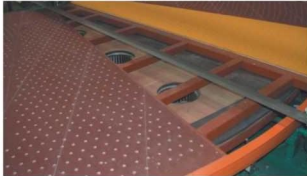




## QHQG-60/70/100 Carrousel Splitting Foam Cutting Machine

### Usage Instruction



可选装吸风装置  
The machine choose with vacuum equipments



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## Product introduction

### 1.General

This manual is provided for users for installation, parameters setting, malfunction diagnosing and fixing, and maintenance and safety notice of the Carrousel Splitting Foam Cutting machine. In order to install and use this machine correctly, please read the manual carefully before using it.

#### ■ Application objects

This manual is for QHQG-60/70/100 Carrousel Splitting Foam Cutting Machine.

### 2.Main Technical specification and parameters

 QHQG-60/70/100 Carrousel Splitting Foam Cutting Machine

● This machine adopts the advanced imported controlled techniques drive, it's fully automatic controlled operation and the cutting is exact. This machine is mostly used for many quadrate foam once flatly slicing, it can be cutout continuously and it is dependability is lofty and production efficiency is better.

#### specification and parameters

Model	QHQG-60	QHQG-70	QHQG-100
Cutting size	W1.5XL2XH1.2m(4pcs)	W1.5XL2XH1.2m(5pcs)	W1.5XL2XH1.2m(8pcs)
Cutting size max	W1.5XL2XH1.2m(4pcs)	W2.15XL3XH1.2m(3pcs)	W2.15XL4.5XH1.2m(3pc)
Total power	8.12 KW	8.92 KW	10.52 KW
Worktable turning speed	0~3.5 r/min	0~3.0 r/min	0~2.0 r/min
Blade length	8940 mm	10000 mm	10240 mm
Worktable dia( $\varphi$ )	$\varphi$ 6 m	$\varphi$ 7 m	$\varphi$ 10.5 m
Cutting thickness	2~150 mm	2~150 mm	2~150 mm
Machine weight	3300 Kg	3500 Kg	3800 Kg
Machine external size(LWH)	L6900XW6000XH2400mm	L7900XW7000XH2400mm	L11500XW1100XH2400mm

## Motor specification

NO.	Model	Amount	Power	Usage
1	60:Y100L1-4	1	2.2 Kw	Carrousel running
	70:Y100L2-4		3Kw	
2	Y112M-4	1	4Kw	Blade running
3	BMA90L-4	1	2.2Kw	Blade lifting
4	YS5622	2	2Kw	Blade grinding
5	150FLJ3	1	180W	Blade grinding cleaner

## 3. Structure

1.This machine is made up of carrousel worktable、 frame、 cutting tool、 electrical control equipment.etc.

2.Carrousel worktable is made up of dynamo、 turbo reducer WPO-100 (m=5 I=20)、 friction pulley、 platform、 idler wheel、 locating ring(inner、 outer)、 square pedestal.ect.

3.Frame is made up of pedestal、 post、 sliding bush、 screw rod、 nut、 electric machinery、 turbo reducer RV75 (m=3 I=20)、 transmission shaft、 cone gear.ect.

4.Cutting tool is made up of blade wheel、 blade、 Blade grinding device、 blade dipping gear、 cutting tool system、 blade box、 blade mantle.ect.

5.electrical control equipment is main made up of electrical control box.

## 4.Installation process and and related notice

### ● Installation condition

Temperature: -10℃- +40℃

Relative humidity: 60%-95%

Barometric: 86-106kpa

### ● Installation sequence

- ↺ Frame
- ↺ Knife rest
- ↺ Carrousel worktable
- ↺ Electrical control equipment

## **π Installation process and requirement**

1. Install the pedestal horizontally.

2. Install post and screw rod after revise the pedestal. Put the left screw rod and left post in the carrousel inner loop, then install right post and right screw rod, revise the parallelism of screw rod and post. After that, revise with electricity, make the screw rod move up and down to validate whether the height of the sliding bush is accordant., whether the machine has yawp and shake.

3. Install the beam and revise the perpendicularity between screw rod and post. Screw down the screws and install the screw rod protection on its fixure.

4. Install the cutting tool throught the knuckle-joint which connect post and sliding bush, obliquity adjusting handwheel and the screw rod, and revise the four blade wheel to be horizontal.

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

6. Adjust the location of inner loop properly, its center is on the lengthener of the center of the two sliding bush knuckle-joint. Deuce the inner trolley(5) under the inner loop, and adjust the planeness and concentricity.

7. Use the outer trolley(10) to install the outer loop flatly.

8. When installing the friction pulley, it is tangent with outer loop, and its common tangent is  $90^\circ$  to the the centre of the carrousel.

9. Spread the table-board of carrousel worktable.

10. Install the electrical control box.

☞ when installing the carousel worktable, be sure that it is horizontal and table-board is even, there is balanced and without noise when it working.

☞ when install the electrical control box, pay attention to the sequence to prevent reversing the electric machinery, and connect the metal part of the machine and the crust of the electrical control box to floor.

☞ close the door of the electrical control box to avoid dust except inspection and servicing.

⚡ This machine adopts 380V, 50HZ three-phase four-wire power supply. The total power is about 7.94KW(ex.QHQG-60). 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 6mm .

⚡ 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 380VAC±10%, 50HZ three-phase four-wire. Control of circuit power supply is 220VAC±10%, if you attach the circuit wrongly; the machine would definitely burn out. Fuse of the machine choose 5A.

### **Notice before cutting test:**

☞ When cutting, keep head and 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.

☞ Reset the “utput meter” before cutting. Once cut a sheet of foam, the “utput meter” add “1”

automatically, the “output meter” will add up without reset.

☞ When install the blade wheel, the radial of it must be insure that the tolerance of parallelism is  $\pm 1$ mm.

☞ When install the blade, the running of obverse side and reverse of the blade must be kept in the middle of the blade wheel. The tension of the blade should be adjusted properly, the blade will break if it is too pressing, if it is too loose , the machine can't cut the foam well.

☞ The Blade grinding electric machinery should be installed in the 1/3 of the location of blade.

## 5.Operation steps and related notice

### Operation steps(See the control panel)

1.put through power, the indicator light shine, circumgyrate and disentangle “general electrical source turn off” mushroom button, then press “general electrical source turn on”, after the light shine, choose the knife rest in manual operation or automatic(commomly automatic), the corresponding light shine.

2.Press the cutting tool “rise” button, adjust the knife rest to the proper height, then put the foam on the carrousel worktable, and adjust the location of foam properly.

3.Adjust the height of knife rest to make the blade be on top of the foam exactly, this operation can work with “Down”、 “Increasing”、 “Stop” buttons, but in a time you can only press one button.

4.Base on the cutting thickness, adjust the height of the blade, choose the proper obliquity of blade and input the proper thickness.

5.After adjusting, turn the “worktabe choose” switch to “Automatic”, blade and carrousel begin running, and the machine cut the foam automatically. The blade decline the height as the carrousel turn one lap untill the cutting is over, this height is the cutting thickness.

6.If the cutting is finish or need to stop the machine from running, press “Carrousel stop” button and turn “select” to “manual”, then press “cutting stop” button, the machine will stop, at last press “power off” button to cut off the power. If the machine doesn’t start again, turn the power off(Recloser QF outside the machine).

☞ Press “setting thickness” button to set the cutting thickness(the setting is base on actual cutting thickness), the unit of thickness meter’s setting is 1/100mm.

☞ If need to stop the machine from running, turn “select” switch to “manual”, the machine will stop at once.

☞ If need to grind the blade, press “wheel on” button, the wheel will work, press wheel stop” button without grinding, the wheel will stop. (the blade must be grinded in running).

☞ In “manual” working, the movement of knife rest and worktable can be adjusted by pressing “decreasing”、 “increasing”、 “forward”、 “back” button.

☞ Done with cutting, press “power” button, the machine will stop, without using the machine, cut off the power for safe.

☞ External power must have the ground terminal, the ground terminal of the machine must connect to the external power earth meshing.

## Notice

☞ Lay the foam on the carrousel properly for cutting, in order to improve the cutting efficiency and quality.

☞ The radial pressure of friction pulley to carrousel must be adjusted properly, it is appropriate that the friction pulley doesn’t slip when it running. Change the press by adjusting the length of spring base which put out from the pole, the pressure will become larger when the pole elongate.

☞ Nonuse as possible when the dia of friction pulley is weared to 230mm.

↪ Keep the machine running as possible when the thickness of cutting is no more than 8mm.

↪ Forbid putting the heavy and other goods on the carrousel without running, or else it will be anamorphic; and forbid impacting and turning the carrousel with a rush.

### The adjustment of blade's obliquity

↪ When cutting foam, choose different obliquity according to the cutting thickness and the density of foam(the angle between blade and horizontal), the angle generally is  $-2^{\circ} \sim +3^{\circ}$  (Sketch map 1), the angle can be chose by experience. Adjust the angle with manual screwand nut, disentangle the bolt of tother post before adjusting, then tighten the bolt after adjusting.

### Sketch map 1

Cutting thickness	The area of angle
2.5~10mm	$0.5^{\circ} \sim 2.5^{\circ}$
10~60mm	$-1^{\circ} \sim +1^{\circ}$

↪ The relationship of thickness and operation.

↪ When the data of thickness is 2~8mm, turn the “select” switch to “continuous”, the power will be not cutted off when the carrousel turn one lap, it can avoid the heat which led by the short time of the machine's stop. If you use this way, the location of the foam must accord with two request:

↪ The rotate speed of the electric machinery can't beyond 500 r/min

↪ the outside arc length of carrousel is 1.5mm(the central angle is  $28^{\circ}$  ), forbid putting foam on this area.

↪ According to the cutting thickness, use different operation way properly, the usage life of the accessory can be extended.



## 6. Packaging and conveying

1. This machine has been detached and packed logically before selling, please lift the machine according to the packaging specification and shape pattern, avoiding the distortion of the machine when conveying. And it is advised to open the package (brief package, wooden box) on the installing place, and make sure that the package is intact before opening. This machine has been detached and packed logically before selling, and it is advised to open the package (brief 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 roll 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. Choose the basic location of machine tool, this machine must be installed on the place which without shake, and can't put it near the machine tool which is impactive, if can't be away from shake for some reason, you must put the cinder and cork board and so on near the basic as insulation ,its thickness is 150mm.

5. Please check up the insulating resistance of the electrical system, make sure that the value is not less than  $1 \Omega$ .

## 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 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 maintainance 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 step on the worktable when it is moving, in case of uneven cutting and accident.

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 equipments should be kept clean often, and kept away from oil, water, dusk.
- 2.The blade wheel and blade box must be cleared dust and added lube after cutting.
- 3.When short circuit occurs, please replacing with the same capacity fuse, brass wire is strongly prohibited.
- 4.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
- 5.Because the blade always be pressing when the machine running, loose the blade after every day's work in order to prolong the life of blade
- 6.Often add lube to axletree、 pole and other parts needs lube.
- 7.If stop using the motor and the 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 turned on solely for 48 hours with reducing voltage to the rated value 1/3 in order to get rid of the moisture.
- 8.Make sure the machine has well earth connection, if the earth connection screw has any oil filth or stain, clean it up promptly.
- 9.Pay attention to the exposed soft tubes and wires; keep them from crushing or breaking.
- 10.Check the flexibility of the connecting point and interlock setting regularly.
- 11.Operate the machine as the specification indicates.

## 9. Diagnosis and handling of daily malfunction

NO.	Abnormal situation	Causes and solution
1	Blade box over heat	1. Operating too long without rest 2. The density of the foam 3. Regulate the blade box and parallel the blade to the inner horizon of the blade box step, ensure the easy turning with hands. The blade is beyond the blade box 10-6mm. 4. Replaced the blade box when needed.
2	Grinding motor vibrates seriously	1. √Balance of the wheel circle 2. √Distortion of the motor axle 3. √Replace the motor axle when necessary
3	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.
4	Uneven cutting	1. Check the thickness counter and rotation coder 2. The blade is not installed in the right position: check its horizontal degree. 3. The angle between the blade plane and the horizon: when cutting 2.5mm ~ 10mm, beveled angle about $0.5^{\circ} \sim 2.5^{\circ}$ , and 10mm~ 150mm, about $-1^{\circ} \sim +1^{\circ}$ 4. The cutting not exact :check the blade accuracy, turn the machine to auto option and idle the blade, visually check whether the every cutting is of the same thickness according to the rulers near the slip noose. 5. Check the tartness of the blade: whether blade is blunt. 6. Whether the joint kit between the rotation coder and the driving screw skid.
5	Cutting mark too obvious	1. whether the blade is sharp 2. whether the blade vibrates, and the joint uneven 3. whether the blade is clean 4. whether the worktable is unimpeded 5. Whether the blade clip is too tight.
6	Abnormal noise of the blade strap	1. Check the intactness of the blade axle 2. Check the intactness of the blade wheel face
7	Abnormal noise of the Gantry	1. Check the lube on the screw pole. 2. whether there is junk or garbage in the screw pole or the clip noose

## Appendix A

## PC(thickness meter) parameters setting

NO.	Appellation	Setting
1.00	IN	1000
2.00	IN	n
3.00	IN	UP
4.00	OUT	std
5.00	OUT	HOLD
6.00	tp	C
7.00	PS	1
8.00	DP	0
9.00	W	40
10.00	RST	20 ms
11.00	KEY/P	L1

## Appendix B

## 2.2KW Frequency changer parameters setting

NO.	Appellation	Setting
0	Torque lift	6%
7	Speedup time	3
8	Speed-down time	1.1
9	Electric current	6
38	5V(10V)input frequency	70
44	Secondly speed-up or	5
56	Benchmark of electricity	6
71	electric machinery	5
79	Operate mode selecting	2
80	Capability of electric	2.2
83	voltage of electric	400
903	Frequency setting	70
904	Frequency setting current	0
905	Frequency setting current	50

**Annotation:Other parameter is changeless as original setting, the setting of other transducer and electric machinery consult this appendix**