

San Ace Products and SDGs

Honami Osawa

1. Introduction

The Sustainable Development Goals (SDGs), consisting of 17 goals and 169 targets, were adopted by the United Nations (UN) in September 2015 as part of the 2030 Agenda for Sustainable Development.

The SDGs aim to “create a better world for all” and require the UN member states to implement initiatives to achieve this, calling on not only governments but also companies to make proactive efforts.

As our corporate philosophy states, we “aim to help all people achieve happiness,” aligning with the SDGs’ vision of creating a sustainable and prosperous society. We engage in our corporate activities and product manufacturing based on the goals and standards that we formulated.

This article describes how our San Ace products are related and can contribute to the SDGs.

2. Our 15 Key Goals for the SDGs

We have formulated “15 key goals” to ensure that we are all well aware of our relationship with the SDGs and work together to achieve them. Table 1 lists these 15 key goals.

Table 1. Our 15 key goals for SDGs

1	Business plan implementation	8	Diversity and inclusion
2	Eco Products	9	Work-life balance
3	CO ₂ emission reduction	10	Career development
4	2030 carbon neutrality	11	Health and productivity management
5	Carbon neutrality for corporate groups	12	Basic procurement policy
6	2050 carbon neutrality	13	Engagement in local communities
7	Employee engagement	14	Communication
		15	Third-party evaluation

Of these goals, the one directly linked to product development is the Eco Product initiative. Eco Product is a system in which we establish our own evaluation criteria and standards to certify products with a low environmental impact.

For cooling fans, which are the flagship of our San Ace products, the reduction of power consumption, noise, and environmentally hazardous substances are the key criteria for Eco Products certification. To meet these criteria, we develop products based on three core technologies that support our corporate philosophy.

- Technology for protecting the global environment
- Technology for using new energy sources and saving energy
- Technology for protecting people’s health and safety

The Eco Products certification system began in FY 2001, and a total of 136 models of San Ace products have been certified to date (as of July 2024).

From FY 2024, Eco Products Plus certification has been introduced to certify products with an even lower environmental impact than standard Eco Product.

By expanding the range of Eco Products and Eco Products Plus certified products and by encouraging customers to use them, we can contribute to achieving a sustainable and prosperous society, as envisioned by the SDGs.

3. San Ace Products and SDGs

3.1 Eco Products and SDGs

As described in Section 2, reductions in power consumption, noise, and environmentally hazardous substances are crucial for cooling fans to be certified as Eco Product. As such, the San Ace Company is focusing on these criteria in its product development efforts.

Table 2 shows the SDGs related initiatives, which will be described below.

Table 2 The SDGs to which San Ace products contribute

7	Affordable and clean energy
9	Industry, innovation and infrastructure
11	Sustainable cities and communities
12	Responsible consumption and production
13	Climate action

Reducing power consumption and noise contributes to achieving SDG targets 7.3 and 9.4.

- Target 7.3: Improve energy efficiency.
- Target 9.4: Improve sustainability with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes.

Reducing environmentally hazardous substances contributes to achieving SDG targets 11.6, 12.4, 12.5, and 13.1.

- Target 11.6: Reduce the adverse environmental impact of cities by paying special attention to air quality and waste management.
- Target 12.4: Achieve the environmentally sound management of chemicals and wastes and reduce their release to air, water, and soil.
- Target 12.5: Reduce waste generation.
- Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters.

Next, we will present new products for which power consumption, noise, and environmentally hazardous substances have been successfully reduced.

3.2 60 × 60 × 76 mm 9CRLB type Long Life Counter Rotating Fan

The 60 × 60 × 76 mm CRLB type Long Life Counter Rotating Fan, released in March 2024, has achieved 13% less power consumption and 3 dB(A) less noise than the current product (CRLA type) at equivalent performance and has been certified as an Eco Product. Figure 1 shows the product.

This article introduces the 60 × 60 × 76 mm CRLB type Long Life Counter Rotating Fan in detail.



Fig. 1 60 × 60 × 76 mm San Ace 60L 9CRLB type

3.3 60 × 60 × 56 mm 9CRH type Counter Rotating Fan

The 60 × 60 × 56 mm CRH type Counter Rotating Fan, released in June 2024, has achieved 22% less power consumption and 4 dB(A) less noise than the current product (CRA type) at equivalent performance and has received Eco Products Plus certification. Figure 2 shows the product.

This article introduces the 60 × 60 × 56 mm CRH type Counter Rotating Fan in detail.



Fig. 2 60 × 60 × 56 mm San Ace 60 9CRH type

3.4 80 × 80 × 80 mm 9CRH Type Counter Rotating Fan

The 80 × 80 × 80 mm CRH type Counter Rotating Fan, released in July 2024, has achieved 14% less power consumption than the current product (CRB type) at equivalent performance and has been certified as an Eco Product. Figure 3 shows the product.



Fig. 3 80 × 80 × 80 mm *San Ace 92 9CRH* type

In addition to complying with the EU RoHS Directive and other legal restrictions on substances, these three new products feature metals that contain less lead, which, although not restricted by the RoHS Directive, helps reduce environmental impact.

4. Technologies Supporting Reduced Power Consumption and Noise

As mentioned in Section 3, the reduction of power consumption and noise is an effective way for cooling fans to contribute to the SDGs. Improvements in cooling fan efficiency are key to achieving these reductions.

To this end, we are leveraging simulation technology in our product development.

Figures 4 and 5 show examples of an aerodynamic performance and motor performance simulations, respectively.

Aerodynamic performance simulations allow us to design blade and frame shapes that create the ideal low-loss airflow.

In motor performance simulations, electromagnetic field analysis enables us to achieve small, lightweight, high-output, and low-loss motors.

In addition to the above, in future development efforts for cooling fans, we aim to utilize optimization simulation technology that incorporates established expertise, with the goal of developing even more efficient cooling fans.

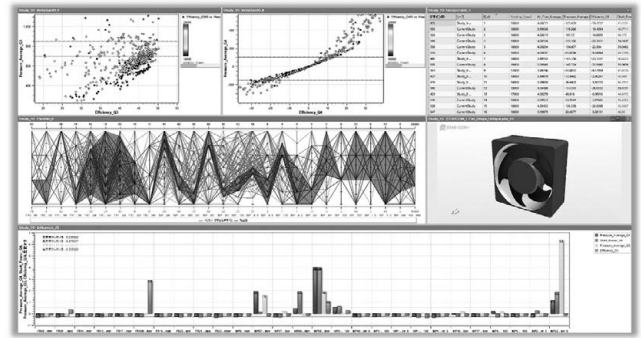


Fig. 4 Aerodynamic performance simulation example

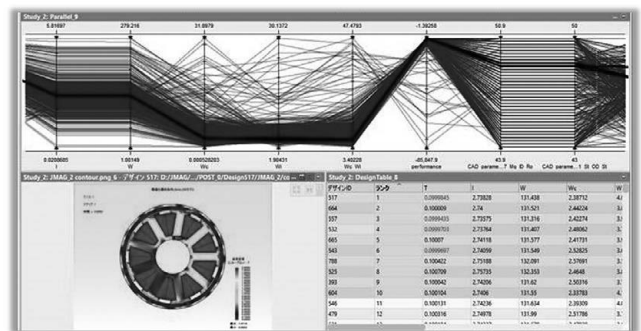


Fig. 5 Motor performance simulation example

5. Initiatives to Reduce Environmental Impact

In addition to reducing power consumption and noise, we are also working to reduce the amount of environmentally hazardous substances contained in our products. To identify and reduce the amount of legally restricted substances, we investigate the content of restricted substances in all materials, enter this information into a database, aggregate the data, and verify the results for each product.

For substances regulated by the EU RoHS Directive, we have introduced an X-ray fluorescence spectrometer and gas chromatography mass spectrometer, thereby establishing a system for in-house monitoring and managing material content.

In addition to regulatory compliance, we are also proactively reducing environmentally hazardous substances, such as reducing the amount of lead in metals, even though lead is currently exempted from the RoHS Directive.

To contribute to the achievement of the SDGs, we will continue to monitor and manage restricted substances and promote voluntary reductions ahead of regulations.

6. Conclusion

This article described initiatives to contribute to reducing the environmental impact of San Ace products and their relevance to the SDGs.

To support the SDGs, it is essential to improve technologies that reduce power consumption and noise, as well as to manage and actively reduce the content of harmful substances that affect the environment. As such, we will continue to address these challenges.

By developing and providing products based on our corporate philosophy to “aim to help all people achieve happiness,” we will join people all over the world in contributing to the achievement of the SDGs.

Reference

SANYO DENKI Technical Report , No. 46, pp. 3–6 (2023.11)

Author

Honami Osawa

Design Dept., San Ace Company

Engages in the development and design of cooling fans.