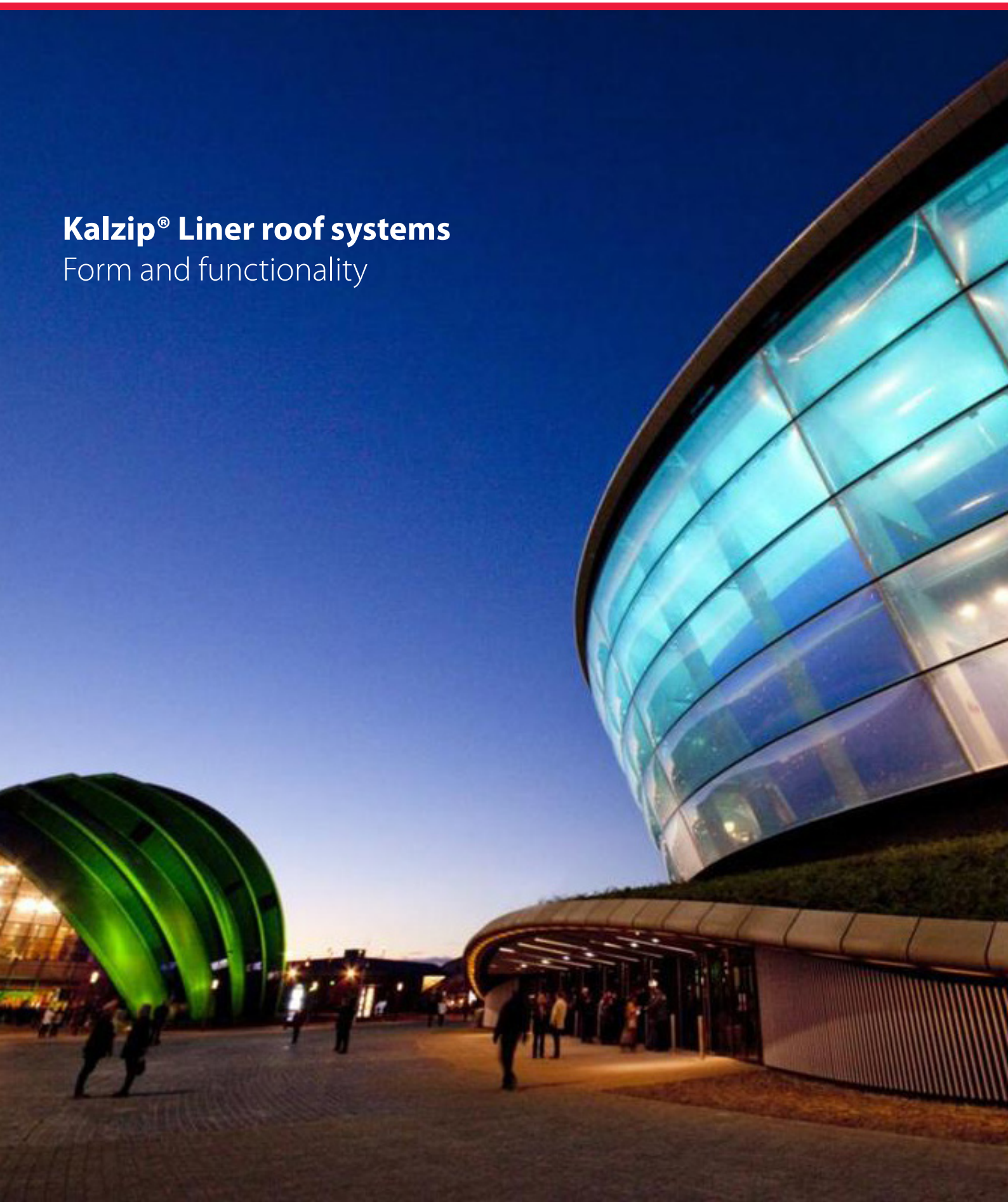
Kalzip® Liner roof systems

Form and functionality



Kalzip liner roof system

Form and functionality

Kalzip liner roof systems are predominantly used for new build construction, although they can also be used for refurbishment in the event of other failed roofing systems or building enhancements.

The Kalzip liner roof system is ideal where speed of installation on a project is of utmost importance. A non-fragile walkable Kalzip liner sheet can be quickly installed to provide a weather cover to allow other trades to work below. The remainder of the roofing components can then be installed without affecting the critical path of the construction programme.

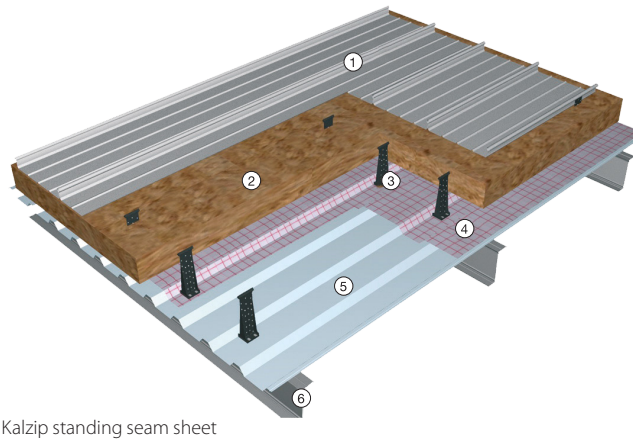
The Kalzip liner roof system has the outer Kalzip standing seam roof sheet and the internal Kalzip liner trapezoidal profiled liner sheet laid in the same direction across roof purlins acting as the primary support. Typical purlin centres would be approximately 1.4 to 1.8 metres.

The Kalzip standing seam roof sheets are supported directly off the roof purlins via the support clips/halters (aluminium clips or E clips) so therefore act independently of the Kalzip liner sheet. When lightweight quilt type insulation is used, the external loads (wind suction, snow, access etc.) are transferred direct to the support purlins and not the liner sheet.without affecting the critical path of the construction programme.

Advantages:

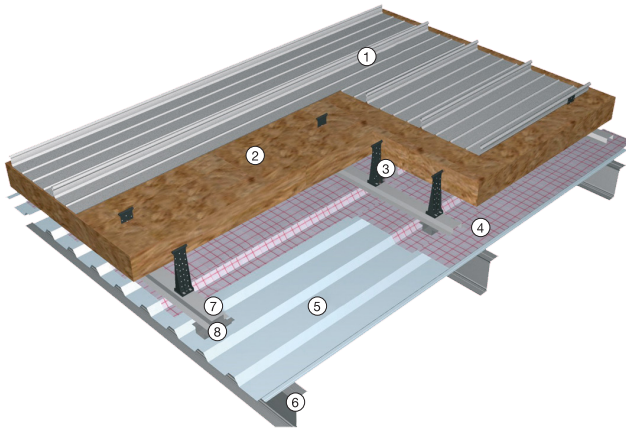
- Kalzip Liner systems provide a fast installation
- Allows other trades to work below once the non fragile walkable liner is installed
- The liner and Kalzip outer sheet are laid perpendicular to the purlins across the purlins
- Purlin centres are typically between 1.0m to 1.8m
- Perforated options available for acoustic enhancement
- Steel or aluminium options available

Standard liner roof configuration



① Kalzip standing seam sheet
② Kalzip insulation
③ Kalzip E clip
④ Kalzip vapour control layer
⑤ Trapeziodal liner sheet
⑥ Purlin

Liner with top hat spacer system for increased U-values



① Kalzip standing seam sheet
② Kalzip insulation
③ Kalzip E clip
④ Kalzip vapour control layer
⑤ Trapeziodal liner sheet
⑥ Purlin
⑦ Top hat sub purlin
⑧ Top hat saddle bracket


SERVICES

Kalzip structural deck system

Form and functionality

Kalzip structural decking provides an economical solution for long span installations and eliminates the need for purlins. For enhanced acoustic absorption, decking sheets can be perforated and can support mass, such as increased insulation or board, which may be introduced for more rigorous acoustic specifications.

With a choice of steel or aluminium, a selection of profiles, gauges and sheet lengths – this range of products has been developed to extend the versatility of Kalzip, making it suitable for a wide range of applications.

As a general rule, steel is cost effective and provides the optimum in loading and spanning capability; whereas aluminium offers exceptional durability in buildings with high humidity levels such as swimming pools and wet industrial process plants, e.g. paper mills.

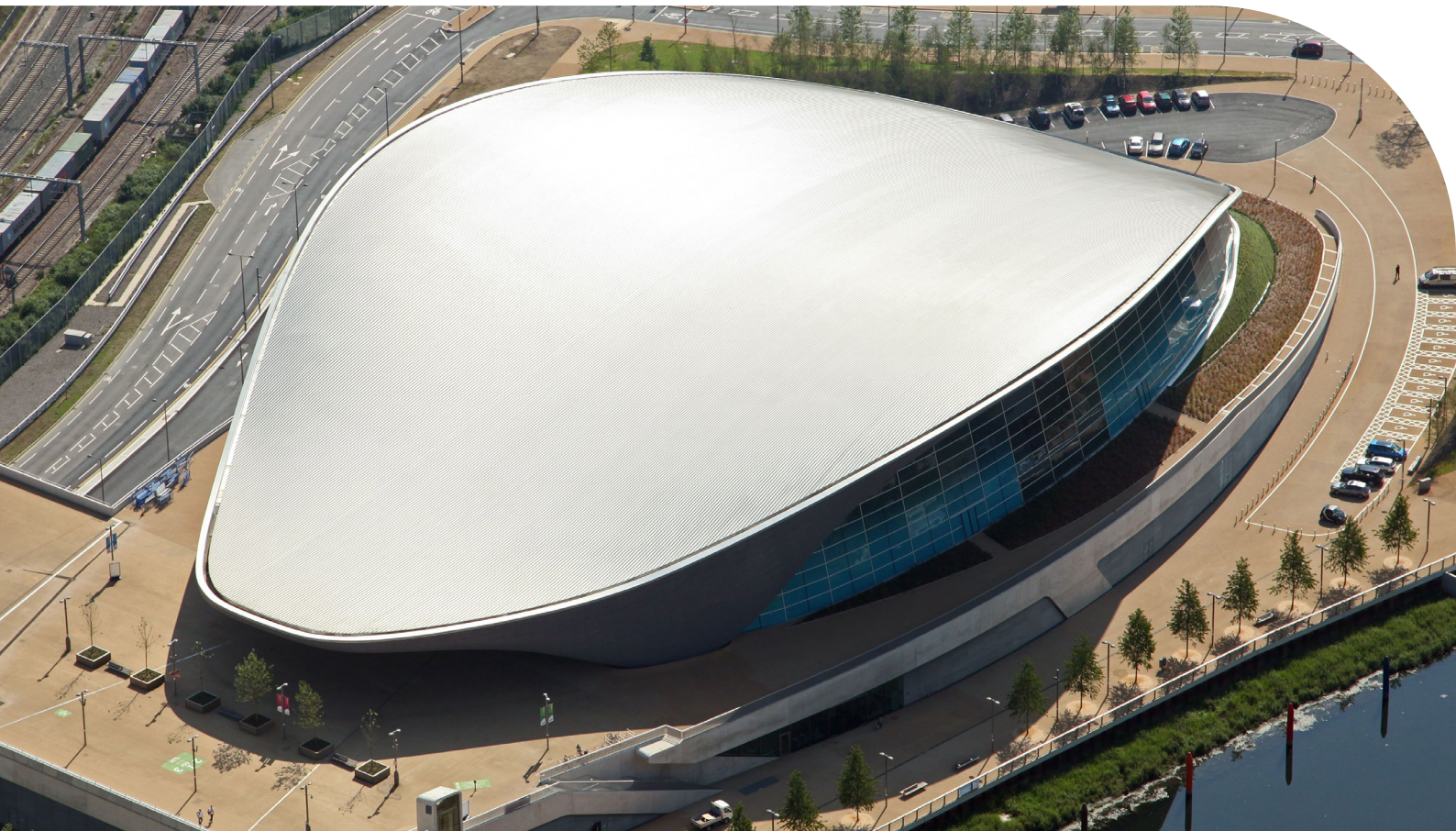
Where structural decking is installed there is a reduced requirement for secondary steelwork. The Kalzip structural decking sheet is generally laid transverse to the direction of the Kalzip standing seam roof sheet and spans between the main steel rafters. Typical rafter centres would be approximately 3 to 8 metres.

The Kalzip clips are installed in a diagonal layout so that all external roof loads can be evenly distributed to the structural decking sheet. The frequency of clips may be increased at the perimeter of the building where higher wind loads occur.

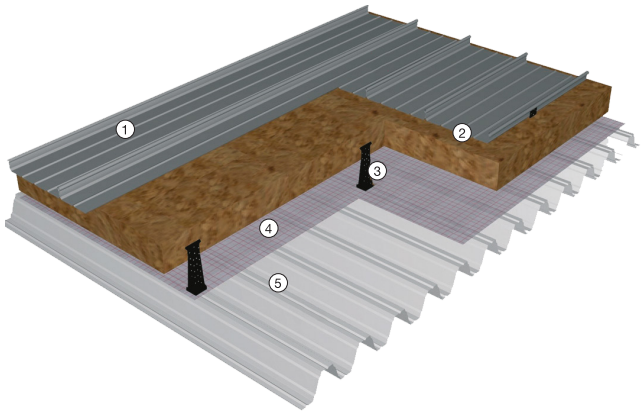
The gauge and profile of the Kalzip structural decking sheet is therefore determined by the rafter centres, all external roof loads, internal wind loads, service loads (e.g. lighting) and the dead weight of the construction components.

Advantages:

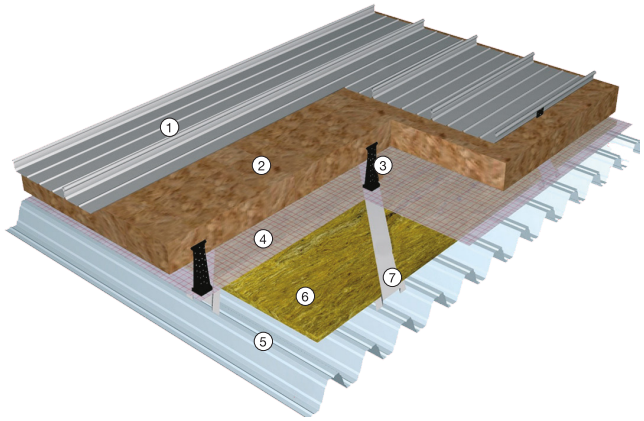
- This is a long span solution which negates the need for roof purlins
- The deck is installed directly onto the steel rafters
- It allows other trades to work below once th edeck is installed
- The deep section deck profiles can support additional mass such as those needed for acoustic systems
- The deck sheet and Kalzip outer sheet are typically laid perpendicular to each other
- Perforated options available for acoustic enhancement
- Steel or aluminium options available



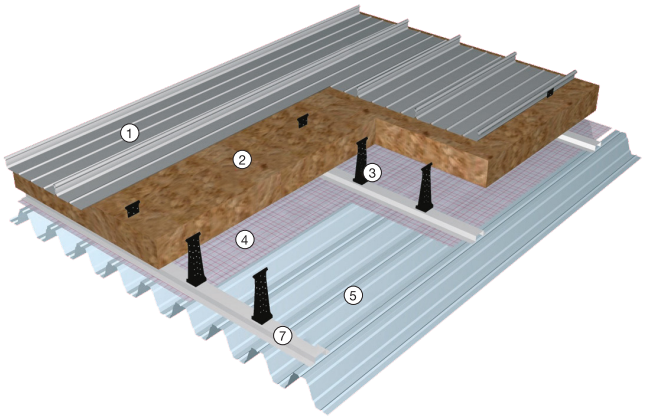
Kalzip standing seam on Kalzip structural decking



Kalzip standing seam on perforated Kalzip structural decking with acoustic insulation slab



Kalzip standing seam on Kalzip structural decking with top hat sub purlins



① Kalzip standing seam sheet
② Kalzip insulation
③ Kalzip E clip
④ Kalzip vapour control Layer
⑤ Structural decking
⑥ Acoustic insulation slab
⑦ Top hat sub purlins

Kalzip low U-value system

The cost effective and technically sound solution

Kalzip's low U-value roof system provides a cost effective and technically sound solution for roof U-values as low as 0.10 W/m2/K by combining rigid insulation boards with glass mineral fibre layers.

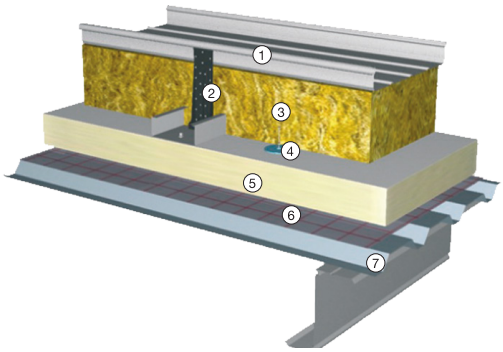
It is the symbiosis of the two insulation types that gives the system its high performance and uniqueness in achieving extremely low U-values, allowing a significantly greater overall thermal resistance to be achieved compared to that of any one single layer of insulation of the same total thickness.

The low U-value system is primarily based on a standard Kalzip standing seam roof build and as such is subject to the same basic set of criteria and properties for materials, finishes, geometries, accessories and components as outlined in the Kalzip systems brochure.

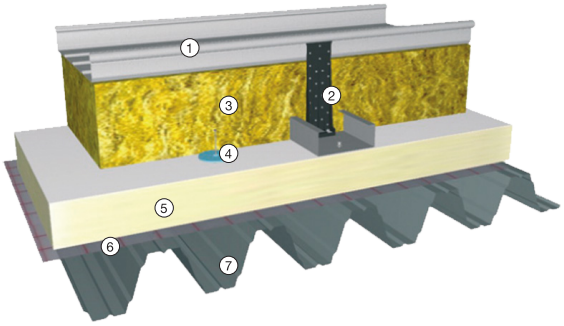
Advantages:

- Kalzip standing seam roof sheets are supported directly off the roof purlins
- Supported directly off the roof purlins via the support clips/halters (aluminium clips or E clips)
- The profile of the Kalzip liner sheets will be determined by its dimensional compatibility with the Kalzip standing seam roof sheet
- Kalzip liners are available as standard in high grade steel or aluminium.
- Standard finishes include a galvanised, or white enamel finish to suit the internal application.

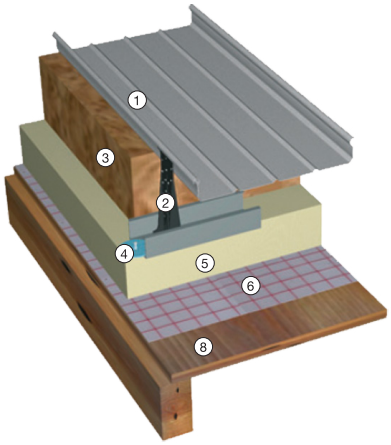
Liner-deck roof system



Structural deck roof system



Timber deck roof system



① Kalzip top sheet
② Kalzip E clips fixed to inverted channel
③ Mineral fibre quilt insulation
④ SFS Iso-Tak fastener system
⑤ Kalzip insulation 23 (2400 mm x 1200 mm)
⑥ Kalzip vapour control layer
⑦ Inverted liner sheet over purlins
⑧ Timber decking

www.kalzip.com

Kalzip is a Donges Group Company

www.donges-group.com

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