



GEFORCE RTX™ 3090 K|NGP|N

HYDR0 COPPER INSTALLATION GUIDE

The following instructions and pictures are provided to assist with the installation of the EVGA GeForce RTX 3090 K|NGP|N HYDR0 COPPER Kit to the EVGA GeForce RTX 3090 K|NGP|N graphics card.

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, heatsink, and screws so your card can be returned to its original condition in case you ever need to submit for warranty.

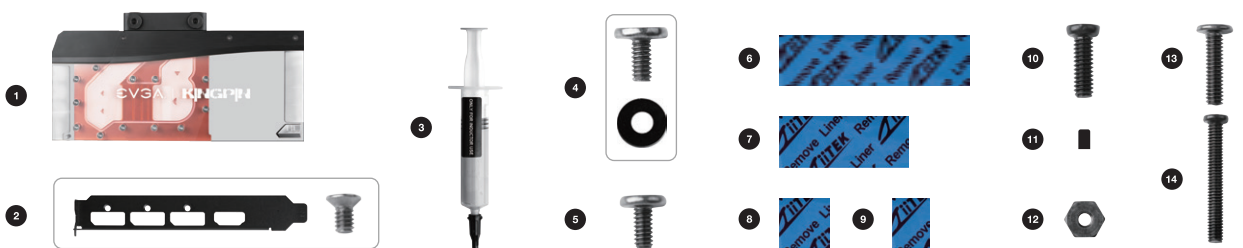
The following instructions will walk you through the removal of the HYBRID cooler (the original factory cooler of the GeForce RTX 3090 K|NGP|N HYBRID) and installation of the EVGA GeForce RTX 3090 K|NGP|N HYDR0 COPPER waterblock.

Compatible Graphics Card | EVGA GeForce RTX 3090 K|NGP|N HYBRID | Part Number: 24G-P5-3998-KR

Included Accessories:

1	EVGA K NGP N HYDR0 COPPER WATERBLOCK
2	I/O Bracket + 3pcs Bracket Screws (+2 extra)
3	1x Thermal Putty Tube
4	4pcs GPU Screws + 4pcs GPU Washers (+2 extra, each)
5	7pcs PCB Screws (+2 extra)
6	2pcs VRAM Thermal Pad (covers 4 VRAM)
7	1pcs VRAM Thermal Pad (covers 3 VRAM)

8	1pcs VRAM Thermal Pad (covers 1 VRAM)
9	1pcs MLCC Thermal Pad
10	8pcs Backplate Screws (+2 extra)
11	1pcs Backplate Rubber Plug (+1 extra)
12	1pcs Backplate Screw Nut (+1 extra)
13	4pcs OLED Screws (+2 extra)
14	2pcs NVLINK Screws (+2 extra)



Please note that the accessory list above covers all items expected to be included in the EVGA GeForce RTX 3090 K|NGP|N HYDR0 COPPER Kit. Extra accessories are noted above in the event the provided accessories are missing or lost during installation. 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 prepared and have access to different sizes of screw drivers or screw bits. All of the screws on the card can be removed with a Phillips #0 and #1 size bit or a JIS #0 and #1 size bit. JIS bits are recommended for best fit.

1. Remove the 4 screws circled in Red that secure the OLED panel to the card.

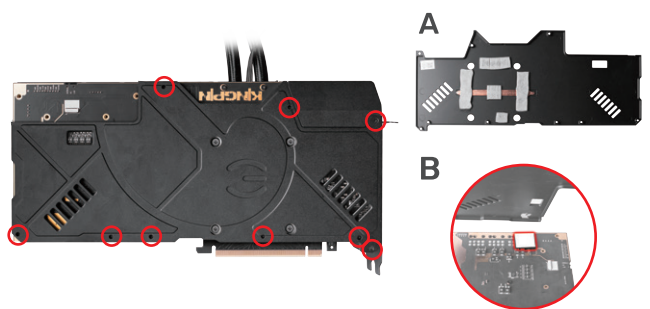
2. Lift up the flap and carefully disconnect the OLED cable connector. Set aside the OLED panel for now.



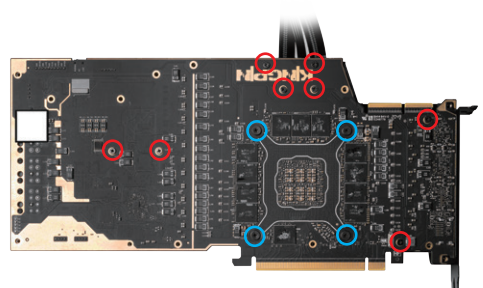
3. Remove the plastic cap covering the NVLINK connectors by squeezing from the sides and lifting up.

4. Remove the remaining Backplate screws (9pcs) circled in the image.

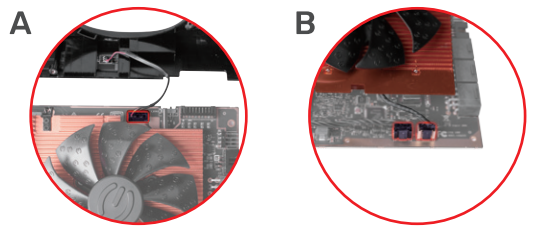
5. Remove the backplate (Figure A.). You may need to use some force to lift the backplate due to thermal pads holding the backplate in place. After removing the backplate screws, warming the backplate with hot air (hair dryer, etc.) may make it easier to remove, but **use extreme caution because the backplate will become very hot.** Remove the thermal pads attached to the backplate and PCB, but leave the double-sided tape near the end of the card (Figure B.).



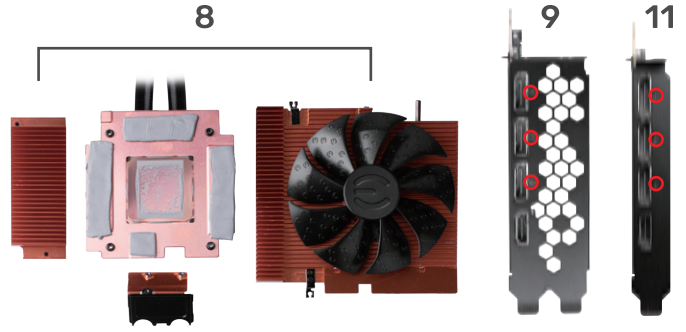
6. Remove the remaining PCB screws (in red), and remove the GPU spring screws and washers (in blue). Several parts will now be loose and may pull away from the PCB. While placing one of your hands between the shroud and your table, hold the shroud against the PCB and carefully turn the card over.



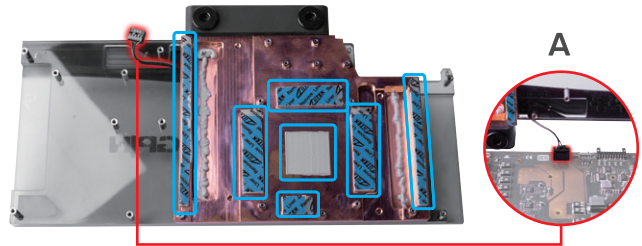
7. Slowly lift the shroud away from the card to reach the LED and fan headers. Disconnect the LED header at the top of the card first (Figure A.), and then disconnect the fan headers at the bottom of the card (Figure B.).



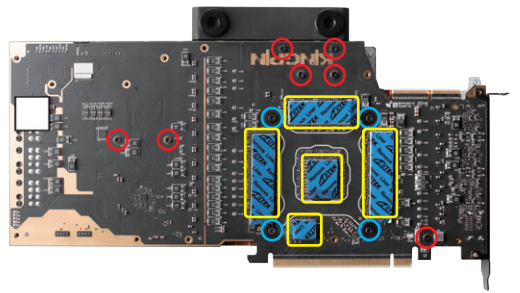
8. Remove both heatsinks, the pump, memory plate, and the bracket that holds the tubes. Gently twist the pump back and forth to make it easier to remove from the GPU if difficult to remove.
9. Remove the three I/O bracket screws and remove the I/O bracket.
10. Clean the GPU and PCB of any remaining thermal paste, thermal putty, and thermal pads.
11. Install the single-slot I/O bracket and fasten with three I/O bracket screws.



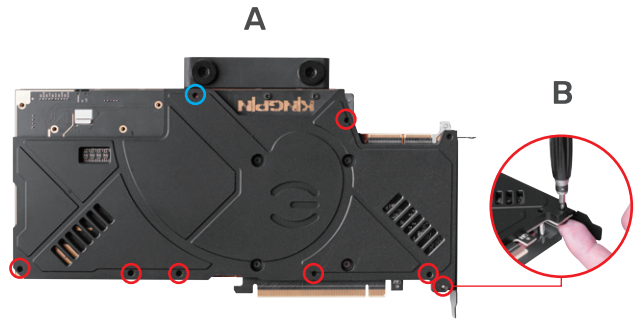
12. Remove the protective covers from the pre-applied thermal pads and paste (outlined in blue). Use the included thermal putty tube to place thermal putty into the channels for the inductors; the channels do not need to be completely filled in. The amount shown in the image to the right is sufficient to cool the inductors.
13. Place the waterblock next to the card, with the inlet/outlet terminal near the top of the card. If lined up correctly, the LED cable on the waterblock should be near the LED header. Connect the LED cable from the waterblock to the LED header on the graphics card (Figure A.).



14. Gently lift and rotate the graphics card so that the GPU faces the waterblock. Carefully line up the mounting holes and lower the card onto the waterblock.
 - Place 4 GPU Washers over the GPU holes, then loosely fasten 4 GPU screws (circled in blue).
 - Next, loosely fasten 7 PCB screws (circled in red).
 - Tighten all screws at this point, starting with the GPU screws and moving outward.
 - Lastly, place the included thermal pads over the memory ICs and the MLCC capacitors (outlined in yellow).

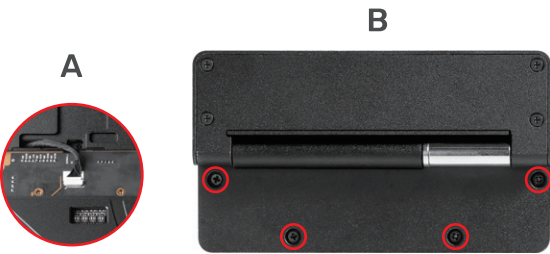


15. Align the backplate mounting holes and lower the backplate onto the PCB.
 - Insert the included Rubber plug in the location indicated (circled in blue).
 - Fasten the final Backplate screws (circled in red), with the exception of the one shown in Figure B.
 - Lastly, fasten the final backplate screw shown in Figure B with the included nut, while holding the nut with your finger, a pair of pliers, or a pair of tweezers.



16. Connect the OLED connector to the OLED header on the graphics card (Figure A.), then fasten the OLED to the card (Figure B.) with 4 OLED screws (circled in red).

17. Place the new NVLINK cap in position and secure it to the waterblock with the provided 2 NVLINK cap screws (circled in red).



18. 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.
19. Install your choice of G1/4 fittings, tubing, and clamps, if necessary. Although you can use either side of the terminal for an inlet or outlet, **EVGA recommends to use the left side (closest to the NVLINK connector) as the inlet and right side as the outlet for best flow rate and performance.** Only use one fitting per side (one left, one right) or you will drastically reduce cooling performance. To properly position your fittings, follow the diagrams below.



*Note – fitting orientation (up/down) is meant to keep the diagram simple.

Each side has three ports (top, middle, bottom), but only one of these ports should be used at a time, per side.

Any unused ports should contain a plug fitting.

Plug fittings can be removed with a hex key.

Important Information

EVGA GeForce RTX 3090 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 an 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 improper liquids with an EVGA Hydro Copper Waterblock 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 GeForce RTX 3090 K|NGP|N graphics card due to improper installation, EVGA will not be liable for physical damage to your graphics card or your EVGA Hydro Copper Waterblock.



Installation Guide