

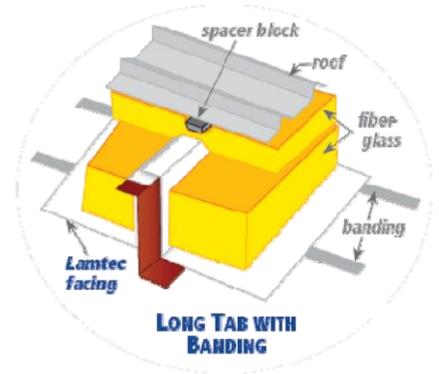
Technical Bulletin #17:

Long Tab with Banding - High-R Insulation System Test Results

The Long Tab with Banding installation method is also referred to as a "Filled Cavity System" (FC) in ASHRAE literature.

A graphic of the installation is to the right.

Thermal testing of the Long Tab with Banding / Filled Cavity System was conducted in October 2010 and January 2011 at the Butler Manufacturing Research Center located in Grandview, MO, an independent certified laboratory. Finite Element Modeling was conducted By Engrana LLC, June 18, 2014.



Testing was conducted in accordance with ASTM C1363, "Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus"

The results for the three assemblies were as follows:

Faced R19 fiberglass and R11 unfaced fiberglass	U-Value of 0.037
Faced R25 fiberglass and R11 unfaced fiberglass	U-Value of 0.035
Faced R25 fiberglass and R19 unfaced fiberglass	U-Value of 0.029

Reports can be downloaded at the following links:

- Faced R19 F/G & R11 unfaced F/G - <http://www.lamtec.com/cdocs/Testreport2010-49.pdf>
- Faced R25 F/G & R11 unfaced F/G - <http://www.lamtec.com/cdocs/LTBRoofFEM.pdf>
- Faced R25 F/G & R19 unfaced F/G - <http://www.lamtec.com/cdocs/Testreport2011-06.pdf>

The benefits of Long Tab with Banding / Filled Cavity System are:

- High- R / Low U-Values which meet most new energy standards.
- Non proprietary installation system
- Attractive installed appearance
- Easy installation of electrical, HVAC and sprinkler systems
- Economical

A summary of the data follows:

Property	Long Tab Banded/Filled Cavity System R-19/R11	Long Tab Banded/Filled Cavity System R-25/R11	Long Tab Banded/Filled Cavity System R-25/R19
Thermal Transmittance, U:	0.209 W/m ² K (0.037 Btu/ hr ft ² F)	0.200 W/m ² K (0.035 Btu/ hr ft ² F)	0.166 W/m ² K (0.029 Btu/ hr ft ² F)
Overall Thermal Resistance, Ru:	4.8 m ² K/W (27.2 hr ft ² F/Btu)	5.0 m ² K/W (28.4 hr ft ² F/Btu)	6.0 m ² K/W (34.1 hr ft ² F/Btu)
Upper Fiberglass	Nominal R-11 unfaced NAIMA 202-96 fiberglass blanket insulation Measured thermal resistance: 11.83 hr ft ² °F/Btu	Nominal R-11 unfaced NAIMA 202-96 fiberglass blanket insulation Nominal thermal resistance: 11.00 hr ft ² °F/Btu	Nominal R-19 unfaced NAIMA 202-96 fiberglass blanket insulation Measured thermal resistance: 22.68 hr ft ² °F/Btu
Lower Fiberglass	Nominal R-19 faced NAIMA 20296 fiberglass blanket insulation Measured thermal resistance: 20.69 hr ft ² °F/Btu WMP-VR-R Plus facing	Nominal R-25 faced NAIMA 20296 fiberglass blanket insulation Nominal thermal resistance: 25.00 hr ft ² °F/Btu Lamtec facing	Nominal R-25 faced NAIMA 20296 fiberglass blanket insulation Measured thermal resistance: 24.04 hr ft ² °F/Btu WMP-VR-R Plus facing