HIGH DENSITY DIE CASTING

HDDC is a process developed by Aavid with its University partners to manufacture near net shape parts with better mechanical and thermal properties compared to die castings.

The process is particularly well suited to making high performance heat sinks and liquid cold plates using aluminum alloys with high thermal conductivity. New process controls during solidification enable fine grain structure with near zero porosity.

3D Shapes of Air Cooled Enclosures

EMBEDDED INSERTS

Aluminum, copper, graphite or other solids with lower CTE than Aluminum can be embedded directly into the part. The process yields a strong mechanical bond with almost no interfacial gap or porosity.

THIN AND HIGH ASPECT RATIO FINS

Smaller minimum enclosure wall thickness, smaller minimum fin spacing, fin thickness and draft angles result in higher cooling fin densities and lighter enclosures.

ENHANCED POST FORMING PROCESSES

Machining without exposing porosity, brazing, and porosity free welding processes enable leak tight complex assemblies. Wet surface finishing processes like anodizing and electroplating can be done without electrolyte retention in surface porosity.