

Ductwork Components

VerroMax Ductwork Jointing System

Slide on Flange Details & Specifications

- Provides for rapid assembly of cross joints, minimising fabrication time.
- Permanently flexible non-toxic sealant injected into the profile during manufacture, will not harden and crack post installation.
- 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.
- No need to switch flange regardless of joint rating and pressure class.
- Full range of accessories to suit all sizes of flange.
- 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 J5 and pressure classes A, B and C.
- Z275 gram coating to steel giving anti-corrosion benefits.
- Choice of material types and gauges, available in Stainless Steel & Aluminium or request.



Design Specification

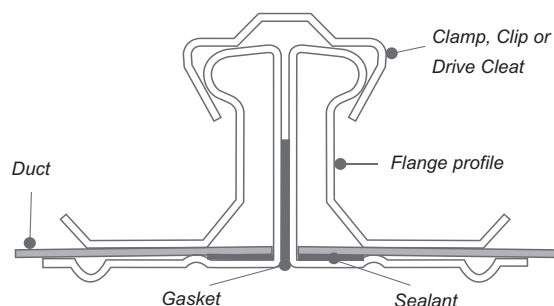
During the manufacturing process airtightness is ensured by the inclusion of a non-toxic sealant.

All rectangular ductwork cross joints shall be the VerroMax 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 with the appropriate gasket all to the manufacturers instructions.

VerroMax Profile - Cross Section



DW/TM1 Test Results

Profile	Joint Rating	Pressure Class		
		A	B	C
VM20	J2	✓	✓	✓
VM30	J3	✓	✓	✓
VM30	J4	✓	✓	
VM30 ⁽¹⁾	J5	✓	✓	✓
VM40 ⁽¹⁾	J5	✓	✓	✓

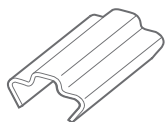
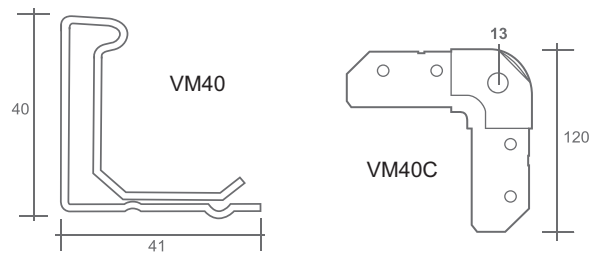
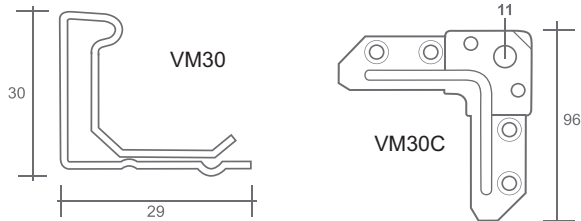
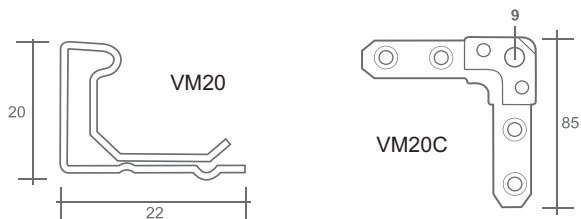
Notes:

VM20, VM30 and VM40 for TM1 test results refer to 120.2 and 130.3, as tested by BSRIA in accordance with HVCA specification DW/TM1 test procedures.

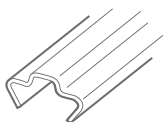
(1) When used with central Tie Bar as tested by BSRIA in accordance with HVCA specification DW/TM1 test procedures.



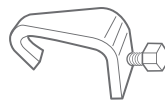
Product Details & Specifications



VF20CL



VF20CT

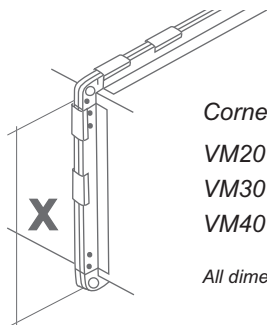


VFGC

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)

VM20 Ductsize plus 20 nom

VM30 Ductsize plus 32 nom

VM40 Ductsize plus 30 nom

All dimensions are in millimetres

Flange Profiles

	gauge(mm)	weight(kg)
VM20	0.7	0.47/m
VM30	0.8	0.73/m
VM40	1.0	1.11/m

Steel Grade and coating BS EN 10346:2015 DX51D +Z275 MAC.

Integral Sealant, Evode Glasticon 126 Solvent Free permanently non-setting mastic.

Corner Pieces

	gauge(mm)	weight(kg)
VM20C	2.0	12.6/250
VM30C	3.0	12.4/125
VM40C	5.0	13.7/50

Steel Grade EN 10111:1998-DD11 Pickled & Oiled Finish - Zinc and clear passivate to BS EN 12329-Fe/Zn5/A.

Clip, Cleat & Clamp

	gauge(mm)	weight(kg)
VF20CL	1.2	6.58/200
VF20CT	1.2	0.33/m
VFGC	3.0	5.4/100

Steel Grade EN 10142:2000 Coating Specification EN 10142 DX51D +Z275-M-A-C. Pickled & Oiled Finish - Zinc and clear passivate.

Packing details

Profiles

VM20	250m Bundle
VM30	250m Bundle
VM40	250m Bundle
5000mm standard length, 3000mm to order.	

Corner Pieces

VM20C	Boxes of 200
VM30C	Boxes of 125
VM40C	Boxes of 50

Clip

VF20CL	Boxes of 200
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Drive Cleat

VF20CT	Bundles of 500m
2000mm standard length.	

Clamp

VFGC	Boxes of 100
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Gasket

570	Carton of 825m (55 rolls)
571	Carton of 600m (40 rolls)
572	Carton of 480m (32 rolls)
572A	Carton of 300m (20 rolls)

Corner Nuts and Set Screws

DS160 - DS163	in boxes of 250
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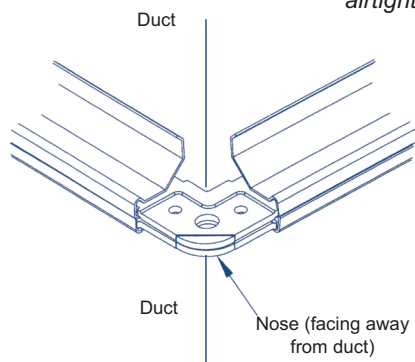


Fabrication Instructions

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.

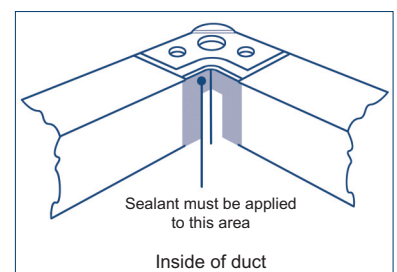
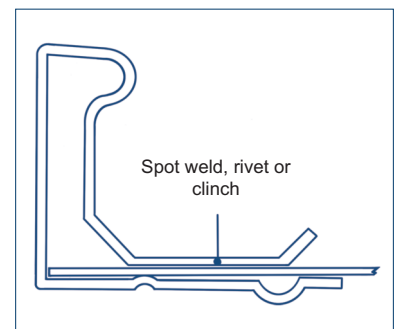
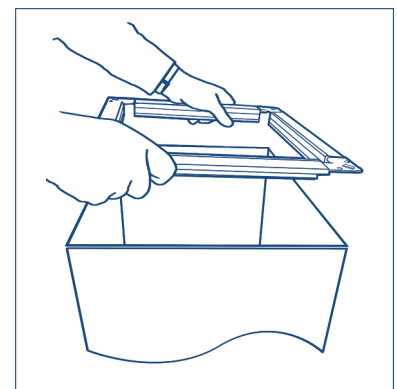
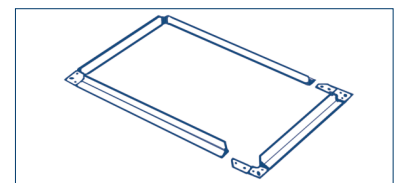
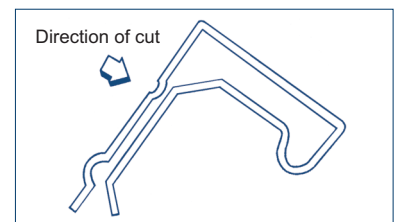
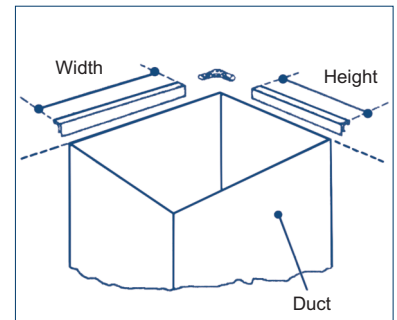
To comply with DW/144 corner pieces should be fixed into the flange. Corners can be secured into profile by dimpling if preferred (machine reference DS145-147).

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.

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.

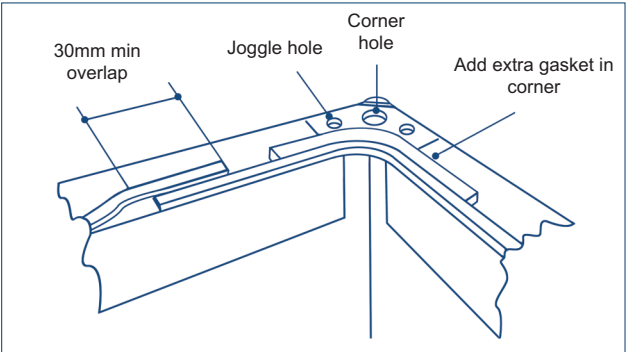
When the frame is securely fixed, a fillet of mastic needs to be run along the cut end of the flange on the inside of the duct, a further fillet of sealant is required around the corner piece where it meets the duct on the inside.



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Site Installation

When using VF20LC, VF30C and VF40C corners the Verrolec gasket 570 (9mm x 4.5mm) is used. 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 VM20

Use M10x25mm set screw for VM30

Use M8x25mm set screw for VM40

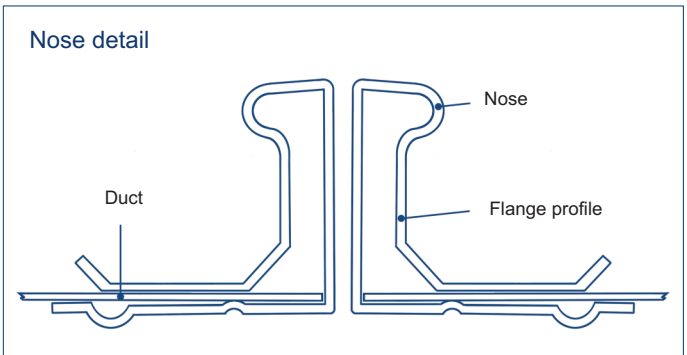
CLIP / CLAMP / CLEAT SELECTION			
Profile	506	508	505
VM20	✓	✓	
VM30	✓	✓	*
VM40			✓

* Use for inaccessible areas

Fixings should not exceed 400mm centres.

To fit the 506, 508, and drive cleat 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.



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