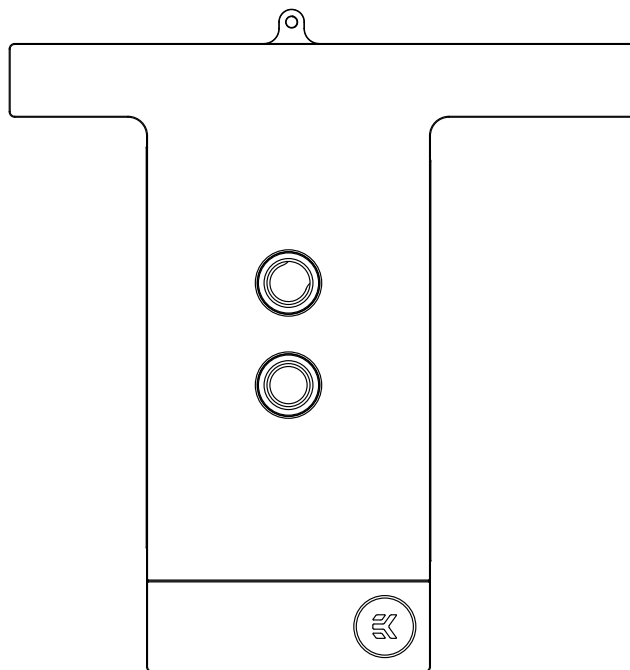


# EK-Quantum Momentum<sup>2</sup> Pro WS W790-ACE - Full Metal

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 website at [www.ekwb.com](http://www.ekwb.com) for updates. Before installation of this product please read the 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 the installation process!**

**Please remove your motherboard from the computer to assure the safest mounting process in order to prevent any possible damages to your CPU and/or motherboard's circuit board (PCB).**

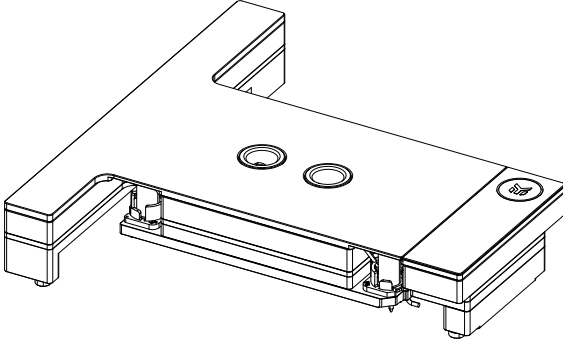

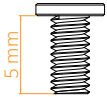

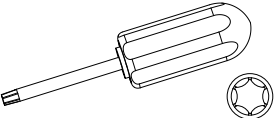
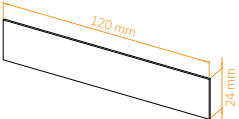
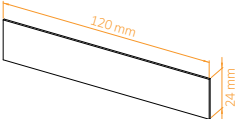
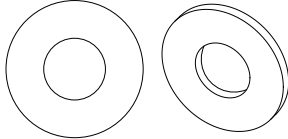
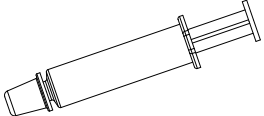
**The EK-Fittings require only a small amount of force to screw them firmly in place since the liquid seal is ensured by the rubber o-ring gaskets.**

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

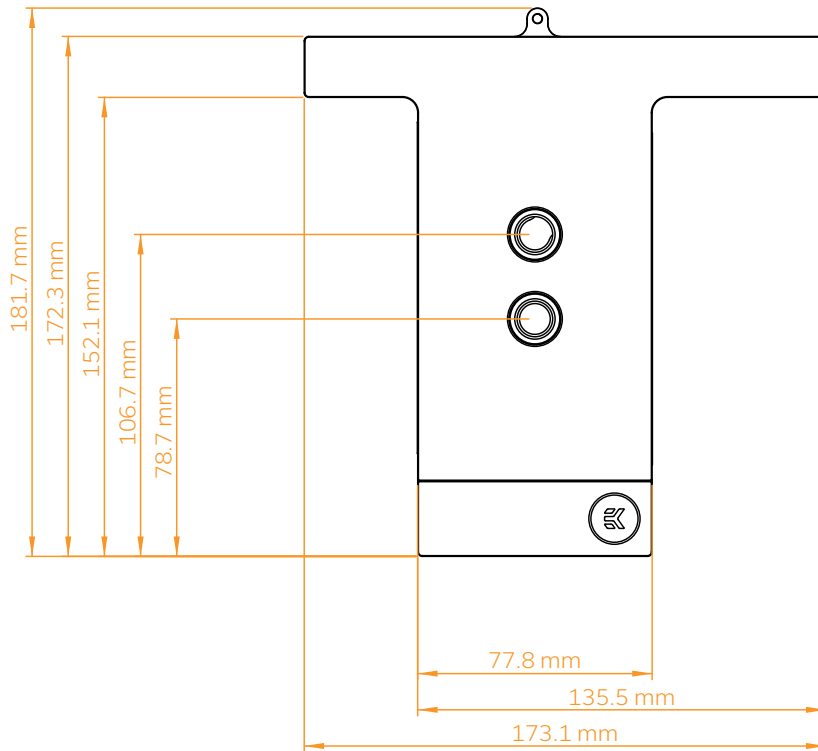
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# BOX CONTENTS

 <p>EK-Quantum Momentum<sup>2</sup> Pro WS W790-ACE - Full Metal</p>	 <p>Allen Key 2 mm (1 pc)</p>	  <p>M2.5x5 AX1 Screw (6 pcs)</p>
 <p>Torx T30</p>	 <p>Thermal Pad G 1.0 mm (120x24) (3 pcs)</p>	 <p>Thermal Pad G 2.0 mm (120x24) (3 pcs)</p>
 <p>Washer M2.5 0.5 mm (6 pcs)</p>  <p>Thermal grease (1 pc)</p>		

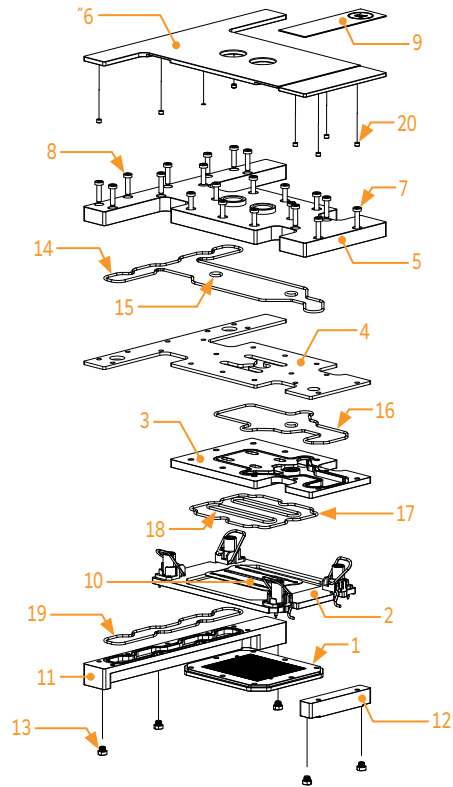
# WATER BLOCK DIMENSIONS



## TECHNICAL SPECIFICATIONS AND WATER BLOCK PARTS

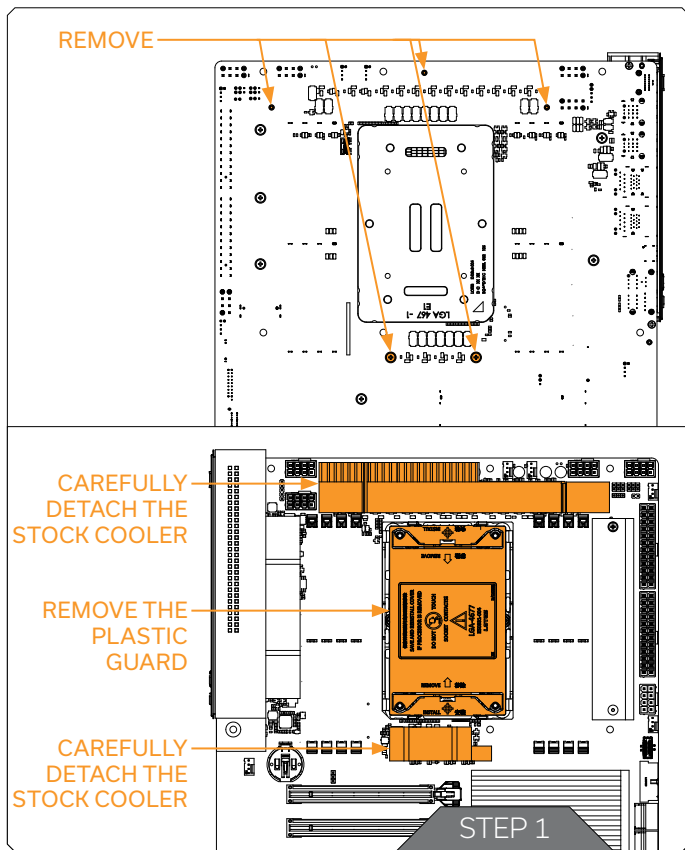
### Technical Specification:

- Dimensions: (LxHxW) - 181.7x173.1x32mm



Position	EAN	Description	Quantity
1	103674	Nickel Core Coldplate	1
2	3831109861097	Mounting Plate - LGA4677	1
3	106559	Nickel Midplate	1
4	106564	Steel Midplate	1
5	106557	TOP Acetal	1
6	106265	Black Aluminium Cover	1
7	9019	Screw M3x18 DIN7984	10
8	9016	Screw M3x12 DIN7984	11
9	106566	Aluminium EK sticker	1
10	106633	Steel Jet Plate	1
11	106561	Nickel North Coldplate	1
12	106563	Nickel South Coldplate	1
13	8533	Standoff M4/M2,5 x 2,5 Medenina	5
14	5125	OR 180x1.5	1
15	5209	OR 6x1.5	3
16	5089	OR 102x1.5	1
17	101395	OR 82x2	1
18	5159	OR 40x1.5	2
19	5099	OR 85x1.5	1
20	105163	Disc magnet 3x2	8

## PREPARING THE MOTHERBOARD



### STEP 1 REMOVING THE STOCK COOLER



Important! Before starting, make sure to have a clean, flat surface to work on. It is recommended to put foam or soft material to lay the motherboard and the water block on.

Additional five (5) screws and three (3) standoffs must be removed in order to remove the original stock cooler above and below the CPU placement.

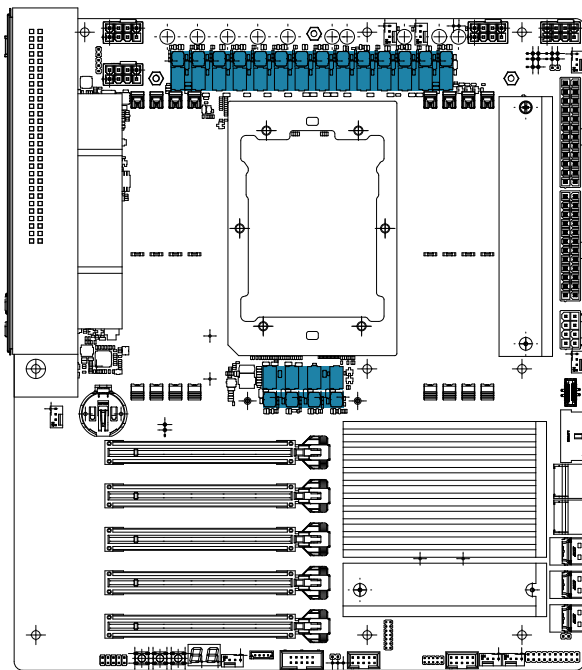
After removing the screws and standoffs, carefully detach the stock cooler and pre-applied thermal pads. EK provides replacement thermal pads with the water block (Chapter: CUTTING AND PLACING THERMAL PADS).

Save the screws and standoffs for later use ( Chapter: ATTACHING THE WATER BLOCK).

## CUTTING AND PLACING THERMAL PADS

### Option 1

Processors **Sapphire Rapids-SP XCC, Sapphire Rapids-112L XCC, Sapphire Rapids+HBM XCC or Airport Cove TTV**



G2 Thermal Pad - 120 x 24 x 2.0 mm

STEP 1

### STEP 1

**EK-Quantum Momentum<sup>2</sup> Pro WS W790-ACE - Full Metal** water block comes with Thermal Pads that have to be cut into smaller pieces to cover all the regulation area (Mosfet) on the motherboard. EK made sure to provide you with more than an adequate quantity of Thermal Pads to complete this Step.



In case you are using processors **Sapphire Rapids-SP XCC, Sapphire Rapids-112L XCC, Sapphire Rapids+HBM XCC or Airport Cove TTV** use 2mm thermal pads provided by EKWB. However if you are using **Sapphire Rapids-SP MCC, Sapphire Rapids-MSWS MCC** you need to first place the 1mm thermal pads and then equally cut 2 mm thermal pads on top of them. Before placing the 1 mm thermal pad remove the foil from just one side. When in place carefully remove the foil from other side as well.



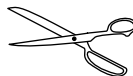
Please remove the protective foil from both sides of the thermal pads prior to installation!

Replacement thermal pads: **Option 1**

3x Thermal PAD G 2.0 mm - (120 x 24 mm) EAN: 3830046996794

For this step, you will need:

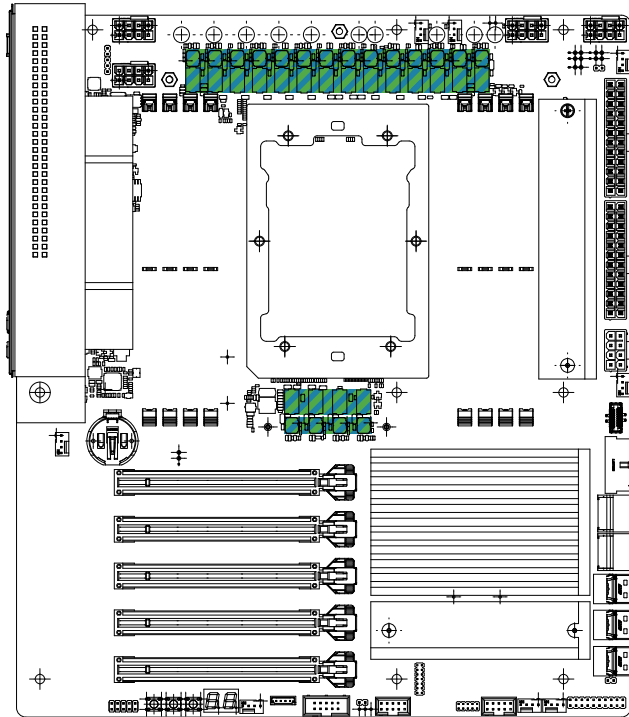
Scissors





## Option 2

Processors **Sapphire Rapids-SP MCC, Sapphire Rapids-MSWS MCC**



**G1 + G2** Thermal Pad - 120 x 24 x 1.0 mm + 120 x 24 x 2.0 mm

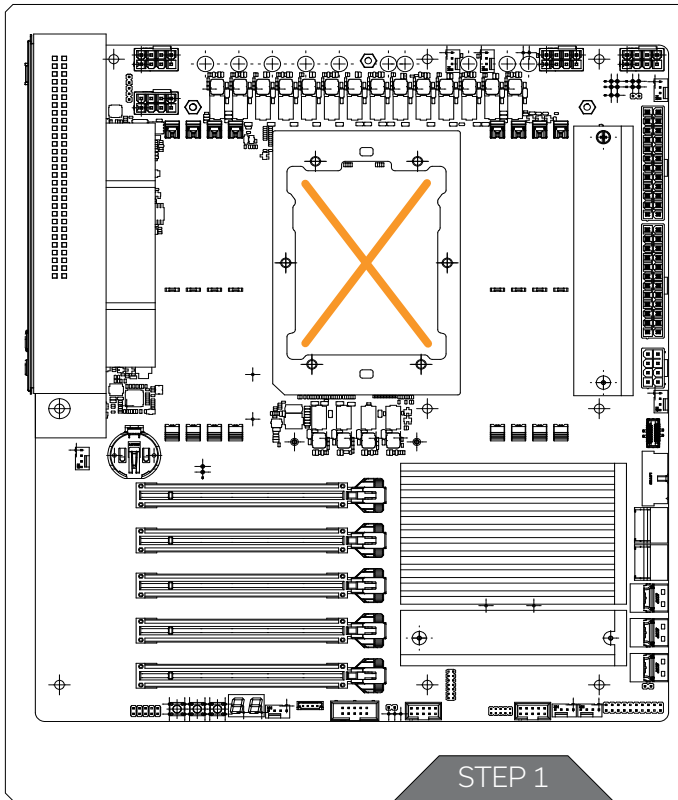
STEP 1

Replacement thermal pads: **Option 2**

3x Thermal PAD G 1.0 mm - (120 x 24 mm) EAN: 3830046996770

+ 3x Thermal PAD G 2.0 mm - (120 x 24 mm) EAN: 3830046996794

## APPLYING THERMAL COMPOUND



### STEP 1

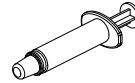
Apply the enclosed EK-TIM Ectotherm thermal grease (thermal compound) on the CPU heat spreader – IHS – as shown in the image. The layer of the thermal compound must be thin and even in thickness over the entire surface of the IHS.



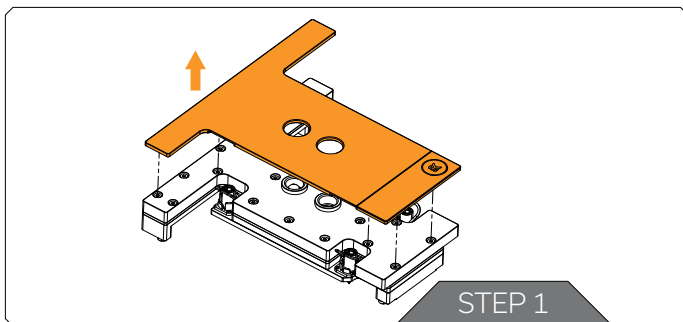
The excessive or uneven application of thermal grease may lead to poor performance!

For this step, you will need:

Thermal Grease



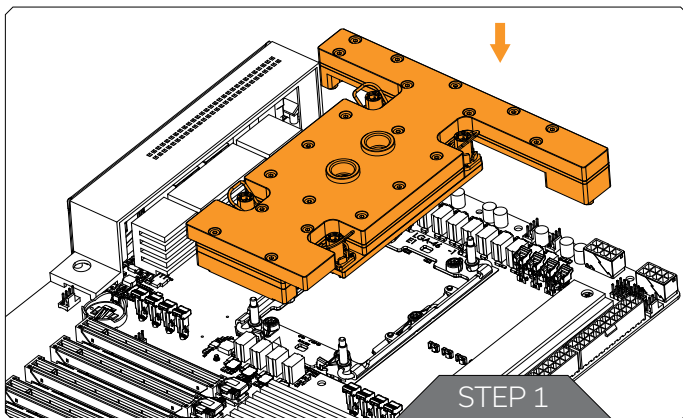
## PREPARING THE WATER BLOCK FOR INSTALLATION



### STEP 1

Block needs to be installed without the aluminium top cover. Remove the aluminium top cover and place it carefully on a clean surface.

## ATTACHING THE WATER BLOCK

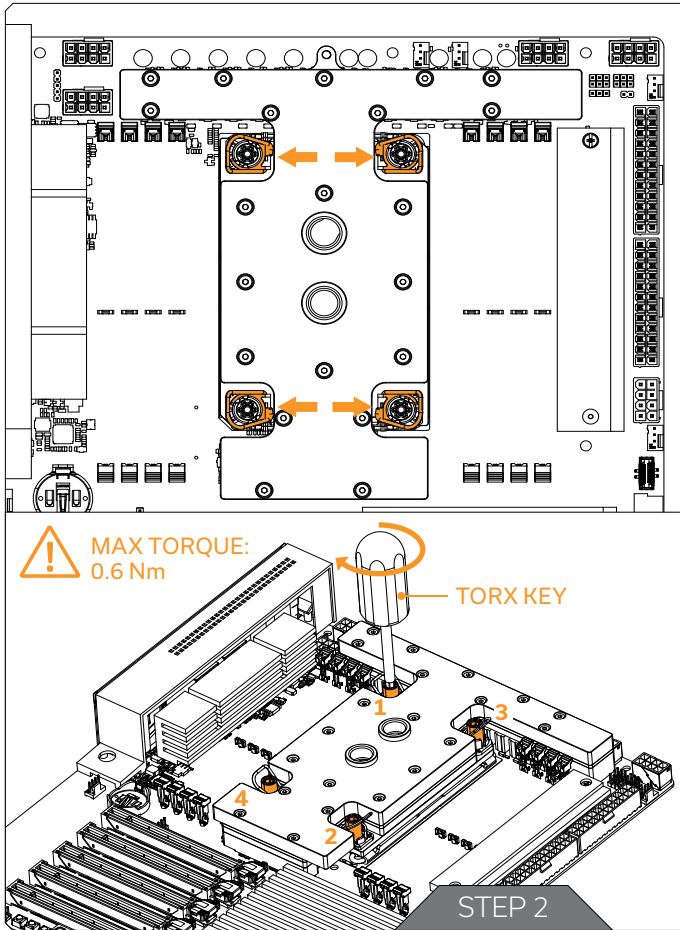


### STEP 1

Carefully place the water block onto the motherboard and align four (4) mounting nuts with four (4) mounting screws on the motherboard.



Before placing the Water Block on the motherboard, make sure all the Thermal Pads are placed correctly and you applied the thermal grease! (Chapter: Cutting and placing thermal pads).

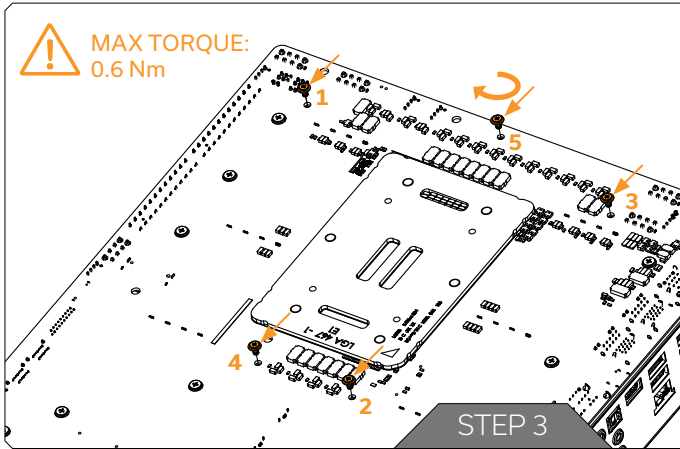


## STEP 2

When you mounted the water block in place push the clips to the sides to its final position as seen in the following picture. Take the TORX key provided by EKWB and tighten all 4 nuts in described order.



Before placing the Water Block on the motherboard, make sure all the Thermal Pads are placed correctly! (Chapter: Cutting and placing thermal pads).

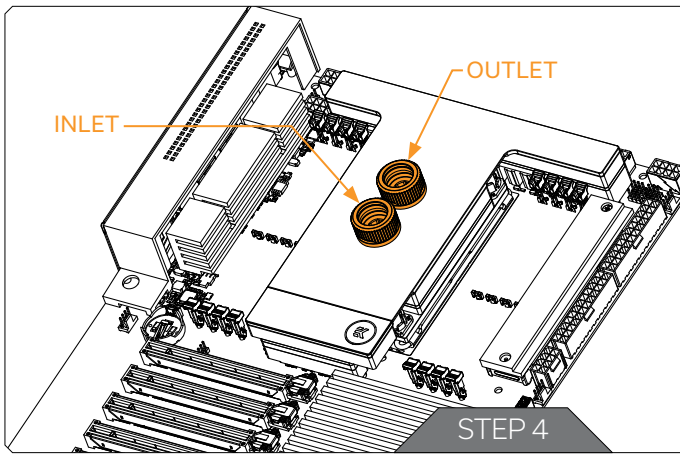
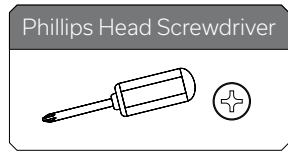


### STEP 3

Tighten the water block using five (5) ek provided AX1 M2.5 x 5 screws and five (5) washers. Do not use excessive force!

EK recommends using the EK-Loop Torque Screwdriver - 0.6Nm: <https://www.ekwb.com/shop/ek-loop-torque-screwdriver-0-6nm>.

For this step, you will need:



### STEP 4

With the **EK-Quantum Momentum<sup>2</sup> Pro WS W790-ACE - Full Metal** water block, it is mandatory to use the bottom port as the **INLET**. Mixing the ports may result in poor thermal performance of the water block.

Tighten the fittings in a clockwise direction until the gasket underneath is compressed.

The installation of the water block is now complete.

## TESTING THE LOOP

To make sure the installation of EK components was successful, we recommend you perform a leak test for 24 hours. 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. It is normal for the coolant level to drop during this process as air collects in the distribution plate. Inspect all parts of the loop, and in the eventuality, that coolant leaks, fix the issue and repeat the testing process. Ensure that all hardware is dry before the system is powered on in order to prevent any damage.

## 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 WATER BLOCK 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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