



OPENING ROOFS

ProductManual



10 YEAR LIMITED WARRANTY

10 Years Warranty

Powdercoating finish
& colour fastness.

5 Year Warranty

Motor, Transformer and Receiver.

2 Year Warranty

Free from defects in
material or workmanship.

More information please contact
9624 0700 or visit www.cwsystems.com.au



Lumex Opening Roof
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Lumex Opening Roof
General Specification

Design Options - Roof Configurations

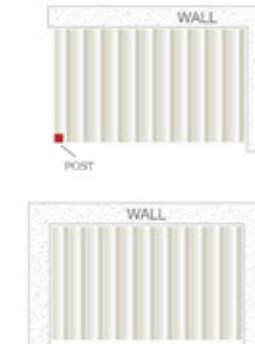
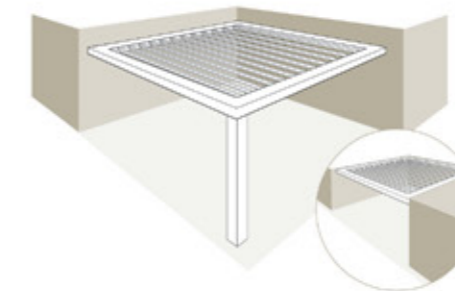
Free standing
 4 x post



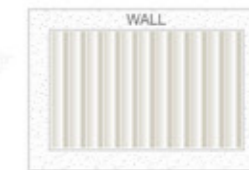
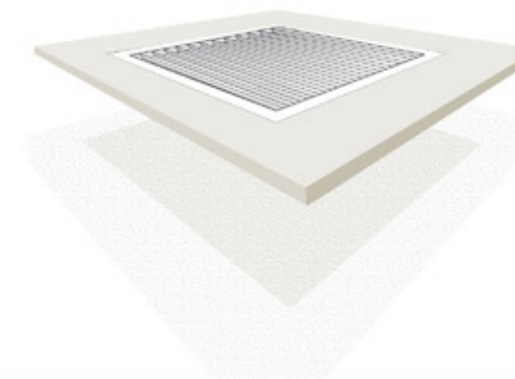
1 x Wall
 2 x Post



2 / 3 x Wall
 1 x Post



4 Wall
 0 x Post



Lumex Opening Roof
General Specification

Max Spans

Max Blade Span - 5000mm
 (Refer to the Engineer Span Tables for exact wind class span.)

Max Beam Span between Post - 6000mm
 (Refer to the Engineer Span Tables for exact wind class span.)

Max Area per Motor - 16m²

Colours

Standard Colours

- Gloss White
- Paper Bark
- Shale Grey
- Monument

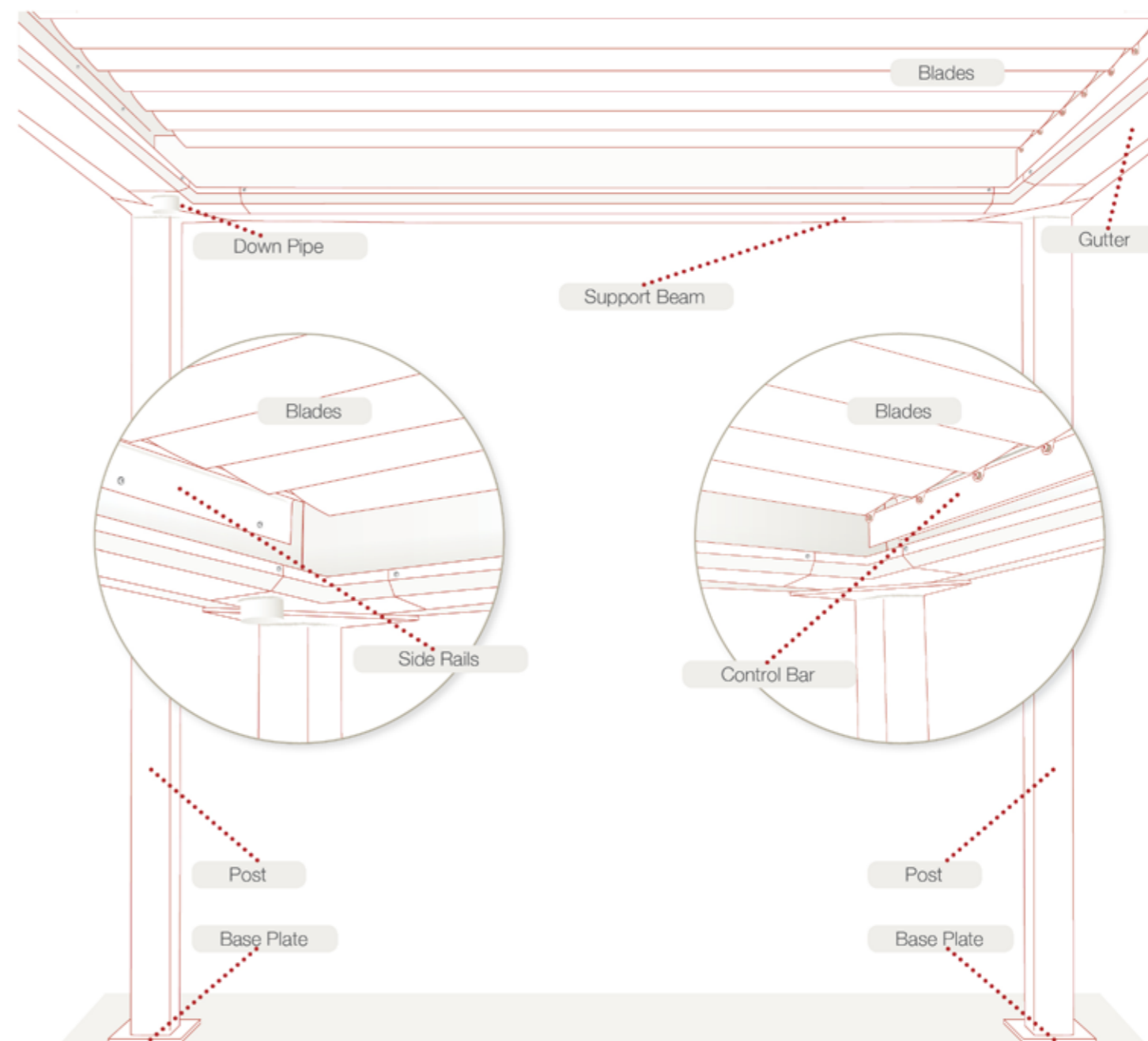
Custom Colours

- Satin White
- Surfmist
- Dune
- Deep Ocean
- Matt Black
- Ironstone
- Pale Eucalypt
- Manor Red
- Silver
- Loft
- Jasper
- Cottage Green
- Birch White
- Classic Cream
- Woodland Grey

**Please note that these colours are Dulux Powder coat colour matches.
 There may be a slight colour variation from the Dulux colour swatch.
 Please refer to the colour swatches supplied by CW Systems.**

Lumex Opening Roof
General Specification

Components

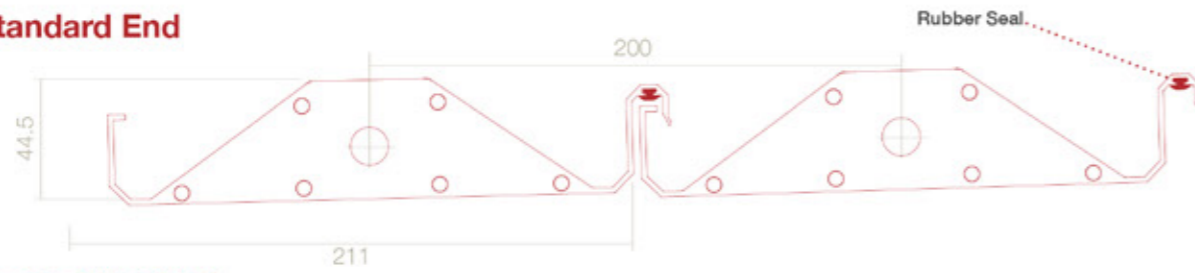


Lumex Opening Roof
General Specification

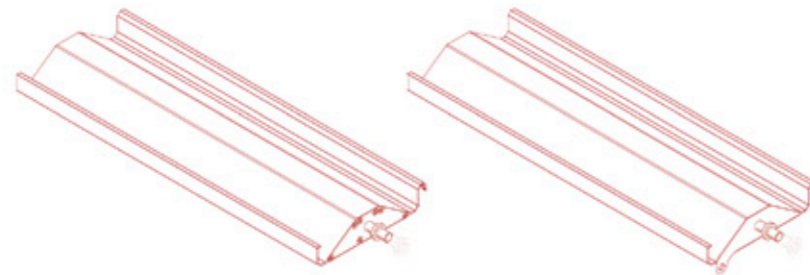
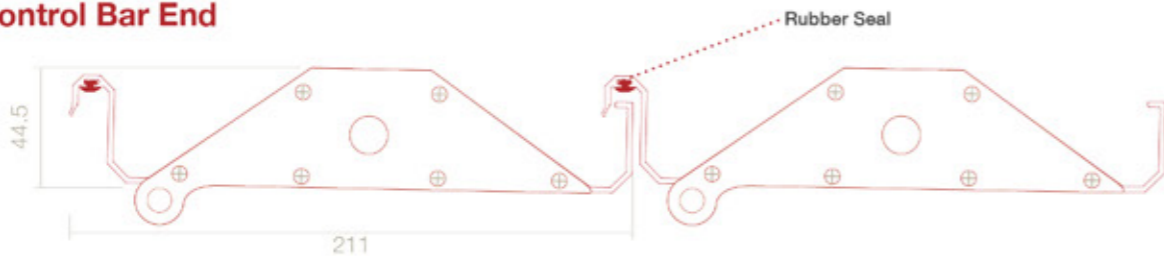
Components

Blade

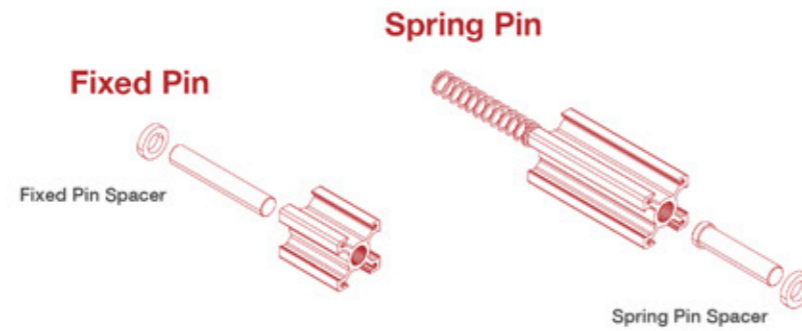
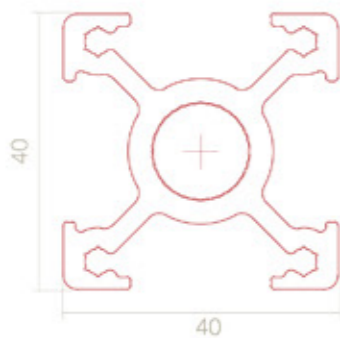
Standard End



Control Bar End

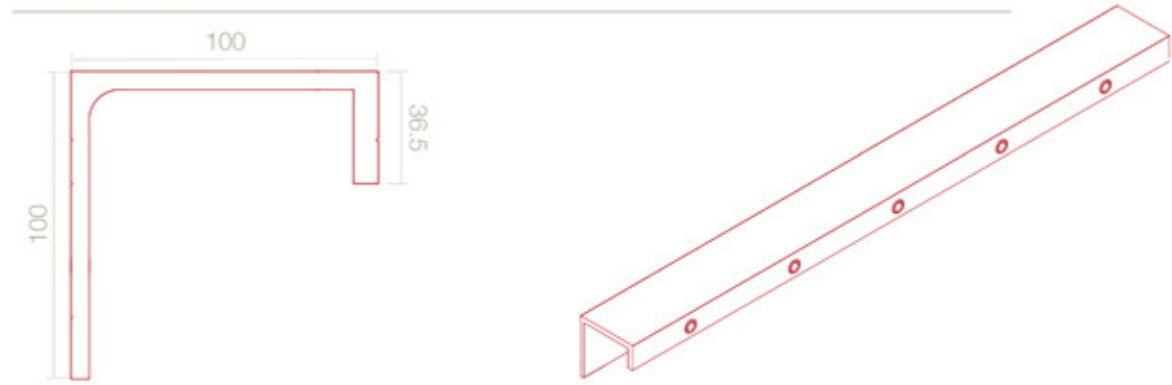


Louvre Pins

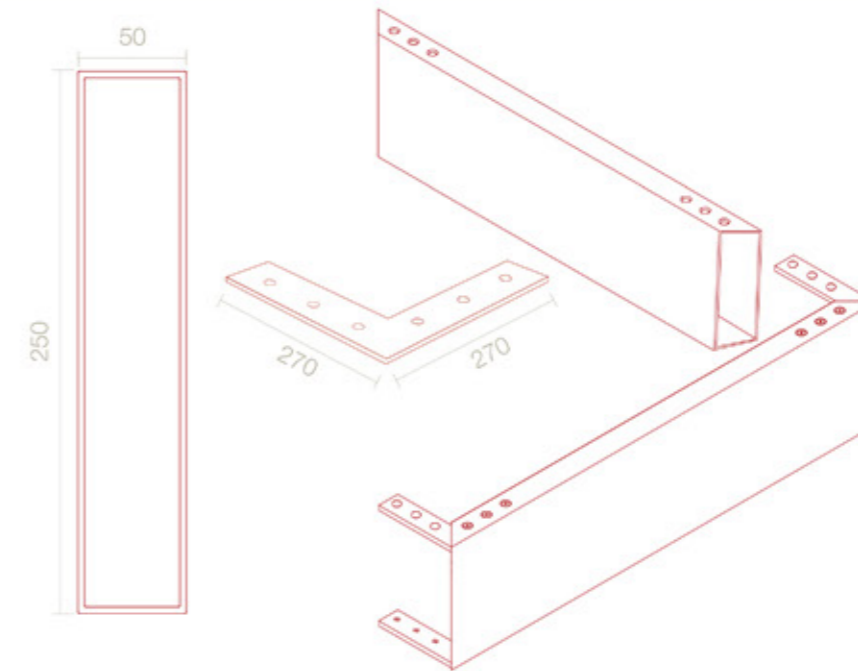


Lumex Opening Roof
General Specification

Side Rail



Support Beam and Bracket



Post



100x100mm Post
 (The 100x100mm Post is supplied when concreting the post into the ground in a footing)

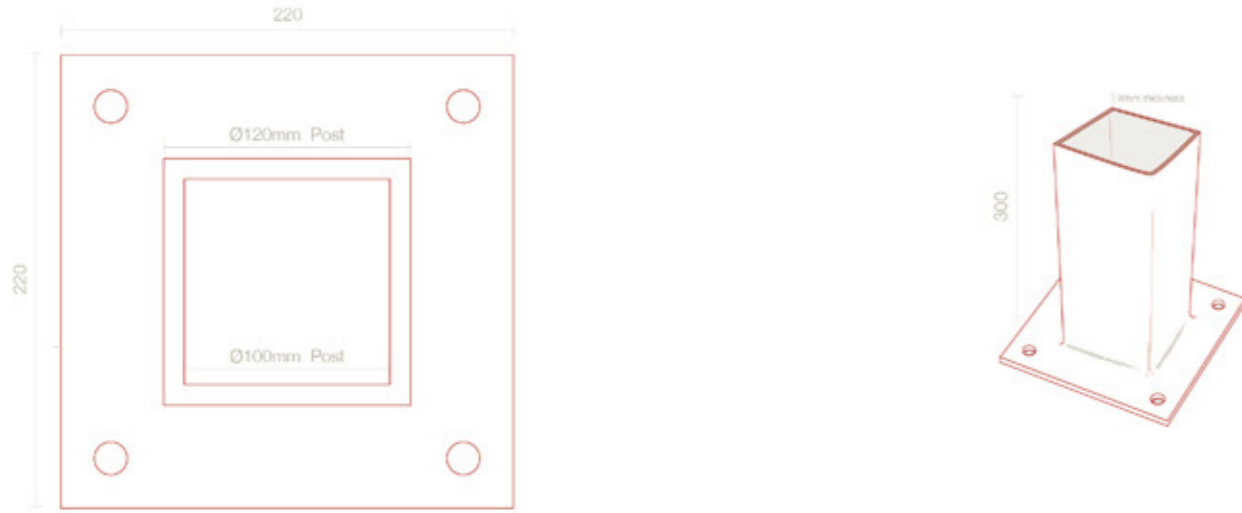


120x120mm Post
 (The 120x120mm Post is supplied in conjunction with the Base plate to fix onto a cast concrete footing)

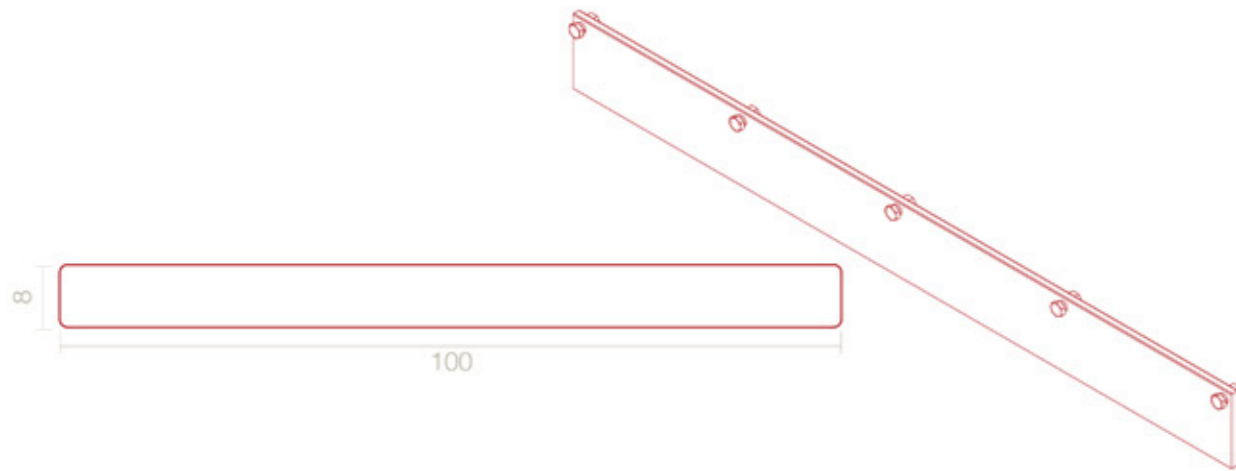
Lumex Opening Roof
General Specification

Components

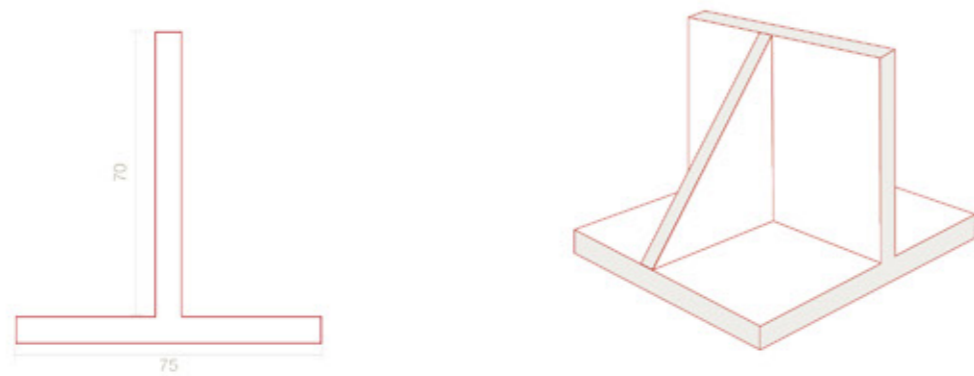
Base Plate



Control Bar

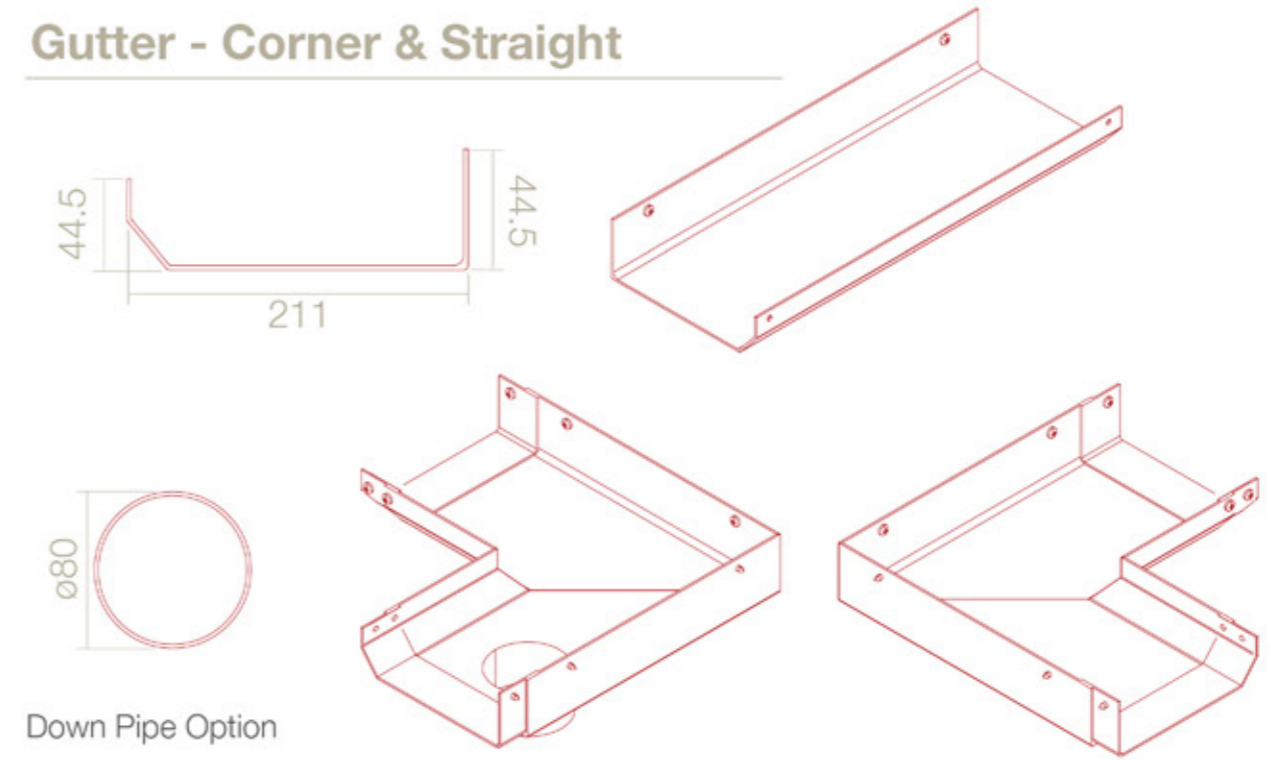


Control Bar Motor Mount

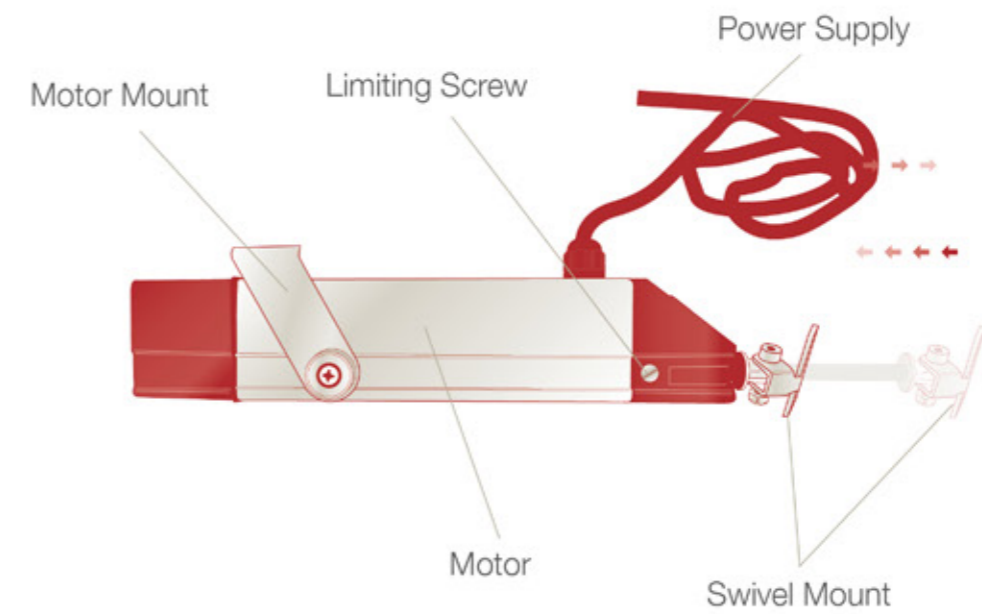


Lumex Opening Roof
General Specification

Gutter - Corner & Straight

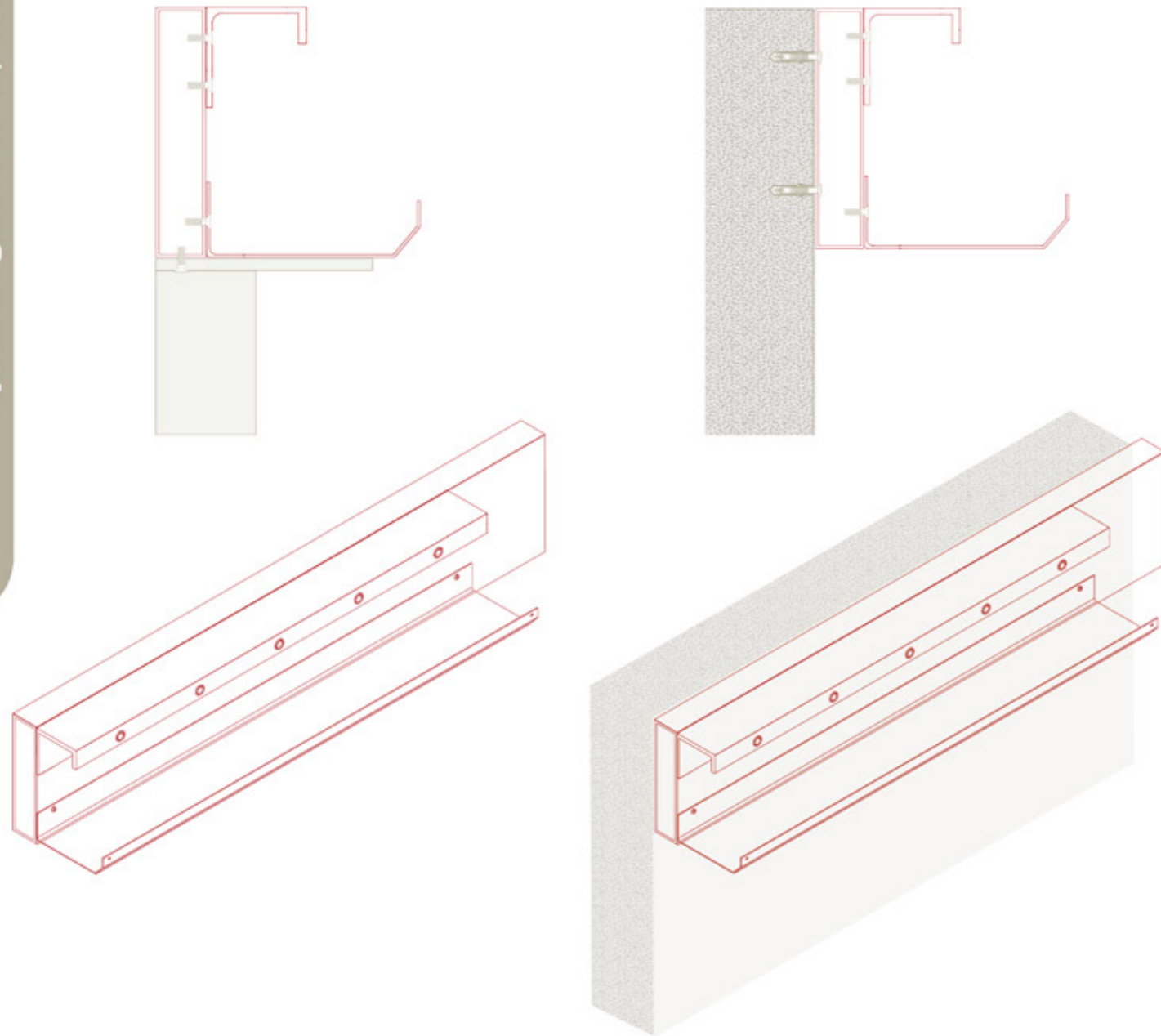


Motor



Lumex Opening Roof
General Specification

Design Options - With Support Beams

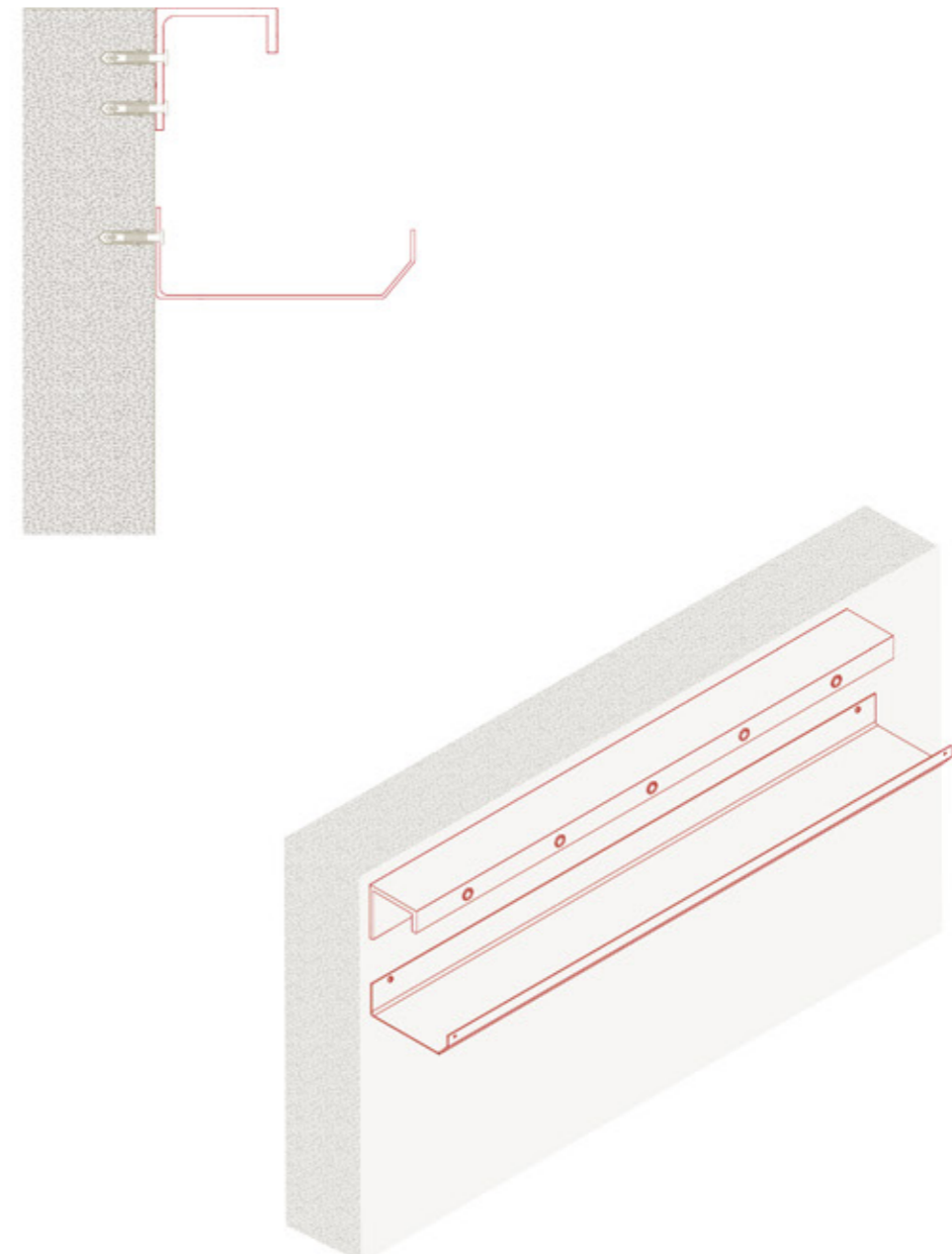


Used for - Free Standing, and 1 & 2 wall mounted configurations

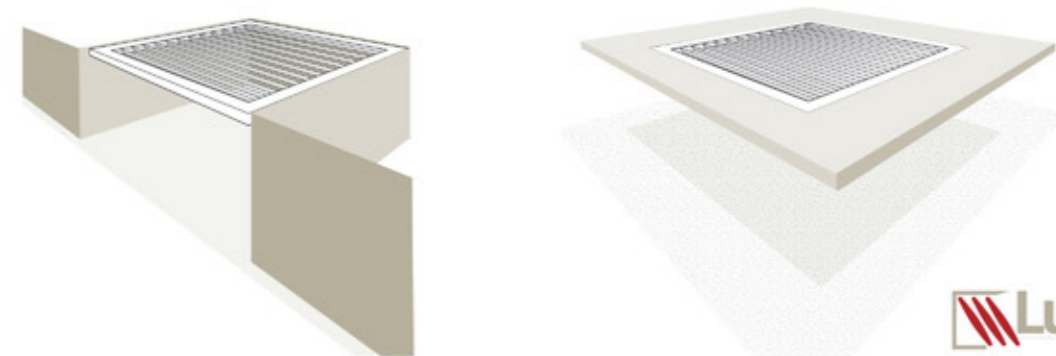


Lumex Opening Roof
General Specification

Design Options - Without Support Beams



Used for direct mount installations for - 3 & 4 wall configurations



Lumex Opening Roof Engineer Span Requirements

4 Post - Roof configuration



Louvre Blade Span Table - 4 Post Configuration

Wind Class	Ultimate Limit State (m/s)	Serviceability Limit State (m/s)	Wu (kPa)	Ws (kPa)	Maximum Allowable Span (mm)	Screw spacing (mm) Side Stile to Beam
N1	34	26	0.69	0.41	5000	100
N2	40	26	0.96	0.41	5000	100
N3	50	32	1.50	0.61	5000	75
N4	61	39	2.23	0.91	4300	75
N5	74	47	3.29	1.33	3500	50
N6	86	55	4.44	1.82	3000	50

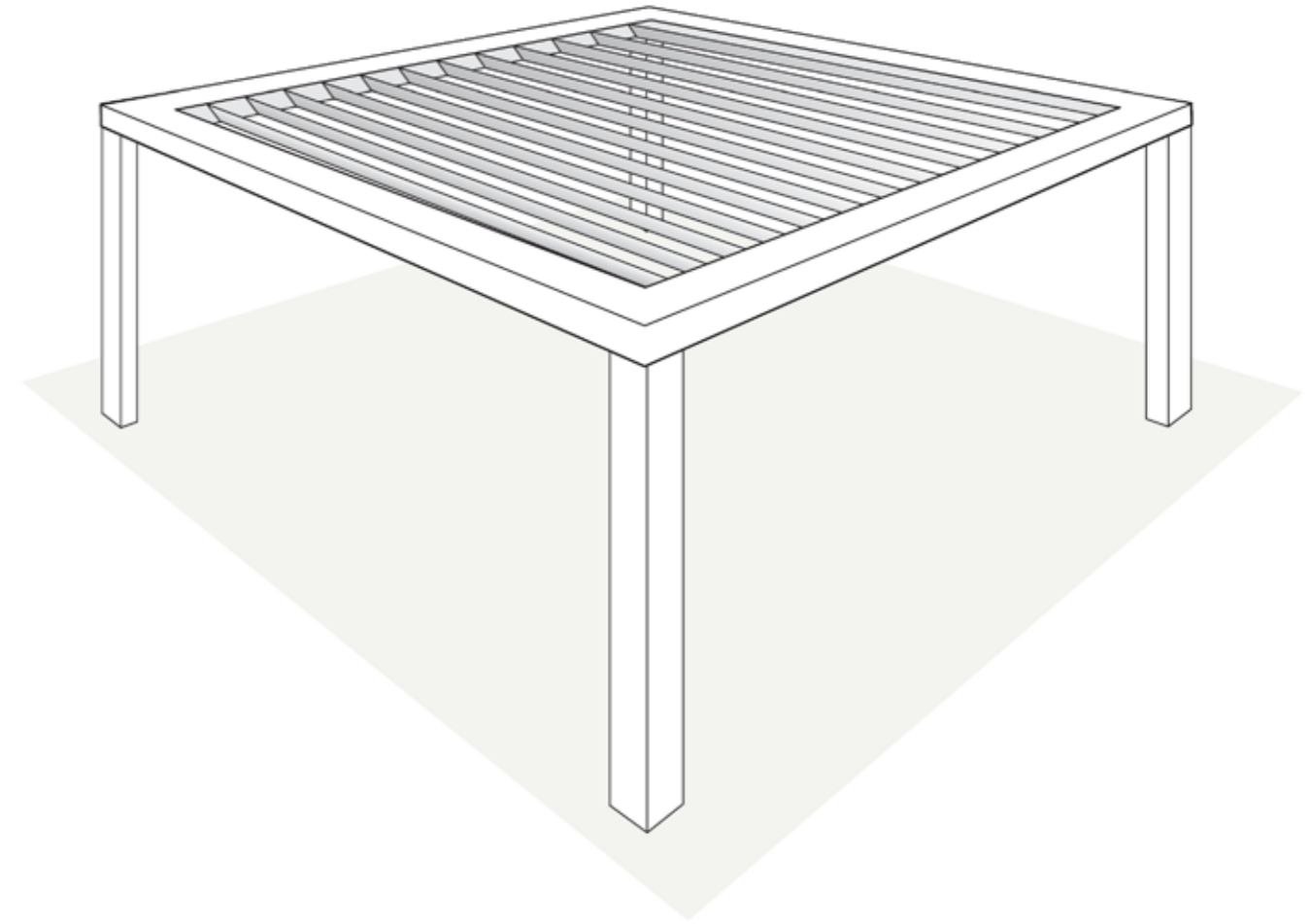
Post Span Tables - 4 Post Configuration 250x50x3.0 RHS Perimeter Beam Span Table - 1 Wall (Cpn = +1.2,-1.5)

Wind Class	Ultimate Limit State (m/s)	Serviceability Limit State (m/s)	Wu (kPa)	Ws (kPa)	Maximum Beam Span (mm)	Maximum Allowable Post Height (mm)
N1	34	26	0.69	0.41	5900	3500
N2	40	26	0.96	0.41	4800	3300
N3	50	32	1.50	0.61	3800	3000
N4	61	39	2.23	0.91	3200	2700
N5	74	47	3.29	1.33	2900	2500
N6	86	55	4.44	1.82	2600	2100

Perimeter Beam Span Table - 4 Post Configuration

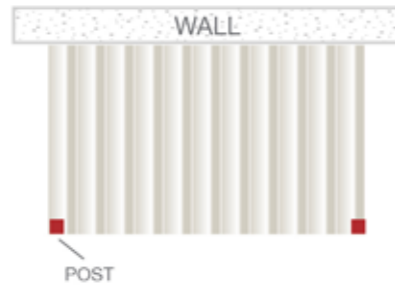
250x50x3.0 RHS Perimeter Beam Span Table - 1 Wall (Cpn = +1.2,-1.5)

Wind Class	Ultimate Limit State (m/s)	Serviceability Limit State (m/s)	Wu (kPa)	Ws (kPa)	Supported Louvre Span (mm)	Maximum Allowable Span (mm)	Number of Fasteners from beam to post
N1	34	26	0.69	0.41	5000	5900	3
N2	40	26	0.96	0.41	5000	4800	3
N3	50	32	1.50	0.61	5000	3800	4
N4	61	39	2.23	0.91	4300	3200	4
N5	74	47	3.29	1.33	3500	2900	5
N6	86	55	4.44	1.82	3000	2600	5



Engineer Span Requirements

1 Walls Roof configuration



Louve Blade Span Table - 1 x Wall Configuration

Wind Class	Ultimate Limit State (m/s)	Serviceability Limit State (m/s)	Wu (kPa)	Ws (kPa)	Maximum Allowable Span (mm)	Screw spacing (mm) Side Stile to Beam
N1	34	26	0.69	0.41	5000	100
N2	40	26	0.96	0.41	4800	100
N3	50	32	1.50	0.61	4500	75
N4	61	39	2.23	0.91	3700	75
N5	74	47	3.29	1.33	3000	50
N6	86	55	4.44	1.82	2500	50

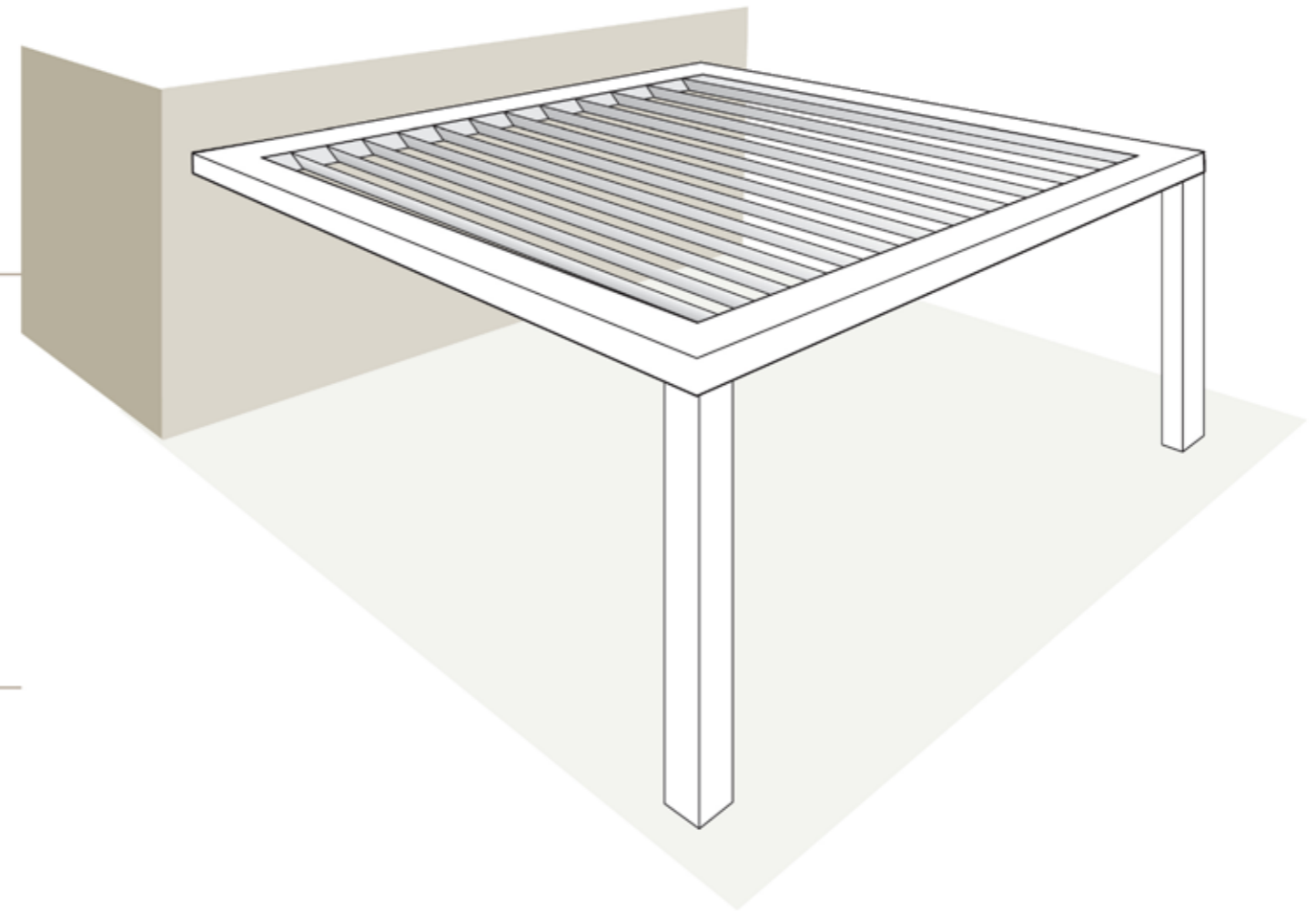
Post Span Tables - 1 x Wall Configuration 250x50x3.0 RHS Perimeter Beam Span Table - 1 Wall (Cpn = +1.2,-1.5)

Wind Class	Ultimate Limit State (m/s)	Serviceability Limit State (m/s)	Wu (kPa)	Ws (kPa)	Maximum Beam Span (mm)	Maximum Allowable Post Height (mm)
N1	34	26	0.69	0.41	4800	6000
N2	40	26	0.96	0.41	4300	5000
N3	50	32	1.50	0.61	3600	4600
N4	61	39	2.23	0.91	3300	4100
N5	74	47	3.29	1.33	3000	3500
N6	86	55	4.44	1.82	2800	3000

Perimeter Beam Span Table - 1 x Wall Configuration

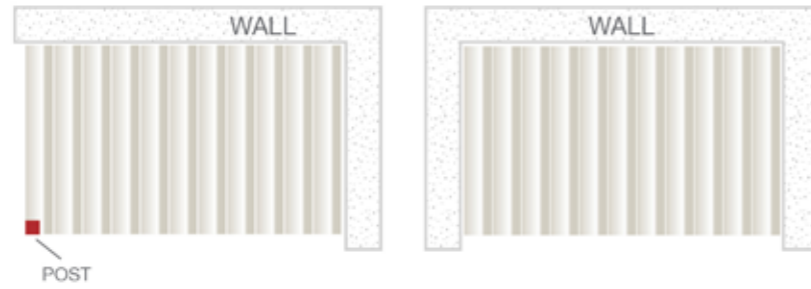
250x50x3.0 RHS Perimeter Beam Span Table - 1 Wall (Cpn = +1.2,-1.5)

Wind Class	Ultimate Limit State (m/s)	Serviceability Limit State (m/s)	Wu (kPa)	Ws (kPa)	Supported Louvre Span (mm)	Maximum Allowable Span (mm)	Number of Fasteners from beam to post	Supported Louvre Span (mm)	Maximum Allowable Span (mm)	Number of Fasteners from beam to post	Supported Louvre Span (mm)	Maximum Allowable Span (mm)	Number of Fasteners from beam to post
N1	34	26	0.69	0.41	5000	4800	3	4500	5000	3	3500	5600	3
N2	40	26	0.96	0.41	4800	4300	3	4000	4800	3	3000	5300	3
N3	50	32	1.50	0.61	4500	3600	4	3500	4200	4	2500	4900	3
N4	61	39	2.23	0.91	3700	3300	4	3000	3600	4	2000	4500	3
N5	74	47	3.29	1.33	3000	3000	5	2500	3300	4	1500	4200	3
N6	86	55	4.44	1.82	2500	2800	5	2000	3100	4	1000	4000	3



Engineer Span Requirements

2 or 3 Walls Roof configuration



Louve Blade Span Table - 2 or 3 Wall Configuration

Wind Class	Ultimate Limit State (m/s)	Serviceability Limit State (m/s)	Wu (kPa)	Ws (kPa)	Maximum Allowable Span (mm)	Screw spacing (mm) Side Stile to Beam
N1	34	26	0.69	0.41	5000	100
N2	40	26	0.96	0.41	5000	100
N3	50	32	1.50	0.61	4300	75
N4	61	39	2.23	0.91	3500	75
N5	74	47	3.29	1.33	2900	50
N6	86	55	4.44	1.82	2500	50

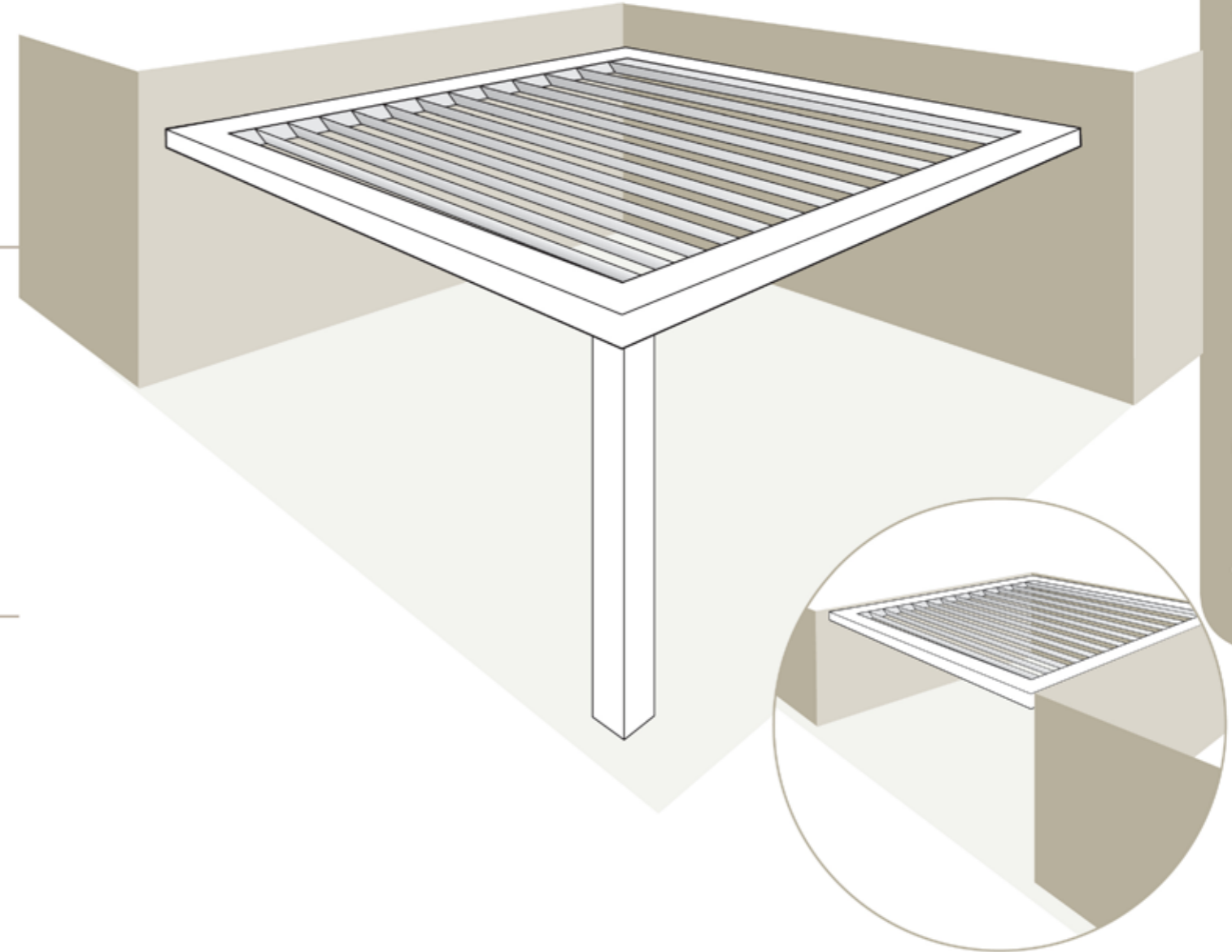
Post Span Tables - 2 or 3 Wall Configuration 250x50x3.0 RHS Perimeter Beam Span Table - 2 Wall (Cpn = +0.85,-1.5)

Wind Class	Ultimate Limit State (m/s)	Serviceability Limit State (m/s)	Wu (kPa)	Ws (kPa)	Maximum Beam Span (mm)	Maximum Allowable Post Height (mm)
N1	34	26	0.69	0.41	4500	6000
N2	40	26	0.96	0.41	4300	5000
N3	50	32	1.50	0.61	3600	4500
N4	61	39	2.23	0.91	3300	4000
N5	74	47	3.29	1.33	3000	3400
N6	86	55	4.44	1.82	2700	3000

Perimeter Beam Span Table - 2 or 3 Wall Configuration

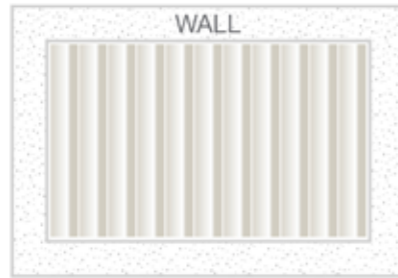
250x50x3.0 RHS Perimeter Beam Span Table - 2 Wall (Cpn = +0.85,-1.5)

Wind Class	Ultimate Limit State (m/s)	Serviceability Limit State (m/s)	Wu (kPa)	Ws (kPa)	Supported Louvre Span (mm)	Maximum Allowable Span (mm)	Number of Fasteners from beam to post	Supported Louvre Span (mm)	Maximum Allowable Span (mm)	Number of Fasteners from beam to post	Supported Louvre Span (mm)	Maximum Allowable Span (mm)	Number of Fasteners from beam to post
N1	34	26	0.69	0.41	5000	5000	3	4500	5400	3	3500	6000	2
N2	40	26	0.96	0.41	5000	4300	3	4000	4800	3	3000	5500	3
N3	50	32	1.50	0.61	4300	3600	4	3500	4000	4	2500	4800	3
N4	61	39	2.23	0.91	3500	3300	4	3000	3500	4	2000	4300	3
N5	74	47	3.29	1.33	2900	3000	5	2500	3200	5	1500	4100	4
N6	86	55	4.44	1.82	2500	2700	5	2000	3000	5	1000	4000	4



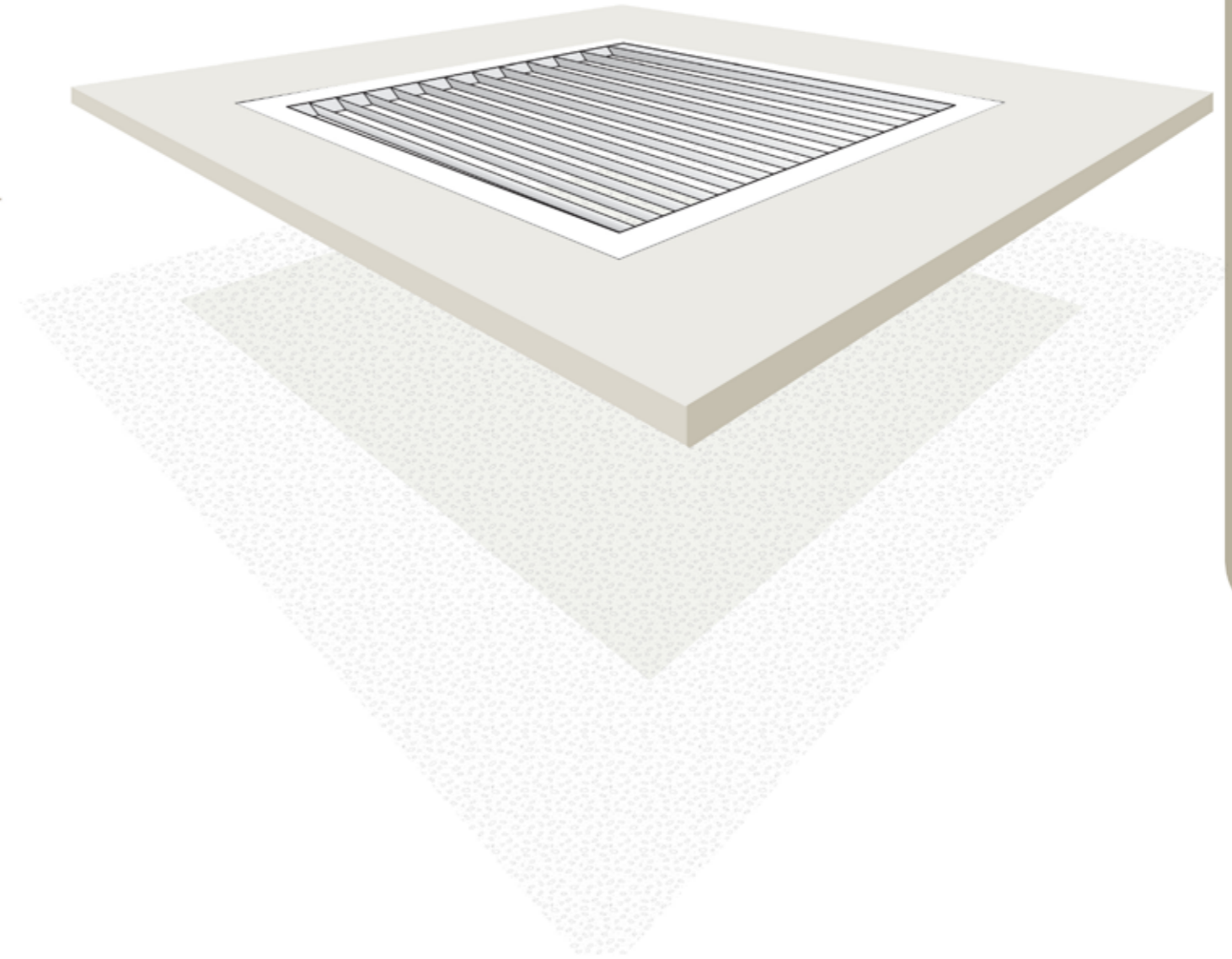
Engineer Span Requirements

4 Walls Roof configuration



Louvre Blade Span Table - 4 Wall Configuration

Wind Class	Ultimate Limit State (m/s)	Serviceability Limit State (m/s)	Wu (kPa)	Ws (kPa)	Maximum Allowable Span (mm)	Screw spacing (mm) Side Stile to Beam
N1	34	26	0.69	0.41	5000	100
N2	40	26	0.96	0.41	5000	100
N3	50	32	1.50	0.61	4300	75
N4	61	39	2.23	0.91	3500	75
N5	74	47	3.29	1.33	2900	50
N6	86	55	4.44	1.82	2500	50



Perimeter Beam Span Table - 4 Wall Configuration

250x50x3.0 RHS Perimeter Beam Span Table - 4 Wall (Cpn = +0.5,-1.1)

Wind Class	Ultimate Limit State (m/s)	Serviceability Limit State (m/s)	Wu (kPa)	Ws (kPa)	Supported Louvre Span (mm)	Maximum Allowable Span (mm)	Number of Fasteners from beam to post	Supported Louvre Span (mm)	Maximum Allowable Span (mm)	Number of Fasteners from beam to post	Supported Louvre Span (mm)	Maximum Allowable Span (mm)	Number of Fasteners from beam to post
N1	34	26	0.69	0.41	5000	5000	3	4500	5400	3	3500	6000	2
N2	40	26	0.96	0.41	5000	4300	3	4000	4800	3	3000	5500	3
N3	50	32	1.50	0.61	4300	3600	4	3500	4000	4	2500	4800	3
N4	61	39	2.23	0.91	3500	3300	4	3000	3500	4	2000	4300	3
N5	74	47	3.29	1.33	2900	3000	5	2500	3200	5	1500	4100	4
N6	86	55	4.44	1.82	2500	2700	5	2000	3000	5	1000	4000	4

Lumex Opening Roof Engineer Span Requirements

Determining Wind Speed

Selection Procedure

To identify a Wind Classification for a proposed domestic site there are four variables you must first identify. They are Region (figure 1), Terrain Category, Shielding Factor and Topographic Classification. The Wind Classification can then be determined using table 2.

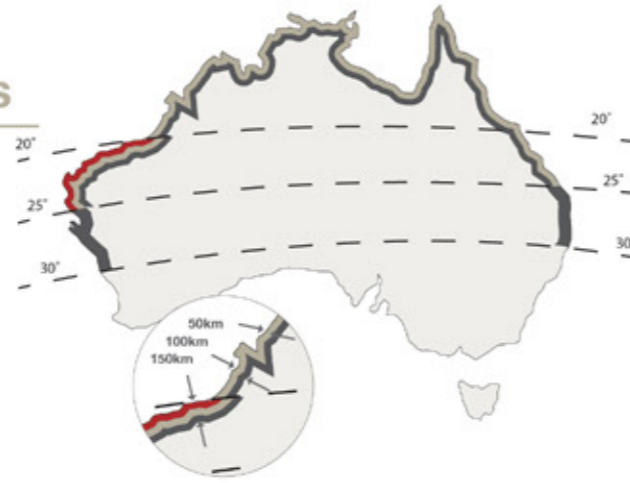
If the permissible gust wind speed is required, refer to table 1 following assessment of wind classification.

* This is an approximate method for estimating wind speeds for residential structures only. For full analysis refer to Australian Standard AS/NZS1170.2:2011.

Regions are marked with the letters A, B, C and D. Coastal region boundaries are smooth lines set in from a smoothed coastline by 50, 100, 150 and 200km. Islands within 50km of the coast are designated in the same region as the adjacent coast.

NOTE: This map is from Australian Standard AS/NZS1170.2. The wind direction sub-regions of A Region A have been removed for clarity.

- REGION A - Normal
- REGION B - Intermediate 100kms
- REGION C - Tropical Cyclones 50kms
- REGION D - Severe Tropical Cyclones



Wind Class	Design Gust Wind Speed () at height (h) m/s	
	Serviceability limit state (v)	Ultimate limit state (v)
N1	26	34
N2	26	40
N3	32	50
N4	39	61
N5	47	74
N6	55	86

Wind Class	Design Gust Wind Speed () at height (h) m/s	
	Serviceability limit state (v)	Ultimate limit state (v)
C1	32	50
C2	39	61
C3	47	74
C4	55	86

Region	Terrain Category	T0			T1			T2			T3		T4	T5
		FS	PS	NS	FS	PS	NS	FS	PS	NS	FS	NS	NS	NS
A	3	N1	N1	N1	N1	N2	N2	N2	N2	N2	N3	N3	N3	N4
	2.5	N1	N1	N2	N1	N2	N2	N2	N3	N3	N3	N3	N4	N4
	2	N1	N2	N2	N2	N2	N3	N2	N3	N3	N3	N3	N4	N4
	1.5	N2	N2	N2	N2	N3	N3	N3	N3	N3	N3	N4	N4	N5
	1	N2	N3	N3	N2	N3	N3	N3	N3	N4	N4	N4	N4	N5
B	3	N2	N2	N3	N2	N3	N3	N3	N3	N4	N4	N4	N4	N5
	2.5	N2	N3	N3	N3	N3	N3	N3	N4	N4	N4	N4	N5	N5
	2	N2	N3	N3	N3	N4	N4	N3	N4	N4	N4	N5	N5	N6
	1.5	N3	N3	N4	N3	N4	N4	N4	N4	N4	N5	N5	N5	N6
	1	N3	N4	N4	N4	N4	N4	N4	N5	N5	N5	N5	N6	N6
C	3	C1	C1	C2	C1	C2	C2	C2	C2	C3	C3	C3	C3	C4
	2.5	C1	C2	C2	C2	C2	C2	C2	C3	C3	C3	C3	C4	NA
	2	C1	C2	C2	C2	C2	C3	C2	C3	C3	C3	C4	C4	NA
	1.5	C2	C2	C3	C2	C3	C3	C3	C3	C4	C4	C4	NA	NA
	1	C2	C3	C3	C3	C3	C3	C3	C4	C4	C4	NA	NA	NA
D	3	C2	C3	C3	C2	C3	C3	C3	C4	C4	C4	C4	NA	NA
	2.5	C2	C3	C3	C3	C3	C4	C3	C4	C4	C4	NA	NA	NA
	2	C3	C3	C4	C3	C4	C4	C4	C4	NA	NA	NA	NA	NA
	1.5	C3	C4	C4	C4	C4	NA	C4	NA	NA	NA	NA	NA	NA
	1	C3	C4	C4	C4	NA	NA	NA	NA	NA	NA	NA	NA	NA

Terrain Category

The wind speed at a structure is influenced by the terrain it flows over as it approaches the structure. The terrain category classifications can be described as follows:



Category 1

Exposed open terrain with few or no obstructions and enclosed water surfaces. For example, flat, treeless, poorly grassed plains; rivers, canals and lakes; and enclosed bays less than 10km in the wind direction.



Category 1.5

Open water surfaces for example coastal waters, large open bays on seas and oceans, lakes and enclosed bays extending greater than 10km in wind direction.



Category 2

Open terrain, including grassland, with well scattered obstructions having heights typically from 1.5-5m with no more than two obstructions per hectare.



Category 2.5

Terrain with a few trees or isolated obstructions, for example terrain in developing outer urban areas with scattered houses.



Category 3

Terrain with numerous closely spaced obstructions with heights typically between 3-10m, for example suburban housing.

Lumex Opening Roof Engineer Span Requirements

Determining Wind Speed

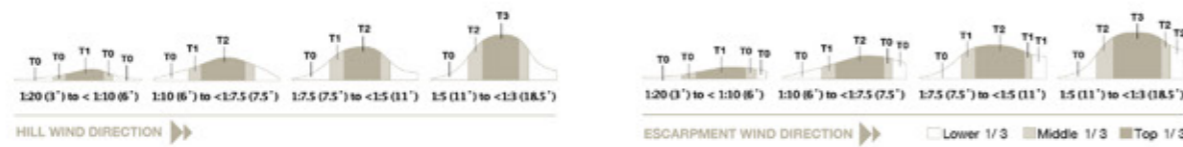
TOPOGRAPHIC EFFECT

The topographic classification determines the effect of wind on a structure due to its location on a hill, ridge or escarpment and the height and slope of the hill, ridge or escarpment.

The bottom of a hill, ridge or escarpment is the area at the base of which the average ground slope is less than 1 in 20 or approximately 3°. The maximum slope of a hill, ridge or escarpment (regardless of structure site) is measured as the steepest slope through the top half of the hill, ridge or escarpment. With the maximum slope known, the adjacent diagrams may be used to determine the topographic classification based on which third of the hill or escarpment the site is located.

In areas where the maximum slope does not exceed 1 in 20 (approximately 3°) the topographic classification shall be T0.

Note: Diagrams suitable for hill or escarpment heights not exceeding 30m. Refer AS4055:2011 for details if outside of these requirements.



SHIELDING FACTOR

Shielding classification is required because the wind speed at a structure is influenced by any upwind obstructions of similar size to the structure that are close to the building. In region C and D, trees and vegetation shall not be considered as shielding elements. The three shielding classifications are defined as follows:

NS ►► Wind Direction

NO SHIELDING eg. Less than 2.5 houses per hectares upwind

NS - Represents No Shielding

No Shielding occurs where there are no (or less than 2.5 obstructions per hectare) permanent obstructions upwind. e.g. The first row of houses or single houses abutting open water, airfields and open parklands.

PS ►► Wind Direction

PARTIAL SHIELDING eg. 2.5 houses per hectares upwind

PS - Represents Partial Shielding

Partial Shielding applies to intermediate situations where there are at least 2.5 houses or sheds per hectare upwind of the structure. e.g. Typical "acreage" type suburban development or wooded parklands. The second row of houses abutting open water or parklands may be classified as having partial shielding.

FS ►► Wind Direction

FULL SHIELDING eg. 10 houses per hectares upwind

FS - Represents Full Shielding

Full Shielding is where at least two rows of houses or similar sized permanent obstructions surround the building being considered. In regions A and B, heavily vegetated areas within 100m of the site can provide Full Shielding. The application of Full Shielding is considered appropriate for typical suburban development, equal to or greater than 10 houses and/or similar sized obstructions per hectare.

DESIGN FACTORS

Wind speeds have been determined using the following factors, in accordance with AS/NZS1170.2:2011 500 year design return period and an average five metre structure height.

Note: A 5% allowance has been used when allocating the wind classification.

TERRAIN CATEGORIES (MZ,cat)	
Terrain Category	Regions A, B, C and D
1	1.05
1.5	0.98
2	0.91
2.5	0.87
3	0.83

SHIELDING FACTOR (MS)	
Shielding Classification	Factor
Full Shielding (FS)	0.85
Partial Shielding (PS)	0.95
No Shielding (NS)	1.00

TOPOGRAPHIC EFFECT (MT)	
Topographic Classification	Factor
T0	1.00
T1	1.10
T2	1.20
T3	1.30

WIND SPEED EXAMPLES

The examples below show typical applications of the rationalised gust wind speeds. For a full analysis refer to AS/NZS1170.2:2011.



REGION A - N1 (W28), REGION B - N2 (W33) AND REGION C - C1 (W41)
Flat Suburbia



REGION A - N3 (W41), REGION B - N4 (W50) AND REGION C - C3 (W60)
Structure sited in undulating sparsely populated terrain



REGION A - N2 (W33), REGION B - N3 (W41) AND REGION C - C2 (W50)
Structures built adjacent to an oval or large vacant lot subject to prevailing winds.



REGION A - N3 (W41) REGION B - N4 (W50) AND REGION C - C3 (W60)
The first row of buildings adjacent to the sea front



REGION A - N2 (W33), REGION B - N3 (W41) AND REGION C - C2 (W50)
Structures on undulating terrain in suburbia



REGION A - N4 (W50) REGION B - N5 (W60) AND REGION C - C4 (W70)
Extremely severe - Isolated building on the crest of a hill

Disclaimer

The method used for calculating the design gust wind speeds has been developed by CW Systems with the assistance of suitably qualified engineers in order to comply with the requirements of AS/NZS1170.2:2011 and classified in accordance with the wind classifications allocated in AS4055:2012.

CW Systems does not accept liability for any loss or damage suffered as a result of any errors in the interpretation or application of this design guide. Any person wishing to check any calculations made by them pursuant to this method may wish to seek independent engineering advice.

Before you Order - Checklist

Checklist

Review the site where the opening roof systems will be installed and check the following:

- Are there any council/ local government regulations that need to be adhered to - Check with the local council.
- Determine the Wind class of the site - Refer to pg 20. Using the Engineer span tables ensure the planned blade, and beam spans and post heights are sufficient.
- Check the level of the site - Determine whether post height adjustments need to be made to ensure the roof is level.
- Determine the roof configuration - refer to page 13 - 19. How many posts are required
- Determine the site aspect - The direction of the Northern sun. Use this to determine the blade rotation.
- Determine whether any footings are required.
- Determine the downpipe drainage points, and stormwater connection points.
- Determine the power supply point.

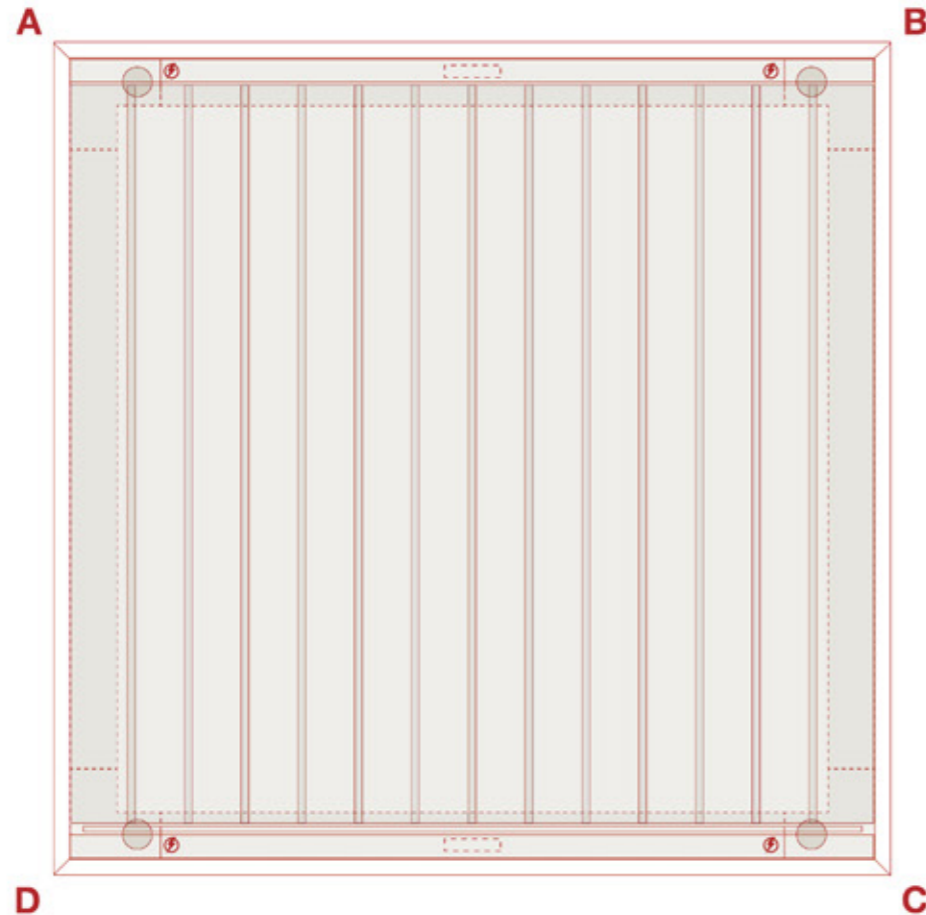
How to order:

Order using the A,B,C,D model on the order form.

A-B is always the Width (number of blades). A-D is always the projection of the blades.


Use the A,B,C,D model to determine the Blade rotation, Power connectivity, Storm water drop pipes, and the corners requiring posts.

A copy of the order form is attached on the next page.



Before you Order - Checklist

Checklist - order form

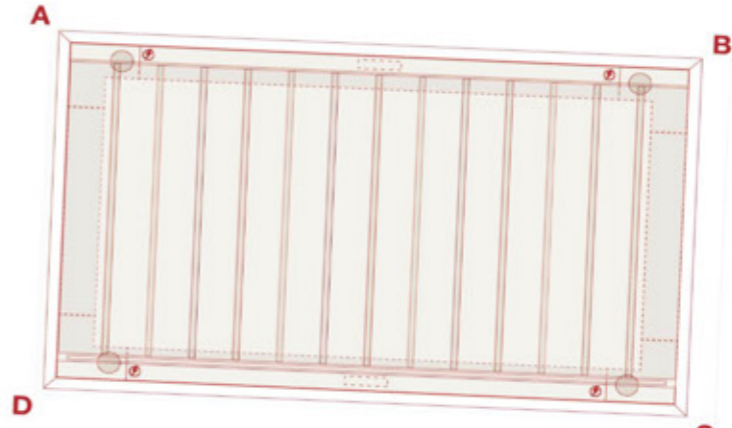


Ph: 02 96240750 Fax: 0295394740
Email: sales@cwsystems.com.au

Company Name		
Order Name/No.		
Pick Up or Delivery		
Date		


Notes for Office Use Only

LUM	
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Item #	Location	Width (Size A-B)	Projection (Size A-D)	Colour	Blade Rotation	Mounting Method	Power Connectivity	Down Pipe	Beams					Posts				Item Code			
									Type	A-B	B-C	D-C	A-D	Post Type	Post Length	A	B		C	D	
1																					
2																					
3																					
4																					
5																					
6																					
7																					
8																					

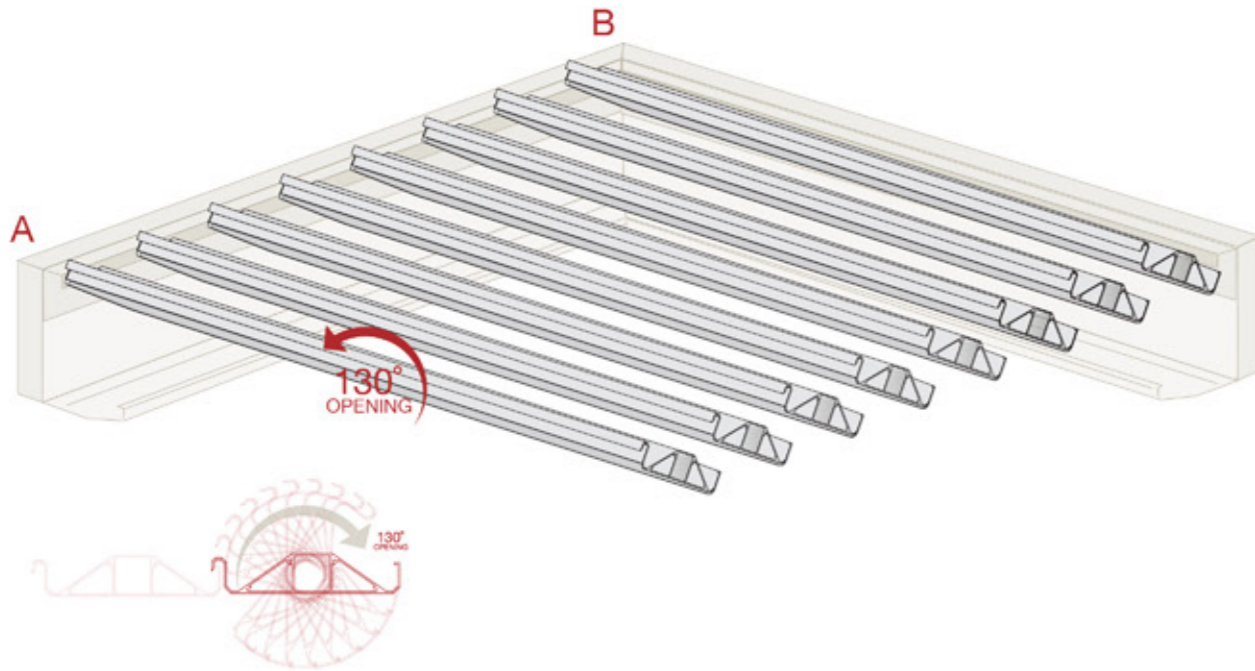
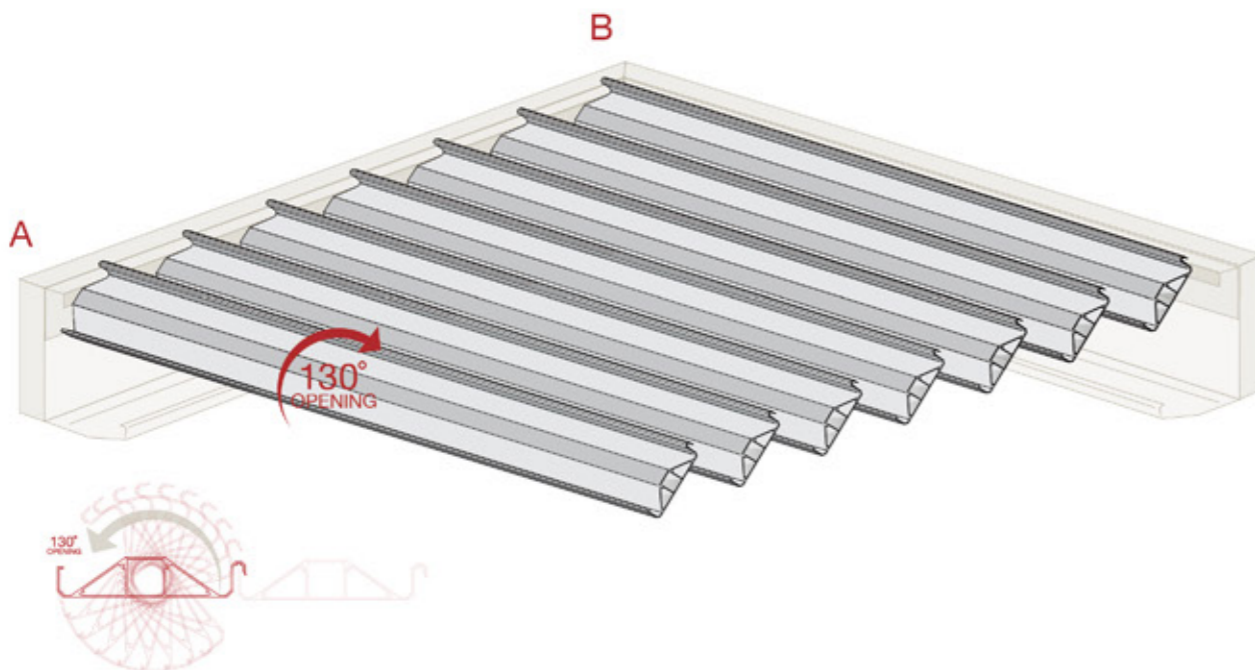
Item #	Notes
1	
2	
3	
4	
5	
6	
7	
8	



Lumex Opening Roof

Before you Order - Checklist**Checklist****Blade Rotation.**

The Blade direction is identified as either; Towards A, or Towards B. See diagram below.

Closing Direction - Towards A**Closing Direction - Towards B**

Lumex Opening Roof

Before you Order - Checklist**Checklist****Determining the Gutter Drop Point.**

Identify the corner that requires the down pipe (A, B, C, or D). Take into consideration the fall of the roof and the closest storm water connection point.

The Corner gutter for the selected corner will have a 80mm drop pipe, welding into the gutter from which a standard down pipe can be attached.

Determining the Power Connectivity point.

Determine which corner of the roof is closest to you power connectivity point A,B,C or D).

The Motor will be attached to the side rail closest to the power connectivity point. 3 meters of cable will be supplied from the motor to ensure the power point can be reached.

Posts and Beams:

If you do not require 250x50mm beams all around, specify which sides you require the beams; Either A-B, B-C, C-D, A-D.

If you require posts, specify which corners you require the posts.

Lumex Opening Roof
Installation Instructions

Fixings Supplied

ITEM	SPECIFICATION	MATERIAL	DESCRIPTION
HEXAGON SOCKET COUNTERSUNK HEAD BOLTS	M8*30	STAINLESS STEEL 304	BEAM CORNER JOINT FIXINGS
COUNTER SUNK RIVET	3*9	STAINLESS STEEL 304	FIXING FOR CORNER / LINE JOINT OF GUTTER
PHILLIPS PAN HEAD SELF TAPPING SCREW	ST4.8*13	STAINLESS STEEL 304	1. FIXING FOR STILE AND BEAM 2. FIXING FOR GUTTER AND BEAM.
PHILLIPS COUNTER SUNK SELF TAPPING SCREW	ST4.2*9.5	STAINLESS STEEL 304	BLADE END CAP
RIVETS	6.4*16.5	ALUMINIUM	FIXING FOR STILE AND BEAM
HEXAGONAL SOCKET HEAD BOLT AND LOCK TIGHT NUT	M8*20	STAINLESS STEEL 304	FIXING FOR BLADE AND TILTROD
HEXAGONAL SOCKET HEAD BOLT	M6*12	STAINLESS STEEL 304	FIXING FOR MOTOR AND STILE
HEXAGONAL SOCKET HEAD BOLT AND NUT	M4*16	STAINLESS STEEL 304	FIXING FOR MOTOR AND T BRACKET
HEXAGONAL SOCKET HEAD BOLT AND NUT	M5*20	STAINLESS STEEL 304	FIXING FOR T BRACKET AND TILTROD

Tools Required

The Following tools are suggested for Installation of the Lumex Opening Roof

- | | | |
|--------------------------------------|--------------------------|---------------------|
| Circular Saw - Aluminium Blade | Pencil | Tape Measure |
| Rivet Gun | Drill | Silicone Gun |
| Impact Drill and Masonry drill bits. | Hex Head drill bits | Spanners or Ratchet |
| | Phillips Head drill bits | Hex Key set. |
| | Spirit Level | 2 x Ladders |

Lumex Opening Roof
Installation Instructions

Extra Fixings Required

ITEM	SPECIFICATION	MATERIAL	DESCRIPTION
HEX HEAD COACH SCREWS	M8 x 75mm	STAINLESS STEEL	WALL MOUNT ANCHORS
LONG ANCHOR PLUG	10 x 80mm	-	WALL MOUNT ANCHORS
DYNA BOLT PLUS HEX NUT BOT	8 X 40MM	STAINLESS STEEL	WALL MOUNT ANCHORS
DYNA BOLT PLUS HEX NUT BOT	10 X 75MM	STAINLESS STEEL	BASE POST ANCHORS

Sikaflex Polyurethane Sealant or Similar

Please note that different mounting methods, and mounting material may require extra / different fixings

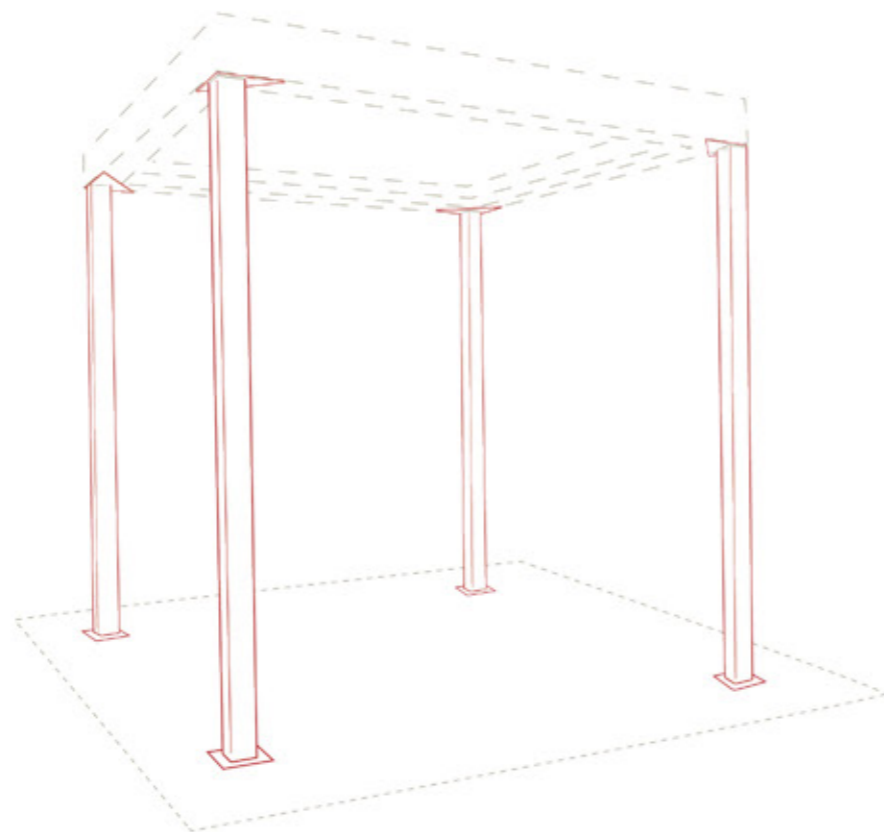
Lumex Opening Roof Installation Instructions

STEP 1

Layout the Site. Marking where the 4 corners of the roof will be positioned.

STEP 2

Check the level of the site. Cut your posts according to the level of the site.

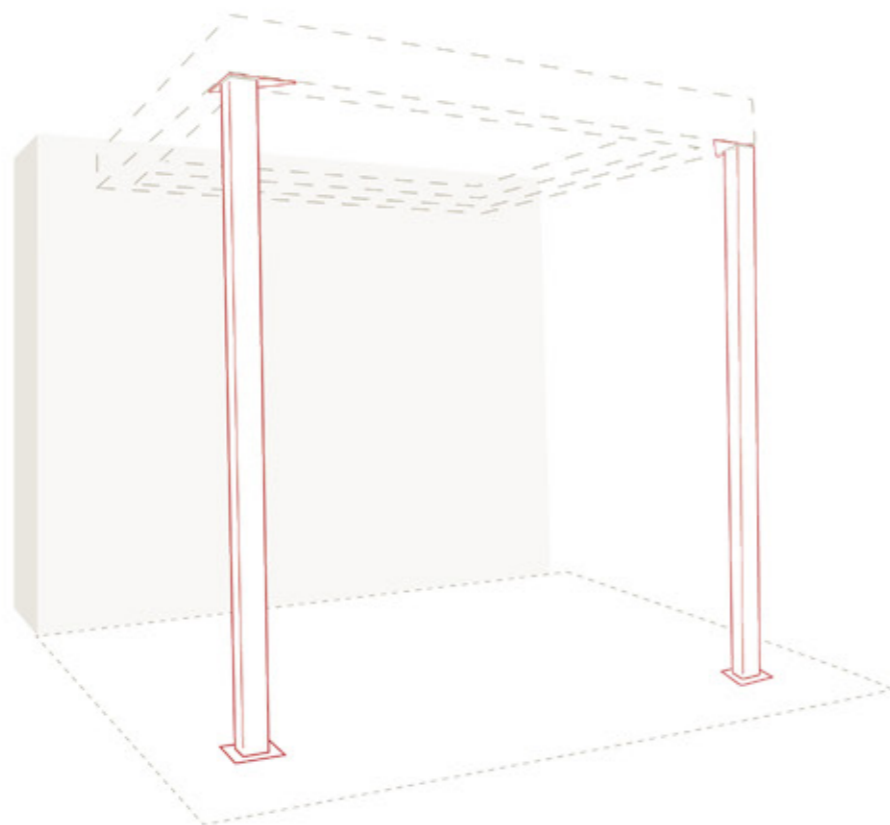


STEP 1

Layout the Site. Marking where the 4 corners of the roof will be positioned.

STEP 2

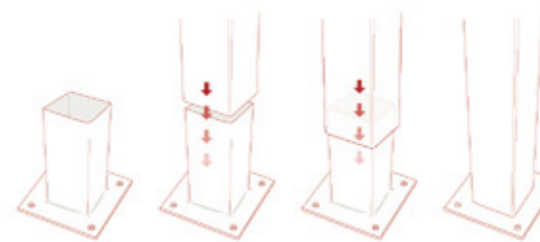
Check the level of the site. Cut your posts according to the level of the site and then mark wall level with the post.



Lumex Opening Roof Installation Instructions

STEP 3 - BASE PLATE

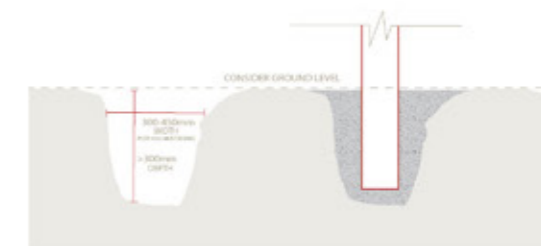
Place the 4 post in position, hold them up with props. Do not fix them into the ground yet.



Do not fix them into the ground yet.

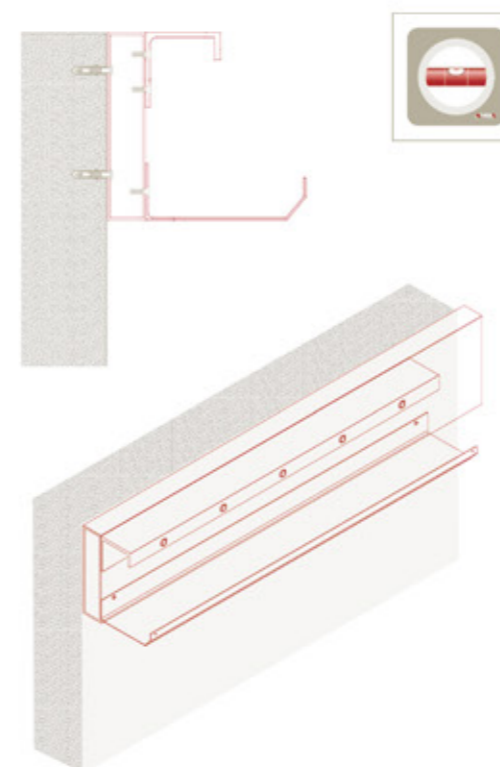
POST FOOTING

Dig footings at the required depth, and concrete the posts into place, making sure all posts are level at the top.

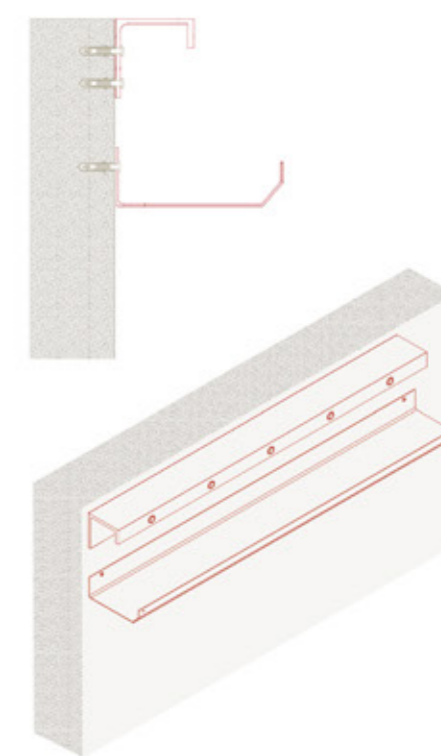


The following instructions apply for free standing structures. If you are wall mounting please mount to the wall as shown below and follow the instructions accordingly.

With roof surrounds



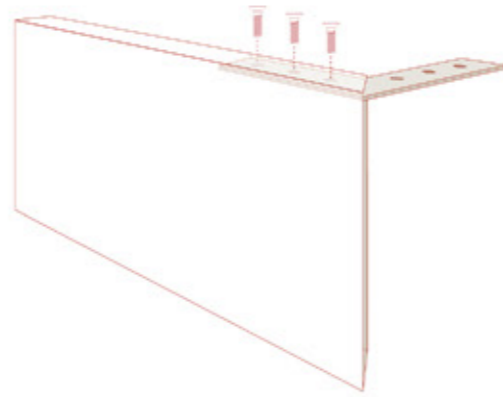
Without roof surrounds



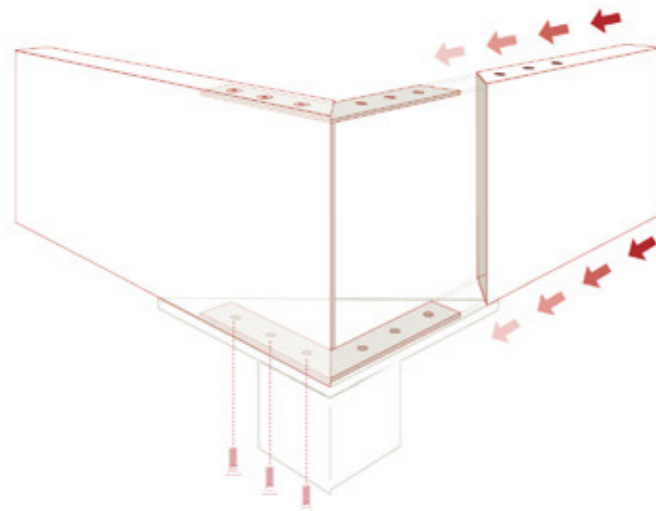
Installation Instructions

STEP 4

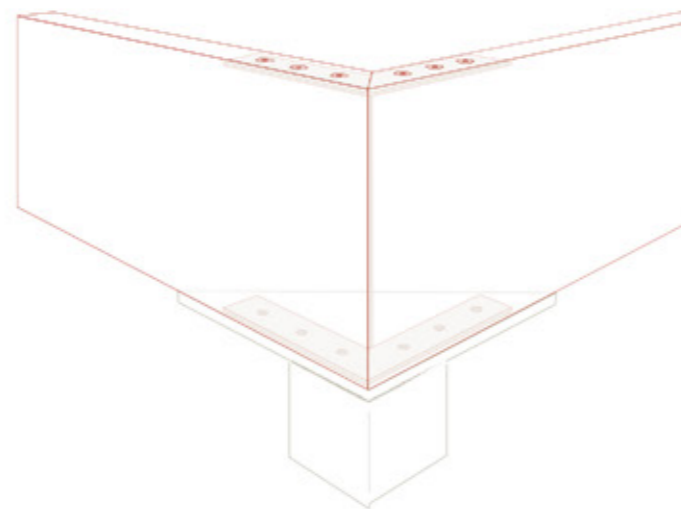
Fix the corner joiners into the top of the 250x50 Surrounds, using the Stainless Steel M8x30mm Hex Bolts supplied. Only fix One of Corner joiners into each 250x50 Surround.

**STEP 5**

Position the first 250x50 Beam on top of the posts, loosely fixing it to the post mounting plate.

**STEP 6**

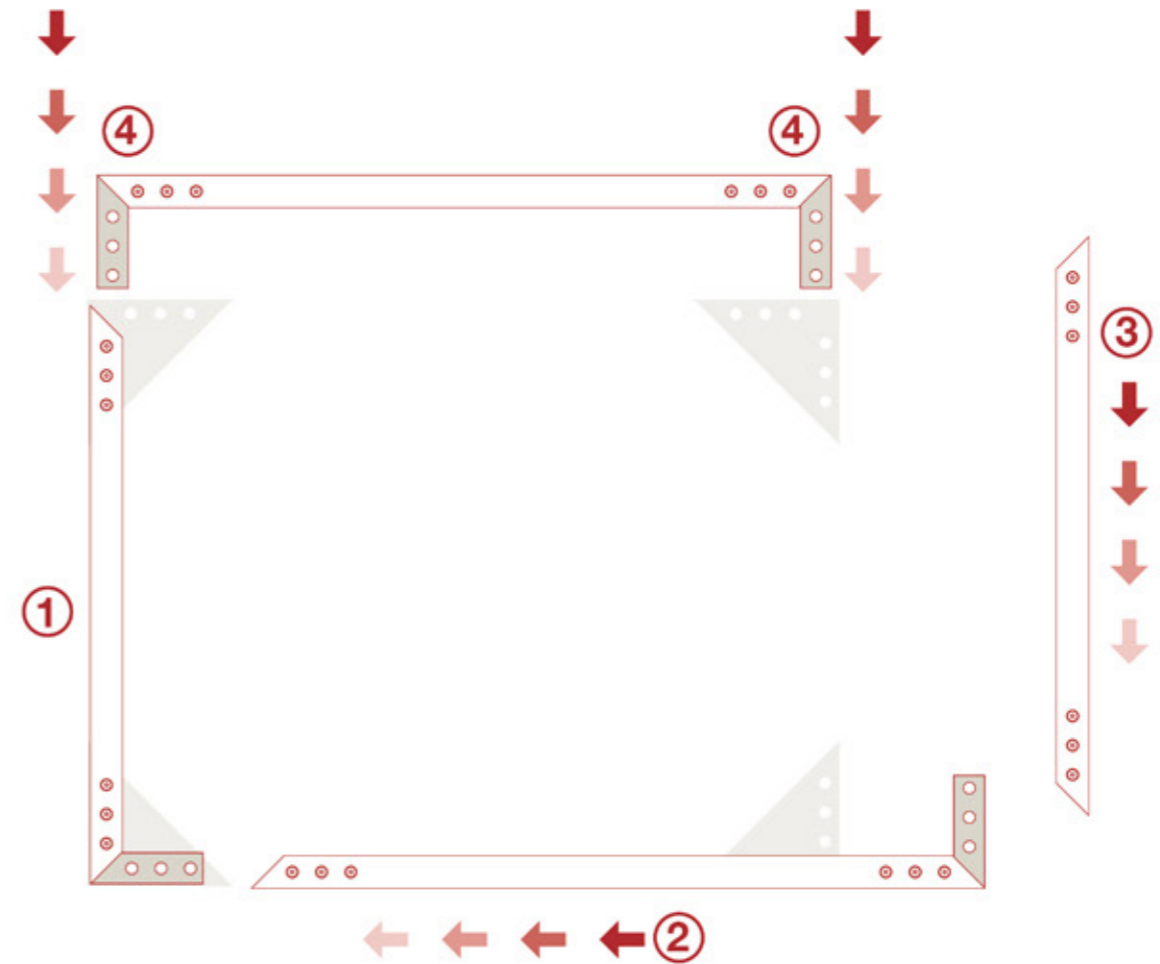
Slide the next 250x50 Beam into the corner joiner of the previous 250x50 beam. Fix the corner into position ensuring the corner is square.



Installation Instructions

STEP 7

Repeat this process for the 2 other 250x50 beams.

**Please Note**

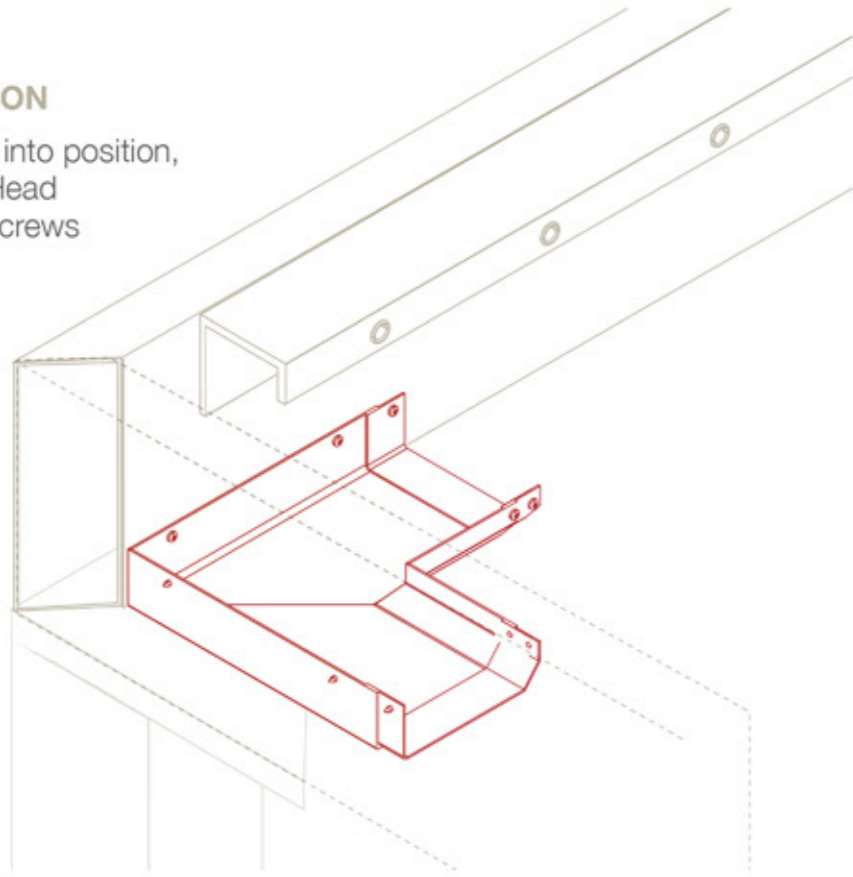
When fixing directly to a wall or existing structure.

Start at the wall first and work your way out to the posts

Lumex Opening Roof
Installation Instructions

**STEP 8 -
 GUTTER INSTALLATION**

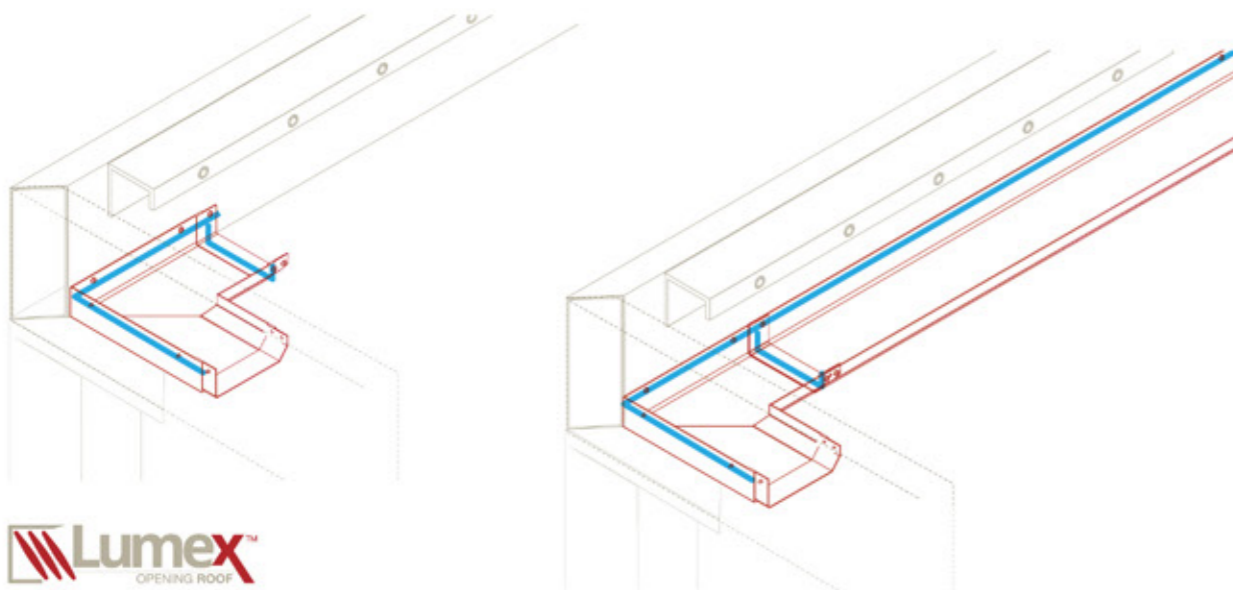
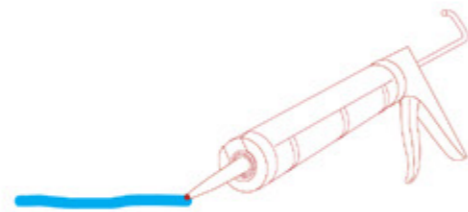
First the corner gutters into position, using the Phillips Pan Head St4.8*13 self-tapping screws supplied.



STEP 9 -

Silicone

Before fixing the corner, gutters apply Sikaflex (silicon) or similar to the beam to ensure the joint is completely water tight.

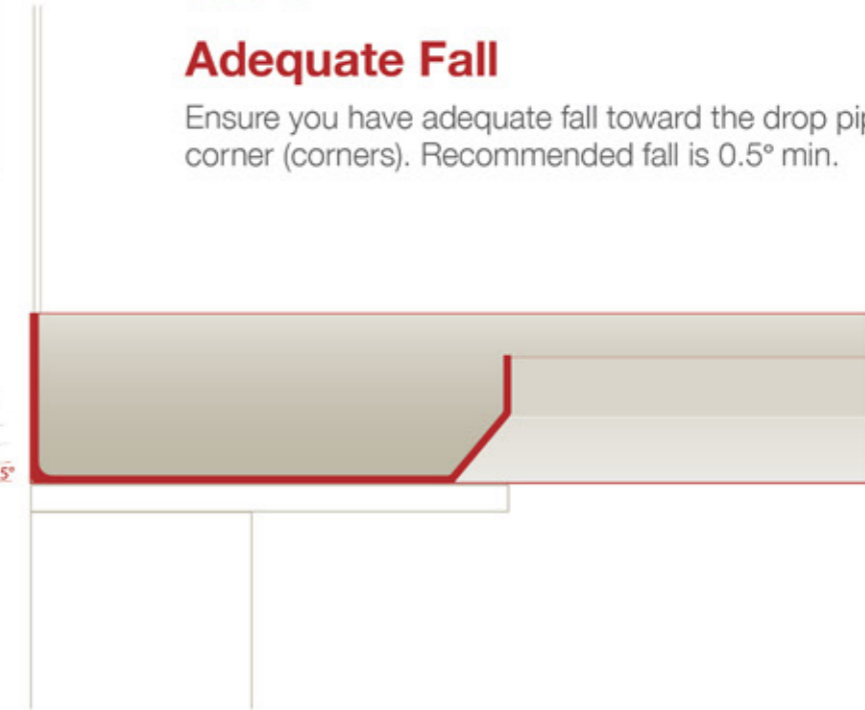
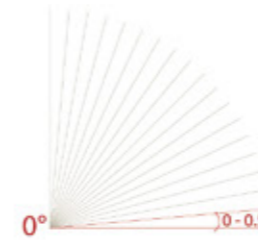


Lumex Opening Roof
Installation Instructions

STEP 10 -

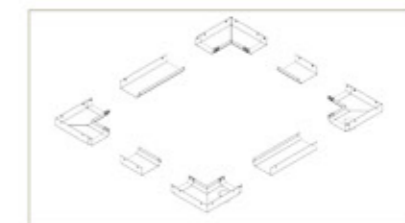
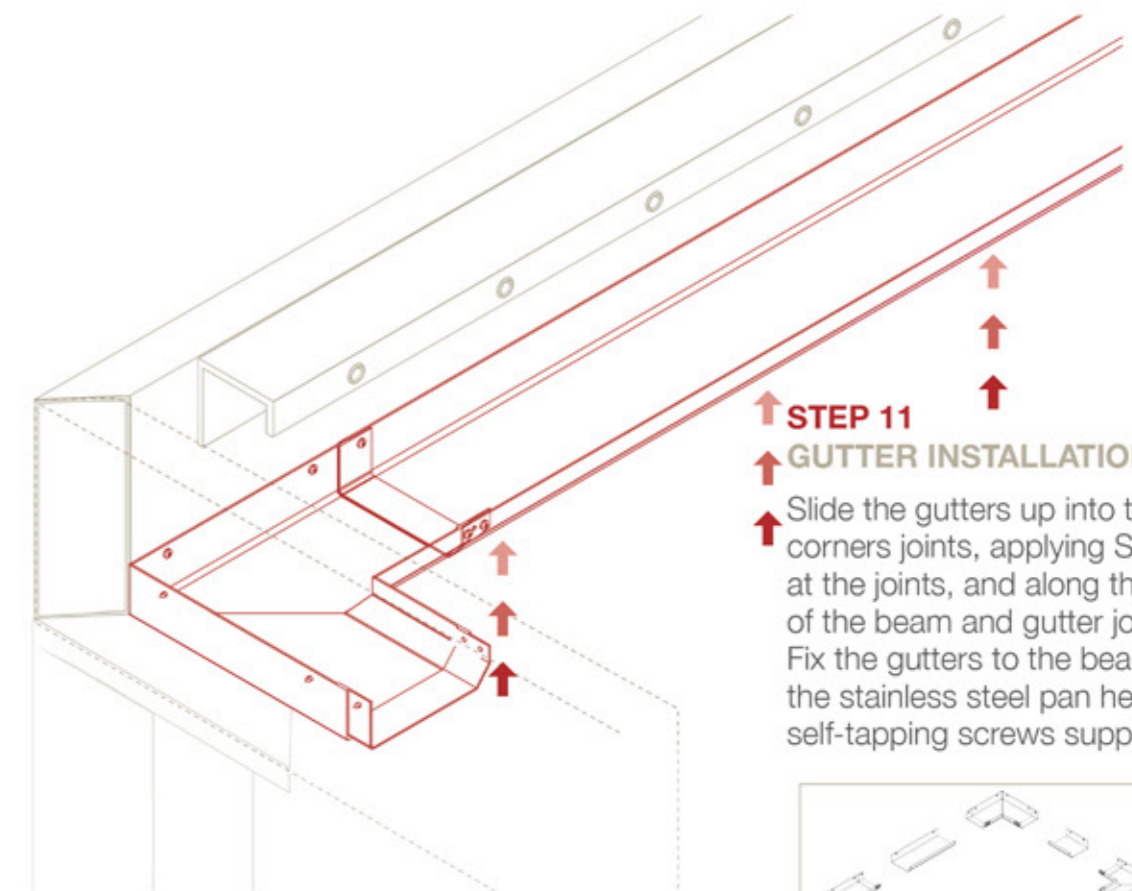
Adequate Fall

Ensure you have adequate fall toward the drop pipe corner (corners). Recommended fall is 0.5° min.



**STEP 11
 GUTTER INSTALLATION**

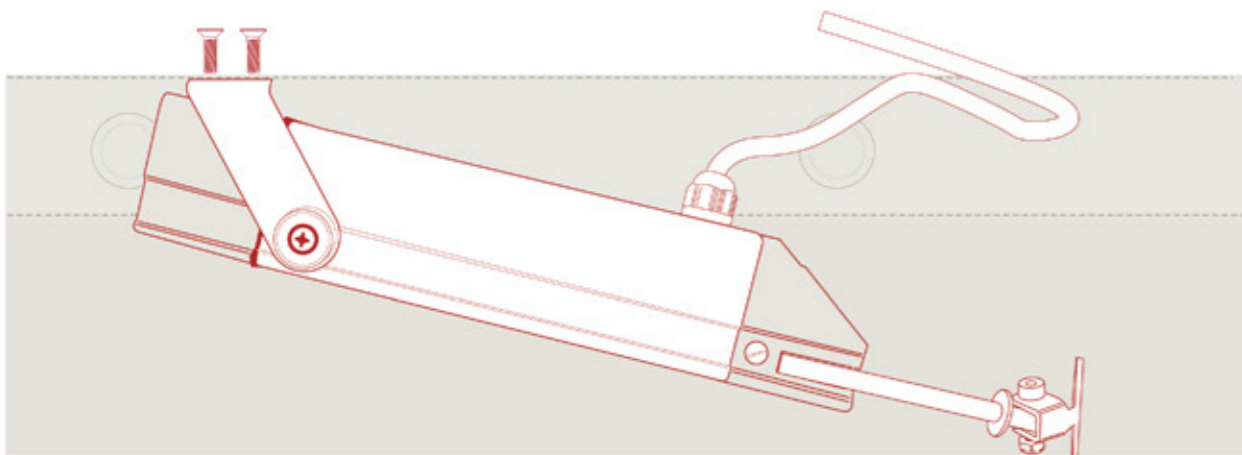
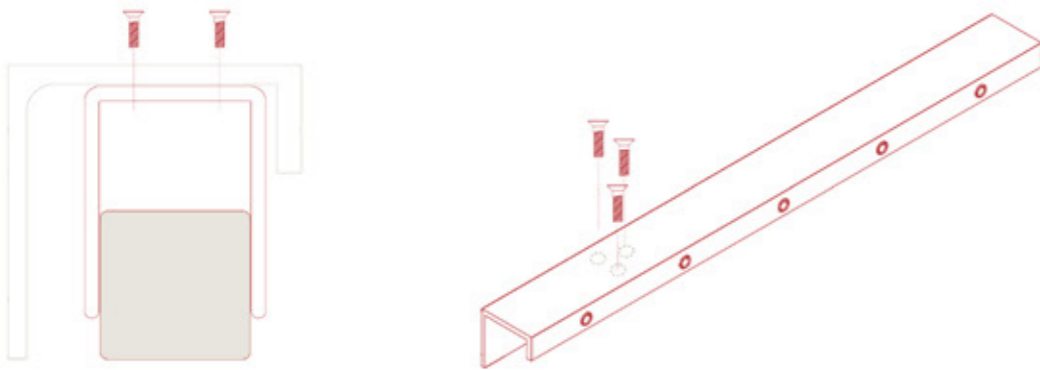
Slide the gutters up into the corners joints, applying Sikaflex at the joints, and along the edge of the beam and gutter joint. Fix the gutters to the beam using the stainless steel pan head self-tapping screws supplied.



Lumex Opening Roof

Installation Instructions**STEP 12 -
MOTOR INSTALLATION**

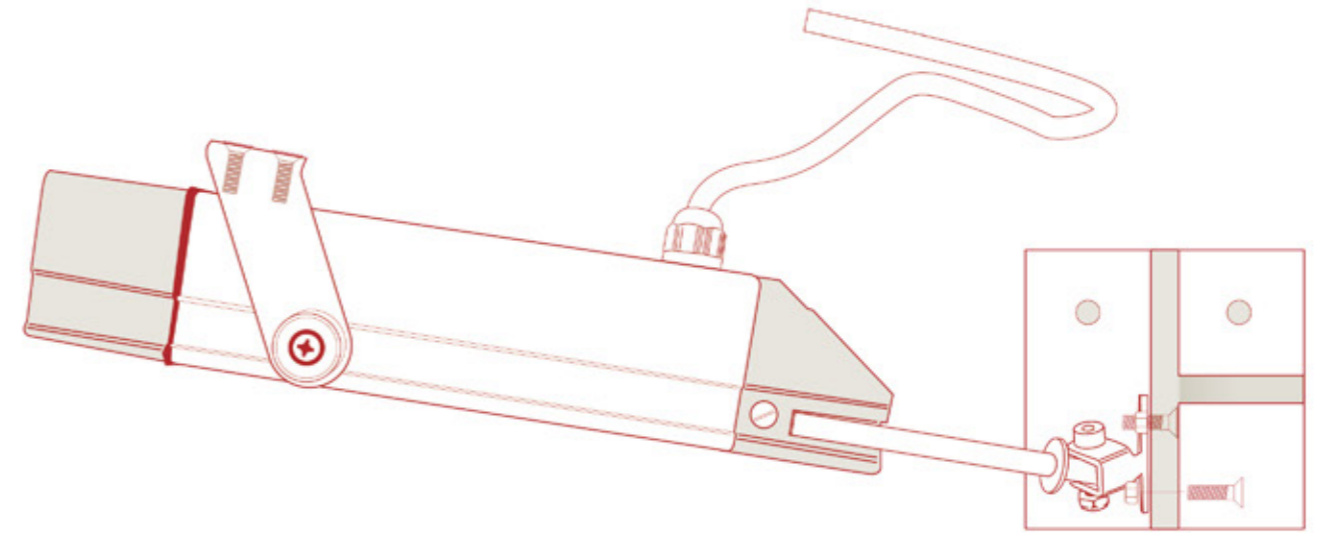
Attach the motor to the motor mount on the Side Rail, using the hex bolts supplied.



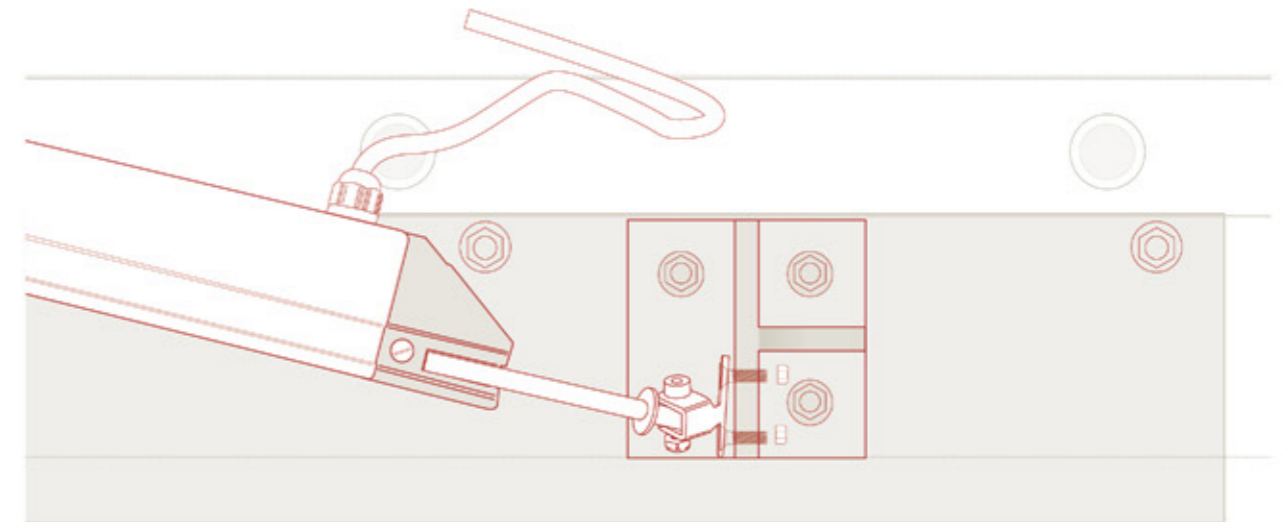
Lumex Opening Roof

Installation Instructions**STEP 13 -
MOTOR INSTALLATION**

Attach the Motor to the Control Bar mount using the bolts supplied.

**STEP 14 -
MOTOR INSTALLATION**

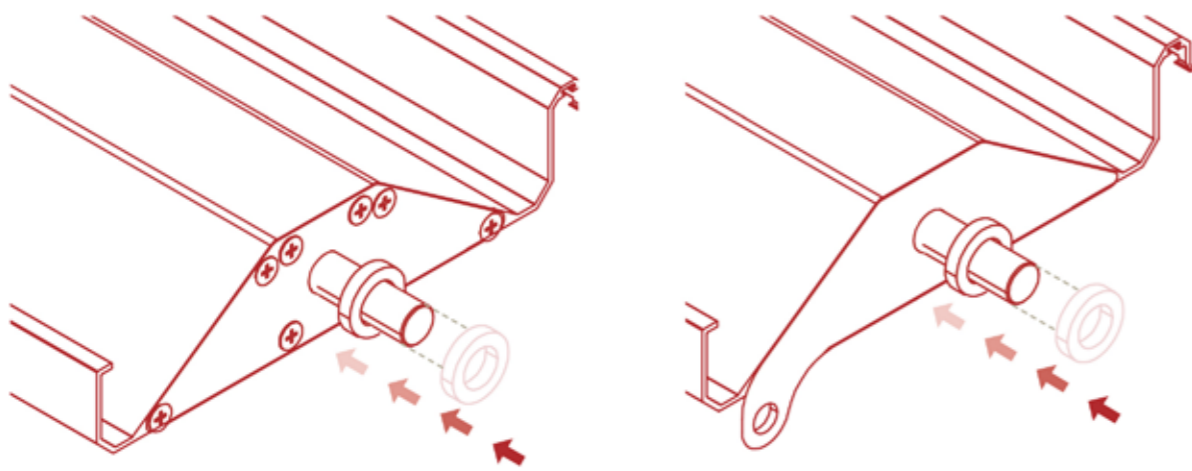
Attach the control bar mount to the control arm.



Lumex Opening Roof
Installation Instructions

**STEP 15 -
 BLADE INSTALLATION**

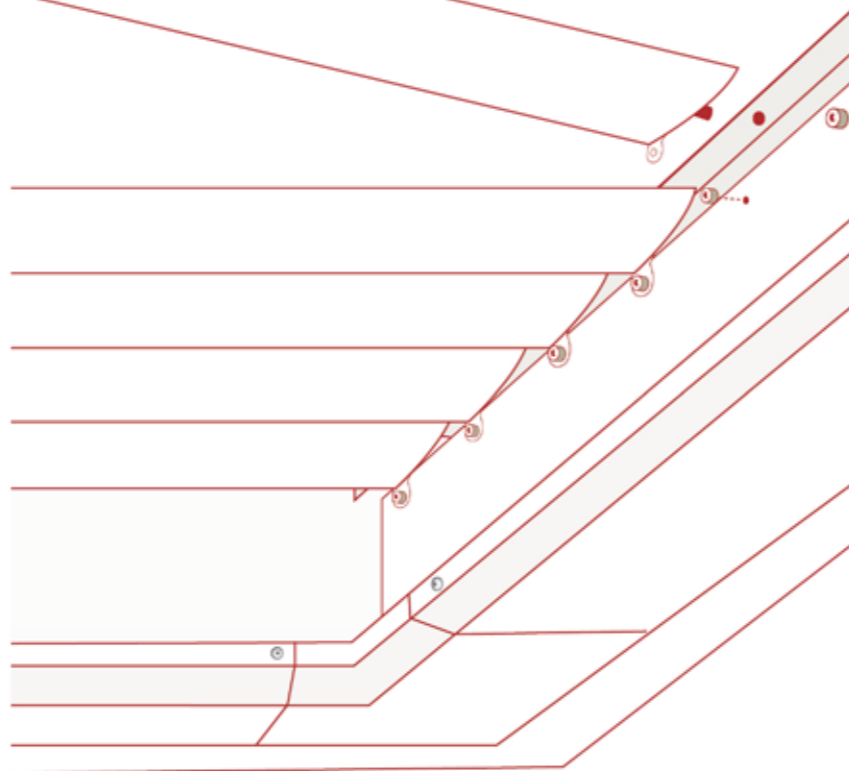
Attach Pin Spacers to both ends of the blade Pins



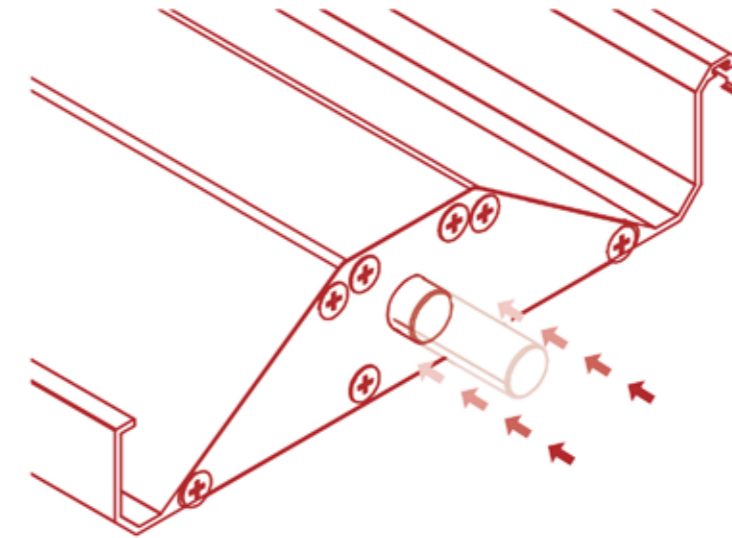
**STEP 16 -
 BLADE INSTALLATION**

Mount the blades, by sliding the 'fixed pin' in the motor side and the 'spring pin' in the idle side. Fix the blade to the control bar with the bolt provided (M8*20)

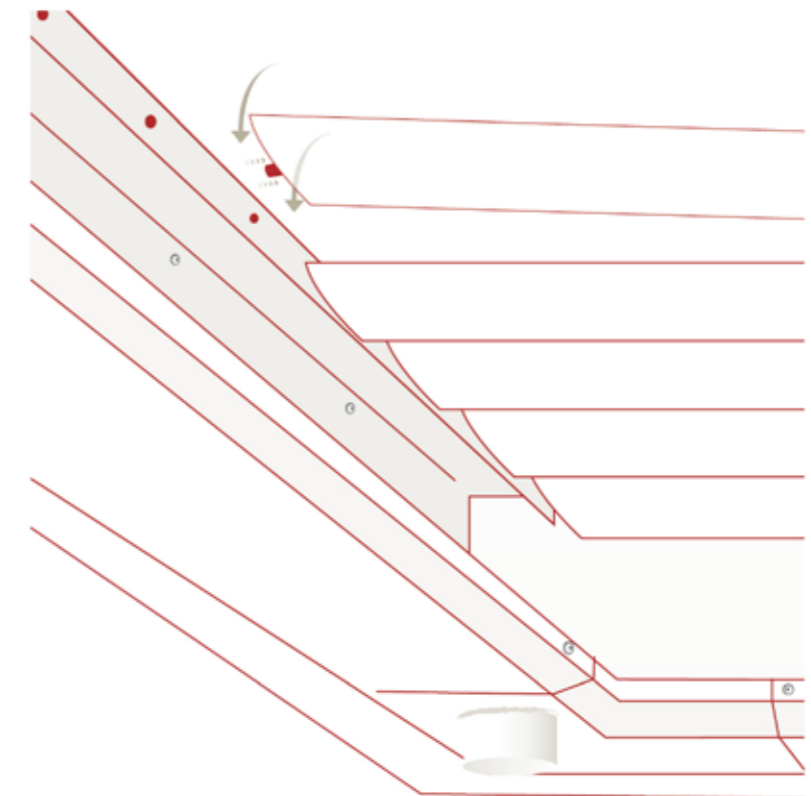
PLACE PIN INTO SIDE
 RAIL AND ATTACH BLADE
 TO CONTROL ARM



Lumex Opening Roof
Installation Instructions



PUSH THE SPRING PIN
 INTO THE BLADE AND
 RELEASE INTO RAIL.



**STEP 17 -
 BLADE INSTALLATION**

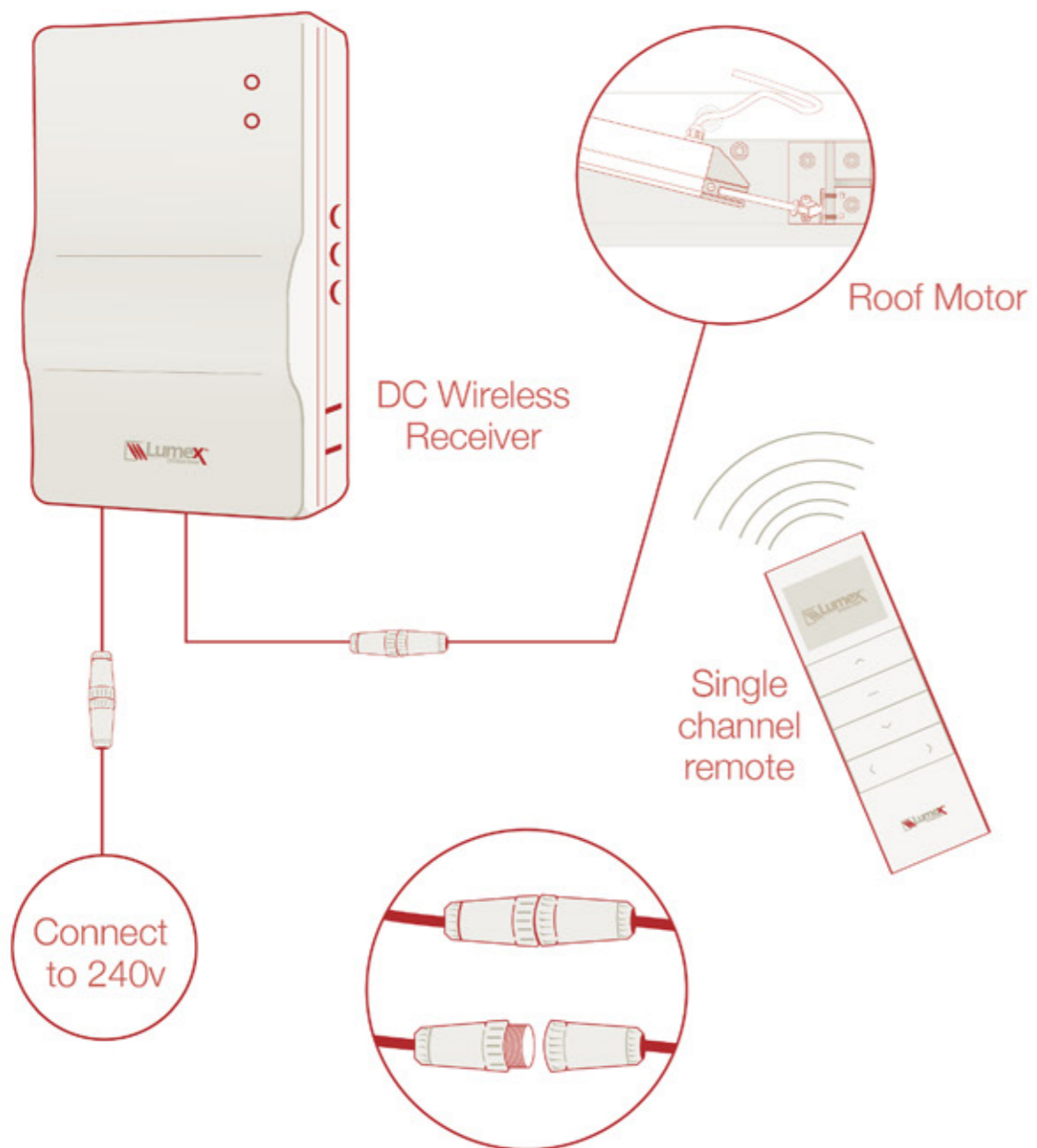
Continue steps 13 & 14 until all blades are in place.

Wiring Diagram

STEP 15 -

Motor Installaion

Assign a qualified electrician, to wire the motor and switch.



STEP 16 -

Motor Installaion

Test the operation of the roof including its drainage, and adjust if required.

Remote Set Up

- 1 Turn on the power to the motor
2. Press the top and Bottom arrows on the transformer at the same time.
3. The Blue light on the right hand of the transformer will flash.



4. Press the middle Button.
5. The Blue light stop flashing.



6. Press the top arrow on the remote.
7. The transformer light will flash.



8. The remote will now be connected to the Transformer.

Installation Instructions

Pairing Wind Sensor to Motor Switch

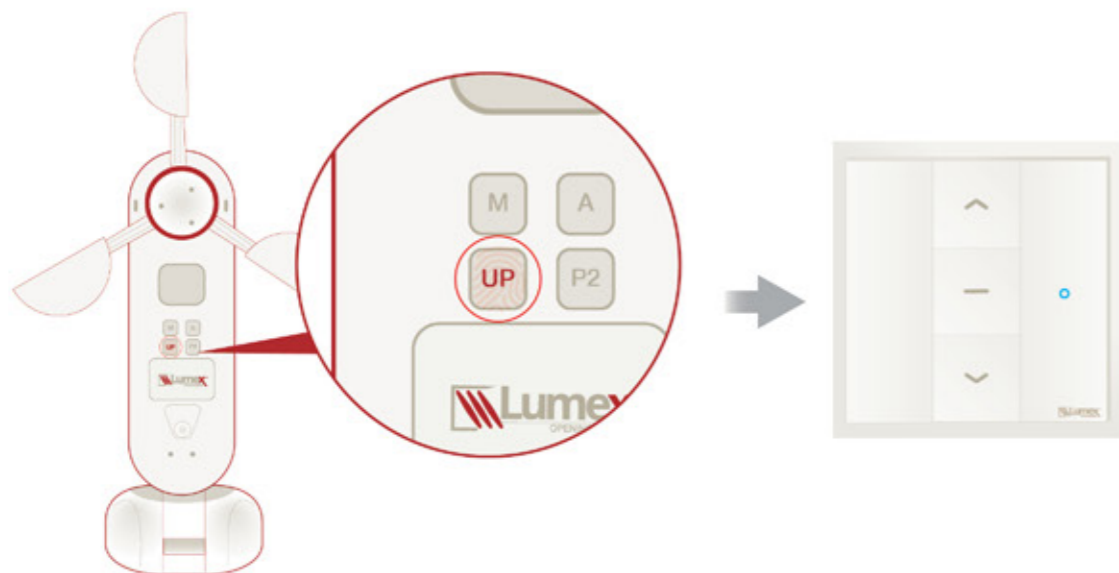
Step 1: Hold down the up and down buttons on the motor switch at the same time till the light on the switch flashes



Step 2: then on the motor switch, press the centre button for 2 seconds so the light is constantly on



Step 3: press the "up" button on the sensor for 2 seconds till the light on the switch goes out. The rain sensor should now be synced to the switch on the motor



Installation Instructions

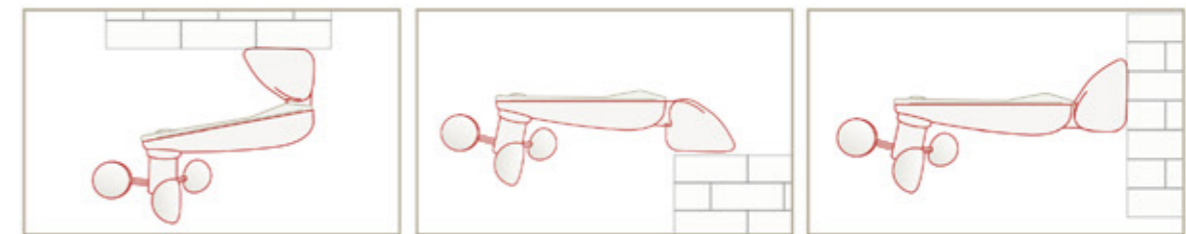
Pairing Wind Sensor to Motor Switch cont.

General tips:

- The awning closes when there is insufficient light after 15 minutes
- The awning opens when there is sufficient light after 2 minutes
- The awning closes when there is rainfall on the sensor for 30 seconds or 1 minute depending on high or low sensitivity

Rain Sensor recommended mounting positions.

- Make sure the sensor is away from the shade of trees and other buildings
- Install the solar panel part of the sensor face up.
- Installation combinations



Wind-Sun-Rain Principles:

- Windspeed greater than the pre-set for 35 seconds will close the shutters, less than the pre-set, it will open again.
- Lighting greater than the pre-set for 2 minutes will open the awning, less than the pre-set for 15 minutes will close the awning
- Rainfall for 30 Seconds on the sensor will close the awning.

Lumex Opening Roof Warranty

What products does this warranty cover?

Our Warranty and Repair Policy covers the repair or replacement of CW product brands, if found to be defective in materials or workmanship. A 'repair' is any order that relates to a previous order, whether making a warranty claim, re-ordering or just requiring a product part for the same job.

A product will be deemed defective if a defect is visible with the naked eye in natural daylight at a distance of 1.5 metres.

This warranty only applies to CW Systems products. CW Systems reserves the right, at its discretion, to void warranty if and where a distributor rebrands a CW product or brand.

To whom do we give this warranty?

We give this warranty to the original purchaser, only if the goods were purchased from a CW Systems distributor (retailer, dealer or reseller) as new goods.

Warranty only applies when the product is fitted in accordance with the distributor's instructions and are used for the intended purpose for which the product has been manufactured.

Warranties are not transferrable and are only available to customer to whom invoice is addressed.

What is CW Systems responsibility?

CW Systems will repair or replace at its sole discretion any parts or items deemed to be suffering from a defect. If and where possible, CW Systems will repair or replace the defective product using identical or similar components.

If CW Systems designs and/or styles have been altered or upgraded, CW Systems will replace any components suffering from a defect with a part or product of comparable quality and value.

How do we honour this warranty?

We will either repair our goods, or replace our goods with new goods, at our discretion, if:

- the goods have a defect in the materials or workmanship, or the goods fail to operate as intended; and
- you make a claim under this warranty as provided below, within the time periods set out below.

Warranty Commencement Condition

The warranties shall be valid once the installer has:

- provided to the customer a warranty certificate signed by the installer as issued by CW Systems with the product details and,
- the relevant part of the warranty certificate has been returned by the customer to CW Systems with a copy of the invoice issued by the installer to the customer and
- it is with a copy of the receipt issued by the installer evidencing payment to the installer.

The warranty certificate must be returned to the distributor no later than 21 days after the completion of the installation for the customer to be entitled to these warranties.

Who will incur costs? Are there any costs?

The consumer will be required to pay the cost of any travelling time to inspect goods, freight or handling costs, any removal and installation costs. There may also be an additional call out fee charged for inspection when you make a claim, however any call out fee that we charge you will be refunded if we determine that the goods are defective.

This warranty does not cover the costs of removal of the warranted goods or installation of the repaired or replaced goods including consequential or incidental damages. However, we will meet those costs if the goods breach any of the guarantees applicable under the Australian Consumer Law.

Lumex Opening Roof Warranty

What warranty will not cover

This warranty is only valid for the original purchaser or first end user and is at the sole discretion of CW Systems. The warranty is ex-factory and restricted to supply only.

The warranty excludes any shipping, labour or other associated costs with the installation or removal of product and all liability for consequential or incidental damages. v

For the purposes of this warranty, "defect" does not include (and we will not replace or repair products suffering from) damage caused by:

- Normal wear and tear
- Installation or the manner of application or fixing
- Installation damage to the window(s) or premises
- Misuse, abuse or accident
- Use of the product outside the CW Systems specification guidelines and its intended use
- Failure to follow instructions with respect to cleaning and/or maintenance
- Incorrect or insufficient care, cleaning and maintenance
- Any unreasonable or unusual use or a failure to carry out normal maintenance and cleaning
- Exposure to the elements (e.g. sun damage), progressive or discolouration over time; installations subject to salt spray or marine influences, severe industrial or corrosive environments
- Damage caused by humans or pets accidentally running or walking into the screen when in use
- Exposure to high humidity (resulting in mould & mildew or 'warping')
- Modifications made by any person other than a professional and certified installer or caused by use or installation that is not in compliance with the installation instructions provided with the product, or otherwise provided by CW Systems
- Use of components not supplied by CW Systems
- Any alterations made to original product supplied
- Use of silicon-based sprays or abrasive cleaning agents on product
- Progressive deterioration of finishes and materials due to exposure due to outside elements
- Fire, flood or natural disasters or acts of God
- Defects due to any contamination or pollution due to surface dirt or staining
- Damage caused by any third party
- Damage caused by pets and animals, such as but not limited to, scratch or bite marks
- Batteries are not covered under this warranty

Lumex Opening Roof Warranty

Distributor obligations under the Warranty

CW Distributors must supply customer with 'Warranty Certificate' on the day of installation and fill accordingly then return to CW Systems sales@cwsystems.com.au or PO Box 294, Pendle Hills NSW 2145 within five business days of installation date. This document certifies that the person named on the certificate properly installed the product thus limiting liability. (A distributor can request for a copy of the Warranty Certificate by emailing sales@cwsystems.com.au)

If the product/s are defective the liability of CW Distributor shall be limited and at the discretion of the Distributor, he/she has the option to do one or more of the following:

- Replace the product or supply equivalent product
- Repair the product
- Pay for the cost of replacing the product or acquiring equivalent product
- Pay the cost of having the product repaired
- Refund the customer of the cost paid by the customer for the product

Warranty & Repair Policy Claim

When claiming under this Warranty to CW Systems, you must submit a completed Repair Request Form through original distributor in writing, AND you must substantiate your claim with proof (ie unedited photograph) of the error or defect. For a copy of the Repair Request form, please email sales@cwsystems.com.au

The customer must submit the form within a period of one calendar month of first detecting the defect and at their cost.

We will then arrange for the goods to be inspected and determine whether they are defective and if, acting reasonably, we agree they are defective we will (at our option) either repair the goods, or replace the goods with new goods. A call out fee may be charged for inspection, however any call out fee that we charge you will be refunded if we determine that the goods are defective.

The Repair Request Form will be assessed by CW Systems and if accepted as a defect of material or labour, will be processed and sent onto the factory of manufacture for re-supply.

Lumex Opening Roof Warranty

How do I make a claim?

Distributor checklist is as follows:

1. Email sales@cwsystems.com.au and ask for a Repair Request Form
2. Ask customer to take photos of the alleged defect
3. Fill out Repair Request Form and attach photo/s with defect explanation then return to CW Systems (please note that your Repair Request Form will be rejected if all the sections are not satisfactorily completed)

Customer checklist is as follows:

1. Prepare claim no longer than one calendar month of first detecting the defect
2. Email details of your claim to the address of the original place of purchase (distributor) and distributor name including:
 - a. your name, address, phone number
 - b. date of installation of product
 - c. images of defect
 - d. explanation of the circumstances in which the defect appeared and that you wish to claim under this warranty
 - e. proof of your purchase and the warranty certificate details
 - f. all other information we would and reasonably request about the circumstances in which you consider the defect was caused

Your repair cannot be accepted if:

The Repair Request form is not filled out correctly or in its entirety, including measurements, details of the cause and effect and the original order information

You are making a claim and have not supplied the relevant photographs

The job had not been paid for in full in accordance with the purchase order

The Warranty Certificate has not been previously submitted within the stated time

The period in which this warranty applies

Please note that each material type has its own limited warranty and will be supplied upon request. To review a specific product warranty please email sales@cwsystems.com.au

CW Systems warrants the Lumex Opening Roof (Product of CW Systems) with a 10 year limited warranty. The warranty breakdown is as follows:

- 10 Years Warranty on the Powdercoating finish and colour fastness.
- 5 Year Warranty on Motor, Transformer and Receiver.
- 2 Year Warranty on product to be free from defects in material or workmanship.

Head Office: 5 Tollis Place, Seven Hills Nsw 2147
 Postal Address: Po Box 294, Pendle Hill NSW 2145
 Ph: (02) 9624 0700 Fax: (02) 9838 4740
 Email: sales@cwsystems.com.au

IMPORTANT NOTICE:

**A PHOTO IS REQUIRED FOR ALL PRODUCTS IF YOU ARE MAKING A WARRANTY CLAIM.
 THIS REPAIR WILL BE REJECTED IF ALL THE APPROPRIATE SECTIONS ARE NOT COMPLETED.**

CUSTOMER:

REPAIR ORDER NO. :	CW SYSTEMS OFFICE USE ONLY, NEW ORDER No.:
YOUR ORIGINAL SIDE MARK OR ORDER No. :	
IF KNOWN CW SYSTEMS ORIGINAL ORDER No. :	
SHUTTER OR BLIND REPAIR:	DATE:
PROBLEM CAUSED BY:	PHOTOS ATTACHED WITH EMAIL:

GENERAL REASON FOR REPAIR:

FACTORY WORK REQUIRED:		CUSTOMER NOTES:
Item No.	Panel/Blind No	
Item No.	Panel/Blind No	
Item No.	Panel/Blind No	
Item No.	Panel/Blind No	
Item No.	Panel/Blind No	
Item No.	Panel/Blind No	
Item No.	Panel/Blind No	
Item No.	Panel/Blind No	
Item No.	Panel/Blind No	
Item No.	Panel/Blind No	

Name of Person Submitting Repair Request:

OFFICE USE ONLY

OFFICE NOTES

REQUEST EXCEL FORM:
 send to sales@cwsystems.com.au

To: CW Systems P/L
 PO Box 294
 PENDLE HILL NSW 2145

This is to certify that the person named on this certificate had installed at the property named on this certificate the CW Systems P/L product known as Vueline Retractable Screen on the date specified on this certificate.

Name and address of installer:

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Place of installation:

.....

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Date of installation:

.....

Signed by the installer:

Dated:

