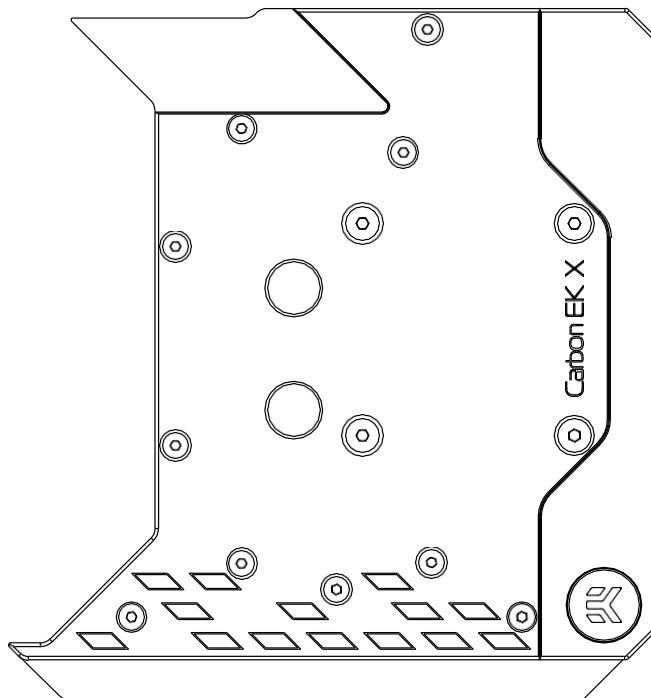


# EK-MSI Z690 Carbon EK X

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](http://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:

**Please carefully read the manual thoroughly before beginning with the installation process!**

**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).**

**The EK- 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.**

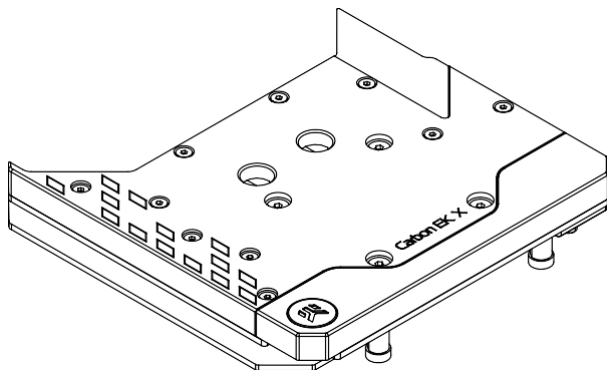
**The use of quality, market proved corrosion inhibiting coolants is always strongly recommended for any liquid cooling system.**

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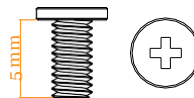
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## BOX CONTENTS

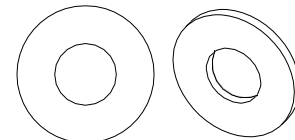
**Universal Mounting Mechanism** - You may not need every screw from this package. EAN: 3831109891582



EK-MSI Z690 Carbon EK X



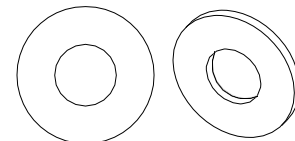
M2.5 x 5 AX1 Screw (5 pcs)



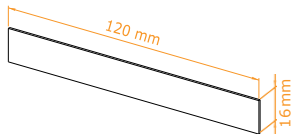
M2.5 PVC Washer 0.5 mm (5 pcs)



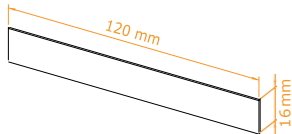
Allen Key 2.5mm (1 pc)



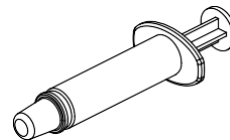
M2.5 Adhesive Washer 0.7 mm (5 pcs)



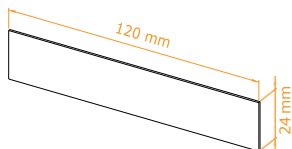
Thermal PAD F1.0mm - (120x16mm) (2 pcs)



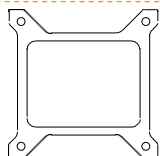
Thermal PAD F0.75mm - (120x16mm) (2 pcs)



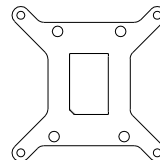
EK TIM Thermal Grease (1 pc)



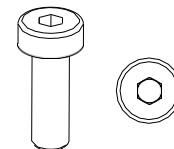
Thermal Pad G 1.5 mm (1 pc)



Rubber Gasket (1 pc)



Metal Backplate (1 pc)

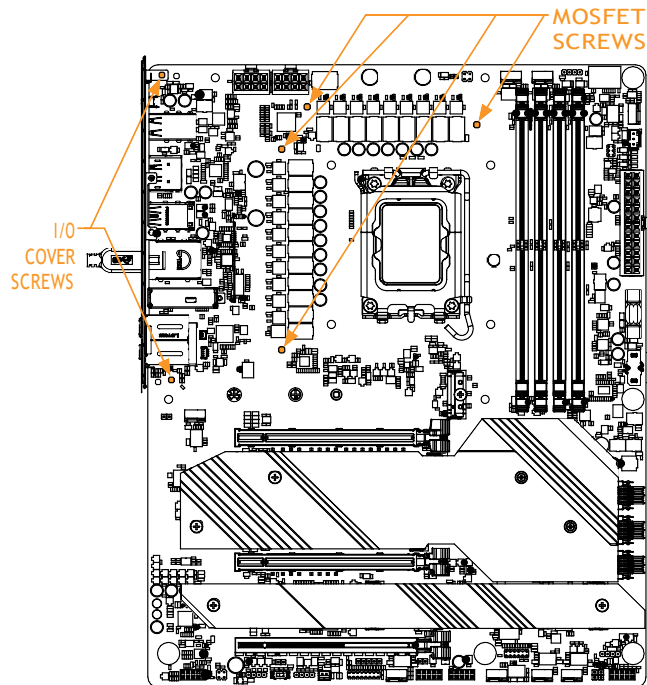


M4 x 12 DIN7984 (5 pcs)

## PREPARING YOUR MOTHERBOARD

### REMOVING STOCK COOLER

Remove all encircled screws. There are four (4) MOSFET screws on the back of the motherboard that needs to be removed. Additional two (2) screws needs to be removed to remove the plastic I/O cover. Store the screws for later use. You can attach the I/O cover back, after you mount the Monoblock.



**Thermal PAD F 0.75 mm (120 x 16 mm)**



**Thermal PAD F 1.0 mm (120 x 16 mm)**



**Thermal PAD G 1.5 mm (120 x 24 mm)**



## APPLYING THERMAL COMPOUND

Apply thermal compound on CPU heat spreader (IHS) with enclosed EK-TIM Ectotherm thermal grease. The quantity of about two rice grains is just about right (like shown on the picture on the left side). There is no need to cover the whole IHS. Applying too much thermal grease will have negative impact on the cooling performance!

## CUTTING THERMAL PADS

Your block comes with thermal pads which needs to be trimmed in order to fit the voltage regulation area (MOSFET) on the motherboard's circuit board.

1. Thermal PAD F 0.75 mm - (120 x 16 mm) EAN: 3831109891537
2. Thermal PAD F 1.0 mm - (120 x 16 mm) EAN: 3830046996732
3. Thermal PAD G 1.5 mm - (120 x 24 mm) EAN: 3830046996787



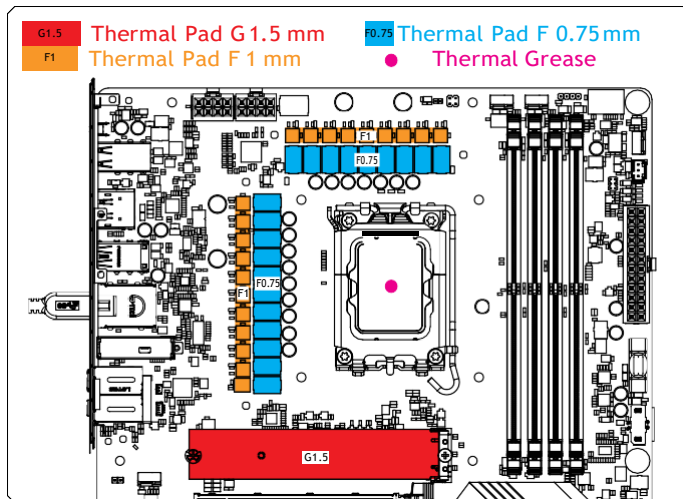
**WARNING:** Dimensions on pictures below are scaled.

## PLACING THERMAL PADS ON THE MOTHERBOARD

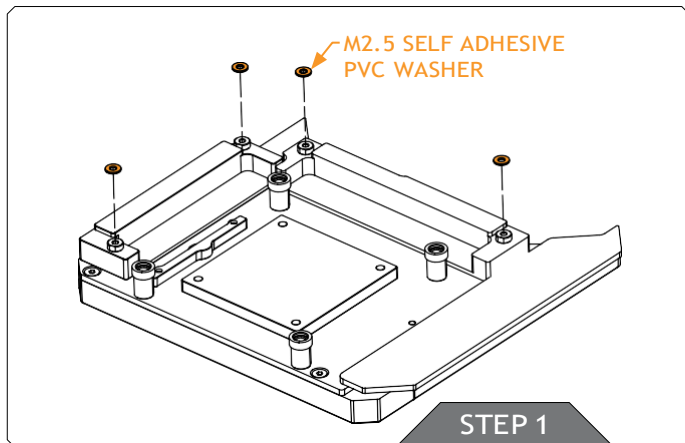
Place thermal pads on PCB as shown on the picture.



Please remove the protective foil from both sides of the thermal pads prior to installation!

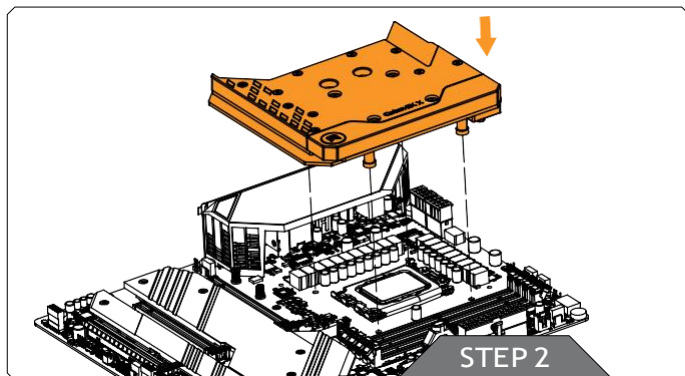


## PLACING THE BLOCK ON TO MOTHERBOARD



### STEP 1

Install four (4) M2.5 self adhesive PVC washers under marked standoffs as shown on the picture below.



### STEP 2

Place the EK-MSI Z690 Carbon EK X Monoblock series water block to the motherboard or vice versa (as shown on the photo). Make sure that mounting holes are aligned.

## ATTACHING BLOCK ON THE MOTHERBOARD

### STEP 1

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

**Mosfet part:** Use four (4) M2.5 x 5 AX1 Screws with PVC washers. Tighten the screws evenly. Do not use excessive force when tightening the screws.

**CPU part:** Use four (4) M4 x 12 DIN 7984 with screws. Tighten the screws using enclosed 2mm Allen Key.

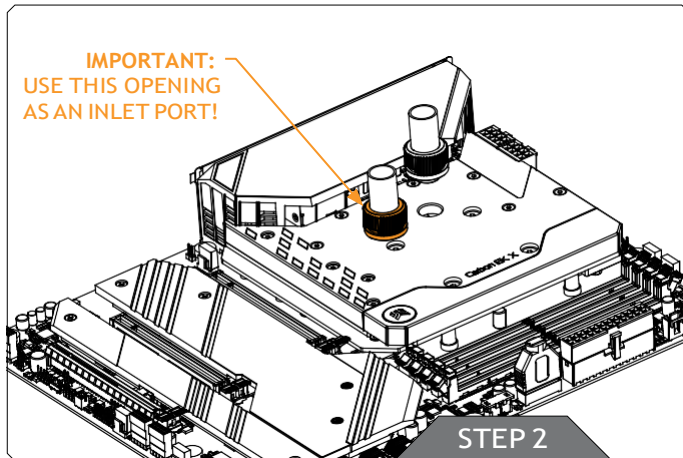
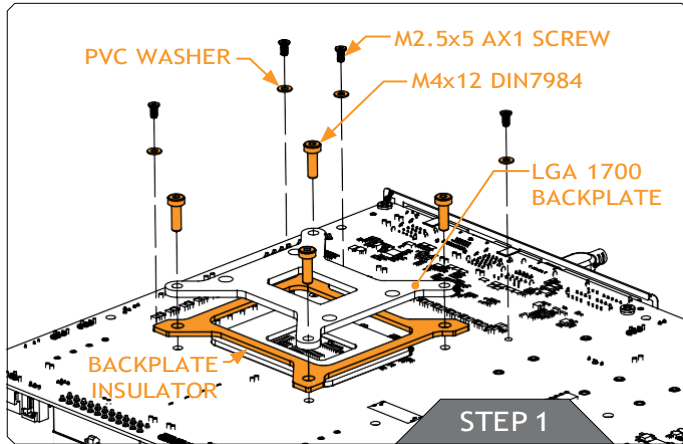


Do not forget install the Backplate Insulator and Backplate (as shown on the photo). They should be oriented to match the holes.

### STEP 2

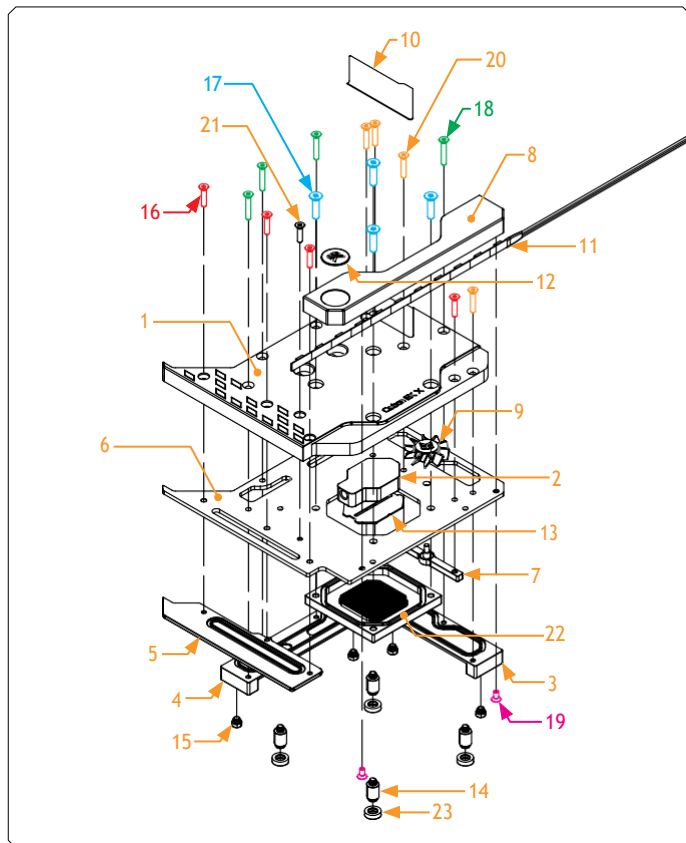
For the MSI Z690 Carbon EK X series water block to operate properly the bottom G1/4 port of the water block **MUST BE USED AS THE INLET PORT**.

EK recommends the use of EK-Fittings. When using fittings other than EK 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.

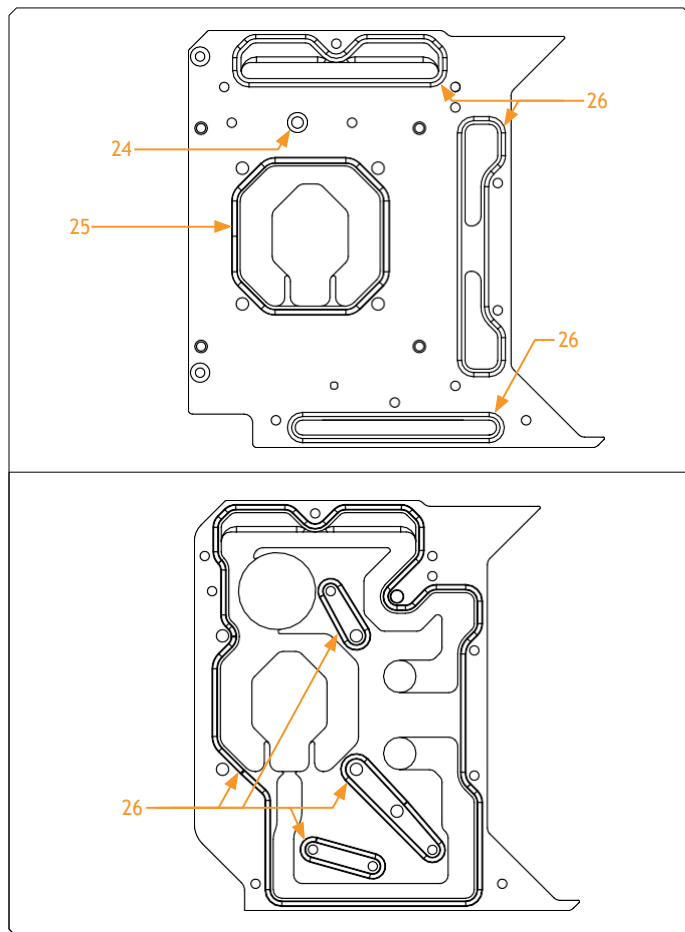




## TECHNICAL SPECIFICATIONS AND WATER BLOCK PARTS

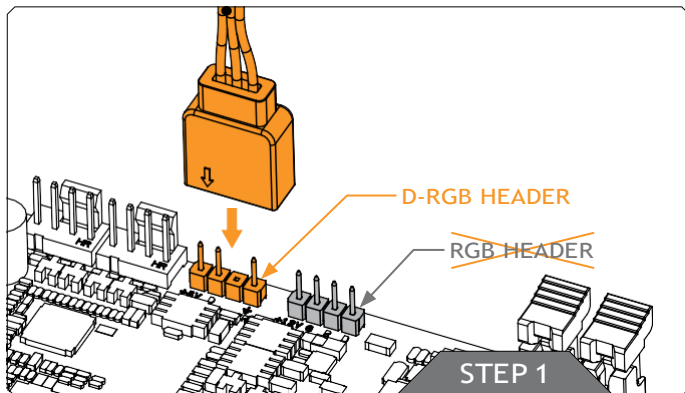


Position	EAN	Description	Quantity
1	104178	Top Plate (Plexi)	1
2	104200	Plexi insert	1
3	104170	Copper plate N (Ni)	1
4	104172	Copper plate W (Ni)	1
5	104174	Copper plate M2 (Ni) - SSD	1
6	104175	Metal plate (Stainless Steel)	1
7	104177	Metal Pin (Ni)	1
8	104181	Stickout (Bl. Elox)	1
9	102344	Quantum Impeller 27 mm - Black	1
10	104207	Carbon Cover (Mylar)	1
11	100824	LED D-RGB strip 500/180 mm	1
12	100663	EK RGB Badge	1
13	100808	Jet Plate 0.8 mm	1
14	102725	Standoff M4/M4 x 11 Male Lock	4
15	8533	Standoff M4/M2.5 x 2.5	4
16	8203	Screw M3x14 DIN7991	4
17	8312	Screw M4x16 DIN7991	4
18	9017	Screw M3x18 7991DIN	4
19	8472	Screw M3x6 DIN7991	2
20	8109	Screw M3x16 DIN7991	4
21	8202	Screw M3x12 DIN7991	1
22	104350	Coldplate (Ni)	1
23	102726	Standoff fi9.9 - 5.5 x 2.8 Female Lock	4



Position	EAN	Description	Quantity
24	102571	OR 4x1.5	1
25	100078	Coldplate OR	1
26	104213	Carbon EK X O-Ring Set	7

## CONNECTING THE D-RGB LED STRIP



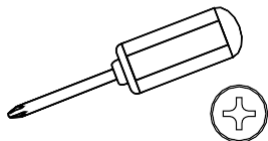
Plug the 3-pin connector from Monoblock D-RGB LED strip to the motherboard.



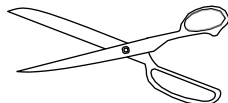
Please ensure that the arrow indicated on the connector is plugged into the +5V line as indicated on your motherboard. Failure to do so will damage your motherboard or LED strip.

## REQUIRED TOOLS

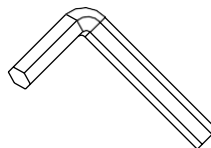
Phillips-head screwdriver



Scissors



Allen Key



## SUPPORT AND SERVICE


In case you need assistance or wish to order spare parts or a new mounting mechanism, please contact:  
<https://www.ekwb.com/customer-support/>

For spare parts orders, refer to the page with “TECHNICAL SPECIFICATIONS AND PRODUCT PARTS” where you can find the EAN number of each part you might need.

Include the EAN number with quantity in your request. Mounting Mechanism EAN can be found under “BOX CONTENTS”

Thermal pads are readily available in the EK shop


## SOCIAL MEDIA

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