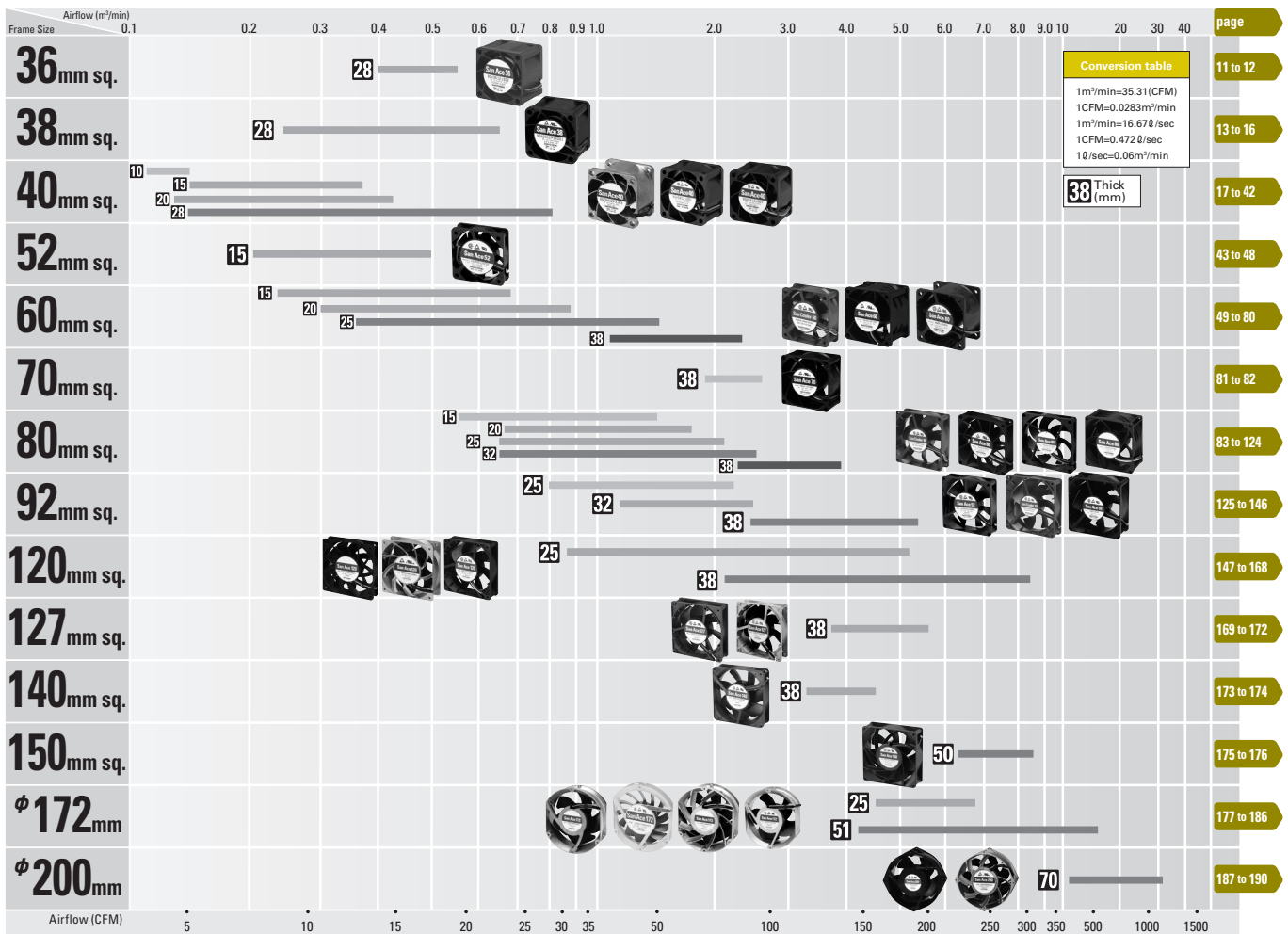


Wide lineup including low power consumption fans (9GA type), silent fans (9S type), and high airflow and high static pressure fans.

Domain Diagram



Part Numbering System

Not every combination of the following codes or characters is available. Contact us for an available combination.

9GV	12	12	J	1	01	1
Type name / frame material 109P / Plastics 109R / Plastics 9GA / Plastics 9S / Plastics 9GV / Plastics Aluminum 9GE / Aluminum 9G / Plastics 9A / Plastics 9SG / Aluminum 109E / Aluminum 9EC / Aluminum	Frame size 36: 36×36mm 03: 38×38mm 04: 40×40mm 05: 52×52mm 06: 60×60mm 08: 80×80mm 09: 92×92mm 12: 120×120mm 13: 127×127mm 14: 140×140mm 15: 150×150mm 17: φ172mm 47: φ172mm×147mm (sidecut) 57: φ172mm×150mm (sidecut) 20: φ200mm	Voltage 05: 5V 12: 12V 24: 24V 48: 48V etc	Speed code A,B,C,D,E,F,G,H,J,K, L,M,S,W etc	Frame thickness 0: 70mm 1: 38mm thick 2: 32mm thick 3: 28mm thick 4: 25mm thick 5: 50mm thick 51mm thick 6: 20mm thick 7: 15mm thick 9: 10mm thick	Sensor specifications 01 or 001: With a pulse sensor 02 or 002: Without a sensor D01 or D001: With a lock sensor	Frame form Nil: Plastics frame: Ribbed frame Aluminum frame: Ribless frame 1: Plastics frame: Ribless frame 3: 40×40×28mm for 1U applications Plastics frame

Fans with PWM speed control function

Example :

9GV	12	12	P	4	G	01	
Type name / frame material 9GV / Plastics Aluminum	Frame size 12: 120×120mm	Voltage 12: 12V	PWM speed control function	Frame thickness	Speed code	Individual customer's spec 2 or 3 digits	Frame form Nil: Plastics frame: Ribbed frame Aluminum frame: Ribless frame

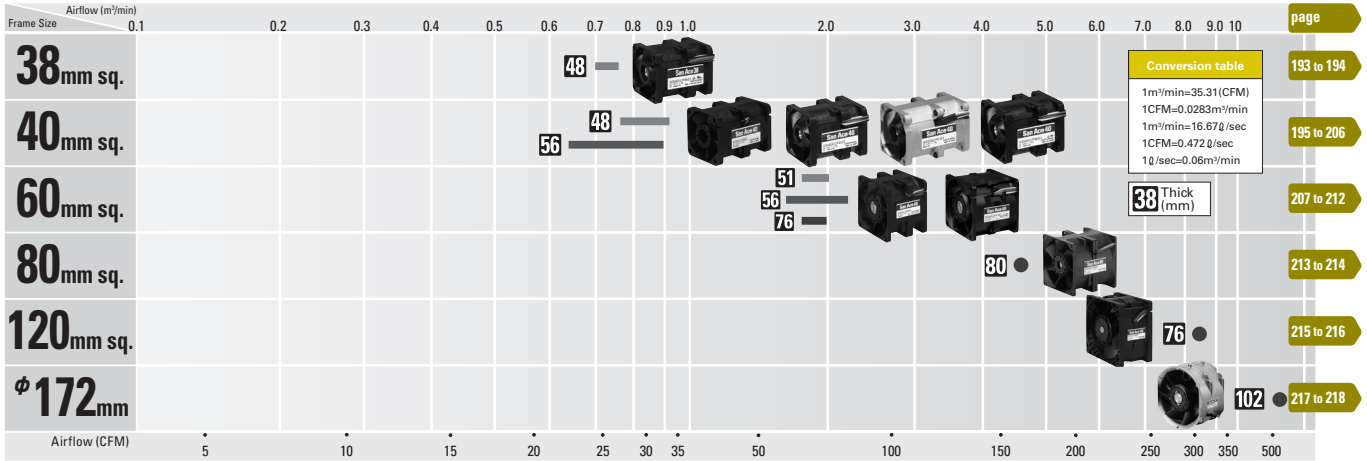
Counter Rotating Fan

Counter rotating fans features high airflow and high static pressure.

Related product

Long Life Counter Rotating Fan ⇒ pp. 297, 303

Domain Diagram



Part Numbering System Not every combination of the following codes or characters is available. Contact us for an available combination.

9CRA	04	12	K	4	01
Type name / frame material 9CR / Plastics Aluminum 9CRA / Plastics 9CRB / Plastics 9CRE / Aluminum 9CRD / Plastics 9CRF / Plastics	Frame size 03 : 38×38mm 04 : 40×40mm 06 : 60×60mm 08 : 80×80mm 12 : 120×120mm 57 : φ172mm×150mm (sidecut)	Voltage 12 : 12V 48 : 48V	Speed code J,G,S,H,K etc	Frame thickness 0 : 76mm thick 4 : 48mm thick 5 : 56mm thick, 51mm thick 6 : 56mm thick 8 : 80mm thick 9 : 102mm thick	Sensor specifications 01 : With a pulse sensor 02 : Without a sensor D01 : With a lock sensor

Fans with PWM speed control function

Example :

9CRA	03	12	P	4	K	03
Type name / frame material 9CRA / Plastics	Frame size 03 : 38×38mm	Voltage 12 : 12V	PWM speed control function	Frame thickness	Speed code	Individual customer's spec 2 or 3 digits

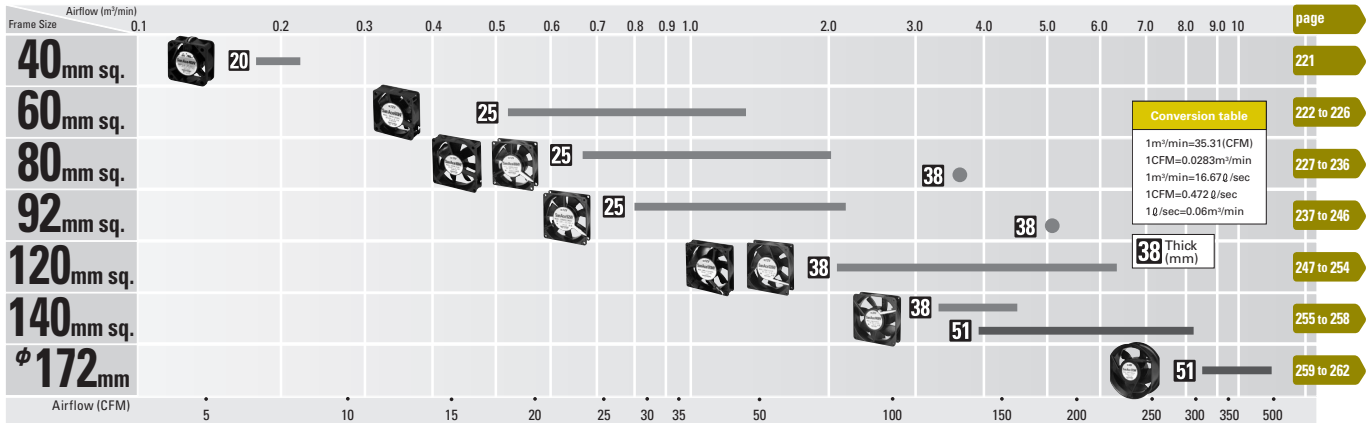
Splash Proof Fan

Cooling fan of IP54, IP55 and IP68 waterproof capability.

Related product

Splash Proof Centrifugal Fan ⇒ p. 264
Oil Proof Fan ⇒ p. 274

Domain Diagram



Part Numbering System

Not every combination of the following codes or characters is available. Contact us for an available combination.

9WS	12	12	H	1	01	
Type name / frame material	Frame size	Voltage	Speed code	Frame thickness	Sensor specifications	Frame form
109W / Aluminum 9WS / Plastics 9WE / Aluminum 9WG / Aluminum 9WB / Aluminum 9WP / Plastics 9WV / Plastics Aluminum 9WL / Aluminum	04 : 40×40mm 06 : 60×60mm 08 : 80×80mm 09 : 92×92mm 12 : 120×120mm 14 : 140×140mm 17 : φ172mm 57 : φ172mm×150mm (sidecut)	12 : 12V 24 : 24V 48 : 48V etc	A, D, E, F, G, H, J, L, M, S etc	1 : 38mm thick 4 : 25mm thick 5 : 51mm thick 6 : 20mm thick	01 : With a pulse sensor 02 : Without a sensor D01 : With a lock sensor	Nil : Plastics frame: Ribbed frame Aluminum frame: Ribless frame 1 : Plastics frame: Ribless frame

Fans with PWM speed control function

Example :

9WV	08	48	P	1	H	001	
Type name / frame material	Frame size	Voltage	PWM speed control function	Frame thickness	Speed code	Individual customer's spec	Frame form
9WV / Plastics Aluminum	08 : 80×80mm	48 : 48V				2 or 3 digits	Nil : Plastics frame: Ribbed frame Aluminum frame: Ribless frame

Ingress protection ratings (IP code)

■ IP Codes used by SANYO DENKI express the level of protection that internal electrical components (for fans: electrical components and motor coils) have against solid objects, water, and access to hazardous parts. San Ace Splash Proof fans feature high protection levels.

Definition of Ingress Protection (IP Code)

Ingress Protection (IP Code) is defined in IEC (International Electrotechnical Commission) 60529* DEGREES OF PROTECTION PROVIDED BY ENCLOSURES (IP Code). *IEC 60529:2001

I P X X

Second digit: Protection against water
First digit: Protection against solid objects and access to hazardous parts

*For details, please refer to p. 410.

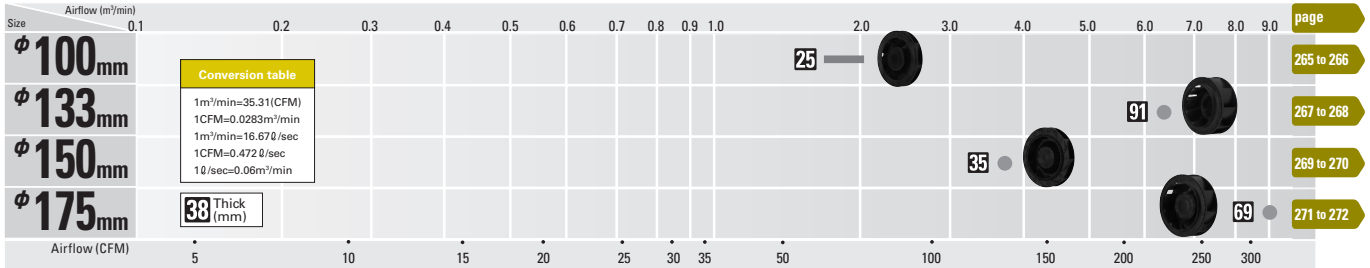
Splash Proof Centrifugal Fan

Centrifugal fans of IP54 waterproof capability.

Related product

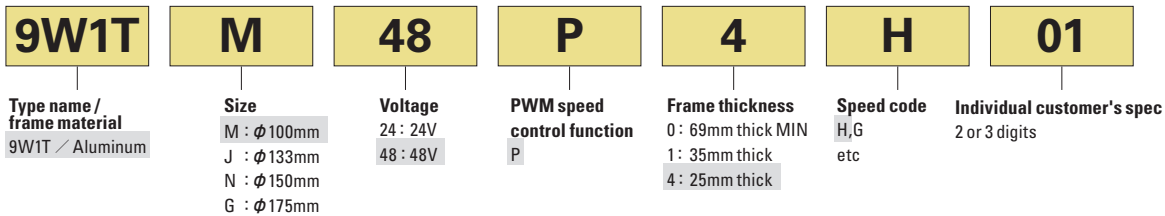
Splash Proof Fan ⇒ p. 220 Centrifugal Fan ⇒ p. 326
Oil Proof Fan ⇒ p. 274

Domain Diagram



Part Numbering System

Not every combination of the following codes or characters is available. Contact us for an available combination.



Ingress protection ratings (IP code)

■ IP Codes used by SANYO DENKI express the level of protection that internal electrical components (for fans: electrical components and motor coils) have against solid objects, water, and access to hazardous parts. San Ace Splash Proof Centrifugal fans feature high protection levels.

Definition of Ingress Protection (IP Code)

Ingress Protection (IP Code) is defined in IEC (International Electrotechnical Commission) 60529*
DEGREES OF PROTECTION PROVIDED BY ENCLOSURES (IP Code). *IEC 60529:2001

I P X X

Second digit: Protection against water
First digit: Protection against solid objects and access to hazardous parts

First digit	Definition
0	No protection
1	Protection against solid objects > 50 mm
2	Protection against solid objects > 12.5 mm
3	Protection against solid objects > 2.5 mm
4	Protection against solid objects > 1 mm
5	Protection against a level of dust that could hinder operation or impair safety
6	Complete protection against dust

Second digit	Definition
0	No protection
1	Protection against dripping water
2	Protection against water spray up to 15°
3	Protection against spraying water
4	Protection against splashing water
5	Protection against low pressure water jets
6	Protection against high pressure water jets
7	Protection against temporary immersion in water
8	Protection against submersion in water

Oil Proof Fan

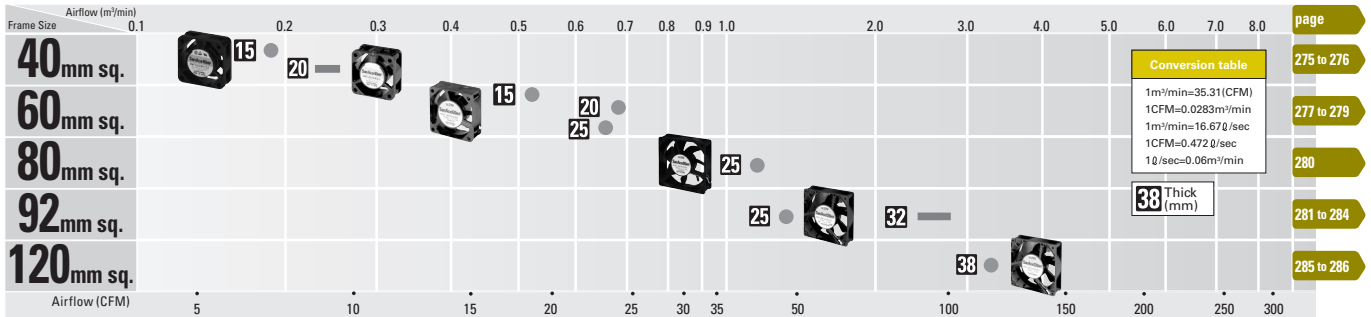
Cooling fan capable of operating in an oil-mist environment.

Related product

Splash Proof Fan ⇒ p. 220

Splash Proof Centrifugal Fan ⇒ p. 264

Domain Diagram



Part Numbering System

Not every combination of the following codes or characters is available. Contact us for an available combination.

9WF	12	24	H	1	01	
Type name / frame material 9WF / Plastics	Frame size 04 : 40×40mm 06 : 60×60mm 08 : 80×80mm 09 : 92×92mm 12 : 120×120mm	Voltage 24 : 24V	Speed code H	Frame thickness 1 : 38mm thick 2 : 32mm thick 4 : 25mm thick 6 : 20mm thick 7 : 15mm thick	Sensor specifications 01 : With a pulse sensor 02 : Without a sensor D01 : With a lock sensor	Frame form Nil : Ribbed frame

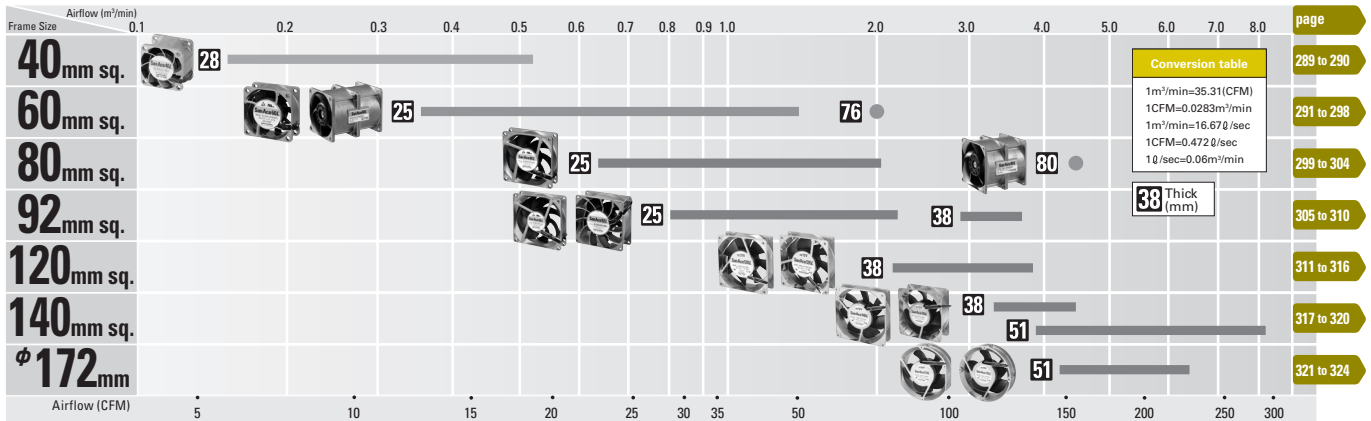
Long Life Fan

Cooling fan with Max. 200,000 hours of expected life.

Related product

Splash Proof, Long Life Fan ⇒ pp. 222, 227, 237

Domain Diagram



Part Numbering System

Not every combination of the following codes or characters is available. Contact us for an available combination.

109L	12	12	H	1	01
Type name / frame material	Frame size	Voltage	Speed code	Frame thickness	Sensor specifications
109L / Aluminum 9LB / Aluminum 9GL / Aluminum 9L / Aluminum 9LG / Aluminum	04 : 40×40mm 06 : 60×60mm 08 : 80×80mm 09 : 92×92mm 12 : 120×120mm 14 : 140×140mm 17 : φ172mm 57 : φ172mm×150mm (sidecut)	12 : 12V 24 : 24V 48 : 48V etc	E, F, G, H, J, L, M, S etc	1 : 38mm thick 3 : 28mm thick 4 : 25mm thick 5 : 51mm thick	01 : With a pulse sensor 02 : Without a sensor D01 : With a lock sensor

Fans with PWM speed control function

Example :

9LG	06	12	P	4	S	001
Type name / frame material	Frame size	Voltage	PWM speed control function	Frame thickness	Speed code	Individual customer's spec
9LG / Aluminum	06 : 60×60mm	12 : 12V		4 : 25mm thick		2 or 3 digits

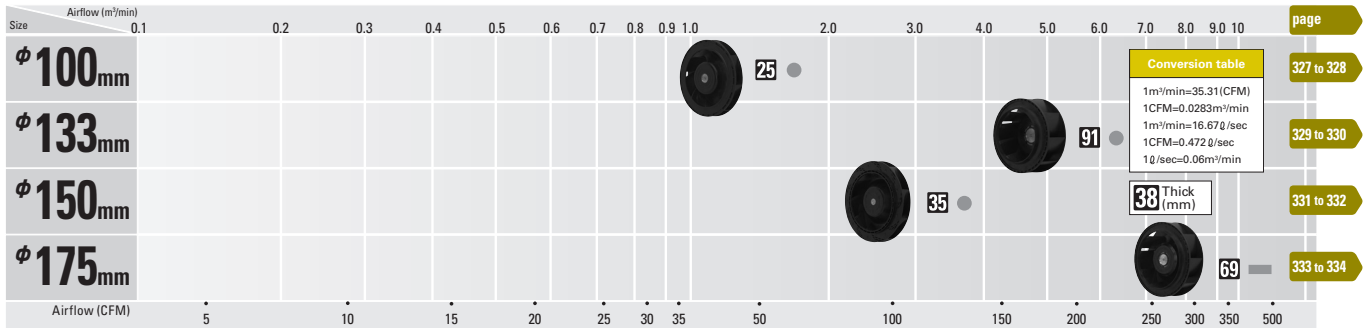
Centrifugal Fan

Cooling fan blows air in a centrifugal course. It features high static pressure.

Related product

Splash Proof Centrifugal Fan ⇒ p. 264

Domain Diagram



Part Numbering System

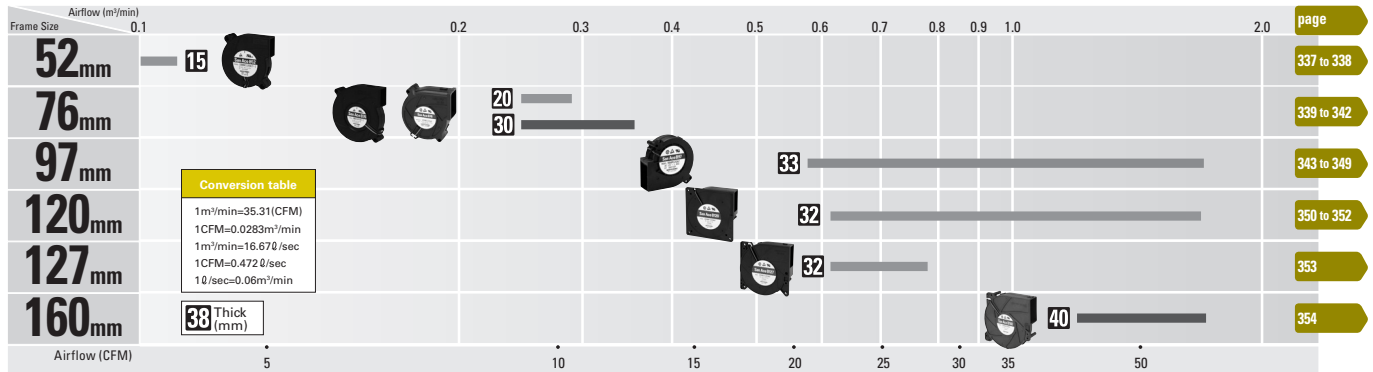
Not every combination of the following codes or characters is available. Contact us for an available combination.

9T	M	48	P	4	H	
Type name / frame material 9T / Aluminum	Size M: φ100mm J: φ133mm N: φ150mm G: φ175mm	Voltage 24: 24V 48: 48V	PWM speed control function P	Frame thickness 0: 69mm thick MIN 1: 35mm thick 4: 25mm thick	Speed code H, G etc	Individual customer's spec 2 or 3 digits

Blower

Cooling fan specialized for high static pressure

Domain Diagram



Part Numbering System

Not every combination of the following codes or characters is available. Contact us for an available combination.

109B	F	12	H	C	2
Type name / frame material 109B / Plastics 9B / Plastics	Frame size C : 52mm F : 120mm D : 76mm J : 127mm M : 97mm G : 160mm	Voltage 12 : 12V 24 : 24V etc	Speed code F,G,H,K,M,S etc	Sensor specifications A : Without a sensor C : With a pulse sensor D : With a lock sensor	Frame thickness 1 : 40mm thick 2 : 30mm thick, 32mm thick, 33mm thick 7 : 15mm thick 6 : 20mm thick

9B	MB	12	G	2	01
Type name / frame material 9B / Plastics	Frame size MB : 97mm FB : 120mm	Voltage 12 : 12V 24 : 24V	Speed code G / S / H etc	Frame thickness 2 : 32mm thick / 33mm thick	Sensor specifications 01 : With a pulse sensor 02 : Without a sensor

Fans with PWM speed control function

Example :

9B	MB	12	P	2	G	01
Type name / frame material 9B / Plastics	Frame size MB : 97mm	Voltage 12 : 12V	PWM speed control function	Frame thickness 2 : 32mm thick / 33mm thick	Speed code	Individual customer's spec 2 or 3 digits