



## Comair Rotron Specification Sheet

Specification Date: September 4, 2009

RoHS Compliant

COMAIR ROTRON PART NUMBER:  
COMAIR ROTRON MODEL NUMBER:

043137  
DDE893948B1S5X-E2

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### A.) MOTOR:

RATED VOLTAGE:	48 Vdc
OPERATING VOLTAGE RANGE:	36 Vdc to 60 Vdc
LOW-START VOLTAGE:	36Vdc
RATED RUNNING CURRENT:	2.2 Amps
RATED POWER:	106Watts
NOMINAL SPEED:	2600rpm $\pm$ 10% (At Free Delivery)
MOTOR TYPE:	Brushless DC
MOTOR PROTECTION:	By Integrated Circuit, Fuse
LOCKED ROTORT PROTECTION:	Electronic
POLARITY PROTECTION:	Yes
AUTOMATIC RESTART CAPABILITY:	By Integrated Circuit
ROTATION:	Clockwise when viewed from Inlet

### B.) MECHANICAL

DIMENSIONS:	227mm Dia. x 99mm (8.94" Dia. x 3.90") <i>Figure 1</i>
WEIGHT:	1.70 Kg (3.74 Lbs.)
BEARING TYPE:	Ball Bearing, Permanently Lubricated, Shielded
MOTOR BASE:	Die Cast Aluminum
PROPELLER:	Metal, Black Paint
CUP	Steel Cup without Holes



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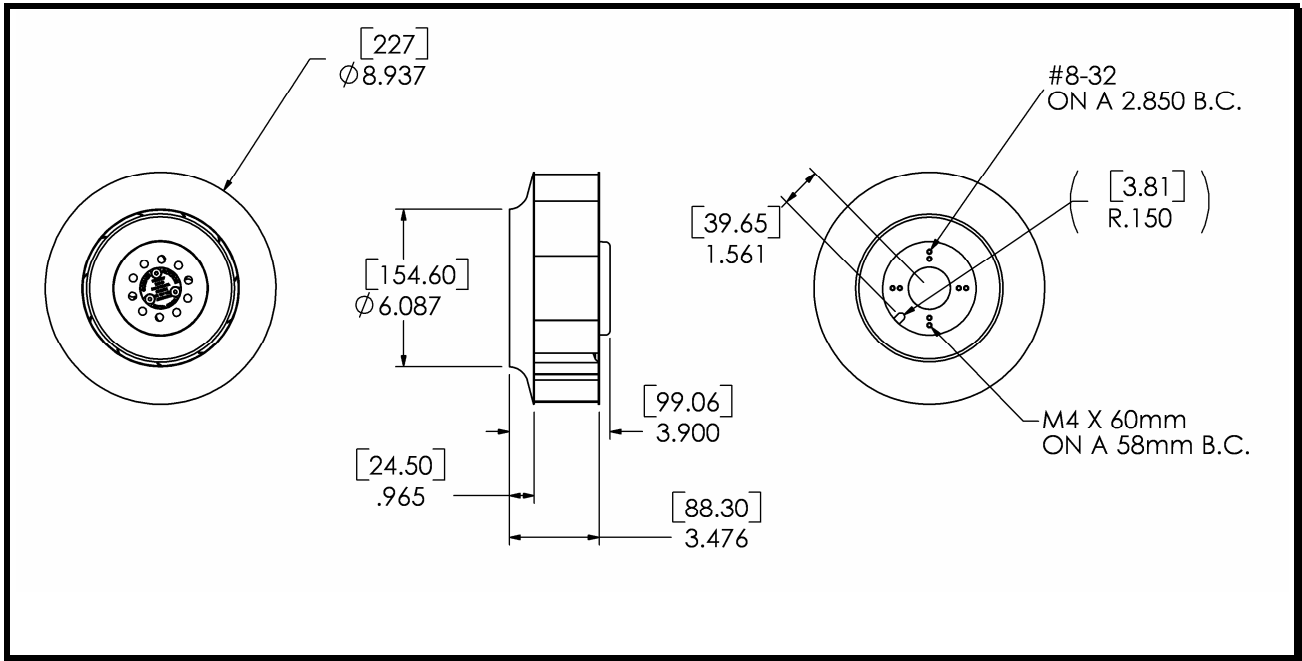


Figure 1

## C.) ADDITIONAL FEATURES

TACHOMETER OUTPUT:

Open Collector Output  
3 Pulses per Revolution  
Non-isolated

SPEED CONTROL:

Base Frequency:  
Amplitude:  
Response:

200Hz to 20KHz  
10vdc  $\pm$  0.50vdc (No insensitive features)  
0%  $\leq$  duty cycle  $<$  10%, off  
10%, 800rpm  $\pm$  100rpm  
10% to 95%, approx direct linear ramp  
 $\geq$  95% or open ctrl lead, 2600rpm  $\pm$  10%

MAX RUNNING LIMITATION:

4 Amps

## D.) ENVIRONMENTAL

OPERATING TEMPERATURE:

-10°C to +70°C

STORAGE TEMPERATURE:

-40°C to +75°C

ENVIROMENTAL SHIELD:

IP55



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### E.) PERFORMANCE CHARACTERISTICS

AIR FLOW:	685CFM (At Free Delivery and 48Vdc)
STATIC PRESSURE:	1.9" H <sub>2</sub> O (At Shut-Off and 48Vdc)
ACOUSTIC LEVEL:	73dBA (Freely Suspended at 1 meter per ANSI S1.31-1980 at 48Vdc)

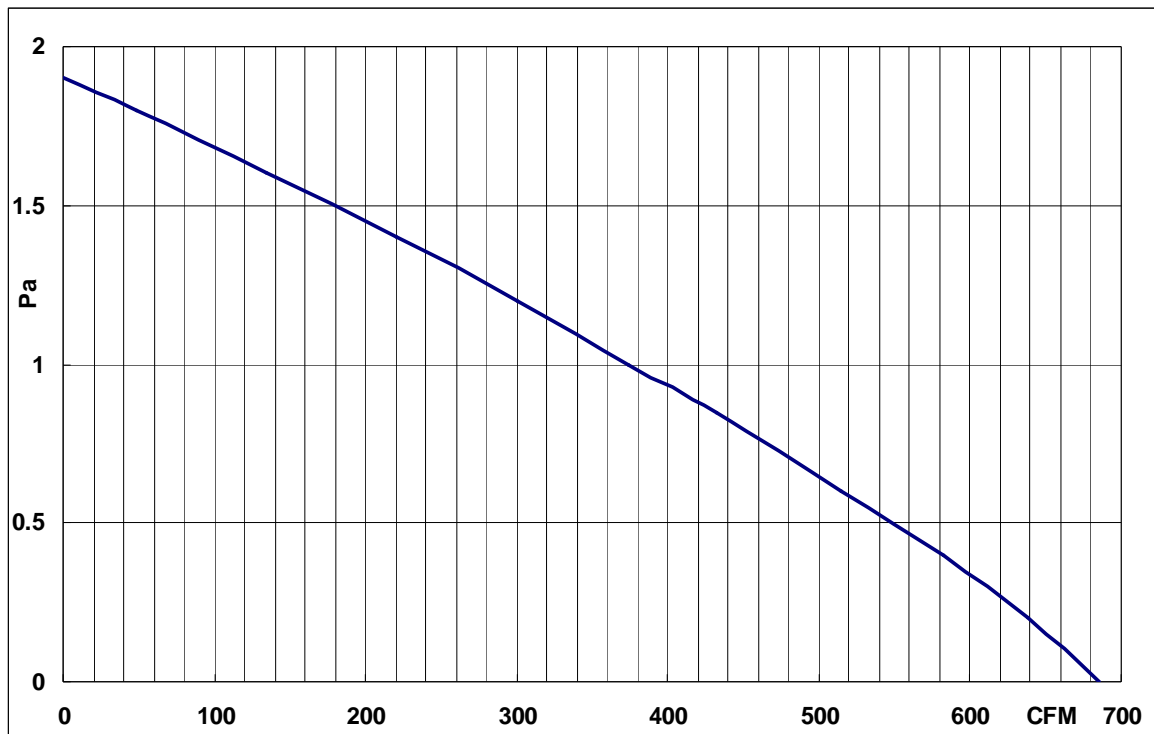


Figure 2



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### F.) TERMINATION

LEADWIRES:	460mm +10mm/-0.0 (From the edge of the venturi to the tip of the leadwire),AWG 18, UL1007
CONTACT:	Molex 39-00-0038
CONNECTOR:	Molex 39-01-2040
SLEEVE TUBE:	PVC (UL or CSA approved) (Sleeve tube to extend $25 \pm 2.0$ mm beyond the edge of the venturi)
PIN DESCRIPTION:	Pin 1: Black----power(-) Pin 2: Blue ----tach Pin 3: Yellow---pwm Pin 4: Red---power(+)

### G.) RELIABILITY

This fan is designed for continuous duty life of 50,000 Hours at 40°C (L10)

### H.) SAFETY

UL, CE

### I.) Flammability

The motorized impeller including all components, meet a UL94V-0 rating.

#### Notes:

All parameters will perhaps fluctuate with the speed tolerance by + / - 10%.