Company Profile
HLQ INDUCTION EQUIPMENT CO., LTD
(former DeWei Induction Heating Machine Co., Ltd) specializes in Induction Heating machine manufacturing and marketing for more than 1 decade. The machines cover Automatic Surface Hardening & Tempering Machines, Flexible Brazing Systems, Compact Adhesive Curing Systems, Efficient Tube Welders & Thermal Straightening Systems. They are widely used in heat treatment, bonding, brazing, welding, forging, melting and heat fitting solutions. Transformer converters from 500Hz to 1100kHz frequency & power sizes from 5 to 300 KW.

Induction heating machines apply the most advanced electric components and unique high-new techniques. They can heat metal quickly and partially. They can also penetrate nonmetal to heat metals till metals fuse without contacting with metals directly. Compare with other heating methods, our induction heating machine has many advantages: self-control and self-protection function. It starts up with required pressure and water, taking up less floor space and requiring less start-up and shutdown time, heating safely, frugally without any pollution.

With the company development, our company pay more and more attention onto research & development and service after sales. We comply ISO9000-2000 strictly in our processing. Our company wins a nice fame for our high quality, machine and good.

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(1) What is induction heating

Induction heating is a form of non-contact heating for conductive materials, when alternating current flows in the induced coil, varying electromagnetic field is set up around the coil, circulating current (induced current, eddy current) is generated in the workpiece (conductive materials), heat is produced as the eddy current flows against the resistivity of the material.

Induction heating is a rapid, clean, non-polluting heating form which can be used to heat metals or change the conductive material's properties. The coil itself does not get hot and the heating effect is under control. The solid state transistor technology has made induction heating much easier, cost-effective heating for applications including soldering and induction brazing, induction heat treating, induction melting, induction forging etc.

(2) How to select induction heating equipment

There are two main specifications of induction heating machines, one is the output power, another is the output frequency, the higher the frequency, the thinner the heating penetration, so it is important to select the frequency of the machine according to the heating depth to achieve best heating effect. The output power decides the heating speed, so power is selected according to the weight of the parts and the heating temperature and the heating speed desired.

All our induction heaters are divided into three major series according to the frequency:
1. High frequency series: 20-90kHz, suitable for high frequency induction heating machine
2. Medium frequency series: 110-200kHz, medium frequency induction heater
3. Ultra high frequency series: 1.08MHz-2.5MHz, ultra high frequency induction heater
**Medium Frequency Induction Heating Equipment**

**1KHZ-20KHZ**

- **Main applications**
  - Medium frequency machines are usually used in the penetration heating occasions. For example, (1) Rod heating for forging, (2) Melting of almost all kinds of metals, (3) Heating of shafts or rotors for fitting, (4) Heating of tube end for extrusion, (5) Heating of moulds, (6) Deep quenching of shafts and gears, (7) Tempering or Preheating of weld-joint etc.

- **Technical parameters**

<table>
<thead>
<tr>
<th>Model</th>
<th>DW-MF-10</th>
<th>DW-MF-20</th>
<th>DW-MF-30</th>
<th>DW-MF-40</th>
<th>DW-MF-75</th>
<th>DW-MF-90</th>
<th>DW-MF-110</th>
<th>DW-MF-160</th>
<th>DW-MF-300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input power max.</td>
<td>15kW</td>
<td>25kW</td>
<td>35kW</td>
<td>40kW</td>
<td>70kW</td>
<td>90kW</td>
<td>110kW</td>
<td>130kW</td>
<td>300kW</td>
</tr>
<tr>
<td>Output power max.</td>
<td>70-660V</td>
<td>70-660V</td>
<td>70-660V</td>
<td>70-660V</td>
<td>70-660V</td>
<td>70-660V</td>
<td>70-660V</td>
<td>70-660V</td>
<td>70-660V</td>
</tr>
<tr>
<td>Input voltage</td>
<td>380V</td>
<td>50/60Hz</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output frequency</td>
<td>1-20KHZ according to the application, normal about: 4KHZ, 8KHZ, 11KHZ, 15KHZ, 20KHZ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duty cycle</td>
<td>24%</td>
<td>24%</td>
<td>34%</td>
<td>34%</td>
<td>61%</td>
<td>70%</td>
<td>94%</td>
<td>115%</td>
<td>120%</td>
</tr>
<tr>
<td>Weight</td>
<td>27(kg)</td>
<td>34(kg)</td>
<td>34(kg)</td>
<td>34(kg)</td>
<td>61(kg)</td>
<td>70(kg)</td>
<td>94(kg)</td>
<td>115(kg)</td>
<td>120(kg)</td>
</tr>
<tr>
<td>Cut-off</td>
<td>27(W X 470) X 660(cm)</td>
<td>34(W X 580) X 660(cm)</td>
<td>40(W X 360) X 660(cm)</td>
<td>40(W X 360) X 660(cm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Matching of Medium Frequency Induction Heating Equipment**

**1KHZ-20KHZ**

- **Main Characteristics**
  1. In DAVE! medium frequency machines, parallel oscillating structure is used. IGBT module power components and our fourth generation inverting control technologies are applied.
  2. Wide frequency ranges from 1KHZ to 20KHZ, it is easy to match the machine according to the parts and heating desire.
  3. Due to the parallel oscillating structure, it is easy to get the best matching of the machine to get high heating efficiency and full power output of generator.
  4. Due to the high technologies of our fourth generation inverting control, soft and accurate switching control is realized to assure the high reliability and low repair of the machine.

- **Complete sets of equipments**

- **Advantages and applications of models with Timer function**
  1. Heating power, retaing power, heating time, retaing time can be preset and adjusted, this makes it possible to control the heating curve and heating time.
  2. It is suitable to use in the repeated heating or high speed heating of small parts;
  3. By presetting the timer and the power of the generator, retaing can be realized to a certain extent.

**Applications**

- Induction melting furnace
- Hardening
- Shrink fitting
- Forging
- Heating treatment
- Fitting furnace
- Accelleration-braking
MF Induction Heating Rod Forging Furnace

● 1KHz-20KHz

Main parts of the rod forging furnace:
1. M.F Induction heating generator (power supply)
2. Compensation capacitor unit
3. Heating coil and accessories
4. Pneumatic rod feeder (handing system)
5. Stand or working table

The main types and Heating Capacity:

<table>
<thead>
<tr>
<th>TYPE</th>
<th>Heating Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>DW-MF-48</td>
<td>1.87kg/min</td>
</tr>
<tr>
<td>DW-MF-70</td>
<td>2.60kg/min</td>
</tr>
<tr>
<td>DW-MF-90</td>
<td>3.33kg/min</td>
</tr>
<tr>
<td>DW-MF-110</td>
<td>4.17kg/min</td>
</tr>
<tr>
<td>DW-MF-180</td>
<td>6.83kg/min</td>
</tr>
<tr>
<td>DW-MF-300</td>
<td>11.28kg/min</td>
</tr>
</tbody>
</table>

Main characteristics:
1. Suitable for rod heating of steel, copper, bronze and aluminum.
2. Portable and light weight, easily installed beside any pressing equipment.
3. Installation and operation can be very easily to use.
4. The rod can be rapidly heated to forging temperature to reduce the oxidation of the rod furnace and to raise the quality of the parts.
5. With a very large range of frequency acceptable the rod larger than 15mm can be heated, more rapidly and more evenly.
6. Designed to work continuously everyday.
7. Pneumatic rod feeding.
8. High efficiency, saving energy and cost.
9. Easy to change heating coil to heat rods of different size.

MF Rod heating furnace with infrared control/kale structure:
1. M.F. generator
2. Compensating capacitor and working table
3. Induction coil and S.S. tube, etc.
4. Pneumatic rod feeder
5. Infrared sensor
6. Temperature controller

Advantages:
1. By detecting the rod temperature at the outlet of the induction coil, the heating power is controlled by the temperature control device, such to control the temperature of the rod.
2. Melting of rods inside the induction coil will not happen any more by the using of infrared sensor and temperature control device. The operating is eased, at the same time, repair of the induction coil is decreased greatly.
3. It is especially important and necessary to use infrared sensor when heating brass and aluminum rods of which the forging temperature and melting point is very near. The forging temperature of brass is about 700°C, and melting point about 660°C, in the continuously heating and heating processes, it is likely to happen that the brass rods melt inside the induction coil due to the careless of operator. Same things may also happen to aluminium rods with forging temperature 450°C-550°C and melting point 660°C only. To install the infrared sensor is the only way to solve the problem.

Auto feed rod heating furnace Specifications:

1. Main members:
   (1) Medium frequency generator
   (2) Compensating capacitor and working table
   (3) Induction coil and S.S. tube, etc.
   (4) Automatic feeding system
   (5) Infrared sensor and temperature control device
2. Rod size: Ø20-Ø650-2500mm
3. Temperature control: ±2°C

Characteristics:
1. Whole processes including the rod picking up, rod selecting, rod pushing and rod sending out, heating and temperature controlling are all automatically controlled by PLC device.
2. Axle range of Rod size from 500 to 9000 and length from 50 to 2500mm.
3. The temperature of the rod can be easily controlled to achieve high quality of the parts.

Applications:
- Steel rod heat forging (copper, aluminum rod heat forging)
- bronze rod heating forging
- Pneumatic rod feeding heating of bolts and rules
- Manual rod feeding

www.dw-inductionheating.com  www.dw-inductionheater.com
Medium Frequency Induction Melting Furnace

- **1KHZ - 20KHZ**

**Characteristics of M.F. Melting Furnace**
1. M.F. Induction heating generator
2. Melting furnace
3. Compensation capacitor

**Structure of the M. F. melting machine**
The machine set includes medium frequency generator, compensating capacitor and melting furnace, infrared temperature sensor and temperature controller can also be included if ordered. Three types of melting furnaces can be selected according to the way of pouring out. They are tilting furnace, push-up furnace and stationary furnace. According to the method of tilting, tilting furnace is divided into three kinds: manual tilting furnace, electric tilting furnace and hydraulic tilting furnace.

**The main types and applications**

<table>
<thead>
<tr>
<th>Type</th>
<th>Steel or Iron</th>
<th>Copper or Mica</th>
<th>Max Kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>DW-MF-155KW</td>
<td>9kg</td>
<td>3kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-2525KW</td>
<td>25kg</td>
<td>3kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-355KW</td>
<td>35kg</td>
<td>3kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-4545KW</td>
<td>45kg</td>
<td>3kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-555KW</td>
<td>55kg</td>
<td>3kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-6065KW</td>
<td>65kg</td>
<td>3kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-7075KW</td>
<td>75kg</td>
<td>3kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-8085KW</td>
<td>85kg</td>
<td>3kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-9095KW</td>
<td>95kg</td>
<td>3kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-100100KW</td>
<td>100kg</td>
<td>5kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-110110KW</td>
<td>110kg</td>
<td>5kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-120120KW</td>
<td>120kg</td>
<td>5kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-130130KW</td>
<td>130kg</td>
<td>5kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-140140KW</td>
<td>140kg</td>
<td>5kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-150150KW</td>
<td>150kg</td>
<td>5kg</td>
<td></td>
</tr>
<tr>
<td>DW-MF-160160KW</td>
<td>160kg</td>
<td>5kg</td>
<td></td>
</tr>
</tbody>
</table>

**Applications**
- Purification of silicon for photovoltaic industry

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High Frequency Induction Heating Equipment

- **30KHZ - 80KHZ**

**Main Characteristics**
1. MOSFET and IGBT module and inverter technologies of the first generation can be used.
2. Simple structure and light weight and easy for maintenance.
3. Simple to operate, a few minutes is enough to learn it.
4. Simple to install, installation can be done by unprofessional person very easily.
5. Advantages of the model with timer, the power and the operating time of the heating period and the ran period can be preset respectively to realize a simple, heating curve, this model is suggested to use for batch production to improve the repeatability.
6. The separated models are designed to fit the dirty surrounding of some cases.

**Main applications:**
- Brazing of Diamond Tool blades
- Heat treatment of gears and shaft, etc.
- Induction heating for shaping and forging, etc.
- With timer function, it is suitable for repeated heating process.
High Frequency Induction Heating Equipment

● 30KHZ - 80KHZ

**Main Characteristics**

1. 100% duty cycle, continuous working is allowed at maximum power output.
2. Light weight, 50-70kg only.
3. Constant current or constant power status can be selected accordingly to achieve higher heating efficiency.
4. Display of heating power and heating current and exciting frequency.
5. Auto-overexcitation circuit of frequency modulation and frequency, the function of digital high precise power starting improves greatly the heating and brazing stability.

**Technical parameters**

<table>
<thead>
<tr>
<th>Model</th>
<th>DW-HF-45KW-B</th>
<th>DW-HF-60KW-B</th>
<th>DW-HF-90KW-B</th>
<th>DW-HF-125KW-B</th>
<th>DW-HF-160KW-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage</td>
<td>45KVA</td>
<td>60KVA</td>
<td>90KVA</td>
<td>125KVA</td>
<td>160KVA</td>
</tr>
<tr>
<td>Output frequency</td>
<td>30-80KHZ</td>
<td>30-80KHZ</td>
<td>30-80KHZ</td>
<td>30-80KHZ</td>
<td>30-80KHZ</td>
</tr>
<tr>
<td>Max. input power</td>
<td>88kVA</td>
<td>99kVA</td>
<td>132kVA</td>
<td>178kVA</td>
<td>235kVA</td>
</tr>
<tr>
<td>Max. Cooling water flow</td>
<td>0.3Mpa ± 0.05Mpa / 0.1L/min</td>
<td>0.5Mpa ± 0.05Mpa / 0.1L/min</td>
<td>0.8Mpa ± 0.05Mpa / 0.1L/min</td>
<td>1.2Mpa ± 0.05Mpa / 0.1L/min</td>
<td>1.5Mpa ± 0.05Mpa / 0.1L/min</td>
</tr>
<tr>
<td>Duct cycle</td>
<td>15-30s</td>
<td>15-30s</td>
<td>15-30s</td>
<td>15-30s</td>
<td>15-30s</td>
</tr>
<tr>
<td>Weight</td>
<td>74kg</td>
<td>74kg</td>
<td>92kg</td>
<td>109kg</td>
<td>125kg</td>
</tr>
<tr>
<td>Cubage</td>
<td>646x343x456mm</td>
<td>660x386x610mm</td>
<td>680x370x640mm</td>
<td>690x310x640mm</td>
<td>700x310x640mm</td>
</tr>
<tr>
<td>Cable length</td>
<td>478x285x440mm</td>
<td>500x500x600mm</td>
<td>500x500x600mm</td>
<td>500x500x600mm</td>
<td>500x500x600mm</td>
</tr>
</tbody>
</table>

**Applications**

- Big axis quenching
- Heating steel plate
- Heating gear
- Welding sanitary ware tap

Ultra high Frequency Induction Heating Equipment

● 1.1 - 2.0MHZ

**Main Characteristics**

1. With high frequency up to 100KHZ 2.0MHZ, the quenching thickness can be controlled lower than 1mm and very tiny parts can be easily heated.
2. IGBT and inverting technologies of third generation been used, higher reliability and lower maintence nanocecost.
3. 100% duty cycle, continuous working is allowed at max power output.
4. Light weight, 20-70kg only, small and portable.
5. Constant current or constant power status can be selected accordingly to achieve higher heating efficiency.

**Applications**

- Hardening treatment for ball of saw knife.
- Hardening treatment for both sides blade of knife.
- Quenching valves.
- Heating electrical equipment.
- Brazing of the saw tip.
- Quenching of the gear.
- Heating of the small screen.
- Brazing of the tools.
- Drills forging or hardening.
- Brazing of the small PCB drills.
- Brazing for parts of jewellery.
- Brazing for DLC data link connector.
- Brazing for parts of optical spectacle frame.
- Soldering for DLC data link connector.
- Brazing of the small PCB drills.
- Brazing of the small PCB drills.
- Soldering of the small precision parts.
- Brazing of the small PCB drills.
- Brazing of the small PCB drills.
- Brazing of the small PCB drills.
- Brazing of the small PCB drills.
- Brazing of the small PCB drills.

**Model**

<table>
<thead>
<tr>
<th>Model</th>
<th>DW-UHF-3.5KW</th>
<th>DW-UHF-4.5KW</th>
<th>DW-UHF-5.5KW</th>
<th>DW-UHF-6.5KW</th>
<th>DW-UHF-8.0KW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage</td>
<td>220V 50-60Hz</td>
<td>220V 50-60Hz</td>
<td>220V 50-60Hz</td>
<td>220V 50-60Hz</td>
<td>220V 50-60Hz</td>
</tr>
<tr>
<td>Output power max</td>
<td>5.5kW</td>
<td>4.5kW</td>
<td>5.5kW</td>
<td>4.5kW</td>
<td>6.0kW</td>
</tr>
<tr>
<td>Heat output air</td>
<td>5-18kW</td>
<td>5-18kW</td>
<td>5-18kW</td>
<td>5-18kW</td>
<td>5-18kW</td>
</tr>
<tr>
<td>Weight</td>
<td>250kg</td>
<td>250kg</td>
<td>250kg</td>
<td>250kg</td>
<td>250kg</td>
</tr>
<tr>
<td>Cubage</td>
<td>520x194x400mm</td>
<td>520x194x400mm</td>
<td>520x194x400mm</td>
<td>520x194x400mm</td>
<td>520x194x400mm</td>
</tr>
<tr>
<td>Cable length</td>
<td>280x119x120mm</td>
<td>280x119x120mm</td>
<td>280x119x120mm</td>
<td>280x119x120mm</td>
<td>280x119x120mm</td>
</tr>
</tbody>
</table>
Ultra High Frequency Induction Heating Equipment

● 100KHZ - 500KHZ

DW-UHF-10KW  DW-UHF-20KW  DW-UHF-40KW  DW-UHF-100KW

Main applications:
1. Heat treatment of gear and shaft
2. Steel and stainless steel screw coating
3. Heating and forging for jewelry and. research
4. Heating and heat treatment of small parts
5. Soldering and heat treatment of small parts

Main Characteristics:
1. With high frequency up to 100KHz-2.0MHz, the quenching thickness can be controlled lower than 1mm and very tiny parts can be easily heated.
2. "GIG" and inverter technologies of third generation have been used, higher reliability and lower maintenance required.
3. 100% duty cycle, continuous working is allowed at max power output.
4. Light weight, 20-70kg only small and portable.
5. Constant current or constant power status can be selected according to application needs to achieve higher heating efficiency.

Technical parameters:

<table>
<thead>
<tr>
<th>Model</th>
<th>DW-UHF-10KW</th>
<th>DW-UHF-20KW</th>
<th>DW-UHF-40KW</th>
<th>DW-UHF-60KW</th>
<th>DW-UHF-100KW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input voltage</td>
<td>380V 50-60Hz</td>
<td>380V 50-60Hz</td>
<td>380V 50-60Hz</td>
<td>380V 50-60Hz</td>
<td>380V 50-60Hz</td>
</tr>
<tr>
<td>Output power</td>
<td>10KW</td>
<td>20KW</td>
<td>40KW</td>
<td>80KW</td>
<td>100KW</td>
</tr>
<tr>
<td>Output frequency</td>
<td>0-30KHz</td>
<td>0-30KHz</td>
<td>0-30KHz</td>
<td>0-30KHz</td>
<td>0-30KHz</td>
</tr>
<tr>
<td>Heat input current</td>
<td>3-15A</td>
<td>5-30A</td>
<td>7-45A</td>
<td>10-90A</td>
<td>12-140A</td>
</tr>
<tr>
<td>Weight</td>
<td>28kg</td>
<td>38kg</td>
<td>75kg</td>
<td>77kg</td>
<td>132kg</td>
</tr>
<tr>
<td>Gage/Extension</td>
<td>570x200x300x300mm</td>
<td>570x200x300x300mm</td>
<td>570x200x300x300mm</td>
<td>570x200x300x300mm</td>
<td>570x200x300x300mm</td>
</tr>
</tbody>
</table>

Applications:
- Quenching gear
- Quenching of motor parts
- Brazing of the diamond disc sawtooth
- Hot spraying NYLOCK (thermal spraying Jam nut)

Saw blade welding machine

● 0.5MHZ - 1.1 MHZ

DW-UHF-6.0KW-I/II 0.5-1.1MHZ/MOSFET

Main Characteristics:
1. It is mechanical vibration seismic, and uses photoelectricity to detectably. Parts feeding, measuring temperature and oil dripping automatically, using ultra-high frequency fusion welding. Sealing terminal twisting and welding automatically. It has automatic temperature compensation to ensure the accuracy of alloy welding.

Technical parameters:

<table>
<thead>
<tr>
<th>Frequency</th>
<th>0.5-1.1 MHZ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Voltage</td>
<td>220V Single phase</td>
</tr>
<tr>
<td>Welding Diameter</td>
<td>150-450mm</td>
</tr>
<tr>
<td>Teeth Pitch</td>
<td>20-75mm</td>
</tr>
<tr>
<td>Teeth Thickness</td>
<td>1.5-5.5mm</td>
</tr>
<tr>
<td>Alloy Length</td>
<td>5.5-12.5mm</td>
</tr>
<tr>
<td>Gear Welding Speed</td>
<td>10 tooth/mm</td>
</tr>
<tr>
<td>Main Motor Power</td>
<td>9.5KW</td>
</tr>
<tr>
<td>Machinery Weight</td>
<td>620kg</td>
</tr>
<tr>
<td>Machinery Size</td>
<td>1100(L)X410(W)X1200(H)</td>
</tr>
</tbody>
</table>
### KGPS - MF Furnace Generator

**Specifications**
1. IP Induction furnace for metallurgical industry.
2. Foundry Industry.
3. forging industry.

**Industrial Forging Billet Furnace**

**Production Description:**
1. KGPS Medium Frequency Furnace
2. Wide frequency scope
3. Constant capacity control
4. Preheating of raw material, under-voltage, under-voltage, lack of water, default phase
5. Frequency-variable zero voltage start

<table>
<thead>
<tr>
<th>Rated capacity (KW)</th>
<th>10-50</th>
<th>100</th>
<th>150</th>
<th>250</th>
<th>350</th>
<th>500</th>
<th>750</th>
<th>1000</th>
<th>1500</th>
<th>2000</th>
<th>3000</th>
<th>4000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated power (KW)</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>250</td>
<td>350</td>
<td>500</td>
<td>750</td>
<td>1000</td>
<td>1500</td>
<td>2000</td>
<td>3000</td>
<td>4000</td>
</tr>
<tr>
<td>Transformer capacity (KVA)</td>
<td>60</td>
<td>120</td>
<td>120</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>300</td>
<td>315</td>
<td>400</td>
<td>500</td>
<td>600</td>
<td>800</td>
</tr>
<tr>
<td>Output voltage (V)</td>
<td>750</td>
<td>750</td>
<td>750</td>
<td>750</td>
<td>750</td>
<td>750</td>
<td>750</td>
<td>1500</td>
<td>2500</td>
<td>3500</td>
<td>5000</td>
<td>5000</td>
</tr>
<tr>
<td>Output frequency (KHz)</td>
<td>1.25</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
<td>0.8</td>
<td>0.8</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td>0.5</td>
</tr>
<tr>
<td>Melting time</td>
<td>20</td>
<td>20</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>80</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Power consumption (steel) (Kw/h/T)</td>
<td>0.9</td>
<td>0.85</td>
<td>0.85</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.65</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Power consumption (cast iron) (Kw/h/T)</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.65</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Power consumption (copper) (Kw/h/T)</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Power consumption (aluminum) (Kw/h/T)</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Water cooling (T/h)</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>8</td>
<td>10</td>
<td>15</td>
<td>18</td>
<td>25</td>
<td>28</td>
<td>30</td>
<td>35</td>
</tr>
</tbody>
</table>

---

### Vacuum Induction Melting Furnace

**Features:**

**Main technical parameters:**
- Maximum temperature: 3000 °C
- High-temperature zone volume: 0.21m3, 0.22m3, 0.23m3, 0.24m3, 0.25m3
- Furnace working atmosphere: vacuum, nitrogen, inert gases
- Temperature uniformity: ± 5 °C
- Temperature measurement: Infrared optical temperature measurement range of 600 ~ 3000 °C temperature or 0 ~ 3000 °C
- Accuracy: ± 0.3%
- Temperature control: Process control and manual control, control accuracy: ± 1 °C
- Limit heating rate: 200 °C / min (air furnace, depending on the volume and the high-temperature furnace configuration)

**Product Description:**
Vacuum Induction Furnace is periodic operating, providing vacuum or protective atmosphere, in which the alloy casting, sintering and others can melt and cast. Besides, it can be also used in metal materials' refining.

<table>
<thead>
<tr>
<th>Model</th>
<th>Electric Power</th>
<th>Frequency</th>
<th>Maximum Working Temperature</th>
<th>Capacity</th>
<th>Ultimate Vacuum</th>
<th>Pressure Raising Rate</th>
<th>In-air power supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZQ-16</td>
<td>800w</td>
<td>1500Hz</td>
<td>3000 degrees</td>
<td>10 kg</td>
<td>6.67x10-3 Pa</td>
<td>6Pa/s</td>
<td>KGBT</td>
</tr>
<tr>
<td>ZQ-25</td>
<td>1000w</td>
<td>2000Hz</td>
<td>3000 degrees</td>
<td>25 kg</td>
<td>6.67x10-3 Pa</td>
<td>6Pa/s</td>
<td>KGBT</td>
</tr>
<tr>
<td>ZQ-50</td>
<td>1000w</td>
<td>2000Hz</td>
<td>3000 degrees</td>
<td>50 kg</td>
<td>6.67x10-3 Pa</td>
<td>6Pa/s</td>
<td>KGBS</td>
</tr>
<tr>
<td>ZQ-150</td>
<td>2000w</td>
<td>1500Hz</td>
<td>3000 degrees</td>
<td>150 kg</td>
<td>6.67x10-3 Pa</td>
<td>6Pa/s</td>
<td>KGPS</td>
</tr>
<tr>
<td>ZQ-200</td>
<td>2000w</td>
<td>2500Hz</td>
<td>3000 degrees</td>
<td>200 kg</td>
<td>6.67x10-3 Pa</td>
<td>6Pa/s</td>
<td>KGPS</td>
</tr>
</tbody>
</table>

---

www.dw-inductionheating.com  www.dw-inductionheater.com
**Pipeline Induction Heating Machine**

All air-cooling induction heating equipment

**Applications and Specifications:**
1. IT is widely used for large pipeline heating treatment, such as preheating of the oil pipeline, postweld heating treatment, stress relieving and so on.
2. Input Voltage: 380V, 3-phase, 50/60Hz
3. Output Power: 15KW - 320KW, 100% duty cycle.
4. Output Frequency: 16kHz-40kHz
5. Cooling: Air cooling

<table>
<thead>
<tr>
<th>Model</th>
<th>DW-10KW</th>
<th>DW-20KW</th>
<th>DW-30KW</th>
<th>DW-40KW</th>
<th>DW-50KW</th>
<th>DW-60KW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Power</td>
<td>AC 200V</td>
<td>AC 200V</td>
<td>AC 200V</td>
<td>AC 200V</td>
<td>AC 200V</td>
<td>AC 200V</td>
</tr>
<tr>
<td>Output Power</td>
<td>150W</td>
<td>200W</td>
<td>250W</td>
<td>300W</td>
<td>350W</td>
<td>400W</td>
</tr>
<tr>
<td>Single output</td>
<td>15A</td>
<td>20A</td>
<td>25A</td>
<td>30A</td>
<td>35A</td>
<td>40A</td>
</tr>
<tr>
<td>Double output</td>
<td>10A</td>
<td>15A</td>
<td>20A</td>
<td>25A</td>
<td>30A</td>
<td>35A</td>
</tr>
<tr>
<td>Input current</td>
<td>10A</td>
<td>15A</td>
<td>20A</td>
<td>25A</td>
<td>30A</td>
<td>35A</td>
</tr>
<tr>
<td>Output voltage</td>
<td>1500-5000V</td>
<td>1500-5000V</td>
<td>1500-5000V</td>
<td>1500-5000V</td>
<td>1500-5000V</td>
<td>1500-5000V</td>
</tr>
</tbody>
</table>

In a sense, coil design for induction heating is built upon a large store of empirical data whose development springs from several simple inductor geometries such as the solenoid coil. Because of this, coil design is generally based on experience.