Thermofoil Underfloor Heating

For Under Carpet and Floating Timber Floors

Installation Guide

Please read these instructions carefully and in full before installation.

Hardwire Installation should be carried out by a qualified electrician.

Please ensure the warranty form on page 19 is completed and handed to the homeowner to enable warranty registration.

Thermogroup
That little bit extra...

thermofoil
UNDERFLOOR HEATING

Thank you for your purchase

Thank you for choosing a Thermogroup product. Our commitment to simple, honest, on-time quality service ensures that we are here to help throughout every stage of your project from idea to installation and, most importantly, after sales support.

This document will provide a step-by-step guide to a perfect installation as well as details on the warranty and how to get technical support should you need it.

To ensure a safe, hassle-free installation to be proud of, please take the time to read this guide in full before you start. We've taken the time to highlight any potential pitfalls and common errors to avoid and get the job done!

Thermofoil is covered by a lifetime warranty, subject to terms and conditions. Be sure to keep the receipt as proof of purchase, this will be required to validate your Lifetime warranty.

Please complete the Customer Handover section on page 19 in full so that your customer has all the information they need to complete the online warranty form and register their Thermofoil Lifetime Warranty.

If you have any questions about your Thermofoil Underfloor Heating or any of our other products call our technical support team on 1300 989 464. We will do our best to find a solution and will always give that little bit extra…

Thanks again for choosing a Thermogroup product.

If you have any questions or concerns or are unsure or need any help, please call our team on 1300 368 631.

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Product Checklist

Thermofoil Underfloor Heating Mat

Thermofoil is an underfloor heating foil system that is designed for installation beneath soft floor finishes such as carpet or floating timber. The system comprises of a 500mm wide foil mat that holds the heating element in place as well as spreading the heat.

Econosoft Underlay

Econosoft Underlay is a 5mm thick board that provides an insulation and cushioning layer under the heating foil. This is essential for protection of the heating system. In an under carpet installation this can be substituted by the carpet underlay.

Econosoft Overlay

Econosoft Overlay is an acoustic, vapour and cushioning layer. This needs to be installed over the Thermofoil heating system in every installation for protection of the heating cable and floor covering.

Thermotouch thermostat

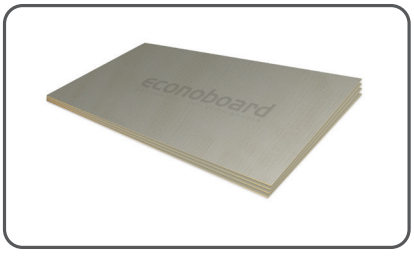
Thermofoil is compatible with all the Thermotouch controllers. Options available include manual, fully programmable, dual and wifi controllers.

Floor sensor and flexible conduit

The floor sensor is a small probe that is designed to be installed at the same level as the underfloor heating to measure the accurate floor temperature. This is designed to be housed in the flexible conduit to allow for replacement if required.

Please note: These are located in the thermostat box beneath the thermostat. The floor sensor is coiled on the inside of the flexible conduit.

Econoboard insulation boards (optional)



Econoboard insulation boards provide an insulated, prepared surface for the installation of an electric underfloor heating system. It is recommended to install insulation boards directly below the heating system to reduce running costs and increase response times. It is recommended to use Econoboard coated boards in all Thermofoil installations.

Coated boards are available in a 6 or 10mm thickness.

Installation Do's & Dont's

Prior to purchasing or installing the floor heating check with the flooring manufacturer that the flooring is compatible with electric underfloor heating and obtain any recommendations such as maximum floor temperatures.

Avoid placement of insulating products over a heated floor for extended periods of time. This will prevent airflow and dissipation of heat leading to build-up of heat which can result in damage or discoloration of the flooring and potential damage to the heating system.

The system is 240Volt and all electrical connections must be carried out by a licensed electrician to AS3000 and all current local regulations. The electrician is required to complete a Certificate of Compliance for the installation and in some states this may require the electrician to install or oversee the installation and do tests prior to the floor covering being laid.

You must never cut or shorten the heating cable under any circumstances. The heating cable is a resistive cable and cutting/shortening the heating cable will alter the resistance and cause the cable to burn out and no longer be usable.

Do's

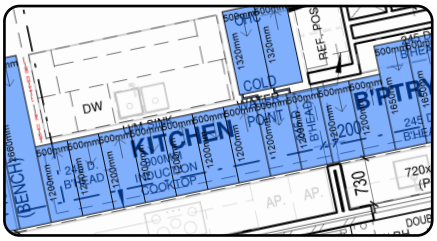
- Check with the flooring manufacturer that the flooring is compatible with electric floor heating
- Operate the heating mat with a Thermogroup floor sensing thermostat to ensure that the floor does not exceed the recommended temperature for the flooring
- Ensure electrical circuit is protected by a suitably rated RCD and complies with local regulations
- Ensure sensor conduit is positioned between 2 runs of heating cable in a representative area of the floor
- Take care to ensure all electrical work complies with current electrical regulations in accordance with current AS/NZS regulations
- Locate the thermostat in accordance with the current guidelines.
- Read this document in conjunction with instructions for associated accessories (e.g. thermostats)
- Ensure test procedures A, B & C are carried out, this is essential for completion of the warranty
- Install conduit in accordance with the instructions on page 13 to facilitate the replacement of the sensor probe if required
- Follow manufacturers recommendations for all associated products such as carpet underlay
- Protect the heating mat during installation, as this is when it is most prone to damage
- Keep foot traffic to a minimum
- Install a suitably rated contactor/snubber if required
- Connect multiple heating mats in parallel to the Thermostat
- Zone each heated room with its own thermostat controller. This allows each room to be controlled individually and ensuring that the floor heating does not exceed the maximum temperature the flooring can handle
- Install the Econosoft Underlay or Carpet Underlay below the heating mats to provide cushioning and ensure that the weight of the of the floor and furniture does not damage the floor heating
- Ensure all exposed cables are encased in aluminium tape

Don'ts

- Cut or shorten the heating cable under any circumstances! This will cause a faulty circuit and potential fire hazard
- Place the cold tail connection in the conduit. The entire connection needs to be fully encased in the foil.
- Position temperature sensor near pipes, external doorways or other temperature influencers
- Lay insulation or carpet underlay on top of the underfloor heating (UFH). Insulation on top of UFH will reflect all the heat emitted back into the substrate
- Use the foil heating mats with glued locking system or laminates that have an underpad or cushion material pre-attached to the underside
- Install over floors that have traces of moisture, are uneven or over carpets or parquet floor
- Overlap heating mats, fold or wrinkle the foil heating mats
- Place heavy/sharp tools (or other potentially damaging object) on top of the heating mats
- Walk unnecessarily on the foil heating mats
- Wire multiple mats in series to the thermostat
- Leave boxes or furniture on the heated flooring
- Strain or bend the cold tail or end termination at any point
- Allow the heating cables to touch or cross over each other
- Place any product over the floor covering that has a tog rating higher than 2.5
- Place bean bags, cushions or fixed furniture over the floor covering that will stop air flow or not allow heat to rise into the room
- Install foil mats under walls or partitions, or in areas under heavy cabinets, closets, or fixtures (toilets, sinks, tubes etc.)
- Install foil heating mats under wooden floor, if the floor is thicker than 18mm
- Proceed with installation if the tested resistance is not within -5% to +10% of the stated resistance
- Tile over or cover the foil heating system with a screed or self-levelling compound. In this situation a undertile system should be used.

If you are unsure or need any help, please call our team on 1300 989 464

Installation Summary



1. Plan out the installation

Determine the location of the thermostat and floor sensor and work out the layout of the heating mat excluding areas under floor mounted fixtures. See more details on page 12-13. Check you have all the required components. See details on page 4.

2. Rough in prior to sheeting walls

Install two 20mm conduits with sweeping bends at the thermostat / floor sensor position. Insert the supplied flexible conduit into the one conduit and out into the floor. Insert the floor sensor probe into the flexible conduit. See more details on page 13.

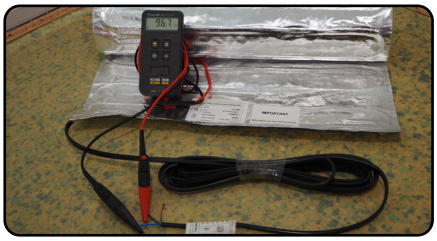
3. Install Econoboard insulation (Optional)

Glue down the coated Econoboards to a concrete substrate or screw down (with washers) the Econoboards to a timber substrate.

See more details on pages 10-11.

4. Install Econosoft Underlay

Install the Econosoft Underlay Boards onto a clean and prepared substrate, in a brick work pattern. For under carpet this can be substituted with standard carpet underlay.



5. Conduct test no. 1

Test the floor heating as per details on page 8 and record the results on page 19.

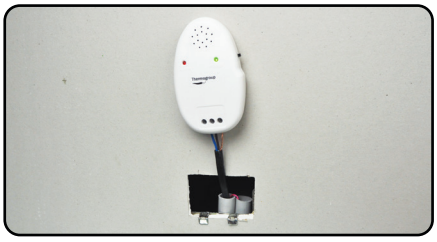
6. Lay out the Thermofoil mat

Starting at the Thermostat position lay out the Thermofoil heating mat according to the plan on page 12. The foil can be cut as needed but should not be removed.

NEVER CUT THE HEATING CABLE.

7. Install Econosoft Overlay

Roll out the Econosoft Overlay over the heating system and seal the joins with the adhesive strips.

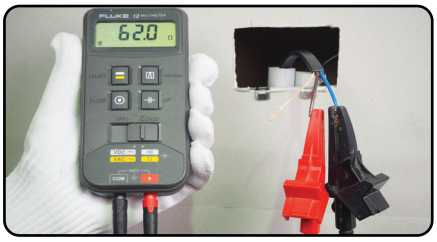


8. Conduct test no. 2 and wire up the mat alarm

Test the floor heating as per details on page 8 and record the results on page 19. Wire up the mat alarm to the end of the black cold tail according to the instructions on page 9.

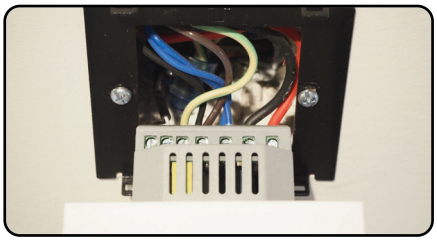
9. Install the floor finish

Install the floor finish according to the manufacturers instructions. See more details on page 16.



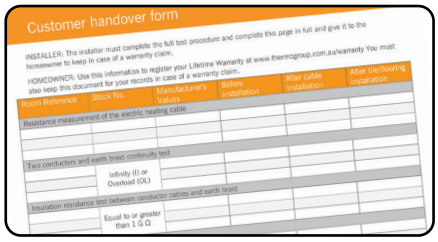
10. Conduct test no. 3

Test the floor heating as per details on page 8 and record the results on page 19.



11. Wire up the Thermostat

Wire up and mount the thermostat according to the wiring diagram and installation details in the thermostat instruction guide.


Customer handover form

12. Complete the customer handover form

Ensure the details are complete on the customer handover form (page 19) and pass this onto the client for online warranty registration.

Install Checklist

Before you start

- ☐ Run the power feed to the thermostat position
- ☐ Read and understand the installation guide in full
- ☐ Read and understand the test procedure
- ☐ Install two conduits (for the cold tail and the floor sensor) from the Thermostat into the floor
- ☐ Feed the supplied flexible conduit down one of the conduits and out into the floor
- ☐ Use a contactor/snubber if required
- ☐ Learn how to safely cut and turn the mat
- ☐ Learn how to adapt the mat for irregular areas
- ☐ Calculate available floor space and draw plan

Econoboard insulation (Optional)

- ☐ Calculate how many boards you need
- ☐ Ensure the substrate is clean and level
- ☐ Install insulation according to the relevant guide

Laying the Thermofoil heating system

- ☐ Install the Econosoft Underlay boards in a staggered brick work pattern. This can be substituted by a standard carpet underlay.
- ☐ Tape the joins of the Econosoft boards
- ☐ Chase a groove into the underlay to recess the conduits
- ☐ Test the resistance of the heating mat and record results - Test A
- ☐ Lay out the heat mat according to your plan on page 12
- ☐ Leave gap between mat and the wall. 200mm for Carpet and 50-100mm for Timber installations
- ☐ Check the cold tail will reach the Thermostat position
- ☐ Push the sensor probe to the end of the conduit
- ☐ Keep the cap in the end of the floor sensor conduit
- ☐ Feed cold tail up wall to Thermostat position
- ☐ Ensure the cold tail junction is not in the conduit
- ☐ Test the resistance of the heating mat and record results - Test B
- ☐ Wire up the mat alarm
- ☐ Take photographs of the completed install
- ☐ Lay Econosoft overlay over the heating foil
- ☐ Install final floor covering in line with manufacturer guidelines

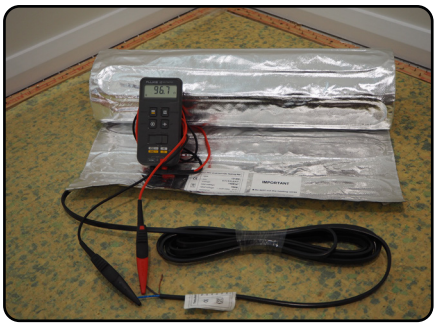
After laying the floor covering

- ☐ Test the resistance of the heating mat and record results - Test C
- ☐ Wire Thermostat to RCD
- ☐ Connect wiring in accordance with relevant wiring diagram
- ☐ Complete and sign customer handover form
- ☐ Give customer complete copy of the customer handover form
- ☐ Give customer a copy of proof of purchase
- ☐ Give customer a copy of the thermostat instructions
- ☐ Follow the flooring manufacturer recommendations for maximum temperatures when setting up the thermostat

Important Testing Procedure

Thermofoil heating cables must be properly tested before installing. To ensure no damage has occurred the cables need to be tested again after the floor heating has been laid and again once the floor finish has been laid.

To perform these tests, you will need a multimeter and a meggar. Results of the tests need to be recorded on the customer handover form (page 19) in order to complete the warranty registration.

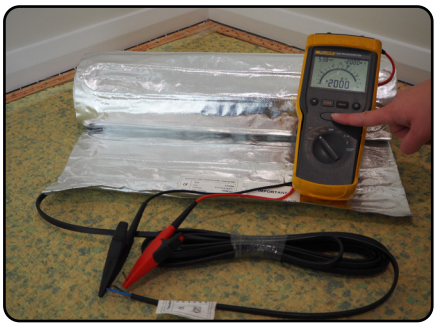


Heating cable resistance test

Connect a multimeter, set for resistance measurement between the live and neutral power leads. Record the results on page 19. If the measured resistance falls outside a tolerance of -5% to +10% it may mean the cable is damaged or the multimeter is not set correctly.

Continuity between earth and conductors

The conductor cables are separated from the earth cable by an insulator. Verify that there is no contact between the earth and the conductors by connecting a multimeter, set to continuity between the earth and both conductors. Record results on page 19.



Insulation resistance test

This test will detect very small holes in the insulating layer that separates the conductors from the earth. These small holes are not usually detected by the continuity test because they are not necessarily short circuits.

Connect a meggar calibrated to 250V to one of the conductor cables and the earth. If there is no current leakage, the insulation resistance between the power leads and earth must be equal to or greater than 200MΩ. Record results on page 19.

Floor temperature sensor testing

Connect a multimeter to the two conductors of the floor temperature sensor probe. Measure its resistance at room temperature. The floor sensor is a 10KΩ sensor and should measure between 8-12KΩ (at 20-30°C). Record results on page 19. The floor sensor should not be meggared as this will damage the sensor.

The ambient temperature will affect the resistance readings of the floor heating mat and the floor sensor. Both the floor heating mat and floor sensor resistance have been tested at 20°C. If the ambient temperature is lower than 20°C the measured resistance will be higher than the stated resistance and if the ambient temperature is higher than 20°C the measured resistance will be lower than the stated resistance.

Scan here to view the video showing how to perform a full testing procedure.

This video is demonstrated on a Thermonet Floor Heating Mat however the testing procedure is the same for the Thermofoil system.

If you are unsure about any of the tests or results, please contact technical support on 1300 989 464 before proceeding

Mat Alarm Explained

The mat alarm is a small white unit that is used to monitor the integrity of the cable during installation and laying the floor finish.

PLEASE NOTE: The use of the mat alarm does not replace the need for the full resistance tests as outlined on the previous page at any stage throughout the installation.

Do not proceed with installing the floor finish if the resistance reading is not within -5% to +10% of the values published on the cable leads.

The mat alarm is there to safeguard against any damage to the heating element during installing or laying the floor finish. It gets connected to the end of the cold tail. The monitor is designed to monitor the cables individually however by making a temporary 'series' connection of multiple cables it can monitor up to three cables at a time.

1. The mat alarm is a small white unit that is used to monitor the integrity of the cable during installation and laying the floor finish.

2. When the cables are connected the green light will be lit. If the green light goes out, please replace the batteries before continuing.

3. Make sure the cables to be monitored are not connected to a power source. Wire up the cold tail to the mat alarm as per the photo opposite and details below.

4. Set the switch to the 'ON' position and the green light will indicate that the monitor is operating.

5. Hang or place the monitor where it can be seen and heard during installation.

6. A red light and alarm indicates cable damage or disconnection of cables from the monitor. Check connections and the integrity of the heating cable before continuing with the installation.

7. If damage to the cable is suspected please contact the technical helpline on 1300 989 464.

For a single element
Terminal 1: Neutral
Terminal 2: Live
Terminal 3: Earth

For two elements
Terminal 1: Neutral from mat 1
Terminal 2: Live from mat 2
Terminal 3: Earth from both mats
Twist together the live from mat 1 and the neutral from mat 2 to complete a series circuit

IMPORTANT!
Multiple cables are connected to the alarm in series, for monitoring purposes only. When completing the final circuit, multiple cables must be connected to the thermostat in parallel.

Mat alarm with single element

Mat alarm with two elements wired in series

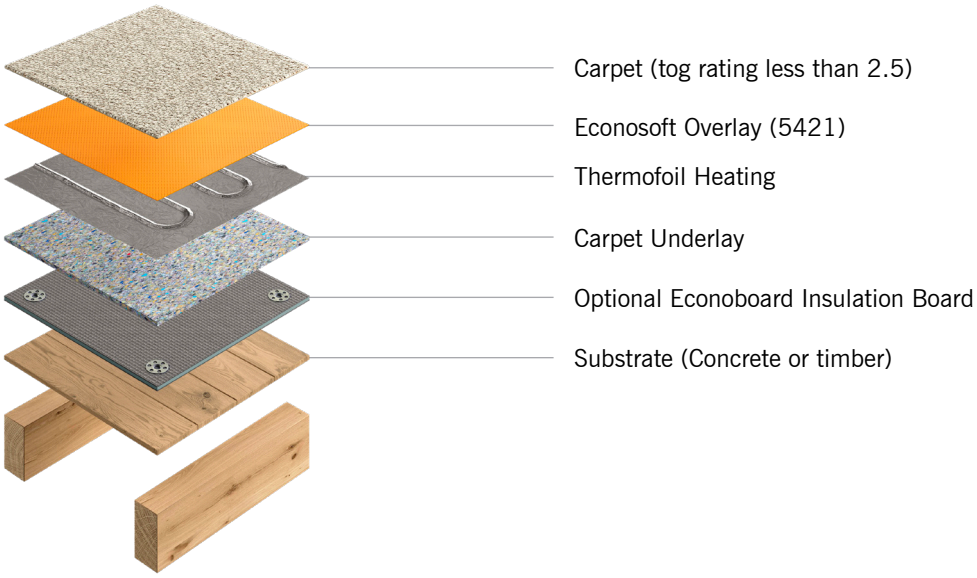
Scan here to view the video on mat alarm explanation and wire up

Insulation Information

Econoboard Insulation is essential for an energy efficient electric underfloor heating system. A layer of Econoboard will help prevent heat loss into the substrate and ensure faster heat-up times for the underfloor heating.

Econoboard Insulation comes in both coated and uncoated options. Econoboard Coated boards consist of a high density extruded polystyrene core with a polymer modified fibre reinforced cement coating on both sides, whereas the Econoboard Uncoated boards are made from an XPS extruded polystyrene foam.

It is recommended to use Econoboard Coated boards in all Thermofoil installations.

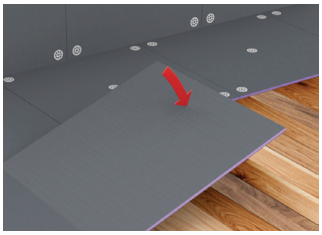


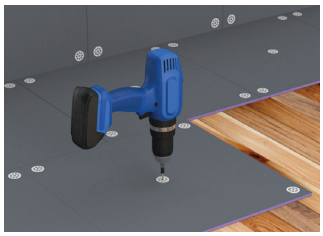
An alternative build-up for an under carpet installation is: Substrate, Econoboard Insulation Boards, Econosoft Underlay, Thermofoil Heating, Econosoft Overlay, Carpet Underlay and Carpet. However in this application you need to ensure that the combined tog rating of the carpet underlay and carpet is less than 2.5.

Insulation Installation

The Econoboard Insulation boards are installed onto the substrate in an offset brick pattern. The Coated boards are fixed down to the timber substrate using Econoboard fixing washers and screws (6022) and or can glued down with a full bed of tile adhesive.

Installing Coated Econoboard





1. Measure your floor space and calculate how many boards you will need using the simple formula shown below.

$$\text{A single board} = 1.2\text{m} \times 0.6\text{m} = 0.72\text{m}^2$$

$$\frac{\textit{Floor space (m}^2\textit{)}}{\textit{0.72m}^2} = \textit{Number of boards}$$

2. Cut the boards to size to suit your room layout. Econoboard Coated boards can be cut very easily using a sharp blade or wood saw. Please take appropriate care when using sharp tools.

3. Ensure your substrate is secure, clean and free from dust and loose particles. Set out your cut boards onto the area in an offset brick pattern. Boards need to run in the opposite direction to the floorboards. Fix into position using fixing screws and washers (6022) at 300mm centres (10 washers per board).

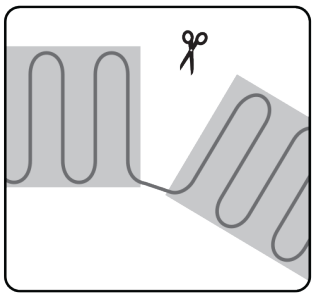
Alternatively the Econoboards can be glued down to a concrete substrate using a full bed of tile adhesive. Mix flexible tile adhesive in accordance with manufacturer instructions and spread using a notched trowel. Particular note should be taken to follow recommended water allowance as making adhesive too dry will cause it to skin over too soon and result in failure. Only spread enough adhesive for one board at a time. Lay the Econoboard onto the adhesive in an offset brick pattern taking care to squeeze out any air pockets in the adhesive. For a more secure finish make sure all boards are flush and tape over the joins using reinforcing tape (6015)

Scan here to view the video on how to install Econoboard Insulation

Planning Page

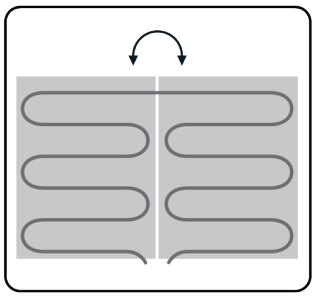
Every room is different, and you will usually need to modify your Thermofoil mat in some way to fully cover your desired heating area. The diagrams on this page will help you to manipulate your Thermofoil mat safely and avoid causing any damage during installation.

Cutting the foil



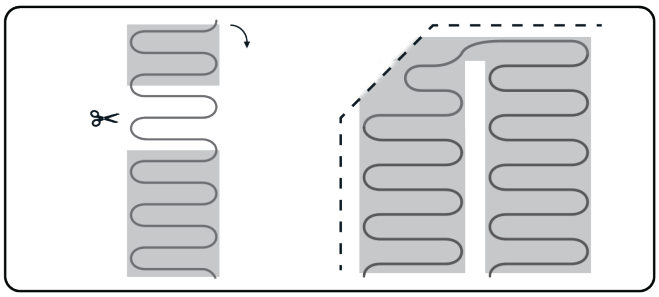
Use scissors to carefully cut the foil – NEVER cut the heating cable.

Turn 180°



Turn the mat 180° laying the mat parallel to the first run.

Staggered 180°



Carefully cut the foil between the runs of cable however do not remove the cable from the foil.

Planning avoids costly mistakes

Use the grid above to plan your installation. This will help you to produce the safest, quickest and cleanest result with as little wastage as possible. Measure the room, if you don't already know the dimensions, and make a note of the available floor space excluding any obstacles or fixtures you might have such as sanitary ware, furniture or drainage. Use the grid to plan the mat layout making sure to include the thermostat and sensor position.

Load calculations

Use the formula below to work out the overall current draw for the Thermofoil system. If this value is over 16A you will need to have a contactor/snubber installed by a qualified electrician. Call our technical helpline if you have any questions.

Total system wattage ÷ 240V = Amps (A)

Position and install conduit and floor sensor

Push the supplied flexible conduit out into the channel in the floor. Ensure that the black cap is firmly in the conduit. Ensure the floor sensor conduit is located evenly between two runs of heating cable.

Referring to your plan on page 12, run the 240V mains power feed to the thermostat position. Ensure the electrical circuit is protected by a suitably rated RCD (residual current device). Install a suitably rated contactor if required. Install the electrical plate for the thermostat in the desired position. Please note the Thermotouch 7.6iG thermostats need to be mounted portrait and the Thermotouch 4.3dC thermostats have the option of portrait or landscape mounting. Install two 20mm conduits with sweeping bends from the thermostat to the floor prior to sheeting the walls. The one conduit will house the flexible floor sensor conduit and the second conduit is for the cold tail(s).

Roll out the heating mat from the starting position and mark the conduit position so it is laid in between two runs of heating cable. It is important not to position the sensor conduit near any temperature influences (such as water pipes or doorways) or in a place where furniture or rugs might be placed over the sensor as this will affect the accuracy of the temperature reading. After you have marked out the conduit position roll the mat away for the time being. Feed the flexible conduit down one of the 20mm conduits and out into the floor. Ensure the black cap is firmly in the end of the conduit.

The floor sensor conduit provided is to facilitate the sensor replacement if ever needed without the need to remove the floor covering. Now feed the sensor probe cable down into the conduit ensuring it is pushed right to the end as this will help to provide the most accurate reading.

The sensor probe can be shortened or lengthened. If you need to cut the sensor probe you must only cut the end with the exposed wires not the end with the plastic end cap. The sensor can be extended, to a maximum of 50m, using a twin core 1mm flex.

The cold tail can also be shortened or lengthened. Cold tails can be extended using a twin core and earth electrical flex, suitably sized to take the load of the underfloor heating system.

Install Econosoft Underlay and lay out the heating mat

Place the heating mat in the starting position and roll out the mat until reaching a wall or fixture. Cut the mat (NEVER CUT THE HEATING CABLE) and turn the mat 180° and roll it out parallel to the first run.

Ω TEST A

Test the resistance (using instructions on page 8) of the heating cable prior to starting the installation. Compare the tested resistance to the correct resistance of the cable and ensure this is within -5Ω to + 10Ω. Record the result on the customer hand over form (page 19)

Make sure the substrate is clear and clean. For a timber or laminate floor finish you will need to install a layer of Econosoft Underlay below the floor heating. The Econosoft Underlay provides insulation as well as a cushioning layer under the heating foil. For an under carpet installation, it is recommended to use the carpet underlay that comes with or is recommended by the carpet manufacturer. The Econosoft underlay boards should be laid out across the room in a staggered brick work pattern. You will need to install the Econosoft underlay across the entire floor area (rather than just below the floor heating) in order to maintain even floor level. The boards can be easily cut to size as needed with a Stanley knife. Tape the joins of the boards with duct tape or similar ensuring boards are flush and level. Measure and mark all fixtures in the room.

Place the heating foil in the starting position and roll out the mat ensuring that the floor sensor conduit lines up between two runs of heating cable as planned. Feed the cold tail up the second 20mm conduit to the thermostat position. The heating foil is a single ended product so there is no additional cold tail to return.

When you reach a wall or fixture a simple turn can be made by cutting across the foil with scissors or a Stanley knife (NEVER CUT THE HEATING CABLE). Turn the mat 180° and roll it out parallel to the first run. Continue running the mat like this throughout the room. Refer to page 12 for various turns and layouts. Do not install the heating under any fixtures or solid based furniture.

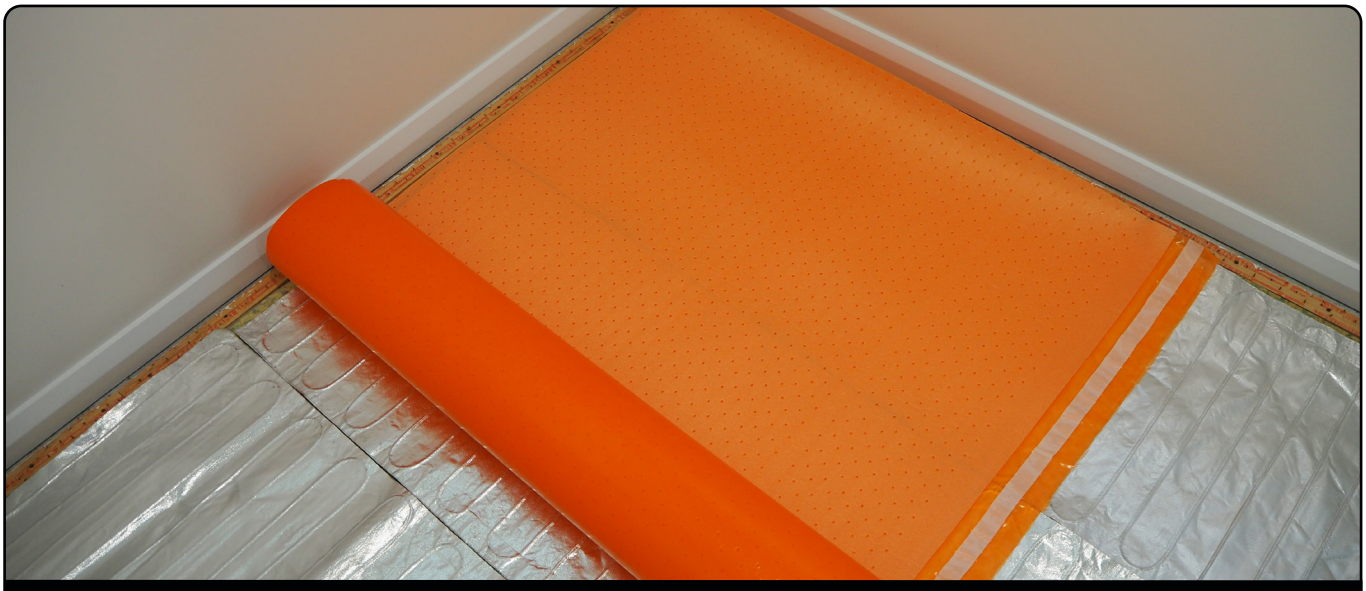
Do not place the cold tail connection or end termination in the wall/floor cavity, in the conduit or in a recess in the floor/ insulation boards covered with tape. This causes an air pocket and leads to cable failure which voids warranty.

For under timber or laminate flooring, allow a gap of between 50-100mm from the wall to the edge of the underfloor heating mat. For under carpet installations allow a gap of 200mm off the walls.

Laying mat in irregular areas

In irregular shaped areas and around fixtures carefully cut between each loop of cable ensuring the foil still encases the cable and loose run the cable around the fixture and secure in place with aluminium tape.

The Thermofoil heating mat will not always fit in spaces around irregular shapes. In this case you will need to cut the foil mat to arrange as needed. When cutting the foil take care not to cut or nick the heating cable. The heating cable should NOT be removed from the foil. If any of the heating cable is visible and not encased in the foil this should be covered by aluminium tape. Allow 50mm spacing between the heating cables and the permanent fixtures. Once the layout of the heating mat is finalised the edges of the heating mat should be fixed down to the underlay with some cloth tape to ensure that the heating mat does not move out of position when installing the Econosoft overlay and floor finish.



Install Econosoft Overlay across the entire floor area. This acts as an abrasive, acoustic and moisture barrier.

Now roll out the Econosoft cushioning overlay. The overlay should be installed with the smooth side facing down (in contact with the heating foil) and the perforated foam side facing up. At the edge of the room, roll out the first row of Econosoft overlay. When you reach the end of the room simply cut the overlay with a sharp blade or scissors taking care not to damage the heating foil. After fitting the first row, roll out the next section beside. Remove the protective film from the self-adhesive overlap strip and stick both rows together creating a damp-proof bond. Repeat this process until the whole floor is covered taking care to ensure the self-adhesive joins are made correctly. For an under timber installation, install the Econosoft overlay with the joins running in the same direction as the floor finish.

It is recommended to install the Econosoft overlay over the entire floor for sound absorption and to stop any moisture rising from the substrate. This also assists with less height difference between the heating foil and floor covering.

Install the floor finish

Install the floor finish in accordance with the manufacturers instructions ensuring care is taken not to damage the Thermofoil heating system.

Ω
TEST B

Test the resistance (using instructions on page 8) of the heating element once installed. Compare the tested resistance to the correct resistance of the cable and ensure this is within -5Ω to + 10Ω. Record the result on the customer hand over form (page 19).

Install the floor finish according to the manufacturers instructions taking care not to damage the heating system in any way. Wire up the mat alarm to the cold tail and turn the unit on. This device will sound an alarm if the cable is damaged during installation of the floor finish. If you hear the alarm sound, stop immediately and call 1300 989 464 for technical assistance. Please note the use of this device does not replace the need for a full resistance test at the three points outlined. For more details on the mat alarm see page 9.

Final test and wire up of the Thermostat

Ω
TEST C

Test the resistance (using instructions on page 8) of the heating element once the floor covering is laid. Compare the tested resistance to the correct resistance of the cable and ensure this is within -5Ω to + 10Ω. Record the result on the customer hand over form (page 19).

The thermostat must be installed by a qualified electrician in accordance with the current local electrical regulations. The installation and wiring of each thermostat model are different. Consult the instruction guide supplied with the thermostat for wiring diagram and installation details. When wiring up multiple mats to a single thermostat ensure the mats are wired in parallel.

Thermostats should be connected to a single phase mains supply via an RCD. The RCD rating is dependent on the overall load of the system.

Check the thermostat installation guide for maximum switching loads. If the system load exceeds the maximum load of the thermostat a suitably rated contactor will need to be installed.

Complete the customer handover form

Once the installation is complete the installer needs to ensure the customer handover form (page 19) is complete. This completed form along with photo(s) of the layout of the heating mat and a proof of purchase needs to be presented to the end user/homeowner to allow for the completion of the lifetime warranty registration. A warranty will not be granted unless this information has been completed in full and submitted via the online form at www.thermogroup.com.au/warranty. The homeowner needs to keep a copy of the handover form in case of a warranty claim.

It is recommended to contact the floor manufacturer to obtain the maximum temperature that the flooring can handle. This can then be set on the Thermostat. Please consult the thermostat instruction guide as to how to set this.

The heating may be slow to react at first especially if installed in a new building. When turning the floor heating on for the first time, we recommend setting the floor temperature at approx. 18°C and building up by 1°C per day until the desired temperature is reached.

What should I do if I have left-over heating cable?

You should always measure the room accurately and choose a system that covers the available heating area. If you do have extra cable you can run it around the edge of the room (Min. spacing 50mm) ensuring that all the cable is covered in the foil or aluminium tape.

Can I join two or more heating cables or mats to fit a larger area?

No, the heating cables or mats cannot be joined together however two or more can be connected in parallel to one Thermostat. When connecting multiple cables or mats you need to ensure that the total load does not exceed the total load of your thermostat.

What happens if it goes wrong or breaks under my floor?

There are no moving parts to an electric underfloor heating system and cable failures are extremely rare, if installed correctly. A damaged cable can usually be located and repaired with minimal disruption.

How long will it take for the floor to heat up?

Every situation is different due to the insulation value of the property, type of flooring used and the level of insulation below the heating system. For an estimated heat up times visit www.thermogroup.com.au/helpmeplan/running-cost-calculator.

Can you walk on the installed heating system before the floor finish is laid?

Whilst the heating system is durable and will handle foot traffic we recommend reducing walking on unfinished floor surfaces to a minimum as a precaution. Avoid putting heavy objects with sharp edges down on the heating system.

Can I cut the heating cable if I have excess?

No - never. Cutting the heating cable will alter the resistance and cause the element to overheat. If you cut the cable by accident, please call our technical helpline for assistance. Cutting the element will void the warranty.

Warranty Terms & Conditions

The Thermogroup Lifetime Warranty guarantees Thermofoil Underfloor Heating Mats to remain free from defects in workmanship and materials under normal use and maintenance, and is guaranteed to remain in full working order subject to the conditions and limitations below:

Thermofoil Underfloor Heating Mats are guaranteed for the Lifetime of the floor covering under which it is originally fitted subject to the following conditions. Please pay attention to the exclusions listed at the end of this warranty statement.

Thermogroup Lifetime Warranty applies:

1. Only if the product is registered, and the registration information is received and documented by Thermogroup, within 60days after install. You can register your product by completing the form online at www.thermogroup.com.au/warranty. Proof of purchase must be presented to make a claim, so please ensure that you keep a copy of both your invoice and purchase receipt in a safe place. Such invoice/receipt should clearly state the model that has been purchased and be in legible condition so as to aid in identifying the system.

2. Only if the Thermofoil Underfloor Heating has been properly earthed and protected by a Residual Current Device (RCD) at all times. This warranty does not cover any thermostats as these are covered by a separate 3 year warranty from the date of purchase.

All Thermogroup warranties become void if the floor covering under which the Thermofoil Underfloor Heating is originally fitted, is damaged, lifted, replaced, repaired or covered with additional layers of flooring. The Thermogroup Lifetime Warranty does not cover accidental damage, including but not limited to damage caused to the cable by laying, lifting, replacing or repairing the original covering.

The warranty period starts on the date of purchase, but the registration is only confirmed when the online warranty form has been complete and the registration details are submitted to the online warranty database in full, checked by Thermogroup and written confirmation is issued. Should it be required, Thermogroup will arrange for the Underfloor Heating element to be repaired or (at the discretion of Thermogroup) have parts replaced free of charge. If a fault is proved to be a manufacturing defect, Thermogroup will make good the floor covering to the original condition.

The Thermogroup Lifetime Warranty does not cover damage caused during installation, tiling or installation of any floor covering. Therefore, it is important to adhere strictly to the installation guide provided and follow the full test procedures detailed in this document before, during and after installation. Failure to do so will result in a void warranty. Thermogroup are, in no event, liable for incidental or consequential damages, including but not limited to extra utility charges or damages to property.

Thermogroup are not held accountable for:

1. Damages or repairs as a result of incorrect installation or application.
2. Damages as a result of floods, fires, winds, lighting, accidents, corrosive atmosphere or any other conditions situations deemed beyond the control of Thermogroup.
3. Use of un-compatible components or accessories.
4. Products installed outside of Australia.
5. Normal maintenance and care procedures.
6. Parts not supplied or designated by Thermogroup.
7. Damages or repair required as a direct result of any improper maintenance, operation or servicing.
8. Failure to power up or start as a result of inadequate/interruption of electrical service.
9. Changes in the appearance of the product that do not directly affect the performance of the product.

Important Notes:

Any repaired Thermogroup Underfloor Heating element carries only a 5 year warranty. Repairs that are made to rectify any damage other than manufacturing defects are not covered by the Thermogroup warranty. Damage as a result of miss-use, improper installation, use of improper accessories or adhesives or unsuitable substrate conditions are in no event covered by any Thermogroup warranty.

Our goods and services come with guarantees that cannot be excluded under the Australian Consumer Law. For major failures with the service, you are entitled: to cancel your service contract with us; and to a refund for the unused portion, or to compensation for its reduced value.

You are also entitled to choose a refund or replacement for major failures with goods. If a failure with the goods or a service does not amount to a major failure, you are entitled to have the failure rectified in a reasonable time. If this is not done you are entitled to a refund for the goods and to cancel the contract for the service and obtain a refund of any unused portion. You are also entitled to be compensated for any other reasonably foreseeable loss or damage from a failure in the goods or service.not done you are entitled to a refund for the goods and to cancel the contract for the service and obtain a refund of any unused portion. You are also entitled to be compensated for any other reasonably foreseeable loss or damage from a failure in the goods or service.

Customer Handover Form

INSTALLER: The installer must complete the full test procedure and complete this page in full and give it to the homeowner to keep in case of a warranty claim.

HOMEOWNER: Use this information to register your Lifetime Warranty at www.thermogroup.com.au/warranty. You must also keep this document for your records in case of a warranty claim.

Room reference	Stock no.	Manufacturer's values	Before installation (TEST A)	After cable installation (TEST B)	After tile/flooring installation (Test C)
Resistance measurement of the electric heating cable					
Two conductors and earth braid continuity test					
	Infinity (I) or Overload (OL)				
Insulation resistance test between conductor cables and earth braid					
	Equal to or greater than 200MΩ				
Floor temperature sensor test					

Installer Details
Name:
Company:
Email:
Phone:
Address:
Signature:
Date:

Thermofoil Heating Cable

Stock Code	Length (m)	Area (m²)	Output (W)	Resistance Ω
121402	2 x 0.5	1.0	140	337.9
121403	3 x 0.5	1.5	210	251.9
121404	4 x 0.5	2.0	280	188.9
121405	5 x 0.5	2.5	350	151.1
121406	6 x 0.5	3.0	420	126
121408	8 x 0.5	4.0	560	94.5
121410	10 x 0.5	5.0	700	75.6
121412	12 x 0.5	6.0	840	63
121414	14 x 0.5	7.0	980	53.9
121416	16 x 0.5	8.0	1120	47.2
121418	18 x 0.5	9.0	1260	41.9
121420	20 x 0.5	10.0	1400	37.8
121424	24 x 0.5	11.0	1680	31.5

Installation accessories

Stock Code	Description	Size	Unit
5400	Econosoft Cushioning Underlay	1200 x 500 x 5mm	(6m2) pk 10
5421	Econosoft Acoustic Overlay	10m x 1m	Ea
3255	Fixing tape	36mm x 25mm	Ea

Width	500mm
Thickness	2.5mm
Max. Temperature	28°C*
Protection Rating	IPX7
Warranty	Lifetime
Wattage	140W/m²
Conductor Type	Single Ended
Cold Tail Length	5m

*Regulataed by a floor sensing thermostat

Thermogroup
That little bit extra...

Contact Us

Phone: 1300 368 631 | Technical Helpline: 1300 989 464
sales@thermogroup.com.au | www.thermogroup.com.au