



solutions catalogue

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Founded in 1980, Sunonwealth Electric Machine Industry Company has become a global leader in the fields of precision motors, mini fans, and thermal modules. SUNON's concentration for more than 30 years on the research and development of core motor technology enables it to release numerous patented products that set the pace for the industrial trend.

Založen v r. 1980, Sunonwealth Electric Machine Industry Company se stal globálním lídrem na poli precizních motorů, mini ventilátorů a chladících modulů. Výsledkem více než třicetileté specializace společnosti SUNON na výzkum a vývoj technologie motorů je množství patentovaných produktů.

Gegründet 1980, wurde Sunonwealth Electric Machine Industry Company zum weltweit führenden Anbieter im Bereich Präzisionsmotoren, Mini-Ventilatoren und Kühlmodule. Die mehr als 30-jährige Spezialisierung des Unternehmens SUNON auf dem Gebiet der Forschung und Entwicklung von Motortechnologien ermöglichte ihm die Einführung mehrerer patentierter Produkte.

Az 1980-ban megalapított Sunonwealth Electric Machine Industry Company globális vezetővé vált a precíziós motorok, mini ventilátorok és hűtőegységek gyártásában. A SUNON több mint 30 éve specializálódott a motor technológia kutatására és fejlesztésére, ami számos szabadalmazott termék bevezetését tette lehetővé.

Założony w r. 1980, Sunonwealth Electric Machine Industry Company stał się globalnym liderem na polu silników precyzyjnych, mini wentylatorów i modułów chłodzących. Ponad 30-letnia specjalizacja spółki SUNON w badaniach i rozwoju technologii silników, umożliwiła jej wprowadzenie wielu produktów opatentowanych.

Înființată în 1980, societatea Sunonwealth Electric Machine Industry Company a devenit un lider global în producția de motoare de precizie, mini-ventilatoare și module termice. Atenția acordată de peste 30 ani cercetării și dezvoltării tehnologice motoarelor îi permite companiei să producă numeroase produse brevetate care imprimă tendințe industriale inovatoare.

Založený v r. 1980, Sunonwealth Electric Machine Industry Company sa stal globálnym lídrom na poli precizných motorov, mini ventilátorov a chladiacich modulov. Vyše 30-ročná špecializácia spoločnosti SUNON na výskum a vývoj technológie motorov, jej umožnilo uvedenie viacerých patentovaných produktov.

Sunon's concentration for more than 30 years on the research and development of core motor technology enables it to release numerous patented products that set the pace for the industrial trend. These products include Maglev, the first magnetic levitation motor fan product in the world, Mighty Mini series, the smallest/thinnest fan products in the world, etc. Today Sunon has become the best thermal solution provider for clients across various industries, such as IT, automobile electronics, optical electronics, and network communication, claiming global shares of 26% and 19% respectively in the markets of projectors and notebook computers.

Why SUNON?

- one of the leaders on the field of thermal solutions
- high quality and long lifetime of products
- very good price/performance ratio

Did You Know?

The company's name in Chinese literally means "to set up standards", what is really reflected in many innovations and patents for SUNON products.

SUNON Axial DC Fans



GM Series - SUNON's Green Motor has a lower power consumption and reduced internal temperature rise which enhances service life. To special order some versions are available to meet 70°C ambient operating temperature.

EE, ME New Series



With the introduction of the MagLev technology, SUNON is offering the best optimised performance on the long-term, at the low noise level and attractive prices. SUNON now goes one step further with the introduction of the EE (ball and slide bearing) and ME (Vapo) series. These series are designed and engineered to maximise the air flow and the fan operating life time. Incorporating highly precise components and new impeller design, this series offers you the best compromise between quality and price.

Axial AC Fans



Alveolate motor AC fan series with automatic motor wire wrapping technology ensures stable performance of high wind volume, low acoustic noise, also available with functions of dual spinning rate and thermal cutout.

Fan Accessories



- Metal Finger Guards
- Plastic Finger Guards
- Filters

Bearing Systems

Sleeve Bearings

When low cost is priority for an application, sleeve bearing fans are the right choice. SUNON uses sintered sleeve bearings with a special deep lubrication utilizing hydrodynamic effects. This guarantee a high operating period with minimum noise. The test series, even with high ambient temperatures, have confirmed an average life span of approx. 50 000 hours.

Sleeve bearing fans are ideally suited for vertically mounted positions, since the operating life expectancy in horizontally mounted positions can be distinctly reduced in comparison to specifications.

Ball Bearings

Ball bearings are ideal for use in portable devices with various mounting angles. However, caution should be used to prevent the product from falling and impact damaging the ball bearing, which could lead to noise and shortened product life-time.

Fans with ball bearing are available for high capacity requirements such as operating temperatures up to 70°C, specific installations and extended service intervals.

MagLev Operating Principle and VAPO Bearings

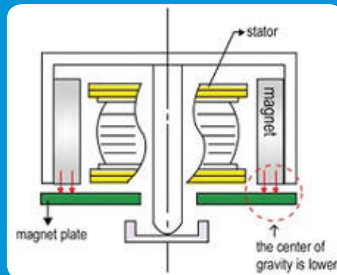
The patented MagLev design is based on magnetic principles and forces that not only propel the fan, but also ensure the stable rotation over its entire 360° movement. Utilizing the attraction of the magnetic levitation force, MagLev Motor Fans eliminate the problems of wobbling and shaking frequently seen on traditional motor fans. With this new technology, the impeller of MagLev Motor Fans is suspended in the air during rotation so that the shaft and the bearing do not come into direct contact with each other to create friction. The result is a new and improved fan with a low noise level, high temperature endurance, and long life

Comparison Between SUNON MagLev Fan and Traditional Fan

SUNON MagLev Fan

Possesses 3 important factors: the magnet plate, the magnet and the stator

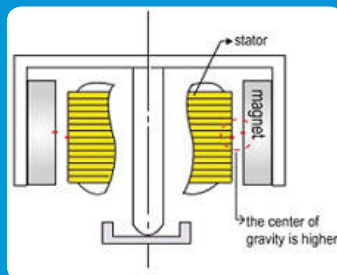
The resulting interaction between the magnet plate and the magnet pulls the rotor downward in a full 360°. Through the lower center of gravity, the rotor runs stably in a consistent orbit.



Traditional Fan

2 factors: the magnet and the stator

The conventional fan utilizes a deviating magnetic center to attract the rotor downwards. This kind of technology causes the rotor to vibrate violently due to both the lack of a consistent orbit and a deviation of the magnetic center.



DC Fans

Structural Configuration DC Fans

Designed as electronically converting direct current motor with Vapo bearing, sintered sleeve bearing system, or precision ball bearing system with additional magnetic levitation force (MagLev), both the frame and impeller are made from filled PBT thermoplastic.

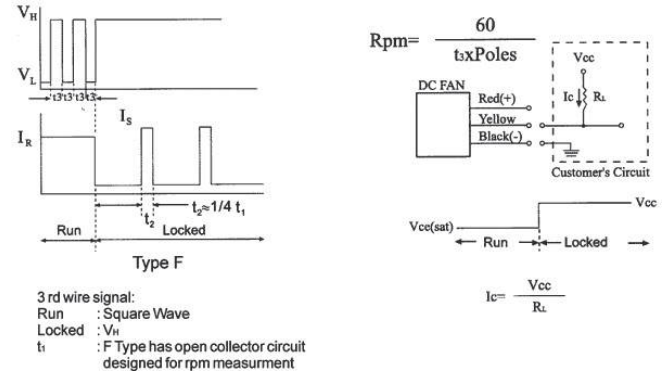
DC Fans with Motor Protection

SUNON DC fans from KDE series are also available with improved motor protection (KDE_A). The motor protection is achieved through an IC developed by SUNON. In the event of failure, the motor is switched off for a short time.

The circuit prevents any further excessive heating up of the motor coils in the event of an error occurring. The motor protection is included in all DC fans with the code letter "A" in classification.

DC Fans with Output Signal

All SUNON DC fans are available with the option of an output signal, which is transmitted out by a third connecting wire. The connection enables the fan to be monitored and controlled. Therefore, in the event of critical operating conditions, like a blocked fan wheel over the output signal, an alarm can be released. Usually the output is lined out through an open collector terminal of a transistor and must be further wired in the application via a resistor in order to receive, f.e. TTL levels. The logic levels are vary with the individual nominal voltages.



SUNON DC Fans Marking

Example: KD 1208 PTS 1.13

Code	Feature	Description
KD	Series	KD=axial DC ventilator KDE=axial DC ventilator with VAPO bearing GM = GreenMotor (low power consumption)
12	Power supply	05=5VDC, 12=12VDC, 24=24VDC
08	Frame size	12=120mm, 09=92mm, 08=80mm, 06=60mm, 55=55mm, 05=52mm, 05=50mm, 45=45mm, 04=40mm, 35=35mm, 03=30mm, 02=25mm, 01=20mm, 17=17mm
P	Frame material	P=standard-termoplastic, V=Venturi
T	Frame depth	M=38mm, T=25mm, K=20mm, H=15mm, F=10mm, D=8mm, E=6mm
S	Bearing	S=Sleeve, B=Ball, V=VAPO (only KDE)
1	Speed	X=Super Air, 1=High, 2=Medium, 3=Low
13	Motor	Motor model

AC Fans

AC Axial Fan

SUNON Axial AC Fan, equipped a shaded-pole motor, die-cast aluminum frame, and UL 94V-0 rated injection molded non-flammable thermoplastic impeller, is the most reliable AC Fan in the field. SUNON AC Fan is available in both life-lubricated ball bearing system and oil-impregnated sintered sleeve bearing system to meet the diverse needs of the market.

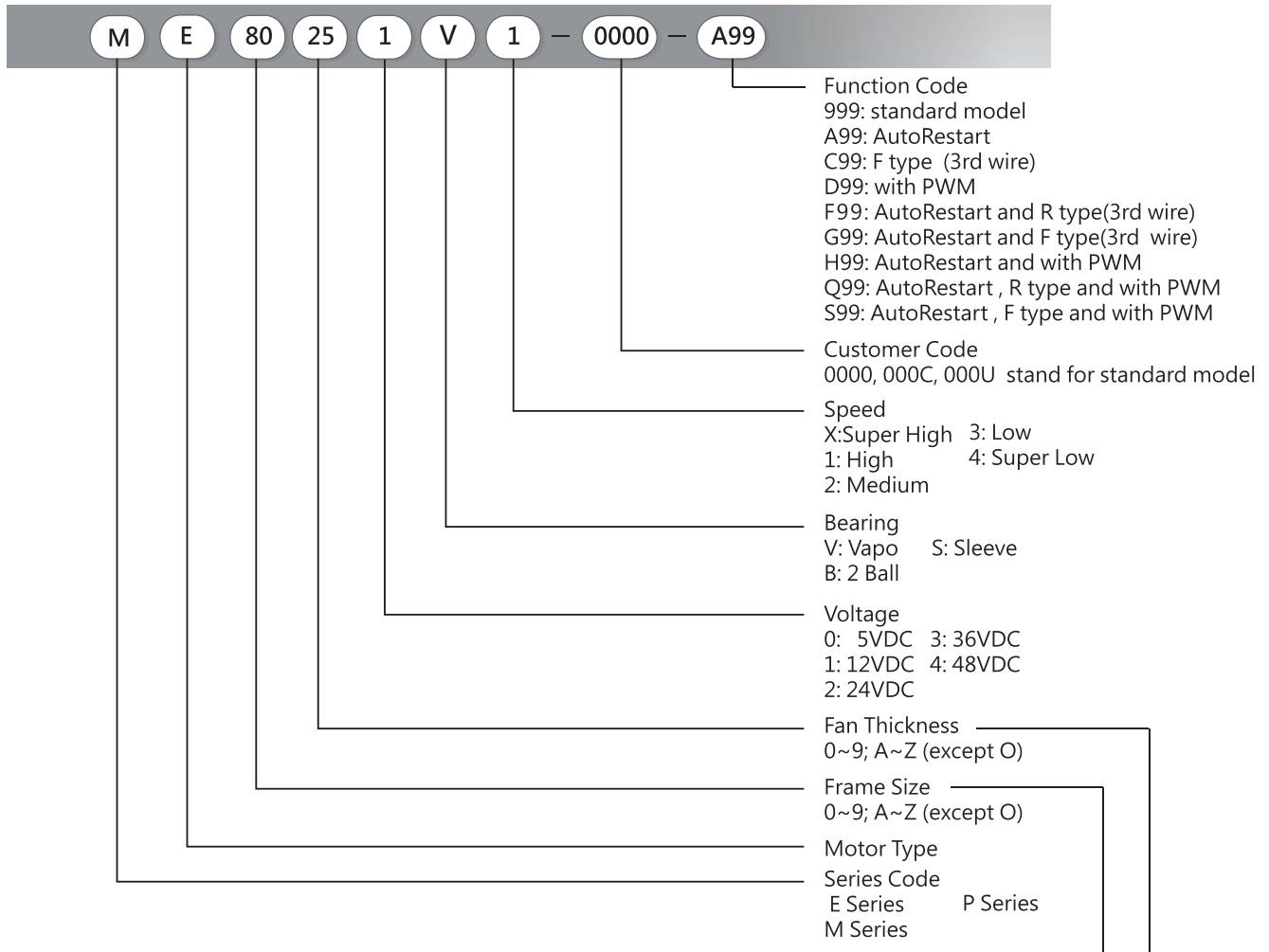
Alveolate System

The AC Alveolate motor supplies a high air volume with a low noise level, a system of reducing the temperature and two-speed operation. Counter to traditional models, the SUNON AC coil motor has Alveolate-wire wrapping as well as a condenser start-up guaranteeing low-temperature operation. Moreover, thanks to the reduction in electrical power consumption, the temperature of cellular motor operation is low, producing little heat.

To ensure practical useful life and sound performance of the SUNON product, the AC Alveolate fan is offered with a designed "Thermal limit". When the coil temperature exceeds a limit of 110° C, the thermal limit ensures protection and safety by automatically cutting the electricity supply. This stops the fan rotating until the temperature returns to around 90°C, then the fan starts working again. Moreover, the fan blades are designed to operate silently and supply a high air flow with a low noise level. Responding to market demands, the SUNON AC Alveolate fan is fitted with a third wire, which allows customisation to personal.

New Model Numbering System

example

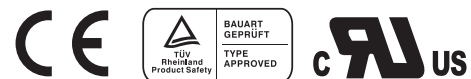


Code	Size(mm)	Code	Size(mm)	Code	Size(mm)	Code	Size(mm)
01~09	01~09	A0~A9	100~109	K0~K9	200~209	V0~V9	300~309
10~19	10~19	B0~B9	110~119	L0~L9	210~219	W0~W9	310~319
20~29	20~29	C0~C9	120~129	M0~M9	220~229	X0~X9	320~329
30~39	30~39	D0~D9	130~139	N0~N9	230~239	Y0~Y9	330~339
40~49	40~49	E0~E9	140~149	P0~P9	240~249	Z0~Z9	340~349
50~59	50~59	F0~F9	150~159	Q0~Q9	250~259		
60~69	60~69	G0~G9	160~169	R0~R9	260~269		
70~79	70~79	H0~H9	170~179	S0~S9	270~279		
80~89	80~89	I0~I9	180~189	T0~T9	280~289		
90~99	90~99	J0~J0	190~199	U0~U9	290~299		

Certification



Safety



Model Numbering System

General AC Fan

example

SF11580AT 1 08 2 H B L .GN

MODEL SERIES

SFxxx

SPxxx

DPxxx

VOLTAGE

1 : 115 VAC

2 : 220 -240 VAC

FRAME SIZE

08 : 80 mm

09 : 92 mm

12 : 120 mm

FRAME THICKNESS

2 : 25 mm

3 : 38 mm

RoHS Compliance

TERMINALS

T : Terminal

L : Lead wire

BEARING SYSTEM

B : Ball

S : Sleeve

SPEED

X : Super

H : High

M : Middle

L : Low

New Type AC Fan

example

A 1 17 5 - H B T

MODEL SERIES

A : New AC fan series

AB : New AC blower series

MA : MagLev AC Fan series

VOLTAGE

1 : 115 VAC

3 : 380 VAC

2 : 220-240 VAC

FRAME SIZE

08 : 80 mm

17 : 172 mm

09 : 92 mm

25 : 254 mm

12 : 120 mm

FRAME THICKNESS

2 : 25 mm

7 : 72 mm

3 : 31~38mm

9 : 89~90mm

5 : 50~51 mm

TERMINALS

T : Terminal

L : Lead wire

BEARING SYSTEM

V : MagLev

S : Sleeve

B : Ball

SPEED

X : Super

H : High

M : Middle

L : Low

P/N

P/N Suffixes have the following significance :

T : Thermal Cutout

TC : Alveolate Motor with Thermal Cutout and Capacitor

TC.R : Round Frame , Alveolate Motor with Thermal Cutout and Capacitor

N : New frame

GN : RoHS compliance

* Alveolate Motor only available in P/N : TC model