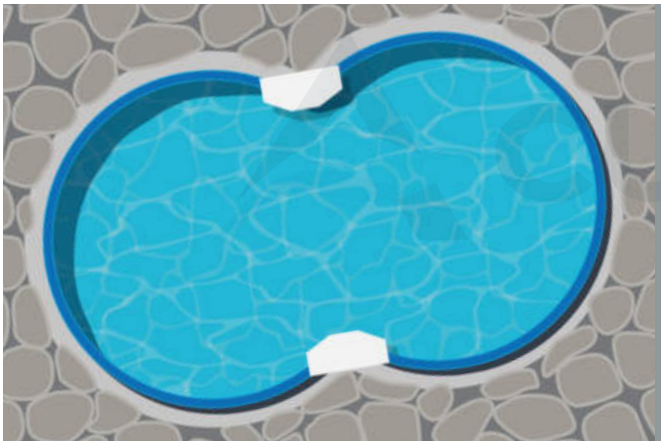
POOLSANA

Pool & Sauna Discount seit 2005

Pre-instructions for steel-wall pools
8-shaped pools



Example sizes*

3,00 × 4,70 m
3,20 × 5,25 m
3,60 × 6,25 m
4,60 × 7,25 m

* You can find our current pool range at **www.poolsana.de**

Please note: The assembly steps given in these instructions are valid only for **figure-eight pools**! In case of any deviations or uncertainties, please contact us before you start the construction work.

Safety instructions:

Before building and using a swimming pool, all assembly instructions with their safety instructions must be read and followed.
To avoid drowning or serious injury, unauthorised access to the swimming pool by persons – especially children under 5 years of age – must be prevented by suitable safety devices.

Non-swimmers and children must be supervised by a competent person. However, all safety regulations and devices can only help and do not replace your personal duty of care.

You can find more information from page 24.

© POOLSANA GmbH & Co. KG – Version 0022.002 – Reprinting and duplication prohibited

Contents

1. Important notes 4

1.1 Earthing the pool 4

2. Preliminary information 5

2.1 Pool parts* 5

2.2 Pool location 5

2.3 Filter system location 5

2.4 Installation options 6

2.5 Preparing the ground 6

2.6 Pool liner 7

3. Preparatory construction work 7

3.1. Layout and dimensions 7

3.2 Excavation 7

3.3 Steel support frame and concrete slab 8

4. Assembling the pool 9

4.1 Laying out the bottom profile rails 9

4.2 Erecting the steel wall 10

4.3 Adjusting the bottom profile rails and joining the wall ends with the connecting profile 11

4.4 Preparing the connection openings 12

4.4.1 Built-in skimmer (surface skimmer) 12

4.4.2 Inlet nozzles 14

4.4.2.1 Inlet nozzles for fixed piping (for in-ground installation) 14

4.4.4 Underwater light Compact (optional) 15

4.4.5 Built-in counter-current system (optional) 16

4.5 Laying the underlay fleece 16

4.6 Hanging the liner and fitting the top rail 17

4.6.1 Fitting the top rail (general) 18

4.6.2 Smoothing out the wrinkles 19

4.6.3 Fitting the cover platform 20

4.7 Fitting the built-in parts 20

4.7.1 Inlet nozzles 20

4.7.2 Skimmer (surface skimmer) 21

5. Lean-concrete backfilling for in-ground/partly in-ground figure-eight pools 21

6. Miscellaneous 22

6.1 Water level and skimmer flap 22

6.2 Pool ladder 22

6.2.1 Ladder for above-ground pools 22

6.2.2 Ladder for in-ground pools 22

6.3 Repairing the pool liner 23

6.4 Care and maintenance 23

6.5 Winterising 24

6.6 Safety instructions 24

CUÁTICO

Assembly and operating instructions for figure-eight pools



Fig. 1

Pool sizes:

3,00 × 4,70 m	3,20 × 5,25 m
3,60 × 6,25 m	4,60 × 7,25 m

1. Important notes

Please first read these instructions carefully in all points and observe all notes.

The illustrations and graphics in these instructions are in part symbolic and exemplary and serve for general illustration.

Before starting assembly, check your swimming pool for completeness. Check all parts for perfect condition. We cannot accept liability for transport damage claimed on parts that have already been assembled. We reserve the right to make changes in the interest of technical progress.

Please make sure that only suitable building materials come into contact with the steel wall. For example, when using silicone, make sure that it is acid-free, otherwise the protective coating of the steel wall will be damaged and rust may form.

If necessary, the suitability of the material for the intended purpose must be determined beforehand.

1.1 Earthing the pool

The swimming pool and all large metal parts must, as required by regulations, be connected to the equipotential bonding by a licensed electrical contractor.

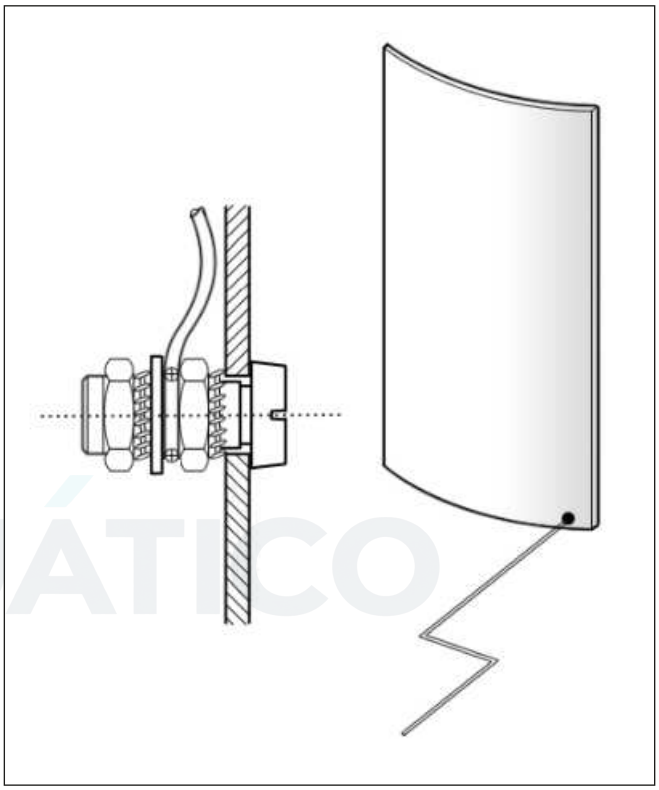


Fig. 2

To do this, you can drill through the steel wall in the lower area (then seal it again with zinc spray or plastic paint) and fasten an earthing cable to a metal screw (see Fig. 2). From there the cable is laid to an earthing rod.

Attention: All electrical work must be carried out by a recognised specialist company in accordance with the relevant DIN and VDE regulations (e.g. DIN VDE 0100 Part 702).

2. Preliminary information

2.1 Pool parts*

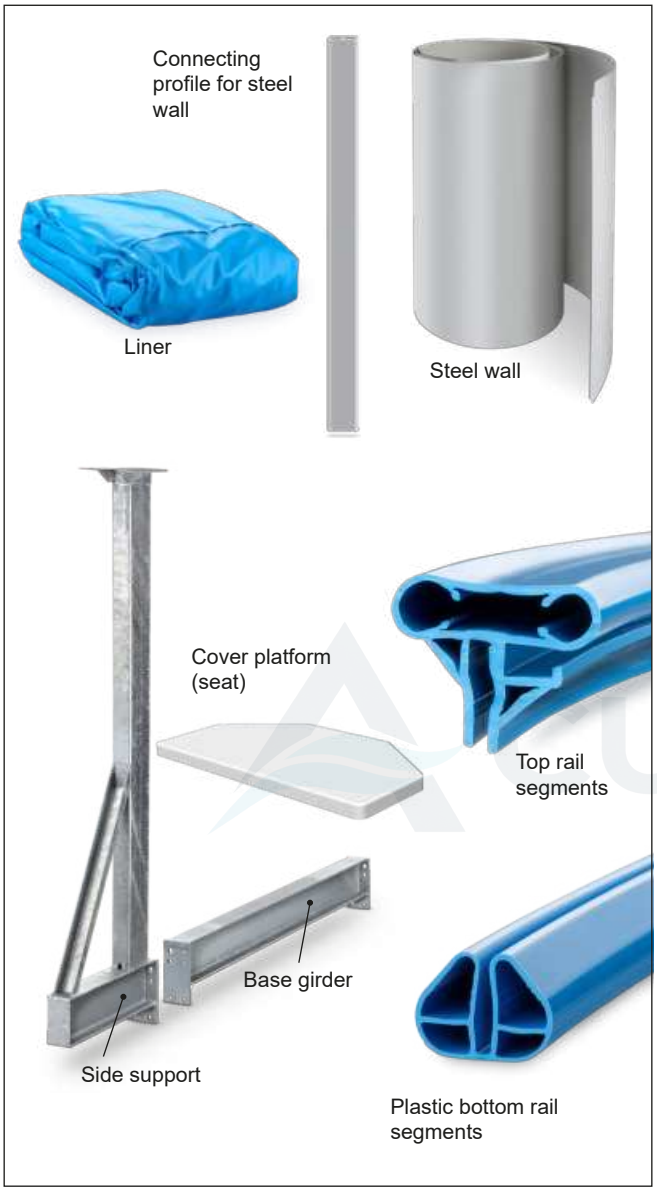


Fig. 3

** Individual components may vary in appearance without affecting their function.*

2.2 Pool location

The swimming pool should be in the sun if possible, not too far from the house. The skimmer (surface skimmer) should be placed in the main wind direction so that the dirt on the water surface is driven towards the skimmer. More important, however, is that the skimmer is installed on the side closer to the filter system.

2.3 Filter system location

The filter system should in principle be placed as close to the pool as possible, and it is in turn better to keep the suction line (skimmer line) shorter than the pressure line (nozzle line).
The filter system can be installed as desired in a shaft, in the house or in a garden house or similar. For the locations house and shaft, make sure that a floor drain is provided for any water that may escape. The backwash water must also be drained away, on average about 200 l every 1 – 2 weeks. This can be done via a fixed sewer connection or, if necessary, via a hose that is led to a suitable drain.

If the filter system is higher than the water level, a non-return valve must as a rule be fitted on the suction side, i.e. in the skimmer line. It is to be installed at a distance of 1.00 – 1.50 m from the sand filter system and must be accessible at all times.
The planned type of heating also plays an important role when choosing the location of the filter system. If the pool is to be heated with a solar absorber system for swimming pools, the filter system should be installed as close as possible to the relevant solar absorber location. Even if an air-to-water heat pump is planned that is installed outdoors, it is advisable to place the filter system in the garden as well. For a heat-exchanger connection to the central heating, on the other hand, a filter location in the house is almost indispensable.

2.4 Installation options

Several types of installation are possible for a figure-eight pool:

In-ground pool

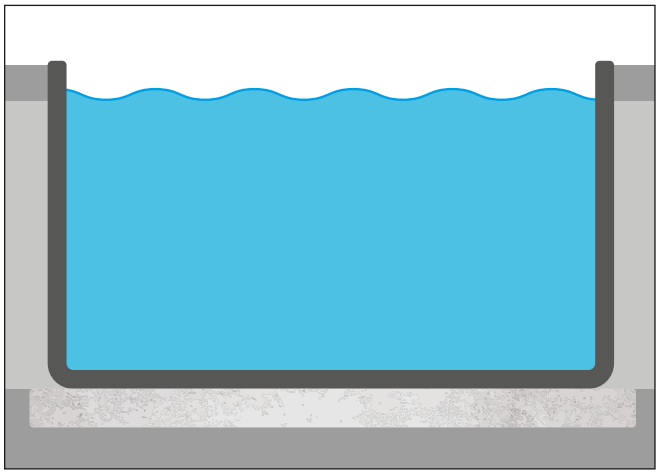


Fig. 4

Possible for all pool depths.
In-ground pools must be backfilled all round with lean concrete.

Partly in-ground pool

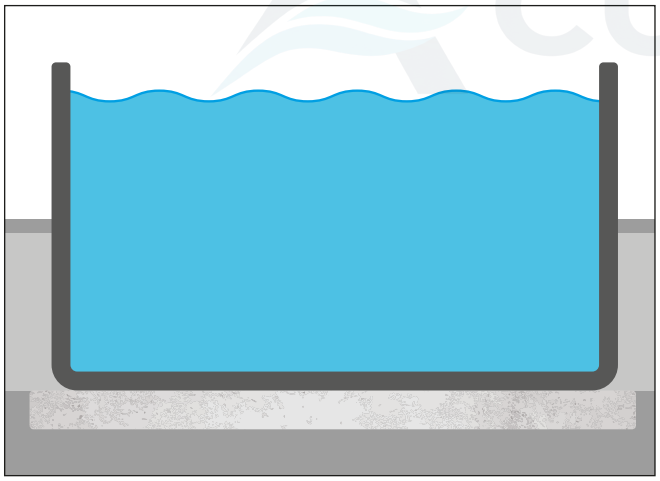


Fig. 5

This installation variant is also possible for all pool depths. A pool 150 cm high must be sunk at least 50 cm into the ground. The backfill in the sunken area must be made with lean concrete.

Free-standing pool

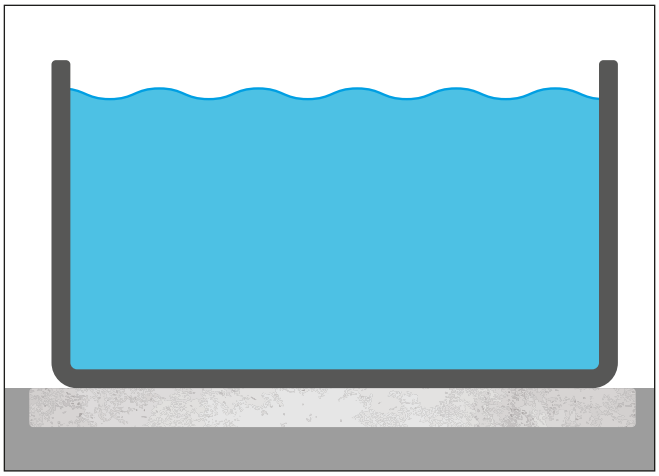


Fig. 6

Only possible for pools 120 cm and 135 cm high.

2.5 Preparing the ground

The site for the swimming pool must meet the structural requirements and be completely level, so any slopes must be dug away.
On sloping sites never build up fill! Embankments must be retained with a support wall. Under no circumstances may the wall of the swimming pool support the slope!

The ground under the swimming pool should be natural and not filled. Filled ground must be compacted so that the swimming pool does not sink, or more effort must be put into the foundation. In case of doubt, consult a building specialist or structural engineer.

Important for in-ground installation: Please note that the pool must on no account be located in the groundwater zone. If groundwater appears already during excavation at the relevant depth, a building specialist must absolutely be consulted and a solution sought.

A reinforced concrete slab (strength class C25/30) is required as the base, usually with a blinding layer/hardcore underneath. For in-ground pools a drainage line is generally recommended.

2.6 Pool liner

The PVC liner of your swimming pool is made of thermoplastic material. You should therefore make sure to assemble your swimming pool at outside temperatures of about + 15° C to + 25° C. Also do not hang the liner in under strong sunshine; in that case wait until the evening before hanging it in.

Please make absolutely sure that the PVC liner only comes into contact with PVC-compatible material. We therefore generally recommend an underlay of polyester protective fleece (usually included in our complete pool sets).

3. Preparatory construction work

3.1. Layout and dimensions

First draw the outline of the pool on the ground. The semicircles of the curves are best marked with a string led around a nail driven into the middle of the diameter.

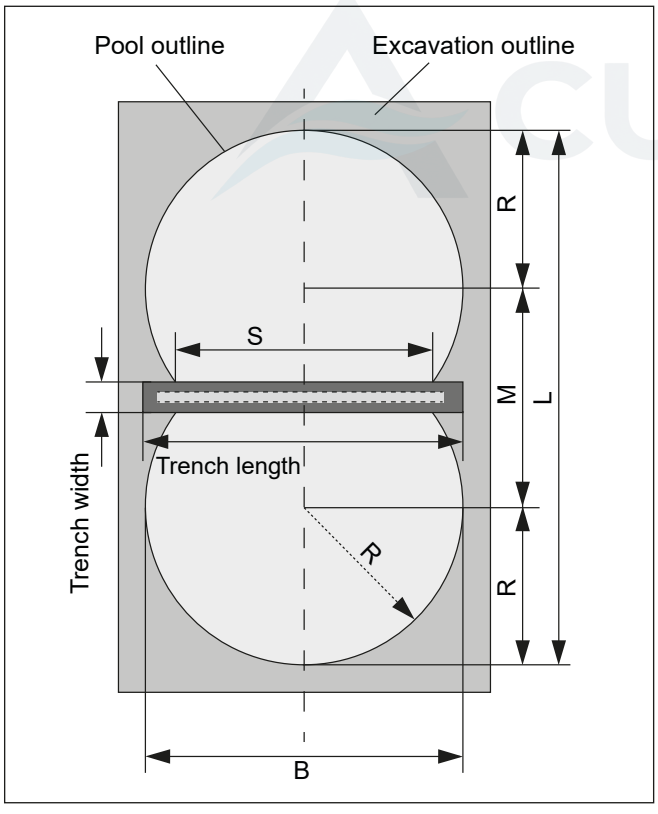


Fig. 7

B = pool width **L = pool length**
R = pool radius
S = support spacing
M = distance of the fixing points for marking the semicircles

Pool			
B × L (m)	R (m)	S (m)	M (m)
3,00 × 4,70	1,50	2,50	1,70
3,20 × 5,25	1,60	2,50	2,05
3,60 × 6,25	1,80	2,50	2,65
4,60 × 7,25	2,30	3,80	2,65

3.2 Excavation

If the pool is sunk in completely, make sure during excavation that at least 50 cm of working space is allowed for at the end where the skimmer is located. If 2 inlet nozzles are used, which are located on the opposite end, a working space of 50 cm must likewise be provided for the piping on that side and on one of the two long sides. Otherwise a distance of 30 cm is sufficient.

If the pool is sunk no more than half-way and the piping is above ground, a distance of 30 cm all round is sufficient, regardless of the number and position of the built-in parts.

At this point it should already be noted that the later backfilling directly behind the steel walls must be done with lean concrete in a thickness of 15 – 30 cm; you will find more information on page 21.

Pool with 2 nozzles

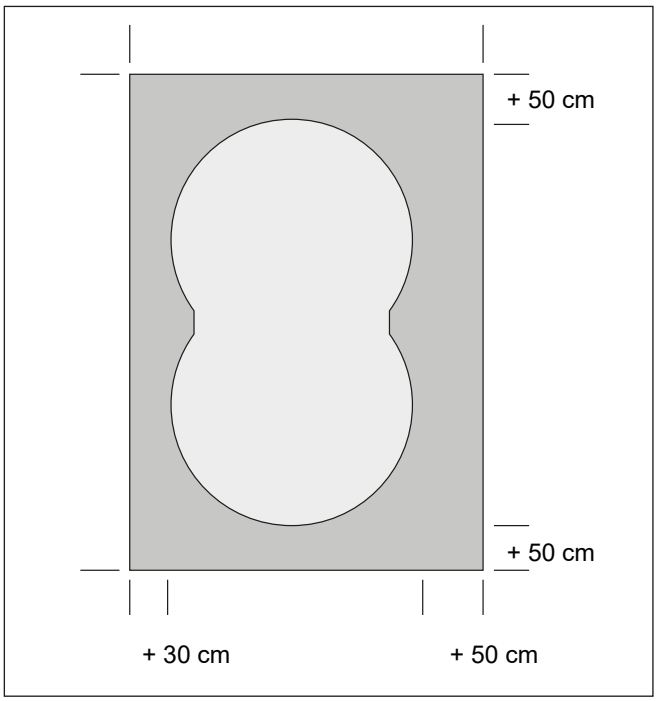


Fig. 8

Recommended excavation dimensions:

Pool	Excavation dimensions
B × L (m)	B × L (m)
3,00 × 4,70	3,80 × 5,70
3,20 × 5,25	4,00 × 6,25
3,60 × 6,25	4,40 × 7,25
4,60 × 7,25	5,40 × 8,25

For simplicity, the excavation pit is usually dug rectangular. Of course, it can also be dug following the outline of the pool (with a suitable clearance).

The depth of the excavation pit depends on the thickness of the concrete slab and of the blinding layer (hardcore), as well as on the pool depth and the pool projection above ground.

The formula is:

Blinding layer (gravel)
+ Concrete slab
+ Pool depth
– Pool projection
= Depth of the excavation pit

The thickness of the concrete slab is usually 20 cm, that of the blinding layer about 15 cm (the exact thickness is decided by the building contractor, depending on the ground).

Important: If the filter system is not directly at the pool, trenches must also be dug for the pipes to be laid. These should be about 40-50 cm wide and about 100 cm deep. If the pipes can be drained completely before winter by means of drain points at the lowest point of the piping, the pipes can be laid higher and sloping towards the drain.

For this it is advisable – as described in detail in our piping instructions – to provide a large plastic pipe or similar with an inside diameter of at least 160 mm at the appropriate place.

Likewise, trenches must be dug if necessary for the solar lines (from the filter system to the solar absorber) and for the electric cables.

3.3 Steel support frame and concrete slab

If a concrete slab and a blinding layer are planned, the excavation is usually already deep enough for the steel support frame. It is advisable to set the support in as soon as the concrete slab is poured. If the structure is only installed afterwards, or if the slab is thinner than the depth of the support, a trench must be dug.

Trench for the steel support

120 cm pool depth		135 / 150 cm pool depth	
Pool	L-beam	Pool	L-beam
B × L (cm)	L x B (cm)	B × L (cm)	L x B (cm)
300 × 470	330 × 25	–	–
320 × 525	330 × 25	320 × 525	330 × 28
360 × 625	330 × 25	360 × 625	330 × 28
460 × 725	460 × 25	460 × 725	460 × 28

The steel support consists of two side-wall supports and – depending on the pool size – two to three base girder sections. The depth of the support is between 14 and 18 cm, depending on the pool size and depth. The whole structure must be carefully bolted together at the end plates before installation.

Tightening torque for the screws:
M 12 = 85 Nm M 16 = 206 Nm

Place the bolted-together steel support in the prepared bed, align it horizontally and vertically and fix it in place. **The concrete or concrete slab must be flush with the top edge of the base girder (see Fig. 10).**

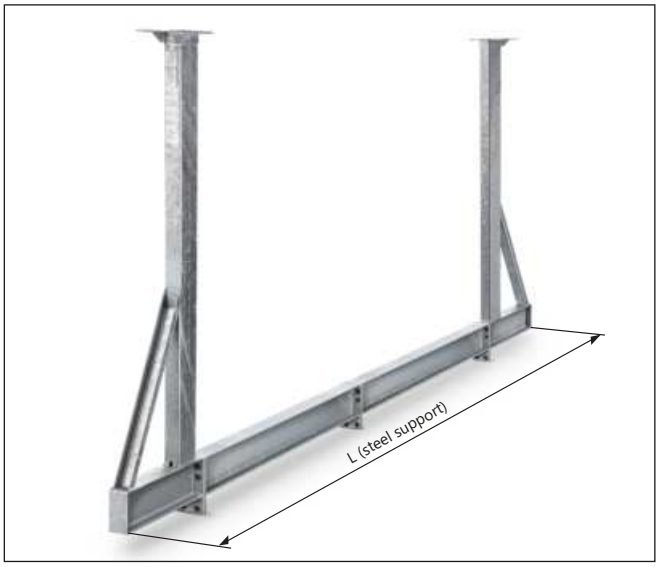


Fig. 9

Top edge of base girder = top edge of concrete slab

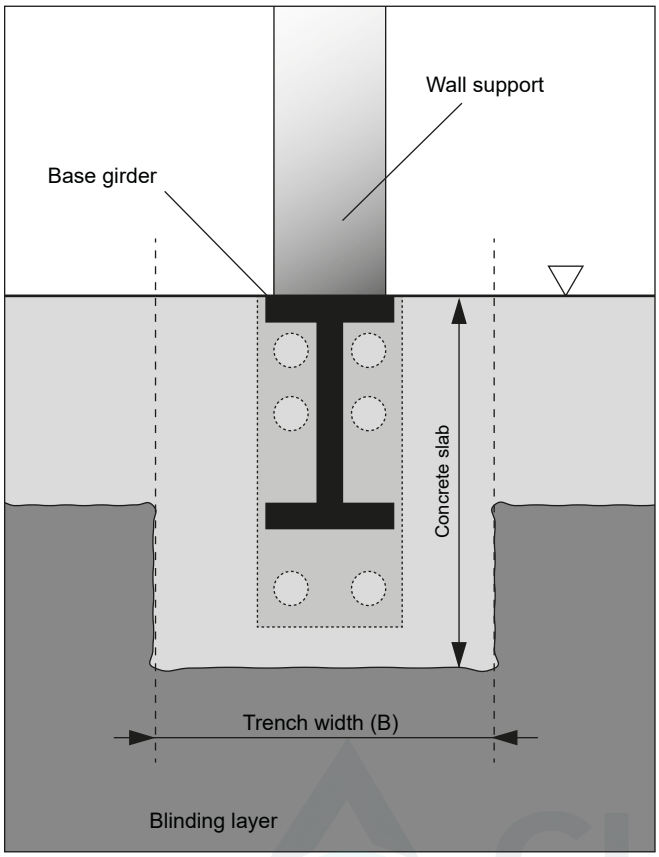


Fig. 10

4. Assembling the pool

Depending on the pool size, the pool should be assembled by 3 – 4 people on a windless day. We recommend wearing gloves when erecting the steel wall.

First draw the outline of the pool on the ground. This is best done with a string led around a nail driven into the middle of the diameter. Mark the lines with a bricklayer's pencil or chalk.



Fig. 11



Fig. 12

4.1 Laying out the bottom profile rails

Join the individual segments of the bottom rails (width approx. 20 mm) together using the connecting tubes and lay out the closed pool contour on the ground. Follow the marked layout. Please check the dimensions and the symmetry carefully and, if necessary, shorten 1 – 2 bottom rails accordingly.

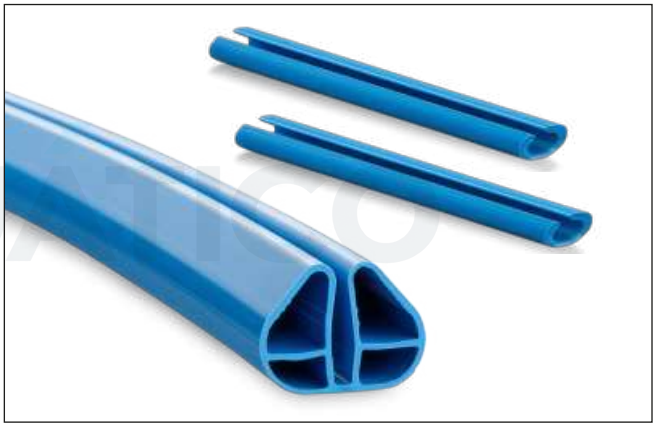


Fig. 13

Saw the bottom rails that lie against the outside of the wall support at a mitre, as shown in Fig. 14.



Fig. 14

4.2 Erecting the steel wall

To get into the pool, you need a ladder for the rest of the assembly.
Later, however, when fitting the liner, care must be taken to avoid damaging the liner with this building ladder.

In addition, before assembling the pool wall, bring the folded liner into the interior of the pool.

With your helpers, place the steel wall roughly at the point where the skimmer (surface skimmer) is to be fitted later, on strong boards and cardboard, so that the steel wall can be pulled more easily when unrolling (see Fig. 15). The steel wall must never be dragged over the concrete floor when unrolling, as this can damage the steel wall.



Fig. 15

The steel wall carton is normally labelled “oben” (top) or similar (see Fig. 16); it is important that the steel wall is erected the right way up.



Fig. 16

The steel wall is always rolled up inwards at the factory, so that the rolled-up steel wall shows the outside of the pool.
So unroll the steel wall in the same direction in which it is rolled up.

It is also important to wear gloves when unrolling and erecting the steel wall and to secure the steel wall with a strap or similar before opening/unrolling it (risk of injury!) (see Fig. 17)

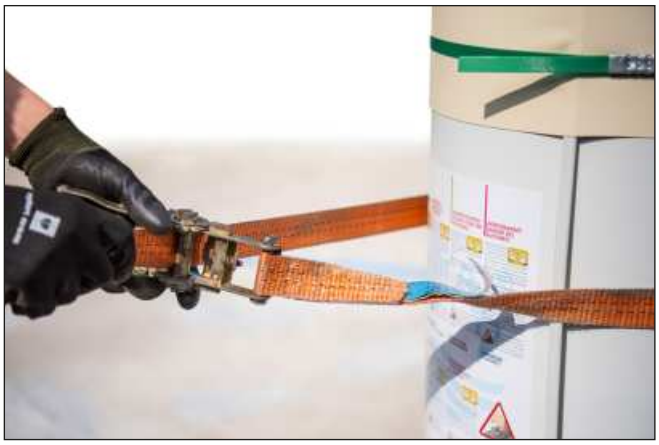


Fig. 17

The skimmer punching is normally located at the start of the steel wall to be unrolled (approx. 1 – 2 m from the start); if there are several steel wall packages, the cartons state which part of the steel wall with which punchings for built-in parts it is.



Fig. 18

Unroll the steel wall and insert it accordingly into the profile rails (see Fig. 18). The skimmer cut-out must be placed at the desired position (as close as possible to the filter system).

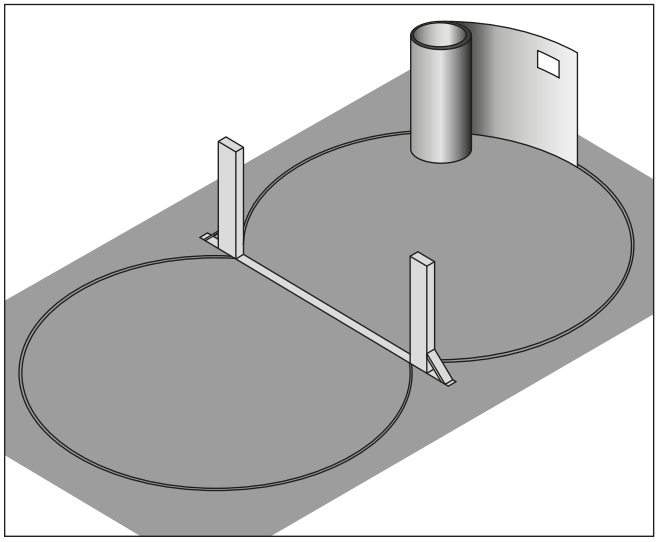


Fig. 19

If the connecting profile is attached to one side of the steel wall, it must be pulled out.
For larger pools the steel wall is divided into 2 parts; i.e. the connection with the connecting profile is made twice.

An important tip: To hold the steel wall temporarily, a few top rail pieces can be pushed on during assembly (see Fig. 20).

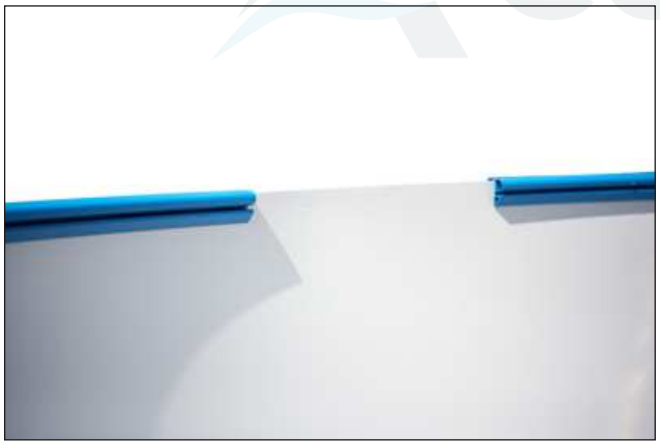


Fig. 20

Also always make sure that the steel wall stands firmly in the bottom profile rail.

4.3 Adjusting the bottom profile rails and joining the wall ends with the connecting profile

The gap between the steel wall ends should be about 5 mm so that the connecting profile can connect the two ends of the steel shell.

This must be taken into account when adjusting/shortening the bottom profile rail.
Shortening the bottom profile rail: unroll the steel wall and measure any overhang of the bottom profile rail. Then pull the steel wall out of the bottom profile rails again by about 50 cm and shorten a bottom profile rail accordingly (allow a gap of 5 mm between the ends of the steel wall for the connecting profile; see above).

Then place the steel wall back in position completely and slide the connecting profile over it (see Fig. 23).



Fig. 21



Fig. 22

Depending on the pool, the connecting profile may have a bevelled side. In that case, fit the connecting profile so that the bevelled side is inside at the top. If there is no bevel, it does not matter which side is up.



Fig. 23



Fig. 24

By moving the connecting profile slightly back and forth while pushing it on, you can make it run more smoothly. It is easier to push on with a rubber mallet. Fitting it incorrectly and hitting the connecting profile violently damages the steel shell (warranty restriction) and impairs the stability of the pool.



Fig. 25



Fig. 26

To protect the liner from damage, the connecting profile should be covered with adhesive tape on the inside.

Attention: Please check that the pool stands absolutely level. With height differences of more than 2 cm the manufacturer's warranty expires. In this case please find the cause and remody the problem, e.g. by reworking the ground.

4.4 Preparing the connection openings

A note in advance: please also observe, where applicable, the manufacturer's own assembly instructions if these are supplied with the built-in parts. Please contact us in case of any uncertainty.

4.4.1 Built-in skimmer (surface skimmer)



Fig. 27

1) Skimmer body
2) Suction plate
3) PTFE tape
4) Hose connector
5) Double gasket

In our pool sets and individual pools the corresponding skimmer opening is as a rule already punched out or pre-punched. If the cut-out is made on site, the skimmer opening and the flange holes are marked and then cut out or drilled through with a drill and jigsaw.

The distance from the top edge of the skimmer opening to the top edge of the steel wall should be 5 cm. Then please deburr the edges carefully.
If the opening is pre-punched but not completely punched out at the factory, the inner piece of metal is carefully detached with a suitable tool and the edges are deburred.

Regardless of whether the punching is done at the factory or on site, the edges must be treated with a corrosion protection agent or plastic paint (see Fig. 29)



Fig. 28



Fig. 29

If the piping is to be done straight away, it is advisable to fit the skimmer body now. To do this, slide the skimmer double gasket over the sheet-metal wall at the punched opening and hold the skimmer against the opening and fix it from the inside with the smaller locking screws with round heads (see Fig. 30).
If 2 individual gaskets are included in the delivery, these are also fitted in the order gasket – steel wall – gasket.

It may be necessary to drill additional holes in the steel wall (and treat them with rust protection), as the holes for the locking screws are not always pre-drilled.

If the piping can also be done later, the skimmer can also be fitted only when the liner is installed (see page 20).



Fig. 30



Fig. 31

4.4.2 Inlet nozzles

Depending on the pool type, either 2 inlet nozzles opposite the skimmer (opposite end of the pool) or 1 inlet nozzle next to the skimmer (so the built-in parts are on one end only) are provided. This is always stated in the scope of the order. In our complete pools, or when the built-in parts are ordered together with individual pools, the corresponding nozzle openings are normally punched out. If the opening is pre-punched but not completely punched out at the factory, the inner piece of metal must be carefully detached with a suitable tool and the edges deburred.

If the cut-outs are made on site, the nozzle openings are made to the size of the nozzle in the curve opposite the skimmer using a drill and jigsaw. Here too, please deburr the edges.
The distance from the top edge of the nozzle opening to the top edge of the pool should be about 30 cm, and the distance between the two nozzles about 200 cm.
Regardless of whether the punching is done at the factory or on site, the edges must be treated with a corrosion protection agent or plastic paint (see Fig. 32).



Fig. 32

4.4.2.1 Inlet nozzles for fixed piping (for in-ground installation)

Very important for inlet nozzles for fixed piping: the nozzle bodies must be fitted now, before the liner is installed, as these are high-quality special inlet nozzles with a flange on the pool side, which makes a later liner replacement considerably easier than with conventional nozzles.

To do this, loosen the lock nut at the back of the nozzle and remove the cover plate, the flange **(which is often pressed into the groove of the cover plate)** and the 2 gaskets. At the front, remove the adjusting ring or the nozzle eye.



Fig. 33

1) Adjusting ring **2) Nozzle eye**
3) Nozzle body **4) Lock nut**
5) Screws **6) Cover plate**
7) Flange **8) Gaskets**

If an additional gasket is supplied with the inlet nozzle without holes (9), it can be disregarded for steel-wall pools.

The nozzle body is now pushed through the punched opening of the steel wall from the inside.



Fig. 34

Now stick one of the two self-adhesive gaskets onto the flange frame of the nozzle body.



Fig. 35

Then screw the lock nut from behind (outside of the pool) onto the nozzle thread and tighten it.



Fig. 36

Remove the adjusting ring and the inner nozzle eye before you start assembly. These are only fitted again after the liner has been installed or after the nozzle cut-out has been made.

Inlet nozzles with a 32/38 mm hose connection are only fitted together with the liner (see page 20).

4.4.4 Underwater light Compact (optional)

The opening (Ø 121 mm) for the installation niche must be marked on the steel shell, drilled, cut out with a jigsaw and then treated with anti-rust paint or zinc spray.

Then stick the gasket without holes onto the back of the niche, pass the niche from the inside to the outside through the hole and fix it on the outside with the lock nut. Make sure that the lock nut is screwed onto the niche with the deep side first.
Important: one of the gaskets with holes is now stuck onto the flange frame on the inside!



Fig. 37



Fig. 38



Fig. 39



Fig. 40

The edges of the resulting hole must be deburred and then treated with zinc spray or similar to prevent later corrosion of the steel wall (see Fig. 40).

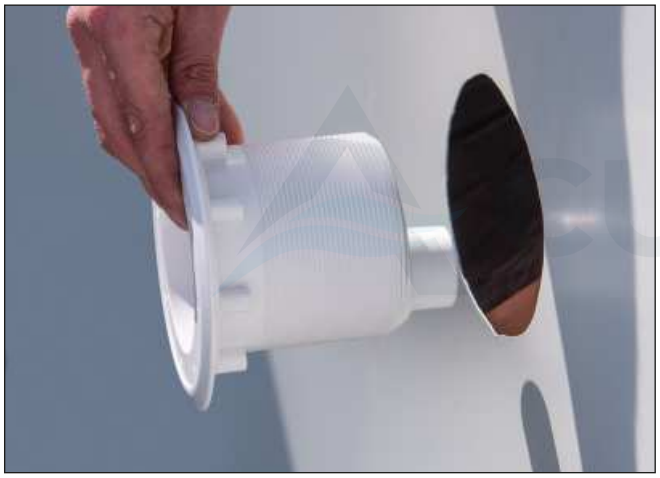


Fig. 41



Fig. 42

After the adhesive gasket without holes – included in the delivery of the light – has been stuck onto the back of the niche, the niche can be inserted into the hole from the inside to the outside and fixed on the outside with the lock nut. Make sure that the lock nut is screwed onto the niche with the deep side first (see Fig. 42).

4.4.5 Built-in counter-current system (optional)

The built-in counter-current system is positioned so that an inspection shaft with minimum dimensions of 100 × 100 × 100 cm can be provided behind it (note the shaft drainage option!)
For the installation of the counter-current system, please observe the assembly instructions of the respective manufacturer. The holes in the pool wall must of course also be carefully protected against corrosion here.

4.5 Laying the underlay fleece

We recommend using a polyester underlay fleece or a ground protection sheet (usually included in our complete pool sets) to protect the liner from direct contact with the ground and any PVC-incompatible materials it may contain. However, the underlay fleece can only protect, not level out unevenness.

The ground must be thoroughly cleaned before the fleece is laid.
In some cases the fleece is already cut to the size of the pool. If it is supplied on a roll, please lay it out in strips and fix it with adhesive tape.



Fig. 43



Fig. 44

Cut the fleece about 10 cm larger than the pool dimensions and let it stand up about 5 cm all round against the pool wall. The offcuts can be used for smaller edge pieces. Pull the overhang over the bottom rails and stick the fleece to the steel wall with packing tape.



Fig. 45



Fig. 46

Pull the underlay fleece smooth and also join it at the seams with packing tape.
Then small wedges must be cut into the fleece every 20 – 25 cm to remove excess material and to prevent the fleece from overlapping



Fig. 47

Any kinks and wrinkles in the fleece disappear by themselves through water pressure and time.

4.6 Hanging the liner and fitting the top rail

Attention: Fit the liner at temperatures between +15 °C and +25 °C. Make sure that the stated minimum temperature also prevails at night, as especially in spring the nights are still quite cold and the liner otherwise does not "come up to temperature" quickly enough when laid, especially if it was stored outdoors. Not in strong sunshine! If the temperature is too high: liner soft, elastic, too large. Temperature too low: liner hard, inelastic, too small (size differences of up to 50 cm!).

Clean the interior of the pool once more.



Fig. 48

Now place the liner in the middle and spread it out so that the outer floor seams lie at an even distance from the steel wall, as the liner is always slightly smaller than the pool itself.

Please make sure that the vertical weld seam is not in the area of the skimmer, the inlet nozzles or the lights, as otherwise watertightness is not guaranteed.

Attention: Walk on the PVC liner only barefoot or with suitable shoes.



Fig. 49



Fig. 50

Irrespective of the top rail, the liner always has a welded hanging profile, the so-called hanging bead (see Fig. 51).



Fig. 51

Push the edge of the liner with the welded hanging profile over the edge of the steel wall and fix the liner with several individual top rail segments (see Fig. 52)



Fig. 52

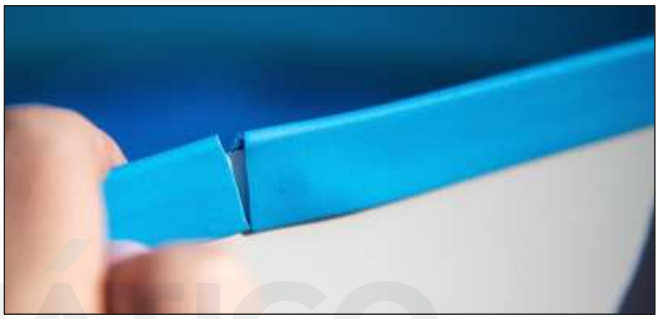


Fig. 53



Fig. 54

Only after the welded seams of the liner have been aligned evenly should the top rail be fitted completely (see 4.6.1).

4.6.1 Fitting the top rail (general)

Plug the top rail pieces together with the connecting pins; press them onto the pool edge by tapping with the flat of the hand or a rubber mallet, clamping the hanging profile in place. If necessary, shorten a top rail piece (see Fig. 55).



Fig. 55

Additional notes for fitting the aluminium combination top rail

Assembly is basically identical to that of the plastic top rail. The profiles are already cut to the size of the respective pool at the factory. At the side supports the top rail segments butt up against the side supports. The top rail is therefore not continuous; there are 2 interruptions, which are however later covered by the seat platforms. If necessary, or in the event of dimensional deviations, the segments can be mitred afterwards at these points to achieve an even better fit. A total of 2 plastic cover caps are included in the delivery. When the pool is filled, the expanding steel wall may cause a larger gap at one or other of the top rail segment joints. Use the cover caps after the pool is finished to cover these points.



Fig. 55.1

4.6.2 Smoothing out the wrinkles

Diagonal wrinkles that appear on the wall section of the liner can be evened out by moving it while the top rail is partly fixed.

Push the wrinkles out from the floor towards the pool wall. Above all make sure that the weld seam of the liner between the floor and the wall section lies exactly in the floor/wall corner of the pool wall and floor. Before the pool is filled, the liner should have an even distance of the weld seams from the pool edge everywhere and, if possible, show no more wrinkles. Since the liner is made undersize, i.e. slightly smaller than the pool dimension, to allow for expansion due to temperature and water pressure, it is absolutely important that the floor seams are not aligned at an uneven distance from the pool wall.



Fig. 56



Fig. 57

After the final fitting of the top rail, any remaining wrinkles in the floor can be corrected by filling the pool with about 2 – 3 cm of water and pushing the wrinkles outwards.



Fig. 58

If wall wrinkles cannot be corrected: wait for a water level of 20 – 30 cm; if the problem still exists then, remove the top rail partly (bit by bit, never completely!) and move the wall liner slightly sideways to reduce the wrinkles or, if possible, remove them. During this operation the liner must nevertheless always be sufficiently secured by the top rail to prevent the liner from slipping into the pool.
If all this does not lead to the desired result and the wrinkles are of an intolerable size, the only option left is to start again completely.

4.6.3 Fitting the cover platform

Now fasten the two cover platforms to the vertical posts with 4 screws each. The platform is meant to form a clean top finish of the support and to cover sharp edges. It is not suitable as a diving board!

4.7 Fitting the built-in parts

When the water level is about 20 cm below the first built-in part, the flange fitting can begin. The following assembly instructions only apply to our own built-in parts.

4.7.1 Inlet nozzles

For hose connection 32/38 mm:
When the liner is aligned, cut out the liner tightly at the punched opening of the sheet metal (slightly smaller than the steel wall opening). Then place one gasket between the liner and the steel wall and pass the nozzle with the second gasket through the opening, so that there is a gasket both in front of and behind the liner. Then tighten the nozzle with the lock nut on the outside of the pool.

Note: If a double gasket is included in the delivery, please separate it in the middle so that there are 2 individual gaskets.



Fig. 59

For fixed piping 50 mm:
When the liner is aligned, pierce the screw holes in advance, e.g. with an awl. Stick the 2nd gasket behind the flange so that the gasket is between the liner and the flange. Tighten the flange screws crosswise.

Then cut out the liner to match the opening. Then screw the ball and the adjusting ring back on and fit the cover plate.

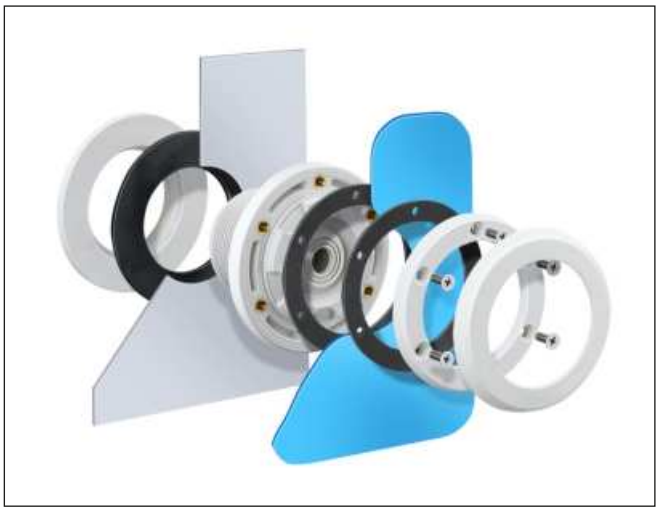


Fig. 60

4.7.2 Skimmer (surface skimmer)

Pierce the screw holes, screw the flange on crosswise, then cut out the skimmer opening and fit the cover plate. On the flange and cover plate the mark "Top" usually indicates the upper side. Insert the skimmer flap and the strainer basket.

If the skimmer body is only fitted now together with the liner, place the double gasket in the punched opening of the steel wall, hold the body from the outside, pierce the screw holes from the inside and screw the flange on crosswise.

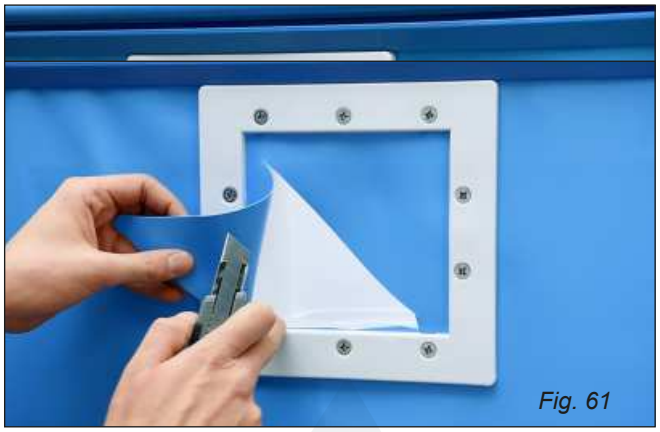


Fig. 61

Fig. 62

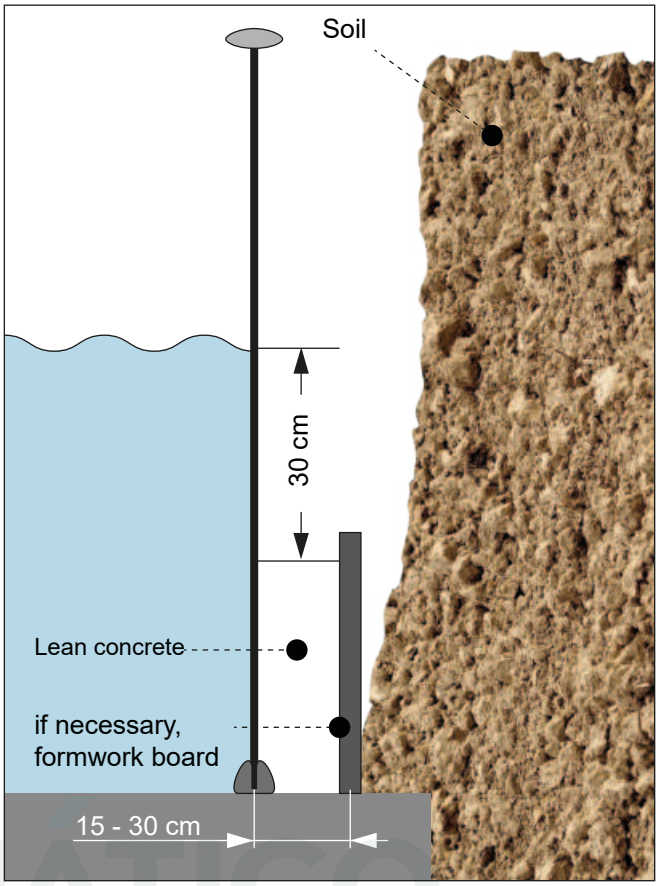


Fig. 63

5. Lean-concrete backfilling for in-ground/ partly in-ground figure-eight pools

Fill the assembled, fully installed pool with water (initial height for pools 1.50 m deep about 60 cm). Pools of 1.20 m or 1.35 m can be filled completely.

Before backfilling, apply building film and polystyrene boards (thickness 15 – 25 mm) to protect the outside of the steel wall at the curves in the ground.

Backfill the pool wall in several layers (each max. 50 cm) with lean concrete C8/10 (or a mixing ratio of about 1:10 depending on the gravel grading), earth-moist. The lower layer should already have set before the next layer is placed. The individual layers of lean concrete can be delimited at the sides with formwork boards or similar. After setting, the formwork boards are moved up to form the next layer to size. (see Fig. 63).

The concrete must not be too wet and must not be vibrated or tamped.
The concrete backfill must be at least 15 cm thick in natural ground (e.g. cohesive clay). For ground that pushes inwards we recommend a backfill of about 30 cm.

When backfilling, the water level must always be about 30 cm higher than the outer concrete fill.

When backfilling the pool with concrete, make sure that the pool wall is not deformed by the pressure of the concrete.

Excessive pressure of the concrete on the built-in skimmer must likewise be avoided, as this can lead, among other things, to deformation and later jamming of the skimmer flap. It is advisable to fit polystyrene or similar around the skimmer to absorb the concrete pressure at this point. Damage to the steel wall of any kind must also be avoided, as this can lead to later corrosion of the steel wall and to the loss of the manufacturer's warranty. If scratches or other damage occur on the steel wall, they must be treated immediately with rust protection agents.

6. Miscellaneous

6.1 Water level and skimmer flap

The water level of the pool must be based on the skimmer opening. The optimum is the middle to 2/3 of the skimmer opening (see Fig. 64). A water level that is too low must be prevented in any case, as this can damage the pump. The free movement of the skimmer flap and the correct seating of the skimmer basket must also always be ensured, as either can otherwise obstruct the water flow.

The suction plate may only be fitted while the floor is being vacuumed and when using the pool vacuum hose.

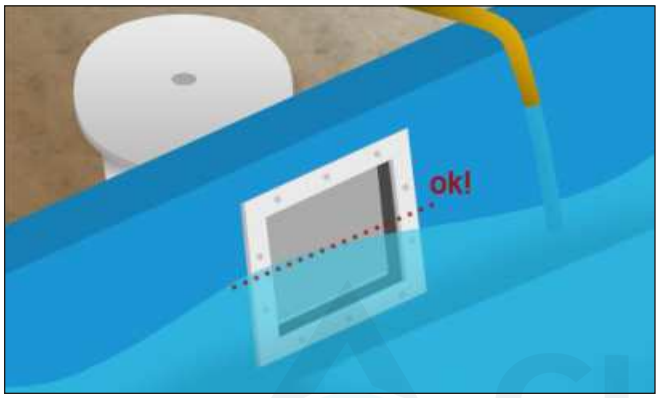


Fig. 64

6.2 Pool ladder

Every swimming pool needs a suitable means of entry, which is provided by a pool ladder. The ladders for in-ground pools (partly/completely sunk) differ from those for above-ground pools (partly/completely free-standing) as follows:

6.2.1 Ladder for above-ground pools

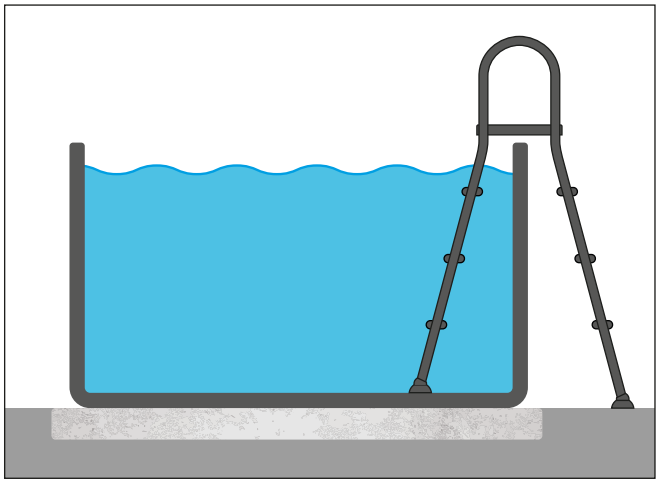


Fig. 65

For free-standing or partly in-ground pools we recommend a ladder for above-ground pools. If necessary (for partly in-ground pools) it can be adapted to the installation situation by shortening the two outer rails with a clean hacksaw or similar. The cut edges should then be cleaned and deburred. The adjustable foot plates are then pushed onto the ladder rails.

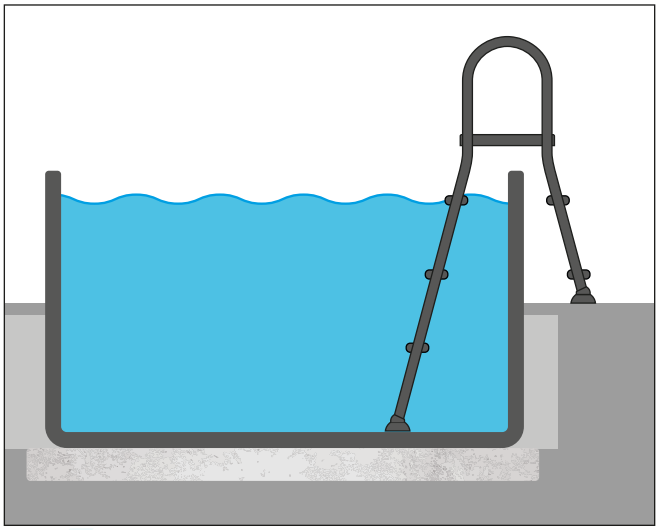


Fig. 66

6.2.2 Ladder for in-ground pools

For a stainless steel ladder for in-ground pools there are two fixing options; our sets are supplied with different ladders; please refer to the respective set description.

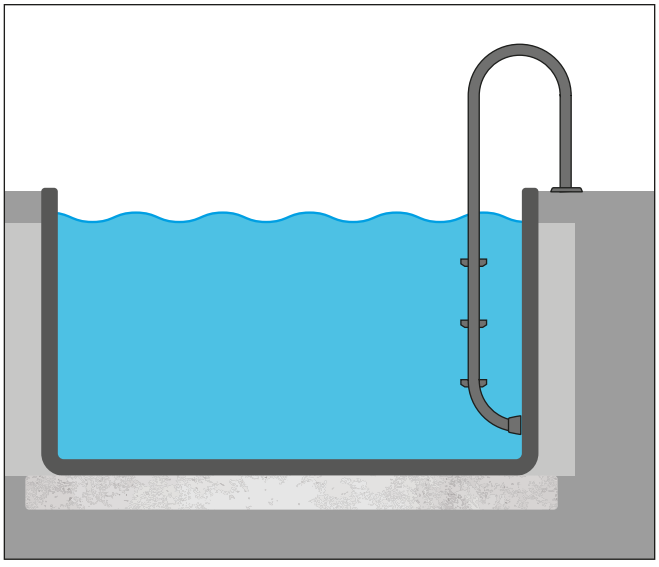


Fig. 67

Plastic installation sleeves: The ladder must first be assembled here. Then the installation sleeves are pushed over the ladder rails and the ladder is positioned at the desired location so that the ladder buffers rest against the liner. The installation sleeves are then cemented in (bear in mind any pool surrounds with regard to the height of the installation sleeves!).

Ladder socket flanges: Here it is sufficient to concrete an area of about 100 × 50 cm around the planned fixing point at the desired ladder location. Please note the ladder projection, depending on the ladder type. The surrounding slabs are later fixed to the concrete with mortar, and the ladder socket flanges are in turn screwed onto them. The ladder can then be assembled and pushed over the socket flanges.

Please observe the enclosed assembly instructions for the respective ladder.

Important! When assembling the pool ladder, make absolutely sure to use clean tools! Most ladder rails and steps of pool ladders are made of stainless steel, which can quite well rust due to, for example, contact corrosion (through contact with so-called "base metals"/tools). When working with stainless ("rust-resistant") steel, therefore, take care to use the right tools. Please do not use tools that already show corrosion from flash rust or similar, or that have been used to assemble parts made of "normal" steel. It is therefore advisable to use separate tools for work with stainless steel and for work with other metals.

6.3 Repairing the pool liner

Damage to the liner of the swimming pool can be repaired without difficulty with a repair kit.

For this you will find useful tips at www.poolsana.de/blog on the correct installation of the pool liner as well as a video guide to repairing a leak.

6.4 Care and maintenance

The combination of mechanical water treatment and chemical water care ensures clean, clear water at all times.

Mechanical water treatment:
Removal by suction of smaller dirt particles on the surface (e.g. pollen, grass, hair) by the skimmer and filter system. Coarse contamination (leaves, insects) is removed with a net and/or pool vacuum.

Chemical water care:
Manual floor cleaning (vacuuming) requires a filter system and a skimmer/surface skimmer to be present. Before manual cleaning, the sand filter system should first be properly backwashed and rinsed.

Vacuuming the floor manually:
The scope of delivery of the skimmer usually includes a so-called "suction plate", which is also needed, together with a cleaning brush (vacuum brush), possibly including a telescopic pole, and a suction hose (connection from the brush to the suction plate). To vacuum up coarse dirt, the suction hose is pushed onto the connector of the suction plate and the plate is placed on the skimmer basket. The hose and the telescopic pole are then connected to the pool vacuum, the valve of your sand filter system for floor cleaning is set to the "Filter" position and cleaning can begin.
Make sure that the suction hose is completely filled with water so that the pool pump does not draw in air!

Pro tip for venting the suction hose:
To vent the suction hose completely for manual cleaning, it can be held briefly against the inlet nozzle while the filter system is running. The movement of the water pushes all the air out of the hose; when no more air bubbles rise from the other end of the hose or from the vacuum brush, it is completely vented and the filter system can be switched off.
Fit the suction plate on the skimmer, push the hose onto the suction plate and switch the sand filter back on. If air still gets into the sand filter system, you must switch off the pool pump and vent the vacuum again – the filter system normally vents itself. To vacuum, now move your brush slowly and evenly (moving too fast can stir up the dirt) over the pool floor. For sand filter systems without a pre-filter, a skimmer with a basket is a prerequisite!

If the filter performance drops, this can have the following causes:

1) Filter sand dirty → backwash the filter
2) Pump draws in air (air bubbles on the inlet side) → hoses defective, check the clamps
3) Skimmer gets too little water → check the water level and raise it if necessary
4) Skimmer basket dirty → clean it
5) Pre-filter basket of the filter pump dirty → clean it

(Please follow our respective recommendation for solving the problem).

For manual pool cleaning, too, you will find many useful tips on pool care on our website at www.poolsana.de/blog, as well as checklists, e.g. for putting the pool into operation or winterising the pool

In our online shop you will find a complete water care range for this with outstandingly suitable, health-compatible products. Our blog – www.poolsana.de/blog – offers you many interesting and up-to-date articles, tips and tricks on pool water care. Here you will also find our detailed water care plan.

6.5 Winterising

All in-ground pools must remain partly filled with water in winter to balance the external pressure.

First the pH value should be set to 7.0 and any cloudiness or algae growth in the water eliminated with shock chlorination.

Then the water level must be lowered to about 10 cm below the inlet nozzles and the pipes and the filter system (water and quartz sand) must be emptied. The inlet nozzles can be closed with winter plugs.

If there are built-in lights in the pool, the water level should be either below or above them.

After lowering, add a winter protection agent to the water. To prevent ice pressure on the pool walls, the use of ice pressure pads is recommended.

On our website www.poolsana.de you will find further information and explanations on this under the headings Checklists and Blog, which can also be downloaded free of charge and printed out in the form of a to-do list.

6.6 Safety instructions

General precautions:
Never let children play unsupervised in or near the swimming pool; inform them about possible dangers. Teach children to swim if necessary. Cover the pool when it is not in use. After eating or sunbathing, enter the water very slowly. Risk of circulatory failure or cardiac arrest!

Immediate help in a bathing accident:
Rescue the casualties immediately. Check pulse and breathing. If necessary, immediately give mouth-to-mouth resuscitation and chest compressions. Call the emergency services.

Safety-related instructions:
Please read all the information carefully before using the swimming pool and ask if anything is unclear. Follow the recommendations. They serve your safety and the safety of your pool users. Please keep this document in a safe place so that you can use it again at a later date.

One thing first: the following describes – without claiming to be exhaustive – typical risks of using a pool. Not all hazards in every conceivable individual case are covered. Therefore: use your common sense in all activities at and in the pool.

Safety of non-swimmers:
Make sure at all times that non-swimmers and users with only limited swimming ability – especially small children – are supervised by a person who can rescue and summon help in an emergency.
To avoid misunderstandings in communication: appoint a person capable of helping who constantly monitors the pool while it is in use.

Non-swimmers and persons with limited swimming ability should wear personal protective equipment (swimming arm bands etc.) when using the pool.

Please remove toys from the pool and its surroundings when the swimming pool is not in use or not supervised. This prevents children from being attracted by them.

Safe access to the pool:
If your access device (ladder) cannot be pulled up or folded away, and to prevent

children from gaining unexpected access to the swimming pool and drowning, we recommend that you secure access to the swimming pool with a safety device.

Safety devices:
Safety devices can not only prevent children from gaining unexpected access to the pool and thus prevent drowning. They also protect in general against unauthorised access to the swimming pool. We therefore recommend that you do not do without safety accessories. Depending on individual circumstances this may be, for example, a fence, a cover with special accident protection, an enclosure or an alarm system. We will gladly inform you about additional protection options for your pool.

In addition, we recommend that you secure the doors and windows of your house and the access to the property to avoid unauthorised access to the swimming pool.

Please note: protective accessories can make a pool safer, but they never replace the permanent supervision of children by an adult who can help in an emergency.

Safety equipment:
We recommend that you keep rescue equipment (for example a lifebuoy) near the swimming pool.

Make sure that a working telephone and a list of emergency numbers are near the swimming pool so that help can be called quickly in an emergency

.

Safe use of the swimming pool:
Encourage all pool users – especially children – to learn to swim.

Learn first-aid measures (cardiopulmonary resuscitation) and refresh what you have learned regularly. In an emergency this can make a life-saving difference.

Explain to all pool users – including children – before using the pool what to do in an emergency.

Never jump into shallow water. This can lead to serious injury or death.

Do not use the pool if you are under the influence of alcohol or medication that may impair the ability to use the pool safely.

If your pool is equipped with a cover: before using the pool, make sure that the cover is fully opened or completely removed from the water surface.

To protect pool users from water-borne diseases, make sure that the water is always treated and kept hygienically safe. For this, consult the guidelines and information on water treatment in the operating instructions.

Keep chemicals and water care products (for example products for water treatment, cleaning or disinfection) out of the reach of children.

Removable ladders must be set up on a level surface.

Display the following safety signs in a clearly visible place within 2 metres of the swimming pool



.

POOLSANA

Pool & Sauna Discount seit 2005

We wish you lots of fun with your swimming pool!



PoolSana GmbH & Co. KG
Vershofenstraße 10
90431 Nürnberg

www.poolsana.de
info@poolsana.de