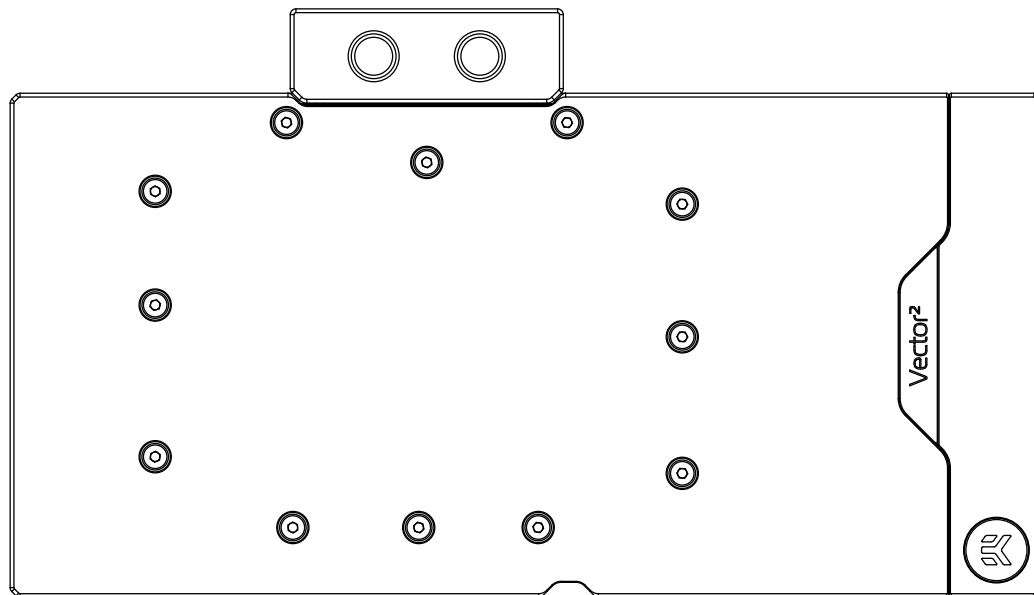


EK-Quantum

Vector² AMP/Trinity RTX 4090 ABP Set D-RGB

GPU WATER BLOCK



Please note the installation of the product is intended to be undertaken by an adequately trained and experienced person. You are installing the product at your own risk. If you are not properly trained or experienced or feel unsure about the installation procedure, please refrain from installing the product yourself and contact our tech support for assistance. We disclaim our liability for any damages to the product as well as incidental, consequential, or indirect damages incurred due to improper or inappropriate installation.

Before you start using this product, please follow these basic guidelines:

Remove your graphics card from the computer for the safest mounting process to prevent any possible damage to your GPU or its circuit board (PCB).

The EK Fittings require only a small amount of force to screw them firmly in place since the liquid seal is ensured by the rubber O-ring gaskets.

The use of corrosion-inhibiting coolants is always recommended for liquid cooling systems and mandatory for nickel-plated water blocks!

Do not use pure distilled water!

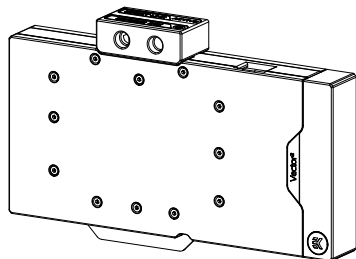
For best results, EK recommends the use of EK-CryoFuel coolants! To reach optimal performance, make sure to thoroughly bleed the air out of your water block!

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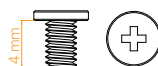
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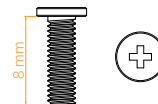
EAN: 106123



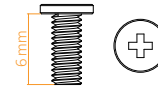
EK-Quantum Vector² AMP/Trinity RTX 4090
ABP Set D-RGB



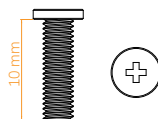
M2.5x4 AX1 Screw (5 pcs)



M2.5x8 AX1 Screw (1 pc)



M2.5x6 AX1 Screw (2 pcs)



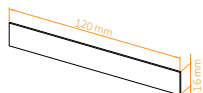
M3x10 AX1 Screw (1 pc)



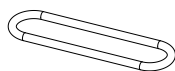
Polyamid Washer M2.5 0.5mm
(7 pcs)



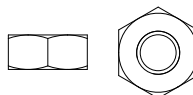
Standoff M2.5-M3 x 6.6mm
(1 pc)



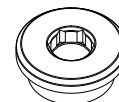
Thermal Pad F 0.5 mm
(2 pcs) (3830046996725)



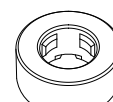
Terminal OR - Vector² 14x1 mm
(2 pcs)



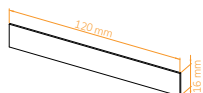
Nut M2.5 (2 pcs)



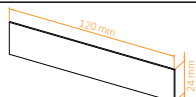
EK Plug G1/4 (2 pcs)



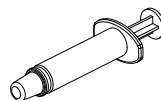
Standoff Ø4.5/2.5 (1 pc)



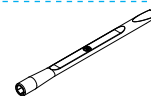
Thermal Pad F 1.0 mm
(3 pcs) (3830046996732)



Thermal Pad G 1.5 mm
(1 pc) (3830046996787)



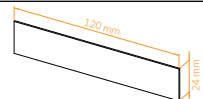
Thermal Grease (1 pc)



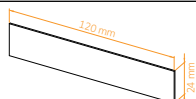
EK-Plug Out Spludger Tool
(1 pc)



EK-Loop Multi Allen Key
(1 pc)



Thermal Pad G 1.0 mm
(2 pcs) (3830046996770)



Thermal Pad G 2.0 mm
(1 pc) (3830046996794)



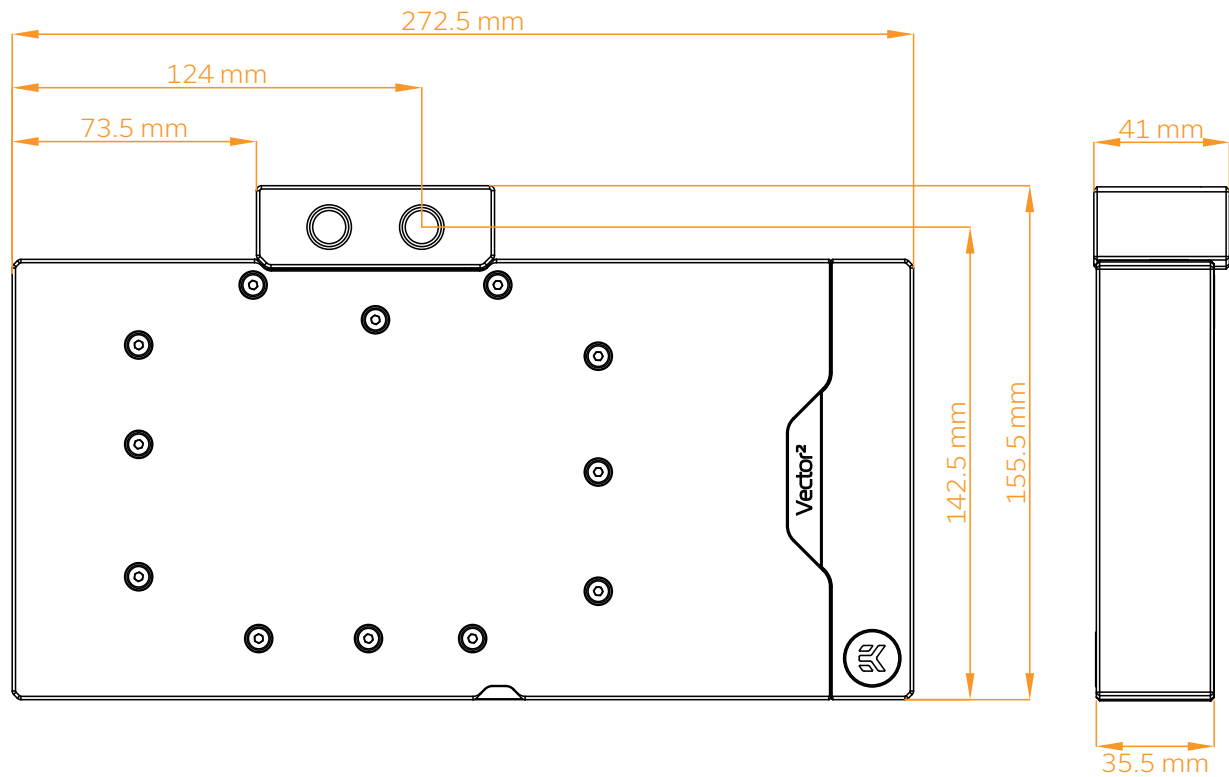
Allen Key 2.5 mm (1 pc)



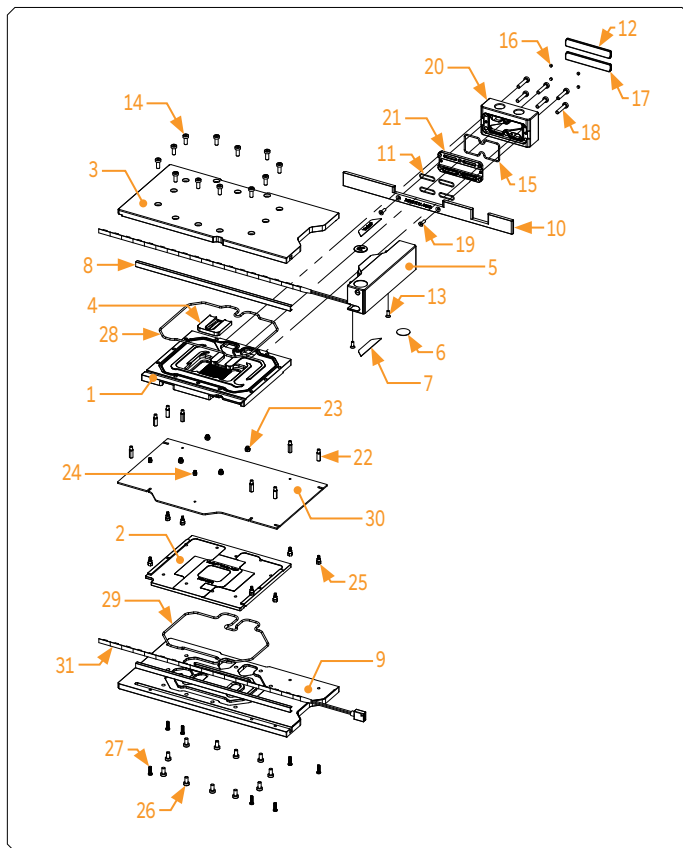
Allen Key 2 mm (1 pc)

EAN: 106046

WATER BLOCK DIMENSIONS



TECHNICAL SPECIFICATIONS AND WATER BLOCK PARTS

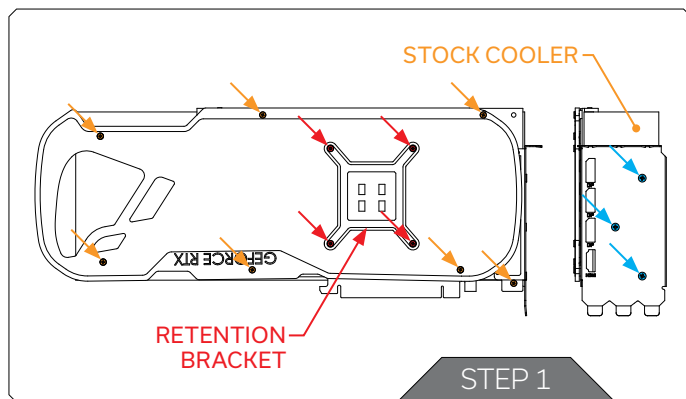


NICKEL PLEXI

- Dimensions: (L x H x W): 272.5 x 155 x 41 mm
- D-RGB LED count: 15
- D-RGB cable length: 50 cm
- D-RGB connector 3-pin 5V digital LED header (Pinout: +5V | Data | Blocked | Ground)

Position	EAN	Description	Quantity
1	106107	Coldplate (Ni)	1
2	106115	Coldplate ABP (Ni)	1
3	106108	Top plate (Plexi)	1
4	106133	Plexi insert	1
5	104099	Stand out (Acetal)	1
6	100663	EK - Badge	2
7	103964	Mylar sticker	2
8	106113	LED Cover (N.elox)	2
9	106116	Top plate ABP (Plexi)	1
10	106119	Sideplate (N.elox)	1
11	104106	Terminal OR - 14 x 1 mm	4
12	103942	Terminal Badge	1
13	8208	Screw M3 x 8 7991DIN	2
14	9024	Screw M4 x 10 DIN7984	12
15	104414	OR - Active Backplate Terminal	1
16	105163	Disc magnet 3 x 2 mm	4
17	104086	Terminal Badge	1
18	8311	Screw M4 x 20 DIN7984	6
19	8201	Screw M3 x 10 DIN7991	2
20	104393	FC Terminal (Acetal)	1
21	104395	Terminal Plate	1
22	103986	Standoff M3.5-M2.5 x 11.3 mm	8
23	103988	Standoff M4-M2.5 x 3 mm	4
24	103987	Standoff M3.5-M2.5 x 3 mm	2
25	104093	Standoff M2.5-M3 x 6.6 mm	7
26	9013	Screw M4 x 8 DIN7984	11
27	104105	Screw AX1 M3 x 10 mm	7
28	106120	OR 144 x 2 mm	1
29	106121	OR 150 x 2 mm	1
30	106124	PCB cardboard	1
31	101556	LED D-RGB strip 500/300 mm	2

PREPARING THE GRAPHICS CARD



REMOVING THE STOCK COOLER

ZOTAC GAMING GeForce RTX 4090 AMP Extreme AIRO

STEP 1

Using a Phillips-head screwdriver, unscrew marked screws to detach the stock cooler and retention bracket from the GPU PCB. After removing, carefully unplug all the LEDs and FANs cables.

For this step, you will need:

Phillips Head Screwdriver



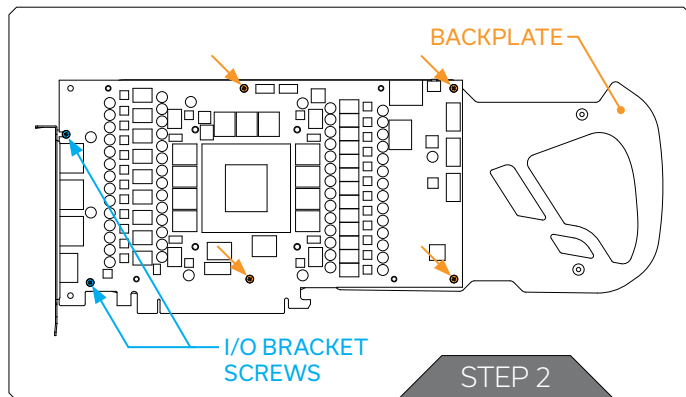
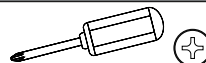
STEP 2

From the front side of the GPU PCB, additional two (2) screws must be unscrewed to remove the I/O Bracket from the GPU PCB. Lastly, unscrew four (4) backplate screws. Remove the Backplate.

Save the I/O Bracket for later use.

For this step, you will need:

Phillips Head Screwdriver



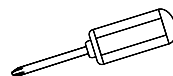
PREPARING THE WATER BLOCK FOR INSTALLATION

STEP 1

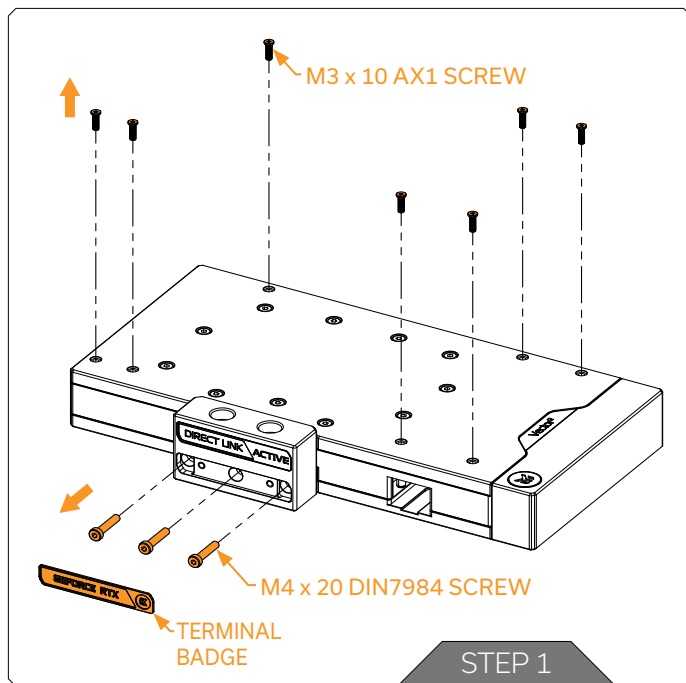
First, remove the terminal badge which is attached to the terminal with two magnets. Under the badge, unscrew three (3) screws M4 x 20 DIN7984. Additional seven (7) screws M3 x 10 AX1 need to be removed (as shown in the image). Save the removed parts for later use.

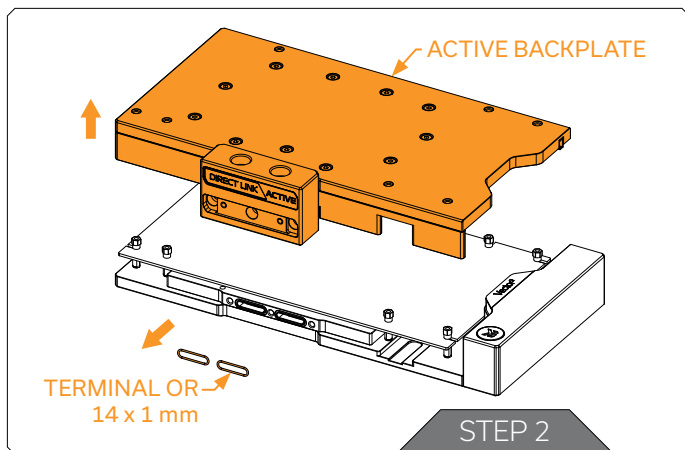
For this step, you will need:

Phillips Head Screwdriver



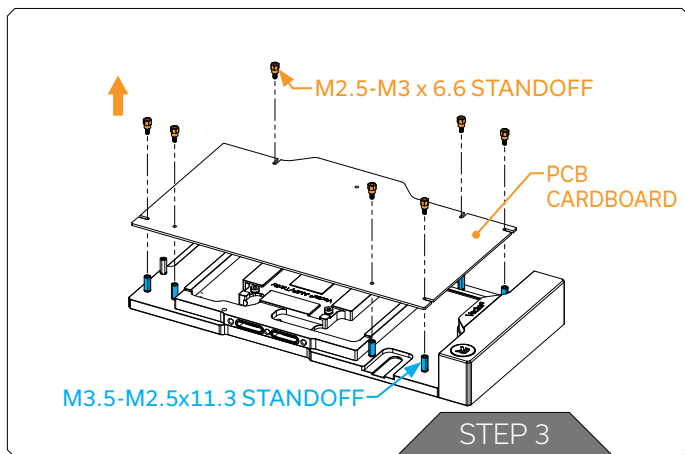
Allen Key 2.5mm





STEP 2

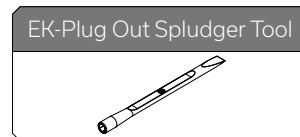
Carefully remove the complete active backplate with the terminal. Additional two (2) O-rings 14 x 1 mm needs to be removed.



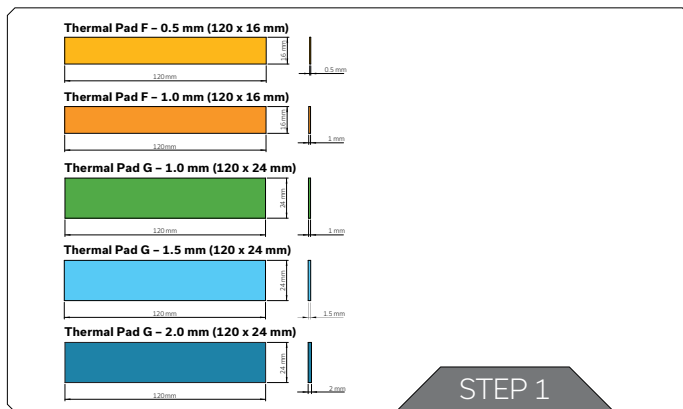
STEP 3

Unscrew seven (7) M2.5-M3 x 6.6 standoffs with the provided tool (EK-Plug Out Spludger Tool). Make sure not to unscrew the M3.5-M2.5 x 11.3 standoffs! In case the M3.5-M2.5 x 11.3 standoffs unscrew, carefully tighten it back with the 4 mm wrench. After removing the standoffs, the PCB cardboard needs to be removed. Save the removed parts for later use.

For this step, you will need:



CUTTING AND PLACING THERMAL PADS



STEP 1

The GPU water block comes with thermal pads that have to be cut into smaller pieces to cover all the VRM components, such as COILS, MOSFETs, and drivers.



Remove the protective foil from both sides of the thermal pad before installation.

Replacement thermal pads:

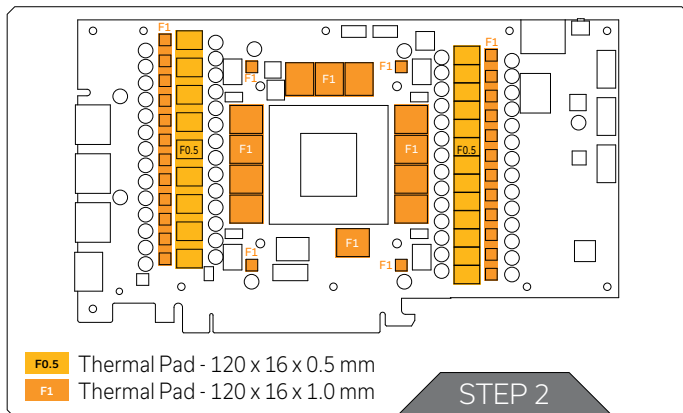
Thermal Pad F 0.5 mm – (120 x 16 mm) EAN: 3830046996725

Thermal Pad F 1.0 mm – (120 x 16 mm) EAN: 3830046996732

Thermal Pad G 1.0 mm – (120 x 24 mm) EAN: 3830046996770

Thermal Pad G 1.5 mm – (120 x 24 mm) EAN: 3830046996787

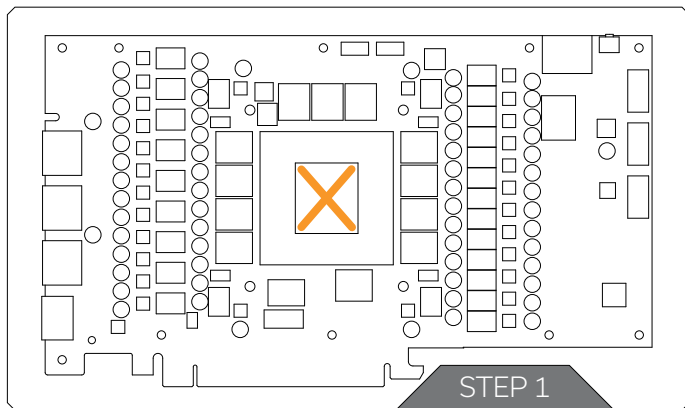
Thermal Pad G 2.0 mm – (120 x 24 mm) EAN: 3830046996794



STEP 2

Once cut to the size, Thermal Pads should be placed on the PCB, as shown in the picture.

APPLYING THERMAL COMPOUND



STEP 1

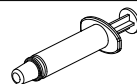
Apply the enclosed thermal grease (thermal compound) on the GPU heat spreader - IHS - as shown in the image. The layer of the thermal compound must be thin and even over the entire surface of the IHS.



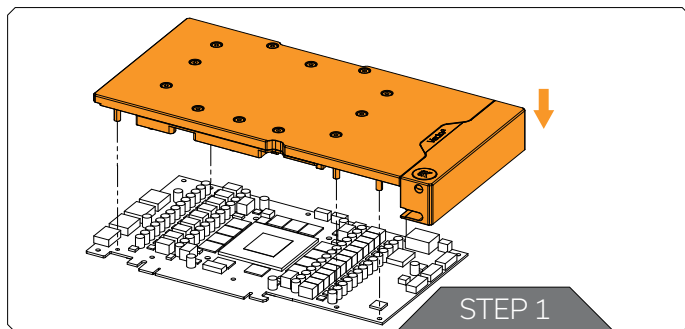
The excessive or uneven application of thermal grease may lead to poor performance!

For this step, you will need:

Thermal Grease



ATTACHING THE WATER BLOCK



STEP 1

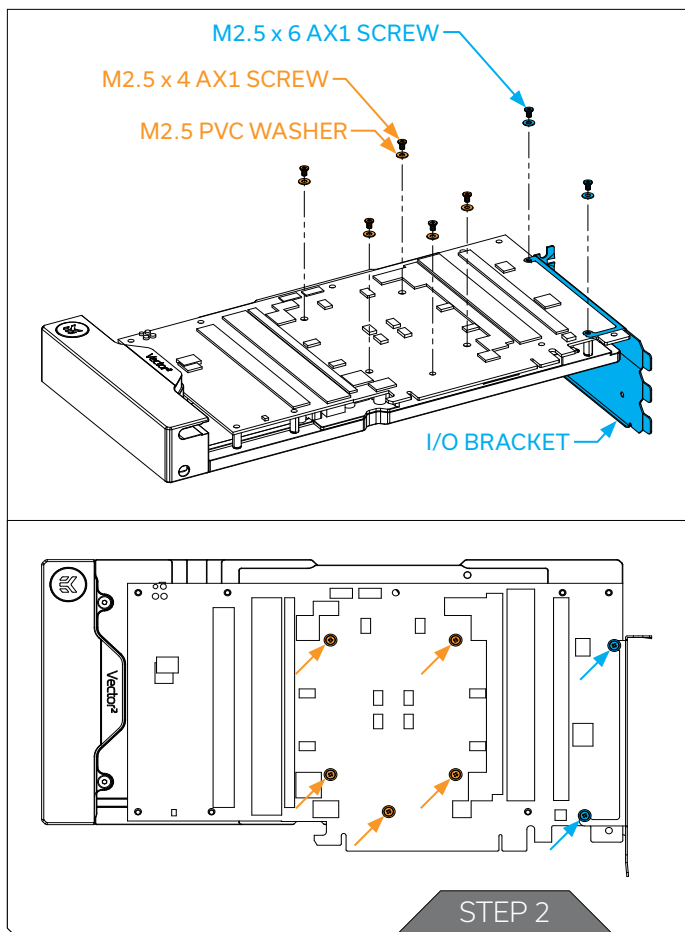
Carefully place the water block with preinstalled standoffs on the GPU PCB. During this process, make sure you have aligned the mounting holes of the PCB with the holes of the water block.



Pay attention not to use too much force when pressing the block down to the PCB since chip dies are prone to cracking.



Before placing the Water Block, make sure all the Thermal Pads are placed correctly!

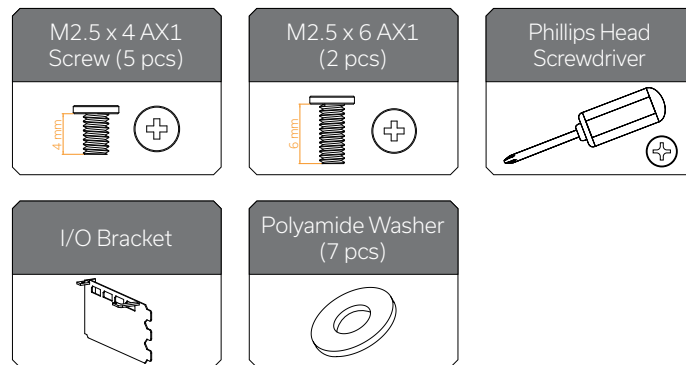


STEP 2

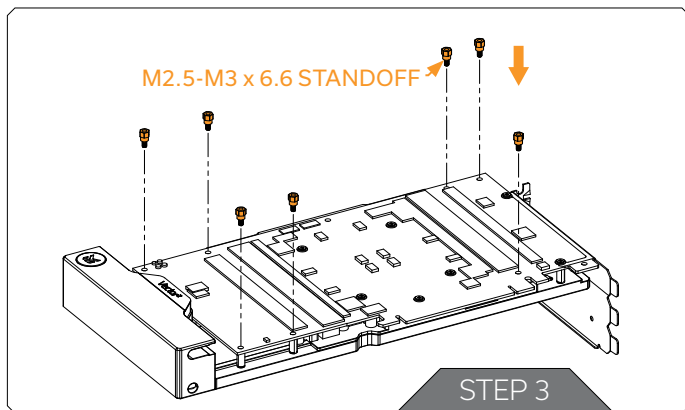
Use five (5) M2.5 x 4 AX1 Screws and PVC washers to tighten the PCB on the water block. Tighten the screws evenly using the Phillips-head screwdriver. EK recommends you start tightening the screws around the GPU core first, and then continuing outward to prevent damage to the GPU.

After securing the GPU PCB, reuse the I/O Bracket and tighten it with two (2) M2.5 x 6 AX1 Screws and PVC Washers (from the mounting bag).

For this step, you will need:



Screws must be present in the places marked on the picture.



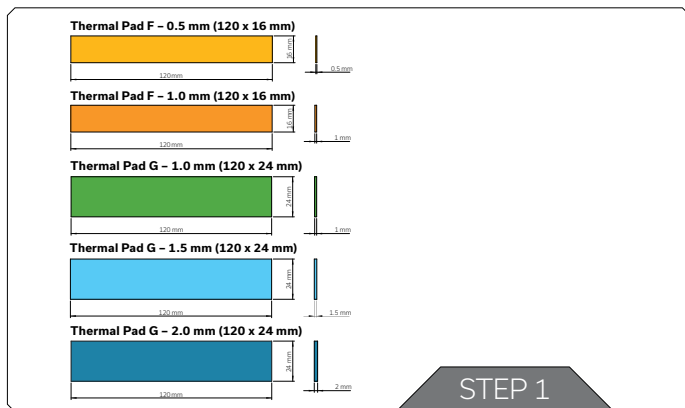
STEP 3

After securing the GPU PCB, position the seven (7) M2.5-M3 x 6.6 standoffs. Tighten it with the provided tool (EK-Plug Out Spludger Tool).

For this step, you will need:



CUTTING AND PLACING THERMAL PADS



STEP 1

The GPU water block comes with thermal pads that have to be cut into smaller pieces to cover all the VRM components, such as COILs, MOSFETs, and drivers.



CAUTION: You must remove the protective foil from both sides of the thermal pad before installation.

Replacement thermal pads:

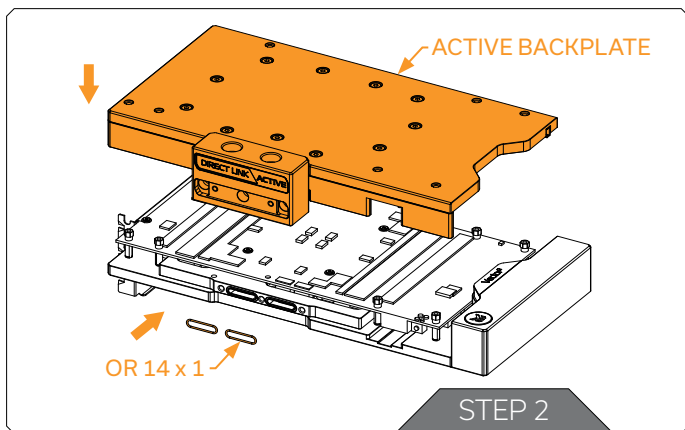
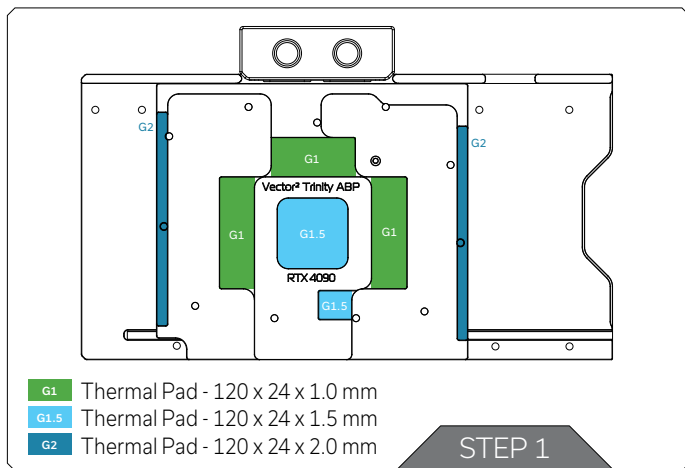
Thermal Pad F 0.5 mm – (120 x 16 mm) EAN: 3830046996725

Thermal Pad F 1.0 mm – (120 x 16 mm) EAN: 3830046996732

Thermal Pad G 1.0 mm – (120 x 24 mm) EAN: 3830046996770

Thermal Pad G 1.5 mm – (120 x 24 mm) EAN: 3830046996787

Thermal Pad G 2.0 mm – (120 x 24 mm) EAN: 3830046996794

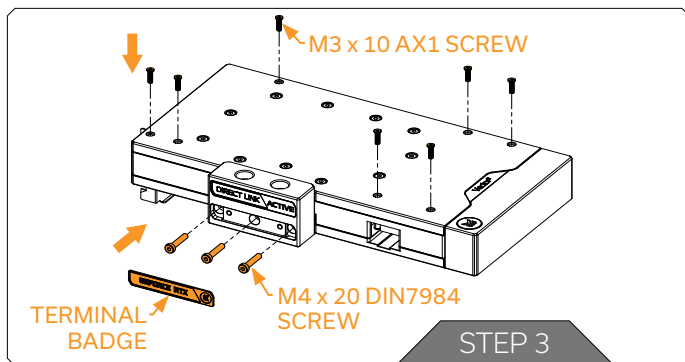


STEP 2

Insert two (2) O-rings (14 x 1 mm) into slots on the cold plate. Then carefully place the active backplate on standoffs (as shown in the image). While putting the active backplate on the PCB, make sure the O-rings stay in the slots.



Before attaching the Active Backplate, make sure all the Thermal Pads are placed correctly!

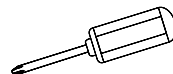


STEP 3

Place seven (7) M3 x 10 AX1 screws into the water block standoffs and tighten them using a Philips head screwdriver (as shown in the image). After attaching the AX1 Screws, three (3) terminal screws M4 x 20 DIN7984 need to be attached using Allen Key 2.5 mm. The terminal badge can be reused, after securing the terminal screws.

For this step, you will need:

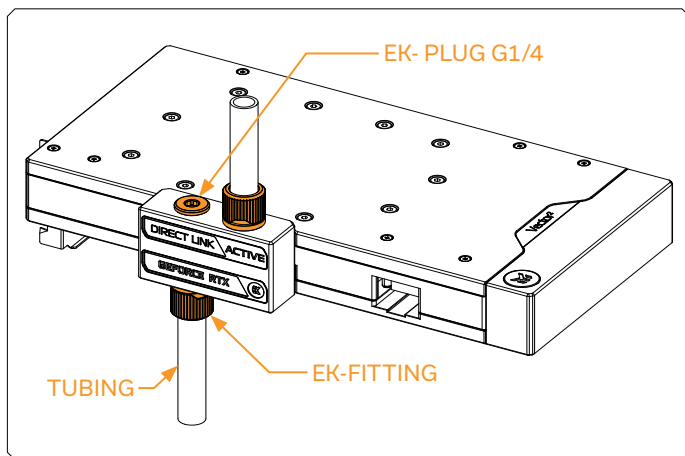
Phillips Head Screwdriver



Allen Key 2.5mm



FITTINGS AND TUBING



Screw in two (2) G1/4 threaded male fittings. Attach the liquid cooling tubes and connect the water block to the cooling loop.



Do not forget to plug the remaining two openings with the enclosed EK-Plug G1/4 or its equivalent.

EK recommends using EK fittings with all EK water blocks.



CAUTION: When using connectors other than EK fittings, pay special attention to the length of the fittings' male G1/4" thread - 5 mm is the maximum G1/4" thread length allowed!

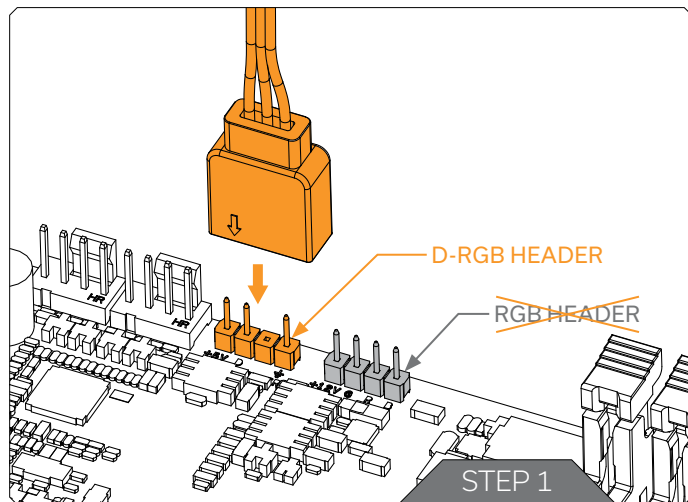
INSERTING THE GRAPHICS CARD INTO THE CHASSIS

Carefully lift your graphics card with the installed water block and insert it into your PC's motherboard PCI Express expansion slot. Please keep in mind that your graphics card is heavier than before it was equipped with the water block.



You need to be very careful when handling the graphics card. Avoid all unnecessary manipulation of the water block assembly that might damage your card or water block.

CONNECTING THE D-RGB LED STRIP



STEP 1

Plug the **3-pin connector** of the distribution plate D-RGB LED light to the **D-RGB HEADER** on the motherboard. The LED will work if the pin layout on the header is as follows: **+5V, Digital, Empty, Ground**.



Incorrect installation or installation to a wrong header can damage the LED strip or the header itself!

TESTING THE LOOP

To make sure the installation of EK components was successful, we recommend you perform a leak test for 24 hours. When your loop is complete and filled with coolant, connect the pump to a PSU outside of your system. Do not connect power to any of the other components. Turn on the PSU and let the pump run continuously. It is normal for the coolant level to drop during this process as air collects in the distribution plate. Inspect all parts of the loop, and in the eventuality, that the coolant leaks, fix the issue and repeat the testing process. Ensure that all hardware is dry before the system is powered on to prevent any damage.

WARRANTY

Our products are warranted against defects of materials and quality for a period of 24 months, starting with the date of delivery to the end user. During this period, products will be repaired or have parts replaced at our discretion, provided that 1) the product is returned to the agent from whom it was purchased; 2) the product has been purchased by the end-user and has not been used for commercial purposes; 3) the product has not been misused, handled carelessly, or used in a manner other than the way described in the instruction's manual. This warranty does not confer rights other than those expressly set out above and does not cover any claims for consequential loss or damage. This warranty is offered as an extra benefit and does not affect your statutory rights as a consumer. This warranty is voided if the product comes in contact with aggressive UV additives or other improper liquids. EK Water blocks are sealed with a warranty-voiding circular label, proving the water block has withstood a pressure leak test. Removing the label will void the leak-free guarantee, but not the guarantee on the product itself. Any other RMA issues can be reported to EK Customer Support at www.ekwb.com/support for further analysis.

SUPPORT AND SERVICE

In case you need assistance or wish to order spare parts or a new mounting mechanism, please contact:

<https://www.ekwb.com/customer-support/>

For spare parts orders, refer to the page with "TECHNICAL SPECIFICATIONS AND WATER BLOCK PARTS" where you can find the EAN number of each part you might need.

Include the EAN number with quantity in your request. Mounting Mechanism EAN can be found under "BOX CONTENTS"

Thermal pads are readily available in the EK shop

SOCIAL MEDIA

 EKWaterBlocks

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 EKWBofficial

 ekwaterblocks

