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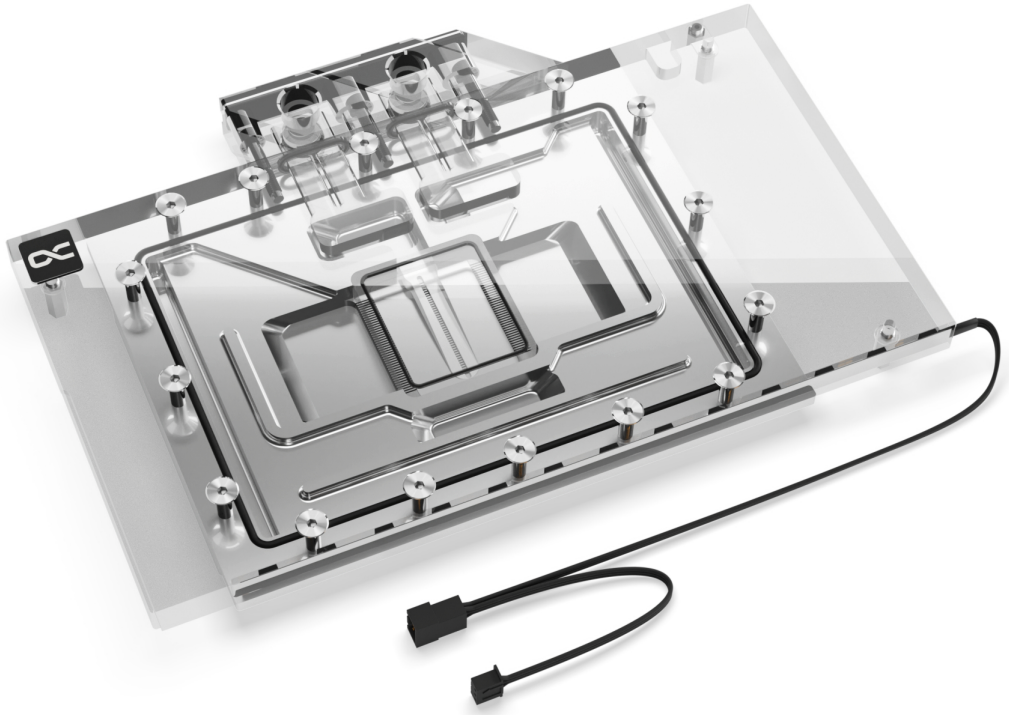
Alphacool Eisblock Aurora Geforce RTX 4090 Aorus Master - Gaming V.2 with backplate

Alphacool article number: 13838



Quick Info

The next generation - the Alphacool Eisblock Aurora water cooler for Geforce RTX 40XX graphics cards. In order to dissipate the enormous heat of this graphics card generation in the best possible way, numerous optimizations have been made to the water cooler compared to the previous model. The fin structure was adapted and enables a very good water flow while increasing the cooling surface. The modified jet plate with improved inflow engine ensures an optimal distribution of the water on the cooling fins.

- Optimised fin structure enables very good water flow & increase of cooling surface
- Modified jet plate ensures optimal distribution of the water on the cooling fins
- Chrome-plated copper cooler
- Visually calm & simple design with digital aRGB illumination

Compatibility

Note: This Version (V.2) of the cooler is compatible with PCB Layout V.1.1 and V.1.0

- Gigabyte AORUS GeForce RTX 4090 Master 24G, 24GB GDDR6X (GV-N4090AORUS M-24GD)

- Gigabyte GeForce RTX 4090 Gaming OC 24G, 24GB GDDR6X (GV-N4090GAMING OC-24GD)

Scope of delivery

1x Eisblock Aurora Acryl V.2
1x Backplate
4x 8x8x1mm Pad
1x 15x15x1mm Pad
1x 38x15x1mm Pad
2x 51x15x1mm Pad
1x 35x8x1mm Pad
3x 100x8x1mm Pad
2x 105x8x1mm Pad
1x Thermal grease
1x Putty tool
7x EVA Unterlegscheibe
7x M2x5 Schraube
1x 38x15x3mm Pad
2x 40x8x3mm Pad
1x 45x45x3mm GPU-Pad
2x 100x8x3mm Pad
6x M2x11 Schraube
1x ARGB Adaptor
2x G1/4“ Plugs
1x Plug tool

Technical data cooler

Dimensions (L x W x H)	233,3 x 152,46 x 33,9mm
Material cooler	chrome-plated copper
Material cooler top	acrylic
Max working temperature	60°C
Pressure tested	0,8 bar
Threads	4 x G1/4"
Thickness cooling fins	0,4mm
Distance cooling fins	0,4mm
Illumination	digital aRGB LEDs
Power connector digital aRGB LEDs	3-Pin JST
Power digital aRGB LEDs	5V
Number of digital aRGB LEDs	12
Color	transparent

Technical data backplate

Dimensions (L x W x H)	233,3 x 127,96 x 6mm
Material	aluminium
Color	black

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Manual	13838_Alphacool_Eisblock_Aurora_Geforce_RTX_4090_Aorus_Master_-_Gaming_V.2_with_backplate_Manual.pdf
Product pictures	13838_Alphacool_Eisblock_Aurora_Geforce_RTX_4090_Aorus_Master_-_Gaming_V.2_with_backplate_pics.zip
EU-DoC / CE / RoHS	Alphacool_EuDoc_CE_RoHS_13838.pdf

Packaging dimensions per unit

L x W x H	355 x 170 x 45 mm
Weight	1820 g

We assume no responsibility for any typing errors. Alphacool International GmbH, Marienberger Strasse 1, 38122 Braunschweig Tel: (+49)0531 288 7400 Supportmail: info@alphacool.com

Other data

Certificates	CE, FC, RoHS
EAN	4250197138383
Customs code	84195080900
Guarantee	2 years

Article text

The next generation - the Alphacool Eisblock Aurora water cooler for Geforce RTX 40XX graphics cards. In order to dissipate the enormous heat of this graphics card generation in the best possible way, numerous optimizations have been made to the water cooler compared to the previous model. The fin structure was adapted and enables a very good water flow while increasing the cooling surface. The modified jet plate with improved inflow engine ensures an optimal distribution of the water on the cooling fins.

Technical Highlights

The fin structure of this Eisblock cooler generation was developed together with Nvidia board partners. The fin thickness is 0.4 mm, the distance between the cooling fins is 0.4 mm. This ensures a very good water flow while increasing the cooling surface. The jet plate has a revised inlay that spreads the water pressure better over the fins thus optimizing the heat absorption. The adjusted water inflow gives the water a better angle of inflow.

Chrome-plated copper

The cooler is made entirely of chrome-plated copper. A chrome plating is much harder than a nickel plating and therefore less sensitive to acids, scratches and damage. It completely eliminates the risk of chipping nickel plating. Additionally, chrome plating looks much more homogeneous and provides a shine that cannot be achieved by nickel plating. Chrome-plated coolers have previously only been used in the industrial sector in areas where extreme influences act on the coolers.

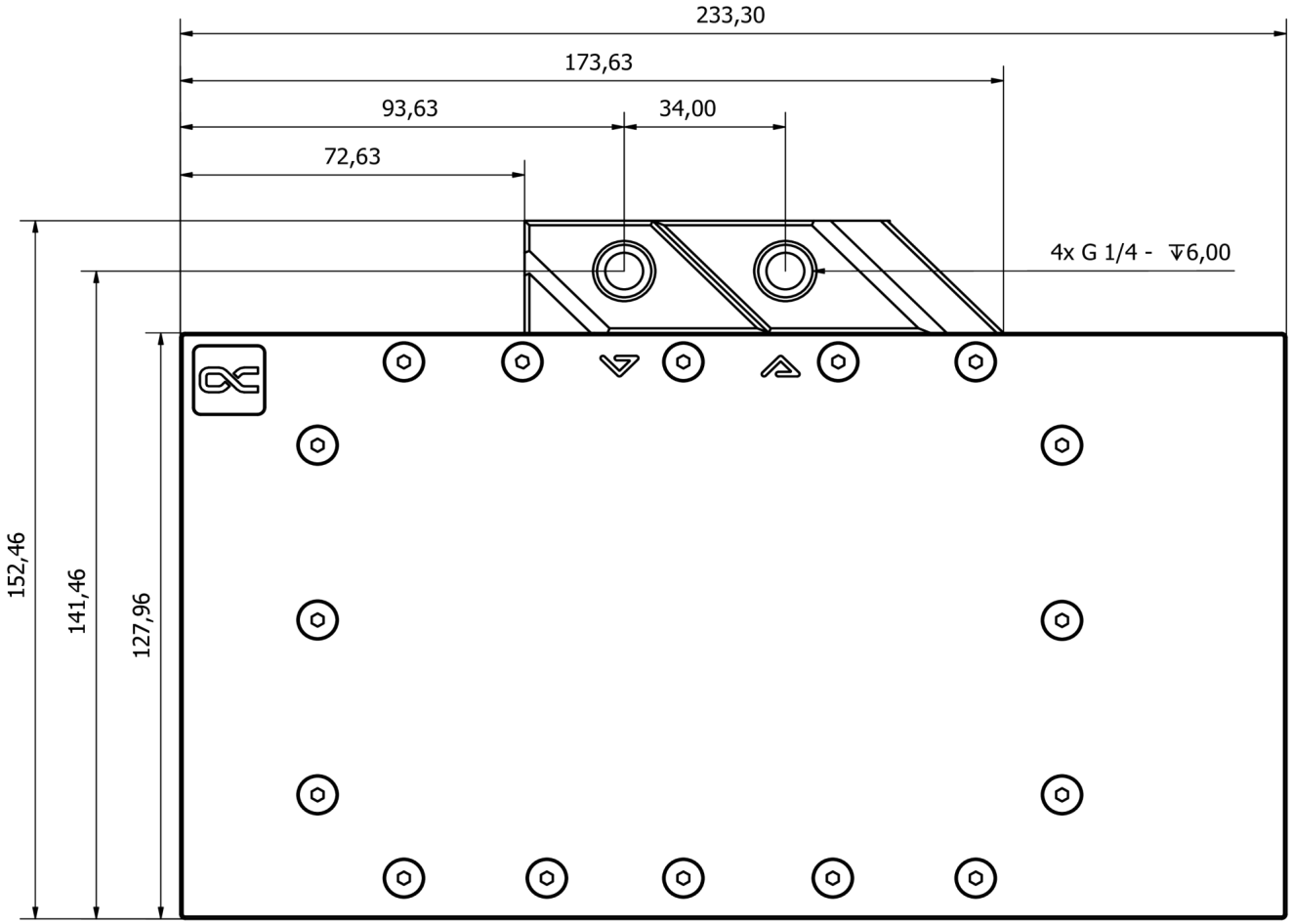
Design

The Aurora design of the Geforce RTX 40XX Eisblock generation is visually calmer and simpler. Only one O-ring runs around the entire cooler. The design around the cooling fins and jetplate makes for a cleaner look. The illumination of the digitally addressable RGB LEDs is even better distributed throughout the cooler as a result of the chrome plating. The terminal's design is in line with the classic Aurora design.

Thermal paste & thermal pads

The included thermal compound is Alphacool's Subzero. With a thermal conductivity of 16 W/mK, it is one of the highest performing thermal pastes on the market. The electrically non-conductive thermal compund is particularly well suited for high contact pressures, but can still be processed perfectly due to its viscosity of 850,000 TF. Alphacool Soft Pads with 1mm thickness are used on the voltage converter and the graphics memory. The thermal conductivity of the pads is 7 W/mK. The pads for the back of the PCB are 3mm thick and have a thermal conductivity of 3 W/mK.

Figure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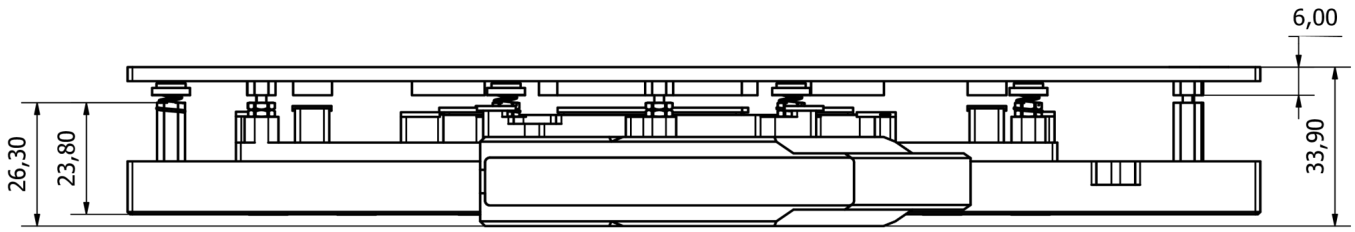
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