

cuplex kryos

Operating and assembly manual

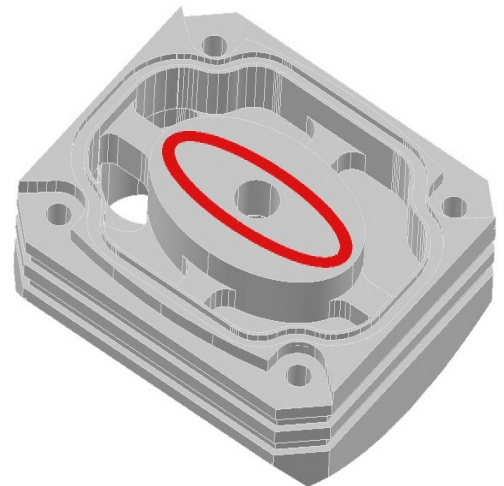
1. Preparation

Back up your data before modifying your hardware! Disconnect your PC from the mains power outlet. To prevent damaging the sensitive hardware components, make sure to ground your workplace and yourself to prevent electrostatic discharges.

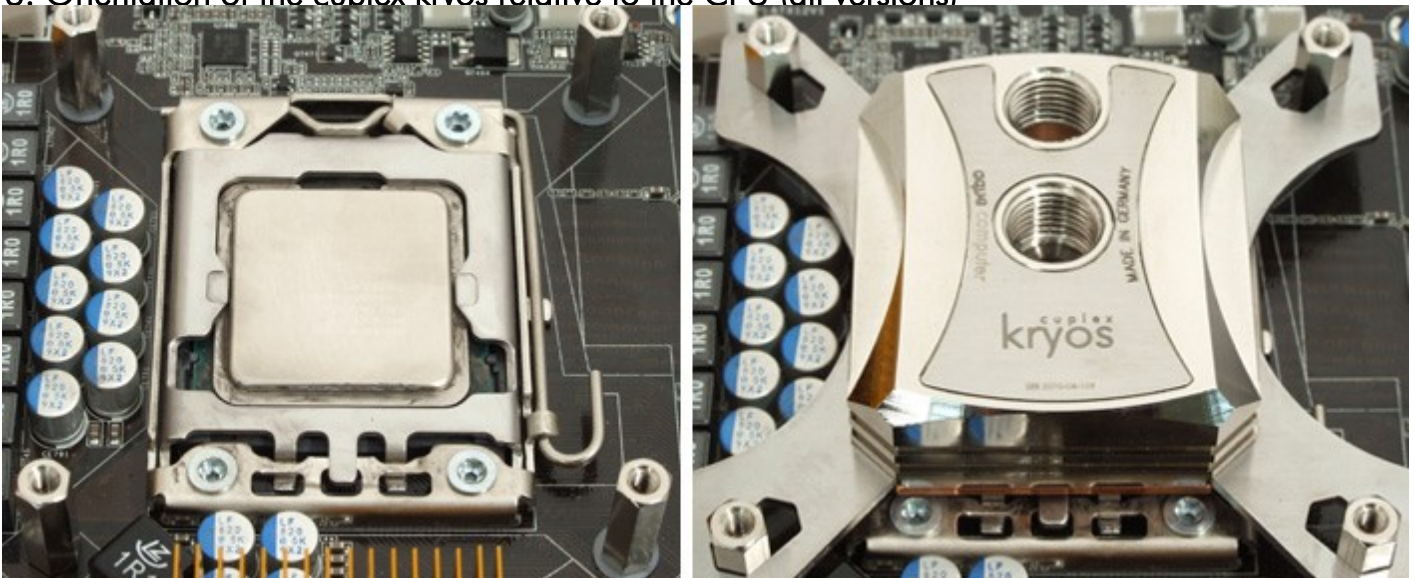
When upgrading an existing PC setup, firstly remove the installed heat sink and fan from the CPU. Refer to the instructions manual of the CPU cooler for details. Clean the CPU surface from thermal grease residues using benzine if necessary. Apply a thin layer of the thermal grease supplied with the cuplex kryos to the CPU, preferably using a plastic spatula or a razor blade. The CPU should now be covered by a thin and homogeneous layer of thermal grease. Remove excessive amounts of thermal grease and make sure that no other components are smeared with thermal grease.

2. Optional: Adjusting the initial load of the copper head

Information: The initial load of the copper head is induced by a rubber gasket inside the cuplex kryos. Upon delivery, a rubber gasket is installed inside the cuplex kryos that provided the best cooling performance during development testing at Aqua Computer. However, due to considerable production deviance in the heat spreaders of different CPUs, another rubber gasket is provided with the cuplex kryos. By replacing the installed rubber gasket with this gasket, the initial load is increased. Normally, you should not replace the installed rubber gasket! Due to the increased initial load, the copper head may become permanently deformed and the full cooling capacity may not be restored after reinstalling the original rubber gasket!



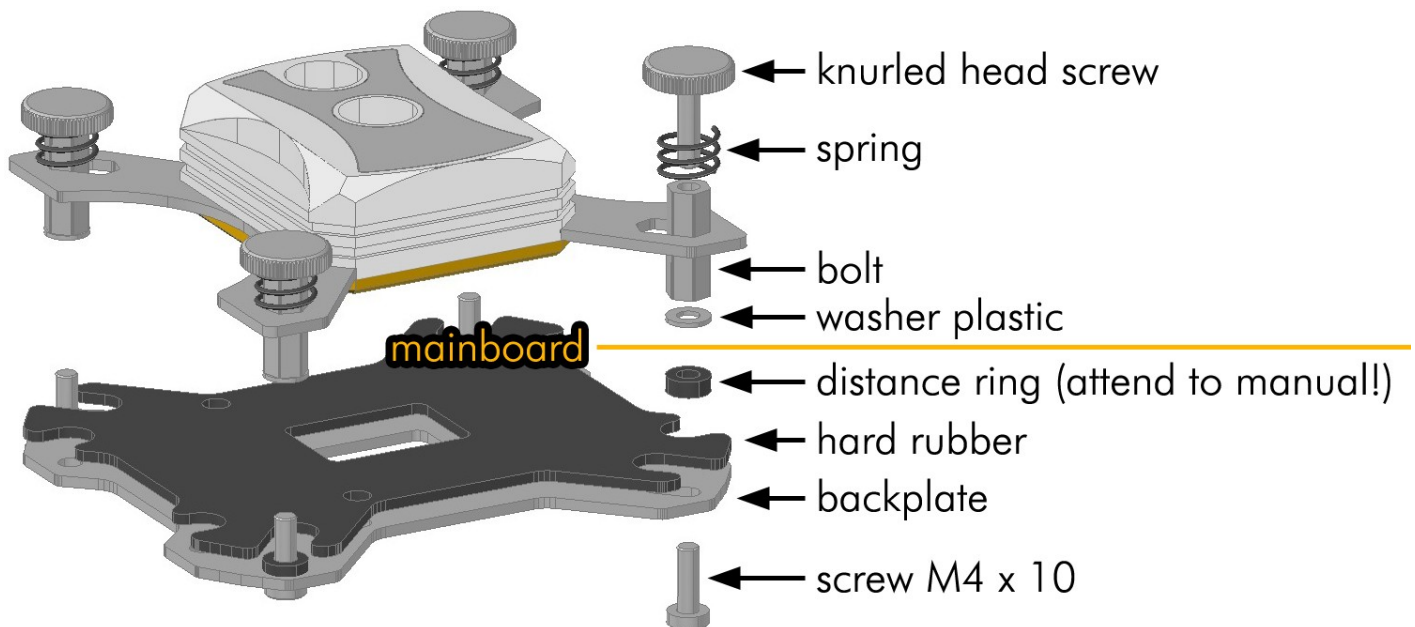
3. Orientation of the cuplex kryos relative to the CPU (all versions)



The internal design of the cuplex kryos is not symmetrical, most current CPUs are also not symmetrical (below the heat spreader cap). Therefore the cuplex kryos should be aligned to the CPU socket as shown in the following figure. This does not concern Socket AM3/AM2, with these sockets the cooler orientation is predefined by the design of the retention system.

4.1 Installation of cuplex kryos XT and cuplex kryos HF (with back plate, not Socket 2011)

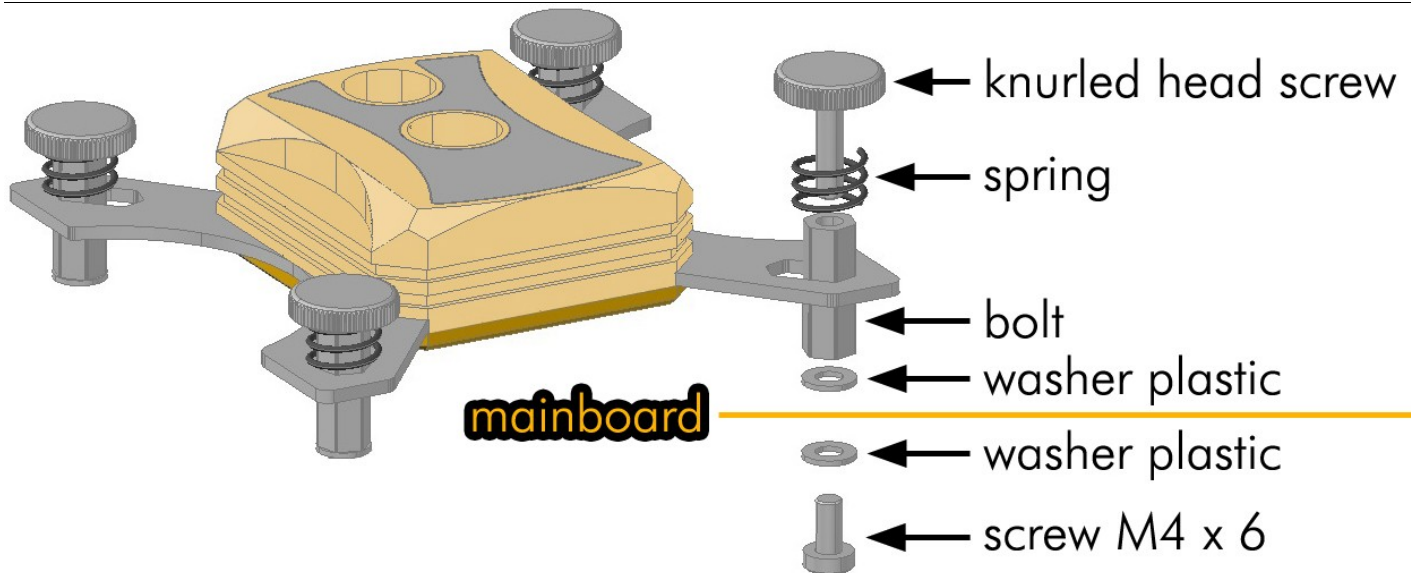
Initially, attach the back plate to the motherboard. Insert one of the M4x10 mm screws into one hole of the back plate matching a retention hole of the motherboard. Slide one of the black plastic spacers onto this screw. Take care to use a spacer of the correct height corresponding to your socket, depending on the version of the cuplex kryos, spacers of two different heights may be supplied. For Socket 1366, 1156 and 1155, use the spacers with a height of 3 mm, for Socket AM3, AM2 and 775 use the spacers with a height of 2 mm. Repeat this procedure for all four holes corresponding to your motherboard's mounting holes. Place the rubber mat onto the back plate and slide all four screws through the mounting holes of your motherboard. Now slide one of the white plastic washers supplied with the cuplex kryos onto each screw protruding from the motherboard and then screw one of the metal bolts onto each screw.



Orientate the bolts to suit the apertures in the cuplex kryos. To do so, you might need to loosen the screws a bit and then refasten the screws. Slide the cuplex kryos onto the bolts and carefully lower it onto the thermal grease covered CPU. Apply one of the four supplied springs to each bolt and secure each spring using one of the knurled head screws (only one or two revolutions). Alternately fasten each screw a fraction of a revolution until all four screws are fully fastened.

4.2 Installation of cuplex kryos PRO (without back plate, not Socket 2011)

Slide one plastic washer onto each of the four M4x6 mm screws and then slide the screws through the retention holes of the motherboard around the CPU socket. Slide another plastic washer onto each screws now protruding from the motherboard and fasten one of the metal bolts onto each screw.



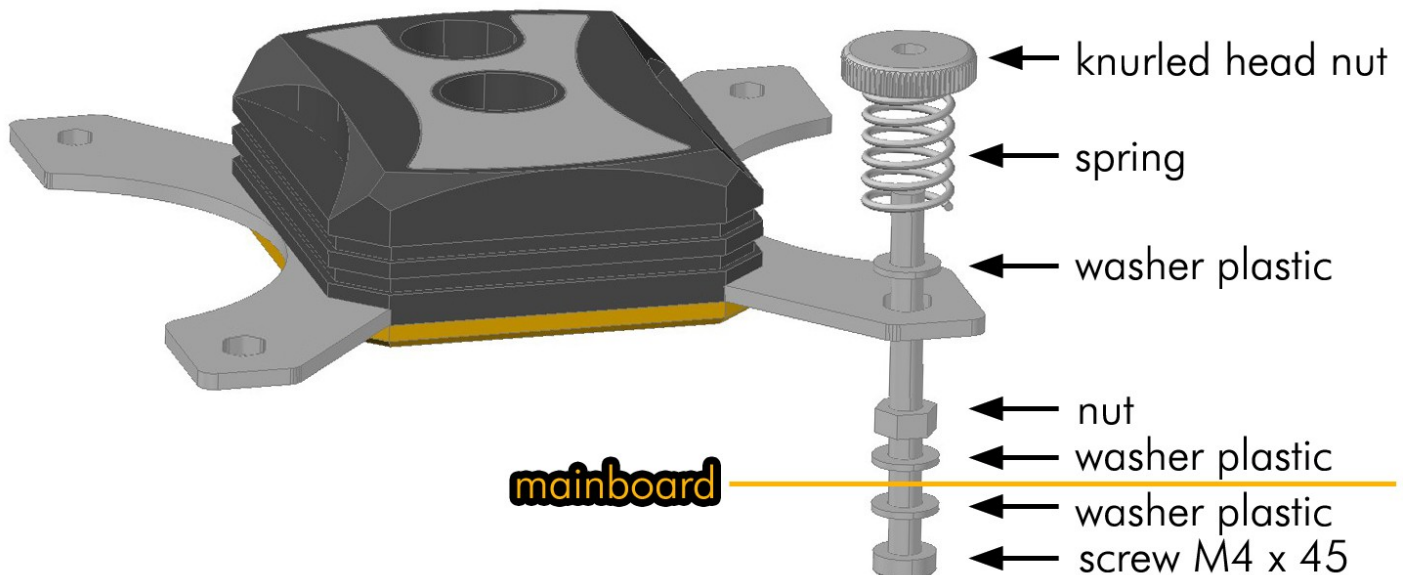
Orientate the bolts to suit the apertures in the cuplex kryos. To do so, you might need to loosen the screws a bit and then refasten the screws. Slide the cuplex kryos onto the bolts and carefully lower it onto the thermal grease covered CPU. Apply one of the four supplied springs to each bolt and secure each spring using one of the knurled head screws (only one or two revolutions). Alternately fasten each screw a fraction of a revolution until all four screws are fully fastened.

4.3 Installation of cuplex kryos HF/XT/PRO onto Socket 2011

Screw one of the bolts supplied with the water block into each of the four mounting threads of the CPU retention system. Slide the cuplex kryos onto the bolts and carefully lower it onto the thermal grease covered CPU. Apply one of the four supplied springs to each bolt and secure each spring using one of the knurled nuts (only one or two revolutions). Alternately fasten each nut a fraction of a revolution until all four nuts are fully fastened.

4.4 Installation of cuplex kryos Delrin (not Socket 2011)

Slide one plastic washer onto each of the four M4x45 mm screws and then slide the screws through the retention holes of the motherboard around the CPU socket. Slide another plastic washer onto the screws now protruding from the motherboard and fasten one M4 nut onto each screw. The screws should now protrude from the motherboard like bolts.



Slide the cuplex kryos onto the screws and carefully lower it onto the thermal grease covered CPU. Slide one of the four supplied springs over each screw and secure each spring using one of the knurled head nuts (only one or two revolutions). Alternately fasten each nut a fraction of a revolution until all four springs are equally compressed. The single coils of the springs must not touch each other to prevent excessive force! You can check the correct installation by sliding a sheet of paper between the coils of the springs. The paper has to slide between the coils with little resistance, otherwise the nuts must be loosened until the paper slides between the coils.

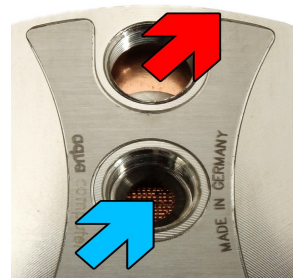
4.5 Installation of cuplex kryos Delrin onto Socket 2011

Screw one of the threaded bolts supplied with the water block into each of the four mounting threads of the CPU retention system for approximately five revolutions. Then lock each bolt with a hex nut. Slide the cuplex kryos onto the bolts and carefully lower it onto the thermal grease covered CPU. Apply one of the four supplied springs to each bolt and secure each spring using one of the knurled nuts (only one or two revolutions). Alternately fasten each nut a fraction of a revolution until all four springs are equally compressed. The single coils of the springs must not touch each other to prevent excessive force! You can check the correct installation by sliding a sheet of paper between the coils of the springs. The paper has to slide between the coils with little resistance, otherwise the nuts must be loosened until the paper slides between the coils.

5. Integration into a water cooling system and flow direction

Integrate the cuplex kryos into a water cooling system of sufficient performance. For best cooling performance, the coolant must be supplied through the central fitting. Reversed flow direction significantly decreases the performance of the cuplex kryos.

Make sure not to connect any water cooling components in parallel but only consecutively. A detailed instruction on building a water cooling system and plug&cool connectors as well can be found on our website www.aqua-computer.de – please check the section support/download.



6. Initial operation and approved coolants

Put the water cooling system into operation, but do not connect any other PC components to the mains supply! Check the cuplex kryos as well as the fittings for leakages and do not put your PC into operation unless you can definitively eliminate the possibility of coolant leaking from the system! If any component has been in contact with coolant, do not put it into operation before it is completely dry again! For operating the PC, the cuplex kryos must be correctly mounted and be connected to a water cooling system featuring adequate cooling performance! For corrosion inhibition, "Double Protect Ultra" or a mixture of water and ACfluid according to the preparation instructions provided with ACfluid must be used as coolant!

ATTENTION:

Disregarding the instructions may lead to severe damages! Aqua Computer GmbH & Co. KG cannot be held liable for damages or injuries resulting from improper installation or use of the product!

Thank you for choosing an aqua computer product.