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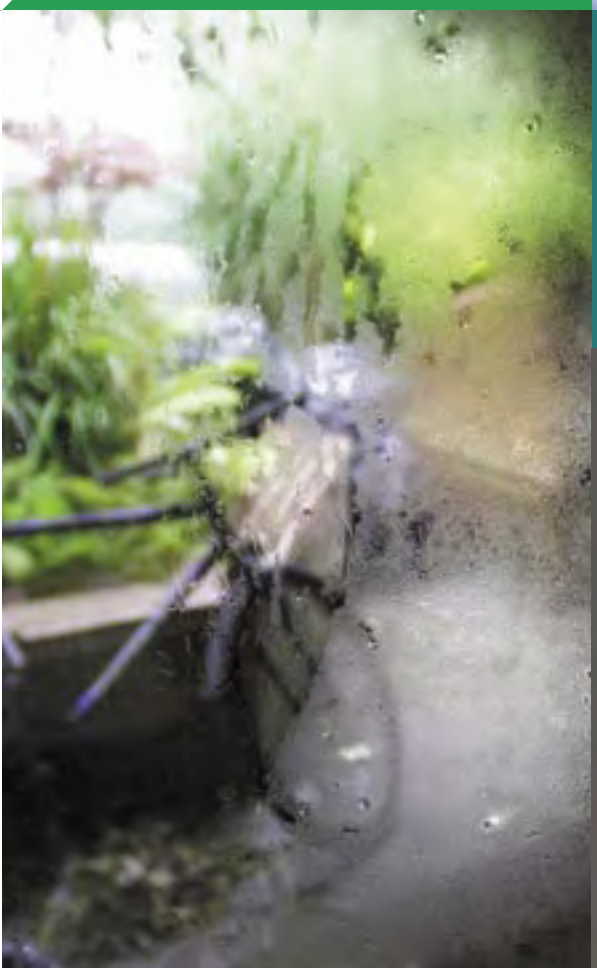
Tegral

Building a Better Tomorrow



Ventilation Solutions

Why Ventilate Roofs?

Condensation

Modern buildings are warmer and better insulated than ever before. This has brought undeniable benefits in terms of comfort, running costs and the environment, but it has also increased the risk of condensation forming in cold roof spaces.

Water vapour is always present in air. The warmer the air, the more water vapour it can hold and the greater the water vapour 'pressure' will be. Within buildings, variations in vapour pressure cause vapour to migrate from warm zones to cold zones, where it condenses on contact with cooler surfaces. Vapour can pass through many building materials. Because warm air is buoyant, vapour pressure 'drive' is particularly noticeable between the insulated building envelope and the cold roof void above the ceiling.

Republic of Ireland Building Regulations

It is a requirement of the Building Regulations that "adequate provision shall be made to prevent excessive condensation in a roof or in a roof void above an insulated ceiling."

Control of Roof Space Condensation

From time to time, it is inevitable that some condensation will form in roof spaces, just as it sometimes does outdoors, appearing as dew on grass, cars and other cold surfaces. The building regulations require the prevention of *excessive* condensation, which could be harmful to structural timber, insulation, metal components and electrical equipment, stored possessions and even decorations below ceiling level.

The technical guidance documents to the building regulations offer design advice on ventilation as an effective, 'deemed-to-satisfy' means of controlling roof space condensation in buildings of simple shape and size. Common solutions are contained in this brochure and further detailed advice is available from Tegral.

Northern Ireland Building Regulations

It is a requirement of the Building Regulations "to prevent, as far as reasonably practicable, any harmful effect on the building from moisture in the form of interstitial condensation."

Control of Roof Space Condensation

From time to time, it is inevitable that some condensation will form in roof spaces, just as it sometimes does outdoors, appearing as dew on grass, cars and other cold surfaces. The building regulations require the prevention, *as far as reasonably practicable*, of interstitial condensation, which could be harmful to structural timber, insulation, metal components and electrical equipment, stored possessions and even decorations below ceiling level.

The deemed-to-satisfy provision for condensation in the building regulations requires the building to be designed and constructed in accordance with BS 5250 *Code of practice for control of condensation in buildings*. Common solutions are contained in this brochure and further advice is available from Tegral.

Quick Guide to Roof Ventilation

The common solutions described in Tegral's quick guide to roof ventilation satisfy the requirements of the Building Regulations for non-complex buildings of normal design and construction.

Authority

Tegral's practical ventilation solutions are based on the good practice guidance contained in the *Building Regulations 1997: Technical Guidance Document F: Ventilation*. Experience shows that harmful condensation is unlikely to occur where moisture entering a roof space is minimized and there is adequate ventilation.

In some situations – for example, where roofs are large or complex in design – it may be difficult to provide effective ventilation and additional precautions, such as the use of a vapour-permeable roofing underlay, may need to be taken. Further detailed advice on alternative condensation control strategies is given in *BS 5250: 1989 Code of practice for control of condensation in buildings* and in the BRE publication Thermal insulation – avoiding risks, or may be obtained from Tegral.

Designing for Condensation Control

For the purposes of condensation control, pitched roofs can be roughly divided into two broad categories:

'Cold' roofs

Roofs where there is a large, readily ventilated space within the roof construction above the insulation – which is typically laid flat at ceiling joist level – and therefore a vapour control layer is not normally required.

'Warm' roofs

Roofs where there is limited space above the insulation or where any part of the insulation is laid following the line of the rafters, making it difficult to ventilate the void(s) adequately and therefore a vapour control layer would be necessary.

Other Uses of Slate & Tile Vents

Tegral's slate and tile ventilators may be fitted with pipe adaptors for use as Soil Vent Pipe, internal extract or radon terminals.

STANDARD DUOPITCH ROOF

Limitations

Roof pitch 15º-35º and eaves-to-eaves distance less than 10m. Where the roof pitch is 25˚ or less contact Tegral before specifying slate vents.

Requirement

10,000mm²/m run of eaves is required at eaves or low level. This is equivalent to a continuous 10mm opening.

Tegral Solutions

For low-level ventilation, select either over-fascia, soffit or slate ventilator solution from the following options.

1. Over-fascia ventilation option

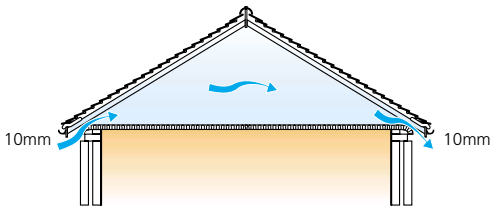
- *TFK10 Tegral over-fascia vent kit (contains TFV10, TUS60 and TCRR sufficient for 6m length of eaves) or*
- *TFV10 Tegral over-fascia vent and Tegral rafter tray (select one from TCRR, TRT, TRF and TRR) – to prevent eaves insulation from obstructing the continuous air gap between the rafters – and Tegral underlay support (either TUS60 or TUS12) or*
- *TOV10 Tegral low-profile over-fascia vent and Tegral rafter tray (TCRR/TRT/TRF/TRR) and Tegral underlay support (TUS60/TUS12)*

2. Soffit ventilation option

- *TSV10 Tegral continuous soffit vent strip for flat soffits and Tegral rafter tray (TCRR/TRT/TRF/TRR) or*
- *TSA10 Tegral continuous soffit vent strip for angled soffits and Tegral rafter tray (TCRR/TRT/TRF/TRR) or*
- *TSD10 Tegral soffit discs at 200mm centres and Tegral rafter tray (TCRR/TRT/TRF/TRR)*

3. Slate ventilator option

- *TV5 Tegral slate vents installed at 2.0m centres and TVFW Tegral felt weir and TFS2 Tegral felt sleeve used with each ventilator*



MONO-PITCH / LEAN-TO ROOF

Limitations

Roof pitch 15º+. Where the roof pitch is 25˚ or less contact Tegral before specifying slate vents.

Requirement

10,000mm²/m run of eaves is required at eaves or low level. This is equivalent to a continuous 10mm opening. 5,000mm²/m run of ridge or abutment is required at ridge, abutment or high level. This is equivalent to a continuous 5mm opening.

Tegral Solutions

For low-level ventilation, select either over-fascia, soffit or slate ventilator solution, as described for Standard Duopitch Roof. For high-level ventilation, select either slate ventilator or ridge or abutment solution from the following options.

1. Slate / Tile ventilator option

- *TV1 Tegral slate vents at 1.0m centres or*
- *TV2 Tegral slate /tile vents at 1.5m centres or*
- *TV5 Tegral slate vents at 4.0m centres or*
- *TV8 Tegral slate vents at 2.0m centres or*
- *TV10 Tegral slate /tile vents at 2.0m centres*

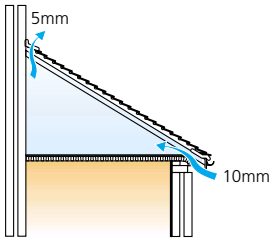
NOTE – SLATE / TILE VENTILATORS SHOULD BE POSITIONED APPROXIMATELY TWO FULL COURSES DOWN-SLOPE OF THE RIDGE OR ABUTMENT.

2. Mono-ridge ventilation option

- *TR2 Tegral continuously vented fibre-cement mono-ridge (contained angle varies according to roof pitch) or*
- *Tegral mono-pitch clay ridge ventilation system (consult Tegral for details)*

3. Abutment ventilation option

- *Abutment vent designed and constructed in accordance with the recommendations of the Lead Sheet Association*



NON-STANDARD DUOPITCH ROOF

Limitations

Roof pitch greater than 35º or eaves-to-eaves distance greater than 10m. In certain circumstances, even where pitch and size limitations do not apply, the provision of eaves-to-eaves ventilation alone may not be adequate. By incorporating high level ventilation, the effectiveness of natural ventilation of the roof space is increased.

Requirement

10,000mm²/m run of eaves is required at eaves or low level. This is equivalent to a continuous 10mm opening. 5,000mm²/m run of ridge is required at ridge or high level. This is equivalent to a continuous 5mm opening.

Tegral Solutions

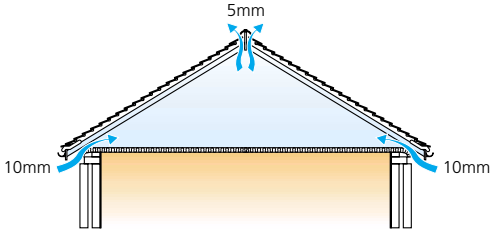
For low-level ventilation, select either over-fascia, soffit or slate ventilator solution, as described for Standard Duopitch Roof.
For high-level ventilation, select either slate ventilator or ridge solution from the following options.

1. Slate ventilator option

- *As described for Mono-pitch / Lean-to Roof*

2. Duo-ridge ventilation option

- *TR1 Tegral individual fibre-cement duo-ridge (contained angle varies according to roof pitch) ventilators installed at 2.4m centres or*
- *TR2 Tegral continuously vented fibre-cement duo-ridge (contained angle varies according to roof pitch) or*
- *Tegral duo-pitch clay ridge ventilation system*



NOTES

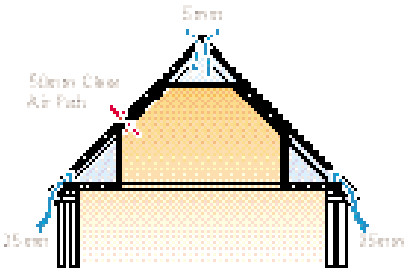
1 THE POSITIONING AND INSTALLATION OF TEGRAL'S VENTILATION PRODUCTS MUST NOT IMPAIR OR REDUCE THE WEATHERPROOF FUNCTION OF THE ROOF UNDERLAY OR ROOF COVERING. DETAILED ADVICE ON HOW TO INSTALL VENTILATION PRODUCTS IS AVAILABLE FROM TEGRAL.

2 IN SOME SITUATIONS, DUE TO THE DESIGN OF THE ROOF, IT MAY NOT BE POSSIBLE TO USE RIDGE OR EAVES VENTS. IN THESE SITUATIONS, USE SLATE OR TILE VENTS HAVING THE APPROPRIATE CAPACITY OR CONTACT TEGRAL FOR FURTHER ADVICE.

3 WHERE IT IS INTENDED TO USE SLATE OR TILE VENTS NEAR THE EAVES OF A ROOF, CONTACT TEGRAL FOR FURTHER ADVICE. NEVER USE LOW-CAPACITY VENTILATORS NEAR THE EAVES.

4 RIDGE OR HIGH-LEVEL VENTILATION, WHICH WILL ALWAYS EXHAUST AIR FROM THE ROOF VOID, MUST NEVER BE USED ON ITS OWN OR EXCEED THE EAVES OR LOW-LEVEL VENTILATION PROVIDED.

WARM ROOF



DUOPITCH ROOF WITH CATHEDRAL CEILING

Limitations

All roof pitches where the insulation follows the line of the rafters, including where there is a void at the apex and/or the eaves

NOTE – WHERE NO VOID EXISTS AT THE APEX, SLATE VENTILATORS CAN NOT BE USED TO PROVIDE HIGH-LEVEL VENTILATION.

Requirement

25,000mm²/m run of eaves is required at eaves or low level. This is equivalent to a continuous 25mm opening. 5,000mm²/m run of ridge is required at ridge or high level. This is equivalent to a continuous 5mm opening. Free airspace between insulation and underlay of at least 50mm.

Tegral Solutions

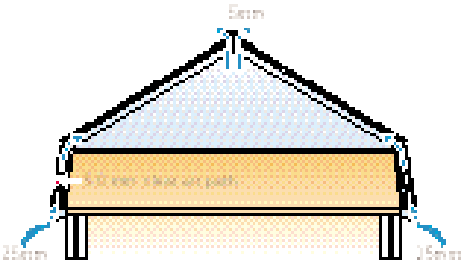
For low-level ventilation, select either over-fascia or soffit solution, from the options below. For high-level ventilation, select either slate ventilator or ridge solution, as described for Non-Standard Duopitch Roof.

1. Over-fascia ventilation option

- *TFK25 Tegral over-fascia vent kit (contains TFV25, TUS60 and TCRR sufficient for 6m length of eaves) or*
- *TFV25 Tegral over-fascia vent and Tegral rafter tray (select one from TCRR, TRT, TRF and TRR) – to prevent eaves insulation from obstructing the continuous air gap between the rafters – and Tegral underlay support (either TUS60 or TUS12)*

2. Soffit ventilation option

- *TSV25 Tegral continuous soffit vent strip for flat soffits and Tegral rafter tray (TCRR/TRT/TRF/TRR)*



MANSARD ROOF

Limitations

All roof pitches where the insulation follows the line of the rafters, including where there is a void at the apex and/or the eaves

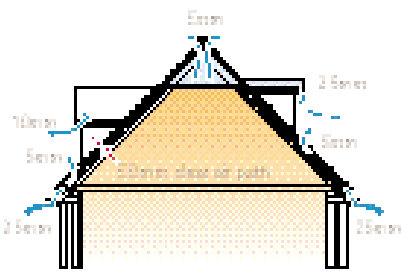
NOTE – WHERE NO VOID EXISTS AT THE APEX, SLATE VENTILATORS CAN NOT BE USED TO PROVIDE HIGH-LEVEL VENTILATION.

Requirement

25,000mm²/m run of eaves is required at eaves or low level. This is equivalent to a continuous 25mm opening. 5,000mm²/m run of ridge is required at ridge or high level. This is equivalent to a continuous 5mm opening. Free airspace between insulation and underlay of at least 50mm.

Tegral Solutions

For low-level ventilation, select either over-fascia or soffit solution, as described for the Duopitched Roof with Cathedral Ceiling. For high-level ventilation, select either slate ventilator or ridge solution, as described for Duopitched Roof.with Cathedral Ceiling



PITCHED ROOF WITH FLAT & PITCHED ROOF DORMERS

Limitations

All roof pitches where the insulation follows the line of the rafters, and some of the ventilation troughs that extend from eaves to ridge are interrupted by continuous elements, such as long dormer or roof windows.

NOTE 1 – WHERE NO VOID EXISTS AT THE APEX, SLATE VENTILATORS CAN NOT BE USED TO PROVIDE HIGH-LEVEL VENTILATION.

NOTE 2 – FOR ROOFS WITH LITTLE OR NO EAVES/RIDGE, THE VENTILATION REQUIREMENT IS ALSO DEFINED AS 0.6% OF THE ROOF PLAN AREA.

NOTE 3 – FOR THE PURPOSES OF HEALTH AND SAFETY, IT MAY NOT ALWAYS BE NECESSARY TO PROVIDE VENTILATION TO SMALL ROOFS, SUCH AS THOSE OVER PORCHES AND BAY WINDOWS.

Requirement

Main Roof

25,000mm²/m run of eaves is required at eaves or low level. This is equivalent to a continuous 25mm opening. 5,000mm²/m run of ridge is required at ridge or high level and at the face of dormers where they break the plane of the roof. This is equivalent to a continuous 5mm opening. Free airspace between insulation and underlay of at least 50mm.

Pitched Dormer ('Cold' Roof)

10,000mm²/m run of eaves is required at eaves or low level. This is equivalent to a continuous 10mm opening.

Flat Dormer

25,000mm²/m run of eaves is required at the roof edges. This is equivalent to a continuous 25mm opening. Free airspace between insulation and roof deck of at least 50mm.

Tegral Solutions

Main Roof

For low-level ventilation, select either over-fascia or soffit solution, as described for Duopitched Roof with Cathedral Ceiling. For high-level ventilation, select either slate ventilator or ridge solution, as described for Duopitched Roof with Cathedral Ceiling. For ventilation where the face of the dormer breaks the plane of the roof, please contact Tegral for further advice.

Pitched Dormer

For low-level ventilation, select either over-fascia or soffit solution, as described for Standard Duopitch Roof.

Flat Dormer

•TSV25 Tegral continuous soffit vent strip for flat soffits

Slate & Tile Vents

Tegral's range of slate and tile ventilators is available in two basic designs – either a raised-cowl type or a flush, in-line type. Both types of ventilator have been designed for use at all standard roof pitches.

Each ventilator can be adapted for use as a terminal for either a soil vent pipe or a domestic mechanical extractor fan. Tegral's TVP reference indicates that the slate or tile ventilator has a pipe adaptor/spigot fitted or supplied to receive a Tegral flexible pipe.

Guidance on the siting of such terminals in relation to windows and openings is provided in the technical guidance documents to the building regulations. TVP ventilators are not suitable for venting hot gases.

TV1 & TVP1

This cost-effective, small-capacity slate vent can be used to provide discrete high-level roof space ventilation. The ventilator cowl projects 55mm above the surface of the slate.

Sizes	***Free Area Capacity***
600 x 300mm	5,000mm^2
Spacing	To achieve 5,000mm^2/m, position vents at 1.0m centres
Colour	Black

TV2 & TVP2

This versatile vent, which is suitable for providing high-level roof space ventilation, is available to match all common slate and interlocking tile profiles, textures and colours. The ventilator cowl projects 80mm above the surface of the slate. When ordering this vent, please give details of the specific slate or tile it is to be used with.

Sizes	***Free Area Capacity***
To suit all slate/tile sizes & profiles	7,500mm^2
Spacing	To achieve 5,000mm^2/m, position vents at 1.5m centres
Colours & Textures	Available to suit all slate/tile colours and textures

TV5 & TVP5

This slate vent is for use in roofs where a high-capacity ventilator is required. This vent is suitable for high-level ventilation and also for low-level ventilation, where 10,000mm^2/m is required. The ventilator cowl projects 100mm above the surface of the slate.

Due to its large capacity, the TVP5 vent is ideally suited as a terminal for radon vent pipes as well as as a terminal for soil vent pipes and domestic mechanical extractor fans.

Sizes	**Free Area Capacity**
600 x 300mm	20,000mm^2
500 x 250mm	20,000mm^2
Spacing	To achieve 5,000mm^2/m, position vents at 4.0m centres
	To achieve 10,000mm^2/m, position vents at 2.0m centres
Colours	To suit Tegral's range of slate colours

TV8 & TVP8

This 'economy' in-line slate vent has been designed to provide high-level ventilation, while maintaining an uninterrupted roof plane. The unique design of this vent means that it can be installed simply and quickly, without the need to cut battens.

The TV8 vent is supplied with a factory-adhered pipe spigot ready for connection to a flexible pipe if required.

Sizes	***Free Area Capacity***
600x300mm	10,000mm^2
500x250mm	5,000mm^2
Spacing	To achieve 5,000mm^2/m, position 600x300mm vents at 2.0m centres
	To achieve 5,000mm^2/m, position 500x250mm vents at 1.0m centres
Colours	Blue-black

OTHER TEGRAL SLATE VENTS

Ventilators to suit other slate sizes, including diamond slates, are available from Tegral as special orders.

TV10 & TVP10

Tegral's premier in-line slate and tile vent has been designed to provide high-level ventilation, while maintaining an uninterrupted roof plane. The TV10 and TVP10 vents are available to suit both fibre cement slates and natural slates, i.e. finished with a riven edge and textured surface, as well as all common interlocking tile profiles, textures and colours. Due to their availability in double-width sizes, TV10 and TVP10 vents are particularly suitable for use with most curved slating.

Sizes	***Free Area Capacity:***
600x300mm	10,000mm^2
500x250mm	10,000mm^2
600x600mm	10,000mm^2
500x500mm	10,000mm^2
To suit all tile sizes & profiles	10,000mm^2
Spacing	To achieve 5,000mm^2/m, position vents at 2.0m centres
Colours & Textures	Available to suit all slate/tile colours and textures

Slate & Tile Ventilator Accessories

TFS1 & TFS2 TEGRAL'S FELT SLEEVES

It is strongly recommended that a Tegral felt sleeve – a short pipe fixed to the base of the slate or tile vent with waterproof adhesive tape to ensure airflow through the roofing underlay with no risk of obstruction – is used with all Tegral cowl-type slate and tile ventilators. TFS1 is suitable for use with tiles and TFS2 is suitable for use with slates.

TVFW TEGRAL'S FELT WEIR

A Tegral felt weir should be used in conjunction with slate or tile vents to redirect any moisture that may be on the surface of the roofing underlay away from the opening cut in the underlay to fit the ventilator. The use of a felt weir up-slope from the vent provides additional security, particularly where the roofing underlay has not been carefully cut and folded back.

All vents with pipe adaptor (TVP) come in kit form, which includes a length of flexible hose, 2 securing clips, template and fixing instructions.

Ridge Vents

Ridge ventilation must never be provided without low level ventilation. Two types of ridge ventilation are available – intermittent vents or continuous ventilation.

TR1

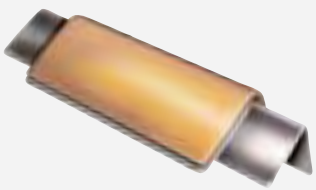
A fibre cement individual ridge vent which is used in lieu of some of the standard ridge cappings.

Sizes	***Angles***	***Free Area Capacity***
F.C. Slate Ridge (525mm Cover)	Angles 90˚, 105˚, 120˚, 135˚	12,000mm^2
Spacing	To achieve 5,000mm^2/m, position vents at 2.4m centres	
Colours	To suit Tegral's range of ridge colours	

TR2

A fibre cement continuous ridge vent which is used in lieu of standard ridge cappings to give a level and unbroken ridge line. A specially designed ventilation strip (Enka Flex) is factory-adhered to the underside of both wings of a standard fibre cement ridge to appear discreet and prevent entry of water under the ridge

Sizes and Angles	**Free Area Capacity**
To suit standard ridge	5,000mm^2 to each ridge wing
Spacing	Continuous
Colours	To suit Tegral's range of ridge colours



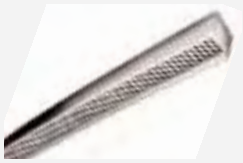
CLAY VENTS

Tegral's clay ridge vents are available for use with all of Tegral's clay ridges. They are intermittent vents with a capacity of 10,000 mm^2/m and should be positioned at 2.0m centres to achieve high-level ventilation equivalent to 5,000 mm^2/m.

DURABILITY

All Tegral ventilation products will have a life comparable with that of the other components of the roofing system. However, over time these high-grade plastics components will weather and a reduction in surface colour may occur, but this will not effect the performance of the product.

Eaves Vents & Accessories



TFV

TOV Viewed from behind/inside roof

TEGRAL'S OVER-FASCIA VENTS

Tegral's over-fascia ventilators are designed to provide discreet eaves ventilation, including eaves not having an overhanging soffit. Each over-fascia ventilator is available in 1 metre lengths and has 2 no. fixing holes for either nails or screws. Tegral's over-fascia ventilators are designed for use in conjunction with Tegral's underlay support tray and Tegral's rafter tray. The overall depth of the over-fascia ventilator must be taken into account when sizing and fixing the fascia board, to ensure the eaves course of slates or tiles is not tilted too much.

Tegral's over-fascia ventilators may be used in other situations to ventilate roof spaces where slate or tile vents are unsuitable, eg at parapet walls, corbelled eaves, tapered or box gutters, or mono-pitch ridges. Contact Tegral for details

Tegral code	Ventilation	Ventilator height
TFV10	10,000mm²/m	24mm
TFV25	25,000mm²/m	32mm
TOV10	10,000mm²/m	16mm

TSV Viewed from top

TSD Viewed from top

TEGRAL'S SOFFIT VENTS

Tegral's soffit ventilators are designed for use in conjunction with Tegral's rafter trays at eaves having an overhanging soffit. They are quick and easy to install and can be used on new-build or refurbishment projects. Three types of soffit strip ventilators are available, as well as a soffit disc ventilator. No mechanical fixing is required for disc ventilators, which simply clip into place.

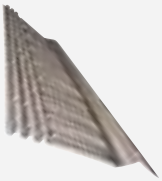
Tegral code	*Ventilation*	*Size*	*Colours*
TSV10	10,000mm²/m	30mm x 2.4m	White, Brown, Black
TSV25	25,000mm²/m	60mm x 2.4m	White, Brown, Black
TSA10	10,000mm²/m	48mm x 2.4m	White, Brown
TSD10 @ 200mmcentres	10,000mm²/m	70mm diameter	White, Brown, Black

***NOTE** – DISC VENTILATORS ARE NORMALLY ONLY SUITABLE FOR 10,000MM²/M VENTILATION. FOR 25,000MM²/M VENTILATION, A WIDE SOFFIT IS REQUIRED TO ACCOMMODATE 2 ROWS OF DISCS.*

TFK

TEGRAL'S OVER-FASCIA VENT KITS

Tegral provides over-fascia vent kits to make ordering for eaves ventilation easier. Two kits are available – one for 10,000mm²/m ventilation (TFK10) and the other for 25,000mm²/m ventilation (TFK25). Each kit can ventilate a 6 metre-run of eaves and consists of the following items: a Tegral over-fascia ventilator (either a TFV10 or TFV25), a Tegral UST60 underlay support tray and a Tegral TCRR continuous rafter tray.



UST 60

UST TEGRAL'S UNDERLAY SUPPORT TRAY

Tegral's underlay support trays prevent the roofing underlay from sagging, thus permitting ponding behind the fascia board and obstructing airflow through the over-fascia ventilator. Underlay support trays also provide added protection at the eaves, particularly where the roofing underlay is not UV-light-resistant.

There are two types of UST, both approximately 300mm wide. 600mm long, the UST60 support tray may be nailed to the tops of rafters; the ribbed tray is flexible and is suitable for all roof pitches. 1275mm long, the UST12 flat support tray can be bent along preformed crease lines, to suit all roof pitches; it is ideal where added strength is required.

RAFTER TRAYS

Tegral's rafter trays are designed to provide an unobstructed ventilation passage from the outside air, through the eaves ventilator and into the roof void, between the roofing underlay and the insulation. They should be used in conjunction with either a Tegral soffit ventilator or a Tegral over-fascia ventilator. Tegral's rafter trays are suitable for use at all standard roof pitches.

TCRR

TCRR Tegral's Continuous Rafter Tray

The Tegral continuous rafter tray (rafter roll) is quick and easy to install, as it may be rolled out over the tops of the rafters and nailed into them prior to laying of the underlay. Supplied in 6m-long rolls, it is easily cut with a knife. TCRR has been designed to suit all common rafter spacings – 400mm, 450mm, and 600mm – and maintains a minimum 25mm continuous ventilation gap (equivalent to 25,000mm²/m).

TRT

TRT Tegral's Rafter Tray

The Tegral rafter tray is quick and easy to install, as each tray fits neatly between two rafters and may be nailed into the tops of the rafters prior to laying of the underlay. TRT is available in different sizes to fit three common rafter spacings – 400mm, 450mm and 600mm. The two available versions give either 10,000mm²/m or 25,000mm²/m continuous ventilation. As six different combinations are possible, care should be taken when specifying which TRT to use.

TRF Tegral's Flyscreen Rafter Tray

The Tegral flyscreen rafter tray is designed to be a combined eaves ventilator, insect screen and rafter tray for open eaves situations, where there is no fascia or soffit and the ends of the rafters are exposed. It is quick and easy to install, as each tray fits neatly between two rafters and may be nailed into the tops of the rafters prior to laying of the underlay. TRF is available in different sizes to fit three common rafter spacings – 400mm, 450mm and 600mm – and maintains a minimum 10mm gap between the underlay and insulation (equivalent to 10,000mm²/m).

TRR Tegral's Refurbishment Rafter Tray

The Tegral refurbishment rafter tray is designed to be installed from inside the roof void, and can be used when insulating existing roofs or in a new build situation following the laying of the underlay. It is a universal tray, which adjusts to suit the roof pitch and rafter centres without disturbing the roof slating or tiling.

Tegral's Rafter Trays

Type	Tegral Code	Rafter centres	Ventilation gap	Quantity in pack
Continuous	TCRR	All	25mm	4 x 6m
10mm	TRT60	600mm	10mm	50
	TRT45	450mm	10mm	50
	TRT40	400mm	10mm	50
25mm	TRT61	600mm	25mm	50
	TRT46	450mm	25mm	50
	TRT41	400mm	25mm	50
Flyscreen	TRF60	600mm	10mm	50
	TRF45	450mm	10mm	50
	TRF40	400mm	10mm	50
Refurbishment	TRR	All	10mm	50

TCF1

TCF1 COMB FILLER

TCF1, available in 1m lenghts and with a 4mm-gap between the teeth, prevents ingress of small birds, large insects and vermin at the eaves batten cavity, while allowing ventilation between the roofing underlay and the roof covering, whether slates or tiles

Tegral
VENTILATION SOLUTIONS

ORDERING TEGRAL VENTILATION SOLUTIONS

Eaves / low-level ventilation solutions

To achieve 10,000mm²/m ventilation (equivalent to a continuous 10mm opening along the eaves), the following Tegral products can be used:

- Tegral TFK10 over-fascia vent kit, see page 6
- Tegral TFV10 over-fascia vent, see page 6
- Tegral TOV10 low-profile over fascia vent, see page 6
- Tegral TSV10 soffit vent strip for flat soffits, see page 6
- Tegral TSA10 soffit vent strip for angled soffits, see page 6
- Tegral TSD10 soffit discs, see page 6
- Tegral TV5 slate vent, see page 4a

To achieve 25,000mm²/m ventilation (equivalent to a continuous 25mm opening along the eaves), the following Tegral products can be used:

- Tegral TFK25 over-fascia vent kit, see page 6
- Tegral TFV25 over-fascia vent, see page 6
- Tegral TSV25 soffit vent strip for flat soffits, see page 6

Ridge / high-level ventilation solutions

To achieve 5,000mm²/m ventilation (equivalent to a continuous 5mm opening along the ridge), the following Tegral products can be used:

- Any Tegral slate or tile vent positioned to achieve the required ventilation capacity, see page 4,4a, 4b
- Tegral TR1 individual fibre cement ridge vent, see page 5
- Tegral TR2 continuously vented fibre cement ridge, see page 5
- Tegral clay ridge ventilation system, see page 5

Tegral Building Products

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