

**AMETEK****LAMB ELECTRIC**

Product Bulletin

Model: 121113-13

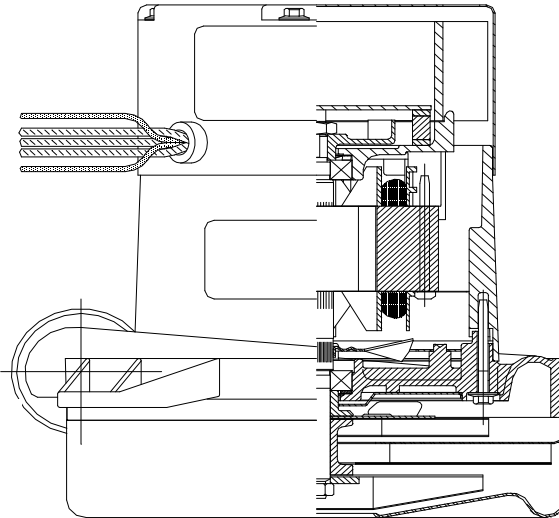


DESCRIPTION

- Brushless Motor
- Switch Reluctance (SR) Technology
- Two stage Fan System
- 120 volts, 50/60 Hz
- 7.2" / 183 mm diameter
- Dual 10mm ball bearings
- Tangential discharge
- All aluminum die cast housings used in motor construction
- Life expectancy: 5 -10 times more than the brush-motor equivalent.

DESIGN APPLICATION

- Equipment operating in environments requiring separation of working air from motor ventilating air
- Designed to handle clean, dry, filtered air only



SPECIAL FEATURES

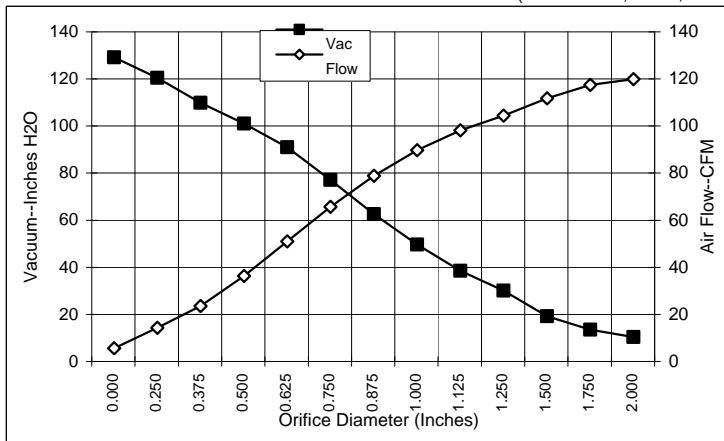
- "Generation II" (DIGITAL) Controller: no external low-voltage control power required. (See "INFIN-A-TEK Application Notes")
- UL component recognized (pending)
- IP Rating: 1.0
- **Speed control capability**
- Tapered fan system
- Thermally protected motor design
- Patented air seal bearing construction (U.S. Patent # 4,088,424)
- Epoxy painted
- Aluminum fan end bracket designed to dampen vibration and improve durability

Please refer to INFIN-A-TEK Application Notes for details on the operation and wiring of this switched-reluctance motor.

TYPICAL MOTOR PERFORMANCE.*

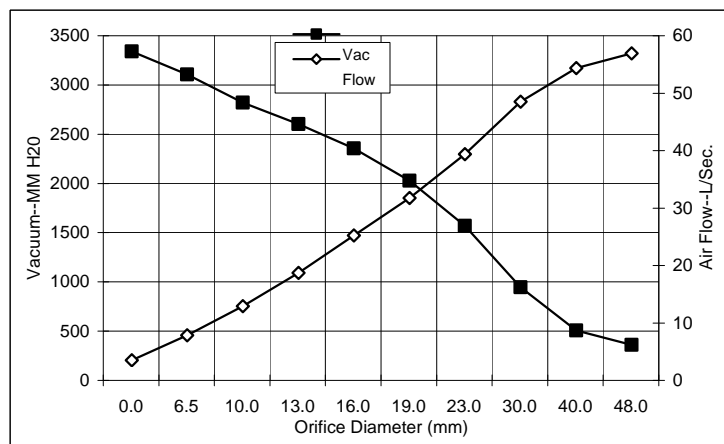
(At 120 volts, 60Hz, test data is corrected to standard conditions of 29.92 Hg, 68° F.)

ASTM DATA



Orifice (Inches)	Amps	Watts (In)	RPM	Vac (In.H2O)	Flow (CFM)	Air Watts
2.000	14.3	1516	22640	4.8	114.3	65
1.750	14.3	1509	22520	7.9	111.8	104
1.500	14.4	1515	22430	13.6	106.1	170
1.250	14.6	1547	22430	24.5	98.8	284
1.125	14.7	1547	22330	32.9	92.5	358
1.000	14.6	1549	22430	44.0	84.2	435
0.875	14.4	1511	22520	57.0	73.3	491
0.750	13.9	1481	22830	71.5	60.1	504
0.625	13.5	1405	23330	85.3	45.4	455
0.500	12.2	1281	24090	95.4	30.7	344
0.375	11.0	1168	25180	104.3	18.0	221
0.250	10.9	1126	26640	114.8	8.7	117
0.000	9.9	1049	27440	123.5	0.0	0

METRIC DATA



Orifice (mm)	Amps	Watts (In)	RPM	Vac (mm H2O)	Flow (L/Sec)	Air Watts
48.0	14.3	1513	22587	157	53.4	82
40.0	14.4	1513	22457	302	50.9	150
30.0	14.7	1547	22375	740	45.0	325
23.0	14.5	1521	22498	1365	35.9	477
19.0	13.9	1479	22840	1823	28.2	503
16.0	13.5	1408	23310	2153	21.7	457
13.0	12.3	1293	24014	2398	15.2	355
10.0	11.2	1185	25017	2615	9.4	239
6.5	10.9	1128	26567	2903	4.3	122
0.0	9.9	1049	27440	3137	0.0	0

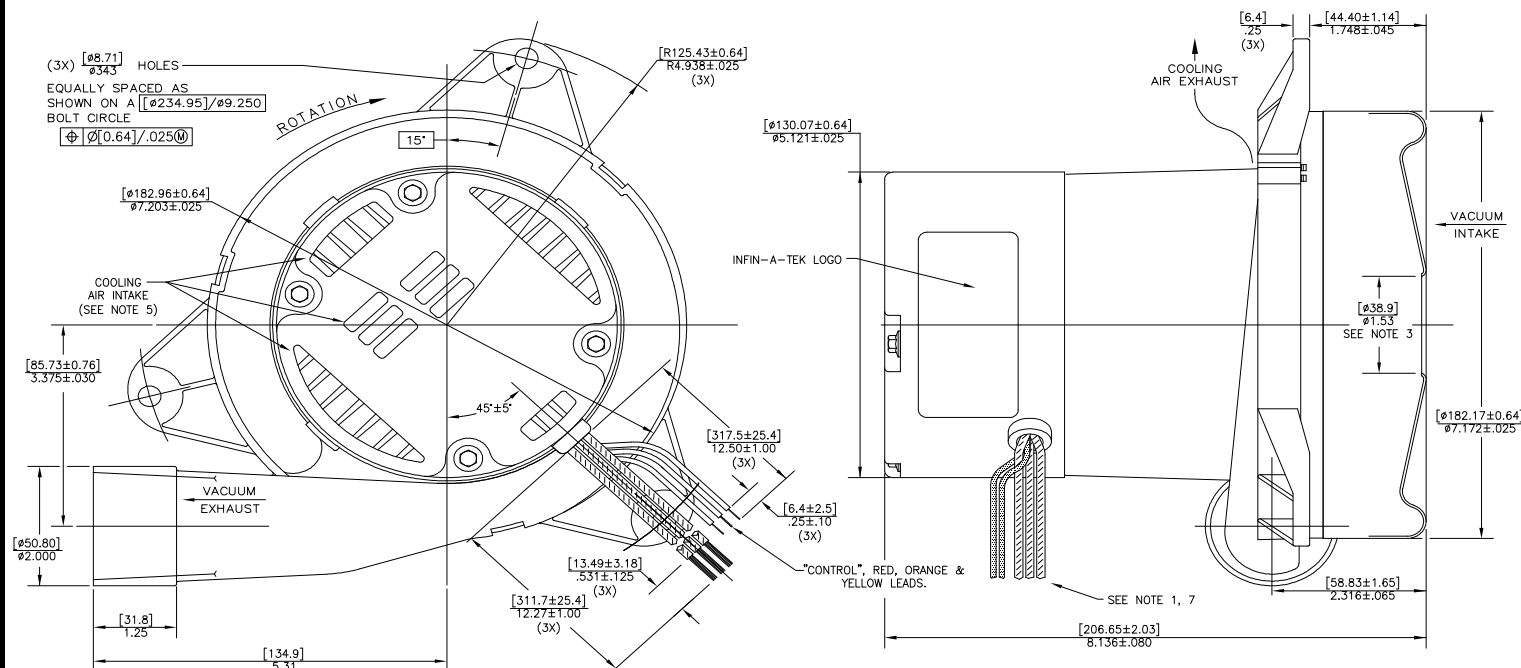
Note: Metric performance data is calculated from the ASTM data above.

* Data represents performance of a typical motor sampled from a large production quantity. Individual motor data may vary due to normal manufacturing variances.

Test Specs: 120V	Minimum Sealed Vacuum: 118.0"	ORIFICE: 7/8"	Minimum Vacuum: 53.0"	Maximum Watts: 1640
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DIMENSIONS



NOTES

1. Leads: 18ga, stranded power leads; one black and one white, ground lead green with yellow stripe. Leads: 22ga, control leads: one red, one blue (or orange) and one yellow.
2. Motor Identification: Manufacturer's name, model number, voltage, frequency, inspection code, date of manufacture, agency recognition code, plant code, "Thermally Protected L 16.0A", "Made in the USA" and the following information: "Manufactured under patent nos: US5789893, TW81933, SG38957, ZA96/2766, US5760519, EP0702448B1, ZA95/7123 under license from Switched Reluctance Drive Ltd. Other U.S. and foreign patents pending, copyright code 1998, all rights reserved."
3. Mounting must not restrict this diameter.
4. **Allow (0.0026 Sq M) / 4.8" Sq In. (min) for cooling air intake and exhaust.**
5. Cooling air intake must be separated from cooling air exhaust.
6. Cooling air exhaust must be separated from vacuum exhaust.
7. Observe NEC wiring convention (black-line and white neutral) to insure proper placement of control module fuse in the circuit. **See wiring options 1 thru 4 of "INFIN-A-TEK Application Notes" for implementing the "control" feature (red, blue (or orange) & yellow leads).**
8. The INFIN-A-TEK blower utilizes a switched reluctance (SR) brushless motor, which is commutated electronically. Similar to a brush type series universal motor, this INFIN-A-TEK (SR) blower operates on AC voltage. The INFIN-A-TEK (SR) blower features an integral electronic control module that rectifies the "AC line voltage" to obtain the DC voltage required to power the motor. All switched reluctance motors are thermally protected using an auto-reset device.

IMPORTANT NOTE: Pictorial and dimensional data are subject to change without notice. Contact factory for current revision levels.

WARNING - When using AMETEK/Lamb Electric bypass motors in machines that come in contact with foam, liquid (including water) of other foreign substances, the machine must be designed and constructed to prevent those substances from reaching the fan system, motor housing and electrical components. Lamb vacuum motors other than hazardous duty models should not be applied in machines that come in contact with dry chemicals or other volatile materials. Failure to observe these precautions could cause flashing (depending on volatility) or electrical shock which could result in property damage and severe bodily injury, including death in extreme cases. All applications incorporating Lamb motors should be submitted to appropriate organizations or agencies for testing specifically related to the safety of your equipment.