

# Синхронный двигатель

## Технические характеристики

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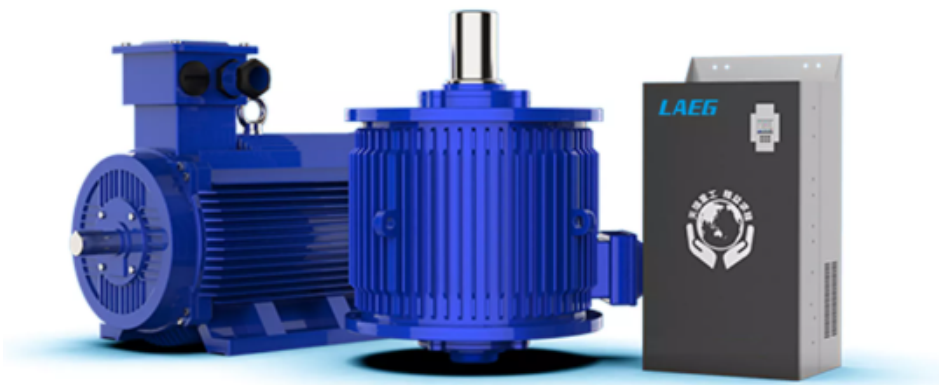
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## Permanent magnet synchronous direct drive motor

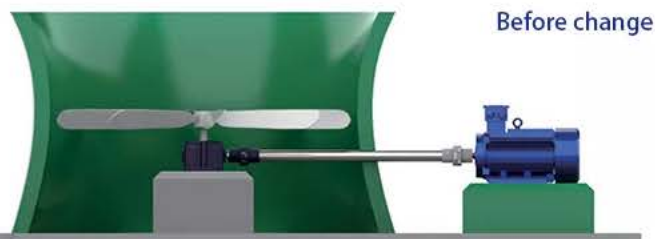
Permanent magnet synchronous direct drive motor integrates variable frequency vector, permanent magnet direct drive, micro-electronic control and other technologies to remove the traditional deceleration device, connect with the load rotation shaft, and directly drive the load, so that the transmission system structure is simplified, efficiency is improved, noise is reduced, easy installation, no manual daily maintenance and repair, thus saving a lot of manpower and material costs. It reduces the environmental pollution in the production process and effectively reduces carbon emissions.



### performance feature

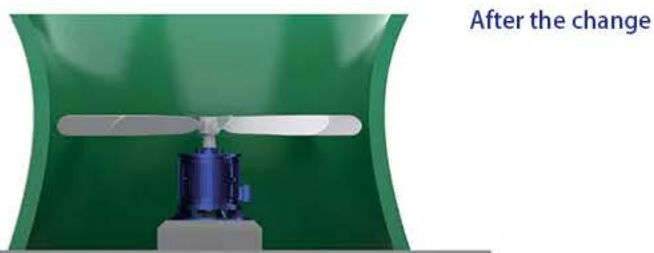


## Comparison of application of cooling tower motor system



### Existing problems:

1. The carbon fiber rod is long, the alignment is troublesome, and the diaphragm coupling is easy to damage.
- 2, reducer heat, weak heat dissipation, seal failure, serious oil leakage.
- 3, large maintenance, high cost.
- 4,The fan Angle must be adjusted to reduce the fan speed.

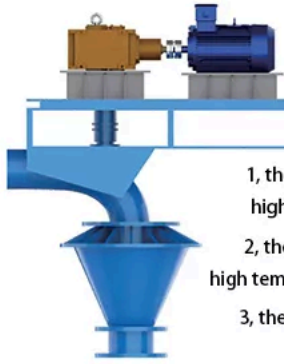


### Advantages after transformation:

- 1,Permanent magnet synchronous direct drive motor direct drive fan, high speed transmission efficiency.
- 2, reduce the period of maintenance, reduce operating costs.
- 3, special inverter, reduce the starting current, reduce the impact on the power grid.
- 4, the system vibration is small, equipment stability is high.
5. Adjust the speed of the motor in real time according to the ambient temperature.

## Comparison of application of separator motor system

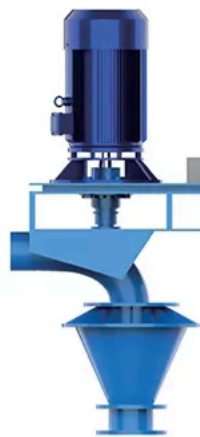
### Before change



#### Existing problems:

- 1, the use of coupling connection, easy to cause high-speed shaft gear, bearing and seal failure.
- 2, the reducer is easy to leak oil, poor heat dissipation, high temperature, easy to cause lubricating oil and seal failure.
- 3, the lower part of the reducer bearing failure.

### After the change



#### Advantages after transformation:

- 1, cancel the reducer, less maintenance points, improve reliability.
- 2, permanent magnet synchronous direct drive motor direct drive separator, improve the transfer efficiency.
3. The output speed of permanent magnet synchronous direct drive motor is low, and the overall vibration of the drive unit is reduced.
- 4, solve the inefficient operation mode of the original system "big horse trolley", high efficiency and energy saving.

## Performance comparison

Performance class	Permanent magnet synchronous direct drive motor	General induction motor
Energy efficiency level and energy-saving effect	All products meet or exceed the domestic first-level energy efficiency standards, and the comprehensive efficiency is 10-30% higher than that of asynchronous motors, or even higher	At present, most three-phase asynchronous motors are 3-level energy efficiency standards, and there are also 2-level energy efficiency standards
Stable performance and overload capability	Strong ability to withstand sudden loading and unloading large load, overload capacity $\geq 1.5$ times, good stable operation performance	The overload capability is relatively weak
Vibration noise	Low vibration, low noise	Noise generally exceeds 100 decibels
Maintenance cycle	Relatively asynchronous motor + reducer system maintenance is simple, long cycle	Frequent maintenance, especially asynchronous motor + reducer system, maintenance is complex and large
Impact on the power grid	High power factor, close to 1, improve the grid quality factor, no need to add power factor compensator	Low power factor, only 0.85-0.92, will reduce the quality of the grid and increase the apparent power

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