

# Intelligent Manufacturer of Induction Heating Equipment





#### Suzhou Hongchuang High Frequency Heating Equipment Co.,Ltd.

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### About

# **Hongchuang Heating**

Suzhou Hongchuang High Frequency Heating Equipment Co., Ltd. is an company specializing design and manufacture industrial heating system with induction-based technology. With 20 years application experience and engineering expertise, the company is committed to providing customers with integrated industrial heating solution and innovative induction heating system in excellent quality, along with comprehensive services.

Hongchuang has a manufacturing plant in 4000 m² near Shanghai, a professional and creative R&D team, a complete process laboratory. Regarding to production and process requirements, we provide manual and automated production induction heating system for brazing, shrink fitting, hardening, heat treatment, forging & forming, plastic heating, wood drying, glass heating etc.

Our induction heating equipment has served more than 5000 customers in various industries, such as automotive, machinery, new energy, HVAC, construction, medical, food, aviation and more industrial fields.





# **Certificate**









#### Hongchuang is an ISO 9000-certified manufacturer with 71 patents and CE Certificate

















# **Customers**









































































Induction Coil Making

# Workshop



Customized Induction Equipment Assembly





Induction Generator Aging Test

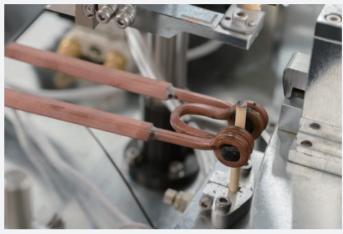


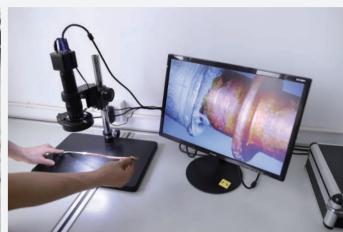
Laboratory

# **Outstanding Service**

#### Free Lab Testing

You can send your parts and heating process requirement to us for free testing. Our experienced engineers have evaluated thousands of heating applications in the laboratory to meet your heating process needs.





#### **Induction Coil**

Customization of induction coil is available to ensure heating part quality, process efficiency, and manufacturing cost. we still provide coil design guide to our customers for their production development.



#### **Induction Heating Consultation**

Our expertised R&D Team offers innovative and effective heating solution for specific requirement of customers.

#### **Technical Support**

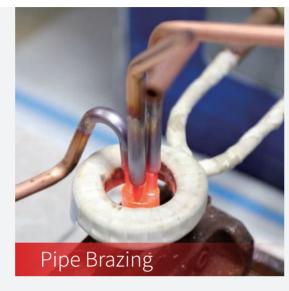
Our on site and on line technical support includes installation & commission service, repair and maintain, spare parts and training course.



# **Ultra-High Frequency**

# **Induction Generator**









#### Feature

- ▶ Ultrahigh frequency (60kHz-200kHz), particularly suitable for small size workpieces heating. Ultra-fine metal minimum diameter 0.1mm can be brazing.
- Induction heater is small size and space saving.
- > Auto frequency tracking, work heads easy to work at high efficiency.
- ➤ Heating reliable and stable.
- ▶ Heating without vibration, ensure accurate heating position.

#### **Applications and Industries**

Ultra-high Frequency Induction generator is suitable for small workpiece heating and hardening depth less than 2mm.

CGP-6.0kw	CGP-12kW	CGP-20kw	CGP-30kw	CGP-40kw		
Single-pahse 220V	Single-pahse 220V	Thre	ae-nhase 380V/50-60E	l <sub>z</sub>		
50-60Hz	50-60Hz					
0.25-25	0.4-50	0.6-30	1.0-45	1.2-50		
5.2	11	20	30	40		
1000-1200	1000 1700	50-250	50-200	50-200		
1000 1200	1000 1700	30 230		30 200		
100%	100%	100%	100%	100%		
2506	2500	2500	2500	2500		
<35°C	<35°C	<35°C	<35°C	<35°C		
>1 1MPa	>0.5MP2	0.2MPa 61 /Min	0.2MPa.6L/Min	0.2MPa.6L/Min		
~1.1IVIF a	~U.JIVIF a	U.ZIVIF a.UL/IVIIII	0.21VII a.0L/ IVIIII	U.ZIVIF d.UL/IVIIII		
	Single-pahse 220V 50-60Hz 0.25-25 5.2 1000-1200	Single-pahse 220V       Single-pahse 220V         50-60Hz       50-60Hz         0.25-25       0.4-50         5.2       11         1000-1200       1000-1700         100%       100%         <35°C	Single-pahse 220V       Single-pahse 220V       Three         50-60Hz       50-60Hz       0.6-30         0.25-25       0.4-50       0.6-30         5.2       11       20         1000-1200       1000-1700       50-250         100%       100%       100%         <35°C	Single-pahse 220V       Single-pahse 220V       Three-phase 380V/50-60H         50-60Hz       50-60Hz         0.25-25       0.4-50       0.6-30       1.0-45         5.2       11       20       30         1000-1200       1000-1700       50-250       50-200         100%       100%       100%         <35°C		



# High Frequency

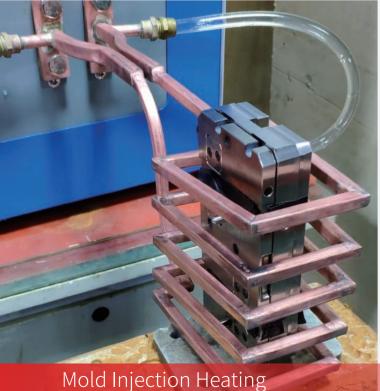
# **Induction Generator**

#### Feature

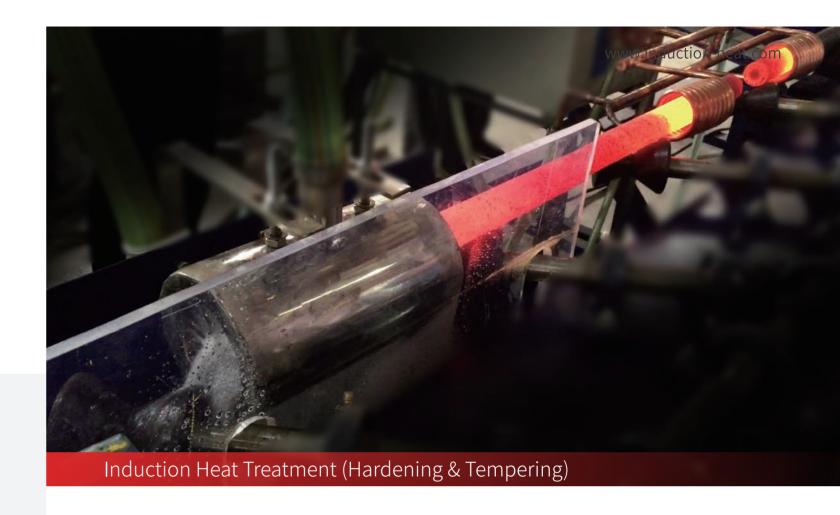
- ▶ High efficiency with IGBT inverter technology & LC series resonance circuit.
- Mitsubishi PLC provides a common signal transmission interface of 24V and 0V, facilitating interconnection with PLC, CNC control, and supporting equipment, achieving automation and integrated control.
- Accurate power adjustment ensure stable heating quality.
- Precise temperature control: In collaboration with the manufacturer, we have jointly developed infrared thermometers with a measurement accuracy of  $\pm 1\%$  measuring range; Closed-loop control system with PID controller, achieving precise temperature control during induction heating process.











#### **Applications and Industries**

High Frequency Induction Heating Equipment have been widely used for brazing, shrink fitting, hardening, heat treatment, forging & forming, melting etc in various industries, such as automotive, machinery, new energy, HVAC, construction, medical, food, aviation.

Model	DIH-30	DIH-35	DIH-40	DIH-50	DIH-60	DIH-80
Max. Power Output	30kW	35kW	40kW	50kW	60kW	80kW
Duty Cycle	100%	100%	100%	100%	100%	100%
Power ADJ Range	5~100%	5~100%	5~100%	5~100%	5~100%	5~100%
Frequency	25~60kHz	10∼20kHz	25~60kHz	10∼25kHz	10∼20kHz	10~20kHz
Input Voltage	3×380V/50Hz	3×380V/50Hz	3×380V/50Hz	3×380V/50Hz	3×380V/50Hz	3×380V/50Hz
Max. Input Current	45A	55A	60A	70A	100A	130A
Min. Cooling Water Flow	10L/Min	10L/Min	10L/Min	15L/Min	15L/Min	15L/Min
Cooling Water Temp.	Max.35°C	Max.35°C	Max.35°C	Max.35°C	Max.35°C	Max.35°C
Cooling Water Pressure		0.2~0.3MPa		0.1~0.3MPa		0.2~0.4MPa
Ambient Temp.	+5°C~+40°C					













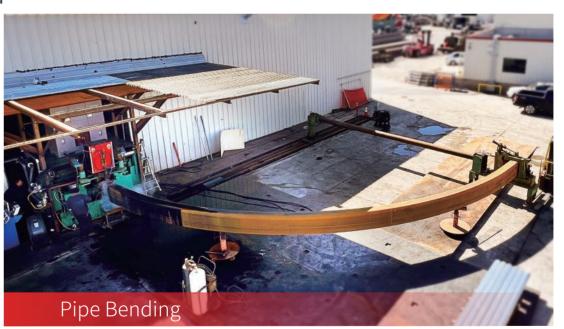


Medium Frequency **Induction Generator** 

#### Feature

- ▶ High efficiency with IGBT inverter technology & LC series resonance circuit.
- > Digital chip technology for power output control and faults detection reducing power variations or faults caused by environmental factors and usage time.
- Modular design, 80% of components on module groups are same, making maintenance and repair simple and
- Reserve AD, DA interfaces to provide analog signal transmission, digital signal transmission using the MODBUS protocol, RS-485. Induction heater is enables easy integration with PLC, CNC control.

Model	HCZ-120	HCZ-160	HCZ-200	HCZ-300	HCZ-400	HCZ-600	HCZ-800
Related Power Output	120kW	160kW	200kW	300kW	400kW	600kW	800kW
Frequency Range	5~8kHz	10~14kHz	0.5~8kHz	0.5~8kHz	0.5~8kHz	0.5~8kHz	0.5~5kHz
Input Current (AC)	185A	245A	305A	455A	610A	910A	1215A
Working Voltage	380V50Hz						
Voltage Range	340V-420V						
Power Source Require	150kVA	200kVA	250kVA	380kVA	500kVA	750kVA	1000kVA
Input Current Require	200A	270A	335A	500A	670A	1000A	1340A
Cooling Water Pressure 0.1Mpa-0.25Mpa							



#### **Applications and Industries**

Medium frequency induction generator is suitable for large workpiece heating or high productivity requirement of heating.







## Portable

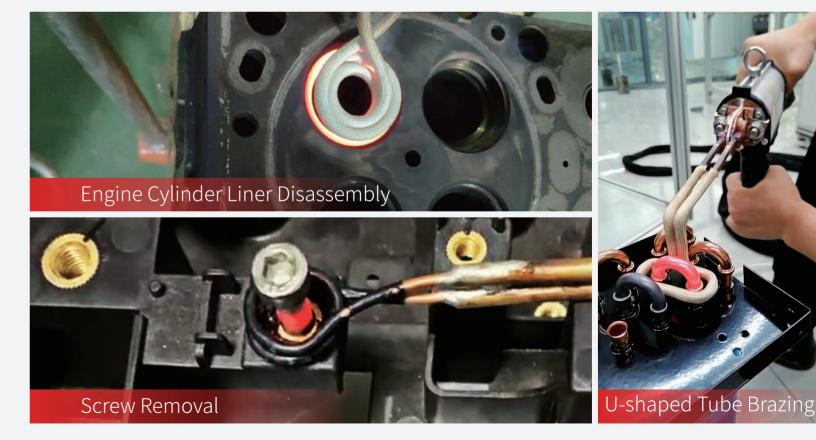
# **Induction Heating Machine**

Potable induction heating device is widely applied in industries such as refrigeration and HVAC, household appliances, automobile manufacturing, and medical devices.

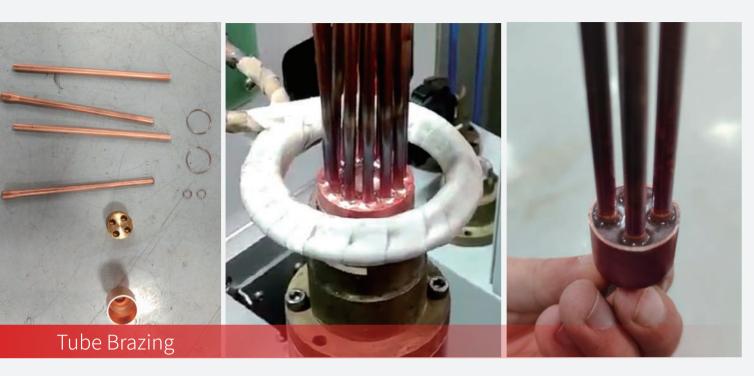
It is especially suitable for brazing, hot removing and other processes in various industries such as valve components for air conditioning refrigeration, tubing components for refrigerator/freezer, solar energy fittings, compressor parts, washing machines (pipe-to-pipe connections, pipe-to-shell connections, pipe-to-valve connections), automobile evaporators, compressor connections, short-circuit rings on motors.

Control Method	Digital Control						
Heating Method	Manual & Auto (Temperature control)						
Heating Current Settings	5-stages						
Dispaly of working status	Heaint Time, Heating Temperature, Current						
Model	PHC-S-35	PHC-S-40	PHC-S-50	PHC-S-60	PHC-S-80		
Power Output	3-35KVA	3-40KVA	3-50KVA	3-60KVA	3-80KVA		
Working Frequency	10~20KHz	10~60KHz	10~35KHz	10~20KHz	10~20KHz		
Length of Output Cable	2-5M	2-5M	2-5M	2-5M	2-5M		
Input Voltage	380V±10% 50/60Hz						
Input Ppwer Factor	0.95	0.95	0.95	0.95	0.95		
Breaker	3P-63A	3P-63A	3P-80A	3P-125A	3P-125A		
Cooling Water Temperature (Input)	35°C	35°C	35°C	35°C	35°C		
Water pressure Max/Min	4/6bar	4/6bar	4/6bar	4/6bar	4/6bar		
Working Temperature	+5°C~+35°C	+5°C~+35°C	+5°C~+35°C	+5°C~+35°C	+5°C~+35°C		















Two Stations Induction Machine for Tube Brazing

Induction Brazing Machine for Electrodes Brazing of Car Battery

Linear Drive Induction
Brazing Equipment

## Automation

# **Induction Brazing Equipment**

Hongchuang has 20 years experience of induction brazing and offer customized automatic system based on variety brazing process and production line.

#### Feature

- Multiple-segment settings for induction heating: There are 5 segment basically and can be customized according to customer requirements.
- Precise temperature control: In collaboration with the manufacturer, we have jointly developed infrared thermometers with a measurement accuracy of  $\pm 1\%$  Measuring range; Closed-loop control system with PID controller, achieving precise temperature control during induction heating process.
- Accurate heating: Heating time can be accurate to 0.1 seconds.
- **>** Data Storage: Multiple process parameters storage with one-click for data retrieval.
- ▶ Plentiful interfaces: Can be connected to industrial buses such as RS-485, Profibus, CAN etc. HCGP induction heater is easier to integrated with other machine and achieve production automation.
- ▶ Induction brazing system can be multiple heating stations, linear drive, rotary index type and other types for variety workpieces loading and composite process requirement.

#### **Applications and Industries**

Induction brazing process have been used on a wide variety of material and part configurations jointing.











Automatic Shrink Fitting System for stator and rotor



# Induction Shrink Fitting Equipment

#### Feature

- > Shrink Fitting Machine is Integrated design with rotary indexing, loading manually or loading by robot arm, feeding, heating, fitting and unloading automatically.
- **Workpieces** is heating with induction, precise localize heat meet tight production tolerances.
- Multiple-segment settings for induction heating: There are 5 segment basically and can be customized according to customer requirements.
- Precise temperature control: In collaboration with the manufacturer, we have jointly developed infrared thermometers with a measurement accuracy of  $\pm 1\%$  Measuring range; Closed-loop control system with PID controller, achieving precise temperature control during induction heating process.
- Accurate heating: Heating time can be accurate to 0.1 seconds.
- Data Storage: Multiple process parameters storage with one-click for data retrieval.
- > Plentiful interfaces: Can be connected to industrial buses such as RS-485, Profibus, CAN etc.
- Induction heater is easier to integrated with other machine and achieve production automation.
- > Customization available for different type of workpiecs such as motor housing, stator and rotor, shaft, gear etc.

#### Shrink Fitting & Disassembly

Our Induction shrink fitting equipment use for parts fit or removal mainly in the automotive industry and the production of electric motors.

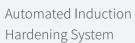






# Induction Hardening Machine

# HOCHOP





Quenching Machine Tool

#### Feature

- Induction heating, shaft travel and cooling is under CNC Control to guaranty accurate heating and cooling.
- Fast heating increase the productivity.
- > Flexible design and control adaptable to a wide variety of hardening parts.
- **>** Customization is available for larger & small and various applications with induction hardening solution.
- **>** Easy automation and work with production line.
- ➤ High heating efficiency & energy saving.











# Other Integrated Automation Induction Heating Machine

#### **Automated Induction Melting System**

Melting capacity: 5kg to 50kg Power output: 30-120kW

High heating efficiency and melting productivity
Hongchuang automation induction melting machine is
customized for different metal melting material such as
aluminum, brass, steel, iron ore, stainless steel, and other
non-ferrous metals.





Induction Melting

#### Automation Induction Annealing Equipment

Induction annealing for rods, pipes, threaded bar and other parts etc. Hongchuang automated Induction annealing equipment can be custom design with various loading and feeding method, high efficiency induction heating for variety of automation induction annealing process.

Power output of machine: 10kW-200kW

Frequency of machine: 5KHz-60KHz





Induction Annealing

#### Turntable Induction Mould Heating Equipment

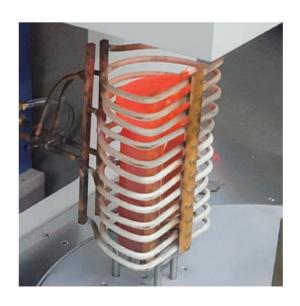
Hongchuang induction mold heating equipment is suitable for heating molds in various shapes.

Heating Temperature up to 1200°C

Power output of machine: 10kW-120kW

Frequency of machine:10KHz-60KHz





Induction Mold Heating

#### Automation Induction Heater for steel welding

This machine is widely used for Preheating before welding and post-welding heat treatment of special steel, such as pipe, steel plate, etc. Preheating steel before welding can reduce stress, improve welding strength, and prevent cracking. Postheating is used for hydrogen elimination, annealing, tempering, normalizing and other processes.





Pre-heating & Post-heating