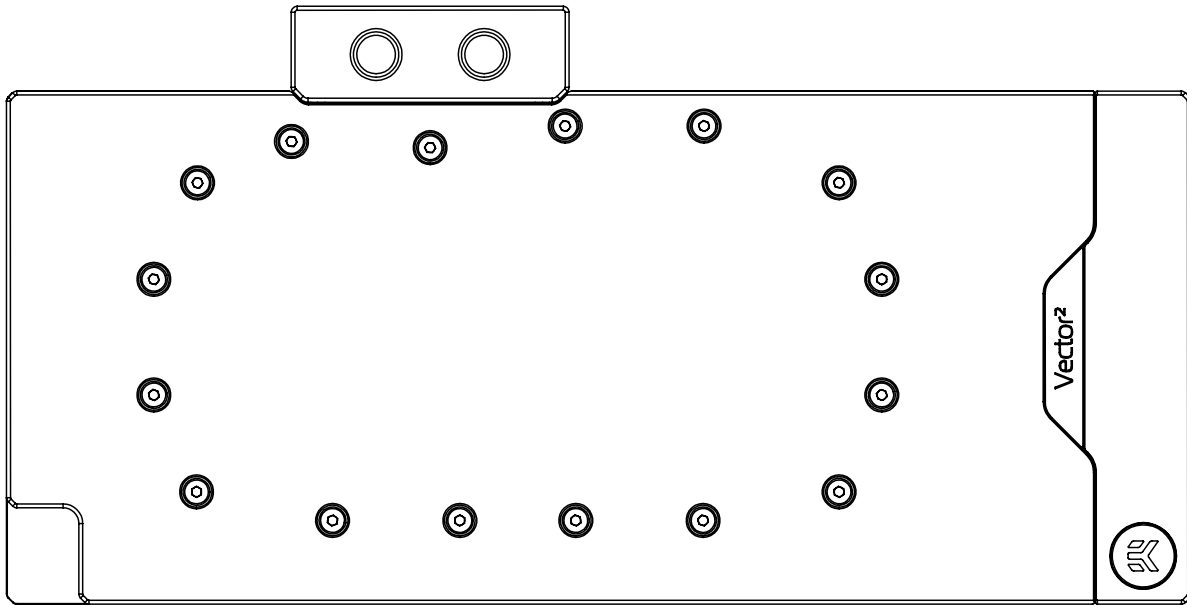


EK-Quantum Vector² Strix/TUF RTX 3090 Ti ABP Set D-RGB

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:

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!

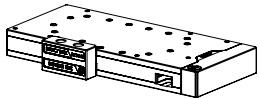
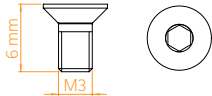

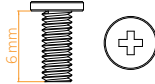
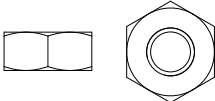
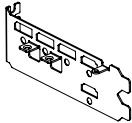
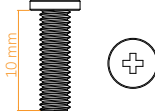
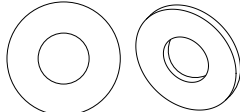
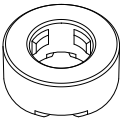
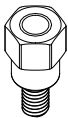
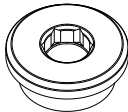
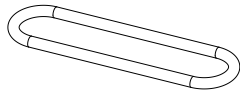
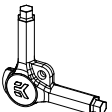


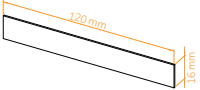
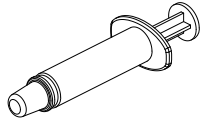
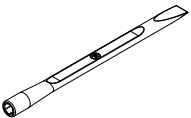
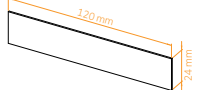
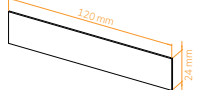
For best results, EK recommends the use of EK-CryoFuel coolants! To reach optimal performance, make sure to thoroughly bleed the air out of your water block!

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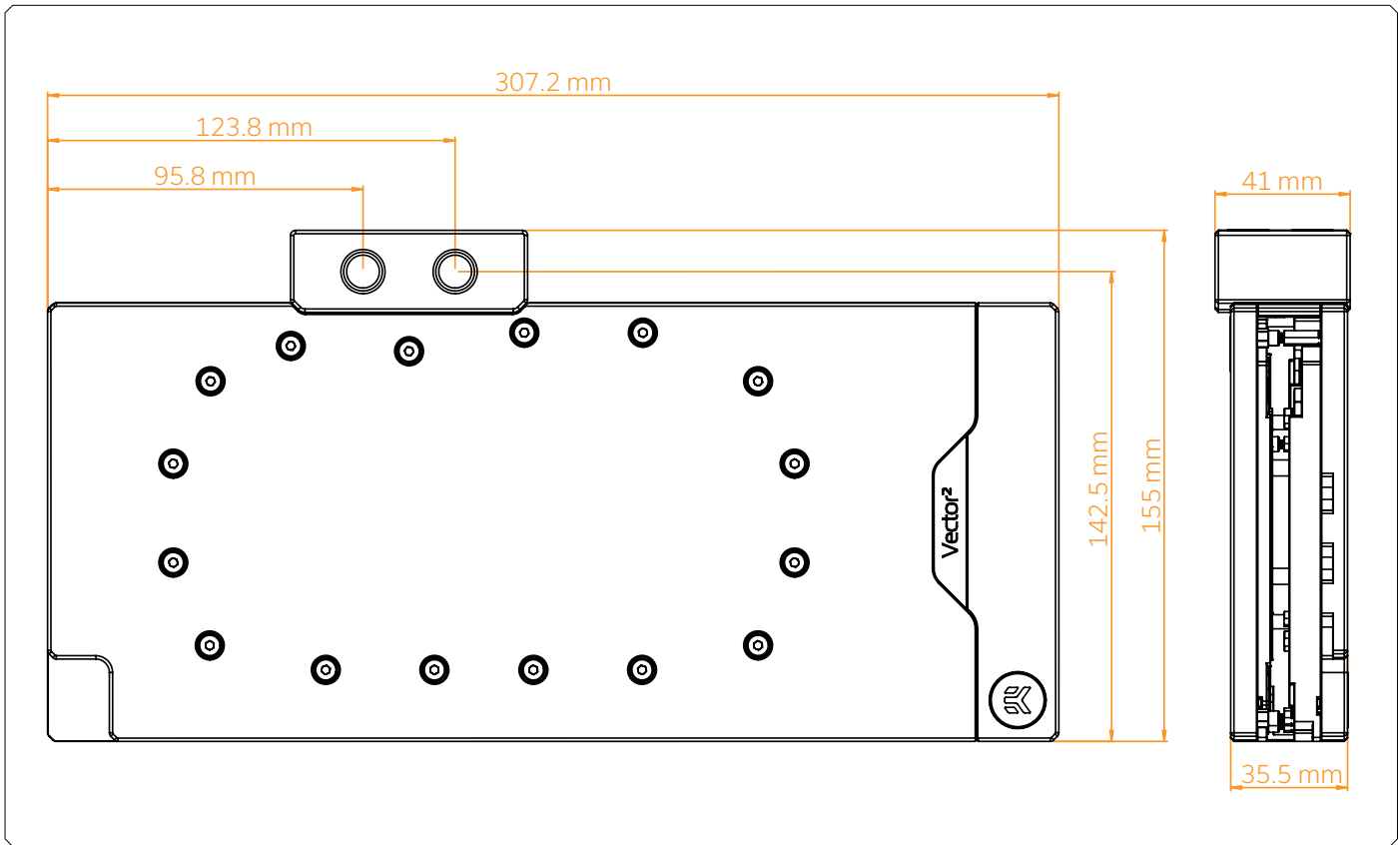
BOX CONTENTS

EAN: 105526

 <p>EK-Quantum Vector² Strix/TUF RTX 3090 Ti ABP Set D-RGB</p>	 <p>M3 x 6 DIN7991 Screw (2 pc)</p>	 <p>M2.5x4 AX1 Screw (8 pcs)</p>	 <p>M2.5x6 AX1 Screw (1 pc)</p>
 <p>Nut M2.5 (2 pcs)</p>	 <p>Strix/TUF Double Slot Bracket (1 pc)</p>	 <p>M3x10 AX1 Screw (1 pc)</p>	 <p>Polyamid Washer M2.5 0.5mm (8 pcs)</p>
 <p>Standoff Ø4.5/2.5 (1 pc)</p>	 <p>Standoff M2.5-M3 x 6.6mm (1 pc)</p>	 <p>Quantum Plug (2 pcs)</p>	 <p>Terminal OR - Vector² 14x1 mm (2 pcs)</p>
 <p>EK-Loop Multi Allen Key (1 pc)</p>	 <p>Allen Key 2 mm (1 pc)</p>	 <p>Allen Key 2.5 mm (1 pc)</p>	 <p>Thermal Pad F 1.0 mm (6 pcs) (3830046996732)</p>
 <p>Thermal Grease (1 pc)</p>	 <p>EK-Plug Out Spludger Tool (1 pc)</p>	 <p>Thermal Pad G 1.5 mm (2 pcs) (3830046996787)</p>	 <p>Thermal Pad G 2.0 mm (4 pcs) (3830046996794)</p>

EAN: 104549

WATER BLOCK DIMENSIONS

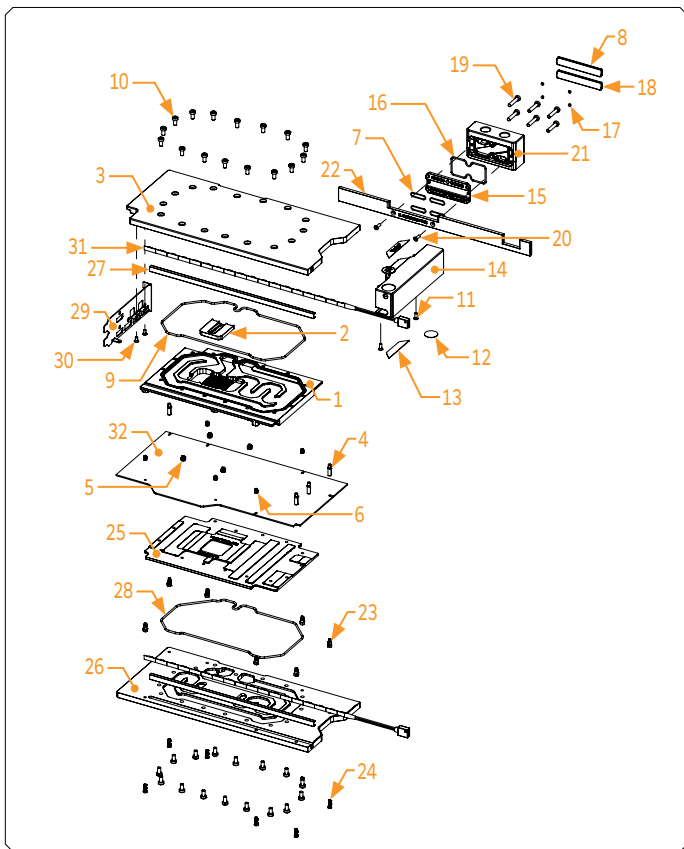


TECHNICAL SPECIFICATIONS AND WATER BLOCK PARTS

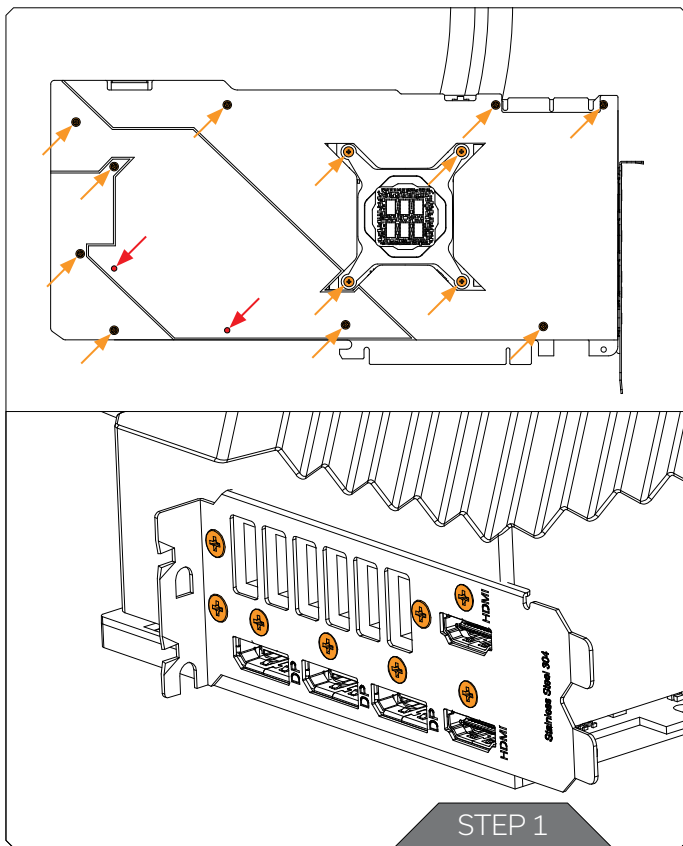
NICKEL PLEXI

- Dimensions: (L x H x W): 307.15 x 155 x 41mm
- D-RGB LED count: 30
- D-RGB cable length: 50 cm
- D-RGB connector 3-pin 5V digital LED header

Position	EAN	Description	Quantity
1	105518	Coldplate (Nickel)	1
2	103962	Plexi insert	1
3	105523	Top plate (Plexi)	1
4	103986	Standoff M3.5-M2.5 x 11.3	4
5	103988	Standoff M4-M2.5 x 3	4
6	103987	Standoff M3.5-M2.5 x 3	5
7	104106	Terminal OR 14 x 1 mm	4
8	103942	Terminal badge	1
9	100240	Main O-ring 165 x 2 mm	1
10	9013	Screw M4 x 8 DIN7984	32
11	8208	Screw M3 x 8 7991DIN	2
12	100663	EK - Badge	2
13	103964	Mylar sticker	2
14	104099	Stand out (Acetal)	1
15	104395	Terminal plate (Nickel)	1
16	104414	OR Terminal 52 x 2 mm	1
17	105163	Disc magnet	4
18	104086	ABP Terminal badge	1
19	8311	Screw M4 x 20 DIN7984	6
20	8201	Screw M3 x 10 7991DIN	2
21	104393	FC Terminal	1
22	105512	Side plate (Black e.)	1
23	104093	Standoff M2.5-M3 x 6.6	7
24	104105	Screw AX1 M3 x 10	7
25	105519	Coldplate ABP (Nickel)	1
26	105524	Top plate ABP (Plexi)	1
27	105510	LED Cover (Nat. elox)	2
28	105369	Main O-ring ABP 160 x 2 mm	1
29	105559	Strix/TUF 3090 Ti Double Slot Bracket (Black)	1
30	8472	Screw M3 x 6 7991DIN	2
31	100815	LED D-RGB strip 500/300 mm	2
32	105526	PCB cardboard	1



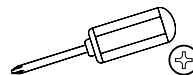
PREPARING THE GRAPHICS CARD



STEP 1

For this step, you will need:

Phillips Head Screwdriver



REMOVING THE STOCK LIQUID COOLER FROM STRIX RTX 3090 Ti

Use the Phillips head screwdriver to remove the thirteen (13) marked stock screws from the backside of the GPU. Two (2) screw positions, marked red need to be detached from the front side of the stock cooler. Carefully detach the Stock Cooler Backplate from the PCB.

To uninstall the cooler you will have to remove the eighth (8) stock screws from the bracket. **Save the removed screws as they are re-used in the following steps! Remove the stock I/O Bracket!**

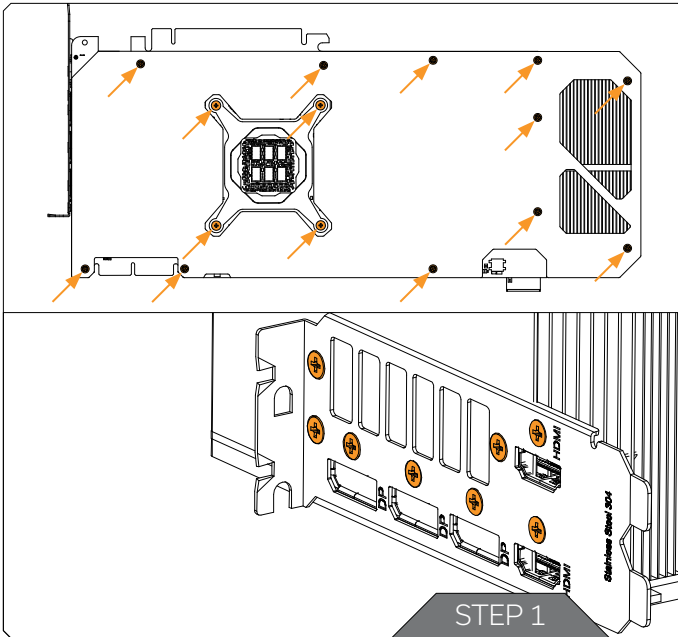


Always remove the stock cooler slowly - it might be firmly glued to the PCB with thermal pads.

REMOVING THE STOCK LIQUID COOLER FROM TUF RTX 3090 Ti

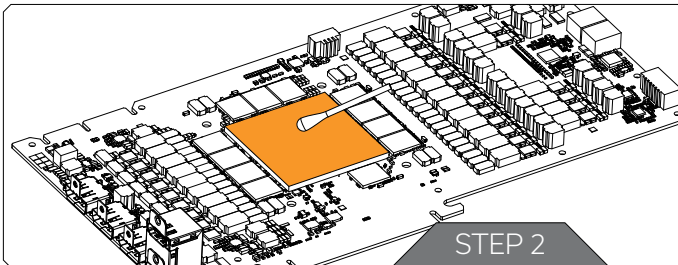
Use the Phillips head screwdriver to remove the fifteen (15) marked stock screws from the backside of the GPU.

To uninstall the cooler you will have to remove the eighth (8) stock screws from the bracket. **Save the removed screws as they are re-used in the following steps! Remove the stock I/O Bracket!**

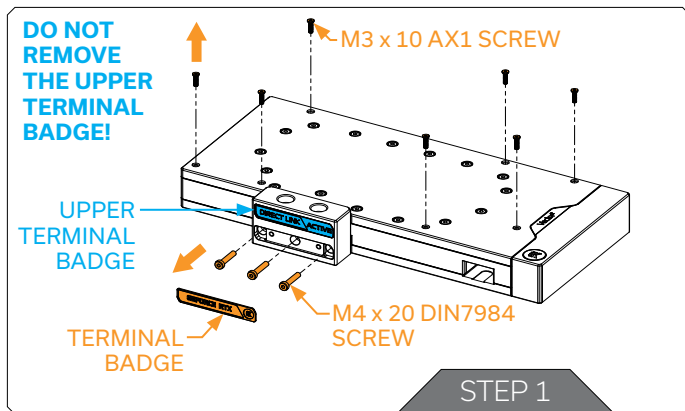


STEP 2 CLEANING THE PCB

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

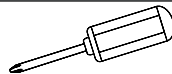
First, remove the terminal badge which is attached to the terminal with two magnets. Under the badge, unscrew three (3) screws M4 x 20 DIN7984. Additional seven (7) screws M3 x 10 AX1 need to be removed (as shown in the image).



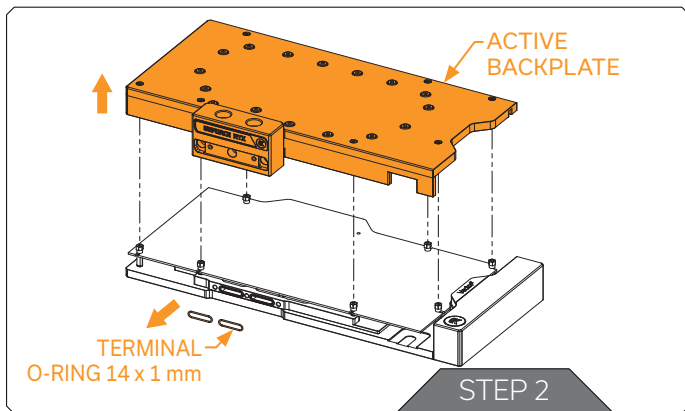
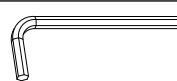
DO NOT REMOVE THE UPPER TERMINAL BADGE!

For this step, you will need:

Phillips Head Screwdriver

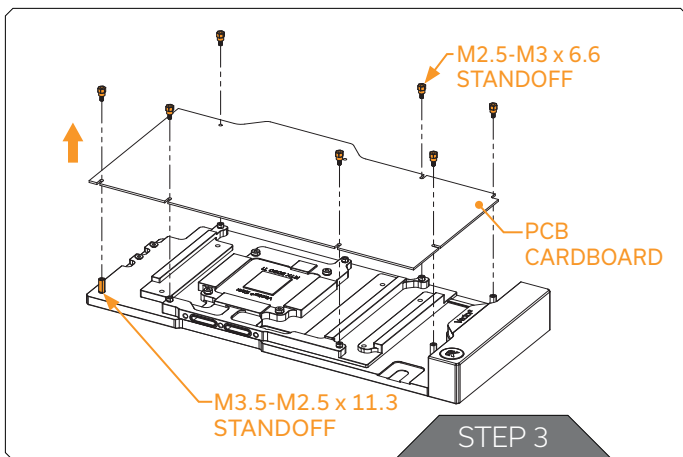


Allen Key 2.5mm



STEP 2

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

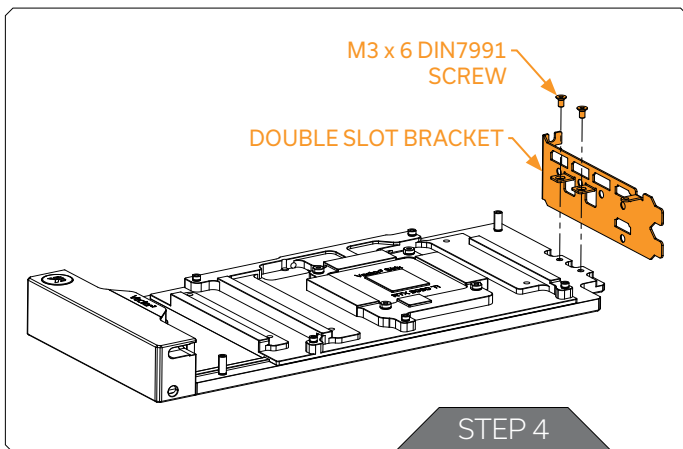
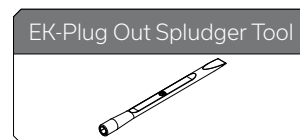


STEP 3

Unscrew seven (7) M2.5-M3 x 6.6 standoffs with the included 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 standoff unscrews, carefully tighten it back with the 4 mm wrench.

After removing the standoffs, the PCB cardboard needs to be removed.

For this step, you will need:

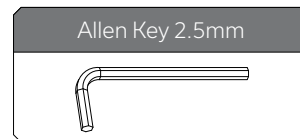


STEP 4

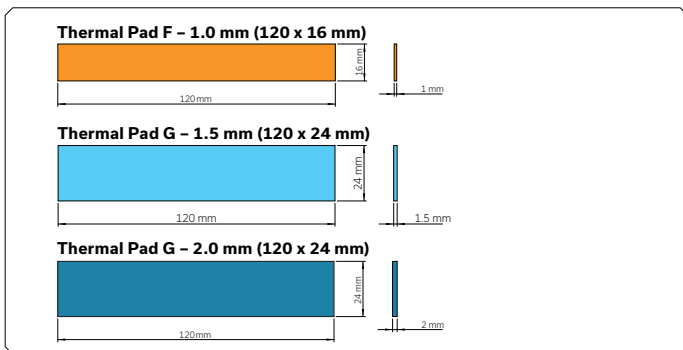
EK-Quantum Vector² Strix/TUF RTX 3090 Ti D-RGB - Nickel + Plexi comes with it's own custom Double Slot Bracket. Position the bracket accordingly and use Allen Key to screw in two (2) M3 x 6 DIN7991 Screws. Make sure the holes are properly aligned.

Do not use excessive force!

For this step, you will need:



CUTTING AND PLACING THERMAL PADS



Your EK-Quantum Vector² Strix/TUF RTX 3090 Ti D-RGB block comes with Thermal Pads that have to be cut into smaller pieces to cover all the VRM components. EK made sure to provide you with more than an adequate quantity of Thermal Pads to complete this Step.



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

Replacement thermal pads:

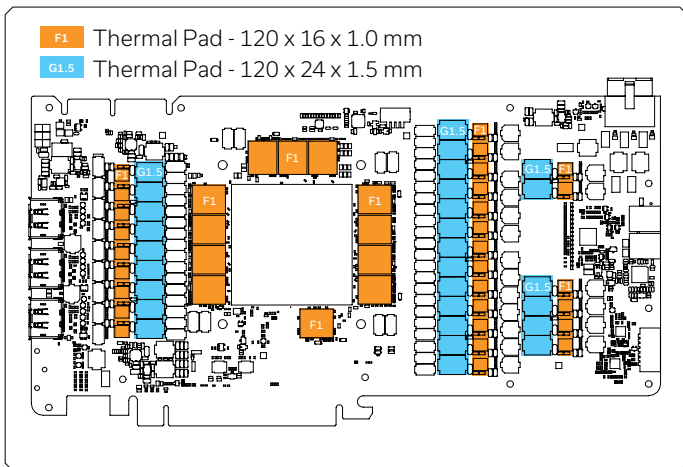
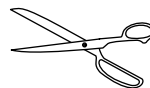
Thermal Pad F 1.0 mm - (120 x 16 mm) EAN: 3830046996732

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

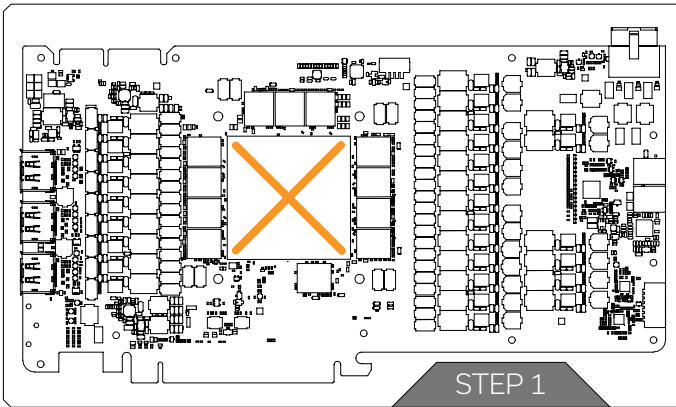
Thermal Pad G 2.0 mm - (120 x 24 mm) EAN: 3830046996794

For this step, you will need:

Scissors



APPLYING THERMAL COMPOUND



STEP 1

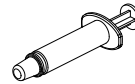
Apply the enclosed EK-TIM Ectotherm thermal grease (thermal compound) on the GPU heat spreader - IHS - as shown in the image. The layer of the thermal compound must be thin and even over the entire surface of the IHS.



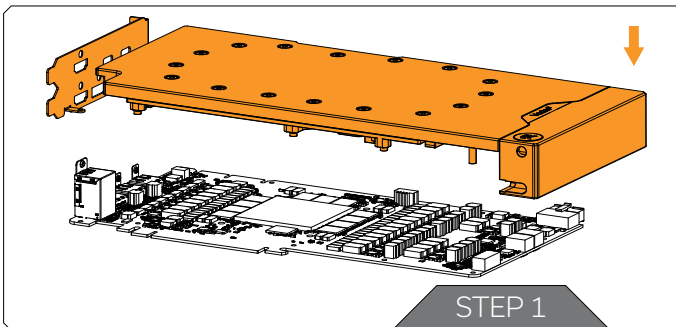
The excessive or uneven application of thermal grease may lead to poor performance!

For this step, you will need:

Thermal Grease



ATTACHING THE WATER BLOCK



STEP 1

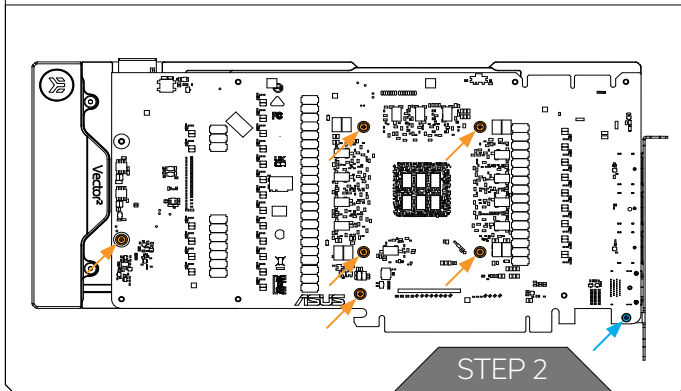
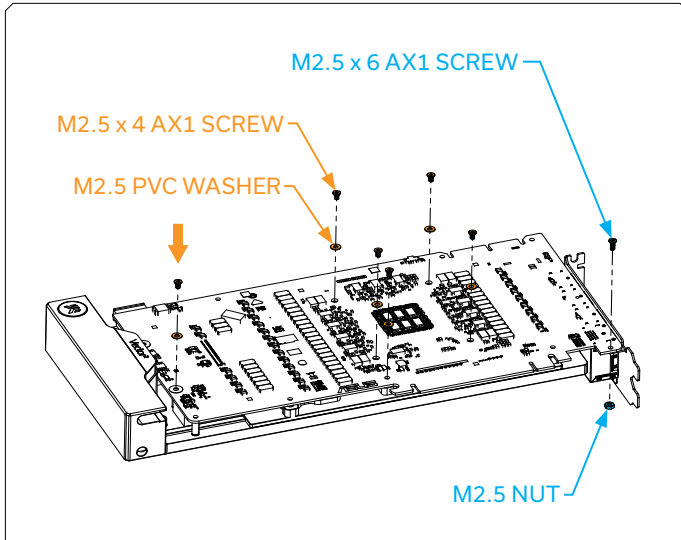
Carefully position the water block with preinstalled standoffs on the graphics card. During this process, make sure you have aligned mounting holes of the PCB with holes of the water block.



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



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

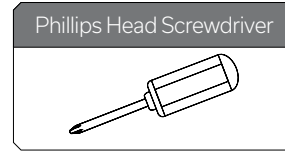


STEP 2

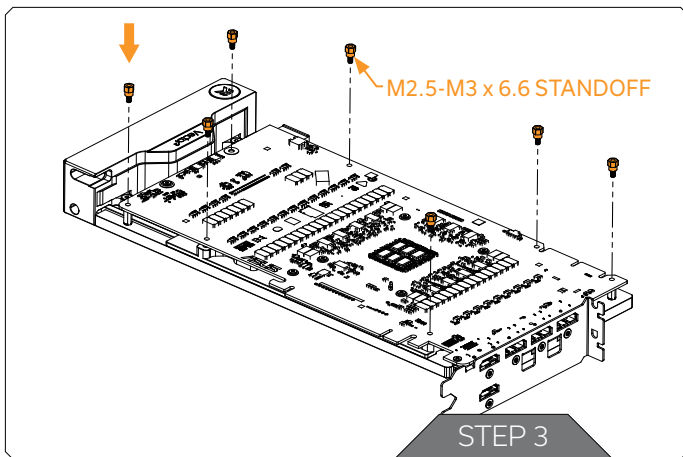
After placing the water block, use six (6) M2.5 x 4 AX1 screws and PVC washers to tighten the GPU PCB. Tighten the screws evenly using the Phillips-head screwdriver. EK recommends you start tightening the screws around the GPU core first and then continuing outward to prevent damaging the GPU. Always use a plastic washer under each screw.

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

For this step, you will need:



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



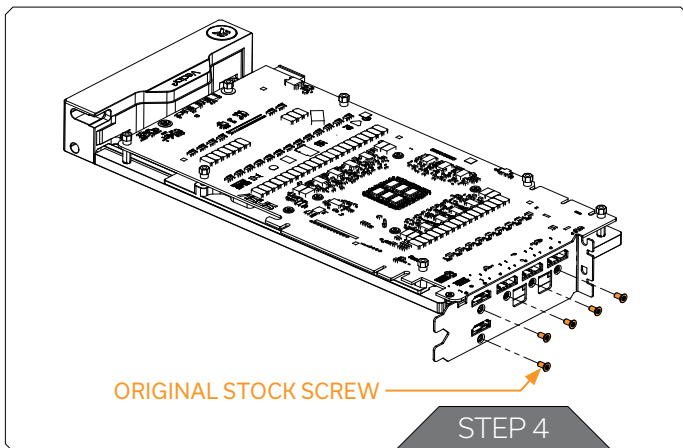
STEP 3

Place the M2.5-M3 x 6.6 Standoff in each of the seven (7) 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



STEP 4

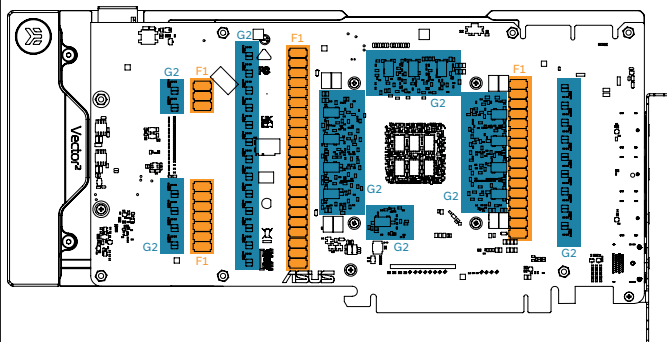
Use five (5) of the original stock screws to secure Double Slot Bracket onto the IO of the PCB.

PREPARING THE BACKPLATE

Thermal Pad F - 1.0 mm (120 x 16 mm)



Thermal Pad G - 2.0 mm (120 x 24 mm)



F1 Thermal Pad - 120 x 16 x 1.0 mm

G2 Thermal Pad - 120 x 24 x 2.0 mm

STEP 1

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.



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

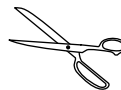
Replacement thermal pads:

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

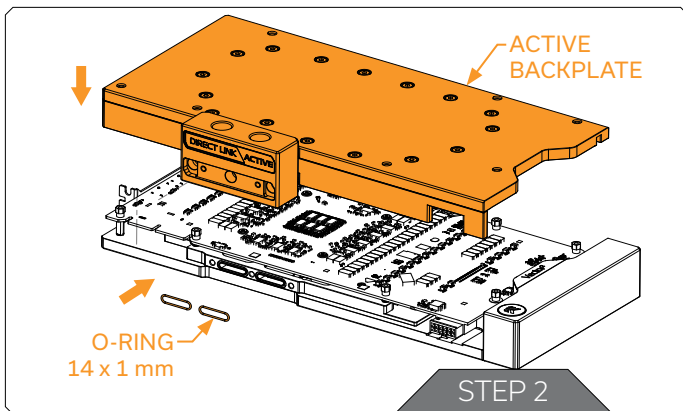
Thermal Pad G 2.0 mm - (120 x 24 mm) EAN: 3830046996794

For this step, you will need:

Scissors



G2

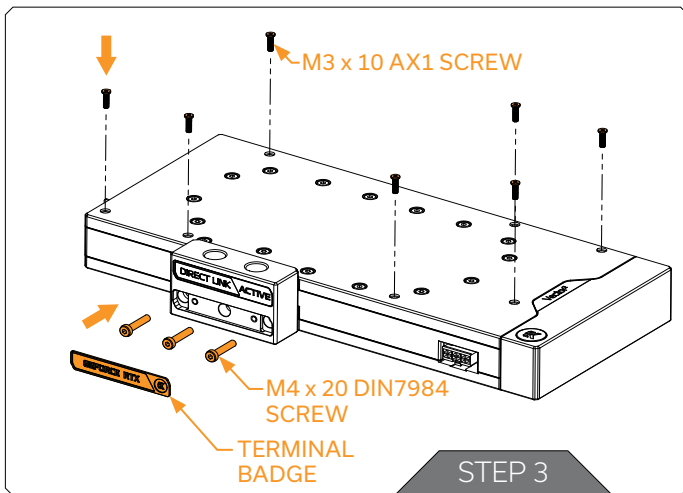


STEP 2

Put two 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

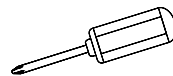
Place seven (7) M3 x 10 AX1 screws into the water block standoffs and tighten them using Philips head screwdriver (as shown in the image). After attaching the AX1 Screws, three (3) terminal screws M4 x 20 DIN7984 need to be attached using Allen Key 2.5 mm. The terminal badge can be reused, after securing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



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

For this step, you will need:

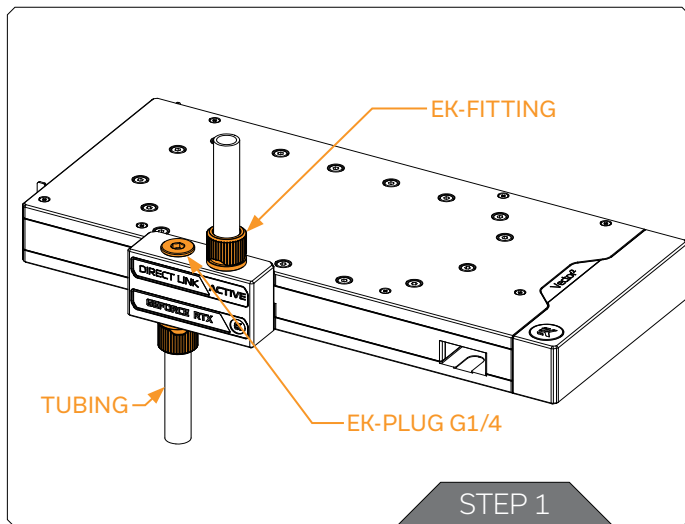
Phillips Head Screwdriver



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 with enclosed EK-Plug G1/4 or its equivalent.

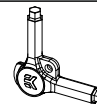
EK recommends using EK fittings with all EK water blocks.



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!

For this step, you will need:

EK-Loop Multi Allen Key



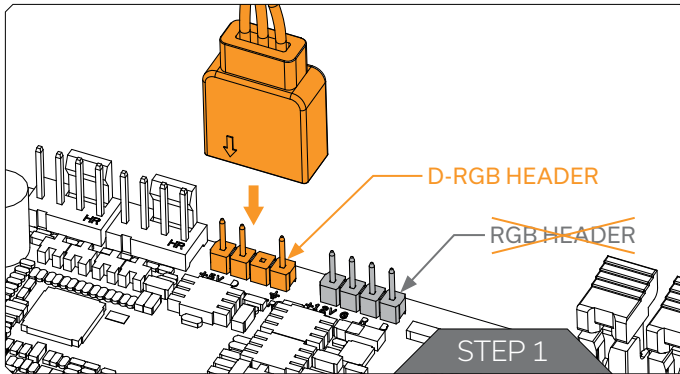
INSERTING THE GRAPHICS CARD INTO THE CHASSIS

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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