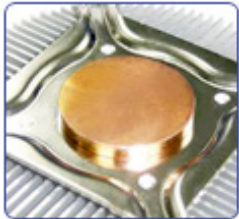





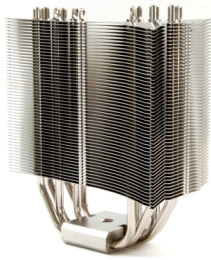
Application Note—Heat Sink Compatibility

This Application Note lists some of thermal solutions known to be incompatible with Indigo Xtreme. Additionally, a few solutions are noted as conditionally compatible, if certain conditions are met.

Incompatible Thermal Solutions (heat sink, waterblock, phase change, etc.)	Issues
	<p>Heat sinks/waterblocks that do not contact the entire surface of the CPU lid:</p> <p>These include the boxed CPU cooler supplied with the purchase of a CPU.</p>
	<p>Heatpipe Direct Touch (HDT):</p> <p>These and other sinks which have grooves and gaps between the baseplate and heat pipes are incompatible.</p>
	<p>HeatKiller and EK blocks with bolts/holes which may touch the CPU lid.</p> <p>Any bolts/bolt holes (on the interface surface) must not be in contact with the CPU lid surface.</p>
	<p>Gold plated blocks such as the EK Supreme HF Full Gold:</p> <p>The Indigo Xtreme alloy will amalgamate with the gold plate, resulting in a bond (and loss of the original gold surface); lapping would be needed to remove the alloy from the block.</p>

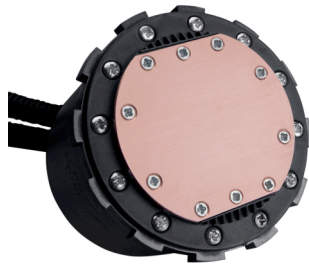


ENERDYNE SOLUTIONS



Thermalright Ultra-120 Extreme CPU Heatsink:

All clamping mechanisms which allow rotation/twisting of the sink after installation. The **Thermalright Venomous-X** may also be incompatible.



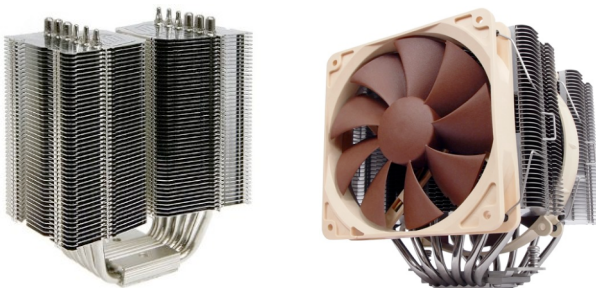
Heat sinks/waterblocks with no spring loading such as the Corsair h50:

Spring clamping mechanisms (compression, clip springs, etc) are required to maintain pressure (on Indigo Xtreme) as bondline thins out during reflow.

Conditionally Compatible Thermal Solutions

Conditions Needed

Large, high convection heat sinks such as the Prolimatech Megahalems and Noctua NH-D14P CPU Coolers:



The reflow time for these large sinks will be significantly longer than what is suggested in the Installation Guide. It is critical to keep all airflow to a minimum during reflow (turn off all fans, seal up the PC chassis, etc.)

Cool solutions for hot problems



ENERDYNE SOLUTIONS

High clamp force blocks such as Heatkiller, EK Supreme and Koolance CPU-360:



When mounting these blocks, there are various clamping pressures determined by the distance of the top of the mounting screw head to the top of the fastener plate. The Watercool Heatkiller install guide refers to this as the screw-in depth:

http://www.watercool.de/_uploads/File/MA_HK30_A5_ENG_.pdf

In general, it is recommended to select a lower clamping force (between 20-40lbs) for these blocks; use a quality caliper to obtain the same screw-in depth on all four spring load bolts (measured between the screw head and fastener plate).

It is not necessary to compensate for the height difference of the Indigo Xtreme alloy “bulge”; simply adjust all bolts to the same depth (before reflow).

Immediately following reflow (before turning on pump and fans), tighten down the (2) bulge side bolts (now loose from reflow) to equal the screw-in depth of the (2) bolts opposite the bulge.