

## Alphacool Eisblock Aurora Acryl GPX-N RTX 4090 with Backplate (Reference)

Alphacool article number: 13429



### Quick Info

The next generation - the Alphacool Eisblock Aurora water cooler for Geforce RTX 4XXX 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

- Nvidia GeForce RTX 4090 Reference Design
  - INNO3D GeForce RTX 4090 X3 OC, 24GB GDDR6X, HDMI, 3x DP (N40903-246XX-18332989)
  - INNO3D GeForce RTX 4090 iCHILL X3, 24GB GDDR6X, HDMI, 3x DP (C40903-246XX-1833VA47)
  - INNO3D GeForce RTX 4090 iCHILL Frostbite, 24GB GDDR6X, HDMI, 3x DP (C4090-246XX-1833FB)
  - INNO3D GeForce RTX 4090 iCHILL Black, 24GB GDDR6X, HDMI, 3x DP (C4090-246XX-18330005)
  - PNY GeForce RTX 4090 XLR8 Gaming Verto Epic-X RGB Overclocked Triple Fan, 24GB GDDR6X, HDMI, 3x DP (VCG409024TFXXPB1-0) (\*)
  - PNY GeForce RTX 4090 XLR8 Gaming Verto Epic-X RGB Triple Fan, 24GB GDDR6X, HDMI, 3x DP (VCG409024TFXXPB1) (\*)
  - KFA2 GeForce RTX 4090 SG (1-Click OC), 24GB GDDR6X, HDMI, 3x DP (49NXM5MD6DSK)
- (\* The cooler is compatible with the GPU, but the rear part of the PCB is not covered. This has no negative effect on the cooling performance!)

## Scope of delivery

|   |                   |
|---|-------------------|
| 1x Eisblock Aurora Acryl GPX-N RTX 4090 Reference | 2x 8x100x3mm Pad  |
| 1x Backplate                                      | 1x Thermal grease |
| 4x 84x8x1mm Pad                                   | 1x Putty tool     |
| 1x 15x15x1mm Pad                                  | 5x M2x5 Screw     |
| 2x 105x8x1mm Pad                                  | 5x EVA Washer     |
| 2x 50x15x1mm Pad                                  | 1x M2x5 Screw     |
| 1x 40x15x1mm Pad                                  | 1x PCI Bracket    |
| 1x 45x45x3mm GPU-Pad                              | 5x M2x11 Screw    |
| 1x 15x15x3mm Pad                                  | 1x ARGB Adaptor   |
| 1x 8x40x3mm Pad                                   | 2x G1/4" Plugs    |
| 2x 8x51x3mm Pad                                   | 1x Plug tool      |

## Technical data cooler

|                                   |                           |
|-----------------------------------|---------------------------|
| L x W x H                         | 198,60 x 144,29 x 35,89mm |
| Material cooler                   | chrome-plated copper      |
| Material cooler top               | acrylic                   |
| 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                        |

## Technical data backplate

|           |                       |
|-----------|-----------------------|
| L x W x H | 198,60 x 119,69 x 6mm |
| Material  | aluminium             |
| Color     | black                 |

## Download links

|                  |  |
|------------------|--|
| Manual           | 13429_Alphacool_Eisblock_Aurora_Acryl_GPX-N_RTX_4090_with_Backplate_(Reference)_Manual.pdf |
| Product pictures | 13429_Alphacool_Eisblock_Aurora_Acryl_GPX-N_RTX_4090_with_Backplate_(Reference)_pics.zip   |

## Packaging dimensions per unit

|           |                   |
|-----------|-------------------|
| L x W x H | 352 x 170 x 45 mm |
| Weight    | 1660 g            |

## Other data

|              |               |
|--------------|---------------|
| Certificates | CE, FC, RoHS  |
| EAN          | 4250197134293 |
| Customs code | 84195080900   |

## Article text

The next generation - the Alphacool Eisblock Aurora water cooler for Geforce RTX 4XXX 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.

**Important note: The RTX 4090 Eisblock Aurora Reference cooler is not compatible with Nvidia's Geforce RTX 4090 Founders Edition. The RTX 4090 FE is compatible with the following cooler: Alphacool Eisblock Aurora Acryl GPX-N RTX 4090 Founders Edition with Backplate (Art. 13456)**

### 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 4XXX 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 compound is particularly well suited for high contact pressures, but can still be processed perfectly due to its viscosity of 850000 TF. Alphacool Soft Pads with 1mm thickness are used on the voltage converter and the graphics memory. The thermal conductivity of the pads is 7W/mk. The pads for the back of the PCB are 3mm thick and have a thermal conductivity of 3W/mk.

