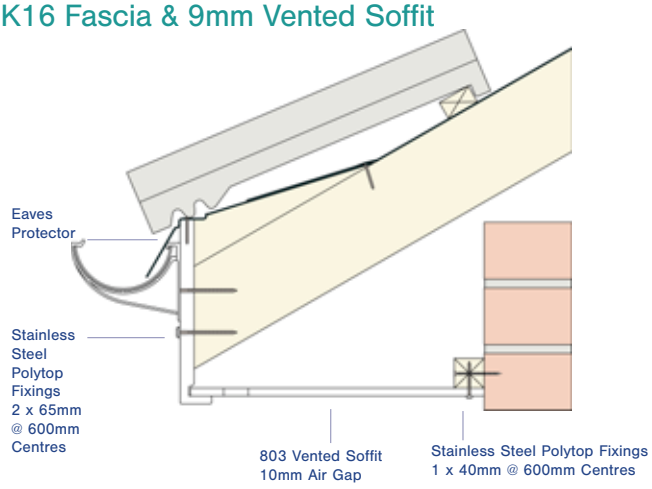
No. 7

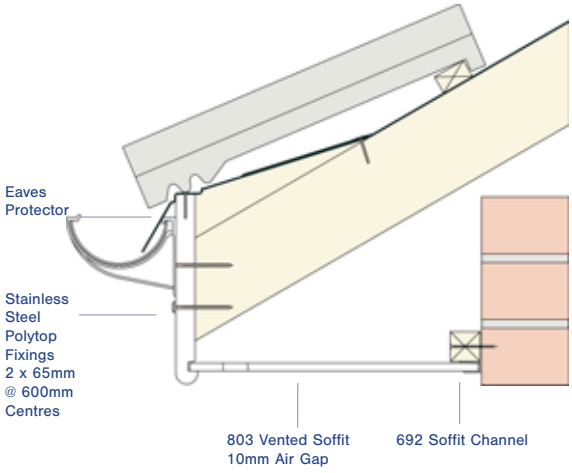
Technical Bulletin

Fascia Installation Details

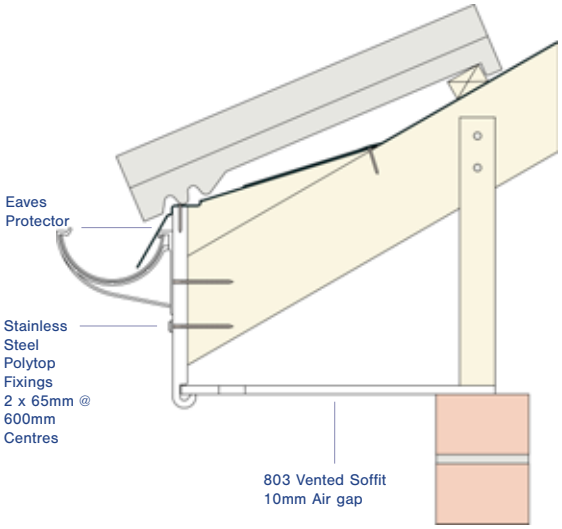
K16 Fascia & 9mm Vented Soffit



K22 Fascia & 9mm Vented Soffit



KB16 Fascia & 9mn Vented Soffit



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 BS EN ISO
3506-1 : 2009). 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.

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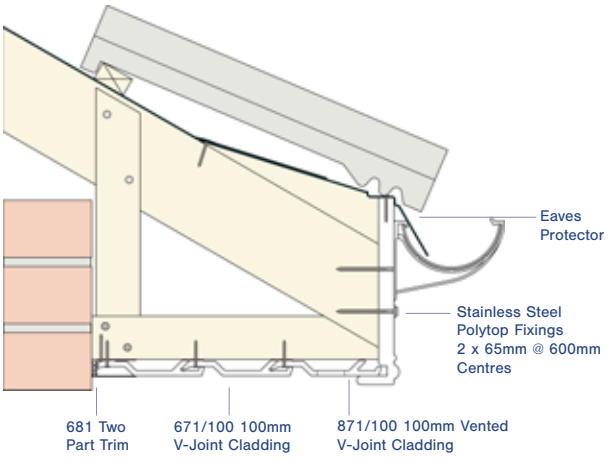
Technical Bulletin

Fascia Installation Details

018 Fascia & 100mm V-Joint Cladding - Vented

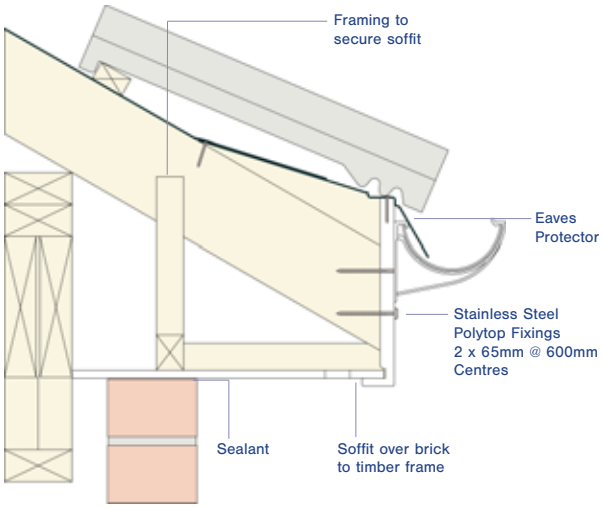


Tongue and Groove Cladding

Shiplap and Open-V cladding planks may also be used as soffit. The Open-V version is also available in a pre-ventilated form. 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 & 605 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.

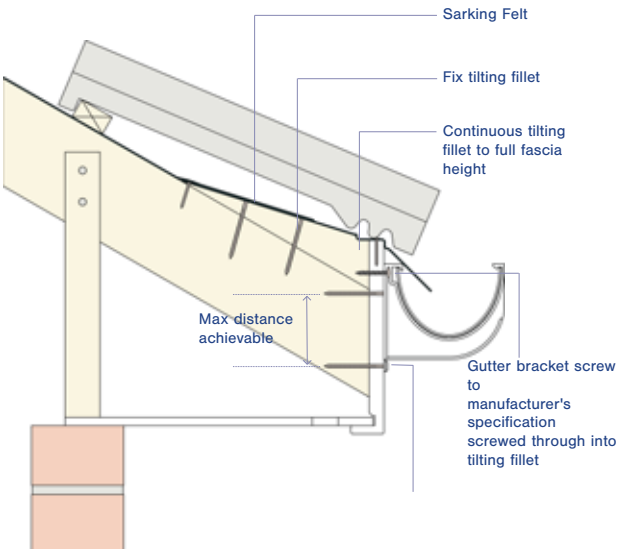
K16 & 803 Timber Frame Detail



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.

K16 & 803 Fascia Detail for Extreme Winters



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.

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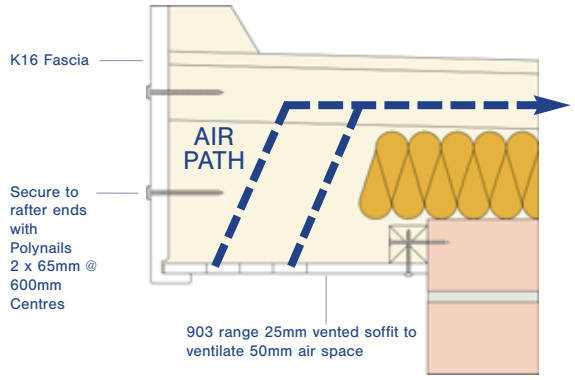
Technical Bulletin

Fascia Installation Details

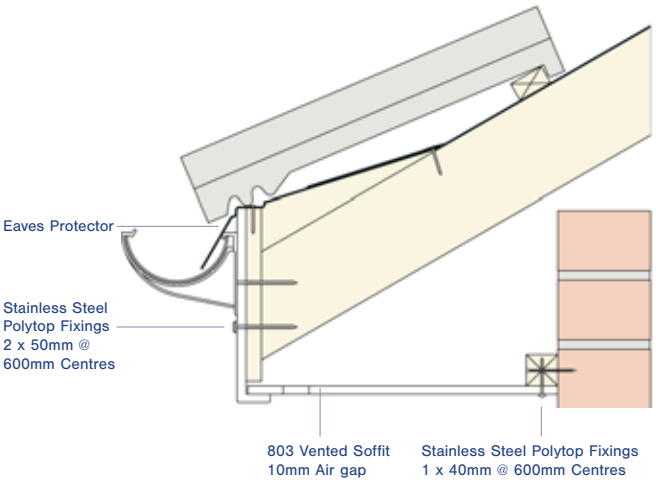
Flat Roof Detail



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 ventilation section for a full explanation of ventilation requirements.

605 Fascia & 9mm Vented Soffit



Replacement Projects

Kestrel manufacture several designs of fascia capping boards which can be fitted over the top of existing timber fascias and bargeboards provided these are sound.

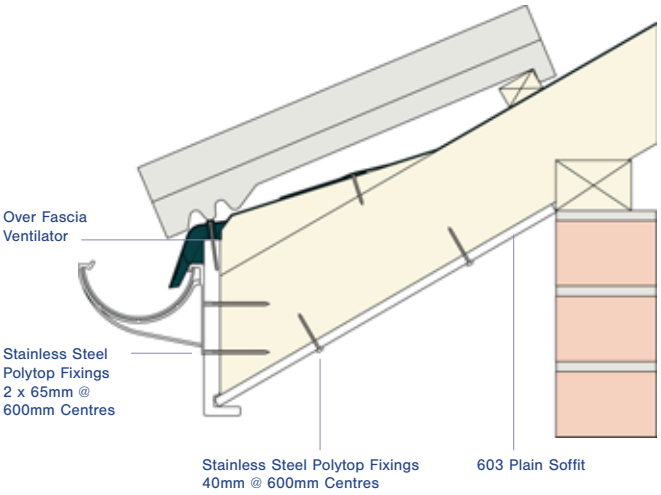
Any unsound or insecure timbers or rafter surfaces should be removed and replaced before overcapping.

Fascia capping boards are available in square, bullnose and ogee designs and fit flush to the existing sound fascias or backing boards.

Fascia capping boards also incorporate a return leg to cover the existing fascia and enclose the soffit leaving a neat finish.

All overcapping fascias can also be used for new-build work, but will require a minimum 12mm exterior grade plywood backing board (BS EN 636:2012+A1:2015).

K16 Fascia & 9mm Inclined Soffit



Inclined soffits

In both new-build and replacement situations, K16 or 605 fascias can be used in conjunction with inclined soffit details, as the return leg (36mm) is wide enough to provide support for the soffit board.

Soffits in this situation are normally plain, such as 603, but can be detailled with cladding if desired.

In this instance, the use of over fascia ventilation is recommended as the ventilation slots in pre-ventilated soffits are restricted. Alternatively a soffit with increased ventilation can be selected.

The boards should be fixed to the rafters at not greater than 300mm centres across the soffit width.

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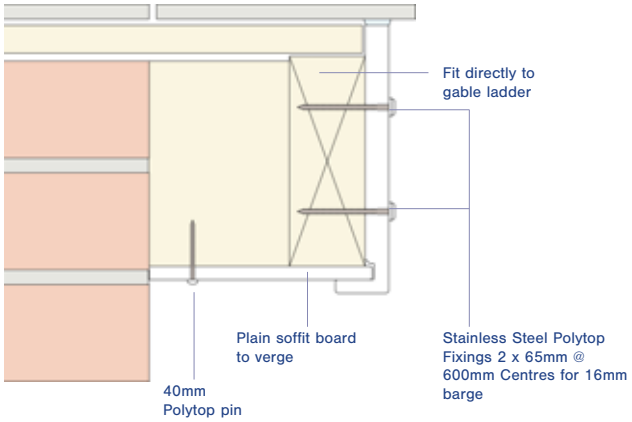
Technical Bulletin

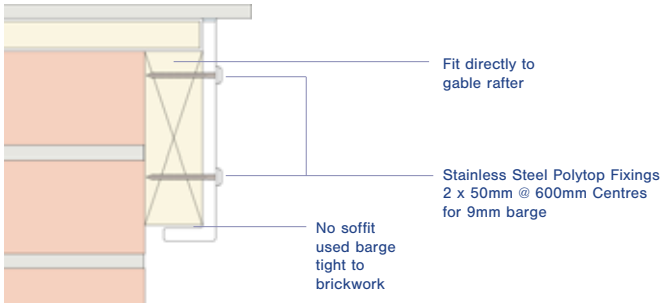
Bargeboard Installation Details

Typical Verge Details

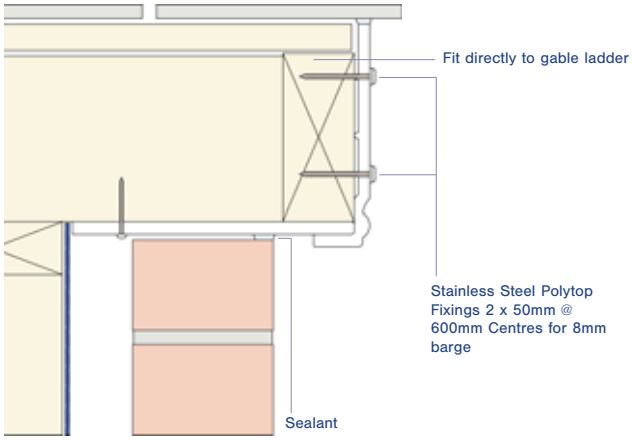
K16 - 16mm Bargeboard & Plain Soffit



605 - 9mm Bargeboard & No Soffit



008 - 8mm Bargeboard to Timber Frame



Bargeboard

K16 16mm bargeboard should be installed using 65mm Polytop nails 2 per fixing centre at maximum 600mm centres. Austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009).

605 9mm bargeboard should be installed using 50mm Polytop nails 2 per fixing centre at maximum 600mm centres. Austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009).

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

V-Wave and V-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 complememtary ranges being the same external shape.

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

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

This allows the 16mm barge to be used in conjuntion 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.

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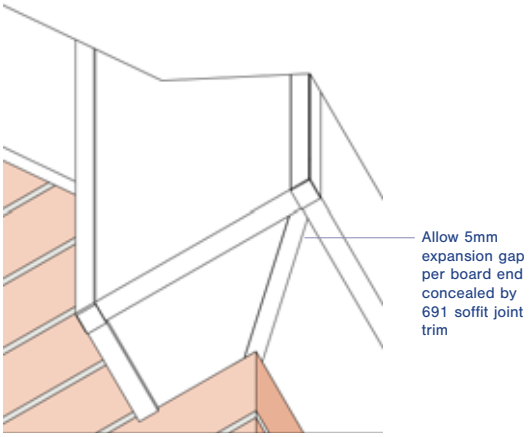
Soffit Installation Details



Stainless Steel Polytop Fixings
1 x 40mm @ 600mm Centres

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.

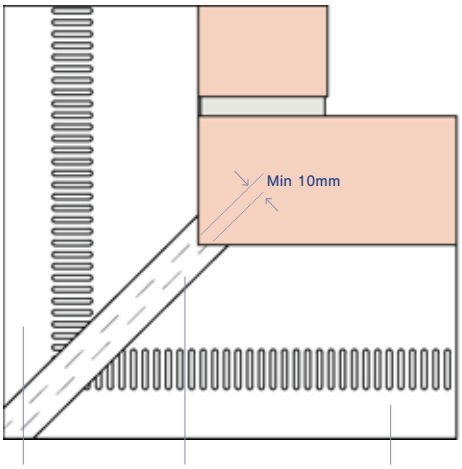
In properties where the outer skin of brickwork is level with the bottom of the fascia board soffit groove, the soffit may be extended over the brickwork and clamped using timber battens secured to the rafter sides.

- Soffit widths should not exceed 300mm without additional support.
- Soffit board fixings should not exceed 300mm across the soffit width.
- H-section trim (691 or 693) is used to join soffit boards.
- A soffit board channel (F trim or J trim) can be used to securely locate the soffit at the wall.
- Soffits can be detailed from standard soffit boards, or Open 'V'-Joint / Shiplap cladding.
- 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.
- The appropriate trims must be used in conjunction with cladded soffits (see Cladding section).

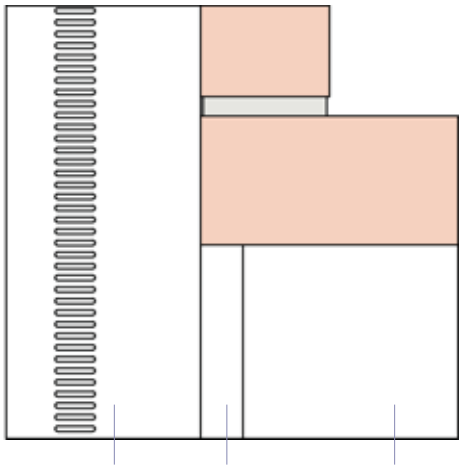
Installation

Use Stainless Steel Polytop Fixings 1 x 40mm @ 600mm Centres. Soffit widths should not exceed 300mm without additional support and fixing.

Mitred Soffit Corner



Straight Soffit Corner



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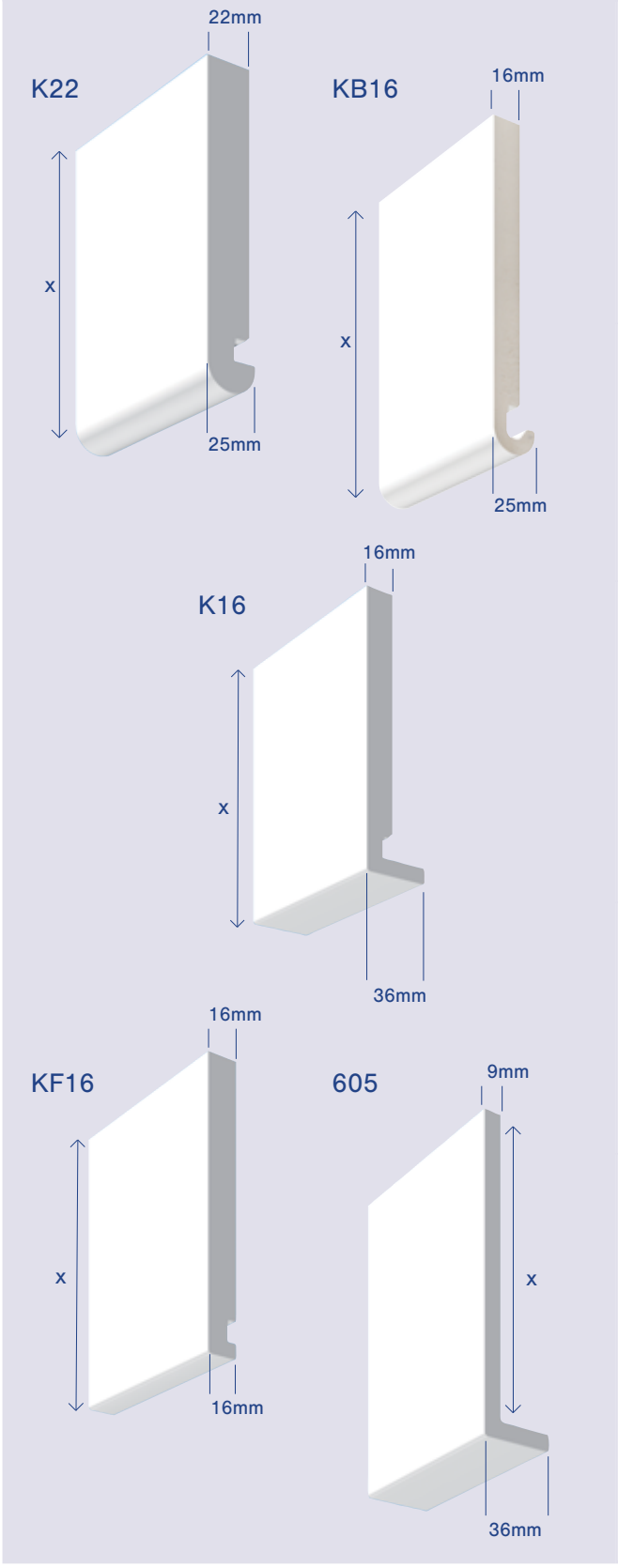
Roofline Range



	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	KB16/150	150mm
	KB16/175	175mm
	KB16/200	200mm
	KB16/225	225mm
	KB16/250	250mm
	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	400mm Double Leg
	K16/405/1.25	400mm Double Leg
KF16	KF16/150	150mm
	KF16/175	175mm
	KF16/200	200mm
	KF16/225	225mm
	KF16/250	250mm
	KF16/405	405mm
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

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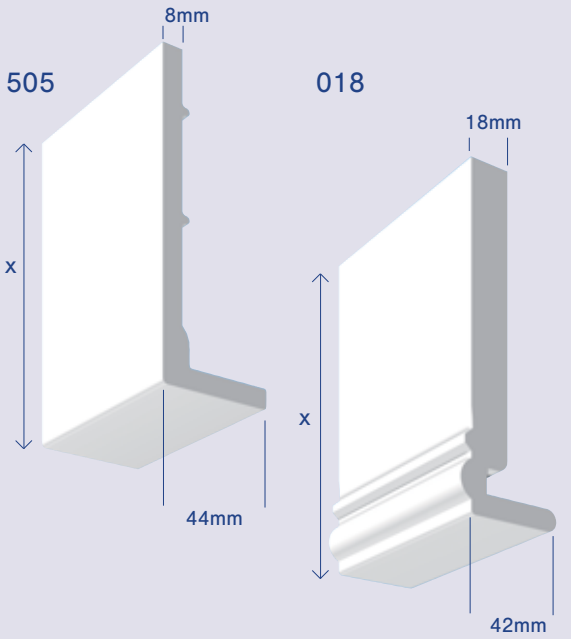
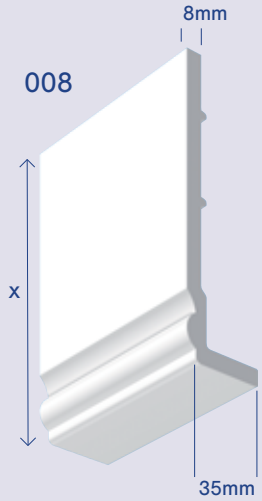
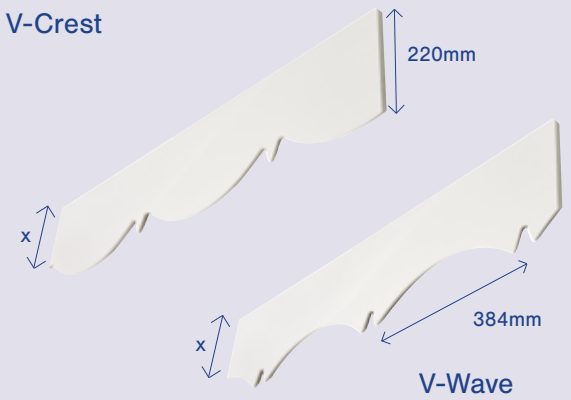
Roofline Range







	Code	Dimension X
505*	505/150	150mm
	505/175	175mm
	505/200	200mm
	505/225	225mm
	505/250	250mm
	505/355	355mm
	505/405	405mm Double Leg
018	018/150	150mm
	018/175	175mm
	018/200	200mm
	018/225	225mm
	018/250	250mm
	018/405	405mm Double Leg
008*	008/150	150mm
	008/175	175mm
	008/200	200mm
	008/225	225mm
	008/250	250mm
	008/405	405mm Double Leg
V-WAVE & V-CREST		
	V-WAVE	150mm min. coverage
	V-CREST	150mm min. coverage

* These products can be used as fascia boards with a minimum 12mm exterior grade plywood backing board.

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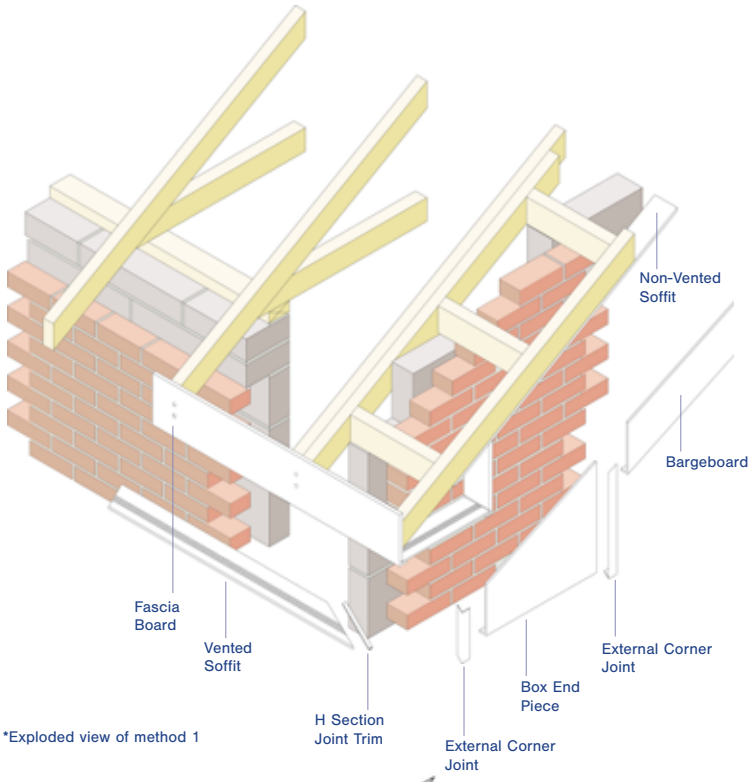
Technical Bulletin

Box End Installations



*Exploded view of method 1

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.

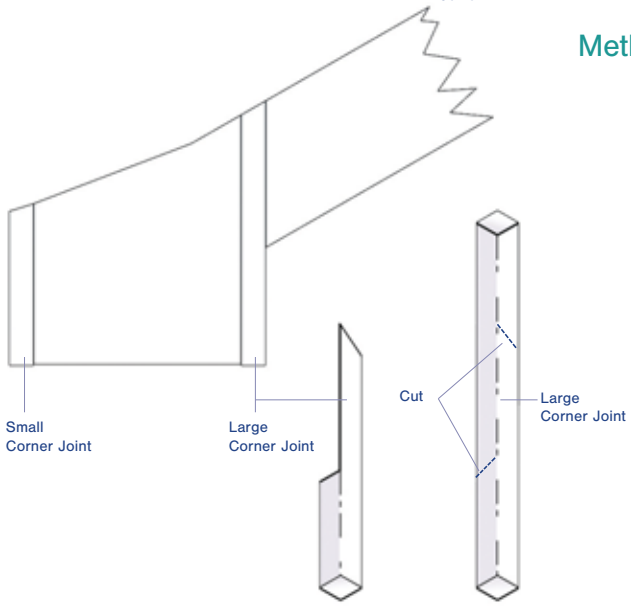
The soffit forming the base of the box end must match the eaves soffit and is mitred at the joint, using 691 H-section as a jointing trim.

Box ends are supported using a preservative treated timber framework.

Boxed End Methods

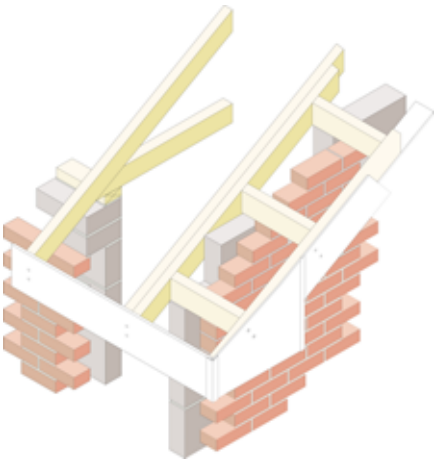
The jointing of the bargeboard into the box end piece can be achieved in two ways

Method 1 →



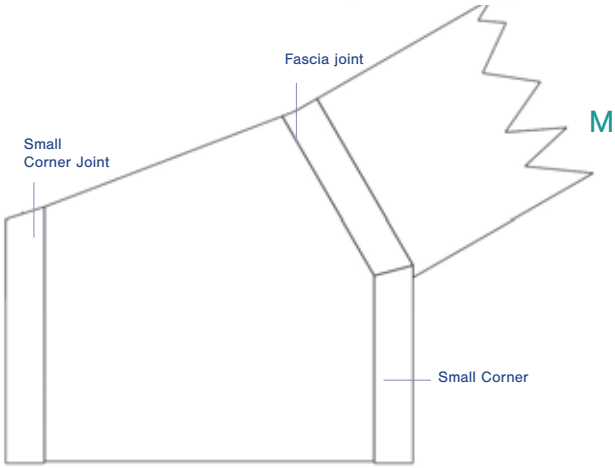
Method 1

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.



*Unexploded view of method 1

Method 2 →



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.

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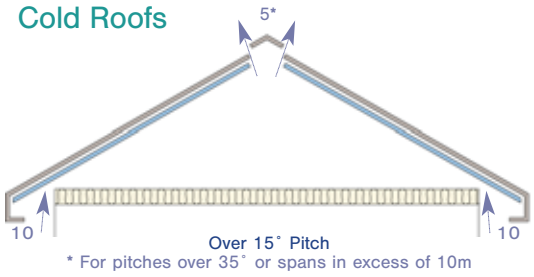
Technical Bulletin

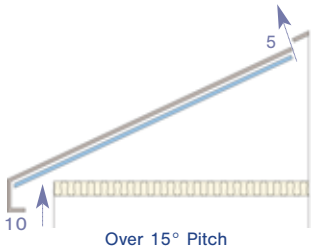
Roofline Ventilation

Provision of Ventilation

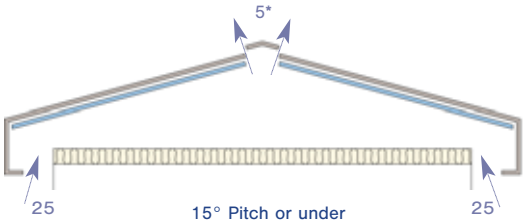
Cold Roofs



Over 15˚ Pitch
* For pitches over 35˚ or spans in excess of 10m

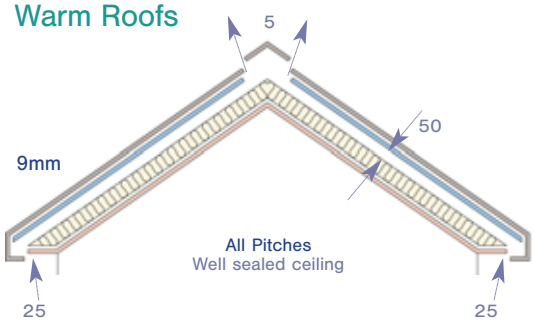


Over 15° Pitch
Pitches of 15° or less require 25mm at eaves



15° Pitch or under
* For spans in excess of 10m

Warm Roofs



All Pitches
Well sealed ceiling

Dimensions in millimetres

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: 2011 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-ventilated 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 Agrement Certificate No. 11/4835.

Provision of Ventilation

The illustrations opposite reflect the basic ventilation requirements normally applicable for impermeable underlays (Type HR) . For additional information including the use of vapour permeable underlays (Type LR) please refer to BS5250: 2011.

Disc and Strip Ventilators

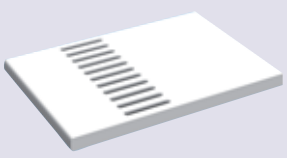
Kestrel provides circular soffit disc ventilators for eaves ventilation. These are fitted at varying centres, into 70mm diameter holes, to achieve the desired level of ventilation.

Kestrel also provides a continuous ventilator strip for eaves ventilation.

This strip is manufactured from PVC-U in 5m lengths giving ventilation equivalent to a 25mm air gap.

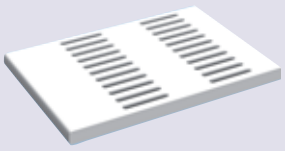
Ventilation Products

803



10mm Air Gap

903

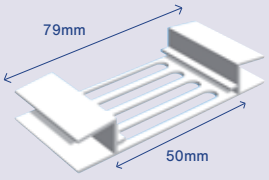


25mm Air Gap

K716

10mm Air Gap = 200mm centres
25mm Air Gap = 85mm centres

662/525



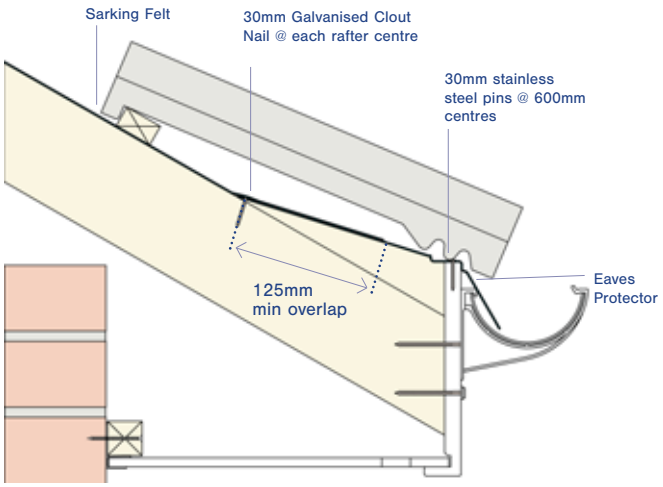
Equivalent 25mm Air Gap

No. 7

Technical Bulletin

Roofline Ventilation

K708 Eaves Protector



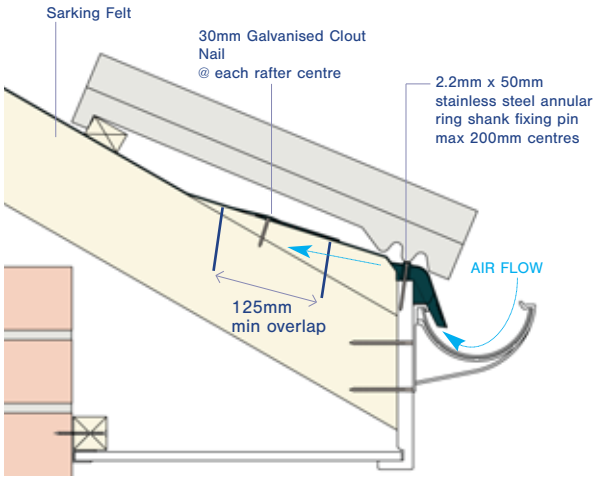
Eaves Protection

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 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.

UNIOFV Over Fascia Ventilator & Eaves Protector



Ventilation and Eaves Protection

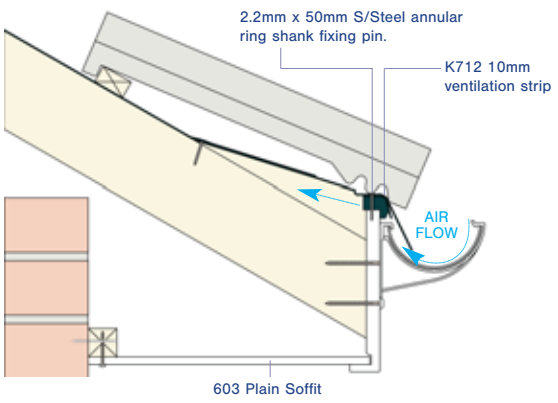
A further enhancement of the idea of the eaves protector comes in the form of UNIOFV an eaves protector combined with over fascia ventilation and bird comb. The ventilation of the roof void at eaves level is provided by an upstand on the underside of the eaves protector which sits on the top edge of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

The UNIOFV product provides ventilation equivalent to a 10mm 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.

- 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 UNIOFV, this product is designed to sit directly on top of the fascia board. Fix with 30mm stainless steel cladding pin at every fixing centre.

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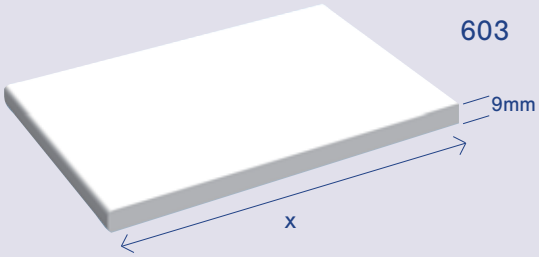
Technical Bulletin

Soffit Range

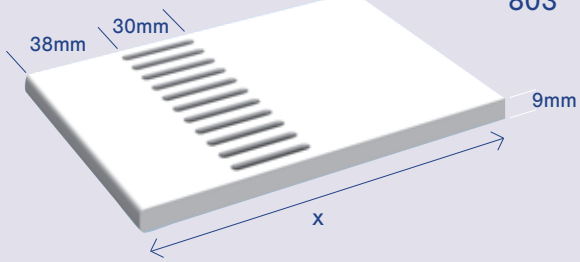
Non-ventilated Soffit

603



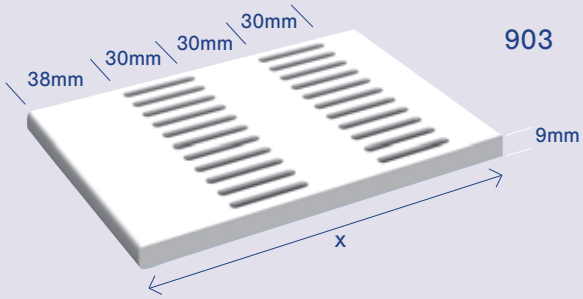
10mm Air Gap Pre-Ventilated Soffit

803



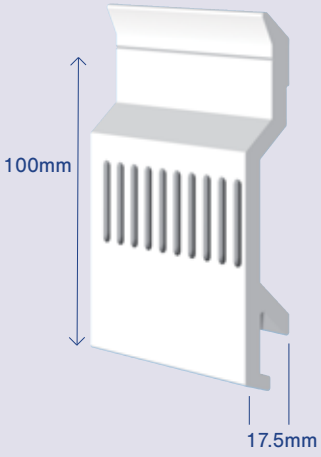
25mm Air Gap Pre-Ventilated Soffit

903



12.5mm Air Gap Pre-Ventilated Cladding

871



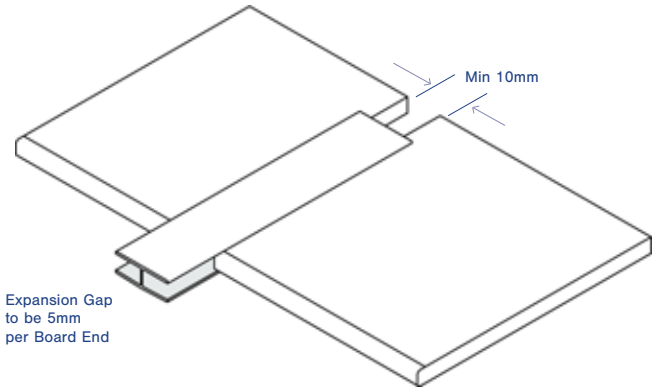
	Code	Dimension X
603	603/100	100mm
	603/125	125mm
	603/150	150mm
	603/175	175mm
	603/200	200mm
	603/225	225mm
	603/250	250mm
	603/300	300mm
	603/330	325mm
	603/400	400mm
	603/450	450mm
	603/500	500mm
	603/600	600mm
803	803/100	100mm
	803/150	150mm
	803/175	175mm
	803/200	200mm
	803/225	225mm
	803/250	250mm
	803/300	300mm
	803/330	325mm
	803/400	400mm
	803/450	450mm
	803/500	500mm
	803/600	600mm
903	903/200	200mm
	903/300	300mm
	903/400	400mm
871	Code	Coverage

No. 7

Technical Bulletin

Typical Jointing Details

Soffit Joint Installation



Jointing of Fascia & Bargeboard

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

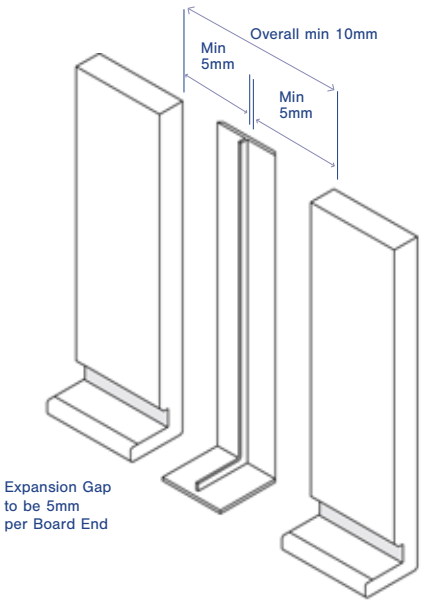
These include some of the following:

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

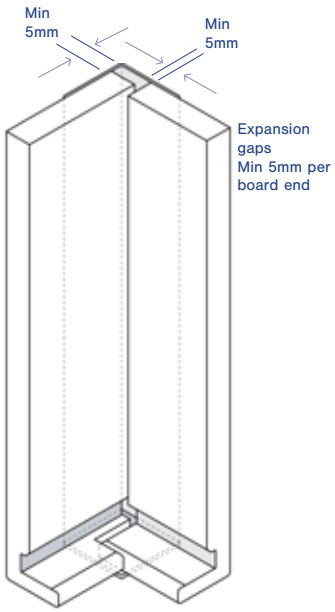
All joints should be secured using Low Modulus Neutral Cure Silicone.

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

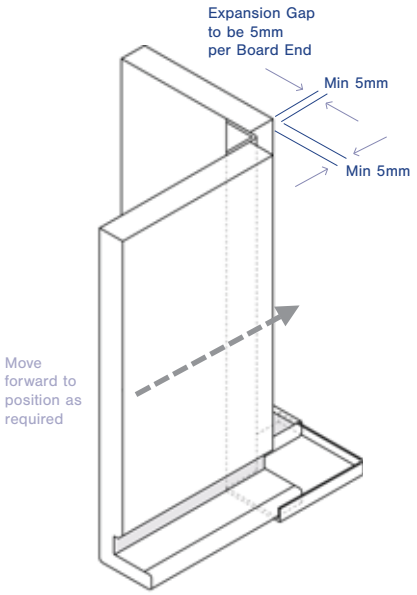
Fascia Joint Installation



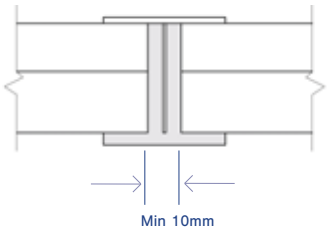
Corner Joint Installation



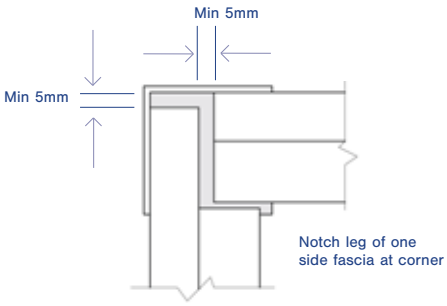
Internal Joint Installation



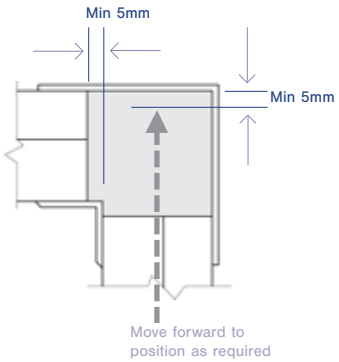
Butt Joint - Plan View



Corner Joint - Plan View



Internal Joint Plan View



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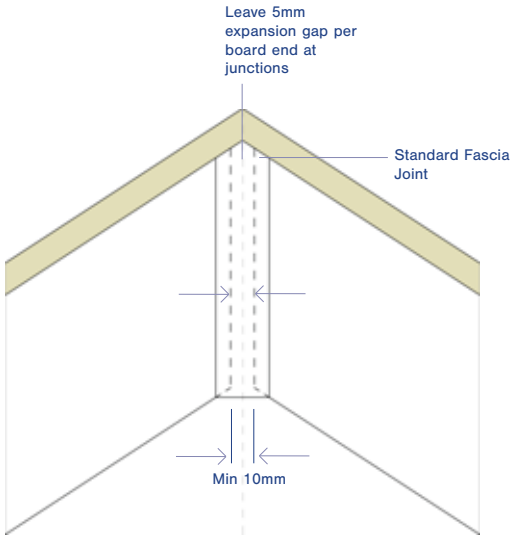
Technical Bulletin

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.

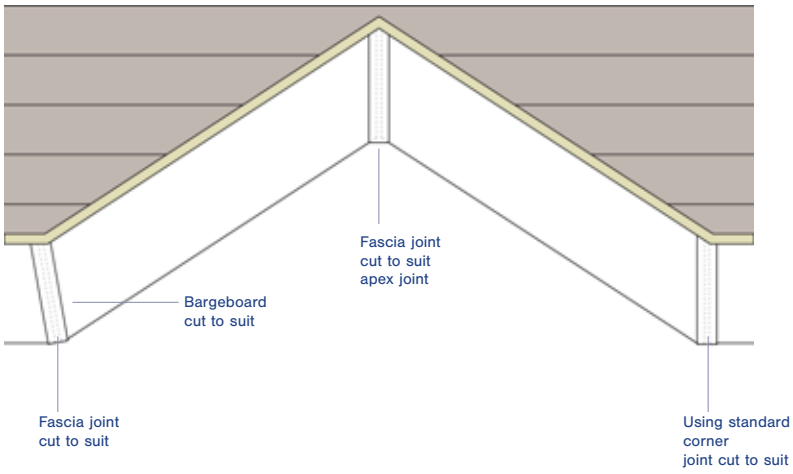
Alternatively, a decorative finial (K714s) can be used to give a more aesthetically pleasing finish.

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.

Method 1 Method 2



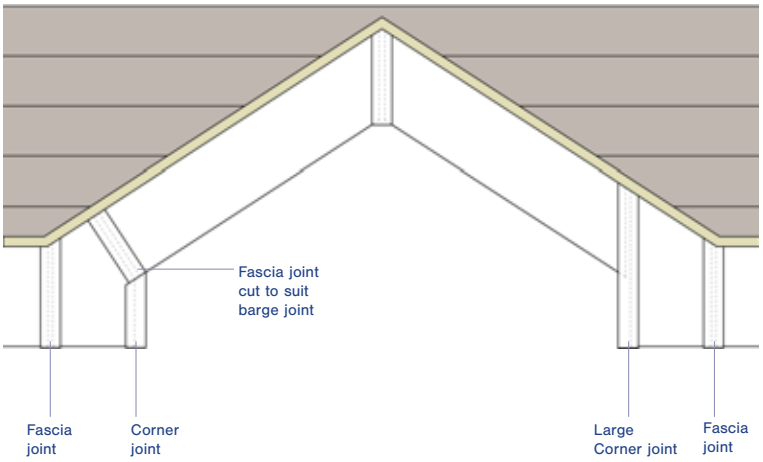
In-Line Pike Junctions

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

Joints and bargeboards will need cutting to suit.

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

Method 3 Method 4



In-Line Box End Options

IIn-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.

- Fascia and bardgeboard material will need to be the same type.

KESTREL© rely on it

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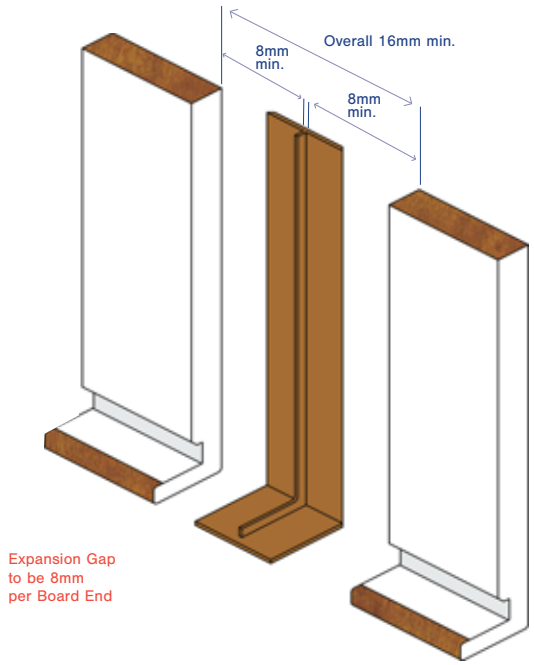
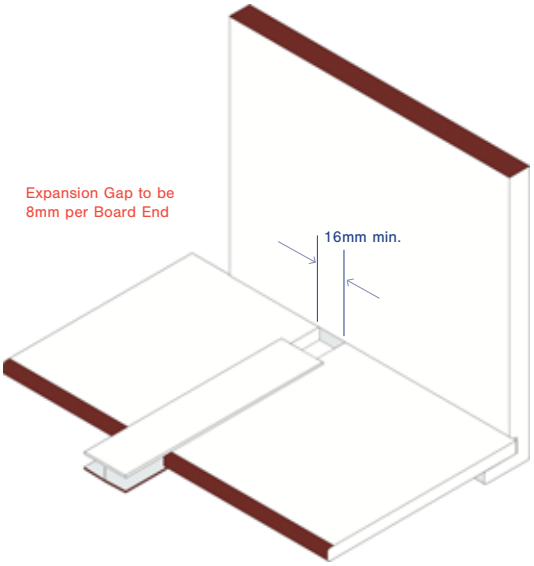
Technical Bulletin

Working with Woodgrain Products - Roofline

Foiled Fascia Joint Installation Details



Foiled Soffit Joint Installation Details



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.

Premiergrains: Up to 3 week lead time.

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Technical Bulletin

Fixing Summary - Roofline

Fascia (thickness)	Fixing detail	Fixing type	Product ref.
8 - 10mm Fascia Capping	Detail with 12mm min exterior grade plywood backing board (BS EN 636:2012+A1:2015)	50mm Polytop Nails 50mm Polytop Screws	SS-50N
16mm - 22mm 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-40P

Cladding boards used as Soffit	Fixing detail	Fixing type	Product ref.
100mm Open V Joint 150mm Sniplap Cladding	Timber soffit bearers	30mm Cladding Pin	SS-30-CP
Kavex 150mm Open V Joint Kavex 150mm Shiplap Cladding		20mm Cladding Trim Nails for cladding trims	SS-20-CN
Kavex 300mm Shiplap Cladding		Application as cladding system	

Eaves Protection & OFVS systems	Fixing detail	Fixing type	Product ref.
K708 Eaves Protector	600mm centres	30mm Cladding Pins	SS-30-CP
UNIOFV	200mm centres	30mm Cladding Pins	SS-30-CP
K712 & K712/025	200mm centres	50mm stainless steel annular ring shank	SS-50N

NOTE: Unless otherwise stated, all fascia/soffit fixing centres should not exceed 600mm centres

General		
Expansion Gap	White Foils & Colours	5mm per board end 8mm per board end
Fixing Centres	Replacement Fascia - 16mm+	2 per fixing centre, max 600mm centres, 65mm polytop nails (or 65 / 50mm x 4mm shank screws), austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009).
	Overcap fascia - 8mm+	2 per fixing centre, max 600mm centres, 50mm polytop nails (or 40mm x 4mm shank screws), austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009).
	Soffit	Per fixing centre, max 600mm centres, 40mm polytop pins (or 40mm x 4mm shank screws), austenitic stainless steel (grade A4 BS EN ISO 3506-1 : 2009).
Soffit Boards	Soffit wider than 300mm	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.
Load Bearing	Fascia 16mm+	16mm - 22mm boards will support all eaves tiles in common usage in the UK (up 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 require a minimum 12mm exterior grade plywood backing board.
Joint Fixing		Low modulus neutral cure silicone BS5889 Type A.
Gutter Fixing	For 16 - 22 mm boards	Fix gutter brackets directly into the board using, for each bracket, at least 2 x 10 gauge x 25mm long (parallel thread form) 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.

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