



**AMETEK**

**LAMB ELECTRIC**

**FLO-TEK**

**Product Bulletin**

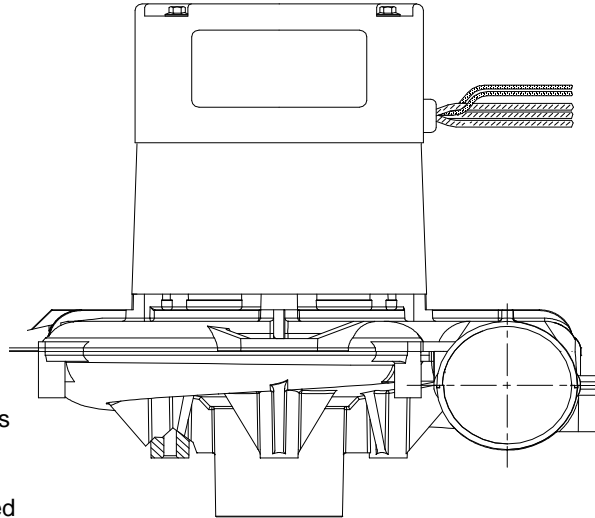
**Model: 121118-00**

**DESCRIPTION**

- Brushless Motor
- Switch Reluctance (SR) Technology
- One-stage High Flow Fan design
- 120 volts, 50/60 Hz
- 9.1" / 231 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**
- High CFM fan system
- Thermally protected motor design
- Aluminum fan end bracket designed to dampen vibration and improve durability

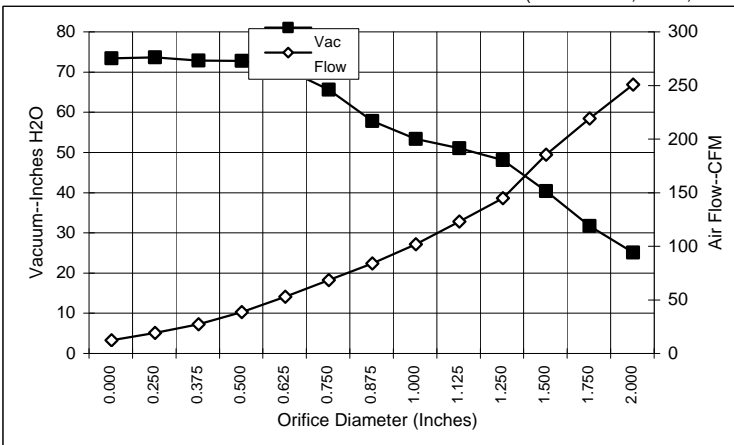
Please refer to INFIN-A-TEK Application Notes for details on the operation and wiring of this switched-reluctance motor.



**TYPICAL MOTOR PERFORMANCE.\***

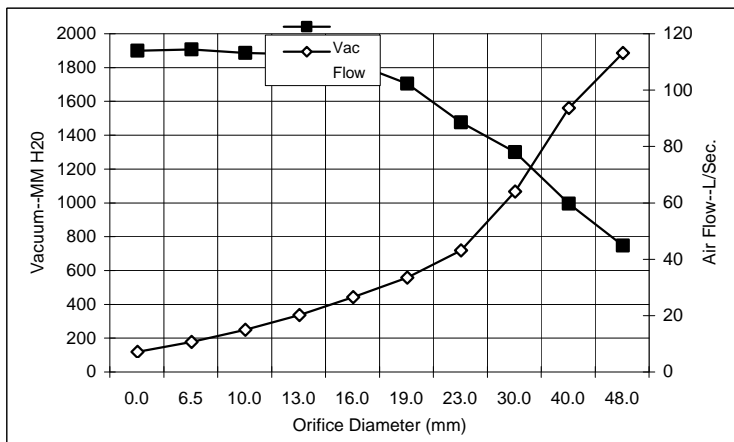
(At 120 volts, 60Hz, test data is corrected to standard conditions of 29.92 Hg, 68° F.)

**ASTM DATA**



Orifice (Inches)	Amps	Watts (In)	RPM	Vac (In.H2O)	Flow (CFM)	Air Watts
2.000	16.4	1758	20820	21.8	238.4	612
1.750	16.4	1750	20820	28.4	207.0	692
1.500	16.8	1771	21310	37.1	173.0	754
1.250	15.8	1654	22000	44.8	132.4	697
1.125	14.9	1600	22570	47.8	110.7	622
1.000	14.5	1488	22900	50.1	89.6	528
0.875	13.4	1410	23600	54.5	71.7	459
0.750	12.5	1317	24400	62.3	56.2	411
0.625	12.4	1293	25480	67.5	40.5	321
0.500	11.8	1223	26390	69.5	26.3	215
0.375	11.0	1161	26900	69.6	14.9	122
0.250	11.1	1158	27930	70.4	7.0	58
0.000	10.6	1110	28440	70.1	0.0	0

**METRIC DATA**



Orifice (mm)	Amps	Watts (In)	RPM	Vac (mm H2O)	Flow (L/Sec)	Air Watts
48.0	16.4	1754	20820	627	106.0	647
40.0	16.7	1765	21163	876	86.5	735
30.0	15.3	1624	22314	1180	56.9	656
23.0	13.7	1430	23425	1356	36.0	476
19.0	12.5	1317	24422	1585	26.4	409
16.0	12.4	1294	25437	1709	19.4	325
13.0	11.9	1230	26299	1760	13.1	226
10.0	11.1	1170	26824	1767	7.8	136
6.5	11.0	1158	27879	1787	3.5	61
0.0	10.6	1110	28440	1781	0.0	0

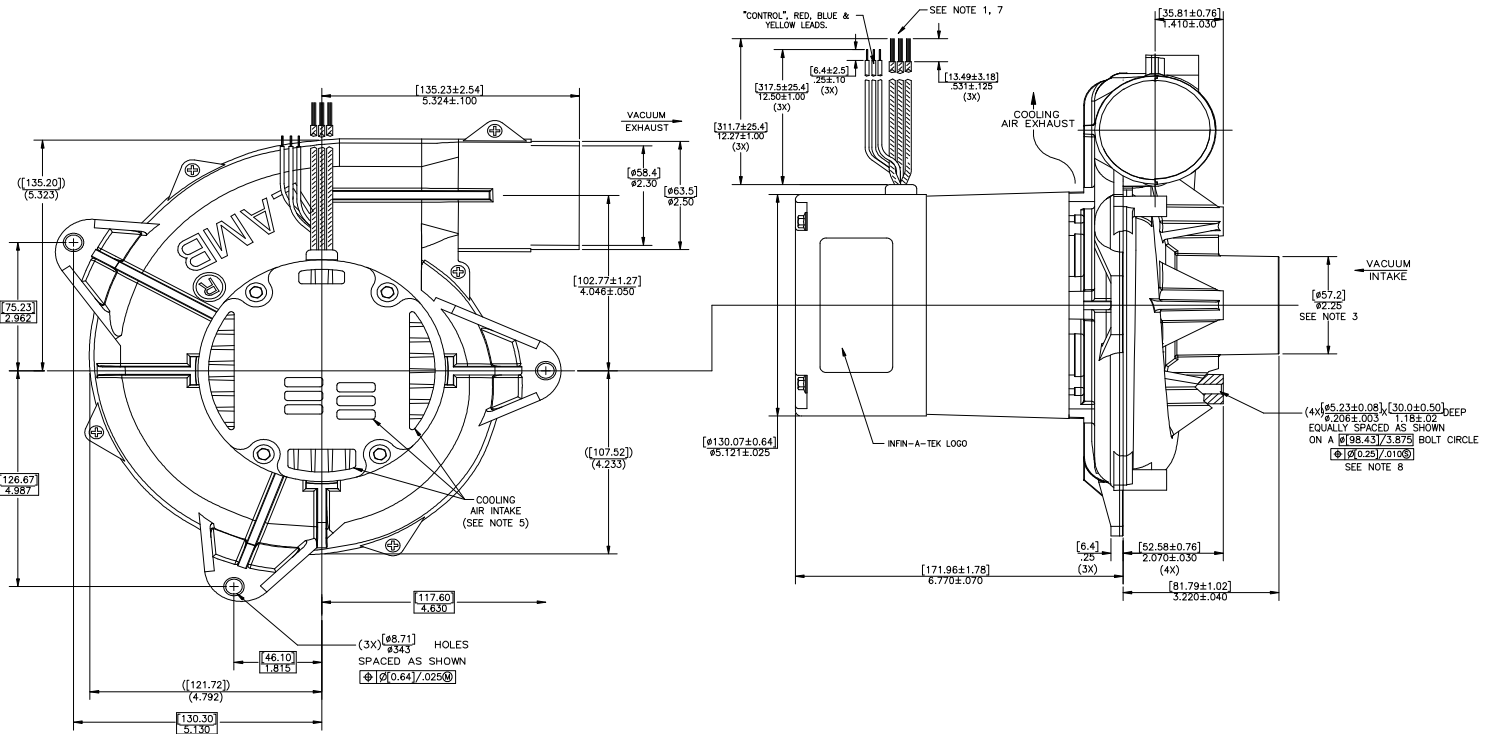
Note: Metric performance data is calculated from the ASTM data above.

\* 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: TBD	Minimum Sealed Vacuum: TBD	ORIFICE: 7/8"	Minimum Vacuum: TBD	Maximum Watts: TBD
-----------------	----------------------------	---------------	---------------------	--------------------



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 NOTES:** 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) or 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.