

PUMPS IN FISH-FARMS AND AQUACULTURE

Fish-farms can use water pumps all over the farm. Pond complexes also need pumps, to circulate water. To pump ponds out, top them up or return water to filters, low pressure pumps with large diameter outlets are ideal.

These portable pumps (pipe pump L3) work in low-pressure applications, where they offer unrivalled efficiency of low energy consumption. Great volumes of water can be pumped quickly, and with low energy costs up to a maximum 250 cm pressure head. Pipe Pumps can guarantee circulation in ponds and raceways. For external, non-submersible applications, a stationary Pipe Pump is the best option. Here, it is plumbed direct into the pipeline.

Waste or dirty water is best pumped with a submersible pump, with either layflat or spiral-reinforced hose. These pumps deliver water under pressure, and lower diameter hose (eg 50 or 75mm) can be used. Even mud can be pumped out of the pond, trouble-free, with the robust and portable Mud Pump.

To ensure that the pond is completely clean, residual mud can be broken down with a water jet, and the mud then pumped out of the pond with the Mud Pump. Although Mud pumps have a lower pumping capacity than waste water Pumps, they have a specially-designed pump chamber, which results in clog-free operation.

Detailed specifications can be found on the following pages. The Linn company can offer a specialised pump, for all applications, giving great performance with low energy consumption.

Of course, we can supply other pump types, such as high-pressure pumps for jet-washing, or borehole pumps. Let us know what you need, and we will make you an offer.



Pumps

Pipe Pump L3 – Efficient pipe pumps for low water pressure-high volume applications.



Type 03 – 10



Type 01 / 02 / 02B

**Pressure head up to 5 m!
Additional new type 02B!**

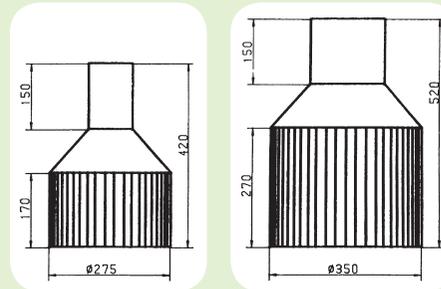


Pipe pumps are the ideal means for moving water at low pressure heads economically. They can be used for circulating water, or pumping-out ponds or tanks quickly! Pipe pumps are designed to move large volumes of water for the minimum use of electricity, and are the most efficient and economic way to pump water at low pressure heads.

The pumps are protected against ingress of fish or detritus by a robust screen, which also serves as a stand.

All pumps are made to the usual high Linn standard with stainless steel screen and base.

The robust submersible motor is permanently submerged, ensuring trouble-free cooling. The drive is direct – long shafts, bearings and seals are not required.



Type 01 + 02 + 02B
Screen distance 9.5 mm

Type 03 – 10
Screen distance 9.5 mm

The pipe pump can either be hung from the loops provided or positioned easily on the water bed. Installation in the pond or well is easy.

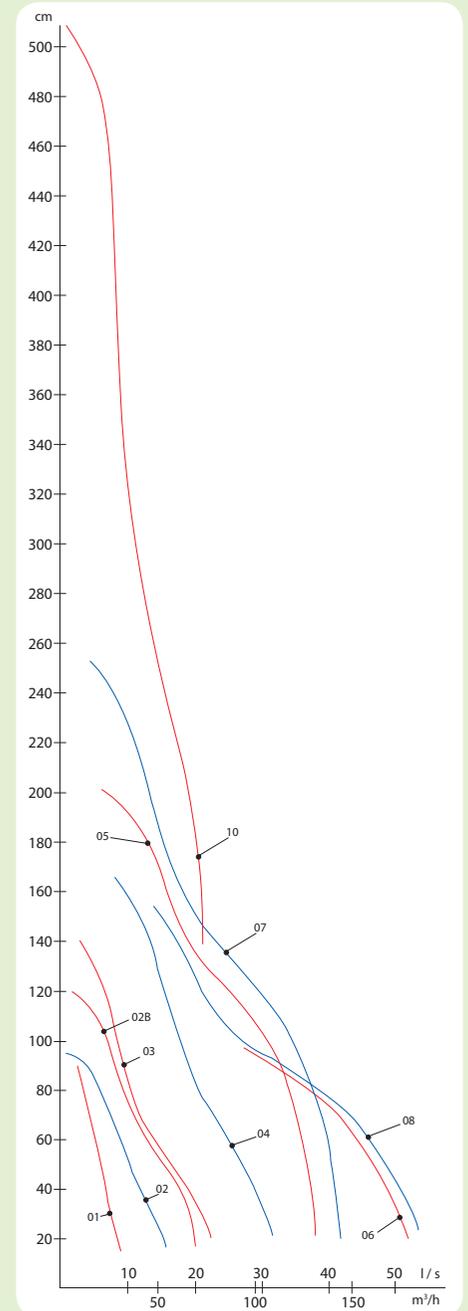
Technical

*Type 01 is not ideal for use in water with suspended silt!

Type		01*	02	02B	03	04	05	06	07	08	10
Motor rating	kW	0.10	0.18	0.25	0.40	0.55	0.75	0.75	1.1	1.1	1.1
Power take-up	W	160	280	460	550	700	1050		1400		
Voltage	V	230	230	400	230/400		230/400		400		
Motor	rpm	2900	1400						2800		
Water del (max)	m ³ /h	29	56	72	80	100	135	170	150	190	70
Pressure head	cm	0-75	0-90	0-120	0-130	0-150	0-200	0-100	0-260	0-140	140-500
Pipe ø	DN	70	100	100	125	150	150	150	150	150	100
Weight	kg	12	15		25						

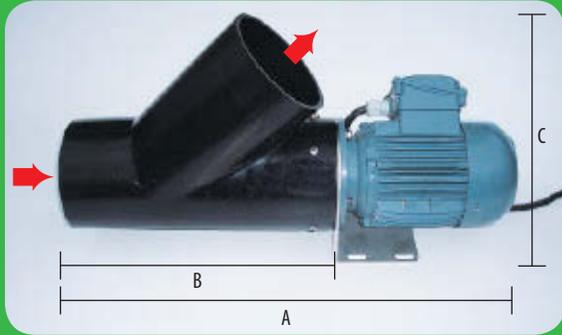
ADVANTAGES:

- minimal energy consumption
- quick and flexible to use
- suitable for many applications
- lightweight and robust





Pipe Pump S

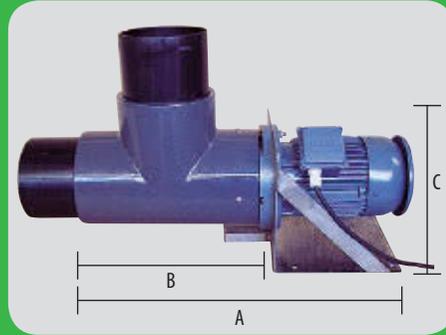


Pipe Pump S Type 01-03

The new Pipe Pump S (stationary) is ideal for applications where water needs to be raised in a closed pipeline, such as in filter- and recirculating systems. Different sizes are available. The pump is simple to fit and can pump water up to a maximum height of approximately 1.5 m.

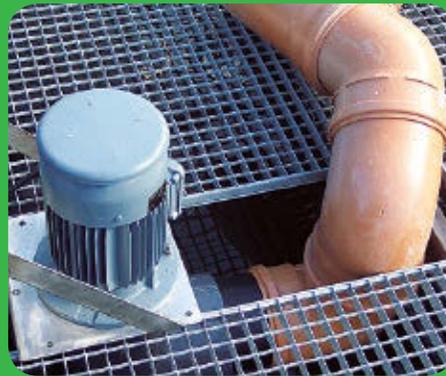
The stationary pump is equipped with two impellers, like the well known and successful pipe pump L3. The pump is installed and fixed securely in the pipeline. It is fitted with an integral baseplate of stainless steel, making installation easy.

The pump is powered by a robust electric motor (splash-proof, IP65, not submersible). The sealing mechanism is a double shaft-sealing ring, and there is a convenient grease nipple for easy maintenance.

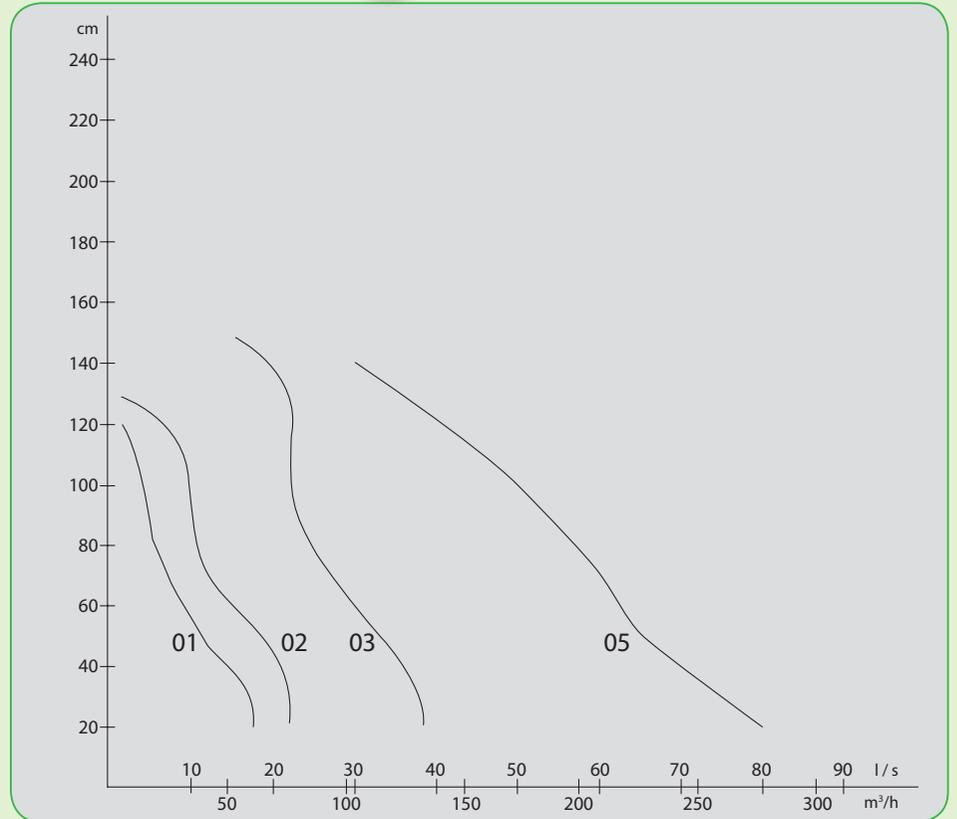


Pipe Pump S Type 05

It is important to install an inline filter screen, upstream of the pump, for protection purposes. Pipe Pump S is supplied ready for use, with a 10 m cable and over-current motor protection.



Pipe Pump S Type 05 mounted



Technical

Type		01	02	03	05
Motor rating	kW	0.15	0.25	0.75	1.5
Power take-up	W	280	450	1000	1900
Voltage	V	230/400	400	400	400
Motor	rpm	1400			
Water del (max.)	l/s	18	22	38	80
	m³/h	65	79	137	288
Pressure head	cm	0 – 110	0 – 130	0 – 150	0 – 140
Pipe	DN	100	125	150	200
Weight	kg approx.	12	12	15	40
Dimensions A/B/C	cm	53/31/29			80/40/35

Deep pump aerator

... the solution for oxygen enrichment in deeper waters and lakes.

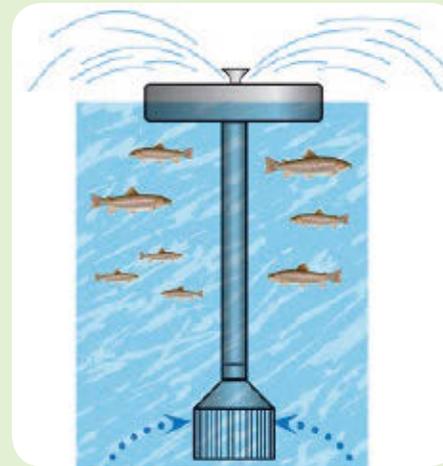


Type I:
Deep Pump Aerator with directional water jet.
Shown complete with pipe (not included).

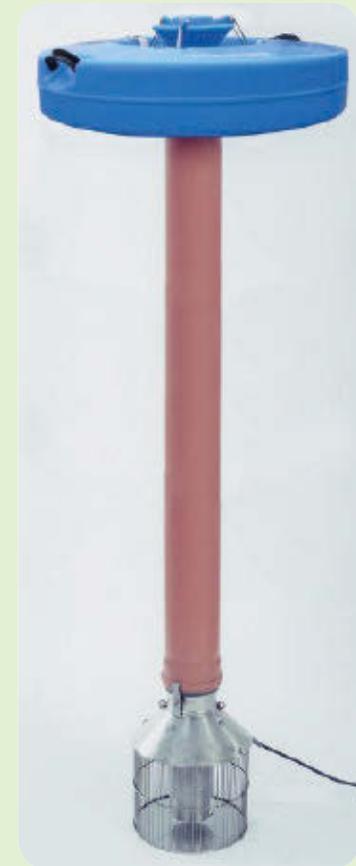
Draws the water from the deeper pond zones to the surface, enriches it with oxygen and mixes it with water at the surface! This pump also mixes colder deep water and warmer surface water.

The pump component can be hung beneath the float down to a depth of 5 m. All that is required is a normal buried drain pipe of nominal 150 mm diameter. This pipe is available in different lengths, and can be cut according to the existing water depth. Simply attach one end of the pipe on the pump outlet, and the other to the underside of the float using the pipe clamps provided. For additional security, the pump is attached to the float by a special steel wire rope (included).

The **deep pump aerator** draws water from deep to the surface. The way the water is ejected at the water surface depends on the outlet type preferred, selected at the time of ordering. The simple pipe outlet gives a directional jet. As an alternative, if the conical deflector type is chosen, the result is a 'mushroom'-shaped fountain pattern, like that produced by the **Aqua-Pilz submersible**.



The pump used for this aerator is the same as the **Pipe Pump L3**. For technical specification, please refer to the Pipe Pump details on page 24.



Type II: Deep pump aerator with water deflector

Technical

Motor rating	kW	0,55	0,75	1,1
Power take-up	W	840	1100	1500
Voltage	V	230/400	230/400	400
Motor	rpm	1400	1400	1400
Water del.	m ³ /h	115	170	190
Dimensions		ø 80 cm (float)		
Weight	kg	approx. 30		



Silt removal from concrete ponds



Type I

In ponds and raceways, suspended solids, faecal and food wastes settle-out and accumulate on the bed. These organic deposits then decompose and putrefy by natural means. The by-products of this putrefaction include hydrogen sulphide. Apart from being toxic, this suppresses the appetite of fish, even when present in trace quantities. The deposits also absorb large quantities of oxygen.

The mobile pond-bottom vacuum cleaner makes it possible to remove silt from stocked ponds. The fish do not need to be removed and the water does not have to be drained. This means huge savings in terms of time and work.



Type II

All pond-bottom vacuum cleaners with directly integrated submerged pumps have a high suction power. Three vacuum-widths are available: 70, 80, or 100 cm. Use the plug-in operation bars (stainless steel, 2 m long each) to move the silt-vacuum across the bottom of the pond. The mixture of water and silt is transported from your pond using a floating hose. The best idea is to transport it directly into a silt deposition pond.

All devices are supplied together with a 20 m cable and plug. Each pump is equipped with a Storz C coupling, to which the floating hose can be quickly and easily connected.

Silt-vacuum type I is equipped with one pump; type II works with two pumps and two separate floating hoses. In both types, the wheels are attached within the vacuum skids.

Vacuum type III is equipped with a universal pump (type B1600 – see page 28). The pump can be quickly and easily attached to the vacuum skids. The big advantage of this: for the rest of the time, this pump can also be used for many other tasks in fish farming, as it is not permanently attached to the vacuum skids; instead, it can be removed quickly and easily. In addition, the silt-vacuum type III is characterised by a very large transport capacity and large holes (65 mm)! The silt-vacuum is equipped with large external wheels. This silt-vacuum also takes up the fish that are lying on the pond floor and can no longer swim.



Type III

Technical

		Type I	Type II	Type III
Motor rating	kW	0.75	2 x 0.75	2.2
Power take-up	Watt	1000	2000	2700
Voltage	Volt	230	230	400
Pump capacity	l/min	400	800	1200
Exhaustion dimension	cm	70	100	80

Supplied complete with 20 m cable and plug, hose connection, C' coupler (without bar and hose).

Pumps

DOMO submersible pumps

For flexible and easy use in fish farms we can deliver robust submersible pumps in different variations. They are applicable for emptying tanks, ponds or reservoirs.

The submersible pumps DOMO are made in stainless steel, with mechanical seal and different propeller for the use in water or solid-laden wastewater. All types are deliverable with or without float switch.

There are two propeller options. The standard propeller is made from reinforced nylon for use in water, the VX-version has a special vortex propeller (made from stainless steel) which is designed to handle suspended filaments or solids up to 50 mm (35 mm for DOMO 7VX).



All pumps are supplied ready for use, complete with 10 m cable and plug. Fire-brigade-couplings are also available.

Technical

		Dirty Water				Muddy water			
Pump type DOMO		7	10	15	20	7VX	10 VX	15 VX	20 VX
Motor rating	kW	0.55	0.75	1.1	1.5	0.55	0.75	1.1	1.5
Power take-up	kW	0.7	1.0	1.4	1.9	0.7	1.1	1.2	1.7
Voltage	V	230/400			400	230/400			400
Motor	rpm	2850							
Suction capacity	2 m	19	34	42	48	16	27	31	41
	5 m	12	22	30	38	9	17	23	30
Max. discharge head	m	10.7	10.1	12.7	14.8	9.1	7.7	9.1	11
Connection	Inches	1 1/2	2	2	2	1 1/2	2	2	2
Weight	kg	10	14	15	15	10	14	15	15

Water pump



Pump WPI

The WPI pump is suitable for pumping dirty or groundwater from ponds with admixtures up to 10 mm. The pump is robust, flexible and can also be used for continuous operation.

The motor housing of the WPI pump is made entirely of cast aluminium. The sealing guarantees long operating times.

Delivery is complete and ready for operation with 10 m cable and motor protection plug, incl. fire brigade coupling.

Technical

Type		WPI	Salvador
Motor rating	kW	1.8	2.0
Power take-up	kW	2.2	2.8
Voltage	Volt	400	400
Motor	1/min	2850	2800
Suction capacity			
Suction head	2 m m ³ /h	62	43
	5 m m ³ /h	53	36
	10 m m ³ /h	38	21
Max. Discharge head	m	14	15
Weight	kg approx.	30	30
Hose connection		B	B

Mud pump



Mud pump Salvador

The Salvador submersible pump is specially designed for „sludge“ applications. The pump has a large free passage (50mm) - the pumping of media with coarser solids is no problem for this pump.

The Salvador sludge pump has a stainless steel outer jacket and is equipped with a double jacket cooling system. Delivery includes motor protection and 10 m cable.