



# AquaMax Eco Premium

5000, 7000, 9000, 13000, 17000, 21000

Operating instructions

# **A** WARNING

- ▶ Disconnect all electrical devices in the water from the power supply before reaching into the water. Otherwise there is a risk of severe injuries or death by electrocution.
- ➤ This unit can be used by children aged 8 and above and by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they are supervised or have been instructed on how to use the unit in a safe way and they understand the hazards involved. Do not allow children to play with the unit. Only allow children to carry out cleaning and user maintenance under supervision.

# Safety information

#### **Electrical connection**

- Special regulations apply for electrical installation in outdoor spaces. Only a qualified electrician may perform the electrical installation.
  - The qualified electrician has the necessary professional training, knowledge and experience to perform electrical installation in outdoor spaces. The electrician can detect potential dangers and knows how to adhere to regional and national standards, regulations and directives.
  - For your own safety, please consult a qualified electrician.
- Only connect the unit if the electrical data of the unit and the power supply match.
- Only plug the unit into a correctly installed outlet.
- The device is to be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30 mA.
- Extension cables and power distributors (e.g. outlet strips) must be suitable for outdoor use (splash-proof).
- Protect open plugs and sockets from moisture.

#### Safe operation

- Do not use the unit, if electrical lines or the housing are damaged.
- Dispose of the unit if its power connection cable is damaged. The power connection cable cannot be replaced.
- The impeller unit in the pump contains a magnet with a strong magnetic field that may affect
  the operation of pacemakers or implantable cardioverter defibrillators (ICDs). Keep a distance
  of at least 0.2 m between the implant and the magnet.
- Do not carry or pull the unit by its power cable.
- Route lines in such a way that they are protected from damage and do not present a tripping hazard.
- Never carry out technical changes to the unit.
- Only carry out work on the unit that is described in this manual.
- Only use original spare parts and accessories.
- Should problems occur, please contact the authorised customer service or OASE.

### EN

#### Intended use

Only use the product described in this manual as follows:

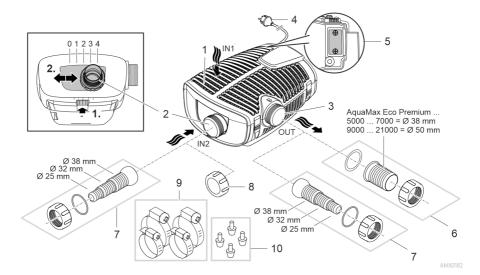
- For pumping normal pond water for filter systems, waterfall systems and water course systems.
- While adhering to the technical specifications. (→ Technical data)
- Adherence to the permissible water quality. (→ Permissible water quality)

The following restrictions apply to the unit:

- Do not use in swimming ponds.
- Never use the unit with fluids other than water.
- Never run the unit without water.
- Do not use in conjunction with chemicals, foodstuff, easily flammable or explosive substances.
- Do not connect to the domestic water supply.
- Do not use for commercial or industrial purposes.
- According to EMC (Electromagnetic Compatibility), this is a class A unit. The unit may cause
  malfunctions in living environments. It is the user's responsibility to take suitable countermeasures.

# **Product Description**

#### Overview

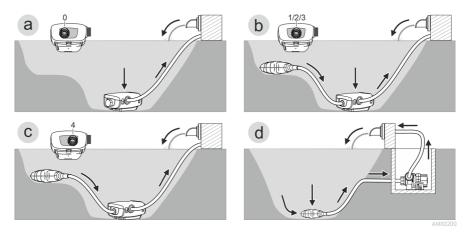


- 1 Inlet 1 (suction side)
  - · Filter housing
- 2 Inlet 2 (suction side)
  - Connection of a satellite filter or skimmer.
  - The flow rate at inlet 2 and with it the flow ratio of inlet 1 to inlet 2 is adjustable. To do so, release the locking mechanism and push the connection to one of the following positions:
    - Position 0: Inlet 2 is closed, water flow only via inlet 1.
    - Position 1/2/3: Inlet 2 is open by approx. 25/50/75 %; meaning water flow via inlet 1 and 2 according to set intake ratio.
    - Position 4: Inlet 1 is closed, water flow only via inlet 2.
- 3 Outlet (pressure side)
  - Connection of the return line into the pond (e.g. via a water course).
- 4 Power cable
- 5 Control system connection (optional)
  - The control system makes it possible to regulate the pump power.
  - Without the control system, the pump runs permanently at full power.
- 6 Hose sleeve for outlet (recommendation).
- 7 Stepped hose adapter for inlet 2 and outlet (alternative).
- 8 Cover cap for closing inlet 2 when it is not in use.
- 9 Hose clips for fastening hoses on the hose sleeves.
- 10 Rubber feet
  - Only for dry installation.

### Symbols on the unit

IP68 4.0 m	The unit is dust-tight and water-tight down to 4 m.
<b>®</b>	Possible danger for persons with pacemakers.
禁	Protect the unit from direct sunlight.
<u>X</u>	Do not dispose of the unit with normal household waste.
	Read the operating instructions.

#### Installation variants



- Variant (a): Water flow only via the filter housing (inlet 1).
  - Set inlet 2 to position "0".
  - Close inlet 2 using the cover cap. (→ Overview)
- Variant (b): Water flow via the filter housing (inlet 1) and additionally via a satellite filter or a skimmer on inlet 2.
  - Set inlet 2 to position "1", "2" or "3", depending on the desired flow ratio (25/50/75 %).
- Variant (c): Water flow only via a satellite filter or a skimmer on inlet 2.
  - Set inlet 2 to position "4".
- Variant (d): Dry pump installation.
  - This variant requires the pump to be installed without a filter housing.
  - The pump is installed outside of the pond but lower than the water level.
  - If larger particles ( $\emptyset$  > 11 mm) may be drawn in, we recommend installing a satellite filter or a skimmer on the intake side.

### Seasonal Flow Control (SFC)

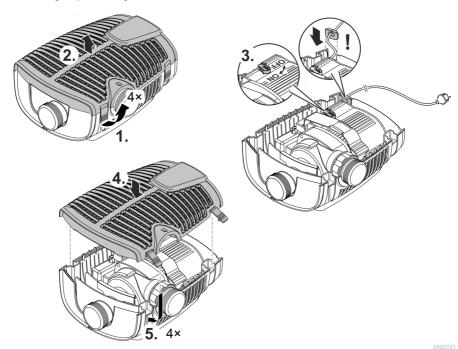
The SFC function intelligently controls the water volume or pump head based on the water temperature. This means the pump adapts to the individual pond ecology throughout the year and supports the pond biology through temperature-dependent circulation (winter mode, transition mode and summer mode).

- If the SFC function is active, the pump differentiates between ...
  - winter mode (water temperature lower than +10 °C)
  - transition mode (water temperature +10 ... +17 °C)
  - summer mode (water temperature greater than +17 °C)

You can find the specific parameters at www.oase.com in the product section "Pond pumps".

- The SFC function may only be activated if the pump is submersed!
- If a skimmer or satellite filter is used, it may, depending on the system, be advisable to deactivate the SFC function.
- The SFC function is deactivated on delivery.

#### Switching ON/switching OFF



#### Installation and connection

The pump can be installed submerged (in water) or dry (outside the water).

### **A** WARNING

Severe injuries or death due to operation of this unit in a swimming pond. Defective electrical components will electrify the water with dangerous electrical voltage.

▶ Never operate the unit in a swimming pond.

# **A** CAUTION

Rotating components in the intake and pressure socket area. Risk of injury when reaching into the sockets.

**In particular, observe the following:** A unit that has stopped due to overload can start up unexpectedly!

- ► Do not reach into the opening of the intake socket or pressure socket while the power plug is plugged in.
- ▶ If the sockets are freely accessible during operation, e.g. if no hoses are connected, use a hand guard to secure the sockets. The hand guard is available as an accessory.
- ① Avoid exposing any unit components to direct sunlight for extended periods of time, as this can lead to damage. If necessary, use a protective cover.

#### Connecting the control system

The pump can be operated with or without the control system.

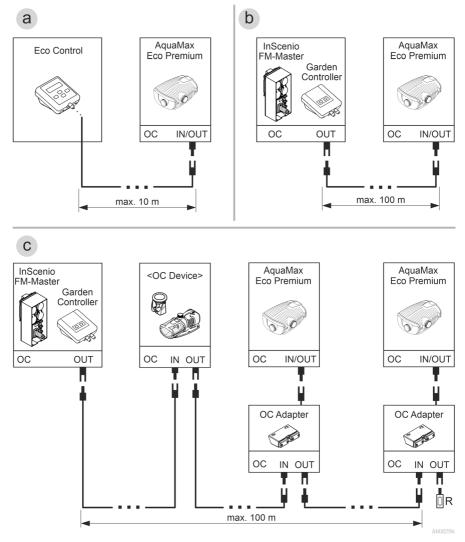
- The control system makes it possible to regulate the pump power.
- Without the control system, the pump runs permanently at full power.

Compatible control systems (accessories):

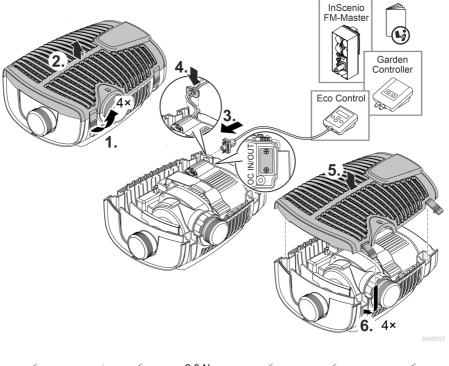
- Eco Control Intelligent control system for one pump.
- Intelligent control system for one pu
   Incenio FM-Master Home/Cloud
   Garden Controller Home/Cloud

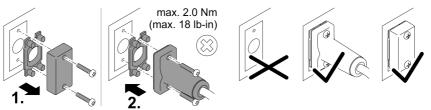
Up to 10 OASE Control-compatible units (pumps, filters, lights) can be controlled using the "OASE Control" app.

For information on this topic, visit www.oase.com and navigate to the section "Smart garden controls and lighting".



- An OASE Control network (variant C) must end with a terminal resistor R. The terminal resistor
  is included with the InSenio FM-Master or Garden Controller. In this case you will need the accessory OASE Control adapter (article number 88443).
- If only one AquaMax Eco Premium pump is connected to the InSenio FM-Master or Garden Controller (variant b), the terminal resistor and the OASE Control adapter are not required.
- ③ Store the terminal resistor in a safe place for possible later expansion of the OASE Control system.





# NOTE

The unit will be damaged, if water enters the plug connector.

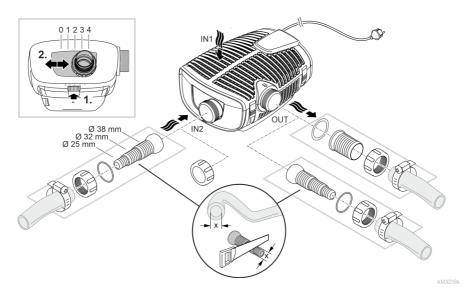
- ▶ Connect the plug connector or place the protective cap on it.
- ▶ Ensure that the rubber seal is clean and fits exactly.
- ▶ If the rubber seal is damaged, it must be replaced. When the plug connector is disconnected, the rubber seal must be replaced if it is older than 2 years.
- ▶ Always secure the plug connector or the protective cap with the two screws.

### Submerged installation of the pump

#### Connecting

Connect the pump according to the desired installation variant. ( $\rightarrow$  Installation variants)

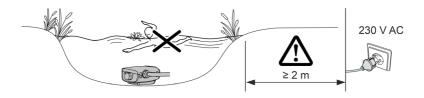
- Ensure that the intake-side hose (IN) does not have a smaller diameter than the pressure-side hose (OUT).
- The larger the hose diameter, the smaller the friction losses in the lines and the better the flow rate.
- The hose diameter must not be limited unnecessarily by a hose sleeve. Shorten the hose sleeve based on the hose diameter, if necessary.



Do not plug the power plug into the socket yet!

#### Installation

- Place the pump horizontally on a stable surface.
- Ensure secure and stable positioning of the pump.
- For muddy or soiled water, we recommend installing the pump or intake-side components (skimmer, satellite filter, base outlet, etc.) above ground level. This decreases intake of particles and increases the service life of the impeller unit.
- Only operate the pump when it is covered in at least 10 cm of water. Otherwise it may draw in air.



- The pull rope allows you to simply pull the pump from the water.
  - Fasten the pull rope on the bottom filter casing through the round openings and make a knot.

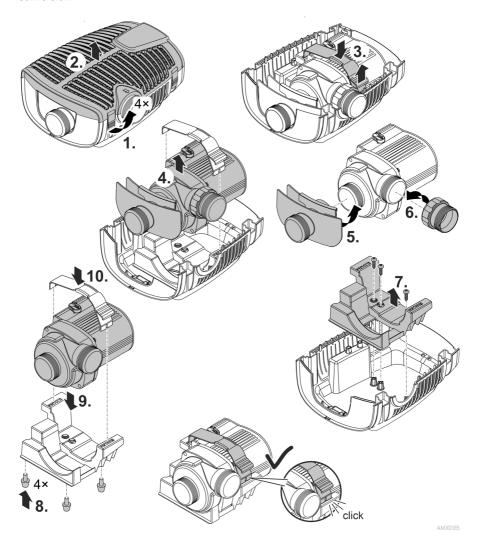


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# Install the unit at a dry place

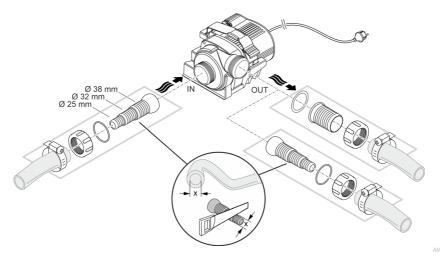
Dry installation requires the pump to be installed without a filter housing.

### Conversion



#### Connecting

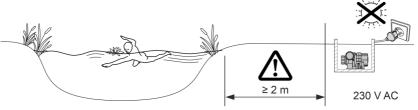
- Hoses or pipes can be connected to the inlet (IN) and outlet (OUT).
  - Connections for hoses are part of the scope of delivery. Instructions for their installation can be found below.
  - An adapter for pipes with DN75/DN110 is available as an accessory (article number 35578).
- Ensure that the intake-side hose (IN) does not have a smaller diameter than the pressure-side hose (OUT).
- The larger the hose diameter, the smaller the friction losses in the lines and the better the flow rate.
- The hose diameter must not be limited unnecessarily by a hose sleeve. Shorten the hose sleeve based on the hose diameter, if necessary.
- The pump can handle particles with a size of up to 11 mm. Larger particles will clog the pump.
   We recommend installing a filter or skimmer on the intake side.



Do not plug the power plug into the socket yet!

#### Installation

- Place the pump horizontally on a stable surface.
- Ensure secure and stable positioning of the pump.
- Do not expose the pump to direct sunlight.
- Ensure that the installation site is sufficiently ventilated to prevent overheating of the pump. Permissible ambient temperatures (→ Technical data)



AMX01

# Commissioning/start-up

#### NOTE

The unit will be destroyed if it is operated with a dimmer. It contains sensitive electrical components.

▶ Do not connect the unit to a dimmable power supply.

#### **NOTE**

Never allow the pump to run dry. Otherwise the pump may be destroyed.

▶ Only operate the pump when it is submerged or flooded.

## Switching ON/OFF

- Switching on: Plug the power plug into the outlet.
  - The unit is switched on after a brief starting phase.
- Switching off: Pull the power plug from the outlet.

#### **Environmental Function Control (EFC)**

When started up and then every 20 ... 40 minutes the pump automatically performs a pre-programmed self-test (**Environmental Function Control (EFC)**). The pump detects if it is running dry / clogged or submerged. The pump shuts down automatically after 60 to 120 seconds if it runs dry/is blocked. In the event of a malfunction, disconnect the power supply and "flood the pump" or remove the obstacle. Afterwards, the unit can be restarted.

# Maintenance and cleaning

#### **A** CAUTION

Risk of injury due to unexpected start-up. Internal monitoring functions may switch off the unit and automatically reactivate it.

▶ Disconnect the power plug before carrying out any work on the unit.

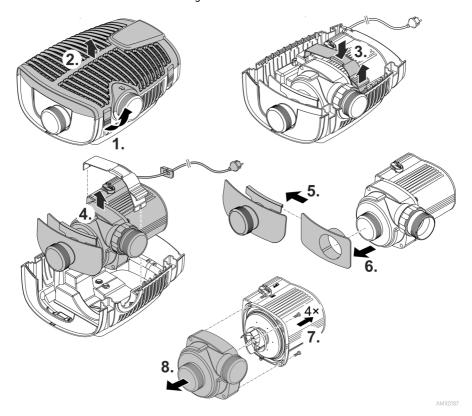
#### NOTE

Do not use aggressive cleaning agents or chemical solutions. These agents can damage the housing, impair the function of the device and harm animals, plants and the environment.

▶ If possible, clean the unit with clear water and a soft brush or a sponge; remove stubborn dirt with the aid of the recommended cleaning agents.

### Dismantling the unit

- Pull the power plug and remove all connections.
- Dismantle the unit as shown in the figure.



- After cleaning or maintenance, reassemble the unit in reverse order.
- During reassembly, ensure that
  - the clamp fastening the pump in the holder is securely engaged.
  - the connection lines are guided out of the housing with the cable sleeve and that they are not kinked or crushed.

# Cleaning the device

- i Clean the unit as required but at least twiceper year.
  - When cleaning the pump, pay particular attention to the impeller unit and the pump housing.
- Recommended cleaning agent for removing stubborn limescale deposits:
  - Pump cleaning agent PumpClean from OASE.
  - Vinegar- and chlorine-free household cleaning agent.
- After cleaning, thoroughly rinse all parts in clean water.

### Replacing the impeller unit

#### NOTE

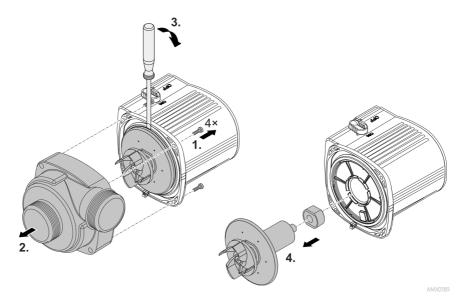
The impeller unit is guided in the motor block by a bearing. This bearing is a wear part and should be changed at the same time as the impeller unit.

► Changing the bearing requires specialist knowledge and tools. Have the bearing changed by the OASE specialist dealer or send the pump to OASE.

# NOTE

The impeller unit contains strong magnets that attract magnetic particles (e.g. iron filings). Any remaining particles can cause irreparable damage to the impeller unit and motor block.

- ► Carefully remove any adhering particles from the impeller unit prior to installation.
- Dismantle the motor block as shown in the figure.
- Use a brush under clear water to clean the components.
- Check all components for damage. Replace damaged or worn components.
- Reassemble the motor block in reverse order.
- (i) When the impeller is pulled out, the bearing in the motor block may come loose. During reassembly, check that it is positioned correctly. If necessary, push the bearing into the motor block with the wide grooves first.



# Storage/winter protection

The unit is frost resistant to minus 20 °C. Should you store the unit outside of the pond, clean it thoroughly with a soft brush and water, check it for damage, then store immersed in water or filled with water. Do not immerse the power plug in water!

# **Malfunction remedy**

Malfunction	Cause	Remedy
Pump does not start	No mains voltage	Check the mains voltage.
	No control voltage (only with optional external controls)	Check connection to OASE Eco Control or OASE Control network; if necessary switch on pump via these networks
	Supply lines kinked	Route the supply lines without kinks
	Supply lines blocked.	Check/clean the supply lines
	Impeller unit is blocked	Remove blockage, check impeller unit for ease of movement
Pump does not transport fluid	Filter housing clogged	Clean strainer casings
Insufficient delivered quantity	lines mum, re	Reduce hose length to the necessary mini- mum, remove unnecessary connection parts, use larger hose diameters
	Impeller unit is running slug- gishly	Check impeller unit for ease of movement
Pump switches off after oper-	Water heavily soiled	Clean pump
ating briefly	Impeller unit is blocked	Remove blockage, check impeller unit for ease of movement
	Pump has run dry	Check/clean supply lines, increase immersion depth (min. 10 cm under water surface)
	Water temperature too high	Adhere to the maximum permissible water temperature. ( $\rightarrow$ Technical data)

# Technical data

# Unit data

AquaMax Eco Premium			5000	7000	9000	
Connection voltage		V AC	220 240	220 240	220 240	
Mains frequency		Hz	50/60	50/60	50/60	
Power consumption		W	10 35	12 45	14 60	
Max. pump capacity		l/h	5000	7000	9000	
Max. pump head		m	3.5	4.0	4.5	
Protection type			IP68	IP68	IP68	
Max. immersion depth	1	m	4	4	4	
Inlet port	Thread		G2	G2	G2	
	Connection, hose	mm	25, 32, 38	25, 32, 38	25, 32, 38	
Outlet port	Thread		G2	G2	G2	
	Connection, hose	mm	25, 32, 38	25, 32, 38	25, 32, 38	
Max. particle size, coa	rse dirt particles	mm	11	11	11	
Filter supply surface a	rea	cm²	1000	1000	1000	
Water temperature	During operation	°C	(→ Pe	ermissible water q	ater quality)	
(submerged installa- tion)	Out of operation	°C	-20 +35	-20 +35	-20 +35	
Ambient temperature (dry installation)	Operating with natural convection	°C	+4 +30	+4 +30	+4 +30	
	During operation and forced cooling	°C	+4 +40	+4 +40	+4 +40	
Dimensions	Length	mm	340	340	340	
	Width	mm	280	280	280	
	Height	mm	165	165	165	
Connection cable length		m	10	10	10	
Weight		kg	6.2	6.2	6.2	

AquaMax Eco Premiun	n		13000	17000	21000
Connection voltage		V AC	220 240	220 240	220 240
Mains frequency		Hz	50/60	50/60	50/60
Power consumption		W	16 100	18 140	20 180
Max. pump capacity		l/h	13000	17000	21000
Max. pump head		m	5.0	5.5	6.0
Protection type			IP68	IP68	IP68
Max. immersion depth		m	4	4	4
Inlet port	Thread		G2	G2	G2
	Connection, hose	mm	25, 32, 38	25, 32, 38	25, 32, 38
Outlet port	Thread		G2	G2	G2
	Connection, hose	mm	25, 32, 38, 50	25, 32, 38, 50	25, 32, 38, 50
Max. particle size, coar	se dirt particles	mm	11	11	11
Filter supply surface ar	rea	cm²	1000	1000	1000
Water temperature	During operation	°C	$(\rightarrow$ Permissible water quality)		
(submerged installa- tion)	Out of operation	°C	-20 +35	-20 +35	-20 +35
Ambient temperature (dry installation)	Operating with natural convection	°C	+4 +30	+4 +30	+4 +30
	During operation and forced cooling	°C	+4 +40	+4 +40	+4 +40
Dimensions	Length	mm	340	340	340
	Width	mm	280	280	280
	Height	mm	165	165	165
Connection cable leng	th	m	10	10	10
Weight		kg	6.9	6.9	6.9

# Permissible water quality

Туре		Fresh water	Pool water	Salt water
pH value		6.8 8.5	7.2 8.3	7.5 8.5
Hardness	DH	8 15	8 15	20 30
Free chlorine	mg/l	<0.3	<0.6	<0.3
Chloride content	mg/l	<250	<250	<22000
Salt content	%	<0.4	<0.4	<4
Overall dry residue	mg/l	<50	<50	<50
Temperature	°C	+4 +35	+4 +30	+4 +28

# Wear parts

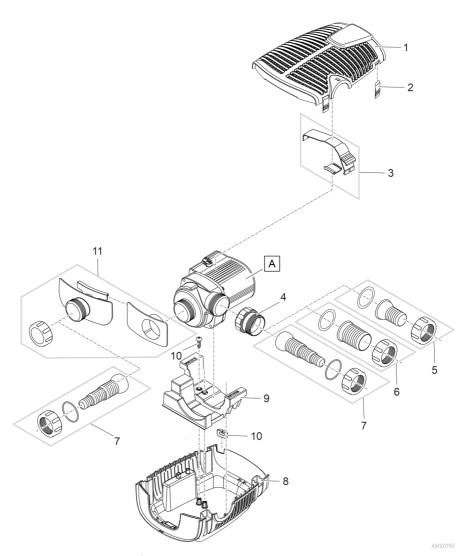
- Impeller unit
- Bearing in the motor block

# **Disposal**

# NOTE

Do not dispose of this unit with household waste.

- ▶ Dispose of the unit by using the return system provided for this purpose.
- ► Should you have questions, please contact your local disposal company. They will give you information on how to correctly dispose of the unit.
- ▶ Render the unit unusable by cutting the cables.

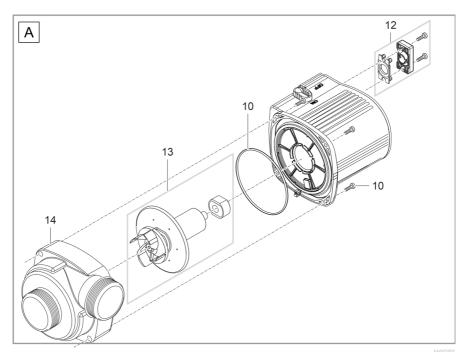


#### AquaMax Eco Premium

Pos.	5000	7000	9000	13000	17000	21000
1	17963	17963	17963	17963	17963	17963
2	30983	30983	30983	30983	30983	30983
3	92640	92640	92640	92641	92641	92641
4	16859	16859	16859	16859	16859	16859
5	17064	17064	-	-	-	-
6	-	-	17069	17069	17069	17069
7	17272	17272	17272	17272	17272	17272
8	17962	17962	17962	17962	17962	17962

#### AquaMax Eco Premium

9	73312	73312	73312	75487	75487	75487	
10	92638	92638	92638	92638	92638	92638	
11	92639	92639	92639	92639	92639	92639	



# AquaMax Eco Premium

Pos.	5000	7000	9000	13000	17000	21000	
12	40509	40509	40509	40509	40509	40509	
13	92644	92644	92645	92646	92647	92648	
14	92649	92650	92651	92652	92653	92654	

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