

Vacuum Cleaner Motors — Product Specification

BLDC high-speed fan motors · AC universal (brushed) vacuum motors · OEM / ODM / custom build

Established	June 2020
Location	No. 448 Zhong'an Road, Puzhuang Town, Wuzhong District, Suzhou, Jiangsu, China
Core products	BLDC high-speed vacuum fan motors (14.4–21.6 V); AC universal vacuum motors (100–240 V)
Power range	120 W – 1,400 W
Patents	9 utility model patents
Services	OEM / ODM, custom build to drawing or sample, prototyping from 1 pc

1. Product Family Overview

We focus on one thing: the motor inside a vacuum cleaner. Two series cover the market — a high-speed brushless fan motor for cordless machines, and an AC universal motor for corded, wet & dry and professional cleaning equipment.

Series	Type	Voltage	Power	Typical application
BLDC-65G / 85G	Brushless (BLDC) high-speed fan motor	14.4 / 18 / 21.6 V	120 / 160 / 240 W	Cordless stick & handheld vacuum, robot vacuum
V1J-PT / PA / PE	AC universal (brushed) motor	100–240 V, 50/60 Hz	600–1,400 W	Corded canister & upright vacuum, wet & dry, industrial
V3J-P	AC universal (brushed) motor	100–240 V, 50/60 Hz	550–900 W	Floor washer / scrubber, compact canister

2. BLDC High-Speed Fan Motor — Technical Data

Model	Voltage (V)	Power (W)	Suction power (W)	Vacuum (kPa)	Noise	Insulation
BLDC-65G	14.4 / 18 / 21.6	120 / 160 / 240	50 / 65 / 85	17 / 20 / 25	< 100 dB(A)	Class E
BLDC-85G	14.4 / 18 / 21.6	120 / 160 / 240	50 / 65 / 85	15 / 19 / 25	< 100 dB(A)	Class E

Values are given per voltage tap in the order 14.4 V / 18 V / 21.6 V.

Features

- Three power steps on one platform — one mechanical envelope, three performance levels.
- High suction-to-weight ratio for cordless machines; 85 W suction at 240 W input.
- Rotor balanced and bearing pre-loaded for low vibration and long service life.
- Available with customer-specific shaft, flange, fan diameter, lead wire and connector.

3. AC Universal Vacuum Motor — Technical Data

Model	Voltage	Frequency	Power (W)	Vacuum (kPa)	Airflow (L/s)	Insulation
V1J-PT	100–240 V	50/60 Hz	600–1,400	17–28	35–40	Class E / F
V1J-PA	100–240 V	50/60 Hz	600–1,400	17–25	36–50	Class E / F
V1J-PE	100–240 V	50/60 Hz	600–1,400	17–25	32–41	Class E / F
V3J-P	100–240 V	50/60 Hz	550–900	14–22	29–36	Class E / F

PT / PA / PE differ in fan geometry: PT is tuned for maximum vacuum, PA for maximum airflow (wet & dry and industrial duty), PE for balanced household performance.

Features

- Wide-voltage design: one platform covers 100–120 V and 220–240 V markets.
- Class E / F insulation with double-impregnated stator for humid and dusty environments.
- Carbon brush life matched to 500–1,000 h duty; brush holder serviceable.
- Optional thermal protector, EMI suppression (choke / X2 capacitor) and earth tab.

4. Selection Guide

Your product	Recommended model	Selection reason
Cordless stick / handheld vacuum	BLDC-65G (18 V or 21.6 V)	Highest suction per gram; 85 W at 240 W input
Entry cordless / lightweight	BLDC-85G (14.4 V)	Lower cost platform, 15–25 kPa for short-run cleaning
Robot vacuum, mite remover	BLDC-65G (14.4 V)	Compact envelope, low voltage, long life
Corded canister / upright vacuum	V1J-PT	Maximum vacuum (up to 28 kPa) for deep carpet cleaning
Wet & dry, industrial vacuum	V1J-PA	Maximum airflow (up to 50 L/s) to move debris and water
Household canister, cost-driven	V1J-PE	Balanced vacuum / airflow at lower cost
Floor washer / scrubber	V3J-P	Compact 550–900 W, stable airflow for water pick-up

Not sure which one fits? Send us your target vacuum (kPa), airflow (L/s), input power and battery voltage — we will recommend a model and quote a sample.

5. Customisation & OEM Service

Item	What we can do
Electrical	Voltage and power tuned to the target market (110 V / 220–240 V); speed and vacuum curve matched to your specification
Mechanical	Shaft length and diameter, mounting flange, fan diameter, impeller material, overall height — built to your drawing
Connection	Lead wire length, connector type, terminal, earth tab, thermal protector
Noise & vibration	Balancing grade, bearing selection, damping ring options
Branding	Nameplate, laser marking, private-label packaging, OEM carton
Prototyping	From 1 piece, 7–10 days

6. Certification & Quality Control

Certification is arranged per project, matched to your target market — CE and RoHS for the EU, UL for North America. Tell us the destination market and we will confirm the applicable scheme and testing route before the sample stage.

Quality control

- 100% end-of-line test: vacuum, airflow, input power, current, speed and noise.
- Incoming inspection of magnet, bearing, commutator and lamination.
- Life test and thermal rise test on request.
- Batch traceability by production lot.

7. Ordering Information

Item	Detail
Minimum order	Sample: 1 pc · Volume: 500 pcs per model
Sample lead time	7–10 days
Volume lead time	25–30 days
Packaging	Individual foam / blister + carton; OEM packaging available
Payment	To be agreed (T/T, or as per contract)
Shipping	EXW Suzhou / FOB Shanghai or Ningbo, per your forwarder

Contact

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Specifications are subject to change without notice; final performance is confirmed on the approved sample.