

50" Pressure Fan

Installation Manual

Fan Assembly and Installation

PACIFIC
INTEGRATED MANUFACTURING SOLUTIONS

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Chapter 1 - Preface

1.1 Safety information

Carefully read all safety messages and decals in this manual. Follow recommended precautions and safe operating practices. Keep safety signs in good condition. Replace missing or damaged safety signs.



Warning: Hazardous Operation & Rotating Fan Components

Keep hands clear of the fan's air outlet at all times. Contact with the air outlet during operation may result in injury due to high-velocity airflow.

Keep hands away from fan blades. Disconnect power before servicing. The fan may start automatically. Do not operate the fan without installing guards such as safety mesh and PVC shutters. Ignoring these matters could result in serious personal injury or even death.

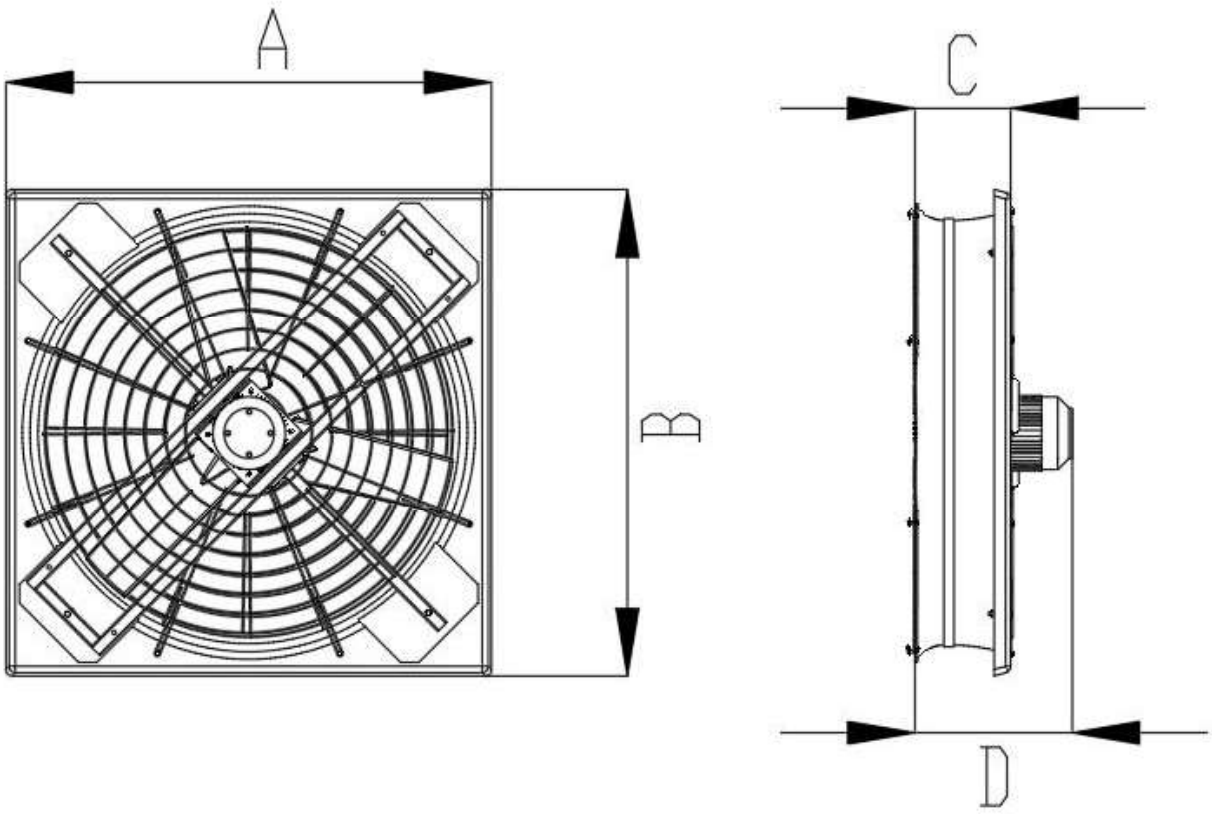
Maintain a safe distance from the air intake area during operation. Do not approach or lean over the intake side while the fan is running, as this may lead to entanglement or injury from the strong suction force.

Note： During the assembly or installation direct-drive fan products, if protective devices such as guide plates, louvers, or safety screens are not installed while the equipment is being assembled or not yet operational, exposure to strong external winds may cause the fan blades to rotate in reverse at high speeds. Such an abnormal operation poses risks of personal injury and may cause structural damage to the fan blades.

If strong winds occur during the construction, temporary blade immobilization measures must be implemented immediately to prevent safety hazards and equipment damage caused by rotational kinetic energy. Suppose the installation environment is prone to strong winds before commissioning. In that case, protective devices such as guide plates, louvers, or safety screens must be installed to block potential abnormal blade rotation and eliminate associated risks physically.

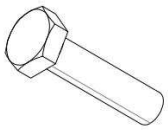
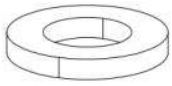
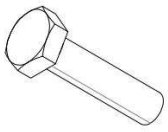
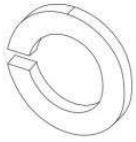
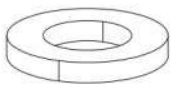
Chapter 2 - Product Information and Tools

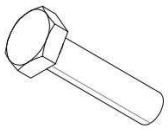
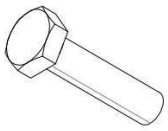
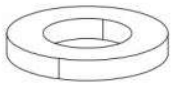
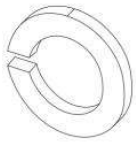
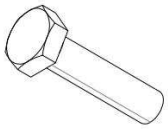
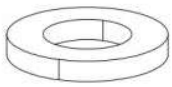
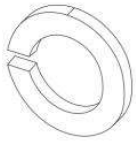
2.1 Fan size

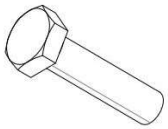
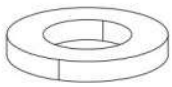
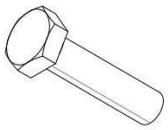
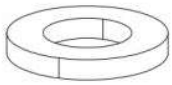
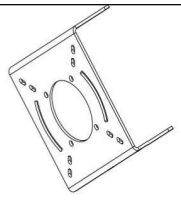


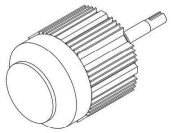
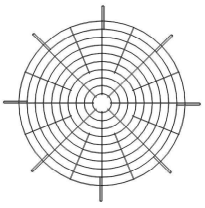
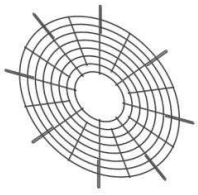
Fan Model	Size(mm)				Power Supply
	A	B	C	D	
50"	1475	1475	291	478	460V 50/60 HZ

2.2 Accessories list

No.	Part	Name	Type	Qty	Picture
1	Housing and cone	Bolts	M6 × 25	4	
2		Lock nut	M6	4	
3		Flat washer	6 × 25	8	
4	Bracket and motor mounting bracket	Bolts	M10 × 70	4	
5		Lock nut	M10	4	
6		Spring washer	Q10	4	
7		Flat washer	10 × 30	8	

8	Motor and bracket	Fastener bolts kit	M8 × 25	4	
9	Bracket and housing	Bolts	M10 × 75	4	
10		Flat washer	10 × 30	8	
11		Spring washer	Q10	4	
12		Lock nut	M10	4	
13	Motor and blade	LH bolt	M10 × 25	1	
14		Flat washer	10 × 50	1	
15		LH Spring washer	Q10	1	

16	Front guard and housing	Bolts	M6 × 25	8	
17		Flat washer	6 × 25	16	
18		Lock nut	M6	8	
19	Back guard and housing	Bolts	M6 × 25	8	
20		Flat washer	6 × 25	16	
21		Lock nut	M6	8	
22		Bracket 1		1	
23		Bracket 2		2	
24		Motor mounting bracket		1	

25		Motor		1	
26		Blade		1	
27		Housing		1	
27		Cone		1	
28		Key		1	
29		Front guard		1	
30		Back guard		1	

2.3 Packing of fan components

The actual packaging is subject to delivery.

2.4 Fan unloading and storage

Note: When unloading the packing of fan components from transportation vehicles on site, it is recommended to unload them with a forklift or truck crane, considering each packing is heavy and valuable. It is not recommended to manually unpack and unload the goods from transportation vehicles inefficiently, as it might damage the fan components during the unloading process, on-site transfer, and storage.

When storing the fan motor on site, it should be placed in a sheltered place or take rainproof measures. Product damage caused by on-site unloading, handling, transportation, and storage will not be covered by Fandi's warranty.

2.5 Tools for assembly and installation

No.	Tools & Description	Picture	Qty
1	10mm open-end wrench X1 14mm open-end wrench X1 17mm open-end wrench X1 Rechargeable electric wrench （with10mm,17mm Hex socket）		1
2	5~25N Torque wrench 10mm/17mm hexagon socket #5 Allen key with hex socket #4 Allen key with hex socket		1
3	Hammer drill （with ϕ12mm drilling bit）		1
4	Rubber hammer		1

The above is a list of tools for assembly and installation, and tools must be prepared before installation. In addition, the sealing foaming agent needed for installation will not be included with fans' delivery. It has to be prepared on site in advance.

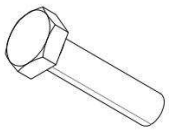
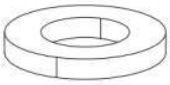
Chapter 3 - Instruction of Fan Assembly

3.1 Assembly of fan

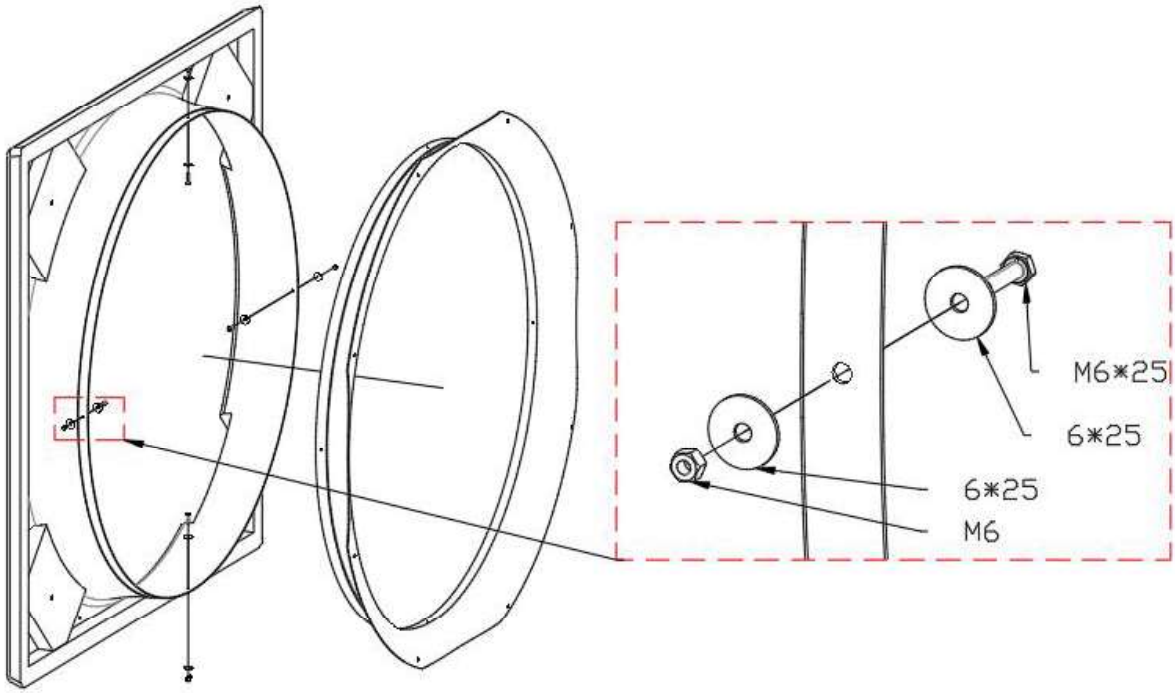
Before assembling the fan, prepare and check the materials used in the following steps according to the relevant fan parts list below. Prepare the tools used in the assembly work according to the tool list in the previous chapter, especially the torque wrench and the Allen keys with hex sockets.

3.1.1 Assembly of housing and cone

Parts and fasteners list

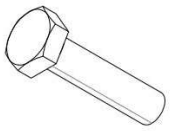
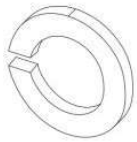
No.	Part	Name	Type	Qty	Picture
1	Housing and cone	Blots	M6 × 25	4	
2		Lock nuts	M6	4	
3		Flat washer	6 × 25	8	
4		Housing		1	
5		cone		1	

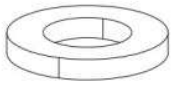
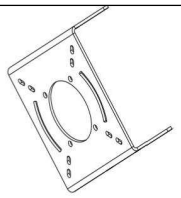
Note: There is a total of 4 sets of fasteners. Use a 10# wrench to secure them.



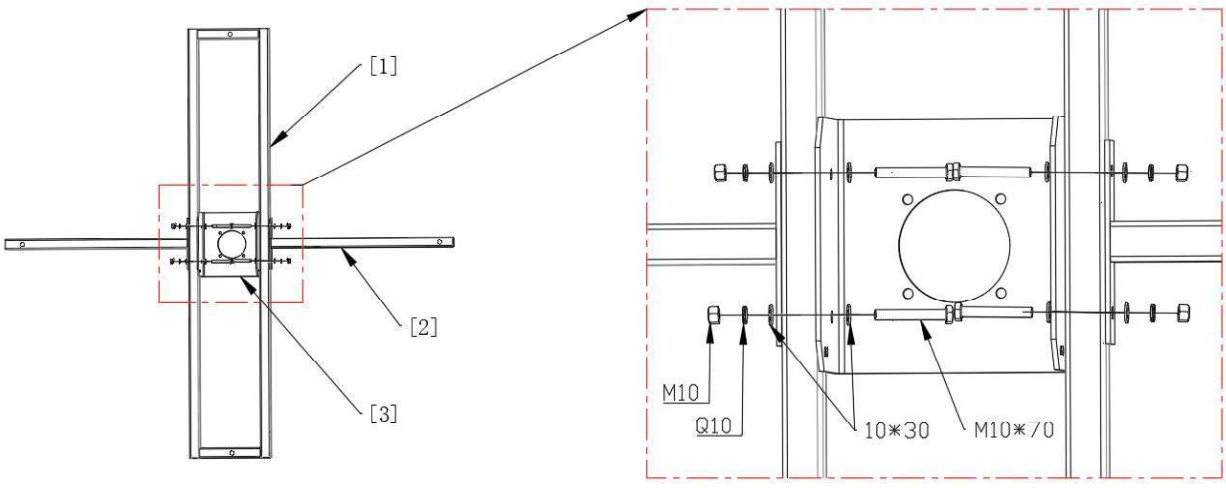
3.1.2 Assembly of bracket and motor mounting bracket

Parts and fasteners list

No.	Part	Name	Type	Qty	Picture
1	Bracket and motor mounting bracket	Bolts	M10 × 70	4	
2		Nuts	M10	4	
3		Spring washer	Q10	4	

4		Flat washer	10 × 30	8	
5		Bracket1		1	
6		Bracket 2		2	
7		Motor mounting bracket		1	

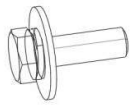
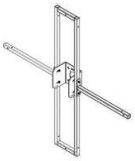
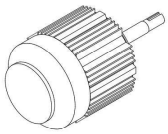
Note: There is a total of 4sets of fasteners. Use a 17# wrench to secure them.



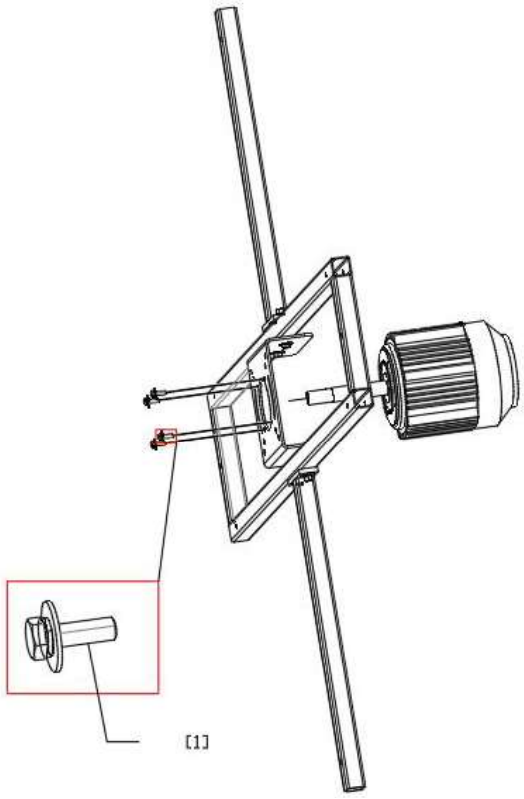
[1] Bracket1 [2] Bracket2 [3] Motor mounting bracket

3.1.3 Assembly of motor and mounting bracket

Parts and fasteners list

No.	Part	Name	Type	Qty	Pic
1	Motor and mounting bracket	Bolts	Fastener kit M8 × 25	4	
2		3.1.2 Combination	-	1	
3		Motor	-	1	

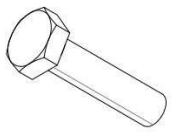
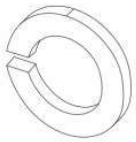
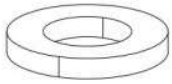
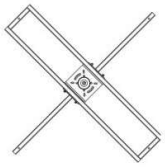
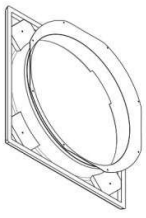
Note: There is a total of 4 sets of fasteners. Use a 14# wrench to secure them.



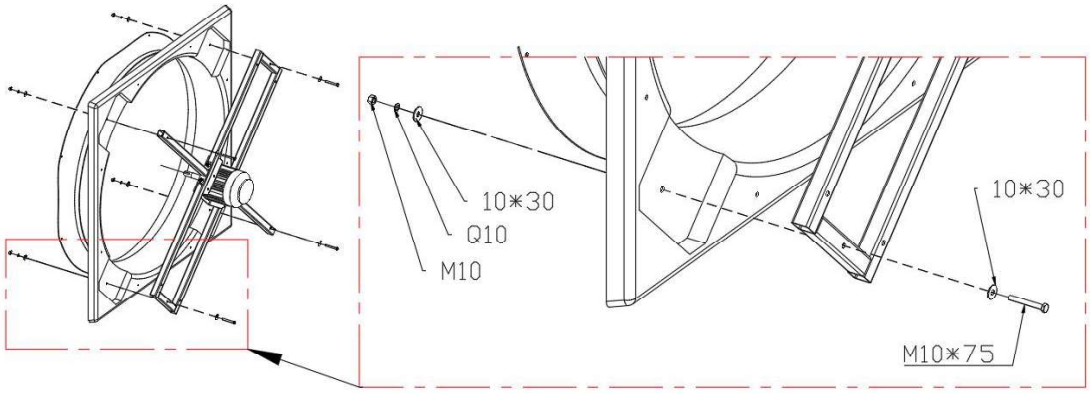
[1] Fastener kit M8×25

3.1.4 Assembly of bracket and housing

Parts and fasteners list

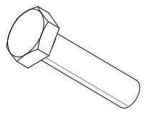
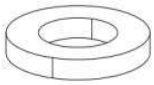
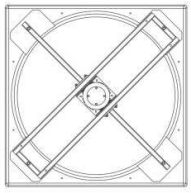
No.	Part	Name	Type	Qty	Pic
1	Bracket and housing	Bolts	M10 × 75	4	
2		Lock nut	M10	4	
3		Spring washer	Q10	4	
4		Flat washer	10 × 30	8	
5		3.1.3 combination		1	
6		3.1.1 combination		1	

Note: There is a total of 4 sets of fasteners. Use a 17# wrench to secure them.

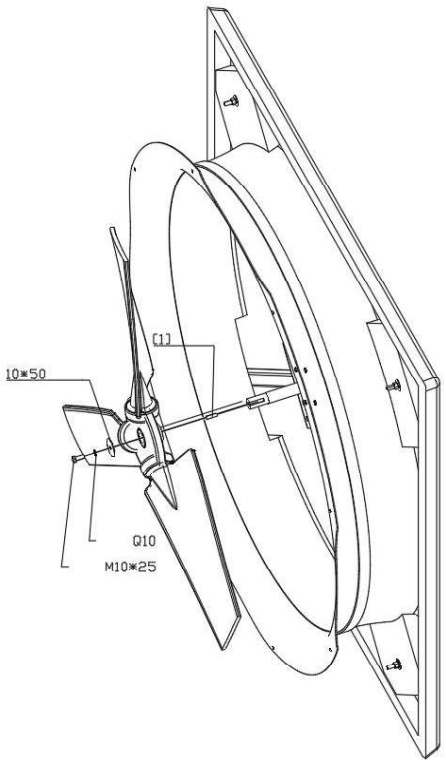


3.1.5 Assembly of motor and blade

Parts and fasteners list

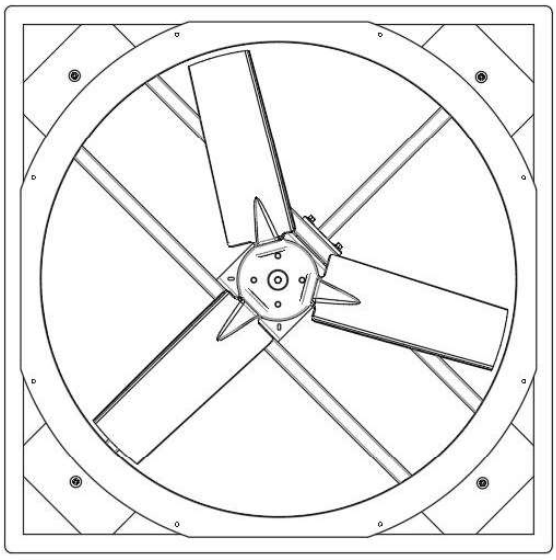
No.	Part	Name	Type	Qty	Pic
1	Motor and blade	LH hex bolt	M10 × 25	1	
2		Flat washer	10×50	1	
3		LH Spring washer	Q10	1	
4		Key		1	
5		3.1.4 combination		1	
6		Blade		1	

Note: There is a total of 1 set of fasteners. Use a 17# wrench to secure them.



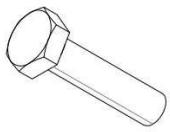
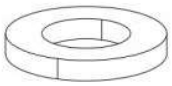
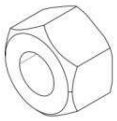
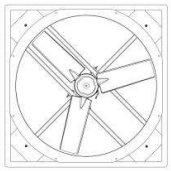
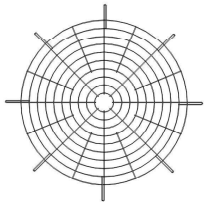
[1]Motor key

1) Inspect and ensure that the flat key matching the motor has been installed in the keyway on the motor shaft.
2) Align the fan blade and slide it onto the shaft.
3) Place a flat washer and a spring washer then tighten the bolt (M10×25).
4) Rotate the fan blade to confirm that there is no interference between the blade and the housing.
5) Maintain a gap of 10-20mm between the fan blade and the circular opening of the housing.

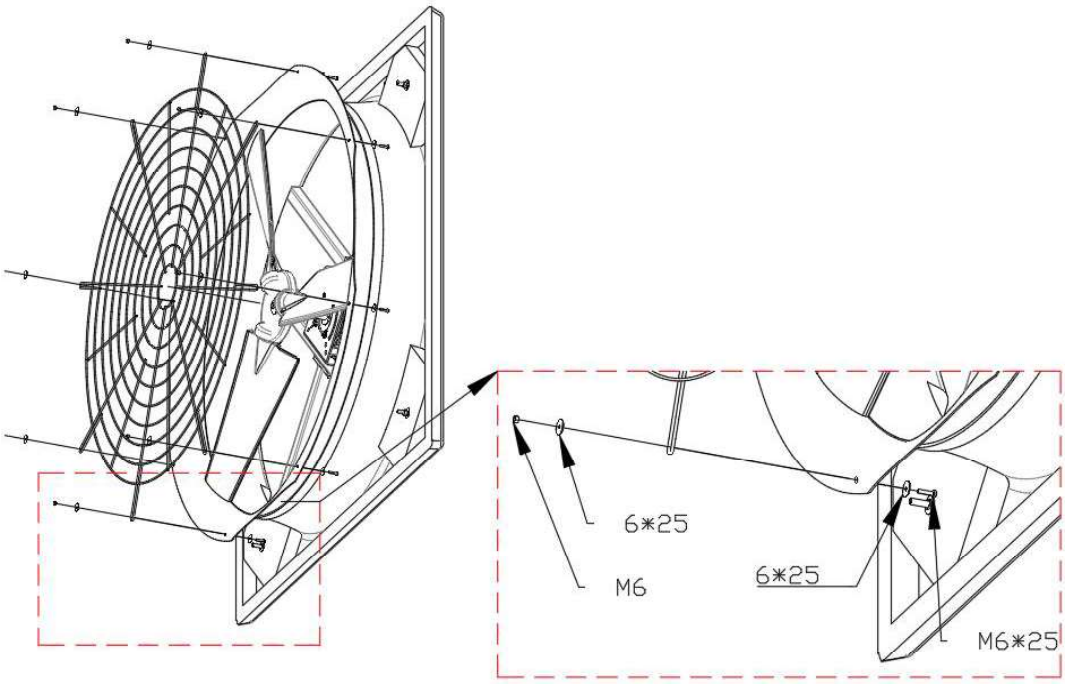


3.1.6 Assembly of front guard and housing

Parts and fasteners list

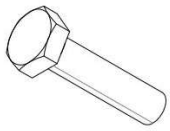
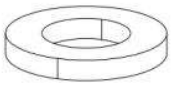
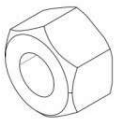
No.	Part	Name	Type	Qty	Pic
1	Front guard and housing	Bolts	M6 × 25	8	
2		Flat washer	6 × 25	16	
3		Lock nut	M6	8	
4		3.1.5 combination			
5		Front guard			

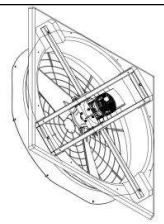
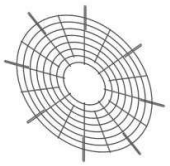
Note: There is a total of 8 sets of fasteners. Use a 10# wrench to secure them.



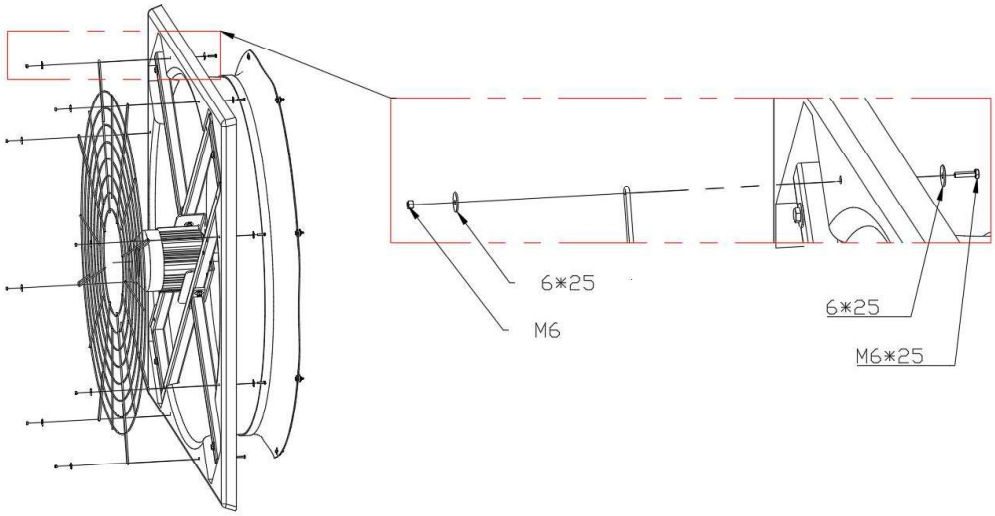
3.1.7 Assembly of back guard and housing

Parts and fasteners list

No.	Part	Name	Type	Qty	Pic
1	Back guard and housing	Bolts	M6 × 25	8	
2		Flat washer	6 × 25	16	
3		Nut	M6	8	

4		3.1.6 combination			
5		Back guard			

Note: There is a total of 8 sets of fasteners. Use a 10# wrench to secure them.



3.2 Pasting safety sticker

According to the position shown in the picture below, paste the safety sticker on the side of the fan.





3.3 Check all fasteners

Check that all fan fasteners are fully tightened up.

3.4 Power-on and testing

Note: Before powering on, the blade must be manually rotated and checked for any possible interference between the rear of the blade hub and the motor. Also, ensure that there is no friction or interference between the tip of the fan blades and the internal surface of the fan housing. Furthermore, it is important to check and clean the internal of the fan to ensure that there are no objects that may get sucked in and damage the rotating fan blades, such as fasteners, paper, tape, or packaging material.

3.4.1 Power on to check the rotating direction

Power the fan for a short time and stop powering it when it starts to rotate slowly.
Observe whether the fan is rotating in the correct direction. If the fan is rotating in the wrong direction, swap any two phases of the three-phase motor power supply wiring to reverse the motor rotation.

3.4.2 Power on and start the fan to inspect vibration and abnormal noise

If the fan rotating direction is correct, power on the fan and run it for 5 minutes to check whether there is any abnormal vibration or noise. If there is any abnormal vibration or noise, inspect the assembly process. If there is no abnormality, start the fan running for 1 hour, and check whether the fan has abnormal vibration and noise. After the trail run, check if all the fasteners are loose.
Note: During the trial run of the fan, the guide plate, shutters, and safety guard must be installed.