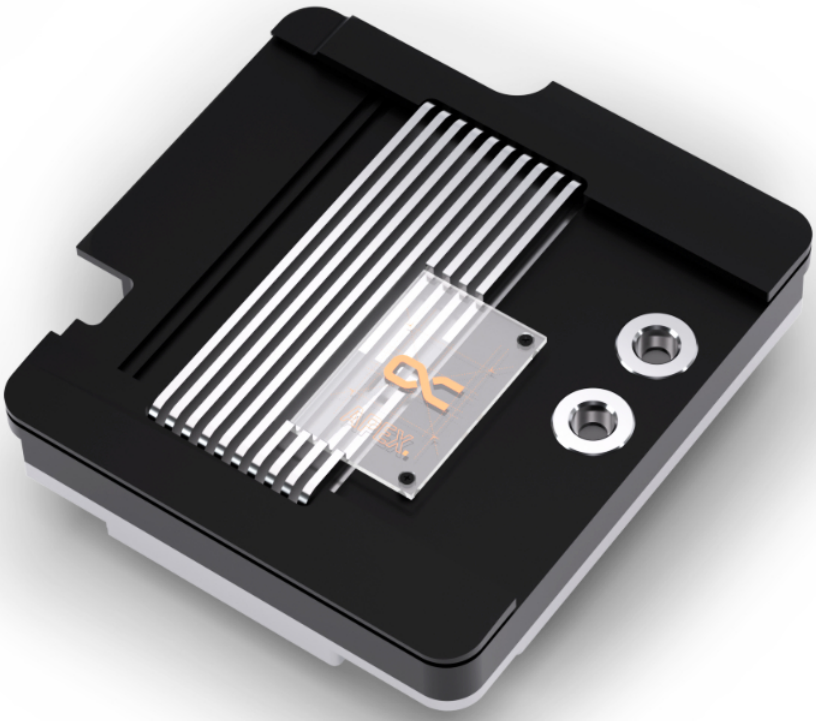
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Alphacool Apex Monoblock ASUS PROART X870E-Creator WiFi

Alphacool article number: 14684



Quick Info

The Apex Monoblock is the ideal cooling solution for maximum performance, combined with an elegant design that is perfectly matched to the motherboard. Developed specifically for the motherboard, the monoblock cools the CPU, the voltage regulators (VRMs), as well as the M.2 NVMe SSD located below the CPU socket. All key motherboard components are actively cooled through the monoblock's water block.

- Signature ProArt design
- Processors hotspot optimized
- Fullcover M.2, VRM and CPU Cooler

Compatibility

ASUS ProArt X870E-Creator WiFi (AM5)

Scope of delivery

1x Apex Monoblock
1x 13,5x15x2mm Pad
1x 10x15x2mm Pad
2x 91,5x8x2mm Pad
2x 89x8x2mm Pad
1x 75x22x2mm Pad
1x Thermal Grease
1x Putty tool
4x AM5 Mounting Nut
4x Washer
4x M3x8mm Screw

Technical data

Dimensions (L x W x H) (in mm)	174,40 x 164,50 x 51,50
Material cooler	Chome-plated copper (Cu-HCP)
Material cover	Aluminium (AlMg0,7Si)
Material cooler top	Plexi (LXN865)
Material terminal	Brass (CuZn39Pb3)
Threads	2x G 1/4
Material connection thread	Brass (CuZn39Pb3)
Maximum torque G1/4 thread (in Nm)	1,00
Maximum torque M3 thread (in Nm)	0,48
Maximum torque M4 thread (in Nm)	1,12
Maximum operating temperature (in °C)	60
Recommended working temperature (in °C)	20
Minimum operating temperature (in °C)	-20
Maximum tested pressure (in bar)	2,00
Recommended working pressure (in bar)	0,00 - 1,00
Thickness of cooling fins (in mm)	0,40
Distance between cooling fins (in mm)	0,40
Cooling technology	Jet engine

Technical data thermalpads

Thermal conductivity of thermal pads (in W/mK)	7
Thermal pads Hardness ASTM 2240	35 Shore 00

Technical data thermalpaste

Evaporation rate	Less than 0,5
Density (g/cm3)	3,2 (Test method ASTM D2196)
Viscosity	150~200*10³ (Test method ASTM D2196)
Operating temperature (°C)	-40°C to 120°C
Breakdown voltage (V/mil)	250 (Test method ASTM D149)
Thermal impedance (°C in 2/W)	0.1 +/- 0.01 (Test method ASTM D5470)
Maximum operating pressure (psi)	40
Quantity (in gramm)	1g
Color	Grey

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Manual	14684_Alphacool_Apex_Monoblock_ASUS_PROART_X870E-Creator_WiFi_Manual.pdf
Product pictures	14684_Alphacool_Apex_Monoblock_ASUS_PROART_X870E-Creator_WiFi_pics.zip
EU-DoC / CE / RoHS	Alphacool_EuDoc_CE_RoHS_14684.pdf

Packaging dimensions per unit

L x W x H	290 x 250 x 105 mm
Weight	2740 g

Other data

Certificates	CE, FC, RoHS
EAN	4250197146845
Customs code	84195080900
Guarantee	5 years

Article text

The Apex Monoblock is the ideal cooling solution for maximum performance, combined with an elegant design that is perfectly matched to the motherboard. Developed specifically for the motherboard, the monoblock cools the CPU, the voltage regulators (VRMs), as well as the M.2 NVMe SSD located below the CPU socket. All key motherboard components are actively cooled through the monoblock's water block.

Like the Apex 1 CPU cooler, the Apex Monoblock uses an offset cold plate. This allows the coolant flow to hit the thermal hotspot of the AM5 CPU directly. In combination with the proven cross-slot structure and the 3D Jetplate 2.0, this design generates high water pressure, enabling particularly efficient heat dissipation. Ideal for overclocking or continuous operation.

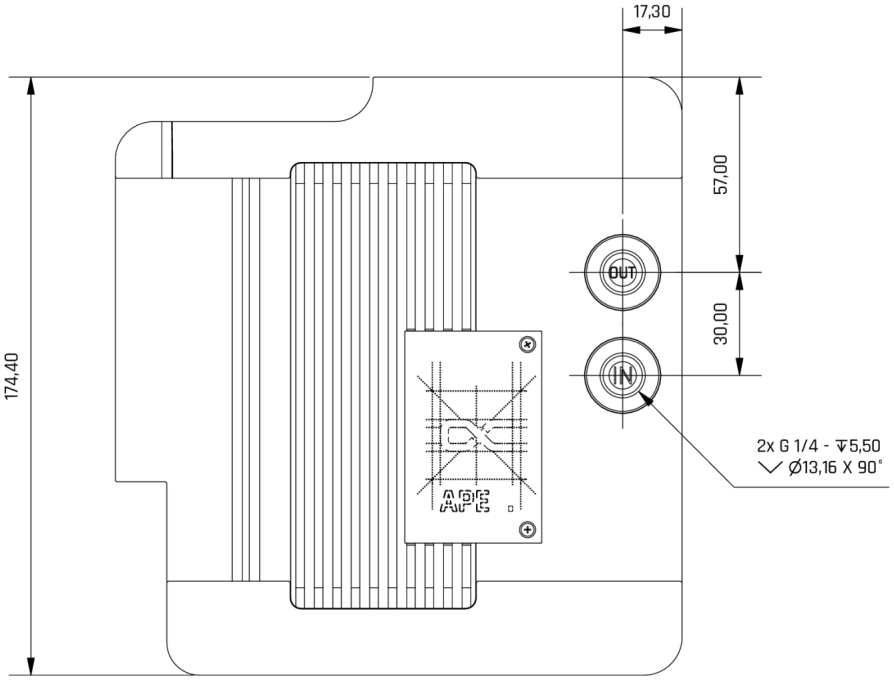
The cooler is milled from a solid block of copper. The G1/4" connection terminal is made of brass and, together with the copper base, ensures long durability as well as excellent thermal conductivity.

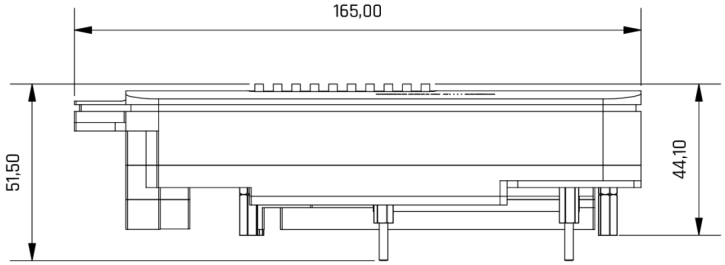
The Apex Monoblock design, tailored to the respective motherboard, not only delivers optimal cooling performance but also integrates seamlessly into the motherboard's appearance.

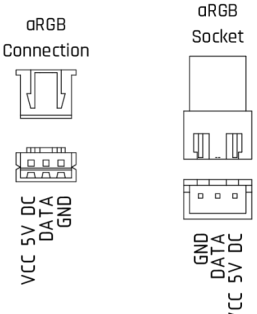
The original I/O cover of the motherboard remains fully intact and preserves the motherboard's distinctive design.

The monoblock combines performance, design, and functionality, making it a highlight of any custom water-cooling setup.

Figure (1)







General tolerance: ± 0,25mm
Thickness with graphics card (PCB)
Dimension in millimeter

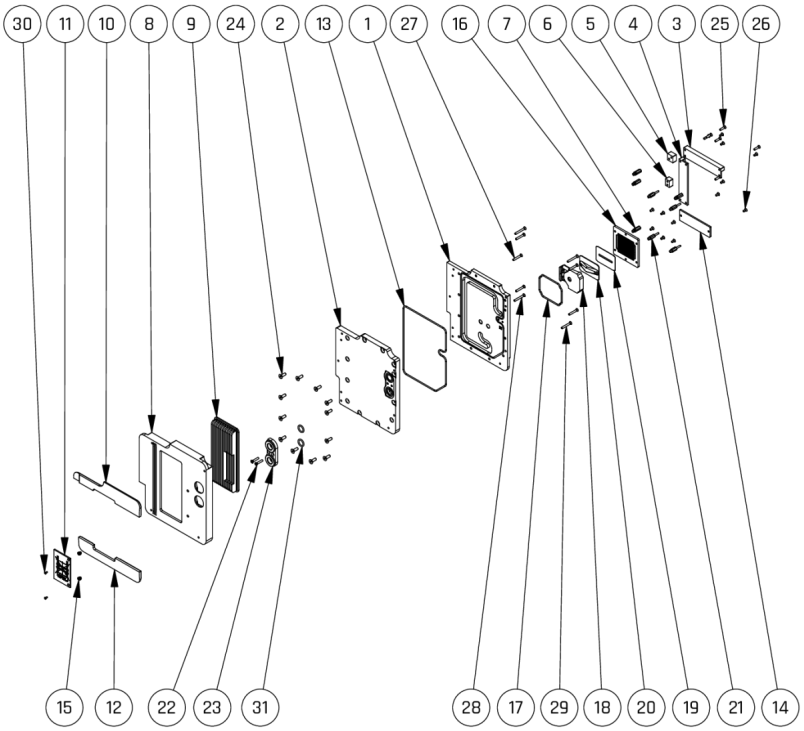
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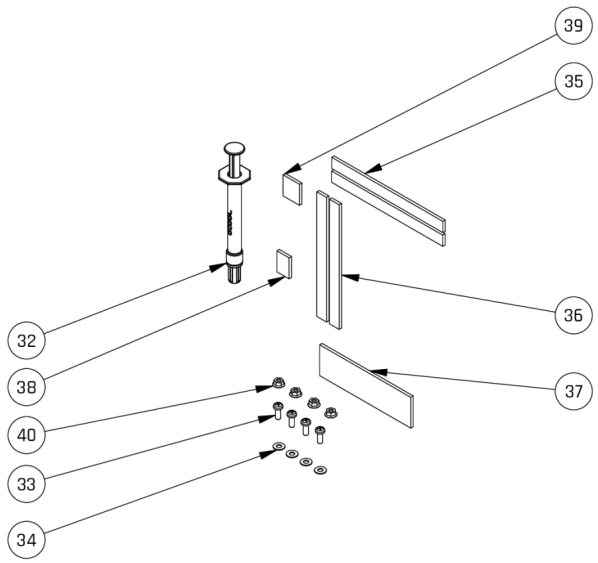
Figure (2)

Mechanical properties:

Minimum temperature t min =	-20°C
Working temperature t =	20°C
Maximum temperature t max =	60°C
Working pressure p =	0,0 - 1,0Bar
Maximum pressure p max =	2,0Bar
Maximum filling volume ml =	-

Maximum torque of G thread M max = G1/4 = 1,0Nm ISO 228-1 Parallel Whitworth pipe thread BSPP (GB)	
Maximum torque of M thread DIN 13-1 Metric ISO standard thread	M max = M2X0,4 = 0,13Nm M2,5X0,45 = 0,27Nm M3X0,5 = 0,48Nm M4X0,7 = 1,12Nm





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Apex Monoblock ASUS PROART X870ECreator WiFi (AM5)

Parts List

Number	Quantity	Description	Material
1	1	Cooling plate	Cu-HCP
2	1	PMMA Part	DX001
3	1	Extension 91,5 x 7 x 8,76 mm	Cu-HCP
4	1	Extension 89 x 7 x 8,76 mm	Cu-HCP
5	1	Extension 13,5 x 13,5 x 8,56 mm	Cu-HCP
6	1	Extension 14 x 10 x 8,66 mm	Cu-HCP
7	4	Spacer	CuZn39Pb3
8	1	Main Cover	AlMg0,7Si
9	1	Design element 1	AlMg0,7Si
10	1	Design Element 2	AlMg0,7Si
11	1	Design Element 3	DX001
12	1	Design Element 4	AlMg0,7Si
13	1	O-Ring 158 x 2	NBR Shore 70
14	1	Extension 75 x 21,5 x 2,56 mm	Cu-HCP
15	2	GPX Spacer SW5 M4X0,7M2X0,4 x 3	CuZn39Pb3
16	1	Apex 1 LGA 1700 Copperplate V4 Rebuild Small	Cu-HCP
17	1	Apex 1 ORing 55 x 2 NBR 70	VMQ Shore A 70
18	1	Apex 1 Rubberinlay	VMQ Shore A 70
19	1	Apex 1 Jet sealing	VMQ Shore A 70
20	1	Apex 1 Jetplate PPS	PPS-GF30
21	4	Apex 1 AM5 Spacer 10,3mm SW5 M2,5	CuZn39Pb3
22	2	ISO 70461 M3 x 16 4.8 H	X10CrNi18-8
23	1	Core GPX Terminal TOP Part	CuZn39Pb3
24	12	ISO 10642 M4 x 12	X10CrNi18-8
25	8	ISO 70461 M3 x 12 4.8 H	X10CrNi18-8
26	12	ISO 70461 M3 x 6 4.8 H	X10CrNi18-8
27	5	ISO 70461 M3 x 20 4.8 H	X10CrNi18-8
28	3	ISO 70461 M3 x 20 4.8 H	X5CrNi18-10
29	1	ISO 70461 M3 x 20 4.8 H	X5CrNi18-10
30	2	M2 x 8	X5CrNi18-10
31	2	O-Ring 12,5 x 2	NBR Shore 70

Accessories

Number	Quantity	Description	Material
32	1	Alphacool Subzero Thermal grease 1g	-
33	4	ISO 7045 M3 x 8 4.8 H	X10CrNi18-8
34	4	ISO 7089 - 3 - PA66	PA 66,GF25 FR(V-2)
35	2	Pad 91,5 x 8 x 2	7W/mK - Shore-00 35 - 2.00 mm
36	2	Pad 89 x 8 x 2	7W/mK - Shore-00 35 - 2.00 mm
37	1	PAD 75 x 22 x 2	7W/mK - Shore-00 35 - 2.00 mm
38	1	Pad 10 x 15 x 2	7W/mK - Shore-00 35 - 2.00 mm
39	1	Pad 13,5 x 15 x 2	7W/mK - Shore-00 35 - 2.00 mm
40	4	Apex 1 AM5 Mounting Nuts	X5CrNi18-10