

# Induction Shrink Fitting

United Induction Heating Machine Limited

We are experienced in Induction Heating, induction heating machine, Induction Heating equipment. They are widely used in induction heating service, induction heat treatment, induction brazing, induction hardening, induction welding, induction forging, induction quenching, induction soldering induction melting and induction surface treatment applications  
<http://www.uihm.com>

Induction shrink fitting refers to the use of induction heater technology to pre-heat metal components between 150 °C (302 °F) and 300 °C (572 °F) thereby causing them to expand and allow for the insertion or removal of another component. Typically the lower temperature range is used on metals such as aluminium and higher temperatures are used on metals such as low/medium carbon steels. The process avoids the changing of mechanical properties whilst allowing components to be worked. Metals typically expand in response to heating and contract on cooling; this dimensional response to temperature change is expressed as a coefficient of thermal expansion.

Induction Shrink Fitting is a procedure in which heat is used to produce a very strong joint between two pieces of metal, one of which is inserted into the other. Heat is applied to one of the pieces so that it expands, the other component is at ambient temperature. At this point the two pieces are placed one inside the other. As the hot component cools it contracts onto the already cool component producing interference and pressure which holds the two pieces together mechanically.

Features of the Induction Shrink Fitting technology:

Accurate and repeatable delivery of heat

Uniform heat giving predictable expansions

Precise control of cycle times

Reduced energy consumption

Fewer reject parts as all aspects of the process can be monitored

Ease of integration into an existing production cell

Better quality



[service@uihm.com](mailto:service@uihm.com)

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