

Minima Panels

Minima Panel Details

Length	Width	Code	Weight (kg)
1200 x 300	MMX21230	18.7	
1200 x 450	MMX21245	24.0	
1200 x 600	MMX21260	29.2	
1200 x 750	MMX21275	33.5	
1200 x 900	MMX21290	38.5	

Length	Width	Code	Weight (kg)
2700 x 300	MMX22730	38.9	
2700 x 450	MMX22745	45.4	
2700 x 600	MMX22760	53.2	
2700 x 750	MMX22775	60.0	
2700 x 900	MMX22790	69.1	

Length	Width	Code	Weight (kg)
1500 x 300	MMX21530	22.6	
1500 x 450	MMX21545	28.5	
1500 x 600	MMX21560	31.1	
1500 x 750	MMX21575	35.9	
1500 x 900	MMX21590	41.4	

Minima Corners

Internal Corner

Size	Code	Weight (kg)
2700 x 300	MMX32730	66.2
1500 x 300	MMX31530	37.9
1200 x 300	MMX31230	30.6

Hinged Corner 300mm

Size	Code	Weight (kg)
2700 x 300	MMX52730	71.7
1500 x 300	MMX51530	41.3
1200 x 300	MMX51230	33.9

Hinged Corner 150mm

Size	Code	Weight (kg)
2700 x 150	MMX32715	49.2
1500 x 150	MMX31515	27.8

Minima Clamps

Minima Clamp

Code	Weight (kg)
MMX10028	3.37

Corner Clamp

Code	Weight (kg)
MMX10001	6.1

Adjustable Clamp

Code	Weight (kg)
MMX10002	5.0

Other Minima Accessories

Waler 80

Code	Weight (kg)
MMX10008	6.3

Tension Bolt 190

Code	Weight (kg)
MMX10012	0.9

Waler Tie 300

Code	Weight (kg)
MMX10010	0.8

MP Bolt

Code	Weight (kg)
MMA20015	0.6

MP Nut

Code	Weight (kg)
MMA20010	0.4

Edge Tie Bearing

Code	Weight (kg)
MMX10023	2.4

Flat Bracket 130 x 100 x 8mm

Code	Weight (kg)
BTA11008	0.79

Flat Bracket 130 x 130 x 10mm

Code	Weight (kg)
BTA11010	1.31

Walkway Bracket

Code	Weight (kg)
MMX10006	14.0

Minima Panel Connections

Panels are connected by either the Minima Clamp (MMX10028) or the Minima Adjustable Clamp (MMX10002). The Minima Clamp can't be used on a horizontal joint. Clamping occurs at the panel edges. All clamps should be located over a panel rib. If the clamps on the vertical joints are not fixed across the horizontal ribs, the alignment of the panels is likely to be compromised. Generally 2 clamps are required at each vertical joint of each panel and one Adjustable Clamp at each horizontal joint of one panel.

Minima clamps are capable of a maximum load of 8kN in both directions.

When different height panels are clamped side by side, ribs may not line up causing a rib offset. In many cases the Minima clamps will not work correctly. However, the Adjustable Clamp is capable of clamping across ribs with a maximum 50mm offset. The Minima Clamp is capable of clamping across ribs with a maximum 30mm offset.

Minima Corner Details

Corner clamps have an incorporated 20mm packer to achieve an even 100mm over lap, as the panel is 120mm deep. The clamp is adjustable to fit an extra 50mm packer to achieve 50mm increments in panel lengths. The clamps are positioned over a panel rib.

Typical Corner with packer

Stop-End Arrangement

Holes in the end of the Minima panels provide suitable fixing for stop ends. Use the Tension Bolt 190 through the Waler 80 to support a stop-end structure.

Centres to be determined based on max. W.L. of TENSION BOLT 190.

Column Forms using Standard Minima Panels

Standard Minima panels can be used to form both square and rectangular columns to a maximum height of 3.0m. Column cross sections range from 300mm to 900mm. The number of corner clamps required depends on the height and width of the forms.

COLUMN SIZE	PANEL SIZE	PACKING REQUIRED*
850 x 850	900	50mm
800 x 800	900	50mm
700 x 700	750	50mm
650 x 650	750	50mm
550 x 550	600	50mm
500 x 500	600	50mm
400 x 400	450	50mm
350 x 350	450	50mm

*SEE CORNER DETAIL WITH PACKING SQUARE COLUMNS AVAILABLE SIZES

Minima Access

The Minima Walkway Bracket can be connected to both vertically and horizontally orientated Minima panels in both horizontal and vertical directions. In both cases, the Walkway Bracket is attached to the panel rib and is fixed at the closest position to the top of the shutter. Hand rails are constructed using tube and fittings.

When the panel is orientated vertically, the Minima Walkway Bracket is connected to the panel rib. The two pins locate in holes along the panel rib. Two 'R' Clips are then used to secure the Walkway to the rib.

The Minima Walkway Bracket can be used with either 230mm wide Hyplanks or Alform and Plywood.

It is good practise to place the smaller panels at the bottom of the shutter. Tie requirements or mating panels may influence this decision. The Minima forms can be extended in height by placing a panel horizontally. For specific length extension up to 4000mm, a ply and timber make-up can be used.

No ties are required at the very top of the formwork provided that the Minima Adjustable Clamps are used at a maximum 900mm centres to join the top to the lower panels. The bottom of each Adjustable Clamp catches either a vertical or horizontal rib.

19mm PLYWOOD
20 TO 30mm THICK TIMBER OR PLYWOOD
100mm TIMBER
400 MAX

Minima Corner Arrangements

Corner clamps can be made neatly in 50mm increments from a wall thickness of 150mm to 500mm. Some corners require a 50mm packer within the corner clamp or between the connecting panel. It is important that the panel ends are equal lengths to allow for the tie holes to line up. Multi Purpose Panels can be used in complicated situations.

Different wall thickness can be achieved by using different packer sizes. Packers on both faces can be used to achieve any wall thickness.

Column Forms using Minima Multi Purpose Panels

The Minima Multi Purpose Panel has 2 continuous rows of tie holes which permits the joining of panels that fly past at corners. Using a Multi Purpose bolt and Multi Purpose nut, the Multi Purpose panels can be joined side to face as shown to the right. Only one side has a corresponding tie hole.

The arrangement shown creates a variable form for square and rectangular columns. They can be adjusted in 50mm increments from 150mm to 550mm. Tie spacing is set by the position of the tie holes.

FORM HEIGHT	PANEL WIDTH	NUMBER OF CLAMPS REQUIRED
1500	< 600mm	3
2700	< 600mm	4
3000 (1500 x 2)	> 600mm	5

100mm PACKING REQUIRES 50mm EACH END OF PANEL
*SEE CORNER DETAIL WITH PACKING RECTANGULAR COLUMNS COLUMN WIDTH DEFINED BY PANEL SIZE

Minima Multi Purpose Panels

Length	Width	Code	Weight (kg)
2700 x 700	MMX42770	60.1	
1500 x 700	MMX41570	39.2	
1200 x 700	MMX41270	35.5	

Minima Panel Infill Connections

To achieve a specific form length, timber infills may be required. Use a timber and ply make up to suit a panel depth of 120mm and tie with the following arrangements. When packer exceeds 50mm thick, Waler Tie Nut 230 must be used.

Infills up to 50mm

Use a standard wing nut and flat bracket tied through the timber and the Minima Clamp (MMX10028).

Infills 150 to 300mm

Use the Waler 80 fastened to the perforated rib of the Minima Panel using 2 off Waler Tie 300. A tie is required through the infill. See arrangement drawn below.

Infills 50 to 150mm

Use a Waler Tie Nut 230 through the timber and the Minima Adjustable Clamp (MMX10002).

Obtuse and Acute Angle Arrangements

Using the hinged corners 150 and 300, it is possible to form non-right angled corners. Hinged corner 300 can only be used as an internal corner. Standard Minima clamps are used to connect them to panels.

Hinged corner 150 can be used as an internal or an external corner. A tension bolt 190 is used to connect them to panels.

Minima 'T' Junction Arrangements

'T' junctions can be formed for wall thickness of up to 400mm. Alternative wall thickness can be achieved by using different packing. It is important that the panel ends are equal lengths to allow for the tie holes to line up. Multi Purpose Panels can be used in complicated situations.

Minima Crane Hook

Description of Use

The Minima Crane Hooks are used for lifting either single Minima panels, or Minima panels assembled into large shutters. Two Minima Crane Hooks are used at all times. The Minima Crane Hook is engaged around either the top of edge of the vertical panel or side edge of the horizontal panel. The hook is always located around a vertical rib, or ribs. The captive pin needs to be fully engaged through the holes in the panel ribs before a sling is attached. A pair of suitable slings are attached to the links on the two Crane Hooks. The slings need to be of a length that ensures that the maximum angle of spread between the two slings is 60°.

Please consult the Minima Technical Data Sheet for further information about the Minima Crane Hook.

Lifting Capacity

500 kg

Minima Medium & Short Alignment Props

The Minima Alignment Prop aligns and secures single Minima Panels up to a height of 2700mm. The prop comes completely assembled, including clamps, props and a base unit. The props are usually clamped to the edge profiles of the panel joints unless special arrangements are required. If propping must occur at the end panel, a timber packer is required.

Alignment Prop Medium

Code	Weight (kg)
MMX10005	20.5

Alignment Prop Short

Code	Weight (kg)
MMX10017	10.9

Our policy is one of continuous improvement and we reserve the right to change, alter or modify any detail, design, weight, dimension or code without prior notice being given.

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