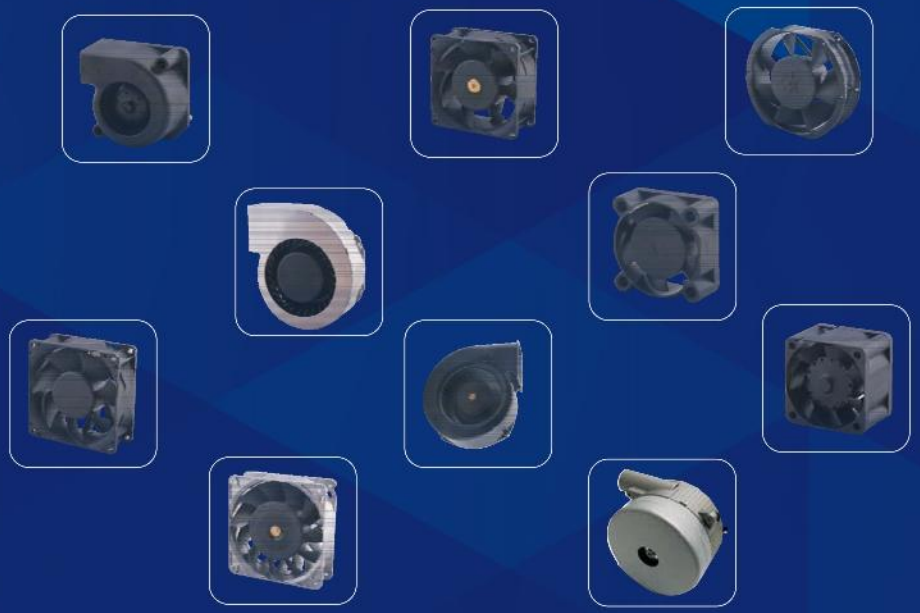
PELKO Motors®

Product Reference Guide

2018



PELKO Motors®

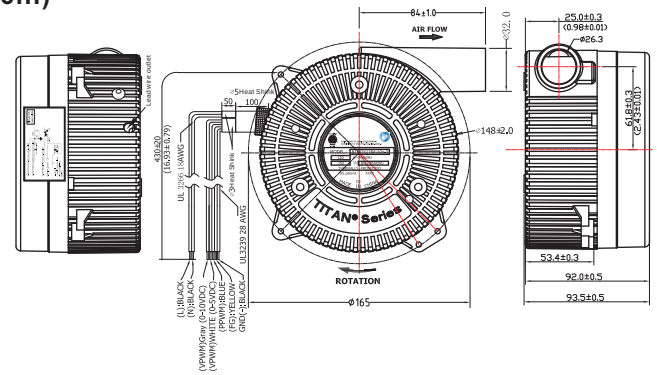
Cunwei Industrial Area, Hengli Town, Dongguan, ,
Guangdong, 523476, China
Tel：86-769-83378688
Fax：86-769-83378628 / 83723710
E-mail：dgsales@pelkomotors.com
www.pelkomotors.com

ERMEC, S.L. BARCELONA
C/ Francesc Teixidó, 22
08918 Badalona SPAIN
Tel. +34 902 450 160
info@ermec.com
www.ermec.com
ERMEC, S.L. - MADRID
C/ Puerto Rico, 4
28222 Majadahonda (Madrid) SPAIN
bilbao@ermec.com
portugal@ermec.com

PELKO Motors®

DC and High Voltage ACDC Blowers (BLDC)

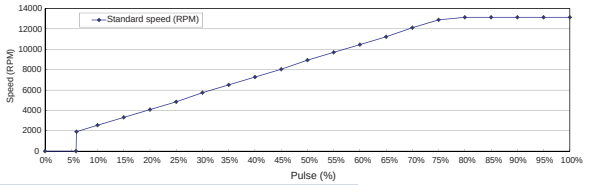
178x93mm (7.01x3.66in)

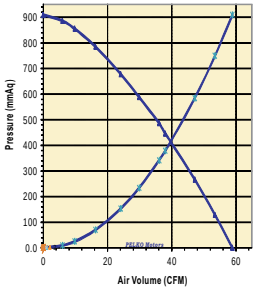


Bearing System--- 2 Ball Bearing
Life Expectancy--- 52K hrs@ 25°C@10K rpm
Frame---------- Alumnum
Impeller---------- Aluminum
Weight----------1921 grams
Packing --------- 6 pcs / Carton

B1793Y11BALA3e-3 PPWM P:6 100 15 100 B 1300 2017/5/10

PPWM input (%)	6%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%
Standard speed (RPM)	1914	2552	3318	4084	4850	5743	6509	7275	8041	8935	9701	10460	11230	12120	12890	13140	13140	13140	13140	13140



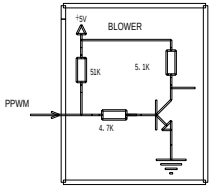


B1793Y24BALB3x-3 24VDC

ITEM	SPECIFICATION
Rated Voltage	24V
Operating Voltage	15~27 VDC
Starting Voltage	15VDC
Rated Speed	13000 RPM(+/-10%)
Input Current	15A, Max:16.5A
Input Power	360W, Max:396 W
Air Flow	59.4 CFM / 1.682 m3/min(+/- 10%)
Static Pressure	900 mmAq / 35.44 in-H2O(+/-10%)
Acoustical Noise	81 dBA, Max at 1m, 76 dBA (11300 RPM)

FUNCTIONS & WIRES:

1. AS – Auto Start: Red(+), Black(-)
2. FG – Frequency Generator; (Yellow wire)
3. PPWM --Pulse Width Modulation, Pulse height=3~10V, High>3V, Low <0.5V, PWM frequency range 300Hz~5KHz. (Blue wire)



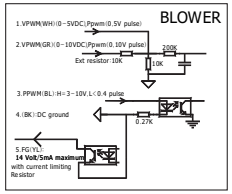
Input circuit

B1793Y11BALB3x-3 120VAC

ITEM	SPECIFICATION
Rated Voltage	120V/60Hz
Operating Voltage	90~135 VAC
Starting Voltage	90VAC
Rated Speed	13000 RPM(+/-10%)
Input Current	4A, Max:4.4A
Input Power	350W, Max:385W
Air Flow	59.4 CFM / 1.682 m3/min(+/- 10%)
Static Pressure	900 mmAq / 35.44 in-H2O(+/-10%)
Acoustical Noise	81 dBA, Max at 1m, 76 dBA (11300 RPM)

FUNCTIONS:FEATURES:

1. VPWM(WH):DC Voltage Signal Control
   Singal 0~5VDC input --> Controls 0~100% of the speed
   Ppwm (0,5V pulse)--> Controls 0~100% of the speed
2. VPWM(GR):DC Voltage Signal Control
   Singal 0~10VDC input --> Controls 0~100% of the speed
   Ppwm (0,10V pulse)--> Controls 0~100% of the speed
3. PPWM(BL):DC Voltage Signal Control
   Pulse height: High=3~10V, L<0.4V
   PWM frequency range 300HZ~30KHZ
4. DC Ground (BK) (thin black wire AWG#28)
5. FG (YL):14 Volt / 5mA maximum,with current limiting Resistor
6. IR:Inrush current protection
7. Thermally Protected



SPECIAL FEATURES:
In the housing of the blower, there is a small hole behind which there is a small variable resistor that can be turned gently with small screw driver.This resistor can be turned to adjust the maximum speed limit. This blower is set to its maximum speed of 13000 RPM and adjustment may not be needed because the desired speed can be controlled externally by the user's signal control.

ABOUT US

PELKO Motors®

PELKO Motors™ is a Canadian Investment Company and leading manufacturer of brushless Axial AC & DC Fans and Radial Blowers specializing in High-Tech OEM solutions. Our insistence on using high quality materials, paired with innovative engineering and our dedication to customer satisfaction has earned ***PELKO Motors***™ a reputable name within the industry.

Our new manufacturing facility provides a pleasant and comfortable environment for our staff and workers

HIGH QUALITY & INNOVATIVE ENGINEERING

We manufacture and test our products using the latest test equipment. We apply the following Quality Standards: ISO9001:2015, IATF16949:2016 and ISO14001:2015 in our certified facilities.

Our flexible manufacturing techniques enable us to respond quickly to both large and small-scale production requirements.

We strongly believe in a cleaner world. As such, we have established policies with environmental concerns in mind. This is evident in regards to packaging with recyclable material and strict adherence to REACH & ROHS rules.

10,000 square meters of manufacturing space ensures large order capacity.

CUSTOMER SATISFACTION

Our goal is to provide the utmost in customer service with ready solutions and custom designs that stand exemplary in the industry with both enhanced PERFORMANCE and INNOVATIVE functions. We are devoted to our customer's satisfaction and the need to remain competitive.

ERMEC
ERMEC, S.L. BARCELONA
C/ Francesc Teixidó, 22
08918 Badalona SPAIN
Tel. +34 902 450 160
info@ermec.com
www.ermec.com
ERMEC, S.L. - MADRID
C/ Puerto Rico, 4
28222 Majadahonda (Madrid) SPAIN
bilbao@ermec.com
portugal@ermec.com

PRODUCT QUALITY

OUR FOCUS IS QUALITY

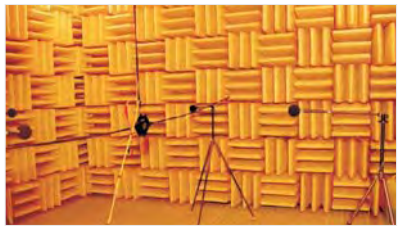
For PELKO Motors, manufacturing quality means adhering to and surpassing industry standards. Our highly trained management, engineering, R&D, and quality control teams along with our special test equipment and quality testing procedures ensure continuous quality production at all times.

QUALITY STANDARDS

- ISO 9001:2015, EN ISO 9001:2015; BSEN ISO 9001:2015; ANSI/ASQ Q9001:2000; UL REGISTERED FIRM / ANSI * RAB, QMS; UKAS QUALITY MANAGEMENT 062
- ISO 14001:2015
- IATF 16949:2016 — DC Series Fans (12V) Automotive.
- Industry standards including testing and compliance in accordance with UL, cUL (UL 507; CSA C22.2 Number 113-M1984, File Number E208866) and CE requirements.
- Highly trained technical and Quality control Inspection staff with thorough knowledge of industry standards and customer requirements.

QUALITY TEST EQUIPMENT

- Dual chamber airflow equipment measures product airflow performance, static pressure, speed, power and fan motor efficiency.
- Fully Anechoic Chamber with low background noise (certified to be 12.5 dB)to test fan noise with 4 microphones
- Micrometer test equipment ensures exact component dimensions.
- Special coating methods using automatic conveyor systems reduce motor winding noise and enhance product longevity.
- Automatic winding equipment using high grade silicon steel.
- On Line testing under high ambient temperature guarantees performance in the field under the worst conditions.



QUALITY CONTROL PROCEDURES

- High temperature testing methods utilizing ovens with temperatures ranging from - 40 °C to + 150 °C are used to determine the product's operating limits and life expectancy. Continuous endurance testing ensures that components meet the required specifications.
- Burn-In test procedures using "Burn In" room at 70 °C ensure product quality under worst case operating conditions.
- Use of high quality bearings with proven quality performance.
- Life testing in accordance with ANSI, ASA, and MIL-STD quality standards.
- L-10 life testing procedures monitor product life.

ISO9001:2015
IATF16949:2016
ISO14001:2015

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ERMEC, S.L. BARCELONA
C/ Francesc Teixidó, 22
08918 Badalona SPAIN
Tel. +34 902 450 160
info@ermec.com
www.ermec.com
ERMEC, S.L. - MADRID
C/ Puerto Rico, 4
28222 Majadahonda (Madrid) SPAIN
bilbao@ermec.com
portugal@ermec.com

PART NUMBER CODE

AXIAL DC FAN MOTOR

FOR EXAMPLE: PART NO. P1238H48BPLB3c-5

P 12 38 H 48 B P L B 3 c -5

MODEL TYPE
DC Fan Type: C, D, R, G, P, K
AC Input with DC Drive: A, B

SQUARE FRAME
25: 25x25mm 40: 40x40mm
50: 50x50mm 60: 60x60mm
80: 80x80mm 92: 92x92mm
12: 120x120mm 17: 172x150mm

HOUSING THICKNESS
10: 10mm 15: 15mm 20: 20mm
25: 25mm 32: 32mm 38: 38mm
51: 51mm 55: 55mm

MOTOR SPEED
Z: Max speed Y: Supper High speed
X: Extra High Speed H: High speed
M: Middle speed L: Low speed

RATED VOLTAGE
05: 5VDC 12: 12VDC 24: 24VDC
48: 48VDC 10: 100VDC 20: 200VDC
11: 120VAC 23: 230VAC

NUMBER OF BLADES

3c: Complete Fnction ID code,
3: Function #
c: may be also customer ID (small character)

FEATURES & IDENTIFICATION CODE
(As per the list of Functions, e.g.:
3c: PPWM 2a: FG 2k: RD for customer KLM

BEARING HOLDER TYPE
B: Brass A: Aluminum
P: Plastic O: Other

CONNECTOR TYPE
T: Terminal L: Lead Wire
C: Connector

FRAME TYPE
A: Aluminum P: Plastic in Black
X: Plastic non-black M: Mixed

BEARING SYSTEM
B: Ball Bearing S: Sleeve Bearing
C: Ceramic R: Semi-Precious Stone

AXIAL AC FAN MOTOR

FOR EXAMPLE: PART NO. PM1238HA1BAT-5

PM 12 38 H A1 B A T -5

FACTORY CODE
PM: PELKO Motors

SQUARE FRAME
80: 80x80mm 92: 92x92mm
12: 120x120mm 17: 172x150mm

FRAME THICKNESS
25: 25mm 38: 38mm 51: 51mm

MOTOR SPEED
H: High Speed M: Middle Speed L: Low Speed

RATED VOLTAGE
A1: 100~125VAC A2: 220~240VAC

BEARING SYSTEM
B: Ball Bearing S: Sleeve Bearing

FRAME TYPE
A: Aluminum P: Plastic

CONNECTOR TYPE
T: Terminal L: Lead Wire

NUMBER OF BLADES

ABBREVIATED LIST OF FUNCTIONS

PELKO Motors®

Additional Features can be added to various DC Fan models to enhance product performance and efficiency, including the following:

#	Abr.	Function Name	Function Description	Wire Color
1x	NAS	No Auto Restart Function	The fan will not reduce its current to zero under locked rotor conditions.	No external wire
1a	IR	Inrush Protection Soft Start	At start up the current is applied gradually (soft start).	No external wire
1b	AS	Auto Restart	The current is reduced to Zero when the fan is blocked and the fan is attempting to restart every few seconds.	No external wire
1c	MS	Special customer Specs	Modified Specifications to meet customer's request.	No external wire
2a	FG	Frequency of Rotation Output Signal	An output signal is provided in order to monitor the fan speed.	Yellow
2b	RD	Rotation Detection Output Signal	LOW Output signal indicates: fan is rotating	Gray
2c	RDb	Inverse of RD Output Signal	HIGH Output signal indicates: fan is rotating.	Violet
2d	LD	Fan Life Detection	LOW Output signal indicates: RPM is <70% of rated (indicates aging fan of many connected in parallel).	Brown
2e	LDb	Fan Life Detection	This function is the complement of the LD function shown in our catalogue applied in one fan.	Brown
2f	FGl	FG+Rotation Detection Output Signal	This function is an FG tachometer function which gives a LOW signal when the fan is stopped.	Yellow
2g	FGh	FG+Rotation Detection Output Signal	This function is an FG tachometer function which gives a HIGH signal when the fan is stopped.	Yellow
3a	VPWM	DC Voltage Signal Control	The fan speed is controlled by applying DC Voltage signal. Standard DC signal 0 to 5VDC.	White
3b	IPWM	DC Current Signal Control	The fan speed is controlled by applying DC current signal (e.g. 4 to 20mA or 20 to 50mA.)	White
3c	PPWM	Pulse Width Modulation Control	The fan speed is controlled by applying PWM signal with frequency from 30HZ to 30 KHz.	Blue
4	OV	Over Voltage Protection	Fan is protected if the applied voltage is up to twice the rated operating voltage.	No external wire
5a.	TPWM	Automatic Temperature Control	The fan speed is controlled by temperature sensed by Thermistor (NTC).(standard NTC 100K@25C, B=4484)	Green
5b	RPWM	Variable Resistor Control	The fan speed is controlled by manually varying external resistor.(Mini VR=10K, Max VR=100K)	Orange + white
6	CL	Current Limit Protection	The current is limited at Startup mode (typically less than twice the rated current.)	No external wire
7	CS	Fixed Constant Speed	The fan speed is independent of the power supply above the rated voltage (factory preset)	No external wire
7a	CS	Programmable Constant Speed	The desired maximum fan speed can be selected externally for values less than the rated.	Orange+ White

<< SELECTION OF A COOLING FAN >>

The following points should be considered when selecting a cooling fan:

1. Determine the amount of heat generated inside the equipment.
2. From the equipment maker' s data, find the maximum permissible equipment temperature.
3. Calculate the air volume necessary from the equation.
4. Select the fan from the performance curves shown in the specification sheets.

The volume of airflow required to cool the equipment can be determined if the internal heat dissipation and the total allowable temperature rise are known.

The basic heat transfer equation is: $Q = Cp \times W \times \Delta T$

Where:

Q = Amount of heat transferred
Cp = Specific heat of air
ΔT = Temperature rise within the cabinet
W = Mass flow = CFM x D
(Where: D= Air Density and CFM is cubic feet / min)

By substitution, we obtain:

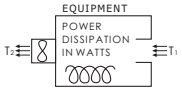
$$\text{Air Flow in CFM} = \frac{Q}{Cp \times D \times \Delta T}$$

Then we get the following equations:

$$\text{Air Flow in CFM} = \frac{3.16 \times P}{Tf} = \frac{1.76 \times P}{Tc}$$

$$\text{Air Flow in m3/min} = \frac{0.09 \times P}{Tf} = \frac{0.05 \times P}{Tc}$$

P : Internal power dissipation in watts
Tf: Allowable temperature rise in °F
Tc: Allowable temperature rise in °C



T : T2-T1
T1: Incoming airflow temperature,
T2: Outgoing airflow temperature.
1 m^3 / min = 35.315 CFM (Cubic Feet / min)

COOLING OF HEAT GENERATING EQUIPMENT

Ex 1: If internal power dissipation is 1500W and T is 50 °F

$$\text{Air Flow in CFM} = \frac{3.16 \times 1500}{50} = 94.8 \text{ CFM (or } 2.68\ m^3 / \text{min)}$$

Ex 2: If internal power dissipation is 1000W and T is 20 °C

$$\text{Air Flow in m3/min} = \frac{0.05 \times 1000}{20} = 2.5\ m^3 / \text{min (or 88.3 CFM)}$$

<< DESCRIPTION OF FAN SERIES & FUNCTIONS >>

Pelko Motos offers 6 series of DC Fans to satisfy most of the customer needs, price, performance, power savings and functions.

The available models can be grouped in 3 groups all of which include the Auto Start function.

1, C and R series: STANDARD series

a. C series uses a 2 coil complementary type drive offering low cost and limited functions. such as FG, RD, and RDb. This series ranges from size 40mm to 92mm
b. R series uses a 2 coil complementary type drive offering low cost, applicable for higher power demanding applications and have more functions, such as FG, RD, RDb and CL (current limiting function). This series ranges from 60mm to 120mm.

2. D and G series: High Performance series.

a. D series uses single coil differential type drive with higher efficiency and more functions (depending on the specific model). Such as FG, RD,RDb. For sizes 25×10 to 60×10mm and large models with the complete function range in sizes from 60×20 to 92×25mm.
The complete range of functions consists of AS, FG, RD, RDb, LD, IR, CL,(V,P,R,I,T) PWM (V: voltage signal input, P: PWM input, R: variable resistance input, I: current signal input, and T: NTC thermistor input).
b. G series uses a single coil, differential type drive with higher efficiency and for higher power demanding applications, offering the basic functions FG, RD, RDb, CL .
This is a medium cost series that ranges from120×25mm to 172×51mm.

3. K and P series: Multifunction Extra High Performance

a. P series use a single coil differential type drive with higher efficiency performance and for higher power demanding applications offering the complete line of functions. This series ranges from 92×25 to 172×51mm.
b. K series use a single coil differential type drive with the highest efficiency and the maximum airflow performance with the complete line of functions and with Airflow and Pressure higher than the P series.
This series range from 80×38 to 120×38mm.

<< START VOLTAGE / OPERATING VOLTAGE RANGE >>

The start voltage depends on:

1. The minimum voltage required to maintain sufficient BIAS to operate the control circuit of the fan.
2. The minimum voltage must be higher than the trigger voltage of the output drivers.

For example:
If the MCU used works at 5V/10mA, the supply voltage must be higher than 5V, plus about 3 volts required for the regulator, i.e.8V. Lower operating voltage may make the fan to run but this does not mean that the fan can necessarily meet all the specifications.
The minimum voltage of operation should be set 15%-20% lower than the rated voltage. The maximum voltage of operation can be controlled by the CS function at low cost of efficiency, but at the additional cost of power which is equal to:
(Max operating Voltage - Rated Voltage) × BIAS current.

As a rule:
For Small operating voltage range: The operating voltage range is ± 20% of the rated voltage.
For Upper wide operating voltage range: The max operating voltage can be set up to -5%+ 50% of the rated voltage.
For Lower wide range: The max operating voltage can be set at -50%+10% of the rated voltage.

On single function fans (without PWM restrictions) the Fan ranges offered, and in order to minimize power losses are:
Fans rated at 12V have operating voltage range from 7 to 14V.
Fans rated at 24V have operating Voltage range from 15 to 27V
Fans rated at 48V have operating Voltage range from 36 to 57V

NOTE: Please note that other wider voltage ranges maybe offered at the customer's request.

<< PELKO'S FAN SPEED CONTROLS >>

It is often necessary for the user of the fan to be able to vary the fan speed for one or more of the following reasons:

1.To reduce the fan noise and meet the cooling and noise requirement of his application.
2.To increase the life of the fan by minimizing the fan speed at times when reduced airflow is sufficient for his application.
3.To automatically vary up/down the fan speed according to ambient in order to maintain the safe operating temperature of the target equipment.
4.To run the fan at multiple preselected fan speeds for cooling in an automated system process etc.

FAN SPEED CONTROL METHODS
The common ways that control information is transferred to the fan VIA input wire are:
1.By VOLTAGE signal – (V)
2.By CURRENT signal – (I)
3.By RESISTOR reacting to TEMPERATURE (Thermistor) – (T)
4.By PASSIVE RESISTOR variable manually – (R)
5.By external PWM signal – (P) (pulse width modulated signal) which is very common and is generated by computer according to its software instructions.

PELKO fans can accept any of the above control input methods, then convert this input information to their own internal PWM signal that controls the fan speed.
Therefore, the fan is controlled internally by its own PWM signal, but for the purpose of association with the input method, we name each control method starting with the excitation used (V, I, P, T, R) and the control methods are:
a) VPWM, b) IPWM, c) PPWM, d) TPWM and e) RPWM

The RPM vs Control signal (or method) graphs shown in next page "M" functions are simply examples of typical application requests with basically ONE limitation.
This limitation deals with the minimum speed a fan can operate and which is in general 20% (for most fans) of its maximum speed.
Note that some smaller fans can achieve lower minimum speeds down to 12% of their rated speed.
The fan speed can have a POSITIVE SLOPE of change (i.e. the speed can be increasing as the input voltage signal increases) or it can have a NEGATIVE SLOPE of change (i.e. the speed can be decreasing as the input voltage signal increases).
Note that negative slope is not available with TPWM, because the temperature sensing element is NTC (negative temperature coefficient).
The GAIN of the slope (how fast or how slow is the required change of the fan speed) or the restriction of the maximumspeed if required, can be controlled by the CS function.
Typical inputs are: 0~5VDC for VPWM, 4~20 mA for IPWM, 0~100% modulation for PPWM, 104J NTC type for TPWM and 10K~100K variable resistor for RPWM.

DC FAN "M" FUNCTIONS

PELKO Motors, in its effort to supply Fan Motors with superior performance and unique functions introduces a new series of products that can satisfy even the most demanding users. Fan sizes starting from 60mm and up are available with the following functions.

1a. "IR" function (Inrush Current Protection with soft start).

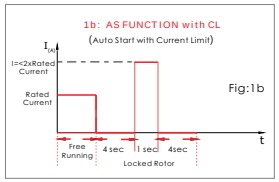
When the power switch is turned on to supply current to the fan, the current is zero and starts to increase gradually until the fan has achieved its maximum speed at the rated current. The maximum current at start up is equal to the free running current (or less in case the rotor is locked at start up). The fan will achieve the rated speed within 10 seconds (see Fig. 1a).

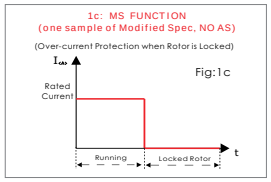
1b. "AS" function (Locked rotor protection and restart with Current Limit).

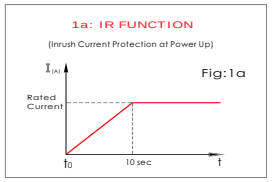
Auto Start function ensures that the fan motor will automatically restart in case the blade is blocked and then it is released. When the rotor is locked, the fan current is reduced to zero and the fan is trying typically every 5 seconds to restart (see Fig. 1b)

1c. "MS" function (Modified Spec per customer's request)(Built in, no wire indication)

The current is reduced to zero when the rotor is locked. To restart: turn the power OFF and ON again. (See Fig. 1c) This function is limited to some high power models only.

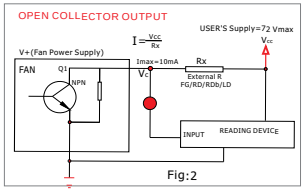






2a. "FG" function (Frequency Generator or Tachometer Output) (Yellow Wire).

This is an open collector output which provides a square wave signal if this open collector output is connected to a "PULL UP" resistor and is powered by the power supply voltage which is compatible with the input of the reading device (such as TTL input of the computer etc.). The maximum collector voltage maybe up to 72VDC and the maximum collector current is 5mA. The power supply of the reading device must have the same ground potential as the fan (see Fig.2,Fig. 2a-1 and Fig. 2a-2).

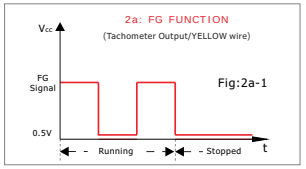


2b. "RD" function (Rotation Detection function) (Gray Wire).

This is an open collector function with the same hardware as the FG function mentioned above (See Fig 2.). The output signal is LOW when the fan is Rotating and it is set HIGH when the fan is stopped or it is powered OFF (see Fig.2b).

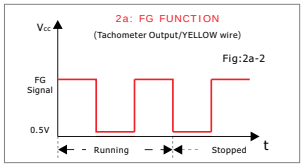
2c. "RDb" function (complement of Rotation Detection Signal) (Violet Wire)

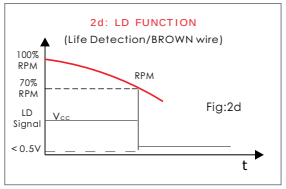
This is an open collector function with the same hardware as the FG function mentioned above(See Fig. 2). The output signal is HIGH when the fan is Rotating and it is LOW when the fan is stopped (see Fig. 2c). This output can be connected in parallel to the RDb of an array of fans ending to a single alarm device to warn in case any one fan has stopped.
(See article below about MULTIFAN ALARM for connection)

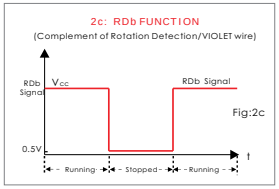


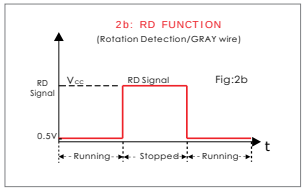
2d. "LD" function (Life Detection Function) (Brown Wire).

This is an open collector function with the same hardware as the FG function mentioned above (See Fig.2). The output signal is HIGH when the fan is rotating normally and it is LOW when the fan speed is rotating below 70% of its rated target speed. The reasons of slow rotation maybe aging or reduced power supply voltage (see Fig. 2d). MULTIFAN ALARM can be wired as in the RDb signal case.





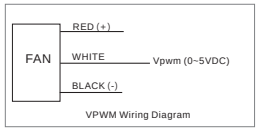




DC FAN "M" FUNCTIONS

3a. "VPWM" function (DC Voltage Signal Control) (White Wire)

With this function the speed can be controlled by applying an external DC Voltage signal. This voltage input "Vin" may have any value from 1V to 20 V (standard value is 1 to 5V). The fan speed will vary linearly and is proportional to the % change of the "Vin" value, corresponding to the same % change of the maximum speed. The CS (constant speed), IR (Inrush Protection) and CL (Current Limit) functions are included. The part # is followed by additional identification entry such as: V 1 5 20 100 C 500: This means that the fan speed will be 1000 RPM (20%) at 1 V and 5000 RPM (100%) at 5V . Further more, the fan will maintain the minimum speed if Vin < 1V and it will stop if Vin < 0.5V (Mode "C" operation). The maximum fan speed is 5000 RPM, and the stop point is typically set at 20% of maximum. (See Fig 3a-A, 3a-B, 3a-C) Slope: 1000 RPM/Volt.



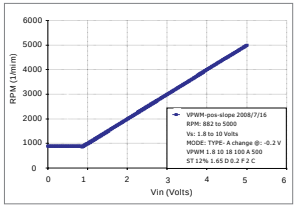


Fig. 3a-A: Mode A

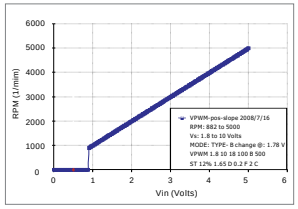


Fig. 3a-B: Mode B

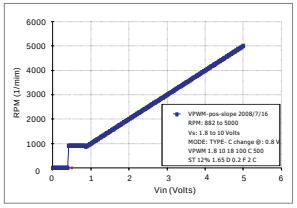
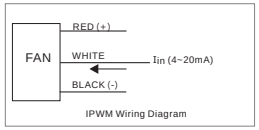


Fig. 3a-C: Mode C

3b. "IPWM" function (Current Source Signal Control) (White Wire)

With this function the speed can be controlled by applying an external Current Source Signal. This current input "Iin" may have any value from 4 mA to 50 mA (standard value is 4 to 20mA). The fan speed will vary linearly and is proportional to the % change of the Iin value, corresponding to the same % change of the maximum speed. The CS (constant speed), IR (Inrush Protection) and CL (Current Limit) functions are included. The part # is followed by additional identification entry such as: I 4 20 20 100 A 500: This means that the fan speed will be 1000 RPM (20%) at 4mA and 5000 RPM (100%) at 20mA . Further more, the fan will maintain the minimum speed if Iin<4mA (Mode "A" operation). The maximum fan speed is 5000 RPM. (See Fig 3b-A, 3b-B, 3b-C) Slope: 266 RPM/mA.



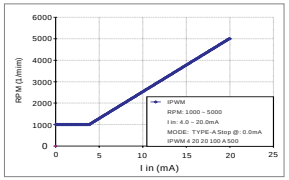


Fig. 3b-A: Mode A

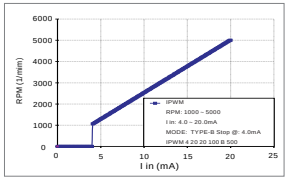


Fig. 3b-B: Mode B

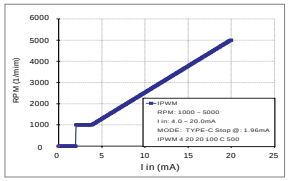
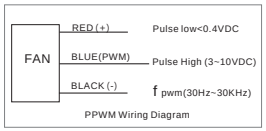


Fig.3b-C: Mode C

3c. "PPWM" function (Pulse Width Modulation Signal Control) (BLUE wire)

With this function the speed can be controlled by applying a pulse width modulated signal whose frequency maybe in the range of 30 Hz to 30 KHz and the max. pulse height "HIGH" maybe from 3 V to 10 V. The maximum pulse height "LOW" is 0.4 V. The fan speed will vary linearly and is proportional to the % change of the Duty Cycle value, corresponding to the same % change of the maximum speed. The CS (constant speed), IR (Inrush Protection) and CL (Current Limit) functions are included. The part # is followed by additional identification entry such as: P 25 80 25 80 C 393 Cs320: This means that the fan speed will be 1000 RPM (25%) at 25% Duty Cycle and 3200 RPM (80%) at 80% Duty Cycle. Further more, the fan will maintain the minimum speed if the Duty Cycle is less than 25% (Mode "A" operation).
The maximum possible fan speed is 4000 RPM. (See Fig 3c-A, 3c-B, 3c-C) Slope: 36.4 RPM/%PWM



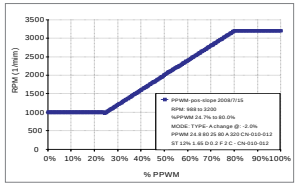


Fig. 3c-A: Mode A

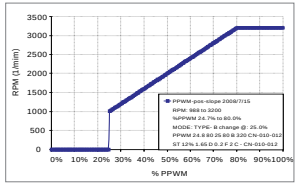


Fig. 3c-B: Mode B

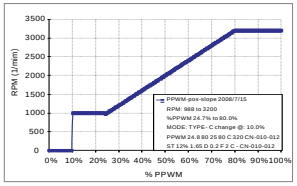
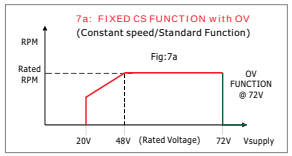


Fig. 3c-C: Mode C

4. "OV" function (Over-Voltage protection) (Built in, no wire indication).

This function detects the power supply voltage and allows operation up to the rated maximum operating voltage.Typically the maximum operating voltage (unless otherwise specified) is 20% over the specified rated voltage. If the power supply voltage increases over the 20% limit the fan will stop running and the power supply current will be reduced essentially to zero. The maximum over-voltage protection range is twice the value of the rated voltage. For example if the rated voltage is 24V, the maximum voltage that can be applied accidentally is 48V. Likewise for a 12V fan the maximum applied over-voltage is 24V (See Fig.7a).



5a."TPWM" function (Automatic Temperature Control) (Green Wire)

When this function is applied, the upper and lower temperatures may be selected as well as the choice of maintaining minimum RPM below the minimum temperature chosen. The CS (constant speed), IR (Inrush Protection) and CL (Current Limit) functions are included.

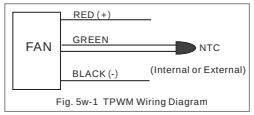


Fig. 5w-1 TPWM Wiring Diagram

The NTC is of the 104J (100K @ 25 °C) type and is included with the fan (either "built in" or external). The part # is followed by additional identification entry such as:
T 16 40 20 100 A 500: This means that the fan speed will be 1000 RPM (20%) at 16 °C and 5000 RPM (100%) a t 40 °C . Furthermore, the fan will maintain the minimum speed of 1000 RPM below the temperature of 16 °C (Mode "A" operation).
Please note that for safety reasons if the NTC is OPEN or SHORTED the fan will run at its maximum speed. (Fig 5a-A, 5a-B, 5a-C show the 3 available modes of control.) Slope: 167 RPM/°C

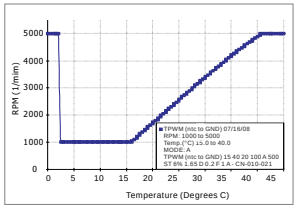


Fig. 5a-A: Mode A

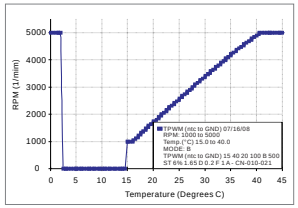


Fig. 5a-B: Mode B

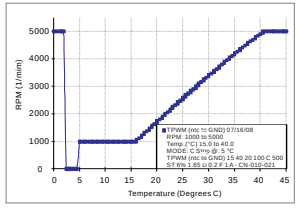


Fig. 5a-C: Mode C

5b."RPWM" function (Manual Variable Resistor Control) (Orange Wire and White Wires)

With this function the speed can be controlled using an external variable resistor. This resistor may have any maximum value from 10K to 100K. The fan speed will vary linearly and is proportional to the % change of the resistor value, corresponding to the same % change of the maximum speed. The CS (constant speed), IR (Inrush Protection) and CL (Current Limit) functions are included.

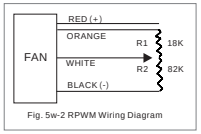


Fig. 5w-2 RPWM Wiring Diagram

The part # is followed by additional identification entry such as: R 25 100 25 100 B 400:
This means that if VR=100K, the fan speed will be 1000 RPM (25%) at VR =25K and 4000 RPM (100%) at VR =100K. Further more, the fan will stop if VR <25K (Mode "B" operation).
The maximum fan speed is 4000 RPM
Solpe: 40 RPM / %R, (If VR=10K: 400RPM/KΩ, If VR=50K: 80RPM/KΩ)

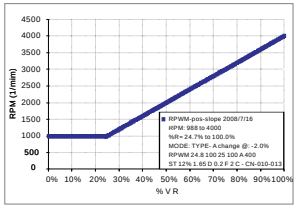


Fig. 5b-A: Mode A

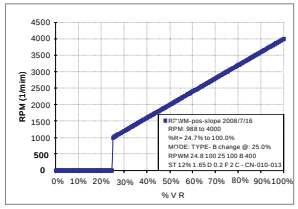


Fig. 5b-B: Mode B

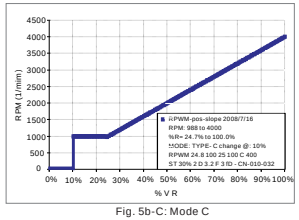
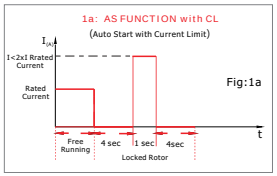


Fig. 5b-C: Mode C

DC FAN "M" FUNCTIONS
PELKO Motors®

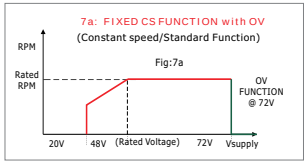
6. "CL" function (Current Limit under locked rotor is "built in" no wire indication)

With this function the current is limited during the start or restart (AS) period. (See Fig. 1b)



7. FIXED "CS" (Constant Speed is "built in" and is standard, no wire indication)

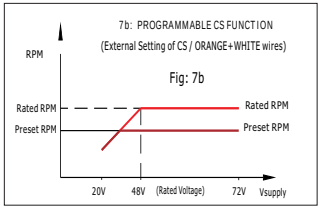
This is a very important function because it allows the fan motor to operate safely over a very large power supply voltage range.
For example if the fan motor is designed to run at 4200 RPM at the rated voltage of 48 Volts, the fan motor will maintain the same RPM even when the supply voltage varies from 48 to 72 volts. The fixed CS function is preset internally and the maximum RPM is the rated RPM. (See Fig. 7a)

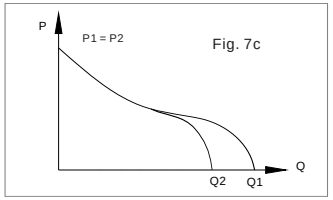


7a. PROGRAMMABLE "CS" with external components. (Orange + White Wires)

This function can be implemented by the use of the RPWM function. For example if the external resistor is made up by a 82K and a 18K resistors, then the center point of these resistors can be the input which will determine that 82% of the rated speed will be the maximum speed of the modified fan (of course if the resistor ends are reversed then 18% of the rated speed will be the new maximum speed). The resistor ends are tied to the ORANGE and BLACK wires and the center point is tied to the WHITE input wire.

A very important use of this function is to overcome system impedance variations. The fan can be programmed to run at 20% lower of the rated speed at zero pressure. When the fan's static pressure is increased the fan will be able to maintain the same speed under maximum pressure, thus becoming immune to system impedance variations. (See Fig. 7b and 7c for the resulting PQ graph)





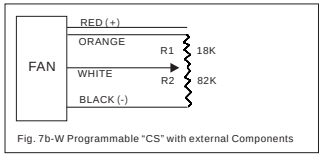
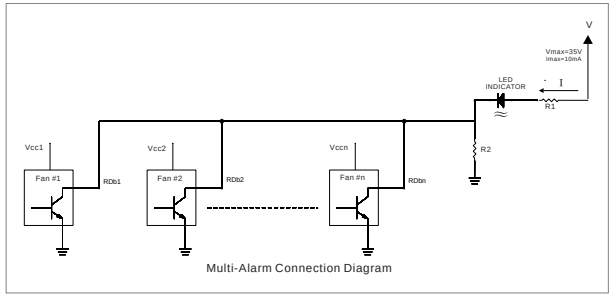


Fig. 7b-W Programmable "CS" with external Components

Q1 is the maximum airflow without CS adjustment.
Q2 is the maximum airflow reduced with R1 and R2 setup.
P2, P1 when the maximum speed is selected to set Q2 at about 80% of Q1.

MULTI-ALARM CONNECTION

When many fans are used (usually in a fan tray) for an application, it is important to monitor the proper running state of the fans. It is practical to have a single alarm (sound or light) that will indicate if any of the fans has stopped running. PELKO Motors can provide every fan with the RDb function in order to combine the multi-alarm function to a single alarm indicator.
The diagram below shows the way to connect in the multi-alarm any number of fans of any PELKO model equipped with the RDb function cascaded (maximum 100 fans).
NOTES:Resistor R2 maybe added if the customer wants to connect to a voltage higher than 35V for his alarm signal.
If the fans have LD ouput, and one fan runs below 70% of its rated speed, the alarm will be activated.



Multi-Alarm Connection Diagram

Standard DC FANS- C Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
40x40x10mm (1.57x1.57x0.39in) - 7 blade												Life Expectancy at 30°C - 60,000hrs @ 9000rpm
1b:AS 2a:FG 2b:RD IP51 IP54 IP56	C4010Y05BPLPxy-7	05 (04~06)	0.303	0.280	1.40	9000	8.03	0.23	6.75	0.27	36.81	16.8g (800pcs)
	C4010X05BPLPxy-7		0.199	0.190	0.95	7500	6.91	0.20	4.60	0.18	32.07	
	C4010H05BPLPxy-7		0.170	0.150	0.75	6600	5.80	0.16	3.66	0.14	28.29	
	C4010M05BPLPxy-7		0.100	0.100	0.50	5500	4.82	0.14	2.69	0.11	24.17	
	C4010L05BPLPxy-7		0.060	0.060	0.30	4400	3.87	0.11	1.73	0.07	19.39	
	C4010Y12BPLPxy-7	12 (07~14)	0.143	0.140	1.68	9000	8.03	0.23	6.75	0.27	36.81	16.8g (800pcs)
	C4010X12BPLPxy-7		0.110	0.090	1.08	7500	6.91	0.20	4.60	0.18	32.07	
	C4010H12BPLPxy-7		0.094	0.062	0.74	6600	5.80	0.16	3.66	0.14	28.29	
	C4010M12BPLPxy-7		0.080	0.051	0.61	5500	4.82	0.14	2.69	0.11	24.17	
	C4010L12BPLPxy-7		0.070	0.032	0.38	4400	3.87	0.11	1.73	0.07	19.39	
	C4010H24BPLPxy-7	24 (15~27)	0.100	0.060	1.44	9000	8.03	0.23	6.75	0.27	36.81	16.8g (800pcs)
	C4010M24BPLPxy-7		0.080	0.054	1.30	8000	7.37	0.21	5.23	0.21	34.97	
	C4010L24BPLPxy-7		0.060	0.040	0.96	7000	6.13	0.17	4.22	0.17	30.44	
40x40x20mm (1.57x1.57x0.79in) - 5 blade												Life Expectancy at 30°C - 50,000hrs @ 10000rpm
1b:AS 2a:FG 2b:RD IP51 IP54 IP56 IP67	C4020Y05BPLPxy-5	05 (04~06)	0.420	0.410	2.05	9500	11.73	0.33	8.93	0.35	33.50	29g (600pcs)
	C4020X05BPLPxy-5		0.390	0.380	1.90	8500	10.50	0.30	7.15	0.28	30.60	
	C4020H05BPLPxy-5		0.300	0.250	1.25	7000	8.65	0.24	4.85	0.19	25.20	
	C4020M05BPLPxy-5		0.180	0.170	0.85	5500	6.79	0.19	2.99	0.12	19.30	
	C4020L05BPLPxy-5		0.130	0.120	0.60	4000	4.94	0.14	1.58	0.06	11.00	
	C4020Z12BPLBxy-5	12 (07~14)	0.420	0.370	4.44	15000	18.53	0.52	22.27	0.88	45.40	29g (600pcs)
	C4020Y12BPLPxy-5		0.220	0.210	2.52	10000	12.35	0.35	9.90	0.39	34.80	
	C4020X12BPLPxy-5		0.160	0.160	1.92	8500	10.50	0.30	7.15	0.28	30.60	
	C4020H12BPLPxy-5		0.120	0.120	1.44	7000	8.65	0.24	4.85	0.19	25.20	
	C4020M12BPLPxy-5		0.070	0.070	0.84	5500	6.79	0.19	2.99	0.12	19.30	
	C4020L12BPLPxy-5		0.050	0.050	0.60	4000	4.94	0.14	1.58	0.06	11.00	
	C4020Z24BPLBxy-5	24 (15~27)	0.210	0.180	4.32	15000	18.53	0.52	22.27	0.88	45.40	29g (600pcs)
	C4020Y24BPLPxy-5		0.110	0.110	2.64	10000	12.35	0.35	9.90	0.39	34.80	
	C4020X24BPLPxy-5		0.080	0.080	1.92	8500	10.50	0.30	7.15	0.28	30.60	
	C4020H24BPLPxy-5		0.060	0.060	1.44	7000	8.65	0.24	4.85	0.19	25.20	
40x40x20mm (1.57x1.57x0.79in) - 7 blade												Life Expectancy at 30°C - 60,000hrs @ 9000rpm
1b:AS 2a:FG 2b:RD IP51 IP54 IP56 IP67	C4020H05BPLPxy-7	05 (04~06)	0.320	0.220	1.10	7000	8.21	0.23	5.74	0.23	32.38	31.6g (600pcs)
	C4020M05BPLPxy-7		0.170	0.140	0.70	5500	6.64	0.19	3.87	0.15	27.14	
	C4020L05BPLPxy-7		0.110	0.083	0.42	4000	4.92	0.14	2.40	0.09	20.78	
	C4020Y12BPLPxy-7	12 (07~14)	0.310	0.160	1.92	9000	10.88	0.31	8.68	0.34	39.18	31.6g (600pcs)
	C4020X12BPLPxy-7		0.168	0.140	1.68	8000	9.81	0.28	6.98	0.27	36.27	
	C4020H12BPLPxy-7		0.140	0.100	1.20	7000	8.21	0.23	5.74	0.23	32.38	
	C4020M12BPLPxy-7		0.100	0.062	0.74	5500	6.64	0.19	3.87	0.15	27.14	
	C4020L12BPLPxy-7		0.050	0.040	0.48	4000	4.92	0.14	2.40	0.09	20.78	
	C4020Y24BPLPxy-7	24 (15~27)	0.120	0.095	2.28	9000	10.88	0.31	8.68	0.34	39.18	31.6g (600pcs)
	C4020X24BPLPxy-7		0.096	0.072	1.73	8000	9.81	0.28	6.98	0.27	36.27	
	C4020H24BPLPxy-7		0.072	0.051	1.22	7000	8.21	0.23	5.74	0.23	32.38	
50x50x10mm (1.97x1.97x0.39in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 6000rpm
1b:AS 2a:FG 2b:RD IP51 IP54 IP56	C5010H05BPLPxy-7	05 (04~06)	0.270	0.270	1.35	6000	13.57	0.38	4.67	0.18	33.15	20g (800pcs)
	C5010M05BPLPxy-7		0.160	0.160	0.80	5000	11.31	0.32	3.24	0.13	30.10	
	C5010L05BPLPxy-7		0.100	0.110	0.55	4000	9.04	0.26	2.08	0.08	25.85	
	C5010H12BPLPxy-7	12 (07~14)	0.140	0.135	1.62	6000	13.57	0.38	4.67	0.18	33.15	20g (800pcs)
	C5010M12BPLPxy-7		0.100	0.086	1.03	5000	11.31	0.32	3.24	0.13	30.10	
	C5010L12BPLPxy-7		0.060	0.055	0.66	4000	9.04	0.26	2.08	0.08	25.85	
	C5010H24BPLBxy-7	24 (15~27)	0.100	0.060	1.44	6000	13.57	0.38	4.67	0.18	33.15	20g (800pcs)
	C5010M24BPLBxy-7		0.080	0.050	1.20	5000	11.31	0.32	3.24	0.13	30.10	
50x50x15mm (1.97x1.97x0.59in) - 7 blade												Life Expectancy at 30°C - 60,000hrs @ 8000rpm
1b:AS 2a:FG 2b:RD IP51 IP54 IP56 IP67	C5015H05BPLPxy-7	05 (04~06)	0.300	0.300	1.50	6000	18.04	0.51	4.86	0.19	32.40	33g (480pcs)
	C5015M05BPLPxy-7		0.240	0.240	1.20	5000	15.04	0.43	3.38	0.13	27.60	
	C5015L05BPLPxy-7		0.160	0.160	0.80	4000	12.03	0.34	2.16	0.09	21.80	
	C5015Y12BPLPxy-7	12 (07~14)	0.400	0.350	4.20	8000	22.80	0.65	9.25	0.36	41.50	33g (480pcs)
	C5015X12BPLPxy-7		0.260	0.250	3.00	7000	21.05	0.60	6.62	0.26	36.40	
	C5015H12BPLPxy-7		0.160	0.160	1.92	6000	18.04	0.51	4.86	0.19	32.40	
	C5015M12BPLPxy-7		0.120	0.110	1.32	5000	15.04	0.43	3.38	0.13	27.60	
	C5015L12BPLPxy-7		0.080	0.080	0.96	4000	12.03	0.34	2.16	0.09	21.80	
	C5015Y24BPLPxy-7	24 (15~27)	0.200	0.180	4.32	8000	22.80	0.65	9.25	0.36	41.50	33g (480pcs)
	C5015X24BPLPxy-7		0.150	0.130	3.12	7000	21.05	0.60	6.62	0.26	36.40	
	C5015H24BPLPxy-7		0.100	0.100	2.40	6000	18.04	0.51	4.86	0.19	32.40	
	C5015M24BPLPxy-7		0.060	0.060	1.44	5000	15.04	0.43	3.38	0.13	27.60	
	C5015L24BPLPxy-7		0.040	0.040	0.96	4000	12.03	0.34	2.16	0.09	21.80	

Standard DC FANS- C Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
60x60x10mm (2.36x2.36x0.39in) - 11 blade												Life Expectancy at 30°C - 70,000hrs @ 4600rpm
1b:AS 2a:FG 2b:RD IP51 IP54 IP56	C6010H05BPLPxy-11	05 (04~06)	0.310	0.230	1.15	4000	17.28	0.49	2.31	0.09	32.07	30g (480pcs)
	C6010M05BPLPxy-11		0.200	0.190	0.95	3600	15.55	0.44	1.87	0.07	29.70	
	C6010L05BPLPxy-11		0.180	0.154	0.77	3200	13.82	0.39	1.48	0.06	24.91	
	C6010H12BPLPxy-11	12 (07~14)	0.280	0.180	2.16	4600	19.87	0.56	3.06	0.12	35.04	30g (480pcs)
	C6010M12BPLPxy-11		0.170	0.120	1.44	4000	17.28	0.49	2.31	0.09	32.07	
	C6010L12BPLPxy-11		0.130	0.090	1.08	3600	15.55	0.44	1.87	0.07	29.70	
	C6010H24BPLPxy-11	24 (15~27)	0.150	0.120	2.88	4600	19.87	0.56	3.06	0.12	35.04	30g (480pcs)
	C6010M24BPLPxy11		0.100	0.074	1.78	4000	17.28	0.49	2.31	0.09	32.07	
	C6010L24BPLPxy-11		0.060	0.060	1.44	3600	15.55	0.44	1.87	0.07	29.70	
60x60x20mm (2.36x2.36x0.79in) - 7 blade												Life Expectancy at 30°C - 65,000hrs @ 5600rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	C6020X12BPLPxy-7	12 (07~14)	0.310	0.230	2.76	5600	24.30	0.69	8.53	0.34	39.16	54g (240pcs)
	C6020H12BPLPxy-7		0.220	0.168	2.02	4800	20.82	0.59	6.26	0.25	35.14	
	C6020M12BPLPxy-7		0.160	0.120	1.44	4000	17.36	0.49	4.36	0.17	30.37	
	C6020L12BPLPxy-7		0.110	0.075	0.90	3200	13.80	0.39	2.76	0.11	24.50	
	C6020Y24BPLPxy-7	24 (15~27)	0.220	0.220	5.28	6400	27.63	0.78	11.03	0.43	42.46	54g (240pcs)
	C6020X24BPLPxy-7		0.180	0.153	3.67	5600	24.30	0.69	8.53	0.34	39.16	
	C6020H24BPLPxy-7		0.140	0.087	2.09	4800	20.82	0.59	6.26	0.25	35.14	
	C6020M24BPLPxy-7		0.100	0.070	1.68	4000	17.36	0.49	4.36	0.17	30.37	
	C6020L24BPLPxy-7		0.070	0.035	0.84	3200	13.80	0.39	2.76	0.11	24.50	
60x60x25mm (2.36x2.36x0.98in) - 5 blade												Life Expectancy at 30°C - 70,000hrs @ 6000rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	C6025Y12BPLPxy-5	12 (07~14)	0.416	0.300	3.60	6500	33.02	0.94	10.44	0.41	41.80	70.0g (224pcs)
	C6025X12BPLPxy-5		0.286	0.230	2.76	6000	30.48	0.86	8.90	0.35	39.80	
	C6025H12BPLPxy-5		0.247	0.190	2.28	5500	27.94	0.79	7.48	0.29	37.50	
	C6025M12BPLPxy-5		0.156	0.140	1.68	4500	22.86	0.65	5.01	0.20	32.30	
	C6025L12BPLPxy-5		0.104	0.090	1.08	3500	17.78	0.50	3.03	0.12	25.70	
	C6025Y24BPLPxy-5	24 (15~27)	0.182	0.180	4.32	6500	33.02	0.94	10.44	0.41	41.80	70.0g (224pcs)
	C6025X24BPLPxy-5		0.143	0.135	3.24	6000	30.48	0.86	8.90	0.35	39.80	
	C6025H24BPLPxy-5		0.117	0.110	2.64	5500	27.94	0.79	7.48	0.29	37.50	
	C6025M24BPLPxy-5		0.091	0.070	1.68	4500	22.86	0.65	5.01	0.20	32.30	
	C6025L24BPLPxy-5		0.061	0.050	1.20	3500	17.78	0.50	3.03	0.12	25.70	
60x60x25mm (2.36x2.36x0.98in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 6000rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	C6025X12BPLPxy-7	12 (07~14)	0.370	0.290	3.48	6000	26.70	0.76	10.56	0.42	41.56	73.5g (224pcs)
	C6025H12BPLPxy-7		0.340	0.240	2.88	5500	24.28	0.69	8.91	0.35	39.31	
	C6025M12BPLPxy-7		0.190	0.140	1.68	4500	19.81	0.56	5.99	0.24	34.13	
	C6025L12BPLPxy-7		0.140	0.100	1.20	3500	15.41	0.44	3.57	0.14	27.86	
	C6025X24BPLPxy-7	24 (15~27)	0.200	0.150	3.60	6000	26.70	0.76	10.56	0.42	41.56	73.5g (224pcs)
	C6025H24BPLPxy-7		0.160	0.125	3.00	5500	24.28	0.69	8.91	0.35	39.31	
	C6025M24BPLPxy-7		0.100	0.080	1.92	4500	19.81	0.56	5.99	0.24	34.13	
	C6025L24BPLPxy-7		0.060	0.050	1.20	3500	15.41	0.44	3.57	0.14	27.86	
70x70x25mm (2.76x2.76x0.98in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 4000rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	C7025X12BPLPxy-7	12 (07~14)	0.260	0.230	2.76	4000	40.12	1.14	6.09	0.24	39.30	73g (200pcs)
	C7025H12BPLPxy-7		0.200	0.180	2.16	3600	36.10	1.02	4.93	0.19	36.50	
	C7025M12BPLPxy-7		0.180	0.131	1.57	3000	30.10	0.85	3.43	0.14	30.67	
	C7025L12BPLPxy-7		0.120	0.076	0.92	2400	24.10	0.68	2.20	0.09	26.00	
	C7025X24BPLPxy-7	24 (15~27)	0.100	0.110	2.64	4000	40.12	1.14	6.09	0.24	39.30	73g (200pcs)
	C7025H24BPLPxy-7		0.090	0.090	2.16	3600	36.10	1.02	4.93	0.19	36.50	
	C7025M24BPLPxy-7		0.060	0.060	1.44	3000	30.10	0.85	3.43	0.14	30.67	
	C7025L24BPLPxy-7		0.050	0.040	0.96	2400	24.10	0.68	2.20	0.09	26.00	
80x80x15mm (3.15x3.15x0.59in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 4000rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56	C8015X12BPLPxy-7	12 (07~14)	0.260	0.308	3.70	4000	43.50	1.23	5.02	0.20	40.14	55g (240pcs)
	C8015H12BPLPxy-7		0.170	0.160	1.92	3200	34.80	0.99	3.21	0.13	34.38	
	C8015M12BPLPxy-7		0.120	0.120	1.44	2800	30.45	0.86	2.46	0.10	31.00	
	C8015L12BPLPxy-7		0.080	0.080	0.96	2400	26.10	0.74	1.81	0.07	27.23	
	C8015X24BPLPxy-7	24 (15~27)	0.160	0.150	3.60	4000	43.50	1.23	5.02	0.20	40.14	55g (240pcs)
	C8015H24BPLPxy-7		0.120	0.100	2.40	3200	34.80	0.99	3.21	0.13	34.38	
	C8015M24BPLPxy-7		0.070	0.070	1.68	2800	30.45	0.86	2.46	0.10	31.00	
	C8015L24BPLPxy-7		0.050	0.049	1.18	2400	26.10	0.74	1.81	0.07	27.23	

Standard DC FANS- C Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
80x80x25mm (3.15x3.15x0.98in) - 7 blade												Life Expectancy at 30℃ - 70,000hrs @ 3600rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	C8025X12BPLPxy-7	12 (07~14)	0.260	0.200	2.40	3600	47.27	1.34	5.15	0.20	37.85	83g (135pcs)
	C8025H12BPLPxy-7		0.180	0.148	1.78	3000	39.39	1.12	3.58	0.14	32.11	
	C8025M12BPLPxy-7		0.140	0.095	1.13	2600	34.14	0.97	2.69	0.11	28.56	
	C8025L12BPLPxy-7		0.110	0.068	0.82	2200	28.89	0.82	1.92	0.08	23.79	
	C8025X24BPLPxy-7	24 (15~27)	0.120	0.116	2.78	3600	47.27	1.34	5.15	0.20	37.85	83g (135pcs)
	C8025H24BPLPxy-7		0.080	0.074	1.78	3000	39.39	1.12	3.58	0.14	32.11	
	C8025M24BPLPxy-7		0.060	0.060	1.44	2600	34.14	0.97	2.69	0.11	28.56	
	C8025L24BPLPxy-7		0.040	0.040	0.96	2200	28.89	0.82	1.92	0.08	23.79	
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	C8026H05BPLPxy-7	05 (04~06)	0.500	0.370	1.85	3000	43.02	1.22	3.63	0.14	31.60	94g (135pcs)
	C8026M05BPLPxy-7		0.330	0.260	1.30	2600	37.28	1.06	2.73	0.11	27.80	
	C8026L05BPLPxy-7		0.200	0.190	0.95	2200	31.54	0.89	1.95	0.08	23.50	
	C8026Y12BPLPxy-7	12 (07~14)	0.750	0.380	4.56	4000	57.35	1.62	6.45	0.25	37.10	94g (135pcs)
	C8026X12BPLPxy-7		0.300	0.250	3.00	3600	51.62	1.46	5.23	0.21	36.30	
	C8026H12BPLPxy-7		0.210	0.200	2.40	3000	43.02	1.22	3.63	0.14	31.60	
	C8026M12BPLPxy-7		0.130	0.130	1.56	2600	37.28	1.06	2.73	0.11	27.80	
	C8026L12BPLPxy-7		0.100	0.090	1.08	2200	31.54	0.89	1.95	0.08	23.50	
	C8026Y24BPLPxy-7	24 (15~27)	0.480	0.190	4.56	4000	57.35	1.62	6.45	0.25	37.10	94g (135pcs)
	C8026X24BPLPxy-7		0.170	0.150	3.60	3600	51.62	1.46	5.23	0.21	36.30	
	C8026H24BPLPxy-7		0.130	0.100	2.40	3000	43.02	1.22	3.63	0.14	31.60	
	C8026M24BPLPxy-7		0.100	0.080	1.92	2600	37.28	1.06	2.73	0.11	27.80	
	C8026L24BPLPxy-7		0.070	0.050	1.20	2200	31.54	0.89	1.95	0.08	23.50	
92x92x25mm (3.62x3.62x0.98in) - 7 blade												Life Expectancy at 30℃ - 70,000hrs @ 3600rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	C9225X12BPLPxy-7	12 (07~14)	0.350	0.350	4.20	3600	66.94	1.90	6.01	0.24	41.16	106.5g (135pcs)
	C9225H12BPLPxy-7		0.230	0.220	2.64	3000	55.78	1.58	4.18	0.16	35.73	
	C9225M12BPLPxy-7		0.180	0.135	1.62	2600	48.34	1.37	3.14	0.12	31.99	
	C9225L12BPLPxy-7		0.140	0.108	1.30	2200	40.91	1.16	2.25	0.09	27.56	
	C9225X24BPLPxy-7	24 (15~27)	0.220	0.180	4.32	3600	66.94	1.90	6.01	0.24	41.16	106.5g (135pcs)
	C9225H24BPLPxy-7		0.150	0.120	2.88	3000	55.78	1.58	4.18	0.16	35.73	
	C9225M24BPLPxy-7		0.090	0.084	2.02	2600	48.34	1.37	3.14	0.12	31.99	
	C9225L24BPLPxy-7		0.060	0.055	1.32	2200	40.91	1.16	2.25	0.09	27.56	
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	C9226L05BPLPxy-7	05 (04~06)	0.330	0.240	1.20	2200	48.50	1.37	2.33	0.09	27.60	114.6g (135pcs)
	C9226X12BPLPxy-7	12 (07~14)	0.600	0.440	5.28	3600	80.10	2.27	5.79	0.23	42.30	
	C9226H12BPLPxy-7		0.320	0.230	2.76	3000	67.70	1.92	4.32	0.17	36.90	
	C9226M12BPLPxy-7		0.230	0.170	2.04	2600	58.50	1.66	3.29	0.13	32.80	
	C9226L12BPLPxy-7		0.150	0.110	1.32	2200	48.50	1.37	2.33	0.09	27.60	
	C9226X24BPLPxy-7	12 (07~14)	0.320	0.250	6.00	3600	80.10	2.27	5.79	0.23	42.30	114.6g (135pcs)
	C9226H24BPLPxy-7		0.180	0.118	2.84	3000	67.70	1.92	4.32	0.17	36.90	
	C9226M24BPLPxy-7		0.143	0.083	2.00	2600	58.50	1.66	3.29	0.13	32.80	
	C9226L24BPLPxy-7		0.085	0.055	1.32	2200	48.50	1.37	2.33	0.09	27.60	

* C series uses a 2 coil complementary type drive offering low cost and limited functions. such as FG, RD, and RDb.
* Specifications are subject to change without notice.

Standard DC FANS- R Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
60x60x20mm (2.36x2.36x0.79in) - 7 blade												Life Expectancy at 30℃ - 65,000hrs @ 5600rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	R6020X05BPLPxy-7	05 (04~06)	0.900	0.550	2.75	5600	24.30	0.69	8.53	0.34	39.16	54g (240pcs)
	R6020H05BPLPxy-7		0.640	0.450	2.25	4800	20.82	0.59	6.26	0.25	35.14	
	R6020M05BPLPxy-7		0.450	0.320	1.60	4000	17.36	0.49	4.36	0.17	30.37	
	R6020L05BPLPxy-7		0.220	0.190	0.95	3200	13.80	0.39	2.76	0.11	24.50	
	R6020Y12BPLPxy-7	12 (07~14)	0.380	0.370	4.44	6400	27.63	0.78	11.03	0.43	42.46	54g (240pcs)
	R6020X12BPLPxy-7		0.310	0.230	2.76	5600	24.30	0.69	8.53	0.34	39.16	
	R6020H12BPLPxy-7		0.220	0.168	2.02	4800	20.82	0.59	6.26	0.25	35.14	
	R6020M12BPLPxy-7		0.160	0.120	1.44	4000	17.36	0.49	4.36	0.17	30.37	
	R6020L12BPLPxy-7		0.110	0.075	0.90	3200	13.80	0.39	2.76	0.11	24.50	
	R6020Y24BPLPxy-7	24 (15~27)	0.220	0.220	5.28	6400	27.63	0.78	11.03	0.43	42.46	54g (240pcs)
	R6020X24BPLPxy-7		0.180	0.153	3.67	5600	24.30	0.69	8.53	0.34	39.16	
	R6020H24BPLPxy-7		0.140	0.087	2.09	4800	20.82	0.59	6.26	0.25	35.14	
	R6020M24BPLPxy-7		0.100	0.070	1.68	4000	17.36	0.49	4.36	0.17	30.37	
	R6020L24BPLPxy-7		0.070	0.040	0.96	3200	13.80	0.39	2.76	0.11	24.50	
60x60x25mm (2.36x2.36x0.98in) - 5 blade												Life Expectancy at 30℃ - 70,000hrs @ 6000rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	R6025X05BPLPxy-5	05 (04~06)	0.884	0.800	4.00	6000	30.48	0.86	8.90	0.35	39.80	70.0g (224pcs)
	R6025H05BPLPxy-5		0.728	0.575	2.88	5500	27.94	0.79	7.48	0.29	37.50	
	R6025M05BPLPxy-5		0.416	0.315	1.57	4500	22.86	0.65	5.01	0.20	32.30	
	R6025L05BPLPxy-5		0.286	0.220	1.10	3500	17.78	0.50	3.03	0.12	25.70	
	R6025Y12BPLPxy-5	12 (07~14)	0.416	0.300	3.60	6500	33.02	0.94	10.44	0.41	41.80	70.0g (224pcs)
	R6025X12BPLPxy-5		0.286	0.230	2.76	6000	30.48	0.86	8.90	0.35	39.80	
	R6025H12BPLPxy-5		0.247	0.190	2.28	5500	27.94	0.79	7.48	0.29	37.50	
	R6025M12BPLPxy-5		0.156	0.140	1.68	4500	22.86	0.65	5.01	0.20	32.30	
	R6025L12BPLPxy-5		0.104	0.090	1.08	3500	17.78	0.50	3.03	0.12	25.70	
	R6025Y24BPLPxy-5	24 (15~27)	0.182	0.180	4.32	6500	33.02	0.94	10.44	0.41	41.80	70.0g (224pcs)
	R6025X24BPLPxy-5		0.143	0.135	3.24	6000	30.48	0.86	8.90	0.35	39.80	
	R6025H24BPLPxy-5		0.117	0.110	2.64	5500	27.94	0.79	7.48	0.29	37.50	
	R6025M24BPLPxy-5		0.091	0.070	1.68	4500	22.86	0.65	5.01	0.20	32.30	
	R6025L24BPLPxy-5		0.061	0.050	1.20	3500	17.78	0.50	3.03	0.12	25.70	
60x60x25mm (2.36x2.36x0.98in) - 7 blade												Life Expectancy at 30℃ - 70,000hrs @ 6000rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	R6025X05BPLPxy-7	05 (04~06)	0.950	0.950	4.75	6000	26.70	0.76	10.56	0.42	41.56	73.5g (224pcs)
	R6025H05BPLPxy-7		0.650	0.620	3.10	5500	24.28	0.69	8.91	0.35	39.31	
	R6025M05BPLPxy-7		0.420	0.410	2.05	4500	19.81	0.56	5.99	0.24	34.13	
	R6025L05BPLPxy-7		0.320	0.250	1.25	3500	15.41	0.44	3.57	0.14	27.86	
	R6025Y12BPLPxy-7	12 (07~14)	0.700	0.377	4.52	6500	29.17	0.83	12.43	0.49	43.64	73.5g (224pcs)
	R6025X12BPLPxy-7		0.370	0.290	3.48	6000	26.70	0.76	10.56	0.42	41.56	
	R6025H12BPLPxy-7		0.340	0.240	2.88	5500	24.28	0.69	8.91	0.35	39.31	
	R6025M12BPLPxy-7		0.190	0.140	1.68	4500	19.81	0.56	5.99	0.24	34.13	
	R6025L12BPLPxy-7		0.140	0.100	1.20	3500	15.41	0.44	3.57	0.14	27.86	
	R6025Y24BPLPxy-7	24 (15~27)	0.240	0.189	4.54	6500	29.17	0.83	12.43	0.49	43.64	73.5g (224pcs)
	R6025X24BPLPxy-7		0.200	0.150	3.60	6000	26.70	0.76	10.56	0.42	41.56	
	R6025H24BPLPxy-7		0.160	0.125	3.00	5500	24.28	0.69	8.91	0.35	39.31	
	R6025M24BPLPxy-7		0.100	0.080	1.92	4500	19.81	0.56	5.99	0.24	34.13	
	R6025L24BPLPxy-7		0.060	0.050	1.20	3500	15.41	0.44	3.57	0.14	27.86	
70x70x25mm (2.76x2.76x0.98in) - 7 blade												Life Expectancy at 30℃ - 70,000hrs @ 4000rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	R7025X05BPLPxy-7	05 (04~06)	0.960	0.720	3.60	4000	40.12	1.14	6.09	0.24	39.30	73g (200pcs)
	R7025H05BPLPxy-7		0.590	0.563	2.82	3600	36.10	1.02	4.93	0.19	36.50	
	R7025M05BPLPxy-7		0.420	0.322	1.61	3000	30.10	0.85	3.43	0.14	30.67	
	R7025L05BPLPxy-7		0.230	0.230	1.15	2400	24.10	0.68	2.20	0.09	26.00	
	R7025Y12BPLPxy-7	12 (07~14)	0.350	0.307	3.68	4400	44.13	1.25	7.37	0.29	41.80	73g (200pcs)
	R7025X12BPLPxy-7		0.290	0.230	2.76	4000	40.12	1.14	6.09	0.24	39.30	
	R7025H12BPLPxy-7		0.220	0.180	2.16	3600	36.10	1.02	4.93	0.19	36.50	
	R7025M12BPLPxy-7		0.140	0.131	1.57	3000	30.10	0.85	3.43	0.14	30.67	
	R7025L12BPLPxy-7		0.120	0.076	0.91	2400	24.10	0.68	2.20	0.09	26.00	
	R7025Y24BPLPxy-7	24 (15~27)	0.180	0.180	4.32	4400	44.13	1.25	7.37	0.29	41.80	73g (200pcs)
	R7025X24BPLPxy-7		0.140	0.110	2.64	4000	40.12	1.14	6.09	0.24	39.30	
	R7025H24BPLPxy-7		0.120	0.090	2.16	3600	36.10	1.02	4.93	0.19	36.50	
	R7025M24BPLPxy-7		0.080	0.060	1.44	3000	30.10	0.85	3.43	0.14	30.67	
	R7025L24BPLPxy-7		0.060	0.040	0.96	2400	24.10	0.68	2.20	0.09	26.00	
80x80x15mm (3.15x3.15x0.59in) - 7 blade												Life Expectancy at 30℃ - 70,000hrs @ 4000rpm
	R8015H05BPLPxy-7	05 (04~06)	0.630	0.400	2.00	3200	34.80	0.99	3.21	0.13	34.38	55g (240pcs)
	R8015M05BPLPxy-7		0.580	0.373	1.87	2800	30.45	0.86	2.46	0.10	31.00	
	R8015L05BPLPxy-7		0.340	0.280	1.40	2400	26.10	0.74	1.81	0.07	27.23	

Standard DC FANS- R Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
80x80x15mm (3.15x3.15x0.59in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 4000rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56	R8015X12BPLPxy-7	12 (07~14)	0.310	0.308	3.70	4000	43.50	1.23	5.02	0.20	40.14	55g (240pcs)
	R8015H12BPLPxy-7		0.200	0.160	1.92	3200	34.80	0.99	3.21	0.13	34.38	
	R8015M12BPLPxy-7		0.180	0.130	1.56	2800	30.45	0.86	2.46	0.10	31.00	
	R8015L12BPLPxy-7		0.130	0.100	1.20	2400	26.10	0.74	1.81	0.07	27.23	
	R8015X24BPLPxy-7	24 (15~27)	0.190	0.150	3.60	4000	43.50	1.23	5.02	0.20	40.14	55g (240pcs)
	R8015H24BPLPxy-7		0.130	0.100	2.40	3200	34.80	0.99	3.21	0.13	34.38	
	R8015M24BPLPxy-7		0.110	0.070	1.68	2800	30.45	0.86	2.46	0.10	31.00	
	R8015L24BPLPxy-7		0.080	0.049	1.18	2400	26.10	0.74	1.81	0.07	27.23	
80x80x25mm (3.15x3.15x0.98in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 3600rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	R8025X05BPLPxy-7	05 (04~06)	0.920	0.750	3.75	3600	47.27	1.34	5.15	0.20	37.85	83g (135pcs)
	R8025H05BPLPxy-7		0.540	0.360	1.80	3000	39.39	1.12	3.58	0.14	32.11	
	R8025M05BPLPxy-7		0.470	0.269	1.34	2600	34.14	0.97	2.69	0.11	28.56	
	R8025L05BPLPxy-7		0.260	0.170	0.85	2200	28.89	0.82	1.92	0.08	23.79	
	R8025Y12BPLPxy-7	12 (07~14)	0.520	0.400	4.80	4400	57.78	1.64	7.69	0.30	40.55	83g (135pcs)
	R8025X12BPLPxy-7		0.370	0.200	2.40	3600	47.27	1.34	5.15	0.20	37.85	
	R8025H12BPLPxy-7		0.260	0.148	1.78	3000	39.39	1.12	3.58	0.14	32.11	
	R8025M12BPLPxy-7		0.190	0.095	1.14	2600	34.14	0.97	2.69	0.11	28.56	
	R8025L12BPLPxy-7		0.140	0.068	0.82	2200	28.89	0.82	1.92	0.08	23.79	
	R8025Y24BPLPxy-7	24 (15~27)	0.340	0.190	4.56	4400	57.78	1.64	7.69	0.30	40.55	83g (135pcs)
	R8025X24BPLPxy-7		0.250	0.116	2.78	3600	47.27	1.34	5.15	0.20	37.85	
	R8025H24BPLPxy-7		0.160	0.074	1.78	3000	39.39	1.12	3.58	0.14	32.11	
	R8025M24BPLPxy-7		0.120	0.060	1.44	2600	34.14	0.97	2.69	0.11	28.56	
	R8025L24BPLPxy-7		0.090	0.040	0.96	2200	28.89	0.82	1.92	0.08	23.79	
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	R8026Y05BPLPxy-7	05 (04~06)	1.000	0.820	4.10	4000	57.35	1.62	6.45	0.25	37.10	94g (135pcs)
	R8026X05BPLPxy-7		0.700	0.580	2.90	3600	51.62	1.46	5.23	0.21	36.30	
	R8026H05BPLPxy-7		0.500	0.370	1.85	3000	43.02	1.22	3.63	0.14	31.60	
	R8026M05BPLPxy-7		0.330	0.260	1.30	2600	37.28	1.06	2.73	0.11	27.80	
	R8026L05BPLPxy-7		0.200	0.190	0.95	2200	31.54	0.89	1.95	0.08	23.50	
	R8026Y12BPLPxy-7	12 (07~14)	0.750	0.550	6.60	4000	57.35	1.62	6.45	0.25	37.10	94g (135pcs)
	R8026X12BPLPxy-7		0.300	0.250	3.00	3600	51.62	1.46	5.23	0.21	36.30	
	R8026H12BPLPxy-7		0.210	0.200	2.40	3000	43.02	1.22	3.63	0.14	31.60	
	R8026M12BPLPxy-7		0.130	0.130	1.56	2600	37.28	1.06	2.73	0.11	27.80	
	R8026L12BPLPxy-7		0.100	0.090	1.08	2200	31.54	0.89	1.95	0.08	23.50	
	R8026Y24BPLPxy-7	24 (15~27)	0.480	0.290	6.96	4500	64.52	1.83	8.17	0.32	42.10	94g (135pcs)
	R8026X24BPLPxy-7		0.170	0.150	3.60	3600	51.62	1.46	5.23	0.21	36.30	
	R8026H24BPLPxy-7		0.130	0.100	2.40	3000	43.02	1.22	3.63	0.14	31.60	
	R8026M24BPLPxy-7		0.100	0.080	1.92	2600	37.28	1.06	2.73	0.11	27.80	
	R8026L24BPLPxy-7		0.070	0.050	1.20	2200	31.54	0.89	1.95	0.08	23.50	
80x80x38mm (3.15x3.15x1.50in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 7000rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	R8038H12BPLBxy-7	12 (07~14)	1.430	1.200	14.40	7000	98.47	2.79	27.23	1.07	57.10	200g (60pcs)
	R8038M12BPLBxy-7		0.720	0.500	6.00	5500	77.37	2.19	16.81	0.66	50.80	
	R8038L12BPLBxy-7		0.330	0.293	3.52	4000	56.27	1.59	8.89	0.35	42.50	
	R8038H24BPLBxy-7	24 (15~27)	0.650	0.500	12.00	7000	98.47	2.79	27.23	1.07	57.10	200g (60pcs)
	R8038M24BPLBxy-7		0.340	0.270	6.48	5500	77.37	2.19	16.81	0.66	50.80	
	R8038L24BPLBxy-7		0.170	0.160	3.84	4000	56.27	1.59	8.89	0.35	42.50	
	R8038H48BPLBxy-7	48 (36~57)	0.330	0.293	14.06	7000	98.47	2.79	27.23	1.07	57.10	200g (60pcs)
	R8038M48BPLBxy-7		0.200	0.140	6.72	5500	77.37	2.19	16.81	0.66	50.80	
	R8038L48BPLBxy-7		0.100	0.093	4.46	4000	56.27	1.59	8.89	0.35	42.50	
92x92x25mm (3.62x3.62x0.98in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 3600rpm
1b:AS 2a:FG 2b:RD 2c:RDb IP51 IP54 IP56 IP67	R9225H05BPLPxy-7	05 (04~06)	0.800	0.540	2.70	3000	55.78	1.58	4.18	0.16	35.73	106.5g (135pcs)
	R9225M05BPLPxy-7		0.600	0.450	2.25	2600	48.34	1.37	3.14	0.12	31.99	
	R9225L05BPLPxy-7		0.440	0.264	1.32	2200	40.91	1.16	2.25	0.09	27.56	
	R9225X12BPLPxy-7	12 (07~14)	0.470	0.360	4.32	3600	66.94	1.90	6.01	0.24	41.16	106.5g (135pcs)
	R9225H12BPLPxy-7		0.290	0.220	2.64	3000	55.78	1.58	4.18	0.16	35.73	
	R9225M12BPLPxy-7		0.220	0.135	1.62	2600	48.34	1.37	3.14	0.12	31.99	
	R9225L12BPLPxy-7		0.140	0.108	1.30	2200	40.91	1.16	2.25	0.09	27.56	
	R9225X24BPLPxy-7	24 (15~27)	0.240	0.180	4.32	3600	66.94	1.90	6.01	0.24	41.16	106.5g (135pcs)
	R9225H24BPLPxy-7		0.170	0.120	2.88	3000	55.78	1.58	4.18	0.16	35.73	
	R9225M24BPLPxy-7		0.120	0.084	2.02	2600	48.34	1.37	3.14	0.12	31.99	
	R9225L24BPLPxy-7		0.080	0.055	1.32	2200	40.91	1.16	2.25	0.09	27.56	

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FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
92x92x25mm (3.62x3.62x0.98in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 3600rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	R9226H05BPLPxy-7	05 (04~06)	0.870	0.700	3.50	3000	67.70	1.92	4.32	0.17	36.90	114.6g (135pcs)
	R9226M05BPLPxy-7		0.630	0.480	2.40	2600	58.50	1.66	3.29	0.13	32.80	
	R9226L05BPLPxy-7		0.330	0.240	1.20	2200	48.50	1.37	2.33	0.09	27.60	
	R9226Y12BPLPxy-7	12 (07~14)	0.860	0.600	7.20	4000	89.00	2.52	7.00	0.28	44.90	114.6g (135pcs)
	R9226X12BPLPxy-7		0.600	0.440	5.28	3600	80.10	2.27	5.79	0.23	42.30	
	R9226H12BPLPxy-7		0.320	0.230	2.76	3000	67.70	1.92	4.32	0.17	36.90	
	R9226M12BPLPxy-7		0.230	0.170	2.04	2600	58.50	1.66	3.29	0.13	32.80	
	R9226L12BPLPxy-7		0.150	0.110	1.32	2200	48.50	1.37	2.33	0.09	27.60	
	R9226Y24BPLPxy-7	24 (15~27)	0.480	0.300	7.20	4000	89.00	2.52	7.00	0.28	44.90	114.6g (135pcs)
	R9226X24BPLPxy-7		0.320	0.250	6.00	3600	80.10	2.27	5.79	0.23	42.30	
	R9226H24BPLPxy-7		0.180	0.118	2.83	3000	67.70	1.92	4.32	0.17	36.90	
	R9226M24BPLPxy-7		0.143	0.083	1.99	2600	58.50	1.66	3.29	0.13	32.80	
	R9226L24BPLPxy-7		0.085	0.055	1.32	2200	48.50	1.37	2.33	0.09	27.60	
92x92x32mm (3.62x3.62x1.26in) - 7 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	R9232H05BPLBxy-7	05 (04~06)	1.404	0.900	4.50	3250	67.62	1.91	6.95	0.27	38.23	180g (100pcs)
	R9232M05BPLBxy-7		1.001	0.600	3.00	2900	60.33	1.71	5.53	0.22	35.30	
	R9232L05BPLBxy-7		0.559	0.400	2.00	2500	52.01	1.47	4.11	0.16	31.52	
	R9232Y12BPLBxy-7	12 (07~14)	1.040	0.720	8.64	4200	87.38	2.47	11.61	0.46	44.89	180g (100pcs)
	R9232X12BPLBxy-7		0.741	0.564	6.77	3750	78.02	2.21	9.25	0.36	41.94	
	R9232H12BPLBxy-7		0.494	0.300	3.60	3250	67.62	1.91	6.95	0.27	38.23	
	R9232M12BPLBxy-7		0.325	0.250	3.00	2900	60.33	1.71	5.53	0.22	35.30	
	R9232L12BPLBxy-7		0.234	0.170	2.04	2500	52.01	1.47	4.11	0.16	31.52	
	R9232Y24BPLBxy-7	24 (15~27)	0.520	0.330	7.92	4200	87.38	2.47	11.61	0.46	44.89	180g (100pcs)
	R9232X24BPLBxy-7		0.364	0.280	6.72	3750	78.02	2.21	9.25	0.36	41.94	
	R9232H24BPLBxy-7		0.260	0.160	3.84	3250	67.62	1.91	6.95	0.27	38.23	
	R9232M24BPLBxy-7		0.182	0.140	3.36	2900	60.33	1.71	5.53	0.22	35.30	
	R9232L24BPLBxy-7		0.143	0.104	2.50	2500	52.01	1.47	4.11	0.16	31.52	
	R9232Y48BPLBxy-7	48 (36~57)	0.209	0.200	9.60	4200	87.38	2.47	11.61	0.46	44.89	180g (100pcs)
	R9232X48BPLBxy-7		0.143	0.140	6.72	3750	78.02	2.21	9.25	0.36	41.94	
	R9232H48BPLBxy-7		0.104	0.104	4.99	3250	67.62	1.91	6.95	0.27	38.23	
	R9232M48BPLBxy-7		0.078	0.078	3.74	2900	60.33	1.71	5.53	0.22	35.30	
	R9232L48BPLBxy-7		0.052	0.052	2.50	2500	52.01	1.47	4.11	0.16	31.52	
92x92x38mm (3.62x3.62x1.50in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 6500rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	R9238H12BPLBxy-7	12 (07~14)	1.850	1.560	18.72	6500	132.94	3.76	22.88	0.90	59.10	225g (60pcs)
	R9238M12BPLBxy-7		0.820	0.640	7.68	5000	102.26	2.90	13.54	0.53	52.20	
	R9238L12BPLBxy-7		0.330	0.292	3.50	3500	71.58	2.03	6.63	0.26	43.00	
	R9238H24BPLBxy-7	24 (15~27)	0.810	0.720	17.28	6500	132.94	3.76	22.88	0.90	59.10	225g (60pcs)
	R9238M24BPLBxy-7		0.430	0.340	8.16	5000	102.26	2.90	13.54	0.53	52.20	
	R9238L24BPLBxy-7		0.170	0.152	3.65	3500	71.58	2.03	6.63	0.26	43.00	
	R9238H48BPLBxy-7	48 (36~57)	0.390	0.351	16.85	6500	132.94	3.76	22.88	0.90	59.10	225g (60pcs)
	R9238M48BPLBxy-7		0.200	0.176	8.45	5000	102.26	2.90	13.54	0.53	52.20	
	R9238L48BPLBxy-7		0.100	0.080	3.84	3500	71.58	2.03	6.63	0.26	43.00	
120x120x25mm (4.72x4.72x0.98in) - 7 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	R1225H05BPLPxy-7	05 (04~06)	0.920	0.800	4.00	3250	99.47	2.82	8.11	0.32	43.02	212g (40pcs)
	R1225M05BPLPxy-7		0.830	0.700	3.50	2900	88.15	2.50	6.59	0.26	40.09	
	R1225L05BPLPxy-7		0.640	0.400	2.00	2600	78.16	2.21	5.25	0.21	37.19	
	R1225Y12BPLBxy-7	12 (07~14)	0.830	0.670	8.04	4200	129.41	3.66	13.58	0.53	50.97	212g (40pcs)
	R1225X12BPLBxy-7		0.690	0.520	6.24	3750	113.47	3.21	11.17	0.44	48.45	
	R1225H12BPLPxy-7		0.440	0.365	4.38	3250	99.47	2.82	8.11	0.32	43.02	
	R1225M12BPLPxy-7		0.330	0.250	3.00	2900	88.15	2.50	6.59	0.26	40.09	
	R1225L12BPLPxy-7		0.250	0.180	2.16	2600	78.16	2.21	5.25	0.21	37.19	
	R1225Y24BPLBxy-7	24 (15~27)	0.430	0.370	8.88	4200	129.41	3.66	13.58	0.53	50.97	212g (40pcs)
	R1225X24BPLBxy-7		0.330	0.300	7.20	3750	113.47	3.21	11.17	0.44	48.45	
	R1225H24BPLPxy-7		0.200	0.165	3.96	3250	99.47	2.82	8.11	0.32	43.02	
	R1225M24BPLPxy-7		0.160	0.140	3.36	2900	88.15	2.50	6.59	0.26	40.09	
	R1225L24BPLPxy-7		0.120	0.100	2.40	2600	78.16	2.21	5.25	0.21	37.19	
	R1225Y48BPLBxy-7	48 (36~57)	0.280	0.228	10.94	4200	129.41	3.66	13.58	0.53	50.97	212g (40pcs)
	R1225X48BPLBxy-7		0.160	0.160	7.68	3750	113.47	3.21	11.17	0.44	48.45	
	R1225H48BPLPxy-7		0.130	0.090	4.32	3250	99.47	2.82	8.11	0.32	43.02	
	R1225M48BPLPxy-7		0.110	0.080	3.84	2900	88.15	2.50	6.59	0.26	40.09	
	R1225L48BPLPxy-7		0.080	0.060	2.88	2600	78.16	2.21	5.25	0.21	37.19	

Standard DC FANS- R Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
120x120x32mm (4.72x4.72x1.26in) - 5 blade												Life Expectancy at 30℃ - 100,000hrs @ 4200rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	R1232Y12BPLBxy-5	12 (07~14)	1.924	1.498	17.98	4200	172.22	4.88	16.49	0.65	54.43	280g (40pcs)
	R1232X12BPLBxy-5		1.200	1.056	12.67	3750	154.41	4.37	13.13	0.52	51.63	
	R1232H12BPLBxy-5		0.858	0.600	7.20	3250	134.21	3.80	9.77	0.38	47.92	
	R1232M12BPLBxy-5		0.624	0.420	5.04	2900	119.87	3.39	7.78	0.31	44.90	
	R1232L12BPLBxy-5		0.468	0.280	3.36	2600	107.49	3.04	6.27	0.25	42.07	
	R1232Y24BPLBxy-5	24 (15~27)	0.858	0.640	15.36	4200	172.22	4.88	16.49	0.65	54.43	280g (40pcs)
	R1232X24BPLBxy-5		0.676	0.532	12.76	3750	154.41	4.37	13.13	0.52	51.63	
	R1232H24BPLBxy-5		0.416	0.310	7.44	3250	134.21	3.80	9.77	0.38	47.92	
	R1232M24BPLBxy-5		0.273	0.220	5.28	2900	119.87	3.39	7.78	0.31	44.90	
	R1232L24BPLBxy-5		0.221	0.182	4.37	2600	107.49	3.04	6.27	0.25	42.07	
	R1232Y48BPLBxy-5	48 (36~57)	0.377	0.348	16.70	4200	172.22	4.88	16.49	0.65	54.43	280g (40pcs)
	R1232X48BPLBxy-5		0.273	0.257	12.36	3750	154.41	4.37	13.13	0.52	51.63	
	R1232H48BPLBxy-5		0.195	0.176	8.45	3250	134.21	3.80	9.77	0.38	47.92	
	R1232M48BPLBxy-5		0.143	0.126	6.05	2900	119.87	3.39	7.78	0.31	44.90	
	R1232L48BPLBxy-5		0.104	0.090	4.32	2600	107.49	3.04	6.27	0.25	42.07	
120x120x32mm (4.72x4.72x1.26in) - 7 blade												Life Expectancy at 30℃ - 100,000hrs @ 4200rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	R1232H05BPLBxy-7	05 (04~06)	1.400	1.200	6.00	3250	101.08	2.86	9.76	0.38	43.32	280g (40pcs)
	R1232M05BPLBxy-7		0.980	0.900	4.50	2900	90.28	2.56	7.79	0.31	40.09	
	R1232L05BPLBxy-7		0.720	0.715	3.58	2600	80.96	2.29	6.26	0.25	37.49	
	R1232Y12BPLBxy-7	12 (07~14)	1.120	0.700	8.40	4200	131.45	3.72	16.34	0.64	49.71	280g (40pcs)
	R1232X12BPLBxy-7		0.770	0.520	6.24	3750	117.21	3.32	13.00	0.51	46.69	
	R1232H12BPLBxy-7		0.540	0.410	4.92	3250	101.08	2.86	9.76	0.38	43.32	
	R1232M12BPLBxy-7		0.410	0.290	3.48	2900	90.28	2.56	7.79	0.31	40.09	
	R1232L12BPLBxy-7		0.260	0.240	2.88	2600	80.96	2.29	6.26	0.25	37.49	
	R1232Y24BPLBxy-7	24 (15~27)	0.530	0.380	9.12	4200	131.45	3.72	16.34	0.64	49.71	280g (40pcs)
	R1232X24BPLBxy-7		0.390	0.260	6.24	3750	117.21	3.32	13.00	0.51	46.69	
	R1232H24BPLBxy-7		0.240	0.190	4.56	3250	101.08	2.86	9.76	0.38	43.32	
	R1232M24BPLBxy-7		0.160	0.155	3.72	2900	90.28	2.56	7.79	0.31	40.09	
	R1232L24BPLBxy-7		0.130	0.125	3.00	2600	80.96	2.29	6.26	0.25	37.49	
	R1232Y48BPLBxy-7	48 (36~57)	0.280	0.216	10.37	4200	131.45	3.72	16.34	0.64	49.71	280g (40pcs)
	R1232X48BPLBxy-7		0.210	0.170	8.16	3750	117.21	3.32	13.00	0.51	46.69	
	R1232H48BPLBxy-7		0.140	0.115	5.52	3250	101.08	2.86	9.76	0.38	43.32	
	R1232M48BPLBxy-7		0.130	0.096	4.61	2900	90.28	2.56	7.79	0.31	40.09	
	R1232L48BPLBxy-7		0.110	0.080	3.84	2600	80.96	2.29	6.26	0.25	37.49	
120x120x38mm (4.72x4.72x1.50in) - 7 blade												Life Expectancy at 30℃ - 100,000hrs @ 4200rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	R1238H05BPLBxy-7	05 (04~06)	2.220	1.600	8.00	3250	130.45	3.69	11.14	0.44	46.13	315g (40pcs)
	R1238M05BPLBxy-7		1.610	1.300	6.50	2900	115.24	3.26	8.81	0.35	42.96	
	R1238L05BPLBxy-7		1.200	0.961	4.81	2600	104.46	2.96	7.26	0.29	39.83	
	R1238Y12BPLBxy-7	12 (07~14)	1.770	1.267	15.20	4200	167.66	4.75	17.92	0.71	52.99	315g (40pcs)
	R1238X12BPLBxy-7		1.440	0.822	9.86	3750	150.71	4.27	15.17	0.60	50.32	
	R1238H12BPLBxy-7		0.860	0.510	6.12	3250	130.45	3.69	11.14	0.44	46.13	
	R1238M12BPLBxy-7		0.640	0.400	4.80	2900	115.24	3.26	8.81	0.35	42.96	
	R1238L12BPLBxy-7		0.410	0.300	3.60	2600	104.46	2.96	7.26	0.29	39.83	
	R1238Y24BPLBxy-7	24 (15~27)	0.850	0.580	13.92	4200	167.66	4.75	17.92	0.71	52.99	315g (40pcs)
	R1238X24BPLBxy-7		0.630	0.460	11.04	3750	150.71	4.27	15.17	0.60	50.32	
	R1238H24BPLBxy-7		0.370	0.300	7.20	3250	130.45	3.69	11.14	0.44	46.13	
	R1238M24BPLBxy-7		0.290	0.238	5.71	2900	115.24	3.26	8.81	0.35	42.96	
	R1238L24BPLBxy-7		0.180	0.160	3.84	2600	104.46	2.96	7.26	0.29	39.83	
	R1238Y48BPLBxy-7	48 (36~57)	0.540	0.350	16.80	4200	167.66	4.75	17.92	0.71	52.99	315g (40pcs)
	R1238X48BPLBxy-7		0.300	0.220	10.56	3750	150.71	4.27	15.17	0.60	50.32	
	R1238H48BPLBxy-7		0.180	0.150	7.20	3250	130.45	3.69	11.14	0.44	46.13	
	R1238M48BPLBxy-7		0.140	0.110	5.28	2900	115.24	3.26	8.81	0.35	42.96	
	R1238L48BPLBxy-7		0.120	0.080	3.84	2600	104.46	2.96	7.26	0.29	39.83	

* R series uses a 2 coil complementary type drive offering low cost, applicable for higher power demanding applications and have more functions
* Specifications are subject to change without notice.

High Performance DC FANS- D Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
25x25x10mm (0.98x0.98x0.39in) - 5 blade												Life Expectancy at 30℃ - 55,000hrs @ 10000rpm
1b:AS 2a:FG IP51 IP54	D2510H05BPLBxy-5	05 (04~06)	0.260	0.220	1.10	13000	2.60	0.07	6.67	0.26	30.54	7.6g (1080pcs)
	D2510M05BPLBxy-5		0.190	0.190	0.95	10000	2.02	0.06	4.05	0.16	24.21	
	D2510L05BPLBxy-5		0.140	0.140	0.70	7000	1.39	0.04	1.98	0.08	18.14	
	D2510X12BPLBxy-5	12 (07~14)	0.136	0.130	1.56	15000	2.92	0.08	8.00	0.32	34.19	7.6g (1080pcs)
	D2510H12BPLBxy-5		0.090	0.090	1.08	13000	2.60	0.07	6.67	0.26	30.54	
	D2510M12BPLBxy-5		0.070	0.070	0.84	10000	2.02	0.06	4.05	0.16	24.21	
	D2510L12BPLBxy-5		0.060	0.060	0.72	7000	1.39	0.04	1.98	0.08	18.14	
30x30x10mm (1.18x1.18x0.39in) - 5 blade												Life Expectancy at 30℃ - 55,000hrs @ 10000rpm
1b:AS 2a:FG IP51 IP54	D3010H05BPLBxy-5	05 (04~06)	0.200	0.190	0.95	10000	4.23	0.12	5.82	0.23	28.53	8.8g (1080pcs)
	D3010M05BPLBxy-5		0.170	0.150	0.75	8000	3.47	0.10	3.95	0.16	24.16	
	D3010L05BPLBxy-5		0.130	0.100	0.50	6000	2.65	0.07	2.19	0.09	17.68	
	D3010H12BPLBxy-5	12 (07~14)	0.100	0.090	1.08	10000	4.23	0.12	5.82	0.23	28.53	8.8g (1080pcs)
	D3010M12BPLBxy-5		0.090	0.070	0.84	8000	3.47	0.10	3.95	0.16	24.16	
	D3010L12BPLBxy-5		0.050	0.040	0.48	6000	2.65	0.07	2.19	0.09	17.68	
40x40x10mm (1.57x1.57x0.39in) - 5 blade												Life Expectancy at 30℃ - 60,000hrs @ 9000rpm
1b:AS 2a:FG 2b:RD 3c:PPWM IP51 IP54 IP56	D4010Y05BPLPxy-5	05 (04~06)	0.400	0.320	1.60	9000	8.81	0.25	6.91	0.27	32.00	16.8g (800pcs)
	D4010X05BPLPxy-5		0.280	0.220	1.10	7500	7.34	0.21	4.80	0.19	27.20	
	D4010H05BPLPxy-5		0.200	0.150	0.75	6600	6.46	0.18	3.72	0.15	23.90	
	D4010M05BPLPxy-5		0.130	0.100	0.50	5500	5.38	0.15	2.58	0.10	19.20	
	D4010L05BPLPxy-5		0.100	0.080	0.40	4400	4.31	0.12	1.65	0.06	13.30	
	D4010Y12BPLPxy-5	12 (07~14)	0.180	0.140	1.68	9000	8.81	0.25	6.91	0.27	32.00	16.8g (800pcs)
	D4010X12BPLPxy-5		0.140	0.100	1.20	7500	7.34	0.21	4.80	0.19	27.20	
	D4010H12BPLPxy-5		0.130	0.090	1.08	6600	6.46	0.18	3.72	0.15	23.90	
	D4010M12BPLPxy-5		0.060	0.050	0.60	5500	5.38	0.15	2.58	0.10	19.20	
	D4010L12BPLPxy-5		0.040	0.032	0.38	4400	4.31	0.12	1.65	0.06	13.30	
	D4010Y24BPLPxy-5	24 (15~27)	0.130	0.070	1.68	9000	8.81	0.25	6.91	0.27	32.00	16.8g (800pcs)
	D4010X24BPLPxy-5		0.060	0.050	1.20	7500	7.34	0.21	4.80	0.19	27.20	
	D4010H24BPLPxy-5		0.050	0.040	0.96	6600	6.46	0.18	3.72	0.15	23.90	
40x40x10mm (1.57x1.57x0.39in) - 7 blade												Life Expectancy at 30℃ - 60,000hrs @ 9000rpm
1b:AS 2a:FG 2b:RD 3c:PPWM IP51 IP54 IP56	D4010H12BPLPxy-7	12 (07~14)	0.110	0.062	0.74	6600	5.80	0.16	3.66	0.14	28.29	16.8g (800pcs)
	D4010M12BPLPxy-7		0.080	0.051	0.61	5500	4.82	0.14	2.69	0.11	24.17	
	D4010L12BPLPxy-7		0.070	0.032	0.38	4400	3.87	0.11	1.73	0.07	19.39	
	D4010H24BPLPxy-7	24 (15~27)	0.100	0.060	1.44	9000	8.03	0.23	6.75	0.27	36.81	16.8g (800pcs)
	D4010M24BPLPxy-7		0.080	0.054	1.30	8000	7.37	0.21	5.23	0.21	34.97	
	D4010L24BPLPxy-7		0.060	0.040	0.96	7000	6.13	0.17	4.22	0.17	30.44	
40x40x15mm (1.57x1.57x0.59in) - 5 blade												Life Expectancy at 30℃ - 70,000hrs @ 7000rpm
1b:AS 2a:FG 2b:RD IP51 IP54 IP56	D4015X05BPLPxy-5	05 (04~06)	0.450	0.400	2.00	9000	11.33	0.32	9.67	0.38	34.90	26g (600pcs)
	D4015H05BPLPxy-5		0.370	0.250	1.25	7000	8.81	0.25	5.85	0.23	28.30	
	D4015M05BPLPxy-5		0.250	0.180	0.90	6000	7.55	0.21	4.30	0.17	24.30	
	D4015L05BPLPxy-5		0.210	0.150	0.75	5000	6.30	0.18	2.99	0.12	19.60	
	D4015Y12BPLBxy-5	12 (07~14)	0.290	0.230	2.76	11000	13.85	0.39	14.45	0.57	40.10	26g (600pcs)
	D4015X12BPLPxy-5		0.250	0.190	2.28	9000	11.33	0.32	9.67	0.38	34.90	
	D4015H12BPLPxy-5		0.170	0.110	1.32	7000	8.81	0.25	5.85	0.23	28.30	
	D4015M12BPLPxy-5		0.150	0.090	1.08	6000	7.55	0.21	4.30	0.17	24.30	
	D4015L12BPLPxy-5		0.120	0.065	0.78	5000	6.30	0.18	2.99	0.12	19.60	
	D4015Y24BPLBxy-5	24 (15~27)	0.170	0.130	3.12	11000	13.85	0.39	14.45	0.57	40.10	26g (600pcs)
	D4015X24BPLPxy-5		0.120	0.090	2.16	9000	11.33	0.32	9.67	0.38	34.90	
	D4015H24BPLPxy-5		0.100	0.055	1.32	7000	8.81	0.25	5.85	0.23	28.30	
40x40x20mm (1.57x1.57x0.79in) - 5 blade												Life Expectancy at 30℃ - 50,000hrs @ 10000rpm
1b:AS 2a:FG 2b:RD IP51 IP54 IP56 IP67	D4020Y05BPLPxy-5	05 (04~06)	0.420	0.410	2.05	9500	11.73	0.33	8.93	0.35	33.50	29g (600pcs)
	D4020X05BPLPxy-5		0.390	0.380	1.90	8500	10.50	0.30	7.15	0.28	30.60	
	D4020H05BPLPxy-5		0.300	0.250	1.25	7000	8.65	0.24	4.85	0.19	25.20	
	D4020M05BPLPxy-5		0.180	0.170	0.85	5500	6.79	0.19	2.99	0.12	19.30	
	D4020L05BPLPxy-5		0.130	0.120	0.60	4000	4.94	0.14	1.58	0.06	11.00	
	D4020Z12BPLBxy-5	12 (07~14)	0.420	0.370	4.44	15000	18.53	0.52	22.27	0.88	45.40	29g (600pcs)
	D4020Y12BPLPxy-5		0.220	0.210	2.52	10000	12.35	0.35	9.90	0.39	34.80	
	D4020X12BPLPxy-5		0.160	0.160	1.92	8500	10.50	0.30	7.15	0.28	30.60	
	D4020H12BPLPxy-5		0.120	0.120	1.44	7000	8.65	0.24	4.85	0.19	25.20	
	D4020M12BPLPxy-5		0.070	0.070	0.84	5500	6.79	0.19	2.99	0.12	19.30	
	D4020L12BPLPxy-5		0.050	0.050	0.60	4000	4.94	0.14	1.58	0.06	11.00	
	D4020Z24BPLBxy-5	24 (15~27)	0.210	0.180	4.32	15000	18.53	0.52	22.27	0.88	45.40	29g (600pcs)
	D4020Y24BPLPxy-5		0.110	0.110	2.64	10000	12.35	0.35	9.90	0.39	34.80	
	D4020X24BPLPxy-5		0.080	0.080	1.92	8500	10.50	0.30	7.15	0.28	30.60	
	D4020H24BPLPxy-5		0.060	0.060	1.44	7000	8.65	0.24	4.85	0.19	25.20	

ERMEC, S.L. BARCELONA
C/ Francesc Teixidó, 22
08918 Badalona SPAIN
Tel. +34 902 450 160
info@ermec.com
www.ermec.com

ERMEC, S.L. - MADRID
C/ Puerto Rico, 4
28222 Majadahonda (Madrid) SPAIN
bilbao@ermec.com
portugal@ermec.com

High Performance DC FANS- D Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
40x40x20mm (1.57x1.57x0.79in) - 7 blade												Life Expectancy at 30°C - 60,000hrs @ 9000rpm
1b:AS 2a:FG 2b:RD 3c:PPWM IP51 IP54 IP56 IP67	D4020H05BPLPxy-7	05 (04~06)	0.320	0.220	1.10	7000	8.21	0.23	5.74	0.23	32.38	31.6g (600pcs)
	D4020M05BPLPxy-7		0.170	0.140	0.70	5500	6.64	0.19	3.87	0.15	27.14	
	D4020L05BPLPxy-7		0.110	0.083	0.42	4000	4.92	0.14	2.40	0.09	20.78	
	D4020Y12BPLPxy-7	12 (07~14)	0.310	0.160	1.92	9000	10.88	0.31	8.68	0.34	39.18	31.6g (600pcs)
	D4020H12BPLPxy-7		0.140	0.100	1.20	7000	8.21	0.23	5.74	0.23	32.38	
	D4020M12BPLPxy-7		0.100	0.062	0.74	5500	6.64	0.19	3.87	0.15	27.14	
	D4020L12BPLPxy-7		0.050	0.040	0.48	4000	4.92	0.14	2.40	0.09	20.78	
	D4020H24BPLPxy-7	24 (15~27)	0.130	0.045	1.08	7000	8.21	0.23	5.74	0.23	32.38	31.6g (600pcs)
	D4020M24BPLPxy-7		0.100	0.030	0.72	5500	6.64	0.19	3.87	0.15	27.14	
	D4020L24BPLPxy-7		0.060	0.020	0.48	4000	4.92	0.14	2.40	0.09	20.78	
40x40x28mm (1.57x1.57x1.10in) - 7 blade												Life Expectancy at 30°C - 50,000hrs @ 10000rpm
1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3c:PPWM IP51 IP54 IP56	D4028Y12BPLBxy-7	12 (07~14)	1.122	0.850	10.20	15000	24.76	0.70	33.22	1.31	61.07	49g (400pcs)
	D4028X12BPLBxy-7		0.734	0.550	6.60	12500	20.63	0.58	23.07	0.91	55.47	
	D4028H12BPLBxy-7		0.480	0.300	3.60	10000	16.50	0.47	14.76	0.58	49.20	
	D4028M12BPLBxy-7		0.264	0.180	2.16	7500	12.38	0.35	8.30	0.33	39.19	
	D4028L12BPLBxy-7		0.144	0.120	1.44	5000	8.25	0.23	3.69	0.15	32.45	
	D4028Y24BPLBxy-7	24 (15~27)	0.608	0.500	12.00	15000	24.76	0.70	33.22	1.31	61.07	49g (400pcs)
	D4028X24BPLBxy-7		0.480	0.400	9.60	12500	20.63	0.58	23.07	0.91	55.47	
	D4028H24BPLBxy-7		0.360	0.160	3.84	10000	16.50	0.47	14.76	0.58	49.20	
	D4028M24BPLBxy-7		0.144	0.080	1.92	7500	12.38	0.35	8.30	0.33	39.19	
	D4028L24BPLBxy-7		0.084	0.070	1.68	5000	8.25	0.23	3.69	0.15	32.45	
50x50x10mm (1.97x1.97x0.39in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 6000rpm
1b:AS 2a:FG 2b:RD IP51 IP54 IP56	D5010H05BPLPxy-7	05 (04~06)	0.270	0.270	1.35	6000	13.57	0.38	4.67	0.18	33.15	20g (800pcs)
	D5010M05BPLPxy-7		0.160	0.160	0.80	5000	11.31	0.32	3.24	0.13	30.10	
	D5010L05BPLPxy-7		0.100	0.100	0.50	4000	9.04	0.26	2.08	0.08	25.85	
	D5010H12BPLPxy-7	12 (07~14)	0.140	0.130	1.56	6000	13.57	0.38	4.67	0.18	33.15	20g (800pcs)
	D5010M12BPLPxy-7		0.100	0.080	0.96	5000	11.31	0.32	3.24	0.13	30.10	
	D5010L12BPLPxy-7		0.060	0.050	0.60	4000	9.04	0.26	2.08	0.08	25.85	
	D5010H24BPLBxy-7	24 (15~27)	0.100	0.060	1.44	6000	13.57	0.38	4.67	0.18	33.15	20g (800pcs)
	D5010M24BPLBxy-7		0.080	0.050	1.20	5000	11.31	0.32	3.24	0.13	30.10	
50x50x15mm (1.97x1.97x0.59in) - 7 blade												Life Expectancy at 30°C - 60,000hrs @ 8000rpm
1b:AS 2a:FG 2b:RD IP51 IP54 IP56 IP67	D5015H05BPLPxy-7	05 (04~06)	0.300	0.300	1.50	6000	18.04	0.51	4.86	0.19	32.40	33g (480pcs)
	D5015M05BPLPxy-7		0.240	0.240	1.20	5000	15.04	0.43	3.38	0.13	27.60	
	D5015L05BPLPxy-7		0.160	0.160	0.80	4000	12.03	0.34	2.16	0.09	21.80	
	D5015Y12BPLPxy-7	12 (07~14)	0.400	0.350	4.20	8000	22.80	0.65	9.25	0.36	41.50	33g (480pcs)
	D5015X12BPLPxy-7		0.260	0.250	3.00	7000	21.05	0.60	6.62	0.26	36.40	
	D5015H12BPLPxy-7		0.160	0.160	1.92	6000	18.04	0.51	4.86	0.19	32.40	
	D5015M12BPLPxy-7		0.120	0.110	1.32	5000	15.04	0.43	3.38	0.13	27.60	
	D5015L12BPLPxy-7		0.080	0.080	0.96	4000	12.03	0.34	2.16	0.09	21.80	
	D5015Y24BPLPxy-7	24 (15~27)	0.200	0.180	4.32	8000	22.80	0.65	9.25	0.36	41.50	33g (480pcs)
	D5015X24BPLPxy-7		0.150	0.130	3.12	7000	21.05	0.60	6.62	0.26	36.40	
	D5015H24BPLPxy-7		0.100	0.100	2.40	6000	18.04	0.51	4.86	0.19	32.40	
	D5015M24BPLPxy-7		0.060	0.060	1.44	5000	15.04	0.43	3.38	0.13	27.60	
	D5015L24BPLPxy-7		0.040	0.040	0.96	4000	12.03	0.34	2.16	0.09	21.80	
60x60x10mm (2.36x2.36x0.39in) - 11 blade												Life Expectancy at 30°C - 70,000hrs @ 4600rpm
1b:AS 2a:FG 2b:RD IP51 IP54 IP56	D6010H12BPLPxy-11	12 (07~14)	0.280	0.180	2.16	4600	19.87	0.56	3.06	0.12	35.04	30g (480pcs)
	D6010M12BPLPxy-11		0.170	0.120	1.44	4000	17.28	0.49	2.31	0.09	32.07	
	D6010L12BPLPxy-11		0.130	0.090	1.08	3600	15.55	0.44	1.87	0.07	29.70	
	D6010H24BPLPxy-11	24 (15~27)	0.150	0.120	2.88	4600	19.87	0.56	3.06	0.12	35.04	30g (480pcs)
	D6010M24BPLPxy-11		0.100	0.074	1.78	4000	17.28	0.49	2.31	0.09	32.07	
	D6010L24BPLPxy-11		0.060	0.060	1.44	3600	15.55	0.44	1.87	0.07	29.70	
60x60x20mm (2.36x2.36x0.79in) - 7 blade												Life Expectancy at 30°C - 65,000hrs @ 5600rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	D6020X12BPLPxy-7	12 (07~14)	0.310	0.230	2.76	5600	24.30	0.69	8.53	0.34	39.16	54g (240pcs)
	D6020H12BPLPxy-7		0.220	0.155	1.86	4800	20.82	0.59	6.26	0.25	35.14	
	D6020M12BPLPxy-7		0.160	0.108	1.30	4000	17.36	0.49	4.36	0.17	30.37	
	D6020L12BPLPxy-7		0.110	0.056	0.67	3200	13.80	0.39	2.76	0.11	24.50	
	D6020Z24BPLBxy-7	24 (15~27)	0.304	0.270	6.48	7500	33.33	0.94	15.39	0.61	46.83	54g (240pcs)
	D6020Y24BPLPxy-7		0.245	0.200	4.80	6400	27.63	0.78	11.03	0.43	42.46	
	D6020X24BPLPxy-7		0.180	0.121	2.90	5600	24.30	0.69	8.53	0.34	39.16	
	D6020H24BPLPxy-7		0.140	0.072	1.73	4800	20.82	0.59	6.26	0.25	35.14	
	D6020M24BPLPxy-7		0.100	0.055	1.32	4000	17.36	0.49	4.36	0.17	30.37	
	D6020L24BPLPxy-7		0.070	0.035	0.84	3200	13.80	0.39	2.76	0.11	24.50	

High Performance DC FANS- D Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
60x60x20mm (2.36x2.36x0.79in) - 7 blade												Life Expectancy at 30°C - 65,000hrs @ 5600rpm
	D6020Z48BPLBxy-7	48 (36~57)	0.150	0.140	6.72	7500	33.33	0.94	15.39	0.61	46.83	54g (240pcs)
	D6020Y48BPLPxy-7		0.132	0.102	4.90	6400	27.63	0.78	11.03	0.43	42.46	
	D6020X48BPLPxy-7		0.100	0.070	3.36	5600	24.30	0.69	8.53	0.34	39.16	
	D6020H48BPLPxy-7		0.060	0.050	2.40	4800	20.82	0.59	6.26	0.25	35.14	
	D6020M48BPLPxy-7		0.040	0.040	1.92	4000	17.36	0.49	4.36	0.17	30.37	
	D6020L48BPLPxy-7		0.030	0.025	1.20	3200	13.80	0.39	2.76	0.11	24.50	
60x60x25mm (2.36x2.36x0.98in) - 5 blade												Life Expectancy at 30°C - 70,000hrs @ 6000rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	D6025Y12BPLPxy-5	12 (07~14)	0.416	0.280	3.36	6500	33.02	0.94	10.44	0.41	41.80	70.0g (224pcs)
	D6025X12BPLPxy-5		0.286	0.220	2.64	6000	30.48	0.86	8.90	0.35	39.80	
	D6025H12BPLPxy-5		0.247	0.180	2.16	5500	27.94	0.79	7.48	0.29	37.50	
	D6025M12BPLPxy-5		0.156	0.135	1.62	4500	22.86	0.65	5.01	0.20	32.30	
	D6025L12BPLPxy-5		0.104	0.090	1.08	3500	17.78	0.50	3.03	0.12	25.70	
	D6025Y24BPLBxy-5	24 (15~27)	0.182	0.180	4.32	7500	38.09	1.08	13.89	0.55	45.60	70.0g (224pcs)
	D6025X24BPLPxy-5		0.143	0.130	3.12	6000	30.48	0.86	8.90	0.35	39.80	
	D6025H24BPLPxy-5		0.117	0.100	2.40	5500	27.94	0.79	7.48	0.29	37.50	
	D6025M24BPLPxy-5		0.091	0.070	1.68	4500	22.86	0.65	5.01	0.20	32.30	
	D6025L24BPLPxy-5		0.061	0.050	1.20	3500	17.78	0.50	3.03	0.12	25.70	
	D6025Y48BPLBxy-5	48 (36~57)	0.085	0.090	4.32	7500	38.09	1.08	13.89	0.55	45.60	70.0g (224pcs)
	D6025X48BPLPxy-5		0.073	0.070	3.36	6000	30.48	0.86	8.90	0.35	39.80	
	D6025H48BPLPxy-5		0.060	0.060	2.88	5500	27.94	0.79	7.48	0.29	37.50	
	D6025M48BPLPxy-5		0.042	0.042	2.02	4500	22.86	0.65	5.01	0.20	32.30	
	D6025L48BPLPxy-5		0.034	0.034	1.63	3500	17.78	0.50	3.03	0.12	25.70	
60x60x25mm (2.36x2.36x0.98in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 6000rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	D6025X12BPLPxy-7	12 (07~14)	0.370	0.286	3.43	6500	29.17	0.83	12.43	0.49	43.64	73.5g (224pcs)
	D6025H12BPLPxy-7		0.340	0.190	2.28	5500	24.28	0.69	8.91	0.35	39.31	
	D6025M12BPLPxy-7		0.190	0.140	1.68	4500	19.81	0.56	5.99	0.24	34.13	
	D6025L12BPLPxy-7		0.140	0.080	0.96	3500	15.41	0.44	3.57	0.14	27.86	
	D6025X24BPLPxy-7	24 (15~27)	0.200	0.160	3.84	6500	29.17	0.83	12.43	0.49	43.64	73.5g (224pcs)
	D6025H24BPLPxy-7		0.160	0.100	2.40	5500	24.28	0.69	8.91	0.35	39.31	
	D6025M24BPLPxy-7		0.100	0.065	1.56	4500	19.81	0.56	5.99	0.24	34.13	
	D6025L24BPLPxy-7		0.060	0.040	0.96	3500	15.41	0.44	3.57	0.14	27.86	
	D6025X48BPLPxy-7	48 (36~57)	0.080	0.080	3.84	6500	29.17	0.83	12.43	0.49	43.64	73.5g (224pcs)
	D6025H48BPLPxy-7		0.060	0.058	2.78	5500	24.28	0.69	8.91	0.35	39.31	
	D6025M48BPLPxy-7		0.040	0.040	1.92	4500	19.81	0.56	5.99	0.24	34.13	
	D6025L48BPLPxy-7		0.030	0.027	1.30	3500	15.41	0.44	3.57	0.14	27.86	
60x60x38mm (2.36x2.36x1.49in) - 5 blade – PRELIMINARY SPEC												Life Expectancy at 30°C - 60,000hrs @ 8000rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	D6038Y12BPLPxy-5	12 (07~14)	1.450	1.200	14.40	11000	61.12	1.73	36.59	1.44	59.60	128.5g (108pcs)
	D6038X12BPLPxy-5		1.080	0.900	10.80	10000	55.56	1.57	30.24	1.19	57.30	
	D6038H12BPLPxy-5		0.830	0.690	8.28	9000	50.00	1.42	24.49	0.96	54.60	
	D6038M12BPLPxy-5		0.590	0.490	5.88	8000	44.45	1.26	19.35	0.76	51.80	
	D6038L12BPLPxy-5		0.420	0.350	4.20	7000	38.89	1.10	14.82	0.58	48.10	
	D6038Z24BPLPxy-5	24 (15~27)	0.950	0.790	18.96	12000	66.67	1.89	43.54	1.71	63.10	128.5g (108pcs)
	D6038Y24BPLPxy-5		0.680	0.570	13.68	11000	61.12	1.73	36.59	1.44	59.60	
	D6038X24BPLPxy-5		0.550	0.460	11.04	10000	55.56	1.57	30.24	1.19	57.30	
	D6038H24BPLPxy-5		0.420	0.350	8.40	9000	50.00	1.42	24.49	0.96	54.60	
	D6038M24BPLPxy-5		0.300	0.250	6.00	8000	44.45	1.26	19.35	0.76	51.80	
	D6038L24BPLPxy-5		0.210	0.180	4.32	7000	38.89	1.10	14.82	0.58	48.10	
70x70x25mm (2.76x2.76x0.98in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 4000rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	D7025X12BPLPxy-7	12 (07~14)	0.260	0.220	2.52	4400	44.13	1.25	7.37	0.29	41.80	73g (200pcs)
	D7025H12BPLPxy-7		0.200	0.160	1.92	3600	36.10	1.02	4.93	0.19	36.50	
	D7025M12BPLPxy-7		0.180	0.110	1.32	3000	30.10	0.85	3.43	0.14	30.67	
	D7025L12BPLPxy-7		0.120	0.080	0.96	2400	24.10	0.68	2.20	0.09	26.00	
	D7025X24BPLPxy-7	24 (15~27)	0.100	0.100	2.40	4000	40.12	1.14	6.09	0.24	39.30	73g (200pcs)
	D7025H24BPLPxy-7		0.090	0.080	1.92	3600	36.10	1.02	4.93	0.19	36.50	
	D7025M24BPLPxy-7		0.060	0.050	1.20	3000	30.10	0.85	3.43	0.14	30.67	
	D7025L24BPLPxy-7		0.050	0.040	0.96	2400	24.10	0.68	2.20	0.09	26.00	
	D7025X48BPLPxy-7	48 (36~57)	0.070	0.060	2.88	4000	40.12	1.14	6.09	0.24	39.30	73g (200pcs)
	D7025H48BPLPxy-7		0.060	0.050	2.40	3600	36.10	1.02	4.93	0.19	36.50	
	D7025M48BPLPxy-7		0.040	0.030	1.44	3000	30.10	0.85	3.43	0.14	30.67	
	D7025L48BPLPxy-7		0.030	0.020	0.96	2400	24.10	0.68	2.20	0.09	26.00	
80x80x15mm (3.15x3.15x0.59in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 4000rpm
	D8015X12BPLPxy-7	12 (07~14)	0.260	0.260	3.12	4000	43.50	1.23	5.02	0.20	40.14	55g (240pcs)
	D8015H12BPLPxy-7		0.170	0.158	1.90	3200	34.80	0.99	3.21	0.13	34.38	
	D8015M12BPLPxy-7		0.120	0.112	1.34	2800	30.45	0.86	2.46	0.10	31.00	
	D8015L12BPLPxy-7		0.080	0.074	0.89	2400	26.10	0.74	1.81	0.07	27.23	

High Performance DC FANS- G Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
120x120x38mm (4.72x4.72x1.50in) - 7 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	G1238Y12BPLBxy-7	12 (07~14)	1.770	1.150	13.80	4200	167.66	4.75	17.92	0.71	52.99	315g (40pcs)
	G1238X12BPLBxy-7		1.440	0.750	9.00	3750	150.71	4.27	15.17	0.60	50.32	
	G1238H12BPLBxy-7		0.860	0.500	6.00	3250	130.45	3.69	11.14	0.44	46.13	
	G1238M12BPLBxy-7		0.640	0.380	4.56	2900	115.24	3.26	8.81	0.35	42.96	
	G1238L12BPLBxy-7		0.410	0.290	3.48	2600	104.46	2.96	7.26	0.29	39.83	
	G1238Y24BPLBxy-7	24 (15~27)	0.850	0.500	12.00	4200	167.66	4.75	17.92	0.71	52.99	315g (40pcs)
	G1238X24BPLBxy-7		0.630	0.420	10.08	3750	150.71	4.27	15.17	0.60	50.32	
	G1238H24BPLBxy-7		0.370	0.290	6.96	3250	130.45	3.69	11.14	0.44	46.13	
	G1238M24BPLBxy-7		0.290	0.200	4.80	2900	115.24	3.26	8.81	0.35	42.96	
	G1238L24BPLBxy-7		0.180	0.150	3.60	2600	104.46	2.96	7.26	0.29	39.83	
	G1238Y48BPLBxy-7	48 (36~57)	0.540	0.260	12.48	4200	167.66	4.75	17.92	0.71	52.99	315g (40pcs)
	G1238X48BPLBxy-7		0.300	0.210	10.08	3750	150.71	4.27	15.17	0.60	50.32	
	G1238H48BPLBxy-7		0.180	0.135	6.48	3250	130.45	3.69	11.14	0.44	46.13	
	G1238M48BPLBxy-7		0.140	0.105	5.04	2900	115.24	3.26	8.81	0.35	42.96	
	G1238L48BPLBxy-7		0.120	0.077	3.70	2600	104.46	2.96	7.26	0.29	39.83	
170x150x51mm (6.77x5.90x2.01in) - 5 blade												Life Expectancy at 30°C - 100,000hrs @ 4500rpm
1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 6:CL 7a:CS IP51 IP54 IP56 IP67	G1751H12BALBxy-5	12 (07~14)	2.170	1.512	18.14	3500	251.97	7.13	17.31	0.68	57.70	750g (20pcs)
	G1751M12BALBxy-5		1.560	0.850	10.20	3000	215.97	6.12	12.72	0.50	53.68	
	G1751L12BALBxy-5		0.670	0.540	6.48	2500	179.98	5.10	8.83	0.35	48.93	
	G1751Y24BALBxy-5	24 (15~27)	2.340	1.200	28.80	4500	323.96	9.17	28.61	1.13	64.24	750g (20pcs)
	G1751X24BALBxy-5		1.430	0.834	20.02	4000	287.96	8.15	22.61	0.89	61.18	
	G1751H24BALBxy-5		0.980	0.600	14.40	3500	251.97	7.13	17.31	0.68	57.70	
	G1751M24BALBxy-5		0.630	0.420	10.08	3000	215.97	6.12	12.72	0.50	53.68	
	G1751L24BALBxy-5		0.360	0.290	6.96	2500	179.98	5.10	8.83	0.35	48.93	
	G1751Y48BALBxy-5	48 (36~57)	1.100	0.567	27.22	4500	323.96	9.17	28.61	1.13	64.24	750g (20pcs)
	G1751X48BALBxy-5		0.710	0.410	19.68	4000	287.96	8.15	22.61	0.89	61.18	
	G1751H48BALBxy-5		0.500	0.298	14.30	3500	251.97	7.13	17.31	0.68	57.70	
	G1751M48BALBxy-5		0.390	0.230	11.04	3000	215.97	6.12	12.72	0.50	53.68	
	G1751L48BALBxy-5		0.200	0.164	7.87	2500	179.98	5.10	8.83	0.35	48.93	
170x150x51mm (6.77x5.90x2.01in) - 7 blade												Life Expectancy at 30°C - 100,000hrs @ 3500rpm
1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 6:CL 7a:CS IP51 IP54 IP56 IP67	G1751H12BALBxy-7	12 (07~14)	2.250	1.600	19.20	2900	267.71	7.58	14.86	0.59	54.07	750g (20pcs)
	G1751M12BALBxy-7		1.080	1.080	12.96	2500	230.78	6.54	11.04	0.43	50.20	
	G1751L12BALBxy-7		0.710	0.710	8.52	2100	193.86	5.49	7.79	0.31	45.66	
	G1751Y24BALBxy-7	24 (15~27)	1.820	1.400	33.60	3500	323.09	9.15	21.64	0.85	58.97	750g (20pcs)
	G1751X24BALBxy-7		1.020	0.950	22.80	3200	295.40	8.36	18.09	0.71	56.63	
	G1751H24BALBxy-7		0.760	0.740	17.76	2900	267.71	7.58	14.86	0.59	54.07	
	G1751M24BALBxy-7		0.490	0.475	11.40	2500	230.78	6.54	11.04	0.43	50.20	
	G1751L24BALBxy-7		0.310	0.300	7.20	2100	193.86	5.49	7.79	0.31	45.66	
	G1751Y48BALBxy-7	48 (36~57)	1.150	0.623	29.90	3500	323.09	9.15	21.64	0.85	58.97	750g (20pcs)
	G1751X48BALBxy-7		0.760	0.500	24.00	3200	295.40	8.36	18.09	0.71	56.63	
	G1751H48BALBxy-7		0.510	0.370	17.76	2900	267.71	7.58	14.86	0.59	54.07	
	G1751M48BALBxy-7		0.280	0.230	11.04	2500	230.78	6.54	11.04	0.43	50.20	
	G1751L48BALBxy-7		0.170	0.160	7.68	2100	193.86	5.49	7.79	0.31	45.66	

* G series uses a single coil, differential type drive with higher efficiency and for higher power demanding applications
* Specifications are subject to change without notice.

Multifunction High Performance - P Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
92x92x32mm (3.62x3.62x1.26in) - 7 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	P9232Y12BPLBxy-7	12 (08~14)	1.040	0.638	7.66	4200	87.38	2.47	11.61	0.46	44.89	180g (100pcs)
	P9232X12BPLBxy-7		0.741	0.440	5.28	3750	78.02	2.21	9.25	0.36	41.94	
	P9232H12BPLBxy-7		0.494	0.330	3.96	3250	67.62	1.91	6.95	0.27	38.23	
	P9232M12BPLBxy-7		0.325	0.210	2.52	2900	60.33	1.71	5.53	0.22	35.30	
	P9232L12BPLBxy-7		0.234	0.130	1.56	2500	52.01	1.47	4.11	0.16	31.52	
	P9232Y24BPLBxy-7	24 (15~27)	0.520	0.320	7.68	4200	87.38	2.47	11.61	0.46	44.89	180g (100pcs)
	P9232X24BPLBxy-7		0.364	0.220	5.28	3750	78.02	2.21	9.25	0.36	41.94	
	P9232H24BPLBxy-7		0.260	0.160	3.84	3250	67.62	1.91	6.95	0.27	38.23	
	P9232M24BPLBxy-7		0.182	0.120	2.88	2900	60.33	1.71	5.53	0.22	35.30	
	P9232L24BPLBxy-7		0.143	0.076	1.82	2500	52.01	1.47	4.11	0.16	31.52	
	P9232Y48BPLBxy-7	48 (36~57)	0.209	0.161	7.73	4200	87.38	2.47	11.61	0.46	44.89	180g (100pcs)
	P9232X48BPLBxy-7		0.143	0.110	5.28	3750	78.02	2.21	9.25	0.36	41.94	
	P9232H48BPLBxy-7		0.104	0.080	3.84	3250	67.62	1.91	6.95	0.27	38.23	
	P9232M48BPLBxy-7		0.078	0.060	2.88	2900	60.33	1.71	5.53	0.22	35.30	
	P9232L48BPLBxy-7		0.052	0.038	1.82	2500	52.01	1.47	4.11	0.16	31.52	
120x120x25mm (4.72x4.72x0.98in) - 7 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	P1225Y12BPLBxy-7	12 (08~14)	0.830	0.650	7.80	4200	129.41	3.66	13.58	0.53	50.97	212g (40pcs)
	P1225X12BPLBxy-7		0.690	0.470	5.64	3750	113.47	3.21	11.17	0.44	48.45	
	P1225H12BPLPxy-7		0.440	0.350	4.20	3250	99.47	2.82	8.11	0.32	43.02	
	P1225M12BPLPxy-7		0.330	0.230	2.76	2900	88.15	2.50	6.59	0.26	40.09	
	P1225L12BPLPxy-7		0.250	0.175	2.10	2600	78.16	2.21	5.25	0.21	37.19	
	P1225Y24BPLBxy-7	24 (15~27)	0.430	0.300	7.20	4200	129.41	3.66	13.58	0.53	50.97	212g (40pcs)
	P1225X24BPLBxy-7		0.330	0.230	5.52	3750	113.47	3.21	11.17	0.44	48.45	
	P1225H24BPLPxy-7		0.200	0.155	3.72	3250	99.47	2.82	8.11	0.32	43.02	
	P1225M24BPLPxy-7		0.160	0.125	3.00	2900	88.15	2.50	6.59	0.26	40.09	
	P1225L24BPLPxy-7		0.120	0.100	2.40	2600	78.16	2.21	5.25	0.21	37.19	
	P1225Y48BPLBxy-7	48 (36~57)	0.280	0.168	8.06	4200	129.41	3.66	13.58	0.53	50.97	212g (40pcs)
	P1225X48BPLBxy-7		0.160	0.110	5.28	3750	113.47	3.21	11.17	0.44	48.45	
	P1225H48BPLPxy-7		0.130	0.090	4.32	3250	99.47	2.82	8.11	0.32	43.02	
	P1225M48BPLPxy-7		0.110	0.070	3.36	2900	88.15	2.50	6.59	0.26	40.09	
	P1225L48BPLPxy-7		0.080	0.055	2.64	2600	78.16	2.21	5.25	0.21	37.19	
120x120x32mm (4.72x4.72x1.26in) - 5 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	P1232Y12BPLBxy-5	12 (08~14)	1.924	1.150	13.80	4200	172.22	4.88	16.49	0.65	54.43	280g (40pcs)
	P1232X12BPLBxy-5		1.200	0.820	9.84	3750	154.41	4.37	13.13	0.52	51.63	
	P1232H12BPLBxy-5		0.858	0.550	6.60	3250	134.21	3.80	9.77	0.38	47.92	
	P1232M12BPLBxy-5		0.624	0.390	4.68	2900	119.87	3.39	7.78	0.31	44.90	
	P1232L12BPLBxy-5		0.468	0.250	3.00	2600	107.49	3.04	6.27	0.25	42.07	
	P1232Y24BPLBxy-5	24 (15~27)	0.858	0.530	12.72	4200	172.22	4.88	16.49	0.65	54.43	280g (40pcs)
	P1232X24BPLBxy-5		0.676	0.380	9.12	3750	154.41	4.37	13.13	0.52	51.63	
	P1232H24BPLBxy-5		0.416	0.250	6.00	3250	134.21	3.80	9.77	0.38	47.92	
	P1232M24BPLBxy-5		0.273	0.180	4.32	2900	119.87	3.39	7.78	0.31	44.90	
	P1232L24BPLBxy-5		0.221	0.135	3.24	2600	107.49	3.04	6.27	0.25	42.07	
	P1232Y48BPLBxy-5	48 (36~57)	0.377	0.288	13.82	4200	172.22	4.88	16.49	0.65	54.43	280g (40pcs)
	P1232X48BPLBxy-5		0.273	0.220	10.56	3750	154.41	4.37	13.13	0.52	51.63	
	P1232H48BPLBxy-5		0.195	0.143	6.86	3250	134.21	3.80	9.77	0.38	47.92	
	P1232M48BPLBxy-5		0.143	0.110	5.28	2900	119.87	3.39	7.78	0.31	44.90	
	P1232L48BPLBxy-5		0.104	0.080	3.84	2600	107.49	3.04	6.27	0.25	42.07	
120x120x32mm (4.72x4.72x1.26in) - 7 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	P1232Y12BPLBxy-7	12 (08~14)	1.120	0.700	8.40	4200	131.45	3.72	16.34	0.64	49.71	280g (40pcs)
	P1232X12BPLBxy-7		0.770	0.510	6.12	3750	117.21	3.32	13.00	0.51	46.69	
	P1232H12BPLBxy-7		0.540	0.330	3.96	3250	101.08	2.86	9.76	0.38	43.32	
	P1232M12BPLBxy-7		0.410	0.250	3.00	2900	90.28	2.56	7.79	0.31	40.09	
	P1232L12BPLBxy-7		0.260	0.187	2.24	2600	80.96	2.29	6.26	0.25	37.49	
	P1232Y24BPLBxy-7	24 (15~27)	0.530	0.330	7.92	4200	131.45	3.72	16.34	0.64	49.71	280g (40pcs)
	P1232X24BPLBxy-7		0.390	0.240	5.76	3750	117.21	3.32	13.00	0.51	46.69	
	P1232H24BPLBxy-7		0.240	0.176	4.22	3250	101.08	2.86	9.76	0.38	43.32	
	P1232M24BPLBxy-7		0.160	0.130	3.12	2900	90.28	2.56	7.79	0.31	40.09	
	P1232L24BPLBxy-7		0.130	0.110	2.64	2600	80.96	2.29	6.26	0.25	37.49	
	P1232Y48BPLBxy-7	48 (36~57)	0.280	0.170	8.16	4200	131.45	3.72	16.34	0.64	49.71	280g (40pcs)
	P1232X48BPLBxy-7		0.210	0.143	6.86	3750	117.21	3.32	13.00	0.51	46.69	
	P1232H48BPLBxy-7		0.140	0.100	4.80	3250	101.08	2.86	9.76	0.38	43.32	
	P1232M48BPLBxy-7		0.130	0.080	3.84	2900	90.28	2.56	7.79	0.31	40.09	
	P1232L48BPLBxy-7		0.110	0.070	3.36	2600	80.96	2.29	6.26	0.25	37.49	

High Performance DC FANS- D Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
80x80x15mm (3.15x3.15x0.59in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 4000rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	D8015X24BPLPxy-7	24 (15~27)	0.160	0.125	3.00	4000	43.50	1.23	5.02	0.20	40.14	55g (240pcs)
	D8015H24BPLPxy-7		0.120	0.080	1.92	3200	34.80	0.99	3.21	0.13	34.38	
	D8015M24BPLPxy-7		0.070	0.060	1.44	2800	30.45	0.86	2.46	0.10	31.00	
	D8015L24BPLPxy-7		0.050	0.040	0.96	2400	26.10	0.74	1.81	0.07	27.23	
	D8015X48BPLPxy-7	48 (36~57)	0.120	0.074	3.55	4000	43.50	1.23	5.02	0.20	40.14	55g (240pcs)
	D8015H48BPLPxy-7		0.070	0.044	2.12	3200	34.80	0.99	3.21	0.13	34.38	
	D8015M48BPLPxy-7		0.040	0.036	1.72	2800	30.45	0.86	2.46	0.10	31.00	
	D8015L48BPLPxy-7		0.030	0.019	0.89	2400	26.10	0.74	1.81	0.07	27.23	
80x80x25mm (3.15x3.15x0.98in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 3600rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	D8025X12BPLPxy-7	12 (07~14)	0.260	0.185	2.22	3600	47.27	1.34	5.15	0.20	37.85	83g (135pcs)
	D8025H12BPLPxy-7		0.180	0.125	1.50	3000	39.39	1.12	3.58	0.14	32.11	
	D8025M12BPLPxy-7		0.140	0.095	1.14	2600	34.14	0.97	2.69	0.11	28.56	
	D8025L12BPLPxy-7		0.110	0.065	0.78	2200	28.89	0.82	1.92	0.08	23.79	
	D8025X24BPLPxy-7	24 (15~27)	0.120	0.100	2.40	3600	47.27	1.34	5.15	0.20	37.85	83g (135pcs)
	D8025H24BPLPxy-7		0.080	0.060	1.44	3000	39.39	1.12	3.58	0.14	32.11	
	D8025M24BPLPxy-7		0.060	0.050	1.20	2600	34.14	0.97	2.69	0.11	28.56	
	D8025L24BPLPxy-7		0.040	0.035	0.84	2200	28.89	0.82	1.92	0.08	23.79	
	D8025Y48BPLPxy-7	48 (36~57)	0.100	0.090	4.32	4400	57.78	1.64	7.69	0.30	40.55	83g (135pcs)
	D8025X48BPLPxy-7		0.070	0.060	2.88	3600	47.27	1.34	5.15	0.20	37.85	
	D8025H48BPLPxy-7		0.050	0.050	2.40	3000	39.39	1.12	3.58	0.14	32.11	
	D8025M48BPLPxy-7		0.040	0.040	1.92	2600	34.14	0.97	2.69	0.11	28.56	
	D8025L48BPLPxy-7		0.030	0.030	1.44	2200	28.89	0.82	1.92	0.08	23.79	
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	D8026Y12BPLPxy-7	12 (07~14)	0.750	0.600	7.20	5000	71.69	2.03	10.09	0.40	44.90	94g (135pcs)
	D8026X12BPLPxy-7		0.300	0.300	3.60	4200	60.22	1.71	7.12	0.28	40.30	
	D8026H12BPLPxy-7		0.210	0.210	2.52	3600	51.62	1.46	5.23	0.21	36.30	
	D8026M12BPLPxy-7		0.130	0.130	1.56	3000	43.02	1.22	3.63	0.14	31.60	
	D8026L12BPLPxy-7		0.100	0.100	1.20	2600	37.28	1.06	2.73	0.11	27.80	
	D8026Y24BPLPxy-7	24 (15~27)	0.480	0.270	6.48	5000	71.69	2.03	10.09	0.40	44.90	94g (135pcs)
	D8026X24BPLPxy-7		0.170	0.170	4.08	4200	60.22	1.71	7.12	0.28	40.30	
	D8026H24BPLPxy-7		0.130	0.120	2.88	3600	51.62	1.46	5.23	0.21	36.30	
	D8026M24BPLPxy-7		0.100	0.080	1.92	3000	43.02	1.22	3.63	0.14	31.60	
	D8026L24BPLPxy-7		0.070	0.070	1.68	2600	37.28	1.06	2.73	0.11	27.80	
	D8026Y48BPLPxy-7	48 (36~57)	0.210	0.160	7.68	5000	71.69	2.03	10.09	0.40	44.90	94g (135pcs)
	D8026X48BPLPxy-7		0.140	0.090	4.32	4200	60.22	1.71	7.12	0.28	40.30	
	D8026H48BPLPxy-7		0.120	0.065	3.12	3600	51.62	1.46	5.23	0.21	36.30	
	D8026M48BPLPxy-7		0.100	0.040	1.92	3000	43.02	1.22	3.63	0.14	31.60	
	D8026L48BPLPxy-7		0.050	0.035	1.68	2600	37.28	1.06	2.73	0.11	27.80	
92x92x25mm (3.62x3.62x0.98in) - 7 blade												Life Expectancy at 30°C - 70,000hrs @ 3600rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	D9225X12BPLPxy-7	12 (07~14)	0.350	0.300	3.60	3600	66.94	1.90	6.01	0.24	41.16	106.5g (135pcs)
	D9225H12BPLPxy-7		0.230	0.200	2.40	3000	55.78	1.58	4.18	0.16	35.73	
	D9225M12BPLPxy-7		0.180	0.120	1.44	2600	48.34	1.37	3.14	0.12	31.99	
	D9225L12BPLPxy-7		0.140	0.090	1.08	2200	40.91	1.16	2.25	0.09	27.56	
	D9225Y24BPLPxy-7	24 (15~27)	0.252	0.250	6.00	4400	81.81	2.32	8.98	0.35	45.73	106.5g (135pcs)
	D9225X24BPLPxy-7		0.220	0.160	3.84	3600	66.94	1.90	6.01	0.24	41.16	
	D9225H24BPLPxy-7		0.150	0.100	2.40	3000	55.78	1.58	4.18	0.16	35.73	
	D9225M24BPLPxy-7		0.090	0.065	1.56	2600	48.34	1.37	3.14	0.12	31.99	
	D9225L24BPLPxy-7		0.060	0.050	1.20	2200	40.91	1.16	2.25	0.09	27.56	
	D9225Y48BPLPxy-7	48 (36~57)	0.142	0.130	6.24	4400	81.81	2.32	8.98	0.35	45.73	106.5g (135pcs)
	D9225X48BPLPxy-7		0.080	0.080	3.84	3600	66.94	1.90	6.01	0.24	41.16	
	D9225H48BPLPxy-7		0.060	0.060	2.88	3000	55.78	1.58	4.18	0.16	35.73	
	D9225M48BPLPxy-7		0.050	0.044	2.11	2600	48.34	1.37	3.14	0.12	31.99	
	D9225L48BPLPxy-7		0.040	0.031	1.48	2200	40.91	1.16	2.25	0.09	27.56	
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	D9226Y12BPLPxy-7	12 (07~14)	0.860	0.800	9.60	4800	106.80	3.02	11.23	0.44	50.10	114.6g (135pcs)
	D9226X12BPLPxy-7		0.600	0.550	6.60	4200	92.30	2.61	7.31	0.29	46.40	
	D9226H12BPLPxy-7		0.320	0.350	4.20	3600	80.10	2.27	5.79	0.23	42.30	
	D9226M12BPLPxy-7		0.230	0.230	2.76	3000	67.70	1.92	4.32	0.17	36.90	
	D9226L12BPLPxy-7		0.150	0.150	1.80	2600	58.50	1.66	3.29	0.13	32.80	
	D9226Y24BPLPxy-7	24 (15~27)	0.480	0.400	9.60	4800	106.80	3.02	11.23	0.44	50.10	114.6g (135pcs)
	D9226X24BPLPxy-7		0.320	0.300	7.20	4200	92.30	2.61	7.31	0.29	46.40	
	D9226H24BPLPxy-7		0.180	0.180	4.32	3600	80.10	2.27	5.79	0.23	42.30	
	D9226M24BPLPxy-7		0.143	0.115	2.76	3000	67.70	1.92	4.32	0.17	36.90	
	D9226L24BPLPxy-7		0.085	0.078	1.87	2600	58.50	1.66	3.29	0.13	32.80	
	D9226Y48BPLPxy-7	48 (36~57)	0.270	0.230	11.04	4800	106.80	3.02	11.23	0.44	50.10	114.6g (135pcs)
	D9226X48BPLPxy-7		0.120	0.130	6.24	4200	92.30	2.61	7.31	0.29	46.40	
	D9226H48BPLPxy-7		0.090	0.090	4.32	3600	80.10	2.27	5.79	0.23	42.30	
	D9226M48BPLPxy-7		0.060	0.060	2.88	3000	67.70	1.92	4.32	0.17	36.90	
	D9226L48BPLPxy-7		0.046	0.046	2.21	2600	58.50	1.66	3.29	0.13	32.80	

High Performance DC FANS- G Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
92x92x32mm (0.98x0.98x0.39in) - 5 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	G9232Y12BPLBxy-7	12 (07~14)	1.040	0.638	7.66	4200	87.38	2.47	11.61	0.46	44.89	180g (100pcs)
	G9232X12BPLBxy-7		0.741	0.510	6.12	3750	78.02	2.21	9.25	0.36	41.94	
	G9232H12BPLBxy-7		0.494	0.330	3.96	3250	67.62	1.91	6.95	0.27	38.23	
	G9232M12BPLBxy-7		0.325	0.210	2.52	2900	60.33	1.71	5.53	0.22	35.30	
	G9232L12BPLBxy-7		0.234	0.130	1.56	2500	52.01	1.47	4.11	0.16	31.52	
	G9232Y24BPLBxy-7	24 (15~27)	0.520	0.320	7.68	4200	87.38	2.47	11.61	0.46	44.89	180g (100pcs)
	G9232X24BPLBxy-7		0.364	0.220	5.28	3750	78.02	2.21	9.25	0.36	41.94	
	G9232H24BPLBxy-7		0.260	0.160	3.84	3250	67.62	1.91	6.95	0.27	38.23	
	G9232M24BPLBxy-7		0.182	0.120	2.88	2900	60.33	1.71	5.53	0.22	35.30	
	G9232L24BPLBxy-7		0.143	0.076	1.82	2500	52.01	1.47	4.11	0.16	31.52	
	G9232Y48BPLBxy-7	48 (36~57)	0.209	0.161	7.73	4200	87.38	2.47	11.61	0.46	44.89	180g (100pcs)
	G9232X48BPLBxy-7		0.143	0.110	5.28	3750	78.02	2.21	9.25	0.36	41.94	
	G9232H48BPLBxy-7		0.104	0.080	3.84	3250	67.62	1.91	6.95	0.27	38.23	
	G9232M48BPLBxy-7		0.078	0.060	2.88	2900	60.33	1.71	5.53	0.22	35.30	
	G9232L48BPLBxy-7		0.052	0.038	1.82	2500	52.01	1.47	4.11	0.16	31.52	
120x120x25mm (4.72x4.72x0.98in) - 7 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	G1225Y12BPLBxy-7	12 (07~14)	0.830	0.650	7.80	4200	129.41	3.66	13.58	0.53	50.97	212g (40pcs)
	G1225X12BPLBxy-7		0.690	0.470	5.64	3750	113.47	3.21	11.17	0.44	48.45	
	G1225H12BPLPxy-7		0.440	0.350	4.20	3250	99.47	2.82	8.11	0.32	43.02	
	G1225M12BPLPxy-7		0.330	0.230	2.76	2900	88.15	2.50	6.59	0.26	40.09	
	G1225L12BPLPxy-7		0.250	0.175	2.10	2600	78.16	2.21	5.25	0.21	37.19	
	G1225Y24BPLBxy-7	24 (15~27)	0.430	0.350	8.40	4200	129.41	3.66	13.58	0.53	50.97	212g (40pcs)
	G1225X24BPLBxy-7		0.330	0.280	6.72	3750	113.47	3.21	11.17	0.44	48.45	
	G1225H24BPLPxy-7		0.200	0.155	3.72	3250	99.47	2.82	8.11	0.32	43.02	
	G1225M24BPLPxy-7		0.160	0.135	3.24	2900	88.15	2.50	6.59	0.26	40.09	
	G1225L24BPLPxy-7		0.120	0.100	2.40	2600	78.16	2.21	5.25	0.21	37.19	
	G1225Y48BPLBxy-7	48 (36~57)	0.280	0.220	10.56	4200	129.41	3.66	13.58	0.53	50.97	212g (40pcs)
	G1225X48BPLBxy-7		0.160	0.110	5.28	3750	113.47	3.21	11.17	0.44	48.45	
	G1225H48BPLPxy-7		0.130	0.090	4.32	3250	99.47	2.82	8.11	0.32	43.02	
	G1225M48BPLPxy-7		0.110	0.070	3.36	2900	88.15	2.50	6.59	0.26	40.09	
	G1225L48BPLPxy-7		0.080	0.060	2.88	2600	78.16	2.21	5.25	0.21	37.19	
120x120x32mm (4.72x4.72x1.26in) - 5 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	G1232Y12BPLBxy-5	12 (07~14)	1.924	1.150	13.80	4200	172.22	4.88	16.49	0.65	54.43	280g (40pcs)
	G1232X12BPLBxy-5		1.200	0.820	9.84	3750	154.41	4.37	13.13	0.52	51.63	
	G1232H12BPLBxy-5		0.858	0.550	6.60	3250	134.21	3.80	9.77	0.38	47.92	
	G1232M12BPLBxy-5		0.624	0.390	4.68	2900	119.87	3.39	7.78	0.31	44.90	
	G1232L12BPLBxy-5		0.468	0.250	3.00	2600	107.49	3.04	6.27	0.25	42.07	
	G1232Y24BPLBxy-5	24 (15~27)	0.858	0.530	12.72	4200	172.22	4.88	16.49	0.65	54.43	280g (40pcs)
	G1232X24BPLBxy-5		0.676	0.380	9.12	3750	154.41	4.37	13.13	0.52	51.63	
	G1232H24BPLBxy-5		0.416	0.250	6.00	3250	134.21	3.80	9.77	0.38	47.92	
	G1232M24BPLBxy-5		0.273	0.180	4.32	2900	119.87	3.39	7.78	0.31	44.90	
	G1232L24BPLBxy-5		0.221	0.135	3.24	2600	107.49	3.04	6.27	0.25	42.07	
	G1232Y48BPLBxy-5	48 (36~57)	0.377	0.288	13.82	4200	172.22	4.88	16.49	0.65	54.43	280g (40pcs)
	G1232X48BPLBxy-5		0.273	0.220	10.56	3750	154.41	4.37	13.13	0.52	51.63	
	G1232H48BPLBxy-5		0.195	0.143	6.86	3250	134.21	3.80	9.77	0.38	47.92	
	G1232M48BPLBxy-5		0.143	0.110	5.28	2900	119.87	3.39	7.78	0.31	44.90	
	G1232L48BPLBxy-5		0.104	0.080	3.84	2600	107.49	3.04	6.27	0.25	42.07	
120x120x32mm (4.72x4.72x1.26in) - 7 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1b:AS 2a:FG 2b:RD 2c:RDb 6:CL IP51 IP54 IP56 IP67	G1232Y12BPLBxy-7	12 (07~14)	1.120	0.700	8.40	4200	131.45	3.72	16.34	0.64	49.71	280g (40pcs)
	G1232X12BPLBxy-7		0.770	0.510	6.12	3750	117.21	3.32	13.00	0.51	46.69	
	G1232H12BPLBxy-7		0.540	0.330	3.96	3250	101.08	2.86	9.76	0.38	43.32	
	G1232M12BPLBxy-7		0.410	0.270	3.24	2900	90.28	2.56	7.79	0.31	40.09	
	G1232L12BPLBxy-7		0.260	0.187	2.24	2600	80.96	2.29	6.26	0.25	37.49	
	G1232Y24BPLBxy-7	24 (15~27)	0.530	0.330	7.92	4200	131.45	3.72	16.34	0.64	49.71	280g (40pcs)
	G1232X24BPLBxy-7		0.390	0.240	5.76	3750	117.21	3.32	13.00	0.51	46.69	
	G1232H24BPLBxy-7		0.240	0.176	4.22	3250	101.08	2.86	9.76	0.38	43.32	
	G1232M24BPLBxy-7		0.160	0.130	3.12	2900	90.28	2.56	7.79	0.31	40.09	
	G1232L24BPLBxy-7		0.130	0.110	2.64	2600	80.96	2.29	6.26	0.25	37.49	
	G1232Y48BPLBxy-7	48 (36~57)	0.280	0.170	8.16	4200	131.45	3.72	16.34	0.64	49.71	280g (40pcs)
	G1232X48BPLBxy-7		0.210	0.143	6.86	3750	117.21	3.32	13.00	0.51	46.69	
	G1232H48BPLBxy-7		0.140	0.100	4.80	3250	101.08	2.86	9.76	0.38	43.32	
	G1232M48BPLBxy-7		0.130	0.080	3.84	2900	90.28	2.56	7.79	0.31	40.09	
	G1232L48BPLBxy-7		0.110	0.070	3.36	2600	80.96	2.29	6.26	0.25	37.49	

Multifunction High Performance - P Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
120x120x38mm (4.72x4.72x1.50in) - 7 blade												Life Expectancy at 30°C - 100,000hrs @ 4200rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	P1238Y12BPLBxy-7	12 (08~14)	1.770	0.970	11.64	4200	167.66	4.75	17.92	0.71	52.99	315g (40pcs)
	P1238X12BPLBxy-7		1.440	0.730	8.76	3750	150.71	4.27	15.17	0.60	50.32	
	P1238H12BPLBxy-7		0.860	0.500	6.00	3250	130.45	3.69	11.14	0.44	46.13	
	P1238M12BPLBxy-7		0.640	0.370	4.44	2900	115.24	3.26	8.81	0.35	42.96	
	P1238L12BPLBxy-7		0.410	0.275	3.30	2600	104.46	2.96	7.26	0.29	39.83	
	P1238Y24BPLBxy-7	24 (15~27)	0.850	0.480	11.52	4200	167.66	4.75	17.92	0.71	52.99	315g (40pcs)
	P1238X24BPLBxy-7		0.630	0.410	9.84	3750	150.71	4.27	15.17	0.60	50.32	
	P1238H24BPLBxy-7		0.370	0.280	6.72	3250	130.45	3.69	11.14	0.44	46.13	
	P1238M24BPLBxy-7		0.290	0.195	4.68	2900	115.24	3.26	8.81	0.35	42.96	
	P1238L24BPLBxy-7		0.180	0.143	3.43	2600	104.46	2.96	7.26	0.29	39.83	
	P1238Y48BPLBxy-7	48 (36~57)	0.540	0.250	12.00	4200	167.66	4.75	17.92	0.71	52.99	315g (40pcs)
	P1238X48BPLBxy-7		0.300	0.200	9.60	3750	150.71	4.27	15.17	0.60	50.32	
	P1238H48BPLBxy-7		0.180	0.130	6.24	3250	130.45	3.69	11.14	0.44	46.13	
	P1238M48BPLBxy-7		0.140	0.100	4.80	2900	115.24	3.26	8.81	0.35	42.96	
	P1238L48BPLBxy-7		0.120	0.072	3.46	2600	104.46	2.96	7.26	0.29	39.83	
170x150x51mm (6.77x5.90x2.01in) - 5 blade												Life Expectancy at 30°C - 100,000hrs @ 4500rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	P1751H12BALBxy-5	12 (08~14)	2.170	1.512	18.14	3500	251.97	7.13	17.31	0.68	57.70	750g (20pcs)
	P1751M12BALBxy-5		1.560	0.850	10.20	3000	215.97	6.12	12.72	0.50	53.68	
	P1751L12BALBxy-5		0.670	0.540	6.48	2500	179.98	5.10	8.83	0.35	48.93	
	P1751Z24BALBxy-5	24 (15~27)	2.131	1.800	43.20	5200	374.35	10.60	38.21	1.50	68.01	750g (20pcs)
	P1751Y24BALBxy-5		2.340	1.200	28.80	4500	323.96	9.17	28.61	1.13	64.24	
	P1751X24BALBxy-5		1.430	0.834	20.02	4000	287.96	8.15	22.61	0.89	61.18	
	P1751H24BALBxy-5		0.980	0.600	14.40	3500	251.97	7.13	17.31	0.68	57.70	
	P1751M24BALBxy-5		0.630	0.420	10.08	3000	215.97	6.12	12.72	0.50	53.68	
	P1751L24BALBxy-5		0.360	0.290	6.96	2500	179.98	5.10	8.83	0.35	48.93	
	P1751Z48BALBxy-5	48 (36~57)	1.159	0.875	42.00	5200	374.35	10.60	38.21	1.50	68.01	750g (20pcs)
	P1751Y48BALBxy-5		1.100	0.567	27.22	4500	323.96	9.17	28.61	1.13	64.24	
	P1751X48BALBxy-5		0.710	0.410	19.68	4000	287.96	8.15	22.61	0.89	61.18	
	P1751H48BALBxy-5		0.500	0.298	14.30	3500	251.97	7.13	17.31	0.68	57.70	
	P1751M48BALBxy-5		0.390	0.230	11.04	3000	215.97	6.12	12.72	0.50	53.68	
	P1751L48BALBxy-5		0.200	0.164	7.87	2500	179.98	5.10	8.83	0.35	48.93	
170x150x51mm (6.77x5.90x2.01in) - 7 blade												Life Expectancy at 30°C - 100,000hrs @ 3500rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	P1751H12BALBxy-7	12 (08~14)	2.250	1.600	19.20	2900	267.71	7.58	14.86	0.59	54.07	750g (20pcs)
	P1751M12BALBxy-7		1.080	1.080	12.96	2500	230.78	6.54	11.04	0.43	50.20	
	P1751L12BALBxy-7		0.710	0.710	8.52	2100	193.86	5.49	7.79	0.31	45.66	
	P1751Y24BALBxy-7	24 (15~27)	1.820	1.400	33.60	3500	323.09	9.15	21.64	0.85	58.97	750g (20pcs)
	P1751X24BALBxy-7		1.020	0.950	22.80	3200	295.40	8.36	18.09	0.71	56.63	
	P1751H24BALBxy-7		0.760	0.740	17.76	2900	267.71	7.58	14.86	0.59	54.07	
	P1751M24BALBxy-7		0.490	0.475	11.40	2500	230.78	6.54	11.04	0.43	50.20	
	P1751L24BALBxy-7		0.310	0.300	7.20	2100	193.86	5.49	7.79	0.31	45.66	
	P1751Y48BALBxy-7	48 (36~57)	1.150	0.650	31.20	3500	323.09	9.15	21.64	0.85	58.97	750g (20pcs)
	P1751X48BALBxy-7		0.760	0.500	24.00	3200	295.40	8.36	18.09	0.71	56.63	
	P1751H48BALBxy-7		0.510	0.370	17.76	2900	267.71	7.58	14.86	0.59	54.07	
	P1751M48BALBxy-7		0.280	0.230	11.04	2500	230.78	6.54	11.04	0.43	50.20	
	P1751L48BALBxy-7		0.170	0.160	7.68	2100	193.86	5.49	7.79	0.31	45.66	

* P series use a single coil differential type drive with higher efficiency performance and for higher power demanding applications offering the complete line of functions.
* Specifications are subject to change without notice.

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
80x80x38mm (3.15x3.15x1.50in) - 7 blade												Life Expectancy at 30°C - 60,000hrs @ 8000rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	K8038X12BPLBxy-7	12 (08~14)	2.150	1.350	16.20	8000	112.53	3.19	35.57	1.40	60.59	200g (60pcs)
	K8038H12BPLBxy-7		1.430	0.900	10.80	7000	98.47	2.79	27.23	1.07	57.10	
	K8038M12BPLBxy-7		0.720	0.500	6.00	5500	77.37	2.19	16.81	0.66	50.80	
	K8038L12BPLBxy-7		0.330	0.250	3.00	4000	56.27	1.59	8.89	0.35	42.50	
	K8038Y24BPLBxy-7	24 (15~27)	1.760	1.200	28.80	10000	140.67	3.98	55.58	2.19	66.40	200g (60pcs)
	K8038X24BPLBxy-7		1.200	0.900	21.60	8500	119.57	3.39	40.15	1.58	62.20	
	K8038H24BPLBxy-7		0.650	0.400	9.60	7000	98.47	2.79	27.23	1.07	57.10	
	K8038M24BPLBxy-7		0.340	0.300	7.20	5500	77.37	2.19	16.81	0.66	50.80	
	K8038L24BPLBxy-7		0.170	0.160	3.84	4000	56.27	1.59	8.89	0.35	42.50	
	K8038Y48BPLBxy-7	48 (36~57)	0.850	0.600	28.80	10000	140.67	3.98	55.58	2.19	66.40	200g (60pcs)
	K8038X48BPLBxy-7		0.530	0.490	23.52	8500	119.57	3.39	40.15	1.58	62.20	
	K8038H48BPLBxy-7		0.330	0.250	12.00	7000	98.47	2.79	27.23	1.07	57.10	
	K8038M48BPLBxy-7		0.200	0.165	7.92	5500	77.37	2.19	16.81	0.66	50.80	
	K8038L48BPLBxy-7		0.100	0.090	4.32	4000	56.27	1.59	8.89	0.35	42.50	

Multifunction Extra High Performance - K Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
92x92x38mm (3.62x3.62x1.50in) - 7 blade												Life Expectancy at 30°C - 60,000hrs @ 8000rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	K9238H12BPLBxy-7	12 (08~14)	1.850	1.450	17.40	6500	132.94	3.76	22.88	0.90	59.10	225g (60pcs)
	K9238M12BPLBxy-7		0.820	0.600	7.20	5000	102.26	2.90	13.54	0.53	52.20	
	K9238L12BPLBxy-7		0.330	0.270	3.24	3500	71.58	2.03	6.63	0.26	43.00	
	K9238X24BPLBxy-7	24 (15~27)	1.560	1.200	28.80	8000	163.61	4.63	34.65	1.36	64.50	225g (60pcs)
	K9238H24BPLBxy-7		0.810	0.640	15.36	6500	132.94	3.76	22.88	0.90	59.10	
	K9238M24BPLBxy-7		0.430	0.310	7.44	5000	102.26	2.90	13.54	0.53	52.20	
	K9238L24BPLBxy-7		0.170	0.140	3.36	3500	71.58	2.03	6.63	0.26	43.00	
	K9238X48BPLBxy-7	48 (36~57)	0.720	0.615	29.52	8000	163.61	4.63	34.65	1.36	64.50	225g (60pcs)
	K9238H48BPLBxy-7		0.390	0.320	15.36	6500	132.94	3.76	22.88	0.90	59.10	
	K9238M48BPLBxy-7		0.200	0.165	7.92	5000	102.26	2.90	13.54	0.53	52.20	
	K9238L48BPLBxy-7		0.100	0.070	3.36	3500	71.58	2.03	6.63	0.26	43.00	
120x120x25mm (4.72x4.72x0.98in) - 7 blade												Life Expectancy at 30°C - 80,000hrs @ 5800rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	K1225Y12BPLBxy-7	12 (08~14)	1.770	1.473	17.68	5500	169.12	4.79	22.28	0.88	57.03	212g (40pcs)
	K1225X12BPLBxy-7		1.334	1.168	14.02	5200	159.89	4.53	19.91	0.78	55.99	
	K1225H12BPLBxy-7		1.002	0.740	8.88	4700	143.38	4.06	16.42	0.65	53.74	
	K1225Y24BPLBxy-7	24 (15~27)	0.848	0.680	16.32	5800	176.75	5.00	24.80	0.98	58.23	212g (40pcs)
	K1225X24BPLBxy-7		0.725	0.613	14.71	5200	159.89	4.53	19.91	0.78	55.99	
	K1225H24BPLBxy-7		0.557	0.400	9.60	4700	143.38	4.06	16.42	0.65	53.74	
	K1225Y48BPLBxy-7	48 (36~57)	0.529	0.380	18.24	5800	176.75	5.00	24.80	0.98	58.23	212g (40pcs)
	K1225X48BPLBxy-7		0.379	0.310	14.88	5200	159.89	4.53	19.91	0.78	55.99	
	K1225H48BPLBxy-7		0.295	0.210	10.08	4700	143.38	4.06	16.42	0.65	53.74	
120x120x32mm (4.72x4.72x1.26in) - 5 blade												Life Expectancy at 30°C - 80,000hrs @ 5800rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	K1232X12BPLBxy-5	12 (08~14)	2.826	1.760	21.12	5200	215.11	6.09	25.09	0.99	60.73	280g (40pcs)
	K1232H12BPLBxy-5		1.767	1.310	15.72	4700	194.42	5.51	20.50	0.81	58.10	
	K1232Y24BPLBxy-5	24 (15~27)	1.710	1.353	32.46	5800	239.93	6.79	31.22	1.23	64.51	280g (40pcs)
	K1232X24BPLBxy-5		1.153	0.975	23.39	5200	215.11	6.09	25.09	0.99	60.73	
	K1232H24BPLBxy-5		0.882	0.720	17.27	4700	194.42	5.51	20.50	0.81	58.10	
	K1232Y48BPLBxy-5	48 (36~57)	1.211	0.637	30.60	5800	239.93	6.79	31.22	1.23	64.51	280g (40pcs)
	K1232X48BPLBxy-5		0.778	0.459	22.05	5200	215.11	6.09	25.09	0.99	60.73	
	K1232H48BPLBxy-5		0.574	0.368	17.66	4700	194.42	5.51	20.50	0.81	58.10	
120x120x32mm (4.72x4.72x1.26in) - 7 blade												Life Expectancy at 30°C - 80,000hrs @ 5800rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	K1232X12BPLBxy-7	12 (08~14)	1.397	1.397	16.76	5200	162.97	4.61	25.04	0.99	57.60	280g (40pcs)
	K1232H12BPLBxy-7		1.106	1.100	13.20	4700	147.30	4.17	20.46	0.81	54.35	
	K1232Y24BPLBxy-7	24 (15~27)	0.896	0.896	21.50	5800	178.59	5.06	27.61	1.09	59.74	280g (40pcs)
	K1232X24BPLBxy-7		0.683	0.683	16.39	5200	162.97	4.61	25.04	0.99	57.60	
	K1232H24BPLBxy-7		0.574	0.574	13.78	4700	147.30	4.17	20.46	0.81	54.35	
	K1232Y48BPLBxy-7	48 (36~57)	0.622	0.608	29.18	5800	178.59	5.06	27.61	1.09	59.74	280g (40pcs)
	K1232X48BPLBxy-7		0.414	0.414	19.87	5200	162.97	4.61	25.04	0.99	57.60	
	K1232H48BPLBxy-7		0.316	0.316	15.17	4700	147.30	4.17	20.46	0.81	54.35	
120x120x38mm (4.72x4.72x1.50in) - 5 blade												Life Expectancy at 30°C - 80,000hrs @ 5800rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	K1238X12BPLBxy-5	12 (08~14)	2.513	2.100	25.20	5200	212.57	6.02	24.38	0.96	61.89	315g (40pcs)
	K1238H12BPLBxy-5		1.846	1.650	19.80	4700	190.31	5.39	21.13	0.83	57.78	
	K1238Y24BPLBxy-5	24 (15~27)	1.733	1.200	28.80	5500	224.58	6.36	28.29	1.11	63.63	315g (40pcs)
	K1238X24BPLBxy-5		1.110	0.950	22.80	5200	212.57	6.02	24.38	0.96	61.89	
	K1238H24BPLBxy-5		0.938	0.680	16.32	4700	190.31	5.39	21.13	0.83	57.78	
	K1238Y48BPLBxy-5	48 (36~57)	0.826	0.610	29.28	5800	236.83	6.71	31.47	1.24	65.02	315g (40pcs)
	K1238X48BPLBxy-5		0.602	0.510	24.48	5200	212.57	6.02	24.38	0.96	61.89	
	K1238H48BPLBxy-5		0.520	0.355	17.04	4700	190.31	5.39	21.13	0.83	57.78	
120x120x38mm (4.72x4.72x1.50in) - 7 blade												Life Expectancy at 30°C - 80,000hrs @ 5800rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	K1238X12BPLBxy-7	12 (08~14)	2.544	2.100	25.20	5200	208.98	5.92	29.16	1.15	61.89	315g (40pcs)
	K1238H12BPLBxy-7		1.950	1.625	19.50	4700	188.64	5.34	23.30	0.92	57.78	
	K1238Y24BPLBxy-7	24 (15~27)	1.766	1.472	35.33	5800	231.53	6.56	34.17	1.35	65.02	315g (40pcs)
	K1238X24BPLBxy-7		1.207	0.960	23.04	5200	208.98	5.92	29.16	1.15	61.89	
	K1238H24BPLBxy-7		0.960	0.640	15.36	4700	188.64	5.34	23.30	0.92	57.78	
	K1238Y48BPLBxy-7	48 (36~57)	0.886	0.750	36.00	5800	231.53	6.56	34.17	1.35	65.02	315g (40pcs)
	K1238X48BPLBxy-7		0.878	0.502	24.10	5200	208.98	5.92	29.16	1.15	61.89	
	K1238H48BPLBxy-7		0.509	0.400	19.20	4700	188.64	5.34	23.30	0.92	57.78	

Multifunction Extra High Performance - K Series

FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
120x120x38mm (4.72x4.72x1.50in) - 11 blade												Life Expectancy at 30℃ - 100,000hrs @ 5800rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	K1238M12BALAxy-11	12 (08~14)	3.250	2.400	28.80	4200	188.15	5.33	19.47	0.77	60.00	550g (40pcs)
	K1238L12BALAxy-11		2.500	1.850	22.20	3700	165.75	4.69	15.11	0.59	56.70	
	K1238Y24BALAxy-11	24 (15~27)	3.770	2.600	62.40	5800	259.83	7.36	37.13	1.46	68.40	550g (40pcs)
	K1238X24BALAxy-11		2.990	1.900	45.60	5200	232.95	6.60	29.84	1.17	65.50	
	K1238H24BALAxy-11		2.210	1.600	38.40	4700	210.55	5.96	24.38	0.96	62.90	
	K1238M24BALAxy-11		1.690	1.200	28.80	4200	188.15	5.33	19.47	0.77	60.00	
	K1238L24BALAxy-11		1.300	0.950	22.80	3700	165.75	4.69	15.11	0.59	56.70	
	K1238Z48BALAxy-11	48 (36~57)	2.340	1.700	81.60	6200	277.75	7.86	42.43	1.67	70.10	550g (40pcs)
	K1238Y48BALAxy-11		1.880	1.300	62.40	5800	259.83	7.36	37.13	1.46	68.40	
	K1238X48BALAxy-11		1.490	1.000	48.00	5200	232.95	6.60	29.84	1.17	65.50	
	K1238H48BALAxy-11		1.100	0.800	38.40	4700	210.55	5.96	24.38	0.96	62.90	
	K1238M48BALAxy-11		0.840	0.600	28.80	4200	188.15	5.33	19.47	0.77	60.00	
	K1238L48BALAxy-11		0.650	0.475	22.80	3700	165.75	4.69	15.11	0.59	56.70	

* K series use a single coil differential type drive with the highest efficiency and the maximum airflow performance with the complete line of functions and with Airflow and Pressure higher than the P series.
* Specifications are subject to change without notice.

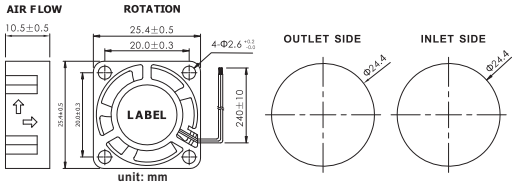
Radial Brushless DC Blowers

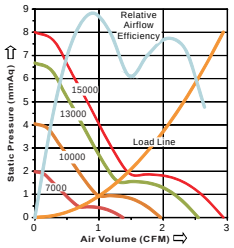
FUNCTIONS	PART NUMBER	RATED (VDC)	LABEL CURRENT	ACTUAL CURRENT	POWER (WATTS)	SPEED (RPM)	AIRFLOW (CFM)	AIRFLOW (m³/min)	PRESSURE (mmAq)	PRESSURE (In H²O)	NOISE (dBA)	WEIGHT (Q'TY/CTN)
53x53x31mm (2.09x2.09x1.22in) - 37 blade												Life Expectancy at 30℃ - 50,000hrs @ 10000rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56	K5331Y12BALBxy-37	12 (08~14)	1.100	1.050	12.60	12000	16.35	0.46	36.24	1.43	52.45	58 g (288pcs)
	K5331X12BALBxy-37		0.720	0.650	7.80	10000	13.62	0.39	25.16	0.99	47.70	
	K5331H12BALBxy-37		0.450	0.340	4.08	8000	10.90	0.31	16.10	0.63	41.89	
	K5331M12BALBxy-37		0.300	0.250	3.00	6000	8.17	0.23	9.06	0.36	34.39	
	K5331L12BALBxy-37		0.210	0.180	2.16	4000	5.45	0.15	4.03	0.16	23.82	
	K5331Y24BALBxy-37	24 (15~27)	0.680	0.540	12.96	12000	16.35	0.46	36.24	1.43	52.45	58 g (288pcs)
	K5331X24BALBxy-37		0.450	0.330	7.92	10000	13.62	0.39	25.16	0.99	47.70	
	K5331H24BALBxy-37		0.240	0.180	4.32	8000	10.90	0.31	16.10	0.63	41.89	
	K5331M24BALBxy-37		0.170	0.130	3.12	6000	8.17	0.23	9.06	0.36	34.39	
	K5331L24BALBxy-37		0.110	0.090	2.16	4000	5.45	0.15	4.03	0.16	23.82	
120x112x32mm (4.72x4.41x1.26in) - 28 blade												Life Expectancy at 30℃ - 90,000hrs @ 5200rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	P1232Y12BALBxy-28	12 (07~14)	3.250	1.700	20.40	5200	42.91	1.22	51.47	2.03	61.64	330g (40pcs)
	P1232X12BALBxy-28		2.132	1.350	16.20	4600	37.96	1.07	40.28	1.59	58.45	
	P1232H12BALBxy-28		1.261	0.940	11.28	4000	33.01	0.93	30.46	1.20	54.81	
	P1232M12BALBxy-28		0.806	0.577	6.92	3400	28.06	0.79	22.01	0.87	50.57	
	P1232L12BALBxy-28		0.442	0.322	3.86	2800	23.10	0.65	14.92	0.59	45.51	
	P1232Y24BALBxy-28	24 (15~27)	1.560	0.760	18.24	5200	42.91	1.22	51.47	2.03	61.64	330g (40pcs)
	P1232X24BALBxy-28		0.949	0.675	16.20	4600	37.96	1.07	40.28	1.59	58.45	
	P1232H24BALBxy-28		0.559	0.455	10.92	4000	33.01	0.93	30.46	1.20	54.81	
	P1232M24BALBxy-28		0.390	0.300	7.20	3400	28.06	0.79	22.01	0.87	50.57	
	P1232L24BALBxy-28		0.260	0.168	4.03	2800	23.10	0.65	14.92	0.59	45.51	
	P1232Y48BALBxy-28	48 (36~57)	0.560	0.400	19.20	5200	42.91	1.22	51.47	2.03	61.64	330g (40pcs)
	P1232X48BALBxy-28		0.420	0.336	16.13	4600	37.96	1.07	40.28	1.59	58.45	
	P1232H48BALBxy-28		0.290	0.221	10.61	4000	33.01	0.93	30.46	1.20	54.81	
	P1232M48BALBxy-28		0.190	0.150	7.20	3400	28.06	0.79	22.01	0.87	50.57	
	P1232L48BALBxy-28		0.120	0.084	4.03	2800	23.10	0.65	14.92	0.59	45.51	
193x172x72mm (7.60x6.77x2.83in) - 38 blade												Life Expectancy at 30℃ - 100,000hrs @ 1800rpm
1a:IR 1b:AS 2a:FG 2b:RD 2c:RDb 2d:LD 3a:VPWM 3b:IPWM 3c:PPWM 5a:TPWM 5b:RPWM 6:CL 7a:CS IP51, IP54 IP56, IP67	P1970M12BALAxy-38	24 (15~27)	3.120	2.400	28.80	1500	106.43	3.01	35.68	1.40	50.70	1030g (8pcs)
	P1970L12BALAxy-38		1.430	1.100	13.20	1200	85.15	2.41	22.83	0.90	44.90	
	P1970H24BALAxy-38	48 (36~57)	2.270	1.750	42.00	1800	127.72	3.62	51.37	2.02	55.50	1030g (8pcs)
	P1970M24BALAxy-38		1.560	1.200	28.80	1500	106.43	3.01	35.68	1.40	50.70	
	P1970L24BALAxy-38		0.650	0.500	12.00	1200	85.15	2.41	22.83	0.90	44.90	
	P1970H48BALAxy-38	48 (36~57)	1.100	0.876	42.05	1800	127.72	3.62	51.37	2.02	55.50	1030g (8pcs)
	P1970M48BALAxy-38		0.780	0.610	29.28	1500	106.43	3.01	35.68	1.40	50.70	
	P1970L48BALAxy-38		0.320	0.254	12.19	1200	85.15	2.41	22.83	0.90	44.90	

PQ GRAPHS OF DC AXIAL FANS

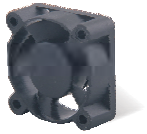
25x25x10mm-5blade

* Speed: 7000~15000 RPM
* Airflow: 1.39~2.92 CFM
* Pressure: 1.98~8.00 mmAq
* Noise: 18.14~34.19 dBA
* Voltage: 05,12 VDC
* Fan Type: D Series

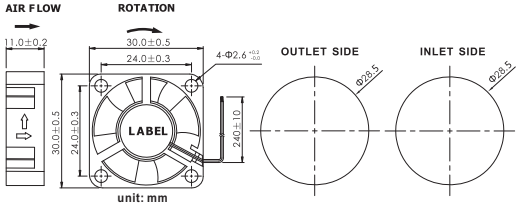


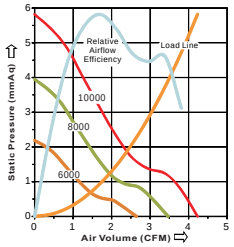


30x30x10mm-5blade



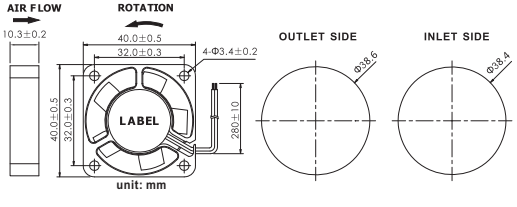
* Speed: 6000~10000 RPM
* Airflow: 2.65~4.23 CFM
* Pressure: 2.19~5.82 mmAq
* Noise: 17.68~28.53 dBA
* Voltage: 05,12 VDC
* Fan Type: D Series

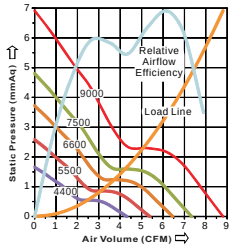




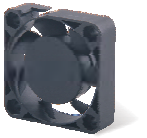
40x40x10mm-5blade

* Speed:4400~9000 RPM
* Airflow: 4.31~8.81 CFM
* Pressure: 1.65~6.91 mmAq
* Noise: 13.30~32.00 dBA
* Voltage: 05,12, 24 VDC
* Fan Type: D Series

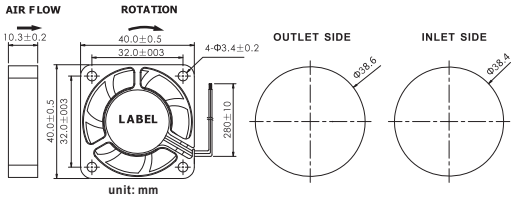


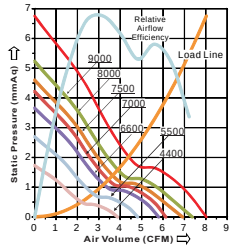


40x40x10mm-7blade



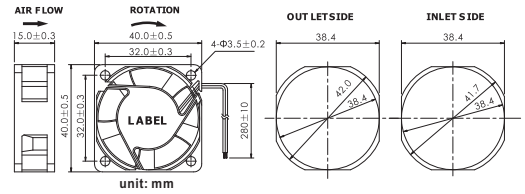
* Speed:4400~9000 RPM
* Airflow: 3.87~8.03 CFM
* Pressure: 1.73~6.75 mmAq
* Noise: 19.39~36.81 dBA
* Voltage: 05,12, 24 VDC
* Fan Type: C, D Series

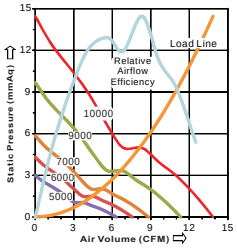




40x40x15mm-5blade

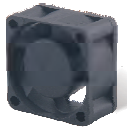
* Speed:5000~11000 RPM
* Airflow: 6.30~13.85 CFM
* Pressure: 2.99~14.45 mmAq
* Noise: 19.60~40.10 dBA
* Voltage: 05,12, 24 VDC
* Fan Type: D Series



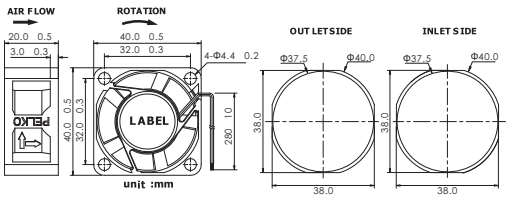


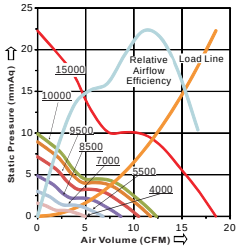
PQ GRAPHS OF DC AXIAL FANS

40x40x20mm-5blade

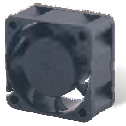


* Speed:4000~15000 RPM
* Airflow: 4.94~18.53 CFM
* Pressure: 1.58~22.27 mmAq
* Noise: 11.00~45.40 dBA
* Voltage: 05,12, 24 VDC
* Fan Type: C, D Series

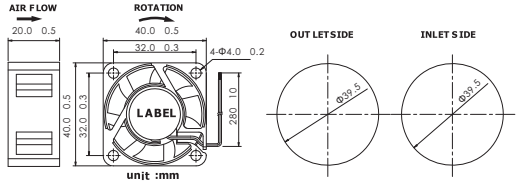


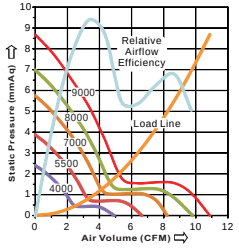


40x40x20mm-7blade



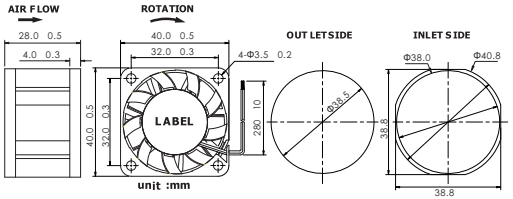
* Speed:4000~9000 RPM
* Airflow: 4.92~10.88 CFM
* Pressure: 2.40~8.68 mmAq
* Noise: 20.78~39.18 dBA
* Voltage: 05,12, 24 VDC
* Fan Type: C, D Series

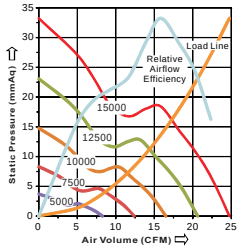




40x40x28mm-7blade

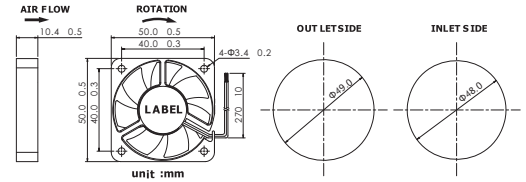
* Speed:5000~15000 RPM
* Airflow: 8.25~24.76 CFM
* Pressure: 3.69~33.22 mmAq
* Noise: 32.45~61.07 dBA
* Voltage: 12, 24 VDC
* Fan Type: D Series

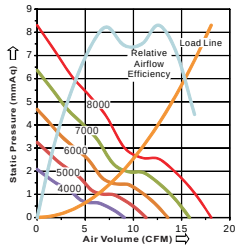




50x50x10mm-7blade

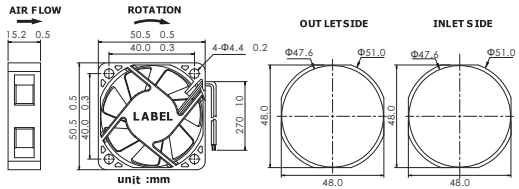
* Speed:4000~8000 RPM
* Airflow: 9.04~18.09 CFM
* Pressure: 2.08~8.30 mmAq
* Noise: 25.85~40.11 dBA
* Voltage: 05,12,24 VDC
* Fan Type: C,D Series

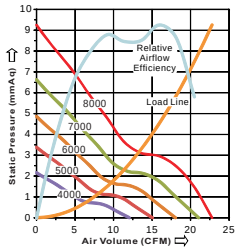




50x50x15mm-7blade

* Speed:4000~8000 RPM
* Airflow: 12.03~22.80 CFM
* Pressure: 2.16~9.25 mmAq
* Noise: 21.80~41.50 dBA
* Voltage: 05,12, 24 VDC
* Fan Type: C, D Series

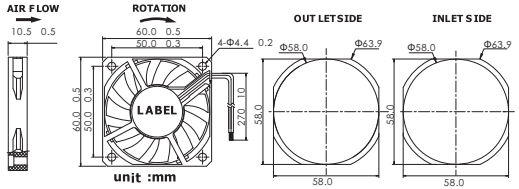


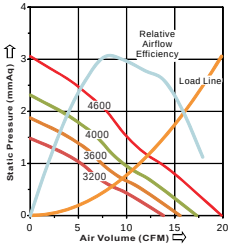


PQ GRAPHS OF DC AXIAL FANS

60x60x10mm-11blade

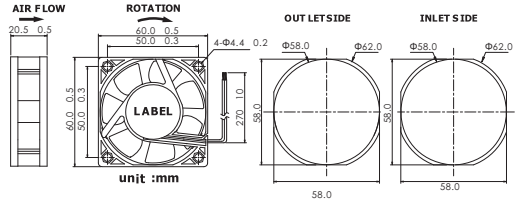
* Speed:3200~4600 RPM
* Airflow: 13.82~19.87 CFM
* Pressure: 1.48~3.06 mmAq
* Noise: 24.91~35.04 dBA
* Voltage: 05,12,24 VDC
* Fan Type: C,D Series

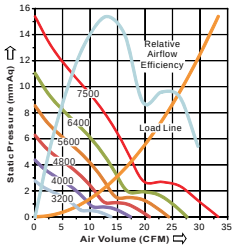




60x60x20mm-7blade

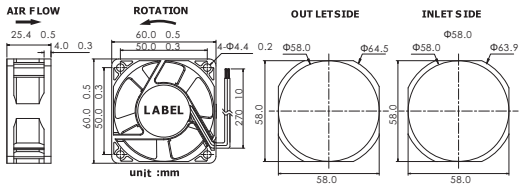
* Speed:3200~7500 RPM
* Airflow: 13.80~33.33 CFM
* Pressure: 2.76~15.39 mmAq
* Noise: 24.50~46.83 dBA
* Voltage: 05,12,24,48 VDC
* Fan Type: C,R,D Series

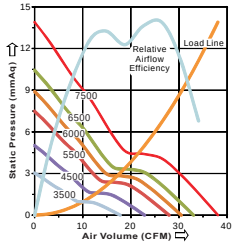




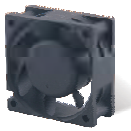
60x60x25mm-5blade

* Speed:3500~7500 RPM
* Airflow: 17.78~38.09 CFM
* Pressure: 3.03~13.89 mmAq
* Noise: 25.70~45.60 dBA
* Voltage: 05,12, 24,48 VDC
* Fan Type: C,R,D Series

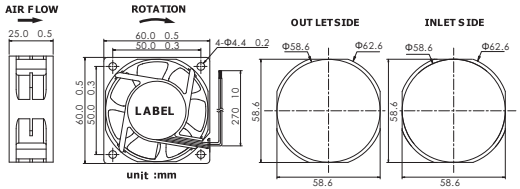


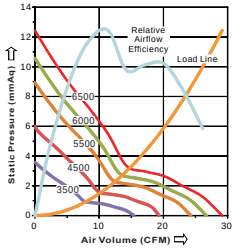


60x60x25mm-7blade



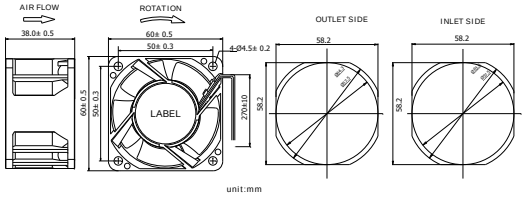
* Speed:3500~6500 RPM
* Airflow: 15.41~29.17 CFM
* Pressure: 3.57~12.43 mmAq
* Noise: 27.86~43.64 dBA
* Voltage: 05,12,24,48 VDC
* Fan Type: C,R,D Series

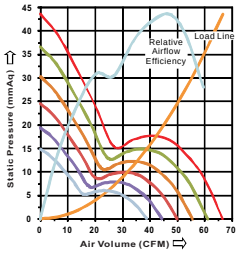




60x60x38mm - 5 blade

* Speed: 7000~12000 RPM
* Airflow: 38.89~66.67 CFM
* Pressure: 14.82~43.54 mmAq
* Noise: 48.10~63.10 dBA
* Voltage: 12, 24 VDC
* Fan Type: D Series

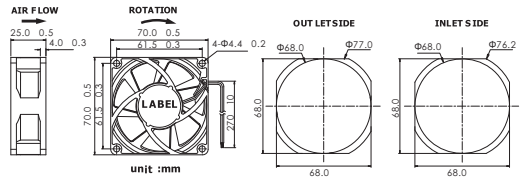


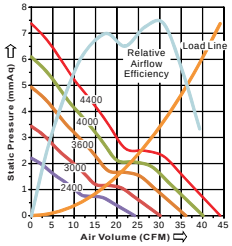


PQ GRAPHS OF DC AXIAL FANS

70x70x25mm-7blade

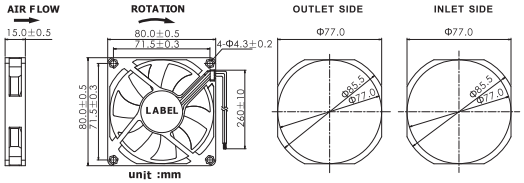
* Speed:2400~4400 RPM
* Airflow: 24.10~44.13 CFM
* Pressure: 2.20~7.37 mmAq
* Noise: 26.00~41.80 dBA
* Voltage: 05,12, 24, 48 VDC
* Fan Type: C,R,D Series

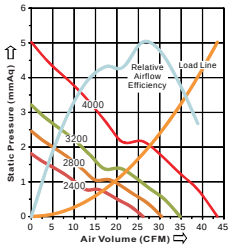




80x80x15mm-7blade

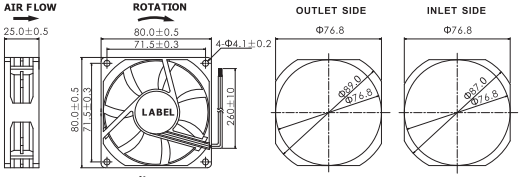
* Speed:2400~4000 RPM
* Airflow: 26.10~43.50 CFM
* Pressure: 1.81~5.02 mmAq
* Noise:27.23~40.14 dBA
* Voltage: 05,12,24,48 VDC
* Fan Type: C,R,D Series

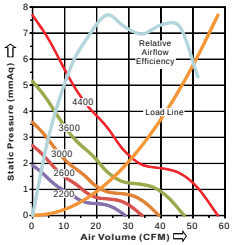




80x80x25mm-7blade

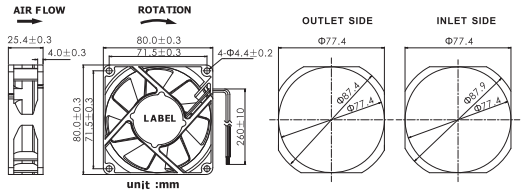
* Speed:2200~4400 RPM
* Airflow: 28.89~57.78 CFM
* Pressure: 1.92~7.69 mmAq
* Noise:23.79~40.55 dBA
* Voltage: 05,12, 24, 48 VDC
* Fan Type: C,R,D Series

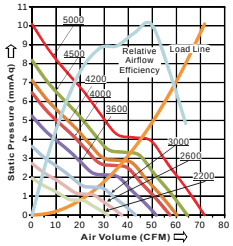




80x80x26mm-7blade

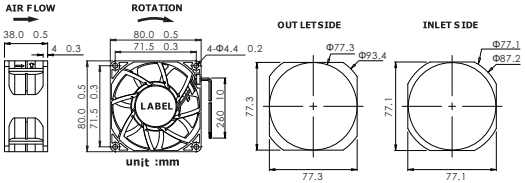
* Speed:2200~5000 RPM
* Airflow: 31.54~71.69 CFM
* Pressure: 1.95~10.09 mmAq
* Noise:23.50~44.90 dBA
* Voltage: 05,12,24,48 VDC
* Fan Type: C,R,D Series

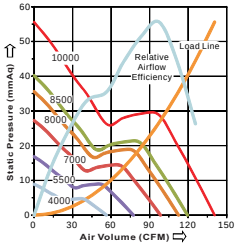




80x80x38mm-7blade

* Speed:4000~10000 RPM
* Airflow: 56.27~140.67 CFM
* Pressure: 8.89~55.58 mmAq
* Noise:42.50~66.40 dBA
* Voltage: 12,24,48 VDC
* Fan Type: R,K Series

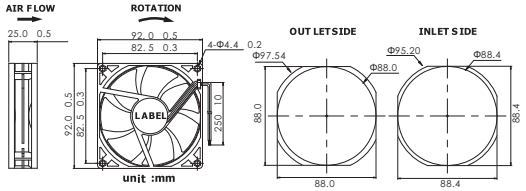


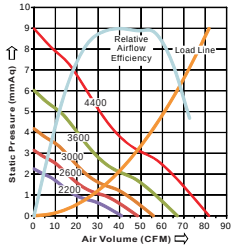


PQ GRAPHS OF DC AXIAL FANS

92x92x25mm-7blade

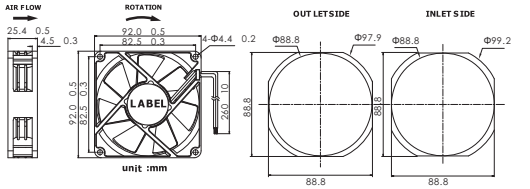
* Speed:2200~4000 RPM
* Airflow: 40.91~81.81 CFM
* Pressure: 2.25~8.89 mmAq
* Noise:27.56~45.73 dBA
* Voltage: 05,12,24,48 VDC
* Fan Type: C,R,D Series

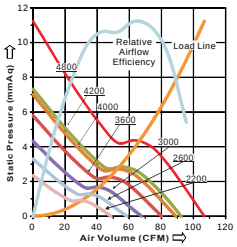




92x92x26mm-7blade

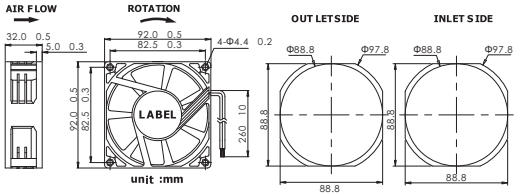
* Speed:2200~4800 RPM
* Airflow: 48.50~106.80 CFM
* Pressure: 2.23~11.23 mmAq
* Noise:27.60~50.10 dBA
* Voltage: 05,12,24,48 VDC
* Fan Type: C,R,D Series

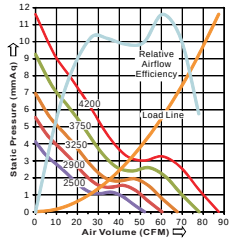




92x92x32mm-7blade

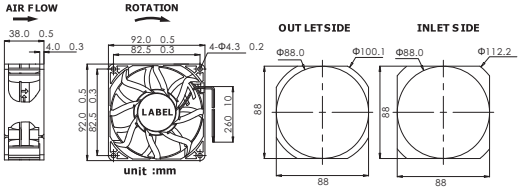
* Speed:2500~4200 RPM
* Airflow: 52.01~87.38 CFM
* Pressure: 4.11~11.61 mmAq
* Noise:31.52~44.89 dBA
* Voltage: 05,12,24,48 VDC
* Fan Type: R,G,P Series

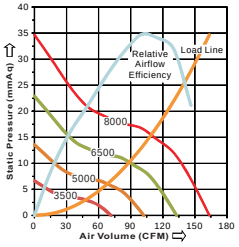




92x92x38mm-7blade

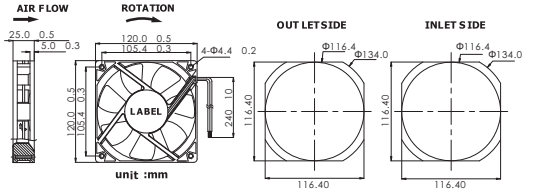
* Speed:3500~8000 RPM
* Airflow: 71.58~163.61 CFM
* Pressure: 6.63~34.65 mmAq
* Noise:43.00~64.50 dBA
* Voltage: 12,24,48 VDC
* Fan Type: R,K Series

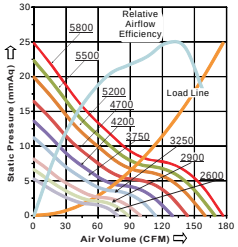




120x120x25mm-7blade

* Speed:2600~5800 RPM
* Airflow: 78.16~176.75 CFM
* Pressure: 5.25~24.80 mmAq
* Noise: 37.19~58.23 dBA
* Voltage: 05,12,24,48 VDC
* Fan Type: R,G,P,K Series

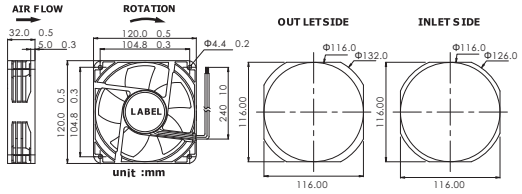


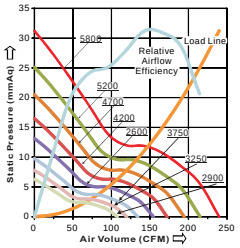


PQ GRAPHS OF DC AXIAL FANS

120x120x32mm-5blade

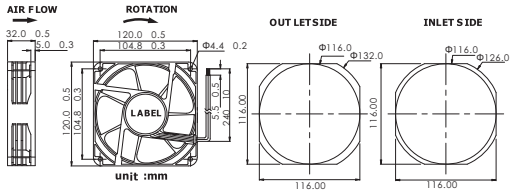
* Speed:2600~5800 RPM
* Airflow: 107.49~239.93 CFM
* Pressure: 6.27~31.22 mmAq
* Noise: 42.07~64.51 dBA
* Voltage: 12,24,48 VDC
* Fan Type: R,G,P,K Series

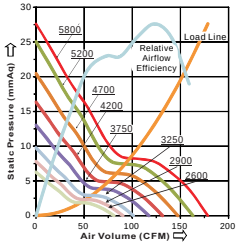




120x120x32mm-7blade

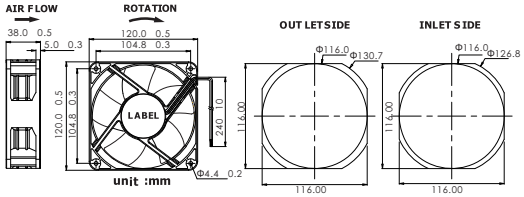
* Speed:2600~5800 RPM
* Airflow: 80.96~178.59 CFM
* Pressure: 6.26~27.61 mmAq
* Noise: 37.49~59.74 dBA
* Voltage: 05,12,24,48 VDC
* Fan Type: R,G,P,K Series

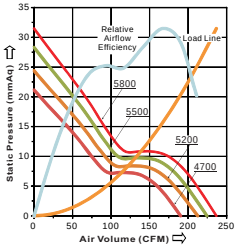




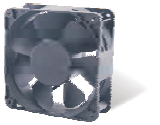
120x120x38mm-5blade

* Speed:4700~5800 RPM
* Airflow: 190.31~236.83 CFM
* Pressure: 21.13~31.47 mmAq
* Noise: 57.78~65.02 dBA
* Voltage: 12,24,48 VDC
* Fan Type: K Series

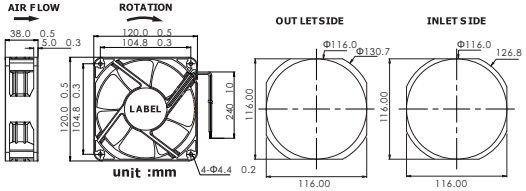


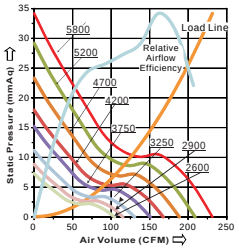


120x120x38mm-7blade

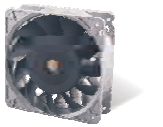


* Speed:2600~5800 RPM
* Airflow: 104.46~231.53 CFM
* Pressure: 7.26~34.17 mmAq
* Noise: 39.83~65.02 dBA
* Voltage: 05,12,24,48 VDC
* Fan Type: R,G,P,K Series

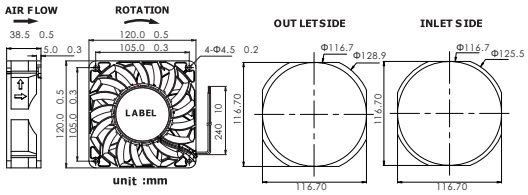


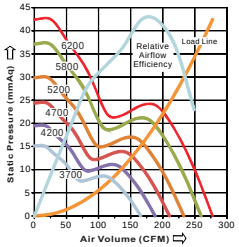


120x120x38mm-11blade



* Speed:3700~6200 RPM
* Airflow: 165.75~277.75 CFM
* Pressure: 15.11~42.43 mmAq
* Noise: 56.70~70.10 dBA
* Voltage: 12,24,48 VDC
* Fan Type: K Series

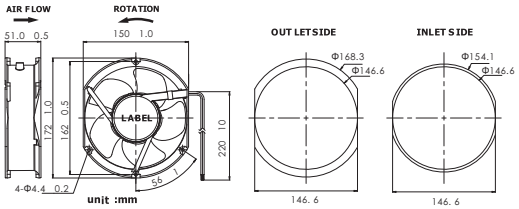


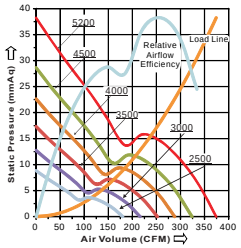


PQ GRAPHS OF DC AXIAL FANS

170x150x51mm-5blade

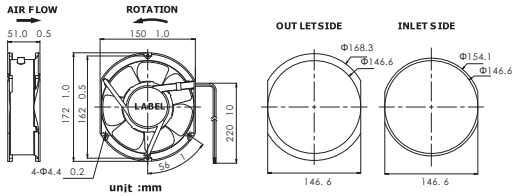
* Speed:2500~5200 RPM
* Airflow: 179.98~374.35 CFM
* Pressure: 8.83~38.21 mmAq
* Noise: 48.93~68.01 dBA
* Voltage: 12,24,48 VDC
* Fan Type: G,P Series

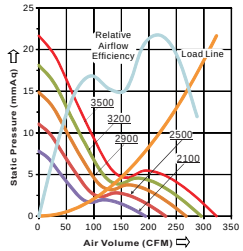




170x150x51mm-7blade

* Speed:2100~3500 RPM
* Airflow: 193.86~323.09 CFM
* Pressure: 7.79~21.64 mmAq
* Noise: 45.66~58.97 dBA
* Voltage: 12,24,48 VDC
* Fan Type: G,P Series

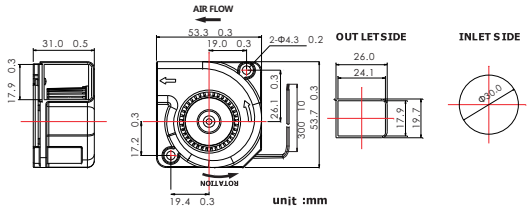


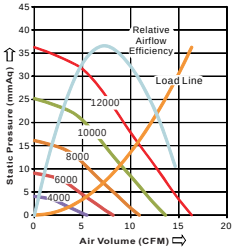


<< PQ GRAPHS Radial Brushless DC Blowers >>

53x53x31mm-37blade

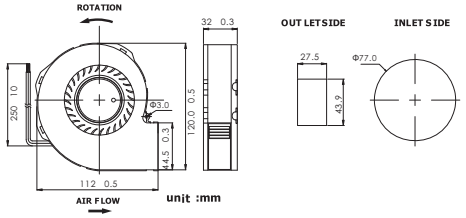
* Speed:4000~12000 RPM
* Airflow: 5.45~16.35 CFM
* Pressure: 4.03~36.24 mmAq
* Noise:23.82~52.45 dBA
* Voltage: 12,24 VDC
* Fan Type: K Series

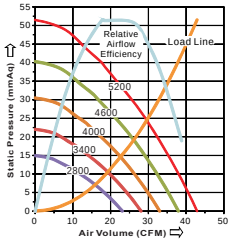




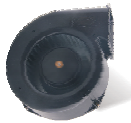
120x112x32mm-28blade

* Speed:2800~5200 RPM
* Airflow: 23.10~42.91 CFM
* Pressure: 14.92~51.47 mmAq
* Noise: 45.51~61.64 dBA
* Voltage: 12,24,48 VDC
* Fan Type: P Series

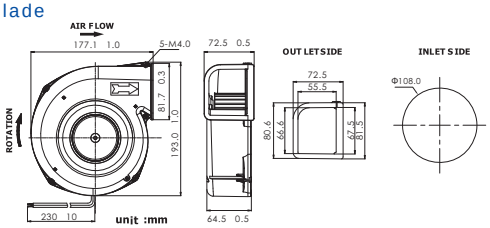


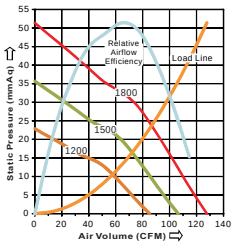


193x177x72mm-38blade



* Speed:1200~1800 RPM
* Airflow: 85.15~127.72 CFM
* Pressure: 22.83~51.37 mmAq
* Noise: 44.90~55.50 dBA
* Voltage: 12,24,48 VDC
* Fan Type: P Series





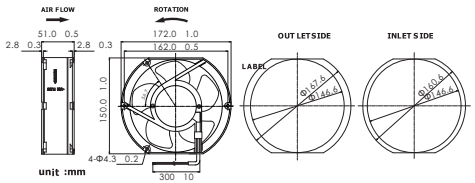
Axial AC Fans

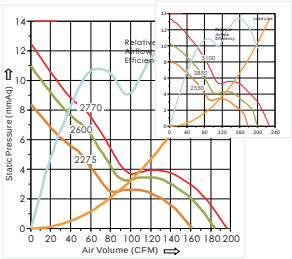
FUNCTIONS	PART NUMBER	VOLTAGE / RANGE (VAC)	LABEL CURRENT	CURRENT (Amp.)	POWER (Watts)	SPEED (RPM)	AIR FLOW (Q) (m3/min)	AIR FLOW (Q) (CFM)	PRESSURE (P) (mmAq)	PRESSURE (P) (In H2O)	NOISE (dBA)	UNIT WEIGHT (Q'TY/CTN)
172x150x51mm (6.72x5.91x2.00in) (5 - Blade)												Life Expectancy at 30°C - 100,000hrs @ 2800rpm
FG RD Thermally Protected	PM1751HA1BAL-5	120/60 100~125	0.40	0.440	32.5	3100	6.44	227.5	13.4	0.52	48.6	950g (16pcs)
	PM1751MA1BAL-5		0.36	0.304	25.9	2850	5.65	199.5	10.3	0.40	45.5	
	PM1751LA1BAL-5		0.32	0.300	23.5	2550	5.05	178.5	8.20	0.32	42.0	
	PM1751HA2BAL-5	230/50 200~240	0.23	0.258	38.5	2770	5.56	196.5	12.5	0.48	44.5	
	PM1751MA2BAL-5		0.15	0.134	21.2	2600	5.22	184.4	11.0	0.42	42.5	
	PM1751LA2BAL-5		0.12	0.097	17.4	2275	4.57	161.4	8.40	0.32	39.5	
120x120x38mm (4.72x4.72x1.50in) (5 - Blade)												Life Expectancy at 30°C - 100,000hrs @ 3100rpm
FG RD	PM1238HA1BAL-5	120/60 100~125	0.21	0.204	15.7	3100	2.77	98.0	7.70	0.30	45.0	516g (30pcs)
	PM1238MA1BAL-5		0.09	0.109	8.90	2600	2.41	85.4	5.80	0.22	41.0	
	PM1238LA1BAL-5		0.08	0.091	7.50	2250	2.10	74.3	4.40	0.17	35.5	
	PM1238HA2BAL-5	230/50 200~240	0.11	0.092	19.5	2650	2.40	85.0	6.90	0.26	40.0	
	PM1238MA2BAL-5		0.06	0.050	8.50	2450	2.22	78.6	4.00	0.15	37.5	
	PM1238LA2BAL-5		0.05	0.043	8.10	2250	2.10	74.3	4.40	0.17	35.5	
120x120x38mm (4.72x4.72x1.50in) (7 - Blade)												Life Expectancy at 30°C - 100,000hrs @ 2700rpm
FG RD	PM1238HA1BAL-7	120/60 100~125	0.21	0.174	13.6	2750	3.05	108.0	7.00	0.30	45.0	540g (30pcs)
	PM1238MA1BAL-7		0.09	0.152	9.70	2200	2.74	96.8	5.60	0.21	37.0	
	PM1238HA2BAL-7	230/50 200~240	0.11	0.112	18.0	2600	2.77	98.0	5.60	0.21	42.5	
	PM1238MA2BAL-7		0.06	0.074	12.0	2450	2.61	92.3	5.00	0.19	41.0	
	PM1238LA2BAL-7		0.05	0.056	9.50	2250	2.82	99.6	5.65	0.22	37.5	
120x120x25mm (4.72x4.72x1.00in)(7 - Blade)												Life Expectancy at 30°C - 100,000hrs @ 2800rpm
FG RD	PM1225HA1BAL-7	120/60 100~125	0.15	0.122	15.5	2800	1.83	66.5	4.30	0.16	38.0	350g (40pcs)
	PM1225LA1BAL-7		0.08	0.062	6.50	2200	1.45	51.3	2.60	0.10	30.5	
	PM1225HA2BAL-7	230/50 200~240	0.08	0.050	15.6	2300	1.58	56.0	3.20	0.12	32.5	
92x92x25mm (3.62x3.62x1.00in)(7 - Blade)												Life Expectancy at 30°C - 100,000hrs @ 2100rpm
FG RD	PM9225HA1BAL-7	120/60 100~125	0.09	0.075	9.30	2050	0.80	28.5	2.20	0.08	24.0	230g (60pcs)
	PM9225HA2BAL-7	230/50 200~240	0.05	0.039	9.10	1650	0.68	24.3	1.50	0.05	20.0	
80x80x25mm (3.15x3.15x1.00in)(7 - Blade)												Life Expectancy at 30°C - 100,000hrs @ 2500rpm
FG RD	PM8025HA1BAL-7	120/60 100~125	0.11	0.069	6.80	2500	18.8	0.53	2.80	0.10	26.7	215g (40pcs)
	PM8025HA2BAL-7	230/50 200~240	0.06	0.047	9.20	2100	15.6	0.44	2.00	0.07	21.5	

<< PQ GRAPHS AXIAL AC FANS >>

170x150x51mm-5blade

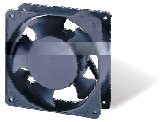
* Speed: 2275~3100 RPM
* Airflow: 161.40~227.50 CFM
* Pressure: 8.40~13.40 mmAq
* Noise: 39.5~48.6 dBA
* Voltage: 120,230 VAC



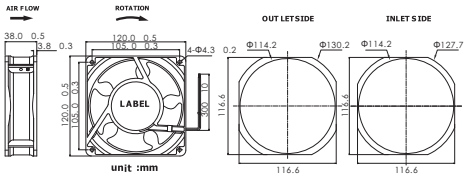


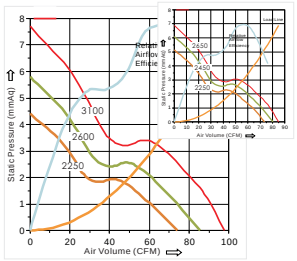
PQ GRAPHS AXIAL AC FANS

120x120x38mm-5blade

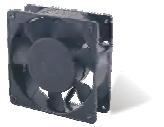


* Speed: 2250~3100 RPM
* Airflow: 74.30~98.00 CFM
* Pressure: 4.40~7.70 mmAq
* Noise: 35.5~45.0 dBA
* Voltage: 120,230 VAC

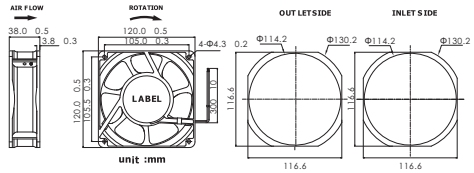


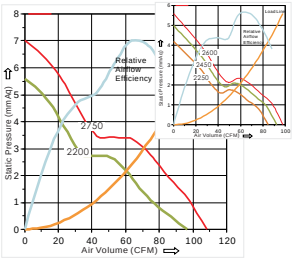


120x120x38mm-7blade



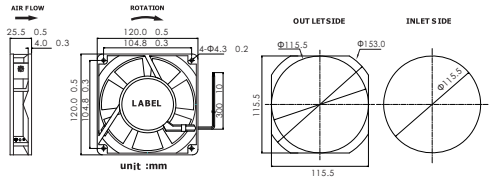
* Speed: 2200~2750 RPM
* Airflow: 84.80~108.0 CFM
* Pressure: 4.20~7.00 mmAq
* Noise: 41.5~45.0 dBA
* Voltage: 120,230 VAC

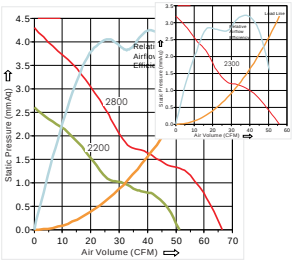




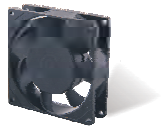
120x120x25mm-7blade

* Speed: 2200~2800 RPM
* Airflow: 51.30~66.50 CFM
* Pressure: 2.60~4.30 mmAq
* Noise: 30.5~38.0 dBA
* Voltage: 120,230 VAC

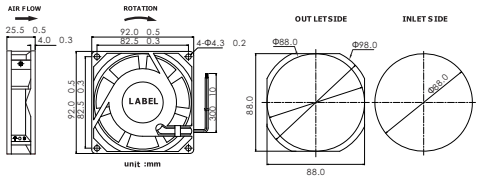


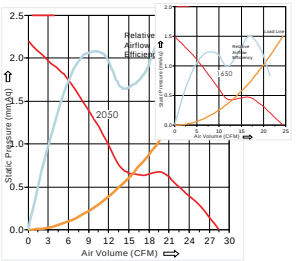


92x92x25mm-7blade

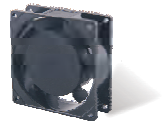


* Speed: 1650~2050 RPM
* Airflow: 24.30~28.50 CFM
* Pressure: 1.50~2.20 mmAq
* Noise: 20.0~24.0 dBA
* Voltage: 120,230 VAC

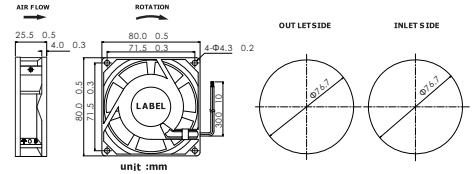


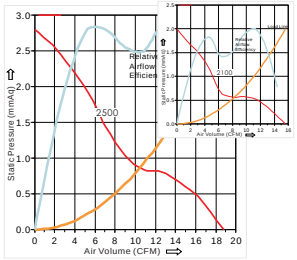


80x80x25mm-7blade



* Speed: 2100~2500 RPM
* Airflow: 15.60~18.80 CFM
* Pressure: 2.00~2.80 mmAq
* Noise: 21.5~26.7 dBA
* Voltage: 120,230 VAC



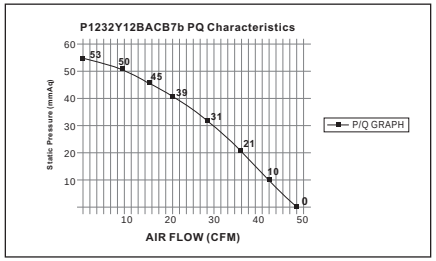


ERMEC, S.L. BARCELONA
C/ Francesc Teixidó, 22
08918 Badalona SPAIN
Tel. +34 902 450 160
info@ermec.com
www.ermec.com
ERMEC, S.L. - MADRID
C/ Puerto Rico, 4
28222 Majadahonda (Madrid) SPAIN
bilbao@ermec.com
portugal@ermec.com

HOW TO MEASURE THE IMPEDANCE OF YOUR SYSTEM

The measurement of the system's impedance and the selection of the appropriate fan motor can be illustrated by the following example:

Let us use PELKO's 1232 blower with the following PQ characteristic:



A. Calculate the airflow through your system by applying the blower in your system and by measuring the incoming and outgoing air flow temperatures as follows:

$$\text{Air Flow in CFM} = \frac{1.76 \times P}{T2 - T1}$$

Where: P = Input power into your system (e.g. 1000 W)
T2 = Outgoing airflow temperature in ºC (e.g. 59.1º C)
T1 = Incoming airflow temperature in ºC (e.g. 20 ºC)
Then, calculate the test result: Air Flow = 45 CFM

B. Refer to the PQ characteristic of the blower to determine the static pressure of your system at the measured airflow. The pressure can be determined from the PQ graph above to be 6 mmAq, for the calculated airflow in A of 45 CFM.

C. From the temperature specifications of your equipment calculate the temperature difference T2-T1 where: T1 is the typical room temperature (e.g. 25° C) and T2 is the maximum allowable operating temperature of equipment (e.g. 60° C). The T2-T1=35° C. Assuming that you are powering your system with 1000W, necessary airflow can be calculated using the formula shown in A as follows:

$$\text{Air Flow in CFM} = \frac{1.76 \times 1000}{35} = 50.3 \text{ CFM}$$

D. For the purposes of the example used here the appropriate fan motor to be selected for this application should be able to deliver minimum of 50.3 CFM at minimum static pressure of 6mmAq. For safety reasons and to allow for higher room temperature, from PELKO Motors DC fan catalog, we can choose model P1232Y that can deliver 64 CFM at 6 mmAq with 4200 RPM or model P1238X that can deliver 63 CFM at 6 mmAq with 3650 RPM. We can further consider the noise level and product life.
In this case P1238X model will be the optimum solution for the system outlined in the above example (See also SELLECTION OF A COOLING FAN and AIR FLOW EFICIENCY OF A FAN MOTOR).

PELKO Motors®

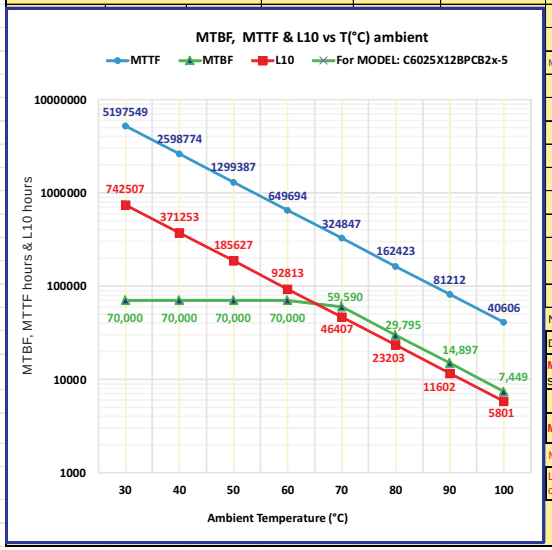
MTTF and L10 CALCULATION

The life expectantly of a fan motor is limited by the following:

1. The temperature of the motor (i.e. Ambient temperature plus Temp. Rise of the motor), (for every 10°C increase of Temp. its life is decrease by 50%).
2. The running speed of the motor (for every 19% increase of speed, its life is decreased by 25%).
3. Metal fatigue of the bearing system used (e. g. The maximum bearing life is 70000 hrs when the fan is running at 6000RPM as shown in the example below).
4. By the life of the electrolytic capacitor whose value is decreased by 50% with every 10°C of temperature increase.

Below is a sample of MTBF calculation of model C6025X12BPCB2x-5.
The calculation is based on tested sample C6025X12B-5, C6025Y12B-5, C6025X24B-5 (these models use the same size, use the same bearing system and are tested at the same 70℃ oven).

Elevated Test Temp. Ts (°C)	Typical Temp to run for L10 hrs: Tuse (°C)	Accelataion Factor Af	Units under test (N)	Poisson Distribution X², Factor Br;c	Actual, Non statistical oven 'no fail' data at 70 C	For MODEL:	C6025X12BPCB2x-5		70K @ 6000RPM @ 30C	RPM= 6000
70	40	8	32	2.303	30693	=test hrs	Max.Life of bearing due to metal fatigue:	830	@ RPM 6000 max life :	70000 hrs
Af=2^[(Ts-Tuse)/10] Arrhenius Acceleration factor					Speed Effect:	Speed Acceleration Factor=AS=1.25*((Smeas.-Sactual)/(Smeas.*0.19)) (i.e. for every 19% speed decrease, the life increases by 25%) = empirical long term test data				
MTTF=7*L10 as per Weibull Distribution					Tested: Model samples of same size, bearing type & normalized speed and at the same oven temperature					
Br;c=2.303 as per Poisson distribution factor					C6025X12B-5	C6025Y12B-5		C6025X24B-5		
MTTF=no fail test hrs*(Af/1.036)/[(Br;c)/N] ^ 0.91=				2598774	& L10 at 40 =	371253		USE Actual MTTF oven Data		Oven Data Date:
						(Actual MTTF data are zero failure or minimum MTBF Data)				1-Oct-17



MTTF & L10 (non-statictical, ACTUAL 30693 test hrs)

MTTF	Ta °C	L10	Af	Bearing Limit
5197549	30	742507	16	70000
2598774	40	371253	8	70000
1299387	50	185627	4	70000
649694	60	92813	2	70000
324847	70	46407	1	59590
162423	80	23203	0.5	29795
81212	90	11602	0.25	14897
40606	100	5801	0.125	7449

NOTES:

DEFINITIONS

MTBF= (TTF1+TTF2+……+TTFN)/N- test stopped when all samples failed is the Mean Time Between Failures

MTTF:(TTF1+TTF2+….+TTFN)/N- test stoped at first failure (zero failure)

Mean Time To Failure Test without failures at 70 C= 30693 hours

L10: time period, the fan shown above will survive and run with 90% confidence. MTTF = 7*L10

< < CONVERSION TABLE > >

AIR FLOW:

Q'TY	UNIT	l/Sec	CFM	M^3/min	M^3/h
1	l/Sec	1.0000	2.1189	0.0600	3.6000
1	CFM	0.4720	1.0000	0.0283	1.6990
1	M^3/min	16.6700	35.3147	1.0000	60.0000
1	M^3/h	0.2778	0.5886	0.0167	1.0000

PRESSURE:

Q'TY	UNIT	Pascal	In-H2O	mmAq	mbar
1	Pascal	1.0000	0.0040	0.1020	0.0100
1	In-H2O	249.0900	1.0000	25.4000	2.4909
1	mmAq	9.8070	0.0390	1.0000	0.0981
1	mbar	100.000	0.4015	10.1972	1.0000

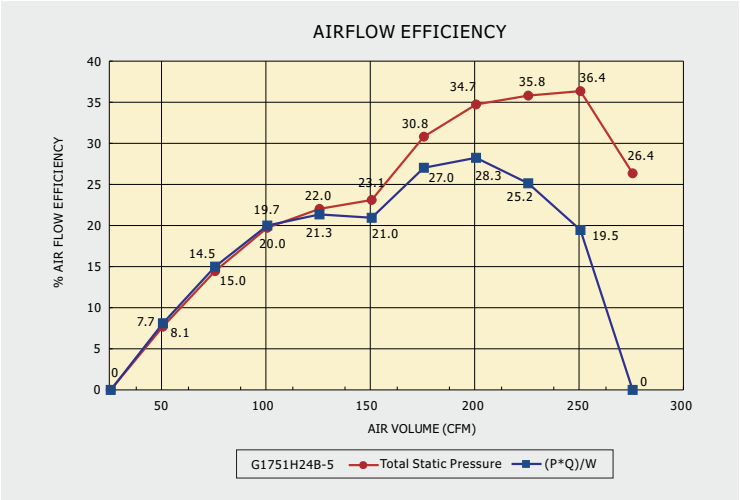
FAN MOTOR EFFICIENCY

In general the efficiency of a system is defined as η = Out Power / Input power
In the case of a motor the incoming power for example in horsepower terms is expressed in electric power of watts equivalent to 746 W/hp (watts/horse power) and the output power is in units or energy/second.

In the case of Fan Motors the efficiency is measured in 2 different ways:

A. (η = P*Q / W) = (Pressure*Air Volume / Input Power) = (Output Power / Input Power)
Where: P*Q is air flow power expressed in Watts if P is in Pascal (Pa), Q is the air flow in m /Sec and the Input Power is expressed in Watts.

The figure of efficiency varies according to the operating point of fan. When there is no obstacle in the airflow (i.e. free air condition) we have the maximum airflow but the pressure presented to the airflow is zero. As a result no actual benefit is provided and at this point the efficiency is zero. Likewise, when the airflow is totally blocked by closing the exhaust opening of the fan in which case we have the maximum pressure but zero airflow the system's efficiency is also zero.
Below please see a typical efficiency graph for our model G1751 indicating the fan motor's efficiency for all the points from zero airflow-max pressure and zero pressure-max airflow.



The units of measurement are: Pressure in Pa (Pascal)
Air Volume: Q in m /second
Input power is expressed in watts
[η=P*Q/W * 100%]

Please note that the above fan has peak airflow efficiency of 36.88% running at 3553RPM and delivering 250.70CFM. The free air, air volume of this fan is 280.1CFM.

B.In the second way of airflow efficiency the total static pressure conditions are taken into consideration.
η=Pt*Q/W, where: Pt=Ps+Pd
Where: Ps=Static Pressure
Pd=m*V²/2=dynamic pressure of the airflow
m=density of the air in Kg/m3
V = is the air velocity through the Blow Area in m /s
Blow area S in m2 is the air exhaust area including the hub area.
V=Q/S=Air volume/Blow area (Where Air Volume Q is expressed in m /second)
Therefore Pt=Ps+m*V²/2=Ps+[m*(Q/S)²]/2

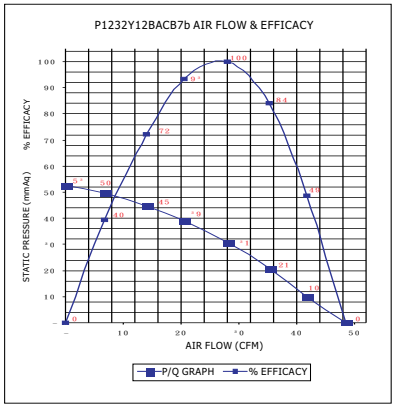
AIR FLOW EFFICIENCY

DEFINITION OF AIR FLOW EFFICIENCY

The air flow % efficiency of a fan motor is usually defined as the product of the airflow times the pressure at a given operating point divided by the power consumed by the fan motor: η={(PxQ)/W}x100%
[P= Pascals, Q=m³/Sec, W=Watts]

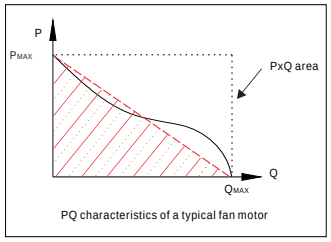
AIR FLOW EFFICACY OF A FAN MOTOR

It is understood that a fan motor is used in general for the purpose of cooling equipment or for circulating free air.
In the case of equipment cooling the airflow is restricted by airflow obstacles presented by the equipment (system impedance).
It is obvious that under zero pressure (free air) the fan motor can deliver the maximum airflow and under zero airflow conditions (max pressure), no air is passing through the equipment in order to remove heat.
In neither of the above fan conditions the fan motor is of any use for cooling equipment purposes.
In order to determine the most efficient operating point of the fan motor engaged in cooling given equipment we must calculate the maximum PQ product and thus determine the optimum ability of a given motor to cool. This can be illustrated by an example based on ***Pelko Motors*** PQ characteristic of a 1232 blower shown:
From left graphs we can see that if we accept over 80% efficacy, then the fan motor can optimally cool a system when it delivers 18 ~ 34 CFM under static pressure of the range 22~ 42 mmAq with optimum point of 24 ~ 30 CFM and pressure of 28 ~ 36 mmAq.



THE (PQ/W) CRITERION

Given the fact that the materials used for DC fan motor production by all the manufactures is pretty much the same and assuming no significant construction shortcomings, which will mainly have a bearing on the product life, the most important criterion remains the product's performance during its life span.
The fan motor's performance can be visualized by its PQ graph shown:



PQ characteristics of a typical fan motor

The higher the P and the higher the Q of a fan motor of a given size, the more airflow will be driven into the system to achieve a better cooling result. However at which cost is this accomplished? In order to appreciate the motor's performance one must consider the product of P times Q result divided by the power that the product consumes. It is obvious that the lower the power dissipation for the highest possible PQ can characterize the fan motor's performance. If we were to draw a line from the maximum point of P and the maximum point of Q we could determine easily the shaded area to be (PxQ)/2. We could then define as performance criterion the (PxQ)/W which represents twice the shaded area divided by the consumed power.
Certainly one could argue that the power dissipation at maximum Q is lower than the power dissipated at maximum P for an axial fan motor, but for comparison reasons this point becomes of less importance. Also it must be noted that in the case of a blower type fan motor at maximum P the power consumption is less than at maximum Q point.
The higher the PQ/W, the better the fan motor's performance.

THE (RPM/W) CRITERION

One other way to detect if the fan motor is properly designed and it can perform under the lowest running temperature rise conditions is to check the ratio of RPM increase over the consumed power increase.
As a rule, to increase the RPM by 10% one needs to increase the power by about 30%. A well-designed fan motor will always stay below the 30% of power increase or else the motor is over driven, which will result on premature failure.
To maintain this criterion one needs to increase the cost, by increasing the silicon steel size, or reduce the PQ performance of the product, or else high running motor temperature will de-rate the life of the product.
Higher RPM/W means more efficient and better-designed fan motor.

WHY ARE THE (PQ/W) AND (RPM/W) CRITERIA IMPORTANT?

Both of the above mentioned criteria are important and their value should be the highest possible because:
1.They indicate how good the performance is for the running power cost.
2.They indicate the lowest running temperature (which is proportional to the power input), which is inversely proportional to the product life. It must be noted that in industry as a rule of thumb the product life is reduced by 1/2 for every 10℃ increase of its running temperature.