



AERATION – Healthy ponds need oxygen!

The oxygen in the supply water is only rarely sufficient for the fish population. This is especially true of ponds with little natural exchange of water. Here, aeration of the water is essential for the well-being of the fish. Pollution of the water by phosphates, nitrogen and dead plant material leads to over-enrichment of the water and excessive biological activity, known as eutrophication.

Like animals, green plants and algae use oxygen all of the time. However, during daylight, they produce more oxygen than they consume, through photosynthesis. After dark, they no longer produce oxygen, and compete with other organisms. This can cause oxygen depletion in the

pond, and can kill any fish present. These problems can be overcome and the environment can be optimised for the fish, by using LINN floating aerators.

Not only do all LINN aerators enrich the water with oxygen from the air, they also mix and circulate the water, and expel noxious gases such as carbon dioxide. They de-acidify pond water, without the use of chemicals, and create a rich and healthy environment for plants and animals. They also combat algae, and reduce organic sediments. Their various fountain and water movements enhance the appearance of ponds and lakes.

We distinguish between two types of water aerators:

Surface aerators

These aerators eject the water above the water surface, and offer the most effective form of water aeration, resulting in the best oxygen input for the energy (power) consumed.

Injector aerators

Injector aerators create a strong, directional flow, and work underwater, virtually silently. However, these aerators are not as effective as the surface injectors.

Note: We use state-of-the-art electric motors. All data in the catalogue correspond to the status at time of printing - subject to change without notice.



Aeration

Aqua-Mini, Aqua-Maxi, Aqua-Hobby are floating Linn aerators that offer effective aeration but low power usage. They can be used in a wide range of applications, including fry ponds, cages, small and hobby ponds. With these aerators it is possible to support the growth of the fish and optimize the environment of the fish. All aerator models are lightweight and convenient to use!



The aerators enrich the water with oxygen and expel waste gases (such as carbon dioxide). The water surface is broken by waves, thus inhibiting, or even preventing the growth of algae. In natural ponds, the circulation created prevents foul, oxygen deficient water. The water remains healthy. Healthy water makes healthy fish!

In addition, all aerators offer a visually attractive fountain pattern. The range of sizes means that there is an ideal aerator for every size of pond ! So, no energy is wasted needlessly by having an oversized aerator!

Aqua-Mini



Aqua-Mini

Aqua-Mini has a small, adjustable submersible motor. Because of the infinitely variable speed controller at the plug,* the power of the aerator can be adjusted optimally and tuned in to the size of the pond. This gives a particularly cost-effective and economical continuous operation. The intake screen (anodised aluminium) excludes plants and small fish and guarantees trouble-free operation. The screen basket is smooth, easy to clean and available with 2 or 6 mm slotted-holes.

Aqua-Mini is delivered ready for use with 10 m of cable and speed controller. It is recommended for ponds of area up to a maximum of 20 square metres.



* not available for UK

Aqua-Maxi



Aqua-Maxi

Aqua-Maxi has a robust stainless steel submersible motor. The pump achieves great water circulation with low use of energy. The fountain pattern is created by a specially designed conical deflector. This achieves excellent aeration and a good current away from the machine, avoiding 'short-circuiting'.

The float of the **Aqua-Maxi** has an integral, practical handle. The screen is stainless steel with a standard bar spacing distance of 9.5 mm, with 5.5 mm available to order.

For an extra charge, the **Aqua-Maxi** can be supplied with a speed controller, which will enable the water delivery and capacity to be varied infinitely.*

Aqua-Maxi is known for its reliable pumping and its low susceptibility to clogging. This model is recommended for basins and natural ponds up to a maximum of 60 square metres.

Aqua-Hobby



Aqua-Hobby

Aqua-Hobby has an encapsulated motor, which is fixed in an aluminium protective casing onto the float above the water surface. It is virtually silent in operation. The water fountain automatically cools the motor.

Aqua-Hobby has a multitude of applications. This model offers very effective aeration at a relatively low price. The stainless steel screen basket (bar spacing 9.5 mm – also available with 5.5 or 18 mm spacing) of the Aqua-Hobby has a large surface area. It excludes large particles and fish from the pump chamber. **Aqua-Hobby** is suitable for ponds up to a maximum of 200 square metres (subject to stock levels).



Fastening material on page 65



Aqua-Hobby with submersible motor



Aqua-Hobby submersible

The motor of this model hangs under the well-proven square float (as used for the Aqua-Hobby). The surface area of the screen (stainless steel screen basket, stan-



... for aquaculture and fisheries

dard bar spacing 9.5 mm – also available with 5.5 mm bar spacing) has been considerably enlarged. This aerator is less prone to clogging, making it more reliable!

The stainless steel submersible motor has been further developed and improved. The high-quality mechanical seal guarantees long-lasting durability, during continuous operation.

Aqua-Hobby with submersible motor is ideal for operation during winter. It is visually unobtrusive, and especially suited to natural waters, as only a small part of the float can be seen when it is not operating. **Aqua-Hobby with submersible motor** is light and easy to move and deploy. This aerator is suitable for ponds up to 200 square metres area (according to stock levels).

ADVANTAGES:

- proven in daily use
- excellent oxygen enrichment
- low power consumption
- very reliable aerators
- easy to transport and install
- high quality

Flow deflector for Aqua Hobby with submersible motor

This flow deflector (available as a spare part) enables the **Aqua-Hobby** submersible to be converted from a 'mushroom' aerator to a directional-flow aerator, like the Aqua-Jet. Thus, it can be used to aerate narrow ponds and channels.

It is possible to fit this to all **Aqua-Hobby** submersible aerators that have a square float. This deflector is fitted quickly and easily, without tools, and can be removed as quickly.



flow deflector for Aqua Hobby with submersible motor



Technical

Aqua-Mini and Aqua-Maxi are not ideal for use in water with suspended silt!

		Aqua Mini	Aqua Maxi	Aqua-Hobby	Aqua-Hobby submersible motor	
Motor rating	W	35 – 75	100	150	150	200
Power take-up	W	35 – 75	130	240	240	380
Voltage	V	230	230	230	230	400
Motor	rpm	2390	2800	1380	1380	1380
Fountain ø	m	max. 0.8	1.00	2.00	2.00	2.20
Fountain height	m	0.20	0.25	0.50	0.55	0.60
Minimum water depth	m	0.30	0.40	0.40	0.50	0.50
Suction depth	m	0.70	0.90	1.00	1.00	1.20
Aktive zone ø	m	5.00	8.00	12.00	15.00	18.00
Water del	m ³ /h	max. 14	22	48	45	65
Dimensions	cm	ø 33 H 30	ø 48 H 40	60 x 60 x 62	60 x 60 x 40	
Weight	kg	5	12	15	15	15



Floating aerators for still and flowing waters, ponds, lakes, sewerage plants and rain-storage ponds



Aqua-Pilz



Fastening material
on page 65

The **Aqua-Pilz** aerator agitates the whole body of the water by means of large-scale circulation and a wide, mushroom-shaped fountain. Harmful gases are expelled as a result of circulating the water. The ripples that are created disturb the surface of the water with the result that there is no heavy formation of algae.

The floating **Aqua-Pilz** aerators discharge the water upwards, as a fountain does, and in so doing create an attractive water feature. The water is stimulated and circulated with a propeller. The angle of trajectory of the spray and the impact on the water surface enhances the exchange of gases with the atmosphere. The gas filtration and oxygenation is unequalled, resulting in a healthy fish population.

The angle of expulsion has been chosen so that waves move outwards from the aerator, distributing the aerated water throughout the pond. Stagnant, oxygen-poor zones are thus avoided.

This flow of water away from the apparatus also ensures that the aerator always draws water low in oxygen from below, circulates it and enriches it with oxygen. A short-circuit flow is avoided by the angle of expulsion. **Aqua-Pilz** comes in two designs: with a surface motor and with a submersible motor. Both types are almost identical in terms of performance, oxygen enrichment and power consumption.

The submersible-motor design produces a lower and rather broader fountain of water, while the fountain from the surface-based-motor version is rather higher but more narrow. Only the submersible motor version is suitable for use during winter (to reduce the formation of ice for example). Both types of **Aqua-Pilz** are, of course, designed for continuous operation. The aerators are supplied ready for use and come with cable and motor-protection device. All screen baskets, fittings, motor shafts and screws are made from rust-resistant materials.



Aqua-Pilz

The high-performance electric motor in this type of aerator is housed, with its long stainless-steel shaft, in a polyethylene cover on the float above the surface of the water.

From the outside the isolated motor operates silently, and only the murmur of the stimulated water can be heard.

A large rust-proof inlet excludes fish and debris from the pump chamber. The screen basket is available in a variety of mesh sizes.

We have been producing Aqua-Pilz aerators for more than 30 years. This aerator has proven itself a thousand times over and ensures durability!

ADVANTAGES:

- best possible oxygen-enrichment
- minimum energy consumption
- robust motors
- easy to install
- lightweight and readily portable
- high quality materials

Aqua-Pilz



Aqua-Pilz with submersible motor



Aqua-Pilz with submersible motor

With this type of aerator the motor is housed underneath the float and is therefore out of sight. The **Aqua-Pilz with submersible motor** is therefore also perfectly suited to natural bodies of water. When not in use only a small part of the attractive circular float (available in either light blue or leaf green) is visible.

In addition to its excellent oxygen-enrichment capability this type of aerator, as a result of its uniform discharge, also provides a beautiful backdrop, for example in parks.

LINN constructed the robust stainless-steel submersible motor (protection class IP68) for this purpose. We use



water distribution cone

a “pot”-type motor with a stainless-steel drive shaft and a strong bearing.

In order to maximise the durability of the motor a double seal with sliding sealer ring and a special sealer ring in an oil bath has been integrated. The minimal needs of the sealer unit results in an economical use of energy and a long service life.

A specially-designed, high-performance axial-pump impeller is mounted on the short motor shaft.

The water deflector is hydrodynamically designed to prevent losses and wasted energy. The deflector distributes the water, producing a large fountain ring. Integral notches in the deflector dissipate and break up the water, improving oxygen enrichment even further.



Aqua-Pilz special version

Aqua-Pilz with submersible motor also has a stainless-steel screen basket (available in a variety of mesh sizes) to prevent fish and plants entering the pump chamber.

We can offer a special version of the **Aqua-Pilz** submersible with a higher fountain. This ornamental version has a lower oxygen transfer rate, but creates a very beautiful water feature for ponds and lakes!

Technical

		Aqua-Pilz				Aqua-Pilz submersible motor				Aqua-Pilz special version	
Motor rating	kW	0.25	0.40	0.55	0.75	0.40	0.55	0.75	1.1	0.75	1.1
Power take-up	Watt	450	590	760	1100	590	840	1100	1400	1100	1500
Voltage	V	230/400	230/400	230/400	230/400	230/400	230/400	230/400	400	230	400
Motor	rpm	1380	1380	1380	1380	1400	1400	1400	1400	2900	2900
Fountain ø	m	2.40	2.80	3.20	3.70	3.20	3.90	4.50	5.00	6.00	7.00
Fountain height	m	0.65	0.75	0.80	0.85	0.55	0.60	0.60	0.70	1.60	2.00
Minimum water depth	m	0.50	0.60	0.60	0.60	0.60	0.60	0.65	0.65	0.65	0.65
Suction depth	m	1.00	1.25	1.50	2.00	1.50	2.00	3.00	3.50	3.00	3.00
Active zone ø	m	15.00	20.00	25.00	35.00	25.00	30.00	45.00	55.00	30.00	45.00
Water del	m³/h	75	120	150	240	125	160	240	300	200	250
Dimensions	cm	ø 80 H 75				ø 80 H 65					
Weight	kg	approx. 30				approx. 30					



Aqua-Wheel 0.55 kW

Aqua-Wheel

for better flow through and blockage-free oxygen enrichment in ponds, lakes, canals and tanks.

The **Aqua-Wheel** paddle-wheel aerators work by considerably increasing the surface area of the water, giving much improved exchange of gases between the air and water. They do this by breaking the water into tiny droplets and flinging them up into the air. The droplets are then able to take up oxygen and discharge to the atmosphere polluting gases, such as carbon dioxide. An added benefit is the increased circulation of the water, which distributes the oxygen-enriched water.

Aqua-Wheel requires almost no maintenance. The paddle wheels turn slowly, and are only slightly submerged in the water, so in most cases a protective screen is not required.

The **Aqua-Wheel** aerator is available in a variety of sizes to suit individual requirements. Common to all sizes is the exceptionally buoyant float. With Aqua-Wheel, we have made ease of use a priority.

Aqua-Wheel is relatively lightweight, so making it easy to install in the desired position. Practical carrying handles are moulded directly onto the sides of the float.

Fastening and anchoring could not be easier. This can be achieved either by means of a fastening rope in the form of a V, or by a single rope attachment, or even by a locking mechanism on rods. This allows for assembly and dismantling on your pond.

Materials

Aqua-Wheel is driven with a high quality, slow running electric motor (IP55). The motor is mounted above the water surface.



motor with belt drive

Power from the motor is transmitted by a simple tooth belt drive (except the 0.25 kW, where a gear motor is used). This results in reliable operation, long life and minimal energy consumption.

The wheels are connected to a one-piece stainless steel shaft held by sealed ball-bearings. For the mountings, shafts and screws, only stainless steel is used. The float and the motor cover are made of robust, UV-resistant polyethylene.



Aqua-Wheel 0.25 kW

The paddle wheel has been specially developed for aeration function, maximizing both the transfer of oxygen, and the dispersal of waste gases. The shape of the wheel and the paddles guarantee optimum water circulation and distribution with minimum power requirements. Its design creates a powerful current, making this aerator especially valuable where flow is required.

The paddles are robust and durable, and can be replaced quickly and easily. **Aqua-Wheel** is supplied ready to use, complete with cable and motor-protection-device.

LINN aerators
in action!
Videos at
www.linn.eu



screen protection

Screen protection

Where fish are stocked very densely, in spawning ponds or ponds with young fish, the fish might sustain injuries from the paddle wheels.

A possibility in the case of dense stocks is to use stainless steel screen-baskets (mesh size 9.5 or 5.5 mm), available for the 0.25, 0.55 and 1.1 kW sizes. Due to the large water flow, these screen-baskets are self-cleaning and remain virtually free from clogging.

ADVANTAGES:

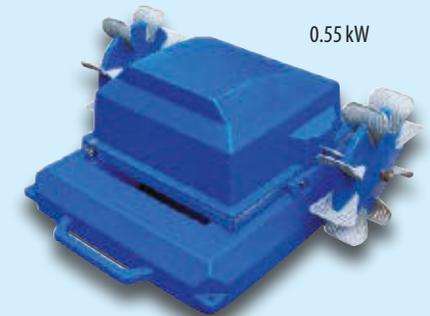
- best possible oxygen-enrichment
- best possible water-circulation
- non-clogging
- convenience and low maintenance
- rating adjustable (size 0.55 kW)
- ready for use
- minimum energy-consumption



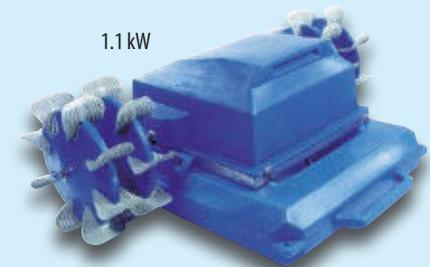
0.25 kW



0.37 kW



0.55 kW



1.1 kW

Technical

Motor rating	kW	0.25	0.37	0.55 (0.40)	1.1
Paddle Wheels		1	2	2	4
Float		U-Schwimmer	T-Schwimmer	U-Schwimmer	U-Schwimmer
Power take-up	W	360	580	840 (600)	1400
Voltage	V	230/400	230/400	230/400	230/400
Motor	rpm	1400	920	920	920
Paddle wheel revolutions	rpn	138	150	190	190
Water ejection horizontal	m	1.5	1.6	1.8 (1.6)	2.0
Water ejection vertical	m	1.20	1.2	1.5 (1.4)	1.50
Water flow speed	m/sec*	0.4	0.6	0.6	0.8
Minimum water depth	m	0.25	0.25	0.30	0.50
Suction depth	m	0.90	1.0	1.5 (1.0)	1.8
Active zone	m	40	55	70 (50)	100
Dimensions	cm	100 x 76 x 50	110 x 75 x 46	100 x 110 x 50	100 x 135 x 50
Weight	kg	30	35	40	50

*Water flow speed determined at a distance of 8 m.



Aqua-Jet

Aqua-Jet has a directable jet fountain, and creates a strong flow in the pond.

Aqua-Jet is very easy to deploy and install. A fixed installation is unnecessary, as it is only required to anchor the aerator (using ropes or chains) to stop it drifting away (against the directional outlet).

The robust submersible pump generates a powerful flow with excellent oxygen transfer. This water circulation strips waste gases from the water, including carbon dioxide, and thus discourages algae. The angle of discharge (trajectory) of the water jet is adjustable according to the desired flow, size of the pond and stock of fish.

The robust submersible motor has a uniquely designed mechanism that gives very high efficiency; low electrical consumption but high power output. The motor shaft is made of high-grade stainless steel, and twin impellers are directly mounted onto it. The arrangement of the axial flow impellers is virtually clog-free. A narrow screen option is available for use in fry

ponds. The stainless submersible motor is always in the water and constantly cooled during use. This guarantees a long life and maintenance-free operation. **Aqua-Jet** is suitable for almost every relatively long pond (whether a canal or raceway) or large and square ponds.

With the aerator suitably positioned, a good flow and thorough circulation of the water can soon be achieved. This is especially important to distribute the oxygen-enriched water throughout the whole pond or lake. Otherwise, putrefaction can become established in stagnant and oxygen-deficient areas. This can result in the death of many different organisms (including fish), bad smells and the acceleration of silt deposition.

Aqua-Jet draws water from deep, and consequently draws up and circulates stagnant water. Aqua-Jet comes with a one-year warranty.

Aqua-Jet with submersible motor gives good flow and high oxygen enrichment.



adjustable flow deflector



Aqua-Jet ... for aquaculture, fisheries, canals and ornamental lakes

ADVANTAGES:

- directional water output
- excellent oxygen enrichment
- low power consumption
- excellent circulation
- robust and readily portable

Technical

Motor rating	kW	0.25	0.40	0.55	0.75
Power take-up	W	460	590	850	1100
Voltage	V	230/400	230/400	230/400	230/400
Motor	rpm	1400	1400	1400	1400
Fountain height	m	0.50	0.60	0.65	0.80
Fountain width	m	0.90	1.10	1.30	1.60
Minimum water depth	m	0.60	0.60	0.65	0.65
Suction depth	m	1.40	1.50	2.00	3.00
Active zone	m	25	30	50	80
Water del	ca. m ³ /h	80	100	140	185
Weight	kg	approx. 30			
Dimensions	ø/Height	80 cm / 70 cm			



... for ponds, lakes and waste water

Turbo-Jet

Water circulator with air diffuser for better water flow and more oxygen ...

Turbo-Jet enriches the water with oxygen and keeps it clean.

Turbo-Jet operates silently below the water surface. The robust submersible motor with its directly driven propeller produces an enormous water circulation with relatively low energy-consumption. The special action of the high-speed motorised impeller draws in air, breaking it into thousands of small bubbles. These fine bubbles are injected into and entrained in the water current where they have a long dwell time. This improves oxygenation of the water.

The special water/air bubble jet is directed down into the water at an angle. This mixes the whole volume and prevents the formation of dead spots.



Turbo-Jet 0.55 – 1.1 kW

Thus, vital oxygen is distributed around the water, benefitting fish and microbes alike.

Despite this great circulation, **Turbo-Jet** is virtually silent in operation.

Fish are protected from the impeller by a cage screen, which is effectively self-cleaning in operation due to the powerful water flow along it.

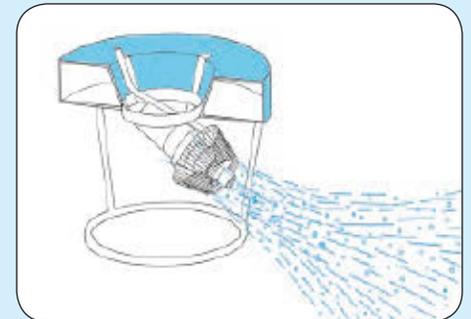
Turbo-Jet can easily be used even in winter when the powerful water circulation will hinder or reduce the formation of ice. In very low minus temperatures, the air supply can be interrupted.

The motor housing is made from cast steel or stainless steel. Other materials used are stainless steel and polyethylene.

Turbo-Jet – the flexible and economical water circulator and oxygenator.

ADVANTAGES:

- excellent circulation
- good oxygen-enrichment
- easy to transport and install
- robust quality
- works silently



Turbo-Jet 0.55 – 1.1 kW

Technical

Motor rating	kW	0.35	0.55	0.75	1.1
Power take-up	W	470	820	1100	1500
Voltage	V	230	230/400	230/400	400
Motor	rpm	2900	2900	2900	2900
Active zone	m	30	60	80	90
Water delivery	m ³ /h	50	160	250	300
Air delivery	m ³ /h	6	15	25	35
Weight	kg	approx. 15	approx. 25		
Dimensions	∅/Height	48 cm/36 cm	80 cm/60 cm		



Aqua-Handy

ADVANTAGES:

- excellent circulation
- easy and versatile to install
- works silently
- lightweight

Aqua-Handy

Aqua-Handy, the handy, portable aerator, weighs only 12 kg and can be installed quickly and easily in the chosen place.

This type of aerator is ideally suited to tanks, circular pools or even small ponds. In addition, Aqua-Handy is ideal as a spare to be used in emergencies and at peak periods.

To protect the fish this aerator is equipped with a conical, self-cleaning stainless steel screen fixed round the propeller.

Aqua-Handy is virtually silent in operation, and no splashing occurs.

All you have to do is hang Aqua-Handy in your pool and plug in. The aerator is equipped with a submersible motor made from stainless steel. The apparatus



comes ready for use complete with cable and plug. The motor has an integral thermal cut-out.

This aerator works like the "Turbo-Jet". Air is sucked in along an air pipe onto the propeller where it is thoroughly aerated below the water surface. Good oxygenation is thus maintained.

Technical

Motor rating	kW	0.35	0.45
Power take-up	W	470	660
Voltage	V	230	230
Motor	rpm	2900	2900
Water delivery	m ³ /h	50	90
Air delivery	m ³ /h	6	10
Weight	kg	approx. 12	
Dimensions	∅/Height	15 cm / 40 cm	