



AMETEK

LAMB ELECTRIC



Product Bulletin

Model: 121112-00

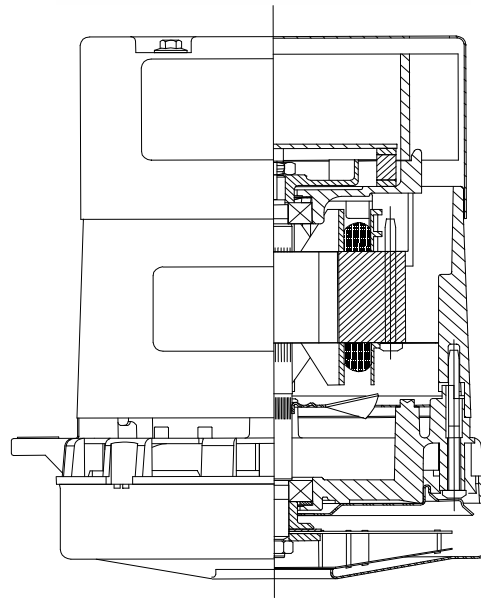


DESCRIPTION

- Brushless Motor
- Switch Reluctance (SR) Technology
- One stage Fan System
- 120 volts, 50/60 Hz
- 5.7" / 145 mm diameter
- Dual 10mm ball bearings
- Peripheral "Acustek" 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

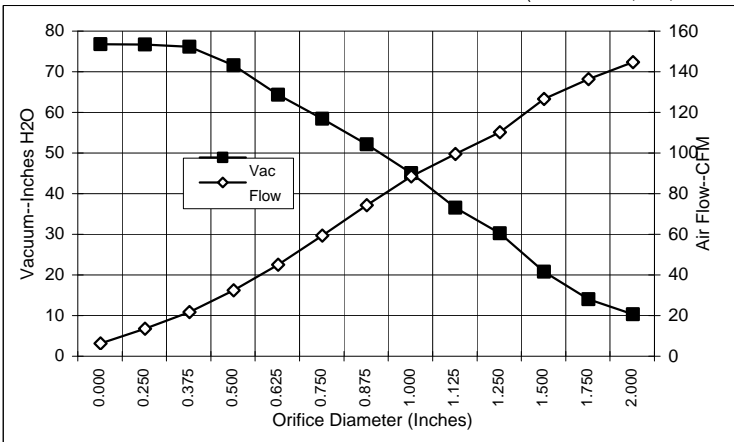
- "Generation II" (DIGITAL) Controller: no external low-voltage control power required. (See "INFIN-A-TEK Application Notes")
- UL component recognized (pending)
- IP Rating: 1.0
- **Speed control capability**
- Tapered fan system
- Thermally protected motor design
- Patented air seal bearing construction (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.*

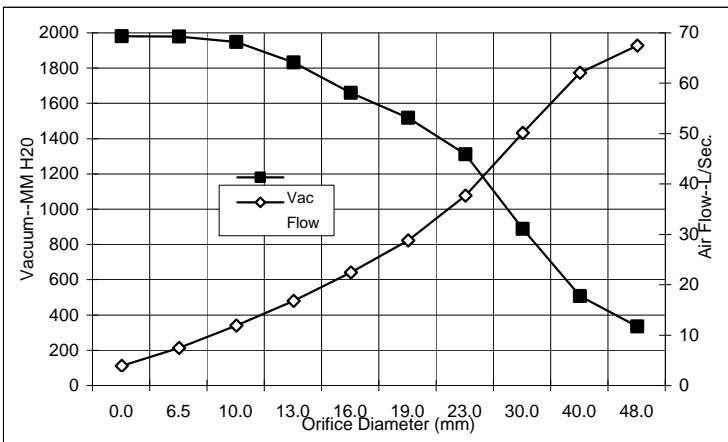
(At 120 volts, AC, test data is corrected to standard conditions of 29.92 Hg, 68° F.)

ASTM DATA



Orifice (Inches)	Amps	Watts (In)	RPM	Vac (In.H2O)	Flow (CFM)	Air Watts
2.000	11.6	1220	25270	7.1	138.4	116
1.750	11.7	1229	25170	10.9	130.1	166
1.500	11.9	1241	24980	17.6	120.4	249
1.250	11.8	1236	25080	27.1	103.9	332
1.125	11.6	1223	25270	33.4	93.2	366
1.000	12.0	1236	25830	41.9	82.2	404
0.875	11.4	1198	26340	49.0	68.1	392
0.750	11.0	1142	26340	55.3	53.0	344
0.625	10.2	1074	26960	61.2	38.7	278
0.500	9.9	1040	27720	68.5	26.1	210
0.375	9.2	960	29190	73.0	15.4	132
0.250	9.2	960	30370	73.6	7.2	62
0.000	9.2	961	30370	73.6	0.0	0

Metric DATA



Orifice (mm)	Amps	Watts (In)	RPM	Vac (mm H2O)	Flow (L/Sec)	Air Watts
48.0	11.6	1224	25226	223	63.6	138
40.0	11.8	1237	25037	397	58.2	224
30.0	11.7	1229	25185	776	46.3	351
23.0	11.5	1208	26213	1199	33.8	395
19.0	11.0	1141	26352	1406	24.9	343
16.0	10.2	1077	26935	1548	18.5	281
13.0	9.9	1043	27644	1720	12.9	217
10.0	9.3	972	28970	1837	8.0	144
6.5	9.2	960	30311	1867	3.6	66
0.0	9.2	961	30370	1869	0.0	0

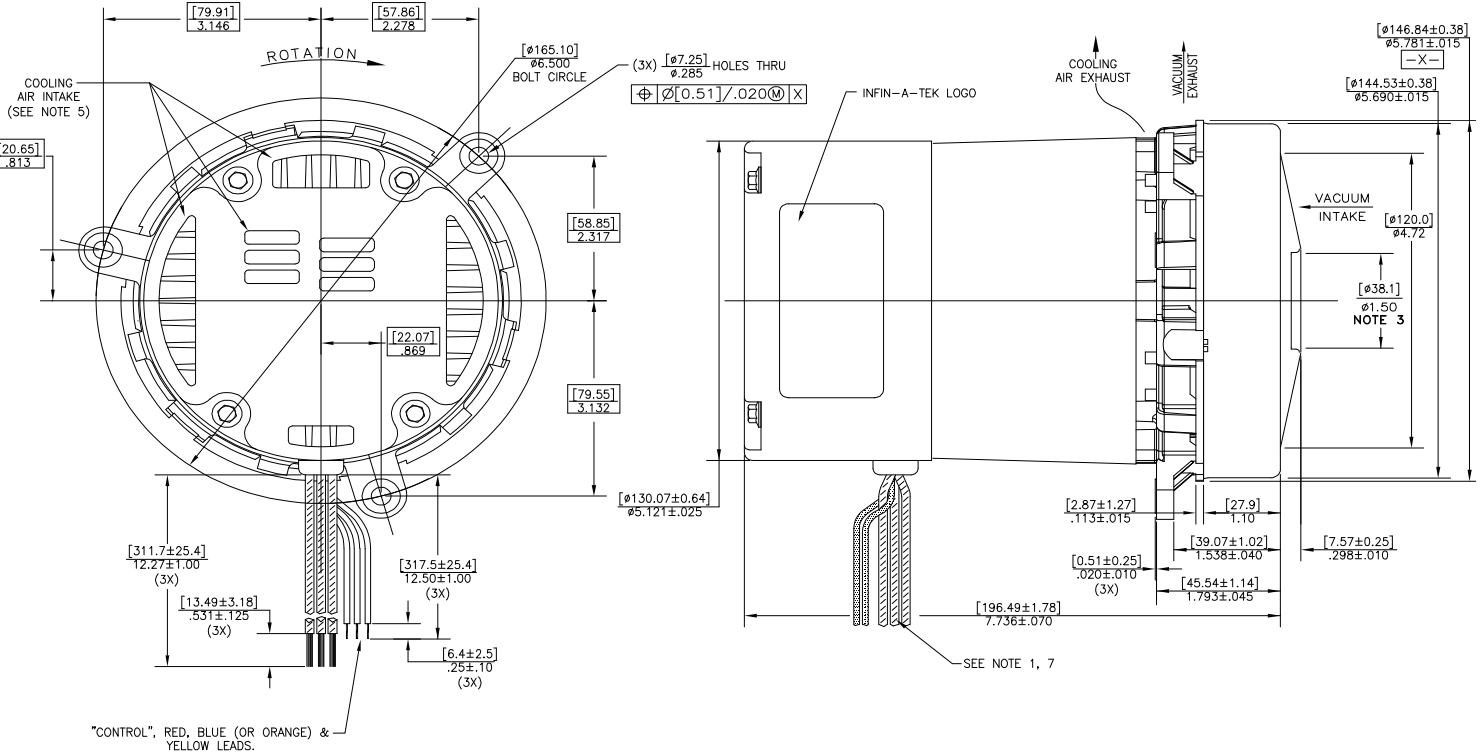
Note: Metric performance data is calculated from the ASTM data above.

* PERFORMANCE DATA IS PRELIMINARY. PRODUCTION SPECIFICATIONS HAVE NOT YET BEEN SET.

Test Specs: 120V	Minimum Sealed Vacuum: TBD	ORIFICE: TBD	Minimum Vacuum: TBD	Maximum Watts: TBD
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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.