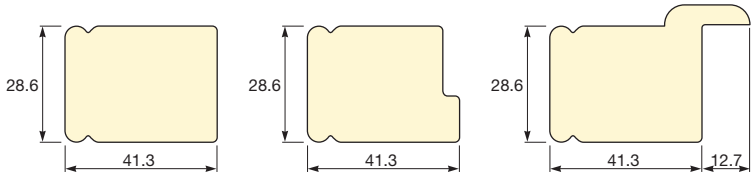
BassWood Shutter Specification

1 Components:

A Stiles:

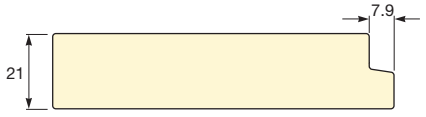


Butt Stile *Rebate Stile* *'D' Mould Stile*

B Rails:

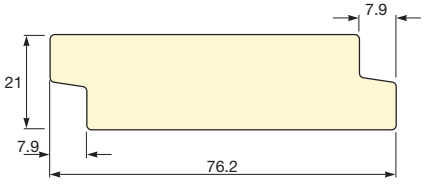
Top and Bottom Rail:

In most instances the top and bottom rail will be deeper than 80mm: we will determine the depth unless otherwise specified in the special instruction section on the order form. If the distributor requires different depth rails, this should be specified on the order form.



Mid-Rails:

The standard mid-rail depth is 76.2mm. If a panel is deeper than 1100mm for 32mm louvres, or 1800mm for 47mm, 64mm, 89mm or 114mm louvres, then a mid-rail is required to add rigidity. (If the panel height is over 1100mm/1800mm and the distributor does not specify the mid-rail location, we will automatically add a mid-rail to the centre of the panel. If the order states that a mid-rail is not required, the warranty will be deemed to have been waived).



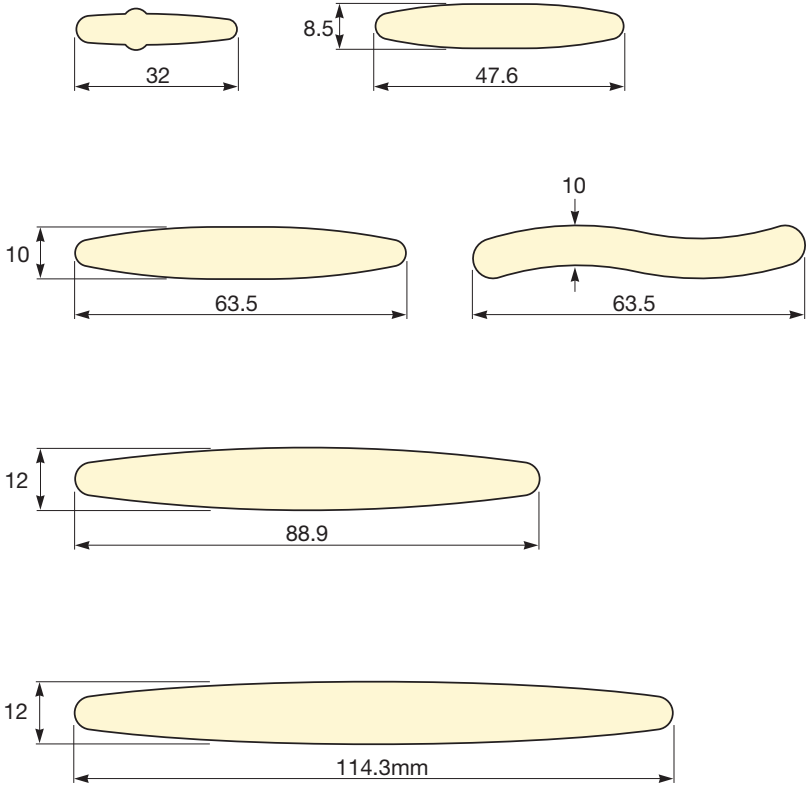
If the distributor requires a different size mid-rail, this should be specified on the order form.

Continued...

BassWood Shutter Specification

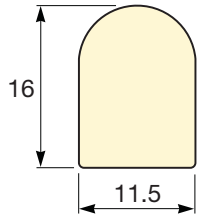
C Louvres:

32mm, 47mm, 64mm (Elliptical & S Shape), 89mm & 114mm



D Tilt Rod:

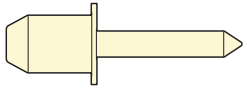
Standard Tilt Rod:



Hidden Tilt Rod:
Tilt rod is rebated into the side stile and is available on 64mm elliptical, 89mm and 114mm louvres only.

Offset tilt rod:
Standard offset is 25mm from the centre of tilt rod to end of louvre on hinge side.

E Louvre Pin:



Louvre pins are used to ensure louvre tension. Additionally a tension rod is inserted through a louvre in the panel. This will require the panel to have holes in the stiles for access to the screw heads on the tension rod. The tension can be adjusted by tightening or loosening the screws.

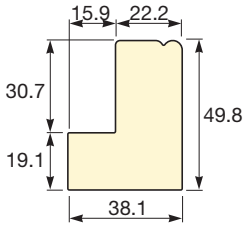
Spring pins are supplied with replacement louvres to ease installation.

Continued...

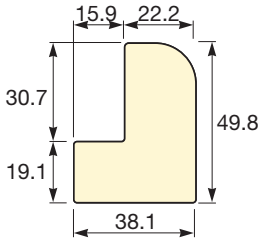
BassWood Shutter Specification

F Frame Options:

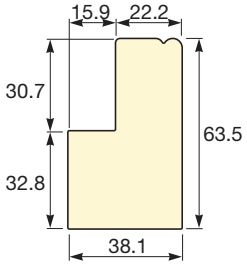
Beaded L



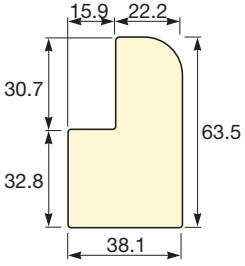
Bullnose L



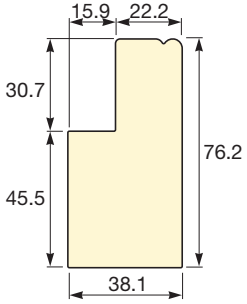
63mm Beaded L



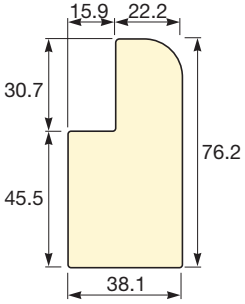
63mm Bullnose L



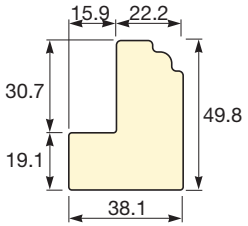
76mm Beaded L



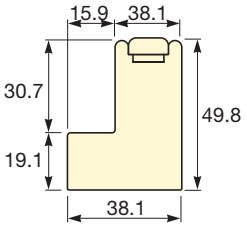
76mm Bullnose L



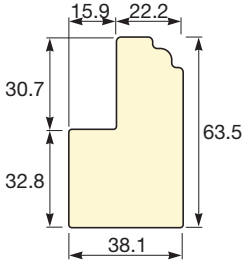
Colonial L



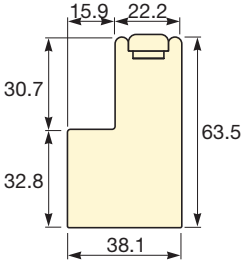
Insert L



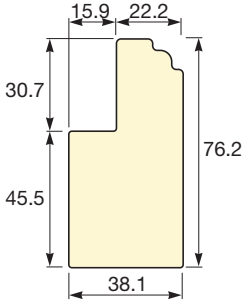
63mm Colonial L



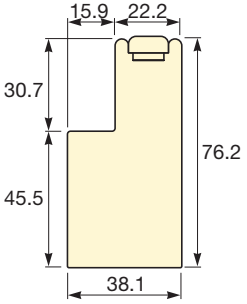
63mm Insert L



76mm Colonial L



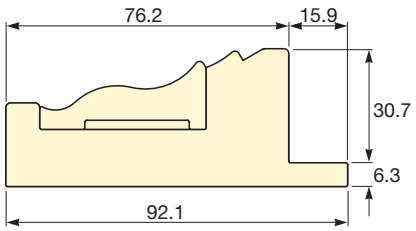
76mm Insert L



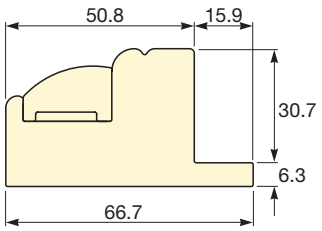
Continued...

BassWood Shutter Specification

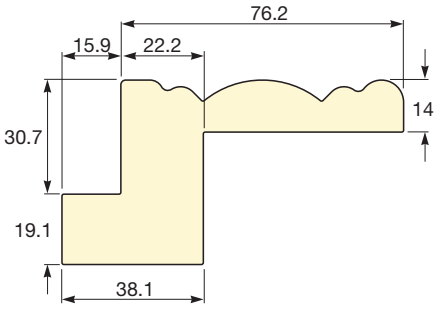
76.2mm Ridge Deco (with insert)



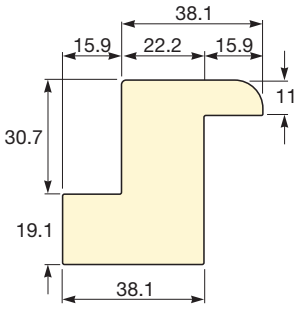
50.8mm Camber Deco (with insert)



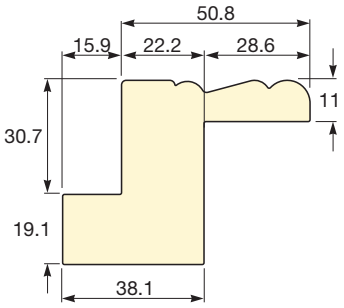
76.2mm Crown Z



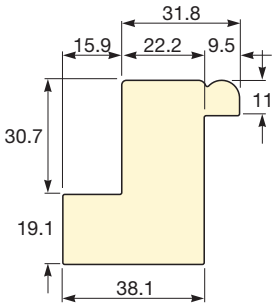
38.1mm Bullnose Z



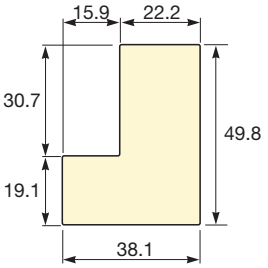
50.8mm Tiara Z



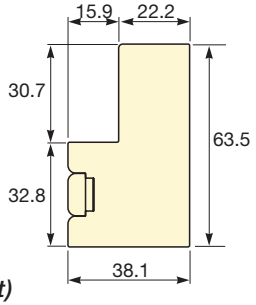
31.8mm Beaded Z



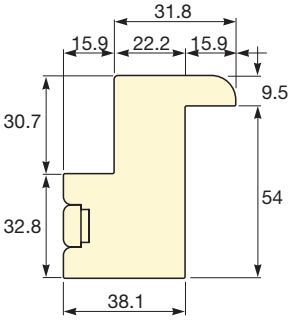
Plain L



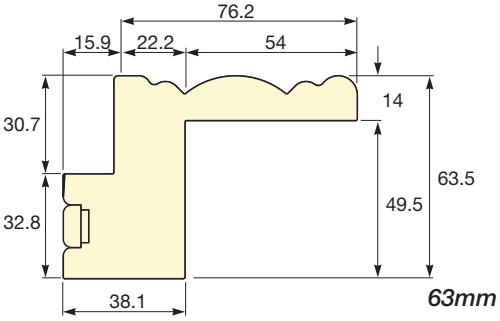
Deep Plain L (with insert)



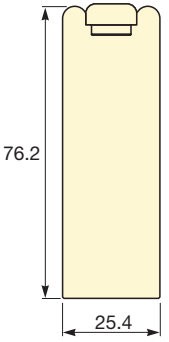
Deep Bullnose Z (with insert)



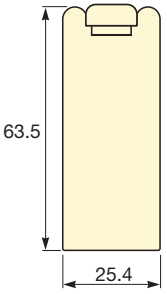
Deep Crown Z (with insert)



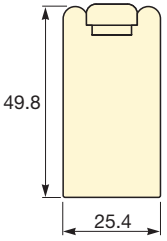
76mm Hang Strip (with insert)



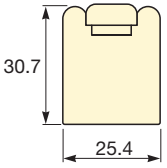
63mm Hang Strip (with insert)



50mm Hang Strip (with insert)



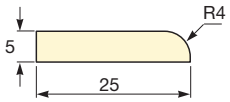
30mm Hang Strip (with insert)



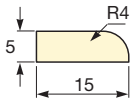
Continued...

BassWood Shutter Specification

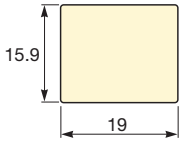
25mm Cover Strip



15mm Cover Strip

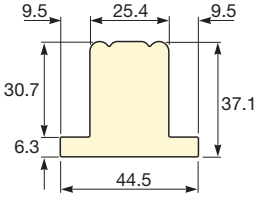


Light Block

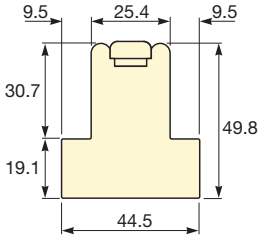


G T-Posts:

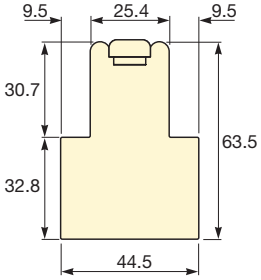
25.4mmT-Post (Deco/Z)



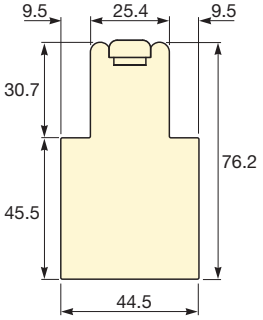
50mm T post (L) (with insert)



63mm T post (L) (with insert)



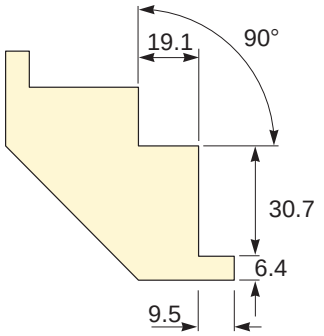
76mm T post (L) (with insert)



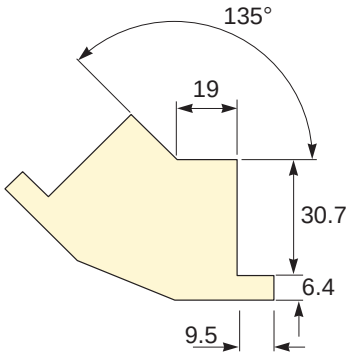
H Corner/Bay Posts:

Standard post angles are 90º and 135º. Special posts can be produced to different angles if required, at a surcharge.

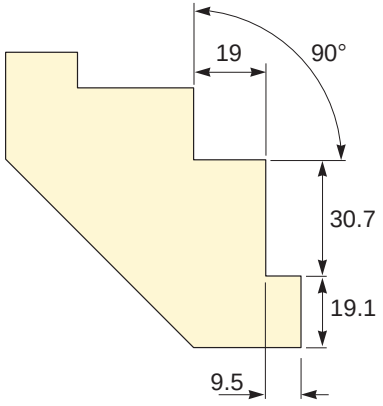
Corner Post (Deco)



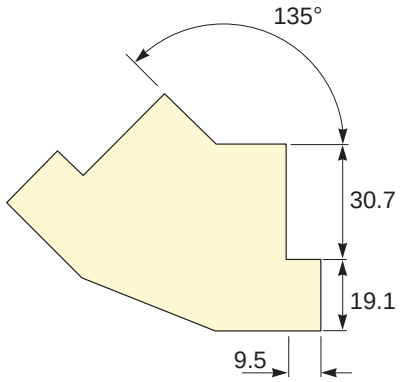
Bay Post (Deco)



Corner Post (L/Z)



Bay Post (L/Z)

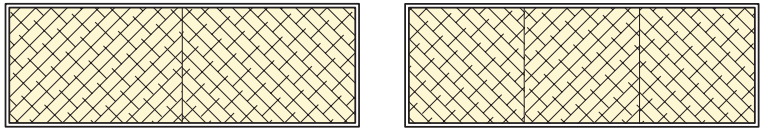


Continued...

BassWood Shutter Specification

1 Frame profiles and battens:

Profiles and battens may be laminated and butt jointed as shown below.



To identify which batten belongs to which panel, We will stamp the order number on the end of the former and the bottom of the latter.

Special shaped battens are available at a surcharge.

2 Colour Options:

Total 52 colours. 20 paint colours and 32 stain colours. Custom colour is also available at a surcharge.

A 20 Paint Colours:

Colour Code#	Shutter Colour	Hidden Tilt Rod Colour (Default)	Hinge Colour Options
001	Pure White	White	Antique Brass Bright Brass Stainless Steel White Pearl Bisque
002	Extra White		
003	Silk White		
004	Bright White		
005	Modern White		
006	Pearl	Pearl	
007	Ivory Lace		
008	Marshmallow		
009	Creamy	Bisque	
010	Dover White		
011	Cameo		
012	Crisp Linen		
013	Bisque		
014	Alabaster		
015	Ecru		
016	Butter		
017	Tony Taupe		
018	Sable	Antique Brass	
019	String	Bisque	
020	Black	Antique Brass	

Sand blasted shutters can be painted in any colour above.

BassWood Shutter Specification

B 32 Stain Colours:

Colour Code#	Shutter Colour	Hidden Tilt Rod Colour (Default)	Hinge Colour Options
100	Pearwood	Stainless Steel	Antique Brass Bright Brass Stainless Steel White Pearl Bisque
101	Banister Beige		
102	Winter White		
103	Maple Sugar		
104	Tuscan Rose		
105	Hermitage Green		
106	Provence Blue		
107	Beechwood		
108	Rustic Grey		
109	Weathered Teak		
200	Natural		
201	Honey		
202	Golden Oak		
203	Autumn Maple		
204	Oak Mantel		
205	Goldenrod		
206	Pecan		
207	Nutmeg		
208	Warm Chestnut		
209	Bright Cherry		
210	Orangewood		
211	Cherry		
212	Dark Teak		
213	Armoire Hickory		
214	Cocoa		
215	Cordovan		
216	Rosewood		
217	Paprika		
218	Plum Mahogany		
219	Mahogany		
220	New Ebony		
221	Black Walnut		

Colours may vary slightly between dye lots. Please order shutters for the same home at one time. Slight variations may also occur between the finished products and the colour samples.

Gloss Level:

Matt	<=15%
Standard	20%~25%
Gloss (Satin)	28%~35%

If there is no specification of the gloss level on the order form, the shutters will be made in the standard gloss level. (20%~25%)

3 Panel Size Limitation:

Louvre Size	Width			Height	
	min.	max. width for single hung panels	max. width for Bi-fold or Multi-fold panels	min.	max.
32mm	152mm	400mm	400mm	250mm	3000mm
47mm	152mm	750mm	550mm	250mm	3000mm
64mm	152mm	750mm	550mm	250mm	3000mm
89mm	152mm	750mm	550mm	250mm	3000mm
114mm	152mm	750mm	550mm	250mm	3000mm

(If any single panel size exceeds the above limitations, the warranty will be automatically waived unless previously agreed in writing).
NB. The maximum amount of panels hinged from each frame side = 3.

Continued...

BassWood Shutter Specification

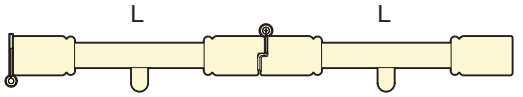
4 Panel Configuration:

When shutters are ordered in the OP or OD format, distributors must submit the panel configuration, as set out below:

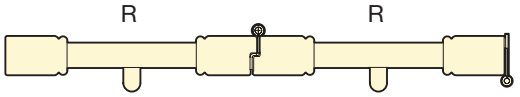
A 1 Panel:

Butt Stile only

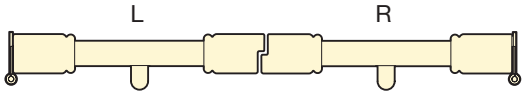
B 2 Panels:



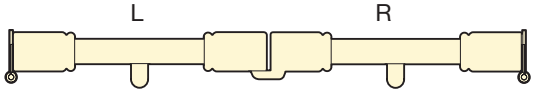
Rebate Stile



Rebate Stile



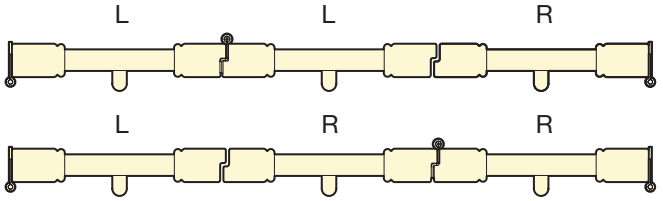
Rebate Stile



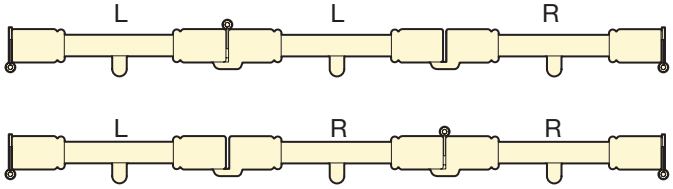
'D'Mould Stile

C 3 Panels:

Rebate Stile

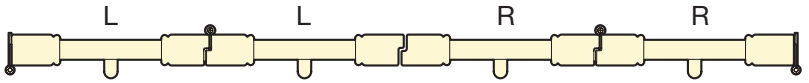


'D' Mould Stile

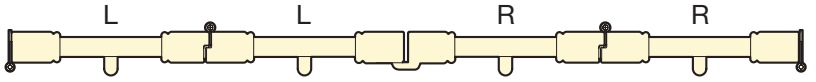


D 4 Panels:

Rebate Stile



'D' Mould Stile



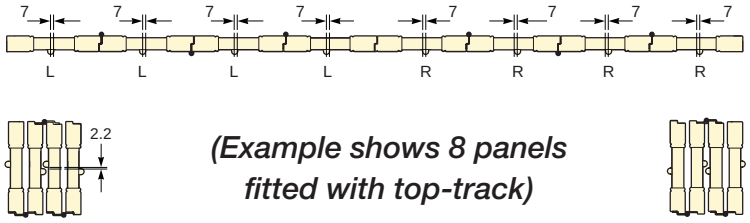
NB. Please note that the 'D' Mould will only apply where shutters are not hinged together, except for the 3 panel example shown above.

Continued...

BassWood Shutter Specification

E Staggered Tilt Rod for Tri-Fold or Multi-Fold Shutters

For panels hung to the left the tilt rod will be staggered by 7 mm to the left. The reverse will apply for right hung shutters. This is to prevent the tilt rods colliding when the panels are folded back.

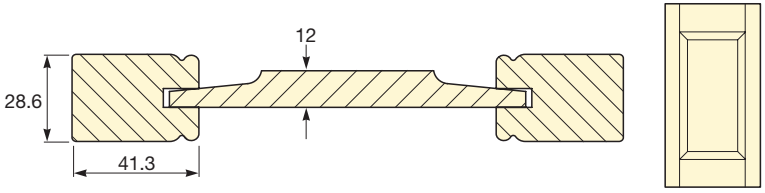


(Example shows 8 panels fitted with top-track)

5 Solid Panel Options:

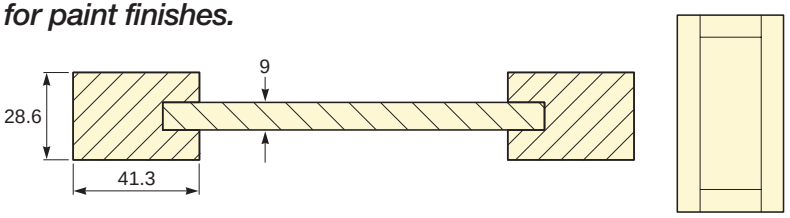
A Solid Raised

Timber infill for stained finishes and MDF infill for painted finishes.



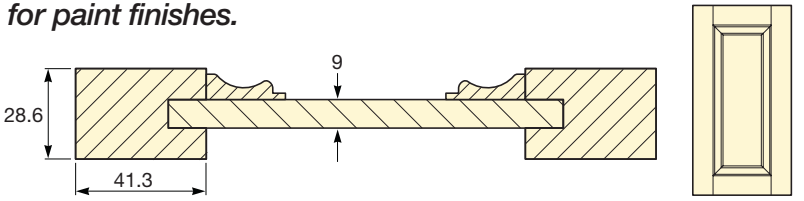
B Solid Shaker

Veneered infill for stained finishes and MDF infill for paint finishes.



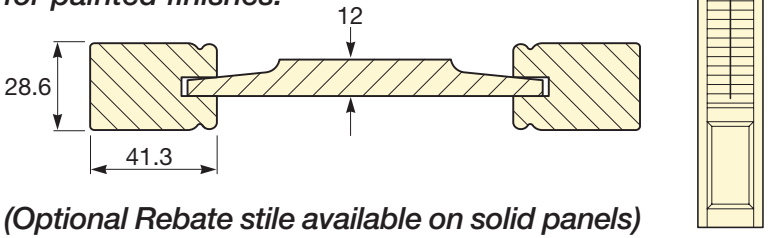
C Solid Moulded

Veneered infill for stained finishes and MDF infill for paint finishes.



D Solid Based *(with solid raised base only)*

Timber infill for stained finishes and MDF infill for painted finishes.

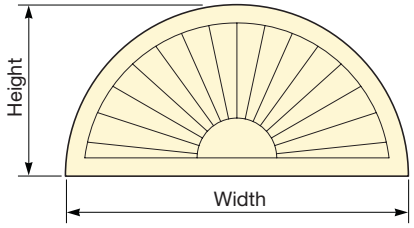


(Optional Rebate stile available on solid panels)

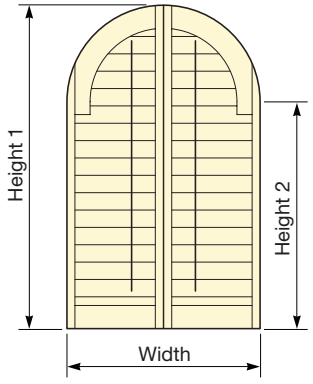
BassWood Shutter Specification

6 Special Shape Shutter Options:

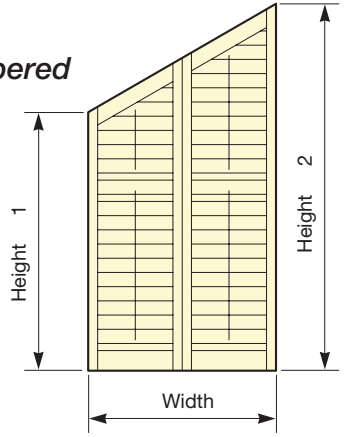
Fan Top



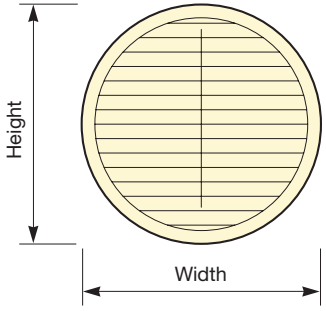
Louvre Arch



Tapered



Circle



** Other shapes available*

Templates

Inside recess fitting

A template is always required.

Outside recess fitting

1. For a perfect arch, template is not required.

2. If the shutter is an imperfect arch or any other shape, a template is required.

All templates should show the OD dimension of the shape required and state clearly which surface is the front.

For special shape shutters, we will produce a CAD drawing for distributor approval. Please check every dimension shown on the drawing to prevent any mistake or misunderstanding.

The distributor should approve and return this to us for production to commence.

N.B. 1. All special orders are on extended lead times and require an additional one week for manufacturing from approval of the drawings.

2. Frames with insert strips will not have removable strips around curves.

BassWood Shutter Specification

7 Installation Styles:

A Café Style: *(Not possible with top-track)*

Shutters installed to a point mid-way between the top and bottom of the window, usually half way up.

B Tier on Tier: *(Not possible with top-track)*

Shutters installed one above the other, usually in line with a horizontal rail on the window.

C Full Height: *(Available with top-track)*

The most popular option, whereby full depth panels are fitted to the window.

8 Three Methods of Ordering:

A Net Panel Size (NP):

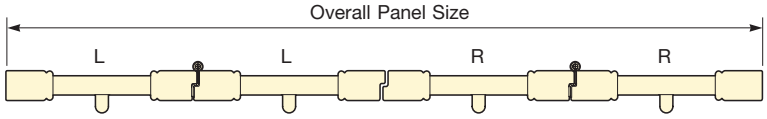
(Where panels are ordered individually).

The shutters only come finished with a butt stile and no hardware or battens will be supplied unless specified. All NP orders are to be raised on the OP order form.

B Overall Panel Size (OP):

(Where panels are ordered excluding the width of the battens and external hinges and to the exact panel drop required).

The width dimension will include all the panels and hinges fitted in between, as set out below. We will pre-assemble this in the factory. A 2.5mm allowance should be made either side for the external hinges, plus the batten width.



Continued...

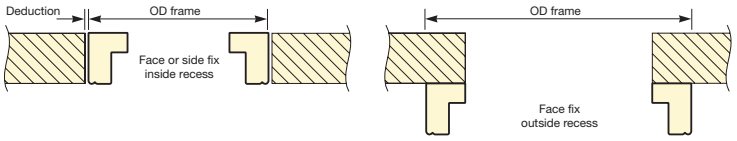
BassWood Shutter Specification

C OD of Frame:

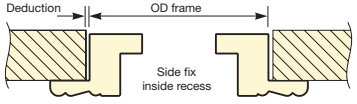
(Where panels are ordered including the profile framework).

All hinges and magnets will be pre-assembled in the factory. The dimensions that should be inserted in the order form by the distributor are taken from the following drawings, as set out below.

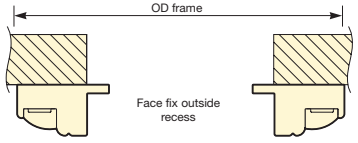
***L-frames** can be fitted inside or outside the recess. Size given is the OD frame size.*



***Z-frames** are fitted inside the recess. Size given is the OD frame size.*



***Deco-frames** are measured from the exterior of the profiles.*

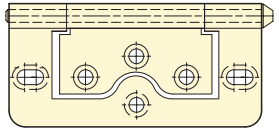


9 Hardware:

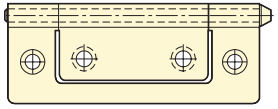
A Hinges

***Self-mortise hinges** (These are used to hinge panels to frames/battens and to hinge butt stile panels together).*

Frame/batten to panel

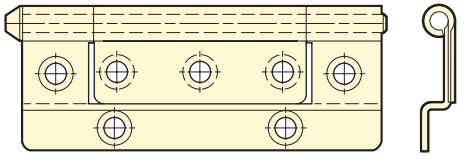


Panel to panel



For 'overall panel' orders we will pre-assemble the inner piece of the hinge onto the panels. The outer piece of the hinge and pin will be included in the hardware box.

***Rebate Hinges** (These are used to hinge rebate stile panels together).*



Continued...

BassWood Shutter Specification

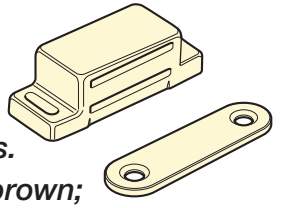
Hinge Colour Available

White, Pearl, Bisque, Antique Brass, Bright Brass and Stainless Steel

Panel height/Hinge amount

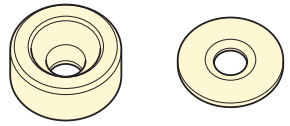
Panel Height	No. of Hinges
< or = 1219mm	2
1220mm - 1981mm	3
1982mm - 2438mm	4
2439mm - 3048mm	5
> 3048mm	6

B Magnets & catches



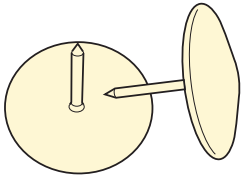
Plastic magnets will be included in the hardware box for OP orders. There are two colours, white and brown; the former for paint orders, the latter for stained orders.

Cylinder magnets will be pre-assembled onto all OD orders.



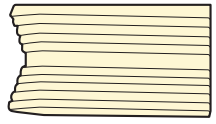
NB - On two and three sided OD orders where the gap from the underside of the panel to the bottom of the frame is greater than 2.5mm, plastic magnets will be supplied.

C Panel feet



Panel feet will be included in the hardware box for OP orders and will be mounted on the bottom of panels for OD orders.

D Hoffmann keys



These are for joining frames together and will be supplied for each frame corner.

BassWood Shutter Specification

10 Tolerance:

A Width:

The width of the panels can be plus or minus 1mm from the order width.

B Height:

The height of the panels can be plus or minus 1.6mm from the order height.

C Mid-rail location:

Specified rail position is taken from the base of the shutter set to the centre point of the rail.

32mm Louvre can be +/-12.7mm

47mm Louvre can be +/-19.1mm

64mm Louvre can be +/-25.4mm

89mm Louvre can be +/-38.1mm

114mm Louvre can be +/-50.8mm

11 Cancellation and modification:

Since we distribute custom manufactured products based on the specifications provided on the original order form, no cancellations will be accepted. Once the order is submitted, the customer will be liable for the shutter order.

Product changes will only be allowed if the shutter order is not in production (usually within 3 hours). If the order is in production, no changes will be allowed and the customer will be responsible for the shutter order.

12 Limited Liability Warranty:

Colour fastness: 3 years.
Joinery: 5 years
(Please refer to trading terms and conditions for details).

Surveying

a. Cover Page

b. Overview

c. Step 1 - Preparation

d. Step 2 - Communication

e. Step 3 - Measuring

Surveying

b Overview

The survey element of the order process is the most critical aspect of selling and fitting interior wooden shutters. That's because an accurate survey results in an easier and more aesthetically pleasing installation and - most importantly – a happy customer.

The alternative can be costly, unsightly and have a negative effect on business. The survey is about more than just measuring; it's about collating the most appropriate specification for the installation in hand.

There are several steps in the survey process.

c Step 1 - Preparation

We recommend the following tools be taken on all shutter surveys:

a ***Steel tape measure***

b ***Spirit level (to check the alignment of the window)***

c ***Survey form***

d ***Masking tape and template paper (brown or lining)***

e ***Dealer bag containing various louvre panels and frame profiles***

d Step 2 - Communication

Distributors should talk to the customer about their preferences, their expectations and how they will use the shutters on a day-to-day basis. Specifically -

a ***Which installation style do they prefer (Full height, Café Style or Tier-on-tier)?***

'Full height'*is the most popular UK installation style. This is where panels are manufactured to the full drop of the window and are fitted with a mid-rail when panels exceed the specified depth (see 'mid-rail position'*

Continued...

Surveying

'Tier-on-tier' *is where the window drop is covered by two sets of panels (an upper set and a lower set) of usually equal depth. However, the two tiers can be different depths if required in order to line up with horizontal glazing bars. Individual panels exceeding the specified maximum depth will be fitted with mid-rails (see 'midrail positions'). This installation style gives the customer the option of 'opening up' the upper panels to allow in maximum light whilst maintaining the privacy afforded by keeping the lower set closed.*
When closed across the window, the shutters will give the appearance of having more solid timber than a set of 'full height' shutters due to the way the tops of the lower panels and the bottoms of the upper panels meet. At this point, if preferred, a horizontal 'T-post' can be fitted to assist panel closure. N.B. If fitted, this 'T-post' will remain in place when the panels are folded back and may be considered unsightly on certain windows.

'Café Style' *is where shutters typically cover the lower half of the window to give privacy and allow in light at the top. Individual panels exceeding the specified maximum depth will be fitted with mid-rails (see 'midrail positions').*

Surveying

Mid-rail positions
Mid-rails are fitted to all 32mm panels deeper than 1100mm and to panels in other louvre widths deeper than 1800mm, irrespective of the installation style, to give rigidity and add strength. The mid-rail is usually placed in the centre of the panel for aesthetic reasons, but can be positioned off centre in order to line up, as closely as manufacturing tolerances will allow, with horizontal glazing bars in the window. The required dimension when specifying mid-rail positions is from the base of the frame to the centre of the mid-rail.

Mid-rail positioning tolerances
32mm louvres = +/- 12.7mm
47mm louvres = +/- 19.1mm
63mm louvres = +/- 25.4mm
89mm louvres = +/- 38.1mm
114mm louvres = +/- 50.8mm
Panels in excess of the above depths can be ordered without mid-rails if preferred but will not be covered by warranty as they are 'out of specification'. Additional mid-rails can be installed at no extra cost if requested, to create additional louvre banks and thus the ability to temper light at different levels.

b ***Which louvre width do they prefer?***
Whilst louvre width is mainly down to individual preference, remember that wider louvres will allow more light into the room when in the openposition. It is vitally important that the backs of the louvres are free from obstructions, such as window handles, as this will hinder

Surveying

the operation of the louvres. Remember to check that the chosen louvre width is available in the selected range.

c ***Do they envisage the shutters being fitted on the inside or outside of the recess (assuming both options are possible)?***

Most UK installations are fitted within the recess and as close as possible to the glass to maintain use of the window sill. Whilst this makes the shutter look like an integral part of the window, it has the disadvantage of the reveal walls preventing the panels from folding completely back, as they can only fold to 90 degrees or until they touch the walls. If fitted flat on the outside of the recess or within but at the front of the recess (e.g. with a 'Z frame') the panels will have the advantage of being able to be folded back against the wall. However, the disadvantage of this method is that it makes the window sill virtually redundant.

There are two key considerations to be made at this point.

• ***Firstly****, is an inside recess installation possible? Check the window alignment by measuring the window opening from corner to corner across both diagonals. If the dimension varies by more than 12mm we recommend that an inside recess installation should not be attempted.*

• ***Secondly****, the question of whether the panels will be folded back on a regular basis is important so as to determine the appearance of the panels in each case. The reality is that in urban environments the shutters usually remain across the window with the louvres being adjusted according to the time of day. However, when shutters are required to be folded back on a daily basis it is important to give more consideration to how they will fold back and their subsequent appearance.*

Surveying

d How many panels do they envisage to cover the width?

The number of panels should be determined by the type and style of the window in question, taking into consideration the position of the vertical glazing bars
and whether the panels are required to fold back at 90 or 180 degrees. The maximum width to which an individual panel can be manufactured is 750mm for
frame and batten installations and 550mm for toptrack installations. Wider panels can be made, but only without warranty. Remember that when two panels meet, the combined width of the two stiles is 82mm.
More panels = more stiles = less light.

e Frame or battens?
The choice is the distributors but we think a three or four sided frame looks best and is certainly easier to install. The frame type is usually based on how the installation is being fitted. There are many options of profile section from which the customer can choose, but the selection offered to them should be restricted by the surveyor and based on installation suitability.

e Step 3 - Measuring

There are some golden rules when it comes to measuring:

- *Always use a steel tape measure (fabric ones stretch).*
- *Measure twice – fit once!*
- *As most windows are not square, be sure to check the width and drop all the way across/down the window.*
- *If the diagonal dimension from corner to corner varies by more than 12mm, we recommend that an inside recess installation should not be attempted.*
- *Always record dimensions as width x drop.*
- *Ensure that louvres will not foul window furniture (handles, locks, etc) when tilted by using sufficiently deep frames or battens when face fixing.*

Surveying

Inside recess fitting

a Inside recess fitting with shutter frame (OD)

1 *Decide on the most appropriate frame profile in order to bring the panels sufficiently forward to prevent them interfering with the window furniture. We recommend physically positioning a sample panel (with the chosen louvre width), together with the preferred frame profile, against the window to ensure sufficient operating clearance.*

2 Measure the recess width at the narrowest point and deduct 5mm to ascertain the OD width.

3 Measure the recess drop at its shallowest point and deduct 3mm to give the OD drop. Or, if the installation is 'Café Style', measure from the top of the proposed shutter panels to the sill at its highest point to ascertain the OD drop.

b Inside recess fitting with OD top-track system (OD)

- refer to top-track section.

1 Measure the recess width at the narrowest point and deduct 5mm to ascertain OD width.

2 Measure the recess drop at its shallowest point and deduct 3mm to ascertain OD drop.

Surveying

c Inside recess fitting with battens (OP)

1 Measure the recess width at the narrowest point.
2 Make the necessary deductions from recess width to ascertain the OP (overall panel) width of the required panel set. (i.e. recess width - side battens - batten to panel hinges = OP width).
3 Measure the recess drop at its shallowest point and make the clearance deductions to ascertain the OP drop. Or, if the installation is 'Café Style', measure from the top of the proposed shutter panels to the sill at its highest point and make a deduction for the clearance between the bottom of the panels and the sill to ascertain the OP drop.

d Inside recess fitting with OP top-track system (OP)
– refer to top-track section.

1 Measure the recess width at the narrowest point.
2 Make the necessary deductions from recess width to ascertain the OP (overall panel) width of the required panel set. (i.e. recess width – side battens – pivot gap/s (7mm for panels all stacking to one side or 13mm for panels stacking at both sides).
3 Measure the recess drop at its shallowest point and deduct 70mm (plus the depth of the top batten if you intend to fit one) from the recess drop to ascertain the OP depth.

Surveying

Outside recess fitting

e Outside recess fitting with shutter frame (OD)

1 Decide where the side frame will start and finish by marking the outside edges of the shutter frame on the wall. Measure between marks to ascertain OD frame width.
2 Mark the positions of the top edge of the top frame onto the wall and then the bottom of the shutter set, which will be either the bottom frame if four sided or bottom of the side frame if three sided. Measure between marks to ascertain the OD frame depth.

f Outside recess fitting with battens (OP)

1 Decide where the outside edges of the panel set will be and mark the positions on the wall. Measure between marks to ascertain OP (overall panel) width of the panel set.
2 Mark the positions of the top and bottom of the panels. Measure between marks to ascertain the OP (overall panel) depth of the panel set.

g Outside recess fitting with OD top-track system (OD) –
refer to top-track section.

1 Measure the recess width and add 120mm to ascertain OD width. This will give an overlap of 60mm each side and position the fixing points at 30mm from the edge of the recess.
2 Measure the recess drop at its deepest point and add 115mm to ascertain the OD drop.

h Semi-outside recess fitting with OD top-track system (OD) –
refer to top-track section.

1 Measure the recess width at the narrowest point and deduct 5mm to ascertain the OD width.
2 Measure the recess drop at the shallowest point and add 35mm to ascertain the OD drop.

Surveying

i Measuring for mid-rails and Tier-on-tier shutters (inside and outside recess)

1 For all panels requiring off-centre mid-rails, record the required mid-rail position by measuring from its centre to the bottom of the shutter set.

2 If the installation is 'Tier-on-tier' and is not being fitted with a horizontal 'T=post' between the upper and lower panels, ascertain the position of the top of the lower panels by measuring from the bottom of the shutter set to this point and enter the dimension in the 'mid 2' column. Mid-rail positions (if relevant) should be entered into the 'short notes' column. The lower tier mid-rail is measured from the bottom of the shutter set to the mid-rail centre and the upper tier mid-rail from the top of the lower panels to the mid-rail centre.

3 If a horizontal 'T-post' is being installed between the upper and lower tiers, measure from the bottom of the shutter set to the centre point of the 'T-post' and enter the dimension in 'mid 2' column. Then write "mid 2 position = centre of horizontal T-post" in the 'short notes' column. The positions of any mid-rails should also be recorded in the 'short notes' column.

Surveying

j 'Measuring for vertical T-posts'

When a window requiring a framed shutter set is too wide to be covered with the maximum amount of panels (6 for Basswood) and a toptrack system is not appropriate, vertical T-posts can be added to the 3 or 4 sided frame. This essentially breaks the shutter set into narrower, multiple units. Each unit is then treated as an individual shutter set in terms of the number of panels to be fitted to it.

T-posts look best when they are lined up with vertical glazing bars so they are not visible from outside. When specifying T-post positions, the dimensions should always be measured and recorded from the outside edge of the left hand frame upright to the centre of the T-post. If using more than one T-post, the second/third positions should also be measured from the outside edge of the left hand frame upright to the centre of the T-post.

Surveying

k Bay windows (Inside and outside recess)
– shutter sets with frame (OD)

1 Decide on the most appropriate frame profile. If fitting inside the recess, ensure the selected frame will bring the panels sufficiently forward to prevent them fouling the window furniture when tilted open (handles, locks, etc). We recommend physically positioning a sample panel(with the chosen louvre width), together with the frame profile, against the window to ensure sufficient operating clearance.

2 Mark the positions of the extreme left and right frame profile and then measure from the outside edge of the left hand frame profile to the first corner point. Then from the first corner point to the second and so on for each elevation. Finally measure from the last corner point to the outside edge of the right hand side frame.

3 Record the angle of each corner point. (A drawing clearly showing these dimensions should accompany all purchase orders involving bay windows).

4 For inside recess installations, measure the drop at its shallowest point and deduct 3mm to ascertain the required OD depth. For outside recess installations, mark the top of the upper frame profile (and the bottom of the lower frame profile if fitting a four sided frame) onto the wall and measure between the marks to ascertain the OD drop.

Surveying

I Special shapes

Physical templates should accompany all orders for special shape shutters (Arched Top Shutters, Fan Tops, Tapered Shutters, Circular Shutters, etc) fitting within a recess, to ensure accurate manufacturing. Templates are also required for all outside recess installations except perfect arches.

1 When making a template, we recommend a suitable material such as brown paper or lining paper be fixed with masking tape to the front of the recess.
2 Once firmly in place, the recess shape can be transposed onto the paper by the distributor firmly running a thumb around the edge of the recess.
3 When the desired shape is clearly visible, the paper can be removed to a flat horizontal surface and a pen used to define the embossed marks of the recess shape.
4 Draw a line parallel to the desired shape 3mm inside the recess edge line. This is the OD dimension to which the shutter set will be manufactured.
5 Relevant notes should then be added to the template, including whether the front of the template is to be the front or back of the shutter set, the order number to which the template relates and all relevant information about the dimensions shown on it.

For all special shape orders, the factory will issue a pre-production CAD drawing, based on the template supplied. This must be signed off by the distributor, before manufacture can commence, in order to ensure accuracy and unambiguous communication.

Photographs

We recommend that digital photographs of the window to be covered are sent with any non-standard orders to assist communication.

Installation

a **Cover Page**

b **Overview**

c **Preparation**

d **Unpacking**

e **Fitting Shutters with Frames**

f **Fitting Shutters with Battens**

g **Fitting Shutters with ‘T’ Posts**

h **Fitting Shutters with Bay Posts**

i **Fitting Shutters with OP Track Systems**

Installation

b Overview

The accuracy of the survey preceding the sale is instrumental to a quick and straightforward installation. If the shutters have been measured incorrectly there will be additional work required at the point of installation.

c Preparation

We recommend the following tools be taken on all shutter installations:

- a *A selection of flat head and cross head screwdrivers*
- b *Spirit level tape measure*
- c *8 gauge screws (length to suit installation)*
- d *Electric chop saw or fine bladed hack saw and mitre block*
- e *Filler and builders' chalk*
- f *Nylon headed hammer*
- g *A selection of wood and masonry drill bits*
- h *Counter sinking drill bit*
- i *Pliers*

d Shutter identification and unpacking

For each shutter set there will usually be one box containing the frame profiles or battens and another box containing the panels (larger shutter sets will have multiple boxes). Each box will have a label on its end giving information of the shutter set dimensions and the location details entered onto the order card.

Carefully open the boxes by cutting the tape (despite the comprehensive packaging, we recommend this be done with scissors rather than a knife to avoid damage to the contents). The panels will have been packed with a sheet of board on the top and bottom to protect them. This board is approximately 3mm thick, is easily cut to shape and therefore makes excellent packing blocks, if needed.

Continued...

Installation

The panels should be removed by fully opening up the box and taking them out one-by-one, rather than opening the end of the box and pulling them out. Battens can be removed from the end of the box.

In the panel box, there will be a small 'hardware' box containing components for each shutter set. Each box will consist of hinge pins, hinge securing screws, Hoffman keys (when using a frame), touch-up paint (for real wood shutters), hinge packers and screws. If using a top-track system, the box will also contain the track and pivot components. If there is more than one panel box, the one containing the hardware box will be labelled accordingly. For 'OP' batten orders, the batten hinges will also be in the hardware box.

When removed from the box, panels should be carefully positioned against a surface which will not damage them. Do not lean panels against each other as the hinge of one may scratch the surface of another. If the floor is not carpeted, open up the panel box and stand the panels on it to prevent damage being caused to their bases.

Before you start!

It is vitally important that when fitted the louvres are not prevented from opening by obstructions such as window furniture. Therefore, before the distributor begins fitting, we recommend that one of the panels is positioned, with its louvres in the open position, into the window. Then the ideal position - where the tilting operation will not be hindered - should be marked onto the wall.

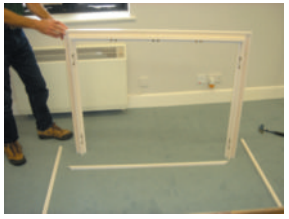
e Fitting shutters with frames (inside or outside recess)

a *Layout the shutter frame, which will usually consist of three or four sides (each profile will be labelled 'left', 'right', 'top', etc) and remove any insert strips..*

Continued...

Installation

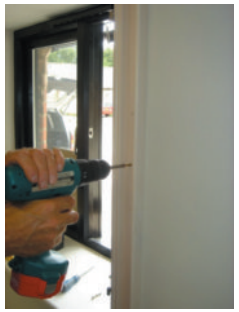
b. *Assemble the shutter frame by inserting a nylon 'Hoffman Key' (packed in the hardware box) into each corner joint. Remember that if the shutter set is Café Style, the horizontal frame profile will be at the bottom rather than at the top. If using a Deco frame, each frame corner is also secured by a diagonal screw for added strength.*



c. *If fitting a frame without factory drilled fixing holes, mark the hole positions on the profiles and drill. If face fixing using a profile with insert strips, there is no need to countersink the screws. If side fixing, the holes will need to be countersunk so that the screw heads are not proud of the frame profile surface which will hinder closure and may damage the sides of the end panels.*

d. *Lift the assembled frame into position and mark the fixing hole positions onto the fixing surface. Ensure the frame is level, both horizontally and vertically, by placing a spirit level against the profiles when positioning.*

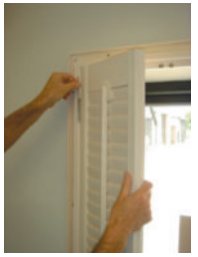
e. *Remove the frame, drill the fixing holes and plug if fixing to masonry.*



f. *Reposition the frame and secure with screws. When fitting inside a recess with a sloping sill, packers can be inserted beneath the frame at the lowest end, to level the frame whilst fitting. These packers can then be removed when the frame is secured or left in place if they are hidden after finishing.*

g. *If fitting a two or three sided frame (except Café Style), fit the light block batten between the inside, bottom edges of the side frames by screwing it to the sill. If the customer prefers not to have anything fitted to the sill, this profile can be left off.*

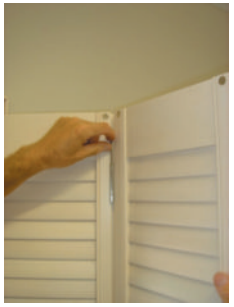
h. *Fit the first panel (the far left hand panel) to the left hand frame side by inserting the hinge pins. If you find a pin difficult to locate, loosen the hinge screws, insert the pin then re-tighten the screws.*



Continued...

Installation

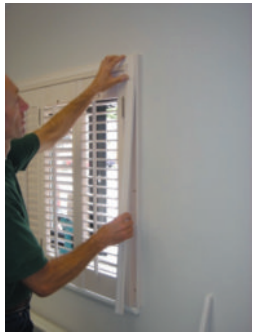
i. *Hinge the second panel to the first and so on until all the panels are fitted. If fitting a Tier-on-tier shutter set, the upper and lower panels can be identified by looking at their backs. The upper panels will have the magnets fitted at the top of the panels, whilst the lower panels will have them at the bottom. The lower panels will also be fitted with panel feet, whilst the upper panels will not.*



j. *Fold back the panels and close them across the window again to ensure they are correctly aligned. If the panels are not aligned correctly where the leading panels meet, the height of the end panels can be adjusted by moving the frame hinges up or down. To do this, slacken the screws in the elongated holes, raise or lower the panels to the required height and retighten the screws.*

k. *Fit the securing screws to the centre hole on each frame hinge to lock them into position.*

l. *If using a frame with insert strips, refit the strips to hide the screw heads.*



m. *When fitting inside a recess, the gaps between the frame and the reveal sides can be filled with a suitable filler such as builders' chalk, which can then be painted by the customer. For larger gaps, cover strips can be cut to shape and fitted to the frame face to disguise any unevenness.*

N.B. All four sided shutter sets are intended to have the panel feet (fitted to the undersides of panels) resting on the bottom frame when closed across the window. This is in order to take the strain off the hinges and will naturally create a friction fit when the panels are moved. If the customer prefers a non-friction fit, the panel feet can be removed by carefully prising them off with a small flat-headed screwdriver. This will create a working gap of approximately 2.5mm between the bottom frame and the underside of the panels.

f. Fitting shutters with battens (inside or outside recess)

a. *If fitting outside the recess, ascertain the overall shutter set dimensions and mark them onto the fixing surface.*

b. *Fit hinges (using the elongated holes only) to the battens by aligning the battens with the end panels and marking the corresponding hinge positions. Ensure that the batten is the correct way round before marking - the hinge holes should be on the inside edge.*

Continued...

Installation

c *Mark and drill the fixing holes on the battens, through the batten face for face fixing or the batten side if side fixing.*

d *Position the battens and mark the fixing holes onto the fixing surface, ensuring they are vertically and horizontally aligned.*

e *Drill, plug (if necessary) and fit the battens.*

f *Fit the first panel (the far left hand panel) to the left hand batten by inserting the hinge pins. If the distributor finds a pin difficult to locate, loosen the hinge screws, insert the pin and retighten the screws.*

g *Hinge the second panel to the first and so on until all the panels are fitted.*

h *If required, fit the plastic magnets and magnet plates to the backs of the panels.*

i *Fold back the panels and close them across the window again to ensure they are correctly aligned. If the panels are not aligned correctly where the leading panels meet, the height of the end panels can be adjusted by moving the frame hinges up or down. To do this, slacken the screws in the elongated holes, raise or lower the panels to the required height and retighten the screws.*

j *Fit the securing screws to the centre hole on each batten hinge to lock into position.*

k *When fitting inside a recess, the gaps between the battens and the reveal sides can be filled with a suitable filler such as builders' chalk, which can then be painted by the customer. For larger gaps, cover strips can be cut to shape and fitted to the frame face to disguise any unevenness.*

g Fitting shutters sets with T-posts

The shutter frame is constructed as described in the 'fitting with frames' section but, when the frame is built up, the vertical T-post or posts should be inserted at the positions stated on the order card. Each top and bottom frame will have 2 pre-drilled fixing holes. Each T-post should be secured by fixing down through the top frame and up through the bottom frame into its ends.

h Fitting shutters sets to bay windows using bay posts or corner posts

(This section assumes the bay window is being fitted with one continuous frame incorporating bay or corner posts and not as individual shutter sets butted together at the angles).

Continued...

Installation

The shutter frame is constructed as described in the 'fitting with frames' section but, when the frame is built up, the bay or corner posts should be inserted at each angle. The top and bottom frame will have their profiles pre-mitred together at each angle and each post should be secured by fixing down through the top frame and up through the bottom frame (if fitted) into its ends. On three sided frames, an angle plate is provided to secure the post to the sill.

i Fitting shutters with the OP top-track system (inside recess)

a. *Mark the batten positions onto the recess top and sides, ensuring that the chosen position will allow the louvres to be opened unhindered.*

b. *Mark and drill the fixing holes in the battens along the centre line.*

c. *Hold the top batten in place, mark the fixing hole positions then drill and plug the fixing holes.*

d. *Fit the batten ensuring it is horizontally level and pack down if necessary.*

e. *Position the side battens directly beneath the top batten, mark the fixing hole positions then drill and plug the fixing holes.*

f. *Fit the battens ensuring they are both vertically level and packout if necessary.*

g. *Slide the wheeled trucks into the top-track and fit one pivot bracket to each end of the track where the panels will stack back. If the shutter set is folding in both directions there will be a pivot bracket at each end. However, if it is only stacking in one direction there will be a pivot bracket at the stacking end of the track and rubber buffer bracket at the other.*

h. *Top fix the track centrally to the underside of the top batten, using the pre-drilled fixing holes. If fitting a shutter set which folds in one direction only, the pivot bracket should be at the stacking end of the track.*

i. *Fit a bottom pivot bracket centrally at the bottom of both side battens, if the set folds in two directions or at the bottom of the batten on the stacking side, if the set folds in one direction.*

j. *Assemble the panels by inserting the hinge pins and stand them in a concertina fashion on the ground. If the distributor finds a pin difficult to locate, loosen the hinge screws, insert the pin and retighten the screws.*

k. *Fit the spring loaded pivot bracket to the top of each pivoting end panel. The cylinder hole is already drilled out ready for the bracket to be inserted. Secure with the screws provided.*

Continued...

Installation

l *Fit one pivot plate to the leading edge of every other panel (2, 4, 6, 8, etc). These are the plates which will attach the wheeled trucks to the panels.*

m *Close the panels flat and lie them on their side, on a soft surface, to gain access to the underside.*

n *Fit the height adjustable pivot bracket to the bottom of each pivoting end panel directly beneath the top pivoting bracket.*

o *With the first set of panels folded flat and at 90 degrees to the track, locate the top spring loaded pivot bracket into the pivot bracket at the end of the track, push up (compressing the spring) then locate the adjustable bottom pivot bracket into the bracket fitted at the base of the side batten.*

p *Repeat this process for the panels folding in the other direction, if the shutter set is folding in both directions.*

q *Connect the wheeled trucks to the pivot plates fitted to the tops of the panels and secure by locking the nylon arm.*

r *To align the panels horizontally, adjust the truck leg length with the spanner provided. The bottom pivot bracket - fitted to the underside of the pivoting panel - can also be raised or lowered with the spanner provided.*

s *To align the panels vertically slide the pivot bracket (fitted to the track) slightly to the left or right, as necessary, using the spanner provided. The bottom pivot (fitted to the bottom of the side batten) can also be adjusted in the same way, with the spanner provided.*

t *Fit the valance (butted to the underside of the reveal) by face fixing it to the top and side battens with Velcro or similar (not supplied).*

u *Gaps between the battens and the reveal sides can be filled with a suitable filler such as builders' chalk, which can then be painted by the customer. For larger gaps, cover strips can be cut to shape and fitted to the frame face to disguise any unevenness.*