Dear EKWB customer - Congratulations!

We would like to congratulate you on choosing EK liquid cooling KIT. You have chosen liquid cooling KIT which performance tops the market compared to other similar size products.

EK liquid cooling kit will make your computer **cooler, quieter** and possibly **faster** if you decide to overclock it.

Before installing make sure you check compatibilities of your hardware at **www.coolingconfigurator.com**.

Please check at **www.ekwb.com/shop/kits-cases.html** for updated manuals (also in other languages).

RMA Statement:

This product is intended to be installed 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 prior notice. Please visit our web site at www.ekwaterblocks.com for updates or contact our support.

VERY IMPORTANT NOTICE AND DISCLAIMERS:
While all efforts have been made to provide the most comprehensive installation tutorial possible, EKWB assumes no liability expressed or implied for any consequential damage(s) occurring to your equipment as a result of using EKWB cooling products, either due to errors or omissions on our part in the enclosed instructions, or due to failure or defect in the EKWB cooling products.

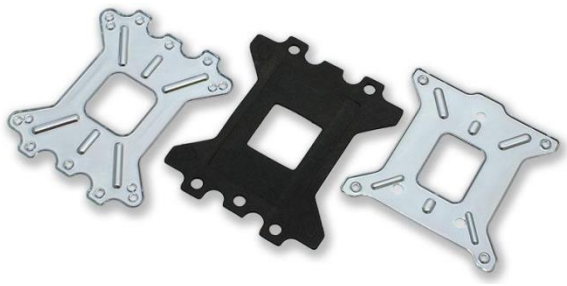
WARRANTY:
Our products are warranted against defects in materials or Workmanship, for a period of 24 months beginning from the date of delivery to the end user. During this period, products will be repaired or have parts replaced at our discretion provided that:
1. the product is returned to the agent from whom it was purchased;
2. the product has been purchased by an end user and has not used for commercial purposes;
3. the product has not been misused, handled carelessly, or used in a manner other than in accordance with the instructions provided of which-describe the proper installation of our product.
This warranty does not confer rights other than those expressly set out above and does not cover any claims for consequential loss or damage. This warranty is offered as an extra benefit and does not affect your statutory rights as a consumer. This warranty is voided if the product comes in contact with aggressive additives or any kind of alcohol or alcoholic derivate that have rendered the products useless.

OTHER INSTRUCTIONS:
Please note that EKWB holds no responsibility of any kind if assembly is not made by instructions. This applies also for all products that are not listed as compatible on web page. Users must by all means also consider instructions that are being made for proper use of pump and other water cooling components provided by manufacturer(s). HINT: Never let your pump dry running. If that happens for prolonged period of time you risk destroying pump's bearing and rendering pump useless.

TABLE OF CONTENTS/INSTALLATION STEPS:

EK strongly suggest the following installation steps. Failure to comply may result in leaks and damaged components.

ENCLOSED EQUIPEMENT

					
EN	Box	EN	CPU Water Block with AMD plate	EN	CPU Backplate mechanism
					
EN	Thermal compound - grease	EN	Radiator	EN	Fans
					
EN	Pump/reservoir combo	EN	Pump/reservoir holders	EN	Compression fittings
					
EN	CPU mounting mechanism	EN	Coolant	EN	Tube
					
EN	4 Fan PWM cable splitter	EN	ATX Bridging Plug	EN	3 Fan cable Y-splitter

REQUIRED TOOLS / BENÖTIGES WERKZEUG

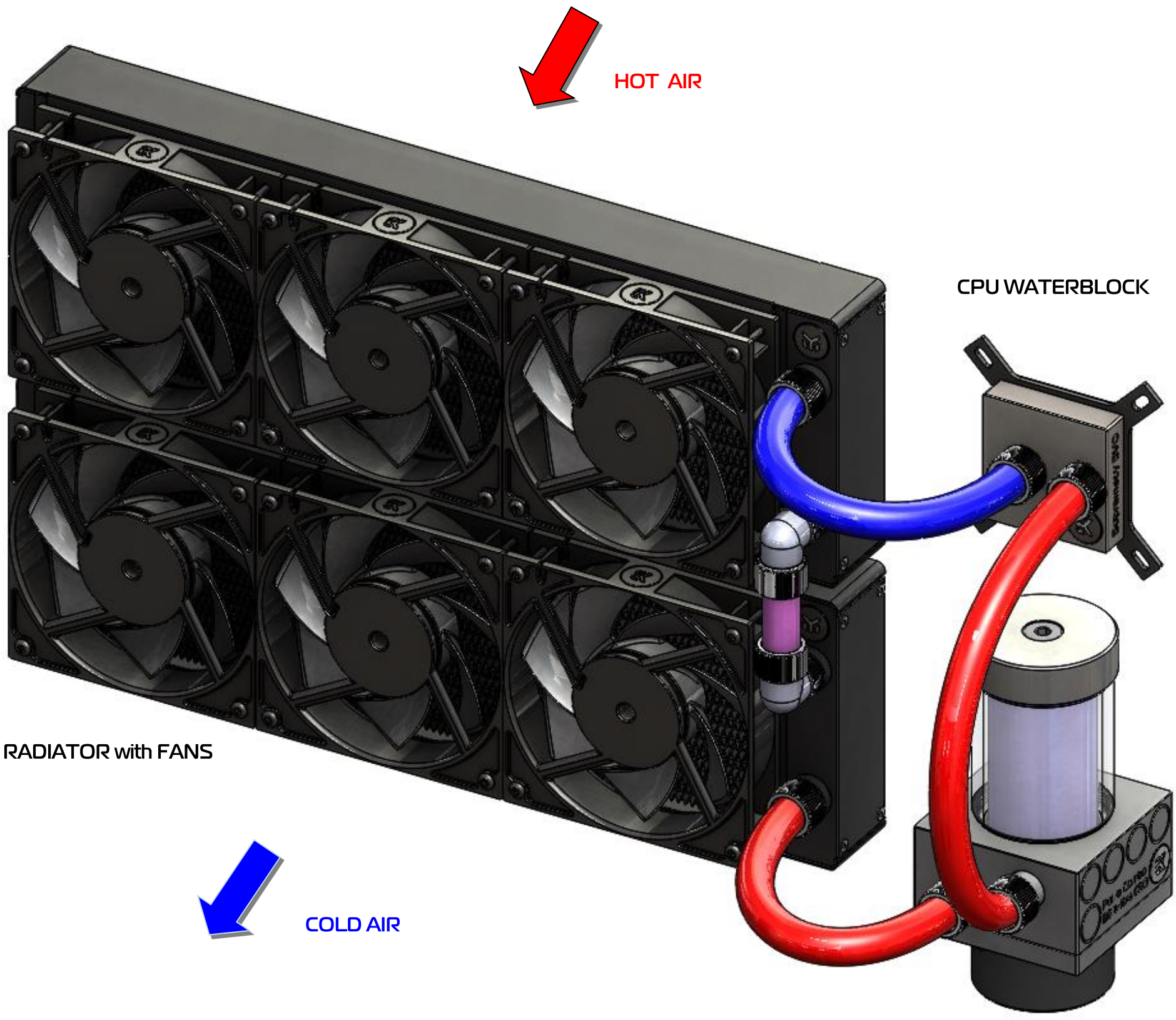
			
EN	1L bottle of distilled water	EN	Needed hardware for installation

THINGS YOU HAVE TO KNOW BEFORE INSTALLING WATER COOLING KIT

WATER COOLING SYSTEM

1. In order to lower shipping costs we have decided to enclose only the coolant concentrate for liquid cooling. Therefor you need to provide 1 litre (1L) of distilled water. You can get it at every gas station or supermarket.
2. Never run your water cooling KIT solely on tap water!
3. Never use alcohol, alcohol derivatives or alcohol based solvents in the system. Using alcohol might result in permanent damage to water cooling KIT components, especially acrylic parts of the system.
4. Reservoir must be positioned above the height level of the water pump in order for liquid to flood the pump which is crucial for the first start-up.
5. Generally, for optimal performance, the Reservoir must be positioned before the pump in the water loop.
6. Generally, for optimal performance, the CPU water block should be right after the Radiator in the water loop.
7. Generally, for optimal performance, the Pump should be positioned before the Radiator in the water loop.
8. Never run your computer for the first time before 24 hour leak test.
9. If you spot any leaks, turn off the power immediately!
10. Optimize tubing length in order to prevent excessive bending and kinking of the tubing.
11. Never let your pump run dry. If this is happening for a prolonged period of time you may risk destroying water pump's bearing, rendering the pump useless.
12. You are encouraged to periodically clean the radiator assembly as it will collect dust over time. This is best done with soft wide tip brush and vacuum cleaner.

WATER COOLING SYSTEM

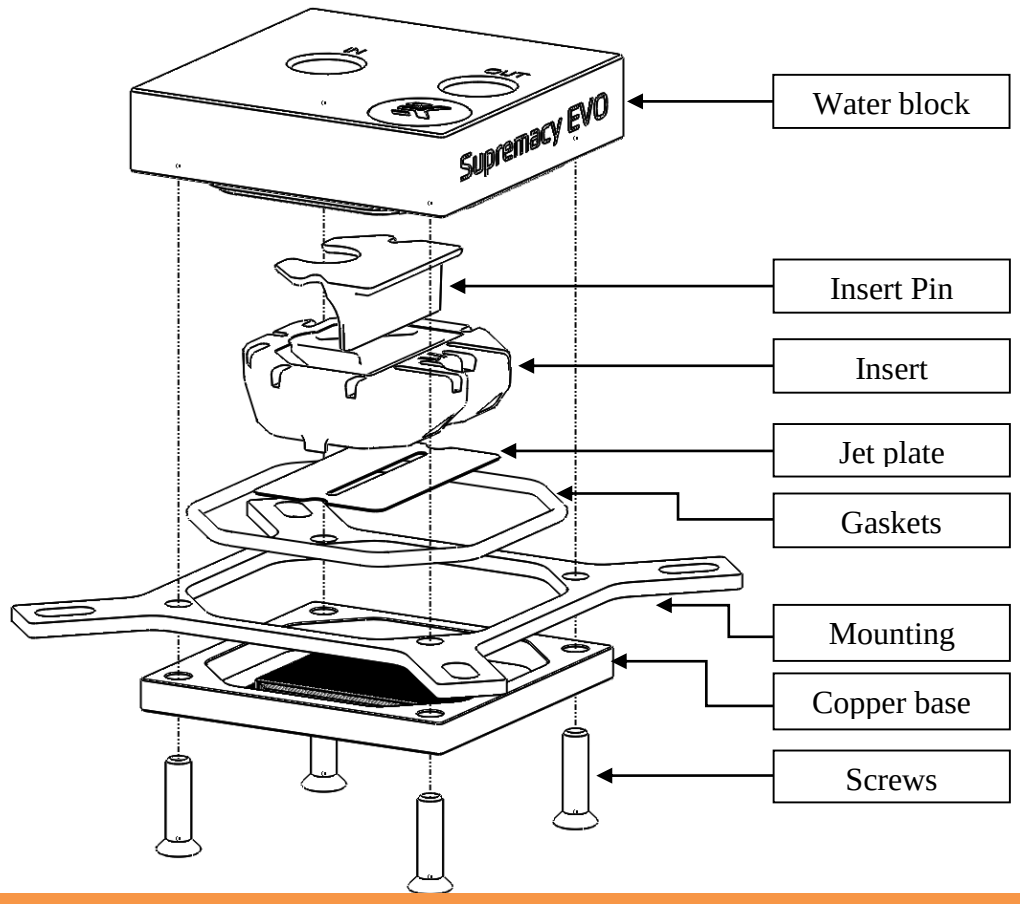


1. PREPARING AND INSTALLING THE CPU WATER BLOCK

STEP 1: GENERAL INFORMATION ON PRODUCT

Congratulations on your purchase of EK-Supremacy EVO universal CPU water block. This water block is pre-assembled for use with modern Intel desktop socket type motherboards. By default this water block supports the following CPU sockets:

- Intel socket LGA-775, LGA-115x, LGA-1366 and LGA-2011
- AMD socket S754/939/940, AMD AMx and FM1



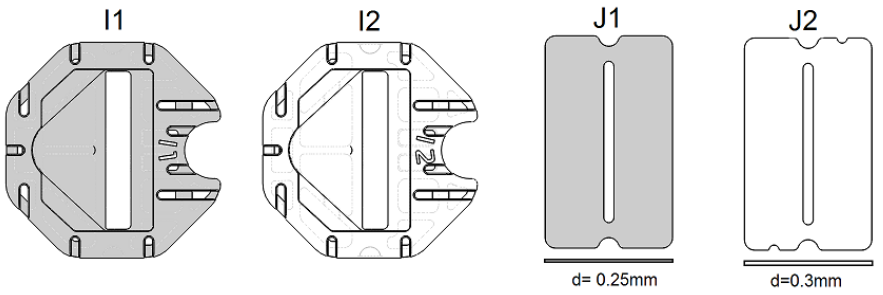
STEP 2: TABLE OF CONTENT

The following items are enclosed with each EK-Supremacy EVO water block:

- EK-Supremacy EVO universal CPU water block /w pre-installed Insert I1 and Jet J1 (0.25mm)
  (all around great performer)
- *PreciseMount EVO* universal CPU mounting mechanism:
  - M4 threaded thumb screws (4 pcs)
  - LGA-2011 M4 threaded mounting studs (4 pcs)
  - Springs (4 pcs)
  - M4 threaded thumb nuts (4 pcs)
  - Washers (4 pcs)
- AMD mounting plate
- EK-Supremacy Backplate
  - Backplate rubber gasket
  - Backplate for Intel LGA-1366 and AMD socket motherboards
  - Backplate for Intel LGA-115x socket motherboards
- Allen (hex) key 2.5mm
- Additional Inserts and Jet plates:
  - Jet J1 (0.3mm thick)
  - Insert I2

Optimal configuration:

Socket	Optimal Insert	Optimal Jet
AMD AMx / FMx	I2	J2
LGA-775	I1	J2
LGA-115x	I1	J2
LGA-1366	I1	J1
LGA-2011	I1	J1



STEP 3.1 (optional): INSTALLING AMD MOUNTING PLATE AND REPLACING JET PLATE / INSERT PROCEDURE

1) Place water block on an even surface and remove the four M4x16 DIN7991 screws attaching the top to the copper base using the enclosed 2.5mm Allen key.

2) Replacing mounting plate:

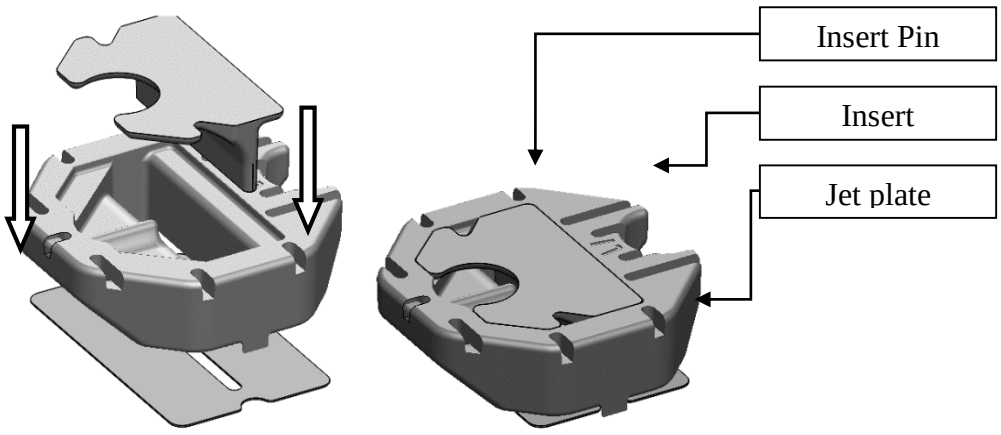
2.1) Replace the Intel mounting plate with AMD one. You will feel the mounting plate locking into the position when placed correctly on to the top.
2.2) Reseat the larger o-ring gasket (57x2 mm) into the gap between the mounting plate and water block top.

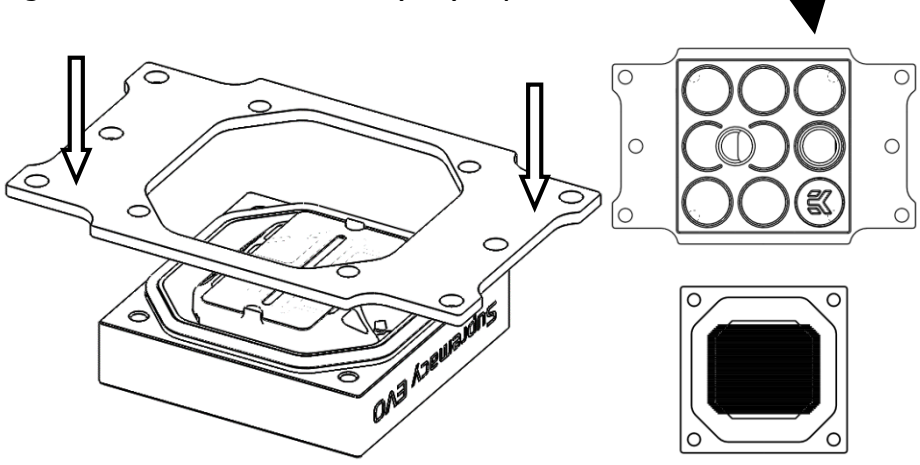
3) Replacing jet plate (OPTIONAL):

3.1) Remove the default Jet J1 (0.25mm thick) and replace it with Jet J2 (0.30mm), depending on your CPU platform. You will feel the jet plate locking into the position when placed correctly to the water block Insert.

4) Replacing insert (OPTIONAL):

4.1) Remove the default Insert I1 and replace it with Insert I2, depending on your CPU platform. It is mandatory to install the Insert Pin and Insert in correct way, there is only one way to install it. You will feel the Insert assembly locking into the position when placed correctly to the water block.
5) Carefully place copper base to waterblock top assembly, make sure gaskets stay in place! **Beware of copper base orientation!**
6) Repeat step #5 if necassery. Screw in all four (4) M4x16 DIN7991 screws using the enclosed 2.5mm Allen (hex) key.



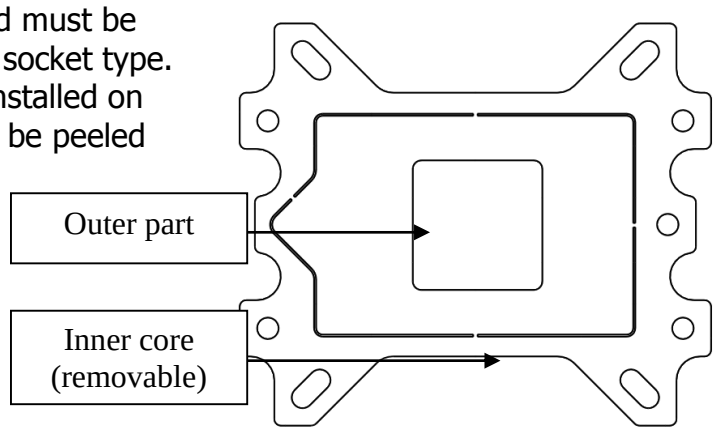


STEP 4: PREPARING BACKPLATE RUBBER GASKET (FOR INTEL LGA-2011 SKIP THIS STEP)

The enclosed rubber gasket is essential part of the backplate and mounting system and must be used every time you install this water block on any motherboard apart from LGA-2011 socket type. The rubber backplate has a partially cut inner part which needs to be removed when installed on Intel LGA-115x and LGA-1366 motherboard. The rubber is held on four places and can be peeled away with hand. These two pieces can be reassembled later if needed.

Intel LGA-115x and LGA-1366 socket:
Remove the inner core of the rubber and use the outer part only.

AMD sockets:
Use the whole rubber backplate including the inner core.



STEP 5: INSTALLING THE WATER BLOCK:

STEP 5a: Intel LGA-775/1366 and AMD socket motherboard:

1) Place motherboard on an even surface with front facing down.
2) Install backplate rubber gasket - depending on your CPU platform *(see STEP 4)* - and place metal backplate for Intel LGA-1366 and AMD socket to the back of your motherboard **RIBBED SIDE UP!** Align the holes on the motherboard with holes on rubber gasket and backplate.
3) Carefully rotate motherboard assembly with front side facing up with one hand while holding the backplate and rubber in place with the other hand.
4) Install the rest of mounting system as per installation manual *(see STEP 6)*

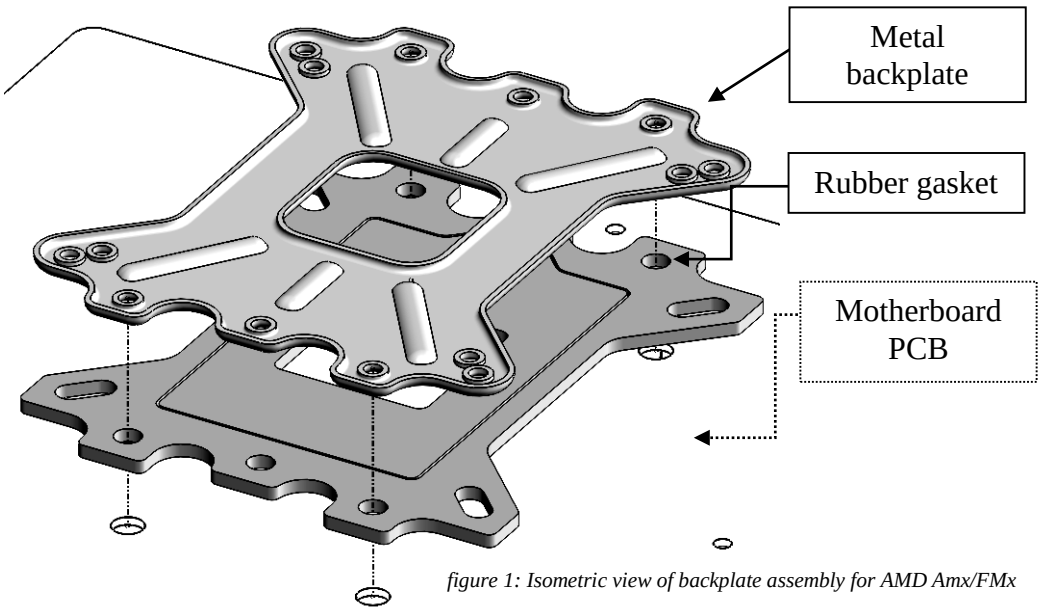
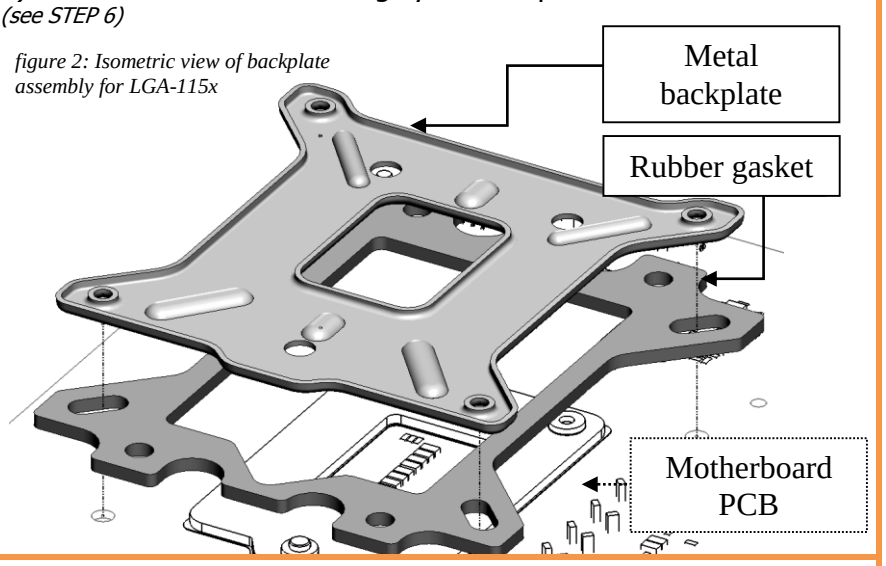


figure 1: Isometric view of backplate assembly for AMD Amx/FMx

STEP 5b: Intel LGA-115x socket motherboard:

1) Place motherboard on an even surface with front facing down.
2) Install backplate rubber gasket depending on your CPU platform *(see STEP 4)* - and place metal backplate for Intel LGA-115x socket to the back of your motherboard **RIBBED SIDE UP!** Align the holes on the motherboard with holes on rubber gasket and backplate. **Make sure to orientate the rubber gasket to fit past the CPU socket ILM backplate.**
3) Carefully rotate motherboard assembly with front side facing up with one hand while holding the backplate and rubber in place with the other hand.
4) Install the rest of mounting system as per installation manual *(see STEP 6)*

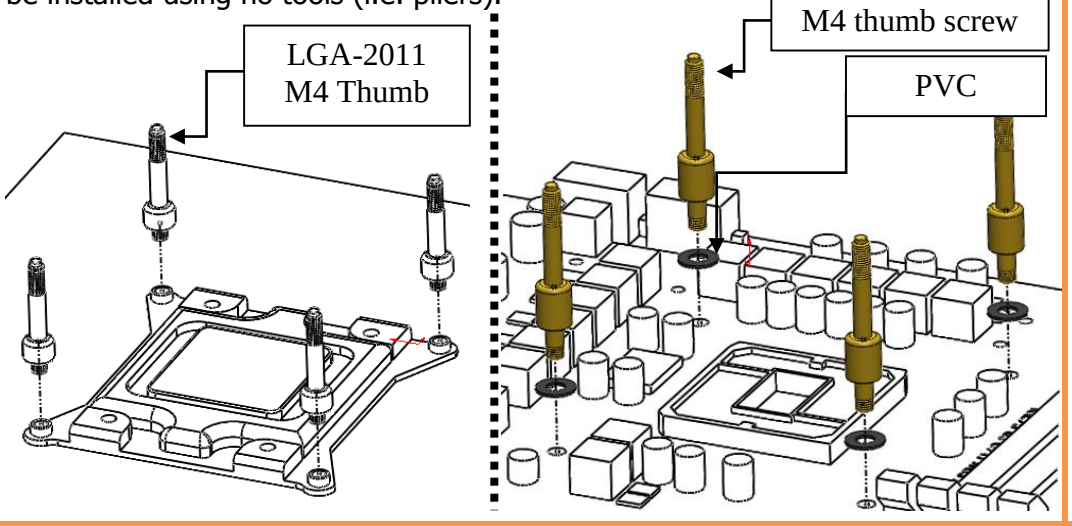
figure 2: Isometric view of backplate assembly for LGA-115x



STEP 5c: Installing the mounting system:

Intel Socket LGA-775/115x/1366 and AMD sockets:
Install the M4 thumb screws of the PreciseMount mounting system onto your motherboard. It is mandatory to put 0.7mm plastic washer underneath each of the M4 thumb screws. Tighten the M4 thumb screw to the metal backplate with your hands until you reach the end of the thread. Using tools (such as pliers) is not recommended!

Intel Socket LGA-2011:
Install four (4) specific LGA-2011 M4 thumb screws into four M4 threaded stubs on the LGA-2011 socket integrated latch mechanism (ILM). The screws are to be installed using no tools (i.e. pliers).



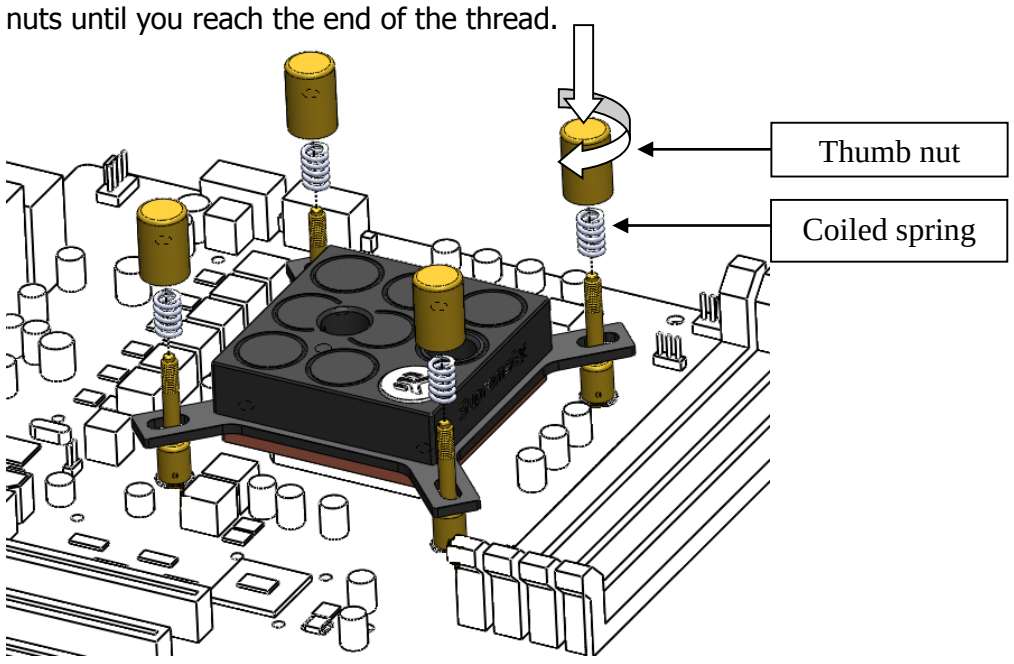
STEP 5d: Preparing your CPU and applying TIM:

Cleaning the CPU: Once mounting mechanism is attached install the CPU into the socket. Wipe the CPU's contact surface (by using non–abrasive cloth or *Q-tip*, as shown on sample photo).

Applying thermal compound: EK recommends blob or line method of applying the enclosed Gelid GC-Extreme™ thermal compound to the CPU heatspreader (IHS) - see sample photo on right. The quantity of about two rice grains is just about right. There is no need to cover the whole IHS. Applying too much thermal grease will have negative impact on the cooling performance!

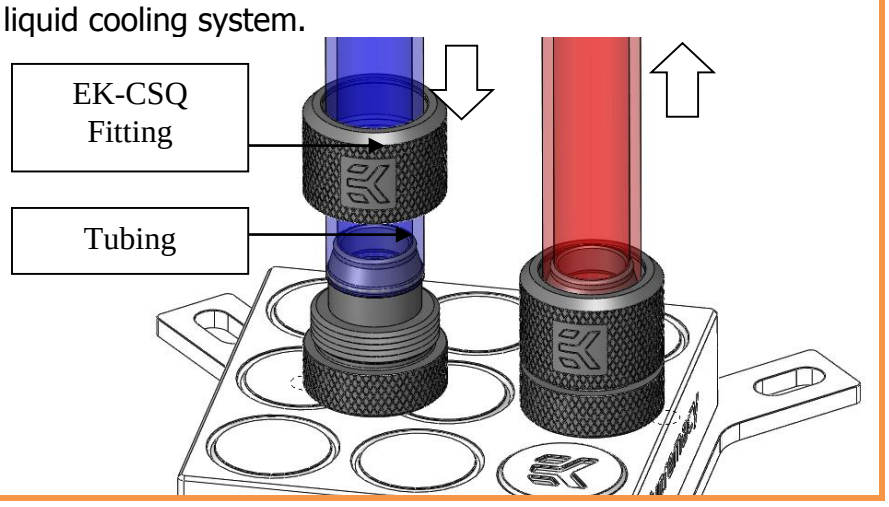
STEP 5e: Fastening the waterblock:

Install the waterblock on your CPU. Place an enclosed compression spring and thumb nut over each M4 thumb screw. Start fastening two thumb nuts at a time, preferably in cross pattern and do not tighten them fully until all of them are partially screwed in. Then - using your fingers only - screw in all four thumb nuts until you reach the end of the thread.

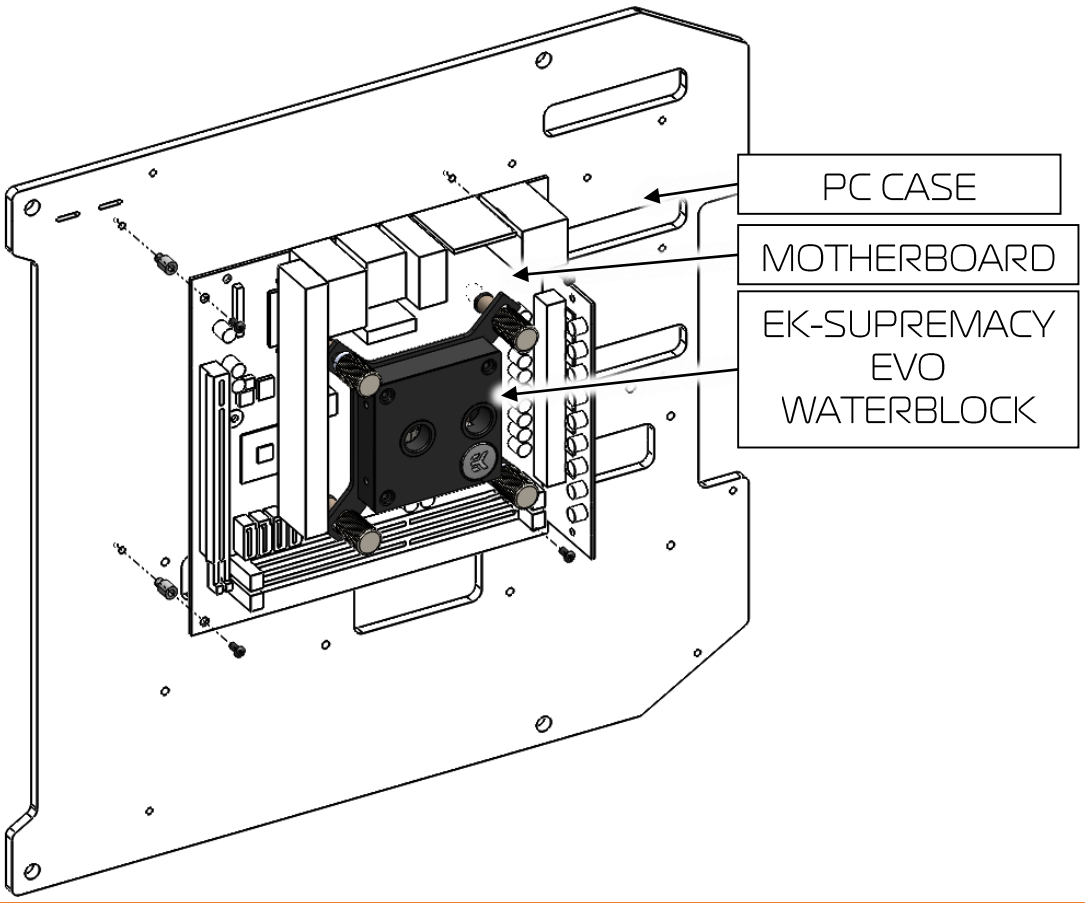


STEP 6: CONNECTING WATER BLOCK TO THE COOLING CIRCUIT

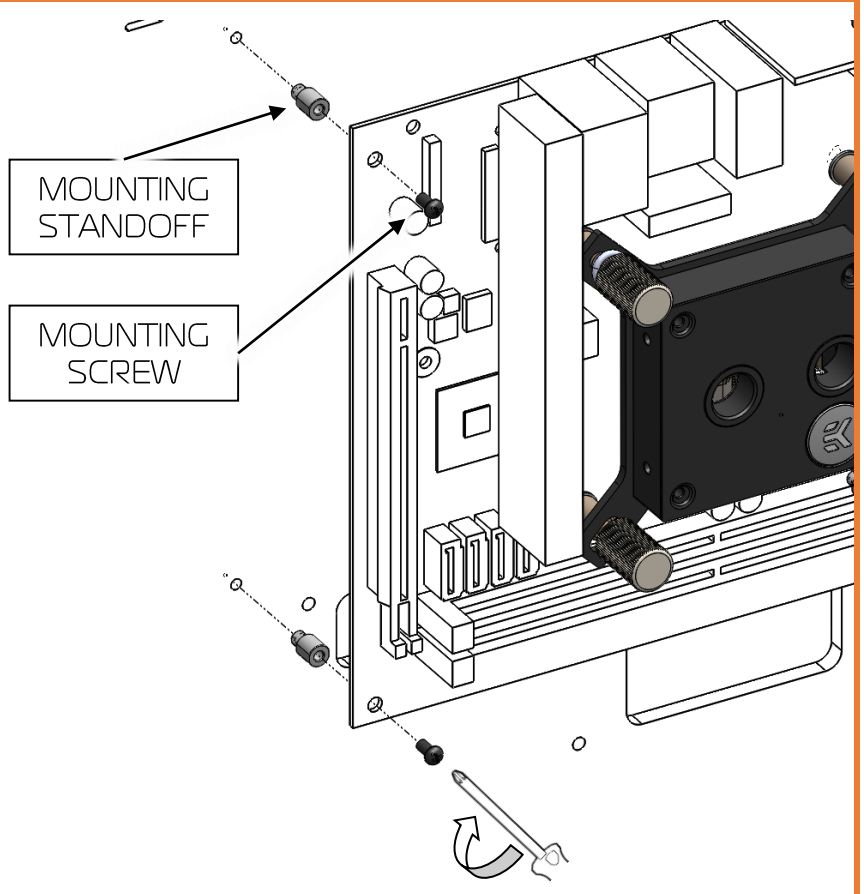
Carefully identify the direction of the flow in your circuit. For the EK-Supremacy series water block to operate properly the G1/4 port nearest to the center of the water block **MUST BE USED AS THE INLET PORT**. EK recommends the use of EK-CSQ Fittings. When using fittings other than EK-CSQ series please 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.



2. PREPARING YOUR COMPUTER CHASSIS

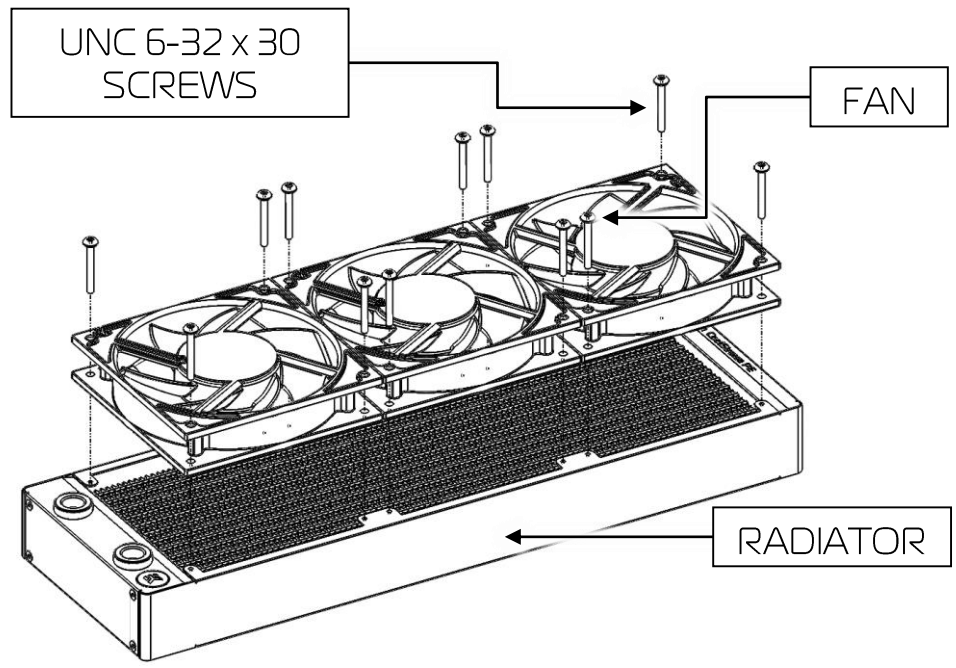


Take the PC case and install the necessary spacers and install the motherboard.

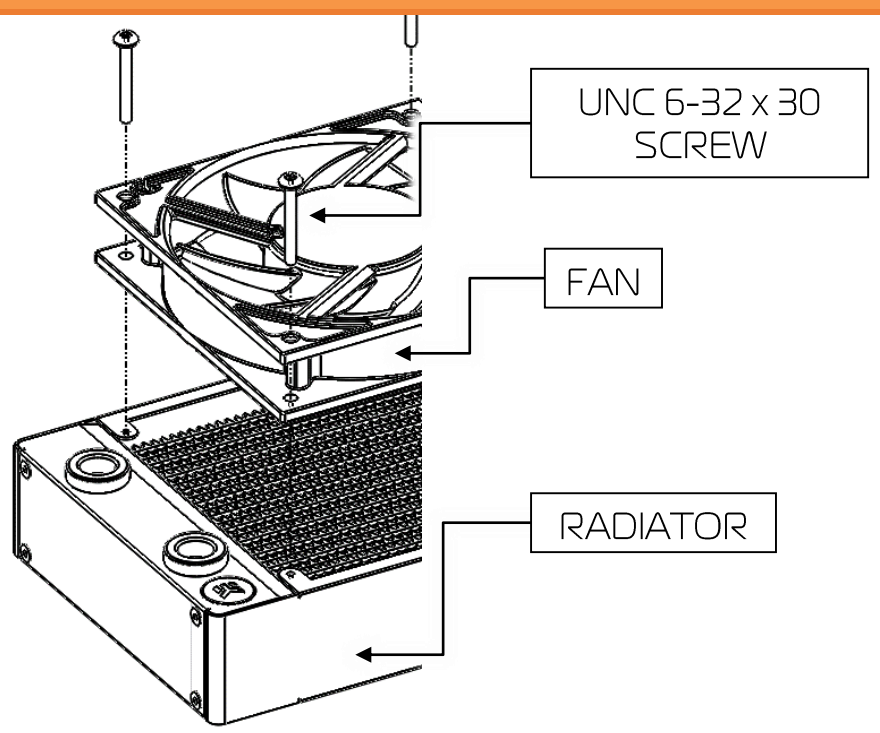


Secure the motherboard by screwing in motherboard mounting screws (provided with your Motherboard)

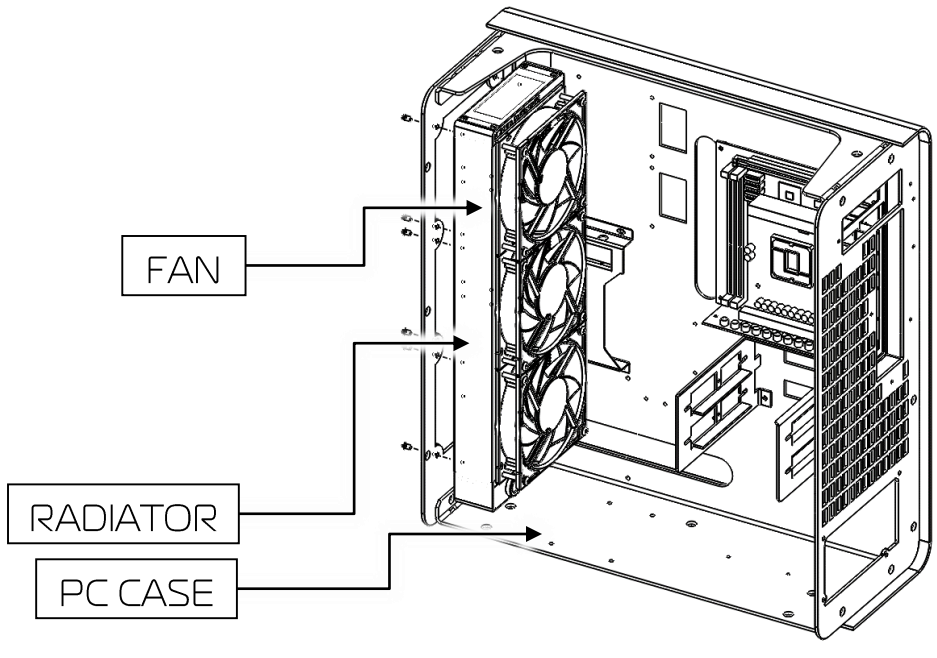
3. INSTALLING THE RADIATOR WITH FANS



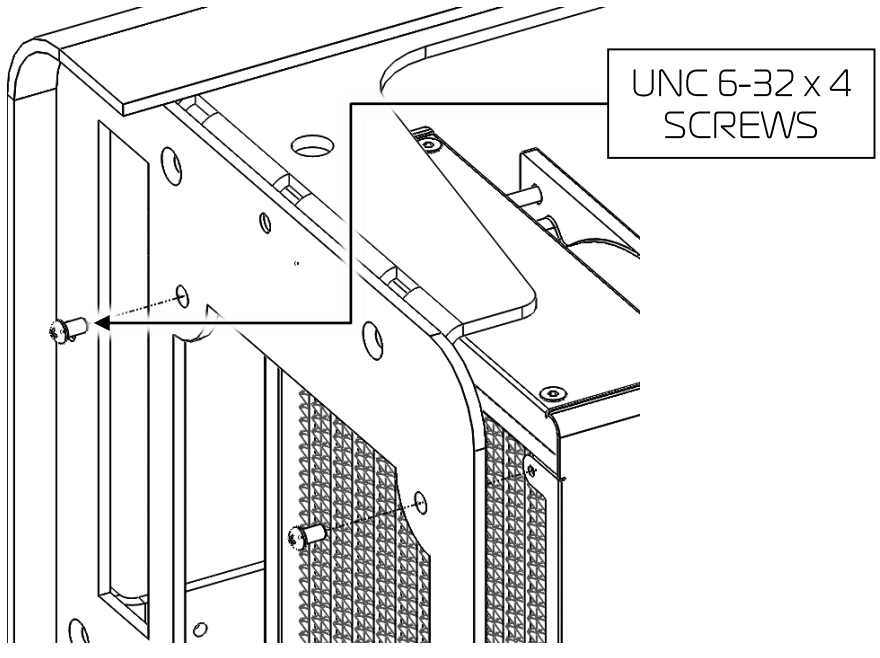
Take the fans and put it on the radiator. Ideally, radiator should receive the coldest air possible. It is recommended to use pull mode as it yields in higher performance.



Take the four UNC 6-32 x 30 screws for each fan and screw them in. Use enclosed 2mm allen key to tighten the screws in clockwise direction.

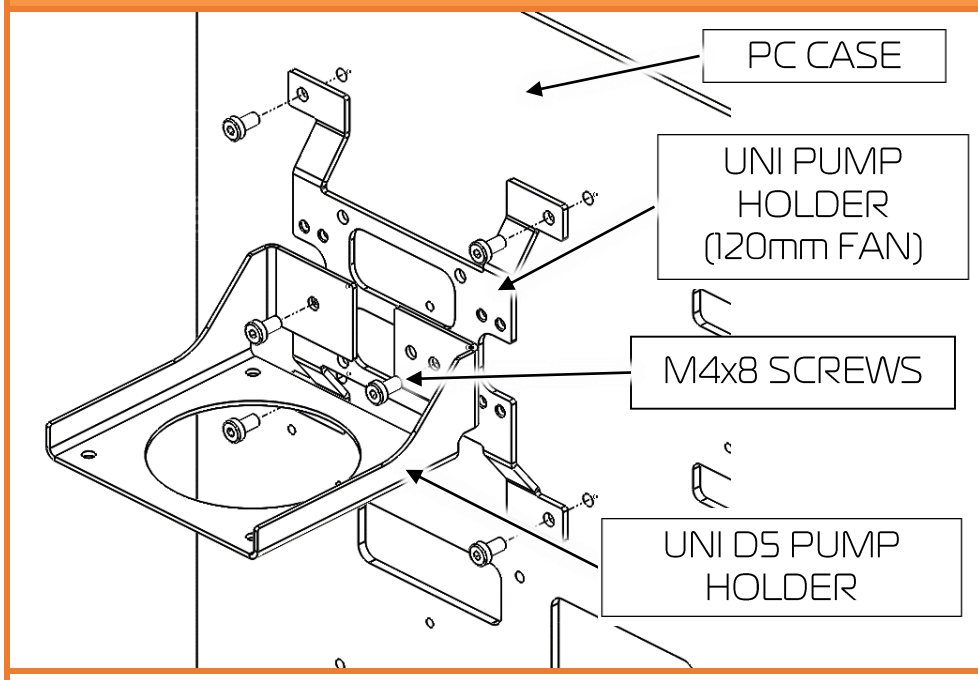


Install the fans and the radiator on the spot where normally air cooling fans take place. (Picture of the PC case is symbolical)

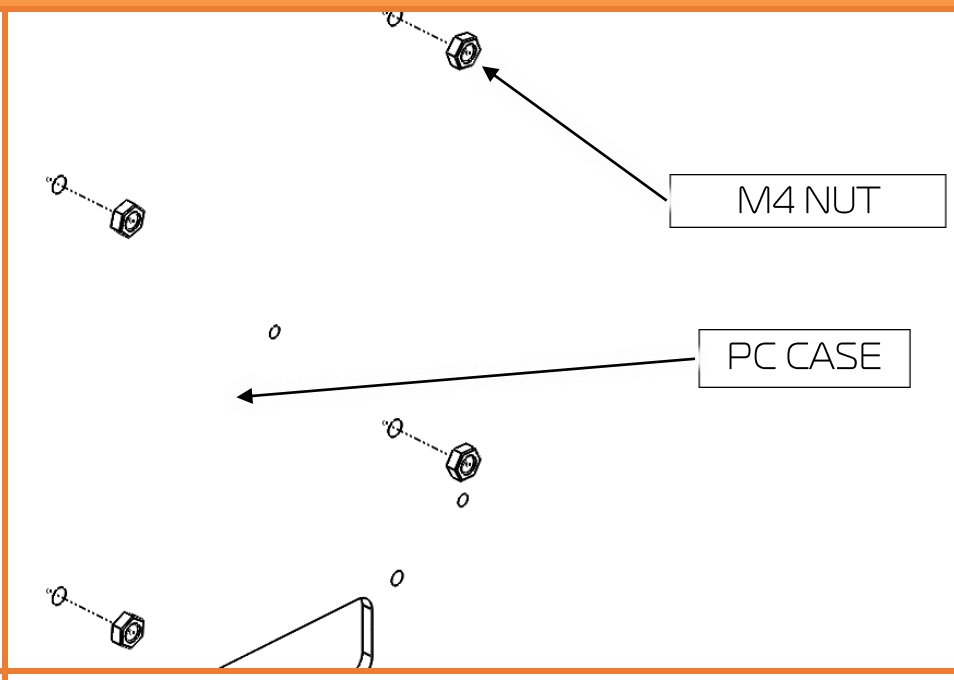


Screw in all four UNC 6-32 x 4 screws per fan into the threaded holes on the radiator casing. Use enclosed 2mm allen key to tighten the screws in clockwise direction.

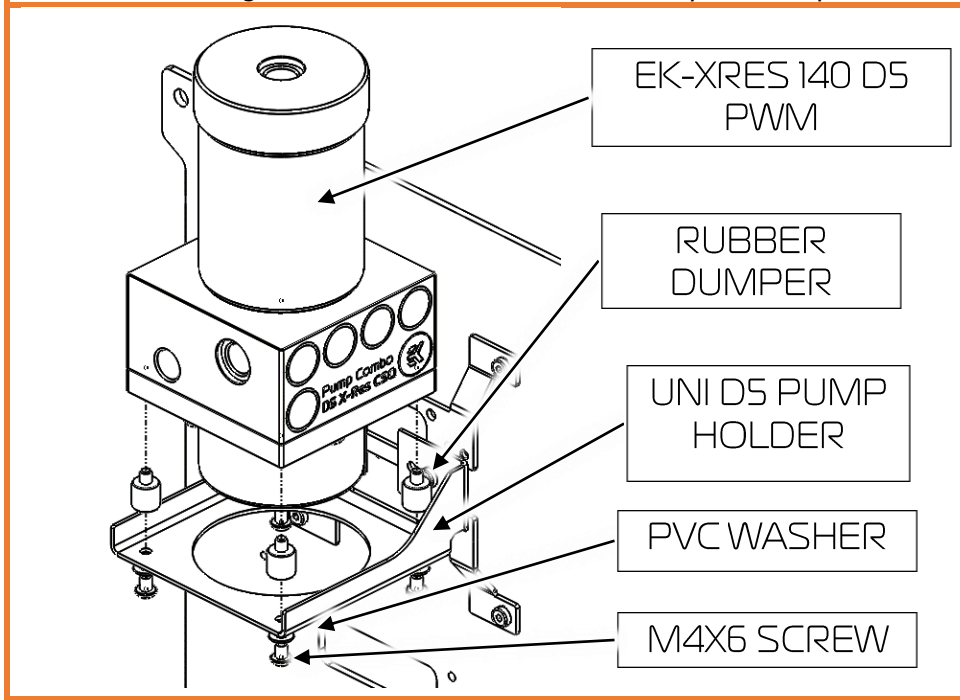
4. INSTALLING THE PUMP/RESERVOIR UNIT



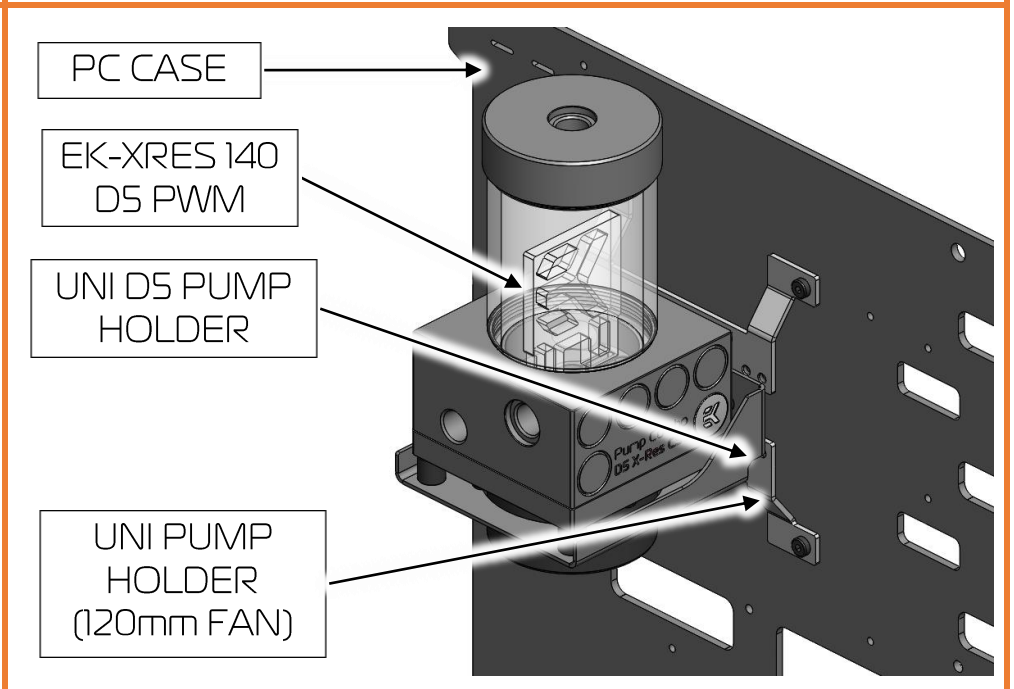
Mount your pump holders together using two M4x8. Use the pre-drilled holes and m4x8 mounting screws to mount the whole assembly onto the pc case.



Secure the assembly from the backside using M4 nuts.

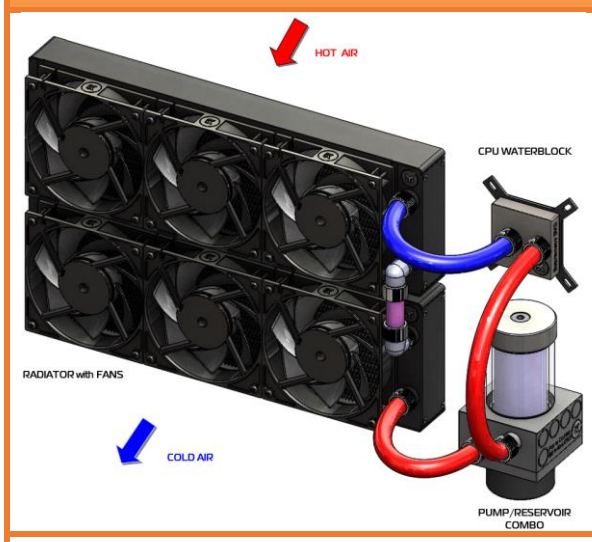


Mount the pump/reservoir combo on the pump holder. Please use four rubber dumpers, pvc washers and four M4x6 screws as shown on the sketch.



Make sure all the screws are tight as the vibrations that come from the pump may loosen them.

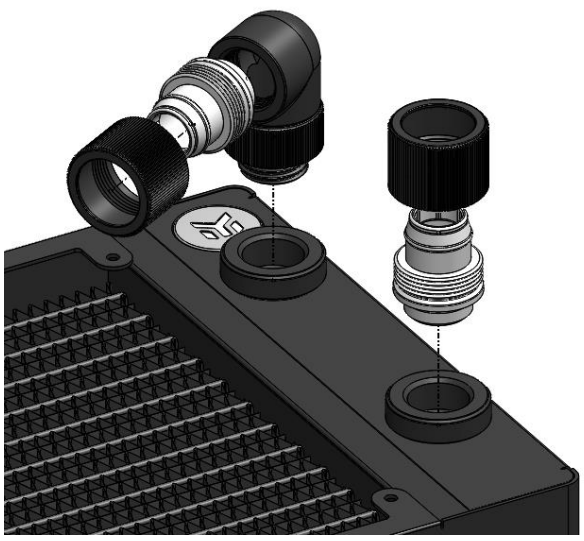
5. INSTALLING THE TUBING



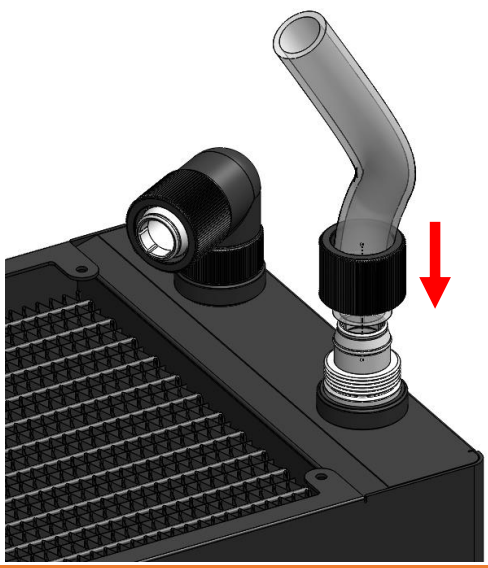
Examine the water loop diagram

Take a measure of required tubing length.

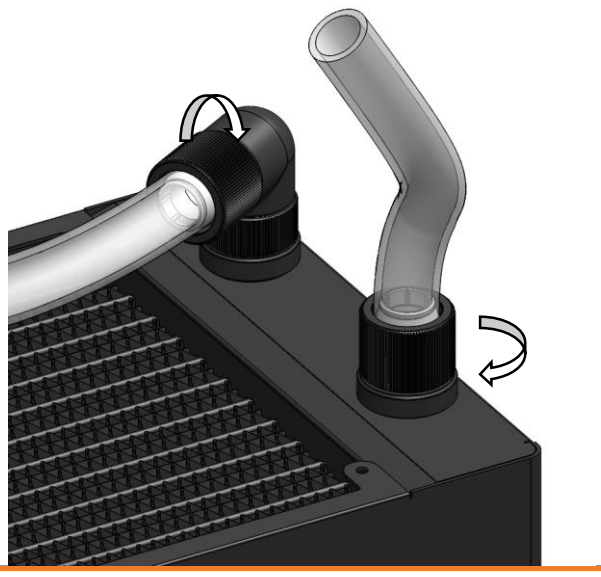
Cut the tube on marked spot.



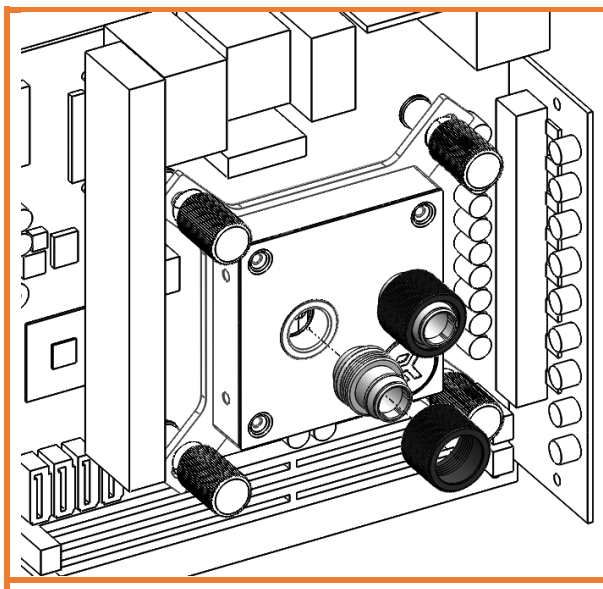
Install the compression fitting to one and 90° adapter with compression fitting on the other G1/4 opening on radiator.



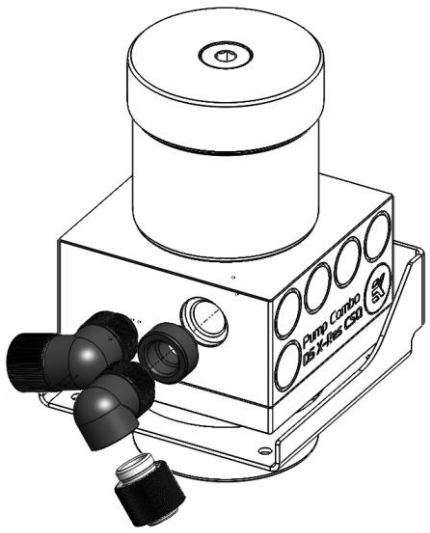
Install the tube on the fittings. If needed heat the tube in warm water.



Screw in the securing ring of the fitting to secure the tube properly



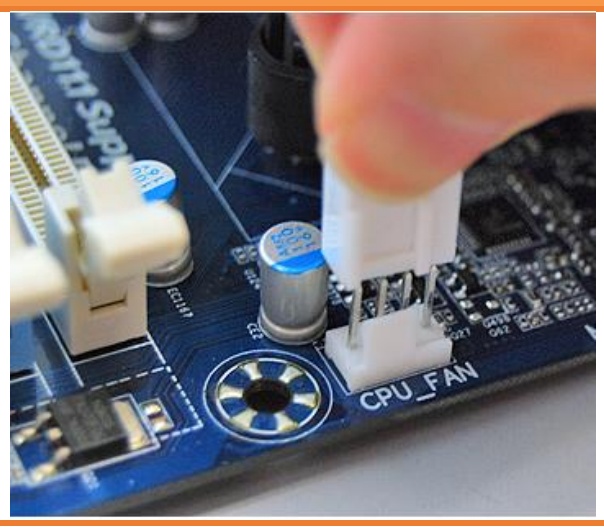
Repeat the procedure on CPU water block



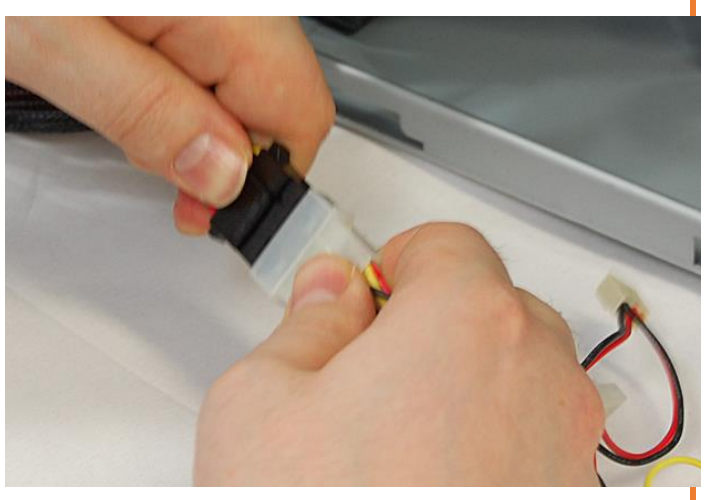
Repeat the procedure on the Pump/Reservoir unit. Screw in the fitting on the outlet and inlet port. Make sure that all the other ports are plugged.

6. CONNECTING THE PUMP AND FANS AND FILLING UP THE SYSTEM

Take the cable with adaptors from the pump delivery.

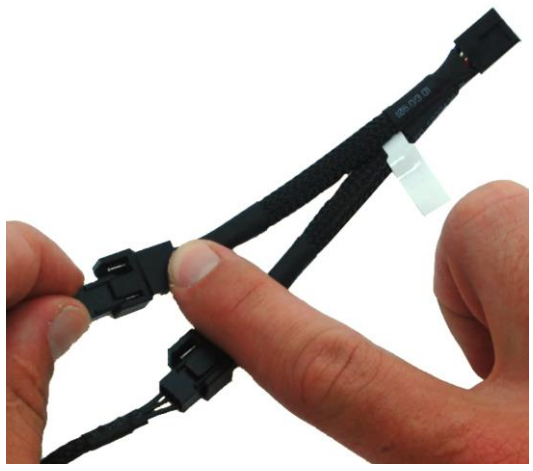


Connect pumps female 4-PIN connector to male connector of the motherboard.

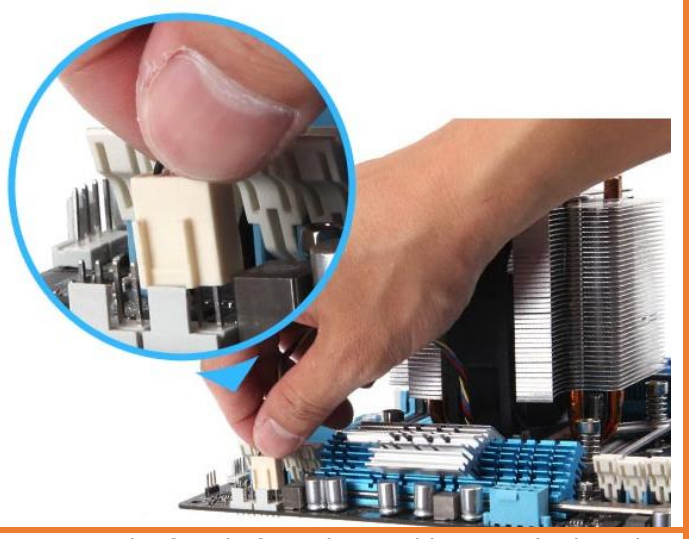


Connect 4-pin Molex female connector to male Molex connector of the power supply.

Prepare enclosed Y fan splitter cables.

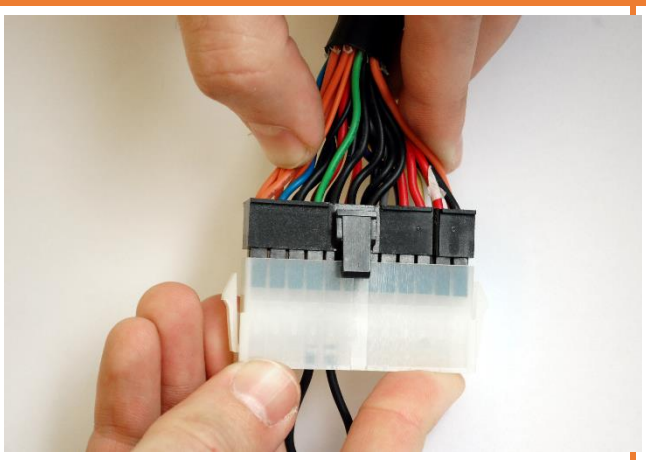


To connect the fans plug in 3-PIN female fan connectors to male fan splitter cable.

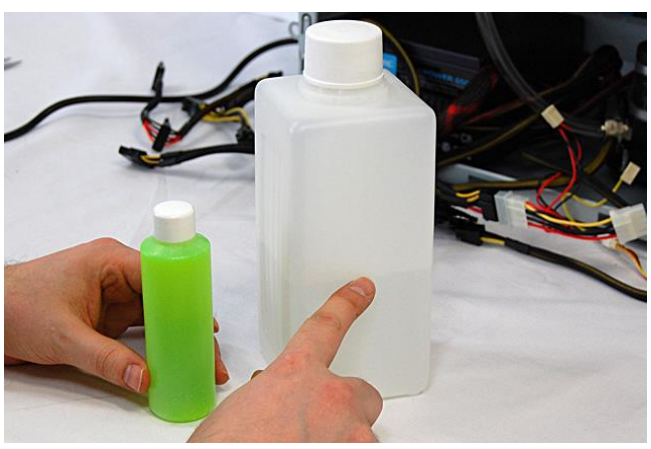


Connect the female fan splitter cable to motherboards male connector. You must also connect the 4-pin Molex connector (fan splitter) to male Molex of the power supply.

Prepare the ATX bridging plug enclosed with the kit. This gadget allows powering up the PSU without powering up the whole computer.

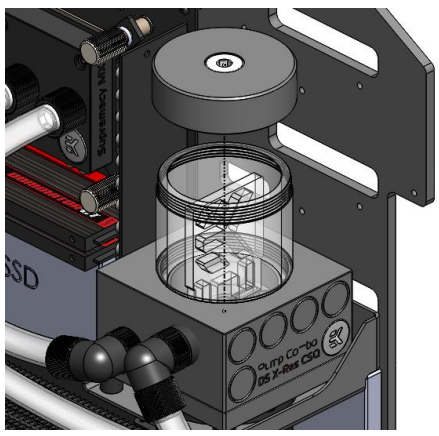


Plug in the ATX bridging plug. Make sure nothing except the pump is plugged to the power supply.

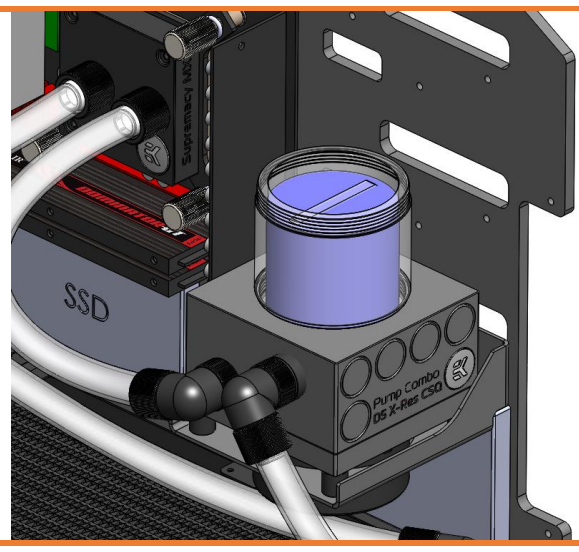


Take about 900 mL of distilled water

And fill in whole content (100mL) of the water additive concentrate

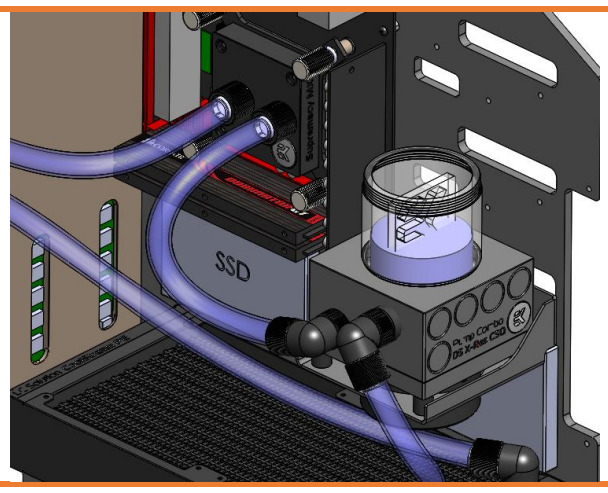


Open top of the reservoir.

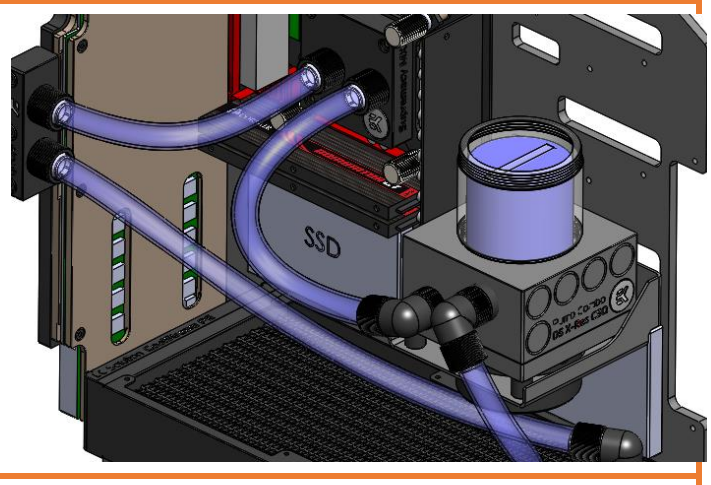


Fill in the ready liquid about 1 cm from the top

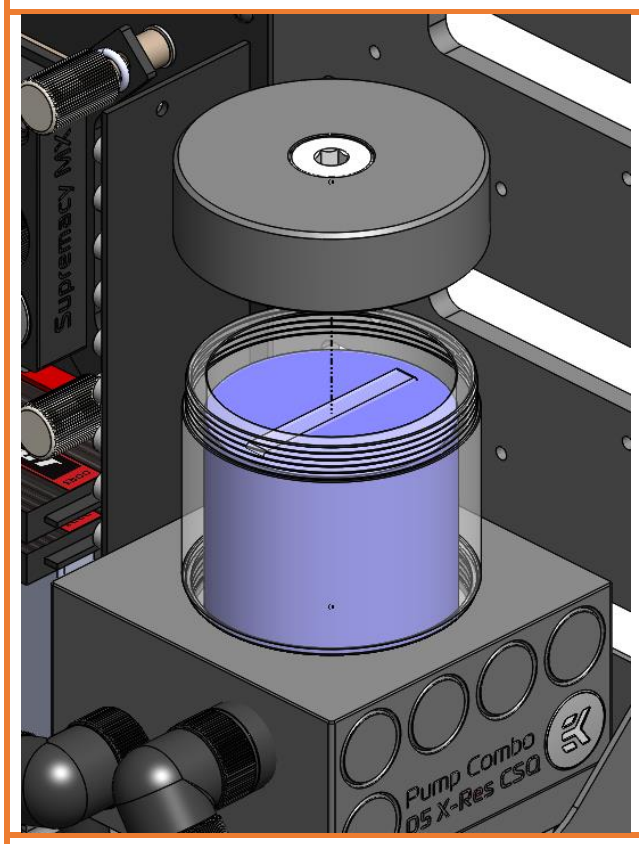
Turn on the power supply



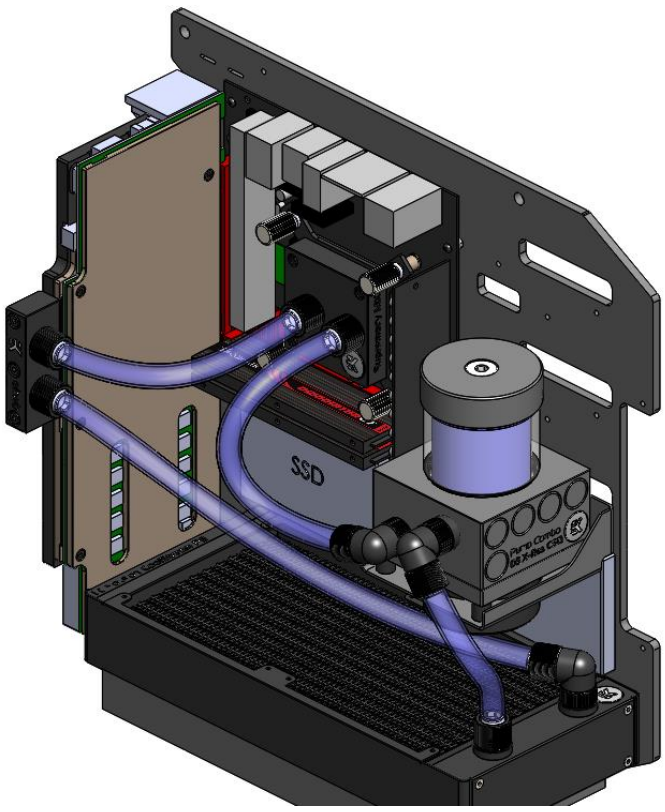
Fill up the liquid while the pump is running and stop when the water level reaches 2 cm under the edge



Alternately turn off and on (cycle) power supply in few second intervals to speed up air bleeding process.



Close the reservoir by screwing in the top acetal endcap.



Shake and tip the PC case to remove any air possibly trapped in the radiator. You may need to add more coolant.

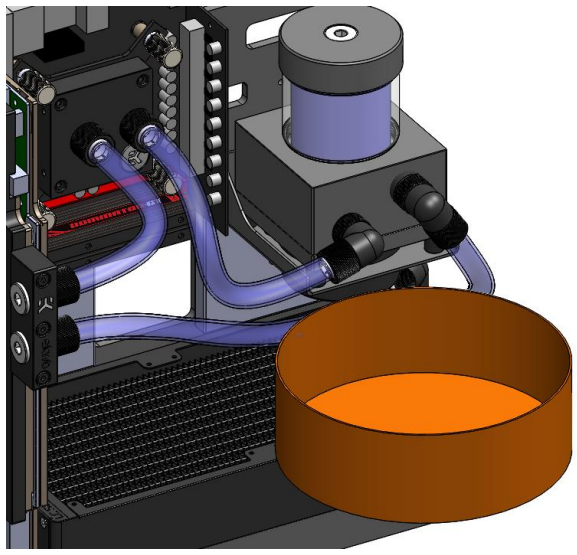
24 hour leak test

Once the 24 hour leak test has been completed and there is no sign of a leaking fluid you are free to finish your computer installation.

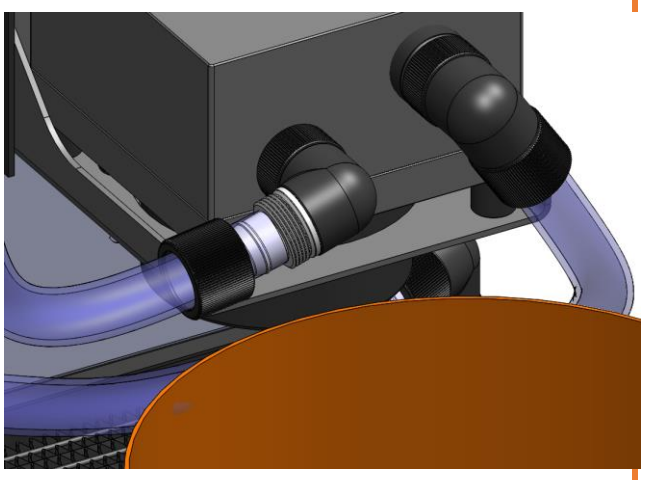
You will not be needing the ATX Bridging Plug any more. Connect all the necassery cables to the motherboard, graphics card and expansion drives.

Leave your PC case for 24 hour leak test, to ensure the system is leak free.

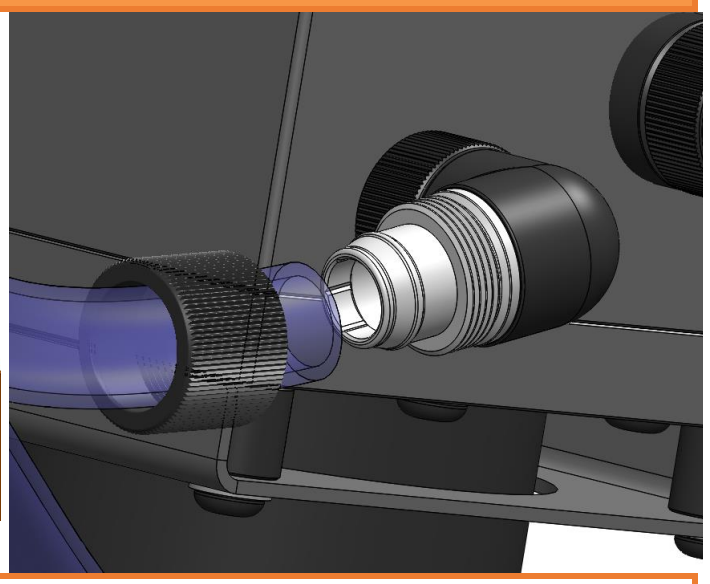
7. EMPTYING THE WATERCOOLING SYSTEM



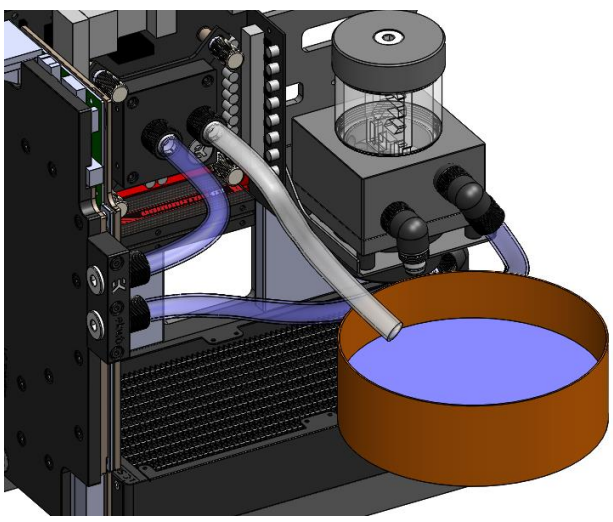
Cover all exposed hardware with a towel or paper towels. Put a container under reservoirs inlet and outlet ports.



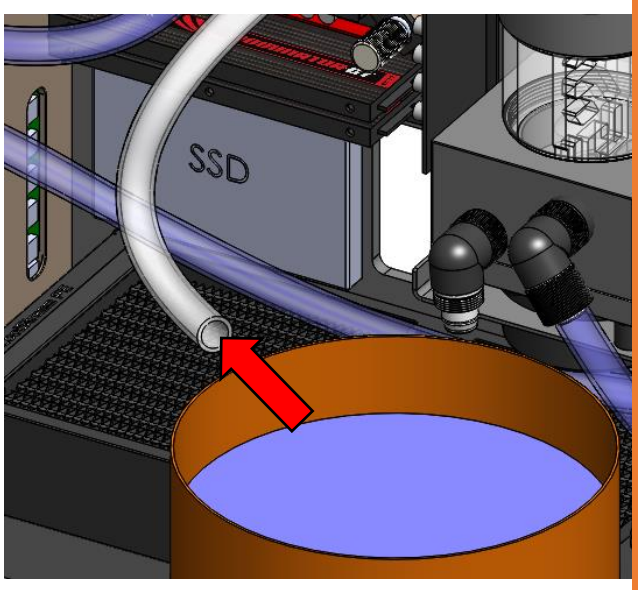
Unscrew one of the G1/4 fitting rings on the pump/reservoir combo.



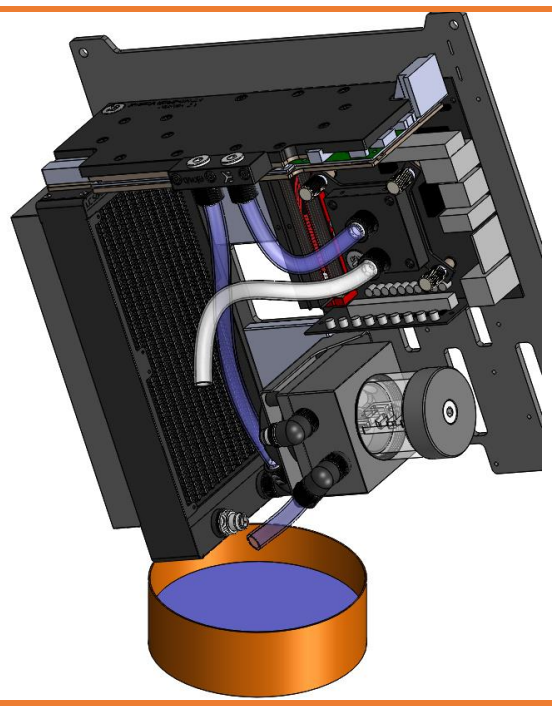
Gently pull the tube off the fitting and direct it into the container.



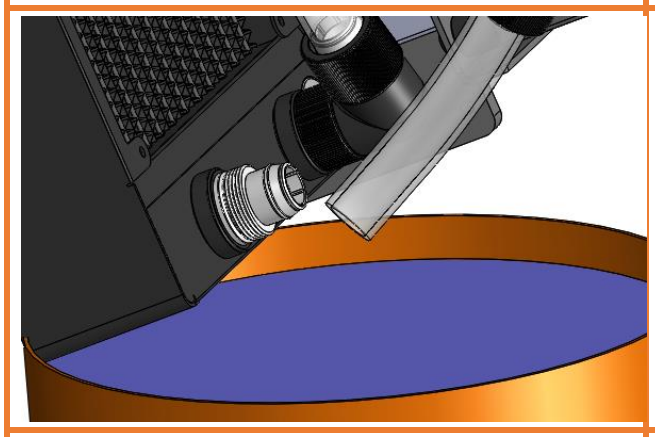
Let the water run away into the container



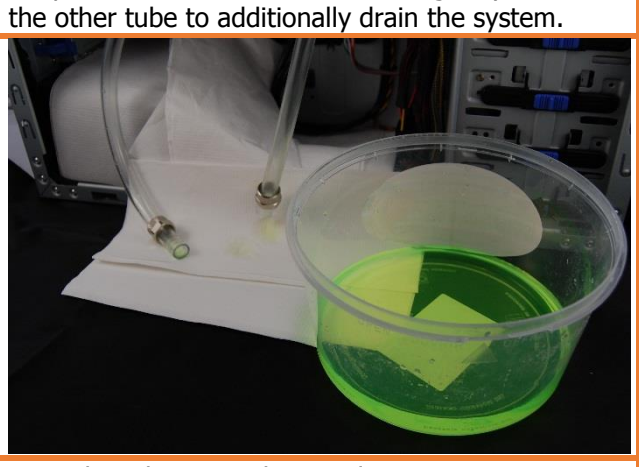
Keep one tube in the container and gently blow into the other tube to additionally drain the system.



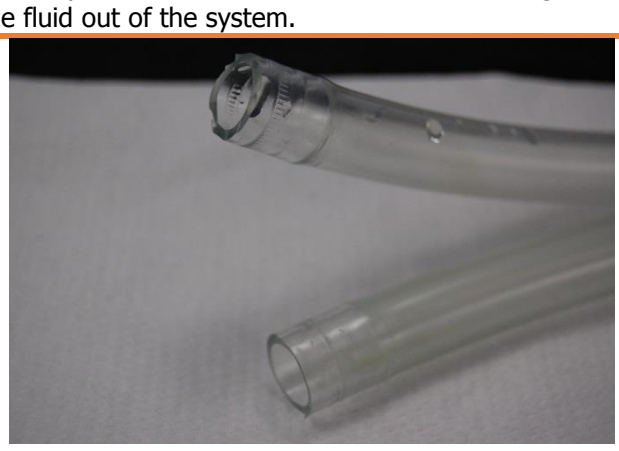
You may need to tilt the whole case in order to get all the fluid out of the system.



The best would be to unplug the pipe from the fitting on the radiator. Repeat



Keep the tubes over the towel to prevent water to spill over the hardware



Dry the tubes and pump with paper towel