



# Promoting Eco-Friendly Physical Distribution and Packaging

Murata is reducing its environmental impact during not only production stages but also the product distribution stage. We are reducing CO<sub>2</sub> by making transport more efficient, and we are reducing waste by cutting down on packaging materials.

## Reduction of Environmental Impact Arising from Distribution

### Promoting New Measures such as Modal Shifts and Joint Shipping

Murata endeavors to reach annual targets for the reduction of CO<sub>2</sub> emissions during distribution. In fiscal 2007, we began joint shipping in collaboration with shippers, and we have begun to reorganize our distribution network to increase efficiency. Reorganization of the network west of Kansai is already complete.

As a result of these efforts, in fiscal 2007 we reduced CO<sub>2</sub> emissions per unit of net production during distribution in Japan, ahead of our minimum target of 33%\* against fiscal 2000. In fiscal 2008, we plan to begin reorganizing our distribution network in the Kansai and Hokuriku areas.

Since fiscal 2007, we have required that truck drivers begin using energy-conserving devices such as the Eco-drive Management System (EMS) for improved fuel efficiency and safe driving, as well as energy-efficient hybrid vehicles. In fiscal 2008, we plan to install EMS devices in 70% of all large, regularly operating trucks (100% in fiscal 2009), and we plan to make 10% of all deliveries (measured by distance) using hybrid vehicles.

\* The FY 2007 reduction target was set at a minimum of 30% against FY 2000; however, we raised that goal to 33% halfway through the year.



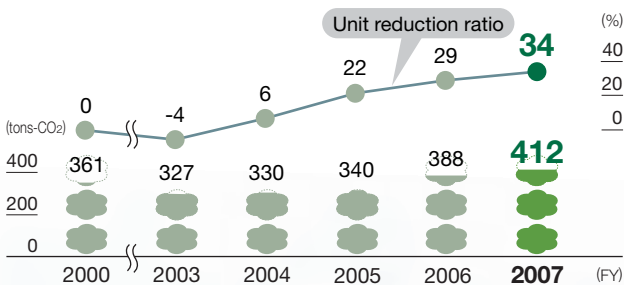
Truck loaded with freight

We continue to study the possibility of a modal shift from truck transport to relatively low CO<sub>2</sub> emission railroad or ocean transport.



EMS device

### Reductions of CO<sub>2</sub> Emissions during Domestic Distribution



Hybrid truck

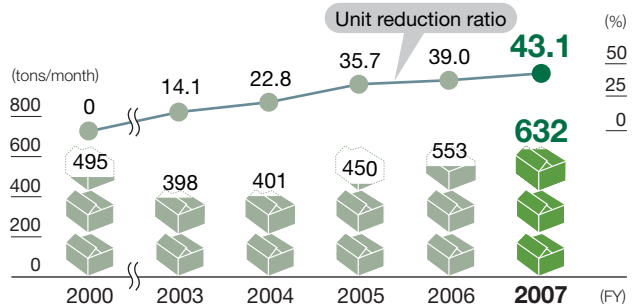
## Reductions in Packaging Materials

Our approach to reducing packaging materials is to use technological innovations to make our products smaller. In addition, in recent years we have promoted the use of returnable boxes for exterior packaging to reduce the use of cardboard boxes. In fiscal 2006, we adopted this practice for the shipment of all products between operating sites within Japan. In fiscal 2007, we began using returnable boxes for some customers, and we plan to continue to expand their use.

As a result of these activities, in fiscal 2007 we attained our goal of a minimum of a 42% unit reduction ratio in tape used for packaging of major products against fiscal 2000, actually reaching 43%.

We plan to move toward the use of environmentally friendly packaging such as bulk pouches, which create less waste, and taped packaging using fewer resources.

### Reductions in Packaging Materials



### Employee Perspective

#### Reductions in Packaging through the Reel Reuse Program



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Packaging maintains product quality during delivery and helps the customer, as the packaging can include important information about part installation or how to separate products into easy-to-use units. We are acutely aware of the difficulties the reduction in packaging creates, and for that reason, we need customers' understanding and cooperation.

Again this year we are planning to implement the Reel Reuse Program, under which we collect and reuse used reels after parts installation. This program contributes to reductions in CO<sub>2</sub> and customers' waste.

### Proposals for New Bulk Packaging

#### Current Bulk Case



Reduction in Packaging

#### Bulk Pouch

