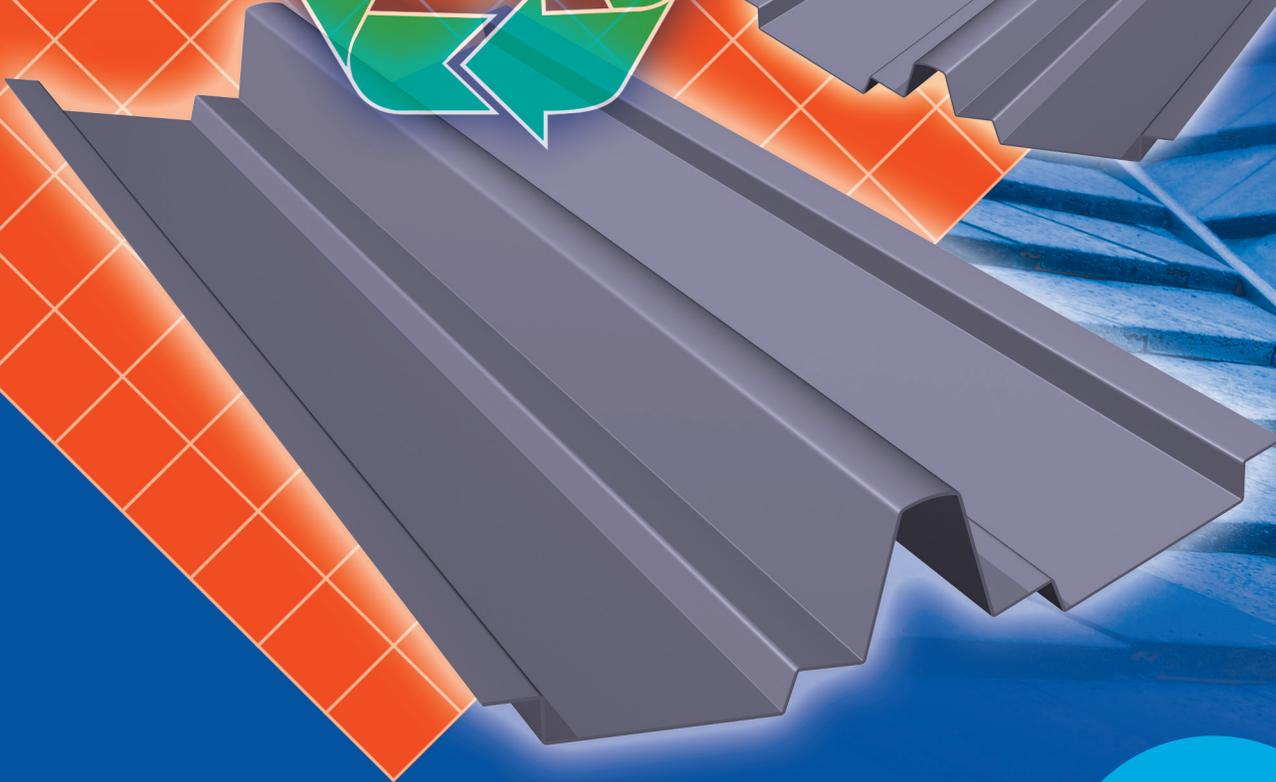
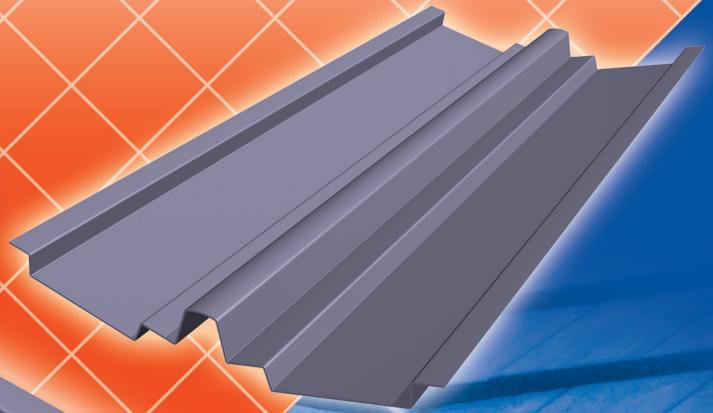


# v-FLOW DF

GRP dry-fix simulated lead valley trough system



- A complete system for use with natural or man-made slates and clay or concrete tiles
- Eliminates the problem of lead theft
- Quick and simple to install with no specialist skills
- Lightweight – easy transportation and handling
- Virtually maintenance-free
- Proven life expectancy of 20 years plus
- Quality Assured to ISO9001: 2008
- Certified to ISO14001:2004 Environmental Management System (EMS)
- Available through specialist distributors nationwide

**NEW**  
Flexible  
Valley  
Closures



CERTIFICATE No. 07/4492

**FILON<sup>®</sup>**

## V-Flow DF GRP dry-fix valley troughs

FILON has been producing GRP (Glass Reinforced Polyester) products for over 50 years and produced the first GRP valley gutters for the UK market in the 1980's.

FILON valley troughs are produced for a number of UK and European companies and are sold via selected distributors.

The V-Flow DF valley trough range caters for tiles and slate roof materials and allows for even the deepest tile profile to be used, with the GDFVT110 valley trough. This dry-fix system has been developed to eliminate the problems associated with the

use of cement mortar and is finished in grey to simulate the appearance of lead. The flexible closures are finished in matt black.

Filon V-Flow DF valley troughs have a minimum life expectancy of 20 years. Many FILON GRP products, which use the same technology as the V-Flow range, achieve working lifespans in excess of 30 years or more.

FILON's V-Flow DF valley troughs and accessories are fully recyclable at end of life.

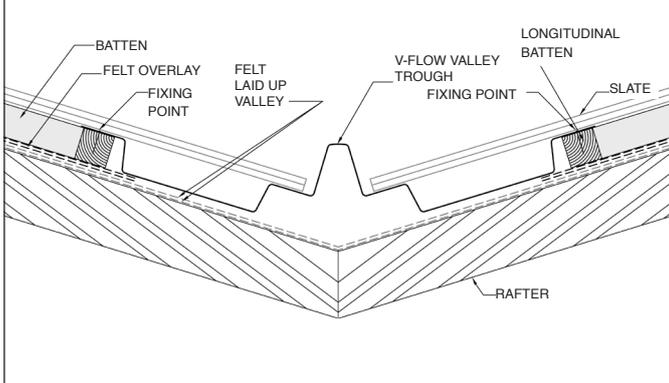
## Installation instructions

- V-Flow valley troughs are suitable for roof pitches up to 60°. FILON strongly recommends that where possible, plywood or other suitable valley boards should be used.
- The underlay material and battens should be fixed in accordance with standard roofing best practice with a batten running the length of the valley on each side to accommodate the V-Flow DF external raised water bar section.
- When using the FILON eaves closure, the 150mm long GRP pre-cut valley section support should be positioned close to the eaves. (See photo A, opposite).
- The eaves closure piece should be overlaid onto the GRP pre-cut valley section (ensuring 150mm overlap), ensuring that the side winged sections are located over the longitudinal battens (See photo B, opposite). The bottom of the eaves closure piece should overhang the eaves. At the highest point of the eaves closure section a large headed galvanised or aluminium nail should be fixed through the section into the longitudinal batten. Note: A length of flexible packing is supplied with the eaves closure, to use if required to form the continuation of the side support timber battens (when the angle of the valley does not allow the battens to extend to the rear of the fascia board).
- V-Flow DF valley troughs are fitted onto the valley boards and should be firmly fixed from the eaves closure section upwards, using suitable large headed roofing nails on either side of the trough and through the top flat section of the water bar, at a minimum of 500mm centres (See photo C, opposite). All overlaps of troughs and eaves closure piece should be

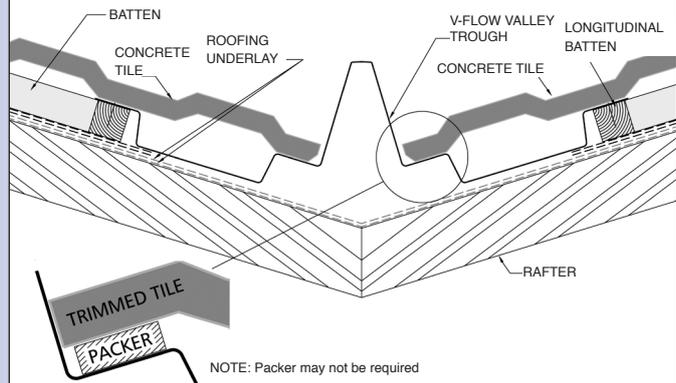
at least 150mm. Care should be taken to ensure that the central raised section is not distorted in any way and that it is positioned central to the valley.

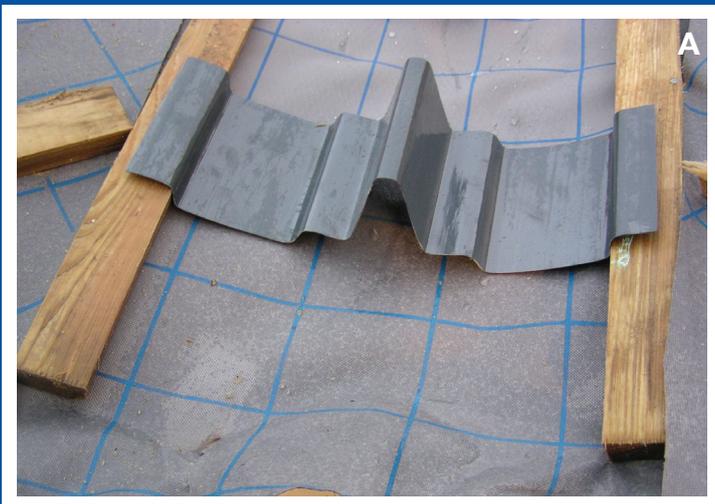
- If the valley trough finishes at a ridge section with a corresponding valley, the top closure pieces 90 or 75 can be used. These closure sections overlap the valley troughs and underlap the slates / tiles that form over this point. The longitudinal battens of each valley should meet and be mitred so that the top of the top closure can be fixed with a suitable roofing nail to stop any movement. The top closure then overlaps both valley troughs by 150mm and forms a neat, tidy, waterproof seal. (See photo E, opposite).
- Tiles or slates being laid into and over the troughs should be laid in accordance with the manufacturer's recommendations. When cutting tiles or slates it is important that neither should be forced to fit. The central raised section of the V-Flow valley trough should not be distorted.
- Where possible the roof tiling should be planned to avoid small cut sections. However, in some instances small cuts will be required. Self adhesive packers are supplied with the valley to support these small cuts if required (See fig 2, below).
- When the slating or tiling has been completed, the eaves closure section should be cut with a sharp knife or scissors to allow water discharge into the rain water gutter.
- It is important to ensure that the valley troughs are cleared of any debris on completion, so water flow is not impeded.

**Fig 1. GDFVT70 V-Flow valley trough**  
Slate or shallow tile application

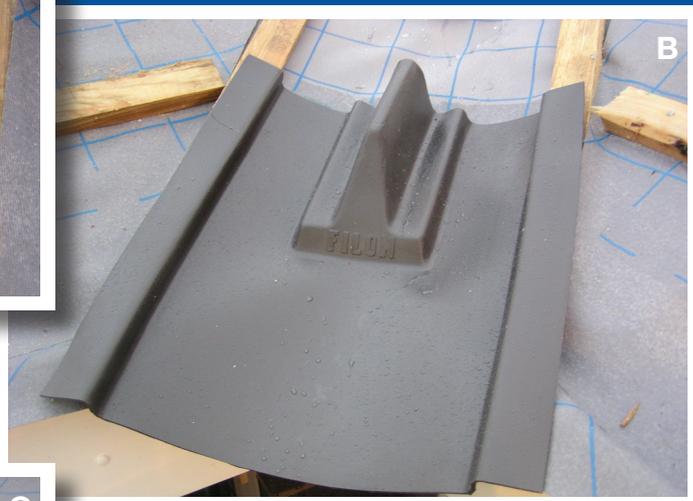


**Fig 2. GDFVT110 V-Flow valley trough**  
Concrete tile application





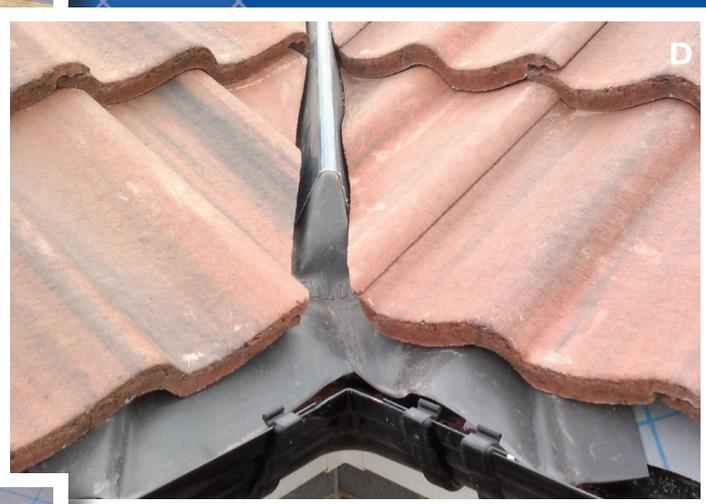
A. 150mm long pre-cut GRP valley section support is placed on the battens so that it will locate under the raised ridge of the flexible eaves closure piece which will be placed on top of the support. This must be positioned to allow the closure piece to be later cut to length to discharge into the gutter.



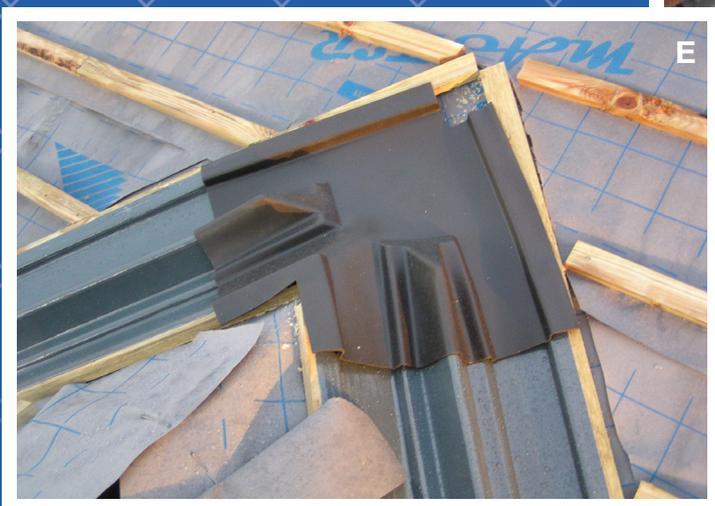
B. The eaves closure piece is placed over the support – a flexible packing piece is used to support the sides of the closure if the battens do not extend to the fascia.



C. The V-Flow DF valley trough is fixed in position over the eaves closure piece at 500 mm centres, with large headed galvanised or aluminium nails.



D. The eaves closure piece is cut to allow water discharge into the gutter.



E. The top closure 90 or 75 should be fixed in position over the two joining FILON V-Flow DF valley troughs.



F. The completed installation: neat, tidy and effective – with minimal on-site time.

# V-Flow DF Technical information

## Handling and Storage

Appropriate care must be taken at all times when handling, storing and installing GRP roofing system components. Care must be taken to avoid damage to edges of sheets and trims. All GRP components should be stored under cover in dry conditions where possible. When stored in open conditions, components should be kept clear of the ground on timber battens or pallets and protected by opaque, waterproof covers.

## Specification and Application

GRP components can be specified for warm or cold roof constructions in new build or refurbishment projects. They are suitable for use with most types of roof construction. The relevant components have been tested in accordance with BS 2782 and BS 4154 for GRP.

## Sealants

Low modulus sealants can be used with GRP products. If in doubt, always seek advice as to the correct sealant.

## Effects of Chemicals

Suitable for exposed, harsh environments. Certain acids, alkalis and solutions of water soluble gases may attack GRP sheets and fixings. Where such conditions occur please contact your supplier.

## Liquids

Water absorption: 50mg after 7days (BS2782: Part 4, Method 430A: 1983).

## Biological

Resistant to attack by micro-organisms, fungi, larvae, insects and mildew. Wash with mild detergents to remove deposits.

## Thermal Properties

'U' value is dependent upon roof construction.  
Coefficient of linear expansion:  $22 \times 10^{-6}$  m/m per °C.

## Effects of Sunlight

All polyester resins used in production of FILON GRP, as well as those used for laminating, are UV stabilised. FILON valley gutters have a UV protective coating on the weather face.

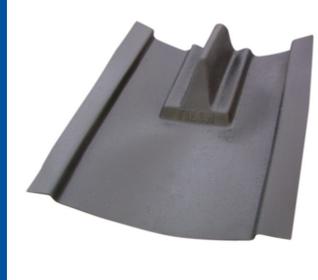
## Compatibility

No chemical reaction with other established construction materials when fully cured.

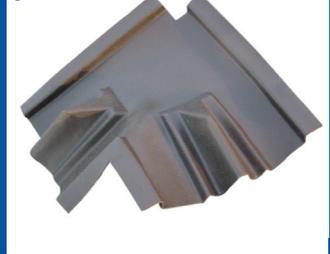
## Fire

Tested to: BS476 - Part 3 – SAB. BS476 - Part 7 – Class 3.

### Eaves closure piece



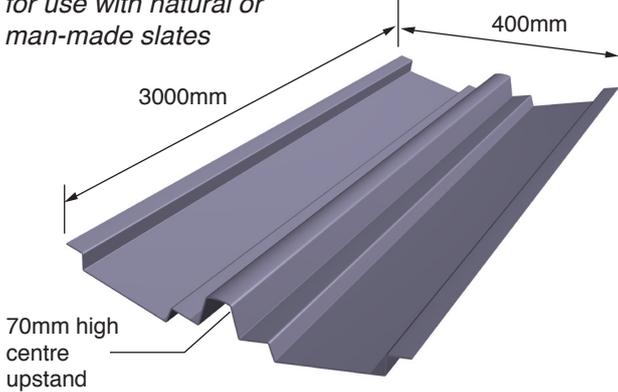
### 90° / 75° top closure piece



Note: Eaves and Top closures are currently only available for the GDFVT110 Valley Trough

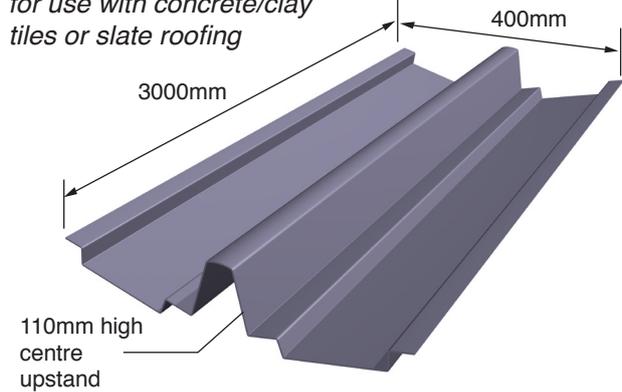
### GDFVT70 Valley Trough

for use with natural or man-made slates



### GDFVT110 Valley Trough

for use with concrete/clay tiles or slate roofing



# FILON<sup>®</sup>

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