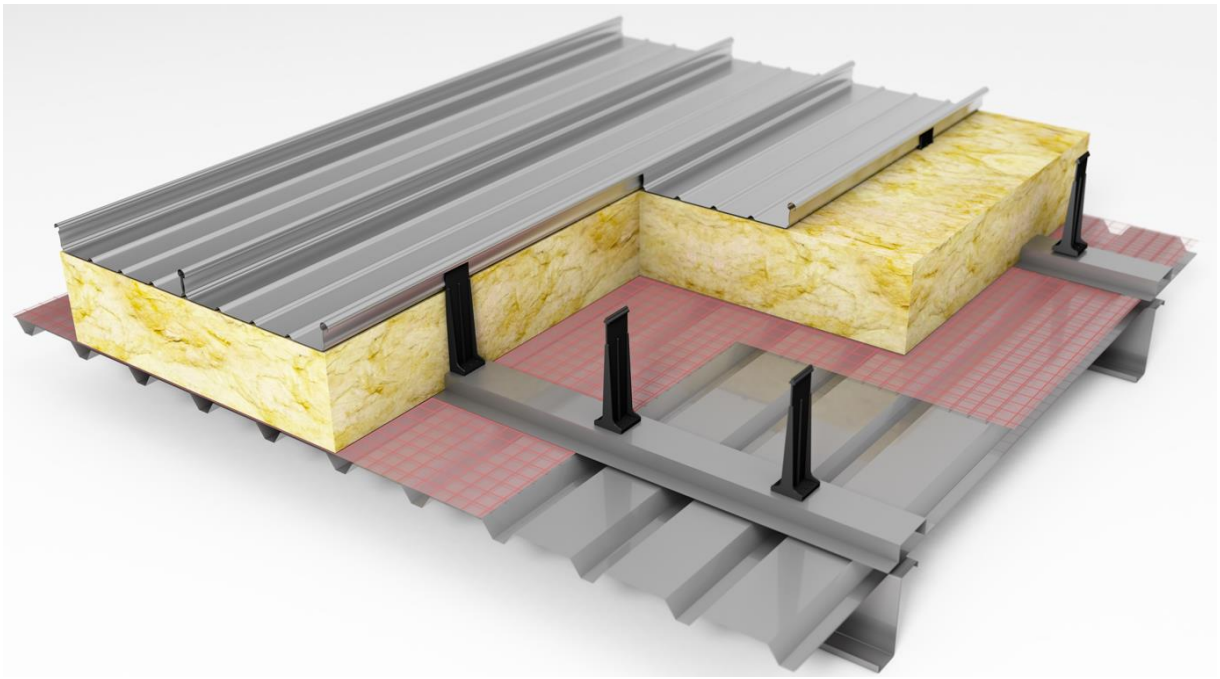
Kalzip Limited

Baily Garner

24-26 Maygrove Road

Kalzip Liner Deck Roof System 0.16

11-08-2023



Contents

H31
Metal profiled/ flat sheet self-supporting cladding/ roof covering

Types of cladding/ covering system

110 Metal

1. Description: METAL STANDING SEAM ROOF: Kalzip Liner Deck Roof System 0.16 W/m^{2}K U-Value
2. Support structure: Timber purlins at maximum 1800mm centres
   2.1. Bearing width (minimum): 58
   2.2. Pitch: Minimum 1.5°
3. Cladding/ covering system type: Standing seam
4. External sheets
   4.1. Material: Aluminium alloy BS EN AW 3004 (AlMn1Mg1)
   0.2% proof stress (Rp0.2) = 185 N/mm2 minimum.
   Ultimate tensile strength (Rm) = 220 N/mm2 minimum.
   4.2. Composition: Aluminium to BS EN 507, grade EN AW-3004
   4.3. Thickness (nominal): 0.9 mm (nominal)
   Tolerance on thickness to be +0.05 mm and –0.025 mm. This is a class 2 thickness tolerance as per BS EN 508-2:2000
   4.4. Profile: Kalzip Aluminium Standing Seam 65/400
   4.5. Cover width: 400mm
   4.6. Finish side 1 (outer)
      4.6.1. Finish Option 1: Natural Stucco Embossed
      4.6.2. Finish Option 2: AluPlusPatina Mill Finish
5. Additional requirements: None
6. Accessories:
   - Extruded Aluminium Alloy (EN AW-6063) Gable End Channel
   - Extruded Aluminium Alloy (EN AW-6061) Gable End Hooks
   - Extruded Aluminium Alloy (EN AW-6063) Tolerance Gable Clip Extrusion
   - Extruded Aluminium Alloy (EN AW-6063) Flat Bar 22mm x 6mm
   - Fabricated Aluminium Alloy (EN AW-3004),Ridge Closures
   - Extruded Aluminium Alloy (EN AW-6063) Drip Angle 40mm x 20mm
   - Kalzip profile ridge fillers
   - Kalzip profile eaves fillers
   - Fabricated aluminium alloy (EN AW-3004) flashings – material and finish as per cladding sheets or as per project requirements
   - Fabricated welded soaker units - material and finish as per cladding sheets or as per project requirements
7. Sealing laps
   7.1. End laps: No end laps – single length sheets
   7.2. Side laps: Kalzip sheets are mechanically seamed over head of support clips with a Kalzip “zipping” machine.

8. Spacers: Support clips, steel reinforced polyamide Kalzip E-clips type E.180
90 mm deep top-hat profile sub-purlin x 1.6 mm thick galvanised steel to BS EN 10326, grade S280GD+Z with designation 275 coating.
    8.1. Fasteners: 6.0 mm diameter stainless steel torque controlled fasteners, reference SDK3-S-377-6.0x45. Two fasteners per E.clip positioned diagonally opposite in the holes of the base of the clip
9. U-value (plane): 0.16W/m²K
10. Thermal insulation: Kalzip Insulation Quilt Plus 40 manufactured with ECOSE™ Technology. 280mm lightly compressed to overall thickness of 270mm to achieve maximum U-value of 0.16 W/m²K
11. Air and vapour control layer: Kalzip VCL Clear - Reinforced virgin polyethylene
12. Acoustic insulation: Not required
13. Lining sheet: As clause 240

General requirements

169 Structural design provided

1. Requirements
    1.1. Generally: Check that structure is in a suitable state to receive cladding before commencing fixing. The subcontractor must confirm acceptance to Main Contractor and C A.
    Support structure tolerances to be as per cladding manufacturer's recommendations.
    Do not fix cladding until final coats of paint have been applied to outer surfaces of the supporting structure.

Design/ performance requirements

187 Deflection of metal cladding/ roof covering

1. Roof covering: Maximum permitted deflection under distributed loads as a multiple of span and due to:
    1.1. Permanent load: L/500
    1.2. Permanent and imposed loads (or undrifted snow load): L/200
    1.3. Permanent and wind loads: L/90

204 Fire performance of roof sheeting

1. External fire exposure: To BS EN 13501-5, Class Broof(t4)

208 Fire performance of insulation

1. Reaction to fire: To BS EN 13501-1, Class A1

Fixing cladding/ roof covering

219 Fasteners

1. Unspecified fasteners: Type(s), size(s), material(s) and finish(es) as specified, or in the absence of such specification, as Recommended for the purpose by the cladding manufacturer.

221 Fittings and accessories

1. Unspecified fittings and accessories: Cappings, closure pieces, flashings, trims, gutters, fillers, spacers, tapes, sealants, fixings, etc, where not specified, to be types recommended by the cladding manufacturer.

223 Prevention of electrolytic action

1. Isolating tape: A type recommended for the purpose by the cladding manufacturer.
    1.1. Location: Apply to those surfaces of supports, which would otherwise be in contact with cladding or accessories after fixing.

240 Lining

1. Safety: Roof lining sheets to be non-fragile and walkable in accordance with BS 5427
2. Material: Galvanised steel to liner clause BS EN 10326
    2.1. Profile: Kalzip Liner Deck KLD32S
    2.2. Thickness (minimum)/ gauge: 0.7mm
    2.3. Cover width: 1000mm
    2.4. Finish/ Colour: Enamel white lining (for internal use)
3. Primary sheet fasteners: 5.5 mm diameter carbon steel self drilling fasteners
4. Joint sealing: Not required
5. Additional requirements: Side laps to be stitched at maximum 400 mm centres with 4.8 mm diameter carbon steel self drilling stitching fasteners

261 Air and vapour control membrane

1. Material: Reinforced virgin polyethylene
    1.1. Vapour resistance (minimum): 350 MNs/g
2. Continuity: Lay as work proceeds ensuring continuity. Lap side and end laps of vapour control layer and seal with sealant tape achieving full bond. Seal with sealant tape to perimeter and to pipes, ducts, structural members etc. which abut or pass through achieving a full bond
    2.1. Laps: Not less than 50 mm, seal with tape. Achieve full bond
3. Tape: Kalzip VCL Sealant Tape. Butyl rubber tape with vapour resistivity of 900 MNs/g
    3.1. Size (width and thickness): 15 mm wide x 2 mm thick
4. Repairs and punctures: Carefully check for tears and punctures and seal them with lapped patch of same vapour control layer material and seal with sealing tape along all edges achieving full bond

270 Mineral wool thermal insulation

1. Standard: To BS EN 13162
2. Material: Kalzip Insulation Quilt Plus 40
    2.1. Thermal conductivity (maximum): 0.040W/mK
3. Installation: Install and secure insulation as the roofing work proceeds ensuring continuity and that all edges are closed off and no gaps are left. Joints between layers of insulation to be staggered. Keep insulation dry at all times

300 Profile fillers generally

1. Material: Closed-cell cross-linked EP
2. Manufacturer: Kalzip Ltd
    2.1. Product references: Kalzip profiled fillers
3. Colour: Black
4. Thickness: Minimum 30 mm
5. Fixing method: Locate where shown on drawings and wherever necessary to close off corrugation cavities from the outside and inside of the building. Ensuring a tight fit, leaving no gaps

5.1. Requirement: To close cavities/ regulate air paths within the external envelope. Tight fit with no unintended gaps

410 Fixing sheets generally

1. Cut edges: Cut sheets and flashings to give clean true lines, with no distortion. Remove burrs and any lubricant
2. Penetrations: Cut openings in sheets for outlets, vent pipes, flues, etc. to the minimum size necessary and as per cladding manufacturer's recommendations
3. Sheet orientation: For double skin construction do not line out building completely before installation of the outer sheets.
   Lay sheets with exposed joints of side laps away from the prevailing wind unless shown otherwise on drawings
4. Sheet ends, laps and raking cut edges: Ensure that the raking cut edges at hips and valleys are fully supported
5. Fasteners: Install fasteners to correct tightness using any special tools recommended by the fastener manufacturer. When used, screw guns must be fitted with depth sensitive devices and used at the correct speed
6. Debris: Remove all drilling swarf, dust, debris and any other foreign matter before finally fixing sheets into position
7. Completion: Protect sheets adequately during fixing and up to practical completion against mechanical damage, corrosion and disfigurement. Rectify any defects as quickly as practicable to minimise damage and nuisance

411 Fixing Kalzip Sheets

1. Sheet orientation: Kalzip sheets to be installed by mechanically seaming sheets to support clips with Kalzip zipping machine.
   Kalzip sheets to be installed as per cladding manufacturer's instructions, British Board of Agrément Certification No. 98/3481 and Institute fur Bautechnic Zulassungbescheid N R 14.1-181.
   Only roofing contractors who are members of Kalzip Ltd' approved roofing contractors programme should be employed to install Kalzip roofing.
   Approved roofing contractor is to provide on site fully trained personnel at a minimum ratio of 1:3.
   All fully trained personnel to have obtained the General Operator's Certificate and Identification Card at Kalzip Ltd' training centre

470 Structural movement joints

1. Requirement: Leave space between sheets to coincide with structural movement joints. Fix weathertight movement joint cover to sheets on one side only. Movement joint cover detail to be as per Kalzip Ltd recommended detail KZ-0-MISC-K-8-006

480 Flashings/ trims generally

1. Lap joint treatment
   1.1. Vertical and sloping flashings/ trims: Joints in flashings and trims to be installed to fully accommodate thermal movement. Flashing joints generally to be as per cladding manufacturer's recommendations
   1.2. Horizontal flashings/ trims: Joints in flashings and trims to be installed to fully accommodate thermal movement. Flashing joints generally to be as per cladding manufacturer's recommendations

Ω End of Section

Specification created using NBS Chorus