

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.ekwaterblocks.com for updates. Before installation of this product please read important notice, disclosure and warranty conditions printed on the back of the box or our home page.

The barb hose fittings require only a small amount of force to screw them in; otherwise the high flow fittings might break. These fittings do not need to be tightened with much force because the liquid seal is made using o-rings. The use of an algacide and corrosion inhibitors is always recommended for any liquid cooling system.

STEP 1: GENERAL INFORMATION. Sample picture of AMD Radeon HD 6990 graphics card



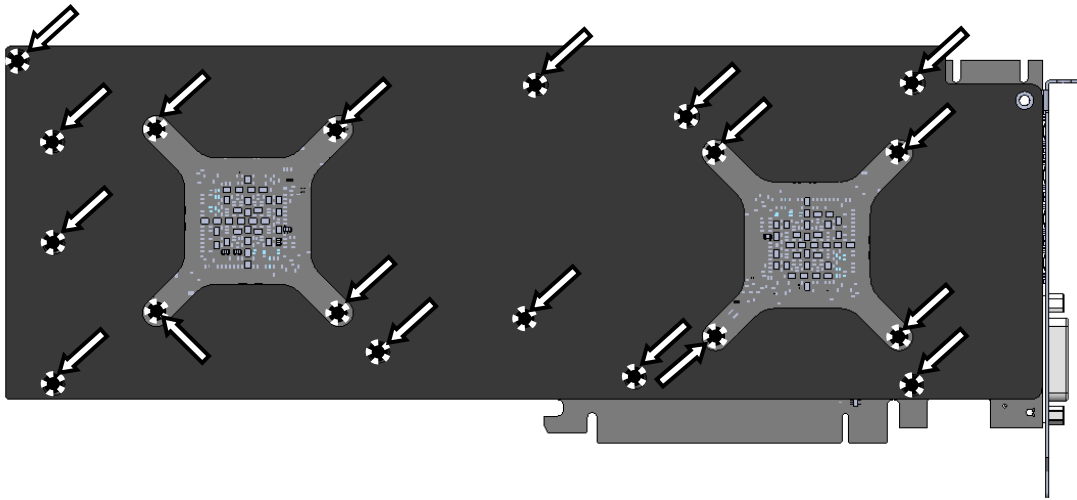
STEP 2: PREPARING YOUR GRAPHIC CARD.

1. REMOVING STOCK COOLER: Remove encircled screws on the I/O bracket:



STEP 2 cont.: PREPARING YOUR GRAPHIC CARD

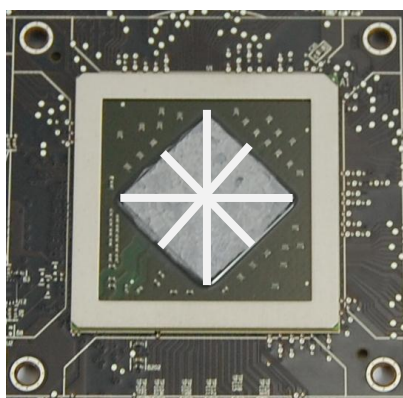
1 cont.. REMOVING STOCK COOLER. Remove all encircled screws. All heat sink assembly screws and backplate should be removed. There are 19 screws on the back of the graphics card.



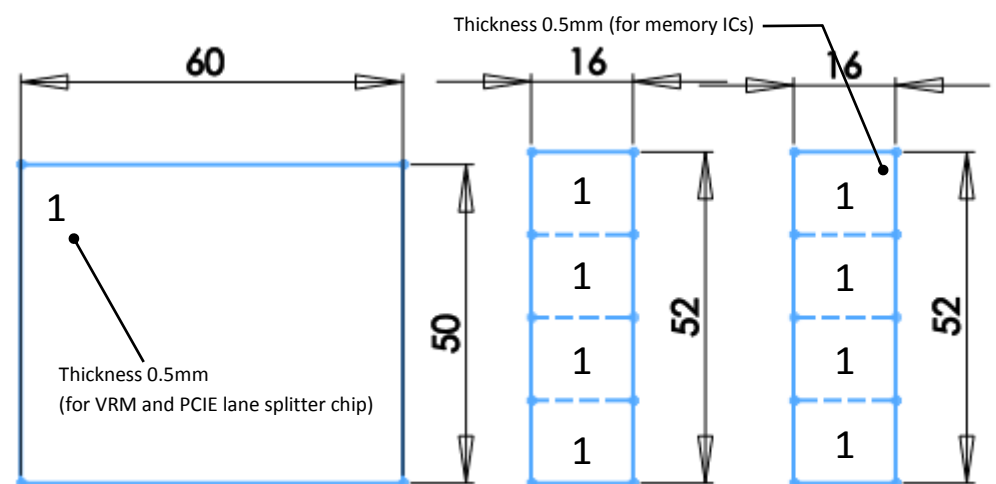
2. CLEANING THE PCB. Carefully detach the original heat sink after removing all fasteners securing it to the board and bracket. Wipe off the remains (by using non-abrasive cloth or Q-tip, as shown on sample photo) of the original thermal compound until the components and circuit board are completely clean. EKWB does not recommend using any liquids for removing paste.



3. APPLYING THERMAL COMPOUND. Apply thermal compound: lightly coat both GPUs and bridge chip with for example Arctic Cooling MX-2™ or MX-4™ thermal grease. EKWB recommends to apply thermal grease in cross form for best performance (see sample picture).

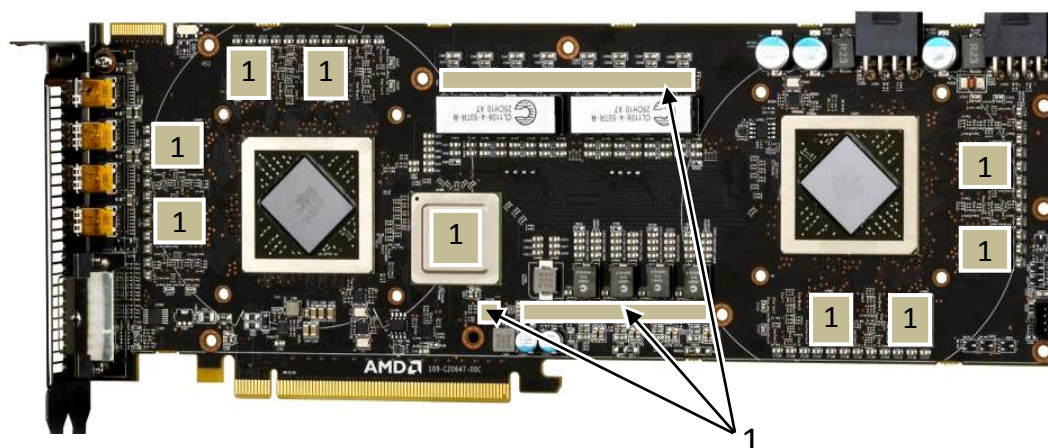


4. CUTTING THERMAL PADS. Your block comes with thermal pads, some of which are already pre-cut. Others have to be cut to smaller chunks in order to cover all the VRM components and PCIe lane splitter chip (PLEASE REMOVE FOIL ON BOTH SIDES OF THERMAL PADS PRIOR TO INSTALLATION. WARNING: DIMENSION BELOW ARE SCALED).

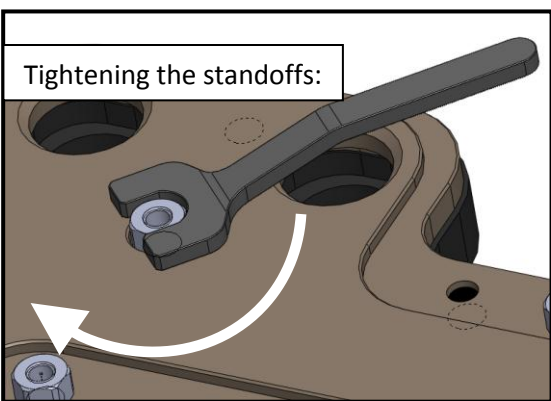
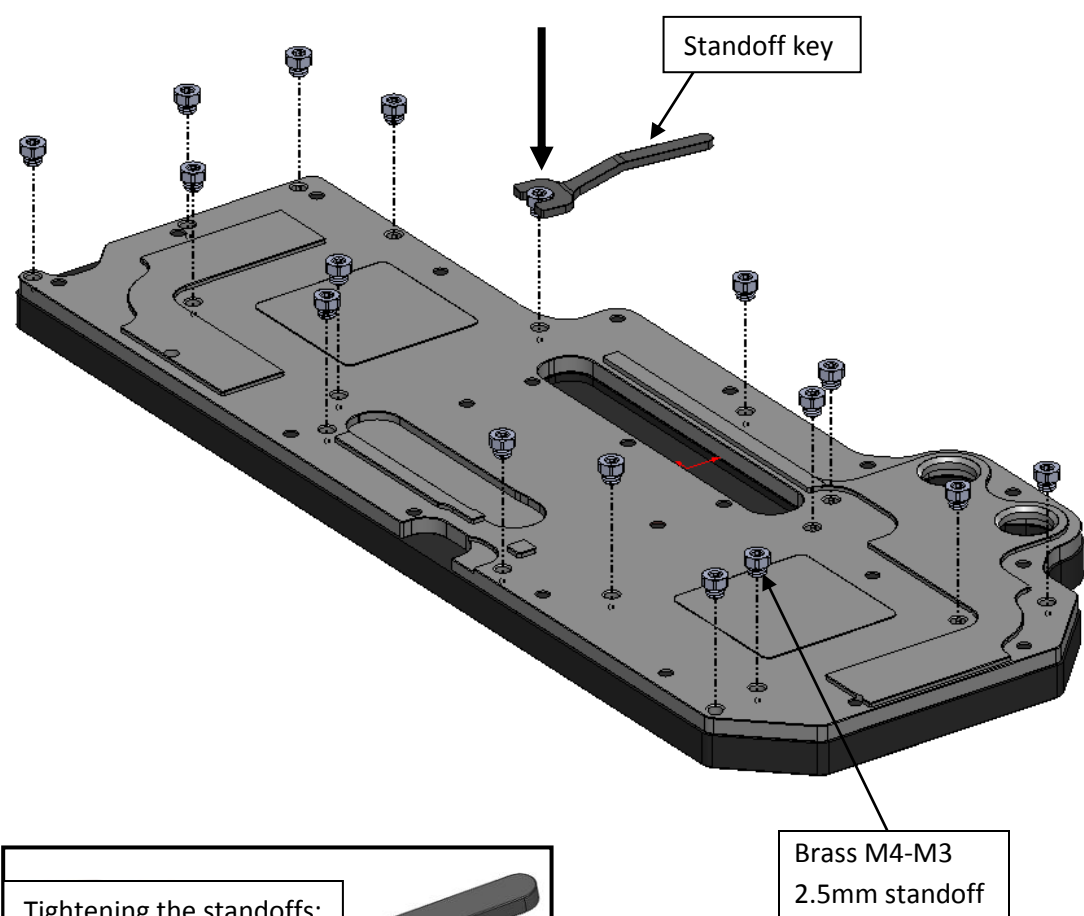


STEP 3: INSTALLING WATER BLOCK

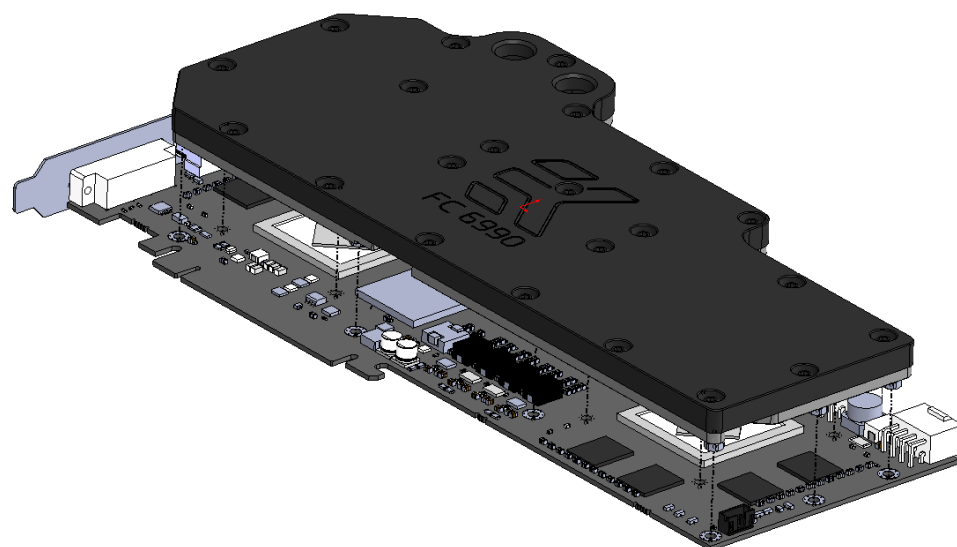
1. PLACING THERMAL PADS ON PCB. Place thermal pads on chips so that numbers on chips match size of thermal pads. EKWB made sure users have more than enough pads to cover all surfaces that need to be covered to make block fully functional). It is advised to use small drops of electrically non-conductive thermal grease on chips to make thermal pads more adhesive and also to improve heat transfer.



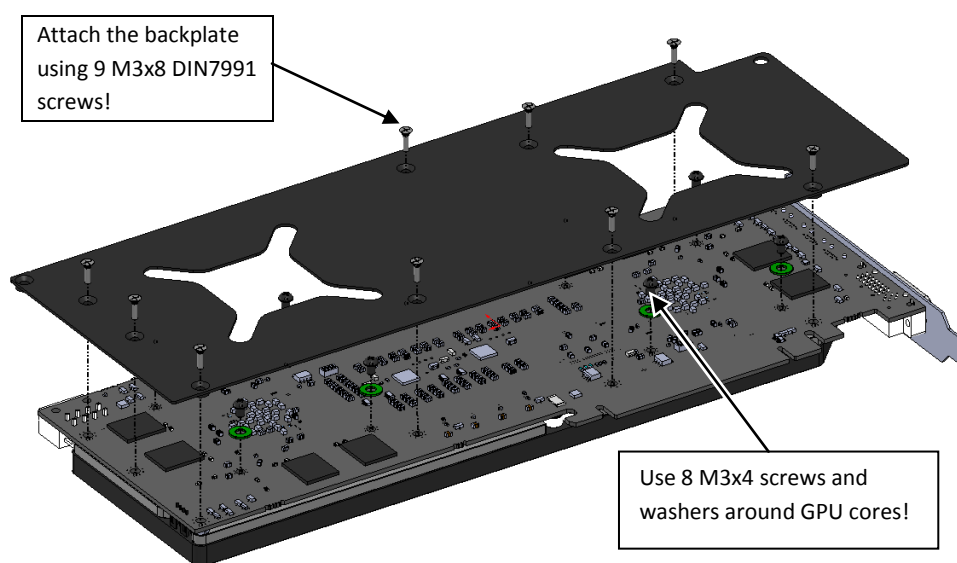
3. **PLACING STANDOFFS ON BLOCK.** Brass standoffs are necessary in order to attach this water block to the printed circuit board of the graphics card. Please use the enclosed key to screw them to the copper base of the water block. There is no need to overtighten standoffs as nickel plating may get damaged.



4. **PLACING BLOCK TO GRAPHIC CARD.** During this process please make sure you align holes on PCB with holes on block. Also pay attention not to use too much force by pressing block down to PCB. Chip dies are prone to cracking.



5. **ATTACHING BLOCK TO GRAPHIC CARD.** By using Philips screwdriver first screw in eight (8) enclosed M3x4 screws. Please use the enclosed plastic washers with these screws. Then attach the original backplate using the nine (9) enclosed M3x8 DIN7991 screws and the enclosed 2mm allen key.

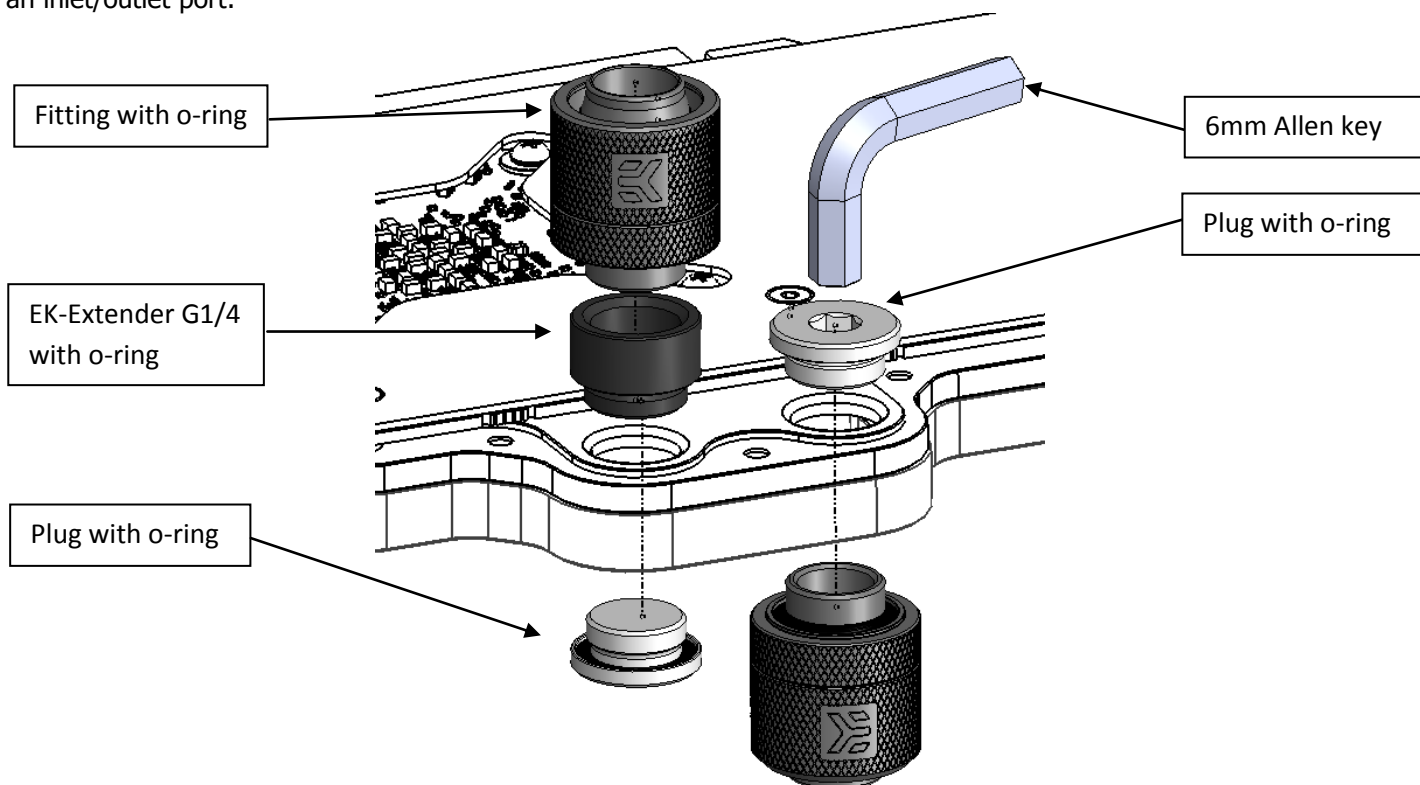


STEP 4: CHECKING FOR CONTACTS

Temporarily remove the water block to check for uniform surface contact between the block and the components. Note the pattern of contact on a piece of paper. Then repeat substeps in previous section to reattach the block. **In case you fail to obtain good contact, please check again your thermal pad thickness or contact our support service.**

STEP 5: FITTING POSITIONING

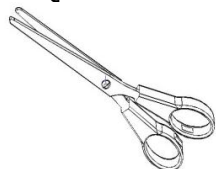
Screw in the fittings and plugs. Please use the enclosed EK-Extender G1/4 extender on copper base for fittings only. These custom spacers are obligatory if you intend to use copper openings as an inlet- and/or outlet port. Use 6mm Allen key to screw in and tighten the EK-Plug G1/4. If you're using the fittings with threads longer than 5mm please use the 3mm G1/4 distancer (not enclosed). Attach the liquid cooling tubes and connect the water-block(s) into the cooling circuit. EKWB recommends using EK-PSC fittings with the EK-FC6990 series water blocks. To ensure that the tubes are securely attached to the barb/fittings, please use hose clamps or an appropriate substitute. The use of an algacide is always recommended for any liquid cooling system. You can use any opening as an inlet/outlet port.



STEP 6: INSERTING CARD IN YOUR PC CASE

Carefully lift your card with installed block and insert it in your PC case. Please bear in mind that your card suddenly withstands extra weight thus again be very careful not to bend it or cause any other unneeded moves that might damage your card or block during installation.

REQUIRED TOOLS AND MOUNTING SCREWS:



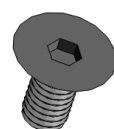
scissors



philips screwdriver



8x screws M3x4 DIN7985



9 x M3x8 DIN7991



8 x PVC washers