

DAIKIN

## ENERGY & COST SAVINGS

ENSURING YOUR LONG-TERM PEACE OF MIND.

### VALUE ADDED SERVICES

## ELECTROCOMMUTABLE FANS (EC FANS)

Predictive Services

### ABOUT DAIKIN APPLIED ASIA & OCEANIA

Engineered for Performance and Flexibility

- Daikin Group is global leaders in the Air Conditioning sector.
- 96,000 employees globally.
- Over 100 Production manufacturing sites across the world.
- Providing technological solutions in more than 170 countries in the world.
- Daikin Applied Asia & Oceania is a subsidiaries under Daikin Industries Ltd Group ("Daikin") of companies.



[www.daikinapplied.com](http://www.daikinapplied.com)



# DAIKIN APPLIED VALUE ADDED SERVICES

## The easiest and most effective way to cut your HVAC energy costs.

EC motors are brushless DC motors that run on a DC voltage, but with a normal AC supply and integrated VFD (variable frequency drive).

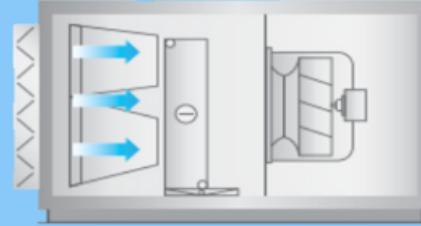
### Benefits

- Longer lifespan and maintenance free
- Does not need separate frequency control
- Compact design for limited space requirement
- Easy and fast installation
- Reduction in noise levels and no acoustic enclosures required

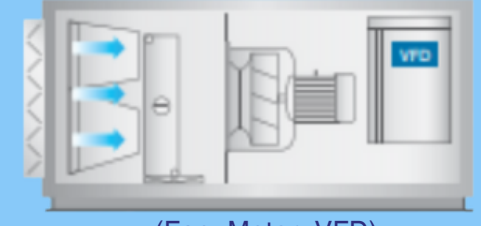
EC-fans offer up to 90% motor efficiency compared to 20-70% with conventional AC (alternating current) motors.



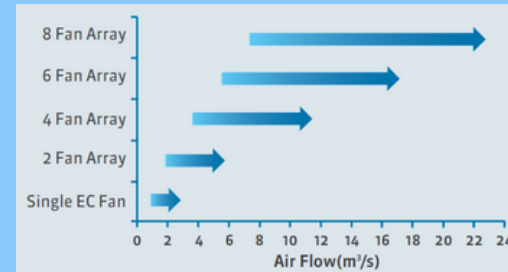
### Daikin EC Fan Retrofit



### Conventional Fan Solution



(Fan+Motor+VFD)



Airside energy efficiency becomes a hot topic as building sectors grow tighter and demand for higher ventilation rates with lower energy costs are required. Airside energy efficiency can be achieved with better HVAC controls, more efficient equipment, and utilized outside air conditions or preconditioning air via exhaust air.

### WHY EC FANS?

- Secondary magnetic field from permanent magnets rather than copper windings.
- AC motors consume additional energy to create a secondary magnetic field.
- For EC-motors, the power input and the speed of the motor is continuously adjusted to optimize energy consumption with integrated controller. AC motors require side equipment VFD (variable frequency drive) to regulate the motor speed.
- Eliminates both rotor copper losses and rotor slip losses results in increased efficiency.
- Eliminates belt drive losses and minimizes bearing losses for traditional belt drive fan motors.
- Motor efficiency is maintained across the speed range rather than only a specific design speed.