Wunda Rapid Response® floor coverings information

These instructions are strictly for use with Wunda systems only — using them with any other system may result in serious performance issues, system failure, or invalidation of your warranty.

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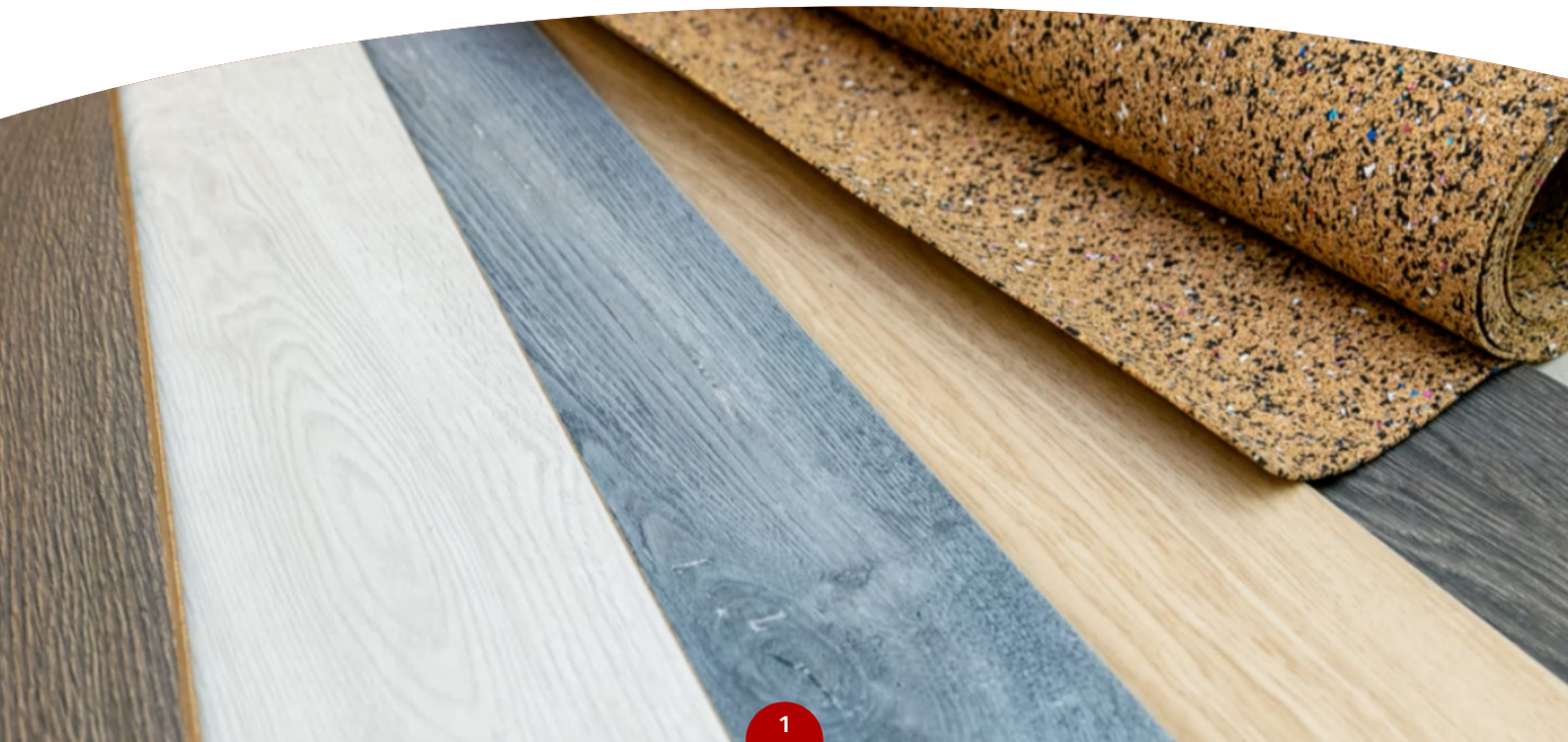


Wood floor coverings

Wood floor covering overview video
https://vimeo.com/wunda/installing-laminate-free-floating-wood-floor-over-boards

Contrary to many people's beliefs you can use wood with underfloor heating. However, it is important to remember that wood is a natural insulator so won't be as effective at spreading the heat as a natural conductor would be. The only two types of wood you cannot use with underfloor heating are maple and beech. It's always important to be safe and check with your flooring supplier if the flooring can be used with underfloor heating.

Most wood floorings should not be heated beyond 27 degrees, our floor heating systems should be limited and controlled by a floor probe for each zone that you intend to have wood flooring. Make sure you tell us what floor coverings you intend to use within your project, so we know to include a probe in your system.

Wood with underfloor heating

Here are a few things to understand when considering your choice of wood flooring.

Wood is a natural insulator and its properties will reduce the heat output, the thicker wood the greater the impact.

To ensure efficient heating, the total thermal resistance of the chosen wood should be less than 2.5 Tog (an R-value of 0.25 m^2K/W).

While solid wood can be used, engineered wood is often a preferable option. Its multi-layered construction offers enhanced stability when subjected to temperature fluctuations.

It is important to note that Maple and Beech woods are not suitable for use with underfloor heating. Be sure to consult your flooring supplier for thermal resistance details and suitability for use with water based underfloor heating.

Your wooden floor finish can be installed on the Rapid Response panels in a number of ways. In order for a smooth process, please take into account the following guidance:

Preparation

Please ensure the wood is allowed to acclimatise before installing, check your suppliers' instructions for more details.

In order to protect your floor, it is necessary to use a room sensor or thermostat that has a facility to accommodate a floor probe, which is positioned directly under the floor finish prior to laying the wood flooring. This will be set to cut out the heating at a floor surface temperature of 27°.

METHOD 1

Free floating

The first and most popular is for it to be free floated using a suitable underlay. We provide a 3mm breathable XPS underlay with an R value of approx. 0.056m²K/W.

METHOD 2

Bond direct

Secondly, the floor finish can be bonded directly using approved high temperature wood adhesive from Mapei, Ultrabond Eco S955 1K.

**Only for when the flooring manufacturer recommends it is bonded*

METHOD 3

Self levelling compound

Thirdly, an approved self levelling compound could be used on top of the Rapid Response® panels. Then, the wood floor finish can be laid on top. When doing small form factor blocks, like parquet blocks in a herringbone or chevron pattern. It is recommended to use one of the approved levelling compounds as an intermediate layer. Floor probes must be installed within any levelling compound at the upper surface and flush with the levelling compound upper surface.

It is important to carry out a pressure test of the floor heating system and pipes prior to applying any primers and levelling compounds.

Before pouring any levelling compounds, ensure that all Rapid Response boards are securely bonded to the subfloor and that there is no movement in the boards. Additional Secure fixing of the boards may be required using large washers and screws, if movement is detected. It is important that any movement in the boards or joints between boards is addressed and remedied before levelling compounds are poured. The aluminium of all unused pipe channel's must be cut to expose the empty channel, ready for filling with your chosen levelling compound.

The approved compounds are:

- ‘10mm Ultra ProLevel Ultimate’, when primed using ‘Ultra Prime it multi surface primer’.
- ‘10mm Mapei Ultraplan Renovation Screed’ when primed with ‘Mapei Eco Prim Grip’

The levelling compounds and primers are not provided by Wunda. They can be sourced from local merchants or online and the relevant ratios will be included on their instructions.

Curing time

Tile adhesives and levelling compounds/screeds must be allowed to cure naturally. Be sure to check the manufacturer’s specific requirements. Do not use the underfloor heating system to accelerate the curing process.

When activating the heating, increase the temperature gradually. If you have a mixing valve begin with the it set to the minimum position and increase slowly by up to 5°C each day until the desired operating temperature is reached. If you are coming from a low temperature heat source, ensure the flow temperature supplied is low to start and slowly increased by up to 5°C each day until the desired operating temperature is reached

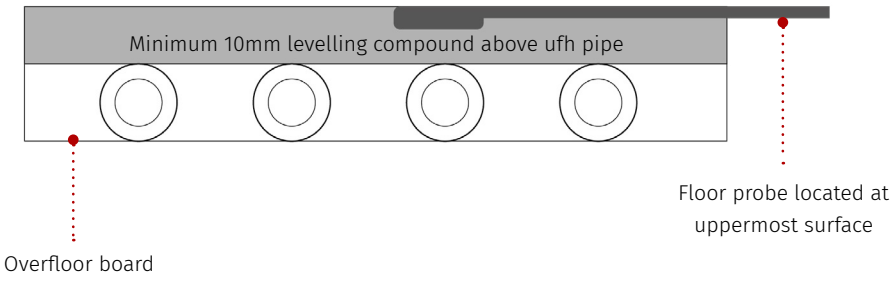
Installation process

When laying the floor finish, an expansion gap needs to be incorporated around the perimeter, please be sure to check your supplier’s instructions.

If possible, try to ensure the wood runs at 90° perpendicular to the pipe runs to avoid joins running parallel with the pipes. This isn’t essential but good practice and it should have already been communicated to the Wunda team at the design stage and reflected in your board and pipe layout plan.

Floor probe

The floor probe protects your flooring from overheating, cutting off the flow if it ever gets too warm. The floor probe needs to be in contact with the floor finish. When doing a self-levelling compound, allow the compound to cure and ensure the floor probe is placed on top, allowing it to be in contact with the floor finish. A small channel may need to be chased out of the compound to allow it to sit flat under the finish.



Laminate floor coverings

Laminate floor covering overview video
https://vimeo.com/wunda/installing-laminate-free-floating-wood-floor-over-boards

Laminate is now a popular choice as a floor covering due to its affordability and the vast range of styles available today. Whether you want to replicate wood, tile or stone there are endless choices, with the added bonus of it being easy to clean, usually scratch and spill resistant and pretty durable.

Most laminate floors work very well with underfloor heating. Please remember it is important to check with your flooring supplier that your choice will work with underfloor heating and if there are any floor surface temperature limitations that would require the use of a floor probe.

Your Laminate floor finish can be installed on the Rapid Response panels in a number of ways. In order for a smooth process, please take into account the following guidance:

Preparation

Please ensure the laminate is allowed to acclimatise before installing, check your suppliers' instructions for more details.

In order to protect your floor, it is necessary to use a room sensor or thermostat that has a facility to accommodate a floor probe, which is located directly under the floor finish. This will be set to cut out the heating at a floor surface temperature of 27°.

METHOD 1

Free floating

The first and most popular is for it to be free floated using a suitable underlay. We can provide an optional 3mm breathable XPS underlay with an R value of approx. 0.056m²K/W.

METHOD 2

Self levelling compound

When doing small form factor laminate including herringbone and chevron patterns it is recommended to use one of the approved levelling compounds as an intermediate layer. An approved self levelling compound could be used on top of the Rapid Response panels. Then, the laminate floor finish can be laid on top.

It is important to carry out a pressure test of the floor heating system and pipes prior to applying any primers and levelling compounds.

Before pouring any levelling compounds, ensure that all Rapid Response boards are securely bonded to the subfloor and that there is no movement in the boards. It is important that any movement in the boards or joints between boards is addressed and remedied before levelling compounds are poured. Additional Secure fixing of the boards may be required using large washers and screws, if movement is detected.

The approved compounds are:

- '10mm ProLevel Ultimate', when primed using 'Ultra Prime it multi surface primer'.
- '10mm Mapei Ultraplan Renovation Screed' when primed with 'Mapei Eco Prim Grip'

The levelling compounds and primers are not provided by Wunda. They can be sourced from local merchants or online and the relevant ratios will be included on their instructions.

Curing time

Tile adhesives and levelling compounds/screeds must be allowed to cure naturally. Be sure to check the manufacturer's specific requirements. Do not use the underfloor heating system to accelerate the curing process.

When activating the heating, increase the temperature gradually. If you have a mixing valve begin with the it set to the minimum position and increase slowly by up to 5°C each day until the desired operating temperature is reached. If you are coming from a low temperature heat source, ensure the flow temperature supplied is low to start and slowly increased by up to 5°C each day until the desired operating temperature is reached

Installation

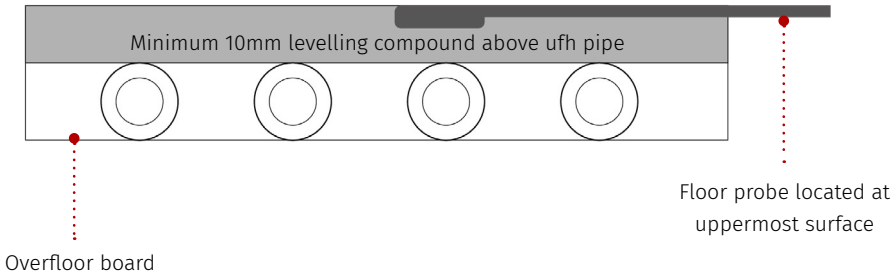
When laying the floor finish, an expansion gap needs to be incorporated around the perimeter, please be sure to check your supplier's instructions.

If possible, try to ensure the laminate runs at 90° perpendicular to the pipe runs to avoid joins running parallel with the pipes. This isn't essential but good practice and it should have already been communicated to the Wunda team at the design stage and reflected in your board and pipe layout plan.

Floor probe

Some laminate floors are temperature sensitive, so requires the use of a floor probe to cut out the heating if surface temperatures ever reach 27°C. Ensure you check the surface temperature limit with your supplier.

A thermostat or sensor that can accommodate a floor probe will protect your flooring from overheating. Cutting off the flow if it ever gets too warm. The floor probe needs to be in contact with the floor finish. When doing a self-levelling compound, allow the compound to cure and ensure the floor probe is placed on top, allowing it to be in contact with the floor finish. A small channel may need to be chased out of the compound to allow it to sit flat under the finish. Ensure these have been installed before laying your floor finish.



Carpet floor coverings

Carpet floor covering overview video
https://vimeo.com/wunda/fitting-carpet-over-wunda-rapid-response-boards

Carpets and rugs can be used with underfloor heating. But it is important to remember that as they are usually insulators, there are some limitations to the type of carpet or rug you choose. A floor finish that is an insulator will resist the rising heat and could stop it from coming through the floor into your room.

It's always best to check with your supplier if their product is suitable for use with underfloor heating, but if you have any carpet related underfloor heating questions then feel free to get in touch. It is advised that 2.5 is the Max combined tog rating of the carpet, underlay and any intermediate layers.

Your carpet floor finish can be installed on the Rapid Response panels in a number of ways. In order for a smooth process, please take into account the following guidance:

Preparation

Firstly, it is necessary to install battens up to the height of the panels (16/20mm) around the perimeter of the room and across door thresholds, allowing for gripper rods and door bars to be fixed without damaging pipe or panels.

METHOD 1

U04 - Duo board & Vapour barrier factsheet
https://www.wundagroup.com/wp-content/uploads/2025/07/U04-Duo-Board-and-vapour-barrier-factsheet-3-7-2025.pdf

Duo board

Firstly, Wunda Duo board can be used as an intermediate layer *before the Duo Boards are installed, lay an 800 gauge (200µm) vapour barrier over the top of the boards and pipework. (See document "U04" for details on the vapour barrier and laying.)

Duo board consists of 2 layers of HDF (high density fibre). The Bottom board is 3mm and top board is 4mm, so the total depth of the board is 7mm. The Duo board layers have 0.5Tog total of thermal resistance, so carpet and underlay combined need to be 2 tog or less. Duo board cannot be used in wet areas such as bathrooms due to the risk of the boards expanding when in contact with moisture.

- The Duo board is installed with the bottom board free floating. The bottom board has an adhesive layer for the top board to be adhered to, simply peel back the paper backing to expose the adhesive.
- The boards need to be laid in a staggered brick bond format so the joints are staggered and overlapping the joints in the bottom boards.
- When fitting the Duo boards in a room, leave an 8-10mm expansion gap around the perimeter of the room. An expansion joint needs to be allowed for every 8 linear meters of between 5 to 10mm and it can be filled using a flexible sealant or filler

METHOD 2

Self levelling compound

Alternatively, an approved levelling compound can be used as an intermediate layer to give a smooth surface for the carpet and underlay. This would also mean perimeter strip is necessary to be fitted around the room to allow expansion.

It is important to carry out a pressure test of the floor heating system and pipes prior to applying any primers and levelling compounds.

Before pouring any levelling compounds, ensure that all Rapid Response boards are securely bonded to the subfloor and that there is no movement in the boards. It is important that any movement in the boards or joints between boards is addressed and remedied before levelling compounds are poured. Additional Secure fixing of the boards may be required using large washers and screws, if movement is detected. The aluminium of all unused pipe channel's must be cut to expose the empty channel, ready for filling with your chosen levelling compound.

The approved compounds are:

- '10mm Ultra ProLevel Ultimate', when primed first using 'Ultra Prime it multi surface primer'.
- '10mm Mapei Ultraplan Renovation Screed' when primed first with 'Mapei Eco Prim Grip'.

The levelling compounds and primers are not provided by Wunda. They can be sourced from local merchants or online and the relevant ratios will be included on their instructions.

Curing time

Tile adhesives and levelling compounds/screeds must be allowed to cure naturally. Be sure to check the manufacturer's specific requirements. Do not use the underfloor heating system to accelerate the curing process.

When activating the heating, increase the temperature gradually. If you have a mixing valve begin with the it set to the minimum position and increase slowly by up to 5°C each day until the desired operating temperature is reached. If you are coming from a low temperature heat source, ensure the flow temperature supplied is low to start and slowly increased by up to 5°C each day until the desired operating temperature is reached.

LVT and vinyl floor coverings

LVT and vinyl floor coverings overview video
https://vimeo.com/wunda/installing-lvt-over-boards

LVT and Vinyl flooring work well with Wunda underfloor heating systems and are becoming increasingly popular. It's important to always check with your supplier that the flooring you choose works with underfloor heating. Some vinyl and LVT flooring need to be limited to a maximum floor temperature of 27 degrees. This will be done by the floor probe that is supplied for each zone that uses this type of flooring. If you are using LVT, it is also necessary to ensure the flow temperature measured at the manifold doesn't exceed 45°C.

Your LVT or Vinyl floor finish can be installed on the Rapid Response panels using self levelling compound. In order for a smooth process, please take into account the following guidance:

Preparation

You may need to allow the floor finish to acclimatise before installing, check your suppliers' instructions for more details.

In order to protect your floor, it is necessary to use a room sensor or thermostat that has a facility to accommodate a floor probe, which is located directly under the floor finish. This will be set to cut out the heating at a floor surface temperature of 27°.

METHOD 1

U04 - Duo board & Vapour barrier factsheet
https://www.wundagroup.com/wp-content/uploads/2025/07/U04-Duo-Board-and-vapour-barrier-factsheet-3-7-2025.pdf

Duo board

Firstly, Wunda Duo board can be used as an intermediate layer *before the Duo Boards are installed, lay an 800 gauge (200µm) vapour barrier over the top of the boards and pipework. (See document "U04" for details on the vapour barrier and laying.)

Duo board consists of 2 layers of HDF (high density fibre). The Bottom board is 3mm and top board is 4mm, so the total depth of the board is 7mm. The Duo board layers have 0.5Tog total of thermal resistance, so carpet and underlay combined need to be 2 tog or less. Duo board cannot be used in wet areas such as bathrooms due to the risk of the boards expanding when in contact with moisture.

- The Duo board is installed with the bottom board free floating. The bottom board has an adhesive layer for the top board to be adhered to, simply peel back the paper backing to expose the adhesive.
- The boards need to be laid in a staggered brick bond format so the joints are staggered and overlapping the joints in the bottom boards.
- When fitting the Duo boards in a room, leave an 8-10mm expansion gap around the perimeter of the room. An expansion joint needs to be allowed for every 8 linear meters of between 5 to 10mm and it can be filled using a flexible sealant or filler

METHOD 2

Self levelling compound

LVT requires a smooth, level and firm surface to be installed upon, in order to ensure this it is necessary to use an approved self levelling compound or renovation screed. Perimeter strip is necessary to be fitted around the room to allow expansion.

It is important to carry out a pressure test of the floor heating system and pipes prior to applying any primers and levelling compounds.

Before pouring any levelling compounds, ensure that all Rapid Response boards are securely bonded to the subfloor and that there is no movement in the boards. It is important that any movement in the boards or joints between boards is addressed and remedied before levelling compounds are poured. Additional Secure fixing of the boards may be required using large washers and screws, if movement is detected.

The approved compounds are:

- '10mm Ultra ProLevel Ultimate', when primed first using 'Ultra Prime it multi surface primer'.
- '10mm Mapei Ultraplan Renovation Screed' when primed first with 'Mapei Eco Prim Grip'.

The levelling compounds and primers are not provided by Wunda. They can be sourced from local merchants or online and the relevant ratios will be included on their instructions.

Curing time

Tile adhesives and levelling compounds/screeds must be allowed to cure naturally. Be sure to check the manufacturer's specific requirements. Do not use the underfloor heating system to accelerate the curing process.

When activating the heating, increase the temperature gradually. If you have a mixing valve begin with the it set to the minimum position and increase slowly by up to 5°C each day until the desired operating temperature is reached. If you are coming from a low temperature heat source, ensure the flow temperature supplied is low to start and slowly increased by up to 5°C each day until the desired operating temperature is reached

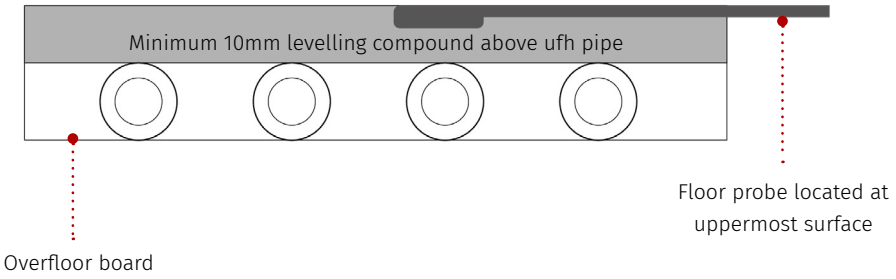
Floor probe

LVT and vinyl flooring are temperature sensitive and require a floor probe to prevent surface temperatures from exceeding 27°C. Always confirm the specific surface temperature limit with your flooring supplier.

To protect your flooring from overheating, use a thermostat or sensor that supports a floor probe. The probe must be in direct contact with the finished floor surface.

When using a self-levelling compound, allow it to fully cure before placing the probe on top—this ensures the probe remains in contact with the floor finish. A small channel may need to be chased into the compound so the probe can sit flush beneath the floor covering.

Similarly, when installing Duo Boards, chasing may also be required to accommodate the probe and ensure it remains properly positioned. Make sure the probe is installed before laying your final floor finish.



Installation process

When laying the floor finish, an expansion gap needs to be incorporated around the perimeter, please be sure to check and follow your suppliers instructions.

If possible, try to ensure the floor finish runs at 90° perpendicular to the pipe runs to avoid joins running parallel with the pipes. This isn't essential but good practice and it should have already been communicated to the Wunda team at the design stage and reflected in your board and pipe layout plan.

Turning on your heating

When finished installation keep the floor at ambient temperature for a minimum of 7 days with the floor heating switched off.

When turning the floor heating on, start with the mixing valve on minimum and slowly increase the flow temperature up to 5°C per day.

Poured floor coverings

Poured finishes such as micro-cement, polished cement, resin and terrazzo work well with underfloor heating as they are all good conductors of heat.

Your poured floor finish can be installed on the Rapid Response panels using self levelling compound. In order for a smooth process, please take into account the following guidance:

METHOD

Self levelling compound

A poured floor finish requires a smooth, level and firm surface to be installed upon, in order to ensure this it is necessary to use an approved self levelling compound or renovation screed. Perimeter strip is necessary to be fitted around the room to allow expansion.

It is important to carry out a pressure test of the floor heating system and pipes prior to applying any primers and levelling compounds.

Before pouring any levelling compounds, ensure that all Rapid Response boards are securely bonded to the subfloor and that there is no movement in the boards. It is important that any movement in the boards or joints between boards is addressed and remedied before levelling compounds are poured. Additional Secure fixing of the boards may be required using large washers and screws, if movement is detected. The aluminium of all unused pipe channel's must be cut to expose the empty channel, ready for filling with your chosen levelling compound.

The approved compounds are:

- '10mm Ultra ProLevel Ultimate', when primed first using 'Ultra Prime it multi surface primer'.
- '10mm Mapei Ultraplan Renovation Screed' when primed first with 'Mapei Eco Prim Grip'.

Revision date: 11/07/2025

The levelling compounds and primers are not provided by Wunda. They can be sourced from local merchants or online and the relevant ratios will be included on their instructions.

Curing time

Tile adhesives and levelling compounds/screeds and poured floor finishes must be allowed to cure naturally. Be sure to check the manufacturer's specific requirements. Do not use the underfloor heating system to accelerate the curing process.

When activating the heating, increase the temperature gradually. If you have a mixing valve begin with the it set to the minimum position and increase slowly by up to 5°C each day until the desired operating temperature is reached. If you are coming from a low temperature heat source, ensure the flow temperature supplied is low to start and slowly increased by up to 5°C each day until the desired operating temperature is reached.

Tile and stone floor coverings

Tile and stone floor coverings overview video
https://vimeo.com/wunda/tiling-over-wunda-rapid-response-underfloor-heating

Tile and stone floors work perfectly with underfloor heating as they are natural conductors. One thing to remember with these floor finishes is the thicker they are, the longer the warm up and cool down times will be. If you want rapid heat up and cool down times, it's best to avoid very thick natural stone.

Nowadays there are manufacturers and suppliers who make tiles with a wood effect. This gives you all the benefits of using a conductor with underfloor heating and the visual effect of wood.

Tiles and stone can be installed on the Rapid Response panels using some different methods.

Small form factor tiles 10cm x 10cm

Small form factor tiles, less than 10cm x 10cm, such as mosaics, the application of an approved self-levelling compound is required prior to tiling. This creates a consistently level surface, which is particularly beneficial for accommodating the intricate layouts and smaller size of mosaic tiles, ensuring a professional and even finish.

Ceramic and porcelain tiles with underfloor heating

The porcelain and ceramic tiles can be fixed directly onto the panels. However, it can be difficult to remove tiles without damaging the surface of the boards when tiled to directly. If in the future the tiles are to be removed or changed in the future it may be worth using an approved levelling compound on top of the Rapid Response panels first.

Natural Stone

When using Ultra ProFlex S2 tile adhesive & Prime IT multi surface primer, natural stone can either be bonded directly to the rapid response boards or with an approved levelling compound as an intermediate layer.
When using Mapei Kerabond T & Isolastic tile adhesive, natural stone needs one of the approved levelling compounds as an intermediate layer and can not be bonded directly to the surface of the panel.

When tiling direct:

When Tiling direct, perimeter strip is necessary to be fitted around the room to allow expansion.

Recommended adhesives:

Mapei, Kerabond T & Isolastic

- Mixed in a ratio of 100:33 (20Kg of Kerabond T to 6.6l of Isolastic).
- This is a highly deformable slow setting cementitious tile adhesive.
- No primer is necessary, it can be used for tiling directly to boards.

Ultra ProFlex S2

- Boards and pipe must be primed with their Prime IT multi surface primer, including empty pipe channels
- Is mixed with water. 20Kg to 4l of water.
- This is a highly deformable fast setting cementitious tile adhesive.

When using a self levelling compound intermediate layer:

Alternatively, an approved levelling compound can be used as an intermediate layer to give a smooth surface for the tiles. This would also mean perimeter strip is necessary to be fitted around the room to allow expansion. Once this has naturally cured, it is recommended to then use an approved tile adhesive from the list above.

It is important to carry out a pressure test of the floor heating system and pipes prior to applying any primers and levelling compounds.

Before pouring any levelling compounds, ensure that all Rapid Response boards are securely bonded to the subfloor and that there is no movement in the boards. It is important that any movement in the boards or joints between boards is addressed and remedied before levelling compounds are poured. Additional Secure fixing of the boards may be required using large washers and screws, if movement is detected. The aluminium of all unused pipe channel's must be cut to expose the empty channel, ready for filling with your chosen levelling compound.

The approved compounds are:

- '10mm Ultra ProLevel Ultimate', when primed first using 'Ultra Prime it multi surface primer'.
- '10mm Mapei Ultraplan Renovation Screed' when primed first with 'Mapei Eco Prim Grip'.

The levelling compounds and primers are not provided by Wunda. They can be sourced from local merchants or online and the relevant ratios will be included on their instructions.

Curing time

Tile adhesives and levelling compounds/screeds must be allowed to cure naturally. Be sure to check the manufacturer's specific requirements. Do not use the underfloor heating system to accelerate the curing process.

When activating the heating, increase the temperature gradually. If you have a mixing valve begin with the it set to the minimum position and increase slowly by up to 5°C each day until the desired operating temperature is reached. If you are coming from a low temperature heat source, ensure the flow temperature supplied is low to start and slowly increased by up to 5°C each day until the desired operating temperature is reached

Ditra matt & decoupling membranes

When tiling onto our systems, the use of Ditra mat or other decoupling membranes is fine. While some tiles can be installed directly, certain tilers may prefer to use a decoupling membrane. Tile adhesive is applied both to fix the Ditra mat to the system and then again to fix the tiles to the Ditra mat. Approved tile adhesives should always be used for a secure installation.

Grout:
Any flexible grout can be used.

These instructions are strictly for use with Wunda systems only — using them with any other system may result in serious performance issues, system failure, or invalidation of your warranty.