Cooling Systems Division

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One of the important technological achievements of the Cooling Systems Division in 1998 was the enhancement of the product line-up. We have added a variety of new fans to our products line of standard fans, Long Life Fans, Splash Proof Fans, "SAN ACE MC", and centrifugal blowers. The division aims at contributing to society by developing products to energy conservation, and protect the environment in our homes and around the world in line with Sanyo Denki's technological orientation towards items such as Long Life Fans and low noise fans.

Electronic equipment cooling is now essential given the increasing packing density which is the result of the increasing speed of data processing and communication. This increasing speed and density also diversifies the demand for cooling equipment as many different varieties are needed. Therefore we are looking forward to further expansion of their use by timely responding to our customers' needs and providing them with a wide variety of competitive products.

Long Life Fans

We have developed two new "SAN ACE" fans for our series of Long Life Fans and incorporated them in our product line-up. "SAN ACE 120L" is a 120 mm sq.x38 mm thick low noise long life fan and "SAN ACE 60L" is a 60 mm sq.x25 mm thick long life fan. The series now features a complete line of 60, 80, 92, 120, 140 mm sq. fans and a 172 mm diameter fan.

SAN ACE 60L　　SAN ACE 120L

There has been strong demand for a long time for small Long Life Fans for cooling electronic equipment. As such features as maintenance-free fans and high reliability have become the norm there is now demand for even smaller fans. We developed a 60 mm sq. trial fan to test the life of the fan and proceeded to turn it into a practical model. "SAN ACE 60L" now has an expected life of 100,000 hours at a temperature of 60 ° C. Designed according to the low noise principle, we have come up with a finished of a high quality product.

"SAN ACE 120L," a 120 mm sq. x 38 mm thick low noise Long Life Fan, has been developed with an improved noise reduction feature. It is equipped with a new silencing fin to particularly reduce the noise when a static pressure head is developed. Effective noise reduction can be promised in actual working conditions.

With an expected life of 200,000 hours at a working temperature of 60 ° C, it is the ultimate Long Life Fan with outstanding air flow performance, noise performance, long life, and high reliability performance.

A Fan 80 mm sq. x 15 mm thick

"PETIT ACE 15" is an 80 mm sq. x 15 mm thick fan that has been added to the line of standard fans. "PETIT ACE 15" has been developed with a focus on a high air flow performance and low noise performance. The details are explained in the feature section of this Technical Report. It is expected to be quite useful for cooling high heat generation that need compact and thin-type efficient fans. The line of 15mm thin type fans is now complete with 4 sizes offered: 40, 52, 60, and 80 mm sq. fans. "PETIT ACE 15" comes in 12V, 24V, and sensor mounted types the same as the other existing models in the line.

Splash Proof Fans

"SAN ACE 140W," a new 140 mm sq. x38 mm thick Splash Proof Fan, has been added to our line of Splash Proof Fans. This is actually the existing Long Life Fan "SAN ACE 140L" 140 mm sq. x38 mm thick fan which has been made splash proof. Inside the motor, stator, and circuit board are completely covered by silicon rubber and meet IPX5 splash proof specifications. Depending on the actual working conditions the fan can have an expected life up to 100,000 hours at 60 ° C. The Splash Proof Fan line is now complete with 80 mm, 92 mm, 120 mm and 140 mm sq. sizes. The range of applications for our Splash Proof Fans is expected to expand for cooling devices for equipment for use outside or in places that risk getting wet from water.

Centrifugal Blowers

SCIROCCO ACE 127 SCIROCCO ACE 76

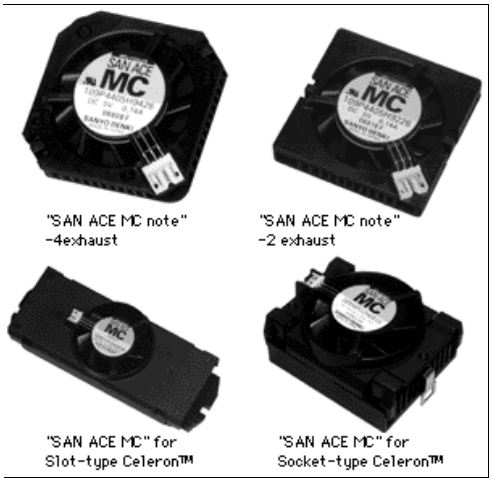
We now offer two new centrifugal blowers. "SCIROCCO ACE 127" is 127 mm sq. x32 mm thick and "SCIROCCO ACE 76" has a 76 mm diameter and is 30 mm thick. Up until now there has only been one "SCIROCCO ACE" fan which is 120 mm sq. x 32 mm thick.

"SCIROCCO ACE 127" is a model developed from the existing 120 mm sq. "SCIROCCO ACE" with a special focus on the noise reduction quality. The increased daily use of densely packed equipment results in more frequent use of centrifugal blower and in generating higher demand for low noise type centrifugal blower where centrifugal blower been previously used without concern for the noise. "SCIROCCO ACE 127" has undergone a careful review of its overall details from the vane wheel to the casing geometry in order to offer a fan with lower noise and higher static pressure. The details of the modifications are described in a feature with this Technical Report.

"SCIROCCO ACE 76" is a compact centrifugal blower. It was designed with a special emphasis on reducing the noise. It is expected that this fan will also be used in densely packed equipment for daily use.

Further expansion of the product line of centrifugal blower should be pursued.

"SAN ACE MC"



Along with increasing data processing speed, the heat generated in each CPU tends to keep getting higher while fluctuating up and down. "SAN ACE MC" has come into increasing use due to this trend. New types of "SAN ACE MC note" that are 45 mm sq. x 10 mm thick such as the 2 exhaust type, 4 exhaust type, and two types of "SAN ACE MC" for use with Celeron™ processors, slot-types and socket-types were introduced in 1998.

The "SAN ACE MC note" line previously consisted of only one single exhaust type model and has now expanded into a 3-model line with the addition of new 2-exhaust and 4-exhaust types. Our customers can select the model which is the most suitable for them from the three types of fans depending on the design of the intended equipment where the processor needs to be kept cool in limited space. "SAN ACE MC note" with 4 exhaust, in particular, was awarded with the Good Design Award 1998 for its compact eliminate waste form and near-perfect contexture.

"SAN ACE MC" for use with Celeron™ processors is the first product in this line using an extruded heat sink. These CPU coolers are uniquely designed. They offer low-noise and high performance using the extruded heat sink on both slot- and socket-type fans, the most common type of heat sinks.

It is expected that the tendency of increasing heat generation from CPUs will continue and we have to continue our efforts to keep solving emerging challenges related to "SAN ACE MC.

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Joined company in 1978
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