Complete Installation Manual



warmset
AUSTRALIA & NEW ZEALAND

warmset
AUSTRALIA & NEW ZEALAND

Dear Client,

Thank you for choosing Warmset underfloor heating.

This installation guide brings together best-practice procedures for Warmset electric underfloor heating systems.

With thousands of kilometres of Warmset installed around the world since 2008, we are confident that, when installed correctly, your system will deliver beautiful far-infrared warmth for many years to come.

This guide covers all floor applications and has been designed to support accurate, safe and professional installation across a range of floor build-ups and floor finishes.

Please read this guide carefully before beginning installation of your Warmset heating mats.

Once installation is complete, be sure to forward a copy of your warranty documentation so your warranty can be validated.

For use by qualified installers and/or licensed electricians in accordance with applicable Australian standards and project requirements.

If you have any questions at any point, please call us on 0425 321 715.

Thank you again for trusting us with your comfort.

The Warmset Australia Team



Important Notice / Scope of Guide

This guide has been prepared to support the correct installation of Warmset electric underfloor heating systems in the Australian market.

Its purpose is to help installers achieve a safe, accurate and professional result, while protecting the long-term performance of the system.

This guide is intended for use by experienced, qualified installers and/or licensed electricians. All electrical work must be carried out by a licensed electrician in accordance with applicable Australian standards, local regulations and project-specific requirements.

This installation guide is to be read in conjunction with:

- the relevant thermostat instructions
- project-specific layout drawings, where provided
- the installation requirements of the selected flooring, adhesive, levelling compound, screed, underlay or substrate preparation products
- any additional documentation supplied for the specific Warmset system being installed

Before installation begins, all parties involved should confirm that the selected Warmset system is suitable for the intended application, floor build-up and floor finish.

Failure to follow correct installation procedures may affect system performance and may void the product warranty.

It is the responsibility of the installer and electrician to ensure that the system is installed correctly and that all associated materials and methods are suitable for the intended application.

If in doubt at any stage, stop and contact Warmset Australia before proceeding.

At-a-Glance Installation Sequence

The following sequence provides a clear overview of the recommended installation process for Warmset electric underfloor heating systems.

1. Confirm the application
Confirm the correct Warmset system, floor build-up and floor finish for the project. Check that all selected materials are suitable for use with electric underfloor heating.

2. Plan the heated area
Measure the floor area carefully and confirm the zones to be heated. Exclude fixed furniture, vanities, cabinets and any other areas where heat should not be installed. Stay 100 - 200mm from the walls.

3. Prepare the substrate
Ensure the substrate is clean, dry, level, stable and ready to receive the heating system and associated materials.

4. Complete electrical rough-in
Confirm the thermostat location, power supply requirements, conduit paths and floor sensor position. Position the floor sensor correctly within the floor build-up in accordance with the installation requirements. All electrical wiring must be carried out by a licensed electrician..

5. Inspect and test the system
Before installation, inspect the heating mats for damage and complete the required resistance and continuity checks. Record all results against the label and keep a copy for later.

6. Lay out the heating mats
Position the Warmset mats in accordance with the room layout and installation plan. Check clearances, spacing and routing before securing the system.

7. Secure the system correctly
Fix the mats in place using approved methods, ensuring the heating ribbon remains flat, undamaged and free from overlap or unnecessary stress.

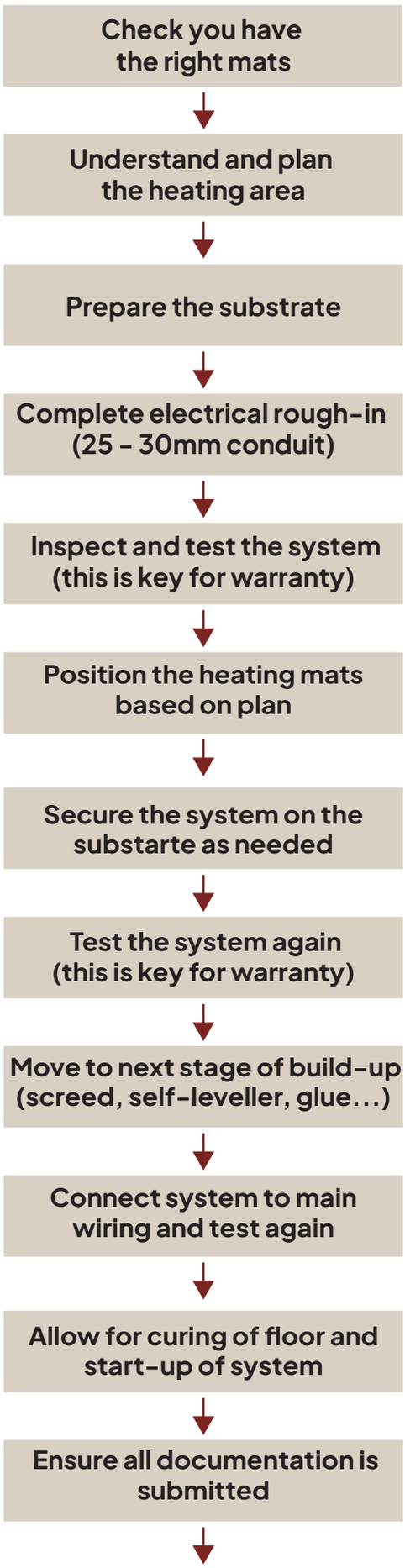
8. Test again before covering
Repeat the required electrical tests once the system has been laid and secured. Record all results before applying the floor covering build-up.

9. Apply floor covering build-up
Cover the heating system using the appropriate adhesive, levelling compound, screed, underlay or floor finish for the selected application, ensuring full compatibility with underfloor heating.

10. Complete final testing and connection
Carry out the final required tests after installation of the floor build-up. The connection of the heating mat cold tails, the connection of the floor sensor, and all final electrical wiring must be completed by a licensed electrician.

11. Allow for curing and start-up
Do not switch on the system until all adhesives, levelling compounds or screeds have cured in accordance with the manufacturer's instructions. Once curing is complete, the system can be commissioned and the thermostat settings confirmed.

12. Complete handover documentation
Record all final test results, take clear photographs of each installed area, retain all installation records, and submit the required warranty documentation to Warmset Australia.



Key Safety, Compliance and Responsibility Notes

All electrical work must be carried out by a licensed electrician. This includes:

connection of the heating mat cold tails
connection of the floor sensor
thermostat wiring
all final electrical connections

The physical positioning of the floor sensor within the floor build-up may be completed during installation, but the sensor must be connected by a licensed electrician.

Before installation begins, confirm that:

- the selected Warmset system is suitable for the application
- the floor finish and associated materials are compatible with electric underfloor heating
- the thermostat is suitable for the system and floor finish
- the system is not being installed beneath fixed items where heat may become trapped

Never cut, shorten, pierce, cross or overlap the heating ribbon.

Never switch on the system until installation is complete and all required curing times have been observed.

Know the Parts Before You Start

Before starting installation, identify each part of the Warmset system and check that all components are present and undamaged.

A typical Warmset system includes:

- heating mat
- cold tail / power lead
- factory connection splice
- end termination
- floor sensor and thermostat (if supplied as part of the project).

Before installation:

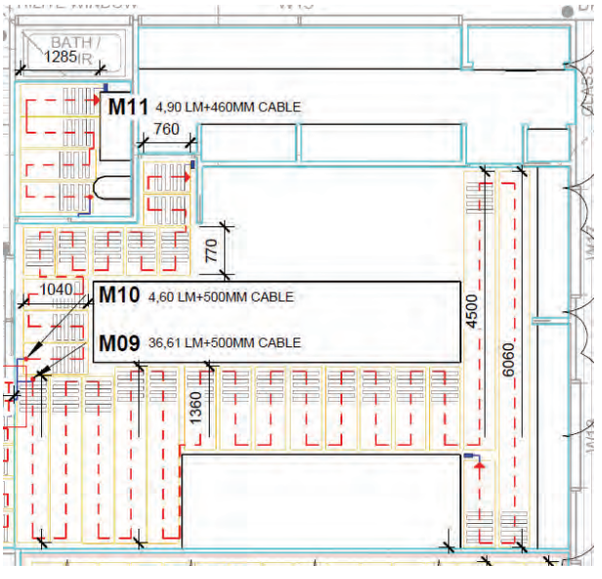
- check that the mat size matches the area it was selected for
- inspect the mat, cold tail, splice and end termination for visible damage
- locate the product label and keep it for the installation record
- confirm that the cold tail is long enough to reach the thermostat position
- confirm that the floor sensor is available before starting the install

1. Confirm the Heated Area

Measure the free floor area carefully. Do not include areas beneath:

- fixed cabinetry
- vanities
- toilets
- baths
- permanent furniture
- any other fixtures that will sit directly over the heated floor

Stay 100–200mm clear of walls. Confirm the zones to be heated before selecting or confirming mat sizes.



2. Confirm the floor build-up

Check how the system will be installed:

- directly under tile (adhesive or double-adhesive methods)
- under self-levelling compound
- in screed
- under a floating floor
- under a glued timber or laminate floor

Make sure the selected build-up is suitable for both the Warmset system and the floor finish.

3. Check the substrate

The substrate must be:

- clean
- dry
- level
- stable
- free from dust, debris, sharp objects, adhesive lumps, screws and nails

Do not install over an uneven, dirty or unstable surface. Remove all loose material before proceeding. If the selected build-up requires primer, insulation board or underlay, apply these in accordance with the manufacturer's instructions and ensure they are firmly fixed and flat before the heating mat is installed.

4. Confirm thermostat, sensor position and cold tail routing

Before laying the mat, confirm the following:

- **Thermostat location** — fixed and final before installation begins
- **Cold tail path** — must reach the thermostat without strain and without crossing the heated area incorrectly
- **Conduit path** — where conduit is required, install it before laying the mat. **Use 25mm conduit for up to 2 mats; use 30mm conduit where 3 or more mats** connect to the same thermostat
- **Floor sensor position** — plan the sensor location between two heating runs, at the midpoint of the heated area, not touching the ribbon, and away from walls, other heat sources, and any area that will be covered by fixed furniture or fittings

6. Confirm total connected load and electrical requirements

Before installation begins, confirm that the licensed electrician has checked:

- circuit suitability
- total system connected load
- thermostat suitability
- any requirement for relay or contactor
- the circuit is protected by a residual current device (RCD) in accordance with Australian wiring standards

7. Confirm all materials are handy on site

Confirm that all required materials are on site and ready before you begin, including:

- heating mat
- floor sensor and thermostat
- aluminium tape
- hot glue gun and glue, if required
- any required insulation or underlay
- test equipment

8. Carry out initial electrical tests

Before installation, complete the required electrical tests and record the results. See the Testing Procedure section for full requirements.

Do not proceed if readings are outside the acceptable range.

9. Plan the mat layout before fixing

Dry-lay and plan the mat before fixing it down. Confirm:

- starting point
- direction of each run
- location of turns
- obstacle areas
- spacing from walls and fixtures
- location of splice and end termination

Do not begin fixing the mat until the full layout has been checked and confirmed.

Substrate Preparation

The substrate must be ready before the heating mat is laid.

Any insulation board or substrate layer must be firmly fixed and flat before the heating mat is installed.

The heating system must sit as evenly as possible within the floor build-up. Avoid voids, raised edges and uneven areas that may create air gaps or reduce contact with the covering layer.

Electrical Rough-In: Thermostat, Conduit and Sensor

Before laying the heating mat, confirm the following:

(A) Thermostat position

Confirm the thermostat location before installation begins. The cold tail and floor sensor must both be able to reach this point without strain.

(B) Conduit path

Where conduit is being used, install it before laying the mat. Confirm the path for the cold tail / power lead and the floor sensor.

Keep these paths clear and practical for connection. Use a 25mm conduit for up to 2 mats or 30mm conduit if connecting 2+ mats under the same thermostat.

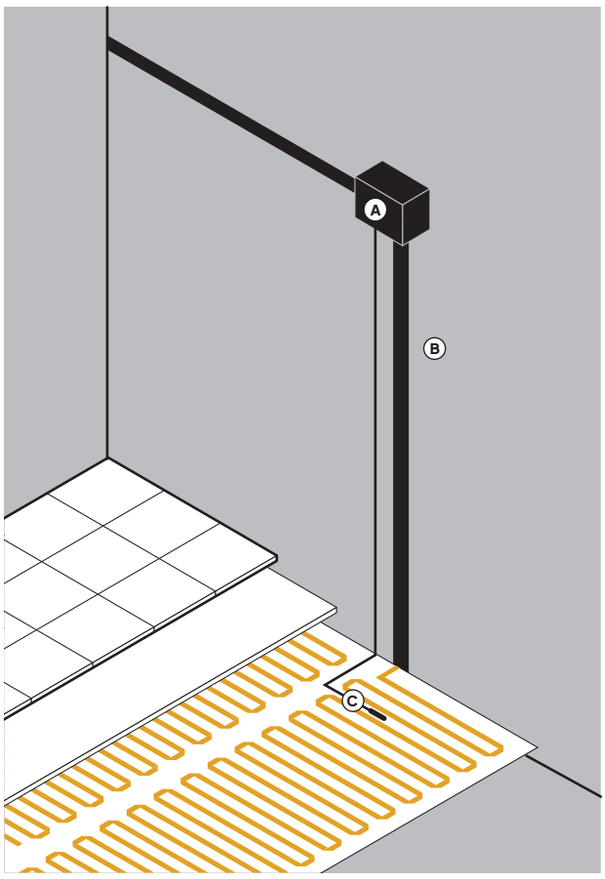
(C) Floor sensor position

Position the floor sensor within the heated area, between two heating runs, in a representative area of the floor.

Do not place the sensor:

- touching the heating ribbon
- too close to a wall
- near other heat sources
- in an area that will be covered by fixed furniture or fittings

If a conduit is used for the floor sensor, make sure it is correctly positioned before the mat is fixed down.



Before proceeding

Confirm that:

- thermostat position is final
- conduit path is ready, where required
- sensor position is planned
- cold tail reach is adequate
- the planned layout allows clean routing of all components

All final electrical connections must be completed by a licensed electrician.

Testing Procedure

The heating mat must be tested three times:

- before installation
- after the mat has been laid and secured
- after the floor build-up has been completed, before final connection

This is mandatory — both for the safety of the installation and to support warranty validation. Record all results at each stage.

Test 1 — Before installation

Before opening out the mat, check:

- conductor resistance
- continuity to earth, where applicable
- insulation resistance, where applicable

Record all results against the product label before proceeding. Do not install the system if the readings are outside an acceptable range.

Test 2 — After laying and securing the mat

Once the mat has been positioned and fixed in place, repeat the same tests.

This confirms that no damage occurred during layout, turning, securing or sensor positioning.

Do not cover the system until the readings are confirmed and recorded.

Test 3 — Before final connection

After the floor build-up has been completed and before final electrical connection, repeat the tests again.

This confirms that no damage occurred during covering, levelling, screeding, tiling or flooring works.

Important

Test results must be recorded for every installation. If any reading is inconsistent, stop and investigate before proceeding. Do not energise the system to “see if it gets warm” before the floor build-up is complete and fully cured.

Final electrical connection must be completed by a licensed electrician.

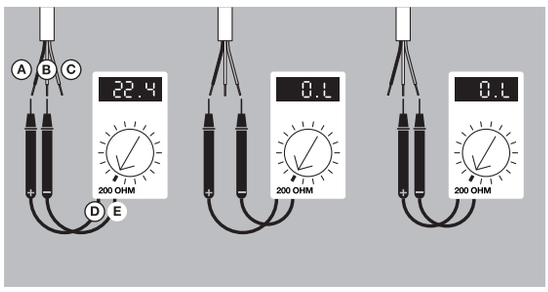
Resistance

1. ____Ω
2. ____Ω
3. ____Ω

Insulation (>2.5 MΩ)

1. ✓ ✗
2. ✓ ✗
3. ✓ ✗

Room name & mat number _____



A. Brown Lead
B. Blue Lead
C. Ground Lead (green & yellow)
D. Black Wire: to COM
E. Red Wire: to OHM

What to do if a reading is outside the acceptable range

Do not proceed. Do not attempt to energise the system to check whether it works. If a resistance reading is significantly different from the nominal value on the product label, or if insulation resistance reads below 2.5 MΩ, follow these steps:

- Stop work immediately. Do not cover or connect the system.
- Check for obvious causes first — confirm the cold tail connections are secure, that the ribbon has not been pinched, stapled through, or trapped under a sharp edge, and that no part of the mat has been walked on heavily or rolled over by equipment.
- Re-test after checking the above. If the reading recovers, document what was found and continue with caution.
- If the reading does not recover, the mat may have been damaged during installation. Do not attempt to repair it yourself.

Contact Warmset Australia before doing anything further. Attempting to energise a damaged mat, or covering a mat with a failed test result, may create a safety hazard and will void the product warranty.

Warmset Australia:
0425 321 715
info@warmsetaustralia.com.au

Recording Test Results

Complete the test record for every mat at every stage. Record:

- room or zone name
- mat model and serial number
- nominal resistance (from product label)
- measured resistance at each of the three test stages
- insulation resistance result (pass / fail, >2.5 MΩ) at each stage
- date and name of person carrying out the test

Do not leave the record until later. Fill it in as you go.

RCD / Safety Switch Requirement

All Warmset electric underfloor heating circuits must be protected by a residual current device (RCD) with a rated residual operating current not exceeding 30mA.

This is a requirement under Australian wiring standards (AS/NZS 3000) and is not optional.

It is the responsibility of the licensed electrician to confirm that RCD protection is in place before the system is commissioned.

If you are unsure whether the existing circuit meets this requirement, do not connect the system until it has been verified.

Floor Finish Temperature Reference

Most floor finishes have a maximum allowable floor surface temperature. Exceeding this limit can cause damage to the floor finish and may void the flooring manufacturer's warranty.

Before commissioning the system, confirm the applicable limit with the flooring manufacturer and set the thermostat floor temperature limit accordingly.

Mat Layout and Positioning

Before fixing anything down, dry-lay the full mat and confirm the layout matches the plan.

Do not begin securing the mat until you are fully satisfied with the result.

Start from the thermostat end and confirm that the cold tail reaches the planned connection point without strain.

The heating ribbon must never be cut or shortened. Only the mesh may be cut to turn or adapt the mat.

The Warmset heating ribbon is flexible and can be positioned at any angle without risk of damage to the element, provided the ribbon remains flat and is not twisted, crossed or overlapped.

Where the mat needs to be shaped around obstacles or irregular areas, adjust the mesh carefully and maintain consistent spacing between runs in order to avoid creating cold spots. Do not allow the ribbon to cross, overlap or bunch.

Do not place the ribbon where penetrations, fixings or future floor drilling are likely.

Do not fix the mat down until you are fully satisfied that the layout matches the plan in every detail.

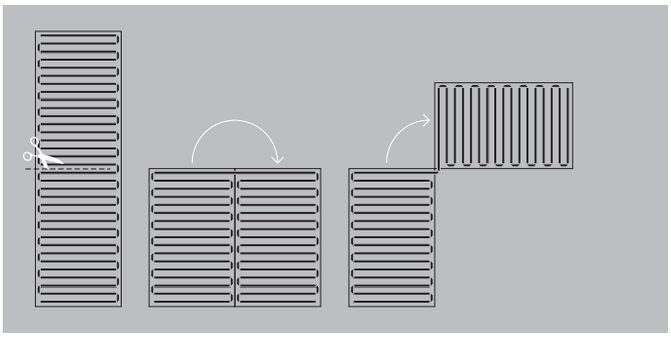
How to Turn, Adapt and Shape the Mat

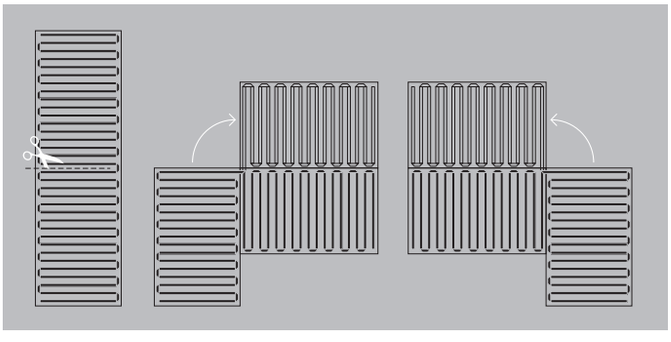
Warmset mats are supplied in a continuous format and must be planned to suit the room before fixing down. To change direction, cut the mesh only and turn the mat as required. Never cut, shorten or damage the heating ribbon.

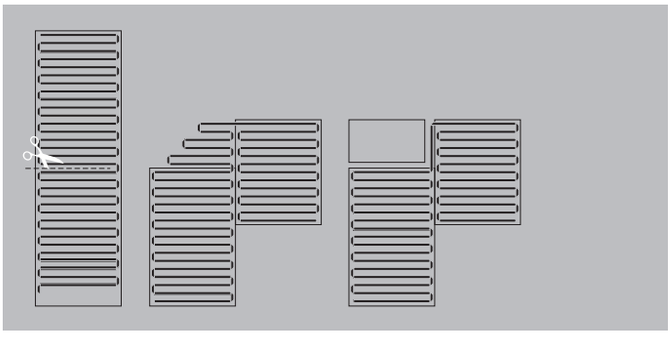
Basic turning method

Where a turn is required:

- stop at the point where the direction needs to change
- cut the mesh carefully
- rotate the mat into the new direction
- lay the next run flat and parallel as planned







Adapting around obstacles

Where the mat must work around a fixture, angle or irregular edge:

- release the ribbon from the mesh only where needed
- keep the ribbon flat
- maintain consistent spacing between runs
- avoid tight bends, twisting or bunching

When shaping the mat

Always make sure that:

- the ribbon does not cross or overlap
- the ribbon remains within the planned heated area
- the splice and end termination are positioned properly within the floor build-up
- the sensor remains between two heating runs and is not moved into an unsuitable position

Do not force the mat to fit. If the layout is not working, stop and review the plan before proceeding.

Securing the System Correctly

Once the layout has been confirmed, secure the mat so it stays flat and in the correct position during the next stage of works.

Fix the mat using the approved method for the selected build-up, such as aluminium tape of hot glue. The mat must sit flat, with minimal lifting, bunching or unnecessary movement.

When securing the system:

- keep the heating ribbon as flat as possible
- keep the spacing consistent
- make sure the mat does not shift from the planned layout
- take care around the splice, end termination and sensor location

Do not:

- staple through the heating ribbon
- tape over the ribbon in a way that creates air gaps
- force the mat into position
- leave raised sections or loose areas that may move during covering (self-leveller)

Before covering the system:

- check that the full layout is still correct
- confirm the sensor is still in the correct position
- confirm the splice and end termination are properly placed
- repeat the required test and record the result
- take clear photos of the installation

Do not proceed to the next stage until the system is secure, tested and photographed.

Floor Covering Installation

Once the mat has been laid, secured and tested, the system can be covered using the floor build-up specified for the project.

The heating system must be fully and evenly incorporated into the floor build-up. Avoid voids, air gaps and uneven coverage.

Tiled applications

Where the system is being installed beneath tile:

- use the adhesive or levelling method specified for the project
- ensure full and even coverage over the mat
- take care not to move the mat during application
- do not leave hollow areas around the ribbon, splice or end termination

Self-levelling or screed-covered applications

Where the system is to be covered by self-levelling compound or screed:

- make sure the mat is secure before pouring
- cover the system evenly across the full heated area
- ensure the splice, end termination and sensor area are properly accommodated within the build-up
- follow the product manufacturer's requirements for thickness, curing and compatibility

Floating floor applications

Where the system is being installed beneath a floating floor:

- follow the approved Warmset build-up for that application
- use the correct intermediate layers, underlay or protection layers as specified
- make sure the finished build-up is flat and suitable to receive the floor finish
- check the flooring manufacturer's temperature limits before commissioning

Glued timber or laminate applications

Where the system is to be installed beneath a glued floor finish:

- use only a build-up and adhesive system suitable for underfloor heating
- ensure the surface is smooth, even and ready to receive the floor finish
- follow the flooring manufacturer's requirements, including any temperature limitations

Important

- Do not switch on the heating to assist drying or curing.
- Follow all adhesive, levelling compound, screed and flooring manufacturer instructions.
- Before final electrical connection, complete the required final test and record the result.

Thermostat Installation and Final Electrical Connection

Before final connection, confirm that:

- the floor build-up is complete
- all required tests have been carried out and recorded
- curing times have been observed
- the cold tails are correctly identified and ready for connection

The thermostat must be installed in line with

the thermostat manufacturer's instructions and the requirements of the project.

Once connected, the thermostat should be set to suit the floor finish and intended use of the system. Where required, apply the relevant floor temperature limit in accordance with the flooring manufacturer's recommendations.

Do not energise the system until the electrician has completed final checks and confirmed that the installation is ready for commissioning.

Start-Up Procedure

Do not switch on the system until all adhesives, levelling compounds, screeds and floor finishes have cured in accordance with the manufacturer's instructions.

Before start-up, confirm that:

- final electrical connection has been completed
- all test results have been recorded
- the thermostat has been set correctly for the floor finish
- the finished floor is clean and ready for use

At first start-up:

- switch the system on only after the full curing period has passed
- bring the floor temperature up gradually where required by the floor finish manufacturer
- check that the thermostat and floor sensor are operating correctly
- confirm that each heated area responds as expected

Do not use the heating system to accelerate drying or curing.

Common Installation Mistakes to Avoid

Most problems are caused by damage during installation or by the wrong floor build-up. Avoid the following:

- cutting, shortening or damaging the heating ribbon
- crossing, overlapping or bunching the ribbon
- installing beneath fixed items where heat may become trapped
- placing the floor sensor in the wrong position
- starting installation before confirming the full layout
- securing the mat poorly and allowing it to move during covering
- leaving voids, raised sections or uneven coverage in the floor build-up
- damaging the system during levelling, screeding, tiling or flooring works
- switching the system on before curing is complete
- failing to complete and record all required tests
- failing to photograph the installation before covering
- using floor finishes, adhesives or build-up materials that are not suitable for underfloor heating

If something does not look right during installation, stop and correct it before proceeding.

Installer Test Record and Handover Sheet

Complete a record for each installation and keep it with the project file.

Record the following:

- client name and project address
- room or zone name
- mat model and serial number
- nominal resistance
- test results at each required stage
- date of installation
- installer name and company
- electrician name and licence details
- thermostat model
- floor finish installed
- confirmation that installation photos were taken
- confirmation that warranty documentation has been submitted

Where more than one room or mat is installed, record each area separately.

Do not leave handover paperwork until later. Complete it as the work progresses so nothing is missed.

Warranty and Support

To validate the Warmset warranty, the required installation records must be completed and submitted to Warmset Australia after installation.

This includes:

- completed test records
- installation photos
- product details
- project details
- warranty documentation

Failure to complete and retain the required documentation may affect warranty validation.

For technical support, installation questions or warranty enquiries, contact Warmset Australia before proceeding with any corrective work.

Warmset Australia
0425 321 715
info@warmsetaustralia.com.au
www.warmsetaustralia.com.au

Certified for
AS/NZS 60335.2.96:2020
AS/NZS 60335.1:2020+A1

Specifications label (example)

Voltage	220-240 VAC 50 Hz 110 VAC 60 Hz	
Power	65 W/sqm 120 W/sqm	85 W/sqm
Max circuit load	15 A	
Max circuit overload protection	20 A breaker	
Mat length	1 – 40m	
Mat width	0.5 m	

System information

	Mat model number	Mat serial number	Rated mat voltage	Rated mat resistance
Mat 1				
Mat 2				
Mat 3				

Resistance

1. ____Ω
2. ____Ω
3. ____Ω

Insulation
(>2.5 MΩ)

1. ✓ ✗
2. ✓ ✗
3. ✓ ✗

Room name & mat number _____

Resistance

1. ____Ω
2. ____Ω
3. ____Ω

Insulation
(>2.5 MΩ)

1. ✓ ✗
2. ✓ ✗
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Room name & mat number _____

Resistance

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Room name & mat number _____

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Insulation
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2. ✓ ✗
3. ✓ ✗

Room name & mat number _____

Resistance

1. ____Ω
2. ____Ω
3. ____Ω

Insulation
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2. ✓ ✗
3. ✓ ✗

Room name & mat number _____

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2. ____Ω
3. ____Ω

Insulation
(>2.5 MΩ)

1. ✓ ✗
2. ✓ ✗
3. ✓ ✗

Room name & mat number _____

Resistance

1. ____Ω
2. ____Ω
3. ____Ω

Insulation
(>2.5 MΩ)

1. ✓ ✗
2. ✓ ✗
3. ✓ ✗

Room name & mat number _____

Resistance

1. ____Ω
2. ____Ω
3. ____Ω

Insulation
(>2.5 MΩ)

1. ✓ ✗
2. ✓ ✗
3. ✓ ✗

Room name & mat number _____

Resistance

1. ____Ω
2. ____Ω
3. ____Ω

Insulation
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1. ✓ ✗
2. ✓ ✗
3. ✓ ✗

Room name & mat number _____

Resistance

1. ____Ω
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3. ____Ω

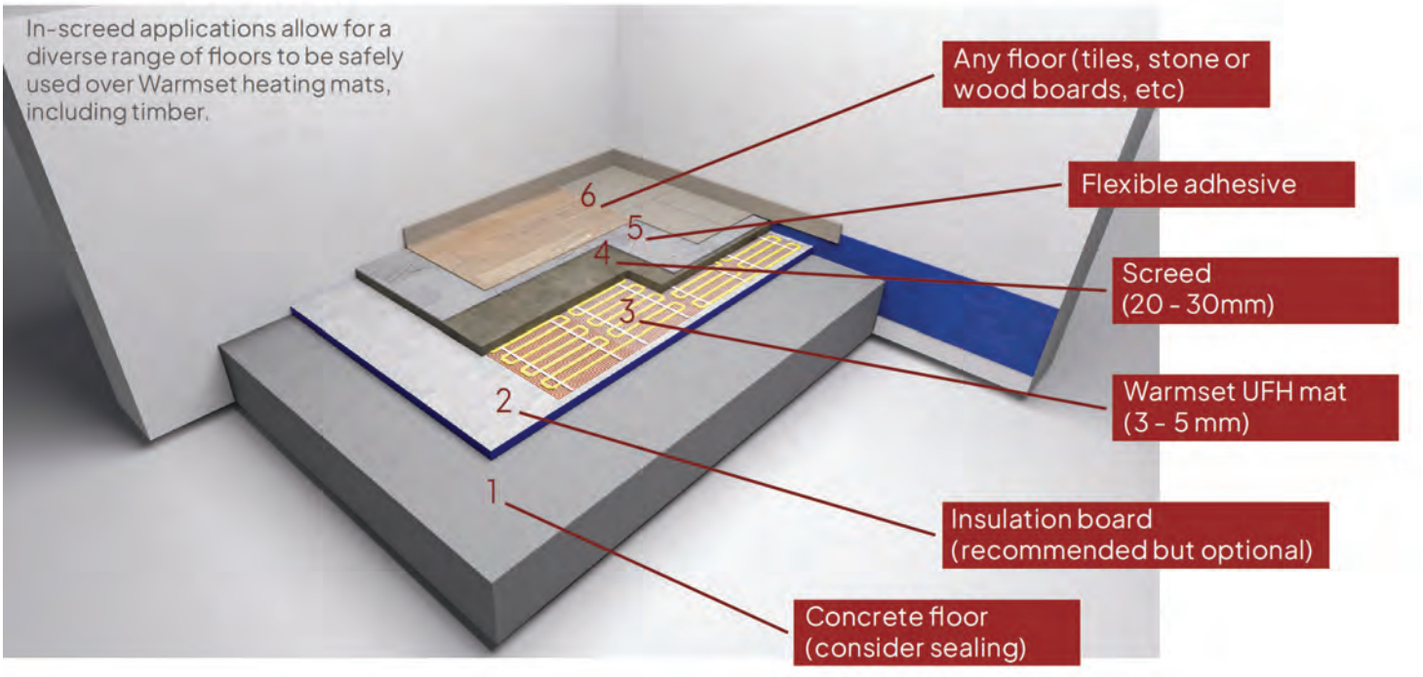
Insulation
(>2.5 MΩ)

1. ✓ ✗
2. ✓ ✗
3. ✓ ✗

Room name & mat number _____

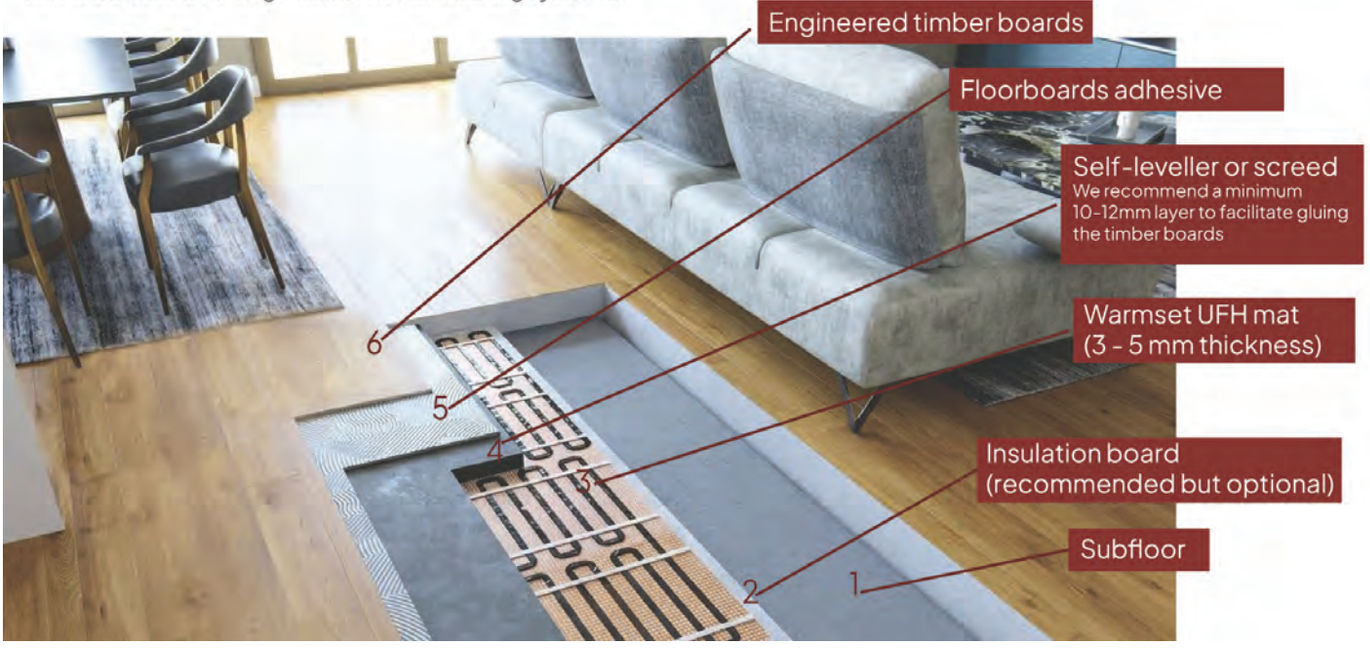
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In-Screed Build Up

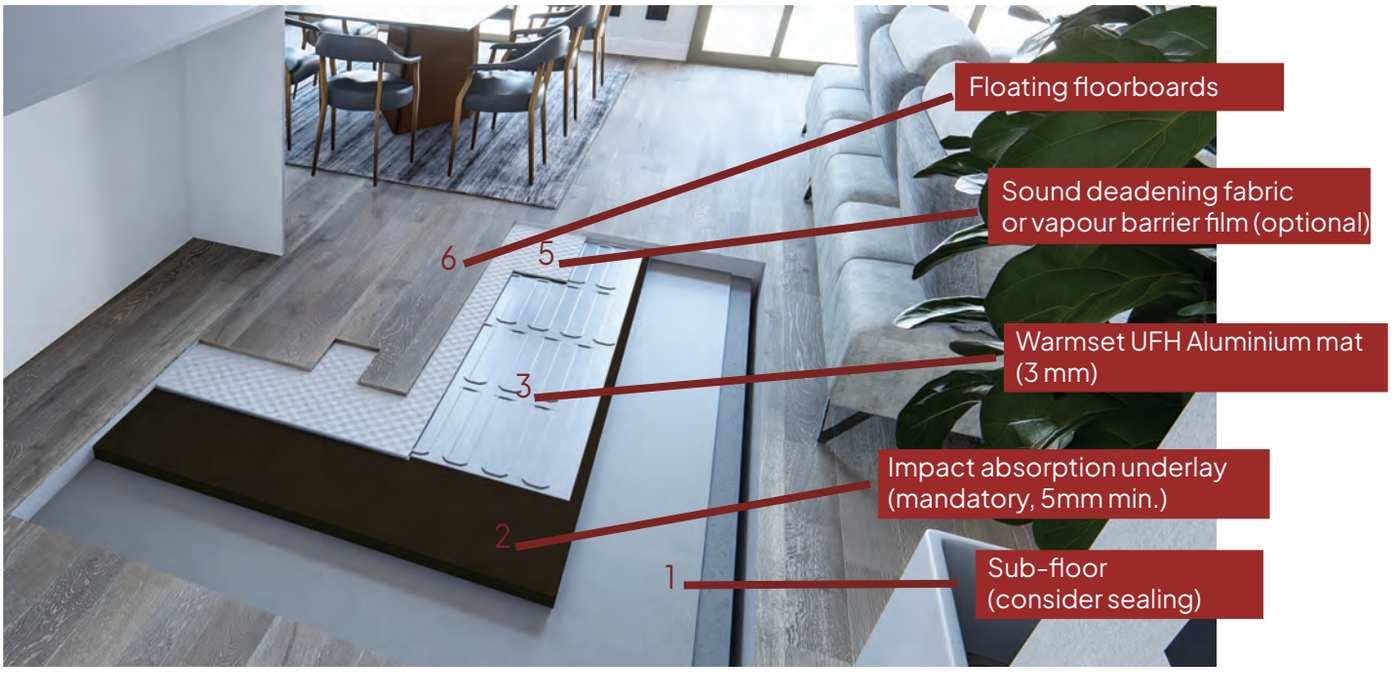


Under Timber Build Up

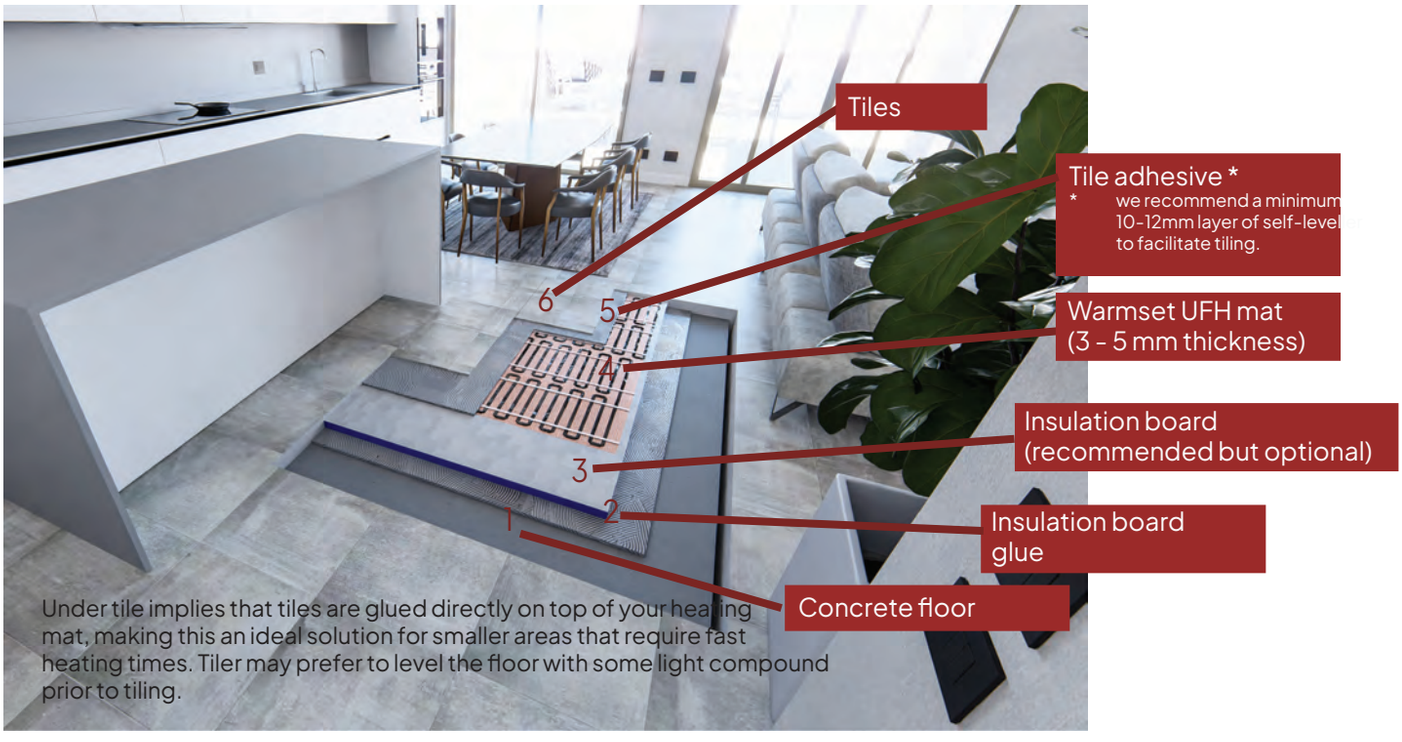
The heating system is placed directly beneath engineered wood flooring or within a thin layer of screed. Warmset's wide radiant heating ribbon distributes heat evenly across the floor surface, helping maintain stable temperatures that are suitable for engineered timber flooring systems.



Floating Floors Build Up



Under Tile Build Up



Under tile implies that tiles are glued directly on top of your heating mat, making this an ideal solution for smaller areas that require fast heating times. Tiler may prefer to level the floor with some light compound prior to tiling.