

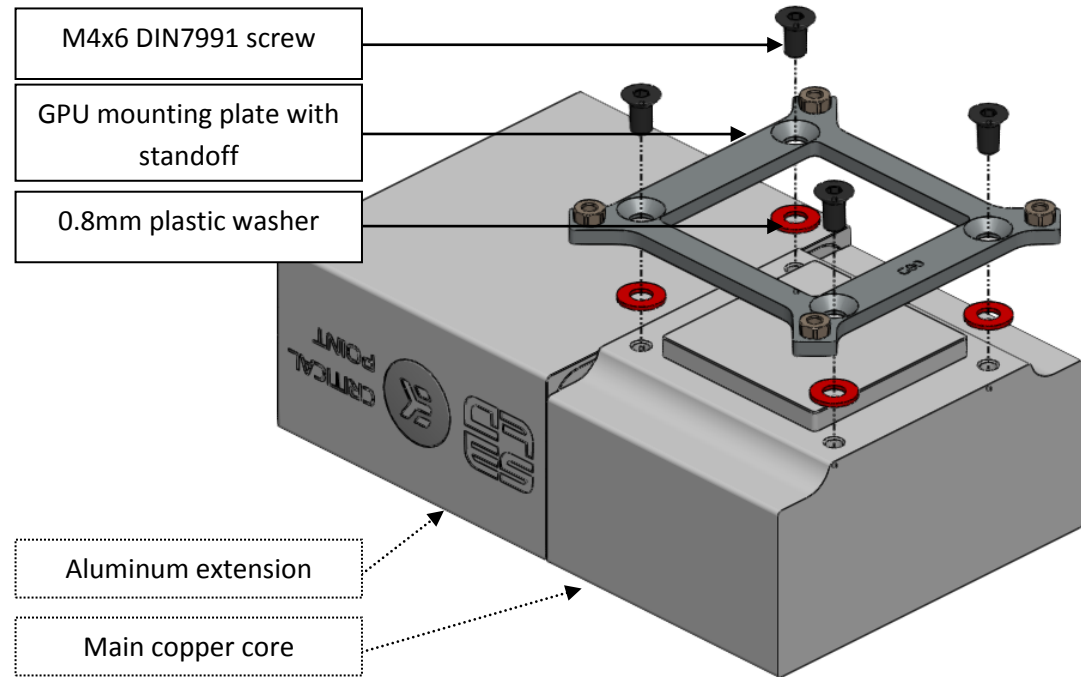
This product is intended for installation only by expert users. Please consult with a qualified technician for installation. Improper installation may result in damage to your equipment. EK Water Blocks assumes no liability whatsoever, expressed or implied, for the use of these products, nor their installation. The following instructions are subject to change without notice. Please visit our web site at www.ekwb.com for updates. Before you start using this product please follow these basic guidelines:

1. **Please carefully read the manual before through before beginning with the installation process!**
2. **Art eraser insulation method is not recommended on graphics cards which exhibit severe memory IC "cold bug". In such cases EK recommends either Vaseline coat insulation method or using neoprene sheets.**
3. **It is vital to ensure proper VRM (voltage regulation module) cooling, especially when overclocking high power draw graphics cards. Leaving VRMs uncooled may result in permanent damage to the graphics card.**
4. **It is vital to insulate PCI-express goldfingers (pins) on the motherboard in order to prevent any short circuit which may damage motherboard and/or graphics card. Standard extreme overclocking rules and precautions apply.**

STEP 1: GENERAL INFORMATION ON PRODUCT COMPATIBILITY

Congratulations on your purchase of EK-SF3D Critical Pint universal GPU liquid nitrogen evaporation cooler. This item comes pre-assembled and ready for use on GeForce GTX 670/680/770/780(Ti)/Titan series graphics cards.

In order to install this product on graphics card other than mentioned above it is mandatory to exchange the mounting plate for alternative enclosed with this product as well as on how to install the thermal probe please **SEE STEP 5 and STEP 6.**



STEP 2: TABLE OF CONTENT

The following items are enclosed with each EK-SF3D Critical Point unit:

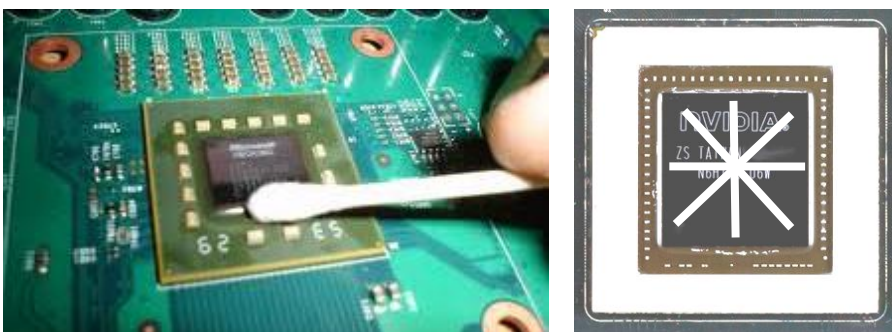
- EK-SF3D Critical Point /w pre-installed G80 mounting plate and 2.5mm M3 standoffs
- Universal GPU Backplate (stainless steel)
- Additional mounting plates:
 - o G92 (53x53mm square pattern) /w 2.5mm standoffs (M3 thread)
 - o G200 (61x61mm square pattern) /w 3.9mm standoffs (M2.5 thread)
 - o GF560 /w 3.9mm standoffs (M3 thread)
 - o HD7970 (54x54mm square pattern) /w 2.5mm standoffs (M3 thread)
- Mounting screws:
 - o Plastic washers M4 (0.8mm) & M3 (0.5mm)
 - o M3 Thumb screws
 - o M3x4 DIN7985 screws
 - o M2.5x4 DIN7985 screws
 - o Additional 3.9mm standoffs (M3 thread)
- Required set of 2.5mm Allen key and EK-UNI standoff key
- TIM Gelid GC-Extreme (1.5g)

Insulation material is not enclosed. We recommend self-adhesive neoprene tape (50mm wide; 3mm thickness). Insulation material must never overlap or interfere in any other way with mounting hold-down plate and/or standoffs!

STEP 3: PREPARING THE GRAPHICS CARD

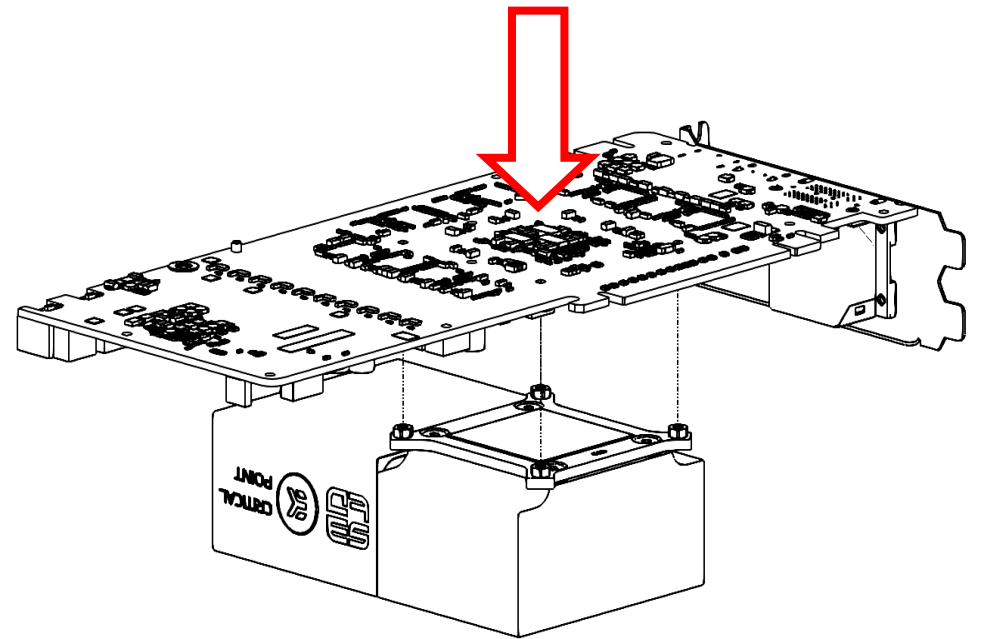
1. CLEANING THE CARD: Carefully detach the original stock cooler after removing **all** screws securing it to the board. Wipe off the remains (by using non-abrasive cloth or *qtip*, as shown on sample photo) of the original thermal compound until the components and circuit board are completely clean. EKWB recommends the use of denatured alcohol for removing TIM leftovers.

2. APPLYING THERMAL COMPOUND: Wipe off the remains (by using non-abrasive cloth or *qtip*) of the original thermal compound until the components and circuit board are completely clean. Apply thermal compound: lightly coat GPU chip with enclosed Gelid GC-Extreme thermal grease. EKWB recommends to apply thermal grease in cross form for best performance (see sample picture).



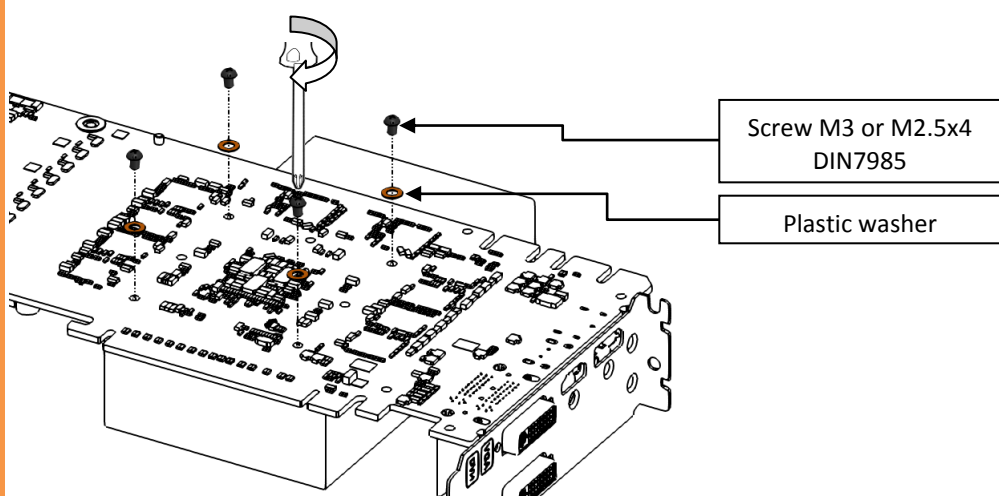
STEP 4: INSTALLING THE GPU EVAPORATOR UNIT

Put the insulated EK-SF3D Critical Point unit on it's back and place the graphics card onto the unit as shown on the picture below:



STEP 4 cont.: INSTALLING THE GPU EVAPORATOR UNIT

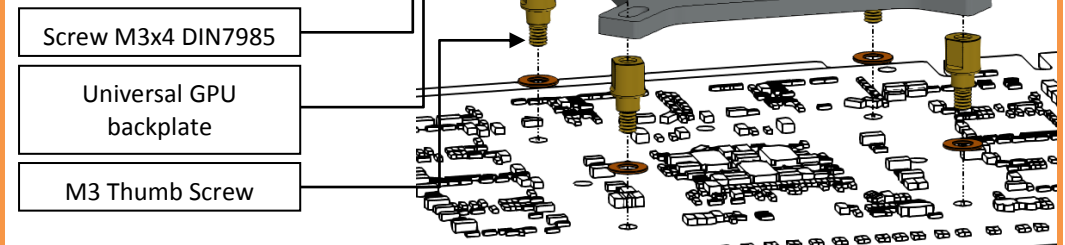
1. USING NO BACKPLATE: By using Philips screwdriver screw in enclosed M3x4 DIN7985 screws (or M2.5x4 DIN7985 – depending on the type of graphics card; see STEP 5). Always use a plastic washer under each and every screw!



2. USING UNIVERSAL BACKPLATE:

- 1) Install four (4) enclosed M3 Thumbs screws with washers onto the graphics card.
- 2) Place universal GPU backplate on top of thumbs screws and secure it with enclosed M3x4 DIN7985 screws.

This backplate system is designed to accommodate 10mm thick sheet of insulation material (neoprene) beneath the back plate assembly.

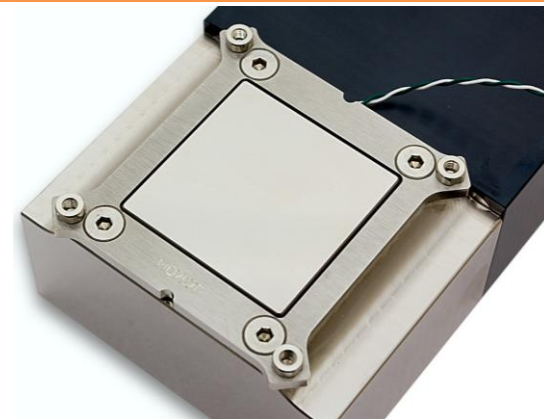


STEP 5: INSTALLING THERMAL SENSOR PROBE AND/OR ALTERNATIVE GPU MOUNTING PLATE

Prior to take the next steps it is mandatory to remove the four M4x6 DIN7991 screws holding the mounting plate attached to the copper base. Use enclosed Allen key 2.5mm to remove the screws as shown in STEP 1.

1. INSTALLING THERMAL SENSOR PROBE:

After disassembling the mounting plate as shown on the STEP 1 please install the thin-wire K-type thermocouple (TC) sensor/probe (or equivalent; not enclosed) to the pre-drilled slot near the contact surface of the evaporator's copper core. We recommend dipping the TC bubble into enclosed Gelid GC-Extreme TIM/grease in order to further improve the precision of the temperature read-outs. Re-install the mounting plate using 0.8mm plastic M4 washers and M4x6 DIN7991 screws. Make sure you route the thermocouple cable underneath the metal mounting plate as shown on the photo.

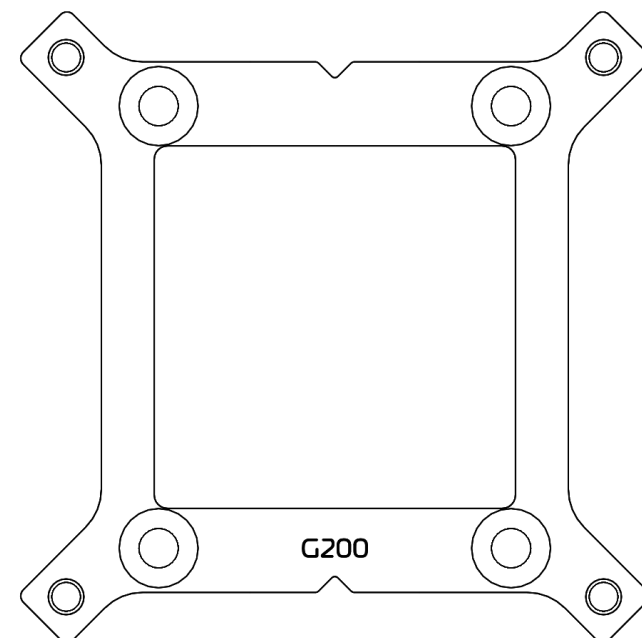
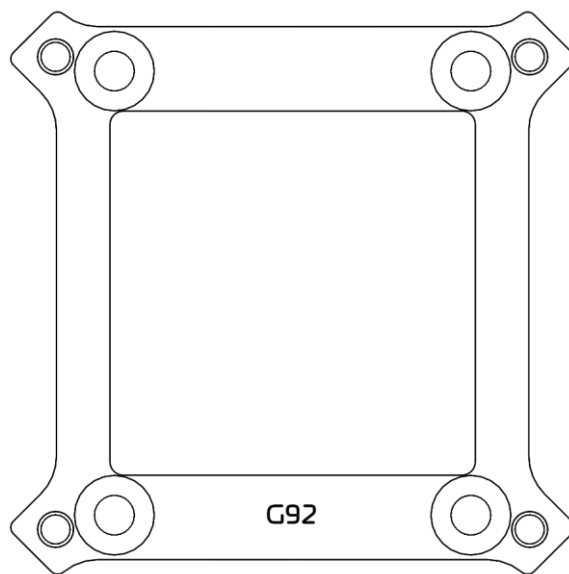
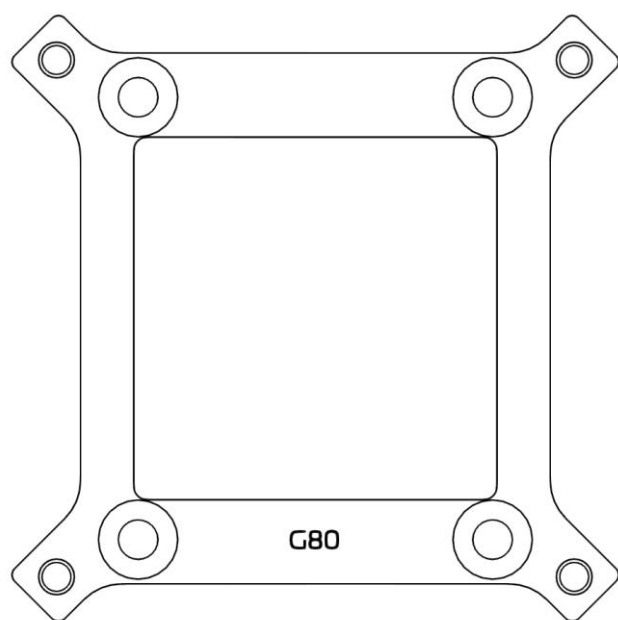


2. INSTALL ALTERNATIVE GPU MOUNTING PLATE:

After disassembling the mounting plate as shown on the STEP 1 please replace the metal hold-down plate with the plate of your choice.

OPTIONAL: Remove existing standoffs using enclosed EK-UNI standoff key to install alternative sized ones if necessary (example: in order to use this unit with nVidia GeForce GTX 580 graphics card one must install 3.9mm M3-threaded standoffs (enclosed) onto the G80 Mounting plate).

Please follow the general fitting guideline below:



G80 Mounting Plate:

- Used with 2.5mm standoffs (pre-installed):
 - for modern nVidia GeForce GTX 600 and - GTX 700 family graphics cards (GK104, GK106, GK110).
- Used with 3.9mm standoffs (optional):
 - for nVidia GeForce 8800 GTS/GTX (G80) and GTX 465/470/480/560 448c/570/580 (GF100, GF110) family graphics cards

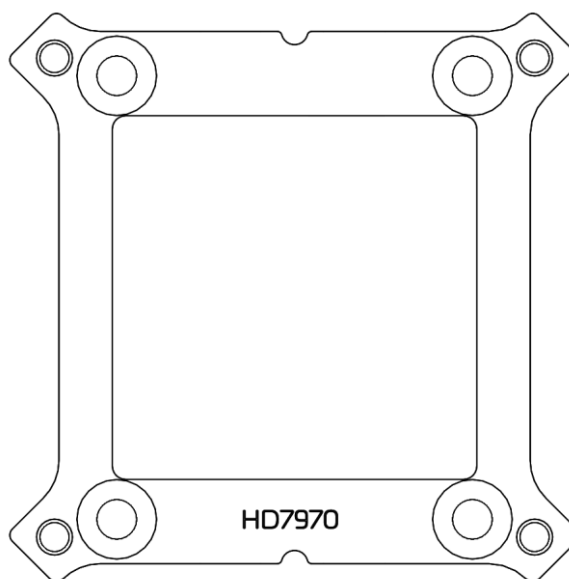
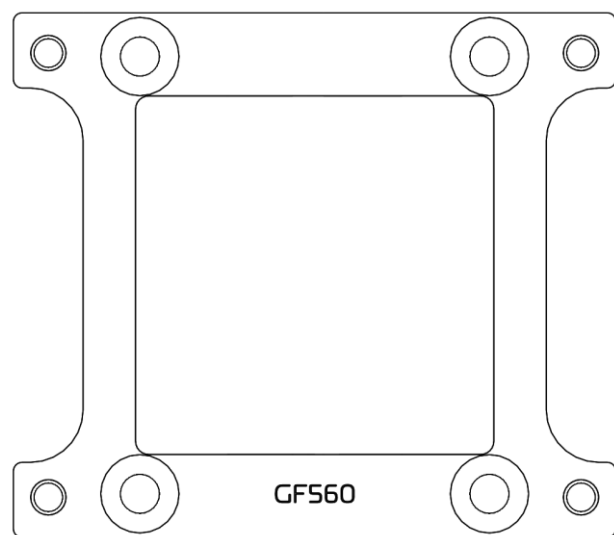
G92 Mounting Plate:

- Used with 2.5mm standoffs:
 - for nVidia GeForce 8800 GT(S) and 9800 GT(X) family graphics cards (G92).
 - for ATi/AMD Radeon HD 3800, 4800, 5800, 6800, 6900, 7800 series graphics cards
 - for modern AMD Radeon R9 270(X) series graphics cards

G200 Mounting Plate:

- Used with 3.9mm M2.5 threaded standoffs:
 - for nVidia GeForce GTX 260/275/280/285 family graphics cards (G200, G200b)

Caution: Cannot use universal backplate! Use M2.5x4 DIN7985 screws!



GF560 Mounting Plate:

- Used with 3.9mm standoffs:
 - for nVidia GeForce GTX 460/560 series graphics cards

HD7970 Mounting Plate:

- Used with 2.5mm standoffs:
 - for ATi Radeon HD 2900 (R600) family cards
 - for AMD Radeon HD 7950/7970 series graphics cards
 - for modern AMD Radeon R9 280(X)/290(X) series graphics cards

Caution: GPU shim must be removed on R600 and 7950/7970 series graphics cards.

REQUIRED TOOLS AND ACCESSORIES:

- Scissors
- Blade knife
- Duct or electrical tape
- Insulation material as per users insulation method (we recommend 10mm neoprene sheet (backplate), 3mm self-adhesive neoprene tape)