Wall-mounted Industrial Big Fan

User Instruction Manual

Please read this instruction manual carefully before using the product

Julai(Chongqing) Ventilation Equipment Co.,Ltd

Important Security Notes

To reduce the risk of fire, electric shock or personal injury, please note the following:

Note: Installation work and wiring connections must be performed by professionals in accordance with all applicable codes and standards.

Warning: Please turn off the power supply before maintenance and clearing the equipment, lock the maintenance cut-off device and make warning signs to prevent accidental power supply.

Warning：Please be alert and have common sense when installing the fan. Do not install the fan when you are fatigued or under the effects of drugs or alcohol.A slight carelessly installed fan can lead to serious personal injury!

Warning：Not suitable for operation by persons (including children) with physical, sensory or mental impairment or lack of relevant experience and knowledge.

Warning：Please stop using the fan immediately and contact the manufacturer, agent or after-sales personnel,if the fan appear abnormal oscillation.

Note：Please be careful when the fan supplies power. Don't connect to the power of the damage or danger. Don't attempt to solve circuit problems or malfunctions by yourself.If you have any questions about the fan installation, please contact the manufacturer or after-sales personnel.

Note：When the fan assembly is repaired or replaced, the removed

safety parts must be reinstalled.

Note：Don't bend the fan blades when installing or maintaining the fan. Don't insert any objects between the rotating fan blades!

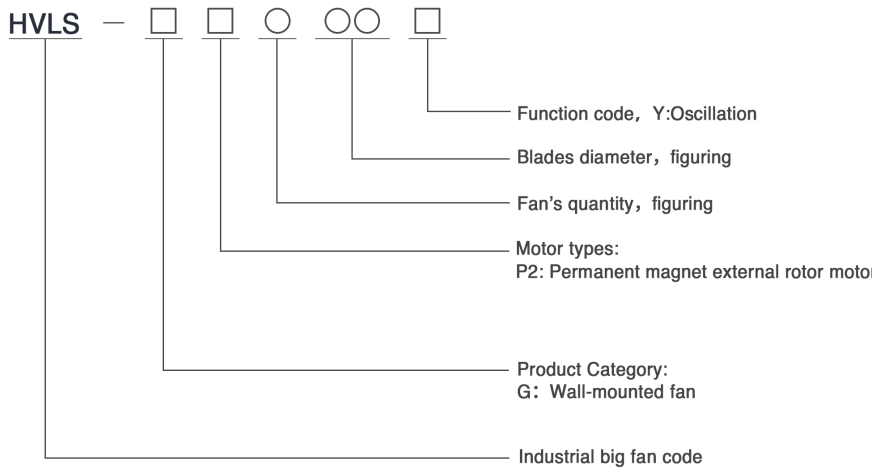
Note：Please follow the safety rules in each tool manual when using certain electric tools for fan installation.Don't use the tools for other purposes not instructed by the manufacturer.

Note： "Three guarantees" do not include equipment damage or malfunction caused by improper installation, maintenance and use.

I.Overview

Julai wall-mounted fan is independently developed by the company's technology department, based on aerodynamic principle and combined with modern aviation wing technology. It adopts high-quality motor, with low speed, large air volume, low noise and low energy consumption. A wide range of imitation natural wind blowing, all-round air circulation, it plays ventilation and cooling functions, effectively solve the high space hot and humid, air stratification, smoke and dust not scattered and other problems. It is suitable for industry, commerce, animal husbandry and many other fields.

II.Product Model



III.Product Parameter

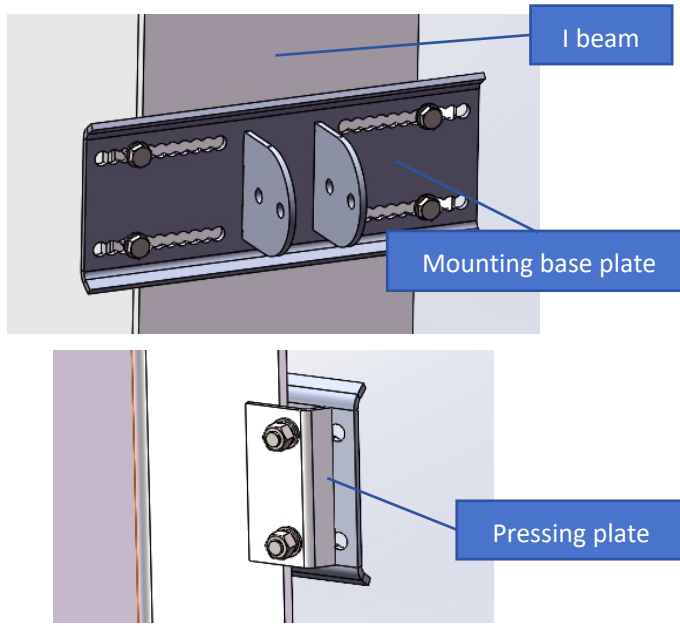
Diameter (M)	Maximum revolutions(RPM)	Airflow (m^3/min)	Weight (Kg)	Noise (DBA)
2(oscillating)	250	1706	116.5	42
2	250	1706	105.3	42
1.5(oscillating)	300	1066	106.5	45
1.5	300	1066	95.3	45

Wall-mounted Fan(Oscillation) Instruction Manual

I.Installation Method

1.I-beam Installation

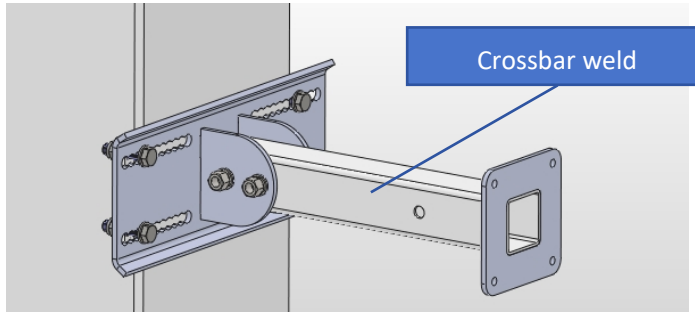
1.1 Installation of the Mounting Base Plate



As shown above, two pieces of pressing plate and four pieces of M16 * 60 bolt(with locknuts, spring washers)are used to fix the mounting base plate on the I-beam.The installation height of a 2m wall-mounted fan is approximately 3.5 meters from the ground,and that of a 1.5m wall-mounted fan is approximately 3 meters from the ground.

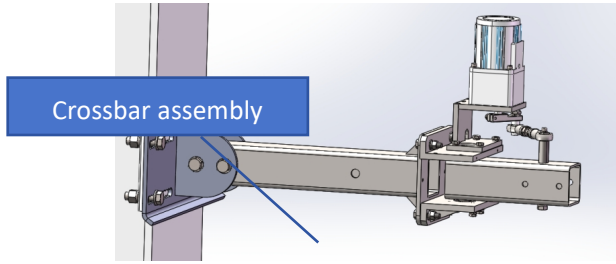
Note: If there is fire retardant coating, remove the fire retardant coating before installation

1.2 Installation of the Crossbar Weld



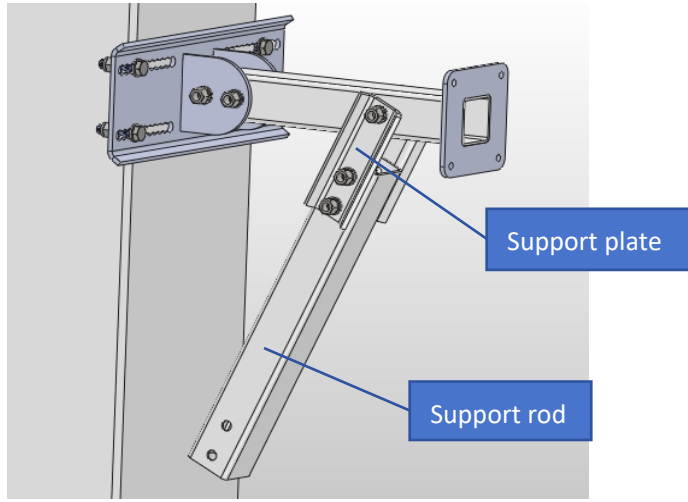
As shown above, two pieces of M16 * 60 bolt (with locknuts, spring washers) are used to fix the crossbar welds and the oscillating part on the mounting base plate.

1.2.1 Installation of the Crossbar Assembly(Oscillating)



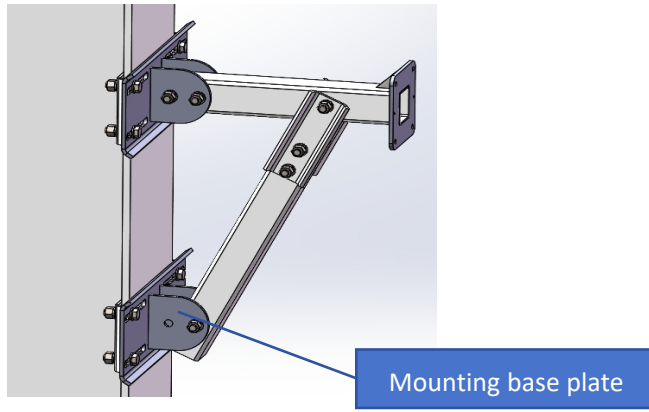
The installation is the same as 1.2.

1.3 Installation of the Support Plate and Support Rod



As shown above, three pieces of M16 * 60 bolt (with locknuts, spring washers) are used to fix the two support plates and one support rod on the crossbar weld in sequence. Note connection bolt and locknuts don't locked, support bar is free to rotate.

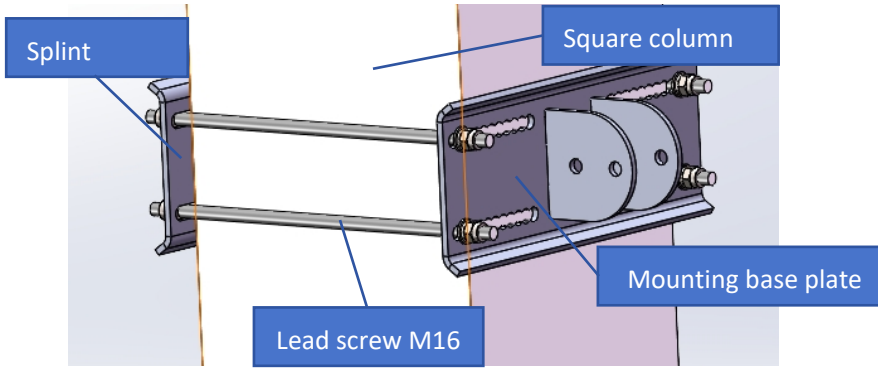
1.4 Installation of the Second Mounting Base Plate



As shown above, one piece of M16 * 60 bolt (with locknuts, spring washers) is used to fix the second mounting base plate on the support rod. Note connection bolts and locknuts don't locked.Move the mounting base plate to the plane of the I-beam and press it tightly.Two pieces of pressing plate and four pieces of M16*60 bolt (with locknuts and spring washers) are used to fix the mounting base frame on the I-beam, and finally all unlocked locknuts are fastened in place.

2.Clip-on Installation

2.1 Installation of the Mounting Base Plate



As shown above, one piece of splint and four pieces of M16 lead screw(with locknuts, spring washers) are used to fix the mounting base plate on the square column. The installation height of a 2m wall-mounted fan is approximately 3.5 meters from the ground, and that of a 1.5m wall-mounted fan is approximately 3 meters from the ground.

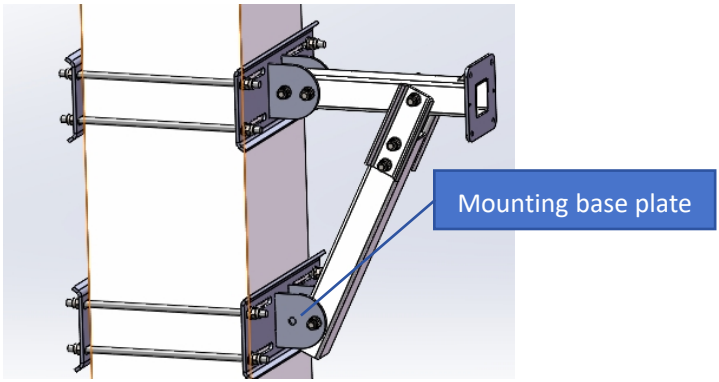
2.2 Installation of the Crossbar Weld

The installation is the same as 1.2.

2.3 Installation of the Support Plate and Support Rod

The installation is the same as 1.3.

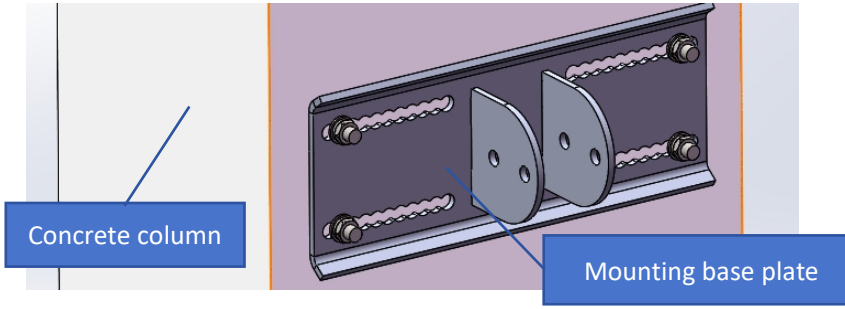
2.4 Installation of the Second Mounting Base Plate



As shown above, one piece of M16 * 130 bolt (with locknuts, spring washers) is used to fix the second mounting base plate on the support rod. Note connection bolts and locknuts don't locked.Move the mounting base plate to the plane of the square column and press it tightly.One piece of pressing plate and four pieces of M16 lead screw(with locknuts and spring washers) are used to fix the mounting base plate on the square column, and finally all unlocked locknuts are fastened in place.

3.Installation of Concrete Column

3.1 Installation of the Mounting Base Plate



As shown above, four pieces of M16*120 expansion anchor bolt are used to fix the mounting base plate on the concrete column. The installation height of a 2m wall-mounted fan is approximately 3.5 meters from the ground, and that of a 1.5m wall-mounted fan is approximately 3 meters from the ground.

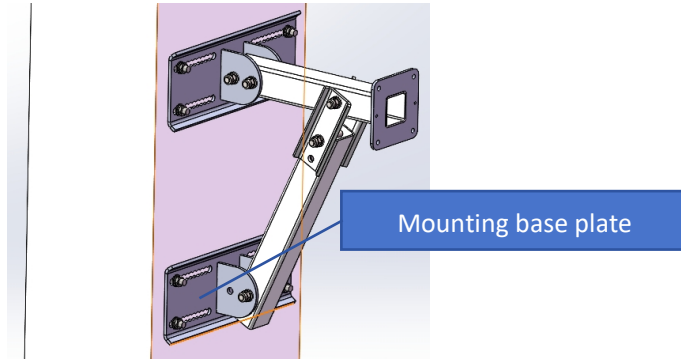
3.2 Installation of the Crossbar Weld

The installation is the same as 1.2.

3.3 Installation of the Support Plate and Support Rod

The installation is the same as 1.3.

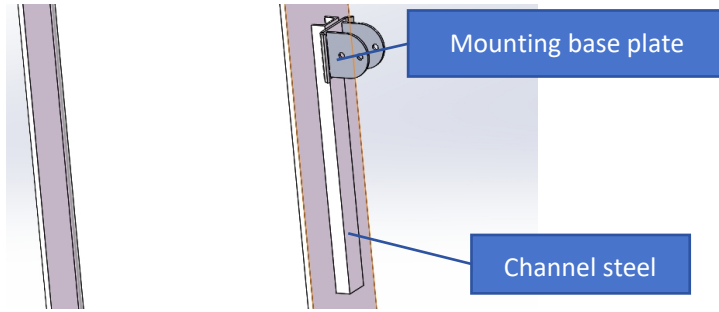
3.4 Installation of the Second Mounting Base Plate



As shown above, one piece of M16 * 130 bolt (with locknuts, spring washers) is used to fix the second mounting base plate on the support rod. Note connection bolts and locknuts don't locked.Move the mounting base plate to the plane of the concrete column and press it tightly.Four pieces of M16 * 120 expansion anchor bolt are used to fix the mounting base plate on the concrete column, and finally all unlocked locknuts are fastened in place.

4.Weld Installation of the Channel Steel

4.1 Weld the Mounting Base Plate



As shown above,weld the mounting base plate on the channel steel. During welding,the upper end face of the mounting base plate is about 10mm from the upper end face of the channel steel.The mounting base plate is placed in the middle of the channel steel, and the upper and lower contact surfaces of the mounting base plate are fully welded.

(Note： The channel steel specification is No. 8 with a length of 780mm, which has been welded on the I-beam by clients.)

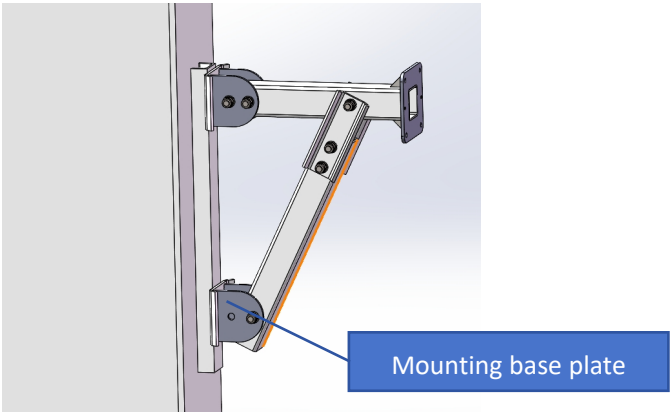
4.2 Installation of the Crossbar Weld

The installation is the same as 1.2.

4.3 Installation of the Support Plate and Support Rod

The installation is the same as 1.3.

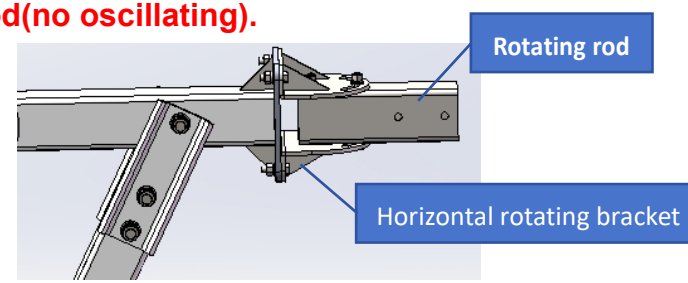
4.4 Weld the Second Mounting Base Plate



As shown above, one piece of M16*130 bolt(with locknuts, spring washers)is used to fix the second mounting base plate on the support rod.Note connection bolts and locknuts don't locked.Move the mounting base plate to the plane of the channel steel and press it tightly and finally all unlocked locknuts are fastened in place.

II.Installation of the Wall-mounted Fan

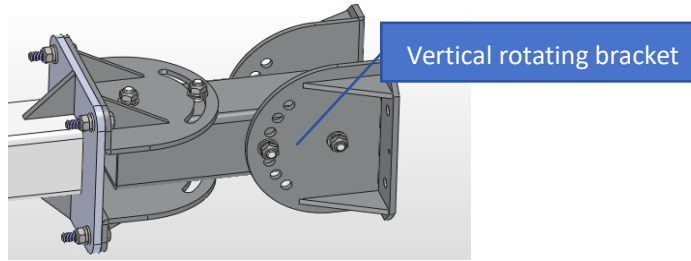
1.Installation of the Horizontal Rotating Bracket and Rotating Rod(no oscillating).



As shown above,the wall-mounted fan(no oscillating),four pieces of M10*40 bolt (with locknuts and spring washers)are used to fix two pieces of horizontal rotating bracket on the crossbar weld.

Then two pieces of M10*110 bolt (with locknuts and spring washers) to clamp and fix the rotating rod inside the 2 horizontal rotating brackets.

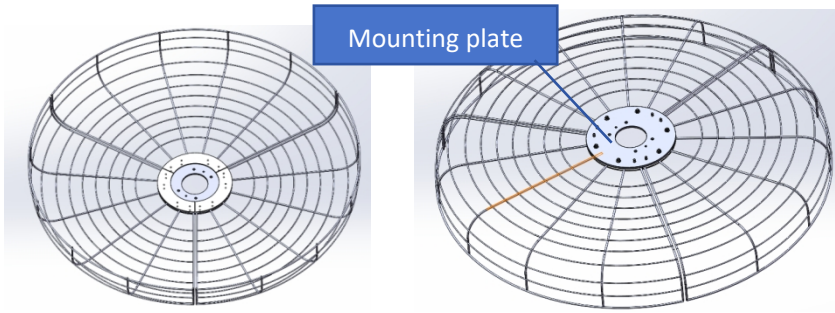
2.Installation of the Vertical Rotating Bracket



As shown above, the wall-mounted fan(oscillating or no oscillating), two pieces of M10*110 bolt (with locknuts and spring washers)are used to fix two pieces of vertical rotating brackets on the rotating rod.

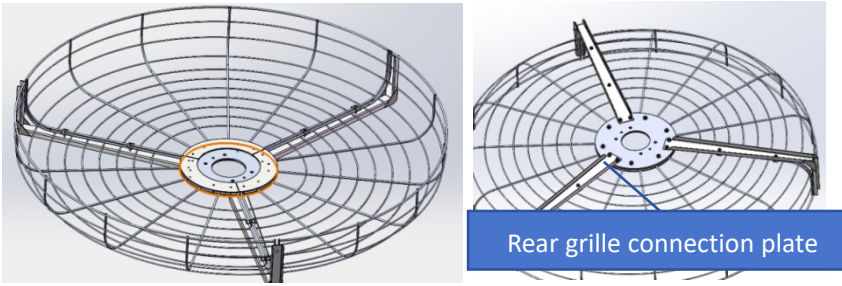
3.Assembly of the Rear Grille（Three-Blade Grille）

3.1 Assembling the Rear Grille to the Mounting Plate



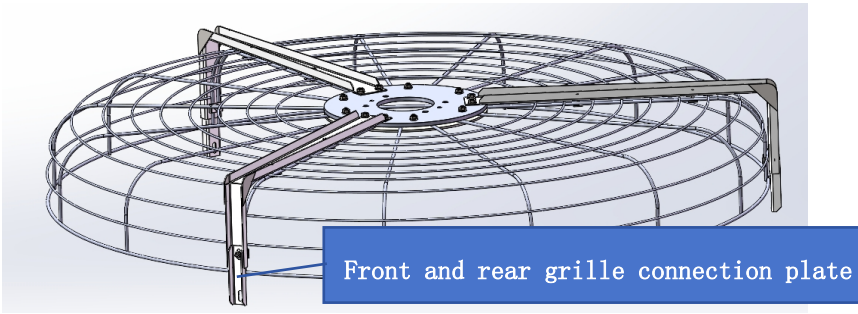
As shown above,six pieces of M8 locknut are used to fix the mounting plate and three pieces of rear grille together.

3.2 Installation of the Rear Grille Connection Plate



As shown above,firstly, six pieces of M8 locknut are used to fix the three pieces of rear grille connection plate on the mounting plate. Secondly, six pieces of M6*25 carriage bolt(with pressing plates and M6 locknuts)are used to fix the three pieces of rear grille connection plate at the junction of the rear grille.

3.3 Installation of the Front and Rear Grille Connection Plate

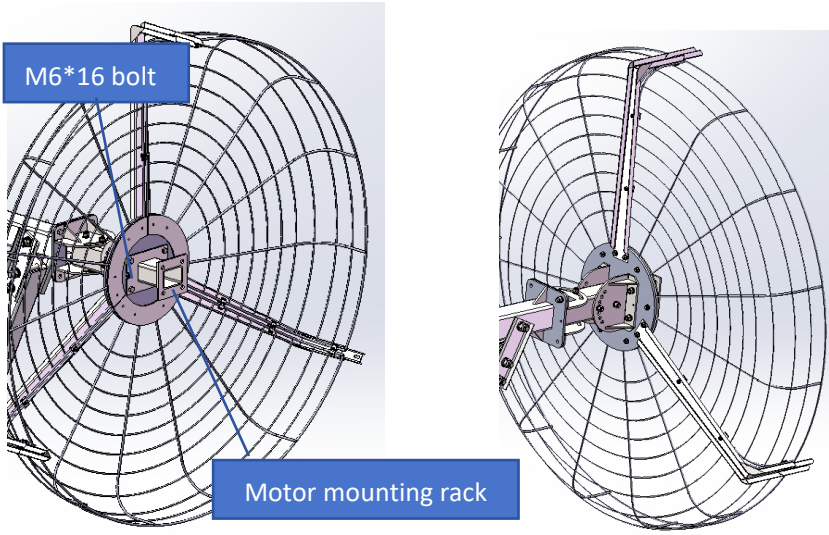


As shown above,six pieces of M6*25 carriage bolt(with pressing plates and M6 locknuts)are used to fix the front and rear grille connection plate at the junction of the rear grille connection plate and the rear grille.

4. Installation of the Rear Grille Assembly and Motor Mounting Rack

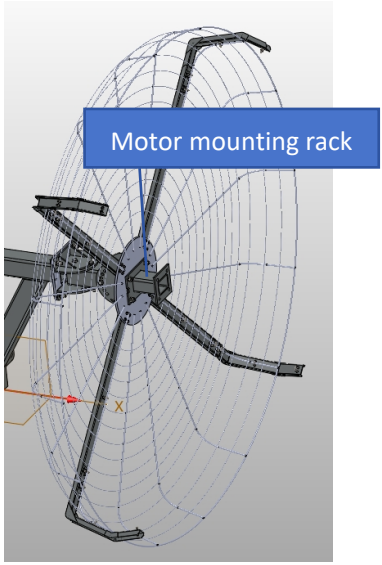
5.

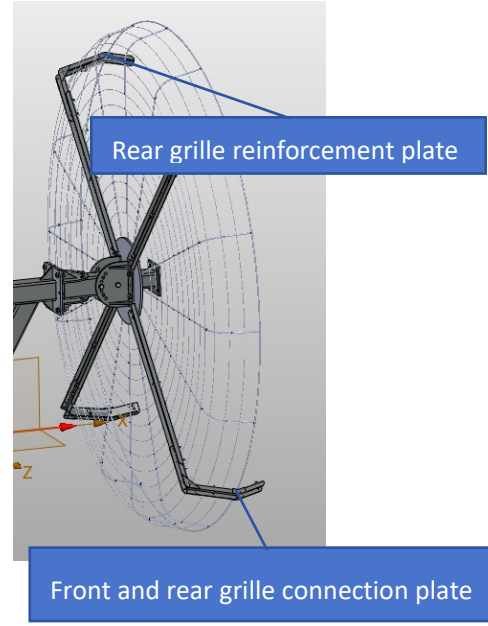
Three-Blade Grille



As shown above,two pieces of M6*16 bolt(auxiliary installation)are used to fix the rear grille assembly on the vertical rotating bracket.Then,four pieces of M10*40 bolt(with nuts and spring washers) are used to fix the motor mounting rack and rear grille assembly on the vertical rotating bracket.

One-Piece Grille

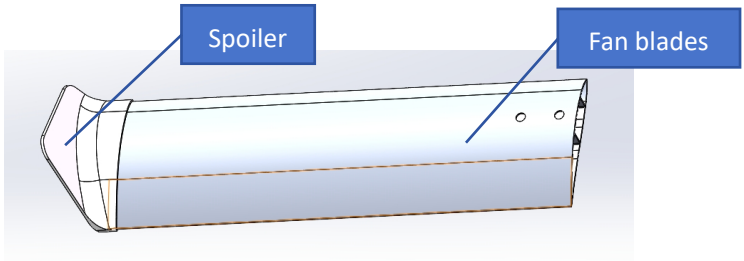




As shown above, the installation of the One-piece grille is similar to that of the three-blade grille. First, 16 pieces of M6*20 bolt (with locknuts and spring washers) are used to fix the rear grille reinforcement plate on the rear grille. Then, M6 U-shaped bolts to connect the rear grille reinforcement plate and the front and rear grille connection plate to the grille. Finally, the rear grille and the motor mounting rack are fixed on the vertical rotating bracket by the installation method of three-blade grille.

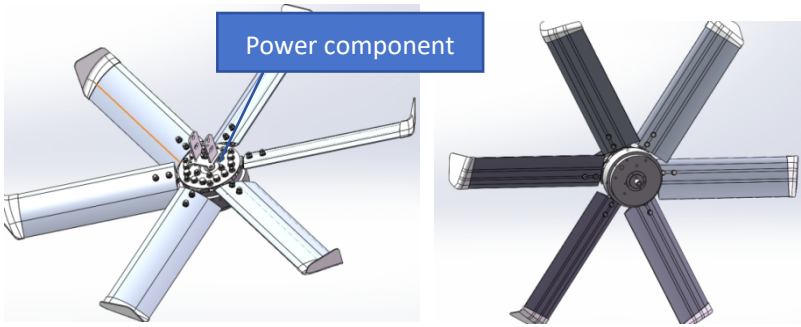
5.The Main Unit Assembly

5.1 Fan Blades Assembly



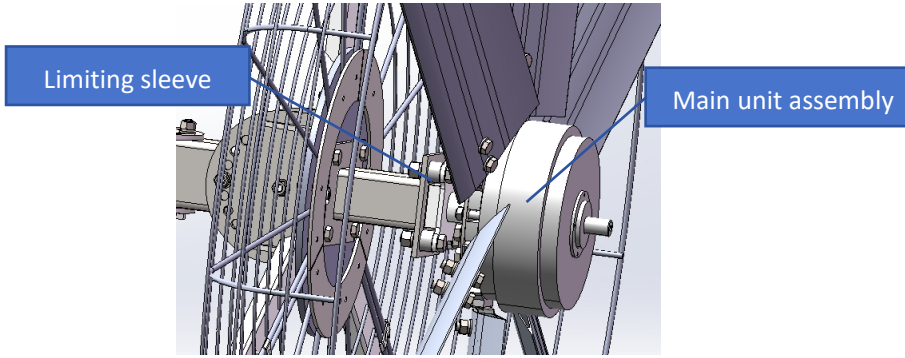
As shown above,two pieces of ST4.2*13 trapezoidal self-tapping screw are used to fix the spoiler on the fan blade.

5.2 Installation of the Fan Blade Assembly



As shown above,twelve pieces of M12*45 bolt(with locknuts and spring washers) are used to fix six pieces of fan blades on the blade connection of the power component.

6.Installation of the Main Unit Assembly

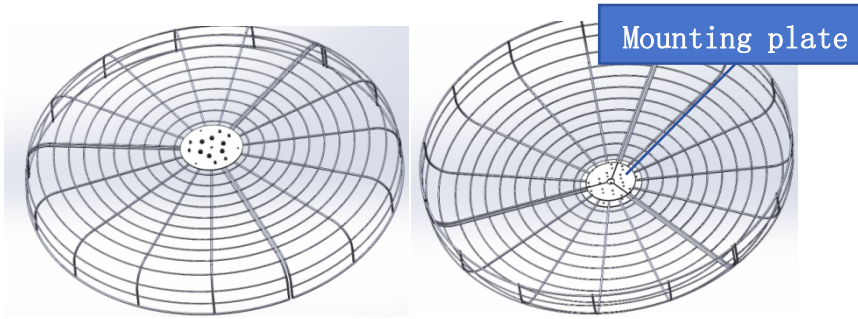


As shown above,four pieces of limiting sleeve and M12*45 bolt (with locknuts and spring washers)are used to fix the main unit assembly on the motor mounting rack.

7.Assembly of the Front Grille

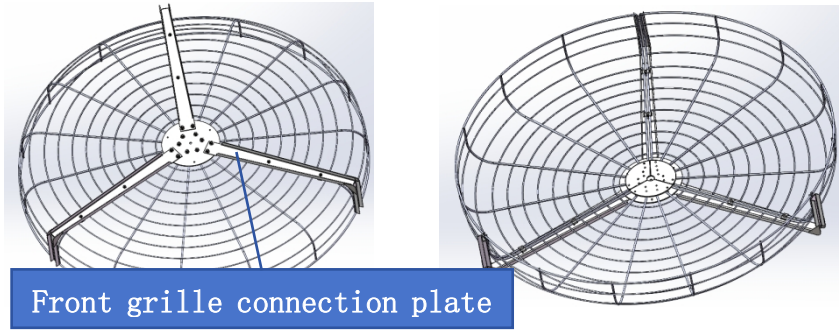
7.1 Assembling the Front Grille to the Mounting Plate

Three-Blade Grille



As shown above,six pieces of M8 locknut are used to fix the mounting plate and three pieces of front grille together.

7.2 Installation of the Front Grille Connection Plate

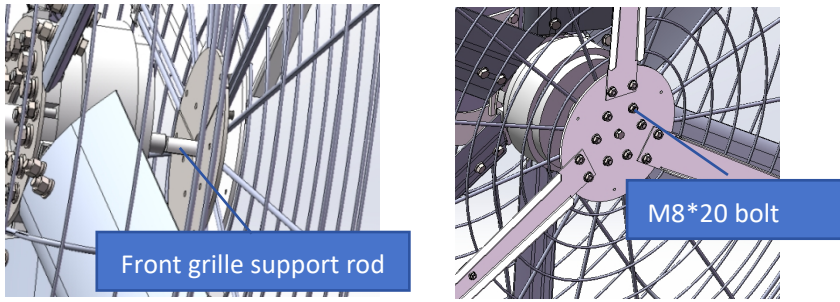


As shown above,firstly, six pieces of M8 locknut are used to fix the three pieces of front grille connection plate on the mounting plate. Secondly, six pieces of M6*25 carriage bolt(with pressing plates and M6 locknuts)are used to fix the three pieces of front grille connection plate at the junction of the front grille.

8. Installation of the Front Grille Assembly

Three-Blade Grille

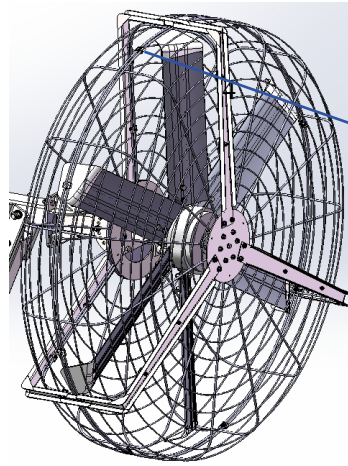
8.1 Connection of the Front Grille Assembly and Motor Shaft



As shown above,first,insert the front grille support rod into the motor shaft.Then,one M8*20 bolt(with spring washers)is used to fix the front grille assembly onto the motor shaft.

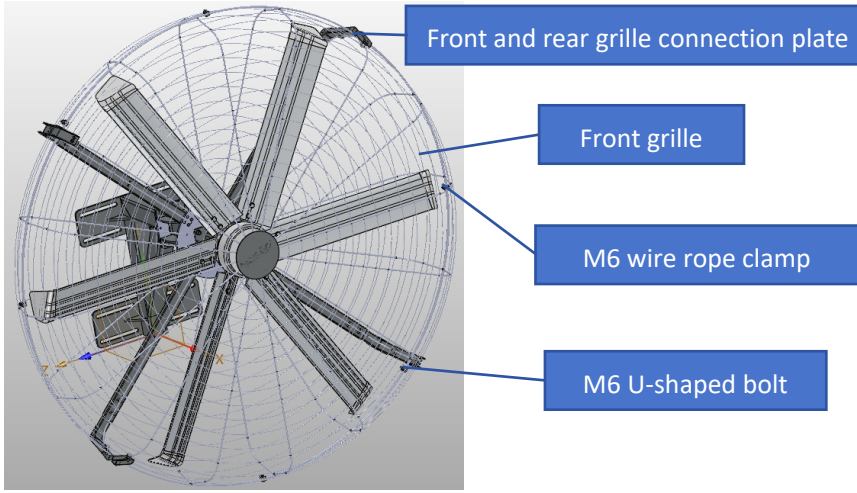
8.2 Connection of the Front and Rear Grille Assembly

Three-Blade Grille



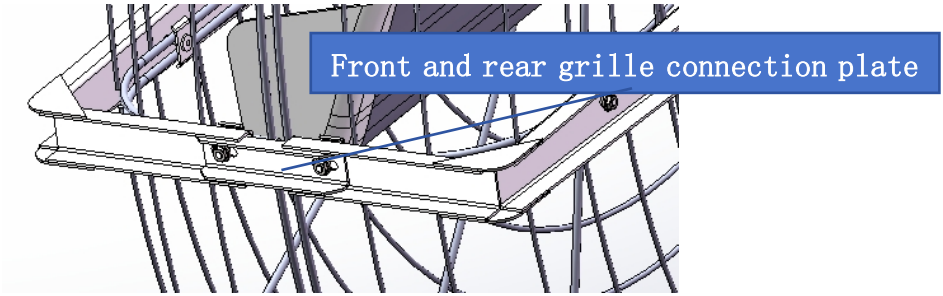
As shown above,eight pieces of coupler M6*20 are used to fix front and rear grille assembly together.

One-Piece Grille



As shown above, eight pieces of M6 wire rope clamp are used to fix the front grille on the rear grille, and four pieces of M6 U-shaped bolt are used to fix the front and rear grille connection plate.

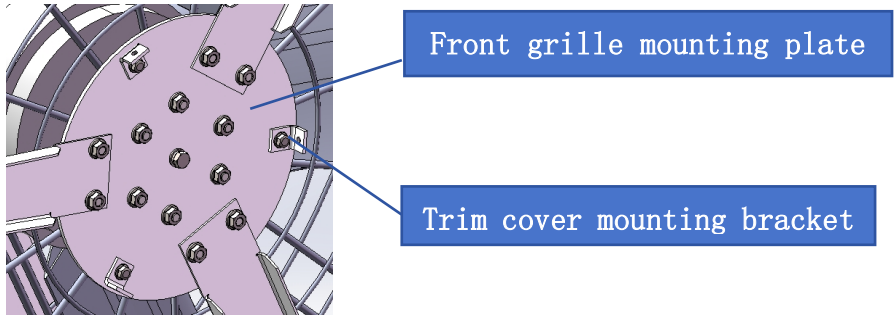
8.3 Connection of Assembly of the Front Grille and the Front and Rear Grille Connection Plate



As shown above,three pieces of M6*25 carriage bolt(with pressing plates and M6 locknuts)are used to fix assembly of the front grille and the front and rear grille connection plate

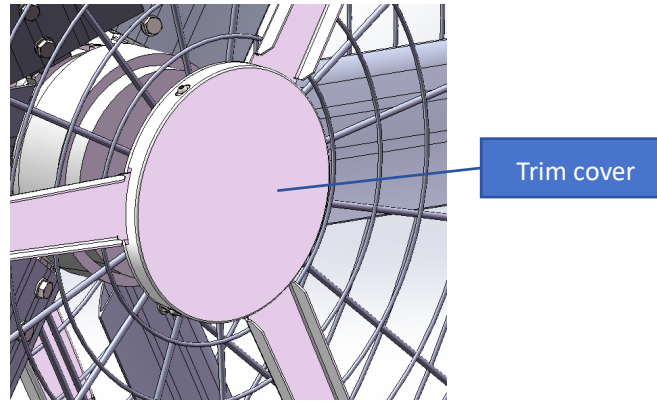
9.Installation of Trim Cover

9.1 Installation of the Trim Cover Mounting Bracket



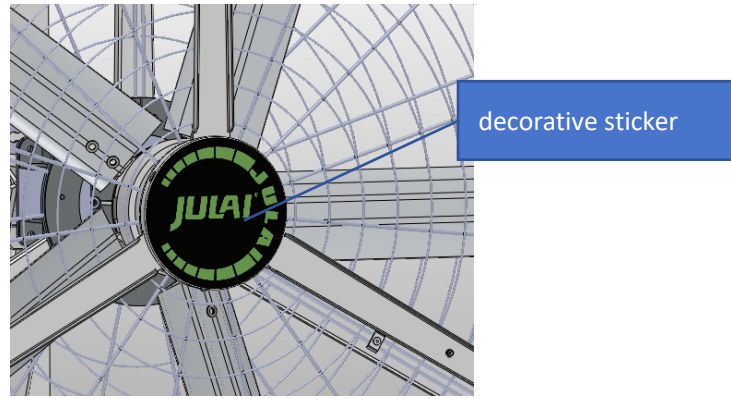
As shown above,three pieces of M6*10 Hex Socket Button Head Screw are used to fix the front grille mounting plate.

9.2 Installation of Trim Cover



As shown above,three pieces of M6*10 Hex Socket Button Head Screw are used to fix the trim cover on the trim cover mounting bracket.

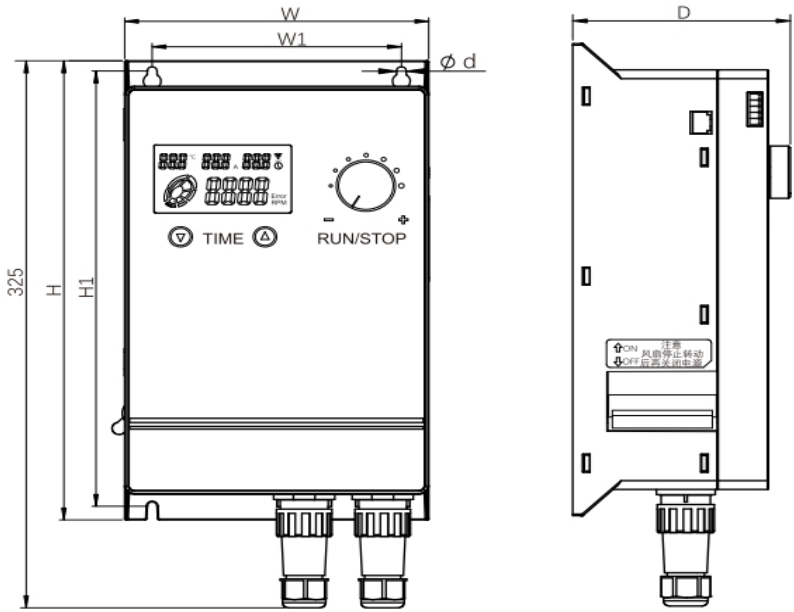
10.Paste the Sticker



Paste the sticker centered on the trim cover.

III.Installation of the Variable-Frequency Drive(VFD)

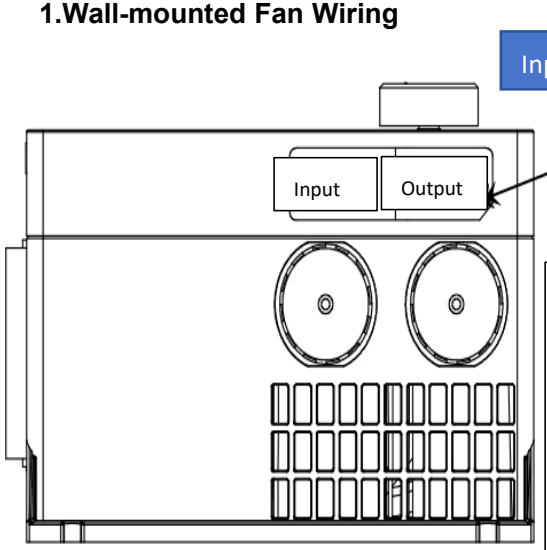
The appearance diagram of the Variable-Frequency Drive(VFD)



Place the Variable-Frequency Drive(VFD) in an appropriate installation position to ensure that there is no shelter around the Variable-Frequency Drive(VFD) and that it is away from water and fire and other places that affect the operation or safety of the Variable-Frequency Drive(VFD).When the installation position is the steel surface such as I-beam, four pieces of 5.5*25 Trapezoidal Self-tapping Screw are used for installation. When the installation position is concrete structure,four pieces of 8*40 Nylon Anchor bolts are used for installation.

IV.Variable-Frequency Drive(VFD) Wiring

1.Wall-mounted Fan Wiring



Wiring diagram of the main

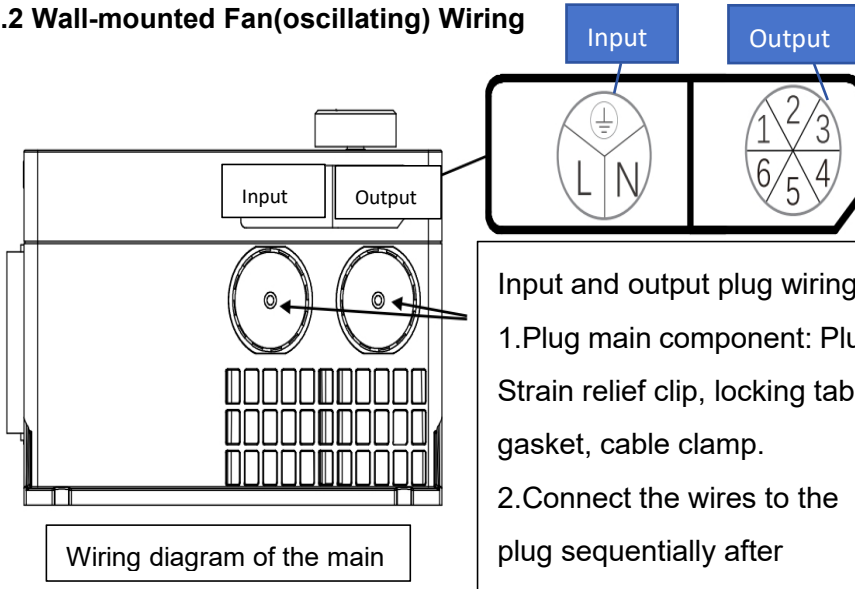
Input and output plug wiring:

1.Plug main component: Plug, Strain relief clip, locking tab, gasket, cable clamp.

2.Connect the wires to the plug sequentially after stripping the cable.

Terminal Function	Terminal Identification	Wiring Description	Function Description
Power Input	L	L	Live Wire Input
	N	N	Neutral Wire Input
	⏚	G	Grounding Input
Power Output	1	U	Motor Phase U
	2	V	Motor Phase V
	3	W	Motor Phase W
	4	G	Motor Grounding

1.2 Wall-mounted Fan(oscillating) Wiring



Wiring diagram of the main

Input and output plug wiring:

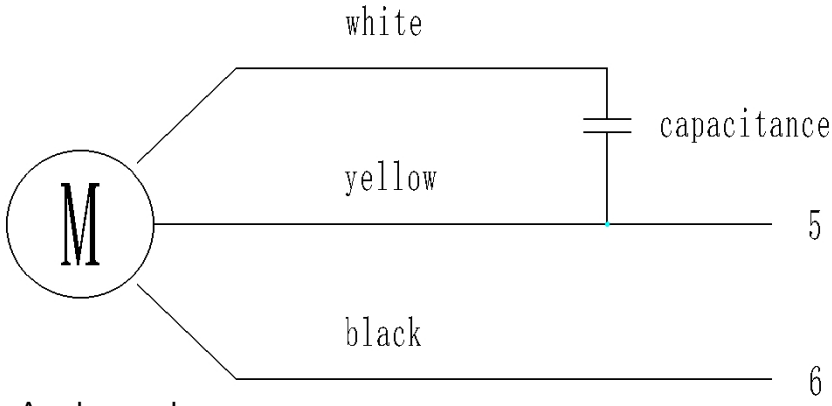
1.Plug main component: Plug, Strain relief clip, locking tab, gasket, cable clamp.

2.Connect the wires to the plug sequentially after stripping the cable.

Description of Wiring Terminal

Terminal Function	Terminal Identification	Wiring Description	Function Description
Power Input	L	L	Live Wire Input
	N	N	Neutral Wire Input
	⏚	G	Grounding Input
Power Output	1	U	Motor Phase U
	2	V	Motor Phase V
	3	W	Motor Phase W
	4	G	Motor Grounding
	5	L	Oscillating Motor Live Wire (Connect only if equipped)
	6	N	Oscillating Motor Neutral Wire (Connect only if equipped)

Wiring schematic diagram of the oscillating motor



As shown above

1.Connect the yellow wire of the oscillating small motor to the output terminal 6 of the Variable-Frequency Drive(VFD).

2.Connect the black wire of the oscillating small motor to the output terminal 5 of the Variable-Frequency Drive(VFD).

3.One end of the capacitor is connected to the white wire, and the other end is connected to the yellow wire.

V.Common Malfunction Solutions

Malfunction	Malfunction Name	Malfunction Countermeasures
01	Output short circuit	Check motor wiring, motor wire and motor insulation
02	Acceleration overcurrent	① Increase acceleration time ② Manually increase torque ③ Troubleshoot peripheral faults ④ Conduct self-learning of

		motor parameters ⑤ Choose the speed tracking start or wait for the motor to stop before starting ⑥ Prevent sudden load application ⑦ Choose a controller with a higher power rating
03	Deceleration overcurrent	① Troubleshoot peripheral faults ② Conduct self-learning of motor parameters ③ Increase the deceleration time ④ Prevent sudden load application ⑤ Equipped with brake unit and resistor
04	Constant-speed overvoltage	① Troubleshoot peripheral faults ② Conduct self-learning of motor parameters ③ Prevent sudden load application ④ Choose a controller with a higher power rating
05	Acceleration overvoltage	① Check the power supply and adjust the voltage to the normal range. ② Appropriately increase the acceleration time.

		③ Prevent sudden load application. ④ Perform motor parameter identification or select a higher controller
09	Undervoltage	Verify normal grid voltage
10	VFD overload	① Choose a product with higher power. ② Set correctly according to the motor nameplate
12	Input phase loss	Check the input power cord connection
13	Output phase loss	① Check the motor wiring ② Check the motor
14	IGBT overtemperature	Clean the Ventilation Ducts
16	Internal Alarm	Return to Manufacturer for Repair
19	Motor Parameter Auto-Tuning Failed	Correctly set the parameter of motor nameplate
23	Ground fault alarm	① Motor Ground Fault ② Replace the motor cable or motor
24	Torque limit	Correctly set the motor parameters or adjust the P09.04/P09.05 parameters
25	Current limit	Correctly set the motor parameters or adjust the P09.00 parameters
45	Motor overload	① Choose a product with higher power.

		② Set Correctly According to the Motor Nameplate
95	Power supply alarm	Verify grid voltage
101	Locked rotor	Synchronous motor stall
The above operations are not resolved, please seek technical support.		

VI.Maintenance and Care

The product design of Jilai Industrial's big fans is maintenance-free.However,to ensure the long-term normal operation of the fans,maintenance is still necessary,especially for applications in harsh environments.For any maintenance of the fan or Variable frequency Drive(VFD), please ensure that the fan is stopped and the power to the controller is cut off to protect the safety of personnel.

No.	Interval	Suggest Maintenance Content
1	Test	Check the fan for abnormal operating sound or vibration
2	Every 2,500 hours worked	Blade dust removal
3	Every 5,000 hours worked	● Check all the mechanical fasteners, ensure no loose; ● Check structural parts,ensure no cracks and no damage.

If abnormal running serious noise or vibration of the fan somewhere it indicates the mechanical parts damaged, should stop immediately and make comprehensive inspection at this time.

Project and Contents

1.Maintenance of Electric Control Box or Variable- Frequency Drive(VFD)

- ✧ Clean the dust inside the electrical control box or the Variable-Frequency Drive(VFD).Guarantee in electric control box and Variable -Frequency Drive(VFD) surface and clean with no dust inside cooling air duct;
- ✧ Tighten all the wiring terminals inside the electrical control box to ensure that they are securely fastened without any looseness.;
- ✧ Check the Variable-Frequency Drive(VFD) to ensure it is operating normally.
- ✧ Check the start switch, speed control knob and indicator lights on the electronic control box.If any of them are damaged, replace the corresponding components.
- ✧ Check the power cord,observe whether there is loose joint,power cord damage, etc.,if there is damage,rewire or replace the power cord.

2.Maintenance of the Main Part of the Fan

- ✧ Tighten the bolts of the wall-mounted fan,and make the color mark of the bolts,ensure that the bolts are tightened without loosening;
- ✧ For the front grille of the wall-mounted fan,clean the fan and the fan blades to remove dust,ensuring that the fan is clean and free of dust and that the motor operates normally.
- ✧ Remove the front grille of the wall-mounted fan,check all the fastening bolts of the fan and the fan blades, and tighten all the bolts.
- ✧ Wall-mounted fan(oscillating),remove the trim cover of the oscillating parts,clean the dust of the oscillating parts,and re-tighten all the bolts.
- ✧ Check the oscillating motor and observe whether there is any abnormal noise from the motor and whether the output shaft is shaking, etc.If these problems occur,replace the oscillating motor.
- ✧ Add grease to the reducer of the oscillating motor to ensure smooth operation and reduce gear wear.

VII.Product Warranty

The warranty period for the product is 36 months. For any faults that occur within the warranty period, please do not attempt to fix them yourself. Our company can send professional technicians to provide free on-site services. However, the following services are chargeable:

* Due to the malfunctions caused by your company's incorrect usage.
* Due to the fact that your company privately modified our company's products, resulting in the malfunction.
* Due to malfunctions caused by natural disasters and fires, etc.
* Beyond the warranty period.
* Other malfunctions not caused by the responsibility of our company.

This product is produced under strict quality management, and each set of products has passed the strict testing process when leaving the factory.

Please configure relevant safety measures when used in situations where major accidents or losses may occur due to the failure of this product.

Warranty Bill

User Counterfoil

The following is the user counterfoil. After filling it out, the user should keep it. Please show this counterfoil when making repairs.

Please fill in the product information

Product model：_____ Serial Number：_____

Note：The starting date of the warranty period is the factory date of purchase of the product.

Please fill in the user information

Username：_____ Postal address：_____

Tel：_____ Contact person：_____

Please fill in the following information：

Dealer name：_____ Tel：_____

Contact person：_____ Purchase date：_____

Invoice No.：_____

Receipt

The following is the user's receipt. After filling it out, please send this page to the dealer or send it back to our company directly.

Please fill in the product information

Product model：_____ Serial Number：_____

Note：The starting date of the warranty period is the factory date of purchase of the product.

Please fill in the user information

Username：_____ Postal address：_____

Tel：_____ Contact person：_____

Please fill in the following information：

Dealer name：_____ Tel：_____

Contact person：_____ Purchase date：_____

Invoice No.：_____

Be world-class Industrial big fan!

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