## Charge Air Cooling Products





### **Thermal-Management Products**

Dana designs, develops, and manufactures innovative charge air cooling solutions. With a variety of styles and cooling methods, Long<sup>®</sup> brand coolers are custom designed to suit your application and package space specifications.



# Quality components customized to your needs.

The charge air cooling market is shifting from air-cooled to liquid-cooled, which plays to Dana technology and product strengths. Long<sup>®</sup> charge air cooler applications include light-duty pickup trucks, personal watercraft, and high-performance vehicles.

All Long 100 percent aluminum components provide unsurpassed durability and value, offer the highest performance and cleanliness for charge air cooler applications, and are completely customized to your specifications.







#### Integrated Stack Plate

- Integrated interior induction system
- Two-pass water side
- · Low profile construction
- Uses low- and/or high-temperature coolant
- · Brazed onto mounting plate

Application: Automotive - Fuel cell, turbo, and supercharger

#### Single-Core/Dual-Core Supercharger Stack Plates

- Single-core design for I-style engines
- Dual-core design for V-style engines
- · Low profile construction
- Uses low- and/or high-temperature coolant
- Integrated into supercharger housing

Application: Automotive - Turbo and supercharger

#### **Stand-Alone Dished Plate**

- Alternating stack plate contains both charge air and cooling fluids
- Unique design maximizes available package space
- · Externally mounted on side of engine

Application: Light-duty pickup truck



#### Stand-Alone Stack Plate

- Externally mounted to top of engine
- · Manifold made of sheet metal or cast aluminum

Application: Personal watercraft

Dana Power Technologies Group

Lisle, Illinois, USA Gravatai, Brazil

Paris, Tennesse Wuxi, China Oakville, Ontario, Canada Neu-Ulm, Germany

Pune, India



For more information, please call 1-888-670-DANA (3262) or visit www.dana.com

#### **Application Policy**

Capacity ratings, features, and specifications vary depending upon the model and type of service. Application approvals must be obtained from Dana; contact your representative for application approval. We reserve the right to change or modify our product specifications, configurations, or dimensions at any time without notice.