Installation
Window Building In Details

Photo courtesy of Rowe Aluminium
VANTAGE SNAP-ON COUPLERS AND TRIMS

Vantage offer a wide range of snap-on couplers and trims to deliver tidy integration between products. Often aluminium windows and doors are joined together with pressed metal covers that are secured to window and door with visible blind rivets or screws. Pressed metal covers usually have raw edges and are deformed at fixing points and do not provide a high quality finishing solution.

Vantage snap-on couplers and trims are sealed to the main frame at the nailing fin position. This may not sound like much but it makes sure the joint is waterproof and keeps untidy caulking away from the face of the window/door.

The data and illustrations on the following pages highlight some of our couplers and trims and their basic features:

**135° BAY CORNER COUPLER (10135)**
- Will join 50mm windows to each other while maintaining the central (nailing fin location) weatherproof line.

**90° BOX CORNER COUPLER (10090)**
- Designed for 50mm thick box corner windows.
- Used on our garden and waterfall windows.

**180° 'I' COUPLER (10180) - illustrated right**
- Will join 50mm windows on flat walls.
- Used on our garden and waterfall windows.

**180° HEAVY DUTY 'I' COUPLER (10181)**
- This coupler is similar to the one illustrated right but slightly bigger and significantly stronger. Ideal for tall windows or windows in higher wind load areas.

**ADJUSTABLE ALUMINIUM STORM MOULD (10036)**
- Used mainly on cavity brick installations.
- The storm mould can be adjusted back to follow the line of the brickwork.
- Storm mould secured to the window frame with rigid PVC clips that allow the trim adjustment.
- The storm mould can be fitted to most of our window and door frames.
EXTERNAL FLANGE (EF) TRIMS (10037 and 10038)

- These external flange trims can be clipped to any of the Vantage 50mm windows.
- This can be useful on replacement windows.

FLAT FRAME CLOSER (10040)

- This jamb closer will clip to any of the Vantage 50mm windows.
- Makes installation into patio room enclosures easier and cleaner as the flat face caters for the radius on the patio posts.

EXTERNAL FRAME CLOSER (10055)

- Can be used on replacement windows and doors fitted with timber reveals to close off the external frame recess.
- This removes the need for angle trims and visible screws and/or rivets.

60mm ALUMINIUM ARCHITRAVE (10186)

- This 60mm wide adjustablealuminium architrave can be used on replacement windows and some of our door frames.
- The architrave usually caters for the gap left after removing old timber windows and their external timber architraves.

90mm ALUMINIUM ARCHITRAVE (10187)

- This 90mm wide adjustable aluminium architrave would be used again on replacement windows where you need to cover a larger gap.
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VERTICAL WINDOW TO DOOR COUPLER (42066)

- This non-load bearing coupler allows us to join 50mm windows to any 102mm door frame while maintaining the weather resistance line.
- The illustration right shows Series 504 sliding window coupled to Series 541 sliding door.

HORIZONTAL WINDOW TO DOOR COUPLER (42025)

- This light transom coupler allows us to join 50mm windows over 102mm door frame while maintaining the weather resistance line.
- The illustration right shows Series 504 sliding window coupled to Series 541 sliding door.

VERTICAL 'I' COUPLER (42030)

- This non-load bearing coupler allows us to join 102mm windows and doors together.
- The illustration right shows Series 504 sliding window with 'Longreach' frame extender coupled to Series 541 sliding door.

135° BAY CORNER COUPLER (42026)

- This wrap around coupler can be used to join 50mm windows to 102mm door frames.
- The coupler can also be used to join 102mm window and door frames together.
- Cover will wrap around 51mm steel column.
- The illustration right shows Series 616 awning window coupled to Series 542 sliding door.

90° BOX CORNER COUPLER (42022)

- This wrap around coupler can be used to join 50mm windows to 102mm door frames.
- The coupler can also be used to join 102mm window and door frames together.
- Cover will wrap around 76mm steel column.
- The illustration right shows Series 616 awning window coupled to Series 616 fixed window.
**180° FLAT COUPLER (42066)**

- This wrap around coupler can be used to join 50mm windows to 102mm door frames.
- The coupler can also be used to join 102mm window and door frames together.
- Cover will wrap around 76mm steel column.
- The illustration right shows Series 517 fixed window coupled to Series 542 sliding door.

**HEAVY DUTY TRANSOM COUPLER (42027)**

- This 102mm x 50mm snap fit box transom coupler allows us to join 102mm windows over 102mm door frames.
- Heavy wall thickness front and back allows us to span wide openings.
- The illustration right shows Series 517 awning window coupled to Series 541 sliding door.

**EXTRA HEAVY DUTY TRANSOM COUPLER (42346)**

- This 133mm x 50mm snap fit box transom coupler allows us to join 102mm windows over 102mm door frames and the wider 133mm Magnum™ door frame.
- Heavy wall thickness front and back allows us to span very wide openings.
- The illustration right shows Series 517 awning window coupled to Series 542 sliding door.

**LONGREACH FRAME EXTENDERS (10212 and 10213)**

- These extrusions snap to and Vantage 50mm window frame and are used to beef up the frame to 102mm x 25mm.
- The extender frame sections maintain the weather line, has nailing fins and will accept building-in lugs and trims.

**PADDINGTON FEDERATION TRIMS (10214 and 10215)**

- These federation trims can be clipped to the ‘Longreach’ frame extenders.
- The trims will also clip direct to Magnum™ window frames.
- The illustration right shows Paddington trims around Series 504 sliding window. The window has frame extenders.
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Window Building in Details

HEAD ‘Z’ FLASHING (10155)
- This ‘Z’ flashing would be useful when windows are installed into clad walls.
- The aluminium ‘Z’ flashing would be coloured to match window frame.

LONGREACH FRAME EXTENDERS (16114)
- This extrusion snaps to Series 517 window frame and is used to beef up the frame from 102mm x 15mm to 102mm x 32mm.
- The extender frame sections maintain the weather line, has a nailing fin and will accept building-in lugs and trims.
- The detail right shows the extended window frame installed into brick veneer wall.

PADDINGTON FEDERATION TRIMS (10214 and 10215)
- These federation trims can be clipped to the 102mm ‘Longreach’ frame extender.
- The trims will also clip direct to Magnum™ window frames.
- The illustration right shows Paddington trims around Series 517 awning window. The window has frame extenders.

BALMAIN FEDERATION TRIMS (10217)
- These federation trims can be clipped to the Vantage Series 504, 514 and 516 windows frames using concealed custom nylon adaptor clips.
- These federation trim can go onto windows that are fitted with timber reveals as shown right.
- The illustration right shows Balmain trims around Series 516 awning window.

FLAT 50mm TRIM (10219)
- This flat trim can be clipped to the Vantage Series 504, 514 and 516 windows frames using concealed custom nylon adaptor clips.
- The wide trim has support gusset on the outer edge to make sure these corners stay tight.
- This trim can go onto windows that are fitted with timber reveals as shown right.
FLAT 20mm TRIM (10220)

- This flat trim can be clipped to the Vantage Series 504, 514 and 516 windows frames using concealed custom nylon adaptor clips.
- The slim flat trim is ideal for closing off the external frame recess, similar to trim 10055.
- This trim can go onto windows that are fitted with timber reveals as shown right.

THERMAL HEART™ TRANSOM COUPLER (72240)

- This 100mm x 20mm snap fit double box transom coupler allows us to join 100mm windows over hinged, bi-fold or sliding doors.
- The thermal break and dual colour option is maintained through the coupler.
- The illustration right shows Series 726 awning window coupled to Series 731 sliding door.

THERMAL HEART™ HEAVY TRANSOM COUPLER (72241)

- This 100mm x 50mm snap fit double box transom coupler allows us to join 100mm windows over hinged, bi-fold or sliding doors. The stronger coupler allows us to offer wider transoms that are required on bi-fold and sliding doors.
- The thermal break and dual colour option is maintained through the coupler.
- The illustration right shows Series 726 awning window coupled to Series 731 sliding door.

THERMAL HEART™ EXTRA HEAVY TRANSOM COUPLER (72242)

- This 163mm x 50mm snap fit double box transom coupler allows us to join 100mm windows over bi-fold or sliding doors. This extra stronger coupler allows us to offer very wide transoms that are required on bi-fold and sliding doors.
- The thermal break and dual colour option is maintained through the coupler.
- The illustration right shows Series 726 awning window coupled to Series 731 stacking sliding door.
Typical window installation into 280mm cavity brick wall
RECOMMENDED INSTALLATION INSTRUCTIONS FOR ALUMINIUM WINDOWS

The following pages show a number of typical window building-in details and coupling arrangements, if the information you require is not covered in these pages contact your local Vantage fabricator.

Fix the window to structure with steel building-in lugs or nails, shim as indicated.

Installation of windows to be in accordance with Australian Standard AS 2047.

Suggested installation steps:

1. If flashing is required fit the flashing to sill.
2. Fit shims on sill plate / slab on meeting stile or mullion centre line and at 450mm maximum centres. Make sure these shims are level.
3. Install the frame into the opening.
4. Fit shims on jambs making sure that the frame is plumb and square, measure frame across diagonals to check for square.
5. Fix the frame to structure by nailing through timber reveals. Make sure that the frame is not twisted. Alternative - On solid brick construction fit galvanised M.S. building-in lugs at 450mm maximum centres.
6. Take care that head, sill and/or jamb are not dished or bowed during installation.
7. Make sure the sill reveal is fully supported, if necessary use additional shims. Failure to do so may result in problems with sash operation.
8. Cement mortar or render droppings can permanently damage aluminium. Remove them as soon as possible.
9. Leave at least 10mm gap between sill brick and frame to allow for possible future building settlement.
10. On brick veneer construction there should be at least a 12mm gap between timber header and aluminium frame.
11. Aluminium windows are not designed to support eave linings.

Important Note:
If you install windows out of square or without sufficient shims the opening sashes won’t perform satisfactorily.
250mm BRICK VENEER

**Head**
- 12mm Clearance between reveal and header
- Quad trim by builder

**Stud opening size = Frame size + 54**

**Frame size**

**Sill**
- 10mm Clearance between eaves lining and window head.
- 10mm Clearance between window sill and brick sill.
- Flexible PVC sill flap

**Brick sill**

**Head**
- No packing
- Timber reveal

**Typical window**
- Fixings at 450mm maximum centres. These centres would be reduced in high wind load areas.
- Timber architrave internal lining by builder.

**Sill plate**

**Sill support by builder**

**Flashing**

**Jamb**
- Caulking
- Fixings at 450mm maximum centres. These centres would be reduced in high wind load areas.
- Timber reveal
- Packing by builder
250mm BRICK VENEER

Head

- Stud opening size = Frame size + 54
- 12mm Clearance between reveal and timber header
- Mild steel lintel angle
- Fixings at 450mm maximum centres. These centres would be reduced in high wind load areas.
- Timber reveal
- Timber architrave internal lining by builder.

Sill

- 10mm Clearance between window sill and brick sill.
- Flexible PVC sill flap
- Brick sill
- Sill plate
- Sill support by builder
- Flashing
- Fixings at 450mm maximum centres. These centres would be reduced in high wind load areas.
- Caulking
- Brickwork
- Timber reveal
- Stud
- Packing by builder

Jamb

- Stud opening size = Frame size + 54
**Installation**

Window Building in Details

**280mm CAVITY BRICK**

- Mild steel lintel angles
- Cavity block at 900mm centres
- Flexible PVC sill flap

**Important Note:**
Leave enough room for the cam handle.

Building-in lugs at 450mm maximum centres. These centres would be reduced in high wind load areas.
115mm SINGLE SKIN BRICK

**Head**

- Mild steel lintel
- Caulking
- Cement render
- Window head screwed to archbar at 450mm maximum centres.
- The sill can be screwed to brickwork in the area illustrated.
- There is a countersunk recess in the sill extrusion to accommodate this fixing, seal these screw heads to sill.

**Sill**

- Flexible PVC sill flap
- Brick sill
- Building-in lugs at 450mm maximum centres. These centres would be reduced in high wind load areas.

**Jamb**

- Caulking
- Brickwork
- Cement render
**Block Wall Construction**

**Head**

- Impervious coating applied to opening before the window is installed.
- Extruded aluminium angle.
- Window head screwed to blockwork at 450mm maximum centres.
- The sill can be screwed to blockwork in the area illustrated. There is a countersunk recess in the sill extrusion to accommodate this fixing, seal these screw heads to sill.

**Sill**

- Building-in lugs at 450mm maximum centres. These centres would be reduced in high wind load areas.
- Impervious coating applied to opening before the window is installed.

**Jamb**

- Impervious coating applied to opening before the window is installed.
- Cement render

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REPLACEMENT WINDOW

Head

Existing timber window head

Caulking

Extruded aluminium angle

Extruded aluminium angle trim

Typical window

Opening = Frame size + 6

Frame size

Existing timber window sill

The sill can be screwed to existing timber window sill section in the area illustrated. There is a countersunk recess in the sill extrusion to accommodate this fixing. Seal these screw heads to sill.

Sill

Jamb

Extruded aluminium angle

Caulking

Existing timber window jamb

Fixings at 450mm maximum centres. These centres would be reduced in high wind load areas.

Extruded aluminium angle

Caulking
ALUMINIUM ARCHITRAVES

**60mm Architrave**
Designed for the replacement window market. When you are fitting a replacement window into stud wall with external wall sheeting or weatherboards.

Cutting formula:
Add 130mm to window height.
Add 121mm to window width.

**90mm Architrave**
If required we also offer a wider architrave as illustrated lower right.

Cutting formula:
Add 181mm to window height.
Add 174mm to window width.

**Note:**
The location of the window in the opening in relation to the external cladding is important. The front face of the window should be 7mm in front of the external cladding to ensure that the architraves sit snugly against the wall.

Coloured images of these architraves can be viewed on our web site: [www.vantagealuminium.com.au](http://www.vantagealuminium.com.au)

**CAD file:** DWG or DXF

VAN_COPLERS

CAD drawings in DXF and DWG format can be found on the WEB. In this case the file name is VAN_COPLERS.
50mm External Flange (EF) Trims

Designed for the replacement window market. When you are fitting a window into say a room enclosure, where you want the window on the external perimeter of the wall.

Cutting formula if square cut:
Add 43mm to window height.
Add 0mm to window width.

Alternative cutting formula if mitred:
Add 43mm to window height.
Add 43mm to window width.

Note:
With the centre nailing fin on window frame broken off. The window frame is sealed to EF trims at this location with continuous closed cell foam tape.

Coloured images of this trim can be viewed on our web site:
www.vantagealuminium.com.au

Sliding window jamb illustrated.
This E.F. trim will clip to any 50mm Vantage window.

Continuous concealed caulking seals the E.F. trim to the window frame at the nailing fin line.

External Flange (E.F) trim designed to move the nailing fin from the centre of the window to the front edge.

Continuous caulking.

Coloured images of this detail can be viewed on our web site: www.vantagealuminium.com.au
102mm External Flange (EF) Trims

Designed for the replacement window market. When you are fitting a (102mm wide frame) window into say a room enclosure, and you want the window on the external perimeter of the wall.

Cutting formula if square cut:
Add 43mm to window height.
Add 0mm to window width.

Alternative cutting formula if mitred:
Add 43mm to window height.
Add 43mm to window width.

Note:
With the centre nailing fin on window frame broken off. The window frame is sealed to EF trims at this location with continuous closed cell foam tape.

Coloured images of this trim can be viewed on our web site:
www.vantagealuminium.com.au

Continuous concealed foam tape seal at this location.

Series 517 awning illustrated.
Trim also suited:
Series 525 Louvres.
Series 601-602 MAGNUM™ sliders.
Series 613 MAGNUM™ double-hung.
Series 614 ClearVENT™.
Series 616 MAGNUM™ awnings.
FLAT JAMB CLOSERS

50mm Jamb Closer
Designed for the patio room enclosures or similar installations.
Cutting formula:
Same length as window frame height.

Note:
With the centre nailing fin on window frame broken off. The window frame is sealed to jamb closer trim at this location with continuous closed cell foam tape.

Coloured images of these architraves can be viewed on our web site:
www.vantagealuminium.com.au

102mm Jamb Closer
Allows you to fit 102mm doors or 102mm wide window frames into patio room enclosures.
Cutting formula:
Same length as door frame height.

Series 541 Sliding door illustrated.

CAD file: DWG or DXF
VAN_COUPLERS

42057
102mm Flat filler
### Installation

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50mm 180° NON LOAD BEARING COUPLERS

<table>
<thead>
<tr>
<th>Mullion 'I' Coupler</th>
<th>Sliding window</th>
<th>Sliding window</th>
<th>Double-hung</th>
<th>Double-hung</th>
<th>Awning window</th>
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</table>

Wind Ratings (Pa) Mullion 'I' couplers 10180 and 10181 between sliding, double-hung and awning window jambs.

'NA' Denotes that the mullion centre is not suitable for this product / window size.

**Mullion Ratings (Pa)**

- **S** = Serviceability limit state (deflection = L/150).
- **U** = Ultimate strength limit state (factored yield strength = 104 MPa).

These tables have been calculated using nominal section properties. A typical assembly has been tested as per the requirements of AS2047.

Serviceability rating has been limited to the highest water rating achieved.

Ultimate strength rating has been limited to 4500 Pa.

Continuous bead of small joint caulking or 1.60mm thick closed cell foam tape.

CAD file: DWG or DXF

VAN_COUPLERS

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50mm 135° NON-LOAD BEARING COUPLERS

Stud Opening Size =
C + 1074mm when wing windows are 610mm or
C + 1252mm when wing windows are 710mm

Important Setout Note:
The inner face of the outer bay skin meets at this corner.

Brick Opening Size =
C + 974mm when wing windows are 610mm or
C + 1116mm when wing windows are 710mm

Overall Brick Size =
C + 1070mm when wing windows are 610mm or
C + 1212mm when wing windows are 710mm

TYPICAL BAY WINDOW LAYOUT
Continuous concealed bead of small joint caulking

Sliding window illustrated

Most Important
This non-load bearing assembly can't be used to support the building.

DATE: NOV 09
REPLACES: AUG 03
SCALE: NOT TO SCALE
50mm 90° NON-LOAD BEARING COUPLERS

Stud Opening Size =

\[ X - 200\text{mm with 250mm brick veneer wall} \]
\[ X - 150\text{mm with 225mm brick veneer wall} \]

Overall Brick Projection =

\[ R + 150\text{mm with 250mm brick veneer wall or 225mm brick veneer wall construction} \]

Brick Opening Size =

\[ X + 70\text{mm with 250mm brick veneer wall} \]
\[ X + 150\text{mm with 225mm brick veneer wall} \]

Continuous concealed bead of small joint caulking or closed cell foam tape.

Most Important
This non-load bearing assembly can’t be used to support the building.
90° NON-LOAD BEARING COUPLERS

Stud Opening Size =
F - 70mm with 250mm brick veneer wall or
F - 45mm with 225mm brick veneer wall

Brick Opening Size =
F + 35mm with 250mm brick veneer wall or 225mm brick veneer wall construction

Overall Brick Projection =
F + 150mm with 250mm brick veneer wall or 225mm brick veneer wall construction

Continuous concealed bead of small joint caulking or closed cell foam tape.

Most Important
This non-load bearing assembly can’t be used to support the building.

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DATE: NOV 09
REPLACES: AUG 03
SCALE: NOT TO SCALE
50mm TO 102mm DOOR TO WINDOW VERTICAL COUPLER

Door to Window
\[ I_{xx} = 865 \times 10^3 \text{mm}^4 \]

Important Note:
This non-load bearing coupler can't be used to support building structure.

Continuous bead of small joint caulking or 1.60mm thick closed cell foam tape.

Mullion Ratings (Pa)
- **S** = Serviceability limit state (deflection = \( L/150 \)).
- **U** = Ultimate strength limit state (factored yield strength = 104 MPa).

These tables have been calculated using nominal section properties. Ultimate strength rating has been limited to 4500 Pa.

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<tr>
<th>Frame Height (mm)</th>
<th>Window Width (mm)</th>
<th>Door Width (mm)</th>
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Wind Ratings (Pa) Mullion coupler 42024 with slider jamb 10015 and door jamb 42005.
50mm to 102mm DOOR TO WINDOW VERTICAL COUPLER

102mm to 50mm 180° Coupler

This coupler has been designed to join 102mm doors to 50mm windows without screws or rivets. A full size detail of the assembly is shown on the following page.

When you are calculating the window/door sizes remember to allow the 20mm for the couplers.

This assembly is non-load bearing (it can’t be used to support the building above).

Coloured images of this detail can be viewed on our web site:
www.vantagealuminium.com.au

External view

Internal view
102mm HEAVY DUTY ‘I’ COUPLER

### Mullion Ratings (Pa)

- **S** = Serviceability limit state (deflection = L/150).
- **U** = Ultimate strength limit state (factored yield strength = 104 MPa).

These tables have been calculated using nominal section properties. Ultimate strength rating has been limited to 4500 Pa.

<table>
<thead>
<tr>
<th>Frame Height (mm)</th>
<th>Window Widths (mm)</th>
<th>Door Widths (mm)</th>
<th>Mullion Coupler Ratings (Pa)</th>
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<td>1810</td>
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<td>2400</td>
<td>2110 2110 2410</td>
<td>1810</td>
<td>1314</td>
</tr>
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</table>

Wind Ratings (Pa) Mullion coupler 42030 with awning jamb 16111 and door jamb 42005.

Any 102mm Vantage frame
- Series 541 Sliding door.
- Series 542 DStacker™ door.
- Series 517 Awnings/Fixed.
- Series 548 Hinged door/Bi-fold door/Fixed.
- Series 525 Louvres.
- Series 601-602 Sliders.
- Series 613 Double-hung.
- Series 614 ClearVENT™.
- Series 616 Awnings.

This coupler will also join Series 525 Louvres to Series 541, 542 or 618 sliding doors as illustrated above.

Series 548 Hinged door frame coupled to another Series 548 frame.
102mm HEAVY DUTY ‘I’ COUPLER

102mm to 102mm 180° Coupler

This coupler has been designed to join together 102mm windows and doors without screws or rivets. A full size detail of the assembly is shown on the previous page. This coupler won’t join 102mm frames to 50mm frames (use 42024).

When you are calculating the window/door sizes remember to allow the 2mm for the couplers.

This assembly is non-load bearing (it can’t be used to support the building above).

Coloured images of this detail can be viewed on our web site: www.vantagealuminium.com.au
102mm 135° Bay Coupler

This coupler has been designed to join together 102mm windows and doors or 102mm door on one face and a 50mm window on the other without screws or rivets. Both of these details are shown in full size on the next couple of pages.

When you are laying out the bay arrangement remember to allow the 45mm at the corners for the couplers.

This coupler is designed to wrap around a steel load bearing posts shown below. Maximum post size 50.8mm (2").

If the bay is installed without steel posts the assembly is non-load bearing (it can’t be used to support the building above).

Coloured images of this detail can be viewed on our web site: www.vantagealuminium.com.au
Any 50mm Vantage window
• Series 501-504 Sliding window
• Series 514 Double-hung window
• Series 516 Awnings/Fixed

Note:
Load bearing 51mm diameter mild steel column can be fitted inside the aluminium coupler, the strength of the steel column would depend on the load it has to carry and would be specified by the structural engineer.
Any 102mm Vantage window
• Series 517 Awnings/Fixed
• Series 548 Hinged door/Fixed

Note:
Load bearing 51mm diameter mild steel column can be fitted inside the aluminium coupler, the strength of the steel column would depend on the load it has to carry and would be specified by the building engineer.

Adjoining windows still have to comply with Section 5 of AS1288 and will require grade 'A' safety glass if they fall within 300mm of the door opening.
**Installation**

**Window Building in Details**

102mm **DOOR TO WINDOW 135° VERTICAL COUPLER**

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**Stud Opening Size =**

\[ C + 1064\text{mm when wing windows are 610\text{mm}} \quad \text{or} \quad C + 1488\text{mm when wing windows are 910\text{mm}} \]

**Brick Opening Size =**

\[ C + 1026\text{mm when wing windows are 610\text{mm}} \quad \text{or} \quad C + 1450\text{mm when wing windows are 910\text{mm}} \]

**Overall Brick Bay Size =**

\[ C + 1122\text{mm when wing windows are 610\text{mm}} \quad \text{or} \quad C + 1546\text{mm when wing windows are 910\text{mm}} \]

**Front Bay Wall Size =**

\[ C + 170\text{mm} \]

**Important Setout Note:**
The inner face of the outer bay skin meets at this corner.

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DATE: NOV 09

REPLACES: AUG 03

SCALE: NOT TO SCALE