Cooling Systems Division

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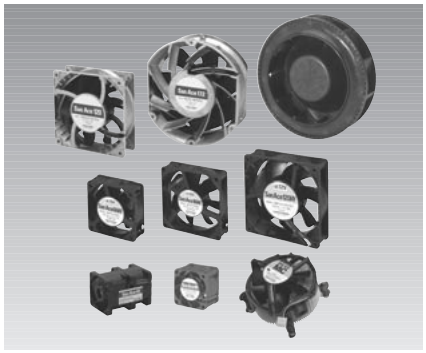
The servers, computers, and other communications–related devices upon which the information age is built are growing smaller in size and gaining more functions, features, and overall performance. But at the same time, the issue of how to deal with the additional heat produced by these devices is a growing problem. Cooling fans provide a solution that meets all of the consumer's demands in regards to large air volume, high static pressure, low noise, low power consumption, and environmental suitability.

What follows is an introduction to the major new technologies pioneered by the Cooling Systems Division in 2005. Going forward we expect to develop more technologies with smaller environmental footprints while at the same time leading the way in developing and producing highly functional technologies that meet the needs of the market.

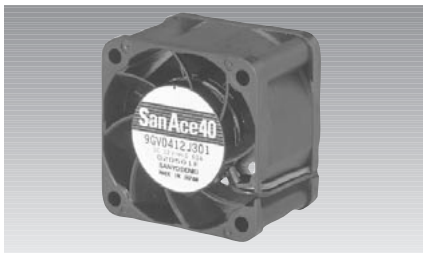


■ "San Ace 40" GV Type

This fan offers an increase in air volume of 15% over our previous models, while at the same time consuming up to 15% less power.

"PWM Control Functions" can also be added (these are optional).

Applications: This product is specifically designed for use in servers, storage systems, copy machines, communications equipment, power sources, and all forms of industrial equipment.



■ "San Ace 40" CRA Type

This fan offers a 28% increase in air volume and a 26% increase in static pressure over previous models while still consuming 40% less power. When running at maximum air volume, the San Ace 40 CRA produces a sound pressure level of only 62 dB (A) (J Speed). "PWM Control Functions" can also be added (these are optional).

Applications: This product is specifically designed for use in 1U servers, storage systems, communications equipment, all forms of power supplies, and all forms of industrial equipment.

For more information, please refer to the feature article in this technical report.

■ "San Ace 120" SG Type

This fan offers 40% greater air volume and 50% greater static pressure than our previous models. When running at maximum air volume, the San Ace 120 SG produces a sound pressure level of only 64 dB (A).

"PWM Control Functions" and "Voltage Command Control Functions" can also be added (these are optional).

This product is specifically designed for use in computers, servers, storage systems, communications equipment, and all forms of industrial equipment.

■ “San Ace 172” GV Type

This fan features a 66% increase in static pressure and a 20% decrease in power consumption when compared to our previous products. When running at maximum air volume, the San Ace 172 GV produces a sound pressure level of only 74 dB (A). “PWM Control Functions” can also be added (these are optional).

This product is specifically designed for use in devices including communications equipment, servers, and storage systems.

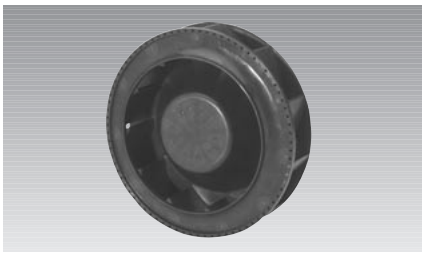
For more information, please refer to the feature article in this technical report.

■ “San Ace 220”

This is our first centrifugal fan, with a diameter of 220 mm and a thickness of 71 mm.

This fan offers the highest functionality in the industry, including a maximum air volume of 18.5 m^3/min, power consumption of 100.8 W, and a sound pressure level of 71 dB (A).

This product is specifically designed for use in devices including communications equipment, large-scale servers, and storage systems.



■ “San Ace MC” (PWM, Variable Temperature)

This fan includes a fan and heat sink specially developed for compliance with Intel* 775-land LGA Package, giving it top class performance in cooling and noise output.

In comparison to our previous products, this unit offers a 3 dB(A) reduction in noise at an equivalent cooling performance and a 3.6% increase in cooling at an equivalent sound pressure level. The sound pressure level at the rated rotating speed of 3900 min^{-1} is 42 dB(A) and the thermal resistance is 0.266 K/W

The “thermal speed control function” regulates the speed of the fan to respond to temperature. This is assisted by the “PWM control function,“ which controls fan speed through an external source.

This product is specifically designed to be compatible with Intel 775-land LGA Package.

*Intel is a registered trademark of Intel Corporation.

■ Splash-Proof Fan “San Ace” W Series, WP Type

“San Ace 60W” 60 mm sq × 25 mm thickness fan
“San Ace 80W” 80 mm sq × 25 mm thickness fan
“San Ace 120W” 120 mm sq × 38 mm thickness fan

The WP type fans in the W series were developed to be resistant to harsh environments and to retain performance even when subject to multiple direct streams of water. They carry an IP55 level of water protection. By utilizing a resin frame, the mass of the San Ace 80W has been reduced by approximately 30%, and the San Ace 120W has been reduced by approximately 12%, in comparison with similar previous products.

This product has been specifically designed for solar inverter systems, outdoor equipment, and all kinds of general manufacturing equipment.

Yoshihiko Aizawa
Joined Sanyo Denki in 1989
Cooling Systems Division, Design Dept.
Worked on fan motor development and design