



Digi Line IHS
Intelligent heating system



Electric Central Heating Without Pipes!
No Boiler - No Pipes - No maintenance



Why Electric Heating?

Electric is the fuel of the future for heating requirements. Dwindling supplies of north sea gas, the uncertainty of imported gas supplies, the volatility of oil prices and the commitment to reduce the U.K. carbon footprint all point towards electricity as the fuel of the future. The government has set a clear path towards a lower carbon future, with electricity to be generated by nuclear power and sustainable sources e.g. wind power, solar energy, wave power etc. Electric heating is 100% efficient and carbon neutral at the point of use, and with electricity being generated by nuclear and renewable sources in the future it will become completely carbon neutral. The government also promotes the use of microgeneration technologies e.g solar panels, photovoltaics and wind turbines. Electric heating appliances are compatible with all these microgeneration technologies. As more low carbon and renewable sources of electricity become available we will increasingly see electric heating being favoured over gas.

BENEFITS OF ELECTRIC HEATING

Low capital and installation costs

Electric heating is very easy to install. There is no requirement for unsightly pipework, and minimal disruption during installation. Because each heater can work independently, it is easy to add to a system as necessary or as budgets permit.

LOW OWNERSHIP COSTS

The true ownership costs of a heating system should be looked at over a system lifetime. Electric heating systems have no moving parts and can be expected to last over 15 years. The boiler industry quotes a lifetime of 10 years for a boiler. Boiler based systems require costly yearly maintenance whereas electric systems are maintenance free. Electric heating is 100% efficient at the point of use meaning all the fuel used is turned into heat unlike boiler systems where energy is wasted through the flue. No Maintenance and no annual inspection. Yearly maintenance and safety checks can add significant costs to the running of a system. Gas boiler systems require yearly maintenance and if used within rental properties, both private and social housing landlords are responsible for annual safety inspections. This can also be a major hassle for landlords needing to gain access to properties to conduct maintenance and safety checks. Electric heating does not require any maintenance or safety inspections.

COMFORT AND CONTROL

Significant developments in electric heating have produced systems with highly accurate electronic thermostatic controls. The Electrorad range offer thermostats capable of maintaining a room temperature to within +/- 0.1 C. This ensures optimum comfort and only the use of energy that's needed.

PART L – BUILDING REGULATIONS

The Electrorad system makes it easy to meet the requirements of Part L of the building regulations, with highly sophisticated zoned control systems.



Central convection fins ensure the perfect balance of radiant and convection heat. Radiant heat warms people directly, just like the sun's rays and the convection heat warms the air.

Digi-Line radiators do not need a circulation pump, or any moving parts. The guarantee period of 5 years on the radiator and electronics reflects this. A simulated lifetime test has confirmed Digi-Line life expectancy to be 24 years.

Below: Digi-Line radiator with radio receiver fitted





Features

Electric dynamic fluid filled convector radiator with integrated digital room thermostat.

Manufactured using the latest technology available.

Designed to cope with the harsh Scandinavian climate and built with quality materials to the highest technical standards gained through years of experience in the heating industry. Manufactured to the latest safety standards and carry the Intertek S mark and CE mark.

The discrete design and high quality materials and finish gives the Radiator its elegant timeless looks.

The environmentally friendly and recyclable fluid heats rapidly and naturally circulates to heat the whole surface area of the radiator. The fluid will never freeze and protects the radiator from internal corrosion.

Energy Saving

The digi-line integral thermostat has an internal micro chip which progressively learns the correct energy setting to maintain a room temperature and selects the optimum setting through an adaptive algorithm.



Each radiator can be used independently with the integral digital electronic thermostat or can be converted to receive radio frequency central programming by simply plugging in the receiver module (As shown left)



Energy Saving Open Window Feature

When the radiator senses a fast and large drop in temperature it will automatically shut itself down for a few minutes before resuming to previous settings





Digi-Line Radio Frequency (RF) Control System

The key to energy efficiency and economy in a heating system is Controllability. The Digi-line RF control system gives complete and accurate control. Each radiator has its own integral room thermostat, accurate to $\pm 0.1^{\circ}\text{C}$. To convert the radiators to RF control simply remove the blank plate above the thermostat and plug in the RF receiver module. The system programming is done on the supplied Windows software which can individually program every radiator for time and temperature from one central point.

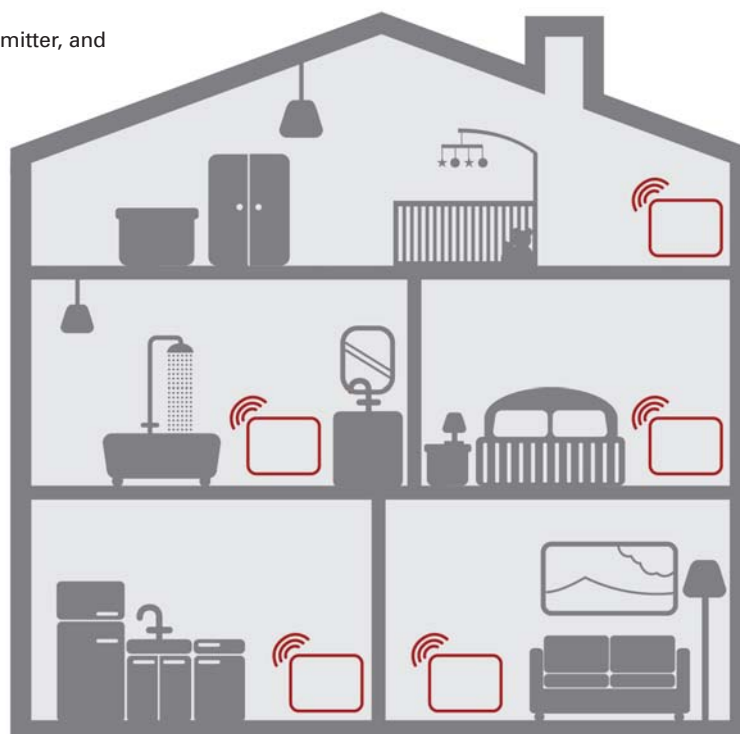


If a different temperature is required in a room than is already set on the programming, simply select the new temperature on the integral thermostat. The thermostat will revert to the computer setting after 2 hours.

Each radio receiver is also a transmitter, and each has a range of 300 metres.

Complete control at your fingertips! Each room can have exactly the operating times and temperatures you want, ensuring ultimate comfort and economy.

Up to 2000 radiators can be programmed with the Digi-Line RF system.



The software includes 'Smart metering' allowing you to see exactly how much energy has been used and at what cost. The Energy Saving Trust endorse smart metering as an important tool in the role of energy saving.



The windows software gives complete control of your heating system. Once programmed, the information will be sent to the USB transmitter which can then be disconnected and will continue to give the programming signals to the heating system.

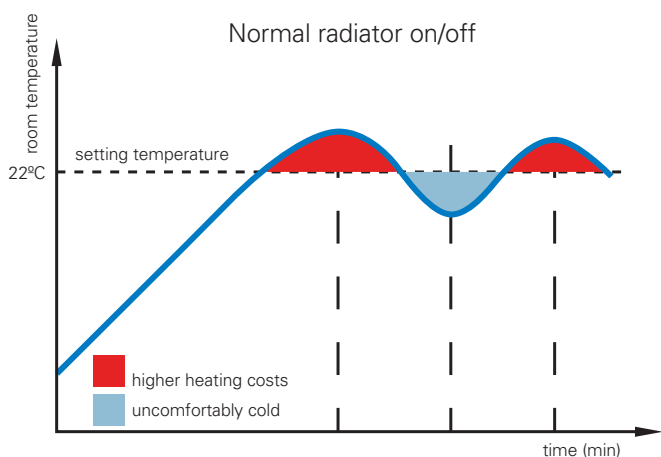
The RF control system is an option, but there are also other ways of setting up your Digi-Line heating system.

1. If timing is not required, just simply connect to a 13 amp supply (either plug in or wire to a fused spur) and just use the thermostat
2. Fit a plug and use plug in timer clocks

3. Wire a dedicated heating circuit, wired back to a dedicated consumer unit and fit a central timing system

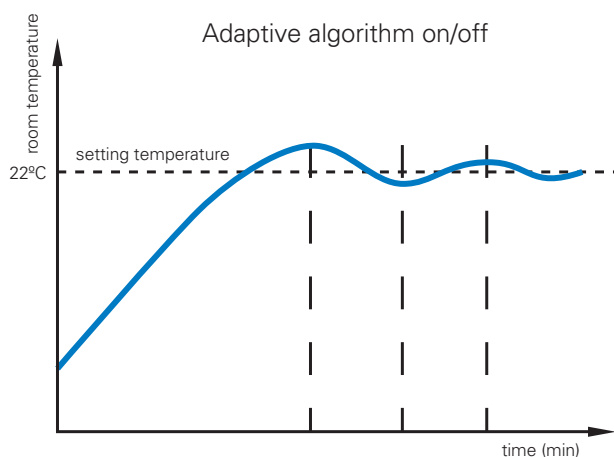
4. If replacing night storage heaters, the heating circuit is already in place. Simply wire in to the existing fused spurs, change the electric supply from economy 7 to either standard tariff or switch to economy 10. A timing system can be fitted to the heating circuit for central timing control

THE IMPORTANCE OF ACCURATE THERMOSTATIC CONTROL



The micro chip adaptive algorithm ensures extremely accurate room temperature maintenance. As seen above, without this feature there is a tendency for going well over and well under the target temperature throughout the heating cycle. This has a large impact on both comfort and economy. Every time the heating system overshoots the target temperature, it has cost you money to raise the room temperature higher than necessary. When the room temperature drops below the target temperature it will cost money to re-raise the temperature back to the target temperature.

The Digi-Line thermostat with adaptive algorithm is accurate to $\pm 0.1^{\circ}\text{C}$.



With most boiler based heating systems, whether it be Gas, Oil, LPG or Electric fired there will be one thermostat for the whole system, typically in the hallway. When the hallway reaches the set temperature, the whole system turns off. This makes it very difficult to have each area at the temperature you want. Basic thermostatic radiator valves only serve to choke the water entering the radiator, they do not sense the room temperature.

With the Digi-Line system, you will always have the desired temperature in every room.



The Digi-Line system can be used without the radio frequency system as shown left, or as shown on the right with the radio receiver fitted. The LED display can be dimmed and can also be set to go blank after setting for use in bedrooms where the LED light might cause disturbance.

A flame symbol shows when the radiator is heating.

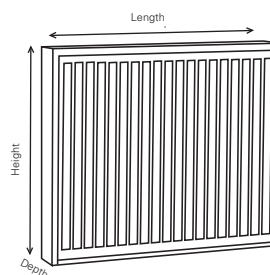
The radiator can be set into low surface temperature mode. If this is activated, the surface temperature will not exceed 50°C and the controls will be locked.

Technical Specification

Model Ref.	Output (Watts)	Output (BTU)	Height	Length	Depth
DL01(S)	500	1707	600	500	90
DL02(S)	750	2560	600	700	90
DL03(S)	1000	3414	600	900	90
DL05(D)	1272	4353	600	700	100
DL06(D)	1700	5804	600	900	100
DL07(D)	2000	6828	600	1100	100

(S) Single Panel
(D) Double Panel

Other height models available. The model specifications shown are stock items.
Digi-Line radiators are also available to order in heights of 500mm and 300mm.



Electrical products sold throughout the EU must bear the CE marking. However, as CE marking is self-declared, impartial testing is not required. Products bearing the S Mark (a voluntary certification) show that Intertek has independently tested and certified that the products fulfill valid safety requirements.

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