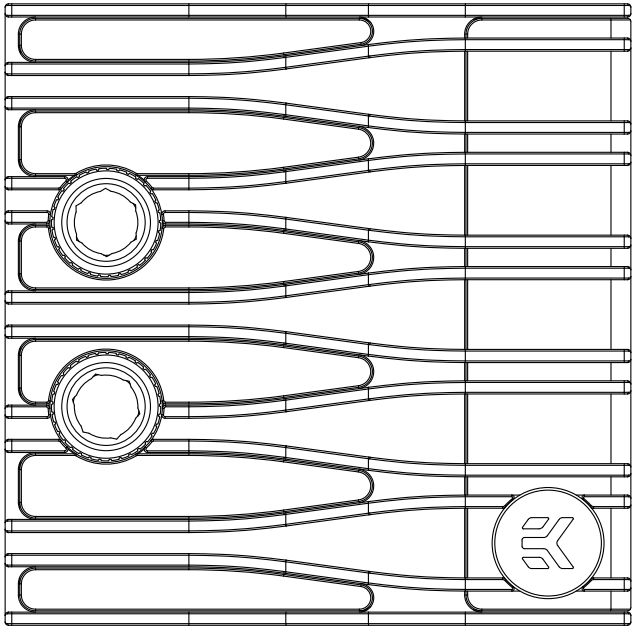
EK-Quantum
Velocity² Direct Die D-RGB - 1700 Core Edition



Please note the installation of the product is intended to be undertaken by an adequately trained and experienced professional. If you are not properly trained or experienced or feel unsure about the installation procedure, please refrain from installing the product yourself and contact our tech support for assistance. You are installing the product at your own risk.

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

Please carefully read the manual before beginning the installation process.

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 corrosion inhibiting coolants is always recommended for liquid cooling systems, and mandatory for nickel plated water blocks.

Do not use pure distilled water! For best results EK recommends the use of EK-Cryo Fuel coolants.

Make sure to thoroughly bleed air out of your water block, or you will not reach optimal performance.

Delidding entails a very risky modification of the CPU and may, even if properly performed, result in damage to the processing unit.

Delidding a CPU voids Intel warranty

We disclaim all our liability for any damages to the product or the CPU as well as incidental, consequential, or indirect damages incurred during or as a consequence of delidding.

TABLE OF CONTENTS

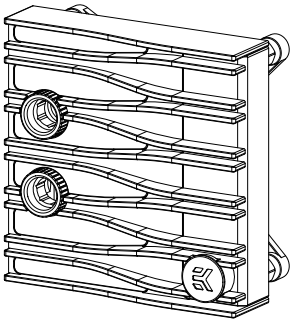
GENERAL INFORMATION ON WATER BLOCK COMPATIBILITY

This CPU liquid cooling unit is pre-assembled for use with modern Intel desktop socket-type motherboards. By default (out of the box) this water block supports the following CPU sockets:

- Intel LGA-1700

- For delidded 12th,13th,14th generation CPUs!

BOX CONTENTS



EK-Quantum Velocity² Direct Die D-RGB - LGA 1700 Core Edition

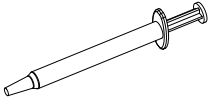
Mounting Mechanism

Allen Key 2 mm (1 pc)

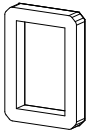
Allen Key 2.5 mm (1 pc)

TX20 L-Shaped Wrench (1 pc)

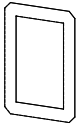
Tx7 L-Shaped Wrench (1 pc)



Thermal Grizzly Conductonaut (1 pc)

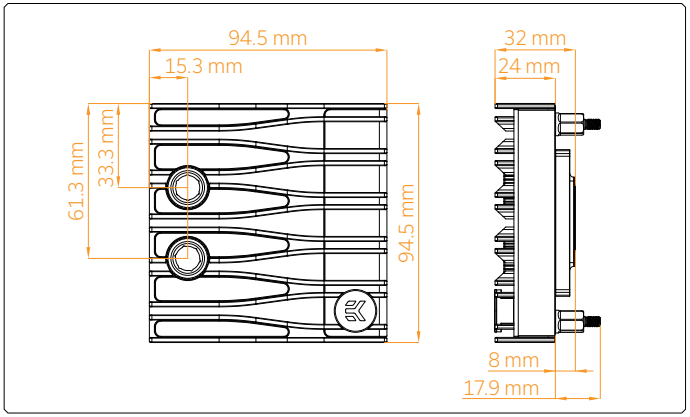


Protective Foam 5 mm (1 pc)

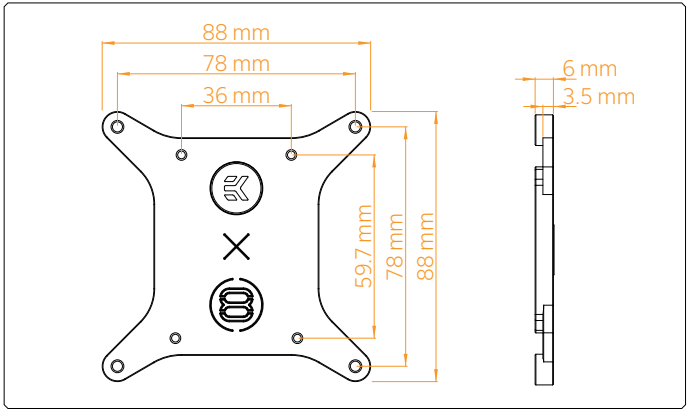


Protective Sticker (1 pc)

WATER BLOCK DIMENSIONS

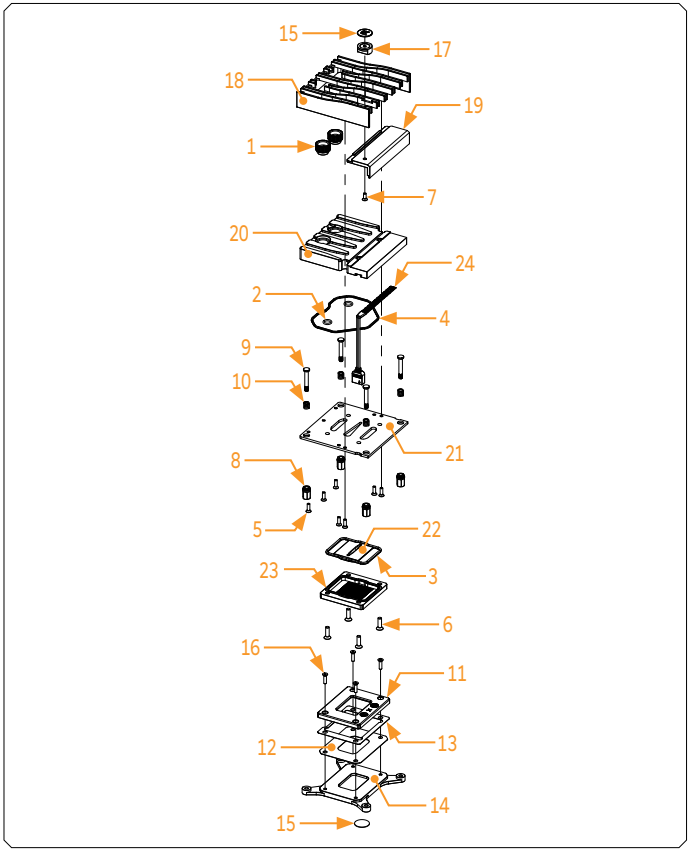


CPU WB:



Backplate:

TECHNICAL SPECIFICATIONS AND WATER BLOCK PARTS



Technical Specification:
Dimensions (L x H x W): 94.5 x 94.5 x 32 mm (Without mounting screws)
D-RGB cable length: 500 mm
D-RGB LED count: 10
D-RGB connector standard 3-pin (+5V, Data, Blocked, Ground)

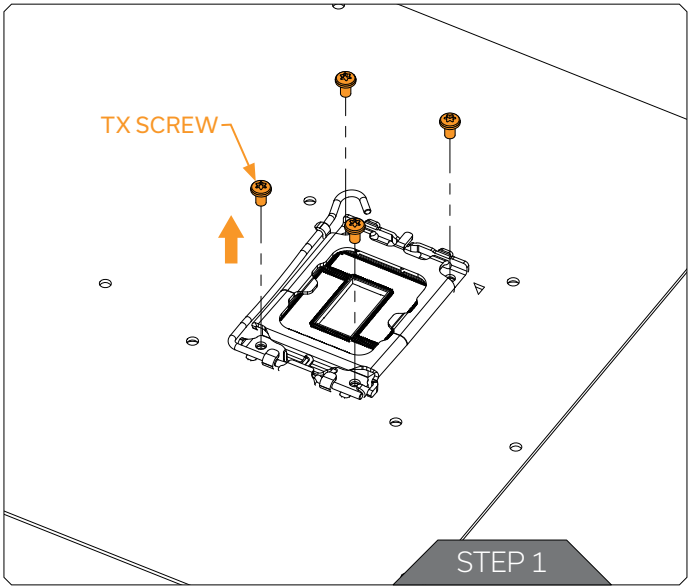
Position	EAN	Description	Quantity
1	3831109827529	EK-Quantum Torque Extender Static MF	2
2	104774	OR Top plate 1/2	2
3	104773	OR Coldplate	1
4	104772	OR Top plate 2/2	1
5	8252	Screw M3 x 10 7991DIN	7
6	104686	Screw M4 x 14 7991DIN	4
7	8208	Screw M3 x 8 7991DIN	1
8	107714	Standoff (Ni)	4
9	107701	Mounting Screw	4
10	8706	Spring M4 x 16 mm 8 kg	4
11	105584	Die Guard 2.10 (Black Elox)	1
12	105917	Backplate Protection sticker	1
13	106307	ILM Protection	1
14	107702	Backplate (Black Elox)	1
15	100663	EK - Badge	2
16	8202	Screw M3 x 12 DIN7991	4
17	107686	Badge Holder (Acetal)	1
18	107689	Top Cover (Black Elox)	1
19	107685	Light Guide (Acetal)	1
20	107684	Top plate (Plexi)	1
21	107683	Midplate	1
22	107700	Jet Plate	1
23	107663	Coldplate (Ni)	1
24	103006	LED Strip	1

DELIDDING THE CPU

STEP 1
For delidding the CPU, EK recommends the use of EK-Quantum Velocity² IHS Removal Tool – 1700:

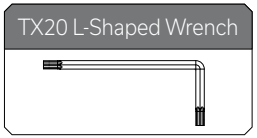
https://www.ekwb.com/shop/ek-quantum-velocity2-ihs-removal-tool-1700

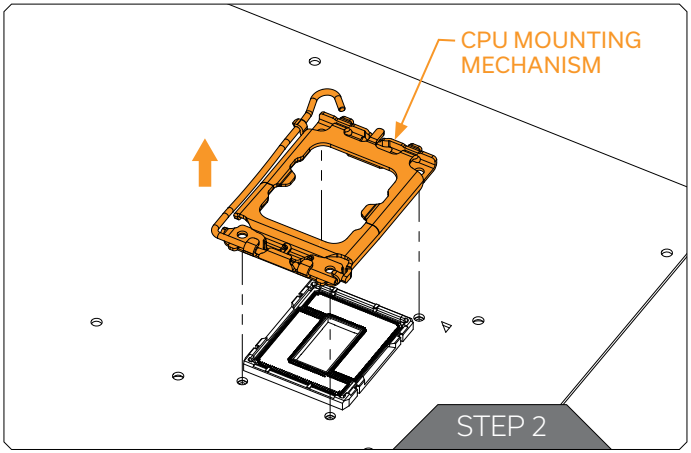
PREPARING THE MOTHERBOARD



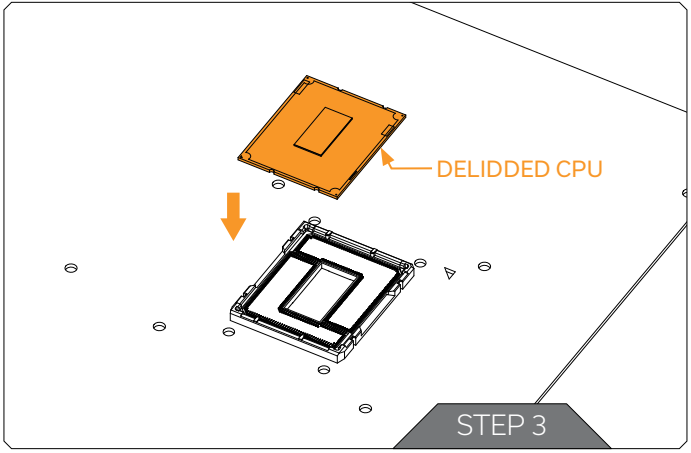
STEP 1
Remove the four (4) stock TX screws from the motherboard. For this step, you must use the TX20 wrench (included in the mounting bag)

For this step, you will need:

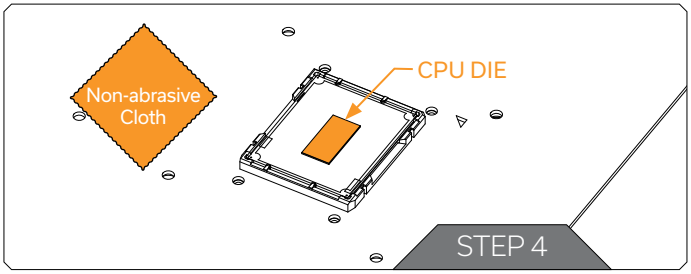




STEP 2
Remove the CPU mounting mechanism from the motherboard. The stock backplate must also be removed.

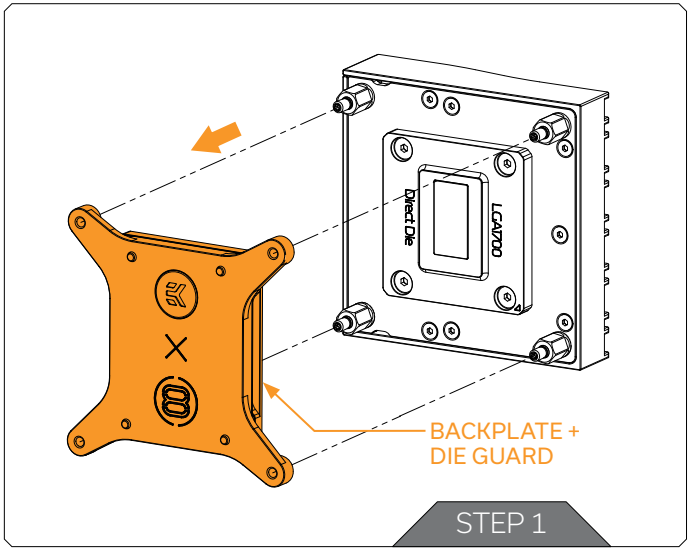


STEP 3
Insert the Delidded CPU in the socket.



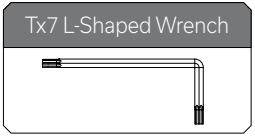
STEP 4
Before applying the Liquid Metal, clean the CPU DIE using a non-abrasive cloth or Q-Tip.

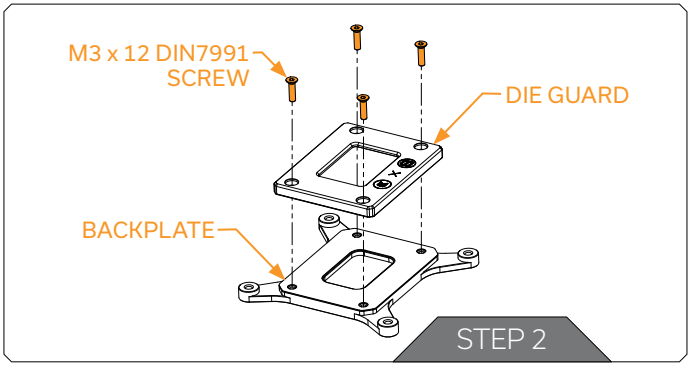
PREPARING THE WATER BLOCK FOR INSTALLATION



STEP 1
Using the Tx7 L-shaped wrench unscrew the Backplate + Die Guard from the CPU Water Block.

For this step, you will need:

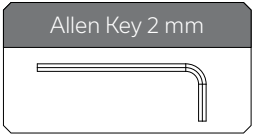




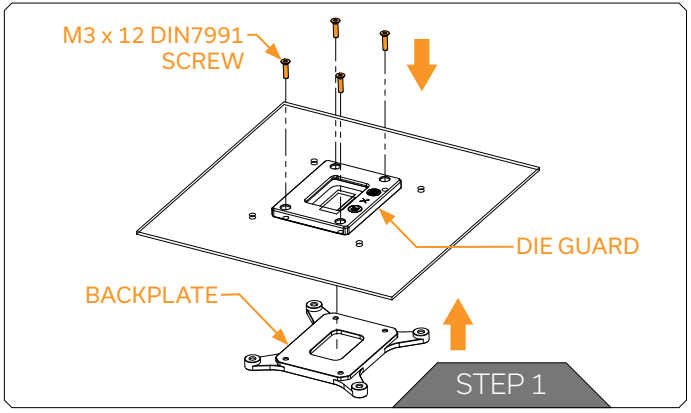
STEP 2
Separate the Die Guard from the Backplate by unscrewing four (4) M3 x 12 DIN7991 Screws. **Save the parts for later use.**

Do not remove the protective stickers!

For this step, you will need:



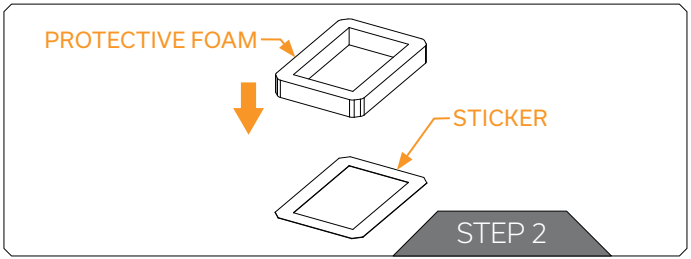
INSTALLING THE DIE GUARD AND APPLYING THE LIQUID METAL (For 12th and 13th gen CPU-s)



STEP 1
Place the Die Guard on the motherboard and align it with the mounting holes. On the back of the motherboard, place the Backplate. Secure the Backplate and Die Guard using M3 x 12 DIN7991 Screws.

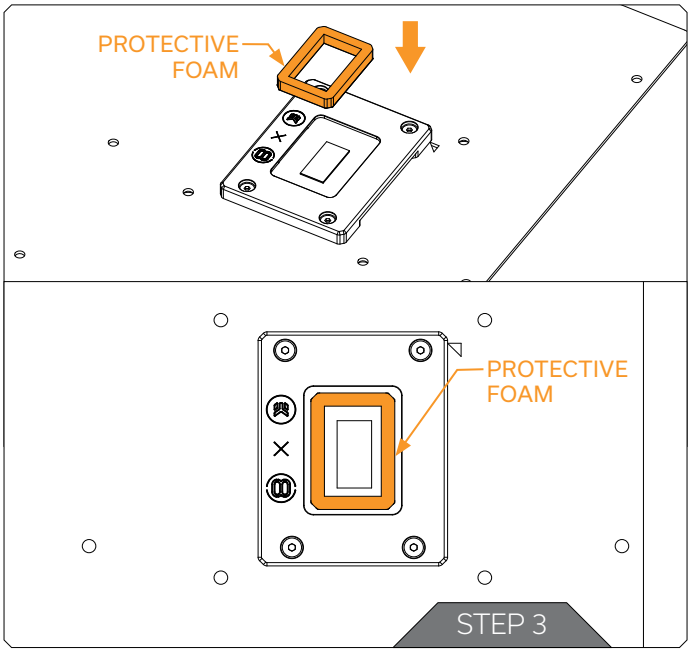
EK recommends using the EK-Loop Torque Screwdriver - 0.6Nm: https://www.ekwb.com/shop/ek-loop-torque-screwdriver-0-6nm

Do not remove the protective sticker from the DIE GUARD.



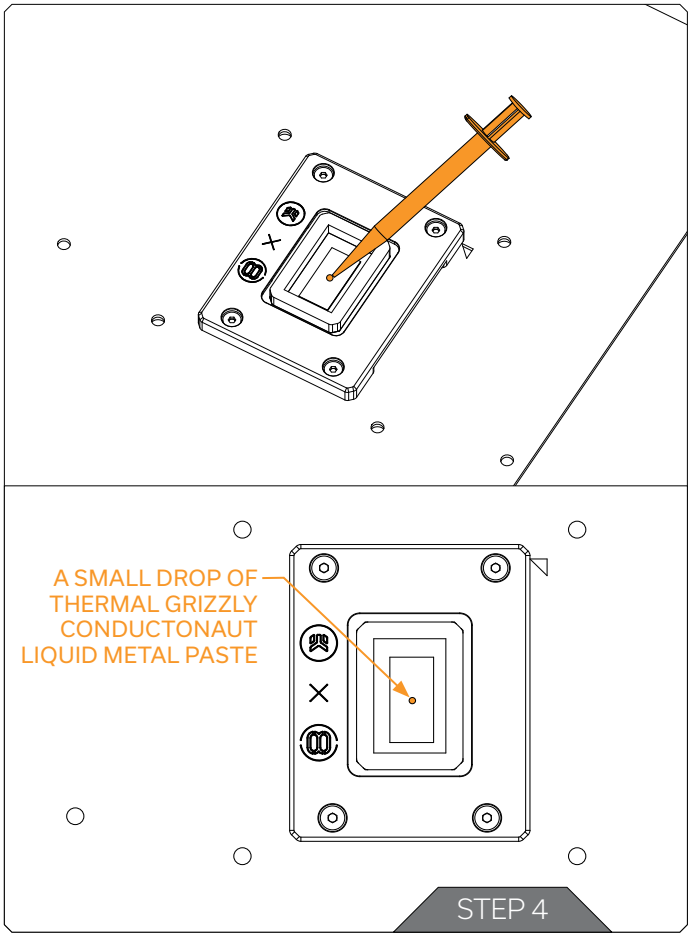
STEP 2
Take the Protective FOAM and glue it to the Protective STICKER on the side of the STICKER with no glue.

Now you can glue the Protective FOAM and STICKER on the CPU.



STEP 3
Put the protective FOAM on the CPU so that it doesn't touch the DIE.

Position the protective FOAM so the DIE is in the center of the protective FOAM.



STEP 4

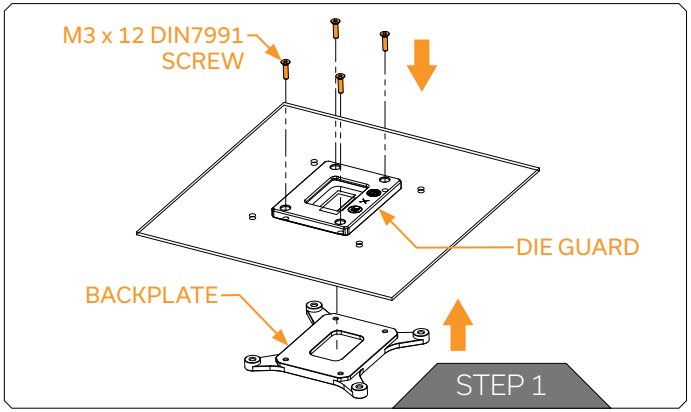
Apply a small drop of Thermal Grizzly Conductonaut liquid metal paste and spread it evenly over the DIE with cotton swabs that are included in the bag. Use the provided needle accessory that is included in the bag. Don't press the syringe too hard!

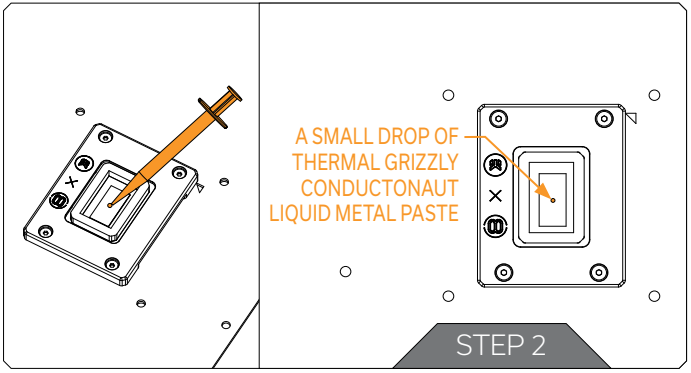
Use the provided needle accessory that is included in the bag. Don't press the syringe too hard!

For more information read the Thermal Grizzly Conductonaut instructions.

In case of over-application of Thermal Grizzly Conductonaut liquid metal, clean the DIE and reapply it. Otherwise, over time, the performance of the water block may deteriorate.

INSTALLING THE DIE GUARD AND APPLYING THE LIQUID METAL (For 14th gen CPU-s)





STEP 1

Place the Die Guard on the motherboard and align it with the mounting holes. On the back of the motherboard, place the Backplate. Secure the Backplate and Die Guard using M3 x 12 DIN7991 Screws.

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

Do not remove the protective sticker from the DIE GUARD.

STEP 2

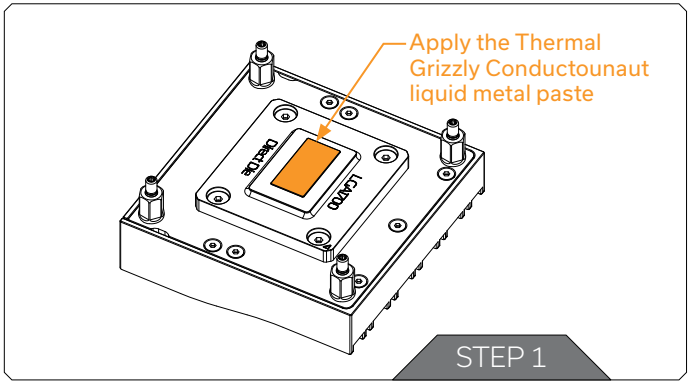
Apply a small drop of Thermal Grizzly Conductonaut liquid metal paste and spread it evenly over the DIE with cotton swabs that are included in the bag. Use the provided needle accessory that is included in the bag. Don't press the syringe too hard!

Use the provided needle accessory that is included in the bag. Don't press the syringe too hard!

For more information read the Thermal Grizzly Conductonaut instructions.

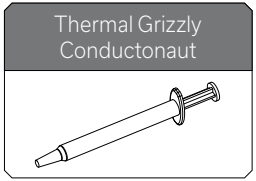
In case of over-application of Thermal Grizzly Conductonaut liquid metal, clean the DIE and reapply it. Otherwise, over time, the performance of the water block may deteriorate.

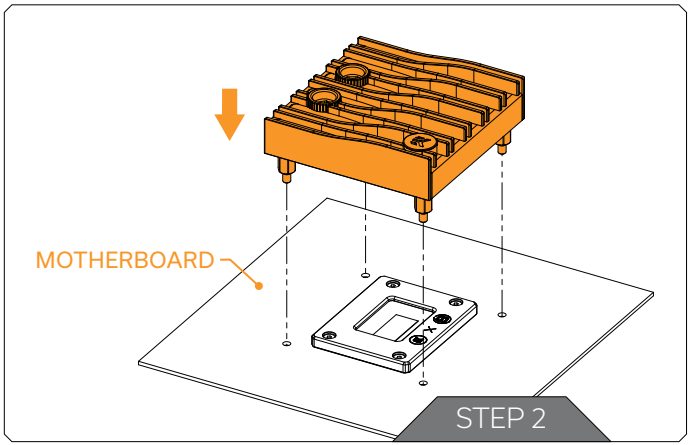
INSTALLING THE CPU WATER BLOCK



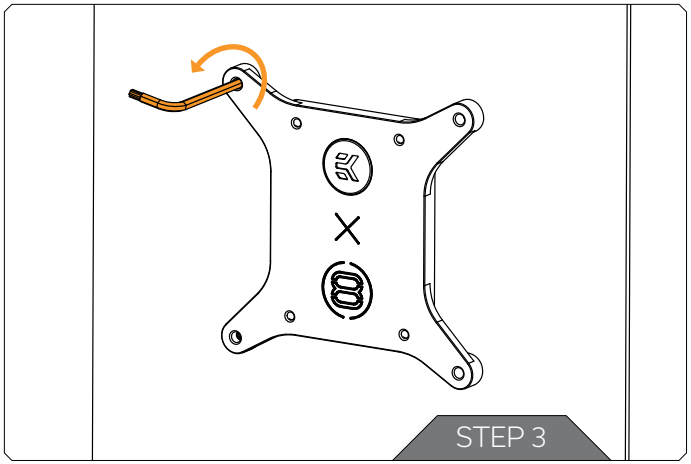
STEP 1
Apply a small drop of Thermal Grizzly Conductonaut liquid metal and spread it on the water block. Spread the liquid metal paste with cotton swabs that are included in the bag.

For this step, you will need:





STEP 2
Position the CPU block onto the motherboard. Make sure to align the mounting holes (as shown in the picture).



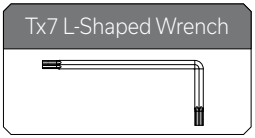
STEP 3

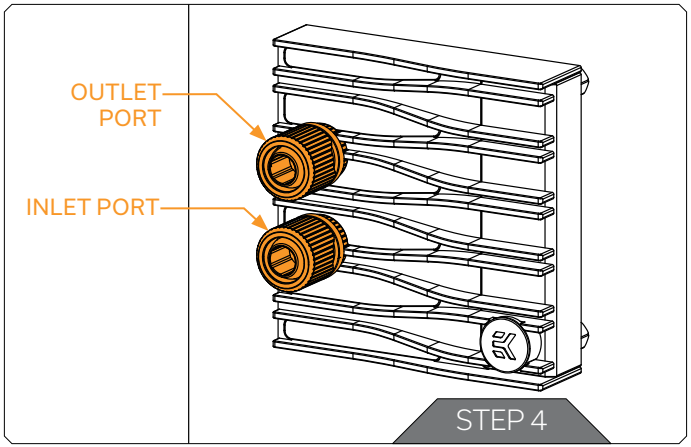
Secure the water block from the backside of the motherboard using the included Tx7 L-shaped wrench.

Tighten the mounting screws in an **anti-clockwise direction.** Start fastening the screws in a cross pattern. Do not tighten fully until all of the screws are partially screwed in.

The Tx7 L-shaped wrench must be used in a standing position! Otherwise, the mounting screws may crack during tightening!

For this step, you will need:





STEP 4

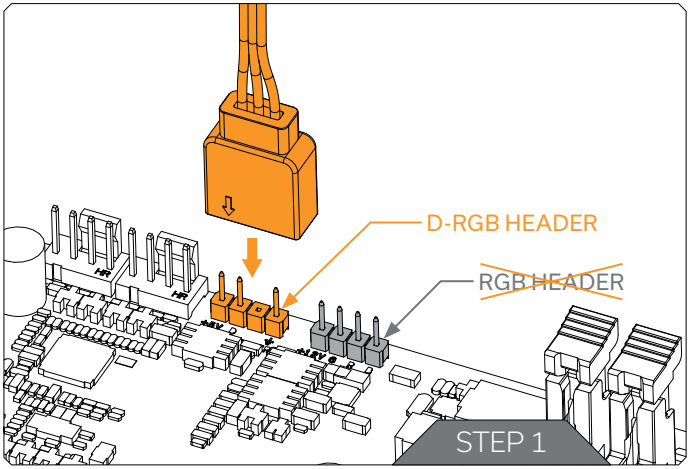
With EK-Velocity^2 series water blocks, it is mandatory to use the bottom port as the INLET.

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.

TESTING THE LOOP

To make sure the installation of EK components was successful, werecommend 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.

CONNECTING THE D-RGB LED STRIP



STEP 1

Plug the 3 Pin connector from the water block's D-RGB LED light to the DRGB HEADER on the motherboard. The LED will work if the pin layout on the header is as follows: +5V, Digital, empty, Ground.

Please ensure that the arrow indicated on the connector is plugged into the +5V line as indicated on your motherboard. If you put the LED Diode to the 12V RGB HEADER you can damage the LEDs. Failure to do so will damage your motherboard or LED strip.

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

EKWaterBlocks

@EKWaterBlocks

ekwaterblocks

EKWBofficial

ekwaterblocks