

EV

ELECTRIC VEHICLE

Special Feature

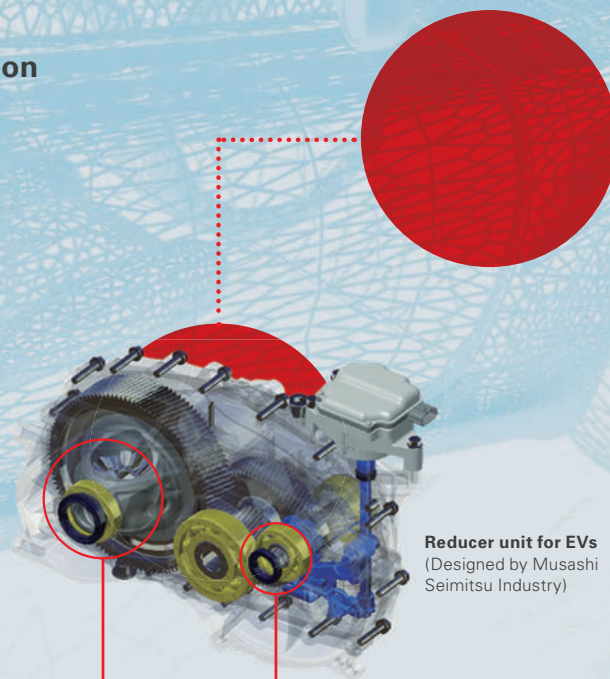
Playing a Leading Role in the Era of Electrification

1 Differential assemblies and reduction gears as key devices for EVs

The EV market is growing rapidly.

The development race is becoming fierce globally, which is leading to car makers increasingly outsourcing operations. An increase in new manufacturers entering the market, an increase in new development projects, shorter development cycles, and other changes have also created new opportunities for us to make inroads. Gears used for differential assemblies and speed reducers, which are our mainstay products, also play an important role in EVs, so demand for these parts is expected to increase.

In this trend, the technologies and knowledge that we have accumulated over many years as a manufacturer specialized in gears for vehicles are our great advantage in the era of electrification. We also work on the development of reducer units for EVs that combine the differential assemblies and reduction gears, aiming for another leap forward based on key devices in the EV era.



Reducer unit for EVs
(Designed by Musashi Seimitsu Industry)



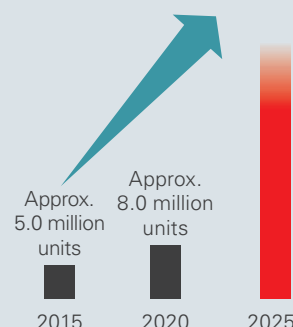
Differential assembly



Reduction gear

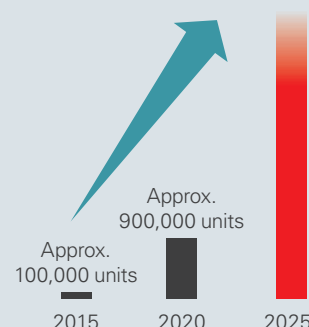
A differential assembly is a differential gear arrangement that receives torque from the engine via the input shaft and directs it to two output shafts (on the right and left wheels) with an applicable difference in revolutions. This device must be very strong and durable because the torque that moves the automobile which weighs more than

one ton is applied to the palm-sized gear.



A reduction gear is a mechanical system that converts the high rotational speed of the motor to a safe and comfortable driving speed. Differences in the reduction ratio affect the performance of an automobile, including acceleration and range. We are working vigorously to improve technologies to reduce gear noise and

weight and to achieve other targets.



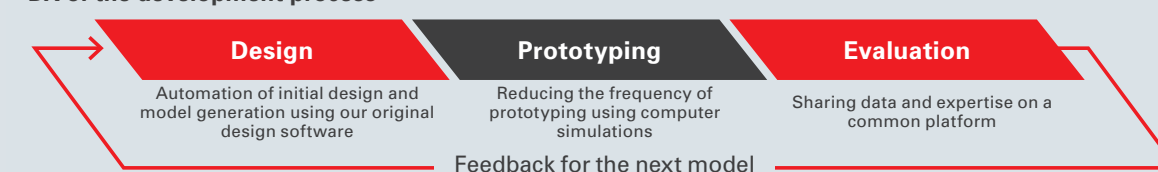
Intensive investment since the 2008 global financial crisis in anticipation of electrification

At Musashi Global Center, which was established in 2008, we have been working on the development of high-performance, affordable Powertrain parts in anticipation of the arrival of the electrification era. One of the great achievements from these efforts is the commercialization of our proprietary differential assembly.

2 Greater opportunities created by accelerating development

We have been working on the digital transformation (DX) of the development process. While development process used to involve many elements that are dependent on individual skills, we have consolidated knowledge through

DX of the development process



3 World's best technologies for the optimization of transmission functionality

Compact & Lightweight High-Strength Quiet

EVs are heavy partly because of the battery. This makes it more important than ever to use compact, lightweight parts. In addition, gears used in EVs must be very strong and quiet while driving due to the characteristics of EVs' motors.

We are pursuing the optimization of transmission functionality, which is our core technology. We cater to high-level customer needs using the world's best technologies, including technologies for the realization of the ideal tooth profile for specific gears, highly efficient processing technologies leveraging our integrated manufacturing system, and technologies based on our digital platform that enable outstanding development speed.



POINT

- 1 Differential assemblies and reduction gears as key devices for EVs
- 2 Greater opportunities created by accelerating development
- 3 World's best technologies for the optimization of transmission functionality
- 4 Capable of supplying products locally to customers all over the world

the introduction of a digital platform. This has enabled us to improve the efficiency and speed of the process.

Because the development period for EVs is short, suppliers must also maintain an unprecedented development speed. We have established an advanced development system leveraging digital technologies. Using this system, we are able to cater to increasingly sophisticated customer needs and seize opportunities to expand our business.

4 Capable of supplying products locally to customers all over the world



Our global production and sales network with its integrated manufacturing system is one of our greatest advantages. It is unrivaled by other companies. The continued evolution of our existing infrastructure enables us to deliver products to customers all over the world from our local bases even as electrification progresses.

