



ZHENGZHOU TUOHONG MACHINERY EQUIPMENT CO.,LTD

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Dear Sirs/Madam,

Thank you for using our medium frequency, high-frequency induction heating equipment. In order to improve the quality of your products processing, production efficiency, ensure safe production and extend the life of the device, please carefully read the instruction manual before installing and using the equipment. During use, if you have any comments and suggestions, please contact us.

1.Preface

induction heating machine has small size, light weight, fast heating, power consumption, cheap and quickly these advantages , won the lover from majority of users. The following is user's instructions of TZP series.

2.Common application areas:

The MF.HF induction heating power is essentially a "converter." Its role is to converted 50KHZ AC power, into MF.HF energy. By sensors in the MF, high-frequency energy is coupled to the work piece. Non-contact heating. Thus it is widely used. Especially heating ferromagnetic material, the effect is very good.

2.1. Brazing welding:

Carbide cutting tools, diamond tools, brazing, silver brazing. Since the high-frequency induction heating power by changing the shape of the sensor, to accommodate a variety of shapes of the tool, complete local heating.It is the preferred process in welding filed.

2.2. Steel surface hardening categories:

One of the greatest features of the high-frequency induction heating is rapid heating surface, so it is the only means of surface hardening steel (especially when hardening depth requirements is more stringent).

2.3. Thermal steel forming, hot forging, forging categories:

Many hot steel forming: as forging, rolling, upsetting top does not require heating the whole parts. Induction heating just play its role: fast localized heating advantage. Because induction heating and completely non-polluting, is the best way to replace the traditional coal, gas burning process.

2.4. The non-ferrous metal smelting:

Another important feature of high-frequency induction heating energy is completely focused on the metal to be heated, resulting in extremely high temperatures. This heating is non-contact type, even can heating in vacuum, and the material can not be contaminated, such as gold, platinum etc. MF induction heating is one of the means in the non-ferrous metal smelting widely used.

2.5. The wire rod continuous heating:



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Important feature in one of the high-frequency induction heating is non-contact heating, for linear materials, such as non-magnetic steel bar, copper, aluminum coated plastic and so on. During the heating process, without affecting the continuous movement of the wire, to facilitate the automation of the heating process.

3.TZP Series power supply and water supply requirements

Model	Input Voltage	Phase current	Input power	Water supply requirements
TZP-36	~380V±15%	36A	25KW	≤50°C、0.15~0.2MP
TZP-60	~380V±15%	63A	35KW	≤50°C、0.15~0.2MP
TZP-90	~380V±15%	93A	45KW	≤50°C、0.15~0.2MP
TZP-120	~380V±15%	100A	70KW	≤50°C、0.15~0.2MP
TZP-160	~380V±15%	140A	90KW	≤50°C、0.15~0.2MP
TZP-200	~380V±15%	220A	120KW	≤50°C、0.15~0.2MP
TZP-300	~380V±15%	245A	160KW	≤50°C、0.15~0.2MP
TZP-350	~380V±15%	380A	200KW	≤50°C、1~0.3MP
TZP-450	~380V±15%	450A	260KW	≤50°C、1~0.3MP

4.Equipment front and rear panel introduction

4.1. Control panel functions

Name	Function	Instruction
Input voltage	Indicate DC voltage	Indicate the rectified DC voltage.
Output current	Indicate output current	The rate is higher, the output power is higher.
“Start heat button	Control heating start	press this button, the device heating.
“Stop” heat button	Control heating stop	heating process, if you click this button , will stop heating (usually not use this).
“Power adjustment ”	Adjusting output power	Power is high in clockwise direction; power is low in counter clockwise direction.
Alarm	“Over voltage” OV	“over-voltage” lamp lights, and emits a constant beep, and you should deal with power failures,until voltage normal,start machine.



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and power indicators	Owe voltage	Indicate voltage is too low
	Over current , OC	This light indicates that the output power is more than rated value.
	Excess caloric OT	When this lamp lit ,its power components and heating induction coil is water-cooled , such as the water temperature is too high or water amount is too small, the indicator light, the device automatically stop working, emits a constant beeping.
	Lack water LW	When pressure > 0.1Mpa, flow switch off; when pressure<0.06Mpa, “LW” alarming.
	Phase wanting LP	Indicate phase loss
	“Power”	Indicate power status. Close the power switch, light indicates that there is electricity.
“Time start” button	Time start button	/
“Time stop”button	Time stop button	/
Timer switch	Close /open	“Close”Normally it is in “manual” position, when heating controlled by pedal, if need to set time automatically,”open” it is in “auto” position
Timer setting	Start to set time	Time setting: H-hour; M- minute; S-second 1. Put it in “S”, “M” or “H” according to requirement. adjust to the time required
“Foot switch socket	Control heating	used to connect a foot switch, instead of heating the buttons on the front panel to operate.
“oscillation frequency”	Indicate machine working frequency	/

4.2Rear panel:

4.2.1, the power input three phase 380V, 50HZ please do not connect wrong .



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4.2.2. Inlet water:

4.2.3, outlet water: water temperature below at 50C (hand feel is not hot) is normal, you should increase the tank volume, if water temperature > 35C , should change the water.

4.2.4.High frequency cable : connect generator and transformer

4.2.5. Ground wire: This terminal should be grounded by electrical specifications.



5.Install methods and requirements

5.1.The power cables, air switch selection:

Model	Peripheral Switch's capacity	Copper wire cross area
TZP-36	≥60A(3P)	≥6MM ²
TZP-60	≥100A	≥10MM ²



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TZP-90	≥100A	≥16MM ²
TZP-120	≥150A	≥25MM ²
TZP-160	≥200A	≥36MM ²
TZP-200	≥250A	≥50MM ²
TZP-300	≥300A	≥70MM ²
TZP-350	≥400A	≥90MM ²
TZP-450	≥500A	≥100MM ²

Because the devices are small, the main power switch is not set in the machine. When users install distribution power lines, must set controls the power switch for each the high-frequency,medium frequency induction heating power.

Note: The distribution power lines installation must be formal, joint firm, not loose or ignition.

5.2. safety grounding wire:

Various types of equipment has safety ground terminal. To prevent accidental leakage accident, the user must set the safety ground wire. Do not allow the use of zero line of power lines for safety ground.

5.3.Water supply facilities:

Water supply facilities, is the key auxiliary condition for Medium,high-frequency induction heating power supply to work , the user must pay close attention It has two options:

5.3.1. Use tap water:

The program is simple to implement, the cooling effect is good but water consumption is big.

5.3.2.Design storage tanks and water pumps to constitute a cooling water circulation system:

The implementation of the program is a bit complex, high initial cost, but save water.Its cooling effect depends on water pool size and heat lose conditions.

It must be noted: the volume of tanks should be determined according to working hours. Generally, the larger the volume, the water temperature rises slowly, better. In normal use of the device, should ensure water not stop, and there is a greater pressure, water temperature is not higher than 45 °C.

6.Use methods and steps

After confirming the power lines, safety grounding, cooling water connections, sensor installation is correct, start the heating machine:

6.1. open cooling water supply, water pressure is not too large nor too small (1.5-2 kg). Water pressure too big is easy to make the machine pipeline rupture, or coupling/joints fall off, caused failure. Cooling water pressure is too small,also can



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easily lead to failure.

6.2. Turn on the air switch power supply:

Before the power supply, the air switch on the back of the machine should be in the closed state. (Air switch should not be used as the power switch). After switching on the air witch, see the voltage indication , whether input AC voltage is normal,and power indicator is normal. If normal, can be heated to work piece properly.

Note: The first time you press the heating switch, we can hear the sound of AC contactor closed.

6.3.output power adjustment:

Work piece to be placed correctly in the sensor (the work piece can not make the sensor short circuit) depresses the foot switch, power meter indicates the output DC current, according to the heating needs, through the "power adjustment" knob to adjust the output current to change the output power. (Jog, lock power. Adjust start and control)

6.4. Use timers:

For the user when the high-frequency induction heating power supply used for the quenching process, using the timer function. First toggle switch to the right"start"t. Jog "Time Power" ,step on the foot switch, automatic timer count operation, when the set value, the machine automatically stop working. When the machine is in working condition,while you want/need to stop it in time, jogging timer stop button.

WARNING: Prohibit touch the with the input and output electrodes exposed parts.

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More information,please contact us !

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