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Alphacool Core 2 LT 240mm CPU AiO

Alphacool article number: 14621

Quick Info

The Alphacool Core 2 LT AIO is designed specifically for compact PC systems and builds with limited space. As the successor to the Eisbaer LT, it continues the compact concept while combining proven components with targeted technical improvements.

- Compact design for space-saving PC systems
- High cooling performance
- Flexible installation even in tight cases

Compatibility

AMD: AM4 / AM5

Intel: LGA 1150 / LGA 1151 / LGA 1155 / LGA 1156 / LGA 1200 / LGA 1700 / LGA 1851 / LGA 2066

Scope of delivery

1x Core 2 LT 240mm CPU AiO
1x Thermal Grease
1x Putty Tool
1x Intel Brackets
4x LGA 115x, 1200, 1700, 1851 Bolt
4x Pressure Spring
4x 0.5mm Washer
1x CPU Backplate Intel
4x 2mm Washer
4x LGA 2066 Screw
1x AMD Brackets
4x AM4, AM5 Bolt
2x Core 120mm Fan
1x Y-Splitter (4-Pin to 2x 4-Pin PWM)
8x M3x30mm Screws
8x M3x5mm Screws
1x Plug tool

Technical data

Material cooler	Chrome-plated copper (Cu-HCP)
Maximum torque G1/4 thread (in Nm)	1,00
Maximum torque M2 thread (in Nm)	0,13
Maximum torque M3 thread (in Nm)	0,48
Maximum torque M4 thread (in Nm)	1,12
Maximum operating temperature (in °C)	60
Minimum operating temperature (in °C)	-20
Maximum tested pressure (in bar)	2,00
Recommended working pressure (in bar)	0,00 - 1,00
LED voltage (in V DC)	5
LED power (in W)	0,3
LED current (in A)	0,06

Technical data Radiator

L x W x H	272 x 120 x 25,5 mm (+/- 3%)
Quantity of cooling channels	12
FPI	15
Material cooling fins	Copper
Material chambers	Copper
Material cooling channels	Copper
Material threads	Brass
Material outer housing	stainless steel
G 1/4“ threads	2 x
For fan size	120 mm
Possible fan assembly	2 x one-sided / 4 x both-sided
Pressure tested	0,8 Bar

Technical data Pump

Rated Voltage (V - DC)	12V
Operating Voltage (V - DC)	8 - 13.5
Input Current (Filled with water) (A)	0.30(Max.0.36)
Input Current (No water) (A)	0.06(Max.0.10)
Input Current (When measuring the flow rate) (A)	0.40(Max.0.48)
Power (W)	3.6(Max.4.32)
Speed (At Zero Water Head) (RPM)	3800±10%
Max . Flow Capacity (At Zero Water Head) (ml/Min)	2100±10%
Max . Water Head (At Zero Flow Capacity) (m - Water)	1.4±10%
Acoustical Noise (dB(A))	25(Max.30)

Technical data Fan

Dimension (L x W x H)	120 x 120 x 25mm
Material	synthetic material (PBT UL94V-0)
Bearing Type	hydraulic Bearing
Rated Voltage	DC 12V
Operating Voltage	DC 7-14V
Start-up Voltage	7V
Rated Current	0.3 (Max: 0.4) A
Rated Power	3.6 (Max: 4.8) W
Control Range	0 - 2500 rpm ±10%
Max. Air Flow	72.63 CFM
Max. Static Pressure	2.42 mm/H2O
Noise level	36.6 (Max: 37.8) dBA
Life Expectance	50000 h bei 25 degrees celcius
Connection	4-Pin PWM
Speed Control	via PWM
Operating Temperature	-10~+55 degrees celcius

Technical data Thermal Paste

Volatilization Rate (24H@200°C)%	less than 0.5
Density (g/cc)	3.2 (Test method ASTM D792)
Viscosity (mPa.s)	150~200*10^3 (Test method ASTM D2196)
Continuous Using 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)
Max. working pressure (psi)	40
Quantity	1g
Color	gray

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Manual	14621_Alphacool_Core_2_LT_240mm_CPU_AiO_Manual.pdf
Safety data sheets	14621_Alphacool_Core_2_LT_240mm_CPU_AiO_SDS(1).pdf 14621_Alphacool_Core_2_LT_240mm_CPU_AiO_SDS(2).pdf 14621_Alphacool_Core_2_LT_240mm_CPU_AiO_SDS(3).pdf
Product pictures	14621_Alphacool_Core_2_LT_240mm_CPU_AiO_pics.zip
EU-DoC / CE / RoHS	Alphacool_EuDoc_CE_RoHS_14621.pdf

Packaging dimensions per unit

L x W x H	262 x 370 x 160 mm
Weight	2485 g

Other data

Certificates	CE, FC, RoHS
EAN	4250197146210
Customs code	84195080900
Guarantee	3 years

Article text

The Alphacool Core 2 LT AIO is designed specifically for compact PC systems and builds with limited space. As the successor to the Eisbaer LT, it continues the compact concept while combining proven components with targeted technical improvements.

Heat is dissipated through an Alphacool NexXxoS ST25 Full Copper Radiator. With a thickness of just 25 mm, it takes up significantly less space than a conventional radiator. This makes the Core 2 LT especially suitable for compact cases and small-form-factor systems, while still offering strong cooling performance.

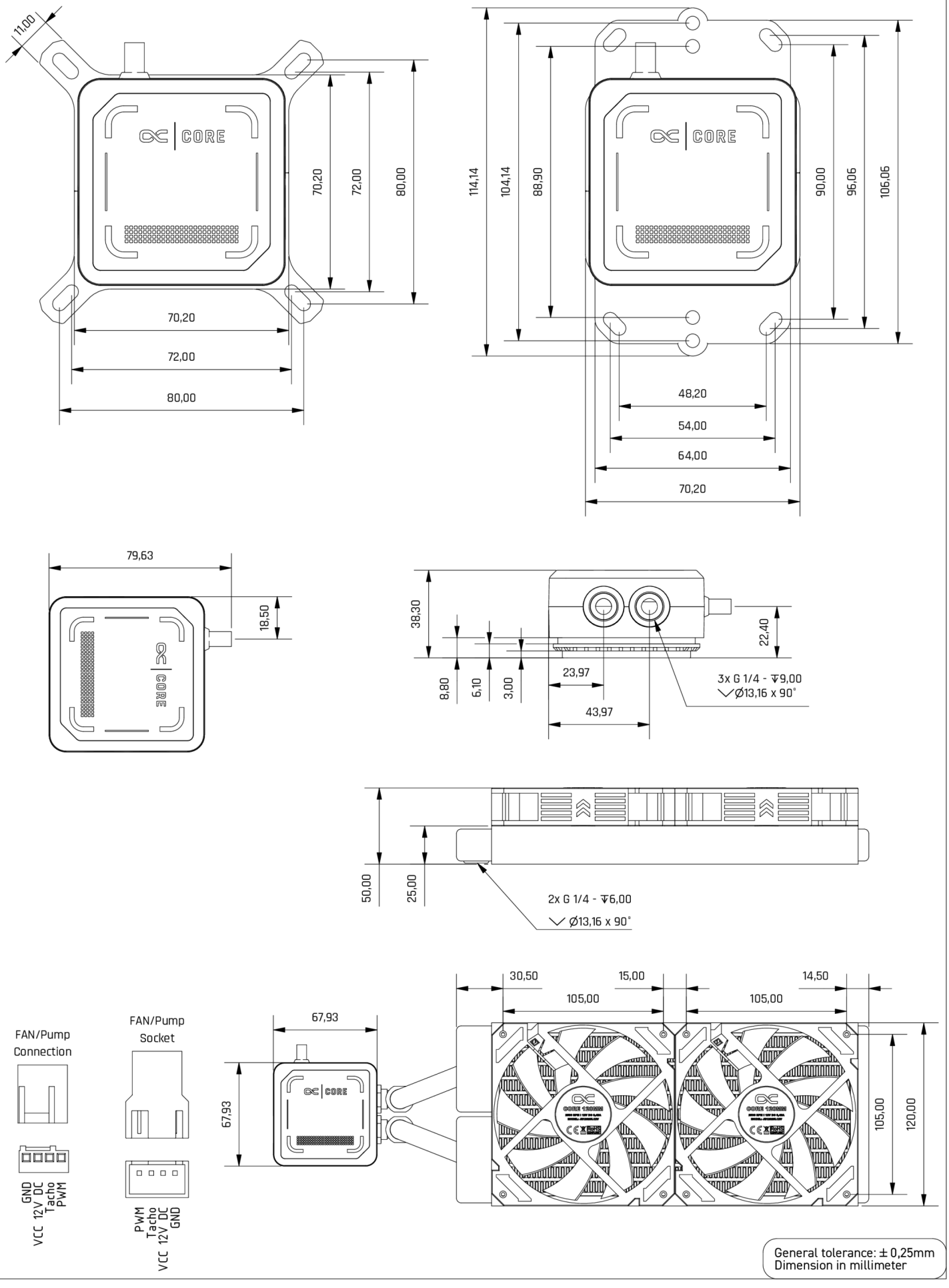
The pump and CPU cooler are combined in one compact unit. Its copper cold plate ensures efficient heat transfer from the CPU to the cooling loop. The new Alphacool Core DC-LT 3 PWM pump reaches speeds of up to 3800 rpm and provides reliable coolant flow. Thanks to PWM control, the pump speed can be adjusted to match the current system load. A subtle blue LED on top of the CPU cooler adds a clean visual accent.

The 320 mm TPV tubes and rotatable 90° fittings on the CPU cooler make installation easier and provide more flexibility when routing the tubes. This is particularly useful in compact cases, where space is often limited. Alphacool Core 120 mm fans with speeds of up to 2500 rpm provide the airflow required by the radiator. The result is easy installation and strong cooling performance in a particularly compact design.

As the successor to the Eisbaer LT, the Alphacool Core 2 LT AIO is aimed primarily at users looking for a simple and compact liquid cooling solution at an attractive price point. It combines solid cooling performance with low space requirements, making it an affordable entry into liquid cooling.

The Alphacool Core 2 LT AIO is available in 240 mm and 360 mm versions.

Figure (1)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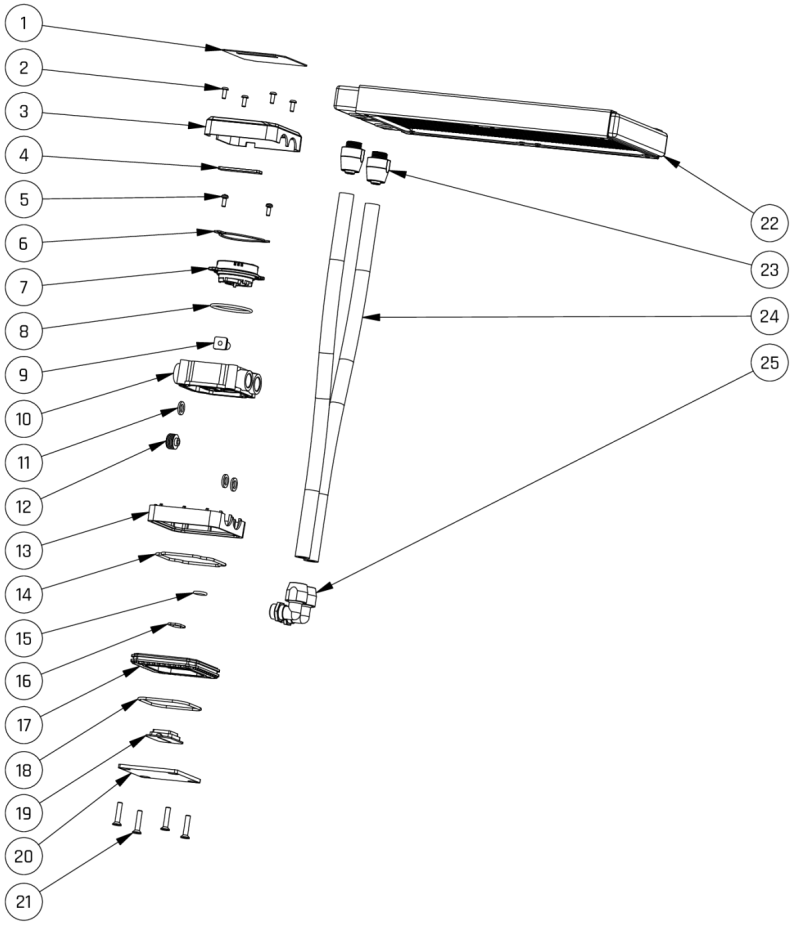
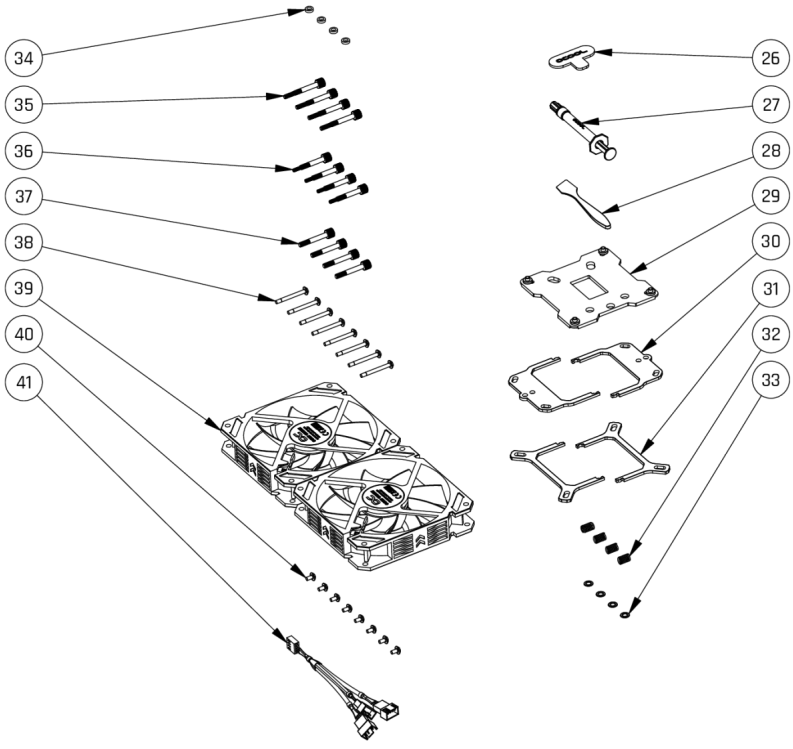
64,00
70,20
79,63
18,50
38,30
8,80
6,10
3,00
23,97
43,97
22,40
3x G 1/4 - ↧9,00
⌵Ø13,16 x 90°
50,00
25,00
2x G 1/4 - ↧6,00
⌵ Ø13,16 x 90°
FAN/Pump
Connection
GND
12V DC
Tacho
PWM
VCC
FAN/Pump
Socket
PWM
Tacho
12V DC
GND
VCC
67,93
67,93
30,50
15,00
14,50
105,00
105,00
105,00
120,00
General tolerance: ± 0,25mm
Dimension in millimeter

Figure (2)

Mechanical properties:					
LED quantity and length	1,0pc. / L =5,0mm	Maximum filling volume ml =	268	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 = 0,48 Nm M4X0,7 = 1,12Nm
LED Voltage V =	5 V	Working pressure p =	0,0 - 1,0Bar		
LED Ampere A =	0,06 A	Maximum pressure p max =	2,0Bar		
LED Power W =	0,3 W	Maximum torque of G thread M max =	G1/4 = 1,0Nm ISO 228-1 Parallel Whitworth pipe thread BSPP (GB)		
Minimum temperature t min =	-20°C				
Working temperature t =	20°C				
Maximum temperature t max =	60°C				





Core 2 LT 240 CPU AiO - Spare parts list			
Number	Quantity	Description	Material
1	1	design cover	DX001
2	4	ISO 7380 - M3 x 8	X10CrNi18-8
3	1	cap with led cutout	PA 66,GF25 FR(V-2)
4	1	led block blue	DX001
5	2	M3 x 8	X10CrNi18-8
6	1	DCLT Bracket	X5CrNi18-10
7	1	Alphacool Core DC-LT 3 PWM 3600rpm	-
8	1	ORing 33 x 2	NBR Shore 70
9	1	cable kink protection	NBR Shore 70
10	1	AGB	PA 66,GF25 FR(V-2)
11	3	gasket 11,5 - 7 x 1,5	NBR Shore 70
12	1	Jeff Screw plug G1/4	PA 66,GF25 FR(V-2)
13	1	cap 2	PA 66,GF25 FR(V-2)
14	1	ORing 58 x 2	NBR Shore 70
15	1	ORing 8 x 2	NBR Shore 70
16	1	ORing 14 x 1,5	NBR Shore 70
17	1	middleplate	PA 66,GF25 FR(V-2)
18	1	ORing 51,5 x 2	NBR Shore 70
19	1	distribution	PA 66,GF25 FR(V-2)
20	1	copperplate	Cu-HCP
21	4	M4 x 20	X10CrNi18-8
22	1	Alphacool NexXxoS ST25 Full Copper 240mm Radiator	Cu-HCP
23	2	Alphacool HF screw-on nozzle TPV Metal - 12,7-7,6mm straight - Black	CuZn39Pb3
24	2	Tube 320mm	TPV
25	2	Alphacool HF screw-on TPV Metal - 90° rotatable 12,7-7,6mm - Black	CuZn39Pb3

Accessories - Spare parts list			
Number	Quantity	Description	Material
26	1	Plug Tool	PA 66,GF25 FR(V-2)
27	1	Alphacool Subzero Thermal grease 1g	-
28	1	Putty Tool	-
29	1	Core 1 Backplate	-
30	2	Bracket AMD	Cr01
31	2	Bracket Intel	Cr01
32	4	Compression spring XPX Pro	X10CrNi18-8
33	4	Washer 8 x 4,3-0,5	X5CrNi18-10
34	4	Washer 7 x 4,1-2	X5CrNi18-10
35	4	Socket screw AM2 AM4	X10CrNi18-8
36	4	Socket screw LGA115x	X10CrNi18-8
37	4	Socket screw LGA2011 LGA2066	X10CrNi18-8
38	8	FAN Screw M3 x 5 - L30mm	X10CrNi18-8
39	2	Alphacool Core 120mm Fan PWM 2500rpm (120x120x25mm)	-
40	8	Radiator Screw M3 x 6	X10CrNi18-8
41	1	Alphacool Y-Splitter 4-Pin to 3x 4-Pin PWM 15cm	-