

TECHNICAL GUIDE  
ACROWALL 60

Any safety provisions as directed by the appropriate governing agencies must be observed when using our products. The pictures in this document are snapshots of situations at different stages of assembly, and therefore are not complete images. For the purpose of safety, they should not be deemed as definitive.

The loads featured in this document, related to the parts of the product, are approximate.

The company reserves the right to introduce any modifications deemed necessary for the technical development of the product.

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## Technical Manual Release Notes

This page is intended to record all changes to the **ACROWALL 60** technical manual pages.

Changes or additions to this manual will be itemised with a brief description and date when the amendments were made.

ISSUE	DATE	Amendment Description
A	09/2023	First Release
B	02/2024	Second Release
C	07/2024	Third Release
D	09/2024	Fouth Release

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## 1. Technical Specifications

### System Description

**ACROWALL 60** is a galvanised steel frame panel with a 14mm plywood face. The panel weight of a 2700 x 750 panel is only 60kg. Panels up to 2700 x 750 may be manually handled or built into a large crane handled assembly for fast movement of formwork.

The maximum permissible concrete pressure is 60kPa for single panel height form arrangements up to 2.7m or 55kPa for height extended form arrangements. The built-in strength in the design of the **ACROWALL 60** system makes the assembly simple with a minimum of components. The aligning clamp locks the panels rigidly together and accurately in line. Panel assemblies stay free of twist even when being crane handled.

### Purpose of the Document

The purpose of this document is to provide guidelines for design, safe handling, transport and installation of the **ACROWALL 60** system.

The document also outlines the various components of the system and it features illustrations, working load limits, typical assembly arrangements and safe transport and handling measures.

The information contained in this document is provided as a general guide only and does not replace the need for the design to be reviewed and checked by a qualified person in the field of temporary works design and installation, concrete, steel, building construction and services.

This material has been prepared in the context of relevant Australian Standards and the National Construction Code (NCC). Users should make themselves aware of any recent changes to these documents referred to therein and to local variations or requirements.

This document is NOT a substitute for site-specific Safe Operation Procedures. It is the Installation Contractors responsibility to prepare safe work method statements and observe and comply with site specific health and safety regulations, standards and policies.

Acrow has dedicated engineering services available for project assistance. We can provide design support for clients to determine the best way to specify and document **ACROWALL 60**. Our technical experts can identify the most efficient temporary work design meeting project requirements, specifications and installation process.

Should the users require any further information or guidance, they are encouraged to contact their local Acrow branch.

### Safety Information

This safety information is to draw the user's attention to possible musculoskeletal disorders as a result of manual handling during assembly and dismantling of the **ACROWALL 60** system

It is recommended that users of the **ACROWALL 60** system employ and implement appropriate procedures and control measures to eliminate or control any risk of Musculoskeletal disorder/injury while handling.

Refer to the Code of Practice on manual handling published by local Workcover Authority or other approved and recognised guidelines for correct and appropriate manual handling procedures.

# 1. Technical Specifications

## Important Information

The erection and application instructions contained in this manual are the recommended methods to be used for **ACROWALL 60** products.

The technical function related instructions must be accurately followed to obtain the correct performance of the product. Any deviation from the recommended usage will require a separate design and/or verification by Acrow Engineering.

The safe use and application of the system must be in accordance with Australian Standard AS 3610 Formwork for Concrete, Occupational Health & Safety regulations, approved industry codes of practice and relevant regulatory authority requirements.

The illustrations in these assembly configurations are minimum guidelines only.

The combined use of the **ACROWALL 60** system with equipment from other suppliers may entail performance issues and therefore requires a design check and/or verification by Acrow Engineering or a qualified experienced engineer.

Hazard Identification/Risk Assessments for the erection and dismantling of the system are available from Acrow branches. Site specific Hazard and Risk assessments may need to be generated for specific projects.

## Disclaimer

1. The photographs/illustrations shown within this manual are intended as expressing the diversity and possible applications of the product and as such must not be used as assembly instructions.
2. In line with Acrow commitment to continuous product development and improvement, the information contained in this manual may be changed without notice. Please confirm with Acrow Engineering for latest update.
3. While all reasonable effort has been taken to ensure the accuracy and adequacy of the information contained herein, Acrow, accepts no responsibility or liability for any loss or damage suffered by any person acting or refraining from action as a result of this information.

Should users require any expert assistance, they are encouraged to contact Acrow Engineering department.

## Applicable Codes and Standards

The structural design information and guide provided in this document are limited to the relevant codes nominated below. It does not include certification of any structures or works associated with a project.

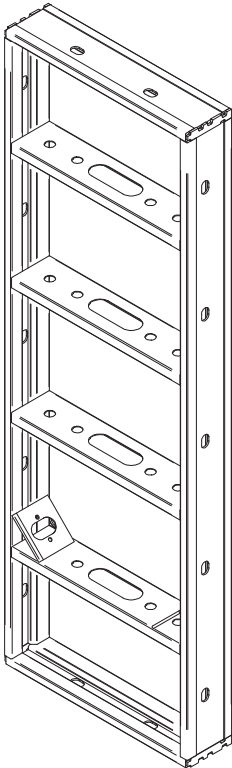
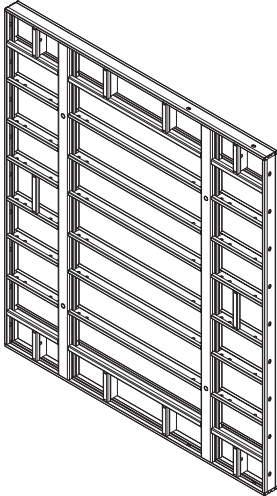
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LOADING	Structural Design Actions – General Principles	AS/NZS 1170.0-2002
	Structural Design Actions – Permanent, Imposed And Other Actions	AS/NZS 1170.1-2002
FORMWORK	Formwork for Concrete	AS 3610-1995
	Formwork for Concrete Part 1- Specifications	AS 3610.1-2018



## 2. GENERAL PRODUCT INFORMATION

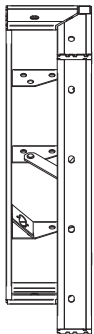
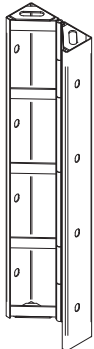
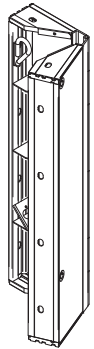
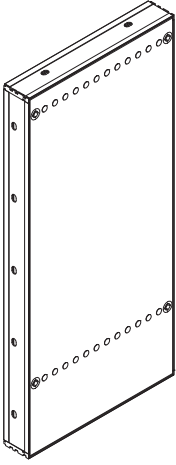
## 2. General Product Information

### Acrowall 60 Panels

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	<b>Acrowall Panels</b>		
	2700 x 900	ACP2790	69.1
	2700 x 750	ACP2775	60.6
	2700 x 650	ACP2765	55.9
	2700 x 600	ACP2760	53.2
	2700 x 550	ACP2755	50.9
	2700 x 500	ACP2750	48.4
	2700 x 450	ACP2745	45.4
	2700 x 300	ACP2730	38.9
	1500 x 900	AWP1590	41.4
	1500 x 750	AWP1575	35.9
	1500 x 650	AWP1565	32.8
	1500 x 600	AWP1560	31.1
	1500 x 550	AWP1555	29.8
	1500 x 500	AWP1550	28.2
	1500 x 450	AWP1545	26.5
	1500 x 300	AWP1530	22.6
	1200 x 900	AWP1290	38.0
	1200 x 750	AWP1275	33.5
	1200 x 650	AWP1265	30.2
1200 x 600	AWP1260	29.2	
1200 x 550	AWP1255	27.3	
1200 x 500	AWP1250	25.5	
1200 x 450	AWP1245	24.0	
1200 x 300	AWP1230	18.7	
	<b>Acrowall Extra Large Panel 2700 x 2400mm</b>		
	2700 x 2400mm Panel	AWP2724	283.7

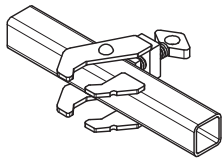
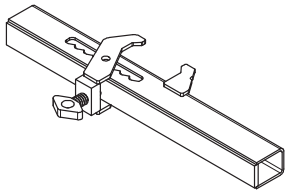
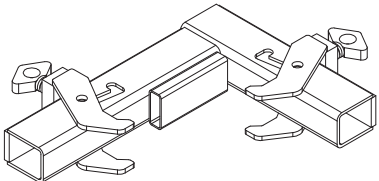
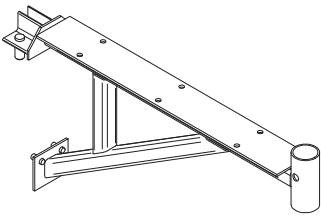
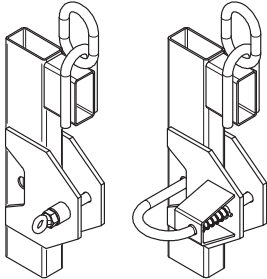
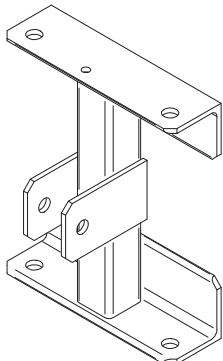
## 2. General Product Information

### Acrowall 60 Corner & Multi Purpose Panels

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	<b>Acrowall Internal Corner Panels</b>		
	ICP 2700 x 300 x 300	AWIC2730	66.2
	ICP 1500 x 300 x 300	AWIC1530	37.9
	ICP 1200 x 300 x 300	AWIC1230	30.6
	<b>Acrowall Hinged Corner Panels 150 x 150</b>		
	HCP 2700 x 150 x 150	AWHC2715	49.2
	HCP 1500 x 150 x 150	AWHC1515	27.8
	<b>Acrowall Hinged Corner Panels 300 x 300</b>		
	HCP 2700 x 300 x 300	AWHC2730	77
	HCP 1500 x 300 x 300	AWHC1530	41.4
	HCP 1200 x 300 x 300	AWHC1230	33.9
	<b>Acrowall Multi-purpose Panels</b>		
	2700 x 700mm MP Panel	AWMP2770	60.1
	1500 x 700mm MP Panel	AWMP1570	39.2
	1200 x 700mm MP Panel	AWMP1270	35.5

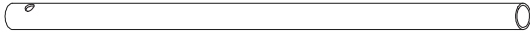
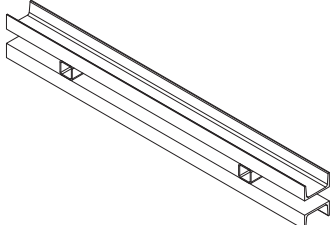
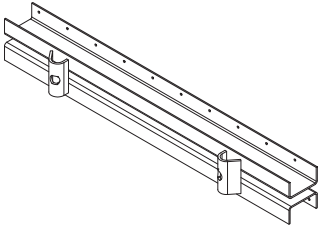
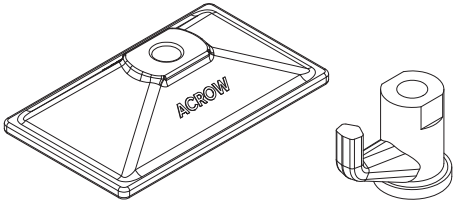
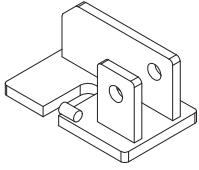
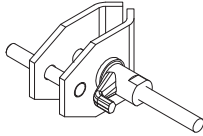
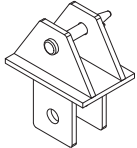
## 2. General Product Information

### Acrowall 60 Components

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	<b>Acrowall Aligning Clamp</b>		
	Aligning Clamp	AWAC	2.9
	<b>Acrowall Adjustable Aligning Clamp</b>		
	Adjustable Aligning clamp	AWAAC	5.0
	<b>Acrowall Outer Corner Clamp</b>		
	Outer Clamp	AWOCC	6.1
	<b>Acrowall Platform Bracket</b>		
	Platform Bracket	AWPB3	13.5
	<b>Acrowall Transport Hook</b>		
	Transport Hook	AWTH	8.2
	<b>Acrowall 2.7m Panel Raker Bracket</b>		
	Panel Raker Clamp	AWP27RB	5.4

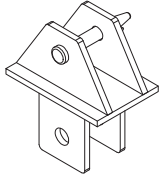
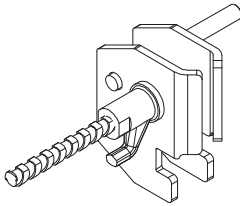
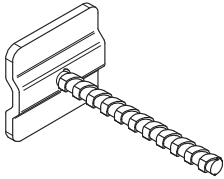
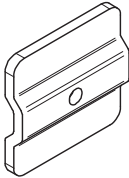
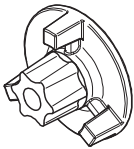
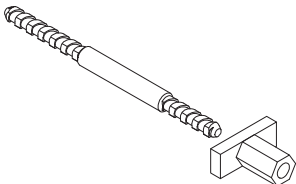
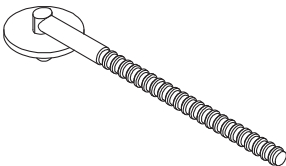
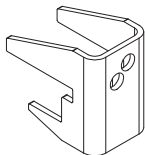
## 2. General Product Information

### Acrowall 60 Components

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	<b>Guardrail Post</b> The Guardrail Post fits into the end socket of the platform bracket to provide the facility to connect a tube and coupler guardrail. The Guardrail Post is secured to the platform bracket with a locating pin.		
	Guardrail post	SSHS12	5.2
	<b>Acrowall Adjustment Waler</b>		
	Adjustment Waler	AWAW	8.6
	<b>Acrowall Multi-purpose Waler</b>		
	Multi-Purpose Waler	AWMPW	13.1
	<b>AZ Tie Nut &amp; HT Thru Tie Cast Wing Nut</b>		
	AZ Tie Nut	ACBTN230	5.9
	15mm Wing Nut	QTTCWN15	0.5
	20mm Wing Nut	QTTCWN20	0.5
	<b>Acrowall Raker Foot Bracket for 36, 38, 40 and 42mm Dia Stem</b>		
	Raker Foot Bracket	AWRFB40	2.5
	<b>Acrowall Adjusting Strut Clamp</b> Clamps onto Acrowall panel joints to provides a fixing point for rakers.		
	Adjusting Strut Clamp	AWASC	2.5
	<b>Acrowall Raker Bracket for 36,38 &amp; 40mm Dia Stem</b>		
	Raker Bracket 36, 38, 40mm	AWPRB40	2.9

## 2. General Product Information

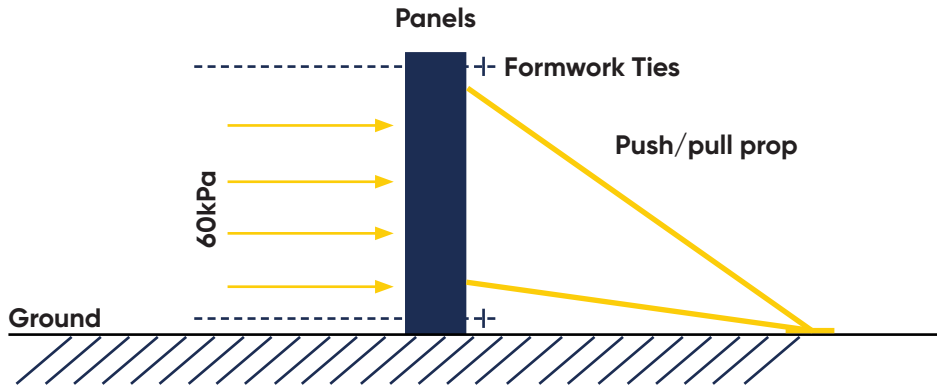
### Acrowall 60 Components

PRODUCT	DESCRIPTION	PRODUCT CODE	MASS (kg)
	<b>Acrowall Raker Bracket for 48mm Dia Stem</b>		
	Raker Bracket 48mm	AWPRB50	2.9
	<b>Acrowall Prop Connector Clamp</b> Has a similar purpose to the Adjusting Strut Clamp and locks around the intermediate rib of an Acrowall Panel to make a stronger connection.		
	Prop Connector Clamp	AWPCC	3.3
	<b>Acrowall Centring Tension Bolt</b> The centring tensioning bolt is used to join panels together when an aligning clamp is not employed such as joining hinged corner panels to standard panels. It can also be used to connect panels to walers at the end of the wall when connecting stop ends.		
	Centring Tension Bolt	AWCTB	0.9
	<b>Acrowall Centring Plate Washer</b> Has a profile that fits the recess of the Acrowall Panel side & end profile. It can be used with the Centring Tension Bolt and HT Thru Tie Wing Nut.		
	Centring Plate Washer	AWCPW	0.5
	<b>Acrowall Centring Nut</b> It has a base which matches the recess of the panel profile assisting to align the adjacent panels. The Acrowall Centring Nut can be used as an alternative to the HT Thru Tie Plate Washer and Wing Nut.		
	Centring Nut	AWCPW	0.8
	<b>Acrowall MP Bolt / Nut</b> The MP Bolt and MP Nut assembly is used to connect MP Panels when forming columns. For a complete joint, the HT Thru Tie Wing Nut and Plate Washer must be used.		
	MP Bolt	AWMPB	0.6
	MP Nut	AWMPN	0.5
	<b>Acrowall Waler Connector</b> The Waler Connector is used to connect an Adjustment Waler, Multi-purpose Waler or Hinged Waler to the Acrowall panel ribs.		
	Waler Connector	AWWC03	0.8
	Waler Connector	AWWC05	1.1
	<b>Acrowall Edge Tie Bracket</b> The Edge Tie Bracket is attached to the top of the panel to allow a tie to be used at the top of the wall clear of the concrete.		
	Edge Tie Bracket	AWETB	2.4

### 3. WORKING LOAD LIMITS (WLL)

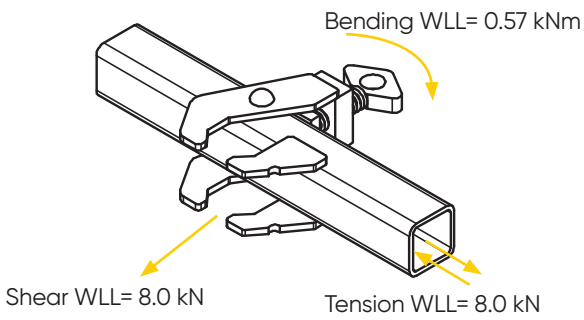
### 3. Working Load Limits (WLL)

#### Vertical Panels

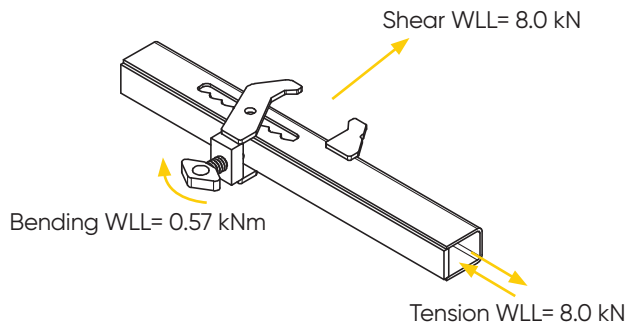


#### Components WLL

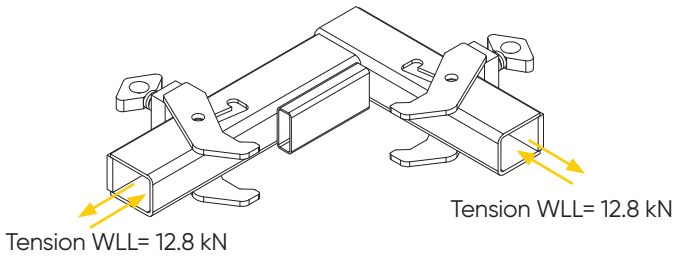
##### Aligning Clamp



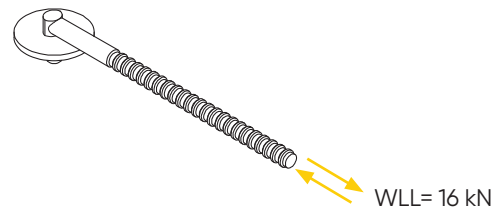
##### Adjustable Aligning Clamp



##### Outer Corner Clamp



##### Waler Connector

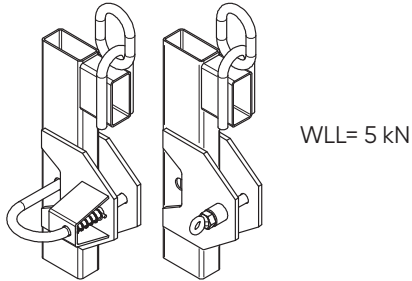




### 3. Working Load Limits (WLL)

#### Components WLL

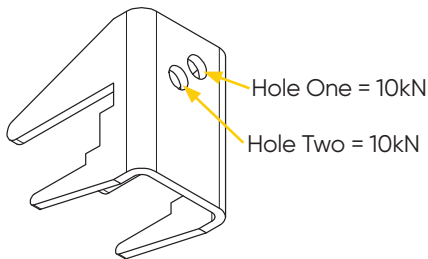
**Transport Hook**



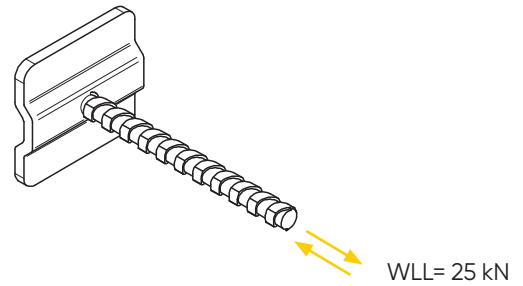
**Adjusting Strut Clamp**



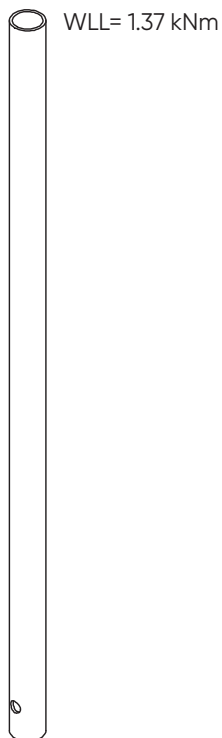
**Edge Tie Bracket**



**Centering Tension Bolt**



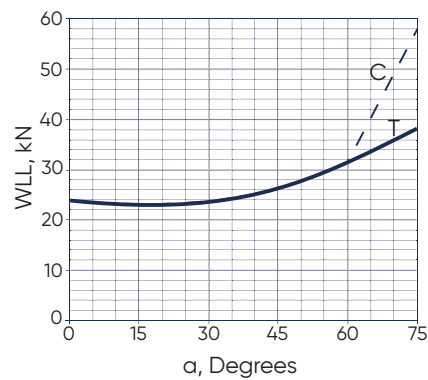
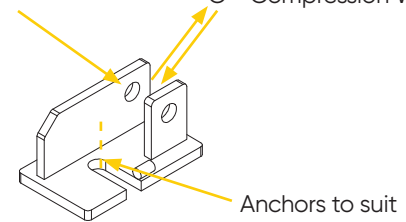
**Guardrail Post**



**Acrowall Raker Foot Bracket**

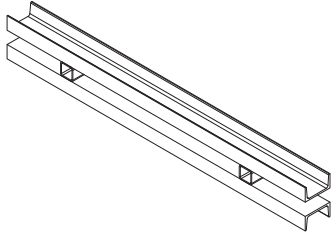
Ø16 Podger Connecting Pin or M20 x 110 Gr. 8.8 bolt & nut thru Ø18mm Holes, in Double Shear

T = Tension WLL  
C = Compression WLL

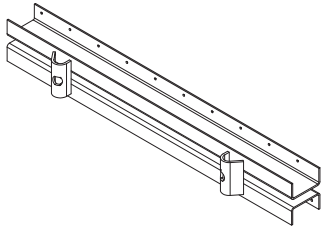


### 3. Working Load Limits (WLL)

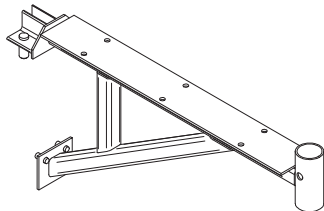
#### Waler, Raker Bracket & Platform Bracket WLL



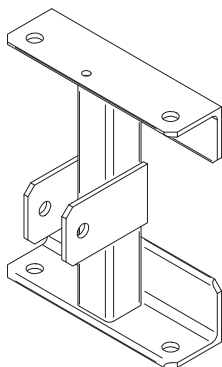
**Acrowall Adjustment Waler (AWAW)**



**Acrowall Multi-purpose Waler (AWMPW)**



**Acrowall Platform Bracket (AWPB3)**



**Acrowall 2.7m Panel Raker Bracket (AWP27RB)**

## 4. SYSTEM DETAILS

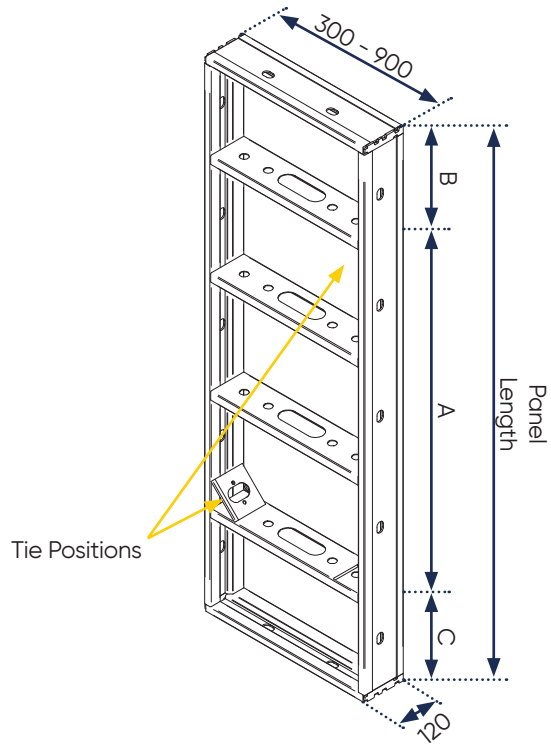
## 4. System Details

### Panel Details

Can be connected to each other to form the required concrete area. They are capable of taking a concrete pressure of 60kPa for a single panel high construction or 55kPa where multiple panels are used in height. Approximate weight is 30kg/m<sup>2</sup>.

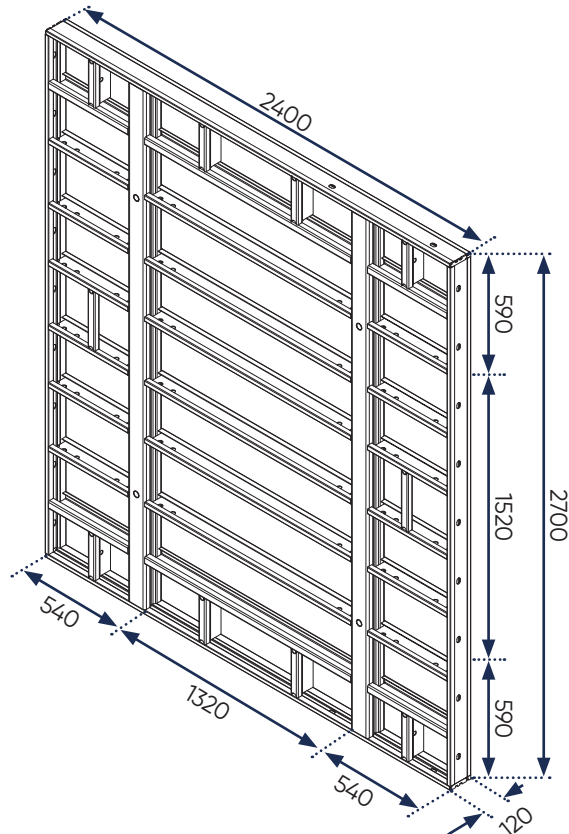
	A	B	C
2700mm Panels	1520	590	590
1500mm Panels	1165	35	300
1200mm Panels	868	32	300

Dimensions are in mm



### Extra Large Panel 2700 x 2400mm

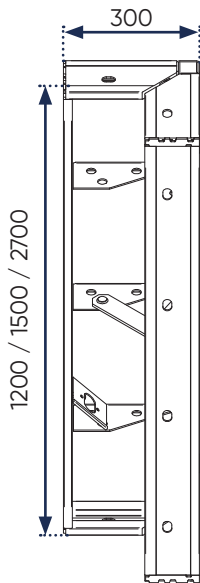
With a form surface area of 6.48m<sup>2</sup>, this panel reduces the need for large numbers of ties and connectors. Only 4 ties are required. When used for single-sided walls, the 4 tie holes must be plugged with the Acrowall Panel Plug (AWPP). The panel can be used either horizontally or vertically.



## 4. System Details

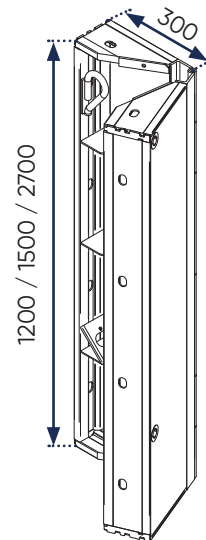
### Internal Corner Panels

The 90° internal corner has a feature which enables the angle to be reduced by 2° to provide clearance to assist in stripping. Unlocking the corner stiffeners enables the panel to move inwards stripping the form away from the concrete.



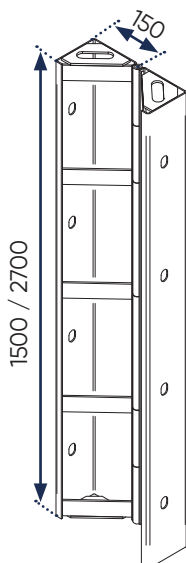
### Hinged Corner Panels 300 x 300

The 300 x 300 wide panel is suitable for corners from 60° to 150°.



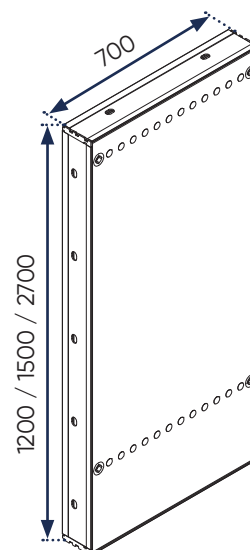
### Hinged Corner Panels 150 x 150

The 150 x 150 wide panel can be used on obtuse corners and has a range of rotation between 90° and 300°. Due to its shape, the panel will not close beyond 90° so can not be used for acute angled internal corners.



### Multi-purpose Panels

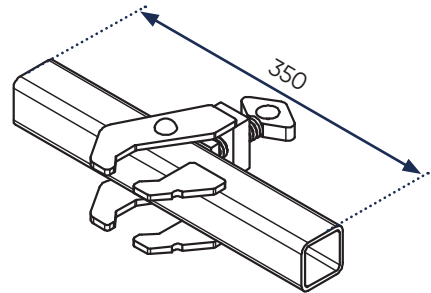
A multi-purpose panel featuring a series of tie holes spaced at 50mm horizontal increments. The tie holes allow the panel to be used for special applications such as wall offsets and corners with oblique angles. It is particularly suitable for 150mm to 550mm columns.



## 4. System Details

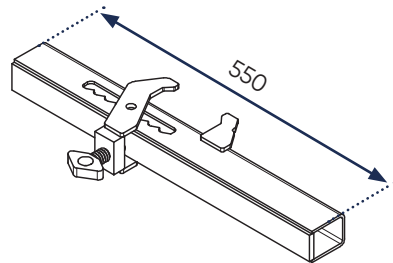
### Aligning Clamp

The Aligning Clamp when used positioned along the panel ribs tightly joins two panels together and aligns them in one action, eliminating the need for walers or other joint clips. If used between rib positions it will not align panels but only join them.



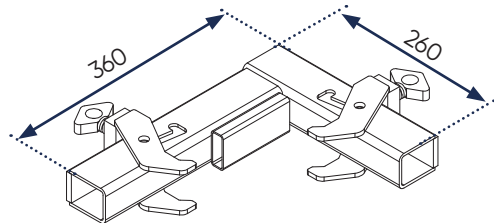
### Adjustable Aligning Clamp

The Adjustable Aligning Clamp is used where timber infills are fitted between panels (max 150mm). The clamp can also be used to join a horizontal panel to a vertical panel at a rib position on the horizontal panel.



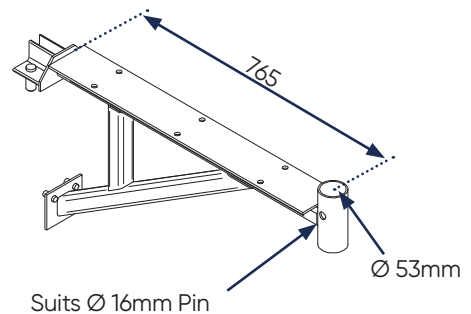
### Outer Corner Clamp

The Outer Corner Clamp provides a strong positive right angled corner with the ability to cater for timber infills of up to 60mm.



### Platform Bracket

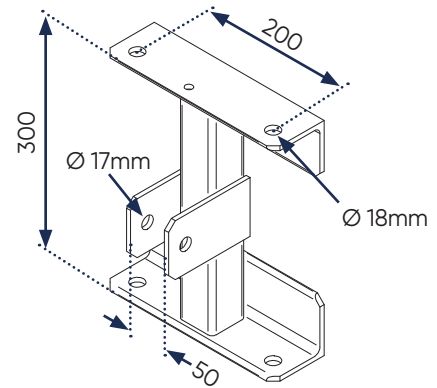
The Platform Bracket can be attached to horizontal or vertical panels. It provides room for 3 timber planks, which are secured to the top flange of the bracket via 6 existing Ø12 holes.



## 4. System Details

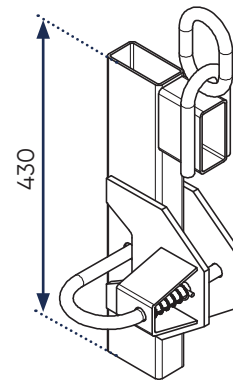
### 2.7m Panel Raker Bracket

The bracket fits centrally between the intermediate ribs of a 2700mm high Acrowall Panel to provide a connection for rakers. It is suitable for applications where rakers can not be effectively connected to the side ribs of a panel such as in column formwork applications.



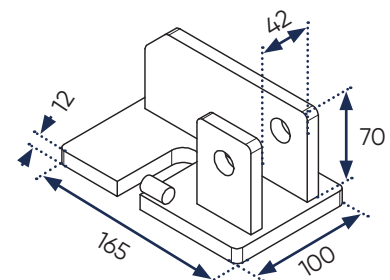
### Transport Hook

The Transport Hook is used for the crane handling of assembled Acrowall panels and the Extra Large panel. Transport Hooks must be used in pairs. Each hook has a maximum load capacity of 5kN (500 kg) enabling assemblies with a form face area of up to 30m<sup>2</sup> to be handled in one operation. Transport Hooks must only be connected to the side bars at a panel joint. The MK2 Transport Hook utilizes a positive and fast-locking screw. It has the same rated capacity as the original.



### Raker Foot Bracket

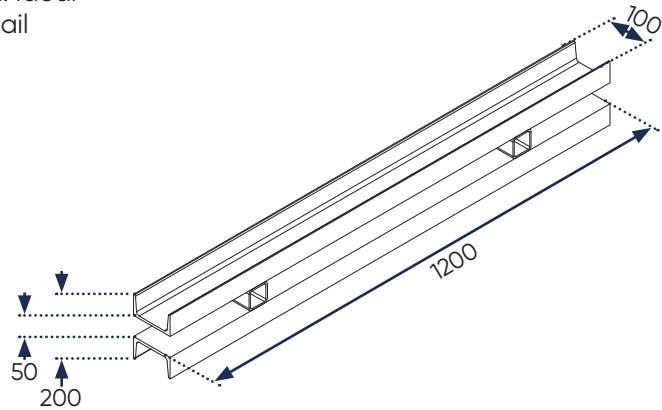
Used to fix the raker to the ground. It is secured to the raker with M16x100 bolts and nuts or Ø16 podger pin and R-Clip and to the ground with Ø20mm anchors.



## 4. System Details

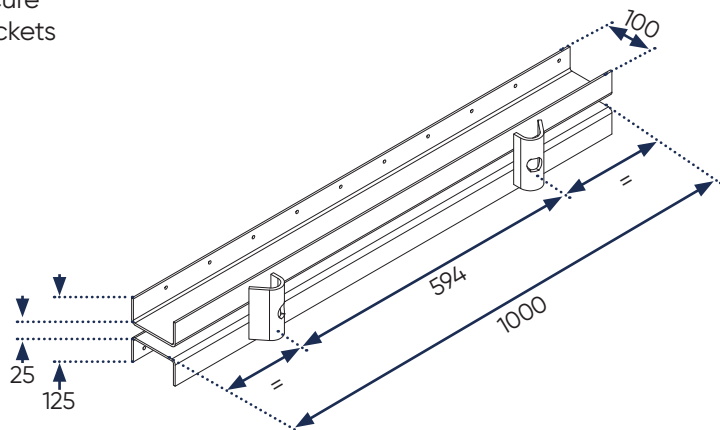
### Adjustment Waler

Used to keep panels in alignment when using timber infill panels of up to a maximum span of 300mm. Ideal for stopends. Timber shuttering is fastened via nail holes.

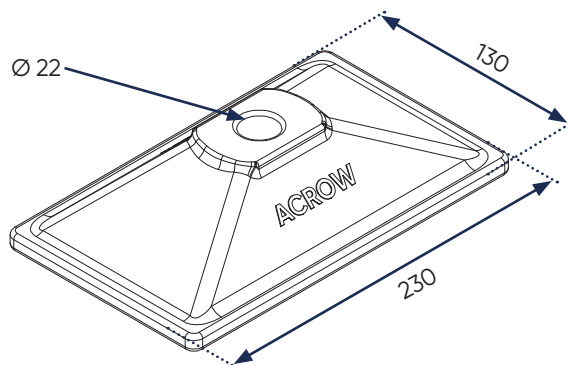


### Multi-purpose Waler

Used in the same manner as the Adjustment Waler. The two built-in tie sockets provide for more secure tying at corners. The round surface of the tie sockets allows the ties to be used at an angle.



### AZ Tie Nut

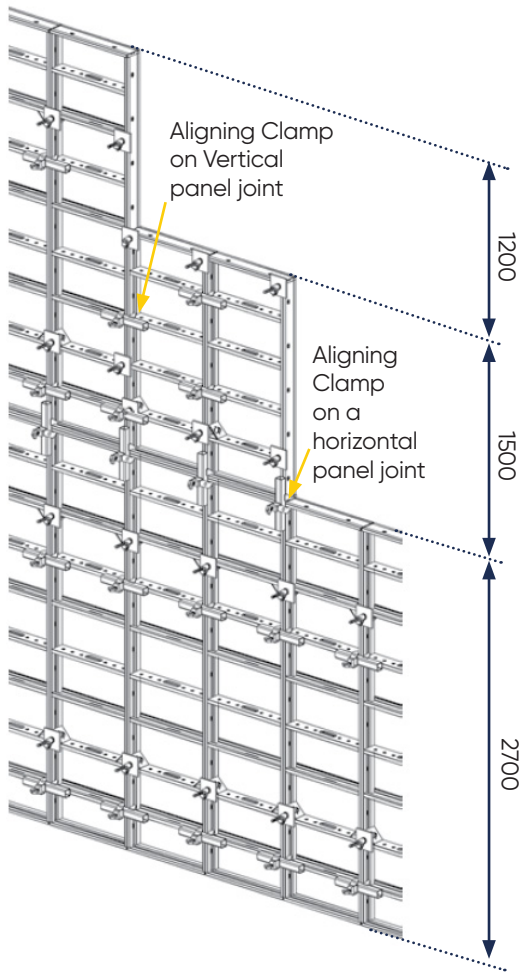




## 5. ASSEMBLY DETAILS

## 5. Assembly Details

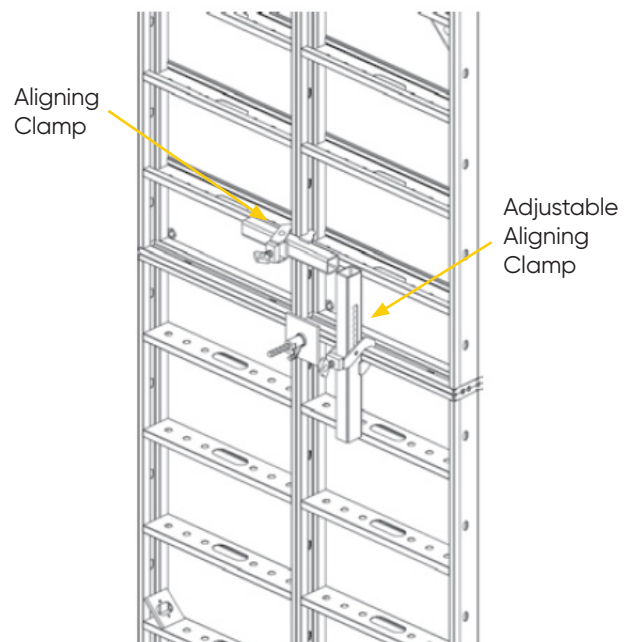
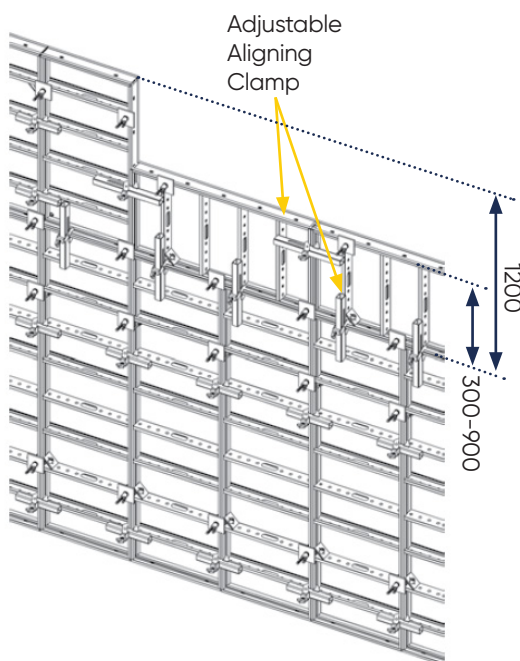
### Element Connection



Acrowall panels are connected using the Aligning Clamp. The aligning clamp provides a tension resistant, tight joint between panels as well as holding the panel in rigid alignment. It can be used on both vertical panel joints and on horizontal panel joints on height extended panel arrangements. When joining a 1500 high panel to a 2700 high panel horizontally adjacent to each other, as shown on the left, the ribs on the two panels are not exactly in line, however the first and third ribs on the 1500 panel are close enough to allow an aligning clamp to be used.

**Note:**

In multiple height assemblies additional clamps may be required to stiffen joints between panels prior to crane handling of the formwork assembly. All Acrowall clamps can be tightened, not by striking the locking screw, but by inserting a podger bar into the hole in the screw head and tightening the screw in a spanner action. This method is labour saving, prevents damage to the screw and is quiet. In height extended walls, using the adjustable aligning clamp which is longer than the aligning clamp enables the panels to be joined together along the rib of the horizontal panel with the clamp picking up across two ribs of the vertical panel thus providing true vertical alignment.

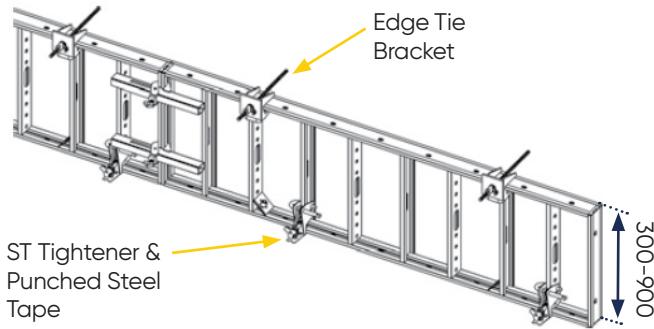


## 5. Assembly Details

### Formwork Height 0.3m - 2.4m

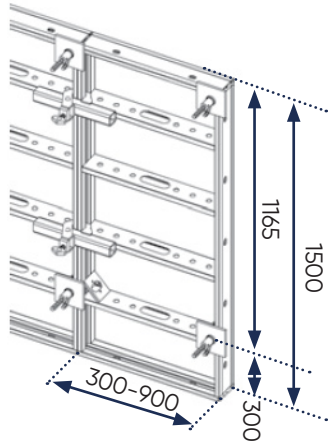
#### Formwork Height 0.3 - 0.9m

Horizontal Acrowall panels connected with Adjustable Aligning Clamps, tied at the top with edge tie brackets and at the bottom with ST Tightener and Punched Steel Tape.



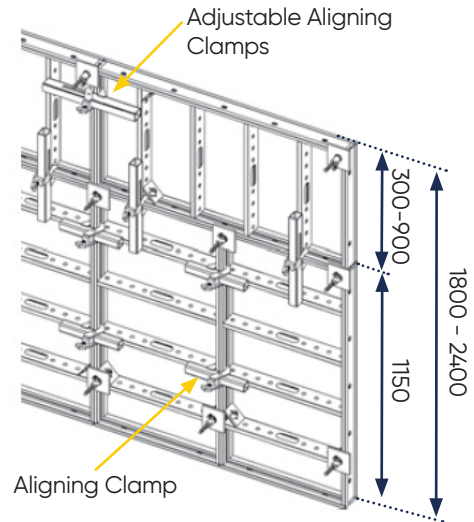
#### Formwork Height 1.5m

Vertical 1500 Acrowall panels connected with Aligning Clamps.



#### Formwork Height 1.8 - 2.4m

Horizontal height-extension panels connected to 1500 vertical panels.

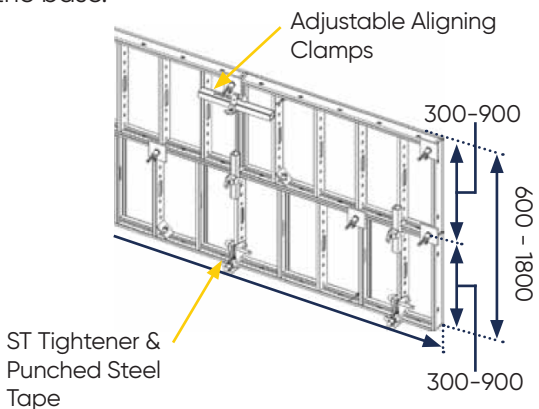


#### Note:

For single panel height form arrangements, the maximum concrete pressure the assembly will support is 60 kPa. For height extended form arrangements ie: more than one panel in height, the maximum pressure reduces to 55 kPa. Depending on the pressure, it may be possible to use Acrowall Edge Tie Brackets instead of ties 35mm from the top of the form.

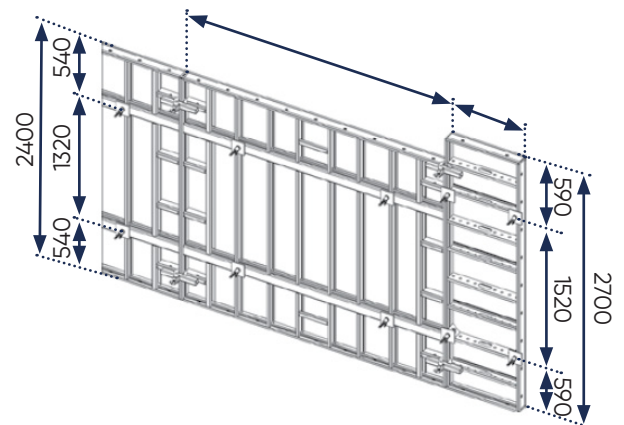
#### Formwork Height 0.6 - 1.8m

Two rows of panels laid horizontally. Aligning Clamps are used to join panels at the horizontal joint while Adjustable Aligning Clamps are used at the vertical joints. ST Tighteners & Punched Steel Tape must be used to support concrete pressure at the base.



#### Formwork Height 2.4m

Acrowall Extra Large Panels may be laid horizontally. Additional 2700 high panels may be used to achieve the desired length.



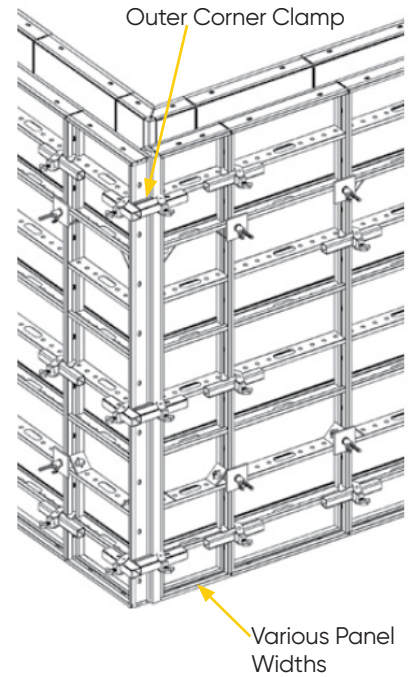
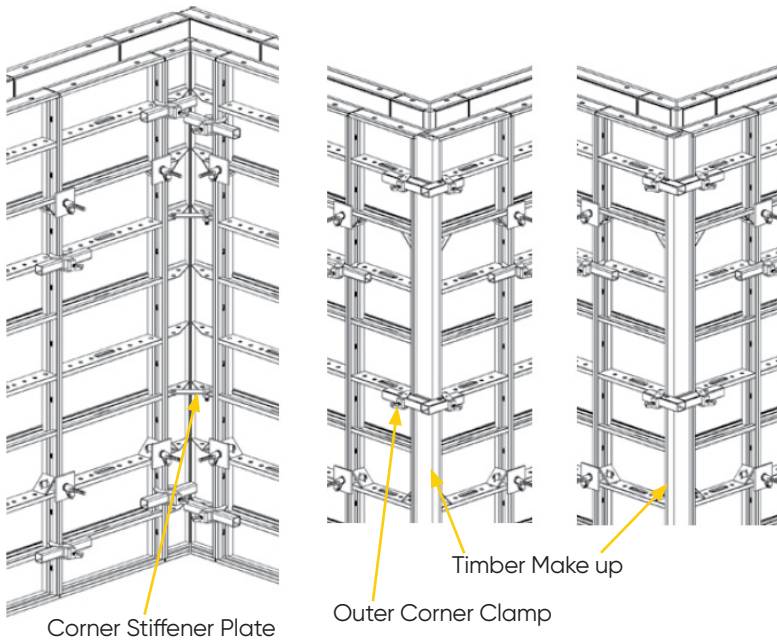




## 5. Assembly Details

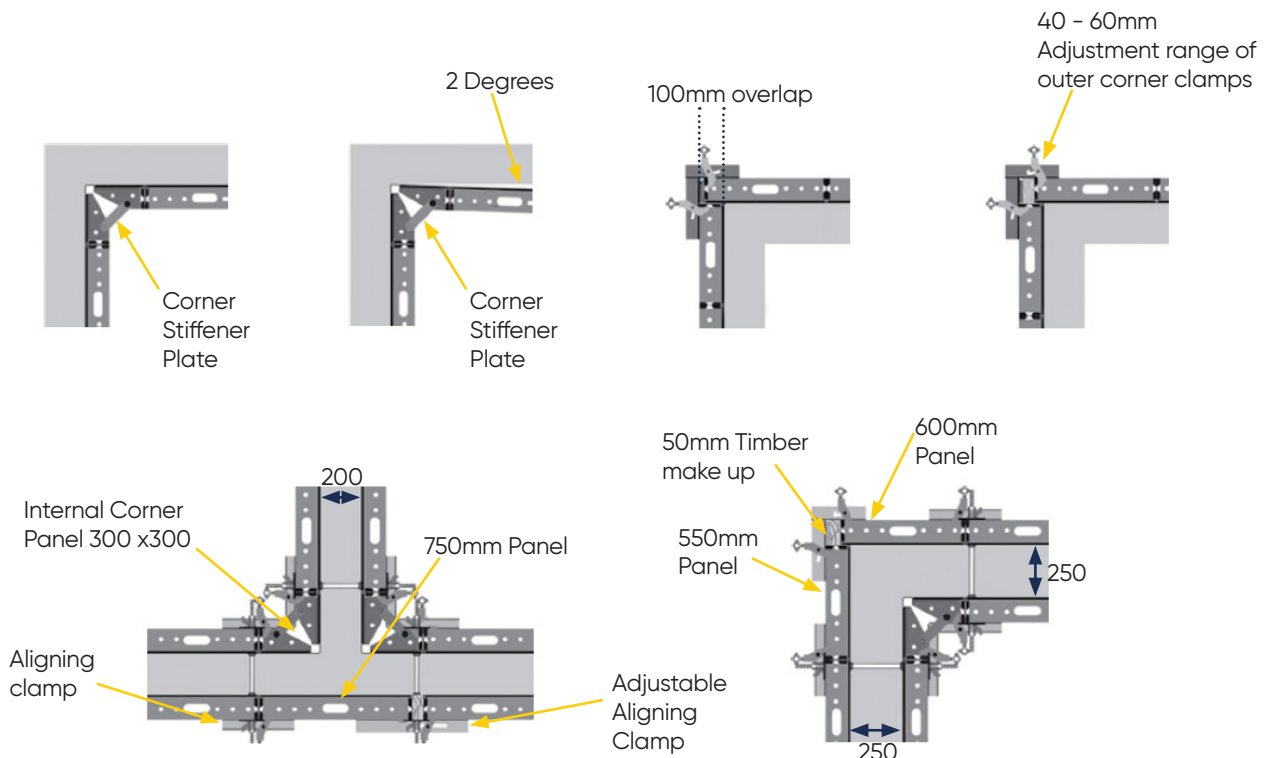
### Square Corners

The internal corner panel has built-in stiffener plates which when locked hold the panels rigidly to a right angle. When the stiffener plates are unlocked the panel angle can decrease by 2° allowing the form to move away from the concrete for easy stripping.



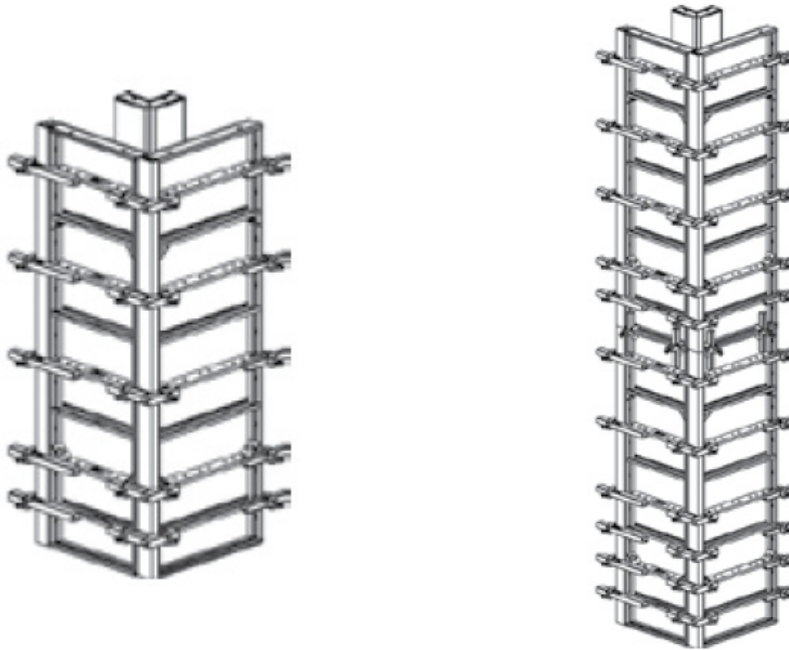
The external corner is made up using a combination of panels so that the panel joints line up with the internal corner panel. In this way the tying system can be used adjacent to the corner panel for full strength.

Timber makeup may need to be used for certain wall thicknesses. Outer corner clamps are able to adequately support the corner joints even if timbermakeup is used.



## 5. Assembly Details

### Outer Corners



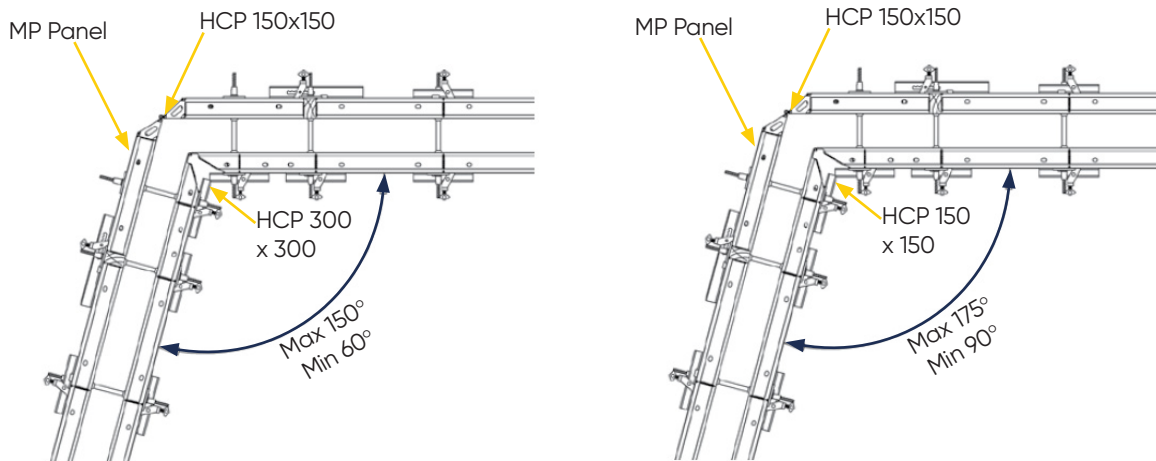
Form Height is 2700									
<b>Wall Thickness</b>	150	200	250	300	350	400	450	500	550
<b>Panel Widths</b>	450 x 550	500 x 600	550 x 650	600 x 700	650 x 750	700 x 750*	750 x 750**	750* x 900	900# x 900*
<b>Outer Corner Clamps</b>	3	3	3	3	4	4	5	5	5
<b>Aligning Clamps</b>	3x2	3x2	3x2	3x2	4x2	4x2	4	4	5
<b>Adjustable Alining Clamps</b>	-	-	-	-	-	-	4	4	5

Form Height is 5400									
<b>Wall Thickness</b>	150	200	250	300	350	400	450	500	550
<b>Panel Widths</b>	450 x 550	500 x 600	550 x 650	600 x 700	650 x 750	700 x 750*	750 x 750**	750* x 900	900# x 900*
<b>Outer Corner Clamps</b>	7	7	7	7	9	9	11	11	11
<b>Aligning Clamps</b>	(7x2)+4	(7x2)+4	(7x2)+4	(7x2)+4	(8x2)+4	(8x2)+4	8+4	8+4	11+4
<b>Adjustable Alining Clamps</b>							8	8	11

## 5. Assembly Details

### Obtuse Corners

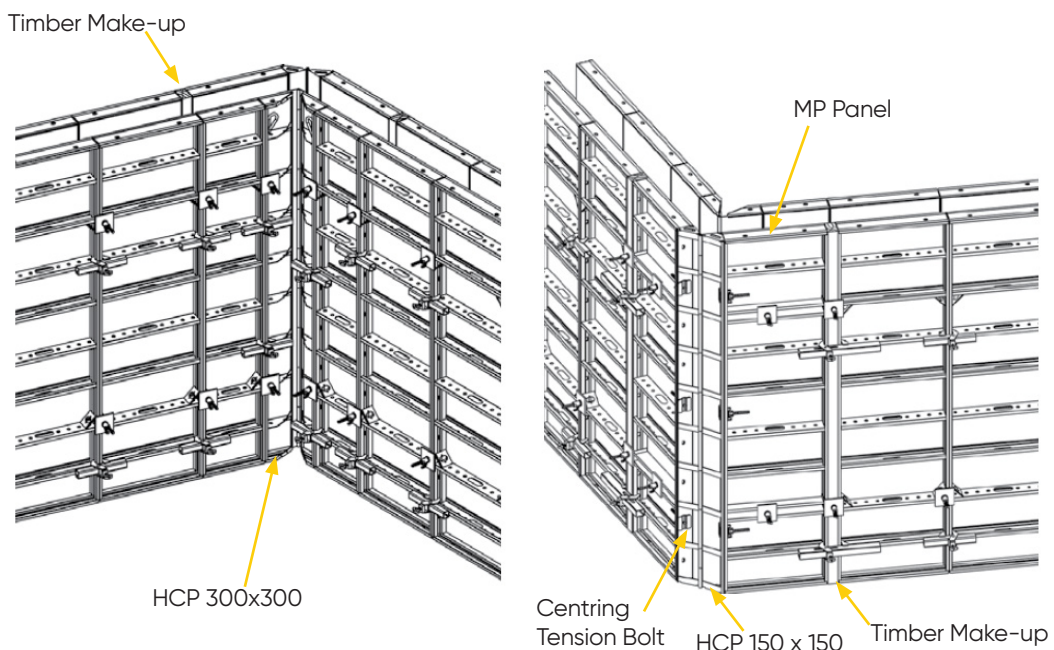
To cater for non right angled corners hinged corner panels are available in two widths 150 x 150 and 300 x 300. The 300 wide hinged panel can only be used on the internal face. The below left arrangement shows a combination of 300 x 300 hinged corner panel on the internal corner with 150 x 150 panel used on the external corner. The below right arrangement shows 150 x 150 hinged corner panels used on the internal and external corner. This combination can only be used on angles greater than 90°.



**Note:**

150 x 150 hinged corner panels should always be joined to adjacent panels using the Centring Tension Bolt with either the Centring Nut or Centring Plate Washer and HT Thru Tie Wing Nut.

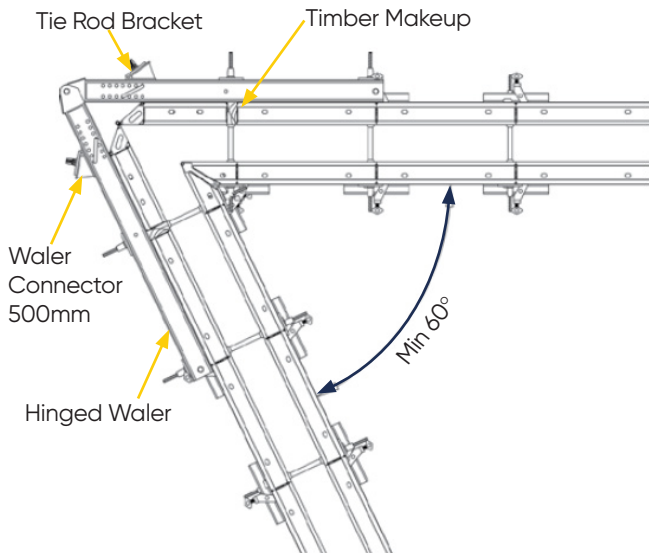
Due to the varying growth in wall length for obtuse corners it is not always possible for panel joints to line up. MP panels are ideal for such applications as it gives greater flexibility in placement of ties.



## 5. Assembly Details

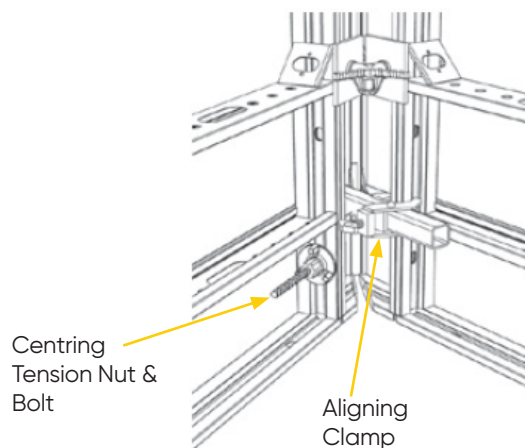
### Acute Corners

The Hinged waler solves the problem of tying when Acrowall is used to form acute-angled corners ( $< 90^\circ$ ). The Hinged Waler is attached to the end panel by the Waler Connector 500mm in conjunction with a Tie Rod Bracket.



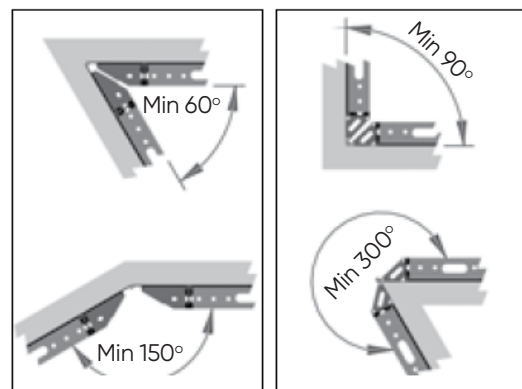
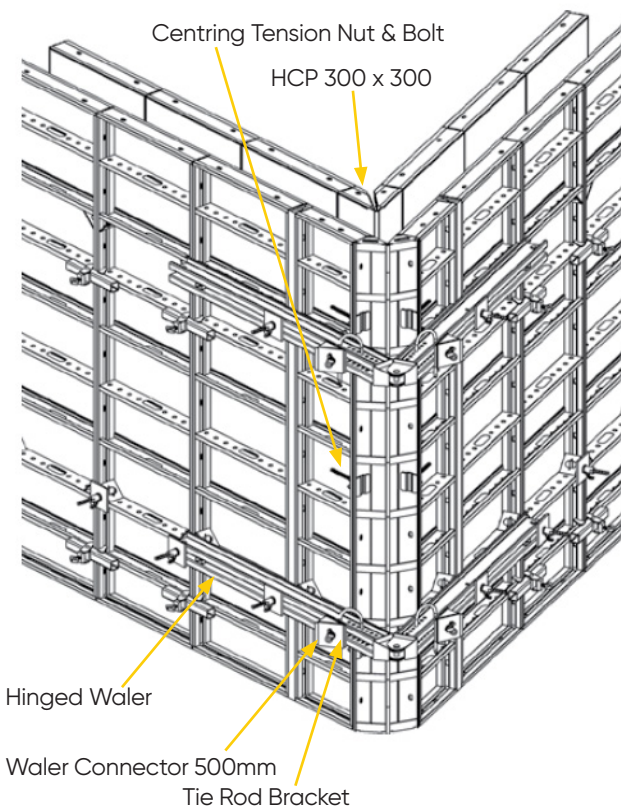
**Note:**

150 x 150 hinged corner panels cannot be used as the internal corner on any acute angled wall. The panel will not close beyond  $90^\circ$ .



**Note:**

Because the 300 x 300 hinged corner panel has the same side bar as a standard panel it can be joined to adjacent panels with the Centring Tension Bolt and Nut or by using the Aligning Clamp. The 150 x 150 corner panels, however have a flat side bar so the alignment clamp cannot be used to joint them to a standard panel.



**Note:**

When using the 300 x 300 hinged corner panel on an acute angled internal form face, if the angle is less than  $70^\circ$  then the tie rods will clash. In this situation MP panels would have to be used on one side of the hinged corner panel to enable the ties to be offset from the joint to allow clearance.

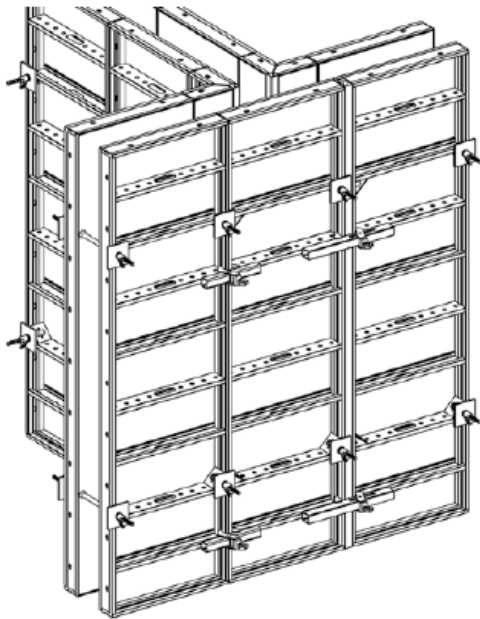


## 5. Assembly Details

### T-Junctions / Stopends / Length Adjustment

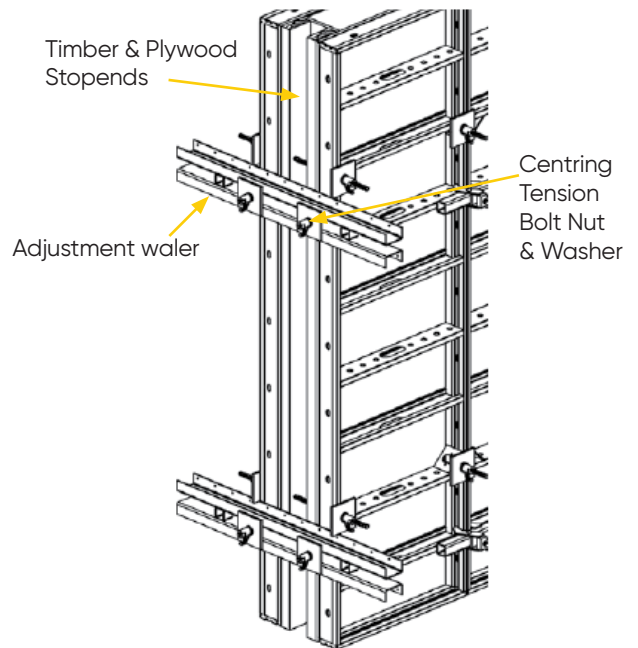
#### T-Junctions

Wall T-junctions can be easily accommodated using standard panels together with timber and plywood makeups where necessary.



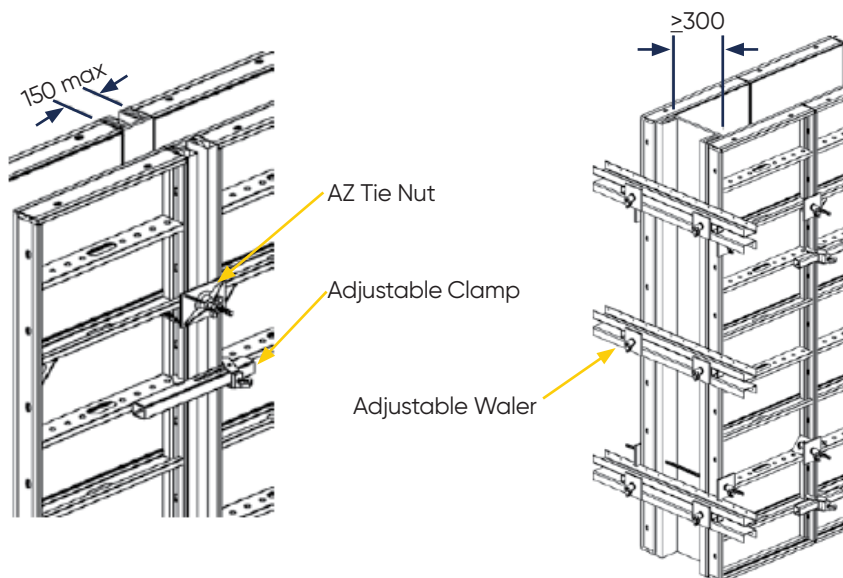
#### Stopends

The holes in the edge profile of the panels provides a means to fasten support for stopends. Centring Tension Bolts and Nuts can be used through the holes to secure Adjustment Walers.



#### Length Adjustments

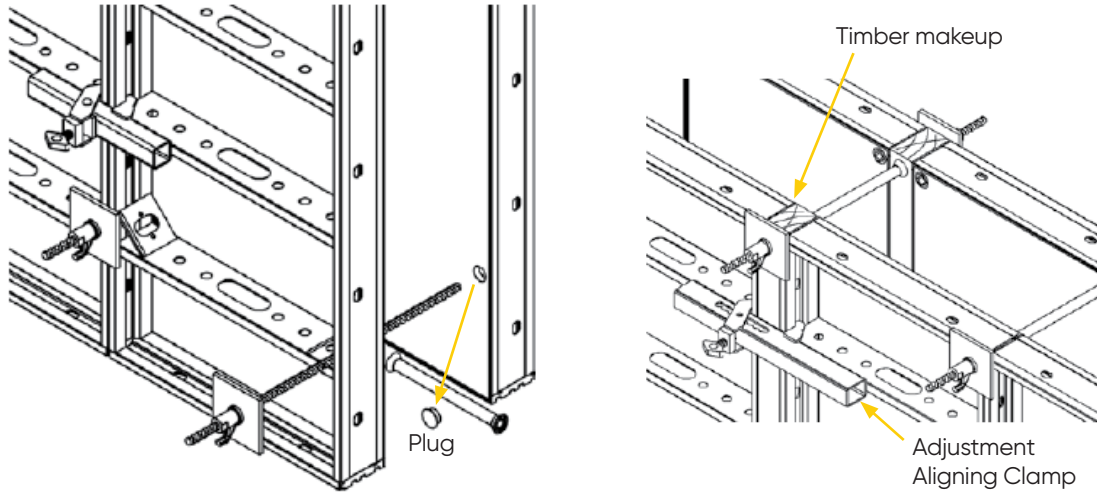
When tying through the timber makeup, make sure that the washer is sufficiently supported by the side bars of the adjacent panel. Timber and plywood site constructed makeup panels can be nailed in place through the holes in the waler. Maximum width of makeup 300mm. For wall thicknesses greater than 300mm at least 3 walers would be required for a wall height of 2.7m.



## 5. Assembly Details

### Tying

Acrowall assemblies are tied using the thru tie system through the tie hole positions in the panels. Before insertion of the tie rod the plastic plug must be removed, all holes not used by ties must be plugged to prevent grout loss. Plastic spacer tube and plastic cones must be used with the thru tie system.

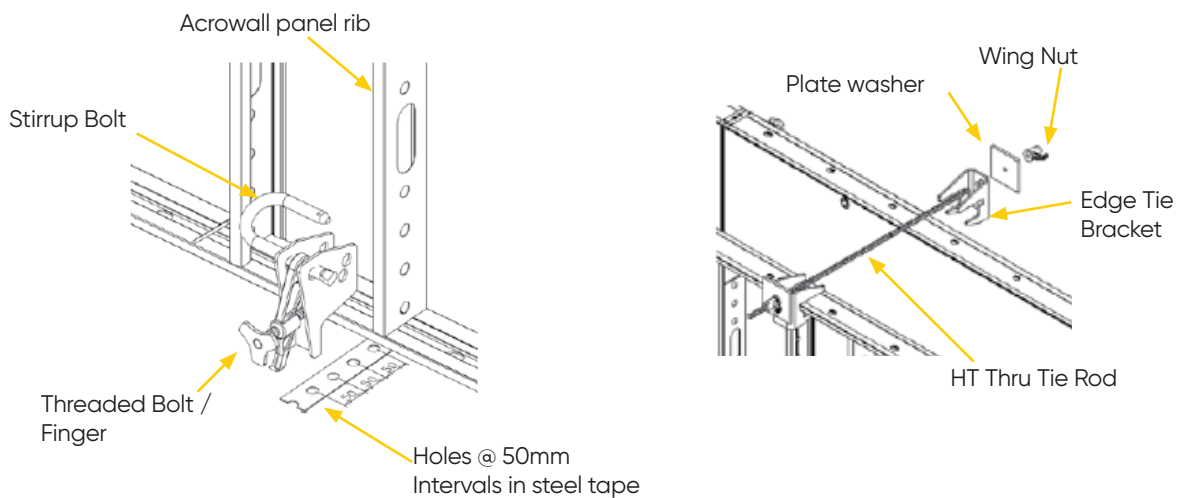


If timber makeups are used for adjustment at a panel joint, tying is more effective if made through the timber makeup. In foundation walls it is often difficult to tie the formwork. When using single panels horizontally a simple method is to use the Acrowall ST Tightener and Punched Steel Tape at the base and Acrowall Edge Tie Brackets at the top of the form.

Acrowall ST Tighteners are inserted into the ribs of the horizontal panels. The finger of the Acrowall ST Tightener is inserted into one of the holes in the steel tape and the formwork is adjusted using the threaded bolt which takes up the slack in the tape so the tape can resist the tensile force resulting from the concrete pressure.

**Note:**

Maximum permissible load for either the Steel Tape system or the Edge Tie Bracket is 10kN. For 900 high foundation walls this means a maximum horizontal distance between ties of 1.5m.



## 5. Assembly Details

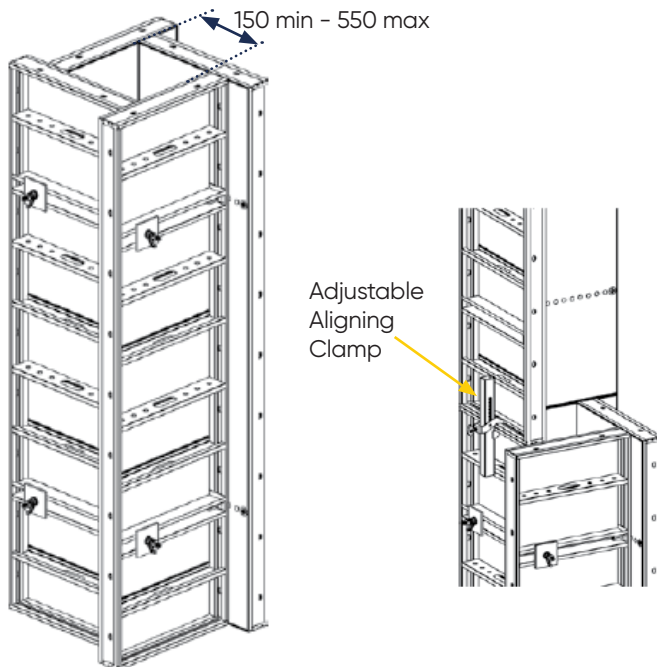
### Column Formwork

#### Column Formwork with MP Panels

The MP Panel (multi-purpose panel) with its continuous rows of tie holes is ideally suited for the construction of smaller/odd size columns. Four MP panels assembled in the configuration depicted below can create a variable form for square or rectangular columns with adjustment in 50mm increments from 150mm to 550mm.

#### Max Pour Pressure:

60kPa and 55kPa when formwork are stacked.

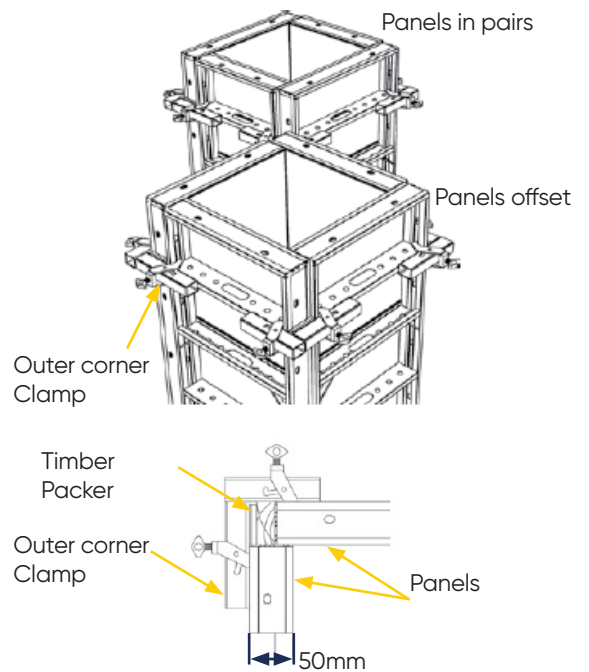


#### Note:

On height-extended column formwork with panels of different size, the smaller panel should always be used at the bottom. The Adjustable Aligning Clamp is used as the connector.

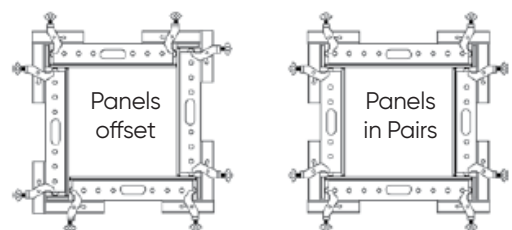
#### Columns using Standard Panels

Column forms made of standard Acrowall panels can be simply and quickly assembled for a wide range of dimensions using the outer corner clamp. By arranging the panels in pairs or offsetting them, or by using a timber packer at the panel overlap, the form can be built for column cross sections ranging in size from 200mm to 850mm maximum.



The number of corner clamps required depends on the form height and the width of the panels being used.

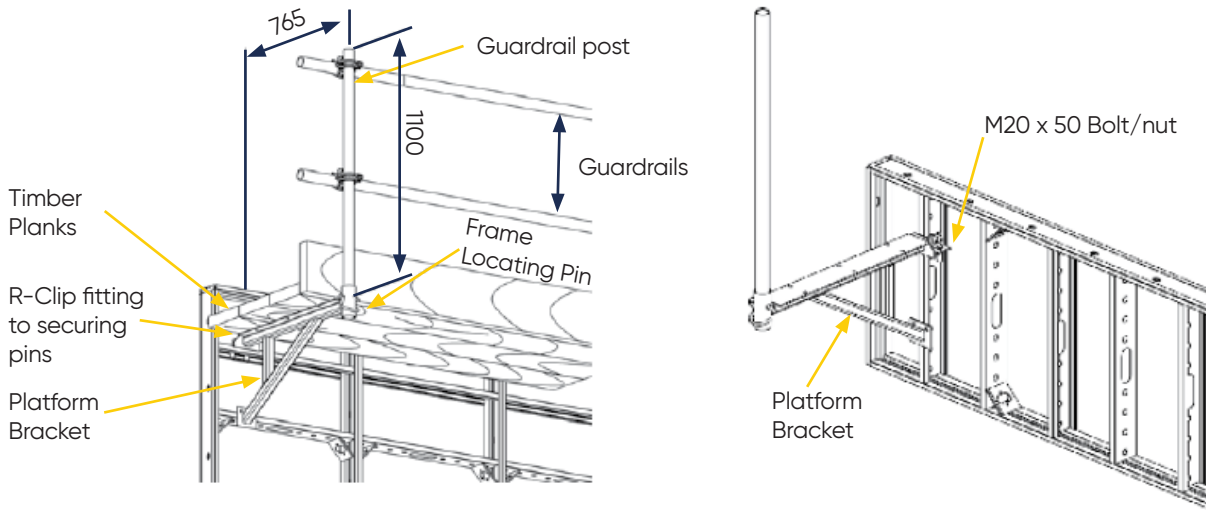
Number of Corner Clamps		
Height	Panel <600	Panel ≥600
1500	3x4	3x4
2700	4x4	5x4



## 5. Assembly Details

### Brackets / Stepped Forms

The Acrowall Platform Bracket hooks into the holes of the panel ribs to provide a 730 mm wide working platform suitable for 3 timber planks in width. The bracket features a tubular socket at its end into which a guardrail post is attached using a Ø16 connecting pin or Frame Locating Pin. The timber planks are bolted to the top plate of the bracket to provide the platform. When fitted to horizontally placed panels the bracket is secured to the rib using an M20 bolt and nut.

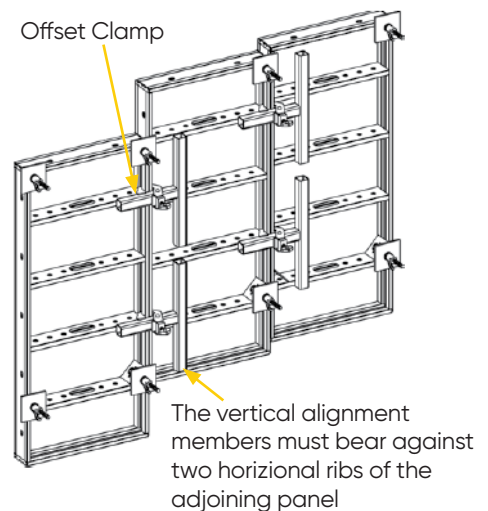


**Note:**

- Maximum distance between platform brackets must not exceed 1.8m.
- Maximum platform load must not exceed 650kgs uniformly distributed along the length of the platform brackets.
- Timber planks must be a minimum of 230 x 39 LVL complying with AS1577.
- Planks must be bolted to platform bracket using M10 cup head bolts and nuts (bolt length 60mm).
- A tubular guardrail and a midrail must be attached to the guardrail post using right angled double couplers.
- A timber kick board shall also be provided along the outer edge of the platform fixed to the guardrail post by Toe Board Clamps.

### Stepped Forms

The Acrowall Offset Clamp can be used to join panels in stepped formwork applications. It attaches to the ribs of adjoining panels both joining and aligning them. Although it can be used as a substitute for a normal Aligning Clamp since its aligning member bears directly on the horizontal ribs it is intended to be used for applications where the height difference of the adjoining panel is between 60-270mm.

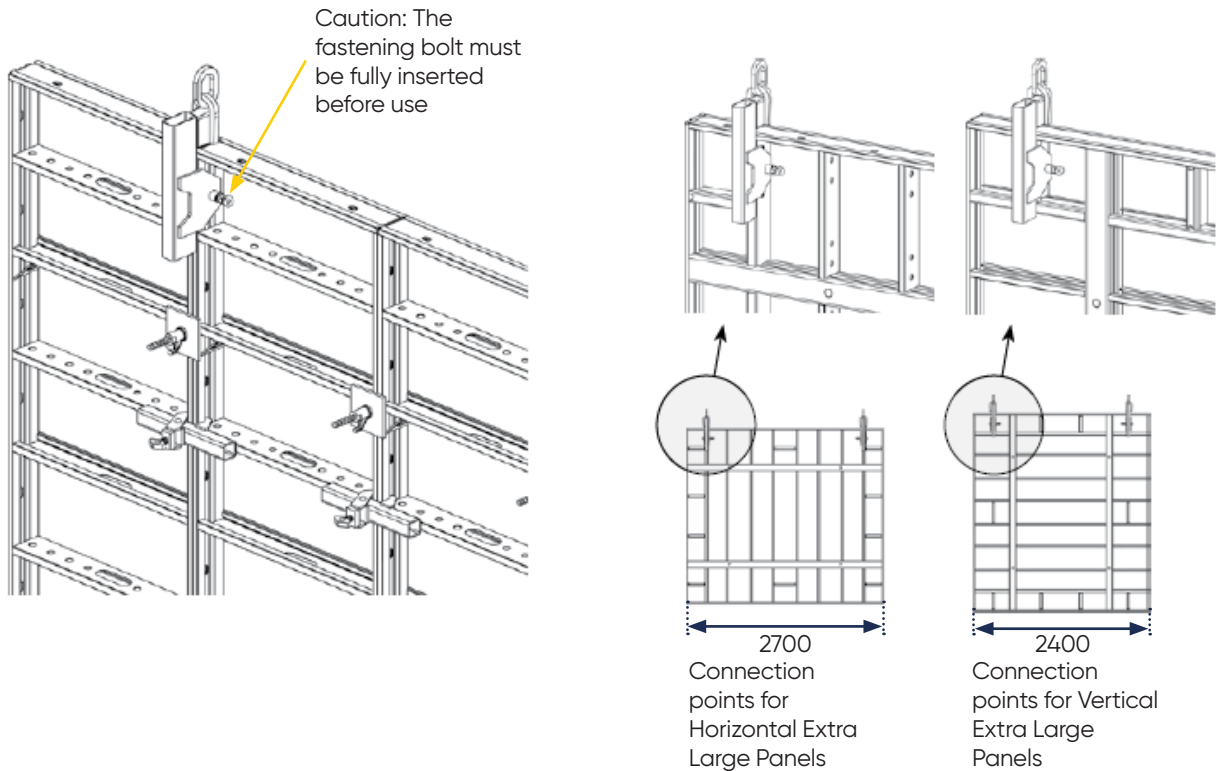


## 6. TRANSPORT & HANDLING

## 6. Transport & Handling

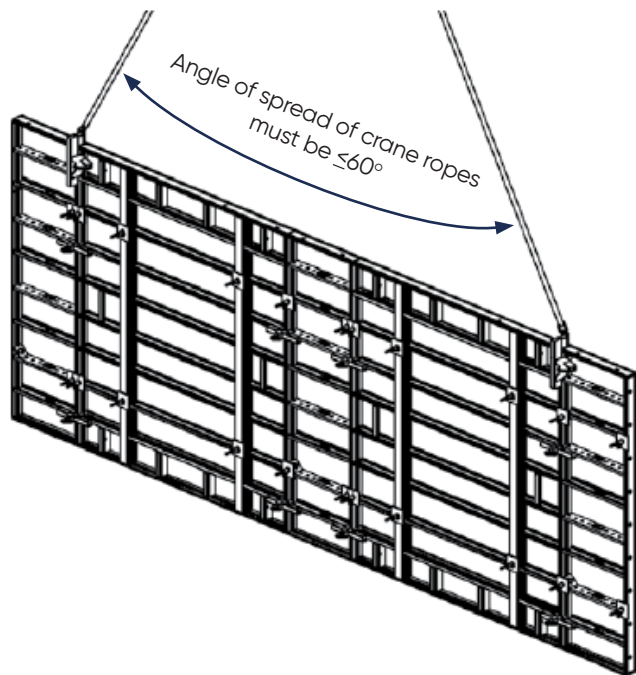
### Crane Handling

The Transport Hook must always be connected to a panel joint. With the Fastening Bolt withdrawn, the hook is guided over the panel edge profiles and aligned with the top hole. When the Fastening Bolt is fully inserted, the Transport Hook is ready for use. On an Extra Large Panel 2700x2400, the connection point for the Transport Hook for individual panel handling is in the corner at the rail profiles. Units for crane handling must not comprise more than 3 Extra Large panels.



#### Important Notes on using Transport Hooks:

- When shifting large area elements the transport hooks must be used.
- Transport hooks must be used in pairs.
- When standard panels are being used the transport hook must always be connected to a panel joint.
- The transport hook must always be positioned in the upper hole of the edge member of the panel.
- The fastening pin must always be fully engaged before lifting.
- The angle of spread between crane ropes must not exceed 60°.
- When using Acrowall extra large panels only 3 panels may be lifted at one time.
- Maximum load for a pair of transport hooks is 1000 kg ie: 500 kg each.
- Maximum form area handled containing standard panels only is 30m<sup>2</sup>.
- Maximum form area handled containing extra large panels (limit 3) and standard panels is 25m<sup>2</sup>.



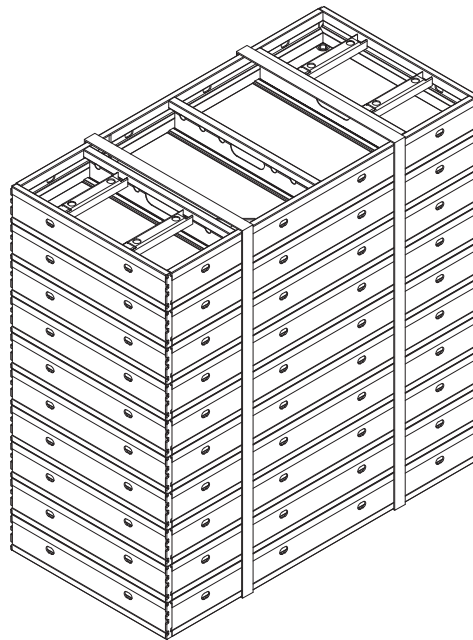


## 6. Transport & Handling

### Panels

The Acrow stillage is used to store a set number of items per a stillage. When a stillage is not used ensure items are bundled and placed on suitable dunnage. Items should be stored in a particular way to prevent them from falling off the stillage. The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage/bundle. Do not mix different sizes or types in one stillage/bundle.
- Ensure every stillage/bundle load does not exceed the advised table below.
- Secure assembled items onto stillage/bundle by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



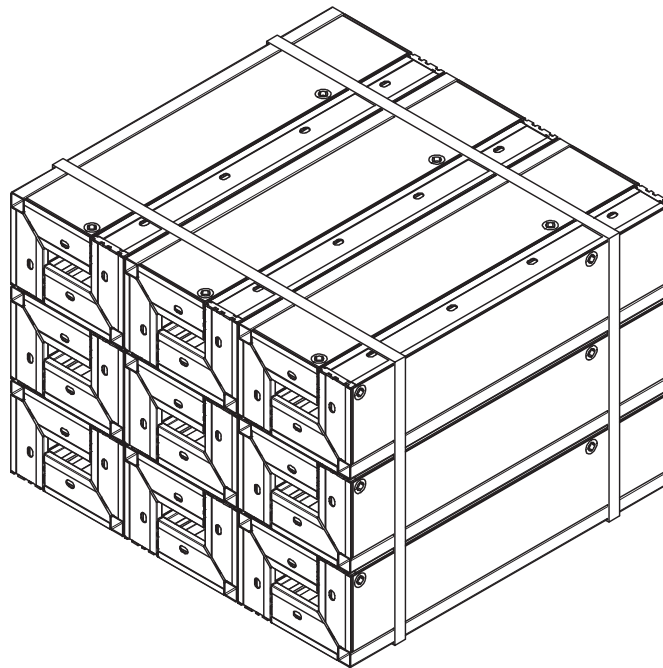
DESCRIPTION	UNIT MASS (KG)	QTY / BUNDLE	TOTAL MASS / BUNDLE (KG)	ACROW STILLAGE TYPE
2700 x 900mm Panel	69.1	10	691	Bundle
2700mm x 550-750mm Panel	60.6 max	10	606	Bundle
2700 x 300-500mm Panel	48.4 max	10	484	Bundle
1500 x 900mm Panel	41.4	10	414	Bundle
1500mm x 550-750mm Panel	35.9 max	10	359	Bundle
1500 x 300-500mm Panel	28.2 max	10	282	Bundle
1200 x 900mm Panel	38.0	10	380	Bundle
1200mm x 550-750mm Panel	33.5 max	10	335	Bundle
1200 x 300-500mm Panel	25.5 max	10	255	Bundle
2700 x 2400mm Panel	283.7	4	1134.8	Bundle
MP Panels 2700 x 700 Panel	60.1	10	601	Bundle
MP Panels 1500 x 700 Panel	39.2	10	392	Bundle
MP Panels 1200 x 700 Panel	35.5	10	355	Bundle

## 6. Transport & Handling

### Corner Panels

The Acrow stillage is used to store a set number of items per a stillage. When a stillage is not used ensure items are bundled and placed on suitable dunnage. Items should be stored in a particular way to prevent them from falling off the stillage. The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage/bundle. Do not mix different sizes or types in one stillage/bundle.
- Ensure every stillage/bundle load does not exceed the advised table below.
- Secure assembled items onto stillage/bundle by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



DESCRIPTION	UNIT MASS (KG)	QTY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	ACROW STILLAGE TYPE
ICP 2700 x 300 x 300	66.2	12	794.4	Bundle
ICP 1500 x 300 x 300	37.9	18	682.2	Bundle
ICP 1200 x 300 x 300	30.6	18	550.8	Bundle
HCP 2700 x 150 x 150	49.2	18	885.6	Bundle
HCP 1500 x 150 x 150	27.8	18	500.4	Bundle
HCP 2700 x 300 x 300	77	12	924	Bundle
HCP 1500 x 300 x 300	41.4	18	745.2	Bundle
HCP 1200 x 300 x 300	33.9	18	610.2	Bundle

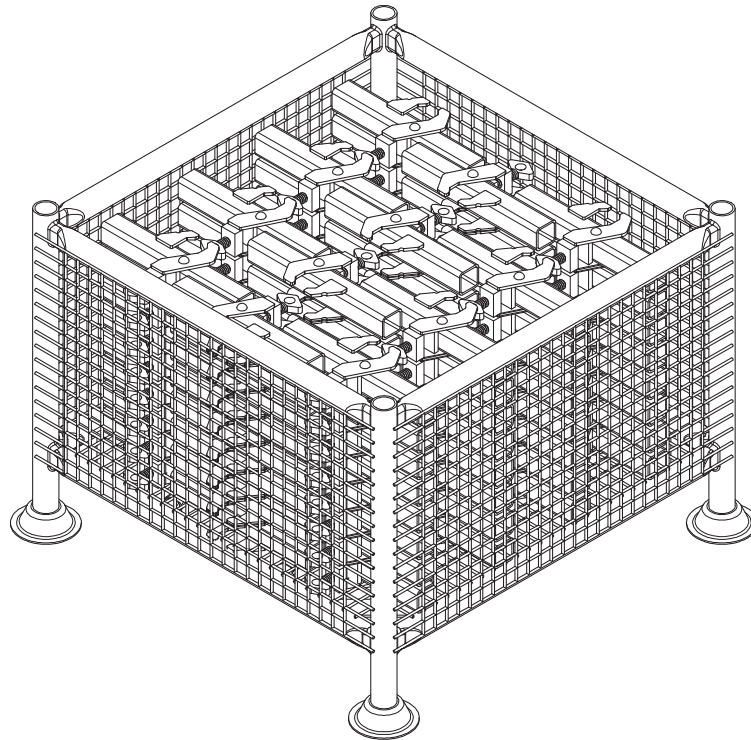


## 6. Transport & Handling

### Clamps

The Acrow stillage is used to store a set number of items per a stillage. When a stillage is not used ensure items are bundled and placed on suitable dunnage. Items should be stored in a particular way to prevent them from falling off the stillage. The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
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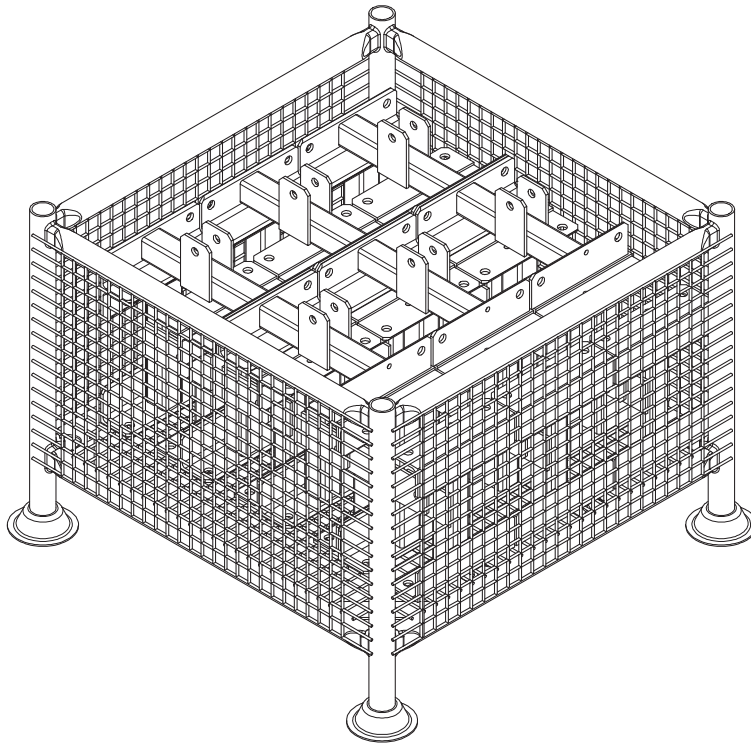
DESCRIPTION	UNIT MASS (KG)	QTY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	ACROW STILLAGE TYPE
Aligning Clamp	2.9	60	174	MEP
Adjustable Aligning Clamp	5.0	40	200	MEP
Outer Corner Clamp	6.1	30	183	MEP
Adjusting Strut Clamp	2.5	80	200	MEP
Prop Connector Clamp	3.3	80	264	MEP
Offset Clamp	6.0	20	120	MEP

## 6. Transport & Handling

### Brackets

The Acrow stillage is used to store a set number of items per a stillage. When a stillage is not used ensure items are bundled and placed on suitable dunnage. Items should be stored in a particular way to prevent them from falling off the stillage. The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



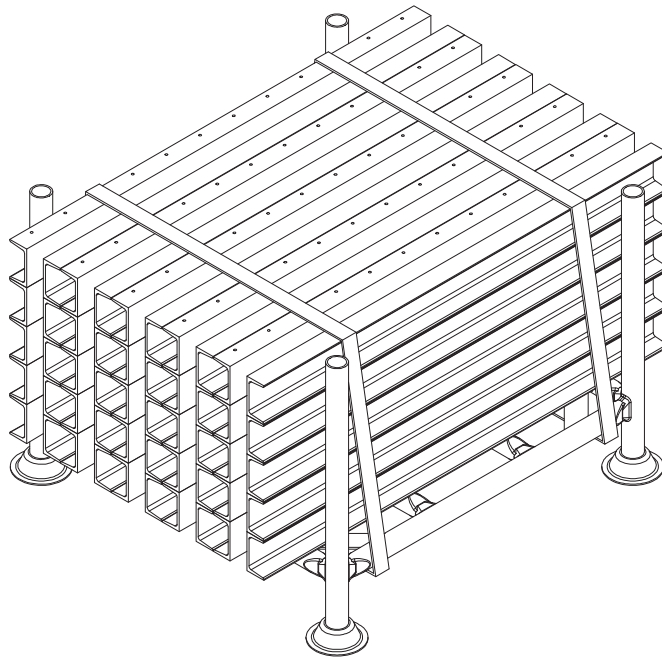
DESCRIPTION	UNIT MASS (KG)	QTY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	ACROW STILLAGE TYPE
Platform Bracket	13.5	20	270	MEP
2.7m Panel Raker Bracket	5.4	30	162	MEP
Raker Floor Bracket	2.5	50	125	MEP
Edge Tie Bracket	2.4	50	125	MEP

## 6. Transport & Handling

### Walers

The Acrow stillage is used to store a set number of items per a stillage. When a stillage is not used ensure items are bundled and placed on suitable dunnage. Items should be stored in a particular way to prevent them from falling off the stillage. The recommended method and process is:

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- Ensure every stillage/bundle load does not exceed the advised table below.
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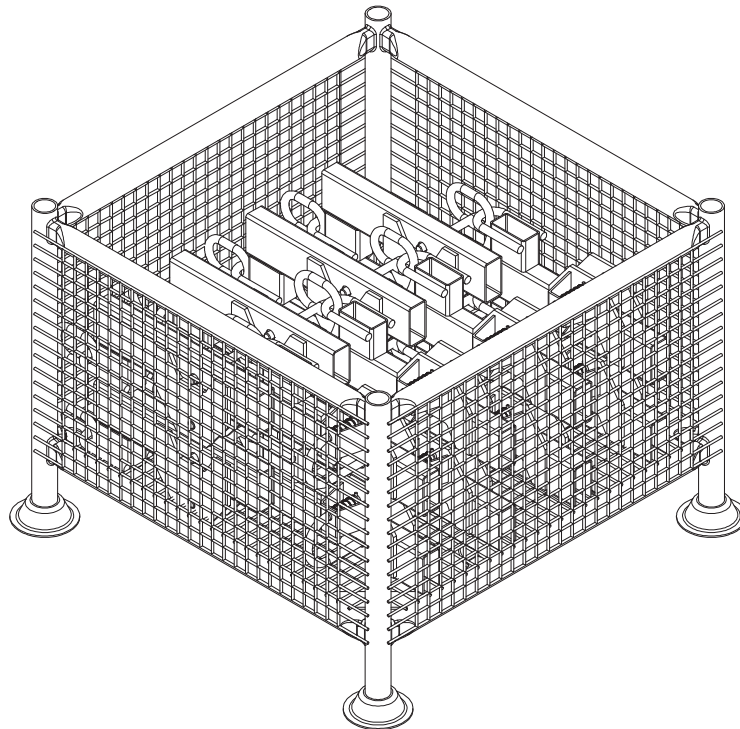
DESCRIPTION	UNIT MASS (KG)	QTY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	ACROW STILLAGE TYPE
Adjustment Waler	8.6	25	215	SP
Multi Purpose Waler	13.1	25	327.5	SP
Hinged Waler	39.0	10	390	SP

## 6. Transport & Handling

### Misc Items

The Acrow stillage is used to store a set number of items per a stillage. When a stillage is not used ensure items are bundled and placed on suitable dunnage. Items should be stored in a particular way to prevent them from falling off the stillage. The recommended method and process is:

- Stack items next to and on top to each other.
- Only pack and stack similar matching lengths per stillage. Do not mix different sizes or types in one stillage.
- Ensure every stillage load does not exceed the advised table below.
- Secure assembled items onto stillage by using at least two straps or plastic wrapped for enclosed stillages (two straps for enclosed stillage not applicable).
- Refer to Acrow Scaffold Stillage Transport and Manual Handling Document for further stacking and transport recommendations.



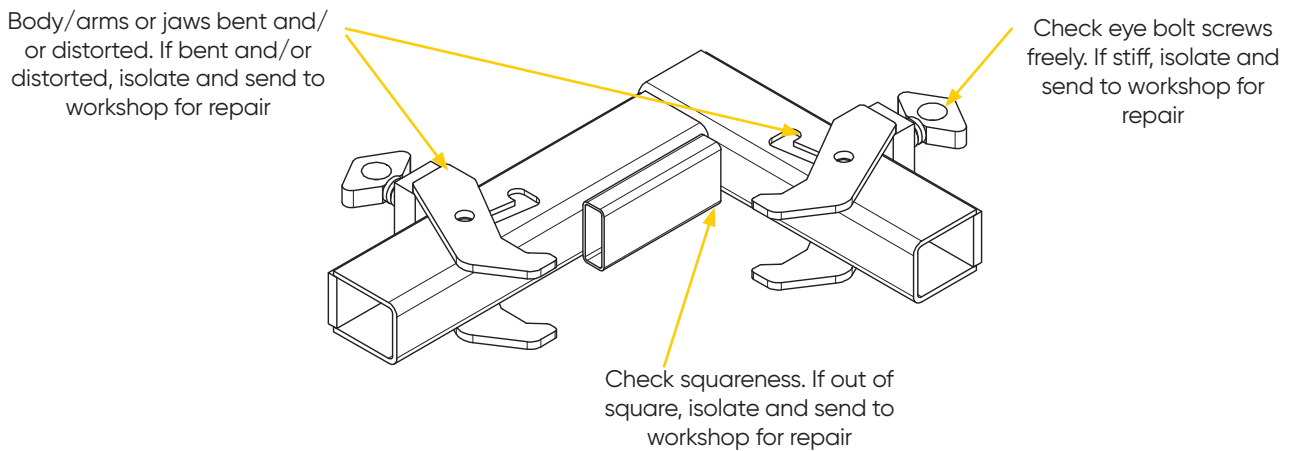
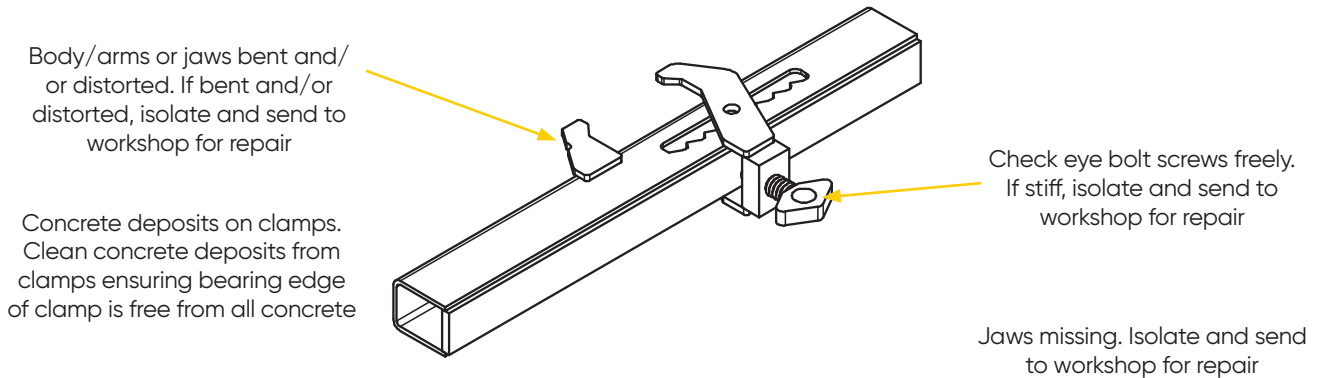
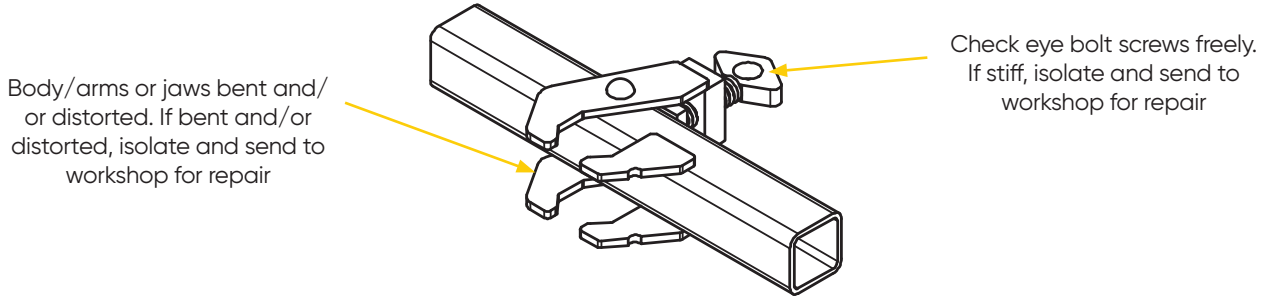
DESCRIPTION	UNIT MASS (KG)	QTY PER STILLAGE	TOTAL MASS PER STILLAGE (KG)	ACROW STILLAGE TYPE
Guardrail Post	5.2	135	702	MP
Transport Hook	8.2	40	328	MEP
Centering Tension Bolt	0.9	100	90	MEP
Centering Plate Washer	0.5	100	50	MEP
Centering Nut	0.8	100	80	MEP
MP Bolt / Nut	0.6	100	60	MEP
Waler Connector	1.1	100	110	MEP

## 7. MAINTENANCE & INSPECTION

## 7. Maintenance & Inspection

### Clamps

Acrowall aligning clamps are used to keep the panels to the true alignment.



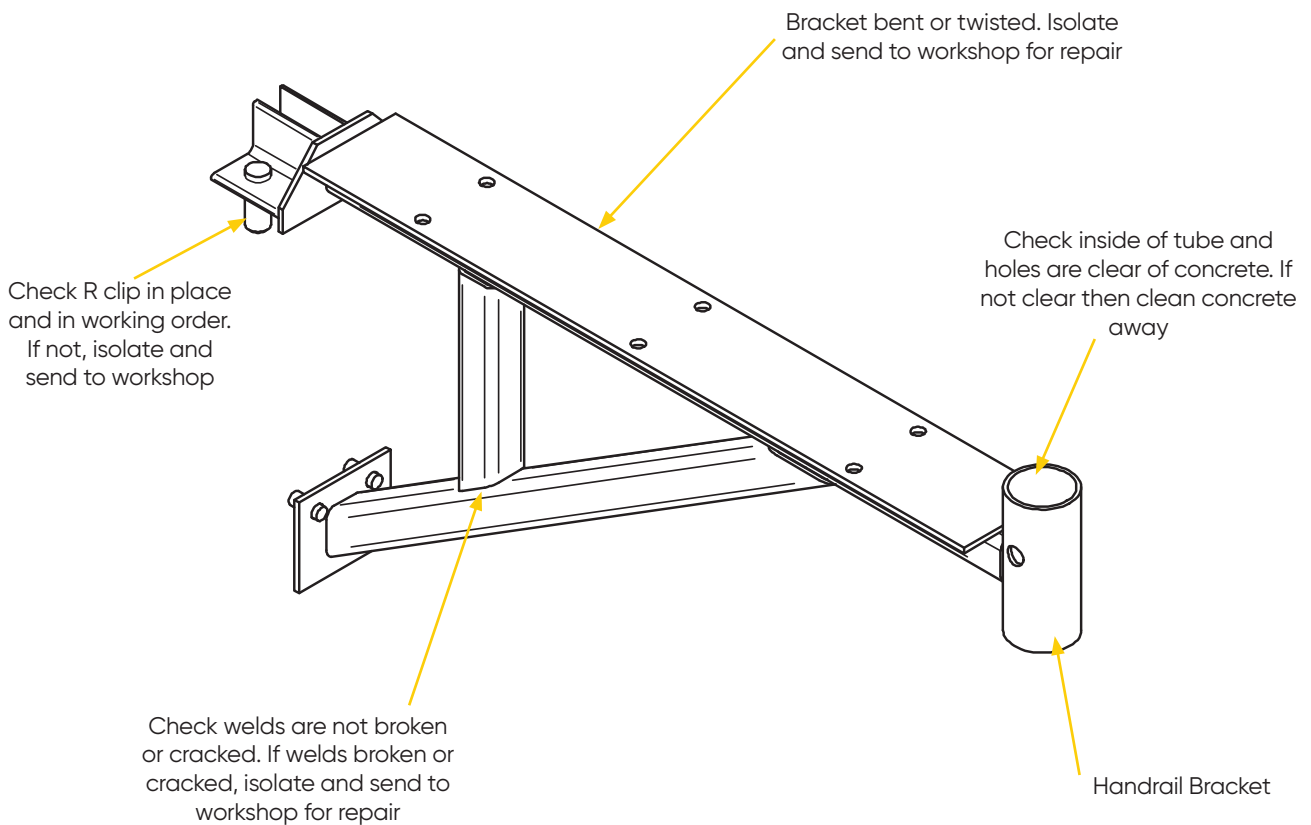


## 7. Maintenance & Inspection

### Platform Bracket

The Platform Bracket provides a 3 board wide accessory along the form face.

Concrete deposits on bracket. Clean concrete deposits from bracket ensuring top surface where plank bear is free of concrete also connection to panel area



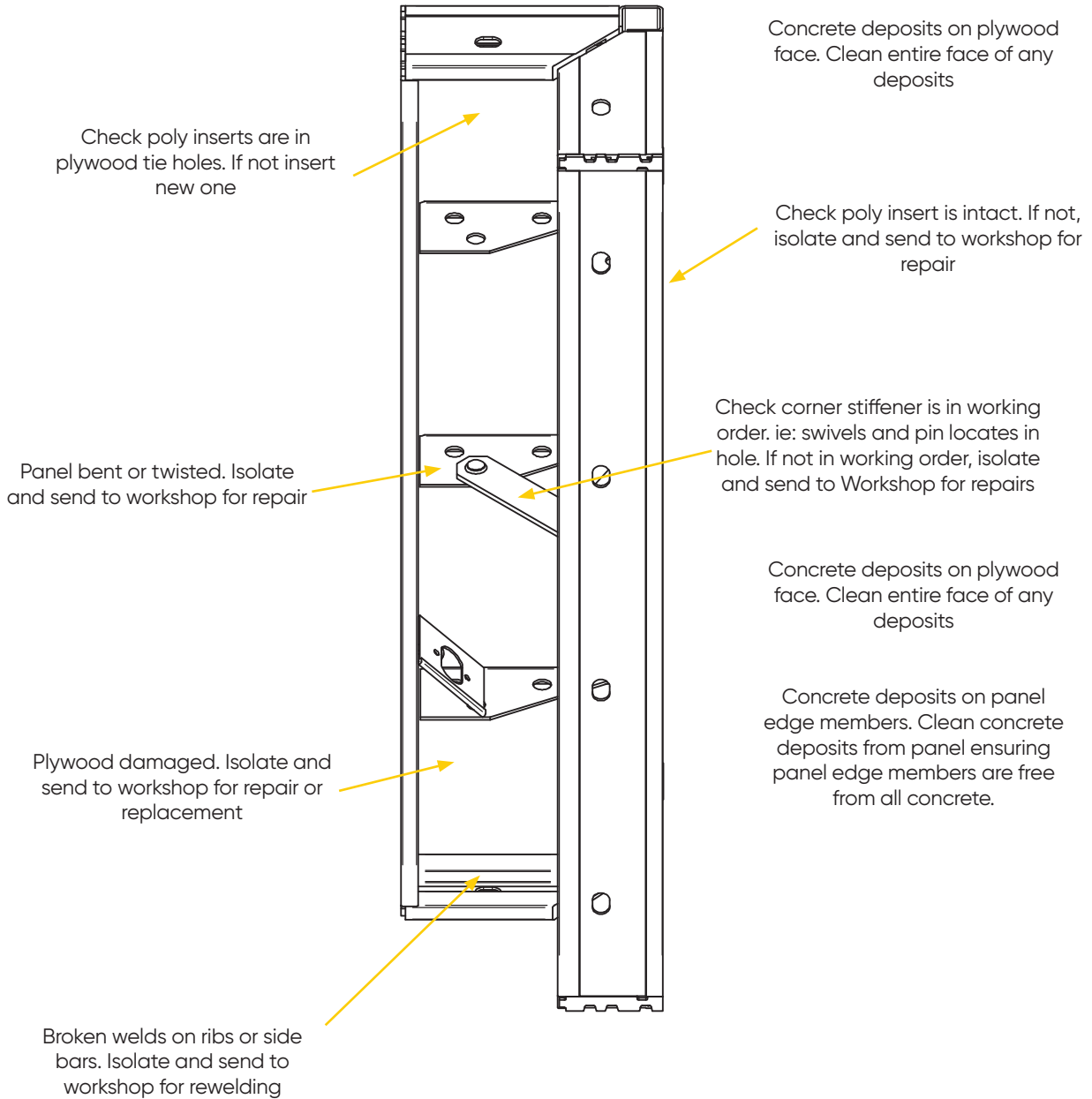




## 7. Maintenance & Inspection

### Corner Panel

Corner Panels are used in a Acrowall arrangement where the return section of the wall to be poured is a true right angle





## 7. Maintenance & Inspection

### Panel

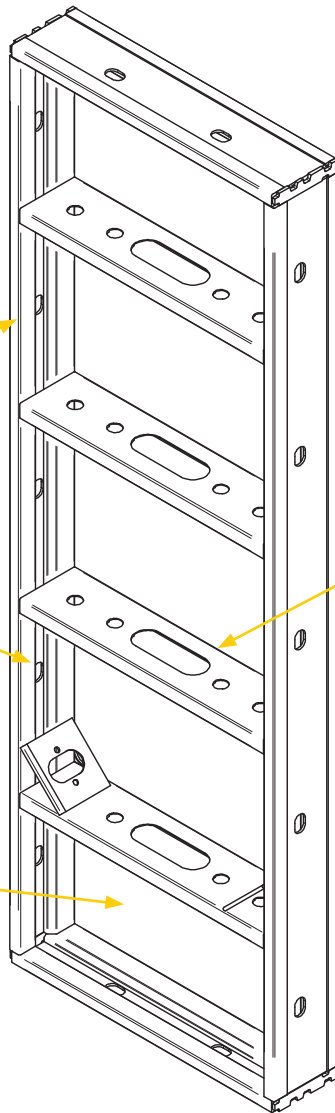
The Acrowall panel is the main component in the Acrowall system. The panel's plywood surface forms the surface finish for the wall being poured, it is therefore of the upmost importance that the plywood face be clean and undamaged. The straightness of the panel and the integrity of its welds are also of paramount importance.

Concrete deposits on panel edge members. Clean concrete deposits from panel ensuring panel edge members are free from all concrete.

Panel bent or twisted. Isolate and send to workshop for repair

Check tie pocket braces are intact. If not, isolate and send to workshop for repair

Plywood damaged. Isolate and send to workshop for repair or replacement



Check poly insert is intact. If not, isolate and send to workshop for repair

Broken welds on ribs or side bars. Isolate and send to workshop for rewelding

Concrete deposits on plywood face. Clean entire face of any deposits



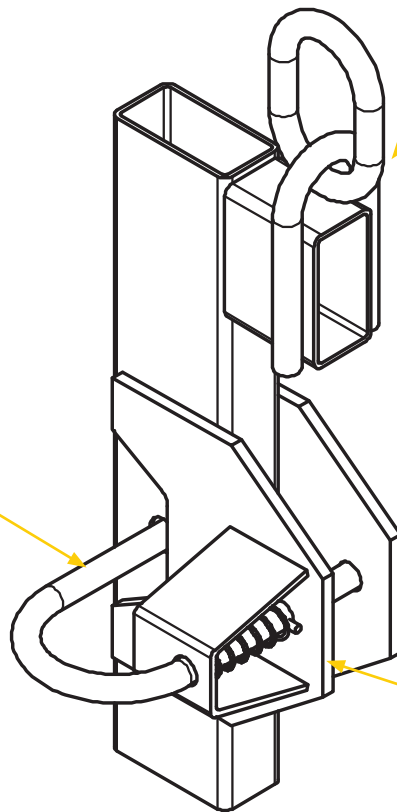
## 7. Maintenance & Inspection

### Transport Hook

Used to lift panel assemblies. Must be in original shape and strength with safety pin working correctly.

Concrete deposits on clamps.  
Clean concrete deposits from  
clamps ensuring bearing  
edge of clamp is free from all  
concrete

Safety pin must be in working  
order with no twists or distortions  
Compression spring must be intact  
and functional. If not working properly  
or damaged, isolate and send to  
workshop for repair



Check links are not worn or  
distorted. If worn or distorted ,  
isolate and send to workshop for  
repair

Check welds are not  
broken or cracked. If welds  
broken or cracked, isolate  
and send to workshop for  
repair

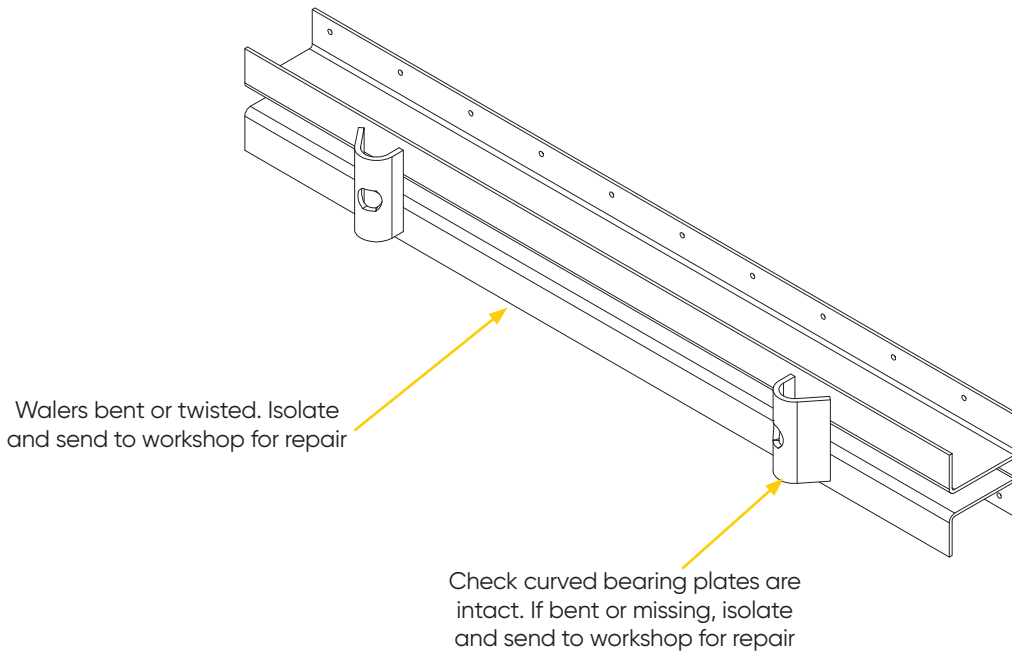
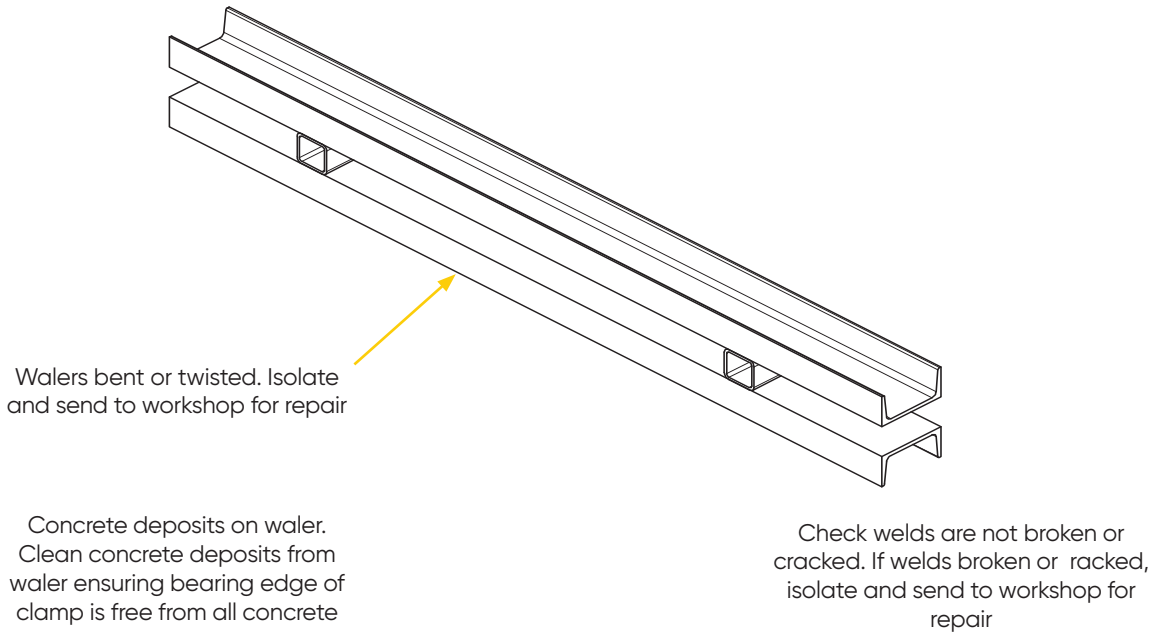
Check plates are straight and  
parallel. If damaged, isolate and  
send to workshop for repair



## 7. Maintenance & Inspection

### Walers

Walers are used as an alignment member, the Multi-purpose waler is often used to tie the corner junction of a return wall.







## 7. Maintenance & Inspection

### Hinged Corner Panel

Hinged Corner Panels are used in a Acrowall arrangement where the return section of the wall to be poured is not a true right angle. 150x150 Panel has Steel Face. 300x300 Panel has plywood face.

Concrete deposits on panel edge members. Clean concrete deposits from panel ensuring panel edge members are free from all concrete.

Indentations in steel face. Isolate and send to workshop for repair

Panel bent or twisted. Isolate and send to workshop for repair

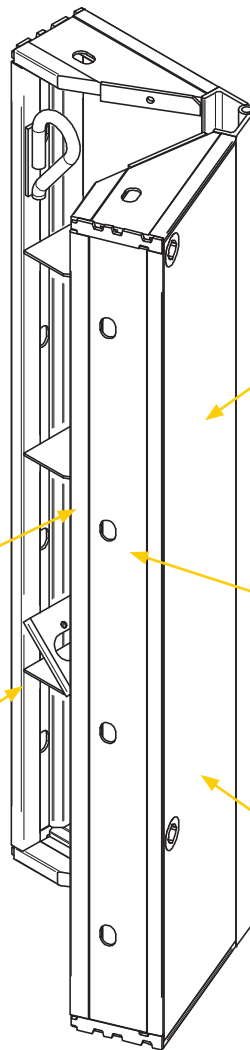
Broken welds on ribs or side bars. Isolate and send to workshop for rewelding

Check hinge works freely if not oil and move open and shut to free up. If still stiff then isolate and send to workshop for repair

Plywood damaged. Isolate and send to workshop for repair or replacement

Concrete deposits on steel face. Clean entire face of any deposits, then oil surface

Concrete deposits on plywood face. Clean entire face of any deposits







# LOCATIONS

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## NEW SOUTH WALES

**National Head Office**  
Formwork & Scaffold  
2a Mavis Street  
Revesby NSW 2212  
P: 02 9780 6500  
F: 02 9780 6499  
E: info@acrow.com.au

**Sydney**  
Screens Head Office  
13-15 Vallance Street  
St Marys NSW 2760  
P: 02 9219 1566

## VICTORIA

**Melbourne**  
Formwork, Scaffold & Screens  
1651-1657 Centre Road  
Springvale VIC 3171  
P: 03 9582 2777  
F: 03 9582 2790

## QUEENSLAND

**Brisbane**  
Formwork & Scaffold  
280 Bilsen Road  
Geebung QLD 4034  
P: 07 3265 2266  
F: 07 3865 0277

**Beenleigh**  
Screens & Formwork  
2 Morrison Lane  
Beenleigh QLD 4207  
P: 07 3807 9800

**Beenleigh**  
Industrial Scaffold  
22a Spans Road  
Beenleigh QLD 4207  
P: 07 3442 4000

**Gladstone**  
Industrial Scaffold  
48 Chapple Street  
Gladstone QLD 4680  
P: 07 4972 3200

**Mackay**  
Industrial Scaffold  
247 Boundary Road E  
Paget Mackay QLD 4740  
P: 07 4952 1966

**Townsville**  
Industrial Scaffold  
8-12 Webb Drive  
Mount St John QLD 4818  
P: 1300 11 22 47

## SOUTH AUSTRALIA

**Adelaide**  
Formwork & Scaffold  
26 Circuit Drive  
Hendon SA 5014  
P: 08 8359 9700  
F: 08 8359 1366

## WESTERN AUSTRALIA

**Perth**  
Formwork & Scaffold  
11 Jackson Street  
Bassendean WA 6054  
P: 08 9373 7200  
F: 08 9379 3488

## TASMANIA

**Hobart**  
Formwork & Scaffold  
93 Lampton Avenue  
Moonah TAS 7009  
P: 03 6277 1212  
F: 03 6277 1290

**Launceston**  
Formwork & Scaffold  
65 Boland Street  
Launceston TAS 7250  
P: 03 6324 8282  
F: 03 6324 8250



**acrow.**

ENGINEERING & CONSTRUCTION

## Contact

Phone: 1300 138 362

[www.acrow.com.au](http://www.acrow.com.au)