

EMBEDDING INSTRUCTIONS FOR AZURO DELUXE POOLS

EXCAVATION IMPLEMENTATION

Important: The pools of the AZURO DELUXE series can be embedded into earth, after complying with the below specified instructions. The AZURO pools are aboveground pools and are designed for construction at a terrain level. If a pool of the AZURO series (300A, 300B, 301, 302) is embedded into earth, even on a partly basis, the Seller will not be responsible for defects arising on the pool body.

If you want to embed the pool under the terrain level, it is necessary to take the following steps.

1. CHOICE OF EMBEDDING DEPTH AND OTHER RECOMMENDED MATERIALS

Before commencement of the excavation work we recommend to pay particular attention to:

- ❑ Depth of pool embedding with regard to pool incorporation into the surroundings and also from the viewpoint of final treatment costs;
- ❑ Orientation of the skimmer with regard to the terrain gradient, for the reason of simplicity of interconnection of the pool, filtration system and other accessories.

The maximum pool embedding depth, which is 1 cm above the skimmer lid, is provided for in the following tables and marked in Figure D1. The full embedding is not allowed. Any other partial embedding up to the maximum depth value is possible, including embedding into slope.

POOL TYPE	400 DL	401 DL	402 DL	403 DL	406 DL
<i>CIRCLE</i>					
Exact diameter of the pool body	360 cm	458 cm	458 cm	550 cm	640 cm
Diameter of the excavation footing (min)	380 cm	478 cm	478 cm	580 cm	670 cm
Pool wall height	107 cm	107 cm	120 cm	120 cm	120 cm
Maximum embedding depth A	100 cm	100 cm	113 cm	113 cm	113 cm
Orientation quantity of concrete for every 10 cm of the backfill height	0.18 m ³	0.22 m ³	0.22 m ³	0.27 m ³	0.30 m ³
Burl foil – approximate length	12 m	15 m	15 m	19 m	22 m

POOL TYPE	404 DL	405 DL	407 DL
<i>OVAL</i>			
Exact dimension of the pool body	366 x 549 cm	366 x 732 cm	458 x 915 cm
Diameter of the excavation footing (min)	396 x 579 cm	396 x 762 cm	488 x 945 cm
Pool wall height	120 cm	120 cm	120 cm
Maximum embedding depth A	113 cm	113 cm	113 cm
Orientation quantity of concrete for every 10 cm of the backfill height	0.24 m ³	0.29 m ³	0.36 m ³
Burl foil – approximate length	17 m	22 m	26 m

Important: In the case that the interconnections of the skimmer and filtration, possibly also the connection of a solar heating or of a thermal pump, are carried out under the terrain level, it is necessary to secure the protection of the pool hoses from the soil pressure. We recommend the use of the DRAINAGE PIPE with a diameter of at least 100 mm and the length corresponding to the use considered (see the chart, Figure B-1).

2. EXCAVATION

The excavation for the pool body should be carried out either manually or with the use of machinery, so that the excavation footing dimension can be along the circumference at least 10 cm larger than the exact pool dimension (see the Table above). In the case of the pools 403, 404, 405, 406 and 407 it is then necessary to ensure, for assembly reasons, that the necessary dimension of the excavation footing can be at least 15 cm larger.

In the case of oval pools it is necessary to make the excavation in such a way that it can be possible to install traversal brackets of the pool. The excavation dimensions must correspond to the chart of the concerned pool which is provided for in the Instructions to Use.

If the skimmer is placed under the terrain level, it is necessary to modify the shape of the excavation accordingly, in order that it can be possible to construct the assembly shaft for the access to the skimmer (see Figures D-1 and D-2). The assembly shaft should feature a dimension of approximately 35 x 55 cm so that it can be covered with a typified slab of 40 x 60 cm. That is why the width of the shaft excavation should be about 80 cm, approximately 50 cm from the pool wall and deep enough (according to the pool body embedding depth). In the case of circular pools it is up to users where they want to have the shaft, while in the case of oval pools it is necessary to choose the excavation for the shaft from several positions exclusively in the circular part of the pool, which are specified in Figure D-3.

In the case of shaft construction it will furthermore be necessary to make the excavation (to a shovel width) between the skimmer area and the filtration installation place. This excavation should feature a gradient from the filtration to the shaft or from the shaft to filtration so that it can be possible to drain water from the hoses for winterisation. Route the excavation in the direction perpendicular towards the pool (shaft) so that there can be created right conditions for both the assembly and disassembly of the pool hoses.

Leave this excavation uncovered in such a manner that pool hoses can be inserted into the drainage pipe before laying onto the excavation bottom. Therefore avoid backfilling of the drainage pipe too early!

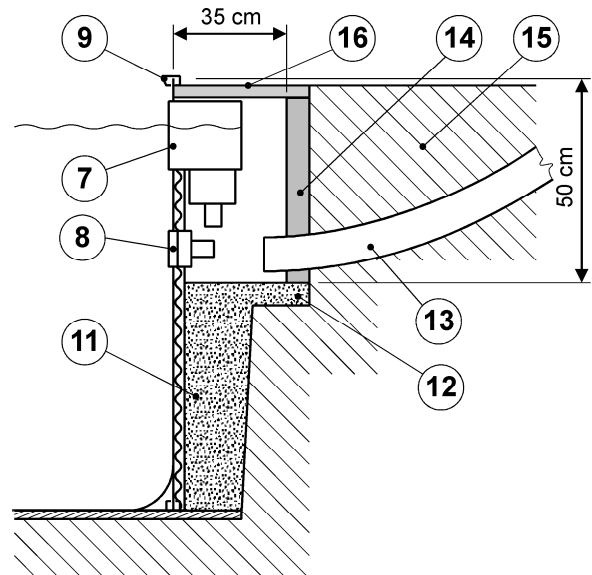
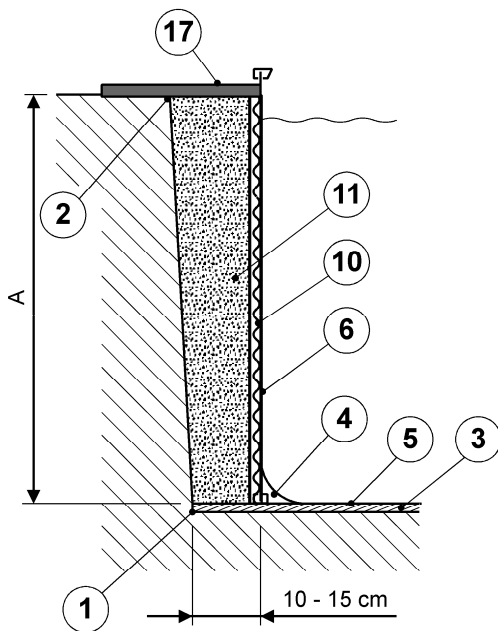


Figure D-1, Pool excavation sections

Legend to Figures D-1 and D-2:

- | | |
|------------------------------------|-------------------------------|
| 1 ... Excavation footing | 10 ... Burl foil |
| 2 ... Excavation crown | 11 ... Backfill with concrete |
| 3 ... Compacted sand layer to 2 cm | 12 ... Shaft bottom |
| 4 ... Corner filling | 13 ... Drainage pipe |
| 5 ... Geo-textile pad | 14 ... Walled shaft |
| 6 ... Foil and wall of the pool | 15 ... Soil |
| 7 ... Skimmer | 16 ... Shaft cover |
| 8 ... Return jet | 17 ... Paving around the pool |
| 9 ... Upper frame of the pool | A ... Max. embedding height |

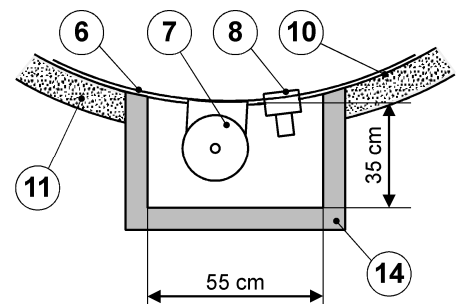


Figure D-2, Upper view of the shaft

Important: It is necessary to verify the ground water level on the construction site and whether this level does not oscillate depending on the annual period. An important feature is also given by classification of the pool subbase, its absorption capacity (beware especially of clays). The ground water level will be also affected by the manner of drawing water from surrounding plots of land, depending on the subbase in the period of spring snow melting or during the period of torrential rains.

In the case of adverse hydro-geological conditions it will be necessary to ensure suitable measures for the land drainage system, i.e. to found the drainage system from the pool bottom or to construct a pit next to the pool, where it is possible to install a submersible pump with a level switch, and water will be conducted into the rainwater gutter or sewerage system.

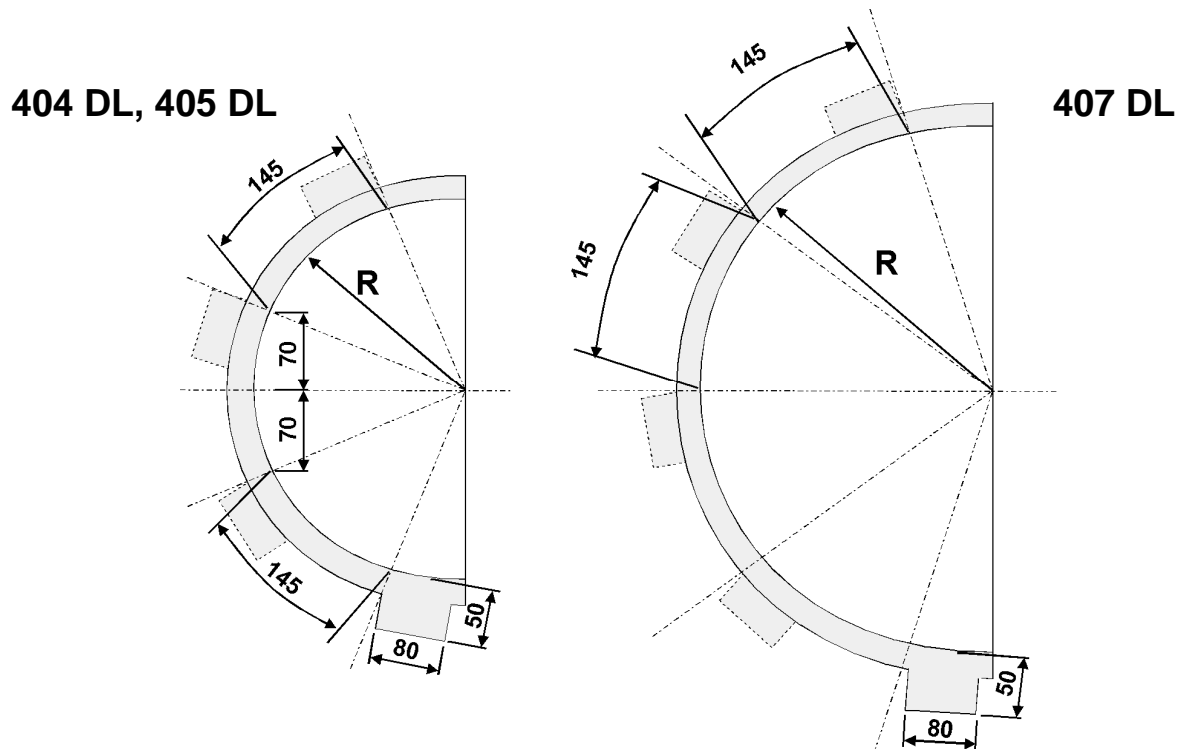


Figure D-3, Location of shaft for the skimmer for oval pools
R ... radius of the circular part of the swimming pool

In the case that it is necessary to reinforce the pool bottom, it is also necessary to pour a concrete slab under the pool. A concrete slab in a bottom thickness of 150 mm made with the use of the B20 concrete with KARI netting reinforcement at the upper edge of the slab will be poured onto the possible gravel bedding (with a thickness of 50 mm – according to the subbase quality). During the slab implementation it is necessary to use for its circumference vertical reinforcing system in two rows (at the place of the pool wall backfill with concrete – see **Finishing work**). The surface of the slab must be perfectly horizontal and smooth. It is also necessary to let the reinforced-concrete slab harden before the assembly of the pool, at least 7 days in advance.

FINISHING WORK AT THE EMBEDDED POOL

Please adapt the finishing work to the pool embedding depth. The below specified procedure corresponds to the maximum embedding depth and use of the recommended material (see **Excavation Implementation**).

Important: During finishing work it is necessary for the pool to be fully filled with water.

External protection of the pool wall

Install a burl foil around the pool, with the dimpled part to the wall. At the place of the skimmer it is necessary to cut out the foil. This foil protects the pool wall from mechanical damage and ensures the humidity ventilation.

Ensuring stability of the pool structure

The pool embedded is exposed to the pressure of the surrounding soil and therefore it is necessary to increase the external rigidity of the pool wall structure with concrete backfill. If the pool is backfilled with sand, soil or other non-reinforced material only, there is a danger of backfill material sliding and the pool collapsing.

Use a dry concrete mixture for the pool backfill. Its approximate quantity can be calculated from the data in the table in the part **Excavation Implementation**, which is to be multiplied by the embedding depth in decimetres. Mix the sand (river sand, if possible) and SPC 325 cement at a ratio of 5 sand shovels to 1 cement shovel. Mix perfectly when dry and then moisten the mixture in such a manner that the material pressed in your palm can stick together (it must have good cohesion, should not decompose or flow out through your fingers).

Pour along the circumference of the pool at two levels. At first approximately 5 cm to below the level of the return jet, simultaneously with the concrete pouring on the shaft bottom through the skimmer.

The next day make the shaft by using burnt bricks around the skimmer and return jet (see Figure D-2). The top of the shaft must be about 1-2 cm above the top of the skimmer. Then finish pouring the concrete mixture around the pool into the height required by you. Ensure also the drainage of the shaft area in order to eliminate rainwater accumulation there.

When the concrete is hardened, cut off the excess of the burl foil.

Note for oval pools

Technological procedure for the pool backfill is the same as in the case of a circular pool, we only recommend to carry out simple formwork in the area of the excavation for side brackets of the pool in order not to increase the concrete consumption uselessly. Please cover the remaining area of the excavation with soil and compact it, once the concrete has hardened and formwork has been removed.

Note for winterisation of the embedded pool

During the pool winterisation it is necessary to use an end cap for the blinding of the return jet area, and during this period it is necessary to maintain the water level below the skimmer collector so that water cannot flow into the shaft through the skimmer.

POOL SURROUNDINGS TREATMENT

The final treatment of the pool surroundings depends on your requirements concerning their appearance. One of the basic requirements for selection of a final treatment is safety. The paving system or treatment selected must be anti-skidding and frost-resistant.

We recommend e.g. a layer of shingle (stones from screened sand), interlocking paver system or artificial sandstone.

Cover the shaft around the skimmer at embedded pools with a suitable deck complying with the following requirements:

- a. It is light in order to facilitate access to the skimmer lid for cleaning purposes or pool vacuum cleaner connection,
- b. It is firm enough, so that it can be possible to walk on it.

Safety

Important: A pool, and in particular an embedded pool, is a permanent source of risk of injury or drowning for persons and animals moving in its surroundings. It is necessary to adopt such measures that children and animals cannot get to the pool.

The access to the pool must be ensured with suitable means (fencing, etc.), in order to eliminate the risk of drowning or injuries of persons, especially children.

Conclusion

The use and maintenance of the pool and accessories are described in the Instructions to Use which form a part of the delivery. It is necessary to read carefully the Instruction Manuals.