



SPECIFICATION FOR APPROVAL

Customer. \_\_\_\_\_

Description. EST FAN (Energy Saving Technology Fan)

Part No. \_\_\_\_\_ REV. \_\_\_\_\_

Delta Model No. AFL22AUHW-R220DH REV. 01

Sample Issue No. \_\_\_\_\_

Sample Issue Date. MAR.07 2018

PLEASE SEND ONE COPY OF THIS SPECIFICATION BACK  
AFTER YOU SIGNED APPROVAL FOR PRODUCTION PRE-  
ARRANGMENT.

APPROVED BY:

DATE :

DELTA ELECTRONICS, INC.

TAOYUAN PLANT

252, SHANG YING ROAD, KUEI SAN INDUSTRIAL ZONE TAOYUAN  
SHIEN, TAIWAN, R.O.C.

TEL:886-(0)3-3591968

FAX:886-(0)3-3591991

DELTA ELECTRONICS, INC.  
252, SHANG YING ROAD, KUEI SAN  
TAOYUAN HSIEN 333, TAIWAN, R. O. C.

TEL : 886-(0)3-3591968  
FAX : 886-(0)3-3591991

STATEMENT OF DEVIATION  
\*\*\*\*\*

<input checked="" type="checkbox"/> NONE
<input type="checkbox"/> DESCRIPTION :

DELTA ELECTRONICS, INC.  
 252, SHANG YING ROAD, KUEI SAN  
 TAOYUAN HSIEN 333, TAIWAN, R. O. C.

TEL : 886-(0)3-3591968  
 FAX : 886-(0)3-3591991

SPECIFICATION FOR APPROVAL  
 \*\*\*\*\*

Customer:

Description: EST FAN (Energy Saving Technology Fan)

Customer P/N:

REV:

Delta Model NO.: AFL22AUHW-R220DH

Delta Safety Model No: MR22AUPE-15R220

Sample Rev: 01

Issue NO:

Sample Issue Date: MAR.07 2018

Quantity:

1. SCOPE:

THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THE AC TO DC BRUSHLESS AXIAL FLOW FAN.

2. CHARACTERS:

UNLESS SPECIFIED, ALL READINGS AND TESTS ARE BASED ON 25°C, 65% RH.

ITEM	DESCRIPTION
NOMINAL VOLTAGE (VAC)	115 / 230 VAC (50/60Hz)
NOMINAL VOLTAGE RANGE	100 - 240 VAC
INPUT POWER ( FREE AIR, MAIN/SECOND SPEED)	13 / 9 W
INPUT POWER (MAX. LOAD)	30W MAX.
*MAIN SPEED (FREE AIR)	2200±10% R.P.M.
*SECOND SPEED (FREE AIR)	1850±10% R.P.M.
MAX. AIR FLOW @2200RPM (AT ZERO STATIC PRESSURE)	7.21 M <sup>3</sup> /MIN. (TYP.) 254.6 CFM (TYP.)
MAX. AIR PRESSURE @2200RPM (AT ZERO AIRFLOW)	13.55 mmH <sub>2</sub> O (TYP.) 0.533 inchH <sub>2</sub> O (TYP.)
ACOUSTICAL NOISE @2200RPM (1M) (NOTE4)	53.0 (MAX. 58.0) dB(A)
INSULATION TYPE	UL: CLASS B

(continued)

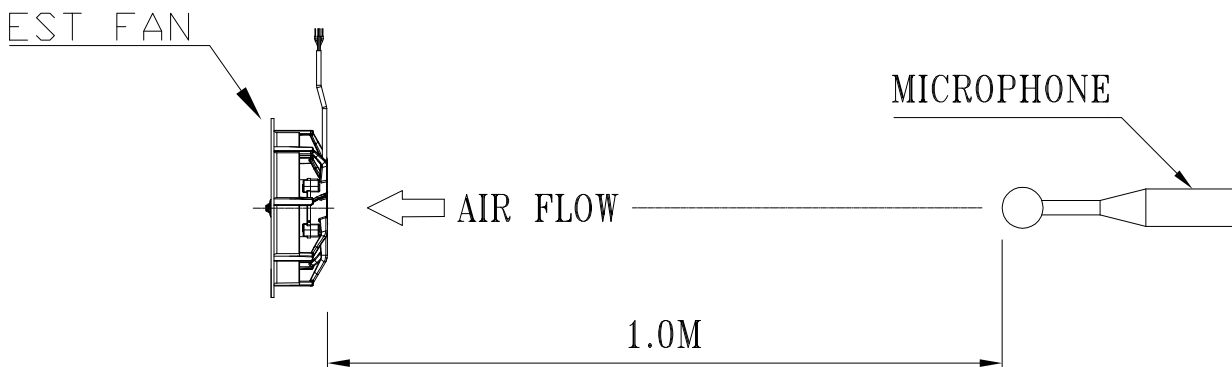
\*SPEED FUNCTION SETTING AT PAGE 4.

PART NO:

DELTA MODEL: AFL22AUHW-R220DH

INSULATION STRENGTH	10 MEGA OHM MIN. AT 500 VDC (BETWEEN FRAME AND (+) TERMINAL)
DIELECTRIC STRENGTH	5 mA MAX. AT 500 VAC 50/60 Hz ONE MINUTE, (BETWEEN FRAME AND (+) TERMINAL)
ROTATION	CLOCKWISE VIEW FROM NAME PLATE SIDE

- NOTES:
1. ALL READINGS ARE MEASURED AFTER STABLY WARMING UP THROUGH 10 MINUTES.
  2. STANDARD AIR PROPERTY IS AIR AT (Td) 25°C TEMPERATURE, (RH) 65% RELATIVE HUMIDITY, AND (Pb) 760 mmHg BAROMETRIC PRESSURE.
  3. THE VALUES WRITTEN IN PARENS , ( ), ARE LIMITED SPEC.
  4. ACOUSTICAL NOISE MEASURING CONDITION:



NOISE IS MEASURED AT RATED VOLTAGE IN FREE AIR IN SEMI-ANECHOIC CHAMBER WITH B & K SOUND LEVEL METER WITH MICROPHONE AT A DISTANCE OF 1.0M FROM THE FAN INTAKE.

---

PART NO:

---

DELTA MODEL: AFL22AUHW-R220DH

---

3. MECHANICAL:

- 3-1. DIMENSIONS \_\_\_\_\_ SEE DIMENSIONS DRAWING
- 3-2. FRAME \_\_\_\_\_ PLASTIC UL: 94HB
- 3-3. IMPELLER \_\_\_\_\_ PLASTIC UL: 94HB OR 94V-0
- 3-4. BEARING SYSTEM \_\_\_\_\_ 2 BALL BEARING
- 3-5. WEIGHT \_\_\_\_\_ 0.8 KILOGRAMS (REF.)
- 3-6. INGRESS PROTECTION LEVEL \_\_\_\_\_ IP-56

4. ENVIRONMENTAL:

- 4-1. OPERATING TEMPERATURE \_\_\_\_\_ -40 TO +55 DEGREE C
- 4-2. STORAGE TEMPERATURE \_\_\_\_\_ -40 TO +85 DEGREE C
- 4-3. OPERATING HUMIDITY \_\_\_\_\_ 5 TO 90 % RH
- 4-4. STORAGE HUMIDITY \_\_\_\_\_ 5 TO 95 % RH

5. PROTECTION:

- 5-1. LOCKED ROTOR PROTECTION
- 5-2. OVER CURRENT PROTECTION
- 5-3. MOTOR OVER TEMP. PROTECTION

6. RE OZONE DEPLETING SUBSTANCES:

- 6-1. NO CONTAINING PBBs, PBBOs, CFCs, PBBEs, PBDPEs AND HCFCs.

7. PRODUCTION LOCATION

- 7-1. PRODUCTS WILL BE PRODUCED IN CHINA.

---

PART NO:

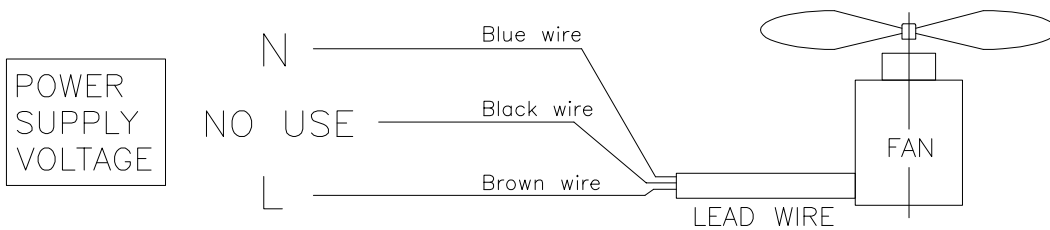
---

DELTA MODEL: AFL22AUHW-R220DH

---

## 8. SPEED FUNCTION:

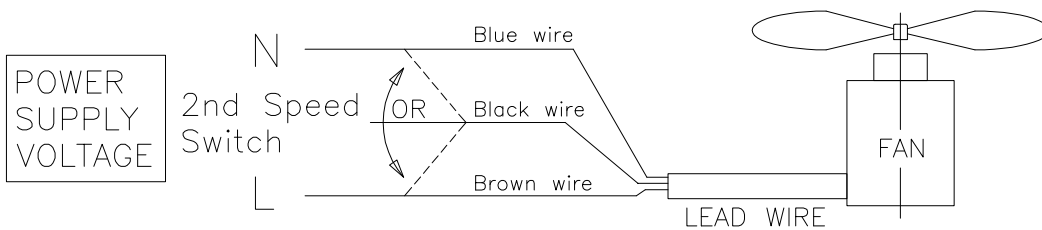
### \* MAIN SPEED SETTING:



### \* SECOND SPEED SETTING:

BLUE WIRE AND BLACK WIRE SHORT, THEN SECOND SPEED.

BROWN WIRE AND BLACK WIRE SHORT, THEN SECOND SPEED.



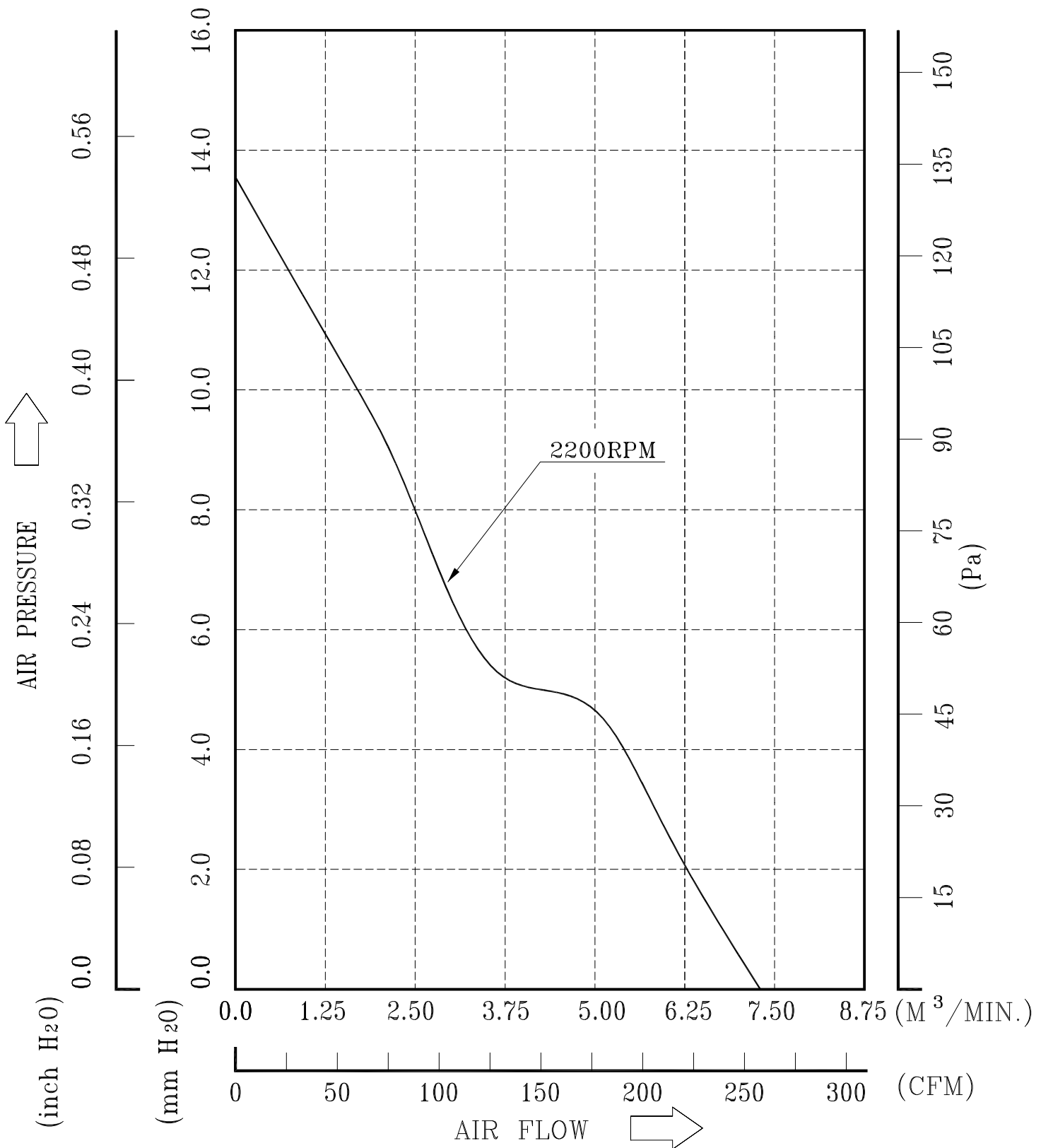
## NOTES:

\*BLUE WIRE (N) DO NOT TOUCH BROWN WIRE (L) DIRECTLY DURING OPERATION

PART NO:

DELTA MODEL: AFL22AUHW-R220DH

9. P & Q CURVE:

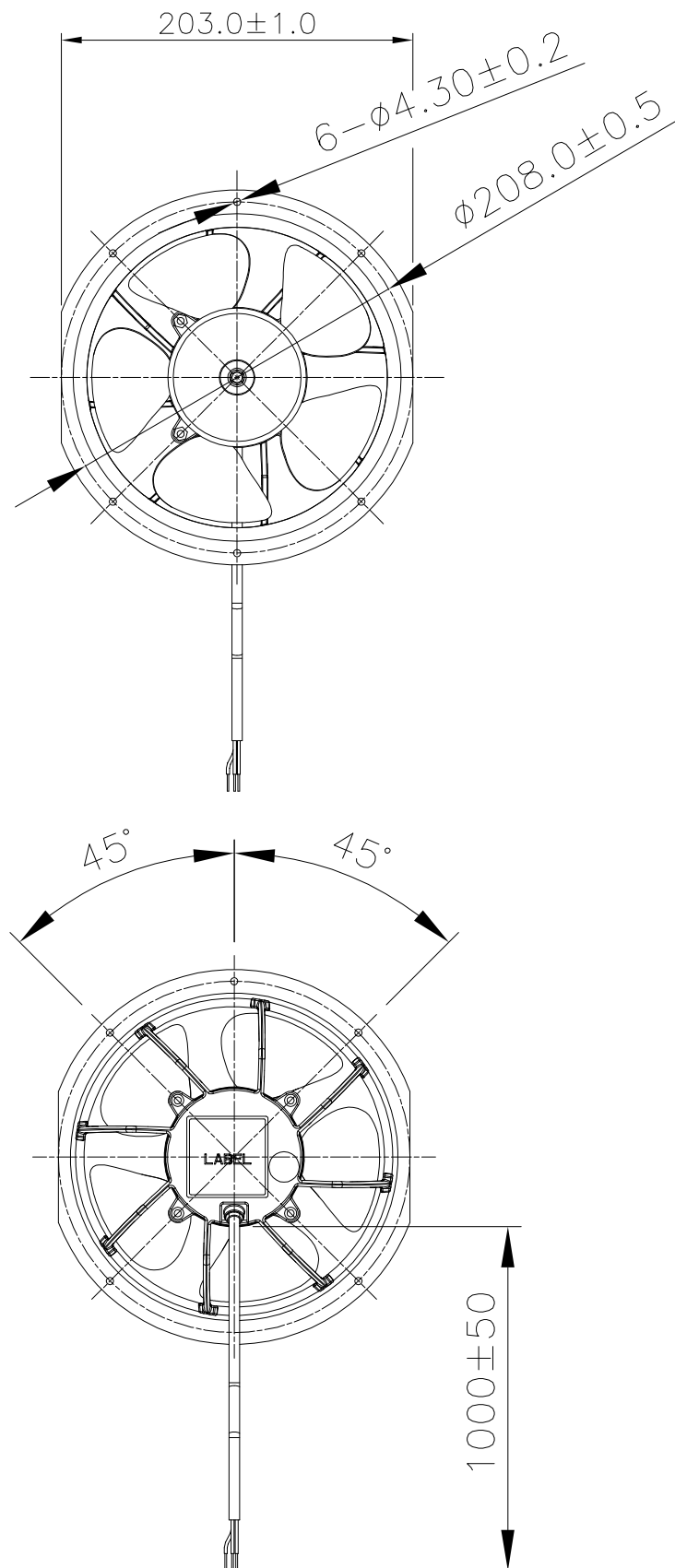


\* TEST CONDITION: INPUT VOLTAGE ——— NOMINAL VOLTAGE  
TEMPERATURE ——— ROOM TEMPERATURE  
HUMIDITY ——— 65%RH

PART NO:

DELTA MODEL: AFL22AUHW-R220DH

10. DIMENSION DRAWING:

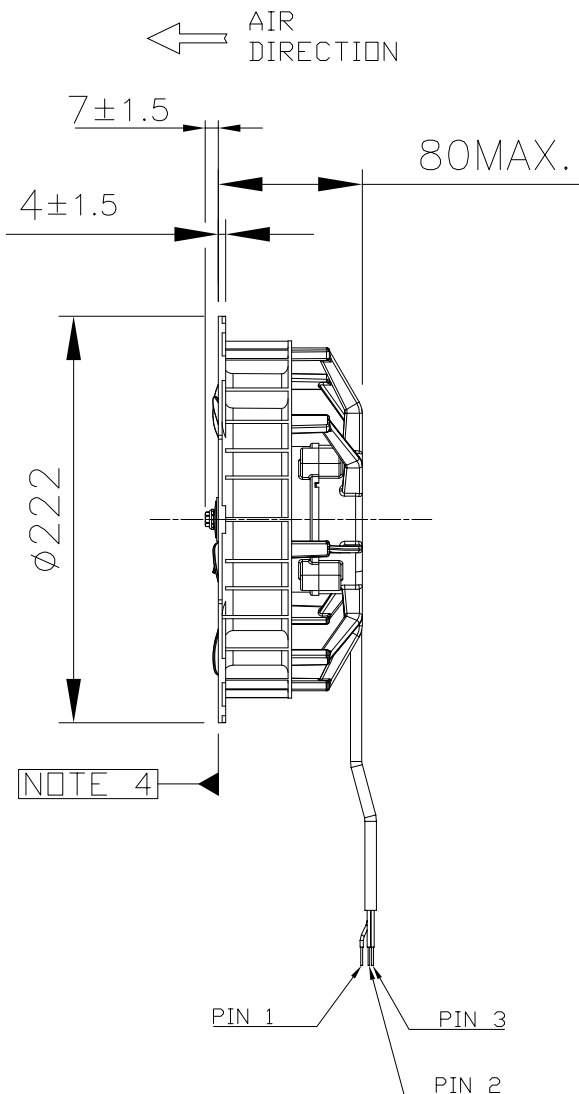


UNIT : mm



PART NO:

DELTA MODEL: AFL22AUHW-R220DH



LABEL:



UNIT : mm

NOTES:

1. THIS PRODUCT IS RoHS COMPLIANT
2. UL 2464 18AWG/3C(80°C) -LF-  
PIN1: BLUE WIRE (N)  
PIN2: BROWN WIRE (L)  
PIN3: BLACK WIRE (SECOND SPEED)
3. IMPELLER DIAMETER IS 172mm
4. FINGER GUARD USING SUGGESTION :  
INTERNAL HEIGHT DIMENSION BETWEEN FINGER GUARD AND  
TOP SURFACE OF FRAME MUST HAS 15 mm MINIMUM.



## ***Application Notice***

- 1. Delta will not guarantee the performance of the products if the application condition falls outside the parameters set forth in the specification.**
- 2. A written request should be submitted to Delta prior to approval if deviation from this specification is required.**
- 3. Please exercise caution when handling fans. Damage may be caused when pressure is applied to the impeller, if the fans are handled by the lead wires, or if the fan was hard-dropped to the production floor.**
- 4. Except as pertains to some special designs, there is no guarantee that the products will be free from any such safety problems or failures as caused by the introduction of powder, droplets of water or encroachment of insect into the hub.**
- 5. The above-mentioned conditions are representative of some unique examples and viewed as the first point of reference prior to all other information.**
- 6. Delta fans without special protection are not suitable where any corrosive fluids are introduced to their environment.**
- 7. Please ensure all fans are stored according to the storage temperature limits specified. Do not store fans in a high humidity environment. We highly recommend performance testing is conducted before shipping, if the fans have been stored over 6 months.**
- 8. Not all fans are provided with the Lock Rotor Protection feature. If you impair the rotation of the impeller for the fans that do not have this function, the performance of those fans will lead to failure.**
- 9. Please be cautious when mounting the fan. Incorrect mounting of fans may cause excess resonance, vibration and subsequent noise.**
- 10. It is important to consider safety when testing the fans. A suitable fan guard should be fitted to the fan to guard against any potential for personal injury.**
- 11. Except where specifically stated, all tests are carried out at room (ambient) temperature and relative humidity conditions of 25°C, 65% RH. The test value is only for fan performance itself.**