Amazing Water

Purifying
Moving
Designing
Vitalising
Lighting
Installation

UV-C technology, filters and equipment pits

Programme and technical specifications 2024

AUGA
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WATER PURIFYING

Swimming ponds.

Fountain ponds.

Koi ponds.

Keeping water clear and vital in water features, basins or other water projects virtually always calls for the use of filter technology.

AUGA designs and builds complete systems for mechanical and biological water purification.

Project: Vos Tuinvisie in Epe (NL)

Ornamental ponds.

Reflecting ponds.

SWIMMING PONDS

Swimming in your very own pond, purified in a completely natural manner with no added chemicals, is a wonderful experience.

Swimming ponds are purified using a helophyte filter, a combination of water plants and a substrate bed. The technology needed for swimming ponds depends entirely on the user's requirements and starts with a circulation pump, but can be expanded to include various technical devices to maintain water quality.

FOUNTAIN PONDS

Moving water is fascinating! Defining the views in ponds and serving as an eye-catcher in front of corporate buildings. However, a fountain alone cannot provide clean and clear water, a relatively simple filter system is often sufficient in order to maintain the water quality, and is especially important when it comes to public water and when legislation plays a role.

A purified pond also ensures the fountain system continues to operate properly. After all, contamination of the fountain heads will have drastic consequences for the effective operation of the fountain heads.

KOI PONDS

These gems need clear and healthy water as they are prone to disease, but they are also major polluters, enjoy stirring everything up, and are substantial eaters.

Koi ponds must be fitted with excellent mechanical/biological filter systems, connected to adequate UV-C capacity to be able to eliminate algae as well as parasites. As these systems operate 24/7, Koi ponds are built using the 'low-energy' concept.

ORNAMENTAL PONDS

An ornamental pond is the most traditional and timeless water feature, often organically designed and enhanced with pond plants, goldfish or ides as eye-catchers. The water plants purify the pond, micro-organisms attach themselves to the bottom or the sides and the substrate at the bottom, if present.

In these ponds filtration mainly provides support to maintain the water quality and slightly improve the water clarity in the pond, which can become green in the summer when it heats up.

REFLECTING PONDS

These ponds are usually very shallow, and do not contain any fish or plants. They are stunning in aesthetic terms, but warm up very quickly, and the water soon loses its clarity because floating algae have free reign.

A pressure filter system with a built-in UV-C clarifier works brilliantly in this case, water supply and drainage is routed through wall ducts, out of sight as much as possible.

WATER PURIFICATION

A UV-C lamp is a safe and effective device for dealing with an excess growth of micro-organisms, such as floating algae, which can multiply incredibly quickly and turn pond water green. Excessive amounts of micro-organisms can also affect the health of people and animals.

The device must be selected with the right lamp power, in accordance with the desired flow capacity.

UV-C technology

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Calculation of hourly output for filter systems, pumps and UV-C clarifiers

It's all in the detail: optimum water management is achieved with systems that are perfectly tuned to each other. Something that has been fitted improperly is difficult to change later.

Every pond type has its own specific fitting rules, as this is directly linked to the required water quality. Choosing the right filter method and technology determines whether the desired result is achieved: clear and healthy water for both people and animals.

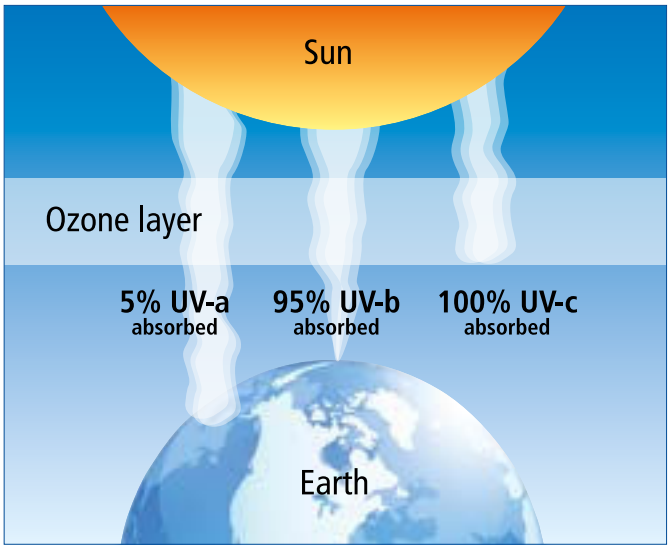
The table indicates the recirculation time of the various pond types: the time it takes in hours to pump the full content of the pond around, thus determining the entire system technology.

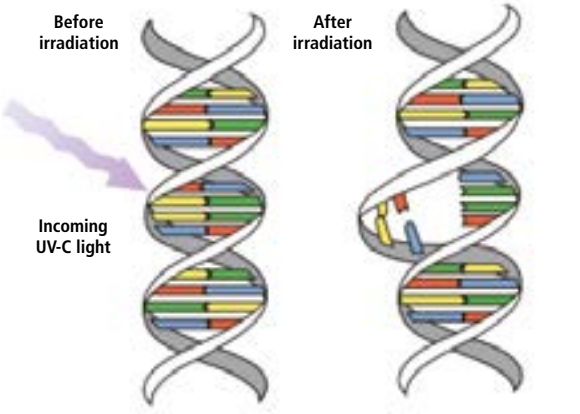
Pond type	Recirculation time of pond volume
Koi pond (depending on number of fish)	1x in 1 - 2 hours
Fish pond (not Koi) with vegetation	1x in 3 hours
Pond without plants or fish	1x in 4 hours
Swimming pond (depending on size)	1x in 5 - 8 hours

How UV-C works

UV-C, a natural product

UV radiation, caused by the sun's rays shining down on the earth, has a spectrum of UV-A, UV-B and UV-C. UV-C is blocked by the ozone layer, however. This type of radiation is harmful to both people and animals upon direct contact.





UV-C radiation damages a micro-organism's DNA molecules so that it can no longer multiply.

UV-C is electromagnetic radiation, which penetrates the cell wall of micro-organisms and damages their nucleus. This destroys their ability to multiply, so they die and have to be filtered out of the water.

UV-C is extremely safe, as long as it is incorporated in a cabinet and neither people nor animals come into direct contact with it. If the housing is made of plastic it must be UV-C resistant (ASA plastic). Non-resistant plastic can deteriorate over time.

The radiation range is quite short, which is why UV-C lamps are built into suitable housings, which is related to the flow capacity. The radiation can only destroy organisms that are carried past the lamp by the device.

Green water due to floating algae.

Clear water thanks to a good UV-C filter.

UV-C for pond and swimming water

UV-C is primarily used to deal with floating algae, which multiply at lightning speed when the water warms up and causes green, soupy water. The strength of the radiation does not have to be particularly high to destroy this micro-organism.

Useful organisms, such as nitrifying bacteria, do not float in the water, but attach themselves to carriers, such as the lining, plants and filter filling. String algae also attach themselves to carriers and do not end up in the device.

When it comes to dealing with a wider range of organisms, for example parasites that can cause disease in humans and animals, more powerful irradiation is needed. This has been scientifically determined.

The amount of water flowing through a device in combination with the lamp output determines the irradiation time of an organism and thus the effectiveness of its elimination. This is also known as dosage, which is indicated in mJ/cm^2.

VarioClean®-S UV-c clarifiers

VarioClean S UV-c clarifiers for eliminating floating algae, which cause the pond water to turn green.

Type	Max. flow capacity l/h	Lamppower consumption W	Voltage V/Hz	Max. pressure Bar	Connections In/out hose (Ø mm)	L x W x H (mm)	Art. no.
VarioClean® S-18	3000	18	230/50	1	20/25/32/40	340 x 160 x 110	202011
VarioClean® S-36	6000	36	230/50	1	20/25/32/40	550 x 160 x 110	202012

- Integrated transformer with lamp holder, quick connection system.
- UV-C lamp: removable without system stop.
- Water flows in a spiral around the UV-C lamp, increasing the contact time.
- Reflective inner wall for improved reflection of radiation.
- Can be fitted horizontally and vertically.

VarioClean® S-18

VarioClean® S-36

Type	Basin content m³		
	water only	fish & plants	plants only
VarioClean® S-18	6	9	15
VarioClean® S-36	12	18	27

Scope of delivery

- VarioClean® S UV-C clarifier with a 5-metre cable.
- Hose couplings.

Materials

- Housing in rigid ASA plastic, resistant to UV-C radiation.

Construction and safety

- The UV-C clarifiers fully comply with European regulations. CE

Warranty

- Two-year warranty in accordance with the General Conditions.

Water runs around the lamp in a spiral

Replacement lamp and quartz glass for VarioClean® S UV-C clarifiers

Type	Brand	Art. no.
18 W PL replacement lamp	AUGA	992036
36 W PL replacement lamp	AUGA	992037
18 W quartz glass	AUGA	992055
36 W quartz glass	AUGA	992056

VarioClean® Pro UV-c clarifiers

VarioClean® PRO UV-C clarifiers to eliminate floating algae and combat micro-organisms that can affect the health of humans and animals if found in excessive quantities in ponds and swimming ponds.

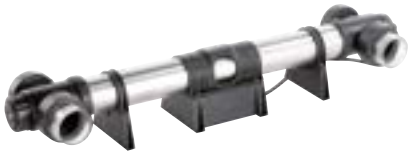
Type	Max. flow capacity l/h	Lamp-power consumption W	Voltage V/Hz	Max. pressure Bar	Connections (Ø mm)		L x W x H (mm)	Art. no.
					In/out + hose	In/out adhesive		
VarioClean® Pro 36	10,000	36	230/50	1	1½" ø 50 - 40 - 32	ø 75 - 63 - 50	520 x 180 x 150	202036
VarioClean® Pro 55	15,000	55	230/50	1	1½" ø 50 - 40 - 32	ø 75 - 63 - 50	640 x 180 x 150	202055
VarioClean® Pro 75	20,000	75	230/50	1	1½" ø 50 - 40 - 32	ø 75 - 63 - 50	960 x 180 x 150	202075

- 360° rotatable connections.
- Stainless steel 316L pipe, thick-walled, Ø 80 mm.
- VarioClean®Pro 75 equipped with Philips UV-C lamp.
- Can be fitted horizontally and vertically.
- Extremely low friction loss.

VarioClean® Pro 36

VarioClean® Pro 55

VarioClean® Pro 75



Type	Basin content m³				
	water only	swimming pond	fish only	fish & plants	plants only
VarioClean® Pro 36	12	12	12	18	27
VarioClean® Pro 55	18	18	18	28	42
VarioClean® Pro 75	25	25	25	40	60

Scope of delivery

- VarioClean® Pro UV-C clarifier with a 5-metre cable.
- Hose and solvent couplings.
- Transformer, cast into the base.

CLICK HERE FOR VIDEO IMPRESSION

Materials

- Stainless steel 316L lamp housing.
- Housing inlet and outlet in rigid ASA plastic, resistant to UV-C radiation.

Construction and safety

- The UV-C clarifiers fully comply with European guidelines. CE

Warranty

- Two-year warranty in accordance with the General Conditions.

Assembly instructions

- The lamp housing must remain filled with water during operation to ensure proper cooling of the lamp and ensure its longevity.

Revolving inlets and outlets

Replacement lamp and quartz glass for VarioClean® Pro UV-C clarifiers

Type	Brand	Art. no.
36 W PL replacement lamp	AUGA	992037
55 W PL replacement lamp	AUGA	992038
75 W PL replacement lamp	Philips	992039
36 W quartz glass	AUGA	992043
55 W quartz glass	AUGA	992044
75 W quartz glass	AUGA	992045

VarioClean® Pro UV-c clarifiers

VarioClean® Pro-X UV-C clarifiers with large flow capacities - are used to eliminate floating algae and intensively combat micro-organisms that can affect the health of humans and animals if they are found in excessive amounts.

Type	Flow capacity m³/h at:			Lamp power consumption W	Voltage V/Hz	Max. pressure Bar	Total height mm	Connection M thread	Art. no.
	8 mJ/cm²	16 mJ/cm²	25 mJ/cm²						
VarioClean® Pro-X 120	40	17	11	2 x 60	230/50	2	642	3"	202020
VarioClean® Pro-X 190	50	25	16	2 x 95	230/50	2	642	3"	202021
VarioClean® Pro-X 285	75	43	28	3 x 95	230/50	2	642	3"	202022

Dosage 8 mJ/cm² ample for control of floating algae in all pond types.
Dosage 16 mJ/cm² a wide range of micro-organisms are eradicated, especially for Koi ponds.
Dosage 25 mJ/cm² guidelines for disinfecting swimming pools, also applies to swimming ponds.

- 3"external thread connections.
- Thick-walled housing in stainless steel 316 L.
- Electronic transformer, protected against over/under voltage.
- Removable cabinet, suitable for wall fitting, IP 65.
- Operating switch.
- Lamp can be removed without system stop.

VarioClean® Pro-X 120

VarioClean® Pro-X 190

VarioClean® Pro-X 285

Scope of delivery

- VarioClean® Pro-X UV-C clarifier with a 3-metre cable.
- PLL H-O lamps.
- Removable electrical panel, suitable for wall fitting.
- Operating switch.
- Fuse holder with glass fuse.

Materials

- Stainless steel 316 L housing.
- Plastic electrical box, IP 65.

Construction and safety

- The UV-C clarifiers fully comply with European guidelines. CE

Warranty

- Three-year warranty in accordance with the General Conditions.

Assembly instructions

- The lamp housing must remain filled with water during operation to ensure proper cooling of the lamp and ensure its longevity.

VarioClean® Pro UV-c clarifiers

It's all in the detail

- Glass fuse protects the unit against excess voltage.
- Splash-proof operating switch.
- System bleeding nipple.
- Double-nut fittings: lamp can be replaced without stopping the system.
- Removable electrical panel, suitable for wall mounting.
- 3" connections, prevent friction loss.
- Micro contacts switch lamps off when lamps are removed.
- Stainless steel 316 thick-walled housing.

Replacement lamp and quartz glass for VarioClean ®Pro-X UV-C clarifiers

Type	Brand	Art. no.
60 W PL replacement lamp	AUGA	992019
95 W PL replacement lamp	AUGA	992020
60/95 W quartz glass	AUGA	992008

3-part couplings for VarioClean® Pro-X

Optional: 3-part female/solvent couplings.

Type	Connection int.thr. x mm	Art. no.
3-part female/solvent union, each	3"x 90	904107

3-part PVC coupling

Mechanical and biological purification

A water feature can be kept free of dirt with a mechanical filter system, which does not filter the dissolved organic substances that are handled by biological processes; micro-organisms attach themselves to the filter material, walls, plants and form a biomass that feeds on the dissolved organic substances.

Filter technology

Biological purification is necessary to maintain the biological balance of the water for life in the pond, water plants make a significant contribution to biological purification in a pond. Mechanical purification is used in water features without any fish or plants or as pre-filtration for biological filter systems.

AUGA AmazingWater

WATER PURIFICATION

Pressure filters

Pressure filters are easy to operate, closed filter systems used in small to medium-sized ponds, in which the water can be transported upwards after the filter to, for example, a waterfall.

The filter material can be periodically cleaned by hand with the practical, built-in cleaning system.

Dirt is discharged with the rinse water to the sewer or the garden.

- Mechanical and limited biological purification.
- Flow capacity up to 15 m^3 per hour.
- Programme: manual and electric cleaning system.

Read more on pages 18 to 25.

Skimmers

Most contamination is blown into the pond, and can be immediately collected by a skimmer and transported to a filter, before it sinks to the bottom.

- Mechanical purification.
- Flow capacity up to 25 m^3 per hour.
- Programme: Floating skimmers, wall skimmers, tube skimmers, marsh skimmers.

Read more on pages 26 to 32.

Helophyte filters

A helophyte filter is a plant filter that operates as a completely biological filter system and is mainly used to purify swimming ponds.

Water plants and bacteria form the biotope and purify the water with the help of filter material such as lava, substrate and zeolite, a pump provides circulation.

A helophyte filter is a structural system which is built on site.

- Mechanical and biological purification.
- Flow capacity depends on the dimensions.

Read more on pages 34 to 36.

Phosphate reduction

Phosphates are a food source for plants, but excessive phosphate levels lead to extreme algae growth and are avoided with phosphate binders.

Read more on pages 37 to 40.

Clean & Easy Pond Vacuum Cleaner

Compact and mobile pond vacuum cleaner, for the removal of floating and soil contamination.

Read more on page 41.

Equipment pits

These fully assembled equipment pits contain all required components and are fully compatible with the relevant pond type.

- Pump chambers.
- UV-C pits.
- Filter chambers.
- Combi chambers.

Read more on pages 42 to 57.

Everything you want to know about a pressure filter

A crystal-clear pond: that is obviously what everyone wants. A pressure filter helps to achieve this. With a pressure filter, you provide clean water as well as fight algae with one system.

What is a pressure filter

A pressure filter is an easy-to-use, closed pond filtration system. Pressure filters are suitable for all types of ponds. A pressure filter keeps the water in a pond clean and clear.

A pressure filter is a completely closed unit. Water flowing through the filter cannot overflow. This is the case with open filter systems such as bank filters or multi-chamber filters.

How a pressure filter works

Because it is a closed system, the pump pressure is maintained, allowing water to pass through a pipe after the filter. The water can even be fed upwards to a limited extent to a waterfall, for example. This is a big advantage over open filter systems, as water flows back down there under free fall. In addition, a pressure filter can be partially buried or mounted in a filter well in the most suitable location near a pond. This is another big advantage, as it allows a pressure filter to be placed out of sight!

AUGA pressure filters purify pond water and fight algae

AUGA pressure filters have a built-in UV-C clarifier which fights green floating algae and filters it out immediately with the built-in filter set.

Cleaning a pressure filter

- **Manual cleaning**
  The starter series VarioPress pressure filters come with manual cleaning. A simple, easy and cheap system! The filter mats are compressed, causing dirt to be removed with water through the filter's dirt drainage connection.

- **Electric cleaning**
  If you want more comfort as well as greater filter capacity, choose the VarioPress® Pro-E series. It can purify ponds up to 75^{m3} in volume. Cleaning work is reduced to turning over the backwash lever on the filter. This starts the cleaning process electrically, as the E series has a built-in electric motor.

And what about the pressure?

All pressure filters are designed for optimum purification at a low pump pressure and the lowest possible energy consumption. After all, the more pump pressure a pump has to deliver, the more energy is consumed. Because pond filter systems are in operation 24/7 to maintain the biological balance in a pond, you naturally want to avoid unnecessary energy consumption.

Pressure filters are therefore low-pressure filters. Connecting too large pumps, too small pipes or too much discharge head after the filter can cause leakage. This means the filter, pump and application must be well matched. The maximum pressure may be 0.3 Bar, which is the sum of pump pressure and discharge head of water to the highest point, counted from the water level.

The pressure in the filter also rises if the filter set becomes saturated and is not cleaned in good time. The advice is to rinse briefly at least once a week, depending on the degree of contamination.

Pressure filter series VarioPress®® Pro E

The VarioPress® Pro-E series features a large filter set cleaned by the electrically powered **AUTO-CLEAN** system which starts when the cleaning lever is turned. The built-in UV-C lamp can be set to burning hours as desired with the built-in timer at 24-12-0 hours.

Type	Pond content m³			UV-C W	Connections			Tank volume	Dimensions ø x H	Article number
	Water only	With plants and and fish*	Only plants		in/mm	out/mm	inches"	Litres	mm	
VarioPress® Pro E-15	15	10	25	24	32/40	40	3 x 1½	38	385 x 760	201113
VarioPress® Pro E-25	25	13	30	36	40/50	50	3 x 2	50	450 x 560	201114
VarioPress® Pro E-35	35	20	50	55	40/50	50	3 x 2	75	450 x 725	201115
VarioPress® Pro E-55	55	35	60	55	40/50	50	3 x 2	170	600 x 825	201116
VarioPress® Pro E-70	70	40	75	55	40/50	50	3 x 2	300	750 x 890	201117

*) *For use in Koi ponds: obtain advice from the pond specialist/dealer.*

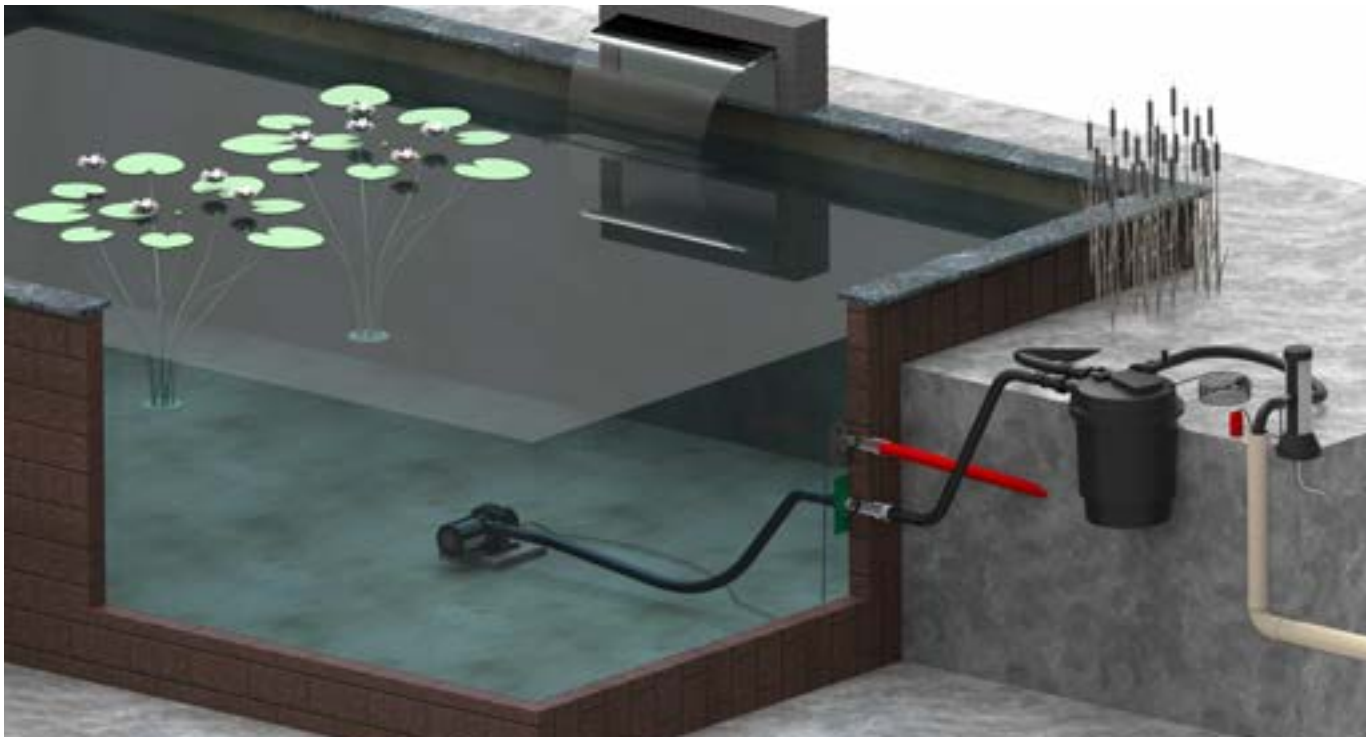
Features

- Double-action filter technology with filter sponge pack and Bio-Cell filter beads.
- Mechanical and biological purification.
- Integrated UV-C lamp with time setting.
- AUTO-CLEAN electrically powered cleaning system.
- Protection class IP 67, maximum protection against moisture.
- Extremely easy to open and periodically maintain.
- Acoustic signal during cleaning and after cleaning.
- 5-metre power cable.
- 3-year warranty in accordance with the general conditions.

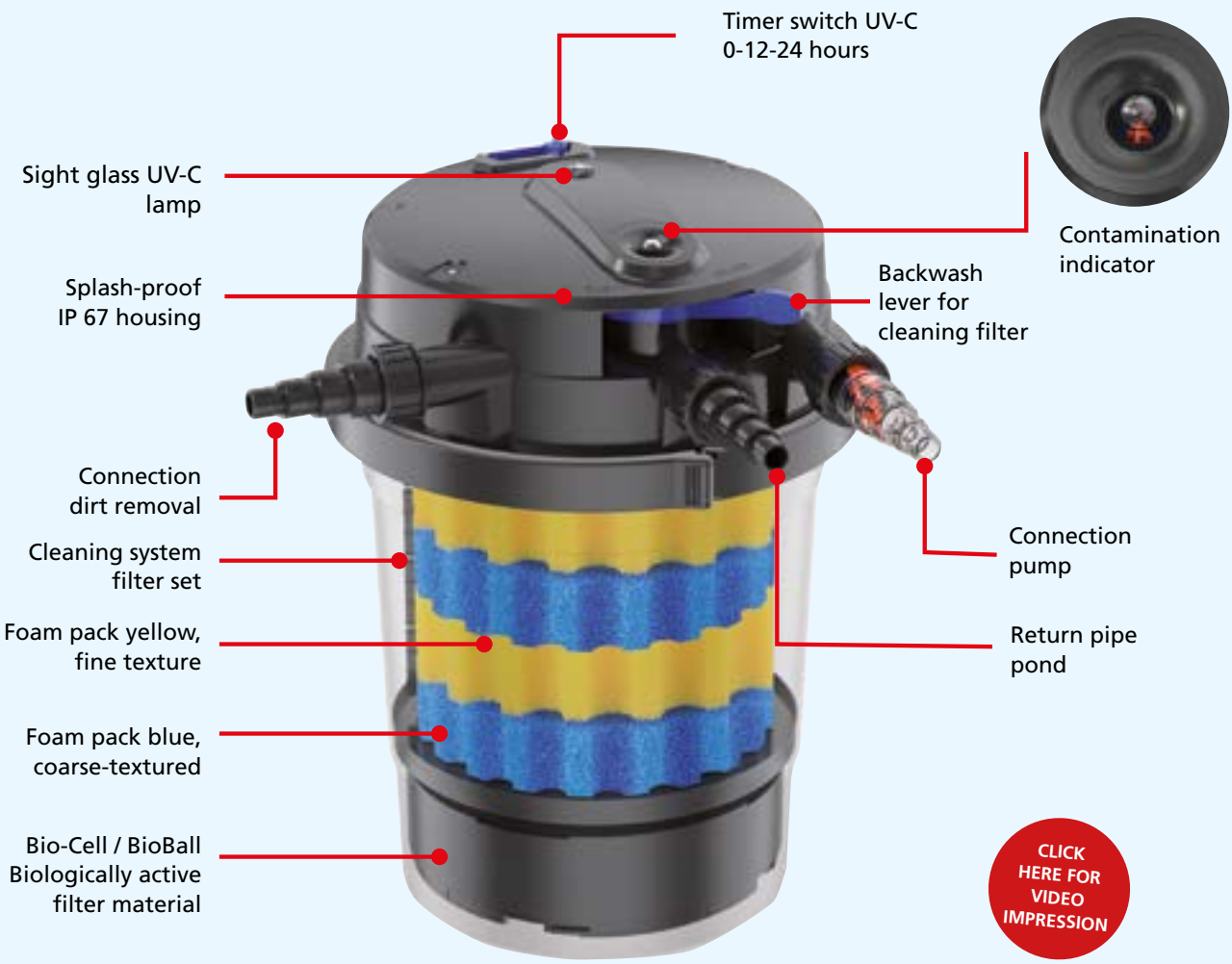
AUTO-CLEAN, electrically powered cleaning system.

Application

The advantages of pressure filters have been proven many times in practice. The fully closed filter system is compact and can be installed practically anywhere, even underwater next to a pond. The filter can be partially buried or fitted in an equipment pit.



VarioPress® Pro E pressure filter



Model: VarioPress® Pro E-15

Strong gearing cleaning system.

All electrical components sealed watertight.

Removing lid separate from filter pack.

Specifications for pressure filter series VarioPress ® Pro E

- **Watertight housing in protection class IP 67.**
  The high protection class ensures the long protection of all built-in electrical components against external moisture.
- **Integrated UV-C lamp with timer.**
  Algae develop mainly in summer. With the timer switch, you switch the UV-C lamp off 12 hours a day or keep it in continuous operation. In spring and autumn, the timer can be set to 12 hours. Less power consumption, lower power costs and a longer lamp life.
- **Optimised drive technology for cleaning the filter set.**
  Convenient back-wash system. The built-in electric motor drives the cleaning system of the filter set. The new drive system relieves forces on the filter set and extends its service life.
- **All electrical components are individually encapsulated in a watertight housing.**
  This effectively eliminates the risk of moisture ingress. The electrical connections are fitted with watertight coupling plugs and are easy to dismantle individually if needed.
- **Filter cover and filter set separately removable.**
  When the lid is removed, the filter set stays in place and is not attached to the lid. Periodic filter maintenance is then made very easy. And the lid is freed because there is no weight on it.
- **Contamination indicator and acoustic signal during cleaning.**
  The built-in contamination indicator shows when the filter needs to be rinsed. During rinsing the filter gives a pulsing signal as a reminder that the cleaning cycle is still running and water is being pumped out of the pond. After rinsing it sounds a continuous signal.
- **Lightly operated rinse lever.**
  The backwash lever requires no force and is easy to operate by anyone.

VarioPress® Pro E-15

VarioPress® Pro E-25

Pond water is pumped through the filter foam pack to the BioCell or BioBall pack. The cleaned water then flows past the UV-C clarifier for elimination of floating algae. The water then flows back to the pond.

Project: Esselink gardeners in De Heurne (NL)

VarioPress® Pro E-35

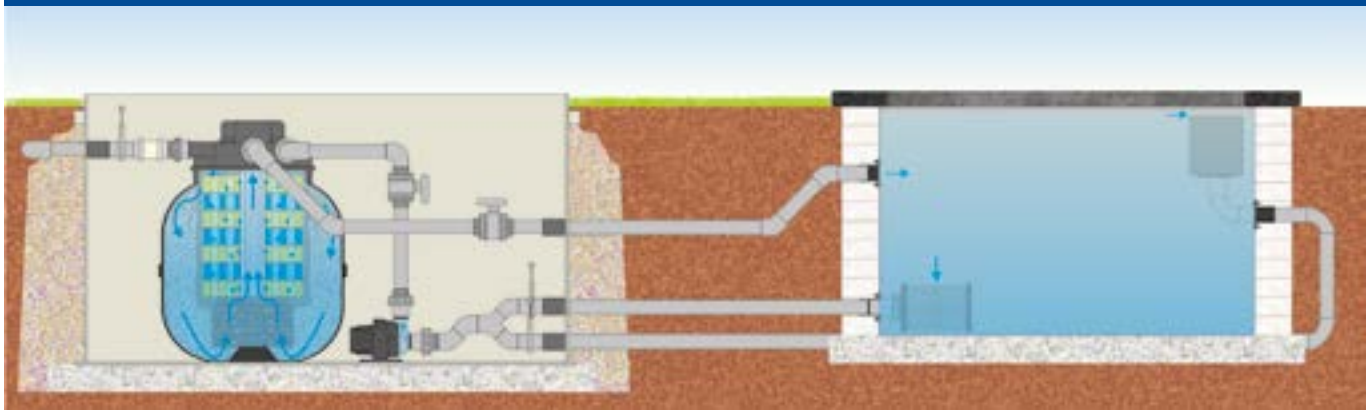
VarioPress® Pro E-55 and E-70

Pond water is pumped through the filter foam pack to the BioCell or BioBall pack. The cleaned water then flows past the UV-C clarifier for elimination of floating algae. The water then flows back to the pond.

VarioPress® Pro E pressure filters

Type	Filter material			Flow capacity m³/h		Recommended pump type
	Foam discs	BioBall	BioCell	Recommended	Max.	
	Total	Total	kg			
						
VarioPress® Pro E-15	7 x ø 260 mm	2 x 30	–	4	9	- AquaFlow® E-10000 - VarioFlow® E-10
VarioPress® Pro E-25	5 x ø 360 mm	–	approx. 0.5	6.5	11	- AquaFlow® E-10000 - VarioFlow® E-10
VarioPress® Pro E-35	7 x ø 360 mm	–	approx. 1.0	10	12	- AquaFlow® E-15000 - VarioFlow® E-20
VarioPress® Pro E-55	7 x ø 360 mm	2 x 30	approx. 5.0	13	14	- AquaFlow® E-20000 - VarioFlow® E-20
VarioPress® Pro E-70	7 x ø 360 mm	2 x 30	approx. 10.0	15	15	AquaFlow E-20000 - VarioFlow® E-20

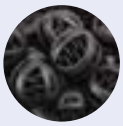
Example of a pressure filter in an equipment pit



Pressure filter series VarioPress®

The VarioPress® starter range with manual cleaning system for the purification of smaller water features with a fairly low fish population, including ornamental ponds and reflecting ponds. The filter set is cleaned by using the rotating handle and reversing the bypass knob to drain the polluted water.

- Mechanical purification.
- Integrated UV-C lamp.
- Manual cleaning system.
- Cleaning indicator.

Type	Filter material		Flow capacity m³/h		Recommended pump type
	Foam discs	BioBalls	Recommended	Max.	
	Total	Total			
					
VarioPress® 7000	4 x ø 260 mm	–	2.5	4.0	- Compact E-4200 - AquaFlow® E-5000
VarioPress® 14000	5 x ø 260 mm	24	3.5	7.0	- AquaFlow® E-5000 - VarioFlow® E-10

Type	Pond content m³			
	Water only	With plants and fish (not Koi)	Plants only	Koi
VarioPress® 7000	7	5	10	–
VarioPress® 14000	14	7	18	–

Type	UV-C W	Cleaning method	Connections		Dimensions Ø x H mm	Tank contents in l	Art. no.
			Hose (Ø mm)	M thread			
VarioPress® 7000	11	Manual	20/25/32/40	3 x 1½"	380 x 410	20	201100
VarioPress® 14000	18	Manual	20/25/32/40	3 x 1½"	380 x 520	25	201101

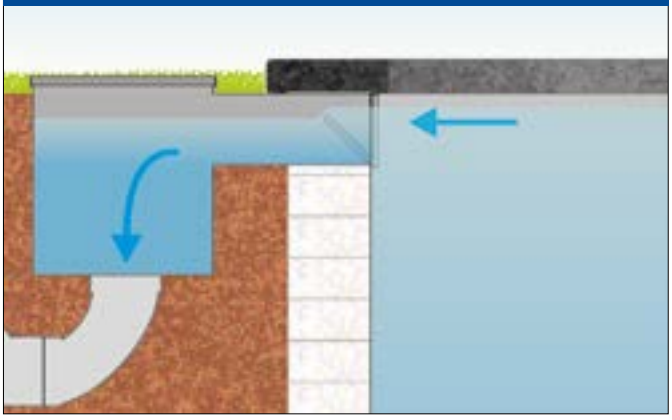
In-wall skimmer 200

The wall skimmer is suitable for installation on liner basins. The skimmer is mounted fully outside the basin so that all engineering elements remain outside the basin and out of sight. Pond edgings can continue uninterrupted with the supplied skimmer neck.

Type	Max. flow capacity l/h	Connection (Ø mm)	L x W x H mm	Art no.
Wall skimmer 200	15,000	110	360 x 320 x 450	207006
Insertion grid				207009
Neck extension			390	207007

Wall skimmer

Built-in wall skimmer underneath edge covering



- Suitable for liner basins.
- The pond edging can be laid in continuous sections.
- The skimmer neck continues underneath the edging.
- Extendible skimmer neck.
- Optional covering grid to stop fish from entering the skimmer.
- Incl. skimmer basket for easy dirt removal.

Wall skimmer filter S-100

Complete assembled wall skimmer filter for swimming ponds, with integrated low-voltage pump.

Type	Flow capacity l/h	Integrated pump	Voltage	Dimensions L x W x H (cm)		Art. no.
				Filter	Skimmer neck	
Wall skimmer filter set S-100	Max 15,000	VarioFlow® LV 20	230 / 12V	58.5 x 40 x 47.5	38 x 14.5 x 10.3	201998

Product description

The wall skimmer is suitable for installation on liner basins. The integrated variable flow pump carries surface dirt in the water quickly and efficiently to the filter, where it is captured in the collection net supplied with the set. The filter can be partially buried. The filter is equipped with an integrated 12V low-voltage pump for installation directly at the pond edge.

- Suitable for liner basins.
- Integrated 12V, variable flow low-voltage pump.
- The skimmer neck continues underneath the edging.

Scope of delivery

- Wall skimmer with skimmer neck.
- VarioFlow® LV 20, 12V low-voltage pump.
- Dirt collection net.
- Separation mat for pump protection.
- Pump coupling for pressure connection.

Wall skimmer filter set S-100

Wall skimmer WXL 200-Pro

Robust wall skimmer with 110 mm tapered and resistance-reducing pipe connection. Visible parts of black plastic construction. Wide/high suction nozzle for improved flow.

Type	Max. flow cap. l/h	Connection diam. mm	Dimensions L x B[1] x H[2] mm	Art. no.
WXL 200-Pro	15,000	110	588 x 435 x 557	207020

[1] = skimmer mouth width. [2] = basic set without expansion.

Design

- Skimmer cover can be raised with spacer ring supplied with unit.
- Fitted with 40-mm overflow connection on both sides.
- Inclusive of temporary cover for skimmer to prevent entry of debris during construction work.
- Inclusive of large skimmer basket.
- Suitable for liner ponds.
- Made of UV-resistant ABS.

Wall skimmer WXL 200-Pro

Spacer ring*to raise the skimmer cover

*) Included in delivery.

Skimmer housing extension with fine filter for wall skimmer WXL 200-Pro

Large filter net with skimmer housing extension for Skimmer WXL 200-Pro.

Type	Overall height skimmer incl. extension (mm)	Art. no.
ES 200	805	207021

Application

A fine-meshed filter is ideal for capturing large amounts of debris in certain seasons - such as leaves and insects - and reducing the load on the biological filter. Regularly cleaning of the filter net is needed to maintain a good water flow.

Only for use with skimmers connected directly to a pump.

Design

- 2-piece skimmer extension.
- Filter net 650 mu.

Skimmer housing extension

Large filter net

Cross-section of skimmer with extension and filter net

Marsh skimmer 300

Skimmers capture a large amount of the debris blown into swimming ponds.

Type	Flow capacity, l/h		Water depth mm above 15,000 l/h		Dimensions Ø H mm	Connections Ø mm	Art. no.
	Min.	Max.	Min.	Max.			
Marsh skimmer 300	9,000	25,000	320	470	490 x 310	75 x 63	ME 2395

Fixed skimmer for installation in swimming pond helophyte filters.

- Large, removable 7.5 litre filter basket.
- Maximum pond surface area of 120 m^2.
- Stable ground plate for fixed installation in substrate bed.
- Stainless steel outer jacket, does not need to be removed in the winter.
- Stainless steel grip for easy removal of filter basket.
- Constructed in conformance with ÖNORM, including amphibian protection.

Marsh skimmer 300

Stainless steel outer and inner wall

Stable ground plate

Large filter basket

Tube skimmer 300

Tube skimmer for mounting on PVC pipe in the pond.

Type	Flow capacity, l/h		Water depth mm above 15,000 l/h		Dimensions Ø H mm	Connections Ø mm	Art. no.
	Min.	Max.	Min.	Max.			
Tube skimmer 300	9,000	18,000[1] / 25,000[2]	390	540	280 x 390	160	ME 2390

Fixed tube skimmer for installation in ponds.

- Large, removable 7.5 litre filter basket.
- Maximum pond surface area of 90 m² ([1] gravity).
- Maximum pond surface area of 120 m² ([2] pump feed).
- Maximum level difference of 150 mm.
- Stable ground plate for fixed installation in substrate bed.
- Stainless steel outer jacket, does not need to be removed in the winter.
- Stainless steel grip for easy removal of filter basket.
- Constructed in conformance with ÖNORM, including amphibian protection.

Tube skimmer 300

Stainless steel grip for filter basket

Large filter basket

Tube skimmer 200

The tube skimmer is mounted on the basin wall using a wall duct and connected to an equipment pit.

Type	Max. flow capacity l/h	Connection (Ø mm)	Minimum water depth mm	Art no.
Tube skimmer 200T	18,000	125	250	ME 2397

Tube skimmer

- Connection to a 125 mm PVC pipe.
- Incl. skimmer basket for easy dirt removal.

Fixed skimmers

Type	Max. flow capacity l/h	Connections		Minimum water depth mm	Art no.
		int.thr.	hose (Ø mm)		
Skimmer 140	3,000	1 "	–	240	ME 2393
Skimmer 200	18,000	1½"	–	430	ME 2396
Skimmer 200 T	18,000	5/4"	40/50	370	ME 2399

- Skimmer 140: Direct connection to the suction side of the pond pump.
- Skimmer 200: Connection to the suction side of a pump through a hose connection.
- Skimmer 200 T: Teleskimmer min. 375 max 900 mm, connection to a pump using a hose connection.
- Incl. skimmer basket for easy dirt removal.

Skimmer 140

Skimmer 200

Teleskimmer skimmer 200

Floating skimmers

Skimmers will catch the great majority of the debris that ends up in a pond or basin from outside, such as leaves, seeds, insects, pollen, etc. Before they sink to the bottom and start to rot, a skimmer will provide the perfect disposal of blown-in debris.

Type	Max. flow capacity l/h	Connections		Minimum water depth mm	Art no.
		int.thr.	hose (Ø mm)		
Floating skimmer 140F	3,000	1 "	19 / 25 / 32	300	ME 2394
Floating skimmer 200F	18,000	5/4"	–	600	ME 2398

- Connection on the suction side of a pond pump via a hose connection.
- Incl. skimmer basket for easy dirt removal.

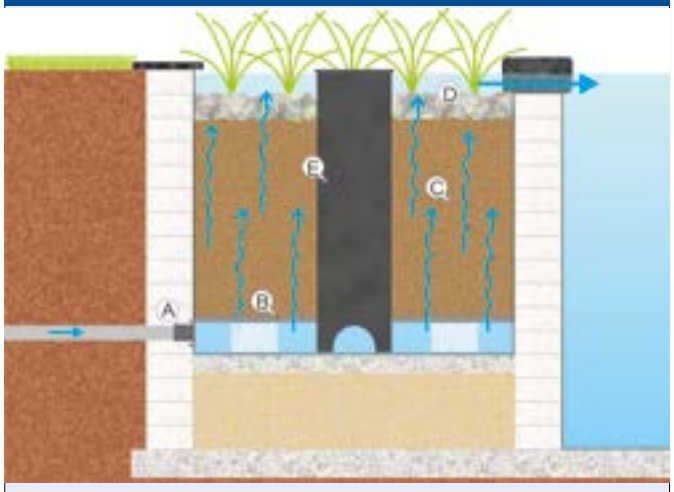
Floating skimmer

Project: Vos Tuinvisie in Epe (NL)

Helophyte filters

A helophyte filter is a plant filter that operates as a completely biological filter system and is used to purify swimming ponds. Water plants and bacteria form the biotope and purify the water with the help of filter material such as lava, substrate and zeolite, a pump provides circulation. There are two filtration principles:

Up-Flow helophyte filter

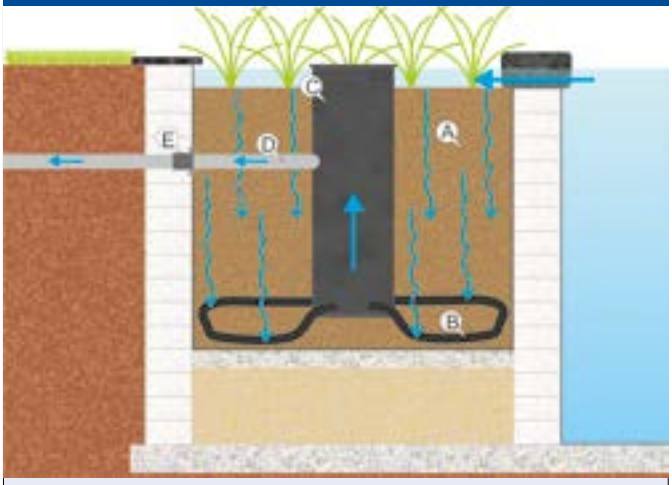


Required materials [1]

A Wall duct.
B Grid with separation mat.
C Clean lava or pond substrate.
D Bio balls or Zeolite.
E Emergency shaft.

[1] *Quantities, diameters and lengths vary by project.*

Down-Flow helophyte filter



Required materials [1]

A Clean lava or pond substrate.
B PE drainage pipe with sleeves.
C Drain collector.
D PVC pipe.
E Wall duct.

[1] *Quantities, diameters and lengths vary by project.*

Up-Flow helophyte filter operation

Unfiltered water flows via the bottom drains and/or skimmers to the equipment pit and is then pumped at the bottom of the filter bed and flows through the filter back into the swimming pond. Any remaining dirt can be periodically pumped out via the dirt remover using a submersible pump.

In this system floating contamination is collected in any skimmers installed and a pre-filter sieve filter, before it can reach the filter bed. The helophyte filter is burdened far less as a result.

Features of Up-Flow filtration

- Excellent contamination management.
- Lower impact on the substrate bed.
- Lower maintenance frequency.
- Pre-filtration possible.
- Higher installation costs.

Down-Flow helophyte filter operation

Unfiltered water flows over the pond overflow into the helophyte filter and sinks. The pump in the equipment pit sucks up the purified water through a perforated drainage hose, which is connected to a drain collector and pumps the water back into the swimming pond.

Dirt collects on the filter bed with the water flow and must be periodically removed.

Down-Flow filtration features

- Lower engineering costs.
- Higher maintenance frequency.
- More bottom contamination.
- Pre-filtration is not possible with this construction.

Helophyte filter application

This filtration system construction can be used for any type of pond, in which large water volumes must be biologically purified. The required dimensions and materials often constitute practical obstacles for achieving this. The combination of a (smaller) helophyte filter with a pre-filter (sieve filter or drum sieve) is a common alternative.

Helophyte filter technology

A helophyte filter is a structural system that is integrated in a pond project; various components are available to assemble it.

Type	Application	Dimensions (cm)		Connection (Ø mm)	Material	Art no.
		H	Ø			
Emergency shaft	Up-Flow	150	31.5	–	PE	209502
Cover emergency shaft	Up-Flow	–	31.5	–	PE	209503
Drain collector	Down-Flow	100	40	8 x 50* suction connection	PE	209500
Cover drain collector	Down-Flow	–	40	–	PE	209501
Grid 120	Up-Flow	120 x 80 x 2.6		–	PE	209034
Separation mat	Up-Flow	100 x 2,500		–	PE	209036
Drainage hose	Down-Flow	5000	5	50	PE	614050
Drainage hose sleeve	Down-Flow	–	5	50	PE	614051

* = Other drain hose connection sizes possible. A pressure connection for the drain collector is customised per order.

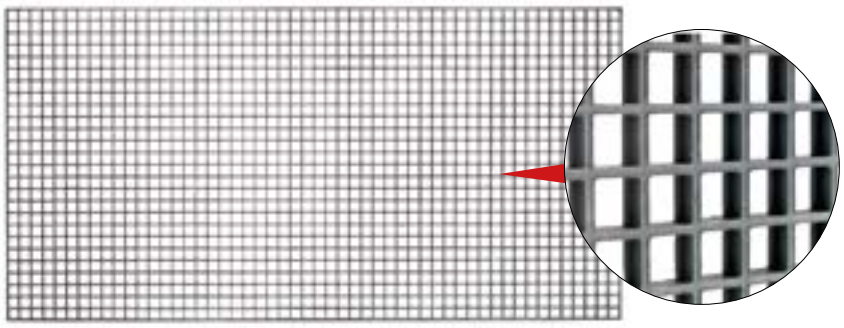
Emergency shaft

Drain collector

Drainage hose

Drainage hose sleeve

Grid



‘Down-Flow’ helophyte filter system

Complete plant filter technology set for swimming ponds.

Type	Application	Dimensions (mm)			Pump type	Voltage	Art. no.
		Drain collector	Connection	Outlet			
DFS 20	Down Flow	1000 x 400	8 x 50	1 x 63	VarioFlow® LV 20	230 / 12V	201996

Application

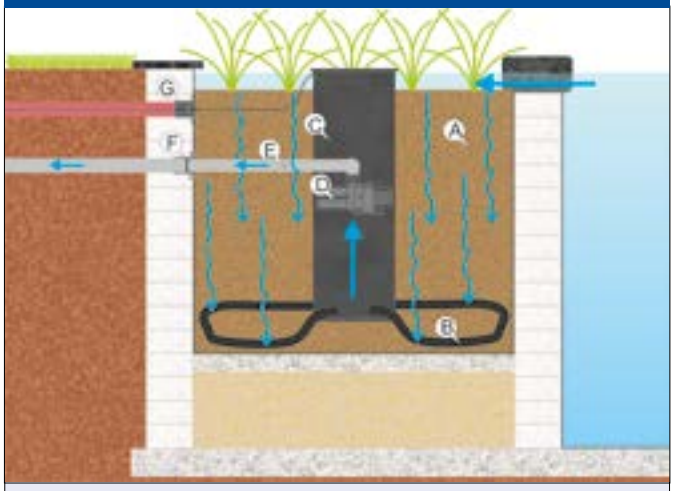
Unfiltered water flows over the pond overflow into the helophyte filter and sinks. The low-voltage pump in the equipment pit draws the purified water through a perforated drainage hose connected to a drain collector, and then returns the water to the swimming pond.

Tip: Mount a UV-C clarifier in the return pipe to obtain really crystal-clear water.

Scope of delivery

- Drain collector, 100 x 40 cm, with 8 50 mm connections.
- Drain collector cover.
- VarioFlow® LV 20 low-voltage pump.
- 1 roll of drainage hose, 50 m.
- 8 sleeves for 50 mm drainage hose.
- Couplings.

Down-Flow helophyte filter



Installation example

A Clean lava or pond substrate.
B PE drainage pipe with sleeves.
C Drain collector.
D 12V safety voltage pump.
E PVC pipe.
F Wall duct.
G Wall duct with cable seal kit.

Drain collector

VarioFlow® LV 20 low-voltage pump

50-metre drainage hose

Drainage hose sleeve

Phospat® phosphate reduction

Filter cartridge to reduce phosphate in ponds, natural pools and basins for fountains, and to support the bio-filter.

Phospat® is a chemical-free absorption cartridge for the simple, fast and irreversible binding of phosphates in filling and pond water, used for ponds and natural swimming pools. Constantly keeping the phosphate level low (<0.035 mg/l) reduces algae growth.

Cartridge design

Vitrosphere® glass beads. *Aktiwa® Phoslamin.* *Vitrosphere® glass beads.*

Vitrosphere® glass beads ensure effective distribution of the water and fix the Aktiwa® Phoslamin in the cartridge.
The Aktiwa® binds the phosphates *1 mg/l $PO4^{-3}$*.

Product features

- Binds nutrients, preventing algae growth.
- Phosphate reduction below 0.035 mg/l.
- For ponds, swimming ponds and natural swimming pools.
- Cartridge construction for quick application.
- For acute and preventive treatment.
- Works with minerals, no chemicals.

Application

- Phospate® cartridges to be installed only in a by-pass pipe, with the specified flow capacity and purified water.
- Phospat® cartridges to be built in with a backwash system.

Phospat® 1 & 3 cartridge

Phospat® 10 & 15 cartridge

Installation example Phospat® 1 cartridge

Type	Flow capacity max. l/h	Basin volume max. m^3	Absorption capacity milligram $PO4^{-3}$	Connection inches	Max. pressure bar	Art. no.
Phospat® 1	1100	50*	90,000	2 x 1"	4	208110
Phospat® 3	3300	150*	270,000	2 x 2"	4	208111
Phospat® 10	6000	450*	900,000	2 x 2"	4	208112
Phospat® 15	6000	600*	1,350,000	2 x 2"	4	208113

** Baseline phosphate level in pond water 1 mg /l $PO4^{3}$.*

! *Only flush the cartridge with clean water without any suspended dirt particles so as to prevent clogging and losses in operation and flow.*

Phospat® Secure

To protect the Phospat® cartridge a Phospat® Secure can be used as a pre-filter. This cartridge is completely filled with glass beads and can be fully backwashed.

Type	Flow capacity max. l / h	Connection inches	Max. pressure bar	Art. no.
Phospat® Secure 1	1100	2 x 1"	4	208120
Phospat® Secure 3	3300	2 x 2"	4	208121

! *Build in with backwashing function.*

Phospat® FF

To reduce the phosphate level in filling water, a Phospat® FF cartridge can be installed when manually filling or topping up or with automatic water replenishment. This cartridge is suitable for ponds, natural pools and basins for fountains.

Type	Flow capacity max. m^3	Basin volume max. m^3	Absorption capacity milligram $PO4^{-3}$	Connection inches	Max. pressure bar	Art. no.
Phospat® FF	90*	30*	90,000	2 x $^3/_4$"	4	208125

** Baseline phosphate level in pond water 1 mg /l $PO4^3$.*

! *Only flush the cartridge with clean water without any suspended dirt particles so as to prevent clogging and losses in operation and flow. This cartridge is suitable for ponds, natural pools and basins for fountains.*

Phospat® Cio

The Phospat® Cio is filled with active carbon and reduces residual chlorine in the filling water. This cartridge can be directly connected to the water supply in the home or garden.

Type	Flow capacity max. l / h	Connection inches	Max. pressure bar	Art. no.
Phospat® Cio	1100	2 x $^3/_4$"	4	208130

! *Build in with backwashing function.*
This cartridge is suitable for ponds, natural pools and basins for fountains.

Phospat® 1 wall bracket

This wall bracket makes it easy to mount a Phospat® 1, Secure 1, FF and Cio on a wall.

Type	L x W x H mm	Art. no.
Phospat® wall bracket	525 x 75 x 75	208135

Phospat® NPF

The Phospat® NPF was developed to reduce the amount of phosphate in ponds, swimming ponds, water play elements and fountains to below the preferred value of 0.035 mg/l, preventing the growth of algae. Phospat® NPF can be placed in both new and existing ponds, around 7 - 15 cm below the surface. It is easy to replace a used cassette without having to take the housing out of the water. The Phospat® NPF is designed to be connected to the suction side of a pump (not included). Only fit a 12V pump in swimming ponds.

Type	Flow capacity max. l / h	Basin volume max. m³	Absorption capacity milligram $PO4^{-3}$	Dimensions ø x H mm	Connection mm	Pressure loss bar / m	Art. no.
Phospat® NPF 1	835	50	90,000	280 x 170	25	< 0.05 / 0.5	208101
Phospat® NPF 2	1670	100	180,000	340 x 270	50	< 0.05 / 0.5	208102

* *Baseline phosphate level in pond water 1 mg / l $PO4^{-3}$. ** With 2 kg Phoslamin filling.*

NPF 1 housing with cassette

NPF 2 housing with cassette

Phospat® NPF Ready

Type	Pump Voltage / Hz	Basin volume max. m³	Absorption capacity milligram $PO4^{-3}$	Dimensions ø x H mm	Connection mm	Pressure loss bar / m	Art. no.
Phospat® Ready	230 V AC / 50	25	45,000	280 x 170	25	< 0.05 / 0.5	208107

The Phospat® NPF READY is a complete starter set. Phospat® NPF with pump and hose. The set is suitable for Koi and standard ponds up to a volume of 25 m³.

Phospat® NPF Ready

Phospat® Acute

Phospat® Acute removes phosphates from the water, which reduces the growth of algae and bacteria. If the pond water has a phosphate level higher than 1 mg/l, we first recommend using Phospat® Acute to bring the phosphate level down below 1 mg/l before installing a Phospat® cartridge.

Type	Contents litres	Manual dosage ltr. / m³	Automatic dosage	Art. no.
Phospat® Acute 1	1	0.2	1 : 10	208105
Phospat® Acute 5	5	0.2	1 : 10	208106

Phospat®Acute works as a precipitation agent.

Phospat® Acute

Hanna Phosphate Meter

Developed as a more accurate alternative for chemical testing kits, the Hanna Checker® HC offers fast, accurate results in four easy steps.

Type	Description	Art. no.
Hanna HI 713	Phosphate meter set	208200
Hanna H173 - 25	Regenta phosphate testing powder	208201

Hanna Phosphate Meter testing set

- Easier and more accurate than chemical test kits.
- Handy pocket size.
- Easy-to-read display.
- Easy to control using a single button.
- Automatic switch off.

Clean & Easy Pond Vacuum Cleaner

Compact and movable pond vacuum cleaner designed to remove floating and bottom contamination.

Type	Suction capacity max. l/h	Max. capacity l/h	Pump motor W	Weight kg	Cable m	Voltage V/Hz	Art. no.
Clean & Easy 1200	8,000	13,000	800	32	10	230/50	ME 6020

Product description

Strong pond vacuum cleaner with suction and transport pump. Suctioned water with contaminants is immediately removed through the built-in transport pump.

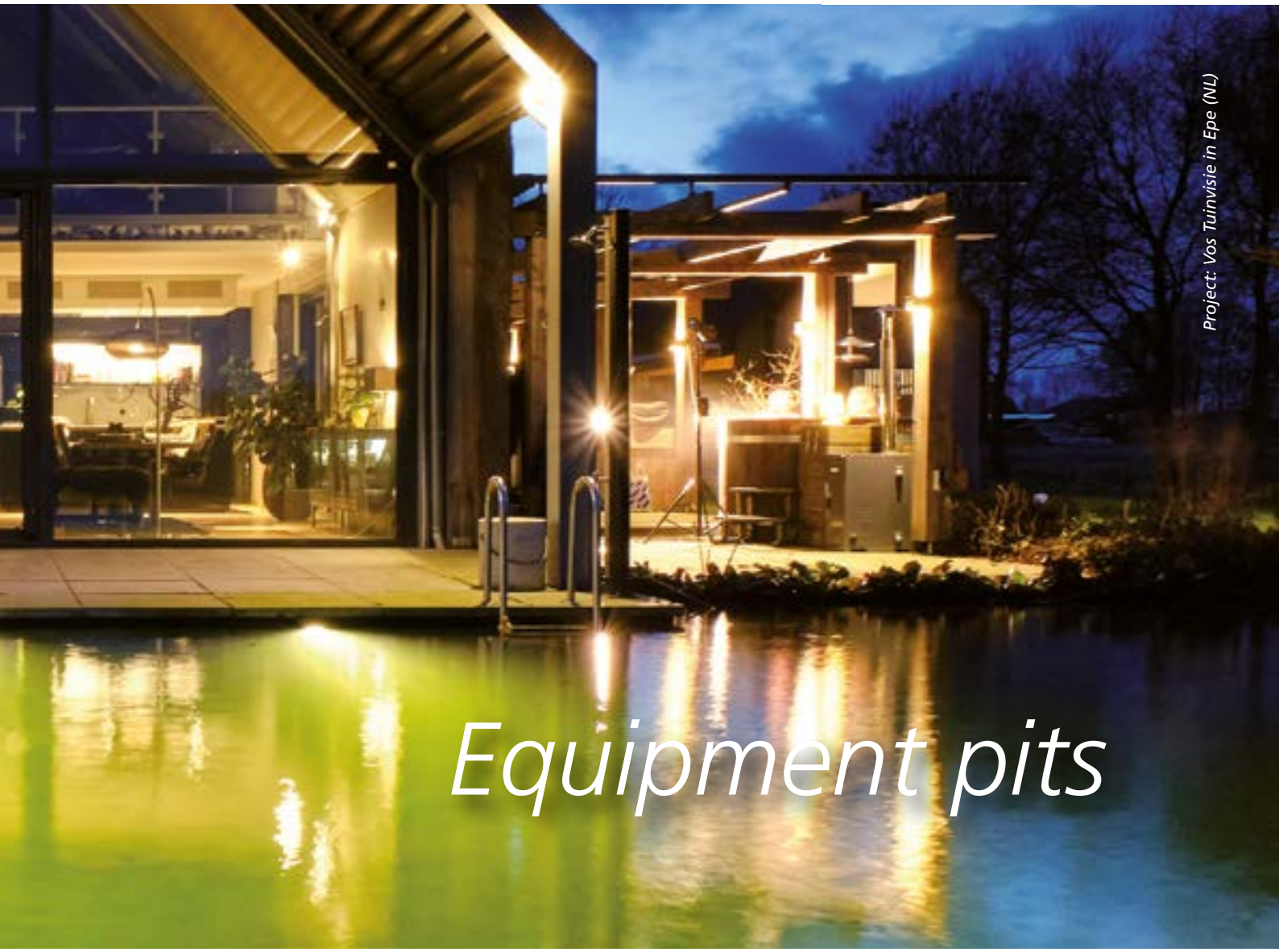
- Suitable for ponds up to 100,000 litres.
- Sucks up to a depth of 2.5 metres.
- Action radius ca. 10 metres.
- Strong turbine and suction pump.
- Incl. bottom suction pump, bristle and nozzle.
- Can be expanded with accessories.

Scope of delivery

- Pond vacuum cleaner.
- 10 m suction hose.
- 10 m drainage hose.
- 4 connectible suction tubes.
- Bottom suction pump with rubber edges.
- Transparent flat nozzle.
- Round nozzle.

Clean & Easy Pond Vacuum Cleaner

Installing ponds including swimming ponds is considerably easier with all-inclusive prepared equipment pits, with all components assembled and fully tailored to the type of pond. Connect pipes and the main flow, carefully dig in the pit, and you're basically ready. The 'all-in' warranty on the entire system is another reason for opting for a complete system.



Project: Vos Tuinvisie in Epe (NL)

Equipment pits

Customised technology

The systems are built in-house, which offers the possibility of aligning an equipment pit to the customer's individual requirements.

AUGA AmazingWater

AquaTec equipment pits with UV-C clarifiers - UV series

Fully assembled equipment pit to combat floating algae.

Type	Flow capacity m³/h		Pumps type	W total	UV-C type	W total	Art. no.
	Max	Recommended					
AquaTec UV-2	17	15	1x VarioFlow® E-20	160	2x VarioClean® Pro 55	110	201904
AquaTec UV-4	34	30	2x VarioFlow® E-20	320	4x VarioClean® Pro 55	220	201905

Design

- Polyester pit with cover.
- Suitable for burying (stabilised sand)*.
- Duct suitable for solvent union.
- Wall socket unit.
- Main switch.
- 230 V / 50 Hz connection voltage.

Application

- Swimming ponds***.

* *In the case of high groundwater levels, precautionary measures must be taken.*
** *A suitable down-flow helophyte filter is required; please get advice from your pond specialist/dealer.*

The UV-series equipment pits are fitted with UV-C clarifiers and high-efficiency pumps.

Type	Dimensions L x W x H mm	Connections (Ø mm)		
		In	Out	Power
AquaTec UV-2	810 x 625 x 760	1 x 63	1 x 63	1x PG 9>16 1 x PG 2.5
AquaTec UV-4	1190 x 790 x 800	2 x 63	2 x 63	1x PG 9>16 1 x PG 2.5

- Electronically adjustable high-efficiency pumps.
- UV-C VarioClean Pro units with large stainless steel housings.

Type	Recommended basin content m³
	Swimming pond
AquaTec UV-2	60
AquaTec UV-4	120

AquaTec equipment pit with UV-C clarifiers - UV series

AquaTec equipment pits with pressure filter - D series

Fully assembled equipment pit for purifying water in ponds without a heavy load.

Type	Flow capacity m³/h		Recommended basin content m³		Connections (Ø mm)				Art. no.
	Max.	Recommended	Water	Plants & fish	In	Out	Dirt	Power	
AquaTec D2	6	6	24	13	1 x 63	1 x 63	1 x 50	1xPG 9>16	201901
AquaTec D4	12	10	40	22	2 x 63	1 x 63	1 x 50	1xPG 9>16	201902
AquaTec D6	16	14	60	40	2 x 63	2 x 63	1 x 50	1xPG 9>16	201903

Design

- Polyester pit and cover with ventilation grids.
- Suitable for burying (stabilised sand)*.
- Gravity set-up.
- Duct suitable for solvent union.
- Wall socket unit.
- Main switch.
- 230 V / 50 Hz connection voltage.

Application

- Reflecting ponds.
- Fish ponds**.
- Fountain ponds.
- Ornamental ponds.
- Swimming ponds***.

* *In the case of high groundwater levels, extra precautionary measures are required.*

** *For use in Koi ponds: obtain advice from the pond specialist/dealer.*

*** *A suitable up-flow helophyte filter is required; please get advice from your pond specialist/dealer.*

The D-series equipment pits are fitted with a pressure filter with built-in UV-C clarifier and a high-efficiency pump suitable for purifying many types of water features without a heavy load.

Type	Pressure filter type	UV-C W	Pump		Dimensions pit mm
			Type	W	
AquaTec D2	VarioPress® Pro E-25	36	AquaFlow E-10000	80	1190 x 790 x 800
AquaTec D4	VarioPress® Pro E-35	55	AquaFlow E-15000	115	1190 x 790 x 800
AquaTec D6	VarioPress® Pro E-55	55	AquaFlow E-20000	175	1650 x 910 x 1000

- Electronically operated cleaning system.
- Mechanical and limited biological filter system.
- Pressure filter with built-in UV-C lamp
- High-efficiency pump, not electronically adjustable.

AquaTec equipment pit with pressure filter - D series

AquaTec equipment pits with sieve filter and pressure filter - BD series

Fully assembled equipment pit with sieve filter and pressure filter.

Type	Flow capacity m³/h		Recommended basin content m³		Connections (Ø mm)				Art. no.
	Max	Recommended	Water	Plants & fish	In	Out	Dirt	Power	
AquaTec BD-4	22	20	60	40	2 x 110	2 x 63	1 x 50	1xPG 9>16	201906
AquaTec BD-6	24	24	80	55	2 x 110	2 x 63	1 x 50	1xPG 9>16	201907

Design

- Plastic PP pit with cover.
- Suitable for burying (stabilised sand)*.
- Gravity set-up.
- Duct suitable for solvent union.
- Wall socket unit.
- Main switch.
- 230 V / 50 Hz connection voltage.

Application

- Reflecting ponds.
- Fish ponds**.
- Fountain ponds.
- Ornamental ponds.
- Swimming ponds.

* *In the case of high groundwater levels, extra precautionary measures are required.*
** *For use in Koi ponds: obtain advice from the pond specialist/dealer.*

The BD-series equipment pits are fitted with a sieve filter as a pre-filter, a pressure filter with built-in UV-C clarifier and a high-efficiency pump suitable for many types of water features with no heavy fish load such as Koi.

Type	Pressure filter + integrated UV-C		Extra UV-C W	Sieve filter type	Pumps		Dimensions pit mm
	Type	W			Type	W	
AquaTec BD-4	VarioPress® Pro E-35	55	36	BZ 30	1x VarioFlow® E-10 1x VarioFlow® E-20	80 160	2100 x 970 x 1000
AquaTec BD-6	VarioPress® Pro E-55	55	55	BZ 30	2x VarioFlow® E-20	320	2100 x 970 x 1000

- Mechanical and limited biological filter system.
- Pressure filter with built-in UV-C lamp.
- Extra UV-C lamp.
- Stainless steel sieve filter clearance 200 > 300 µm.
- Electronically adjustable high-efficiency pumps.

AquaTec equipment pit with sieve filter and pressure filter - BD series

Equipment pits AquaTec® B-20 and B-35 Body

Basic equipment pit fitted with a Sieve, expandable as required in accordance with the overview in this brochure.

Type	Sieve type	Flow capacity m³/h		Dimensions mm	Connections mm	Art. no.
		Max	Recommended			
AquaTec® B-20 Body	BZ 20	22	20	2100 x 580 x 810	2 x 110, 2 x 63 and 1 x 50	201043
AquaTec® B-35 Body	BZ 35	33	30	2100 x 855 x 810	3 x 110, 2 x 63 and 1 x 50	201044

Basic pit

- Body with sieve.

Expansion options

- 1 connection/gate valve set without pump.
- 1 connection/gate valve set with 1 pump.
- 2 connections/gate valve sets without pump.
- 2 connections/gate valve sets with 2 pumps.
- 2 or 4 Submersible UV-C sets with switch box.
- Cover hinge set, gas springs and handle.

Construction

- PP sheet thickness 15 mm.
- High rigidity, outer sides with additional cross beam reinforcement.
- Internally-reinforced cover with vents.

Example of fully-assembled AquaTec B-20

AquaTec equipment pits with sieve filter - B series

Fully assembled equipment pit with sieve filter and UV-C clarifier as pre-purification for filter systems and plant filters.

Type	Sieve type	Flow capacity m³/h		Pumps type	W total	UV-C type	W total	Art. no.
		Max	Recommended					
AquaTec B 30	BZ 30	25	22	1x VarioFlow® E-30	285	1x VarioClean® Pro-X 285	285	201912
AquaTec B 45	BZ 45	45	33	2x VarioFlow® E-20	320	2x VarioClean® Pro-X 190	380	201913

Design

- Plastic PP pit with cover.
- Suitable for burying (stabilised sand)*.
- Gravity set-up.
- Duct suitable for solvent union.
- Main switch.
- 230 V / 50 Hz connection voltage.

Application

- Ornamental ponds**.
- Swimming ponds***.

* *In the case of high groundwater levels, precautionary measures must be taken.*

** *A suitable up-flow helophyte filter is required; please get advice from your pond specialist/dealer.*

The B-series equipment pits are fitted with a sieve filter, UV-C clarifier and high-efficiency pumps.

Type	Sieve duct µm	Dimensions L x W x H mm	Connections (Ø mm)			
			In	Out	Dirt	Power
AquaTec B 30	200 > 300	1680 x 900 x 820	2 x 110	2 x 63	1 x 50	1x PG 9>16 1 x PG 2.5
AquaTec B 45	200 > 300	2030 x 1520 x 820	3 x 110	4 x 63	1 x 50	1x PG 9>16 1 x PG 2.5

- Mechanical pre-purification system.
- Electronically adjustable high-efficiency pumps.
- UV-C VarioClean® Pro-X unit with 2 or 3 UV-C lamps.

Type	Recommended basin content m³			
	Water only	Swimming pond	Plants & fish	Koi
B 30	100	110	65	40
B 45	150	165	100	60

AquaTec equipment pit with sieve filter - B series

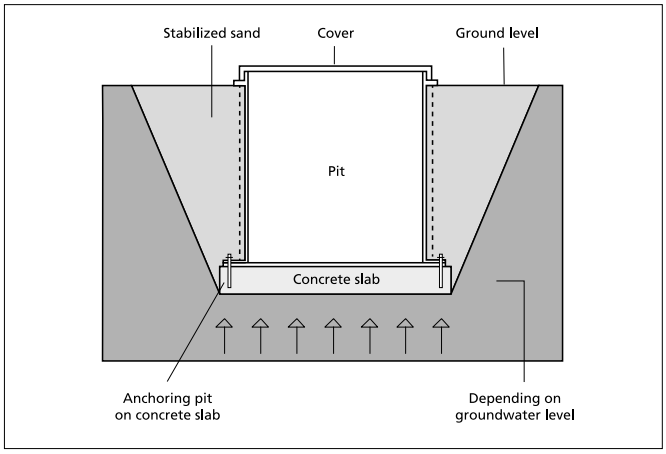
Complete equipment pits

Why choose a completely assembled AUGA equipment pit?

While it may seems easy and even cheaper to build an equipment pit yourself, there are plenty of reasons not to do it yourself.

The advantages of a fully assembled equipment pit

- All built-in technology will be calculated and coordinated on the relevant project.
- The system is calculated for the lowest possible power consumption.
- Voltage-free fitting of devices and pipes with flexible couplings.
- An equipment pit meets legal regulations for use at swimming ponds.
- Functional test and water-tightness check prior to delivery.



Technical and water-tightness guarantee.

All AUGA built-in devices are provided with a 3-year warranty against defects in material and workmanship. If (by customer request) other devices are used, the supplier's warranty terms apply. Pits are delivered watertight; each pit is pressure-sealed to detect any leaks.

Technology guidance

We deliberate and work with you from the initial design to the completion of the project. We thus guarantee an optimal result and proper functioning of the systems supplied by us.

It is therefore in everyone's interest to be involved in the designing of ponds, swimming ponds and other water features at an early stage.

After-sales service

AUGA has its own service department which can be contacted should a problem occur with a delivered equipment pit.

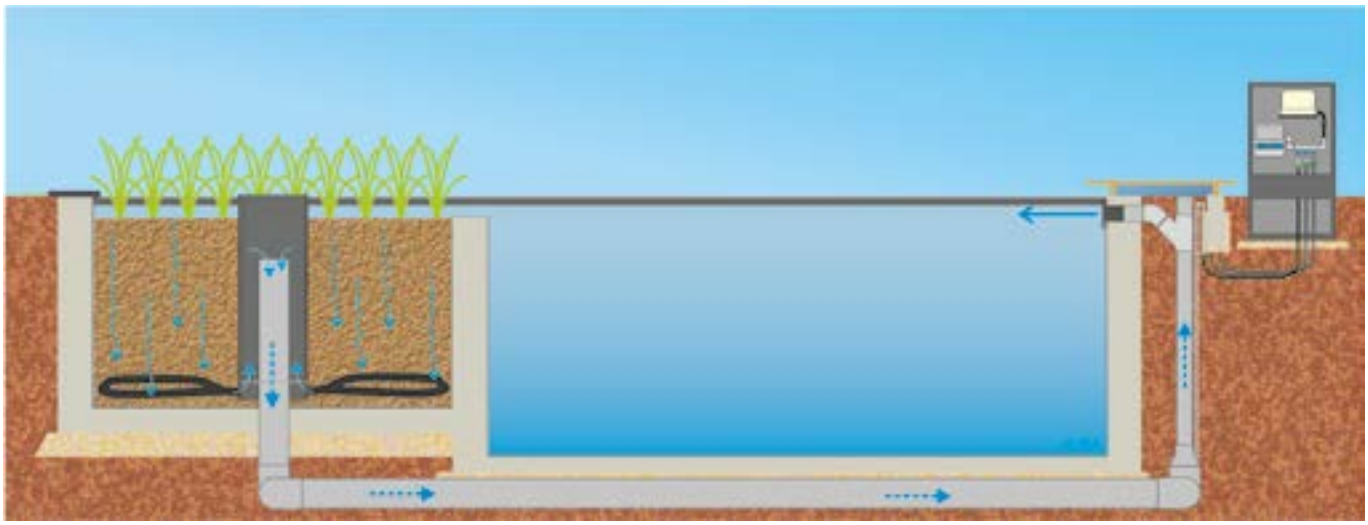
Special construction

We supply series-built and customer-specific equipment pits. Common adaptations are:

- Hinged lid with gas springs.
- Dry-running protection for UV-C and/or pumps.
- Anchoring system for fixing to concrete foundation (if required).
- Air pump for powering a helophyte filter.
- Control box for underwater lighting.
- Custom pit sizes.

Technology of helophyte filters with O²-lift system

Airlift system for efficient water circulation in swimming ponds.



Pumps are always needed to continually circulate (swimming) pond water through a biological filter.

Even though pond pumps now in use are very efficient and use little energy, efficiency can still be improved further with an O²-lift system.

Operating principle of the O²-lift

Air rather than a mechanical pump is used to transport water. An efficient air pump feeds air into the O²-lift (Airlift pipe) that injects the air into the water which raises it to the required height. This unit consumes much less power than a water pump. Air pumps are suitable for use in this application, as resistance and head do not play a role in O²- lift systems. Moreover, the purification process is boosted by the oxygen in the air injected into the water.

Saving energy with an O²-lift

3 airlift pipes used in combination with a NITTO air pump LA-60 B installed in a (swimming) pond can transport more than 20 m³ of water per hour. This pump consumes 67 W per hour. A comparable pond pump consumes an average 175 W per hour.

This difference in power consumption amounts to 72 kW per month, or more than 800 kW a year, equivalent to a saving of between €300 and €400 a year!

Technology of helophyte filters with O²-lift system

More benefits of O² lift

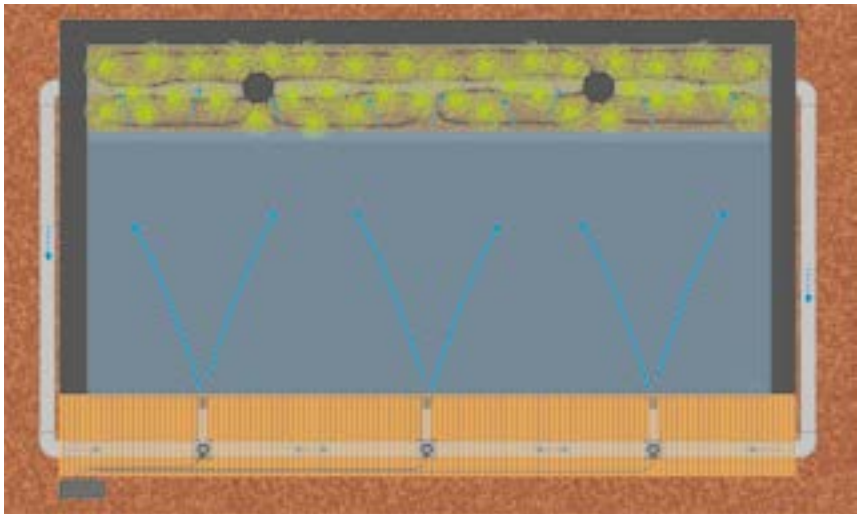
- The air pump does not come into contact with pond water, which eliminates the risk of debris getting into the pump.
- Air pumps, in contrast to pond pumps, do not need to be installed below water level, which makes them perfect for installation in an installation column placed in any location.
- Air pumps do not come into contact with water and, unlike 230V pond pumps, do not need a ground connection.
- The Airlift pipe is made of stainless steel. Resistance loss is minimised.
- The Airlift pipe can be cleaned in a trice.

The O²-lift is part of the complete Air-Eco system

Airlift systems are already in use in the pond market. AUGA has further developed and optimised the technology for Down-Flow swimming pond applications.

Air-Eco systems are used in the installation of Down-Flow swimming ponds. The system consists of:

- O²-lift, each pipe raises 7-8 m3 of water per hour.
- Installation column with integral air pump and air distribution station.
- Drain-collector, the system that allows purified water in the plant filter to pass through a drain hose to the O²-lift.
- Option: automatic water replenishment to maintain the water level.
- Technical back-up provided by our project team.



The illustration shows how 3 Airlift pipes circulate the water in a down-flow swimming pond. 3 Airlift pipes in combination with a 67 W NITTO air pump transport about 20 m³ water per hour.

Example of installation column

Installation column for the operation of 3 Airlift pipes. Simple technology, neatly housed in a steel, lockable outdoor cabinet that can be placed in any required location.

Biological swimming pool Up-Flow

- No chlorine.
- Clear and healthy water.
- Low maintenance.
- Mechanical/biological purification.
- Larger pool area.
- Smaller filter area.
- Optimal circulation.

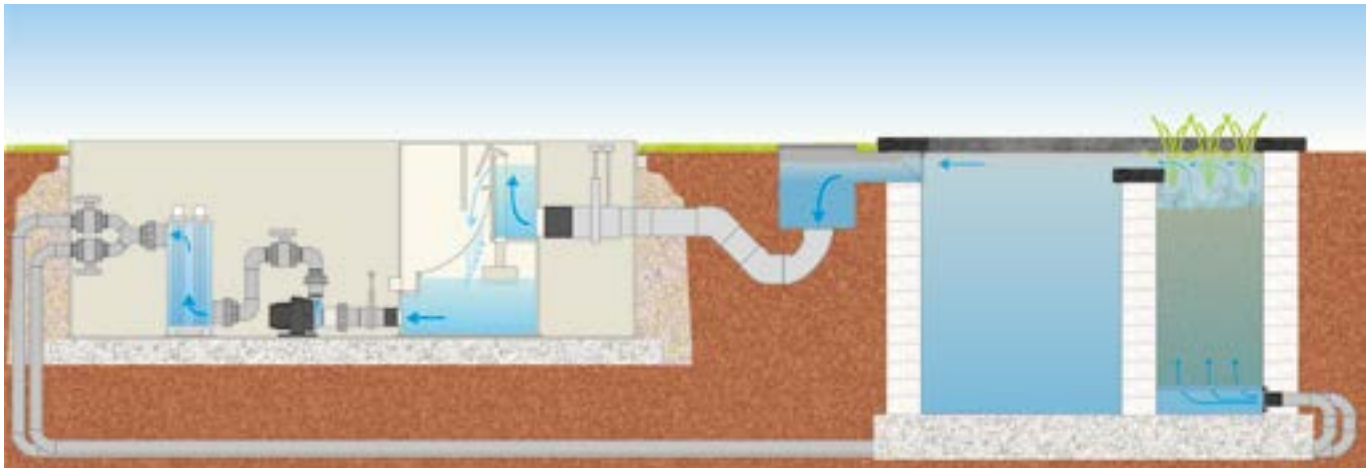
Swimming in clear and clean water without chemicals and chlorine and requiring less maintenance: the Up-Flow system is the most efficient filter process for a biological swimming pool.

Branches, leaves and dust make up to 80% of blown-in, floating debris. Wall skimmers carry this debris to the filter along with the water flow before it can sink. Soil drains are unnecessary in most cases.

How Up-Flow works

The wall skimmer transports floating debris with inflowing water to the sieve filter in the equipment pit, where debris is separated from water. The pond pump behind the sieve filter then pumps the pre-purified water into the helophyte filter through the filter bed.

Bacteria and aquatic plants provide biological final purification, and the purified water flows back into the swimming pond. That's how easy the Up-Flow circulation and purification system works! A UV-C clarifier is a good option to always be assured of clear water.



Biological swimming pond Down Flow

- No chlorine.
- Clear and healthy water.
- Low maintenance.
- Complete biological purification.
- Little use of technology.
- Low installation costs.

The most naturally purified swimming pool! Purification is left entirely to biological processes, the pond pump being the only technology necessary.

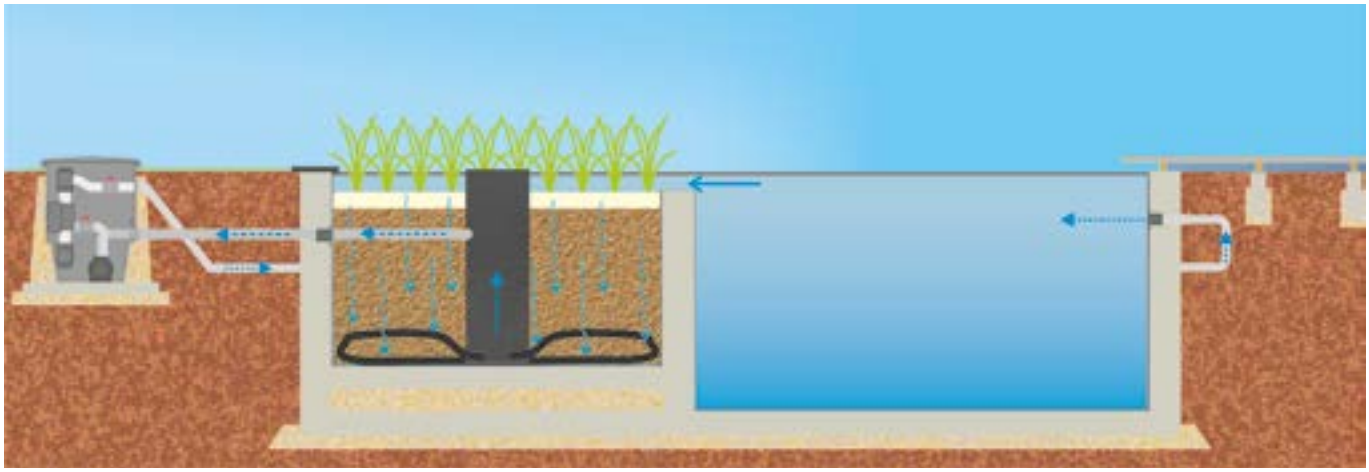
A sleekly shaped pool with clear and clean swimming water, part of which is set up as a helophyte filter. Nature mostly does the work here.

How Down-Flow works

The pond pump provides circulation and moves floating debris into the helophyte filter and settles. Aquatic plants, lava and bacteria carry out the natural purification process, which is boosted by aeration. The purified water is pumped back into the pond via injectors.

The cost of technology is low with this system but, on the other hand, the helophyte filter must be somewhat larger to ensure good purification.

One area of concern is maintenance, which does take a bit more time. With the installation of a UV-C clarifier, clear water is always ensured.



Reflecting ponds

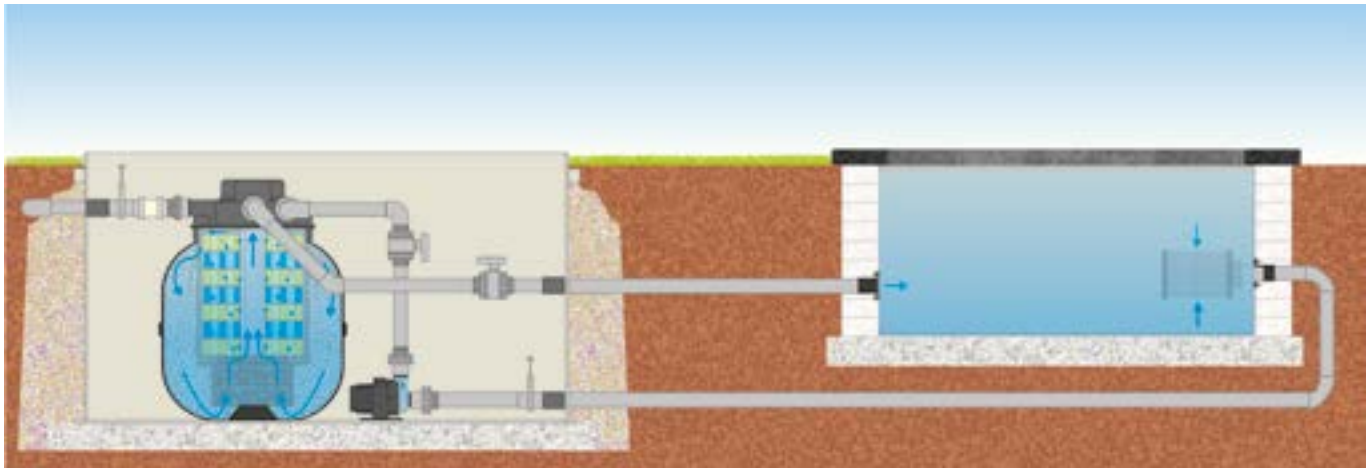
- Mirror-smooth water surface.
- Clear water.
- Formal design.
- Beautiful water object.
- Limited installation costs.

Minimalism elevated to water art, in which the surroundings reflect beautifully in the glass-like water surface — that is the definition of a reflecting pond.

The interplay between the practically still water and the formal design make a beautiful silent object in gardens and are an eye-catcher at commercial buildings.

Clear water is the prerequisite

Debris and green water from warming water disrupt the effect of a reflecting pond, which should just be crystal clear.
A pressure filter with the right UV-C clarifier is the best solution. Soil waste that still remains is easily removed with a pond vacuum cleaner.



Natural pond

- Organic design.
- Flora and fauna life.
- Limited technology.
- Low maintenance.
- Fits any garden.
- Low acquisition cost.

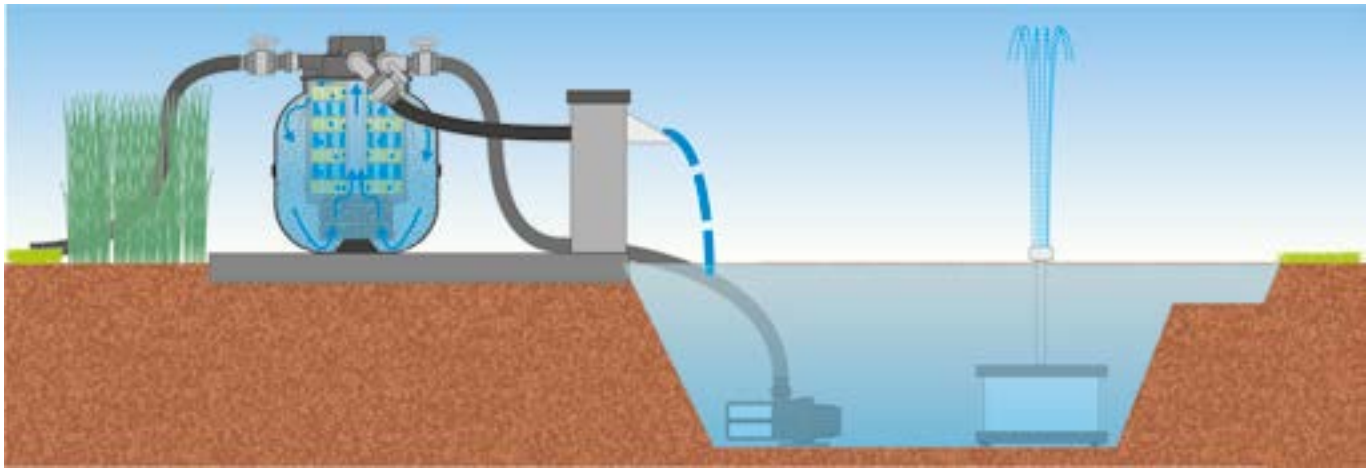
Back to nature: flora, fauna and design are decisive in this pond type.

A garden pond with plenty of water plants for natural purification which is also the ideal habitat for insects, birds, fish and other aquatic animals.

Water ecology in your own garden is enjoying renewed interest, with nature doing the purifying work. Technology is not a must, but to always be assured of clear as well as clean water, an AUGA pressure filter with a built-in UV-C clarifier is a great support, filtering out all suspended dirt particles from the water.

The purified return water can be used to create a watercourse or a waterfall. A fountain pump provides the water with extra oxygen and is a nice focal point.

LED underwater spotlights extend the enjoyment of a pond into the late evening hours.



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