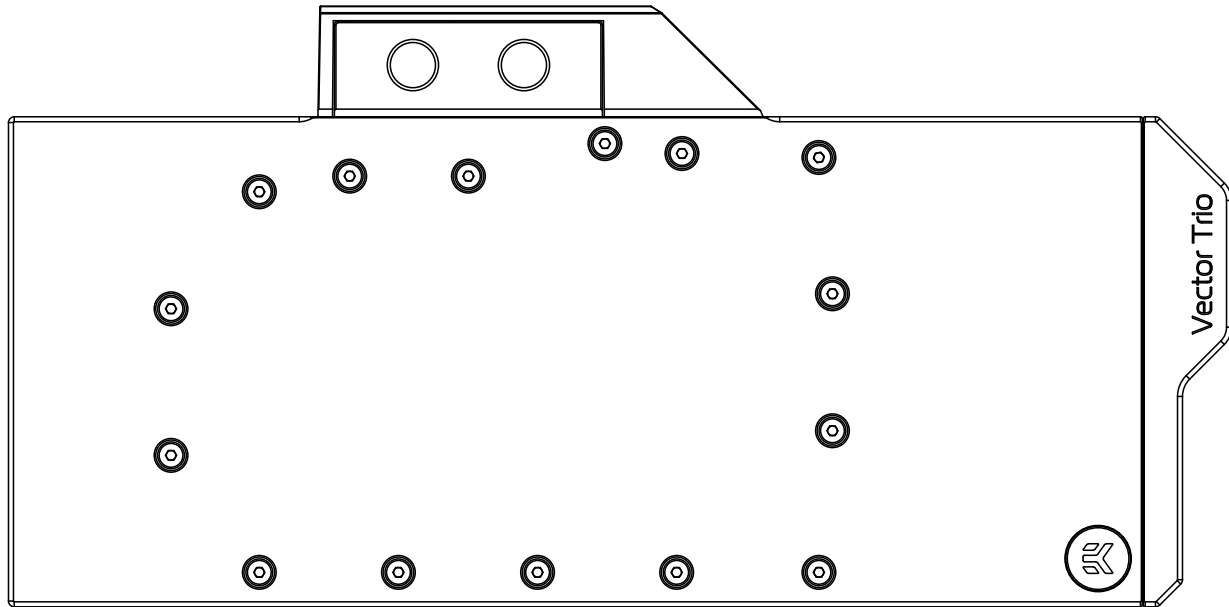# EK-Quantum
Vector Trio RTX 3080/3090 D-RGB

GPU WATER BLOCK

Vector Trio

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).

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

The use of quality market-proven corrosion-inhibiting coolants is always strongly recommended for any liquid cooling system.
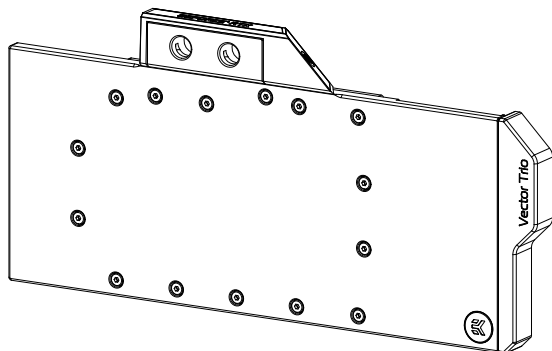
Do not use pure distilled water as a cooling liquid! For best results, EK recommends the use of EK-CryoFuel Coolants.

Make sure to bleed air out of your water block thoroughly in order to reach optimal performance.
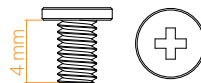
TABLE OF CONTENTS

BOX CONTENTS

EK-Quantum Vector Trio RTX 3080/3090 D-RGB

4 mm

M2.5x4 AX1 Screw (20 pcs)

6 mm

M2.5x6 AX1 Screw (13 pcs)

8 mm

M2.5x8 AX1 Screw (2 pcs)

PVC Washer M2.5 (20 pcs)

Thermal Grease (1 pc)
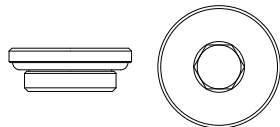
EK-Plug G1/4 CSQ-Bridge (2 pcs)

4 mm
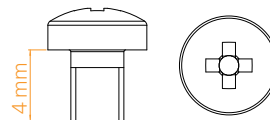
M3x4 DIN7985 Screw (2 pcs)
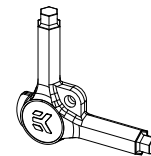
EK-Loop Multi Allen Key (1 pc)

120 mm

16 mm
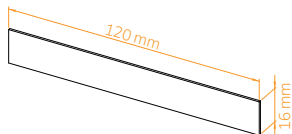
Thermal Pad F 1.0 mm (5 pcs)
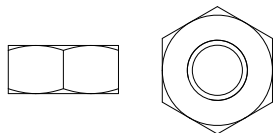
M2.5 Nut (6 pcs)

Allen Key 2.5 mm (1 pc)
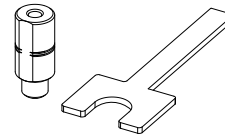
Standoff and Wrench

WATER BLOCK DIMENSIONS

319.43 mm

134.62 mm

105.62 mm

20.35 mm

Vector Trio

141.50 mm

156.90 mm
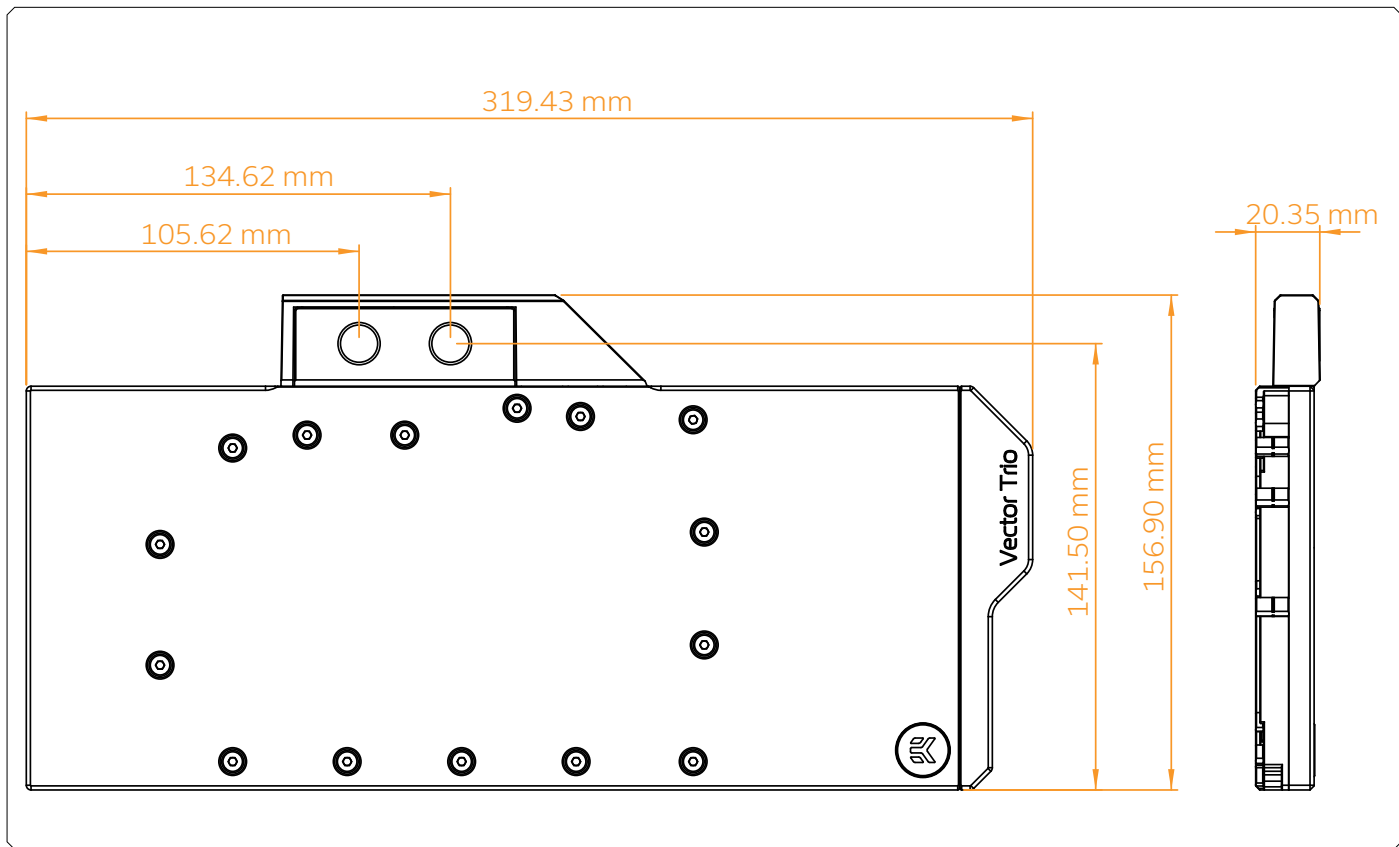
TECHNICAL SPECIFICATIONS AND WATER BLOCK PARTS

TERMINAL COVER

M4x20 DIN7984 SCREW

TERMINAL

O-RING 15x1

M4x8 DIN7984 SCREW

TOP PLATE (PLEXI, ACETAL)

COLDPLATE INSERT (PLEXI)

O-RING 171x2

JET PLATE

COLDPLATE

M4/M2,5x2,5 STANDOFF-SHORT

STICKER GEFORCE

STICKER EK

LED D-RGB STRIP

EK BADGE

LED D-RGB STRIP

STICKOUT (ACETAL WHITE/BLACK)

M4/M2,5x2,5 STANDOFF/ SCREW FOR STICKOUT

M4/M2,5x10.5 STANDOFF-LONG
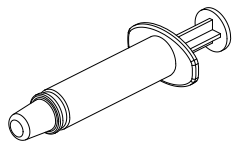
Technical Specification:
Dimensions: (LxHxW) – 319.43 x 156.9 x 20.35
D-RGB (Adressable RGB) wire harness cable length: 335 mm
D-RGB LED COUNT: 9
D-RGB connector standard 3-pin (+5V, Data, Blocked, Ground)
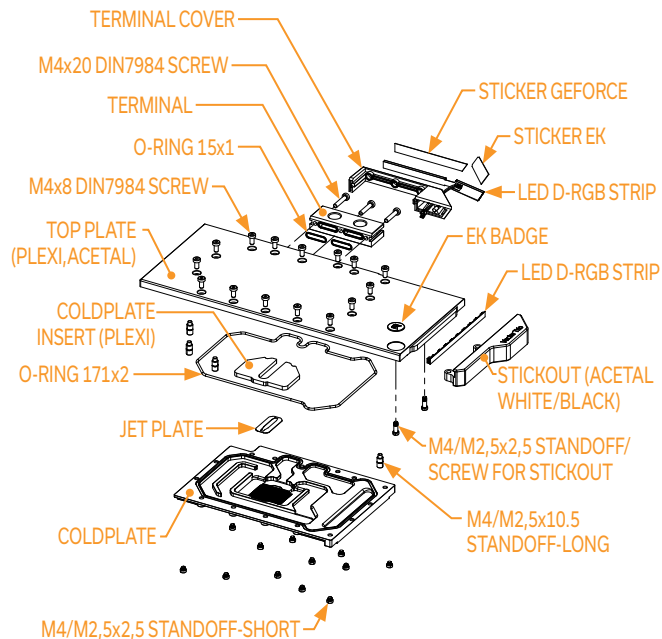
PREPARING THE GRAPHICS CARD
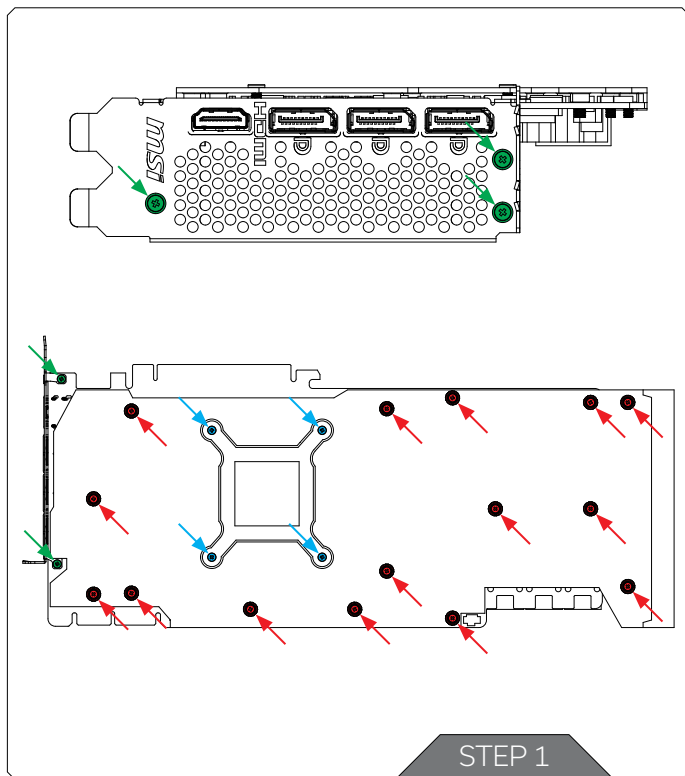
STEP 1

OPTION 1: USING THE MSI GEFORCE 3080/90 SUPRIM X

For this Step, you will need:

Phillips Head Screwdriver
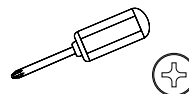
STEP 1
REMOVING THE STOCK COOLER AND BACKPLATE

Place your graphics card on the flat surface and carefully remove the stock cooler. Do not forget to unplug all the LED and fan connectors. Pay attention to the following steps in order to install the EK-Quantum Vector Trio RTX 3080/3090 D-RGB water block on the graphics card.

Use the Phillips head screwdriver to remove the five (5) green marked screws from the GPU bracket side.

Then remove the fifteen (15) red marked screws with Phillips head screwdriver and carefully detach the stock backplate from the PCB. After removing the stock backplate remove four (4) blue marked screws on retention bracket and you can move to step 2 of the process.

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

STEP 1

OPTION 2: USING THE MSI GEFORCE RTX 3080/90 GAMING X TRIO

STEP 1

Place your graphics card on the flat surface and carefully remove the stock cooler. Do not forget to unplug all the LED and fan connectors. Pay attention to the following steps in order to install the EK-Quantum Vector Trio RTX 3080/3090 D-RGB water block on the graphics card.

Use the Phillips head screwdriver to remove the three (3) green marked screws from the GPU bracket side.

Then remove the fifteen (15) red marked screws with Phillips head screwdriver and carefully detach the stock backplate from the PCB. After removing the stock backplate remove four (4) blue marked screws on retention bracket and you can move to step 2 of the process.

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

For this Step, you will need:

Phillips Head Screwdriver
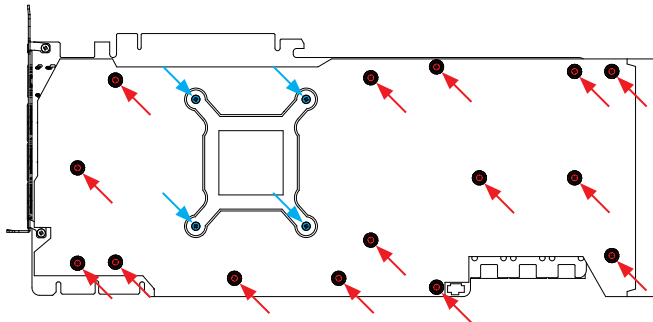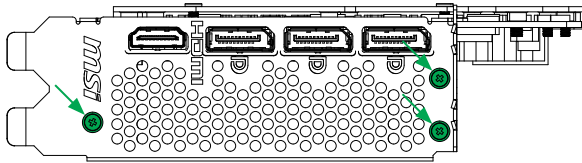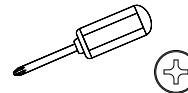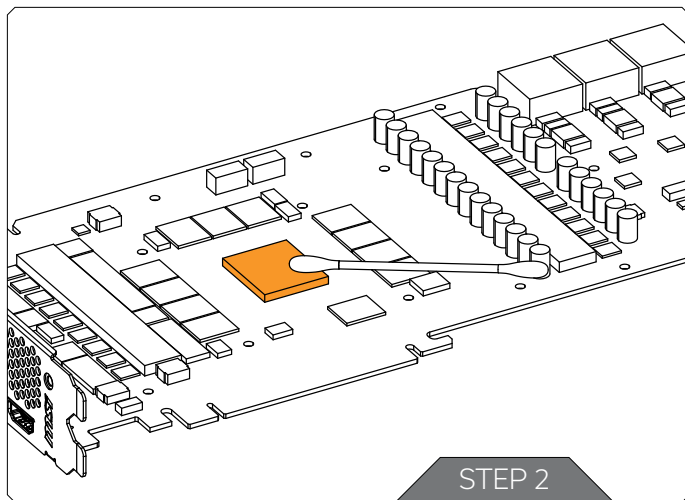
STEP 2
CLEANING THE PCB
Carefully detach the original stock cooler after removing all screws that are securing it to the board. Wipe off the remains of the original thermal compound using a nonabrasive cloth or Q-tip, as shown in the sample image, until the components and circuit board are completely clean. EK recommends the use of denatured alcohol for removing TIM leftovers.

CUTTING AND PLACING THERMAL PADS

Thermal Pad F – 1.0 mm (120 x 16 mm)

16 mm

120 mm

1 mm
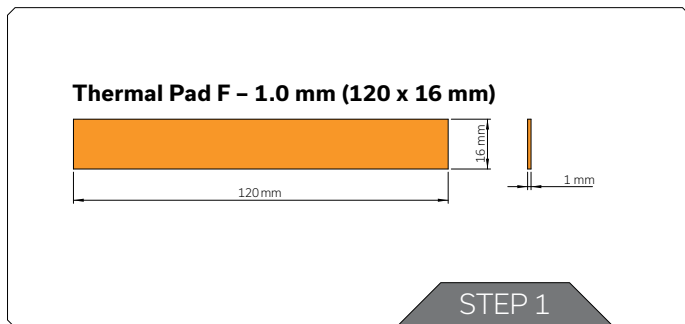
STEP 1
Your GPU water block comes with thermal pads that have to be cut into smaller pieces to cover all the VRM components, such as COILs, MOSFETs, and drivers.

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

Replacement thermal pads:
5x Thermal Pad F 1.0 mm – (120 x 16 mm) EAN: 3830046996732

RTX™ 3080/3090   Thermal Pad F 1.0 mm
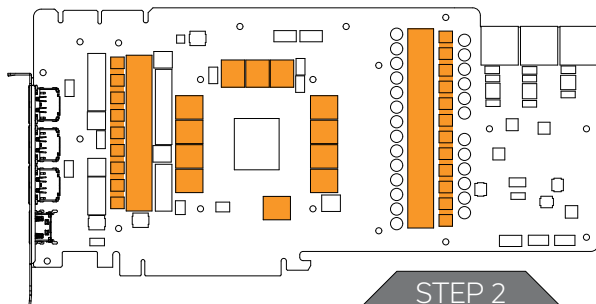
STEP 2

STEP 2
Once cut to size, thermal pads should be placed on the PCB, as illustrated below. EK made sure to provide you with more than an adequate quantity of thermal pads to complete this Step.

APPLYING THERMAL COMPOUND
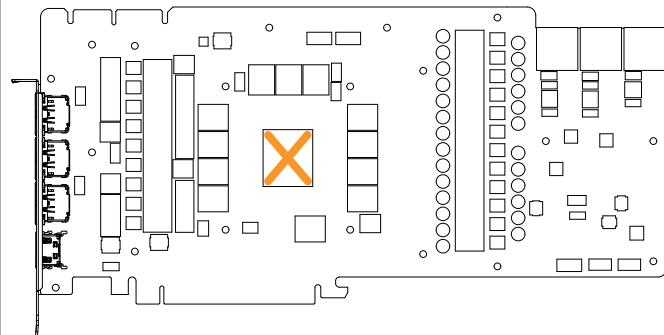
STEP 1
Apply the enclosed EK-TIM Ectotherm thermal grease (thermal compound) on the GPU heat spreader – IHS – as shown in the image. The layer of the thermal compound must be thin and even over the entire surface of the IHS.

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

For this Step, you will need:

Thermal Grease

STEP 1

INSTALLING THE WATER BLOCK

**MAX TORQUE:
0.6 Nm**

STEP 1

STEP 2

OPTION 1: USING THE MSI GEFORCE 3080/90 SUPRIM X

STEP 1
ATTACHING THE ADDITIONAL STANDOFF

From the mounting mechanism take the additional standoff with wrench and attach it on the water block as shown on the picture.
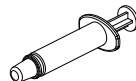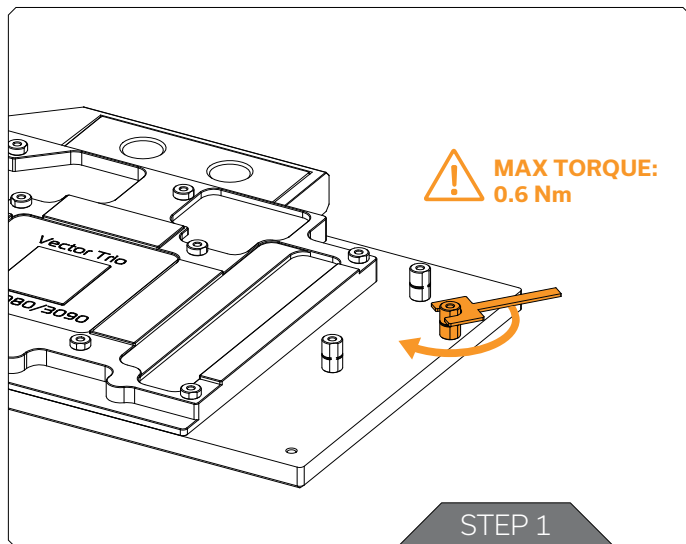
⚠ Pay attention not to use too much force while tightening the standoff.

For this Step, you will need:

Standoff and wrench
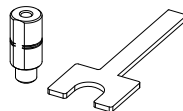
STEP 2
PLACING THE BLOCK ON THE GRAPHICS CARD

This procedure is the same for all full-cover water blocks.
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 (the same applies to other tops).

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

M2.5 x 4 AX1 SCREW
M2.5 PVC WASHER

M2.5 NUT

STEP 3

STEP 3
ATTACHING THE BLOCK TO THE GRAPHICS CARD

Use nineteen (19) M2.5 X 4 AX1 screws and M2.5 PVC washers. 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. Always use a plastic washer under each screw! For one (1) M2.5 screw marked with red triangle you will also need one (1) M2.5 Nut to succesfully attach bracket to pcb.

For this Step, you will need:

M2.5 x 4 AX1 (19 pcs)	M2.5 PVC Washer (19 pcs)	Phillips Head Screwdriver	M2.5 Nut 1 pcs

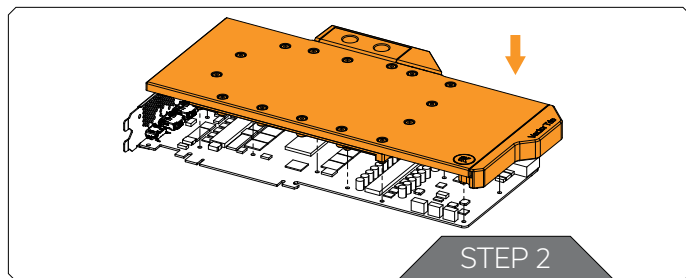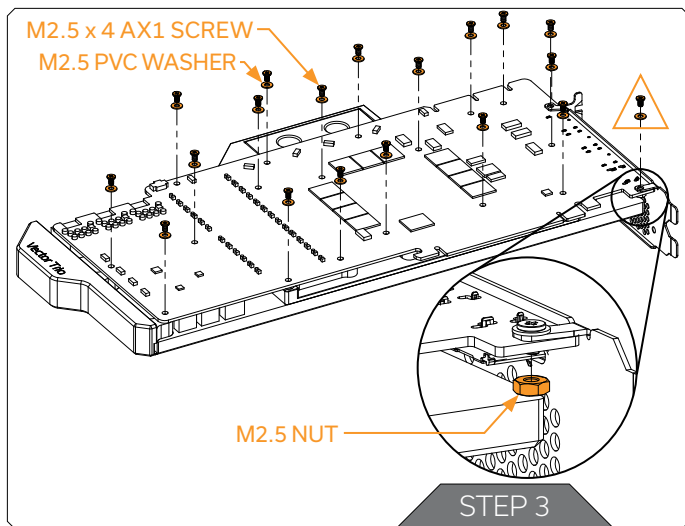## OPTION 2: USING THE MSI GEFORCE RTX 3080/90 GAMING X TRIO

STEP 1
PLACING THE BLOCK ON THE GRAPHICS CARD

This procedure is the same for all full-cover water blocks.
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 (the same applies to other tops).

⚠ Pay attention not to use too much force when pressing the block down to the PCB since chip dies are prone to cracking.
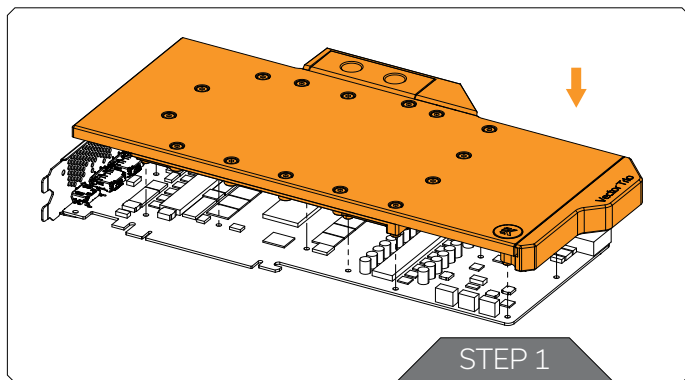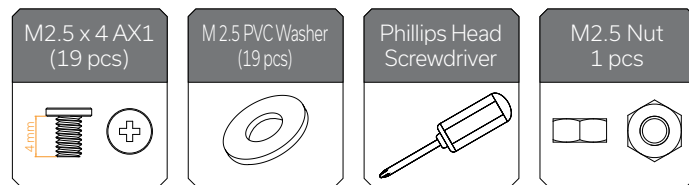
STEP 1

M2.5 x 4 AX1 SCREW
M2.5 PVC WASHER
STEP 2
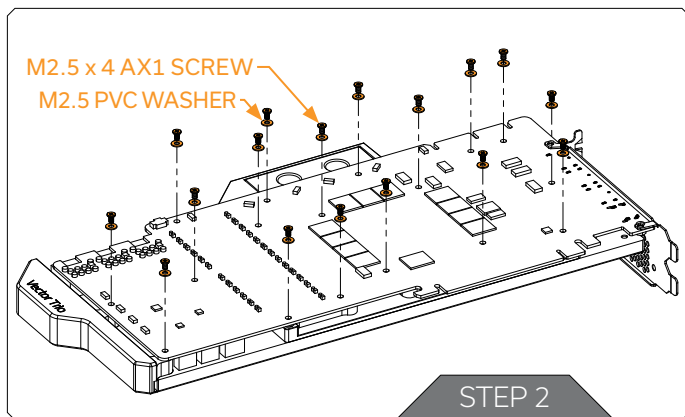
STEP 2
ATTACHING THE BLOCK TO THE GRAPHICS CARD
Use seventeen (17) M2.5 X 4 AX1 screws and M2.5 PVC washers. Tighten the screws evenly using the Phillips head screwdriver. EK recommends you start tightening the screws around the GPU core first and then continuing outward to prevent damage to the GPU. Always use a plastic washer under each screw!

For this Step, you will need:

M2.5 x 4 AX1 (17 pcs)	M 2.5 PVC Washer (17pcs)	Phillips Head Screwdriver
4 mm		
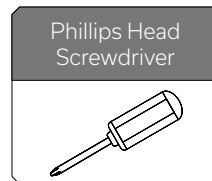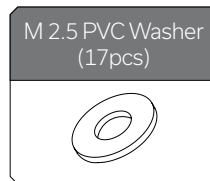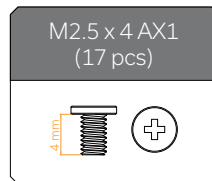
CHECKING FOR CONTACT

If necessary, temporarily remove the water block to check for uniform surface contact between the block and components. Pay special attention to the VRM section of the graphics card. Check whether the water block makes contact with the intended integrated circuit. Then repeat Steps from the previous section to re-attach the block.

⚠️ In case you fail to obtain good contact, please check again or contact our support service at https://www.ekwb.com/customer-support/.

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 PCIexpress expansion slot. Please bear in mind that your graphics card is very likely 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.

INSTALLATION OF FITTINGS AND TUBING

EK- PLUG G1/4
EK-FITTING
TUBING
STEP 1
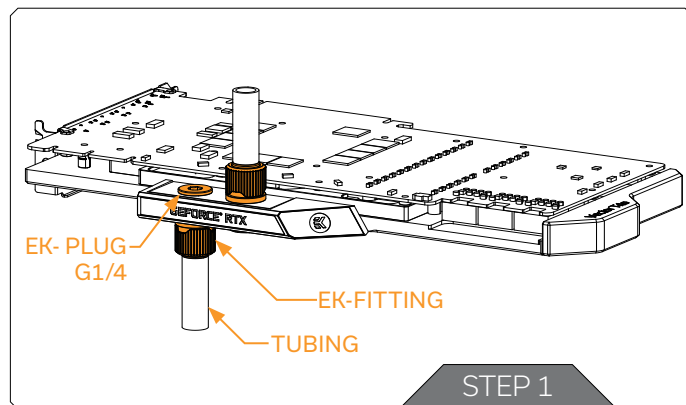
STEP 1
Screw-in two (2) G1/4 threaded male fittings. Attach the liquid cooling tubes and connect the water block(s) to the cooling loop.

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

You can use any opening as an inlet/outlet port.

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!

CONNECTING THE D-RGB LED STRIP

D-RGB HEADER
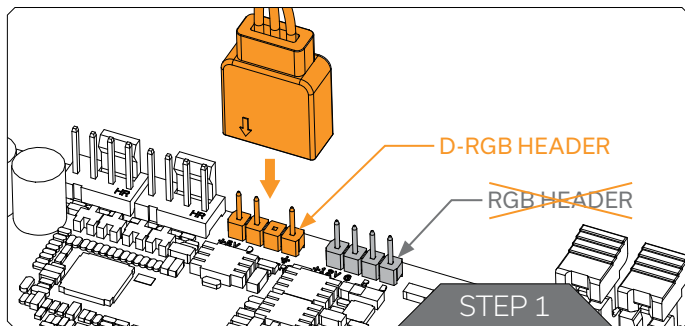
RGB HEADER

STEP 1

STEP 1

Plug the **4-pin D-RGB** connector from the GPU water block to the **D-RGB Header** on your motherboard or controller. The LED strip will work only if the pin layout on the header is as follows: **+5V, Data, Empty, Ground**.

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

TESTING THE LOOP

To ensure the installation of EK components was successful, we recommend you perform a 24-hour leak test.

When your loop is complete and filled with coolant, connect the pump to a PSU outside your system. Do not connect power to any of the other components. Turn on the PSU and let the pump run continuously.

Inspect all parts of the loop, and in case the coolant leaks, fix the issue and repeat the testing process. To prevent possible damage, please ensure that all hardware is dry before the system is powered on.
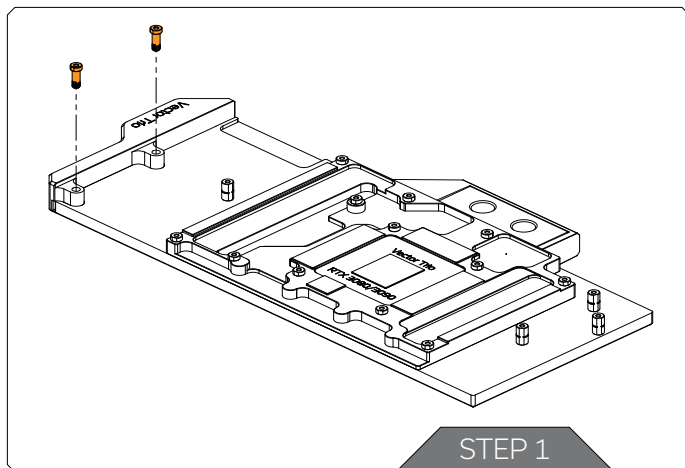
REPLACING THE LED STRIP (Optional)

STEP 1

STEP 1
If you want to replace the D-RGB LED strip, you must remove the two (2) standoffs shown in the picture using a 6mm wrench. Remove the stickout and replace the LED strip.

⚠️ Once you have replaced the LED strip, align the holes on the stickout with holes on the top plate, and tighten the standoffs evenly.

SUPPORT AND SERVICE

In case you need assistance, please contact:
https://www.ekwb.com/customer-support/

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Slovenia - EU

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