

Cooling Systems Division

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Various electronic devices; such as information communications related equipment, industrial equipment, and power supplies; use fans as cooling devices. As devices continue to evolve to become higher performance, higher functionality, and smaller size, applications and operating environments become more diversified.

In addition to requests for even

higher air flow, higher static pressure, and lower SPL (Sound Pressure Level), there is also demand for cooling fans to have lower power consumption and improved environmental resistance.

In order to respond to these market trends and needs, Sanyo Denki presses forward with development of new products and necessary technological

development for these customer demands. In future, we plan to continue providing customers with products that are easier to use and have even more reliable high performance.

The following products introduce main technical developments for the Cooling Systems Division in 2011.

■ Low Power Consumption Fan Series

DC Fan

- “San Ace 40” GA Type
40 mm sq., 15 mm thick
- “San Ace 52” GA Type
52 mm sq., 15 mm thick
- “San Ace 80” GA Type
80 mm sq., 20 mm thick

Three types of low power consumption fans were developed.

The 40 mm sq., 15 mm thick “San Ace 40” GA Type has 1.8 times maximum air flow and 2 times maximum static pressure compared to our conventional model while reducing the power consumption at equal air flow by 54%. The 52 mm sq., 15 mm thick “San Ace 52” GA Type has 1.3 times maximum air flow and 1.3 times maximum static pressure compared to our conventional model while reducing the power consumption at equal air flow by 62%. Furthermore, SPL was reduced by 4 dB. The 80 mm sq., 20 mm thick “San Ace 80” GA Type also

has 1.6 times maximum air flow and 2.4 times maximum static pressure compared to our conventional model while reducing the power consumption at equal air flow by 71%. Furthermore, SPL was reduced by 4.5 dB.

All types include the “PWM control function” so that speed can be controlled externally.

Application: Information communications related equipment (Server, storage system, telecommunication equipment), power supply, etc.

Details of the “San Ace 52” GA Type are described in the features in this Technical report.



■ “San Ace 60” GA Type

DC Fan

60 mm sq., 25 mm thick axial fan achieved the top performance in the industry (according to a Sanyo Denki investigation as of March 2012).

Maximum air flow is increased 1.3 times and static pressure is increased 1.9 times compared with our conventional model, and at the same time, power consumption for equal air flow is reduced 32%.

The “PWM control function” is included so that speed can be controlled externally.

Application: Information communications related equipment (Server, storage system, telecommunication equipment), power supply, etc.



■ Counter Rotating Fan Series

DC Fan

“San Ace 40” CRB Type

40 mm sq., 56 mm thick

“San Ace 80” CRA Type

80 mm sq., 80 mm thick

Two types of counter rotating fans were developed.

Demands for lower power consumption in cooling fans are also increasing for 1U servers and their power units. Compared to our conventional models, the “San Ace 40” CRB Type 40 mm sq., 56 mm thick model has improved the aerodynamic characteristics in the assumed operating range and decreased power consumption 37% during equivalent cooling performance.

According to high dense parts mounting for information communications becoming higher performance, the demands for

high static pressure for fans are becoming stronger. Compared to our conventional model, the “San Ace 80” CRA Type 80 mm sq., 80 mm thick model has reduced power consumption while improving 2.2 times of maximum static pressure.

Both types include “PWM control function” so that speed can be controlled externally.

Application: Information communications related equipment (Server, storage system, telecommunication equipment), power supply, etc.

Details of the “San Ace 80” CRA Type are described in the features in this Technical report.



■ Splash Proof Fan Series

DC Fan

“San Ace 80W” WV Type
80 mm sq., 38 mm thick

“San Ace 172W” WG Type
172 mm dia., 51 mm thick

Two types of splash proof fans were developed.

The “San Ace 80W” WV Type 80 mm sq., 38 mm thick model is the first splash proof fan of its size from Sanyo Denki, and compared to conventional 80 mm sq., 25 mm thick model, it has performance with 3 times higher maximum air flow and 9 times higher maximum static pressure.

Compared to our conventional

model, the “San Ace 172W” WG Type 172 mm dia., 51 mm thick model realizes higher air flow and higher static pressure with 1.5 higher maximum air flow and 4.1 times higher maximum static pressure.

Both types have protection class IP55 dust proof and splash proof performance. Also, both types include “PWM control function” so that speed can be controlled externally.

Application: Solar inverter, outdoor equipment, and various types of industrial equipment.



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Joined Sanyo Denki in 1984.

Cooling Systems Division, Design Dept.

Worked on the development and design of cooling fans.