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# Alphacool Eisbaer Pro Aurora 280 CPU AIO

Alphacool article number: 11773

## Quick Info

The Alphacool Eisbaer Pro Aurora CPU AIO water cooler is a special development for processors with particularly large CPU dies. These include the AMD Threadripper and Epyc processors and the Intel CPUs for the LGA 3647 and LGA 4189 socket.

- Full copper radiator, Nickel-plated copper cooler
- Virtually silent DC-LT 2 pump
- Tube length 40 cm
- Digital RGB illuminated cooler and 140 mm fan

## Compatibility

**AMD:** AM4 / AM5 / SP3 / SP6 / sTR5 / sWRX8 / TR4

**Intel:** LGA 1700 / LGA 1851 / LGA 2011 / LGA 2011-3 / LGA 2066 / LGA 3647 / LGA 4189 (optional) / LGA 4677 (optional) / LGA 4710 (optional)

## Scope of delivery

1 x Mounting set for AMD TR4 / sTRX4 / SP3
1 x Mounting set for AMD AM4
1 x Mounting set for Intel 2011 / 2011-3 / 2066
1 x Mounting set for Intel 3647 Narrow & Square
1 x Mounting set for Intel LGA 4189
1 x Mounting set for Intel LGA 1700
8 x M3x5 case mounting screws
8 x M3x30 fan screws
2 x 140 mm Aurora Rise fans
1 x Y-Adaptor 4-Pin PWM
1 x Digital RGB Controller
1 x 3-Pin JST to 3-Pin 5V adaptor
1 x Thermal compound
1 x Screw plug Tool
1 x Allen key

## Technical data radiator

| | |
|---|---|
| L x W x H | 316 x 144 x 30 mm (±3 % in the range of the pre-chambers) |
| Material cooling fins | copper |
| Material chambers | copper |
| Material cooling channels | copper |
| Material threads | brass |
| Material outer housing | stainless steel |
| Threads | 2x G 1/4 |
| For fan size | 140 mm |
| Fan mounting options | 2 x one-sided / 4 x both-sided |

## Technical data cooler and pump

| | |
|---|---|
| L x W x H | 64 x 79 x 54.3 mm |
| Material cooler bottom | Nickel plated copper |
| Material cooler top | PMMA |
| Threads | 2 x G 1/4 (+ 1x Fillport G 1/4) |
| Pump typ | DC-LT 2 |
| Pump speed | 2600 rpm (±10 %) |
| Head of delivery | 1 m |
| Maximum flow rate | 72 L/h |
| Voltage | 6-13.5 V DC |
| Power consumption | 3.2 W |
| MTBF | 50.000 h |
| Number of aRGB Digital LED | 10 |

## Technical data tube

| | |
|---|---|
| Length | 40 cm |
| Material tube | TPV (EPDM/PP) |
| Color | black matt |
| Tube size | 12.7 / 7.6 mm |
| Hardness grade | 35 Shore A to 50 Shore D |
| Working temperature | -50 to +155 °C |

## Technical data fittings

| | |
|---|---|
| L x D straight fitting | 24 x 18 mm |
| Quantity straight fittings | 4x |
| For tube size | 12.7 / 7.6 mm |
| Material fittings | nylon |

## Technical data quick fasteners

| | |
|---|---|
| L x D | 95 x 27 mm |
| Material | nylon |
| For tube size | 12.7 / 7.6 mm |
| Color | black |

## Technical data fan

| | |
|---|---|
| Speed | 0-2000 rpm |
| Static pressure | 2.20 $mmH_2O$ |
| Air flow rate | 154.1 $m^3/h$ |
| Bearings | Sleeve bearing |
| Fan connector | 4-Pin PWM |
| Number of aRGB Digital LED | Frame: 16 / Hub: 8 |
| Connection Digital aRGB | 3-Pin JST + 3-Pin 5 V |
| Dimensions | 140 x 140 x 25 mm |
| Max working temperature | 60 °C |

## Download links

| | |
|---|---|
| Manual | 11773_Alphacool_Eisbaer_Pro_Aurora_280_CPU_AIO_Manual.pdf |
| Safety data sheet | 11773_Alphacool_Eisbaer_Pro_Aurora_280_CPU_AIO_SDS.pdf |
| Product pictures | 11773_Alphacool_Eisbaer_Pro_Aurora_280_CPU_AIO_pics.zip |
| EU-DoC / CE / RoHS | Alphacool_EuDoc_CE_RoHS_11773.pdf |

## Packaging dimensions per unit

| | |
|---|---|
| L x W x H | 370 x 255 x 165 mm |
| Weight | 3100 g |

## Other data

| | |
|---|---|
| Certificates | CE, FC, ROHS |
| EAN | 4250197117739 |
| Customs code | 84195080900 |
| Guarantee | 3 years |

# Article text

The Alphacool Eisbaer Pro Aurora CPU AIO water cooler is a special development for processors with particularly large CPU dies. These include the AMD Threadripper and Epyc processors and the Intel CPUs for the LGA 3647 and LGA 4189 socket.

**Large cooling surface**

The cold plate bottom covers the entire surface of the respective processors. The area of the cooling fins exceeds all known processor cores with an area of around 55 x 42 mm. This ensures that all hotspots of a CPU are directly covered and thus optimally cooled. The cooling fins are 0.4 mm thick and also have an optimal distance of 0.4 mm between them. In total there are 58 cooling fins on the bottom of the cooler. The bottom of the cooler is only 3 mm thick, which allows the heat to reach the water and be dissipated as quickly as possible.

**Copper radiator**

As per usual with Alphacool, the radiators are made of copper. Alphacool is the first manufacturer worldwide to use copper for all water bearing components such as the antechambers, the cooling fins and the cooling channels to which the fins are soldered. The connection threads are made of brass for strength reasons. In addition, the cooling fins are only lightly painted. On closer inspection the copper shimmers through a little. A thick lacquer coating would result in a reduction of the cooling capacity. The fin density is at optimal 15FPI. Therefore the radiator works perfectly even at low airflow. A too high fin density would require fans with higher speed to achieve the same cooling capacity. A lower fin density would no longer benefit from fast rotating fans. So the golden mean was chosen.

**Real water cooling**

The Eisbaer Pro Aurora consists almost entirely of actual water cooling components. The extremely robust and durable TPV hoses are used in the enterprise products for servers and workstations. The hose connections also come from the Enterprise series from Alphacool and use the standard G1/4". This makes the Eisbaer Pro Aurora fully compatible with all common water cooling products. The quick-release fastener allows easy expansion of the AIO with additional components. The most important of these are the prefilled radiators and the Eiswolf GPU AIO water cooling system.

**Fan and lighting**

The entire Eisbaer Aurora Pro cooler is equipped with addressable digital RGB LEDs. This gives a real eye-catcher in the Case. The fan used is the Aurora Rise with 140mm. Due to the special blade design, the fan is extremely quiet and the addressable RGB LEDs provide brilliant illumination. The Alphacool Aurora Rise fan convinces with a max. statistical pressure of 2.20 mm/H2O and offers a max. air flow of 154.1 $m^3/h$. The PWM control allows the fan to be controlled over a wide speed range. In addition, it offers a zero control. It can therefore be regulated down to 0 rpm and then starts with approx. 350 rpm. Of course all Digital RGB LEDs can be controlled at will. Depending on the controller almost all effects are possible.

**How to connect everything**

The fans are normally controlled via a 4-pin PWM connector. An included Y-adapter for the fans makes it easy to connect them to the mainboard. This allows all fans to be controlled and regulated via one connector. Each fan has a 3-pin JST connector including Y-adapter for the LED illumination. This allows the fans to be connected directly together and can also be controlled simultaneously via a controller. For the connection to a typical 3-pin 5V connector a corresponding adapter is included. Alternatively, the included Digital RGB controller can be used. The pump of the Eisbaer Aurora uses a 3-pin Molex connector. This can also be connected to the mainboard.

The Eisbaer Pro Aurora is a true multi-talent. Expandable, fully compatible with DIY water cooling components and it is the optimal solution for the most powerful processors on the market.

With the Alphacool LGA 4677 Mounting Bracket (article no.: 13764), this cooler is also compatible with the Intel socket LGA 4677.