Electrorad electric boilers

A unique domestic electric boiler with the advanced technology of a commercial boiler

Clean
100%Efficient
Flueless
Quiet

Electrorad®
Electric Heating

The Electrorad boiler is a 100% energy efficient, intelligent modulating electric boiler, combining proven commercial technology in a unique design to bring the consumer one of the most up to date and efficient electric boilers on the market. The boilers can heat an indirect hot water cylinder and a wet central heating system, be it radiators, under floor or a mixture of both with all the ease and controllability of a gas or oil boiler.

The boilers are available with a choice of 2 heating control packages, Electronic (E) or Electro-Mechanical (M).

E versions boilers are supplied with a fully integrated outside temperature sensor. This intelligent device consistently monitors the outside temperature – the resulting information being constantly relayed to the unique in-built heating curve software. This exceptional advantage can reduce energy consumption by as much as 20%. (Further heating curve information shown on page 9.)

E version boilers supplied for connection to hot water cylinders are also supplied with a cylinder temperature sensor that relays the temperature information back to the boiler.

M versions boilers are supplied without the heating curve software and do not have an integrated outside temperature sensor. Boiler operation is via standard boiler control principles with the temperature and heating controlled by room and cylinder thermostats.

Space heating only boilers are also available.

When ordering or specifying an Electrorad boiler the E or M version should be clearly stated.

Underfloor heating (UFH) requires lower primary flow temperatures than a conventional radiator system. At Electrorad we have recognised this fact and have our boilers in-built with an easily set manually operated switch that ensures the correct primary flow temperature range is selected for the installed heating system.

contents

versatile

The Electrorad range of stylish compact boilers have a multitude of features that will benefit the developer, builder and installer, one such benefit where flue arrangements from a gas or oil boiler are difficult, or impossible to site, or where gas is not available, the Electrorad boiler in these circumstances offers a cost effective solution to these problems.

electric boilers do not require an annual safety certificate.

Power surges are eliminated in all boilers by a two or three stage soft start.
All Electrorad boilers are available with power outputs of 4.8, 6.0, 7.2, 10.8 and 14.4kW for connection to a single-phase 240-volt supply – Electrorad boilers can be connected in parallel thus increasing total output.

Electrorad boilers are almost silent in operation, carry a three year guarantee and require minimal maintenance.

trs-e
rs-m

The **RS** can be used as an additional, parallel source of heating, or as an independent heat source.

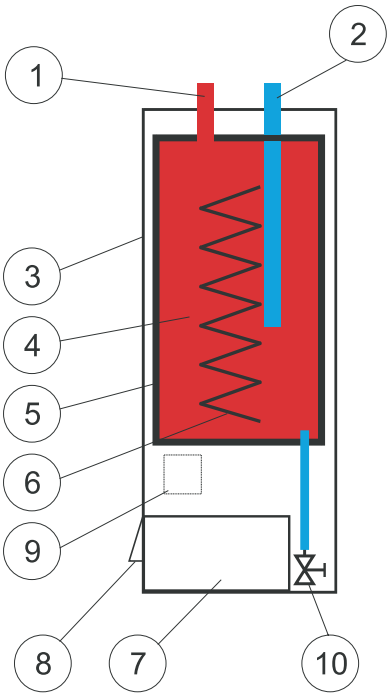
Both versions of the **RS** are compact and easy to install.

Features include an easy to read digital temperature display, state of the art PCB control panel and a RCD safety switch.

The **RS-E** version boiler is supplied with inbuilt heating curve software, outside temperature sensor and a hot water cylinder sensor. Further information about heating curves can be found on page 9.

The **RS** can be used with the cascade power limiter (see page 10 for details)

1 Primary flow to heating and cylinder
2 Combined heating and cylinder primary return 3 Boiler case
4 Boiler
5 Armaflex insulation
6 Electric elements
7 Control panel
8 Mains power entry
9 Contactors
10 Charge and discharge valve



plus-e
plus-m

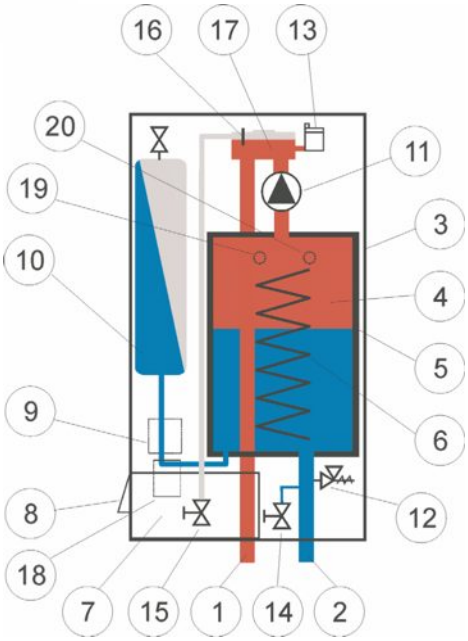
Plus is a space heating only boiler specifically designed for use with a wet central heating system containing either radiators, UFH or a combination of both.

The **Plus** boiler is a self contained unit that includes a state of the art PCB control panel, easy to read digital temperature display, RCD safety switch, primary expansion vessel and a circulation pump. This compact boiler ensures a simple, less complicated on site system and boilers that are easy and quick to install.

As well as a choice of power ratings the **Plus-E** is supplied with our unique heating curve software and outside temperature sensor – a correctly set heating curve working in conjunction with the outside temperature sensor will ensure only the required amount of energy will be used to maintain the dwelling at the consumer set temperature.

The **Plus** can be used with the cascade power limiter
(see page 10 for details)

1. Primary flow
2. Primary return
3. External boiler jacket
4. Boiler
5. Armaflex insulation
6. Electrical heaters
7. Control panel
8. Cable entry point
9. Contactors
10. Expansion vessel
11. Circulation pump
12. Safety valve 2.5 bar
13. Automatic air vent (AAV)
14. Charge and discharge valve
15. Manual air vent
16. Air-indicator
17. Manifold
18. RCD switch
19. Pocket with temperature probe
20. Pressure probe



ptv-e
ptv-m

The **PTV** is a sealed system boiler, specifically designed to provide heat to a wet radiator system, under floor heating, or both and an indirect cylinder, vented or unvented, by means of the factory fitted twin pump arrangement.

Supplied with the **PTV-E** is a temperature sensor which measures the temperature of the stored water in the cylinder. When heat is required to the cylinder the intelligent controls read the temperature of the cylinder stored water and adjust the output from the boiler using only the required amount of energy to raise the cylinder contents to the desired temperature.

The **PTV-E** can be used in conjunction with any standard or programmable room thermostat and systems incorporating thermostatic radiator valves.

The **PTV-E** and **PTV-M** can be used in conjunction with the Power Cascade Limiter, see page 10.

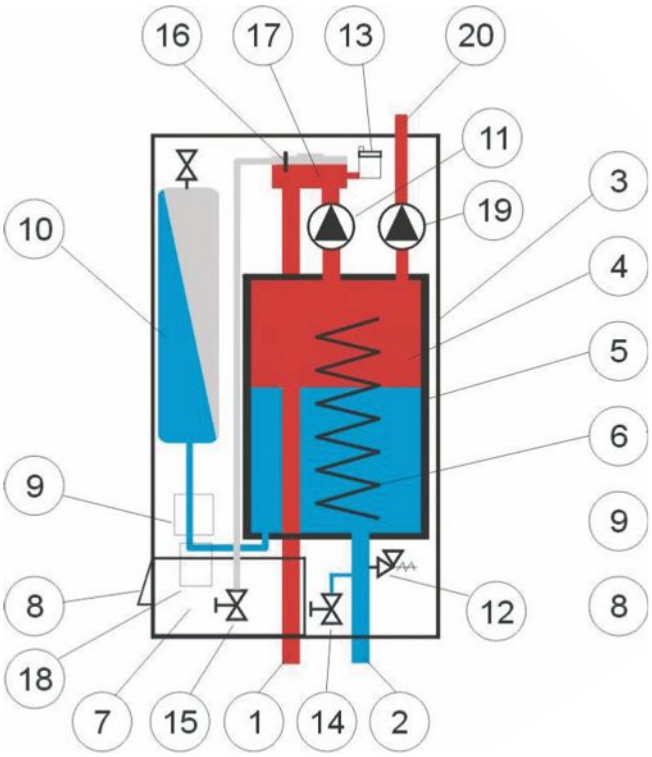
The PTV-E version boiler is supplied with inbuilt heating curve software, outside temperature sensor and a hot water cylinder sensor. Further information about heating curves can be found on page 9.

Digital control panel showing heating curve settings, air in boiler indicator and primary temperature and pressure gauge.

ptv-e
ptv-m

The **PTV-E** boiler is a self contained unit that includes a state of the art PCB control panel, easy to read digital temperature display, RCD safety switch, primary expansion vessel, outside temperature sensor and circulating pumps ensuring a simple, less complicated on site system and boilers that are quick and easy to install.

PTV-E



1 Primary flow to heating
2 Combined heating and cylinder primary return 3 Boiler case
4 Boiler
5 Armaflex insulation
6 Electric elements
7 Control panel
8 Mains power entry
9 Contactors
10 Expansion vessel
11 Heating pump
12 Safety valve
13 Automatic air vent (AAV)
14 Charge and discharge valve
15 Manual air vent
16 Air in boiler detector
17 Manifold
18 RCD switch
19 Pump to cylinder
20 Primary flow to cylinder

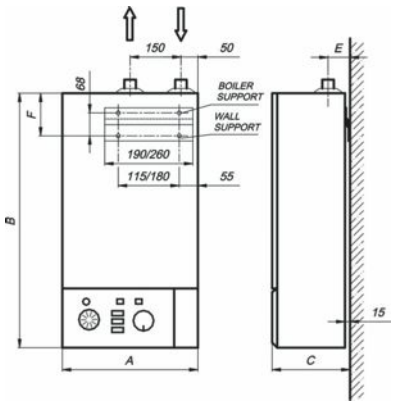
PTV-M

This boiler is similar in construction to the **PTV-E** but is not supplied with an outside temperature sensor, heating curve or a cylinder temperature sensor. When using the **PTV-M** the temperature of the cylinder and boiler firing is controlled by the cylinder thermostat. The **PTV-M** can be used in conjunction with any standard programmable room thermostat and system incorporating thermostatic radiator valves.

Further information about heating curves and a boiler selection chart can be found on page 9.

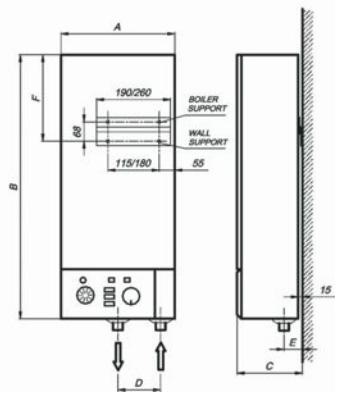
technical **information**

rs-e
rs-m



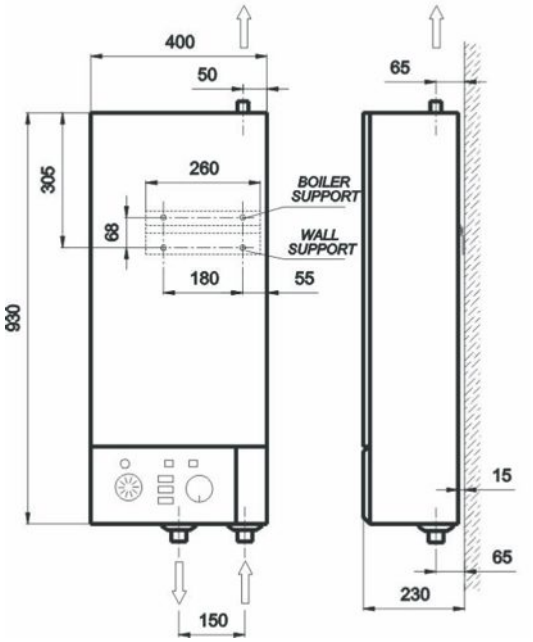
Power kW	Cap.	Dim.	Dry Weight kg	Maximum operating pressure	Conn.	Power
4.8 6 7.2 10.8 14	7.5	A 330 B 750 C 230 D 100	21	0.25 (2.5)	3/4"	240V N ~

plus-e
plus-m



Power kW	Cap.	Dim.	Dry Weight kg	Maximum operating pressure	Conn.	Power
4.8 6 7.2 10.8 14	6	A 330 B 930 C 230 D 100	34.5	0.25 (2.5)	3/4"	240V N ~

ptv-e
ptv-m



Power kW	Boiler Cap.	Dimensions Mm	Dry Weight kg	Maximum operating pressure MPa (bar)	Connection	Power Supply
4.8 6 7.2 10.8 14	1	A 400 B 930 C 230 D 150	44.2	0.25 (2.5)	3/4" (cylinder) 1" (heating)	240V N ~ 50/60 Hz

heating **curves**

Heating curves are a well established concept used when designing commercial heating and ventilating systems, but have never been widely used or adopted in the UK for domestic installations – Electrorad now bring this unique and energy saving feature to the UK in our range of electric boilers.

By correctly setting the heating curve software contained in the E version of the electric boiler energy consumption can be reduced by up to 20%.

The intelligent controls used monitor the outside temperature in conjunction with the desired room temperature and adjust the boiler output to only supply enough energy to achieve the desired internal temperature. The colder it is outside, the more heat is required inside.

Heating requirements for properties vary according to insulation levels and occupier preference. Choosing the correct curve will depend upon the insulation property of the building. Better insulated buildings will have a lower heating curve and require less heat than poorly insulated buildings.

The boiler software contains several heating curves to cover most eventualities.

boilers have factory set heating curves to match the 2000 Insulation Requirement of the Building Regulations. Full guidance to the selection of an appropriate heating curve is given in the easy to use installation and user manuals.

Note: Heating curve software is only installed in the E version of the Electrorad Electric boiler.

Feature	RS-M	RS-E	Plus-M	Plus-E	PTV-M	PTV-
Suitable for open vented heating systems	Y	Y	Y	Y	Y	Y
Suitable for sealed heating systems	Y	Y	Y	Y	Y	Y
Suitable for water heating to an indirect cylinder	Y	Y	N	N	Y	Y
Suitable for sealed system without the need for S or Y plan system	N	N	Y	Y	Y	Y
Hot water cylinder sensor	N	Y	N	N	N	Y
Outside temperature sensor	N	Y	N	Y	N	Y
Inbuilt 10 litre expansion vessel	N	N	N	N	Y	Y
Inbuilt 8 litre expansion vessel	N	N	Y	Y	N	N
Inbuilt 3 speed heating pump	N	N	Y	Y	Y	Y
Inbuilt 3 speed pump to cylinder	N	N	N	N	Y	Y
Two or three stage soft start	Y	Y	Y	Y	Y	Y
Inbuilt heating curve software	N	Y	N	Y	N	Y
Air in boiler indicator	Y	Y	Y	Y	Y	Y
Low voltage warning light	Y	Y	Y	Y	Y	Y
Cascade power limiter option	Y	Y	Y	Y	Y	Y
240V single phase power supply	Y	Y	Y	Y	Y	Y
3 Year Guarantee	Y	Y	Y	Y	Y	Y
BEAB Approved	Y	Y	Y	Y	Y	Y

electricity **tariffs**

A number of off peak electricity schemes are available*.

Economy 7*:

Will require two meters installed in the home.
Economy 7 tariff is not recommended with Electrorad boilers as power will not be available to the boiler during peak periods.

Economy 10*:

Requires one meter
Off peak times are generally set for
Midnight to 05.00 (gmt) 5 hours 13.00 – 16.00 (gmt) – 3 hours
20.00 – 22.00 (gmt) – 2 hours
Times vary with electricity suppliers.

Economy 14*:

Requires one meter
Includes a long off peak time at night and other off peak times available during the day. Times vary with electricity suppliers.

By operating your Electrorad electric boiler with our unique outside temperature compensator you can be assured that your system will operate at its most efficient and reduce / save energy – our electric boilers are 100% efficient

The Electrorad electric boiler is versatile and can be installed singly or as multiple units. Our boiler is easy to site and can be fitted wherever there is an electricity supply.

**** You should make enquires with your electricity supplier as to what tariff and duration are available in your area.***

cascade power limiter

Unique to is the **cascade automatic power limiter***. The power limiter is fitted on site between the boiler and the meter – the cascade unit continually monitors the electricity consumption of the dwelling and will automatically power down the boiler in situations where medium to high power consumption is being detected – once the electrical load returns to low usage the cascade unit will allow full power back to the boiler should it be required. (*Supplied as an optional extra.)

How It Works

Household Appliances	Household Power consumption	Boiler Power
	Low power consumption	●●● Full boiler power
	Medium power consumption	●●● 2/3 of total power
	High power consumption	●●● 1/3 of total power

THE ELECTRIC BOILER THAT LOOKS AND THINKS LIKE A GAS BOILER

- No annual safety check
- No flue system or fans required
- No need for bulk oil storage tanks and the associated maintenance
- All electric elements are bottom entry to heat exchanger thus ensuring they are always in water
- 2 or 3 stage soft start feature ensures no power surges
- Suitable for use on open vented or sealed heating systems.
- Three year guarantee
- Minimal maintenance and service cost
- Compact system boiler quick and easy to install
- Suitable for use with a wet radiator system, under floor heating or a mixture of both
- Almost silent operation
- E - version boilers are supplied with heat curve software to reduce energy usage
- M - version boilers are supplied to operate with standard central heating controls

The **Electrorad** range of stylish compact boilers have a multitude of features that will benefit the developer, builder, householder and installer, one such benefit being where flue arrangements from a gas or oil boiler are difficult, or impossible to site, or where gas is not available, the **Electrorad boiler** in these circumstances offers a cost effective solution to these problems.

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Electric Heating

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