



## Daylight Systems

# INSTALLATION INSTRUCTIONS: DR1000 Multivault CPS

### INTRODUCTION


DR1000 is the the low pitch composite system from Wards, ideal for low pitch applications. When introducing daylight through such a system a high specification rooflight is required. For this Brett Martin Daylight Systems recommend the **DR1000 Multivault CPS**.

It is a triple skin rooflight consisting of a double skin FAIR and single skin barrelvault outer suitable for all low pitch and curved roof DR1000 applications. Meeting Building Regulation requirements in a cost effective manner it is the first choice rooflight system for DR1000.

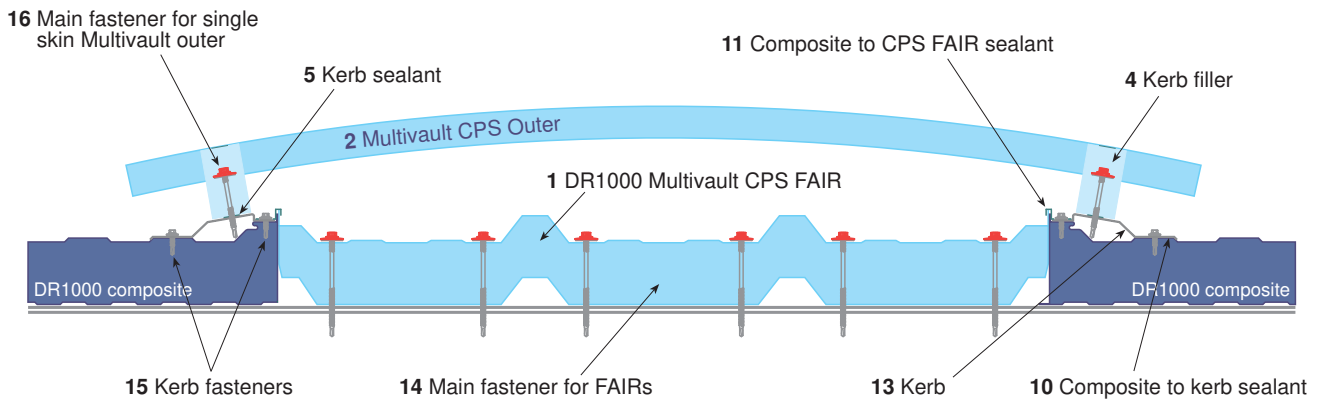
This Technical Bulletin details the installation of the **DR1000 Multivault CPS** including installation drawings, recommended fixing sequence and parts check list.

### PARTS CHECK LIST

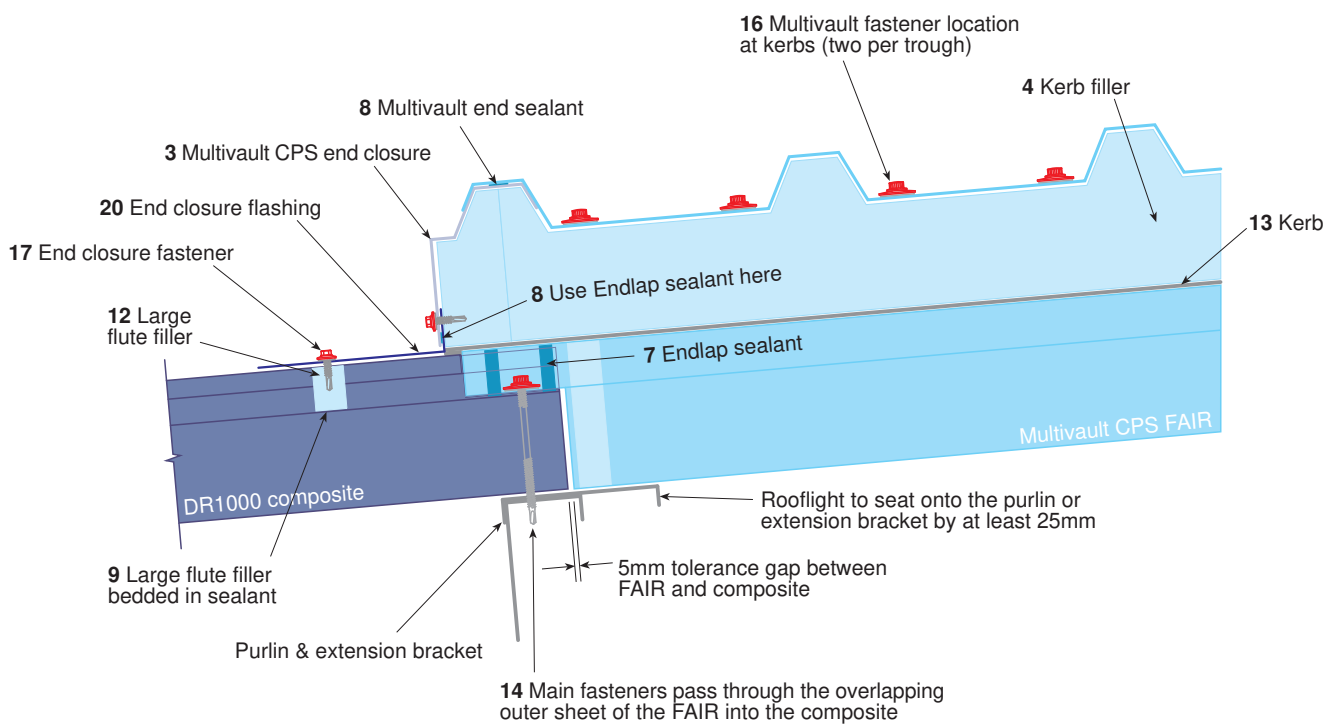
The following list itemises all parts which maybe required. Item numbers refer to those shown in the following installation drawings. It is the responsibility of the roofing contractor to identify all parts required and correct quantities for each particular application. The list is colour coded: items 1-12 (green) are available from BMDS and items 13-20 (orange) to be sourced by others.

ITEM	DESCRIPTION	CHECK	SUPPLIED BY
1	DR1000 Multivault CPS FAIR	<input type="checkbox"/>	 <p>Coventry Aldermans Green Ind Estate Coventry CV2 2QU 024 7660 2022 <a href="http://www.daylightsystems.com">www.daylightsystems.com</a></p>
2	Multivault CPS Outer	<input type="checkbox"/>	
3	Multivault CPS End Closure	<input type="checkbox"/>	
4	Kerb Filler (E289 - 0950)	<input type="checkbox"/>	
5	Sealant - Kerb to Filler (0311 - 20x3mm)	<input type="checkbox"/>	
6	Sealant - Filler to CPS Outer (Webbseal LMN clear silicon)	<input type="checkbox"/>	
7	Sealant - FAIR end lap (0311 - 6x5mm)	<input type="checkbox"/>	
8	Sealant - Multivault CPS Outer end lap (0311 - 9x3mm)	<input type="checkbox"/>	
9	Sealant - Large flute filler (Webbseal LMN clear silicon)	<input type="checkbox"/>	
10	Sealant - DR1000 to kerb (0311 - 9x3mm)	<input type="checkbox"/>	
11	Sealant - DR1000 to CPS FAIR (Vapourflex)	<input type="checkbox"/>	
12	Large flute filler to suit DR1000 (0625)	<input type="checkbox"/>	
13	Kerb	<input type="checkbox"/>	<p><b>ROOFING CONTRACTOR</b></p> <p>It is the responsibility of the roofing contractor to ensure all parts have been acquired in the correct quantities for their particular application.</p>
14	Main fastener - FAIR (eg. SFS SXC5-A32-5.5x133)	<input type="checkbox"/>	
15	Fastener - Kerb (eg. SFS SX3/10-L12-S19-6x29)	<input type="checkbox"/>	
16	Main fastener - Multivault Outer (eg. SFS SXC5-A32-5.5x92)	<input type="checkbox"/>	
17	Fastener - End closure (eg. SFS SX3/10-L12-S19-6x29)	<input type="checkbox"/>	
18	Galvanised ridge support & rigid PIR foam (if required)	<input type="checkbox"/>	
19	Site fabricated water deflector - by specialist contractor	<input type="checkbox"/>	
20	End closure flashing	<input type="checkbox"/>	

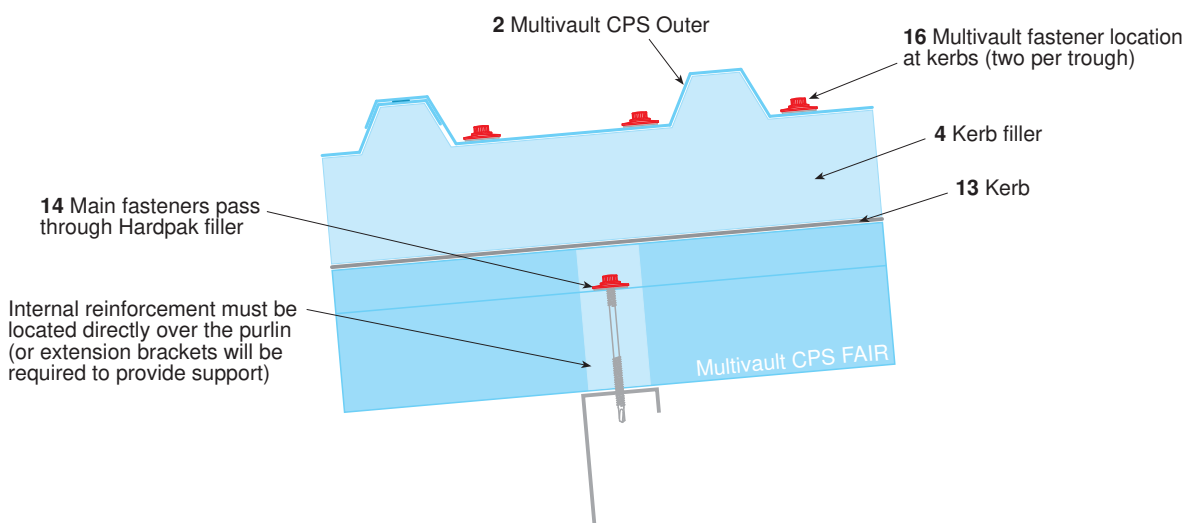
## CROSS SECTION: Multivault CPS FAIR and Outer



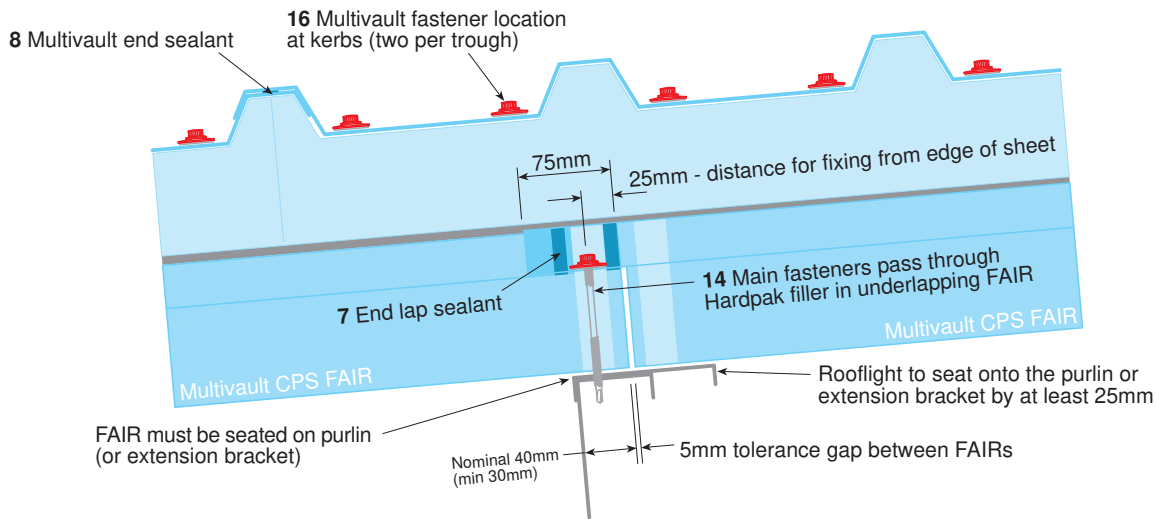
## ENDLAP - Rooflight to composite



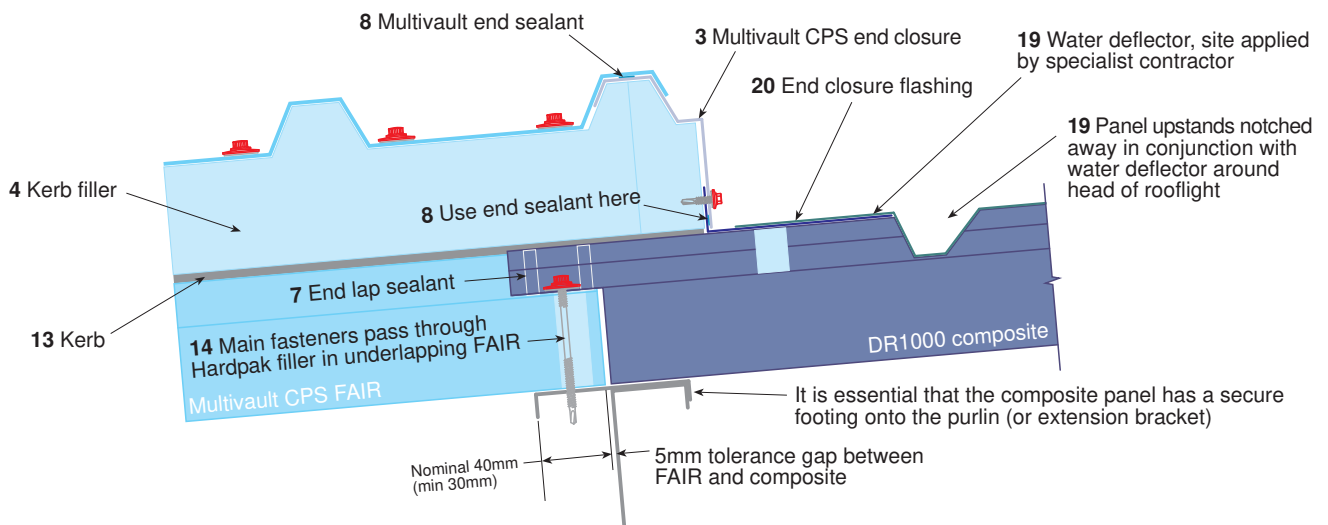
## MID SPAN ARRANGEMENT



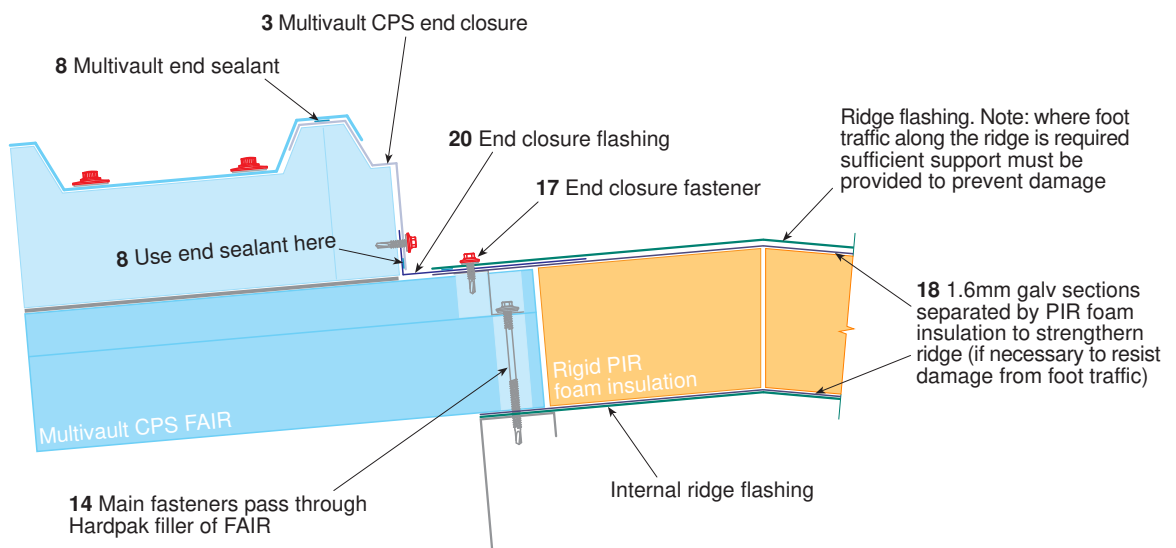
## ENDLAP - Rooflight to rooflight



## ENDLAP - Composite to rooflight



## ENDLAP - Ridge position



## KERB LENGTHS

Before kerbs are fitted the run lengths need to be calculated. The overall kerb run length will be the sum of the run length of the Multivault CPS Outers\* (ITEM 2) + 150mm, to ensure both Large flute fillers will be correctly positioned relative to the Multivault CPS end closures/flashings. The position of the fillers should be designed to be clear of the FAIR at each end (as shown), if the rooflight run terminates at the ridge the kerb should stop in line with the FAIR (as shown).

\*Multivault CPS Outer run length is 1020mm per element.

## FIXING SEQUENCE

- a Position the DR1000 Multivault CPS FAIRs (ITEM 1) ensuring all endlaps are sealed with 2 rows of 6x5mm section, UV stable, pale coloured cross linked butyl mastic (ITEM 7), positioned above and below the line of fixing, no more than 25mm from the line of fasteners.
- b Before fixing, position the FAIR in line with the down slope DR1000 panel then fix down the FAIRs using Stainless steel 5.5mm diameter fasteners fitted with a large diameter (29/32mm) washer with soft (40 shore hardness) bonded seal (ITEM 14). There should be six fasteners located as shown. Do not over tighten fixings, do not use light weight washers.
- c Install up slope and adjacent DR1000 panels using standard DR1000 installation techniques.

### **DO NOT LEAVE DR1000 MULTIVAUULT CPS FAIRS EXPOSED TO THE WEATHER - COVER IMMEDIATELY WITH MULTIVAUULT CPS OUTERS**

- d Apply a run of Vapourflex sealant (ITEM 11) long both side joints to ensure a satisfactory vapour check.
- e Apply a run of composite to kerb sealant (ITEM 10) along both sides (located as shown), then position kerb (ITEM 13) and fix using kerb fasteners (ITEM 15).
- f Run Kerb to Filler sealant (ITEM 5) along both kerbs end to end.
- g At the down slope end, position the kerb fillers (ITEM 4) and carry on along the kerbs on both sides ensuring the end kerb fillers on each side are correctly aligned with each other and with the position of end closure (ITEM 3).
- h Fix the Large flute filler (ITEM 12) to the down slope composite against the end of the kerbs, bed in silicone sealant (ITEM 9) including a bead along the top of the dam.
- i Run a bead of silicone sealant (ITEM 6) along the top of the kerb fillers at the end of the run, including down the end of the kerb fillers.
- j Position the End closure flashing (ITEM 20) & Multivault CPS End Closure (ITEM 3) onto the down slope fillers compressing the sealant on the Large flute fillers. Secure flashing and end closure together (ensuring joint is sealed) and in place using fasteners (ITEM 17) fixing into the corrugations of DR1000 panel. Note: the end closure will need to be trimmed to fit with the End closure flashing.
- k Run a strip of Multivault CPS Outer end lap sealant (ITEM 8) along the centre of the CPS End Closure corrugation. Prepare the first Multivault CPS Outer element (ITEM 2), by running a strip of end lap sealant (ITEM 8) on the under lapping corrugation of the element. Ensure silicon sealant (ITEM 9) is along the top of the kerb filler, position the first Multivault CPS Outer element with an equal amount of lap overhanging each kerb.
- l When correctly positioned fix in place with stainless steel 5.5mm diameter fasteners with large diameter washer (29/32mm) with soft (40 shore hardness) bonded seal (ITEM 16), each Multivault CPS Outer element (ITEM 2) should be fixed with two fasteners in each trough along both sides. Do not over tighten fixings, do not use light weight washers.
- m Continue fitting Multivault Outer elements (ITEM 2) until the last element is ready to be installed.
- n At the other end, position the kerb fillers ensuring the end closure and alignment with the kerb is correct. Position the Large flute filler remembering to bed in silicon sealant (ITEM 9). The position may vary depending on the end detail used.
- o Fit the Multivault CPS End Closure (ITEM 3) and End closure flashing (ITEM 20) ensuring all sealant is in place and secure to the DR1000 panel. Note: the end closure will need to be trimmed to fit with the End closure flashing.
- p Position the last Multivault CPS Outer element (ITEM 2) ensuring all sealants are in place and secure to kerb.
- q Where the rooflight terminates mid slope the site applied water deflector (ITEM 19) will be required, by a specialist contractor, e.g. Aperture t: 0161 681 4455 / Jones & Woolman Ltd t: 01922 712 111.
- r If the rooflight assembly is to run to the ridge position the kerb should extend to the top purlin. Where safe access along the ridge is required, additional galvanised steel ridge sections & rigid PIR foam (ITEM 18) will be required as shown.