

## Alphacool ES H100 80GB HBM PCIe

Alphacool article number: 13844

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### Quick Info

The Alphacool ES Copper/Carbon water cooler with backplate was developed for the Alphacool Enterprise Series. Due to the positioning of the connections, the hosing of the cooler in the server rack is significantly simplified. The top of the cooler is made of carbon. This makes the water cooler lighter compared to Alphacool's Eisblocks with acetal or acrylic tops. Thanks to the compact design, only 1 slot is needed to mount the cooler in the server rack instead of 1.5 slots as before. This additional space saving is one more argument for using the ES Copper/Carbon graphics card water cooler.

- 1 Slot Cooler
- Fullcover water cooler
- Chrome-plated copper bottom
- For high performance in server and workstation systems

### Compatibility

- Nvidia H100 80GB PCIe 5.0

## Scope of delivery

1x ES H100 80GB HBM PCIe Cooler	1x Thermal Grease
1x Backplate	1x Putty tool
1x 65x8x1mm Pad	7x M2x11mm Screw
2x 81x8x1mm Pad	7x M2x5mm Screw
1x 57x8x1mm Pad	1x EVA Washer
1x 15x8x3mm Pad	1x PCIe Bracket

## Technical data

Dimensions (L x W x H)	261,89 x 95,71 x 19,40mm
Slot size	1
Material cooler	Chome-plated copper
Material cooler top	Carbon
Threads	2 x G1/4"
Maximum working temperature	60 °C
Pressure tested	0,8 Bar
Color	black, carbon

## Technical data backplate

Dimensions (L x W x H)	261,89 x 95,71 x 4,00 mm
Material	Aluminium
Color	black

## Download links

Manual	<a href="#">13844_Alphacool_ES_H100_80GB_HBM_PCl_e_Manual.pdf</a>
Product pictures	<a href="#">13844_Alphacool_ES_H100_80GB_HBM_PCl_e_pics.zip</a>

## Packaging dimensions per unit

L x W x H	350 x 200 x 50 mm
Weight	2000 g

## Other data

Certificates	CE, FC, RoHS
EAN	4250197138444
Customs code	84195080900

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### **More performance!**

Alphacool manages to position the cooler as close as possible to the components to be cooled. For this purpose, the heat conducting pads used are reduced to a thickness of 1mm. The maximum possible reduction in the thickness of the copper block and the optimization of the water flow inside the cooler allow all important components such as GPU, voltage converters and VRAMs to be cooled by water much better and more effectively. All of this provides a significant increase in cooling performance.

### **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.

### **Connections on the back?**

In order to save space in the width and height during installation, the water input and output have been moved to the back of the cooling block. This positioning of the connections makes hosing much easier. It enables easy integration of the GPU cooler into the water circuit even in the tightest server housings.

### **Copper or aluminum?**

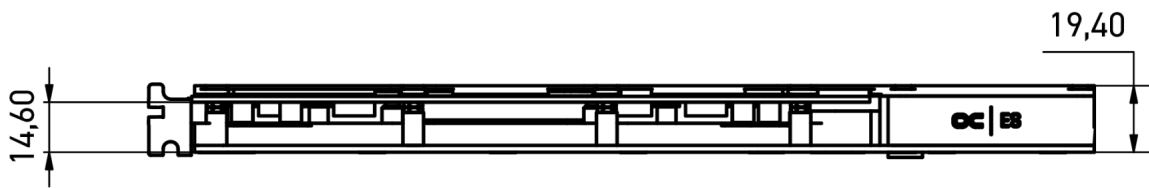
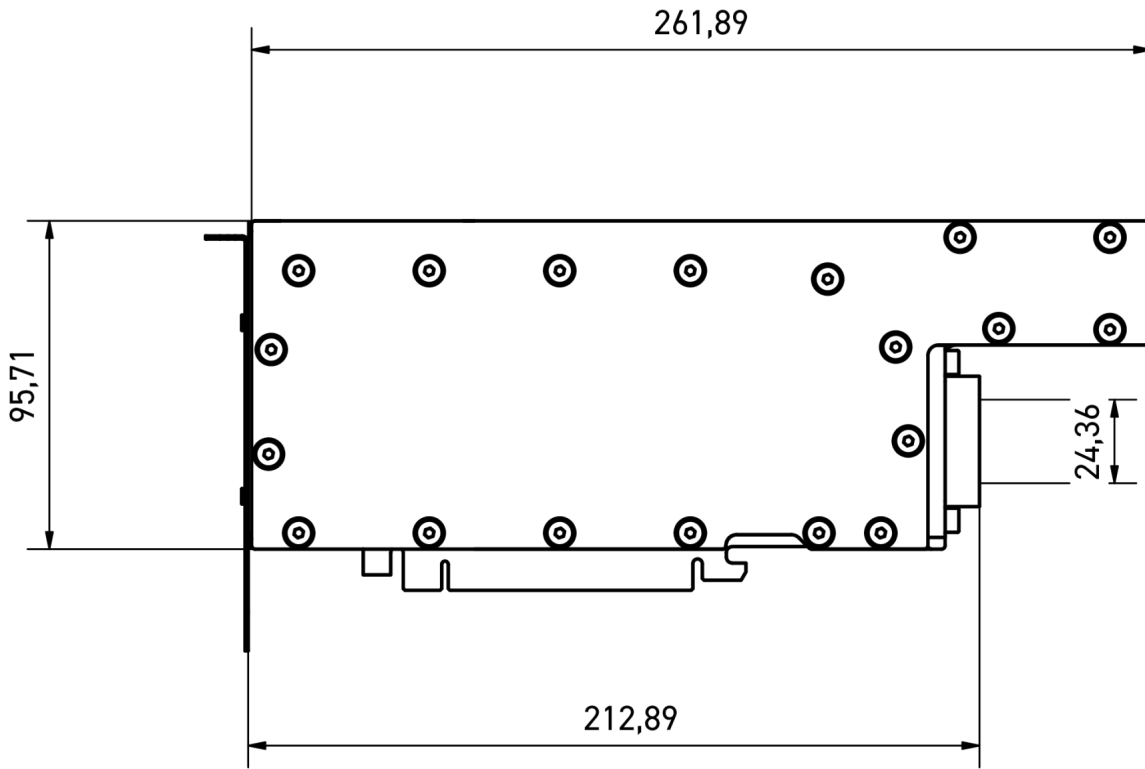
Alphacool uses only copper for all water-bearing parts. Copper has almost twice the thermal conductivity of aluminum and is therefore clearly the better choice of material for water cooling. The chrome-plated copper base is highly resistant to acid, which means that chipping of the chrome plating can be ruled out.

### **Thermal paste & thermal pads**

The included thermal paste is Alphacool's Apex with a thermal conductivity of 17 W/mK. The electrically non-conductive thermal paste is particularly well suited for high contact pressures. For the thermal pads, Alphacool uses soft pads that fit perfectly to the components to be cooled and are very durable. The 3mm thick pad have a thermal conductivity of 3 W/mK. The 1mm thick pads can dissipate 7 W/mK of heat.

### **Discreet appearance**

The matte carbon finish gives the cooler a noble appearance. This makes it additionally interesting for private users who want to do without aRGB lighting.



General tolerance:  $\pm 0,25$ mm  
Dimension in millimeter