DVM INDUSTRIES

Electronically Commutated EC Motors

The strategic horsepower to drive e ciency!

DVM Industries specializes in auditing and retrofitting existing motors both interval and fractional motors to EC (Electronically Commutated) We offer fully programmable EC Motors to save energy costs related to the following applications

- Rooftop Exhaust Fans
- Fan Coil Units
- AHU's Refrigeration
- RTU's (Rooftop Packaged Units)
- Fan Powered Boxes
- CRAC Units (Computer Room A/C)
- Dry Coolers

EC Motors are cost-effective and properly efficient with numerous utility rebates available programs that help offset the cost. If you need help finding an EC motor for your requirements, our technicians are highly trained in motor programming, and installation to meet your exact specifications.

Our Dedication and ability for creating EC motor solutions translates to reliable and energy-efficient products!

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Strategic Partner:

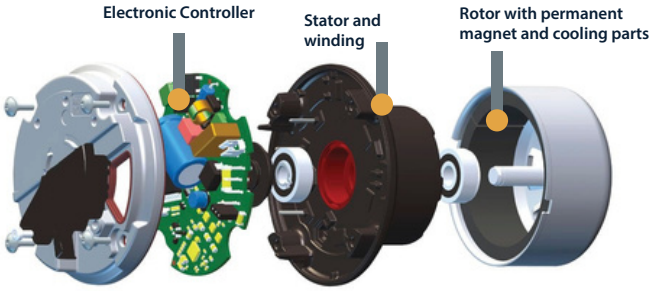
I·E·S·G Integrity Energy Solutions Group

EC Motor Solutions

Electronically commutated (EC) motors are highly efficient, programmable, brushless DC motors utilizing a permanent magnet rotor and a built-in inverter. Basically, it is a DC motor (in a DC motor the mechanical commutation switches the direction of the current) with a built-in VFD (Variable Frequency Drive) and a DC to AC Transformer.

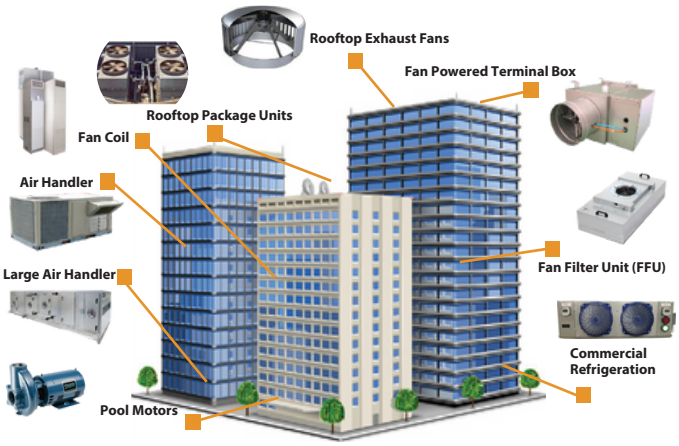
However, in EC motors, the mechanical commutation and the brushless are replaced by an electrical commutation. EC motors are extremely efficient, especially at reduced speeds compared to traditional motors. Also, they have built-in speed controller eliminating the need for a separate VFD.

With an EC motor, the electronic circuitry stands in lieu of the traditional mechanical commutation meaning the right amount is being supplied in the right direction at exactly the right time providing precise motor control. EC motors are very valuable for small motor sizes, where a variable frequency drive (VFD) is not cost-effective.



Benefits

- 30 – 80% More Efficient
- Less Noise (Lowered Decibles)
- Extends the life of the motor
- Less wear and tear
- Reconditions vs Replace

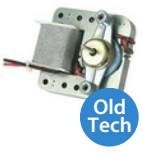


Why EC Motors?

- As speed is reduced the savings is to the cubed root.
- Permanent magnet motor and electronic control allow for higher efficiencies and higher energy savings.
- High-Efficiency Variable Speed Motor.
- Can be retro tted to replace existing AC motor components
- Similar to an interval horsepower motor with a VFD (Variable Frequency Drive)
- As speed is reduced the savings is to the cubed root.

Types

- **Shared Pole Motor**



Induction
Single phase
Rotating flux
20% efficiency

- **PSC Motor**

Induction
Single phase
Relay contacts
35-55% e ciency

- **ECM Motor**

DC machine
Single and 3 phase
Multiple signal control
65-85+% e ciency