

INTRODUCING CORE PRODUCTS

Reducing environmental impact and enhancing safety are two universal requirements of the automotive industry. Since its founding as a company manufacturing automotive brake components, Nissin Kogyo has been engaged in research and development activities to satisfy these requirements by leveraging the advanced technologies it has amassed, including aluminum casting and processing technologies, and braking system control technologies.

By making use of its strengths in aluminum casting and processing technologies to deliver lightweight and compact products, Nissin Kogyo has been improving automotive fuel efficiency and contributing to reducing the environmental impact of automobiles by reducing CO₂ emissions. The Company is also making use of another strength, its braking system control technologies, to contribute to the ongoing development of highly intelligent braking systems, and thereby to driving safety and comfort.

Matched precisely to the needs of the current era, Nissin Kogyo's products are finding favor with the Company's customers, automobile manufacturers.

New Adoptions of Our Products

Through its aluminum weight reduction technology and its braking system technology, Nissin Kogyo makes considerable contributions to motorized society in terms of both environment and safety.

Four-wheeled Vehicle Business

The new hybrid car, the Honda Insight, launched in February 2009, has adopted brake products and aluminum products that utilize Nissin Kogyo core technology. Hybrid cars, which are not only safe and comfortable, but also environmentally friendly, have multiple power sources (gasoline engine + electric motor). Considering their superior fuel efficiency and their contribution to reducing CO₂ emissions, demand for these cars is expected to continue growing.



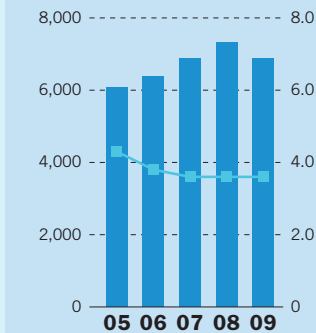
Motorcycle Business

The popular European motorcycle maker Triumph Motorcycles Ltd has adopted single-mold body disc brake calipers. Compared with the two-piece structure they used up until now, more advanced processing technology is required but because they are compact, lightweight and highly rigid, the vehicles adopting this product are expected to expand.



R&D EXPENDITURES/ RATIO TO NET SALES

(¥ millions/%)



■ R&D Expenditures (left scale)
■ Ratio to Net Sales (right scale)

Research and Development Activities

The Nissin Kogyo Group constantly strives to keep one step ahead of changes in the world by conducting research and development activities in order to create new product families that can contribute to safety and the environment while meeting the needs of customers and society.

We aim to raise the levels of safety and comfort and to reduce weight, for motorcycles and four-wheeled vehicles. Placing importance on basic brake and mechatronics automated control system development, aluminum-based weight reduction design technology, materials development and manufacturing process technology development, we are steering research and development in a direction that will facilitate production on a global scale. We are also working jointly with dedicated automakers to develop full braking systems.

Nissin Kogyo's development division is the key driver of the Group's research and development. R&D expenditures in the year under review were ¥6,884 million.

Introducing Core Products

NK15 SERIES

▶ Produced in: Japan



Nissin Kogyo developed the NK15 series brake system specifically for hybrid vehicles. This system adjusts the hydraulic brake volume according to the change in the regenerative brake volume when the brake is operated. The NK15 series has been adopted for use in Honda Motor's Civic Hybrid vehicle.

VSA

▶ Produced in: Japan, the U.S. and China



The Company's VSA (vehicle stability assist) system helps maintain the stability of a vehicle by preventing skidding. The system applies the brakes automatically when the vehicle is cornering if a sensor detects the vehicle is losing stability.

EPB (ELECTRONIC PARKING BRAKE)

▶ Produced in: Japan



The EPB makes driving less of a chore by allowing smooth hill starts and eliminating those times when you forget to disengage the parking brake lever. Mass production has been underway since December 2008 and its adoption is expected to expand.

ALUMINUM ENGINE MOUNT BRACKET

▶ Produced in: Japan, the U.S., China and Thailand



The engine mount bracket is used when attaching the engine to the vehicle chassis. This part was previously made from pressed steel, but in recent years it has been made from aluminum instead of steel to make the part more lightweight, more recyclable and to improve driving comfort.

MOTORCYCLE DISC BRAKES

▶ Produced in: Japan, the U.S., China and other parts of Asia, South America



The motorcycle disc brake operates by pinching a rotating disc together with the front wheel between friction pads.

The Nissin Kogyo Group holds the world's top share in master cylinders used with these brakes.

MOTORCYCLE MASTER CYLINDERS

▶ Produced in: Japan, the U.S., China and other parts of Asia, South America



This component generates hydraulic pressure when a lever is physically operated. The pressure is then conveyed to the disc brake.

The Nissin Kogyo Group holds the world's top share in master cylinders for motorcycle disc brake systems.