AMETEK

Product Bulletin

LAMB ELECTRIC

Models: 114587
114589

230 Volt Two-Stage Totally Enclosed Vacuum Motors

For Commercial and Industrial Vacuum Equipment Used in Hazardous Locations

DESCRIPTION

This single-phase, two-pole universal motor series is totally enclosed, externally fan-cooled, and is combined with a centrifugal blower to produce vacuum airflow characteristics suited for vacuum blower applications. The motors are available in both 120-and 230-volt AC models and incorporate class B insulation in the armature and field windings.

The vacuum air is drawn into the bottom of the fan case and is discharged through openings between the upper and lower mounting flanges. Motor cooling air is drawn in the top of the die cast aluminum shell and is directed over the outside of the enclosed motor. An internal fan circulates air through the electrical parts to properly transfer heat to the outside housing of the motor.

APPLICATION

These motors have been listed by Underwriters Laboratories Inc. Guide PTDR, File E-25653 for use in hazardous locations with respect to safety of operation as follows:

Class I, Group D--Atmospheres containing gasoline, petroleum, naphtha, benzene, butane, propane, alcohols, acetone, benzol, lacquer solvent vapors, or natural gas.

Class II, Group E--Atmospheres containing metal dust, including magnesium, aluminum, and their commercial alloys.

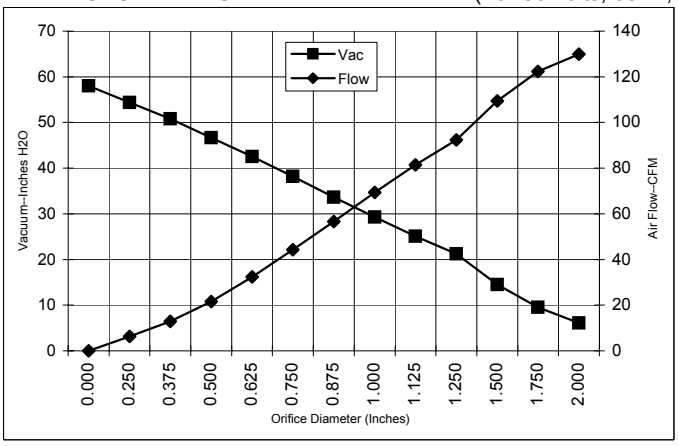
Class II, Group F--Atmospheres containing carbon black, coal, or coke dust.

Class II, Group G--Atmospheres containing flour, starch, or grain dusts.

These motors are designed for use in commercial and industrial vacuum equipment which employ filters to remove dirt from the air stream before reaching the vacuum fans. While these vacuum motors are listed for use in hazardous locations, that in itself does not mean that the end product has hazardous duty characteristics. The design of the equipment must be evaluated by Underwriters Laboratories Inc. or other listing or regulatory agency to determine if the end product is suitable for use in hazardous locations.

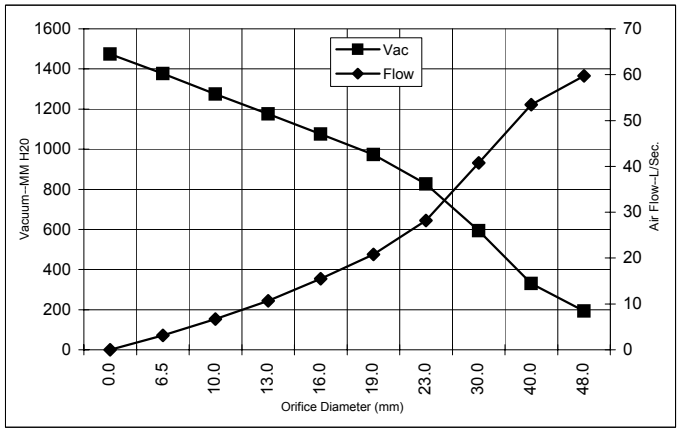
TYPICAL MOTOR PERFORMANCE.* (At 230 volts, 60Hz, test data is corrected to standard conditions of 29.92 Hg, 68° F.)

ASTM DATA



Orifice (Inches)	Amps	Watts (In)	RPM	Vac (In.H2O)	Flow (CFM)	Air Watts
2.000	4.6	942	11800	6.1	129.9	94
1.750	4.6	956	11310	9.5	122.3	137
1.500	4.7	967	11250	14.5	109.4	186
1.250	4.7	971	11480	21.2	92.3	231
1.125	4.7	963	11340	25.1	81.4	241
1.000	4.6	946	11540	29.3	69.3	239
0.875	4.4	921	12020	33.6	56.6	223
0.750	4.3	892	12040	38.2	44.3	199
0.625	4.1	852	12160	42.5	32.4	162
0.500	3.9	814	13030	46.7	21.6	119
0.375	3.7	775	13160	50.8	12.9	77
0.250	3.5	744	13440	54.4	6.3	40
0.000	3.4	719	13770	58.0	0.0	0

METRIC DATA



Orifice (mm)	Amps	Watts (In)	RPM	Vac (mm H2O)	Flow (L/Sec)	Air Watts
48.0	4.6	948	11584	193	59.7	113
40.0	4.7	964	11268	330	53.5	171
30.0	4.7	967	11403	593	40.7	237
23.0	4.5	927	11900	826	28.2	227
19.0	4.3	891	12042	972	20.8	198
16.0	4.1	854	12155	1075	15.5	163
13.0	3.9	818	12943	1176	10.7	123
10.0	3.7	781	13141	1275	6.7	83
6.5	3.5	746	13426	1377	3.1	42
0.0	3.4	719	13770	1473	0.0	0

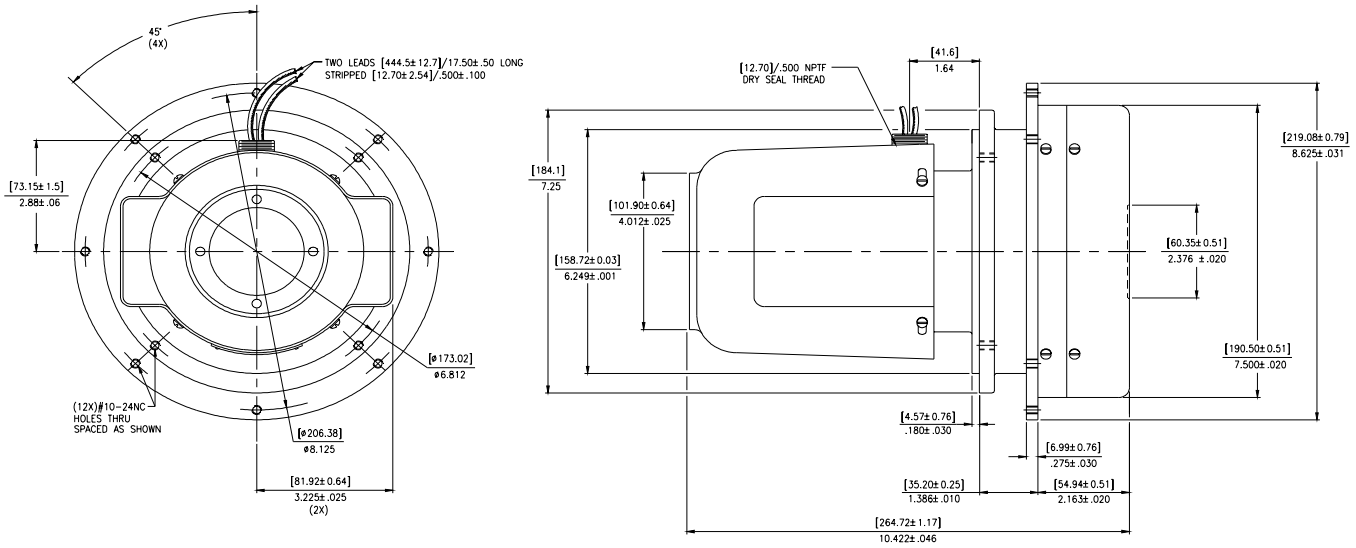
Note: Metric performance data is calculated from the ASTM data above.

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

Test Specs:	230 volts	**Minimum Sealed Vacuum:**	N/A	**ORIFICE:**	7/8 "	**Minimum Vacuum:**	30.0"	**Maximum Watts:**	950

DIMENSIONS

114587



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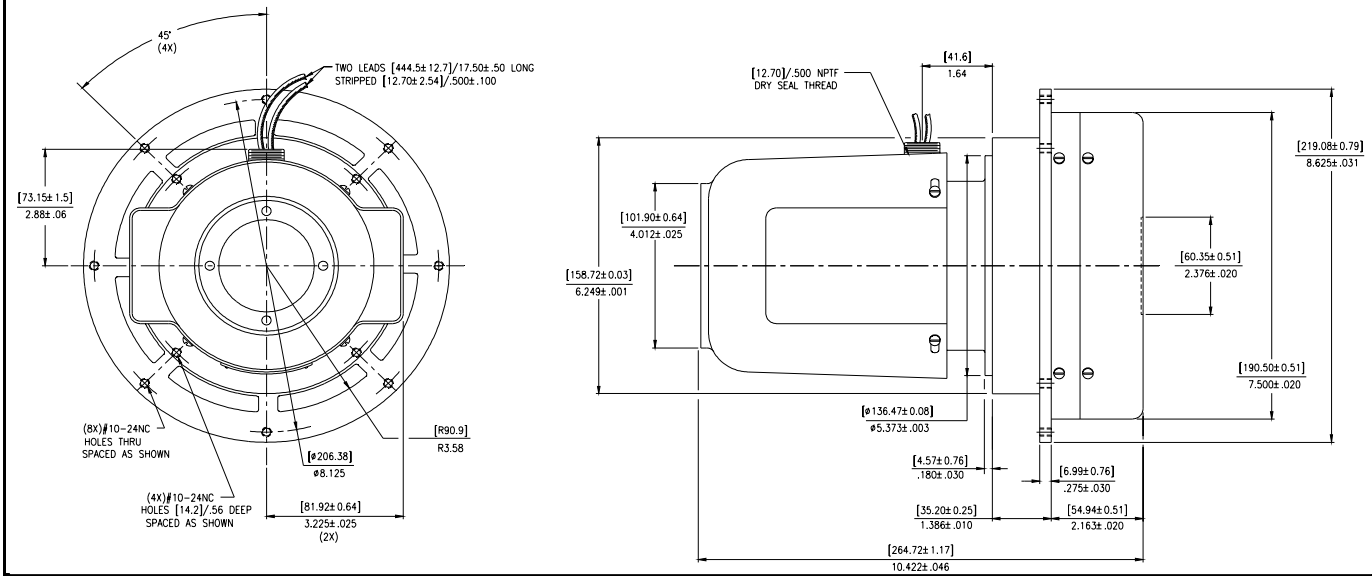

IMPORTANT NOTE: *Pictorial and dimensional data are subject to change without notice. Contact factory for current revision levels.*

WARNING - When using AMETEK Lamb Electric bypass motors in machines that come in contact with foam, liquid (including water), 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 Electric 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 Electric motors should be submitted to appropriate organizations or agencies for testing specifically related to the safety of your equipment.

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