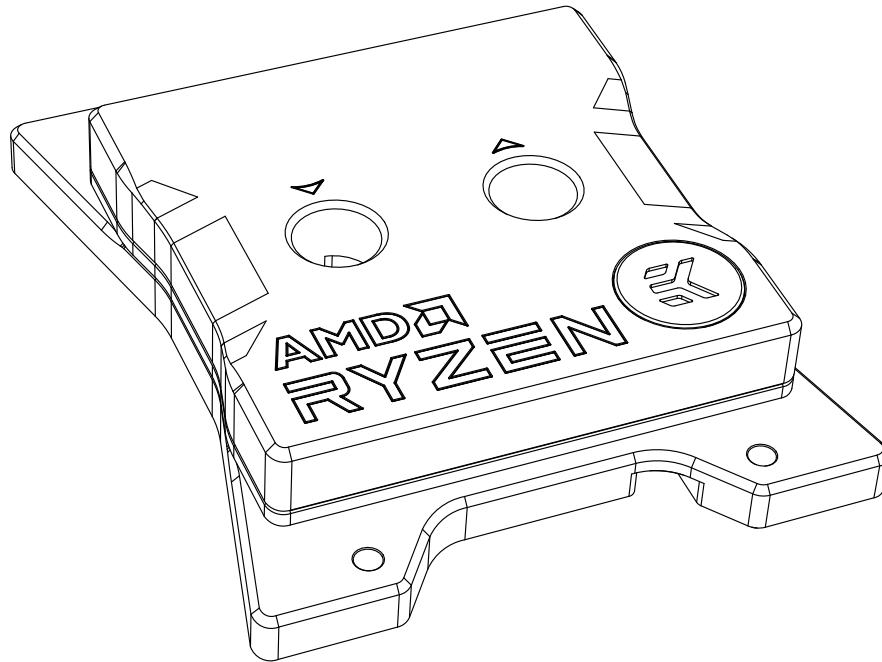# EK-Quantum
Velocity D-RGB - AMD Ryzen Edition

CPU WATER BLOCK

These products are intended for installation by expert users only. 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 all important notices, disclosures and warranty conditions printed on the back of the box.

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

Read the entire manual before you start installation!

Please remove your motherboard from the computer to ensure the safest possible mounting process and to prevent the possibility of damage to your GPU or any printed circuit boards (PCB's).

EK-Quantum Torque fittings require only a small amount of force to screw them firmly in place since the liquid seal is ensured by compression of the rubber O-ring gaskets and not the thread itself.

Only G1/4 fittings with a parallel thread should be used (1/4" BSPP), maximum thread engagement is strictly 5.75mm!

The use of corrosion inhibiting coolants are always recommended for any liquid cooling system.

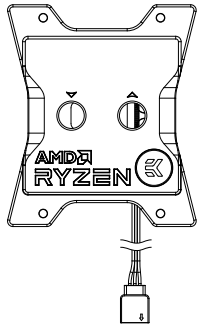**Do not use pure distilled water! For best results EK recommends the use of EK-CryoFuel coolants!**

Make sure to thoroughly bleed air out of your CPU Water Block or you will not achieve optimal performance!
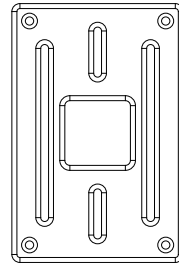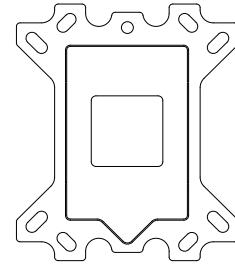
TABLE OF CONTENTS
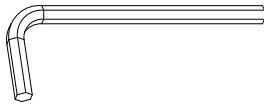
QUICK INSTALLATION GUIDE

BOX CONTENTS

EK-Quantum Velocity D-RGB - AMD Ryzen Edition - CPU Water Block (1)
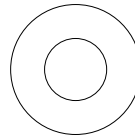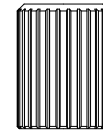
Metal Backplate (1)

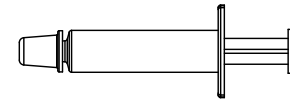Rubber Gasket (1)

Allen Key 2.5mm (1)

M4 x 0.8 PA Washer (4)

Thumb Nut (4)

Standoff (4)

Spring (4)

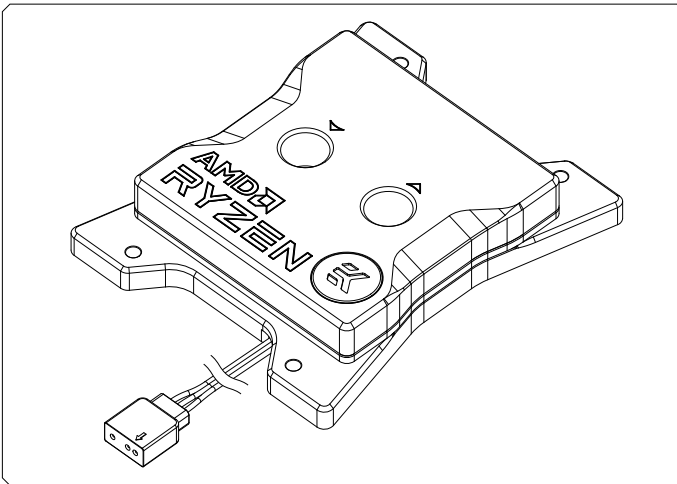Thermal Grease (1)

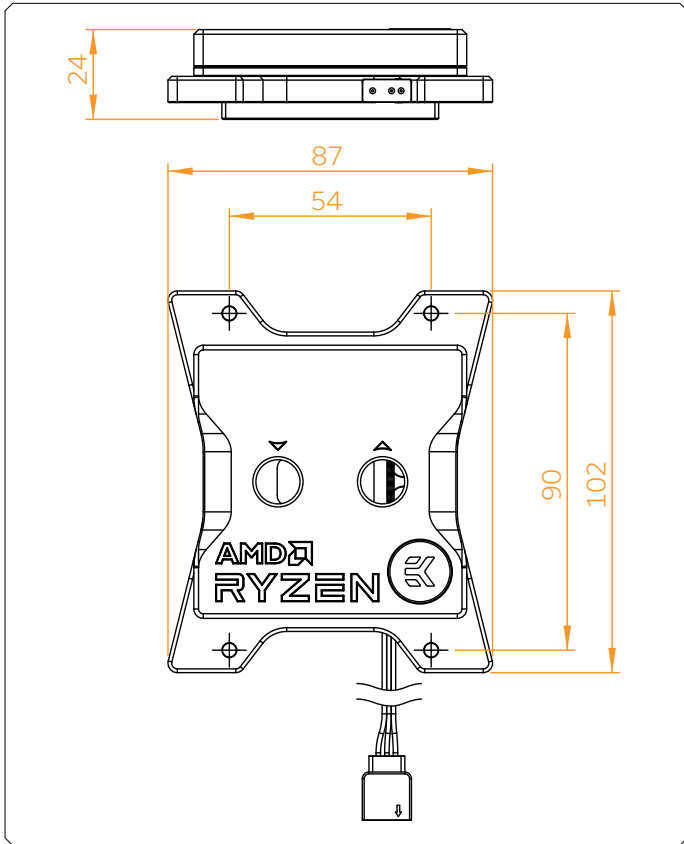# REQUIRED TOOLS

Phillips Head Screwdriver
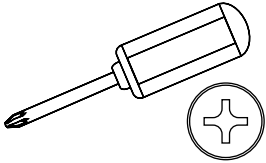
GENERAL INFORMATION ON WATER BLOCK COMPATIBILITY

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

- AMD® socket AMx and FMx

WATER BLOCK DIMENSIONS

TECHNICAL SPECIFICATIONS AND WATER BLOCK PARTS

Technical Specifications:
- Dimensions (LxHxW): 102 x 87 x 24 mm
- D-RGB (Adressable RGB) Cable Length: 300 mm
- D-RGB LED Count: 20
- D-RGB Connector: Standard 3-Pin (+5V, Data, Blocked, Ground)

Position	EAN	Description	Quantity
1	100669	COLDPLATE	1
2	9028	SCREW M4x14 DIN7991	4
3	100728	SEALING GASKET	1
4	100673	D-RGB LEDs PCB	1
5	100663	EK-BADGE	1
6	103036	MOUNTING BRACKET	1
7	103037	JET PLATE	1
8	103038	LED COVER	1
9	103039	TOP PLATE	1
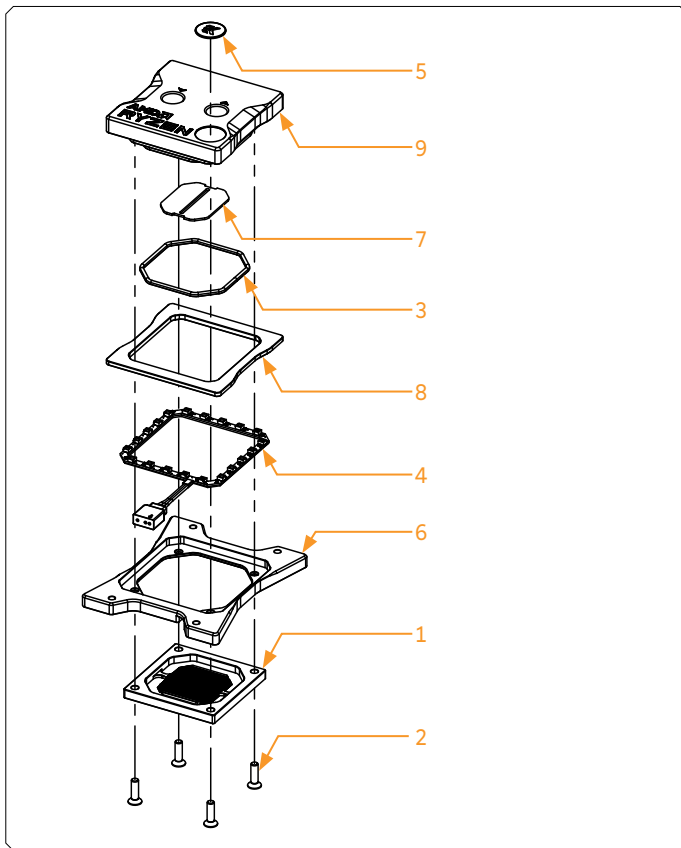
INSTALLING THE WATER BLOCK

UNC 6-32 SCREWS

HOLD-DOWN CLAMPS

AMD® FACTORY BACKPLATE
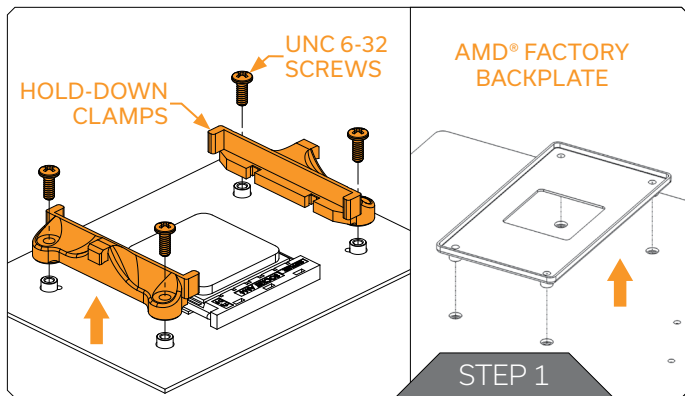
STEP 1

AMx AND FMx SOCKET MOTHERBOARDS
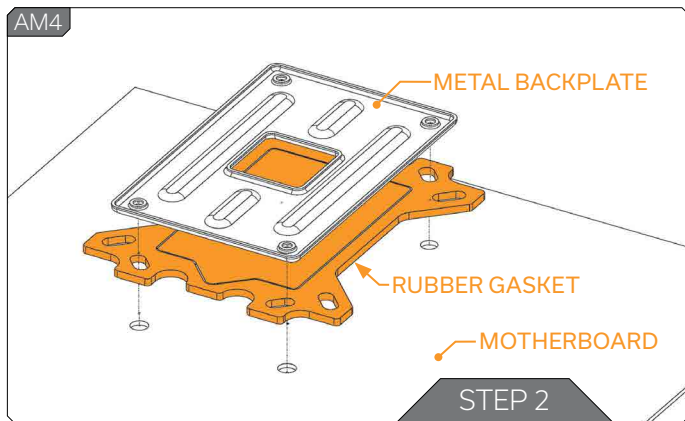
STEP 1

Use a Philips head screwdriver to remove four (4) UNC 6-32 screws securing the plastic hold-down clamps to the motherboard. Remove the clamps and the original motherboard backplate, and store them away. See the illustration to identify those parts.

AM4

METAL BACKPLATE

RUBBER GASKET

MOTHERBOARD

STEP 2

STEP 2

Turn your motherboard face down and position the Rubber Gasket and Backplate directly in line with the mounting holes. The ribbed side of the backplate should be turned face up! Once aligned, carefully rotate the motherboard assembly while holding the backplate in position with the other hand.
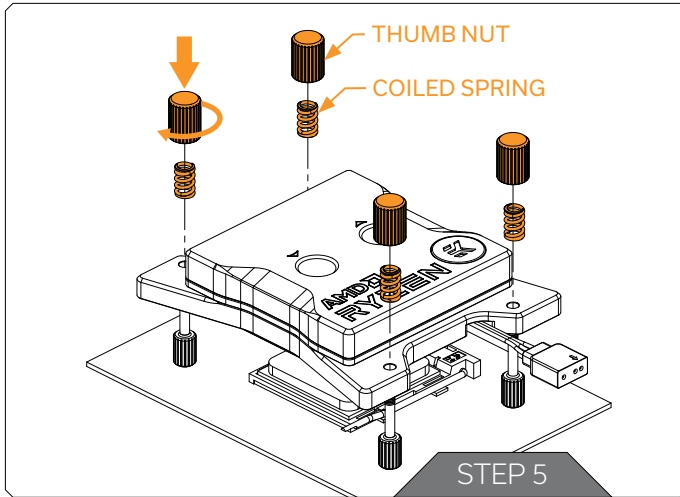
STANDOFF
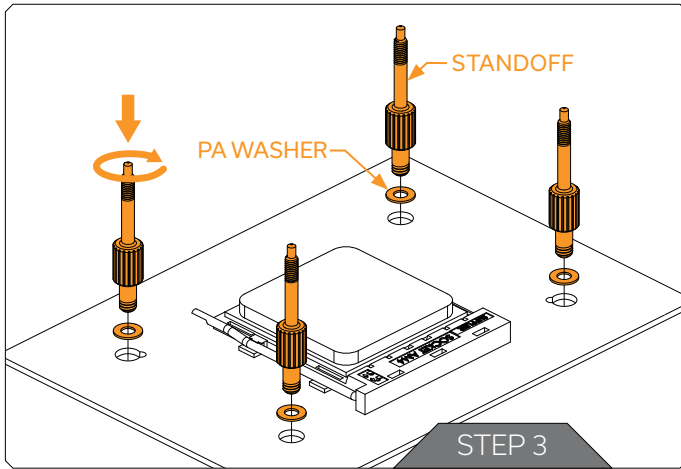
PA WASHER

STEP 3

STEP 3

Loosely install all four standoffs and plastic washers before proceeding to tighten them completely. It is mandatory to install plastic washers as they prevent damage to the motherboard PCB. Using pliers or similar tools is not recommended.

Non-abrasive cloth

IHS
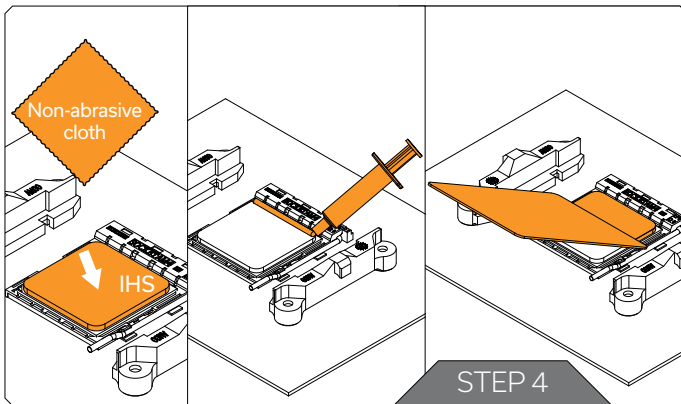
STEP 4

STEP 4

Wipe the IHS clean using a non-abrasive cloth or Q-tip, as shown in the image. Once it's clean, apply a line of Thermal Compound to one edge of the IHS and use a plastic card or something similar to spread it evenly. The layer of Thermal Compound must be thin and even in thickness over the entire surface of the IHS. The excessive or uneven application will lead to poor performance!

THUMB NUT
COILED SPRING

STEP 5

STEP 5

Remove the protective sticker and position the CPU water block onto the standoffs. Place the springs and thumb nuts over each standoff before tightening them two revolutions at once, in a cross pattern. Do not tighten them fully until all of them are partially screwed in.

FITTING RING
FITTING BARB
INLET PORT
OUTLET PORT
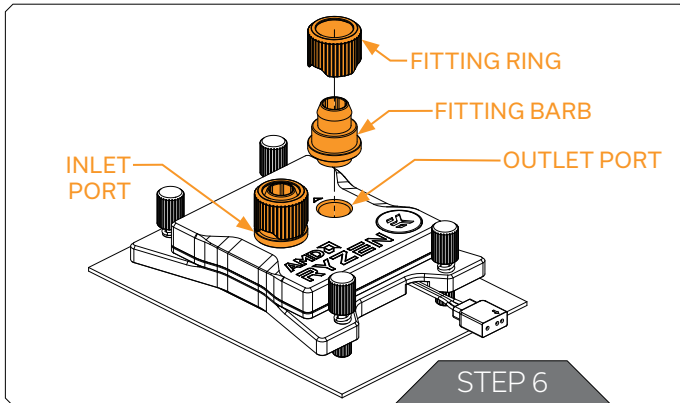
STEP 6

STEP 6

Tighten the fitting barbs in a clockwise direction until the O-ring underneath is compressed.

CONNECTING THE D-RGB LED STRIP


D-RGB HEADER
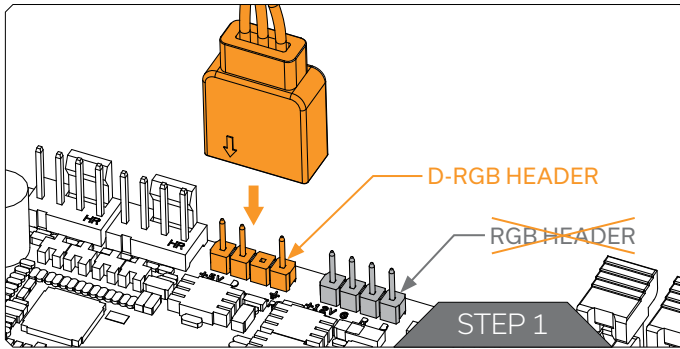
RGB HEADER

STEP 1

STEP 1
Plug the 3-pin D-RGB connector from your CPU water block to the D-RGB header on your motherboard or controller. The LED strip will work only if the pin layout on the header is as follows: **+5V, Data, Empty, Ground**.

⚠ Incorrect installation or installation to the incorrect header may result in damage to the LED strip or the header itself!

REPLACING THE D-RGB LEDs

SCREW M4x14 DIN 7991

D-RGB LEDs PCB

JET PLATE

SEALING GASKET
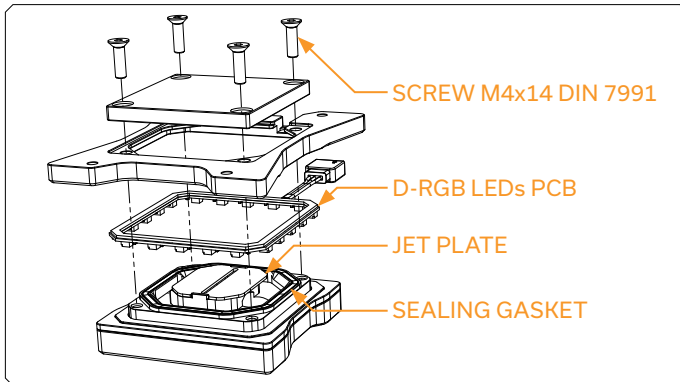
Use the Allen key to unscrew four (4) M4 x 14 screws from the bottom of the water block.

Carefully disassemble the block and replace the LED's PCB unit.

Make sure the Jet plate and the O-ring are well aligned when you put everything back together.

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

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