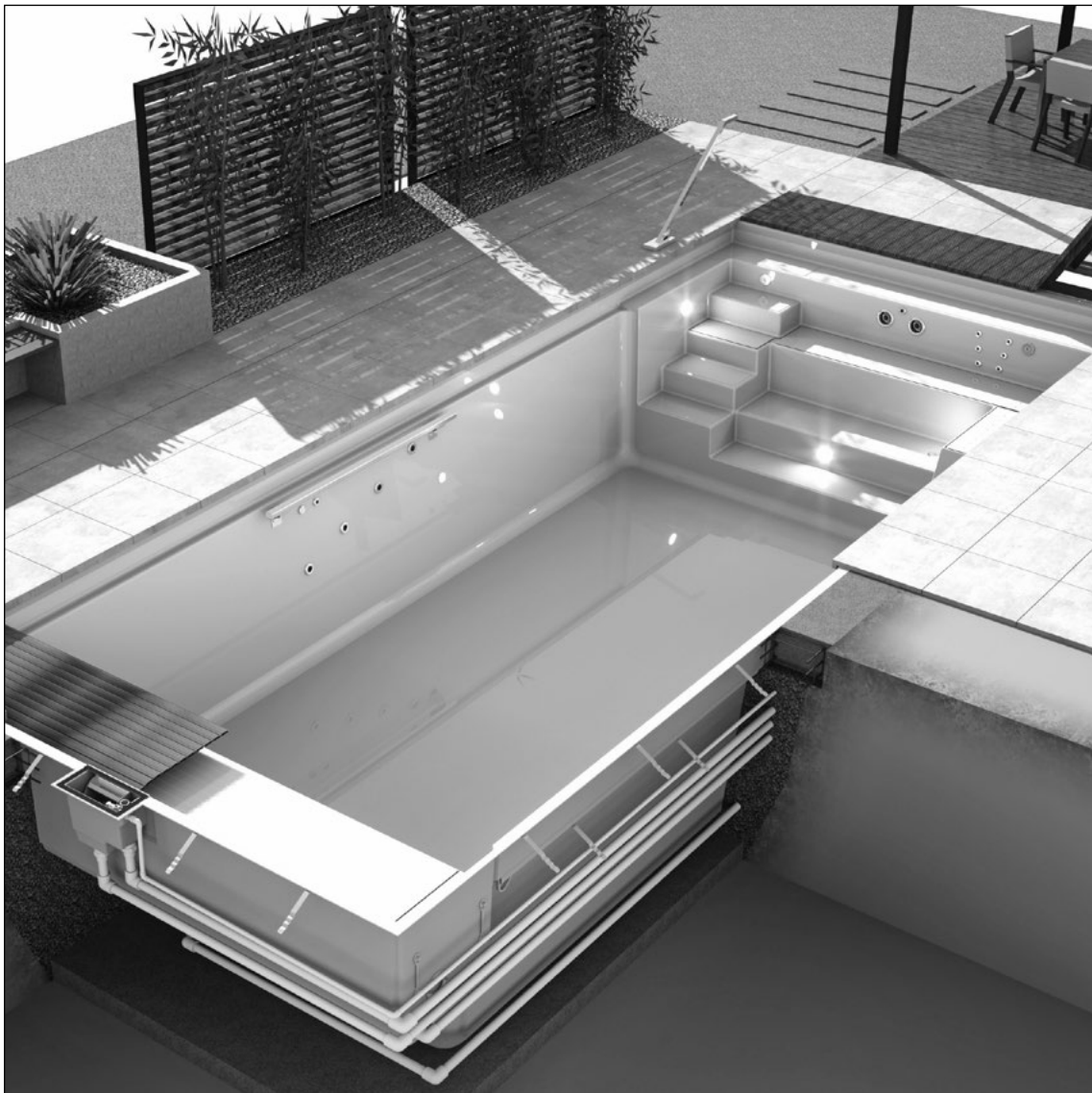


Pit / Delivery / Installation

PREFABRICATED SWIMMING POOL WITH SKIMMER OPERATION



MADE FROM EPOXY ACRYLATE

## 1. General information

1.1	Intended use	Page 3
-----	--------------	--------

## 2. Pool delivery

2.1	370 (320 / 270)-series one-piece pools	Page 4
2.2	470 (XL)-series one-piece pools	Page 4
2.3	470 (XL) or 370-series segment pools 370	Page 4
2.4	Insertion into the pit	Page 5
2.5	Inspection	Page 5

## 3. Pit and drainage layer

3.1	Pit	Page 6
3.2	Drainage layer	Page 6
3.3	Shaft drainage	Page 7
3.4	WetLounge substructure	Page 7

## 4. Foundation plate - "For increased requirements"

4.1	Floor drain recess	Page 8
-----	--------------------	--------

## 5. Concrete backfill

5.1	Rim design	Page 11
-----	------------	---------

## 6. Installation with wall struts

Page 12

## 7. Ring beam

7.1	Ring beam	Page 13
-----	-----------	---------

## 8. Infinity edge installation

8.1	Technical drawing	Page 14
8.2	Infinity edge schematic diagram – ring beam / reinforcement	Page 15
8.3	Infinity edge schematic diagram – optionally with steel struts	Page 15

## 9. Segment pool assembly

Page 16

## 10. Follow-up work on site

10.1	Pool soiling	Page 17
10.2	Water maintenance	Page 17

## Appendix: levelling certificate (example table)

Page 18

### Note:

You can obtain additional information from our technical customer support.

In line with technical advances, we reserve the right to make modifications and improvements in production without notification.

## 1. General information

### 1.1 Intended use

Our pools and their accessories have been designed for operation as swimming and bathing pools. They are to be operated with water from the municipal pipeline network in accordance with local water supply regulations. Brine, mineral and well water are not suitable. The maximum metallic load should not exceed the following values:

• Iron	0.1 mg	per litre
• Manganese	0.05 mg	per litre
• Ammonium	2.0 mg	per litre
• Polyphosphate	0.005 mg	per litre
• Copper	0.01 mg	per litre
• Chloride	300 mg	per litre
	(150 mg/l if using electric heaters)	

Higher values may corrode installed parts and devices and/or create deposits on the pool walls. The maximum temporary bathing water temperature must not exceed the following values:

• For swimming pools	32°C
• For whirlpools	40°C
• For sauna plunge pools	15°C

When used as intended, a swimming pool or whirlpool is filled with water. That is why we assess the surface quality when the pool is filled. Discolouration or irregularities in the surface that are not visible when the pool is filled do not constitute grounds for complaint. Here we would like to refer in particular to our Technical Info 02/18 Granicite colours and DIN EN 16582-1 2015, Annex D.

Dimensional tolerances may exist owing to the elastic-plastic body manufacturing process. They amount to +/- 2 cm. The dimensions specified are therefore only approximate and non-binding.

Solar roller shutters tend to become 'milky' over time.

Installation must only be performed by contractors that specialise in the swimming pool and heating/plumbing fields. Electrical connections are to be established by locally licensed specialist electrical contractors.

The respective installation and operating instructions must be followed.

All RivieraPools are water-proof swimming pool shells made from epoxy acrylate. They do not have any structural values for analysis. Stability is only achieved through concrete backfilling.

There is a structural analysis for this backfill (see our Technical Information SB 3) on which these installation instructions are based. The structural analysis and installation instructions only apply under the following conditions:

- The pool is installed in natural, undisturbed ground.
- Pressure from groundwater, mountain water, etc. does not occur
- Permitted ground pressure is assumed to be 100 kN/sqm
- The floor and walls of the pool are not subjected to any additional stress from a superstructure

These conditions must be met before construction. If this is not the case, additional construction measures are necessary. For indoor pools, for example, a separate structural analysis must be created for both the pool hall and the concrete backfill of the pool.

If the specifications in these installation instructions do not cover local circumstances or installation situations, please ask us about the options available to you.

## 2. Pool delivery

### 2.1 370 (320, 270)-series one-piece pools Lorry crane transport

One-piece pools 370, 320 or 270 wide and up to 12.3 m long are delivered directly to the construction site on special flat-bed lorries. The lorry can unload the pool to the side using its own crane. Sufficient space must be prepared for this.

Length of the vehicle:	18.5 x 2.55 m
Space required for unloading:	18.5 x 6.5 m

The construction site access points must also be checked. In the event of uncertainty, email us a video recording of the vehicle route, from which we can obtain an idea of the situation.

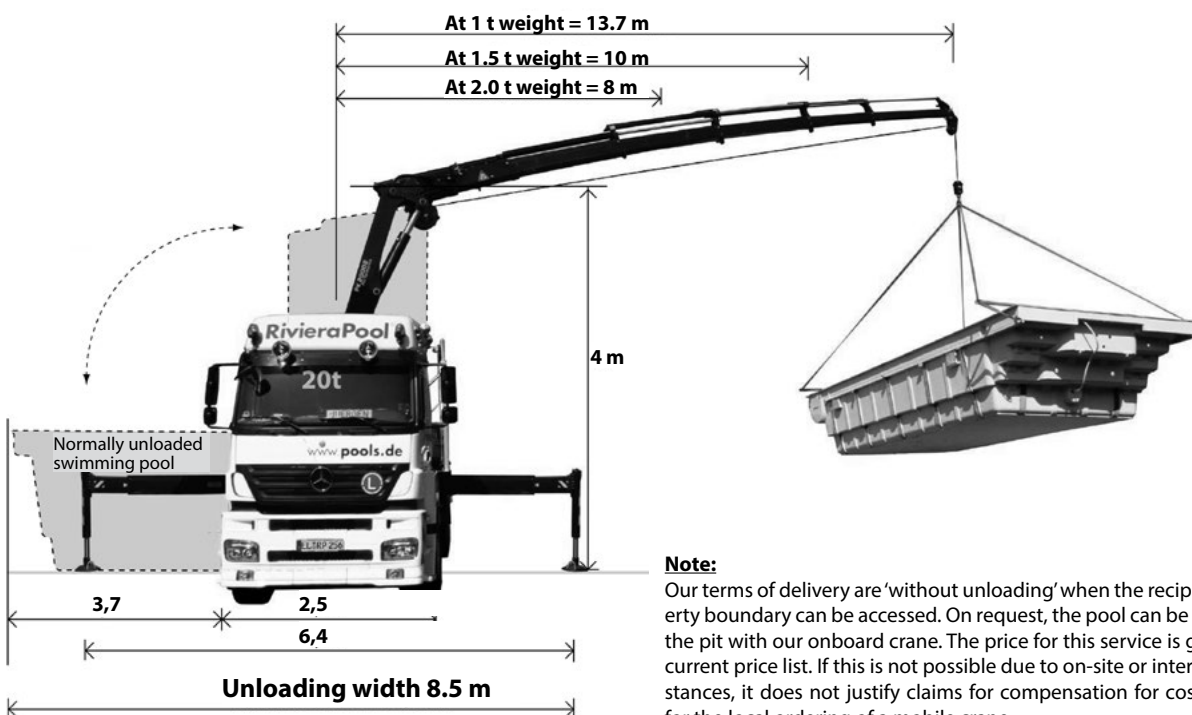
### 2.2 XL-series one-piece pools and wide-load haulage

All wide-load pools, especially XL, are delivered as special haulage, which usually may only be transported at night between 10 p.m. and 6 a.m. in Germany, for example. This results in the following special conditions:

- A permit for the haulage must be applied for which, depending on the target destination, may have a processing time of several weeks. This permit can be revoked at short notice. A delivery deadline can therefore only be made to a customer conditional on the issue of a valid permit.
- Special haulage can encounter unforeseeable obstructions along the way, which delay the delivery.
- Once at the construction site, there must be adequate parking space for the lorry of approx. 7 x 18 m.
- At the location, the responsible regulatory authority must be notified of the expected haulage so that any necessary 'traffic control measures' – such as the sealing off of roads by the police – can be organised. This could last several days and must therefore be organised promptly. The specialist swimming pool construction contractor is responsible for this. Crane contractors also offer this service upon request.

### 2.3 470 and 370-series segment pools

Segment pools are also delivered on flat-bed lorries. The size of the segments can be defined when placing an order so that continuous transport – through a building if necessary – is possible.



## 2.4 Insertion into the pit



Insertion via crane



Insertion via helicopter



Manual insertion

Insertion into the pit must be organised at the construction site, and the buyer bears the costs for this. However, our driver is instructed to only leave the construction site once the pool is safely in the pit. The pool can be inserted:

### Via crane

This operation is always recommended because it is uncomplicated and safe. The crane contractor will visit the construction site before use and then determine the correct size and location of the crane. Our driver has crane gear on board and will guide the crane operator.

### Via helicopter

Possible if there is inaccessible terrain. Our driver can also guide and direct the pilot here. Please enquire as to the weight of the pool manufactured for you without fail before delivery!

### Manually

Possible for small pools in exceptional circumstances. Our driver has trolleys on board on which the pool can be pushed over solid ground. Five or six helpers are required for this. The pool slides over two scaffold planks into the pit.

Pool weights are important for the aforementioned operations. Please use the following values for guidance:

#### Pool width

270 cm:	approx. 700 kg including Integra roller shutter shaft
320 cm:	approx. 110 kg/m pool length (without roller shutter shaft)
370 cm:	approx. 120 kg/m pool length (without roller shutter shaft)
470 cm:	approx. 150 kg/m pool length (without roller shutter shaft)

320-type Integra 2–13:	approx. 150 kg
------------------------	----------------

370-type Integra 2–13:	approx. 180 kg
------------------------	----------------

320-type Integra:	approx. 110 kg
-------------------	----------------

370-type Integra:	approx. 120 kg
-------------------	----------------

Roller shutter niche 370:	approx. 200 kg
---------------------------	----------------

Roller shutter niche 470:	approx. 220 kg
---------------------------	----------------

370-type underfloor roller shutter shaft:	approx. 180 kg
---	----------------

470-type underfloor roller shutter shaft:	approx. 200 kg
---	----------------

+50 kg for safety in each case

The weights are inclusive of roller shutter drive in each case.

#### Remark:

Exact weight specifications can be determined once the swimming pool has been manufactured.

Before unloading the pool, the customer must inspect the full delivery, including the supplied accessories, which should be checked and confirmed with the driver. Defects raised subsequently can no longer be the subject of warranty claims.

## 2.5 Inspection

Before setting down the pool, check the surface of the concrete slab for small protruding or fallen stones. These can drill into the pool floor. Also, check that the surface of the concrete slab is level with a smooth finish. Unevenness is visible from the water level after installation, and by that stage, nothing can be done about it.

## 3. Pit and drainage layer

### 3.1 Pit

**Length/width:**

At least 25 cm bigger all around than the outer dimension of the pool.

**Depth:**

- Installation height of the pool body (1)
- + At least 10 cm for concrete slab (2)
- + Any drainage layer required (3)
- Dimension by which the pool should protrude from the ground. (4)

**Outer installation height:** · 270, 320, 370 / XL pool 154 cm

· All sizes with transverse flange, segmented  
Segmented XL pool 157 cm

· 320 pool with niche 157 cm

A 50 x 50 cm recess is to be provided for an external skimmer.

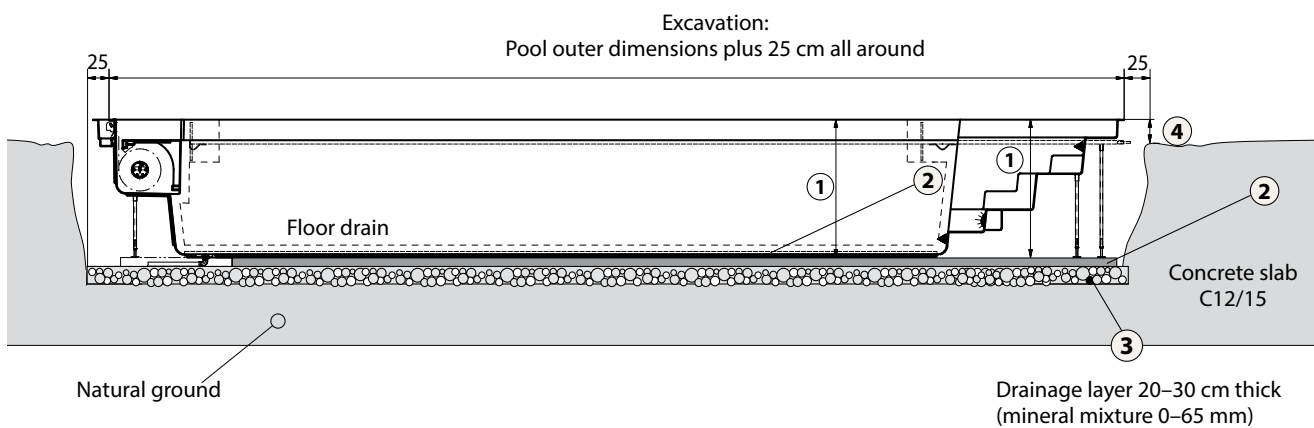
### 3.2 Drainage layer

If groundwater pressure does not dissipate, as soon as a pool is emptied, there is a risk of the pool floor being forced up and becoming damaged along with the installation. If groundwater is expected, a drainage layer (3) should be placed on the floor of the pit, which channels the groundwater away through a drain. Groundwater poses no risk when the pool is filled with water.

**Dimensions:** Across the entire pit

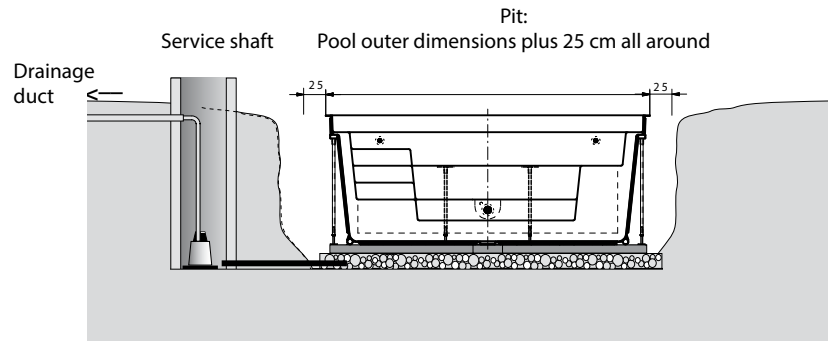
**Thickness:** 20–30 cm

**Material:** Gravel, drainage pipe 100 mm diameter



In any case, we advise you to create a control shaft. This can be done by using several stacked concrete rings. The inexpensive alternative is an open PVC pipe with a 45° cut on the bottom with the diameter of a submersible pump. This allows you to proof the groundwater level as well as to lower it if necessary. A simple solution is a 2" PVC pipe with a lid to measure the groundwater level with a folding rule because, in the event of a high level of groundwater, the pool cannot be emptied.

# Pit and drainage layer



### 3.3 Shaft drainage

If the pool is fitted with a service shaft, the shaft drain must be connected to ensure there is always one water drain. One drain is usually insufficient.

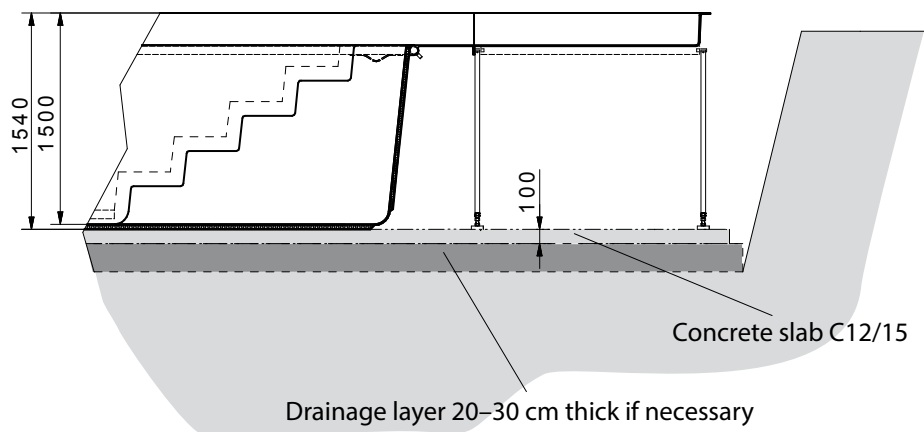
Attention: Substructure shafts are not usually water pressure-resistant.

### 3.4 WetLounge substructure

Excavation with foundation plates and drainage layer (design example):

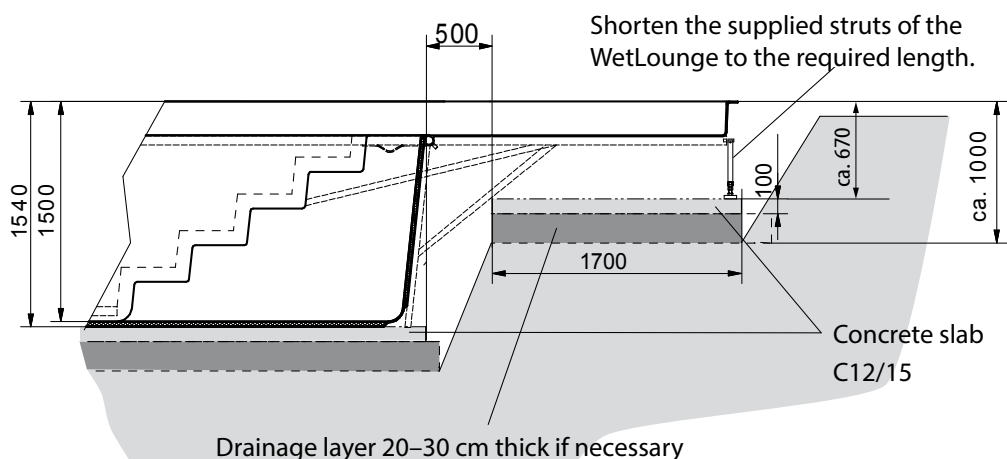
#### Flanged WetLounge

Excavation with foundation plate and drainage layer (design example)



#### Laminated WetLounge

Excavation with foundation plate on an elevated level and drainage layer (design example)



## 4. Foundation plate - "For increased requirements"

### Length/width:

The foundation plate should be as big as the pool's outer diameter, ideally including the steps and roller shutter shaft.

Purely for structural reasons, the concrete slab can be manufactured to the size of the pool floor, although this makes work around the pool slightly more difficult.

**For segmented pools:** Due to the pool installation and the set-up of gantries for lowering the bolted-together pool bodies, it is necessary to have the foundation plate 25 cm bigger in circumference than the pool (including the steps and the roller shutter shaft).

### Thickness

At least 10 cm

Only with undisturbed, natural ground

### Material

Concrete B 15 (C12/15)

Earth-moist, rigid

Without steel reinforcement

### Surface

#### Level:

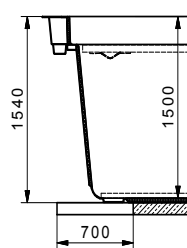
Any unevenness in the foundation plate will later be visible on the water surface. It is imperative that you get a levelling certificate (see Appendix on page 18).

### Smooth finish:

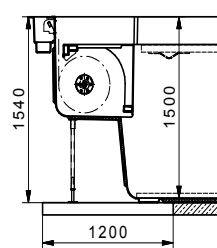
The RivieraPool is placed on the foundation plate without an additional intermediate layer. This must have a smooth finish and have been swept clean because small stones could bore into the pool floor.

### 4.1 Floor drain recess

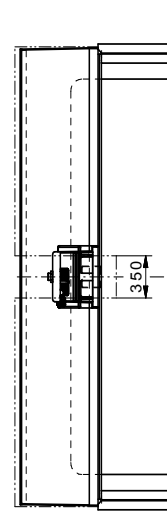
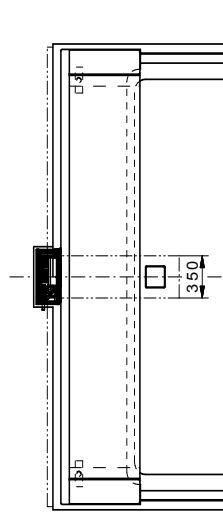
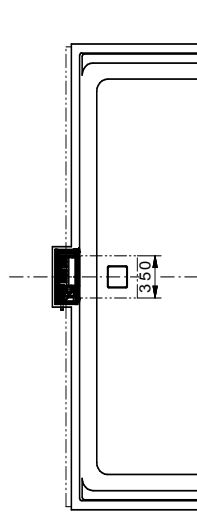
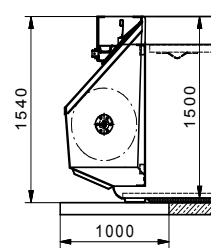
#### Classic



#### Integra 2-13



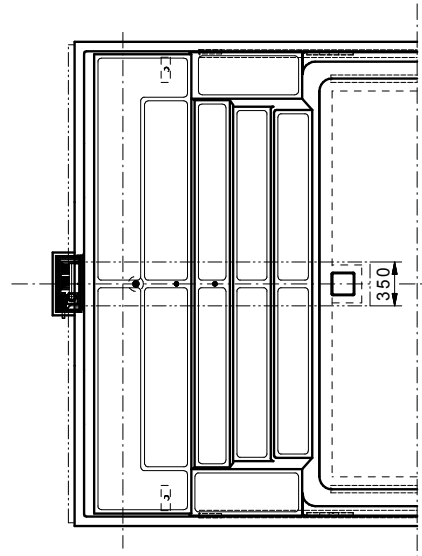
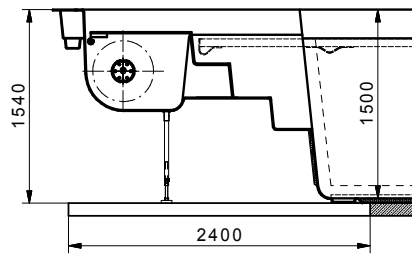
#### Niche



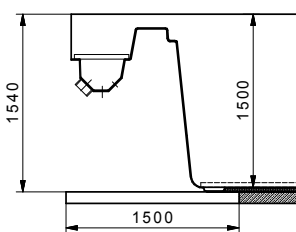


# Foundation plate

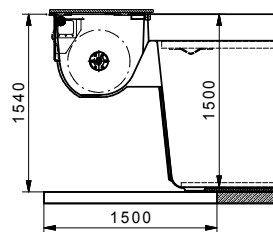
**Linear RS**



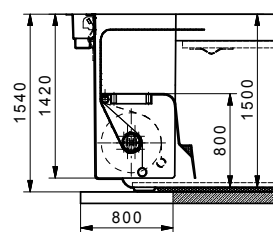
**Infinity edge**



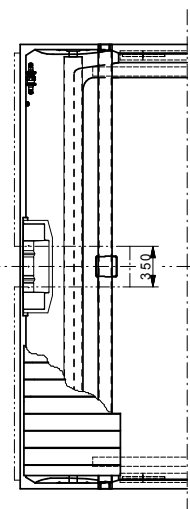
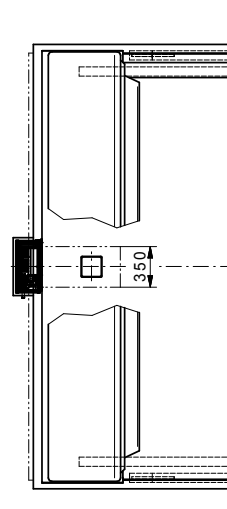
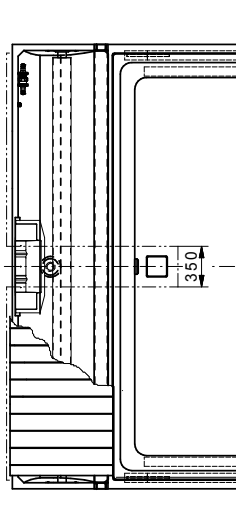
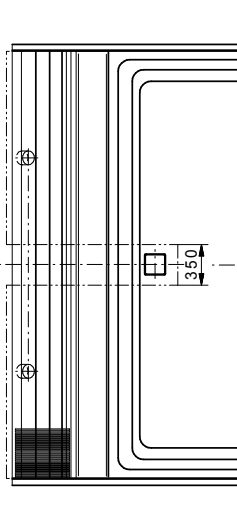
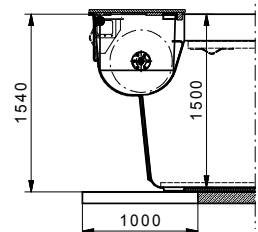
**Underfloor**



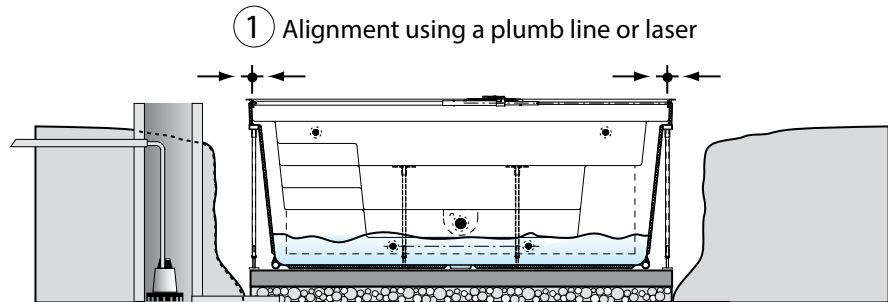
**Inline**



**Integra**

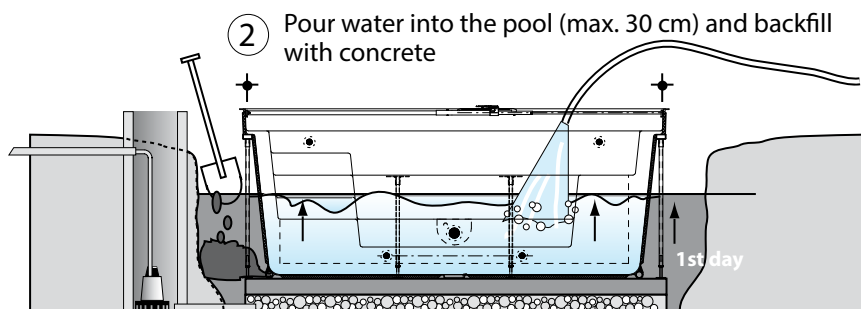


## 5. Concrete backfill



1. Align the pool on the concrete slab, install the piping and set it down. Let in 30 cm of water. Only now does the pool settle on the floor plate with full surface coverage. Tension the plumb lines over the pool edges, place square timbers/struts every 2–3 m along the edge of the pool and fix the pool edge.

**Adjust the height of the pool using the adjustable support feet beneath the steps if necessary and fix it in place.**



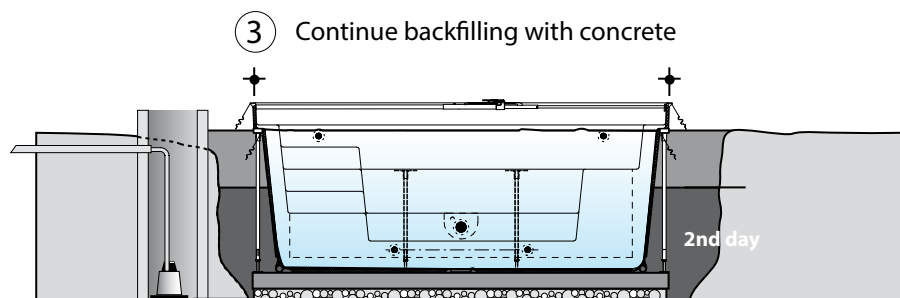
2. Pour in concrete slowly and evenly around, especially under the steps, manually. Water pressure and pressure from the backfill concrete should equalise so that the pool walls are installed free from bending stress.

The water level is raised in parallel with the concrete backfilling.

- No ramming, - No vibrating, - No concrete pumping
- Set the pipelines in concrete without applying stress
- Material: C 12/15; texture: rigid, DIN: 1992

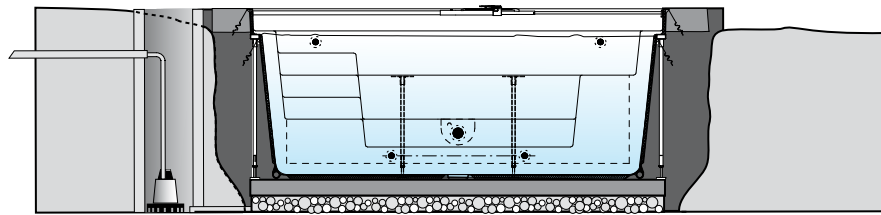
After approx. 75 cm of concrete filling, leave to set overnight. Continue the next day.

**Note:** If the pool has a roller shutter shaft, please also observe our Technical Information SB 6 C, D and E, the item 'Setting the roller shutter shaft in concrete'.

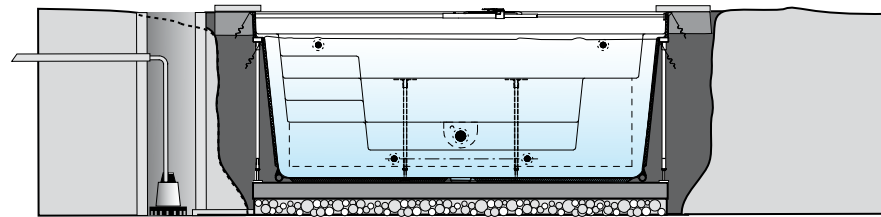


3. Spread out concrete anchors and set them in the concrete backfill. Set in concrete for friction-locking.

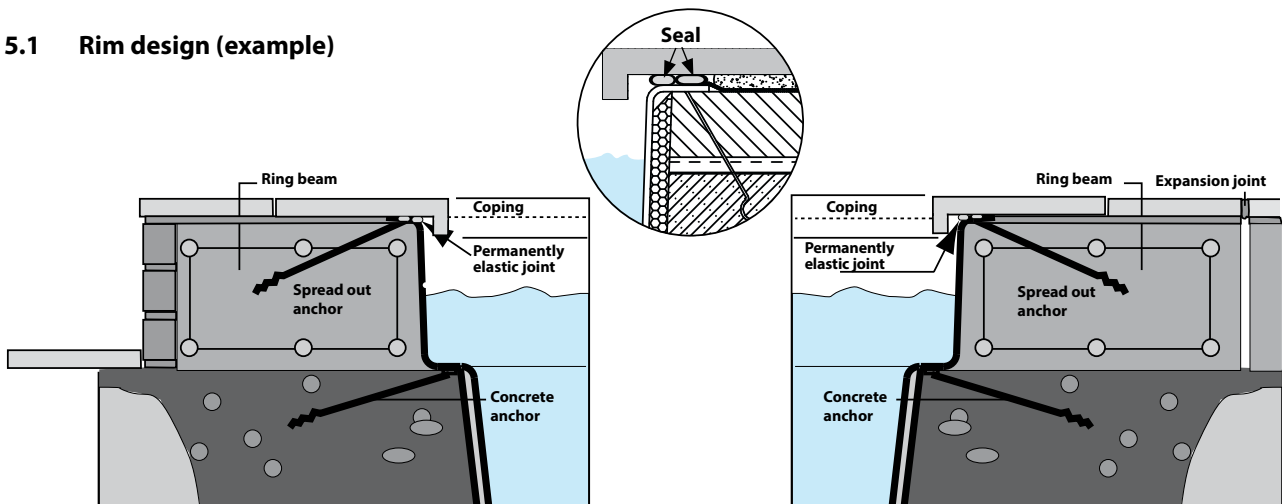
④ Install the ring beam as per the structural analysis (SB 3)



⑤ ... and install the coping

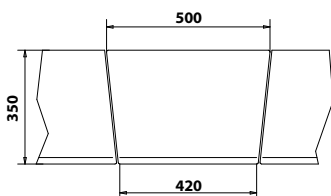


## 5.1 Rim design (example)

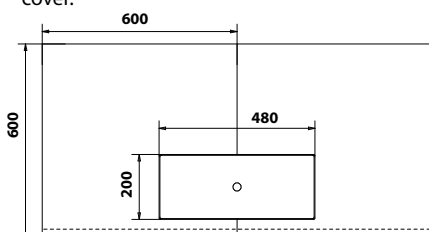


### Coping sections above the GRP skimmer

50 x 35 cm coping; conical coping cut supplied by the customer.



60 x 60 cm coping with prefabricated cover.



The top approx. 5-cm-wide edge of the RivieraPool has been intentionally designed so that it should not remain visible. It must be covered with coping.

The coping should rest on the mortar bed of the ring beam – not on the edge of the pool. Here it lies on a mere 2–3 cm-wide bed of silicone.

The coping should protrude into the pool by about 5 cm so that an edge is formed that prevents overspill. The joint between the coping and the pool edge should be inserted for a permanently elastic effect.

If the pool is fitted with a roller shutter shaft, attaching the shaft cover during plating is recommended. As a result, the exact cutting dimension of the rim plates around the roller shutter shaft is determined.

## 6. Installation with wall struts

1. Align the pool on the concrete slab. Install piping and set down. Let in 30 cm of water. Only now does the pool settle on the concrete slab with full surface coverage. Tension the plumb lines over the edges of the pool, place square timbers/struts every 2–3 m along the edge of the pool, thus fixing the pool edge and stabilising it against subsequent concrete pressure.

Adjust the height of the pool using the adjustable feet if necessary and fix it in place.

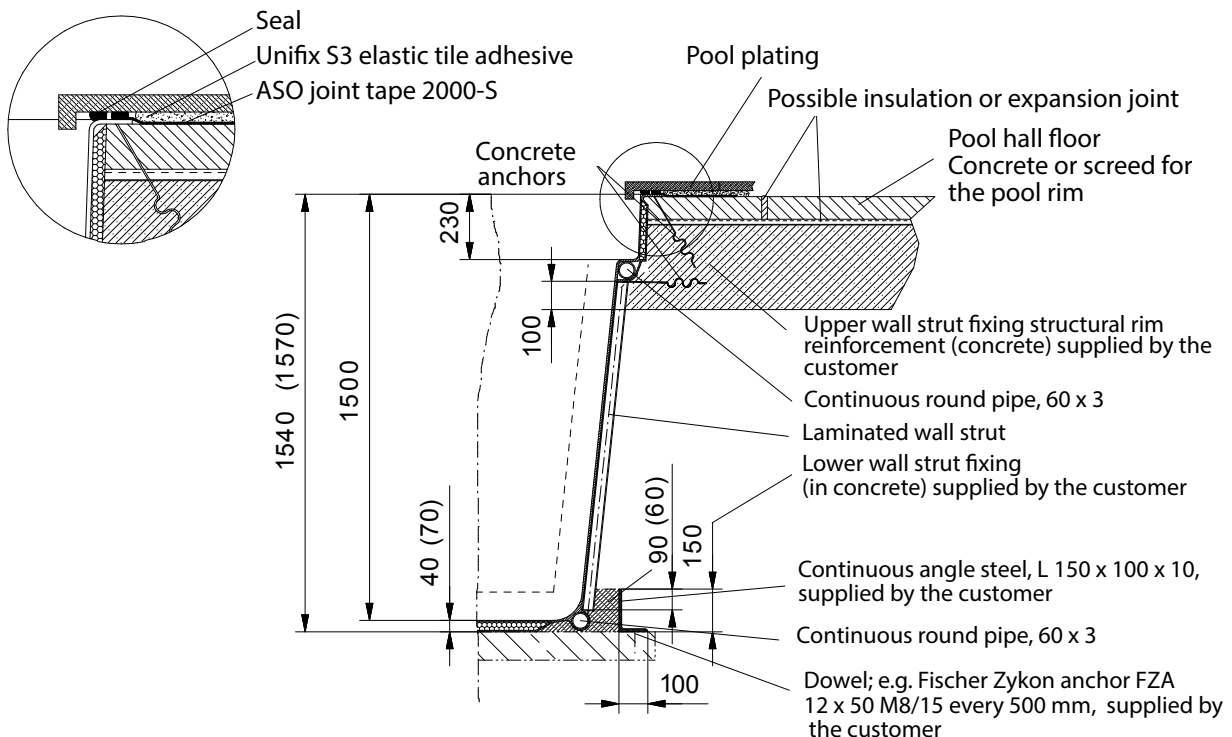
2. Pour a 15-cm-high concrete base around the pool floor which submerges the wall struts. This base must be firmly connected to the concrete slab so that the water pressure is channelled toward the concrete slab via the wall struts.

3. Spread out the ground anchors. Concrete the pool hall floor to the pool. When doing so, set the ground anchors in concrete. Ensure that the wall struts are firmly set in concrete, and the water pressure can be channelled away to the concrete.

The pool can now be filled with water.

Note: To seal the top of the pool, using ASO joint tape 2000-S is recommended.

We recommend placing the coping on a bed of silicone, which is applied to the rim of the pool before laying the coping. This saves on a separate silicone joint, which would be difficult to introduce retroactively with protruding coping stones in particular.



\* The structure of the pool floor, including insulation and laminate, is 4 cm as standard, and 7 cm for segmented pools, and 320-type pools with a flange-mounted roller shutter niche. This results in a total outer height of 1.54 / 1.57 m with a 1.5-m pool depth.

## 7. Ring beam

### 7.1 Ring beam installation

The structural analysis assumes a reinforced concrete ring is placed around the pool's rim, which prevents any bending. This ensures that no stress is applied by external forces to the plastic pool when full or empty.

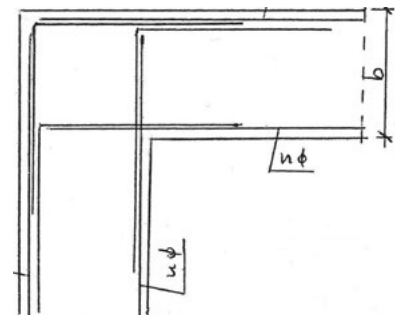
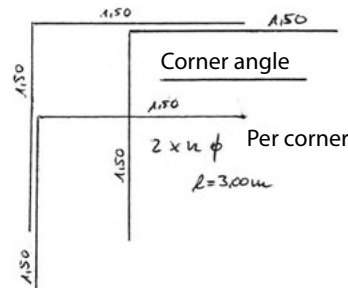
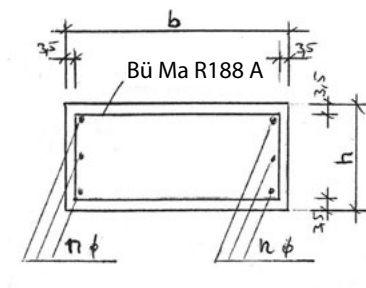
**Dimensions:** Depending on the pool size (see table)

**Material:** Concrete C 25/30 XC3  
Reinforced concrete B St 500A

#### Installation

The ring beam is placed on the rough top of the concrete backfill and must not be interrupted by installed parts such as skimmers.

The concrete anchors below the edge of the pool and the roller shutter edge are to be spread out and set in concrete within the ring beam.



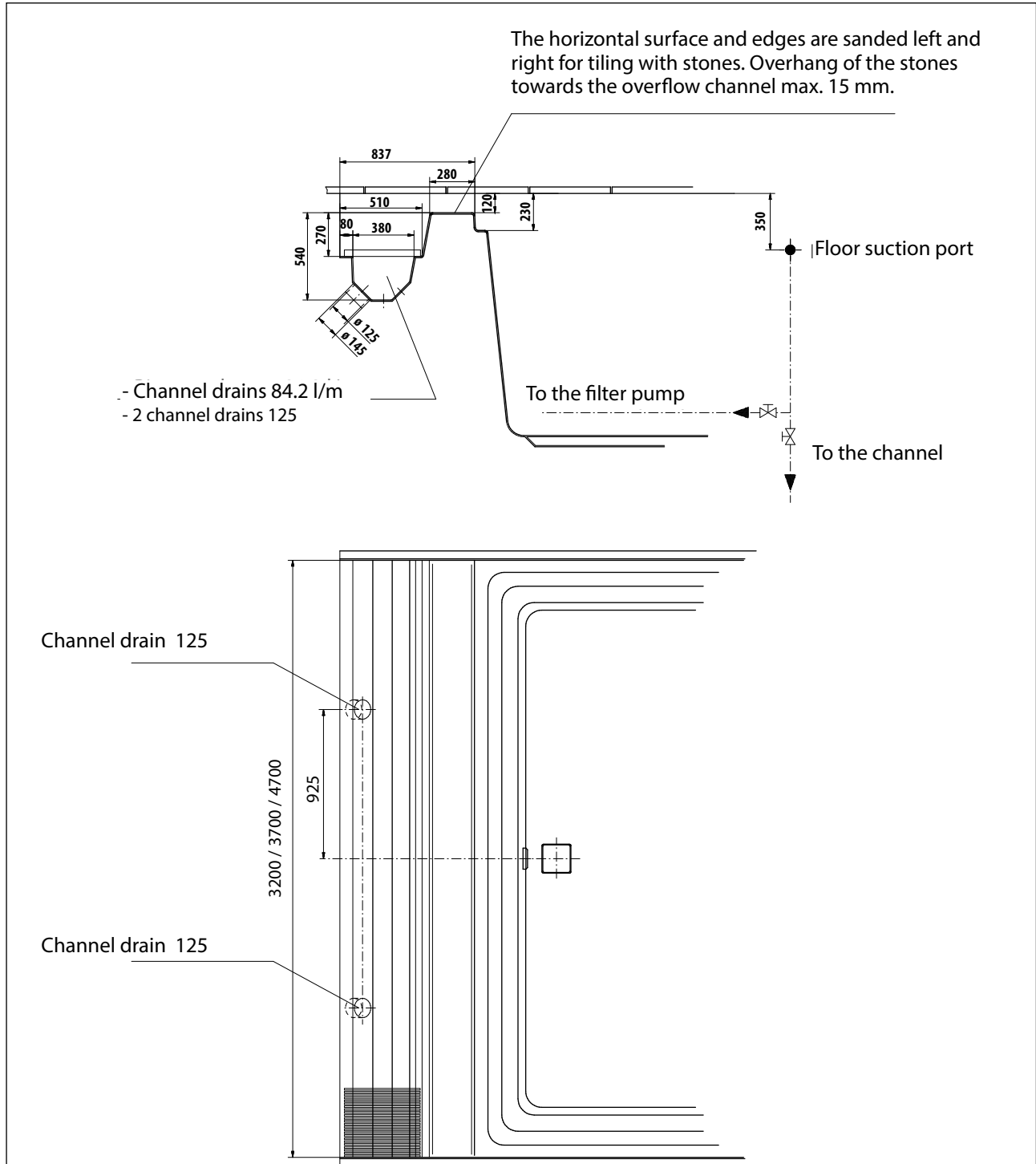
#### Concrete cross section ring anchor:

Concrete: C25/30, XC3, c= 35 mm  
Reinforced concrete: BSt 500 A

Pool size	H (cm)	W (cm)	n	n Ø (mm)
3.70 (4.70) x 5.00 m	25	25	2	12
3.70 (4.70) x 6.00 m	25	25	3	12
3.70 (4.70) x 7.00 m	35	35	3	12
3.70 (4.70) x 8.00 m	35	35	3	12
3.70 (4.70) x 9.00 m	35	35	4	12
3.70 (4.70) x 10.00 m	35	35	4	12
3.70 (4.70) x 11.00 m	40	40	4	12
3.70 (4.70) x 12.00 m	40	40	5	12
3.70 (4.70) x 14.00 m	40	40	5	12
3.70 (4.70) x 16.00 m	40	60	8	16
3.70 (4.70) x 18.00 m	40	60	8	16
3.70 (4.70) x 20.00 m	40	60	12	16
Lay reinforcing bars with overhang or with a 1.5 m overlap				

## 8. Infinity edge installation

### 8.1 Technical drawing

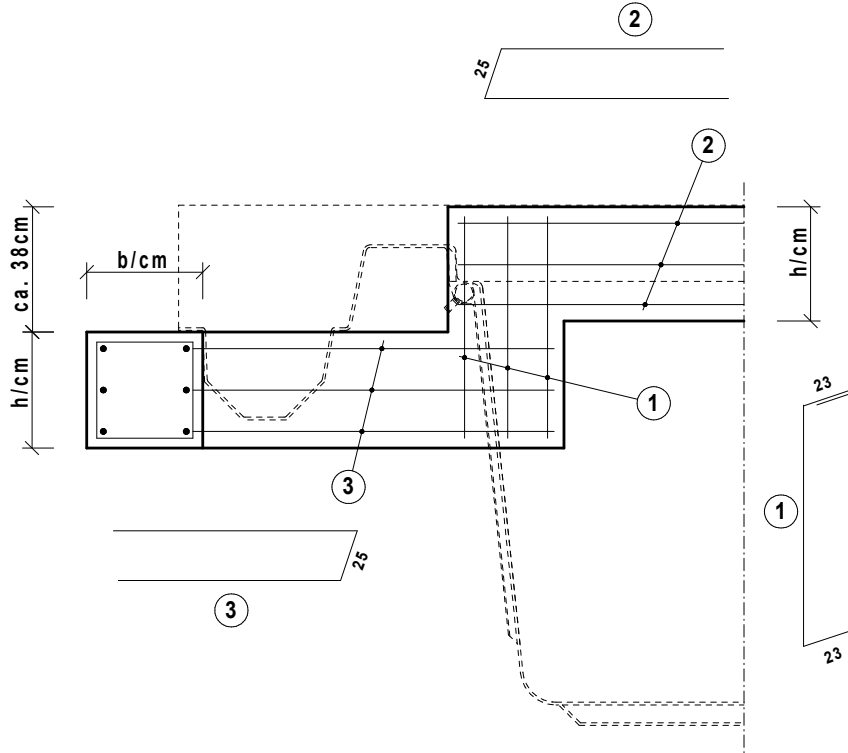


#### **ATTENTION:**

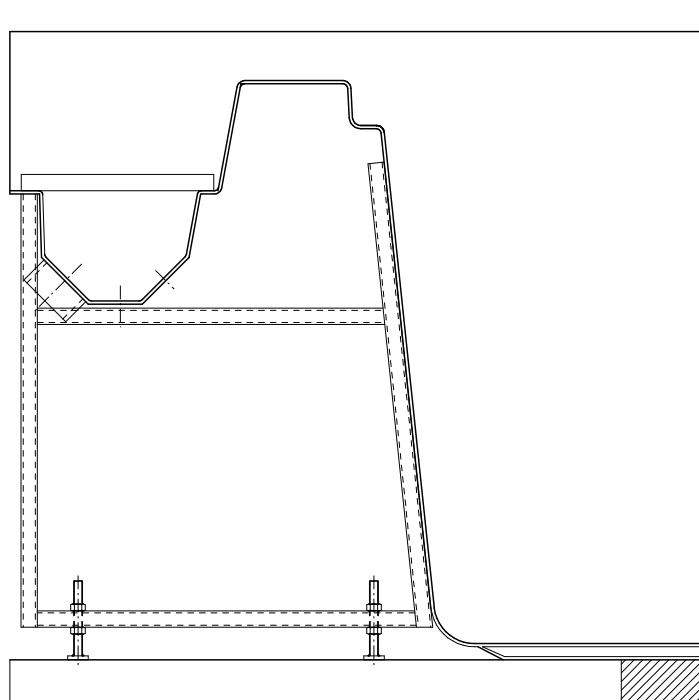
Swimming pools with infinity channels need a connection for a vacuum cleaner for pool cleaning and to drain rain or condensation water into the waste during the wintertime. Please take care of the connection and prepare the piping.

The standard height of the overflow is 120 mm from the top edge of the pool. The water level is adjusted on-site by adjusting the stones on the overflow edge or through a completely tiled overflow edge.

## 8.2 Infinity edge schematic diagram – ring beam



## 8.3 Infinity edge schematic diagram – optionally with steel struts



## 9. Segment pool assembly



Gantries



Assembly



Bolting

Every pool can also be delivered in segments. The individual pool segments are then fitted with flanges which allow the segments to be bolted together. As a result, the pool is 3 cm higher on the outside (1.57 m instead of 1.54 m). The size of the segments can be agreed when the order is placed. Factory technicians perform the bolting together of the segments. Assembly occurs in the following steps:

- Assembly blocks are set up on the concrete slab
- Pool segments are placed on the assembly blocks
- A PVC seal is glued onto each flange
- The flanges are pushed into one another, aligned and bolted together.
- In this process, the seal is pressed, and impermeability is created. A joining seam remains visible.
- Once all flanges are bolted together, the pool is raised using gantries and pulleys.
- The assembly blocks are removed
- The pool is placed on the concrete slab

**Important:** The pit and the foundation plate must be at least 25 cm larger than the pool all around to provide adequate space for installation. The concrete slab must be level with a smooth finish. A pool height of 1.57 m must be ensured (see page 8, item 4).



# 10. Follow-up work on site

## 10.1 Pool soiling

Concrete spatter getting into the inside of the pool is pretty much unavoidable. It does not cause any damage if it is wiped away when it is still wet. Removing dried-on concrete residues, by contrast, causes annoying scratches.

Once the concrete has set, the dirty construction water is to be drained and the pool cleaned. Steel parts (nails and suchlike) in particular must be removed – they leave behind rust spots that are difficult to remove.

For outdoor pools, the swimming pool can only be put into service following installation without changing the water and a deep clean if it was thoroughly cleaned before installation and there are no cement residues to dull the water. The filter device is not a water purification system but is instead intended to keep the water clear. Furthermore, the cement dust would cake up the filter sand, rendering it ineffective.

For indoor pools, the pool should be filled with clean water for the remainder of the construction period. The water protects the surface from falling, and the load conditions are necessary when the top edge of the pool is laid with coping.

**Attention:** An acidic cleaning agent (e.g. our Herli Rapid SR) should be used for subsequent cleaning when putting the pool into service. It chemically dissolves rust spots, cement residue, chalk and dirt. If you are having difficulties, do not risk experimenting with solutions – seek advice by calling the manufacturing plant!

## 10.2 Water maintenance

For ongoing operation, only use special and tested water maintenance equipment for swimming pools. Request tips for maintenance in the summer and winter (Technical Information SB 9)!

## Levelling certificate (example table)

Construction site:	Date:
Performed by:	Measuring device:

Fixed height point:

Number of measuring points:

Measuring point		Terrain height	Comments
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			



**RivieraPool®**

**One of the leading  
manufacturers of  
prefabricated swimming  
pools, swimming pool  
technology and whirlpools.  
Member of the BSW.**



[www.rivierapool.com](http://www.rivierapool.com)