Plast-Pol®

CONSTRUCTION AND ASSEMBLY INSTRUCTIONS

FOR THE SWIMMING POOL BASIN

TÜVRheinland®
CERTIFIED

Safety
Regular
Production
Surveillance

www.tuv.com
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READ CAREFULLY AND KEEP FOR FUTURE REFERENCE!

Before beginning the installation, carefully read the manual, which contains guidelines and materials for the construction, safety and installation of the pool basin. Keep these instructions for future reference as they contain important information and guidelines for using the basin.

INTRODUCTION

Many thanks for the purchase of the Plast-Pol polyester basin. We encourage you to take a few moments to read the installation and operating instructions for our product. The information included in the manual will ensure that the swimming pool is used for longer and safely.

A **minimum of 4 people is recommended** to assemble the basin. The estimated installation time for the swimming pool basin is

+/- 4 days, depending on, among other things: the size of the basin, weather conditions or the knowledge and experience of the installers. The people who can influence the smooth and correct installation of the basin are, for example, a qualified electrician, plumber, builder or bricklayer. Tools and equipment such as a shovel, concrete mixer, excavator, screwdrivers, screwdriver, hacksaw, wheelbarrow, etc. may be necessary to complete the installation.

The following instructions apply to the models listed below:

MODEL	ESTIMATED AREA USABLE	ESTIMATED CAPACITY	MODEL	ESTIMATED AREA USABLE	ESTIMATED CAPACITY
type, ROMAN STAIRS			**type, INTERNAL STAIRS**		
5.00 x 3.00 x 1.50	11.50 [m^2]	12.5 [m^3]	5.10 x 3.00 x 1.50	13.00 [m^2]	16 [m^3]
6.00 x 3.00 x 1.40	14.50 [m^2]	14 [m^3]	6.10 x 3.00 x 1.50	16.00 [m^2]	21 [m^3]
6.00 x 3.00 x 1.50	14.50 [m^2]	16 [m^3]	6.10 x 3.65 x 1.50	20.00 [m^2]	25 [m^3]
7.00 x 3.20 x 1.50	18.50 [m^2]	21 [m^3]	8.10 x 3.65 x 1.50	27.00 [m^2]	32 [m^3]
8.00 x 3.20 x 1.50	21.50 [m^2]	25 [m^3]	6.60 x 3.20 x 1.50	18.00 [m^2]	21 [m^3]
10.00 x 3.20 x 1.50	27.50 [m^2]	32 [m^3]	7.60 x 3.20 x 1.50	21.00 [m^2]	24 [m^3]
8.80 x 3.65 x 1.50	27.50 [m^2]	35 [m^3]	7.60 x 3.65 x 1.50	24.50 [m^2]	27 [m^3]
10.30 x 3.65 x 1.50	32.00 [m^2]	42 [m^3]	8.50 x 3.65 x 1.50	27.00 [m^2]	32 [m^3]

GENERAL CONDITIONS

Our products and their additional accessories are designed for use as swimming and bathing pools. It is recommended that the water in the pool comes from the municipal water supply system in accordance with the drinking water rules. Topping up the basin with spring water, deep water or brine is not recommended. High levels of salt, iron or abnormal water hardness (lime compounds), among other things, can cause corrosion on equipment and pool components, and deposit on the walls of the pool basin.

Due to the technology and manufacturing process of the swimming pool basin in flexible polyester resins, dimensional tolerances may occur. The dimensions given are therefore only approximate and non-binding. **The basins made of laminate achieve full stability through the outer concrete shell.** We recommend that installation is carried out by building and installation companies or persons familiar with the installation of polyester basins, and that **all electrical installations** are carried out **by qualified and authorised electrical contractors** for safety reasons when using the pool.

The maximum and short-term water temperature in the polyester pool basin should not exceed 28°C. Discharge equipment, especially filter pumps and countercurrent systems, **should be located below the water surface** to exclude gravitational backflow and "dry" operation of the equipment, unless the pump is designed for this (e.g. self-priming pump).

It is **not advisable to drain the pool basin completely** because of the high risk of deformation due to external forces (e.g. groundwater, soil pressure) and, in extreme cases, damage to the pool structure. **The foundation slab should be constructed above the groundwater level**. A drainage **(drainage band)** should always be additionally provided at the **level of the foundation slab** with drainage into a drainage manhole. A building specialist familiar with the local ground conditions should be consulted for the work.

All possible defects are rectified free of charge during the guarantee period, provided they are caused by material or manufacturing defects. **The warranty does not cover consumable and rotating parts (e.g. bulbs, bearings, etc.), or parts which show signs of mechanical damage, as well as damage resulting from incorrect use, incorrect installation and/or incorrect commissioning.** In the event of a warranty claim, please return with the warranty document to your dealer or company headquarters. Detailed terms and conditions and the warranty period are contained in the warranty document supplied with the delivery of the pool.

CONSERVATION

For correct and long-lasting use of the pool and equipment, we recommend that you inspect the pool basin, components and equipment regularly, optimally once a week. The **condition of the pool shell should be checked on an ongoing** basis and the manufacturer should be informed immediately of any worrying changes.

Regularly, this should be done:

- check the general condition and accessible surfaces of the swimming pool basin,
- remove dirt from the pool area with the appropriate products,
- control of water parameters (temperature, pH values, chlorine concentration levels),
- water treatment as recommended by the manufacturers of the preparations,
- control of the technical room with pool technology (filters, pumps and other equipment). Cleaning

and dirt removal should not be carried out with aggressive cleaning agents,
not intended for polyester basins (in particular: bleach, abrasive substances, preparations with micro powder). It is forbidden to remove soiling by mechanical methods without consulting the manufacturer.

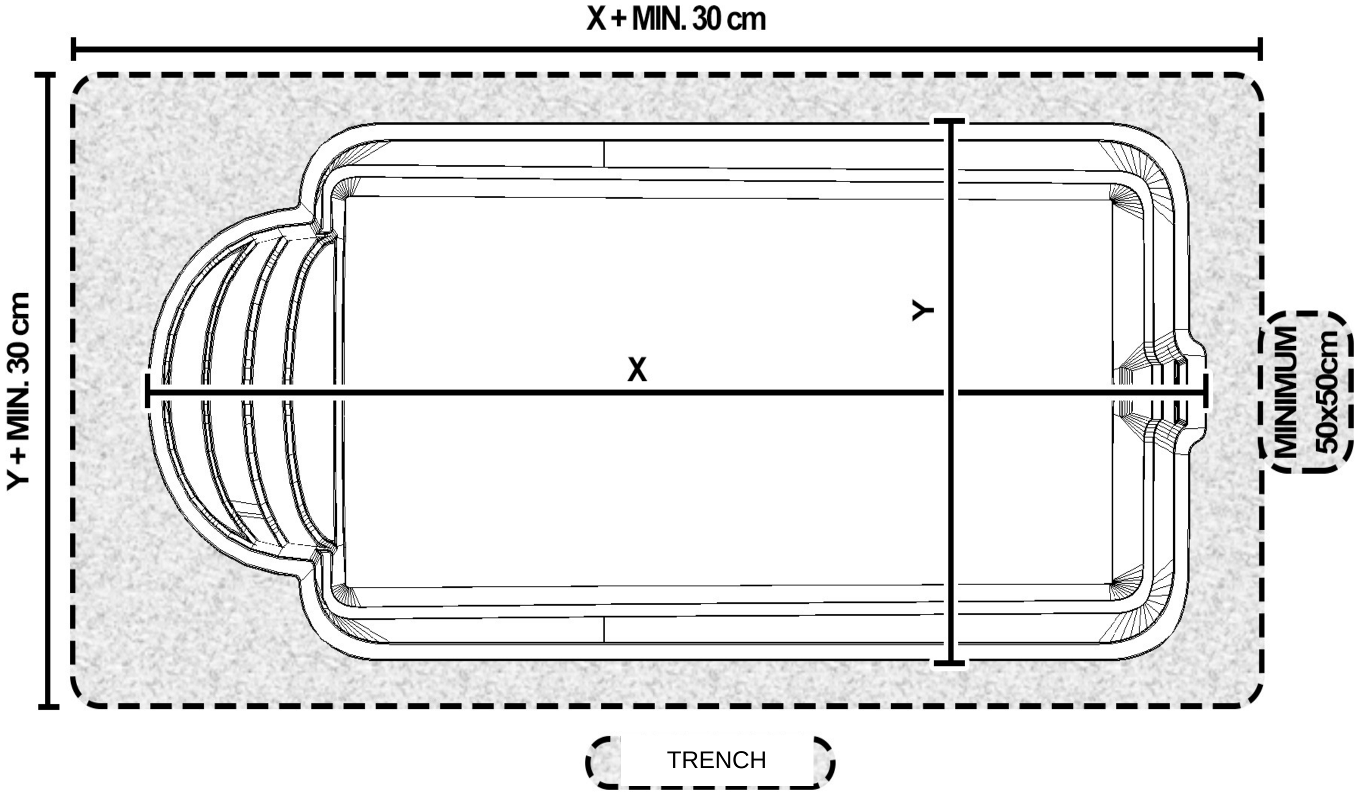
SPECIAL PRECAUTIONS

1. Use the product for its intended purpose.
2. When preparing for installation, the goods should be checked to ensure that they comply with the order. If damage is found, contact the seller immediately.
3. Installation should be carried out in accordance with the guidelines of the installation instructions. If installation instructions are not provided with the product, please contact your sales supervisor or PLAST-POL employee for correct installation.
4. Installation should be carried out by a suitably qualified person. All operations should be carried out with extreme caution.
5. When connecting the product to a power source, it is recommended to follow the safety guidelines contained, among others, in the European Standard PN-EN 50110-1:2013-05
6. Doing repairs and modifications yourself will void the warranty.

INSTALLATION INSTRUCTIONS FOR THE SWIMMING POOL BASIN

1. TRENCH PREPARATION

1.1 / In a predetermined location, we dig a hole with a depth corresponding to the height of our pool (this should include the screed, polystyrene foam, PUR foam insulation of the basin and the pool flange). **We enlarge the trench by a minimum of 15 cm from the pool basin on each side (installation of piping)**. The trench must also include an opening for components that project beyond the pool basin (skimmer, countercurrent panel, etc.). The final depth of the trench can vary, depending on how the pool beach and basin flange are finished.

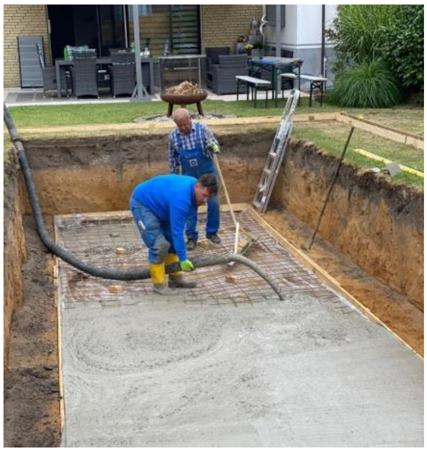


Minimum trench dimensions:

length of the basin + 30 cm / width of the basin + 30 cm

1.2 / At the bottom of the trench we make a concrete screed (bottom/foundation slab) of minimum grade B20-B25, 10-15cm thick. The screed should be reinforced (mesh or rebar with a minimum thickness of 8 mm, 15-20 cm mesh). **In the case of groundwater or stratified water in impermeable soils (clay, silt), a 20 cm thick layer of well-compacted coarse sand should be laid under the bottom slab and an additional drainage band should be constructed with an outlet to an inspection chamber from which excess water can be pumped out.** A bottom slab above groundwater is recommended. It is important to ensure that the slab is perfectly level and the surface should be smoothed smooth.

1.3 / After the slab has dried, a layer of hard floor polystyrene (extruded polystyrene) should be laid on top of the screed. The recommended thickness of polystyrene foam is 5 cm. This layer is laid to provide additional insulation of the basin, to level out any irregularities and to protect against any abrasion of the bottom.



TIP

Extruded polystyrene sheets can be glued to the foundation slab to prevent the slabs from moving when the basin is set on top of the laid polystyrene. Before embedding the basin, the polystyrene surface should be cleaned of any dirt (stones, tools, sand).

IMPORTANT INFORMATION

A reinforced screed for the bottom of the pool is mandatory to maintain the warranty. No other method of hardening the soil in the trench is recommended. We recommend bottom slab drainage for every installation, as ground conditions can change dynamically.

2. UNLOADING AND SETTLING OF THE BASIN

2.1 / The unloading of the basin and the settling of the pool is always the responsibility of the investor. Depending on the model chosen, the size and the availability of the destination, different equipment may be needed for unloading. If access to the trench is not problematic, we recommend that a crane/hds with a minimum reach of 10-12m and a few people to assist should be arranged for unloading. Our driver is present during unloading - supervising and instructing and assisting.

Manual unloading is possible in exceptional situations, while any other method of unloading should be consulted with the trader. If you have any questions or concerns, contact your retailer for details. Examples of videos of our customers' pool unloading can be found on our Youtube channel: https://www.youtube.com/channel/UC_1RcTVu7qLxMdK6zACIwKw and Facebook profiles.

TIP

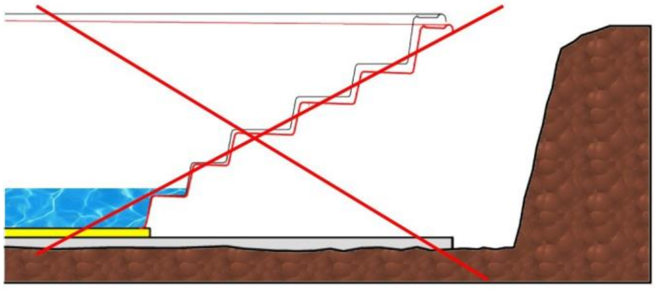
Our basins are equipped with 4 transport handles for unloading. The crane operator should be equipped with their own slings of sufficient length. In difficult weather conditions (wind, precipitation, etc.), unloading may be difficult or impossible altogether.

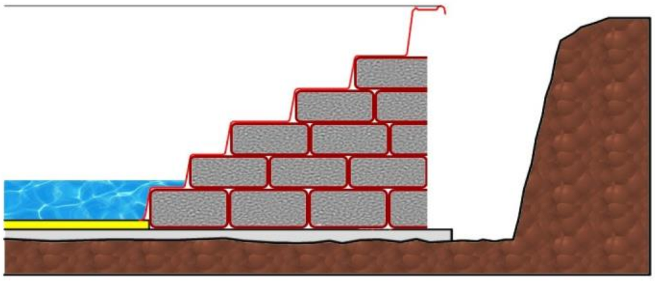
2.2 / We embed the basin in the previously prepared trench. Once the pool is properly positioned, its levelling should be checked. We recommend paying particular attention to the level of the edges at the stairs and seating area. These elements, without support (shoring), can sink under their own weight.

2.3 / The scope should be checked during delivery. Check with the driver for completeness, especially of attachments and accessories. Subsequent reports of deficiencies may not constitute grounds for a claim.

3. POOL INSTALLATION

3.1 / After mounting and levelling the basin under the stair treads, the foundation is made of concrete blocks, checking their level with the walls, and the gap between the stair and the blocks is filled with foam or wedged around the perimeter.





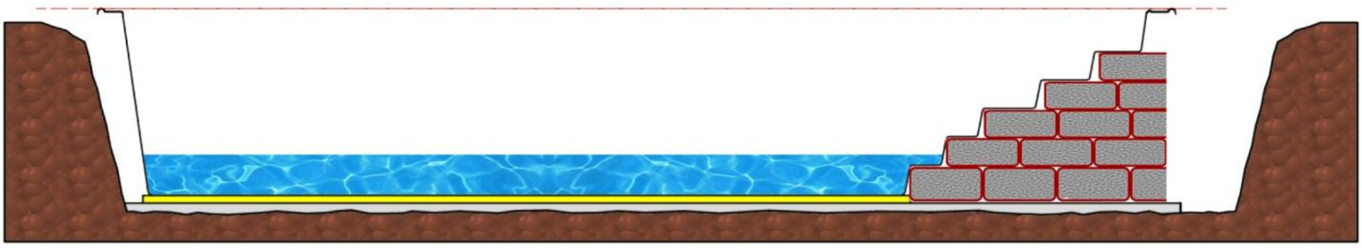
TIP

At this stage, 10-15 cm of water can be poured into the basin to stabilise it by adding weight to the bottom. This will ensure that no one moves the basin in the excavation during installation. Before shoring, it is forbidden to add weight to seats and stairs. The stairs should be walled on the bottom slab.

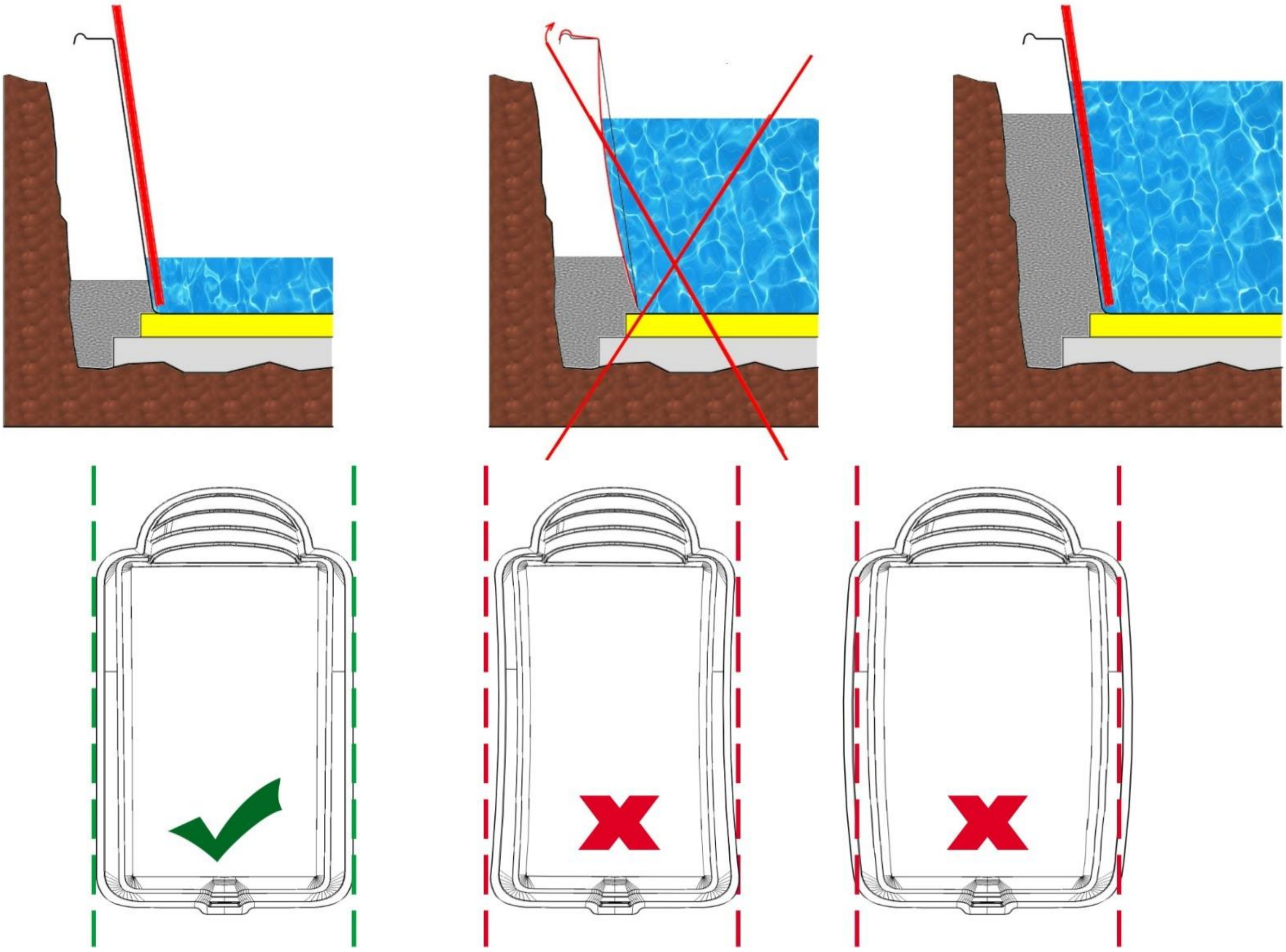
IMPORTANT INFORMATION

Bricking up the stairs and seats is necessary to maintain the warranty. Unsupported steps and seats under water pressure can lead to deformation, loss of basin level, hairline cracks and, in extreme situations, complete cracking - damaging the pool.

3.2 / After shoring up the steps, pour about 20-30 cm of water into the pool and check the level of the top edge of the pool.



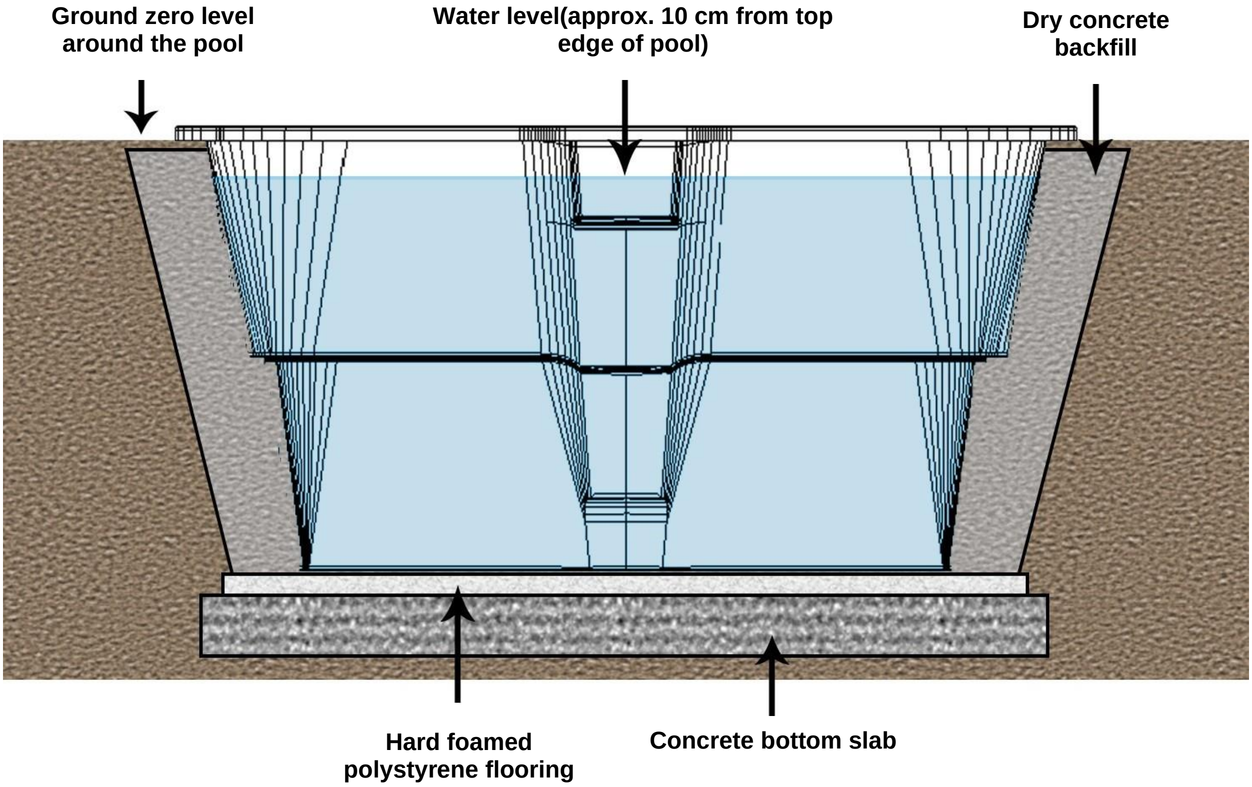
3.3 / Cover the sides of the pool **dry sand-cement mortar** in a ratio of 1-4 (cement-sand), up to the water level of the pool. Pour water over the mortar to thicken it and fit it to the walls of the pool. While the pool is being backfilled with mortar, the deformation of the pool walls, both vertically and horizontally, must be constantly monitored.



3.4 / Repeat the above step by step until the pool is completely filled with water.

TIP

Deformation of the walls inwards, indicates too much pressure (a lot of mortar) from outside the pool, while deformation outwards, indicates too much water. When backfilling, care must be taken to ensure that the mortar does not contain stones, rubbish or other hard and sharp objects that could damage the pool wall under pressure.



IMPORTANT INFORMATION

1/ It is recommended that the water level in the basin is slightly higher than the level of the backfill.

2/ Special care must be taken to ensure that the sides of the pool have their natural shape (especially the longer sides) i.e.: too much backfill will cause the walls to dent inside the pool, too much water will cause the walls to deform on the outside.

3/ It is advisable to create a narrow formwork and to cover these components with sand in order to facilitate access to the equipment in case of failure.

4/ Backfill the pool with dry sand-cement mortar. Wet mortar can cause a lot of pressure on the walls and lead to the pool walls denting inwards.

5/ Mechanical tamping of sand and cement mortar is prohibited. 6/ The
plumbing is recommended to be done in the upper part of the cast.

7/ If the trench is too large or the soil is loose, stay-in-place formwork may be used.

4. INSTALLATION OF PIPING AND LIGHTING

4.1 **/** When the backfill approaches the level of the nozzles and skimmer, the pipework should be glued in. The components installed by our fitters are prepared for quick connection. **All reductions / transitions are already installed at the elements in the basin.** After bonding, we continue to backfill the pool until it is completely filled with water.

The bonding process: In the first phase of bonding, pipe remover should be used to degrease and partially soften the pipes before the actual bonding. Lubricate the end of the pipe and the socket of the fitting with remover (the parts coming out of the skimmer and nozzles and the filter set). We then lubricate the same parts with glue. The joint must be sealed within a maximum of 1 minute to prevent the adhesive from evaporating. When fitting, the pipe should be turned 90° in the socket in order to better distribute the glue throughout the joint.

TIP

The joint should be held in place for 15-30 seconds to prevent the pipe slipping out of the joint (the time it takes for the joint to reach the correct strength depends on the temperature). Bonded joints should dry for a minimum of 2-3 hours before coming into contact with water.

4.2 **/** Pool lights **must be connected in parallel** with the transformer supplied. Connecting lamps directly to 230V power supply may result in burned-out bulbs. Cables should be routed in a protective hose (electrical conduit) to the junction box.

TIP

In the case of the Multicolour PAR56 LED lamps, the third cable (yellow-green) is responsible for the synchronisation between the lamps - it should be connected together.

IMPORTANT INFORMATION

Lamps cannot be attached without water – without cooling and directly to 220-230V (without transformer). This can result in a leaking lamp and/or burnt-out bulbs. **All electrical installations should be carried out by a qualified electrician.**

5. MANHOLE FOR SWIMMING POOL TECHNOLOGY

5.1 / Make the bottom of the manhole as concrete screed reinforced with mesh, the walls with concrete blocks. The cover should be of a material that provides protection from rain, snow and varying weather conditions. The manhole work should be carried out after the installation of the pool basin. It is advisable to keep a distance between the pool and the filter manhole.

5.2 / The manhole should be located below the water surface of the pool so that the equipment is gravity-flooded with pool water and does not operate without cooling.

The final size of the manhole depends on the amount of planned equipment (pumps, appliances, etc.) to be installed inside.

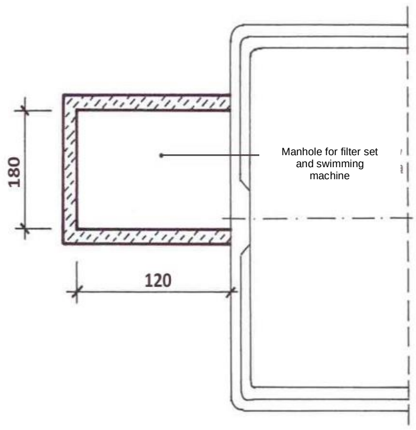
5.2 / Electricity supply cable must be inserted into the manhole.

5.3 / The manhole must be sealed and protected from groundwater and precipitation.

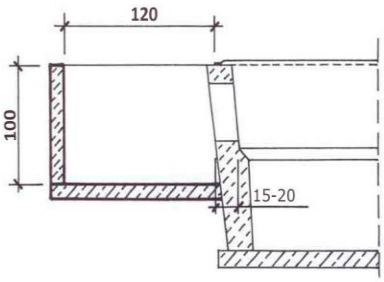
5.4 / The following diagrams, photographs and drawings are **examples**.

Example diagram of a large manhole (e.g. filter, bypass, countercurrent):

MANHOLE PLAN

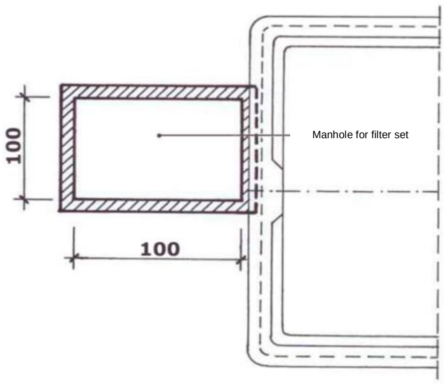


LONGITUDINAL SECTION

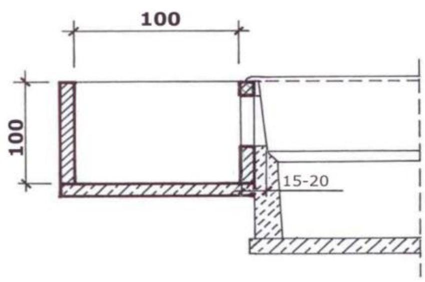


Example diagram of a small manhole (e.g. filter, bypass):

MANHOLE PLAN



LONGITUDINAL SECTION



You can purchase a pre-fitted manhole for mounting from our company.

TIP

If a canopy is planned, the height of the manhole flap must be taken into account. A high flap may prevent the module from passing over a manhole. The box must then be moved off the axis of the pool or the flap/profile of the canopy must be configured accordingly.

IMPORTANT INFORMATION

The filter manhole should be sealed and ventilated. It should be located below the water surface of the pool so that the equipment is gravity-flooded with pool water and does not operate without cooling. The technical condition of the room and equipment should be checked regularly.

6. EXAMPLE HYDRAULIC SYSTEM DIAGRAMS

DIAGRAM – 1

SKIMMER → FILTRATION → NOZZLES

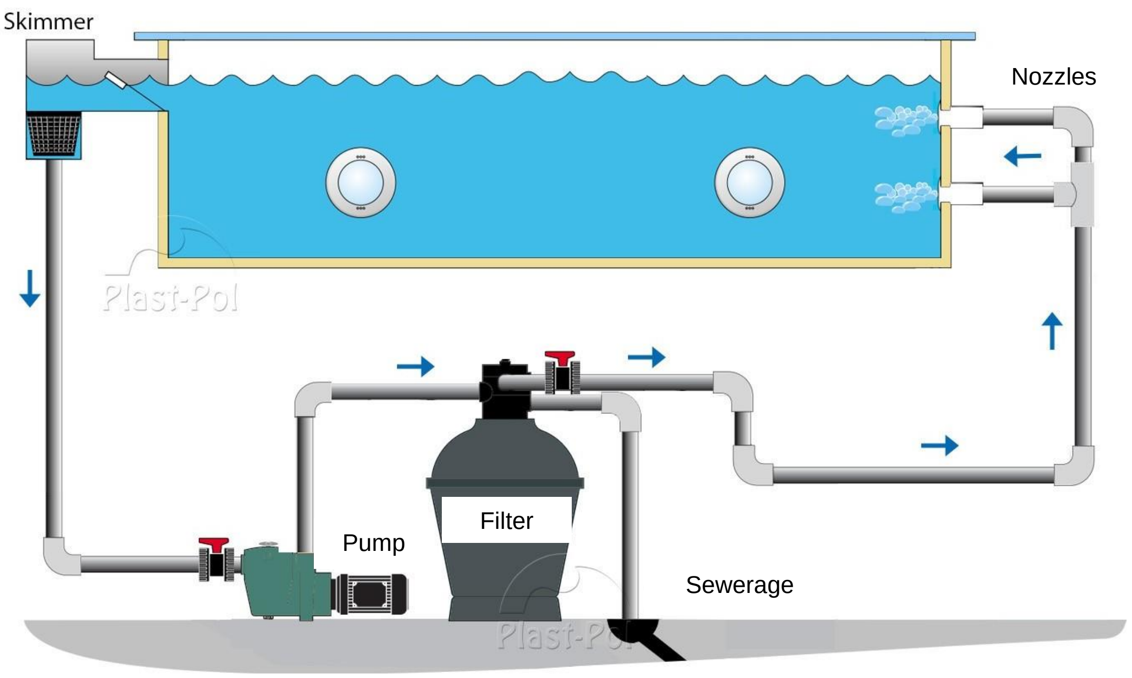


DIAGRAM – 2

SKIMMER → FILTRATION → HEAT PUMP → JETS + COUNTERCURRENT

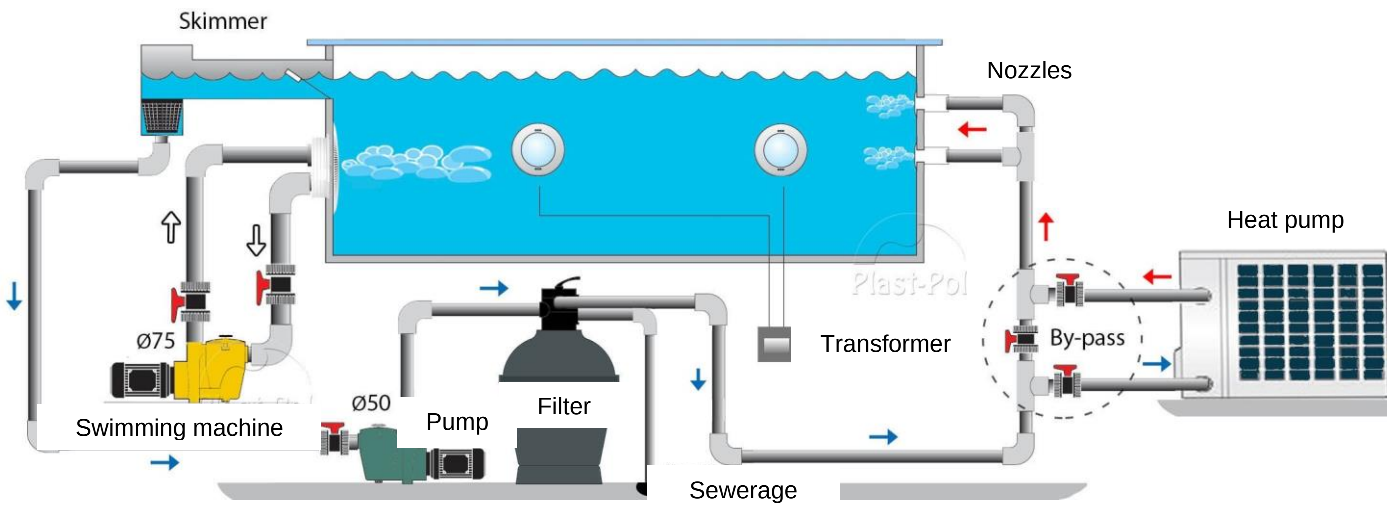
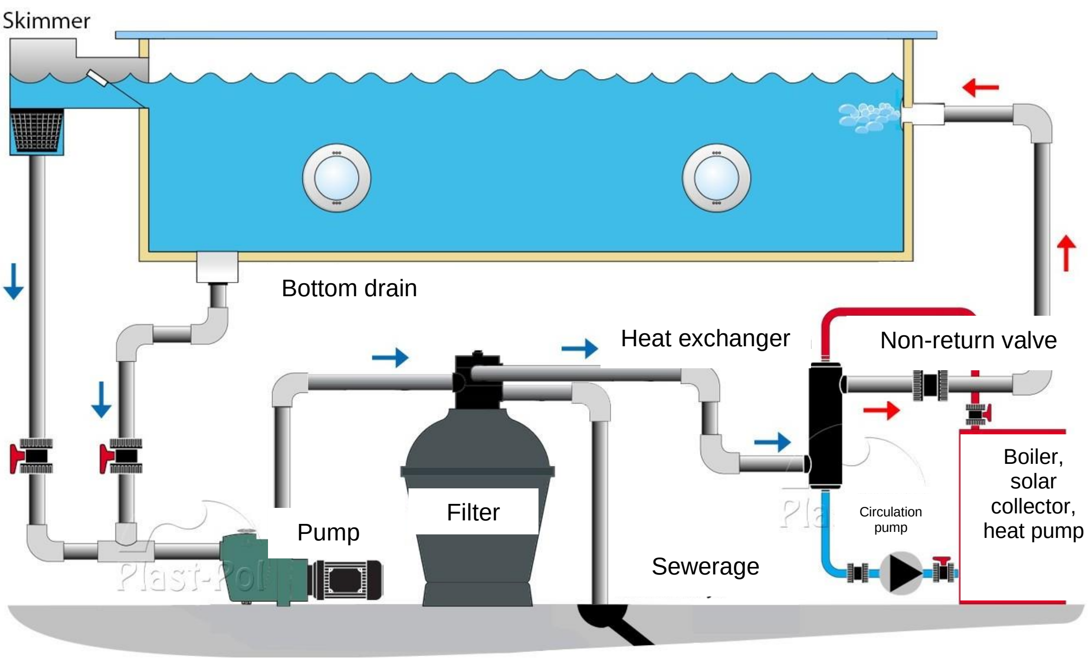


DIAGRAM – 3

SKIMMER / BOTTOM DRAIN → FILTRATION → HEAT EXCHANGER → NOZZLES



TIP

Drainage to the sewerage system is not required. Dirt during sand bed cleaning can be discharged using a vacuum hose by attaching it to the “waste” outlet during rinsing.

IMPORTANT INFORMATION

All chemical dosing equipment (e.g. automatic dosing units, salt electrolysers, chlorinators) should be placed last in line (before the water returns to the nozzles). Positioning the unit in a different order may damage the other components of the installation.

ADDITIONAL INFORMATION

Additional information related to the installation and operation of the pool can be obtained via our website www.plast-pol.com (menu → technology → instructions), other instructions (pool wintering, pool operation, etc.), by telephone or email from the sales department, or stationary at the company's head office.

COMMERCIAL OFFICE/SHOP:

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