Setting out step flashing

Introduction

There are numerous ways of flashing the conservatory roof to the host wall. In this section we will go through the processes required to make the Lead work quick and effective. The tables below show the identification and specification and also in which situation each code of Lead should be used.

The term 'step flashing' is given to the flashings which weathers a pitched roof to brick/stonework. There are four main types of flashings used in conjunction with conservatory roofs:

1 Step flashing.

2 Step and cover flashing.

3 Flashing to coursed stonework.

4 Flashing to random/rubble walls.

Before installing flashing, the mortar should be ground out. It is advisable to do the grinding as early as possible as this will prevent the window frames and roof sections from becoming coated in mortar and brick dust - saving you time at the end of the job cleaning.

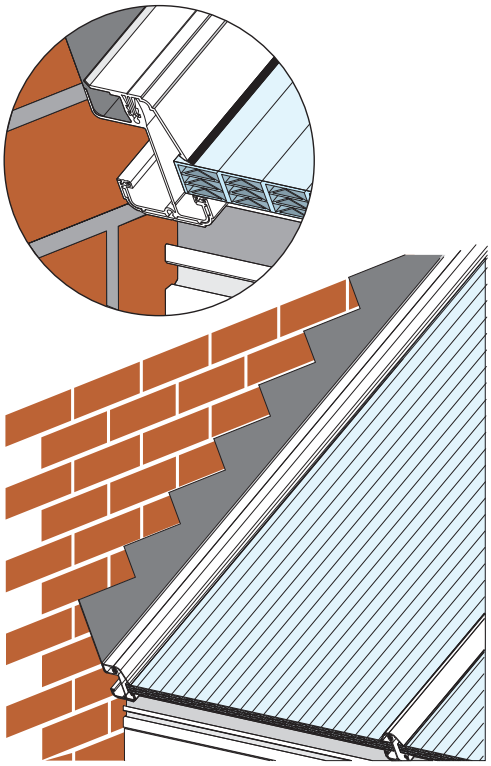
BS specification Code No.	Colour	Thickness (mm)
3	Green	1.25
4	Blue	1.80
5	Red	2.24
6	Black	2.50
7	White	3.15
8	Orange	3.55

Fixing position	BS specification Code No.
Small flats with no pedestrian traffic	4 or 5
Large flats with or without traffic	5, 6 or 7
Gutters - parapet, box or tapering valley	5 or 6
Dormer cheeks and roofs	4 or 5
Chimney flashings	4 or 5
Soaker	3 or 4
Cornices	5 or 6
Valleys, hip, ridge and cover flashings	4 or 5
Vertical cladding	4 or 5
Pipe weathering	4 or 5
Cornice weathering	4, 5 or 6
Damp-proof courses	3, 4 or 5

Setting out step flashing

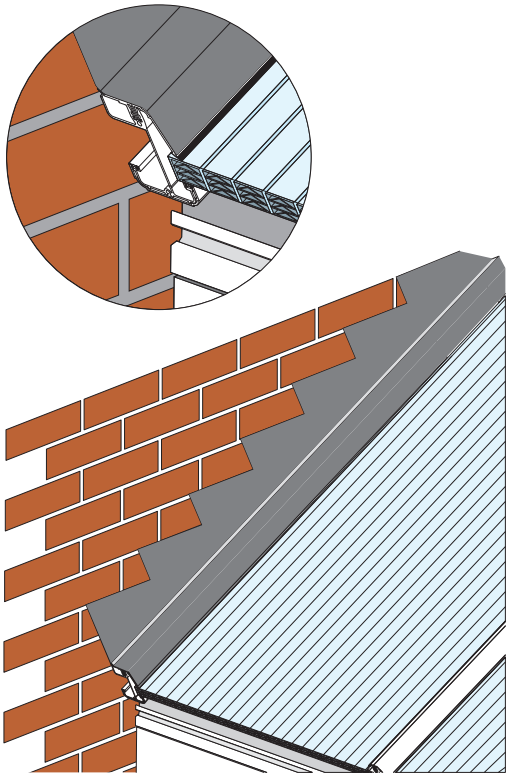
1 Step flashing

Step flashing should be done in runs of between 1.2 and 1.5m. These can be inserted either before or after the Glazing Bars have been installed, however they should always be in position before the glazing materials are fitted. This type of Lead flashing is only suitable for use with materials such as brick, where the horizontal joints are equally spaced and where a drainage channel is available on the Glazing Bar.



2 Step and cover flashings

This style of flashing uses the same step finish as standard step flashing as well as the same lengths of material (i.e. 1.2 to 1.5m). Unlike step flashing however, the Lead isn't dressed into a drainage channel but over the Wall Bar Top Cap. Again, the Lead work can be installed either before or after the Wall Bar has been fitted but it can only be dressed down after the glazing material has been installed. This is because the Wall Bar Top Cap must be in place prior to this part of the process.



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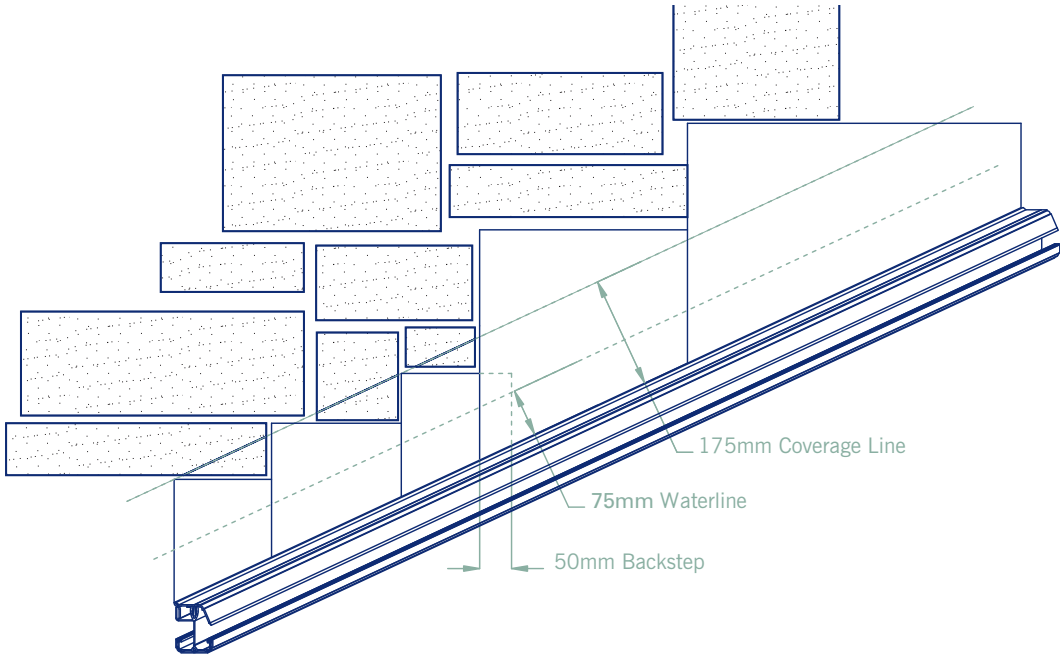
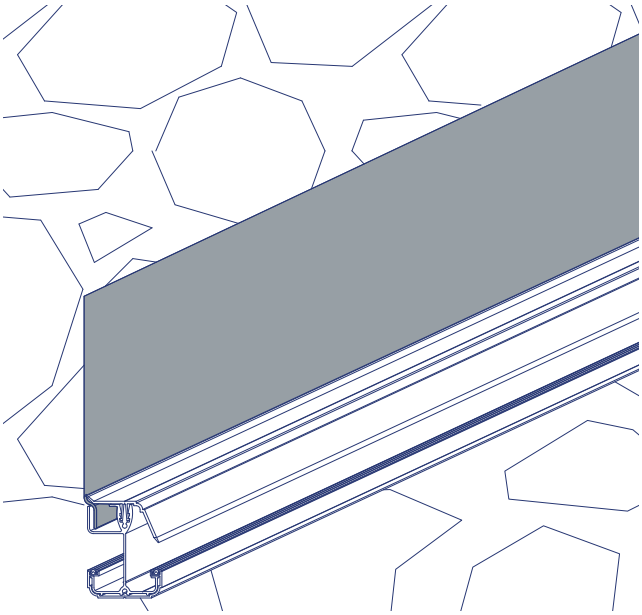
3 Flashing to coursed stone

Where stones are laid to regular horizontal courses, it is possible to use step flashing. However owing to the uneven look of the steps, the preferred method is to use a separate piece of Lead for each step. As with the other types of flashing already mentioned, the Lead can either be dressed into the drainage channel or over the wall bar. There should always be at least a 70mm overlap on each individual flashing.



4 Flashing to random/rubble walls

Where random stonework is used, the best method of flashing is to cut a groove into the stone into which the Lead is to be installed. Again, you can either put the Lead into the drainage channel or form it on top of the wall bar. All runs should be between 1.2m and 1.5m with an over lap of at least 70mm.



Mark and grind

By using information the below you can mark and grind out the mortar required to accept the Lead flashings.

Step 1

Mark on the host wall the height of the window frames. This should be done by firstly marking a vertical line up the host wall from the inside of the outside brick. Repeat this process on both sides of the conservatory.

60mm Frames			
Roof Pitch °	A mm	B mm	C mm
5	103	179	191
10	106	183	196
15	110	189	201
20	114	195	208
25	118	202	215
30	124	212	226
35	131	224	238

70mm Frames			
Roof Pitch °	A mm	B mm	C mm
5	104	180	192
10	108	185	197
15	113	191	204
20	118	199	211
25	123	207	220
30	130	218	232
35	138	231	245

A=underside Eaves Beam to underside of Glazing Bar

B=underside Eaves Beam to Glazing Bar Top Cap (25mm Standard Transom)

C=underside Eaves Beam to Glazing Bar Top Cap (25mm Heavy Duty Transom)

Example Roof Materials Details:

Colours: Mahogany, Unglazed

Finish:

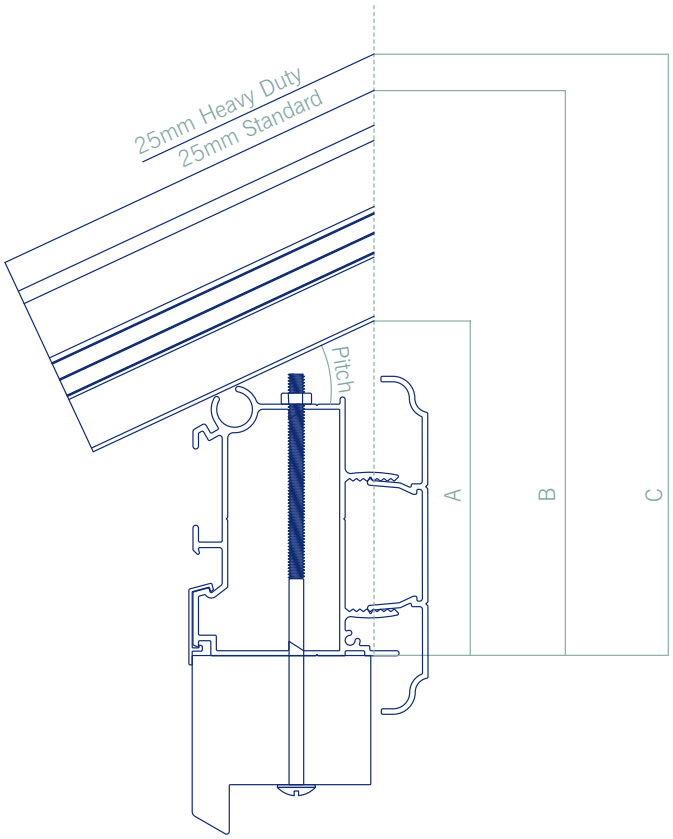
Size: 4050mm width, 5000mm depth

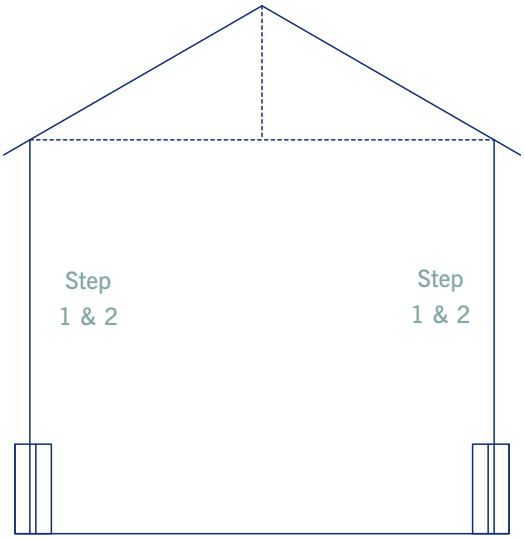
Height: 2100mm windows + 1144/981mm roof

Total: 3244mm

Weight: 217.608kg

Diagram X





Mark and grind

Step 2

Use the information from diagram X to attain the setting out point for the top of the relevant Glazing Bar. Add this height to the height of the window frames.

For example:

60mm window frames, 25° roof pitch with 25mm standard Glazing Bar,

(B) is 202mm. Frame height 1500+202mm=1702mm.

Roof Pitch °	A mm	B mm	C mm	D(STD) mm	D(HD) mm
20	36	116	129	150	163
25	38	121	134	148	163
30	40	127	140	148	163

A=underside Ridge assembly to underside of Glazing Bar

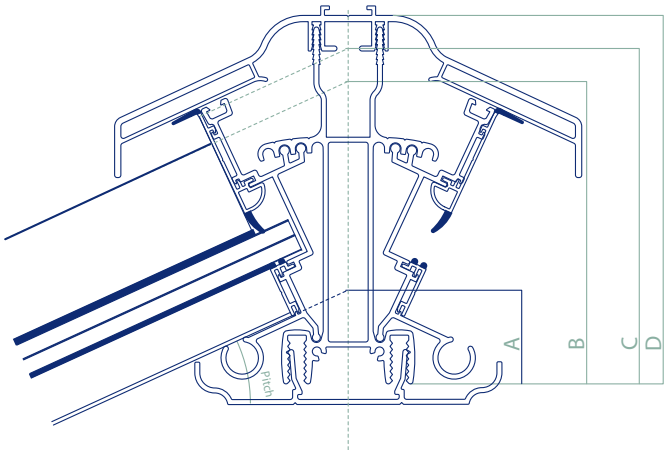
B=underside Ridge assembly to Glazing Bar Top Cap (25mm Standard Transom)

C=underside Ridge assembly to Glazing Bar Top Cap (25mm Heavy Duty Transom)

Step 3

To identify the required position of the centre and underside of the ridge, firstly mark the height of the frames and the roof pitch setting out point on the vertical lines as described in Step 1. Where the window frame height mark bisects the vertical line hammer in a masonry nail. Repeat this on the opposite side. Stretch a chalk line between the two points and ping the line. Next use the information concerning roof material details to find the internal frame size and divide this measurement by 2. This will give you the centre point. From this point use a spirit level and mark a vertical line up the wall. Again using the information from the roof material details, mark the stated height on the line and add to this the height relevant from diagram Y. This line denotes the position of the top of the Wallbar Cap.

Diagram Y



For example:

Roof pitch 25°, 25mm standard Glazing Bar (B)=121mm Ridge height 981mm + 121mm = 1102mm.

Setting out step flashing

Once all the marking and grinding has been done it's time to mark-out the Lead work by following diagram 1 below.

1 Lay the Lead on to the Wall Bar.

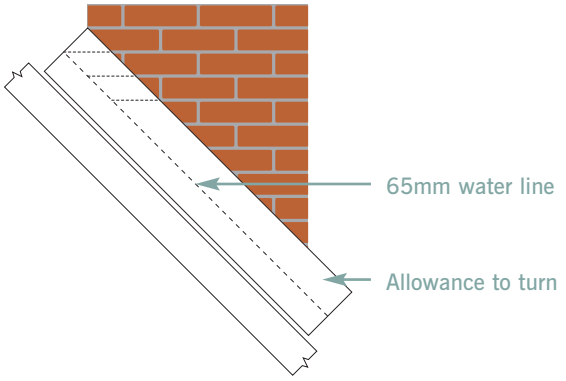
2 Line through accurately the brick joints until they meet the water line.

3 Repeat this all the way down.

Setting out the flashing from brickwork

A straight edge must be in line with each joint to ensure accuracy.

Diagram 1



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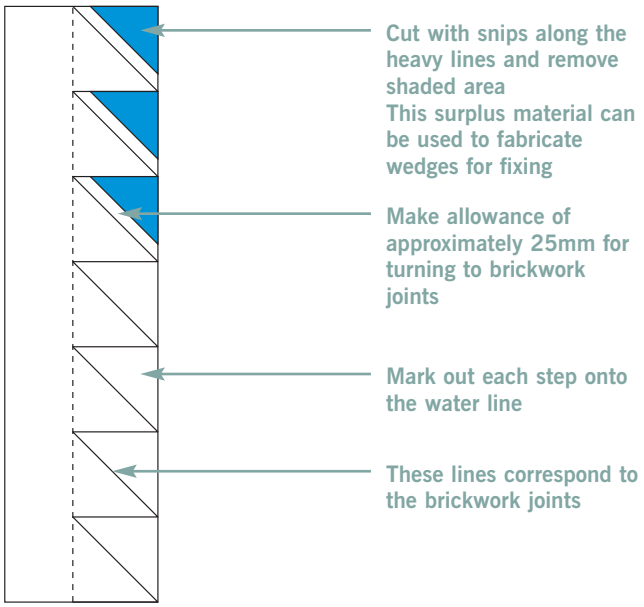
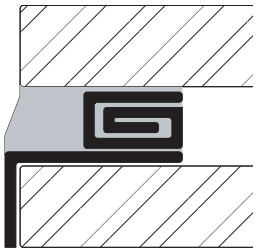


When ready, insert the Lead flashing into the ground recesses and hold in place using pre-made Lead wedges.

Lead sealant



Lead sealant has been especially designed for pointing joints between Leadwork and masonry or brickwork. It gives a permanent, flexible and waterproof joint that can accommodate the different rates at which Lead and masonry expand in-line with changes in air temperature. It is also Lead-grey in colour allowing it to blend in with the Leadwork.

Usually sold in 310ml tubes, Lead sealant is quicker and easier to use than mortar and offers higher levels of adhesion to Lead and masonry. It can also be used in joints with or without damp-proof courses. The average tack time is 30 minutes depending on the ambient temperature.

Handy Hints

- Always thoroughly clean out a joint before applying sealant.
- Prior to Lead Flashings being pointed into joints over 18mm wide they should be fixed using a stainless steel screw and washer at 450mm centres where the Lead is turned up the back of the chase.
- The nozzle on the sealant tube can be cut to suit the width of the joint to be filled. be careful not to cut it too wide at first.
- Keep sealant away from eyes and skin – uncured sealant can cause irritation.