

DESIGN MANUAL

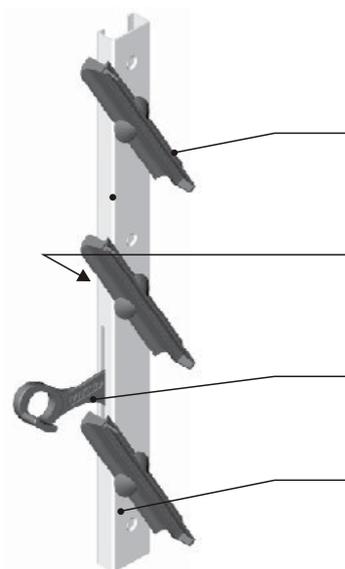
PALMAIR™ LOUVRE WINDOWS

breezway®

Breezway Palmair™ General Information

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Palmaid™ Louvres



Clips are manufactured from UV stabilised polypropylene. The clip colour is solid throughout. A patented weather fin provides additional performance.

For long and maintenance-free use the operating mechanism and over-centre locking mechanisms are manufactured from non-corrosive materials, including all rivets and fasteners.

The handle is made entirely from a UV stabilised acetal. This makes it not only non-corrosive, but ideal for commercial areas, as it will spring back to position, even when bent severely.

The Palmaid Louvre channel is made from 6063-T5 extruded aluminium.

Palmaid™ Louvre System

Palmaid weatherstripping and mullions enable Palmaid Louvres to be used in a wide range of frame types.



Wind and Water Performance Warranty

Breezway Louvre windows products are designed to achieve the requirements of AS2047-1999 “Windows in Buildings”.

The following table outlines the maximum variations that Breezway will warranty per Rating Category. Exceeding these constraints will void this Warranty. The limitations have been generated through NATA test results and Breezway’s Product Performance Warranty, based on over 50 years of field experience. The design constraints below apply to the Palmaid Louvre Window System, or the Palmaid Louvre Component System.

The Warranty is based on the use of 5mm glass minimum to maximum of 6.38mm. For the other glass thickness refer to Breezway.

	1000Pa Design Wind Speed 150Pa Water Pass		1500Pa Design Wind Speed 200Pa Water Pass		2200Pa Design Wind Speed 200Pa Water Pass	
	Max Span (mm)	Max Louvre Height ¹ (mm)	Max Span (mm)	Max Louvre Height ¹ (mm)	Max Span (mm)	Max Louvre Height ¹ (mm)
Palmaid™ Louvre Component System Single Bay						
152mm x 6mm glass or aluminium blade ²	865	2129	707	2129	580	1709
102mm x 6mm glass or aluminium blade ²	720	1988	589	1988	486	1098
Mullion Type						
Palmaid Mullion Strip	-	1145	-	1005	-	865
Palmaid Box Mullion	-	1450	-	1361	-	1361

Note:

Design Wind Speed = The ability of the window to perform the intended function under normal service conditions avoiding excessive deflection or the appearance of buckling.

1. The Palmaid Louvre System Product Performance Warranty is applicable only when Breezway Palmaid Weatherstrips are used and the system is installed in accordance with Breezway recommended installation procedures. Maximum Louvre Heights noted in the Product Performance Warranty include Palmaid Weatherstrips.
2. Maximum blade lengths apply regardless of whether annealed glass, toughened glass or aluminium blades are used. Glass must be straight and flat within 0.35mm/m.

Asia Warranty

Your Palmaid Louvre windows by Breezway are warranted against defects arising from faulty workmanship or materials for seven years from the date of receipt of goods, provided the following conditions are met.

- a) The product is installed in accordance with the manufacturers product performance warranty, written installation specification and with all relevant Local Standards.
- b) The product has been maintained according to industry recommendations.
- c) The product has not been subject to misuse, physical abuse or neglect.
- d) Manufacturing standards and tolerances are not deemed defects, nor are industry variations in colour of aluminium, plastic and timber componentry.
- e) Breezway accepts no responsibility for glass breakage (except for faulty workmanship or materials). Toughened and float glass is guaranteed against defects and degradation for three (3) years (only when Breezway supplies glass).
- f) Moving parts, which wear out as part of normal use, are guaranteed for three (3) years.
- g) This Guarantee is limited to the repair or replacement of the faulty product at the company's discretion, but does not extend to the installation or refinishing of a replacement product.
- h) Only repairs carried out by Breezway personnel or authorised agents are covered by this Guarantee.
- i) Claims under this Guarantee should be made within one month of the defect arising in the product. Copies of documentation showing the purchase date of the product should be included with your written claim and forwarded to the nearest Breezway office.

Selecting the Right Aluminium Finish

Surface finishes are either Polyester powder coated (50 µm minimum thickness) or anodised (minimum 15 µm thickness).

Unless otherwise specified all Breezway products are finished with standard powder coat formulations from leading powder suppliers. However, over time there will be weathering of this finish, resulting in a gradual change in appearance. This will be evident in loss of gloss, chalking, colour change and erosion of powder coatings. Selecting the right powder for the atmospheric conditions of the site together with correct maintenance will be critical to the ongoing appearance of the finish.

The application of high durability powder will reduce this deterioration and is essential for severe industrial, coastal or tropical environments.

Note that industry accepted colour variation can occur during the aluminium anodising process.

Standard Aluminium Finishes

Aluminium Finish	RAL Code
Natural Anodized	-
White Powder Coat	9016
Black Powder Coat	9005

For other aluminium finish options, including wood grain powder coated finishes and high performance finishes suited to severe industrial, coastal or tropical environments, please contact Breezway.

Clip And Handle Colours

Clip & Handle Colours
Black
White
Misty Grey
Natural Anodized

Other clip and handle colours are available, but are subject to minimum order quantities.

Louvre Care and Maintenance

Maintaining Aluminium Finishes

Regular maintenance of the surface finish will be necessary to reduce the rate of weathering. The frequency of cleaning will depend on the environmental conditions, but as a guide should be done at 6 monthly intervals, or more frequently in aggressive coastal or industrial environments.

- 1) Remove loose deposits with a wet sponge (avoid scratching by dry dusting first).
- 2) Use clean soapy water and chamois to clean louvre frames and blades. Avoid excessive amounts of water gaining entry into internal mechanisms through the handle notching. Rinse with clean water.
- 3) Do not use any cleaning agents that contain a caustic base, abrasive materials or chemicals that can affect the surface finishes.
- 4) To help maintain the lustre of the finish apply and wipe over with "non-abrasive car polish".

Glass Maintenance

For best results, glass blades should be regularly cleaned with mild, non-abrasive detergents. Low e glass blades should be installed with the coated side facing to the inside of the building and should only be cleaned with mild, non-abrasive detergents. Abrasive detergents or cleaning tools will visibly damage the low e glass.

Louvre Maintenance

It is recommended that inspection be carried out at the time of installation and then at yearly intervals. This may be required more frequently depending upon the variation of location, and environmental conditions.

Inspection and checks:

- 1) Inspect all screw fixings for firmness.
- 2) Where handle connectors are used, inspect all pivot points of linkages, connecting links, pins and split pins and/or clips for wear and secure fixings.
- 3) Ensure all louvre blades operate freely.
- 4) Ensure that seals are in place and clean.

Lubrication

All internal louvre operating mechanisms are pre-lubricated prior to assembly, with a clear lubricant. Under normal conditions this will be satisfactory for the life of the window.

Palmaid™ Component System

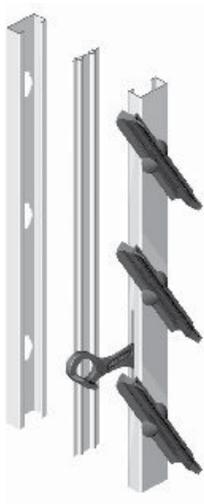


Gallery

Available in 102mm and 152mm to suit glass, aluminium or timber blades



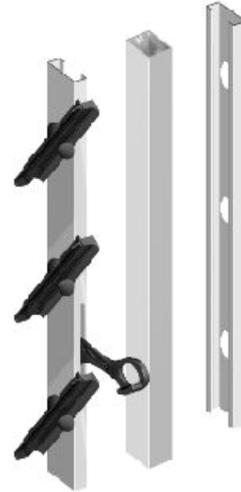
Weatherstrip System



Light Duty Mullion

34 x 1.5mm

Louvre Gallery simply clips to Mullion



Medium Duty Mullion

35 x 24mm

Louvre Gallery simply clips to Mullion



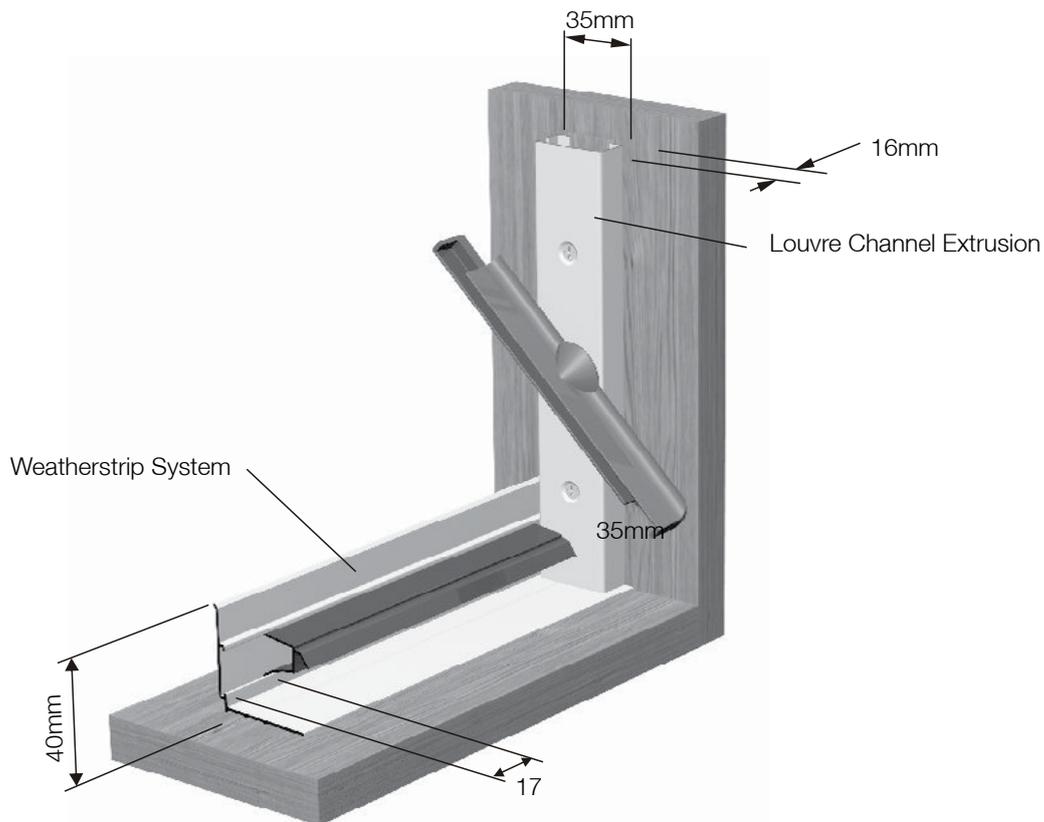
6mm Glass Blade



**6mm Hollow Extruded
Aluminium Blade**

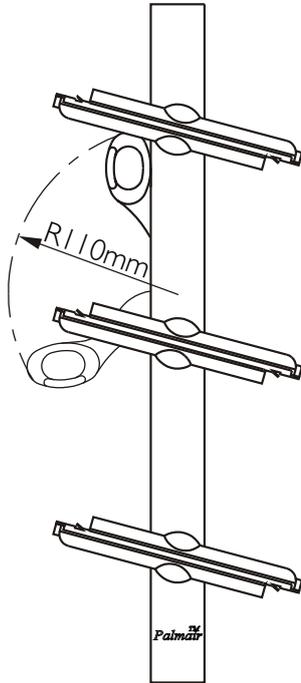
Recommended Specification

- The Louvres shall be “Palmaid Louvres” by Breezway.
- The Louvre Gallery Channel is to be manufactured from extruded aluminium alloy 6063 T5. The blade holding clips are to be UV stabilised polypropylene and activated by extruded aluminium alloy 6063 T5 pantograph operating bars. Handles are to be manufactured from acetal.
- The blade holding clips and the operating mechanism shall be replaceable.
- Weatherstrips complete with coextruded seal shall be fitted to manufacturer’s specification with an approved sealant to head and sill of each louvre set.
- The louvre system shall comply to AS2047 (windows in buildings) tests for window performance. Glass shall be width of 102mm or 152mm, thickness between 5mm to 6.38mm.



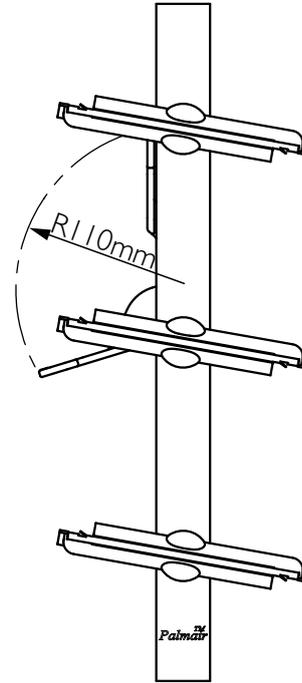
Corner of Louvre Window Assembly Detail

Palmair™ Louvre Handles



Standard Handle

- Acetal plastic handle
- Over centre locking action for tight sealing



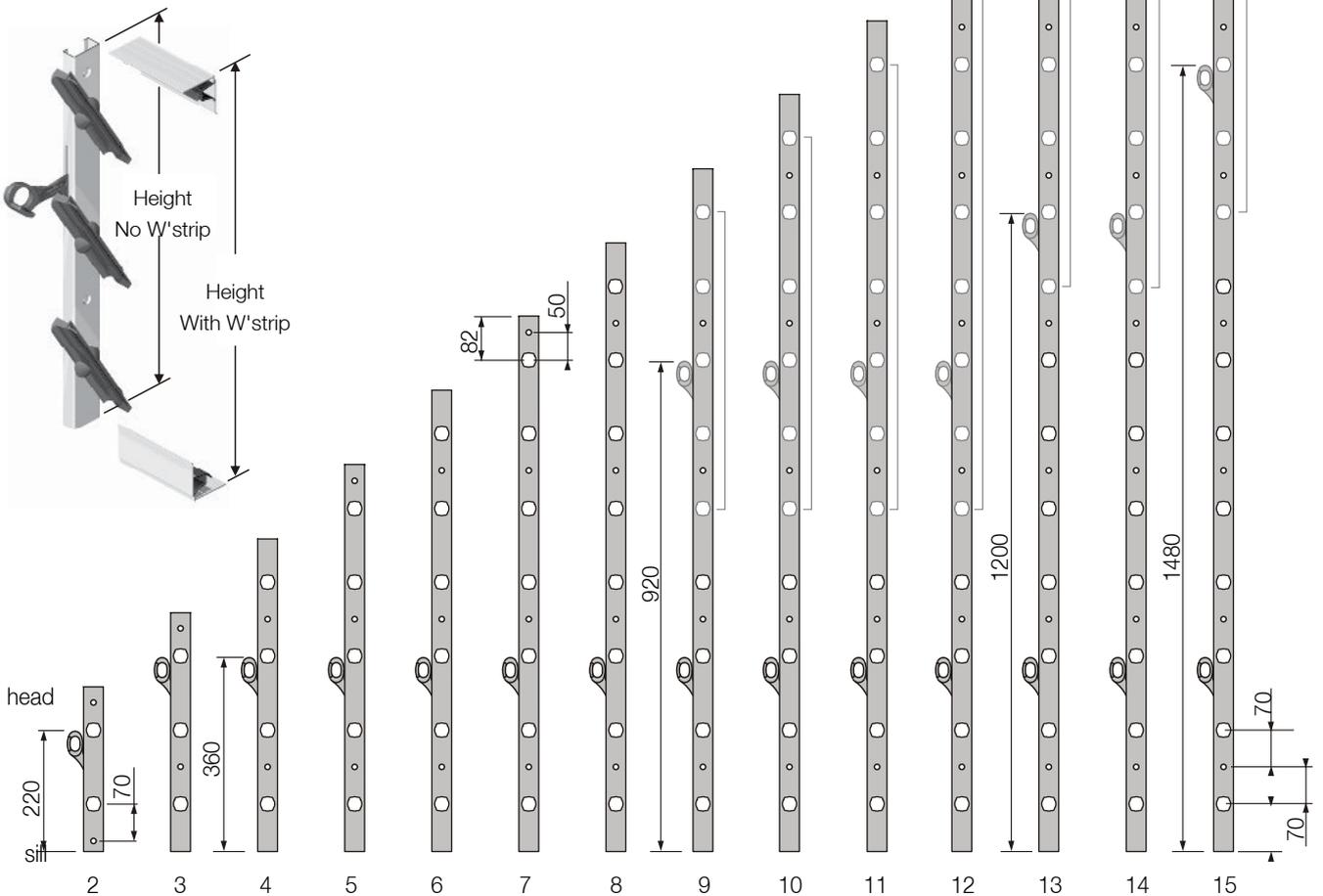
Low Profile Handle

- Acetal plastic handle
- Over centre locking action for tight sealing

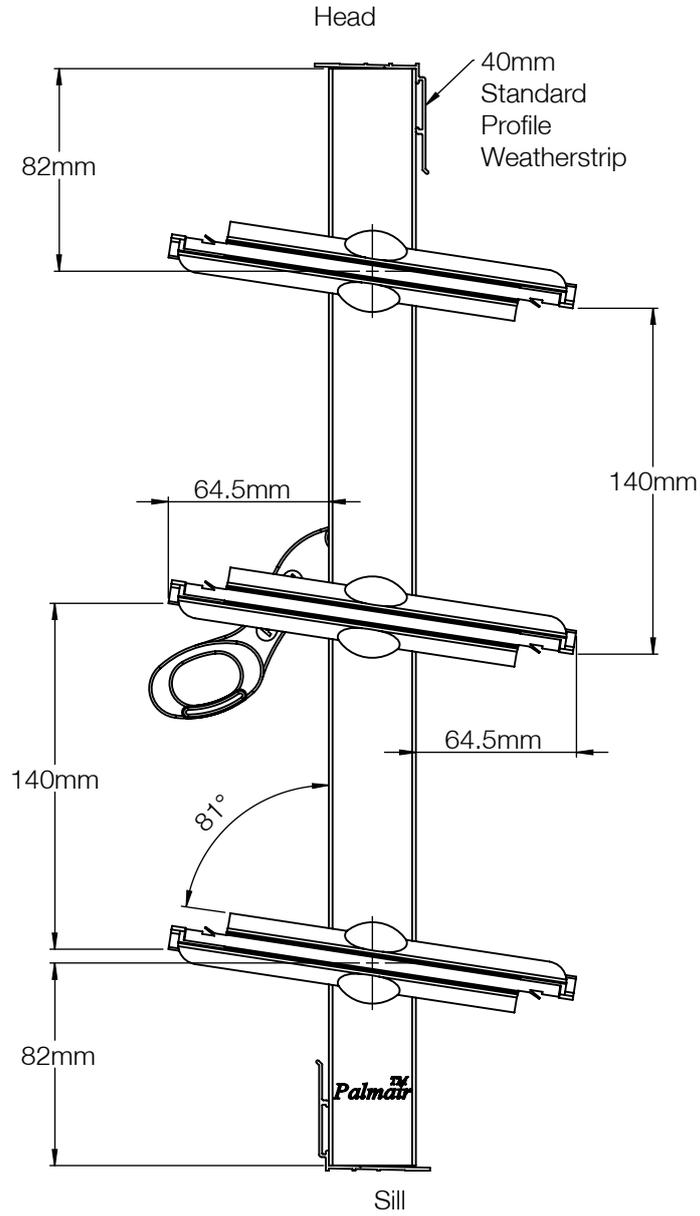
Palmaid™ 152mm Louvre Gallery Standard Heights and Handle Positions

Palmaid 152mm Galleries with Standard or Low Profile Handle

No. of Blades	Height (mm) No W'strip	Height (mm) With W'strip	Blades Controlled in Banks from Sill Upwards
2	304	309	2
3	444	449	3
4	584	589	4
5	724	729	5
6	864	869	6
7	1004	1009	7
8	1144	1149	8
9	1284	1289	4 5
10	1424	1429	4 6
11	1564	1569	4 7
12	1704	1709	4 8
13	1844	1849	6 7
14	1984	1989	6 8
15	2124	2129	8 7



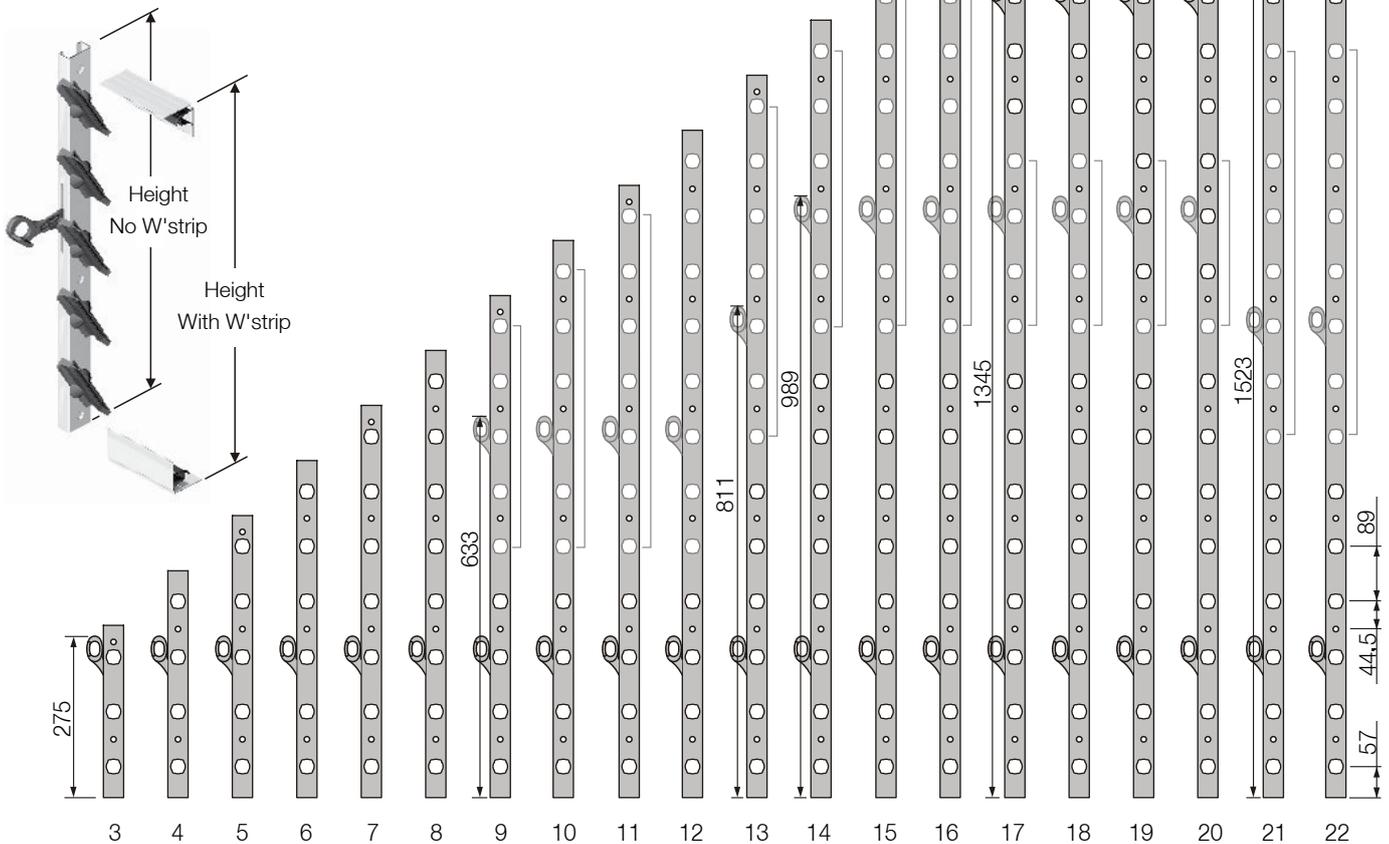
Palmaid™ 152mm Louvre Gallery Dimensions



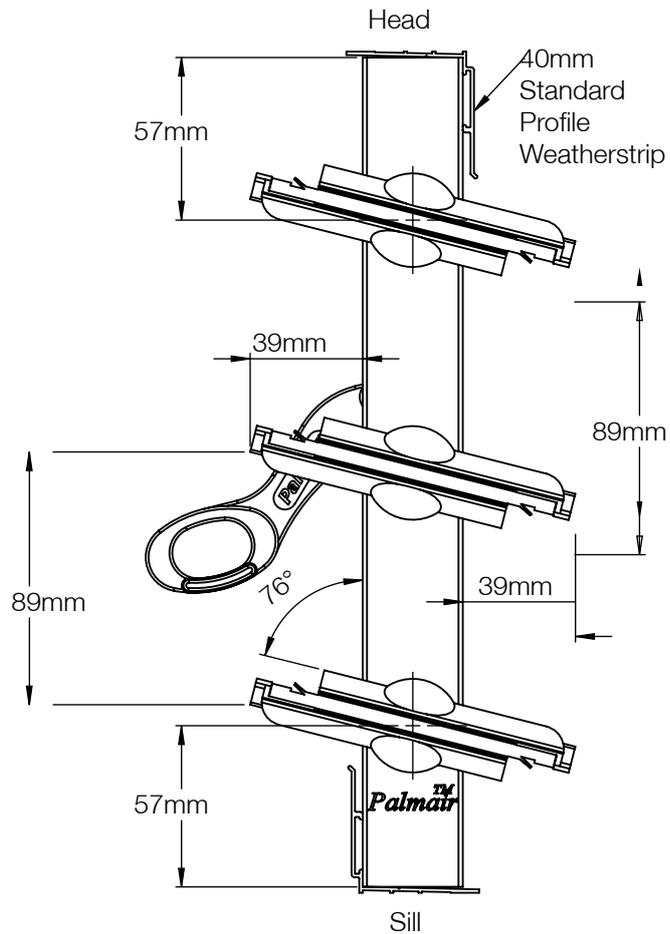
Palmaid™ 102mm Louvre Gallery Standard Heights and Handle Positions

Palmaid 102mm Galleries with Standard or Low Profile Handle

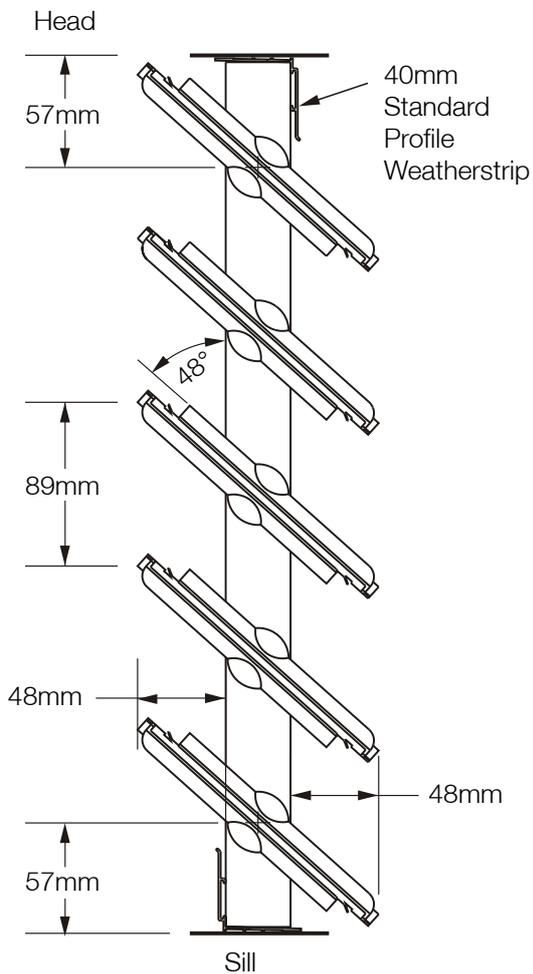
No. of Blades	Height (mm) No W'strip	Height (mm) With W'strip	Blades Controlled in Banks from Sill Upwards
3	292	297	3
4	381	386	4
5	470	475	5
6	559	564	6
7	648	653	7
8	737	742	8
9	826	831	4 5
10	915	920	4 6
11	1004	1009	4 7
12	1093	1098	4 8
13	1182	1187	6 7
14	1271	1276	8 6
15	1360	1365	8 7
16	1449	1454	8 8
17	1538	1543	8 4 5
18	1627	1632	8 4 6
19	1716	1721	8 4 7
20	1805	1810	8 4 8
21	1894	1899	6 8 7
22	1983	1988	6 8 8



Palmair™ 102mm Louvre Gallery Dimensions



152mm Palmaid™ Fixed Louvre



No. of Blades	Height (mm) No W'strip	Height (mm) With W'strip
3	292	297
4	381	386
5	470	475
6	559	564
7	648	653
8	737	742
9	826	831
10	915	920
11	1004	1009
12	1093	1098
13	1182	1187

Note: Not Available in 102mm

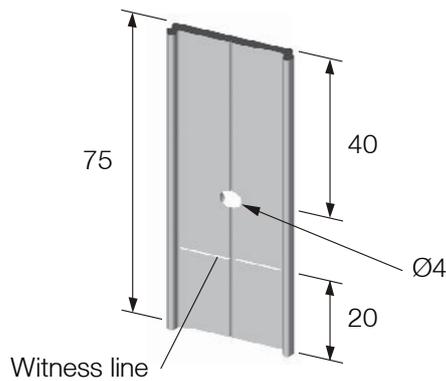
The Palmaid 152mm fixed clip louvre system provides blades fixed at angle of 48 degrees every 89mm, for permanent ventilation. The fixed louvre is used where permanent ventilation, light, privacy or a degree of weather proofing is required. Although the fixed clip louvre does not meet water penetration requirements, the angle and positioning of the blade holders ensures sufficient cover from adverse weather conditions.

The injection moulded blade holder is designed to accept 5 to 6.38mm glass, aluminium or timber blades. The recommended maximum span of the blades is 900mm, toughened glass is also an option for higher wind load areas.

Stacking Process For Louvre Galleries

This Process is used when Louvre Galleries are stacked on top of each other.

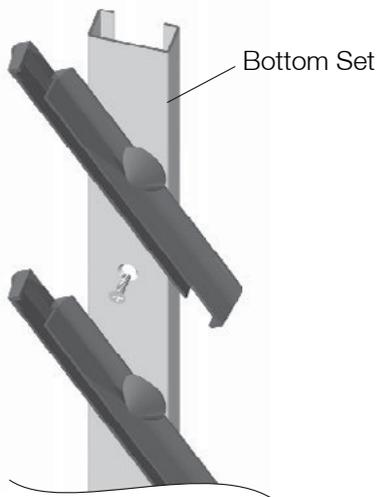
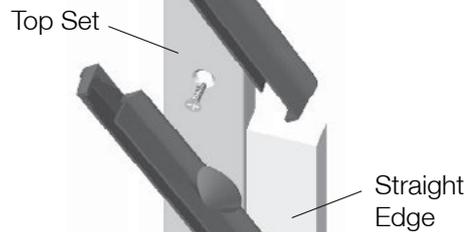
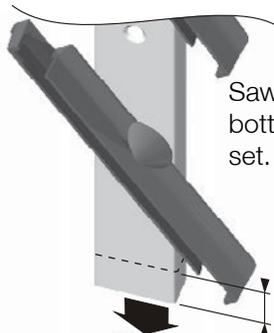
Note: IF STACKING KITS ARE USED, NO PERFORMANCE WARRANTY IS APPLICABLE



Adaptor
Extruded Aluminium Section

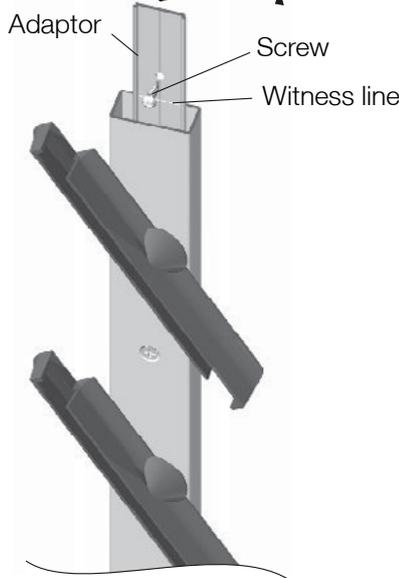
Snap the top set over the adaptor and align using a straight edge. Then attach.

Enter the adaptor into the top of the bottom set by 20mm (up to witness line as shown). Then fix the adaptor with a No.6 x 12 Long stainless steel screw.



Stage 1

Fix Bottom Louvre Set to Jamb



Stage 2

Fix Adaptor



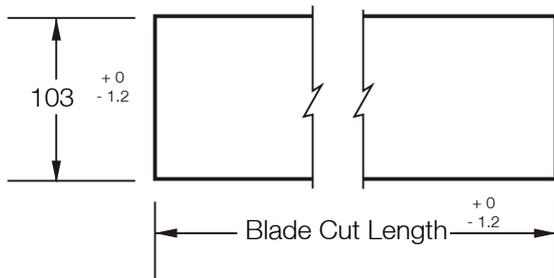
Stage 3

Fix Top Louvre Set

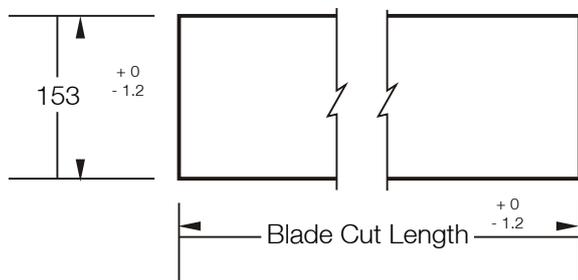
Blade Dimensions

Glass Louvre Blade Dimensions

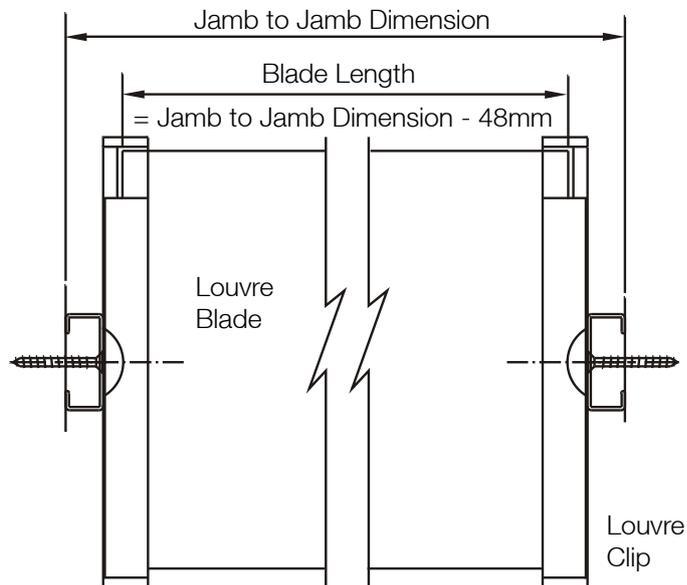
102 Louvre Blade



152 Louvre Blade



Blade Cut Length Calculator



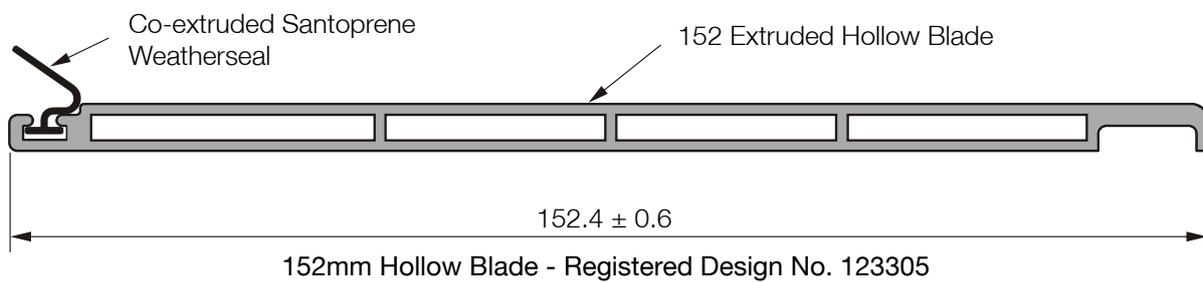
Extruded Aluminium Blades

Extruded Hollow Blades are available in Polyester powder paint finishes (minimum 50 micron finish) to a standard colour range or Anodised (minimum 15 micron finish). Unique finishes are available on request.

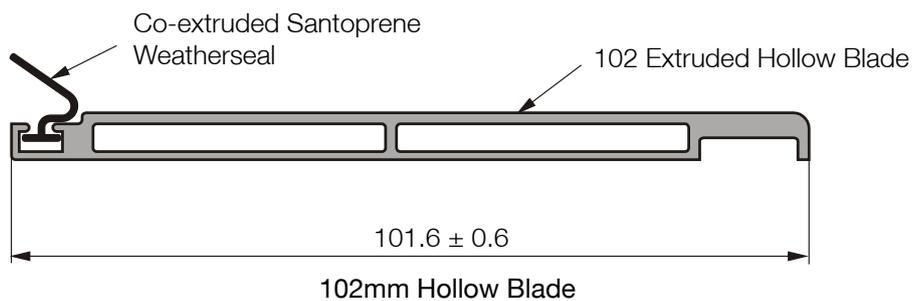
PERFORMANCE

This louvre blade with weatherseal conforms to N.A.T.A. certifications covering water penetration to AS-2047. Refer to Palmaid product performance warranty for details.

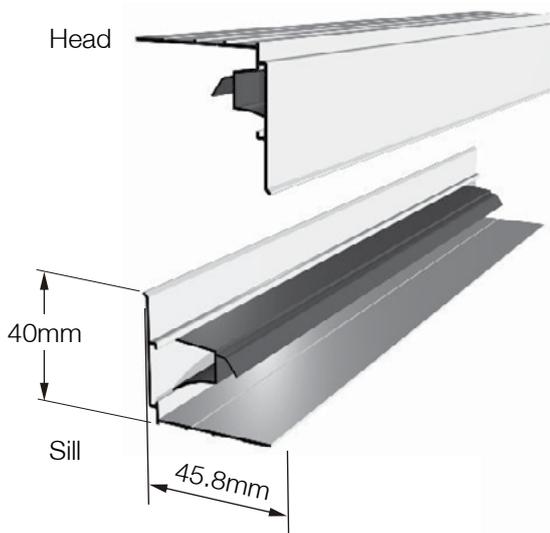
152mm Extruded Hollow Blade



102mm Extruded Hollow Blade

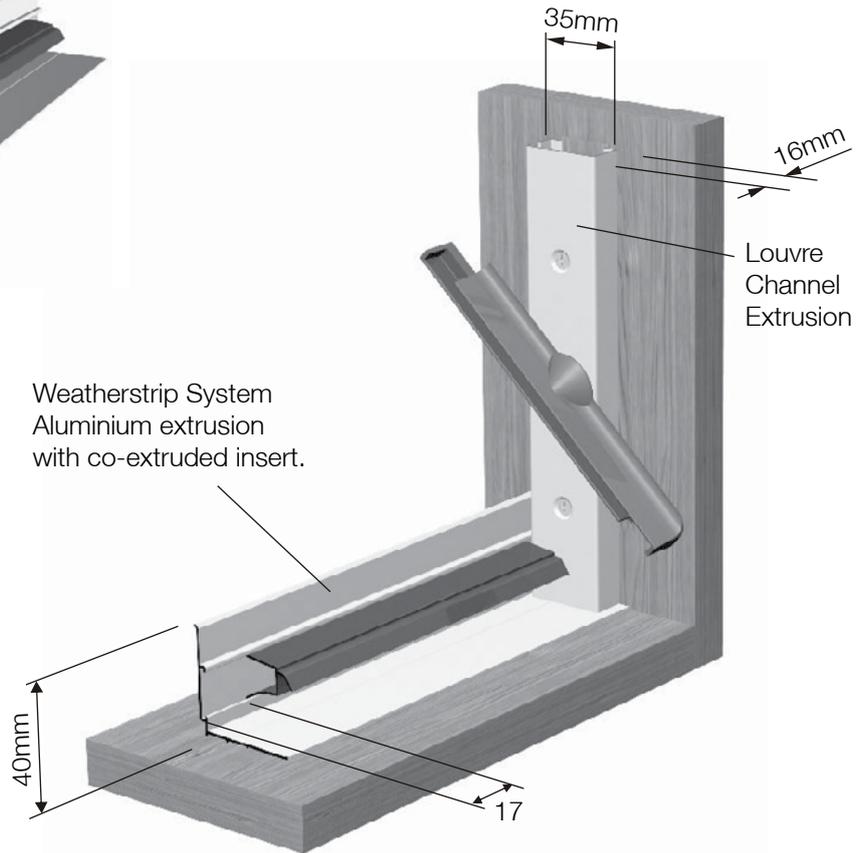


Palmaid™ Louvre Weatherstrip



Note: Weatherstrip for Head and Sill must be used to gain manufacturer's Performance Warranty.

Palmaid Louvre Gallery is positioned on top of the weatherstrip, adding 5mm to the overall internal window height.



Palmaid™ Mullions



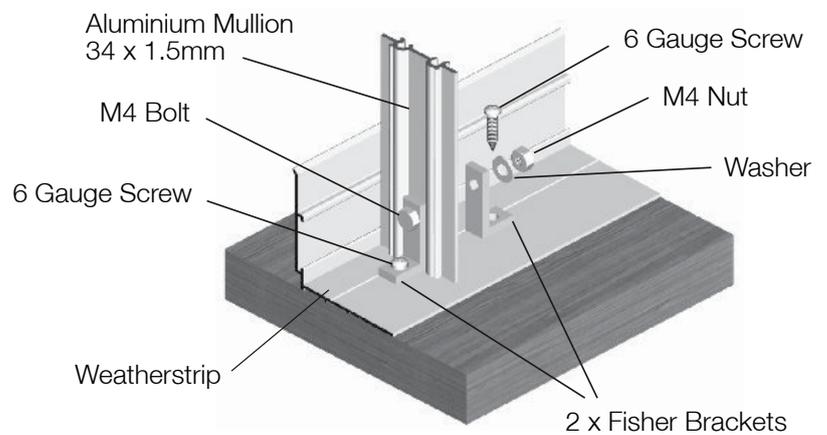
Palmaid Mullion Strip

34mm x 1.5mm



Palmaid Medium Duty Mullion

35mm x 24mm



Palmair™ Louvre System Installation Instructions

SINGLE PANELS
YOU WILL NEED:
A B C
F G H I J K

MULTIPLE PANELS
YOU WILL NEED:
A B C x 2 sets D E
F G H I J K

MULLION SECTION
L Shaped Bracket, M4 x 14 Long Nut & Bolt, Pan Head Screw S/S 6 Gauge x 19mm (3/4")

Flathead Countersunk Screws S/S 8 Gauge x 12mm (15/32")

Flathead Countersunk Screws S/S 8 Gauge x 30mm (1 3/16")

Electric Drill

Sealant

Spirit Level

Hacksaw

1 & **1**

1. Ensure the Frame is true and plumb **I**
2. Cut **A** Weather Strips to length of frame = **F**
3. Drill holes and counter-sink as shown

F = Width of window opening
B = 40mm (1 1/2") max
C = 200mm (8") typical spacing between holes

2 & **1**

Note:
Apply sealant to the whole length

3 & **1**

Note:
Do not over tighten the screws

Note:
A Bottom Weather Strip orientation

4 & **1**

IMPORTANT !
Ensure the Frame and Galler **C** are true and plumb

IMPORTANT !
Leave 2.5mm (1/8") space at top for **A** Top weather Strip

G 30mm (1 3/16")

NOTE: Orientation of louvres

5 & **1**

1. Ensure the Frame and the **A** Top Weather Strip are true and plumb **J**
2. Fix **A** Top Weather Strip by repeating steps **1** and **2**

6 & **1**

MULLION ONLY

1. Ensure the Frame and the **D** Mullion Section are true and plumb **J**
2. Fix the **D** Mullion Section using the **E** Brackets
3. Align **C** Galleries and install to **D** Mullion

a = 1/2 width of a window

L Shape Bracket with Fixing Bolts

7 & **1**

B x 2
B x 4

f Cut **B** Seals inserts to length **P** or **Q**

P = **f** - 35mm (1 3/8")
Q = distance between Galleries

2 Drill holes
R = 50mm (2") from all **B** edges for drainage & one in the top middle: **S**

3 Push-in **B** Weather Seal into:

8 CALCULATION OF BLADE WIDTH

IMPORTANT !
Required blade width =

IMPORTANT !
Required blade width =

of Mullions
= 50mm (2")

light · air · space

palmaid louvres
by breezway

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