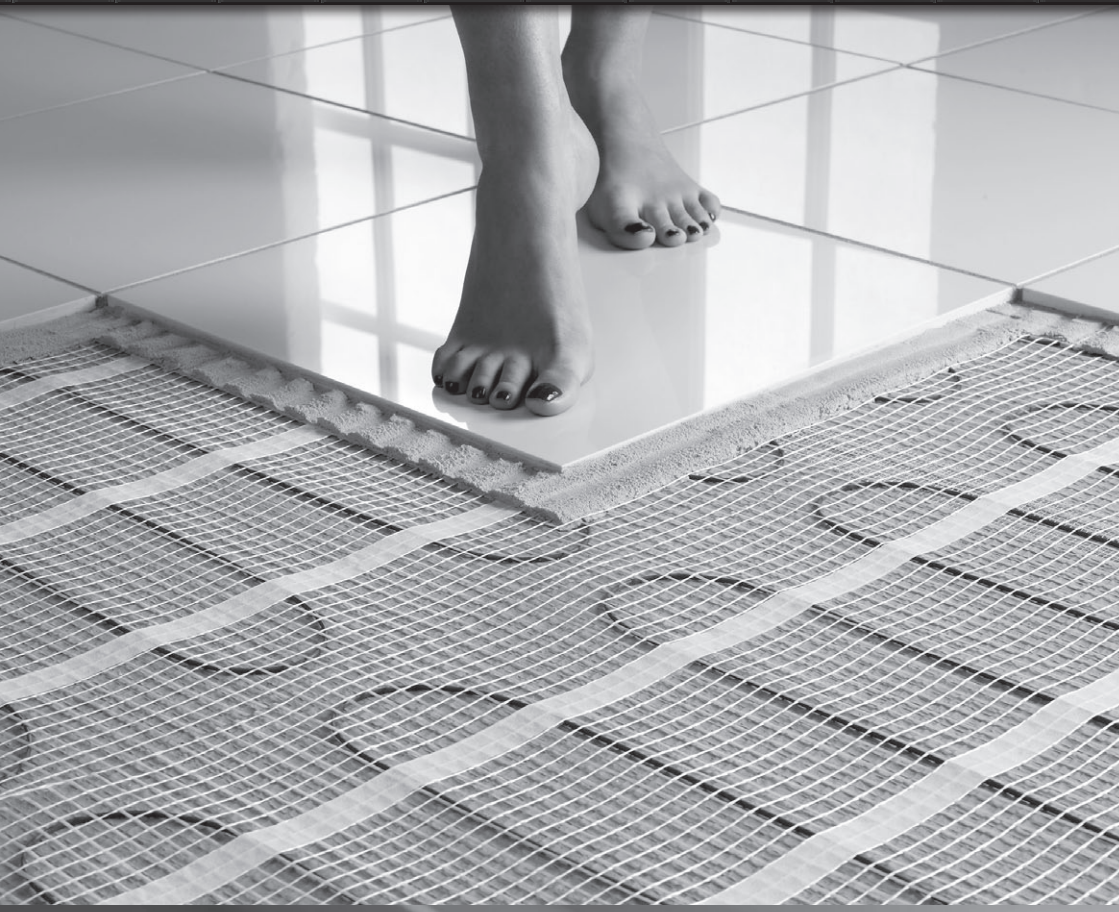
Vitrex
Sign of a professional job

FloorWarm

UNDER TILE OWNERS MANUAL



DISPOSAL OF OBSOLETE APPLIANCES

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Please visit our website to ensure you have the very latest version of the installation instructions

Version 2.0

IMPORTANT NOTICE:

ENSURE THE MAINS SUPPLY IS ISOLATED PRIOR TO INSTALLATION/MAINTANENCE/TESTING

ALL VITREX FLOORWARM UNDERFLOOR HEATING MATS MUST BE EARTHED

A DEDICATED 30Ma (RCD) MUST BE USED WITH THIS HEATING SYSTEM

ELECTRICAL WORK WHICH IS SUBJECT TO PART P BUI LDING REGULATIONS MUST BE CARRIED OUT BY A QUALIFIED ELECTRICAL CONTRACTOR

ALL WORK MUST CONFORM TO BS 7671.2008 AND THE LATEST IEE WIRING REGULATIONS (CURRENTLY 17th EDITION)

CONSULT AN ELECTRICIAN PRIOR TO INSTALLATION TO ENSURE THE ROOM IS SUITABLE FOR UNDERFLOOR HEATING SYSTEMS

PLEASE:

DO Read all the instructions before commencing installation

DO Ensure a 30mA RCD is used in conjunction with the heating system

DO Test the system regularly during the installation process

DO Take care when planning the layout

DO Only cut the mat using scissors, do not use a knife

DO Ensure the cables are never less than 50mm apart

DO Take care when cutting the mat to prevent accidental damage to the heating cable

DO Wear gloves to prevent any irritation from the fibre glass matting

DO Ensure a qualified electrician completes the final wiring following the latest electrical regulations

DO Purchase slightly less than is required as the mats cannot be shortened in anyway

DO Only connect mats in parallel

DO Leave a 50mm gap between walls and the heating system

DO ensure the floor area is clean and free from any debris. Ensure no protruding nails heads etc.

DO use a multi meter to continually test the mat before and during the installation and before laying final flooring

DO ensure all electrical connections conform to Part 'P' of the Building Regulations and latest IEE Wiring Regulations

DO avoid any unnecessary traffic over the cables during installation

DO install thermal and sound insulation materials beneath the heating mats and ensure they are suitable for use with Underfloor Heating systems.

PLEASE:

Do NOT Install the heating system under any fixtures or fittings i.e. bath tub, cabinets & toilets

Do NOT Place any heavy items on the matting (e.g. tiles) during the installation

Do NOT Cut the heating cable at ANY point

Do NOT Overlap the heating mats or cross cables at ANY point

Do NOT Install the heating system under any flooring other than tiles

Do NOT Leave any excess matting or cable – use a smaller mat if necessary

Do NOT Proceed without regular testing of the system

Do NOT Start up the system until the adhesive and grout is fully dry

Do NOT Connect mats in series

Do NOT place items which may prevent the heat rising onto the finish floor, such as heavy rugs, bean bags and solid base furniture. This causes THERMAL BLOCKING and can damage the flooring and heating system

Do NOT install the floor sensor close to other heat sources for example hot water pipes

Do NOT install the flooring without final continuity testing of the mats with a multi-meter

Installation checklist

Room plan
Insulation Boards
Mesh Joint Tape
Floorwarm Thermostat
Residual Current Device 30 mA (RCD)

Electrical Components:

Electrical backbox for thermostat if required
Junction box if installing more than one mat
Conduit to house power cables

Useful tools

Marker Pen
Tape Measure
Scissors
Electrical screwdrivers & multi meter for connections
Gloves

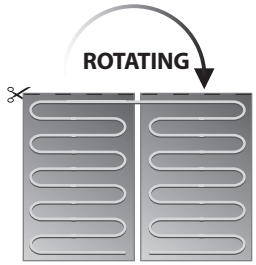
Planning your layout

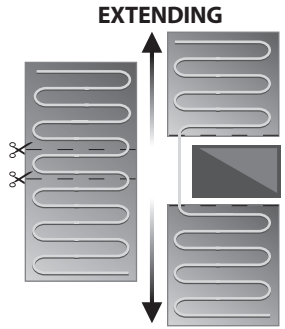
The mats can be adapted to suit all room shapes and layouts. If using more than one mat ensure that the cold tails reach the thermostat. DO NOT cut the cable.
For difficult areas the mat can be cut away and the cable placed directly onto the insulation board and secured into place using the glass fibre tape.

Connect the mat in parallel, ensuring cold tails reach the thermostat.

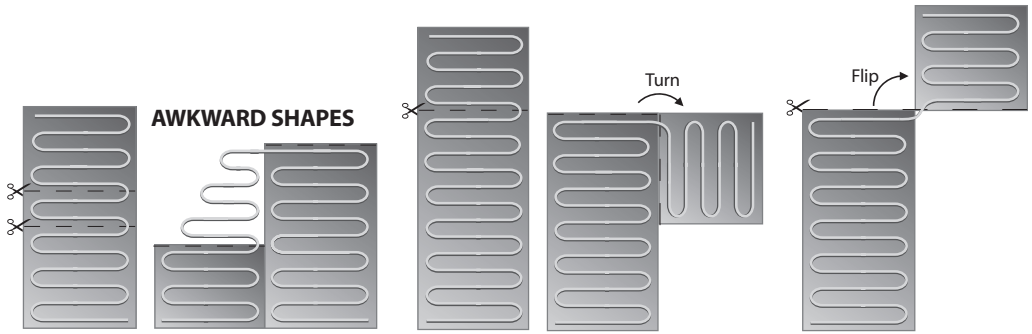
DIAGRAMS

Layout Example Diagrams

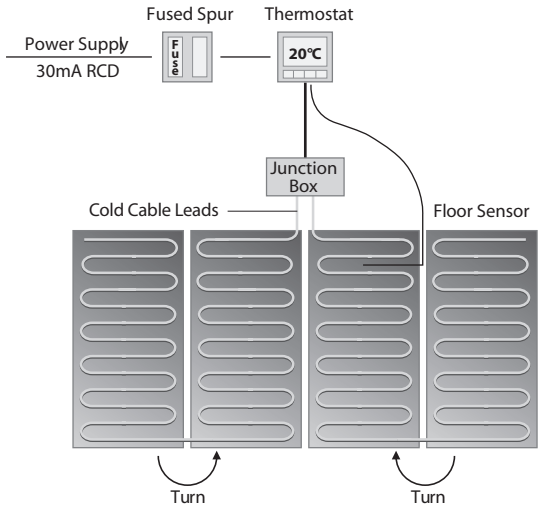




Layout Example Diagrams (cont.)



Typical Wiring System



DISPOSAL OF OBSOLETE APPLIANCES

DO NOT dispose of this appliance in your general waste. Your local authority or retailer will be able to provide further guidance

Technical Specification

TECHNICAL INFORMATION

Construction	Dual conductor wire with earth
Voltage	230V ac – 50Hz
Maximum Load	12W/m
Wire Thickness	Between 2.2m to 2.8mm
Cable Flexibility	Minimum allowable cable radius is 16mm
Power Range	150W to 750W
Approved in accordance with	EN60335 – 1:2004 / EN60335-2-96:2004, EN50366:2003+A1:2006

CONSTRUCTION

Thermal Conductor	2 x resistance wire insulated with FEP tested to 200°C
Outer Insulation	FEP tested to 200°C
IP Rating	IPX7
Reinforcement Mesh	Fibreglass mesh
Fixing Materials	Supplied with 3 rows of double sided tape

POWER CONSUMPTION

	Amps per Square Metre	Watts per Square Metre
1sqm	0.65	150
2sqm	1.30	300
3sqm	1.95	450
4sqm	2.61	600
5sqm	3.26	750

Surface Preparation

The floor must be clean and free from dust and dirt. Remove any old floor coverings.

Wooden Floors:

Ensure the floor has adequate ventilation underneath

Secure all floorboards to prevent flexing. A secure base is essential for tiled flooring so consider reinforcing with WBP plywood, if necessary.

Concrete Floors:

Ensure floor is level and structurally sound

Testing your heating mat

We recommend testing the mat before fully un-wrapping. Test using a multi-meter to ensure continuity through the cables.
Test regularly during the installation process and before laying the final flooring.

Insulation

We recommend the use of insulation boards prior to installing underfloor heating. Insulation increases the performance and efficiency of running underfloor heating. Insulation also reduces the heat up time and reduces running costs.

Instructions

- Ensure the area is clean and free of any debris
- Check the mats visually to ensure they are not damaged. Test the cable using a multi-meter, compare the resistance rating to the following chart. Results should be within +10% / -5% of the following readings:

Resistance (Ohm) for 230V 150W/m²

1 sqm	353 Ohm
2 sqm	176 Ohm
3 sqm	118 Ohm
4 sqm	88 Ohm
5 sqm	71 Ohm

- Lay the insulation boards, we recommend a brick pattern layout. To cut the boards simply run a knife through to score and flex. We recommend using a flexible powder tile adhesive and floor adhesive trowel to install the insulation boards. Press firmly into place and once dry, tape the edges of the board with Mesh Joint Tape.
- Please take time to re-check your room plan ensuring that adequate space is allowed for any additional fixtures and fittings to be installed post installation.
- Start to lay the mats on the floor, starting close to the thermostat. Mark out any cuts and turns. Mark the position where the temperature sensor is to be positioned.
- If you require a specific layout of cable not offered by the matting, simply cut the matting away and fix the cable in place using the mesh tape. ENSURE THERE IS NEVER LESS THAN 50MM BETWEEN THE CABLES.
- When confident everything is in the correct position, you are ready to install the floor sensor. Place the floor sensor underneath the mat - evenly spaced between 2 cables. Prepare a small channel in the insulation board to house the floor sensor. Ensure the channel accommodates the protective tube supplied. Place the floor sensor into the tube; tape over the end - this stops the tile adhesive from coming into contact with the sensor. The tip of the sensor should be at least 500mm away from the edge of the wall.
- Fix the mats to the floor using the 3 double sided tape strips (peel off adhesive backing). When cutting and turning the mats take care not to cut the cable.
- Once in place, it is good practice to test the resistance again using a multi meter.
- CONNECTION – This must be undertaken by a qualified electrician. This also validates your warranty. Ask your electrician to sign and date your warranty card.
- Install the thermostat following the instructions supplied.
- As the power cable is thicker than the heating element it may be necessary to cut a channel into the floor to ensure that you maintain an even level.
- Secure the power cables in place using tape.
- Run the power cables and temperature sensor cable to the thermostat using electrical housing if necessary.
- It is possible to shorten or lengthen the cold power cables as necessary. This should only be done by a qualified electrician.
- Test the system again using a multi meter. Write the meter readings on the warranty card to validate.
- Once laid, protect the cables with cardboard to prevent any accidental damage and avoid any unnecessary traffic over the cables, whilst exposed.

Tiling

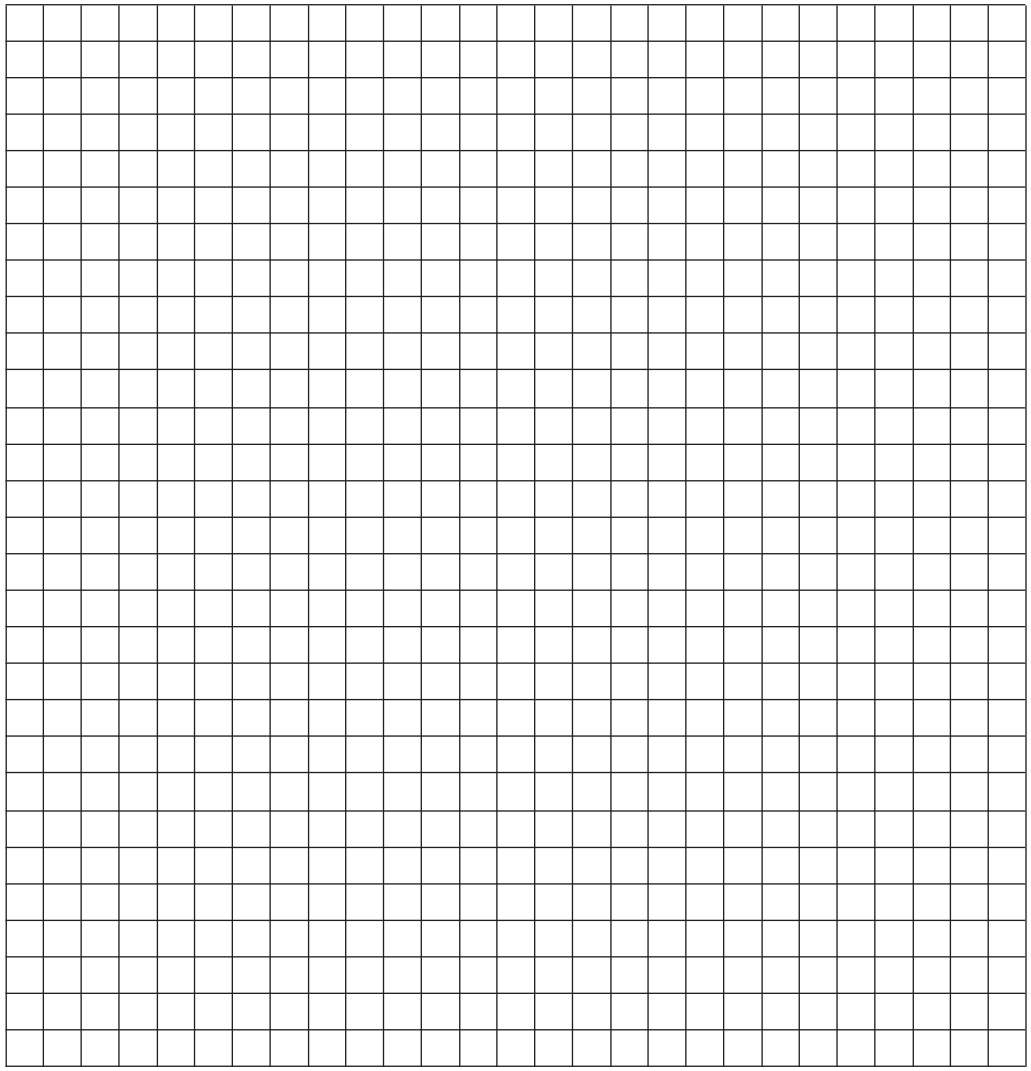
- Use a flexible powder tile adhesive which is suitable for underfloor heating systems. Apply following the manufacturer's instructions taking care not to cause any damage to the heating cables. We recommend the use of a plastic adhesive trowel for this purpose.
- Ensure the cables are fully covered with an even layer of adhesive, taking care to avoid any gaps or air pockets.
- Ensure tiles are securely set into adhesive again avoiding any gaps or air pockets.

ADHESIVE AND GROUT MUST BE FULLY DRY BEFORE TURNING ON THE HEATING SYSTEM.
This can take a number of days depending on site conditions, temperature and weather.

THERMAL BLOCKS – caution must be taken to avoid thermal blocks.

Thermal blocks (increases in temperature at a localised point) are caused when an object placed on the floor prevents the heat generated from being transferred into the air. Thermal blocks can cause damage to the item and / or the flooring. Examples of items that can cause thermal blocks are rubber backed rugs, solid based furniture, floor cushions / beanbags etc.

LIFETIME WARRANTY



Ensure a copy of this room layout is displayed at the distribution box

Products covered by this warranty

Item No.	Description	Barcode
FWT001	Under Tile 1m²	5011204608218
FWT002	Under Tile 2m²	5011204608225
FWT003	Under Tile 3m²	5011204608232
FWT004	Under Tile 4m²	5011204608249
FWT005	Under Tile 5m²	5011204608256

Vitrex Floorwarm Underfloor Heating for TILE is covered by a warranty for the **LIFETIME** of the original floor covering under which it is installed, subject to the terms and conditions set forth herein. The warranty is only applicable to the original purchaser and is not transferable. This warranty is offered by QEP Co. UK Ltd.

During the period of this warranty we will replace free of charge or refund the cost of the product (at our discretion) or arrange for it to be repaired. The cost of repair or replacement is the only remedy under this warranty. This warranty does not extend to costs incurred in re-laying, replacing or repairing the floor covering or floor.

This warranty will only be valid if the purchaser promptly registers the product with QEP Co. UK Ltd. To validate the warranty please ensure:

- The product is registered with us within 30 days of purchase. Registration must be completed by filling out the warranty card supplied in the Vitrex Floorwarm Underfloor Heating for TILE pack.
- In the event of a claim, proof of purchase is required so please ensure you retain your receipt or invoice.
- All final electrical connections must be carried out by a qualified electrician to the latest electrical regulations and comply with local and national building regulations. The registered electrician must complete the resistance readings on the warranty card and sign it stating their Part P Certificate Number.
- The heater must be earthed and protected by 30mA Residual Current Device at all times.

The warranty becomes invalid if:

- The floor covering installed above the heating mat is damaged, lifted, replaced, repaired or covered with subsequent layers of flooring.
- The heating mat is damaged during installation or by the laying of the floor covering.

As stated in the manual it is important to check the heating mat throughout the installation process and prior to laying the flooring.

Thermostats are warranted for a period of 3 years from the date of purchase, subject to the exclusions set out in this warranty document.

QEP Co. UK Ltd SHALL IN NO EVENT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO EXTRA UTILITY EXPENSES OR DAMAGES TO PROPERTY.

QEP Co. UK Ltd is not responsible for:

- Damage or repairs required as a result of faulty installation, incorrect application or misuse
- Damage caused by thermal blocking, details of which are explained in the Owner's Manual
- Damage as a result of floods, fires, wind, lightning, accidents, corrosive atmosphere or other conditions beyond our control
- Use of components or accessories not compatible with this unit
- Products installed outside of the UK
- Regular maintenance, for example cleaning of thermostats
- Parts not supplied by QEP Co. UK Ltd
- Damage or repairs as a result of improper use, maintenance, operation or servicing
- Failures due to interruption or inadequate power supply
- Changes in the appearance of the product that does not affect its performance
- Any damage caused by frozen or broken water pipes in the event of equipment failure

Claims procedure:
Any claim made under this warranty should be made directly to QEP Co. UK Ltd. The claim should be made in a letter stating the following information:

- Product purchased
- Date of purchase
- Proof of purchase
- Place of purchase
- Details of the problem leading to the claim

Please ensure a copy of everything sent is retained. This warranty is offered as an extra benefit and does not affect your statutory rights. The warranty period commences from the date of purchase. Products must be registered within 30 days of purchase. Registration for warranty is confirmed only when a letter of confirmation is sent by QEP Co. UK Ltd.

QEP Co. UK Ltd.
August 2010

Vitrex
Sign of a professional job
Everest Road, Lytham St. Annes, Lancashire, FY8 3AZ, England Tel: +44 (0) 1253 789 180 www.vitrexfloorwarm.com

Installation, Ownership and Part P Electrical Document

To validate your warranty you must fully complete this form

Owners Name _____

Owners address _____

_____

Postcode _____ Telephone number _____

Email _____

Date of purchase _____

Owners signature _____ Date _____

Installers Name _____

Installers Telephone Number _____

Please state the room in which the heater(s) is installed:

☐ Kitchen ☐ Bathroom ☐ Conservatory ☐ Hall ☐ Other

I confirm that I have read and fully understand the contents of the terms, conditions and installation manual and that the heater(s) has been installed as directed. I confirm that the heater(s) was working prior to tiling and accept that no claim against the manufacturer or its agents can be made for any loss or damage.

Installers signature _____ Date _____

Electricians Name _____

Electricians Address _____

_____

Electricians Phone Number _____

Electricians Part P Certificate Number _____

TABLE OF HEATERS INSTALLED

Room	Product Code	Batch No.	Under Tile or Under Wood	RCD Rating	Resistance Reading
Hall	*FWT005*	*12345*	*Under Tile*	*30 ma*	*76.8 ohms*

Return completed form to:
Vitrex FloorWarm Warranty, Everest Road, Lytham St. Annes, Lancashire, FY8 3AZ

WARNING

Please complete and display this page at your distribution board

This building is fitted with an underfloor heating system utilising 240V ac supply.

Do NOT pierce the flooring above the heating system with nails, screws or other fasteners. (See installation diagram for reference.)

Do NOT expose the floor to thermal blocking or attempt to reduce the area of the heated floor. (Ensure the flooring is suitable for use with the heating system.)

In the event of flooding or when carrying out any repairs or alterations, disconnect the underfloor heating system and contact your electrician or Vitrex Floorwarm Technical Helpline for advice. + 44 (0) 1253 789 180.

Details of Installation: _____

Electricians Name: _____

Company Name and Address: _____

Telephone Number: _____

Date: _____

Room with Heating Installed: _____

Total Wattage of System Installed: _____

PLEASE LIST THE HEATING MAT INSTALLED AND THE TEST RESULTS

Mat Type	Resistance Rating	Insulaton Test Passed