



**36 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 36, 120 and 230 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.

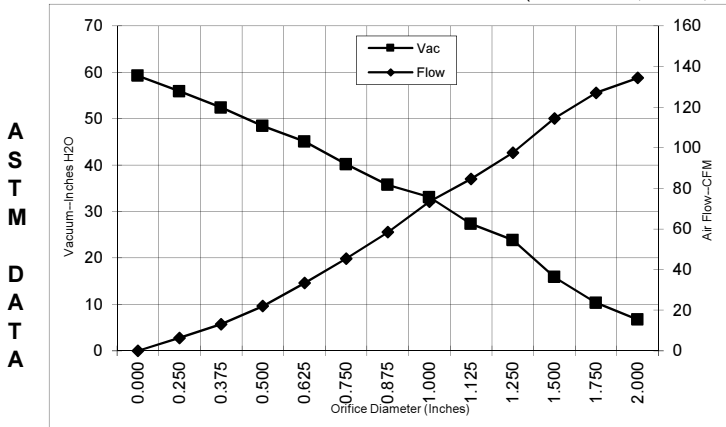
**Class II, Group E**--Atmospheres containing metal dust, including magnesium, aluminum, and their commercial alloys.

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

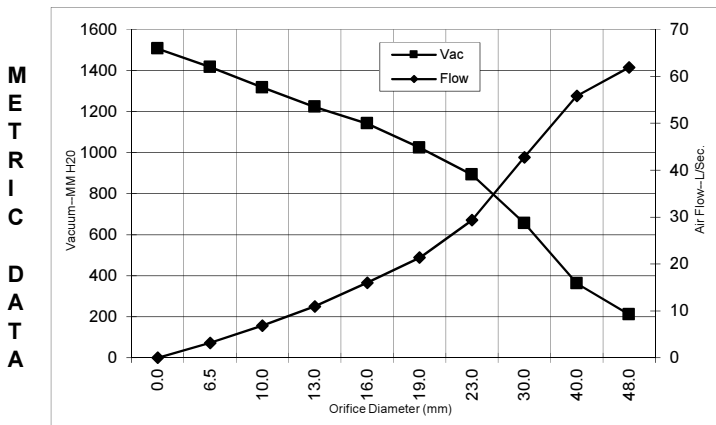
These motors are designed for use in commercial and industrial vacuum equipment which employ filters to remove dirt from the air stream before reaching the vacuum fans. While these vacuum motors are listed for use in hazardous locations, that in itself does not mean that the end product has hazardous 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 36 volts, 60Hz, test data is corrected to standard conditions of 29.92 Hg, 68° F.)



Orifice (Inches)	Amps	Watts (In)	RPM	Vac (In.H <sub>2</sub> O)	Flow (CFM)	Air Watts
2.000	30.2	1086	11838	6.7	134.3	106
1.750	29.4	1061	11716	10.3	127.0	154
1.500	29.6	1071	11608	15.9	114.4	214
1.250	29.4	1064	11550	23.9	97.6	273
1.125	29.9	1083	11618	27.4	84.7	272
1.000	29.7	1074	11769	33.1	73.4	285
0.875	29.2	1051	11986	35.7	58.4	245
0.750	28.0	1008	12246	40.2	45.4	214
0.625	29.3	1054	12605	45.1	33.4	177
0.500	25.1	906	12984	48.4	22.0	125
0.375	23.7	857	12983	52.4	13.1	81
0.250	22.8	825	13666	55.9	6.4	42
0.000	21.9	793	13892	59.3	0.0	0



Orifice (mm)	Amps	Watts (In)	RPM	Vac (mm H <sub>2</sub> O)	Flow (L/Sec)	Air Watts
48.0	29.8	1075	11784	211	61.9	127
40.0	29.6	1068	11640	362	55.8	196
30.0	29.7	1074	11587	655	42.7	272
23.0	29.3	1057	11932	891	29.3	255
19.0	28.0	1009	12254	1023	21.3	213
16.0	29.3	1053	12591	1141	16.0	178
13.0	25.5	921	12947	1222	10.9	130
10.0	23.9	865	12984	1316	6.8	87
6.5	22.8	826	13632	1415	3.2	44
0.0	21.9	793	13892	1505	0.0	0

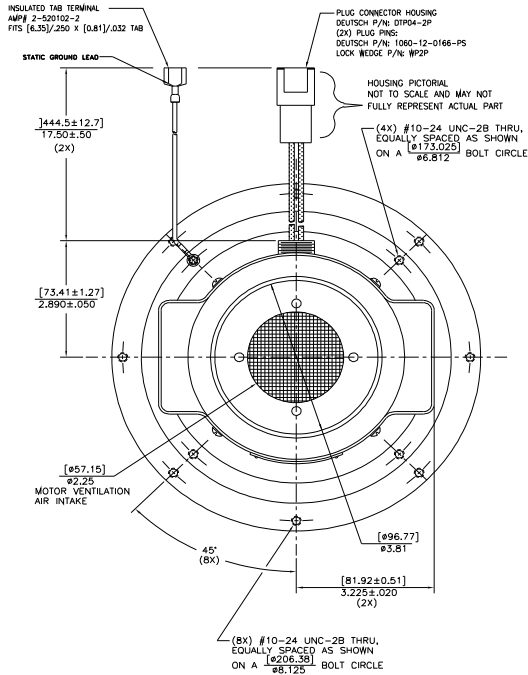
Note: Metric performance data is calculated from the ASTM data above.

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

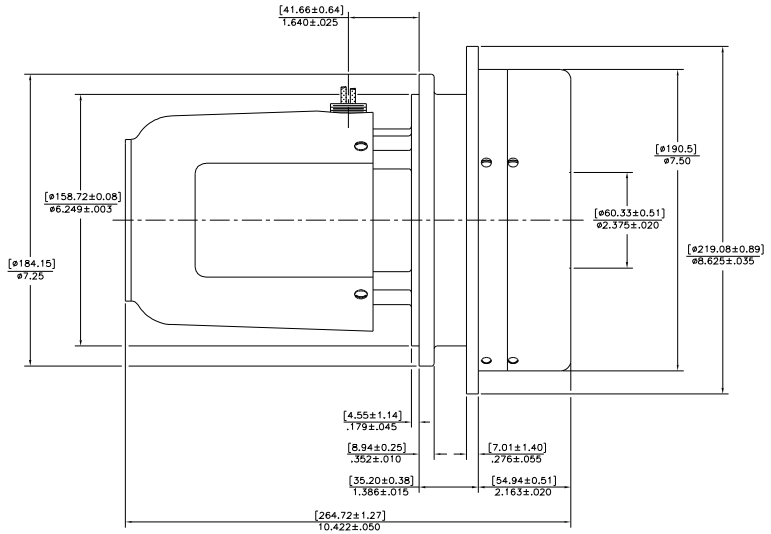
<b>Test Specs:</b>	<b>36 volts</b>	<b>Minimum Sealed Vacuum:</b>	<b>55"</b>	<b>ORIFICE:</b>	<b>7/8"</b>	<b>Minimum Vacuum:</b>	<b>34"</b>	<b>Maximum Watts:</b>	<b>1150</b>
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DIMENSIONS

NOTES:  
1. LEADS: 14 GA. STRANDED; LEADS CAN BE ANY COLOR EXCEPT GREEN OR GREEN WITH YELLOW STRIPE.



OUTLINE UPDATED ONLY FOR CUSTOMER APPROVAL  
ASSEMBLY TO BE UPDATED AFTER CUSTOMER APPROVAL.



**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.

**AMETEK Dynamic Fluid Solutions**  
**www.ametekdfs.com**