

# Quick start guide



## ULTITUBE D5

**ENGLISH: PAGE 1**

**DEUTSCH: SEITE 9**

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## 1. Safety precautions

The following safety precautions have to be observed at all times:

- Read this manual thoroughly and entirely!
- Save your data onto suitable media before working on your hardware!
- This product is not designed for use in life support appliances, devices, or systems where malfunction of this product can reasonably be expected to result in personal injury. Aqua Computer GmbH & Co. KG customers using or selling this product for use in such application do so at their own risk and agree to fully indemnify Aqua Computer GmbH & Co. KG for any damages resulting from such application!

## 2. Scope of delivery

- One reservoir
- Mounting material
- This manual

## 3. Assembly instructions

### 3.1. Installation of a D5 pump motor

*Skip this section if a pump is already installed into the reservoir.*

If you have a complete D5 pump instead of a D5 pump motor, you will have to disassemble the pump first. The only parts needed are the housing with electronic components and the impeller.

Install the pump motor as follows:

1. Place the gasket into the ULTITUBE base part.
2. Place the ULTITUBE base part on top of the D5 pump motor.
3. D5 NEXT only: Remove the controller unit from the pump
4. Slide the mounting ring onto the rear side of the pump motor and fasten the ring by screwing it onto the ULTITUBE base part.
5. D5 NEXT only: Re-attach the controller unit to the pump.

### 3.2. Installation into a PC case

Mounting material for upright standing installation (for example to the bottom of the case) or lateral installation (for example to a side panel of the case) is included in delivery. A standing installation should be preferred for stability reasons.

If the reservoir is used in combination with a D5 NEXT pump, the reservoir can be installed standing directly on the pump. Additional stabilization is recommended, a suitable mounting bracket is available (product code 34111, included in reservoir variants 34100, 34109 and 34110 only).

For additional, vibration dampening fixation in the upper area of the glass tube, a rubber fixation ring is available. The rubber ring can be slipped over the top of the reservoir onto the glass tube (product code 34114, included in ULTITUBE D5 PRO only).

Furthermore, mounting brackets for installation to standard 120 mm or 140 mm fan mounting positions are available as accessories (product codes 34112 and 34113, not included in delivery).

### 3.3. RGBpx LED ring

For effective illumination of the reservoir, a RGBpx LED ring is available (product code 34115, included in ULTITUBE D5 PRO only).

The LED ring consists of a transparent silicone ring and a black rubber LED holder. For installation, slide the silicone ring over the top of the reservoir to your preferred position on the glass tube. Insert the rubber LED holder into the silicone ring.

Connect the LED ring (connector marked with the word "IN") to a compatible RGBpx output of an Aqua Computer device. A suitable cable is included in delivery. If required, additional RGBpx components can be connected (daisy chained) to the adjacent connector (connector marked with the word "OUT").

### 3.4. Disassembly and reassembly of the reservoir lid for filling

To remove the lid, hold the glass tube and turn the lid counter-clockwise. Take care not to lose the gasket. For reassembly, place the gasket onto the glass tube and screw the lid onto the reservoir. Do not use any tools and use only moderate force.

### 3.5. Integration into the cooling loop

Connect the return line to the reservoir connector engraved with the word "IN" and connect the other line to the remaining connector. Use light force only when screwing in fittings in order not to damage the threads in the plastic base part!

### 3.6. Compatible coolants

This product must be used with Double Protect Ultra coolant or water. **In particular, this product must not be used with coolants containing solid micro particles!** Solid micro particles contained in various non-transparent/opaque coolants cause damage to the D5 pump bearing and may lead to destruction of the borosilicate glass tube!

## 4. D5 NEXT

*This chapter applies to variants with D5 NEXT pump only (product numbers 34100, 34109, 34110).*

### 4.1. Detachable control unit, mounting options

The controller unit of the pump can be removed by pulling it off the pump motor unit in a straight line. Make sure that no power is supplied to the pump whenever the controller unit is being removed from or re-attached to the pump motor unit! The controller unit can only be attached to the pump motor unit in a given orientation. Do not use excessive force but re-check the orientation if you encounter problems re-attaching the controller unit.

The orientation of the display can only be adjusted by rotating the entire pump. In order to rotate the pump, the mounting ring attaching the pump to the reservoir needs to be unscrewed, which can result in coolant leakage! Completely drain the coolant before loosening the mounting ring and remove the controller unit from the pump! After rotating the pump, re-fasten the mounting ring by hand.

In case the reservoir is installed without using the mounting plate of the pump, the mounting plate and silicone damper of the pump can be replaced with a flat silicone insert.

Please note that all mounting options that make use of the silicone damper require the pump to be installed vertically above the damper and additionally the reservoir to be firmly secured to the PC case! The silicone damper of the pump is not designed to withstand lateral stress or transportation of the PC!

## 4.2. Electrical connections

**ATTENTION:** Completely turn off your power supply or disconnect the mains power cord from the wall outlet before connecting or disconnecting any cables to/from the device!

## 4.3. Power Connector

Connect a SATA power plug of your PC's power supply unit to this connector. Do not use excessive force but double check the polarity of the plug if you are having trouble to connect.

Pin assignment:	Pin 1, 2, 3, 11:	not connected
	Pin 4, 5, 6, 10, 12:	GND
	Pin 7, 8, 9:	5 V DC
	Pin 13, 14, 15:	12 V DC

## 4.4. Connector "USB"

This connector is used for USB communication with a PC. Connect to an internal USB header of your motherboard. Take special care to make sure the pin alignment matches your motherboard! The USB interface is used for data exchange with the PC and not required for pump operation.

Pin assignment:	Pin 1: GND (black, optional)
	Pin 2: GND (black)
	Pin 3: D+ (green)
	Pin 4: D- (white)
	Pin 5: +5 V (red)

## 4.5. Connector "Fan" for fan or flow sensor

Depending on configuration, this connector can either be used as a PWM regulated fan output with speed signal processing or to connect a flow sensor. Simultaneous use of both functions is not possible!

Pin assignment: Pin 1: GND  
Pin 2: 12 V / max. 25 W  
Pin 3: Speed signal  
Pin 4: PWM signal

Flow sensor and special interconnecting cable are optional accessories and not included in delivery.

Compatible flow sensors:

- Flow sensor with 5.6 mm nozzle (53061, requires cable 53027)
- Flow sensor "high flow" (53068, requires cable 53027)
- Flow sensor high flow LT (53291)
- Flow sensor high flow 2 (53292)

#### 4.6. Connector "Bus" for aquabus or RGBpx

Depending on configuration, this connector can either be used for communication with other Aqua Computer devices or to connect RGBpx products (up to 90 addressable LEDs). Simultaneous use of both functions is not possible!

Compatible aquabus devices:

- aquaero 6 XT (53146, 53206, 53250, 53251, 53262, 53263)
- aquaero 6 PRO (53145, 53253)
- aquaero 6 LT (53234)
- aquaero 5 XT (53089, 53125, 53249)
- aquaero 5 PRO (53090, 53252)
- aquaero 5 LT (53095)

If the RGBpx product to be connected has more than one RGBpx connector, the connector marked with the word "IN" must be used! Additional RGBpx products may be connected to the "OUT" connector.

Compatible RGBpx products:

- RGBpx LED-Strip (53268, 53269, 53270)
- RGBpx lighting set (53271, 53272)
- RGBpx Splitty4 (53267)
- RGBpx LED ring for ULTITUBE (34115)
- RGBpx LED ring for aqualis (53274, 53276)
- RGBpx LED ring for 60 mm reservoir (53277)
- RGBpx cable (53259, 53260, 53261, 53266)

#### 4.7. Technical details D5 NEXT

Power supply voltage (Vin): 5 V DC  $\pm$ 5 %, 12 V DC  $\pm$ 5 %  
Maximum power consumption: 65 Watts (including fan and RGBpx)  
Maximum pump pressure: 370 mbar (approx. 3.7 m water head)  
Maximum fan output power: 25 Watts  
Ambient temperature range: 10 to 40 °C (noncondensing)  
Coolant temperature: 0 to 50 °C

The pump must not run dry!

#### 4.8. Restore factory defaults

There are two options to reset the pump controller to factory defaults. Restoring factory defaults may be useful if the pump is not properly operating or if erroneous settings have been saved into the pump.

1. aquasuite: Click the “Reset device to factory defaults” button on the “System” screen.
2. Device menu: Select “System”, then “Factory defaults” and confirm by pressing the middle key.

#### 4.9. Full manual and aquasuite software

For configuration and monitoring of D5 NEXT pumps, the aquasuite software is available for download from our website [www.aqua-computer.de](http://www.aqua-computer.de). You will find the most up-to-date version as well as the complete operation manual for the D5 NEXT pump in the support section of the website.

## 5. D5 PWM

*This chapter applies to variants with D5 PWM pump only (product numbers 34097, 34098, 34099).*

### 5.1. Electrical connections

Connect the power supply connector of the pump to a matching connector of the power supply unit of the computer.

The pump speed can be adjusted using a compatible PWM fan connector. For monitoring purposes, the pump generates a speed signal. However, a valid speed signal cannot guarantee an actual flow of coolant!

### 5.2. Technical details D5 PWM

Power supply voltage (Vin):	8 – 24 V DC
Current consumption:	0.25 – 1.9 A
Ambient temperature range:	10 to 40 °C (noncondensing)
Coolant temperature:	0 to 50 °C

The pump must not run dry!

## 6. Technical details and care instructions

### 6.1. Technical details

Capacity:	ca. 230/350/470 ml (ULTITUBE 100/150/200)
Thread size:	G ¼
Ambient temperature range:	10 to 40 °C (noncondensing)

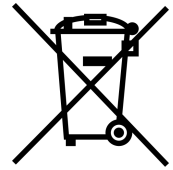
Compatible coolants:	Double Protect Ultra, water
Coolant temperature:	0 to 50 °C
Footprint (L x W):	ca. 72 x 72 mm (without cables/mounting material)
Height with D5 pump:	ca. 200/250/300 mm (ULTITUBE 100/150/200)
Height with D5 NEXT pump:	ca. 215/265/315 mm (ULTITUBE 100/150/200)

## 6.2. Care instructions

Use a dry and soft cloth for cleaning. All electronic components and headers must not get in contact with coolant or water!

## 6.3. Waste disposal

This device has to be disposed of as electronic waste. Please check your local regulations for disposal of electronic waste.



## 6.4. Contact Aqua Computer

We are always happy to answer questions regarding our products and to receive feedback. For answers on frequently asked questions, please also check our website [www.aqua-computer.de](http://www.aqua-computer.de). You might also want to visit our forums and discuss our products with experienced moderators and thousands of members – available 24/7. To get in direct contact with our customer support team, we offer several options:

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