EVGA | KINGPIN

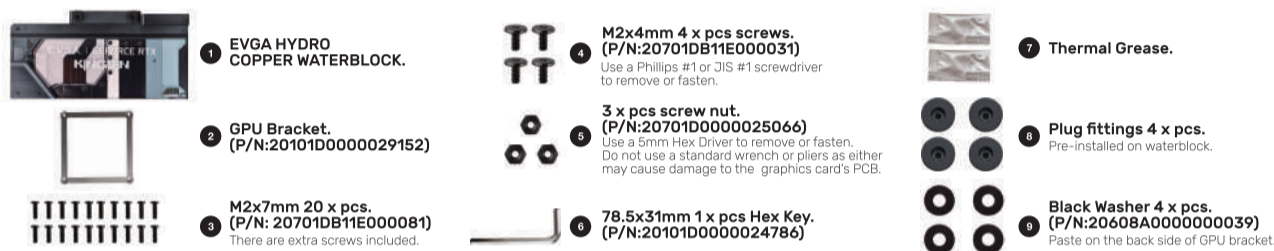## GEFORCE RTX 2080 Ti | Hydro Copper Installation Guide

The following instructions and pictures are provided to assist your installation of the EVGA GeForce RTX™ 2080 Ti K|NGP|N Hydro Copper Waterblock Kit to the EVGA GeForce RTX™ 2080 Ti K|NGP|N graphics cards. *Please be careful installing the Kit there are several very small fasteners used that can be stripped if you are not careful.*

Please be sure to keep your original shroud, heatsinks, AIO and screws so your card can be returned to its original condition should you ever need to submit for warranty.

The instructions below will walk you through the removal of the original Hybrid cooler (installed, as standard, to all GeForce RTX 2080 Ti K|NGP|N cards) and installation of the EVGA Hydro Copper Waterblock module.

Compatible Graphics Card   Graphics Card RTX 2080 Ti K|NGP|N   Part Number 11G-P4-2589-KR

Included Accessories

1. **EVGA HYDRO COPPER WATERBLOCK.**

2. **GPU Bracket. (P/N:20101D0000029152)**

3. **M2x7mm 20 x pcs. (P/N: 20701DB11E000081)** There are extra screws included.

4. **M2x4mm 4 x pcs screws. (P/N:20701DB11E000031)** Use a Phillips #1 or JIS #1 screwdriver to remove or fasten.

5. **3 x pcs screw nut. (P/N:20701D0000025066)** Use a 5mm Hex Driver to remove or fasten. Do not use a standard wrench or pliers as either may cause damage to the graphics card's PCB.

6. **78.5x31mm 1 x pcs Hex Key. (P/N:20101D0000024786)**

7. **Thermal Grease.**

8. **Plug fittings 4 x pcs.** Pre-installed on waterblock.

9. **Black Washer 4 x pcs. (P/N:20608A0000000039)** Paste on the back side of GPU bracket.

Please note that the accessory list above covers all items expected to be included in the K|NGP|N Hydro Copper Waterblock Kit. It is possible that you may receive extra accessories that will go unused after completion of the installation manual. Please follow all directions carefully and contact EVGA Customer Service If you are missing any accessories or have any questions.

Before installing, it is recommended that you have a flat work surface to work on and have access to different sizes of screw drivers or screw bits. All of the screws on the card can be removed with a Philips #0 and #1 size bit or a JIS #0 and #1 size bit. JIS bits are recommended for best fit .

Please follow the steps below:

01
Remove the visible screws for the PCIe Bracket of the card. There are two screws in total. The smaller of the two should be removed with a JIS #0 bit or a Philips #0 bit. The larger screw can be removed with a JIS #1 bit or a Philips #1 bit.
Note, removing these two screws will not allow the bracket to come loose. The bracket is still held by two screws on the backplate.

02
Remove the two backplate screws near the I/O ports of the card. Both can be removed with a JIS #1 bit or a Philips #1 bit. Once these two screws are removed (four in total) the PCIe Bracket should be loose.

03
Remove the dust caps from the video ports (if still installed). Remove the bracket by pulling it away from the card, pulling from the port side not the backplate side.
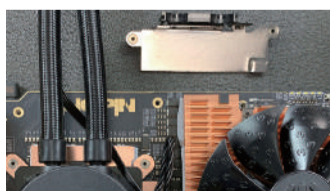
04
Remove all the Backplate screws. There are sixteen Backplate screws remaining (as two were removed in the previous step). All can be removed with a JIS #1 bit or a Philips #1 bit.
Note, there is a single screw that is covered by an inspection sticker. Removing this sticker and the screw underneath does not void the card's warranty.
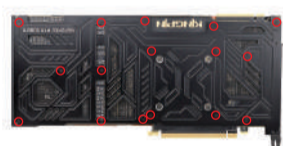
05
Flip the card over so that the VRM fan and shroud are facing up. Then pull straight up on the shroud to remove it.

06
With pump and VRM fan facing up, remove the trim around the hoses. This piece should be easy to remove as the removal of the Backplate screws loosens the hose trim. Pull straight up to remove.

07
Flip card over and remove four remaining screws on the back of the card. These silver screws hold the pump to the GPU. Recommend to use a JIS #1 bit or a Philips #1 bit.

08
Flip card over so that the pump and VRM fan are facing up. Remove the fan and headers located at the bottom of the PCB. Please be careful when removing the fan and LED connectors. The wires can snap if pulled too hard. The safest way to remove the connector is with a small flat-head screwdriver, tweezers or fingernails to raise the edge of the headers a little at a time. Set aside the pump/radiator; it will no longer be needed for this installation.


09
Remove the Rear VRM heatsink. This can be done by pulling straight up. *Note, there will be some resistance due to the thermal pads and light force may be needed to break the mild bond of the thermal pads.*
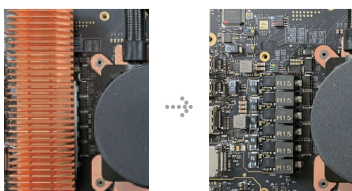
10
Remove the Front VRM heatsink. This can be done by pulling straight up, griping from the leading edge near the very back of the card. *Note, there will be some resistance due to the thermal pads and light force may be needed to break the mild bond of the thermal pads.*
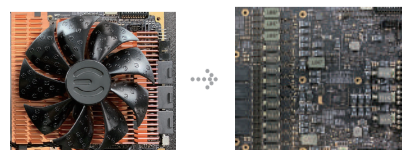
11
Remove the Vram cooling plate. This can be done by pulling straight up. *Note, there will be some resistance due to the thermal pads and light force may be needed to break the mild bond of the thermal pads.*
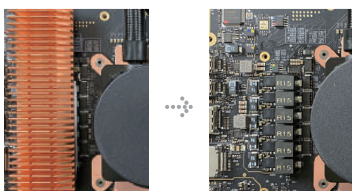
12

Clean the GPU die. The HC kit comes with thermal paste to replace the existing paste. It is strongly recommended to clean the die using very light pressure and lint-free cloth with Isopropyl alcohol (70 % or higher concentration recommended). Remove any pads that stick on the PCB.

13

Install the GPU bracket #2 included in this kit. Align the holes with the PCB. Carefully turn the card over and paste the four included black washers #9 on the holes indicated below. Use the four included screws #4 to fasten the GPU bracket. *Important note, the bottom of the bracket is covered in a non-conductive material. This is visually identifiable by the black color. The black side must touch the PCB with the shiny metallic side facing up.*
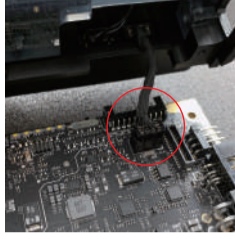

14

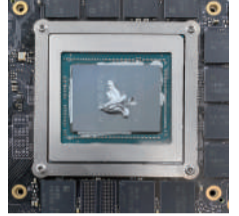Once installed the bracket will surround the GPU die.

15

Install the 8 pin OLED Connector. *Note, this connector will only install in one direction with the connector having groves that link up with the receptor. Do not force the connector if it does not go in easily.*

16

Carefully remove all the blue stickers covering the thermal pads on the waterblock.
*Note, failure to do this may cause overheating and serious damage to the graphics card.*

17

Apply a small amount of thermal grease to the GPU die.
Take care to avoid putting thermal grease on any other components. If you get thermal grease on other components, clean any affected areas with high-percentage isopropyl/rubbing alcohol.

18

Carefully line up the standoffs on the waterblock to their matching holes on the PCB. Gently lower the waterblock until it is fully seated on the PCB.

19

Reinstall 16x pcs backplate screws #3 leaving the two screws out. These two screw are the ones nearest the video out ports and fasten the PCIe bracket in place. All can be fastened with a JIS #1 bit or a Philips #1 bit. *Note, do not overtighten or screws may break.*
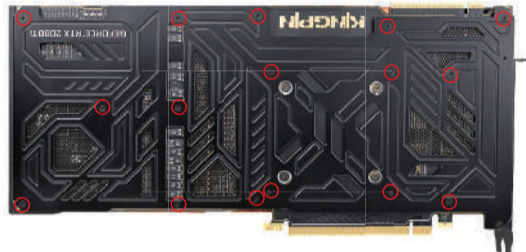
20

Fasten visible the screws for the PCIe Bracket of the card. There are two screws in total. The smaller of the two should be fastened with a JIS #0 bit or a Philips #0 bit. The larger screw can be fastened with a JIS #1 bit or a Philips #1 bit.
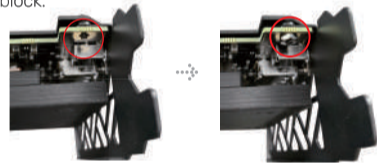*These screws are reused from the K|NGP|N Hybrid card.*

21

Fasten the two backplate screws #3 near the I/O ports of the card. Both can be removed with a JIS #1 bit or a Philips #1 bit.
To hold the lower backplate screw in place, the nut #5 needs to be fastened.

22

Tighten down all backplate screws #3 to ensure that the GPU die makes good contact with the waterblock.

23

The waterblock should be fully tightened and ready to test. As noted before, please use care to avoid overtightening as this may strip the screws and/or damage the graphics card. Lastly, do not use power tools to install the waterblock or backplate.
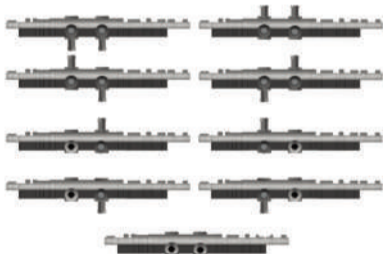
24

Install your barbs/compression fittings. Including plug fittings, and hose clamps (if needed). The thread size is G1/4. You may use either the left or right side of the terminal as an inlet or an outlet; make sure that you use no more than one barb or compression fitting on the same side or you will drastically reduce cooling performance. Lastly, check to confirm that all terminal ports contain either a barb/compression fitting or a plug fitting. To properly position your fittings, follow the diagram to the right. Note, the plug fittings #8 can be tightened and removed with the #6 hex key.

Important Information

EVGA K|NGP|N Hydro Copper Waterblocks are leak tested at the factory before shipping to the customer. Regardless, it is still recommended to run a full leak test after installing the EVGA Hydro Copper Waterblock and connecting it to your water loop.

It is recommended to use distilled water or any other popular, certified, and approved liquid coolant. Using tap water or any other liquid not meant for water cooling will cause damage, including corrosion, to the EVGA Hydro Copper Waterblock. Damage caused by using an EVGA Hydro Copper Waterblock with improper liquids will void the limited 1 year warranty.

It is strongly recommended to avoid using aluminum components within the same loop as the EVGA Hydro Copper Waterblock. Mixing copper and aluminum may cause corrosion, which will void the limited 1 year warranty. If you damage your RTX 2080 Ti K|NGP|N graphics card due to improper installation, EVGA will not be held liable for physical damage to your graphics card or your EVGA Hydro Copper Waterblock.