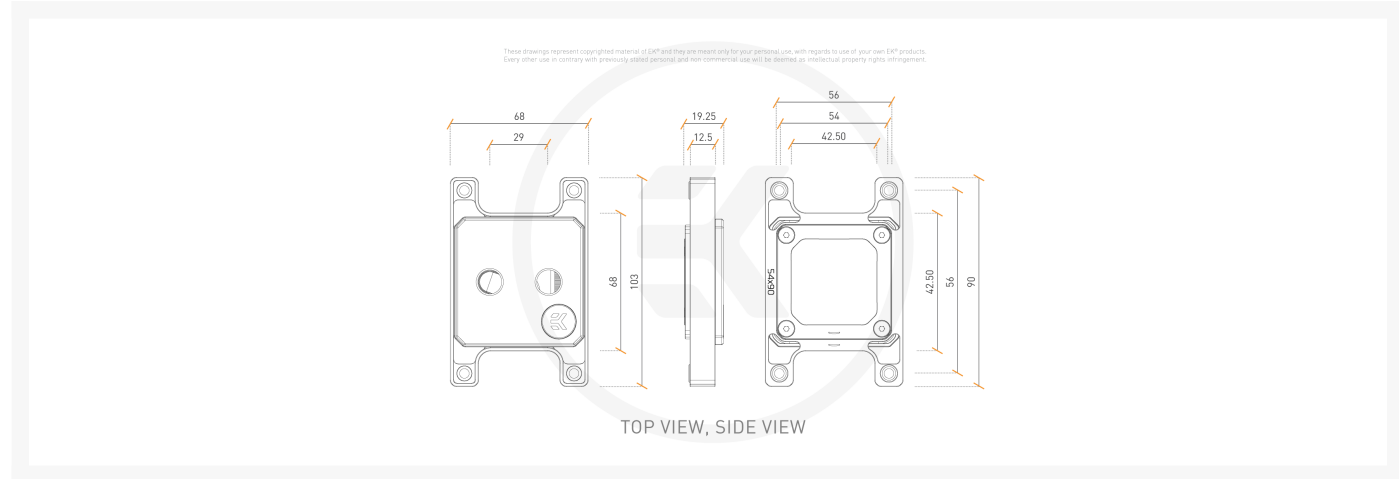
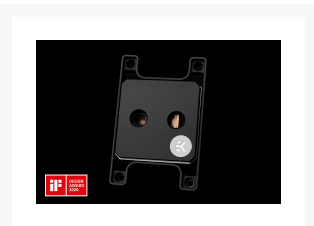
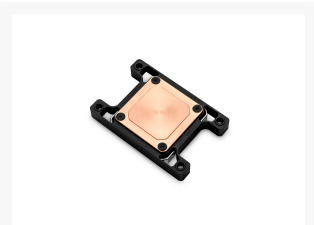




# EK-Quantum Magnitude - AM4 Copper + Acetal

Special Price  
**\$205.99** was  
 \$220.99

## Product Images



## Short Description

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The EK-Quantum Magnitude is the new ultimate bespoke CPU water block from EK that brings the highest cooling performance with the lowest possible flow restriction. The AM4 version of the water block is using a specific combination of flow distribution insert, mounting pressure, and cold plate geometry tailored for the IHS and chiplet layout of AMD AM4 socket processors.

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Different from any mounting structure used by other water blocks that are usually black and mundane plates, the design accentuates an integrated H-shaped, three-dimensional frame with premium finishes that firmly cradles the main body in place while the screws are morphed into a sophisticated design detail.

Specialized manufacturing techniques were deployed to create this truly unique product. Not a single component of Magnitude was made using mass production techniques; instead, every single piece was CNC machined separately, out of a solid piece of material. This version of the water block features a bare copper cold plate with a high-grade glass-like top CNC machined out of durable POM acetal.

A CNC machined solid brass insert made it possible to significantly enlarge and optimize the cooling engine. Compared to previous generations of water blocks, the fin array has a 50% bigger surface area, all contained in a smaller footprint to ensure maximum compatibility even with mITX motherboards. The copper cold plate uses 0.40mm wide microchannels and 0.26mm thick microfins to maximize the thermal transfer with minimal flow restriction.

Since EK-Quantum Magnitude was engineered from the ground up for each specific socket, the AM4 version features an offset insert that directs more flow over the AMD Ryzen CPU chiplets with the I/O die still getting plenty of flow to keep it cool.

The aesthetic interchangeable inner frame is also machined out of a single piece of brass, which is subsequently nickel-plated. The aesthetic frame can be replaced with color-anodized aluminum variants that perfectly match EK-Quantum Torque fitting lineup or with a white POM acetal piece that can be used as a light dispersion element for addressable D-RGB LEDs. The aesthetic interchangeable inner frames are sold separately.

The mounting mechanism is a three-dimensional H shaped aluminum piece that makes the screws a seamless part of the water block. Strong edges and chamfers root this award-winning icon firmly among the EK-Quantum line. Did we say award-winning?

EK-Quantum Magnitude is bearing the [prestigious iF Design award](#) for its bold and different approach to the CPU water block mounting mechanism.

The cold plate of the Magnitude water block is intentionally machined into a convex shape to align with the concave shape of the CPU IHS. However, if you are interested in a flat cold plate that works perfectly with lapped CPUs or aftermarket IHSs, EK is providing a special, flat bare copper as well as nickel-plated copper cold plates that are sold separately.

The Magnitude is supplied with an additional, thicker jet plate. If the user concludes that his CPU IHS is exceptionally concave (poor thermal paste spread after mounting), the curvature of the water block cold plate can be adjusted by using this secondary jet plate. It will make the center of the contact area bow by an additional 0.1mm outwards, for it to make better contact with the IHS.

## Specifications

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CPU socket compatibility:

- AMD AM4

Enclosed:

- EK-Quantum Magnitude Water Block
- Mounting mechanism with all necessary springs, screws, and washers
- AMD AM4 Socket compatible backplate
- Additional jet plate - 0.6P
- Thermal Grizzly Hydronaut (1.0g) Thermal Paste
- Allen (Hex) key - 2.5mm

Made in Slovenia, EU

PLEASE NOTE:

- This product should NOT be installed with any aluminum EK Fluid Gaming parts!
- Rotating the insert on AM4 versions of the water block will reduce performance due to chiplet placement.

## Additional Info

	Copper Acetal
	G1/4
	AMD

## Additional Information

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Brand	EK Waterblocks
SKU	EK-MAG-AM4-CA-D
Weight	2.5000
Color	Black
CPU Series	AM4/PGA 1331
Block CPU Type	AMD
Block Style	Nickel-Acetal
Vendor SKU/EAN	3831109819241
Special Price	\$205.99

