

White Paper-3

May, 2010

Helwig grade passes test for Commercial floor care application

Situation:

A commercial floor care manufacturer was looking for a reliable supplier of carbon brushes for their 1.5HP vacuum motor. The previous supplier went out of business and several others were not meeting life requirements. Helwig Carbon was called on to find a replacement for the original IM812 grade brush.

Application	Motor Type	HP	Volts	Speed	Current	Current Density
Commercial Vacuum	Field Wound DC	1.5	120	10,000 RPM	12 amps	70 amp/in ²

Average motor life 12,000 hours, and it is one of the most durable and well known commercial vacuum cleaners.

Analysis:

Helwig engineers developed Grade K374 based on application information given along with using the properties of the original IM812 grade as a reference.

Life Tests:

Motors were tested by the customer along with different grade options from competitors.

Results:

- The K374 grade matched the characteristics of the IM812.
- Brush life with the Helwig grade K374 brushes exceeded the 2000 hours target while other competitor's grades failed to meet the brush life criteria.

Additional benefits:

K374 is available for many high speed, medium current density applications where better life and lower wear rates are required.

Note: Helwig Carbon has a comprehensive motor test lab including a Dynamometer, R&D Dept, Application and Design engineering group.

For more information contact us directly at 800-962-4851 or visit our website at: www.helwigcarbon.com.



-Nitin Kulkarni
Engineering Manager