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# Technology Contributing to Effective Use of Power

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For the past several years, effective use of power has become a great issue in society. With problems such as insufficient power in Japan, the importance of this topic is growing larger. Customers of Sanyo Denki face the same problems, making the effective use of power an essential need.

Let us look at some examples of this need.

As smartphones and tablets grow more common, there has been a dramatic increase in traffic worldwide. This has caused the capacity and amount of communications to continue growing in communication facilities and data centers. This has caused an increase in consumption power and low power consumption for the related equipment has become increasingly important.

As labor costs soar in Asia, factories are relying more upon automation. However, the power supply may not be sufficient in many of these regions, and therefore there is a demand for low power consumption machine tools and robots.

Many display boards are switching to digital signage. Cooling fans are used for uniformity of color in the display boards and promote longer lifespans. For giant display boards, such as at sports arenas, a massive number of cooling fans are used, so there is a demand for products with energy-saving features.

In this environment, Sanyo Denki products take part in the effective use of power in many fields. The following are the Sanyo Denki's representative products that effectively lower power consumption, and features that contribute to low power.

## **1. Servo motor (SANMOTION R Series)**

- 26% faster than the conventional product (SANMOTION Q) in high-speed regions
- Improved efficiency 26% compared to conventional products of the same size with higher speeds

Applications: Chip mounters, semiconductor equipment, robots, machine tools

## **2. Closed loop stepping system**

(SANMOTION Model No. PB with EtherCAT interface)

- With EtherCAT, system response becomes faster and the equipment tact time is greatly reduced
- Improved torque efficiency 30% over open loop stepping motors

Applications: Semiconductor equipment, general industrial machinery

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### **3. Regenerative power compensator (SANUPS K23A)**

- Uses power generated when decelerating motors in transport equipment such as in multi-story parking structures
- Stores generated power in electric double layer capacitors and reuses it as power

Applications: Multi-story parking structures

### **4. Peak-cut devices (SANUPS K33A)**

- Cuts the momentary large capacity of power that is generated when driving motors for large pressing machines or transport equipment
- Eliminates the need for expanded power equipment at factories

Applications: Large factory equipment

### **5. Power conditioner for photovoltaic power generation with peak-cut function (SANUPS PMC-TD)**

- Reduces the contract demand through peak-cut
- By storing nighttime power in the battery and releasing that power during the day, the device achieves peak cut on the power
- Supplies power even when there is a power outage in standalone run

Applications: Office buildings, factories

### **6. Low power consumption fans (San Ace GA Type)**

- Reduces power consumption 20% to 50% compared to conventional models

Applications: Servers, power supplies, storage, communication equipment, photovoltaic power conditioners, LCD panels, etc.

### **7. Centrifugal fan**

- Provides large air flow and high static pressure cooling even in devices with high part mounting density
- High cooling performance enables a reduction in the number of fans used

Applications: Heat exchangers, fan filter units, PEHA filters, communication devices, FA equipment, etc.

In this way, Sanyo Denki products realize effective use of power in a variety of fields. Among these, the Power Systems Division stands at the center with low power consumption and new energy flows. Power conditioners for photovoltaic power generation, power supply related equipment based on UPS technology, grid management devices, and other products that meet the needs of this era are at work in society.

Sanyo Denki will continue to solve the problem of effective use of power and provide products that realize customers' dreams.