

Addressing Environmental Issues without Impairing Product Functions Working Actively to Develop Technologies to Attain This Objective

As a manufacturer, Sanden is dedicated to supplying products that can help solve global environmental problems. One way is by developing environmentally responsible products. However, we also have a strong commitment to developing the environmental technologies required to make these products.

Creating environmental technologies has two benefits. The first is raising the value of products from the standpoint of customers.

The second is dealing with environmental issues. Our environmental R&D activities target three themes: technologies to prevent global warming, mainly by conserving energy; technologies to help create a recycling-based society by promoting recycling and using fewer resources; and technologies to replace hazardous substances with materials that are environmentally friendly.

To create these technologies, we use Life Cycle Assessments (LCAs). With LCAs, we monitor and evaluate the environmental load of a product over its entire life cycle. This begins with the procurement of materials and the product's manufacture and extends through delivery, use, recycling and final disposal. We also use a methodology called quality function deployment for environment (QFDE). With this system, we examine products to identify wasteful components that can be eliminated without affecting the product's performance (loss analysis).

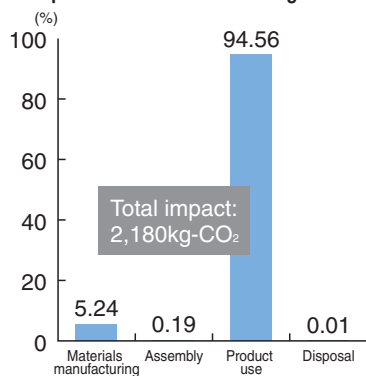
In addition, we have a global chemical management system so that we remain up to date on environmental laws and regulations in Japan and around the world. With this system, we constantly gather the latest information on new restrictions, particularly concerning tighter standards in the EU.

Analyzing the Environmental Impact of Products through Life Cycle Assessments (LCA)

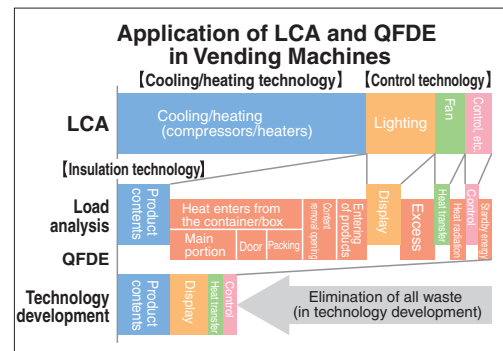
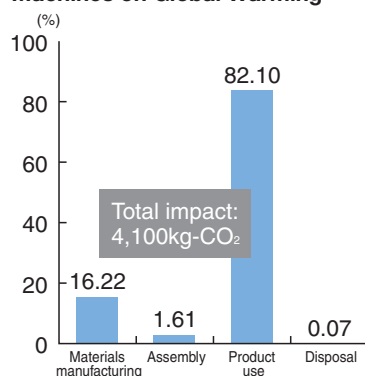
In LCA analysis, we evaluate the environmental impact of products using CO₂, the environmental indicator for global warming. As a result, we have confirmed that our main products can make the greatest contribution to reducing environmental impact over the course of their life cycles by improving their energy conservation properties when in use. In addition, to set the proper course for the development of energy conservation technologies, we have introduced our original QFDE method and are progressing toward the development of new technologies in this area. By introducing these methods for product development and quantifying the environmental impact of our products, we have been able to identify the technologies needed for product development and put these technologies we develop to work in the development of "environmentally advanced products."

In addition to working toward saving energy, we have introduced environmental impact related items in our "product assessments," including those related to reducing the use of resources, reducing weight, and lowering the usage of harmful substances. Through these activities, we are making the activities in reducing the environmental impact of our products from the early stages of product development.

Analysis of the Impact of Car Air Conditioner Compressors on Global Warming



Analysis of the Impact of Vending Machines on Global Warming



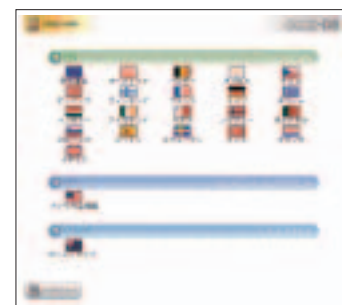
Reduction of Hazardous Substances Used in Products

Hazardous substances used in products impact the environment when the products are used, recycled, and disposed of. To minimize this impact, we are working on the elimination of ozone-depleting compounds. Moreover, we are working hard on the creation of techniques for substituting heavy metals, which have a substantial environmental impact, with other materials.

To supply customers with products they can use with confidence, we conduct a green procurement program that extends these environmental activities to include parts manufacturers.

As a global organization, Sanden must comply with the strict standards of the EU (notably, the ELV and RoHS directives) in order to raise the recycling rate of Sanden products. That means eliminating the use in products of all designated hazardous substances (heavy metals like mercury, lead, cadmium, and hexavalent chromium).

To gather the latest information on new regulations worldwide and comply quickly, we have adopted the global chemical management system.



Global Chemical Management System