



PLEASE ENSURE YOU HAVE READ  
AND FULLY UNDERSTOOD THIS  
GUIDE BEFORE INSTALLATION!

# Vario

## Installation Guide

YOUR STEP-BY-STEP GUIDE TO  
THE PERFECT INSTALLATION



STOCK NO 5259



STOCK NO 2102



STOCK NO 6009

## Thank you for your purchase...

### Warranty, Terms and Conditions\*

The Thermogroup UK Lifetime Warranty guarantees Vario underfloor heating kits 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:

Please complete the customer handover section on page 13 in full so the customer has all the information they require to complete the online warranty form. This is required to validate the Lifetime warranty.

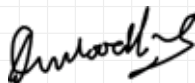
Proof of purchase must be presented to make a claim, so please ensure that you keep a copy of both your invoice and purchase receipt in a safe place. Such invoice/receipt should clearly state the model that has been purchased.

\*Full terms and conditions available on request.

### A message from customer care...

Thank you for choosing a Thermogroup UK 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 your warranty and how to get Technical Support should you need it.



**Duncan Woodford**  
Customer Support

## ! IMPORTANT SAFETY REGULATIONS !

### ALL WIRING MUST CONFORM TO IEE 17TH EDITION PART P REGULATIONS

**CE** Vario underfloor heating kits are **CE approved**, certified and manufactured to the highest standards using state of the art heating cables. All our cables are designed to be **17th Edition Part P** compliant and the instructions we supply with them include as much information as possible to ensure that all installations comply with them. Please call our freephone customer care line if in any doubt on **0800 019 5899**.

#### DO

- ✓ TAKE CARE TO ENSURE ALL ELECTRICAL WORK COMPLIES WITH IEE 17TH EDITION PART P REGULATIONS
- ✓ ENSURE SENSOR CONDUIT IS POSITIONED BETWEEN 2 RUNS OF HEATING CABLE IN A REPRESENTATIVE AREA OF THE FLOOR
- ✓ USE THE PATENTED FIXING STRIPS AND REAPPLY THE PROTECTIVE WARNING STRIP SO THE WARNING CAN BE READ CLEARLY
- ✓ CALCULATE ALL SPACING FOR YOUR VARIO CABLE AND PATENTED FIXING STRIPS
- ✓ LOCATE YOUR THERMOSTAT IN ACCORDANCE WITH RELEVANT IP GUIDELINES

#### DO NOT

- ✗ LAY VARIO NEAR OR ON TOP OF ANY HEAT INFLUENCES SUCH AS HOT PIPES
- ✗ LAY INSULATION ON TOP OF VARIO. THIS WILL OVER HEAT YOUR SYSTEM
- ✗ LAY VARIO ON AN UNCLEAN OR UNCURED SUBSTRATE
- ✗ CUT OR JOIN IN SERIES TO ANOTHER HEATER
- ✗ POWER UP YOUR SYSTEM UNTIL ALL ADHESIVES AND GROUTS ARE FULLY CURED. SEE MANUFACTURER GUIDELINES FOR CURING TIMES.

FAILURE TO FOLLOW THESE INSTRUCTIONS WILL INVALIDATE THE WARRANTY. PLEASE TAKE CARE TO READ THIS GUIDE THOROUGHLY.



Plan your installation



Thoroughly clean your substrate



Use the half way mark to aid installation



Reapply the adhesive covers warning side up



Do not cut the yellow cable!



Do not use a metal trowel



Do not touch electric's unless fully qualified



Do not overlay Vario cable



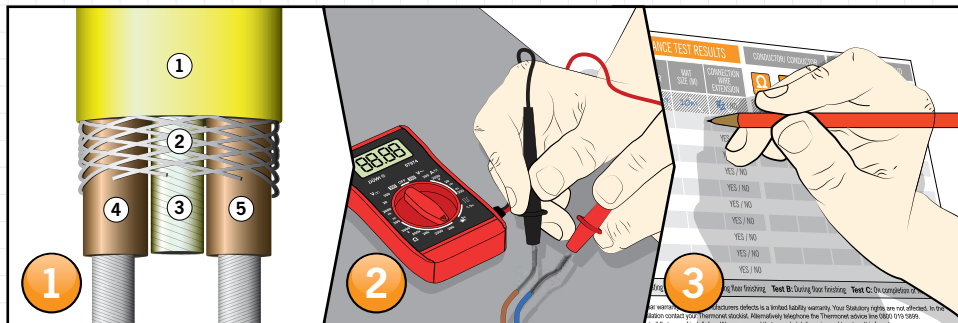
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## Planning: Resistance test

### Three test symbols

Be sure to check the electrical resistance reading on the cable three times; before, during and after the installation process. These test symbols throughout this guide are a reminder:



### Wire explanation

- ① Fluoropolymer coating
- ② Continuous earth braid
- ③ Fibreglass padding
- ④ Neutral element
- ⑤ Live element

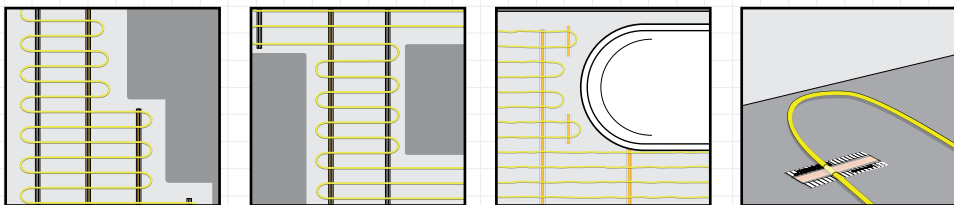
### Resistance test

Each test has two parts:  
Live and neutral  
Live and earth braid / neutral and earth  
Conducting the test in this way ensures total accuracy.

### Record results

Write each resistance value on the customer handover form (P13) to ensure your customer can complete the Lifetime Warranty form online.

## Planning: Irregular areas



Arrange the cable loops to cover irregular areas. Use a minimum cable spacing of 50mm and fix in place using a small section of the patented fixing strip.

### Planning checklist

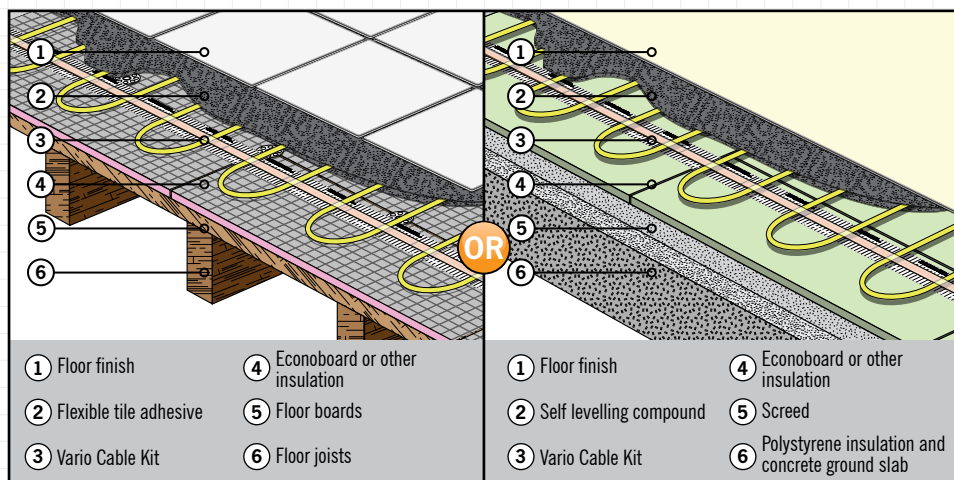
- ☐ FULLY UNDERSTAND RESISTANCE TESTS AS THEY ARE REQUIRED FOR WARRANTY APPLICATION
- ☐ CARRY OUT TEST A AND RECORD RESULTS (P13)
- ☐ FULLY READ AND UNDERSTAND IRREGULAR AREAS

### ! IMPORTANT SAFETY PRECAUTIONS !

- DO NOT CUT VARIO CABLE
- NO ELECTRICITY IS NECESSARY FOR A RESISTANCE TEST
- DO NOT CONNECT VARIO CABLE TO A MAINS SUPPLY WHILST ROLLED UP



## Planning: Insulation, substrate build up and compatibility



### Option 1: Insulating a timber substrate

#### Step 1: Measure and plan your layout

First measure your floor space and calculate how many boards you'll need using the calculation below.

#### Step 2: Cut your Econoboard coated to size

If required, cut the Econoboard coated to size to suit your room layout. Econoboard coated can be cut very easily using a sharp blade or wood saw.

#### Step 3: Lay and fix Econoboard coated

Ensure your substrate is secure, clean and free of dust and loose particles. Set out your boards onto the floor space and fix in place using appropriate fixings. We recommend 32mm fixing screws, (6017) and 36mm plastic fixing washers (6032).

#### Calculation: Number of boards required

Econoboard Area = 0.78m<sup>2</sup>

Econoboard coated Area = 0.72m<sup>2</sup>

$$\frac{\text{Floor space (m}^2\text{)}}{\text{Board Area (m}^2\text{)}} = \text{Number of boards}$$

### Planning checklist

- ☐ READ AND FULLY UNDERSTAND THE USE OF ECONOBOARD AND ECONOBOARD COATED. IT WILL EFFECT THE EFFICIENCY OF YOUR SYSTEM
- ☐ IDENTIFY WHICH SUBSTRATE APPLIES TO YOU
- ☐ LAY ECONOBOARD OR ANOTHER ADEQUATE INSULATION

### Option 2: Insulating a concrete substrate

#### Step 1: Measure and plan your layout

Measure your floor space and calculate how many boards you'll need using the simple formula.

#### Step 2: Cut your Econoboard

If required, cut the Econoboard to size to suit your room layout. Econoboard can be cut very easily using a sharp blade or wood saw. Please take appropriate care when using sharp tools.

#### Step 3: Spread adhesive

Ensure your substrate is secure, clean and free of dust and loose particles. Mix Econofix (6009) flexible adhesive in accordance with instructions and spread using a notched trowel creating a full bed of adhesive large enough for one board.

#### Step 4: Lay the Econoboard

Lay the Econoboard onto the adhesive taking care to squeeze out any air pockets in the adhesive. For a high quality finish make sure all boards are flush and tape over the seams using our reinforcing tape (6015).

### ! IMPORTANT SAFETY PRECAUTIONS !

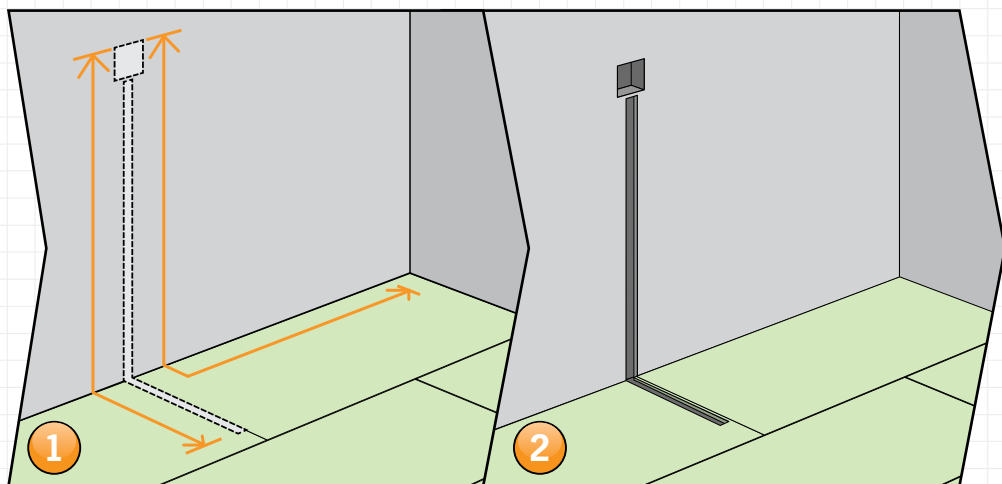


DO NOT LAY INSULATION ON TOP OF VARIO. THIS WILL OVER HEAT YOUR SYSTEM



ECONOBOARD WILL COMPRESS OR PUNCTURE UNDER LOW SURFACE AREA IMPACT

## Preparation: Installing Econoboard and chase conduit



### Step 1: Plan back box and conduit positions

Referring to your plan (p14) measure and mark your back box and conduits in the required position. Trace a line vertically from your back box to the floor and mark the conduit position on the floor.

**Even temperature reading:** It is important to position your sensor between two runs of heating cable. A channel must be chased into the insulation or substrate to house the sensor conduit. Do not position the sensor conduit near any temperature influence or where furniture and rugs might be placed over the sensor.

The cold tail is 3m in length. It needs to reach from your back box, down through your conduit and along to your Vario cable start position (extension available 5412).

### Step 2: Install back box

**Timber substrate and cavity wall:** Fit an extra deep single gang back box at the desired level. Chase from the back box to the floor level, allowing for a 20mm conduit and an 11mm sensor conduit.

Power for the thermostat will come from an RCD protected fused spur.

### Planning checklist

- ☐ MEASURE AND MARK OUT FOR A BACK BOX AND TWO CONDUITS
- ☐ PLAN THE INSTALLATION OF THE SENSOR CONDUIT BETWEEN TWO RUNS OF VARIO CABLE

### ! IMPORTANT SAFETY PRECAUTIONS !



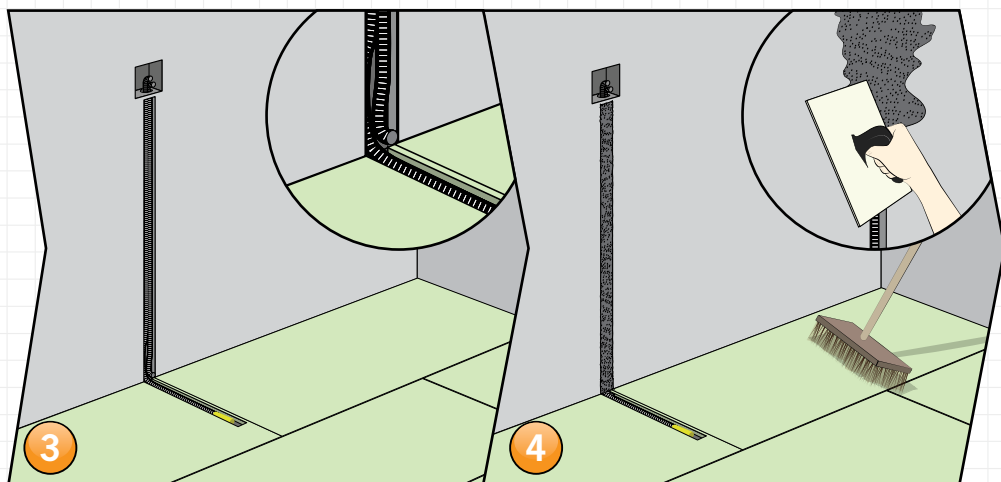
THE SENSOR PROBE IS ONLY 2M IN LENGTH. ENSURE IT REACHES THE VARIO CABLES FOR AN ACCURATE TEMPERATURE READING



SENSOR PROBE MUST NOT BE POSITIONED ON TOP OF VARIO



## Preparation: Skim and clean substrate thoroughly



### Step 3: Install two conduits

**Sensor conduit:** Install a conduit for the sensor probe (laid centrally between two runs of Vario cable), ensure the yellow cap supplied is on the end of the sensor conduit.

**Cold tail conduit:** Install another conduit for the cold tail (black cable) of the Vario cable. Cut cold tail conduit flush with the wall to avoid unnecessary floor buildup.

### Step 4: Make good and clean your substrate



When your two conduits are in place fill the wall channel (not the substrate) with plaster, if required, and smooth out.

After all fillers are fully cured take the time to thoroughly clean your substrate. This is exceedingly important to ensure the patented fixing strips adhere fully to your substrate. Any dust could jeopardise adhesion.

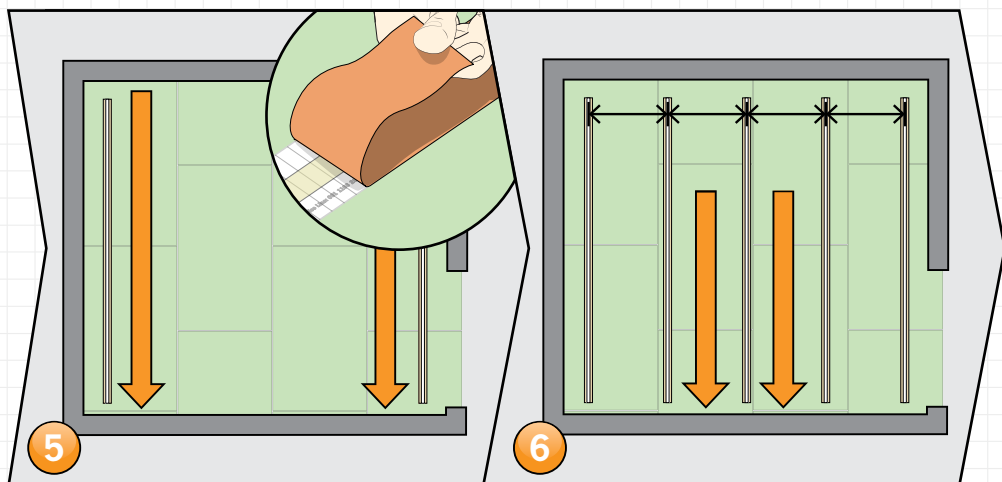
### Planning checklist

- ☐ INSTALL THE SENSOR CONDUIT AND THE COLD TAIL CONDUIT
- ☐ SKIM THE CAVITY AND THOROUGHLY CLEAN YOUR SUBSTRATE BEFORE CONTINUING

### ! IMPORTANT SAFETY PRECAUTIONS !

-  DO NOT LAY VARIO ON AN UNCLEAN OR UNCURED SUBSTRATE
-  ENSURE ALL FILLERS ARE FULLY CURED BEFORE CONTINUING WITH THIS INSTALLATION

## Installation: The patented fixing strip



### Step 5: Lay your first and last fixing strips

Firstly you need to lay the patented fixing strip at either end of the room. Roll a length of the patented fixing strip out across the length of the room ensuring to leave a 200mm space around the perimeter of the room.

Cut fixing strip to size and peel off an inch of the brown paper protecting the adhesive layer on the underside of the fixing strip. Stick adhesive side down pulling off the bottom protective layer as you go. Repeat this for the other end of your room.

### Step 6: Lay remaining fixing strips

Measure in between the two fixing strips you laid in step 1. Use this measurement to evenly distribute more runs of the fixing strip.

It is important these strips are no further than 500mm apart. See below for a calculation that gives you ideal spacing.

$$\frac{\text{Available floor space (m}^2\text{)} \times 100}{\text{Cable kit length (m)}} = \text{Spacing (cm)}$$

Floor Area (m<sup>2</sup>) \_\_\_\_\_ Cable space (m) \_\_\_\_\_

### Planning checklist

- ☐ LAY FIRST AND LAST FIXING STRIP LEAVING A 200MM SPACE AROUND THE PERIMETER
- ☐ INSTALL REMAINING FIXING STRIPS AND PRESS FIRMLY ONTO SUBSTRATE

### ! IMPORTANT SAFETY PRECAUTIONS !



ENSURE THE SUBSTRATE IS CLEAN AND DUST FREE BEFORE APPLYING ANY PATENTED FIXING STRIPS

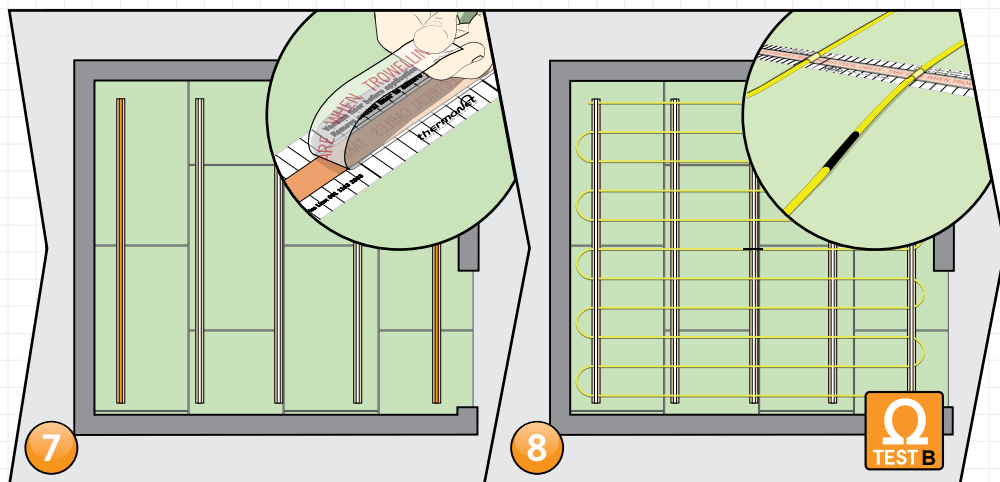


FIXING STRIPS SHOULD BE NO FURTHER THAN 500MM APART





## Installation: Lay the Vario cable



### Step 7: Peel off adhesive cover strip

Now peel off the adhesive cover from the first and last Fixing Strips. Put these top strips to one side for use later.



#### PRO TIP: PATENTED FIXING STRIPS

Use the markings on the patented fixing strip to aid your cable spacing calculated on p14. (minimum spacing between cable: 50mm).

### Step 8: Lay the Vario cable

Pull the cold tail (black cable) fully out of the cable dispenser and ensure it reaches from your back box to your start position.

Lay the Vario cable across the width of the room at spacing calculated on p14 and gently apply pressure when crossing exposed adhesive bands on the fixing strips. Meander the cable across the room as shown above.



#### PRO TIP: HALF WAY POINT

You will notice a black mark half way along the length of your Vario cable. This half way mark should meet up with the middle point of your installation. Use this to ensure you have enough cable to reach the end of your installation.



**Perform Test B now and record the results on p14**

### Planning checklist

- ☐ PEEL OFF THE ADHESIVE COVER FROM THE FIRST AND LAST RUNS. RETAIN THE ADHESIVE COVERS AS THESE WILL BE REAPPLIED AT A LATER STAGE
- ☐ CHECK THE COLD TAIL REACHES THE BACK BOX AND LAY THE VARIO CABLE

### ! IMPORTANT SAFETY PRECAUTIONS !

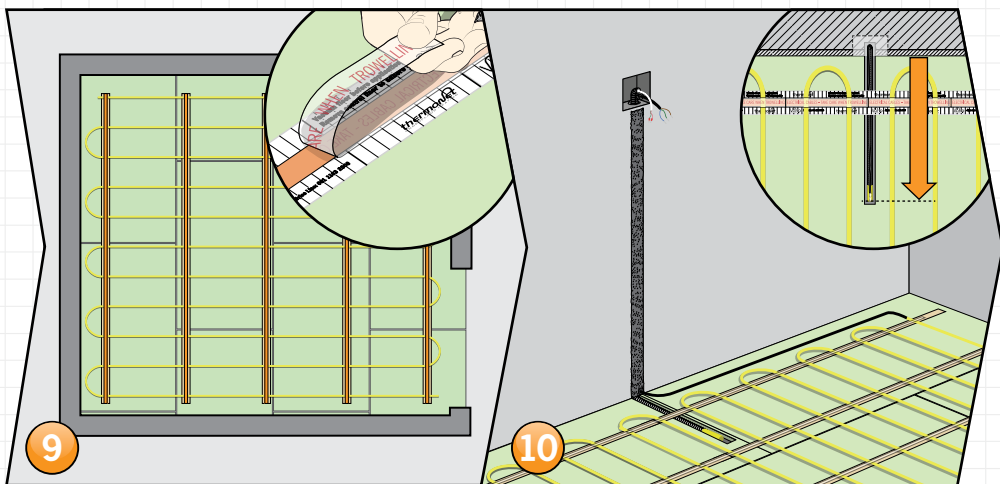


UNDER NO CIRCUMSTANCES SHOULD THE VARIO CABLE BE CUT OR JOINED IN SERIES TO ANOTHER HEATER



THE MINIMUM SPACING FOR VARIO CABLE IS 50MM DO NOT LAY ANY CLOSER TOGETHER THAN THIS

## Installation: Peel and reapply final strips



### Step 9: Peel off and reapply adhesive covers

Reverse and re-apply the adhesive cover to the first and last run of the patented fixing strip, securing the Vario cable as you go.

Now, one-by-one take off the adhesive cover from your remaining fixing strips. Apply a small amount of pressure to the Vario cable where it crosses over the exposed adhesive band.

Re-apply the top protective layer sealing the cable in place.



#### PRO TIP:

When reapplying the adhesive cover, ensure the warning message is facing the correct way to allow the alert to be displayed clearly. This will help to prevent damage to the cable on site.

### Step 10: Cold tail and sensor probe

Feed the black Vario cold tail up through the cold tail conduit and into the back box.

Also feed the thermostat sensor probe into the back box, down and through the sensor conduit ensuring it goes right to the end.

These will later be wired into the thermostat (5259 touch screen thermostat used in this installation guide).

### Planning checklist

- ☐ REAPPLY ALL ADHESIVE COVERS OVER THE VARIO CABLE ENSURING THE WARNING MESSAGE CAN BE READ
- ☐ FEED THE COLD TAIL UP THE CONDUIT TO THE BACK BOX AND FEED THE SENSOR PROBE DOWN TO THE END OF THE CONDUIT IN THE FLOOR

### ! IMPORTANT SAFETY PRECAUTIONS !



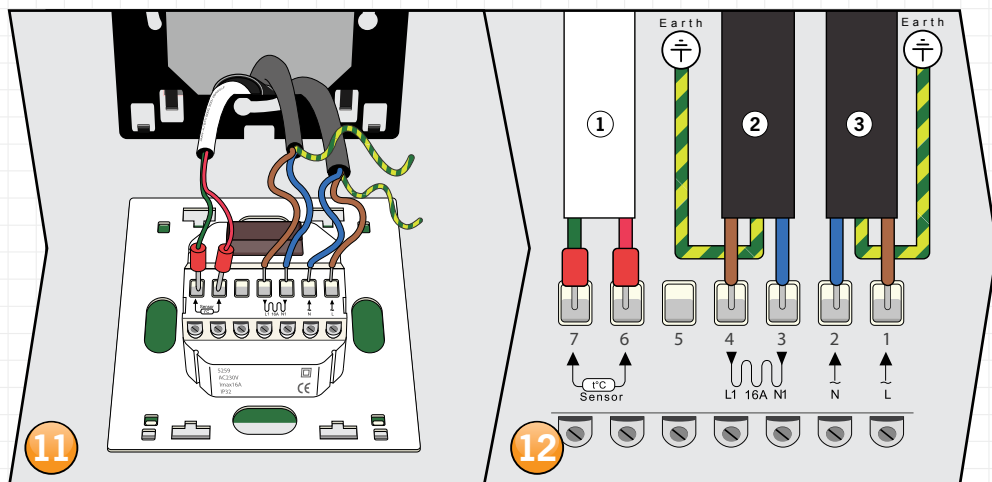
ENSURE SENSOR PROBE REACHES RIGHT TO THE END OF THE SENSOR CONDUIT



ENSURE ALL MAINS ELECTRICITY IS OFF BEFORE CONTINUING WITH THIS INSTALLATION



## Installation: Wire the thermostat



### Step 11: Wire thermostat (5259)

Your thermostat may require a different wiring diagram. Please consult the relevant installation guide for full details.

Secure your thermostat bracket to the back box using the screws provided, taking care to ensure the mount is level.

Now pull all the wires through from the wall cavity or chased channel and loosen the tension screws on your thermostat electrical connection panel.

Images 11 and 12 show correct wiring diagrams for the Touchscreen Programmable Thermostat (5259, 5255 and 5255) only. Please consult your thermostat installation guide for the correct wiring diagram.

### Step 12: Wiring schematic

Position the cables as shown above and tighten the tension screws one by one.

- ① Sensor cable
- ② Vario cold tail
- ③ Power supply from an RCD protected source.

### Planning checklist

- ☐ INSTALL THE THERMOSTAT WALL BRACKET IN PLACE ACCORDING TO THE RELEVANT INSTALLATION GUIDE
- ☐ WIRE THE THERMOSTAT IN PLACE ACCORDING TO THE RELEVANT INSTALLATION GUIDE

### ! IMPORTANT SAFETY PRECAUTIONS !

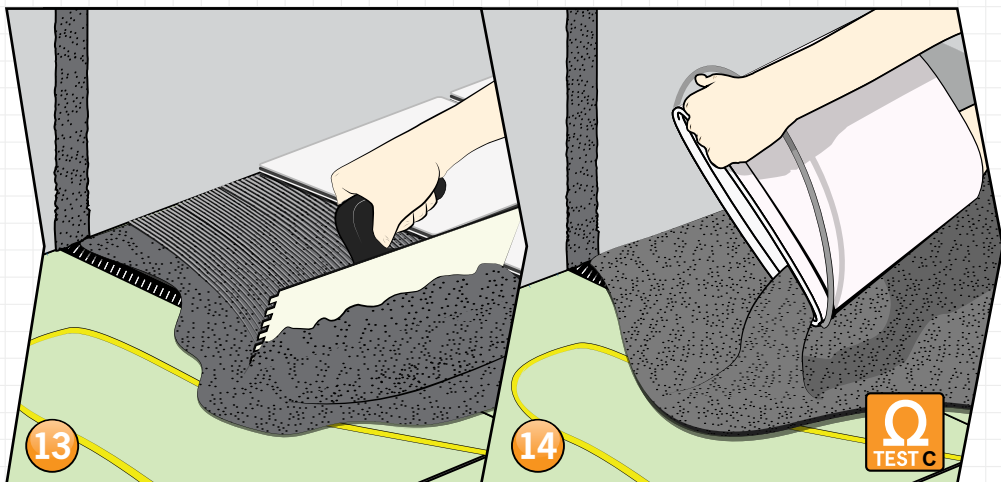


TAKE CARE TO ENSURE ALL ELECTRICAL WORK COMPLIES WITH IEE 17TH EDITION PART P REGULATIONS



LOCATE YOUR THERMOSTAT IN ACCORDANCE WITH RELEVANT IP GUIDELINES

## Installation: Floor finishes



### Step 13: Tiled finish

You can simply tile directly over Vario underfloor heating but take extra care not to damage the yellow cable in any way.

Tile the floor using a flexible tile adhesive and grout in accordance with industry standards and manufacturer guidelines.

To allow the flexible tile adhesive to fully cure, you must wait 2 weeks (unless otherwise stated by the manufacturer) before switching your new Vario system on.

### Step 14: Other finishes

If you plan to install carpet, vinyl or wood flooring over a Vario installation you must first lay a bed of at least 10mm self levelling compound, such as Econoplan (6004). Please refer to the relevant installation guide for details.

Lay your flooring according to the manufacturer's instructions. Please refer to manufacturer's guidelines for drying times before turning on your heating system, this is usually around 2 weeks.



**Perform Test C now and record the results on p14**

### Step 13 and 14 checklist

- ☐ BE SURE TO USE A SOLID BED OF FLEXIBLE ADHESIVE FOR TILING
- ☐ LAY SELF LEVELLING COMPOUND IF INSTALLING CARPET, VINYL OR WOOD FLOORING OVER VARIO
- ☐ USE A PLASTIC TROWEL TO AVOID SNAGGING AND DAMAGING THE VARIO HEATING CABLE

### ! IMPORTANT SAFETY PRECAUTIONS !



TAKE CARE NOT TO SNAG OR DAMAGE YELLOW CABLES IN ANY WAY. USE A PLASTIC TROWEL



USE A SUITABLE FLEXIBLE TILE ADHESIVE OR SELF LEVELLING COMPOUND



DO NOT POWER UP YOUR SYSTEM UNTIL ALL ADHESIVES AND GROUTS ARE FULLY CURED. SEE MANUFACTURER GUIDELINES FOR CURING TIMES.



## Finalise: Customer handover

### Vario Installation Lifetime Warranty



Record the resistance test results here. Tests should be carried out when prompted during the installation process. Please fill out the entire form in clear writing to ensure your customer can register their system online or contact you with any queries that may arise after installation.

#### VARIO ON SITE RESISTANCE TEST RESULTS

| ROOM<br>REFERENCE | STOCK<br>NUMBER | HEATED<br>AREA (m <sup>2</sup> ) | CONNECTION<br>WIRE<br>EXTENSION | CONDUCTOR / CONDUCTOR |        |        | CONDUCTOR / EARTH/BRID |        |        |
|-------------------|-----------------|----------------------------------|---------------------------------|-----------------------|--------|--------|------------------------|--------|--------|
|                   |                 |                                  |                                 | TEST A                | TEST B | TEST C | TEST A                 | TEST B | TEST C |
| 0 Example Room    | 2102            | 10m <sup>2</sup>                 | YES / NO                        | 236                   | 284    | 285    | 0/0                    | 0/0    | 0/0    |
| 1                 |                 |                                  | YES / NO                        |                       |        |        |                        |        |        |
| 2                 |                 |                                  | YES / NO                        |                       |        |        |                        |        |        |
| 3                 |                 |                                  | YES / NO                        |                       |        |        |                        |        |        |
| 4                 |                 |                                  | YES / NO                        |                       |        |        |                        |        |        |
| 5                 |                 |                                  | YES / NO                        |                       |        |        |                        |        |        |
| 6                 |                 |                                  | YES / NO                        |                       |        |        |                        |        |        |
| 7                 |                 |                                  | YES / NO                        |                       |        |        |                        |        |        |
| 8                 |                 |                                  | YES / NO                        |                       |        |        |                        |        |        |
| 9                 |                 |                                  | YES / NO                        |                       |        |        |                        |        |        |
| 10                |                 |                                  | YES / NO                        |                       |        |        |                        |        |        |

**KEY:** Test A: After laying the Vario cable(s) and before starting floor finishing    Test B: During floor finishing    Test C: On completion of floor finishing

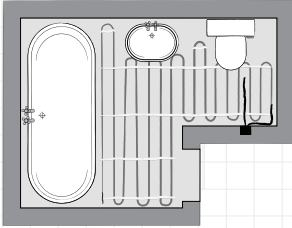
The Vario heating kit Lifetime Warranty against manufacturers defects is a limited liability warranty and will only apply if the product is registered online. Online warranty registration must be completed within 60 days of installation to apply. Your statutory rights are not affected. In the event of a problem with your installation contact your Vario stockist. Alternatively telephone the customer care line 0800 019 5899. Take photographs of installation at all 3 stages of installation.

**Fill out and sign the boxes below to declare that all the information recorded on this form correlates to the installation.**

| INSTALLER      | CUSTOMER   |
|----------------|------------|
| Name:          | Name:      |
| Email:         | Email:     |
| Website:       | Website:   |
| Address:       | Address:   |
| Postcode:      | Postcode:  |
| Part P number: | Telephone: |
| Telephone:     | Signature: |
| Signature:     |            |

Please note: Actual tested resistance may differ from those listed. Allow a tolerance of -5Ω to +10Ω of the resistance specified.

## Planning: Installation planning grid



### Planning: Avoid costly mistakes

Use the grid above to plan your installation this will help you to produce the safest, quickest and cleanest result. Include thermostat and sensor positions.

### Planning: System requirements

- Vario cable kit - (2202 - others available)
- Thermostat (5259 - others available)
- Single back box kit (5275)
- Econoboard (6014 and 6110)
- Sensor probe and conduit (5267)

### Planning checklist

- ☐ PLAN FOR ALL THE ITEMS SHOWN IN SYSTEM REQUIREMENTS
- ☐ CALCULATE CABLE SPACING
- ☐ FULLY PLAN YOUR INSTALLATION

### Planning: Cable spacing calculation

Now is a good time to think about cable spacing. Use the calculation below to calculate ideal cable spacing.

$$\frac{\text{Available floor space (m}^2\text{)} \times 100}{\text{Cable kit length (m)}} = \text{Spacing (cm)}$$

Floor Area (m<sup>2</sup>) \_\_\_\_\_ Cable space (m) \_\_\_\_\_

### ! IMPORTANT SAFETY PRECAUTIONS !



FAILURE TO PLAN YOUR INSTALLATION COULD RESULT IN SYSTEM FAULTS OR LACK OF MATERIALS



VARIO CABLE SHOULD HAVE A MINIMUM SPACING OF 50MM BETWEEN EACH CABLE



DO NOT LAY VARIO NEAR OR ON TOP OF ANY HEAT INFLUENCES SUCH AS HOT PIPES



## FAQ: Trouble shooting

| Problem   | Cause   | Solution  |
|---|---|---|
| Vario system does not fit as planned  | Incorrect cable spacing   | Adjust the spacing of the cable in accordance with this calculation.<br><br>$\frac{\text{Available floor space (m}^2\text{)} \times 100}{\text{Cable kit length (m)}} = \text{Spacing (cm)}$  |
|   | Excess cable  | Run surplus yellow heating wire around perimeter of room or readjust spacing in accordance with the above calculation   |
| Wire has been damaged during installation                                   | Inadequate protection of Vario system   | Do not continue installation. Assess damage and check resistance readings. If resistance readings fall outside the allowable tolerance, repair the wire using a 5272 repair kit. 5272 repair kit are available from your Vario stockist. If the insulation is damaged but readings are within the allowed tolerances also use a 5272 repair kit.  |
| On-site resistance test results do not comply with Factory Test Certificate | Wire or connector damaged   | Do not continue installation. Contact your Vario stockist for advice or call the customer support line <b>0800 019 5899</b> .   |
| Floor takes more than 2 hours to heat up                                    | Heat loss or insufficient coverage  | Set heating to come on earlier.   |
| Only part of the floor is heating up  | Insufficient coverage or incorrect wiring   | Check all Vario systems are correctly connected to the thermostat.  |
| The floor does not heat up  | Thermostat set below measured temperature   | Increase thermostat temperature set point.  |
|   | Vario not functioning   | Check that the system is connected to the thermostat correctly.<br>Check that the mains power supply is connected and the thermostat mains supply terminals are live.<br><br>Disconnect the system from the thermostat and check the resistance readings against the Factory Test Certificate(s). If any resistance reading falls outside the allowable tolerance, contact your Vario stockist or call the Vario Customer Support line <b>0800 019 5899</b> .<br><br>Disconnect the floor temperature sensor from the thermostat and check the resistance readings against the thermostat installation guide. If the resistance is not within range, contact your Vario stockist or call the Vario Customer Support line <b>0800 019 5899</b> . |
| High running costs  | Solid floor without insulation or poorly insulated space<br>Insufficient or Incorrectly programmed Thermostat | Lower comfort temperature and adjust time settings for thermostat.  |

**Got a problem you can't solve? Call the Thermogroup Customer Support line 0800 019 5899**

## Vario Technical Specification

Max. Operating Temperature 29°C

Cable Thickness (approx) 3.5mm

## Estimated heat up times

Concrete and 50mm Econoboard 0.5 hrs

Concrete and 10mm Econoboard up to 1.0 hr

Un-insulated concrete up to 5.0 hrs

Concrete and sub surface insulation 3.0 hrs

Chipboard and 10mm Econoboard 0.5 hrs

Un-insulated chipboard up to 1.0 hr

## Vario Cable Kits Available

| Stock No. | Size (M) | Area (M <sup>2</sup> ) | Output (W) |
|-----------|----------|------------------------|------------|
| 2202      | 13.0     | 1.0 to 2.0             | 185        |
| 2203      | 20.0     | 2.0 to 3.0             | 294        |
| 2204      | 29.0     | 3.0 to 4.0             | 424        |
| 2206      | 41.0     | 4.0 to 6.0             | 586        |
| 2208      | 55.0     | 5.0 to 8.0             | 767        |
| 2210      | 69.0     | 6.0 to 10.0            | 958        |
| 2212      | 85.0     | 8.0 to 12.0            | 1222       |

### CONTACT US ONLINE



Browse our full product range, watch videos, download product literature and get a quote, all on the Thermogroup UK website.

[WWW.THERMOGROUPUK.COM](http://WWW.THERMOGROUPUK.COM)

### CONTACT US BY PHONE



Got a question or query? Call our UK support line free from your land line.  
Open 07:30 – 16:30 Mon - Fri

**0800 019 5899**

### CONTACT US BY MAIL



Need to find us or want to write a letter to say hello? Feel free to contact us at Bridge House.

**Thermogroup UK, Bridge House,  
Hop Pocket Lane, Paddock Wood,  
Kent. TN12 6DQ.**

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SUSTAINABLE HEATING SOLUTIONS

**Thermogroup UK  
Bridge House  
Hop Pocket Lane  
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Kent  
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**[sales@thermogroupuk.com](mailto:sales@thermogroupuk.com)  
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