

# Promoting Efficient Logistics and Reducing Environmental Impact

Sanden is actively working to reduce environmental impact by making logistics operations more efficient. For instance, we are working to reduce transport distance by revising distribution routes, reduce the number of vehicles used by increasing load ratios, promoting a modal shift in transport, and develop a maintenance and co-delivery business. In addition, the Logistics Department is focusing on reducing, reusing, and recycling packaging materials by simplifying packaging specifications, using returnable containers for packaging materials, reusing pallets, and promoting the use of highly recyclable packaging materials.

## Measures to Improve Transport Efficiency

In January 2003, Sanden put its newly introduced logistics system (nationwide centralized vehicle dispatch and fleet management system) into operation as part of efforts to reduce environmental impact through efficient transport and delivery operations.

The Company is also building a uniform logistics system to ensure that promises to customers regarding delivery dates, times, and places are honored and to achieve more economical product delivery. The delivery of vending machines and showcases entails more than the simple shipment of products to cus-

tomers. The delivery requirements of each customer are different and we provide fine-tuned sales and distribution services to meet these needs. We are achieving overall gains in logistics efficiency by reducing the number of delivery vehicles required for sales and distribution activities and increasing the ratio of direct deliveries by completing work that was previously carried out at the time of delivery at plants.

## Enhancing Customer Service and Protecting the Environment Through Packaging Innovations

Sanden's environmental preservation initiatives include the aggressive promotion of the 3Rs (reduce, reuse, recycle) in packaging specifications. First, we revolutionized vending machine packaging design by moving from the use of an open wood frame that encases the entire product to a simplified packaging design that only requires the use of wood packaging at the top and bottom ends of the product. Then, we made further improvements by switching from the use of wood material to cardboard for the top end packaging and, in fiscal 2002, we succeeded in creat-

ing a design that does not use any wood packaging material. These efforts have markedly reduced the volume of packaging waste generated by customers and at distribution sites.

Sanden also uses simplified, environment-friendly packaging for such store equipment as refrigerated and freezer showcases as part of ongoing measures to substantially reduce packaging waste.

### Evolution of Vending Machine Packaging



### Refrigerated Showcase Packaging



As for overseas environmental issues, we took prompt action in response to EPS regulations in overseas markets by switching from the use of expanded polystyrene EPS to cardboard as cushioning material in packaging for compressors—a mainstay export product. This move enhanced customer satisfaction and increased the recycling rate for packaging.

Furthermore, we are shifting to the use of returnable packages for shipments between production sites in Japan and overseas to conserve packaging resources and reduce overall costs. We are also promoting the use of cardboard as cushioning material in household heater packaging to reduce the amount of plastic waste generated.



Returnable packaging