



# YEN SUN TECHNOLOGY

CORPORATION

2010/2011

## PRODUCT GUIDE



*QUALITY*

*PRECISION*

*INNOVATION*

[WWW.YSTECHUSA.COM](http://WWW.YSTECHUSA.COM)

# About Y.S. TECH



Yen Sun Technology Corporation was established in 1987, conforming with the business philosophies of **INNOVATION, QUALITY** and **EFFICIENCY**.

With over 1000 employees, Yen Sun is a publicly-traded company in Taiwan comprised of two major divisions, including the Electronics Cooling Division and the Home Appliances Division. The manufacturing plants are located in Taiwan, Dongguan, and Shanghai with worldwide service facilities throughout Asia, America, Australia and the greater part of Europe.

## COMPANY MISSION

Environmental Concern  
Customer Satisfaction

## PHILOSOPHIES

Innovation Quality Efficiency

Established: 1987

C.E.O.: Mr. C. J. Chen

TS 16949 / ISO 9001 / ISO 14001 Certified

Capital: US\$10.65 Million

Employees: 1,000

Headquarters Location: Kaohsiung, Taiwan

Business Units:

Electronics Cooling Division

Home Appliance Division

In the past decade, the Electronic Cooling Division has accumulated hundreds of patents all over the world and successfully established a reputation of consistent quality and unique capabilities with its well-known brand name Y.S. TECH.

Devoted to innovative technologies and new products, Y.S. TECH continuously improves its R&D and core technologies. The core technologies consist of Advanced Motor Control, CFD Thermal and Fluid Dynamic Simulation, Psycho-Acoustic Analysis, and Electro-Thermal Analysis. Y.S. TECH has integrated its core technologies to develop a series of DC and AC cooling fans with RoHS compliance such as a series of Xtreme high performance fans, along with the *SINTEGICO* long life bearing system that has been approved for Telecom and Automotive applications. Furthermore, utilizing T.M.D. Technology Y.S. TECH has developed the world's slimmest fans measuring only 0.4 centimeters in thickness with applications including the next-generation multi-function handheld devices. **CUSTOMER SATISFACTION** is based on excellent production capabilities as well as a consistent level of quality. In such a way, Y.S. TECH's advanced automated production lines, along with our precision equipment, provide a high level quality control. Moreover, Yen Sun utilizes XRF to assist its Environmental Materials Management.

This quality system has not only been approved by ISO 14001 and ISO 9001, but has also gained TS 16949 certification, the worldwide automotive industry quality standard.

At Y.S. TECH, our long-term vision is to aggressively integrate our business resources, enhance total quality management, innovations, and increase our global logistics capabilities to achieve competitive advantages as a world-class manufacturer to be **YOUR BEST PARTNER OF THERMAL SOLUTIONS**.

Headquarters



Dongguan Factory



Shanghai Factory



# N YW 120 38 012 B H 6

MODEL NUMBER

1 2 3 4 5 6 7 8

## Explanation

### 1 Impeller Type

Without N: Standard impeller  
 With N: Newly Designed Impeller  
 With H/E: High Pressure Impeller

### 2 Product Type

ADW: AC to DC Fans  
 B: Blower  
 YW: AC/DC Fan Series  
 CF: Cross Flow  
 TD/PD: TMD Products

### 3 Dimension/LxW

25: 25mmx25mm	30: 30mmx30mm
40: 40mmx40mm	45: 45mmx45mm
50: 50mmx50mm	60: 60mmx60mm
70: 70mmx70mm	80/81: 80mmx80mm
92: 92mmx92mm	120: 120mmx120mm
	127: 127mmx127mm

### 4 Thickness

07: 7mm	15: 15mm	28: 28mm
08: 8mm	20: 20mm	32: 32mm
10/11: 10mm	25: 25mm	38: 38mm

### 5 Voltage Types

005: DC5V	053: DC53V
012: DC12V	110: AC 110V
024: DC 24V	220: AC 220V
048: DC 48V	

### 6 Bearing Type

B: 2 Ball Bearing  
 D: 1 Ball 1-Sleeve Bearing  
 S: Sleeve Bearing  
 L: Sintetico

### 7 Speed

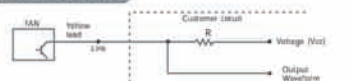
X: Extra Low Speed  
 L: Low Speed  
 M: Medium Speed  
 H: High Speed  
 S: Extra High Speed  
 SE: Super Extra High Speed  
 SS: Super High Speed  
 U: Ultra high Speed

### 8 Function

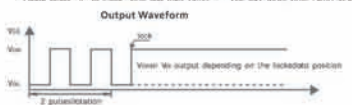
Blank: Transistor (2 wires)  
 1: Transistor w/3rd Pulse Wire (3 wires)  
 2: Alarm High-Low IC(3 wires)  
 3: Alarm Low IC (3 wires)  
 4: Alarm High IC (3 wires)  
 5: Tachometer IC (3 wires)  
 6: Auto-Restart IC (2 wires)  
 7: Thermistor IC (2 wires)  
 8: Thermistor (T) + Tachometer (F) IC  
 9: Thermistor (T) + Alarm High-Low (S) IC  
 10: Alarm High (R) + Tachometer (F) IC  
 11: Alarm-Low (Q) + Tachometer (F) IC  
 12: Pulse Width Modulation (PWM) IC

## IC FUNCTIONAL WAVEFORM

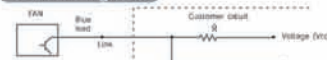
1: 3rd Pulse Wire



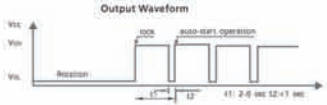
\*\*Please select "B" to make "Link" less than 10mA\*\* \*Vcc: 30V MAX, Link: 10mA MAX



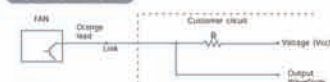
2: Alarm/high-low



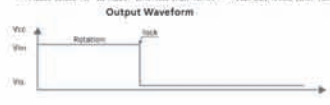
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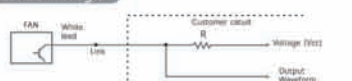
3: Alarm/low



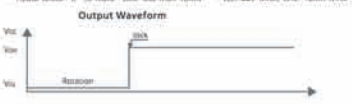
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4: Alarm/high



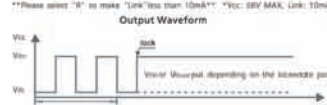
\*\*Please select "B" to make "Link" less than 10mA\*\* \*Vcc: 30V MAX, Link: 10mA MAX



5: Tachometer/Speed Sensor



\*\*Please select "B" to make "Link" less than 10mA\*\* \*Vcc: 30V MAX, Link: 10mA MAX



# Automotive Applications

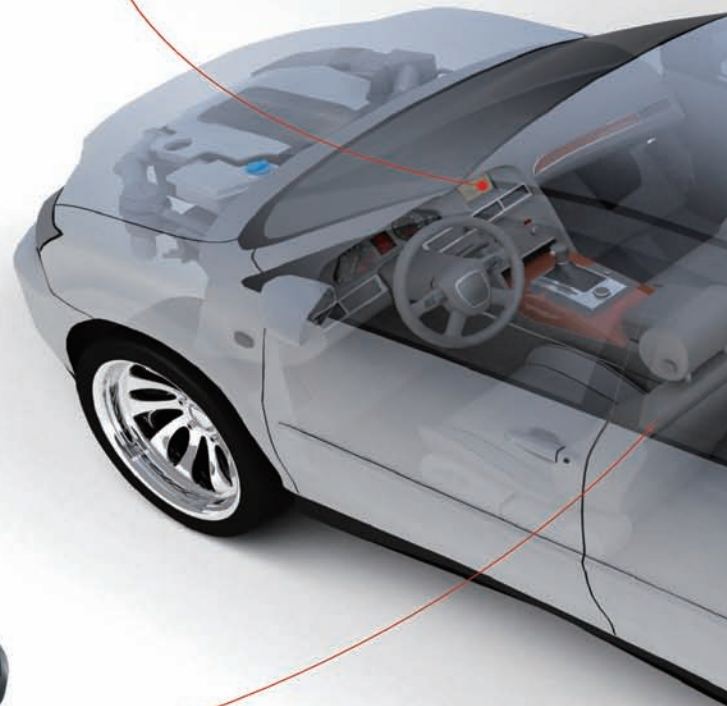
Y.S. TECH has many years of experience working in both the North American and European Automotive Markets. Utilizing our core technologies of CFD simulations, Psycho-Acoustic Analysis, Multi-function control system, mechanical expertise, and overall system integration we are able to develop optimal cooling solutions for customers in one of many different applications. Telematics Systems (Navigation, Audio Amplifiers, DVD and Head units), Seat heating and cooling, Hybrid Driving System (Fuel Cell-Gasoline), LED lighting and more are just a few of the applications Y.S. TECH can help solve thermal management problems. Our goal is to provide a cooling system that is unsurpassed in reliability, quality and performance giving the driver & passengers the most comfortable driving experience.



Telematics System  
(Navigation, Head Unit)



Car Seat Heating / Cooling System



# Advantages

- TS16949 CERTIFICATED
- Wide range operating voltage 4 ~ 16VDC at 12V Rated
- Wide range operating temperature:-40 ~ 90
- Multi-Function motor control
  - Thermostat control(NTC)
  - Pulse Width Modulation control(PWM)
  - PWM with NTC hybrid control
  - Redundancy protection design
  - Customized design by program
- High Reliability
  - Over-Voltage Resistance during long term operation: DC 27V / 1 min
  - Thermal Shock: -40 ~ 90, 1hr per Temp., Temp. Change in 30 sec.
  - Mechanical Shock: Semi-wave, a = 500m/s<sup>2</sup>, 6ms, 10 times per direction
  - Vibration Test:5Hz/0.00919 G<sup>2</sup>/Hz~ 2000Hz/0.00146 G<sup>2</sup>/Hz, 25/12hrs
- Customized design service for total thermal solutions and analysis



● Multimedia Entertainment System



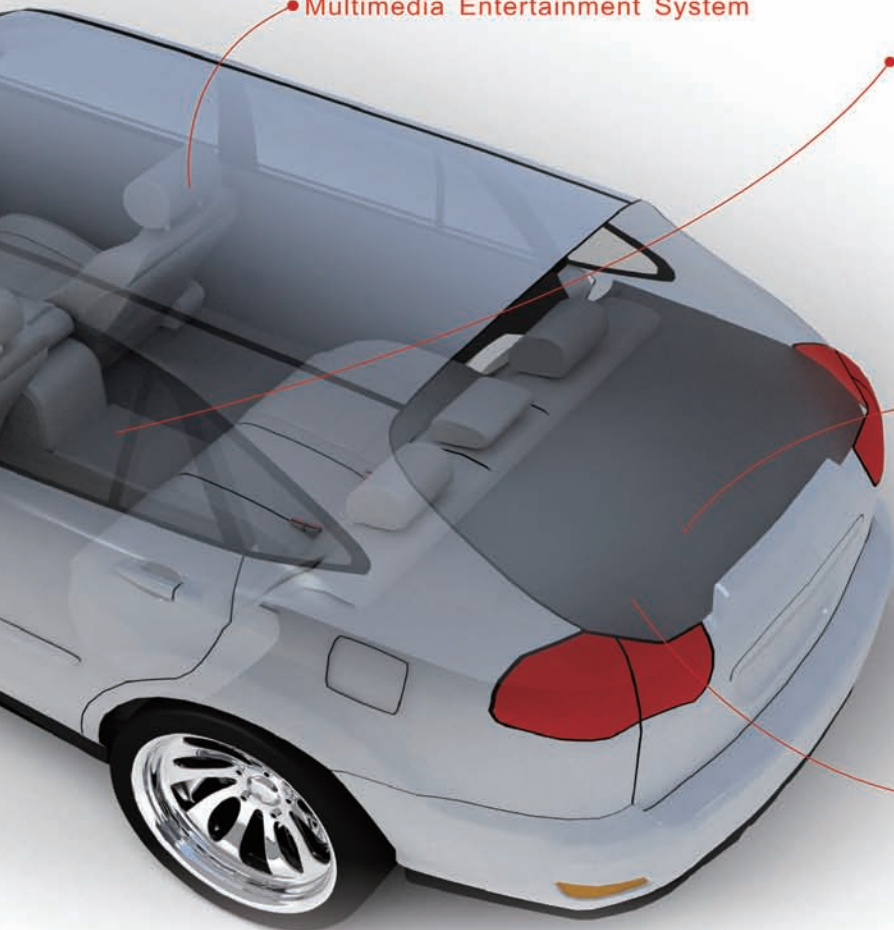
● Mobile Refrigeration With Bottle Cooler



● Audio Amplifier and DC/AC Inverter



● Car Computer System



# Telecommunication Applications

Y.S. TECH has applied our expertise in fan design to produce a line of high output fans well suited for Telecom applications (System Chassis, Fast Ethernet Switch, Service Gateway, VoIP Product, Network Storage System (NAS) and Server system). Serving the Telecom markets of Asia, Europe, and North America we have a broad understanding of the needs of our global market. Y.S. TECH's Xtreme Series is a line of fans that have been designed with a unique flow pattern that has overcome the low pressure boundaries that traditional axial fans have. The stationary and dual rotor products made by Y.S. TECH have high torque motors, more robust bearing systems and internal motor structure that will provide the high end performance and reliability for applications with high impedance. Sound quality is always a concern too and we can offer many options to better manage and achieve those goals.



Reverse-Blade Design  
*different blade direction*

Rack-Mount Fan Tray



Reverse-Blade Design utilize different blade direction to exhaust air out for more reliability and safety when fan mounted on the top of chassis.

System Chassis Solutions



# Advantages

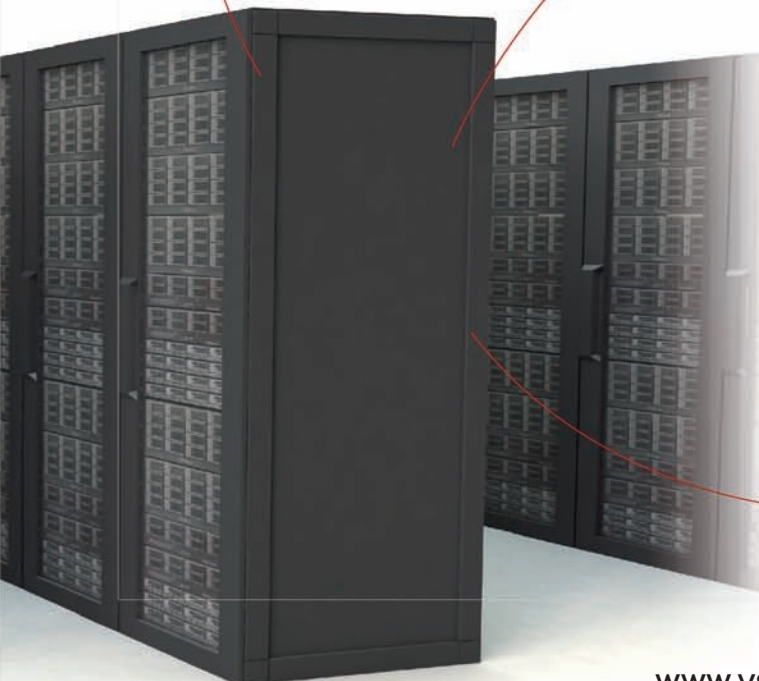
- **High operating voltage:**
  - Max. operating voltage 75VDC for 48VDC rated.
  - Max. operating voltage 40VDC for 24VDC rated.
- **High Vcc input for control signal design by open collector circuit.**
- **Multi-Function motor control**
  - Thermostat control(NTC)
  - Pulse Width Modulation control(PWM)
  - PWM with NTC hybrid control
  - Customized design by program
- **Reversed Blade design for more reliability (To ensure fan running on a right direction and improve life, especially for chassis cooling application.)**
- **Water/Dust Proof**
- **Customized Fan-Tray design and CFD analysis service (To reduce consonance, vibration, and reversed electromotive force.)**
- **High quality and reliability**
  - Surge voltage & overload current protection
  - Soft Start up & Hot Swappable support
  - Redundancy protection design
  - Sustained rotating system and mechanical design
- **Customized design service for total thermal solutions and analysis**



● Fast Ethernet Switch



● Rack-Mount Ups Systems



● 1U;13U Network Storage and Server Systems

Normally most users select cooling fans or blowers by referring to the maximum flow rates, pressure and rotational speed in the specification. However you have to have a good understanding of the system resistance and flow patterns inside the application. YS TECH highly recommends identifying the operating point in the application and cross reference that data with the performance curve of the fan to know exactly what is to be expected from the fan in the system. Other design elements to be sensitive of are power consumption and acoustic performance in the application. All of these factors will effect the others based on the total system requirements. You will have to weigh which are more import to achieve your end results. The following will help guide you through the design and select the right fan. Following this section we will review other key topics including L10, ROHS and additional application notes.

**STEP 1:**

**Ask five questions before choosing a fan**

Here are five questions of thermal inquiry we need to verify at first. That include:

**1.Watt:**  
*How many watts would you need to dissipate?*

**2.Air Impedance:**  
*What is your system air-impedance?*

**3.Noise:**  
*What is acoustic noise specification you need?*

**4.Temperature Gradient:**  
*What is your design of  $\Delta T$ ?*

**5.Dimension:**  
*What is fan dimension you need?*

**STEP 2:**

**Choose the right fan or blower to meet your thermal needs.**

The effects of heat transfer include conduction, convection, and radiation. Most heat transferred by conduction and/ or radiation effect the total system mechanism. For example, a good chassis or heat sink design is much more effective in accomplishing your goals. Convection cooling happens in 2 ways; natural and forced air. Cooling fans and blowers are the driver behind forced convection cooling and always increases the effectiveness of the system cooling. Illustration 1 shows you a normal system using heat dissipation via natural convection. Pcon&rad presents heat dissipation of natural convection and radiation transfer. Pfan presents forced convection that needs a cooling fan or blower to assist with dissipation,  $\Delta T$  presents temperature gradient  $\Delta T = T_2 - T_1$ .  $T_2$  is the thermal spec of the critical parts within margin tolerance.  $T_1$  presents ambient temperature.

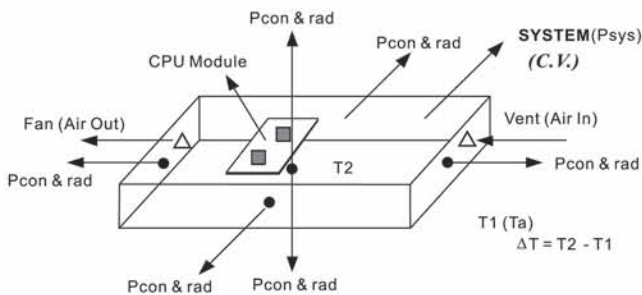


Illustration 1: System Heat transferred

Now we can estimate the flow rates with the following equations:

$$P_{fan} = P_{sys} - P_{con\&rad}$$

$$P_{fan} = C_p \times Q \times \rho \times \Delta T$$

$$Q_{eff} (CFM) = \frac{P_{fan}}{C_p \times \rho \times \Delta T} = \frac{1.76 \times P_{fan}}{\Delta T_c} = \frac{3.16 \times P_{fan}}{\Delta T_f}$$

- $Q_{eff}$  : Efficiency Flow Rate
- $\rho$  : Gas Density
- $C_p$  : Specific Heat of Gas
- $Q_{eff} = 3160 \times KW / \Delta T_f$
- $\Delta T_f$  : Allowable temperature rise in degree Fahrenheit
- $\Delta T_c$  : Allowable temperature rise in degree Celsius

By incorporating conversion factors, specific heat and density of sea level air we can summarize above equations of  $Q_{eff}$  that is called the effective flow rate. The fans operating point should be equal to or greater than  $Q_{eff}$ . The fans operating point is the point at which the performance curve and system impedance curve intersect. This factor can vary based on component placement in and density of the application. Normally this is measured by static pressure, fPi. Please reference the following formula:

$$\Delta Pi = kQ^n$$

- $k$  : System form factor constant value.
- $Q$  : Flow rate by different impedance
- $n$  : Coefficient of turbulence
- $1 < n < 2$ . Laminar Flow,  $n = 1$ ; Turbulence Flow,  $n = 2$

Illustration 2 shows two fans performance curve and system air impedance curve.

Even B's maximum flow rate is higher than A's but the  $Q_{op,A}$  better than  $Q_{op,B}$ . Both  $Q_{op,A}$  and  $Q_{op,B}$  are Operating Points.

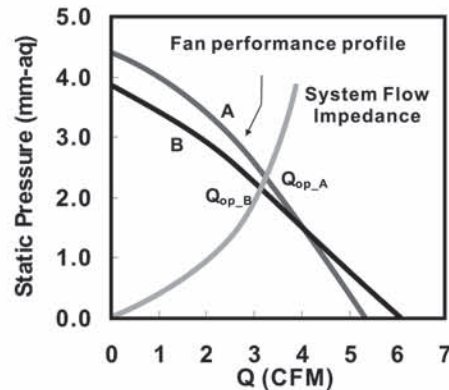


Illustration 2: Fan Performance Comparison

If  $Q_{op,B} < Q_{eff} < Q_{op,A}$ , Then we can say Fan A is a proper choice for this thermal solution. So that why we emphasize that focus on fan performance profile rather than on maximum flow rate or static pressure or rotational speed.



**STEP 3:****Choose a solution with low noise**

As mentioned before the flow rate, static pressure and acoustic noise are a trade off. You have to balance these key elements in your design. Meanwhile many issues can arise if the fans are misapplied in the system. For example, mounting fans directly on the chassis can resonate vibration throughout the chassis and greatly increase the audible noise. Please reference the following notes to optimize your system for the best all around sound quality:

1. Efficient design for system impedance. Higher system air impedance needs a higher pressure fan, but that comes with higher noise. Allow enough space for your critical components to have maximum flow patterns around them. We recommend you measure your system air impedance and collect enough data to know your fPi. Normally, a specialized fan manufacturer can help you with this process.

2. Choose a proper fan based on the Qeff. We have illustrated to you a method to figure out the right fan for Qeff, now consider the current and acoustic noise. Which one is the first priority? YS TECH recommends to evaluate the two parameters under the same Qeff.

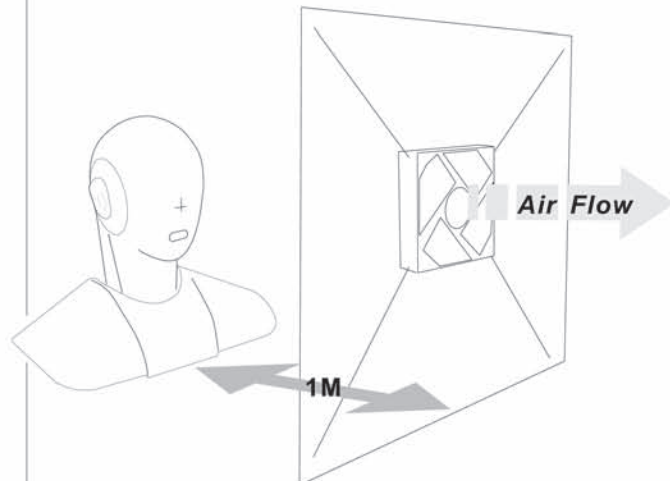
3. Review the mechanical design between the fan and system. Vibration and flow disturbance always causes resonance and greater acoustic noise. Proper mounting and flow field design may decrease noise. For example, mounting a fan with a rubber boot will definitely reduce resonance in the chassis. Review your design and make sure there is enough margin (over 1.5mm) at the intake/exhaust of the fan. If there are odd shapes blocking the airflow that will add to the audible noise.

4. Advanced fan speed control via your thermal profile. The thermal profile of a system is similar to a fan performance curve. The system can be designed to utilize the fan only at the needed speed to gain the thermal dissipation needed, not more. The control of the fan in the system will better manage the used power, thermal dissipation and acoustics. The most popular way of achieving this is use PWM control or we can also provide fans with integrated thermistors.

5. Sound quality analysis. In the cooling fan industry we have always focused on the sound pressure, but with the increased speeds available today the total system noise in application can get very high. This has pushed industry standards to put limits on system noise. Designing with this in mind we have to keep in mind how sound quality is perceived by the human ear so that we can offer the best solutions. Our primary interest is to create the best overall sound quality. The examination methods are based on the idea of correct recording and description of the noise exposure from the acoustic environment in a way that reflects what humans subjectively perceive.

In order to record this entire perception, physical aspects as well as psychoacoustic characteristics of hearing and cognitive aspects must be considered. The main focus of psychoacoustics is the subject aural perception by human beings. The goal is objectively describing the subjective perception. YS TECH introduced the sound quality analysis system from HEAD ACOUSTICS out of Germany. This system includes artificial head and analysis tools that are utilized in the automotive industries for measuring all types of acoustics parameters. We also have the capability to provide detailed data about: Sound pressure levels, Sone, Tonality, and Modulation.

1. ANECHOIC Room Noise Measurement System.
2. Digital Head Measurement System, 16-bits version.
3. SQlab III, Mobile Multi-channel Analysis System.
4. Specifications: ISO 3744, ISO 3745, ISO 7779, CNS 6753, JIS 8346
5. Background Noise: < 17dB(A)



**Cooling Fan Life Expectancy: L10 and MTTF**

Fan reliability can be evaluated in several ways. The data for a life test can be plotted as a cumulative distribution that shows the total fraction of fans failing up to any operating time. Fig. 1 is a sample of cumulative distribution, which was stopped at 8,400 hours after 18 out of 48 fans had failed.

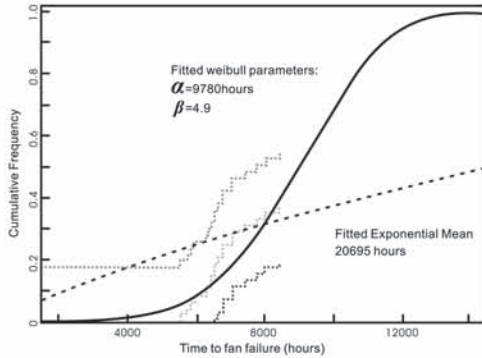


Figure 1 : Sample cumulative distribution function, Weibull vs. Empirical with 95% confidence bands  
(Reference : IBM Corp. , May 1996, Vol.2, No.2, Electronics Cooling)

Some vendors provide life expectancy data to customers based on the exponential assumption. However, life test data does not support the use of the exponential distribution. Nevertheless the past experimentation fitting has shown that the Weibull distribution provides a good fit to real fan life data. The *Cumulative Distribution Function* ,*F(t)* of Weibull distribution is a below:

$$F(t) = 1 - e^{-(t/\alpha)^\beta}$$

Where *t* : age  
 $\alpha$ :characteristic life (Scale Parameter)  
 $\beta$ :shape parameter

Then Reliability Function is  $R(t) = e^{-(t/\alpha)^\beta}$   
 $MTTF = \int_0^\infty R(t) dt = \alpha \Gamma(1+1/\beta)$   $\Gamma$  : Gamma Function

Normally,  $L_{10}$  was introduced a life expectancy parameters by fan vendors. That means the tenth percentiles under an assumed life distribution such as the Weibull. Sometimes vendors will also quote the Mean Time To Failure (*MTTF*) then we need to figure out the correlation between  $L_{10}$  and *MTTF* by following equations:

$$\begin{aligned} \therefore L_{10} \text{ Means age } t \text{ when } F(t) &= 0.1 \\ \therefore 0.1 &= 1 - e^{-(L_{10}/\alpha)^\beta} \\ L_{10} &= \alpha (0.10536)^{1/\beta} \\ MTTF &= 7.46 \times L_{10} \approx 7 \times L_{10} \text{ (90\% Confidence Level)} \end{aligned}$$

After we have verified the correlation between  $L_{10}$  and *MTTF*, we also need to know how long should a sample size be tested to determine with 90% confidence level that  $L_{10}$  greater than or equal to expectancy value at a test temperature without failure ( $x = 0$ ). Here we introduce the Poisson Distribution to estimate.

$$\begin{aligned} P(x, t) &= \{(\lambda t)^x e^{-\lambda t}\} / x! \\ P(0, t) &= \{(\lambda t)^0 e^{-\lambda t}\} / 0! = e^{-\lambda t} \\ \therefore R(t) &= e^{-(t/\alpha)^\beta} \\ MTTF &= \alpha \Gamma(1+1/\beta) \\ \therefore t &= \alpha [(Br : c)/n]^{1/\beta} \\ t &= [MTTF / \Gamma(1+1/\beta)] \times [(B_{rec})/n]^{1/\beta} \end{aligned}$$

where  $B_{rec}$  is Poisson Distribution Factor

Normally on the condition of 90% confidence level and 0 failure then  $B_{rec} = 2.303$ . Then we introduce *Takes Martin Marietta Model* to estimate Life at different environment stress.

$$AF = [Va / Vu] \times 2^{(Ta - Tu)/10}$$

where  
*AF* : Acceleration Factor  
*Va* : Actual Testing Voltage  
*Vu* : Rating Voltage  
*Ta* : Actual Testing Temperature  
*Tu* : Rating Temperature  
 if  $Va = Vu$   
 then  $AF(t) = 2^{(Ta - Tu)/10}$

Then we can define the *Required Test Time (t)* with zero failure is as below:

$$t = [MTTF / \Gamma(1+1/\beta)] \times [(B_{rec})/n]^{1/\beta} / 2^{(Ta - Tu)/10}$$

where *MTTF* is an expectancy value

**Management Regulations for the Environment-Related Substances**

**Management Standards**

SUBSTANCES	Allowable Content (ppm)	
	RoHS	SONY SS259
Cadmium and Cadmium compounds	<100	0
Lead and Lead compounds	<1000	<100
Total concentration of four heavy metals for product package (Concentration of Cadmium for Plastics (including Rubber) has to less than 5 ppm.)	<1000	<100
Concentration of lead for PVC cable · connectors · paints · inks · resins	<1000	<100
Concentration of lead for solder	<1000	<1000
Concentration of lead for Steel Alloys	<3500	<3500
Concentration of lead for Aluminum Alloys	<4000	<4000
Concentration of lead for Copper Alloys	<4%	<4%
Concentration of lead for electrical components with ceramic base (ex: resistor · capacitor.)	<100	<100
Mercury and Mercury compounds	<1000	<100
Hexavalent Chromium compounds	<1000	0
PBB · PBDE <sup>***1</sup>	<1000	0

**Note:**

1. For RoHS, Decabromobiphenyl ether (DecaBDE) in polymeric applications is exempted by Commission Decision of 13 Oct. 2005 amending Directive 2002/95/EC notified under document 2005/717/EC.
2. PBBEs=PBDEs=Polybrominated Diphenyl Ethers= PBDOs=PBBOs.

**Standards for Preconditioning and Measurement**

**I. Pre-conditioning**

- Typical pre-conditioning methods are as follows:
1. Incineration under the existence of sulfuric acid.
  2. A pressurized acid decomposition method done in a sealed container. (A microwave decomposition method such as EN 13346:2000 and EPA 3052:1996)
  3. An acid decomposition method under the existence of sulfuric acid or hydrogen-peroxide water. (e.g. EPA3050B Rev.2: 1996).
  4. A wet decomposition method under the existence of sulfuric acid, nitric acid, or hydrogen-peroxide water. (e.g. BS EN 1122:2001)
  5. If precipitates (insoluble matter) are produced, dissolve them totally by taking some means. (e.g. alkali dissolution)
  6. US EPA 3540C or 3550 for organic or organic compounds substances.

**II. Measurement methods**

- Typical measurement methods are as follows,
1. Inductively Coupled-Plasma-Atomic (Optical) Emission Spectroscopy (ICP-AES, ICP-OES) (e.g. EN ISO 11885:1998)
  2. Atomic Absorption Spectroscopy (AAS) (e.g. EN ISO5961: 1995).
  3. Inductively Coupled-Plasma Mass Spectroscopy (ICP-MS)
  4. Gas Chromatography Mass Spectroscopy (GC-MS) for organic or organic compounds substances.
  5. If a combination of a pre-conditioning method and a measurement method can guarantee that the lower determination limit of cadmium is less than 5 ppm, the combination is also applicable.
  6. Any one of the measurement methods above (except AAS) enables you to analyze cadmium and lead simultaneously.

**III. Environmental Logo**



Environmental Concern & Keep Improving

**Cooling Fan and Blower Application Notices**  
**Test Conditions and definitions**

Most specifications of cooling fan are measured after 5 minutes rotating in an ambient of 25°C/ 65% RH. The operating voltage and temperature were defined after fan rotating continually at rated voltage. Starting Voltage was defined on power on/off condition and Rotational Speed was defined on full speed by its rated value. Except for the feature of the Lock Rotor Protection specifically stated, Y.S. Tech highly suggests not to stop the impellers of the working fans such interruption will cause adverse effect. Noise Level is different from abnormal noise. We estimate noise level by equation when noise level is lower than background noise (17dB). L10 of Life test is a deductive value under statistical method and it is different from product warranty.

**Handling**

Please be cautious when fan is being exercised or handled. Applying pressure to the impeller, handling the fan by lead wire, or dropping the fans to the production platform is resulting in damage.

Fan is to be stored in a dry/cool place. High levels of humidity are harmful to products. If fan was stocked at an ambient temperature under 5°C and over 24 hrs. Please stock fans to an ambient temperature over 20°C and remained over 24 hrs before using. All specifications include abnormal noise have to be measured after 30 minute running.

The correct polarity, Positive (+) and Negative (-), has to be clearly identified before connecting the fan to the power. Be aware of the connection with reverse polarity may lead to damage since no effective protection can be introduced against such errors.

With exception of suitability of some particular designs, any failure and problems regarding safety of the product caused by the introduction of powder, droplets of water or encroachment of insert in the hub are not guaranteed. It is also not well suited for corrosive environments that include liquids, gases, or matters.

**After Service**

A written request should be submitted to Y.S. Tech prior to approval if abnormality and deviation from specification is required. Meanwhile, send abnormal samples to Y.S. TECH for more detail analysis is necessary.

**Other Reminding**

Please be cautious. Y.S. Tech is not responsible for any excess resonance, vibration and subsequent noise caused by incorrect mounting of fans. Take necessary precaution handling fans when in operation. Finger guards are recommended to prevent personal injury. To avoid any unstable power, an "over 4.7µF" capacitor has to be connected to fan externally whenever multiple fans are applied in parallel.

## Conversion Tables and Equations

### I . Air Flow Rate

m <sup>3</sup> /s	m <sup>3</sup> /min	l/s	l/min	m <sup>3</sup> /h	ft <sup>3</sup> /s	CFM
1	6 x 10	1 x 103	6 x 10 <sup>4</sup>	3.6 x 10 <sup>3</sup>	3.531 x 10	2.118 x 10 <sup>3</sup>
1.667 x 10 <sup>-2</sup>	1	1.667 x 10	1 x 10 <sup>3</sup>	6 x 10	5.885 x 10 <sup>-1</sup>	3.531 x 10
1 x 10	6 x 10 <sup>2</sup>	1	6 x 10	3.6	3.531 x 10 <sup>-2</sup>	2.118
1.667 x 10 <sup>-5</sup>	1 x 10 <sup>-3</sup>	1.667 x 10 <sup>-2</sup>	1	6 x 10 <sup>-2</sup>	5.9 x 10 <sup>-4</sup>	3.54 x 10 <sup>2</sup>
2.778 x 10 <sup>-4</sup>	1.667 x 10 <sup>-2</sup>	2.778 x 10 <sup>-1</sup>	1.667 x 10	1	9.81 x 10 <sup>-3</sup>	5.886 x 10 <sup>-1</sup>
2.832 x 10 <sup>-2</sup>	1.69833	2.832 x 10	1.6983 x 10 <sup>3</sup>	1.019 x 10 <sup>2</sup>	1	6 x 10
4.72 x 10 <sup>-4</sup>	2.831 x 10 <sup>-2</sup>	0.472	2.831 x 10 <sup>2</sup>	1.6983	1.667 x 10 <sup>-2</sup>	1

### II . Static Pressure

P <sub>s</sub> = N/m <sup>2</sup>	mm-H <sub>2</sub> O	inch-H <sub>2</sub> O	Kgf/cm <sup>2</sup>	atm	bar	lbf/in <sup>2</sup>
1	1.019 x 10 <sup>-1</sup>	4.017 x 10 <sup>-3</sup>	1.019 x 10 <sup>-5</sup>	9.869 x 10 <sup>-6</sup>	1 x 10 <sup>-5</sup>	1.450 x 10 <sup>-4</sup>
9.80665	1	3.939 x 10 <sup>-2</sup>	1 x 10 <sup>-4</sup>	9.678 x 10 <sup>-5</sup>	9.806 x 10 <sup>-5</sup>	1.442 x 10 <sup>-3</sup>
2.49 x 10 <sup>2</sup>	25.4	1	2.54 x 10 <sup>-3</sup>	2.46 x 10 <sup>-3</sup>	2.49 x 10 <sup>-3</sup>	3.61 x 10 <sup>-2</sup>
9.807 x 10 <sup>4</sup>	10 <sup>5</sup>	3.937 x 10 <sup>2</sup>	1	0.9678	0.980665	14.22334
1.0133 x 10 <sup>5</sup>	1.0332 x 10 <sup>4</sup>	4.071 x 10 <sup>2</sup>	1.033323	1	1.01325	14.696
1 x 10 <sup>5</sup>	1.0197 x 10 <sup>4</sup>	4.018 x 10 <sup>2</sup>	1.101972	0.986923	1	14.5038
6.895 x 10 <sup>3</sup>	7.031 x 10 <sup>2</sup>	27.686	7.031 x 10 <sup>-2</sup>	6.805 x 10 <sup>-2</sup>	6.895 x 10 <sup>-2</sup>	1

### III. System Allowable Temperature Rise (ΔT) at P<sub>fan</sub> v.s. Q<sub>eff</sub>

Temperature Rise	P <sub>fan</sub> (Kwh)											
	ΔT <sub>s</sub>	ΔT <sub>r</sub>	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
50	90	18	35	53	70	88	105	123	141	158	176	176
45	81	20	39	59	78	98	117	137	156	176	195	195
40	72	22	44	66	88	110	132	154	176	195	220	220
35	63	25	50	75	100	125	151	176	201	226	251	251
30	54	29	59	88	117	146	176	205	234	264	293	293
25	45	35	75	105	141	176	211	246	281	316	351	351
20	36	44	88	132	176	220	264	308	351	396	439	439
15	27	59	117	176	234	293	351	410	469	527	586	586
10	18	88	176	264	351	439	527	615	704	791	879	879
5	9	176	351	527	704	879	1055	1230	1406	1582	1758	1758

### IV. Acoustic Noise

$$\text{Sound Pressure Level (SPL, dB)} = 20 \log (P / P_0)$$

where P<sub>0</sub> = 20 μPa

P<sub>0</sub> : the reference sound pressure of human hearing system

#### Similarity Algorithm of Acoustic Noise

##### ii) By Rotational Speed (rpm)

$$N_2 = N_1 + 50 \log (rpm_2 / rpm_1)$$

where

$$N_1 = \text{Noise level measured at } rpm_1$$

$$N_2 = \text{Noise level calculated at } rpm_2$$

##### i) By Measuring Distance

$$N_2 = N_1 + 20 \log (Distance_1 / Distance_2)$$

where

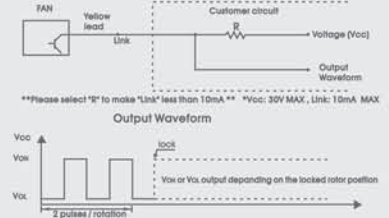
$$N_1 = \text{Noise level measured at } Distance_1$$

$$N_2 = \text{Noise level calculated at } Distance_2$$

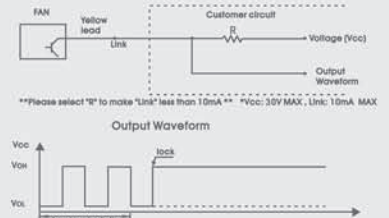
According to above equations, it is very clear the acoustic noise level will reduce 6 dB when the distance doubled. Comparatively, the noise level will also increase 6 dB when distance shorten by half.

## Wave form of ic function

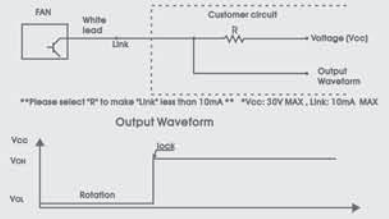
### 1. 3rd Pulse Wire



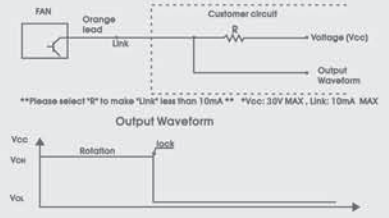
### 5. Tachometer Speed Sensor



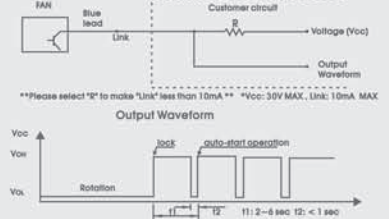
### 4. Alarm / high



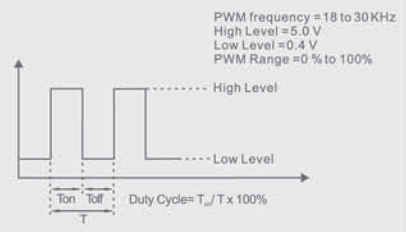
### 3. Alarm / low



### 2. Alarm / high low

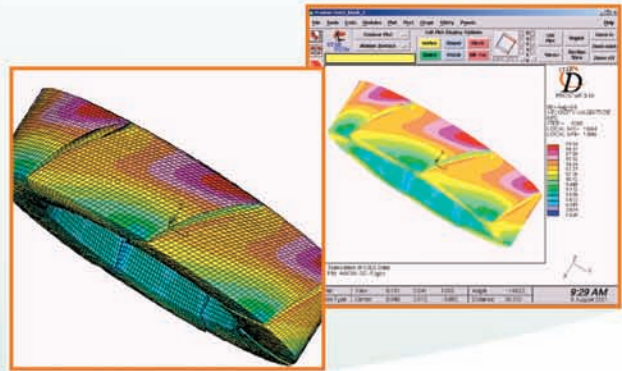


### W: PWM Control Input



Y.S. TECH's advance R&D Center utilizes various most advance analysis/simulation software and labs while designing different impellers, thermal modules for any particular cooling devices. This Integrated Supporting System of thermal solutions enables engineers and designers to stimulate a micro climate and then optimize the performance for more Green, Silent and Powerful cooling devices.

Facilities For Supporting Design

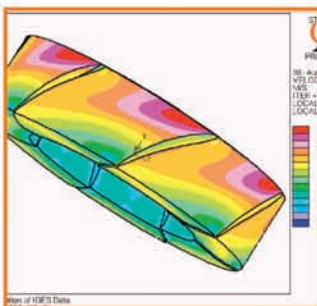


■ CFD Software-Star-CD

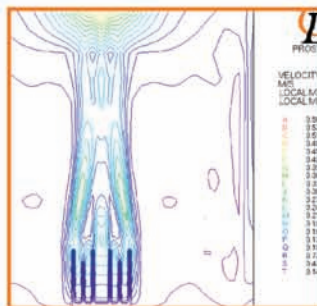
To visualize temperature distribution of observed object surface



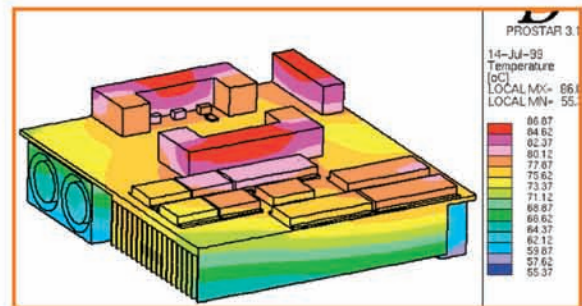
Fan, Ventilation and Thermal System Design



■ Airflow Velocity Distribution of Fan



■ Airflow Velocity Distribution of Heat Sink



■ Temperature Distribution of Thermal System



# 25x25x10mm

- Airflow: 2.0~3.3 CFM
- Static Pressure: 3.7~6.3 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1571 #28 AWG
- Weight: 7.5 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
NYW02510005BL	2B	05	4~5.5	7000	2.0	3.7	80	0.40	80000	4	18.0
NYW02510005BM	2B		4~5.5	8500	2.4	4.5	110	0.55	80000	3	22.5
NYW02510005BH	2B		4~5.5	10000	2.8	5.3	140	0.70	75000	2	26.0
NYW02510005BS	2B		4~5.5	12000	3.3	6.3	190	0.95	65000	1	30.0
NYW02510012BL	2B	12	9~13.2	7000	2.0	3.7	40	0.48	80000	4	18.0
NYW02510012BM	2B		7~13.2	8500	2.4	4.5	50	0.60	80000	3	22.5
NYW02510012BH	2B		7~13.2	10000	2.8	5.3	65	0.78	75000	2	26.0
NYW02510012BS	2B		7~13.2	12000	3.3	6.3	80	0.96	65000	1	30.0

2: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

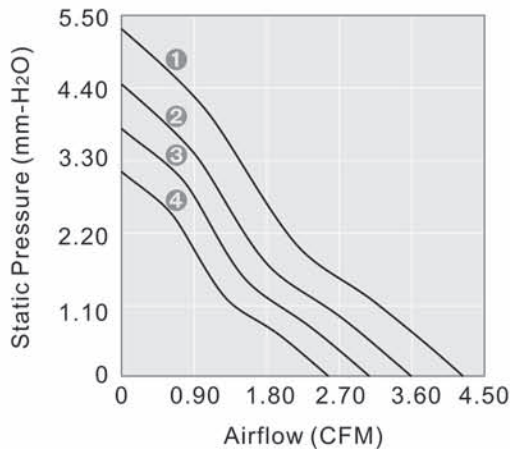
Bearing System Available

2B L S

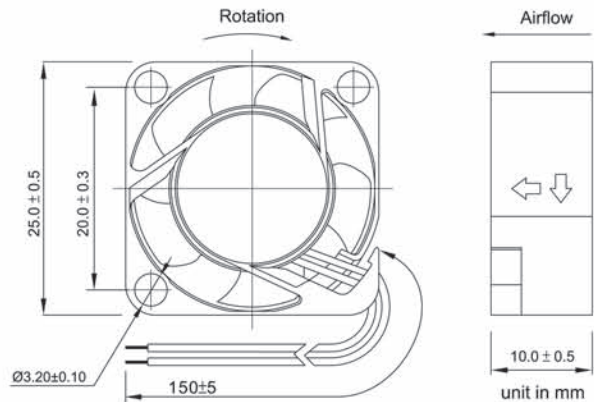
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





## 25x25x15mm

- Airflow: 2.1~2.6 CFM
- Static Pressure: 3.1~4.7 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1571 #28 AWG
- Weight: 10.0 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW02515005BM	2B	05	4~5.5	9000	2.1	3.1	70	0.35	80000	2	24.0
YW02515005BH	2B	05	4~5.5	11000	2.6	4.7	100	0.50	75000	1	28.0
YW02515012BM	2B	12	7~13.2	9000	2.1	3.1	45	0.54	80000	2	24.0
YW02515012BH	2B	12	7~13.2	11000	2.6	4.7	60	0.72	75000	1	28.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

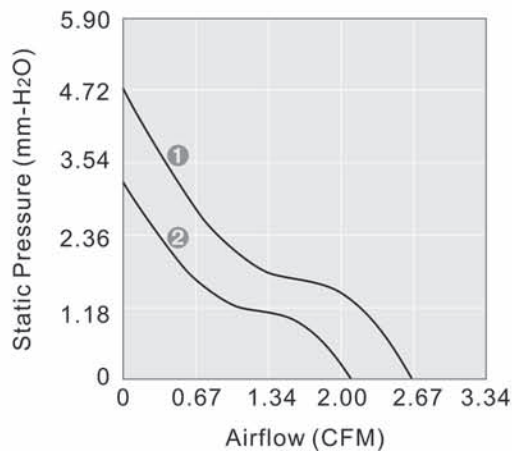
Bearing System Available

2B L S

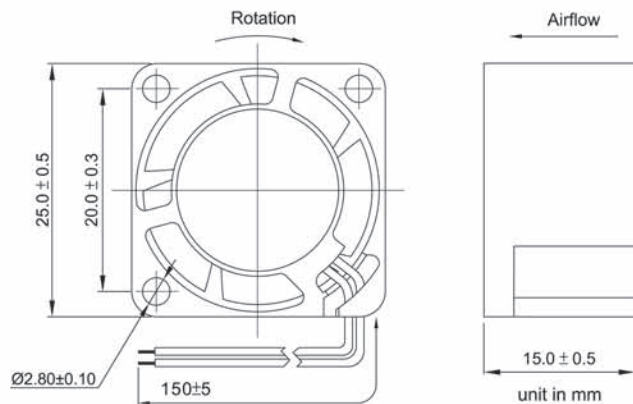
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 U

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 30x30x10mm

- Airflow: 2.5~4.0 CFM
- Static Pressure: 2.0~5.2 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1571 #28 AWG
- Weight: 9 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
NYW03010005BL	2B	05	4~5.5	5800	2.5	2.0	50	0.25	80000	4	<17.0
NYW03010005BM	2B		4~5.5	6800	3.0	2.7	70	0.35	80000	3	18.0
NYW03010005BH	2B		4~5.5	7800	3.4	3.3	80	0.40	75000	2	21.5
NYW03010005BS	2B		4~5.5	10000	4.0	5.2	130	0.65	65000	1	28.0
NYW03010012BL	2B	12	9~13.2	5800	2.5	2.0	35	0.42	80000	4	<17.0
NYW03010012BM	2B		7~13.2	6800	3.0	2.7	40	0.48	80000	3	18.0
NYW03010012BH	2B		7~13.2	7800	3.4	3.3	40	0.48	75000	2	21.5
NYW03010012BS	2B		7~13.2	10000	4.0	5.2	60	0.72	65000	1	28.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

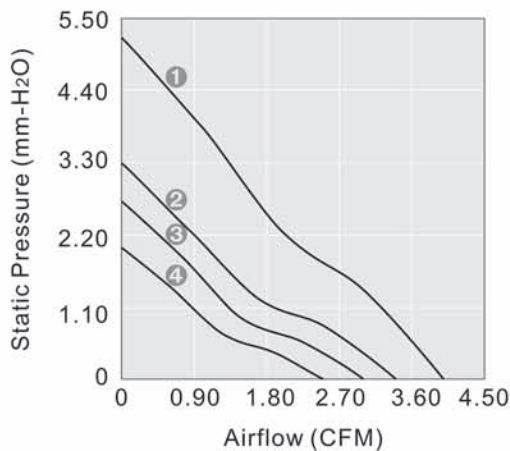
Bearing System Available

2B L S

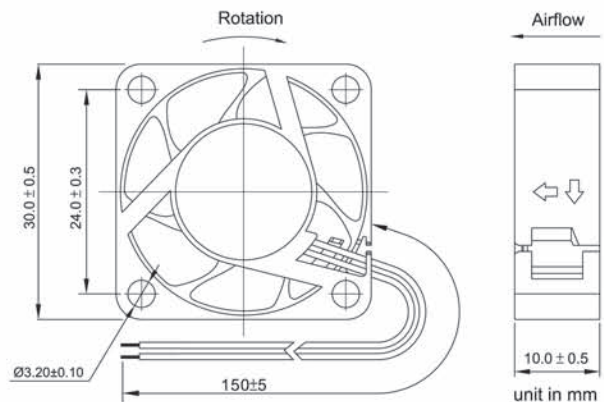
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS







# 30x30x15mm

- Airflow: 3.8~6.1 CFM
- Static Pressure: 2.8~7.1 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1571 #28 AWG
- Weight: 13 g

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
NYW03015005BL	2B	05	4~5.5	7000	3.8	2.8	60	0.30	80000	4	<17.0
NYW03015005BM	2B		4~5.5	8000	4.4	3.7	85	0.425	80000	3	20.5
NYW03015005BH	2B		4~5.5	9000	4.9	4.4	110	0.55	75000	2	25.0
NYW03015005BS	2B		4~5.5	11000	5.7	6.3	200	1.00	65000	1	30.0
NYW03015012BL	2B	12	7~13.2	7000	3.8	2.8	30	0.36	80000	4	<17.0
NYW03015012BM	2B		7~13.2	8000	4.4	3.7	40	0.48	80000	3	20.5
NYW03015012BH	2B		7~13.2	9000	4.9	4.4	45	0.54	75000	2	25.0
NYW03015012BS	2B		7~13.2	11500	6.1	7.1	90	1.08	65000	1	30.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

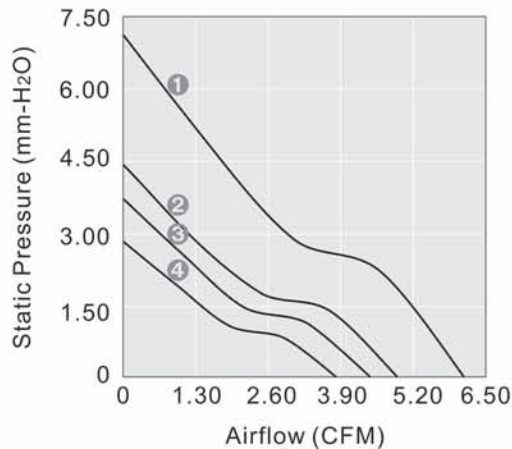
Bearing System Available

2B L S

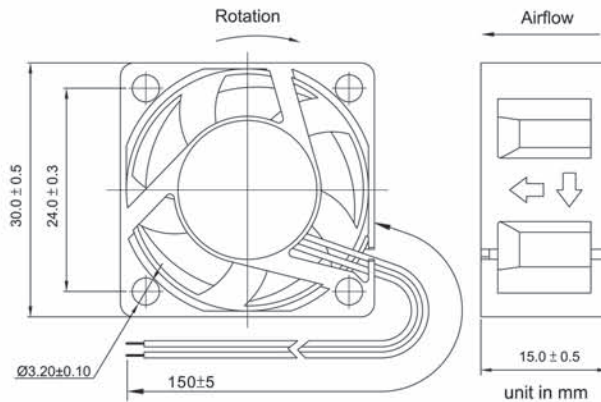
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 113

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 40x40x10mm

- Airflow: 4.5~8.1 CFM
- Static Pressure: 2.0~5.4 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 15 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW04010005BL	2B	05	4~5.5	4500	4.5	2.0	90	0.45	80000	4	21.5
YW04010005BM	2B		4~5.5	5500	5.6	2.9	130	0.65	80000	3	26.5
YW04010005BH	2B		4~5.5	6500	6.6	4.1	170	0.85	75000	2	29.0
YW04010005BS	2B		4~5.5	7500	8.1	5.4	250	1.25	65000	1	34.5
YW04010012BL	2B	12	7~13.2	4500	4.5	2.0	55	0.66	80000	4	21.5
YW04010012BM	2B		7~13.2	5500	5.6	2.9	65	0.78	80000	3	26.5
YW04010012BH	2B		7~13.2	6500	6.6	4.1	90	1.08	75000	2	29.0
YW04010012BS	2B		7~13.2	7500	8.1	5.4	120	1.44	65000	1	34.5
YW04010024BL	2B	24	12~26.4	4500	4.5	2.0	50	1.20	80000	4	21.5
YW04010024BM	2B		12~26.4	5500	5.6	2.9	60	1.44	80000	3	26.5
YW04010024BH	2B		12~26.4	6500	6.6	4.1	70	1.68	75000	2	29.0
YW04010024BS	2B		12~26.4	7500	8.1	5.4	120	1.44	65000	1	34.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

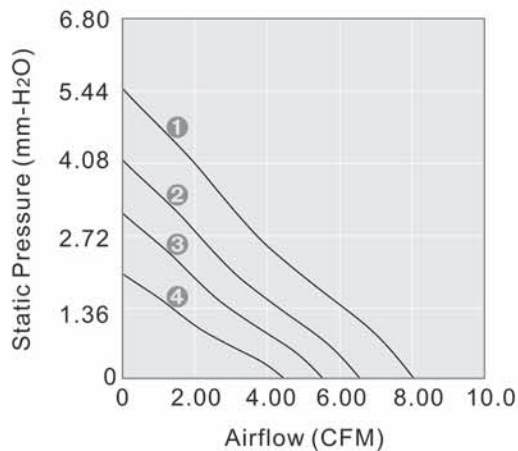
**Bearing System Available**

2B L S

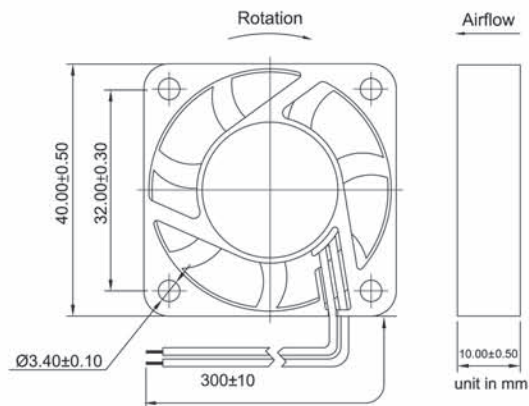
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 40x40x15mm

- Airflow: 6.1~9.5 CFM
- Static Pressure: 4.6~8.7 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 26 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW04015005BL	2B	05	4~5.5	6000	6.1	4.6	200	1.00	80000	3	28.0
YW04015005BM	2B	05	4~5.5	7300	7.5	6.8	280	1.40	80000	2	32.0
YW04015012BL	2B	12	7~13.2	6000	6.1	4.6	80	0.96	80000	3	28.0
YW04015012BM	2B	12	7~13.2	7300	7.5	6.8	120	1.44	80000	2	32.0
YW04015012BH	2B	12	7~13.2	8500	9.5	8.7	160	1.92	75000	1	36.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

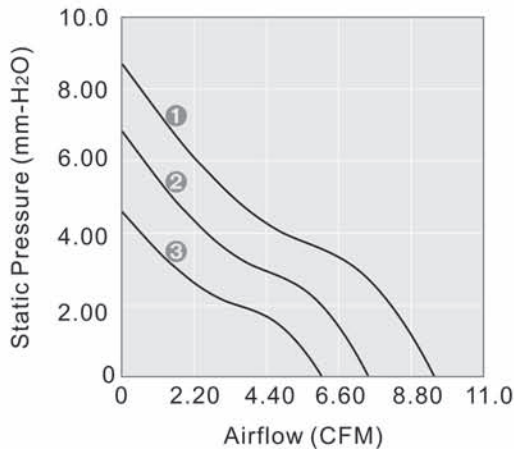
**Bearing System Available**

2B L S

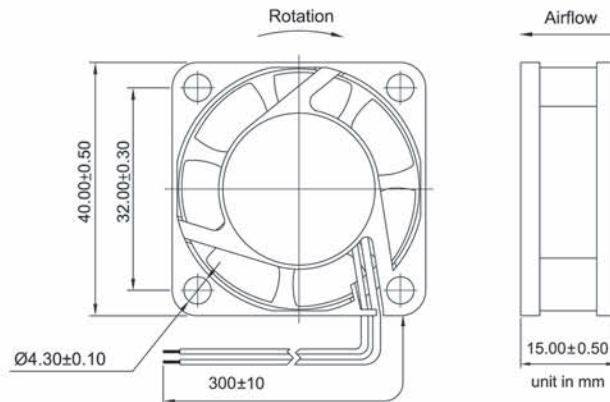
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

**PERFORMANCE P-Q CURVE**



**OUTLINE DIMENSIONS**





# 40x40x20mm

- Airflow: 5.7~12.0 CFM
- Static Pressure: 3.2~11.5 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 24 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
HYW04020012BL	2B	12	7~13.2	5000	5.7	3.2	70	0.84	80000	5	20.0
HYW04020012BM	2B		7~13.2	6300	7.2	5.2	100	1.20	80000	4	25.5
HYW04020012BH	2B		7~13.2	7600	9.0	6.4	140	1.68	75000	3	29.5
HYW04020012BS	2B		7~13.2	8900	10.5	9.2	170	2.04	65000	2	33.5
HYW04020012BSS2B	2B		7~13.2	10000	12.0	11.5	210	2.52	65000	1	37.5
HYW04020024BL	2B	24	12~26.4	5000	5.7	3.2	40	0.96	80000	5	20.0
HYW04020024BM	2B		12~26.4	6300	7.2	5.2	50	1.20	80000	4	25.5
HYW04020024BH	2B		12~26.4	7600	9.0	6.4	70	1.68	75000	3	29.5
HYW04020024BS	2B		12~26.4	8900	10.5	9.2	100	2.40	65000	2	33.5
HYW04020024BSS2B	2B		12~26.4	10000	12.0	11.5	120	2.88	65000	1	37.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

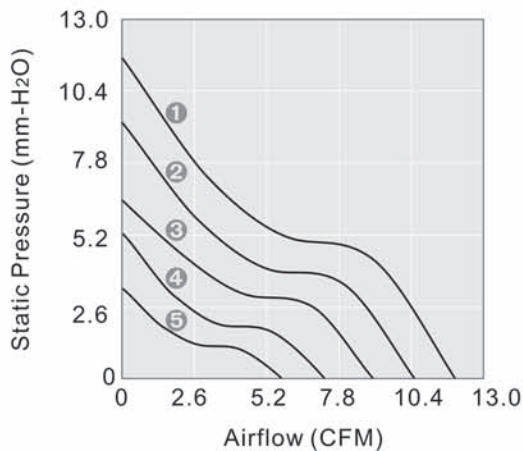
Bearing System Available

2B L S

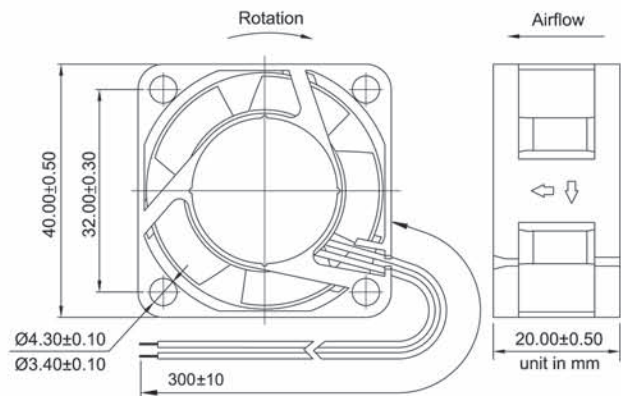
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 45x45x10mm

- Airflow: 8.0~10.3 CFM
- Static Pressure: 2.5~4.8 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 17 g

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
YW04510005SL	S	05	4~5.5	4900	7.6	2.5	150	0.75	30000	3	28.5
YW04510005SM	S		4~5.5	5300	8.5	3.0	170	0.85	30000	2	30.5
YW04510005SH	S		4~5.5	6300	10.0	4.0	240	1.20	25000	1	35.5
YW04510005BL	2B		4~5.5	5100	8.0	2.8	150	0.75	80000	3	29.5
YW04510005BM	2B		4~5.5	5500	8.7	3.4	170	0.85	80000	2	31.5
YW04510005BH	2B		4~5.5	6500	10.3	4.8	240	1.20	75000	1	37.0
YW04510012SL	S	12	7~13.2	4900	7.6	2.5	90	1.08	30000	3	28.5
YW04510012SM	S		7~13.2	5300	8.5	3.0	120	1.44	30000	2	30.5
YW04510012SH	S		7~13.2	6300	10.0	4.0	140	1.68	25000	1	35.5
YW04510012BL	2B		7~13.2	5100	8.0	2.8	90	1.08	80000	3	29.5
YW04510012BM	2B		7~13.2	5500	8.7	3.4	120	1.44	80000	2	31.5
YW04510012BH	2B		7~13.2	6500	10.3	4.8	140	1.68	75000	1	37.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

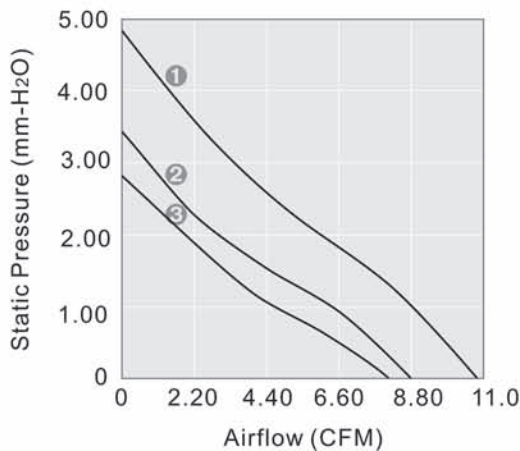
Bearing System Available

2B L S

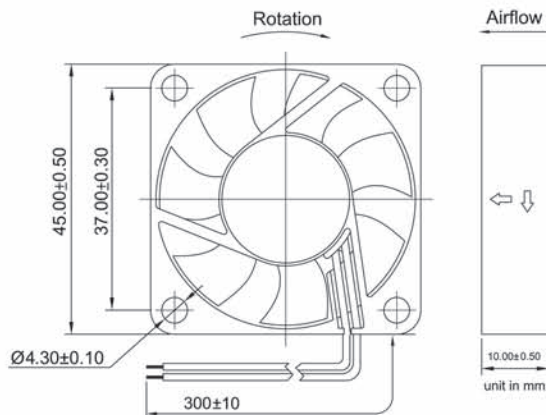
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 50x50x10mm

- Airflow: 9.0~13.8 CFM
- Static Pressure: 1.7~4.1 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 18 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW05010005BL	2B	05	4~5.5	4000	9.0	1.7	150	0.75	80000	4	25.5
YW05010005BM	2B		4~5.5	4600	10.7	2.6	170	0.85	80000	3	31.0
YW05010005BH	2B		4~5.5	5200	12.0	3.0	215	1.08	75000	2	34.0
YW05010012BL	2B	12	7~13.2	4200	9.5	1.9	90	1.08	80000	4	27.0
YW05010012BM	2B		7~13.2	4600	10.7	2.6	120	1.44	80000	3	31.0
YW05010012BH	2B		7~13.2	5200	12.0	3.0	140	1.68	75000	2	34.0
YW05010012BS	2B	24	7~13.2	6000	13.8	4.1	180	2.16	65000	1	38.5
YW05010024BM	2B		12~26.4	4600	10.7	2.6	80	1.92	80000	3	31.0
YW05010024BH	2B		12~26.4	5200	12.0	3.0	110	2.64	75000	2	34.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

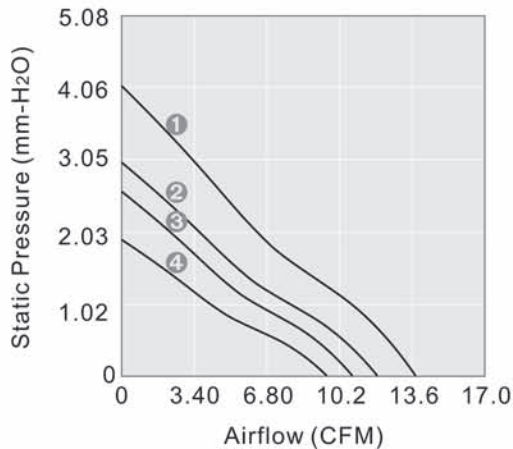
**Bearing System Available**

2B L S

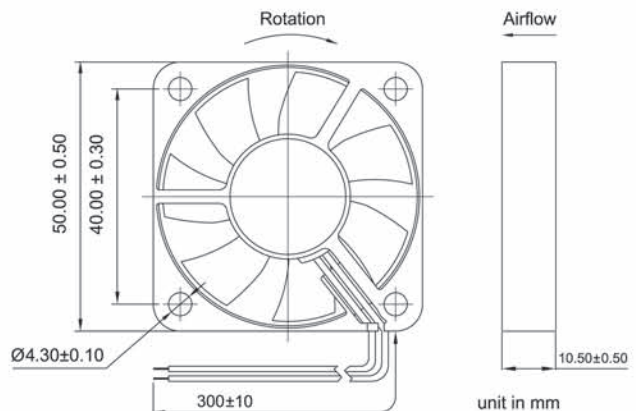
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS



unit in mm



## 50x50x15mm

- Airflow: 12.0~17.1 CFM
- Static Pressure: 2.0~4.4 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 27 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW05015005BL	2B	05	4~5.5	3800	12.0	2.0	180	0.90	80000	4	24.5
YW05015005BM	2B		4~5.5	4500	13.8	2.9	250	1.25	80000	3	30.0
YW05015005BH	2B		4~5.5	5000	15.5	3.6	285	1.43	75000	2	31.5
YW05015012BL	2B	12	7~13.2	3800	12.0	2.0	85	1.02	80000	4	24.5
YW05015012BM	2B		7~13.2	4500	13.8	2.9	130	1.56	80000	3	30.0
YW05015012BH	2B		7~13.2	5000	15.5	3.6	170	2.04	75000	2	31.5
YW05015012BS	2B	24	7~13.2	5500	17.1	4.4	240	2.88	65000	1	36.5
YW05015024BL	2B		12~26.4	3800	12.0	2.0	70	1.68	80000	4	24.5
YW05015024BM	2B		12~26.4	4500	13.8	2.9	80	1.92	80000	3	30.0
YW05015024BH	2B	24	12~26.4	5000	15.5	3.6	90	2.16	75000	2	31.5
YW05015024BS	2B		12~26.4	5500	17.1	4.4	110	2.64	65000	1	36.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

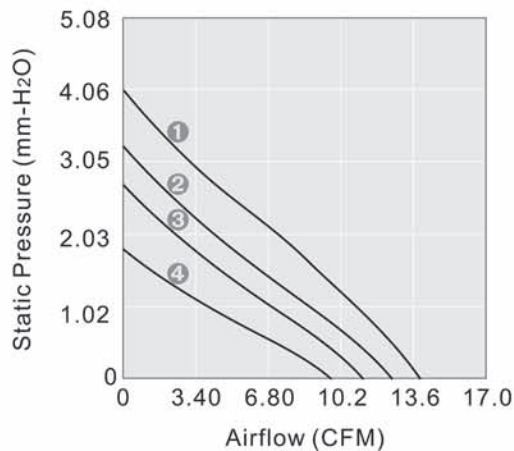
Bearing System Available

2B L S

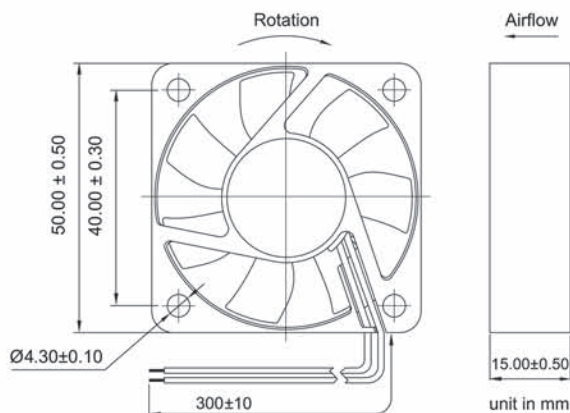
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 50x50x20mm

- Airflow: 8.9~14.0 CFM
- Static Pressure: 2.1~5.5 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 36.0 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW05020012SL	S	12	7~13.2	3500	8.9	2.1	60	0.72	30000	3	22.5
YW05020012SM	S		7~13.2	4300	11.0	4.0	90	1.08	30000	2	25.0
YW05020012SH	S		7~13.2	5300	13.2	4.7	110	1.32	25000	1	30.0
YW05020012BL	2B		7~13.2	3900	10.0	2.5	60	0.72	80000	3	23.5
YW05020012BM	2B		7~13.2	4800	12.2	4.0	90	1.08	80000	2	28.0
YW05020012BH	2B		7~13.2	5600	14.0	5.5	110	1.32	75000	1	32.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

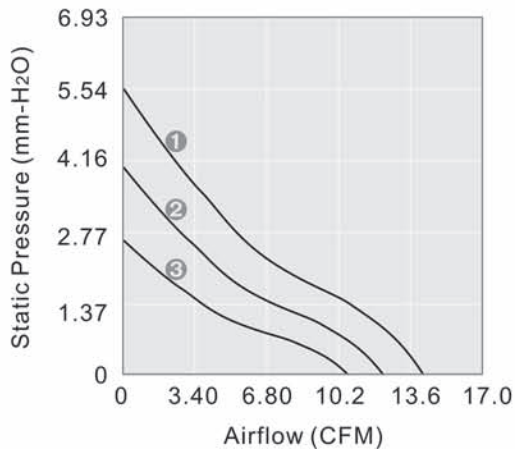
**Bearing System Available**

2B L S

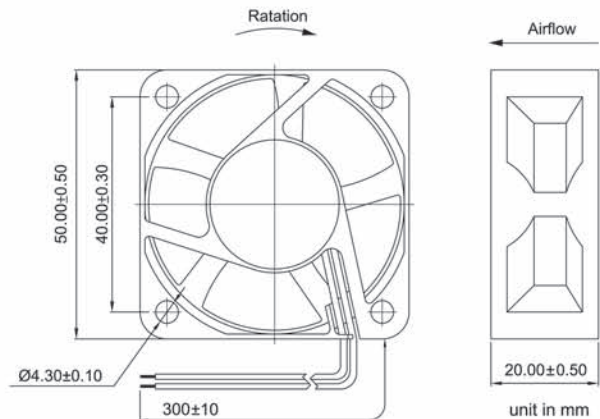
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS







# 60x60x10mm

- Airflow: 17.3~23.3 CFM
- Static Pressure: 2.1~4.0 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 26.0 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW06010005BL	2B	05	4~5.5	3800	17.3	2.1	260	1.30	80000	3	33.0
YW06010012SL	S	12	7~13.2	3800	17.3	2.1	140	1.68	80000	3	33.0
YW06010012SM	S		7~13.2	4500	21.0	3.0	170	2.04	80000	2	38.0
YW06010012SH	S		7~13.2	5200	23.3	4.0	240	2.88	75000	1	41.0
YW06010012BL	2B		7~13.2	3800	17.3	2.1	140	1.68	80000	3	33.0
YW06010012BM	2B		7~13.2	4500	21.0	3.0	170	2.04	80000	2	38.0
YW06010012BH	2B		7~13.2	5200	23.3	4.0	240	2.88	75000	1	41.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

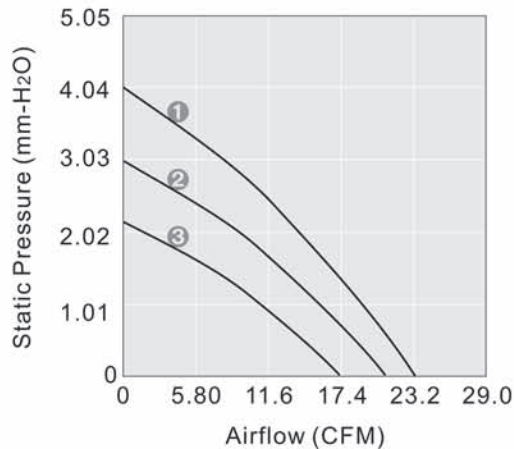
Bearing System Available

2B L S

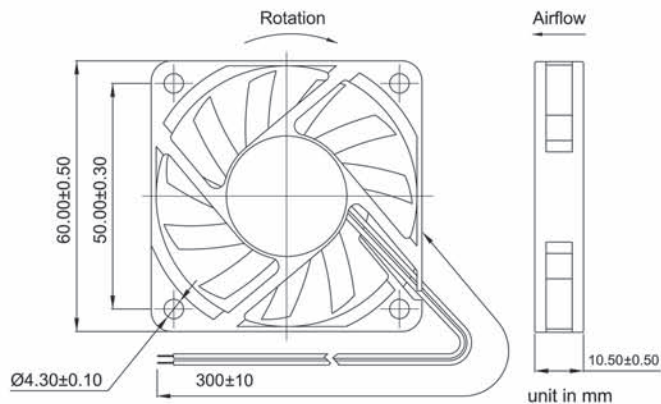
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 60x60x15mm

- Airflow: 17.1~31.3 CFM
- Static Pressure: 2.0~5.3 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 26.0 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level	
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)	
NYW06015012BL	2B	12	7~13.2	3200	17.1	2.0	100	1.20	80000	5	25.5	
NYW06015012BM	2B		7~13.2	4000	21.0	3.0	160	1.92	80000	4	33.0	
NYW06015012BH	2B		7~13.2	4700	24.1	3.9	220	2.64	75000	3	36.0	
NYW06015012BS	2B		7~13.2	5200	27.2	4.8	270	3.24	65000	2	40.0	
NYW06015012BSS2B	2B		7~13.2	6000	31.3	5.3	400	4.80	65000	1	43.0	
NYW06015012SL	S		7~13.2	3000	15.1	1.8	75	0.90	30000	5	24.0	
NYW06015012SM	S		7~13.2	3800	19.8	2.6	140	1.68	30000	4	31.0	
NYW06015012SH	S		7~13.2	4700	24.1	3.9	220	2.64	25000	3	36.0	
NYW06015024BL	2B		24	12~26.4	3200	17.1	2.0	90	2.16	80000	5	25.5
NYW06015024BM	2B			12~26.4	4000	21.0	3.0	110	2.64	80000	4	33.0
NYW06015024BH	2B	12~26.4		4700	24.1	3.9	145	3.48	75000	3	36.0	
NYW06015024SL	S	12~26.4		3000	15.1	1.8	90	2.16	30000	5	24.0	
NYW06015024SM	S	12~26.4		3800	19.8	2.6	110	2.64	30000	4	31.0	
NYW06015024SH	S	12~26.4		4700	24.1	3.9	145	3.48	25000	3	36.0	

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

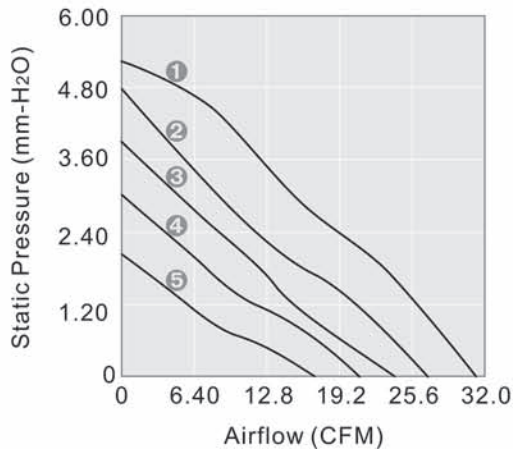
**Bearing System Available**

2B L S

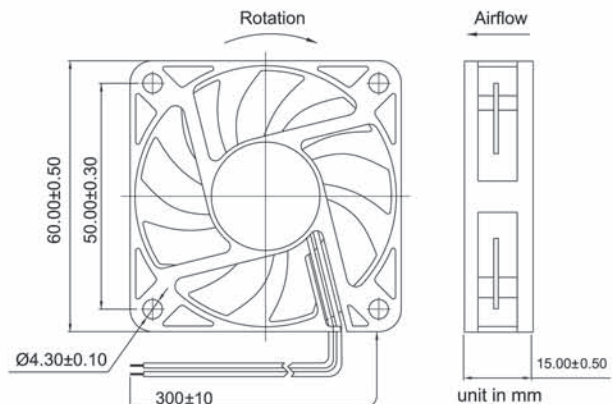
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 60x60x20mm

- Airflow: 17.1~29.1 CFM
- Static Pressure: 2.4~7.0 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 44.0 g

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
YW06020012BL	2B	12	7~13.2	3000	17.1	2.4	80	0.96	80000	4	26.0
YW06020012BM	2B		7~13.2	3600	20.0	3.4	110	1.32	80000	3	30.5
YW06020012BH	2B		7~13.2	4200	22.9	4.4	160	1.92	75000	2	35.0
YW06020012BS	2B		7~13.2	5300	29.1	7.0	280	3.36	65000	1	41.0
YW06020012SL	S		7~13.2	2800	15.2	2.0	80	0.96	30000	4	25.0
YW06020012SM	S		7~13.2	3400	18.0	2.7	110	1.32	30000	3	28.0
YW06020012SH	S	7~13.2	4000	21.8	4.0	160	1.92	25000	2	35.0	
YW06020024BL	2B	24	12~26.4	3000	17.1	2.4	40	0.96	80000	4	26.0
YW06020024BM	2B		12~26.4	3600	20.0	3.4	70	1.68	80000	3	30.5
YW06020024BH	2B		12~26.4	4200	22.9	4.4	80	1.92	75000	2	35.0
YW06020024SM	S		12~26.4	3400	18.0	2.7	70	1.68	30000	3	28.0
YW06020024SH	S		12~26.4	4000	21.8	4.0	80	1.92	25000	2	35.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

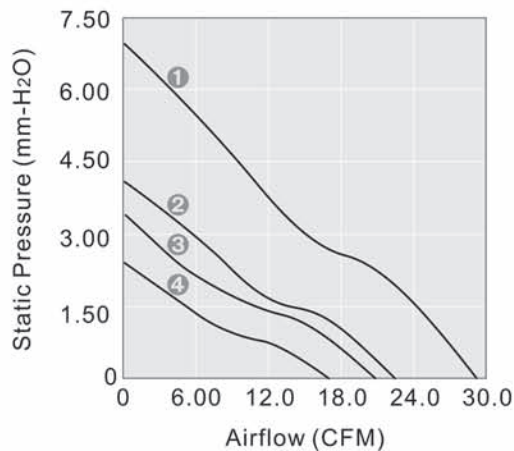
Bearing System Available

2B L S

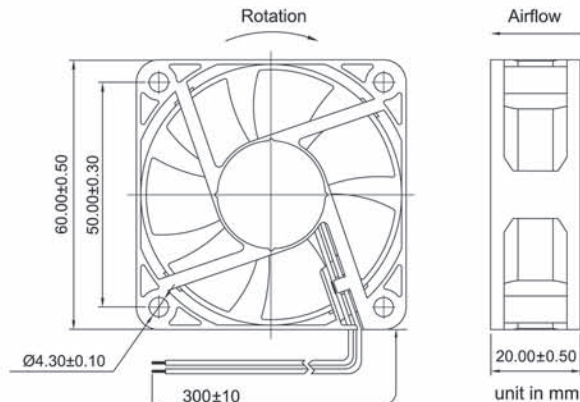
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 60x60x25mm

- Airflow: 15.3~40.1 CFM
- Static Pressure: 2.3~14.2 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 56 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
NYW06025012BL	2B	12	7~13.2	2800	15.8	2.4	80	0.96	80000	5	23.5
NYW06025012BM	2B		7~13.2	3700	20.2	3.8	120	1.44	80000	4	29.5
NYW06025012BH	2B		7~13.2	4300	25.4	5.5	150	1.80	75000	3	34.0
NYW06025012BS	2B		7~13.2	5200	29.3	6.3	210	2.52	65000	2	40.5
NYW06025012BSS2B	2B		7~13.2	6800	40.1	14.2	420	5.04	65000	1	48.0
NYW06025024BL	2B	24	12~26.4	2800	15.8	2.4	50	1.20	80000	5	23.5
NYW06025024BM	2B		12~26.4	3700	20.2	3.8	70	1.68	80000	4	29.5
NYW06025024BH	2B		12~26.4	4300	25.4	5.5	90	2.16	75000	3	34.0
NYW06025024BS	2B		12~26.4	5200	29.3	6.3	110	2.64	65000	2	40.5
NYW06025024BSS2B	2B		12~26.4	6800	40.1	14.2	210	5.04	65000	1	48.0
NYW06025048BL	2B	48	24~56.0	2800	15.8	2.4	30	1.44	80000	5	23.5
NYW06025048BM	2B		24~56.0	3700	20.2	3.8	45	2.16	80000	4	29.5
NYW06025048BS	2B		24~56.0	4300	25.4	5.5	50	2.40	75000	3	34.0
NYW06025048BS	2B		24~56.0	5200	29.3	6.3	80	3.84	65000	2	40.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

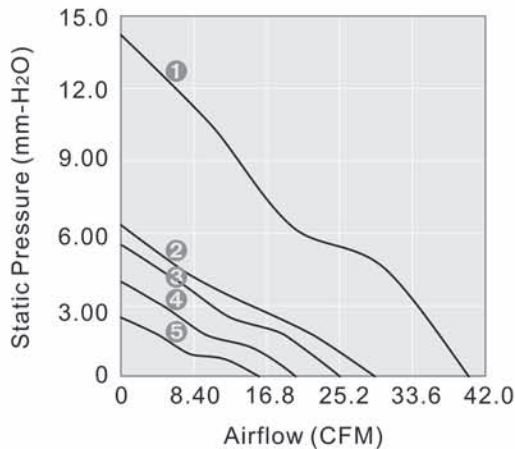
**Bearing System Available**

2B L S

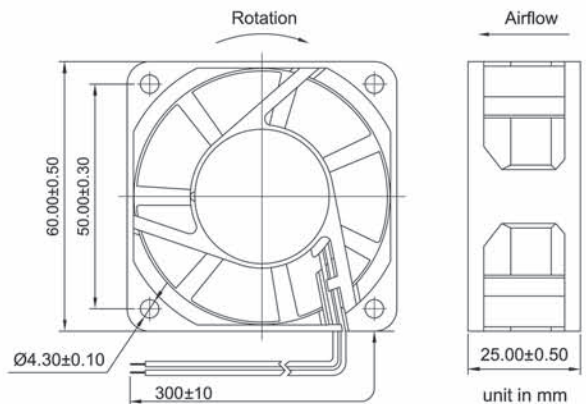
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 60x60x25mm

- Airflow: 15.3~31.2 CFM
- Static Pressure: 2.3~11.8 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UI1015 #22 AWG
- Weight: 56 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW06025012BL-W	2B	12	7~13.2	3000	14.4	5.0	50	0.60	80000	5	24.9
YW06025012BM-W	2B	12	7~13.2	4100	19.7	7.5	80	0.96	80000	4	31.0
YW06025012BH-W	2B	12	7~13.2	5100	24.5	9.3	120	1.44	75000	3	36.0
YW06025012BS-W	2B	12	7~13.2	5600	26.9	10.2	150	1.80	65000	2	38.1
YW06025012BSS-W	2B	12	7~13.2	6500	31.2	11.8	190	2.28	65000	1	41.0
YW06025024BL-W	2B	24	12~26.4	3000	13.5	2.3	35	0.84	80000	5	19.5
YW06025024BM-W	2B	24	12~26.4	4100	19.7	7.5	55	1.32	80000	4	31.0
YW06025024BH-W	2B	24	12~26.4	5100	24.5	9.3	75	1.80	75000	3	36.0
YW06025024BS-W	2B	24	12~26.4	5600	26.9	10.2	100	2.40	65000	2	38.1
YW06025024BSS-W	2B	24	12~26.4	6500	31.2	11.8	120	2.88	65000	1	41.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

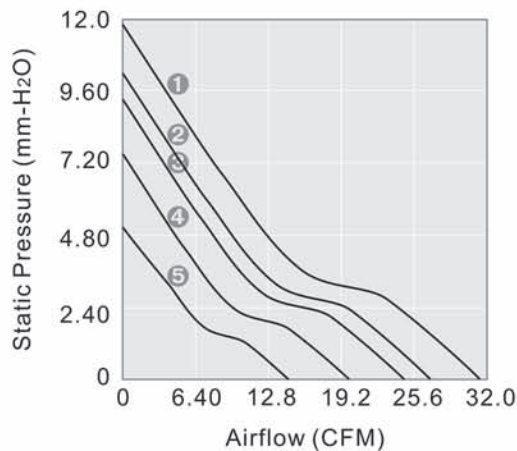
Bearing System Available

2B L S

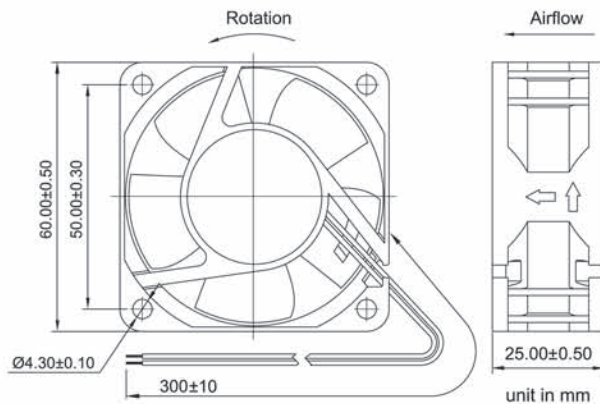
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 70x70x10mm

- Airflow: 14.2~24.6 CFM
- Static Pressure: 1.1~3.0 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 35.0 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW07010005BL	2B	05	4~5.5	2300	14.2	1.1	160	0.80	80000	4	24.0
YW07010005BH	2B	05	4~5.5	3000	19.6	2.0	260	1.30	75000	3	30.0
YW07010012BL	2B	12	7~13.2	3700	23.6	2.6	200	2.40	80000	2	35.0
YW07010012BM	2B	12	7~13.2	3900	24.6	3.0	220	2.64	75000	1	37.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

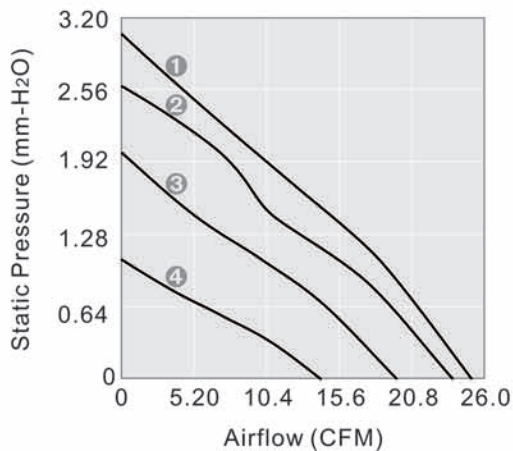
**Bearing System Available**

2B L S

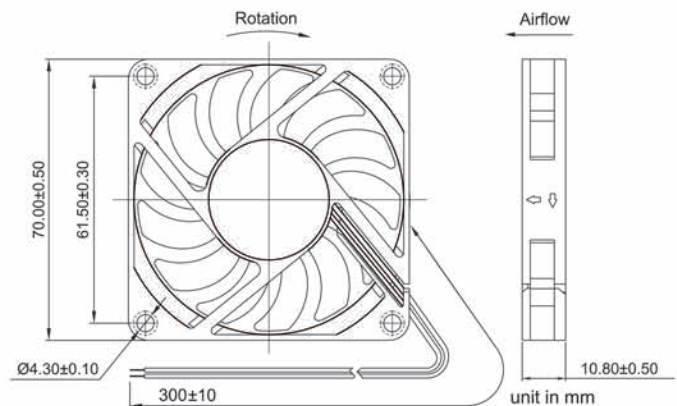
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 70x70x10mm

- Airflow: 23.7~30.8 CFM
- Static Pressure: 3.6~4.7 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 35.0 g

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
HYW07010012BL	2B	12	7~13.2	3700	23.9	3.7	130	1.56	80000	3	31.0
HYW07010012BM	2B		7~13.2	4300	27.8	4.3	170	2.04	80000	2	34.5
HYW07010012BH	2B		7~13.2	4800	31.0	4.8	240	2.88	75000	1	37.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

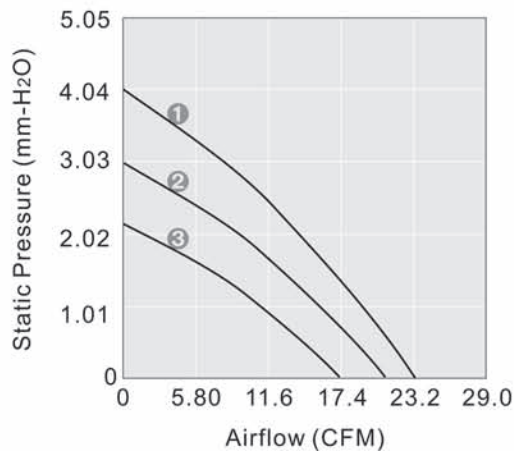
Bearing System Available

2B L S

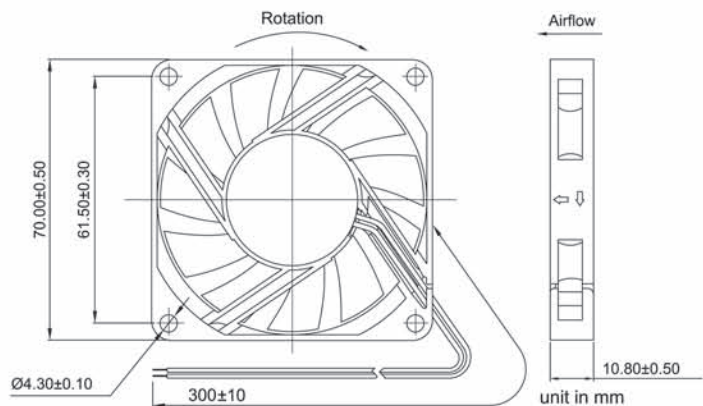
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 70x70x15mm

- Airflow: 27.9~39.5 CFM
- Static Pressure: 3.4~6.8 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 54.0 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW07015012BL	2B	12	7~13.2	3800	27.9	3.4	130	1.56	80000	4	34.0
YW07015012BM	2B		7~13.2	4300	31.6	4.4	190	2.28	80000	3	39.0
YW07015012BH	2B		7~13.2	4800	35.3	5.4	260	3.12	75000	2	41.5
YW07015012BS	2B		7~13.2	5500	39.5	6.8	400	4.80	65000	1	45.5
YW07015012DL	BS		7~13.2	3800	27.9	3.4	130	1.56	50000	4	34.0
YW07015012DM	BS		7~13.2	4300	31.6	4.4	190	2.28	50000	3	39.0
YW07015012DH	BS		7~13.2	4800	35.3	5.4	260	3.12	40000	2	41.5
YW07015012DS	BS		7~13.2	5500	39.5	6.8	400	4.80	30000	1	45.5
YW07015012SL	S		7~13.2	3800	27.9	3.4	155	1.86	30000	4	34.0
YW07015012SM	S		7~13.2	4300	31.6	4.4	220	2.64	30000	3	39.0
YW07015012SH	S		7~13.2	4800	35.3	5.4	280	3.36	25000	2	41.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

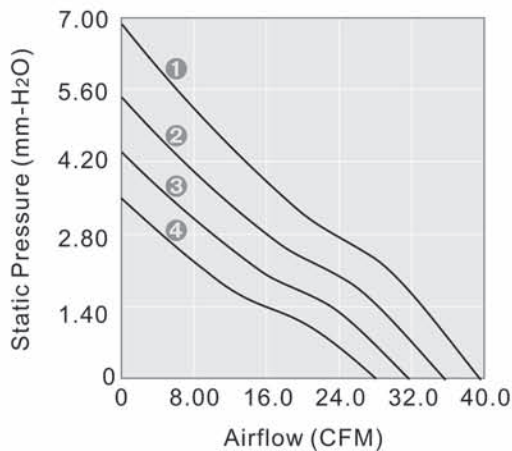
**Bearing System Available**

2B L S

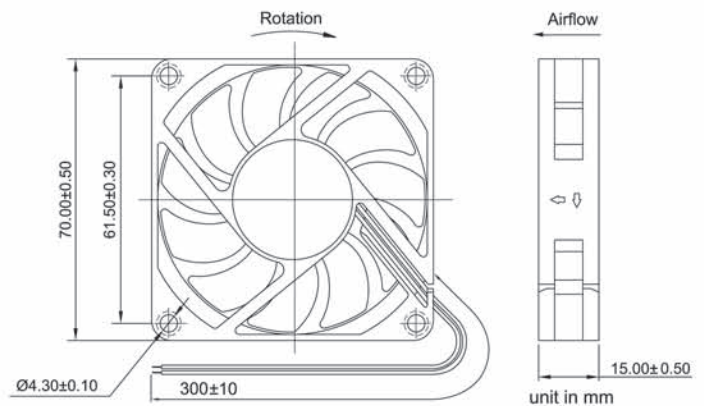
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS







# 70x70x25mm

- Airflow: 25.0~49.0 CFM
- Static Pressure: 3.0~10.06 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 82.0 g

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
YW07025012BL	2B	12	7~13.2	3000	25.0	3.0	90	1.08	80000	4	29.0
YW07025012BM	2B		7~13.2	4000	33.1	5.0	170	2.04	80000	3	34.5
YW07025012BH	2B		7~13.2	5000	40.5	7.2	300	3.60	75000	2	41.0
YW07025012BS	2B		7~13.2	6000	49.0	10.6	400	4.80	65000	1	47.0
YW07025012DL	BS		7~13.2	3000	25.0	3.0	110	1.32	50000	4	29.0
YW07025012DM	BS		7~13.2	4000	33.1	5.0	200	2.40	50000	3	34.5
YW07025012DH	BS		7~13.2	5000	40.5	7.2	300	3.60	40000	2	41.0
YW07025012DS	BS		7~13.2	6000	49.0	10.6	400	4.80	30000	1	47.0
YW07025012SL	S		7~13.2	2900	24.9	3.0	110	1.32	30000	4	28.0
YW07025012SM	S		7~13.2	3900	33.0	4.9	210	2.52	30000	3	33.5
YW07025012SH	S		7~13.2	4900	36.7	7.1	300	3.60	25000	2	40.0
YW07025012SS	S		7~13.2	5900	48.1	10.2	400	4.80	20000	1	46.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

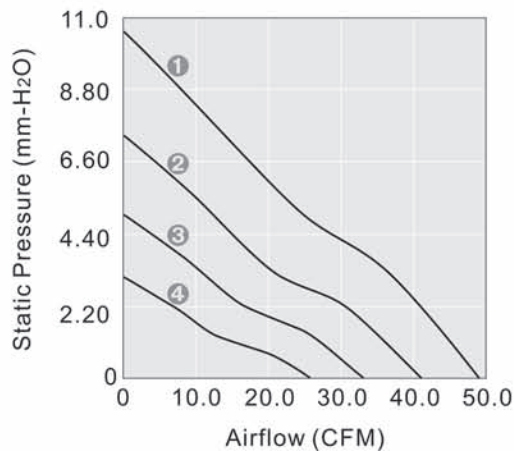
Bearing System Available

2B L S

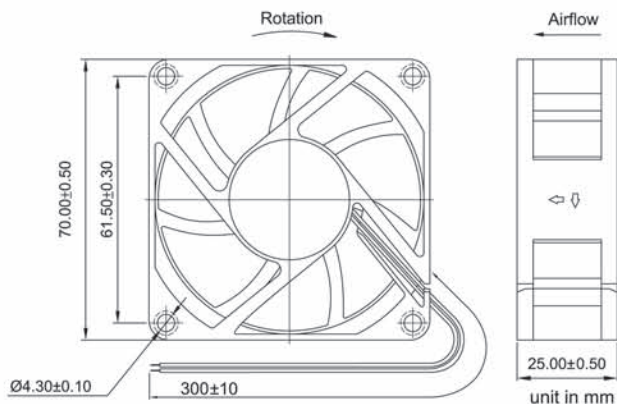
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 80x80x15mm

- Airflow: 23.5~50.2 CFM
- Static Pressure: 1.4~5.8 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 50.0 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW08015012BL-(Q)	2B	12	7~13.2	2100	23.5	1.4	70	0.84	80000	5	19.0
YW08015012BM-(Q)	2B		7~13.2	2600	29.1	1.9	100	1.20	80000	4	27.0
YW08015012BH-(Q)	2B		7~13.2	3200	35.8	2.7	190	2.28	75000	3	33.0
YW08015012BS-(Q)	2B		7~13.2	3900	43.6	4.3	250	3.00	65000	2	38.5
YW08015012BSS-(Q)	2B		7~13.2	4500	50.2	5.8	380	4.56	65000	1	42.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

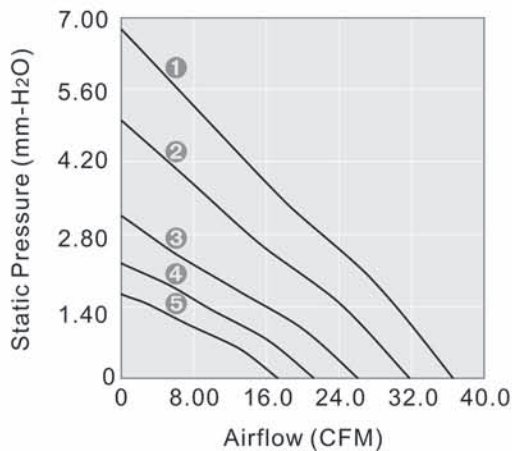
**Bearing System Available**

2B L S

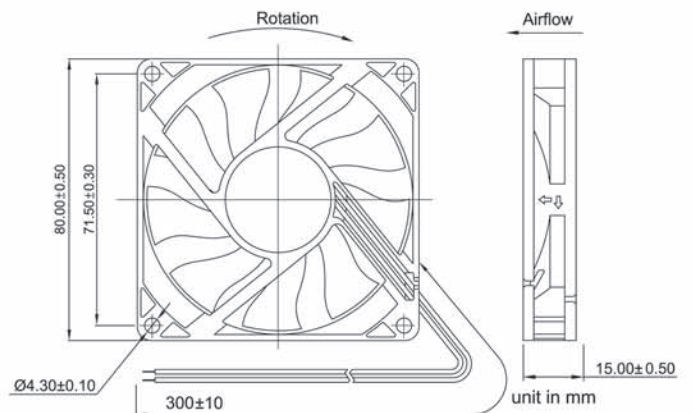
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 80x80x20mm

- Airflow: 22.7~37.0 CFM
- Static Pressure: 1.3~4.4 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 85.0 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW08020012BL	2B	12	7~13.2	2100	25.0	1.5	100	1.20	80000	4	24.0
YW08020012BM	2B		7~13.2	2600	31.0	2.2	110	1.32	80000	3	27.0
YW08020012BH	2B		7~13.2	3100	37.0	3.2	150	1.80	75000	2	33.5
YW08020012BS	2B		7~13.2	3600	45.2	4.4	200	2.40	65000	1	38.0
YW08020012SL	S		7~13.2	1900	22.7	1.3	100	1.20	30000	4	22.5
YW08020012SM	S		7~13.2	2400	28.2	1.9	110	1.32	30000	3	25.0
YW08020012SH	S	24	7~13.2	2900	32.7	3.1	150	1.80	25000	2	33.5
YW08020024BL	2B		12~26.4	2100	25.0	1.5	50	1.20	80000	4	24.0
YW08020024BM	2B		12~26.4	2600	31.0	2.2	70	1.68	80000	3	27.0
YW08020024BH	2B		12~26.4	3100	37.0	3.2	100	2.40	75000	2	33.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

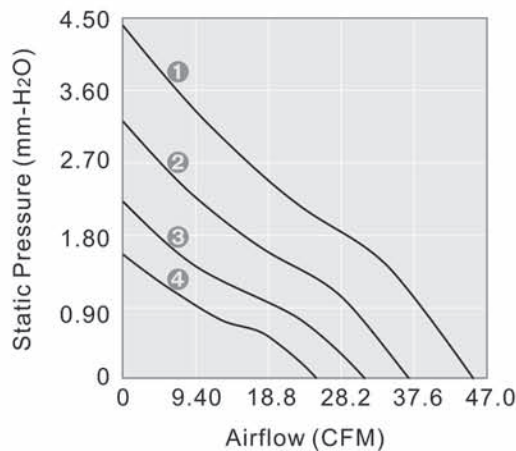
Bearing System Available

2B L S

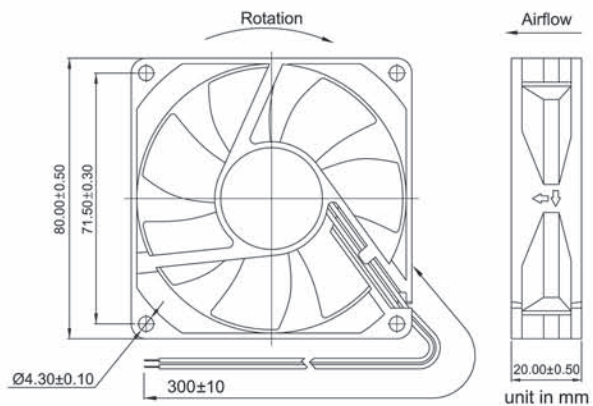
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS



DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN



# 80x80x25mm

- Airflow: 27.9~59.8 CFM
- Static Pressure: 1.3~5.4 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 88 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW08025012SL	S		7~13.2	1900	27.9	1.3	100	1.20	30000	5	22.5
YW08025012SM	S		7~13.2	2400	35.4	2.1	160	1.92	30000	4	27.5
YW08025012SH	S		7~13.2	2900	43.7	2.9	230	2.76	25000	3	33.5
YW08025012SS	S		7~13.2	3200	47.4	3.6	260	3.12	20000	2	36.0
YW08025012BL	2B		7~13.2	2000	30.0	1.5	100	1.20	80000	5	23.5
YW08025012BM	2B	12	7~13.2	2500	37.0	2.1	160	1.92	80000	4	30.0
YW08025012BH	2B		7~13.2	3000	45.2	3.1	230	2.76	75000	3	34.5
YW08025012BS	2B		7~13.2	3300	48.5	3.8	260	3.12	65000	2	37.0
YW08025012BSS	2B		7~13.2	4000	59.8	5.4	510	6.12	65000	1	43.0
YW08025024BL	2B		12~26.4	2000	30.0	1.5	60	1.44	80000	5	23.5
YW08025024BM	2B	24	12~26.4	2500	37.0	2.2	80	1.92	80000	4	30.0
YW08025024BH	2B		12~26.4	3000	45.2	3.1	130	3.12	75000	3	34.5
YW08025024BS	2B		12~26.4	3300	48.5	3.8	150	3.60	65000	2	37.0
YW08025048BL	2B		24~56.0	2000	30.0	1.5	40	1.44	80000	5	23.5
YW08025048BM	2B	48	24~56.0	2500	37.0	2.2	50	2.40	80000	4	30.0
YW08025048BH	2B		24~56.0	3000	45.2	3.1	90	4.32	75000	3	34.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

**Bearing System Available**

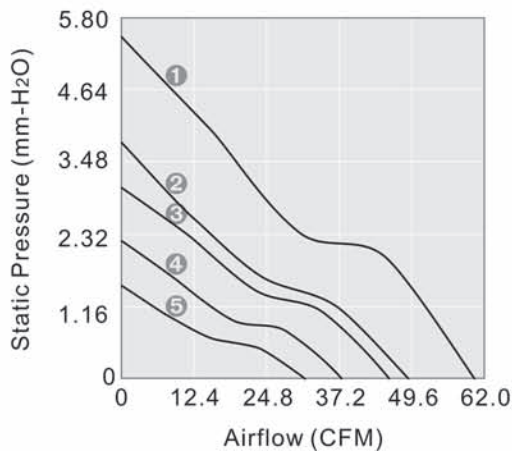
**Function Available**

05 12 24 48

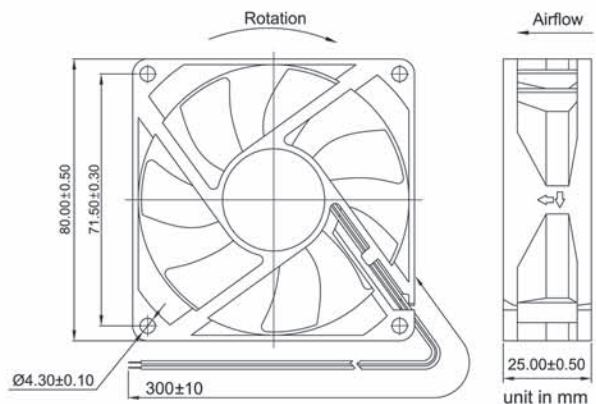
2B L S

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 80x80x25mm

- Airflow: 26.3~48.7 CFM
- Static Pressure: 2.0~5.8 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 100 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
NYW08025012SL	S	12	7~13.2	2100	26.3	2.0	80	0.96	30000	6	26.0
NYW08025012SM	S	12	7~13.2	2600	32.7	3.1	130	1.56	30000	5	29.5
NYW08025012SH	S	12	7~13.2	3200	40.4	3.9	200	2.40	25000	4	35.5
NYW08025012SS	S	12	7~13.2	3500	46.0	5.2	250	3.00	20000	3	38.5
NYW08025012BL	2B	12	7~13.2	2300	28.8	2.2	80	0.96	80000	6	27.0
NYW08025012BM	2B	12	7~13.2	2900	36.9	3.6	130	1.56	80000	5	32.0
NYW08025012BH	2B	12	7~13.2	3400	41.6	4.5	180	2.16	75000	4	37.5
NYW08025012BS	2B	12	7~13.2	3700	48.7	5.8	250	3.00	65000	3	39.5
NYW08025012BSS2B	2B	12	7~13.2	4500	59.2	8.5	390	4.68	65000	2	44.0
NYW08025012BU	2B	12	7~13.2	5500	64.1	12.5	500	6.00	65000	1	48.0
NYW08025024BL	2B	24	12~26.4	2300	28.8	2.2	60	1.44	80000	6	27.0
NYW08025024BM	2B	24	12~26.4	2900	36.9	3.6	80	1.92	80000	5	32.0
NYW08025024BH	2B	24	12~26.4	3400	41.6	4.5	100	2.40	75000	4	37.5
NYW08025024BS	2B	24	12~26.4	3700	48.7	5.8	140	3.36	65000	3	39.5
NYW08025024BSS2B	2B	24	12~26.4	4500	59.2	8.5	230	5.52	65000	2	44.0
NYW08025048BM	2B	48	24~56.0	2900	36.9	3.6	45	2.16	80000	5	32.0
NYW08025048BH	2B	48	24~56.0	3400	41.6	4.5	80	3.84	75000	4	37.5
NYW08025048BS	2B	48	24~56.0	3700	48.7	5.8	85	4.08	65000	3	39.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

Bearing System Available

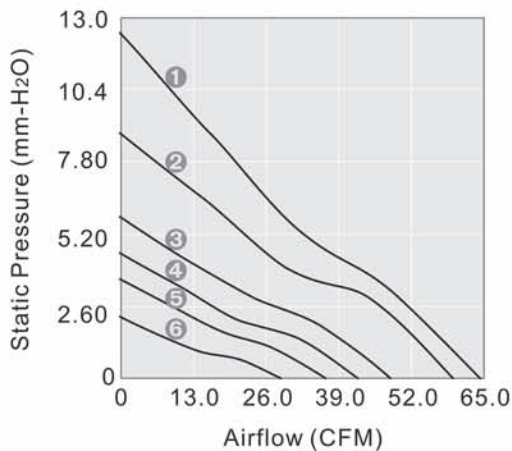
Function Available

05 12 24 48

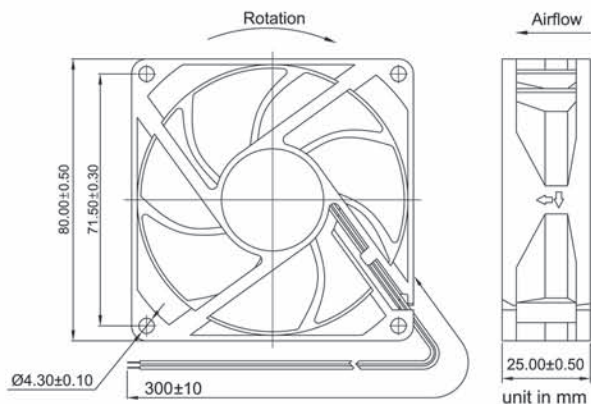
2B L S

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS



DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN



# 92x92x25mm

- Airflow: 45.8~73.4 CFM
- Static Pressure: 3.1~7.2 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 100.0 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
NYW09225012SL	S	12	7~13.2	2400	45.8	3.1	150	1.80	30000	5	32.5
NYW09225012SM	S	12	7~13.2	2800	53.5	4.3	220	2.64	30000	4	38.0
NYW09225012SH	S	12	7~13.2	3100	58.6	5.2	260	3.12	25000	3	40.0
NYW09225012SS	S	12	7~13.2	3500	67.3	5.9	340	4.08	20000	2	43.0
NYW09225012SSS	S	12	7~13.2	3800	73.4	7.3	470	5.64	20000	1	45.5
NYW09225012BL	2B	12	7~13.2	2400	45.8	3.1	150	1.80	80000	5	32.5
NYW09225012BM	2B	12	7~13.2	2800	53.5	4.3	220	2.64	80000	4	38.0
NYW09225012BH	2B	12	7~13.2	3100	58.5	5.2	260	3.12	75000	3	40.0
NYW09225012BS	2B	12	7~13.2	3500	67.3	5.9	340	4.08	65000	2	43.0
NYW09225012BSS2B	2B	12	7~13.2	3800	73.4	7.2	470	5.64	65000	1	45.5
NYW09225024BL	2B	24	12~26.4	2400	45.8	3.1	90	2.16	80000	5	32.5
NYW09225024BM	2B	24	12~26.4	2800	53.5	4.3	120	2.88	80000	4	38.0
NYW09225024BH	2B	24	12~26.4	3100	58.5	5.2	160	3.84	75000	3	40.0
NYW09225024BS	2B	24	12~26.4	3500	67.3	5.9	200	4.80	65000	2	43.0
NYW09225024BSS2B	2B	24	12~26.4	3800	73.4	7.2	270	6.48	65000	1	45.5
NYW09225048BL	2B	48	24~56.0	2400	45.8	3.1	55	2.64	80000	5	32.5
NYW09225048BM	2B	48	24~56.0	2800	53.5	4.3	80	3.84	80000	4	38.0
NYW09225048BH	2B	48	24~56.0	3100	58.5	5.2	100	4.80	75000	3	40.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

Bearing System Available

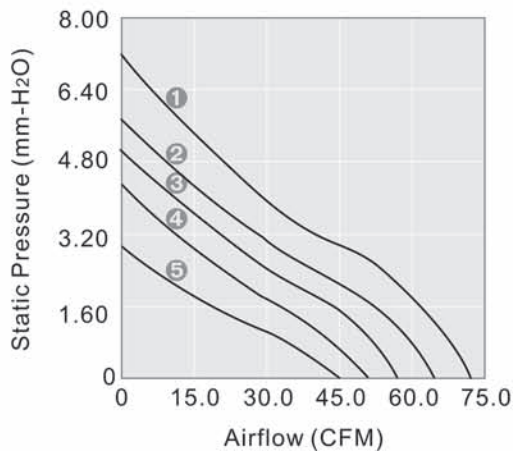
Function Available

05 12 24 48

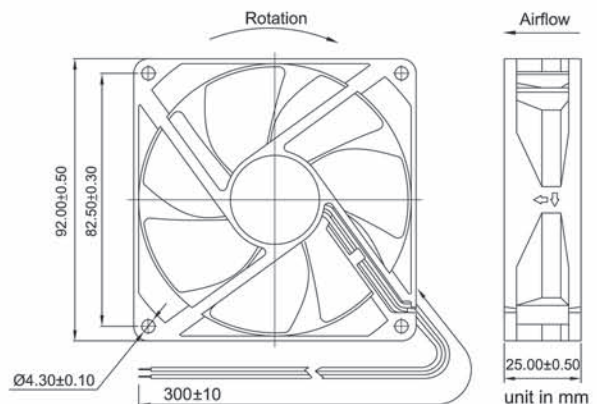
2B L S

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 92x92x25mm

- Airflow: 38.1~75.0 CFM
- Static Pressure: 1.5~4.8 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 100.0 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW09225012SL	S		7~13.2	1800	38.1	1.5	100	1.20	30000	5	25.0
YW09225012SM	S		7~13.2	2300	48.7	2.2	160	1.92	30000	4	32.0
YW09225012SH	S		7~13.2	2700	61.4	2.7	200	2.40	25000	3	36.5
YW09225012SS	S		7~13.2	3000	63.1	3.3	260	3.12	20000	2	39.0
YW09225012BL	2B	12	7~13.2	1900	40.2	1.7	100	1.20	80000	5	25.0
YW09225012BM	2B		7~13.2	2400	50.8	2.4	160	1.92	80000	4	33.0
YW09225012BH	2B		7~13.2	2800	63.7	3.0	230	2.76	75000	3	37.5
YW09225012BS	2B		7~13.2	3100	66.3	3.7	260	3.12	65000	2	40.0
YW09225012BSS	2B		7~13.2	3500	75.0	4.8	360	4.32	65000	1	42.5
YW09225024BL	2B	24	12~26.4	1900	40.2	1.7	60	1.44	80000	5	25.0
YW09225024BM	2B		12~26.4	2400	50.8	2.4	80	1.92	80000	4	33.0
YW09225024BH	2B		12~26.4	2800	63.7	3.0	130	3.12	75000	3	37.5
YW09225024BS	2B		12~26.4	3100	66.3	3.7	160	3.84	65000	2	40.0
YW09225024BSS	2B		12~26.4	3600	81.9	3.9	190	4.56	65000	1	47.5
YW09225048BM	2B	48	24~56.0	2400	50.8	2.4	55	2.64	80000	4	33.0
YW09225048BH	2B		24~56.0	2800	63.7	3.0	70	3.36	75000	3	37.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

Bearing System Available

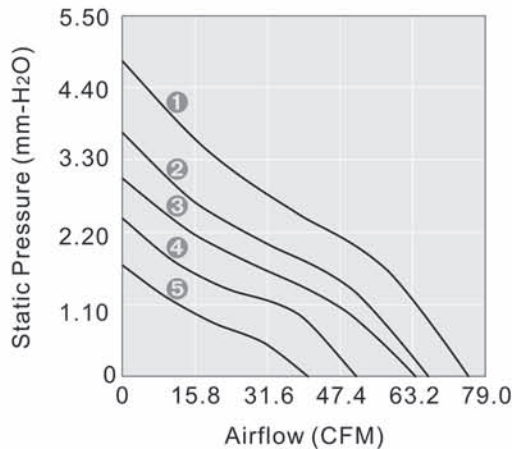
Function Available

05 12 24 48

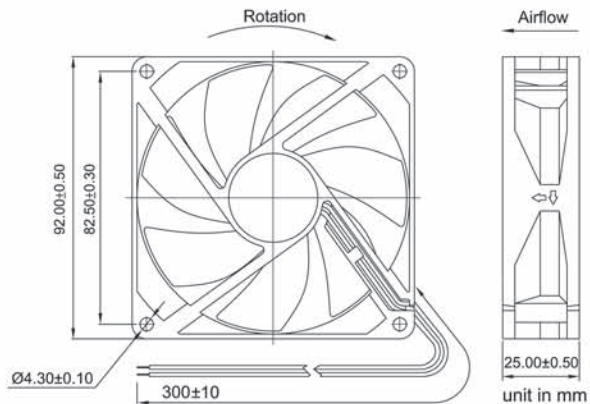
2B L S

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 92x92x32mm

- Airflow: 42.6~86.8 CFM
- Static Pressure: 3.5~14.3 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #22 AWG
- Weight: 183.0 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW09232012BL	2B	12	7~13.2	2300	42.6	3.5	130	1.56	80000	4	34.0
YW09232012BM	2B		7~13.2	3200	58.7	6.9	270	3.24	80000	3	42.5
YW09232012BH	2B		7~13.2	4000	73.3	10.7	490	5.88	75000	2	47.0
YW09232012BS	2B		7~13.2	4700	86.8	14.3	800	9.60	65000	1	51.0
YW09232024BL	2B	24	12~26.4	2300	42.6	3.5	90	2.16	80000	4	34.0
YW09232024BM	2B		12~26.4	3200	58.7	6.9	170	4.08	80000	3	42.5
YW09232024BH	2B		12~26.4	4000	73.3	10.7	260	6.24	75000	2	47.0
YW09232024BS	2B		12~26.4	4700	86.8	14.3	420	10.08	65000	1	51.0
YW09232048BL	2B	48	24~56.0	2300	42.6	3.5	70	3.36	80000	4	34.0
YW09232048BM	2B		24~56.0	3200	58.7	6.9	120	5.76	80000	3	42.5
YW09232048BH	2B		24~56.0	4000	73.3	10.7	210	10.08	75000	2	47.0
YW09232048BS	2B		24~56.0	4700	86.8	14.3	280	13.44	65000	1	51.0

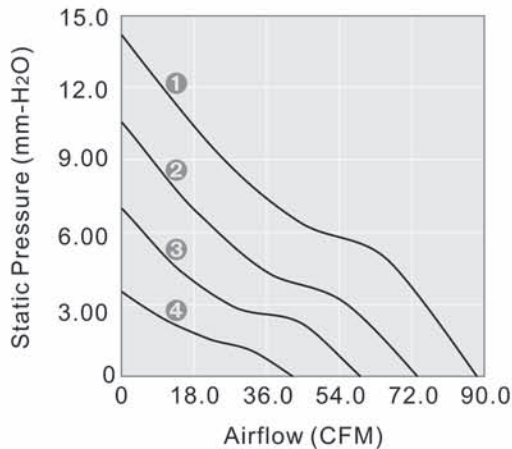
2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**  
05 12 24 48

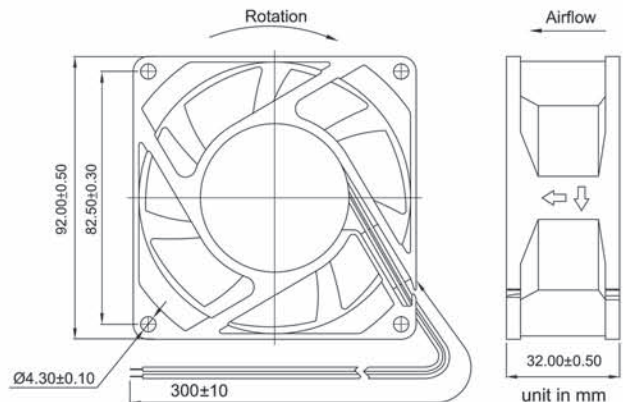
**Bearing System Available**  
2B L S

**Function Available**  
- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS







# 120x120x25mm

- Airflow: 61.2 CFM
- Static Pressure: 2.3 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 118 g

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
KM12025012BH	2B	12	7~13.2	2000	61.2	2.3	180	2.16	80000	1	31.5
KM12025012BL	2B		7~13.2	1200	38.4	1.4	70	0.84	80000	2	17.5
KM12025012LH	L		7~13.2	2000	61.2	2.3	180	2.16	50000	1	31.5
KM12025012LM	L		7~13.2	1200	38.4	1.4	65	0.78	50000	2	17.5
KM12025012LL	L		7~13.2	800	25.6	1.0	40	0.48	50000	3	16.5
KM12025012SH	S		7~13.2	2000	61.2	2.3	180	2.16	30000	1	31.5
KM12025012SM	S		7~13.2	1200	38.4	1.4	70	0.84	30000	2	17.5
KM12025012SL	S		7~13.2	800	25.6	1.0	40	0.48	30000	3	16.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

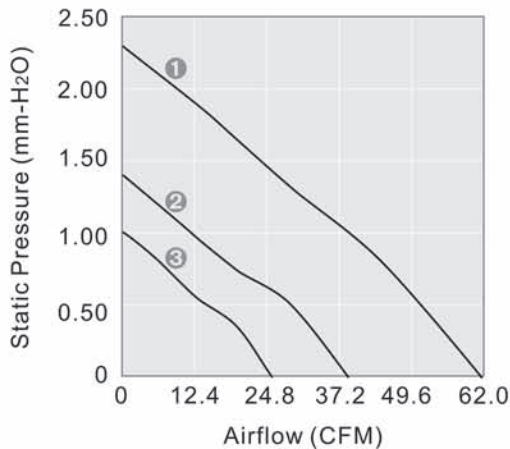
**Bearing System Available**

2B L S

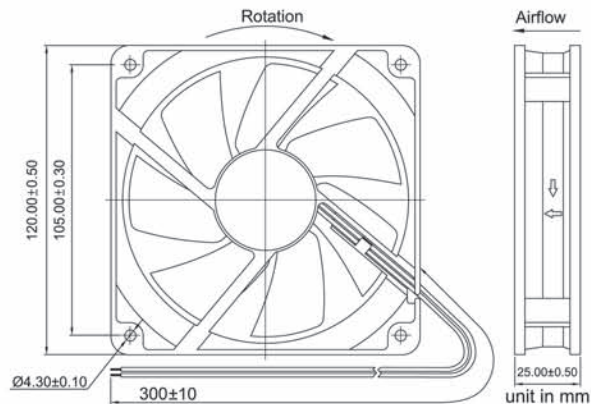
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

**PERFORMANCE P-Q CURVE**



**OUTLINE DIMENSIONS**



DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN



# 120x120x25mm

- Airflow: 73.0~123.0 CFM
- Static Pressure: 2.6~7.6 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #22 AWG
- Weight: 160 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
YW12025012BL	2B	12	7~13.2	1800	73.0	2.6	180	2.16	80000	4	34.0
YW12025012BM	2B		7~13.2	2200	87.8	3.9	290	3.48	80000	3	40.5
YW12025012BH	2B		7~13.2	2600	106.1	5.8	460	5.52	75000	2	44.0
YW12025012BS	2B		7~13.2	3000	123.1	7.6	570	6.84	65000	1	49.0
YW12025024BL	2B	24	12~26.4	1800	73.0	2.6	100	2.40	80000	4	34.0
YW12025024BM	2B		12~26.4	2200	87.8	3.9	160	3.84	80000	3	40.5
YW12025024BH	2B		12~26.4	2600	106.1	5.8	280	6.72	75000	2	44.0
YW12025024BS	2B		12~26.4	3000	123.1	7.6	390	9.36	65000	1	49.0
YW12025048BL	2B	48	24~56.0	1800	73.0	2.6	60	2.88	80000	4	34.0
YW12025048BM	2B		24~56.0	2200	87.8	3.9	80	3.84	80000	3	40.5
YW12025048BH	2B		24~56.0	2600	106.1	5.8	110	5.28	75000	2	44.0
YW12025048BS	2B		24~56.0	3000	123.1	7.6	190	9.12	65000	1	49.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

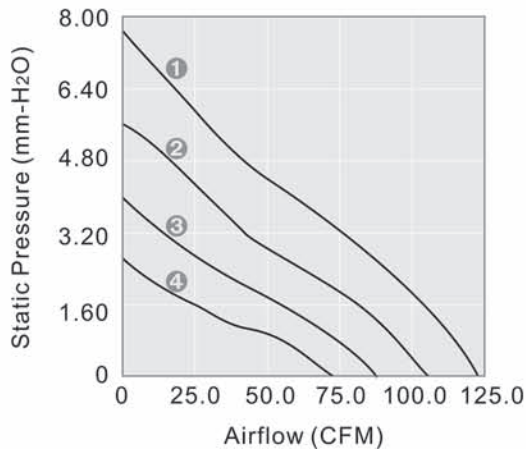
**Bearing System Available**

2B L S

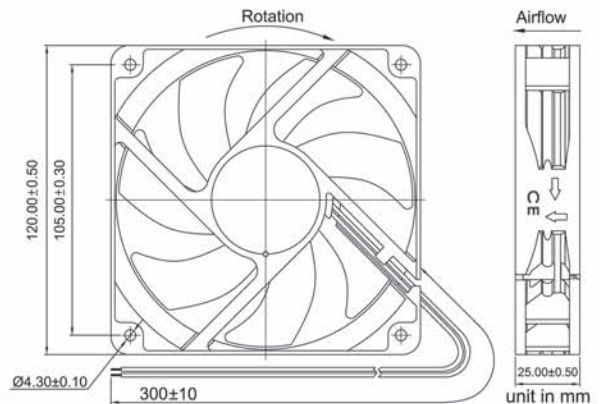
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 120x120x32mm

- Airflow: 83.3~137.0 CFM
- Static Pressure: 4.3~9.4 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #22 AWG
- Weight: 219 g

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
YW12032012BL	2B	12	7~13.2	2100	87.7	4.2	330	3.96	80000	4	39.5
YW12032012BM	2B		7~13.2	2500	99.0	6.0	450	5.40	80000	3	42.5
YW12032012BH	2B		7~13.2	2900	115.0	8.0	580	6.96	75000	2	47.5
YW12032012BS	2B		7~13.2	3300	137.3	9.4	840	10.08	65000	1	49.0
YW12032024BL	2B	24	12~26.4	2100	87.7	4.2	150	3.60	80000	4	39.5
YW12032024BM	2B		12~26.4	2500	99.0	6.0	200	4.80	80000	3	42.5
YW12032024BH	2B		12~26.4	2900	115.0	8.0	290	6.96	75000	2	47.5
YW12032024BS	2B		12~26.4	3300	137.3	9.4	400	9.60	65000	1	49.0
YW12032048BL	2B	48	24~56.0	2100	83.3	4.3	68	3.26	80000	4	39.5
YW12032048BM	2B		24~56.0	2500	99.0	6.0	110	5.28	80000	3	42.5
YW12032048BH	2B		24~56.0	2900	115.0	8.0	190	9.12	75000	2	47.5
YW12032048BS	2B		24~56.0	3300	137.3	9.4	400	9.60	65000	1	49.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

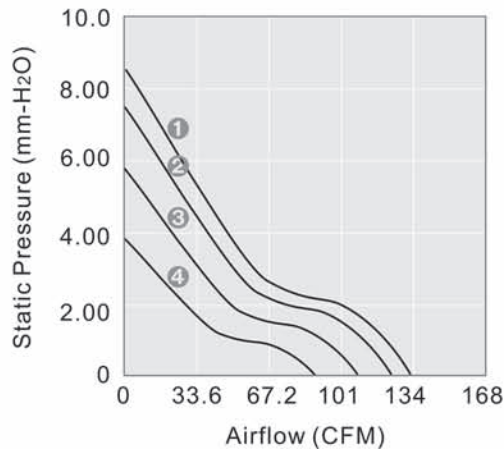
Bearing System Available

2B L S

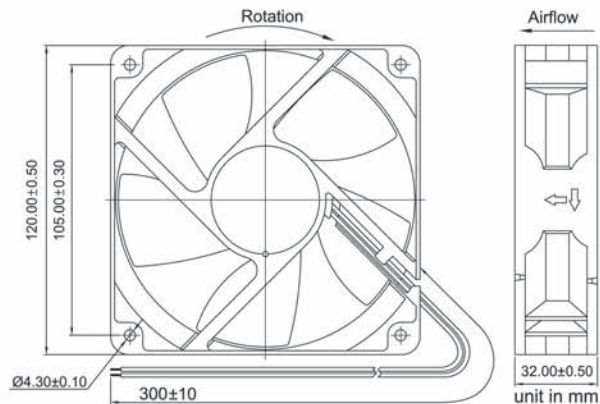
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 120x120x38mm

- Airflow: 89.5~135.0 CFM
- Static Pressure: 3.9~8.6 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #22 AWG
- Weight: 220 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
YW12038012BL	2B	12	7~13.2	2000	89.5	3.9	320	3.84	80000	4	36.0
YW12038012BM	2B		7~13.2	2400	107.7	5.8	420	5.04	80000	3	41.0
YW12038012BH	2B		7~13.2	2800	125.5	7.6	660	7.92	75000	2	45.0
YW12038012BS	2B		7~13.2	3000	135.0	8.6	830	9.96	65000	1	47.0
YW12038024BL	2B	24	12~26.4	2000	89.5	3.9	150	3.60	80000	4	36.0
YW12038024BM	2B		12~26.4	2400	107.7	5.8	250	6.00	80000	3	41.0
YW12038024BH	2B		12~26.4	2800	125.5	7.6	360	8.64	75000	2	45.0
YW12038024BS	2B		12~26.4	3000	135.0	8.6	410	9.84	65000	1	47.0
YW12038048BL	2B	48	24~56.0	2000	89.5	3.9	120	5.76	80000	4	36.0
YW12038048BM	2B		24~56.0	2400	107.7	5.8	140	6.72	80000	3	41.0
YW12038048BH	2B		24~56.0	2800	125.5	7.6	180	8.64	75000	2	45.0
YW12038048BS	2B		24~56.0	3000	135.0	8.6	210	10.08	65000	1	47.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

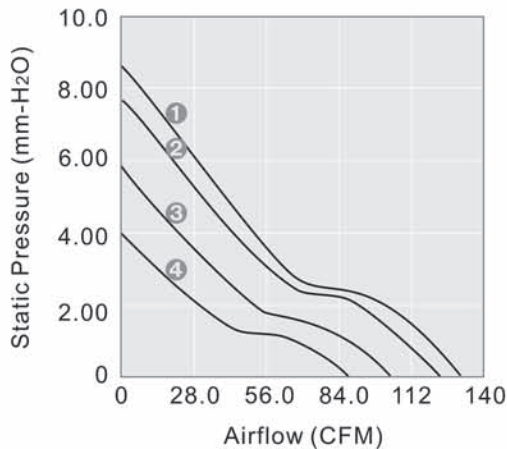
Bearing System Available

2B L S

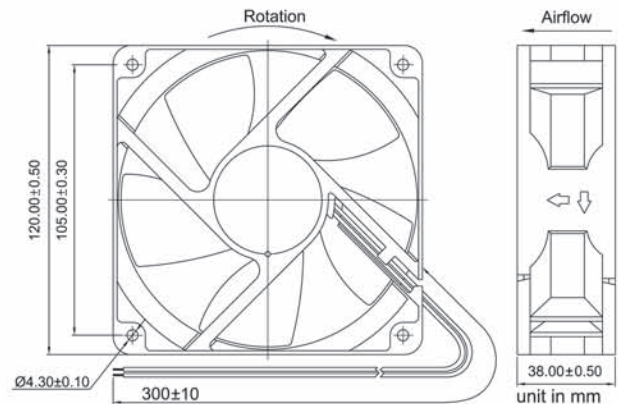
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 120x120x38mm

- Airflow: 115.5~135.0 CFM
- Static Pressure: 9.15~13.2 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #22 AWG
- Weight: 220 g

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
NYW12038012BM	2B	12	7~13.2	3500	115.0	9.1	560	6.72	80000	3	48.0
NYW12038012BH	2B	12	7~13.2	3800	125.8	9.8	680	8.16	75000	2	49.5
NYW12038012BS	2B	12	7~13.2	3900	129.8	11.0	850	10.2	65000	1	52.0
NYW12038024BM	2B	24	12~26.4	3500	115.0	9.1	380	9.12	80000	3	48.0
NYW12038024BH	2B	24	12~26.4	3800	125.8	9.8	420	10.08	75000	2	49.5
NYW12038024BS	2B	24	12~26.4	4100	135.0	13.2	470	11.28	65000	1	53.0
NYW12038048BM	2B	48	24~56.0	3500	115.0	9.1	130	6.24	80000	3	48.0
NYW12038048BH	2B	48	24~56.0	3800	125.8	9.8	160	7.68	75000	2	49.5
NYW12038048BS	2B	48	24~56.0	4100	135.0	13.2	230	11.04	65000	1	53.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

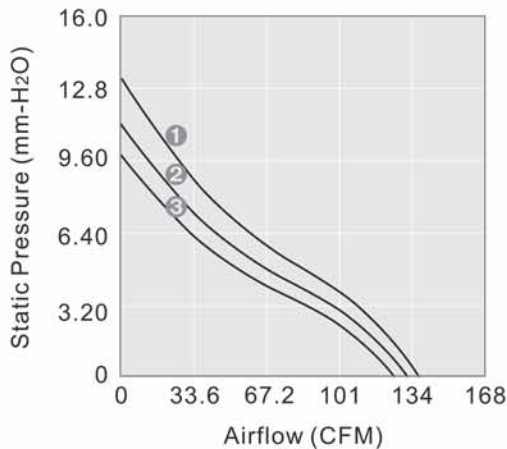
Bearing System Available

2B L S

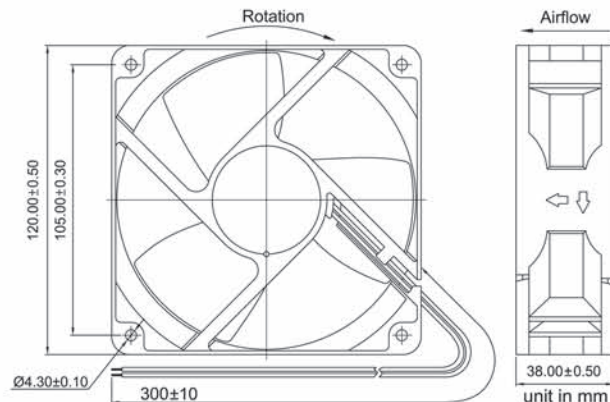
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





## 50x50x10mm

- Airflow: 2.4~3.3 CFM
- Static Pressure: 6.1~11.5 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1571 #28 AWG
- Weight: 17.5 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
BW05010005BM	2B	05	4~5.5	5000	2.4	6.1	130	0.65	80000	2	27.0
BW05010005BH	2B		4~5.5	6500	3.3	11.5	170	0.85	75000	1	32.0
BW05010012BM	2B	12	7~13.2	5000	2.4	6.1	55	0.66	80000	2	27.0
BW05010012BH	2B		7~13.2	6500	3.3	11.5	100	1.20	75000	1	32.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

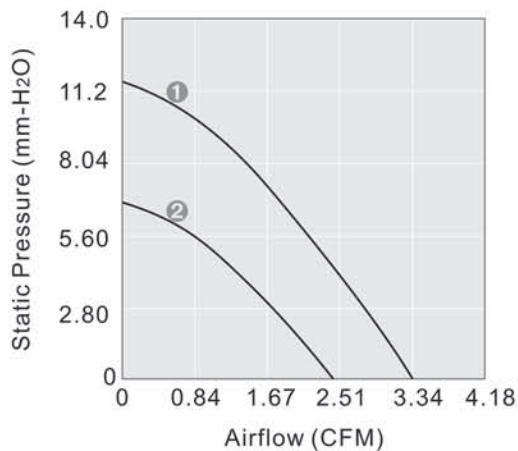
Bearing System Available

2B L S

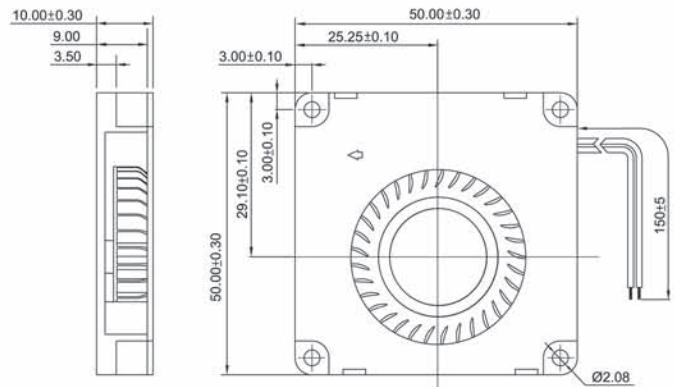
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 50x50x15mm

- Airflow: 3.4~5.6 CFM
- Static Pressure: 7.3~12.1 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 28 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
BW05115005BL	2B	05	4~5.5	4500	4.2	16.3	170	0.85	80000	4	33.5
BW05115005BM	2B		4~5.5	5500	5.1	19.9	350	1.75	80000	3	38.0
BW05115012BL	2B		7~13.2	4500	4.2	16.3	95	1.14	80000	4	33.5
BW05115012BM	2B	12	7~13.2	5500	5.1	19.9	160	1.92	80000	3	38.0
BW05115012BH	2B		7~13.2	6500	6.0	23.5	230	2.76	75000	2	41.5
BW05115012BS	2B		7~13.2	7500	7.0	27.1	290	3.48	65000	1	44.5
BW05115024BL	2B	24	12~26.4	4500	4.2	16.3	60	1.44	80000	4	33.5
BW05115024BM	2B		12~26.4	5500	5.1	19.9	85	2.04	80000	3	38.0
BW05115024BH	2B		12~26.4	6500	6.0	23.5	120	2.88	75000	2	41.5
BW05115024BS	2B		12~26.4	7500	7.0	27.1	180	4.32	65000	1	44.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

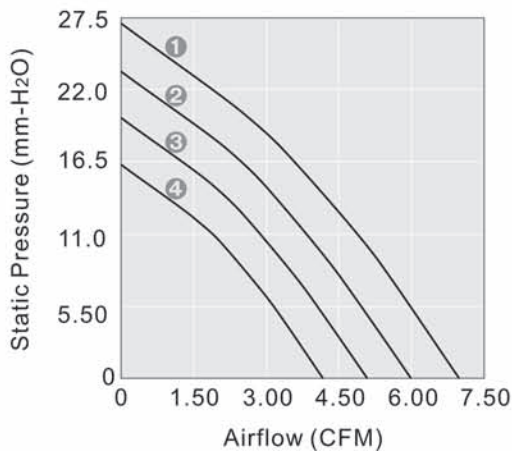
**Bearing System Available**

2B L S

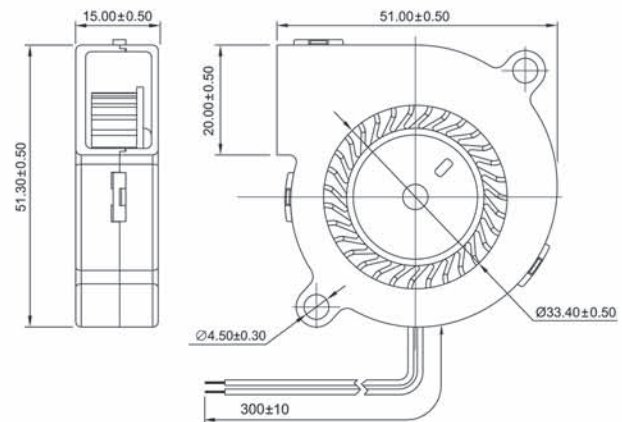
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

**PERFORMANCE P-Q CURVE**



**OUTLINE DIMENSIONS**





## 60x60x18mm

- Airflow: 6.7~8.2 CFM
- Static Pressure: 17.6~22.0 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 41 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
BW06018012BL	2B	12	7~13.2	4200	6.7	17.6	140	1.68	80000	3	38.0
BW06018012BM	2B		7~13.2	4800	7.7	21.2	180	2.16	80000	2	43.5
BW06018012BH	2B		7~13.2	5400	8.2	22.0	330	3.96	75000	1	49.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

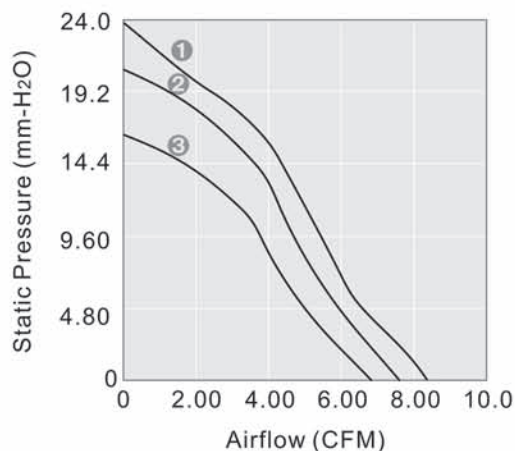
Bearing System Available

2B L S

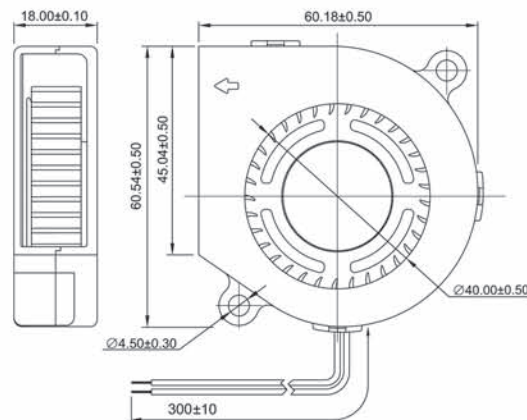
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS







# 75x75x30mm

- Airflow: 9.7~16.5 CFM
- Static Pressure: 5.5~20.3 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 88.9 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
BW08030012BL	2B	12	7~13.2	2400	9.7	5.5	110	1.32	80000	4	37.0
BW08030012BM	2B		7~13.2	3000	12.2	10.3	190	2.28	80000	3	42.0
BW08030012BH	2B		7~13.2	3400	14.0	13.7	270	3.24	75000	2	44.5
BW08030024BL	2B		12~26.4	2400	9.7	5.5	60	1.44	80000	4	37.0
BW08030024BM	2B	24	12~26.4	3000	12.2	10.3	110	2.64	80000	3	42.0
BW08030024BH	2B		12~26.4	3400	14.0	13.7	150	3.60	75000	2	44.5
BW08030024BS	2B		12~26.4	4000	16.5	20.3	200	4.80	65000	1	48.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

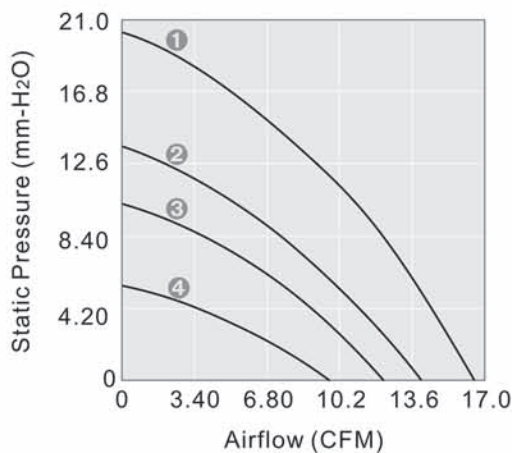
**Bearing System Available**

2B L S

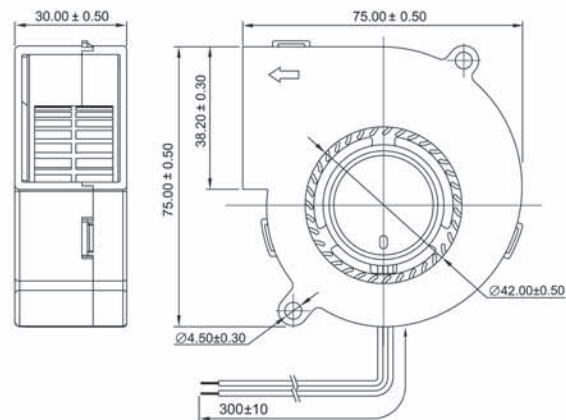
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

**PERFORMANCE P-Q CURVE**



**OUTLINE DIMENSIONS**



DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN



## 97x97x33mm

- Airflow: 25.6~32.4 CFM
- Static Pressure: 22.1~28.1 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 156.7 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
BW09733012BL	2B	12	7~13.2	2600	25.6	22.1	400	4.80	80000	3	40.0
BW09733012BM	2B	12	7~13.2	2900	28.5	24.7	480	5.76	80000	2	42.5
BW09733012BH	2B	12	7~13.2	3300	32.4	28.1	740	8.88	75000	1	48.5
BW09733024BL	2B	24	12~26.4	2600	25.6	22.1	210	5.04	80000	3	40.0
BW09733024BM	2B	24	12~26.4	2900	28.5	24.7	280	6.72	80000	2	42.5
BW09733024BH	2B	24	12~26.4	3300	32.4	28.1	420	10.08	75000	1	48.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

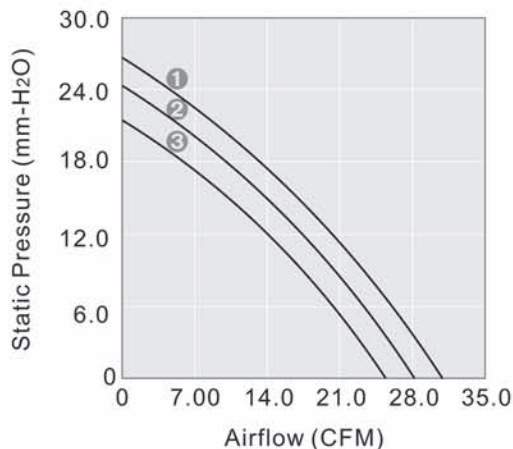
Bearing System Available

2B L S

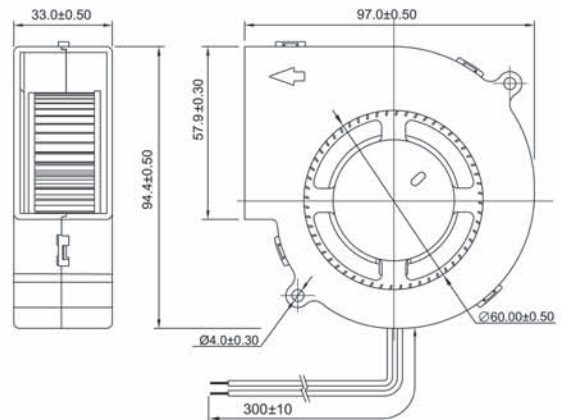
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 40x40x28mm

- Airflow: 10.3~25.9 CFM
- Static Pressure: 7.9~39.0 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 45.1 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
XYW04028012BL-Q	2B	12	7~13.2	5000	10.3	7.9	90	1.08	80000	7	24.5
XYW04028012BM-Q	2B		7~13.2	7000	13.0	12.0	150	1.80	80000	6	34.5
XYW04028012BH-Q	2B		7~13.2	8000	14.4	14.6	180	2.16	75000	5	37.5
XYW04028012BS-Q	2B		7~13.2	9500	16.5	18.9	260	3.12	65000	4	41.0
XYW04028012BSE-Q	2B		7~13.2	11000	19.0	26.2	460	5.52	65000	3	47.0
XYW04028012BSS-Q	2B		7~13.2	13000	21.4	31.9	550	6.60	65000	2	49.5
XYW04028012BU-Q	2B		7~13.2	16000	25.9	39.0	750	9.00	65000	1	51.5
XYW04028024BL-Q	2B	24	12~26.4	5000	10.3	7.9	80	1.92	80000	7	24.5
XYW04028024BM-Q	2B		12~26.4	7000	13.0	12.0	90	2.04	80000	6	34.5
XYW04028024BH-Q	2B		12~26.4	8000	14.4	14.6	160	3.84	75000	5	37.5
XYW04028024BS-Q	2B		12~26.4	9500	16.5	18.9	200	4.80	65000	4	41.0
XYW04028024BSE-Q	2B		12~26.4	11000	19.0	26.2	280	6.72	65000	3	47.0
XYW04028024BSS-Q	2B		12~26.4	13000	21.4	31.9	430	10.32	65000	2	49.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

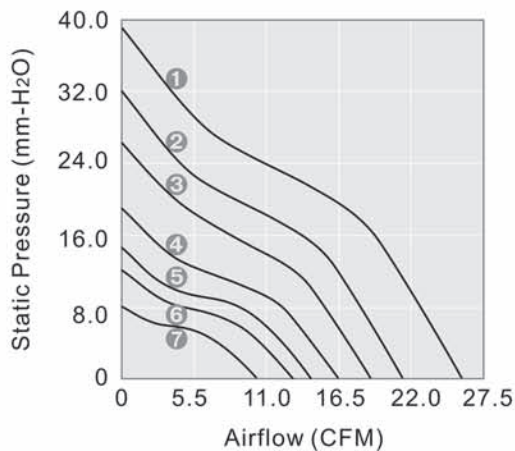
**Bearing System Available**

2B L S

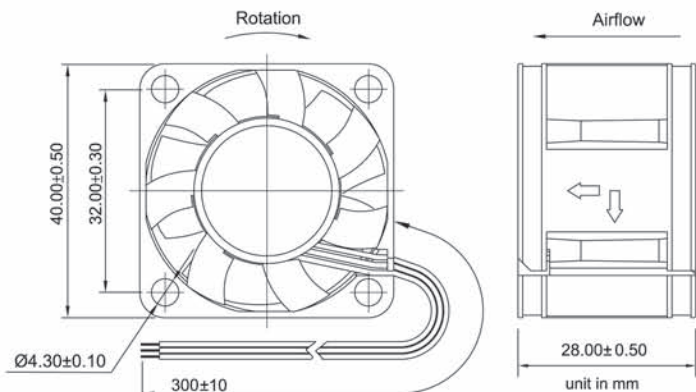
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

**PERFORMANCE P-Q CURVE**



**OUTLINE DIMENSIONS**





# 40x40x56mm

- Airflow: 25.5 CFM
- Static Pressure: 40.3 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #26 AWG
- Weight: 90.2 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
XYW04056012BSS	2B	12	7~13.2	14000	25.5	40.3	1180	14.16	65000	1	60.5
XYW04056024BSS	2B	24	12~26.4	14000	25.5	40.3	590	14.16	65000	1	60.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

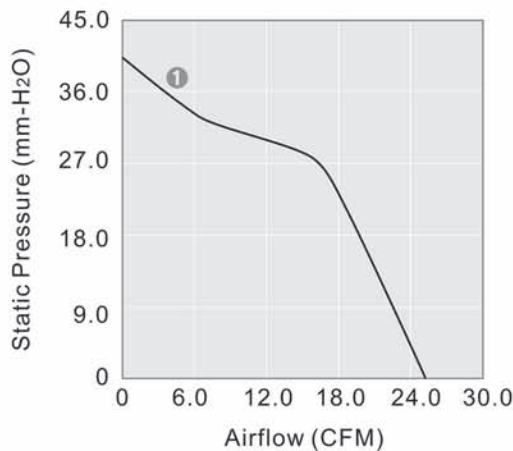
Bearing System Available

2B L S

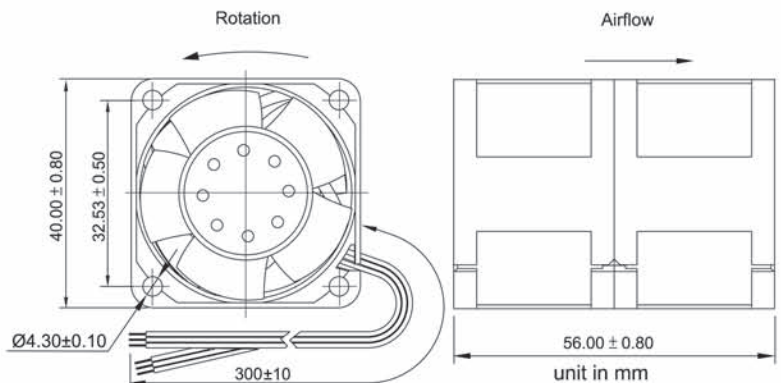
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 60x60x38mm

- Airflow: 26.7~45.5 CFM
- Static Pressure: 8.1~22.9 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 115.6 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
XYW06038012BL	2B	12	7~13.2	4500	26.7	8.1	190	2.28	80000	4	41.0
XYW06038012BM	2B		7~13.2	5500	32.6	12.2	260	2.16	80000	3	47.0
XYW06038012BH	2B		7~13.2	6500	38.5	16.5	450	2.52	75000	2	51.0
XYW06038012BS	2B		7~13.2	7500	45.5	22.9	720	3.48	65000	1	55.0
XYW06038024BL	2B	24	12~26.4	4500	26.7	8.1	110	2.64	80000	4	41.0
XYW06038024BM	2B		12~26.4	5500	32.6	12.2	170	4.08	80000	3	47.0
XYW06038024BH	2B		12~26.4	6500	38.5	16.5	250	6.00	75000	2	51.0
XYW06038024BS	2B		12~26.4	7500	45.5	22.9	360	8.64	65000	1	55.0
XYW06038048BL	2B	48	24~56.0	4500	26.7	8.1	70	3.36	80000	4	41.0
XYW06038048BM	2B		24~56.0	5500	32.6	12.2	90	4.32	80000	3	47.0
XYW06038048BH	2B		24~56.0	6500	38.5	16.5	130	6.24	75000	2	51.0
XYW06038048BS	2B		24~56.0	7500	45.5	22.9	190	9.12	65000	1	55.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

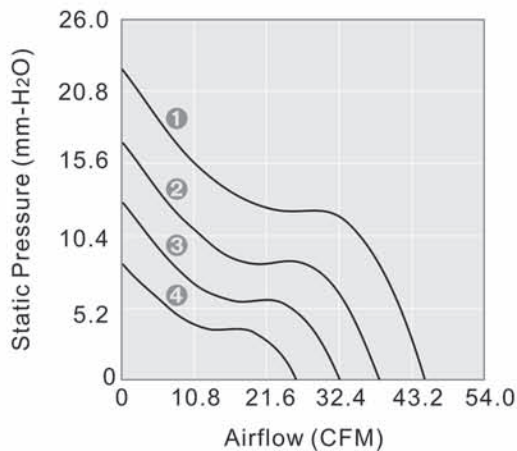
**Bearing System Available**

2B L S

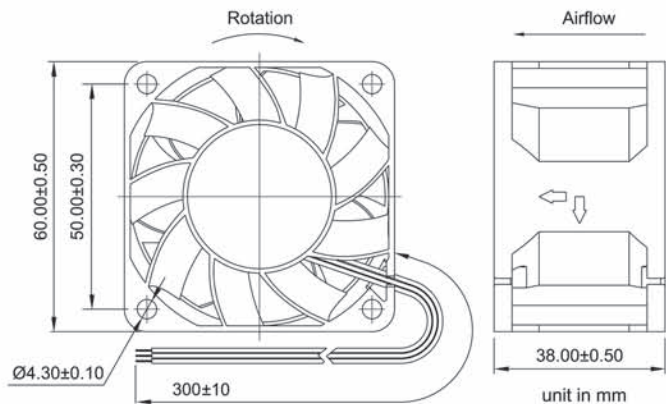
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

**PERFORMANCE P-Q CURVE**



**OUTLINE DIMENSIONS**





## 80x80x32mm

- Airflow: 48.6~80.5 CFM
- Static Pressure: 13.5~22.3 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 148.2 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage VDC	Operating Voltage Range VDC	Speed RPM	Max. Airflow CFM	Max. Static Pressure mm-H <sub>2</sub> O	Current mA	Power Consumption W	Life at 40°C L10 Hour	P-Q Curve	Noise Level dB(A)
XYW08032012BL	2B	12	7~13.2	3500	48.6	13.5	240	2.88	80000	4	45.0
XYW08032012BM	2B		7~13.2	4200	58.3	16.2	350	4.20	80000	3	49.0
XYW08032012BH	2B		7~13.2	5000	69.4	19.2	650	7.80	75000	2	53.0
XYW08032012BS	2B		7~13.2	5800	80.5	22.3	880	10.56	65000	1	56.0
XYW08032024BL	2B	24	12~26.4	3500	48.6	13.5	150	3.60	80000	4	45.0
XYW08032024BM	2B		12~26.4	4200	58.3	16.2	220	5.28	80000	3	49.0
XYW08032024BH	2B		12~26.4	5000	69.4	19.2	330	7.92	75000	2	53.0
XYW08032024BS	2B		12~26.4	5800	80.5	22.3	450	10.80	65000	1	56.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

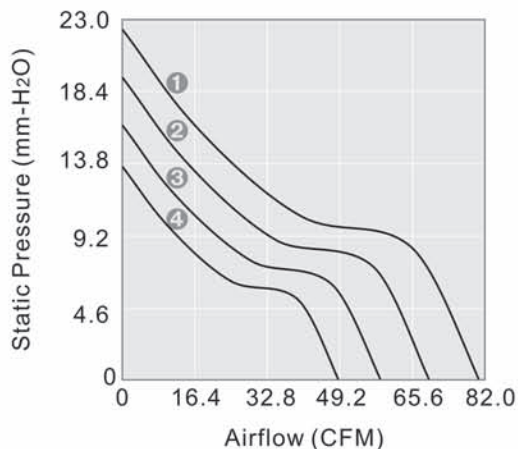
Bearing System Available

2B L S

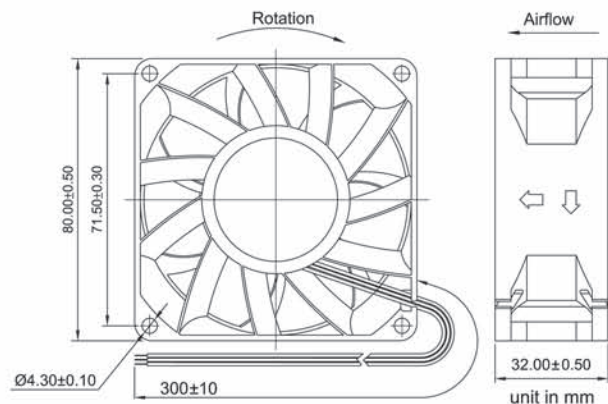
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 80x80x38mm

- Airflow: 47.6~81.2 CFM
- Static Pressure: 7.5~20.5 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 172.6 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
XYW08038012BL	2B	12	7~13.2	3400	47.6	7.5	240	2.88	80000	4	41.5
XYW08038012BM	2B		7~13.2	4200	58.9	11.2	380	4.56	80000	3	47.0
XYW08038012BH	2B		7~13.2	4900	69.2	15.2	580	6.96	75000	2	51.5
XYW08038012BS	2B		7~13.2	5700	81.2	20.5	800	9.60	65000	1	55.0
XYW08038012BU	2B		7~13.2	8000	116.0	37.2	2000	24.0	65000	1	62.5
XYW08038024BL	2B	24	12~26.4	3400	47.6	7.5	130	3.12	80000	4	41.5
XYW08038024BM	2B		12~26.4	4200	58.9	11.2	200	4.80	80000	3	47.0
XYW08038024BH	2B		12~26.4	4900	69.2	15.2	280	6.72	75000	2	51.5
XYW08038024BS	2B		12~26.4	5700	81.2	20.5	420	10.08	65000	1	55.0
XYW08038024BU	2B		12~26.4	8000	116.0	37.2	2000	24.0	65000	1	62.5
XYW08038048BL	2B	48	24~56.0	3400	47.6	7.5	80	3.84	80000	4	41.5
XYW08038048BM	2B		24~56.0	4200	58.9	11.2	110	5.28	80000	3	47.0
XYW08038048BH	2B		24~56.0	4900	69.2	15.2	150	7.20	75000	2	51.5
XYW08038048BS	2B		24~56.0	5700	81.2	20.5	200	9.60	65000	1	55.0
XYW08038048BU	2B		24~56.0	8000	116.0	37.2	2000	24.0	65000	1	62.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

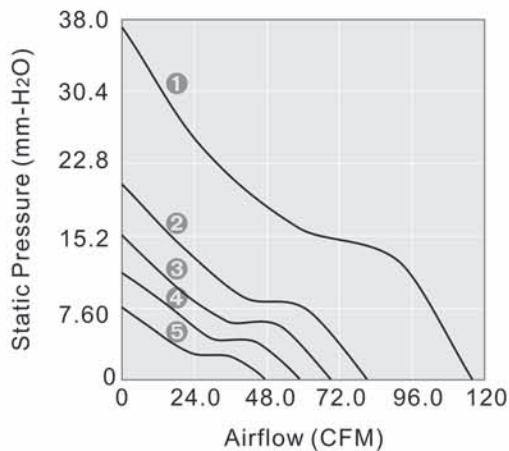
**Bearing System Available**

2B L S

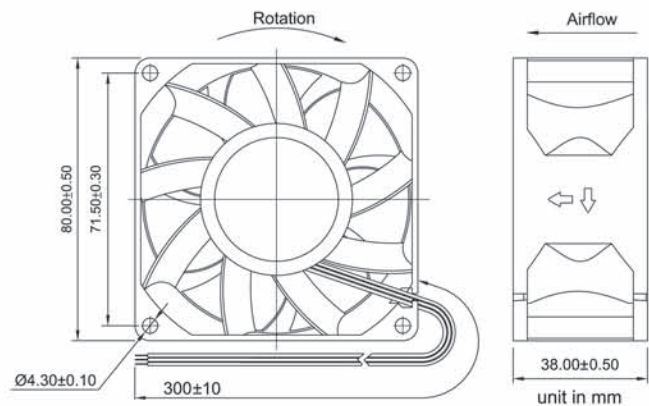
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

**PERFORMANCE P-Q CURVE**



**OUTLINE DIMENSIONS**



DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN



## 92x92x38mm

- Airflow: 80.5~117.3 CFM
- Static Pressure: 7.8~15.5 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #24 AWG
- Weight: 198.4 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
XYW09238012BL	2B	12	7~13.2	3300	80.5	7.8	450	5.40	80000	4	48.0
XYW09238012BM	2B		7~13.2	3800	92.6	10.9	640	7.68	80000	3	51.0
XYW09238012BH	2B		7~13.2	4300	102.9	11.9	950	11.40	75000	2	55.0
XYW09238012BS	2B		7~13.2	4900	117.3	15.5	1200	14.40	65000	1	57.0
XYW09238024BL	2B	24	12~26.4	3300	80.5	7.8	250	6.00	80000	4	48.0
XYW09238024BM	2B		12~26.4	3800	92.6	10.9	350	8.40	80000	3	51.0
XYW09238024BH	2B		12~26.4	4300	102.9	11.9	470	11.28	75000	2	55.0
XYW09238024BS	2B		12~26.4	4900	117.3	15.5	600	14.40	65000	1	57.0
XYW09238048BL	2B	48	24~56.0	3300	80.5	7.8	130	6.24	80000	4	48.0
XYW09238048BM	2B		24~56.0	3800	92.6	10.9	170	8.16	80000	3	51.0
XYW09238048BH	2B		24~56.0	4300	102.9	11.9	240	11.52	75000	2	55.0
XYW09238048BS	2B		24~56.0	4900	117.3	15.5	290	13.92	65000	1	57.0

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

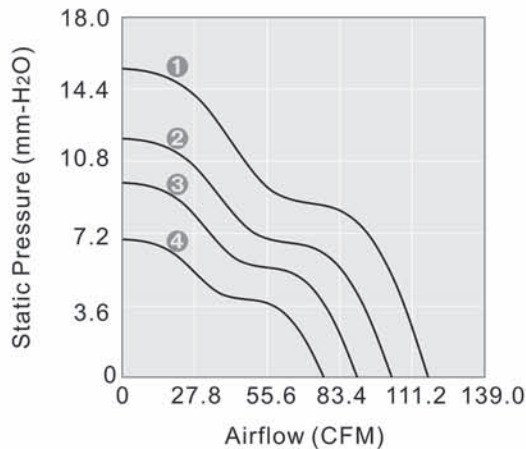
Bearing System Available

2B L S

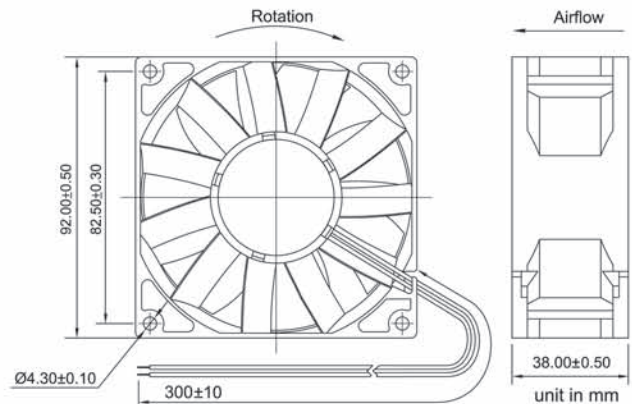
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS







# 120x120x38mm

- Airflow: 88.0~142.0 CFM
- Static Pressure: 8.4~20.0 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.  
Frame: Die-Casting Aluminum
- Lead Wire: UL1007 #22 AWG
- Weight: 396.8 g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
XYW12038012BL-R	2B	12	7~13.2	2800	88.0	8.4	270	3.24	80000	5	45.5
XYW12038012BM-R	2B		7~13.2	3200	100.9	10.5	360	4.32	80000	4	47.0
XYW12038012BH-R	2B		7~13.2	3600	113.9	13.0	520	6.24	75000	3	51.0
XYW12038012BS-R	2B		7~13.2	4000	127.0	16.0	700	8.40	65000	2	55.0
XYW12038012BSS-R	2B		7~13.2	4500	142.0	20.0	950	11.40	65000	1	58.5
XYW12038024BL-R	2B	24	12~26.4	2800	88.0	8.4	145	3.48	80000	5	45.5
XYW12038024BM-R	2B		12~26.4	3200	100.9	10.5	195	4.68	80000	4	47.0
XYW12038024BH-R	2B		12~26.4	3600	113.9	13.0	270	6.48	75000	3	51.0
XYW12038024BS-R	2B		12~26.4	4000	127.0	16.0	370	8.88	65000	2	55.0
XYW12038024BSS-R	2B		12~26.4	4500	142.0	20.0	520	12.48	65000	1	58.5
XYW12038048BL-R	2B	48	24~56.0	2800	88.0	8.4	100	4.80	80000	5	45.5
XYW12038048BM-R	2B		24~56.0	3200	100.9	10.5	130	6.24	80000	4	47.0
XYW12038048BH-R	2B		24~56.0	3600	113.9	13.0	170	8.16	75000	3	51.0
XYW12038048BS-R	2B		24~56.0	4000	127.0	16.0	200	9.60	65000	2	55.0
XYW12038048BSS-R	2B		24~56.0	4500	142.0	20.0	270	12.96	65000	1	58.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

**Voltage Available**

05 12 24 48

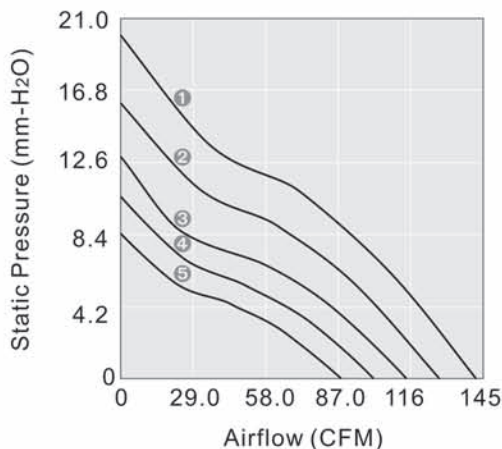
**Bearing System Available**

2B L S

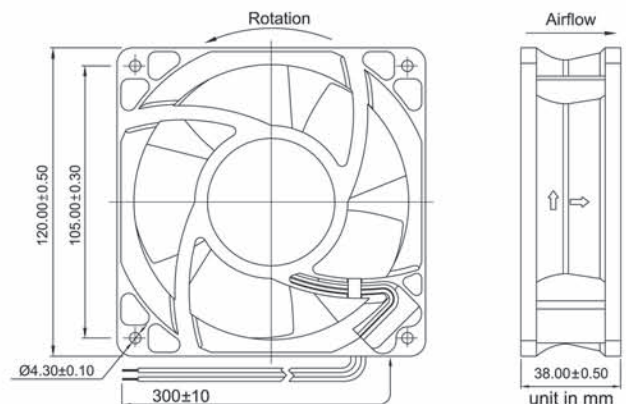
**Function Available**

- 1 6 5 4 3 2 7 8 9 10 11 14 12 13

**PERFORMANCE P-Q CURVE**



**OUTLINE DIMENSIONS**



DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN



# 120x120x38mm

- Airflow: 194.4~315.3 CFM
- Static Pressure: 31.1~50.5 mm-H<sub>2</sub>O
- Blade / Housing: Plastic Material UL 94V-0 P.B.T.
- Lead Wire: UL1007 #22 AWG
- Weight: 400 g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H <sub>2</sub> O	mA	W	Hour		dB(A)
XYW12038012BL-P	2B	12	8~13.2	4000	194.4	31.1	2200	26.40	80000	5	64.0
XYW12038012BM-P	2B		8~13.2	4400	213.7	34.2	2600	31.20	80000	4	66.0
XYW12038024BL-P	2B		15~27.0	4000	194.4	31.1	900	21.60	80000	5	64.0
XYW12038024BM-P	2B	24	15~27.0	4400	213.7	34.2	1200	28.80	80000	4	66.0
XYW12038024BH-P	2B		15~27.0	5100	247.6	39.6	1600	38.40	65000	3	69.5
XYW12038024BS-P	2B		15~27.0	5800	281.5	45.1	2500	60.00	65000	2	72.5
XYW12038048BL-P	2B	48	35~56.0	4000	194.4	31.1	500	24.00	80000	5	64.0
XYW12038048BM-P	2B		35~56.0	4400	213.7	34.2	570	27.36	80000	4	66.0
XYW12038048BH-P	2B		35~56.0	5100	247.6	39.6	860	41.28	75000	3	69.5
XYW12038048BS-P	2B		35~56.0	5800	281.5	45.1	1200	57.60	65000	2	72.5
XYW12038048BSS-P	2B		35~56.0	6500	315.3	50.5	1500	72.00	65000	1	74.5

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

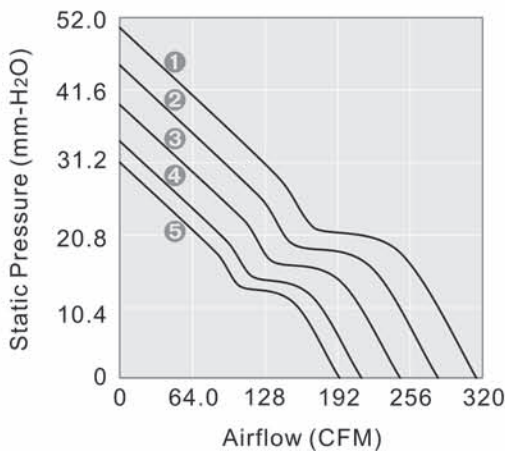
Bearing System Available

2B L S

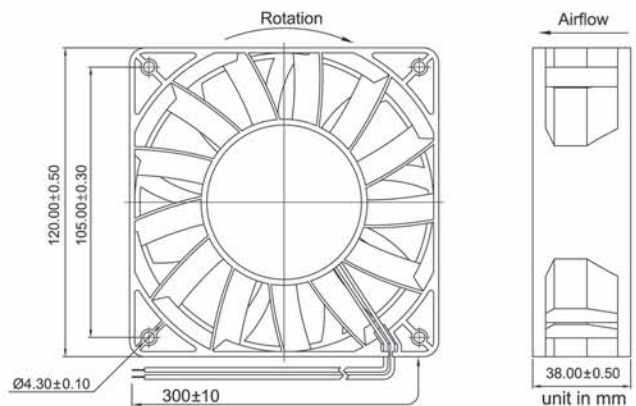
Function Available

- 1 5 6 4 3 2 7 8 9 10 11 14 12 13

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 172x150x51mm

- Airflow: 247.5~464.0cfm
- Static Pressure: 16.7-52.0mmH2O
- Blade/Housing: Plastic Material UL 94V-0 P.P.O
- Lead Wire: UL 1007 #22 AWG
- Weight: 1080g

Model No.	Bearing	Rated Voltage	Operating Voltage Range	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VDC	VDC	RPM	CFM	mm-H2O	mA	W	Hour		dB(A)
XYW17251012BL	2B	12	7-13.2	3000	247.5	16.7	1800	21.6	80,000	6	57.2
XYW17251012BM	2B		7-13.2	3400	213.7	34.2	2600	31.2	80,000	5	66
XYW17251024BL	2B	24	12-26.4	3000	247.5	16.7	850	20.4	80,000	6	57.2
XYW17251024BM	2B		12-26.4	3500	294.4	23.7	1250	30.0	80,000	5	62.1
XYW17251024BH	2B	24	12-26.4	4000	335.4	29.8	1850	40.4	75,000	4	63
XYW17251024BS	2B		12-26.4	4500	379.7	37.1	2700	64.8	65,000	3	67.3
XYW17251048BL	2B	48	24-56	3000	247.5	16.7	440	21.1	80,000	6	57.2
XYW17251048BM	2B		24-56	3500	294.4	23.7	650	31.2	80,000	5	62.1
XYW17251048BH	2B	48	24-56	4000	335.4	29.8	950	40.4	75,000	4	63
XYW17251048BS	2B		24-56	4500	379.7	37.1	1250	64.8	65,000	3	67.3
XYW17251048BSS	2B	48	24-56	5000	419.9	46.3	1650	21.1	65,000	2	71.1
XYW17251048BU	2B		24-56	5500	464.0	52.0	2400	31.2	65,000	1	73.1

2B: 2-ball bearing D: 1-ball 1-sleeve bearing L: sintetico bearing S: sleeve bearing

Voltage Available

05 12 24 48

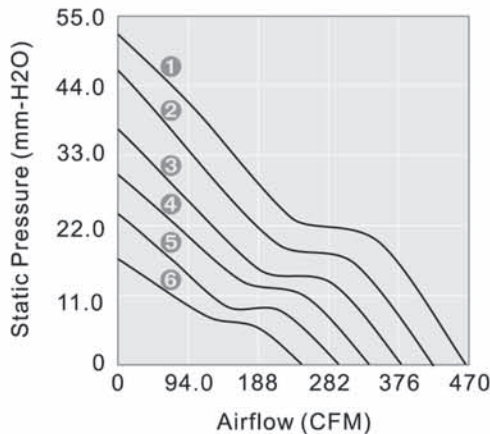
Bearing System Available

2B L S

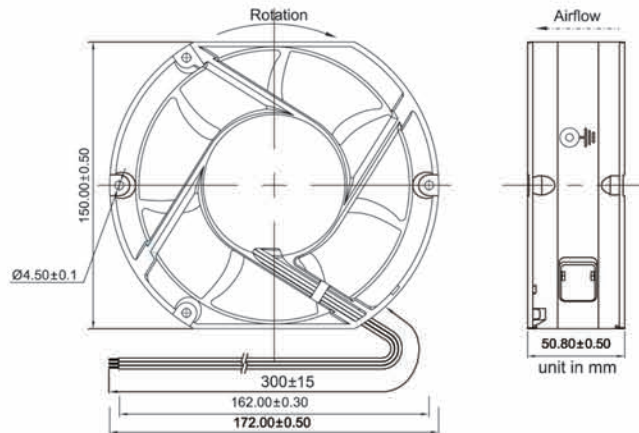
Function Available

- 1 6 5 4 3 2 7 8 9 10 11 14 12 15

### PERFORMANCE P-Q CURVE

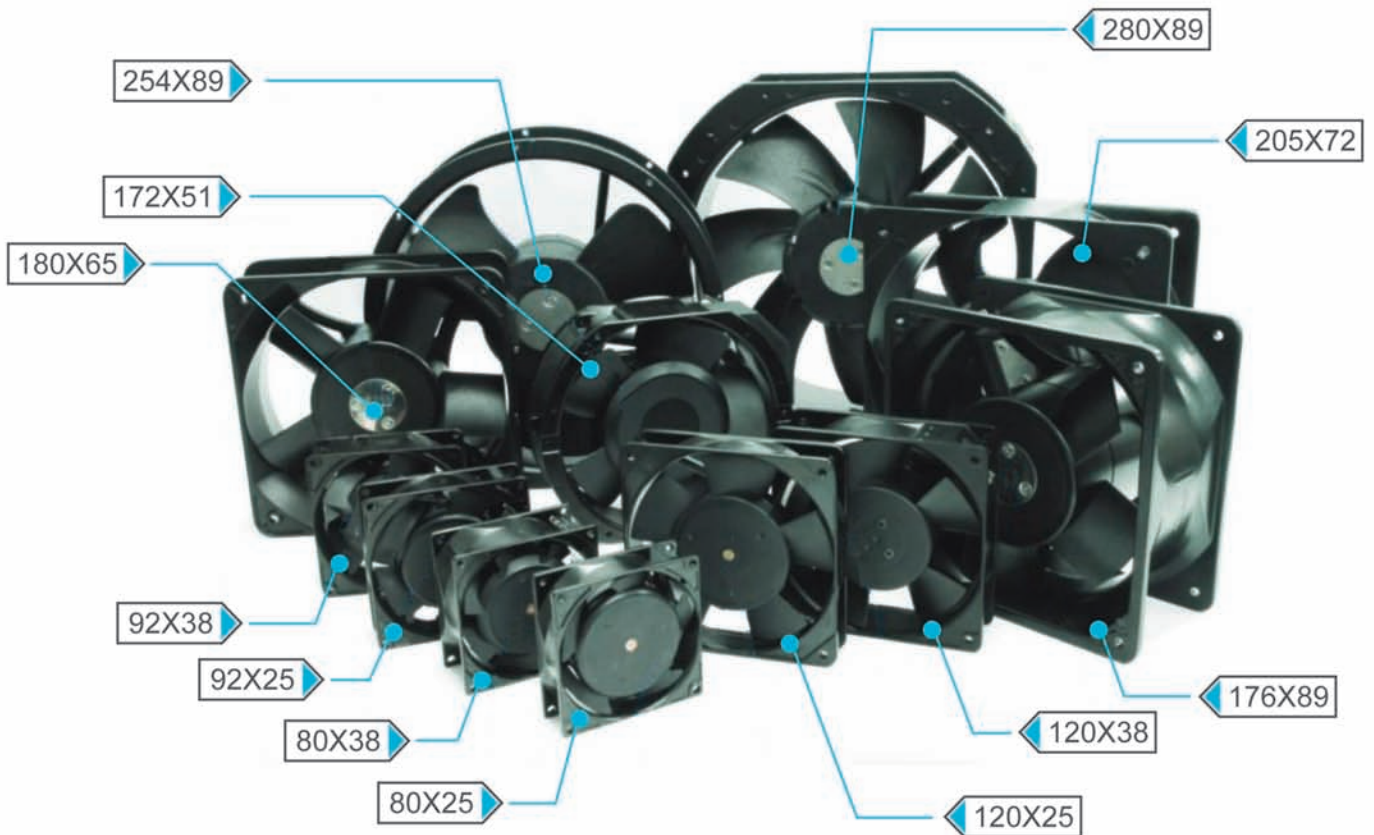


### OUTLINE DIMENSIONS





**NEW PRODUCT**  
**AC FAN K SERIES**





# 80x80x25mm

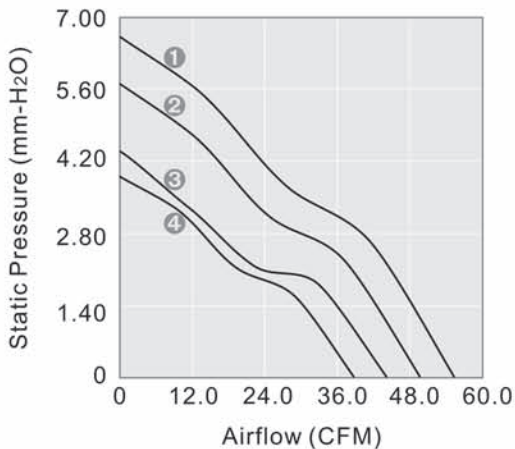
- Airflow: 38-55cfm
- Static Pressure: 3.9-6.6mmH2O
- Blade: Plastic
- Frame: Aluminum
- Weight: 138g

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	P-Q Curve	Noise Level
		VAC	HZ	RPM	CFM	mm-H2O	mA	W	Hour		dB(A)
ADT08025115BL	2B	110	50/60	2800/3200	38.6/44.1	3.9/4.4	.11/.13	1.9/2.4	50,000	4/3	34/38.5
ADT08025115BM	2B	110	50/60	3200/3600	44.1/49.6	4.4/5.7	.15/.17	2.8/3.6	50,000	3/2	38.5/42
ADT08025115BH	2B	110	50/60	3600/4000	49.6/55.1	5.7/6.6	.16/.19	3.4/4.3	50,000	2/1	42/45.5
ADT08025220BL	2B	220	50/60	2800/3200	38.6/44.1	3.9/4.4	.11/.13	1.9/2.4	50,000	4/3	34/38.5
ADT08025220BM	2B	220	50/60	3200/3600	44.1/49.6	4.4/5.7	.15/.17	2.8/3.6	50,000	3/2	38.5/42
ADT08025220BH	2B	220	50/60	3600/4000	49.6/55.1	5.7/6.6	.16/.19	3.4/4.3	50,000	2/1	42/45.5

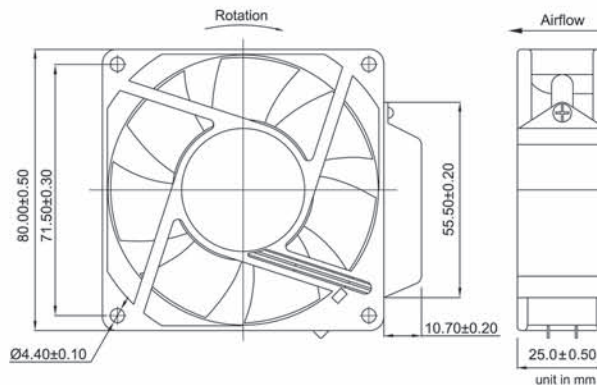
Voltage Available  
**115 230**

Bearing System Available  
**2B S**

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 80x80x25mm

- Airflow: 13-25cfm
- Static Pressure: 2.7-5.3mmH2O
- Blade: Plastic.
- Frame: Aluminum
- Weight: 260g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

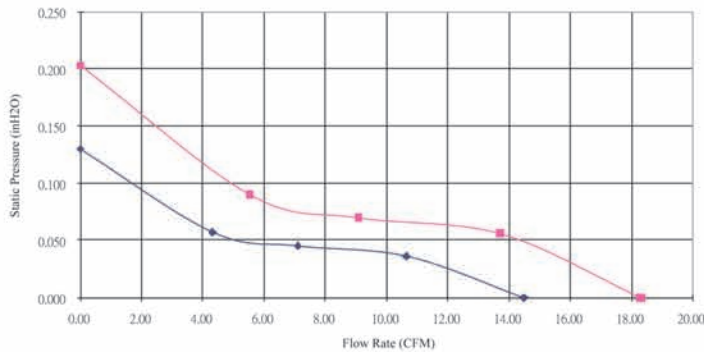
AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	Noise Level
	VAC	HZ	RPM	CFM	mm-H <sub>2</sub> O	A	W	Hour	dB(A)	
KT08025115BL	2B	110	50/60	1600/1800	13/14	2.7/2.8	.06/.07	6/7	60,000	20
KT08025115BM	2B	110	50/60	2200/2300	17/18	3.2/3.5	.08/.09	9/10	60,000	24
KT08025115BH	2B	110	50/60	2500/3000	22/25	4.5/5.3	.15/.17	13/15	60,000	28
KT08025220BL	2B	220	50/60	1600/1800	13/14	2.7/2.8	.04/.05	6/7	60,000	20
KT08025220BM	2B	220	50/60	2200/2300	17/18	3.2/3.5	.05/.06	9/10	60,000	24
KT08025220BH	2B	220	50/60	2500/3000	22/25	4.5/5.3	.07/.08	13/15	60,000	28

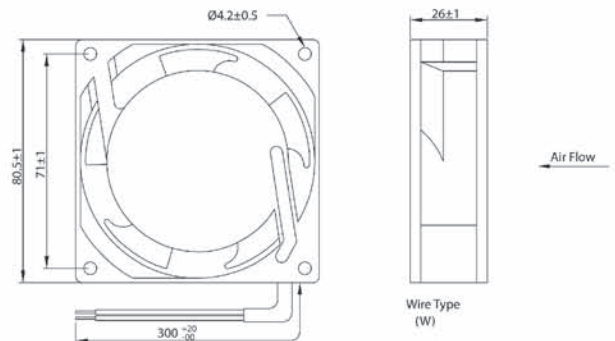
Voltage Available  
115 230

Bearing System Available  
2B S

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 80x80x38mm

- Airflow: 17-31CFM
- Static Pressure: 2.5-6mmH2O
- Blade: Plastic.
- Frame: Aluminum
- Weight: 370g

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	Noise Level
	VAC	HZ	RPM	CFM	mm-H <sub>2</sub> O	A	W	Hour	dB(A)	
KT08038115BL	2B	110	50/60	1600/1800	17/18	2.5/3.0	.04/.05	5/7	50,000	18
KT08038115BM	2B	110	50/60	2100/2300	22/23	3.5/3.8	.06/.07	9/11	50,000	22
KT08038115BH	2B	110	50/60	2450/3000	26/31	4.3/6.0	.10/.12	12/14	50,000	29
KT08038220BL	2B	220	50/60	1600/1800	17/18	2.5/3.0	.03/.04	5/7	50,000	18
KT08038220BM	2B	220	50/60	2100/2300	22/23	3.5/3.8	.04/.05	9/11	50,000	22
KT08038220BH	2B	220	50/60	2450/3000	26/31	4.3/6.0	.05/.06	12/14	50,000	29

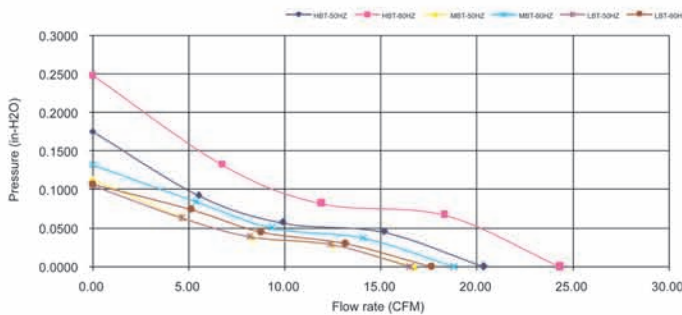
Voltage Available

**115 230**

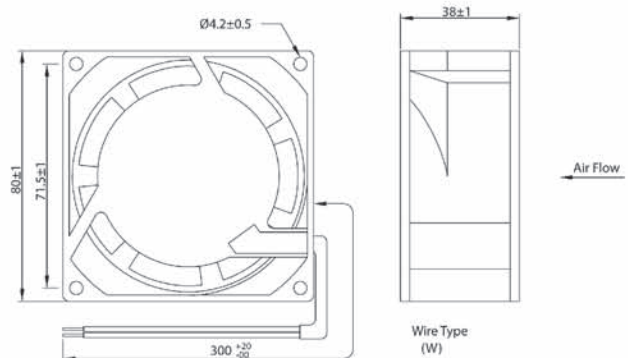
Bearing System Available

**2B S**

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS



DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN



# 92x92x25mm

- Airflow: 21-35cfm
- Static Pressure: 2.3-5mmH2O
- Blade: Plastic
- Frame: Aluminum
- Weight: 290g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

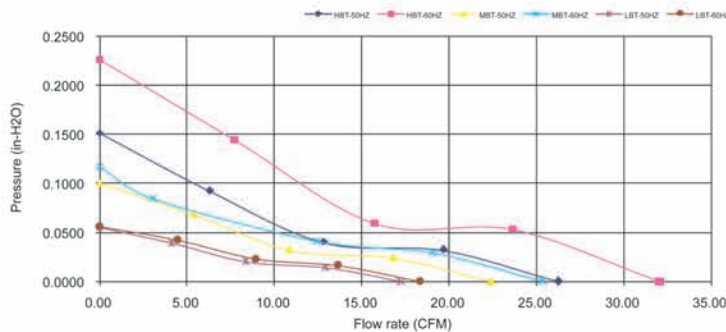
AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	Noise Level
	VAC	HZ	RPM	CFM	mm-H <sub>2</sub> O	A	W	Hour	dB(A)	
KT09225115BL	2B	110	50/60	1600/1800	21/22	2.3/2.5	.06/.07	6/7	60,000	19
KT09225115BM	2B	110	50/60	2100/2300	25/27	3.2/3.5	.08/.09	9/10	60,000	22
KT09225115BH	2B	110	50/60	2500/3000	30/35	4.0/5.0	.16/.18	13/15	60,000	30
KT09225220BL	2B	220	50/60	1600/1800	21/22	2.3/2.5	.04/.05	6/7	60,000	19
KT09225220BM	2B	220	50/60	2100/2300	25/27	3.2/3.5	.05/.06	9/10	60,000	22
KT09225220BH	2B	220	50/60	2500/3000	30/35	4.0/5.0	.07/.08	13/15	60,000	30

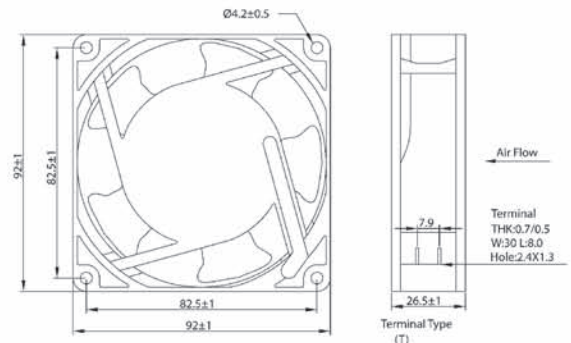
Voltage Available  
115 230

Bearing System Available  
2B S

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS







# 92x92x38mm

- Airflow: 21-50cfm
- Static Pressure: 2.5-5.5cfm
- Blade: Plastic
- Frame: Aluminum
- Weight: 450g

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	Noise Level
	VAC	HZ	RPM	CFM	mm-H <sub>2</sub> O	A	W	Hour	dB(A)	
KT09238115BL	2B	110	50/60	1800/1900	21/25	2.5/3.0	.04/.05	5/7	60,000	19
KT09238115BM	2B	110	50/60	2200/2400	28/32	3.5/4.2	.06/.07	9/11	60,000	23
KT09238115BH	2B	110	50/60	2550/3100	42/50	4.5/5.5	.11/.12	12/14	60,000	32
KT09238220BL	2B	220	50/60	1800/1900	21/25	2.5/3.0	.03/.04	5/7	60,000	19
KT09238220BM	2B	220	50/60	2200/2400	28/32	3.5/4.2	.04/.05	9/11	60,000	23
KT09238220BH	2B	220	50/60	2550/3100	42/50	4.5/5.5	.05/.06	12/14	60,000	32

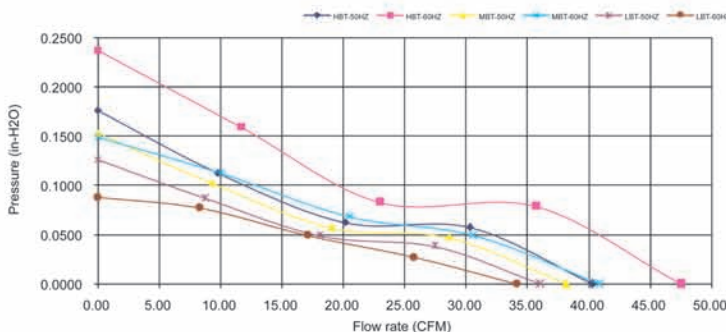
Voltage Available

115 230

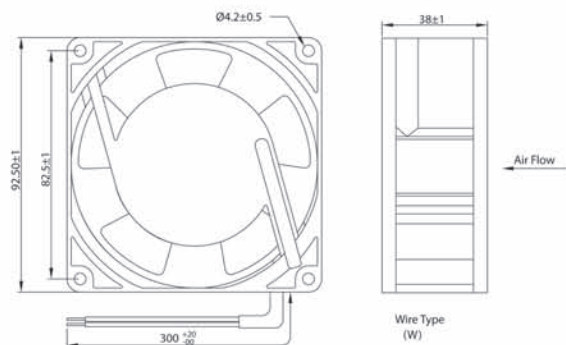
Bearing System Available

2B S

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS



DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN



# 120x120x25mm

- Airflow: 42-81cfm
- Static Pressure: 3.0-5.9mmH2O
- Blade: Plastic
- Frame: Aluminum
- Weight: 390g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

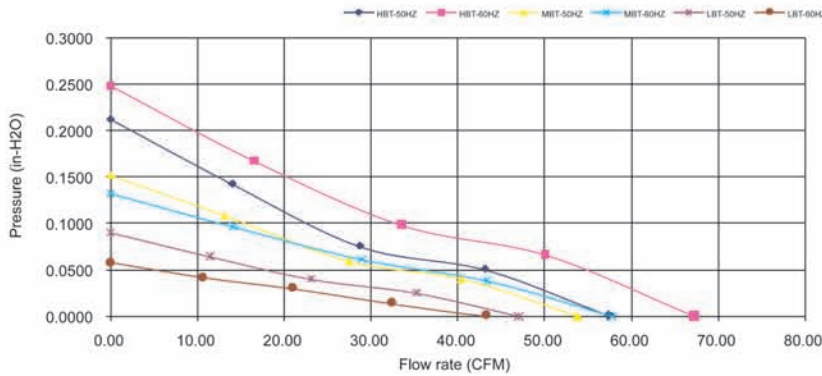
AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	Noise Level
	VAC	HZ	RPM	CFM	mm-H <sub>2</sub> O	A	W	Hour	dB(A)	
KT12025115BL	2B	110	50/60	1600/1800	42/49	3.0/3.5	.05/.06	6/8	60,000	25
KT12025115BM	2B	110	50/60	2200/2300	57/60	4.0/4.5	.08/.09	10/12	60,000	30
KT12025115BH	2B	110	50/60	2400/2900	64/81	5.0/5.9	.20/.25	15/17	60,000	37
KT12025220BL	2B	220	50/60	1600/1800	42/49	3.0/3.5	.04/.05	6/8	60,000	25
KT12025220BM	2B	220	50/60	2200/2300	57/60	4.0/4.5	.05/.06	10/12	60,000	30
KT12025220BH	2B	220	50/60	2400/2900	64/81	5.0/5.9	.07/.09	15/17	60,000	37

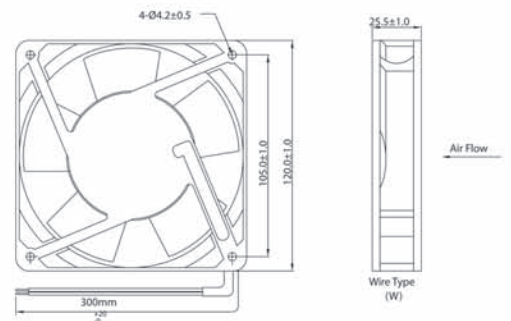
Voltage Available  
115 230

Bearing System Available  
2B S

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 120x120x38mm

- Airflow: 50-110cfm
- Static Pressure: 3.7-7.0mmH2O
- Blade: Plastic
- Frame: Aluminum
- Weight: 550g

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	Noise Level
	VAC	HZ	RPM	CFM	mm-H <sub>2</sub> O	A	W	Hour	dB(A)	
KT12038115BL	2B	110	50/60	1600/1800	50/53	3.7/4.0	.10/.10	8/9	60,000	26
KT12038115BM	2B	110	50/60	2100/2300	63/71	4.9/5.4	.13/.14	11/12	60,000	35
KT12038115BH	2B	110	50/60	2500/3000	88/110	5.8/7.0	.21/.25	15/17	60,000	42
KT12038220BL	2B	220	50/60	1600/1800	50/53	3.7/4.0	.05/.06	8/9	60,000	26
KT12038220BM	2B	220	50/60	2100/2300	63/71	4.9/5.4	.06/.07	11/12	60,000	35
KT12038220BH	2B	220	50/60	2500/3000	88/110	5.8/7.0	.10/.12	15/17	60,000	42

Voltage Available

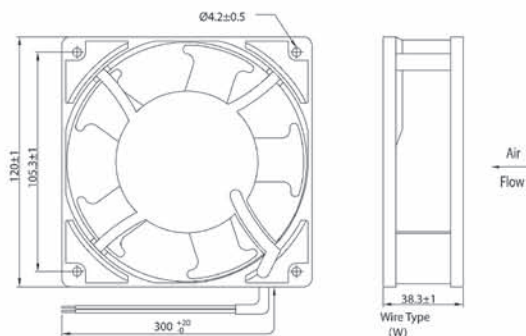
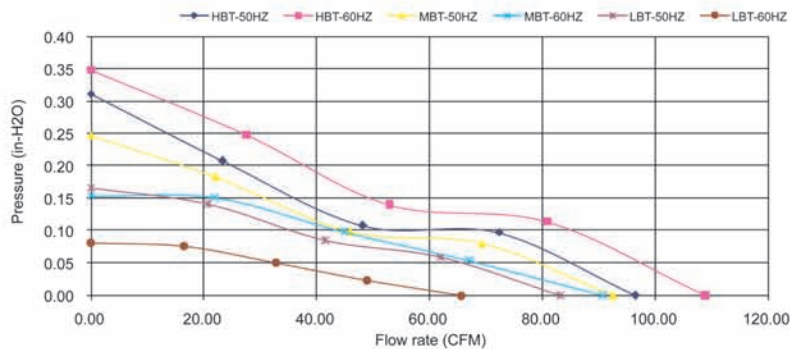
**115 230**

Bearing System Available

**2B S**

### PERFORMANCE P-Q CURVE

### OUTLINE DIMENSIONS



DC AXIAL FAN

DC BLOWER

XTREME SERIES

AC AXIAL FAN



# 172x150x51mm

- Airflow: 106-235cfm
- Static Pressure: 8-20mmH2O
- Blade: Plastic
- Frame: Aluminum
- Weight: 1050g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

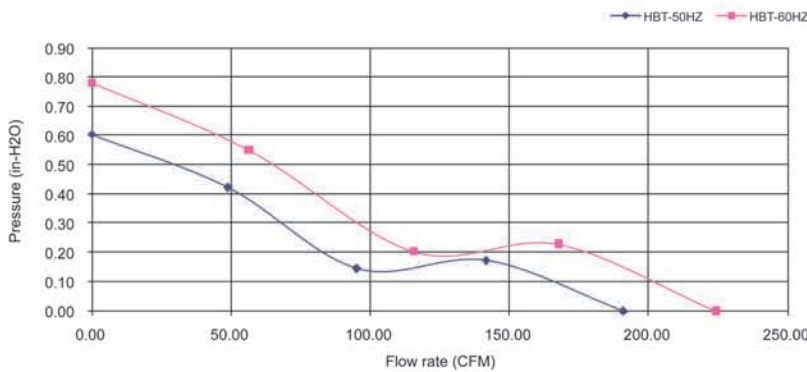
AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	Noise Level
	VAC	HZ	RPM	CFM	mm-H <sub>2</sub> O	A	W	Hour	dB(A)	
KT17251115BL	2B	110	50/60	1600/1800	106/110	8/10	.16/.20	16/18	50,000	32
KT17251115BM	2B	110	50/60	2370/2470	165/170	13/14	.17/.21	20/23	50,000	40
KT17251115BH	2B	110	50/60	2600/3000	190/235	16/20	.24/.25	24/28	50,000	50
KT17251220BL	2B	220	50/60	1600/1800	106/110	8/10	.06/.09	16/18	50,000	32
KT17251220BM	2B	220	50/60	2370/2470	165/170	13/14	.10/.12	20/23	50,000	40
KT17251220BH	2B	220	50/60	2600/3000	190/235	16/20	.12/.16	24/28	50,000	50

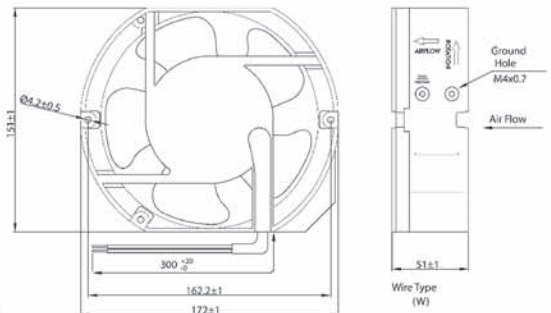
Voltage Available  
115 230

Bearing System Available  
2B S

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 180x180x89 mm

- Airflow: 350-400cfm
- Static Pressure: 20-26mmH2O
- Blade: Plastic
- Frame: Aluminum
- Weight: 2000g

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	Noise Level
	VAC	HZ	RPM	CFM	mm-H <sub>2</sub> O	A	W	Hour	dB(A)	
KT18089115BH	2B	110	50/60	2650/3200	340/400	16/20	.48/.57	50/52	40,000	60
KT18089220BH	2B	220	50/60	2650/3200	340/400	16/20	.21/.23	43/52	40,000	60

DC AXIAL FAN

DC BLOWER

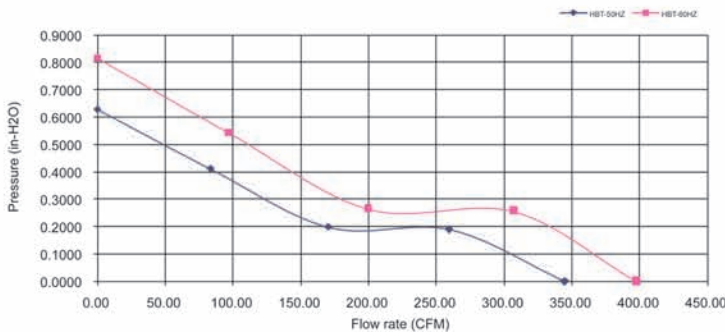
XTREME SERIES

AC AXIAL FAN

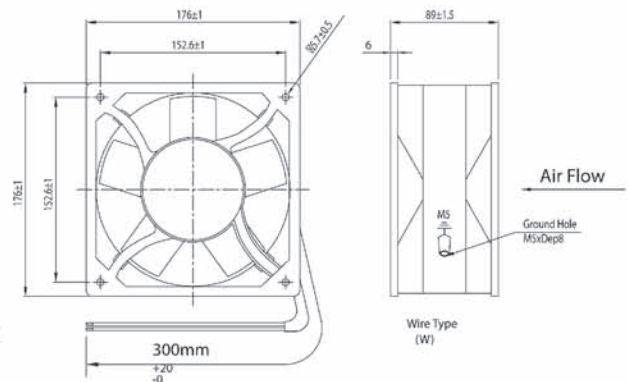
Voltage Available  
**115 230**

Bearing System Available  
**2B S**

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 180x180x65mm

- Airflow: 350-400
- Static Pressure: 18-23mmH2O
- Blade: Plastic
- Frame: Aluminum
- Weight: 1800g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

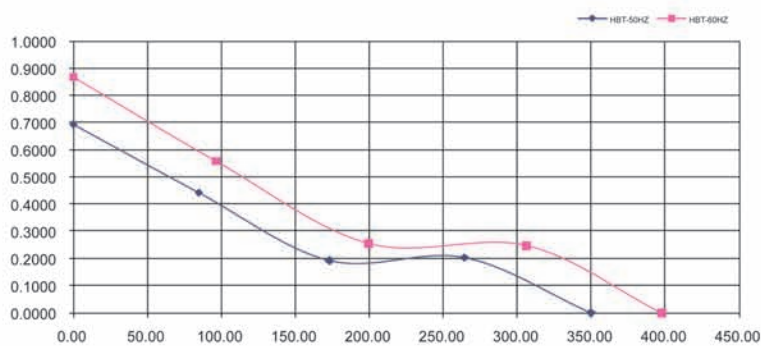
AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	Noise Level
	VAC	HZ	RPM	CFM	mm-H2O	A	W	Hour	dB(A)	
KT18065115BH	2B	110	50/60	2650/3200	350/400	18/23	.50/.54	50/52	40,000	60
KT18065220BH	2B	220	50/60	2650/3200	350/400	18/23	.23/.24	43/52	40,000	60

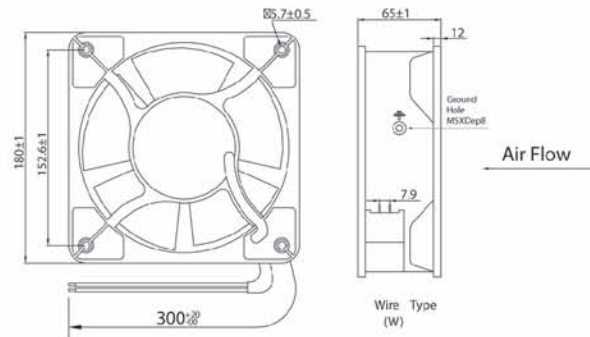
**Voltage Available**  
115 230

**Bearing System Available**  
2B S

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 254x89mm

- Airflow: 560-680cfm
- Static Pressure: 9-12.5mmH2O
- Blade: Plastic
- Frame: Aluminum
- Weight: 2000g

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10	Noise Level
	VAC	HZ	RPM	CFM	mm-H <sub>2</sub> O	A	W	Hour	dB(A)	
KT25489115BM	2B	110	50/60	1400/1600	450/560	6.9/9.1	.22/.24	34/37	40,000	51
KT25489115BH	2B	110	50/60	2150/2000	630/700	9.4/11.7	.55/.62	60/67	40,000	56
KT25489220BM	2B	220	50/60	1400/1600	450/560	6.9/9.1	.14/.16	34/37	40,000	51
KT25489220BH	2B	220	50/60	2200/2300	630/700	10.4/12.4	.26/.30	60/67	40,000	58

DC AXIAL FAN

DC BLOWER

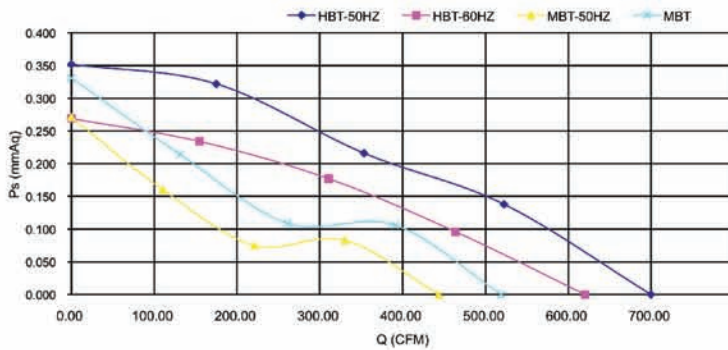
XTREME SERIES

AC AXIAL FAN

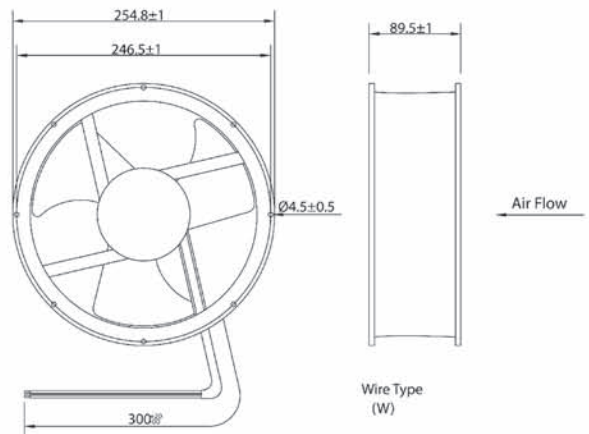
Voltage Available  
**115 230**

Bearing System Available  
**2B S**

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS





# 280x280x90mm

- Airflow: 655-1425cfm
- Static Pressure: 9-33mmH2O
- Blade: Plastic
- Frame: Aluminum
- Weight: 2400g

DC AXIAL FAN

DC BLOWER

XTREME SERIES

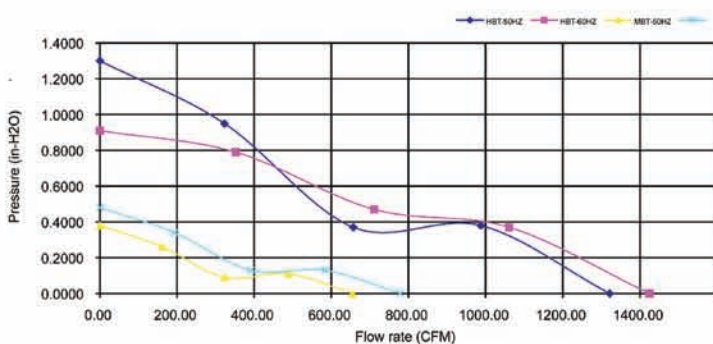
AC AXIAL FAN

Model No.	Bearing	Rated Voltage	Frequency	Speed	Max. Airflow	Max. Static Pressure	Current	Power Consumption	Life at 40°C L10
	VAC	HZ	RPM	CFM	mm-H <sub>2</sub> O	A	W	Hour	
KT28090115BM	2B	110	50/60	1400/1600	655/780	9/12	.67/1.82	60/61	40,000
KT28090115BH	2B	110	50/60	2200/2600	1320/1425	23/33	1.65/2.50	185/300	40,000

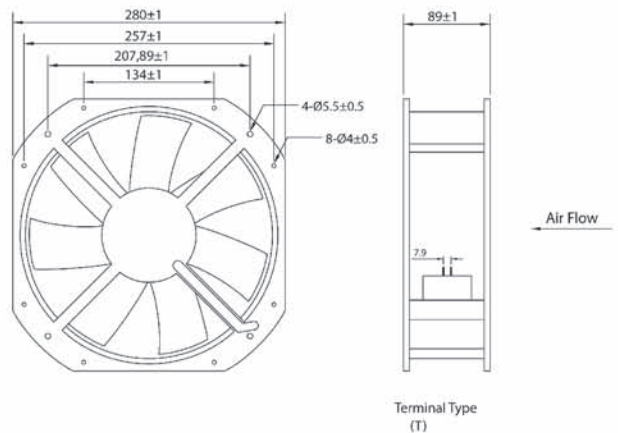
**Voltage Available**  
115 230

**Bearing System Available**  
2B S

### PERFORMANCE P-Q CURVE



### OUTLINE DIMENSIONS

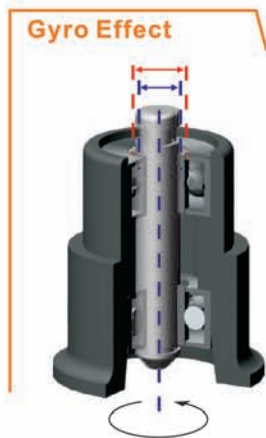




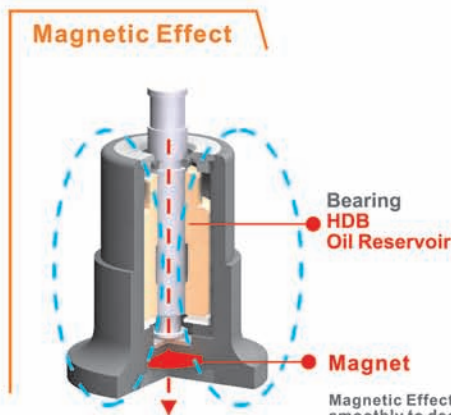


## SINTETICO bearing system makes more reliable & stable

- The particular mechanism for oil leakage prevention makes proper oil film on surface of bearing and shaft to reduced damage when fan start up.
- Dynamic Pressure Field will be constructed when fan are running to sustain shaft rotate with concentricity to prevent bearing will not collided with shaft.
- Magnetic Effect makes shaft always working more smoothly to decrease Gyro Effect. That also decreases the probability of bearing collided with shaft and prevent oil film was damaged.



The Gyro Effect Short the Life of Bearing and More Vibration  
**Unstable!**



Magnetic Effect makes shaft always working more smoothly to decrease Gyro Effect. That also decrease the probability of bearing collided with shaft and prevent oil film was damaged.

## T.M.D. TECHNOLOGY

### Advantages fo T.M.D. Technology

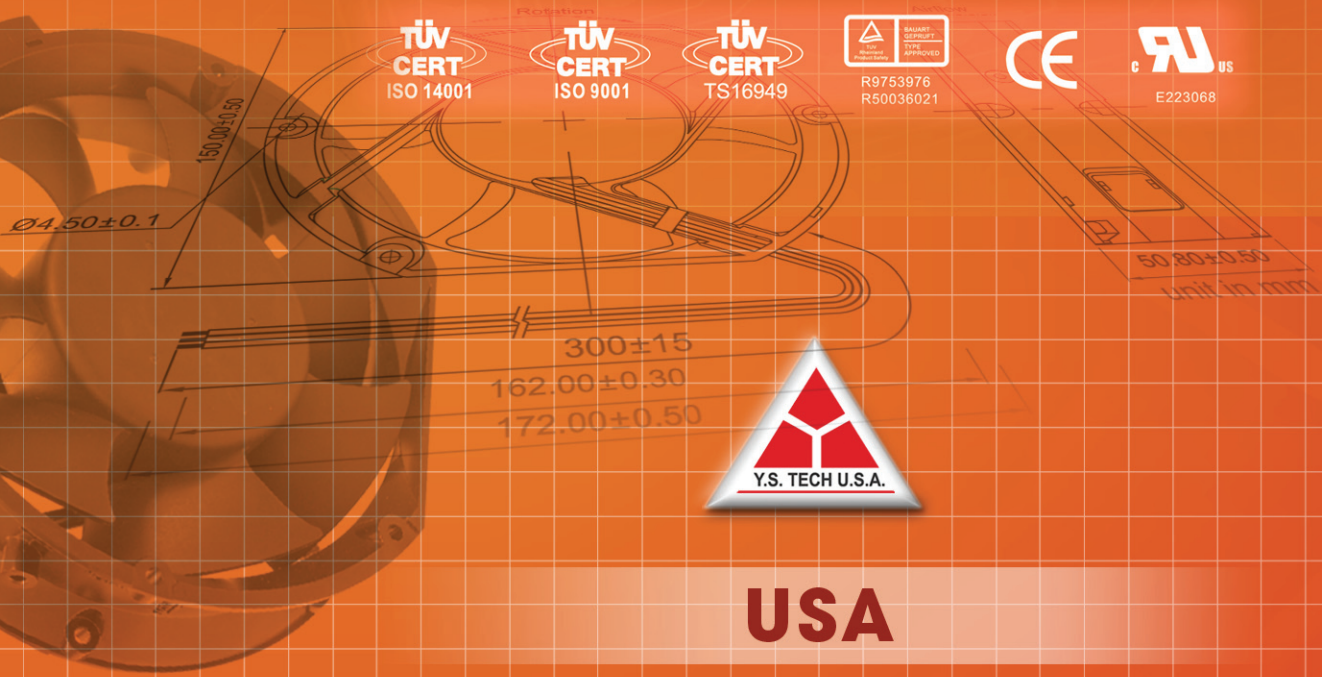
1. The patent of Tip Driving Magnetic design result in higher torque and make lower power consumption. The patent of impeller rotor with diversion ring to decrease acoustic noise that made by the flow field to fit an application of Coupling Heat Dissipation Devices.
2. External circuit design result in optimal reliability and safety when fan working in a worse ambient.



**T.M.D. FAN<sup>II</sup>**  
LEPTON Series







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