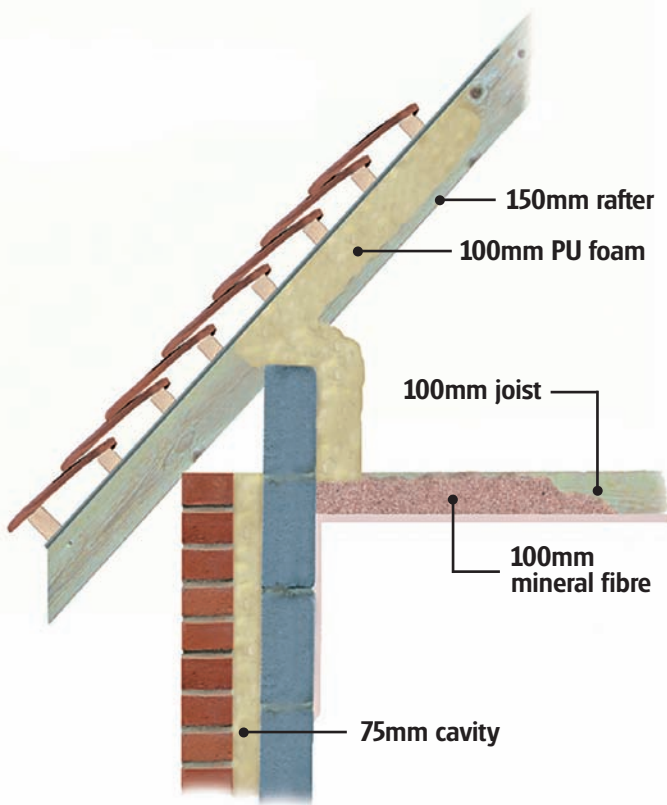


# New pitched roof, hybrid warm deck – horizontal ceiling



## General

### Spray applied polyurethane foam between rafters onto breathable roofing membrane

<b>Average depth:</b>	85mm	100mm	150mm
<b>U-value:</b>	0.18W/m <sup>2</sup> K	0.16W/m <sup>2</sup> K	0.013W/m <sup>2</sup> K
<b>Condensation risk:</b>	Zero	Zero	Zero
<b>Ventilation:</b>	Unventilated loft space		
<b>Additional insulation:</b>	100mm mineral fibre at ceiling level		

PU foam is applied directly to the breathable roofing membrane between timber rafters and over the underside of rafters, in tiled or slated pitched roofs which enclose a non-habitable and unventilated loft space with additional thermal insulation between horizontal ceiling joists as required.

The resultant warm, dry and clean unventilated loft space provides excellent usage for storage. It is essential that the movement of moisture from the occupied space below by diffusion and convection is restricted by ensuring that the lining board has filled / sealed joints or a vapour control layer and that all penetrations into the loft space are sealed. Foil-faced plasterboards have better water vapour resistance than plain plasterboards and are usually recommended.

## U-value and Condensation Risk Analyses

Construction details New pitched roof, hybrid warm deck	Thickness (mm)
Tiling including batten space	-
Breather membrane	-
Spray Applied PU Foam	100.0
Loft space between flat ceiling and pitched roof line	-
Mineral fibre	100.0
Vapourcheck Wallboard	12.5
Thistle Finish Plaster (Multi Board)	2.0
<b>U-value - 0.16W/m<sup>2</sup>K</b>	

### Dew point prediction

