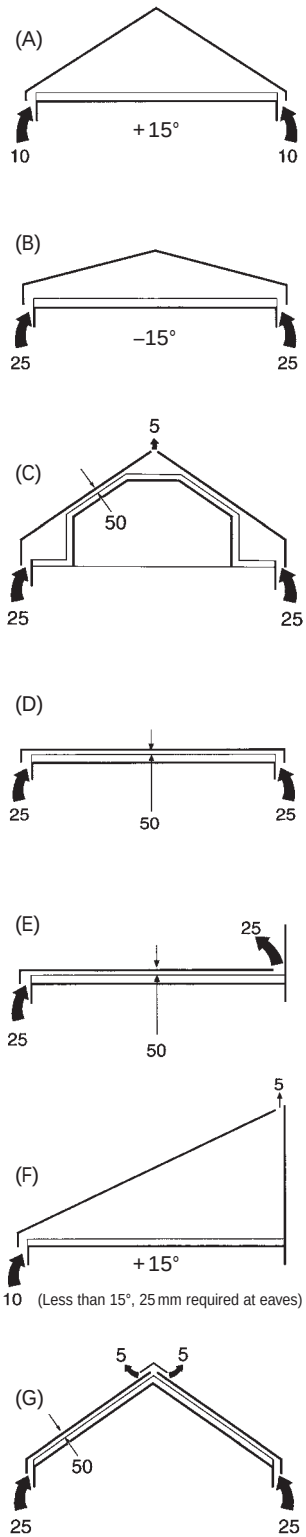
Contents and Product Index

This brochure is designed to provide an overall guide to the Hambleside Danelaw Roofing and Ventilation range of products. Further technical information is available by contacting our Daventry Sales Office on 01327 701910.

The illustrations below reflect the basic ventilation requirements which would normally be applicable. For additional information please refer to the current Building Regulations and appropriate British Standards. Dimensions in millimetres.



Accreditation

Hambleside Danelaw GRP flashing products carry BBA Certification. The range of valley troughs hold unique BBA multi-product certification.

Hambleside Danelaw Limited's Production Centre at Dalcross is an Investor in People company.

The Hambleside Danelaw Ltd group has BS EN ISO 9001 : 2000 accreditation.

Where appropriate products have been independently tested for suitability, purpose and performance by Birmingham City Laboratories.

The Hambleside Danelaw Group are CPD and RIBA CPD Certified providers.

Memberships

Hambleside Danelaw is a member of the RIBA NBS Plus electronic library service.

Hambleside Danelaw is an associate member of the Builders Merchant Federation.

Hambleside Danelaw are associate manufacturing members of the National Federation of Roofing Contractors and also participate in the co-partnership guarantee scheme.

Awards

In 2006 the Group received the Queen's Award for Enterprise: Innovation for the environmental benefits provided by the Insulator Rooflight. In the same year it achieved recognition under BS 14001 and a B.C.E. Award, for its environmental management systems. A further Green Apple Award was received for the Stormforce 225 Valley Trough Range, due to the introduction of new manufacturing processes which reduced waste and replaced virgin raw materials with materials generated from recycled products.

ROOF VENTILATION

Ventilation to negate the effects of condensation in roofs is essential to comply with Building Regulations, Building Standards and British Standards. Ventilation openings should be provided on the longer sides of rectangular roofs and designed to prevent the ingress of rain, snow, birds and large insects. Minimum mesh/grille sizes should not be smaller than 4 mm to avoid excessive airflow resistance. Particular attention should be paid to potential restrictions at changes in roof slope or changes in constructional details and at junctions with walls. The Hambleside Danelaw range of ventilation products is manufactured to enable compliance with all current technical requirements and standards.

BUILDING REGULATIONS – THE REQUIREMENTS

Approved Document C2 (2004 Edition) requires that roofs be designed and constructed so that their structural and thermal performance are not adversely affected by interstitial condensation.

This requirement will be met if the roof is designed and constructed in accordance with Clause 8.4 of BS 5250 : 2002 'Code of practice for control of condensation in buildings' and BS EN ISO 13788 :2001 'Hygrothermal performance of building components and building elements. Internal surface temperature to avoid critical surface humidity and interstitial condensation. Calculation methods.' Further guidance is given in BRE Report BR 262 'Thermal insulation: avoiding risks', 2002 edition.

To avoid excessive moisture transfer into roof voids, gaps and penetrations for pipes and electrical wiring should be filled and sealed, particularly in areas of high humidity such as kitchens and bathrooms and an effective draught seal should be provided to loft hatches to reduce the inflow of warm air and moisture.

Vapour control layers can reduce the amount of vapour entering roof voids but cannot be relied on as an alternative to ventilation. A complete barrier to moisture is needed for this.

Roofs should also be designed and constructed so that the thermal transmittance (U-value) of a roof does not exceed 0.35 W/m^2K at any point and the junctions between roof and walls are in accordance with DTLR's Robust Construction Details.

Scottish Executive Technical Standards Part G, Regulation 18 requires that dwellings shall be so constructed as to protect the building and its users, so far as may be reasonably practicable, from harmful effects caused by surface and interstitial condensation. Both these requirements are deemed to be satisfied by following the guidance given in BS 5250.

BS 5534 :2003 'Code of practice for slating and tiling (including shingles)' recommends that roof ventilation be provided in accordance with BS 5250.

COLD ROOFS WITH A PITCH OF 15° OR MORE

Pitched roof spaces should have ventilation openings at eaves level (Fig. A) on opposite sides of the structure at least equal to an opening of 10 mm wide and running the full length of the eaves to promote cross ventilation. For roof pitches above 35° or spans in excess of 10 m, additional high level ventilation at or close to the ridge equivalent to a continuous opening of 5 mm should be provided.

A pitched roof that has a single slope or abuts a wall (Fig. F) should have ventilation at high level equal to a continuous opening of 5 mm wide in conjunction with an opening of at least 10 mm wide at the eaves.

High level ventilation should never be used on its own as the wind suction effect created will increase water vapour transfer into the roof void.

Pitched roofs where part or all the insulation follows the pitch of the roof (Fig. C) should have ventilation openings on opposite sides of the structure at least equal to a continuous opening of 25 mm wide. In addition, such structures require ventilation at or close to the ridge equivalent to a continuous opening of at least 5 mm. The void between the underside of the roof covering and the insulation should have a free air space of at least 50 mm. In this application, a vapour control layer should also be provided on the warm side of the insulation.

COLD ROOFS WITH A PITCH OF LESS THAN 15°

Roof spaces in low pitched and flat roofs should have ventilation openings at eaves level (Figs. B, D & E) on opposite sides of the structure at least equal to an opening of 25 mm wide to promote cross ventilation. Roof voids should have a free air space of at least 50 mm between the roof deck or underside of the roof covering and the insulation.

Mono pitched roofs should be provided with ventilation of at least the equivalent of a 25 mm continuous opening at eaves and 5 mm at the ridge.

VAPOUR PERMEABLE UNDERLAYS

BS 5250 : 2002 provides recommendations and alternative approaches when using vapour permeable underlays that when followed, can achieve compliance with Building Regulations.

Horizontal Insulation:
With slated or tiled roofs containing horizontal insulation over a horizontal ceiling, it is not always necessary to ventilate the roof space below the underlay. In these circumstances, a ventilated counterbatten space should be formed using 25 mm counterbattens and ventilation provided at low and high level. Openings at low level should be the equivalent to a 25 mm continuous gap and equivalent to a 5 mm continuous gap at high level. Fortuitous ventilation through the slate/tile joints should not be relied upon to adequately ventilate this space. Where continuous boarding is used under the slates or tiles, ventilation should always be provided to the roof space below the underlay.

Inclined Insulation:
Slated or tiled roofs containing inclined insulation above inclined ceilings may be constructed with a 50 mm ventilated airspace between the insulation and underlay whether using permeable or impermeable underlays as previously described. For vapour permeable underlays used without ventilation between the insulation and underlay, it is necessary to provide a ventilated airspace above the underlay. Counterbattens not less than 25 mm thick should be fitted with ventilation openings to each and every counterbatten void equivalent to a continuous opening of not less that 25 mm at low level and 5 mm at high level each side to provide ventilation for both roof slopes (Fig G). Again, fortuitous ventilation through the slate/tile joints should not be relied upon to remove the risk of harmful condensation.

With this type of construction, an effective vapour control layer of high vapour resistance, sealed at the laps and at all roof details, e.g. hips, valleys, ridges, abutments, firewalls and around all penetrations created by services, etc., should be provided. The designer should be sure that the vapour control layers and/or insulation can be installed and maintained air tight for the design life of the building.

FIRE PERFORMANCE OF ROOF VENTILATION PRODUCTS

In general, and for the purposes of Building Regulations requirement B4, small plastic components such as slate and tile ventilators and soil pipe penetrations that occur on the surface of the roof and jointing and ventilation strips that appear at ridges, hips and soffits are regarded as insignificant and are therefore not covered in Approved Document B and can normally be ignored.

UNDERFLOOR VENTILATION

SUSPENDED FLOORS AT GROUND LEVEL

Any suspended floor next to the ground will meet the requirements of Building Regulations Approved Document C, Scottish Technical Standards Part G and BS 5250 : 2002 provided that:

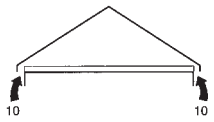
a) the ground is covered so as to resist moisture and prevent plant growth and;
b) there is a ventilated air space between the ground covering and the floor construction of at least 150 mm and;
c) there are damp-proof courses between the floor construction and any material that can carry moisture from the ground.

Two opposing external walls should have ventilation openings placed so that the ventilating air will have a free path between opposite sides and to all parts. The openings should be large enough to give an actual opening of at least equivalent to 1500 mm^2 for each metre run of wall or 500 mm^2 per m^2 of floor area whichever gives the greater opening area, this opening area also being provided in internal sleeper walls or similar obstructions to maintain the underfloor ventilation. Any pipes needed to carry this ventilating air should have a diameter of at least 100 mm.

PRODUCT SELECTION

As a general guide to assist in choosing the correct products from the Hambleside Danelaw range, first identify the type of roof detail from the typical examples A to G illustrated, then select the combination of products from the range to achieve full cross flow ventilation in accordance with the Building Regulations.

A



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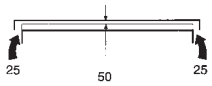
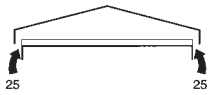
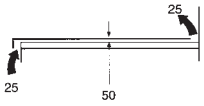


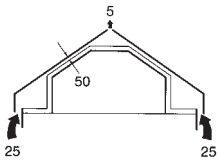
B



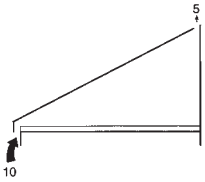
E



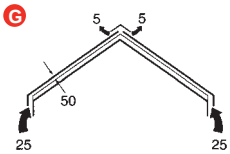
C



F

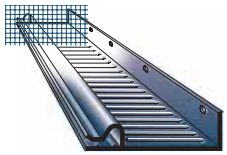


G

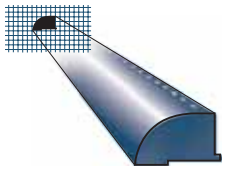


EAVES AND SOFFIT VENTILATORS

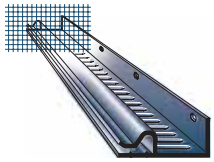
HD8250
B C D E G



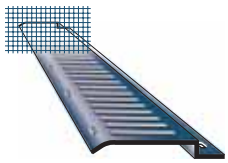
HD12000M
A F



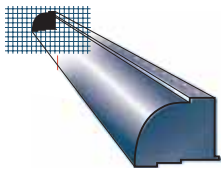
HD8000
A F



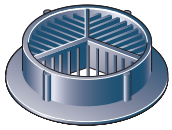
HD8210
A F



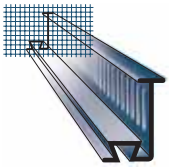
HD12000U
A B C D E F G



HD7000
A F

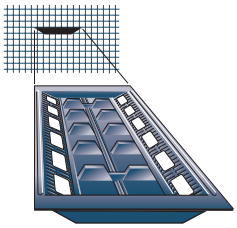


HD8310 CORBEL VENTILATOR
A F

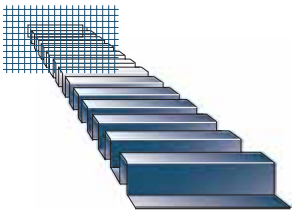


PANEL VENTILATORS

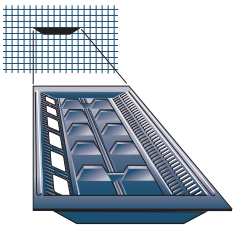
HD4000, HD4500 and HD6000
A B C F G



HD5000 UNIVERSAL ROLL PANEL
A B C F G

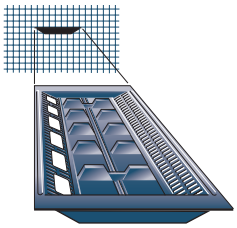


HD4050, HD4550 and HD6050
A F



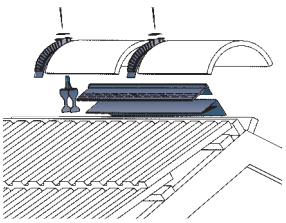
HDURT UNIVERSAL REFURBISHMENT TRAY
A B C F

HD4025, HD4525 and HD6025
B C G



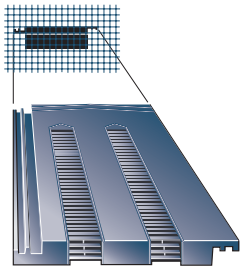
DRY FIX RIDGE

DFR3 DRY FIX RIDGE/VENTILATION SYSTEM

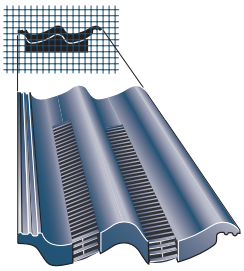


TILE AND SLATE ROOF VENTILATORS

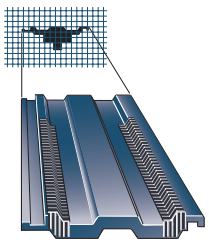
HDTV15/1



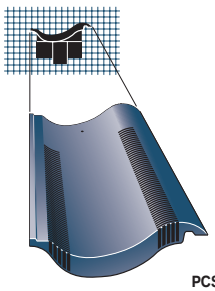
HDTV15/2

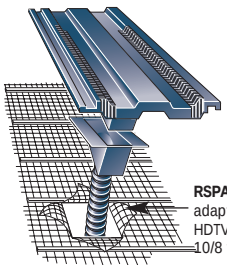


HDTV10/6



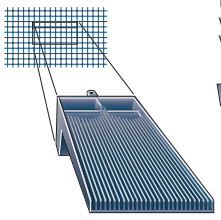
HDTV10/8



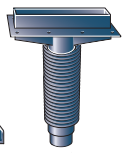


RSPA Soil pipe adapter for HDTV 10/6 and 10/8 ventilators

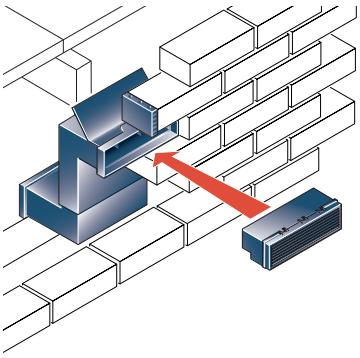
HDTV10/5



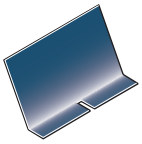
PCSPA Plain tile soil pipe adapter for HDTV 10/5 ventilator – soil ventilation only



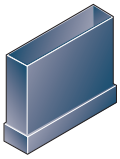
CAVITY AND UNDERFLOOR VENTILATORS



HD9600M Telescopic Ventilator
HD9600CT Cavity Tray
HD9300 Airbrick Ventilator



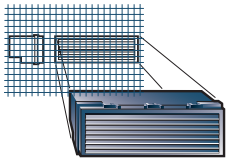
Cavity Tray
HD9600CT



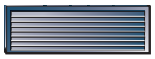
Vertical Extension Sleeve
HD9610/2

Horizontal Extension Sleeve
HD9660M

HD9300 COMBINATION AIR BRICK

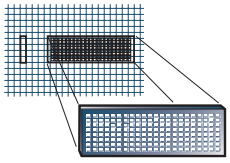


HD9400/1/2/3 INTERNAL VENT GRILLE

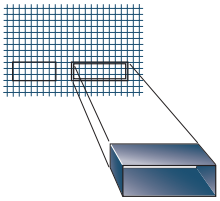


HD9300G GAS VENT GRILLE

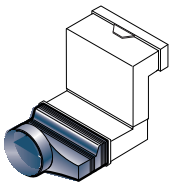
HD9600B Factory Fitted VERMIN SCREEN

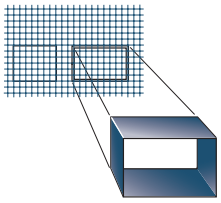


HD9350/1/2/3 AIRBRICK VENTILATOR SLEEVES



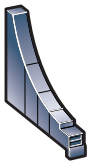
HD96200 SQUARE TO ROUND ADAPTER

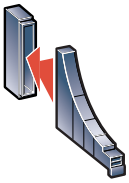




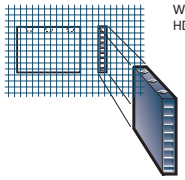
HD9800 LINTEL STOP END

HD9100 PERP WEEP

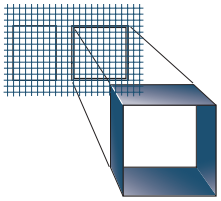




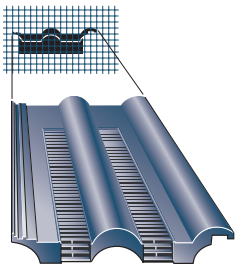
HD9200
PERP WEEP EXTENSION



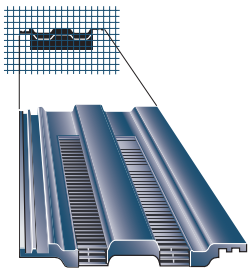
WEEP VENT
HD9500



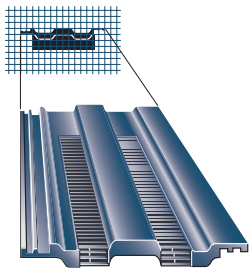
HDTV 15/3

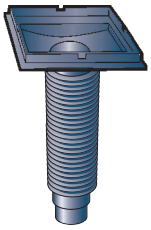


HDTV 15/4



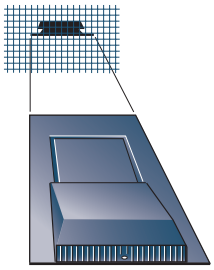
HDTV 15/7



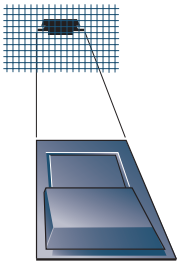


TVSPA Soil Pipe Adapter for use with HDTV 15/1, 15/2, 15/3, 15/4 and 15/7 tile roof ventilators

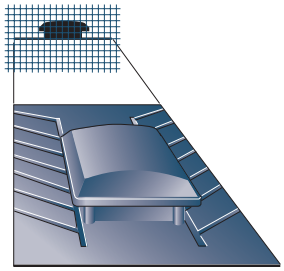
HDSRV 5U



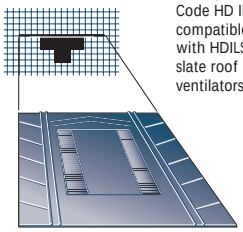
HDSRV 10U



HDSRV 680

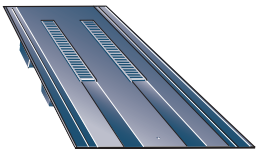


HDILSRV 10U



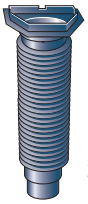
Soil Pipe Adapter Code HD ILSPAU compatible for use with HDILSRV 10U slate roof ventilators

ILSRV 10/20 and 10/24



ILSPA
For use with ILSRV 10/20 & ILSRV 10/24 slate roof ventilators

HDSPA 680
For use with HDSRV 680 slate roof ventilators



HDSPA
For use with HDSRV 10/U slate roof ventilators

HD FPC
Flexi-pipe can be used as an extension to all HDL Soil Pipe Adapter Kits