



## Powertrain

Always focused on the continuous changes of modern mobility, Magna's powertrain group is more than well prepared to meet all the propulsion needs of our customers for today and tomorrow. With our broad and innovative electrification portfolio, we are setting new benchmarks. In fact, we have entered into strategic joint ventures with LG Electronics and Hasco to accelerate both partner's growth in the electric powertrain market.

Magna's powertrain group is an operating unit of Magna International and a long-term premier supplier for the global automotive industry with full capability in game-changing powertrain design, development, testing and manufacturing.

As one of the world's largest suppliers of transmission and all-wheel drive systems, as well as powertrain subsystems and transmission components for passenger cars and light commercial vehicles, we have a unique market position. Our innovations contribute to the overall performance of the vehicle, always pushing to the next level of CO2 emissions reductions, best-in-class efficiency, safety, comfort and driving fun.

For our full range of products and capabilities visit: [magna.com](http://magna.com)

TRANSMISSION SYSTEMS  
DRIVELINE SYSTEMS  
METAL-FORMING SOLUTIONS  
ENGINEERING SERVICES

### Customer Base

Aisin, Alfa Romeo, Allison Transmission, AMG, Audi, BMW, Brilliance Auto, Chang'an, Chery, CMC, Daimler, Dongfeng, FAW, Ferrari, Fiat, Ford Motor Company, Foton, Geely Group, General Motors, Great Wall, Honda, Hyundai, Jaguar, Jatco, JMC, Land Rover, Leopard, Mazda, Mercedes-Benz, Mitsubishi, NEVS, NEXTEV, Nissan, Porsche, Proton, Qoros, Renault, Samsung, Scania, Seat, Skoda, Smart, Soueast Motor, SsangYong, Stellantis, Suzuki, Tata Motors, Toyota, Volkswagen Group, Volvo Car, WIA, ZF and their respective operating divisions and subsidiaries.

# Powertrain

## Capabilities

### Transmission Systems & Driveline Systems

- Battery Electric Systems
  - Highly Integrated eDrive Systems
  - E-motors
  - Inverters
  - On-Board Chargers
  - eDrive Transmissions
- High-Voltage Hybrid Systems
  - Dedicated Hybrid Transmissions
  - Highly Integrated eDrive Systems
- Mild Hybrid Systems
  - Hybrid Dual-Clutch Transmissions
- Conventional Drivetrains
  - Dual-Clutch Transmissions
  - AWD/4WD Systems
  - Manual Transmissions

### Metal-Forming Solutions

- eClutch Products
  - eCoupling & eBrake
- Lightweight Aluminum Products
  - Inverter & Battery Covers, Clutch Housings, Oil Pans
- High Precision Metal Forming & Cutting Products
  - Carriers, Clutch Modules, Housings, Gears, Stampings
- Engine Drive Plates & Accessories
  - Drive Plates, Flex Plates

### Engineering Services

- Engine & Hybrid System Engineering
- Vehicle Engineering
- Simulation Services
- Technical Application Software & Support
- Vehicle Prototyping & Testing
- Full Range of Testing Services
  - Engine Testing, High Altitude & Climate Test Bench
  - 4WD Chassis Dynamometer
  - Fatigue Testing Services
  - Proving Ground



## Innovations

### etelligentDrive™

From mild hybrids to pure electric drive: Magna Powertrain is the adaptive partner for all electrified powertrain systems. With our innovative technologies, we drive the transformation in the automotive industry towards electrification.

### Master Complexity

#### With etelligent Dedicated Hybrid Solutions

Increasing electric power in hybrid transmissions enables the e-motor to be the dominant propulsion source. This allows for significantly simplifying the transmission design, primarily by reducing the number of gears. This so-called dedicated hybrid transmission (DHT) strongly contributes with best-in-class (BIC) electrical peak power to smaller package and reduced weight, leading to BIC torque-over-weight ratio and efficiency. BIC etelligent Launch will increase potential acceleration from standstill by improved traction limit.

### eDrive Systems

Our modular and scalable eDrive Systems for hybrid and battery electric vehicles are providing up to 250 kW peak power and are optimized for best-in-class efficiency. We are designing and optimizing gearbox, e-machine and inverter as an integrated system, thus providing best-in-class package and weight properties. The optional eDS features, clutch-based torque vectoring and mechanical decoupling are deeply integrated and piloted by the inverter via Magna's dedicated functional software & controls enabling best-in-class safety and dynamics without compromising efficiency.

### Aluminum Oil Pans & Covers

The Metal-Forming Solution group has developed eClutch technologies that eliminate the need for hydraulic, friction plate clutches in hybrid and EV transmissions. Using electric coil modules to connect and disconnect the powerflow reduces weight, simplifies transmission architecture, and improves CO2 reduction by reducing parasitic drag. Magna continues to advance the eClutch line with new products such as the eSelectable Brake and Rotating eCoupling, both key enablers for transmission hybridization.