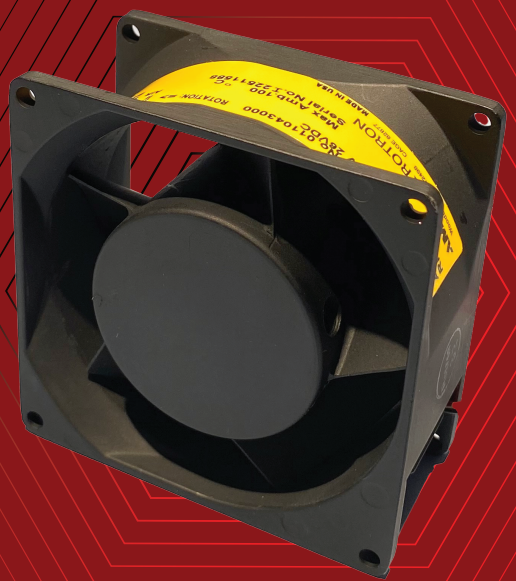
ROTRON / AMETEK®
AEROSPACE & DEFENSE

Rotron MIL - 80
Tubeaxial Fans



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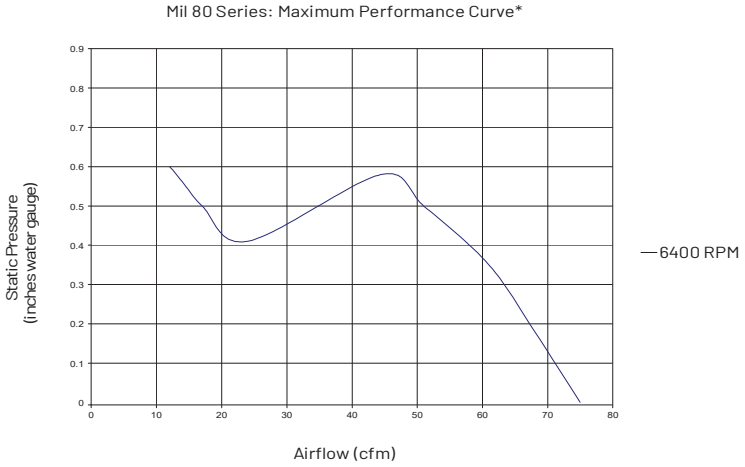
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General Tubeaxial Information

Tubeaxial Fans are integrated axial flow air moving devices in which the motor rotor is cast inside the impeller to achieve the smallest possible axial dimension. Higher aerodynamic performance and efficiencies can be achieved with these true airfoil blade designs. These fans typically operate near free delivery, but can achieve static pressures above those of Propeller Fans due to high speed operations.

The Tubeaxial Fan is suitable for operation in severe environmental conditions in air, ground, and shipboardapplications. They come in a variety of AC voltages and frequencies, as well as DC voltages. Hook up options include: lead wires, terminal blocks, or MS connectors. All Tubeaxial Fans are finely balanced to meet the requirements of MIL-B-23071. All units are available with an optional internal Fan Performance Sensor (FPS) and an external Low Speed Warning Device (LSWD). Some units are available with an internal Low Speed Warning Device (LSWD).

Rotron MIL-80



*Individual Performance Curve Characteristics Available Upon Request



General Tubeaxial Information

- Physical envelope: 3.12" x 3.12" x 1.50" [1]
- Weight: approximately 0.74 lbs.
- Die cast aluminum Venturi and Rotorprop.
- Specially designed for cooling electronics in shipboard and submarine rack applications and Telecom/Datacom racks.
- Designed to meet the high shock requirements of MIL-S-901.

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) with an integral lubricant reservoir for a long, maintenancefree life.
- Motors have stator winding insulation which is rated for continuous duty for either Class F or Class H.

Options/Accessories

- Helicoil Inserts
- Finger Guards
- Custom Paints Available
- 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 29.7 CFM at 50 Hz, 35.8 CFM at 60 Hz, 58 CFM at 400 Hz.
• Ambient temperature range: -54 °C to 125 °C.
• Acoustic levels as low as 42 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 70 CFM.
• Ambient temperature range: -40 °C to 100 °C.
• Acoustic levels as low as 51 dBA.

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.

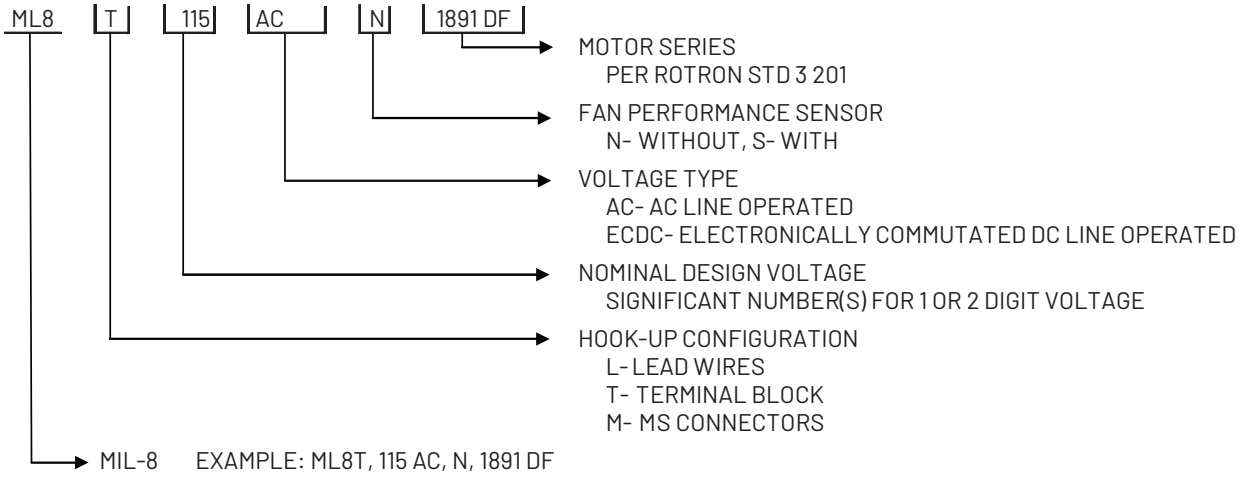
DELTAC® Converter Driven Units

• 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.

[1] See Accessories: Power Conversion

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

Ordering Information

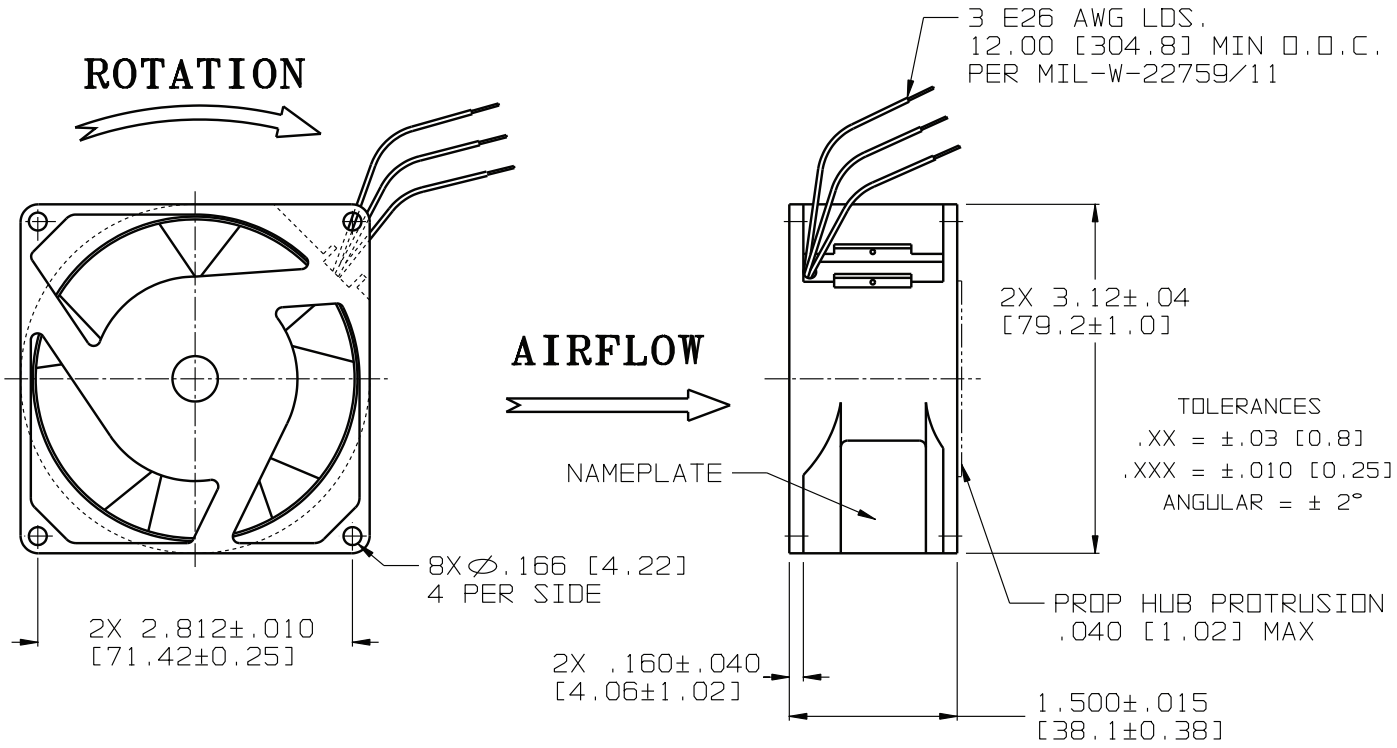
When ordering, please specify the specific Rotron part number listed on the following model table. Further ordering information, based on the configuration and motor series,may be obtained by contacting customer service. Please refer to the Unit Description Key explanation above.

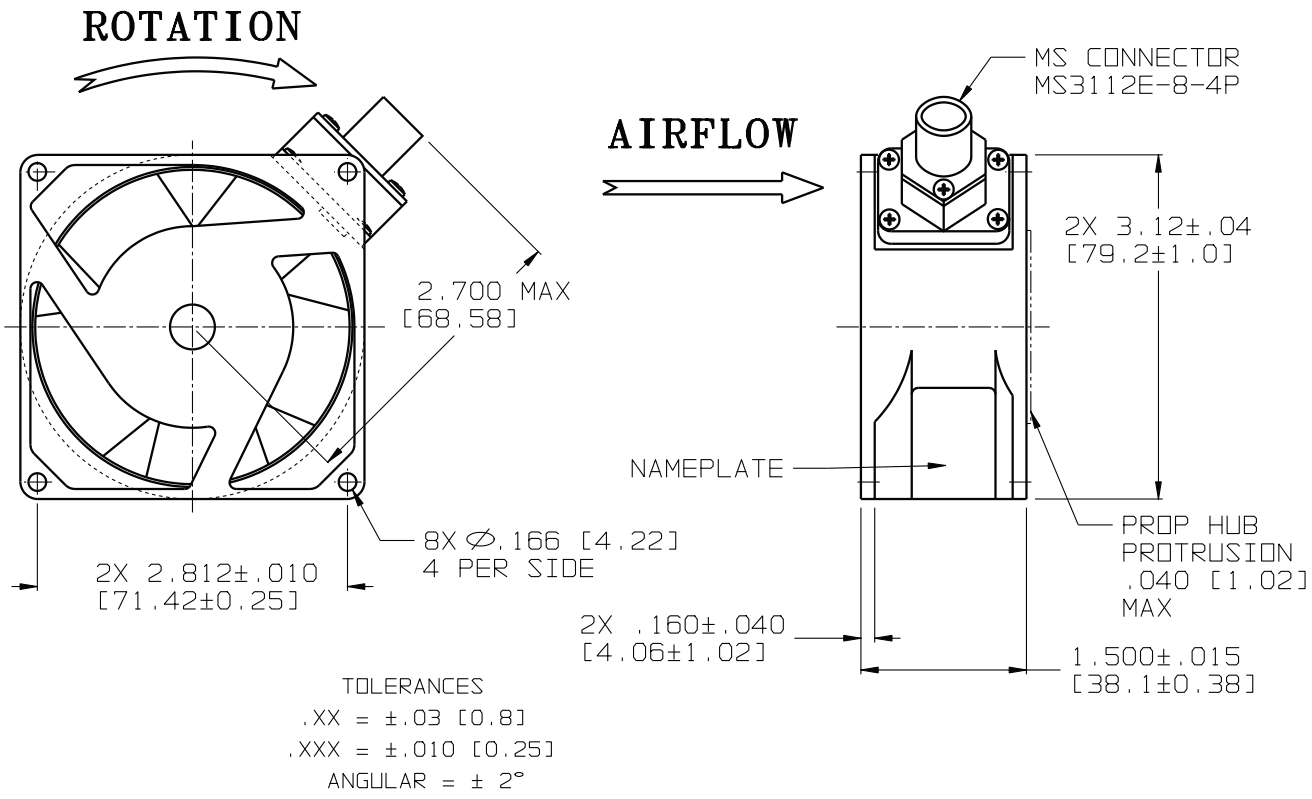
Standard Product Offering of AC Line Powered Models

Part #	Product Description	Flow (CFM)	Max Pressure (IWG)	Nom. RPM	Nom. Watts	Line Amps (A)	Max Amb (C)	Weight	Volts	Phase	Hz	Capaciotr	Airflow Source Data	Features
041183000	ML8L 3760WF	75	0.9	7,300	18	0.1	125	0.7	200	3	400	N/A	A631-9A	LEAD S
035998000	ML8T 3682JF	60	0.6	5,730	12	0.2	100	0.7	115	3	400	N/A	A 574-17	TERMINALS
033559000	ML8L 1891DF	58	0.5	5,600	11	0.1	125	0.7	115	1	400	.39/220	A 554-9	LEADS
033856000	ML8L 19 18JF	55	0.5	5,300	8	0.1	125	0.7	200	3	400	N/A	A 554-8	LEADS
034836000	ML8L 2536DF	42	0.3	3,840	6	0.1	125	0.7	115	1	400	0.18/220	A 554-10	LEADS
035492000	ML8L 995JF	36	0.21*	3,500	16	0.1	100	0.7	200	3	60	N/A	A 551-10	LEADS
033592000	ML8L 765NF	36	0.2	3,460	11	0.1	125	0.7	230	1	60	1.0/220	A 553-11	LEADS, 50/60 400 Hz
033593000	ML8T 765NF	36	0.2	3,460	11	0.1	125	0.7	230	1	60	1.0/220	A 553-11	TERMINALS, 50/60 400 Hz
033561000	ML8L 682ZF	36	0.2	3,500	13	0.1	125	0.7	115	1	60	1.0/220	A 551-2	LEADS
035997000	ML8M 18 9 0ZH	32	0.2	3,200	13	0.1	125	0.7	115	1	60	0.5/220	A 557-5	M S C ONNECTOR
033778000	ML8L 1890ZH	32	0.2	3,200	13	0.1	125	0.7	115	1	60	0.5/220	A 557-5	LEADS, 50/60 400 Hz

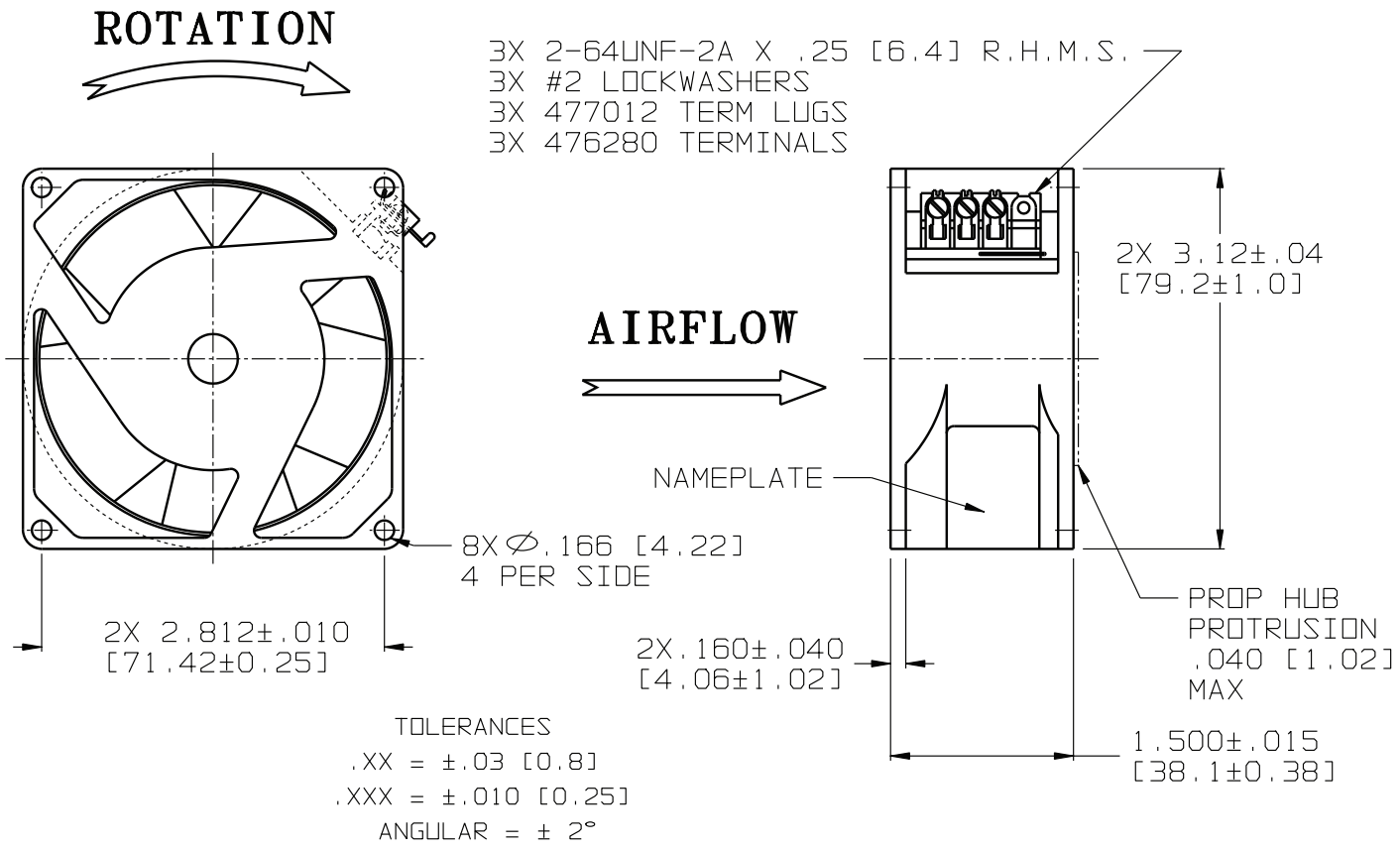
Standard Product Offering of DC Line Powered Models

Part #	Product Description	Flow (CFM)	Max Pressure (IWG)	Nom. RPM	Nom. Watts	Line Amps (A)	Max Amb (C)	Weight	Volts	Airflow Source Data	Features
011043000	M L8L 1936SF	70	0 7	6,400	11	0.45	100	0.7	26	A582-3A	LEADS, FPS
012105000	ML8L 1984SF	63	0.6	6,300	14	0.31	100	0.7	48	A759-20	LEADS, FPS
011040000	ML8L 1933SF	63	0.6	6,000	8	0.73	75	0.7	12	A552-17	LEADS, FPS
011042000	ML8L 1935SF	42	0.3	4,035	4	0.15	100	0.7	26	A554-11A	LEADS, FPS
011184000	ML8M 1959SF	41	0.3	4,099	8	0.19	100	0.7	48	A554-3	CO NNECTOR, FPS
011073000	ML8T 1959SF	41	0.3	4,099	8	0.19	100	0.7	48	A554-3	TERMINALS, FPS
011067000	Mil8T 1930SF	40	0.3	4,000	3	0.27	100	0.7	12	A554-7	TERMINALS, FPS
011070000	ML8T 1934SF	37	0.2	3,450	3	0.13	100	0.7	26	A582-5A	TERMINALS, FPS
011038000	ML8L 1929SF	32	0.2	3,200	2	0.16	100	0.7	12	A552-9B	LEADS, FPS


ROTATION
3 E26 AWG LDS,
12.00 [304.8] MIN O.O.C.
PER MIL-W-22759/11
AIRFLOW
2X 3.12±.04
[79.2±1.0]
TOLERANCES
.XX = ±.03 [0.8]
.XXX = ±.010 [0.25]
ANGULAR = ± 2°
NAMEPLATE
8X ∅.166 [4.22]
4 PER SIDE
PROP HUB PROTRUSION
.040 [1.02] MAX
2X 2.812±.010
[71.42±0.25]
2X .160±.040
[4.06±1.02]
1.500±.015
[38.1±0.38]


ROTATION
MS CONNECTOR
MS3112E-8-4P
AIRFLOW
2X 3.12±.04
[79.2±1.0]
2.700 MAX
[68.58]
NAMEPLATE
8X ∅.166 [4.22]
4 PER SIDE
PROP HUB
PROTRUSION
.040 [1.02]
MAX
2X 2.812±.010
[71.42±0.25]
2X .160±.040
[4.06±1.02]
1.500±.015
[38.1±0.38]
TOLERANCES
.XX = ±.03 [0.8]
.XXX = ±.010 [0.25]
ANGULAR = ± 2°

MIL-80 – AC & DC*



*Part Number Specific Drawings Available Upon Request

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Specifications subject to change without notice