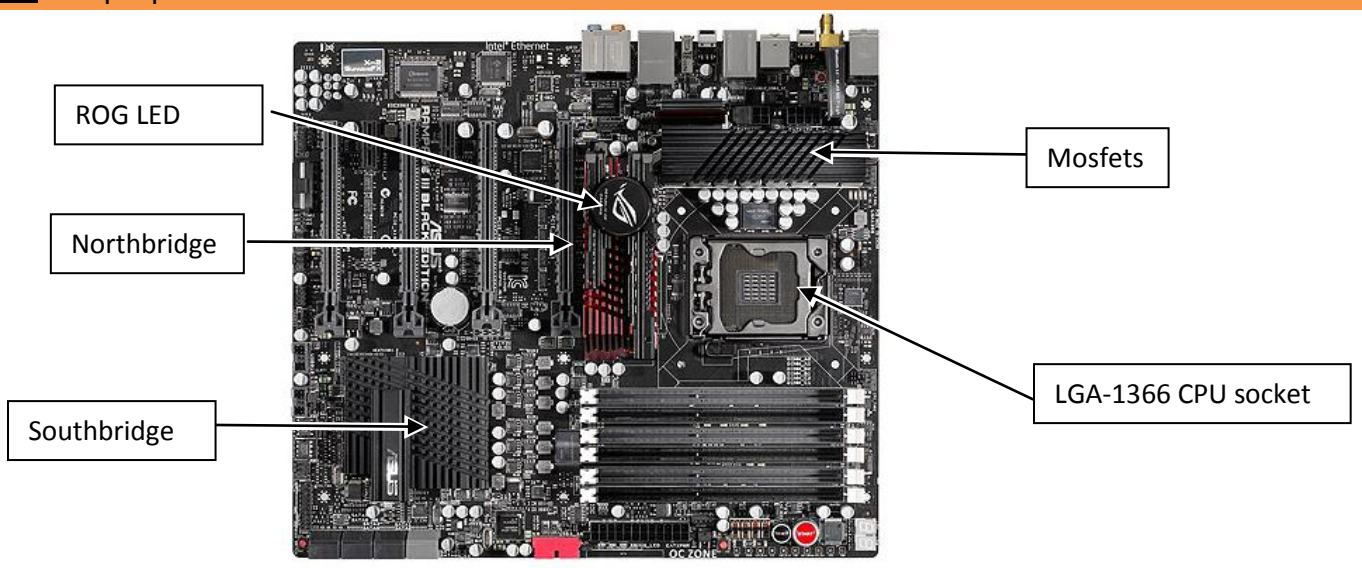
Installation and mounting manual for **EK-FB RE3 Black** water block:

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.

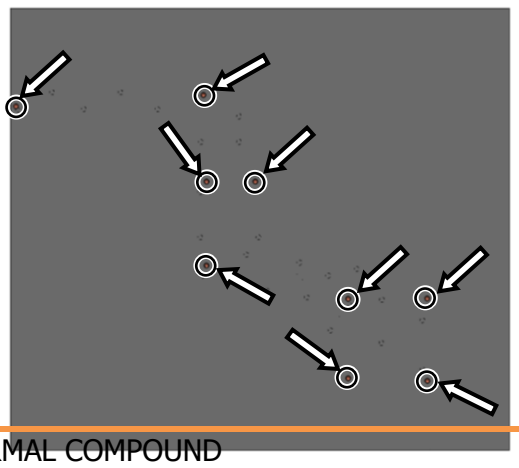
The barb hose and EK-PSC fittings require only a small amount of force to screw them in; otherwise the fittings might break. These fittings do not need to be tightened with much force because the liquid seal is made using o-rings. The use of an algaecide and corrosion inhibitors is always recommended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

STEP 1: GENERAL INFORMATION Sample photo of ASUS RAMPAGE III EXTREME Black Edition motherboard

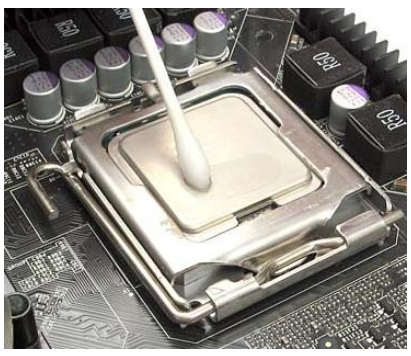


STEP 2: PREPARING YOUR MOTHERBOARD

1. REMOVING STOCK COOLER. Remove all screws under stock heat sink assembly. There should be 9 screws attaching the original cooling solution to the motherboard's circuit board.

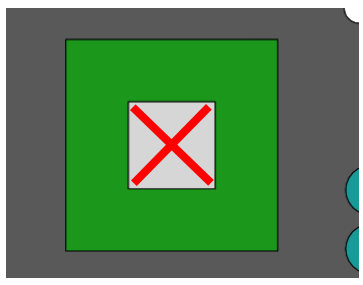


2. CLEANING THE PCB. Carefully detach the original stock cooler after removing **all** screws securing it to the board. Wipe off the remains (by using non–abrasive cloth or *qtip*, as shown on sample photo) of the original thermal compound until the components and circuit board are completely clean. EKWB does not recommend using any liquids for removing paste.

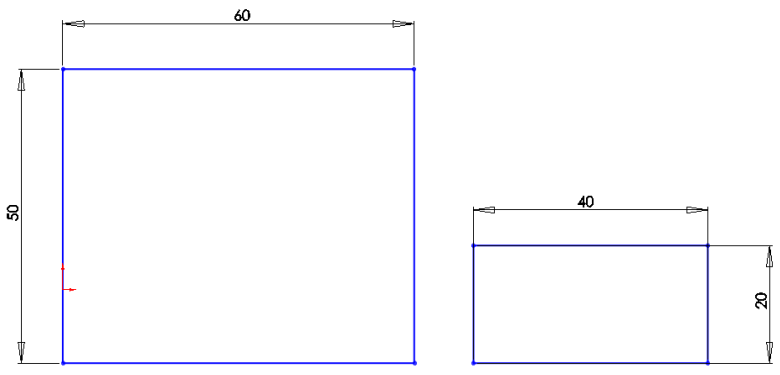


3. APPLYING THERMAL COMPOUND

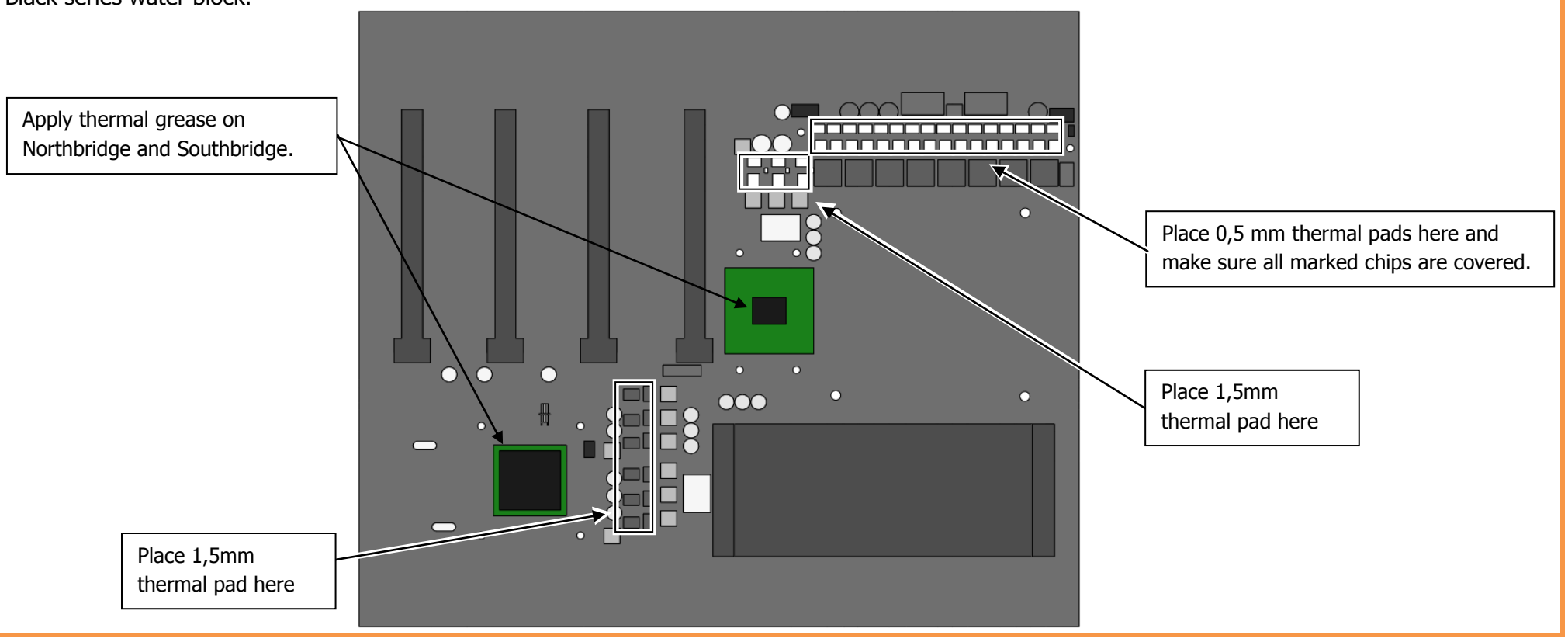
Apply thermal compound: lightly coat the X58 (NB) and ICH10R (SB) chips with electrically non-conductive thermal grease - for example Arctic Cooling MX-2 ™ or MX-4 ™. EKWB recommends to apply thermal grease in cross form for best performance (see sample picture).



4. CUTTING THERMAL PADS. Two thermal pads, (40x20x1.5 mm) and (60x50x0.5 mm) are enclosed with your water block kit. You will have to cut out small chunk from one thermal pad in order to cover all marked surfaces surfaces that are left exposed on mosfets. (WARNING: DIMENSIONS ON PICTURES BELLOW ARE SCALED!)

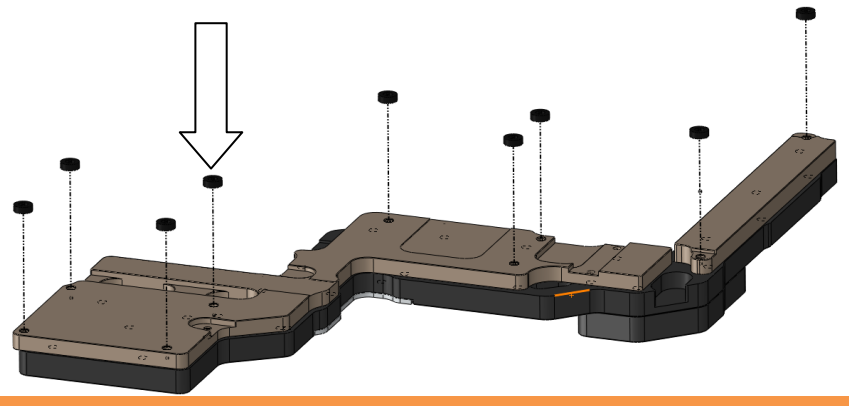


5. PLACING THERMAL PADS ON MOTHERBOARD. Place thermal pads you cut on PCB as shown on picture bellow. (PLEASE REMOVE FOIL OF THERMAL PADS ON BOTH SIDES PRIOR TO INSTALLATION). EK recommends using small drops of electrically non-conductive (for example: Arctic Cooling MX-2 ™ or MX-4 ™) thermal grease on each phase regulator (that is being covered with thermal pad; see picture below) in order to even further improve the thermal performance of the EK-FB RE3 Black series water block.



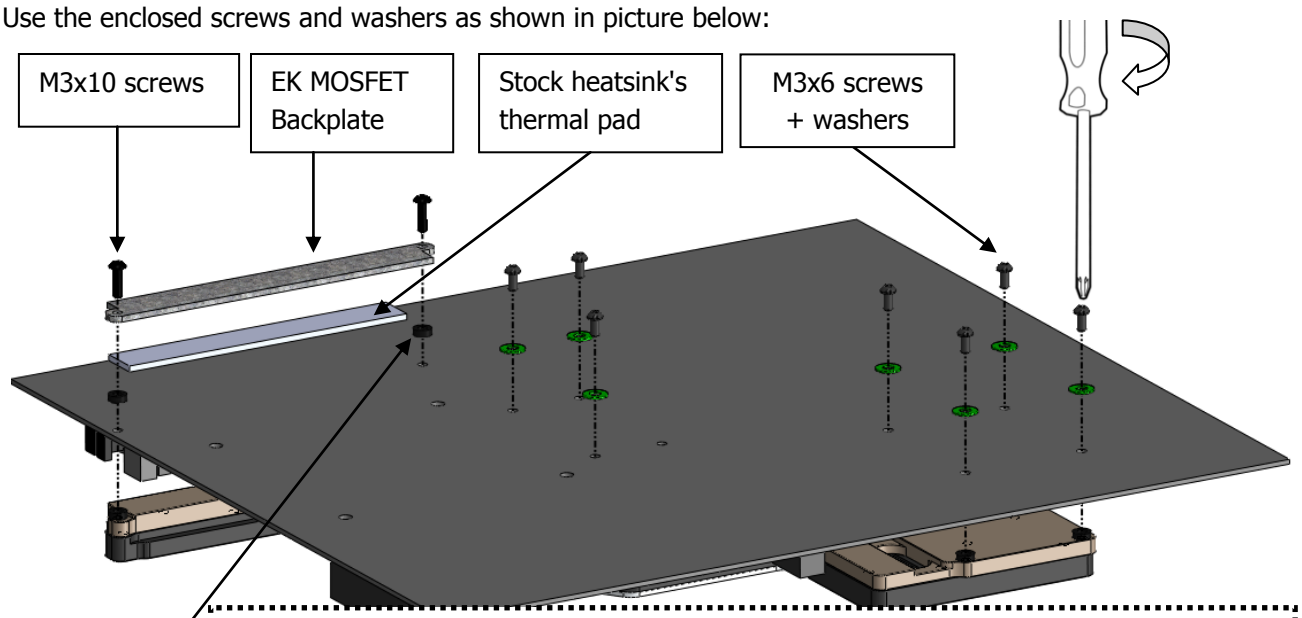
STEP 3: PREPARING YOUR WATER BLOCK

1. ATTACHING STANDOFFS. Apply small amount of thermal grease around water block's threaded mounting holes and place acetal (plastic) standoffs (thickness 2.1mm) so the holes are concentric. Thermal paste provides enough adhesive force for standoffs to stay in a place during the installation thus making the whole procedure easier. You can also attach the standoffs onto motherboard's openings instead.



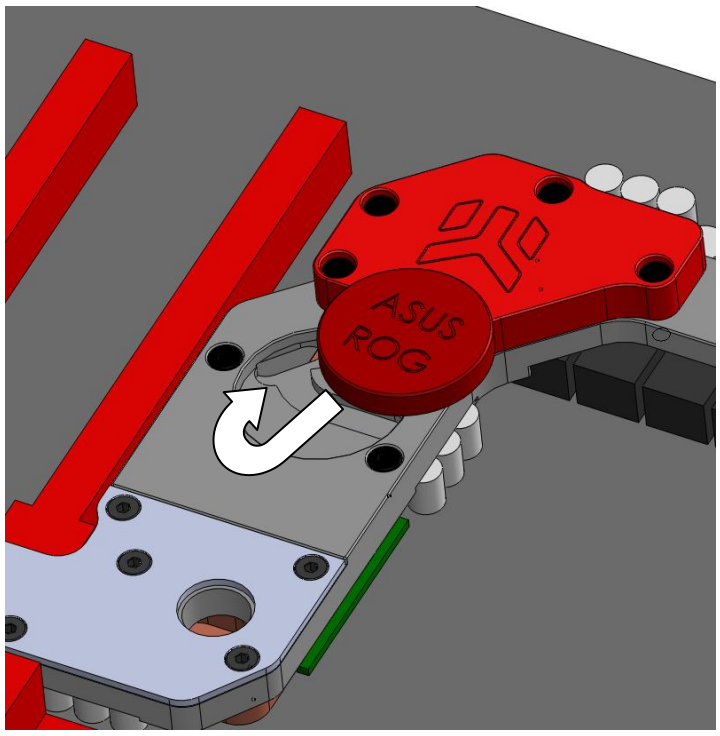
STEP 4: ATTACHING BLOCK TO MOTHERBOARD

1. MOUNTING THE BLOCK. Place the motherboard on the inverted water block or vice versa and attach them with enclosed screws as shown below. Make sure that mounting holes are aligned.
Tighten the screws, beginning at the center of the block near the northbridge, and continue evenly outwards. Do not use too much pressure on screws, because motherboard might bend and either cause bad contact with water block, or break a connection on the board.
Use the enclosed screws and washers as shown in picture below:



Alternative mounting method: When not using the EK provided MOSFET backplate please use two (2) M3x6 screws and 0.5mm plastic washers underneath (instead of M3x10 screws and standoffs) to attach the water block to the motherboard.

2. RECONNECTING. Put small amount of magic glue or double sided adhesive tape on the ROG LED socket as shown below. (Make sure that you do not block cable opening). Route cable connector through the opening on the water block's top and gently press ROG LED onto pre-glued socket.

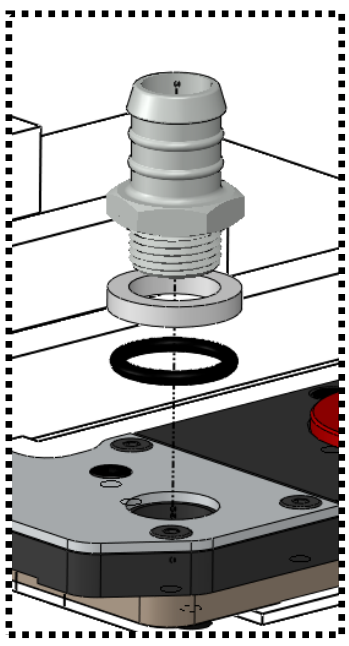


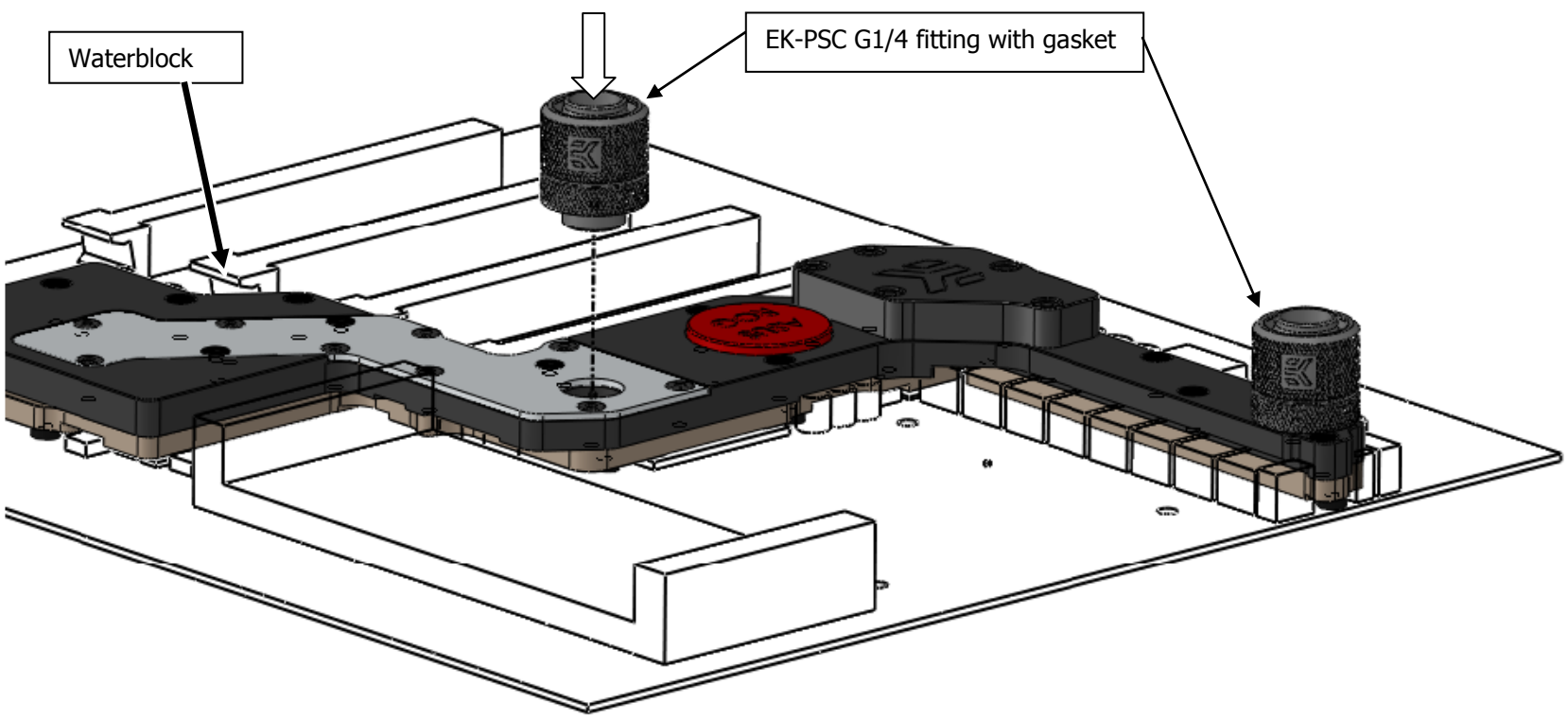
STEP 5: CHECKING FOR CONTACTS

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 steps 3 and 4 to reattach the block. Block was tested on physical hardware. Due to height variations of chipset some differences may occur. In case you have problem with block contacts please contact our support mail.

STEP 6: POSITIONING FITTINGS AND CONNECTING TO WATER CIRCUIT

Please use the provided 3mm spacer along with the gasket on shown opening only if you use fitting with G1/4 thread longer than 5mm (see left picture). Attach the liquid cooling tubes and connect the water-block(s) into the cooling circuit. EKWB recommends using EK-PSC compression fittings with the EK-FB RE3 Black series water blocks. The use of an algaecide and corrosion inhibitors is always recommended for any liquid cooling system.You can use any opening as an inlet/outlet port.





REQUIRED TOOLS AND MOUNTING SCREWS:

 scissors

 philips screwdriver

 9 screws M3x6 DIN7985

 2 screws M3x10 DIN7985

 9 PVC washers

All disclosures, notices and warranty conditions are being written on our web page.

Released on 8th of June, 2011.