

Ductwork Components

VerroFlange Ductwork Jointing System

Slide on Flange Details & Specifications

- Provides for rapid assembly of cross joints.
- Permanently flexible non-toxic sealant injected into the profile during manufacture.
- Available in standard metric sizes of 20mm, 30mm and 40mm.
- Fully conforms to UK, HVCA specification DW144.
- Awarded Quality Assurance Certification BS EN ISO 9001.
- Full accessory range to suit all sizes of flange, choice of material types and gauges.
- Tested and certified by BSRIA in accordance with the B&ES (formerly HVCA) test procedures DW/TM1.
- Suitable for B&ES specification DW/144 for Joint Ratings up to J6 and pressure classes A, B, C and D.



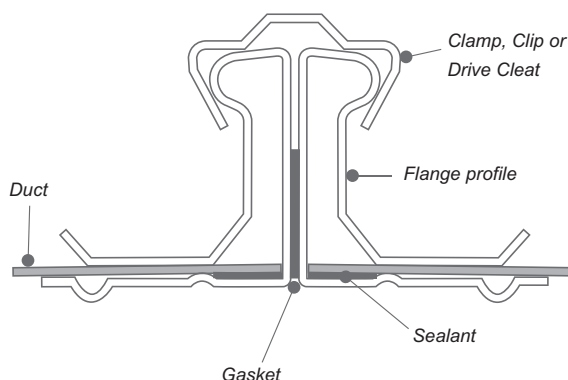
Design Specification

During the manufacturing process the sealant pocket is rolled into the profile and airtightness is ensured by the inclusion of a non-toxic sealant.

All rectangular ductwork cross joints shall be the VerroFlange slide on flange type complete with integral permanently flexible non-toxic sealant, consisting of a Galvanised MS Profile and EZP Corner Pieces. The appropriate size of flange shall be fitted to the ductwork as covered by the construction tables 2 to 4 of specification DW144. Shall be independently tested to the procedures of BSRIA in accordance with HVCA specification DW/TM1 and as manufactured by Doby Verrolec. The flanges shall be fitted to

the ductwork and assembled on site where appropriate with the correct gasket, all to the manufacturers instructions.

VerroFlange Profile - Cross Section



DW/TM1 Test Results

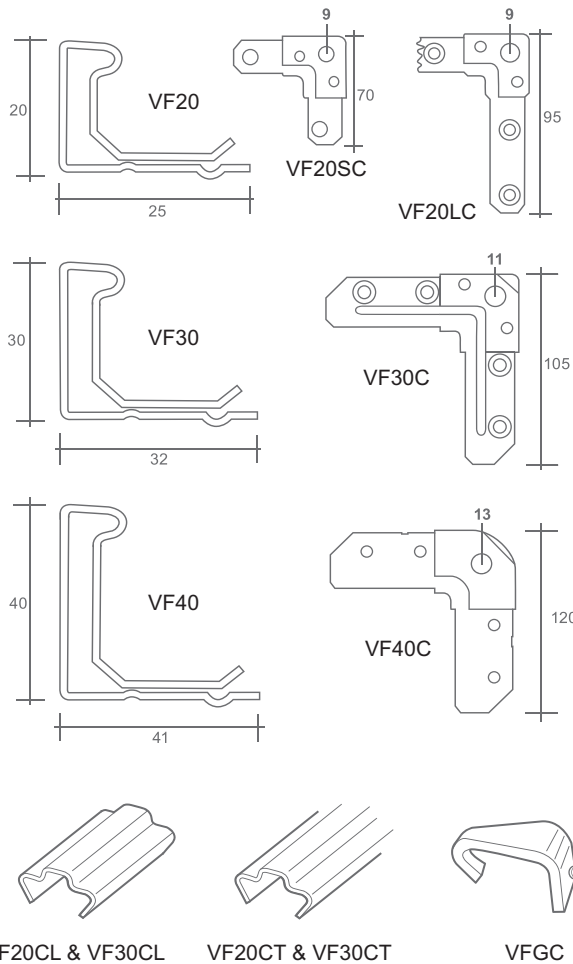
| Profile | Joint Rating | Pressure Class | | | |
|---------------------|--------------|----------------|---|---|---|
| | | A | B | C | D |
| VF20 | J2 | ✓ | ✓ | ✓ | ✓ |
| VF30 | J3 | ✓ | ✓ | ✓ | ✓ |
| VF30 | J4 | ✓ | ✓ | ✓ | ✓ |
| VF40 | J5 | ✓ | ✓ | ✓ | ✓ |
| VF40 ⁽¹⁾ | J6 | ✓ | ✓ | ✓ | ✓ |

(1) When used with a Central Tie Bar.

As tested by BSRIA in accordance with HVCA specification DW/TM1 test procedures.



Product Details & Specifications



Flange Profiles

| | gauge(mm) | weight(kg) |
|------|-----------|------------|
| VF20 | 0.8 | 0.52/m |
| VF30 | 1.0 | 0.86/m |
| VF40 | 1.25 | 1.38/m |

British Standard steel grade and coating specification
BS EN 10346:2015 DX51D +Z275 MAC.
Integral sealant, Evode Glasticon 126 solvent free
permanently non-setting mastic.

Corner Pieces

| | gauge(mm) | weight(kg) |
|--------|-----------|------------|
| VF20SC | 2.5 | 9.5/250 |
| VF20LC | 2.5 | 14.0/250 |
| VF30C | 3.0 | 15.0/125 |
| VF40C | 5.0 | 13.7/50 |

Hot rolled steel to BS EN 10111:1998.
Steel grade EN 10111 - DD11 Pickled & Oiled finish -
Zinc and clear passivate to BS EN 12329 - Fe/Zn5/A

Clips, Cleats & Clamp

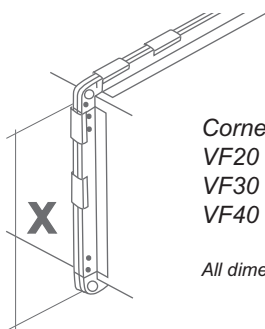
| | gauge(mm) | weight(kg) |
|--------|-----------|------------|
| VF20CL | 1.2 | 6.6/200 |
| VF30CL | 1.2 | 7.4/200 |
| VF20CT | 1.2 | 0.33/m |
| VF30CT | 1.2 | 0.38/m |
| VFGC | 3.0 | 5.4/100 |

Coating specifications as per Flange Profiles above
(minus sealant details).
VerroFlange profiles are also available in different
materials, (Aluminium, or Stainless Steel).

Ductseal Gasket

A cross linked Medium Density P.V.C. closed cell foam combined with a high grab sensitive adhesive to give good all round sealing properties. Temperature range -40°C to $+70^{\circ}\text{C}$. We recommend the use of the appropriate gasket to ensure performance in accordance with our DW/TM1 test results, where application allows. Supplied in green for easy identification.

Corner Hole Centering



Corner Holes Centres (X)

| | |
|------|----------------------|
| VF20 | Ductsize plus 20 nom |
| VF30 | Ductsize plus 32 nom |
| VF40 | Ductsize plus 30 nom |

All dimensions are in millimetres

Packing details

Profiles

Bundles of 250m and 75m, 5000mm standard length, 3000mm to order.

Corner Pieces

| | |
|------------------------|-----------------------|
| VF20SC in boxes of 250 | VF30C in boxes of 125 |
| VF20LC in boxes of 250 | VF40C in boxes of 50 |

Clips

VF20CL & VF30CL in boxes of 200
DS033 in boxes of 200

Drive Cleats

VF20CT & VF30CT in bundles of 500m, 2000mm standard length.

Clamp

VFGC in boxes of 100

Gasket

| |
|------------------------------------|
| 570 in cartons of 825m (55 rolls) |
| 571 in cartons of 600m (40 rolls) |
| 572 in cartons of 480m (32 rolls) |
| 572A in cartons of 300m (20 rolls) |

Corner Nuts and Set Screws

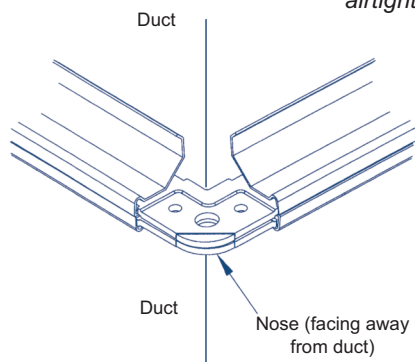
DS160 - DS163 in boxes of 250

Fabrication Instructions

Cut two lengths of profile to suit the duct width less 30-32mm (W), and two lengths to suit the duct height less 30-32mm (H).

Note: External dimensions of the duct are to be used.

The profile should be cut in the direction shown to prevent the metal cuttings contaminating the sealant. For best results use a circular cut off saw with pneumatic vice. The use of an abrasive blade or wheel should not be used, the heat can melt the sealant and affect the airtightness of the completed joint. If any burring has occurred during the cutting of the flange, this must be removed before assembly.



Fully insert four corners into the flange to form a rectangle frame as shown. Care must be taken to ensure the legs of the corners are fully inserted into the flange, the 'nose' on the corner faces away from the duct on which the frame is to be fitted.

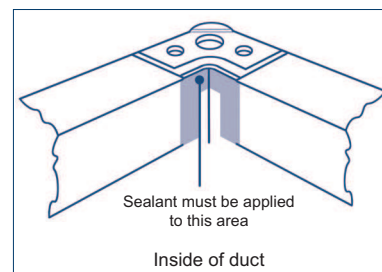
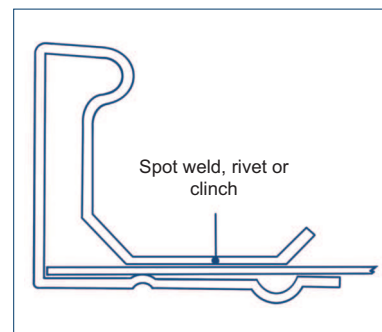
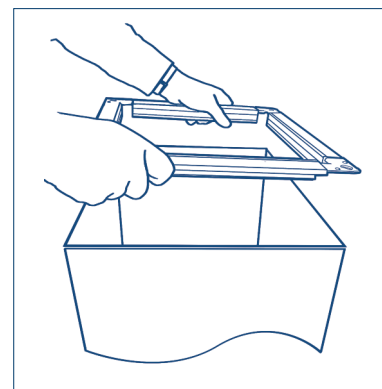
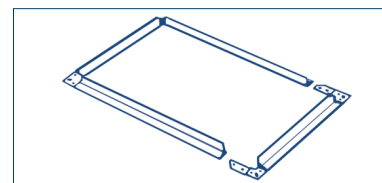
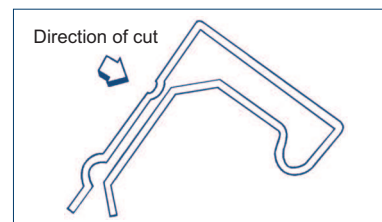
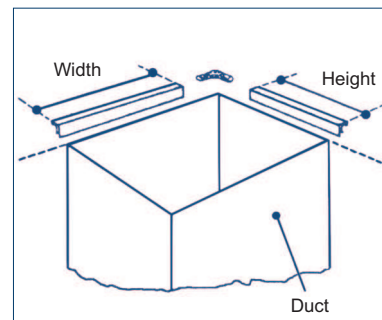
To comply with DW/144 corner pieces should be fixed into the flange. Corners can be secured into profile by dimpling if preferred (machine reference DS145-147).

The frame is now ready to be fitted to the duct. Starting in one corner, the frame should be firmly tapped home by working away from the corner. On larger ducts a straight edge should be used to ensure the frame is on 'flat'.

The frame can be attached to the duct by various methods, spot welding, rivet or clinch. Spacing for fastenings to be as DW144 Table 5. A fixing at a maximum of 50mm from each corner is recommended, this will give additional strength during the installation.

Any burrs caused during the drilling for fixings should be removed from all surfaces before finally fixing the frame to the duct. Sealant should be applied if any method of fixing pierces the duct.

When the frame is securely fixed, a bead of mastic needs to be run along the cut end of the flange on the inside of the duct, a further bead of sealant is required around the corner piece where it meets the duct on the inside.



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Site Installation

The gasket is fitted as one continuous length. To complete the seal there should be a minimum overlap of 30mm where the two are in contact. For working duct pressures of 1000PA and above, additional gasket should be applied to the four corners extending 30mm from the corner onto the flange.

Assemble the ductwork by the use of nuts and set screws fitted into the corner holes. If necessary align the corner holes by use of the joggle holes. The nuts and screws should be finger tight at this point.

Use M8x25mm set screw for VF20

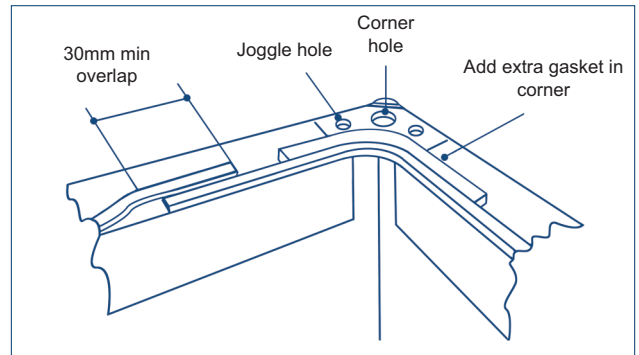
Use M10x25mm set screw for VF30

Use M12x25mm set screw for VF40

Fixings should not exceed 400mm centres.

To fit the cleats or clips to two sides of the duct, remove one corner set screw and slide the drive cleat across the profile. Compress the nose of the profile together by using molegrips or similar.

Repeat this operation for the other two sides. Finally tighten the corner nuts and set screws.



| CLEAT SELECTION | | | | |
|-----------------|--------|--------|---------------|------|
| Profile | VF20CL | VF30CL | VF20CT VF30CT | VFGC |
| VF20 | ✓ | | ✓ | * |
| VF30 | | ✓ | ✓ | * |
| VF40 | | | | ✓ |

* Use for inaccessible areas

