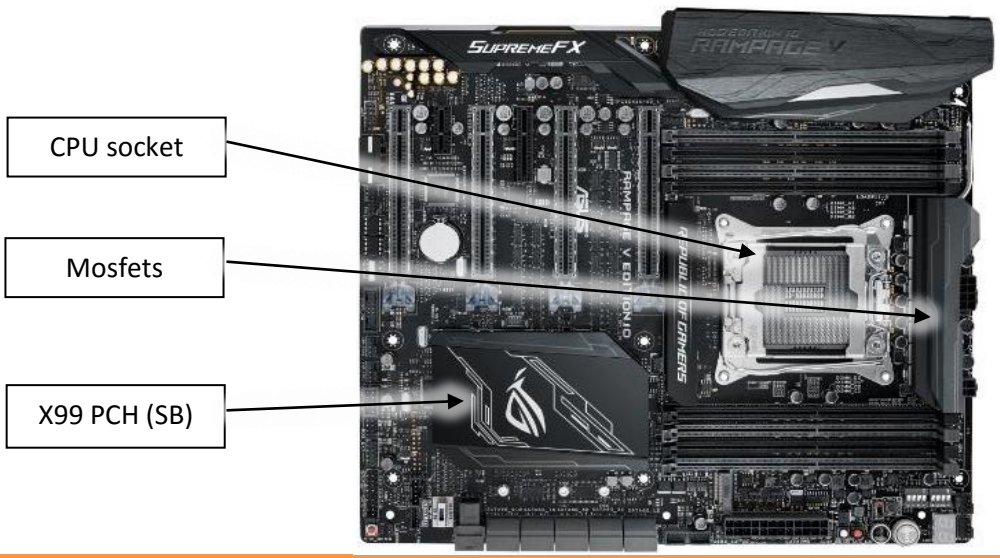
Installation and mounting manual for **EK-FB ASUS R5-E10** monoblock:

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 installation of this product please read important notice, disclosure and warranty conditions printed on the back of the box.

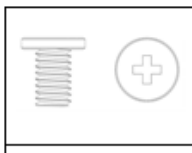
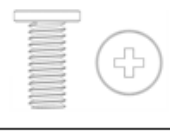
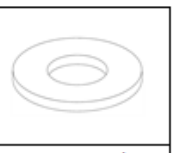
Before you start using this product please follow these basic guidelines:

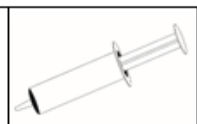
1. **Please carefully read the manual before through before beginning with the installation process!**
2. **Please remove your motherboard from the computer to assure safest mounting process in order to prevent any possible damages to your CPU and/or motherboard's circuit board (PCB).**
3. **The EK High Flow and EK-ACF type fittings require only a small amount of force to screw them firmly in place since the liquid seal is ensured by the rubber O-ring gaskets.**
4. **The use of quality, market proved corrosion inhibiting coolants is always strongly recommended for any liquid cooling system.**

STEP 1: GENERAL INFORMATION Sample photo of ASUS Rampage V Edition 10 motherboard



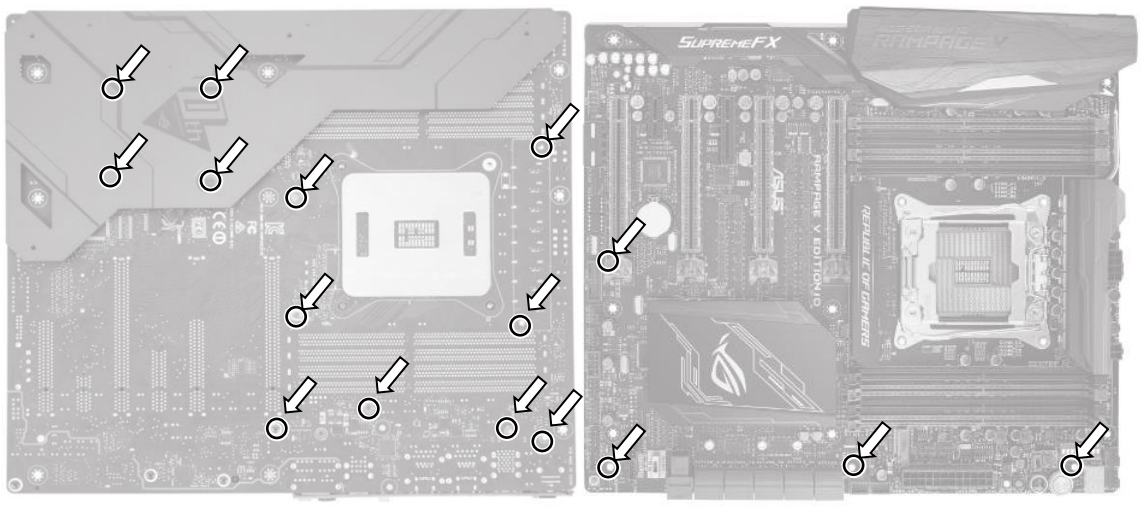
BAG CONTENT: Bag content is universal for all water blocks, you may not need all screws.

			
M2.5x5 AX1	M2.5x7 AX1	M2.5 PVC washer	M3 PVC washer
6pcs	3pcs	6pcs	4pcs

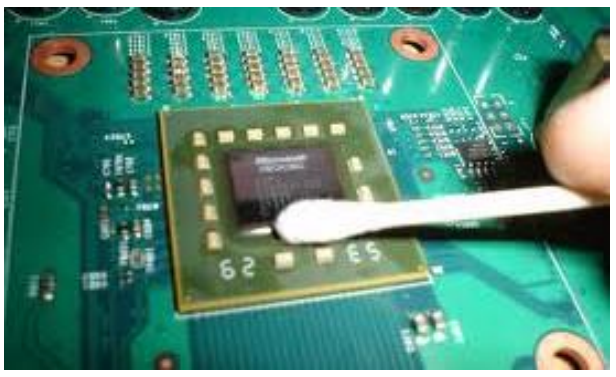
			
M3 adhesive PVC washer	Thermal grease	Thumb nut	
7pcs	1pcs	4pcs	
Replacement mounting mechanism: FB ASUS R5-E10 MB (EAN: 3831109872253)			

STEP 2: PREPARING YOUR MOTHERBOARD

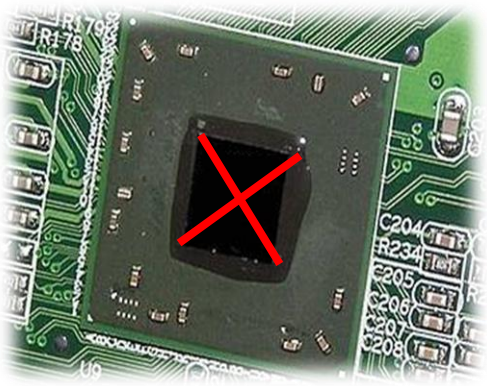
1. REMOVING STOCK COOLER. Remove all encircled screws. There are 4 screws on the front (picture on the right) of the motherboard that needs to be removed first in order to remove the factory installed backplate. You must also remove all 12 screws from the back side (picture on the left) in order to remove SB/MOSFET heat pipe cooling solution. Be careful to disconnect all the electrical connection as well.



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 recommends the use of denatured alcohol for removing TIM leftovers.



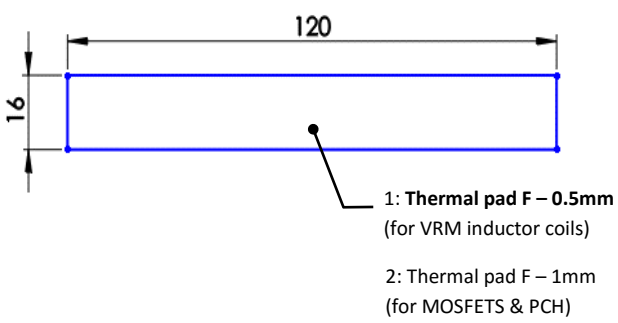
3. APPLYING THERMAL COMPOUND. Apply thermal compound: lightly coat the *Intel X99 PCH* (SB) with electrically non-conductive thermal grease – EK-TIM Ectotherm (enclosed) EKWB recommends to apply thermal grease in cross form for best performance (see sample picture).



4. APPLYING THERMAL COMPOUND. Apply thermal compound on CPU heat spreader (IHS) - see sample photo on right with enclosed EK-TIM Ectotherm thermal grease.

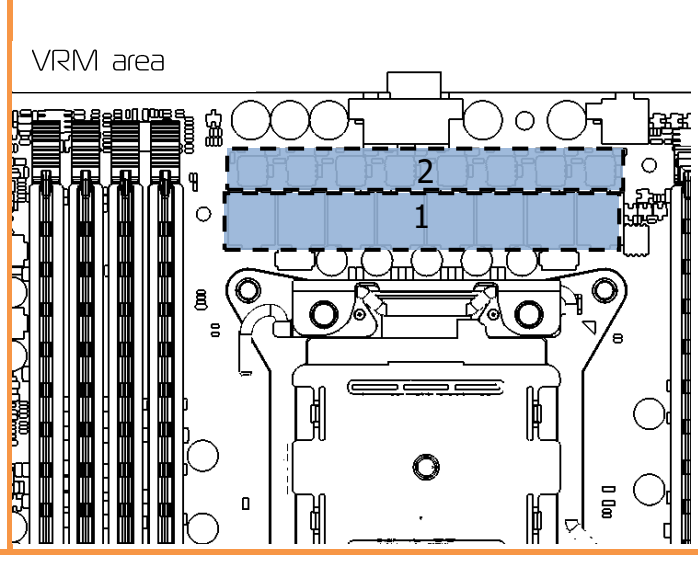
The quantity of about two rice grains is just about right. There is no need to cover the whole IHS. Applying too much thermal grease will have negative impact on the cooling performance!

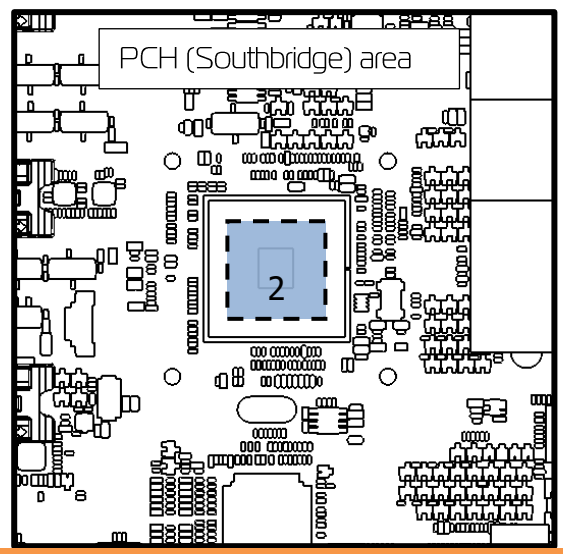
5. CUTTING THERMAL PADS. Your block comes with thermal pads which needs to be trimmed in order to fit the voltage regulation area (VRM/MOSFET) and few other elements on the motherboard's circuit board. WARNING: DIMENSIONS ON PICTURES BELOW ARE SCALED.



Replacement thermal pads @EKWB webshop:
Thermal PAD F 0,5mm - (120x16mm) (EAN: 3830046996725)
Thermal PAD F 1,0mm - (120x16mm) (EAN: 3830046996732)

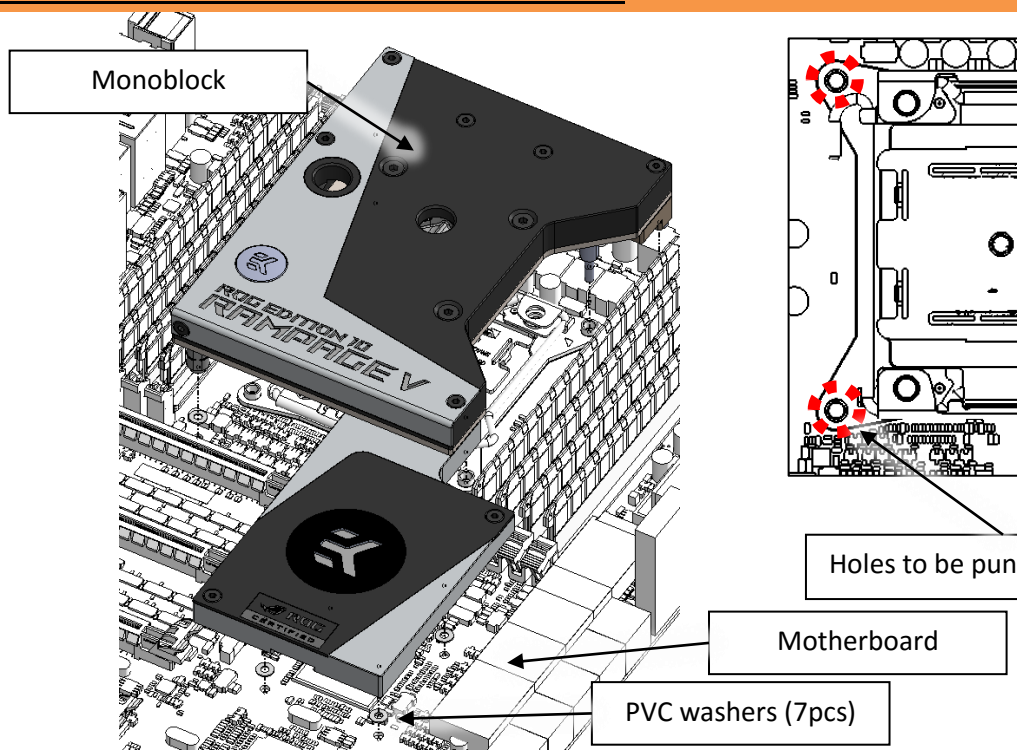
6. PLACING THERMAL PADS ON MOTHERBOARD. Place thermal pads you cut on PCB as shown on picture bellow (PLEASE REMOVE THE PROTECTIVE FOIL FROM BOTH SIDES OF THE THERMAL PADS PRIOR TO INSTALLATION). EK recommends using small drops of electrically non-conductive (for example: Arctic Cooling MX-2 ™ or MX-4 ™) 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 ASUS R5-E10 series water block.





Published on September 20th 2016

STEP 3: PREPARING YOUR WATER BLOCK



PLACING MONOBLOCK ON THE MOTHERBOARD:

From the backside there is a protective sticker which covers the mounting holes for the water block. You should take a pointy object (small screwdriver) and punch 4 holes through it (see picture on the left). Be careful not to damage the PCB!

Place the monoblock with preinstalled standoffs gently to the motherboard or vice versa. Make sure that mounting holes are aligned.

You mustn't forget to install seven (7) self-adhesive PVC washers under each and every standoff IF the stock-glued washers are not present on the PCB.

Be careful not to double the washers!!!!

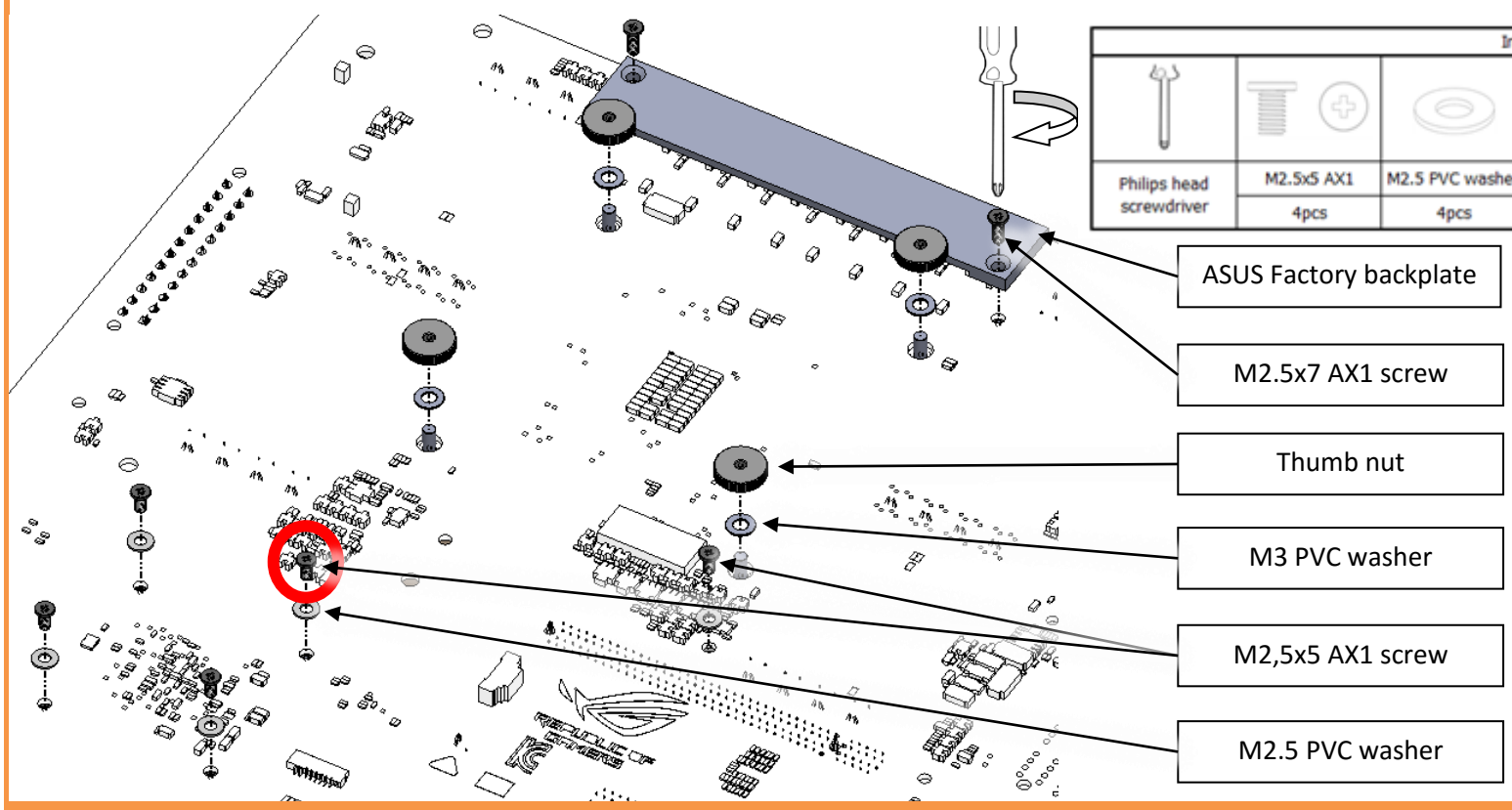
The locations are shown on the picture on the left. Skip to STEP 4 on how to fasten the Monoblock to the motherboard using the enclosed screws and washers.

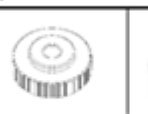
STEP 4: ATTACHING BLOCK TO MOTHERBOARD

Prior to fastening the screws please make sure the mounting holes on the motherboard's circuit board are aligned with the water block.

A) **Mosfet part:** Use two (2) M2,5x7 AX1 screws with PVC washers. Tighten the screws evenly. Do not use excessive force when tightening the screws!
B) **CPU part:** Use four (4) thumb nuts and washers.
C) **SB part:** Use five (5) M2,5x5 AX1 screws with PVC washers. Tighten the screws evenly. If you wish to install factory backplate you should remove the encircled screw and replace it with one M2,5x7 AX1 screw. Do not use excessive force when tightening the screws!

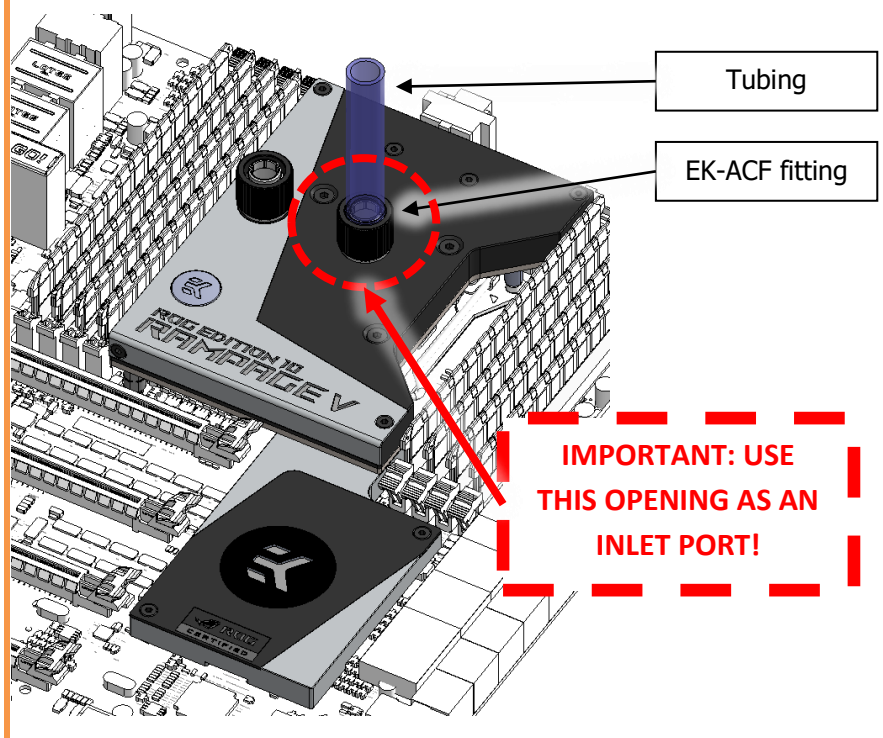
Use the enclosed screws and washers as shown in picture below:



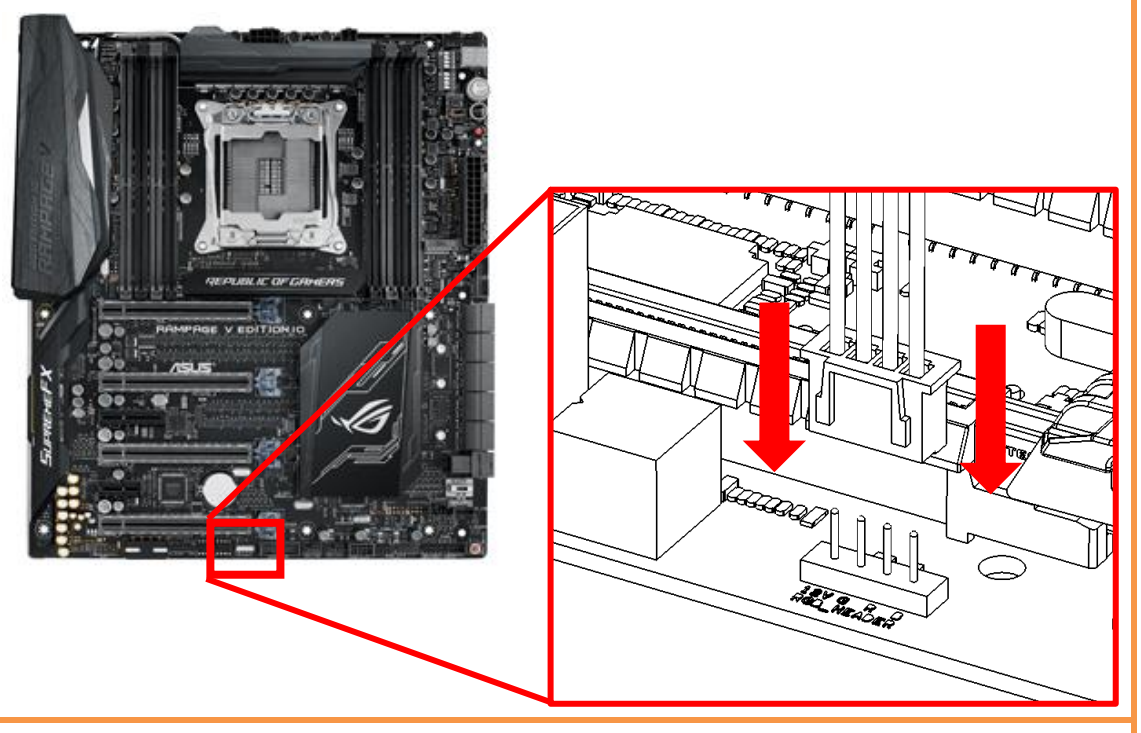
In this step you will need:						
						
Philips head screwdriver	M2.5x5 AX1	M2.5 PVC washer	M2,5x7 AX1	Thumb nut	M3 PVC washer	ASUS stock backplate
	4pcs	4pcs	2pcs	4pcs	4pcs	1pc

STEP 5: POSITIONING FITTINGS AND CONNECTING TO WATER & ELECTRICAL CIRCUIT

For the EK-FB ASUS R5-E10 Monoblock series water block to operate properly the G1/4 port nearest to the right edge of the water block **MUST BE USED AS THE INLET PORT**. EK recommends the use of EK-ACF fittings. When using fittings other than EK-ACF series please use hose clamps or appropriate substitute to secure the tubing to the barb. The use of biocide containing and corrosion inhibiting coolant is always recommended for any liquid cooling system.



In order to connect the RGB LED lights on the water block please take the 4-pin connector from the water block and connect it to the RGB header on the motherboard. Be careful to connect the 4-pin female connector so that the Grey wire (others are black) connects to the 12V pin marked on the PCB under the male header.



REQUIRED TOOLS:  scissors  philips screwdriver  thermal grease