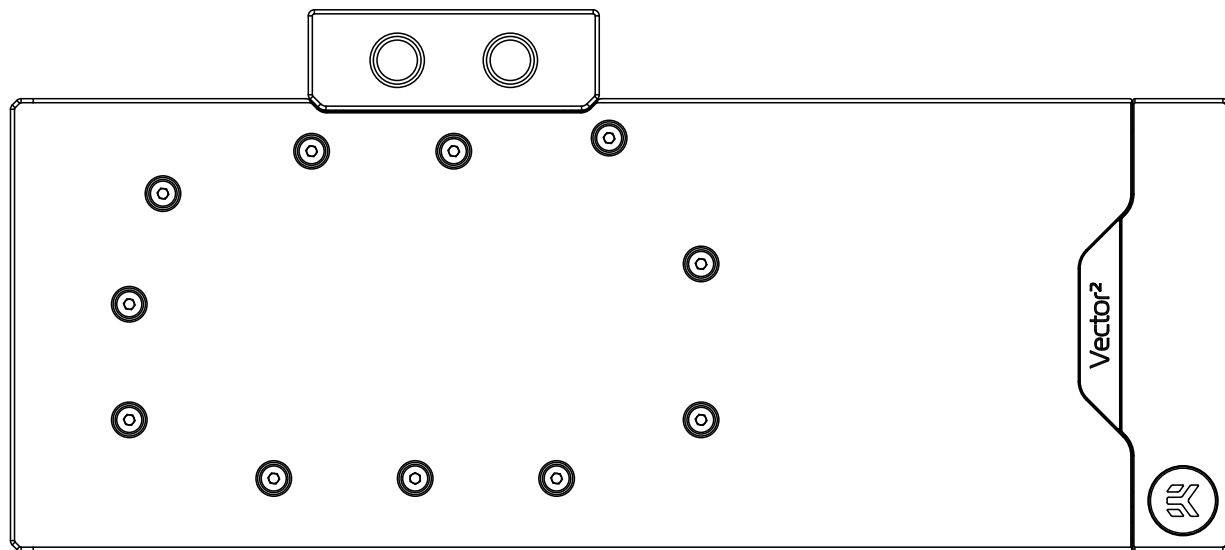


EK-Quantum Vector² XC3 RTX 3080/90 ABP Set D-RGB

GPU WATER BLOCK



This product is intended for installation by expert users only. Please consult with a qualified technician. Improper installation may result in damage to your equipment. EK assumes no liability whatsoever, expressed or implied, for the use of this product or its installation. The following instructions are subject to change without notice. Please, read the manual carefully before starting the installation process. For updates, you can visit our official website **www.ekwb.com**.

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

Carefully read the manual before beginning with the installation process.

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!

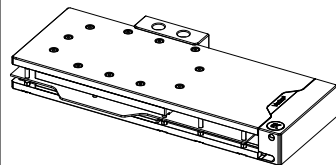
For best results, EK recommends the use of EK-CryoFuel coolants! To reach optimal performance, make sure to thoroughly bleed the air out of your water block!

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BOX CONTENTS

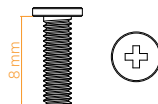
EAN: 104911



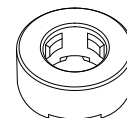
EK-Quantum Vector² XC3 RTX
3080/90 ABP Set D-RGB



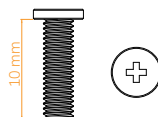
M2.5x4 AX1 Screw (8 pcs)



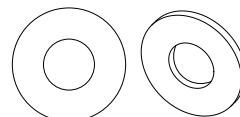
M2.5x8 AX1 Screw (1 pc)



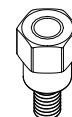
Standoff Ø4.5/2.5 (1 pc)



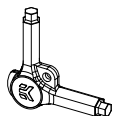
M3x10 AX1 Screw (1 pc)



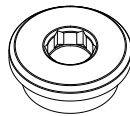
Polyamid Washer M2.5 0.5mm (8 pcs)



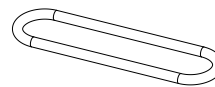
Standoff M2.5-M3 x 6.6mm (1 pc)



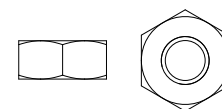
EK-Loop Multi Allen Key (1 pc)



Quantum Plug (2 pcs)



Terminal OR - Vector² 14x1 mm (2 pcs)



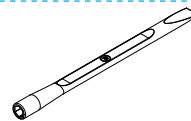
Nut M2.5 (2 pcs)



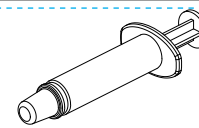
Allen Key 2.5 mm (1 pc)



Allen Key 2 mm (1 pc)

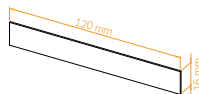


EK-Plug Out Spludger Tool (1 pc)

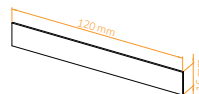


Thermal Grease (1 pc)

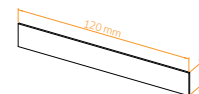
EAN: 104549



Thermal Pad F 1.0 mm (6 pcs)
(3830046996732)

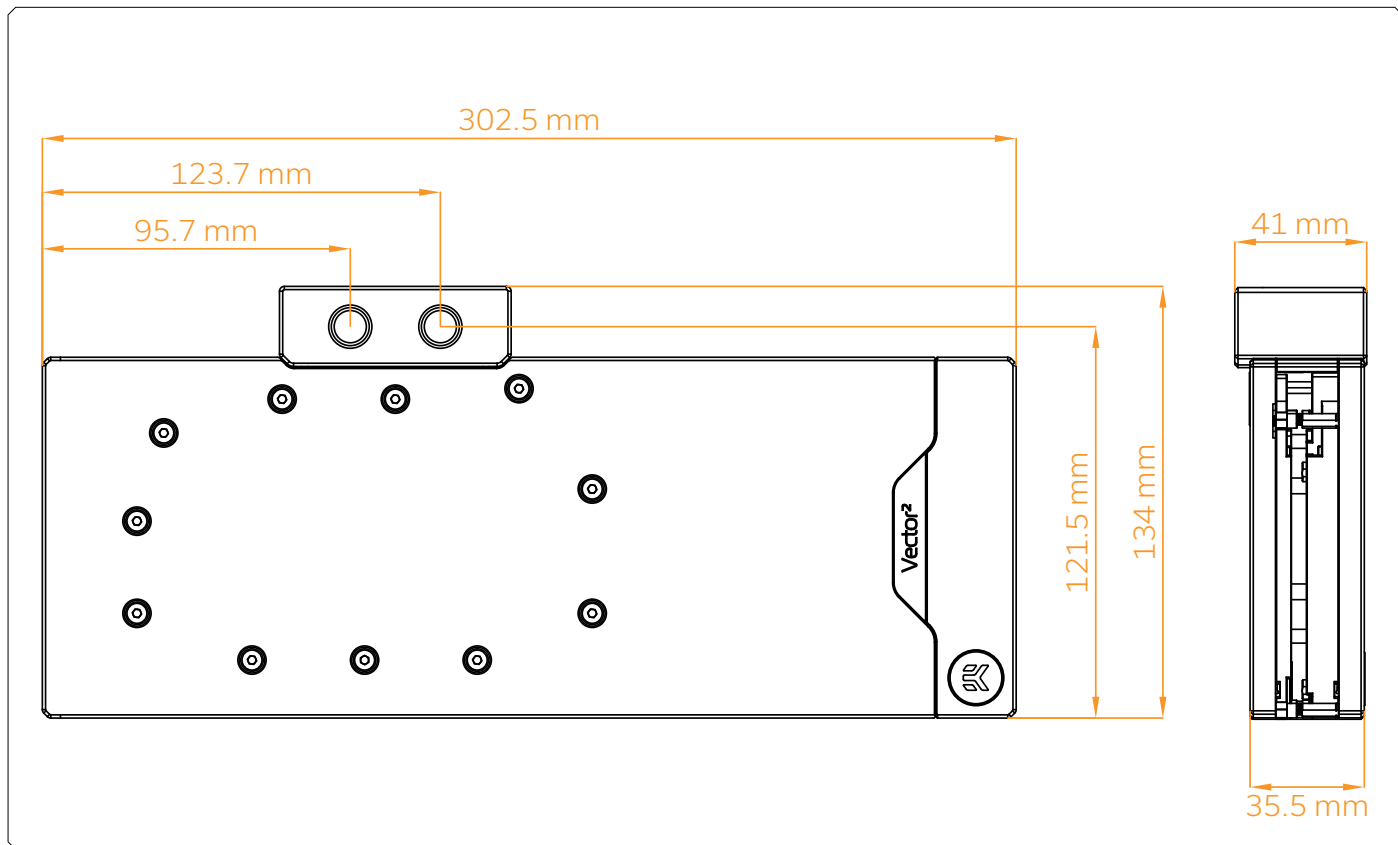


Thermal Pad F 1.5 mm (1 pc)
(3830046996749)



Thermal Pad F 2.0 mm (2 pcs)
(3830046996756)

WATER BLOCK DIMENSIONS

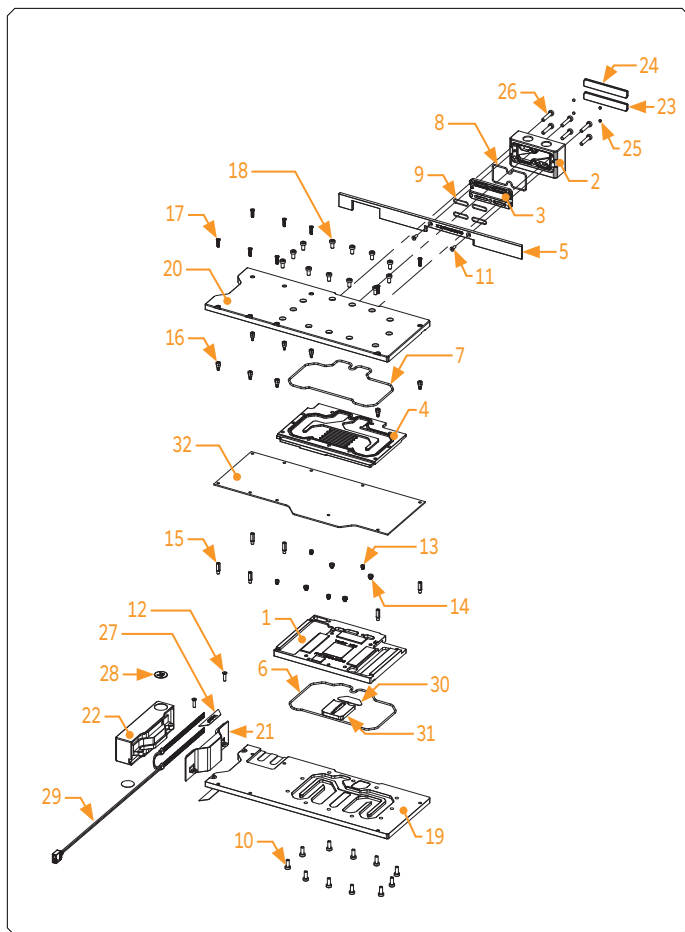


TECHNICAL SPECIFICATIONS AND WATER BLOCK PARTS

NICKEL PLEXI

- Dimensions: (LxHxW): 302.5 x 134 x 41 mm
- D-RGB LED count: 34
- D-RGB cable length: 50 cm
- D-RGB connector 3-pin 5V digital LED header

Position	EAN	Description	Quantity
1	104963	Coldplate (Nickel)	1
2	104582	Top plate (Plexi)	1
3	104393	FC Terminal	1
4	104395	Terminal plate (Nickel)	1
5	104085	Coldplate ABP (Nickel)	1
6	104584	Top plate ABP (Plexi)	1
7	104097	Stand out (Acetal)	1
8	104575	Side plate (Black e.)	1
9	103965	Main O-ring 128 x 2 mm	1
10	104087	Main O-ring ABP 131 x2 mm	1
11	104414	OR Terminal 52 x 2 mm	1
12	104106	Terminal OR 14 x 1 mm	4
13	9024	Screw M4 x 10 DIN7984	11
14	8208	Screw M3 x 8 7991DIN	4
15	103987	Standoff M3.5-M2.5 x 3	4
16	103988	Standoff M4-M2.5 x 3	4
17	103986	Standoff M3.5-M2.5 x 11.3	6
18	104093	Standoff M2.5-M3 x 6.6	8
19	104105	Screw AX1 M3 x 10	8
20	9013	Screw M4 x 8 DIN7984	12
21	103942	Terminal badge	1
22	104086	ABP Terminal badge	1
23	105163	Disc magnet	4
24	8311	Screw M4 x 20 DIN7984	6
25	103964	Mylar sticker	2
26	100663	EK - Badge	2
27	104571	LED Cover (Nat.elox)	2
28	101556	LED D-RGB strip 500/300 mm	2
29	103975	Bridge plate	1
30	103962	Plexi insert	1
31	104904	PCB cardboard	1



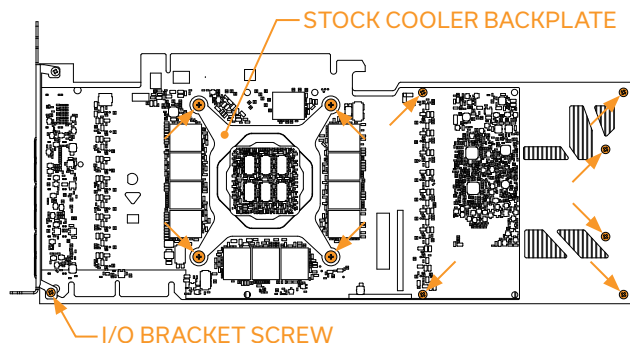
NICKEL ACETAL

- Dimensions: (LxHxW): 302.5 x 134 x 41 mm
- D-RGB LED count: 28
- D-RGB cable length: 50 cm
- D-RGB connector 3-pin 5V digital LED header

Position	EAN	Description	Quantity
1	104963	Coldplate (Nickel)	1
2	104393	FC Terminal (Acetal)	1
3	104395	Terminal plate (Nickel)	1
4	104085	Coldplate ABP (Nickel)	1
5	104575	Side plate (Nickel)	1
6	103965	Main O-ring 128 x 2 mm	1
7	104087	Main o-ring ABP 131 x 2 mm	1
8	104414	OR Terminal 52 x 2 mm	1
9	104106	Terminal OR -14 x 1 mm	4
10	9024	Screw M4 x 10 DIN7984	11
11	8208	Screw M3 x 8 7991DIN	2
12	8202	Screw M3 x 12 DIN7991	2
13	103987	Standoff M3.5-M2.5 x 3	4
14	103988	Standoff M4-M2.5 x 3	4
15	103986	Standoff M3.5-M2.5 x 11.3	6
16	104093	Standoff M2.5-M3 x 6.6	8
17	104105	Screw AX1 M3 x 10	8
18	9013	Screw M4 x 8 DIN7984	12
19	104583	Top plate (Acetal)	1
20	104585	Top plate ABP (Acetal)	1
21	104094	Light guide	1
22	104100	Stand out (Acetal)	1
23	103942	Terminal Badge	1
24	104086	Terminal Badge ABP	1
25	105163	Disc magnet	4
26	8311	Screw M4 x 20 DIN7984	6
27	104211	Mylar sticker	2
28	100663	EK - Badge	2
29	104295	LED D-RGB Dense Strip Double	1
30	103975	Bridge Plate	1
31	103962	Plexi insert	1
32	104904	PCB cardboard	1

PREPARING THE GRAPHICS CARD

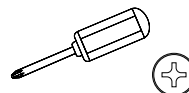
OPTION 1



STEP 1

You will need the following tool:

Phillips Head Screwdriver



STEP 1 REMOVING THE STOCK COOLER

OPTION 1 – GPU Versions Without a Backplate

Some versions of this GPU don't have a backplate (e.g., EVGA GeForce RTX 3080 XC3 BLACK GAMING).

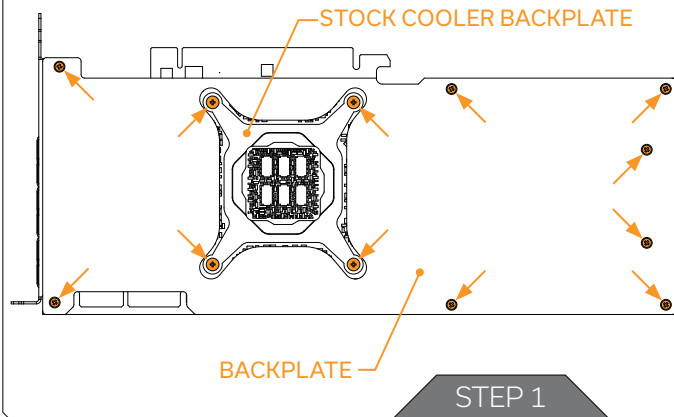
Use the Phillips head screwdriver to remove the eleven marked screws and the Stock Cooler Backplate from the backside of the GPU. You do not have to remove the unmarked I/O Bracket screw.

Carefully detach the PCB from the stock cooler and disconnect all cables connecting the stock cooler to the PCB.



Always remove the stock cooler slowly - it might be firmly glued to the PCB with thermal pads.

OPTION 2



OPTION 2 – GPU Versions With a Backplate

Use the Phillips head screwdriver to remove the twelve marked screws and the Stock Cooler Backplate from the backplate's side.

Carefully detach the PCB from the stock cooler and the backplate, and disconnect all cables connecting the stock cooler to the PCB.

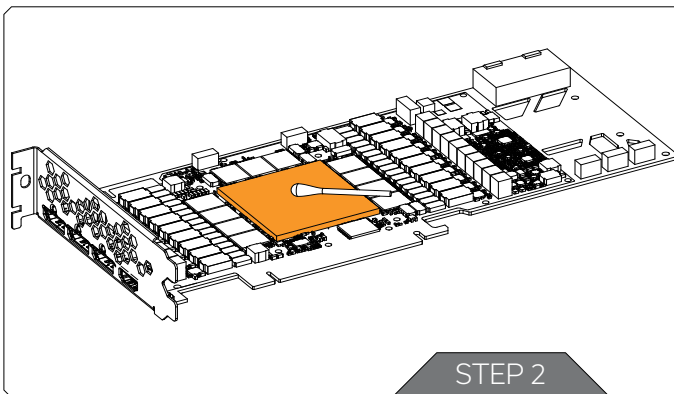


Always remove the stock cooler slowly - it might be firmly glued to the PCB with thermal pads.

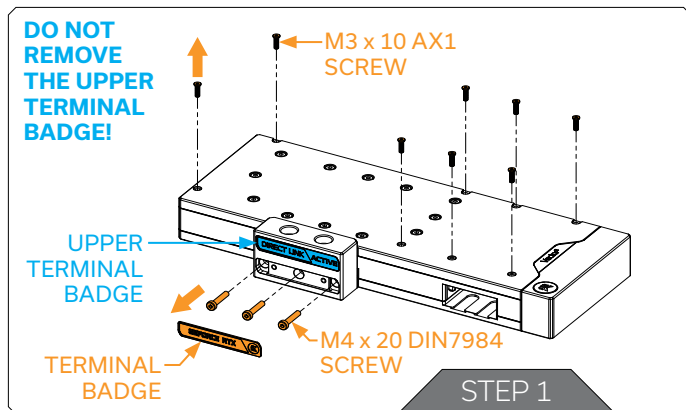
STEP 2

CLEANING THE PCB

Wipe off the remains of the original thermal compound using a nonabrasive cloth or Q-tip, as shown in the sample image, until the components and circuit board are completely clean. EK recommends the use of denatured alcohol for removing TIM leftovers. After that, remove all remaining stock thermal pads from the PCB.



PREPARING THE WATER BLOCK FOR INSTALLATION



STEP 1

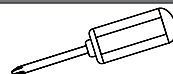
First, remove the terminal badge which is attached to the terminal with two magnets. Under the badge, unscrew three (3) screws M4x20 DIN7984. Additional eight (8) screws M3x10 AX1 need to be removed (as shown in the image).



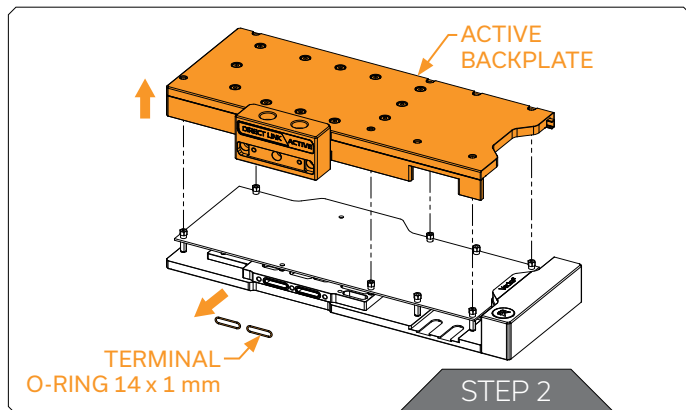
DO NOT REMOVE THE UPPER TERMINAL BADGE!

For this step, you will need:

Phillips Head Screwdriver

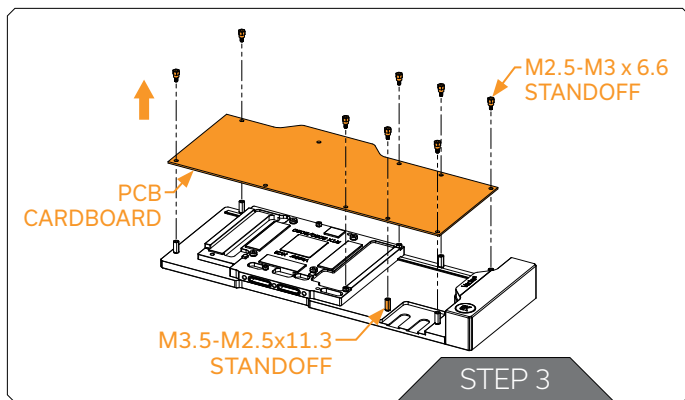


Allen Key 2.5mm



STEP 2

Carefully remove the complete active backplate with the terminal. Additional two (2) O-rings 14 x 1 EPDM50 need to be removed.



STEP 3

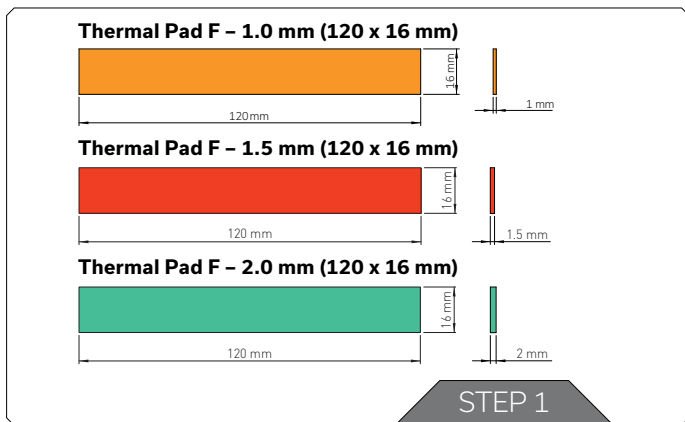
Unscrew eight (8) M2.5-M3 x 6.6 standoff with the included tool (EK-Plug out Spludger Tool). Make sure not to unscrew the M3.5-M2.5 x 11.3 standoff! In case the M3.5-M2.5 x 11.3 standoff unscrews, carefully tighten it back with the 4 mm wrench.

After removing the standoffs, the PCB cardboard needs to be removed. The PCB cardboard is printed on 1:1 scale.

For this step, you will need:



CUTTING AND PLACING THERMAL PADS



STEP 1

our 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.



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

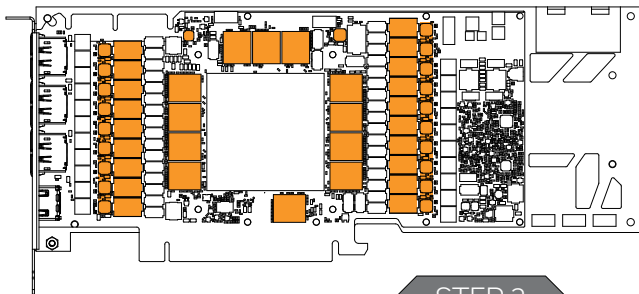
Replacement thermal pads:

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

Thermal Pad F 1.5 mm – (120 x 16mm) EAN: 3830046996749

Thermal Pad F 2.0 mm – (120 x 16mm) EAN: 3830046996756

F1 Thermal Pad - 120 x 16 x 1.0 mm



STEP 2

The cardboard is printed in scale 1:1. Cut Thermal Pads to the size printed on the cardboard. Once cut to the size, Thermal Pads should be placed on the block, as shown in the picture.



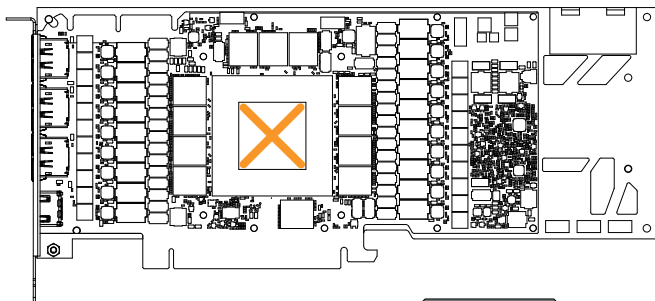
Before attaching the PCB to the Water Block, make sure all the Thermal Pads are placed correctly!

For this step, you will need:

Scissors



APPLYING THERMAL COMPOUND



STEP 1

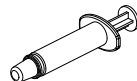
Apply the enclosed EK-TIM Ectotherm thermal grease (thermal compound) on the GPU heat spreader - IHS - as shown in the image. The layer of the thermal compound must be thin and even over the entire surface of the IHS.



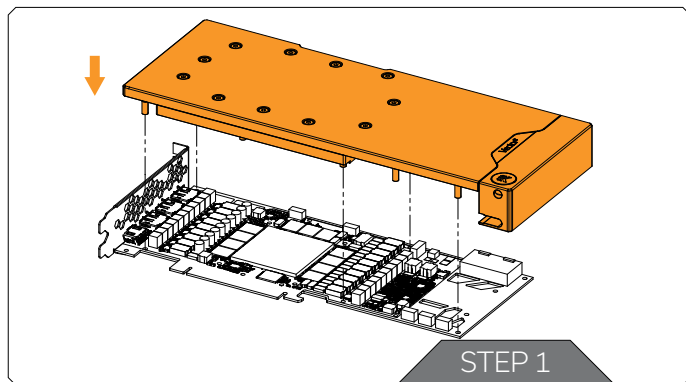
The excessive or uneven application of thermal grease may lead to poor performance!

For this step, you will need:

Thermal Grease



ATTACHING THE WATER BLOCK



STEP 1

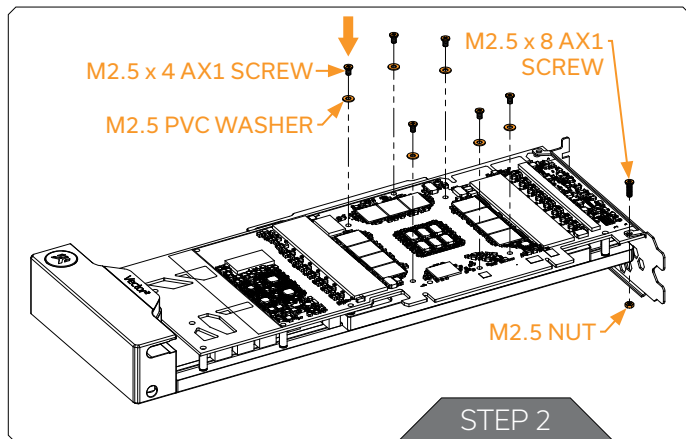
Carefully position the water block with preinstalled standoffs on the graphics card. During this process, make sure you have aligned mounting holes of the PCB with holes of the water block.



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



Before attaching the PCB to the Water Block, make sure all the Thermal Pads are placed correctly!

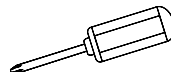


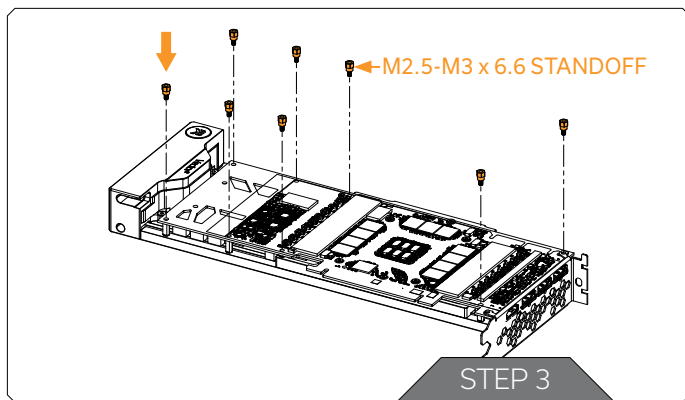
STEP 2

Use six (6) 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. After attaching the PCB, use one (1) M2.5 x 8 AX1 Screw and one (1) M2.5 Nut to secure the I/O Bracket.

For this step, you will need:

Phillips Head Screwdriver





STEP 3

Place the M2.5-M3 x 6.6 Standoff in each of the eight (8) mounting holes of the standoff M3.5-M2.5 x 11.3 (as shown in the image) and tighten them evenly with the EK-Plug-Out Spludger Tool.



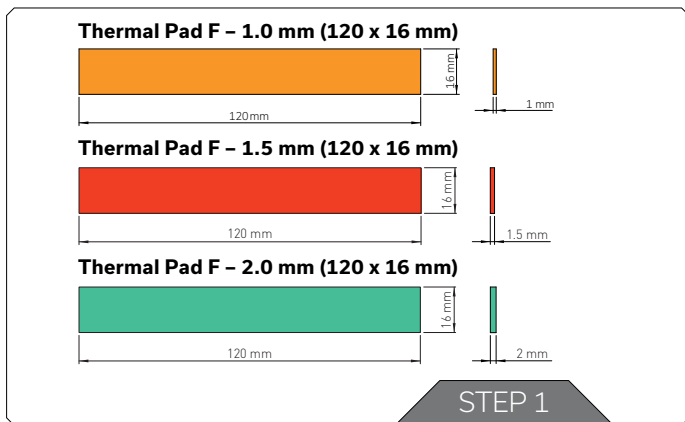
Do not use excessive force!

For this step, you will need:

EK-Plug Out Spludger Tool



ATTACHING THE ACTIVE BACKPLATE



STEP 1

After attaching the water block, a few more thermal pads need to be placed on the backside of the GPU PCB. Once cut to size, thermal pads should be placed on the PCB, as illustrated. EK made sure to provide you with more than an adequate quantity of thermal pads to complete this Step.

Replacement thermal pads:

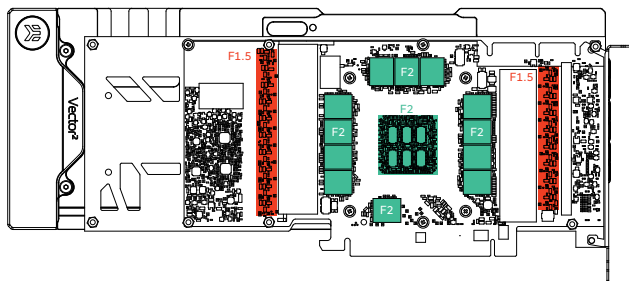
Thermal Pad F 1.0 mm – (120 x 16mm) EAN: 3830046996732

Thermal Pad F 1.5 mm – (120 x 16mm) EAN: 3830046996749

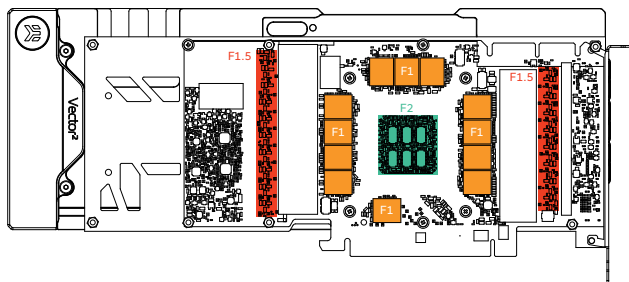
Thermal Pad F 2.0 mm – (120 x 16mm) EAN: 3830046996756

- F1 Thermal Pad - 120 x 16 x 1.0 mm
- F1.5 Thermal Pad - 120 x 16 x 1.5 mm
- F2 Thermal Pad - 120 x 16 x 2.0 mm

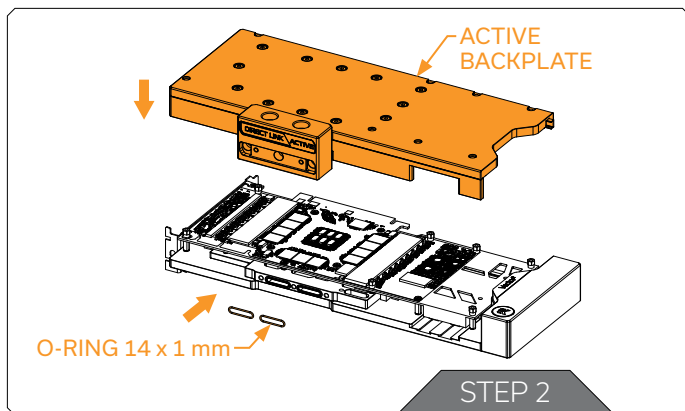
3080/ 3080Ti:



3090:



STEP 1

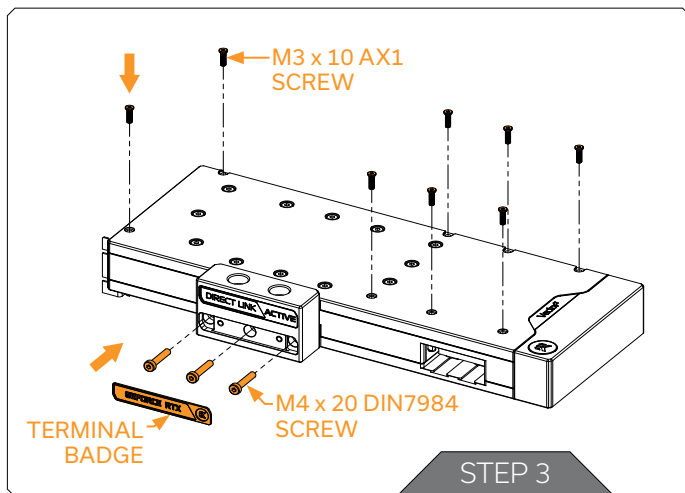


STEP 2

Put two (2) O-rings 14 x 1 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

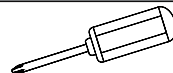
Place eight (8) M3 x 10 AX1 screws into the water block standoffs and tighten them using Philips head screwdriver (as shown in the image). After attaching the AX1 Screws, three (3) terminal screws M4 x 20 DIN7984 need to be attached using Allen Key 2.5mm. The terminal badge can be reused, after securing the terminal screws.



Pay attention not to use too much force when tightening the active backplate.

For this step, you will need:

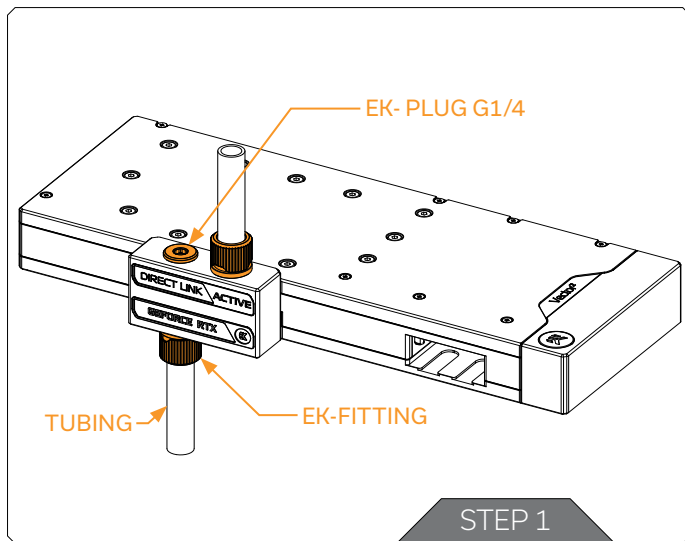
Phillips Head Screwdriver



Allen Key 2.5mm



FITTINGS AND TUBING



STEP 1

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 using the enclosed EK-Plug G1/4 or its equivalent.

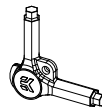
EK recommends using EK fittings with all EK water blocks.



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

For this step, you will need:

EK-Loop Multi Allen Key



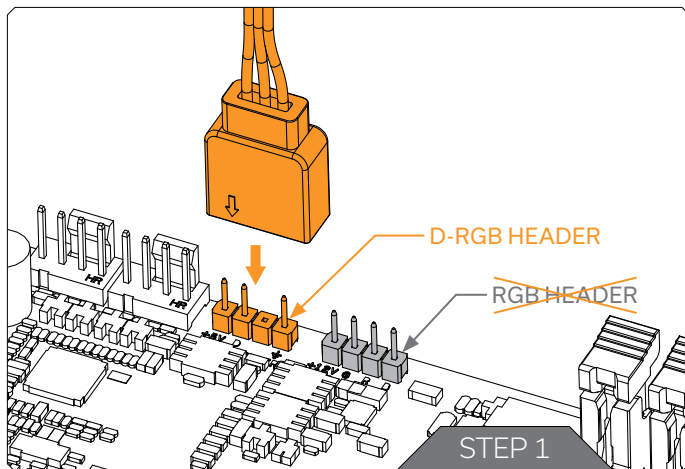
INSERTING THE GRAPHICS CARD INTO THE CHASSIS

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 coolant leaks, fix the issue and repeat the testing process. Ensure that all hardware is dry before the system is powered on in order 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 instructions 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

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