ROTRON / AMETEK®

Rotron ½ AXIMAX® 1 Small Vaneaxial Fans

Small Vaneaxial Fans

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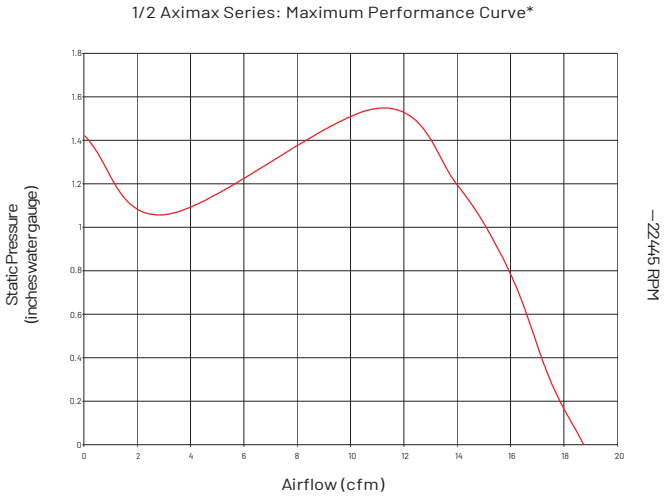
General Small Vaneaxial Information

Small Vaneaxial Fans are compact, high-speed fans whose airflow is parallel to the motor shaft. The impeller and guide vanes 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).

Rotron ½ AXIMAX® 1



*Individual Performance Curve Characteristics Available Upon Request



General

- Physical envelope: 1.75" Dia. x 1.36" L [1].
- Weight: approximately 3.75 oz.
- Specially designed for spot cooling of electronics and optics.
- Custom mounting configurations, such as flanges or servo rings and synclamps, are available [2].

[1] See specific part-number drawing for complete product dimensions
[2] Please contact the Application Engineering Department for further information

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 either Class F or Class H.

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 19 CFM at 400 Hz.
- Ambient temperature range: -54 °C to 125 °C.
- Acoustic levels as low as 72 dBA.

DC Line Powered Units – E.C.D.C® or M.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.
- M.C.D.C.® version offers locked rotor protection and integral LSWD or FPS with 1 or 2 pulse per revolution
- Max free delivery airflow of 26.5 CFM.
- Ambient temperature range: -54 °C to 100 °C.
- Acoustic levels as low as 72 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

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.

1/2 AX **1** **L** **115** **AC** **N** **820JH**

MOTOR SERIES
PER ROTRON STD 3.201

FAN PERFORMANCE SENSOR
N - WITHOUT, S - WITH, L - WITH INTERNAL LSWD

VOLTAGE TYPE
AC - AC LINE OPERATED
ECDC - ELECTRONICALLY COMMUTATED DC LINE OPERATED
MCDC - MICROPROCESSOR CONTROLLED DC LINE OPERATED
DC - DC LINE OPERATEDNOMINAL

NOMINAL DESIGN COLTAGE
FOR AC OR DC FAN, USE 3 DIGITS (ENTER "0" PRECEEDING SIGNIFICANT NUMBER(S) FOR 1 OR 2 DIGIT VOLTAGE)

HOOK-UP CONFIGURATION
L - LEADWIRES, T - TERMINALS, M - MS CONNECTOR

STD	CASE	BLADES
1	SPECIAL CASE	Std.

1/2 AXIMAX

EXAMPLE: 1/2AX1L, 115 AC, N, 820JH

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

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 DC Line Powered Models

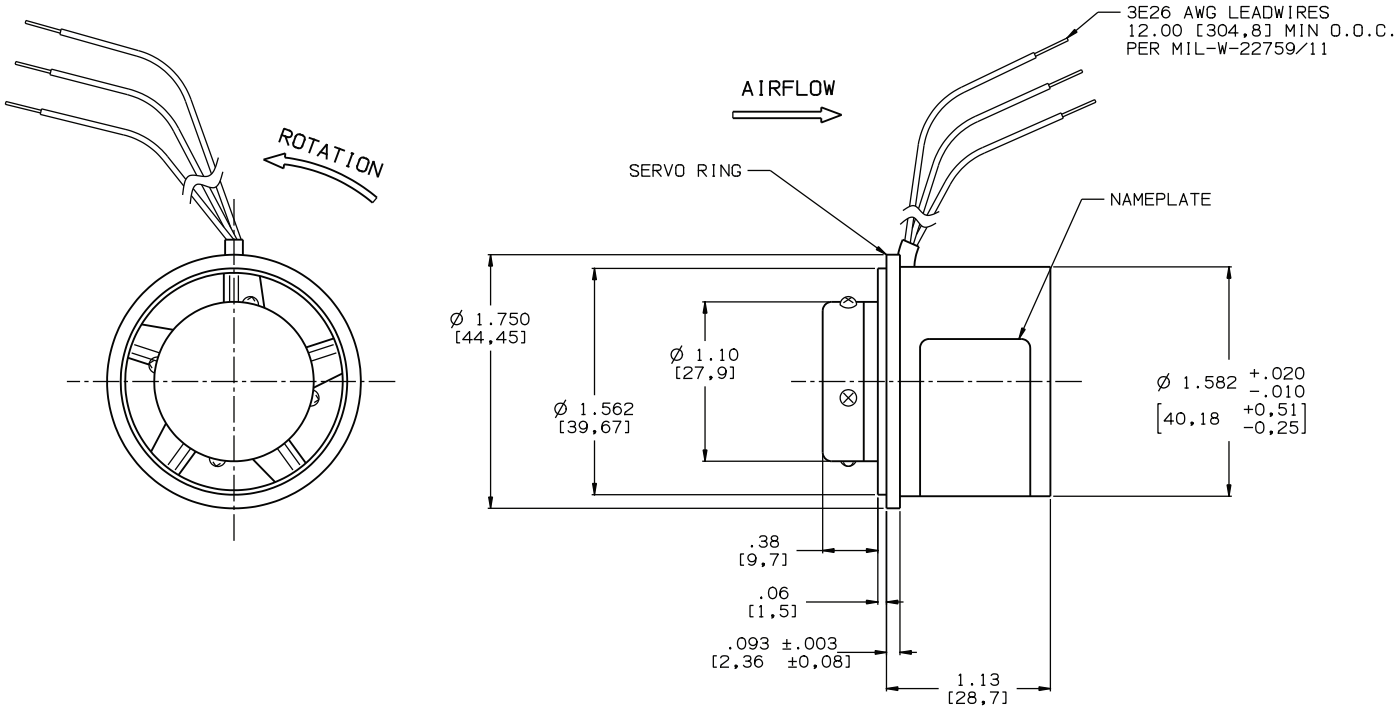
Part #	Prod. Desc.	Flow (CFM)	Max Pressure (IWG)	Nom. RPM	Nom. Watts	Line Amps (A)	Max Amb (°C)	Weight (lbs)	Volts	Phase	Hz	Capacitor	Airflow Source Data	Features
035688000	½ AX1L 820JH	6	0.8	22000	6	0.3	80	0.1	26	1	400	N/A	A288-11	LEADS
035032000	½ AX1L 820JH	6	1.0	21000	6	0.3	80	0.1	26	2	400	0.10/220	A364-7	LEADS

Standard Product Offering of DC Line Powered Models

Part #	Product Description	Flow (CFM)	Max Pressure (IWG)	Nom. RPM	Nom. Watts	Line Amps (A)	Max Amb (C)	Weight	Volts	Airflow Source Data	Features
012132000	½ AX1L 3859TF	21	1.4	26000	19	0.6	85	0.2	28	A748-22A	LEADS, LSWD
011397000	½ AX1L 2962SF	14	0.8	18300	9	0.3	100	0.2	26	A772-22A	LEADS, FPS
011409000	½ AX1L 3147SF	11	0.5	12000	6	0.2	100	0.2	26	A775-5	LEADS, FPS

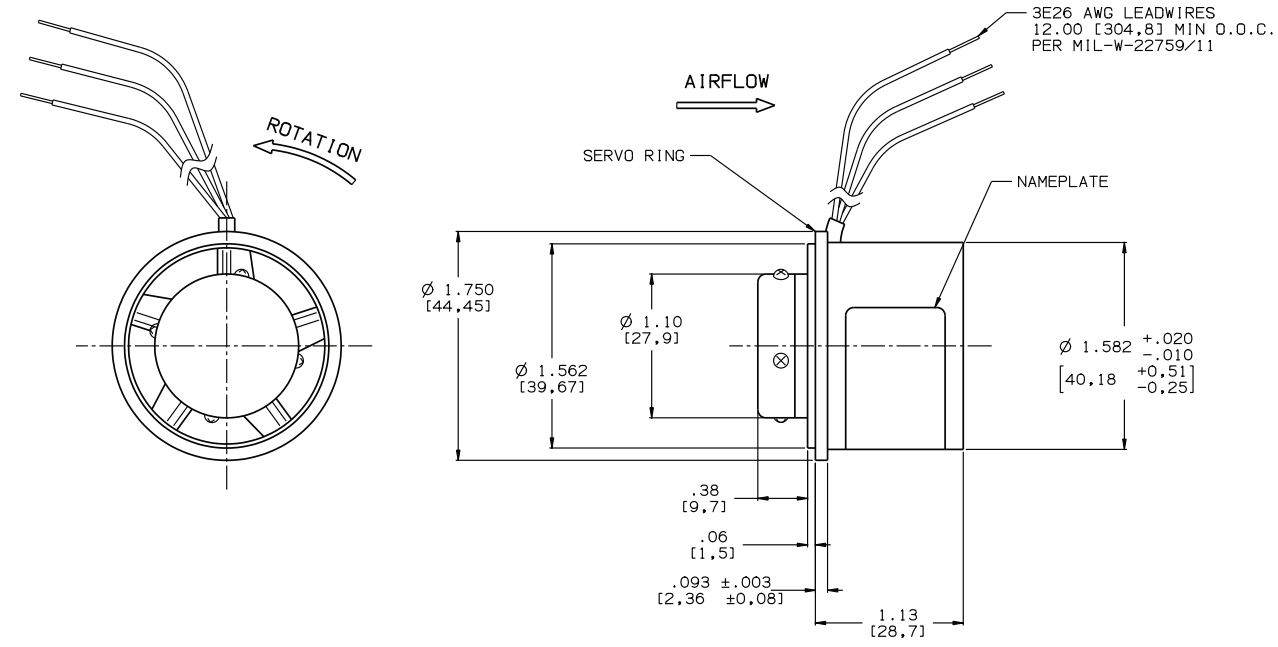
½ AXIMAX 1 - AC

½ AX1L



½ AXIMAX 1 - AC

½ AX1L



*Part Number Specific Drawings Available Upon Request

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Specifications subject to change without notice