BAUDER VIP
VACUUM INSULATION PANEL

Introduction
BauderVIP is a vacuum insulation panel designed to provide high thermal performance in areas with limited installation height and is ideally suited for terrace and balcony applications with a landscaped finish.

The exceptional insulating properties (calculated value of thermal conductivity – 0.0063W/mK) achieved by BauderVIP is due to the high performance vacuum silica core. This silica is encased by a multi-layer composite aluminium foil, and then the air is removed from the silica to create a vacuum.

The VIP panel is a factory pre-assembled product which is used beneath the waterproofing layers to optimise its thermal performance.

In order to protect the vacuum during installation and against normal construction processes, Bauder VIP is protected on the underside with a 3mm thick rubber granulate mat and on the upper surface with 17mm Bauder High Density PIR. Both protective layers are bonded to the vacuum core to provide one complete encapsulated panel.

VIP insulation panels are available in 60mm and 80mm thickness and is used in conjunction with other Bauder insulation boards to further enhance U values if required. As VIP panels cannot be cut it is necessary to use Bauder FA-TE insulation boards at the roof perimeters and penetrations. Bauder offers a design service for this and for calculation of the area weighted U value for the roof area.

Product Testing and Certification
The Bauder VIP panels are certified under a European Technical Approval ETA-13/0493. This certification looks at a wide range of characteristics and at the following product performance:

- Density
- Thermal Conductivity
- Compressive Strength
- Dimensional Stability
- Reaction to Fire
U Values – VIP 60mm & 80mm

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<th>Area Weighted U-Value</th>
<th>FATE Overlay</th>
<th>Total Thickness of Insulation</th>
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U Value Calculations & VIP Layout Designs

Bauder can undertake bespoke U Value calculations to confirm thickness required and/or U value achieved, and can also provide a layout design service to aid with installation on site.

Upstand Height Design Considerations

When faced with limited upstand height restrictions Bauder VIP panels can provide an ideal solution to the problem by reducing the height of the proposed system by up to 60mm compared to a foil faced board designed to achieve a U value of 0.13. This could be the difference between achieving the required Codes of Practice upstand height or not.
For Bituminous Applications Utilising VIP: Paving on Bauder Supports

6 = Paving (by others)
5 = Bauder Supports/Spacers
4 = Bauder Capping Sheet
3 = Bauder Underlayer
2 = Bauder VIP Insulation 60 or 80mm
1 = Bauder Vapour Control Layer

Stone Ballast Finish

6 = Ballast (by others)
5 = Bauder Protection Layer
4 = Bauder Capping Sheet
3 = Bauder Underlayer
2 = Bauder VIP Insulation 60 or 80mm
1 = Bauder Vapour Control Layer
Green Roof Applications

If installed correctly and protected from damage and/or penetrations and used in conjunction with Bauder waterproofing systems, the Bauder VIP Insulation will provide reliable long-term thermal performance over the lifetime of the building.

Specification and Technical Support

Please contact your local Bauder Technical Manager for individual project specification and design advice to meet the requirements of your project.