



VICTOR REINZ®

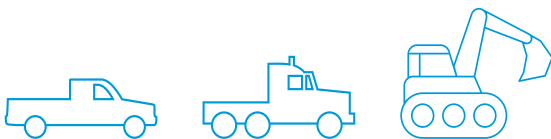
Sealing Products

Composite Bipolar Plates and Seals

Fuel Cell and Energy Storage Components



Ideal for Light Vehicle, Commercial Vehicle, and Off-Highway Vehicle Applications



Delivering Low-Cost Product Solutions for Advanced Fuel Cell Engines

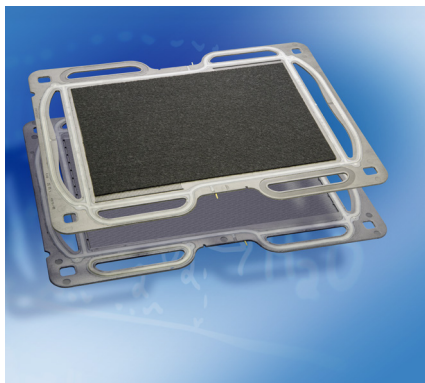
Dana has been precision-molding highly conductive, polymer composite bipolar plates for fuel cell stack developers for several years. In conjunction with high-volume polymer molding expertise, Dana's unique capabilities in ultrathin bonded plate assemblies with integrated seals make us a valuable partner for all your plate and sealing needs.

Applications for Dana's technologies include bipolar plates for polymer electrolyte fuel cell (PEFC) and flow battery energy storage systems, with markets extending to stationary power, industrial mobility, and transportation.

Product Specifications	
Designs	Customized to your project
Materials	Optimized to your design
Conductivity	20 to 50 S/cm
Flexural Strength	45 to 55 MPa
Minimum Plate Thickness	<0.028 in/0.7 mm
Web Thickness	<0.3 mm
Parallelism	<0.038 mm active area
Molded Plate Size	Up to 2,000 cm ²

Features

- Precision-molded graphite-polymer composite plates
- More than 10 years of production experience and proven field reliability
- Adhesively bonded plate modules with mold-in-place seals
- Custom seal design capability



Proven Technologies for Tomorrow's Power Sources

A global leader in the fuel cell market, Dana has the reliable alternative energy technologies that OEMs are looking for – both today and in the future.

Production Supply

Dana operates an established manufacturing facility for serial production of composite fuel cell and flow battery plates, along with integrated seals.

Development Capabilities

Dana works with customers to create customized plate solutions to meet application requirements, while ensuring robust design for manufacturability and low cost. We use customized seal materials and application processes to ensure seal reliability and system compatibility. An extensive materials characterization laboratory - complete with fuel cell testing equipment - is used for these projects.

Technology Development

Our customers benefit from Dana's ongoing technology improvements in plate and seal materials, as well as manufacturing improvements to reduce cost and improve product reliability. The combination of our strategic supplier alliances and in-house capabilities allows Dana to provide product solutions for a wide range of fuel cell and flow battery applications.

Modularity

Dana offers its customers both bonded plate assemblies and optional short-stack modules, each of which features integrated seals.

- Conductively bonded plate assemblies allow internal liquid cooling and improved plate-to-plate conductivity
- Mold-in-place seals and insulators on either side of bonded assemblies for robust stack sealing and simplified stack assembly

Dana.com/Electrified

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.



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