UNDERFLOOR HEATING

Nu-Heat UNDERFLOOR & RENEWABLES

Floor installation instructions

TPBA14 – 14mm Fastflo™ in suspended timber floor with ClippaPlate™

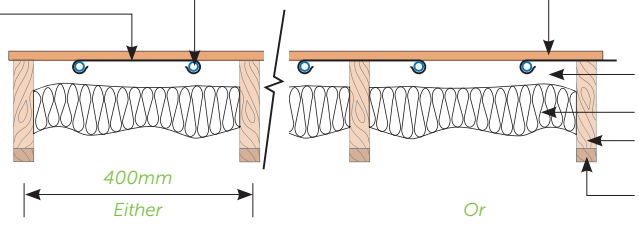
Supplied by Nu-Heat

14mm Fastflo™ tubing

Nu-Heat ClippaPlate™ fitted either between joists or over joists

Supplied by others

Timber floor



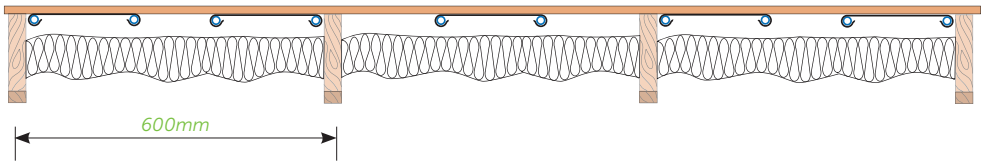
20-50mm air gap

100mm mineral wool insulation

Suspended timber floor joists

Optional batten to allow tubing to pass under joists

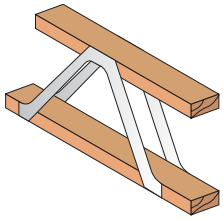
400mm joist spacings – 1 plate per bay in 400mm joist centres



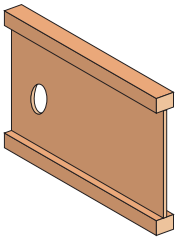
600mm joist spacings – Alternating 2/1 plates per bay in 600mm joist centres

Note: Check design instructions for correct tube/plate spacings for each individual room.

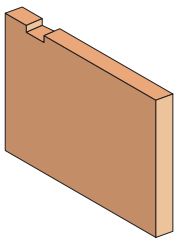
STEP 1 – NOTCHING AND PREPARATION



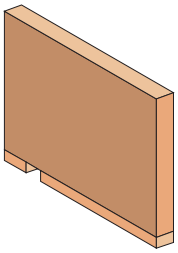
Eco-joist



'I' joist



Standard joist with notch



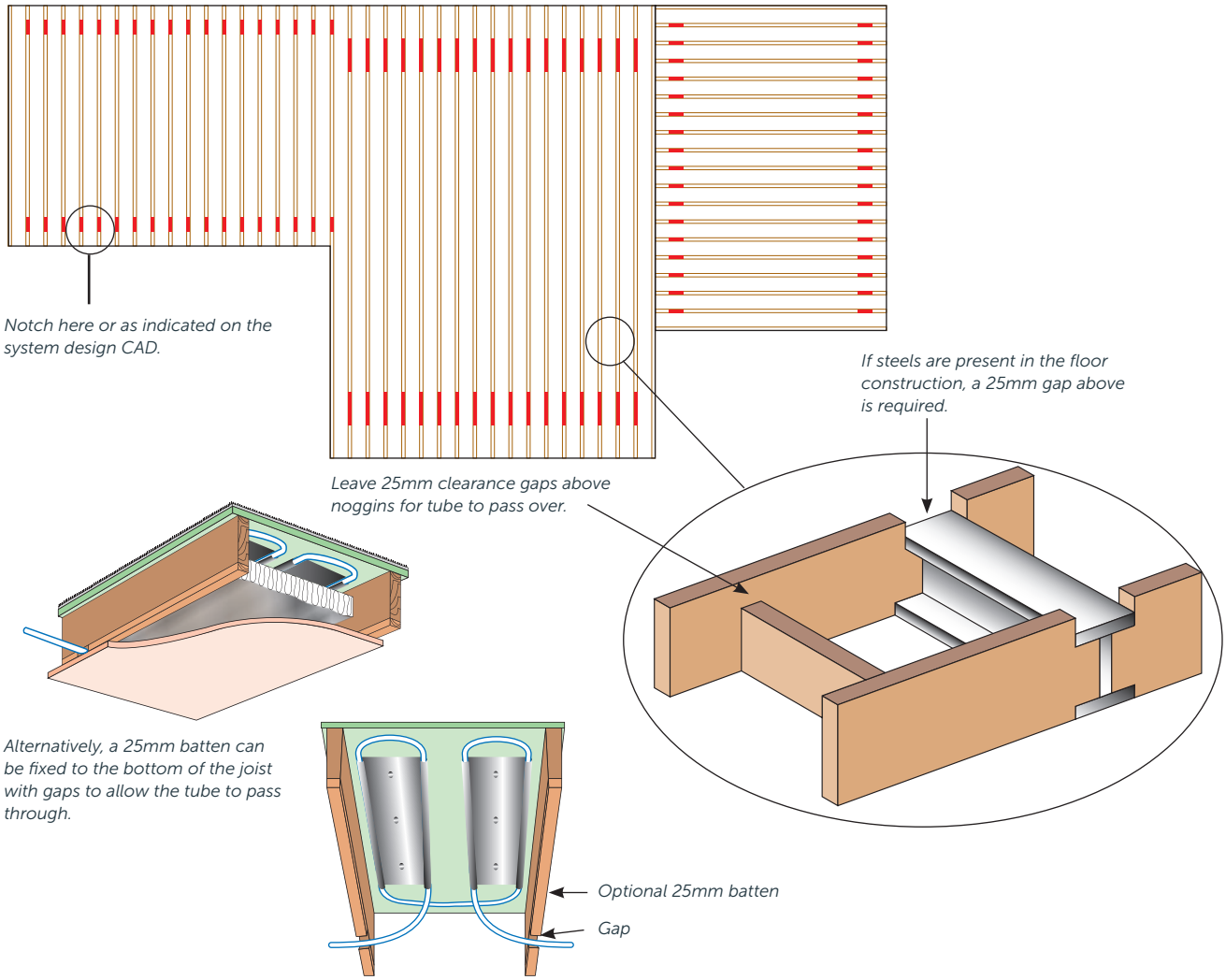
Standard joist with under-battening

Alternative – Steel web joists (eco-joists)
Steel web joists enable easier and more flexible installation of pipe and ClippaPlate™ than any other joist type.

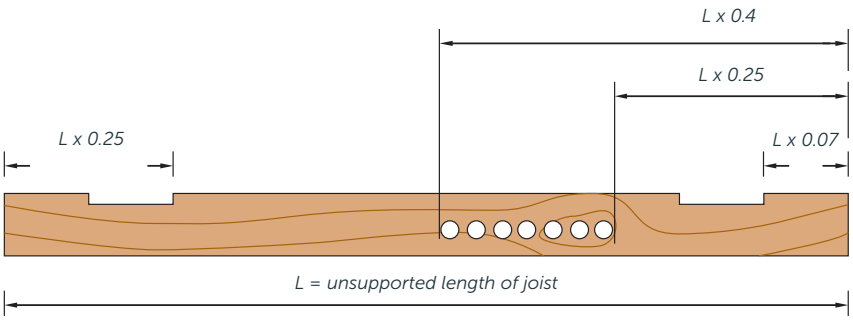
Alternative – 'I' joists
Timber I beams are unable to be notched but can usually be drilled in more convenient points than standard joists.

Standard joists
Standard joists can only be drilled/notched in accordance with current Building Regulations.

Standard joists with under-battening
This is a much easier way of installing the underfloor heating tube. Gaps can be left to accomodate tube to suit as it does not affect the integrity of the joists.



IMPORTANT: SCREWS USED TO FIX CEILING PLASTER BOARD MUST BE CLEAR OF PIPEWORK AND BE ADEQUATE LENGTH TO PASS THROUGH BATTEN AND FIX SECURELY INTO THE JOIST.



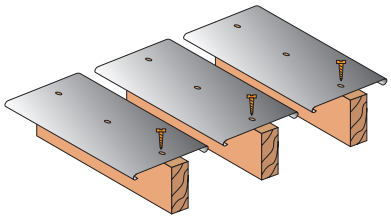
Notch 25mm deep, or 0.125 - depth of joist – whichever is smaller. Drill holes can be 25mm in diameter.

Allow space for multiple 14mm flow and return pipes (see table below).

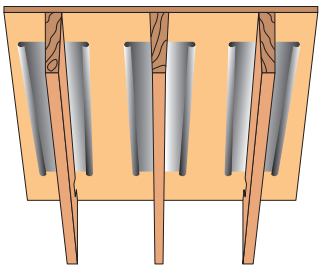
Approximate room/zone size (m^2)	40	30	20	10
Approx. max. number of 14mm pipes	8	6	4	2

STEP 2 – FITTING THE PLATES IN 400mm SPACED JOISTS FROM ABOVE

In joists spaced at 400mm, plates are more easily fitted at the same time as laying the chipboard deck.

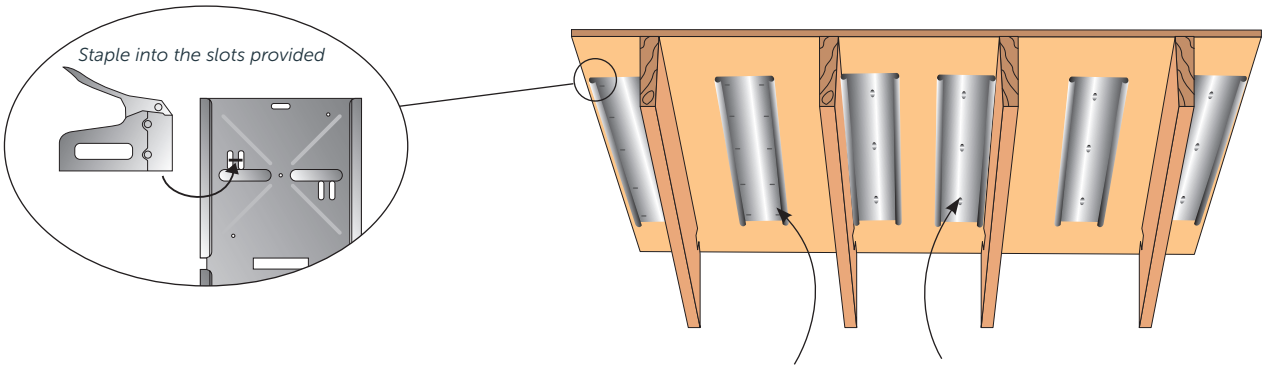


Nails can be used, but ensure that the finished surface is flat.



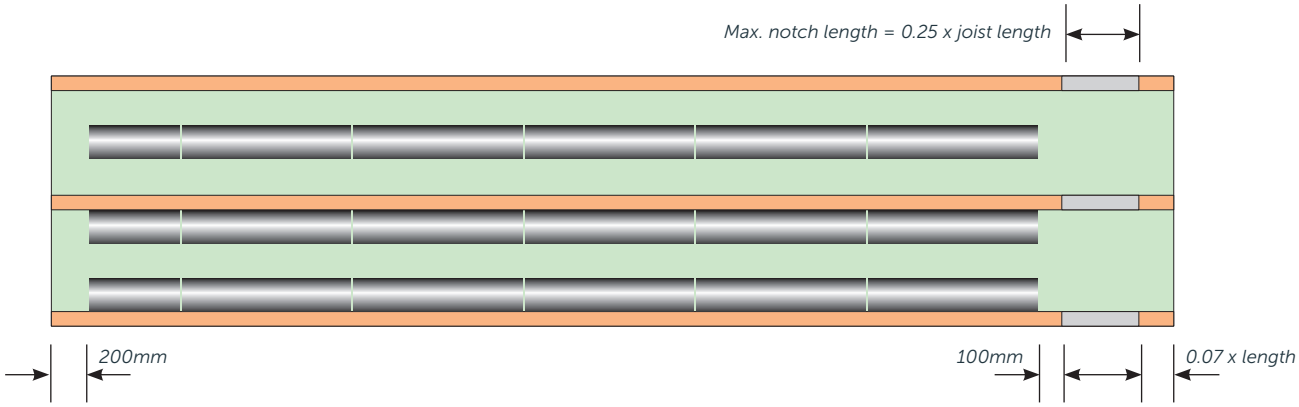
Note: When fitting from above, use the smaller screws supplied.
When fitting from below, use the larger panhead versions.

STEP 2 ALTERNATIVE – FITTING THE PLATES IN 400mm OR 600mm SPACED JOISTS FROM BELOW



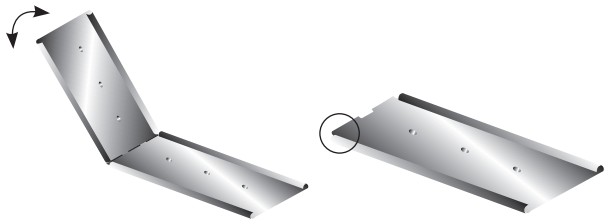
Either: Heavy duty hand staple gun with STAINLESS STEEL staples.

Or: Screw up using the PAN HEAD screws supplied.



Ensure that the plate is flat and touching the chipboard across its entire surface.

Allow 100mm tube clearance at the notch to prevent kinks.



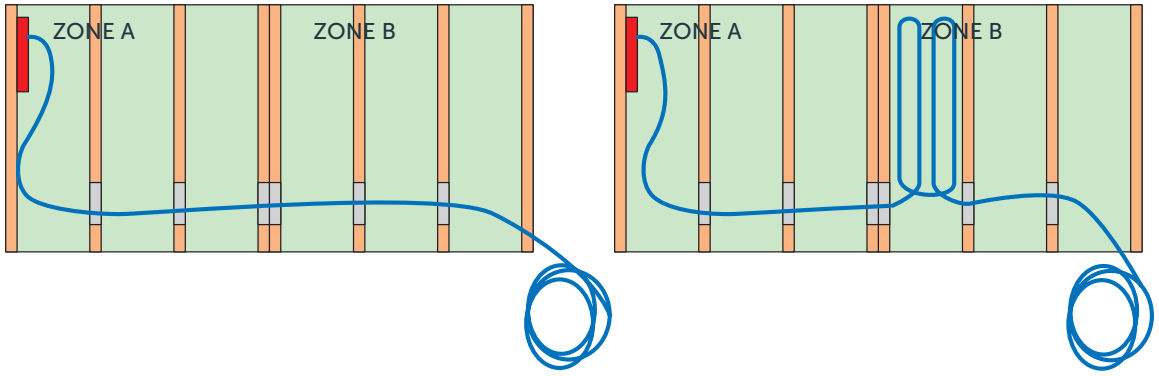
When snapping plates to length ensure edges do not curl up as this can damage tube. Flatten with a hammer or grips.

STEP 3 – FITTING THE PIPE

There are 3 ways of feeding the pipework from manifold to zone (refer to the CAD drawing).

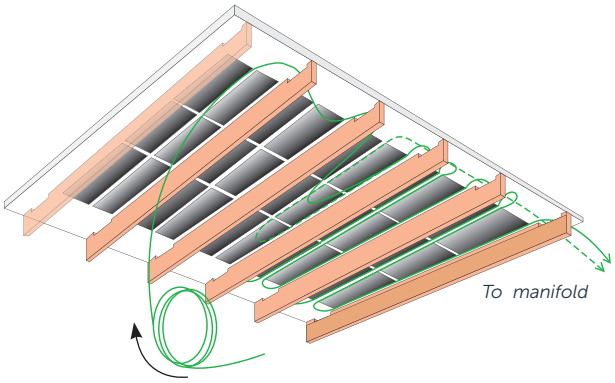
Note: this instruction refers to 600mm spaced joists. 400mm spaced joists follow the same principle but with one plate and one loop of tube per bay.

A) – Direct pipework from manifold to zone

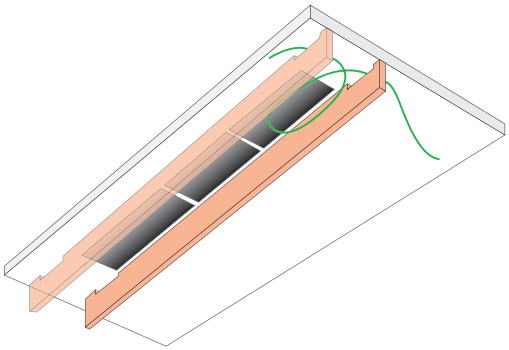


Feed the end of the coil back to the manifold, following the system plans.

With assistance, pull loops into the joist bays and clip pipe in place. **Where necessary tap tube in place with a small block of wood or similar.**

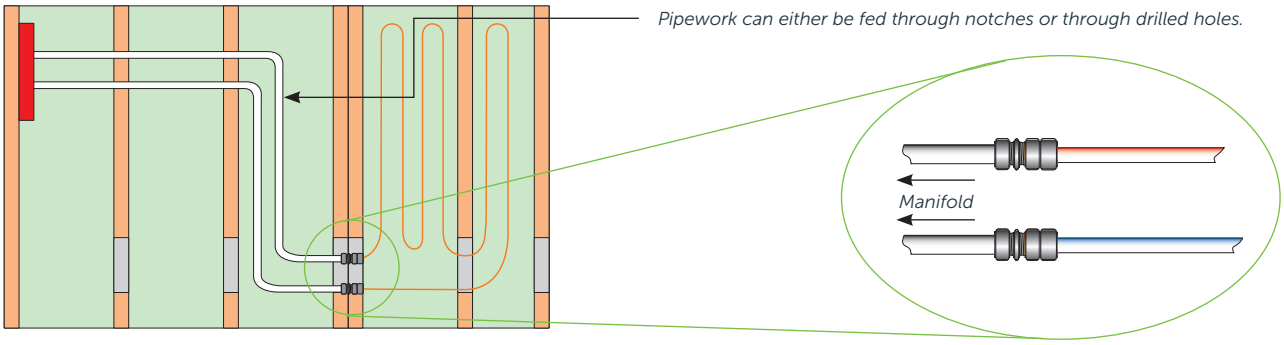


Fit two runs of ClippaPlate™ between 600mm joists.

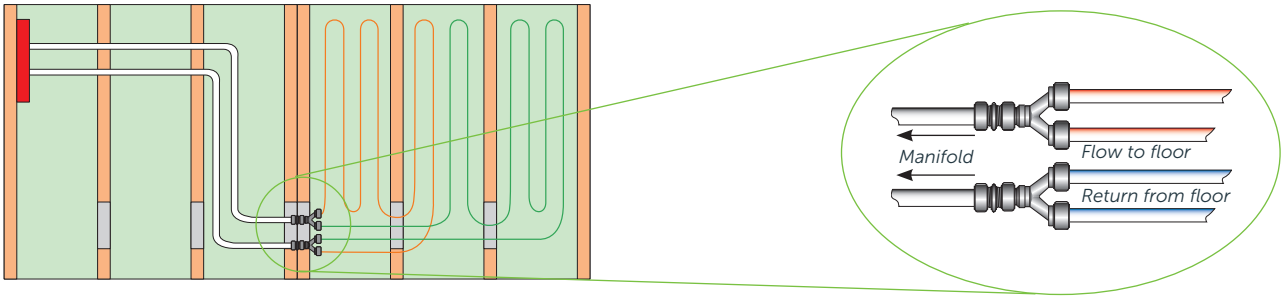


For 400mm joist spacings its sometimes easier to twist the pipe in a loop as it's drawn into the joist bay.

B) – In more distant zones it is economical to use larger bore 18mm pipe to feed the Fastflo-14™, making connections in the zone.



C) – In larger zones, 18mm pipe can be used to feed 2 port splitters, distributing to the 14mm pipes.



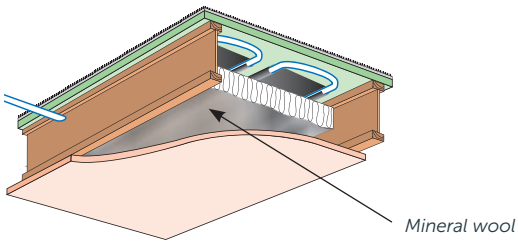
STEP 4 –CONNECTING TO THE MANIFOLD

When the correct number of tubes are laid in the floor, trim excess coillength and connect to manifold as described in the *Installation Manual*.

STEP 5 – FILLING, FLUSHING & PRESSURE TESTING

Pressure test the system as desxribed in the *Installation Manual*.

STEP 6 – INSULATION



Fit 100mm mineral wool in **all** cases. Increase to 200mm over unheated spaces.