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Advanced PC Watercooling Solution for the DIY Enthusiast

VORTEX ONE DIY

CE ☒ RoHS

AM002

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CPU Waterblock Installation for INTEL 115x

Take the 115x backplate as pictured below, turn your Motherboard upside down carefully and place the backplate on the back of the Motherboard, It will only fit one way. Ensure the threaded lugs are inserted through the Intel mounting holes, then turn the Motherboard the correct way over, holding the backplate in place.

Take four of the washers you have received in your mounting pack and place them over the four Intel mounting lugs as shown below. From the same mounting pack, find the mounting screws, and thread them into the 115X backplate to secure it in place, making sure the washer is separating the mounting screw from the Motherboard.
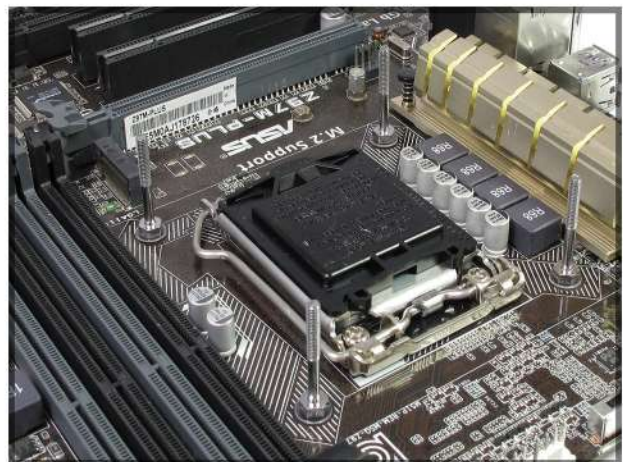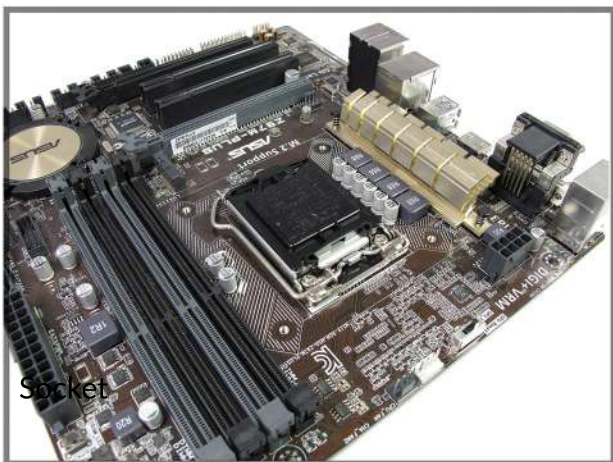
Ensure the CPU is fitted correctly into the Motherboard, then apply paste to the CPU to the top as required. Only a small amount is needed to produce a thin layer, then smooth it down with a flat plastic card or spatula making sure you clean up any excess with a tissue or an alcohol wipe.

Place the CPU Waterblock over all four of the mounting screws which are now fitted to the 115X backplate, the waterblock will sit nicely on top of the CPU with the board up right, you shouldn't need to hold it in place.

Place a washer over each of the four mounting screws followed by four springs on top, then your installation should look like the picture below. You are now ready to screw down the four thumb screws on each of the four mounting screws.


Take a thumb screw, and thread it onto each mounting screw as above, as far down as you can just before the spring starts to make tension. Repeat this for the others. Once all four of the thumb screws are in place, you can start to tighten them down opposites at opposite corners so that the tension is evenly applied. Tighten them until the thumb screw stops.

CPU Waterblock Installation for INTEL 1366 & 2011

Start here for socket 1366 Installation...

Locate the four mounting screws for Intel 115x, and four of the washers from the mounting pack. these are used in the installation for socket 1366. Place a washer over the small threaded end and insert it through the 4 motherboard mounting holes as shown below. Next turn the Motherboard upside down, and locate another four washers, place them over the thread you placed through the Motherboard, and then screw the four nuts over each one. Tighten them down carefully with a small spanner or pliers, be careful not to damage the Motherboard tracks on either side.
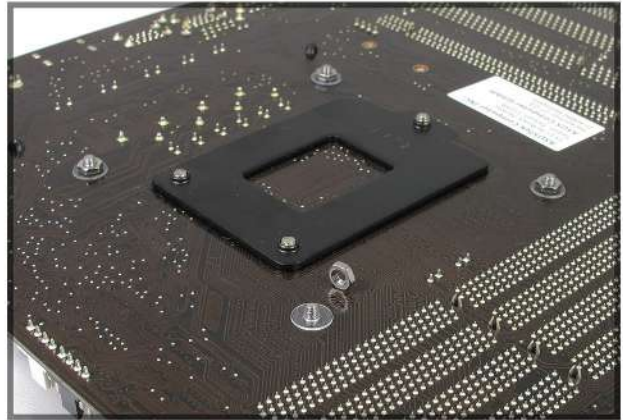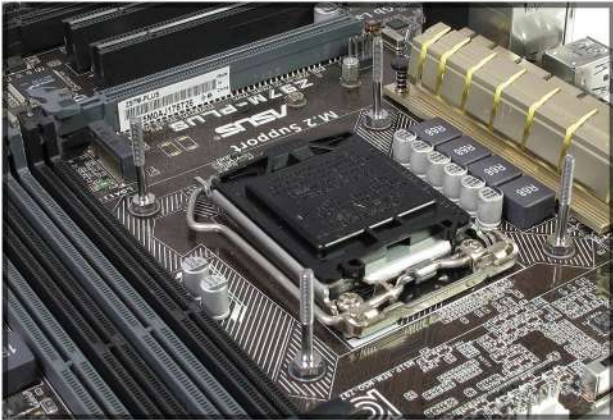
Start here for socket 2011 Installation...

Locate the four mounting screws for Intel 2011 in your Mounting pack. With socket 2011, you simply use the 2011 mounting screws by threading these in to the standard 2011 Socket plate on your Motherboard. No washers are needed here.

Ensure the CPU is fitted correctly into the Motherboard, then apply paste to the CPU to the top as required. Only a small amount is needed to produce a thin layer, then smooth it down with a flat plastic card or spatula making sure you clean up any excess with a tissue or an alcohol wipe.

Place the CPU Waterblock over all four of the mounting screws which are now fitted to the Motherboard, the waterblock will sit nicely on top of the CPU with the board up right, you shouldn't need to hold it in place.

Place a washer over each of the four mounting screws followed by four springs on top, then your installation should look like the picture below. You are now ready to screw down the four thumb screws on each of the four mounting screws.
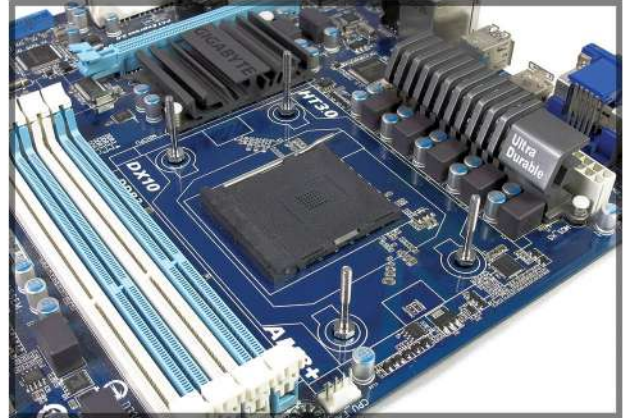

Take a thumb screw, and thread it onto each mounting screw as above, as far down as you can just before the spring starts to make tension. Repeat this for the others. Once all four of the thumb screws are in place, you can start to tighten them down opposites at opposite corners so that the tension is evenly applied. Tighten them until the thumb screw stops.

Start here for socket AM3 or AM4 Installation...

On AMD Socket AM3 and AM4 motherboards you will find around the socket a plastic retention mount which has 2 or 4 screws in it, you need to remove these 4 screws as shown below, this will remove the retention mount on the front of the Motherboard and give you 4 screws in the standard backplate which we can use. Ensure the backplate doesn't fall off by holding it with your fingers.

Locate the four mounting screws for AMD Sockets in your Mounting pack. With socket AM3 and AM4, you simply use the AMD mounting screws by threading these in to the standard AMD Socket backplate on your Motherboard. No washers are needed here.

Ensure the CPU is fitted correctly into the Motherboard, then apply paste to the CPU to the top as required. Only a small amount is needed to produce a thin layer, then smooth it down with a flat plastic card or spatula making sure you clean up any excess with a tissue or an alcohol wipe.

Place the CPU Waterblock over all four of the mounting screws which are now fitted to the Motherboard, the waterblock will sit nicely on top of the CPU with the board up right, you shouldn't need to hold it in place.

Place a washer over each of the four mounting screws followed by four springs on top, then your installation should look like the picture below. You are now ready to screw down the four thumb screws on each of the four mounting screws.

Take a thumb screw, and thread it onto each mounting screw as above, as far down as you can just before the spring starts to make tension. Repeat this for the others. Once all four of the thumb screws are in place, you can start to tighten them down opposites at opposite corners so that the tension is evenly applied. Tighten them until the thumb screw stops.

Radiator Installation & Tube Routing

Within your new Watercooling system, we have included a high performance Copper radiator. Most modern PC cases are now made with full support for watercooling radiators to be fitted inside the chassis, please check the product specification of the case or with the retailer you purchase the case from before ordering to confirm compatibility with 240mm or 360mm Radiators as standard.

The radiator can be mounted in a variety of places inside or outside of the case. The position depends on the amount of room you have in your case, the size of the radiator and mounting options that case offers.

The radiator can be positioned either way up, and both tubing connectors can be used for either INLET or OUTLET.

Example installation:
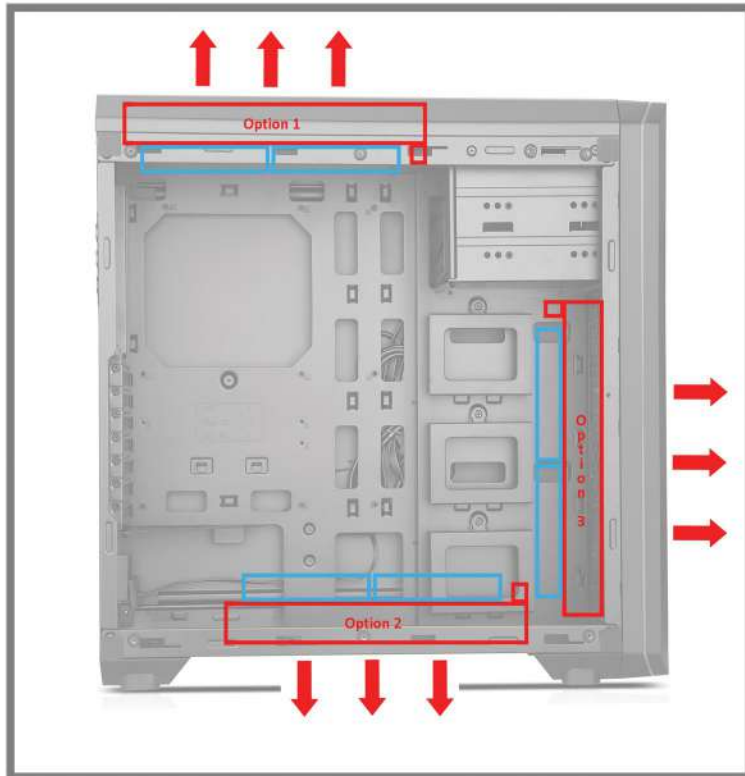
Airflow:

Always ensure the case has good Airflow, this is key to cooling down the internal system temperature as well as helping your overall ambient temperature for the watercooling kit.

If you mount the radiator in Option 1 as shown here, then you will want cool air coming in to the case from fans mounted where Option 3 is.

If you mount the radiator in Option 2 as shown here, then the same applies as above, you can use Option 3 OR Option 1 as your air inlet.

If you mount the radiator in Option 3 as shown here, you will need to have fans mounted in Option 1 to bring cool air into the case.

In all instances above, your Radiator will act as the air outlet, so all warm air from the case and radiator is removed from inside the case.

Nothing is set in stone, you can set this up in a different way, as long as the case has air flow being pushed into the case as well as the radiator acting as an Exhaust, its OK.

Tube Routing Advice:

Before you cut any tubing, ensure that you've temporarily mounted all your watercooling in place, so you can see how long you need to cut the tubing, allowing a nice hose flow that isn't too tight and has a nice loop to it.
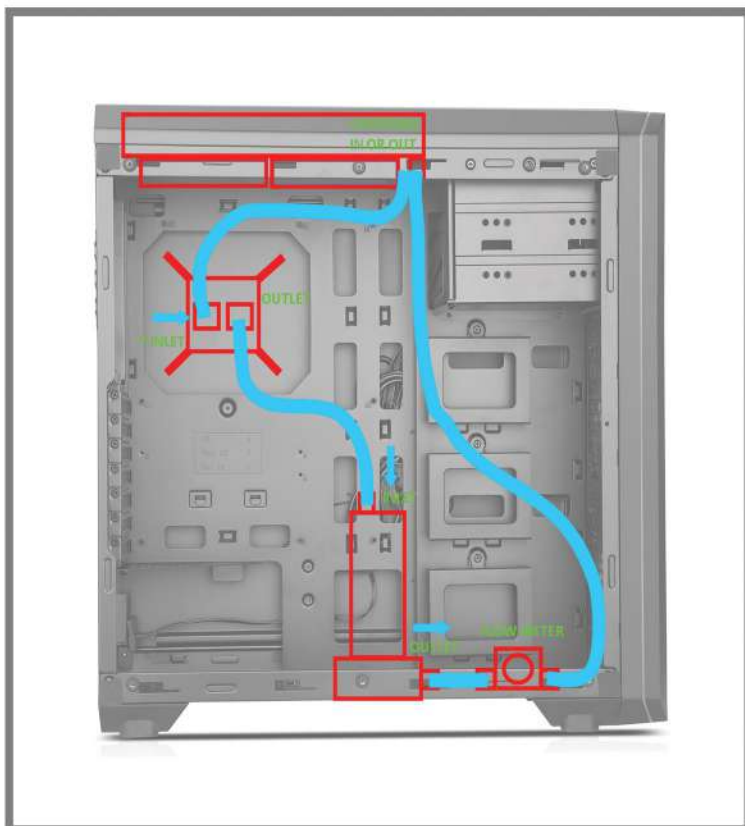
Once all the kit is installed in the case, you can then begin to cut the tubing to pipe the system up. If you've never done this before it's best to follow the two examples below:

Example 1: (Pictured left)

PUMP OUTLET >> FLOW METER (Optional) >> RADIATOR >> CPU BLOCK >> PUMP INLET

Example 2:

PUMP OUTLET >> FLOW METER (Optional) >> CPU BLOCK >> RADIATOR >> PUMP INLET

Once you've piped the system up, it's not time to fill just yet, we need to remove the kit from the case, away from your new Hardware, and perform a 24hr leak test first. You can do this by using the 24pin bridging tool included in the kit so that the PSU doesn't need to start your Motherboard, for it to power the pump which you will connected to it.

Plug this tool into your Powersupply, it will allow you to start the PSU without the Motherboard being switched on.

This is a safe way to power your Pump while leak testing for 24hrs..

Compression Fitting & Tube overview

Compression fittings are an ideal fitting for watercooling, they are 100% leak free when installed correctly. Follow the details below for guidance on how to correctly install your fittings and tube to the components within this watercooling system.

Failure to install them correctly may result in coolant leaks, which may lead to damaged hardware..

When installing your compression fittings into your CPU Block, Pump/Reservoir Radiator or Flow Meter you do not need to use excessive force. These fittings are fitted with an O-ring on the thread and will seal the fitting correctly without need for any additional items such as PTFE Tape or Thread lock. Screw each fitting in all the way with your fingers, till the O-ring starts to tighten up the fitting, then turn a further quarter turn until the fitting is hand tight. This is all you need.

NOTE: Using spanners, pliers, grips or other tools to install your compression fittings is not needed and will damage the threads on your watercooling parts.

Once your fittings are installed finger tight into your parts, you can start to install the hose. Unscrew all the Compression Collars and keep them safe, you'll need these later during the temporary installation of the parts in your case, prior to leak testing.

Fig 1: Cut your tubing to the desired length using a sharp knife, scissors or preferably a tube cutter, try and cut as straight as possible. Push your tubing onto the barb of the Compression Body until fully down all the way.

Fig 2: Slide a Compression Collar over the tube with the thread pointing down towards the thread on the Compression Body.

Fig 3: Screw the Compression Collar all the way down, finger tight. There is no need for tools here during this process.

Once those three steps are complete, you can now duplicate this over the rest of the fittings during the installation process.

Pump & Reservoir overview

Your Pump & Reservoir will have 3 main threads which you can insert fittings into. At this stage, take a moment to think about where you will install the pump inside your case, you can then work out which of the two INLET ports to use.

If you decide to use INLET 1 as your return back to the pump, then you will need to install the Blank fitting which is included with your kit to seal INLET 2, but don't seal it just yet. We'll be using the other INLET as a way to fill the reservoir. Blank it when filling is complete.

The FLOW OUTLET is the fitting which the liquid will pump from at speed. This is usually sent straight to the heat source or radiator first, please refer to the section on Tube Routing within this manual for further details.

The pump is powered by a 4Pin Molex plug, and will fit into any standard PSU 4Pin power plug inside your PC case. It's always best to run the pump on its own feed from the PSU but if that isn't possible, it will be fine.

When filling the system, fill the reservoir 3/4 of the way full, and switch the PSU on, the pump will activate and push the liquid into the loop. Be sure to switch off when the reservoir is empty so you can fill it up again. Repeat this process until the system is full.

Note: Do Not allow the pump to run dry at all, it will cause damage to the pump impeller inside.

Pure Distilled Coolant & Colouring

Inside you kit box will be a bottle of Pure Distilled coolant which you will use to fill up the system. This is an Ultra Pure liquid with all the nasties that are in tap water removed. This liquid does not contain any Anti Algae or Biocides.

Also inside the kit box, you'll notice it comes with 3 coloured dyes which you can use to make your system look unique and colourful.

Take care when using the dyes, these are concentrated dye stuff liquids and if proper precautions are not taken, this can and will stain hands and clothes. When the dye is added to the system and diluted, it becomes a non-stain solution.

Your kit contains, UV Reactive Blue, UV Reactive Green and Cherry Red

To mix the dye, you can either dye the Ultra Pure liquid in the bottle OR you can fill the system and then add the dye to the reservoir unit, and watch the flow chase the dye around the loop until fully coloured.

When adding the dye, add drips at a time, rather than lots at a time to get the desired colour preference. Dyes can be mixed to make custom colours.

All our dyes come with Anti Corrosive Biocide mixed in. Please do not mix these three dyes with any other manufacturer's dyes.

Additional Liquid.cool Pure Distilled coolant can be purchased from your Liquid.cool retailer.

Additional safe to use coolant

Here at Liquid.cool we manufacturer the best liquid on the planet for PC watercooling end of! If you like the look of "Opaque" setups like the ones pictured below and don't want to use the Pure Distilled + Dyes that come with this kit, we recommend you check out the Liquid.cool CFX Opaque coolant from your Liquid.cool retailer. This coolant is a safe to use, non-clogging and non-separating High Performance liquid specifically made for the PC Watercooling industry.

Colours include:

Cherry Red, Sky Blue, Pure Blue, Vivid Green, Electric Yellow, Atomic Orange, Steel Grey, Purple Violet, Shadow Black and last but not least Ghost White.

SCAN FOR MSDS

CUSTOM PC
RECOMENDED

Non Toxic   Anti-Freezing   Bio-degradable

RoHS Compliant 2002/95/EC

Question:

I have bubbles in the system, how do i get rid of them?

Answer:

The bubbles in the coolant will usually leave the system within 24 hours. Additionally Shutting down the system and ensuring the pump is switched off, leaving it for a while for the bubbles to settle can help before restarting.

Question:

My Pump is making a noise ?

Answer:

Check your coolant level. If the coolant falls too low air will get into the pump and make a noise. It is normal for some noise upon filling and bleeding the system, this will fade quickly and become almost silent when all the bubbles are gone.

Question:

Can i use tap water to fill the system up ?

Answer:

No, tap water contains lots of impurities which may cause a build up or growth inside the watercooling setup. We recommend to use only the Pure Distilled that comes with this kit or Liquid.cool CFX High Performance liquids.

Question:

My CPU temperature seems high, what could be wrong ?

Answer:

Check to ensure the pump is running first of all, double check all of the air has been removed from the radiator and that the air flow to the radiator is not restricted in any way. It's always best to check there are not kinks of blockages in the pipes. If the problem persists, remove the CPU waterblock and clean the old thermal past off and then reinstall it using high performance thermal paste.

Question:

Water is leaking from the connectors ?

Answer:

Please revert back to the Compression Fittings & Tube section, where it details the correct way to install the fittings into the hardware, and also how to use the compression fittings correctly. Drain the system and re-fit them correctly.

Question:

Water is leaking from from the CPU block, Pump or Radiator ?

Answer:

In the unlikely event of a leak from one of the components in this kit, drain the system down and contact your retailer for further instructions.

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