SHAPING A BETTER FUTURE Special Feature

CASE

At present, the automotive industry is facing a so-called once-in-a-century drastic changes, with CASE, which stands for Connected, Autonomous, Shared, and Electric, said to be the future trend and growth market within the industry.

JTEKT is promoting specific and advanced initiatives in this area, focusing mainly on autonomous driving and vehicle electrification.

Basic Concept and Aim of CASE

JTEKT is expanding its technologies and products supporting new innovations, mainly related to autonomous driving and vehicle electrification, such as integrated control systems for autonomous driving and E-AWD, while at the same engaging in the creation of new businesses in preparation for fewer vehicles due to sharing and other factors.

Autonomous Steering Participation in the Ministry of Economy, Trade and Industry (METI) nextgeneration logistics system project Participation in Cross-ministerial Strategic Innovation Promotion Program (SIP) Steering Established J-QuAD DYNAMICS Inc.

Steering

Collaborations with venture companies

Steering

Development of Linkless Steer-by-Wire System

Shared

New

Power Assist Suit "J-PAS"

New

"Factory agent" cloud service for matching manufacturers

Electric Assist & Training "Walker"



Connected

Steering

E-safety Vehicle Intrusion proTected Applications (EVITA) compatible system development

Driveline

E-AWD*1 system development

Bearing

Small-type SBB for motors and reducers For high-speed rotation usage, a quietnessimproved ball bearing

Electric

Volume production of equipment for battery

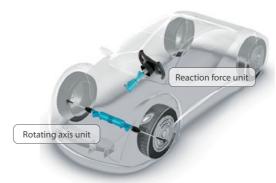
Kneading machine-Coating machine-Press machine-Electrode drying machine (Koyo Thermo Systems Co., Ltd.)

1. Electric-All Wheel Drive: A four-wheel drive system equipped with a motor drive device that does away with mechanical drive force transmission for the front and rear wheels

Machine tools

Specific Examples of CASE Businesses

Linkless Steer-by-Wire System Development



JTEKT's next-generation steering system, the steer-by-wire system*2, transmits steering wheel operations to the steering unit using electrical signals, improving vehicle responsiveness and feedback on road surface information, thereby realizing comfortable driving. Furthermore, we will provide safety and security through the realization of autonomous driving and advanced driving support, contributing to a "zero" traffic accident society.

2. A mechanism that transmits the rotation of the steering wheel to the tire electronically rather than mechanically

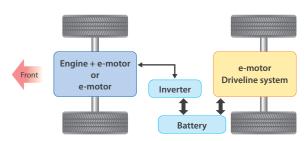
Contributing to Vehicle Electrification with Motor and **Reducer Performance Improvements**





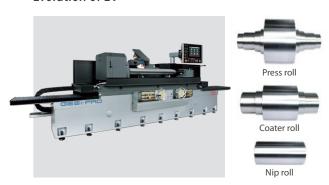
To support vehicle electrification, we are promoting the development of bearings leveraging JTEKT technologies. We are enhancing support for vehicle electrification with the realization of a bearing that enables high-speed motor rotation and improves creep resistance, corrosion resistance, and silence. Going forward, we will continue contributing to the sustainability of society through the promotion of new products in response to needs and issues.

Expanding Our Lineup of E-AWD and Other **Driveline Products for Vehicle Electrification**



The advance of vehicle electrification requires the development of traditional 4WD engine drivelines as well as a variety of AWD systems. To this end, we are drawing on our strengths to promote the development of driveline products for vehicle electrification. Examples of these include the development of an electric oil pump (EOP) for motor cooling that utilizes hydraulic control technology and the development of a high-efficiency constant velocity joint (CVJ) that is both quiet and environmentally friendly. In addition, we are aiming for the practical application of an E-AWD system utilizing a technology for 4WD front / rear right / left torque distribution. Going forward, we will continue to create products that are environmentally friendly and contribute to safe car performance.

High-Accuracy Grinder Technologies Accelerating the **Evolution of EV**



TOYODA grinder high-accuracy processing technologies accumulated in monozukuri (building excellent products) throughout all industries have generated high-performance rolls that produce lithium-ion electrode foil.

JTEKT will continue to respond to rapid increases in demand for automotive batteries with Only One technology.