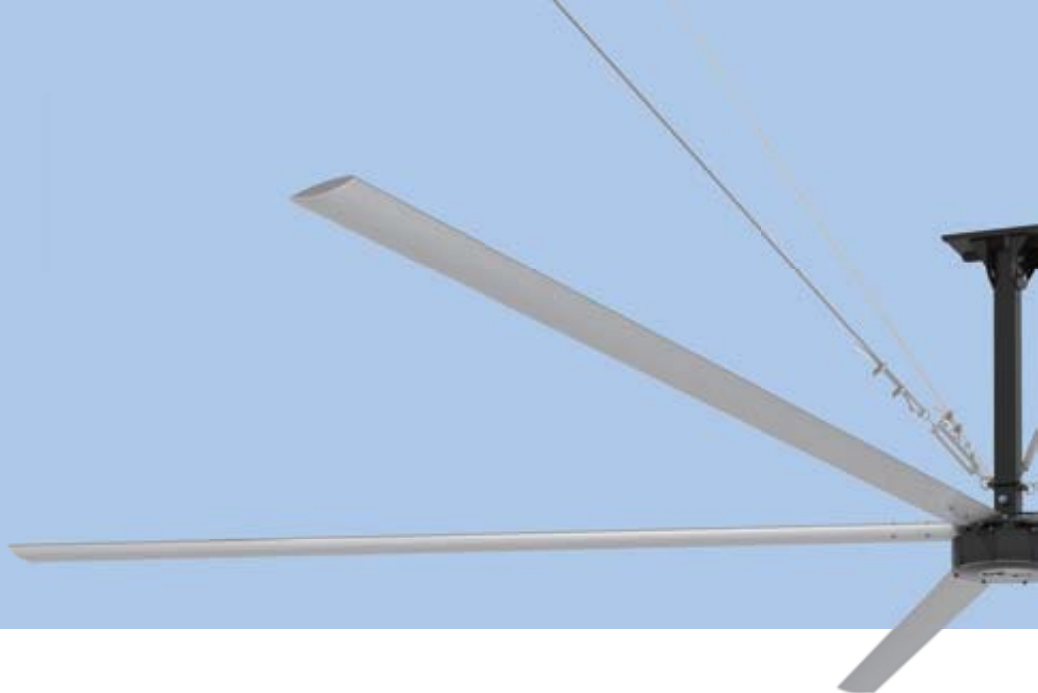




HVLS FAN

PMSM Technology

High Efficiency, Energy Saving
Cooling and Ventilation
Environment Improvement



Products introduction

DAHVLS Ceiling Fan, used ultra-high efficient PMSM motor technology, is a high volume and low speed fan, with diameter 7.3meter(24inches), speed only 60rpm. It can produce large air volume promoting the air flow and circulation, it's the most direct and effective solution to the large space ventilation and cooling.

Compared with traditional HVAC and high speed fan, DeAura HVLS Fan has incomparable advantages. Its stream-lined fan blades are designed with aerodynamics and made with advanced manufacturing process, only 1kw power can drive the fan to produce high air volume for big spaces cooling, ventilation and dampproof.

The core technology of DeAura Fan is PMSM motor technology, its energy efficiency complies with Euro IE4 or China standard, saving 600USD/year compared with same products in market. Besides, its digital control panel brings more convenience for customers.

HVLS Fans are widely used in big space, such as factories, logistical and warehousing, exhibition hall, dining room, farm and animal livestock and etc. Your best solution for cooling and ventilation!

7.3

Diameter(meter)

60

Max.speed (rpm)

1

Input power (KW)

500

Energy Saving(USD/Set/Year)

360 degree full area coverage

Ventilation Principle

**only 1kw/h power
very quiet 38dB
maintenance free**



Product Specification

Cooling

Deaura Fan brings the natural wind to the human body and improve the speed of the evaporation and drop the temperature of the human body. Usually it could decrease the temperature by 5-8°C.

Circulation

Deaura Fan circulates the airflow of whole factory space, get rid of smog, humidity air, CO₂ and bade quality air in bottom, where people work at.

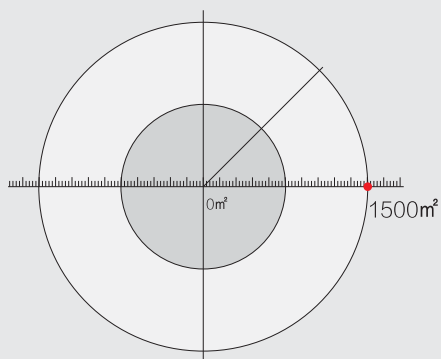
Humidity Proof

Deaura Fan promotes the air mingling to get rid of smelly and humid air, improving the air quality and creating a healthy, dry and safe working environment, at mean time, eliminating the birds and bug.

Energy Saving

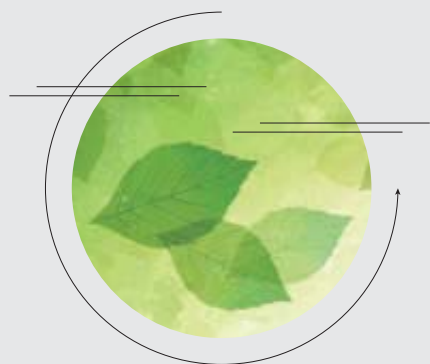
The fan is also a good partner with air-conditioner for energy saving. The temperature between 20-34 in Spring and Autumn, it is conflict to decide whether to use or not air conditioner because of high bill expense. The Deaura Fan will help you make decision, it can realize the cooling and ventilation with economic bill expense.

Products Advantage



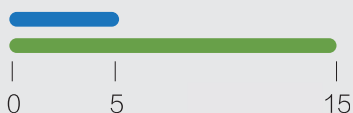
Big Coverage Area

The unique design of Deaura streamlined fan blades, can mostly eliminate the resistance, and most efficiently transform the electricity into kinetic energy of air. Besides, the air flow structure is different from the ordinary small fan, which could cover the large area. While the super large energy-saving fan push the air flow to the ground and form a 1-3 meters air flow layer on the ground. In the open area the fan could cover an area of 1500 square meters.



Nature Breeze

The comfort brought by the large energy-saving fan is entirely different from the other fans, under the HVLS FAN covering area, you could feel the natural breeze around, so that the whole body would be covered by the airflow. While the traditional high speed fan blows directly to the human body which is not quite comfortable. Often time, the speed of the airflow is too high which brings many healthy problems such as fan diseases.



Lifetime

Strictly comply with quality management, from raw material, parts to manufacturing process, HVLS FANS could achieve 15 years above product lifetime.



Easy Clean and Maintenance

Ordinary fan is working under 50HZ/60HZ, speed at 1400rpm, the high speed fan blades and air rub against each other, so as to bring static electricity and absorb the dust, which add the difficulty to clean. While the Deaura Fans under low speed running, greatly reduced the air friction, easy for clean and maintenance.

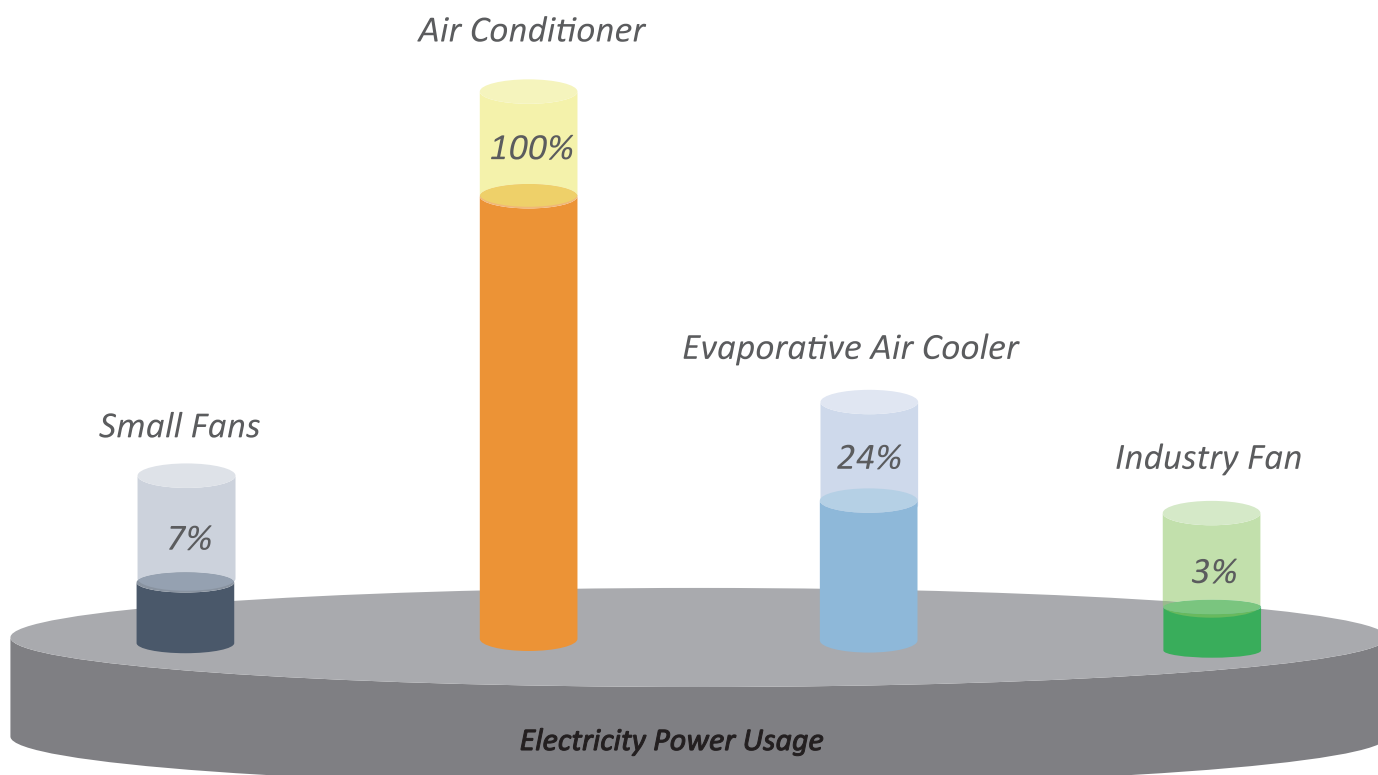
Cost comparison

Comparison among industry fan,small fans,air conditioner,evaporative air cooler

Solutions	Power KW	Quantity (set)	Invest (10k RMB)	Lifetime (Year)	Annual Cost (10K RMB)	Maintenance (10k RMB)	10 year cost (10k RMB)	Cost Percentage
Small fan	0.25	200	5	2	7.5	2.5	105	7%
Air Conditioner	600	1	450	10	90	13.5	1485	100%
Evaporative Air Cooler	1.5	75	175	6	16.9	3.5	357.25	24%
Industry Fan	1.1	8	15.2	15	1.32	1	38.4	3%

Above calculation is bases on ecample,10,000m² , 10hours running day,from May to Oct,total 1500hours running,1RMB/k-

Cost Comparison





DM-PMSM Motor HVLS



TM-Gearbox HVLS FAN



LDM-FAN with LED



SDM-Mist Spray FAN



AEXP-Control



SCC-Central Control



CDM-Commercial HVLS FAN



MDM-Portable FAN

Deaura PMSM HVLS FAN -Patented Product



Big Airflow, Low Noise, Smart Control
Good for industry, commercial, Public place

High efficient PMSM Motor
High reliability, Maintenance free

PMSM Motor Direct Drive

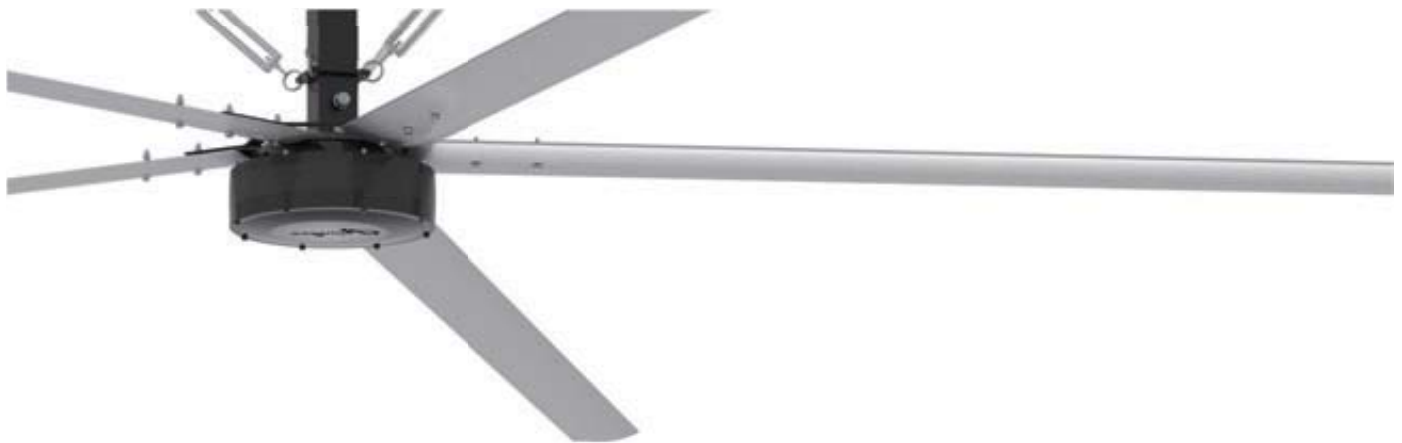
Safer, Reliable, and Energy Saving



Maintenance Free



≤38dB Ultra Quite



DM Series-PMSM Motor HVLS Fan

MODEL	Size MM	Blade PCS	Weight KG	VOLTAGE V	Current A	Power KW	Speed RPM	Airflow m³/M	Cover Area m²
DM-7300	7300	5	123	220/380V	8.1/2.7	1.5	60	14989	1500
DM-6100	6100	5	115	220/380V	7.1/2.4	1.3	70	13600	1250
DM-5500	5500	5	109	220/380V	6.5/2.2	1.1	80	12500	900
DM-4800	4800	5	102	220/380V	5.5/1.8	0.9	90	10600	700
DM-3600	3600	5	92	220/380V	2.9/1.0	0.7	100	8600	450
DM-3000	3000	5	89	220/380V	2.3/0.8	0.4	110	7500	300

Product Features Permanent Magnet Motor

- Deaura patented permanent magnet direct-drive ceiling fan with an outer rotor, a patented touch screen control panel, and real-time display of the ceiling fan speed status
- Permanent magnet motor has a wide speed range, 10-60rpm can run for a long time at low speed without motor temperature rise noise
- IE4 ultra-high efficiency motor saves 50% energy compared to induction motor ceiling fans with the same function
- 38dB ultra-quiet operation of ceiling fan



TM Series Motor+Gearbox HVLS Fan

MODEL	Size MM	Blade PCS	Weght KG	VOLTAGE V	Current A	Power KW	Speed RPM	Airflow m³/M	cover Area m²
TM-7300	7300	6	126	220/380V	8.1/2.7	1.5	60	14889	1500
TM-6100	6100	6	117	220/380V	7.1/2.4	1.3	70	13383	1250
TM-5500	5500	6	112	220/380V	6.5/2.2	1.1	80	12167	900
TM-4800	4800	6	107	220/380V	5.5/1.8	0.9	90	10300	700
TM-3600	3600	6	97	220/380V	2.9/1.0	0.7	100	9125	450
TM-3000	3000	6	93	220/380V	2.3/0.8	0.4	110	7300	300

Product Features Germany SEW Geardriver

- The SEW brand gearbox,SKF reinforced bearing,imported double oil seals,low noise and high reliability
- The digital panel is convenient and reliable,speed range 10-60rpm
- IE4 ultra-high efficiency motor saves 50% energy compared to induction motor ceiling fans with the same function
- The temperature rise and vibration moniyoring of the ceiling fan during the whole operation process are safe and reliable;compared with the induction motor ceiling fan,the weight is reduced by 25KG

LDM Series-LED HVLS Fan



Product Features

- LED light power 50w,100w,150w,200w,250w optional
- High luminous efficiency,low energy consumption,waterproof and dustproof,long life
- 60 degree/90 degree/120degree multiple light distribution angle options to meet the application needs of different occasions

LED Long Life,Energy Efficient

Power	50W	100W	150W	200W	250W	300W
Color	White/warm	white/warm	white/warm	white/warm	white/warm	white/warm
Area	30-40	45-60	70-85	100-110	120-135	140-150

CDM-Series-Commercial HVLS Fan

Dia 2.4-7.3 meter,Maintenance Free,Energy Saving



Product Features Permanent Magnet Motor

MODEL	Size MM	Blade PCS	Weight KG	VOLTAGE V	Current A	Power KW	Speed RPM	Airflow m³/M	Cover Area m²
CDM-7300	7300	5	123	220/380V	8.1/2.7	1.5	60	14989	1500
CDM-6100	6100	5	115	220/380V	7.1/2.4	1.3	70	13600	1250
CDM-5500	5500	5	109	220/380V	6.5/2.2	1.1	80	12500	900
CDM-4800	4800	5	102	220/380V	5.5/1.8	0.9	90	10600	700
CDM-3600	3600	5	92	220/380V	2.9/1.0	0.7	100	8600	450
CDM-3000	3000	5	89	220/380V	2.3/0.8	0.4	110	7500	300

SDM Series-Mist Spray HVLS Fan



Product Features

Suitable for agricultural greenhouses, animal husbandry farm, industrial plant cooling, landscape business

All-copper high-quality atomizing nozzle, working pressure 2-5kg, atomizing water spraying 50-100 liters per hour

MODEL	Size MM	Blade PCS	Weight KG	VOLTAGE v	Current A	Power KW	Speed RPM	Airflow m³/M	Cover Area m²
SDM-7300	7300	5	123	220/380V	8.1/2.7	1.5	60	14989	1500
SDM-6100	6100	5	115	220/380V	7.1/2.4	1.3	70	13600	1250
SDM-5500	5500	5	109	220/380V	6.5/2.2	1.1	80	12500	900
SDM-4800	4800	5	102	220/380V	5.5/1.8	0.9	90	10600	700
SDM-3600	3600	5	92	220/380V	2.9/1.0	0.7	100	8600	450
SDM-3000	3000	5	89	220/380V	2.3/0.8	0.4	110	7500	300

AEXP-HVLS Fan Control

Smart Touch Panel

Customized, Convenient, Easy



300 * 200 * 120 (L x W x H)

Product Features

- High-quality electronic components, strict quality and safety testing
- Hardware detection of ceiling fan operating status, full real-time safety protection
- Touch screen control, real-time display of the operating status, one-button speed adjustment, forward and reverse switching
- Comprehensive hardware and software safety protection - overvoltage, under voltage, overcurrent, - temperature, phase loss protection, collision protection



SCC-Smart Central Control

Intelligent management, convenient for
daily management and control



Product Features

- Each SCC is able to control up to 30 large fans
- Through timing and temperature sensing, the operation plan is pre-defined
- While improving the environment, minimize the cost of electricity
- Use the touch screen to realize the control, simple and convenient, which greatly improves the modern intelligent management of the factory
- SCC intelligent control can be customized according to the customer's factory intelligent management

MDM-Series-Portable Fan

Dia1.5-2m,PMSM Motor,High Volume



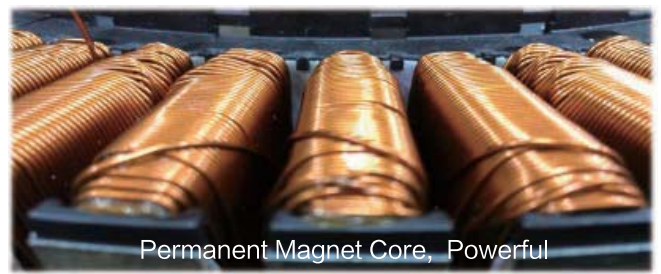
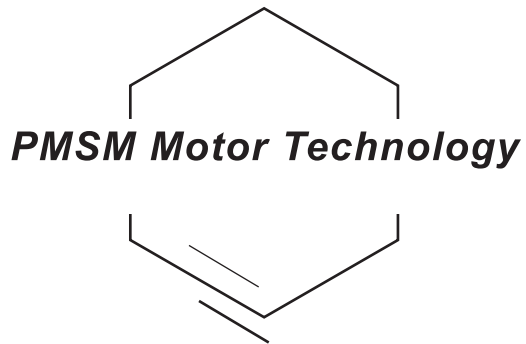
Product Features

The MDM series is a mobile high-volume fan. In some specific places, HVLS fans can not be installed on the top due to limited space. MDM is an ideal solution. The product is suitable for narrow passages, low roof, dense working places, or places of specific air volume. MDM uses a permanent magnet brushless motor to drive directly, the motor is high energy-efficient, and has ultra-high reliability. The fan blades are made of high-strength aluminum-magnesium alloy. The streamlined fan blade maximizes the air volume and fan coverage distance. Compared with low-cost sheet metal fan blades, it has better air outlet efficiency, airflow stability, and low noise. The product is suitable for indoor and outdoor use, convenient and practical.

	MDM-1.5-180	MDM -1.2-190	MDM -1.0-210
Diameter (m)	1.5	1.2	1.0
Airflow (m ³ /min)	630	450	320
Speed (rpm)	450	480	650
Voltage (v)	220	220	220
Power (w)	600	450	350
Cover Material	Steel	Steel	Steel
Noise (dB)	40	40	40
Weight (kg)	112	108	96
Distance (m)	22	18	15

***Permanent Magnet Core Technology
IE4 Motor Maintenance Free, Energy saving***

Core Technology



Competitive Advantage

Competitors	Apogee
Induction Motor + FED	PMSM Motor
IE2 Motor	IE4 Motor
Speed Range 35-55rpm(24feet)	Speed Range 10-60rpm(24feet)
55dB noise	38dB noise
Frequency Display	Speed display, Touch Screen
No Central Control Feature	Smart Central Control up to 30 Fans

Case analysis

Workshop

Why are HVLS Fans widely used in modern workshops and workshops? In summer, the factory is hot and humid, with poor ventilation, the employees are often in a uneasy mood at work. At present, small fans are selected in the workshop, but due to the limit airflow they can not solve the ventilation and cooling problem. How to improve the occupational health of employees and how to provide employees with a comfortable working environment become more important for many companies. The HVLS Fan has been used in many industries and many application. It has become the trend of modern time solution to solve the problem of ventilation and cooling.

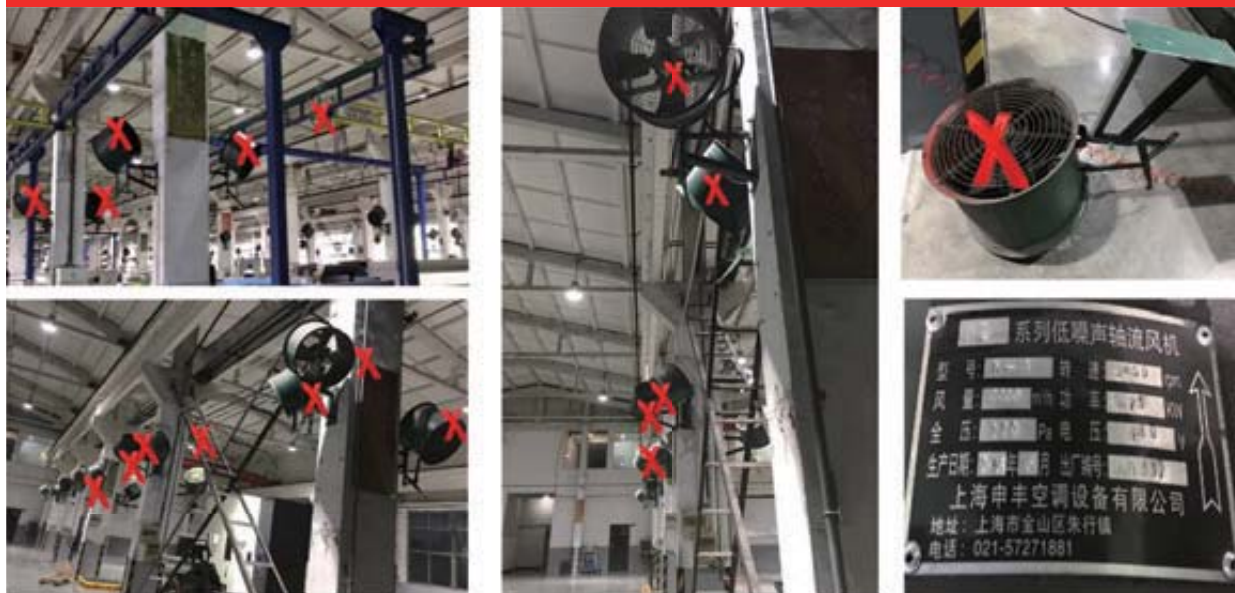


Warehouse Application

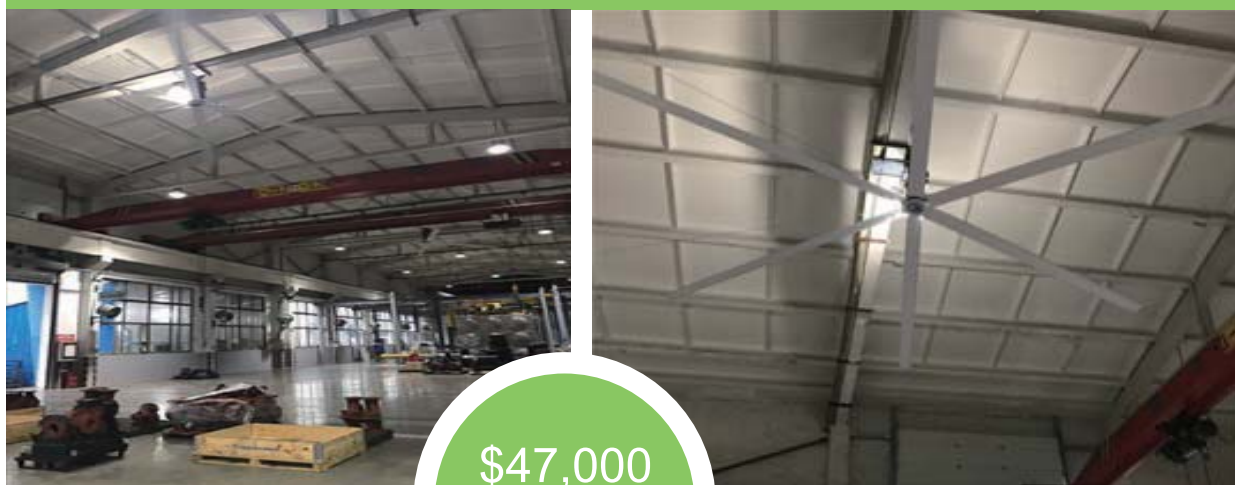
HVLS Fans are becoming an effective solution in modern working place. For example, in the warehouse industry, if the environment conditions are poor, the shelf life and quality of the products may be reduced or even a large amount of loss and waste may be caused! Therefore, the warehouse should maintain proper air flow and good ventilation, preventing moisture, corrosion, mildew, and deterioration according to the storage requirements of different items. In addition, once the product packaging of some goods becomes damp and soft, logistics and warehousing will also become the first object of customer complaints. On behalf of warehousing and logistics, more and more attention is paid to the configuration of ventilation and cooling equipment. Modern warehouses often use roof axial fans to promote air circulation and exchange, but the single use is not good, especially when the warehouse is high, only a short air passage can be formed in the space. Generally speaking, the logistics work area has high personnel mobility and large work areas. Most areas cannot be equipped with small fans, resulting in very low work efficiency and poor working environment for warehouse employees. The use of industrial energy-saving fans will solve these problems!

Case Study

Before Using HVLS Fans: Consumer Power, Small Area Coverage, High Maintenance Cost



After Using HVLS Fans: Energy Saving, Ultra Quite, Full Area Coverage



**\$47,000
Saving**

	Product	Power/Unit	Qty	Power Usage	Saving
Before	SF Axial FAN	750w	280	393,120	\$47,000/yYear
After	HVLS FAN	1000W	34	63, 648	

Note: 6 month, 26/month, 10000 m² size

Applications

- | | | | |
|-----------|-----------|--------------|---------|
| Industry | Warehouse | Public Place | Farm |
| Railroad | Education | Supermarket | Airport |
| Show Plce | Sports | Market | Station |





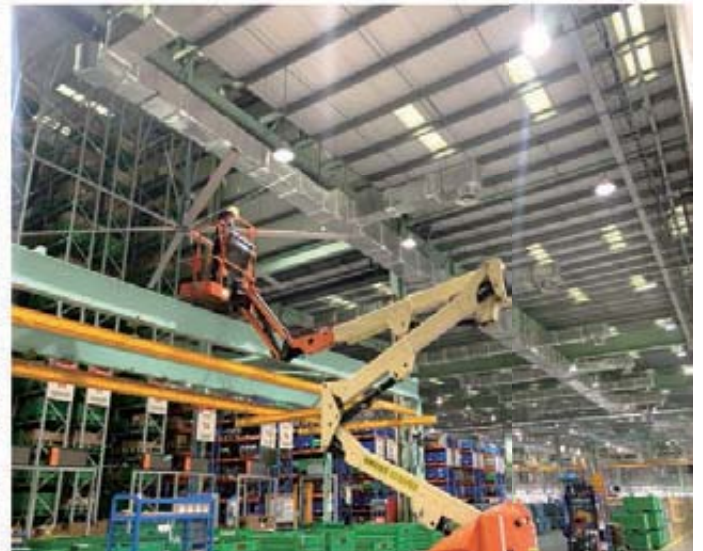
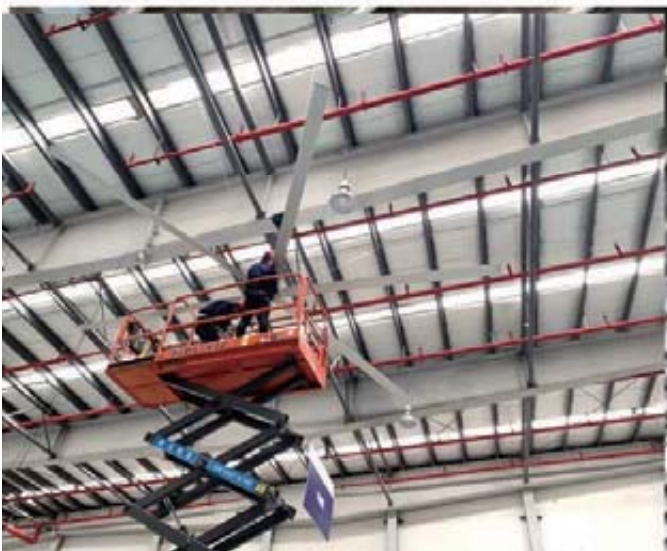
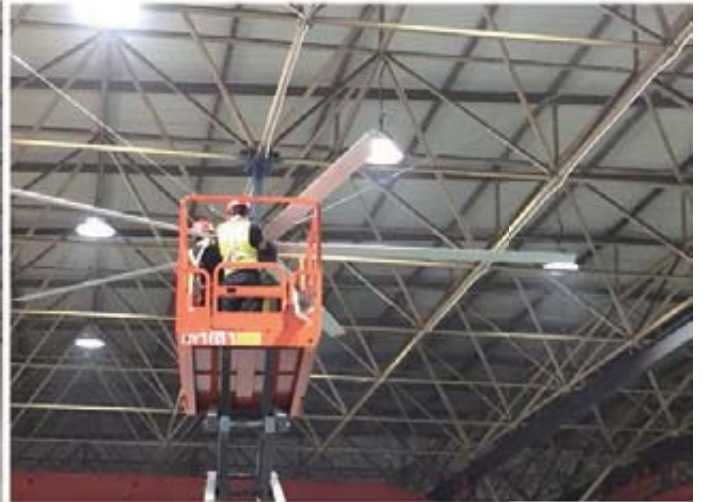
Industrial:

Factory Floor, Assembly Area, Warehouse, Packaging Area, Loading Dock, Agricultural Buildings

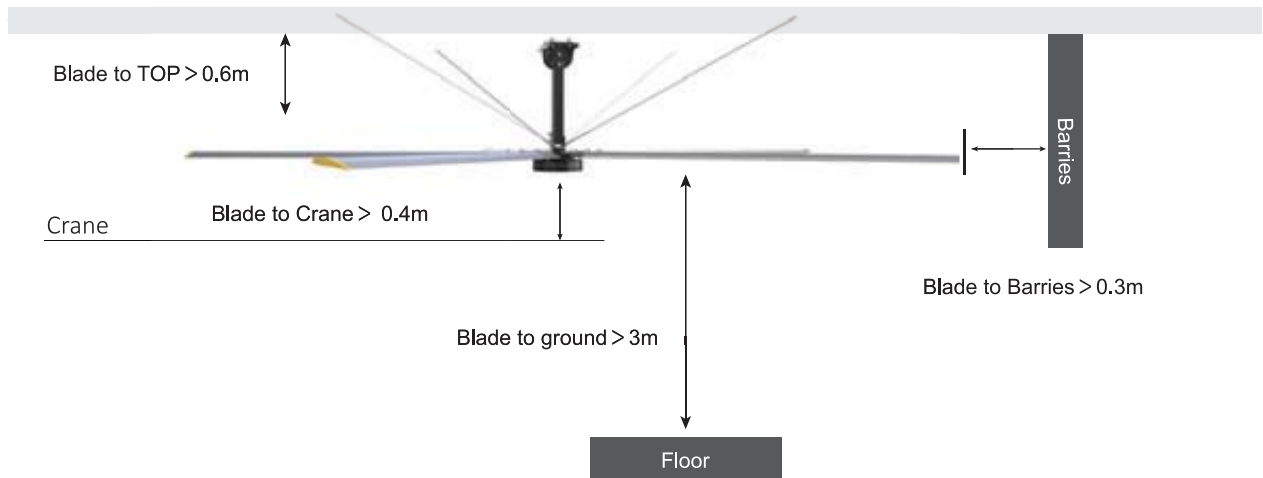
DEAURA
We'll Keep You Comfortable



Installation Sites



Installation Conditions



- from blades to floor > 3m
- from blades to barries(crane) > 0.3m
- from blades to barries (column/light) > 0.3m

Installation

H-beam, Beams, Reinforced concrete beam, Spherical grid



H-beam



Reinforced concrete beam



Spherical grid



Assembly

Security Guarantees

- Permanent magnet direct drive patented external rotor motor, SKF double bearing design, long life, high reliability
- Customized software, real-time monitoring of operating temperature, anti-collision protection, stepless speed regulation, overvoltage, overcurrent, phase failure, overheating and other protection.
- Integral fan hub structure, good compactness, ultra-high strength, toughness, fatigue resistance and more safety.
- Aluminum Alloy 6063-T6, aerodynamic and resist fatigue design, effectively prevent deformation
- Fan blade connecting parts: the fan blade lining is connected with the fan hub by three bolts. Each blade is safely connected by 3mm steel plate to effectively prevent the fan blade from falling off.

Security guarantees

- Fastener: All fasteners adopt high-strength industrial bolts above grade 8.8, and the actual strength is more than 10 times.
- Steel wire traction rope: The strength of each wire rope can reach 1250, and each node is equipped with double protection.
- Fan protection structure: Fan safety ring, prevent any parts from sliding.
Smart protection: In case of accidental impact, the system will give an alarm and stop operation.

Security installation

Deaura has a team of experienced electric and mechanical engineers who conduct stress analysis from different building structures, provide reasonable installation schemes, have strict operation specifications and installation standards, and our professional technology and high requirements are committed to your satisfaction.

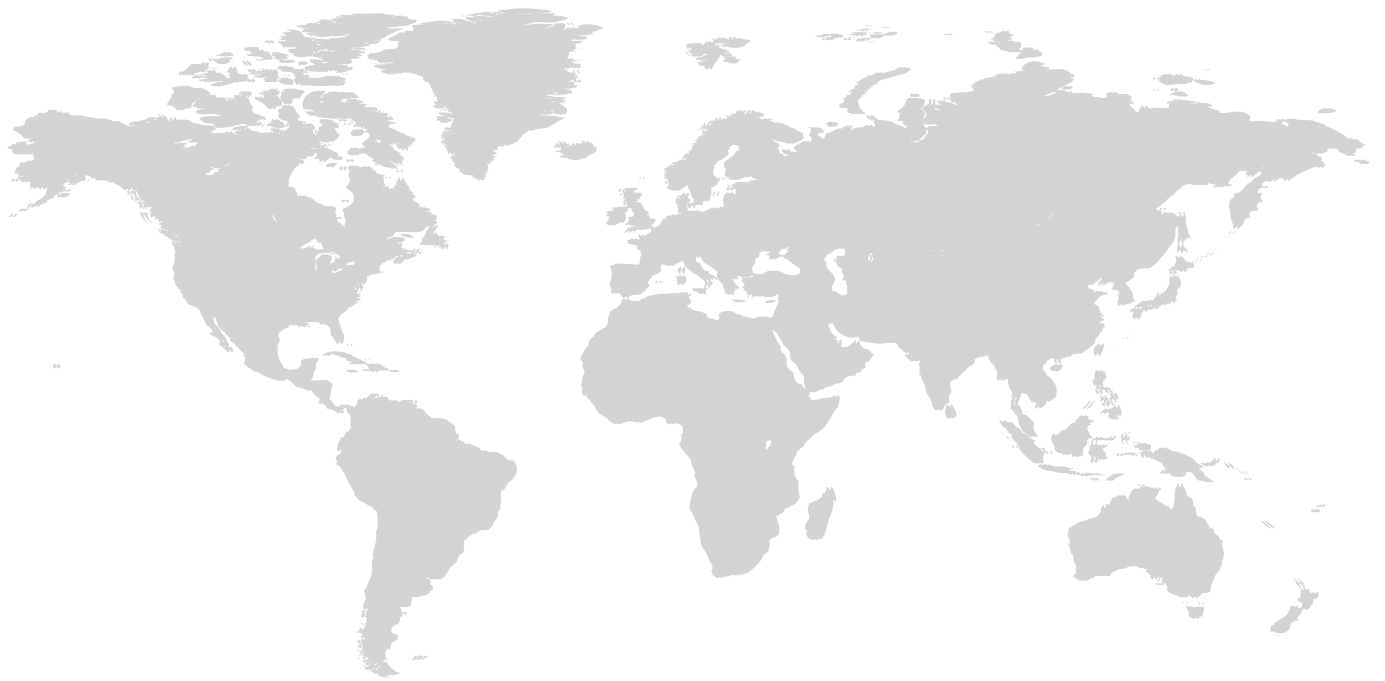
Installation case, customized

Level, height, balance debugging

Dynamic balance test, stable operation

Standard torque for optimum tightening

Regular return visit to customers, ensure quality



PMSM HVLS Fans

Cooling and Ventilation Solutions

VNL TECHNICAL SERVICES CO LLC.

ADDRESS: WAREHOUSE NO 8, STREET # 13TH, AL QUSAIS INDUSTRIAL AREA 2, DUBAI, UAE
EMAIL: SALES@VNLTECHNICAL.COM
CONTACT: +971 50 2251056
WHATSAPP: +971 50 2251056

