

BOYD

CORPORATION

WWW.BOYDCORP.COM

ENTERPRISE SOLUTIONS

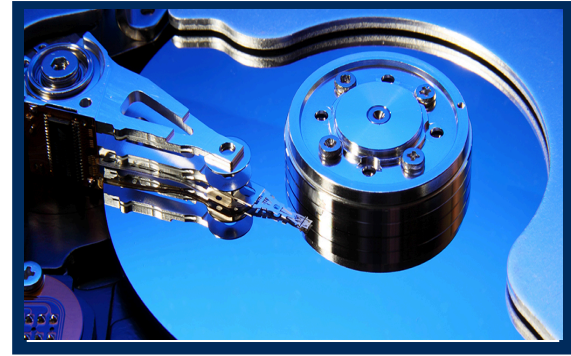
A decorative graphic consisting of several hexagons of varying sizes. The hexagons are colored in a gradient of orange and blue, with some having a horizontal line pattern. They are arranged in a cluster, with some overlapping. The orange hexagons are on the left and bottom, while the blue hexagons are on the right and top.

One Company, Many Solutions

Enterprise Converting Solutions

Boyd is an innovative precision converter with extensive experience in the Enterprise Industry ranging from high-end thermal interface materials to dielectric insulators, EMI shielding, air baffles and ducting, liquid cooling system O-Rings and gaskets.

We turn concepts into components. From design to manufacturing to packaging and logistics, Boyd provides full service solutions that transform your innovative ideas into reality.



Product Development Assistance

Boyd's product development assistance unifies industrial design, engineering and manufacturing to accelerate your time to market. To ensure success, cross-functional teams are assembled from mechanical design, sourcing, manufacturing engineering, quality and production to meet your specific manufacturing challenges. Recognizing that cost and time savings are key to your success, Boyd enhances your product development process from initial investigation through final production.

Quick-Turn Prototyping

Today's marketplace demands compressed product development cycles and swift results. Boyd integrates global access to materials with quick-turn prototyping techniques to accelerate prototype delivery. Same or next day samples often achievable.

Sealing & Protect Solutions

- Air Baffles & Diverters
- Air Duct Gaskets & Filters
- Direct Chip Cooling Gasket Seals
- Electrical Insulators
- EMI Shield & I/O Gaskets
- Enclosure & Door Seals
- Seals for Water & Dust Ingress
- HDD Arm Dampers
- Hoses for Liquid Cooling Systems
- Identification & System Information Labels
- Installation Direction Graphics & Insulators
- LED Crosstalk Management
- Liquid Cold Plate Connector O-Rings
- Noise & Vibration Damping
- Absorption Gaskets
- Thermal Interface Material

Clean Room Capabilities for HDD

Information storage via hard drive is very sensitive to scratches, dust and other environmental issues. Clean room manufacturing ensures nearly pure products with little to no contaminants from Class 100 to Class 100K certified clean environments.

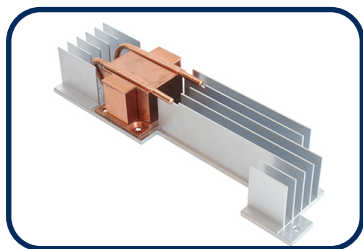
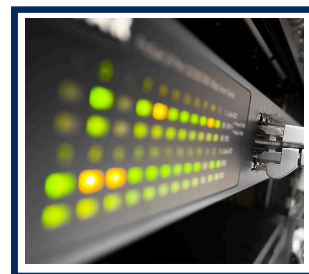
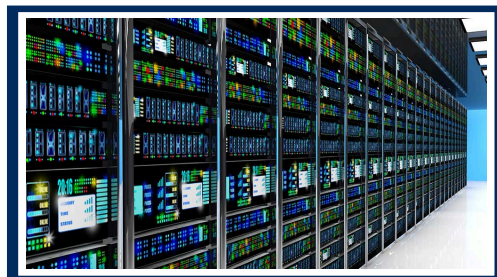
Electrical Insulation for Enterprise

Boyd's Electrical Insulators are designed to manage high levels of electrical energy in harsh settings with excellent dielectric strength and breakdown resistance, helping to extend the lifetime of electrical equipment and reduce electrical failure.

Enterprise Thermal Solutions

Aavid, Thermal Division of Boyd Corporation, provides solutions and services utilizing both traditional cooling systems and breakthrough technologies ranging from standard heat sinks to custom two phase or liquid cooling.

Aavid meets thermal management challenges with solutions that enable cooling for high heat loads with longer lifetime and higher reliability.



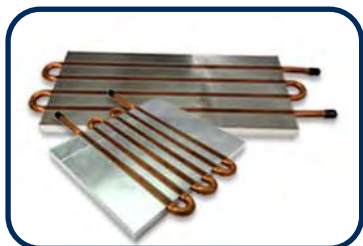
Applications

- Chipset Cooling/CPU
- Networking Fabric/Optical Switch
- Cloud Computing/Hyper Scale
- Edge Routing & Server
- Data Center & High
- Performance Computing
- Node Level Cooling
- Rack Level Cooling



Technologies

- BGA Assemblies
- Heat Pipe Assemblies
- Vapor Chambers
- Liquid Cold Plates
- Thermosiphons
- Heat Exchangers
- Sensors and Controls
- Liquid Cooling Systems



Managing Heat in Enterprise Systems

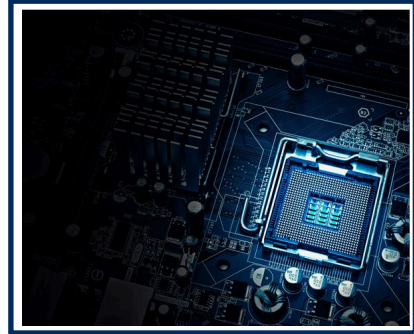
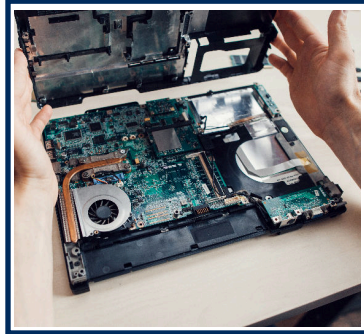
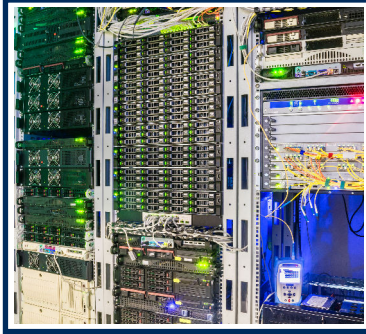
Selecting the proper technology improves performance and enables designers to achieve smaller device size, extend component life and meet reliability standards.

Embedded Heat Pipes & Vapor Chambers

Flexible in design, heat pipe assemblies spread heat throughout the base of a heat sink for heat transfer to cooling systems. Vapor chambers enable more dynamic heat spreading through even construction with heat transferred in more directions than axial heat pipes.

Liquid Cooling & Heat Exchangers

Aavid's innovative liquid cooling systems and highly engineered liquid cold plates enable optimized cooling that is leak-free and highly reliable for high density heat loads. Part of an integrated liquid cooling system, Aavid heat exchangers are manufactured for compact heat transfer and are available in a wide variety of fabrications.



Enterprise Materials & Cooling You Can Count On

Boyd's fully integrated precision converting and thermal management capabilities are from multi-faceted facilities in the US, Asia and Europe, providing competitive solutions for virtually any Enterprise device. **Boyd offers total solutions** with deep material selection expertise, innovative manufacturing technologies and easy-to-integrate production parts with tight tolerances.

Converting and fabrication capabilities include rotary and flatbed precision converting, laser and water jet for quick turn prototyping, laminating, slitting, CNC machining, brazing, welding and other fabrication techniques. Boyd can assist in selecting the most cost-effective material solutions while supporting the design of your solutions within the most comprehensive manufacturing and assembly operations in the industry. The result is reliable, consistent production execution at the highest quality.

Quality & Processing

Boyd's Enterprise production facilities are certified to ISO 9001 quality management and ISO 14001 environmental management specifications with deep knowledge of UL certification requirements - ensuring we exceed specifications and deliver the highest levels of quality products with minimal impact to the environment.

Supply Chain Management

Supply chain and logistics management at Boyd is dynamic and nimble - establishing supply channels and delivery schedules with speed and cost effectiveness to virtually any shipping destination possible. With decades of experience in complex customer value chains, we work seamlessly with your contract manufacturers and tiered supply chain partners helping you optimize your total value chain.

Global Capacity

With production facilities strategically located around the world all certified to ISO 9001 at minimum, Boyd is uniquely positioned to support your Enterprise needs. No matter where you are designing or developing Enterprise products around the world, Boyd is there to support. Boyd offers design assistance, testing and validation, immediate customer service, local warehousing, and just-in-time delivery and logistics services efficiently and in close proximity to your R&D and production locations.

Boyd Enterprise Solutions Facilities

With over 90 years of customer-focused performance, Boyd Corporation has evolved as a market leader in engineered energy management solutions, electronics cooling, materials converting, and optimized product design.

Boyd Shenzhen

Boyd Shenzhen operations, located in Shenzhen, China near Hong Kong, is a co-location facility, housing both precision converting & metal fabrication capabilities, both of which are the best that Boyd and it's Thermal Division, Aavid, have to offer. Boyd Shenzhen serves Asia-Pacific customers as well as Global OEMs' R&D and production facilities with quick-turn prototyping, design assistance, mass production & customer service for precision converted & thermal management solutions with 14 years of experience in the consumer enterprise and industrial industries.



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Boyd Shanghai

In Shanghai, China, Boyd's Thermal Division, Aavid, serves enterprise, consumer & industrial markets with research & development, mass production & quick turn prototyping. Through longstanding experience in supporting the needs of global OEMs, Boyd Shanghai is a leader in Boyd's strong supply chain management, logistics & quality control, providing fast and efficient production with a commitment to excellent customer satisfaction.



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Aavid, Thermal Division of Boyd Corporation New Hampshire

Aavid, Thermal Division of Boyd Corporation, located in New Hampshire, USA, provides design and engineering services for advanced enterprise technologies with a fully dedicated Engineering Design Center. Aavid New Hampshire also houses duplicated mass production technologies to respond to your urgent market needs for domestic production, further enhancing our dynamic & nimble supply chain management support with cost efficient production.



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Boyd Thailand

Boyd Thailand operations, located in Chonburi, Thailand to the East of Bangkok, has more than 2,000 sqm of clean room production areas in Class 100, 10K, to 100K. These clean rooms provide a pristine environment for high quality HDD Dampers which are critical for data storage applications. Boyd Thailand provides high precision stamping components, printed and blank labels, and high complexity precision converting parts for global customers in the enterprise industry.



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Additional Locations

Boyd Corporation facilities that customize, build and ship products specified to the Enterprise industry include Hanoi, Vietnam; Syke, Germany; Bologna, Italy; Bangalore, India; Wuxi, China; Oregon, USA; Laconia NH, USA; Modesto CA, USA. For additional information or to inquire about your Enterprise needs, contact Boyd Corporation directly at customerservice@boydcorp.com or call our general customer support line: +1(888)244-6931 from 6am to 5pm PST.