For roofing products with maximum durability

# DON'T TRUST LUCK, TRUST KLOBER









# THE PROFESSIONALS TRUST KLOBER

For roofing products that deliver exceptional performance, and people who deliver outstanding customer service

Klober is the industry leader continually innovating, developing new products and system solutions. Our technical support and customer service is unrivalled, so whatever you are looking for in roofing ventilation products and accessories – reliability, innovation and value for money, you can trust Klober to deliver.

#### FIND OUT MORE

T: 0800 783 3216 | info@klober.co.uk



#### Certification

All of Klober's products conform to the relevant Building Regulations and British Standards and, where appropriate, are BBA, BRE, IAB and CE certified.









#### Guarantee

All products supplied by Klober Ltd are covered by a 10 year guarantee against manufacturing defect. Products are not covered for colour stability, poor workmanship or incorrect installation.

All products should be installed as per our literature/fixing instructions and/or guidelines set out in regulations and British Standards such as BS5534, BS8612, BS5250 and our BBA/BRE/IAB certificates.









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# KLOBER PRODUCT OVERVIEW



# Technical support

All products are rigorously tested — as you would expect from a company with a reputation for quality. This includes performance and wind tunnel testing, ensuring that every product in the range will stand up to the worst of the British and Irish weather. Products fully comply with British Standards and all other relevant performance requirements. We offer technical advice and design support on how best to incorporate Klober products into specific building types or particular forms and techniques of construction, whether for refurbishment or new-build projects.

The Klober technical service includes:

- Telephone helpline +44 (0) 1332 813 050
- Computerised U-value calculations and condensation risk analysis
- Site visits by technical staff
- Product samples (depending on availability and product)
- Copies of relevant test reports and certification
- Technical literature
- CPD approved seminars
- Help and advice on roof detailing and on meeting the requirements of Building Regulations
- In-house and on-site training















Recommendations as to methods, use of materials and construction details are based on the accumulated experience and knowledge of Klober and are given in good faith as a general guide and service to designers, contractors, merchants, roofers and manufacturers. All products are sold subject to Klober's 'Conditions of Sale', copies of which are available on request.

Klober's policy of continuing development may mean that the products supplied could differ slightly from those described in this Roofing Accessories & Products Pocket Guide.

## **7** Pitched Roof Vents

Venduct® Soil & Ventilations
 Systems

# **?** Roof Ventilation

- Ridge & Hip Product System
- Eaves Product System

# 3 Underlays and Vapour Barriers

- Permo® Vapour permeable
   Membranes & Barriers
- Sepa® non Vapour permeable Membrane
- Wallint® Vapour Barriers
- Adhesive Tapes & Sealants

# Other Roofing Accessories

- Easy-Form® Universal Flashina
- Verge Product System
- Valleys Product System
- Bird Deterrent

# **5** Roof Safety

- Trapac® Roof Access & Maintenance
- Trapac® Snow Guard

# K Flat Roof

- Flavent® Vents for Roof & House Ventilation
- Flavent® Rainwater Outlets for Roof, Parapet & Balcony
- Flavent® Outlets for Power Cables

# 7 SOLAR-LINE

- Venduct<sup>®</sup> Solar Cable Outlet Kit
- Venduct® Solar Thermal Outlet Kit
- Venduct® Solar Panel Support
- Easy-Form®Tile Guard Flashing
- Easy-Form® Solar Panel Apron Flashing

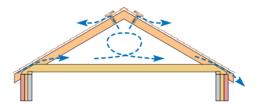
# MAKING THE RIGHT CHOICE OF VENTILATION

The diagrams below are designed to provide an at-a-glance guide to ventilation requirements for the most common roof types and the Klober products that can be used for them. In many cases, there is a choice of suitable products.

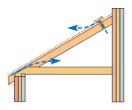
Product selection will depend on several factors – such as whether it is new build, re-roofing or refurbishment work and whether ventilation is preferred through the soffit or over the fascia. The ventilation requirements are the minimum levels set out in the Building Regulations and BS 5250. There may well be instances where additional ventilation is thought advisable.

Unusual roof types will demand special consideration.

Astandard duo-pitch roof 15° pitch and above
10mm continuous opening at eaves, with additional high level ventilation of 5mm particularly for pitches over 35° and spans greater than 10m.



# Dean-to or mono-pitch roof 15° pitch and above 10mm continuous opening at eaves, with additional high level ventilation of 5mm. Below 15°, the opening at the eaves should be increased to 25mm.



Flat roof – cold deck or pitched roof less than 15° 25mm continuous opening on opposite sides.



# THE KEY TO PRODUCT CHOICE

Each of the roof types below are identified by a simple key -

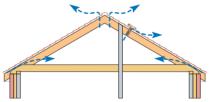
# A. B. C. D. E.

Using this method, it is easy to select which products are most suited to a particular type of roof construction and which are the related products.

Further information or technical guidance is available by contacting Technical Support on +44 (0)1332 813 050.

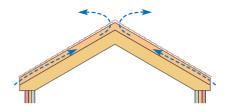
On non-ventilated roofs using Permo® air, forte or light underlays, consideration should be given to the guidelines stated in the relevant BBA and IAB certificates

Duo-pitch roof 15° pitch and above, with division walls 10mm continuous opening at eaves, with 5mm continuous opening immediately below and 10mm continuous opening immediately above each division wall.



# Duo-pitch roof, with ceiling and insulation inclined 25mm continuous opening at eaves, with additional high level ventilation of 5mm either side or 5mm at the ridge. 50mm gap between insulation and

underlav.



# BS 5534 and KLOBER

The updated BS 5534 'Code of Practice for slating and tiling' has generally been accepted as the industry's most important of the last 20 years. Enquiries to Klober so far have certainly reflected a high level of interest, in complete contrast to what we would normally expect with a new British Standard.

We believe there are two reasons for this, the main one being that it affects fixing principles as a whole and secondly it has incorporated new wind load information contained in new Euro codes and the new regulations mean that a greater level of fixing is necessary.

#### MORTAR FIXING

The first key element of the Standard was prompted by the fact that around two thirds of roofing claims to the NHBC under its Buildmark Warranty relate to mortar fixing. Mortar offers little tensile strength and changes in construction technique have exposed its inflexibility. Failures had shown little sign of reducing in number, so much so that the move toward dry fixing had already been formally supported by the NHBC. Though mortar will of course continue to be used, all ridge and hip tiles must now be mechanically fixed.

The Standard also places particular emphasis on use of the correct material ratios when mixing mortar as site complaints had highlighted poor quality on a regular basis. There are many factors which can affect mortar quality, among them water purity, weather, use of admixtures and cleanliness of the tile surface. The NHBC's input on failure rates also prompted withdrawal of the mortar test from the Standard and the requirement for mechanical fixing of all ridge and hip tiles.



Klober's dry fix products provide a simple solution to overcome all problems associated with mortar, and are fully compliant with the new standards.

## DRY FIXING

Dry fixing, which has been in common use in Scotland for a number of years and is very much the quicker, more reliable option is considered to be best practice. It is important to follow manufacturer specifications for dry fixing of ridges and hips, particular in relation to such features as the ridge batten. Klober dry fix kits contain all the necessary mechanical fixings needed to comply with the Standard while products such as Roll-Fix, designed for universal use, can also provide ventilation at the ridge. As an alternative, the Klober Uni-Dry Ventilating Ridge provides neat, secure, maintenance-free, all-weather mechanical fixing for half-round and angled ridges as well as high-level ventilation. Fixing screws are not supplied by all manufacturers so care should be taken to ensure the correct type and length of screw is used, ensuring too that compatible clamping plates are supplied.

#### **VERGES**

Dry fix systems vary between manufacturers so it is important to ensure that the specification for each is followed. Verges must have two fixings while, when fixing natural slates, if using a hook fixing system verge slates should be hooked and nailed. With fibre-cement slates, verge slates should be nailed in addition to a hook or rivet (according to the manufacturer's recommendations). For all verges, where the nearest batten fixing is more than 300mm, an additional fixing must be provided.

# SINGLE LAP TILE FIXING

One element of the Standard which will impact heavily on contractors is the need to fix every single lap interlocking tile with either a clip or nail. Changes in wind loading calculations were prompted by improved knowledge of weather patterns throughout Europe.

Whether for new build or refurbishment, it is important to nail or clip tile and slate vents which are, after all, lighter than the roof coverings they are fixed with. All perimeter courses should also be mechanically fixed.

Where the new BS 5534 wind zone map and/or a manufacturer specification indicates a building will be subject to high winds, nailing alone may not be sufficient. The new calculation method should always relate to individual buildings to determine the level of fixing required: nailing, clipping or both.

# UNDFRLAYS

The Standard carries considerable implications for manufacturers as well as contractors, particularly in relation to underlays. Following an increasing number of problems with lightweight membranes 'ballooning', a new wind speed map of the UK has been produced and manufacturers will be required to provide information on wrappers to show the zonal limit for each product. A test for upward deflection has also been established, so labelling will at last provide a measure of comparison for the dozens of products available. Many have the support of BBA certification but this has, in many senses, caused confusion as it has masked variations in product quality.

Among air-open underlays, BRE tests have confirmed that Permo® air, for example, exceeds the minimum wind uplift resistance of 1600 Pa and can be used at a 345mm batten gauge in all zones (used with Permo TR tape for Zones 4-5 instead of the additional fly batten which is otherwise required). It can be used up to Zone 3, which extends as far north as Aberdeen, without it.

Underlay laps must be secured by a batten or by proprietary means such as tapes/sealants. If the latter, evidence will be needed from the manufacturer that this has been tested for wind uplift.

An unsupported underlay should provide a drape between rafters or supports sufficient enough to ensure that any water will run away from the batten fixing penetrations at supports or rafters, and allows it to drain to the eaves gutter.

Contact between the membrane and the roof covering should be avoided during and after installation. Klober membranes should be laid with a maximum drape of 15mm.

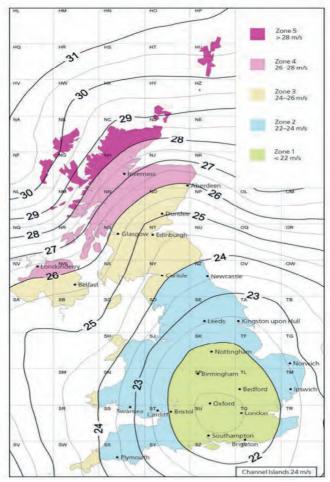


Klober have a range of compliant underlays including Permo $^{\circ}$  forte SK  $^2$  that can be used everywhere in the UK without restriction.

## **BATTENS**

BS 5534 requirements for battens have not changed though roofing battens should be clearly and indelibly marked with the name of supplier, timber type, origin, size and stamped to confirm compliance with BS 5534. Accompanying documentation should also contain details of the type of preservative and method of treatment used on the timber. The simplest way to ensure compliance is to use a supplier with UKAS quality assurance certification.

#### THE NEW UK WIND ZONE MAP IN BS 5534



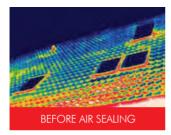
© IHS Reproduced with permission from BRE DG489 2014 Edition

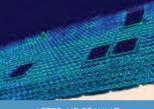
To obtain a copy of the table guidelines for Klober Permo underlays, just contact us t: 0800 783 3216 or e: info@klober.co.uk

# MAXIMISING AIRTIGHTNESS IN ROOF CONSTRUCTION BY TAKING CONTROL OF AIR LEAKAGE

As thermal insulation standards have increased, heat loss through air leakage has taken on a much greater significance. If not addressed, it can constitute more than 50% of the heat loss through the building envelope. However, in eliminating these unwanted air leakage paths, attention needs to be paid achieving sufficient ventilation for health.

# WITH THIS IN MIND, THE INDUSTRY HAS DEVELOPED AN APPROPRIATE SLOGAN: 'BUILD TIGHT, VENTILATE RIGHT'.





AFTER AIR SEALING

#### **AIRTIGHTNESS STRATEGY**

The airtightness strategy should be to introduce air barriers into the construction that are well sealed at the junctions between elements, are sufficiently robust to withstand the air pressures likely to be encountered, as well as accidental damage, and have appropriate vapour resistance characteristics according to their location within the construction. Taking into account the trade sequence, it is also important to simplify detailing in order to ensure consistent buildability.

#### KLOBER'S AIRTIGHTNESS SOLUTION

Klober provide a variety of solutions to help to maximise airtightness. We have developed a range of products, technical literature:

Maximising airtightness in roof construction and SAP Analysis and a CPD: Control of Air leakage (Part L & BS 5250) supported by our in-house technical team to ensure that you have everything you need to help you tackle the problem.

Our range of products that work together to provide a complete airtightness solution. The package includes underlays, vapour control layers, air barriers and compatible sealing products. This ensures that any joins, penetrations and gaps within the membranes and connections with the air barriers in other elements of the construction are sealed correctly.

# Profile-Line® Tile Vents

## Area of application

- For roofs with a pitch over 17.5°
- Limarech Vent: suits Marley Ludlow Major, Redland Renown, Russell Cheviot and Sandtoff Lindum profiles
- Double Roman Vent: suits Marley, Redland, Russell and Sandtoft Double Roman profiles

#### Product features

- In-line design makes it unobtrusive on the roof line
- Can be used at high or low levels and for soil ventilation or mechanical extraction when used with a Klober Flexipipe
- Built-in downpipe ensures ventilation path into roof space
- Adaptor and Flexipipe available for soil ventilation or mechanical extraction
- Complies fully with the relevant Building Regulations and British Standards

#### Product Code / Colour

Limarech Vent: KG9859
Double Roman Vent: KG9857
Antique Red -0116
Brown -0247
Slate Grey -0429
Terracotta -0152

#### Related Products

Adaptor & Flexipipe KG979200 Flexipipe 100/100mm KG979900 Soil/Mechanical KG979100 Adaptor

#### **Dimensions**

418mm long x 332mm wide

# Packaging

10 pcs per carton

Provides 10,000mm² venti	lation area		
5mm opening at 2m centr	es (high level)	25mm opening at 0.4m centres (warm roof without HR underlay)	
10mm opening at 1m centres	s (low level)		
Airflow resistance	15 litres/sec	30 litres/sec	60 litres/sec
Limarech Vent	7 Pascals	29 Pascals	115 Pascals
Double Roman Vent	7 Pascals	29 Pascals	115 Pascals

# Profile-Line® Tile Vents

- Single Pantile Vent: suits Sandtoft Shire Pantile, Redland Norfolk Pantile, Marley Anglia and Forticrete Centurion interlocking tiles.
   For roofs with a pitch over 20°
- Double Pantile Vent: suits Marley Mendip, Redland Grovebury, Russell Pennine and Sandtoft Double Pantile profiles
   For roofs with a pitch over 17.5°

#### **Product features**

A B D

- In-line design makes it unobtrusive on the roof line
- Can be used at high or low levels and for soil ventilation or mechanical extraction when used with a Klober Flexipipe
- Built-in downpipe ensures ventilation path into roof space
- Adaptor and Flexipipe available for soil ventilation or mechanical extraction
- Complies fully with the relevant Building Regulations and British Standards

#### Product Code / Colour

 Single Pantile Vent:
 KG9860

 Double Pantile Vent:
 KG9858

 Antique Red
 -0116

 Brown
 -0247

 Slate Grey
 -0429

 Terracotta
 -0152

#### Related Products

Adaptor & Flexipipe KG979200 Flexipipe 100/100mm KG979900 Soil/Mechanical KG979100 Adaptor

#### **Dimensions**

384mm long x 229mm wide (Single Pantile) 10 pcs per carton 418mm long x 332mm wide (Double Pantile) 10 pcs per carton

Provides 10,000mm <sup>2</sup> ver	ntilation area		
5mm opening at 2m cer	tres (high level)	25mm opening at 0.4m centres (warm roof without HR underlay)	
10mm opening at 1m cen	tres (low level)		
Airflow resistance	15 litres/sec	30 litres/sec	60 litres/sec
Single Pantile Vent	12 Pascals	48 Pascals	192 Pascals
Double Pantile Vent	4 Pascals	16 Pascals	64 Pascals

# Profile-Line® Tile Vents

- 15x9 Vent: suits Redland 49, Marley Ludlow Plus, Sandtoft Standard Pattern, and Forticrete V2 interlocking tiles.
  For roofs with a pitch over 20°
- Flat Vent: suits Marley Modern, Redland Mini Stonewold, Russell Grampian and Sandtoft Calderdale profiles For roofs with a pitch over 22.5°

#### **Product features**

- In-line design makes it unobtrusive on the roof line
- Can be use at high or low levels and for soil ventilation or mechanical extraction when used with a Klober Flexipipe
- Built-in downpipe ensures ventilation path into roof space
- Adaptor and Elexipipe available for soil ventilation or mechanical extraction.
- Complies fully with the relevant Building Regulations and British Standards

## Product Code / Colour

# Related Products

15x9 Vent: KG9690 Adaptor & Flexipipe KG979200 Flat Vent KG9856-3 Flexipipe 100/100mm KG979900 Antique Red -0116 Soil/Mechanical KG979100 Brown -0247Adaptor Slate Grev -0429

Black -0450 (only Flat Vent)

Dimensions / Packagina

Terracotta

384mm long x 229mm wide (15x9 Vent) 10 pcs per carton 418mm long x 330mm wide (Flat Vent) 10 pcs per carton

-0152

	•		
Provides 10,000mm² ve	entilation area		
5mm opening at 2m ce	entres (high level)	25mm opening at 0.4m centres (warm roof with HR underlay)	
10mm opening at 1m o	centres (low level)		
Airflow resistance	15 litres/sec	30 litres/sec	60 litres/sec
15 x 9 Vent	12 Pascals	48 Pascals	192 Pascals
Flat Vent	7 Pascals	29 Pascals	115 Pascals





# Twin Plain Tile Vent/Thin-Line Tile Vent

is a neat, cleverly designed in-line vent which is virtually invisible from the ground. High and low level ventilation.

#### Area of application

- Twin Plain Vent for roofs with a pitch over 22.5° (\*25° with Gemini)
- **Thin-Line Vent** For roofs with a pitch over 17.5° at 100mm headlap and over 22.5° at 75mm headlap

#### Product features

- Twin Plain Vent Suits Redland Duo Plain, Forticrete Gemini\* and Marlev Ashmore
- Thin-Line Vent Suits Marley Edgemere, Russell Galloway, Lagan Elite, Quinn Lakeland Slate Range) and Redland's Slate 10 range (Richmond 10, Landmark Slate 10, Saxon 10)
- Adaptor and Flexipipe available for soil ventilation or mechanical extraction
- Complies fully with the relevant Building Regulations and British Standards

#### Product Code / Colour

Troducti Code /	COIOOI
Twin Plain Tile Vent:	KG986
Antique Red	-0116
Brown	-0247
Slate Grey	-0429
Terracotta	-0152

# Thin-Line Tile Vent: KG9855

Antique Red	-0116
Brown	-0247
Slate Grey	-0429
Terracotta	-0152
Black	-0450

#### Related Products

Adaptor & Flexipipe	KG979200
Flexipipe 100/100mm	KG979900
Soil/Mechanical	KG979100
Adaptor	

#### **Dimensions**

#### Twin Plain Tile Vent:

273mm long x 330mm wide

#### **Packaging**

10 pcs per carton

# Dimensions/weight (per carton)

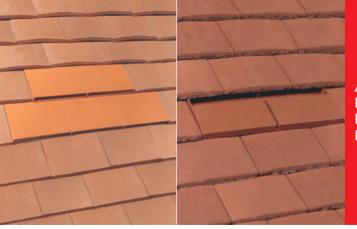
Thin-Line Tile Vent:

418mm long x 330mm wide/8.3kg

#### PERFORMANCE / TECHNICAL DATA

Provides 7,850mm<sup>2</sup> (Twin Plain Tile Vent) / 10,000 mm<sup>2</sup> (Thin-Line Tile Vent) ventilation area

Twin Plain Tile Vent	Thin-Line Tile V	Thin-Line Tile Vent  5mm opening at 0.2m centres (high level)		
5mm opening at 1.57m centr	es 5mm opening			
10mm opening at 0.78m cen	tres 10mm openin	g at 0.1m centres (low l	evel)	
25mm opening at 0.3m centr	es 25mm openin	g at 0.4m centres (warm	n roof with HR underlay)	
Airflow resistance	15 litres/sec	30 litres/sec	60 litres/sec	
Twin Plain Tile Vent only:	35 Pascals	140 Pascals	560 Pascals	
Thin-Line Tile Vent only:	12 Pascals	47 Pascals	188 Pascals	



# Clay Plain Tile Vent and Uni-Plain Tile Vent are in-line ventilating tiles which suit most clay and concrete plain tiles.

#### Area of application

- Suitable for ventilation at high or low levels
- Adaptor and Flexipipe available for soil ventilation or mechanical extraction
- Clay Plain Tile Vent: for roofs with a pitch over 30°, optional downpipe to ensure direct ventilation path into the roof space
- Uni-Plain Tile Vent: for roofs with a pitch over 35°, built-in downpipe ensures ventilation path into roof space

#### Product features

- In-line design makes the vent virtually invisible on the roof line
- Simple to install as no tile or batten cutting is necessary

#### Product Code / Colour

Clay Plain Tile Vent:	KG4321
Brown	-0200
Terracotta	-0100

#### Uni-Plain Tile Vent: KG9918

Antique Red	-03
Autumn	-23
Brown	-36
Brown Gran	-02
Hedgerow Brown	-18
Red Gran	-05
Rustic Red	-78
Slate Grey	-30
Terracotta	-34
Cotswold	-12

#### Related Products

Flexipipe 100/100mm KG979900 Adaptor KG8003

#### Related Products

Adaptor & Flexipipe KG992800
Adaptor only KG990500
Flexipipe only100/100mm KG979900

Dimensions
Clay Plain Tile Vent:
size of 5 plain tiles
Uni-Plain Tile Vent:

300mm long x 330mm wide

Packaging

10 pcs per carton

#### PERFORMANCE / TECHNICAL DATA

Provides 9,000mm<sup>2</sup> (Clay Plain Tile Vent) / 6,000 mm<sup>2</sup> (Uni-Plain Tile Vent) ventilation area

Clay Plain Tile Vent	Uni-Plain Tile Ven	ŀ	
5mm opening at 1.8m centres	5mm opening at	1.2m centres (high leve	el)
10mm opening at 0.9m centres	10mm opening o	at 0.6m centres (low lev	el)
25mm opening at 0.36m centres	25mm opening o	at 0.24m centres (warm	roof with HR underlay
Airflow resistance	15 litres/sec	30 litres/sec	60 litres/sec
Uni-Plain Tile Vent only:	12 Pascals	48 Pascals	191 Pascals



# Uni-Line® Tile Vent

is a neat, cleverly designed vent which suits almost all concrete interlocking tile profiles.

#### Area of application

- For roofs with a pitch over 20°
- Suitable for ventilation at high or low levels
- Adaptor and Flexipipe available for soil ventilation or mechanical extraction

#### **Product features**

- New low profile design makes it unobtrusive on the roof line
- Colour matched grill and base
- Built-in downpipe ensures ventilation path into roof space
- Soil ventilation & mechanical extraction require no adaptor
- Complies fully with the relevant Building Regulations and British Standards

# Product Code / Colour KG9853

Related Products

Flexipipe 100/100mm KG979900

 Antique Red
 -0116

 Brown
 -0247

 Slate Grey
 -0429

 Terracotta
 -0152

#### **Dimensions**

455mm long x 440mm wide x 3mm deep (excluding downpipe)

## **Packaging**

1 pc per carton

(carton shows fitting instructions and template)

#### PERFORMANCE / TECHNICAL DATA

Provides 10,000mm<sup>2</sup> ventilation area

5mm opening at 2m centres (high level)

10mm opening at 1m centres (low level)

25mm opening at 0.4m centres (warm roof with HR underlay)

Airflow resistance

15 litres/sec	30 litres/sec	60 litres/sec
3.5 Pascals	14 Pascals	56 Pascals

# Universal Vent Tile

suits most popular interlocking tile profiles.

#### Area of application

- For roofs with a pitch over 17.5°
- Suitable for ventilation at high or low levels
- Adaptor and Flexipipe available for soil ventilation or mechanical extraction

#### Product features

- Coloured fluted base matches most popular interlocking tiles
- Fully wind tunnel tested
- Built-in downpipe ensures ventilation path into roof space

#### Product Code / Colour

KG9854		Slate Grey	-30
Antique Red	-03	Terracotta	-34
Brown	-36	Black	-76

#### Related Products

Soil mechanical adaptor + 100/100mm Flexipipe	KG979800
Soil mechanical adaptor to suit 100mm	KG968300
Soil mechanical adaptor to suit 100mm/125mm	KG979000
Flexipipe 100/100mm	KG979900
Flexipipe 100/125mm	KE8047

#### **Dimensions**

455mm long x 440mm wide x 3mm deep (excluding downpipe)

#### **Packaging**

10 bases, caps per carton

Provides 15,000mm² ventilation area	
5mm opening at 3m centres (high level)	
10mm opening at 1.5m centres (low level)	
25mm opening at 0.6m centres (warm roof with HR underlay)	
Airflow resistance with 125mm adaptor	

Amow resistance with 125mm dadplot			
	15 litres/sec	30 litres/sec	60 litres/sec
	3 Pascals	12 Pascals	47 Pascals
Airflow resistance with	100mm adaptor		
	15 litres/sec	30 litres/sec	60 litres/sec

,	,	,
4 Pascals	16 Pascals	65 Pascals



High Flow Bold Roll



High Flow Stonewold Mark II

# High Flow Tile Vents

High flow vents are a range of high-flow quality ventilating tiles to suit most popular interlocking roof tiles. They can be used for roof space ventilation at high or low level, or for soil ventilation or mechanical extraction when used with adaptor pack.

#### Area of application

- High and low level ventilation
- Soil ventilation or mechanical extraction when used with an adaptor packs
- For roof pitches over 20°

#### Product features and Benefits

- Provide high levels of ventilation
- Vent caps designed to reflect the base tile profile
- Comprehensive range to match most makes of concrete interlocking tiles
- Adaptor and flexipipe available for soil ventilation or mechanical extraction
- Prevents entry of birds and large insects

#### Material

High quality PVCu

#### Colour

As below, colour spray to match available with limitations, contact Sales Office for more information

#### Product Code

High Flow Wessex - Brown only KG6092-0200 KG6083-0200, -0400 High Flow Stonewold Mark II – Brown, Grev High Flow Bold Roll - Brown only KG6085-0200

#### Dimensions

High Flow Wessex 420mm long x 330mm wide x 122mm deep High Flow Stonewold Mark II 430mm long x 380mm wide x 98mm deep High Flow Bold Roll 420mm long x 334mm wide x 125mm deep

#### Packaging

10 units per carton 5 cartons per pallet







High Flow Delta

# High Flow Tile Vents

High flow vents are a range of high-flow quality ventilating tiles to suit most popular interlocking roof tiles. They can be used for roof space ventilation at high or low level, or for soil ventilation or mechanical extraction when used with adaptor pack.

#### Dimensions / Weight

High Flow Delta Tile Vent 430mm long x 385mm wide x 105 deep High Flow Regent Tile Vent 420mm long x 334mm wide x 122 deep

#### Colour

As below, colour spray to match available with limitations, contact Sales Office for more information

#### **Product Code**

High Flow Delta – Brown only	KG4096-0200
High Flow Regent – Brown	KG6084-0200
High Flow Regent - Grey	KG6084-0400

#### Related Products

100mm Adaptor (except for Delta Vent)	KG8000
100mm/100mm Flexipipe	KG979900

PERFORMANCE / TECHNICAL DATA				
Provides 15,000mm ventilation area	5,000mm <sup>2/m</sup>	install at 3.0 m centres (high level)		
	10,000mm <sup>2/m</sup>	install at 1.5 m centres (low level)		
	25,000mm <sup>2/m</sup>	install at 0.6 m centres (warm roof with HR underlay)		
Airflow resistance	15 litres/sec	3.5 Pascals		
	30 litres/sec	14 Pascals		
	60 litres/sec	56 Pascals		



# Universal 20k Tile Vent

20k Tile Vent is a universal Tile Vent that suits most concrete interlocking roof tiles that can be used to ventilate roof voids.

#### Product features

- Low profile design
- Fully wind tunnel tested

#### Area of application

- Most popular interlocking and plain tile roofs with a pitch over 17.5°
- Roof space ventilation
- High or low level roof ventilation
- Perfect solution for Heat Recovery Systems with 150mm adaptor

#### Material

Soft and rigid UPVC

#### Colour

Brown and Slate Grey

#### Product Code

Brown Slate Grey Terracotta 150mm adaptor KG9854-20-0247 KG9854-20-0429 KG9854-20-0152 KG979700

# Dimensions / Weight (per carton)

455 mm long x 440 mm wide x 91 mm deep, 19kg

#### **Packaging**

10 vents per carton

8 cartons per pallet

# Regulations and certifications

Complies fully with relevant Building Regulations and British Standards

#### Related products

When used as high-level ventilation, use in conjunction with Klober Eaves Ventilation products.

#### PERFORMANCE / TECHNICAL DATA

Provide 20,000mm<sup>2</sup> ventilation area

5,000mm² /m install at 4.0m centres (high level)
10,000mm² /m install at 2.0m centres (low level)
25,000mm² /m install at 0.8m centres (warm roof with HR underlay)

Airflow resistance (with 150mm adaptor)

15 litres/sec	30 litres/sec	60 litres/sec
3 Pascals	9 Pascals	36 Pascals



# Universal 20k Slate Vent

20k Slate Vent is a large capacity ventilating slate to suit 600mm x 300mm (24'' x 12'') and 500mm x 250mm (20'' x 10'') double lap slates, manmade or natural, for roofs with a pitch over  $22.5^\circ$ .

#### **Product features**

- Fits perfectly with adjacent slates
- Slate grey cap blends in with most man-made or natural slates
- Fully wind tunnel tested

#### Area of application

- Most popular interlocking and plain tile roofs with a pitch over 22.5°
- Roof space ventilation

#### Material

Rigid PVC

#### Colour

Slate Grey and Black

#### Product Code

Slate Grey

Black

150mm adaptor

KG9795-0429 KG9795-0450 KG979700

#### **Dimensions**

600mm long x 380 mm wide x 91 mm deep, 15kg

#### Packaaina

10 vents per carton

8 cartons per pallet

#### Regulations and certifications

Complies fully with relevant Building Regulations and British Standards

#### Related products

When used as high-level ventilation, use in conjunction with Klober Eaves Ventilation products.

Provide 20,000mm² ventilation area	
Vent spacing	5,000mm² /m install at 4.0m centres (high level) 10,000mm² /m install at 2.0m centres (low level) 25,000mm² /m install at 0.8m centres (warm roof with HR underlay)

Airflow resistance (with 150mm adaptor)			
	15 litres/sec	30 litres/sec	60 litres/sec
	2 D l.	O.D I.	2/ D



# Small Slate Vent

The Small Slate Vent, with the integral down pipe, with a low profile design to blend with the roof line

#### Area of application

- For roofs with a pitch of 20°-70°
- For new build or re-roofing applications
- No adaptor required to convert to soil ventilation or mechanical extraction
- Suit 600mm x 300mm (24" x 12") and 500mm x 250mm (20" x 10") double lap slates, man-made or natural

#### **Product features**

- Available with an integral downpipe
- Designed to avoid any build up debris inside the vent
- Prevents entry of birds and large insects
- Can be used at high or low level
- Slate Grev cap blends with most man-made or natural slates
- Clearly marked for cutting to various slate sizes

#### Product Code / Colour

Black KG972276 Slate Grey (matt finish) KG972200

#### Related Product

Flexipipe 75/100mm KG972400

#### **Dimensions**

600mm long x 300mm wide x 75mm deep (including downpipe)

#### **Packaging**

10 per carton

#### PERFORMANCE / TECHNICAL DATA

Provides 4,500mm<sup>2</sup> effective ventilation area

5mm opening at 0.9m centres (high level)

10mm opening at 0.45m centres (low level)

Airflow resistance

7 WHOW TESISIANCE			
	1.5 litres/sec	30 litres/sec	60 litres/sec
	22 Pascals	88 Pascals	352 Pascals

# Uni-Line® / Mini Uni-Line® Slate Vents

#### Area of application

- For roof pitches of 22.5° and above
- Built-in downpipe allows direct ventilation into roof space

#### Uni-Line® Slate Vent:

Uni Line® Slate Vent

- Universal application suits both 600mm x 300mm or 500mm x 250mm double-lap slates (man-made and natural)
- Batten cutting only required below 225mm gauge (when used with 500mm x 250mm double-lap slates)

#### Mini Uni-Line® Slate Vent:

 Universal application suits small natural and man-made doublelap slates of 400mm x 250mm and below sizes

Related Products

Uni-Flexipipe

KG979900

#### Product features

- In-line design
- Fully wind tunnel tested

#### Product Code / Colour

Uni-Line® Slate Vent: KG9630 Dark Slate -0403

Slate Grev -0429

Mini Uni-Line® Slate Vent:

KG9631

Dark Slate -0403 Slate Grev -0429

**Dimensions** 

Uni-Line® Slate Vent: 600mm long x 380mm wide x 141mm deep

(including adaptor)

Mini Uni-Line® Slate Vent: 450mm long x 300mm wide x 147.5mm deep

(including adaptor)

Packaging

10 pcs per carton

# PERFORMANCE / TECHNICAL DATA

Provide 0,500mm² Ventilation area	
5mm opening at 1.2m centres	10mm opening at 0.6m centres
(high level)	(low level)

Airflow resistance

15 litres/sec	30 litres/sec	60 litres/sec
24 Pascals	96 Pascals	384 Pascals

# 10K Slate Vent / Large Slate Vent

#### Area of application

- For roofs with a pitch of 20°-70°
- For new build or re-roofing applications
- Suits 600mm x 300mm (24" x 12") and 500mm x 250mm (20" x 10") double lap slates, man-made or natural

#### Product features

- Prevents entry of birds and large insects
- Low profile design to blend with the roof line
- Slate Grev cap blends with most man-made or natural slates
- Can be used for soil ventilation and mechanical extraction.

#### **Product Codes**

10K	Slate	Vent:
-----	-------	-------

10K Slate Vent KG968900 10K Adaptor KG979100 Flexipipe 100/100mm KG979900 Adaptor and Flexipipe KG979200

#### Large Slate Vent:

Slate Vent Base KG979400 Slate Grev Cap KG979630 (20 per carton)

Adaptor and Flexipipe KG979800 Adaptor 100mm KG968300 Flexipipe 100/100mm KG979900 KG979000 Adaptor 125mm

## Colour

Slate Grev (matt finish)

#### **Dimensions**

10K Slate Vent-

600mm long x 300mm wide x 60mm deep (excluding downpipe)

Large Slate Vent: 600mm long x 380mm wide x 85mm deep

(excluding adaptor/downpipe)

# **Packaging**

10 pcs per carton

OK Slate Vent Large Slate Vent		
Provides ventilation area 10,000mm²	Provides ventilation area 28,000mm²	
5mm opening at 2m centres (high level)	5mm opening at 2.8m centres	
10mm opening at 1m centres (low level)	10mm opening at 1.4m centres	
	Airflow Resistance 15 Litres/Sec 30 litres/Sec 60 litres/Sec 3.5 Pascals 14 Pascals 56 Pascals	



# Soil and Mechanical Vent Adaptors & **Flexipipes**

Packs consist of an adaptor, together with Klober's quick push-fit high quality flexible pipe.

#### Area of application

■ For roofs with a pitch over 17.5°

#### Product features

- Quick and simple connection to internal pipework
- Lightweight, durable no tile cutting or lead flashing required
- Pressure tested to comply with relevant British Standards

#### Material

Adaptor - Rigid PVC 10K Slate Vent Adaptor - polypropylene

Flexipipe - Galvanised spring steel wire helix encapsulated in double-ply PVC wall

#### Product Code / Dimensions

- 1. & 7. Adaptor and Flexipipe
  - (Universal/Large Slate Vents)
- 10 per carton KG979800
- 170mm long x 120mm wide x 90mm deep 105mm internal diameter
- 2. & 7. Adaptor and Flexipipe
  - (10K Slate Vent/Profile-Line®Vents)
- 10 per carton KG979200
- 76mm long x 86mm wide x 120mm deep 105mm internal diameter
- 10 per carton KG992800 3. & 7. Adaptor and Flexipipe (Uni-Plain Tile Vent) 273mm long x 44mm wide x 200mm deep - 105mm internal diameter
- 10 per carton KG979100 2. Adaptor (10K Slate Vent/Profile-Line®Vents) 76mm long x 86mm wide x 120mm deep - 105mm internal diameter
- 3. Adaptor (Plain Tile Vent) KG990500 - 1 per carton
- 273mm long x 44mm wide x 200mm deep 105mm internal diameter
- KG8003 4. Adaptor (Clay Plain Tile Vent) - 1 per carton Adaptor for High Flow Vents for Bold Roll,
  - - Stonewold Mark II, Regent, Wessex (not shown) - 1 per carton KG8000
- 1. Adaptor (100mm Universal Vent Tile - Large Slate Vent) - 1 per carton KG968300 Adaptor\* (125mm Universal Vent Tile - Large Slate Vent) - 1 per carton KG979000
- 7. - 10 per carton KG979900 Flexipipe (100/100mm)
- 6. - 10 per carton KG972400 Flexipipe (75/100mm) including jubilee clips 5.
- Flexipipe (100/125mm) - 1 per carton KE8047
- 8. 150mm Adaptor\* (20k Universal Tile & Slate Vents)
- \*Not shown - 10 per carton KG979700



# Pipe Sealing Collar

is the ideal solution for creating airtight and windtight seals around pipes which pass through the roof.

#### Area of application

■ For pitches of 10°-70° due to the highly flexible ridges in the collar

#### Product features

- For use both inside and outside
- UV stable
- Easy to install
- Flexible material allows pipes from 100mm plus diameter to pass through the roof
- Use with Klober's sealing tape to create fully windtight and airtight seals between the underlay or vapour control layer and pipes which penetrate the roof
- Suitable for both rigid and flexi pipes
- Suitable for areas with adverse weather conditions. High quality EPDM collar is highly durable for use inside where heat builds up and outside in very cold conditions

#### Material

FPDM

#### **Product Code**

KU8001

#### Colour

Black only

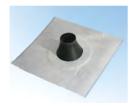
#### **Dimensions**

310mm long x 235mm wide x 115mm high; inside diameter: 95mm

#### Packaging

20 pcs per carton

48 cartons per pallet



#### Solar Sealing Collars for Cables;

Sealing Collar 42-55mm KE8090 Sealing Collar 50-70mm KE8091



# Eaves Filler Comb

Simple to install method to protect against entry of birds vermin and debris, through gaps left by tile profiles at the eaves.

#### Area of application

Eaves Filler Comb - deep profiled tiles and plain tiles

## Product features

- Lightweight and durable, fixing slots allow easy fixing
- Protects against entry of birds, vermin and debris
- Maintains low level air movement in the batten cavity and allows moisture run-off below the roof finish
- One-piece perimeter closer detail for counter batten roof systems
- Comb adjusts to suit any profile of tile

MaterialProduct CodesColourBlack polypropyleneKP965400Black only

Dimensions

1 m long strips

Packaging 300 x 1m lengths per carton

# **Eaves Closer**

Simple to install method to protect against entry of birds vermin and debris, through gaps left by tile profiles at the eaves.

## Area of application

Eaves Closer - all types of roof tile and slates

#### Product features

- Lightweight and durable, fixing slots allow easy fixing
- Protects against entry of birds, vermin and debris
- Maintains low level air movement in the batten cavity and allows moisture run-off below the roof finish
- One-piece perimeter closer detail for counter batten roof systems

#### Material

Black PVC

#### **Product Codes**

30mm x 30mm x 2.5m	KP3325-0450
30mm x 50mm x 2.5m	KP3326-0450
30mm x 70mm x 2.5m	KP3327-0450
30mm x 90mm x 2.5m	KP3328-0450

Colour Dimensions Packaging
Black only 2.5m lengths 20 x 2.5 metre lengths per carton



# Vented Eaves Protector

is the fast and easy way to ventilate and protect at the eaves, consisting of a practical 1000mm Over Fascia Vent with integrated Underlay Support Tray, and available with or without an Eaves Filler Comb.

#### Area of application

- New build and refurbishment work
- Roof pitches between 15° and 60°
- Flat and profiled tiles

#### Product features

- Easy to fit 1000mm lengths
- Available in 10mm version
- Split drip section allows 240mm sections to be lifted, enabling easy fixing of autter brackets
- Engineered nail/screw ports, with sleeves to guide fixings into the centre of the fascia edge
- Prevents birds and vermin from entering the batten space
- Prevents ponding behind the fascia board
- Satisfies NHBC requirements and BS5250:2000
- Available with or without an Eaves Filler Comb

#### Material

Black injection moulded UV-stable polypropylene

#### **Product Codes**

10mm without comb

KP3005-0450 KP3006-0450

#### Colour

Black only

#### **Dimensions**

1000mm x 220mm

#### Packaging

40 pieces per carton (without comb)

20 pieces (with comb)

#### **Performance**

Provides ventilation of 10,000mm<sup>2</sup>/per metre run.



# Loft Vent Tray

is easily installed from inside the loft, to allow air into the roof space by preventing insulation material from blocking the ventilation path.

#### Area of application

Suitable for use in refurbishment or new build

#### Product features

- Adjusts itself to pitch of roof
- No need to disturb roof covering
- Lightweight and durable
- Loft Vent Tray complies fully with relevant Building Regulations and British Standards

#### Material

PVC

#### **Dimensions**

315mm wide x 700mm long x 30mm deep

#### **Product Code**

KP965000

#### Colour

Black only

#### **Packaging**

10 trays per pack, 5 packs per carton (50 off)

#### Performance

Provides a ventilation area of 10,000mm<sup>2</sup> per metre run when installed between rafters at eaves level.





# Fascia Vent

provides unobtrusive continuous eaves ventilation.

#### Area of application

- Suitable for new build or re-roofing application
- The 25mm vent is specifically designed for use in situations where the insulation is positioned between the rafters and on flat roofs and roof pitches below 15° (both at edges and at abutments)
- The 10mm vent is suitable for conventional cold roofs

#### Product features

- Unobtrusive method of ventilation
- Can be installed with or without soffit
- Lightweight and durable
- Savings in depth of fascia can be made
- Prevents entry of birds and large insects
- Complies fully with relevant Building Regulations and British Standards

#### Material

Polypropylene

#### **Dimensions**

10mm Vent 1m long x 42mm wide x 25mm deep 25mm Vent 1m long x 48mm wide x 38mm deep

#### Product Code / Dimensions / Packaging

 KP965200
 10mm x 1m long
 50 off (50m)

 KP964300
 25mm x 1m long
 50 off (50m)

#### Colour

Black only

#### Performance

Available in two ventilation capacities. When installed along whole length of eaves, 10mm vent provides the equivalent of a continuous 10mm opening (10,000mm² per metre run), 25mm vent provides the equivalent of a continuous 25mm opening (25,000mm² per metre run).

# 3-in-1 Eaves Vent Pack

A complete 6m pack for eaves ventilation over the fascia (comprising of Fascia Vents, Underlay Support Trays and Roll-Out Rafter Tray).

#### Area of application

- Suitable for new build or re-roofing applications
- Suitable for rafter centres 400mm 600mm wide

#### Product features

- Lightweight, durable, quick and easy to install
- Provides a clear ventilation channel above the insulation
- Prevents felt ponding behind the gutter

#### Material

Fascia Vent: Black polypropylene

Underlay Support Tray and Roll-Out Rafter Tray: Black PVC

#### **Product Codes**

300mm wide x 6m tray (10mm Fascia Vent)	KP990200
300mm wide x 6m tray (25mm Fascia Vent)	KP966700
400mm wide x 6m tray (10mm Fascia Vent)	KP990400

#### **Dimensions**

10mm Fascia Vent42mm wide x 1m long x 25mm deep25mm Fascia Vent48mm wide x 1m long x 38mm deepRoll-Out Rafter Tray300mm wide x 6m long or 400mm wide x 6m longUnderlay Support Tray265mm wide

#### Packaging

- 6 x Fascia Vents
- 10 x Underlay Support Trays
- 1 x Roll-Out Rafter Tray

(sufficient to cover 6m of eaves)

#### Performance

Provides the equivalent of a continuous 10mm or 25mm opening (10,000mm² and 25,000mm² per metre run respectively) at eaves level.

# Roll Out Rafter Tray and Rafter Trays

Simple and quick to install, combined insulation interrupter and roof space ventilator.

#### Area of application

- Suitable for use in refurbishment or new build
- Rafter Trays roof pitches over 15°
- Roll Out Rafter Trays roof pitches over 12.5°

#### Product features

- Provides a clear ventilation channel above the insulation
- Lightweight and durable

#### Material

Roll-Out Rafter Tray: Black PVC

Rafter Tray (sections): Black high-impact styrene

#### **Product Codes**

Roll-Out Ratter Iray:	300mm width	KP971500
	400mm width	KP975700
	600mm width	KP971600
	800mm width	KP971700

#### Rafter Tray (sections):

Each pack – sufficient for 4.5 metres at 450mm rafter centres KP964800 Each pack – sufficient for 6 metres at 600mm rafter centres KP964900

#### **Dimensions**

Roll-Out Rafter Tray: 300/400/600/800mm wide x 6m long x 35mm deep Rafter Tray (sections):

450 mm Rafter Trays (450 mm centres) – 430 mm wide x 450 mm long x 18 mm deep 600 mm Rafter Trays (600 mm centres) – 430 mm wide x 620 mm long x 18 mm deep

#### Packaging

Roll-Out Rafter Tray: 10 rolls per carton

Rafter Tray (sections): 10 trays per pack, 10 packs per carton (100 off)

#### Performance

The Roll-out Rafter Tray provides the equivalent of a 10mm or 25mm opening (10,000mm² and 25,000mm² per metre respectively). The rigid section Rafter Tray provides the equivalent of a continuous 10mm opening.



# Circular Soffit Vent

are easy to install, providing eaves ventilation through the soffit for new build or re-roofing.

## Area of application

Suitable for installation in soffit boards of any thickness

## Product features

- Available in four colours to match painted or stained soffits
- Lightweight, durable, fits any thickness soffit board complies fully with relevant Building Regulations and British Standards
- Easy circular fixing

## Material

Polypropylene

## Product Codes / Colours

Dark Brown	KP9642-0247
Light brown	KP9642-0220
Black	KP9642-0450
White	KP9642-0900
Anthracite	KP9642-0429

### **Dimensions**

75mm diameter x 13mm deep

## Packaaina

50 pcs per carton (50 off)

### Performance

For 10mm continuous ventilation install at 200mm centres, for 25mm continuous install at 80mm centres.



# Roll-Fix® Kit

Roll-Fix® Kit is a universal ventilating dry ridge and hip system suitable for ventilating most concrete and clay ridge/hip tiles. Available in 4 colours to blend in with the roof, it comes in a practical all-in-one kit.

## Area of application

- For most concrete ridge and hip tiles, including clay angle ridge tiles
- For clay ridge tiles
- Minimum roof pitches of 15° to 45° maximum
- Installation temperature +5 to +40°C
- Resistance to temperature -20 to +80°C

## Product features

- Mortar and maintenance free, weatherproof and UV stable
- No harmful effects on surrounding materials and components
- Highly resistant to mould growth and fungal attack
- Ventilates to BS5250
- Complies with BS 5534 for mechanical fixing
- Self-adhesive butyl strip provides a permanently strong bond

### Description

Roll-Fix® rolls are finished with a durable, UV-stable coloured aluminium coating (colours below) with centre fleece being vapour permeable. Roll-Fix® kits are complete packs for mechanical fixing to adhere to dry fix regulation and British Standard.

## Weiaht

As a guide for handling and stacking, each box weighs approximately 3.5kg

Polypropylene membrane with a mesh fabric.

Lower portion of each side flap: UV stable coloured aluminium coating or applied copper finish

Klober hip packs comes complete with cro clips for secondary fixings. The wire is wrapped to the nearest nail for securing the cut tile.





KR5001-1 Concrete Universal Hip Seal Kit

# Roll-Fix® Kit

## **Product Codes**

Uni Roll-Fix® Kit with:

Concrete Universal Ridge Seal KR5000

Concrete Universal Hip Seal

(inc. Cro Clips and Hip Trays) KR5001-1

Additional Kit for Ridge (For 300mm Clay tiles) KR5100-6 Additional Kit for Hip (For 300mm Clay tiles) KR5001-6

## Colour Codes

Anthracite -0402 Brown -0200 Terracotta -0100

Copper -0340 (Copper finish available on request)

### **Dimensions**

295mm roll width x 5m lengths

Hip Trays in 470mm lengths

## **Packaging**

- One Roll-Fix® Kit per box.
- Each box contains 5m ridge or hip roll, fixing pack and seals. Cro Clips and Hip Trays KR5001-1 only

### Installation

To allow ridge ventilation, cut the underlay 30 mm short of apex on each side. The method of fixing ridge battens will depend upon the type of roof structure. Once the ridge batten is in position, Roll-Fix® is rolled out along the ridge or hip and stapled or nailed to the ridge/hip batten. Peel away the adhesive strip's backing tape and push-fit the corrugated side flaps to follow the profile of the tiles. The ridge tiles are secured by using the screw and washer provided to fix the Clamping Plate through the Ridge Seal into the ridge batten as shown above. Finish the ridge ends with either a Klober Ridge End Cap, block end ridge tile or mortar. Full fixing instructions are included in Roll-Fix® Kit packs.

### Performance

Provides the equivalent of a continuous 5mm opening.



## Permo<sup>®</sup> air

is a air-open low resistance underlay. It is the ideal solution where there is a high risk of condensation forming in the roof space.

## Area of application

- Suitable for cold and warm roof applications
- UK Wind Zone map:all zones 1-3, all zones with tape

## **Product features**

- Air open and vapour-permeable
- Tailor made to perform in extreme climate conditions
- No ventilation required
- Hvdrophobically treated and UV stable for four months
- Batten spacing 350mm
- Strong 3 layer material
- Recyclable

## Material

A strong three-layer product consisting of UV stabilised PP fleece and a high performance meltblown layer

## Roll sizes / Roll weights / Product Code

50 x 1.0m (50m<sup>2</sup>) 8kg KU0045-1 50 x 1.5m (75m<sup>2</sup>)12kg KU0045-15

### **Packaging**

20 rolls per pallet

### Installation

Permo® air should be laid in accordance with our installation details set out in our Underlay brochure and with the BBA certification.

Note: NHBC accepts Permo® air without the need for additional high level ventilation when used in cold pitched roofs. For further information regarding installation standards please refer to the underlay section on page 12.

### PERFORMANCE / TECHNICAL DATA





Weight	160g/m <sup>2</sup>
Water vapour resistance EN 12572	0.045 MNs/g
Resistance to water penetration, EN 1928	W1
Tensile strength longitudinal / transverse, BS EN 12311-1	280N/40mm 200N/40mm
Nail tear strength longitudinal / transverse, BS EN 12310-1	140N / 130N



# Permo<sup>®</sup> forte and Permo<sup>®</sup> forte SK<sup>2</sup>

are four-layer, vapour permeable roofing underlays that let roofs breathe and are suitable for all pitched roofs.

## Area of application

- Suitable for cold and warm roof applications
- UK Wind Zone map:- Permo forte zones 1-4 Overlap Batten Permo forte SK<sup>2</sup> all zones

## Product features

- Very strong, bitumen-free, vapour-permeable underlay
- Clean, safe and lightweight to handle
- Four layer material with safety grid
- No ventilation of the roof void required
- Hydrophobically treated and UV stable for four months
- Batten spacina 350mm
- Allows roof structure to breathe, vet fully waterproof
- SK<sup>2</sup> has a double integral tape creating a strong and durable airtight seal to reduce energy loss

### Material

A strong, laminated sheet material, with outer layers of polypropylene and an inner layer of microporous polyethylene film and reinforcement mesh

## Roll sizes / Roll weights / Product Code

NOII 31ZC3 /	Non weigins /	Hoduci	Code	
Permo® forte	50 x 1.5m	$(75 \mathrm{m}^2)$	10.9kg	KU0044-07-1
	50 x 1.1m	(55m <sup>2</sup> )	8kg	KU0044-07-05-1
Permo® forte S	<b>SK</b> <sup>2</sup> 50 x 1.5m	(75m <sup>2</sup> )	11.5kg	KU0044-07-11-1
	50 x 1 1m	(55m <sup>2</sup> )	8ka	KU0044-07-05-11

## Packaging 20 rolls per pallet Installation

Permo® forte should be laid in accordance with our installation details set out in our Underlay brochure and with the BBA and IAB certification. For further information regarding installation standards please refer to the underlay section on page 12.

PERFORMANCE / TECHNICAL DATA	CE HEADER
Weight	145g/m²
Water vapour resistance BS 3177	0.15 MNs/g
Water vapour transmission s <sub>d</sub> -Value EN ISO 12572	0.03m
Water column	W1
Tensile strength longitudinal / transverse, BS EN 12311-1	430 / 370 N/5cm
Nail tear strength longitudinal / transverse, BS EN 12310-1	320 / 340 N



# Permo® light

are three-layer, vapour permeable roofing underlays that let roofs breathe.

## Area of application

- Suitable for cold and warm roof applications
- UK Wind Zone map: Zones 1-3 at maximum overlap batten gauge

## Product features

- Strong, bitumen-free, vapour-permeable underlay
- Clean, safe and lightweight to handle
- Three-laver material
- No ventilation of the roof void required
- Hydrophobically treated and UV stable for four months
- Allows the roof structure to breathe yet fully waterproof

#### Material

Permo® light is a strong laminated sheet material, with outer layers of polypropylene, and an inner layer of microporous polyethylene film.

## Roll sizes / Roll weights / Product Code

Permo® light 50 x 1.5m (75m²) 10.9kg KU0043-04-1 50 x 1.1m (55m²) 8kg KU0043-04-05-1

## Packaging

20 rolls per pallet

### Installation

Permo® light should be laid in accordance with our installation details set out in our Underlay brochure and with the BBA approval certification. For further information regarding installation standards please refer to the underlay section on page 12.

PERFORMANCE / TECHNICAL DATA	BRASE SERVICE
Weight	145g/m <sup>2</sup>
Water vapour resistance BS 3177	0.15 MNs/g
Water vapour transmission BS 3177	1350 g/m²/day
Water column	> W1
Tensile strength longitudinal / transverse, BS EN 12311-1	275 / 230 N/5cm
Nail tear strength longitudinal / transverse, BS EN 12310-1	180 / 180 N



# Permo® ecovent NG & ecovent NG SK<sup>2</sup>

is a lightweight vapour permeable roofing underlay.

Area of application

- Suitable for BBA approved for non-ventilated cold and warm roofs
- UK Wind Zone map:- Permo ecovent NG zones 1-2
   Permo ecovent NG SK<sup>2</sup> all zones

### Product features

- Lightweight vapour-permeable roofing underlay
- Three-layer material
- No additional ventilation required
- UV stable for four months
- Allows the roof structure to breathe yet fully waterproof
- Type LR underlay
- SK<sup>2</sup> has a double integral tape creating a strong & durable airtight seal
- to reduce energy loss

### Material

A laminated sheet material, with outer layers of polypropylene, and an inner layer of polyethylene

## Roll sizes / Roll weights

 1.5m x 50m
 75m²
 8.25kg

 1.1m x 50m
 55m²
 6kg

### Product Code

1.5m KU0039-2-15 1.1m KU0039-2 1.5 x 50m SK<sup>2</sup> KU0039-2-11-15

### Packaging

KU0039-2-15 1.5m 30 rolls per pallet KU0039-2 1.1m 30 rolls per pallet KU0039-2-11-15 1.5m 20 rolls per pallet

### Installation

Permo® ecovent NG should be laid in accordance with the fitting instructions supplied with each roll and with the BBA approval certification. For further information regarding installation standards please refer to the underlay section on page 12.

PERFORMANCE / TECHNICAL DATA	BBATTE
Weight	110 g/m²
Water vapour resistance BS 3177	0.15 /MNs/g
Water vapour transmission s <sub>d</sub> -Value EN ISO 12572	<0.03 m
Water column	W1
Tensile strength longitudinal / transverse, DN EN 13859-1	200N/50mm 135N/50mm
Nail tear strength longitudinal / transverse, DN EN 13859-1	135N / 160N



# Permo® frame

is a single-layer, vapour permeable membrane for use on timber framed walls and behind vertical cladding.

## Area of application

Suitable for:

- On timber and steel framed walls
- In factory pre-assembled panels and on site assembled frames
- To support the insulation in a suspended timber ground floor

## **Product features**

- Strong, vapour-permeable, timber frame membrane
- Allows walls to breathe, yet is fully waterproof
- UV stable for four months
- BBA and IAB approved

### Material

A strong non woven spun bonded polypropylene sheet material

## Roll sizes / Roll weights

1.5 x 50m	75m <sup>2</sup>	7.5kg
2.7 x 100m	270m <sup>2</sup>	27kg
3 x 100m	300m <sup>2</sup>	30kg

## Colour / Product Code

1.5m x 50m	Anthracite	KU0059-3-1-15-10
2.7 x 100m	Anthracite	KU0059-3-1-27-10
3m x 100m	Anthracite	KU0059-3-1-30-10

### **Packaging**

20 rolls per pallet (1.5m only) \*Permo frame doesn't have any logo printed on it.

### Installation

Permo® frame should be laid in accordance with our installation details set out in our Underlay brochure and IAB certification.

PERFORMANCE / TECHNICAL DATA	CE :=!!
Weight	100g/m <sup>2</sup>
Water vapour transmission EN 12572	0.02 MNs/g
Water vapour transmission s <sub>d</sub> -Value EN ISO 12572	<0.003m
Water column	W2
Tensile strength longitudinal / transverse, BS EN 12311-1	225 / 200 N/50mm
Nail tear strength longitudinal / transverse, BS EN 12310-1	130 / 130 N



# Permo® sec metal

is a vapour-permeable waterproofing barrier, installed as a separating layer between copper, zinc, aluminium and stainless steel standing seam roof finishes and the supporting deck.

Permo® sec metal will prevent any condensation that occurs on the underside of the metal roof covering from re-entering the roof structure and will offer protection against any external moisture that may penetrate the outer roof covering.

## Area of application

Suitable for:

- Roof pitches over 3°
- Can be laid over rigid insulation or timber boarding, horizontally or vertically

### Product features

- Clean, safe and lightweight to handle
- Will cover any irregularities within the roof deck that could deform the metal roof covering
- Simple to install, using traditional methods
- Fully vapour-permeable, it provides a strong, fully waterproof secondary barrier to moisture penetration

### Material

Outer layer of polypropylene mesh bonded to a vapour permeable membrane. 5 layer fleece foil combination of polyolefin, hydrophobic treatment and PP monofilament mesh

## Roll sizes / Roll weights

25 x 1.5m (37.5m<sup>2</sup>) 14.5kg

## **Product Code**

KU0020-04

### Installation

Permo<sup>®</sup> sec metal be laid in accordance with our installation details set out in our Underlay brochure.

PERFORMANCE / TECHNICAL DATA	CE
Weight	390g/m²
Thickness	8.5mm
Water vapour transmission s <sub>d</sub> -Value, EN 12572	0,03m
Acoustic damping value	8db



# Permo® extreme RS SK<sup>2</sup>

is a tear-resistant underlay. It has double, self-adhesive strips which provide a permanent seal of overlaps and immediate weatherproofing protection against wind, rain and snow. (Call Technical for further advice)

## Area of application

Suitable for:

- Minimum roof pitch of 12.5° for profile tiles or 15° for flat tiles such
- as slates and 22.5° for plain tiles
- Meets the requirements as a roof support system with improved raintiahtness according to ÖNORM
- Butylon® tape should be laid along the rafters as this will ensure nail penetrations are sealed.

Contact Technical for more information

### Product features

- Double self-adhesive strips permit permanent wind and waterproof sealing of overlaps (shear resistance > 300 N tested)
- High-temperature stability at peaks up to 100°C and highly UV-resistant
- Fleece with capillary stop controls the formation of condensation water Robust PES fleece ensures improved mechanical load capacity, thus facilitating the use on sheathing

### Material

Glueable two-layered underlay with monolithic TPU coating on extremely tear-resistant PES fleece.

## Roll sizes / Roll weights / Product Code

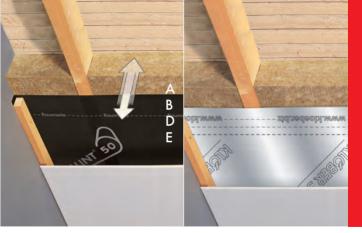
1.5m x 50m (75m<sup>2</sup>) / 18kg / KU0171-11

### Accessories

KU0103 / KU0104 Butylon® tape (see page 50)

\*Butylon tape must be purchased alongside Permo Extreme in order to comply with our fitting instructions.
\*Klober accessories are recommended. These are especially coordinated with the layer and included in the warranty.
\*\*For further information regarding installation standards please refer to the underlay section on page 12.

PERFORMANCE / TECHNICAL DATA	C€
Weight	240g/m <sup>2</sup>
Resistance to water penetration, EN 1928	W1
Water vapour permeability s <sub>d</sub> -value, EN 12572	0.08m
Water Column, EN 20811	> 4500mm
Tensile strength longitudinal / transverse, en BS EN 12311-1	310 / 360 N/5cm
Nail tear strength longitudinal / transverse, BS EN 12310-1	215 / 200 N
UV exposure, EN 13859-1	4 months



Wallint® 50

Sepa® solar (reflective)

are combined air barriers and vapour control layers with a vapour resistance of 250MNsg, meeting the requirement of BS9250.

Vapour control layers prevent large volumes of water vapour entering the construction from the interior, particularly during the building's drying out period. Their relatively low vapour resistance also allows any damp timbers within the construction to rapidly dry out.

Their strength allows them both to provide an effective supporting/retaining layer to insulation boards or guilts.

Related products include: Pasto® sealant, Permo® TR universal tape, Tacto® double-sided tape, Easy-Form® stretchable tape and Pipe Sealing Collars.

## Area of application

Suitable for:

- The inner face of walls (including timber frame), cold and warm roof applications
- Ceilings and walls of rooms in the roof, and on ceilings below non-habitable lofts

### Product features

- Very strong internal air barrier/vapour control layers
- Sepa® solar's reflective surface increases a construction's thermal resistance when facing into the service void or room
- Easy to handle and UV stable for four months

### Material

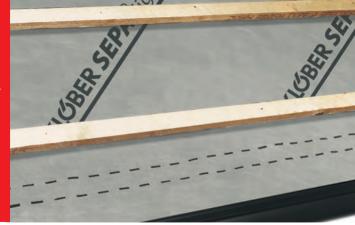
Wallint® 50: Composite PP-spun fleece with coating Sepa® solar: Composite woven, non woven, foil

Roll sizes / Roll weights / Product Code

 Wallint® 50:
 50 x 1.5m
 (75m²)
 9.5kg
 KU0065

 Sepa® solar:
 50 x 1.5m
 (75m²)
 13.5kg
 KU0092

PERFORMANCE / TECHNICAL DATA		CE	
	Wallint® 50	Sepa® solar	
Weight	126 g/m²	180 g/m²	
Water vapour resistance BS 3177	W1	W1	
Water vapour transmission BS EN 1931 (s <sub>d</sub> value)	50m	>100m	
Elongation longitudinal / transverse EN 12311-2	60 / 65%	40 / 50%	
Tensile strength longitudinal / transverse, BS EN 12311-1	200 / 160 N/5cm	600 / 550 N/5cm	



 $\frac{Sepa^{(\!R\!)} \ light}{Sepa^{(\!R\!)} \ light \ is \ a \ light weight \ alternative \ to \ traditional \ 1F \ bituminous \ felt.}$ 

## Area of application

- Suitable for use on ventilated pitched roofs
- UK Wind Zone map:all zones 1-3, all zones with tape

### Product features

- Strong, bitumen-free, non-breathable underlay
- Clean, safe and lightweight to handle
- UV exposure 4 months
- Three-laver material
- High tensile and nail tear strength
- Simple to install, using traditional methods
- Marked 100mm and 150mm lap lines for easy alignment
- Not susceptible to noise when windy

### Material

Three-layer, non-woven, spun-bonded polypropylene

## Roll sizes / Roll weights / Product code

Sepa® light KU979145-1 45m x 1m (45m<sup>2</sup>) 5.6kg

## Packaging

42 rolls per pallet

### Installation

For further information regarding installation standards please refer to the underlay section on page 12.

## PERFORMANCE / TECHNICAL DATA



	Sepa® light
Weight	120g/m²
Water tightness class EN 13859-1	passed
Water vapour transmission EN 1931 (sd value)	2.19 MNs/g
Tensile strength longitudinal BS EN 12311-1	260 N/5cm
Tensile strength transverse BS FN 12311-1	230 N/5cm

**Underlay Support Tray** 

ensures no underlay is carried into the gutter and prevents water ponding behind the fascia; thereby reducing long term maintenance to the eaves of a building.

## Area of application

Suitable for new build and refurbishment applications

## **Product features**

- Provides clear drainage point into gutter, directing water away from the underlay
- Protects the roofing underlay from UV degradation
- Highly recommended when existing fascia boards are being replaced
- Easy to install and economic replacement for rotting underlay at eaves
- Prevents ponding behind the fascia and the underlay sagging between rafters

## Material

PVC

### **Dimensions**

1.5m long x 190 wide with 55mm overhang

## Product Code

**Underlay Support Tray:** 

KP973910

### Packaaina

20 pcs x 1.5m lengths per pack

25 packs per pallet

Product sizes

30m per pack 1.5m



# Adhesive tapes and sealants

Tapes and sealants are essential products for reducing energy-loss through the roof by sealing laps in underlays, air barriers and vapour control layers and around roof penetrations, etc.

### 1. Permo®TR plus tape

- Multi-functional, single-sided tape ideal for joining, repairing and creating airtight seals
- Ideal for use with Wallint® 50 or Wallint® solar since it retains its low emissivity properties

### 2. Tacto® tape

- Double-sided highly durable, creates air and wind-tight seals
- Fibre-reinforced for strength, with high-tack acrylic adhesive

### 3. Easy-Form® tape

- Up to 70% stretchable, ideal for creating tight seals around traditionally difficult areas such as pipes, penetrations, etc
- Full butylon backing offers excellent adhesion
- Quick and easy to use inside and outside

### 4./5. Butylon® tape

 Double-sided tape, ideal for creating seals around nail penetrations through underlays/AVCL's or adhering underlays/AVCL's to both smooth and rough surfaces

### 6. Pasto® Sealant

- Sealing to irregular and rough surfaces
- Humidity of 15° or more

## PERFORMANCE / TECHNICAL DATA

Material	Reel size	Product code
Permo® TR plus tape Acrylic adhesive with PE release paper	60mm x 25m	10 reels per carton KU0121-1
Tacto® tape Acrylic adhesive with PE release paper	20mm x 50m	10 reels per carton KU 0111
Easy-Form® tape Crepped coated aluminium, PET fleece, complete coating with self-adhesive butylon	60mm x 10m 90mm x 10m	6 reels per carton KW0060 KW0090
Butylon® tape Double-sided butylon-rubber adhesive	20mm x 25m 50mm x 25m	4 reels per carton KU0103 KU0104
Pasto® Sealant MS polymer	310ml tube	12 tubes per carton KU0128



# Trapac® Tile & Snow Guard

supports are the universal answer for preventing slipping tiles and snow on pitched roofs. The support brackets are suitable for installation with flat and profiled concrete interlocking tiles. They are lightweight and easy to fit, without the need for an additional support batten. Snow guard grids can be connected together using grid connectors.

## Area of application

- Suitable for clay and concrete interlocking tiles with battens between 24–40mm deep. The complete thickness of the tile and the tile batten must not exceed 57mm.
- Suitable for new build and refurbishment projects

## **Product features**

- Quick and easy to install
- Lightweight and easy to fit without need for an additional support batten
- Suitable for both flat and profiled clay and concrete interlocking tiles
- Galvanised and powder coated
- Prevents slipping tiles from falling

### Material

Galvanised flat steel DX51D-7275 to EN10142

#### Colour

Black -9905 (available in Brown, Red and galvanised on request)

## Product Code / Packaging

Tile Support Brackets\*

Slate Support Brackets\*

Grid 3m long

Grid Connector

KS9210-1

KS9216-1

\* Grid is 3m in length and requires 5 brackets to support. Each joint requires 2 connectors.

For our other Roof Safety Product Range please contact the Sales Office;-

Trapac® Snow Stops Trapac® Walkway Trapac® Safety Step

Trapac® Safety Hooks



# Easy-Form® plus Flashing

can be used as a flashing for all abutments at walls, chimneys, rising parts of structures such as dormers, fire walls and other abutments in the roof area.

## Area of application

- Universal suitable for all tile, clay and slate profiles
- Suitable for new build or refurbishment

## Product features

- Perfect match of flexibility and rigidity
- Creating weathertight wall connections
- Bridges gaps up to 5cm
- Highly durable giving similar life expectancy as for lead or zinc
- Wide range of applications
- Flexible and stretchable material quicker and easier to install than lead
- Strong adhesive butyl backing is self-fixing to dry surfaces
- Does not suffer from wind upliftt

### Material

Crepped coated aluminium, PET-foil, PET-fleece, complete coating with metal grid and self-adhesive butyl

### Dimensions

5m lengths with three widths: 250mm, 300mm and 450mm

## Product Codes / Colours

riodoci Codes / Colodis					
	250 mm KW4250-05	300 mm KW4300-05	450 mm KW4450-05		
Red	-0154	-0154	-0154		
Anthracite	-0469	-0469	-0469		
Dark Brown	-0248	-0248	-0248		
Zinc Grey	-0470	-0470	-0470		
Black	-0450	-0450	-0450		

## **Packaging**

250mm and 300mm 5 rolls per carton

450mm 2 rolls per carton

### PERFORMANCE / TECHNICAL DATA

Roof pitch	10°
Temperature resistance	-20°C to 80°C
Installation temperature	+5°C to 40°C
Thickness	approx. 1.7 mm





Designed to provide a mortar-free and secure method of fixing concrete interlocking verge tiles. Its neat interlocking design provides a consistent appearance that requires no maintenance.

## Area of application

- Refurbishment or new build on roofs from 12.5° to 90°
- Most makes and profiles of concrete interlocking tiles between 260-350mm batten gauge

### Product features

- Mortar free
- All weather fixing
- Secure mechanical fixing avoids wind uplift problems
- Quick and easy to fit no special tools required
- Available in 4 colours to blend in with roof tiles
- Neat attractive appearance
- Weatherproof and maintenance free
- Unaffected by settlement or differential movement
- UV stable
- Prevents entry of birds and large insects

### Material

Dry Verge Unit - Polypropylene Eaves Closure - Polypropylene

Ridge Closure - Polyp

- Polypropylene

## **Product Codes**

 Dry Verge Unit – left hand
 KR9765

 Dry Verge Unit – right hand
 KR9770

 Uni-Ridge End Cap Half Round
 KR9772

 Universal Angle End Cap
 KR9773

 Eave Ridge cartons
 KR9733

 Batten End Clips
 KR977100

### Colour / Colour Codes

Black -0450 Brown -0247 Slate Grey -0429 Terracotta -0152

### Packaging

Dry Verge Unit (left or right hand): 10 units per pack – 5 packs per carton Batten End Clip: 50 Clips per pack – 10 packs

Ridge End Pack contains:

2 Ridge End Caps and 4 Screws; 10 packs per carton

Eaves Ridge Pack contains:

2 Ridge Closures, 2 Eaves Closures, Nails 20 packs per carton



# Contract Dry Verge

All-weather, quick and easy fixing, requiring no special tools, compatible with any ridge system, wet or dry.

## Area of application

Suitable for:

- Refurbishment or new build on roofs from 12.5° to 90°
- Makes and profiles of concrete interlocking tiles between 260-350mm batten gauge

### Product features

- Mortar free, all weather fixing and UV stable
- Secure mechanical fixing avoids wind uplift problems
- Quick and easy to fit no special tools required
- Weatherproof and maintenance free
- Unaffected by settlement or differential movement
- Prevents entry of birds and large insects

### Material

Dry Verge unit - Polypropylene Eaves Closure - Polypropylene Ridge Closure - Polypropylene Ridge End Cap - Polypropylene Batten End Clip - Stainless steel

### **Dimensions**

397mm long x 139mm wide x 59mm deep

## Product Codes / Colours

 Dry Verge Unit Left Hand
 Brown
 KR9785-0247

 Slate Grey
 KR9785-0429

 Dry Verge Unit Right Hand
 Brown
 KR9790-0247

 Slate Grey
 KR9790-0429

## Packaging

10 units per pack - 5 packs per carton

### Can also be used for this products (but only for brown and slate grey):

 Uni-Ridge End Cap Half Round
 KR9772

 Universal Angle End Cap
 KR9773

 Eave Ridge cartons
 KR9733

 Batten End Clips
 KR977100

Ridge End Pack contains:

2 Ridge End Caps and 4 Screws; 10 packs per carton

Eaves Ridge Pack contains:

2 Ridge Closures, 2 Eaves Closures, Nails; 20 packs per carton



# Uni-Line Continuous Dry Verge T-Strip – suits most plain and profile concrete interlocking tiles. For bold roll

and double pantile, fit the 'T' Strip on top of batten.

S-Strip – suits all fibre cement, natural and synthetic slates up to 8mm in thickness.

Scot Strip – suits all fibre cement, natural and synthetic slates, up to 8mm in thickness, on boarded roofs with top of batten fixing.

## Area of application

- Refurbishment or new build
- For roof pitches 12.5° 90°
- Slates and tiles

## Product features

- Quick and easy to install, maintenance free, neat finish
- Ideal for use with UPVC bargeboards, fascias and soffits
- Gives extra security at verge against wind damage
- Can be used on existing roofing ('T' Strip only)

## Material

UPVC – UV stabilised

## Colour / Product Codes

T-Strip — Black	KR980376
T-Strip – Brown	KR980378
T-Strip – White	KR980377
S-Strip – Black	KR980476
Scot Strip - Black	KR980676

## **Packaging**

4 x 5m lengths per pack

### Related Products

## Connectors

T-Strip

Black	KR980576
Brown	KR980578
White	KR980577

### Connectors

S-Strip

Black KR980580

Ridge End Caps	Half Round	Universal Angle
Black	KR977276	KR977376
Brown	KR977236	KR977336
White	KR977277	KR977377



# Secret Gutter

is a high performance secret gutter for use with all flat interlocking tiles which provides a secondary line of defence against wind driven rain at wall abutments.

## Area of application

Flat interlocking tiles

## Product features

- Cost effective alternative to lead
- Lightweight and durable
- Quick and easy to install
- Anti-capillary rib provides extra watertightness

### Material

UV stabilised PVC

## **Product Code**

KR972000

## Colour

Black

## **Dimensions**

3m x 97mm wide x 1.1mm

## Weight (per pack)

10kg per 5 pcs

## **Packaging**

Banded in packs of 5 pcs

## **Uni-Finials**

**Uni-Finals** are designed to provide a quick and simple, neat, attractive and low-cost traditional finish to the roof line.

## Area of application

- Concrete and clay ridge tiles
- A dry ridge system
- Universal angle or 1/2 round ridge tiles

### Product features

- Traditional design complements both concrete and clay ridge tiles cost effective alternative to clay or concrete finials
- Encapsulated, dry-fixing compatible with most ridge systems
- Available in two colours

## Material

UV protected medium density polyethylene

## **Product Codes**

Tall Ball Finial	KR9961
Universal Angle Base	KR9962
Half Round Base	KR9963

## Colour Codes

Slate Grey -30 Terracotta -34

### **Dimensions**

Tall Ball – 325mm high (429mm including base) Bases 104mm high, 235 wide

# **Bonding Strip**

The Bonding Strip is an excellent way of providing a watertight junction above the party wall between different roof finishes when re-roofing.

## Area of application

 Provides a weathertight junction between two different roof finishes above the party wall.

## Product features

- Provides a weathertight junction between differing roof finishes
- Lightweight and flexible
- UV resistant
- Safe and easy to cut
- BBA certified



### Material

UV stabilised Glass Reinforced Polyester

### Product Codes

KR965710

### Colour

Grey

### **Dimensions**

3m long x 216mm x 1mm

## Weight (per pack)

16kg per 10 pcs

## **Packaging**

Banded in packs of 10

## Regulations

Fire tested to comply with BS476: Part 3 SAB and Part 7 Class 3



# Dry Bonding Strip

The Dry Bonding Strip is an excellent way of providing a watertight junction above the party wall between different roof finishes when re-roofing.

## Area of application

 Provides a weathertight junction between two different roof finishes above the party wall.

## Product features

- Provides a weathertight junction between differing roof finishes
- Lightweight and flexible
- UV resistant
- Safe and easy to cut
- Mortar-free

## Material

UV stabilised Glass Reinforced Polyester

### **Product Codes**

Dry Bonding Strip

70mm: KR966500 110mm: KR966600

Under Batten Dry Bonding Strip

70mm: KR966700 100mm: KR966750

## Colour

Grev

### **Dimensions**

Dry Bonding Strip: 3m long x 225mm x 1mm

## Weight (per pack)

70mm (for slates) 19kg per 10 pcs 100mm/110mm (for Concrete and Plain tiles) 24kg per 10 pcs

## **Packaging**

Banded in packs of 10

### Regulations

Fire tested to comply with BS476: Part 3 SAB and Part 7 Class 3

BBA certification in process BBA



# **GRP Valleys**

provide a robust, durable and lightweight alternative to lead and zinc valleys.

## Area of application

- Use on tile and slate pitched roofs
- For plain angles of 90° only
- 20° maximum pitch variance
- 17.5° minimum rafter pitch
- 60° maximum rafter pitch

## Product features

- Cost effective alternative to lead
- Lightweight, flexible, safe and easy to cut
- UV resistant
- BBA certified certificate no 12/4928



## Material

UV stabilised Glass Reinforced Polyester

### **Product Codes**

Tile Valley Trough 360 KR965210 Slate Valley Trough KR965610

### Colour

Grey

## **Dimensions**

Tile Valley Trough 360 3m long x 360mm wide x 1.1mm Slate Valley Trough 3m long x 225mm wide x 1.1mm

## Weight (per pack)

 Tile 360
 24kg

 Slate
 19kg

## **Packaging**

Banded in packs of 10

### Regulations

Fire tested to comply with BS476: Part 3 SAB and Part 7 Class 3

### **Performance**

Allow 150mm overlap for rafter pitches 40°-60°.

Allow 200mm overlap for rafter pitches 22.5°-39.5°. Allow 250mm overlap for rafter pitches 17.5°-22°.

Guidance on specification and installation of open preformed GRP Valleys

Troughs are available on our website or contact Technical for advice; technical@klober.co.uk



# GRP Dry Valleys

provide a robust, durable and lightweight alternative to lead and zinc valleys.

## Area of application

- Use on tile and slate pitched roofs
- 15° maximum pitch variance
- 17.5° minimum rafter pitch
- 60° maximum rafter pitch

## Product features

- Cost effective alternative to lead
- Lightweight and flexible
- UV resistant
- Safe and easy to cut
- BBA certified certificate no 12/4928 (70mm & 110mm profiles only)



### Material

UV stabilised Glass Reinforced Polyester

## **Product Codes**

Dry Tile Valley Trough 70mm (for slate version)	KR966000
Dry Tile Valley Trough 110mm (for tile version)	KR966100
Under batten Dry Valley 80mm (for slate, flat & plain tiles)	KR966080
Under batten Dry Valley 105mm (for profile tiles)	KR966105

## Colour

Grey

## **Dimensions**

Tile Valley Trough 70mm & 110mm 3m long x 400mm wide x 1.1mm Under batten Dry Valley 80mm & 105mm 3m long x 360mm wide x 1.1mm

## Weight (per pack)

Dry Valley 70mm 25kg Dry Valley 110mm 29kg

### **Packaging**

Banded in packs of 10

### Regulations

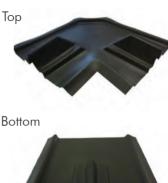
Fire tested to comply with BS476: Part 3 SAB and Part 7 Class 3

### **Performance**

Allow 150mm overlap for rafter pitches 40°-60°. Allow 200mm overlap for rafter pitches  $22.5^{\circ}$ -39.5°.

Allow 250mm overlap for rafter pitches 17.5° -22°.





# Dry Valley Closures

## Area of application

Head and foot of GRP valley troughs.

## Product features

■ Neat and clean professional finishing and flashing of dry fix valley troughs. Double closure provides a purpose made flashing for the junction of GRP valley troughs above dormer roofs with pitch differential to the main roof of up to 10 degrees. The eaves closure can be used at the eaves to fully close the gap beneath the peak of the valley trough. For dormers with pitch differential of over 10 degrees eaves closures can be used upslope, 1 to each valley trough.

## Material

Polyurethane 65

### **Product Codes**

KR9660-1-0070 70mm Single Dry Valley Closure KR9660-2-0070 70mm Double Dry Valley Closure KR9661-1-0110 110mm Single Dry Valley Closure KR9661-2-0110 110mm Double Dry Valley Closure

# Colour Dark matt grey Dimensions



Please note cro clips are available to buy separately for secondary fixings



# Bird Deterrent

prevents birds from landing and nesting on structures. To protect surrounding area from fouling, damages and prevent possible slippery surfaces. Also avoids unsightly appearances.

## Area of application

Suitable for:

- Window sills and ledges
- Sians
- Conservatories
- Security cameras
- Liahts
- Edges of roofs

## Product features

- Quick and easy to install simply bend into shape and screw in place
- Highly weather resistant
- Flat-packed to save storage space and facilitate transport
- Rounded end to spikes makes them safe to handle and prevents birds from being injured
- Highly durable galvanised steel suitable for window sills and ledges, signage, conservatories, security cameras, light fittings and edges of roofs

## Material

Galvanised steel

### **Dimensions**

500mm long x 75mm high

## **Product Code**

KB7781

## Packaging

10 pieces per carton



# FLAVENT BREATHER AND EXTRACTION VENTS

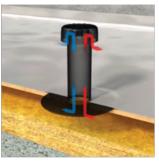
Breather vents are designed to create air circulation above the insulation layer. They remove moisture trapped in a flat roof, thereby avoiding condensation on the underside of the waterproofing layer which can lead to the formation of mould, rot and surface blisters. Our Flavent breather vents can be used for renovation, renovation of vents in a roof overlay and for drying out roofs after construction or renovation.

## Product features and benefits

- Optimum air circulation
- Moisture and condensation is removed
- Insulation performance remains intact
- Compatible with most modern membranes
- Quick and easy installation

## Material and performance

- High impact PVC, black
- Weather, frost and UV-resistant
- Fire rating B2 (no direct flame contact)
- Temperature resistance -40°/+80°C
- Flow temperature max. +40°C (for short periods max. +80°C)



Installation example: Flavent Single-piece breather vent for ventilated roof with PVC roof membrane



Installation example: Flavent Two-piece breather vent for unventilated roof with bitumen roof membrane Note the insulation material-filled lower section, preventing condensation forming within the roof structure

Product Code	Vent Dia	Free Air Flow	Materal Connection	Height Inc Cap	Pack Qty
KF6000	70mm	$3847  \text{mm}^2$	High Impact PVC	261mm	10
KF6001	70mm	$3847  \text{mm}^2$	Bitumen	261mm	5
KF6010	100mm	7850mm <sup>2</sup>	High Impact PVC	346mm	5
KF6011	100mm	7850mm <sup>2</sup>	Bitumen	346mm	5
KF6012	100mm	7850mm <sup>2</sup>	Universal Snap In	346mm	10
KF6030	125mm	12265mm <sup>2</sup>	High Impact PVC	411mm	10
KF6031	125mm	12265mm <sup>2</sup>	Bitumen	411mm	5
KF6032	125mm	12265mm <sup>2</sup>	Universal Snap-In	411mm	10



# FLAVENT MECHANICAL AND SOIL VENTILATION TERMINALS

## Area of use

- Ventilation of bathrooms and toilets
- Soiled water ventilation
- Ventilation for extraction hoods in kitchens
- Controlled ventilation systems

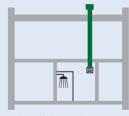
### Product features and benefits

- Provides fresh air whilst removing stale and foul air
- Compatible with most modern membranes
- Optional pipe extension allows for all thermal insulation thicknesses
- Quick and easy installation

## Material and properties

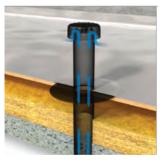
- High impact PVC, black
- Weather, frost and UV-resistant
- Fire rating B2 (no direct flame contact)
- Temperature resistance -40°/+80°C
- Flow temperature max. +40°C (for short periods max. +80°C)

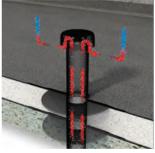
### **VENTILATION SITUATIONS**



Ventilation of bathrooms and toilets without a window to the outside



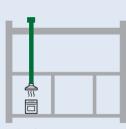




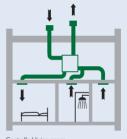
Installation example: Flavent Single-piece breather/ mechanical soil extraction vent for ventilated roof with PVC roof membrane

Installation example: Flavent Two-piece breather/soil vent for unventilated roof with bitumen roof membrane

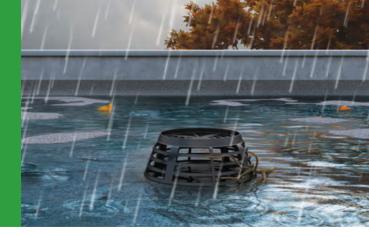
Product Code	Vent Dia	Free Air Flow	Materal Connection	Height Inc Cap	Lenght Below Base	Pack Qty
KF6040	70mm	3847mm <sup>2</sup>	High Impact PVC	261mm	234mm	5
KF6041	70mm	3847mm <sup>2</sup>	Bitumen	261mm	234mm	5
KF6050	100mm	7850mm <sup>2</sup>	High Impact PVC	346mm	310mm	5
KF6051	100mm	7850mm <sup>2</sup>	Bitumen	46mm	310mm	5
KF6052	100mm	7850mm <sup>2</sup>	Universal Snap-In	346mm	310mm	5
KF6070	125mm	12265mm²	High Impact PVC	411mm	270mm	5
KF6071	125mm	12265mm²	Bitumen	411mm	270mm	8
KF6072	125mm	12265mm²	Universal Snap-In	411mm	270mm	5
KF6520	2 Part Rai	nwater outlet	High Impact PVC	For Unve	ntiled Roof	10



Ventilation for extraction hoods in kitchens



Controlled living space ventilation



# FLAVENT RAINWATER OUTLETS & LEAF FILTER GRILLS

### Product features and henefits

- Slender inlets for narrow roof penetrations
- Quick installation with individual flange connectors
- Variable height options
- High impact leaf filters for optimum water drainage
- Optional pipe extension allows for all thermal insulation thicknesses

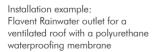
## Material and properties

- High impact PVC
- Weather, frost and UV-resistant
- Fire rating B2 (no direct flame contact)
- Temperature resistance -40°/+80°C
- Flow temperature max. +40°C (for short periods max. +80°C)

## TPE - Thermoplastic Elastomers

- Flexible
- Cost-effective
- Resistance to the ozone
- Excellent resistance to the degradation due to the atmospheric ageing
- Resistance to high temperatures (until 140°C) both in a dry and in a wet environment
- Resistance to low temperatures: the flexibility is conserved until -35°C







Installation example: Flavent Rainwater outlet for an unventilated roof with a bitumen waterproofing membrane

Product Code	Vent Dia	Materal Connection	Lenght Below Base	Pack Qty
KF6500	70mm	High Impact PVC	255mm	10
KF6501	70mm	Bitumen	255mm	5
KF6510	100mm	High Impact PVC	299mm	10
KF6511	100mm	Bitumen	299mm	5
KF6520	125mm	High Impact PVC	299mm	10
KF6521	125mm	Bitumen	299mm	5

## Leaf Filter Grills

Product Code	Vent Dia	Materal Connection	Height Inc Cap	Pack Qty
KF6819	70mm	High Impact PVC	55mm	10
KF6826	100mm	High Impact PVC	75mm	10
KF6827	125mm	High Impact PVC	75mm	10
KF7800-1	60 - 125	High Impact PVC	110mm	100



# FLAVENT ROOF OUTLET KIT FOR POWER CABLES

## Product features and benefits

Ideal for connecting to bitumen and PVC roof membranes optional pipe extension allows for quick and simple installation for all thermal insulation thicknesses.

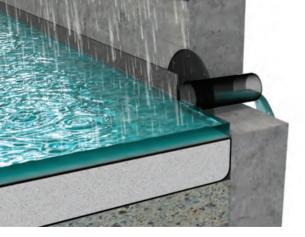
## Material and properties

- High impact PVC, black
- Weather, frost and UV-resistant
- Fire rating B2 (no direct flame contact)
- Temperature resistance -40°/+80°C
- Flow temperature max. +40°C (for short periods max. +80°C)

Product Code	Vent Dia	Materal Connection	Height Inc Cap	Lenght Below Base	Pack Qty
KF6910	70mm	High Impact PVC	261mm	234mm	1
KF6920	100mm	High Impact PVC	346mm	310mm	1
KF6930	125mm	High Impact PVC	411mm	270mm	1



Installation example: Flavent Two-piece roof outlet kit in unventilated roof with bitumen roof membrane



# FLAVENT PARAPET RAINWATER OUTLET

Our products are designed for optimum drainage of parapet walls, terraces and balconies.

## Product features and benefits

- Rainwater outlet for horizontal installation through a wall (parapet)
- Ideal for installation to roofs, balconies and terraces
- Weather, frost and UV-resistant
- Extendable, reliable and easy to install



Product Code	Vent Dia	Materal Connection	Pack Qty
KF6530	70mm	High Impact PVC	5
KF6531	70mm	Bitumen	5
KF6540	100mm	High Impact PVC	5
KF6541	100mm	Bitumen	5
KF6550	125mm	High Impact PVC	5
KF6551	125mm	Bitumen	5



## SOLAR-LINE

Professional accessory solutions for solar panel installations.

## 1 Venduct® Solar Cable Outlet Kit

- Allows PV panel cables to pass through the roof
- Retains watertightness of roof covering
- Use with Sealing Collar to create airtight seal
- Available in 3 colours to blend in with roof
- Suitable for the majority of roof tiles and slates

## 2. Venduct® Solar Thermal Outlet Kit

- Allows thermal panel pipes to pass through the roof
- Retains watertightness of roof covering
- Use with Sealing Collar to create airtight seal
- Available in 2 colours to blend in with roof
- Suitable for the majority of roof tiles and slates

## 3. Venduct® Solar Panel Suppor

- Avoids the maintenance costs of tile breakages
- Watertight unlike many traditional metal hooks
- Adapters allow use with numerous PV rail systems
- Variable bracket position independent of rafters
- Universal base allows use with most tile profiles



# **SOLAR-LINE**

# 4. Tile Guard Flashing solution

- When used under traditional metal hook supports, helps reduce the risk of expensive maintenance should a tile break
- Available in 4 colours to blend in with the roof (refer to page 80 for EasyFlash lead-free flashing, can also use Wakaflex as alternative)
- Universal suitable for all tile and slate profiles

# 5. Solar Panel Apron Flashing solution

- Seals PV and solar thermal systems to roof covering
- Universal suits all tile and slate profiles
- Creates a water and windtight seal
- 60% stretchable (refer to page 80 for EasyFlash lead-free flashing, can also use Wakaflex as alternative)
- Available in 4 colours to blend in with the roof (refer to page 80 for EasyFlash lead-free flashing, can also use Wakaflex as alternative)

# 6. Easy-Form® Solar Sealing Collar

- Prevents the ingress of water under the roof covering
- Applicable for roof pitches 10° and over

Call Sales Office to request for SOLAR-LINE Brochure.



# **Lead Free Flashing**

Save time, save money.

Easy to install alternative to lead.





# **Lead Free Flashing**

Used throughout Europe, Australasia and the USA for more than 20 years, Klober introduced the range to the UK in 2014. Products provide an easy-to-install, cost-effective, alternative to lead.

All the products in the range have been developed as lead-free alternatives. Wakaflex a flexible lead free flashing which can chemically bond to itself making it the perfect solution for sealing abutments and pitch transitions on roof up stands, dormers, chimneys and walls as well as providing a stepped, roof light and solar panel flashing. Being non-toxic, all products are suitable for use with rainwater harvesting systems and present no lasting health hazard. The Wakaflex Uni Outlet and Sabetoflex sealing collars are ideal for applications including sealing gas and wood burner flues through pitched and flat roofs.

All products are extremely easy and quick to install, with products such as Easy Form that can be stretched up to 60% without use of lead forming tools. This enables them to be used with deeply profiled concrete and clay tiles as well as slates, shingles, metal seams and polycarbonate for tight and complex detail work. Products are tested in relation to wind load and shear, fire, abrasion resistance, dimensional, colour and temperature stability, weather tightness and UV-resistance.

They can withstand temperatures as low as -40°C as well as in extremely hot conditions. Developments in self-adhesive backings has greatly assisted in the quality of seal, with butyl adhesive backings retaining their high bond strength and being usable in most dry surfaces without priming.

Wakaflex® will also chemically bond with itself to provide a secure seal with no more than a 30mm lap.

Our product range







**HP**accessories



Wakaflex® is a flexible, self-welding flashing designed to be used alongside or as an alternative to lead in most modern roofing applications

Wakaflex is simple and quick to install, safety in use and lightweight. It can be stretched by up to 50% in length and 15% in width while its unique composition enables it to self-weld on laps. Making it the perfect solution for chimney flashing and sealing the top saddle.

# **Areas of Application**

#### Suitable for:

- All Wall abutments and upstands
- For chasing into brickwork e.g. Chimneys
- Sealing the top saddle
- Pipe flashings
- Gas and wood burner flues in conjunction with a collar such as Sabetoflex
- Oprmers and rooflights
- Easy to apply over deeply profiled tiles and around corners
- Metal and polycarbonate

#### **Material**

Polyisobuthylene (PIB) with aluminium-meshwork and butyl-adhesive tape

#### Compatibility

Wakaflex® is compatible with most roofing surfaces including glass. However, Wakaflex® should not be used with bitumen or in situations where ponding is likely to occur. See instructions on our website for full details

#### Colours & Sizes

Wakaflex® comes in a 5m roll in five different widths. It is available in four colours to blend in with the roof.



\*Red & Brown are made to order and subject to pallet quantity, please contact our sales office for more information and availability of colours.

Width	Colour	Code	Carton Quantity
140mm	Light Grey	PWF140GR	2 Rolls
180mm	Light Grey	PWF180GR	4 Rolls
280mm	Light Grey	PWF280GR	4 Rolls
	Anthracite	PWF280AN	4 Rolls
	Light Grey	PWF280GR-10	2 Rolls x 10m*
370mm	Light Grey	PWF370GR	3 Rolls
	Anthracite	PWF370AN	3 Rolls
560mm	Light Grey	PWF560GR	2 Rolls
	Anthracite	PWF560AN	2 Rolls

\*This is a 10 metre roll

#### **Related Products**









# **Traditional Step Flashing**

Traditional step flashing is easy to achieve with Wakaflex.

Use a step and cover flashing turned up the wall by approx. 150mm, and covering the tile surface by a minimum of 120mm



# **Chimney Flashing**

Wakaflex can be used as an alternative to lead on most pitched roof applications such as chimney flashing.



### **Mansard Roof**

Wakaflex can be used as an alternative to lead when constructing a mansard roof.



# Ridge Saddle

Creating a ridge saddle with Wakaflex is easily done by using two pieces of Wakaflex, one covering the ridge, with the second sealing on to the roof.



## **Mortar Free Valley**

When constructing valleys using Wakaflex. Our 560mm Wakaflex is great for lining the valley while our 280mm roll is the perfect solution for the top saddle.



#### **Lead Roll**

You can use Wakaflex when bonding two roofs with different tiles.

For sealing the lead rolls use two strips of Wakaflex. Making sure that the butyl strips are parallel to it.



# **Hip Flashing**

Wakaflex can be used for soakers with slates or plain tiles on close mitred hips.



# Wall Connection at Ridge

For side wall abutments that go over a ridge.

Lay Wakaflex over the ridge by standing up the wall 25mm. The butyl strip has to be parallel with the wall. The second piece is for connection to the brick-work.



EasyFlash® is a lightweight, universal flashing for the sealing of abutments between walls and roof tiles, it is ideal for sealing penetrations for flues, pipework and as a solar panel flashing apron.

The material is highly flexible, up to 60% due to its creped aluminium facing. It moulds easily to the contours of the roof and is particularly effective around corners. A high strength butyl backing makes EasyFlash extremely durable and has exceptional wind uplift resistance.

# **Areas of Application**

#### Suitable for:

- All abutments at walls
- **Chimneys**
- Rising parts of structures such as dormers
- Firewalls and other abutments in the roof area
- New build or refurbishment
- All plain and profiled roofing materials
- Link EasyFlash to Klober Solar Range

#### **Material**

Creped coated aluminium, PET-foil, PET-fleece, complete coating with self adhesive butyl

#### Compatibility

EasyFlash is compatible with most roofing surfaces and products other than bitumen and should not be used in situations where ponding is likely to occur.

See instructions on our website for full details

#### Colours & Sizes

EasyFlash comes in a 5m roll in five widths: 200, 250, 300, 450, 600 mm. It is available in in five colours to blend in with the roof



\*Red & Brown are made to order and subject to pallet quantity, please contact our sales office for more information and availability of colours.

Width	Colour	Code	Carton Quantity
200mm	Anthracite	PEF200AN	5 Rolls
	Zinc Grey	PEF200GR	5 Rolls
250mm	Red	PEF250RE	5 Rolls
	Dark Brown	PEF250BR	5 Rolls
	Anthracite	PEF250AN	5 Rolls
	Zinc Grey	PEF250GR	5 Rolls
300mm	Red	PEF300RE	5 Rolls
	Dark Brown	PEF300BR	5 Rolls
	Black	PEF300BL	5 Rolls
	Anthracite	PEF300AN	5 Rolls
	Zinc Grey	PEF300GR	5 Rolls
450mm	Red	PEF450RE	2 Rolls
	Dark Brown	PEF450BR	2 Rolls
	Black	PEF450BL	2 Rolls
	Anthracite	PEF450AN	2 Rolls
	Zinc Grey	PEF450GR	2 Rolls
600mm	Zinc Grey	PEF600GR	2 Rolls

#### **Related Products**



# **Wakaflex** Uni Outlet

Wakaflex® Uni Outlet is a lead-free, flexible, adhesive sealing collar where flue pipes and soil stacks penetrate the roof





The Wakaflex<sup>®</sup> Uni Outlet is the ideal solution for sealing penetrations in the roof. The outlet is extremely flexible as it is designed to fit a wide range of outlet diameters.

It is also very easy to install and unlike other methods of sealing penetrations such as aluminium or lead, if the seal needs to be extended, extra Wakaflex® can simply be added to accommodate it.

#### **Product Features**

- Universal sealing of flue pipes and soil stack penetrations
- Ease of handling and installation
- Aesthetically pleasing with a high quality finish
- Lead-free
- Long life due to polymer surface of Wakaflex and high quality EPDM material
- Suitable for concrete, clay tiles and slates

## **Areas of Application**

#### Suitable for:

Pitched Roof

18° - 45°

## **Recommendation for Application**

- Surfaces have to be dust, oil, fat free and dry,
- Be aware that sharp edges can damage the EPDM collar.
- Please ensure that the non-supported gap between tiles and roof penetration is less than 50mm, if greater than 50mm additional support will be needed
- Water sags and standing water have to be avoided. fixing instructions can be found on our website.

#### **Material**

Base Material - Wakaflex®. Polyisobuthylene(PIB) with aluminium-meshwork and butyl-adhesive tape

Collar Material - EPDM

#### **Dimensions**

Wakaflex® Base Dimension: 560mm x 450mm

Collar sizes: 25mm, 50mm, 75mm, 100mm, 110mm, 125mm

# **Operating Temperatures**

#### Temperature Range

-40°C up to 100°C (up to 120°C short term/intermittently)

#### Carton Quantities

10 pieces per carton

120 pieces per pallet

#### **Product Codes**

PWFU0560GR - Wakaflex Uni Outlet - Grey

#### Related Products



Sabetoflex is a range of flashing products suitable for sealing flues, pipework, vents and ducting

Sabetoflex provides the perfect collar and flashing combination for flues with diameters ranging from 100-160mm for gas flues and 250/270mm for wood burners.

Unlike traditional metal collars, up to three of which are needed to cover all pitches, Sabetoflex collars can be adjusted to suit the pitch and can be used just as effectively on flat and green roofs\*. They can also be used to seal services from solar PV and solar thermal panels and in some cases can be used with roof windows.

Sabetoflex kits come complete with a pre-installed Wakaflex sealing collar which provides an airtight seal with the roof. This offers a far better solution than standard lightweight metal flashings which provide no overall seal and can be inadequate on low pitches.

<sup>\*</sup>Please contact our Technical Department for specific installation advice.

#### Colours & Sizes

Gas Flue Outlets 100mm | 125mm | 160mm For roof pitches 7°- 48° Wood Burner Outlets 250mm | 270mm Both diameters are available for low pitches 7°- 32° and high pitches 31°- 45°

# **Areas of application**

Suitable for sealing:

Pipework

Vents

O Ducting

Product	Width	Colour	Code
Wood Burner Outlet High Pitch	250mm	Anthracite	PSFWBH250
Wood Burner Outlet Low Pitch	250mm	Anthracite	PSFWBL250
Wood Burner Outlet High Pitch	270mm	Anthracite	PSFWBH270
Wood Burner Outlet Low Pitch	270mm	Anthracite	PSFWBL270
Gas Burner (M-Flex) Gas Burner (M-Flex)	100mm 100mm	Red Anthracite	PSFEX100RE PSFEX100AN
Gas Burner (M-Flex) Gas Burner (M-Flex)	125mm 125mm	Red Anthracite	PSFEX125RE PSFEX125AN
Gas Burner (M-Flex) Gas Burner (M-Flex)	160mm 160mm	Red Anthracite	PSFEX160RE PSFEX160AN

#### **Related Products**







# **★ HP**accessories

# M Glue

Using M Glue adhesive makes it possible to install a flashing even in wet weather.

The process is simple: just apply a thin line of M Glue on the butyl tape, and it is then possible to install on a wet surface.

- Unlike some other adhesives, once opened M Glue can be resealed and used again.
- Temperature tolerance is between -30°C and 90°C. Lowest working condition is 5°C. Size: 290ml

Code: PACCGL

# Flashing Roller

The Flashing Roller is a simple tool to ensure you get the best finish to your Wakaflex® or EasyFlash® installation.

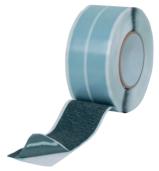
We recommend that Wakaflex® & EasyFlash® should be formed with a roller and its 35mm stainless steel seaming roller is the perfect way to ensure effective overall contact is made between the flashing and roof.

The roller has chamfered edges to prevent flashings from being marked.

Code: PACCRO







EasyFlash Tape



# Flashing Sealant

The HP Flashing Sealant has been especially formulated to work with EasyFlash® and Wakaflex® making it adhere very well to other surfaces.

This is different to other sealants on the market that can be used with EasyFlash® and Wakaflex, but generally do not stick well to its surface.

It comes in a 310ml application tube that fits inside a standard caulking gun available from any merchant or DIY store.

Material: UV resistant, Bitumen-friendly synthetic rubber (silicone free)

Colour: Transparent

Optimal Temp: +5°C to +40°C

Storage: Cool and dry place, protected from frost

Size: 310ml

Code: PACCSE

# EasyFlash Tape

EasyFlash tape is a multifunctional highly flexible tape. It can be used both inside and outside, creating watertight and airtight seals around penetrations, corners of roof windows or tears in underlays.

Material: Creped coated aluminium, PET fleece, complete coating with self-adhesive butylon.

Colour: Anthracite Size: 90mm x 10m

Code: KW0090

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