

# Comfortech® H1 FAQs

To support the industry in successfully meeting today's challenges, including the new H1 Building Code changes, Comfortech® developed a range of H1 solutions, including a new product range, Pink® Superbatts® insulation. Below are the answers to some common questions about the H1 insulation changes.

## What are Comfortech's solutions to the H1 insulation changes?

The new Pink® Superbatts® insulation products are specifically designed to meet the new H1 requirements and are extra wide to bridge thermal gaps and maximise thermal performance.

**Single-layer solution:** For residential ceilings, a single layer of Pink® Superbatts® R7.0 at the new width of 460mm can be installed. Segments should be notched and fitted between the truss chord to seal the thermal bridge.

**Double-layer solution:** Comfortech's two-layer solution uses a first layer of high-density Pink® Superbatts® insulation that is the combined height of the truss chord and the gap to the top of the ceiling batten. This layer would be 110mm for a 90mm truss chord and an R-value of R2.6 or 160mm for a 140mm truss chord and R3.0.

The second layer is our new Pink® Superbatts®, over-width 460mm wide R4.5. Installed at right angles to the first layer, with this method, the thermal bridge is completely closed. A lower R-value second layer can be selected where another compliance pathway method has been chosen.

## Can I install two layers of R3.6 insulation to meet the new code?

You can install a double-layer of R3.6 insulation. However, industry experts have expressed concerns that the second layer will compress the first layer, further reducing its R-value, and with the first layer sitting above the top of the truss chords, there is an open path for airflow over the joist, again reducing the thermal performance.

## Why does Comfortech® recommend notching?

The decision to promote notching as the preferred installation methodology has been endorsed by industry experts as the best way to ensure the in-situ performance reflects the modelling.

It also relies less on a complicated installation methodology to ensure adequate recovery of the insulation.

## Is a raised heel at the roof edge necessary?

No. Initially it was expected, with the height of insulation now required and the need to maintain a 25mm air gap under the roof underlay, that all new houses would require a raised heel. However, a raised heel has significant cost and height in relation to boundary implications. Comfortech® has developed an Edge Compression Calculator to demonstrate how Pink® Superbatts® insulation, under compression and in conjunction with an insulation guard, could meet the requirements and avoid a raised heel. Subsequently, BRANZ has also launched their calculator, which demonstrates the same.

## How do the H1 changes impact insulation installation?

The single-layer solution is the quicker of the two solutions to install, although it does require time onsite cutting. From trials with the PinkFit® insulation installation network, it will take 30% longer to install compared to the old R3.6 single layer and more of the product is required - as R-values have doubled. The double-layer solution involves further labour to install, likely twice that of a single-layer solution.

## Are there new requirements for walls?

There are few changes to the R-value of walls under the new H1 requirements. However, a recent industry survey revealed significantly higher than assumed wall framing ratios, meaning to achieve the new H1 R2.0 construction R-value requirement, an R2.2 or R2.4 is no longer adequate. The industry is fast responding with an increase in the specification and installation of R2.6 and R2.8 wall insulation, where the higher R-value will offset the thermal bridging and bring the wall performance closer to the code requirement.