

Quick Installation Guide



1. After preparing a smooth surface, measure the area to be heated. Fit the Ecomax Insulated Tile Backer Board to the floor securely following the manufacturers instructions. Create a groove in the board to accommodate the conduit for the floor probe.



2. Check the cable resistance using an Ohmmeter before beginning the layout.



3. Planning is extremely important at this stage so it is advisable to lay the mat out over the surface of the floor without sticking it down to enable you to have a clear idea of how the mat will be laid.



4. Once you are satisfied with the proposed layout stick the matting to the floor using the integral self-adhesive fixing strips.



5. For hard to reach areas or areas where the mat cannot be fully rolled out, detach the cable from the mat and attach to the floor uniformly with duct tape.



6. Insert the floor probe into the tubing and ensure the probe is between two cables. Test the cable resistance reading. A fully qualified electrician must now make the final connection to the mains supply and install the thermostat.

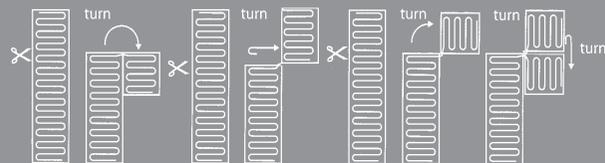
This sample installation is only a guide and should not be used to install Ecofloor. Full instructions are supplied with the product and must be used to ensure Guarantee validity.

7. Cover as soon as possible using a flexible tile adhesive/self levelling compound, consult the adhesive manufacturers instructions as to a suitable time period before turning on the system.



Installation Example:

Each Ecofloor mat is designed to be cut to fit around corners and objects as demonstrated below. However, please note that only the mat can be cut and not the heating cable. The matting can also be cut easily & the cable removed from the matting to enable you to heat hard to reach areas.



Electrical Requirements

- Ecofloor Underfloor Heating Mats are very simple to install by following the comprehensive instruction booklet included with each cable mat. The final electrical connection should be made by a qualified electrician in accordance with the current wiring regulations.
- All installations require an RCD (residual current device) for safe operation.
- The thermostat has a max load of 15Amp / 3450W at 230Vac.
- Rooms requiring more than two mats require connection to the thermostat via a standard junction box.

Authorised Distributor:

Ecofloor is part of the Flexel Underfloor Heating Systems product range by Flexel International Ltd, Queensway Ind Est, Glenrothes, Fife, KY7 5QF, Scotland. Also available: Ecoflex & EcofilmSet.

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The complete underfloor heating solution for all tile, stone, marble & porcelain floors.

Easy to install & control

Ecofloor Underfloor Heating Mats are a combination of self-adhesive mesh with a heating cable pre-attached. The mat design enables fast installation & an even heat distribution across the whole floor. **Ecofloor Underfloor Heating Mats** are 500mm wide and available in a range of lengths.

Ecofloor Underfloor Heating Mats have a twin conductor cable simplifying installation with a single 3m "cold tail" connection. The finished installation is controlled using an easy to use, programmable thermostat.

Ecofloor Underfloor Heating Mats are available in 160W/m² or 200W/m² heat outputs. The 160W/m² mat is suitable for internal applications including kitchens, bathrooms & living areas. The 200W/m² mat is recommended for conservatories or areas prone to high heat losses.

Install Almost Anywhere

Ecofloor can be installed on top of either suspended timber floors or solid concrete floors enabling installation in all room types. **Ecofloor** can also be installed under many floor coverings including:

- Ceramic
- Natural Stone
- Slate
- Quarrystone
- Porcelain
- Marble
- Limestone
- Terracotta

Maintenance free, safe, overall warmth

Totally safe, under tile & stone floors, **Ecofloor's** radiated heat provides overall warmth and comfort without the usual dust carrying convective air currents of conventional radiator systems. The large heated area provides a balanced temperature distribution. Once it has been installed it is completely maintenance free.

10 Year Guarantee

Ecofloor comes with a 10 year guarantee against manufacturing defects.

How Effective Is Under Tile Heating?

Ecofloor is a highly effective direct acting radiant heating system. It can provide primary heating or just be used to warm a floor and provide background heat.

A Primary Heat Source

Heat loss calculations should be calculated by your architect or heating engineer. As a guide however, if your room complies with the insulation standards in current building regulations **Ecofloor** can be used as a primary heating source. Rooms with potentially high heat losses like conservatories may need a supplementary heat source in very cold days.

Heat-Up Times

The speed of response of your **Ecofloor** Untertile Heating System depends on several factors including sub-floor construction and tile material & thickness. The table below provide indications of heat-up times for various sub-floor constructions.

Sub-floor Construction	Heat-Up Time (hrs)
Ecomax Insulated Tile Backer Board (10mm) on timber	0.5
Concrete Screed Floor (Insulated under screed)	2-5
Un-Insulated Concrete	3-8+
Concrete with Ecomax Insulated Tile Backer Board (10mm)	1

Running Costs

The running costs associated with **Ecofloor** can be related directly to the floor heat-up times. A high quality thermal barrier like **Ecomax** Insulated Tile Backer Board will significantly slow the process of heat losses into the sub-floor, improve performance, and reduce the initial warm-up time therefore reducing the energy consumption.

A 2.5m² floor in a bathroom fitted with **Ecomax** Insulated Tile Backer Board on top of an insulated concrete sub-floor would cost approximately 7p* per day to run. This is based on the heating system being on twice a day for two hours each time. This assumes a 50% duty cycle once the floor had reached temperature and assumes a cost of 8p per KwH.

* Cost estimate given is an approximation only. Running costs vary depending on heat losses in individual rooms.

Simple Control

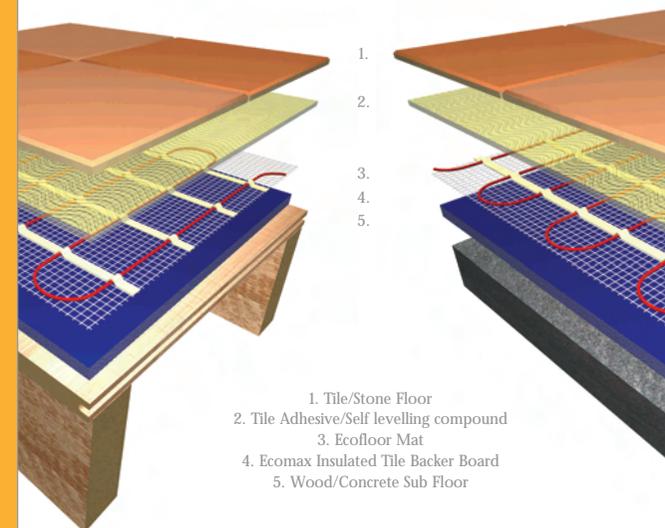
Ecofloor is controlled by a simple to operate timer-thermostat that offers the user maximum flexibility and control. Air and floor temperature sensors regulate heat output to maximise comfort. The unit can offer full 24 hour control, 7 days a week with simple manual over ride functions.



Installation

Suspended Floors - When fitting **Ecofloor** to a timber sub-floor it is essential that you take the standard precautions to stabilise the floor and prevent floor movement. You must always over-board the timber floorboards or chipboard with a surface suitable for tiling. Flexel recommend **Ecomax** Insulated Tile Backer Board or primed 18mm WBP Plywood.

Solid Floors - For best performance it is recommended before fitting **Ecofloor** you fit a layer of **Ecomax** Insulated Tile Backer Board. This will minimise heat losses & ensure quicker heat-up times for the floor. **Ecofloor** can be laid directly onto an un-insulated floor. However this will slow heat-up times & increase running costs.



Product Codes



160W/m ² Reference	Output (W)	Width (m)	Length (m)	Area (m ²)	Price (exc. vat)	Price (incl. vat)
12070-165	70	0.5	0.90	0.50	38.76	45.54
12130-165	130	0.5	1.60	0.80	46.26	54.36
12210-165	210	0.5	2.60	1.30	54.00	63.45
12260-165	260	0.5	3.20	1.60	65.00	76.38
12340-165	340	0.5	4.20	2.10	77.50	91.06
12410-165	410	0.5	5.20	2.60	90.00	105.75
12500-165	500	0.5	6.00	3.00	95.00	111.63
12560-165	560	0.5	6.70	3.35	123.50	145.11
12670-165	670	0.5	8.30	4.15	129.50	152.16
12810-165	810	0.5	10.20	5.10	152.50	179.19
121000-165	1000	0.5	12.30	6.15	178.00	209.15
121210-165	1210	0.5	15.10	7.55	204.00	239.70
121400-165	1400	0.5	17.60	8.80	238.00	279.65
121800-165	1800	0.5	22.00	11.00	250.00	293.75
122150-165	2150	0.5	26.60	13.30	340.00	399.50
122600-165	2600	0.5	32.50	16.25	446.00	524.05

200W/m ² Reference	Output (W)	Width (m)	Length (m)	Area (m ²)	Price (exc. vat)	Price (incl. vat)
12210-205	210	0.5	2.1	1.05	59.72	70.17
12410-205	410	0.5	4.1	2.05	100.00	117.50
12560-205	560	0.5	5.6	2.80	127.08	149.32
12810-205	810	0.5	8.1	4.05	168.42	197.89
121000-205	1000	0.5	10	5.00	207.46	243.76
121210-205	1210	0.5	12.1	6.05	224.48	263.77
121400-205	1400	0.5	14	7.00	253.87	298.29
121800-205	1800	0.5	18	9.00	305.66	359.15
122150-205	2150	0.5	21.5	10.75	397.21	466.73

Control Pack Contents	Description	Price (exc. vat)	Price (inc. vat)
TH132F	15Amp Fully Programmable Room Thermostat with 7 day control and optimum start and night set-back facilities; c/w Floor sensor only.	75.00	88.12
TH132AF	15Amp Fully Programmable Room Thermostat with 7 day control and optimum start and night set-back facilities; c/w Air and Floor sensor.	75.00	88.12

- EcoMax Insulated Tile Backer Board is recommended for use with Ecofloor. (This will ensure quicker warm up times & reduce costs.)