



Rotron / Airscrew



Rotron AXIMAX[®] 1 Small Vaneaxial Fans

General Small Vaneaxial Information

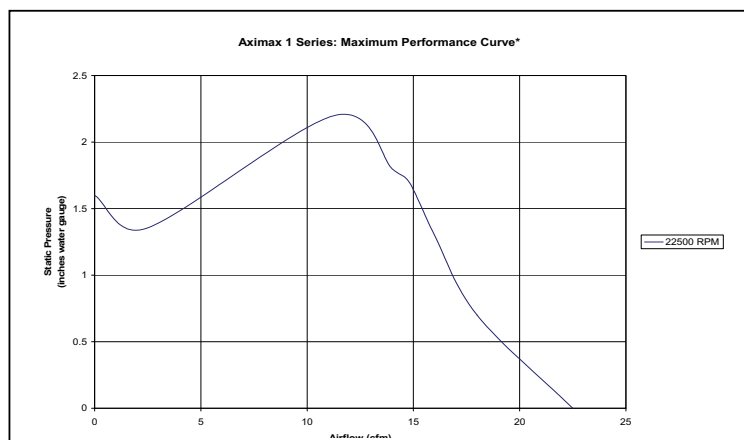
Small Vaneaxial Fans are compact, high-speed fans whose airflow is parallel to the motor shaft. The impeller and guide waves are of airfoil construction for maximum aerodynamic efficiency and minimum acoustical noise.

These fans are designed for use in tightly packaged airborne “black boxes” where sizes and weight must be held to an absolute minimum, where reliability is critical,

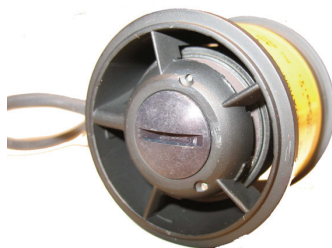
and where high heat loads must be dissipated with cooling air.

Small Vaneaxial Fans 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 external Low Speed Warning Device (LSWD). Some units are available with an internal Low Speed Warning Device (LSWD).

Rotron AXIMAX[®] 1



*Individual Performance Curve Characteristics Available Upon Request



General

- Physical envelope: 1.75" Dia. x 1.70" L¹
- Weight: approximately 4 oz.
- Specially designed for spot cooling of electronics and optics
- Custom mounting configurations, such as flanges or servo rings and synclamps, are available²

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) with an integral lubricant reservoir for a long, maintenance-free life
- Motors have stator winding insulation which is rated for continuous duty for Class H

¹ See specific part-number drawing for complete product dimensions

² Please contact the Application Engineering Department for further information

Options/Accessories

- Synclamp
- Reverse Synclamp
- Fingerguard
- LSWD (Low Speed Warning Device)
- FPS (Fan Performance Sensor)

Specifications subject to change without notice



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AC Line Powered Units¹

- 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 specifications²
- Max free delivery airflow of 2.5 at 60 Hz and 21 CFM at 400 Hz
- Ambient temperature range: -54°C to 125°C
- Acoustic levels as low as 60 dBA

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

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 specifications²
- Max free delivery airflow of 17.4 CFM
- Ambient temperature range: -54°C to 100°C
- Acoustic levels as low as 69 dBA

Optional DC-AC Inverters and AC-AC Converters for AC Powered Models¹

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

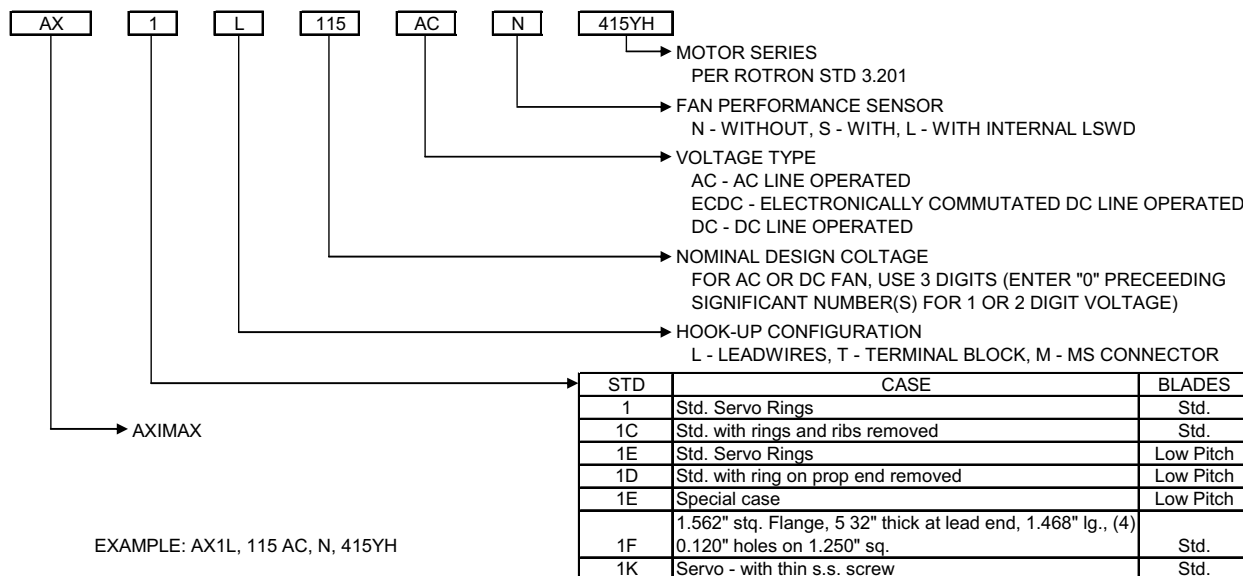
¹ See Accessories: Power Conversion

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.



* "X" IN ANY POSITION DENOTES SPECIAL FOR THAT FEATURE



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Ordering Information

When ordering, please specify the specific Rotron part number listed on the model table below. 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 #	Prod. Desc.	Flow (CFM)	Max Pressure (IWG)	Nom. RPM	Nom. Watts	Line Amps (A)	Max Amb (C)	Weight	Volts	Phase	Hz	Capacitor	Airflow Source Data	Features
026942000	AX1T 623YH	22	1.6	22000	18	0.2	125	0.3	115	1	400	0.25/220	A629-5	TERMINALS, SERVO RING
035180000	AX1T 367JH	21	1.6	22500	19	0.1	125	0.3	200	3	400	N/A	A620-16	TERMINALS, SERVO RING
021251000	AX1L 415YH	18	1.4	19000	18	0.2	125	0.3	115	1	400	0.15/220	A621-11	LEADS, SERVO RING
041139000	AX1L 499JH	14	1.0	14100	11	0.1	125	0.3	200	3	400	N/A	A621-8	LEADS, SERVO RING
035520000	AX1L 529YH	13	0.9	13400	10	0.1	125	0.3	115	1	400	0.10/220	A421-1	LEADS, SERVO RING
027764000	AX1T 1744NH	11	0.8	12100	11	0.1	125	0.3	115	1	400	0.68/220	A201-27	TERMINALS, SERVO RING
026944000	AX1T 464YH	10	0.4	11000	9	0.1	125	0.3	115	1	400	0.15/220	A621-13	TERMINALS, SERVO RING
024300000	AX1T 1138NH	8	0.3	8800	5	0.1	125	0.3	115	1	400	0.33/220	A419-2A	TERMINALS, SERVO RING

Standard Product Offering of DC Line Powered Models

Part #	Prod. Desc.	Flow (CFM)	Max Pressure (IWG)	Nom. RPM	Nom. Watts	Line Amps (A)	Max Amb (C)	Weight	Volts	Airflow Source Data	Features
011966000	AX1L 2991SF	22	1.6	22200	32	1.2	85	0.3	28	A781-2B	Leads, FPS
011825000	AX1L 3725SF	9	0.3	11500	5	0.2	85	0.3	26	A644-14	Leads, FPS



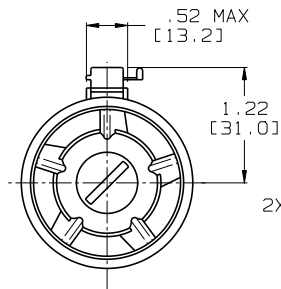
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AXIMAX 1 – AC*

AX1T

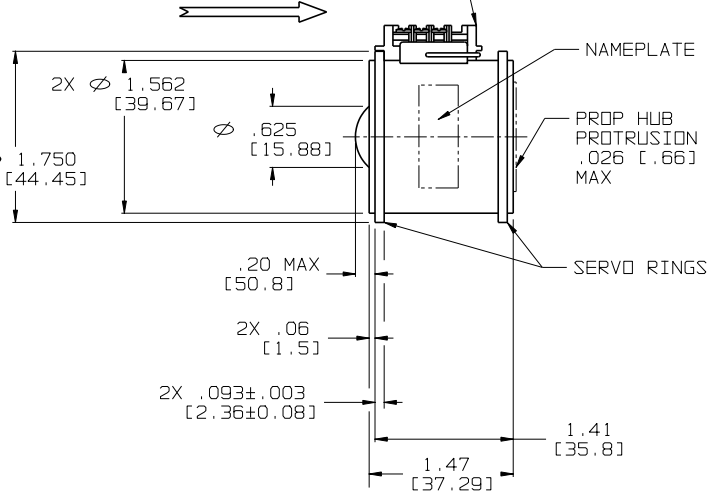
ROTATION



TOLERANCES
.XX = $\pm .03$ [0.8]
.XXX = $\pm .010$ [0.25]
ANGULAR = $\pm 2^\circ$

3X 2-64UNF-2A X .25 [6.4] SCREWS
3X #2 LOCKWASHERS
3X 477012 TERM LUGS
3X 476280 TERMINALS

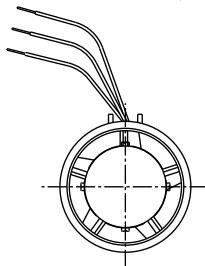
AIRFLOW



AXIMAX 1 – DC*

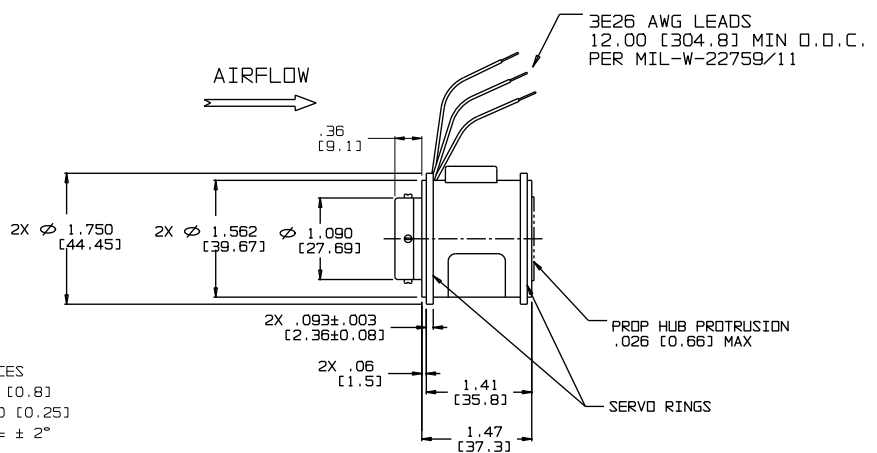
AX1L

ROTATION



TOLERANCES
.XX = $\pm .03$ [0.8]
.XXX = $\pm .010$ [0.25]
ANGULAR = $\pm 2^\circ$

AIRFLOW



*Part Number Specific Drawings Available Upon Request

AMETEK
AEROSPACE & DEFENSE
Rotron / Airtechnology Products

North America
T: +1 845-679-1361
F: +1 845-679-1870

United Kingdom
T: +44 (0) 1932 765822
F: +44 (0) 1932 761098

Specifications subject to change without notice

Europe
T: +49 8145 951767
F: +49 8145 951768

Asia Pacific
T: +65 6484 2388
F: +65 6481 6588

Contact E-mail: millenquiry@ametek.com

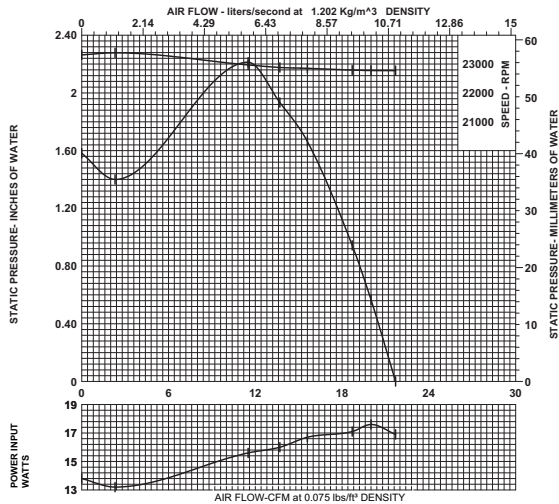
www.ametekaerodefense.com



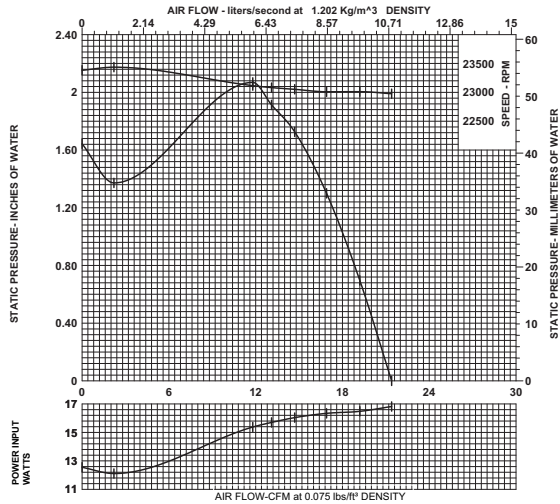
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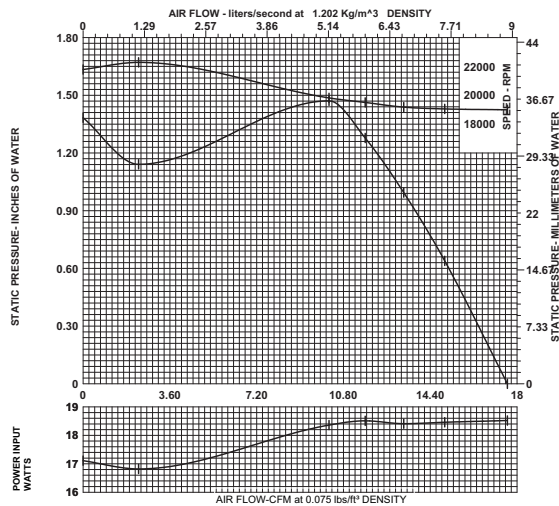
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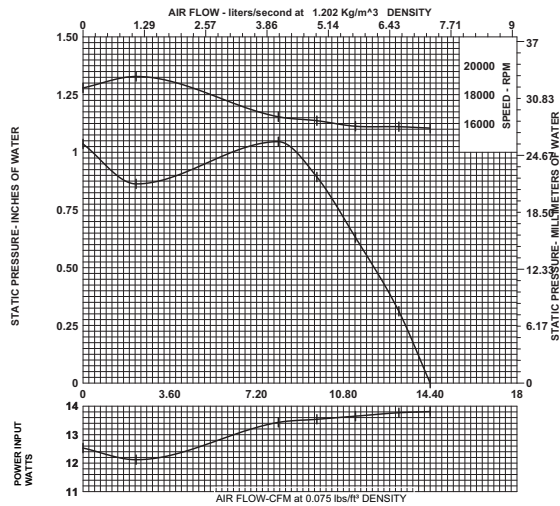
P/N 035180000 AX1T 367JH A620-16



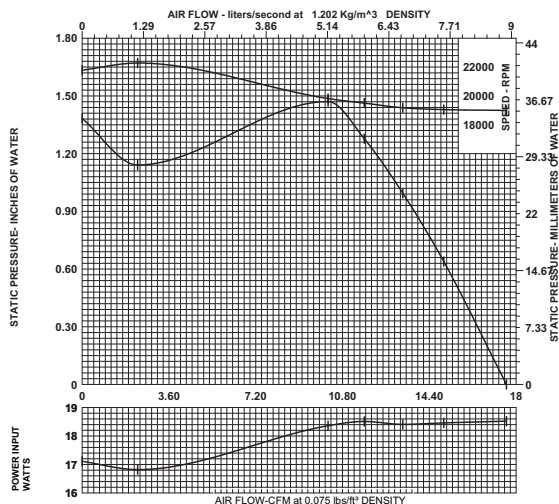
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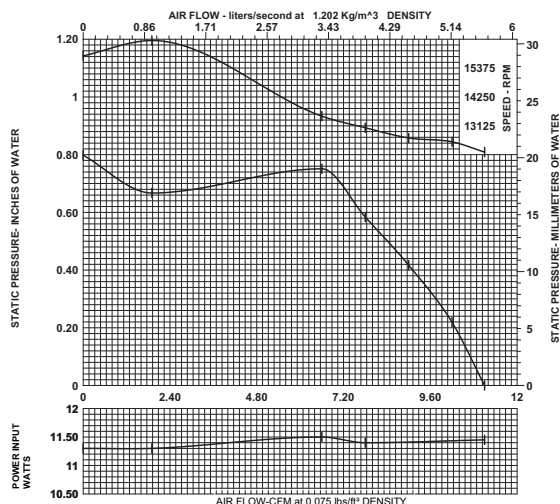
P/N 041139000 AX1L 499JH A621-8



P/N 035520000 AX1L 529YH A421-1



P/N 027764000 AX1T 1744NH A201-27



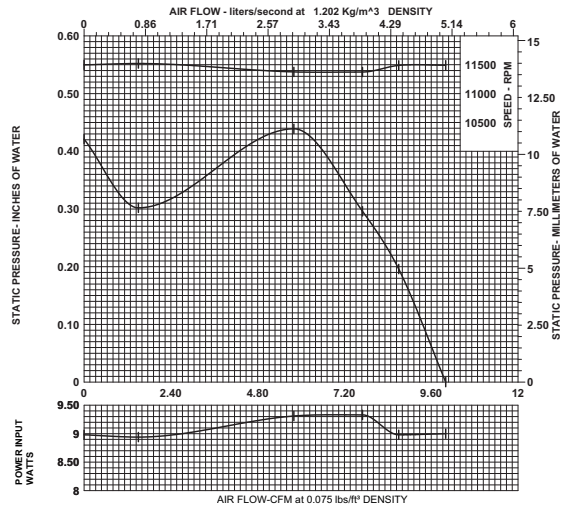
Specifications subject to change without notice



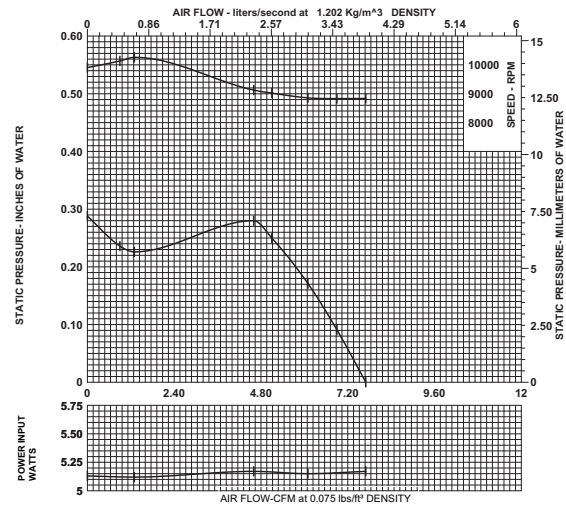
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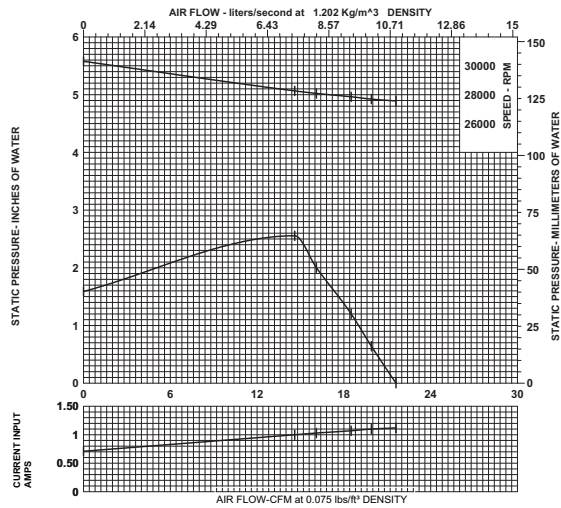
P/N 026944000 AX1T 464YH A621-13



P/N 024300000 AX1T 1138NH A419-2A



P/N 011966000 AX1L 2991SF A781-2B



P/N 011825000 AX1L 3725SF A644-14

