

Standard 240v "Type A" and 110v "Type B" models:



Type "A" with Base Heater

2 x 110v Type "B" Thermosafe

Faratherm



Induction Base Heater

Key Benefits of standard units:

- Safe in explosive areas
- ATEX & IECEx certifications
- Energy Efficient
- Rapid Heating of liquids
- Melts solids fast
- Fully enclosed - IP66
- Easy to clean, will not rust.
- Simple to move and use
- Hard wearing
- Close Control
- Variable voltage options
- Maintenance free

Thermosafe Drum & Process Induction Heater

Designed to heat 205 liter drums or smaller steel vessels. Thermosafe is a single induction coil, wholly encapsulated in a cylinder made from a glass reinforced resin specifically developed for chemical plant. The cylinder is simply placed over the drum. Physical contact is not required.

The coil is connected to a single phase AC mains supply and generates heat directly and uniformly in the drum wall. Energy transfer is by alternating magnetic field and thus there is no heat transfer by the conventional and inefficient means of radiation or convection. As there are no hot elements, the heater remains substantially cooler than the drum being heated.

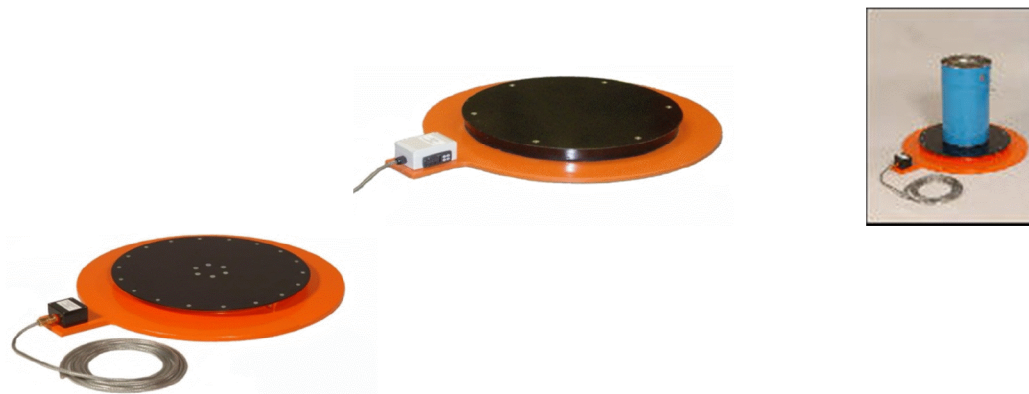
Type "A" Thermosafe is for operation with up to 240 volts ac. Type "B" is for operation at 110/120 volts ac.

Faratherm Induction Base Heater

The Induction Base Heater works on exactly the same electrical principle as the Thermosafe heater, but permits significant additional power to be delivered into the base of a drum. For melting solids or rapidly heating highly viscous liquids this will dramatically reduce the total time required to reach operating temperature. It can also be used as a stand-alone item, or with one of our insulation only jackets. The base heater is also certified to operate safely with HDPE plastic drums and smaller



containers can be placed onto its hot plate if required. Where hazardous area certification is not essential, our DIGIHEAT base heater can be considered. Designed for use with or without a Thermosafe Drum Heater, it has an integrated digital temperature indicating controller.



Safety

The complete absence of hot elements in our Induction Heaters, plus the encapsulation of all electrical components enables unattended use, overnight if required. Thermosafe and Faratherm can be used in hazardous areas Zones 1 and 2, as the heaters possess both ATEX and IECEx certification from SIRA. Uniform heating without hot spots reduces the risk of product degradation. Accidental spillage does not present a fire hazard and personnel can work comfortably in close proximity. Together, these features allow material to be heated at point of use, eliminating the transport of hot drums.

Efficiency

The low system temperature and lack of unwanted heat transfer contribute to the high efficiency of the induction heater. Power usage is extremely low at only 2.25kW. The heaters have won several awards for efficiency and productivity. Independent figures show energy savings of over 50% compared with conventional radiant drum heaters, and more than 90% in comparison with drum ovens.

Speed

By using the entire drum wall to input energy, the fastest practical heating rate can



be achieved without product degradation. Heating times will depend on the contents of the drum, but to give a rough idea, the rate of temperature rise of a typical viscous organic liquid will be about 15 °C per hour. The speed is further improved by the instant initial response of induction heating. Typically, Thermosafe has proved to be 2 to 4 times faster than ovens.

Cleanliness

With ingress protection to IP66, simple smooth surfaces and no moving parts, the induction heaters are ideal for use in clean environments. They can even be hosed down during use.

Flexibility

Single or Multi-drum "Oven" Applications

In addition to being operated at point of use and integrated into the process, the heaters are used extensively as replacements for, and alternatives to, drum ovens. A key point to note is that far fewer individual heaters are required than the drum capacity of an oven. For example, one particular award winning installation of 3 Thermosafe units heats 20 drums per day. The ease, at which capacity can be adjusted, to meet varying heating requirements of different materials, is in stark contrast to the fixed facility of an oven.

Multi-Purpose

The induction heater's unique features enable the same piece of equipment to be used in a wide range of applications to heat drums and a variety of other metal items, including gas bottles, small-scale reactors and process vessels.

Complete access to the drum while heating enables pumps and stirrers to be employed. The drum and heater can be integrated into the system, often eliminating the first process vessel, and continuous feeding of material, at regulated temperatures and flow rates, can easily be achieved.

Re-working and sampling of solidified or suspect material, even if heat sensitive, is a common task for Thermosafe. The lack of contact with the drum surface makes this possible even when the material is in its final packing.

Uniform heating and instant response makes the heater ideal for removing residues from drums, significantly reducing wastage. With full drums, these same features enable very rapid removal of solid drum contents by melting the outer layer of



material.

Maintenance

With no heating elements and no moving parts, the units have virtually unlimited life, and no maintenance is required.