

# Products • Mounting

## Thermal mounting and dismounting

Electric heating plates • Induction heating devices

### Electric FAG heating plate HEATER-PLATE

The temperature-controlled FAG heating plate HEATER-PLATE can be used to heat rolling bearings (up to a maximum of +120 °C) or small machine components up to 5 kg mass. The removable housing cover protects the workpieces from contaminants and ensures uniform and rapid heating. This inexpensive device is maintenance-free and easy to handle.

Dimensions (WxDxH):  
390x270x156 mm Plate  
size 380x180 mm Power: max.  
1500 W at 230 V/50 Hz  
Temperature control:  
continuously variable from  
+50 °C to +200 °C Mass: 5,6  
kg

Ordering designation:  
**HEATER-PLATE**

Ordering designation for version  
with 115 V/60 Hz: **HEATER-PLATE-115V**



FAG heating plate HEATER-PLATE

### Electric FAG heating plate HEATER-PLATE-370C

The HEATER-PLATE-370C is used principally for heating the FAG aluminium heating rings HEATING-RING (see page 34). It can also be used for the heating of rolling bearings. Heating rings are suitable for dismounting the inner rings of cylindrical roller and needle roller bearings without ribs and inner rings with one rib. The heating rings are heated to a temperature of +200 °C to +300 °C. The outside diameter of the workpieces can be up to max. 350 mm, the mass can be up to 20 kg.

Dimensions (WxDxH): 360x360x170 mm Plate size 350x350 mm Power: max. 2 200 W at 230 V/50 Hz Power control: 0 to 100% Temperature control: continuously variable from +100 °C to +370 °C Mass: approx. 13 kg Ordering designation: **HEATER-PLATE-370C** Ordering designation for version with 115 V/60 Hz: **By agreement**



FAG heating plate HEATER-PLATE-370C

### Induction FAG heating devices

Many rolling bearings and other rotationally symmetrical parts made from steel have tight fits on the shaft. In particular, larger parts can be mounted more easily if they are heated first. Rapid and clean induction heating is superior to the conventional methods. It is therefore particularly suitable for batch mounting. Heating is carried out on complete bearings, rings for cylindrical roller or needle roller bearings and rotationally symmetrical steel parts such as labyrinth rings, roller couplings, tyres etc.

#### Advantages

- Rapid, energy-efficient operation
- Suitable for rolling bearings and other ring-shaped steel parts
- Very safe operation
- Environmentally friendly, oil-free (no disposal required)
- Uniform, controlled heating
- Easy to use
- Automatic demagnetisation
- High cost-effectiveness through selection of the most suitable size of device for the particular application

• Suitable for batch mounting  
For the mounting of workpieces up to 300 kg mass, we supply five table-top heating devices PowerTherm HEATER10 to 300 suitable for mobile and/or stationary use.

For workpieces up to 3 000 kg mass, we recommend the particularly heavy duty standalone devices HEATER600, HEATER1200 and HEATER3000.

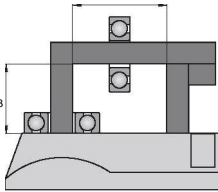




For detailed information, see TPI WL 80-54.

# Products • Mounting

## Thermal mounting and dismounting

Induction heating devices

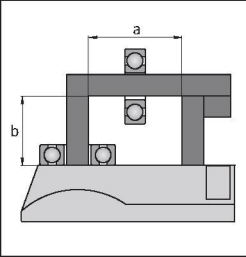




### Overview of induction heating devices

Heating device	HEATER10	HEATER20	HEATER35	HEATER150
				
<b>Power consumption</b> max. <sup>1)</sup>	2,3 kVA	3,6 kVA	3,6 kVA	12,8 kVA
<b>Voltage/frequency</b> <sup>2)</sup>	230 V/50 Hz	230 V/50 Hz	230 V/50 Hz	400 V/50 Hz
<b>Current</b>	10 A	16 A	16 A	32 A
<b>Mass</b>	7 kg	17 kg	31 kg	51 kg
<b>Length</b>	230 mm	345 mm	420 mm	505 mm
<b>Width</b>	200 mm	200 mm	260 mm	260 mm
<b>Height</b>	240 mm	240 mm	365 mm	440 mm
<b>Dimension a</b>	65 mm	120 mm	180 mm	210 mm
<b>Dimension b</b>	95 mm	100 mm	160 mm	210 mm
<b>Ledges (ind.)</b>	20/45/65 mm	20 mm	70 mm	100 mm
<b>Forworkpieces of min. bore</b>	(graduated supports)	35 mm 60 mm		
<b>Ledges (accessories)</b>	10 mm	10 mm	15 mm	20 mm
<b>Forworkpieces of min. bore</b>	15 mm	15 mm 45 mm	20 mm 35 mm 45 mm 60 mm	30 mm 45 mm 60 mm 70 mm 85 mm

If lower voltage is used, the power will be reduced.

Upon request, we can also supply heating devices with other rated voltages and frequencies as well as higher power ratings.

## Overview of induction heating devices

Heating device	HEATER300 <sup>3)</sup>	HEATER600	HEATER1200	HEATER3000
				
<b>Power consumption max.<sup>1)</sup></b>	12,8 kVA	25 kVA	40 kVA	100 kVA
<b>Voltage/frequency<sup>2)</sup></b>	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
<b>Current</b>	32 A	63 A	100 A	250 A
<b>Mass</b>	75 kg (+25 kg) <sup>3)</sup>	350 kg	850 kg	1800 kg
<b>Length</b>	870 mm	1100 mm	1500 mm	2500 mm
<b>Width</b>	300 mm	850 mm	1100 mm	1500 mm
<b>Height</b>	580 mm (900 mm) <sup>3)</sup>	1250 mm	1400 mm	1800 mm
<b>Dimension a</b>	330 mm	430 mm	700 mm	700 mm
<b>Dimension b</b>	260 mm	400 mm	450 mm	800 mm
<b>Ledges (ind.)</b>	115 mm	145 mm	215 mm	285 mm
<b>For workpieces of min. bore</b>				
<b>Ledges (accessories ;)</b>	30 mm	45 mm	85 mm	145 mm
<b>For workpieces of min. bore</b>	45 mm	60 mm	115 mm	215 mm
	60 mm	70 mm	145 mm	
	70 mm	85 mm		
	85 mm	100 mm		
	100 mm	115 mm		
		130 mm		

<sup>3)</sup> Convertible to a mobile version by adding HEATER300.TROLLEY.

# Products • Mounting

## Thermal mounting and dismounting

Heating rings • Heat conducting paste

### FAG heating rings

Heating rings are suitable for dismounting the inner rings of cylindrical roller and needle roller bearings without ribs and inner rings with one rib. Heating rings are particularly advantageous for the occasional extraction of small and medium-sized bearing rings (bore diameter 50 to 200 mm). Depending on the size of the ring, heating takes between 5 and 30 seconds. The heating rings are made from light metal. They have a radial slot. They are easy to handle due to the heat-insulated handles.

Heating rings are heated to between +200 °C and +300 °C by means of an electric heating plate. The cylindrical outside surface of the bearing inner ring must be coated with a silicone-free heat conducting paste (HEATING-RING.PASTE). This gives optimum heat transfer. The heating ring is then slid over the inner ring to be extracted.

### FAG heat conducting paste HEATING-RING.PASTE

The silicone-free heat conducting paste HEATING-RING.PASTE is used as an aid in the dismounting of bearing inner rings by means of heating rings. The cylindrical outside surface of the bearing inner ring is coated with the heat conducting paste before extraction in order to achieve optimum heat transfer from the heating ring to the bearing inner ring.

The bearing ring must be removed from the heating ring immediately after extraction in order to prevent overheating.

Each bearing size requires a specific heating ring. By agreement, we can supply these heating rings made from a special aluminium alloy. In order to prepare a quotation, we require the following information:

1. Bearing designation or ring dimensions,
2. Drawing of mounting position including information on fits.
3. Approximate number of parts to be extracted per day

### Recommended FAG accessories

- Electric heating plate for temperatures up to +370 °C  
**HEATER-PLATE-370C**
- Temperature gauge **TEMP-CHECK-CONTACT** (see page 61)
- Gloves **GLOVE2**
- Heat conducting paste (see below)  
**HEATING. RING. PASTE-20ML**  
(20 ml included in delivery)

Ordering designation  
(expendable syringe containing 20 ml silicone-free heat conducting paste):

**HEATING-RING. PASTE-20ML**

For detailed information,  
see publication TPI 180.

### Ordering examples for heating rings

#### HEATING-RING-320E

(for the inner ring of a cylindrical roller bearing NU320-E, NJ320-E etc.)

#### HEATING-RING-2317E

(for the inner ring of a cylindrical roller bearing NU2317-E, NJ2317-E etc.)

For detailed information, see  
publication TPI 180.



# Products • Mounting

## Thermal mounting and dismounting

Electric induction heating devices

### Electric induction heating devices

Electric induction heating devices are suitable for the dismounting of inner rings on medium-sized and large cylindrical roller and needle roller bearings (bore diameter 90 mm and larger). They can also be used to heat labyrinth rings, couplings, ring rolls and other rotationally symmetrical parts.

### Low voltage heating devices

This design comprises an induction coil and a transformer. The coil runs on non-hazardous low voltage and is water-cooled. This allows continuous heating, which is particularly suitable for batch mounting. Due to the lightweight construction, these devices are easy to handle. Each bearing size requires a specific coil. The coil is connected to a mobile transformer that can be designed for any mains voltage. The voltage for the coil is adjustable between 20 V and 40 V. We supply transformers for the induction coils in six different power steps. The largest transformer and the corresponding coil can be used to heat inner rings up to a maximum mass of 1200 kg to the required dismounting temperature of +80 °C...+120 °C (maximum mass of 600 kg for couplings).

Ordering example for bearing inner rings 120x150x144 mm:

**COIL152X145-LOW** (coil) **COIL.TRAFO-45KVA-400V-50HZ** (transformer)

Low voltage heating device with transformer for



dismounting of the inner rings of cylindrical roller bearings

### Mains voltage heating devices

In addition to coils for low voltage, FAG also supplies coils for mains voltage (with a switch box or foot switch). This economical alternative without water cooling is used for sporadic dismounting (where batch dismounting is not required).

Ordering examples:

**COIL150X100-MAIN-L**  
(mains voltage coil for labyrinth rings)

**COIL.SWITCH-PEDAL-50KVA-400V-50HZ**  
(foot switch for mains voltage device)

### COIL.SWITCH-CABINET-80KVA-400V-50HZ

(switch box for mains voltage device)

Mains voltage heating device with switch box for dismounting of the inner rings of cylindrical roller bearings



### Information required for quotation

FAG induction heating devices are always produced in single-item production.

For detailed information and a guide to the information required in order to prepare a quotation, see TPI 180.