

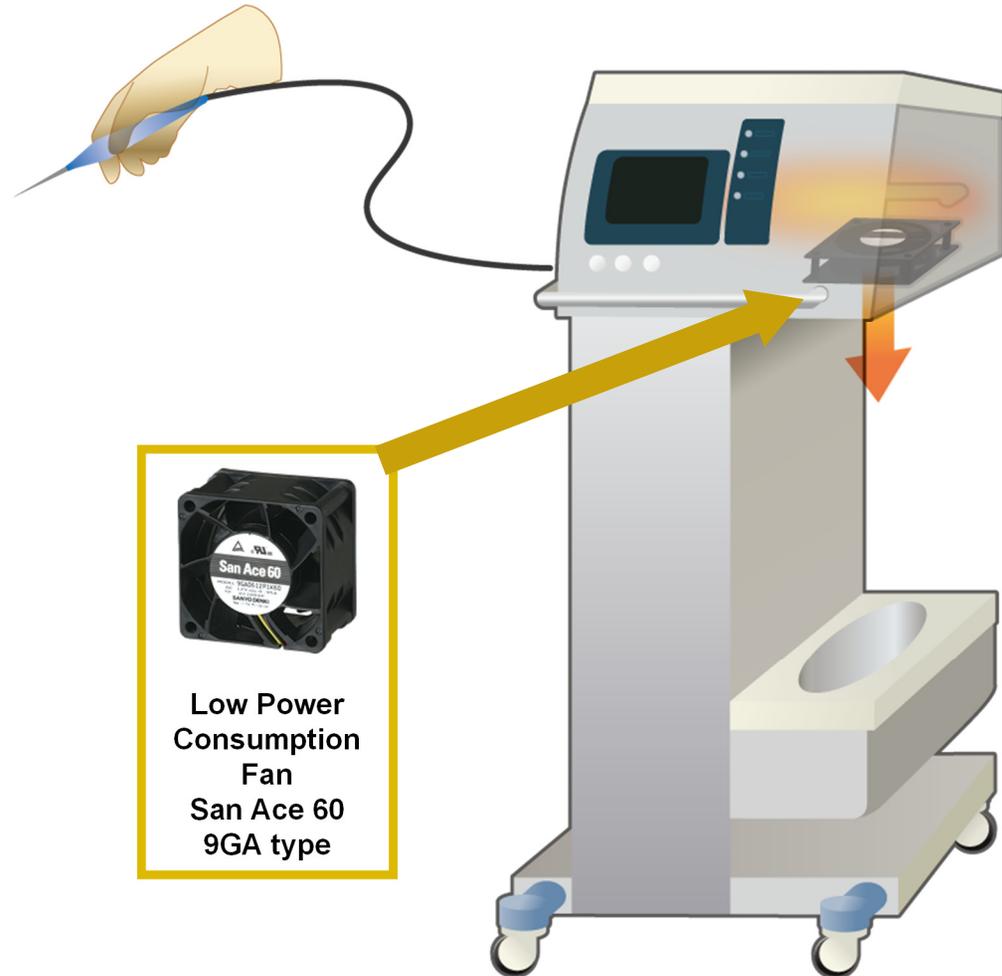
Electrosurgical Instrument

Description

A high frequency electric scalpel, otherwise known as an electrosurgical instrument, is a medical device used for various minor surgical procedures.

A high frequency current from the electrode tip is applied to human tissue, instantaneously heating and vaporizing moisture within cells. Raising intracellular water above the boiling point causes the cell membrane to rupture, producing a cutting effect. As a result, it is possible to both cut and seal small blood vessels for the purpose of hemostasis.

The instrument generates high frequencies causing extremely high levels of heat within a unit. To maintain the safety of the medical practitioner and patient, a fan with high cooling performance and reliability is required.



Low Power
Consumption
Fan
San Ace 60
9GA type

SANYO DENKI Proposal

■ **9GA0612P1J03 / 60 x 60 x 38 cm / 12 V / PWM control function / 40,000 h @ 60°C / 1 unit**

Purpose: Used for removing heat from within of the instrument.

Features

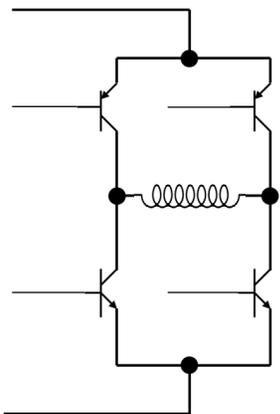
■ Lower power consumption

Bipolar windings reduce loss and improve efficiency within the driving circuits to reduce power consumption.

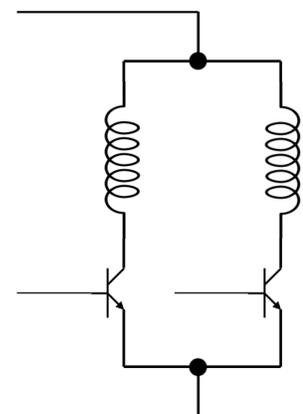
Low Power Consumption Fan Conventional fan

Low power loss

High power loss



Bipolar driving method



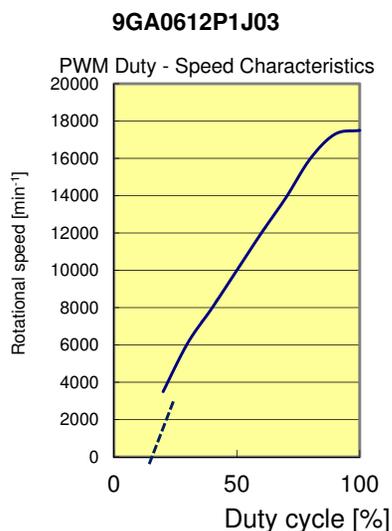
Unipolar driving method

■ PWM control function

PWM control function controls the rotational speed of the fan by changing the duty cycle.

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Sets an optimal rotational speed in accordance with the temperature.

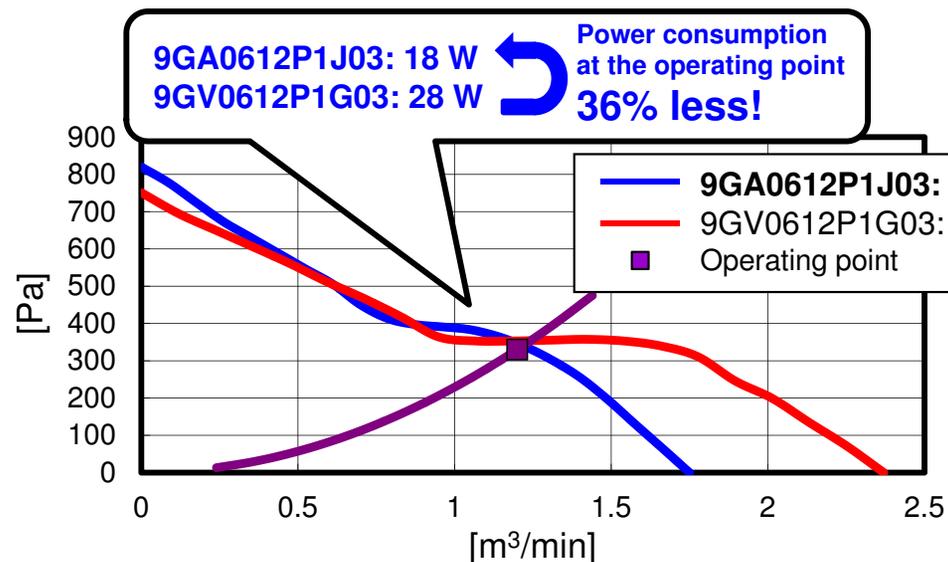
↓
Reduces power consumption and noise by setting a low rotational speed.



Merits

■ Reduces device power consumption

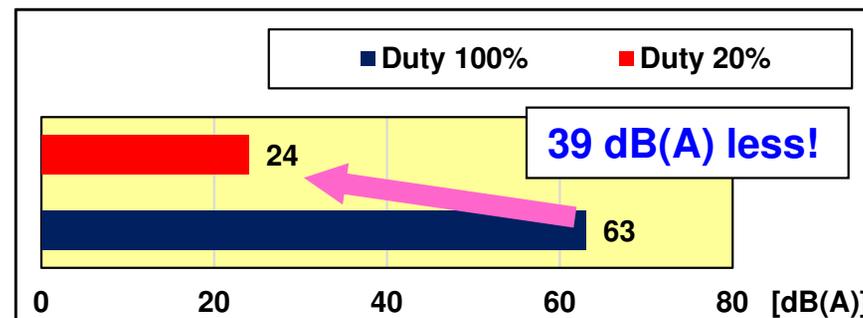
With the 9GA type at its optimal cooling performance near the operating point, power consumption can be reduced while keeping the same cooling performance as the 9GV type.



Comparison between 9GA0612P1J03 and 9GV0612P1G03

■ Reduced device noise

By using the optimum speed to suit conditions, low noise can be attained.



Comparison of SPL at 100% and 20% duty (9GA0612P1J03)