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Agrément Certificate No 91/2620
*Fourth issue**

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

Designated by Government to issue European Technical Approvals

SWISH CELLULAR PVC-U ROOFLINE SYSTEMS

Accessoires en PVC-U pour toits
Zuberhör von PVC-U für Dächer

Product

- *THIS CERTIFICATE RELATES TO SWISH CELLULAR PVC-U ROOFLINE SYSTEMS.*
- *The products are for external use at the roofline as a substitute for timber or other conventional materials.*
- *The products are available in one shade of white.*
- *It is essential that the products are installed in accordance with the manufacturer's instructions and the* Design Data *and* Installation *parts of the Detail Sheets.*

These Front Sheets must be read in conjunction with the relevant accompanying Detail Sheets, which provide information specific to insulation systems.

Regulations

1 The Building Regulations 2000 (England and Wales)

The Secretary of State has agreed with the British Board of Agrément the requirements of the Building Regulations to which roofline systems can contribute in achieving compliance. In the opinion of the BBA, Swish Cellular PVC-U Roofline Systems, if used in accordance with the provisions of this Certificate, will meet or contribute to meeting the relevant requirements.

Requirement:	C4	Resistance to weather and ground moisuture
Comment:		The system will contribute to providing protection against the penetration of moisture to the inner surface of the building on which it is installed. See section 7.1 of these Front Sheets.
Requirement:	F2	Condensation in roofs
Comment:		When used in accordance with this Certificate, Swish ventilated soffit boards can contribute in enabling a roof to meet this Requirement. See sections 7.4 to 7.14 of these Front Sheets.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The components of the system are acceptable. See section 12.1 of these Front Sheets.

2 The Building Standards (Scotland) Regulations 1990 (as amended)

In the opinion of the BBA, Swish Cellular PVC-U Roofline Systems, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Regulations and related Technical Standards as listed below.

Regulation:	10	Fitness of materials
Standard:	B2.1	Selection and use of materials and components
Comment:		The components of the system are acceptable. See section 12.1 of these Front Sheets.
Regulation:	17	Resistance to moisture
Standard:	G3.1	Resistance to precipitation
Comment:		The product will provide adequate protection against the penetration of moisture to the inner surface of the building on which it is installed. See section 7.1 of these Front Sheets.
Regulation:	18	Resistance to condensation
Standard:	G4.1	Interstitial condensation
Comment:		Swish ventilated soffit boards can contribute towards enabling a roof to meet this Standard. See sections 7.4 to 7.14 of these Front Sheets.

3 The Building Regulations (Northern Ireland) 1994 (as amended)

In the opinion of the BBA, Swish Cellular PVC-U Roofline Systems, if used in accordance with the provisions of this Certificate, will satisfy or contribute to satisfying the various Building Regulations as listed below.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The components of the system are acceptable. See section 12.1 of these Front Sheets.
Regulation:	C5	Resistance to ground moisture and weather
Comment:		The system will contribute to providing protection against the penetration of moisture to the inner surface of the building on which it is installed. See section 7.1 of these Front Sheets.
Regulation:	C7	Condensation
Comment:		Swish ventilated soffit boards can contribute towards enabling a roof to meet this Regulation. See sections 7.4 to 7.14 of these Front Sheets.

4 Construction (Design and Management) Regulations 1994

Information in this Certificate may assist the client, planning supervisor, designer and contractors to address their obligations under these Regulations.

See section: 13 *Installation* (13.3 and 13.4).

Technical Specification

5 Description

5.1 Swish Cellular PVC-U Roofline Systems comprise a range of cellular PVC-U (PVC-UE) boards together with ancillary trims.

5.2 The boards are for use at the roofline as fascia, soffit and barge boards in place of timber or other conventional materials.

5.3 The various fascia boards included in the range are described in the accompanying product Detail Sheets. Soffit boards, trims and other items common to all fascia systems are detailed in these Front Sheets.

5.4 The products are available in one shade of white.

5.5 PVC-UE soffit boards are available both unvented (see Figure 1) and, for ventilating the roof void, as vented Polo boards (see Figure 2).

5.6 A range of impact modified PVC-U extruded trims, square and Ogee box ends, vacuum formed from PVC-U sheet and acrylate styrene acrylonitrile (ASA) injected-moulded joint covers are available for use with the cellular boards. Typical examples are shown in Figure 3.

5.7 The cellular boards comprise a closed-cell cellular PVC-U core beneath an outer weathering impact modified PVC-U skin. Both core and skin formulations include a tin-based stabiliser. The boards are manufactured by co-extruding the skin compound onto a foamable core compound, cooling and forming to section. Cellular PVC-U is formed during the process by the evolution of gas from sodium bicarbonate in the core compound.

5.8 Polo ventilated soffit boards are produced by punching 4 mm by 35 mm slots into Gee Pee, Tee Gee cladding or Open 'V' cladding soffit boards at regular intervals. All boards are available with a single row of slots, suitable for providing ventilation to satisfy the requirement for ventilation equivalent to a continuous air gap of at least 10 mm wide, at the eaves. The Gee Pee boards are also available, with a double row of slots, providing ventilation equivalent to a continuous air gap at least 25 mm wide at the eaves.

Figure 1 Soffit boards (unvented)

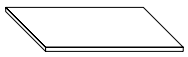
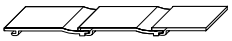
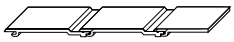
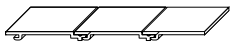
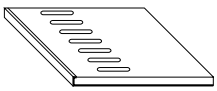
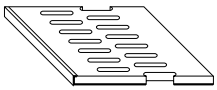
Soffit board	Overall thickness (mm)	Width (mm)
Gee Pee boards	9	100-605
		
Fluted soffit	9	300
		
Cladding soffits		
Shiplap	6 or 7	100 or 150
		
Open 'V'	7 or 7.5	100 or 150
		
Tee Gee	6	125
		

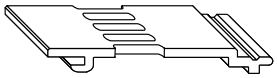
Figure 2 Soffit boards (vented)



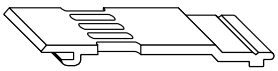
Polo board with a single row of vents



Polo board with a double row of vents

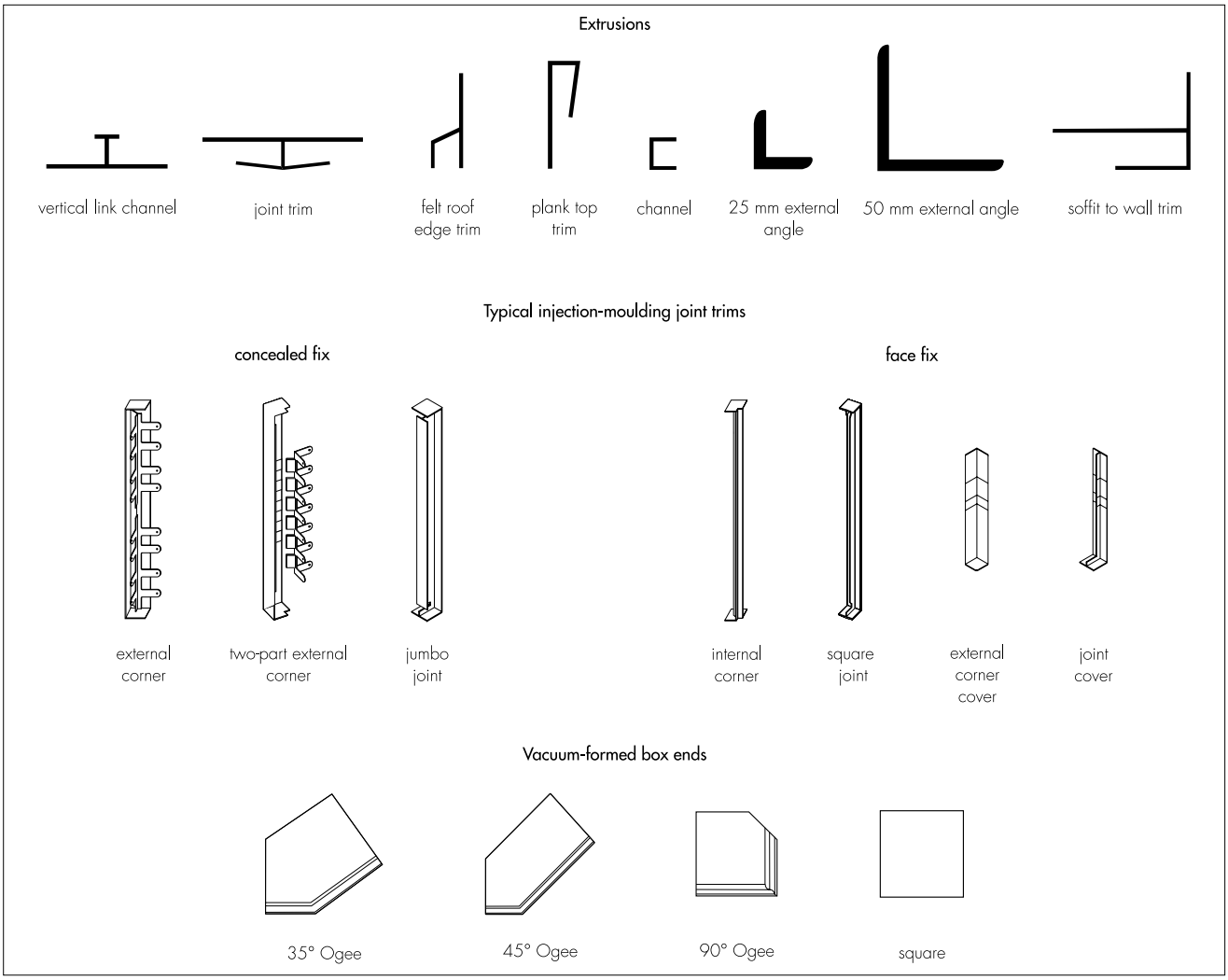


Tee Gee Polo cladding



open V Polo cladding

Figure 3 Trims



5.9 The boards are extruded in standard 5 m lengths with a nominal density of 550 kgm^{-3} and skin thickness of 0.5 mm.

5.10 The overall thickness and width of the soffit boards are given in Figure 1. The ventilated (Gee Pee) Polo boards, shown in Figure 2, are available in widths of 150 mm to 600 mm.

5.11 Continuous quality control is undertaken during manufacture to include checks on:

Cellular planks

appearance
dimensions
weight per metre
impact strength

Trims

heat reversion
stress relief.

5.12 A range of stainless steel[1] screws with white cover caps and stainless steel[1] annular ring-shank nails with white plastic heads are specified and supplied by the manufacturer for fixing the boards to sound roof timbers.

(1) A4 (steel No 1.4401, BS EN 10088-2 : 1995).

5.13 A low modulus silicone sealant specified and supplied by the manufacturer is available for fixing cover trims to boards at corners and abutments.

6 Delivery and site handling

6.1 Standard 5 m lengths of Swish cellular boards are delivered to site in packs sealed in polythene sleeves bearing the Swish product marking and the BBA identification mark incorporating the number of this Certificate. Pack quantities vary with the type of profile.

6.2 The packs should be unloaded by hand, stored on a clean, level surface in stacks not exceeding one metre in height and restrained from collapse. If stored externally the packs should be kept under cover.

Design Data

7 General

7.1 Swish Cellular PVC-U Roofline Systems are suitable for use externally to provide a protective and decorative trim at the roofline where timber or other conventional materials would normally be used. The products will provide adequate protection to the interior of the building from the penetration of moisture.

7.2 The systems must be fixed only to structurally sound building substrates at centres not exceeding 600 mm. Rafter feet and gable ladders should be adequately supported by noggings to ensure rigidity. Timber roof structures to which the system is fixed must be designed and/or constructed in accordance with the relevant Building Regulations and, as appropriate, in compliance with one of the following:

BS 5268-2 : 1996

BS 5268-3 : 1985.

7.3 Swish cellular PVC-U components have a similar coefficient of thermal expansion to that of conventional solid PVC-U. An 8 mm gap should be provided between abutting fascia boards to allow for movement. Care should be taken not to install the system in extremes of temperature. The recommended temperature for installation is between 5°C and 25°C.

Ventilation

7.4 Swish Polo ventilated soffit boards can contribute towards providing the necessary roof space ventilation. Guidance on the provision of adequate ventilation is given in the 1995 edition of the Approved Document F2 *Condensation in roofs*, to the Building Regulations 2000 (England and Wales), and in BS 5250 : 1989(1995).

7.5 When providing roof space ventilation it is essential that the airway should not be allowed to become blocked by the loft insulation. This may be achieved by the use of a suitable BBA, approved insulation retainer producing an air passage with an effective area (assumed equal to the geometric free area) at least equal to that of the ventilated soffit board used.

7.6 The ventilated soffit boards with a double row of slots have an effective ventilated area of approximately 25946 mm^2 per metre run (which is equivalent to a continuous slot of approximately 25.9 mm wide at eaves level) and are suitable for the applications given in sections 7.8 to 7.10.

7.7 The ventilated soffit boards with a single row of slots have an effective ventilated area of 12 973 mm^2 per metre run (equivalent to a continuous slot 13.0 mm wide at eaves level) and are suitable for the applications given in section 7.8.

7.8 For roofs with a pitch of 15° or more, where both the ceiling and insulation are horizontal, soffit ventilators with a minimum effective area of 10000 mm^2 per metre run, if used in accordance with section 7.5, can provide adequate ventilation to loft spaces as set out in BS 5250 : 1989(1995), clause 9.4. The soffit ventilators should run along the eaves of the longest opposite sides of a rectangular roof to provide adequate cross-ventilation. The ventilators are suitable for use with traditional (semi-permeable) and high performance (impermeable) sarking felts. Consideration should be given to the use of high-level ventilation openings to increase the ventilation rate for roofs as referred to in BS 5250 : 1989(1995), clause 9.4. The use of high-level ventilation openings is strongly recommended in roofs with a pitch greater than 35° or roof spans in excess of 10 m.

7.9 For roofs where the ceiling follows the pitch of the roof, soffit ventilators with a minimum effective area of 25000 mm^2 per metre run, if used in conjunction with suitable high-level ventilation, can provide adequately for roof voids as set out in BS 5250 : 1989(1995), clause 9.4. It is essential that a minimum unrestricted air space of 50 mm is maintained between the underside of the roof deck and the top of the insulation. Consideration should be given to the probability of the sarking felt bowing between rafters and it should be ensured that this does not reduce the gap between felt and insulation to less than 50 mm. Where there is an obstruction to the ventilation, eg rooflights or a change in pitch of roof, adequate ventilation, in accordance with the requirements of BS 5250 : 1989(1995), clause 9.4, should be provided above and below the obstruction using suitable ventilators. The required ventilation at high level and around obstructions may be achieved by using a suitable BBA approved ventilator.

7.10 For roofs with a pitch of less than 15°, soffit ventilators with a minimum effective area of 25000 mm^2 per metre run, if used in accordance with section 7.5, can provide adequate ventilation to roof voids as set out in BS 5250 : 1989(1995), clause 9.4. When providing roof space ventilation for flat roofs, it is essential that a minimum unrestricted air space of 50 mm is maintained between the underside of the roof deck and the top of the insulation. Ventilation should be provided along two opposite sides of the deck; where possible these should be the two longest sides to achieve maximum cross-ventilation. The recommendations contained in BS 5250 : 1989(1995) , clause 9.4, should be followed when planning the provision of ventilation to flat roofs, especially where spans exceed 5 m, or for concrete deck roofs. Where a flat roof has a span of greater than 10 m, or is not of a simple rectangular plan more ventilation will be required, totalling at least 0.6% of the total area of the roof. It should be noted that cold flat roof construction is

generally unacceptable in Scotland and not the preferred option elsewhere in the UK[1].

(1) See BRE Report BR 262 : 1994 *Thermal insulation : avoiding risks.*

7.11 Where soffit ventilators are used in lean-to or mono-pitched roofs, high-level ventilation, in accordance with BS 5250 : 1989(1995), clause 9.4, must be provided.

7.12 Where a pitched roof abuts a wall, additional high-level ventilation must be arranged to provide an open area at least equal to a 5 mm slot running the full length of the abutment.

7.13 The ventilated soffit boards meet NHBC requirements for protection against the ingress of birds, rodents or large insects.

7.14 The dimensions of the slots in ventilated soffit boards are such that the risk of blockage is limited. However, blockage by insects and debris would impair their performance as vents and they should be examined occasionally and cleared if necessary.

8 Practicability of installation

8.1 The components are easy to work using normal woodworking tools for cutting, drilling and shaping. Handsaws should have a fine-toothed blade. Hand-held and bench-mounted power tools with a carbide-tipped blade should be run at speeds similar to, or higher than, those normally used for timber.

8.2 Special training is not required to install the roofline systems correctly, provided the manufacturer's instructions and procedures outlined in section 14 of these Front Sheets are followed.

9 Strength and stability

9.1 When installed in accordance with this Certificate, the products will withstand, without damage or permanent deflection, the design wind loads likely to be encountered in the United Kingdom.

9.2 The systems have adequate resistance to the hard and soft body impacts likely to occur in practice.

9.3 Apart from the exceptions listed in the accompanying Detail Sheets, the fascia boards are not loadbearing and must not be independently used to support fixtures such as roof tiles, gutters, other components of the roof structure or television aerials. Suitably fixed telephone wires and power cables may be run along the boards but the main brackets for these services should be fixed through the fascia to structurally sound timber.

10 Performance in relation to fire

10.1 Apart from the exceptions listed in the accompanying Detail Sheets the boards achieve a class 1Y rating when tested in accordance with BS 476-7 : 1997.

10.2 On exposure to fire PVC-U tends to char and may fall away. The spread of flame along its surface is limited. It is unlikely that the roofline systems will significantly affect the overall fire performance of any roof in which it is installed.

10.3 Where it is normal practice to carry the eaves box over, between dwellings, it is important that the box is fire-stopped at compartment walls.

11 Maintenance

11.1 The systems can be cleaned by washing with water and detergent. Solvent-based cleaners should not be used. The material can be cut and drilled, using normal woodworking tools, if repairs are required.

11.2 As with all PVC products, paint can adversely affect the impact strength of the cellular PVC-U sections, and the application of dark colours could lead to a risk of thermal distortion, therefore painting is not recommended.

11.3 The slots in the ventilated soffit boards should be examined periodically and, if necessary, cleared (see section 7.14).

12 Durability

12.1 Accelerated weathering tests and limited natural exposure experience indicate that Swish cellular PVC-U is as durable as conventional solid PVC and that boards will retain adequate impact resistance for periods in excess of 20 years.

12.2 The systems will retain their decorative qualities for a period in excess of 20 years with only minor changes in surface appearance.

12.3 Where the timber substrate is preservative treated with copper/chrome/arsenic, care must be taken to ensure that sufficient time is allowed for complete fixation of the preservative (approximately seven days) to avoid corrosion of fixing screws and nails used to fix the Swish components.

Installation

13 General

13.1 Installation must be carried out in accordance with the manufacturer's instructions and the requirements of this Detail Sheet.

13.2 Fascia, soffit and barge boards should be fixed to preservative treated, structurally sound timber at centres not exceeding 600 mm using the screws and nails specified by the manufacturer.

13.3 Care should be taken when handling boards at roof level.

13.4 When using power tools to cut or shape the product it is recommended that eye protection and a coarse-particle dust mask are used.

13.5 Existing support timbers should be checked for soundness and where necessary replaced.

13.6 Sarking felt should be checked to ensure that it is in good condition and extends onto the verge rafter and over the fascia and into the gutter at the eaves. A continuous fillet should be installed at the eaves to prevent the felt sagging between the rafters. Damaged or worn felt should be replaced in accordance with good practice.

13.7 Ventilation boards should be selected and installed so that the roof ventilation conforms to the relevant building regulations.

14 Procedure

14.1 Selected boards and accessories are assembled and cut to size.

14.2 Rafter feet are cut to a line.

14.3 Noggings, soffit bearers, battens, eaves fillets, brackets and other additional timber supports are fixed to a sound substrate.

14.4 The summary for the installation details of fascia, soffit and barge boards (see sections 14.5 to 14.17) should be read with reference to the appropriate diagrams in Figure 4.

Fascia boards

14.5 Fascia boards are fixed to rafter feet, or where relevant to support timber, at centres not exceeding 600 mm, using at least two fixings per rafter. When the product is installed in particularly exposed locations it is recommended that the fascia boards are fixed to support timbers at maximum 400 mm centres.

14.6 Where necessary, fascia boards are joined between rafters using the appropriate joint trim cut to size. The trim is fixed to one board only allowing 4 mm gap for expansion at the end of each board. Depending on the particular trim, either a low modulus silicone sealant or a nail through the spine of the trim into the end of the board is used to secure the trim in place.

14.7 At external corners, the appropriate corner joint trim, cut to size, is used. The trim is either nailed to timber work through the holes provided in the inner lug of the trim (including two-part push-fit trims) using the specified 25 mm nail or face-fixed to one board with a low modulus silicone sealant, depending on the particular trim. In each case a 4 mm gap for expansion is left at the end of each board.

14.8 Internal corner joint trims are available for some boards and these are fitted by the procedure described in section 14.7 for external corners.

Soffit boards

14.9 Soffit boards, fitted into or butted up against fascia boards, may be used in a variety of ways, as illustrated in Figure 4.

14.10 Soffit boards should be fixed to soffit bearers, battens secured to the wall, or the underside of the rafters at maximum 600 mm centres along their length, and 200 mm centres across their width, using 40 mm nails specified by the manufacturer.

14.11 Where Swish cladding boards are used to construct a soffit, the instructions specified for this product are followed, starting at the fascia and working towards the building using the specified secret-fix annular ring-shank nails.

14.12 For soffit runs in excess of 5 m, board ends are fitted into a soffit joint trim.

14.13 Soffit corner returns are made by cutting the boards to the appropriate angle and joining with a soffit joint trim.

Barge boards

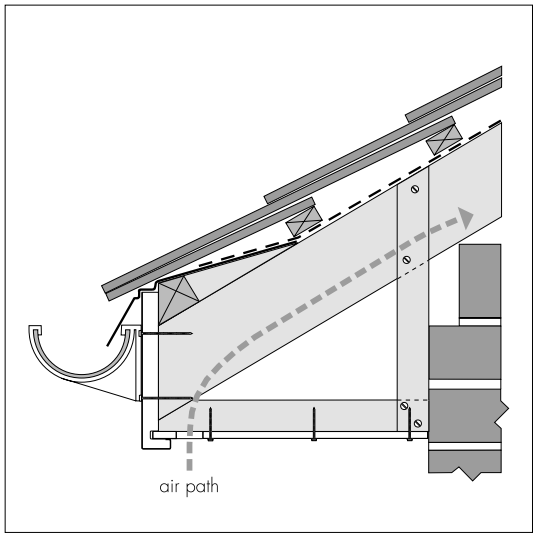
14.14 Barge boards are installed by fixing fascia boards to a gable ladder or noggings, using the procedure given for fascia boards.

14.15 The barge board ridge joint should be made using an appropriate joint trim, depending on the barge board profile.

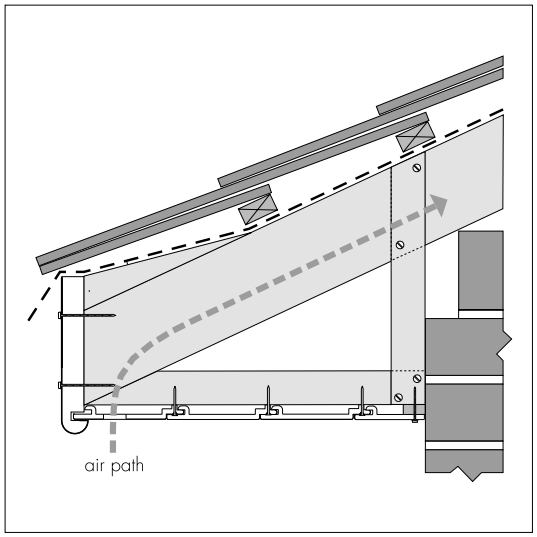
14.16 Eaves box ends should be made using either the appropriate fascia board or vacuum-formed box end, cut to suit the roof pitch, fascia and soffit detail. The fascia boards are nailed to roof timbers and the box end trims fixed to the PVC-UE boards with low modulus silicone sealant and, if necessary, additional trim nails.

14.17 Treated timber should be used to create the support framework required for the box end.

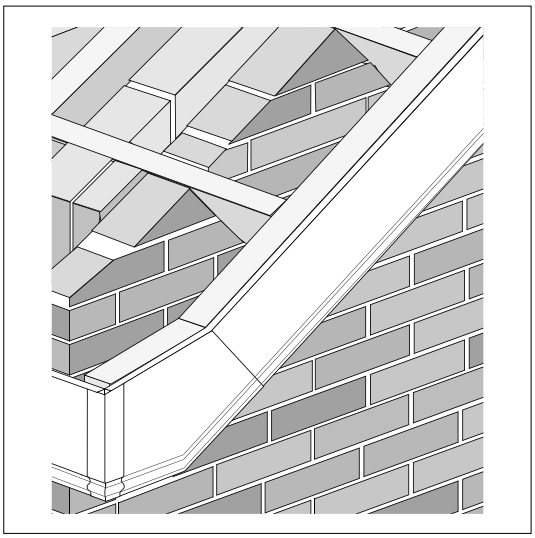
Figure 4 Typical installation details



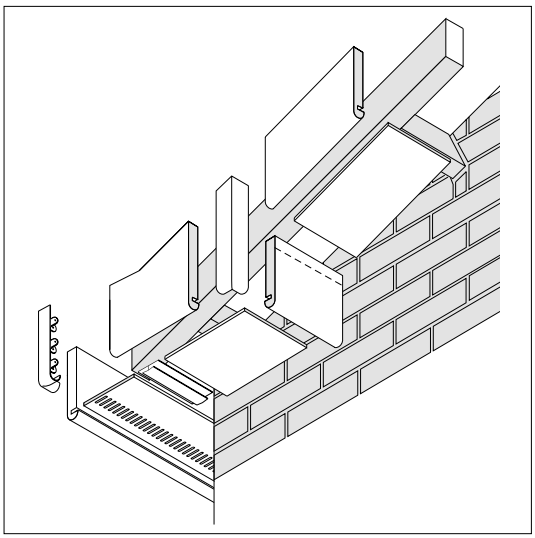
Polo board soffit



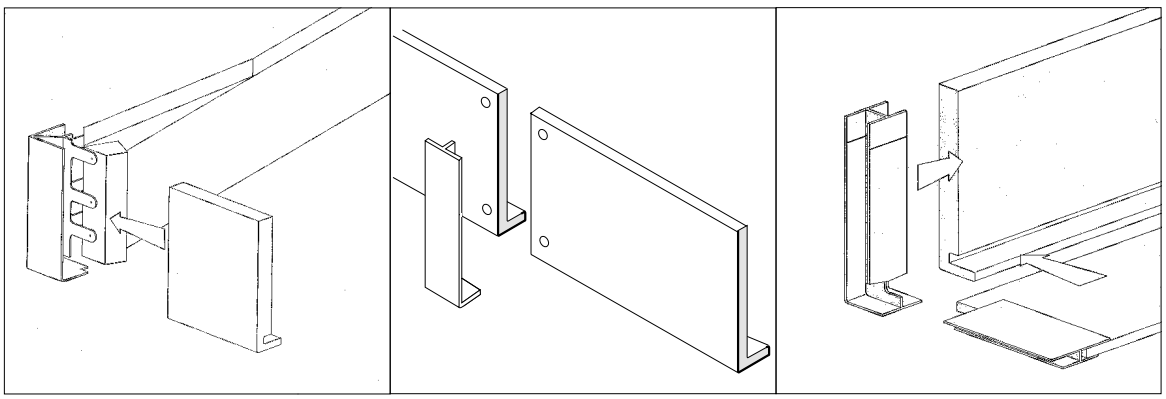
Tee Gee Polo cladding soffit



vacuum-formed box end detail



box end detail (cut fascia board)



external corner-concealed fix

joint-face fix

joint-concealed fix

Technical Investigations

The following is a summary of the technical investigations carried out on Swish Cellular PVC-U Roofline Systems.

15 Tests

15.1 Tests were carried out on cellular boards to determine impact strength.

15.2 As part of the original assessment, tests were carried out on cellular boards and trims to determine:

thickness of layers
Vicat softening point
density
weight per linear metre
ash content
tensile impact strength
IZOD impact strength (ISO 180 : 1982)
impact resistance
dimensional stability
tensile strength/elongation
modulus of elasticity
impact strength/DHC (dehydrochlorination)/ appearance after UV ageing
impact strength/DHC/appearance after heat ageing
impact strength/DHC/appearance after watersoak ageing
nail pull-through
heat reversion
acetone resistance
stress relief.

16 Other investigations

16.1 The dimensions of cellular boards and trims were checked.

16.2 An examination was made of data relating to:

behaviour of the product in fire
colour stability
impact strength before and after UV ageing.

16.3 The manufacturing process, including the methods adopted for quality control, was examined and details were obtained of the quality and composition of the materials used.

16.4 As part of the original assessment, the resistance of the products to wind suction, the practicability of installation and the compatibility and efficacy of the sealants specified for use with the product were assessed.

16.5 As part of the assessment leading to the issue of Detail Sheet 6 of Certificate No 90/2503 relating to Swish ventilators for Roof Voids, the ventilation characteristics of the ventilated soffit boards were examined.

Bibliography

BS 476 *Fire tests on building materials and structures*
BS 476-7 : 1997 *Method of test to determine the classification of the surface spread of flame of products*

BS 5250 : 1989(1995) *Code of practice for control of condensation in buildings*

BS 5268 *Structural use of timber*
BS 5268-2 : 1996 *Code of practice for permissible stress design, materials and workmanship*
BS 5268-3 : 1985 *Code of practice for trussed rafter roofs*

BS EN 10088 *Stainless steels*
BS EN 10088-2 : 1995 *Technical delivery conditions for sheet plate and strip for general purposes*

ISO 180 : 1982 *Plastics — Determination of Izod impact strength of rigid materials*

Conditions of Certification

17 Conditions

17.1 This Certificate:

(a) relates only to the product that is described, installed, used and maintained as set out in this Certificate;

(b) is granted only to the company, firm or person identified on the front cover — no other company, firm or person may hold or claim any entitlement to this Certificate;

(c) has to be read, considered and used as a whole document — it may be misleading and will be incomplete to be selective;

(d) is copyright of the BBA.

17.2 References in this Certificate to any Act of Parliament, Regulation made thereunder, Directive or Regulation of the European Union, Statutory Instrument, Code of Practice, British Standard, manufacturers' instructions or similar publication, shall be construed as references to such publication in the form in which it was current at the date of this Certificate.

17.3 This Certificate will remain valid for an unlimited period provided that the product and the manufacture and/or fabricating process(es) thereof:

(a) are maintained at or above the levels which have been assessed and found to be satisfactory by the BBA;

(b) continue to be checked by the BBA or its agents; and

(c) are reviewed by the BBA as and when it considers appropriate.

17.4 In granting this Certificate, the BBA makes no representation as to:

(a) the presence or absence of any patent or similar rights subsisting in the product or any other product;

(b) the right of the Certificate holder to market, supply, install or maintain the product; and

(c) the nature of individual installations of the product, including methods and workmanship.

17.5 Any recommendations relating to the use or installation of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory, common law or other duty which may exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory, common law or other duty of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the installation and use of this product.

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

In the opinion of the British Board of Agrément, Swish Cellular PVC-U Roofline Systems are fit for their intended use provided they are installed, used and maintained as set out in this Certificate. Certificate No 91/2620 is accordingly awarded to SBP Limited.

On behalf of the British Board of Agrément

Date of Fourth issue: 23rd March 2001

Chief Executive

**The original Certificate was issued on 27th March 1991. This amended version was issued to include change of Certificate holder's name, address and telephone and facsimile numbers, updated Building Regulations references, addition of CDM Regulations, 16 mm fascia profiles and additional trims and updated* Conditions of Certification. *There is a separate product Detail Sheet for each type of fascia, with soffits, trims and other common details covered in the Front Sheets.*

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BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

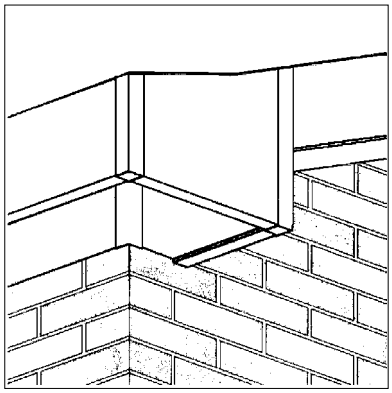
SBP Limited

SWISH 9 mm CELLULAR PVC-U ROOFLINE SYSTEM

Certificate No 91/2620

DETAIL SHEET 3

Product



- *THIS DETAIL SHEET RELATES TO THE SWISH 9 mm CELLULAR PVC-U ROOFLINE SYSTEM, COMPRISING WHITE, 9 mm FASCIA, SOFFIT AND BARGE BOARDS, POLO VENTILATED SOFFIT BOARDS, AND ACCESSORIES.*
- *The products are for external use at the roofline as a substitute for timber or other conventional materials.*
- *The 9 mm thick fascia boards are intended for use at the roofline over a sound fascia or other backing board.*
- *The Swish 9 mm fascia boards were previously included in Detail Sheet 2 (now deleted) of the original Certificate.*
- *It is essential that the product is installed in accordance with the* Design Data *and* Installation *parts of this Detail Sheet.*

This Detail Sheet must be read in conjunction with the Front Sheets, which give Conditions of Certification, *the product's position regarding the Building Regulations and information common to all product Detail Sheets.*

Technical Specification

1 Description

1.1 The Swish 9 mm Cellular PVC-U Roofline System is for use at the roofline as fascia, soffit and barge board in place of timber or other conventional materials.

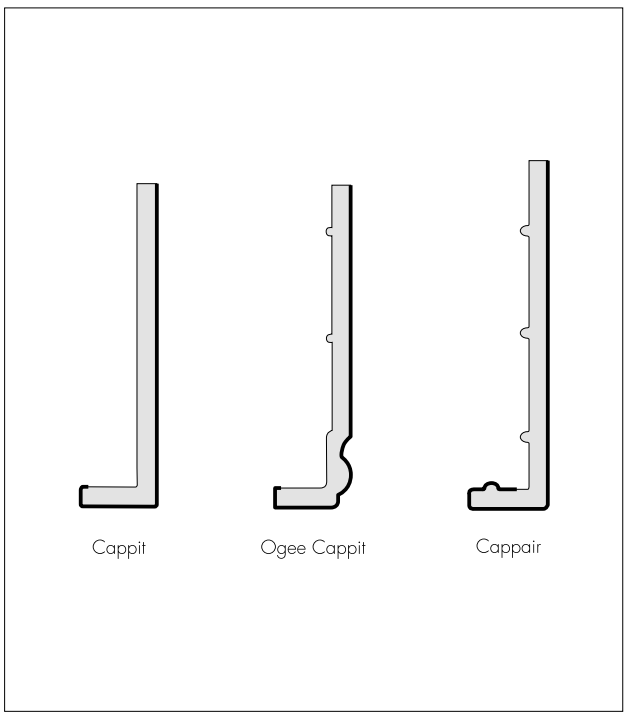
1.2 The 9 mm thick fascia boards are shown in Figure 1. Other components of the system (soffit boards, trims, etc) are described in the Front Sheets, of this Certificate.

1.3 The 9 mm fascia boards are available in widths of:

163 mm–405 mm (Cappair boards)
150 mm–605 mm (Cappit boards)
150 mm–405 mm (Ogee Cappit boards)

1.4 The discontinuous ribs running along the unexposed face of the Cappair and Ogee Cappit boards are intended to allow air circulation over the backing board.

Figure 1 9 mm fascia boards



Installation

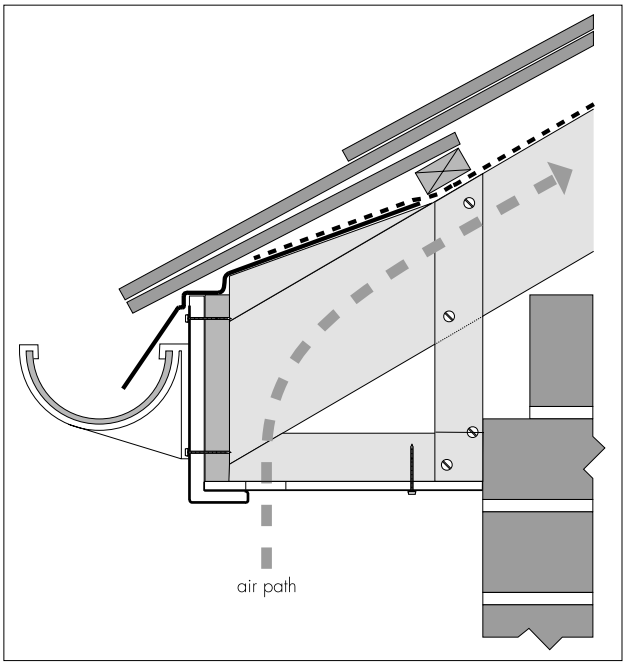
2 General

2.1 Typical installation details are shown in Figure 2 and the Front Sheets of this Certificate.

2.2 It is recommended that the 9 mm fascia boards are fixed to rafter feet over a sound backing board. This may be on existing fascia provided that this is inspected thoroughly and found to be in sound condition. Otherwise the existing fascias should be removed and replaced by minimum 12 mm thick marine grade plywood or other equivalent backing board.

2.3 A minimum of two 50 mm nails or two 40 mm screws per maximum 600 mm centres are used for fixing 9 mm fascia.

Figure 2 Typical installation detail



BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

On behalf of the British Board of Agrément

Date of issue: 23rd March 2001

Chief Executive

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BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

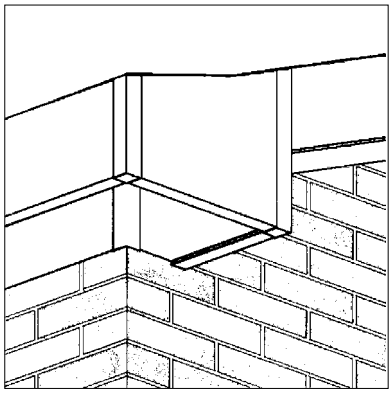
SBP Limited

SWISH 16 mm CELLULAR PVC-U ROOFLINE SYSTEM

Certificate No 91/2620

DETAIL SHEET 4

Product



- *THIS DETAIL SHEET RELATES TO THE SWISH 16 mm CELLULAR PVC-U ROOFLINE SYSTEM, COMPRISING WHITE, 16 mm FASCIA, SOFFIT AND BARGE BOARDS, POLO VENTILATED SOFFIT BOARDS, AND ACCESSORIES.*
- *The products are for external use at the roofline as a substitute for timber or other conventional materials.*
- *It is essential that the product is installed in accordance with the* Design Data *and* Installation *parts of this Detail Sheet.*

This Detail Sheet must be read in conjunction with the Front Sheets, which give Conditions of Certification, *the product's position regarding the Building Regulations and information common to all product Detail Sheets.*

Technical Specification

1 Description

1.1 The Swish 16 mm Cellular PVC-U Roofline System is for use at the roofline as fascia, soffit and barge board in place of timber or other conventional materials.

1.2 The 16 mm thick fascia boards are shown in Figure 1. They are available in 150 mm to 405 mm widths.

1.3 The 16 mm fascia board is also available with a decorative chamfered cut edge, either convex or concave (see Figure 2). The decorative chamfered edge of the board is achieved by routing along the edge of a 16 mm board. The purpose of the chamfer is to reduce the visibility of the cut edge. The minimum width of the decorative board is 160 mm (concave) and 165 mm (convex).

1.4 Other components of the system (soffit boards, trims etc) are described in the Front Sheets, of this Certificate.

2 Strength and stability

2.1 PVC-U gutters, as specified in BS 4576-1 : 1989(1998), may be screw-fixed directly to the 16 mm fascia boards. Gutter bracket spacings must not exceed 1 m; reduced spacings are recommended in the Scottish Highlands. Other lightweight gutters may also be screw-fixed to the board provided the maximum bracket loading, covered in BS 4576-1 : 1989(1998), is not exceeded.

2.2 16 mm fascia boards will support all eaves tiles in common usage in the UK (up to 10 kg load per 1 m length of fascia) provided the boards are installed in accordance with the requirement of this Certificate.

Figure 1 16 mm fascia boards

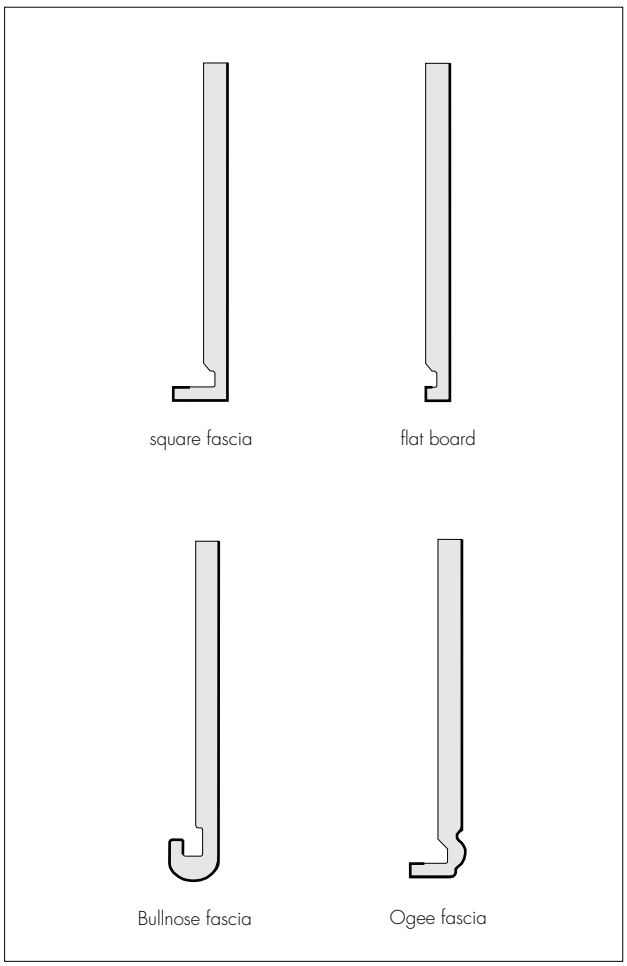


Figure 2 16 mm fascia board with decorative cut edge

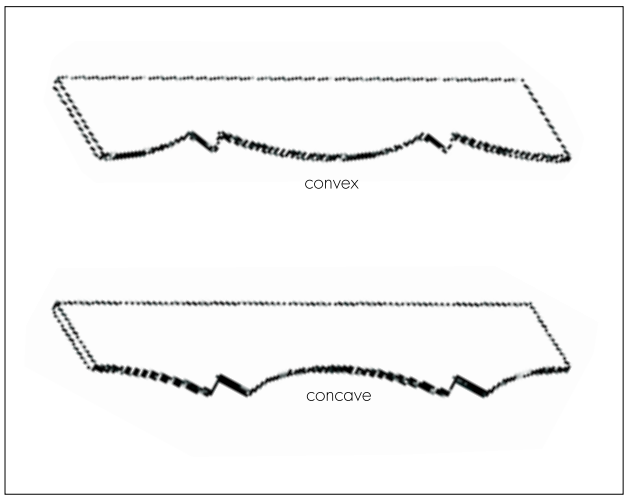
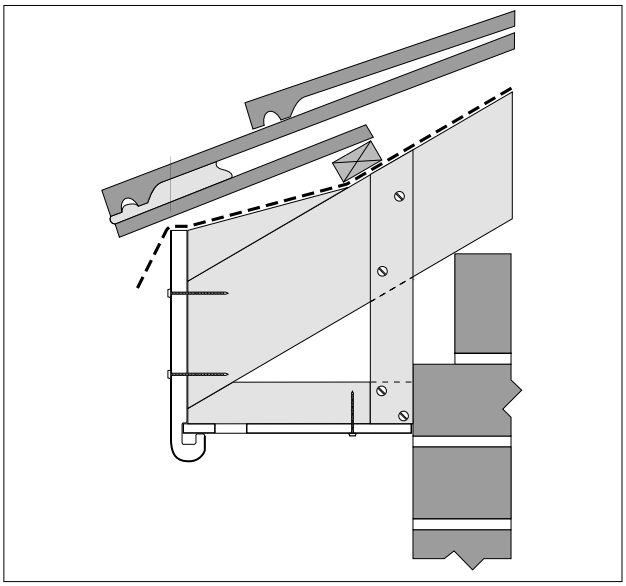


Figure 3 Typical installation detail



Installation

3 General

3.1 Typical installation details are shown in Figure 3 and the Front Sheets of this Certificate.

3.2 16 mm fascia boards may be used directly to support PVC-U and other lightweight gutters (see section 2.1).

3.3 16 mm fascia boards may be used to support eaves tiles (see section 2.2). In certain geographical/ topographical locations the eaves tiles will need to be restrained in order to resist wind uplift. Guidance on this fixing should be sought from the manufacturer of the eaves tile.

3.4 A minimum of two 65 mm nails at maximum 600 mm centres are used for fixing 16 mm fascia boards to rafter feet.

Technical Investigations

The following is a summary of the technical investigations carried out on the Swish 16 mm Cellular PVC-U Roofline System.

4 Tests

Tile and gutter loading tests were carried out on 16 mm fascia boards.

Bibliography

BS 4576 *Unplasticized polyvinyl chloride (PVC-U) rainwater goods and accessories*
BS 4576-1 : 1989(1998) *Half-round gutters and pipes of circular cross-section*

BBA BRITISH BOARD OF AGRÉMENT
TECHNICAL APPROVALS FOR CONSTRUCTION

On behalf of the British Board of Agrément

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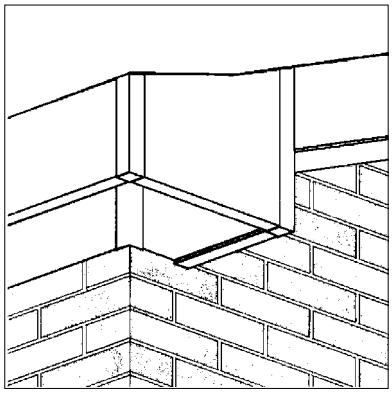
SBP Limited

SWISH JUMBO CELLULAR PVC-U ROOFLINE SYSTEM

Certificate No 91/2620

DETAIL SHEET 5

Product



- *THIS DETAIL SHEET RELATES TO THE SWISH JUMBO CELLULAR PVC-U ROOFLINE SYSTEM, COMPRISING WHITE, JUMBO FASCIA, SOFFIT AND BARGE BOARDS, POLO VENTILATED SOFFIT BOARDS, AND ACCESSORIES.*
- *The products are for external use at the roofline as a substitute for timber or other conventional materials.*
- *The Swish Jumbo boards were previously included in Detail Sheet 2 (now deleted) of the original Certificate.*
- *It is essential that the product is installed in accordance with the* Design Data *and* Installation *parts of this Detail Sheet.*

This Detail Sheet must be read in conjunction with the Front Sheets, which give Conditions of Certification, *the product's position regarding the Building Regulations and information common to all product Detail Sheets.*

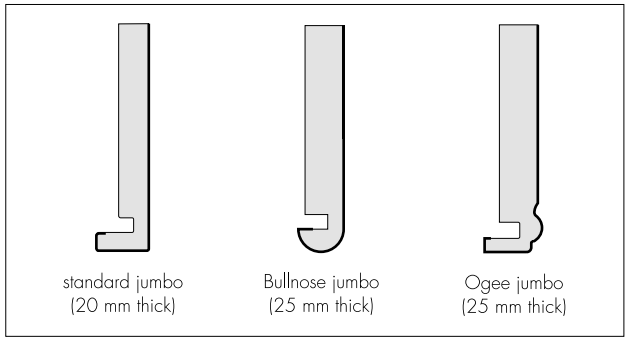
Technical Specification

1 Description

1.1 The Swish Jumbo Cellular PVC-U Roofline System is for use at the roofline as fascia, soffit or barge board in place of timber or other conventional materials.

1.2 The 20 mm/25 mm thick Jumbo fascia boards are shown in Figure 1. All boards are available in widths of 150 mm to 405 mm (double ended board).

Figure 1 Jumbo boards



1.3 Other components of the system (soffits, trims, etc) are described in the Front Sheets, of this Certificate.

2 Strength and stability

2.1 PVC-U gutters, as specified in BS 4576-1 : 1989(1998), may be screw-fixed directly to the Jumbo boards. Gutter bracket spacings must not exceed 1 m; reduced spacings are recommended in the Scottish Highlands. Other lightweight gutters may also be screw-fixed to the board provided the maximum bracket loading, covered in BS 4576-1 : 1989(1998), is not exceeded.

2.2 Jumbo boards will support all eaves tiles in common usage in the UK (up to 10 kg load per 1 m length of fascia) provided the boards are installed in accordance with the requirement of this Certificate.

3 Performance in relation to fire

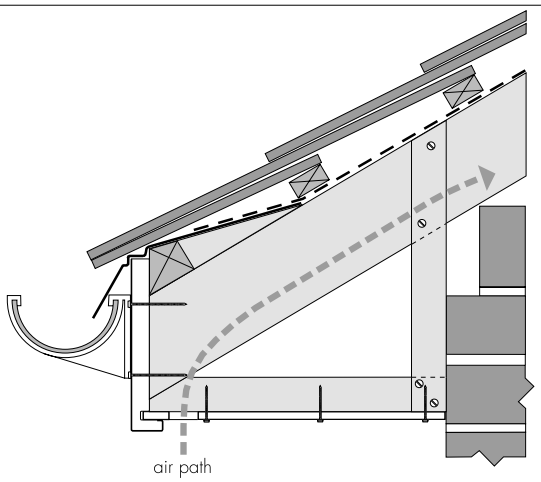
When tested in accordance with BS 476-7 : 1997 the Jumbo boards achieved a class 1 rating.

Installation

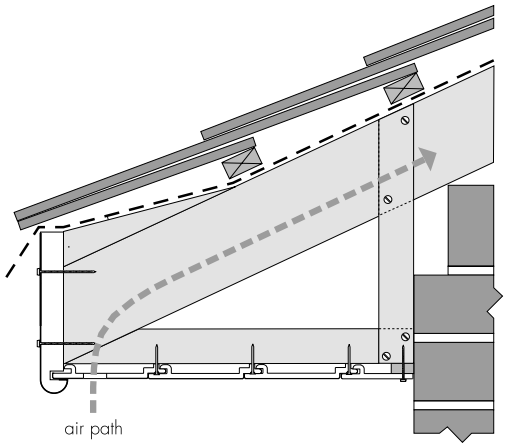
4 General

4.1 Typical installation details are shown in Figure 2 and the Front Sheets of this Certificate.

Figure 2 Typical installation details



standard Jumbo with Polo board soffit



Bullnose Jumbo with Tee Gee Polo soffit

4.2 A minimum of two 65 mm nails at maximum 600 mm centres are used for fixing Jumbo boards to rafter feet.

Technical Investigations

The following is a summary of the technical investigations carried out on the Swish Jumbo Cellular PVC-U Roofline System.

5 Tests

As part of the assessment leading to the Third issue of this Certificate, tile and gutter loading tests were carried out on Jumbo fascia boards.

Bibliography

BS 476 *Fire tests on building materials and structures*
BS 476-7 : 1997 *Method of test to determine the classification of the surface spread of flame of products*

BS 4576 *Unplasticized polyvinyl chloride (PVC-U) rainwater goods and accessories*
BS 4576-1 : 1989(1998) *Half-round gutters and pipes of circular cross-section*

BBA BRITISH BOARD OF AGRÉMENT
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