

Model: 121131-00



## **AMETEK**

# LAMB ELECTRIC

# SPECIAL SPECIAL

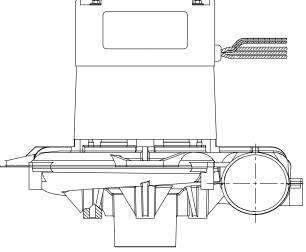
#### **DESCRIPTION**

- Brushless Motor
- Switch Reluctance (SR) Technology
- One-stage High Flow Fan design
- 230 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





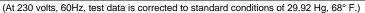
### SPECIAL FEATURES

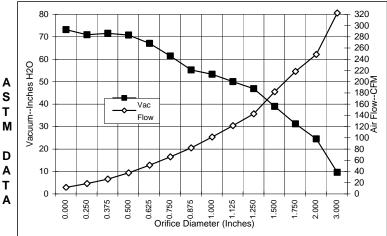
- "Generation II" (DIGITAL) Controller: no external low-voltage control power required. (See "INFIN-A-TEK Application Notes")
- UL component recognized (pending)
- IP Rating: 1.0
- Speed control capability
- High CFM fan system
- Thermally protected motor design
- Aluminum fan end bracket designed to 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.

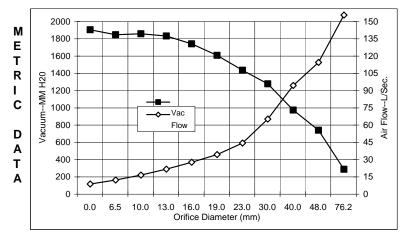


#### **TYPICAL MOTOR PERFORMANCE.\***





Orifice	Amps	Watts	RPM	Vac	Flow	Air
(Inches)		(ln)		(In.H2O)	(CFM)	Watts
3.000	7.9	1560	20600	6.7	311.0	245
2.000	7.9	1555	20625	21.6	237.1	602
1.750	7.9	1538	20530	28.3	206.7	689
1.500	7.8	1512	20875	36.1	170.7	724
1.250	7.5	1464	21855	44.0	131.3	680
1.125	7.2	1399	22245	47.1	110.0	609
1.000	7.0	1356	22825	50.4	90.0	534
0.875	6.5	1255	23190	52.4	70.4	433
0.750	6.1	1170	24010	58.6	54.6	376
0.625	5.9	1141	25145	64.2	39.6	299
0.500	5.5	1085	25865	67.9	26.0	208
0.375	5.3	1032	26510	68.6	14.9	120
0.250	4.9	964	27075	68.0	7.0	56
0.000	5.0	965	28100	70.3	0.0	0



Orifice	Amps	Watts	RPM	Vac	Flow	Air
(mm)		(ln)		(mm H2O)	(L/Sec)	Watts
76.2	7.9	1560	20600	170	146.8	245
48.0	7.9	1548	20583	624	105.6	640
40.0	7.8	1520	20772	857	85.7	713
30.0	7.3	1428	22070	1161	56.4	641
23.0	6.6	1280	23099	1318	35.5	459
19.0	6.1	1169	24033	1490	25.6	374
16.0	5.9	1142	25100	1624	19.0	302
13.0	5.5	1091	25793	1715	12.9	217
10.0	5.3	1040	26413	1741	7.8	133
6.5	4.9	967	27047	1728	3.5	59
0.0	5.0	965	28100	1786	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: 230v	Minimum Sealed Vacuum: TBD	ORIFICE: 7/8"	Minimum Vacuum: TBD	Maximum Watts: TBD
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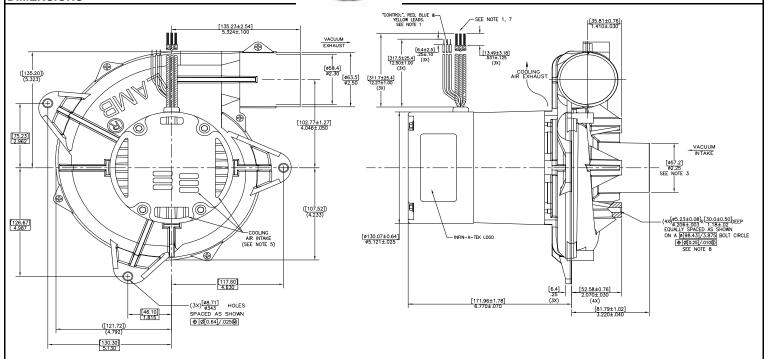
PRODUCT BULLETIN 121131-00







#### **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.
- 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."
- 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 rejuctance 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) 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.