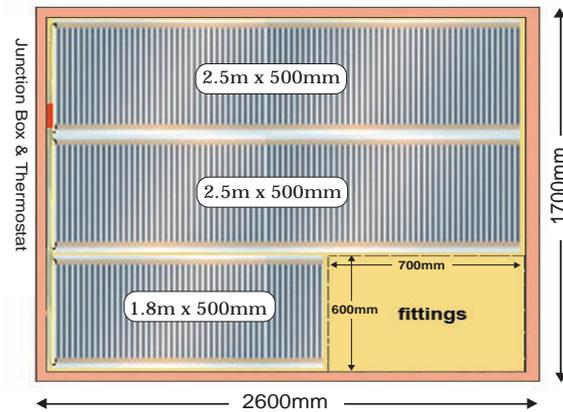


Plan Your Installation

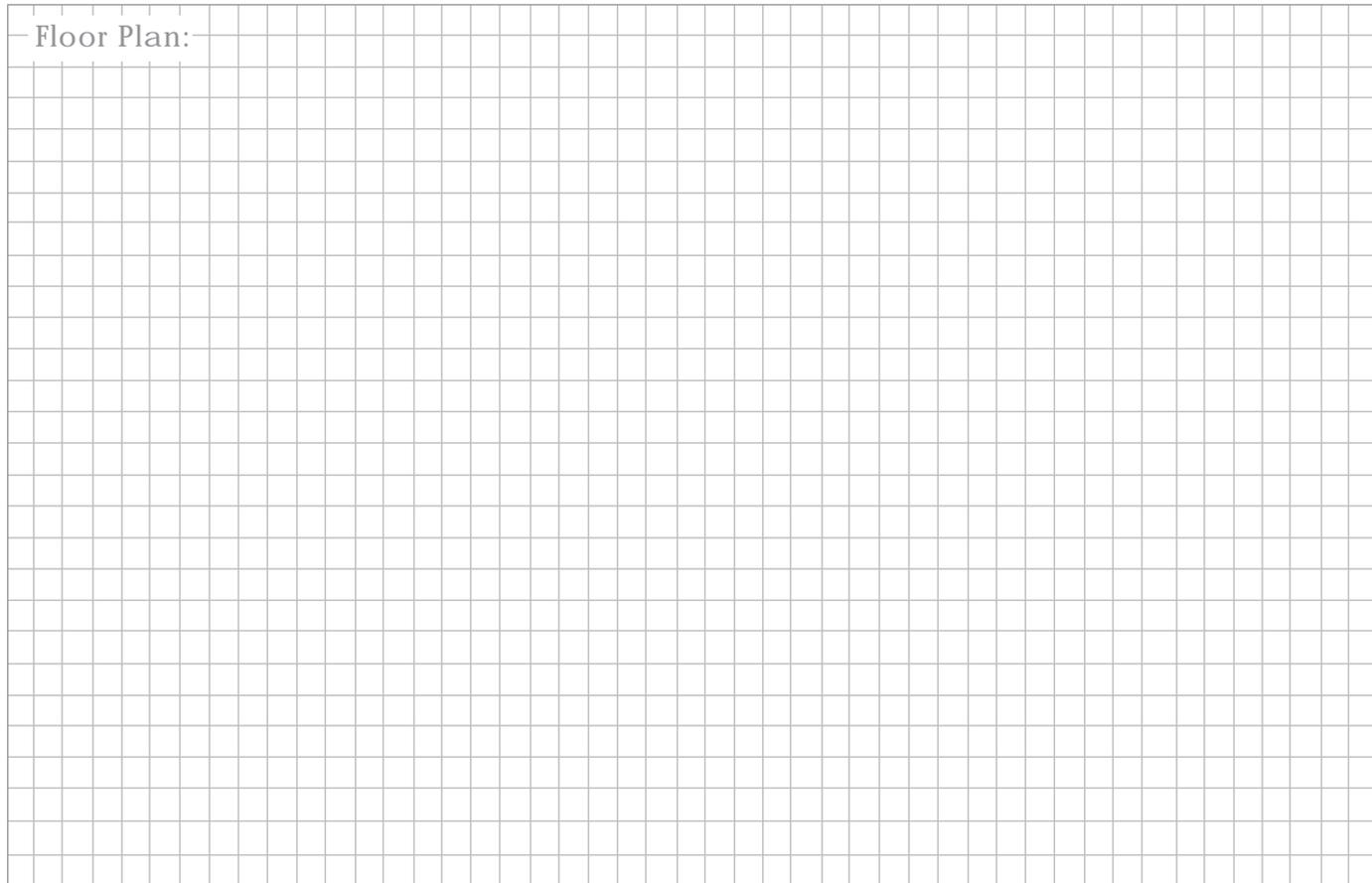
- The position of the thermostat should take account of the ease of access to the power supply.
- Remember to note down the dimensions of any items of furniture which cover-up the floor surface, such as wardrobes, cupboards, kitchen base units etc. as heating element should not be placed under these. Allow for a perimeter border around the room of at least 50mm from each wall or item of furniture, to determine the heating area of the room.
- Element edges should be butted together, do not overlap the ECOFILM elements.
- It is recommended that when planning your room the ECOFILM elements run in line with the longest room dimension, this keeps elements and electrical connections to a minimum making installation easier and quicker.

Installation Example

A child's nursery with a laminate floor to be laid



Floor Plan:



Product Codes

Product Code	Description	Price ex. vat (£)
EPRO-5	5m ² ECOFILM ^{PRO} kit	158.90
EPRO-10	10m ² ECOFILM ^{PRO} kit	258.90
EPRO-15	15m ² ECOFILM ^{PRO} kit	358.90
EPRO-20	20m ² ECOFILM ^{PRO} kit	458.90

Required Accessories

Product Code	Description	Price ex. vat (£)
EL06	ECOMAX-LITE thermal insulation (800mm x 1250mm x 6mm)	5.50
PVB12	Polyester Vapour Barrier (1m x 12m)*	28.00
PVB25	Polyester Vapour Barrier (1m x 25m)**	47.00
TH132AF	Digital programmable thermostat	68.00
EB100	Manual analogue thermostat	50.00
ADT50	Adhesive Tape (50mm x 50m roll)	6.40

*1m x 12m of PVB covers 10m² of floor area

**1m x 25m of PVB covers 22m² of floor area

Additional Accessories

Product Code	Description	Price ex. vat (£)
CRIMP10	10 x Connection Crimps	4.50
CTBL10	1.5mm ² x 10m Cold Tail Leads (Blue)	6.50
CTBR10	1.5mm ² x 10m Cold Tail Leads (Brown)	6.50
MASTIC1	1000mm x 101mm Mastic Adhesive Tape	20.00
GTD20	20 x Green Bus Bar Insulating Disks	1.20

Authorised Distributor:

Version 1.2 - February 2010 - Priced



ECOFILM^{PRO} is part of the Flexel Underfloor Heating Systems product range by Flexel International Ltd, Queensway Ind Est, Glenrothes, Fife, KY7 5QF, Scotland.

Also available: ECOFILM^{SET}, ECOFLOOR & ECOFLEX.

www.flexel.co.uk

Tel: 01592 760928 Fax: 01592 760929 Email: enquiries@flexel.co.uk

Electrical Requirements

- ECOFILM^{PRO} Underfloor Heating Kits are very simple to install by following the comprehensive instruction booklet included. The final electrical connections should be made by a qualified electrician in accordance with the current wiring regulations.
- All installations require a 30mA RCD (residual current device) for safe operation.
- The thermostat has a max load of 15Amp / 3450W at 230Vac.
- All elements require connection to the thermostat via a standard junction box.



ECOFILM^{PRO}

professional underfloor heating kit

ECOFILM^{PRO} KITS MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN

APPROVED to comply with the 17th Edition Wiring Regulations



The professional underfloor heating kit for laminate & timber floors

Professional underfloor heating kit for living areas, bedrooms, hallways & conservatories

Bringing Out The Luxury Of A Wood Floor

ECOFILM^{PRO} Professional Underfloor Heating Kits provide the luxury of electric underfloor heating to living rooms, bedrooms, hallways, loft conversions and conservatories or almost anywhere a laminate, engineered wood or real timber floor is being laid.

Easy To lay

ECOFILM^{PRO} Professional Underfloor Heating Kits are available in kit sizes to cover floor areas 5m², 10m², 15m² and 20m² and include all the tools for the professional installer. Simply cut the roll of 500mm wide ECOFILM element to the required lengths and connect the wiring using the supplied crimp tool.

ECOFILM^{PRO} is NOT designed for use in wet areas e.g. bathrooms/shower rooms.

Freedom Of Installation

ECOFILM elements are ultra-thin and have a minimum effect on finished floor levels. It can be laid on most sub-floors, concrete or timber, when used in conjunction with **ECOMAX-LITE** thermal insulation.

Safety

ECOFILM is approved to the relevant International safety approval EN60335-2-96 as required by the 17th Edition Wiring Regulations (BS7671:2008).

Maintenance Free

ECOFILM is reliable, safe and manufactured to last. Being electric with no moving parts it is completely maintenance free.

Economy

ECOFILM^{PRO} produces the optimum heat distribution in any room by using the whole area of the floor to radiate heat. This means that the air temperature can be lowered by 2-3 degrees over a conventional convector system while still maintaining a comfortable environment. **ECOFILM^{PRO}** can realise savings of up to 10% over conventional convector systems if the floor is well insulated.

Warranty

ECOFILM^{PRO} comes with a 10 year guarantee against manufacturing defects.

How Effective Is Under Laminate Heating?

ECOFILM^{PRO} is a highly effective direct acting radiant heating system. It can be used to substitute traditional convector radiators by providing primary heating or just be used to warm a cool floor & provide background heat.

A Primary Heat Source

Heat loss calculations should be performed before using **ECOFILM^{PRO}** as the sole source of heating. Consult your Architect or heating engineer. As a guide however if your room complies with the insulation standards in current building regulations, **ECOFILM^{PRO}** can be used as a primary heating source. Rooms with potentially high heat losses such as conservatories may need a supplementary heat source on very cold days.

Running Costs

The running costs associated with **ECOFILM^{PRO}** can be related directly to the floor heat-up times. A well insulated sub-floor will significantly reduce heat losses, improve heat-up times & reduce running costs. Even on insulated floors (concrete or wood) a minimum of 6mm of **ECOMAX-LITE** Thermal Insulation should be used in conjunction with **ECOFILM^{PRO}**.

Example:

A 6m² floor in a lounge fitted with 6mm of **ECOMAX-LITE** Thermal Insulation on top of an insulated concrete sub-floor would cost approximately 4.5p* per square metre per day to run. This is based on the heating system being on twice a day for a 2hr and 5hr period respectively. This assumes a 50% duty cycle once the floor has reached temperature and assumes a cost of 10.0p per Kwh.

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

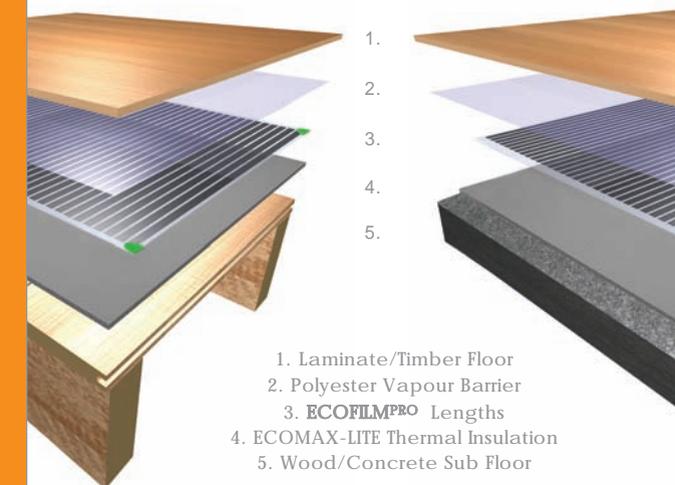
Simple Control

ECOFILM^{PRO} installations are 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 override functions.



Installation

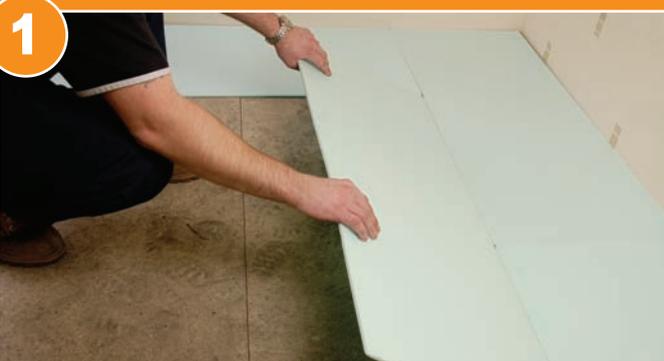
Before laying the **ECOFILM^{PRO}** kit on either a suspended wooden floor or concrete sub-floor it is necessary to install a layer of **ECOMAX-LITE** Thermal Insulation. This will minimise heat losses and ensure quicker heat-up times for the floor. It will also act as a means of sound deadening which is required for laminate floors. Unroll the **ECOFILM^{PRO}** and cut to required lengths. Cover the floor area with elements laid in parallel. Elements should NEVER overlap. Connect the wiring harness to the heating element with the supplied crimping tool and insulate the connector with mastic adhesive tape. Cover the total floor including non heated areas with a layer of **Polyester Vapour Barrier** (PVB) before laying the chosen floor covering.



Kit Contents

The kit includes the following items

- Roll of 500mm wide ECOFILM (5m², 10m², 15m² or 20m²)
- 20 x Foil Crimp Connectors
- 20 x Green Insulation Discs
- 15m x Cold Tail Connection Leads (Brown & Blue)
- 1m x Mastic Insulating Tape
- 1 x FREE Ratchet Crimping Tool
- Warning Labels & Full Installation Instructions
- 10 Year Guarantee Certificate



1 Lay the **ECOMAX-LITE** Thermal Insulation (available separately) in a "brick work" pattern and fix with adhesive tape.



2 Unroll the **ECOFILM^{PRO}** and cut to required lengths. Cover the floor area with elements laid in parallel. Elements should NEVER overlap.



3 Connect the wiring harness to the heating element with the supplied crimping tool and insulate the connector with mastic adhesive tape.



4 Cover the total **ECOFILM^{PRO}** installation with **POLYESTER VAPOUR BARRIER** (available separately).



5 Lay the floor covering as soon as possible to prevent damage to the element.