

Specification Guide

May 2011

First for innovation

The widest range of PVC-U and PVC-UE roofline, cladding and window finishes available in the UK



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Benefits of Kestrel PVC-UE & PVC-U

Kestrel's popularity in the new build, specification, architectural and refurbishment sector stems from its product reliability and wide acceptance amongst the trade and the general public. Refurbishment programmes by housing associations and local authorities acknowledge Kestrel products as the route to lower maintenance costs.

Key Features

Flexibility

A wide range of designs and styles to suit virtually every commercial, industrial and domestic application. With flexibility of application built in at every stage.

Durability

Long-lasting, reliable products that will not rot, split, warp or crack and that are designed to resist the elements.

Practicality

Never needs painting or preserving and will stay looking good for years to come. Easy to specify and simple to install.

Good-looking

A wide variety of colours and finishes to choose from with designs for every application.

Quality - ISO 9000

The company has a Quality Management System approved by the British Standards Institute to ISO 9000 (FM506475).



Environmental - ISO 14001

The company has a Environmental Management System approved by the British Standards Institute to ISO 14001 (EMS533259).



Recovinyl

Recovinyl facilitates the collection and recycling of PVC post-consumer waste from the construction and demolition sector.



REGISTERED RECYCLER

Product Guarantees

Kestrel's white products are guaranteed for 15 years, woodgrains for 10 years and lightgrains for 7 years provided that approved installation and maintenance instructions are followed. Copies of the guarantees which relate to white and foiled products are available from the Kestrel marketing team.



Calcium Organic

Eliminating the lead content in PVC has been a matter of particular concern for responsible manufacturers in our industry. The Commission of the European Communities has confirmed in its Directive 76/769 that Dibutyl Tin (DBT) compounds such as those used in tin stabilisers for PVC building products will be banned in articles supplied to the consumer that contain over the equivalent 0.1% weight of tin from 2012. Some suppliers have already made the switch, with Kestrel among those leading the way. In fact, we believe we were the first in the UK to offer calcium organic core and calcium organic skin in our PVC, future proofing the product for our customers and doing what we can now in the global drive for environmental protection.



Fastrack Cad

Fastrack CAD is an online CAD database which gives architects and specifiers the opportunity to download DXF or DWG files. Kestrel's library of CAD drawings which is available on-line and can be accessed and downloaded by visiting www.kbp.co.uk



NBS

The National Building Specification (NBS) is a library of clauses that can be selected and edited and used to produce project specifications. Kestrel's NBS information is available on-line and can be accessed through www.thenbs.com



The Kestrel Range and Colours

Kestrel PVC-UE & PVC-U extruded products are ideally suited for both domestic and commercial applications. They perform better in use than traditional alternatives, are quick and easy to install, and are virtually maintenance-free. When calculating whole-life costs, Kestrel's products invariably offer a more practical and lower cost option.



Fascia and Capping boards

Kestrel's extensive range of Square Leg, Ogee and Bullnosed fascia boards provide the complete solution to every roofline application.



Soffit/General purpose boards & accessories

Available in widths from 100mm to 600mm, in 5m lengths and now also available with two finished edges with up to seven different foil finishes.



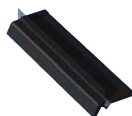
Preventilated Soffit

Available in Kestrel whites and woodgrain, the preventilated soffit boards incorporate integral air slots giving 10mm and 25mm continuous ventilation. They are available in widths up to 600mm.



Kavex Textured Cladding

Kestrel's latest textured shiplap cladding comes with 150mm & 300mm coverage with a full range of accessories. It is available in White, Sand and Cream providing an effective yet stylish external cladding solution.



Ventilation and Eaves protection Systems

An over fascia system which provides an alternative method of roof void ventilation. Simple to install with easy fit clipping joints, the system is available in Black. Circular soffit vents are also available, in White and all three solid colours.



Window Boards

A wide variety of shapes and sizes available to suit all domestic and commercial window applications.



Finishing Trims

Kestrel's finishing trims are available in a selection of colours, shapes and sizes to suit all window applications. Available in 5m lengths in various pack quantities.



Cladding systems

Kestrel's cladding systems can be fixed vertically, horizontally or diagonally and are available in two styles: Shiplap with 150mm coverage and V-joint with 100mm coverage. The system is available in all white and woodgrain colours.



Fixings

A selection of sizes is available in a variety of colours to suit all applications.

Colours

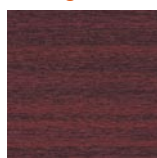
Kestrel has been at the forefront of product development in the PVC-UE and PVC-U building products sector for the last twenty years. Our innovations have helped to develop new markets and to offer both customer and consumer a greater degree of choice. Keeping abreast of consumer trends for colours and textures is also key to meeting demand.

The current Kestrel range includes:

- **Standard White • Dove White • Brilliant White**
- **Mahogany Woodgrain • Sherwood Woodgrain**
- **Black Woodgrain • Rosewood Woodgrain**
- **Cream Lightgrain • White Lightgrain**
- **Irish Oak**

For a colour-matched product sample or current Kestrel Price list, please contact our samples department 01724 400440.

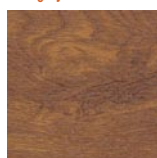
Woodgrains



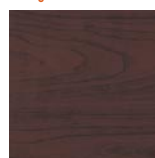
Mahogany - WG



Blackgrain - BG

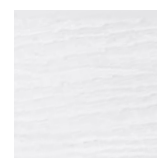


Sherwood - SG

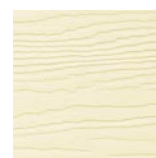


Rosewood - PG

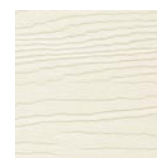
Kavex Range



White - W

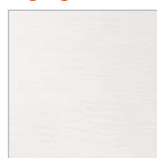


Sand - RAL1015



Cream - RAL9001

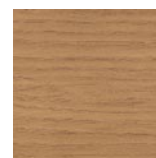
Lightgrains



Whitegrain - WHG



Creamgrain - CRG



Irish Oak - IOG

Fascia Installation Details

This section of the guide is intended to provide you with a brief overview of the popular products in Kestrel's Roofline range, where they can be used and the main criteria for installation.

Pre-Installation Considerations

Preparation:

- All access and works to comply with current and relevant Health & Safety and Construction Design Management Regulation recommendations
- Clear work area in-line with best practice before starting work, ensuring safe scaffolding access is available
- Remove first row of roof tiles where necessary
- Remove all existing fascia / soffit materials
- Replace any un-sound / rotten timber or felt and treat rafter ends with preservative
- Maintain air path for roof ventilation

Installation considerations

Installation considerations are intended to provide you with need-to-know information for the core processes of product installation.

They are not intended as an exhaustive installation guide. The information presented will provide you with a valuable resource when assessing how best to use our products in your selected application.

Fascia

Fit directly to rafter ends using polytop nails, 2 per fixing centre max 600mm centres - 65mm nails. Austenitic stainless steel (Grade A4 BS6105). Fascia is capable of load bearing in relation to light weight gutters and the first row of roof tiles (Eaves Tiles).

Expansion gaps of 5mm per board end must be allowed for during installation.

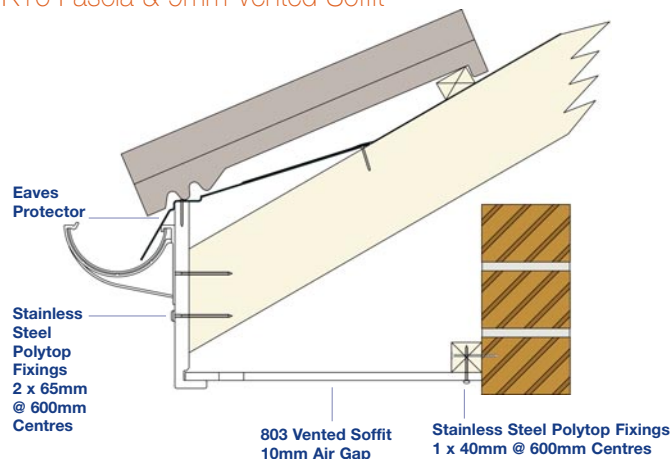
Cover joints and Corners to be secured using low modulus neutral cure silicone. BS5889 Type A.

Gutter brackets to be secured directly into the board using stainless steel screws - 10 gauge x 25mm long (parallel thread form).

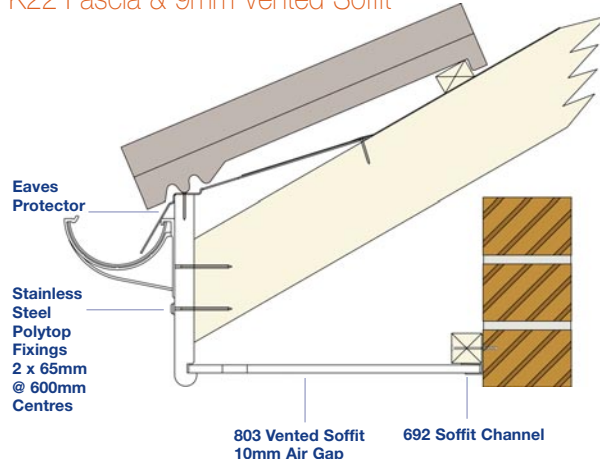
All Kestrel fascia boards 16mm and over are capable of load bearing and may be used in new-build or refurbishment.

Typical Eaves Details

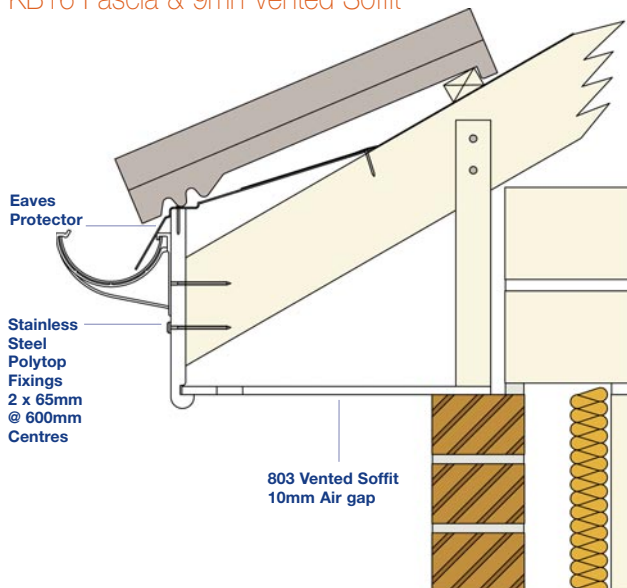
K16 Fascia & 9mm Vented Soffit



K22 Fascia & 9mm Vented Soffit

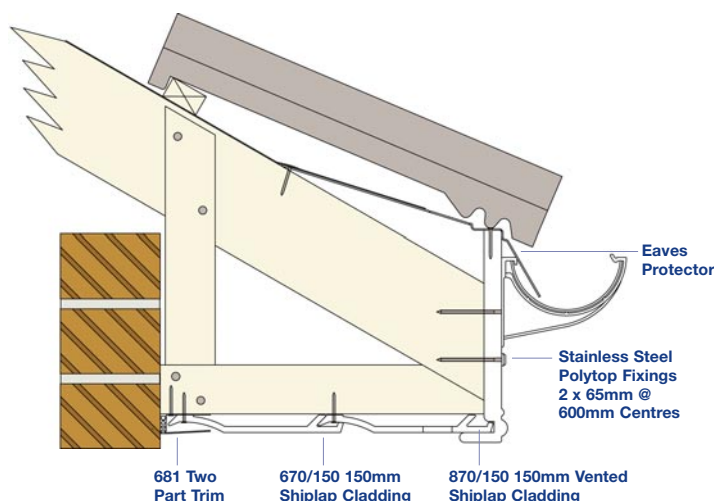


KB16 Fascia & 9mm Vented Soffit



Fascia Installation Details

018 Fascia & 150mm Shiplap Cladding - Vented

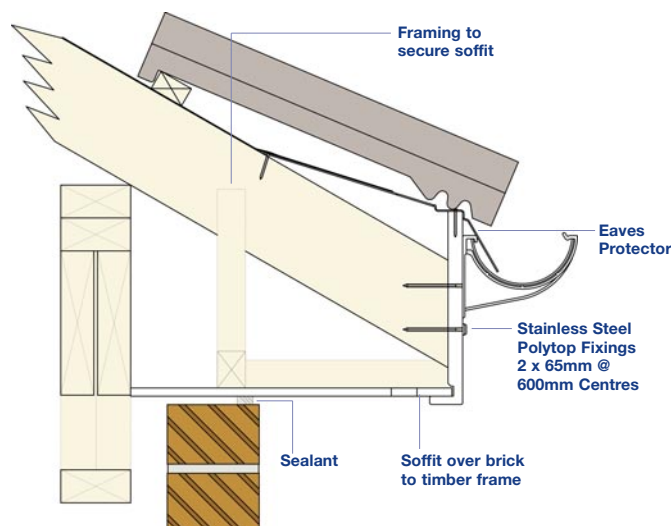


Tongue and Groove Cladding

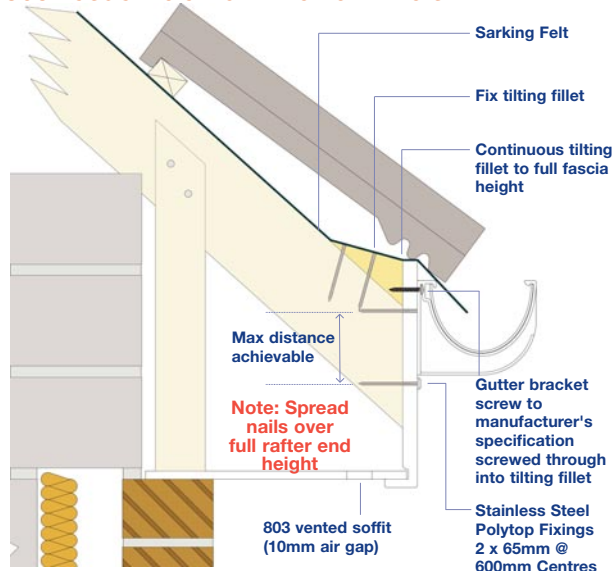
Shiplap and Open-V cladding planks may also be used as soffit and are available in vented and non-vented versions. Vented cladding planks have a 12.5mm air gap which permit 25mm continuous ventilation to be achieved via the use of two rows of vented product. Cladding planks are secured using 30mm cladding pins.

- Joints for K22, K16, KB16 & K605 are available in 600mm lengths in addition to shorter standard lengths.
- When using 018 as a bargeboard the box end piece will need to be packed out to prevent the Ogee form of the bargeboard standing proud of the box end piece.

K16 & 803 Timber Frame Detail



K16 & 803 Fascia Detail for Extreme Winters



Timber Frame

When fitting to timber frame project, be aware the soffit needs to be large enough to carry over the top of the brickwork line, back to the timber frame. Soffit widths should not exceed 300mm without additional support.

Extreme Winter Fitting Guidelines

- A continuous tilting fillet must be used.
- The fillet provides screw retention for the gutter brackets and support to the top of the fascia. It should be securely nailed into the top of each rafter
- Plastic headed, 65mm long, austenitic stainless steel (grade A4) nails, are used to fix the fascia by nailing directly into rafter ends.
- 2 fixings must be used at each fixing centre, with a maximum distance of 600mm between centres.
- Fixings should utilise as much of the height of the rafter end as possible, taking care not to split the timber and ensuring full depth nail engagement.
- Gutter bracket screws should be fixed through the PVC-UE fascia into the continuous tilting fillet.
- Gutter specification and fixings should be obtained from the gutter system manufacturer.

When considering the overall performance of the eaves area of a roof, it is important to include the roof design, the components and ultimately the imparted load from rain, snow and wind. The above guidance has been compiled to aid the roof designer in obtaining the maximum performance from the PVC-UE fascia element.

Bargeboard Installation Details

Bargeboard

K16 16mm bargeboard should be installed using 65mm Polytop nails 2 per fixing centre at maximum 600mm centres. Austenitic stainless steel (grade A4 BS6105).

605 9mm bargeboard should be installed using 50mm Polytop nails 2 per fixing centre at maximum 600mm centres. Austenitic stainless steel (grade A4 BS6105).

Boards less than 16mm thick boards are required to be fully supported along their length.

K-Wave and K-Crest being 16mm thick should be installed using 65mm Polytop nails 2 per fixing centre at maximum 600mm centres.

The joint of bargeboards meeting at a ridge should be covered using a cover joint or feature finial and secured using Low Modulus Neutral Cure Silicone

Complementary Ranges

The K16 and 605 are complementary ranges being the same external shape.

This allows the 9mm barge to be used in conjunction with the 16mm fascia for a more cost effective solution.

The K22 and KB16 are also complementary ranges being the same external shape.

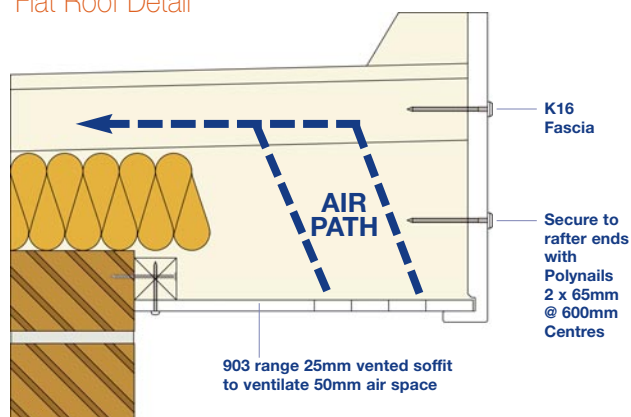
This allows the 16mm barge to be used in conjunction with the 22mm fascia, to be a more cost effective solution.

NB: KB16 barge can be run into a K22 box end piece to create a stepped box end feature.

Flat Roof Installation

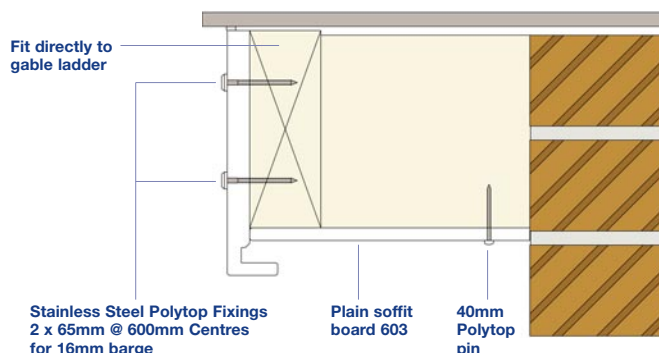
When fitting to a flat roof area, consideration must be given to allow adequate ventilation above the insulation in order to comply with building regulations. See page 11 for a full explanation of ventilation requirements.

Flat Roof Detail

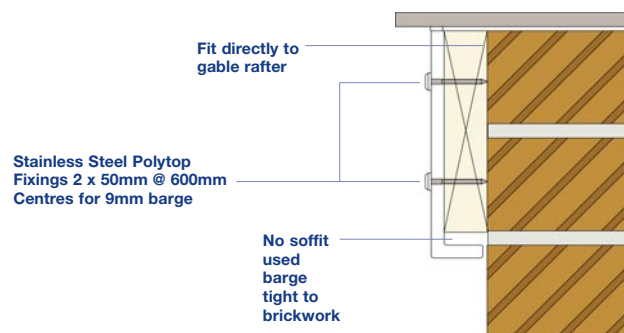


Typical Verge Details

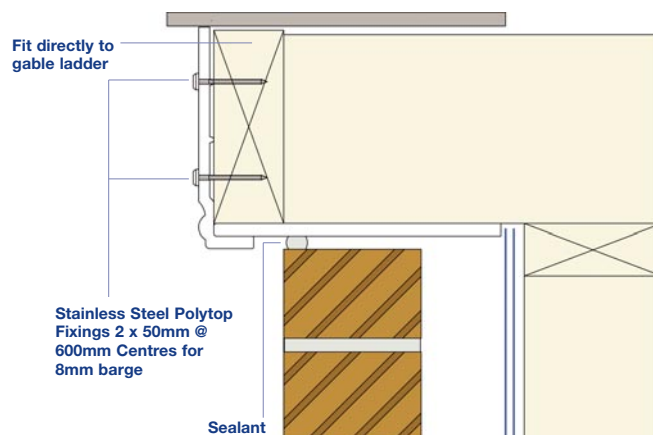
K16 - 16mm Bargeboard & Plain Soffit



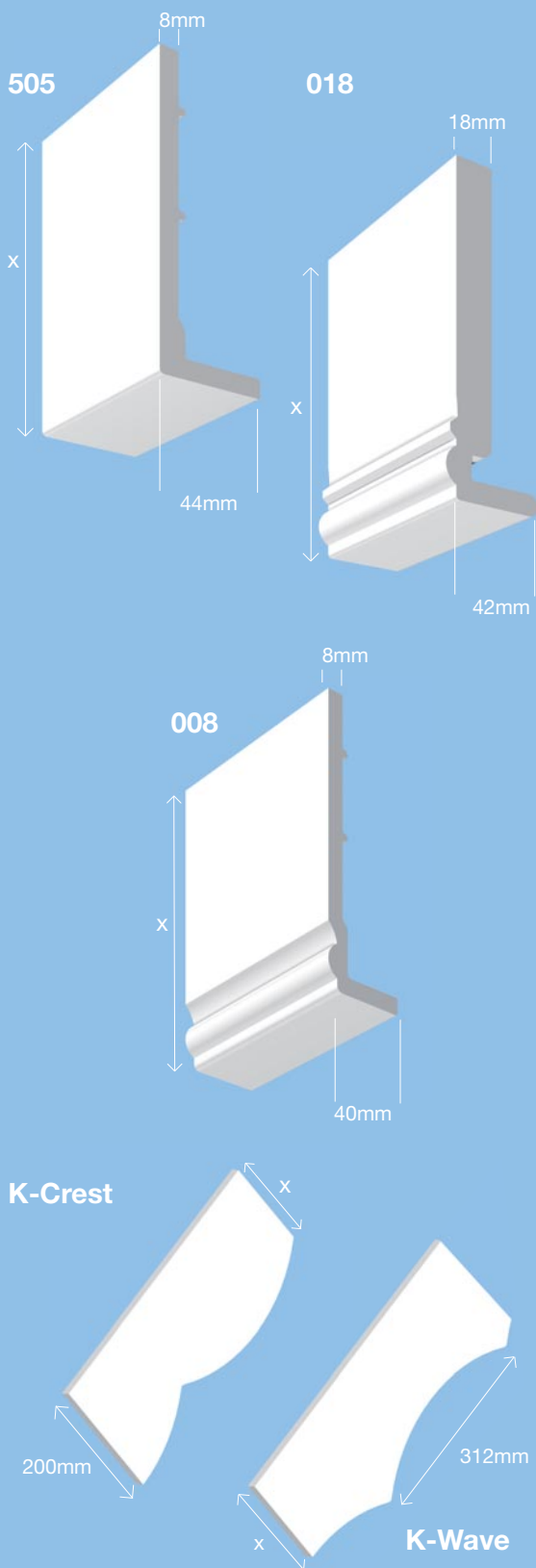
605 - 9mm Bargeboard & No Soffit



008 - 8mm Bargeboard to Timber Frame



| Roofline Range | | | |
|----------------|-------------|--------------|-------------------|
| | | Code | Dimension X |
| | K22 | K22/150 | 150mm |
| | | K22/175 | 175mm |
| | | K22/200 | 200mm |
| | | K22/225 | 225mm |
| | | K22/250 | 250mm |
| | | K22/300 | 300mm |
| | | K22/355 | 355mm Double Nose |
| | | K22/405 | 405mm Double Nose |
| | KB16 | KB16/100 | 100mm |
| | | KB16/150 | 150mm |
| | | KB16/175 | 175mm |
| | | KB16/200 | 200mm |
| | | KB16/225 | 225mm |
| | | KB16/250 | 250mm |
| | | KB16/300 | 300mm |
| | | KB16/405 | 405mm Double Nose |
| | K16 | K16/150 | 150mm |
| | | K16/175 | 175mm |
| | | K16/200 | 200mm |
| | | K16/225 | 225mm |
| | | K16/250 | 250mm |
| | | K16/355 | 355mm Double Leg |
| | | K16/405 | 405mm Double Leg |
| | | K16/405/1.25 | 405mm Double Leg |
| | KF16 | KF16/150 | 150mm |
| | | KF16/250 | 250mm |
| | 605* | 605/100 | 100mm |
| | | 605/125 | 125mm |
| | | 605/150 | 150mm |
| | | 605/175 | 175mm |
| | | 605/200 | 200mm |
| | | 605/225 | 225mm |
| | | 605/250 | 250mm |
| | | 605/300 | 300mm |
| | | 605/405 | 405mm |
| | | 605/450 | 450mm |
| | | 605/500 | 500mm |
| | | 605/550 | 550mm |
| | | 605/600 | 610mm |

| Roofline Range | | | |
|--|--|--|--|
| | | Code | Dimension X |
|  | 505* | 505/150 505/175 505/200 505/225 505/250 505/355 505/405 | 150mm 175mm 200mm 225mm 250mm 355mm 405mm Double Leg |
| | 018 | 018/150 018/175 018/200 018/225 018/250 018/405 | 150mm 175mm 200mm 225mm 250mm 405mm Double Leg |
| | 008* | 008/150 008/175 008/200 008/225 008/250 008/300 008/405 | 150mm 175mm 200mm 225mm 250mm 300mm 405mm Double Leg |
| | K-Wave & K-Crest K-Wave K-Crest | | 150mm min. coverage 150mm min. coverage |
| | | <p>* These products can be used as fascia boards with a minimum 10mm marine ply backing board.</p> | |

Boxed End Installations

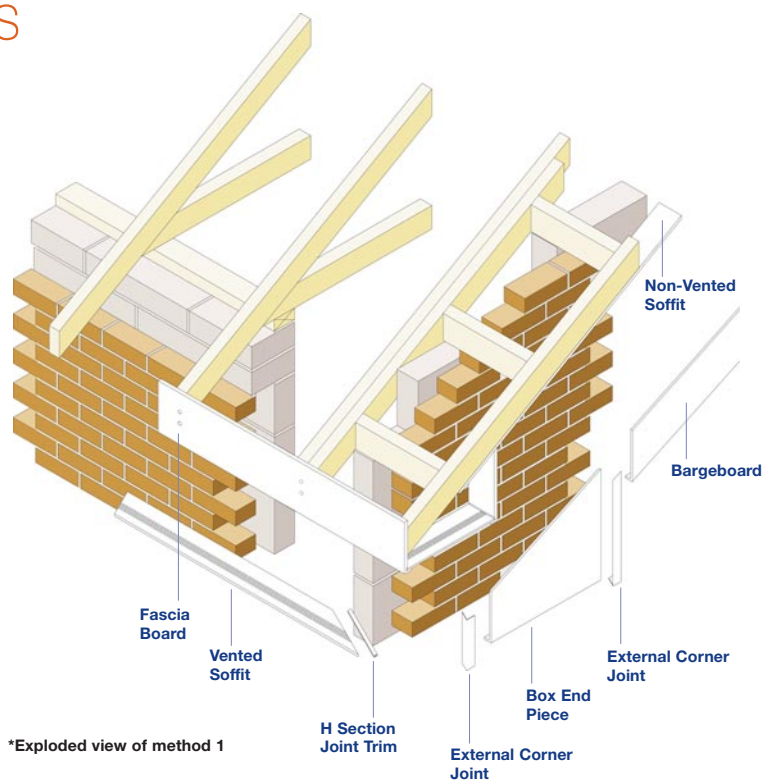
Boxed Ends

To provide a neat and weathertight area at the point where Fascia and Bargeboard meet, it is necessary to construct a box end.

A box end piece is cut from wide Bargeboard material (nominally 405mm) to suit the roof pitch and overhang requirement. When using K605 bargeboard large box end details may be obtained by using the extra wide product of 600mm width.

The soffit forming the base of the box end must match the eaves soffit and is mitred at the joint, using 691 H-section as a jointing trim.

Box ends are supported using a preservative treated timber framework.



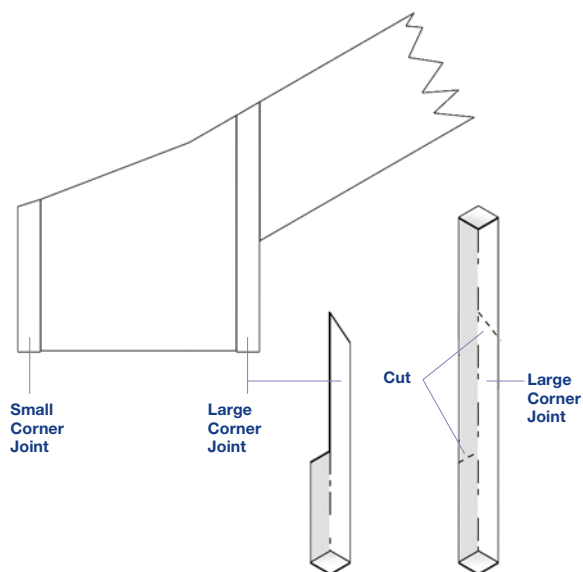
Boxed End Methods

The jointing of the bargeboard into the box end piece can be achieved in two ways

Method 1

The Bargeboard is cut plumb directly above the back edge of the box. A corner joint with a piece of one face removed is then used to cover the back corner and Bargeboard/Box end piece joint.

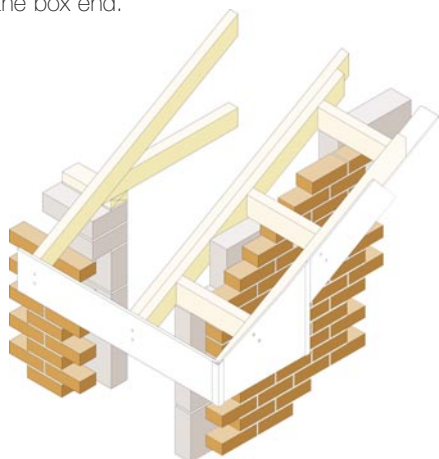
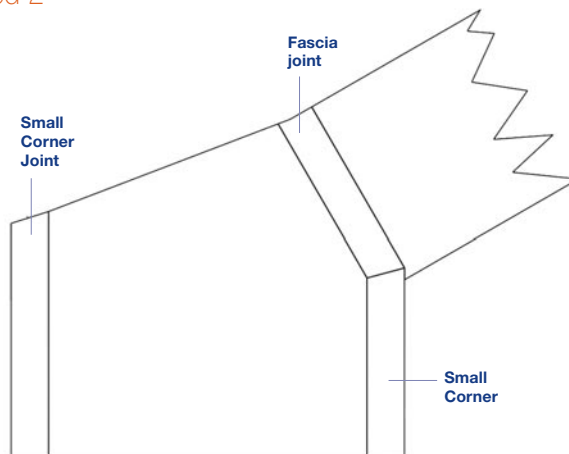
Method 1



Method 2

The bargeboard is cut perpendicular to its length; the angled joint between the boards being covered by a cover joint with its return leg removed. The bottom edge of the cover joint is then cut to mate with the top edge of the corner joint used to cover the back corner of the box end.

Method 2



Soffit Installation Details

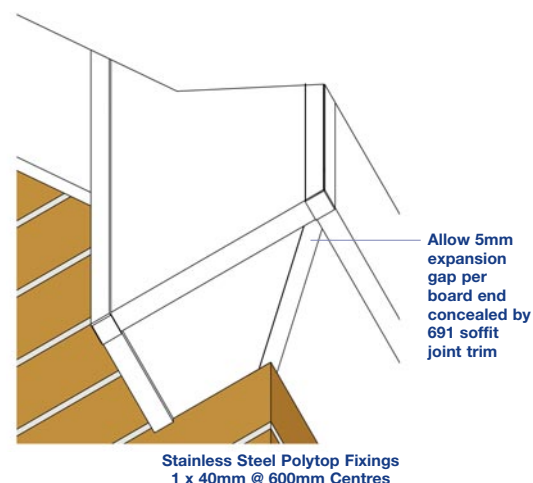
Soffit

Kestrel 9mm soffit boards are available in non-vented versions for use as verge soffit or as eaves soffit when other forms of eaves ventilation are to be used. They are also available in ventilated form and can contribute towards providing the necessary roof space ventilation.

Soffit is secured at maximum 600mm centres to timber using 40mm Polytop pins, alternatively a wall side fix may be achieved using 692 Soffit Channel.

In properties where the outer skin of brickwork is level with the bottom of the fascia board soffit groove, the soffit may be extended over the brickwork and clamped using timber battens secured to the rafter sides.

- Soffit widths should not exceed 300mm without additional support.
- A H-section trim 691 is used to join soffit boards.
- Soffits can be detailed from solid Soffit Board or Open 'V'-Joint/Shiplap cladding.
- A Soffit Board channel can be used as a soffit location for soffits
- All Open 'V'-Joint and Shiplap cladded soffits should be fully supported and fixed to timber bearers at max 600mm centres along the soffit length
- It is recommended that cladding is detailed when designing wide soffits.



Roofline Ventilation

The requirement to ventilate the roof space of a building to protect the building and people who use it from the harmful effects caused by condensation is covered by 'The Building Regulations 2000.'

Guidance on the provision of adequate ventilation is given in Approved Document C2 Resistance to Moisture (2004 edition) and detailed in BS5250: 2002 Code of practice for control of condensation in buildings.

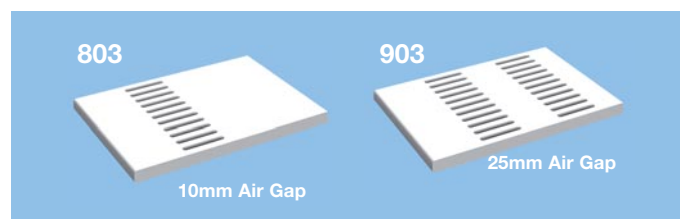
Kestrel provides a comprehensive range of products designed to comply with the requirements of these regulations. (www.kbp.co.uk)

Kestrel 9mm soffit boards are available in non-vented versions for use as verge soffit or as eaves soffit when other forms of eaves ventilation are to be used.

They are also available in ventilated form and will contribute towards providing the necessary roof space ventilation.

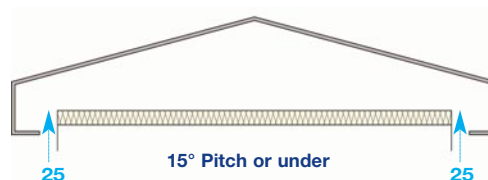
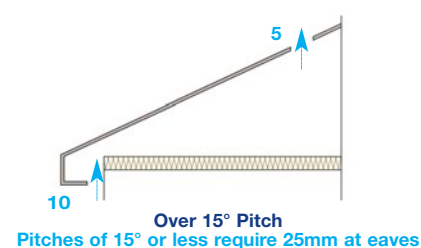
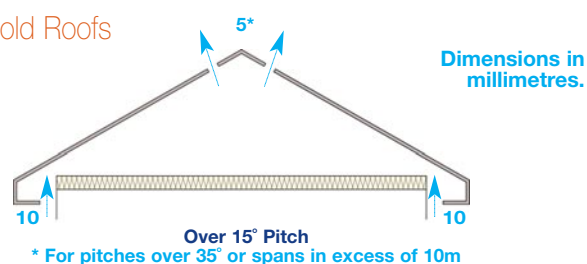
These pre-vented soffits are available in 10mm air gap up to 600mm wide and 25mm air gap up to 450mm wide.

All soffits are covered by Kestrel's British Board of Agreement Certificate No. 95/3117.

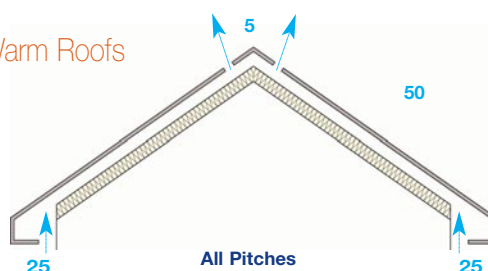


Provision of Ventilation

Cold Roofs



Warm Roofs



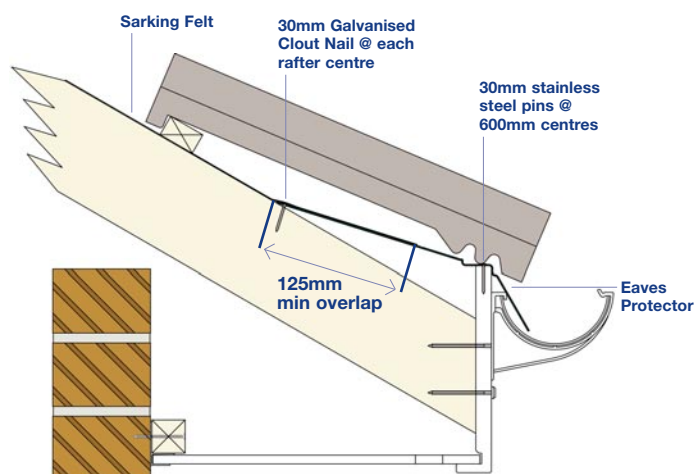
Provision of Ventilation

The illustrations reflect the basic ventilation requirements normally applicable. For additional information please refer to the current Building Regulations and appropriate British Standards.

Roofline Ventilation

Ventilation and Eaves Protection

K708 Eaves Protector



Eaves Protection

The Kestrel Eaves Protector K708 has been designed to provide a long-term solution to the problems associated with eaves decay under the roof, including the degradation of sarking felt and the secondary rotting of rafter timbers and other roof structures.

Available in 1.5m, 2.55m or 4.95m lengths the Kestrel eaves protection profile consists of a durable black pigmented PVC-U profile located between the roof tiles and the PVC-UE fascia system.

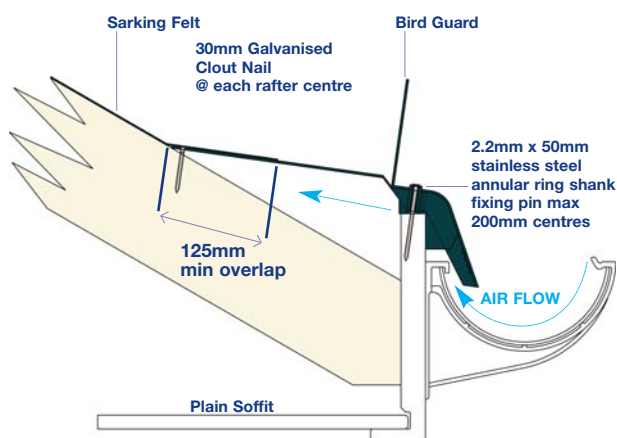
Whether used on refurbishment projects or in new-build installations, the traditional sarking felt finishes before the fascia and is lapped over the eaves protector. Therefore it is not exposed to the elements and is not subject to decay.

Ventilation and Eaves Protection

A further enhancement of the idea of the eaves protector comes in the form of K711 an eaves protector combined with over fascia ventilation and bird comb. The ventilation of the roof void at eaves level is provided by an upstand on the underside of the eaves protector which sits on the top edge of the fascia board.

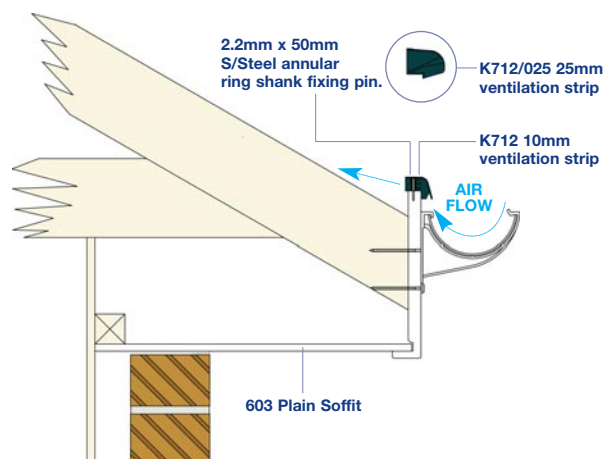
The K711 product provides ventilation equivalent to a 10mm continuous slot. This product is also available as K711/25 to provide ventilation equivalent to a 25mm continuous slot. The provision of an integral bird comb provides an effective barrier against bird infiltration into the roof void when using profiled roof tiles. If flat slate tiles are to be used the comb is readily removed.

K711 Over Fascia Ventilator & Eaves Protector



The durability and rigidity of the eaves protectors and the load bearing features of Kestrel fascia boards are such that no tilting fillet is needed.

K712 Over Fascia Ventilation Strips



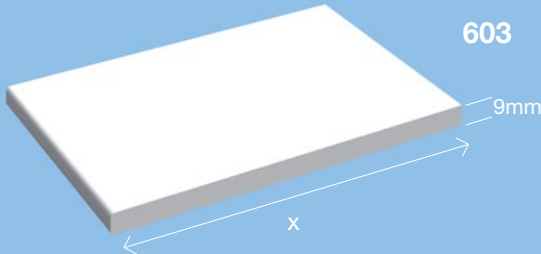
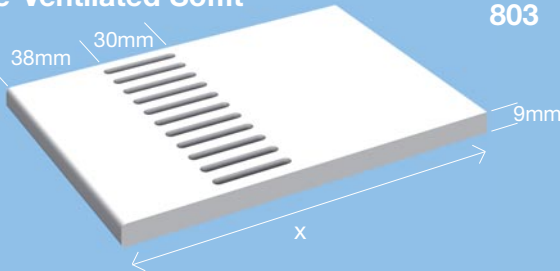
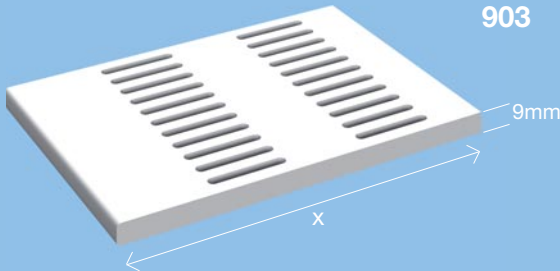
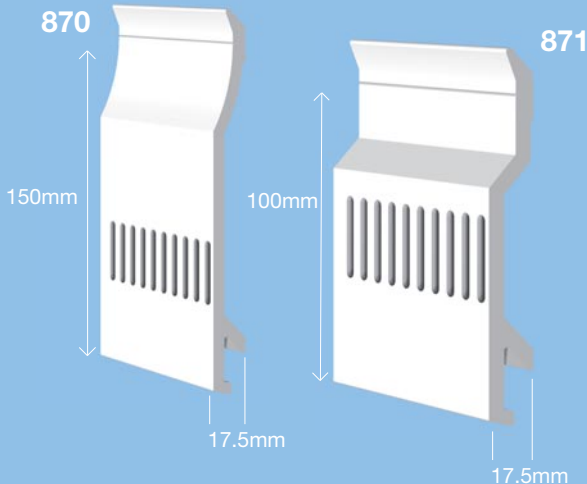
Eaves Ventilation

A simple means of providing ventilation over the fascia is also available in the form of Kestrel K712 over fascia ventilation strips.

The K712 product provides ventilation equivalent to a 10mm continuous slot.

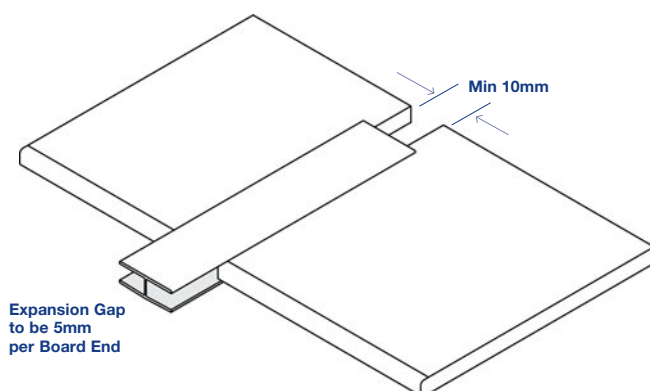
This product is also available as K712/025 to provide ventilation equivalent to a 25mm continuous slot.

As with the K711, this product is designed to sit directly on top of the fascia board. Fix with 2.2mm x 50mm stainless steel annular ring shank fixing pin at every fixing centre.

| Soffit Range | | | |
|--|--|---|---|
| | | Code | Dimension X |
| Non-ventilated Soffit  | | 603 603/100 603/125 603/150 603/175 603/200 603/225 603/250 603/275 603/300 603/330 603/400 603/450 603/500 603/550 603/600 | 100mm 125mm 150mm 175mm 200mm 225mm 250mm 275mm 300mm 330mm 400mm 450mm 500mm 550mm 600mm |
| 10mm Air Gap Pre-Ventilated Soffit  | | 803 803/100 803/150 803/175 803/200 803/225 803/250 803/300 803/330 803/400 803/450 803/500 803/550 803/600 | 100mm 150mm 175mm 200mm 225mm 250mm 300mm 330mm 400mm 450mm 500mm 550mm 600mm |
| 25mm Air Gap Pre-Ventilated Soffit  | | 903 903/150 903/200 903/225 903/300 903/400 903/450 | 150mm 200mm 225mm 300mm 400mm 450mm |
| 12.5mm Air Gap Pre-Ventilated Cladding  | | 870 150mm 17.5mm 871 100mm 17.5mm | 150mm 100mm |
| | | Code Cladding 870/150 Cladding 871/100 | Coverage 150mm 100mm |

Typical Jointing Details

Soffit Joint Installation



Jointing of Fascia & Bargeboard

All Kestrel fascia board ranges have a series of specifically designed accessories to complement the size & shape of the fascia board.

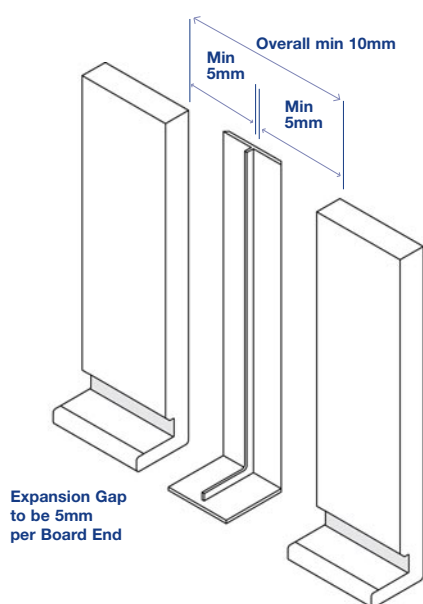
These include some of the following:

- Extra Large Corner Joints (Typically 600mm for Box ends)
- Standard Corner Joints
- Fascia Joints
- Internal Corner Joints
- End Caps

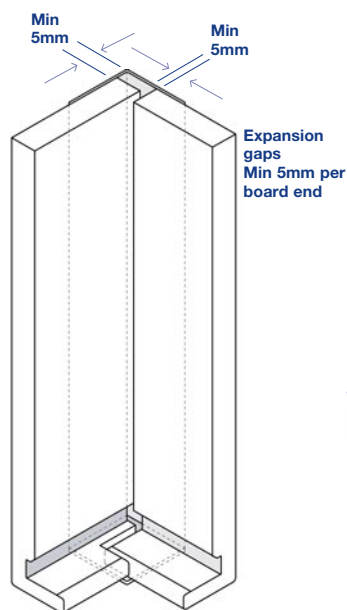
All joints should be secured using Low Modulus Neutral Cure Silicone.

Gaps to increase to 8mm per board end for foiled products

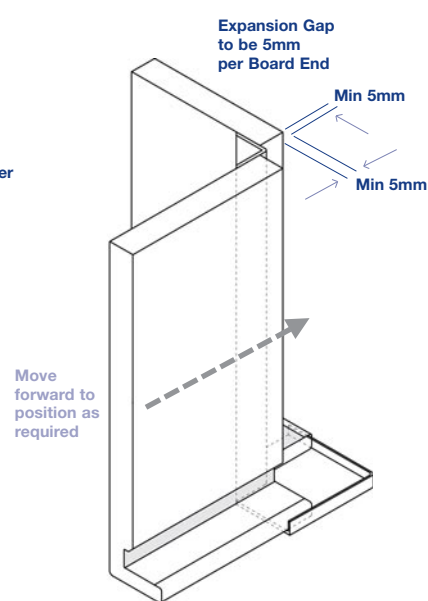
Fascia Joint Installation



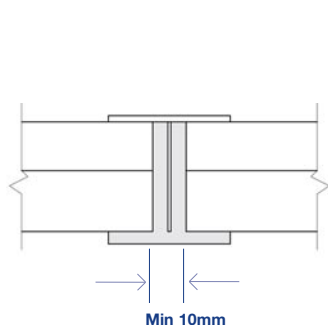
Corner Joint Installation



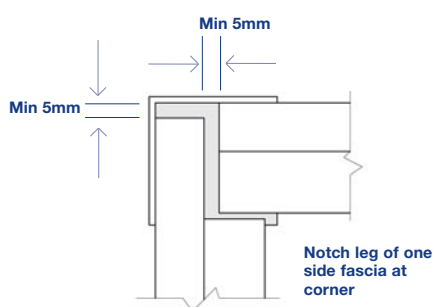
Internal Joint Installation



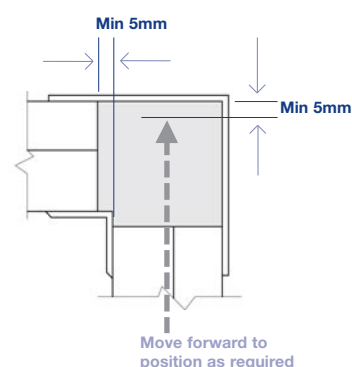
Butt Joint - Plan View



Corner Joint - Plan View



Internal Joint Plan View

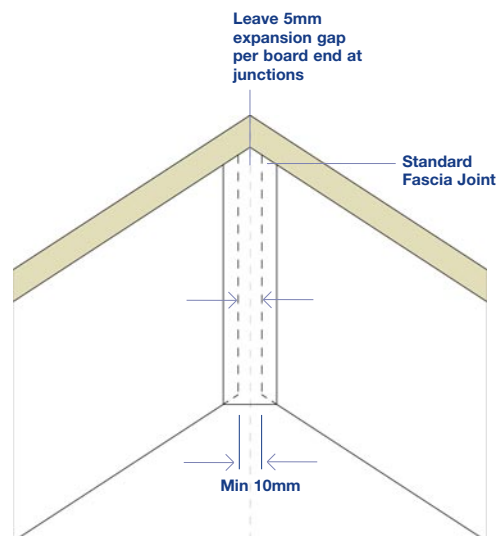
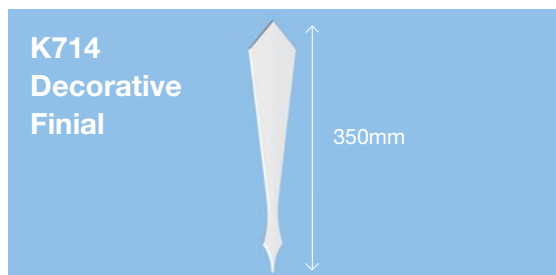


Typical Jointing Details

Apex Joint

Apex joints are made utilising a standard fascia joint from the main fascia range cut to suit. e.g. for the K16 range item 649/300.

Alternatively, a decorative finial (K714) can be used to give a more aesthetically pleasing finish.



Running Gables / In-Line Pikes

Where fascia meets barge along a running gable, it is important that the same range of fascia and bargeboard is used. This will prevent a step being created.

Four typical methods are shown to the right. The exact method used will be dependent on roof pitch, layout etc.

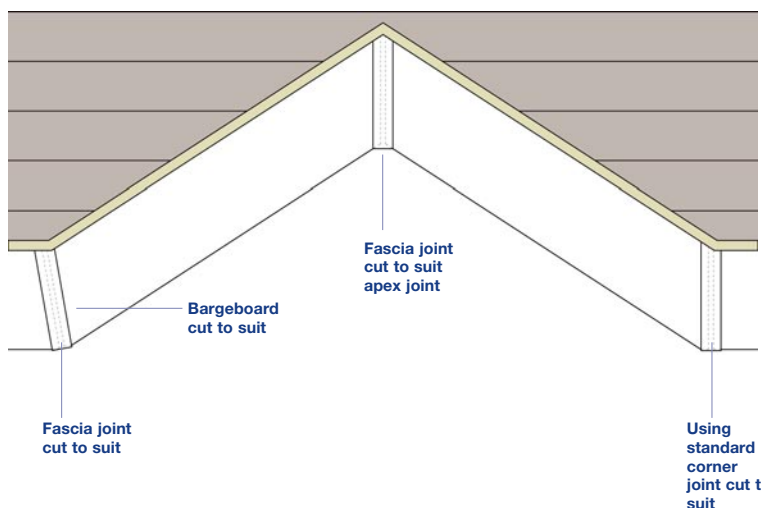
In-Line Pike Junctions

In-line pike junctions can be created using standard joints from the relevant ranges.

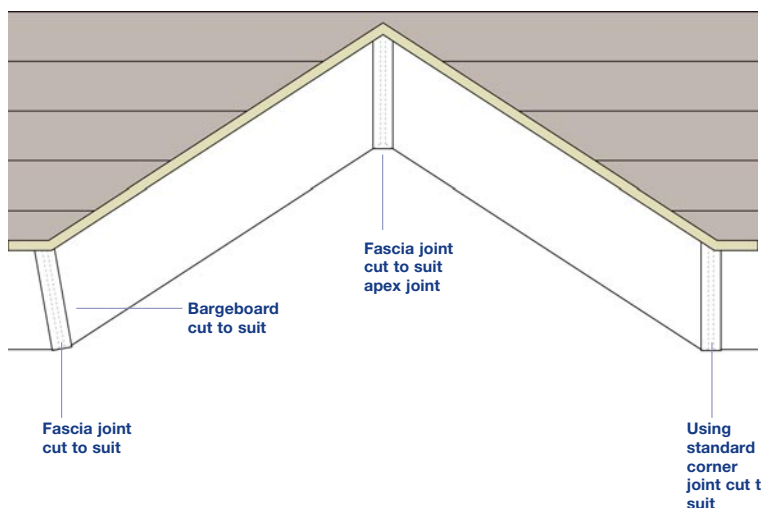
Joints and bargeboards will need cutting to suit.

Fascia and bargeboard material will need to be the same type.

Method 1



Method 2



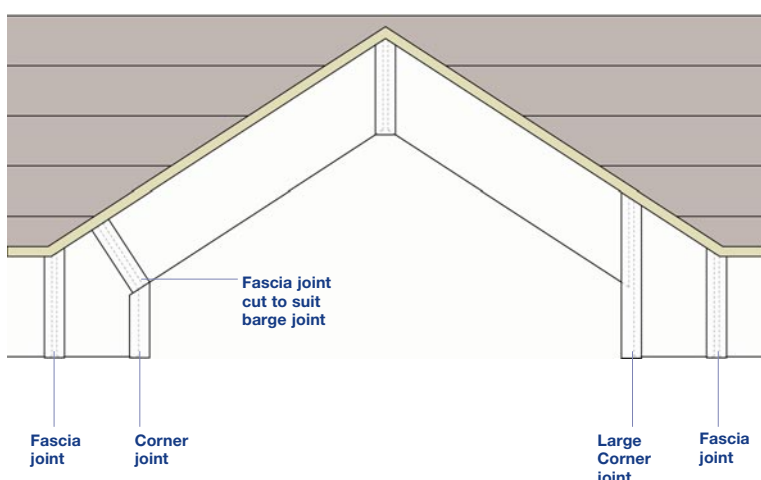
In-Line Box End Options

In-line boxends can be created using the same construction methods as shown previously on page 10.

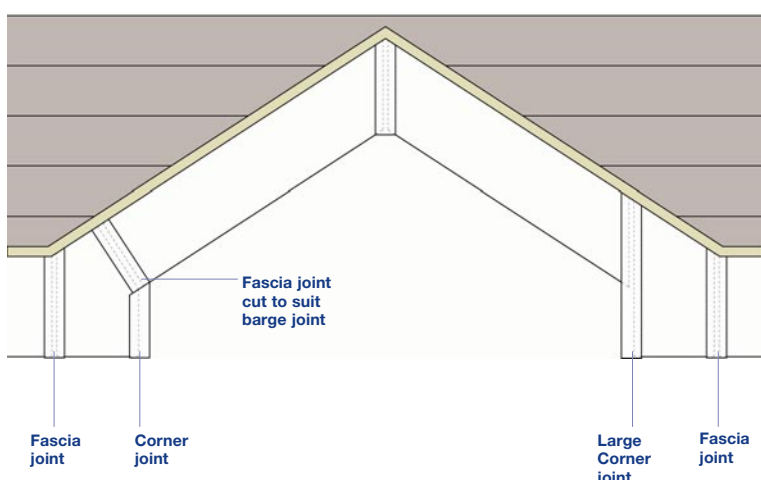
It is important that the same material is used on the barge as is used on the fascia.

This configuration is often used to a side gable where the gable meets a roof projection.

Method 3



Method 4



Fascia and bargeboard material will need to be the same type.

Working with Woodgrain Products: Roofline

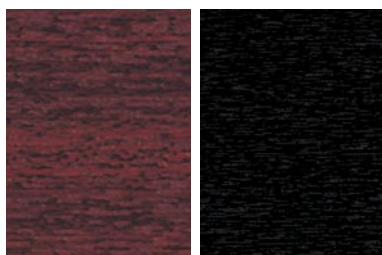
Working with Woodgrain products requires slightly modified procedures and installation processes. Overall, woodgrain products are as easy and convenient to fit and use as most other products in the Kestrel range. However, with a little extra knowledge and care at the preparation stage, you can save yourself potential difficulties later on.

Kestrel's Woodgrain foiled profiles have been extensively tested to ensure long term weatherability and are guaranteed for use both internally and externally for a period of 10 years. However, non-white systems have a different potential for heat absorption, with resultant risk of excessive expansion and contraction. In particular, with a Woodgrain foiled coating, this heat absorption can be significant, with potentially detrimental effects on long term installation. Special consideration needs to be given when installing Woodgrain products to minimise the amount of heat build up and provide for greater amounts of expansion.

The following additional fixing details must be followed when installing Woodgrain products:

Fascias/Bargeboard

1. Increase expansion gap from 5mm for white to 8mm.
2. All installations to take place at ambient temperatures - between 5°C and 25°C.
3. All pre-installed products to be kept away from direct sunlight, preferably indoors, at all times.
4. All joints to be made with Woodgrain corners and butt joints.



Mahogany

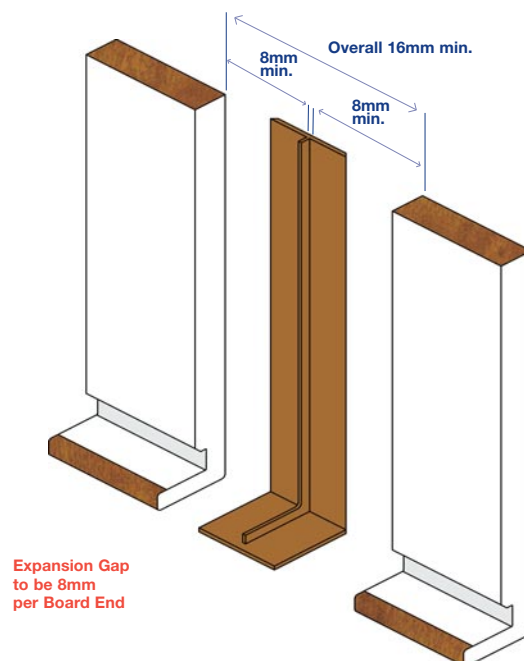
Blackgrain



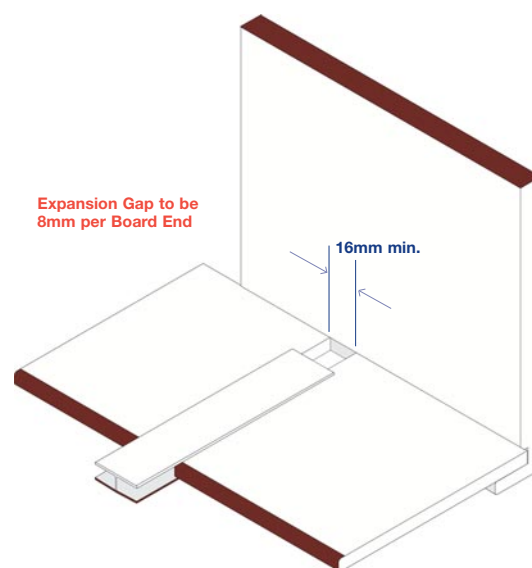
Sherwood

Rosewood

Foiled Fascia Joint Installation Details



Foiled Soffit Joint Installation Details



Fixing Summary - Roofline

| Fascia (thickness) | Fixing detail | Fixing type | Product ref. |
|--|---|--|--------------|
| 8 - 10mm Fascia Capping | Detail with marine/ WBP plywood backing board | 50mm Polytop Nails 50mm Polytop Screws | SS-50N |
| 16mm Fascias | Full replacement | 65mm Polytop Nails 50mm Polytop Screws | SS-65N |
| 16mm+ Fascias | Full replacement | 65mm Polytop Nails 65mm Polytop Screws 50mm Polytop Screws | SS-65N |
| Soffit | Fixing detail | Fixing type | Product ref. |
| 9mm Soffit | Soffit bearers recommended | 40mm Polypins | SS-40N |
| Cladding boards used as Soffit | Fixing detail | Fixing type | Product ref. |
| 100mm Open V Joint 150mm Shiplap Cladding Kavex Textured Shiplap Cladding | Timber soffit bearers | 30mm Cladding Nails 20mm Cladding Trim Nails for cladding trims. Application as cladding system | SS-30CP |
| Eaves Protection & OFVS systems | Fixing detail | Fixing type | Product ref. |
| K708 Eaves Protector | 200mm centres | 30mm Cladding Pins | SS-30CP |
| K711 & K711/25 | 200mm centres | 50mm stainless steel annular ring shank | SS-50N |
| K712 & K712/025 | 200mm centres ring shank | 50mm stainless steel annular | SS-50N |
| NOTE: Unless otherwise stated, all fascia/soffit fixing centres should not exceed 600mm centres | | | |

| General | | |
|---------------|-----------------------|---|
| Joint Fixing | | Low modulus neutral cure silicone BS5889 Type A |
| Soffit Boards | | Soffits up to 300mm wide require no additional fixing. Soffit boards over 300mm wide should be fixed at maximum 600mm centres along their length and 300mm centres across their width. Fix to adequate timber bearers |
| Gutter Fixing | For 16 - 22 mm boards | Fix gutter brackets directly into the board using, for each bracket, at least 2 x 30mm x 4mm diameter austenitic s/steel screws, ensuring that the screws penetrate the rear face of the board and that the bracket spacings do not exceed one metre. |
| Gutter Fixing | For 9mm boards | For the 9 mm board, gutter brackets are screwed through the fascia board onto rafter feet or other timber support. |
| Installation | | To be installed between 5°C & 25°C temperatures |

Specifying White Cladding Installations



Kestrel's cladding systems are ideal for a wide variety of internal and external applications. The system is offered complete with all trims, fixings and components to ensure a high quality, aesthetically appealing finish. Cladding is an ideal means of covering large areas with a durable, maintenance free solution which will stay looking good for years. It never needs painting and is highly suitable for areas where future access could prove difficult or costly. The design features within the system mean that cladding offers a visually appealing alternative to traditional materials, whether in domestic or commercial applications.

Popular products within the cladding range and the principal elements of installation are detailed here.

TECHNICAL CONSIDERATIONS - Installation

The Kestrel co-extruded PVC-U'E cladding system is suitable for horizontal, vertical and diagonal fixing, as a decorative & protective external facing, over a timber stud or masonry wall.

When used over a sheathed timber stud frame or over a masonry or block substrate, the cladding should be fixed to preservative treated, good quality timber battens (measuring not less than 19mm by 38mm) rigidly fixed to the substrate at 600mm centres or closer.

Installation takes place by fixing trims around the periphery of the area to be clad followed by installation of the cladding planks.

Planks are fixed using stainless steel annular ring shank nails positioned in the groove which runs along the length of the cladding plank. Nailing takes place from the centre of each plank working outwards.

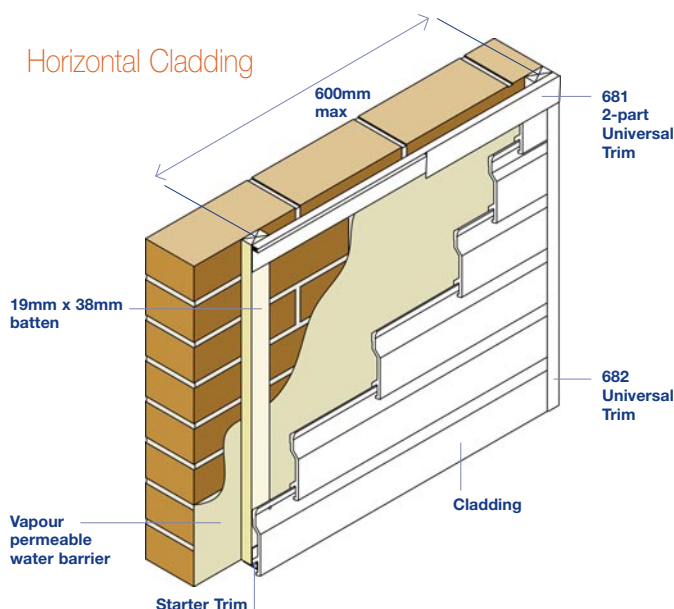
Subsequent planks are fitted over the preceding planks ensuring that the tongue-and-groove joint is firmly closed so that the nail heads are concealed by the overlap. To avoid distortion in service, care should be taken not to install the cladding in extremes of temperature (i.e. below 5°C or above 25°C) and to allow adequate expansion gaps of 5mm per plank end for expansion.

The cladding must be installed to provide a minimum ventilated air space of 19mm between the cladding and the backing wall. This satisfies both NHBC requirement for a minimum 10mm wide ventilation cavity and the Foundation 15 clause for a minimum 19mm cavity to be maintained between claddings and sheathing.

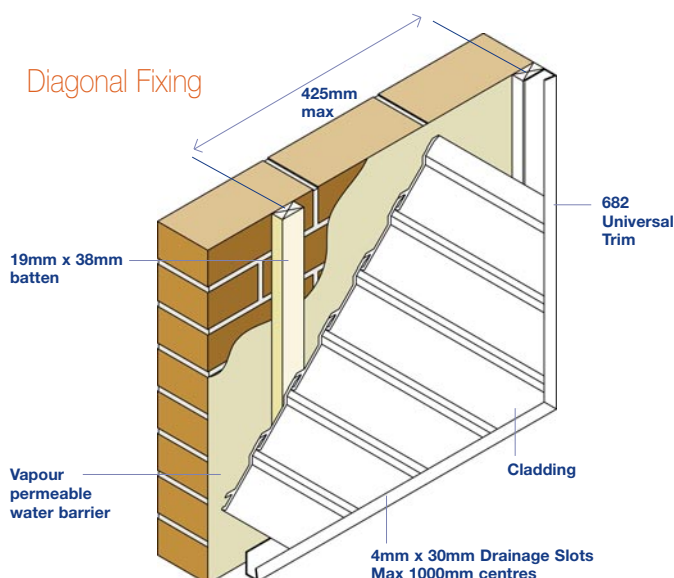
Horizontal battens used to support trims at the base of installations or at window heads, require 10mm diameter drainage holes at 1000mm centres.

When installed in accordance with Kestrel installation requirements onto battens at maximum 600mm centres, on buildings up to 10 metres in height, the cladding is suitable for use as shown in the table.

Horizontal Cladding



Diagonal Fixing



White Cladding Installations

When cladding is used in exposed locations (eg buildings above 10 metres in height, buildings on unprotected sites or in open countryside) it is recommended that batten spacing be reduced, particularly at the corners of the building, in order to increase the resistance to wind suction. the cladding is suitable for use above ground-floor level, and at ground-floor level in private areas where there is some incentive to exercise care.

It is not recommended for use at ground-floor level in public areas where it may be exposed to vandalism and general misuse. PVC-UE cladding installations are not air, water or water vapour tight. When used on timber stud walls the product must be backed by a breather membrane acting as a vapour-permeable water barrier, incorporated behind the cladding under the supporting battens.

This barrier must meet the requirements of BS4016: 1972 and have a vapour resistance less than 0.6 MNsg-1 when calculated from results carried out at 25°C and a relative humidity of 75%, in accordance with BS3177: 1959.

Where the product is used as a decorative facing attached to weathertight masonry walls, a water barrier is not necessary as the amount of water that will penetrate the cladding will be small and will not have an adverse effect on the wall.

Behaviour in relation to fire

When tested to BS476: Part 6: 1981 Kestrel white PVC-UE cladding planks achieved a fire propagation index of 15.4 with sub indices and of 7.6, 6.4 and 1.4 respectively.

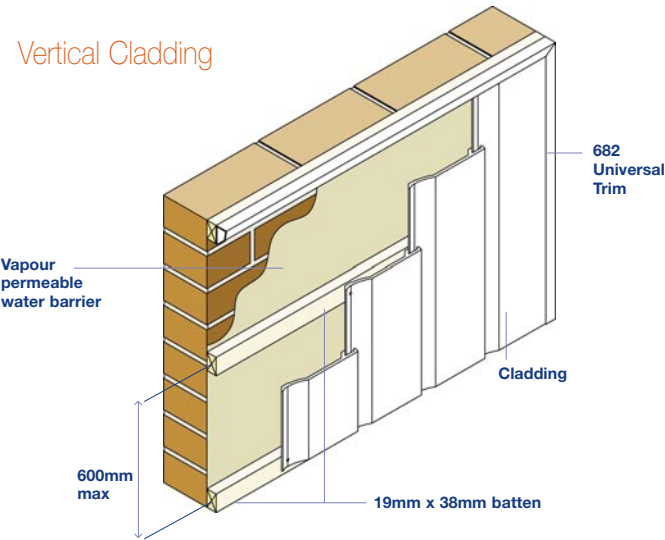
Kestrel PVC-UE cladding is suitable for use as cladding on the external walls of buildings less than 20m in height (England & Wales) or 15 metres in height (Scotland) provided that the wall is 1 metre or more from the relevant boundary.

The product is suitable for use on the external walls of buildings in Northern Ireland less than 15 metres in height provided the wall is 1 metre or more from the relevant boundary, but excluding use on buildings of purpose group VII (assembly buildings) having more than one storey, at situations up to 7.5m above the finished surface of any adjoining roof or other part of the building to which persons have access.

The product is suitable for use as a cladding on the external walls of buildings 20 metres or more in height (England & Wales) or 15 metres or more in height (Scotland) provided that the wall is 1 metre or more from the relevant boundary and the cladding does not extend higher than 20 metres (England & Wales) or 15 metres (Scotland).

The product is suitable for use on external walls of

Vertical Cladding



buildings in Northern Ireland which are 15 metres or more in height provided the wall is 1 metre or more from the relevant boundary and the cladding does not extend higher than 15 metres, but excluding use on buildings of purpose group VII (assembly buildings) having more than one storey, at situations up to 7.5 metres above the finished surface of any adjoining ground, or of any adjoining roof or other part of the building to which persons have access.

When tested in accordance with BS476: Part 7: 1987, the white co-extruded material achieved a Class 1Y rating.

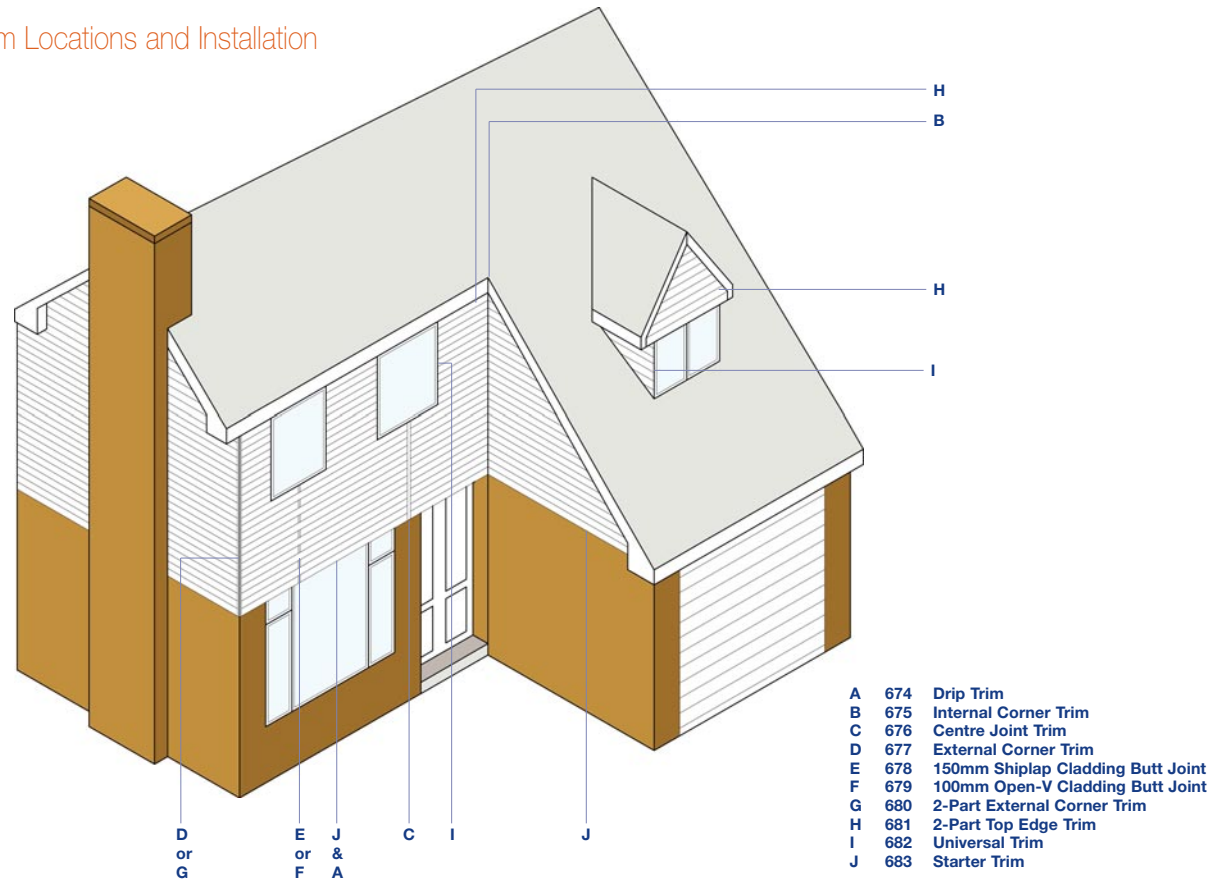
Although the surface spread of flame across the surface of the PVC is limited, the material does tend to char and may fall away when exposed to fire. Due consideration should always be given to any combustible material behind the cladding, which may become exposed in the event of a fire.

PVC cladding installed over timber framing now carries BRE A+ rating. This allows the specifier to claim the maximum three points available under the CSH for just such an external wall system.

| Permissible dynamic wind pressures (Pa) | | |
|---|------------------|---------------|
| Length of fixing nail (mm) | Cladding Profile | |
| | 100mm Open-V | 150mm Shiplap |
| 30 | 2650 | 1750 |
| 25 | 1750 | 1150 |

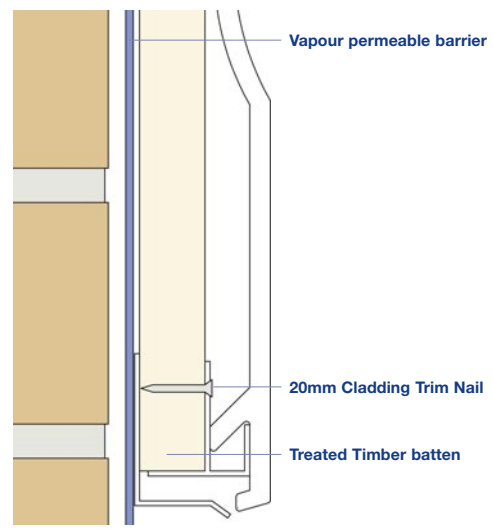
White Cladding Installations

Trim Locations and Installation

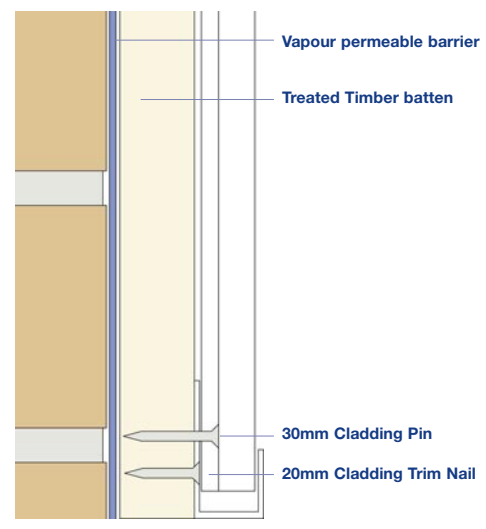


Trims Installation

Starter and Drip Trim - Horizontal Installation



Starter Trim - Vertical Installation

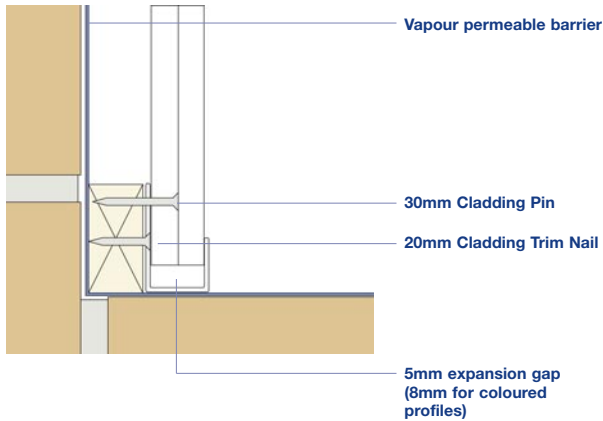


NB. Universal channel must be pre-slotted to allow for drainage

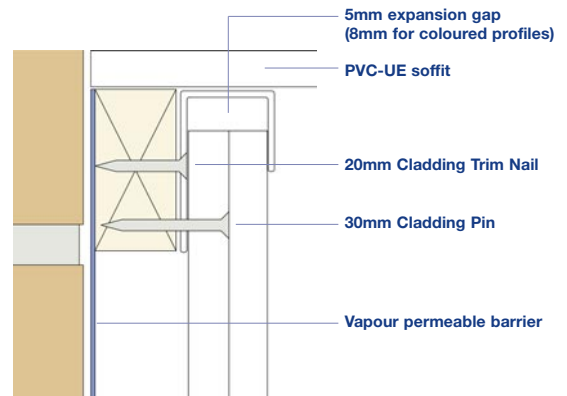
White Cladding Installations

Trims Installation

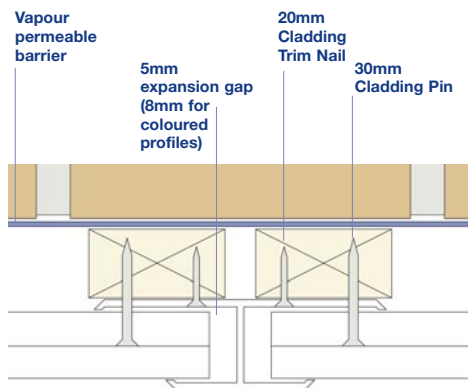
Universal Channel- General Edge Installation



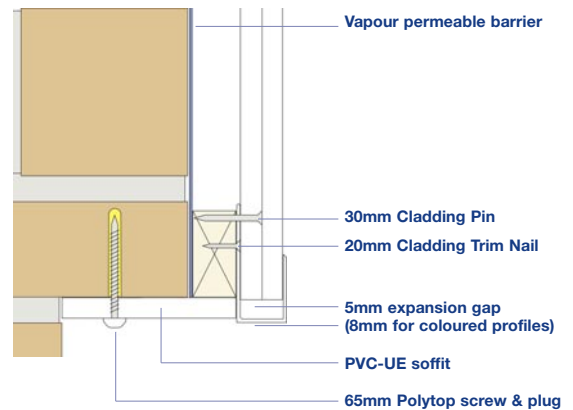
Universal Channel - Vertical Installation to Soffit



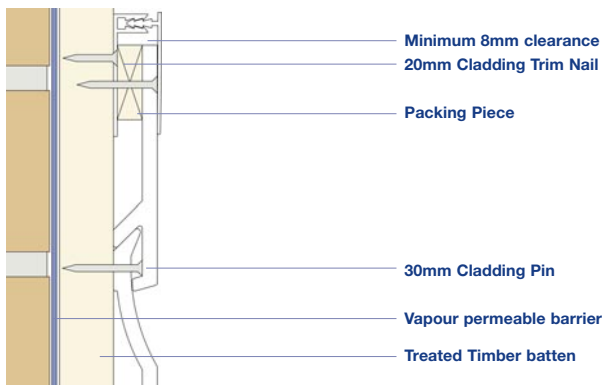
Centre Joint Trim Installation



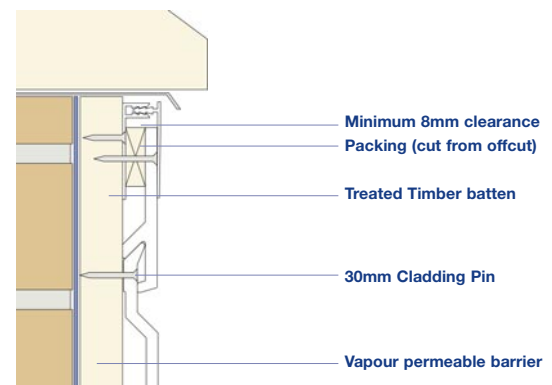
Universal Edge - Vertical Installation



2-Part Top Edge Trim - Horizontal Installation

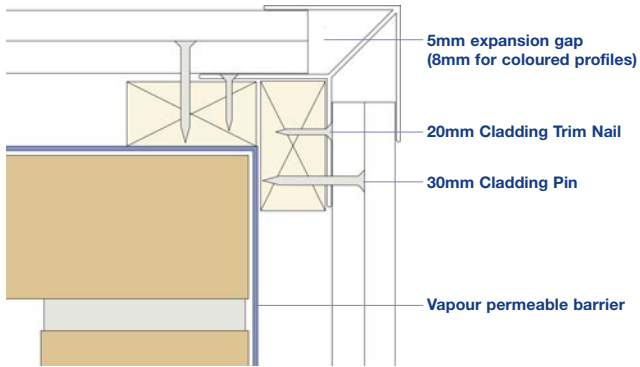


2-Part Top Edge Trim Installation to Window Cill

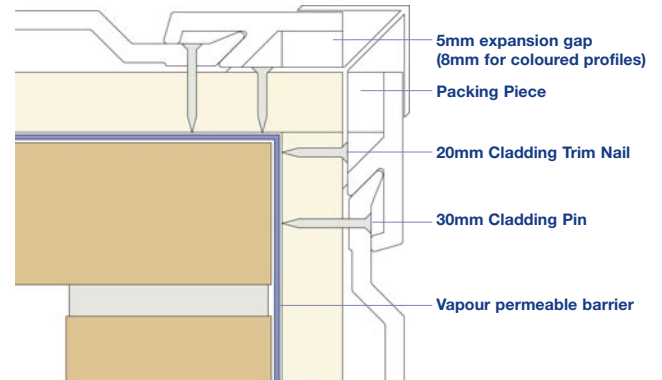


White Cladding Installations

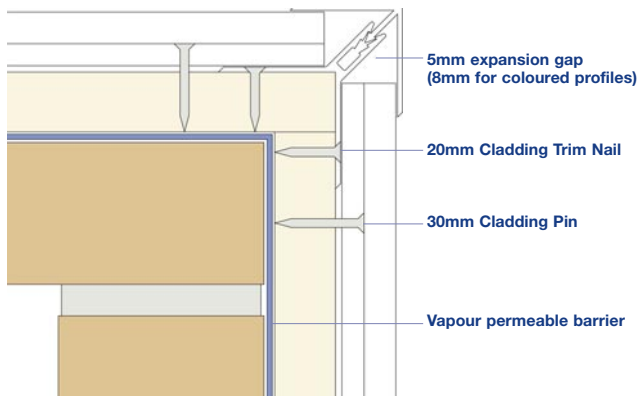
External Corner - Horizontal Installation



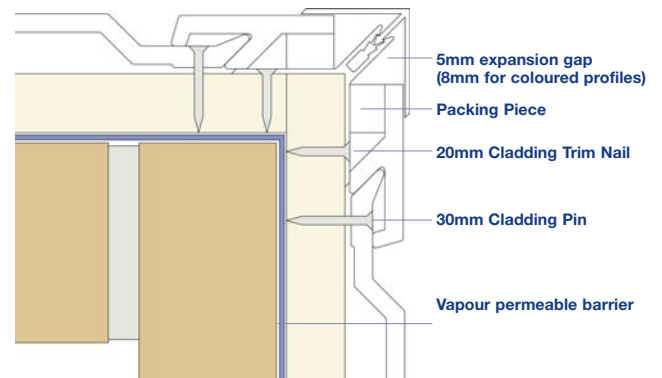
External Corner - Vertical Installation



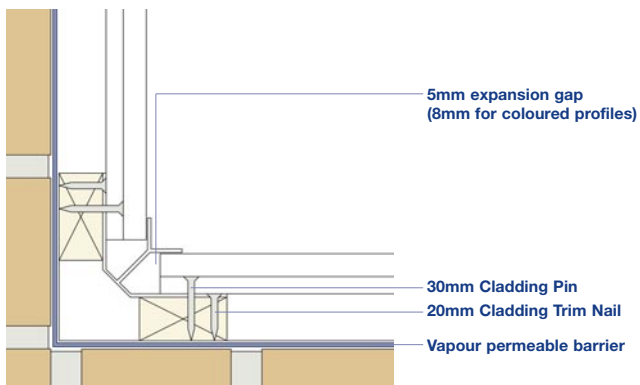
2-Part External Corner - Horizontal Installation



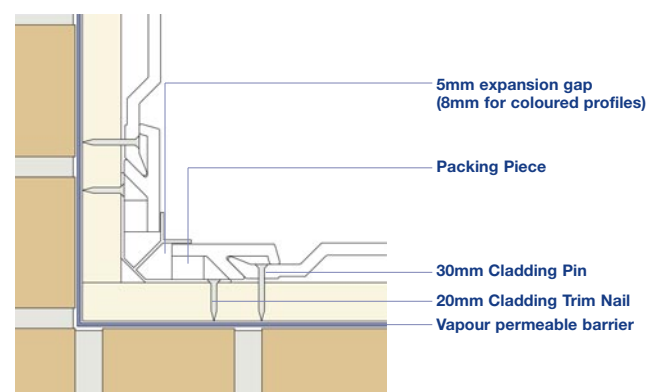
2-Part Corner - Vertical Installation



Internal Corner - Horizontal Installation

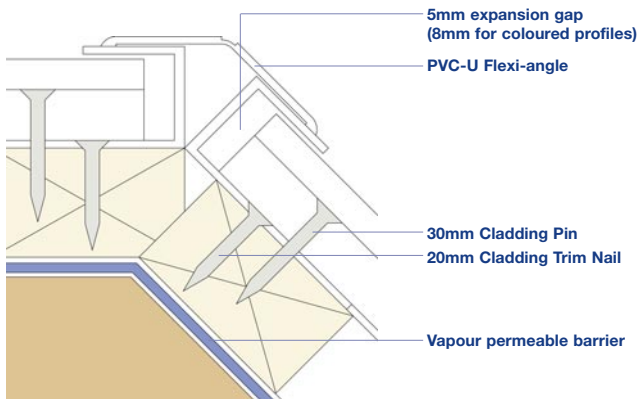


Internal Corner - Vertical Installation

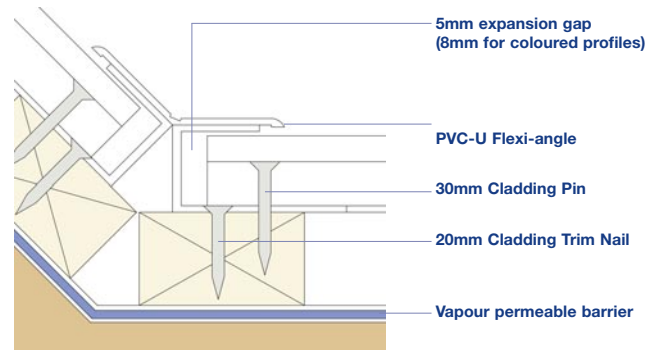


White Cladding Installations

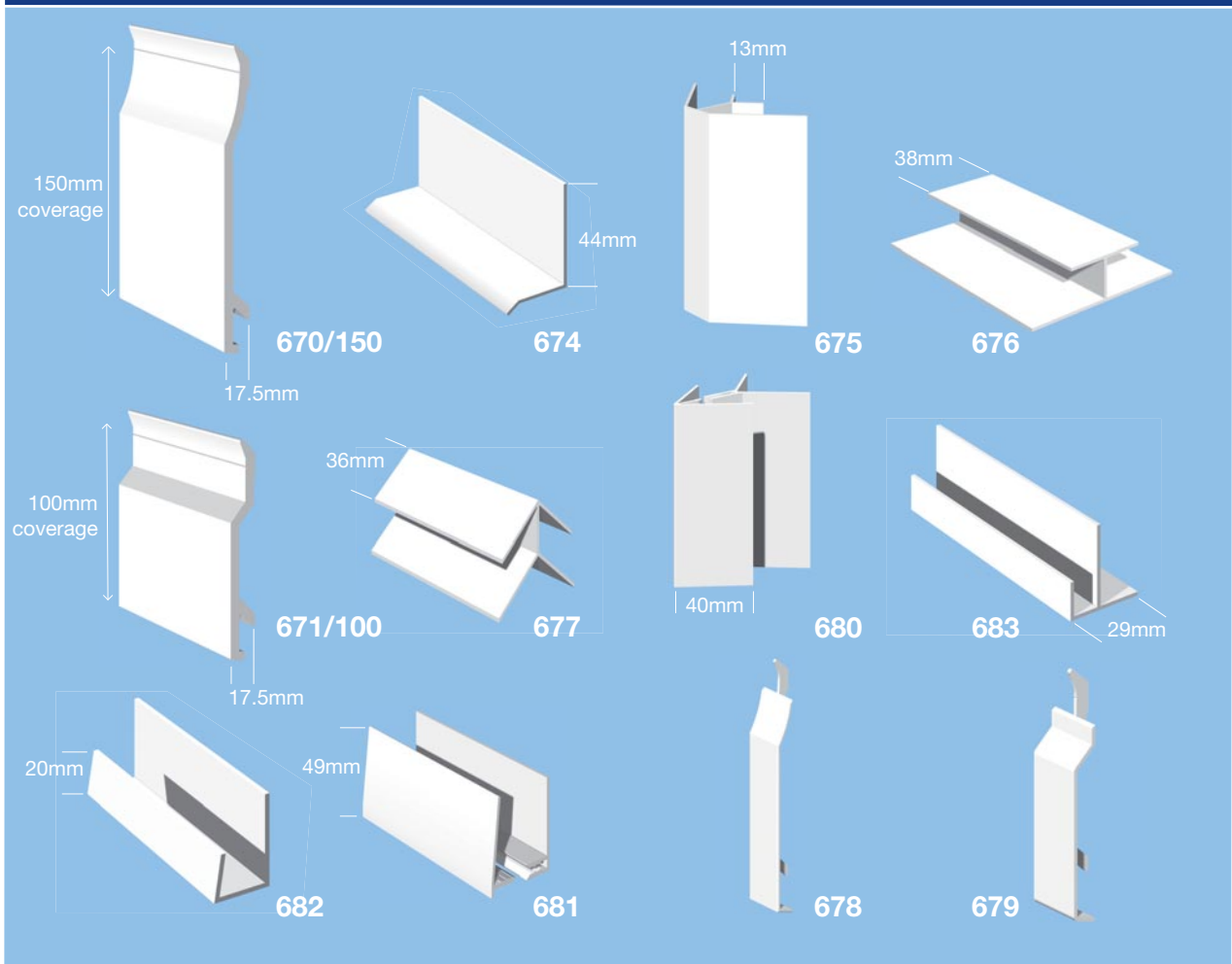
Variable External Angle - Horizontal Installation



Variable Internal Angle - Horizontal Installation

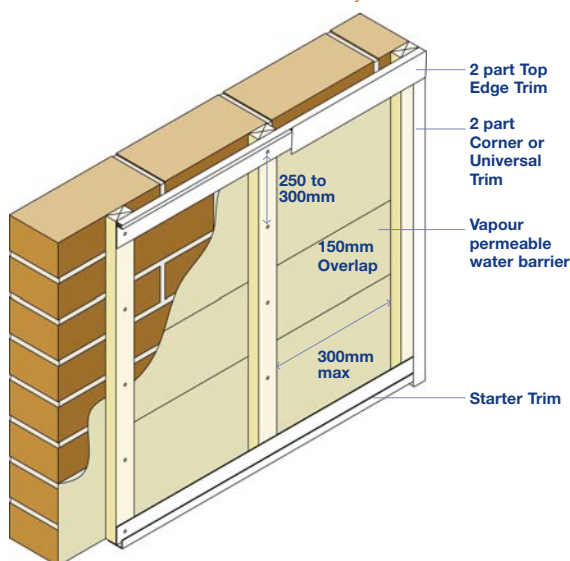


Cladding System



Kavex Textured Cladding Installations

Batten Installation - Kavex Only



For Kavex textured cladding, standard fitting instructions can be followed. However, due to the differing sizes and colours available in the Kavex range, slightly modified batten fixings are required. As before, ensure breather membrane is positioned beneath the batten system against the substrate.

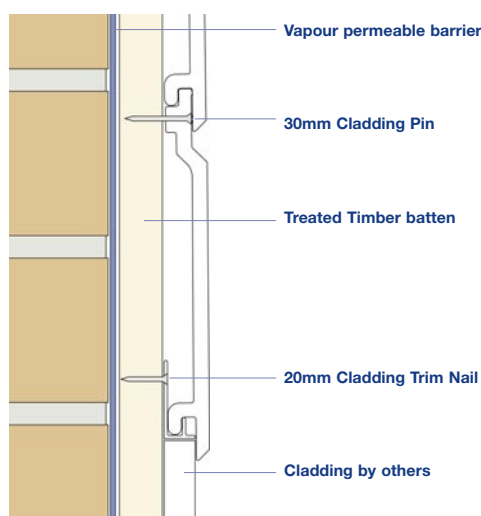
Battens

- Set out and fix 25mm x 38mm tannalised battens vertically.
- Ensure battens are parallel straight and level.
- Fix battens to the substrate at 300mm maximum centres.
- Fix a tannalised batten along the top of the installation.
- No batten is needed along the base of the cladding system because it relies on this opening to dispel excess moisture and to be used as a point of ventilation.

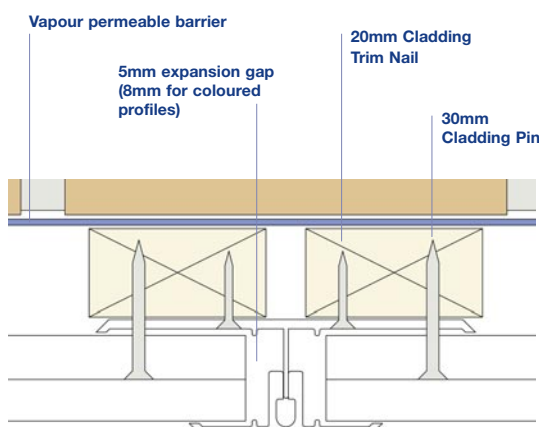
Battens

- Fix the starter trim to the battens at the base of the installation with 20mm A4 stainless steel nails.
- The starter trim is designed to locate the first cladding plank.
- Measure and cut to size the vertical universal trim or corner trim notch out at the rear of the trim.
- Ensure that the trim is straight and plumb and fix onto batten with A4 20mm stainless steel fixings at 250mm-300mm intervals.
- Trims are designed to take up expansion - ensure a 5mm gap between board edges/ends and trim stops for White cladding and 8mm for RAL9001 and RAL1015.
- Note there are two part versions of the vertical trims for use with horizontal and vertical cladding applications.
- Measure, cut and fix the top edge trim male extrusion to the top of the installation between the two vertical trims. Ensure you notch out the rear of the vertical trim to accommodate the male top edge extrusion.
- The installation is now ready to accept the first cladding plank.
- Measure first cladding plank ensuring that there is the correct gap left on either end of the plank for expansion.
- Before fixing plank locate groove section of the cladding plank into the location lip of the starter trim.
- Ensure plank is straight and level using a spirit level.
- Fix plank to each batten centre using A4 30mm stainless steel nails or 8-gauge x 30mm stainless steel countersunk headed screws.
- Ensure fixings pass through nail/screw guideline groove as the boards are a concealed fix.
- Locate second board, ensure groove of second board covers the tongue of the first board fully as not to show nail/screw heads.
- Follow this procedure until you reach the top of the installation, ensuring that each board is located properly.
- Ensure the installation is checked for level every three boards.
- Measure width of last board.
- Cut down last board and use the off cut tongue of the board as packing material. This will be spot glued (Cyanoacrylate adhesive) to the back of the last cladding plank and then nailed through into the top batten once located.
- Locate top cladding plank & fix through plank into top batten.
- Cut and snap on female part of trims to the vertical male extrusion ensuring that the trim finishes at the top of the installation.
- Measure cut and snap on the top edge trim ensuring that the trim is fixed between the two vertical trims.

Wall Starter Trim Installation - Kavex Only

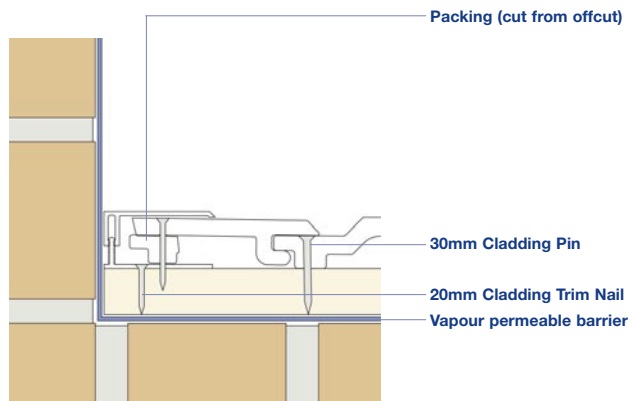


2pt Centre Joint Trim Installation - Kavex Only

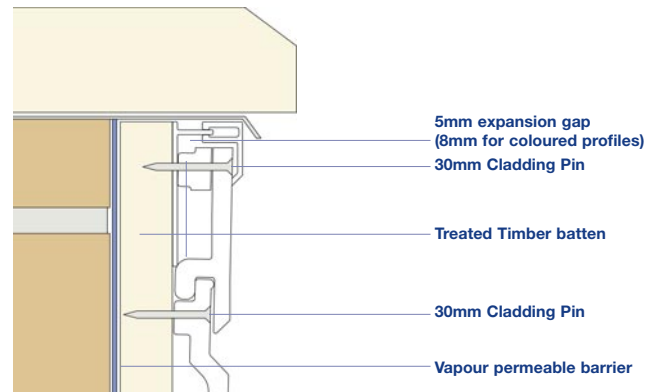


Kavex Textured Cladding Installations

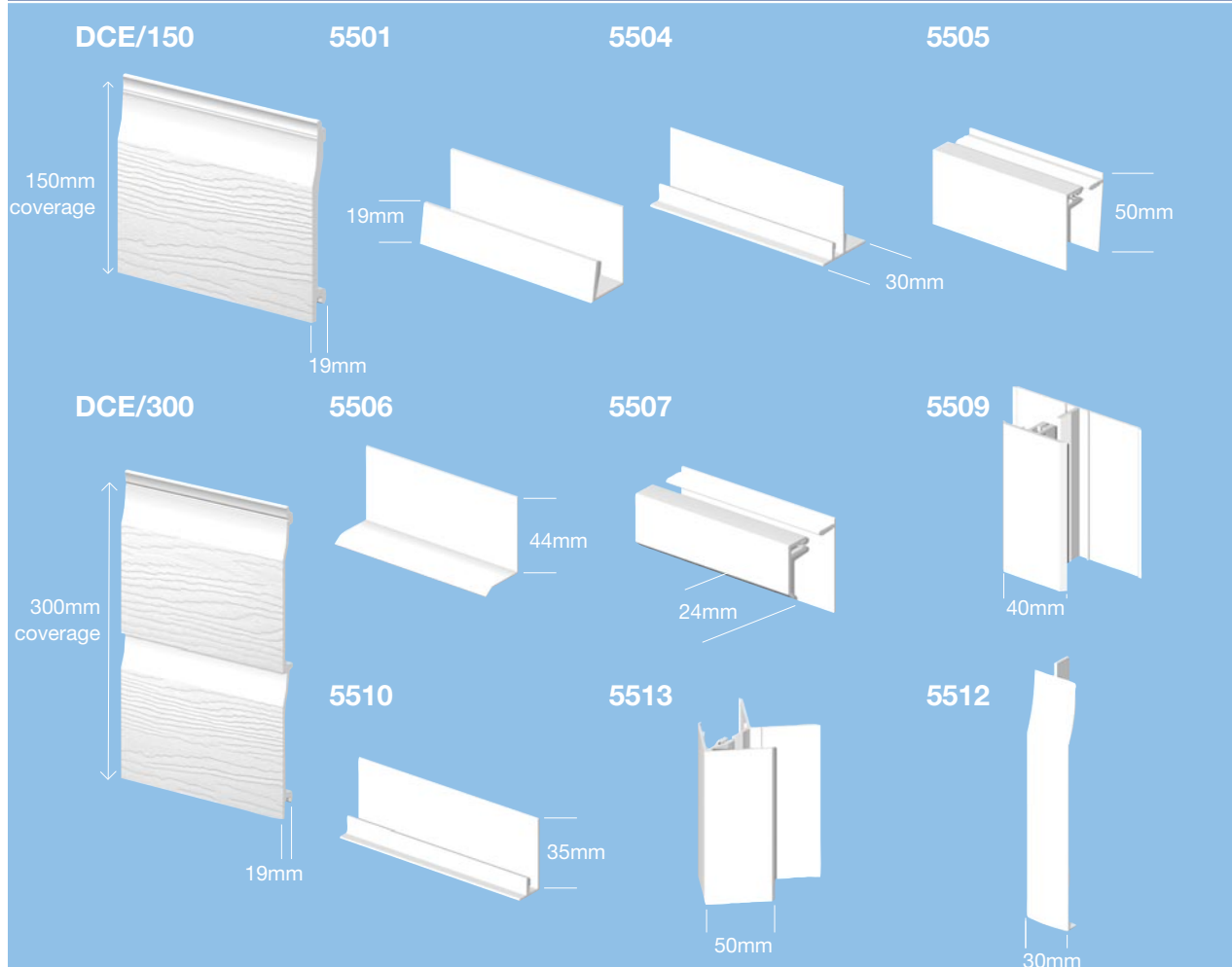
2pt Universal Trim Installation - Kavex Only



2pt UniversalTrim Installation - Kavex Only



Kavex Textured Cladding System



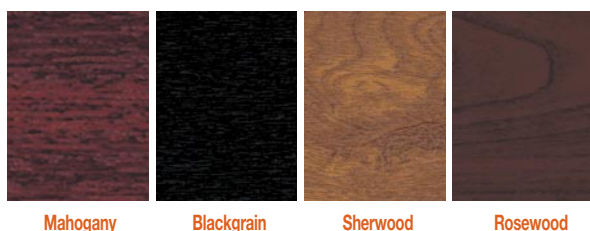
Working with Woodgrain Products: Cladding

Working with Woodgrain cladding requires some modified procedures and installation processes. The following fixing details must be followed when installing Woodgrain cladding products:

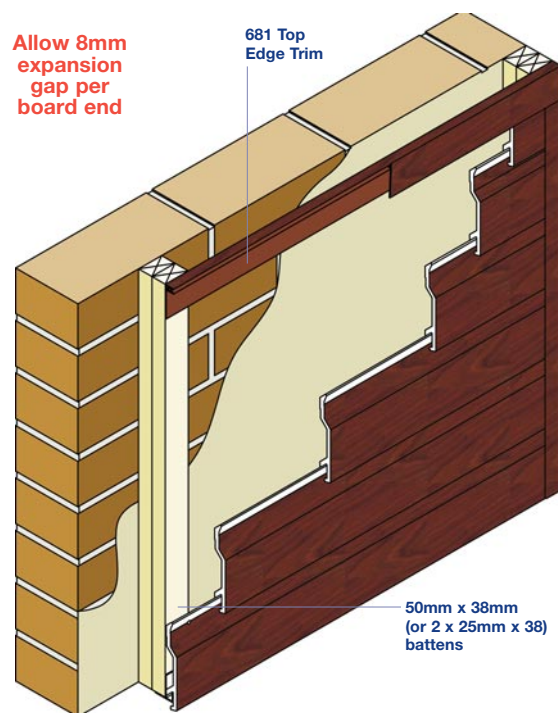
1. Allow a minimum of 50mm air space behind the back of all cladding installations.
2. Using the Universal Channel or Starter Trim with Batten Cover at both the top and base of each cladding face, allow a 10mm air gap at the top and bottom of each cladding unit in order to generate air flow behind the installation. When installing cladding vertically the use of counter battens is required.
3. Install 5m (max.) cut lengths and fix firmly at the centre of each cut length with Cladding pins as recommended for white profile. All subsequent fixings, at maximum 400mm centres from the central fixing point, to be pre-slotted with a 2.5mm x 10mm slot and fixed with a large headed nail as recommended for white profile ie stainless steel annular ringshank nails - 2mm shank diameter of 30mm length
4. Jointing of boards to be made with 676 cover joint trim, allowing an 8mm expansion gap at every board end.
5. Installations to take place at ambient air temperature - between 5°C and 25°C.
6. All pre-installed products to be kept stored away from direct sunlight, preferably indoors, at all times.
7. All end finishing cover strips etc. should allow an 8mm expansion gap between the end of the cladding profile and the cover stop.

These precautions will allow airflow behind the cladding which helps to reduce excessive heat build-up.

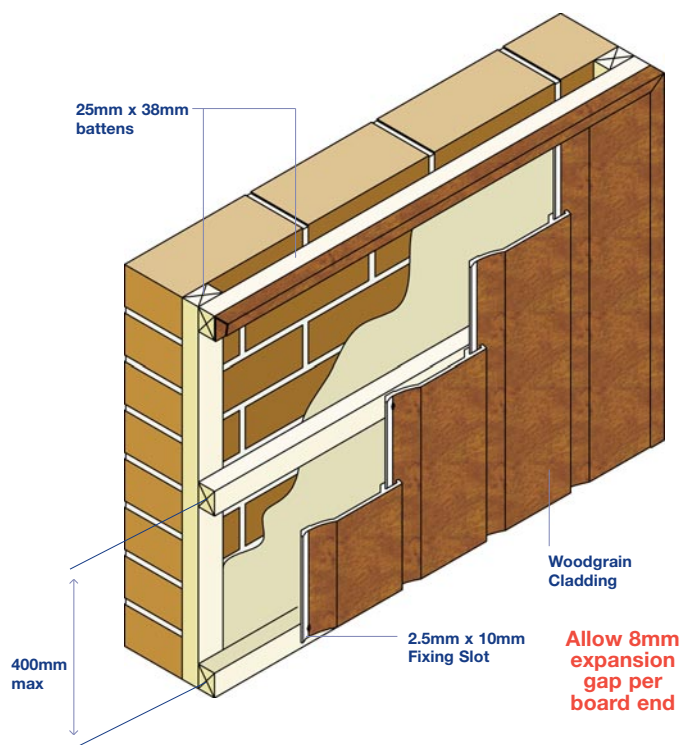
They also allow a free expansion and contraction of the profile along the profile length from a central fixed point. Expansion gaps at joints and finishing strips also allow for freedom of expansion.



Installation Detail - Horizontal Cladding



Installation Detail Vertical Cladding (counter batten)



Fixing Summary - Cladding

| Fixing Details | | | |
|--|--|--|----------------------------|
| Batten fixings | into masonry: into steel: into timber: | Hammer screws Self-tapping screws Plated woodscrews. | |
| Cladding fixings | | 30mm stainless steel Cladding Nails. | |
| Trim fixings | | 20mm stainless steel Nails. | |
| Breather membrane | | To be positioned behind the batten system against the substrate. | |
| Important Points Which Must Always Be Observed | | | |
| If fixing insulation behind cladding system | <ul style="list-style-type: none">- Ensure cladding batten system is fully supported- Fix at recommended fixing centres- Always detail a suitable secondary waterproofing material (EXAMPLE: Vapour permeable breather membrane to maintain a watertight structure- The membrane should be positioned on the external face of the insulation between the insulation and the cladding- Maintain the correct statutory airspace behind the cladding system | | |
| Area Calculations | | | |
| CLADDING: | PRODUCT CODE: | 5M LENGTHS REQUIRED PER SQUARE METRE: | COVERAGE PER LINEAR METRE: |
| Open V Joint Cladding (100mm profile) | 671/100 | 2.0 | 0.1m ² |
| Shiplap Cladding (150mm profile) | 670/150 | 1.4 | 0.15m ² |
| Textured Shiplap Cladding (150mm profile) | DCE/150 | 1.4 | 0.15m ² |
| Textured Shiplap Cladding (300mm profile) | DCE/300 | 0.7 | 0.3m ² |
| Cladding | | | |
| Expansion Gap | White Foil & Colours | 5mm per board end 8mm per board end | |
| Joint Fixing | | Low modulus neutral cure silicone BS5889 Type A | |
| Fixing Centres | White | 1 per fixing centre, max 600mm centres, 25 or 30mm x 2mm shank nails, austenitic stainless steel (grade BS6105) | |
| Fixing Centres | Foil & Colours | 1 per fixing centre, max 400mm centres, 30mm x 2mm shank nails, austenitic stainless steel (grade BS6105). | |
| | Kavex Embossed | 1 per fixing centre, max 300mm centres, 30mm x 2mm shank nails, austenitic stainless steel (grade BS6105). | |
| Ventilation | White | Minimum ventilated air space of 19mm between the cladding and the backing wall. This satisfies the NHBC requirement for a minimum 10mm wide ventilation cavity to be maintained between claddings and sheathing. | |
| Ventilation Joint Fixing | Foil | Allow a minimum of 50mm air space behind the back of all cladding installations Low modulus neutral cure silicone BS5889 Type A | |
| General | | | |
| Installation | | To be installed between 5°C & 25°C temperatures | |
| Fire Rating | | | |
| Fire Rating | White Kavex Embossed Cladding | 6 mm Class 1Y Class 2Y | |

Internal Applications for Kestrel Products

Kestrel makes a wide range of products for interior applications and to support the window fitting industry. This range includes window boards, reveal liners, trims, architraves and skirtings.

PVC-UE products used in interior and window application offer several key advantages over traditional building materials. PVC-UE products:

- are durable and long lasting
- are lightweight, quick and easy to install
- do not need painting or any other form of treatment
- can be worked with conventional tools by traditional trades

GENERAL

Installation Conditions

Kestrel internal trim profiles should only be fixed within the recommended installation temperatures of 5°C and 25°C. Boards should not be sprung between fixed points. A gap of 1mm/m at each board end should be allowed for thermal expansion on white boards and 1.3mm/m on Woodgrain foiled boards. It is recommended that products are only used in circumstances where the maximum internal temperature will not exceed 30°C.

Prior to installation it should be ensured that the substrate is sound, level and free from dust or moisture. The relevant profile should be cut to size and mitred if required.

Cutting The Material

Workability of PVC-UE and PVC-U is similar to that of timber. All Kestrel products can be sawn, drilled and planed using traditional joinery tools. Hand saws should have a fine tooth blade. Power tools should be run at speeds similar to, or in excess of, those used for timber. When using power tools, a coarse particle dust mask, eye protection and light industrial gloves should be worn.

Repairs and Remedial Work

In the event of a profile becoming damaged in service, it is recommended that the damaged profile be removed and replaced to ensure full product performance.

In-Service Maintenance

In order to maintain the as-new finish it may be necessary to wash the profiles occasionally to remove surface dirt. This can be done easily with soap and water. When wiping over, use a soft cloth and never use solvent-based or abrasive cleaners.

Storage

Products should be stored on a clean level surface in stacks not exceeding 1m in height and restrained from collapse. If stored externally, the product must be kept under cover.

Woodgrain

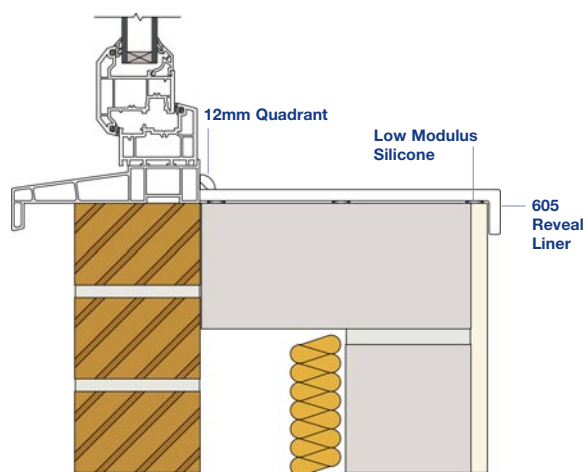
It is not recommended to use Cyanoacrylate adhesive (Super Glue) on foiled products.

Selection of Boards

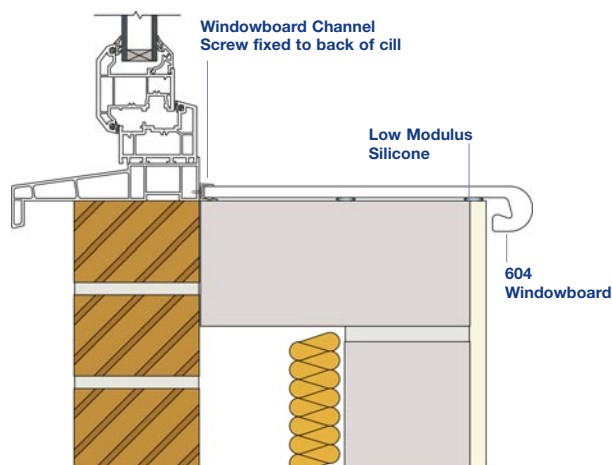
Kestrel's 9mm thick boards are suitable for the majority of applications. However in certain applications, it may be necessary to consider the use of thicker boards, e.g. K16 & K22, with their superior strength and rigidity. Consideration should be given in the following circumstances:

- New Build type applications where a board is required to bridge a cavity.
- Fixing over irregular or uneven substrates.
- Situations where boards may be subject to above average loading.

Installation of reveal liner, silicone fix with quadrant



Installation of windowboard, silicone fix with window board channel



Windowboards and Trims

INSTALLATION

Reveal Liner

Window board channel should be fixed to the inner surface of the window frame using fixing screws suitable for the window frame material, in lengths corresponding to the reveals to be cloaked. Reveal liner may also be installed without the use of window board channel by butting up directly to the inner window frame.

Packing pieces should be introduced under the board to level it out if required. Continuous 6mm wide beads of Low Modulus Silicone should be applied to the front, middle and rear of the underside of the board.

The board should be bedded into the substrate and, where used, located into the window board channel. The product may require to be held in place to allow the silicone to skin.

The installation should be finished by filling all gaps with acrylic Sealant. Internal reveal corners can be trimmed using a slimline internal corner joint, applied after installation of the boards and secured using Low Modulus Silicone. Exposed board ends are trimmed using end caps secured with Low Modulus Silicone or Cyanoacrylate adhesive.

Window Boards

Internal window boards may be fixed over existing window board or directly to the internal building construction, using either of the methods detailed. On New Build or when fixing over uneven substrates, thicker boards such as K22 and K16 are recommended.

Window board channel should, if required, be fixed to the inner surface of the window frame/cill, using fixing screws suitable for the window frame material. Where required, packing pieces should be placed under the window board channel for support. Window board may also be installed without the use of window board channel by butting up directly to the window frame/cill. Packing pieces should be introduced under the board to level it out if required. Window board channel is the recommended option due to its positive location and the lack of a need for further trimming.

Continuous 6mm wide beads of Low Modulus Silicone should be applied to the front, middle and rear of the underside of the board. The board should be bedded onto the substrate and where used, located into the window board channel. The board may require to be held in position to allow the silicone to skin. The installation should be finished by filling all gaps with Acrylic sealant. Visible window board ends are finished using end caps which may be applied with Low Modulus Silicone or Cyanoacrylate adhesive. Note: It is recommended that the overhang on all window board installations be kept to a minimum.

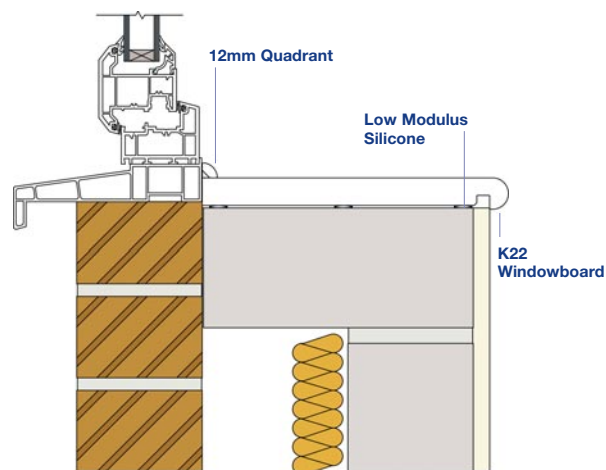
Skirting and Architraves

Low Modulus Silicone should be applied in a continuous 6mm bead to the upper part of the back of the profile, and peaks of the same silicone applied at maximum 250mm centres to the lower part of the profile. The profile is then bedded into position. The profile may require holding in position to allow the silicone to skin. The installation should then be finished by filling gaps with acrylic sealant.

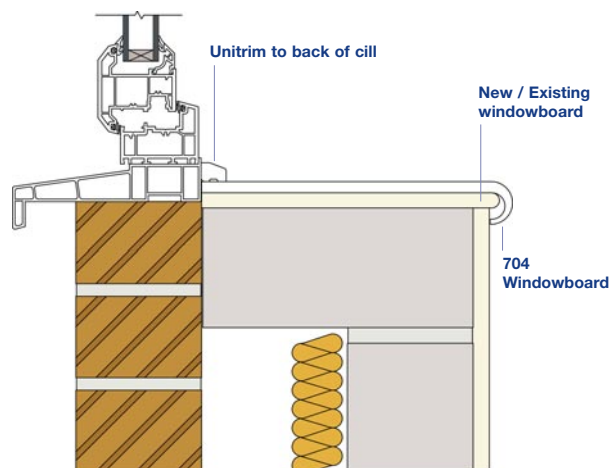
Finishing Trims

To provide a finished appearance to installations, PVC-UE trims should be used. Trims are installed using Low Modulus Silicone. Following application of silicone to the rear of the trims, they are bedded into position and when required held in position to allow the silicone to skin.

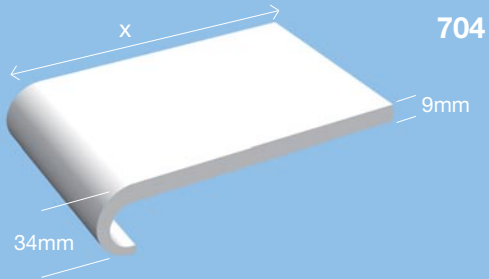
Installation of windowboard, silicone fix with quadrant



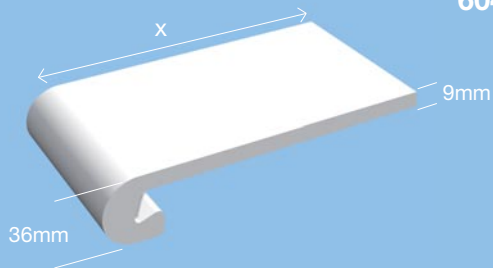
Installation of windowboard, silicone fix to new / existing window board



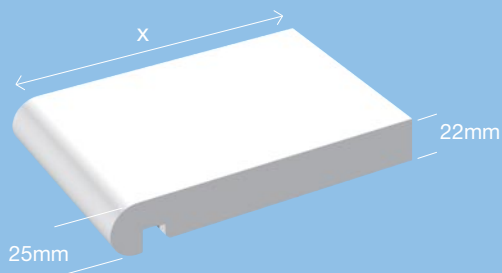
Windowboard Range



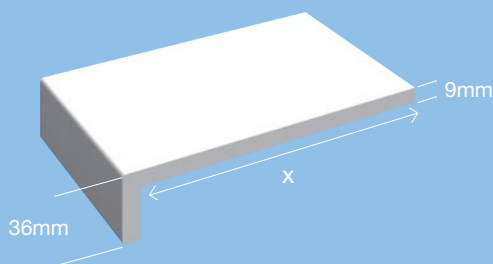
704



604



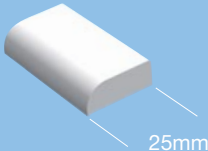
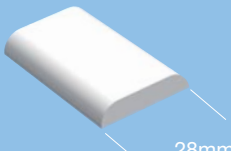
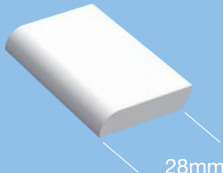
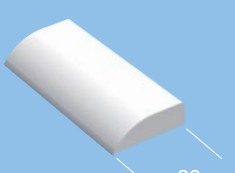


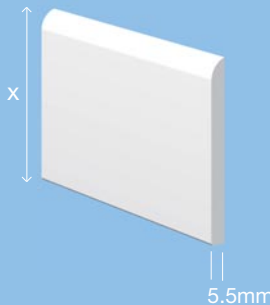
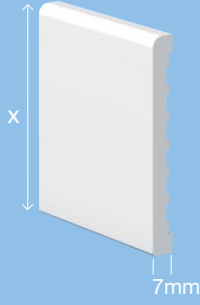
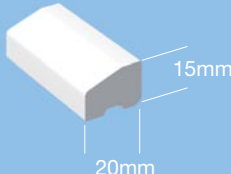
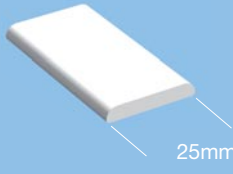
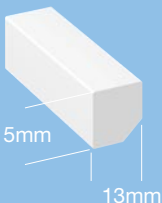
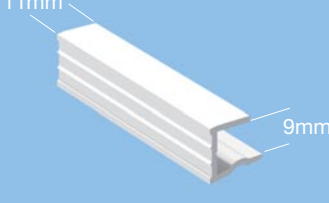
K22



605

| | Code | Dimension X |
|------------|---------|-------------------|
| 704 | 704/150 | 150mm |
| | 704/175 | 175mm |
| | 704/200 | 200mm |
| | 704/225 | 225mm |
| | 704/250 | 250mm |
| | 704/300 | 300mm |
| | 704/405 | 405mm Double Nose |
| 604 | 604/125 | 155mm |
| | 604/175 | 205mm |
| | 604/200 | 230mm |
| | 604/225 | 255mm |
| | 604/275 | 305mm |
| | 604/405 | 470mm Double Nose |
| K22 | K22/150 | 150mm |
| | K22/175 | 175mm |
| | K22/200 | 200mm |
| | K22/225 | 225mm |
| | K22/250 | 250mm |
| | K22/300 | 300mm |
| | K22/355 | 355mm Double Nose |
| | K22/405 | 405mm Double Nose |
| 605 | 605/100 | 100mm |
| | 605/125 | 125mm |
| | 605/150 | 150mm |
| | 605/175 | 175mm |
| | 605/200 | 200mm |
| | 605/225 | 225mm |
| | 605/250 | 250mm |
| | 605/300 | 300mm |
| | 605/405 | 405mm |
| | 605/450 | 450mm |
| | 605/500 | 500mm |
| | 605/550 | 550mm |
| | 605/600 | 610mm |

*For full list of trims please see current price list.

| Trim Range | | | | |
|---|---|------|---|--|
| | | Code | Dimension X | |
| 607/025 | 607/028 | 607* | 607/025 | 25mm x 9mm Edge Fillet |
|  |  | 607* | 607/028 | 28mm x 6mm D-section |
| | | | | |
| 686 | 609/020 | 686 | | 28mm x 6mm Cloaking Fillet |
|  |  | 609* | 609/020 | 20mm x 6mm Edge Fillet |
| | | | | |
| 608/012 | 608/019 | 608* | 608/012 608/019 | 12mm quadrant 18mm quadrant |
|  |  | | | |
| 712 | 723 | 712 | 712/045 712/065 712/095 | 45mm Flat Back Architrave 65mm Flat Back Architrave 95mm Flat Back Architrave |
|  |  | 723 | 723/040 723/060 723/080 723/090 723/100 | 40mm Castellated Architrave 60mm Castellated Architrave 80mm Castellated Architrave 90mm Castellated Architrave 100mm Castellated Architrave |
| | | | | |
| 610 | 685 | 610* | 610 | 20mm x 15mm Unitrim |
|  |  | 685 | 685 | 25mm x 4mm D Section |
| | | | | |
| 687 | 652/010 | 687 | 687 | 15mm x 13mm Rectangle |
|  |  | 652* | 652/010 | 9mm Window Board Channel |

*For full list of trims please see current price list.

10 Most Frequently Asked Questions

Kestrel's technical team is always willing to offer advice and practical assistance with planned installations. Our team can guide you as to the most appropriate products, expected product life, ease of installation and more. We are also able to provide estimates in terms of bills of quantities and to supply full health and safety information about each product in the range. Where you have a particularly large or complex installation, please call on us at the planning stage. One of our area sales managers can then visit you to advise on the best options for your application.

In the meantime, here are the answers to the ten most frequently asked questions about Kestrel's products and PVC-UE applications in general

1. With what do you recommend fixing cover and corner joints to fascia board?

A: Low Modulus Neutral Cure Silicone.

2. What is the minimum coverage of waveline products - K-Wave & K-Crest?

A: A minimum of 150mm.

3. Has hollow soffit got a Class 1 Fire Rating?

A: No, whilst PVC-UE products in the Kestrel range have, hollow soffit has not.

4. Are Woodgrain products guaranteed for external use?

A: Yes for 10 years and white products are guaranteed for 15 years.

5. Does Kestrel supply vented soffit with an insect mesh?

A: No, Kestrel does not recommend the use of mesh due to the reduction in vent area and air flow, coupled with the possibility of the mesh becoming totally blocked from airborne dust and debris. BS5250 recommends a minimum slot size of 4mm.

6. What expansion gaps are required when installing Kestrel products?

A: For white products there should be an expansion gap of 5mm per board end (eg. 2 boards butting up to each other in the same plane = 10mm gap). When installing Woodgrain product this gap is increased from 5mm to 8mm per board end.



7. Are PVC cladding products suitable for use in swimming pool buildings?

A: Yes, contact with swimming pool water is not detrimental to PVC.

8. Is it better to install the thickest board available?

A: For a replacement installation, a 16mm fascia board will perform equally as well as thicker products, requiring no additional support and taking both gutter and tile loading. If the 16mm board chosen is K16, it can be teamed with 9mm K605 bargeboard to give a cost effective performance installation.

9. What is the coverage of Kestrel Shiplap and Open-V Cladding boards?

**A: 670/150 Shiplap = 150mm
671/100 Open-V = 100mm**

10. What is the length of the leg on Kestrel 'L Boards'?

A: Both K16 and K605 have the same length of leg, which is 36mm.

Kestrel is constantly updating and developing its product range and reserves the right to amend or change the information and advice given here at its absolute discretion. For the latest product information, please contact Kestrel on the telephone number shown on the back cover.

Product Characteristics

A) TECHNICAL DATA

Many of the applications for PVC foam profile are for wood-replacement products due to its ease of installation and the advantages of a low maintenance product. The principal products in the Kestrel range are manufactured by co-extruding a highly weather-able PVC-U compound (skin) onto a PVC-UE compound (core), cooling and forming into the desired section.

In order to obtain a high quality product with the required stiffness, strength and impact performance, it is important to control foam density, skin thickness, surface finish and cell size distribution. Formulations contain a mixture of processing aid, thermal stabilisers, lubricants, pigment and filler in addition to the blowing agents required for foaming. The cellular structure is generated by the decomposition of chemical blowing agents, e.g. sodium bicarbonate (baking powder). The latest calcium organic stabiliser technology is utilised to provide optimal performance. Other products in the Kestrel range (rigid profile and joints) are manufactured using conventional extrusion or injection moulding techniques.

OPTICAL PERFORMANCE

Colour

The surface colour of the profile shall be uniform and be within the optical limits as specified by Kestrel's test procedure and specification for each particular colour.

Appearance and Finish

The profile shall be free from foreign bodies, cracks or sink marks when viewed by normal corrected vision at 90 degrees to the surface and at a distance of 1 metre in normal diffused north light.

Subject to normal wear and tear, Kestrel's PVC-UE and PVC-U profiles will retain their optical and mechanical properties for a period of at least 15 years for white and 10 years for Woodgrain foiled, with only minor changes in surface appearance. Additional care should be taken with foiled and colour finishes to ensure that correct installation procedures are followed.

CLEANING & MAINTENANCE

Kestrel products are low maintenance and with the required care and attention will stay looking good for years to come. However, there are some external factors which may adversely affect the appearance of any PVC, especially after extended weathering:

- Solvent based cleaners
- Abrasive cleaners
- Environmental contamination e.g. dirt / pollen

In order to maintain the appearance, it will be necessary to wash the installation with warm soap and water to remove surface dirt. The frequency of this will depend upon the local environmental conditions. This cleaning should be carried out with copious amounts of soapy water to avoid any chance of scratching of the surface.

When wiping over **ALWAYS** use a soft cloth or sponge.

NEVER use solvent-based cleaners.

NEVER use abrasive cleaners.

Repairs and Remedial Work

In the event of a profile becoming damaged in service it is recommended that the damaged profile is removed and replaced to ensure full product performance.

DURABILITY

Colour Fastness

Accelerated weathering tests and natural exposure trials indicate that Kestrel products are at least as durable as conventional window grade PVC-U profiles. White Kestrel PVC-UE profiles are Kitemarked and satisfy UV stability and UV aged impact resistance requirements to BS7619:1993.

PHYSICAL PERFORMANCE

Sectional Weight

Sectional weight per metre is within a tolerance deviation of +/- 12.5% as detailed in BS7619:1993.

Flatness

When measured in accordance with BS7619:1993 the surface flatness over any 100mm distance does not exceed +/- 0.6mm.

Bowing

When measured in accordance with BS7619:1993 test procedure the maximum permitted bowing is 25mm over a 5 metre length. This is not applicable to products which, under their own weight, lie flat.

PHYSICAL PERFORMANCE

Dimensions

| Width (mm) | Tolerance (mm) |
|---------------|-------------------|
|---------------|-------------------|

| | |
|--------|---------|
| 0 - 50 | +/- 0.5 |
|--------|---------|

| | |
|--------|---------|
| 51-150 | +/- 1.0 |
|--------|---------|

| | |
|----------|---------|
| 151- 250 | +/- 1.5 |
|----------|---------|

| | |
|----------|---------|
| 251- 350 | +/- 2.0 |
|----------|---------|

| | |
|----------|---------|
| Over 350 | +/- 3.0 |
|----------|---------|

| Thickness (mm) | Tolerance (mm) |
|-------------------|-------------------|
|-------------------|-------------------|

| | |
|-------|---------|
| 5 -12 | +/- 0.5 |
|-------|---------|

| | |
|---------|----------|
| Over 12 | +/- 0.75 |
|---------|----------|

| Length (m) | Tolerance (mm) |
|---------------|-------------------|
|---------------|-------------------|

| | |
|-----|-----|
| 5.0 | +10 |
|-----|-----|

| | |
|-----|--|
| - 0 | |
|-----|--|

Water Absorption

When tested according to BS2782 Part 4 Method 430A, maximum water absorption is less than 1.0%.

Product Characteristics

Thermal Movement

Linear thermal expansion when measured to BS4370 Part 3 Method 13 is less than $7 \times 10^{-5}/^{\circ}\text{C}$. The linear co-efficient of thermal expansion is similar to that of rigid PVC-U, hence similar precautions need to be taken to provide for possible thermal movement.

Thermal Conductivity

Cellular foam profiles have a very low co-efficient of thermal conductivity, resulting in insulation properties better than timber boarding or gypsum plasterboard ($K=0.06\text{W/mC}$).

Chemical Resistance

Staining will result from contact with creosote or bitumen. Organic solvents and solvent based cleaning solutions will damage the surface finish.

Kestrel PVC-UE profiles are resistant to most acids and alkalines but are liable to damage if attacked by aromatic solvents, ketones and esters. PVC-UE profiles are resistant to insect attack but may need protection during storage from vermin.

Fire Resistance

Kestrel white cellular foam profiles do not support combustion and conform to the following specifications: Surface spread of flame BS476 Part 7 1997. Fire Propagation BS476 Part 6 1989 (see Fixing Summary table on opposite page).

Oxygen Index

BS2782 Part 1 Method 141 1986 (ISO 4589 = 1984)
Oxygen Index Value = 41.3%

Impact Resistance

All white Kestrel PVC-UE profiles are Kitemarked and comply with the BS specification for falling weight impact resistance as specified by BS7619:1993.

Softening Point

The foamed PVC-UE material has a softening point in the range 75 to 80 degrees centigrade.

STORAGE

Profiles are protected on the co-extruded surface by polythene lo-tac film, which should be removed immediately prior to installation. Kestrel PVC-UE profiles are delivered in packs sealed in polythene sleeves, using coloured cello tape for ease of identification of the product shades. Pack quantities vary according to the profile and all packs carry a Kestrel product code indicating product, quantity and date of manufacture.

All packs not in stillages should be unloaded by hand, stored flat in their protective packaging on a clean, level surface in stacks not exceeding 1 metre high and restrained from collapse.

Where the packs are stored externally, additional protection should be provided against the weather and accidental damage.

B) PVC AND THE ENVIRONMENT

PVC RESIN SYNTHESIS: PVC is one of the world's oldest plastics. It has evolved since the 1940s to become a much used, cost-effective, safe, adaptable and environmentally efficient material. In essence, salt and oil derivatives are combined to produce a plastic material specified for a broad range of applications across various market sectors. Production processes are being continually improved. For this reason, the European industry, under the auspices of the European Council for Vinyl Manufacturers (ECVM), has signed a European Industry Charter, committing us all to tighter limits on emissions from PVC production plants.

PVC RESIN WASTE MANAGEMENT:

Plastics represent only 6% of municipal solid waste, of which the PVC component is about one tenth and is mainly composed of used packaging. It is known that the presence or absence of PVC in the municipal solid waste stream makes no difference to the levels of dioxins produced during incineration.

Developed countries generate some 500 kg of waste per person per annum. In the EU this represents 100 million tonnes. of household waste annually. Plastic materials account for 6%, of which PVC itself accounts for 0.6% in total, i.e. 600,000 tonnes. In Western Europe only 30% is incinerated, most going to landfill.

A study of PVC undertaken by the TNO Institute of Environmental and Energy Technology in Holland on behalf of the European Commission's Director General emphasises that PVC can be incinerated safely and cleanly.

REPROCESSING PVC-U AND PVC-UE:

During any manufacturing process, a small percentage of scrap is generated. Kestrel reprocesses this back into the manufacturing cycle without losing any of the excellent characteristics of our finished products. Long term durability, aesthetics, colour fastness and weather resistance are not affected. Kestrel reprocesses 99.8% of all its incoming materials. The small amount of unusable scrap is disposed of, off site, at locally authorised and registered incinerators or land fill sites.

C) STANDARDS AND CERTIFICATION

Kestrel's principal product ranges have all the necessary approvals for wide use in the majority of common domestic and commercial building applications.

British Board of Agreement

Certification: Co-Extruded Cellular PVC-U Cladding System:
Certificate number – 93/2876.
PVC-UE Roofline System: Certificate number – 95/3117.

BS Kitemark:

Kestrel products are manufactured in accordance with British Standard 7619: 1993.

Company Standards:

Kestrel's business and manufacturing resources have been assessed to and are operated under BS EN ISO 9001:2000.

Product Characteristics

D) PRODUCT GUARANTEES

Kestrel's white products are guaranteed for 15 years, woodgrains for 10 years and lightgrains for 7 years provided that approved installation and maintenance instructions are followed. Copies of

the guarantees which relate to Kestrel products are available from the marketing team.

Fixing Summary

| Roofline | | |
|----------------|---|---|
| Expansion Gap | White | 5mm per board end |
| | Foils & Colours | 8mm per board end |
| Fixing | Replacement Fascia - 16mm+ | 2 per fixing centre, max 600mm centres, 65mm polytop nails (or 50mm x 4mm shank screws), austenitic stainless steel (grade BS6105) |
| | Overcap fascia - 9mm+ | 2 per fixing centre, max 600mm centres, 50mm polytop nails (or 40mm x 4mm shank screws), austenitic stainless steel (grade BS6105) |
| | Soffit | Per fixing centre, max 600mm centres, 40mm polytop pins (or 40mm x 4mm shank screws), austenitic stainless steel (grade BS6105) |
| Load Bearing | Fascia 16mm+ | 16mm - 22mm boards will support all eaves tiles in common usage in the UK (up to 10kg load per 1m length of fascia) provided that the boards are installed within the requirements of the BBA certificate. |
| | Fascia <16mm | All fascia less than 16mm requires a minimum 10mm marine plywood backing board. |
| Joint Fixing | | Low modulus neutral cure silicone BS5889 Type A |
| Soffit Boards | | Soffits up to 300mm wide require no additional fixing. Soffit boards over 300mm wide should be fixed at maximum 600mm centres along their length and 300 mm centres across their width. Fix to adequate timber bearers |
| Gutter Fixing | For 16 - 22 mm boards | Fix gutter brackets directly into the board using, for each bracket, at least 2 x 30mm x 4mm diameter austenitic s/steel screws, ensuring that the screws penetrate the rear face of the board and that the bracket spacings do not exceed one metre. |
| Gutter Fixing | For 9mm boards | For the 9 mm board, gutter brackets are screwed through the fascia board onto rafter feet or other timber support. |
| Cladding | | |
| Fixing Centres | White | 1 per fixing centre, max 600mm centres, 25 or 30mm x 2mm shank nails, austenitic stainless steel (grade BS6105) |
| Fixing Centres | Foils & Colours | 1 per fixing centre, max 400mm centres, 30mm x 2mm shank nails, austenitic stainless steel (grade BS6105). |
| Ventilation | White | Minimum ventilated air space of 19mm between the cladding and the backing wall. This satisfies the NHBC requirement for a minimum 10mm wide ventilation cavity to be maintained between claddings and sheathing. |
| Ventilation | Foils & Colours | Allow a minimum of 50mm air space behind the back of all cladding installations. |
| Joint Fixing | | Low modulus neutral cure silicone BS5889 Type A. |
| General | | |
| Installation | | To be installed between 5°C & 25°C temperatures |
| Fire Rating | | |
| Fire Rating | White White Kavex Embossed Cladding | 16mm+ Class 1 6 - 16mm Class 1Y Class 2Y |

Customer Services

Tel: (08702) 406107 or 406197

Fax: (08702) 406116 or 406113

Email: info@kestrelbce.co.uk

Estimating & Specification

Tel: (01732) 897791

Fax: (01732) 897795

www.kbp.co.uk

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rely on it



REGISTERED RECYCLER



BS 7619
Lic No. KM51726



Kestrel is a brand of Kestrel-BCE Ltd. Billet Lane, Normanby Enterprise Park, Normanby Road, Scunthorpe,
North Lincolnshire, DN15 9YH. Tel: (01724) 400440 Fax: (01724) 280241