

# Uponor

## PEX 20 UNDERFLOOR HEATING

### Timber Suspended, Sprung & Battened Floors

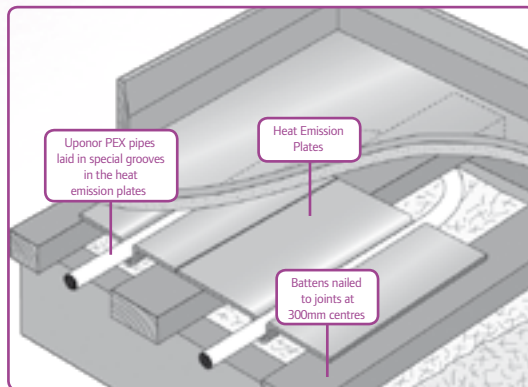
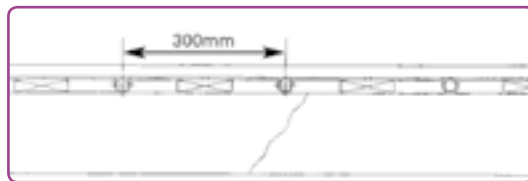


Fig 1 & 2. HEP300's on counter battens



Uponor have developed various heat emission plates (HEP's) to suit many timber floor applications. There are 3 plate sizes suitable for Uponor PEX20 pipe, as follows:

#### HEP300

For use with timber suspended or battened floors with joists/ supports at 300mm centres.

#### HEP400

For use with timber suspended or battened floors with joists/ supports at 400mm centres.

#### HEP411

For use with sprung timber floors with battens spaced at 411mm centres, such as Junckers Unobat and Blubat Sports Floor Systems, suspended or battened floors with joists/supports at 411mm centres.

Heat emission plates are used to spread the heat evenly, the plates being secured directly onto the battens or joists. The groove in the plate is designed to grip the pipe securely. Once the loops are laid, connected up and pressure tested, the floor deck can be fixed to the batten or joists. All other services such as cables and plumbing pipes should be laid before the underfloor heating.

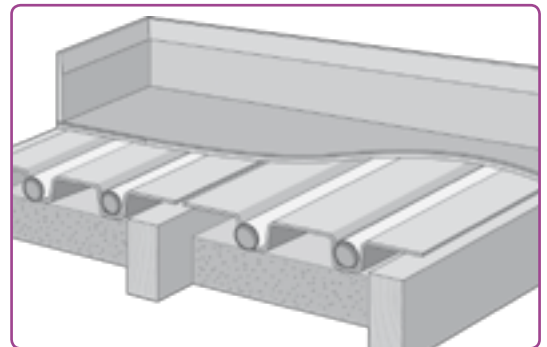


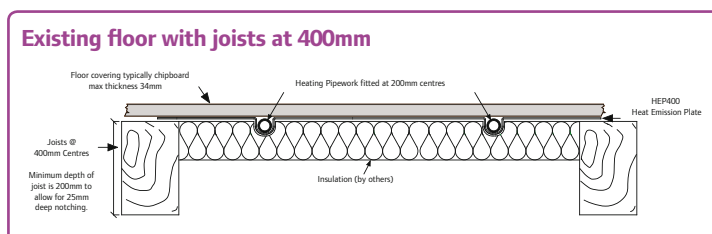
Fig 3. HEP400's on joists spaced at 400mm centres

#### Heat Output

The maximum heat output available will be approximately 70W/ m<sup>2</sup> with a floor temperature of 26°C and a design air temperature of 20°C. This output should be checked against the heat losses of the building given by the Architect and/or consulting engineer. This is particularly important in refurbishments and rooms with large glazed areas and/or high ceilings.

Item	Code (mm)	Dimensions (qty)	No Pipe Tracks (qty)	Plates/Pack (m <sup>2</sup> )	*Pack Coverage
HEP300	010601	280 x 1150	Single	40	16
HEP400	801122	380 x 1150	Two	20	11
HEP411	010598	405 x 1150	Two	28	16.3

\* Based on 80% floor coverage



## Materials Supply and Installation Guide

Material	Supplied By		Installed By	
	Uponor PEX	Others	UFH Installer	Others
Uponor PEX Pipe	✓		✓	
Pipe bend support	✓		✓	
Manifold Components	✓		✓	
Heat Emission Plates	✓		O	O
Controls	O	O		✓
Insulation		✓	O	O
Battens and Joints		✓		✓
Floor Decks and Finish		✓		✓
Flow and return to manifold	O	O		✓
Boiler		✓		✓
Timer/Programmer	O	O		✓

Key: O denotes optional item which can be offered by Uponor or by UFH installer on request

### Installation Guide

The following important points are offered as a guide when using Uponor underfloor heating with timber suspended floors.

1. Insulate between the joists prior to battening or cross battening. Mineral wool or similar insulation is easiest to install since it fits snugly between joists. The insulation should be laid so that it is in contact with the underside of the Uponor heat emission plates thus avoiding any air gaps. Ensure that there are no draughts underneath heat emission plates.
2. If cross battening, this is best done by using 25mm x 100mm battens. Leave the ends of the battens loose so that the pipe loop can be laid beyond the end of or under the cross batten. Fix batten ends before laying floor.
3. In existing floors where the finished floor must be at the same level as previously, noggins and battens must be laid so that the top edge of the battens are flush with the top of the joists. Notch the joists where the pipe loops are to be laid over them. Inform Uponor if there are any steel beams in the floor.
4. Lay out all the heat emission plates in the required configuration prior to fixing. This ensures that the appropriate quantity of plates are evenly set out across the entire area. Plates are scored so that they may be easily broken into sections if required.
5. Heat emission plates are fixed to the joists and/or battens as appropriate, either by stapling or nailing. Leave a gap of at least 10mm between each plate end.
6. The system should be pressure tested prior to and during the laying of the floor deck.
7. Exclude all other trades from the area other than the flooring contractor until the system is completely covered by the floor deck. The installation of underfloor heating is regarded as a 2nd fix operation.
8. Make sure that the flooring contractor notes the position of the pipes, particularly where they cross joists. Care must be exercised so as to avoid accidental damage to the pipes. Nailing through heat emission plates is however normal.
9. Carpet fitters should take care when fitting grips and bars, especially in doorways. Equal care should be taken when fixing any furniture to the floor.

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