

Figure III - Assembly of pieces to be built into the wall

Pay attention to the correct positioning of the sealing gaskets in order to achieve an optimal assembly.

7. Positioning phase of the technical room and the pipes of the water recirculation system

Then proceed to carry out the excavation for the housing of the technical room. It must be 10 cm deeper than the fiberglass room. The technical room must be positioned near the swimming pool at a distance between 3 and 5 meters.
At the end of the excavation, make a concrete base 15 cm thick, with at least one electro-welded mesh embedded. We thus obtain the appropriate support from the technical room. The casting thus performed will lead to having the closing lid of the technical room a few cm higher than the ground level.
Doing so prevents that, in the event of heavy rain, water can flow into the room, damaging the motors, electrical panels and anything else contained therein.
In the case of clayey and non-draining soil, it is advisable to install a pump for the drainage of rainwater at the side of the room, making sure that it is inserted in its own separate collection well.
Position the room, being careful to point the ends of the pipes towards the pool, then proceed to lay out the flexible pipes, designed for water recirculation.
Connect the flexible hoses at the ends of the fittings with the prepared joints, which can be glued or pressurized according to the models.

Figure IV - Local junction - pipes

Figure V - Completed technical room installation

We recommend the use of an "overflow" tube, attaching it to the attachment provided in the upper part of the skimmer, and an automatic loading float, attaching it to the attachment arranged behind the skimmer.
After arranging the pipes, we suggest you reinforce the walls of the excavation around the filter and pump room with dry-laid concrete blocks, so as to create a double wall..
Then cover the pool recirculation pipes with at least 30 cm of sand and finally reintegrate with homogeneous and light earthy material.
Finally, fill the filter with quartz sand and complete the installation by proceeding, in compliance with the safety regulations in force, to the electrical system connections. Be careful not to puncture the room: it is necessary to close the holes hermetically to prevent the room from filling up with water due to rain. As already mentioned, the accidental entry of water into the room could damage the appliances housed therein. Once all is finished, the excavation for housing the room can be backfilled and the desired finish around the pool can be created.

8. Installation phase of the covering

As the last stage of the set-up proceed with the laying of the primary seals on the accessories to be walled in (vents, skimmers, lights, etc. ...): with a cutter removes the mat near the pieces, proceeding with precise cuts, until they are completely view.
Then clean the flanges from dirt and any residues and then place the appropriate gaskets using, if present, the special gluing side.
The following phase consists in the removal of any processing residue present on the foundation slab: by means of an aspirator bin, meticulously remove all the dust and any cement residues, checking once again that there are no imperfections or holes in the foundation casting.

Figure VI - Cleaning of the bottom with a vacuum cleaner

Figure VII - Cleaning of the bottom with a vacuum cleaner

When the surface is perfectly clean, the Liner can be laid. Place the Liner on the flat portion of the bottom and then in any diving pit. Open the package lengthwise and proceed to unroll the Liner. Once this operation is completed, the sheet, correctly positioned, will present the surfaces of the walls within its shape. The drafting of the walls must be performed starting from an edge.

Figure VIII - Drawing up the liner

Figure IX - Attaching the liner to the guide

Then proceed to attach the Liner to the aluminum guide progressively from the edge towards the center of the wall: insert the Liner strip in the seat and block it with a PVC strap, or with the PVC cross spacers normally used in construction for laying the tiles. Once the corner is fixed, you can progressively hook the Liner around the entire perimeter. Remember to repeat the corner fixing operation also in the subsequent corners, this will facilitate the spreading of the sheet. Correctly laid Liner must appear to be under tension.

Once all the Liner has been positioned, it is necessary to accompany its surfaces with your hands and spread the bottom well: the Liner will however still show some folds and swellings.

At this point, the air trapped between the Liner and the structure will be aspirated using the aspirator, previously used in the cleaning operations, to which the cleaning basket will be removed beforehand. This operation will be carried out by inserting, about half the length of one long side, a flexible tube of the same height as the wall between the Liner and the same: the end of the tube must be cut at 45 °, so as to expire the air even when pushed into contact with the foundation.

the foresight to remain at an altitude of about 8 cm higher than the bottom level.

Figure X - Liner tensioning

Before starting the suction, check the complete closure of all the ball valves of the water circulation system.
Therefore, start the aspirator properly connected to the flexible hose, so that this creates a vacuum between the two surfaces.
The duration of this operation is about 5-10 minutes: during this period you will notice how the Liner will stretch until it adheres perfectly to the bottom and to the walls.
If any secondary swelling remains, accompany the sheet with your hands so as to facilitate the expulsion of the still trapped air.
At the end of these operations the Liner will be well spread and therefore it will be possible to access the tub, without shoes so as not to scratch the PVC sheet, to complete the installation of the pieces to be walled.
To do this, you will need a screwdriver, a cutter and a screwdriver.
To lay the pit, fasten the sealing flange, taking care to progressively tighten the screws for 50% of their length.
Once the correct coupling of the flange with the well has been verified, the screws can be fully tightened with the screwdriver, checking that the gaskets adhere well to the piece.

Figure XI - Assembling the flanges

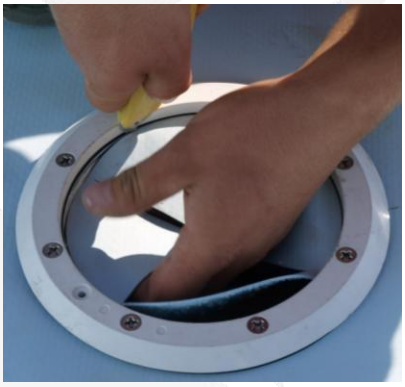


Figure XII - Removal of excess fabric

Then proceed to remove the excess Liner with the cutter, and then position the protection grid. At this point the tank is ready for filling. After checking again that there are no manufacturing imperfections, fill the pool using a garden rubber.

To install the lighthouse, after fixing the flanges, insert the power cable into the sheath with a probe, having first inserted the cable gland, until it reaches the junction box connected to it, then tighten the cable gland well.
Pay attention to the correct tightening of the cable gland as it is essential to the sealing system of the headlight. Finally, fix the lamp body to the housing niche and position the finishing crown.

9. Start-up phase of the filtration system

Once all the flanging operations have been completed, complete the filling of the pool with water. At the same time, check that the system works and that the electrical connections are correct and performed according to the rules of the art, in compliance with the safety regulations in force.
Also check that you have put sand in the filter. If this is not the case, proceed immediately, being very careful not to damage the very delicate PVC bottom sticks; a safe way to fill the filter is to put 50% of water inside it and only then add the sand.
Place the lever of the filter multi-selector valve on FILTER, open all the valves, and wait for the water to drain from the pool and fill the pipes, pump, etc. well.
At the first start, the pool will be able to make some air bubbles until it is completely stabilized.
Once the water has reached the height of the skimmer, start adjusting the filtration system: reduce, by partially closing the bottom valve, to a flow rate of 30%, leaving that of the skimmers at 70% and opening all the inlet vents.
Then adjust the pilot timer, if present. It is always good to leave the system running, as still water tends to stagnate. The duration of the filtration period is directly proportional to the water temperature (never less than 8 hours).

10.Fase Finitura della piscina con posa del bordo

The edges of the swimming pools are in cement conglomerate and are laid with glue and outdoor stucco.
The laying of the border must start from the four corners; once these are placed, you can follow the installation starting from the two corners until you reach the center of the wall.

Figure XIII - Laying the pool edge

If the length of the wall is not a multiple of the basic module of the edge, it will be necessary to cut the last piece to size before the corner.

11. Pool maintenance

You have now finished the pool. However, we must not forget that when using it, it is necessary to use water treatment products, such as chlorine, anti-algae and the pH regulator. Remember that pH regulation is very important because it maintains water balance and allows the correct disinfectant action of chlorine; then start with a MAGICLOR treatment and a dose of K3 anti-algae.
To keep your pool efficient over time, carry out periodic cleaning with the manual cleaning kit or with the HUB Advance automatic cleaner, vacuuming and removing the impurities introduced into the pool by atmospheric events.
To contain the dispersion of the heat accumulated by the water during the day, it is possible to have isothermal covers: these guarantee a thermal gain of 4-5 ° C. Covering and withdrawal operations can be simplified thanks to the Omega mobile reels.
In the winter period, it is possible to equip the pool with a special cover, so that your pool remains protected and clean until the summer season arrives, without requiring, at the time of restarting, expensive and demanding cleaning.
To anticipate the season, it is also possible to equip the system with a heat pump to heat the water temperature in mid-season.

12.Note: Roman stair

If there is a Roman staircase to be placed at the head of the pool, make sure that the foot of the ladder is of the right height with respect to the height of the perimeter walls.
For example, if the pool is 110 cm deep and the ladder is 120 cm, or if the height of the ladder is greater than the wall, it will be necessary to remove the excess portion with a circular blade, removing it from the foot of the latter. On the contrary, if the height is lower, it will be necessary to create a support foot in concrete blocks to compensate for the missing height; that is, a reinforcement curb will be created on which to rest the base of the same. At the time of installation, check the surfaces with a bubble, and check the correct alignment with the walls in which it will be inserted. Shims can be used to bring the ladder into position; in particular, make sure that the upper edge is flush with the top of the perimeter wall. To optimize the fastening and positioning operations, it is recommended to place braces at the rear of the ladder so as to stabilize the position until the support feet are complete, in blocks of lightened concrete and mortar, in the void existing under each step.
Proceeding with the fixing of the staircase, it is necessary to make sure that there are no empty spaces between the staircase and the perimeter panels.

Note

- The information contained in this document may vary at the discretion of the editor, without notice, together with the changes to the product in question in this document: it will be the responsibility of the customer to verify the persistent correspondence of the product when placing the order.
- It is the manufacturer's responsibility to comply with current safety regulations in all stages of the outfitting described in this document.