



STANDARD AC FAN PRODUCTS AND VALUE ADDED MANUFACTURING



COFAN USA



COFAN-USA
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- >25 years of cooling systems experience
- US inventory of standard cooling products
- US design, fabrication and assembly
- China, Taiwan and S. Korea manufacturing
- ISO 9001:2015 /1 4001:2015 Qualified

THE COMPANY

Established in 1994, COFAN USA provides advanced, customized solutions to serve our partners' unique needs and allow them to succeed in their markets. While we started out as a company dedicated to cooling solutions for electronic and industrial applications, over time we have expanded to provide innovative solutions in the PCB and LED industries as well. We strive to deliver quick, customized, and professional solutions to our clients by adhering to the highest standards of quality and service.

QUALITY

At Cofan, we stand behind every product we ship with rigorous testing and reporting included in every shipment. Inspection begins with components at our dock and concludes with system level testing of final products. Our Quality Assurance engineers and technicians are dedicated ensure the quality designed into our processes and every product we touch.

CERTIFICATIONS:

To establish and maintain the highest quality practices, we have certified our manufacturing facilities to ISO-9001 standards and our heat sink fabrication facility to the ISO 14001 standard (environmental management). We also comply with OHSAS 18001 for employee safety. All our standard products are UL and CSA certified, and RoHS compliant.



COFAN-USA

Silicon Valley

25,000 ft² Warehouse
3,000 ft² Assembly
35,000 ft² Administration



COFAN PRECISION

Silicon Valley

10,000 ft²
CNC Machining and
Sheet Metal Fabrication



Adding Value to our Standard Products

THERMAL SIMULATION

We provide the best thermal simulation services in the industry utilizing our 25+ years experience with 6SigmaET, Solidworks, Altium, Flotherm, ANSYS Icepack, and Pro/E software tools. Our capabilities reduce the time and costs related to development of the right thermal solution for our customers. We offer CFD analysis and consultation for the best possible arrangements and recommendations in thermal solutions. Whether you have a completely new product in need of a thermal solution or you have an existing product with non-functioning parts, COFAN is here to assist you.

MECHANICAL ENGINEERING

We offer a wide range of mechanical engineering solutions with extensive experience with extrusion, sheet metal enclosures, injection molding, vacuum forming, die-casting, and precision machining. Our diverse client base has provided us with a massive library of designs that we can easily adapt to any industry or application. Our local and offshore manufacturing and fabrication facilities make us the ideal partner from design through large scale manufacturing.

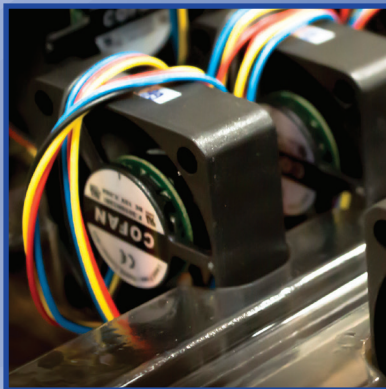
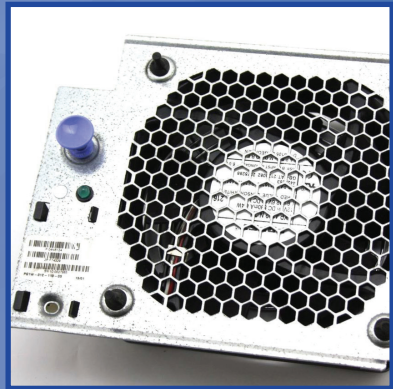
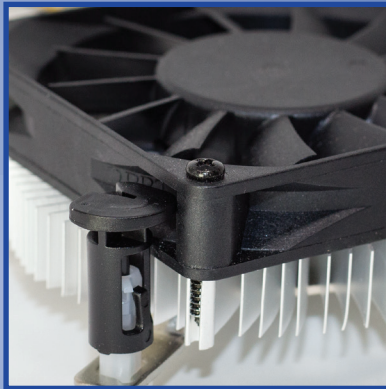
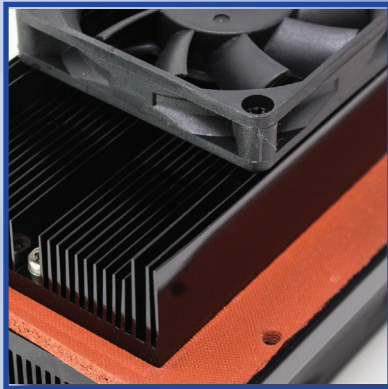
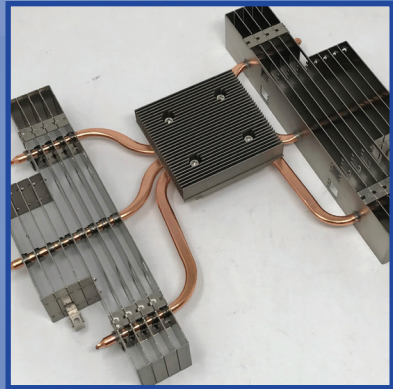
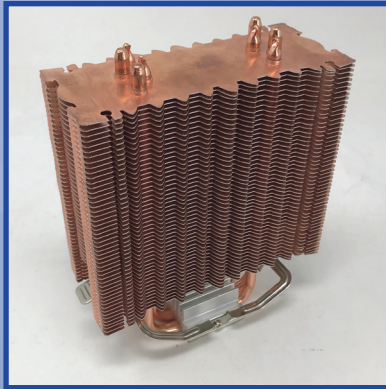
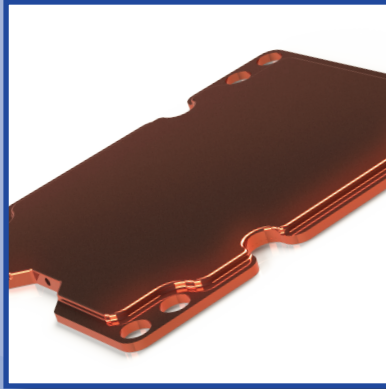
MANUFACTURING PROCESSES

- » Passivation
- » Grinding
- » Soldering
- » Water Jet Cutting
- » Turning
- » Press Brake Forming
- » Die Casting
- » Cold Forging
- » Drilling
- » Masking
- » Epoxy Isolation
- » Wirecut
- » Welding
- » Extrusion
- » Sheet Metal
- » Extrusion
- » Electrical Discharge Machining (EDM)
- » CNC Milling (-3, 4, 5 Axis)
- » Friction Stir Welding
- » Laser Cutting Machine
- » Punching
- » Stamped Metal Fin
- » Plastic (Injection Molding)
- » Skived Fins

FINISHING OPTIONS

- » Anodized
- » Degreased
- » Silk Screened
- » Painted
- » Nickel Plated
- » Electrophoresis Coated
- » Chromated (RoHS Compliant)
- » Antioxidation (For Copper)





GENERAL SPECIFICATIONS

Material	Frame, Impeller: Plastics, Aluminum, etc.
Operation Environment	Two ball bearing: -10°C~+70°C (35%~85%RH) FMB: -10°C~+50°C (35%~85%RH)
Storage Temperature	-40°C +75°C (Humidity: 35%~85%RH)
Insulation Resistance	5mA MAX. at 500 VAC 60Hz one minute (between frame and lead conductor)
Vibration Resistance Test	Applied 5.30Hz, 0.04 peak to peak amplitude, 30~500Hz, 2G peak amplitude for five minutes all three axis/5.3Hz,0.04
Shock Test	Under the conditions of 60G, 22ms (1/2 sine), two times to all three axis
Noise	Expressed as the value at 1m from air inlet side
Life Expectancy (L10 at 40°C)	
Two ball bearing type	30,000hr~100,000hr
FMB bearing type	30,000hr~60,000hr
Sleeve bearing type	20,000hr~30,000hr

STATUS & CONTROL FUNCTIONS

see each series for available options



FG (Tacho) Signal (FG)

The speed of the fan can be controlled via a voltage signal carried by a dedicated input wire.



Analogue Control Input

An additional wire is offered to output a voltage signal when the fan is stationary (operating). It is a useful functionality to identify a non-operating (operating) fan.



Rotation Detector Signal (RD)

An additional wire is offered to output an oscillating voltage output which can be used by the system to infer the fan speed.



Temperature Control

A NTC thermistor is connected to the fan and the fan speed varies with the temperature measured by the thermistor.



PWM Control

The speed of the fan can be controlled via a pulse-width-modulated (PWM) signal carried by a dedicated input wire.



IP Protection

Provide waterproof fans meeting ICE standard 60529.

AC FAN INDEX

Fan Guards and Fan Screws on pages 17 & 18

DIMENSIONS (mm)	SERIES	CFM	VDC	BEARING	PAGE
80 x 25	IGE08025B	17-21	110 / 230	2-Ball	7
80 x 38	IGE08038B	24-30	110 / 230	2-Ball	8
92 x 25	IGE09225B	24-29	110 / 230	2-Ball	9
92 x 38	IGE09238B	42-49	110 / 230	2-Ball	10
120 x 25	IGE12025B	55-59	110 / 230	2-Ball	11
120 x 38	IGE12038B	85-95	110 / 230	2-Ball	12
120 x 38	IGF12038B	95-109	110 / 230	2-Ball	13
172 x 150 x 51	IGE17251B	180-200	110 / 230	2-Ball	14
172 x 150 x 51	IGF17251B	220-268	110 / 230	2-Ball	15
254 x 89	IGE25489B	450-700	110 / 230	2-Ball	16

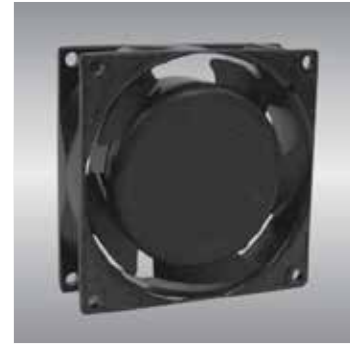
80

IGE series

80X80X25mm

● General Specification

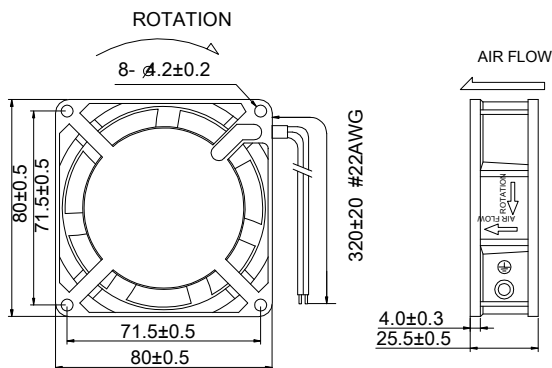
- Motor / Inner rotor, shaded pole AC motor
- Material / Frame: Al alloy
Impeller: PBT plastic
- Insulation / Class 'B' or 'F'
- Connection / Lead wires; Terminal
- Weight / 260g



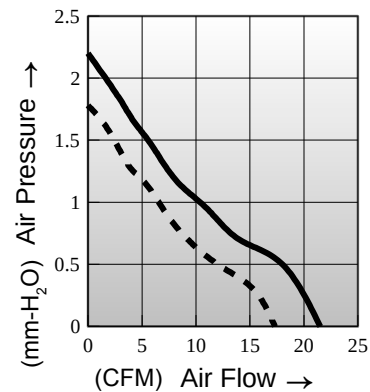
Model	Motor Type	Bearing System	Rated Voltage	Frequency	Watt	Rated Speed	Maximum Air Flow	Maximum Static Pressure	Sound Level
Part No.	○ / ⊗	B / S / F	V	Hz	W	RPM	m ³ /min / CFM	mm-H ₂ O / In-H ₂ O	dBA
IGE08025_1H	○	B	110	50/60	12.0/9.5	2550/2000	0.49/0.61 / 17/21	1.8/2.2 / 0.07/0.08	28/33
IGE08025_2H	○	B	230	50/60	12.0/9.5	2550/2000	0.49/0.61 / 17/21	1.8/2.2 / 0.07/0.08	28/33

Motor Type ○: shaped pole AC motor / ⊗: capacitor induction motor

● Drawing



● Characteristic Curves



80

IGE series

80X80X38mm

● General Specification

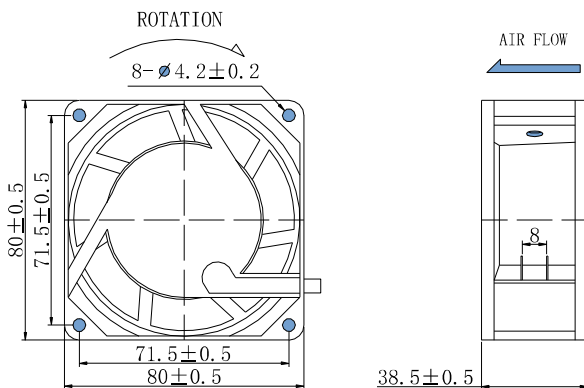
- Motor / Inner rotor, shaded pole AC motor
- Material / Frame: Al alloy
Impeller: PBT plastic
- Insulation / Class 'B' or 'F'
- Connection / Lead wires; Terminal
- Weight / 370g



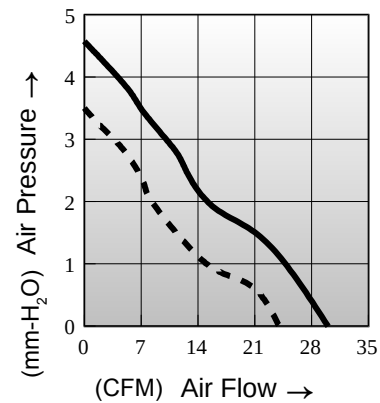
Model	Motor Type	Bearing System	Rated Voltage	Frequency	Watt	Rated Speed	Maximum Air Flow	Maximum Static Pressure	Sound Level
Part No.	○ / ⊗	B / S / F	V	Hz	W	RPM	m ³ /min / CFM	mm-H ₂ O / In-H ₂ O	dBA
IGE08038_1H	○	B	110	50/60	13/10	2450/2950	0.69/0.85 / 24/30	3.5/4.6 / 0.14/0.18	29/30
IGE08038_2H	○	B	230	50/60	13/10	2450/2950	0.69/0.85 / 24/30	3.5/4.6 / 0.14/0.18	29/30

Motor Type ○ : shaped pole AC motor / ⊗ : capacitor induction motor

● Drawing



● Characteristic Curves



92

IGE series

92X92X25mm

● General Specification

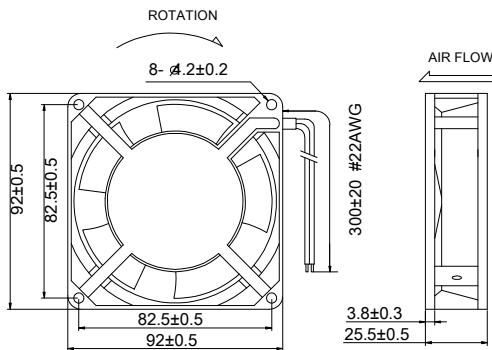
- Motor / Inner rotor, shaded pole AC motor
- Material / Frame: Al alloy
Impeller: PBT plastic
- Insulation / Class 'B' or 'F'
- Connection / Lead wires; Terminal
- Weight / 290g



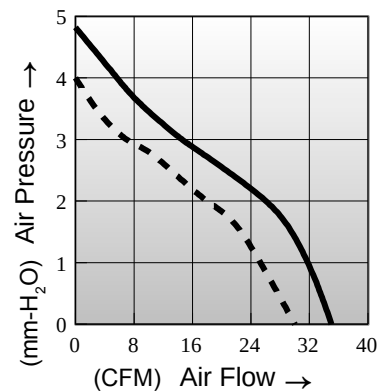
Model	Motor Type	Bearing System	Rated Voltage	Frequency	Watt	Rated Speed	Maximum Air Flow	Maximum Static Pressure	Sound Level
Part No.	⊙ / ⊗	B / S / F	V	Hz	W	RPM	m ³ /min / CFM	mm-H ₂ O / In-H ₂ O	dBA
IGE09225_1H	⊙	B	110	50/60	15/13	2400/2800	0.85/0.99 / 30/35	4.0/5.0 / 0.16/0.20	30/31
IGE09225_2H	⊙	B	230	50/60	15/13	2400/2800	0.85/0.99 / 30/35	4.0/5.0 / 0.16/0.20	30/31

Motor Type ⊙ : shaped pole AC motor / ⊗ : capacitor induction motor

● Drawing



● Characteristic Curves



120 IGE series

120X120X25mm



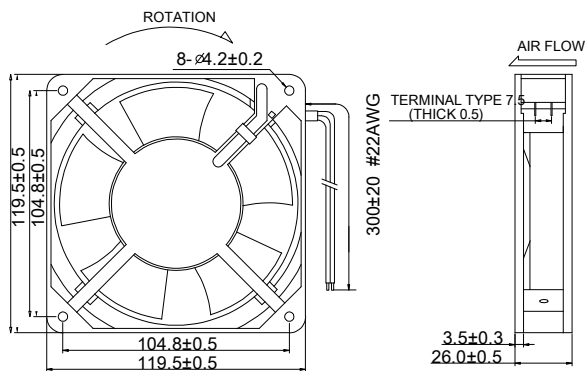
General Specification

- Motor / Inner rotor, shaded pole AC motor
- Material / Frame: Al alloy
Impeller: PBT plastic
- Insulation / Class 'B' or 'F'
- Connection / Lead wires; Terminal
- Weight / 260g

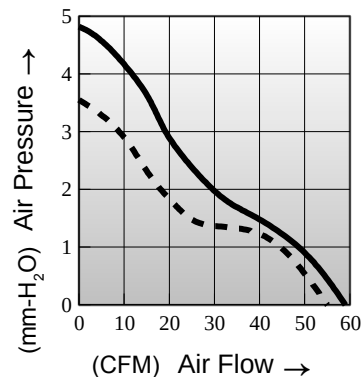
Model	Motor Type	Bearing System	Rated Voltage	Frequency	Watt	Rated Speed	Maximum Air Flow	Maximum Static Pressure	Sound Level
Part No.	⊙ / ⦶	B / S / F	V	Hz	W	RPM	m ³ /min / CFM	mm-H ₂ O / In-H ₂ O	dBA
IGE12025_1H	⦶	B	110	50/60	19/18	2200/2500	1.80/2.30 / 64/81	5.0/5.9 / 0.20/0.23	37/38
IGE12025_2H	⊙	B	230	50/60	19/18	2200/2500	1.80/2.30 / 64/81	5.0/5.9 / 0.20/0.23	37/38

Motor Type ⊙: shaped pole AC motor / ⦶: capacitor induction motor

Drawing



Characteristic Curves



120 IGE series

120X120X38mm



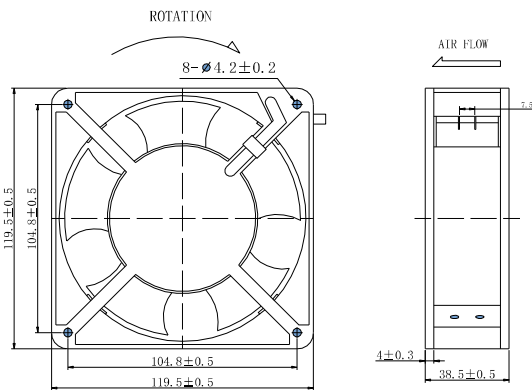
General Specification

- Motor / Inner rotor, shaded pole AC motor
- Material / Frame: Al alloy
Impeller: PBT plastic
- Insulation / Class 'B' or 'F'
- Connection / Lead wires; Terminal
- Weight / 530g

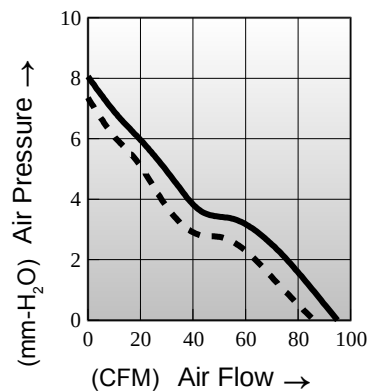
Model	Motor Type	Bearing System	Rated Voltage	Frequency	Watt	Rated Speed	Maximum Air Flow	Maximum Static Pressure	Sound Level
Part No.	⊙ / ⦿	B / S / F	V	Hz	W	RPM	m ³ /min / CFM	mm-H ₂ O / In-H ₂ O	dBA
IGE12038_1H	⦿	B	110	50/60	21/19	2600/3000	2.57/2.97 / 91/105	6.35/7.62 / 0.25/0.30	43/44
IGE12038_2H	⊙	B	230	50/60	21/19	2600/3000	2.57/2.97 / 91/105	6.35/7.62 / 0.25/0.30	43/44

Motor Type ⊙: shaped pole AC motor / ⦿: capacitor induction motor

Drawing



Characteristic Curves



120 IGF series

120X120X38mm



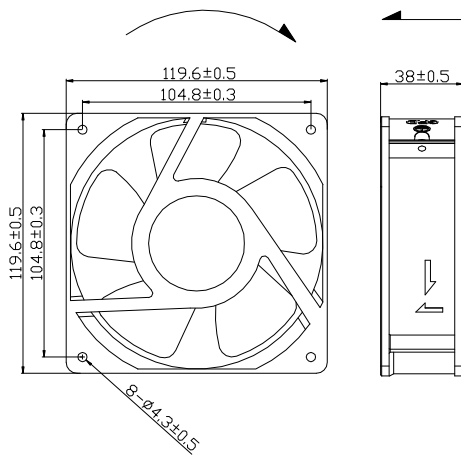
General Specification

- Motor / Inner rotor, shaded pole AC motor
- Material / Frame: Al alloy
Impeller: PBT plastic
- Insulation / Class 'B' or 'F'
- Connection / Lead wires; Terminal
- Weight / 500g

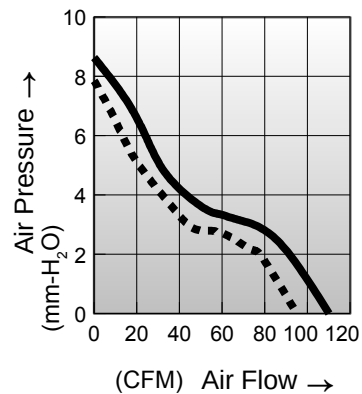
Model	Motor Type	Bearing System	Rated Voltage	Frequency	Watt	Rated Speed	Maximum Air Flow	Maximum Static Pressure	Sound Level			
Part No.	○ / ⊗	B / S / F	V	Hz	W	RPM	m ³ /min	CFM	mm-H ₂ O	In-H ₂ O	dBA	
IGF12038_1H	○	B	110	50/60	17/15	2600/3000	2.69/3.11	95/109	7.8/8.6	77.19/84.66	0.31/0.34	26/27
IGF12038_2H	○	B	230	50/60	17/15	2600/3000	2.69/3.11	95/109	7.8/8.6	77.19/84.66	0.31/0.34	26/27

Motor Type ○: shaped pole AC motor / ⊗: capacitor induction motor

Drawing



Characteristic Curves



172 IGE series

172X150X51mm

General Specification

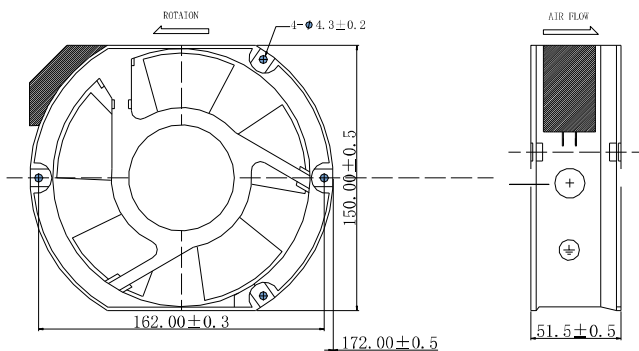
- Motor / Inner rotor, shaded pole AC motor
- Material / Frame: Al alloy
Impeller: PBT plastic
- Insulation / Class 'B' or 'F'
- Connection / Lead wires; Terminal
- Weight / 260g



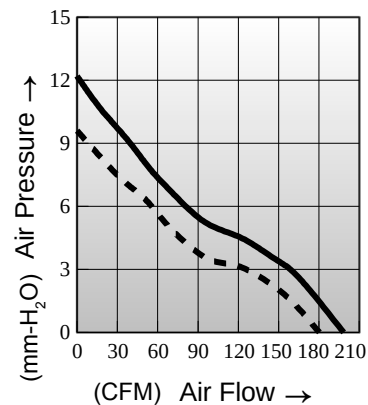
Model	Motor Type	Bearing System	Rated Voltage	Frequency	Watt	Rated Speed	Maximum Air Flow	Maximum Static Pressure	Sound Level
Part No.	⊙ / ⊕	B / S / F	V	Hz	W	RPM	m ³ /min / CFM	mm-H ₂ O / In-H ₂ O	dBA
IGE17251B1H	⊙	B	110	50/60	36/34	2500/2500	5.10/5.62 / 180/198	9.6/12.2 / 0.38/0.48	50/50
IGE17251B2H	⊕	B	230	50/60	36/34	2500/2500	5.10/5.62 / 180/198	9.6/12.2 / 0.38/0.48	50/50

Motor Type ⊙ : shaped pole AC motor / ⊕ : capacitor induction motor

Drawing



Characteristic Curves



254 IGE series

254X89mm



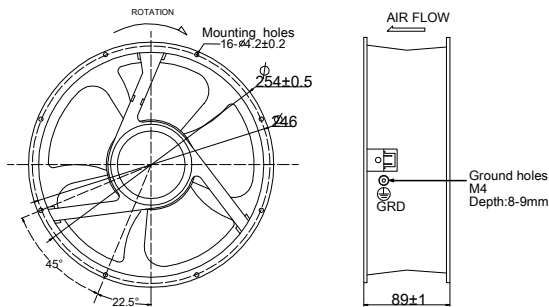
General Specification

- Motor / Outer rotor induction capacitor motor
- Material / Frame: Al alloy
Impeller: PBT plastic
- Insulation / Class 'B' or 'F'
- Connection / Lead wires
- Weight / 2000g

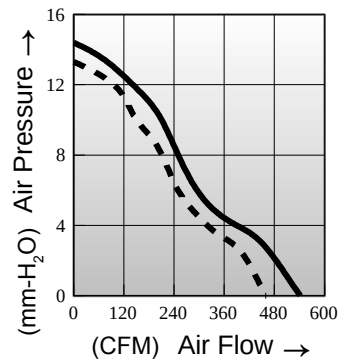
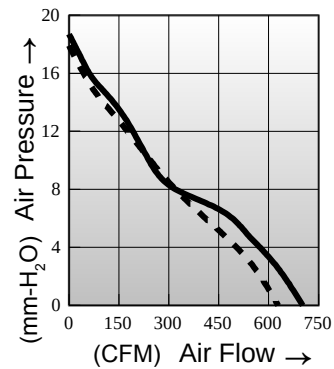
Model	Motor Type	Bearing System	Rated Voltage	Frequency	Watt	Rated Speed	Maximum Air Flow	Maximum Static Pressure	Sound Level
Part No.	⊙ / ⊕	B / S / F	V	Hz	W	RPM	m ³ /min / CFM	mm-H ₂ O / In-H ₂ O	dBA
IGE25489B1H	⊕	B	110	50/60	60/67	2150/2000	17.8/19.87 / 628/702	17.9/18.7 / 0.70/0.74	54/56
IGE25489B2H	⊕	B	230	50/60	60/67	2150/2000	17.8/19.87 / 628/702	17.9/18.7 / 0.70/0.74	54/56
IGE25489B1M	⊙	B	110	50/60	60/67	1400/1600	13.0/15.3 / 458/541	13.3/14.4 / 0.52/0.57	49/51

Motor Type ⊙: shaped pole AC motor / ⊕: capacitor induction motor

Drawing



Characteristic Curves



40

AGE series

40X40X20mm



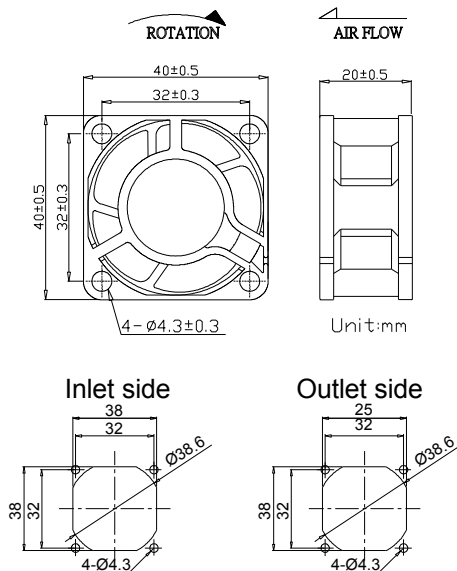
● General Specification

- Material ----- Frame & Impeller : PBT (UL94V-0)
- Operation Temp. -- Two ball bearing : -10°C~70°C
Fluid bearing : -10°C~50°C
- Lead Wires ----- UL 1007 AWG#26 (2 wires) / 26 (3 wires) / 26 (4 wires)
Red Wire : + Yellow Wire: Tach signal
Black Wire : - Blue Wire: PWM control
- Weight ----- 27g

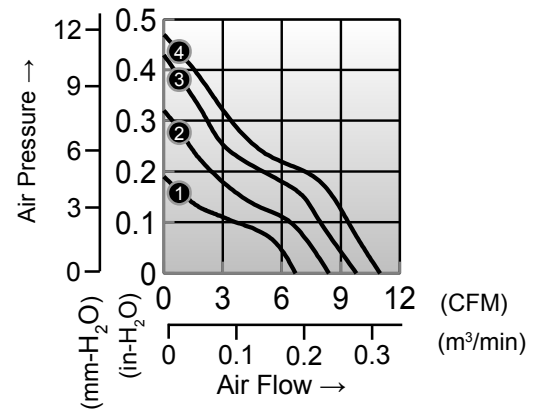
● Specification *Bearing system B:two ball bearing F:fluid bearing

Model	*Bearing System	Rated Voltage	Operating Voltage	Rated Current	Rated Speed	Maximum Air Flow		Maximum Air Pressure		Sound Level	P-Q Curve
P/N	B / F	V	V	A	RPM	m ³ /min	CFM	mm-H ₂ O	In-H ₂ O	dB-A	No.
AGE04020_12L	B / F	12	7.0~13.2	0.10	5000	0.21	6.7	3.8	0.19	23	①
AGE04020_12M	B / F	12	7.0~13.2	0.12	6500	0.22	8.4	7.1	0.32	27	②
AGE04020_12H	B / F	12	7.0~13.2	0.16	8600	0.31	9.8	8.7	0.43	36	③
AGE04020_12U	B / F	12	7.0~13.2	0.22	9500	0.31	11.0	9.3	0.47	37	④
AGE04020_24L	B / F	24	14.0~26.4	0.07	5000	0.21	6.7	3.8	0.19	23	①
AGE04020_24M	B / F	24	14.0~26.4	0.09	6500	0.22	8.4	7.1	0.32	27	②
AGE04020_24H	B / F	24	14.0~26.4	0.13	8600	0.31	9.8	8.7	0.43	36	③

● Drawing & Panel Cut Outs



● Characteristic Curves



40

AGS series

40X40X20mm



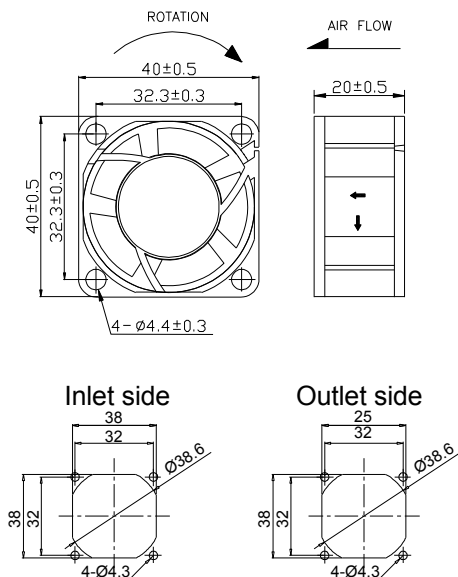
General Specification

- Material ----- Frame & Impeller : PBT (UL94V-0)
- Operation Temp. -- Two ball bearing : -10°C~70°C
Fluid bearing : -10°C~50°C
- Lead Wires ----- UL 1007 AWG#26 (2 wires) / 26 (3 wires) / 26 (4 wires)
Red Wire : + Yellow Wire: Tac signal
Black Wire : - Blue Wire: PWM control
- Weight ----- 27g

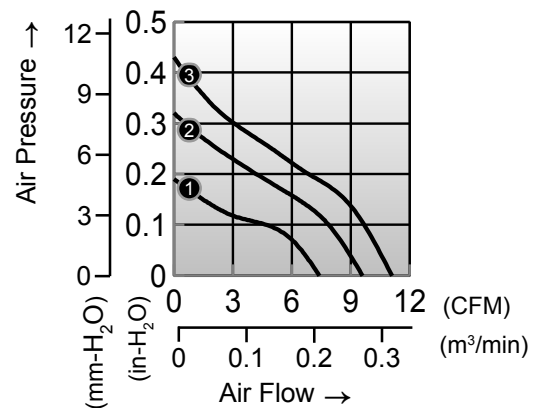
Specification *Bearing system B:two ball bearing F:fluid bearing

Model	*Bearing System	Rated Voltage	Operating Voltage	Rated Current	Rated Speed	Maximum Air Flow	Maximum Air Pressure	Sound Level	P-Q Curve		
P/N	B / F	V	V	A	RPM	m³/min	CFM	mm-H ₂ O	In-H ₂ O	dB-A	No.
AGS04020_12L	B / F	12	7.0~13.2	0.10	5000	0.21	7.4	4.8	0.19	21	①
AGS04020_12M	B / F	12	7.0~13.2	0.12	6500	0.22	9.6	8.1	0.32	25	②
AGS04020_12H	B / F	12	7.0~13.2	0.16	8600	0.31	11.1	10.8	0.43	33	③
AGS04020_24L	B / F	24	14.0~26.4	0.07	5000	0.21	7.4	4.8	0.19	21	①
AGS04020_24M	B / F	24	14.0~26.4	0.09	6500	0.22	9.6	8.1	0.32	25	②
AGS04020_24H	B / F	24	14.0~26.4	0.13	8600	0.31	11.1	10.8	0.43	33	③

Drawing & Panel Cut Outs

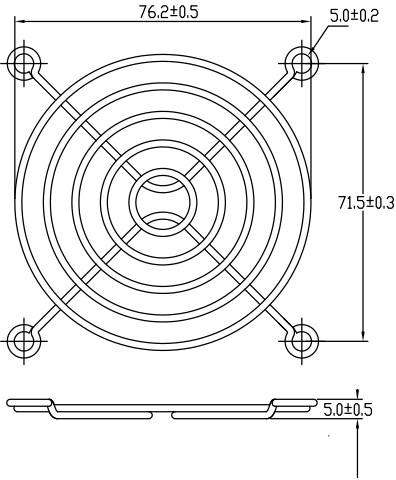


Characteristic Curves

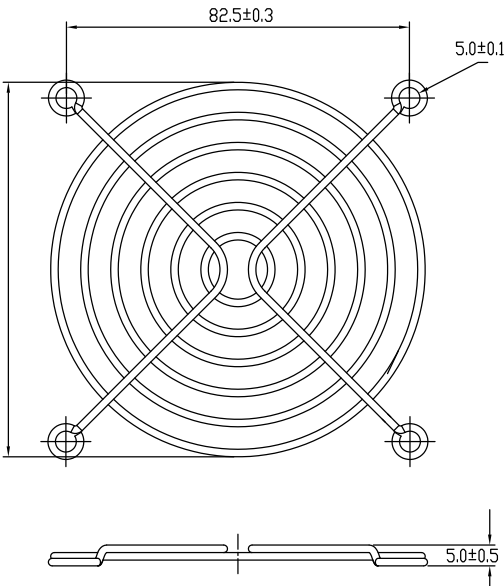


FAN GUARDS

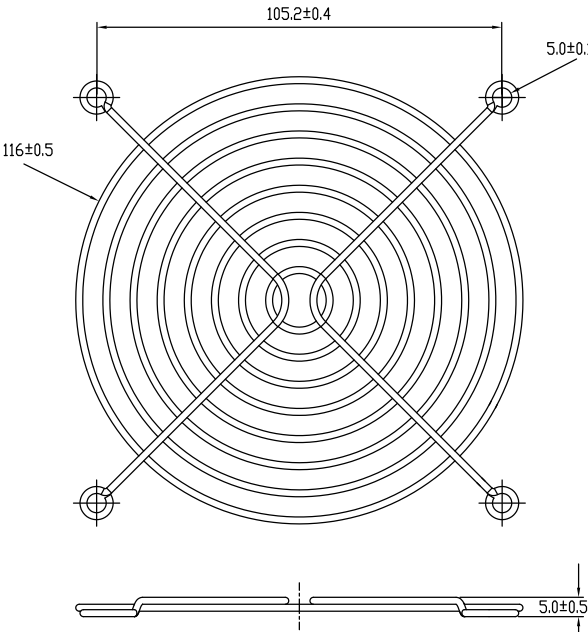
FG80CP (80mm)



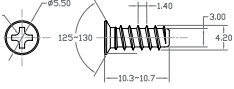
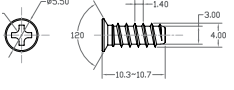
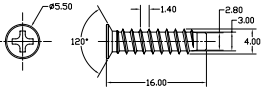
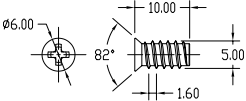
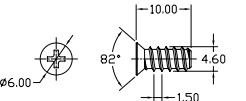
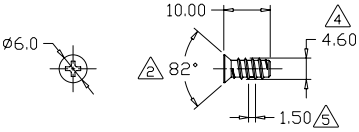
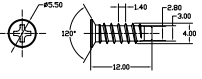
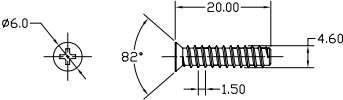
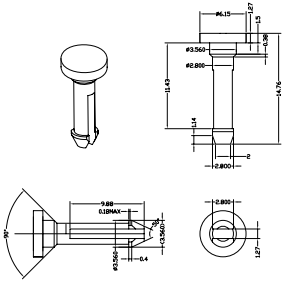
FG92CP (92mm)



FG120CP (120mm)



FAN SCREWS

	60-1250	4.2 x 10.5mm	Nickel
	60-1251	4.2 x 10.5mm	Nickel
	FS4016120	4.0 x 16mm	Steel
	FS51082	5.0 x 10mm	Nickel
	FS461082	4.6 x 10mm	Nickel
	60-1124	4.6 x 10mm	Black Zinc
	FS4012120	4 x 12mm	Nickel
	FS462082	4.60 x 20mm	Zinc Plated
	50-1393	Brass Push Pin	