

Cooling Systems Division

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The main technical achievement of the Cooling Systems Division for 2012 was enhancement of the product lineup, including first product in the industry. These products were developed to meet the requirements for cooling fans; high air flow, high static pressure, low sound pressure level (SPL) and

low power consumption.

Globalization of communication device usage has progressed, and many different types of equipment which transmit, process and store large volumes of information have been developed in order to improve performance. In order to meet these cooling needs, Sanyo

Denki is pushing forward with the development of new products and technologies. In the future, we plan to continue providing customers with products are easier to use and have even more reliable high performance.

This document is an overview of the enhanced lineup.

■ Counter rotating fan series

DC Fan

“San Ace 60” CRA Type
60 mm sq., 76 mm thick

“San Ace 172” CR Type
φ 172 mm x 150 mm x 102 mm thick

Two types of counter rotating fans were developed.

The 60 mm sq., 76 mm thick “San Ace 60” CRA Type is suitable for application in 2U servers and their power units to achieve low power consumption and low SPL. Compared to our conventional model, maximum static pressure is improved by 1.8 times and power consumption is reduced by 29% during equivalent cooling performance in the expected operating range. Furthermore, SPL was reduced by 4 dB.

The “San Ace 172” CR Type (φ 172

mm x 150 mm x 102 mm thick) is the first φ 172 mm counter rotating fan in the industry (Note 1), and achieves high air flow and high static pressure suitable for high-density mounted devices and other communication devices which are becoming increasingly sophisticated.

Application: Communication devices (Servers, storage systems, telecommunication devices), heat exchangers, power supplies and various other equipments with high system impedance

Details of the “San Ace 172” CR Type are described in the features of this Technical report.



“San Ace 80” HV Type

80 mm sq., 38 mm thick

“San Ace 120” HV Type

120 mm sq., 38 mm thick

“San Ace 200” GV Type

φ 200 mm 70 mm thick

Three types of high air flow and high static pressure fans were developed.

The 80 mm sq., 38 mm thick “San Ace 80” HV Type achieves a cooling performance that is equivalent to two of our conventional models being operated in series. It also reduces power consumption by 40% and SPL by 8 dB.

The 120 mm sq., 38 mm thick “San Ace 120” HV Type achieves 3.8 times maximum static pressure of our conventional model. Moreover, power consumption is reduced by 33% during equivalent cooling performance in the expected operating range. Both of these models are ideal to improve performance on high-density mounting servers and storages which require

forced cooling.

The φ 200 mm, 70 mm thick “San Ace 200” GA type has increased maximum air flow by 1.7 times and maximum static pressure by 1.4 times compared to the conventional model while reducing the power consumption by 20% at equivalent cooling performance within expected operating range.

Among axial flow fans of the same size, the San Ace 200 achieves the highest air flow in the industry (Note 2) and we expect to see a demand for it in cooling and ventilation of large equipment like never before.

Application: Communication devices (Servers, storage systems, telecommunication devices), power supplies, etc.

Details of the “San Ace 200” GV Type are described in the features of this Technical Report.



Low power consumption fan series

DC Fan

“San Ace 38” GA Type
38 mm sq., 28 mm thick

“San Ace 80” GA Type
80 mm sq., 25 mm thick

Two types of low power consumption fans were developed.

The 38 mm sq., 28 mm thick “San Ace 38” GA Type has 1.9 times better maximum static pressure compared to our conventional model. Moreover, power consumption is reduced by 48% during equivalent cooling performance in the expected operating range and SPL is reduced by 3 dB. This makes the San Ace 38 optimal for the low power consumption and low SPL of 1U size power units.

The 80 mm sq., 25 mm thick “San Ace 80” GA type consumes 30% less power than our conventional model at equivalent cooling performance within expected operating range and an SPL reduced by 4 dB. This is the first performance improvement since our R-type conventional model of the same size was released in 1989 and we expect to see the demand for it increase.

Application: Communication devices (Servers, storage systems, telecommunication devices), power supplies, etc.



(Note 1) As a fan for industrial application. March 2013. Results from Sanyo Denki research.

(Note 2) As of March 2013. As a fan for industrial application. Results from Sanyo Denki research.



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Joined Sanyo Denki in 1984.
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