



Kalzip® DuoPlus roofing systems

Exceptional thermal performance and enhanced sound reduction



Kalzip® DuoPlus roofing systems

Kalzip’s DuoPlus E and Duo E roof systems provide a cost effective and technically sound solution for roof U-values as low as 0.10 W/m²/K.

The system was developed in anticipation of the on-going changes to Part L of the Building Regulations and future initiatives with energy efficiency. These new regulations will lead to ever-tightening design limits on thermal and energy performance of buildings.

Maintaining all the qualities and benefits of a standard Kalzip standing seam roofing system, this hybrid configuration combines rigid insulation slabs with compressible glass mineral fibre insulation.

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.

Features and benefits:

- Reduced thermal bridge
- High thermal performance – meets and exceeds the current thermal performance of Part L
- Variable thermal insulation thicknesses up to 345mm
- Use of all E-clip types and heights
- Excellent sound insulation values up to R’w = 43 dB (A), depending on roof structure
- Lightweight - ideal for large spans
- Complete roof system from one source
- Functional and harmoniously matched system components
- Variable fixing system
- High efficiency and short installation times by prefabricated system components
- Suitable for substructures made from steel trapezoidal profiles, concrete and timber

Kalzip® DuoPlus E and Kalzip Duo E

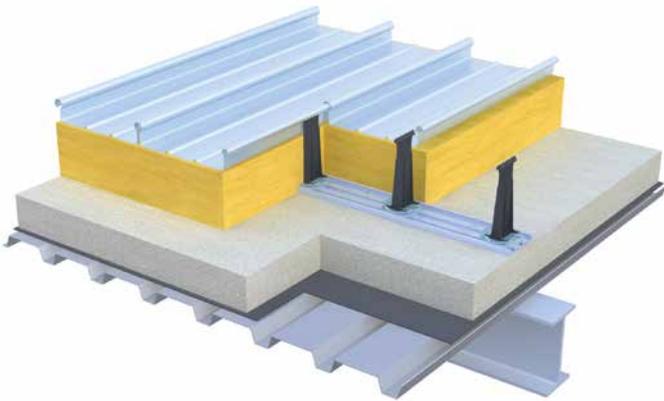
The Kalzip DuoPlus E and Duo E roof systems are primarily based on a standard Kalzip standing seam roof build and as such is subject to the same basic set of criteria and properties for materials, finishes, geometries, accessories and components as outlined in the Kalzip Systems brochure.

KALZIP DUOPLUS E	KALZIP DUO E
<p>The design principle of Kalzip DuoPlus E and Kalzip Duo E roofing system is to minimise cold bridging through the roof fabric, with a continuous thermal break achieved by using mineral wool or PIR insulation boards in thicknesses of 100mm or 140mm.</p> <p>Sitting above the insulation the specifically developed and designed rotating clip adaptor and clip rail is fixed through to the steel trapezoidal deck profile, purlins, concrete or timber substrate with approved fasteners.</p> <p>This rail system solution serves as an economical and secure mounting surface for the new Kalzip rotating E-clip and adapter. The design and flexibility of the rail and adapter allows the clips to be manually adjusted quickly to suit the required profile during installation.</p>	<p>This economical option provides a cost effective roof solution to the DuoPlus E option, adopting 240mm wide rigid insulation strips, either mineral wool or PIR insulation in 100mm or 140mm thicknesses.</p> <p>These insulation strips provide the support for the rotating clip and rail. Between the strip mineral fibre insulation is used to reduce cost.</p>

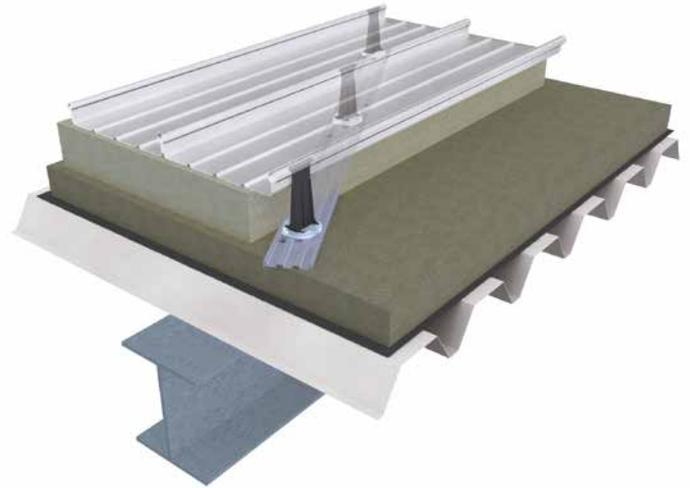
Kalzip® DuoPlus roofing system

Kalzip® DuoPlus E and Duo E roof systems are available in the following variations.

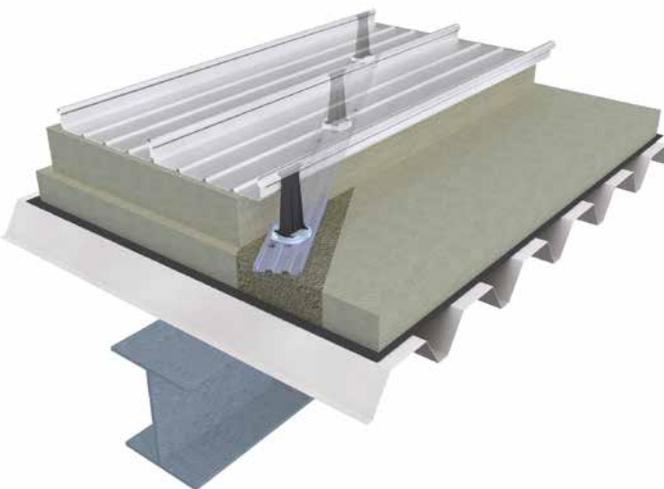
Kalzip DuoPlus E over purlin construction



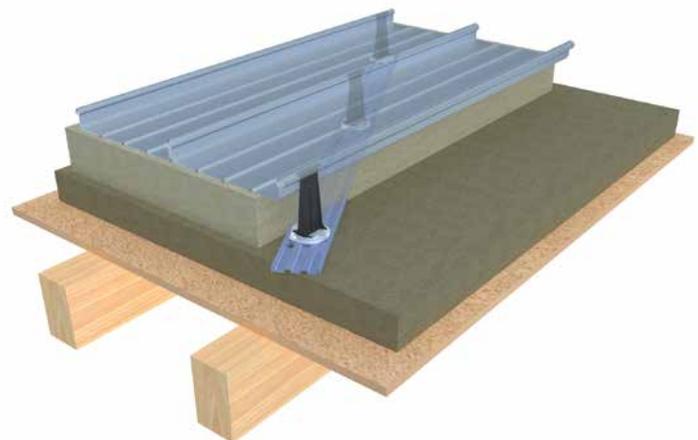
Kalzip DuoPlus E trapezoidal deck construction



Kalzip Duo E trapezoidal deck construction



Kalzip DuoPlus E over timber deck construction



The roofing system for exceptional thermal performance and enhanced sound reduction

PRODUCT DESCRIPTION	PRODUCT SPECIFICATION
Kalzip aluminium profile	Full range of profiles available
E clip and rotatable clip adapter	To suit project application
Rotatable clip rail	Aluminium with pre-punched holes at 7mm and 10.5mm diameter
Rocksilk Krimpackt high strength mineral wool insulation	Thickness: <ul style="list-style-type: none"> • Kalzip DuoPlus – 100mm or 140mm for the complete base layer • Kalzip Duo - In 240mm wide strips to support the rotatable clip rail • Thermal conductivity 0.038 W/mK • Compressive strength: 60 kPa • To BS EN 13501-1 Euro Class A1 - non-combustible
Kalzip 23 Insulation high performance rigid polyisocyanurate (PIR) insulation board	Thickness: <ul style="list-style-type: none"> • Kalzip DuoPlus – 100mm or 140mm for the complete base layer • Kalzip Duo - In 240mm wide strips to support the rotatable clip rail • Thermal conductivity 0.022 W/mK • Compressive strength: 150 kPa • To Euro Class B2 - normal flammability
Kalzip vapour control layer	To suit project application
Kalzip DuoPlus or Kalzip Duo roof system on steel structural deck profile	To suit project application Structural deck minimum thickness 0.9mm Deck profile to project parameters

Combination of insulating materials with different thermal transmittance

ROOF BUILD	BASE INSULATION	QUILT INSULATION	COMPRESSED INSULATION THICKNESS (MM)	U-VALUE (UN-BRIDGED)	U VALUE (BRIDGED)*
1	0.022 W/mK	0.032 W/mK	100 + 100	0.13	0.14
			140 + 180	0.08	0.09
2	0.038 W/mK	0.035 W/mK	100 + 100	0.18	0.19
			140 + 190	0.11	0.12
3	0.040 W/mK	0.040 W/mK	100 + 100	0.19	0.20
			140 + 180	0.12	0.13

* Representative U-values in W/m² K considering 2 clips/m²

Kalzip Ltd
Haydock Lane
Haydock
St. Helens
Merseyside WA11 9TY

T +44 (0) 1942 295500
F +44 (0) 1942 295508
E enquiries.uk@kalzip.com
W www.kalzip.com