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TOP QUALITY SINCE 1978

BEGA SPECIAL TOOLS

ANNO 1978

BETEX®
INDUCTION HEATERS

THE SUPERIOR METHOD

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BEGA SPECIAL TOOLS
ANNO 1978

Professional Solutions With Proven Quality & Performance!

Dear reader,

We are proud to present our catalogue of **BETEX Induction Heaters.**

Here you will find our BETEX® Induction Heater programme for maintenance (MRO) and production (OEM). Our induction heaters are used for heating bearings and other drive components.
The series include the Standard and TURBO 50/60 Hz heaters, but we can also supply custom-made heaters.

New to our range are the BETEX MF Quick-Heaters, middle frequency heaters that are suitable for mounting and dismounting bearings and other components.

About Bega Special Tools
We have been developing and manufacturing 'Special Tools' since 1978 and we provide solutions for damage-free mounting and dismounting of bearings and drive components. Our expertise and experience ensure quality, reliability, professional advice and outstanding service.

BETEX® is a registered trademark of Bega Special Tools and stands for quality and reliability.

Please request the catalogue for:

- Betex Maintenance Products, including:
  - Betex Dismounting equipment
  - Betex Hydraulics
  - Condition Monitoring

Please do not hesitate to contact our Sales department.

We are at your service.

Your Bega Team

MOUNTING CHECKING DISMOUNTING
BEGA SPECIAL TOOLS

TOP QUALITY SINCE 1978

MADE IN HOLLAND

BETEX® induction heaters are MADE IN HOLLAND, Vaassen, 100 km east of Amsterdam, in the Bega Special Tools factory. Our induction heaters are exported around the world and comply with the highest standards.

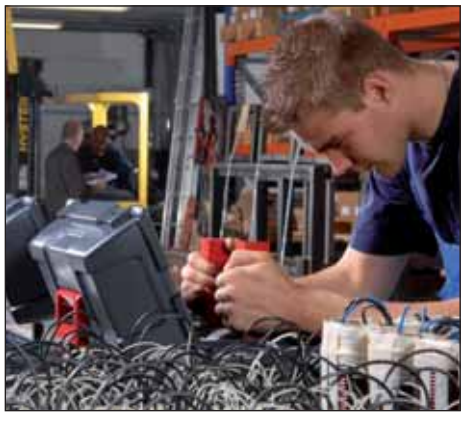
DEPENDABLE QUALITY

BETEX® induction heaters are proven to be reliable. Their sturdy styling and user-friendly design guarantees sustained, problem-free operation in an industrial environment.

SERVICE & WARRANTY

Our expertise and experience ensure top quality, reliability, professional advice and outstanding service.

- **3 year warranty!**
- **clear user instructions**



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INDUCTION HEATERS

Bega develops, manufactures and sells worldwide a wide range of BETEX® induction heaters for professional use in industry and industrial services.

DEPENDABLE QUALITY

BETEX® induction heaters are proven to be reliable. Their sturdy styling and user-friendly design guarantees sustained, problem-free operation in an industrial environment. Our Standard series heaters are low frequency (50/60Hz). We also make use of the middle frequency (< 20kHz) principle for combined mounting and dismounting applications.

SERVICE & WARRANTY

Our expertise and experience ensure quality, reliability, professional advice and outstanding service. BETEX® induction heaters are supplied with clear instructions and a 3-year warranty on the electronic components.

WHY USE INDUCTION HEATING?

Induction heating is a superior, fast and controlled heating method.
It is a safe and environmentally-friendly alternative to traditional heating methods such as ovens, oil baths or blow torches. These methods generate smoke, fumes or oil waste and are hazardous for personal health and safety.

ENERGY EFFICIENT

All BETEX® induction heaters are energy efficient in comparison with classic methods. The advantage of the TURBO series over the Standard series is that larger components can be heated in a relatively short time while consuming the same amount of energy.

FOR BEARINGS AND OTHER COMPONENTS

BETEX® induction heaters are versatile and can be used for the heating of gear wheels, bushes, couplings, etc. It is common knowledge that a correct mounting method extends bearing life. Even, tension-free heating prevents unnecessary damage and retains original lubrication. Induction heaters are ideal for sealed (2RS-ZZ) and pre-lubricated bearings.

SAFE AND CONTROLLED HEATING

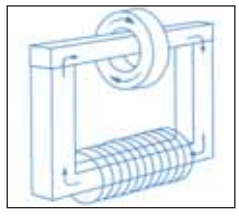
Digital electronics ensure optimum control during the heating process. These automatically regulate the most efficient use of power and ensure even and rapid heating. No extra steps are necessary. This prevents explosive heating (no discolouration or pitting of material).

DEMAGNETISATION

Fail-safe demagnetisation is essential for bearings and transmission parts.
The proven quality of BETEX® induction heaters guarantees maximum demagnetisation (< 2A/cm).
This has a major positive effect on the life span of bearings, gears, etc.

WORKING PRINCIPLE

The heater works by inducing a (low frequency) current in the component to be heated. This is achieved by incorporating the component as a secondary winding in a transformer. The primary winding is connected to the mains power by means of an electronic control. The magnetic field induces a high current (short circuit current) through the component which consequently becomes hot.
The workpiece is automatically demagnetised after every heating cycle.



ADVANTAGES OF BETEX® INDUCTION HEATERS

- ✓ Robust design for working in industrial environments.
- ✓ Evenly distributed heating: the microprocessor controlled electronics prevent overheating and explosive heating.
- ✓ The energy saving alternative to traditional methods.
- ✓ For sealed (2RS-ZZ) and pre-lubricated bearings.
- ✓ Automatic power reduction.
- ✓ Automatic demagnetisation to <2A/cm.
- ✓ Unique, user-friendly swivel-arm construction.
- ✓ Suitable for continuous use (24/7).
- ✓ Large selection from STANDARD and TURBO series, from 3.6 to 100 kVA.
- ✓ TURBO models are energy efficient.
- ✓ Portable models for on-site works.
- ✓ 3 year warranty.
- ✓ Meets CE and IEC requirements.
- ✓ Certified by TUV to CSA (Canada) and UL (USA) standard.
- ✓ Practical solutions based on more than 30 years of experience.

OUR RANGE INCLUDES

- Standard series - up to 100 kVA
- TURBO series - up to 100 kVA
- Custom-made to client's requirements.
- Middle frequency for mounting & dismounting

	Standard series		TURBO series	
3,6 kVA Page 10-11	**Betex 22 ELD portable** Min. ID Ø: 10 mm Max. OD Ø: 240 mm For bearings up to ± 15 kg			**Betex 24 RLD TURBO portable** Min. ID Ø: 10 mm Max. OD Ø: 350 mm For bearings up to ± 40 kg
3,6 kVA Page 12-13	**Betex 22 ESD** Min. ID Ø: 15 mm Max. OD Ø: 340 mm For bearings up to ± 40 kg			**Betex 24 RSD TURBO** Min. ID Ø: 15 mm Max. OD Ø: 520 mm For bearings up to ± 95 kg
8 kVA Page 14-15	**Betex 38 ESD** Min. ID Ø: 30 mm Max. OD Ø: 480 mm For bearings up to ± 125 kg			**Betex 40 RSD TURBO** Min. ID Ø: 30 mm Max. OD Ø: 790 mm For bearings up to ± 350 kg
12 kVA Page 16-17	**Betex 38 ZFD** Min. ID Ø: 30 mm Max. OD Ø: 720 mm For bearings up to ± 280 kg			**Betex 40 RMD TURBO** Min. ID Ø: 60 mm Max. OD Ø: 920 mm For bearings up to ± 600 kg
24 kVA Page 18-19	**Betex SUPER** Min. ID Ø: 60 mm Max. OD Ø: 1300 mm For bearings up to ± 600 kg			**Betex SUPER TURBO** Min. ID Ø: 175 mm Max. OD Ø: 1700 mm For bearings up to ± 1200 kg
40-48-100 kVA Page 20-21	**Betex GIANT** Min. ID Ø: 85 mm Max. OD Ø: 1400-2500 mm For bearings from ± 1500 up to ± 3500 kg			**Betex GIANT TURBO** Min. ID Ø: 115 mm Max. OD Ø: 1400-2500 mm For bearings from ± 1500 up to ± 12000 kg

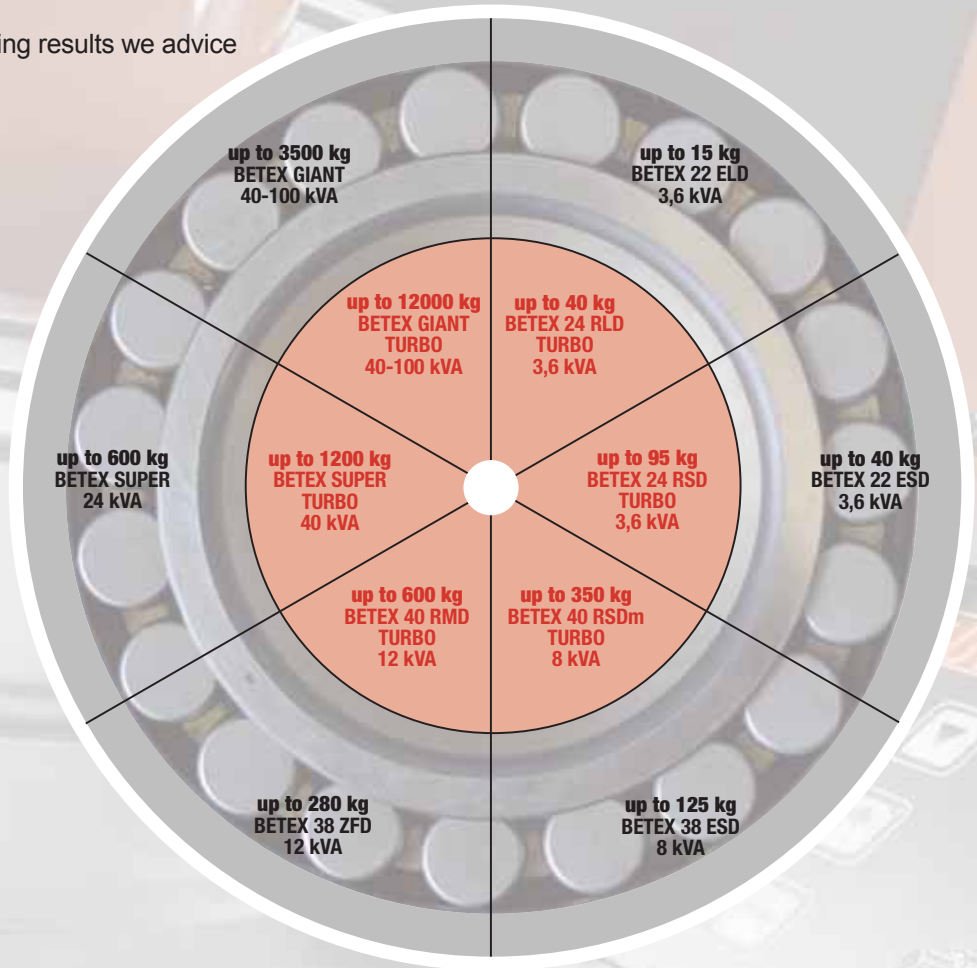
BETEX INDUCTION HEATERS

SELECTOR FOR INDUCTION HEATER TYPE

Assumes average heating times for maximum weights for each induction heater.

Heating times are subject to the relationship between:

- Min. bore and max. outside diameter, width, weight.
- Required temperature and material type.
- Available power.
- For optimal heating results we advice 230V models



STANDARD or TURBO?

TURBO models offer low energy consumption combined with high output as an added advantage.
The maximum TURBO effect is achieved with heating in the horizontal position!

Comparison of heating times, Standard and TURBO induction heaters
Heating in horizontal position, to 110°C, in minutes.

Bearing no.	23130	22240	23148	23156	175296	gearwheel
Weight kg	16 kg	43,5 kg	63 kg	95,8 kg	220 kg	300 kg
Bore/OD mm	150/250	200/360	240/400	280/460	350/580	210/600
22 ELD 3,6 kVA, 230V	31.20	--	--	--	--	--
24 RLD TURBO 3,6 kVA, 230V	07.26	43.20	--	--	--	
22 ESD 3,6 kVA, 230V	--	30.15	--	--	--	--
24 RSD TURBO 3,6 kVA, 230V	--	10.05	19.20	45.00	--	--
38 ESD 8 kVA, 400V	--	--	11.50	23.00	--	--
40 RSD TURBO 8 kVA, 400V	--	--	04.30	08.57	26.50	15.00
38 ZFD 12 kVA, 400V	--	--	09.55	14.20	39.50	48.45
40 RMD TURBO 12 kVA, 400V	--	--	02.15	03.30	08.40	06.35

BETEX ACCESSORIES

Accessories
1. Trolley
2. Set of yokes
3. Adaptor yokes
4. Heat resistant gloves
5. Magnetic temperature sensor, type K
6. Vaseline for maintenance
7. Horizontal support
8. Fitting tool set, Impact 33 and 39

◀ Adaptor yokes

- ✓ All heaters are supplied with an instruction manual, heat-resistant gloves, vaseline, magnetic temperature sensor and a 3 year warranty.
- ✓ Bega heaters are easy to use thanks to a user-friendly control panel with LED display.
- ✓ Digital electronics ensure optimum control during the heating process. These automatically regulate the most efficient use of power and ensure even and rapid heating. No extra steps are necessary.

STANDARD

BETEX 22 ELD portable 3.6 kVA

Portable heater for use in the workshop and on site.

- Min. ID Ø: 10 mm
- Max. OD Ø: 240 mm
- Max. width: 120 mm
- Automatic demagnetisation
- Automatic power reduction
- Including 5 yokes
- Shoulder strap

- Max. bearing weight: 15 kg
- Max. weight other parts: 10 kg

Technical details page 32

AREAS OF APPLICATION:

- Technical services
- MRO organisation

TURBO

BETEX 24 RLD TURBO 3,6 kVA

Portable heater for use in the workshop and on site.

- Min. ID Ø: 10/100 mm
- Max. OD Ø: 350 mm
- Max. width: 135 mm
- Automatic demagnetisation
- Automatic power reduction
- Including 5 yokes

- Max. bearing weight 40 kg
- Max. weight other parts: 25 kg

Technical details page 32

AREAS OF APPLICATION:

- Technical services
- MRO organisation

High output, energy efficient!

The TURBO effect only works when the component is in a horizontal position

STANDARD

BETEX 22 ESD 3.6 kVA

AREAS OF APPLICATION:

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

Basic bench-top type with swivel arm for use in the workshop.

- Min. ID Ø: 15 mm
- Max. OD Ø: 340 mm
- Max. width: 150 mm
- Automatic demagnetisation
- Automatic power reduction
- Yokes: set of 3 or 5 sizes

- Max. bearing weight: 40 kg
- Max. weight other parts: 25 kg

Optional:
- **Adaptor yokes**
- **Max. OD Ø: 580 mm**

Technical details page 32

TURBO

BETEX 24 RSD TURBO 3.6 kVA

AREAS OF APPLICATION:

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

Basic bench-top type with swivel arm for use in the workshop.

- Min. ID Ø: 15/120 mm
- Max. OD Ø: 520 mm
- Max. width: 200 mm
- Automatic demagnetisation
- Automatic power reduction
- Yokes: set of 3 or 5 sizes

- Max. bearing weight: 95 kg
- Max. weight other parts: 50 kg

Technical details page 32

High output, energy efficient!

The TURBO effect only works when the component is in a horizontal position

STANDARD

BETEX 38 ESD 8 kVA

AREAS OF APPLICATION:

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

Medium size bench-top type with swivel arm for use in the workshop.

- Min. ID Ø: 30 mm
- Max. OD Ø: 480 mm
- Max. width: 200 mm
- Automatic demagnetisation
- Automatic power reduction
- Yokes: set of 2 or 3 sizes

- Max. bearing weight: 125 kg
- Max. weight other parts: 75 kg

Optional:
- **Adaptor yokes**
- **Max. OD Ø: 720 mm**

Technical details page 32

TURBO

BETEX 40 RSD / 40 RSDm TURBO 8 kVA

AREAS OF APPLICATION:

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

Medium size bench-top type with swivel arm for use in the workshop.

- Min. ID Ø: 30/155 mm
- Max. OD Ø: 790 mm
- Max. width: 315 mm
- Automatic demagnetisation
- Automatic power reduction
- Yokes: selection of 5 sizes

- Max. bearing weight: 350 kg
- Max. weight other parts: 250 kg

Technical details page 32

High output, energy efficient!

BETEX 40 RSDm TURBO ▶ roll-around option

The TURBO effect only works when the component is in a horizontal position

STANDARD

BETEX 38 ZFD 12 kVA

AREAS OF APPLICATION:

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

Roll-around heater with swivel arm and convenient folding operating panel.

- Min. ID Ø: 30 mm
- Max. OD Ø: 720 mm
- Max. width: 340 mm
- Automatic demagnetisation
- Automatic power reduction
- Yokes: selection of 5 sizes

- Max. bearing weight: 280 kg
- Max. weight other parts: 200 kg

Optional:
- **Adaptor yokes**
- **Max. OD Ø: 1080 mm**

Technical details page 32

◀ *Folding operating panel from ZFD/RMD/RSD series*

TURBO

BETEX 40 RMD TURBO 12 kVA

AREAS OF APPLICATION:

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

Roll-around heater with swivel arm and convenient folding operating panel.

- Min. ID Ø: 60/170 mm
- Max. OD Ø: 920 mm
- Max. width: 365 mm
- Automatic demagnetisation
- Automatic power reduction
- Yokes: selection of 3 sizes

- Max. bearing weight: 600 kg
- Max. weight other parts: 450 kg

Technical details page 32

High output, energy efficient!

◀ *Folding operating panel from ZFD/RMD/RSD series*

The TURBO effect only works when the component is in a horizontal position

STANDARD

BETEX SUPER 24 kVA

AREAS OF APPLICATION:

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

Heavy duty heaters.

- Min. ID Ø: 60 mm
- Max. OD Ø: 900/1300 mm
- Max. width: 400/700 mm
- Automatic demagnetisation
- Automatic power reduction
- Yokes: selection of 5 sizes

- Max. bearing weight: 600 kg
- Max. weight other parts: 350 kg

Optional:
- **electric crane**
- **enlarged width 700 mm: DL700**

NB: these technical data are indicative and dependent on the amount of power and type of heater.

Technical details page 32

Heating times are subject to the relationship between:

- Min. bore and max. outside diameter, width, weight.
- Required temperature and material type.
- Available power.

TURBO

BETEX SUPER TURBO 24 kVA

AREAS OF APPLICATION:

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

Heavy duty heaters.

- Min. ID Ø: 175/195 mm
- Max. OD Ø: 1700 mm
- Max. width: 750 mm
- Automatic demagnetisation
- Automatic power reduction
- Including 1 yoke

- Max. bearing weight: 1200 kg
- Max. weight other parts: 900 kg

NB: these technical data are indicative and dependent on the amount of power and type of heater.

Technical details page 32

High output, energy efficient!

The TURBO effect only works when the component is in a horizontal position

STANDARD

BETEX GIANT 40, 48, 100 kVA

AREAS OF APPLICATION:

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

Heavy duty heaters.

- Min. ID Ø: 85/215 mm
- Max. OD Ø: 1400-2500 mm
- Max. width: 440-990 mm
- Automatic demagnetisation
- Automatic power reduction
- Yokes: selection of 5 sizes

- Max. bearing weight: 1500-3500 kg
- Max. weight other parts: 900-2500 kg

Optional:
- **electric crane**
- **enlarged width 700 mm: DL700**
- **enlarged width 1000 mm: DL1000**

NB: these technical data are indicative and dependent on the amount of power and type of heater.

Technical details page 32

Heating times are subject to the relationship between:

- Min. bore and max. outside diameter, width, weight.
- Required temperature and material type.
- Available power.

TURBO

BETEX GIANT TURBO 40, 48, 100 kVA

AREAS OF APPLICATION:

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

Heavy duty heaters.

- Min. ID Ø: 115 - 240 mm
- Max. OD Ø: 1400-2500 mm
- Max. width: 450-1020 mm
- Automatic demagnetisation
- Automatic power reduction
- Including 1 yoke

- Max. bearing weight: 1500-12000 kg
- Max. weight other parts: < 12000 kg

NB: these technical data are indicative and dependent on the amount of power and type of heater.

Technical details page 32

High output, energy efficient!

The TURBO effect only works when the component is in a horizontal position

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

NEW

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 inductors 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 inductors.
- ✓ 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 an inductor around the component. Energy input inwards. For example, for bearing rings, pipes and rings of 50-2000 mm.

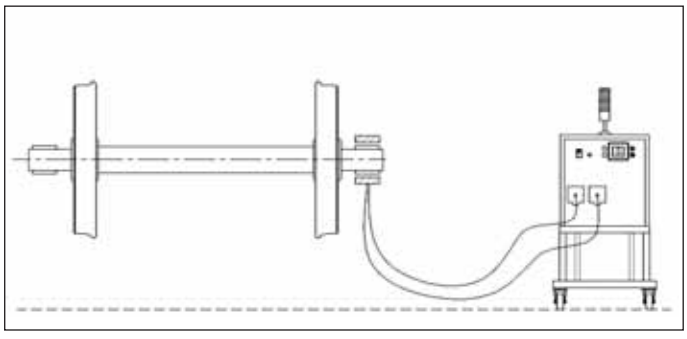
In this example, a metal pipe for a photocopier is being heated.
At the same time end shafts are being mounted at both ends.

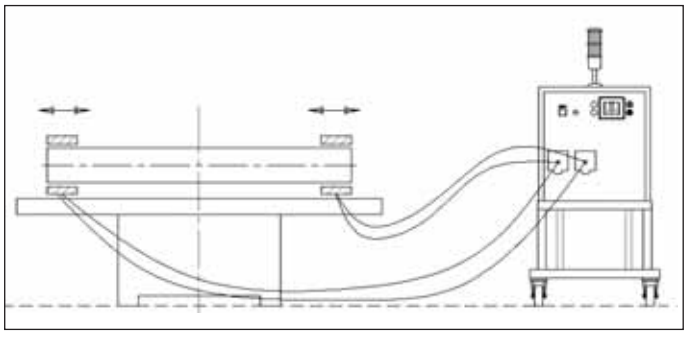
Task:
heat as rapidly as possible, prevent rust formation (result of old method).

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 an inductor around the component.





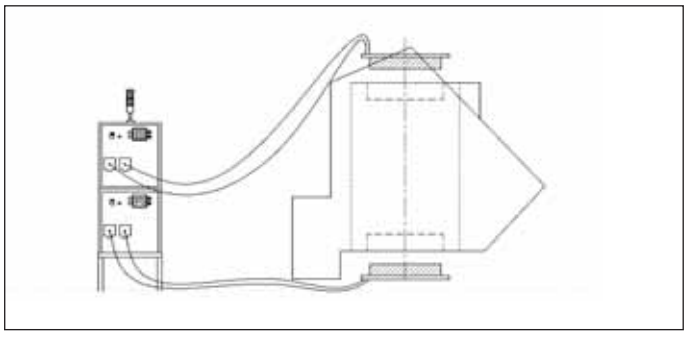
In the Railroad Industry the MF Quick-Heater is used for dismounting of bearing inner rings (NU, NJ) and labyrinth rings.

Middle frequency induction heaters: Heating method 2

Heating with an inductor 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.

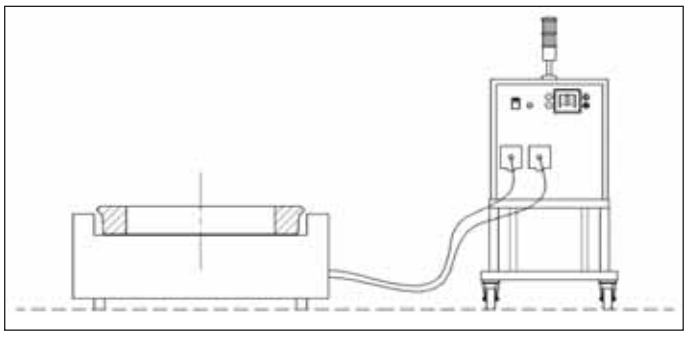
HEATING EXAMPLE
Heating with an inductor inside the component.

Heating method 3

The component lies on top of the flat induction table.
The component is placed on the induction table 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 inductor. This method is suitable for light products that require serial heating.

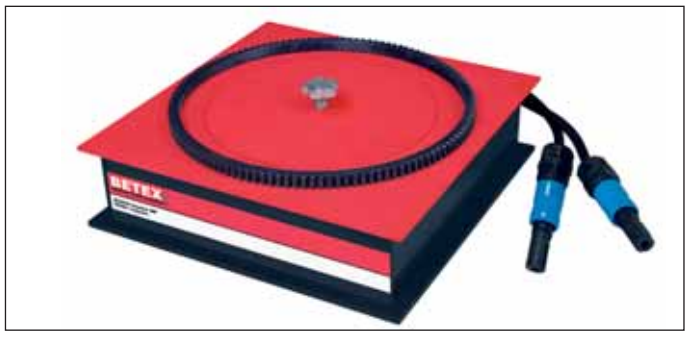
Task:
heat the crown gear as quickly as possible, OD 400 mm, ID 360 mm, thickness 15 mm, up to 270°C.



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

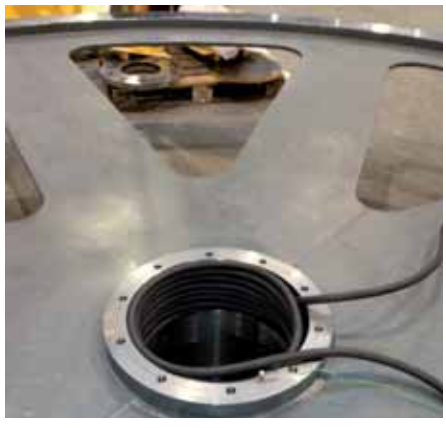
Advantage:
rapid heating doubles production figures, controlled, evenly spread heating.

HEATING EXAMPLE
heating on an induction table.



Middle frequency induction heaters: Heating method 4

Flexible heating by means of a flexible inductor.
The flexible inductor 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.



For more information visit our website www.bega.nl where you can find youtube videos about these tools.
For more pictures of the fixed and flexible inductors see page 34.

Advantages Betex MF Quick-Heaters:

- **Easy to use**
- **Clean**
- **Very suitable for production and maintenance applications**
- **Suitable for continuous production (24/7)**
- **Demagnetisation is not necessary**
- **No water cooling required**
- **Controlled heating**
- **Fixed and flexible inductors available**
- **Energy efficient**

The capacity and the size of the inductors 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**

BETEX INDUCTION POWER TOOLS®

RAIL
TRANSPORT

WIND
ENERGY

MACHINE
BUILDING

CUSTOM
MADE

Rail transport

Bega has offered many solutions in the area of heating components in the rail transport sector.
The most important advantages for our customers are:

- Time and energy efficient
- Can be immediately deployed, no pre-heating time needed.
- Controlled heat, no quality loss.
- Fast, safe, clean, stress-free heating.
- Environmentally friendly, no flames, smoke or noise.
- Capacities and types to the client's requirements.

References available on request.

For more information: www.bega.nl

BETEX GIANT TURBO, page 21
For heating wheel for subways, trams, trains and locomotives.

BETEX 40 RSDm TURBO 8 kVA ▼

Client:	manufacturer of drive systems for trains
Component:	gearwheel
Weight:	150 kg
Max. temp.:	150°C
Required time:	35 minutes

◀ BETEX GIANT

Client:	manufacturer of bogie sets
Component:	train wheel
Weight:	330 kg
Max. temp.:	240°C
Required time:	27 minutes
Optional:	slide-in induction yoke

BETEX GIANT ▲

Client:	supplier of rail components
Component:	rail track
Max. temp.:	250°C
Required time:	7 minutes

Wind energy

**Bega has been supplying induction heaters for many years for the sustainable manufacture of wind turbines.
Here we show some examples of successful projects with manufacturers and suppliers in this sector.**

The most important advantages for our customers are:

- Time and energy efficient.
- Can be immediately deployed, no pre-heating time needed.
- Controlled heat; no quality loss.
- Fast, safe, clean, stress-free heating.
- Environmentally friendly, no flames, smoke or noise.
- Capacities and types to the client's requirements.

For more information: www.bega.nl

BETEX GIANT TURBO 48-100 kVA, page 21

◀ BETEX GIANT XL

Client:	manufacturer of wind turbines
Component:	stainless steel tube
Weight:	1100 kg
Temp.:	270°C
Time:	3 hours

BETEX GIANT ▼

Client:	manufacturer of wind turbines
Component:	(main) bearing
Temp.	120°C
Time:	25 min.

Wind energy

BETEX GIANT TURBO

Client:	supplier of wind turbine components
Component:	bearing housing
Weight:	4300 kg
Temp.:	90°C
Time:	55 min.

Machine building

Our large heaters are very suitable for heavy and large components where safe, rapid and stress-free heating is a priority.

Bega Special Tools designs and produces cutomised powerful and sturdy heaters for various industrial environments on request.

BETEX GIANT DL-700

BETEX GIANT DL-700
References available on request.

BETEX GIANT DL-1000

Client:	manufacturer of steel profiles
Component:	steel roll
Weight:	up to 12000 kg

This company was using blow torches and was looking for an environmental friendly method. Opting for induction heating was obvious and satisfied the client's needs in several ways, also due to the controlled and stress-free heating of the sections.

Specials - custom-made

Bega Special Tools designs and builds custom-made heaters for serial heating of components such as bearings, gear wheels, bushes, rings and aluminium housings of E-motors.

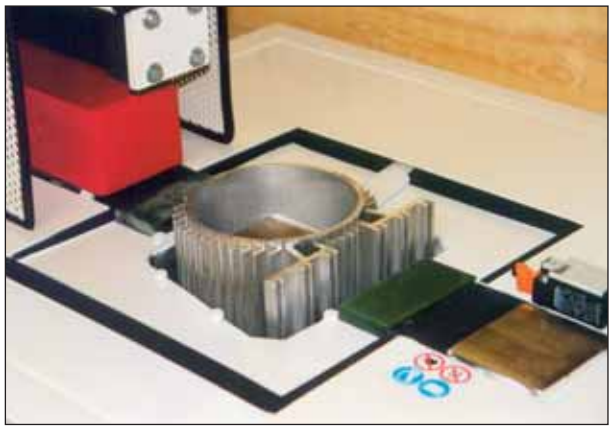
When fast and accurate heating is imperative, these 'Specials' offer surprising solutions. For example, it is possible to integrate them into fully automated production processes, even with a pick-and-place unit if desired. A huge advantage is the use of low frequency (50/60Hz), which costs much less than middle or high frequency solutions.

The most important advantages for our customers are:

- Heating times from 30 seconds to temperatures up to < 300°C.
- Energy-saving production method
- Increase in production capacity
- Safe, rapid, simple operation

References available on request.

For more information: www.bega.nl



Heating bores in housings
For mounting bearings and pins (including in frames and gearboxes).

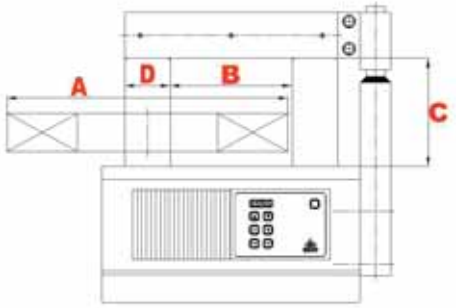
TECHNICAL DATA

						
Type BETEX		**22 ELD Portable**	**24 RLD TURBO Portable**	**22 ESD**	**24 RSD TURBO**	**38 ESD**
Facility power		**3.6 kVA**	**3.6 kVA**	**3.6 kVA**	**3.6 kVA**	**8 kVA**
Voltage/Amp*		120V/15A 230V/16A	120V/15A 230V/16A	120V/15A 230V/16A	120V15A 230V/16A	400/500V 20A
Frequenz Hz		50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Yokes, standard mm/ set 1		7,10,14,20,40	7,10,14,20,40	14,30,60	14,30,60	30,70
Yokes, standard mm/ set 2		in box	in heater	10,14,20,30,60	10,14,20,30,60	20,30,70
Swivel arm		-	-	yes	yes	yes
Max. weight ± kg						
- bearings		15	40	40	95	125
- other parts		10	25	25	50	75
Min. ID Ø: mm		10	10/Ø100	15/Ø100	15/Ø120	30/Ø115
Max. OD Ø: mm	*A	240	350	340/580 *1	520	480/720 *1
Max. width: mm	*B	120	135	150	200	200
Max. width at horizontal heating: mm	*C	-	135	125	230	180
Cross section poles mm	*D	40	40/Ø95	60	60/Ø115	70
Pole height mm		130	165	140	230	210
Temperature control ºC/ F						
- max reach*		150ºC	240ºC	240ºC	240ºC*2	240ºC*2
- magnetic probe		yes	yes	yes	yes	yes
- digital display		yes	yes	yes	yes	yes
Time control						
- max. reach		0-30 min.	0-45 min.	0-45 min.	0-45 min.	0-60 min.
- digital display		yes	yes	yes	yes	yes
Sound signal		yes	yes	yes	yes	yes
Error report		yes	yes	yes	yes	yes
Temperature hold		yes	yes	yes	yes	yes
Automatic power reduction		-	yes	-	yes	yes
Automatic demagnetising, <2A/cm		yes	yes	yes	yes	yes
Thermal safety guard		yes	yes	yes	yes	yes
Support for horizontal heating		-	yes	yes	yes	yes
Dimensions mm (lxbxh)		460x240x280	600x220x275	340x290x380	440x370x420	630x365x470
Weight heater kg excl. Yokes		21 (incl. yokes)	23 (incl. yokes)	31	37	53
Electric crane for yokes		-	-	-	-	-
Alarm signal		-	-	-	-	optional
Mobile		-	-	-	-	-

*1 With adaptor yokes, only available for the Standard models
*2 On request: 350ºC with heavy duty sensor and extra isolation
*3 Subject to power and execution

On request:other voltage/ amperage/ higher temperature up to 480ºC

Reference list available on request
For more information: WWW.BEGA.NL



							
40 RSD en RSDm (mobiel) TURBO	**38 ZFD**	**40 RMD TURBO**	**SUPER Standard en DL-700**	**SUPER TURBO**	**GIANT Standard en DL-700**	**GIANT Standard DL-700 / DL-1000**	**GIANT XL TURBO**
8 kVA	**12 kVA**	**12 kVA**	**24 kVA**	**24 kVA**	**40 kVA**	**48, 100 kVA**	**40, 48, 100kVA**
400/500V 20A	400/500V 30A	400/500V 30A	400/500V 60A	400/500V 60A	400/500V 100A	400/500V 120, 250A	400/500V 100, 120, 250A
50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
optional	optional	optional	optional	included	optional	optional	included
20,30,40,60,80	20,30,40,60,80	40,60,80	40,50,60,80,100*3	1 yoke	60,80,100,150*3	60,80,100,150,200*3	1 yoke
yes	yes	yes	-	-	-	-	-
350	280	600	600	1200	1500/2000*3	3000/3500*3	1500/12000*3
250	200	450	350	900	900/1500*3	1500/2500*3	<12000*3
30/Ø155	30/Ø130	60/Ø170	60/85*3	175/Ø195	85*3	85/215*3	115/240*3
790	720/1080 *1	920	900/1300*3	1700	1400/1700*3	1700/2500*3	1400/2500*3
315	340	365	400/700*3	750	620/700*3	700/900*3	450/1020*3
280	290	305 adj. supports 320 fixed supports	390/690*3	600	440/730*3	730/990*3	450/1000*3
80/Ø153	80	Ø170/110x80	100*3	145/ Ø195	150*3	150/200*3	200*3
320	340	305	390*3	595	660/740*3	740/1000*3	900*3
240°C*2	240°C*2	240°C*2	240/350°C*2	240/350°C*2	240/350°C*2	240/350°C*2	240/350°C*2
yes	yes	yes	yes	yes	yes	yes	yes
yes	yes	yes	yes	yes	yes	yes	yes
0-60 min.	0-99 min.	0-99 min.	0-99 min.	0-99 min.	0-99 min.	0-99 min.	0-99 min.
yes	yes	yes	yes	yes	yes	yes	yes
yes	yes	yes	yes	yes	yes	yes	yes
yes	yes	yes	yes	yes	yes	yes	yes
yes	yes	yes	yes	yes	yes	yes	yes
yes	yes	yes	yes	yes	yes	yes	yes
yes	yes	yes	yes	yes	yes	yes	yes
yes	yes	yes	yes	yes	yes	yes	yes
yes	yes	yes	yes	yes	yes	yes	yes
1200x640x1000	1200x640x1000	1200x640x1000	1000x500x1350*3	1600x700x1300	1750x600x1470*3	2150x900x2210*3	2350x1000x1875*3
65/105	125	205 adj. supports 185 fixed supports	220/320 kg*3	450 kg (incl yoke)	660/800 kg*3	800/1700 kg*3	1800 kg*3
-	-	-	optional	-	optional	optional	optional
optional	optional	optional	optional	optional	optional	optional	optional
yes (40RSDm)	yes	yes	optional	optional	optional	optional	optional

CE

Heating times are subject to the relationship between:
- Min. bore and max. outside diameter, width, weight
- Required temperature and material type
- Available power

High output, energy efficient!

Examples fixed inductors

Examples flexible inductors