

Middle frequency induction heaters

For both mounting and dismounting – BETEX MF Quick-Heater

Heat your expensive components faster, more effectively and more safely. And save money as well!

With middle frequency induction heating you will have a sustainable solution for the rapid and controlled mounting or dismounting of all types of metal (thin-walled) components: bearings, rings, housings, pipes, machine parts and transmission parts.

Correct mounting and dismounting prevents damage to components and machine parts. In short, by improving the quality of your procedures, you can improve the performance of your machines!

Areas of application:

- Chemical industry
- Steel industry
- Paper industry
- Gearbox manufacturers
- Wind energy
- Machine building
- Transport sector
- Railway
- MRO/OEM sector



The BETEX MF Quick-Heater has great advantages

- ✓ You will work more effectively by applying middle frequency.
- ✓ Heat is transferred more rapidly to the component with less loss of energy.
- ✓ The Betex MF Quick-Heater is handy and easy to transport for use on site.
- ✓ The coils can be placed both in and around the component. You can also place a component on a flat surface (table model) or work with flexible coils.
- ✓ Temperature controlled heating: overheating is not possible because demand is constantly monitored and if necessary adjusted. When the preset temperature has been reached, the device will switch off automatically.
- ✓ The cos phi power factor is compensated and the mains supply connection is distributed across 3 phases.
- ✓ **You will save a lot of time with this method compared to conventional methods (ovens, blow torches, oil baths).**

Middle frequency induction heaters: Heating method 1

Heating with induction coil around the component. Energy input inwards. For example, for bearing rings, pipes and rings of 50-2000 mm.

**In this example, a metal pipe for a photocopier is being heated.
At the same time end shafts are being mounted at both ends.**

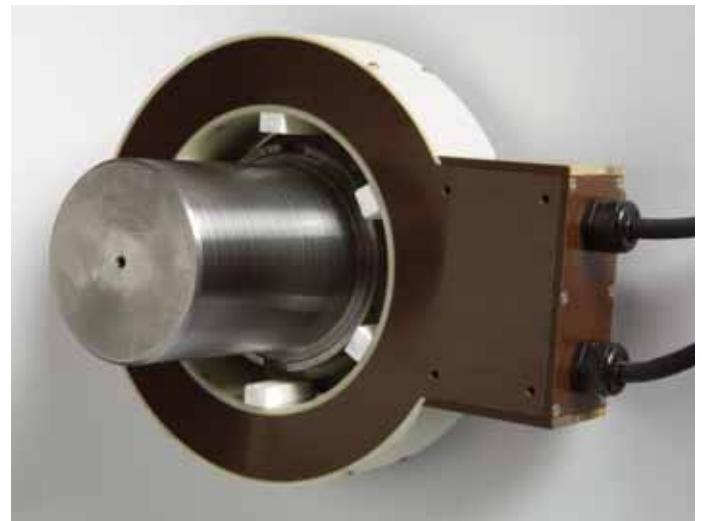
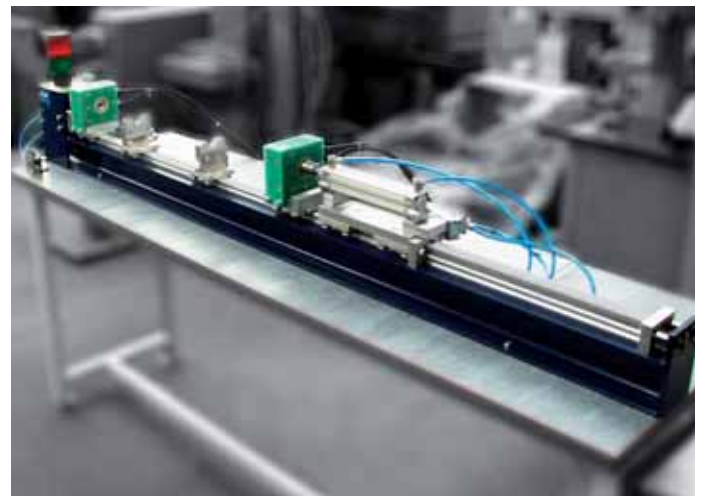
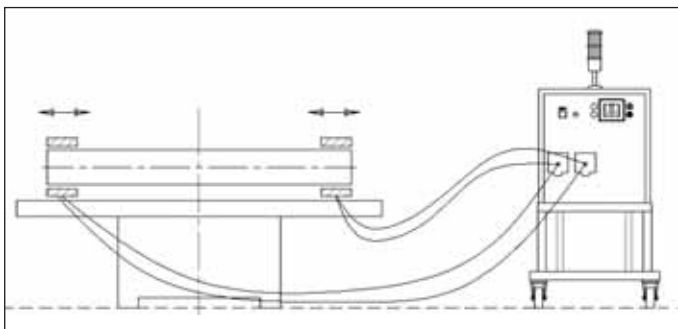
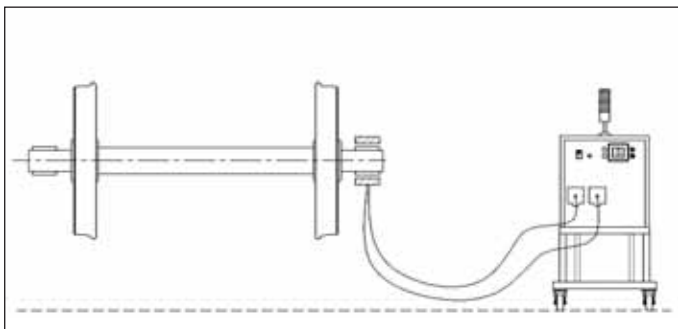
Task:
heat as rapidly as possible, prevent rust formation (result of old method).

Result:
both ends were heated within 6 sec. to 200°C.

Advantage:
rapid heating resulting in increased production figures, the quality of the heating and the product greatly improve, no rust formation.

HEATING EXAMPLES

Heating with induction coil around the component.



Ideal in Rail Industry

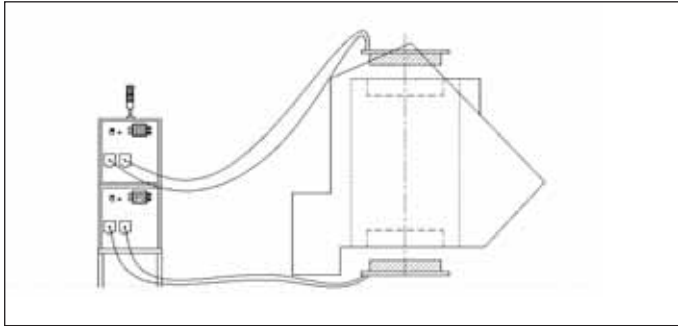
Dismounting of bearing inner rings (NU, NJ) and labyrinth rings.

Middle frequency induction heaters: Heating method 2

Heating with induction coil inside the component. Energy input outwards.
For example, bored holes for gearboxes or bearing bores in housings/frames.

This method is suitable for heating the bore of a bearing in a cast-iron housing, for example.

Task:
reduce production time from 8 to 2 hours.



Result:
the metal surrounding the hole in this 10,000 kg cast-iron housing is heated within 1 hour to 110°C!

Advantage:
the heating method is simplified and considerably faster and safer as regards handling.

HEATING EXAMPLE

Heating with induction coil inside the component.

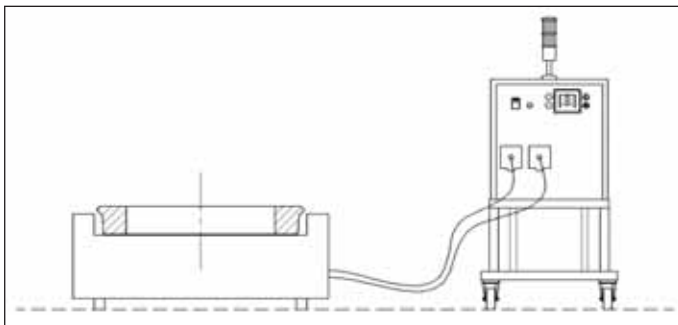


Heating method 3

The component lies on top of the flat table coil.
The component is placed on the table coil and is heated in a very short time to the required temperature.
Very suitable for production companies.

In this example a crown gear is placed in a product holder above the coil. This method is suitable for light products that require serial heating.

Task:
heat the crown gear as quickly as possible, OD 400 mm, ID 360 mm, thickness 15 mm, up to 270°C.

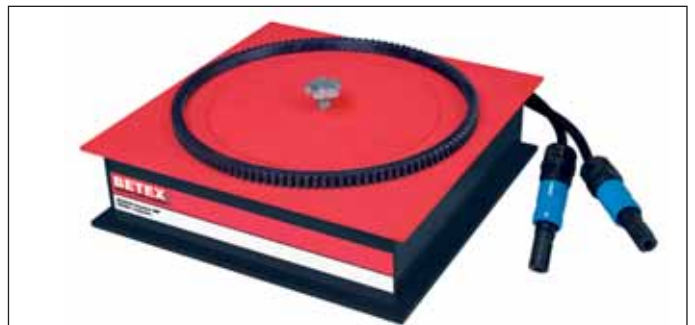


Result:
heated within 25 sec. to 270°C.

Advantage:
rapid heating doubles production figures, controlled, evenly spread heating.

HEATING EXAMPLE

Heating on a table model coil



Middle frequency induction heaters: Heating method 4

Flexible heating by means of a flexible coil. This tube coil is wrapped around a component, for example to pre-heat pipes and rings in order to weld them stress-free. Also very suitable for non-cylindrical shapes or extreme dimensions.



Advantages Betex MF Quick-Heaters:

- **Very suitable for production and maintenance applications.**
- **Suitable for continuous production. (24/7)**
- **Demagnetisation is not necessary.**
- **No water cooling required.**
- **Controlled heating**
- **Coils are available in various diameters, fixed and flexible**

The capacity and the size of the induction coils are determined by your requirements.

Technical data

Connection voltage	400-480 V
Connection frequency	50-60 Hz
Output frequency	10-20 kHz
Power	max. 24 kW