ROTRON / AMETEK®

AEROSPACE & DEFENSE

Rotron MAXIAX® 6.75 - 7.50

Large Vaneaxial Fans

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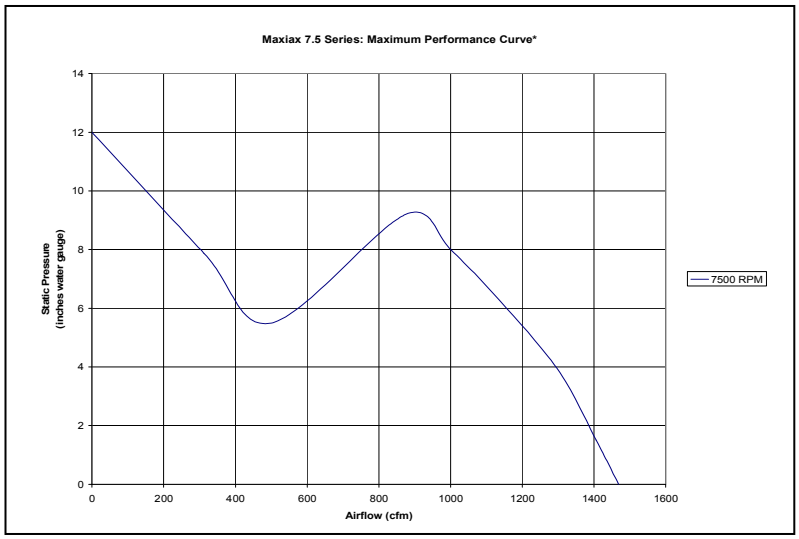
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General Large Vaneaxial Information

MAXIAX® fans provide relatively high flows against high impedance in a compact axial flow package. They operate at high rotational speeds, typically with 400 Hz motors or internal ECDC brushless motors. MAXIAX® fans are extremely efficient and highly customizable, allowing for precise airflow design. MAXIAX® fans are typically utilized to cool airborne radar and other devices with high power transmitters. They are also employed as evaporator/condenser fans in environmental controls systems and to duct air to various aircraft avionics bays, cockpit displays and cabin compartments. MAXIAX® fans are also used extensively in general aviation aircraft, military vehicles and shelters and shipboard applications. They come in a variety of voltages and frequencies and are available with lead wires, terminal blocks and MS connectors. Most units are available with an optional internal Fan Performance Sensor (FPS) or an internal or external Low Speed Warning Device (LSWD).

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General Large Vaneaxial Information

- Physical envelope: 6.75 to 7.50" diameters, 4.33 to 12.00" lengths [1]
- Weight: 8.75 to 13.3 lbs.
- Specially designed for avionics/equipment cooling and environmental control systems.
- Speeds as high as 11,700 RPM.
- Airflow as high as 1600 CFM.
- Functional Static Pressures: as high as 27 IWG.

1. See specific part-number drawing for complete product dimensions

Materials and Finishes

- All aluminum components finished with a chemical conversion coating per MIL-C-5541, top coat of lusterless black enamel, color #37038, per Federal Standard 595 conforming to TT-E-489 Type B.
- Corrosion-resistant stainless steel shaft and hardware
- Impeller runs on two high-precision, double-shielded, stainless steel ball bearings (ABEC Class 5) for a long, maintenance-free life.
- Motors have stator winding insulation which is rated for continuous duty for either Class F or Class H

Options/Accessories

- Flanges
- Beads
- Check Valves
- Custom Designs Available
- Integral EMI filter
- LSWD (Low Speed Warning Device)
- FPS (Fan Performance Sensor

AC Line Powered Units [1]

- 3-phase and 1-phase permanent-split capacitor motor designs.
- Fixed speeds (performance) based on input frequency.
- Meets or exceeds the requirements of MIL-B-23071 and other applicable U.S. military and commercial aerospace specifications [2]
- Max free delivery airflow of 1600 CFM at 400 Hz
- Ambient temperature range: -54 °C to 85 °C.
- Acoustic levels as low as 66 dBA.

DC Line Powered Units – E.C.D.C.® [1]

- Brushless permanent magnet design (Electronically Commutated DC).
- Speed (performance) fixed by input voltage
- Meets or exceeds the requirements of MIL-B-28873 and other applicable U.S. military and commercial aerospace specifications [2]
- Max free delivery airflow of 786 CFM.
- Ambient temperature range: -40 °C to 72 °C.
- Standard 24 and 28 volt designs.

[1] Airflow, maximum ambient and acoustic levels will vary depending on design parameters

[2] Please call for further information concerning applicable U.S. military and commercial aerospace specifications

Optional DC-AC Inverters and AC-AC Converters for AC Powered Models[1]

BATAC® Inverter Driven Units

- AC square wave fans driven from a DC power source through a BATAC® Inverter.
- Low cost alternative when multiple fans are used in a single application or area.
- Allows for greater than 100 VDC input voltage.

[1] See Accessories: Power Conversion

DELTAC® Converter Driven Units

- DELTAC® converters allow high frequency (typically 400 Hz) fans to be driven by variable frequency (typically 360-800 Hz) power or low frequency 50/60 Hz power to obtain the higher frequency performance.

Unit Description Key

The unit description key is for reference only and should not be confused with a part number. While most units are custom configurations, not all variations of the key shown below are possible. Please contact the Application Engineering department for more information regarding possible custom configurations.

AC MODELS

MAX | 475 | 01 | A | Q | 2 | C | L | N | 1894 JF

- 1894 JF → MOTOR SERIES
- N → FAN PERFORMANCE SENSOR
  - N- WITHOUT, S-WITH
- L → CONNECTOR
  - L- LEADWIRES
  - M- MILITARY, MS ATTACHED TO HOUSING
  - N- MILITARY, MS ATTACHED TO LEADS
  - T- TERMINAL BLOCK
- C → MOUNTING CONFIGURATION
  - A- FLANGED, INLET ONLY
  - B- FLANGED, OUTLET ONLY
  - C- FLANGED, BOTH ENDS
  - D- FLANGED INLET, BEADED OUTLET
  - E- FLANGED OUTLET, BEADED INLET
  - F- BEADED, BOTH ENDS
  - G- FLANGED CENTER, PLAIN ENDS
  - H- FLANGED CENTER, BEADED ENDS
  - I- PLAIN, BOTH ENDS
  - J- FLANGED INLET ONLY WITH INLET PERFORMANCE RING
  - K- FLANGED OUTLET ONLY WITH INLET PERFORMANCE RING
  - L- FLANGED, BOTH ENDS WITH INLET PERFORMANCE RING
  - M- FLANGED INLET, BEADED OUTLET WITH INLET PERFORMANCE RING
  - N- FLANGED OUTLET, BEADED INLET WITH INLET PERFORMANCE RING
  - O- BEADED, BOTH ENDS WITH INLET PERFORMANCE RING
  - P- FLANGED CENTER, PLAIN ENDS WITH INLET PERFORMANCE RING
  - Q- FLANGED CENTER, BEADED ENDS WITH INLET PERFORMANCE RING
  - R- PLAIN, BOTH ENDS WITH INLET PERFORMANCE RING
  - S- LEGS, WITH INLET PERFORMANCE RING
  - T- SERVO RINGS, BOTH ENDS
  - X- SPECIAL
- 2 → VOLTAGE
  - 1- 115
  - 2- 200
  - 3- 115/230
  - 4- 416
- Q → ELECTRICAL DATA
  - A- AC LINE OPERATED
- A → DESIGN SEQUENCE
- 475 → SIZE GROUP
  - APPROXIMATE HOUSING O.D.; NUMBER IS DIMENSIONED IN INCHES TO TWO DECIMAL PLACES. THE PERIOD IS NOT SHOWN
- MAX → MAXIAX

•	NO. POLES	NO. PHASES	APPOX.. SPEED- NO LOAD (REF.) 50 Hz	60 Hz	400 Hz
A	2	3	2900	3500	-
B	4	3	1450	1750	-
E	6	1 OR 3	950	1150	-
F	8	1 OR 3	700	850	-
K	2	1	2900	3500	-
L	4	1	1450	1750	-
M	6	1 OR 3	-	-	7500
N	8	1 OR 3	-	-	5500
P	12	1 OR 3	-	-	3900
Q	4	1 OR 3	-	-	11000
R	2	1 OR 3	-	-	23000

NOTE: DUAL FREQUENCY OR DUAL POLE MOTORS DESIGNATED BY USING 2 DIGITS. EX: KM = (2 POLE 1Φ 50/60 Hz, 6 POLE 1Φ 400 Hz

DC MODELS (SAME AS AC EXCEPT WHERE INDICATED)

MAX | 420 | 01 | D | 28 | G | N | N | 1894 JF

- 28 → VOLTAGE
- D → ELECTRICAL DATA
  - D- DC LINE OPERATED
  - E- ECDC
  - M- MCDC

EXAMPLE: MAX47501AQ2CL, N, 1894 JF

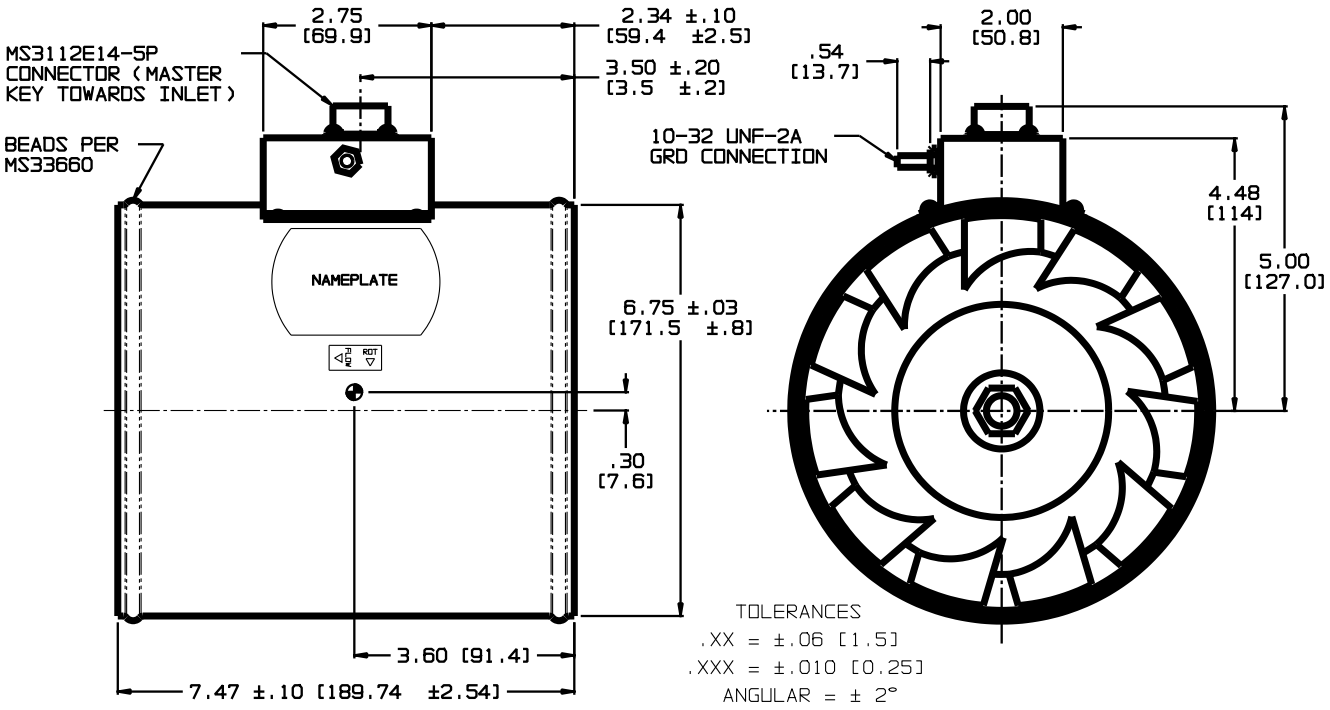
Ordering Information

When ordering, please specify the specific Rotron part number listed on the following model table. Further ordering information, based on the configuration and motor series,may be obtained by contacting customer service. Please refer to the Unit Description Key explanation above.

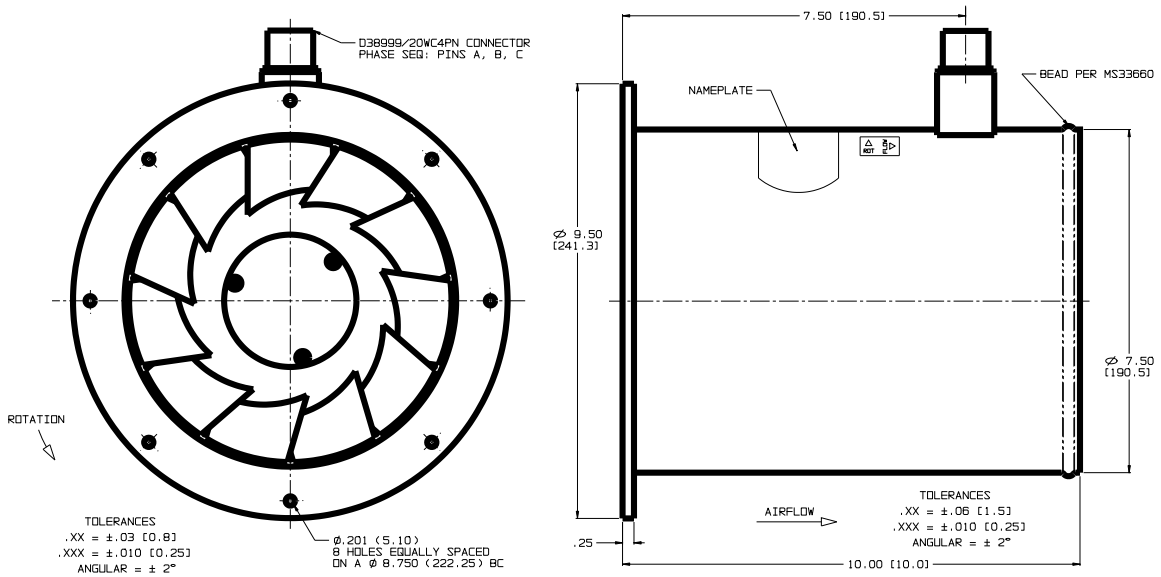
Standard Product Offering of AC Line Powered Models

Part #	Product Description	Flow (CFM)	Max Pressure (IWG)	Nom. RPM	Nom. Watts	Line Amps (A)	Max Amb (C)	Weight	Volts	Phase	Hz	Capacitor	Airflow Source Data	Features
041493000	MAX67505 2875Q7	923	27.6	11800	2070	9.0	71	14.5	200	3	400	N/A	A660-18	CONNECTOR, THERMAL PROTECTOR
041013000	MAX75000 2965WF	1472	11.9	7500	1911	7.9	60	15.0	200	3	400	N/A	A617-17	CONNECTOR
041227000	MAX75002 3418JH	475	1.7	3400	85	0.8	100	8.3	115	3	60	N/A	A691-7	LEADS
041463000	MAX70005 3850QH	1602	19.4	11300	2776	9.5	100	10.9	200	4	400	N/A	A788-20	CONNECTOR

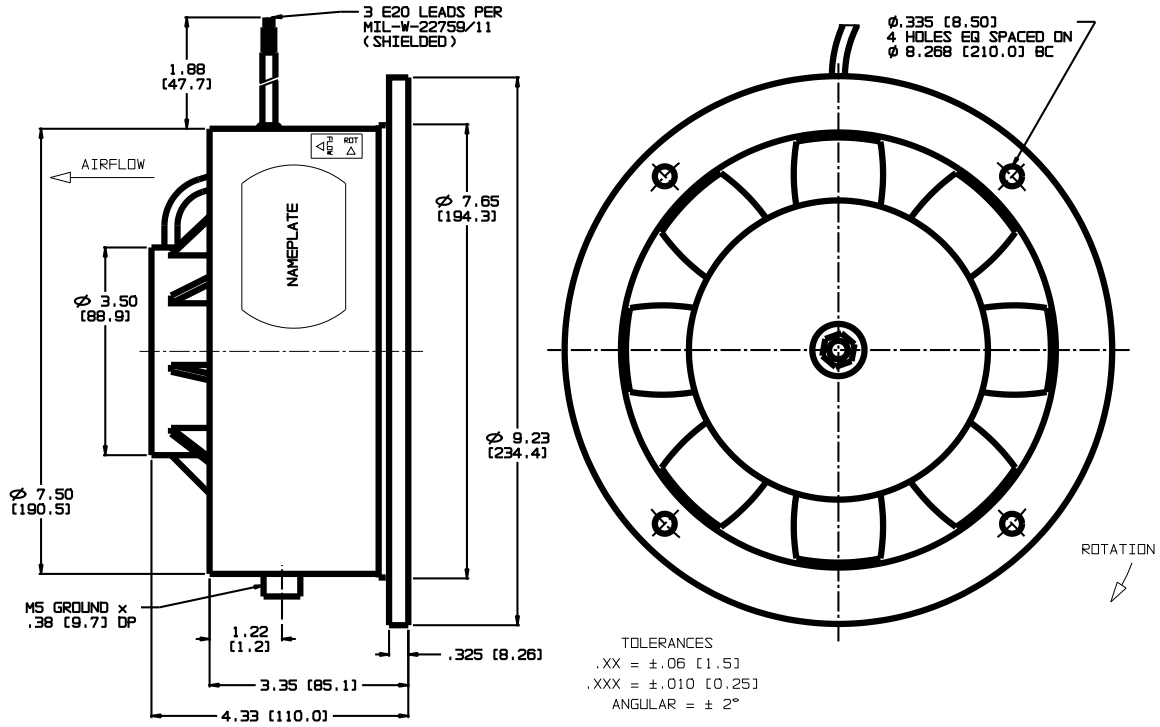
MAXIAX 67505 - AC



MAXIAX 75000 - AC



MAXIAX 75002 - AC



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Specifications subject to change without notice