



Fan / Motor manufacturer
Caring global customers

FAN MOTOR

MAKE TO ORDER SYSTEM





Korea Amass Co., Ltd. & Motadol Co., Ltd.
- Honest and reliable fan motor manufacturing companies.

Amass Wing Co., Ltd.
- The fruit of over 20 years of technology development by Korea Amass and Motadol.

Amass Wing Co., Ltd. is a joint venture established by Korea Amass Co., Ltd. and Motadol Co., Ltd., which have been steadily developing technologies in their respective fields for over 20 years. It is a company infused with many years of experience and technology.

Amass Wing aims to grow into a company that supplies a new concept of fans, previously unattempted in Korea, by simultaneously developing and applying high-air-volume, low-noise fans and motors optimized for them. We strive to supply products of good quality and excellent performance to manufacturing companies across the country and to each and every customer.

Amass Wing Co., Ltd. promises to always respond to customer needs with an open mind, and we ask for your continuous interest and support.

- All executives and employees of Amass Wing -



FAN MOTOR FEATURE

AMASS WING Series Features



- The fan, designed based on fluid dynamics, realizes **high air volume and low noise**.
- By applying an **IP54-rated** motor, the causes of problems during outdoor use have been blocked.
- By adopting an **Inner Rotor Motor**, there is no starting noise and the starting time is short.
- It is manufactured lighter than existing OR (Outer Rotor) type products, making it easy to handle.
- By model, it consists of General type (single-phase, three-phase), Free Voltage type (380~460V), and Inverter type (phase control type), allowing you to choose according to your purpose.
- The Free Voltage type (380~460V) and Inverter type have **improved power efficiency** by 20% compared to the general type product and **up to 30%** compared to the standard type (existing fan/motor separated type) product. (Compared to our company's products)
- It has excellent weather resistance by applying **PP+GF30% (PA6+GF30% for coolers)** to the fan.

AMASS WING DPCON (Digital Phase CONTroller) Features



- The high-performance MCU (Micro Controller Unit) accurately analyzes the input power to **precisely control the fan speed**.
- Simply by connecting the pressure sensor and power line, **the fan speed is automatically adjusted** according to the compressor pressure.
- **Installation is simplified** as there is no need to install a separate inverter or phase controller.
- 8 levels of operating range can be set through DIP Switch manipulation.
- A single AMASS WING DPCON model can **simultaneously control multiple** AMASS WING inverter type (phase control type) models (parallel connection is possible).

Product Naming Convention

AW	000	T	DA	O	S
Product Name	FAN Diameter	Phase	Product Characteristics	Voltage	Phase
Amass Wing	250 350 400 450 500 550 630	T: Single Phase S: Three Phase	DA : General Type DF : Free voltage(380~460V) DI : Control Type(&) DC : CONTROLLER TA: TF: TI: TC:	1 : 220~240V (50Hz) 2 : 220V 3 : 380V	

AWC250

► Product Use

- Fan motor for cooler

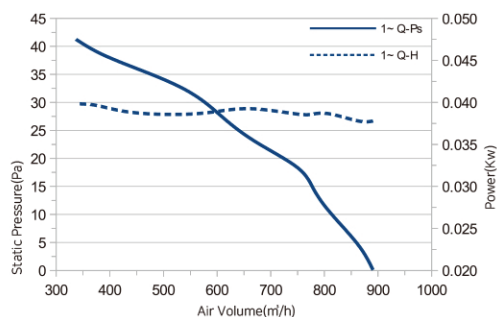
► Specification

- Fan Material : PA6+GF30
- Motor Class : B class, IP54
- Product Weight : 2.5Kg
- Maximum Air Volume : 15CMM

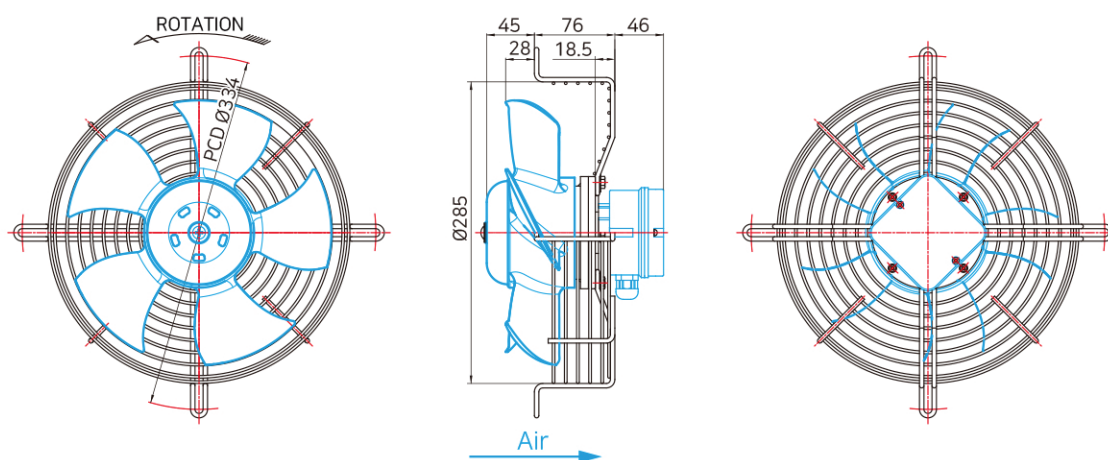


► Characteristics Curve

Motor Specifications	Voltage	Frequency	Phase	Poles	Input	Current	Speed	Noise
MODEL	[V]	[Hz]	[PH]	[P]	[W]	[A]	[RPM]	[dBA]
AWC250S-DA2-S	220	60	Single Phase	4	42	0.2	1,302	50
	220	50	Single Phase	4	36	0.17	1,207	49
	240		Single Phase		39	0.18	1,258	49



► Machine system design



AW350

► Product Use

- Fan motor for condenser

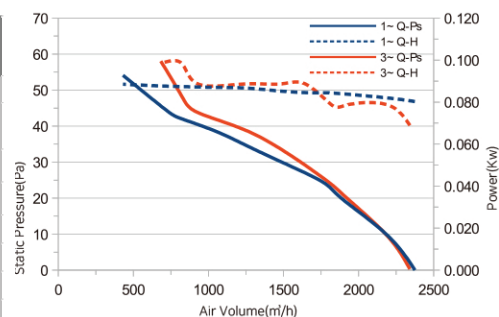
► Specification

- Fan Material : PP+GF30
- Motor Class : B class, IP54
- Product Weight : 3.8Kg
- Maximum Air Volume : 39CMM

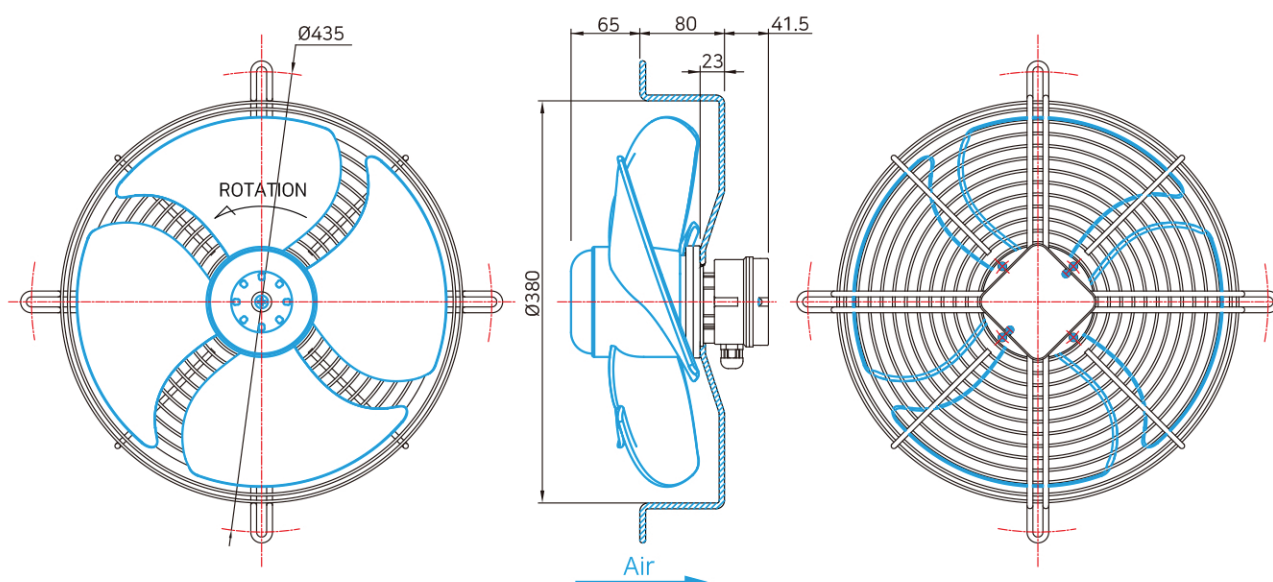


► Characteristics Curve

Motor Specifications	Voltage	Frequency	Phase	Poles	Input	Current	Speed	Noise
MODEL	[V]	[Hz]	[PH]	[P]	[W]	[A]	[RPM]	[dBA]
AW350S-DA2-S	220	60	Single Phase	4	87	0.39	1,309	52
	220	50	Single Phase	4	71	0.31	1,203	51
	240				80	0.32	1,253	51
AW350T-DA3-S	380	50	Three-phase	4	69	0.14	1,210	51
		60			81	0.14	1,290	52
AW350T-DF3-S (FREE VOLTAGE)	380	50	Three-phase	4	67	0.13	1,200	51
		60			81	0.14	1,280	52
		50			79	0.16	1,290	52
	460	60			98	0.15	1,390	53
AW350T-DI3-S For control (inverter & phase control)	380	50	Three-phase	4	67	0.13	1,200	51
		60			81	0.14	1,280	52



► Machine system design



※ Dimensions are subject to change without notice for performance improvement.

AW400

► Product Use

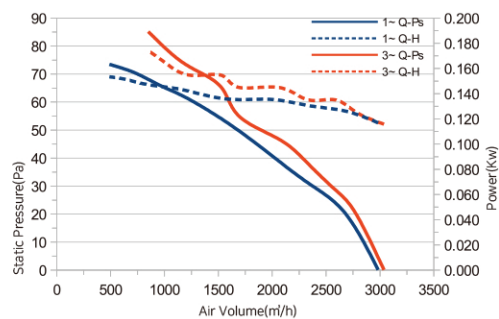
- Fan motor for condenser

► Specification

- Fan Material : PP+GF30
- Motor Class : B class, IP54
- Product Weight : 5.5Kg
- Maximum Air Volume : 52CMM

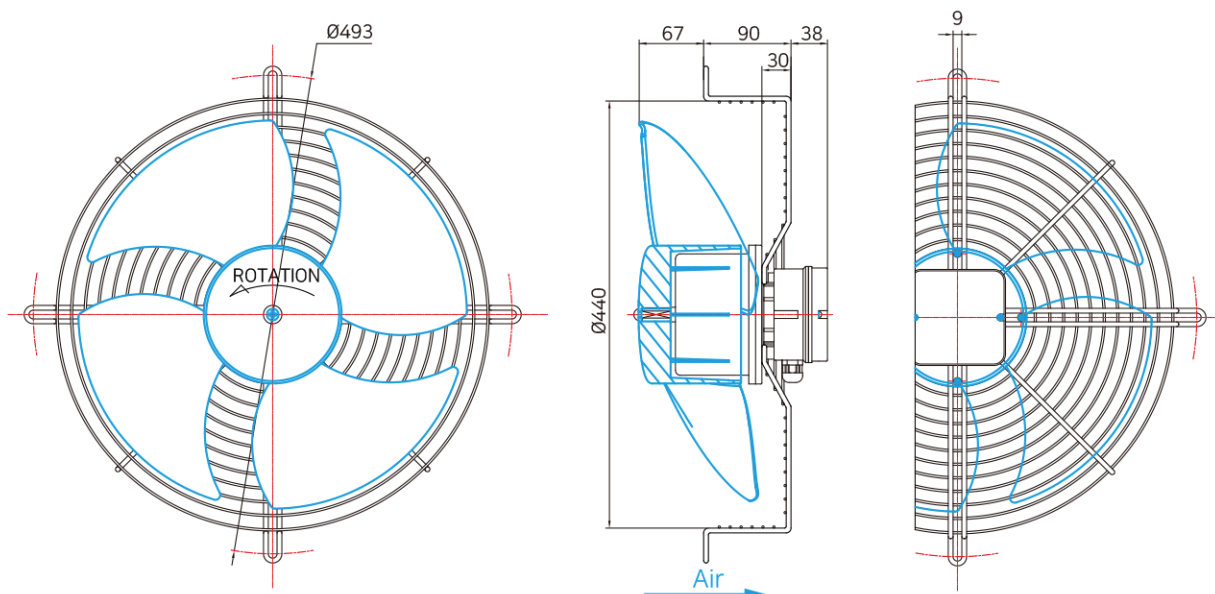


► Characteristics Curve



Motor Specifications	Voltage	Frequency	Phase	Poles	Input	Current	Speed	Noise
MODEL	[V]	[Hz]	[PH]	[P]	[W]	[A]	[RPM]	[dBA]
AW400S-DA2-S	220	60	Single Phase	6	173	0.80	1,046	57
AW400S-DA1-S	220	50	Single Phase	6	130	0.62	922	54
	240				135	0.62	932	54
AW400T-DA3-S	380	50	Three-phase	6	124	0.37	932	54
		60			151	0.34	1,067	57
AW350T-DF3-S (FREE VOLTAGE)	380	50	Three-phase	6	117	0.31	939	54
		60			160	0.32	1,080	57
	460	50			140	0.38	956	54
		60			180	0.35	1,116	58
AW350T-DI3-S For control (inverter & phase control)	380	50	Three-phase	6	117	0.31	939	54
		60			160	0.32	1,080	57
AW400T-DC3-S CONTROLLER Built-in	380	50	Three-phase	6	117	0.31	939	54
		60			160	0.32	1,080	57

► Machine system design



※ Dimensions are subject to change without notice for performance improvement.

AW450

► Product Use

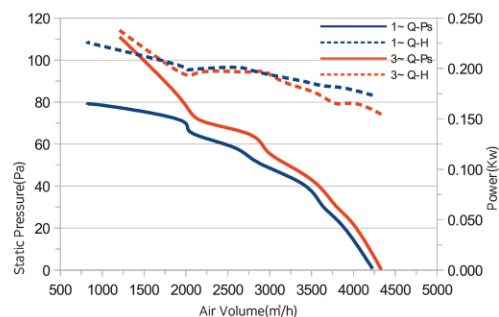
- Fan motor for condenser

► Specification

- Fan Material : PP+GF30
- Motor Class : B class, IP54
- Product Weight : 6.7Kg
- Maximum Air Volume : 72CMM

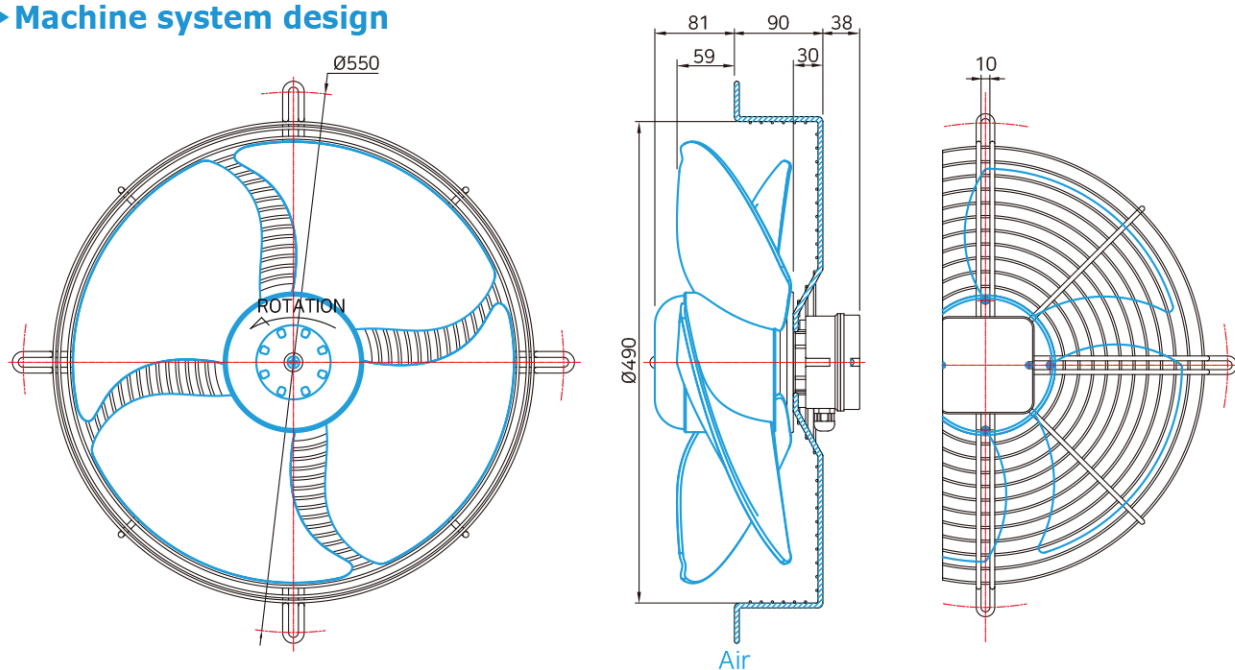


► Characteristics Curve



Motor Specifications	Voltage	Frequency	Phase	Poles	Input	Current	Speed	Noise
MODEL	[V]	[Hz]	[PH]	[P]	[W]	[A]	[RPM]	[dBA]
AW500S-DA2-S	220	60	Single Phase	6	235	1.15	1,085	62
	220	50	Single Phase	6	166	0.8	938	58
	240				180	0.83	949	58
AW500T-DA3-S	380	50	Three-phase	6	189	0.63	952	58
		60			252	0.56	1,103	62
AW500T-DF3-S (FREE VOLTAGE)	380	50	Three-phase	6	170	0.53	948	58
		60			243	0.53	1,093	62
	460	50			210	0.69	963	58
		60			267	0.59	1,124	63
AW500T-DI3-S For control (inverter & phase control)	380	50	Three-phase	6	170	0.53	948	58
		60			243	0.53	1,093	63
AW500T-DC3-S CONTROLLER Built-in	380	50	Three-phase	6	170	0.53	948	58
		60			243	0.53	1,093	63

► Machine system design



※ Dimensions are subject to change without notice for performance improvement.

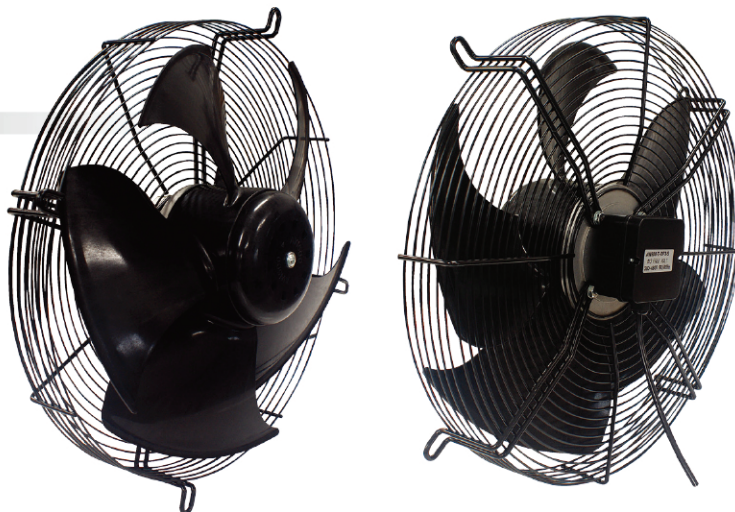
AW500

► Product Use

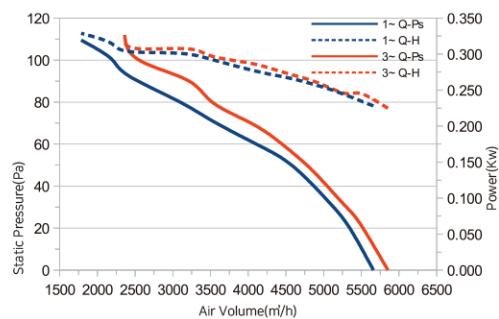
- Fan motor for condenser

► Specification

- Fan Material : PP+GF30
- Motor Class : B class, IP54
- Product Weight : 8.3Kg
- Maximum Air Volume : 97CMM

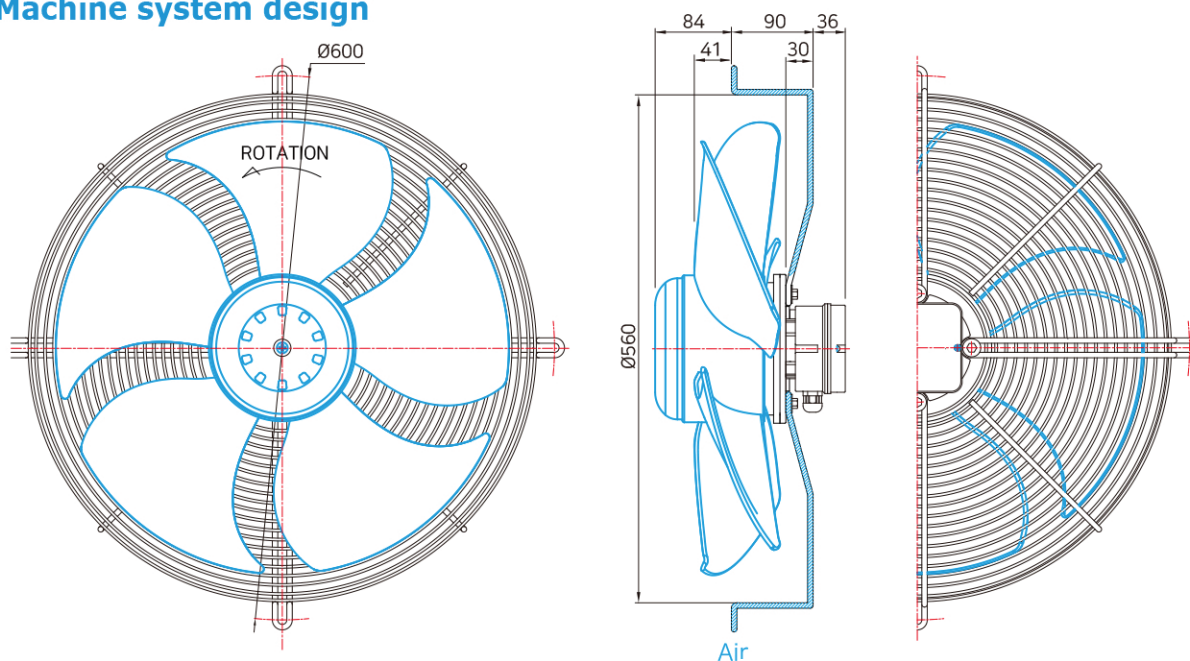


► Characteristics Curve



Motor Specifications MODEL	Voltage [V]	Frequency [Hz]	Phase [PH]	Poles [P]	Input [W]	Current [A]	Speed [RPM]	Noise [dBA]
AW500S-DA2-S	220	60	Single Phase	6	235	1.15	1,085	62
	220	50	Single Phase	6	166	0.80	938	58
	240				180	0.83	949	58
AW500T-DA3-S	380	50	Three-phase	6	189	0.63	952	58
		60			252	0.56	1,103	62
AW500T-DF3-S (FREE VOLTAGE)	380	50	Three-phase	6	170	0.53	948	58
		60			243	0.53	1,093	62
	460	50			210	0.69	963	58
		60			267	0.59	1,124	63
AW500T-DI3-S For control (inverter & phase control)	380	50	Three-phase	6	170	0.53	648	58
		60			243	0.53	1,093	63
AW500T-DC3-S CONTROLLER Built-in	380	50	Three-phase	6	170	0.53	648	58
		60			243	0.53	1,093	63

► Machine system design



※ Dimensions are subject to change without notice for performance improvement.

AW550

► Product Use

- Fan motor for condenser

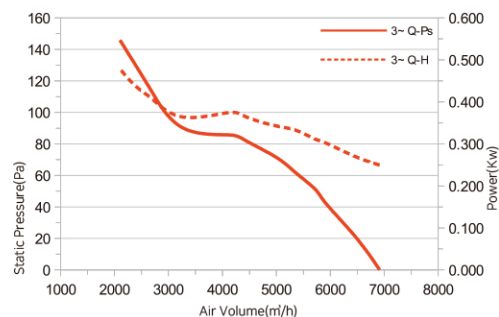
► Specification

- Fan Material : PP+GF30
- Motor Class : B class, IP54
- Product Weight : 9.7Kg
- Maximum Air Volume : 115CMM

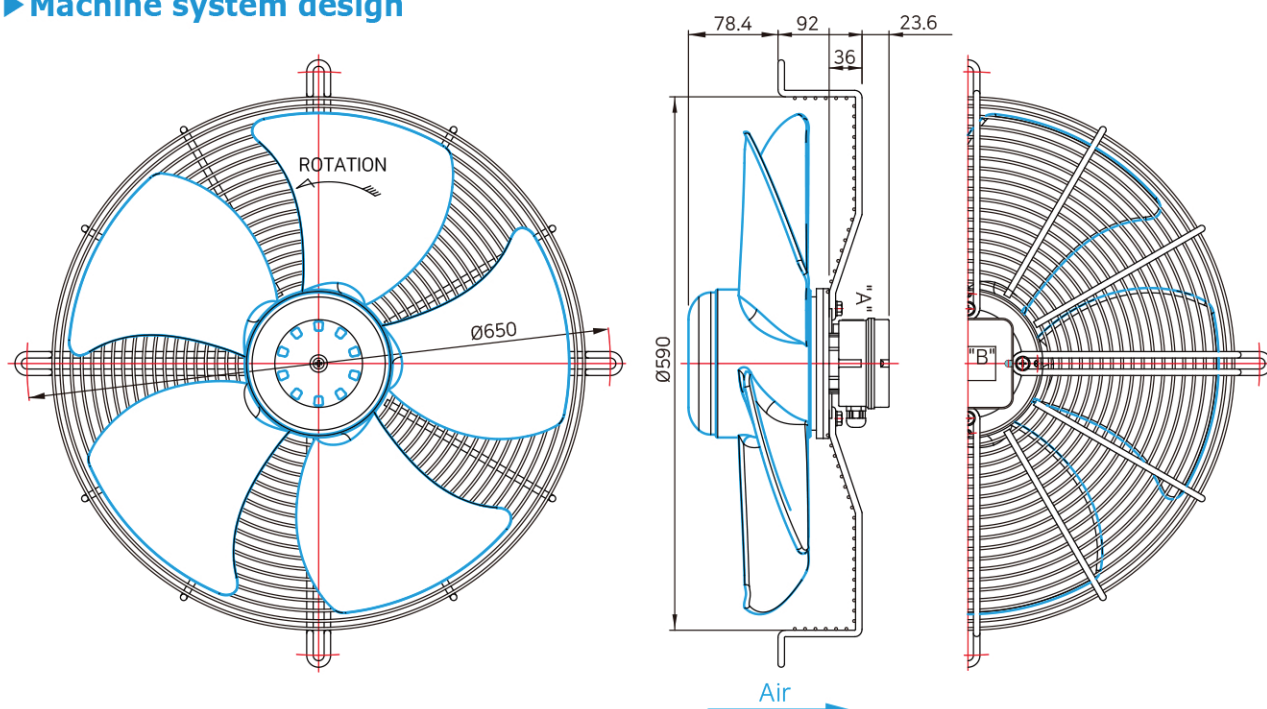


► Characteristics Curve

Motor Specifications	Voltage	Frequency	Phase	Poles	Input	Current	Speed	Noise
MODEL	[V]	[Hz]	[PH]	[P]	[W]	[A]	[RPM]	[dBA]
AW550T-DA3-S	380	50	Three-phase	6	210	0.66	937	63
		60			282	0.62	1,075	67
AW550T-DF3-S (FREE VOLTAGE)	380	50	Three-phase	6	210	0.67	940	63
		60			284	0.64	1,080	67
	460	50	Three-phase	6	250	0.79	968	63
		60			298	0.70	1,110	68
AW550T-DI3-S For control (inverter & phase control)	380	50	Three-phase	6	203	0.56	950	63
		60			285	0.60	1,066	67
AW550T-DC3-S CONTROLLER Built-in	380	50	Three-phase	6	203	0.56	950	63
		60			285	0.60	1,066	67

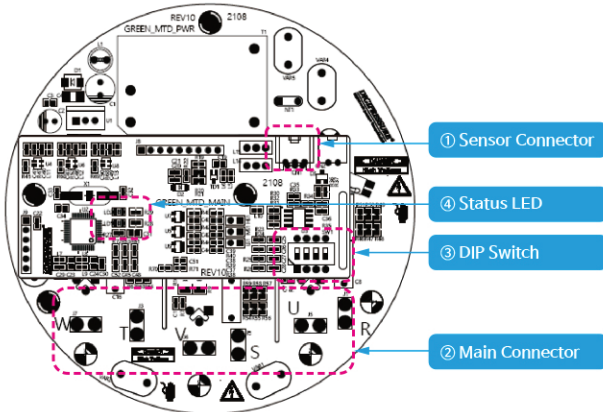


► Machine system design



※ Dimensions are subject to change without notice for performance improvement.

AMASS WING Controller Precautions & Specs



► Precautions

1. Manual operation in case of pressure sensor error
2. When applying input power, be sure to install a circuit breaker and circuit protection fuse (10A), etc.
※ Functional specifications, external dimensions, and standards described in this manual are subject to change without notice.

► Warning

When using for equipment that has a significant impact on human life or property (nuclear control equipment, medical equipment, test equipment, railway, aviation safety devices, etc.), be sure to attach dual safety devices. • Property loss such as fire and human accidents may occur.

1. Be sure to install and use it according to the instructions.
2. Do not wire, inspect, or maintain while power is applied.
3. Do not modify/open except by our authorized technicians.
4. Be sure to use within the rated/performance range.
5. Distinguish the colors of terminals and cables and connect them accurately.

출력 특성	정격 용량[kVA] (220/380/440)	1.9 / 3.0 / 3.0
	정격 전류[A]	5
	최소 출력 전압 [V]	121[V] 3상±10% (입력 전압 380V, 25°C 기준)
	최대 출력 전압 [A]	380[V] 3상 -5% (입력 전압 380[V], 25°C 기준)
입력 전원	정격전압[V]	3상 220 / 380 / 440 VAC(+5%, -5%)
	정격 주파수 [Hz]	50~60
제어	제어방식	전압 제어
운전	운전방식	압력 센서(0~50kgf/cm ²)
	동작온도	-10~65°C
사용 환경	보관온도	-20~85°C
	습도	상대습도 80% RH이하 (이슬 맺힘 현상 없을것)
	기압	70~160kPa
	대기	실내에 부식성 가스, 인화성 가스, 오일 미스트, 먼지 등이 없을것

► ① Sensor Connector

Pressure sensor or 0~5 V input terminal

► ② Main Connector

R S T : Three-phase input
U V W : Three-phase output
Connect in the correct order according to each phase.

※Make sure the wiring is properly connected.

► ③ DIS Switch

DIP S/W 운용				※센서에러 or 센서 미 연결시			
초기값	ON	OFF	1 2 3 4	Cut off	초기값	ON	OFF
1	ON	OFF	1	BIT1 Cut off	1	ON	OFF
2	ON	OFF	1	BIT1 Min speed	2	ON	OFF
3	ON	OFF	1 2 3 4	0-0-0 12~16kgf/oil	3	ON	OFF
4	ON	OFF	1 2 3 4	0-0-1 12.5~16.5kgf/oil	4	ON	OFF
5	ON	OFF	1 2 3 4	0-1-0 13~15kgf/oil	5	ON	OFF
6	ON	OFF	1 2 3 4	0-1-1 13.5~15.5kgf/oil	6	ON	OFF
7	ON	OFF	1 2 3 4	1-0-0 19~23kgf/oil	7	ON	OFF
8	ON	OFF	1 2 3 4	1-0-1 19.5~23.5kgf/oil	8	ON	OFF
9	ON	OFF	1 2 3 4	1-1-0 21~25kgf/oil	9	ON	OFF
10	ON	OFF	1 2 3 4	1-1-1 22~26kgf/oil	10	ON	OFF

► ④ Status LED

1. Green LED

- Flashes at 0.5-second intervals during normal 60 Hz operation.
- Flashes at 1-second intervals during normal 50 Hz operation.

2. Red LED

- Operation error indicator

► Operation Error

1. Reverse/Missing Phase Error

-When Red LED is ON

: Please cut off the power to the product, disconnect it, and check the input power.

2. Sensor Error / - Red LED blinks at 0.5-second intervals

- Red LED blinks at 0.5-second intervals

: It may have exceeded the measurement range of the pressure sensor, or there is a possibility of disconnection, short circuit, or damage.

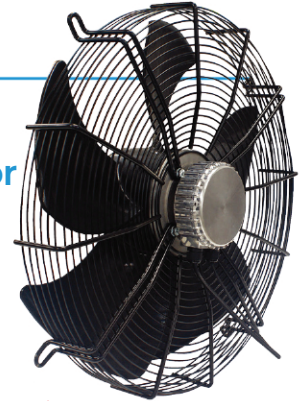
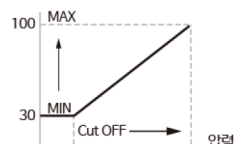
: When a sensor error occurs, the fan output operates manually by selecting the DIP Switch.

※ If there is any abnormality in the product, please contact us.

► Operation Feature

※ Operating characteristics may vary depending on voltage, frequency, ambient temperature, and the fan used.

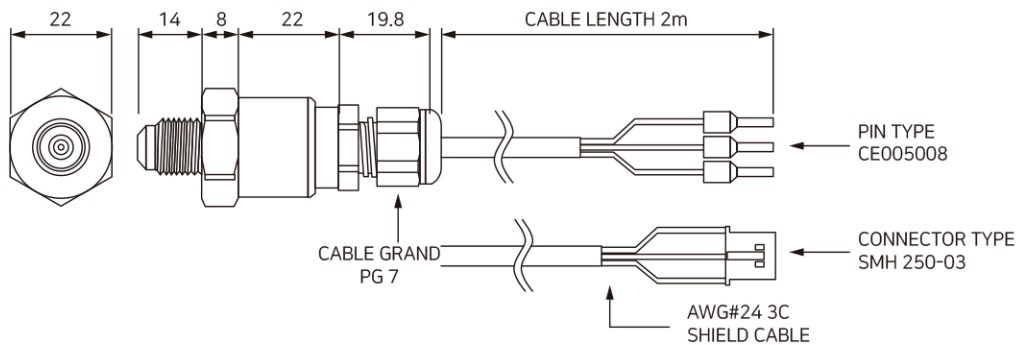
※ AC 3PHASE 380[V], 1 [HP] FAN

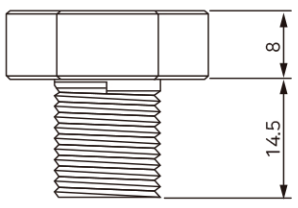
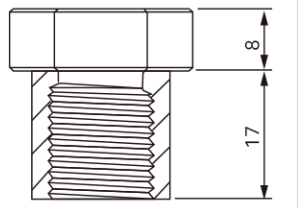
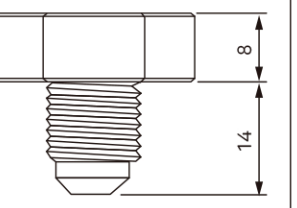
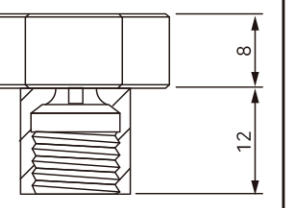


GPTV Product Specifications

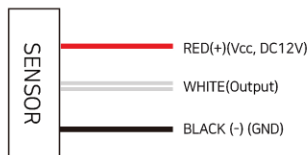


Dimension

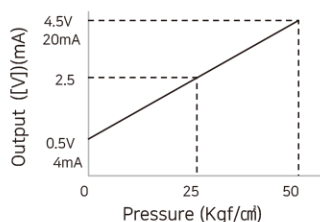


PT 1/4 M	PT 1/4 F	UNF 7/16 M	UNF 7/16 F
			
8 14.5	8 17	8 14	8 12

Wiring



Characteristics



Pressure Range	0 ~ 50 Kgf/CMM	
Output	DC 0.5~4.5V	
Total Accuracy	±0.5%FS	
Operating Temperature Range	-20~85℃	
Storage Temperature Range	-30~125℃	
Maximum Overpressure	150%FS	
Output Current	Isource	0.3mA Max.
	Isink	0.02mA Max.
Power Supply Current	10mA Max.	
Power Supply	12VDC, 12~24VDC±5%	
Insulation Resistance	100MΩ at DC500V	
Dielectric Strength	AC1500V, 1 Min Or AC1800V, 1 Sec	

Note.

1. When connecting the pipe, a different spanner must be used on the hexagonal part of the connector.
2. When connecting the cable, the connector must be inserted at the end of the pressure sensor. Reverse wiring procedures can damage the pressure sensor due to static electricity.
3. The output voltage changes in proportion to the power supply.



AMASSWING Co., Ltd.

- Head Office: 100, Daegotbuk-ro 165beon-gil, Daegot-myeon, Gimpo-si, Gyeonggi-do
- Factory: 13, Sangmasingi-ro 41beon-gil, Daegot-myeon, Gimpo-si, Gyeonggi-do
- Tel_010_6316_7720 • Fax_0504_022_7720