ROTRON / AMETEK®
AEROSPACE & DEFENSE

Rotron SPARTAN®
Tubeaxial Fans



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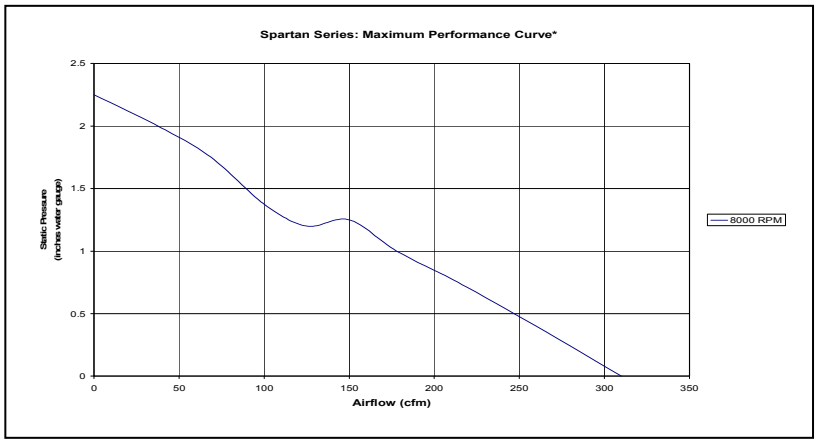
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General Tubeaxial Information

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 SPARTAN®



*Individual Performance Curve Characteristics Available Upon Request



General

- Physical envelope: 4.69" x 4.69" x 1.53" 1
- Weight: approximately 1.0 lbs.
- Die cast aluminum Venturi and Rotorprop
- Specially designed for cooling electronics in aircraft, ground-based and shipboard applications
- Designed to meet the high shock requirements of MIL-S-901 (AC – heavy spider, DC – high shock housing)

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, maintenance-free 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 specifications2
- Available as a QPL product (MIL-B-23071/7-001)
- Max free delivery airflow of 122 CFM at 50 Hz, 100 CFM at 60 Hz, 305 CFM at 400 Hz
- Ambient temperature range: -54°C to 125°C
- Acoustic levels as low as 36 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 204 CFM
- Ambient temperature range: -40°C to 100°C
- Acoustic levels as low as 53 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.

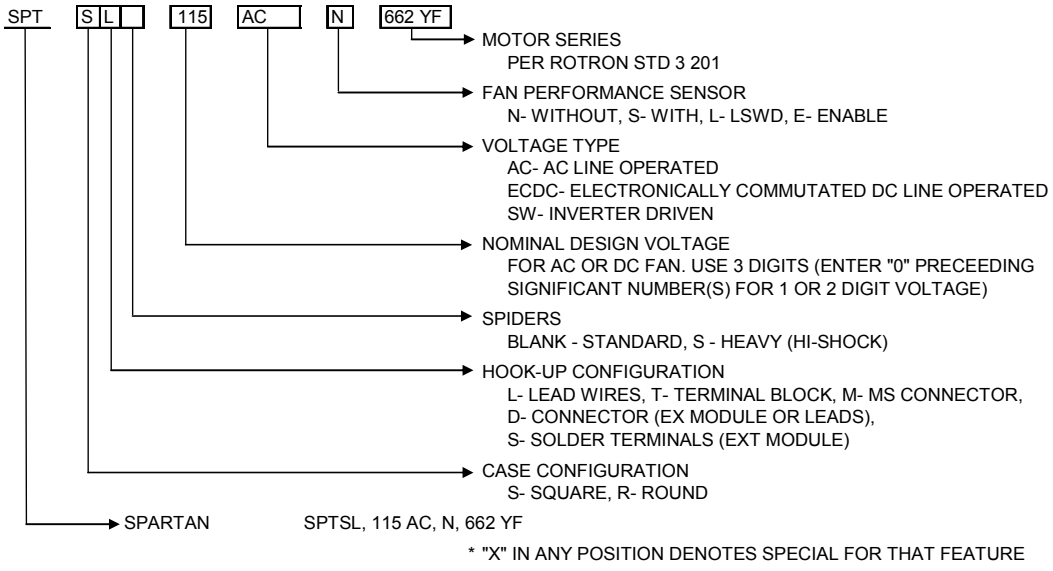
DELTAC® Converter Driven Units

- 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.



Ordering Information

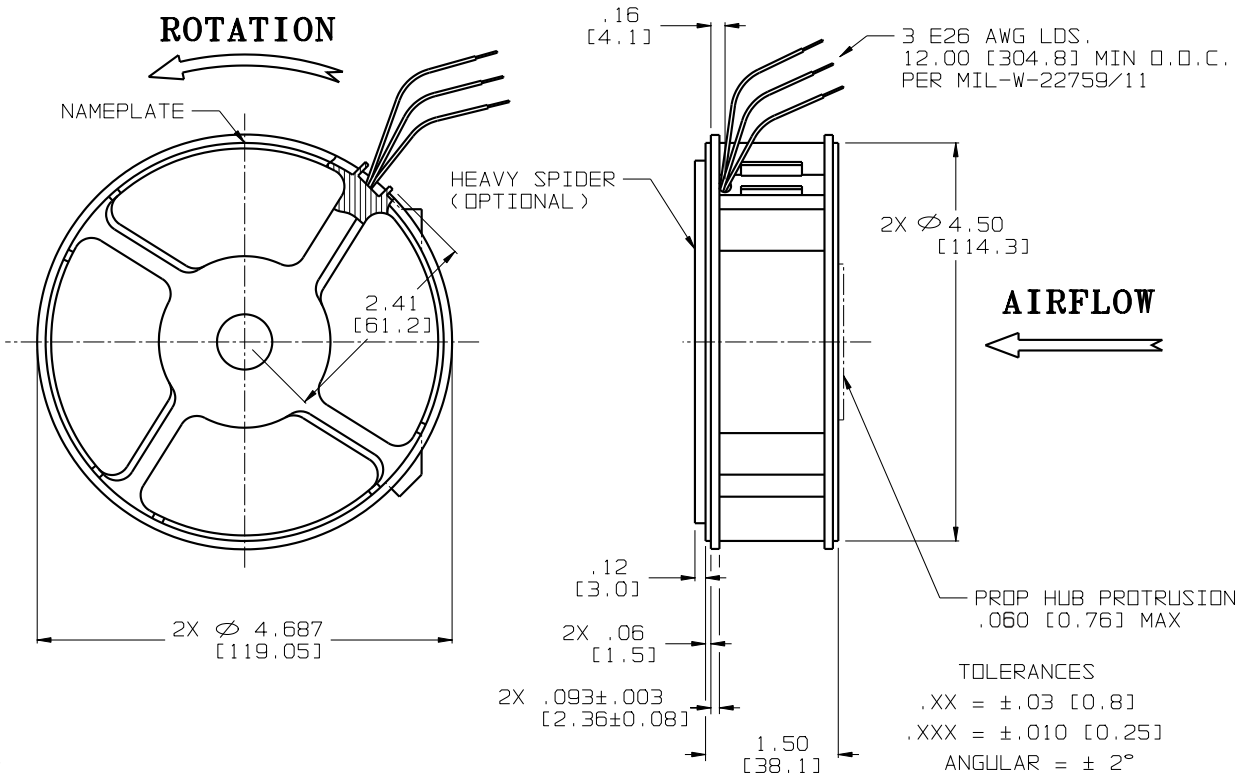
When ordering, please specify the specific Rotron part number listed on the following model table. Further ordering information, based on the configuration and motor series,may be obtained by contacting customer service. Please refer to the Unit Description Key explanation above.

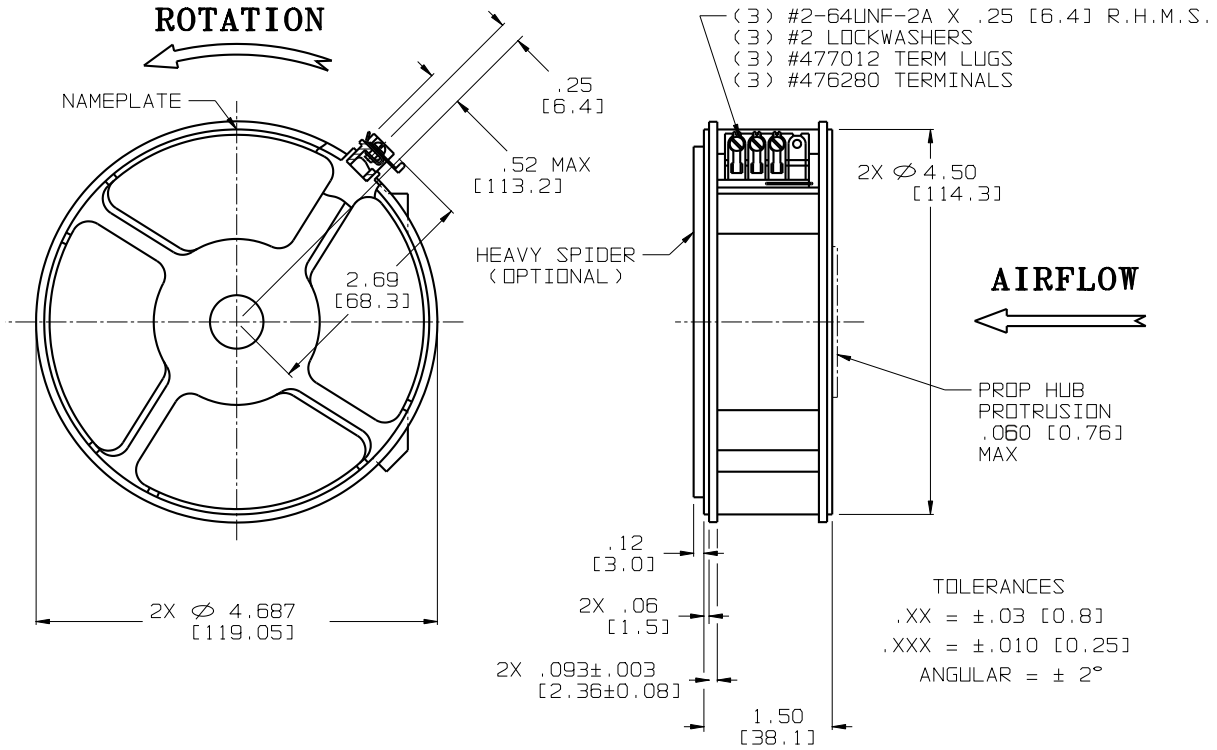
Standard Product Offering of AC Line Powered Models

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
041219000	SPTSL 3279JH	305	2.3	8000	123	0.5	90	1.0	200	3	400	N/A	A489-6	LEADS
035649000	SPTSL 2791WF	210	0.8	5600	51	0.2	90	1.0	200	3	400	N/A	A556-1	LEADS
026988000	SPTST 1395YF	200	0.9	5470	44	0.4	125	1.0	115	1	400	0.5/220	A482-30A	TERMINALS
026986000	SPTST 942WF	195	0.7	5200	45	0.2	100	1.0	200	3	400	N/A	A558-7	TERMINALS
033817000	SPTSL 1918JF	137	0.4	3800	15	0.1	125	1.0	200	3	400	N/A	A496-10	LEADS, GROUND HOLE
026984000	SPTST 810DF	133	0.3	3500	13	0.1	125	1.0	115	1	400	0.39/220	A732-8A	TERMINALS
026596000	SPTSL 995JF	122	0.5	3280	17	0.1	100	1.0	200	3	60	N/A	A475-18	LEADS
034265000	SPTSL 1465XF	118	0.5	3250	16	0.1	110	1.0	115	3	60	N/A	A482-29A	LEADS, FPS
020027000	SPTSL 682YF	118	0.4	3200	13	0.1	125	1.0	115	1	60	1.0/220	A476-28A	LEADS, 50/60 400 Hz
021436000	SPTST 765NF	112	0.4	3150	11	0.1	125	1.0	230	1	60	1.0/220	A477-7A	TERMINALS
034523000	SPTSM 867YF	76	0.2	2100	23	0.2	100	1.0	115	1	60	0.25/220	A481-30	CONNECTOR, 50/60 400 Hz
026982000	SPTST 778YF	74	0.1	2190	14	0.1	125	1.1	115	1	60	0.25/220	A482-6A	TERMINALS, 50/60 400 Hz
021224000	SPTSL 776DF	56	0.1	1650	7	0.1	125	1.0	115	1	60	1.5/220	A493-16	LEADS

Standard Product Offering of DC Line Powered Models

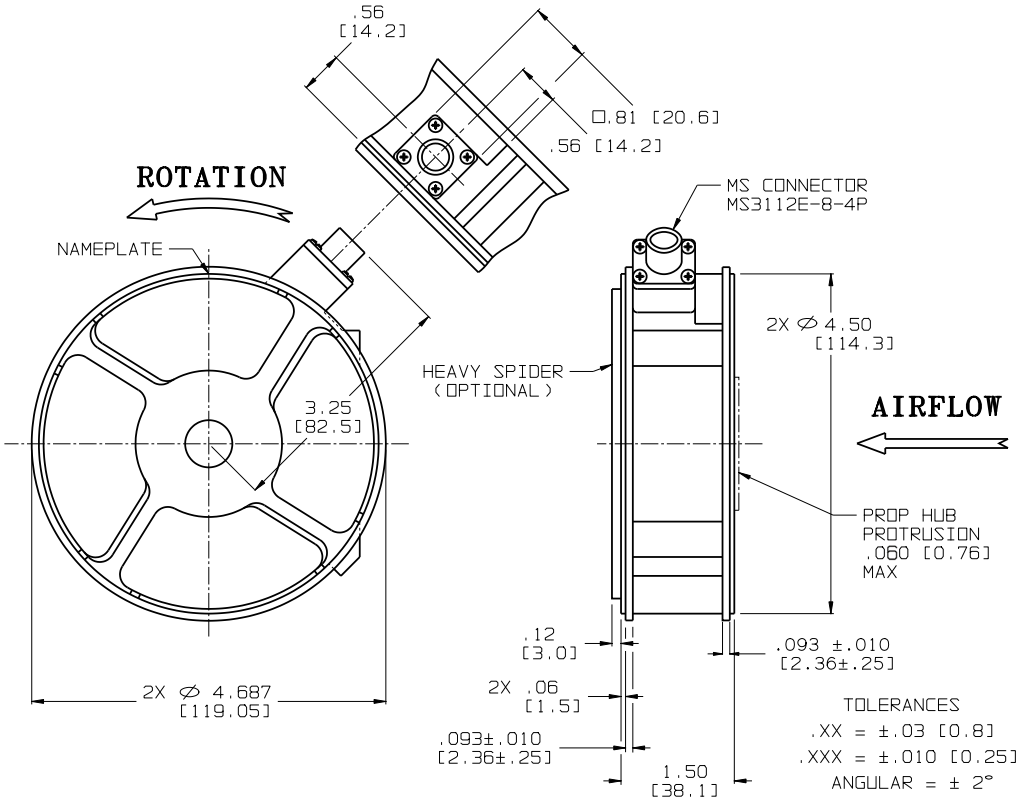
Part #	Product Description	Flow (CFM)	Max Pressure (IWG)	Nom. RPM	Nom. Watts	Line Amps (A)	Max Amb. (C)	Weight	Volts	Airflow Source Data	Features
011683000	SPTSL 3531SF	189	0.9	5200	33	1.0	55	1.0	28	A751-11C	LEADS, FPS
011033000	SPTST 1941SF	143	0.6	3800	12	1.0	50	1.0	12	A524-15A	TERMINALS, FPS
011209000	SPTST 1976SF	142	0.5	3900	14	0.5	100	1.0	28	A525-25B	TERMINALS, FPS
011036000	SPTST 1928SF	141	0.5	3800	12	0.5	100	1.0	26	A523-16	TERMINALS, FPS
011035000	SPTST 1943SF	133	0.5	3600	9	0.3	100	1.0	28	A524-12B	TERMINALS, FPS
011838000	SPTST 1981SF	118	0.4	3400	11	0.2	100	1.0	48	A524-10A	LEADS, FPS



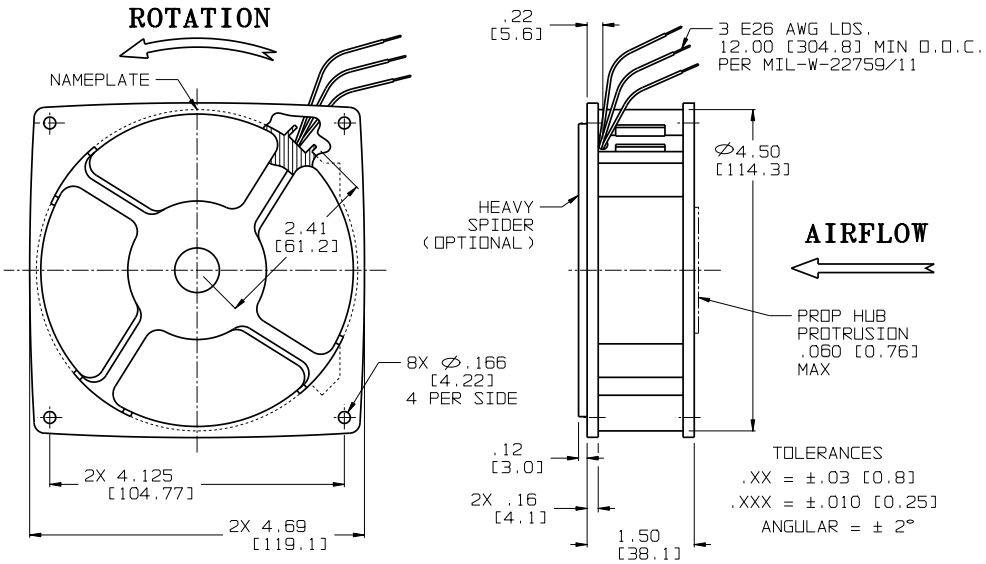


*Part Number Specific Drawings Available Upon Request

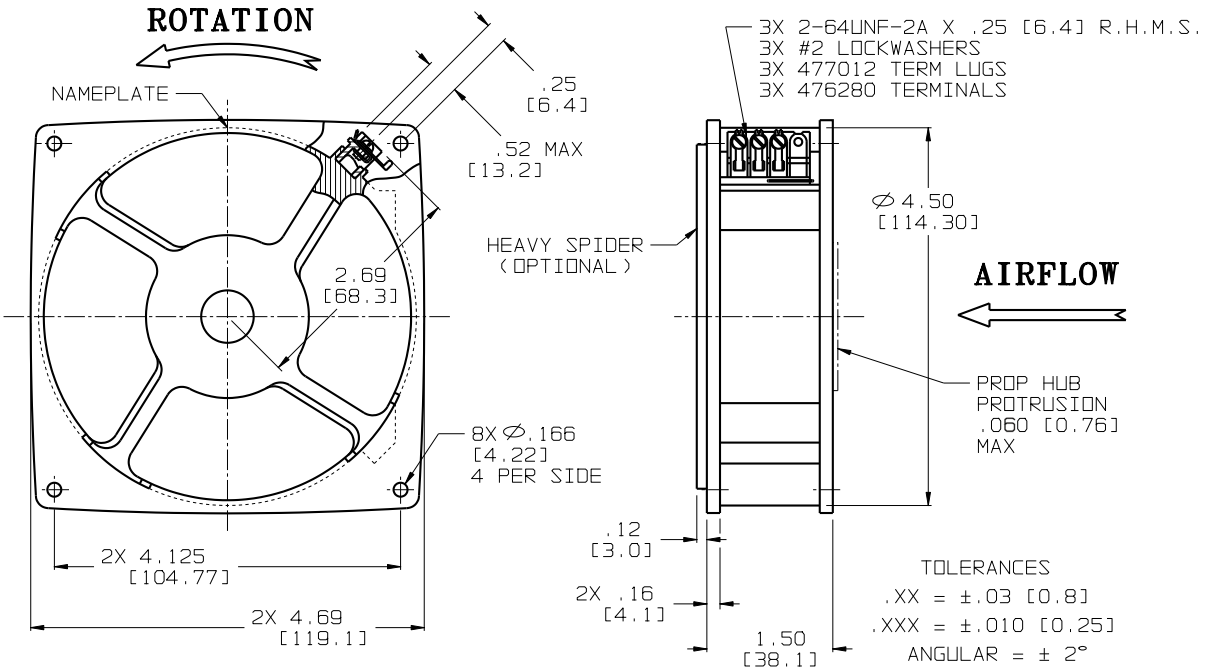
SPARTAN- ROUND AC*

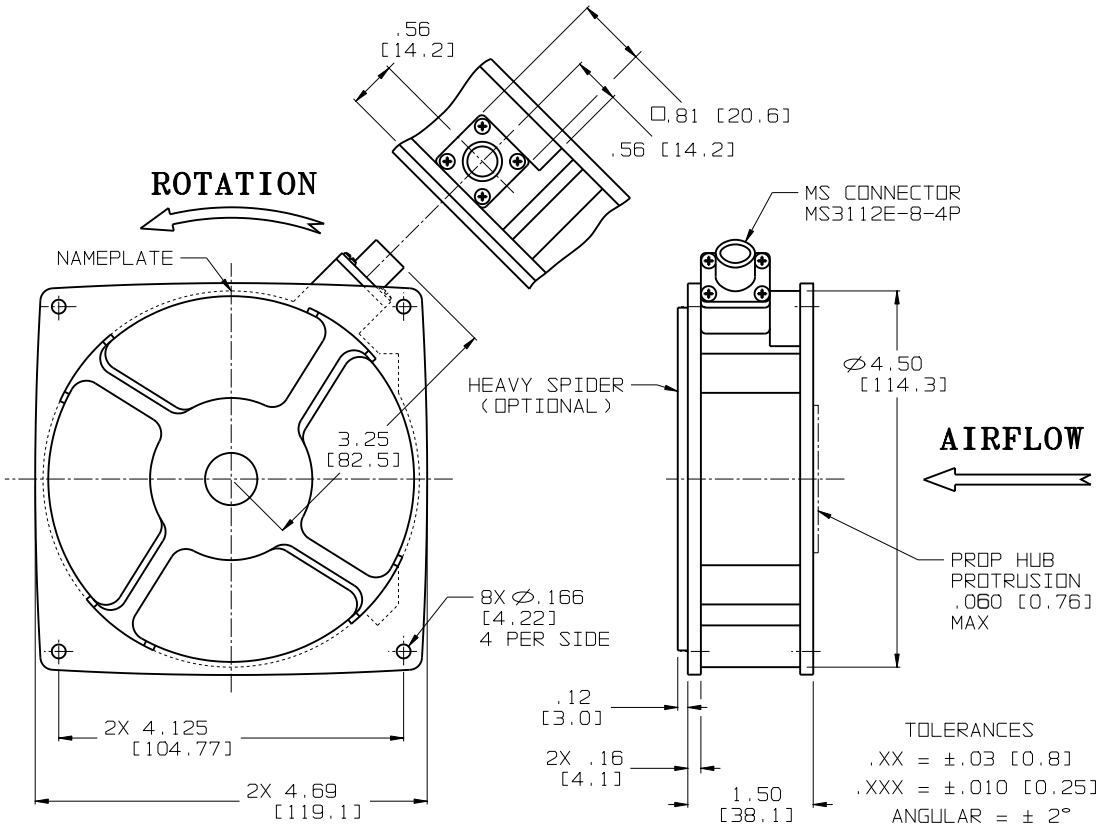


SPARTAN - SQUARE AC*



*Part Number Specific Drawings Available Upon Request


ROTATION
NAMEPLATE
.25
[6.4]
.52 MAX
[13.2]
2.69
[68.3]
8X ∅.166
[4.22]
4 PER SIDE
2X 4.125
[104.77]
2X 4.69
[119.1]
3X 2-64UNF-2A X .25 [6.4] R.H.M.S.
3X #2 LOCKWASHERS
3X 477012 TERM LUGS
3X 476280 TERMINALS
HEAVY SPIDER
(OPTIONAL)
∅4.50
[114.30]
AIRFLOW
PROP HUB
PROTRUSION
.060 [0.76]
MAX
.12
[3.0]
2X .16
[4.1]
1.50
[38.1]
TOLERANCES
.XX = ±.03 [0.8]
.XXX = ±.010 [0.25]
ANGULAR = ± 2°


.56
[14.2]
□.81 [20.6]
.56 [14.2]
ROTATION
NAMEPLATE
MS CONNECTOR
MS3112E-8-4P
HEAVY SPIDER
(OPTIONAL)
3.25
[82.5]
∅4.50
[114.3]
AIRFLOW
PROP HUB
PROTRUSION
.060 [0.76]
MAX
8X ∅.166
[4.22]
4 PER SIDE
2X 4.125
[104.77]
2X 4.69
[119.1]
.12
[3.0]
2X .16
[4.1]
1.50
[38.1]
TOLERANCES
.XX = ±.03 [0.8]
.XXX = ±.010 [0.25]
ANGULAR = ± 2°

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Specifications subject to change without notice