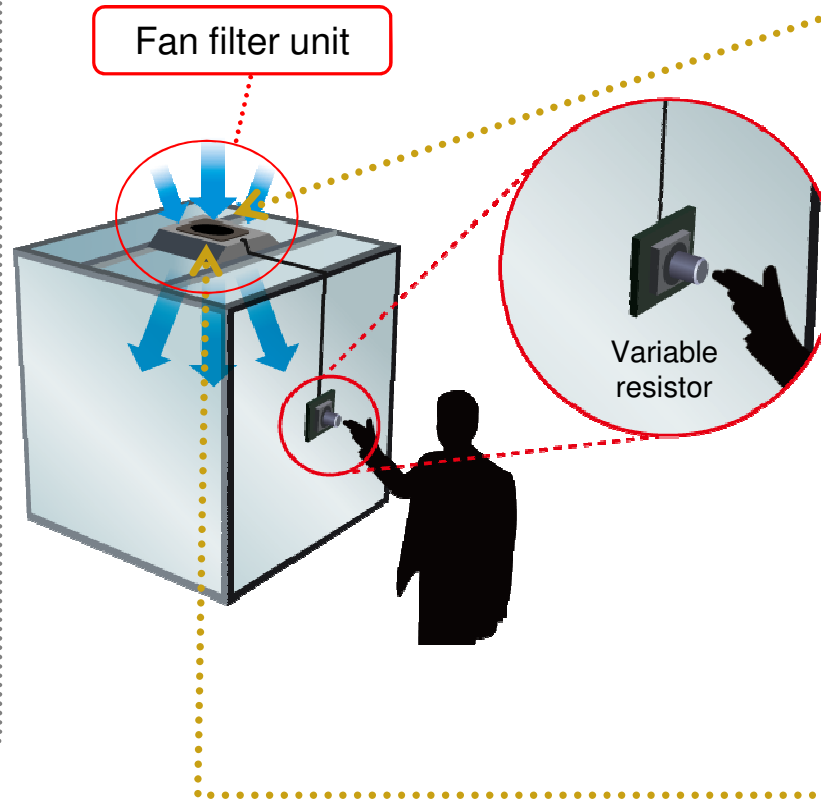


# Fan Filter Unit

## Description

Fan filter units (FFU) are used to supply purified air to clean rooms and clean booths at precision equipment factories and laboratories. They are installed within the ceiling or floor grid. With the progress of precision processing technology and sophistication of medical treatment, the requirements for clean rooms have become stricter. Demands for improved dust collection efficiency and noise reduction have posed problems. Therefore, mounted fans require both high static pressure and low noise. Also, since FFUs must be equipped with an airflow adjustment function, there are requests to make it easy to control airflow remotely.



**SANYO DENKI**

(Application image)



San Ace PWM  
Controller  
PCB type  
Variable resistor  
control function



High static pressure  
fan  
San Ace 172  
9HV type

## SANYO DENKI Proposal

Products and solutions proposed for installation in different environments:

- 9HV5748P5H01 /  $\phi$ 172 x 150 x 51 mm / 48 V / PWM control function / 40,000 h @ 60°C / 1 unit  
Purpose: Blowing clean air through the filter
- 9PC8045D-V001 / PCB type / Variable resistor control  
Purpose: Controlling PWM-capable fans from a distance

## Features

### ■ High Static Pressure Fan (9HV type)

By improving the efficiency of the motor and blade shape, the maximum static pressure increased by **1.6 times** compared with our conventional product.

Comparison with conventional model (48 V high speed model)	Rotational Speed [min <sup>-1</sup> ]	Max. Airflow [m <sup>3</sup> /min]	Max. Static Pressure [Pa]	SPL [dB(A)]	Power Consumption [W]
New model 9HV5748P5G001	10,500	16.1	1,600	83	240
Conventional model 9SG5748P5G01	8,600	15.5	1,000	78	140

### ■ PWM control function

Fan speed can be controlled by changing the PWM duty cycle.

### ■ PWM Controller (PCB Type)

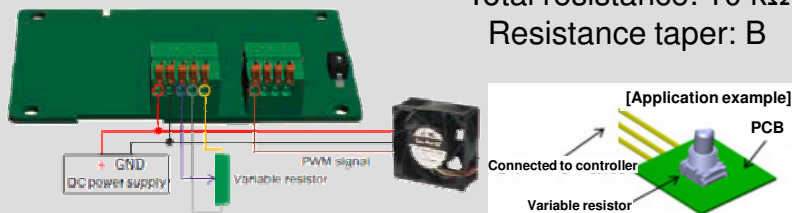
Users can easily control fan speed without having to design a PWM generation circuit.

### ■ Variable resistor control function

Remote control of a fan is possible using a variable resistor.

**Recommended variable resistor:**  
ALPS RK09L series  
Total resistance: 10 kΩ  
Resistance taper: B

[Connection example]



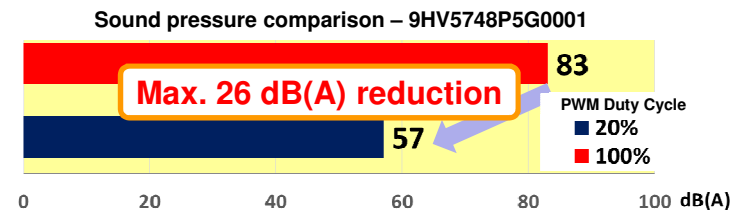
## Merits

### ■ Improved dust collection efficiency

By using the 9HV type, it was possible to attach a filter with higher dust collection efficiency.

### ■ Reduced device noise

By matching the fan speed to the required airflow, noise was reduced.



### ■ Reduces design labor hours and costs

The PWM Controller frees users from having to build a PWM generation circuit or pay someone else to.

### ■ Control fan speed remotely

Airflow can be controlled without being in the immediate vicinity of a device.

