CASE STUDY · MAINTENANCE

DISMOUNTING WITH A FLEXIBLE INDUCTOR.

INDUCTION HEATING

READ ONLINE

Dismounting tightly fitted components like gears, couplings and bearings is one of the most demanding jobs in maintenance.

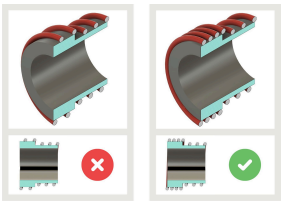
THE CHALLENGE.

For dismounting applications, a high power output is essential. The objective is to heat the component as quickly as possible, creating sufficient expansion before the heat can travel through to the shaft. Diverse geometries of parts add another layer of complexity.

Traditionally, fixed or tightly fitted components were removed using gas burners, open flames, or by cutting the part altogether. These methods are difficult to control and often result in excessive heat transfer to surrounding components, increasing the risk of damage to shafts, seals and bearings.

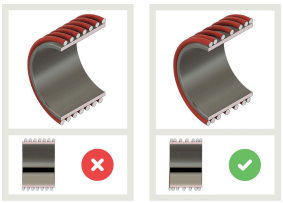
OUR SOLUTION.

A high-power medium-frequency generator in combination with a flexible inductor introduces heat exactly where it is needed. The result is a fast, controlled heating process that minimizes heat penetration into surrounding parts. TM's EXTRATHERM family offers generators of up to 150 kW.



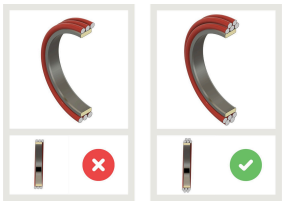
NON-UNIFORM PARTS.

Thinner parts heat faster. Adjust the winding accordingly to distribute the heat and avoid overheating the workpiece or the inductor.



UNIFORM PARTS.

With a uniform mass distribution, wind the inductor tighter at the edges. Colder edges impede removal; tighter edge windings let the ring come off cleanly.



NARROW PARTS.

For narrow workpieces, apply multiple layers of winding on top of each other (stacking) to introduce enough power. Always apply as many windings as possible.

PROVEN RESULTS.

- Heat introduced exactly where it is needed
- Fast expansion before the heat reaches the shaft
- Handles diverse geometries: gears, couplings and bearings
- Minimal heat transfer to shafts, seals and bearings
- EXTRATHERM generators of up to 150 kW
- Flexible inductors up to 300 °C / 572 °F, in various cable lengths

Dismounting rings or bearings with a flexible inductor? Tell us about your workpiece and we will help you choose the right flexible inductor and cable length for the job.

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TM'S 5 PRODUCT CATEGORIES.

A complete range of induction heating solutions, structured into five product families. Each series matches a specific application level and workpiece range, from compact and portable solutions to heavy-duty and fully customized systems.



EASYTHERM SERIES

Versatile workshop induction heaters for daily assembly and maintenance tasks. Programmable temperature control, automatic demagnetization and a wide range of models for workpieces from 1 to 300 kg.



SURETHERM SERIES

Advanced heaters that heat uniformly and demagnetize automatically, with controlled temperature ramps for fast, repeatable shrink-fit installations. Equipped with the original dual-sensor technology that TM invented and introduced to the market. Heats workpieces from 1 to 1600 kg.



EXTRATHERM SERIES

Compact mid-frequency heater that frees fixed parts and components in seconds: clean, targeted heat anywhere without flames or mess. The generator can be supplied with various flexible or custom coils.



PROTHERM SERIES

Fully custom-built induction heating systems engineered for your specific workpiece and process. Five product lines: U-LINE, H-LINE, S-LINE, STATOR HOUSING-LINE and ROTOR-LINE, covering industries from e-mobility to mining, heating parts up to 100 tonnes (100,000 kg).

EXPECTED
IN H2, 2026

PORTATHERM SERIES

Ultra-portable induction heater for on-site maintenance, field service and workshop applications. Compact, lightweight design with multi-frequency output for fast, flameless heating anywhere.

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TM INDUCTION HEATING