



SWISH_ROOFLINE_DESIGN_GUIDE_ APRIL_2018

GUIDE

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Swish[®]
BUILDING PRODUCTS

Roofline Products

Design & Specification Guide



Licence No. KM33730



The Specifier's Choice for
Cellular PVC Roofline & Cladding
www.swishbp.co.uk

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SWISH CELLULAR PVC ROOFLINE PRODUCTS

The Swish Roofline range offers the specifier a fully integrated bargeboard, fascia and soffit system with a wide range of components and trims for new build or replacement projects. The system includes provision for ventilation to meet current Building Regulation requirements. The products are complementary to Swish Cellular PVC claddings and are available in the same range of colours.

They present the ideal substitute for timber components, with the added advantages of attractive appearance, maintenance free qualities, weather resistance and durability.

Composition and manufacture

Swish Cellular PVC is an extruded, foamed material with an integral smooth and durable skin. The product can be cut, drilled, nailed and routed, using conventional tools. It is light to handle, easy to fix and does not require any painting or subsequent treatment after installation.

Advantages

- Durable
- Weather resistant
- Fire resisting
- Thermally efficient
- Maintenance free
- Compatible with other building materials
- Will not warp, flake or peel
- Rot proof
- Will not support bacterial or fungal growth
- Agrément approved

Environment and recycling

Swish Cellular PVC Roofline products represent an environmentally responsible use of plastics. They do not contain CFCs, lead or cadmium, which are considered harmful to the environment. Also, they have a very long life span and when replaced, can be easily identified and fully recycled.

Standards

Swish Cellular PVC is manufactured to stringent quality control standards. Swish has been awarded:

- BS EN ISO 9001 - Quality Management
- BS EN ISO 14001 - Environmental Management
- OHSAS 18001 - H & S Management
- BS EN ISO 50001 - Energy Management
- BES 6001 - Responsible Sourcing
- British Standard Kitemark approval to BS 7619 - 2010



FS 681825



EMS 681826



OHS 523157



ENMS 620926



BS 7619
Licence N° KM 33730

Trademarks

Jumbo, Cappit, Polo, Tee Gee, Jumbotec are all trademarks of Specialist Building Products Limited

Swish website

Specifiers have access to a large amount of technical data at www.swishbp.co.uk.

Project guidance, design considerations and installation guides are dealt with in depth. The site also features a CAD library. Downloadable NBS clauses are available in a choice of formats.

Within the site's Library the entire suite of Swish literature can be viewed or downloaded. Construction professionals, Swish Approved Installers and Swish Stockists are also able to order printed literature and samples.

Density

The density of Swish Cellular PVC is on average 450 kg/m³.

Strength

Swish Roofline profiles are sufficiently rigid to facilitate storage and erection but are still sufficiently flexible to withstand normal site handling.

Swish Roofline profiles have been tested for hard and soft body impact resistance in accordance with BS 7619: 2010 and exceed the minimums laid down in the standard. They can therefore be expected to meet the requirements for on-site and in-use service adequately.

Loading

JUMBO & 16MM STATIC LOADING

All Swish Jumbo and 16mm boards have been tested by the British Board of Agrément and found suitable to support all eaves tiles in common usage in the UK (up to 10kg. load per 1 metre length of fascia) at all roof pitches, subject to the boards being fixed to rafter ends at a maximum of 600mm spacings with Swish 65mm Capped Screws (C073) or 65mm Trimtop Nails (C083.)

Note: The assessment does not cover the fixing of eaves tiles to fascia boards, which may be necessary in certain geographical locations to resist wind uplift forces.

GUTTER LOADS

When fitted as recommended by Swish, gutter brackets can be fixed directly to Jumbo and 16mm boards. Tested in accordance with BS 4576: Part 1: 1989, using various third party brackets fixed to Jumbo or 16mm boards, no failure occurred at the specified test weight of 330 N.

When tested to failure, in all cases the brackets failed before the fixing into the board.

WIND LOADINGS

Swish Roofline profiles have adequate resistance to wind loading at the recommended fixing centres, up to five storeys. If 3 storeys or above fixing centres need to be reduced to 400mm.

Fire retardance

Swish white Cellular PVC roofline profiles conform to the following requirements:

BS 476: Part 7:1987. Surface spread of flame test: Class I.

BS 2782: Part 1 (method 140E) 1982 (1988).

Alcohol cup test: Very low flammability.

ASTM D2862-77: Critical oxygen index test: 48%.

DIN 4102 Part 1: Fire behavior of building materials and building components: Class B2.

Thermal conductivity

The lambda value of Swish Cellular PVC is 0.06 W/mK. This imparts a thermal resistance over six times better than timber.

Thermal movement

The coefficient of linear expansion under test conditions is 5×10^{-5} per °C. Swish Cellular PVC profiles will perform satisfactorily in most northern European climates. However, they should not be installed where ambient temperatures are likely to exceed 50°C, as for example in proximity to boiler flues.

Avoid fixing in temperatures greater than 30°C or less than 0°C. When installed as recommended, the fixing system will largely accommodate thermal expansion and minimise the need for expansion gaps.

Water resistance

The impermeable skin of Swish Roofline profiles is unaffected by moisture. Cut ends are non-absorbent due to the closed cell structure of the material.

Chemical stability

Swish Cellular PVC is not affected by liquids in common use. It is resistant to most acids and alkalis, but can be damaged by ketones, esters and solvents. Swish Cellular PVC is not prone to adverse reaction when used in conjunction with established building materials.

Biological

Swish Cellular PVC will not support bacterial or fungal growth. It is resistant to attack by woodworm and termites but should be protected against vermin.

Durability

Swish Roofline profiles have a high stiffness to weight ratio and the dense outer skin ensures a surface of high durability.

Weathering resistance is tested with equipment complying with BS 2782: Part 5: Method 540B.

Colour fastness

Colour fastness assessed in accordance with BS 1006 shows that white Swish Cellular PVC achieves a rating of 7-8 (8 being the test maximum) and that therefore no significant fading or change in whiteness can be expected for a minimum of 20 years.

Swish White Cellular PVC demonstrates excellent performance in tests designed to predict discolouration (pinkening). When exposed to the Suntest, samples do not reach a Delta L* of -2 even after 500 hours. In the ACT test samples exhibit low Delta PI on both ACT 1 and ACT 2.

Discolouration

Swish white cellular profiles DO NOT suffer from the discolouration problems claimed to be associated with some lead stabilized formulations. THEY ARE LEAD FREE.

Workability

Swish cellular PVC can be worked using conventional carpentry tools for cutting, drilling and shaping. Nails, screws and specified adhesives are used for fixing.

Saws with fine-toothed blades should be used and power tools should be operated at the same or higher speeds to those normally used for timber work, with carbide tipped blades.

BIM Objects

Swish has a range of BIM objects that are available to designers on the FastrackCAD or BIM store websites.

Under the REACH directive Swish Building Products is not required to provide an MDS (Material Data Sheet) or COSHH data sheet (Control of Substances Hazardous to Health) for its Cellular PVC products, however, we recognise a duty of care to our customers and so we provide a separate bulletin for the Safe Use of Cellular PVC Materials.

Access Systems

The work area must never be accessed using an unsupported ladder or other unstable access system. Always use a full scaffold platform or a purpose made cantilevered deck system with guard rails in place.

Asbestos

By law all existing asbestos materials must be removed by trained operatives under strictly controlled conditions. If it is suspected that asbestos is present the Local Authority should be consulted.

Design Considerations

GENERAL

The Swish roofline range consists of all the necessary components for the installation of eaves and gable assemblies. The range covers **new build** requirements, the complete **replacement** of degraded timber components in older properties and the overcapping or **refurbishment** of existing, sound timber structures, with capping profiles. Each of these provides a long term solution to the burden of eaves maintenance, especially when combined with appropriate eaves protection components.

Major system elements:

Fascias and Bargeboards	Replacement - White	16mm Square, Ogee, Bullnose & Flat, 20mm Square & Ogee, 25mm Bullnose
	Replacement - Foiled	Mahogany, Light Oak, Rosewood, Irish Oak, Black, Anthracite Grey, Cream, White
	Replacement - Co-ex	White, Anthracite, Light Grey, Hazy Grey, Anthracite Grey, Cream, Sand
	Capping - White	Square Cappit, Ogee Cappit
Eaves soffits	White	GeePee, Fluted, Polo (vented 10 & 25mm air path), TeeGee*, OpenV*
	Foiled	Mahogany, Light Oak, Rosewood, Irish Oak, Black, Anthracite Grey, Cream, White
	Replacement - Co-ex	White, Anthracite, Light Grey, Hazy Grey, Anthracite Grey, Cream, Bright White
Over fascia ventilation	Standard	Ventilator C504 & C505 (10mm & 25mm equivalent airpaths)
	With eaves protection	Vented Eaves Protector, Bird Comb
Eaves protection	Standard	Jumbotec
	With over fascia ventilation	Vented Eaves Protector, Bird Comb
Joints, corners and abutments	Full range of concealed-fix and face fix units, internal and external corners. White, foiled and Co-ex units available	
Decorative Elements	Decorative bargeboards, spires, finials, braces, dentils, gallows brackets and a wide range of decorative trims	
Fixings	A4 marine grade stainless steel screws, nails (plastic top) and pins	

* These cladding profiles, also available as vented units (Polo)

NEW BUILD WORK

The range consists of Swish white 16mm, 20mm and 25mm fascias and woodgrain foiled and coloured fascias and accessories. These boards are rigid enough to bear their own weight, the load of the guttering and the roof covering at the eaves without the need for a backing board (see 'Loading' page 3).

Replacement fascia boards are available in Square, Bullnose, Flat and Ogee (Taurus) styles. All profiles feature a groove to engage soffit boards by simple push fit.

Foiled and Co-extruded fascias allow the specification of colour for purposes of matching to coloured window systems and for maintaining or providing an individual appearance to a property. Soffits are usually installed as a full colour system or as foiled or co-extruded fascias complemented by white soffits.

Notes on fixing (details page 12)

- Fix replacement fascia and 16mm foiled boards directly to the rafter foot using A4 marine grade stainless steel nails.
- Recommendations for fixing materials and centres must be followed (page 12).
- Gutter brackets can be fixed directly to Swish replacement fascias and foiled or coextruded boards using A4 marine grade stainless steel screws which should penetrate the inner face of the board (see 'Gutter Loading' page 3).
- A suitable framework of timber hangers should be provided for supporting the soffit board (see drawings).

REPLACEMENT WORK

Provided the existing supporting framework is still sound, 16mm, Jumbo fascias, Gee Pee plain soffits and Polo vented soffits can all be used to replace existing timber construction. The wide range of sizes available will cater for all normal situations. It may be necessary to re-align or supplement any timber battens supporting the soffits.

REFURBISHMENT PROJECTS

Cappit profiles with matching joints, corners and abutments can be fitted over the face of sound existing timber fascias and bargeboards. Unsound or insecure backings and rafters should be cut out and replaced before overcapping.

Profiles are mainly flat-backed for flush fitting to existing sound fascias or backboards. Cappit profiles have a return bottom leg for lay-on soffits.

All overcapping profiles can also be used for new-build work, but will require a backing board of not less than 12mm marine plywood.

Notes on fixing (details P14)

- Overcapping profiles will not support the weight of tiles at the eaves. Eaves tiles must be supported by a continuous timber kick fillet or batten.
- Alternatively the load should rest on the top of the backing board to which the capping profiles are attached. The backing board should stand proud of the PVC profile.

- Recommendations for fixing materials and centres must be followed (page 25).
- Gutter brackets must be fixed through both the capping profile and the backing board with A4 marine grade stainless steel screws.

Eaves Protection

The longevity of any roofline installation will benefit from the use of eaves protection components. The support provided by eaves protection profile Jumbotec, eradicates 'ponding' which generally occurs behind the fascia board where there is a tendency for the sarking felt to sag. Eaves protection is also available in combination with over fascia ventilation (Vented Eaves Protector C406 see page 10).

Ventilation

The requirements of the building regulations for ventilation of the roof void are given on page 5. Consideration should also be given to the method of providing eaves ventilation.

Through soffit - Ventilation of the roof void may be achieved using an appropriate Polo board or strip ventilator (see page 10). Where a plain soffit board is to be installed over an existing sound timber soffit, circular ventilators (C267) will provide the required airflow (see page 10).

Over fascia - Where a 'clean' soffit is required, ventilation may be provided by Over Fascia Ventilator C504 and C505 or Vented Eaves Protector C406 fixed securely to the top of the fascia board. This area remains hidden behind the rainwater system. The height of

the specified fascia board should be reduced by the depth of the ventilator component.

Through ventilation – Installation of an eaves ventilator tray system, will ensure an unobstructed air path above the loft insulation material (page 18).

Design detailing

Swish provide a number of detailing options. These are best viewed in the Swish Range Brochure A432. They may be summarised as follows:

- **Decorative bargeboards:**
Two systems of concave and convex boards. Decorative Roofline (5m) and Roofstyle (450mm sections)
- **Roof Spires:** A range of decorative spires, finials and bracing bars.
- **Dentil Mould:** A GRP unit for gable or eaves soffits.
- **Trimming profiles:** The range of Swish trims allows considerable choice of finishing effects. Profiles may be mounted singly or in multiples.

Colour range

Profiles are supplied as standard in white. A range of woodgrain foiled boards are available in Mahogany, Light Oak, Rosewood, Irish Oak, Anthracite Grey, Cream, White and Black. Co-extruded coloured boards are also available in Light Grey, Hazy Grey, Anthracite Grey, Anthracite and Sand. Trim, joint and corner components are available in matching finishes. A range of complementary cladding profiles is also provided.

Sizes

Swish Roofline profiles are supplied as standard in 5m lengths. Other lengths can be supplied to order, subject to minimum quantity restrictions. For nominal board widths see pages 6/7.

Sealants

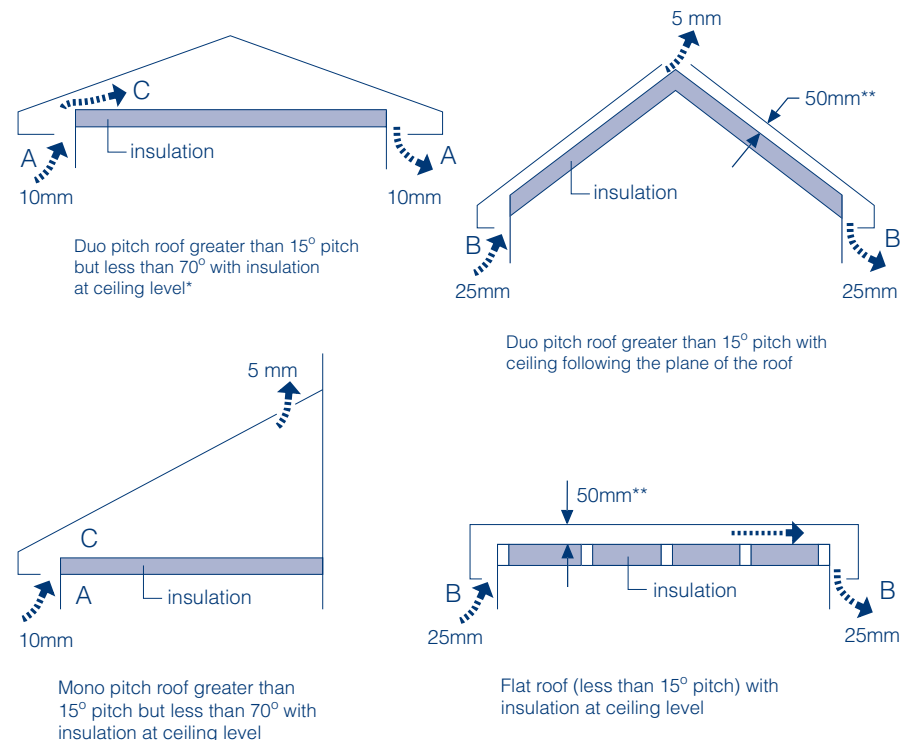
Where detailing requires a weather seal to prevent ingress of rain, snow, etc. (eg corners, junctions, openings) Swish low modulus silicone sealant is recommended (see 'Sealants and Adhesives' page 25).

Climate

If intended for use in climates other than those common to northern Europe, please consult Swish for advice. Swish Cellular PVC profiles and components for external use will normally perform satisfactorily in ambient air temperatures up to 50°C.

Roof ventilation

The air path dimensions shown on the drawings are the minimum widths required for clear continuous gaps.



*Duo pitch roofs greater than 20° pitch or greater than 10m span should have additional ventilation at the ridge to assist airflow through the roof void, equivalent to at least a 3 mm wide continuous gap. Additionally, if the span is greater than 10m the overall ventilation area should be increased to at least 0.6% of the total roof area.

**Air paths should not be obstructed. A minimum 50mm free air path should be maintained between the top of the insulation and the underside of the roof decking.

Building Regulations

Swish ventilators for roof voids are covered by British Board of Agrément Certificate No. 91/2620. When used in accordance with the Certificate, Swish ventilators will satisfy the following statutory requirements.

England and Wales

The Building Regulations 2010 (as amended) (England and Wales):
Requirement C2 (b) (c): Resistance to Moisture
Regulation 7: Materials and workmanship.

Scotland

The Building (Scotland) Regulations 2004: (as amended)
Regulation 8: (1) (2) Fitness and durability of materials and workmanship
Regulation 9: Building Standards – Construction; Standard 3.10 – Precipitation and Standard 3.15 - Condensation

Northern Ireland

The Building Regulations (Northern Ireland) 2012 (as amended)
Fitness of materials and workmanship, 28 (b): Resistance to ground moisture and weather and 29: Condensation.

Swish ventilators also meet the recommendations BS 5250: 2002 which deals comprehensively with the subject of condensation in dwellings.

Jumbo Profiles

Scale 1:2 and 1:5

Jumbo profiles are available in 3 styles to facilitate matching with existing roofline detail and to widen design choice.

Used primarily as fascia boards for either pitched or flat roofs, Jumbo profiles may also be used for bargeboard applications.

Jumbo profiles do not require a timber backing board and may be fixed directly to the rafter ends or gable ladders, using the fixings recommended (pages 12 & 25).

All Swish Jumbo boards have been tested by the British Board of Agrément and have been found to be capable of supporting the roof covering and guttering system (see 'Loading', page 3).

Square Jumbo

Square Jumbo is 20mm thick with a rectilinear section. It has a 35mm wide return bottom leg and a rebate designed to accommodate a Gee Pee flat board or Polo ventilated soffit board by simple push fit. The profile also allows the use of inclined soffit constructions.

These profiles are available in 7 standard depths, including two double-ended sections (C151 and C280) which allow cutting on site into two separate boards to meet design requirements, each with its return leg and rebate.

A 405mm x 1.25m double-ended board is available for box-end construction (CI 13).

Bullnose Jumbo

Bullnose Jumbo is 25mm thick with a half-round bottom edge. As with Square Jumbo, the bottom return includes a rebate for engaging the soffit board.

These profiles are available in 6 standard depths, including one double-ended board (C277).

A 405mm x 1.25m double-ended board is available for box-end construction (CI 12).

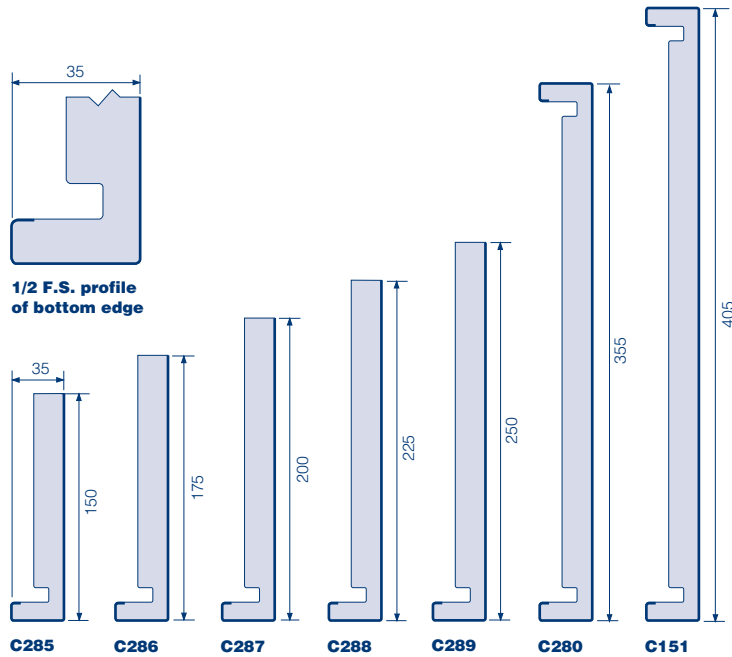
Ogee Jumbo

Ogee Jumbo is also 20mm thick and has an Ogee profile at the bottom edge, with a flat return leg and soffit rebate. It has the same strength characteristics as Square Jumbo and is available in the same range of depths, including two double-ended boards (CI 145/6).

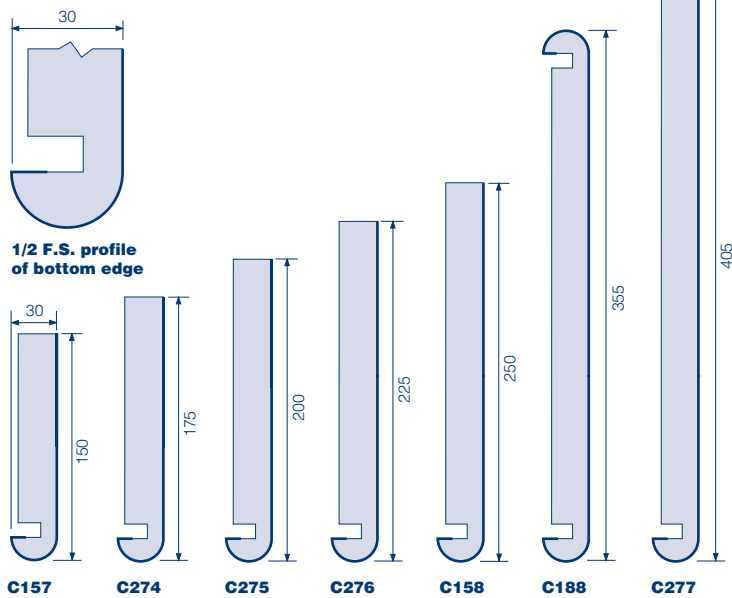
A 405mm x 1.25m double-ended board is available for box-end construction (CI 16).

Accessories

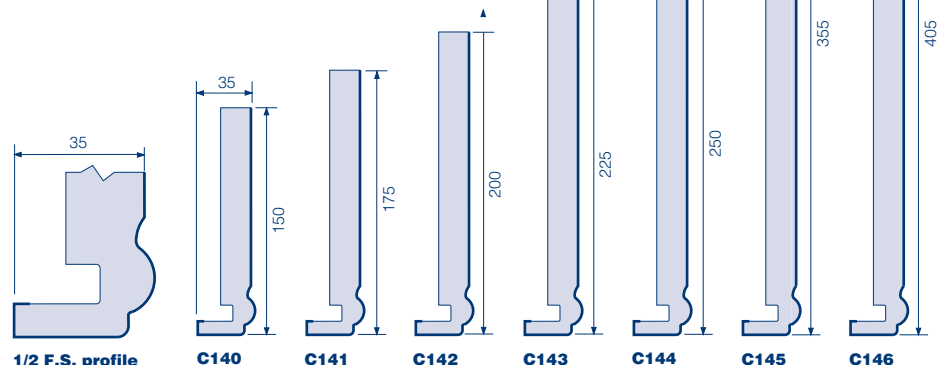
A full range of matching purpose-made mouldings is available for joints, internal and external angles, as well as general purpose trims. (See page 9.)



Standard Jumbo (20 mm thick)



Bullnose Jumbo (25mm thick)



Ogee Jumbo (20mm thick)

16mm Profiles

Scale 1:2 and 1:5

16mm profiles are available in 4 styles to facilitate matching with existing roofline detail and to widen design choice.

Used primarily as fascia boards for either pitched or flat roofs, 16mm profiles may also be used for bargeboard applications.

16mm profiles do not require a timber backing board and may be fixed directly onto rafter ends or gable ladders, using the fixings recommended (pages 12 & 25).

All Swish 16mm boards have been tested by the British Board of Agrément and have been found to be capable of supporting the roof covering and guttering system (see 'Loading', page 3).

16mm Square

The 16mm Square boards with a rectilinear section have a 35mm wide return bottom leg and a rebate designed to accommodate a Gee Pee flat board or Polo vented soffit board by simple push fit. The profile also allows the use of inclined soffit constructions.

This profile is available in 9 standard depths including 4 double-ended boards (C350, C111/C351 & C366) which allow cutting on site into two separate boards to meet design requirements, each with its own return leg and rebate.

A 405mm x 1.25m double ended board is available for box end construction (C111).

16mm Bullnose

The 16mm Bullnose board has a half round bottom edge. As with the 16mm Square profile the bottom return includes a rebate for engaging the soffit board.

This profile is available in 8 standard depths including 4 double-ended boards (C425, C119/C426 & C448).

A 405mm x 1.25m double-ended board is available for box-end construction (C119).

16mm Ogee

The 16mm Ogee board has an ogee profile at the bottom edge with a flat return leg and soffit board rebate. It has the same strength characteristics as the 16mm square profile and is available in 7 standard depths including 3 double-ended boards (C166 & C117/C167).

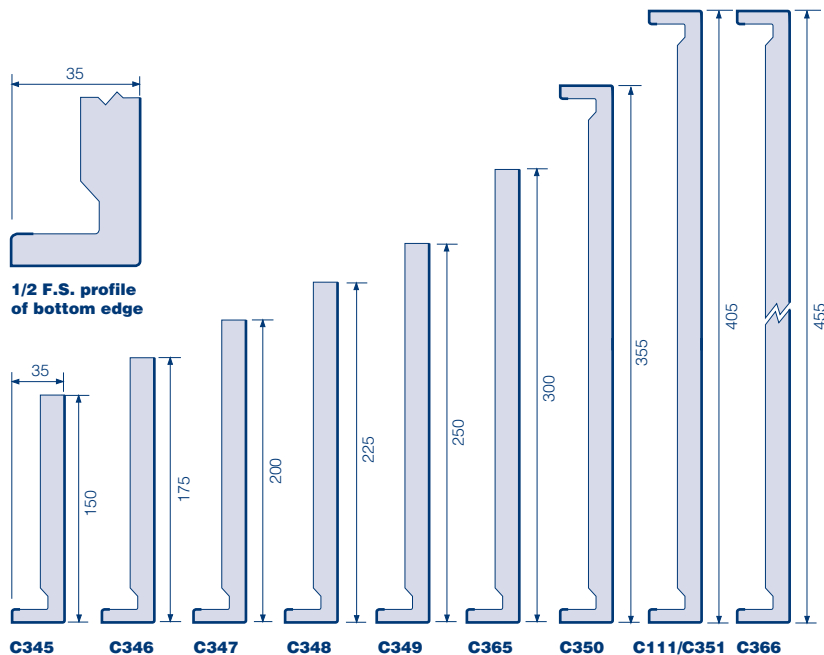
A 405mm x 1.25m double-ended board is available for box-end construction (C117).

16mm Flat

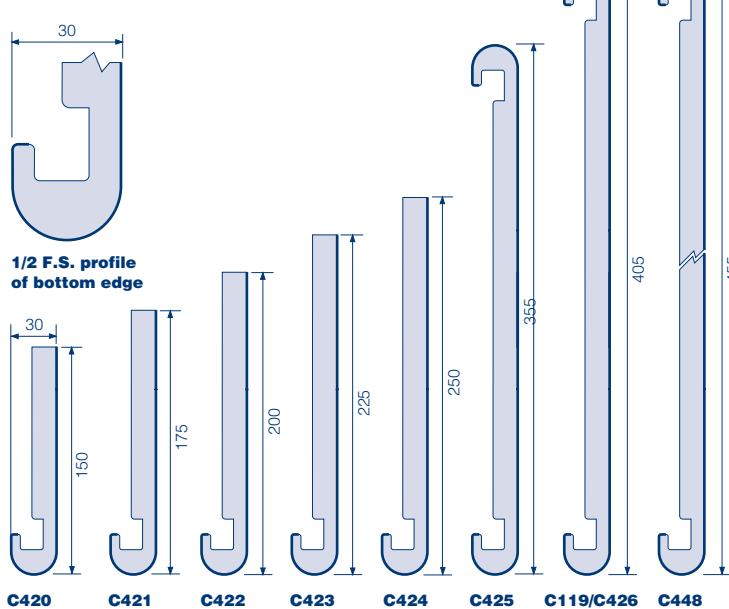
The 16mm Flat fascia board with its rectilinear section has a rebate designed to accommodate a soffit board. This profile is available in 6 standard designs including one double-ended board (C354).

Accessories

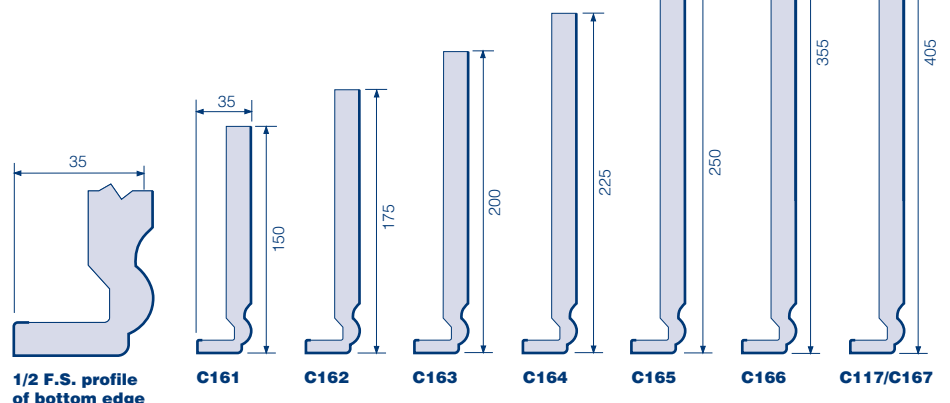
A full range of matching purpose-made mouldings is available for joints, internal and external angles, as well as general purpose trims. (See page 9)



16 mm Square



16 mm Bullnose



16 mm Ogee

Cappit & Gee Pee Boards

Scale 1:5

Swish Cappit profiles are designed primarily for overcapping of existing roofline construction in refurbishment projects. They may be used for both fascia and bargeboard applications.

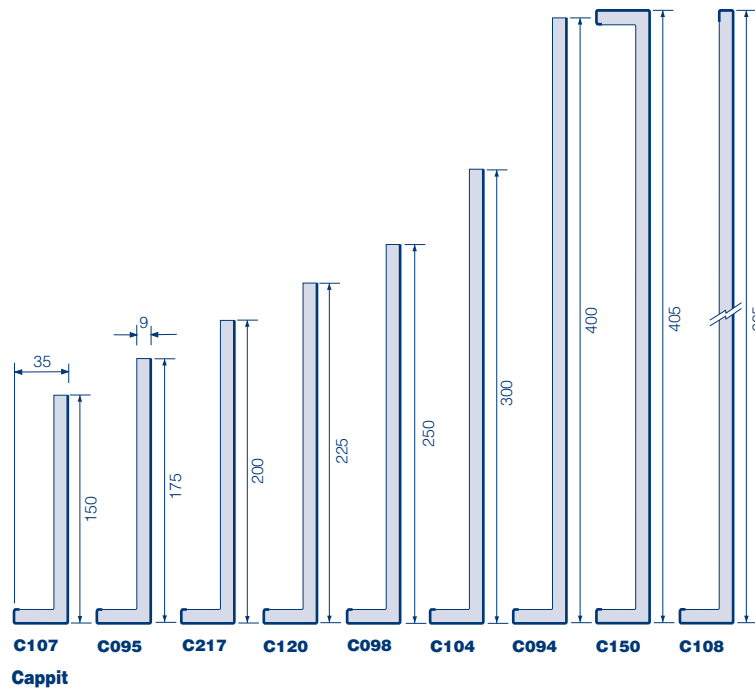
The profiles are not able to support the weight of eaves tiles or guttering on their own and should be fixed to existing sound timber or suitable backboards, using the fixings recommended on page 14.

Cappit

Standard Cappit has a square base. The profile is flat-backed for flush fitting over sound existing fascias or backboards.

These boards are available in a range of nine depths, including one double-ended board (C150).

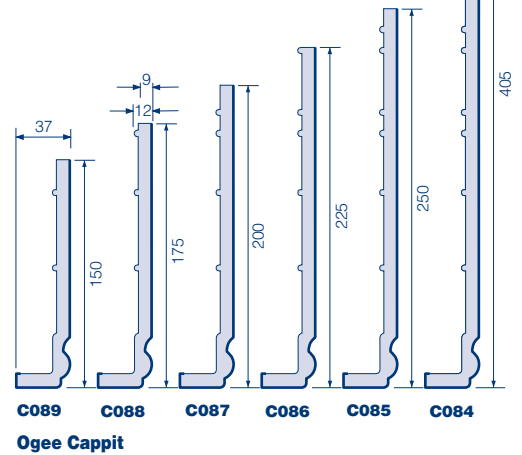
A 405mm x 1.25m double-ended board is available for box-end construction (C114).



Cappit

Ogee Cappit

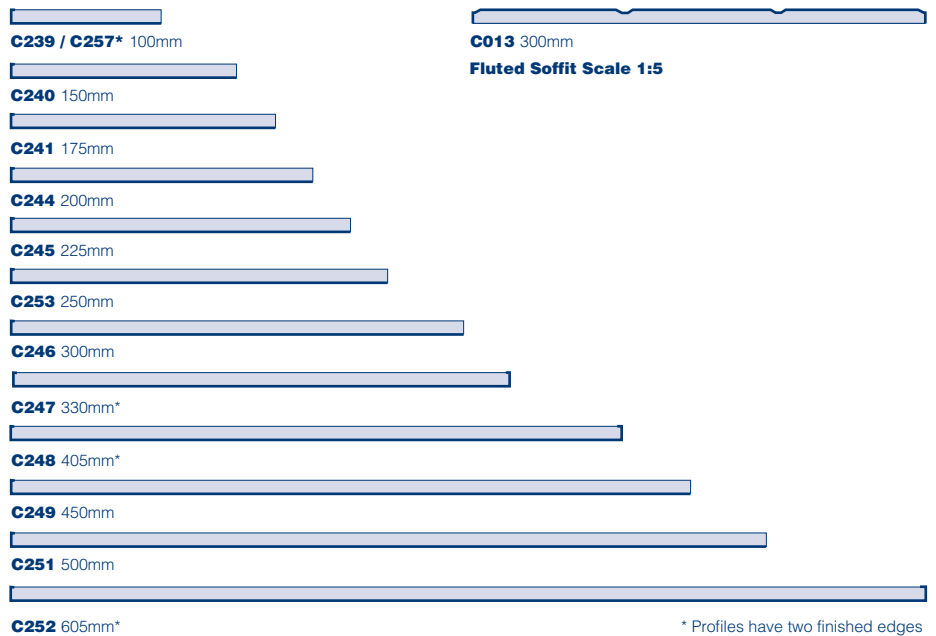
The Ogee version is available in a range of six sizes, including a 405mm double-ended board (C084). The ogee shape is of the same dimensions as the Ogee Jumbo board, thus facilitating box-end construction.



Ogee Cappit

Gee Pee boards

Swish Gee Pee is a 9mm thick general purpose board, produced in 5 m lengths, suitable for soffits and linings. It should only be fixed to a suitable supporting framework or backboard.



Gee Pee Scale 1:5

* Profiles have two finished edges

Corners, Joints & General Purpose Trims

Scale various

Corners and joints

Corners and joints for the Jumbo, 16mm and Cappit ranges are purpose-made mouldings.

CONCEALED FIX

Concealed fix external corners have lugs for fixing to rafters or support timber.

Joints are used between rafter fixing positions and are secured using Swish Low Modulus silicone (C077).

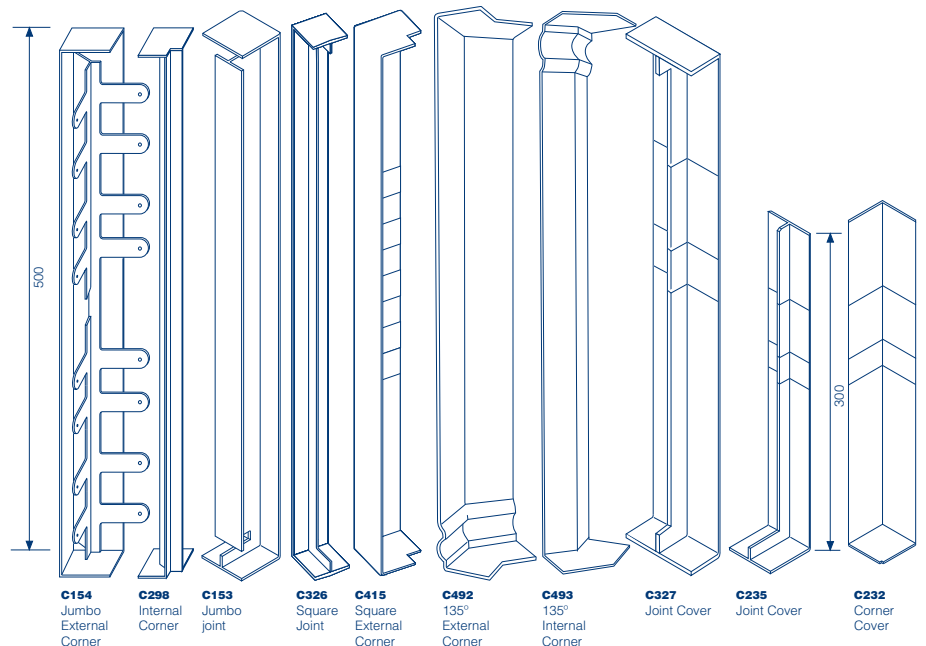
In the case of Jumbo boards, joint fixing is supplemented by nailing through pre-formed holes into one plank end.

Concealed fix corners and joints are supplied as standard 500mm double-ended units, scribed on the back face at 150, 175, 200, 225 and 250mm to aid cutting to standard board sizes.

FACE FIX

Corner and joint covers are also available for face fixing. Joint covers should be fitted over board joints using Swish Low Modulus silicone. Allow a 4 mm expansion gap between board ends.

Face fix corners and joints are supplied as 300mm or 500mm double-ended units and are scribed on the back face at 150, 175 and 225mm.



	Joints		Corners
	500mm		External 500mm
Square	C153	90°	C154
Bullnose	C360	90°	C361
Cappit	C302	90°	C294

All 500mm joints and corners are double-ended

	Joints		Corners			
	500mm	300mm	External		Internal	
			500mm	300mm	500mm	
Square	C326	C235	90° C415	C232	C298	
Bullnose	C328	C299**	90° C418	C301**	C321	
Ogee	C329	C236	90° C417	C233	C300	
Square/Ogee			135° C492		C493	
Flat	C327					

*C299, C236, C301, C233 are not illustrated

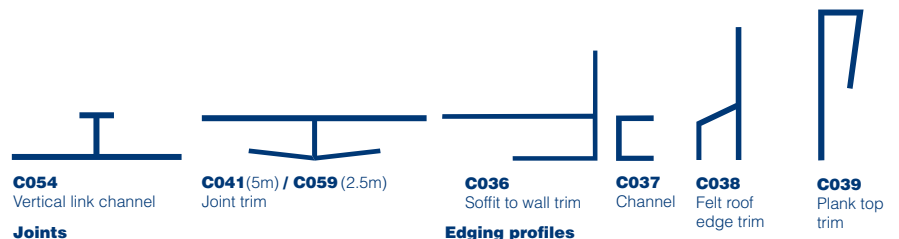
** C299 & C301 are suitable for 16mm bullnose only

Trims for Gee Pee soffits and other plain boards:

Joints (C054, C041 and C059)

Edging trims (C036, C038 and C039)

Stop ends (C037)

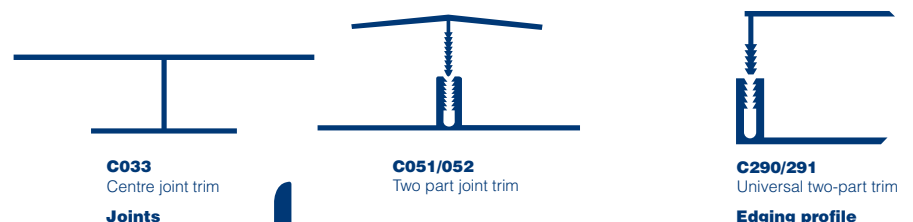


Trims for cladding profiles when used as soffit boards:

Centre joint trim (C033)

Two part joint (C051/C052)

Edging trim (C290/C291)



External Corner trims for general application:

(C018 and C056)



All trims are produced in 5m lengths.

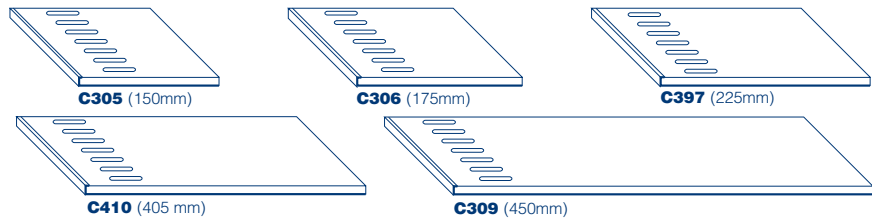
Roofline general purpose trims Scale 1:2

Ventilation

Scale: various

Polo ventilated soffit boards

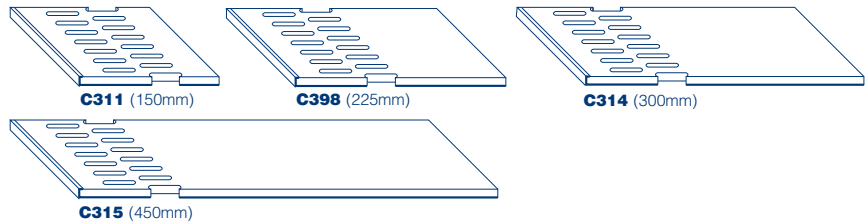
The Polo range complies with UK Building Regulations for new build applications and provides the equivalent of either a 10mm or a 25mm continuous air path.



Polo (10mm air gap) – Additional sizes are available (see a current price list)

Tee Gee Polo boards

A tongued and grooved board containing a single row of slots (equivalent to 10mm air gap), particularly suitable for wide 'feature' soffits.

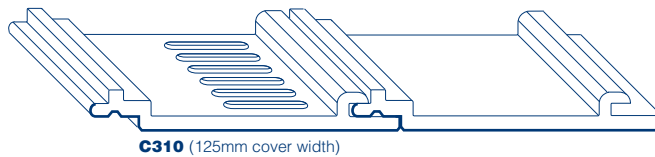


Polo (25mm air gap) – Additional sizes are available (see a current price list)

Strip ventilators

The range comprises slotted profiles to meet all roofline ventilation requirements, in conjunction with either Swish Gee Pee or other soffit boards. They are supplied in 10mm and 25mm air gap configurations.

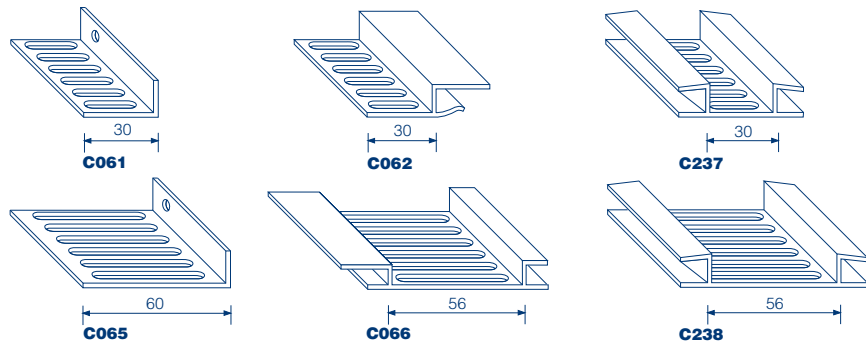
- C061 (10mm) and C065 (25mm) are general purpose angle ventilators.
- C062 (10mm) fixes between soffit and wall.
- C066 (25mm) engages into the fascia soffit groove and over the soffit board.
- C237 (10mm) and C238 (25mm) engage over the soffit boards on both edges.



Tee Gee Polo for wide soffits
(150mm vented Open V profile also available - C058)

Jumbotec

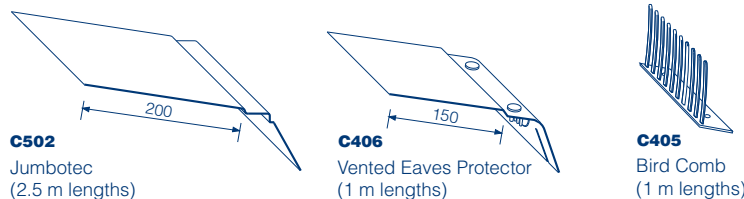
Jumbotec is a rigid PVC extrusion designed for eaves protection. It eliminates the problems arising from deterioration of traditional roofing felts (see page 19).



Strip ventilators

Vented Eaves Protector

The Vented Eaves Protector is used where both eaves protection and over fascia ventilation are required. Uniquely this fitter friendly unit allows access to gutter brackets positioned behind the forward skirt. A Bird Comb unit is available which attaches to the Vented Eaves Protector to prevent the incursion of birds and larger insects under profiled roof tiles.



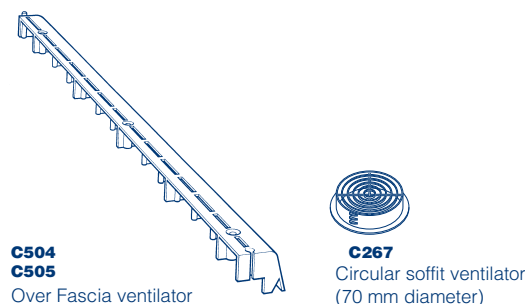
Eaves protection/ventilation

Over fascia ventilation

Robust 1m vent units fixed on top of the fascia to allow a 'clean' or unvented soffit to be used. 10mm (C504) and 25mm (C505) air gap versions.

Circular soffit ventilator

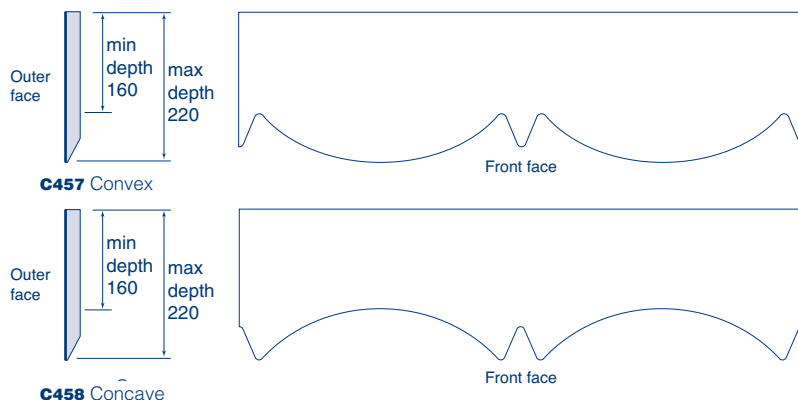
The C267 soffit ventilator fixes with a push/twist action into a 70mm dia. hole drilled in the soffit. Fix at 200mm centres along eaves to achieve equivalent of 10mm continuous air gap.



Decorative bargeboards

Convex and Concave boards are available in standard 5m lengths. The pattern is routed from a 16mm flat board. The reverse side of the board is chamfered at the lower edge (see page 20) to produce a more elegant appearance when viewed from ground level.

Bespoke designs and lengths may be developed where a commercial requirement exists.



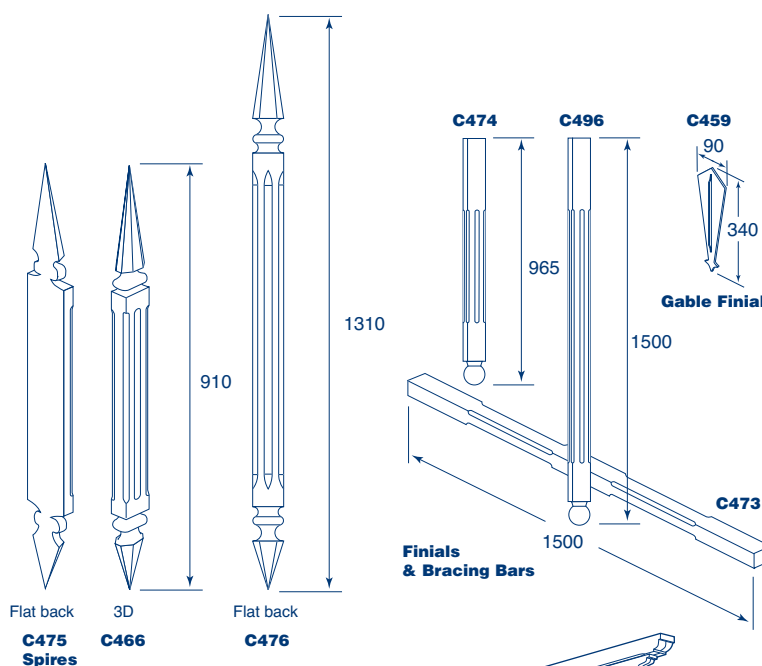
Spires and Finials

These units are essentially decorative and afford a simple but highly effective enhancement of the installation.

Spires

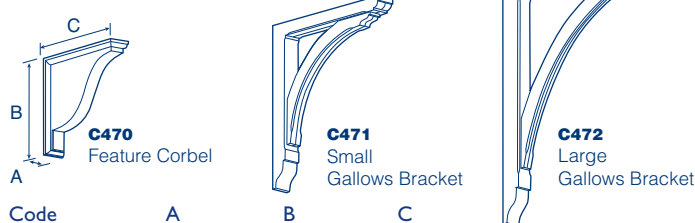
Where there is no direct line of sight to the back of the spire, either from ground level or from within the dwelling, a flat backed spire (C475 or C476) will present a rapid and simple decorative cap to the face of the bargeboard at the apex.

A square section spire (C466) with detailing on the front and rear faces allows the unit to be viewed from all available angles.



Corbel & Gallows

Swish exterior Corbel and Gallows Brackets are designed to fit under canopies, bay and oriel windows. The Corbel has sharply defined sweeping curves which are most effective when installed below a flat top canopy or used in pairs beneath oriel windows. Swish Gallows Brackets are load bearing and capable of offering structural support to door and window canopies. The surface is matt and has the appearance of timber incorporating a high level of bevelling detail. It is generally recommended that these items are not painted. However if this is a requirement please consult the Swish Technical Department for further guidance.



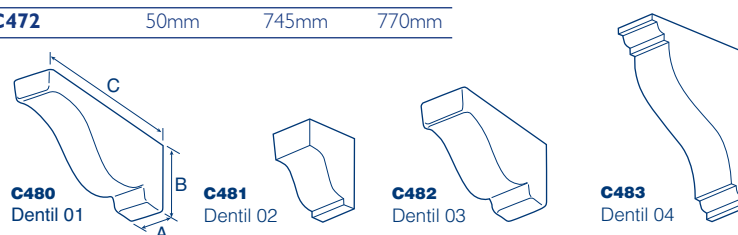
Code	A	B	C
C470	80mm	350mm	390mm
C471	70mm	630mm	580mm
C472	50mm	745mm	770mm

Dentils

Swish Dentils provide an excellent means of adding both decoration and value to a property. The range meets the requirements of most new build and refurbishment applications as each unit is capable of a secret mechanical fix in at least one direction.

Decorative Trims

Swish provide a range of trims that can be used on their own, or in combination, to enhance the look of the installation. Typical applications are at the gable eaves and under the fascia and soffit. Further information concerning the range of decorative trims on offer is available from the Swish Trade Price List.



Code	A	B	C
C480	78mm	123mm	350mm
C481	77mm	120mm	105mm
C482	77mm	100mm	200mm
C483	77mm	250mm	200mm

Gallows & Dentils

Fascias - New Build / Replacement

Installation details Scales: various

Framing out and preparatory work

- Rafters must be at maximum 600mm centres. **Note:** centres not exceeding 400mm are required for foiled and coloured profiles. When framing out of the main roof timbers is completed, rafter ends should be checked for plumb and level, to give a true line for the fascia. If necessary, suitable packings should be applied.
- Soffit bearers must be provided at max 600mm intervals (400mm for foiled and coloured soffits). A preferred method is to secure battens between the rafter foot and the wall, fixed securely at both ends and supported between these points as appropriate. The bearers should be checked for line and level and suitable packings applied where required.
- Bargeboards at gable ends require a gable ladder or other suitable timbers to provide adequate fixing for the fascia board at maximum 600mm centres. Suitable framing is also required to give adequate support at junctions between bargeboard and fascia and at hip and valley rafters.
- All timbers should be preservative treated.

Installation sequence

- Install soffit boards, nailing to each soffit bearer with 40mm Trimtop nails (C081) or capped screws (C074). Soffit boards can be joined using push-fit trim C041, cut to the desired width and leaving a 4mm expansion gap at each board end. Allow the soffit board to over hang the rafter foot by 10mm in order to locate into the slot at the rear of the fascia board.
- Select the appropriate height of Jumbo/16mm board having regard to the required details at roof oversail, (eg. allow for height of over fascia ventilator unit where required - see Fig. 20) and soffit board location.
- Fix the fascia board to each rafter end with not less than two Trimtop nails or Capped screws at the recommended centres. When installing 25mm boards use 65mm fixings. However, Standard Jumbo/16mm can be fixed with 65mm Trimtop nails or 50mm capped screws.
- Butt joint fascia lengths using matching joint mouldings, nailed through the preformed holes to one plank end. The next Jumbo/16mm board is then offered up and engaged into the trim by simple push fit. Joints should be made between rafter positions.
- Fix internal/external corner covers, using Swish low modulus silicone (C077).
- Fit Jumbotec or Vented Eaves Protector where specified.

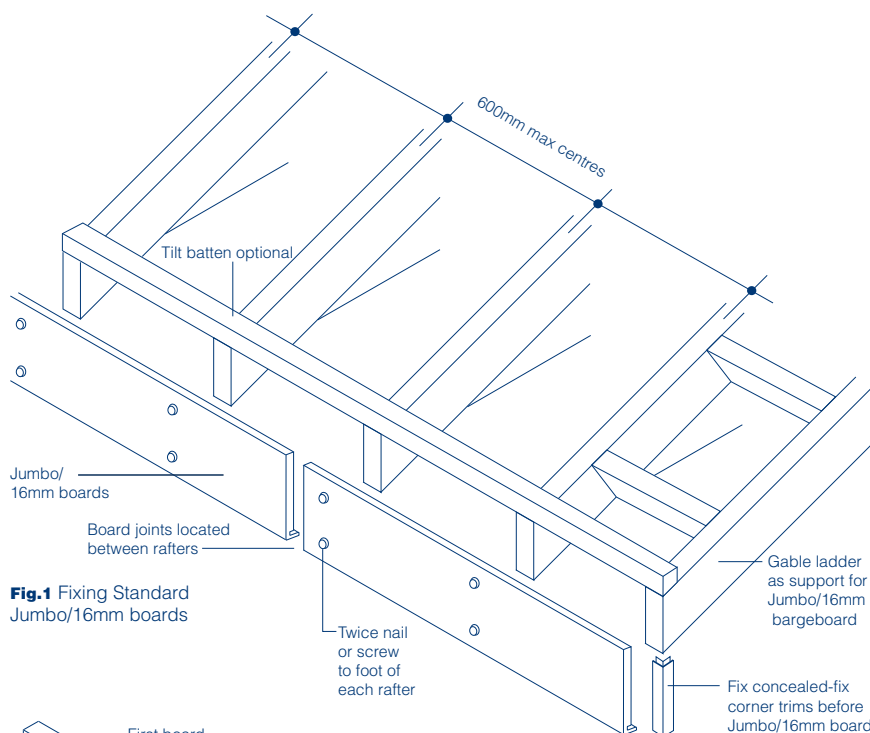


Fig.1 Fixing Standard Jumbo/16mm boards

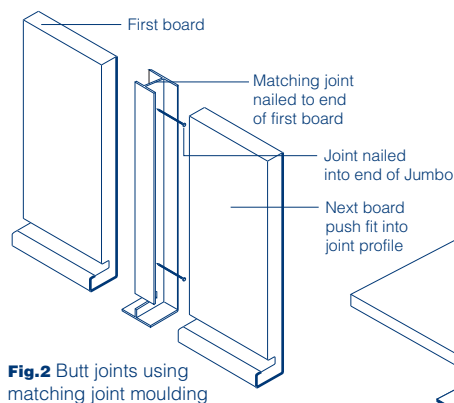


Fig.2 Butt joints using matching joint moulding

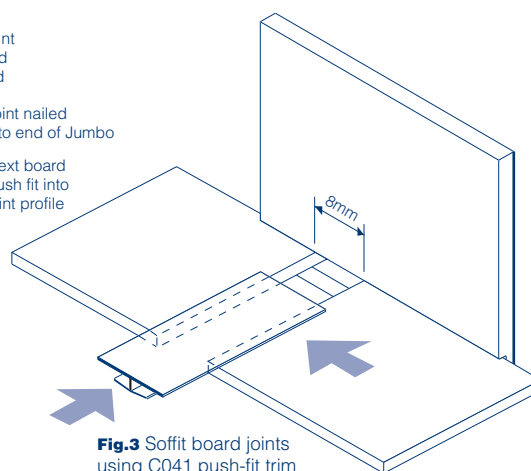


Fig.3 Soffit board joints using C041 push-fit trim

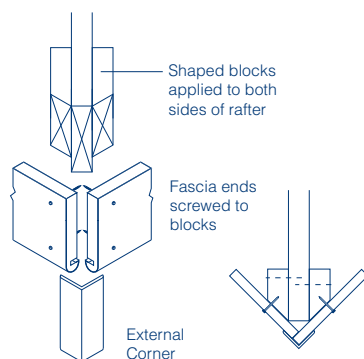


Fig.4 Hip rafter exploded view

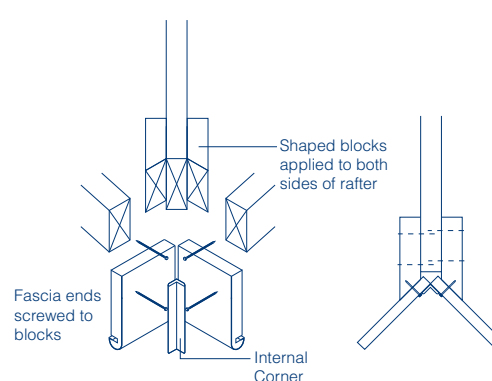


Fig.5 Valley rafter exploded view

Fascias - New Build / Replacement

Installation details Scale 1:5

All Swish replacement fascia boards and Swish foiled boards are capable of supporting the eaves course of roof covering. They are sufficiently robust to accept direct fixing of gutter brackets for conventional domestic gutter materials.

Important design and installation notes:

- Always specify the recommended fixing materials and fixing centres (page 25)
- Where Over Fascia Ventilator C504/C505 and Vented Eaves Protector C406 are specified, the fascia height must be reduced by 25mm/50mm.
- Eaves Protection
 - Installation of eaves protection (ie. Jumbotec / Vented Eaves Protector) will significantly increase the life expectancy of the installation.
 - Where eaves protection is not to be fitted the roof felt must be in good condition and dressed over the fascia down into the gutter. (Fig 8)
 - Where eaves protection is to be fitted the rear flange of the unit must dress under the existing felt edge. (Fig 6)
 - In the case of severe deterioration, the roofing felt may require complete replacement.
- While tilt fillets are illustrated (Fig 6), the necessity for these will depend on factors other than that of supporting the tiles or slates, such as angle of pitch and position of tile battens.
- Whilst the bottom groove in each board accommodates the soffit board by simple push fit, Fig 7 shows an alternative relationship for the fascia and soffit. The deeper fascia illustrated may be required for reasons of style or appearance.
- Gutter brackets should be fixed in accordance with the manufacturer's recommendations, ensuring that the fixing penetrates the rear skin of the fascia board.

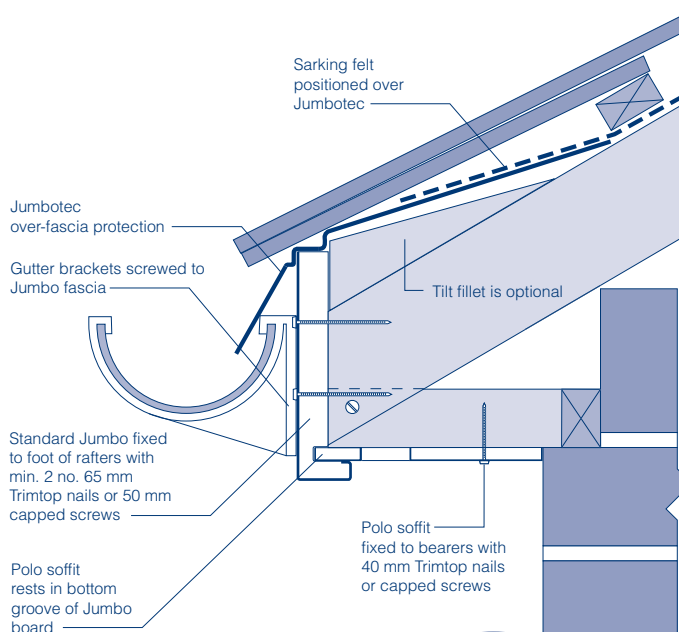


Fig. 6 Square Jumbo used with Polo ventilated soffit and Jumbotec over-fascia protection

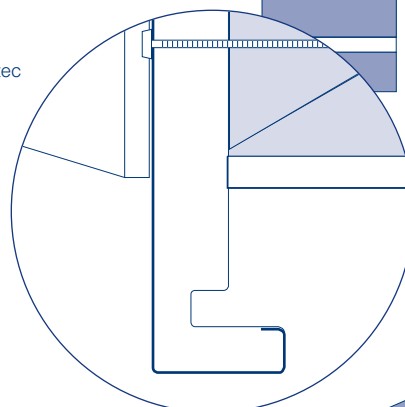


Fig. 7 Square Jumbo used with Gee Pee raised soffit

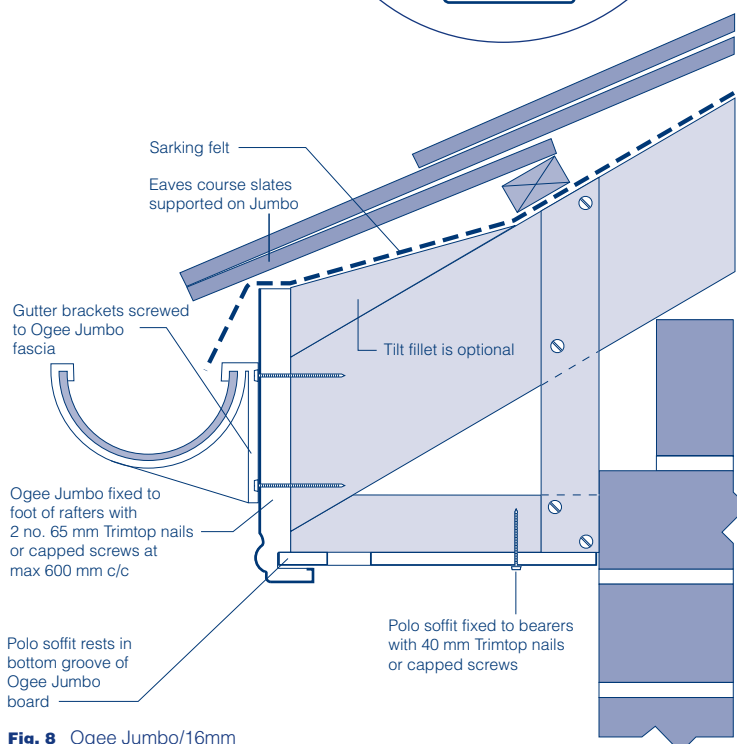


Fig. 8 Ogee Jumbo/16mm used with polo vented soffit

Fascias - Refurbishment (Overcapping)

Installation details Scales various

Framing out and preparatory work

After disassembling the gutter system, existing fascias and bargeboards should be checked for condition and secureness of fixing, any suspect areas being cut out and replaced. If total replacement is required, support for the profiles can be provided by either noggins or a new backboard of not less than 12mm marine plywood (see drawing). Soffit boards and bearers should be similarly inspected and replaced or supplemented. New timbers should provide support which is at least the equal of that required for new-build work. Soffits should be checked for line and level and suitable packings applied where required.

Existing rafters must be sound. Any showing signs of rot should be cut out and replaced.

All new timbers should be preservative treated.

The first two courses of tiles/slates should be taken up and set aside with a view to renewing the sarking felt and/or providing Jumbotec over-fascia protection.

Installation sequence

- Install soffit boards by nailing to each soffit bearer with Trimtop nails or capped screws. Soffit boards can be joined using push-fit trim C041, cut to the desired width and leaving an 8mm expansion gap at each joint.
- If the existing soffit is to be retained and requires new roof space ventilation, drill 70mm dia. holes and fix Swish circular soffit ventilators at required centres.
- Select the appropriate height of the Cappit profile required, having regard to the required details at roof oversail and soffit board locations.
- Fix the profiles over the backboard with not less than two 50mm Trimtop nails or 40mm capped screws at the recommended centres and at all plank ends. An 8mm gap should be left between plank lengths.
- Joints between profiles are made using the appropriate corner and joint covers, faced fixed with Swish low modulus silicone (C077).
- Where specified, fit Jumbotec over-fascia protection and/or over-fascia strip ventilator.
- Dress sarking felt back over Jumbotec or new fascia, replacing any damaged areas, and re-fix tiles/slates.
- Replace gutter assembly. Gutter brackets should be securely fixed through the profile into the backboard, using A4 (stainless steel) screws in accordance with manufacturer's recommendations.

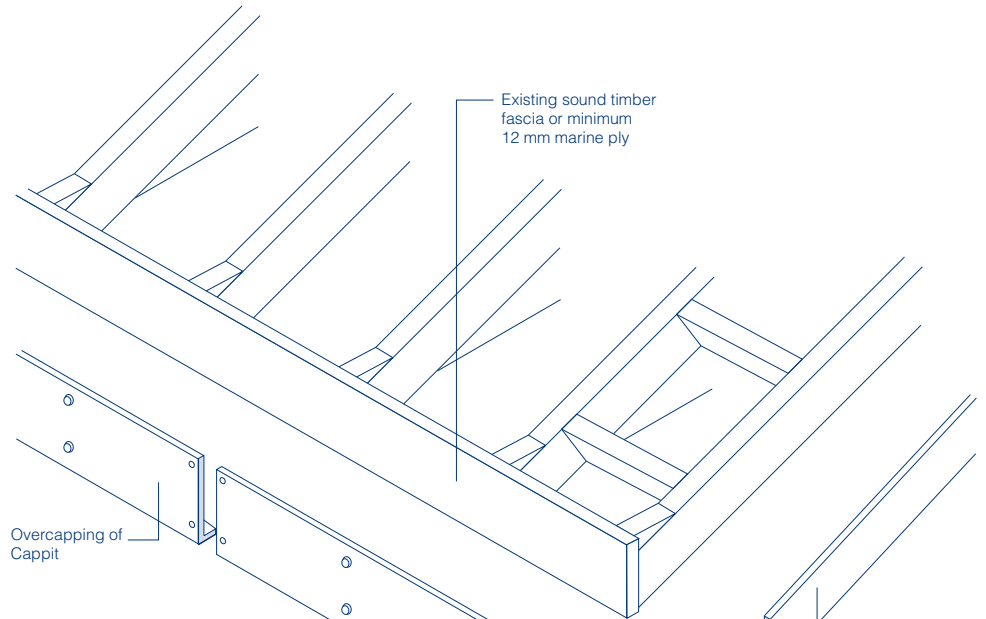


Fig.9
Fixing of overcapping profiles

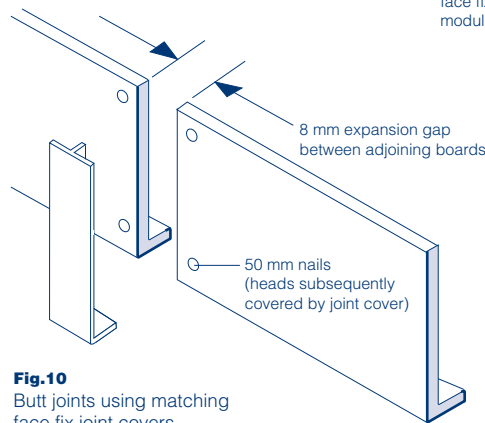


Fig.10
Butt joints using matching face fix joint covers

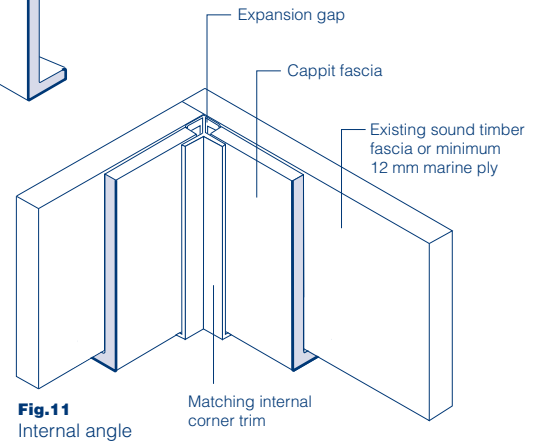


Fig.11
Internal angle

Fascias - Refurbishment (Overcapping)

Installation details Scale 1:5

Pitched roofs

The fascia requires a suitable existing or new backboard. The overcapping should be positioned so that the weight of the eaves course of tiles is borne entirely by the backboard and/or tilt fillets.

Support for the soffit board, if it is to be replaced with Gee Pee, must be as previously described for new build/ replacement work.

Figure 12 shows a traditional pitched roofline detail, using Cappit overcapping on an existing fascia board, Gee Pee soffit with Swish strip ventilator and Jumbotec over-fascia protection. The Jumbotec should be nailed to the top of the backboard and not the Cappit. Fixing requires the temporary removal of two courses of tiles and will allow the existing sarking felt to be trimmed and put back above the Jumbotec.

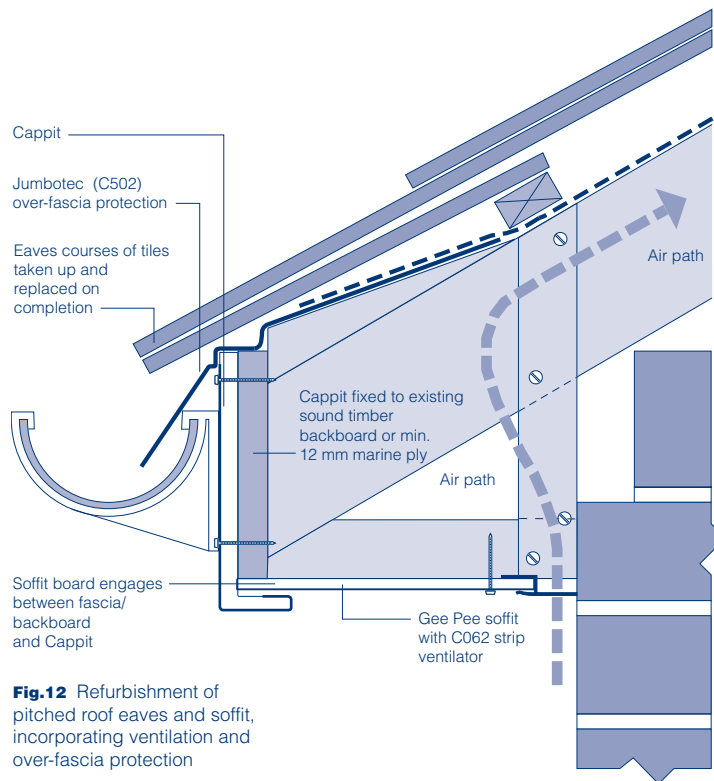


Fig.12 Refurbishment of pitched roof eaves and soffit, incorporating ventilation and over-fascia protection

Flat roofs

Figure 13 shows Cappit mounted over a backboard securely fixed to the ends of the roof joists. A Polo soffit board provides the required equivalent of a 25 mm continuous air gap and is secured between the Cappit and the backboard at the outer edge. The inner edge is supported by a continuous wall-mounted batten.

See pages 5 and 24 for details on the ventilation requirements for flat roofs.

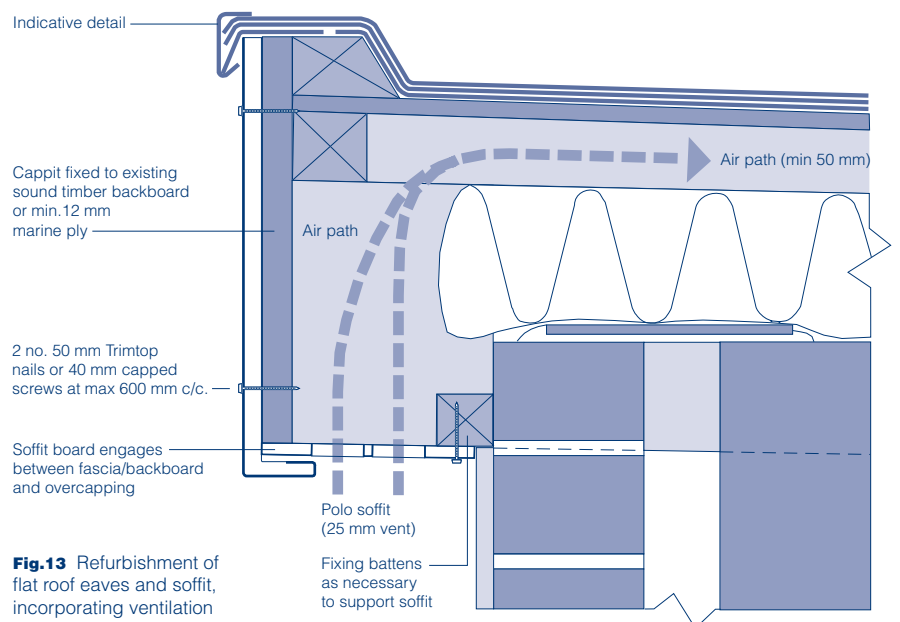


Fig.13 Refurbishment of flat roof eaves and soffit, incorporating ventilation

Soffits / Ventilation

Installation details Scale 1:5

Soffits

Gee Pee Boards are available in widths up to 605mm. Boards can be joined using joint trim C041 to create wider plain soffits if necessary.

Polo ventilated soffit boards are available in widths up to 605mm.

Figure 14 shows a typical Polo installation, with treated softwood hangers and soffit bearers providing the necessary support at each rafter position. This preferred method will ensure that positive support is provided at each rafter position and does not depend upon finding adequate fixings for horizontal wall battens. The screws or nails into the bearers should be at maximum 200mm centres across the board width.

Where overhangs exceed 450mm it is recommended that adequate ventilation is provided to disperse any heat build up in the eaves void.

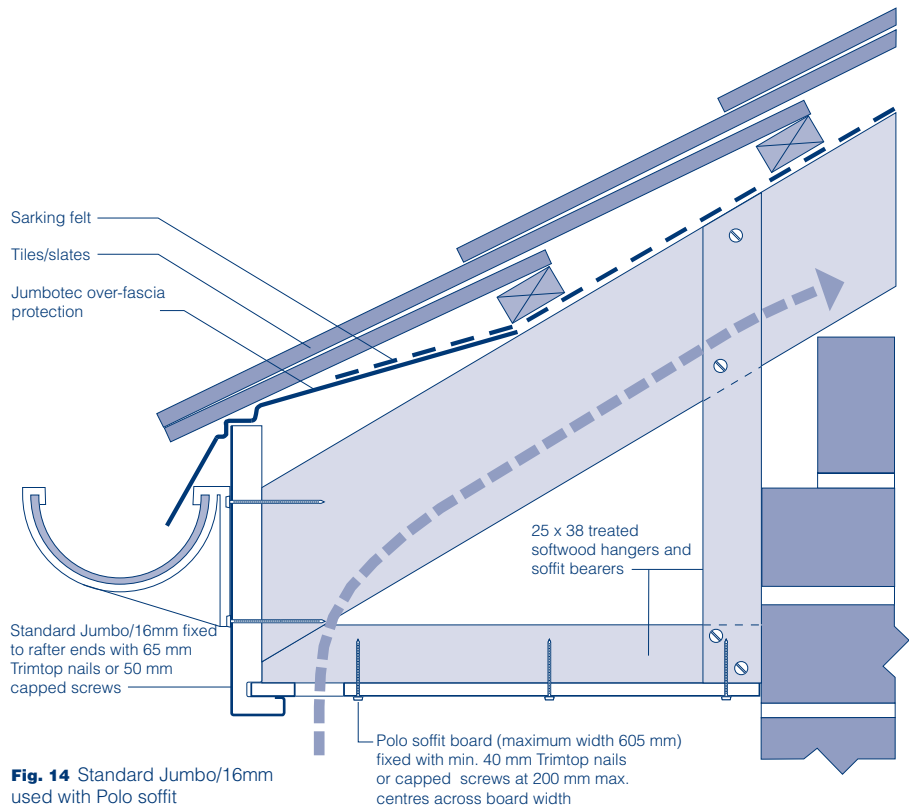


Fig. 14 Standard Jumbo/16mm used with Polo soffit

Tee Gee and Tee Gee Polo soffits

A tongued and groove effect can be obtained using Swish Tee Gee planks (C055) incorporating a Tee Gee Polo ventilating plank (C310) if required, as shown in figure 15.

Tee Gee Polo planks provide the equivalent of a continuous 10mm air gap to satisfy current Building Regulations. Additional Tee Gee Polo planks can be used in wide soffits to provide greater ventilation and minimise the risk of excessive heat gains in the deeper eaves voids.

Note: The Jumbo fascia groove is designed to accommodate the first board, which should be offered into the groove with the female end foremost. The male end is nailed into the soffit bearers and successive planks are engaged into each other and fixed in a like manner. Any cut ends will require a packing piece to maintain a level soffit, as illustrated.

Open V cladding and Open V Polo profiles are also available.

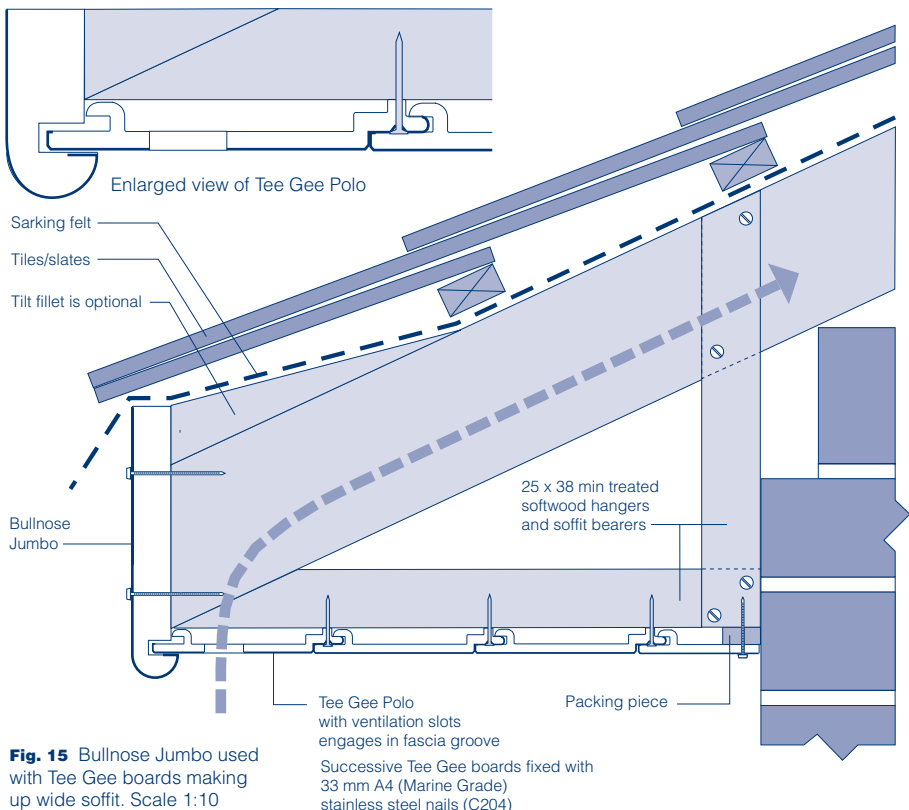


Fig. 15 Bullnose Jumbo used with Tee Gee boards making up wide soffit. Scale 1:10

Inclined soffits

In new-build/replacement applications, Standard Jumbo is particularly suitable for steeply inclined soffit details, as the bottom return is sufficiently wide to provide support for the outer edge of the soffit board.

Figure 16 illustrates this detail with Gee Pee boards used for the soffit. The boards should be fixed to the rafters at not greater than 200mm centres across the soffit width.

Note: Experience has shown that in this type of installation, it is advisable to provide greater levels of ventilation than are required by Building Regulations. This is to avoid a build up of heat in the more restricted area above the soffit.

Bullnose Jumbo can also be used with inclined soffits. However, its greater thickness makes it more suitable for shallower soffits.

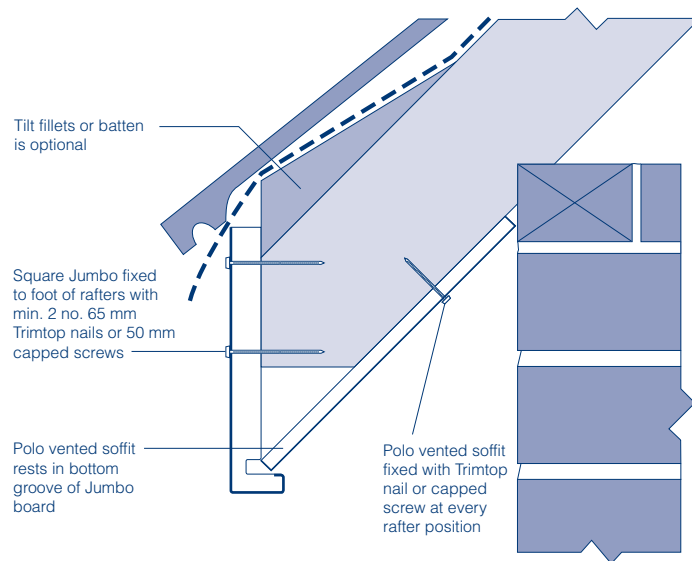


Fig. 16 Square Jumbo used with polo vented inclined soffit board (Gutter not shown)

Swish Strip Ventilators

The full range of Swish Strip Ventilators for eaves ventilation is illustrated on page 10. They are manufactured from PVC in standard lengths of 5m and in 10mm or 25mm equivalent air path.

Figure 17 shows a C237 ventilator mounted in the soffit board, in conjunction with a Jumbo/16mm fascia. Ventilators C237 and C238 can be positioned at any intermediate horizontal point to suit the construction or the aesthetic requirements.

Figure 18 is an example of refurbishment, utilising the C062 ventilator at the wall. The other end of the soffit board is supported between the Cappit fascia and the backboard.

Figure 19 shows a C066 ventilator, a special unit that fits between a soffit board and the soffit slot in the back of a Jumbo fascia board.

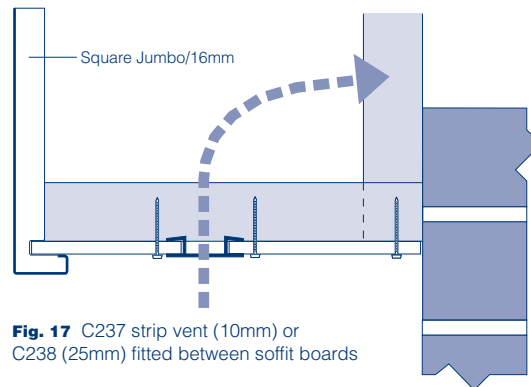


Fig. 17 C237 strip vent (10mm) or C238 (25mm) fitted between soffit boards

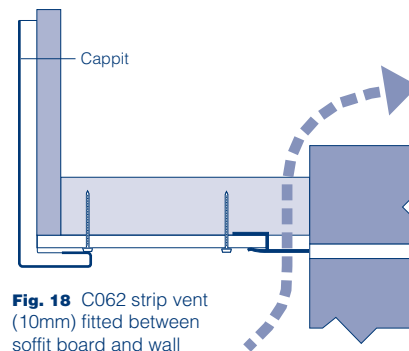


Fig. 18 C062 strip vent (10mm) fitted between soffit board and wall

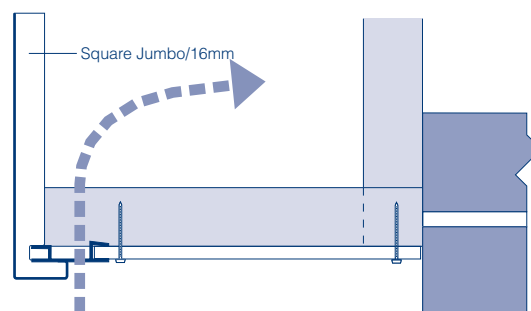


Fig. 19 C066 strip vent (25mm) fitted between soffit board and Jumbo/16mm fascia.

Angle ventilators

Also available are the Swish general purpose angle vents C061 and C065 with airway equivalents of 10mm and 25mm respectively (see page 10). The unvented leg on these profiles is predrilled with fixing holes at regular intervals.

Over Fascia Ventilation/Protection

Installation details Scale 1:5

Eaves Ventilator Tray

Ventilator trays are easily fitted above the roof insulation, before installation of the roof covering, by nailing or stapling to the top edge of each rafter. The trays provide a continuous gap of 10 mm into the roof void.

Over Fascia Ventilator (C504/C505)

Robust 1m vent units fixed on top of the fascia to allow a 'clean' or unvented soffit to be used. 10mm (C504) and 25mm (C505) air gap versions. (Fig 20). Allow for the height of the ventilator unit when calculating the fascia height required. (C504: 22mm, C505: 51mm).

Vented Eaves Protector (C406)

Swish Vented Eaves Protector provides over-fascia protection and ventilation equivalent to a continuous 10mm air gap. It is ideal for new or replacement work where the soffit is unvented.

For new-build, the unit is installed prior to tiling/slating work and requires the Jumbo fascia height to be reduced by 25mm in relation to roof oversail. (see Fig 21).

For refurbishment work, this requirement is the same but the first two courses of tiles should be taken up, the Vented Eaves Protector fitted under the existing sarking felt and the tiles replaced.

Units are of black polypropylene, supplied in 1m lengths. Adjacent strips interlock and are fixed on top of the fascia at 200mm centres, using 65mm ring shanked galvanised steel nails. For roofs over 7.2m the fixing requirements should be calculated in accordance with BS 5534.

Bird Comb (C405)

An upstanding flexible Bird Comb, for use as a bird guard in conjunction with profiled tiles, may be fitted to the top of the Vented Eaves Protector. Tile clips can be attached to the comb to provide a more secure tile fixing.

Jumbotec (C502)

Swish Jumbotec provides over fascia protection for new and refurbishment projects in conjunction with a vented soffit. Jumbotec is dressed underneath the sarking felt.

Sealing tape (C403)

At valleys and hips, Jumbotec and Vented Eaves Protector can be easily mitre-cut to fit, and should be sealed at all running joints and mitres with Swish Sealing Tape.

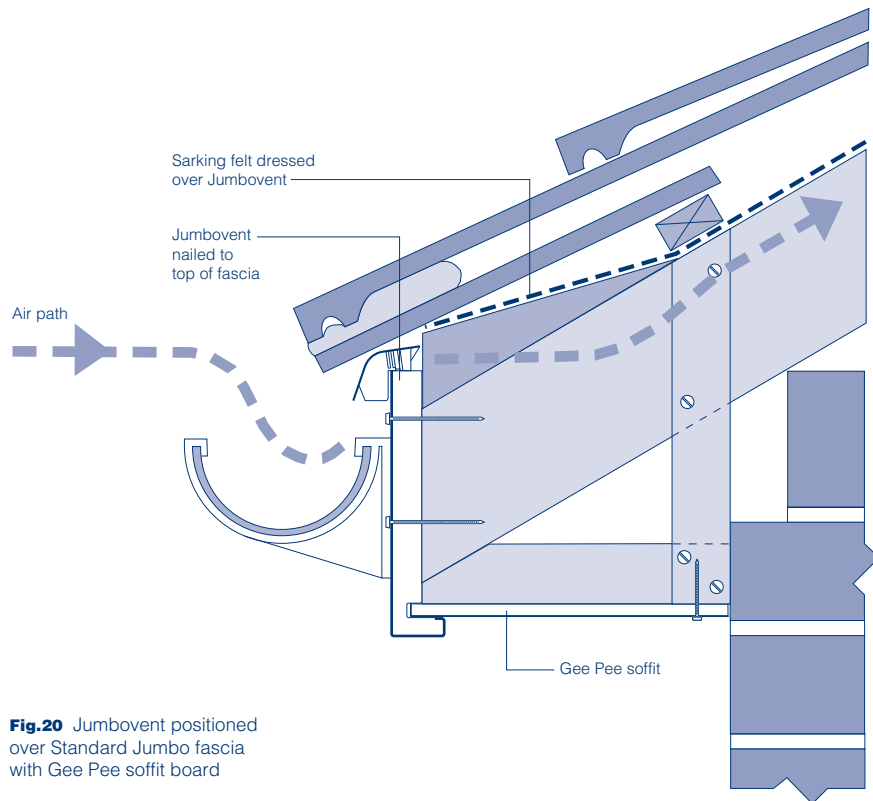


Fig.20 Jumbovent positioned over Standard Jumbo fascia with Gee Pee soffit board

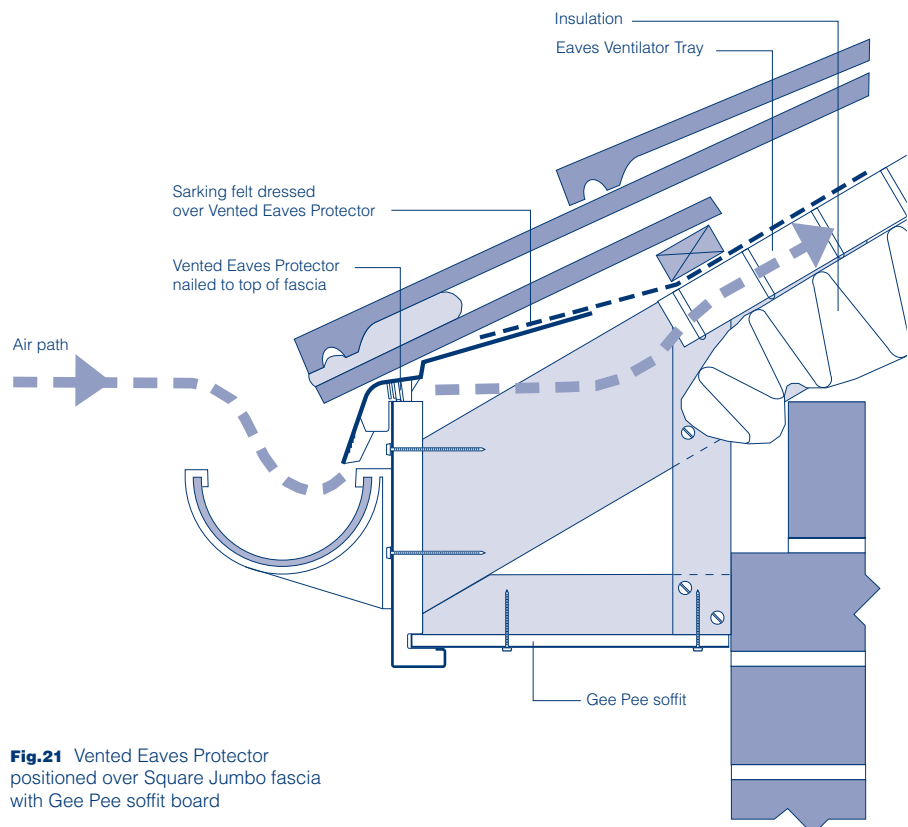


Fig.21 Vented Eaves Protector positioned over Square Jumbo fascia with Gee Pee soffit board

Bargeboard Choice

Boards may be used that match the choice of fascia, or alternatively a decorative bargeboard may be required to enhance the appearance or individuality of the installation. Swish Decorative Roofline boards may be specified in either concave or convex formats. Soffits for Decorative bargeboards must be supported at both edges by the timber substructure.

Bargeboard fixing

In all cases, adequate timber support should be provided for both the bargeboard and soffit (where fitted), whether new build or replacement.

It is also best practice for the verge and undercloak tiles/slates to be stripped for refurbishment work, and then re-bedded on completion of the gable roofline.

The bargeboard should be fixed with a minimum of 2 no. Trimtop nails or capped screws at max. 600mm centres (400mm for foiled and coloured profiles).

Figure 22 is a suitable detail for an oversail verge where a gable ladder supplies the necessary fixing. If the distance between the gable ladder nogginns is greater than 600mm (400mm for foiled and coloured soffits), softwood battens should be fixed to the wall between the nogginns.

Cappit profiles may also be used as bargeboards. Where there is no significant oversail the soffit may be dispensed with (Fig 23). Alternatively the bargeboard may be deepened for effect by up to 50mm below the level of the soffit.

Gable and in-line gable details

At the gable apex the bargeboard is mitre cut leaving a 4mm expansion gap either side of the centre line. The junction is then finished with a face-fix joint cover to match the bargeboard profile, using Swish low modulus adhesive.

The same apex details apply to in-line gables. Figure 24 also shows two possible alternatives for the junction between gable bargeboards and fascias.

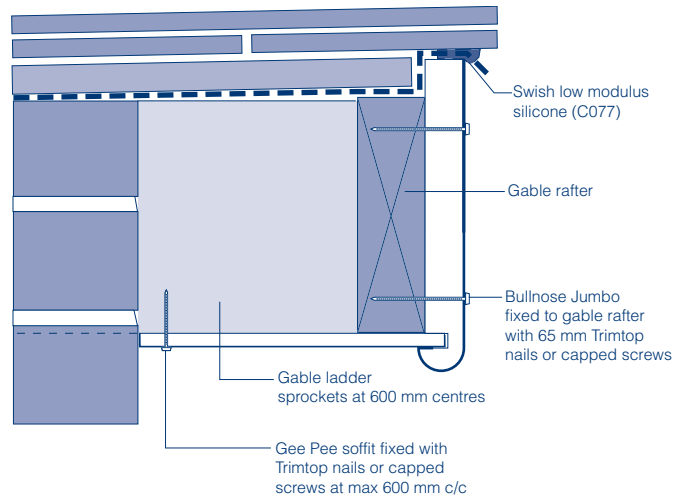


Fig.22 Bullnose or Ogee Jumbo used with gable ladder and Gee Pee soffit

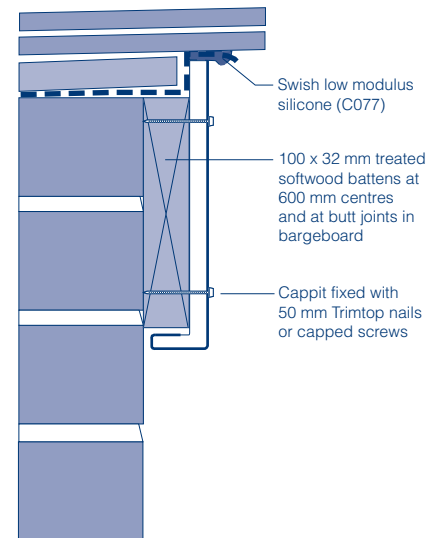


Fig.23 Cappair fixed flush to gable wall using batten fixings

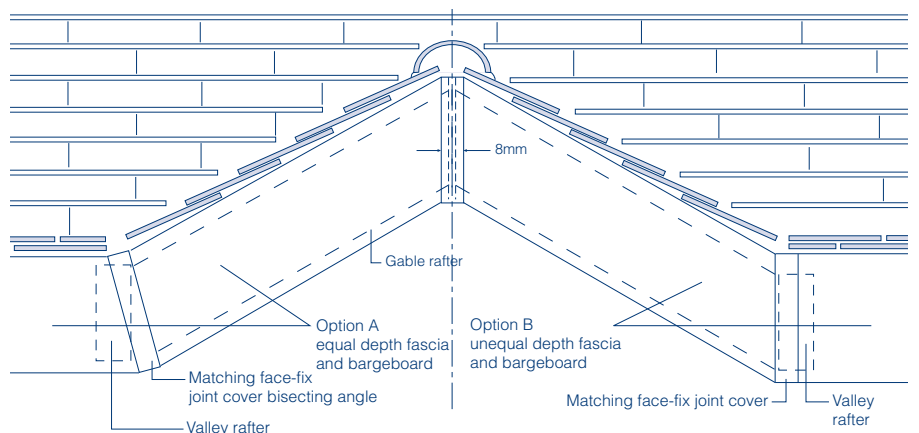


Fig.24 Junction of fascia with in-line gable

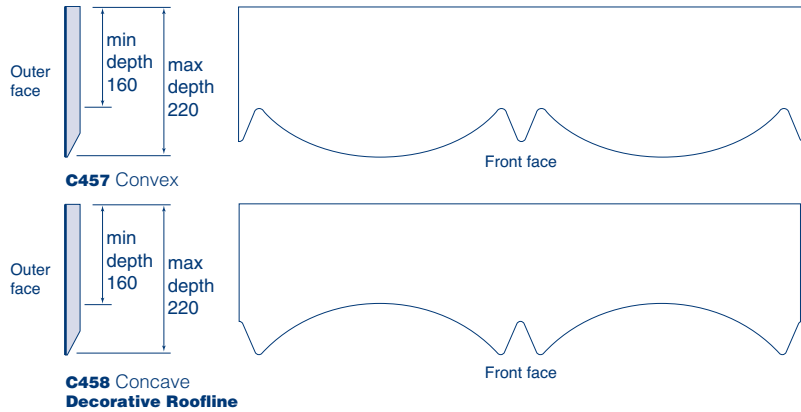
Decorative Bargeboards / Apex Finishes

Installation details Not to scale

Decorative bargeboards

There is no soffit groove in the back of Swish Decorative Bargeboards and so the soffit location is variable. The soffit should not be set lower than 150mm below the under side of the oversail, in order to avoid interfering with the pattern detailing.

Consideration should be given to the treatment of the mitre cut at the roof apex. The point at which the cut is made can considerably vary the appearance of the installation. (Fig 25)



Roof Spires

Flat backed and 3D spires may be fitted flush to the face of the gable end or the bargeboard. In either case the ridge tile will require modification to allow the spire to project through it. To avoid the ridge tile a suitable packing piece should be installed between the barge and spire. Suggested spacers include off-cuts of cellular PVC profiles and square down pipes with suitably treated timber block infills. (Fig 26)

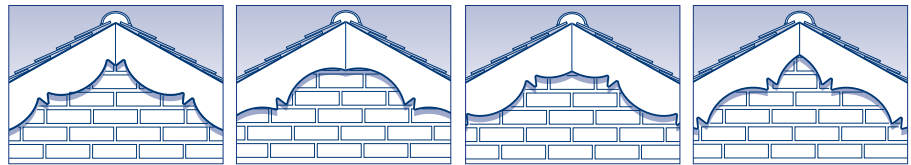


Fig. 25

Ball Finial & Bracing Bar

The application of this ball finial and bracing bar is for decorative purposes only. The upper end of the finial sits on the front face of the barge apex, usually being notched at the back, and should be shaped at the sides to fit under the cloaking at the ridge. The bracing bar runs across the face of the gable and is notched into the rear face of the finial at its centre. The ends of the bar are hidden behind the barge and locate on the rear face of the first gable rafter or a suitably sturdy timber hanger.

The combined depth of all the notches to be cut into the finial and bracing bar should equal the distance between the front face of the bargeboard and the rear face of the first gable rafter. (Fig 27)

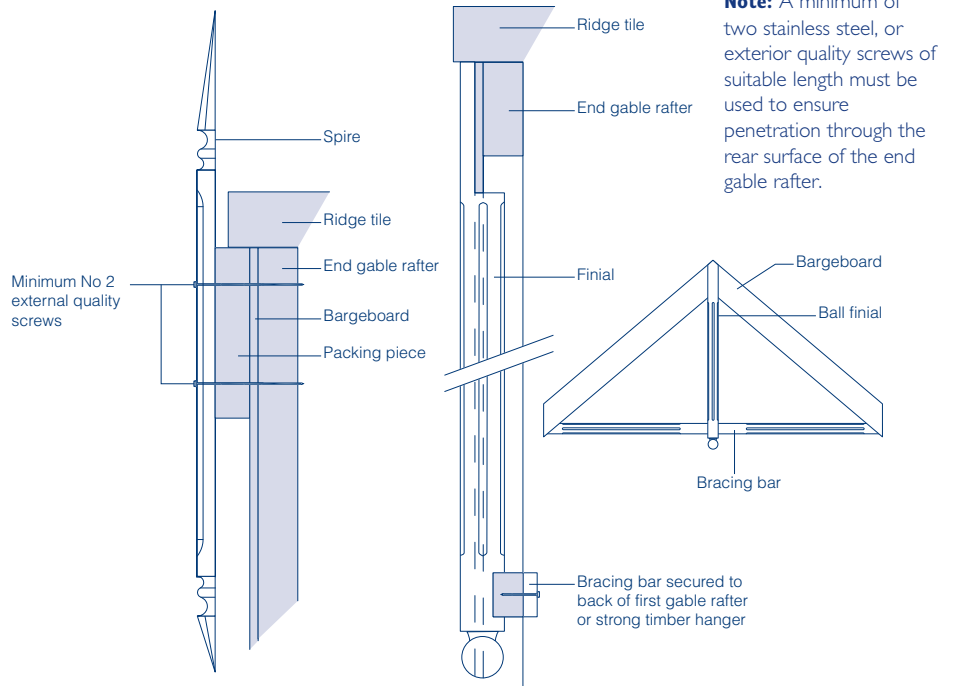


Fig.26 3D roof spire fitted to suitable packing piece

Fig.27 Cross section through bracing bar and finial

Apex Finishes

C459 and C450 capping units provide a clean finish to the bargeboard at the roof apex. (Figs 28 & 29). The upper edge should be cut to match the roof angle. Apply units with Swish Silicone (C077).

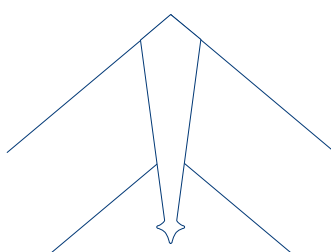


Fig.28 Gable finial C459

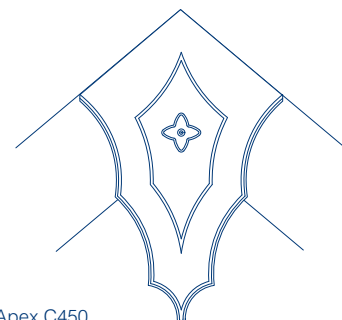


Fig.29 Apex C450

Dentils / Gallows Brackets

Installation details Not to scale

Dentils

Swish Dentils meet the requirements of most new build and refurbishment applications in that each unit is capable of a secret mechanical fix in at least one direction. The orientation and spacing are worth careful consideration in order to achieve the best effect. In addition a continuous sub-fascia of cellular PVC fixed to the wall under the soffit will greatly enhance the effect.

- A strong mechanical secret fix is achieved through the soffit using stainless steel screws. (Fig 30). This application is performed in newbuild prior to the installation of the roof covering, or in renovation when the first two rows of tiles have been removed.
- Alternatively the timber fixing plate may be detached from the dentil unit and screwed directly to the soffit or wall. The sides of the dentil unit should then be pre-drilled and the unit secured to the timber fixing plate with 30mm capped screws (C074).
- Seal as required with Swish Low Modulus Silicone (C077).

Gallows Brackets

Loading tests have established that when installed correctly Swish Gallows brackets have an end loading capacity of 75 kg. Swish Gallows Brackets must not be installed via fixings at any point other than through the holes provided.

- Pilot drill Gallows brackets at the pre-defined fixing points from the back face (using a wood drill) ensuring the hole is accurately formed at right angles to the back face. Choose a drill diameter (\varnothing) that will form a hole marginally bigger than the screw it is intend to use:-

For Screw Size:	Use Drill:
No. 6	\varnothing 3.5mm
No. 8	\varnothing 4mm
No. 10	\varnothing 5mm

- Spot mark the wall and drill to a minimum depth of 50mm using \varnothing 5.5mm or 6mm masonry bit.
- Insert appropriate wall plugs ("Red" is commonly available).
- The fixing to the underside of the porch should penetrate beyond the soffit into a suitable timber support.
- For maximum strength, apply adhesive to the back face of each Gallows bracket before securing with screws.
- Fit all screw heads with plastic collars and caps to suit.
- Recommended screws include:-
Exterior Grade Stainless Steel or
Hardened Zinc Yellowed Wood Screw.

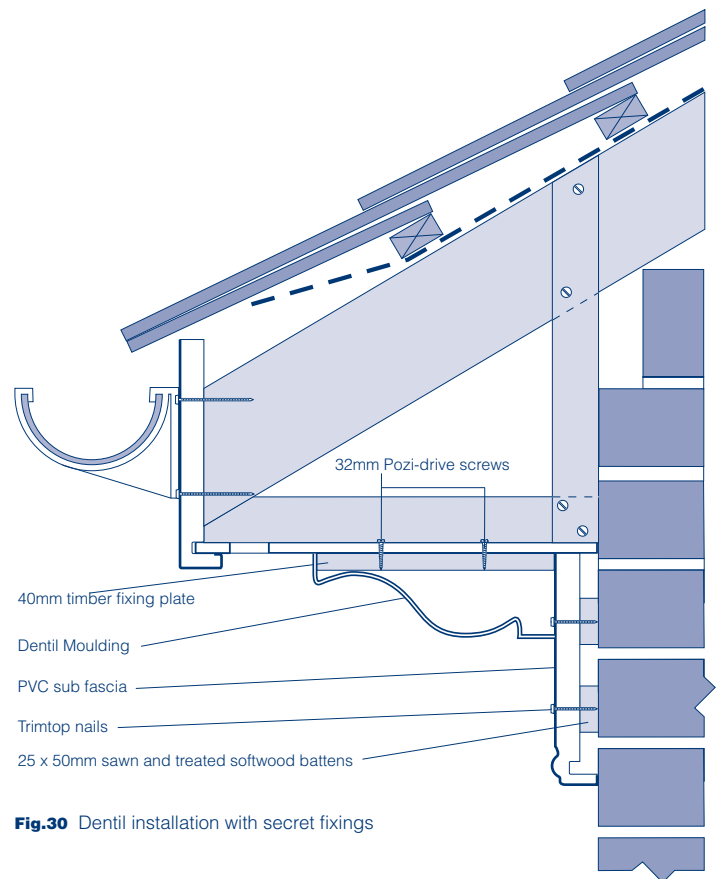


Fig.30 Dentil installation with secret fixings

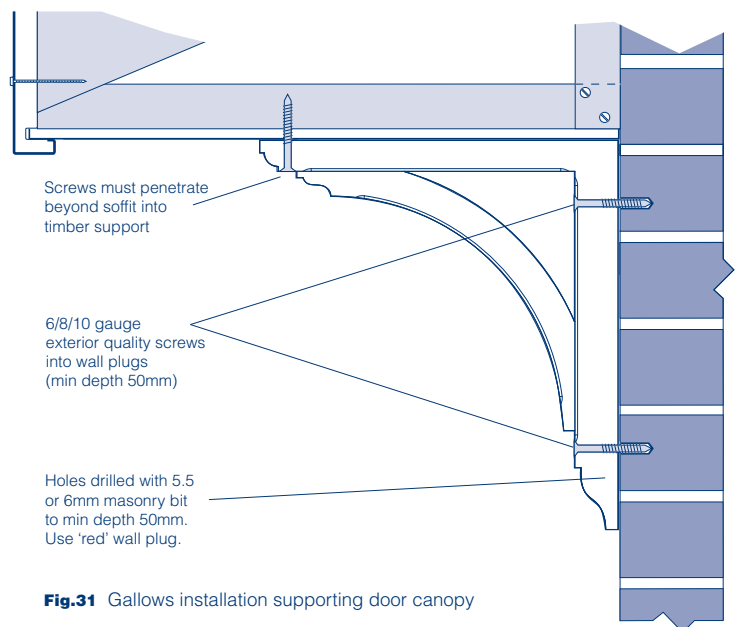


Fig.31 Gallows installation supporting door canopy

Bargeboards / Box-Ends

Installation details: Not to scale

Box-end detailing

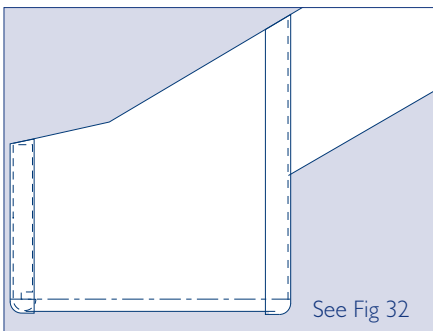
The versatility and range of Swish profiles and accessories allows an extensive choice of detail and appearance when dealing with box-ends.

The following illustrations show some of the industry standard arrangements. The whole of the supporting timber framing is not shown because this will depend on the materials of construction and individual building design.

However, provision should be made for supporting all free edges of the box-end and box-end returns as well as the soffit boards. Treated softwood battens, securely fixed or tied back to the main structure, will provide a suitable means of support.

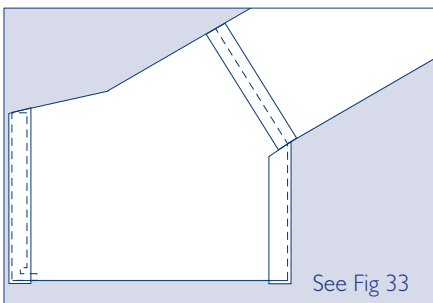
Figure 32 shows a Bullnose Jumbo fascia and bargeboard with a box-end made from a larger depth of the same basic profile and cut at the top edge to follow the pitch of the roof. The return to the gable wall is cut from the same fascia profile, thus providing support for all outer edges of the soffit and presenting a neat, uniform appearance. This return piece should be a little taller than the point at which the bargeboard soffit meets it in order that no gap shows from below.

Junctions between fascia, box-end and bargeboard are finished with matching corners and joints (see pages 9 & 12).



See Fig 32

Figure 33 shows a detail giving the same outline, but with the box-end splay-cut at its junction with the bargeboard.



See Fig 33

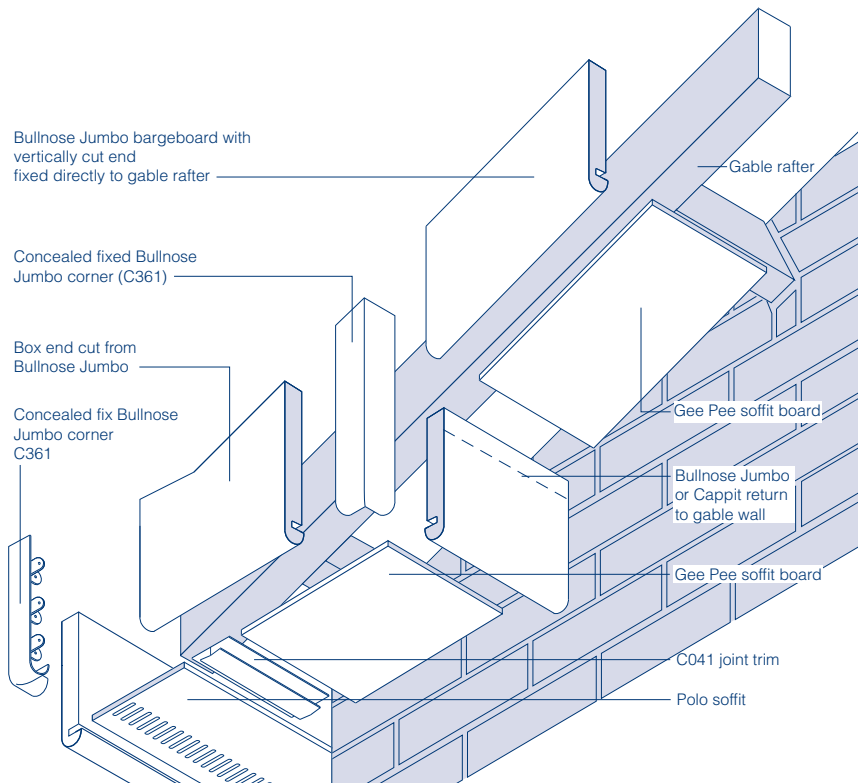


Fig. 32 Bullnose Jumbo box end, fascia and bargeboard with vertical cut junction

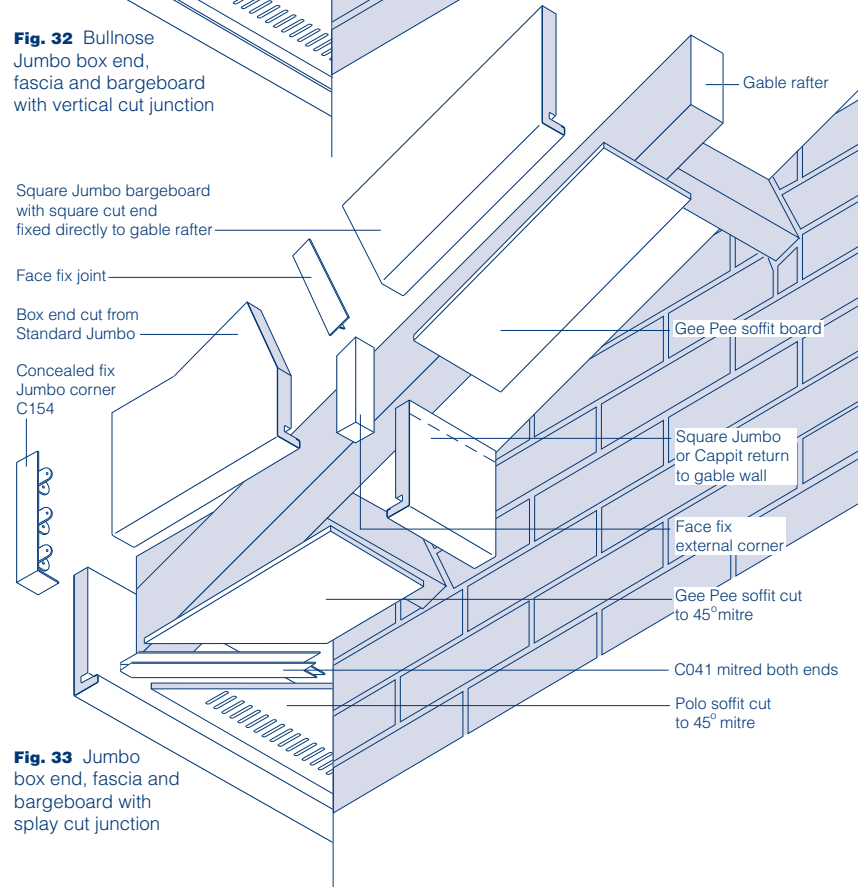


Fig. 33 Jumbo box end, fascia and bargeboard with splay cut junction

Bargeboards / Box-Ends

Installation details Not to scale

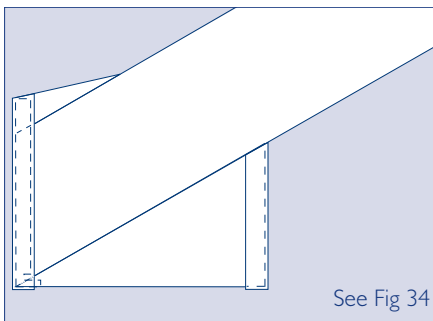
Box-end detailing

Figure 34 shows the bargeboard extending to meet the fascia. A triangular fillet, cut from a suitable piece of fascia board, is applied above the bargeboard and fixed with Trimtop nails to the tilt fillet on the gable rafter. Another fillet, with a return leg, is fixed to timber framing below the gable ladder.

The triangular offcuts may be closely butt jointed and finished with Swish low modulus silicone to the top and bottom edges of the bargeboard, or vertical link channel (C054) may be used if preferred.

The return to the gable wall is cut from a matching board, retaining the bottom leg, and should be supported by suitable softwood battens.

Junctions between fascia, bargeboard and box-end return are made with standard matching corners and joints (see pages 9 & 12).

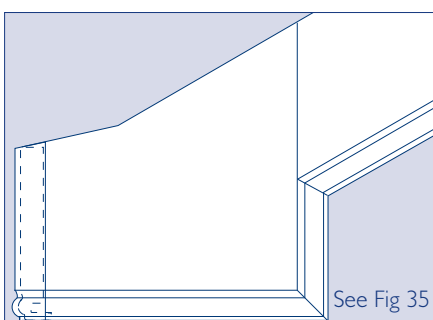


See Fig 34

Figure 35 shows a method of dealing with Ogee profiles at box-ends in order to obtain uniformity of profile and neat detailing.

Note: In all cases, the return to the gable wall should be cut a little taller than necessary, to ensure that the top of it is masked by the adjoining bargeboard soffit, leaving no gap (shown by dotted line on the drawings).

All joints between bargeboard, box-end and face fix joints should be made using Swish low modulus silicone.



See Fig 35

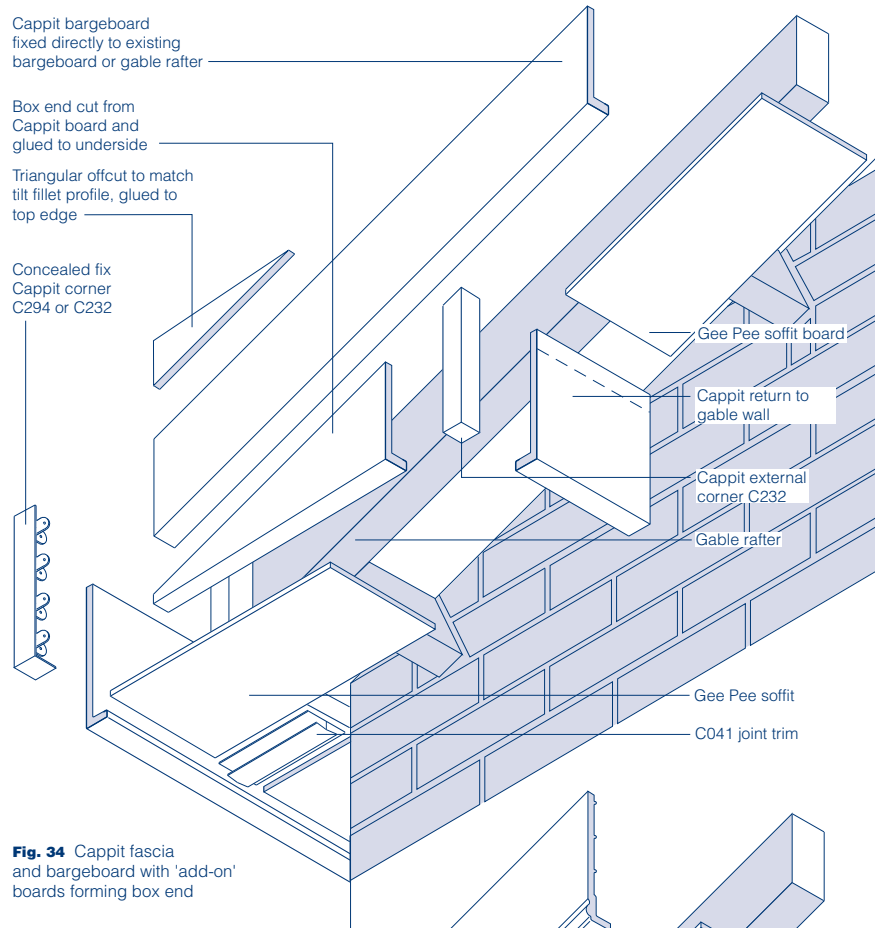


Fig. 34 Cappit fascia and bargeboard with 'add-on' boards forming box end

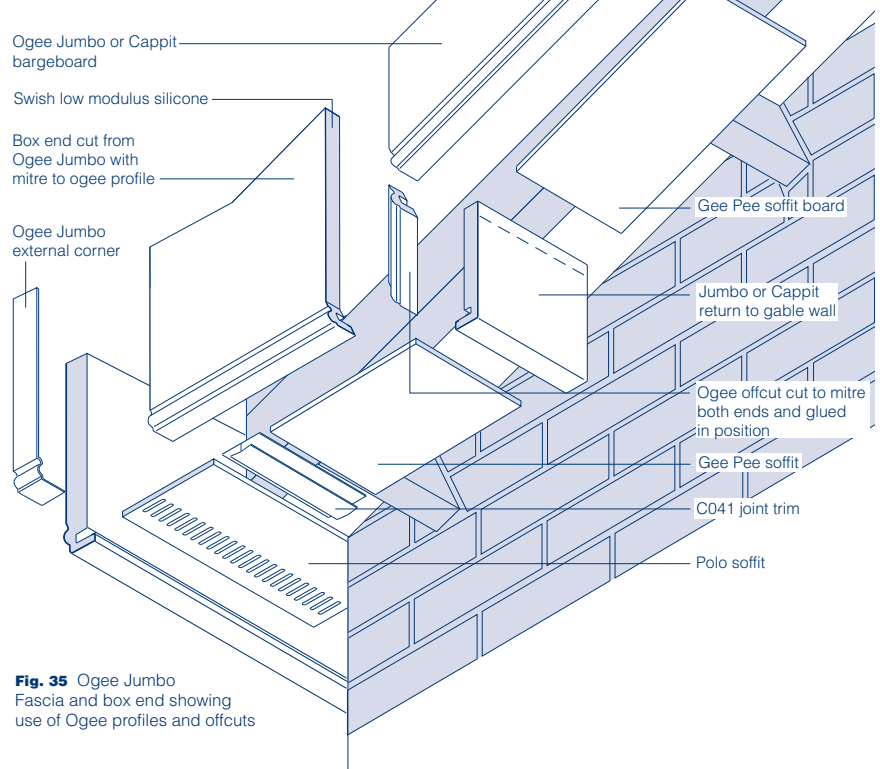


Fig. 35 Ogee Jumbo Fascia and box end showing use of Ogee profiles and offcuts

Flat Roof ('Cold Roofs')

Installation details Scale 1:5 and 1:20

Eaves to flat roofs

The 16mm and 20mm fascia range, in combination with a Polo soffit (Fig 36) or Gee Pee soffit board and strip ventilator (Figs 17-19) may be used to make up an overhanging eaves and provide the ventilation required by the Building Regulations. (see page 5).

This detail shows one side of the roof only, but it needs to be repeated on the opposite side, as shown in figure 37 to achieve the cross ventilation required.

In 'cold' roofs of this type, whatever the supporting structure or type of roof decking, the required thickness of insulation is usually such that it will fill the joist space. Consequently, the air path of 50mm (see page 5) needs to be formed above this level. Figure 36 shows the common method of applying timber firings to the top of the joists.

The detail adopts a Polo soffit engaging into a Square fascia. The fascia is directly fixed to the ends of the rafters, which should therefore be at not less than 600mm centres.

Figure 37 shows the general arrangement of a flat-roofed structure. Oversailing joists at 600mm centres support the roof covering and provide support for the fascia and projecting soffit. Additional bearers are built into the top of the walls to provide a fixing for the fascia corner junctions which are mitred and finished with concealed-fix corner trims.

In the case of foiled boards, fixing centres are required at not greater than 400mm intervals. Additional intermediate support will be required. This can take the form of treated softwood battens fixed between the joist ends, arranged to support both fascia and soffit.

Detailing

Corners and joints may be made with either concealed fix or face fixed cover trims.

Scottish Regulations

'Cold' roof construction is not generally approved in Scotland.

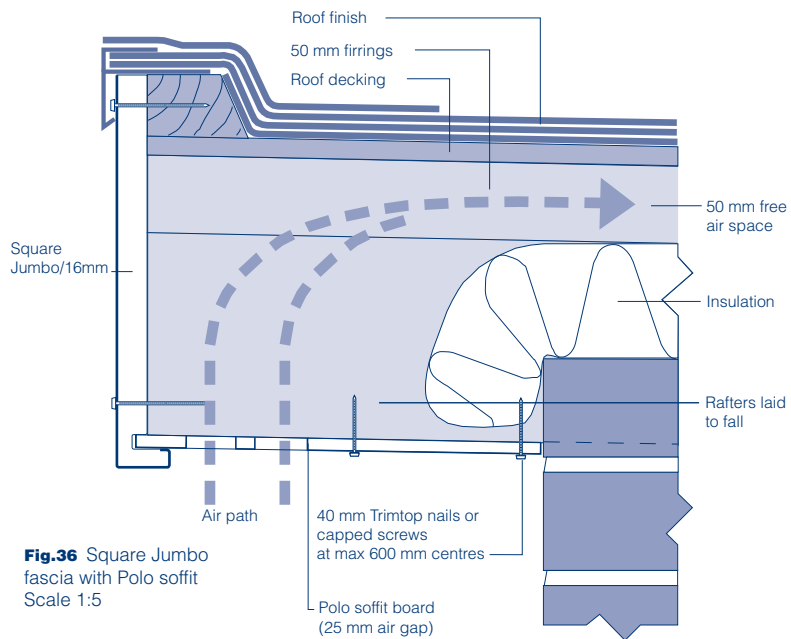


Fig.36 Square Jumbo fascia with Polo soffit Scale 1:5

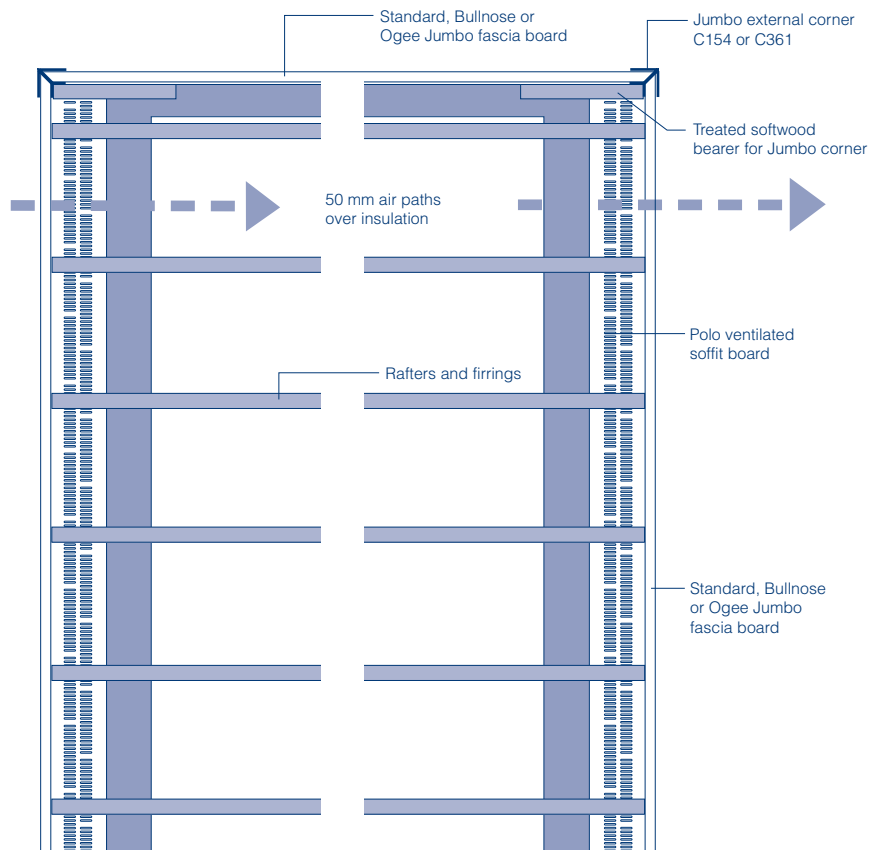


Fig.37 Typical flat roof plan showing ventilation arrangement and Jumbo fascia details Scale 1:20

Sitework, Fixings, Sealants & Maintenance

Summary of important installation requirements

- Swish Profiles should be secured only to structurally stable substrates of masonry, concrete or timber.
- Timber supporting framework should be preservative treated, securely fixed, aligned and levelled. Use non-perishable packings as necessary.
- Spacing of fixings should not exceed 600mm, and 400mm for foiled and coloured profiles or in very exposed situations (see below).
- Use only recommended fixings (see below).
- Avoid installation in temperatures greater than 30°C or less than 0°C.
- Use only Swish low modulus silicone for sealing purposes.

Fixings

To comply with the requirements of the Swish product guarantee, suitably sturdy timber fixing points must be provided at the required maximum fixing centres. Where such points do not naturally occur they must be fabricated during installation.

Always use Swish A4 grade stainless steel ring shank plastic headed nails, capped screws or pins.

Board	Fixing	Code	Size	Qty	Max Centres
Jumbo & 16mm	All	Nail	C083	65mm	2
	25mm	Screw	C073	65mm	2
	20mm	Screw	C072	50mm	2
Cappit	Nail	C082	50mm	2	White: 600mm Foiled: 400mm Coloured: 400mm
	Screw	C071	40mm	2	
Polo & Gee Pee	Nail	C081	40mm	2	White: 600mm Foiled: 400mm Coloured: 400mm
	Screw	C071	40mm	2	
Tudorboard	Nail	C083	65mm	2	White: 600mm Foiled: 400mm Coloured: 400mm
	Screw	C072	50mm	2	
General Fixing	Pin	C203	25mm		As required
	Pin	C204	33mm		
	Pin	C228	50mm		

Handling and storage

Loading and unloading should be carried out by hand. It is recommended that both ends should be supported when handling. Swish Cellular PVC should be stacked in its protective sleeving on a flat, firm base with a stacking height not exceeding 1 metre. Storage in the open is not recommended unless additional protection is provided.

Contact with solvents and with organic based compounds such as bitumen products, paint or creosote should be avoided.

Cutting and shaping

Swish Cellular PVC can be worked using conventional carpentry tools for cutting, drilling and shaping.

Saws with fine-toothed blades should be used and power tools should be operated at the same or higher speeds to those normally used for timber work, with carbide tipped blades.

Maintenance

CLEANING

Swish Cellular PVC products are self-finished and essentially maintenance free.

Occasional washing with a non-scratch mild detergent and water is beneficial in removing surface grime and maintaining a pristine appearance, especially in heavily polluted atmospheres.

As with other plastics based materials, solvents should not be used.

When cleaning, flood the surface to prevent ingraining of any dirt particles.

Exercise care to prevent contact with, and staining by creosote or bitumen-based products. Other common building materials are easily cleaned off without damage.

PAINTING

As with all PVC products, paint can adversely affect the impact strength of PVC sections, and the application of dark colours could lead to risk of thermal distortion. However, if necessary use a good quality satin finish polyurethane paint.

Sealants and adhesives

Swish supply a low modulus silicone (C077) conforming to BS 5889 (Type A) for cladding and fascia joints, allowing for movement of up to 50% of the joint width. A primer is recommended if bonding to GRP, stainless steel, aluminium or untreated wood. It is not suitable for use with polycarbonate sheet.

Swish C403 sealing tape, supplied in 20 m rolls is useful for butt joining Jumbotec.

TABLE 2. SEALANTS AND ADHESIVE

TYPE	CODE
LOW MODULUS SILICONE	C077
GENERAL PURPOSE ADHESIVE	C079
SEALING TAPE (10 M ROLL)	C403

Note: Swish will NOT guarantee any product which has been treated or coated with another material

REPAIRS

Swish Cellular PVC can be cut and drilled using normal woodworking tools if repairs are required.

Scratches can be polished out using a progression of 180 to 360 to 1000 wet and dry papers. Finally, wash and polish with a cream cleaner.

Safety

Swish Cellular PVC should be cut with the correct tools, never broken.

Eye protection should be worn when using power tools.

Swish Cellular PVC is inert and therefore, as with most such substances, should not be inhaled since in volume it could impair lung function.

Specification Clauses

(The numerical heading references are those used in the NBS Standard specifications)

Blank Specification clause for completion G20 Carpentry/Timber Framing/First Fixing. 950 CELLULAR PVC FASCIA/BARGES/SOFFITS.

- Material:
- Material Specification:
- Colour stability Delta PI <15 in ACT test Delta L* less than -2 after 500 hrs in Suntest.
- Manufacturer:
-
- Manufacturer accreditation: ISO 9001, ISO 14001, ISO 50001 and BS OHSAS 18001 Class 1 Surface spread of flame to BS 476: Part 7: 1987
- FASCIA
- Profile:⁽¹⁾
- Finish/Colour:
- Support timber:
- Fixings:⁽²⁾
- Fixing centres: (p25)
- Joints:
- BARGEBOARD
- Profile:⁽¹⁾
- Finish/Colour:
- Support timber:
- Fixings:⁽²⁾
- Fixing centres: (p25)
- Box-end details:⁽⁵⁾
- Joints:
- FASCIA SOFFITS
- Profile:⁽³⁾
- Finish/Colour:
- Fixings:⁽²⁾
- Fixing centres: (p25)
-
- Joints:
- BARGEBOARD SOFFITS
- Profile:⁽³⁾
- Finish/Colour:
- Fixings:⁽²⁾
- Fixing centres: (p25)
-
- Joints:
- OVER-FASCIA VENTILATION / EAVES PROTECTION⁽⁴⁾
-
-
-
- Fixings:⁽²⁾
- Fixing centres: (p25)
- Corners:
- Sealing:

Please quote Swish product references in all cases. Fixing procedures as per Swish Roofline Products Design and Specification Guide A227.

Copies of this form may be downloaded from the Swish website by visiting www.swishbp.co.uk>Library>NBS Clauses.

For further guidance or help with creating NBS clauses please call **01827 317200** and ask for the Technical Department.

The following are typical specification clauses for Swish Roofline components. 950 CELLULAR PVC FASCIA/BARGES/SOFFITS

- Material: Cellular PVC (PVC -ue)
- Material Specification: BS 7619: 2010 - BBA Certified.
- Colour stability Delta PI <15 in ACT test Delta L* less than -2 after 500 hrs in Suntest.
- Manufacturer: Swish Building Products, Tamworth, Staffordshire B79 7TF
-
- Manufacturer accreditation: ISO 9001, ISO 14001 and BS OHSAS 18001 Class 1 Surface spread of flame to BS 476: Part 7: 1987
- FASCIA
- Profile:⁽¹⁾ C286 Jumbo Board (175 x 20 mm)
- Finish/Colour: White
- Support timber: Fix to rafter ends
- Fixings:⁽²⁾ C073 65 mm A4 stainless steel capped screws
- Fixing centres: (P25) 600 mm maximum
- Joints: C153 concealed fix Jumbo joints
- BARGEBOARD
- Profile:⁽¹⁾ C095 Cappit (175 mm)
- Finish/Colour: White
- Support timber: Existing timber bargeboard
- Fixings:⁽²⁾ C082 50 mm Trimtop A4 s.s. nails
- Fixing centres: (P25) 600 mm maximum
- Box-end details:⁽⁵⁾ As figure No.34, page 23
- Joints: C235 face-fixed joint covers
- FASCIA SOFFITS
- Profile:⁽³⁾ C308 Polo Board (300 mm)
- Finish/Colour: White
- Fixings:⁽²⁾ C081 40 mm Trimtop A4 s.s. nails
- Fixing centres: (P25) 200 mm (max) centres across width and 600 mm (max) along length of boards
- Joints: C041 Joint Trim
- BARGEBOARD SOFFITS
- Profile:⁽³⁾ C246 Gee Pee Board (300 mm)
- Finish/Colour: White
- Fixings:⁽²⁾ C081 40 mm Trimtop A4 s.s. nails
- Fixing centres: (P25) 200 mm (max) centres across width and 600 mm (max) along length of boards
- Joints: C041 Joint Trim
- OVER-FASCIA VENTILATION / EAVES PROTECTION⁽⁴⁾
- C502 Jumbotec and Eaves Ventilator Trays
-
- along full length of eaves
- Fixings:⁽²⁾ Galvanised clout nails
- Fixing centres: (P25) 200 mm (max)
- Corners: C154 Concealed Fix Corners
- Sealing: Swish C077 low modulus silicone

Notes:

- (1) Replacement, load bearing profiles: Square, Bullnose or Ogee Jumbo (page 6). Refurbishment overcapping profiles: Cappit (page 7).
- (2) Specify A4 Marine Grade stainless steel nails or screws (page 25).
- (3) Flat Boards: (page 8) Gee Pee, (page 10) Gee Pee with appropriate strip ventilators, Polo vented flat board, Cladding as Soffit: Tee Gee, Open V, or Polo (vented) versions of these (page 10).
- (4) Eaves Protection: Jumbotec (without ventilator), Vented Eaves Protector C404. Eaves Ventilators only: (page 10) C504, & C505
- (5) Box-end detail drawings may be found on pages 22 & 23.

NBSPlus

Supply

Swish Roofline components and accessories are available through a national network of suppliers.

Ordering

Please state Swish reference and number of lengths of fascia boards, soffits and bargeboards required.

In the case of joint covers, trims, nails, screws, Jumbotec, Vented Eaves Protector and other accessories, please state the number of packs required. See Swish Trade Price List for pack quantities.

Swish will be pleased to advise on approximate quantities on receipt of layout drawings for individual projects. Please contact the Swish Technical Team on **01827 317200** or e-mail: technical@swishbp.co.uk.

Technical services

The Technical Services staff of Swish will be happy to provide quotations for individual projects and to give advice on technical aspects of Swish Roofline installations.

Swish can supply a list of approved contractors for Swish Roofline installations if required.

Details of all Swish building products can be found in the NBS Specification Manager and Specification Writer. Easy to use, this unique software provides product information and installation guidance.

References

Swish also publish a Design and Specification Guide A226 for their Cellular PVC Cladding Range.

Agrément Certificates for the Swish Cladding and Roofline Systems are available on request.

For further information, please contact the Swish - address details are on the back cover.

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It is the specifier's responsibility to satisfy himself that each product is fit for the purpose for which he intends to use it and that the actual conditions of use are suitable.

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