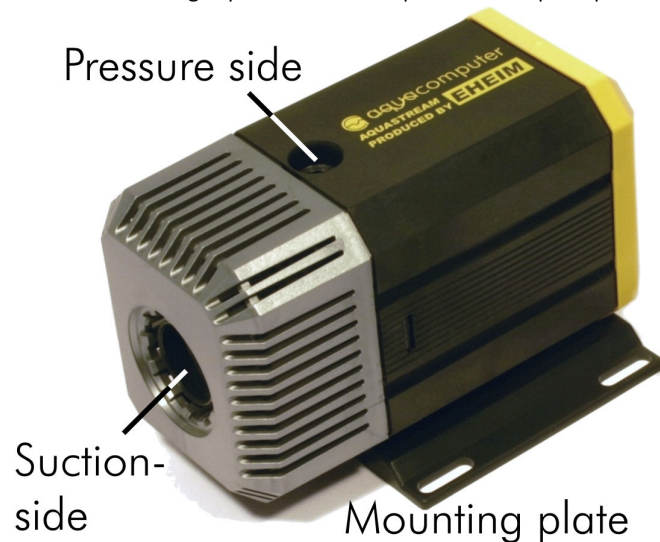


User- and operating manual for the aquastream-pump

Dear customer,

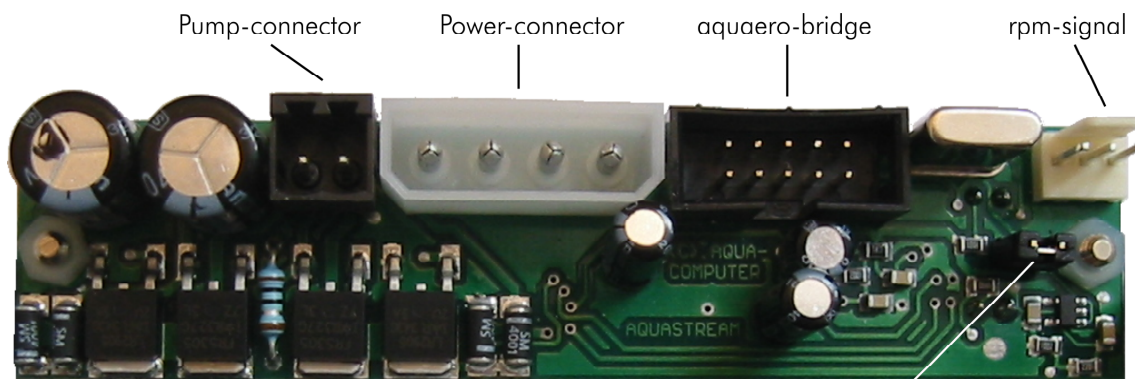
we thank you for purchasing the aquastream pump. You have received a very high-quality and for longevity built pump for your water cooling system. The aquastream pump was developed in co-operation with the company Eheim and is particularly developed for the employment in PC water-cooling systems. The electronic construction units are laid out for maximum performance and each component has been thoroughly tested before distribution. Also each pump is meticulously submitted to a test run, therefore you might find some moist residue within the pump.



Technical Data:

Operating voltage (controller)	5.0 / 12.0 V DC +/- 10%
Power consumption typ.	5.5 W
Delivery volume	up to 300 l/h
Maximum pumpheight	1.2 m
Measurements pump	ca. 145x75x105 mm
Measurements controller	ca. 110x25x94 mm

Overview of the controller for the pump:



- Integration in vacant 3,5" bay possible
 - High-quality mounting plate made of brushed stainless steel
 - 5/12 Volt pump-control, no generation of high-voltages
 - Continuous control of the functionality of the pump
 - Error analysis via flash-codes of the error-LED
 - Special deaeration program for convenient filling of the system
 - Emergency program for low 12 Volt current supply
- Jumper for deaeration-mode

- Rpm-signal jack to monitor and shutdown the functionality of the pump via the BIOS
- Optional connection for the separately available aquaero-controller, transmission of the functionality and errors of the pump as well as adjustment of the pump frequency
- Optional connection to the aquastream PC-interface (optional accessory) with control and regulation of the functionality, performance and frequency of the pump

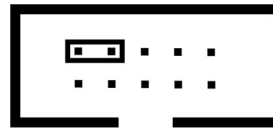
General notice for usage:

- The pump may be used as a submerged or inline-pump outside of the water
- The controller for the pump **must not** get in contact with water!
- A short rattling sound is perfectly normal at first start of the pump. If the sound persists for a longer period of time there is remaining air in the pump
- The pump is not a suction pump. Please make sure that the pump is filled with water
- The pump is not suited for dry operation
- Operate only indoors. Not suited for outdoor operation

Increase of the performance of the pump (for firmware => 1.04, all hardware revisions):

For firmware versions 1.04 and higher the performance of the pump can be increased by approx. 20% simply by implementing a jumper on the aquastream controller. To determine the firmware version of your controller please refer to the sticker on the power connector of the controller. If the sticker is missing an old firmware is installed and an increase of the performance is not possible. A low-cost update-service for older controllers can be found in our online shop at www.aqua-computer.de.

The jumper is implemented on the "aquaero-bridge" as shown on the image. You can use the vacant jumper of the deaeration-mode.



*Jumperposition
for User-Mode
(aquaero-bridge)*

CAUTION: Erroneous use of the jumper may damage or destroy the aquastream controller! Please monitor the correct functionality of the pump after setting the jumper.

Notice: If the controller is used with the optional PC-interface or the aquaero the jumper is not needed! In this case the control of the performance is done via the PC and/or the aquaero.

For advanced users: The jumper activates the "user-mode" of the controller. Hereby the last saved user-frequency is loaded and activated. At delivery this user-frequency is presetted to 56 Hz. Should the user-frequency have changed via the PC-interface and/or aquaero the last saved value is activated. It is thus possible to change the user-frequency once, i.e. via the interface, and continue using the frequency without the interface. The standard frequency of the pump (without jumper) is 47 Hz.

Operating instructions:

First install the connecting adaptors to the aquastream. Should you be using a plug-on reservoir tank with the pump (e.g. aquainlet), then you must remove the silver suction grille and mount the tank directly on the intake adaptor of the aquastream. In this case no connecting adapter should be installed on the intake. The adapters should generally be mounted **without** any tool (i. e. **without force**). The black sealing ring should no longer be visible.

If the pump is to be equipped with an uncoupling set, you will first have to remove the mounting plate from the pump and then fasten the rubber buffers with the enclosed nuts in the elongated holes of the mounting plate.

Optional: The aquastream pump can now be installed in the fmj-housing. This housing effectively shields the electromagnetic fields of the pump-motor and protects your computer against possible disturbances due to electromagnetic signals. The fmj housing can only be installed in connection with the uncoupling set!

To use your pump when filling the system you must either start the power supply unit with the enclosed bridge or attach the pump to a second power supply.

First turn off your PC, or remove the main PSU cable if no power-switch is present. Remove all cables of the PSU (e.g. from non removable disks, optical storage drives or graphic cards). Attach the controller of the aquastream pump to a 5 ¼" 12V power connector and attach the connector of the pump into the fitting socket on the aquastream controller.

To start the PSU without having it connected to the mainboard you will now have to remove the ATX plug from your mainboard. Simply attach the supplied ATX-connector to the end of the plug. After you have attached the connector to the PSU it can now be started.



The green status LED on the aquastream controller should flash now. The aquastream pump is now running in a special mode, which you can use to fill your system. After filling the system you must remove the Jumper from the plate of the aquastream controller. The green status LED should now shine constantly. In order to supervise the pump, you can attach a rpm-signal cable to the Main board. For this use the enclosed cable and attach it to a fan connector of the mainboard as well as to the 3-pin connector of the aquastream controller. Depending on the BIOS version of your mainboard you should receive a signal of approx. 3500 rpm. You can supervise this in the BIOS.

The red error-LED of the aquastream controller informs of possible arising errors by flash-codes. If possible the controller will maintain the functionality despite arising errors of the pump.

The meaning of the flash-codes can be found below. Should you own an aquaero, the circuit board of the aquastream controller can be mounted to the aquaero controller. Appropriate mounting possibilities are implemented. In this case the aquaero and aquastream controllers are connected via a 10-pin ribbon cable. Via this cable the aquastream pump is also supplied with the correct current. All data of the pump can be read and monitored with the aquaero.

Error-codes of the controller:

Green LED flashes: The pump is running the deaeration program (no error)

Red LED flashes:

<u>Flash-impulse</u>	<u>Error</u>
1x	12V-current below the tolerance
2x	12V- current above the tolerance
3x	Pump is not receiving power or is not connected correctly
4x	Short circuit at the Pump or the cable
5x	Signature of the power consumption is not typical

Spare parts:

Partnumbers of the original spare parts and accessories for the pump-controller:

Description	Partnumber Aqua Computer
Rpm-cable	93111
ATX-connector	93112
Cable aquaero-bridge 10-pin	53028/53029
Circuit board for the aquastream	95017
Pump without controller	93086
Front plate stainless steel	93081
Mounting bracket stainless steel	93082
Manual (German)	93080
Manual (English)	93085
Mounting screws for case installation	93083
Mounting screws for aquastream circuit board	93084

Following Eheim spare parts may be used with the pump:

Description	Partnumber Aqua Computer	Partnumber Eheim
Pump cover	41032	7439909
Gasket for pump cover	92014	7263550
Spare axis incl. Rubber	41031	7433720
Impeller incl. axis	41034	7644950 or 7644990
Mounting plate	41036	7264509

All spare parts may be ordered from us. Eheim spare parts can additionally be obtained in local specialized aquarium stores.