CONSTRUCTION GUIDE FOR A STAINLESS STEEL SKIMMER POOL

This document describes, specifies and regulates:

- excavation work
- concrete pouring
- masonry
- drainage
- grounding

Hand this document over to the construction company installing your pool. Pay attention to the processes described in this document. Only proper preparation and well-executed construction will ensure the reliable operation and long service life of your pool and prevent problems with warranty and post-warranty repairs of stainless steel pools and their equipment supplied by us. If you are unsure of something, our technicians will be happy to help you with a consultation. If you need help, contact our sales department.

Basic information about our stainless steel swimming pools:

- 100% Czech product
- The stainless steel pool is assembled in our plant.
- It is delivered to the installation site in one piece.
- It is lowered onto the base in accordance with this construction guide.

Materials:

- ČSN 17349, AISI 316L
- Stainless steel grade 1.4404
- Designed for aggressive environments, acids at lower concentrations up to medium temperatures, swimming pools (chlorine fumes), chimneys, jewellery (surgical stainless steel), food industry.

Pool material thickness:

- 2-mm thick sheet metal walls, 1.5-mm thick floor
- Welded by the TIG/WIG method pursuant to: ČSN En 287.1

Warranty:

- 5 years for stainless steel pool
- 2 years for accompanying technology

Contents:

1. Excavation work - performed by the investor

The pit for the pool should have at least 600 mm extra space on each side of the pool to allow comfortable installation of coping and for all the necessary connections (see the table). The pit is 1,680 mm deep throughout its length. The dimensions in the table are listed in mm.

Pool length	Pool width	Base length	Base width	Pit length	Pit width
4,000	2,000	4,600	2,600	5,200	3,200
4,000	3,000	4,600	3,600	5,200	4,200
5,000	2,000	5,600	2,600	6,200	3,200
5,000	3,000	5,600	3,600	6,200	4,200
6,000	3,000	6,600	3,600	7,200	4,200
6,000	3,500	6,600	4,100	7,200	4,700
6,000	4,000	6,600	4,600	7,200	5,200
6,500	3,000	7,100	3,600	7,700	4,200
6,500	3,500	7,100	4,100	7,700	4,700
6,500	4,000	7,100	4,600	7,700	5,200
7,000	3,000	7,600	3,600	8,200	4,200
7,000	3,500	7,600	4,100	8,200	4,700
7,000	4,000	7,600	4,600	8,200	5,200
8,000	3,000	8,600	3,600	9,200	4,200
8,000	3,500	8,600	4,100	9,200	4,700
8,000	4,000	8,600	4,600	9,200	5,200

Please consult our technicians for other dimensions not listed in the table.

2. Drainage – performed by the investor

The base needs to be drained. Drainage under the pool is necessary to remove water and provide protection against the harmful effects of water seeping under the pool. If it is not possible to drain the water, build a sump pump.

3. Pool grounding – performed by the investor

Before the concrete pool base is poured, the grounding will be installed; this is very important to prevent stray voltage in the pool water and reactions on the pool walls. If the soil moisture is low, ground rods need to be installed. The ground rods will be installed in two opposite corners (by the stairs and across from them) above the base, where the pool will connected.

4. Base formwork– performed by the investor

The bottom is filled with crushed stone of a fraction of 8/32 and compacted with a vibratory plate to keep the formwork height at 180 mm for the concrete.

The pool base formwork is always at least 300 mm wider and longer on each side than the pool (i.e. 6600 x 3600 mm for a 6000 x 3000 mm pool, see the table on page 4.). Install the top edge of the formwork at a depth of 1,450 mm from the ground or the coping around the pool. The upper edge of the pool is at the same height as the surrounding terrain/coping around the pool.

5. Base – performed by the investor

The base is reinforced with welded wire mesh in a thickness of 6 mm with a 150 x 150 mm hole size. Finally, a B20 concrete slab is poured. It is necessary to maintain ideal surface flatness. After the concrete has matured, any unevenness must be levelled with adhesive or a self-levelling trowel. Total flatness up to 5 mm.

Attention: If the base is not perfectly flat, the unevenness will also affect the pool. If it is unneven, the slab needs to be levelled.

The investor is responsible for perfect flatness and for verifying the flatness before installing the pool.

6. Preparation for pool installation – performed by the investor

The day before the pool is installed, XPS 50 mm insulation must be glued to the surface of the mature base slab. The size depends on the pool size.

7. Pool installation - performed by the investor

The pool is lowered onto the XPS insulation with a crane. The crane is provided by the investor for the pre-arranged date of the pool installation.
After the pool is installed, a handover document on the pool installation will be drawn up.

Attention: The exact location of the pool will be chosen by the investor, who will mark the position. Slight corrections of the pool's placement can be made without a crane.

After the pool is placed in its exact location, it is must be immediately filled with water up to a height of at least 100-150 mm, or up to under the inlet nozzles!!!

If the pool coping is installed when the pool is empty, the pool may rise up due to Archimedes' principle.

8. Protective pool cover – performed by the investor

After the pool is installed, it must be protected, ideally with a simple wooden structure covered with a tarpaulin.

Attention: Under no circumstances may any iron materials be cut or ground near the installed pool. Dust from cutting/grinding will stick to the stainless steel pool and cause it to rust.

9. Pool equipment and connection - performed by the investor

On the day of installation (if possible), all plumbing lines will be led outside the pool to be subsequently connected to the pool's equipment.
A room for the pool equipment must be built by the pool. For more information, see the document 'Pool construction drawing'. All the necessary equipment will be installed in the pool's equipment room and connected to the water supply line, sewerage and the pool. A handover document will be drawn up after installation of the pool equipment. The area where the equipment is kept must be dry and ventilated to ensure proper function and compliance with warranty conditions. Always consult the placement of pool equipment with our technician!

10. Pool coping – performed by the investor

Before pouring the coping, prepare 12 mm holes for the insertion of rebars. **Do not cut the rebars near the pool!** The coping is poured by constructing the 1st row of 200 x 500 x 250 mm permanent formwork. XPS 80 mm insulation is inserted between the formwork and the pool wall. 12 mm rebars are inserted into pre-prepared holes in the formwork in the base slab, and then B20 concrete is poured.
After this, additional rows of permanent formwork are constructed, filled with concrete and reinforced longitudinally and vertically up to a height of five rows.

Junction boxes for the wiring of lights, blinds, etc., must be kept by the pool. The technician will show them to you during installation.

Enclosure - if you want to enclose the pool, you will need to build concrete footings. Consult our technician.

Attention: It is absolutely necessary to make sure that the nozzles, light cables and lights are not in direct contact with the concrete. A space of at least 50 mm must be left around them when the coping is poured. This space around the nozzles and the pool lights will be filled with spray foam**. If the nozzles or lights are encased in concrete, they may be damaged or destroyed.**

11. Filling the pool – performed by the investor

Remove the pool's protective cover and any protective film. Once filled, it will not be possible to remove the protective film under the water. After filling the pool, check the tightness of all outlets and pipes that may have been damaged during construction work, then fill the above-mentioned holes around nozzles and lights with spray foam.

12. Backfilling – performed by the investor

After the pipes are checked, the rest of the pit is backfilled. **We don't recommend compacting the soil above pipelines, as this may result in their damage.**

13. Final adjustments and the surface surrounding the pool – performed by the investor

A deck (paving, WPC, etc.) can be built around the pool under strict conditions that specify how to do it and what to avoid to prevent damage to the stainless steel pool. The stainless steel pool must not come into contact with other metals. Do not cut any metals around the pool.

14. Pool start-up and handover - performed by the contractor

When all work is finished, the pool will be started up. The equipment will be connected and all functional parts will be tested and prepared for full use.
The final handover document will be drawn up.

If you have any questions, contact our technician. He will be available throughout the implementation.

List of recommended construction materials:

- Grounding rods and strips
- B20 concrete
- 6 x 150 x 150 mm welded wire mesh – foundation reinforcement
- XPS 50 – under pool bottom
- EPS 80 or XPS 80 – wall insulation
- Rebar – permanent formwork reinforcement
- 200 x 250 x 500 mm permanent formwork - pool coping

Common mistakes in construction:

No grounding - if there is not enough soil moisture around the pool, the pool will not be grounded naturally, which results in the occurrence of stray voltage and its reaction with chlorine and oxygen.

No drainage - if the pool is not adequately drained, there is a risk of the pool lifting, e.g. when snow melts in spring.

Uneven base slab - if there are irregularities on the base slab or it is sloping, deformations and bowing of the walls and bottom may occur. The unevenness will also be visible on the optical plane when the pool is filled.

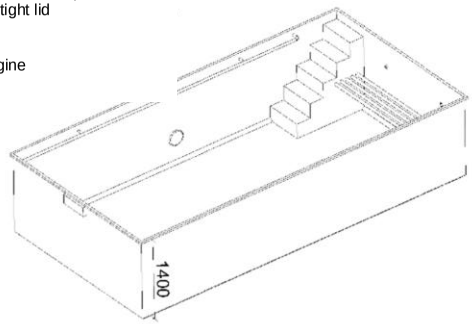
Uneven coping - the pool coping must always be level from corner to corner; remember that this concrete wall will support the stainless steel wall, which will copy its flatness when the pool is filled.

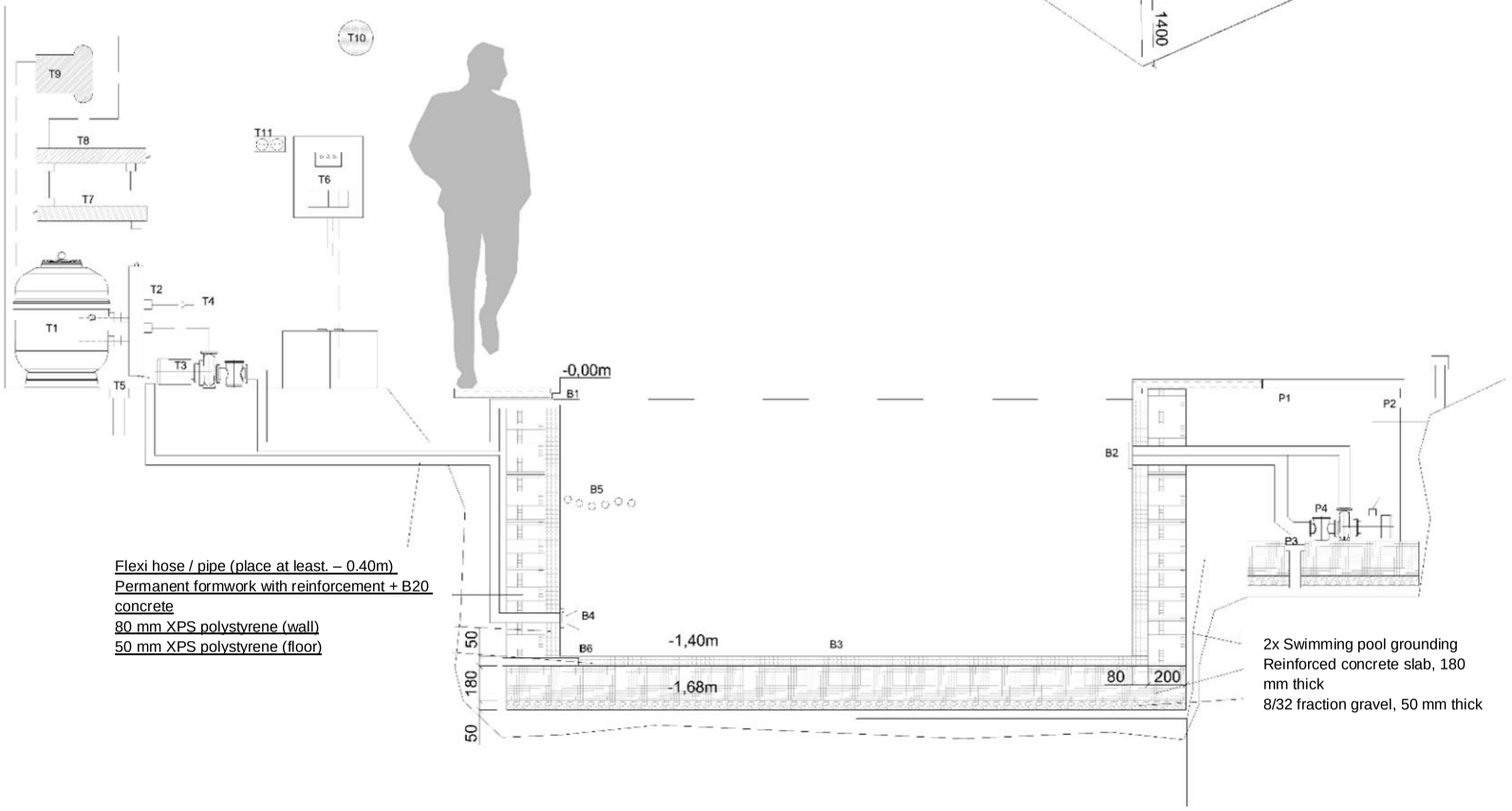
Compacting above pipelines – pipelines vary between different types of pools and their equipment, so it is necessary to use common sense and avoid compacting materials that can damage the pipeline, or those that would cause the pipeline to sink.

Equipment room
T1 – Pool sand filter
T2 – Besgo 6-way valve
T3 – Filter pump
T4 – Pressure waste
T5 – Equipment room drainage.
T6 – ASEKO
T7 – UV lamp
T8 – Heat exchanger / bypass for heat pump
T9 – Ventilation unit (must be placed 1m above the surface)
T10 – Equipment room ventilation
T11 – Sockets 220 V (for loxone control, etc.)

Stainless steel pool
B1 – Skimmer (water drainage into filter)
B2 – Countercurrent (engine in a separate shaft))
B3 – 1.5 mm bottom / 1.5 mm NOP bottom
B4 – Nozzle (water supply from filter)
B5 – Massage bench (air pump in equipment room)
B6 – Bottom drain (water drainage into filter)

Countercurrent shaft (PP-C or concrete)
P1 –900x900x900mm, watertight lid
P2 – Venting
P3 – Drainage
P4 –380V countercurrent engine





Flexi hose / pipe (place at least. – 0.40m)
Permanent formwork with reinforcement + B20 concrete
80 mm XPS polystyrene (wall)
50 mm XPS polystyrene (floor)

2x Swimming pool grounding
Reinforced concrete slab, 180 mm thick
8/32 fraction gravel, 50 mm thick