

New Product Introduction  
June 8, 2022

# San Ace 120

**Low noise fan (9RA type)**  
**120 mm × 25mm**

**SANYO DENKI**

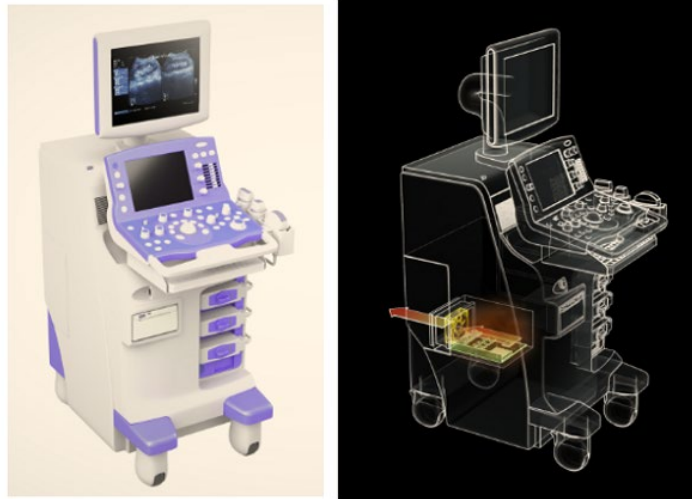
SANYO DENKI AMERICA, INC.  
Cooling Systems Division  
[www.Sanyodenki.com/america](http://www.Sanyodenki.com/america)



# Products Highlights

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- Low Noise and Energy Saving
- Long Life
- Extensive Lineup
- Target applications: Medical equipment, built-in power supplies, AV equipment, measuring instruments, arcade machines



Ultrasound Diagnostic equipment

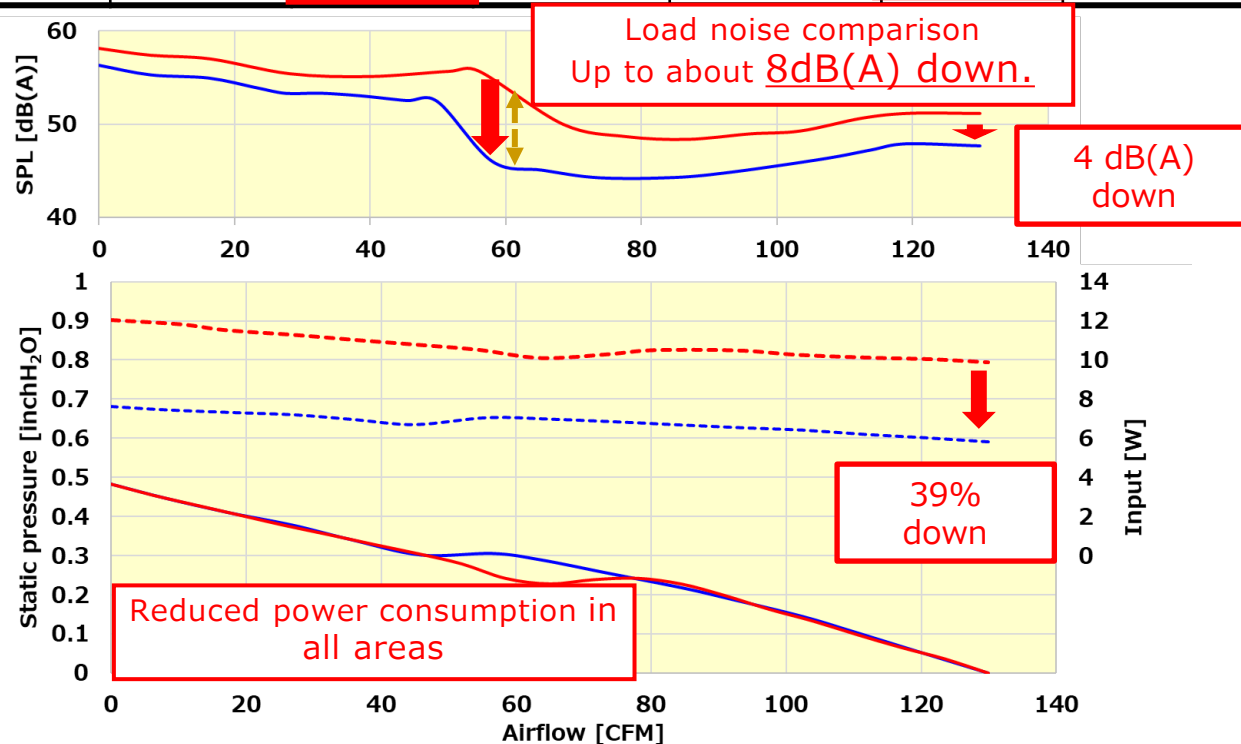
# Low Noise, Energy Saving & Long Life San Ace 120/9RA type

## □ Specification

\*Rated speed and sound pressure level are values at rated voltage in free air.

\*Sound pressure level is measured at one meter from the inlet.

Model no.	Rated voltage [V]	Rated speed [min <sup>-1</sup> ]	Rated input [W]	Max. airflow [CFM]	Max. static Pressure [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating temperature [°C]	Expected life@60°C[h]
<b>New model</b> <b>9RA1212G4001</b>	<b>12</b>	<b>4,500</b>	<b>6.6</b>	<b>130</b>	<b>0.48</b>	<b>47</b>	<b>-20~+70</b>	<b>60,000</b>
<b>Current model</b> <b>9G1212G401</b>	<b>12</b>	<b>4,100</b>	<b>10.8</b>	<b>130</b>	<b>0.48</b>	<b>51</b>	<b>-20~+60</b>	<b>30,000</b>



**SANYO DENKI AMERICA, INC.**

# Specification and Extensive Lineup

San Ace 120/ 9RA type

The product lineup is available in a wide variety in 12/24/48 voltage, cooling performance, noise level, and PWM control. This allows users to choose the most suitable one for their applications.

## ■ Specifications

\*Rated speed, sound pressure level, power consumption are values at rated voltage in free air.

\*Sound pressure level is the value at one meter away from the inlet.

The models listed below **have ribs and pulse sensors with PWM control function.** For models without ribs, append "1" to the end of model numbers.

Model no.	Rated voltage [V]	Operating voltage range [V]	PWM duty cycle* [%]	Rated current [A]	Rated input [W]	Rated speed [min <sup>-1</sup> ]	Max. airflow [m <sup>3</sup> /min] [CFM]	Max. static pressure [Pa] [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating temperature [°C]	Expected life [h]
9RA1212P4G001	12	10.8 to 13.2	100	0.55	6.6	4500	3.68 130	120 0.48	47	-20 to +70	60000/60°C (90000/40°C)
			20	0.06	0.72	1250	1.02 36	9.2 0.037	15		
9RA1224P4G001	24	21.6 to 26.4	100	0.28	6.72	4500	3.68 130	120 0.48	47		
			20	0.05	1.2	1750	1.43 50.5	18.1 0.073	22		
9RA1248P4G001	48	43.2 to 52.8	100	0.15	7.2	4500	3.68 130	120 0.48	47		
			20	0.03	1.44	1650	1.34 47.3	16.1 0.065	21		

\* PWM input frequency is 25 kHz; models without specifications at 0% PWM duty cycle have zero fan speed at 0%.

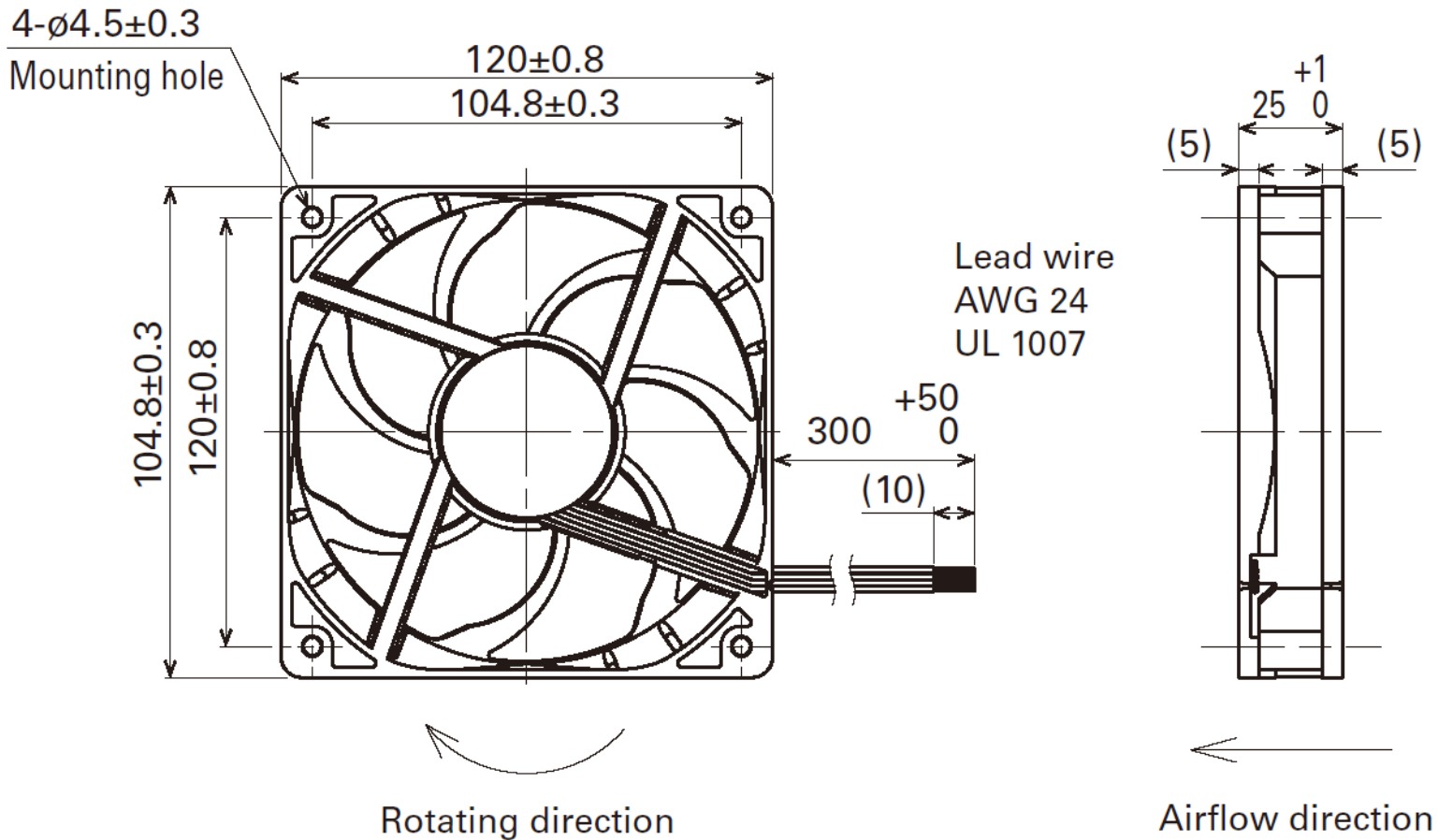
The models listed below **have ribs and pulse sensors.** For models without ribs, append "1" to the end of model numbers.

Model no.	Rated voltage [V]	Operating voltage range [V]	Rated current [A]	Rated input [W]	Rated speed [min <sup>-1</sup> ]	Max. airflow [m <sup>3</sup> /min] [CFM]	Max. static pressure [Pa] [inchH <sub>2</sub> O]	SPL [dB(A)]	Operating temperature [°C]	Expected life [h]
9RA1212G4001	12	7 to 13.8	0.55	6.6	4500	3.68 130	120 0.48	47	-20 to +70	60000/60°C (90000/40°C)
9RA1212E4001			0.41	4.92	4000	3.3 116.5	96 0.386	45		
9RA1212A4001			0.3	3.6	3500	2.86 101.1	73 0.293	42		
9RA1212H4001			0.26	3.12	3200	2.62 92.4	61 0.245	39		
9RA1212M4001			0.12	1.44	2200	1.8 63.5	29 0.116	28		
9RA1224G4001	24	14 to 27.6	0.28	6.72	4500	3.68 130	120 0.48	47		
9RA1224E4001			0.22	5.28	4000	3.3 116.5	96 0.386	45		
9RA1224A4001			0.16	3.84	3500	2.86 101.1	73 0.293	42		
9RA1224H4001			0.13	3.12	3200	2.62 92.4	61 0.245	39		
9RA1224M4001			0.07	1.68	2200	1.8 63.5	29 0.116	28		
9RA1248G4001	48	36 to 55.2	0.15	7.2	4500	3.68 130	120 0.48	47		
9RA1248E4001			0.11	5.28	4000	3.3 116.5	96 0.386	45		
9RA1248A4001			0.09	4.32	3500	2.86 101.1	73 0.293	42		

# Dimensions

San Ace 120/ 9RA type

(unit : mm) (With pulse sensor with PWM control function)



□ MTBF = 3 million hours

□ FIT rate = 330

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# Target Applications

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Equipment used near by people that require both cooling performance and noise reduction

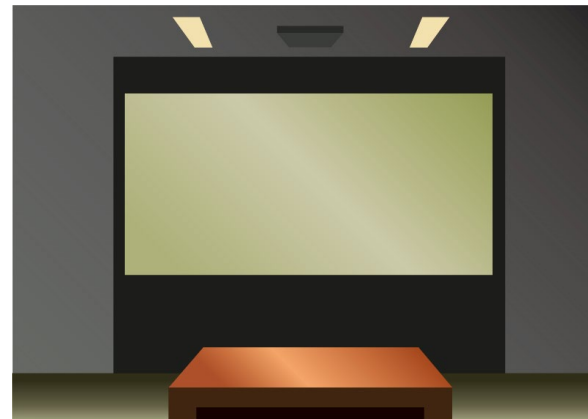
- Medical equipment
- Built-in power supplies
- Audio-Visual equipment
- Measuring instruments
- Arcade machines



Ultrasound  
Diagnostic  
equipment



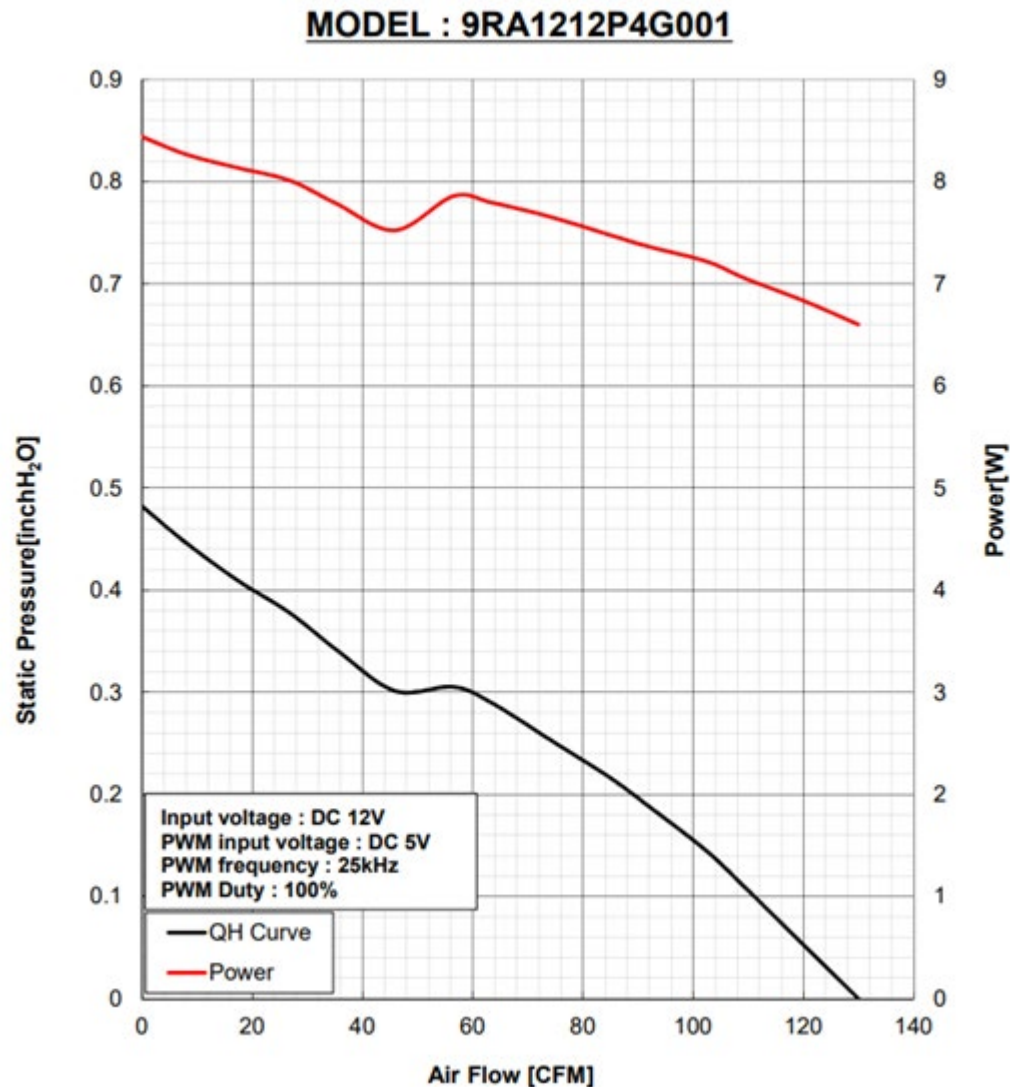
Medical  
Endoscope



Home Theater equipment

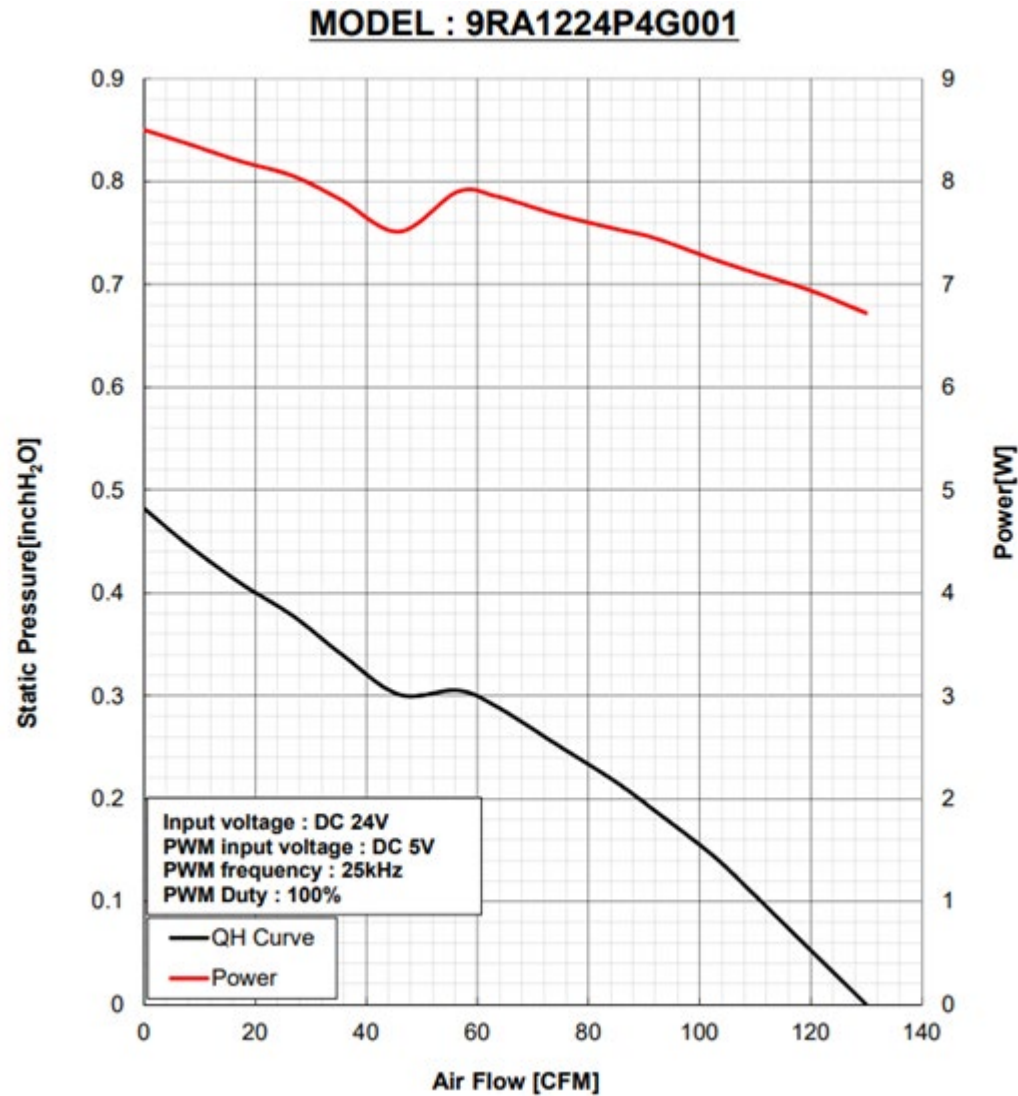
# Performance vs Power

San Ace 92/ 9RA type/12V/G Speed



# Performance vs Power

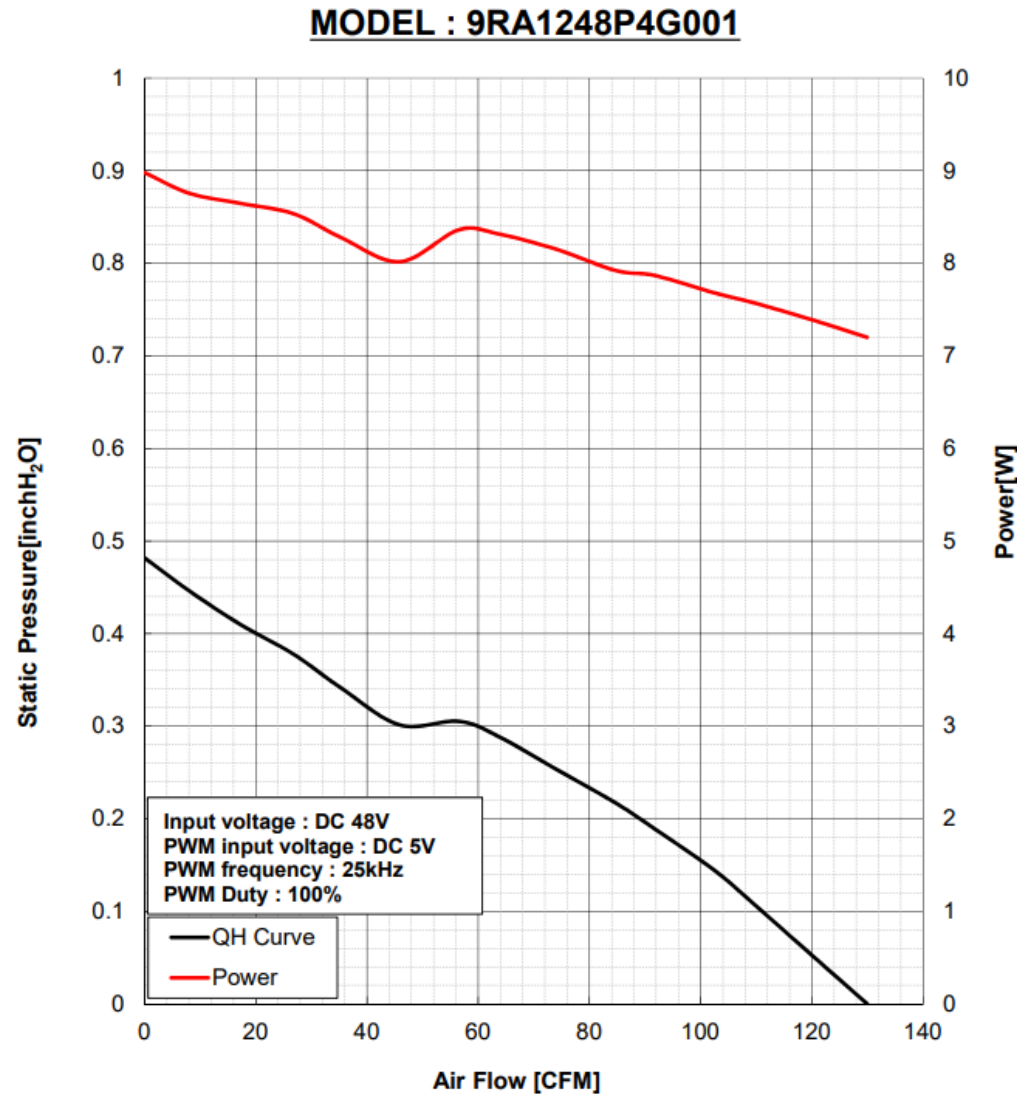
San Ace 92/ 9RA type/24V/G Speed



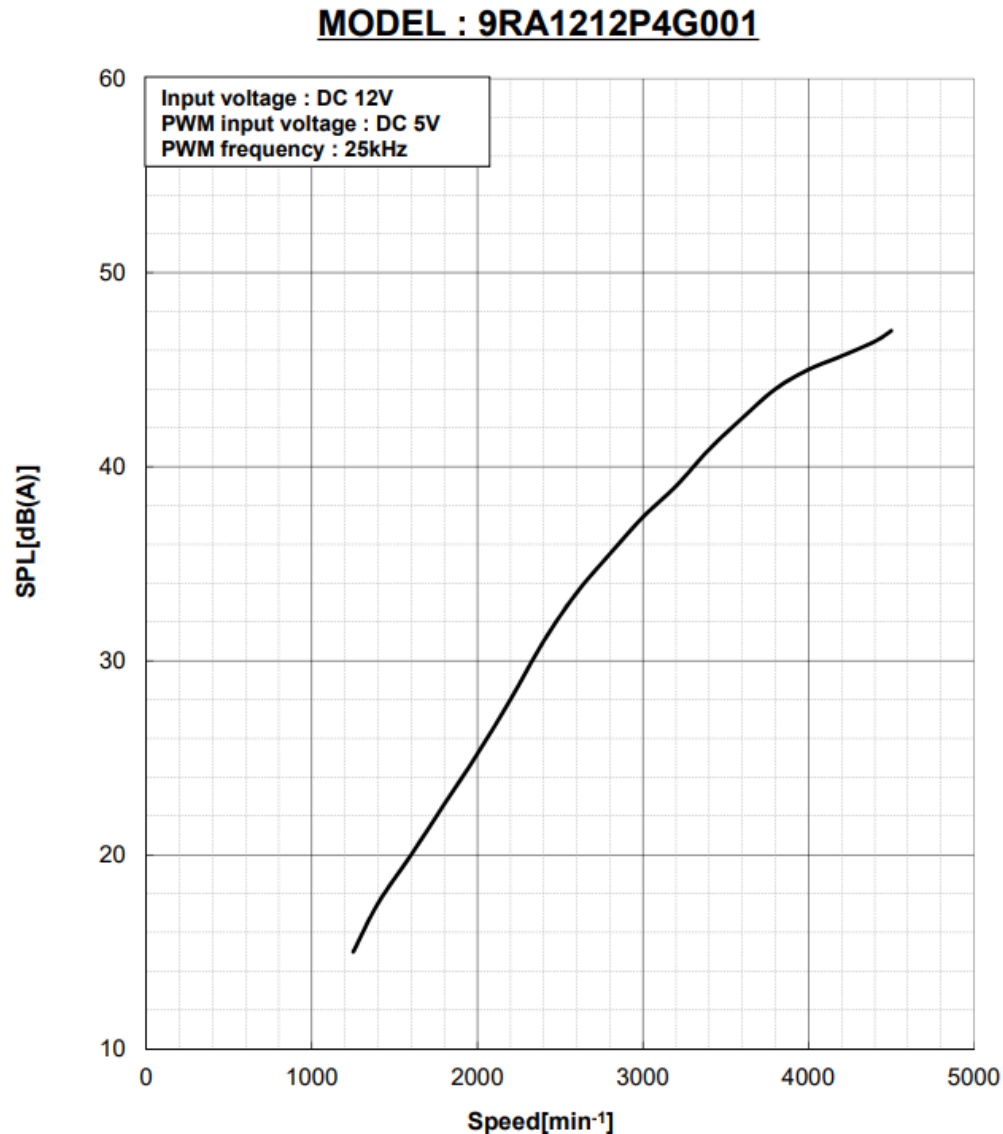


# Performance vs Power

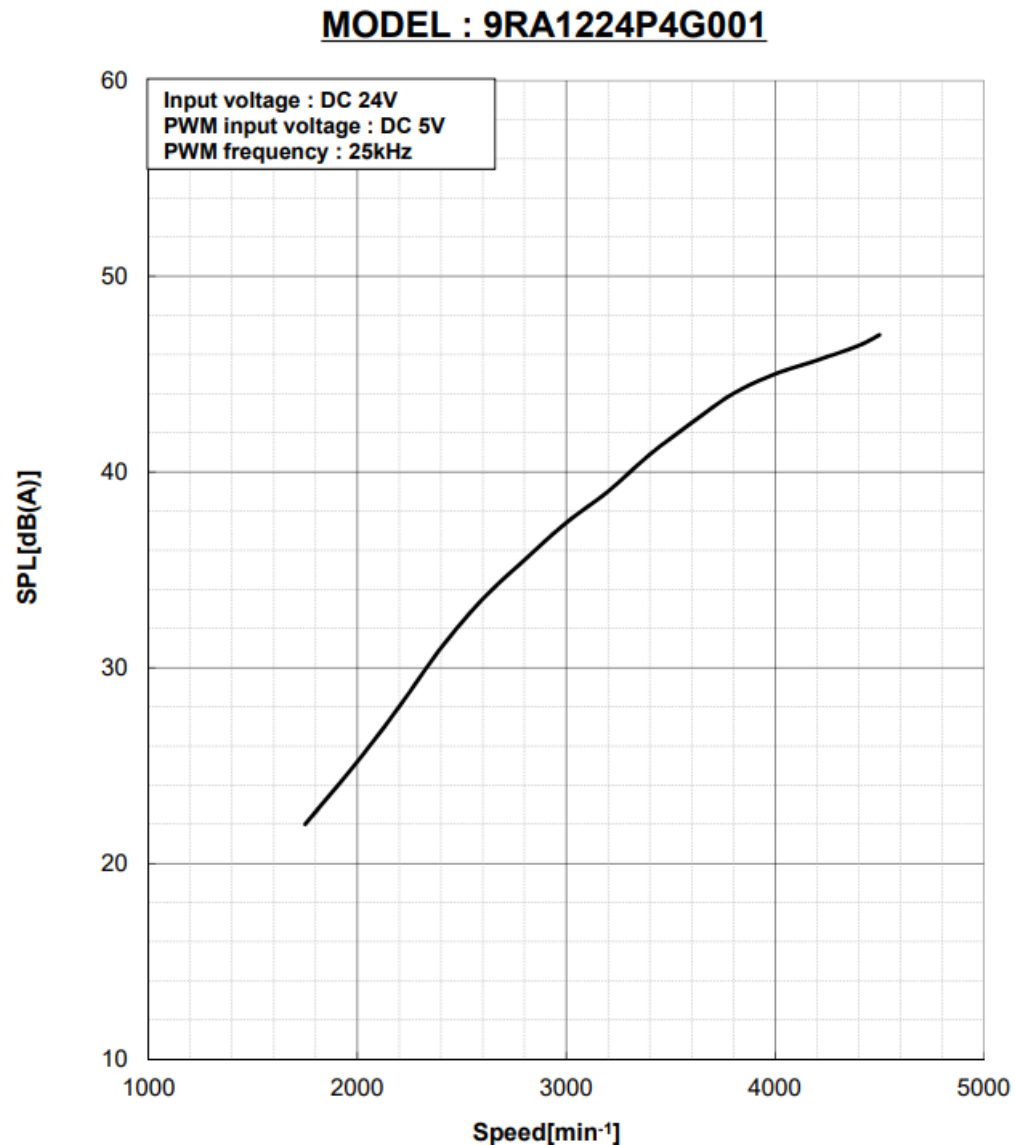
San Ace 92/ 9RA type/48V/G Speed



# SPEED vs Sound Pressure Level (dB(A)) San Ace 92/ 9RA type/12V/G Speed

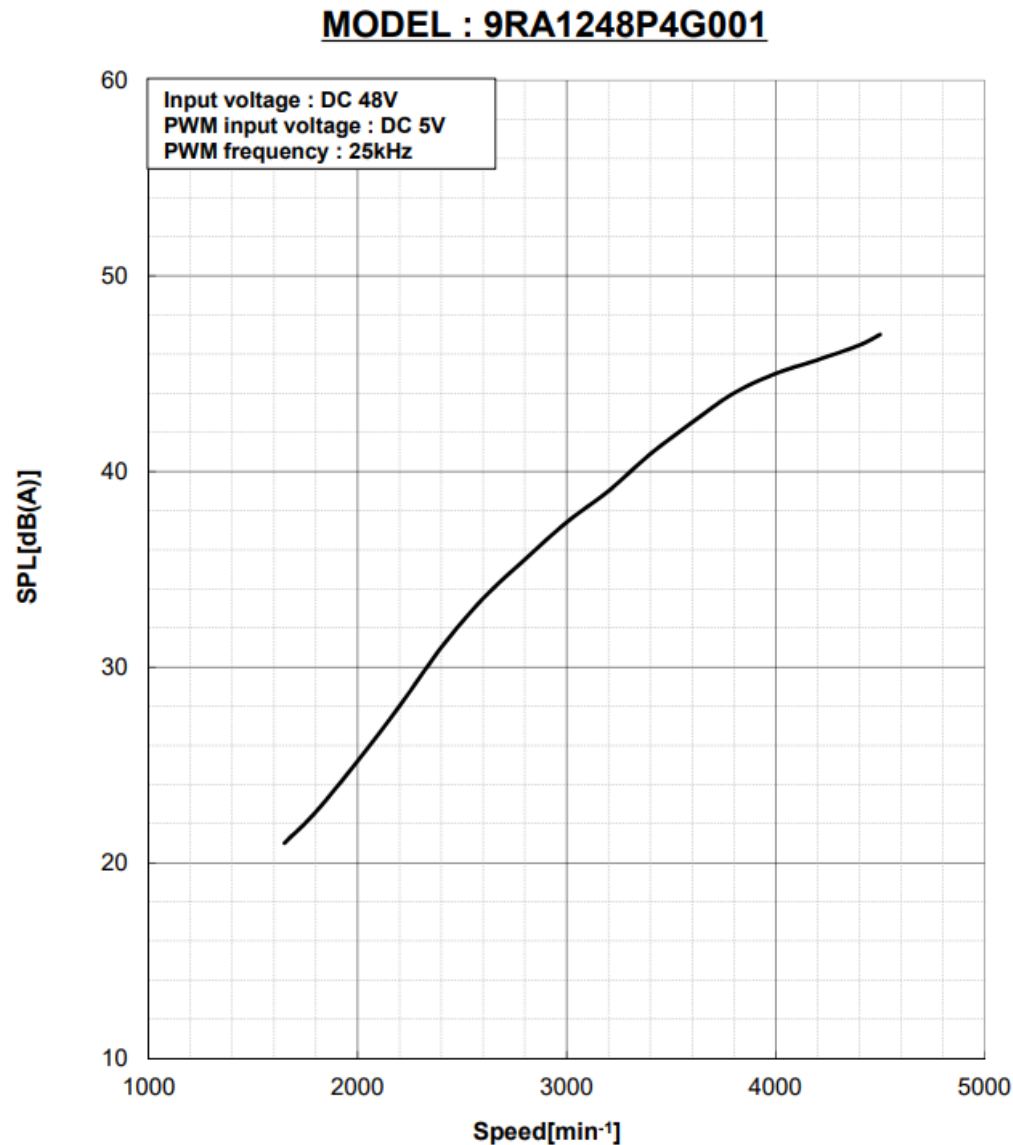


# SPEED vs Sound Pressure Level (dB(A)) San Ace 92/ 9RA type/24V/G Speed



# SPEED vs Sound Pressure Level (dB(A)) San Ace 92/ 9RA type/48V/G Speed

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# Miscellaneous

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- Customizations available

- Harness assembly: Sanyo Denki can recommend connectors and terminals.
- Additional conformal coating available
- Others

- PWM Control Models available

- PWM control function enables to control fan speed depending on the situation and to reduce the power consumption and noise.

- 12, 24 and 48VDC available

- cUL and TUV approved