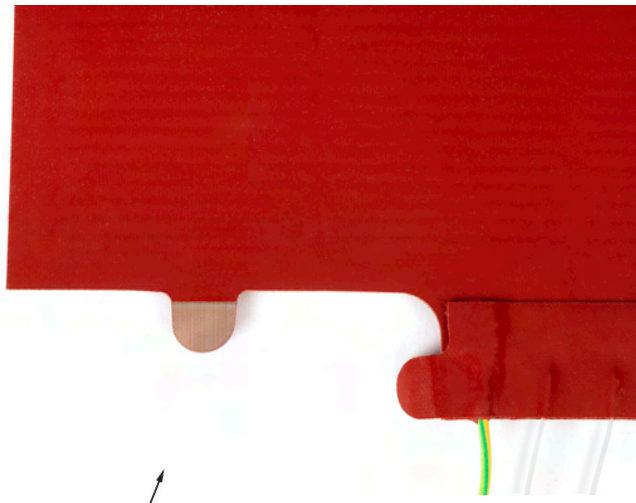
Earth Screen Technical Datasheet

THORNE & DERRICK INTERNATIONAL

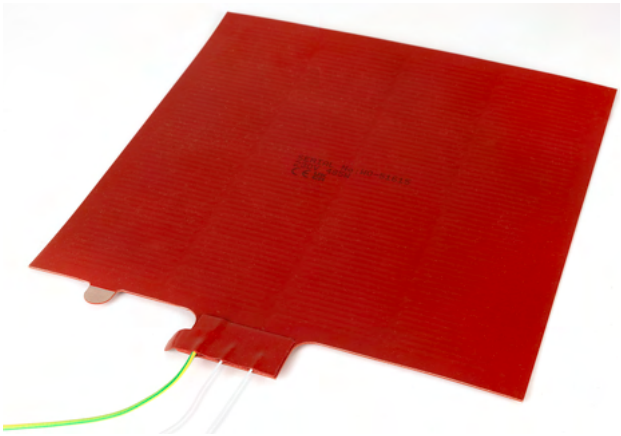
Overview:

Thorne & Derrick offer flexible silicone heaters with an inbuilt earth screen that offers protection in case of puncture of the outer insulation layer resulting in contact with the live heating circuit. The full coverage Earth Screen provides continuity of any earth fault back to the protection device of the electrical supply such as residual current device (RCD) or ground flow circuit interrupter (GFCI). Any electrically conductive surface that the heater is fitted to should be earthed separately.



EARTH SCREEN TEST TAB

The flexibility of the Earth Screen heaters allows them to be used effectively on convex, concave and flat surfaces. This is particularly useful when the heaters are required to be flexed within the application. A self-adhesive backing can be supplied to hold these heaters effectively in place if required.



Common applications include but are not limited to industrial catering, heated work benches, vessel heating and laboratory equipment.

Main Points:

- Wire wound or etched foil technology
- Precise even heating
- Moisture & chemical resistant
- IP64 protection as standard
- Wide temperature range –60°C to 200°c
- Single or three phase supply
- Possibility to fit low profile limiter & surface mounted sensors
- Bespoke design, power densities & voltages possible

Construction:

An Earth Screen provides a layer of protection within the heater's construction in the event of the heater surface being cut, pierced, or damaged resulting in contact with the live heating circuit. Full coverage is obtained with our construction including the lead/cable patch. Upon impact, the screen will provide continuity to earth, ensuring the RCD or GFCI will trip out and cut power to the heater. Providing an additional layer of protection.

The Earth Screen heaters are manufactured with Earth Screen testing tabs to demonstrate the earth screen material and allow continuity of the earth to be tested once the heaters are manufactured. These can be cut off if not required.

By using one of our thinnest materials, the heaters do not lose any of the flexibility even with an additional earth mesh layer embedded.

These heaters can be fitted with various leads or cables, including earth armoured cables when required. Low profile thermal switches are optional.

Health & Safety:

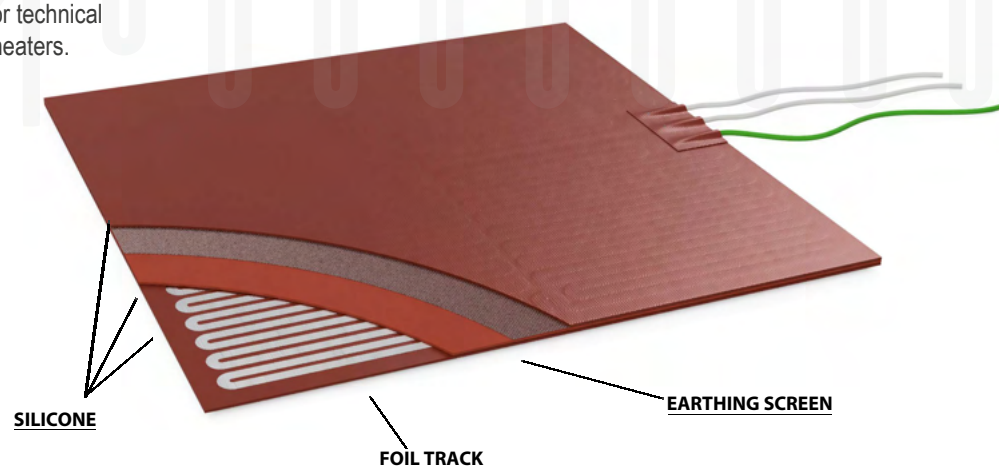
These heaters are intended for use in industrial electric apparatus. They correspond to the BS EN 60335-1:2012. The heater must be operated in accordance with these standards and regulations and should be installed on an electrical system protected by a residual current circuit breaker.

Design Capabilities:

We can design heating elements ranging from basic dimensions through to complex designs with various holes and cut outs. We can work to basic sketches or technical drawings to manufacture a versatile range of heaters.

There may also be possibilities to include free issue components such as sensors or limiters to the heaters. Upon request we could bond our heaters to metallic plates if this is required for the application.

TECHNICAL DATA	
MAXIMUM DIMENSIONS	Wire Wound - 940mm (W) x 300mm (L) Etched Foil- 595mm (W) x 2500mm (L)
THICKNESS	1.2mm - 1.5mm
TEMPERATURE RANGES	-60°c to 200°c (Non-Adhesive) -30°c to 180°c (Self Adhesive)
POWER DENSITIES	Variable
DIELECTRIC STRENGTH	1000V above operating Voltage
VOLTAGE RATING	Variable Single or Three Phase
FIXINGS	Non-Adhesive Self-Adhesive Hooks & Springs Preformed



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