



Wolter HyBreeze Fan

LDC Series: High Volume Low Speed



Air in Motion.

Wolter Fans.

L01.1

Wolter HyBreeze HVLS Fans - LDC Series

Redefine Airflow!
Reclaim Energy!

Revolutionize Comfort!

Experience the next generation of High-Volume, Low-Speed (HVLS) technology. The Wolter HyBreeze Series is engineered to transform large, demanding spaces with unparalleled efficiency, whisper-quiet operation, and unwavering reliability. Move beyond stagnant air and soaring energy costs into a new era of intelligent climate management.



Application

Transform Any Space with Unrivaled Performance.



Industrial & Logistics

- Manufacturing Plants & Workshops
- Warehouses & Distribution Centers



Commercial & Retail

- Shopping Malls & Exhibition Halls
- Car Showrooms & Corporate Lobbies



Sports & Recreation

- Gyms, Stadiums, & Fitness Centers
- Theme Parks & Large Public Gardens



Public & Hospitality

- Museums, Cafeterias, & Transit Hubs
- Airport Terminals & Bus Stations



Specialized Environments

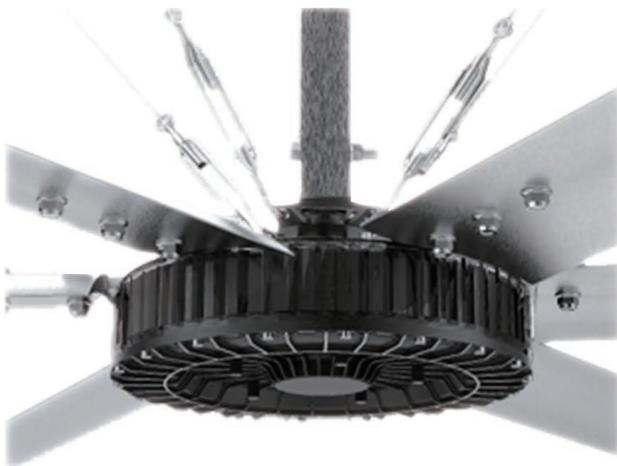
- High-ceiling facilities & challenging conditions (-20°C to +60°C)

Advantages

Unmatched Efficiency & Cost Savings

- ▶ **Dramatic Energy Reduction:** A single fan replaces up to 10 traditional small fans, using 90% less energy.
- ▶ **HVAC Synergy:** Cut air-conditioning runtime by over 50% by destratifying air, creating uniform temperatures and slashing yearly energy costs by 30-50%.
- ▶ **Human-Centric Comfort:** Generate a natural, pervasive breeze that delivers a 5-8°C perceived cooling effect, eliminating the discomfort of direct, high-velocity blowing.

Revolutionary PMSM Direct-Drive Motor



The LDC is equipped with a new generation PMSM (Permanent Magnet Synchronous Motor) platform, which reduces the over - all weight of the motor and presents a slim and light weight beauty. The new platform PMSM motor is a new design achievement for LDC industry by R&D team. It combines mechanical design, electromagnetic design, thermal design, optimization algorithm, simulation technology and other comprehensive cutting-edge technologies to further ensure the precision of the motor. At the same time, the core process uses automatic production equipment to achieve the consistency of motor production quality.

The heart of the HyBreeze, ensuring a new standard of performance.

- ▶ **Maintenance-Free Operation:** No gears, belts, or lubrication needed. Enjoy decades of service with zero routine upkeep.
- ▶ **Whisper-Quiet Power:** Advanced electromagnetic design ensures operation below 40dB - quieter than a library.
- ▶ **Built for Extremes:** IP65~IP68 rated for complete protection against dust and moisture, performing reliably in temperatures from -20°C to +60°C.



Crystallization of Science and Technology:

Low temperature rise

Low temperature rise, no electric spark phenomenon, can achieve full sealing effect



Saving

Permanent magnet brushless motors use permanent magnets to generate magnetic fields without the need for electromagnetic induction



Wide range

HVLS fans can blow air in all directions, creating airflow not only vertically but also horizontally, providing a wider coverage area and a three-dimensional breeze effect.



Long Life

The service life of permanent magnet brushless motors can reach several decades or more.



IP68

Top tier dust and water resistance capabilities

Air Guide Cover

By utilizing the principle of laminar flow, air is evenly distributed on the working surface to form a clean air layer, preventing external pollutants from entering the equipment. By reducing the irregularity of air flow, noise and vibration can be reduced, creating a quieter working environment

IE5

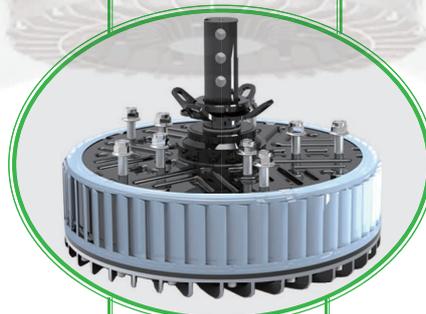
According to the standards of the International Electrotechnical Commission(IEC), IE5 is the world's highest motor energy efficiency level.

Unique Appearance

Compared to brushless motors on the market, our exterior design is more aesthetically pleasing.

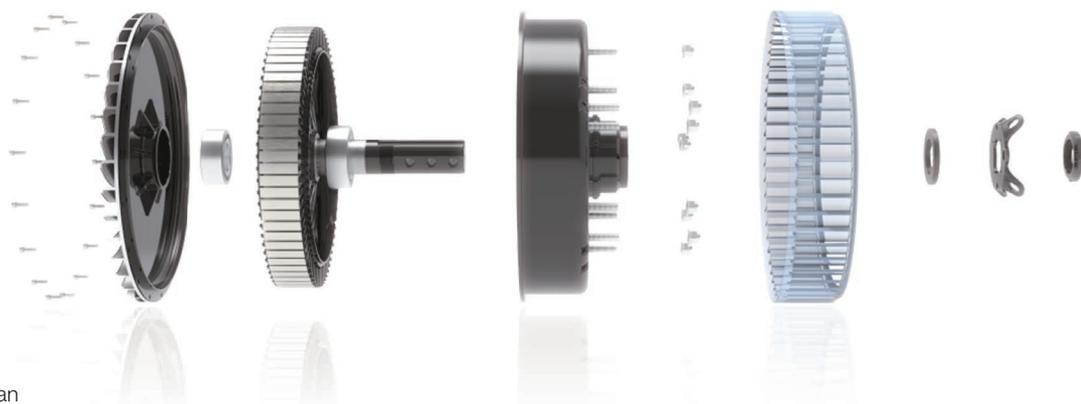
High Performance

Brushless permanent magnet motors perform well in terms of efficiency, power density, control accuracy, noise, and reliability, making them a high-performance motor.



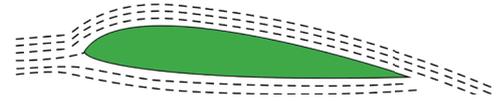
Noise 40.0 dB

The noise of the traditional motor reducer integrated machine, the excitation noise from the motor housing and the friction noise between the reducer gears, usually reach more than 50dB. The application of LDC PMSM motor solves these problems in one fell swoop, reducing the noise index of the fan to below 40dB.



Expansive, Intelligent Airflow

- ▶ High-Efficiency Aerodynamics: Patented blades with light weight precision aluminum winglets move massive air volumes using minimal energy.
- ▶ Total Space Envelopment: Projects a vertical column of air that forms a wide, ground-level blanket for uniform comfort.
- ▶ Precise Environmental Control: Adjustable speed settings tailor airflow to any activity or occupancy level.

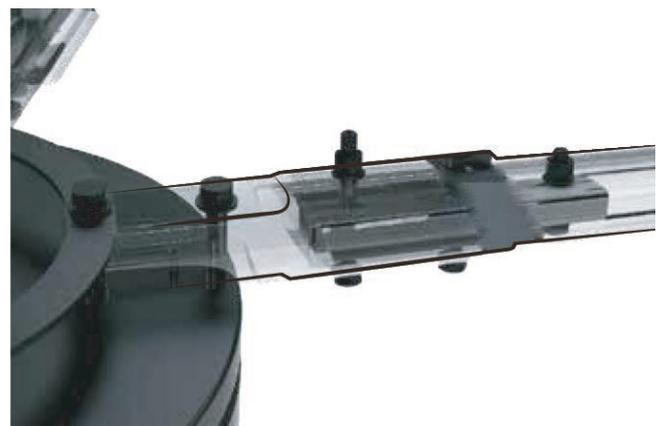


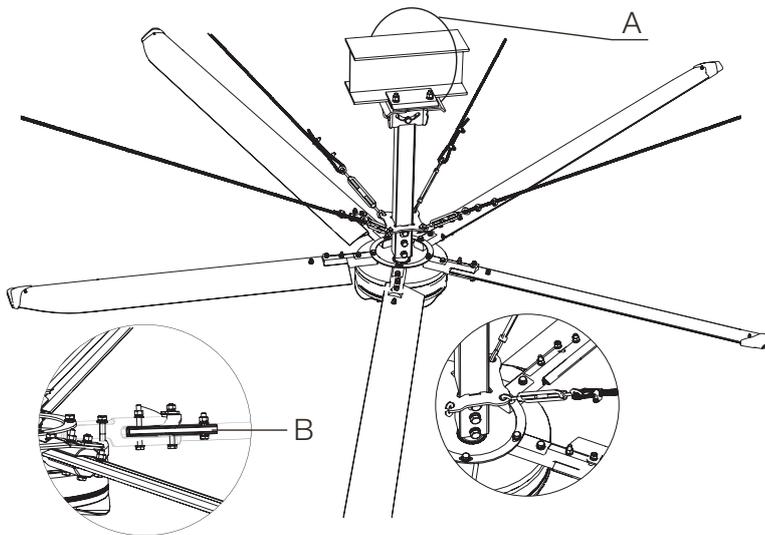
Uncompromising Safety & Durability

Safety is engineered into every component, providing peace of mind for high-traffic areas.

- ▶ Blade & Hub Security: High-strength fasteners and integrated retainers prevent detachment under extreme conditions.
- ▶ Multi-Point Redundancy: Features double safety cables, Grade 8 hardware, and built-in accelerometers for real-time monitoring.
- ▶ Certified Integrity: Exceeds UL, CSA, and CE safety standards, ensuring compliance and reliability.

The fan blade fixed structure adopts a new design scheme, and the fan blade connection component replaces the original fan blade connector, which has higher structural strength, more scientific mechanical design, better material toughness, and excellent comprehensive performance. The shape of the fan blade is redesigned to ensure safety and increase the harmony of the product. In addition, the fan blade has built-in reinforced safety parts to deal with sudden risks, multi-dimensional protection, safe and reliable!





A Safety rope
B Reinforced rib

Unexpected situations, safety features ensures safety

In order to ensure the safety of product use and avoid accidents, LDC has designed multiple safety measures in structural safety design and electrical protection design, as follows:

- A. **Motor shaft failure:** There are 9 protective measures, including 6 sets of independent high-strength fasteners, 2 internal threaded cylindrical pins installed independently, and the main shaft chassis is integrated to prevent the main shaft from failing;
- B. **Bearing fragmentation failure:** The rotor disk as a whole will fall on the stator disk. All parts are located above the spindle stator disc, and no parts will fall off;
- C. **Accidental collision:** The fan blade is transmitted to the root component by the unexpected impact force, and the ductile material will effectively absorb the impact, even if the bad situation of the root of the fan blade fails;

There are still fan blade retainer and reinforced safety parts to protect the fan blades from multiple dimensions, ensuring that no parts will fall off. When a collision occurs, the inverter system will stop the fan operation in time to ensure that the accident will not be serious;

The above mentioned are all extreme cases. The safety of the whole machine design belongs to the ultra-high level, and users can rest assured to use!

Seamless Integration & Control

- › **Versatile Mounting:** Adapts to I-beams, concrete slabs, and more, with extension tubes for perfect height adjustment.
- › **Professional Installation:** Our certified teams ensure a precise, vibration-free, and turnkey installation.
- › **Advanced Control Systems:** Manage your environment with an intuitive, IP55-rated touchscreen controller, with options for BACnet, Modbus, and 0-10VDC integration into any Building Management System (BMS).

Technical Specifications

Power Supply: 220±10%V / 50Hz, Single Phase, IP65 ~ IP68

Model Name	Diameter [m]	Airflow [m³/h]	Speed [1/min]	Motor Power [kW]	Rated Current [A]
LDC 2400E	2.4	48,565	169	0.3	1.9
		39,372	135		
		29,024	101		
		19,541	68		
		9,916	34		
LDC 3000E	3.0	83,594	146	0.5	2.0
		66,990	117		
		50,386	88		
		33,209	58		
		16,604	29		
LDC 3600E	3.6	130,911	147	0.9	2.6
		105,085	118		
		78,369	88		
		52,543	59		
		25,826	29		
LDC 4500E	4.5	195,980	116	1.2	4.2
		157,122	93		
		118,264	70		
		77,716	46		
		38,858	23		
LDC 5000E	5.0	241,751	104	1.5	4.3
		192,936	83		
		144,121	62		
		97,630	42		
		48,815	21		
LDC 5500E	5.5	281,993	96	1.5	4.3
		226,182	77		
		170,371	58		
		111,622	38		
		55,811	19		

- Note:**
- Those data above were obtained from the testing according to Standard AMCA 230-23, Figure 10.1A.
 - Listed above is the product standard diameter, other specifications need to be customized.
 - We reserve the right to alter measurements without notice in case of technical improvements.

Power Supply: 220±10%V / 50Hz, Single Phase, IP65 ~ IP68

Model Name	Diameter [m]	Airflow [m³/h]	Speed [1/min]	Motor Power [kW]	Rated Current [A]
LDC 6100E	6.1	325,962	84	1.5	4.3
		259,993	67		
		194,025	50		
		131,937	34		
		65,968	17		
LDC 7300E	7.3	406,732	64	1.7	4.2
		324,115	51		
		241,497	38		
		165,235	26		
		82,617	13		

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Technical Specifications

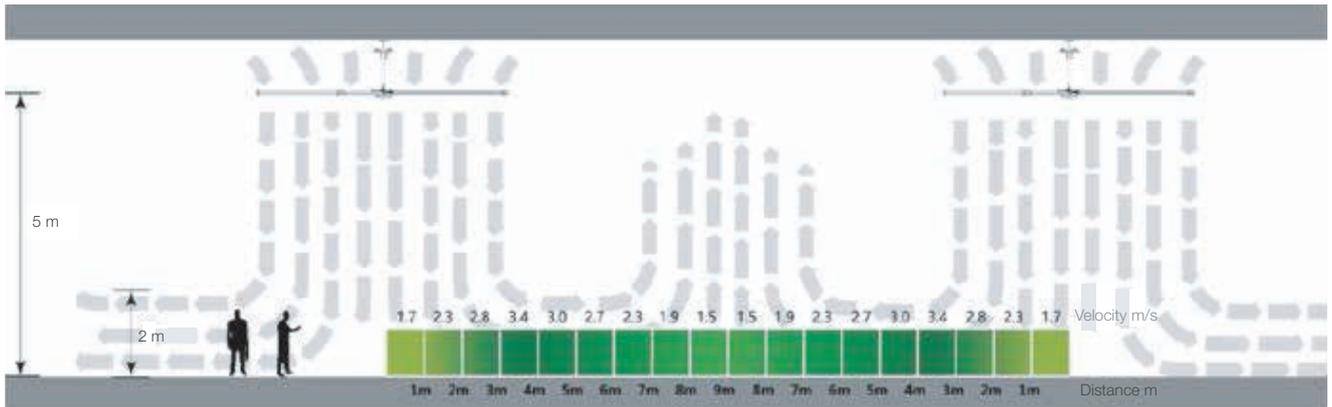
Power Supply: 380±10%V / 50Hz, Three-Phase, IP65 ~ IP68

Model Size -	Diameter [m]	Airflow [m³/h]	Speed [1/min]	Motor Power [kW]	Rated Current [A]
LDC 3600D	3.6	130,911	147	0.9	1.7
		105,085	118		
		78,369	88		
		52,543	59		
		25,826	29		
LDC 4500D	4.5	195,980	116	1.2	2.7
		157,122	93		
		118,264	70		
		77,716	46		
		38,858	23		
LDC 5000D	5.0	241,751	104	1.5	2.6
		192,936	83		
		144,121	62		
		97,630	42		
		48,815	21		
LDC 5500D	5.5	281,993	96	1.5	2.6
		226,182	77		
		170,371	58		
		111,622	38		
		55,811	19		
LDC 6100D	6.1	325,962	84	1.5	2.6
		259,993	67		
		194,025	50		
		131,937	34		
		65,968	17		
LDC 7300D	7.3	406,732	64	1.7	2.9
		324,115	51		
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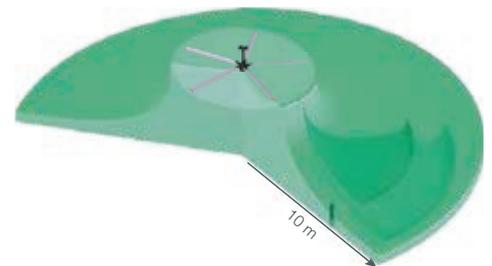
Three-dimensional natural breeze

The LDC energy saving fan will simulate the natural breeze and provide a full range of three-dimensional air supply, bringing a cooling experience of 5-8°C to the human body while preventing health diseases caused by high speed direct blowing. The LDC wind speed can be adjusted freely from 1m/s to 3m/s, making it easy to operate and suitable for any application.



Large coverage area

Wolter LDC energy saving fans have the features of low speed, low power and large coverage area. LDC uses the Airfoil Blades design to reduce drag to a minimum, ensuring that electrical energy is converted into aerodynamic energy with high efficiency at low speeds.



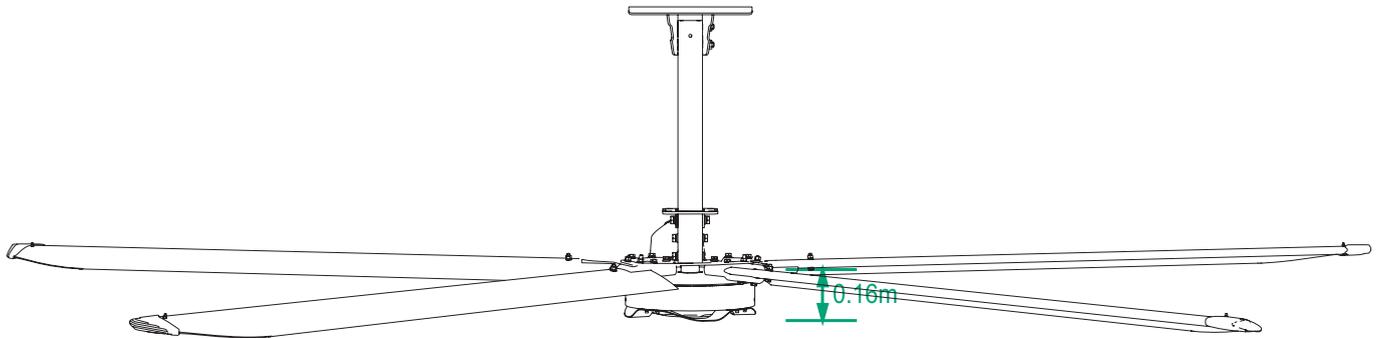
In addition, the airflow structure of LDC is very different from that of the ordinary small fan. The small fan can only cover the range of the fan diameter, and the LDC energy saving fan first pushes the airflow vertically to the ground, and then forms a gas layer of 1-2 meters on the ground. Thus, an oversized coverage area is formed that is not limited to the underside of an industrial energy saving fan.

Comparison of conventional ventilation cooling solutions

Parameter classification	Coverage effect	Air circulation	Safety	Cool Down	Cost	Comprehensive
Wolter fan	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Small fan	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Station fan	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
Water cooled air conditioner	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●

Exquisite workmanship

The overall volume of the LDC is more exquisite, LDC PMSM motor height is only 0.16m, the installation space of traditional fans is more than 1.2m, and LDC only needs 0.80m.

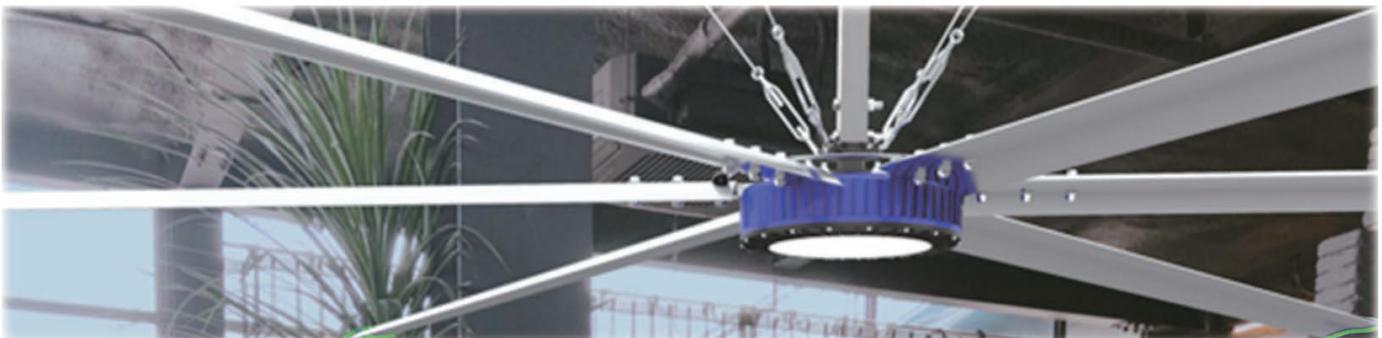


Installation conditions and technical parameters

Installation condition

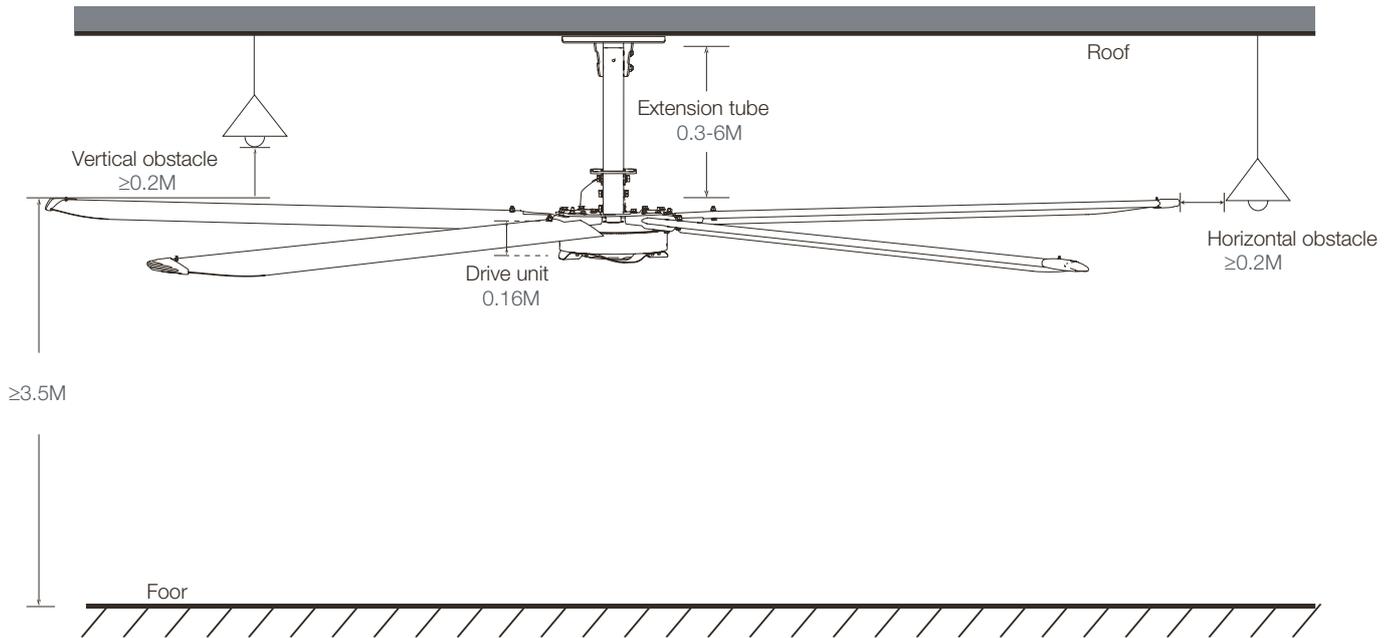
The Wolter fan has an experienced team of electricians, mechanics and construction engineers who can perform stress analysis for different building structures and provide the most reasonable installation solution; it can be installed for various buildings with installation conditions. We know that installation is extremely important, so there are strict operating practices and installation standards during the operation. Our expertise and high requirements will eliminate all your doubts.

- A. Installation plan, tailored;
- B. The lift truck is installed and equipped;
- C. Level, height, balance debugging, and experienced;
- D. Balance test, running smoothly;
- E. Fasteners have torque standards for optimum fastening;
- F. Installation process, concise science;
- G. Building structure: H-beam, I-beam, concrete beam, spherical column and other structures.
- H. The total height of the building is required to be greater than 3.5m.
- I. The safety distance between the blades and the obstacle is 0.2m minimum.
- J. Input power: single phase 220V \pm 10%, three-phase 380V \pm 10%.

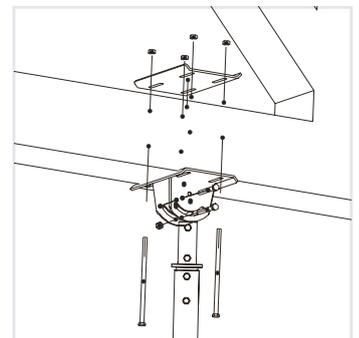
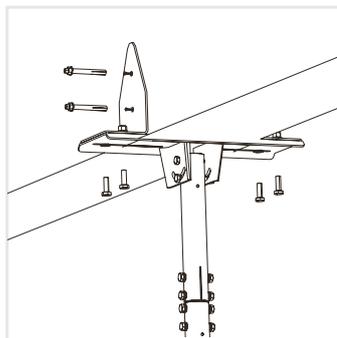
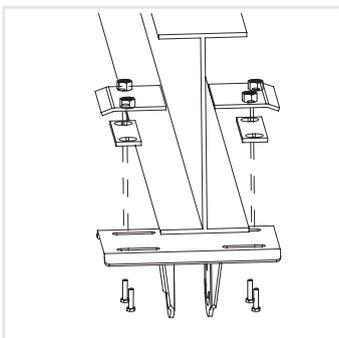


HyBreeze HVLS Fan

LDC Series



Mounting structure type



Note: The above are common structures, for other structures, there are proper installation brackets to match



HyBreeze HVLS Fan

LDC Series



Typical Case



Industrial case



Commercial case



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