WUNDA

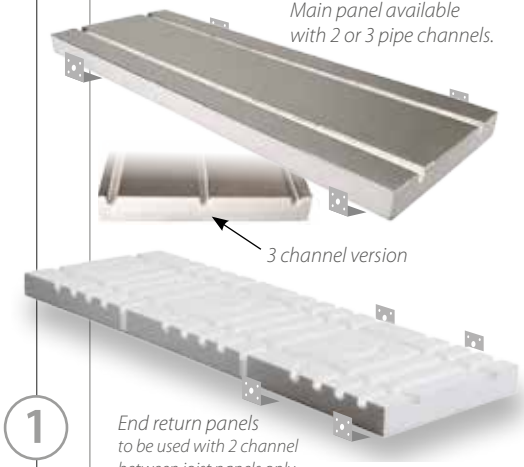
THE BRAND YOU CAN TRUST

Between Joist Insulation panels

✆ 0800 5420 816 | www.wundafloorheating.co.uk

F10

Installing Between Joist Insulation Panels



Main panel available with 2 or 3 pipe channels.

3 channel version

End return panels to be used with 2 channel between joist panels only.

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This system utilises Wunda 50mm EPS insulation between joist panel with factory fitted 200 micron aluminium heat spreader foil. There is no need to purchase extra insulation or seperate aluminium spreader plates.

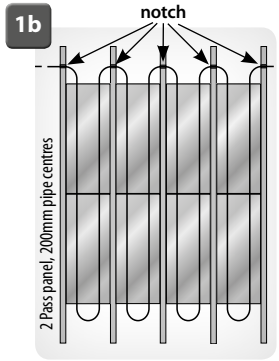
In order to install panels, original floorboards will need to be carefully removed and safely stored ready for refitting or replacing at a later stage. Insulation panels are supported between the joists using Wunda support brackets. Panels can be easily cut to length using a fine toothed saw **(5).**

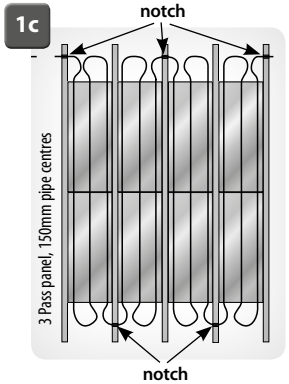
If permissable, notch joists according to building regs allowing an opening for floor heating pipe to pass between joists **(1a/b)***. If notching of joists is not allowed then an 18mm batten can be securely attached to the top of the joist **(2)**. Run the batten short at one end to allow pipe to pass between each joist **(3)**. Always check with your structural engineer before notching or modifying any joists.

Method 1 - Metal support brackets

Once joists have been exposed and inspected, use (optional) panel support brackets fixed to inside face of each joist with suitable nails or screws **(3)**. The top edge of the vertical bracket face is designed to be flush with top of the joist, this automatically provides a 50mm space to the horizontal seat of the bracket to support the panel. Panels are then laid onto the support brackets between the joists where the top face of the panel should be level with the top of the joists. **(4)**.

End return panels (for use with 2 channel panel only) incorporate returns which can be simply cut using a craft knife or a fine toothed saw **(5)**. Individual end returns are inserted at opposite ends of joist runs to allow pipe to return or for transitional areas **(6)**. Each main panel require 4 support brackets (2 each side). Each end return panels require 4 brackets (2 each side) making sure brackets are placed where they won't obstruct pipe passing between joists.

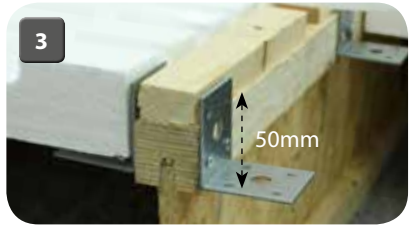




* When installing panels with 3 passes of pipe **(1c)**, notching of joists will be required to alternate ends of the joist to allow pipes to pass between each joist.

You Will Need:

• Marker pen • Pipe cutter • Craft Knife • Fine Toothed Saw • Hammer • tough work gloves • Knee protection • Eye protection • Battens • Suitable nails/screws



Please exercise caution when working on exposed joist floors or at heights. Ensure all Health & Safety regulations are followed.
The edges and corners of aluminium covering our panels can be very sharp, take care and wear appropriate clothing/gloves when handling.

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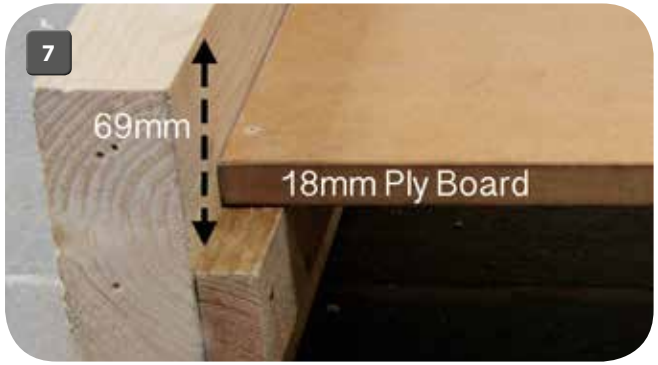
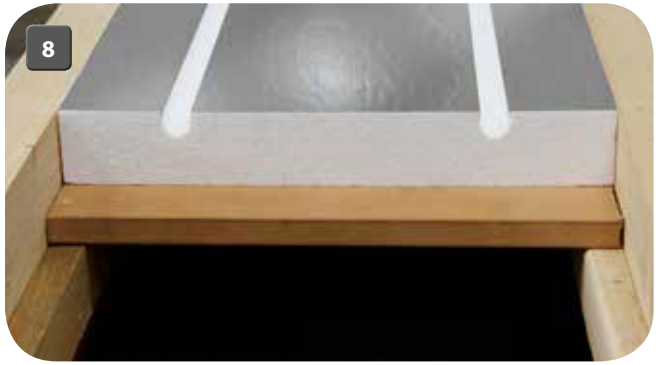
Method 2 - Batten, Board & Panels

Once joists have been exposed and inspected, wooden battens are fixed at a depth of 69mm to inside face of each joist in order to take an 18mm ply board **(7)**. This board serves two purposes; to hold the 50mm profile heating panel in place and to act as a supporting floor for the installer. The ply and battens can be set lower on ground floor installations to accommodate further insulation. Panels are then laid onto the battens between the joists giving a level surface with joist tops **(8)**.

If fitting a different depth of ply board, batten heights will need to be adjusted accordingly, check with your structural engineer before adjusting any joists or adding extra weight to joists.

End return panels (for use with 2 channel panel only) incorporate 3 returns per panel which can be simply cut using a craft knife or a fine toothed saw **(9)**. Individual end returns are inserted at opposite ends of joist runs to allow pipe to return or for transitional areas **(10)**.





Ensure between joist panels are fitted flush with the top of the joists and that no panels protrude above the joist tops.

This will allow the flooring/boards direct contact with the aluminium and even heat and ensure maximum heat output.

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Installing Pipe

Firstly make sure all pipe channels are clear of debris. Check and familiarise yourself with the pipe layout drawing **(15)** noting where to begin and pipe routes for individual loops. The pipe layout drawing will indicate each length of pipe required. Do not cut pipe before laying as you may need to change the route due to unforseen events. Please notes image **(15)** is an example.

Always begin laying the floor heating pipe at the manifold, allowing extra pipe for final connection. Identify each loop flow, return and loop number using a permanent marker **(16).** The pipe is easily installed into the pipe channels. Pipe is best laid using two people, one to roll out the pipe whilst the other presses the pipe into the channels **(17)**. Take care not to kink the pipe, if a kink occurs, the pipe can be lifted and relocate the kinked section iinto a straight channel. Alternatively, gently heating the affected section with a hair drier may aid in straightening Easy flex pipe. 15mm nail clips can be used to secure a pipe bend in a notched joist area.

Having followed the pipe layout (if requested) you will reach the point of having to return the pipe to the manifold using the end transitional panels (when used with 2 channel panel only) and notches/gap in battens to allow pipe to return to manifold **(18)**.

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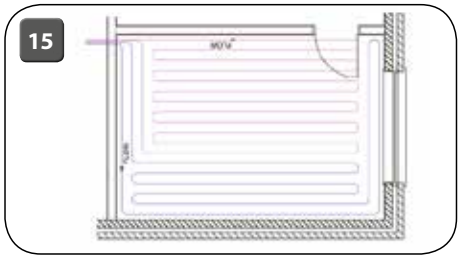

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Floor probes can be fitted if required to measure the temperature of the floor **(19)**. Limiting floor surface temp to a maximum of 27^{0}C by using floor probes is advisable when using wooden floor finishes.

Specialist timber suppliers should be contacted to obtain expert advice on your chosen floor finish. The addition of carpet or rugs on wooden floors can increase the temperature between the floor and carpet, check suitability with specialist suppliers.

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Many flooring manufacturers i.e. solid wood/engineered board recommend the use of a damp proof membrane (DPM) if laying directly onto the joists.

Please consult your flooring supplier. and if necessary a damp proof membrane can be installed directly over the panels and pipe before installing floorboards. **(20)**.

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Technical Information		Double Main Panel	Double End Panel	Triple Main Panel
Aluminium Thickness		200 micron	N/A	200 micron
Maximum heat output		Approx 80 W/m^2		Approx 80 W/m^2
Recommended flow temperature		45 - 55^{0}C*	45 - 55^{0}C*	45 - 55^{0}C*
Maximum loop length		100m (16mm Pipe)		100m (16mm Pipe)
Pipe centres		200mm	200mm	150mm
Fire properties		EN 13501-1:E	EN 13501-1:E	EN 13501-1:E
Density		[kg/m^3] : 30	[kg/m^3] : 30	[kg/m^3] : 30
Panel Thickness		50mm	50mm	50mm
Dimensions:	Width	350mm	350mm	350mm
	Length	1200mm	400mm	1200mm
Declared Thermal Conductivity		λ [W/(m*K)]:0,033	λ [W/(m*K)]:0,033	λ [W/(m*K)]:0,033
Declared Thermal Resistance R		[(m^2*K)/W]:1,515	[(m^2*K)/W]:1,515	[(m^2*K)/W]:1,515
Minimum Compression Strength		[kPa]:200	[kPa]:200	[kPa]:200
Material		EPS-200	EPS-200	EPS-200

*Limiting floor surface temperature to a maximum of 27^{0}C. by using floor probes, is essential when using wooden floor finishes. Specialist timber floor suppliers should be contacted to obtain expert advice on your chosen floor finish. The addition of carpet and rugs on wooden floors can increase the temperature between floor and carpet. Make sure the combined tog value of carpet & underlay does not exceed 2.0 tog. Total thickness of floorboards and any wooden or laminate floor finish should not exceed 25mm.

"When mixed floor solutions are being served from the same manifold, a floor probe must be used in the floor solution with the lower maximum supply temperature. This is to limit the temperature in these floor areas and prevent damage to the floor solution and/or floor finish."

PLEASE NOTE:

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Tech support opening hours are subject to change - please visit our website for the latest information

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