



QHQG-4L Vertical Cutting Machine

Usage Instruction



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Product introduction

1. General

This manual provides guide for the users about installation, parameter setting, abnormality diagnosis and handling, and daily maintainance and relevant specifications for the users. Please read the manual carefully before installation in order to install and operate the machine successfully.

■ Specified object

This manual is for the use of QHQG-4L Vertical cutting Machine.

2. Main technical specification

📖 QHQG -4L Vertical cutting machine

- This machine is mostly use for Wet Screen's upright slicing and moulded slicing work, and also can manufacture all kinds of EVA and EPE

ULLQ-4L Vertical cutting machine main specification

Model	QHQG-4L(increasing)
Inside worktable size	W1420*L2440mm
Outside worktable size	W1500*L2440mm
Cutting height	1200mm
Cutting thickness	5~ mm
Blade length	L8250mm
Motor power	2.4Kw
Machine weight	1500Kg
Machine external size	L4550*W4800*H2550mm

Motor collocation list

No.	Model	Qty	power	speed rpm	Usage
1	Y90L-4	1	2.2Kw	1400	Blade Motor
2	JF130-5	1	200W	2600	Blade Guard

3. Structure

1.This machine is composed by frame, pedestal, worktable tracking mechanism, movable positioning board, drive motor, blade tension regulator, blade wheel mechanism, grinding wheel mechanism, blade safety guard, etc.

2.The frame and pedestal is welded with box iron, and the blade mechanism is installed on this component, in case of the stability of the blade, before installing the blade, test the blade static balance. It is no need to change its position after installation.

3.The worktable is composed by square brass made frame together with aluminum plywood. There is a movable positioning board, which moves on the track longitudinally to slice the foam forward and back. This positioning board is used to regulate the cutting thickness.

4.The blade tension regulator is served as a regulator for blade tension and a decompressor for installation/uninstallation of the blade, cooperated with the spring pressed nut to regulate the tension of the spring.

5.The grinding wheels is made up of two subtended bowl discs (powered by motor) which stick to the blade slightly, fix the two wheels after a certain degree of excursion.(the angle is set by the user, usually $15^{\circ}\sim 30^{\circ}$)

6.The installation/uninstallation of the blade: As there are level gauges in the front and back of the worktable. This mechanism is used to joint the left/right platforms together, as well as replacing the used blade, so please remove the level gauge before uninstall the blade.

7.The positioning of the blade: Make sure that the blade wheels installed within the same level, and stability of the blade's turning, without any migration. In case of the above situation, install a set of axletrees under the press blade axle of the girder, as well as the pedestal.

4. Fixing process and related notice

● Installation condition

Temperature: -10℃ - +40℃

Relative humidity: 60%-95%

Atmosphere pressure: 86-106kpa

● Installation order

↺ Frame

↺ Blade wheel

↺ Safety guard

↺ Worktable

↺ Baffle

π Installation process and notice

1.Install the frame vertically and horizontally.

2.Before installing the rail, please ensure the uprightness and counter-parallelism, then regulate horizontally. When assembling, make sure all the worktable is within the same level.

3.Make sure that the worktable moves flatly and steadily, roughness \leq 1mm.

4. When installing the blade wheel, please make sure that the its radial' parallelism tolerance $\pm 1\text{mm}$

6. The blade should remain in the right middle of the wheel when the blade forward/reverse turning, and regulate the blade tension propriety, because being too tight would break the blade, and too loose can't cut the Wet Screen.

7. Please pay attention to the parallelism and trimness of the safety guard, when installing it.

8. Connect the Air Valve with the pipe.

⚡ This machine adopts 415V, 50HZ three-phase four-wire power supply. The total power is about 2.4KW. The power origins from the 3-phase 4-wire circuit breaker which is supplied by the user and the wire's radii of the power supply can not be less than 4mm .

⚡ The earth connection of the machine should be operated by professional electrician. Both the machine and the electricity box need earthing. The earthing wire should be more than 2.5 mm of insulation wire, and the no less than 4 ohm earthing resistance

⚡ During the machine working, unskilled electrician is not allowed to open the control box for safety.

⚡ The machine operation power supply is 415VAC $\pm 10\%$, 50HZ three-phase four-wire. Control of circuit power supply is 220VAC $\pm 10\%$, if you attach the circuit wrongly; the machine would definitely burn out.

5. Operating process and related notice

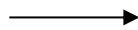
➔ Notice before test-cut:

☞ When cutting, keep head, hands off the blade to avoid injury; when the machine is operating, install the safety guard and make sure that the blade and grinding wheel protecting door is shut.

☞ Please check whether there is barrier on the track or beside to avoid low efficiency.

π Working process

TBSN-315 pressed switches schematic diagram



1. Put the wet screen on the worktable, press on the blade motor after the machine is electrified

2. Turning the hand-wheel to move the baffle to adjust the cutting size, after configuring the position, then push and pull the worktable to cut the wet screen.

3. After cutting, please cut off the power supply, stop the machine.

4. The external power supply should have a reliable earthing terminal, and the machine earthing terminal also should connect well with the external power supply earthing network.

6. Package and conveying

1. This machine has been detached and packed logically before selling, and it is advised to open the package (package, wooden box) on the installing place, and make

sure that the package is intact before opening.

2. When opening the package, please start from the top, because the side board of the package can be lifted over wholly, and make sure whether the machine is intact, count the accessories according to the packing list. If anything missing, inform the party who is responsible and the related department with a written report. If it is within the range of our company's obligation, please inform our related department.

3. When conveying the machine it is advisable to use equipment like crane, and make sure that the loading capacity of the conveying equipment. If not having such conveying facility, pad the package box with several steel tubes with the same diameter, and prize the box to move with the rolling tubes slowly. It is prohibited to pad the machine directly. The place which can be frayed by the steel wire should be pad with soft objects such as wood and rubber.

4. Please check up the insulating resistance of the electrical system, make sure that the value is not less than 1Ω .

7. Safety notice

1. Make sure the machine has well earth connection,

2. Those who are not professional technician are prohibited to open the electrical box which might cause injury. When repairing the machine, make sure the power is cut off, and shut down every device of the machine (pneumatic device, hydraulic device), in case of turning the power on. (A yellow warning notice "keep off the switches when maintaining" is advisable.). Make sure the power is cut off

before opening, but if the maintenance should go on with the power, safety protection should be adopted to avoid electric shock.

3. When regulating the fuses, it is prohibited to change the value of the current.

4. The power supply voltage is advisable to exceed 10% of the set voltage to avoid the aging of the insulator.

5. The shield of grinding wheel, strap, and blade should be intact when the machine is operating and prohibited to remove.

6. It is prohibited to stand in front of the blade within 300mm when the machine operating, in order to avoid injury.

7. It is prohibited to step on the worktable when it is moving, in case of uneven cutting and accident.

8. It is prohibited to touch the strap, chain, and blade, etc with hands or any other object, or get close to them, which is dangerous.

9. It is prohibited to stand under the conveying or the lifting objects in order to avoid accident.

10. When malfunction occurs, the machine should be repaired by professional technician.

8. Maintenance

1. The electric equipment should be kept clean often, and kept away from oil, water, dust.

2. When short circuit occurs, please replacing with the same capacity fuse, brass

wire is strongly prohibited.

3.The rolling axletree in the rotating motor should be cleaned once a month (with kerosene or diesel) and replaced the lube. Gears, chain wheels and so on also should be lubricated after cleaning after every day's work

4.If stop using the motor, electrical devices for a long time(more than a month) in wet weather, before using them again, the insulation of the devices should be tested, and the motor should be idled for 48 hours with reducing voltage to the rated value 1/3 in order to get rid of the moisture.

5.Make sure the machine has well earth connection, if the earthing screw has any oil filth or stain, clean it up promptly.

6.Pay attention to the exposed hoses and wires; keep them from crushing or breaking.

7.Check the sensitivity of the contacting point and interlocking device regularly.

8.Operate the machine as the specification indicates.

9. Diagnosis and handling of daily malfunction

NO.	Abnormal situation	Causes and solution
1	Grinding motor vibrates seriously	1. √Balance of the wheel circle
		2. √Distortion of the motor axle
		3. √Replace the motor axle when necessary
		4. √Axial run out of the grinding wheel
2	Abnormal noise of the blade wheel	1. √The dirt on the blade wheel is too thick: use soft abrasive fabric to clean and lubricate.
		2. √The tension device too loose: tighten the blade; make sure the blade remains in the right middle of the blade when turning forward/backward.
		3. √The blade installing position not accurate√check the blade's horizontal level

		4. √Check the sharpness of the blade: collapse of the blade
3	Cutting mark too obvious	1. √Whether the blade is sharp
		2. √Whether the blade vibrates; whether flat jointing
		3. √Whether the blade edge is clean
		4. √ Whether the worktable is clean; whether the rail is tidy
		5. √Whether the blade clip is too tight
4	Uneven cutting	1. √Whether the blade parallels with the baffle.
		2. √Whether the blade is installed accurately
		3. √ Check the sharpness of the blade: collapse of the blade
		4. √Regulate the position of the rack and gear , ensure the consistence of the two gears
5	Frequent rupture of blade	1. √ Whether the blade remains in the right middle of the blade when turning forward/backward
		2. √ Replace the blade with qualified one and fixed jointing
		3. √Whether the axle and axletree swings.
		4. √Whether the rubber surface of the blade wheel uneven
6	Abnormal noise of the blade	1. √Whether the axletree of the blade wheel is damaged
		2. √Whether the surface of the blade wheel is damaged
		3. √Whether the blade attrites the worktable pressing bar; regulate the rail positioning pulley when necessary
		4. √Whether the blade is clean