



2. CHOOSING THE PANEL

KALWALL MODULE OPTIONS

Best value occurs when **1200mm** or **1500mm** modules (frame centres) are used.

Other widths up to a maximum of **1500mm** are optional.

All panels are manufactured on a project-by-project basis.

Panels can be made from **900mm** to **6000mm** long but the table below indicates the most effective use of the panels when used in multiple panel openings.

RECOMMENDED MAXIMUM PANEL SIZE (INTERMEDIATE SUPPORT MAY BE REQUIRED)		
LAYOUT OPTION	HORIZONTALLY Oriented in Multiple Panel Openings	VERTICALLY Oriented Panels in Multiple Openings
Wall, Flat	4600MM	6000MM *
Roof, Overlap	2500MM	3050MM
Roof, Monopitch	2500MM	4870MM (SINGLE PANEL)
Kalcurve, Wall	3650MM	N/A
Kalcurve, Roof Overlap	N/A	4260MM

* For optimum containerisation we recommend a maximum length of 5900mm

STANDARD INTERNAL GRID SIZES

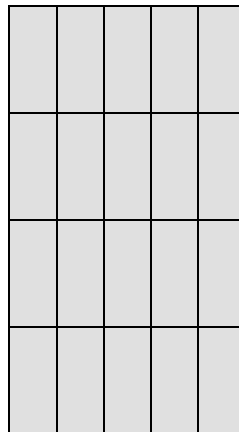
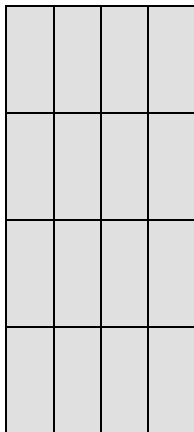
Shoji 300mm x 500mm 200mm x 500mm 300mm x 600mm

Reverse
Shoji 500mm x 300mm 500mm x 200mm 600mm x 300mm

Tuckerman 200mm x 200mm 300mm x 300mm

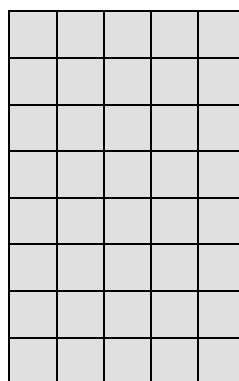
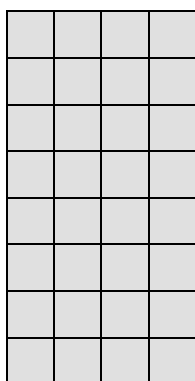
INTERNAL GRID PATTERNS

SHOJI

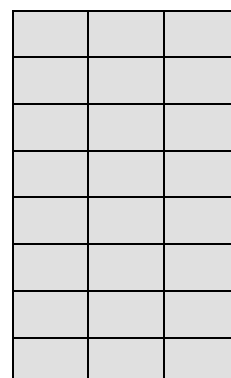
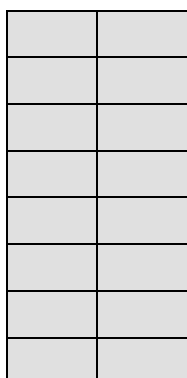


Shoji Panels can also be
laid on edge to give
Horizontal emphasis

TUCKERMAN



REVERSE SHOJI



Normally used in Vertical
format, but can be laid on
edge, if required

LAYOUT OPTIONS FOR ECONOMY

For maximum economy utilize the maximum number of standard width modules of 1200mm and 1500mm.

These are options to “fill in” the remaining areas not covered when standard modules do not fit into the overall opening width, as illustrated in the diagrams.

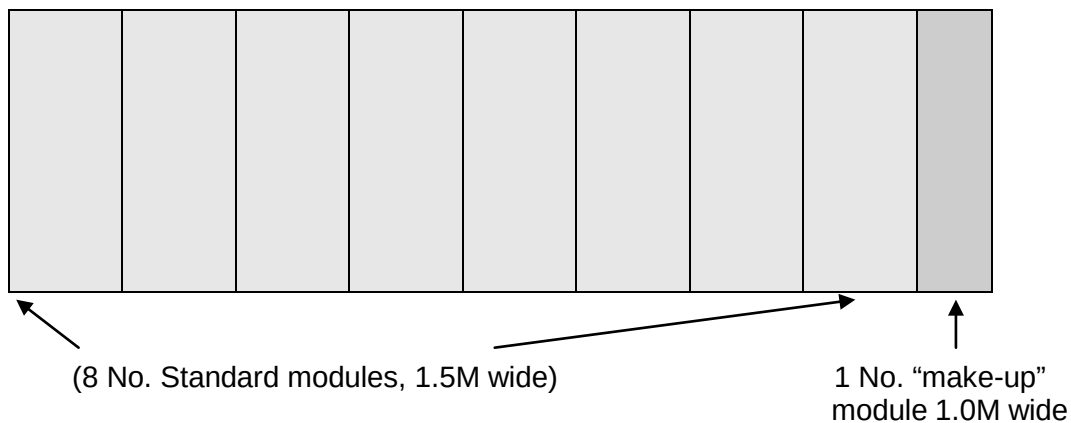
1. Use a minimum number of non standard “make-up” panel up to 1500mm wide.
2. Use optional wide battens (64mm, 83mm and 101mm) and/or deep jambs to take up the extra width.

Layout Example:

Overall Opening for Option 1 and 2 – 13.0M wide opening

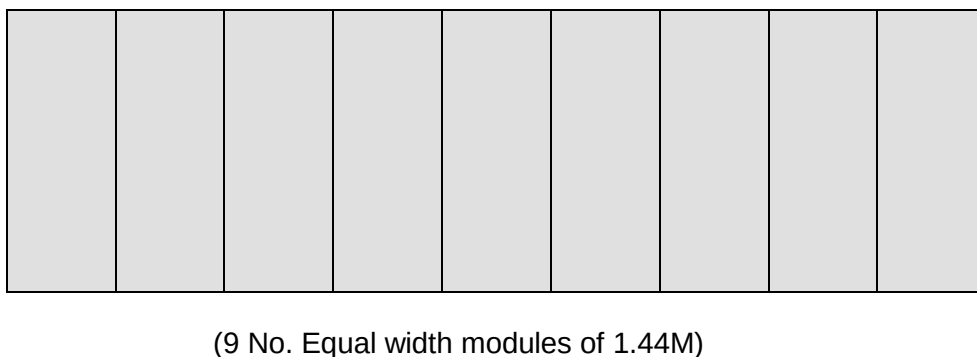
OPTION 1

Most Economic Solution – Using maximum number of standard 1.5M modules



OPTION 2

Least Economic Solution – Using Non Standard equal width modules



NOTE:

By changing from a 1.5m Standard module to a Non Standard width module on a long wall can add up to more than 15% extra to cost.

KALWALL VERTI-KAL DESIGN PARAMETERS

Verti-Kal is available for wall applications in Vertical and Horizontal orientations.

Verti-Kal is not available for Roof applications.

Preferred maximum length is **3048mm**, but up to **3658mm** could be achievable.

In certain circumstances it may be possible to further increase the length to an absolute maximum of **4000mm**. These longer spans require Kalwall Engineering approval and it should be noted that if a panel is insulated, cross-muntins will be required beyond **3658mm**.

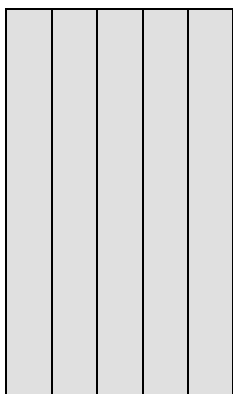
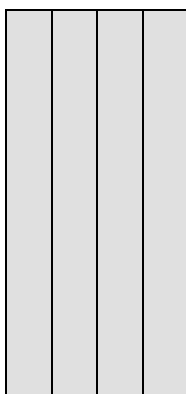
Internal I-beam mullion spacing is from **150mm** minimum to **300mm** maximum.

Panel Unit Wall Construction, with integral windows, is possible in some cases. Kalwall Engineering approval is required.

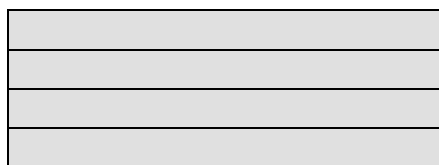
Verti-Kal is available with the 100mm panels to maximum length of **3660mm**.

Verti-Kal is not available with 0.28 "U" factor (Lumira™).

VERTI-KAL



HORIZONTAL



KALWALL100MM THICK PANELS

The Kalwall 100 system is based on **100mm** thick thermally broken Kalwall sandwich panel, manufactured with the same face sheets, internal grid layouts and Fibreglass insulation as used with 70mm Kalwall flat panels.

Available as Wall Panel System), and Skyroof Systems (monopitch and supported ridge). Also available in S Line Skylights.

Standard grid patterns **300mm x 600mm** and **300mm x 500mm**.

Panel sizes up to **1500mm** wide and **6000mm** long.

Only 3 'U' value options available, 2.83, 0.83 and 0.45 W/m²K (for more detailed information see Section 5)

KALWALL + LUMIRA MANUFACTURING LIMITATIONS

Max.Panel Sizes	1200mm wide panel	1200mm x 3660mm
	1500mm wide panel	1500mm x 3040mm

To make handling easier a panel is limited to 4.65m²

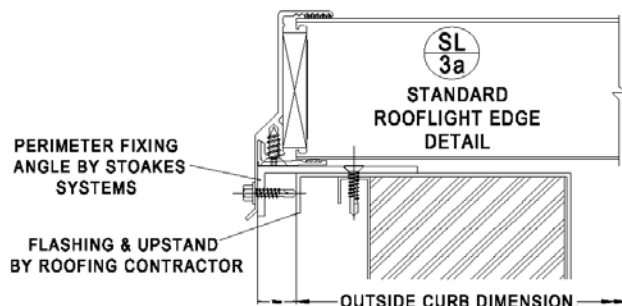
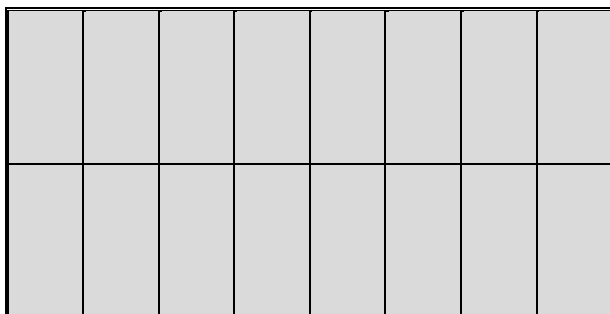
Configuration	70mm thick Panels, and flat only
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Pyramids	Not less than 2743mm square at base. All pyramids require box beams
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Geo Roofs	Not Available
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STANDARD ROOFLIGHTS

1200SERIES STANDARD SIZED S-LINE THERMALLY BROKEN SKYLIGHTS



STANDARD PANEL SPECIFICATION

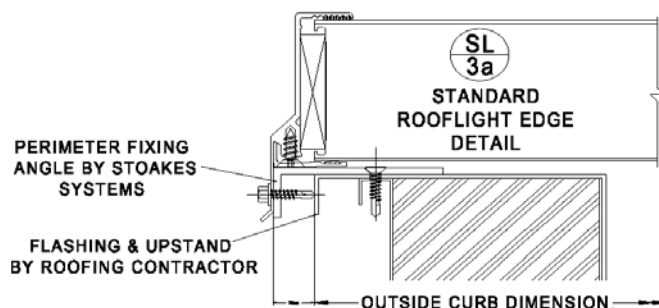
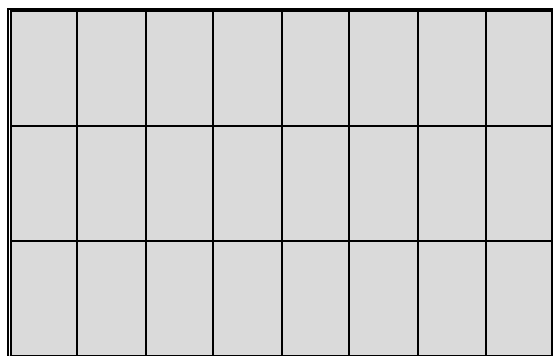
Face sheets Crystal SWE outer / White B3C inner
 Light transmission 20%
 Solar Factor 0.18
 'U' Value 1.25 W/m²K
 ('U' values of 0.78, 0.56 and 0.28 W/m²K available as options, but max length of 0.28 'U' value rooflight is 3658mm)
 Design Wind Load 1915 Pa
 Design Snow Load 1915 Pa
 Live Load 958 Pa
 Aluminium Finish : Mill (Kalwall KCRF available as option)
 Minimum Pitch 2°

STANDARD SIZES 1200 SERIES

PANEL REFERENCE CODE	KALWALL PANEL SIZE MM	REQUIRED OUTSIDE KERB DIMENSION MM
S-44-3A	1220 x 1220	1200 x 1200
S-45-3A	1220 x 1524	1200 x 1504
S-46-3A	1220 x 1829	1200 x 1809
S-47-3A	1220 x 2134	1200 x 2114
S-48-3A	1220 x 2438	1200 x 2418
S-49-3A	1220 x 2743	1200 x 2723
S-410-3A	1220 x 3048	1200 x 3028
S-411-3A	1220 x 3353	1200 x 3333
S-412-3A	1220 x 3658	1200 x 3638
S-413-3A	1220 x 3962	1200 x 3942
S-414-3A	1220 x 4267	1200 x 4247
S-415-3A	1220 x 4572	1200 x 4552
S-416-3A	1220 x 4877	1200 x 4857
S-417-3A	1220 x 5182	1200 x 5162
S-418-3A	1220 x 5486	1200 x 5466
S-419-3A	1220 x 5791	1200 x 5771
S-420-3A	1220 x 6096	1200 x 6076

FOR FURTHER INFORMATION PLEASE SEE STRUCTURA STANDARD DETAILS **SUK/SL/2102/4**

1500 SERIES STANDARD SIZED S-LINE THERMALLY BROKEN SKYLIGHTS



STANDARD PANEL SPECIFICATION

Face sheets Crystal SWE outer / White B3C inner
 Light transmission 20%
 Solar Factor 0.18
 'U' Value 1.25 W/m²K
 ('U' values of 0.78, 0.56 and 0.28 W/m²K available as options, but max length of 0.28 'U' value rooflight is 3048mm)
 Design Wind Load 1915 Pa
 Design Snow Load 1915 Pa
 Live Load 958 Pa
 Aluminium Finish : Mill (Kalwall KCRF available as option)
 Minimum Pitch 2°

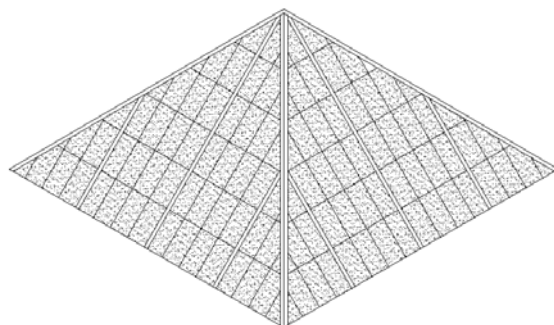
STANDARD SIZES 1500 SERIES

PANEL REFERENCE CODE	KALWALL PANEL SIZE MM	REQUIRED OUTSIDE KERB DIMENSION MM
S-55-3A	1524 x 1524	1505 x 1504
S-56-3A	1524 x 1829	1505 x 1810
S-57-3A	1524 x 2134	1505 x 2114
S-58-3A	1524 x 2438	1505 x 2418
S-59-3A	1524 x 2743	1505 x 2723
S-510-3A	1524 x 3048	1505 x 3028
S-511-3A	1524 x 3353	1505 x 3333
S-512-3A	1524 x 3658	1505 x 3638
S-513-3A	1524 x 3962	1505 x 3942
S-514-3A	1524 x 4267	1505 x 4247
S-515-3A	1524 x 4572	1505 x 4552
S-516-3A	1524 x 4877	1505 x 4860
S-517-3A	1524 x 5182	1505 x 5162
S-518-3A	1524 x 5486	1505 x 5466
S-519-3A	1524 x 5791	1505 x 5771
S-520-3A	1524 x 6096	1505 x 6076

FOR FURTHER INFORMATION PLEASE SEE STRUCTURA STANDARD DETAILS SUK/SL/2103/5

STANDARD KALWALL PRE ENGINEERED PYRAMIDS

Choose from 17 standard sizes



STANDARD SPECIFICATION

Face sheets	Crystal SWE outer / White B3C inner
Light transmission	20%
Solar Factor	0.18
Panel 'U' Value	1.25 W/m ² K
('U' values of 0.78, 0.56 and 0.28 W/m ² K available as options, but max size of 0.28 W/m ² K pyramid limited to 3048 x 3048mm)	
Design Wind Load	1197 Pa
Design Live Load	958 Pa
Standard Slopes	27 ¹ / ₄ °, 33 ¹ / ₃ °, 45°
Grid Layouts	300 x 600, 200 x 500 or 300 x 300mm
Aluminium Finish :	Mill (Kalwall KCRF Paint as option)

STANDARD SIZE MM OUTSIDE KERB DIMENSION		NO. OF PANELS PER SIDE	MAXIMUM HORIZONTAL THRUST LOAD ON KERB N
1219 x 1219	SELF SUPPORTING	1	445
1524 x 1524		1	712
1829 x 1829		1	1001
2134 x 2134		1	1379
2434 x 2434		1	1779
2743 x 2743		2	2269
3048 x 3048		2	2780
3353 x 3353		2	3381
3656 x 3656		2	4003
3962 x 3962		4	4715
4267 x 4267		4	5449
4572 x 4572*	SUPPORTING STRUCTURE REQUIRED	4	6272
4887 x 4887*		4	7117
5182 x 5182		4	8051
5486 x 5486		4	9008
5791 x 5791		4	10053
6096 x 6096		4	11121

* May require supporting structure internally dependant on snow load.
L/60 allowable deflection based on 45° slope
Kerbs to withstand thrust load by others.

FOR FURTHER INFORMATION PLEASE SEE STRUCTURA STANDARD DETAILS SUK/SS/2201-2206