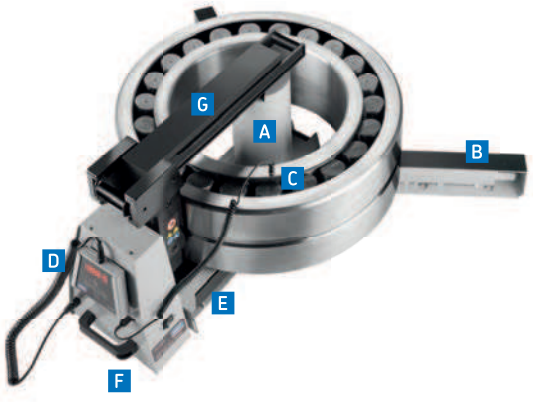
Heating tools

TIH series



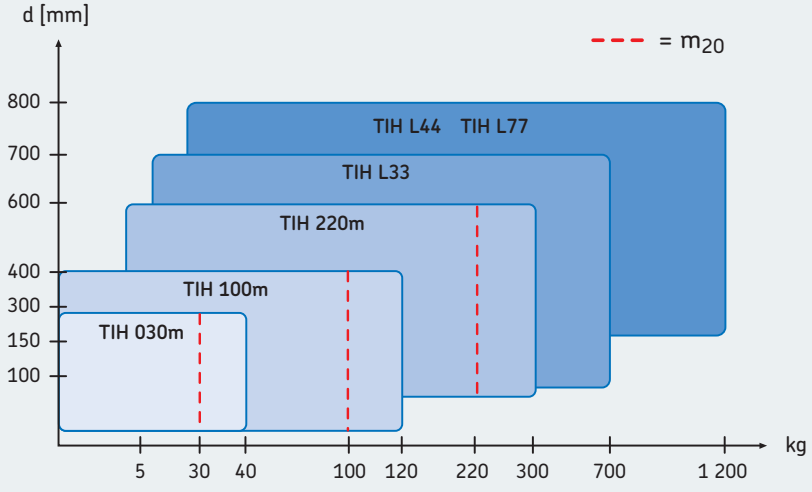
Features and benefits

The comprehensive SKF induction heater range can be used for efficiently heating bearings and workpieces, both large and small. Their innovative design offers significant advantages to both owners and operators:

- Advanced power electronics, with accurate electric current control, help control the temperature rate increase
- Two step power setting option (50% / 100%), enables small bearings to be heated safely and at a lower power consumption
- For heating components other than bearings, all heaters are equipped with a heating time mode and for large components, optimized TIH MB heaters for solid workpieces are available
- Thermal overheating protection reduces the risk of damage to the induction coil and electronics, enhancing reliability and safety
- Automatic demagnetisation reduces the risk of ferrous debris contamination after heating
- Available in different voltage variants, to suit most operating voltages worldwide
- Supplied with heat-resistant gloves for improved operator safety

A Induction coil located outside the heater's housing enables a shorter heating time and lower energy consumption
B Foldable bearing support arms allow larger diameter bearings to be heated, and reduce the risk of the bearing toppling during heating
C Magnetic temperature probe, combined with a temperature mode pre-set at 110 °C *(230 °F)*, helps prevent bearing overheating
D Unique SKF remote control, with operating display and control panel, makes the heater easy and safe to use
E Internal yoke storage, for smaller yoke(s), reduces the risk of yoke damage or loss
F Integrated carrying handles allow for easy movement of the heater in the workshop
G Sliding or swivel arm allows for easy and quick bearing replacement, reducing operator fatigue (not for TIH 030m)

SKF induction heater range



The comprehensive range of SKF induction heaters is suitable for most bearing heating applications. The chart gives general information on choosing an induction heater for bearing heating applications [1].

The SKF m_{20} concept represents the weight (kg) of the heaviest SKF spherical roller bearing of series 231 which can be heated from 20 to 110 °C *(68 to 230 °F)* in 20 minutes. This defines the heater's power output instead of its power consumption. Unlike other bearing heaters, there is a clear indication of how long it takes to heat a bearing, rather than just the maximum bearing weight possible.

[1] For heating components other than bearings, SKF recommends consideration of TIH L MB series heater. Contact SKF to help you select a suitable induction heater for your application.

Small induction heater with a 40 kg bearing heating capacity

TIH 030m

- Compact lightweight design; just 21 kg *(46 lb)*, facilitating portability
- Capable of heating a 28 kg *(62 lb)* bearing in just 20 minutes
- Supplied standard with three yokes, allowing bearings with a bore diameter from 20 mm *(0.8 in.)* up to a maximum weight of 40 kg *(90 lb)* to be heated

Medium induction heater with a 120 kg bearing heating capacity

TIH 100m

- Capable of heating a 97 kg *(213 lb)* bearing in less than 20 minutes
- Supplied standard with three yokes, allowing bearings with a bore diameter from 20 mm *(0.8 in.)* up to a maximum weight of 120 kg *(264 lb)* to be heated
- Swivel arm for large size yoke

Large induction heater with a 300 kg bearing heating capacity

TIH 220m

- Capable of heating a 220 kg *(480 lb)* bearing in just 20 minutes
- Supplied standard with two yokes, allowing bearings with a bore diameter from 60 mm *(2.3 in.)* up to a maximum weight of 300 kg *(660 lb)* to be heated
- Sliding arm for large size yoke

Technical data

Designation	TIH 030m	TIH 100m	TIH 220m
Max. bearing weight	40 kg *(88 lb)*	120 kg *(264 lb)*	300 kg *(662 lb)*
Bore diameter range	20–300 mm *(0.8–11.8 in.)*	20–400 mm *(0.8–15.7 in.)*	60–600 mm *(2.3–23.6 in.)*
Operating area (w × h)	100 × 135 mm *(3.9 × 5.3 in.)*	155 × 205 mm *(6.1 × 8 in.)*	250 × 255 mm *(9.8 × 10 in.)*
Coil diameter	95 mm *(3.7 in.)*	110 mm *(4.3 in.)*	140 mm *(5.5 in.)*
Standard yokes (included) to suit bearing/workpiece minimum bore diameter	65 mm *(2,6 in.)* 40 mm *(1.6 in.)* 20 mm *(0.8 in.)*	80 mm *(3.1 in.)* 40 mm *(1.6 in.)* 20 mm *(0.8 in.)*	100 mm *(3.9 in.)* 60 mm *(2.3 in.)*
Performance example (bearing, weight, temperature, time)	23136 CC/W33, 28 kg, 110 °C, 20m	23156 CC/W33, 97 kg, 110 °C, 20m	23172 CC/W33, 220 kg, 110 °C, 20m
Max. power consumption	2,0 kVA	3,6 kVA (230 V) 4,0–4,6 kVA (400–460 V)	10,0–11,5 kVA (400–460 V)
Voltage [1] 100–120 V/50–60 Hz 200–240 V/50–60 Hz 400–460 V/50–60 Hz	 TIH 030m/110 V TIH 030m/230 V –	 – TIH 100m/230 V TIH 100m/MV	 – TIH 220m/LV TIH 220m/MV
Temperature control [2]	20 to 250 °C *(68 to 482 °F)*	20 to 250 °C *(68 to 482 °F)*	20 to 250 °C *(68 to 482 °F)*
Demagnetisation according to SKF norms	<2 A/cm	<2 A/cm	<2 A/cm
Dimensions (w × d × h)	460 × 200 × 260 mm *(18.1 × 7.9 × 10.2 in.)*	570 × 230 × 350 mm *(22.4 × 9 × 13.7 in.)*	750 × 290 × 440 mm *(29.5 × 11.4 × 17.3 in.)*
Total weight (incl. yokes)	20,9 kg *(46 lb)*	42 kg *(92 lb)*	86 kg *(189 lb)*

[1] Some special voltage versions (e.g. 575V, 60 Hz CSA ready) are available for specific countries. For additional information, please contact your local SKF authorised distributor.
[2] Maximum heating temperature capacity depends on the weight and geometry of the bearing or workpiece. The heaters can achieve higher temperatures, please contact SKF for advice.