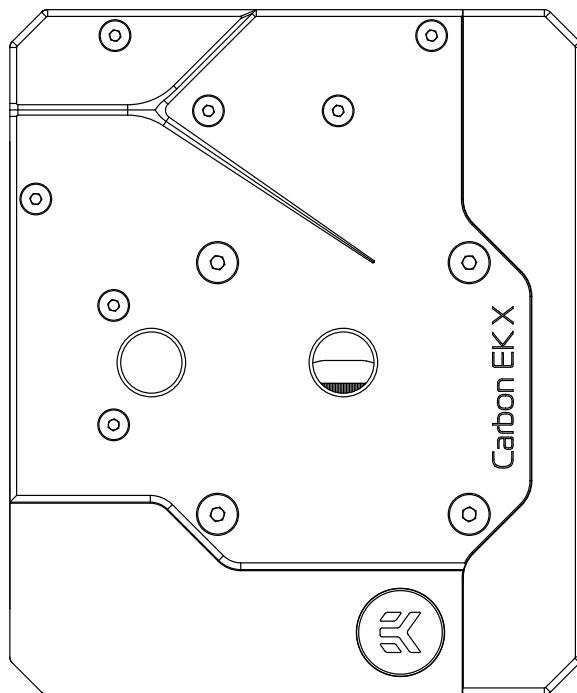


# MSI MPG Z490 Carbon EK X Monoblock

MONOBLOCK



This product is intended for installation by expert users only. Please consult with a qualified technician for installation. Improper installation may result in damage to the 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 website at [www.ekwb.com](http://www.ekwb.com) for updates. Prior to the 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:

**Carefully read the manual before beginning with the installation process!**

**Remove your motherboard from the chassis for the safest mounting process and to prevent any possible damages.**

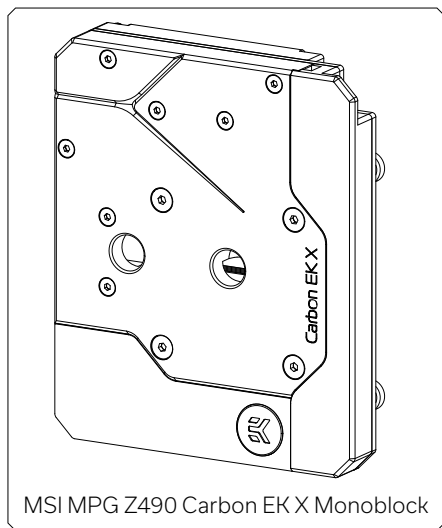
**EK Fittings require only a small amount of force to screw them firmly in place since the liquid seal is ensured with the rubber o-ring gaskets.**

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

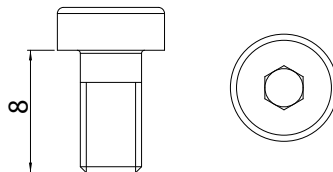
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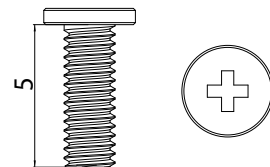
## BOX CONTENTS



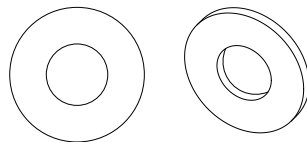
**MOUNTING MECHANISM** - Bag content is universal; you may not need every screw



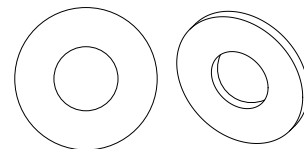
M4 x 8 7984DIN (5 pcs)



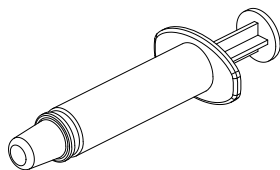
M2.5 x 5 AX1 Screws (5 pcs)



M4 PVC Washers (5 pcs)



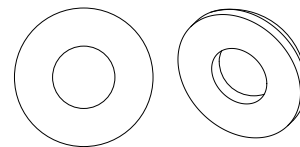
M2.5 PVC Washers (5 pcs)



Thermal Grease (1 pc)

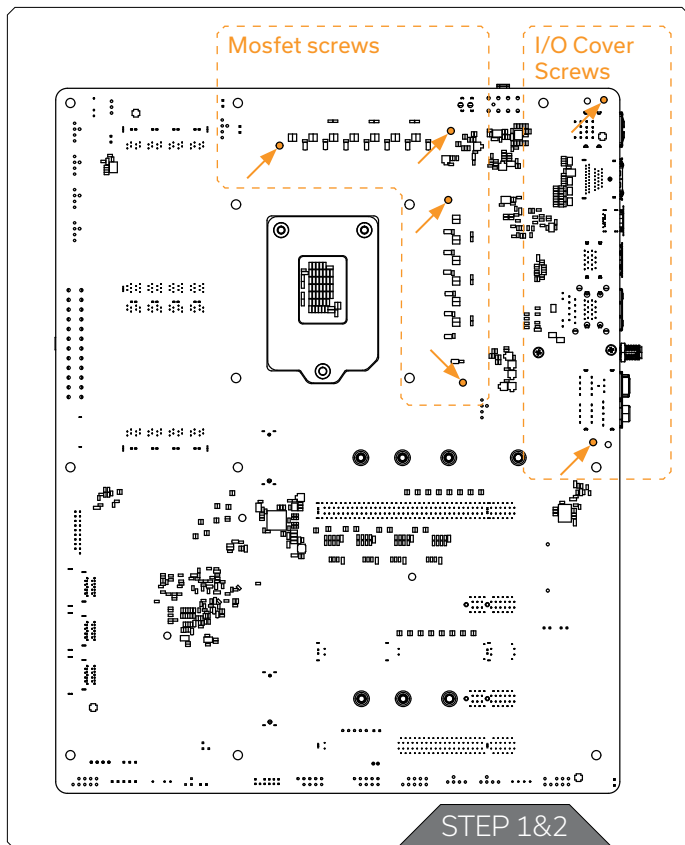


2.5. mm Allen Key (1 pc)



M2.5 Adhesive PVC Washers (5pcs)

## PREPARING YOUR MOTHERBOARD



## REMOVING THE STOCK COOLER

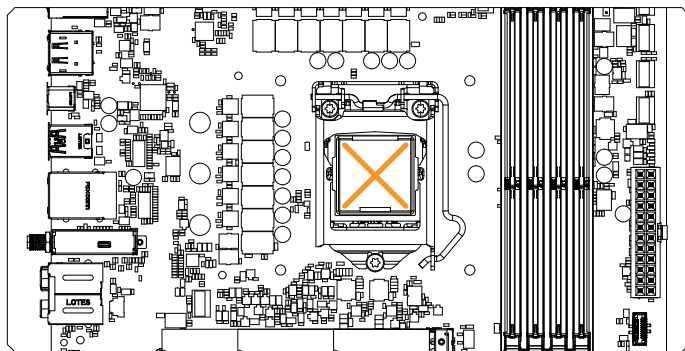
### STEP 1

There are two (2) screws on the back of the motherboard that need to be removed to allow for the removal of I/O plastic cover.

### STEP 2

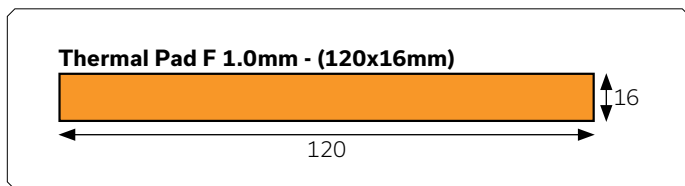
After removing the I/O cover, you need to remove four(4) MOSFET screws and take off the VRM MOSFET cooler.

**You can attach the I/O cover back on after you have mounted the Monoblock.**



## APPLYING THERMAL COMPOUND

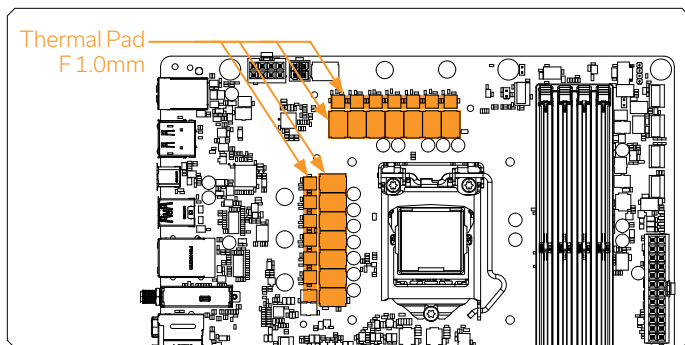
Apply the enclosed EK-TIM Ectotherm thermal grease (thermal compound) on the CPU heat spreader – IHS – as shown in the image. The layer of the thermal compound must be thin and even in thickness over the entire surface of the IHS. The excessive or uneven application may lead to poor performance!



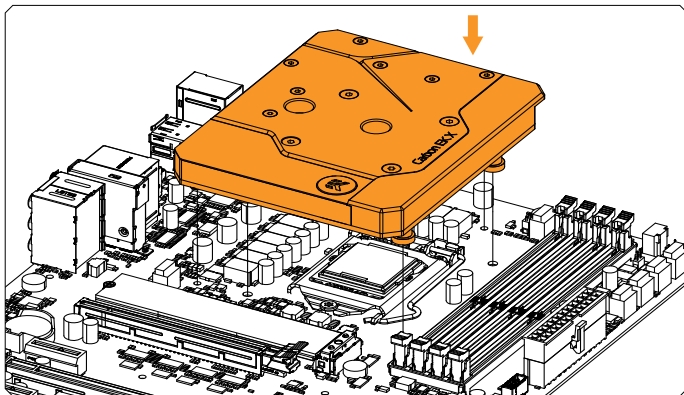
## CUTTING AND PLACING THERMAL PADS

Your block comes with two pieces of thermal pads that need to be trimmed to fit the voltage regulation area (MOSFET) on the motherboard's circuit board.

1. Thermal PAD F 1.0mm - (120x16mm)

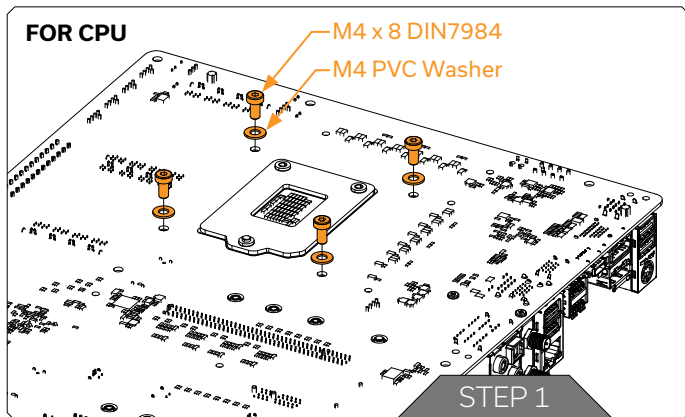


## PLACING THE BLOCK ON THE MOTHERBOARD



Place your MSI MPG Z490 Carbon EK X monoblock on the motherboard, as shown in the scheme. Make sure that mounting holes are aligned.

Before placing the monoblock on to the motherboard, make sure that protective sticker on the coldplate is removed!



## ATTACHING BLOCK ON THE MOTHERBOARD

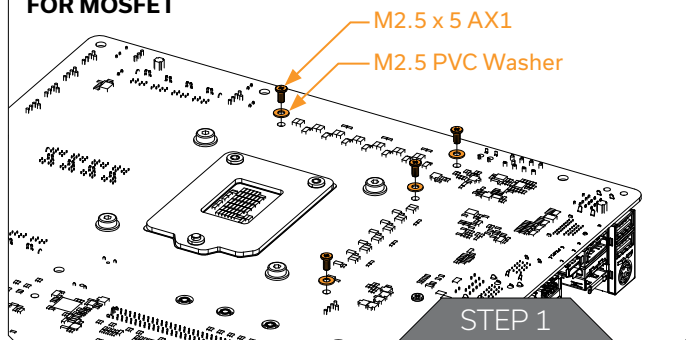
### STEP 1

Before you fasten the screws, please make sure the mounting holes on the motherboard's circuit board are aligned with the water block. While tightening the screws, do not use excessive force!

#### For the CPU:

Use four (4) M4 X 8 DIN7984 screws and M4 PVC washers. Tighten the screws evenly using the enclosed 2.5mm Allen Key.

### FOR MOSFET

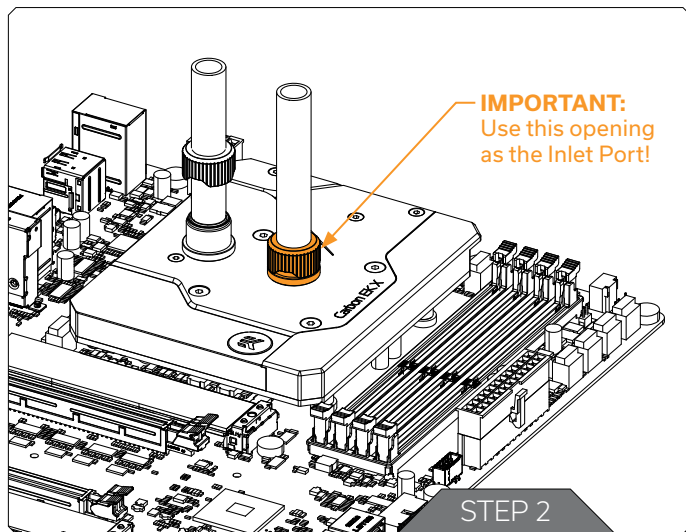


### For Mosfet:

Use four (4) M2.5 x 5 AX1 screws with M2.5 PVC washers. Tighten the screws evenly.

### STEP 2

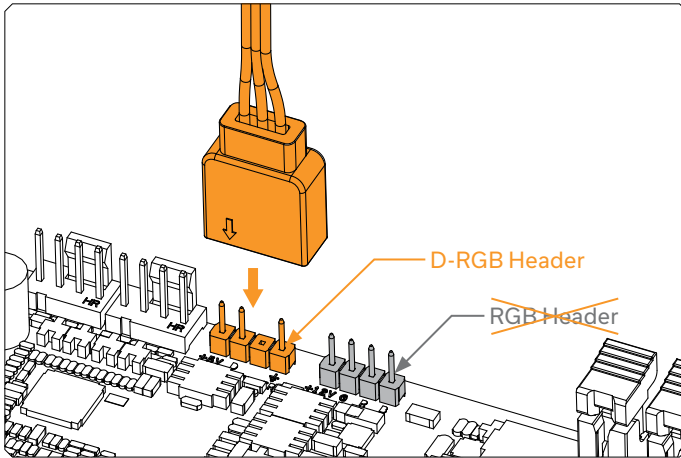
For the MSI MPG Z490 Carbon EK X monoblock to operate properly, the G1/4 port nearest to the right edge of the water block **MUST BE USED AS THE INLET PORT**.





## CONNECTING THE D-RGB LED STRIP

Plug the 3-pin connector from the Monoblock's D-RGB LED light to the **D-RGB Header** on the motherboard. The LEDs will work if the pin layout on the header is as follows: **+5V, Data, Empty, Ground**.



## TESTING THE LOOP

To make sure the installation of EK components was successful, we recommend you perform a 24-hour leak test.

When your loop is complete and filled with coolant, connect the pump to a PSU outside of your system. Do not connect power to any of the other components. Turn on the PSU and let the pump run continuously.

Inspect all parts of the loop, and in case the coolant leaks, fix the issue and repeat the testing process. Ensure that all hardware is dry before the system is powered on, to prevent any damage.


## SUPPORT AND SERVICE

For assistance please contact:


**<http://support.ekwb.com/>**

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## SOCIAL MEDIA

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