Phase 2: Installing the pipe and Wunda Rapid Response® boards - DIY & professional guide

Before proceeding to phase 2, ensure that phase 1 has been fully completed.

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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Phase 2 - Installing the Wunda Rapid Response® boards and pipe

STEP 1

Perimeter strip overview video

https://vimeo.com/wunda/perimter-edge-strip

Perimeter strip (optional)

Perimeter strip creates a barrier between the edge of a Rapid Response® board and the wall to create an expansion gap and minimise heat loss.

Optional materials needed

- Perimeter strip
- Battens

**Refer to step 5 in phase 1 for tools and materials*

- If the final floor finish laid onto the Rapid Response® system is intended to be wood, engineered wood or laminate free floated with XPS breathable underlay, your floor finish does not require perimeter strip. Please skip to step 2.
- If the intended floor finish is carpet laid on top of wunda duo boards, fit battens around the perimeter of your room before fitting the Rapid Response® boards, your floor finish does not require perimeter strip. Please skip to step 2.
- If the final floor finish laid onto the Rapid Response® system is tile or stone, or requires self levelling compound you will need to fit perimeter strip and complete this step.

How to fit perimeter strip

Before laying the Rapid Response® boards, remove skirting boards and any doors that will require trimming to accommodate the depth of the boards and final floor finish.

Fit perimeter edge strip around the outside edges of the area to be heated using the sticky tape on the back. Any height excess can be trimmed off once the final floor finish has been laid and before refitting the skirting boards.

Battening for carpet & the use of vapour barrier if required

When laying carpet over a completed and pressure tested system and using duo board and carpet grippers, fix a wood batten around the perimeter of your room including the doorway. Use a batten the same height as your Rapid Response® boards. This will give the door thresholds and carpet grippers something to be fixed to.

After pressure testing, lay the vapour barrier across the Rapid Response system. Then, fix carpet grippers to the battens, through the vapour barrier. Do not fix through the panels or pipework. In doorways, battens can be cut to allow pipes to pass.

Always take care to avoid damaging the pipe when using carpet grippers and door bars, especially when there is pipework transitioning through the doorway.

STEP 2

Dry lay boards overview video

https://vimeo.com/wunda/dry-laying-wunda-rapid-response-boards

Dry lay boards

- Review your supplied Wunda board & pipe layout drawing.
- If in any doubt, contact our customer support team before starting.
- Dry lay boards onto the floor making any cuts where required using the fine tooth saw/craft knife, use the straight edge rule to assist in making straight cuts.

Materials needed

- Pipe layout plan
- Rapid Response® Boards
- Fine tooth saw / craft knife
- Straight edge rule
- Work gloves
- Marker pen
- Drill
- Pipe conduit

**Refer to step 5 in phase 1 for tools and materials*

(Take care when cutting the boards, wear work gloves as the aluminium can be sharp. Keep any offcuts as these may be useful in other areas. If you cut boards incorrectly don't worry, you can bond the 2 halves in a main panel area.)

- Using a marker pen, mark any areas that may need routing for additional pipe channels. Keeping a gradual radius (bend) no sharper than found on the main boards.

- **(Optional) Before fixing board in place** - If the pipe layout design shows that pipes are to be run through walls, mark out where the pipe channel aligns with wall and drill suitably sized holes (pipe conduit is 25mm) before fixing the boards in place to avoid damage to the boards. It is good practice to use a pipe conduit or sleeve to allow free movement of the pipe within the wall. Take care not to drill though any pipework/cables within the wall. If there is an unforeseen obstruction, please call our team and they will advise, be rest assured we will get you back on track.

Pipes through walls overview video
https://vimeo.com/wunda/laying-pipes-through-walls

STEP 3

Bonding the board in place

Bonding the boards overview video
https://vimeo.com/wunda/bonding-wunda-rapid-response-boards-using-wunda-spray-adhesive

- It is necessary to warm your cans of spray adhesive in warm water in order for the propellant to mix with the adhesive. Failure to warm the adhesive will result in 'spattered' spraying, causing a weaker bond and less coverage.

Materials needed

- WundaSpray board adhesive
- Rapid Response® boards
- Mask

**Refer to step 5 in phase 1 for tools and materials*

Revision date: 11/07/2025

- Please ensure you have followed the Phase 1 preparation guide to ensure the floor is level, stable and dry. Do not bond the boards to asphalt or bitumen subfloors.
- Remove any dust or debris created from cutting the boards.
- Make sure boards are in the correct place, as they are very hard to move once bonded without damaging the boards.
- Suitable for bonding to concrete, screed and wood. If in doubt call our customer support team and always try a patch test first.
- Ensure you are working in a well ventilated area and using a protective mask.
- Use WundaSpray adhesive to bond the boards to the sub floor. The boards need to be secured next to each other with no gaps between them.
- Use a small off cut of pipe to ensure the pipe channels line up.
- Ensure all the boards are securely bonded before proceeding. Movement in the boards might be detected if the glue has not been fully warmed and the appropriate spray pattern is not followed. In which case it is necessary to fix the boards in place using stainless steel screws and large washers at a 300mm spacing across these boards.

Transitional boards overview video
https://vimeo.com/wunda/wunda-transitional-boards

Understanding transitional boards

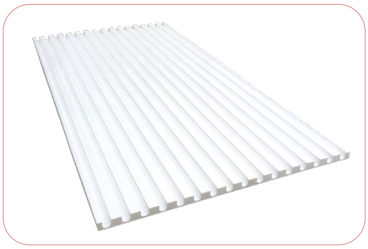
Transitional boards are needed when a high density of pipe is required to run through areas such as a hallway. Enabling multiple pipe loops to run side by side from the manifold into the room they are serving.

Made from the same high density EPS materials the Wunda Rapid Response® board, they have multiple pipe channels and can be cut and shaped as required by the floor layout plan.

They bond to the subfloor in the same way as the Wunda Rapid Response® board using WundaSpray bond adhesive. Where the transitional boards are required at a corner, two opposite 45 degree angles provide a 90 degree turn. Leaving a gap of approximately 120mm allows the pipe to be formed and bent around the corner as it changes direction from one straight channel to another without kinking the pipe.

To ensure the pipe is fully supported in the gap, the gap and boards can be back-filled using a levelling screed such as Mapie ultraplan renovation screed or Ultra-floor Level It 2.

Alternatively, use a main or plain board in this section and a router to cut the necessary corners.



STEP 4

Preparing the boards for pipe

Preparing the boards for pipe overview video
https://vimeo.com/wunda/preparing-wunda-rapid-response-boards-for-laying-pipe

Materials needed

- Router
- Vacuum

**Refer to step 5 in phase 1 for tools and materials*

With boards firmly secured, use router set at the appropriate height (16/12mm) to route any additional channels required as marked. Vacuum any debris on boards and in pipe channels.

STEP 5

Lay the Pipe

Materials needed

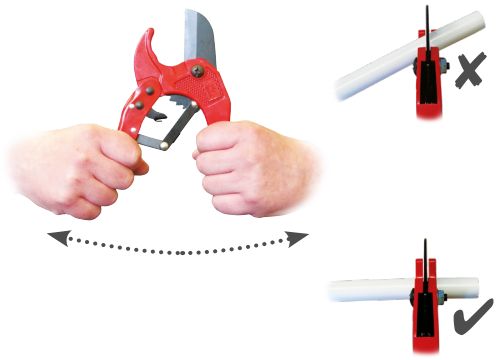
- Pipe layout plan
- Pipe
- Craft knife
- Pipe cutter
- Marker pen
- Manifold

**Refer to step 5 in phase 1 for tools and materials*

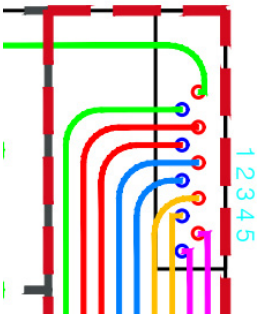
Preparation

- Review your supplied Wunda board & pipe layout drawing to identify manifold location and pipe routes, and the length of pipe for each loop. Some shorter loops may share a longer coil.
- Referring to the pipe layout drawing prepare to lay the first loop of pipe.
- Some channels may need cutting with a craft knife.

- Cut the very end of the pipe carefully to remove the air pressure, ensuring it is pointed downwards and away from anyone as the end can come off with some force. **Make sure to cut the end straight.**



- Ensure you are using the correct length coil supplied, refer to your pipe layout drawing. Mark on each loop with the loop number and if it is the flow or return, this will be important to identify when connecting to the manifold. The flow is identified on the layout plan by the red dot, while the return end of the loop is identified by the blue dot.



Laying the pipe overview video

https://vimeo.com/wunda/laying-pipe-into-boards

When laying the pipe

Start at the manifold location allowing approximately 1m excess pipe up the wall starting with your flow and on your return to the manifold location allow 600mm for the return fitting to the manifold, you may wish to mount the manifold at this stage (see phase 3)

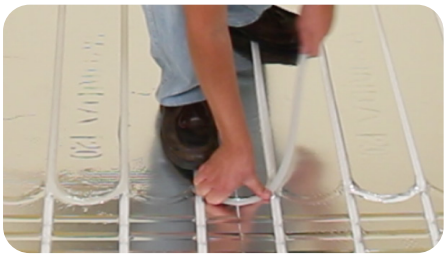
Following the pipe layout, lay the pipe securely into the channels the boards.

- A tip is for one person to lead with the coil, whilst another walks behind ensuring the pipe is secure into the channels.

- Any areas where the aluminium has been perforated will snap through as the pipe is walked into the channel and fold down in contact with the edge of the pipe.

- Rotate the entire coil 180 degrees when the loop returns at the end of each run to ensure the pipe does not try to twist, and that the tension in the pipe is pushing down into the floor so it does not try to raise up and out of the channel.
- If the pipe does push out of the channel it can be carefully tapped down using a wooden batten across the board with a hammer and some aluminium tape to secure it in place.

- Do not try to force tight bends into the pipework as this may cause it to kink.
- If a kink does occur wrap it in a cloth to protect it and gently reshape with pliers being careful not to damage the pipe.



Repeat these steps to lay all of the pipe runs as per your pipe layout drawing.

If any pipes need to be run through walls, have one person feeding the pipe through the wall while another draws it from the other side, to avoid kinking the pipe.

STEP 6

Prepare for your floor finish

Installing floor probes for wood and laminate floor finishes

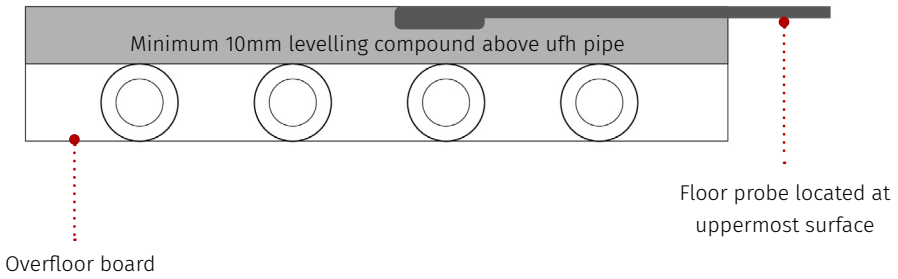
If you will be laying a temperature sensitive floor covering such as wood or laminate, a temperature sensor floor probe will need to be installed.

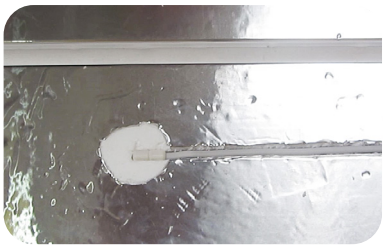
The floor probe must be placed so that it will be in contact with the underside of the floor covering.

The aluminium on the rapid response board around the sensor end must be peeled back so that the sensor is not touching.

A thin channel must be cut allowing the probe cable to pass across the floor and at a sufficient height up the wall for it to be connected to the wall thermostat at a later time. Please take care to choose an area of the wall for your thermostat that is not in direct sunlight or near a source of heat.

If you are installing any floor finish on top of an approved screed / levelling compound, the floor probe will need to be fit later once the screed has cured.





Prepare unused pipe channels

Depending on your choice of floor finish. An approved self levelling compound may be needed as an intermediate layer. Please see the floor covering information document for recommendations depending on your choice of finish. When using a self levelling compound, ensure the aluminium of all the unused pipe channel are cut to expose the empty channel, ready for filling with your chosen levelling compound.

Before moving onto phase 3, it is important that the pipe runs are continuous with no joins to ensure no potential points of failure under the floor. Ensure all boards are firmly in place and pipe is flush and secure in the pipe channels.

If you are planning on installing a temperature sensitive floor finish, remember to install a floor limitation probe. Note the end of the probe needs to be in contact with the underside of the floor finish. If using a self-levelling compound, this will need to be installed after pouring the levelling compound following a successful pressure test.

Once phase 2 is complete, proceed to phase 3.

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