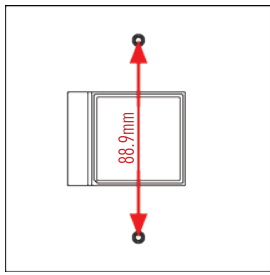


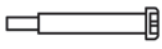
Thank you very much for choosing a Noctua cooler for your AMD Opteron system. Please install the cooler according to this manual.

Should you encounter any difficulties, please check the FAQs on our website and don't hesitate to contact our support team at [support@noctua.at](mailto:support@noctua.at). Noctua cannot be held responsible for any damage or losses caused by compatibility issues.

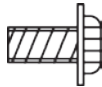
Please note that the NH-U12DO is designed for Socket F with 88.9mm (3.5 inch) hole spacing. It's thus not compatible with mainboards that have a hole spacing of 104.14mm (4.1 inch).



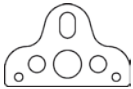
### Required mounting parts:



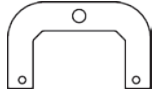
2x black spring screws



4x short silver screws



2x standard fastening brackets



2x 90° fastening brackets



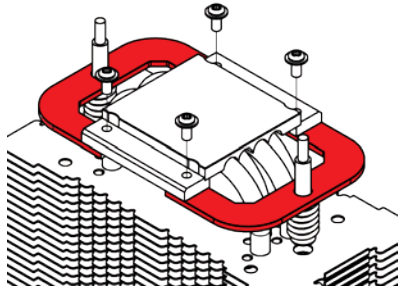
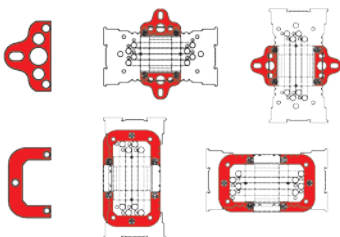
2x pressure springs

1x NT-H1 thermal compound  
 1x NF-P12 120mm fan  
 4x anti-vibration-strips  
 4x fan clips

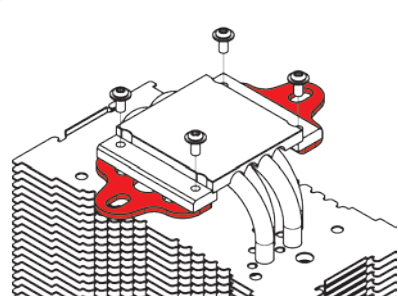
### Step 1:

### Attaching the fastening brackets to the heatsink

Choose the fastening brackets according to the desired orientation of the cooler:



When using the 90° fastening brackets, first stick the spring screws and springs into the fastening brackets. Then screw them to the base of the heatsink tightly using 4 short screws.



When using the standard fastening brackets, tightly screw them to the base of the heatsink using 4 short screws.

### Step 2:

### Applying thermal paste

If there are residual traces of thermal paste or thermal pads on your CPU, please clean them off first. Press a small drop (4-5mm diameter) of NT-H1 onto the centre of the heat-spreader.

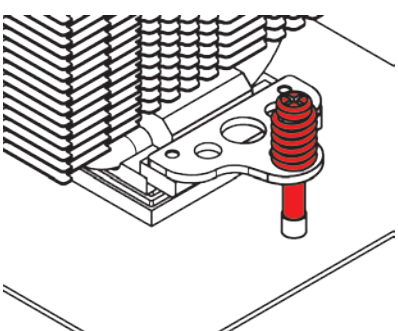
**Caution:** Applying too much thermal paste will lower the heat conductivity and cooling performance!

### Step 3:

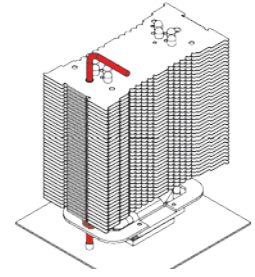
### Fastening the cooler to the CPU

Take off the protection cover at the bottom side of the heatsink first. Then put the cooler onto the CPU. Align the mounting holes of the fastening brackets with those of the backplate.

Now screw the fastening brackets to the mounting bars employing the pressure springs and the respective screws.



When employing the 90° fastening brackets, please use the supplied mounting-tool to tighten the springscrews.

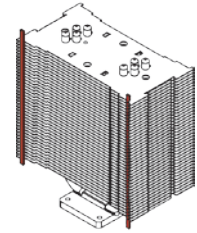


**Caution:** Tighten the screws until they stop.

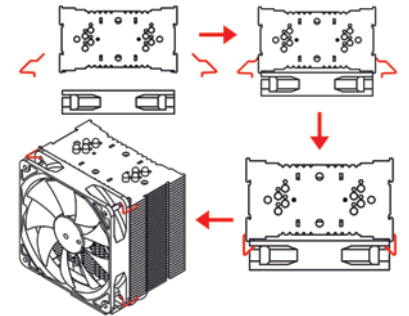
### Step 4:

### Attaching the fan

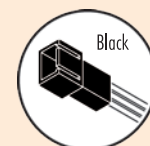
First stick the 2 anti-vibration strips onto the cooling fins in order to dampen minor vibrations emitted by the fan.



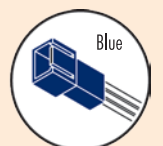
Then attach the fan to the heatsink using the 2 steel clips, placing it so that it blows onto the heatsink (You can optionally use the second pair of clips to install a second fan).



Connect the fan to the mainboard, power supply or fan controller. Depending on your CPU and the temperature inside the case, you may interconnect the supplied Low-Noise Adapter (L.N.A.) or Ultra-Low-Noise Adapter (U.L.N.A.) in order to further reduce the fan's operating noise.



Low-Noise Adapter (L.N.A.)  
 1100 RPM, 16.9 dB(A)



Ultra-Low-Noise Adapter (U.L.N.A.)  
 900 RPM, 12.6 dB(A)

**Caution:** When using the (U.)L.N.A., check the temperature of your CPU using appropriate software (e.g. the respective applications of your mainboard manufacturer), in order to evade automatic throttling of the CPU due to the increased temperature. If the cooling performance is insufficient, please increase case ventilation or remove the (U.)L.N.A.