

Get customers
to the future, faster,
from anywhere.

ENNOVI.COM

TM
ENNOVI



Electrification and AI – two powerful megatrends – are reshaping how industries innovate and grow.

From automotive to aerospace, consumer electronics, data storage, industrial, and medical markets, we help our customers achieve these megatrends by creating smarter, safer, and more sustainable solutions.

We excel in developing high-performance, custom solutions that meet diverse technical needs, solve unique challenges, optimize performance, and adapt to evolving market demands.

12	22
Countries	Locations
8	8,000+
R&D Centers	Employees

OUR LOCATIONS

SINGAPORE, HEADQUARTERS

CZECH REPUBLIC
+ PISEK

USA
+ ATTLEBORO, MA
+ CHICAGO, IL
+ FORT LAUDERDALE, FL
+ NORTHVALE, NJ
+ SAN DIEGO, CA

CHINA
+ DALIAN
+ HANGZHOU
+ SHANGHAI
+ SUZHOU

FRANCE
+ BESANCON

GERMANY
+ NECKARSULM

MEXICO
+ GUADALAJARA
+ TIJUANA

INDIA
+ BANGALORE
+ CHENNAI

HUNGARY
+ KUNSZENTMARTON

INDONESIA
+ BATAM

SCOTLAND, UK
+ ARBROATH
+ MOTHERWELL

MALAYSIA
+ PARIT BUNTAR

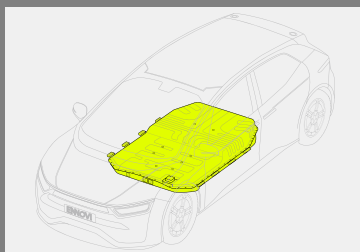




AUTOMOTIVE

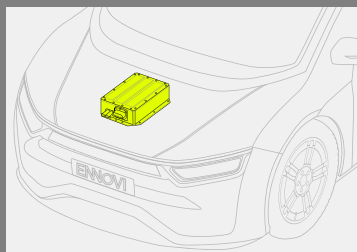
Our portfolio of enabling technologies and targeted solutions addresses the key challenges in electric, hybrid, and ICE mobility. With our in-house R&D, design, prototyping, and tooling services, we have the expertise and commitment to solve complex problems faster, making products with fewer components, materials, and processes, and accelerating the transition from initial prototypes to robust solutions.

ELECTRIC VEHICLES



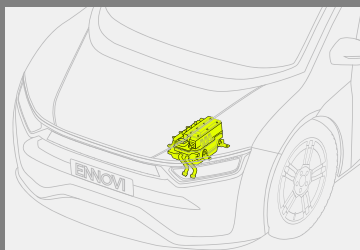
BATTERY PACK

- + Cell Contacting System (Cylindrical), ENNOVI-CellConnect-Round
- + Cell Contacting System (Prismatic), ENNOVI-CellConnect-Prism
- + Cell Contacting System (Pouch), ENNOVI-CellConnect-Pouch
- + High-Voltage Extruded Busbar
- + Enclosures & Cell Components



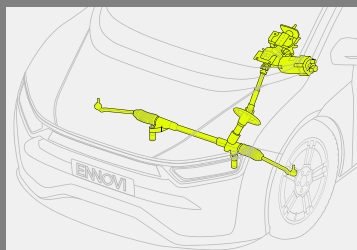
ON-BOARD CHARGER

- + High Power Connector
- + Power Busbar PCB Connector, ENNOVI-BusMate



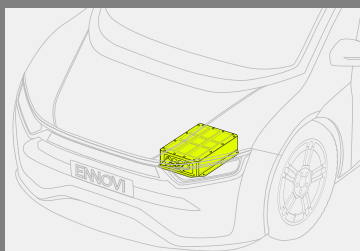
INVERTER

- + AC & DC Molded Busbar
- + Flexible Busbar
- + High Power Connector
- + Phase Busbar
- + Power Busbar PCB Connector, ENNOVI-BusMate
- + Power Filter Module
- + Power Module Housing & Lead Frame



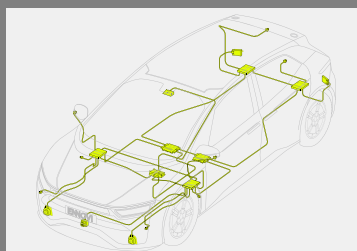
ELECTRIC POWER STEERING

- + Motor Stator Busbar
- + Multi-Row Board-to-Board Connector
- + Power Busbar PCB Connector, ENNOVI-BusMate
- + Power Filter Module



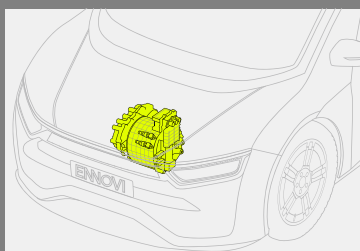
CONVERTER

- + AC & DC Molded Busbar
- + High Power Connector
- + Power Busbar PCB Connector, ENNOVI-BusMate
- + Power Module Housing & Lead Frame



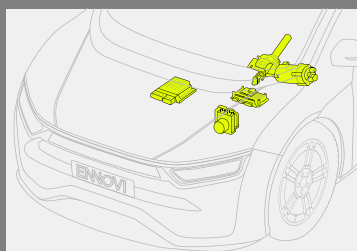
SENSOR

- + Automotive Ethernet Connector, ENNOVI-Net
- + LiDAR Interconnect
- + Radar Interconnect



ELECTRIC TRACTION MOTOR

- + Flexible Busbar
- + Motor Stator Busbar
- + Phase Busbar



CONTROLLER

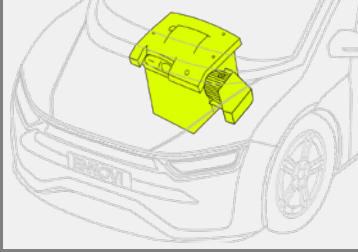
- + Automotive Ethernet Connector, ENNOVI-Net
- + High-Pin-Count Solutions

LEARN MORE ABOUT
OUR SOLUTIONS FOR
ELECTRIC VEHICLES



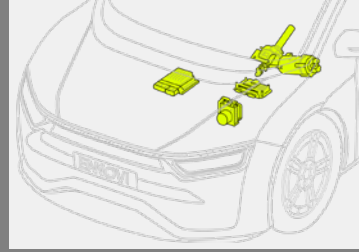


HYBRID VEHICLES



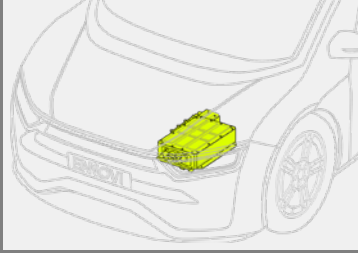
48V BELT STARTER GENERATOR

- + Power Module Housing & Lead Frame
- + High Power Connector
- + Low Voltage Connector



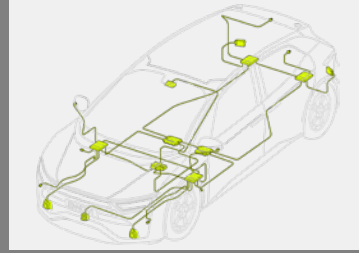
CONTROLLER

- + Automotive Ethernet Connector, ENNOVI-Net
- + High-Pin-Count Solutions



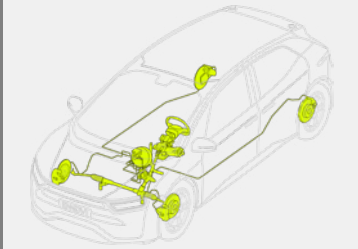
CONVERTER / INVERTER

- + AC & DC Molded Busbar
- + High Power Connector
- + Low Voltage Connector
- + Power Busbar PCB Connector, ENNOVI-BusMate
- + Power Module Housing & Lead Frame



SENSOR

- + Automotive Ethernet Connector, ENNOVI-Net
- + LiDAR Interconnect
- + Radar Interconnect



STEERING & BRAKING

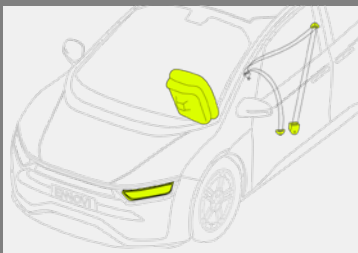
- + High-Pin-Count Solutions
- + Low Voltage Connector
- + Motor Stator Busbar
- + Multi-Row Board-to-Board Connector
- + Power Busbar PCB Connector, ENNOVI-BusMate
- + Power Filter Module

LEARN MORE ABOUT
OUR SOLUTIONS FOR
HYBRID VEHICLES



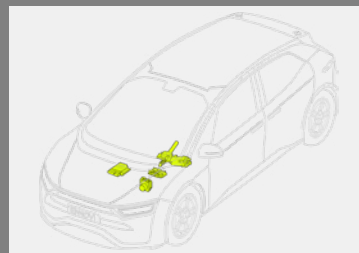
ICE VEHICLES

We customize solutions such as board-to-board connectors, busbars, enclosures, power connectors, and lead frames across various systems and applications in the ICE vehicle.



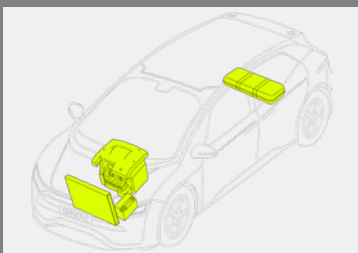
SAFETY

- + Airbag System
- + Brake Booster
- + Electronic Stability Program (ESP)
- + Headlight
- + Light Control ECU
- + On-board Diagnostics Hardware
- + Seat Belt
- + Tire Pressure Monitoring System



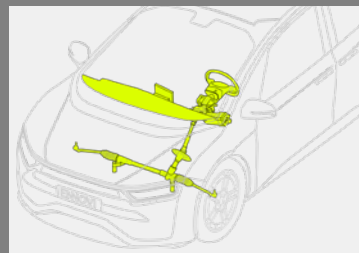
PASSENGER COMFORT AND ACCESS

- + Air-conditioning System
- + Door Handle and Lock
- + Window
- + Seat
- + Trunk
- + Windshield Wiper System



POWERTRAIN

- + Converter/Inverter
- + Engine Cam Drive Mechanism
- + Engine Cooling System
- + Engine Intake Manifold
- + Engine Valvetrain
- + Exhaust System
- + Fuel Injection System
- + Fuse and Relay Box
- + Ignition Circuit
- + Powertrain Control Module
- + Start Stop System
- + Transmission



INFOTAINMENT

- + Entertainment Systems
- + Information Systems and Displays

STEERING

- + Electric Power Steering
- + Steering Column

LEARN MORE ABOUT
OUR SOLUTIONS
FOR ICE VEHICLES





AEROSPACE



APPLICATIONS

COMMERCIAL AIRCRAFT

- + Jet engine
- + Electric power system

eVTOL & HYBRID AIRCRAFT

- + Electric power system
- + Battery system

Driving the future of electrification, we enable advanced air mobility through uncompromising safety, traceability, and quality across every phase, from concept to takeoff.

WHY US?

MASTERY IN HIGH-STRENGTH ALLOYS

- + Expertise in stamping and deep drawing of challenging materials.
- + Capability to achieve complex geometries without tearing or cracking.
- + From ultra-thin (<0.08 mm) heat shields to micro-sized terminals, we deliver consistent tolerances.

RELIABILITY IN EXTREME CONDITIONS

- + Components engineered to withstand vibration, dynamic loads, and extreme thermal exposure.
- + Robust process controls to guarantee safety and reliability in mission-critical systems.

QUALITY ASSURED FROM START TO FINISH

- + Strict aerospace-grade standards embedded into every stage.
- + High mix, low volume expertise aligned with aerospace supply chain needs.
- + Proven track record delivering consistent quality.

SOLUTIONS

MECHANICAL

- + Back plate
- + Cup
- + Clamp
- + Damper
- + Heat shield

POWER

- + Busbar

TERMINALS

- + Terminal

CAPABILITIES

- + Deep Drawing
- + Stamping
- + Plating

LEARN MORE ABOUT
OUR AEROSPACE
SOLUTIONS





CONSUMER ELECTRONICS



APPLICATIONS

SMART PHONE

- + Button & key
- + Charging port flex cable
- + Mainboard

SMART WATCH

- + Antenna
- + Battery
- + Circuit board
- + Flex cable
- + Knob
- + Taptic engine

SMART TABLET

- + Mainboard
- + Dual speaker

We are your end-to-end partner in developing solutions to accelerate consumer technology trends and AI-powered smart devices that shape everyday living.

WHY US?

DIGITALLY MANAGED, INTEGRATED PRODUCTION LINES

- + Achieve faster cycle times, reduced labor, and lower overall costs.
- + Ensure consistent, high-quality output across all component types.

EFFICIENCY-DRIVEN INNOVATION

- + In-die welding integrated with stamping boosts production efficiency by up to 100%.
- + Reduce labor requirements by up to 60%.

VERSATILITY ACROSS COMPONENT TYPES

- + Expertise across brackets, clips, cowlings, hooks, gaskets, pads, and springs.
- + Provide complete solutions under one roof.

SOLUTIONS

MECHANICAL

- + Bracket
- + Clip
- + Cowling
- + Hook
- + Metal Gasket
- + Spring

ELECTRO-MECHANICAL

- + Pad
- + Spring

CAPABILITIES

- + Cold Forging
- + In-die Welding
- + Insert Molding
- + Lamination
- + Laser Welding
- + Plating
- + Stamping

LEARN MORE ABOUT OUR
CONSUMER ELECTRONICS
SOLUTIONS



DATA STORAGE



APPLICATIONS

HARD DISK DRIVE SOLUTIONS

We support the digital infrastructure revolution, empowering AI data capacity through precision-manufactured components for next-gen data storage systems, from cloud to edge.

WHY US?

PRECISION, RELIABILITY & EFFICIENCY-DRIVEN INNOVATION

- + Mastery of cold forging progressive stamping, which has excellent raw material utilization.
- + Liquid forging to achieve pore-free and structurally robust components.
- + Proven capability to overcome challenges such as resonance and leakage by delivering tight flatness control, dimensional consistency, and high repeatability.

SURFACE FINISHING SPECIALIST

- + Proprietary electroless nickel plating chemistry that outperforms cleanliness requirements.
- + Proven track record solving industry-wide contamination issues.

COLLABORATIVE ENGINEERING SUPPORT

- + Early design engagement with customers to enhance designs, such as reducing part count.
- + Optimize manufacturability to achieve material, time or cost savings.
- + Simulation, prototyping, and validation ensure fast resolution of engineering challenges.

SOLUTIONS

MECHANICAL

- + Disk Clamp
- + Disk Separator Plate
- + Flex Bracket
- + Hard Disk Drive Cover
- + Shroud
- + Voice Coil Motor Yoke

CAPABILITIES

- + Precision CNC Machining
- + Liquid Forging
- + Cold Forging Progressive Stamping
- + Surface Treatment (Plating)

VALUE-ADDED CAPABILITIES

- + Early-stage design support
- + Simulation and analysis of product & process
- + Prototype development and validation

LEARN MORE ABOUT
OUR DATA STORAGE
SOLUTIONS



INDUSTRIAL



ENNOVI

APPLICATIONS

INDUSTRIAL AUTOMATION & ROBOTICS

- + Industrial automation
- + Logistic storage system
- + Power tool
- + Robotics (autonomous mobile robots)

ENERGY STORAGE SYSTEM

- + Battery management system
- + Battery storage system
- + EV charger
- + Inverter

Your partner in shaping the future of automation, robotics, and energy storage systems, enabling OEMs to achieve AI-powered manufacturing for Industry 4.0.

WHY US?

INDUSTRIAL AUTOMATION & ROBOTICS PERFORMANCE-DRIVEN DESIGN

- + Optimized interconnects that reduce cost, complexity, and assembly time.
- + Thermal management features that ensure safe, efficient energy transfer.

INNOVATION FOR SMART TECHNOLOGIES

- + Signal and power interconnects for IoT-ready tools and AI-driven robots.
- + Integration-ready designs that support smart ecosystems and predictive maintenance.

ENERGY STORAGE SYSTEM DE-RISKED, LOCALIZED SUPPLY CHAINS

- + Regional manufacturing and dual sourcing strategies reduce dependency on single suppliers.
- + Global footprint with agile logistics ensures supply continuity and scalability.

COMPLIANCE & FUTURE-PROOFING

- + Components engineered to meet Global Battery Regulation.
- + Full documentation, traceability, and lifecycle data for battery passports and regulatory audits.

SOLUTIONS

MECHANICAL

- + Radar housing
- + Smart shelf housing

POWER

- + Busbar
- + Battery connector
- + Charging connector
- + Lead frame
- + Power connector

CAPABILITIES

- + Insert Molding
- + Lamination
- + Laser Welding
- + Plating
- + Stamping

LEARN MORE ABOUT
OUR INDUSTRIAL
SOLUTIONS



MEDICAL



APPLICATIONS

DIABETES MONITORING
+ Continuous glucose monitoring
+ Wearable

DIAGNOSTIC / THERAPEUTIC (CLASS II) DEVICE
+ Point of care
+ Durable medical equipment

MINIMALLY INVASIVE DEVICE
+ Point of care
+ Disposables

We are your end-to-end customized solutions partner, empowering OEMs to harness AI-driven technologies and accelerate innovation for medical devices.

WHY US?

PROVEN RELIABILITY AT SCALE

+ Over 500 million medical-grade contacts produced, demonstrating ENNOVI's ability to deliver consistent quality at high volumes.

INNOVATION WITH SAFETY & COMPLIANCE

+ Global leader in continuous glucose monitoring introducer needles, co-developing the world's most successful product line.
+ Established track record supporting mission-critical devices with repeatable precision while maintaining medical-grade performance.

CONSISTENCY THROUGH PRECISION

+ Controlled processes ensure dimensional accuracy, surface integrity, and repeatable quality for small, complex parts.
+ Integration of high-precision tooling and plating processes guarantees reliability across applications.

SOLUTIONS

INJECTION NEEDLE

+ Needle

MECHANICAL

+ Blade
+ Clip
+ Contact
+ Heater / tub plate
+ Shield
+ Water chamber

CONNECTOR

+ Diagnostic sensor connector
+ Test strip port connector

CABLE ASSEMBLY

+ Cable interconnect

CAPABILITIES

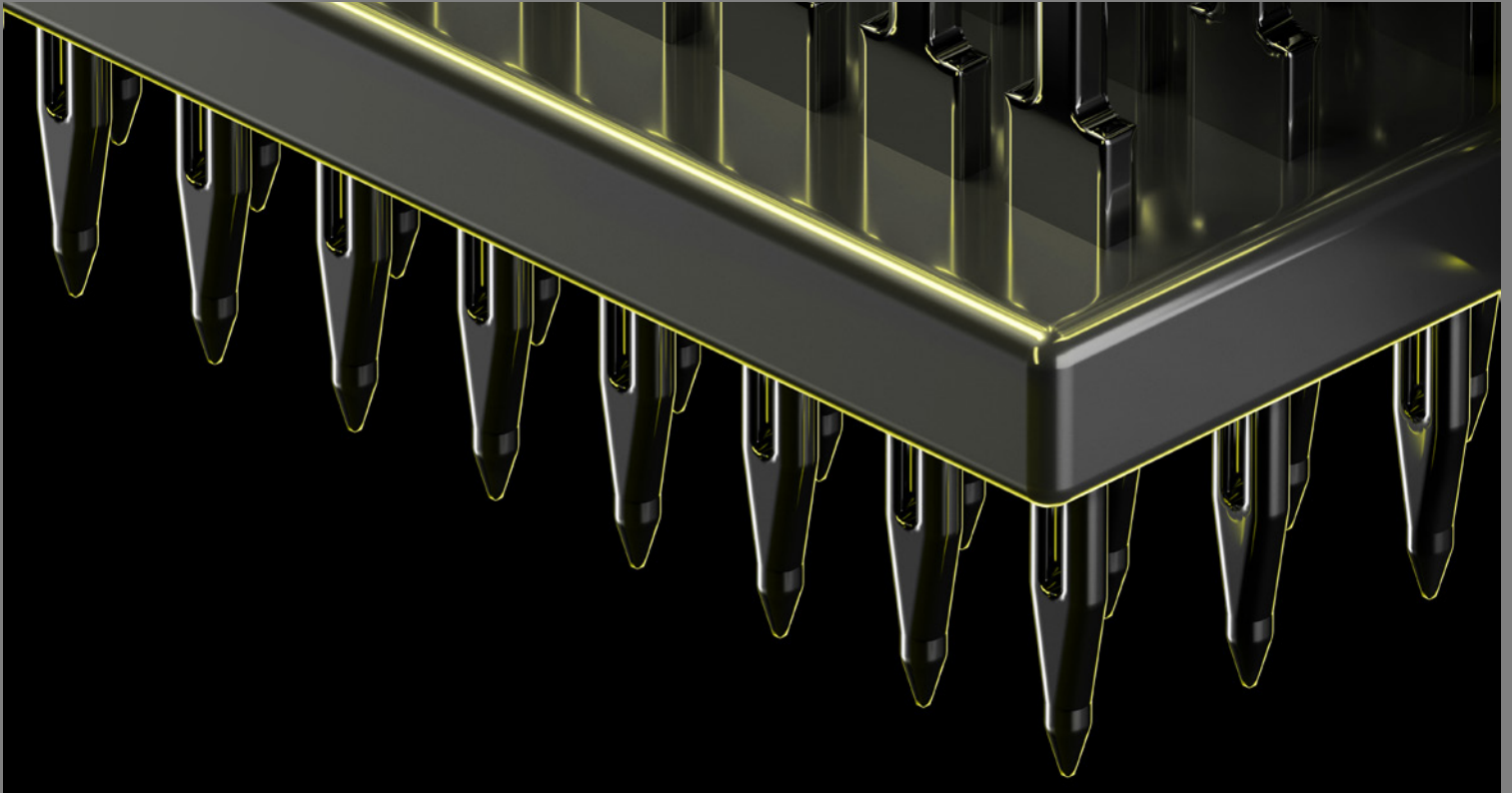
+ Chemical Etching
+ High-precision Stamping
+ Insert Molding
+ Machining
+ Plating

LEARN MORE ABOUT
OUR MEDICAL
SOLUTIONS





At ENNOVI, we empower OEMs and suppliers to harness AI and drive electrification through customized interconnect solutions. Leveraging our proven technologies, talent and global footprint, we deliver the flexibility, speed and innovation needed to create smarter, safer, and more sustainable products.



ADHESIVE-FREE LAMINATION TECHNOLOGY

Lamination without adhesives.



LAMINATION TECHNOLOGY

Comprehensive database of lamination foils and methods.



FLEXIBLE DIE-CUT CIRCUIT (FDC) TECHNOLOGY

Cost-efficient wiring option.



BUSBAR EXTRUSION TECHNOLOGY

High-voltage rigid extruded busbar for battery packs.



BUSBAR SEALING TECHNOLOGY

Shrinking method for sealing busbars to prevent leakage.



MODULAR SNAP-IN BISCUIT TECHNOLOGY
Connector units can be snapped together without solder.



PRESS-FIT TECHNOLOGY

Solderless interconnect with 10 times greater reliability.



WHISKER MITIGATION PLATING TECHNOLOGY

IndiCoat™ helps mitigate tin whiskers, which pose electrical reliability risks.



Our global-reach-and-local-engagement model includes multiple R&D and production facilities with extensive capabilities and certifications.

NUMBER OF SITES HOLDING CERTIFICATES

Our facilities are certified to various standards:

- ISO 9001:2015
- AS 9100:2016
- IATF 16949:2016
- ISO 13485:2016
- ISO 14554-1:2013
- ISO 17025:2017
- ISO 3834-2:2005
- ISO 45001:2018
- ISO 14001:2015
- ISO 27000:2013

QUALITY

ISO 9001	31
IATF 16949	25
ISO 13485	7
AS 9100	1

SOCIAL & ENVIRONMENTAL RESPONSIBILITIES

ISO 14001	21
ISO 45001	6
ISO-IEC 27000	1

WELDING PROCESS CONTROLS

ISO 3834-2:2005	3
ISO-IEC 14554-1:2013	1

LABORATORIES

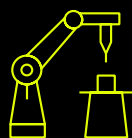
ISO/IE 17025	3
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VIEW OUR STANDARDS & CERTIFICATIONS



R&D CAPABILITIES

- + Additive Manufacturing
- + Design Services
- + Metallurgical Laboratory
- + Product and Technology Development
- + Plating R&D
- + Precision Tool and Die Design and Manufacturing
- + Prototype Excellence Center
- + Sheet Metal Fabrication Center



MANUFACTURING CAPABILITIES

- + Cold Forging
- + Cold Forging Progressive Stamping
- + Deep Drawing
- + Die Casting
- + Diffusion Bonding
- + Chemical Etching
- + Lamination
- + Liquid Forging
- + Molding
 - o Silicone Molding
 - o Overmolding
 - o Insert Molding
- + Plating
 - o IndiCoat™ Whisker Mitigation Plating (patented)
- + Potting
- + Precision Stamping
 - o Reel-to-reel Stamping
 - o Chemical Panel Stamping
- + Precision Machining
- + Welding
 - o Green Laser Welding
 - o Ultrasonic Welding
 - o Laser Welding



TESTING & VALIDATION CAPABILITIES

- + Functional Testing
 - o Hi-Pot
 - o Contact Pressure
 - o Automated Vision Inspection
- + Laboratory Testing
 - o Micro Contamination
 - o Environmental

DISCOVER OUR CAPABILITIES



ENNOVI™

Our commitment to sustainability is evident in the values that drive our global operations.



We have been awarded the **EcoVadis Platinum Rating** every year since 2021.



VISIT [ENNOVI.COM](https://www.ennovi.com)
FOR MORE DETAILS

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