



# Operation Manual

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## HOLO QA1000 High Frequency Welding Machine (Side Wall and Cleat Welding)

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# HOLO® BELTS PRESS MACHINE

WENZHOU HOLO INDUSTRIAL EQP MFG CO.,LTD

## Automatic belt welding machine

Be sure to read and completely understand this procedure before applying product.  
Be sure to select the proper PREFORMED product before application.



### CONSIDERATIONS:

This equipment uses 380V/220V 3PH Power supply, and requires an air compressor.

### MAIN COMPONENTS

1. Control panel
2. Welding mould(Side wall, cleat)
3. Electron Tube
4. Mould protector

### FEATURES AND BENEFITS:

This equipment used to Support high frequency panel up and down automaticly during the work.

YOU MUST HAVE AN AIR PRESS BEFORE YOU USE IT.



Air compressor

## Tool Specification

项 目 ATTRIBTEC 参 数 机 型 MODEL	QA1000
电源电压 Power Voltage	3φ 380VAC 50HZ
电源输入容量 Input Power	20KVA
高周输出 H.F Power	10KW
高周频率 H.F Freuquency	27.12MHZ
整流器 Recrifier	硅二极管 2CL
电子管 Oscillation tube	7T69
活动距离 Working Soack	200mm
驱动方式 Operation	气压
最大压力 Maxpressuere	800KGS
机身尺寸 Dimensions	大约 1100×1450×1900mm (L×W×H)
上模板尺寸 Size of High frequency panel	600 mm×400mm
下台板尺寸 size of working table	750 mm×750mm

## General Safety Rules

[Save These Instructions](#)

### Signal words:

“DANGER” indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. The signal word is limited to the most extreme situations.

“WARNING” indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

“CAUTION” indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

### Safety Symbol



This international safety symbol is used to identify and call attention to specific safety matters.

### Safety Information

To Avoid Severe Personal Injury or Property Damage, read carefully and understand the following Safety Precautions.

### Overall Safety rules

**⚠ DANGER**

This action will send a more abrupt collision sound, the operator needs to predict that, in order to avoid panic!

**⚠ DANGER**

Press wheel drive rapid upward pressure roller fixing belt while open the pressure valve.

**⚠ WARNING**

Frequency is proportional to the temperature of the hot air gun.

**⚠ CAUTION**

manual welding need to use hand welding hot air gun, please prepare in advance.

**⚠ CAUTION**

Bars cutting length shown above is ideal, it will facilitate the completion of the final welding by hands, please pay attention!

## I. Machine introduction and features

### 1、 Production operation

The operator only needs to put products into the mould and trigger the switch, the mould will automatically drop and rise, the process is safe and convenient. The operator can use this machine with simple training (Operator without training should not operate the machine).

### 2、 Output strength adjustment

The machine adopts unique low loss coaxial oscillator. It can change output strength at any time according to mold size and thickness of materials. This high-frequency machine does not generate interference to outside while working.

### 3、 Protection device

The current resistance protection: The device can cut off high frequency output when the output force is over rated value. In this way, it can protect evacuated tube from damage because of excessive current.

Spark protection: If mould produces sparks in the process of working. The protector can cut off output in time and mould will also automatically rise and leave products. It can protect mould from damage because of sparks.

Emergency brake: The machine can stop high frequency output at any time in the process of working, at the same time, the mould will return to its original position.

### 4、 Rise distance

This machine is equipped with three-position solenoid valves, which can cooperate

with time system to freely adjust rising distance of inflator. It reduces the time of the pump for rising and dropping and improves production efficiency.

## II. Equipment explanation

### 1、 Setting Position:

The machine should be far away from high temperature object, moisture and rain, dust to prevent electricity from leakage and the electronic component burning down.

### 2、 Mains input:

Power: Three-phase, 380V.

Power input: 12KVA.

This machine is equipped with 60A the power switch and fuse. The machine must grounding, otherwise may have electricity leakage.

### 3、 Pneumatic supply:

A.This machine uses compressed air as motive power, so it should be equipped with the air compressor (over 1HP).

B.The barometer indication should be in 4--6kg

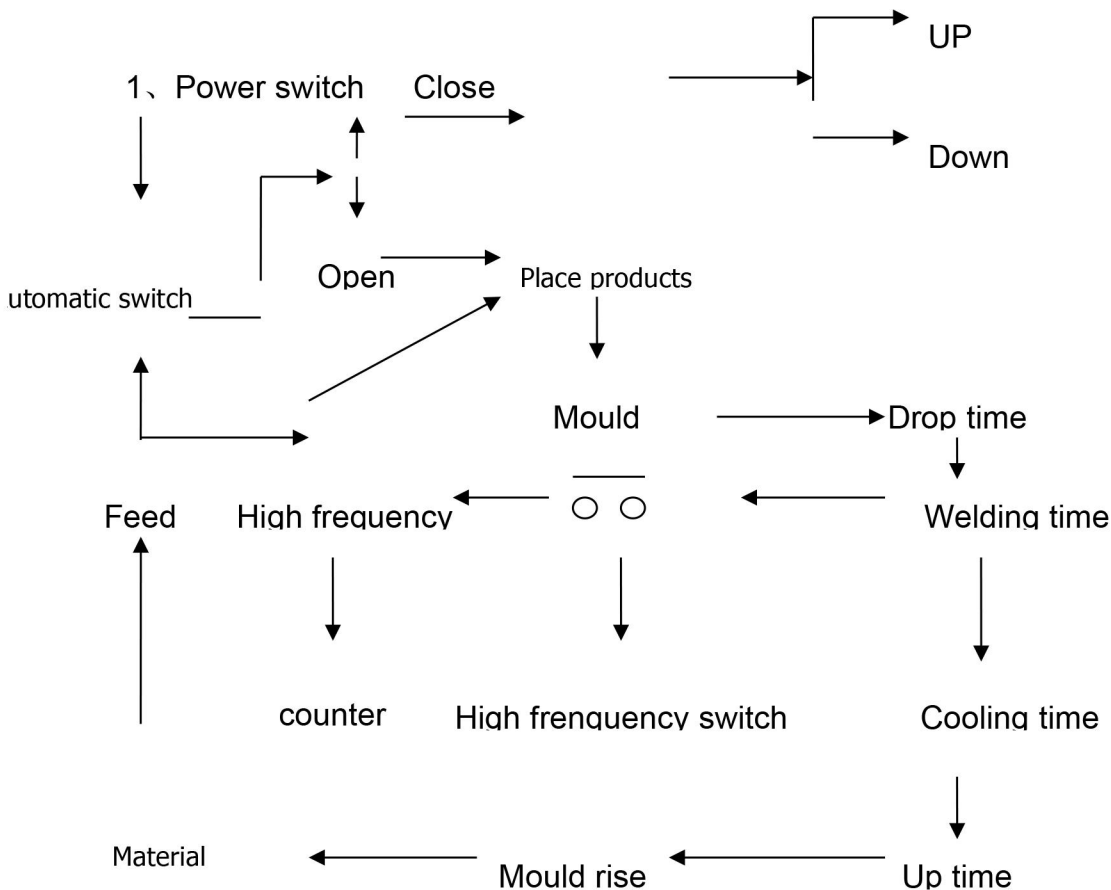
4、 Adjust mould parallel: Please turn off the high-frequency switch and automatic switch, and then start power main switch.

- Press the" up" button, let cylinder back to its highest position, then push the plate close to bottom crown, Press the"down" button, press the bottom mould closely.

- Loose the screw of the mould, press "down" button to make tool mould touch bottom mould, and then press the "up" button to make the upper plate leave heaters and tool mould for 1/4 inch. Lock the screw.
- The installation of copper sheet: Press "down" button and then adjust copper sheet position, press lower die closely.
- Press the "up" button, making the pump raise to its highest position.



### III. Operating instructions



2、 To ensure safety, please note the followings:

- 1) Please understand the specific operation procedure before using this machine.
- 2) Please do not touch the mould and the heating plate while working, or else, you will be got burned.
- 3) Copper sheet should grounding, otherwise, push disc may have leakage of electricity.
- 4) Please close high-frequency switch and automatic switch before adjusting moulds.

5) Close high frequency switch and automatic switch, then let the tool mould press the push plate closely, at the same time, cut off the compressed air input and the power.

6) There is HV inside the machine, please turn off the main power when maintain.

7) Please remove the evacuated tube when move the machine, or else, the evacuated tube will be damaged.

8) Combustible substance should far away from push plate, or else, it may cause fire.

3、 Turn on the power switch, preheat the electric tubes for 10 minutes before using high frequency output.

4、 Testing before HF output:

1). Close high-frequency switch, open automatic switch, setting time.

2). Drop time for about 2-4 seconds.

3). HF output for about 40/60 seconds.

4). Cooling time for about 20-30 seconds.

5). Rise time for about 2 seconds.

6). Rising distance depends on mould, changing rise time can adjust space of the mould.

7). Top and bottom mould should align and copper sheet should connect ground well.

Note: Cool the mould in time/Use reasonable current/welding time should moderate.

8) Adjust high frequency output:

High frequency knob regresses "0". put the materials and moulds in the right position, start automatically switch, then moulds drop (dropping should wait 0.5 seconds after press materials closely) and HF output should be 0.25 - 2A (if not, oscillating circuit has fault).

Please adjust the HF output according to the moulds, if the output strength is strong or the mould area is small, the HF output should be shorter, or else, the HF should be longer.

### **V. Processing makings**

1) This machine is mainly used for PVC, PU, PE materials, specially for welding material contains more than 30% PVC.

2) Mould material:

Copper, aluminum, zinc materials

3) Insulation material selection:

Generally use insulation cloth, other materials: insulation paper, insulating tape, glass, teflon, thin electricity board, etc.

### **VI. Maintenance instructions**

- Moulds and plastic should be kept clean when using HF. Otherwise, it will produce sparks. If machine has sparks, please check whether mould is burned out. If there is any gap, it must be repaired. If the mould is not clean, please use clean water clean it.

- Always check grounding copper sheet, if there is damage, it must be replaced.
- Compressed air water may store up in filter bottles, please remove the water before using.
- If the lubricating oil is under instructions line, must add it (lubricant oil should use non-corrosiveness oil).
- Clean the machine once a month (the inner of the machine, especially Oscillator).
- Mechanical transmission parts must be refueled oil every 2 or 3 months.

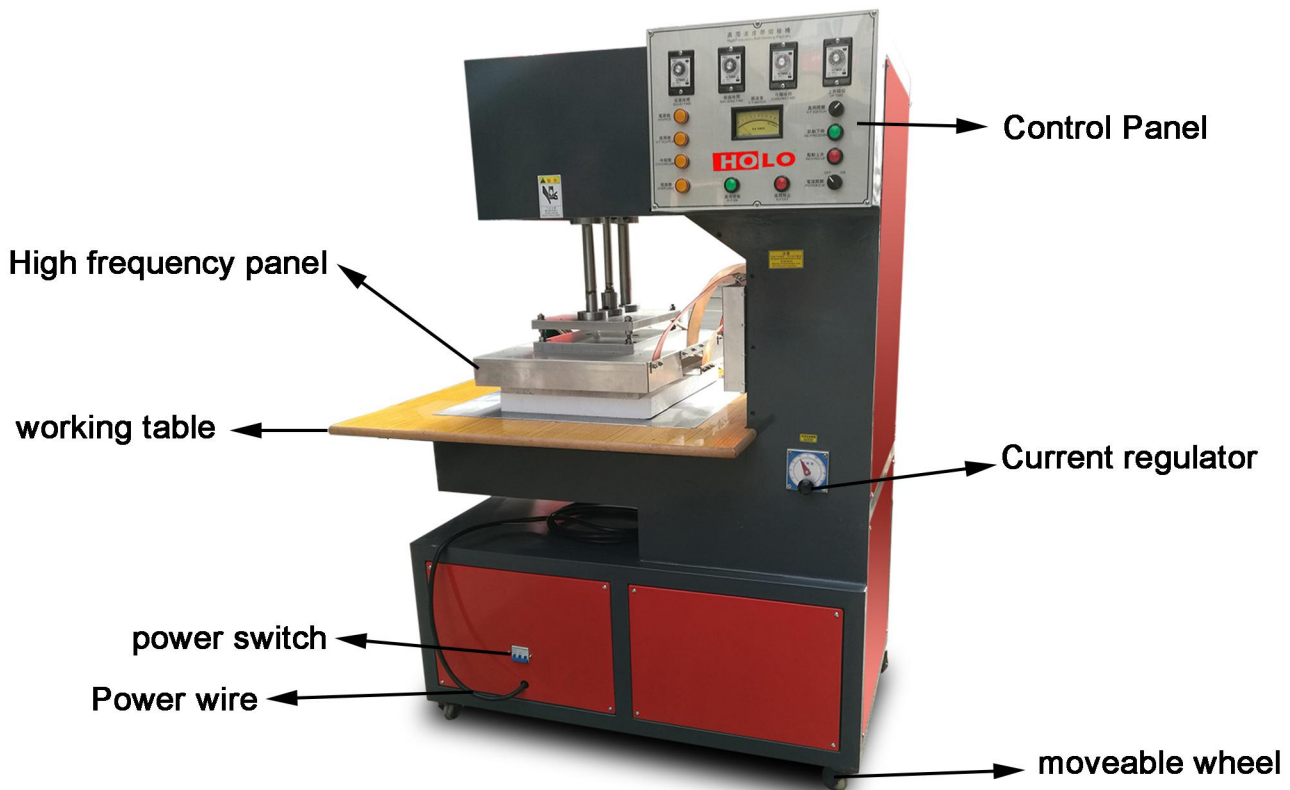
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## Safe Operation of Welding machine

### MATTERS OF PARTICULAR

This manual will be referred to the key components of the following, if failed to account for the location, please refer to the map to understand.



Welding time (Depends on the material welding)

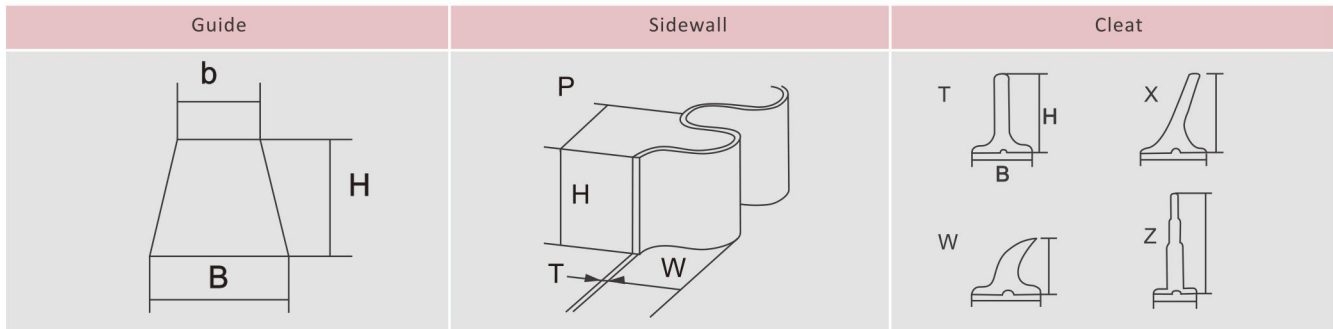
Cooling time(Depends on the material welding)



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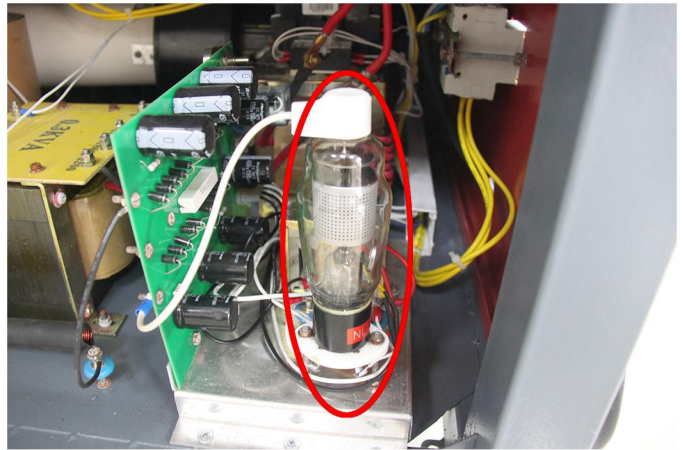
## Technical Datasheet:



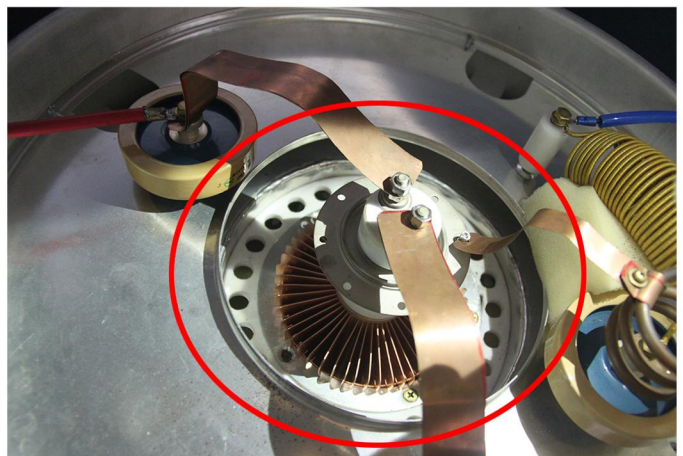
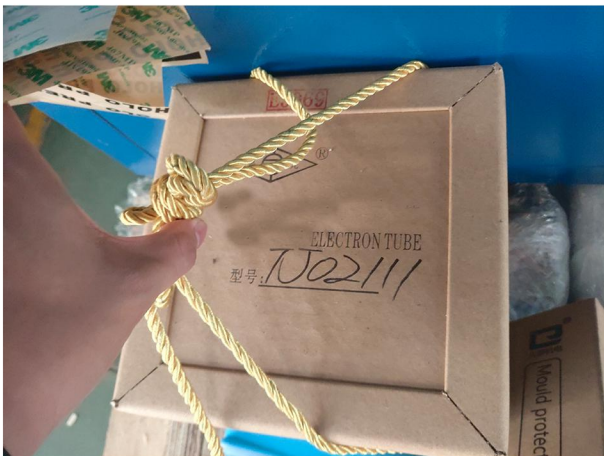
Material	Model	Size	Color	Operating Temperature (°C)	Minimum turning diameter (mm)	
					Surface	Bottom
PVC	D6	6x4		-10/+70	40	30
	D8	8x5		-10/+70	50	40
	D10	10x6		-10/+70	70	60
	D13	13x8		-10/+70	100	80
	D17	17x11		-10/+70	110	90
	D22	22x14		-10/+70	180	120
PU	D30	30x17		-10/+70	230	280
	D13	13x8		-20/+80	100	70
	D17	17x11		-20/+80	110	90
	D22	22x14		-20/+80	180	150
PVC	T10	10x10		-10/+70	40	
	T20	20x20		-10/+70	90	
	T30	25x30		-10/+70	120	
	T40	25x40		-10/+70	120	
	T50	25x50		-10/+70	120	
	T60	38x60		-10/+70	150	
	w35	28x35		-10/+70	130	
	X50	30x50		-10/+70	80	
	X60	30x60		-10/+70	80	
	X80	43x80		-10/+70	100	
PU	T20	12x20		-20/+80	40	
	T30	12x30		-20/+80	45	
	Z120	40x120		-20/+80	300	

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Assembly the mould protector and electron tube, please make sure it is correct.



A.Warning/ Caution



B.High Voltage



C.Ground Connection



D.Warning Hands Pingching



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1.Assemble the Coherent



2.Open the power switch



3.Connect the air pipe



4.Open the power switch



5.Open the H.F switch



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6. Inset the material, sidewall, you need put Extra material on bottom if the height is not enough. For example, you need the side wall height only 4mm, you need put 4.2mm material (8mm side wall mould).



7. Adjust the Delay raise time ("2s" is enough)



8. Adjust the welding time, depends on the material you welded, PVC or PU, side wall or cleat.



9. Adjust the cooling time, depends on the material you welded, PVC or PU, side wall or cleat.



10. Adjust the UP time ("2s" is enough)

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11.Put the mould on the middle of the H.F Panel.



12.Press start.



13.Adjust the H.F power around 4~6.



14.Check this part,you can see the H.F power.



15.Work automaticly,so you don't need to touch any button again,check the quality after the work completed.

## Common problems and solutions

No.	Faults	Check steps	Solution
1	Fan doesn't work	1.Mains input breaks 2.Fan damage	Check the mains input Check whether the coil has been burnt out fan blade is flexible.
2	Tool mould can't drop	1.Dropping time system damage 2.The pump damage 3.Electromagnetic valve damage 4.Relay damage	Check the pump, relay and electromagnetic valve.
3	When high frequency outputs, the motor immediately cuts off output, tool mould also immediately backs up.	1.Tool mould sparks Output current is overload. 2.The spark device damage 3.Output capacitance slice short-circuit 4.HV grounding 5.Valve damage	Check whether the mould has been burnt out Reduce the HF output Check whether spark-ground voltage is about 30v Check whether 300P capacitance short circuit, HV copper should grounding. Change the electronic valve.
4	Ammeter exceeds 1.5 A, motor can not cut off output	1.Relay damage 2.Variable resistor burnt out	Check electric resistance is normal.
5	Tool mould sparks	1.Output force is excessive 2.mould heating insufficiency 3.mould and welding materials are not parallel 4. Pneumatic insufficient	Reduce output. Examine whether fever indicator lights shines, if light shines, it means a lack of temperature. (instructions should about 140 °C) Check whether upper and bottom moulds are parallel, air pressure should 4KG-6KG.
6	No high frequency output	1.filament transformer damage 2.high-voltage transformers damage 3.Gate resistance burnt out 4.Electronic valve damage	Check the resistance, change electronic valve.
7	Tool mould cannot rise	1.Rise time system of damage 2.Relay damage 3.Pump damage	Check air source to see whether push and return is normal
8	Heater has no heat output	1.calorific wire damage 2.Thermostat damage	Change with new ones.

## SAFETY CONSIDERATIONS

This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN PERSONAL INJURY OR DEATH.

Do not modify this product under any circumstances.

This product is intended for use by trained technicians only. This product should not be used by anyone who is not familiar with, and not trained to use it.

When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

For proper performance and personal safety, be sure to select the proper size PREFORMED product before application.

PREFORMED products are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



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**HOLO**



Factory scene

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