



Manufacturer of Thermo-dynamic electric Radiators, Towel Rails & wireless Heat controller  
www.kalirel.co.uk

### How It Works

All Kalirel radiators use the same technology to provide responsive, efficient electric heating. Three key components work together to produce the extremely high levels of efficiency that make Kalirel radiators truly unique.

- ❖ Each radiator is fitted with a Tungsten element that absorbs energy quickly but slowly emits heat to the fluid, therefore maximising power usage.
- ❖ Each radiator is filled with a Thermo-Dynamic fluid which is designed to rapidly heat up and expand to cover the entire heat exchange surface, resulting in 100% hot point effect. The Thermo-Dynamic fluid also has high heat retention which allows the energy absorbed to be used for the maximum period of time.
- ❖ Each radiator is fitted with its own intelligent thermostat that allows manual control of temperature and mode selection. Each thermostat is equipped with a lockable option, thanks to the Kalirel electromagnetic key supplied with the radiator. The intelligent thermostat gauges the exact amount of power required and therefore, only draws the required power to maintain temperature.

When operational, the radiator will draw full power until the required temperature (set on the thermostat) is achieved. This is normally within 10 minutes. At this point, the radiator will cease drawing power. The Thermo-Dynamic fluid will have rapidly expanded and the radiator will now have 100% hot point effect. Due to the elements slow release of power and the fluid's heat retention qualities, the radiator will continue emitting heat.

At some point, the radiator will drop below temperature, the thermostat senses this and operates the element to draw more power. Intelligently, the radiator calculates exactly how much power is needed to return the temperature back to the desired level and therefore, will only draw that exact amount.



For example, if a 1000w radiator has dropped below the desired temperature and the radiator has sensed that only 250w are required to return it to the desired level, then the radiator only draws 250w and not 1000w.

Subsequently, by a radiator sensing when temperature is reached and ceasing power and then only drawing the exact amount of power as and when required, it uses power consumption in the most efficient way possible.

Therefore, when a 1000w radiator is installed in a room that has been calculated to require a 1000w radiator, if switched on for 8 hours to maintain a room temperature of 21 degrees, it will only use approx. 5 hours of electricity 5 kw.

Kalirel – Elegant, Efficient & Controlable.

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