



TECHNICAL GUIDE  
ACROWALL 80

FORMWORK

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 80** 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     | SEPT 2023 | First Release         |
| B     | FEB 2024  | Second Release        |
|       |           |                       |
|       |           |                       |
|       |           |                       |
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## 1. Technical Specifications

### System Description

**ACROWALL 80** Panel is a steel frame panel with an 18mm plywood face. The maximum permissible concrete pressure is 80kPa.

The built-in strength in the design of the **ACROWALL 80** system makes the assembly simple with a minimum amount of components. The aligning clamps lock the panels rigidly together and accurately in line. Panel assemblies stay free of twist even when being crane handled. The panels come in hot dipped galvanized or powder coated finish.

### Purpose of the Document

The purpose of this document is to provide guidelines for design, safe handling, transport and installation of the **ACROWALL 80** 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. 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 80** system.

It is recommended that users of the **ACROWALL 80** 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 80** 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 80** 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.

The maximum capacity of an assembly using Acrowall-80 panels may be limited by other members. See relevant data or consult with a suitably qualified and experienced engineer. Maximum capacity is only applicable for equipment in good condition and free from defects.

Limit State Conversion Factor = 1.5  
WLL = Working Load Limit

### 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.

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

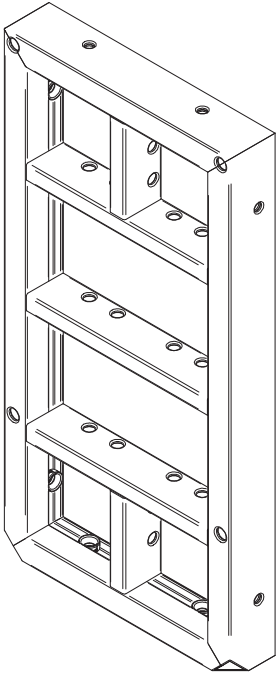
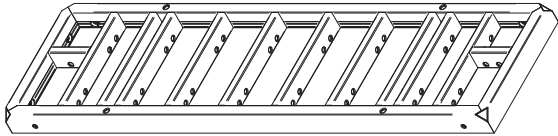
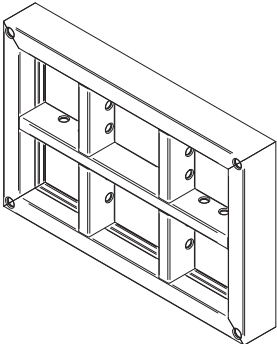




## 2. GENERAL PRODUCT INFORMATION

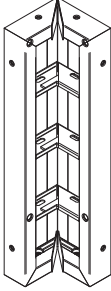
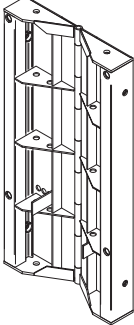
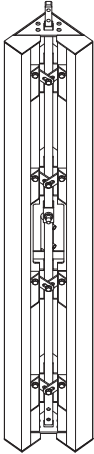
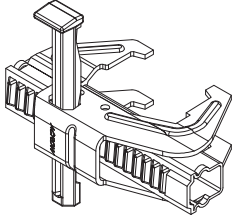
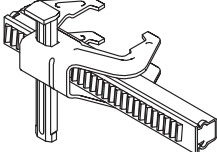
## 2. General Product Information

### Acrowall 80 Panels

| PRODUCT   | DESCRIPTION                  | PRODUCT CODE | MASS (kg) |
|---|------------------------------|--------------|-----------|
|   | <b>Acrowall 80 Panels</b>    |              |           |
|   | 3300 x 2400 Panel            | AW80P3324    | 472.0     |
|   | 3300 x 1200 Panel            | AW80P3312    | 208.0     |
|   | 3300 x 900 Panel             | AW80P3309    | 171.0     |
|   | 3300 x 720 Panel             | AW80P3307    | 145.0     |
|   | 3300 x 600 Panel             | AW80P3306    | 131.0     |
|   | 3300 x 300 Panel             | AW80P3303    | 89.0      |
|   | 3300 x 240 Panel             | AW80P3302    | 73.0      |
|   | 2700 x 2400 Panel            | AW80P2724    | 392.0     |
|   | 2700 x 1200 Panel            | AW80P2712    | 173.0     |
|   | 2700 x 900 Panel             | AW80P2709    | 142.0     |
|   | 2700 x 720 Panel             | AW80P2707    | 121.0     |
|   | 2700 x 600 Panel             | AW80P2706    | 108.0     |
|   | 2700 x 300 Panel             | AW80P2703    | 73.0      |
|   | 2700 x 240 Panel             | AW80P2702    | 61.0      |
|   | 1200 x 2400 Panel            | AW80P1224    | 195.0     |
|   | 1200 x 1200 Panel            | AW80P1212    | 88.0      |
|   | 1200 x 900 Panel             | AW80P1209    | 73.0      |
|   | 1200 x 720 Panel             | AW80P1207    | 60.0      |
|   | 1200 x 600 Panel             | AW80P1206    | 54.0      |
| 1200 x 300 Panel  | AW80P1203                    | 35.0         |           |
| 1200 x 240 Panel  | AW80P1202                    | 29.0         |           |
|  | <b>MP Panels</b>             |              |           |
|   | 3300 x 720 MP Panel          | AW80P3307M   | 176.0     |
|   | 2700 x 720 MP Panel          | AW80P2707M   | 135.0     |
|   | 1200 x 720 MP Panel          | AW80P1207M   | 72.0      |
|  | <b>600 High Range Panels</b> |              |           |
|   | 600 x 900 HR Panels          | AW80P0609    | 43.0      |
|   | 600 x 720 HR Panels          | AW80P0607    | 37.0      |
|   | 600 x 600 HR Panels          | AW80P0606    | 32.0      |
|   | 600 x 300 HR Panels          | AW80P0603    | 20.0      |

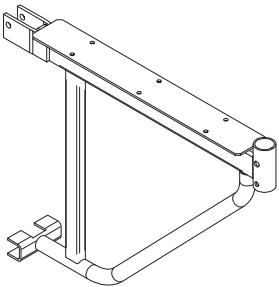
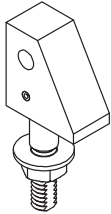
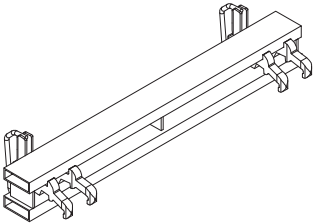
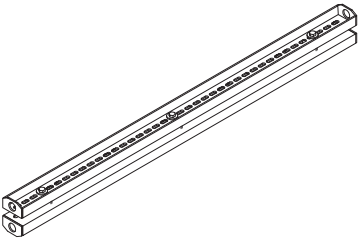
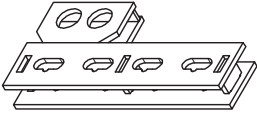

## 2. General Product Information

### Acrowall 80 Corner Panels & Alignment Clamps

| PRODUCT   | DESCRIPTION                                  | PRODUCT CODE | MASS (kg) |
|---|--|--------------|-----------|
|    | <b>Acrowall 80 Internal Corner Panels</b>    |              |           |
|   | 3300 x 300 x 300 ICP                         | AW80IC33     | 131.0     |
|   | 2700 x 300 x 300 ICP                         | AW80IC27     | 108.0     |
|   | 1200 x 300 x 300 ICP                         | AW80IC12     | 63.0      |
|   | 600 x 300 x 300 ICP                          | AW80IC06     | 31.0      |
|   | <b>Acrowall 80 Articulated Corner Panels</b> |              |           |
|   | 3300 x 292 x 292 ACP                         | AW80ACP33    | 199.0     |
|   | 2700 x 292 x 292 ACP                         | AW80ACP27    | 164.0     |
|   | 1200 x 292 x 292 ACP                         | AW80ACP12    | 78.0      |
|  | <b>Acrowall 80 Stripping Corner Panel</b>    |              |           |
|   | Stripping Corner 3300mm                      | AW80SC33     | 211.0     |
|  | <b>Alignment Clamp</b>                       |              |           |
|   | Alignment Clamp                              | AW80AC       | 4.5       |
|  | <b>Alignment Clamp 380mm</b>                 |              |           |
|   | Alignment Clamp 380mm                        | AW80AC380    | 5.5       |

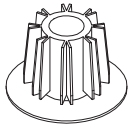
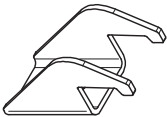
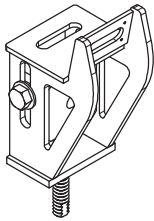
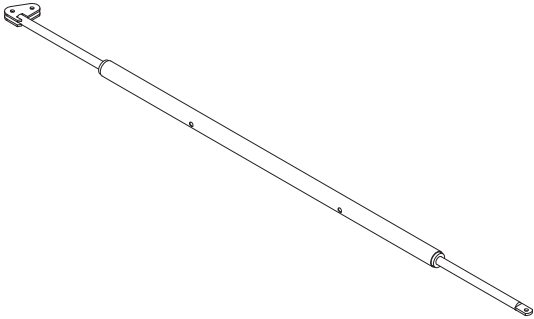
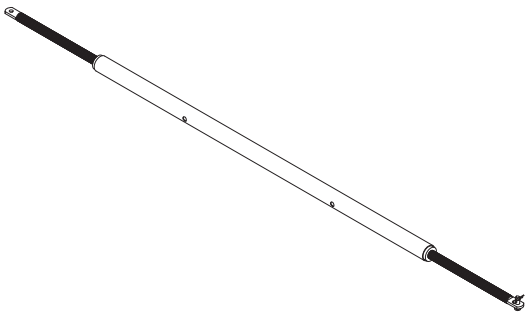
## 2. General Product Information

### Acrowall 80 Components

| PRODUCT   | DESCRIPTION                                 | PRODUCT CODE | MASS (kg) |
|---|---|--------------|-----------|
|    | <b>Acrowall 80 Working Platform Bracket</b> |              |           |
|   | Working Platform Bracket                    | AW80WPB      | 17.0      |
|   | <b>Acrowall 80 Platform Adaptor</b>         |              |           |
|   | Platform Adaptor                            | AW80PBA      | 1.7       |
|  | <b>Acrowall 80 Compensation Walers</b>      |              |           |
|   | Compen. Waler 850                           | AW80CW850    | 13.5      |
|   | Compen. Waler 1200                          | AW80CW1200   | 19.0      |
|  | <b>Acrowall 80 Universal Waler</b>          |              |           |
|   | Universal Waler 2450                        | AW80UW2450   | 89.0      |
|  | <b>Acrowall 80 Waler Stop</b>               |              |           |
|   | Waler Stop                                  | AW80WS       | 5.0       |
|  | <b>Acrowall 80 Waler Wedge</b>              |              |           |
|   | Waler Wedge                                 | AW80UWW      | 0.8       |

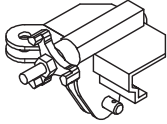
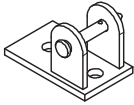

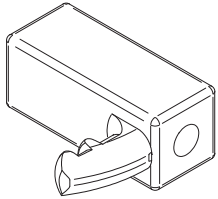
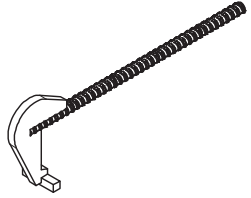
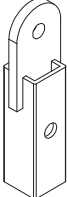
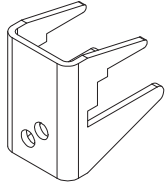
## 2. General Product Information

### Acrowall 80 Components

| PRODUCT   | DESCRIPTION  | PRODUCT CODE | MASS (kg) |
|---|--|--------------|-----------|
|    | <b>Acrowall 80 Plastic Hole Plug</b>               |              |           |
|   | Hole Plug 20/24mm                                  | AW80PHP20/24 | 0.03      |
|    | <b>Acrowall 80 Frame Anchor Bracket</b>            |              |           |
|   | Frame Anchor Bracket                               | AW80FAB      | 2.3       |
|   | <b>Acrowall 80 Plumbing Shear Bracket Assembly</b> |              |           |
|   | Plumbing Shear Bracket                             | AW80PSBA     | 14.0      |
|  | <b>Acrowall 80 Push/Pull Prop</b>                  |              |           |
|   | 2050 - 2940mm                                      | AW80PP2050   | 27.0      |
|   | 2900 - 3800mm                                      | AW80PP2900   | 31.0      |
|   | 4600 - 6000mm                                      | AW80PP4600   | 69.0      |
|  | <b>Acrowall 80 Kicker Brace</b>                    |              |           |
|   | 1080 - 1400mm                                      | AW80KB1080   | 14.0      |
|   | 1280 - 2100mm                                      | AW80KB1280   | 20.0      |
|   | 2030 - 2940mm                                      | AW80KB2030   | 26.0      |

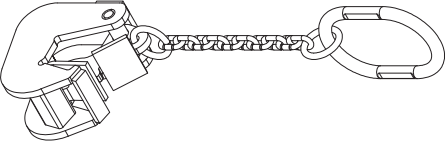

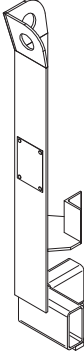
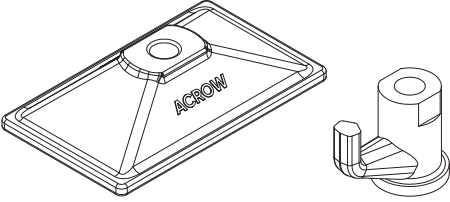
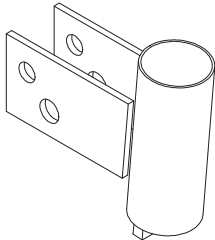
## 2. General Product Information

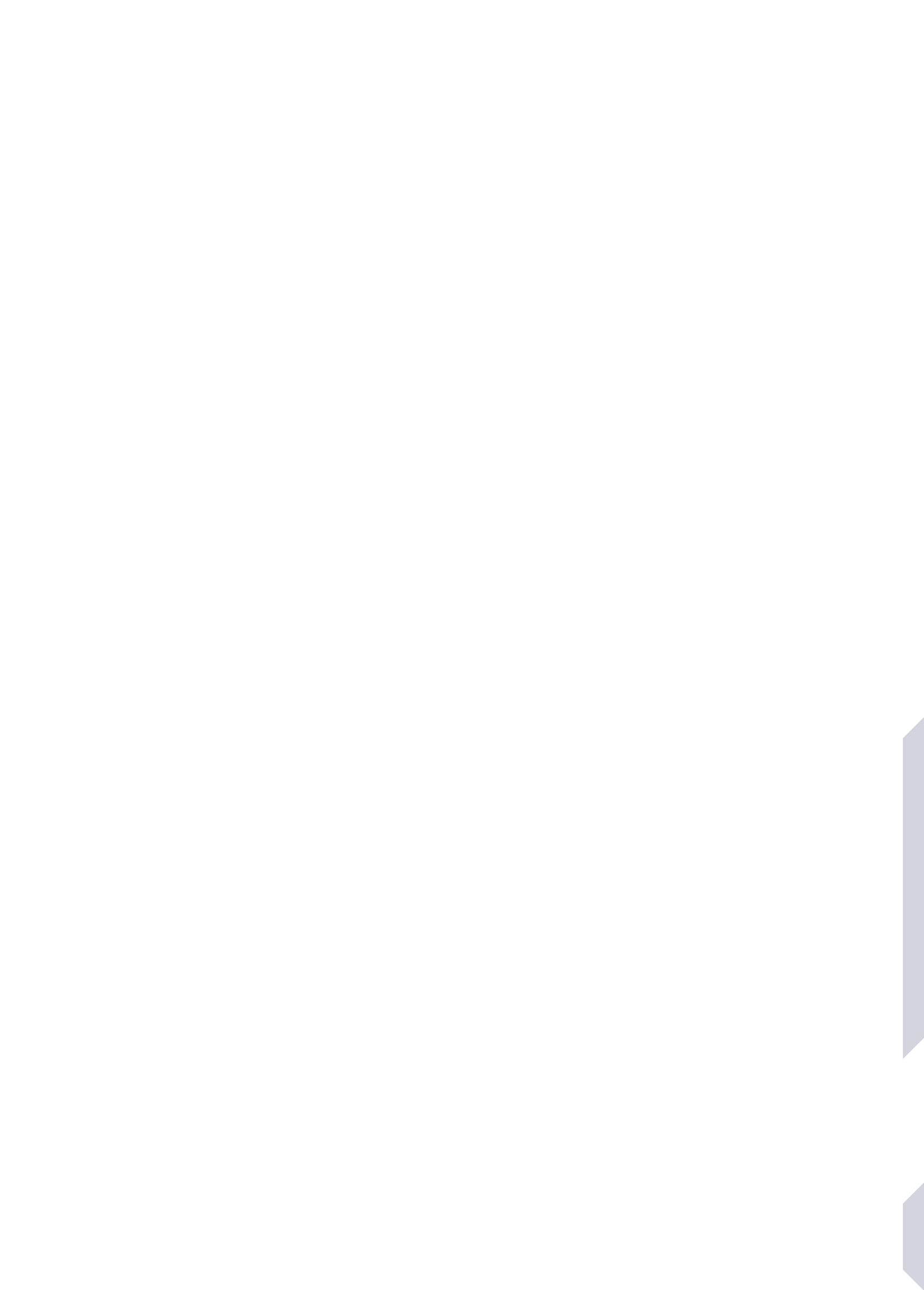
### Acrowall 80 Components

| PRODUCT   | DESCRIPTION                           | PRODUCT CODE | MASS (kg) |
|---|---------------------------------------|--------------|-----------|
|    | <b>Acrowall 80 Brace Connector</b>    |              |           |
|   | Brace Connector                       | AW80BC       | 3.5       |
|    | <b>Acrowall 80 Base Plate</b>         |              |           |
|   | Base Plate                            | AW80BP       | 2.0       |
|    | <b>Acrowall 80 Hook Tie DW15</b>      |              |           |
|   | Hook Tie DW15                         | AW80HT15     | 0.6       |
|  | <b>Acrowall 80 Hook Tie Head DW15</b> |              |           |
|   | Hook Tie Head DW15                    | AW80HTH      | 0.4       |
|  | <b>Acrowall 80 Stopend Tie</b>        |              |           |
|   | Stopend Tie                           | AW80ST       | 1.2       |
|  | <b>Tilt up Prop Shisham Adaptor</b>   |              |           |
|   | Prop Shisham Adaptor                  | PTUSA        | 1         |
|  | <b>Acrowall 80 Top Tie Bracket</b>    |              |           |
|   | Tie Bracket                           | AW80TTB      | 0.4       |

## 2. General Product Information

### Acrowall 80 Components

| PRODUCT   | DESCRIPTION                                       | PRODUCT CODE | MASS (kg) |
|---|---|--------------|-----------|
|    | <b>Acrowall 80 Lifting Hook 1.5T</b>              |              |           |
|   | Lifting Hook                                      | AW80LH       | 7.7       |
|   | <b>Acrowall 80 Lifting Gear</b>                   |              |           |
|   | Lifting Gear                                      | AW80LG       | 15.6      |
|  | <b>Acrowall 80 Stacking Post</b>                  |              |           |
|   | Stacking Post                                     | AW80SP       | 7.5       |
|  | <b>AZ Tie Nut &amp; HT Thru Tie Cast Wing Nut</b> |              |           |
|   | AZ Tie Nut  | ACBTN230     | 5.9       |
|   | 15mm Wing Nut                                     | Q TTCWN15    | 0.5       |
|   | 20mm Wing Nut                                     | Q TTCWN20    | 0.5       |
|   | 26mm Wing Nut                                     | Q TTCWN26    | 0.9       |
|  | <b>Acrowall 80 Top Handrail Post Bracket</b>      |              |           |
|   | Handrail Post Bracket                             | AW80THPB     | 1.8       |

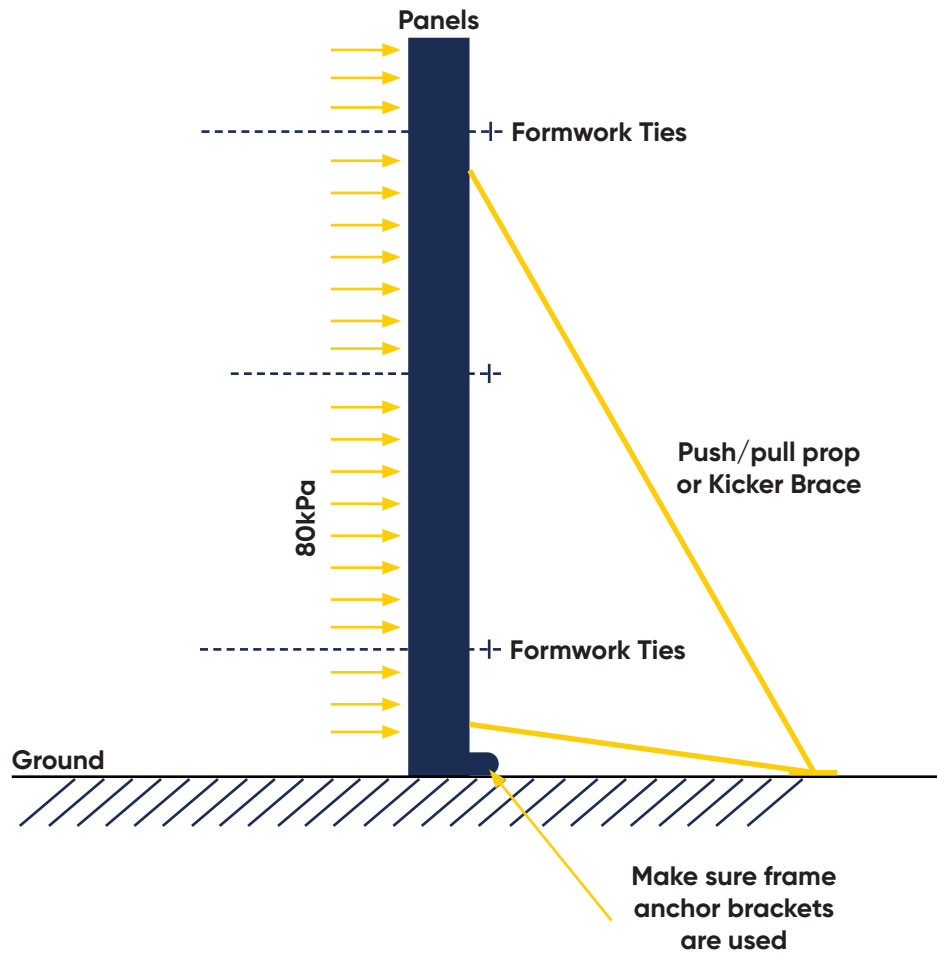




### 3. WORKING LOAD LIMITS (WLL)

### 3. Working Load Limits (WLL)

Vertical Panel



### 3. Working Load Limits (WLL)

#### Plumbing Prop

Table 1 is based on region A wind speed for terrain category 3 with annual probability of exceedance = 1/100 and importance level 2 for construction equipment in accordance with AS/NZS1170.2 and AS/NZS1170.0.

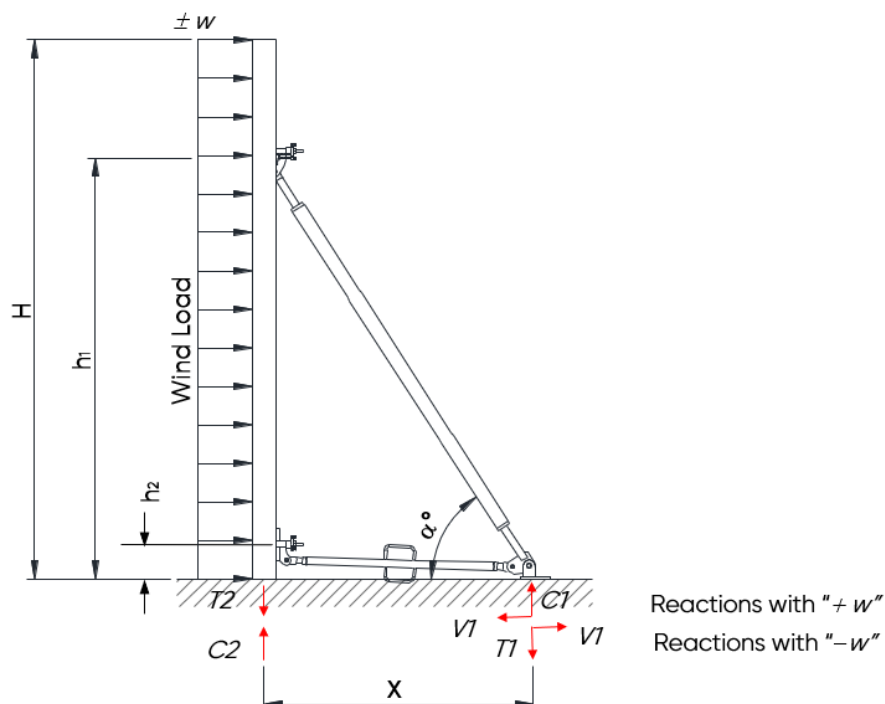


Figure 26 - Plumbing Prop load diagram

| FORM HEIGHT, H,mm                         | 3000 | 3000 | 3900 | 3900 | 4800 | 4800 | 4800 | 5400 | 5400 | 6000 | 6000 |
|---|------|------|------|------|------|------|------|------|------|------|------|
| x, mm                                     | 1200 | 1200 | 1650 | 1650 | 1800 | 2400 | 2600 | 240  | 2600 | 2400 | 2600 |
| h <sub>1</sub> , mm                       | 2100 | 2175 | 3000 | 2625 | 3300 | 4200 | 4045 | 4200 | 4045 | 4200 | 4575 |
| h <sub>2</sub> , mm                       | 300  | 225  | 300  | 225  | 300  | 300  | 225  | 300  | 225  | 300  | 225  |
| α°  | 58   | 60   | 60   | 57   | 60   | 59   | 57   | 59   | 57   | 59   | 60   |
| Maximum spacing between plumbing props, m | 3.5  | 3.5  | 2.7  | 2.7  | 2.2  | 2.2  | 2.2  | 2.1  | 2.1  | 1.8  | 1.8  |

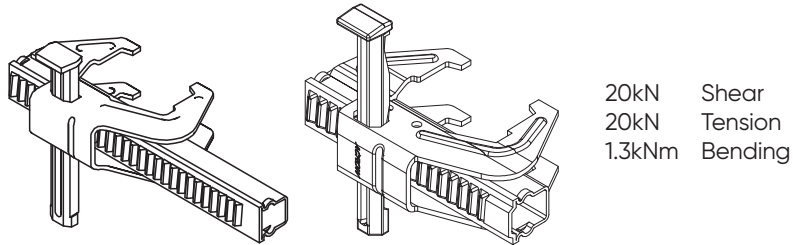
| ANCHOR LOADS & REACTIONS AT MAXIMUM SPACING, kN |    |
|---|----|
| T <sub>1</sub> , kN                             | 16 |
| V <sub>1</sub> , kN                             | 8  |
| C <sub>1</sub> , kN                             | 10 |
| T <sub>2</sub> , kN                             | 2  |
| C <sub>2</sub> , kN                             | 17 |

Where:  
 T = Tension force  
 C = Compression force  
 V = Shear force

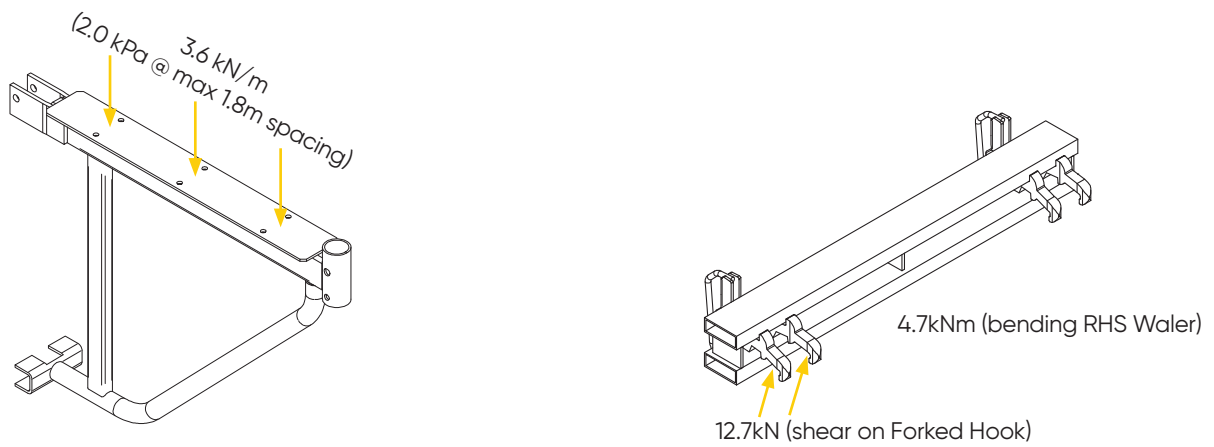
Refer pages 5.36-5.42 for typical applications.

### 3. Working Load Limits (WLL)

#### Alignment Clamp WLL



#### Platform Bracket & Compensation Waler WLL

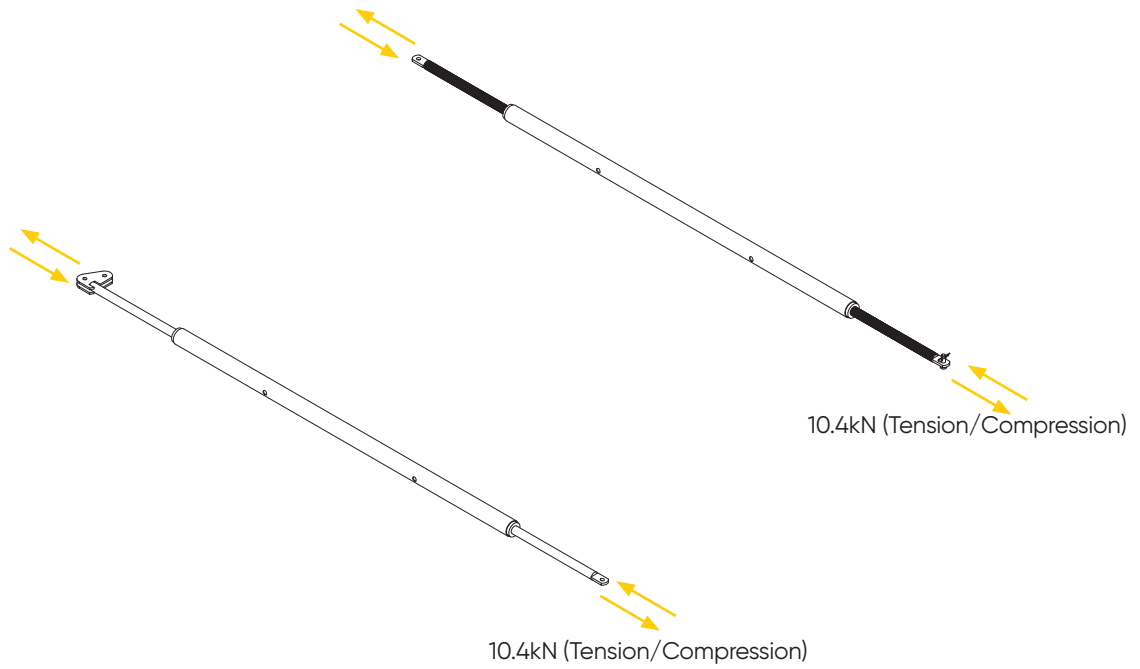


#### Plumbing Shear Bracket Assembly & Frame Anchor Bracket WLL

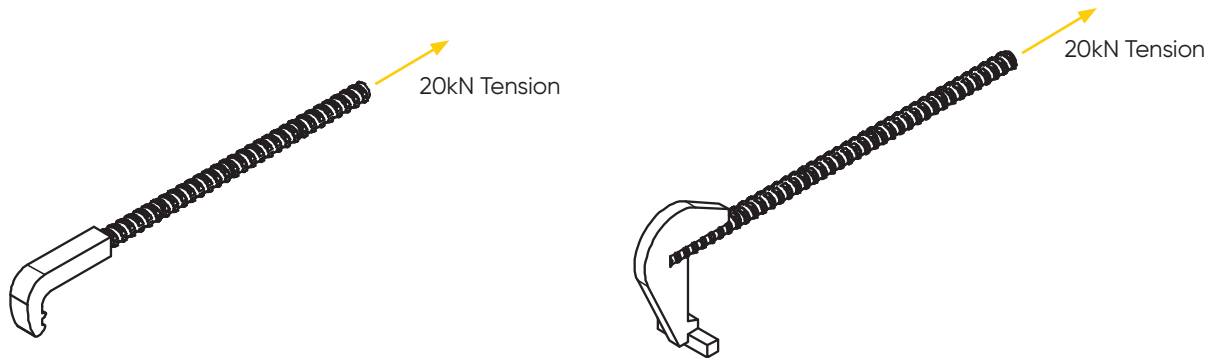


### 3. Working Load Limits (WLL)

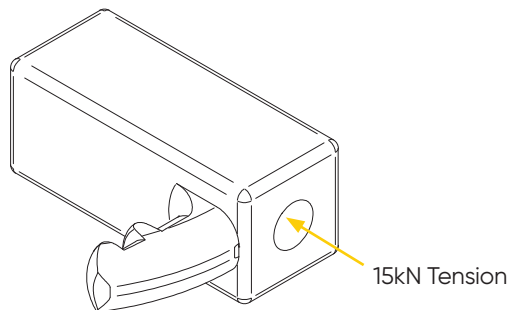
#### Push/Pull Props & Kicker Bracket WLL



#### Hook Tie & Stopend Tie WLL

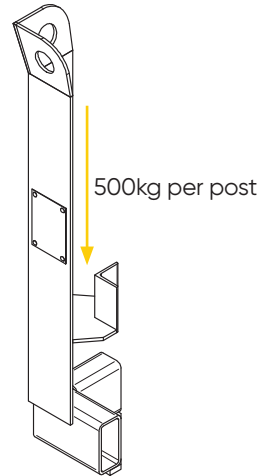
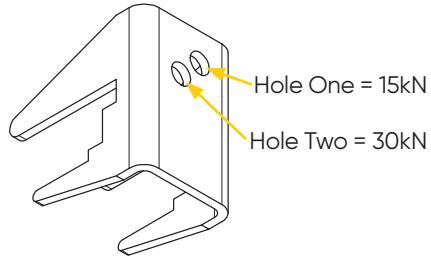


#### Tie Head WLL

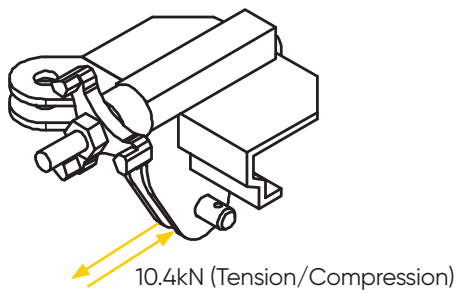


### 3. Working Load Limits (WLL)

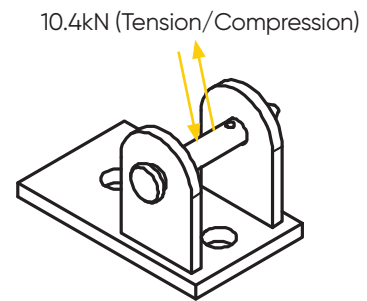
#### Top Tie Bracket & Stacking Post WLL



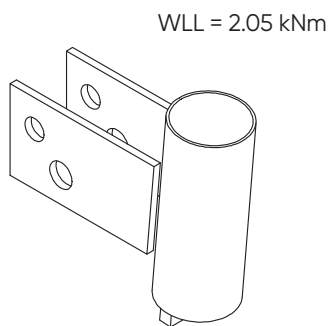
#### Brace Connector WLL



#### Base Plate WLL



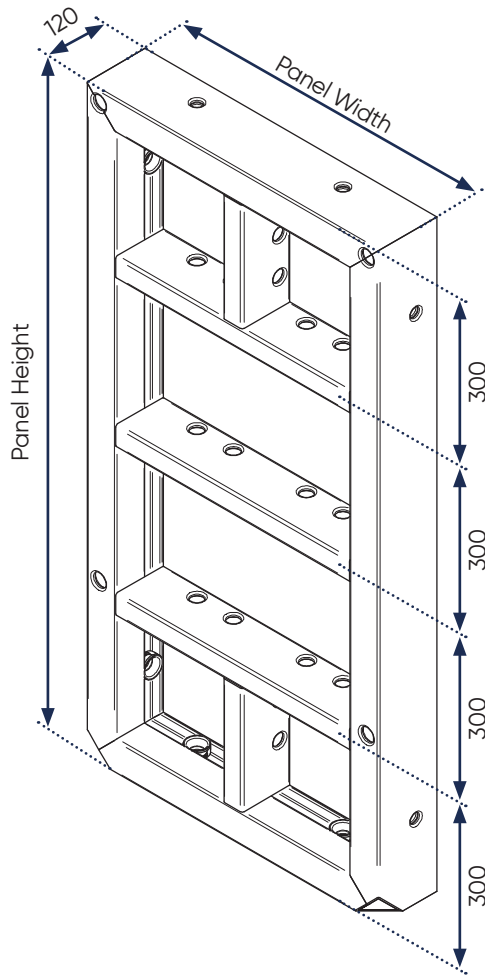
#### Top Handrail Bracket



## 4. SYSTEM DETAILS

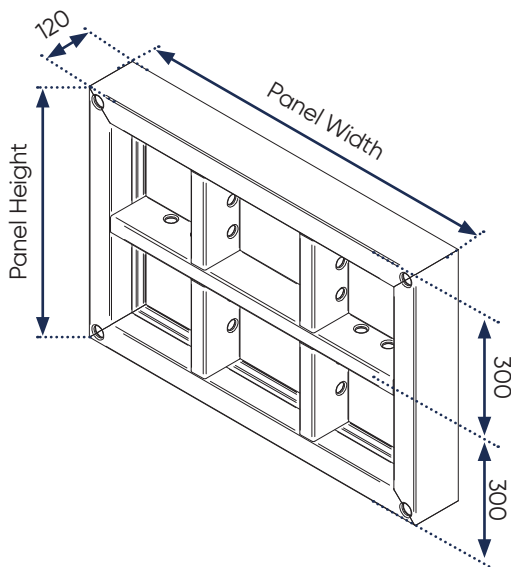
## 4. System Details

### Panels



| Height x Width    | Code      |
|-------------------|-----------|
| 3300 x 2400 Panel | AW80P3324 |
| 3300 x 1200 Panel | AW80P3312 |
| 3300 x 900 Panel  | AW80P3309 |
| 3300 x 720 Panel  | AW80P3307 |
| 3300 x 600 Panel  | AW80P3306 |
| 3300 x 300 Panel  | AW80P3303 |
| 3300 x 240 Panel  | AW80P3302 |
| 2700 x 2400 Panel | AW80P2724 |
| 2700 x 1200 Panel | AW80P2712 |
| 2700 x 900 Panel  | AW80P2709 |
| 2700 x 720 Panel  | AW80P2707 |
| 2700 x 600 Panel  | AW80P2706 |
| 2700 x 300 Panel  | AW80P2703 |
| 2700 x 240 Panel  | AW80P2702 |
| 1200 x 2400 Panel | AW80P1224 |
| 1200 x 1200 Panel | AW80P1212 |
| 1200 x 900 Panel  | AW80P1209 |
| 1200 x 720 Panel  | AW80P1207 |
| 1200 x 600 Panel  | AW80P1206 |
| 1200 x 300 Panel  | AW80P1203 |
| 1200 x 240 Panel  | AW80P1202 |

### 600mm High Panel Range

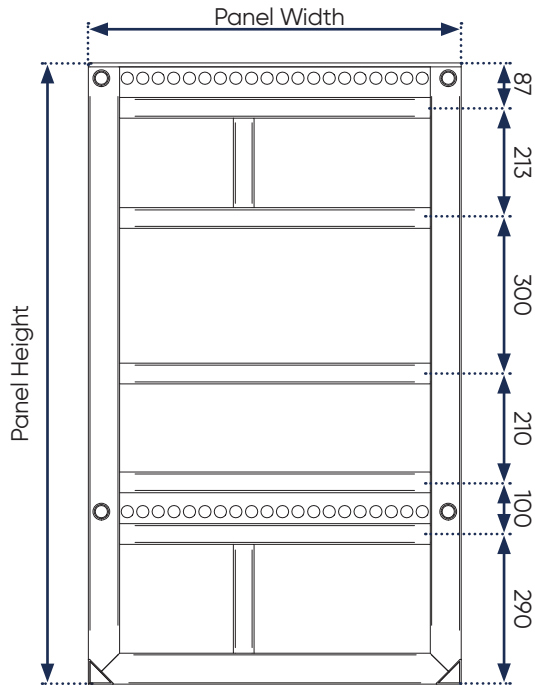


| Height x Width | Code      |
|----------------|-----------|
| 600 x 900      | AW80P0609 |
| 600 x 720      | AW80P0607 |
| 600 x 600      | AW80P0606 |
| 600 x 300      | AW80P0603 |



## 4. System Details

### Multi Panels

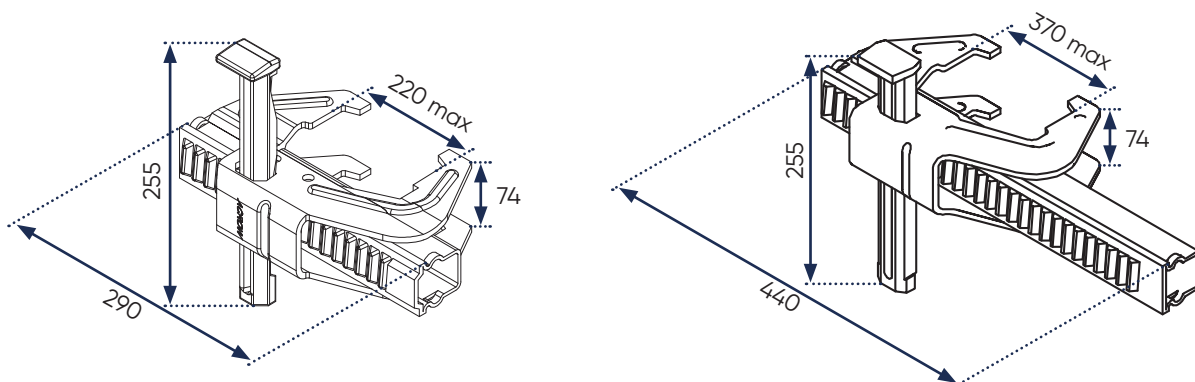


1200mm Panel shown

| Height x Width | Code       |
|----------------|------------|
| 3300 x 720     | AW80P3307M |
| 2700 x 720     | AW80P2707M |
| 1200 x 720     | AW80P1207M |

### Alignment Clamps

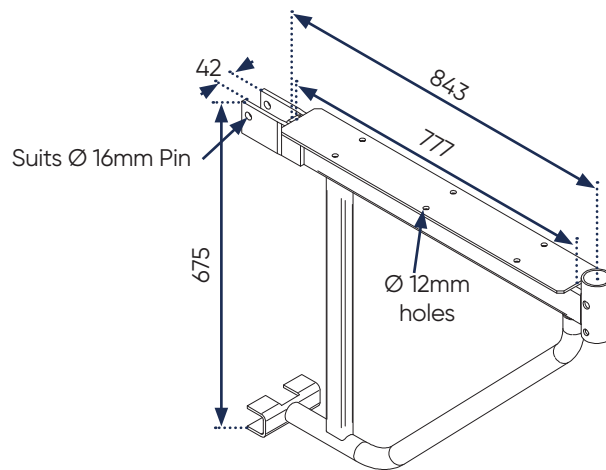
The Alignment Clamp is used along the ribs of the adjacent panels to tightly join two panels together and aligns them in one action, eliminating the need for walers. If used between rib of adjacent panels it will not align panels but only joins them. The joint will not have much design rigidity.



## 4. System Details

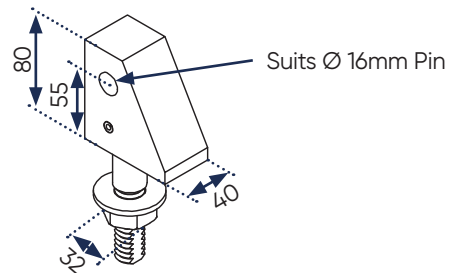
### Working Platform Bracket

Can be attached to horizontal (requires Platform Adaptor) or vertical ribs of the panel. It provide room for three timber planks which are secured to the top flange of the bracket via 6 existing Ø12 holes.



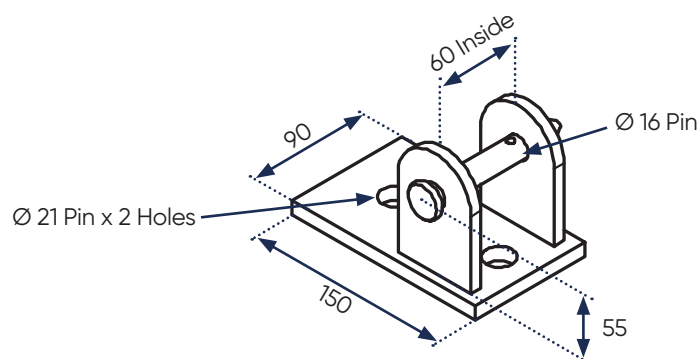
### Platform Adaptor

Used to connect Working Platform Bracket to the panel rib when ribs are in horizontal plane.



### Base Plate

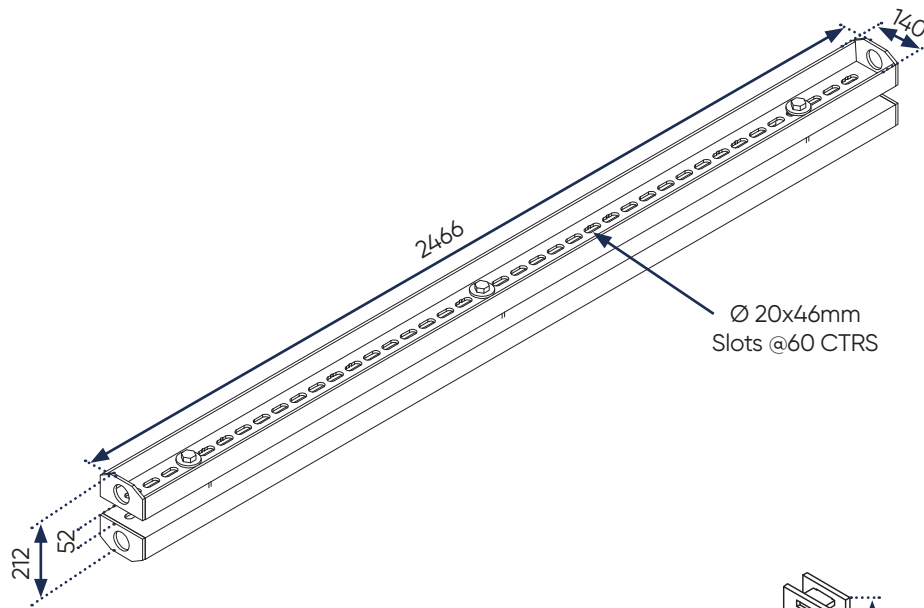
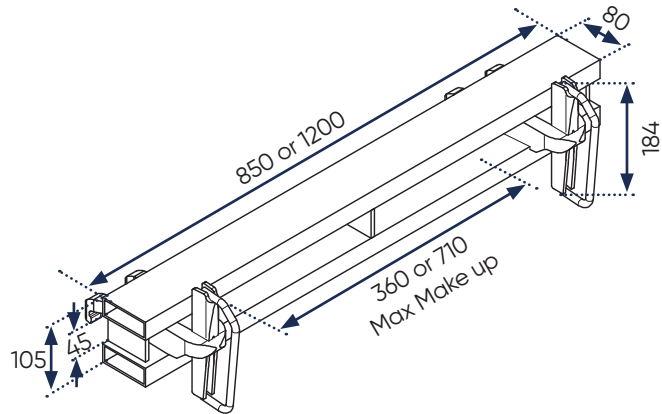
Used to anchor Push-Pull Props and Kicker Brace to concrete footing.



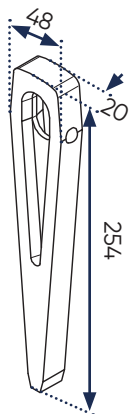
## 4. System Details

### Walers & Waler Components

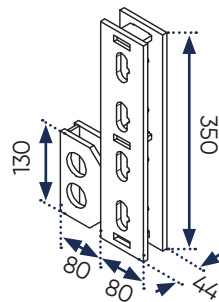
Used to support timber infill panels up to 360mm / 710mm width and to align panels.



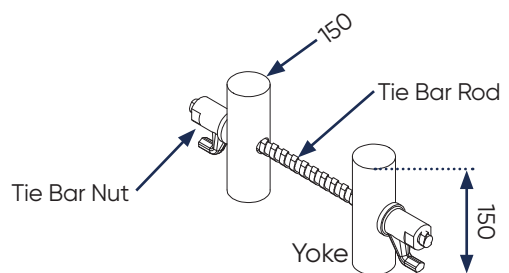
Used for tying acute and obtuse angles of thick walls.



Used in conjunction with Waler Stop to connect two Universal Waler 2450 together.



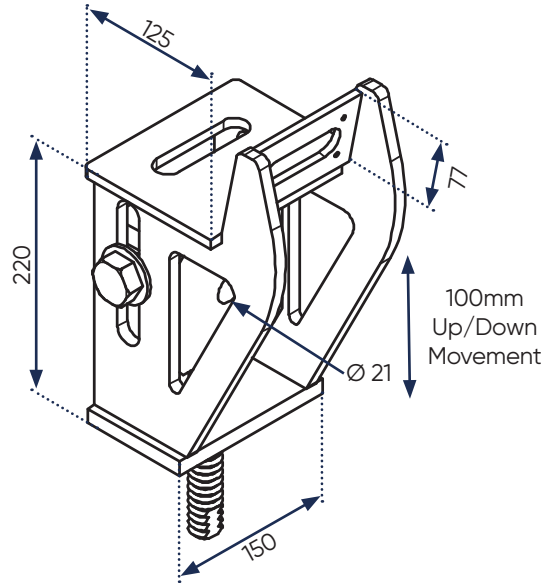
Used in conjunction with Waler Wedge to connect two Universal Waler 2450 together.



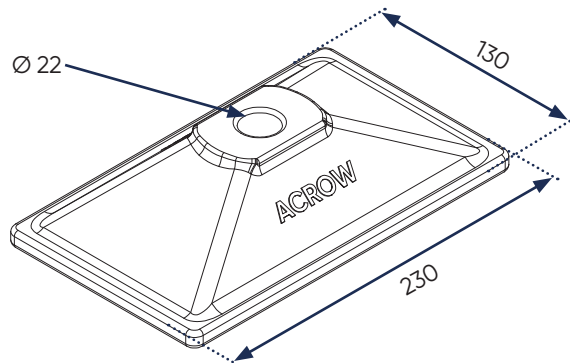
## 4. System Details

### Plumbing Shear Bracket Assembly

Used to support panels off the ground or around the perimeter of footings. Push-pull props will be used to provide means for plumbing the panels while stabilizing and securing against the wind loads.



### Washer Spacer



## 5. ASSEMBLY DETAILS

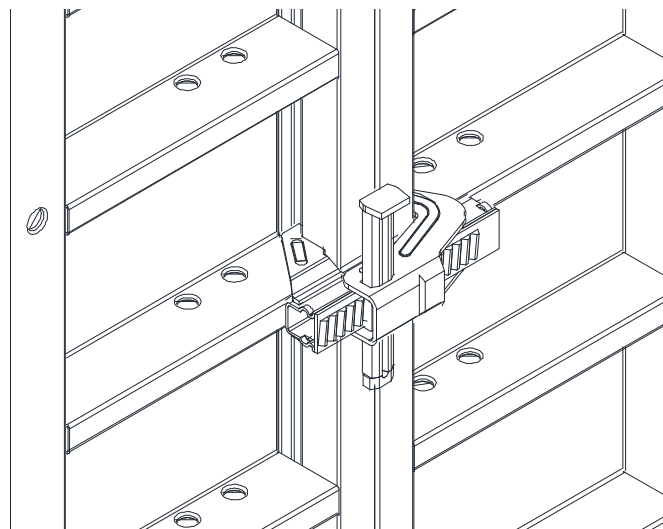
## 5. Assembly Details

### Alignment Clamps

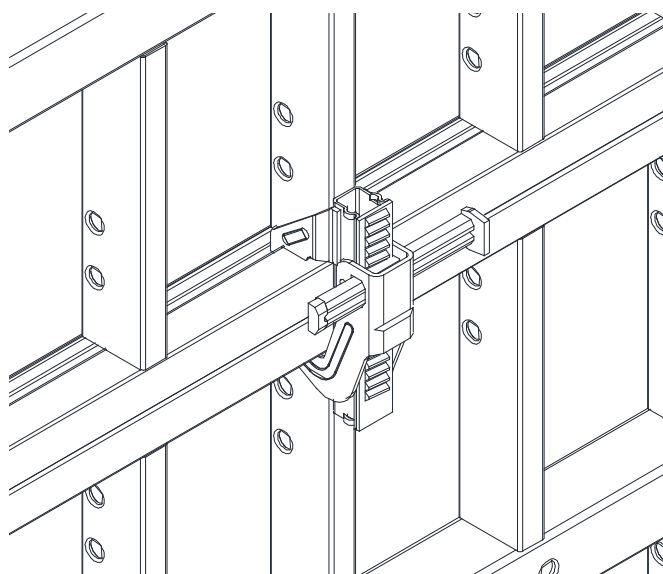
Acrowall-80 Panels are always connected together using the Alignment Clamps. The Alignment Clamp provides a tension resistant, tight joint between panels as well as holding the panel in rigid alignment. It can be used on both vertical and horizontal panel joints.

Important Note:

- Alignment Clamps must be placed at rib positions to facilitate correct alignment. This is dependent on the clamp acting against the rib.
- All Alignment Clamps must be re-tightened after crane handling. Movement by crane can cause vibration which may loosen the locking bar.
- When building a shutter on the ground it is best to lay the panels in their proper sequence first before attaching the alignment clamps in a random pattern.
- For number of Alignment Clamps required refer pp.29-39.



Alignment Clamps connecting vertical panel joints

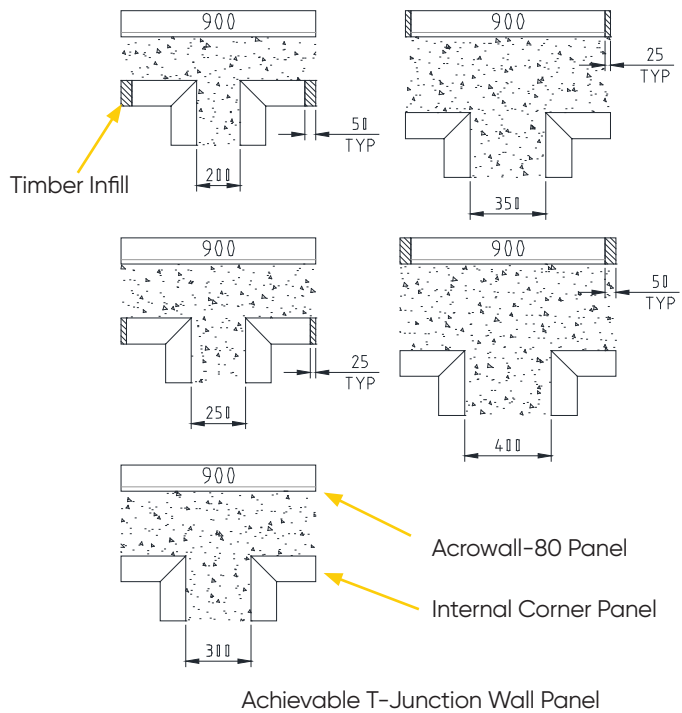
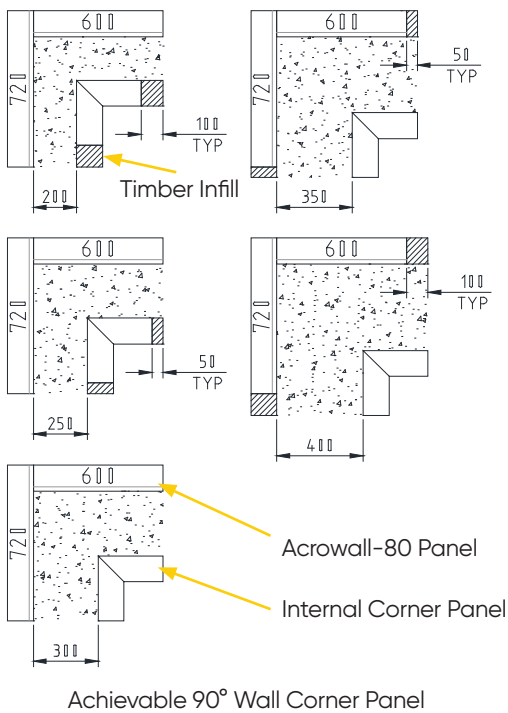
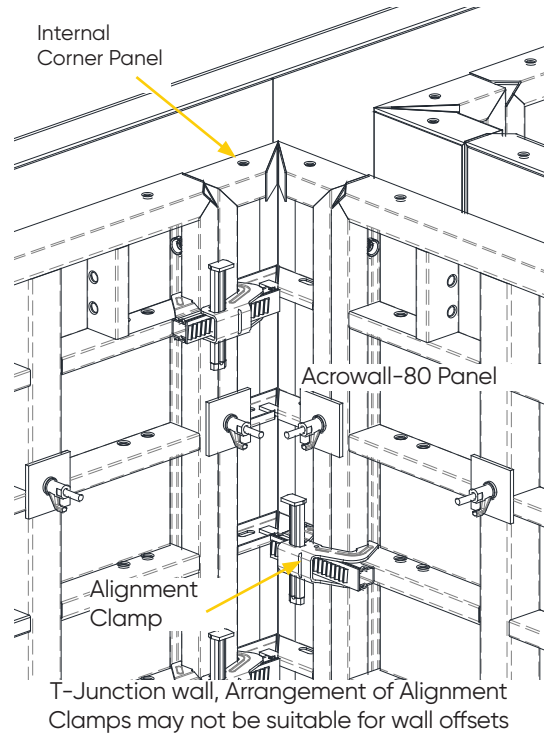
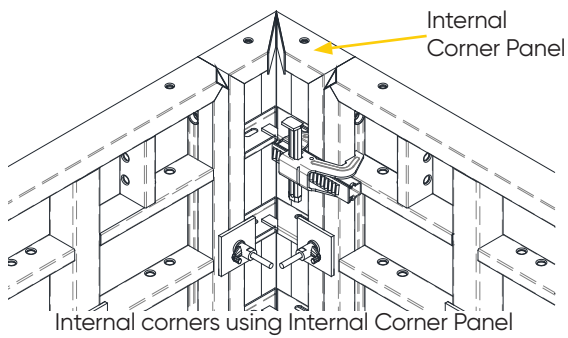
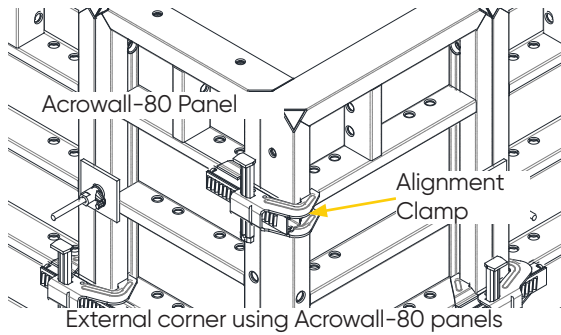


Alignment Clamps connecting horizontal panel joints

## 5. Assembly Details

### 90° Wall Corners and T-Junctions

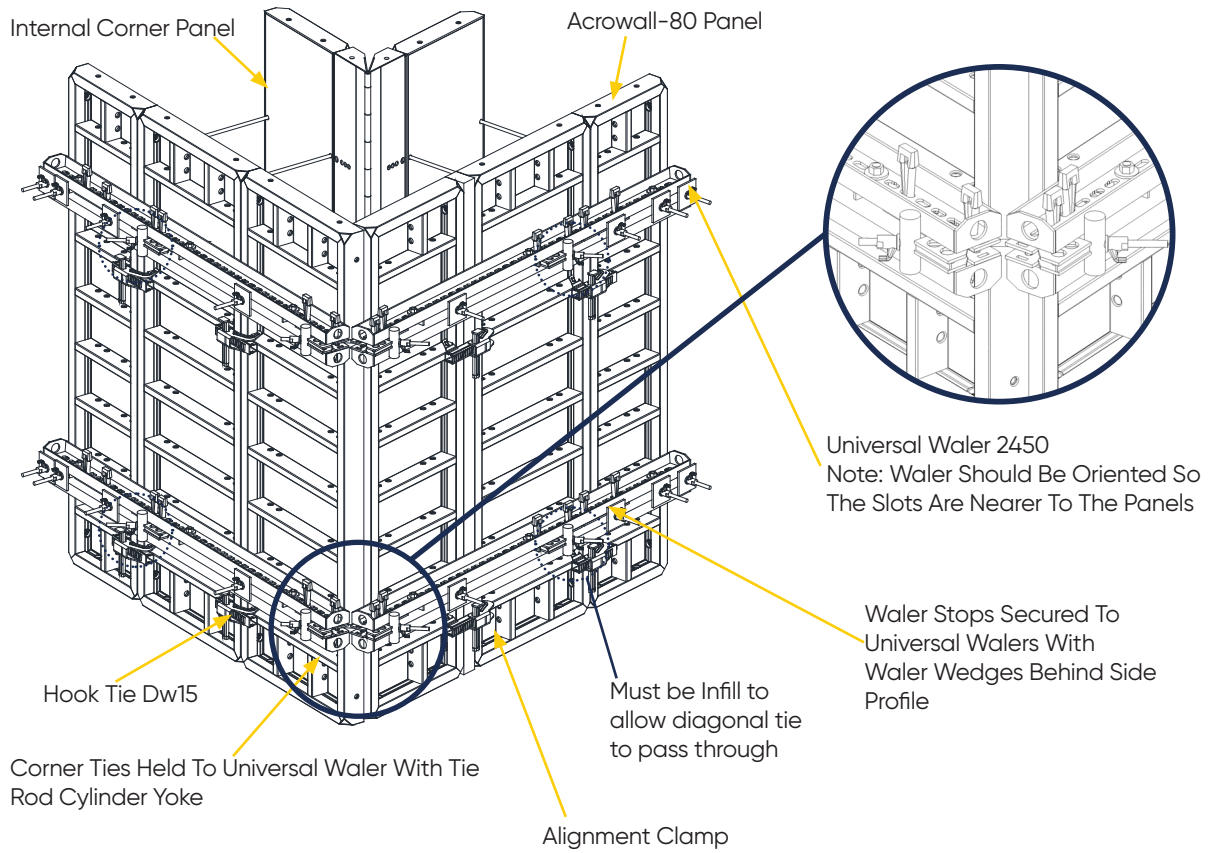
90° wall corners up to 400mm thickness are made using 720 and 600 long Acrowall-80 panels for external corners, and Internal Corner Panels for internal corners. The number and position of Alignment Clamps between the panels depend on the lateral concrete pressure, wall thickness and size of panels.



## 5. Assembly Details

### 90° Wall Corners and T-Junctions (cont'd)

90° Acrowall-80 corner panels connected using Universal Walers

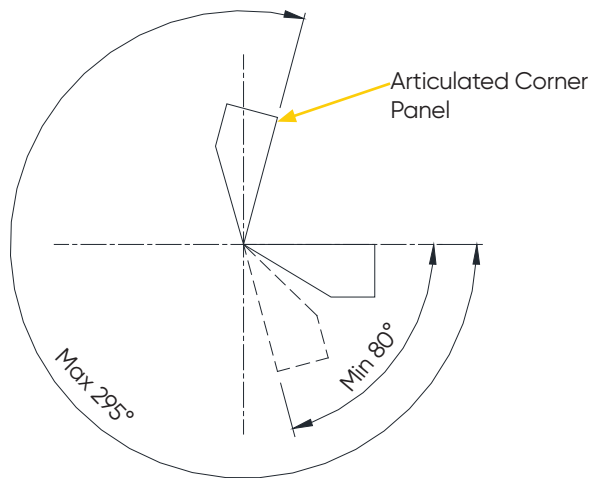
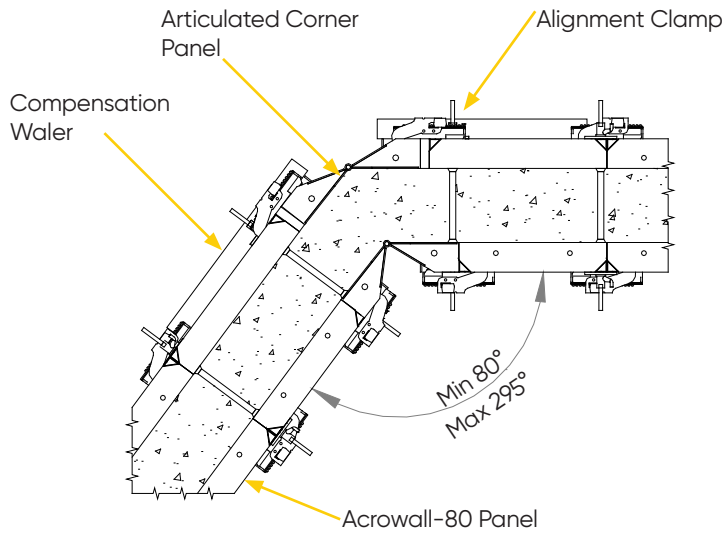




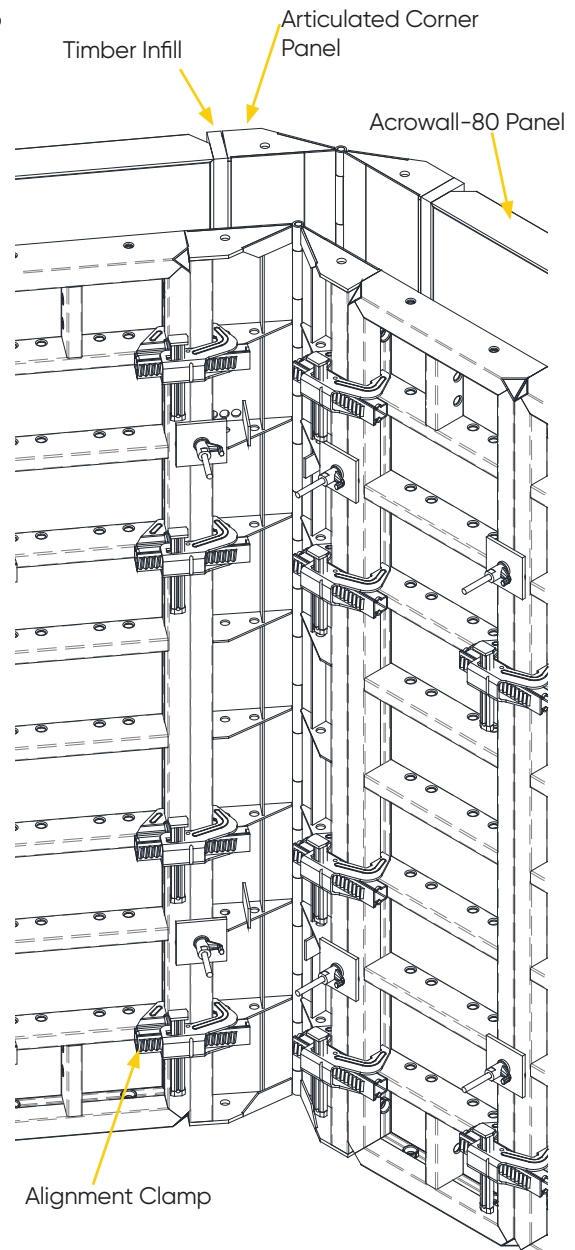
## 5. Assembly Details

### Oblique Angular Corners

To cater for non right angled corners, Articulated Corner Panels are used for internal and external corners. The adjustment range of the component permits oblique angular corners from 80° to 295°.



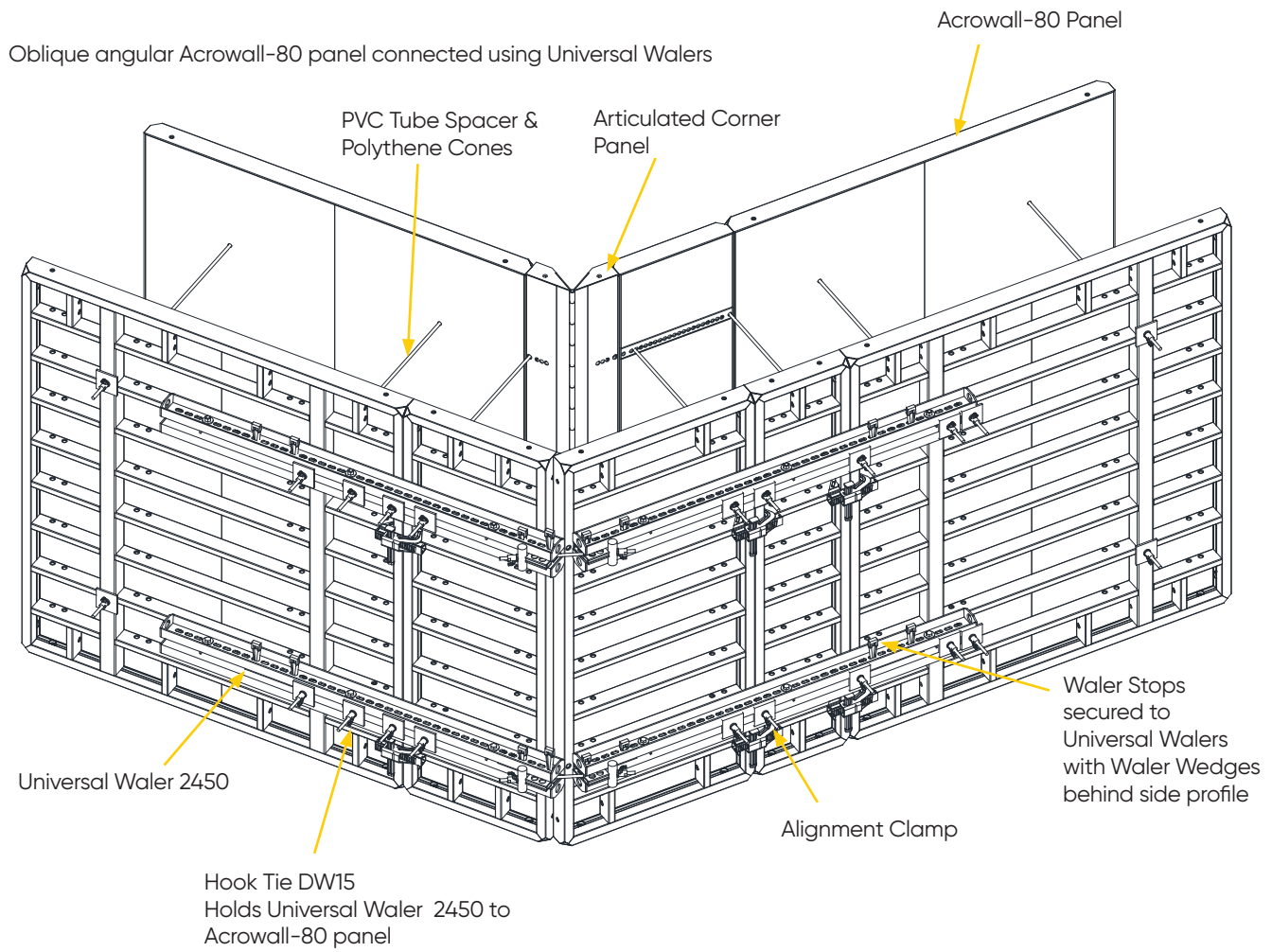
Articulated Corner Panel angle ranges



Oblique angular corner typical arrangement

## 5. Assembly Details

### Oblique Angular Corners (cont'd)

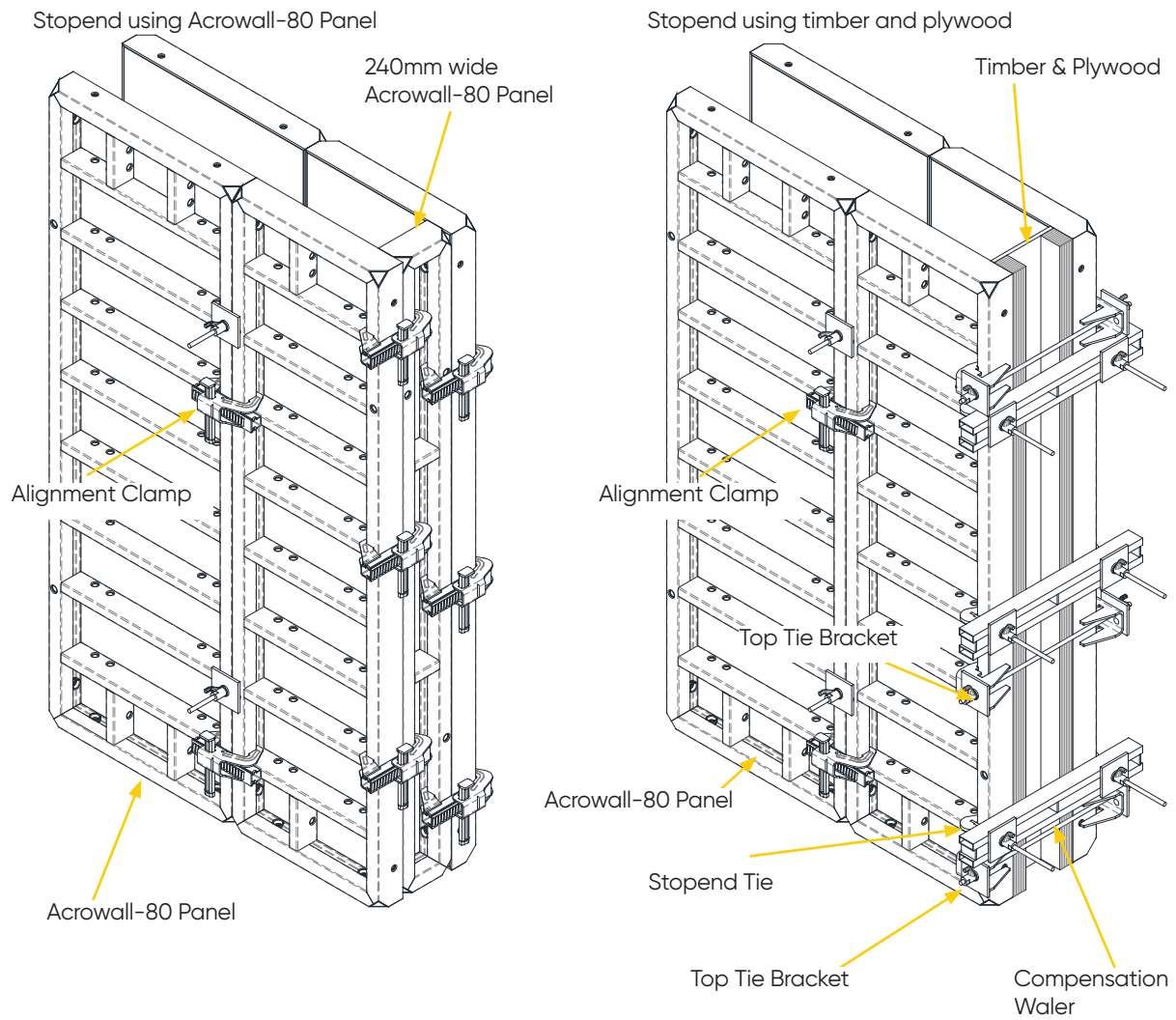


## 5. Assembly Details

### Stopend

Stopend can be formed using Acrowall-80 panel when wall thickness is 240mm. Alignment Clamps are used to join the panel together.

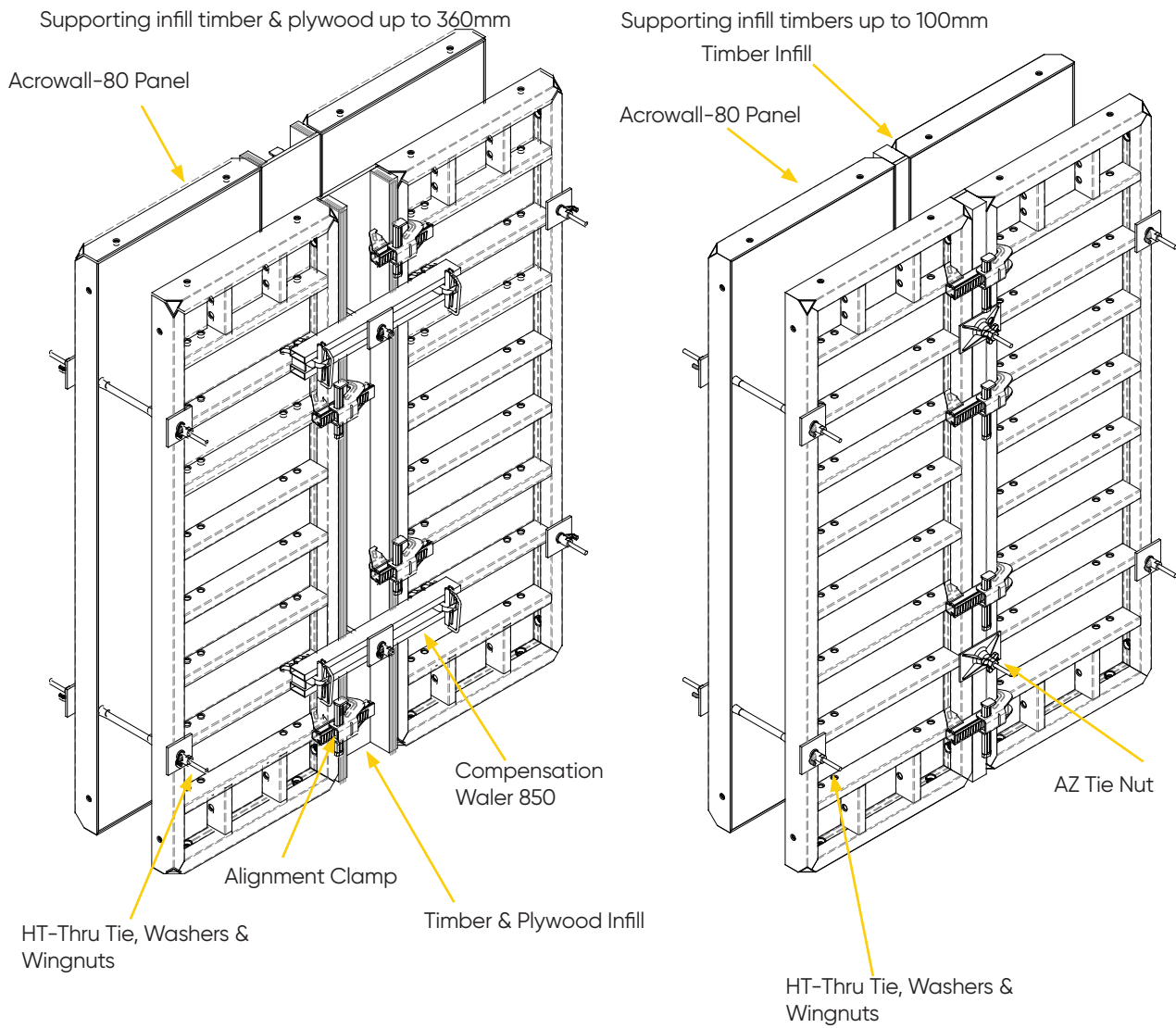
Combination of timber and plywood can also be used as stopend panel. Compensation Waler with Stopend Ties plus Top Tie Brackets are used to join them together.



## 5. Assembly Details

### Infill

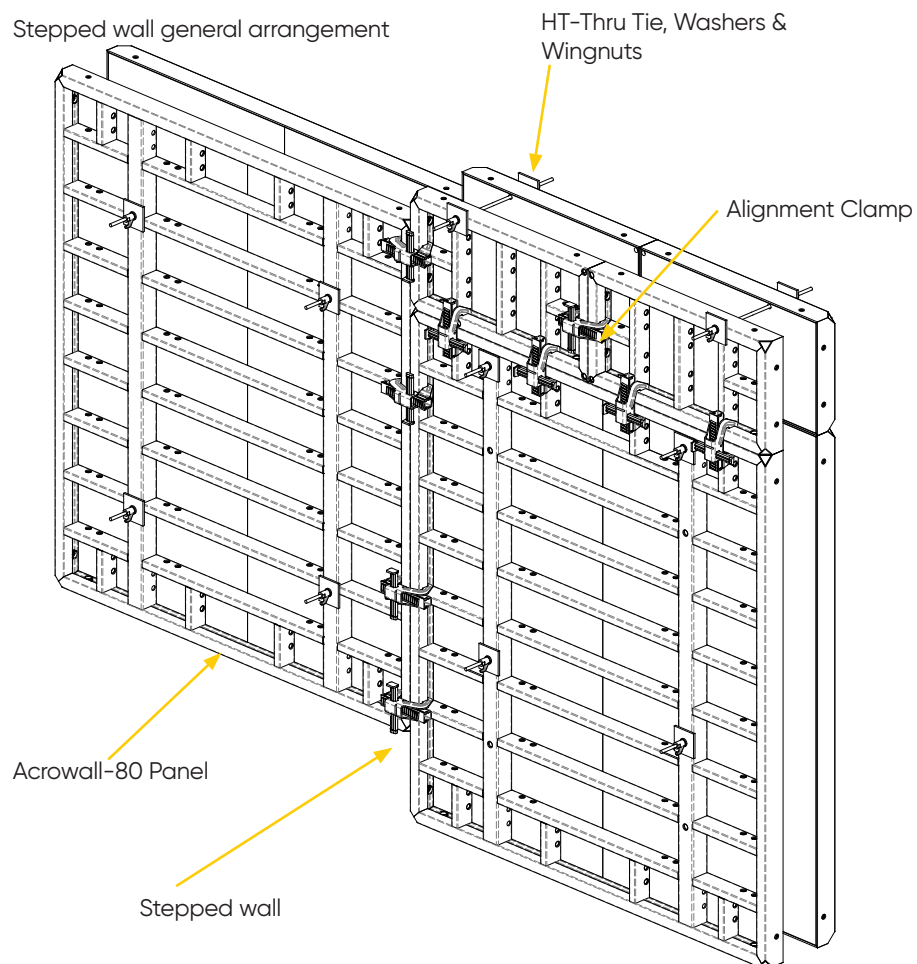
Infills up to 100mm can be made vertically between panels using Alignment Clamps (excluding corners) and up to 360mm using Compensation Waler 850.



## 5. Assembly Details

### Stepped Wall

Alignment Clamps are used to join Acrowall-80 panels in stepped wallform applications.



## 5. Assembly Details

### Plumbing Prop

Plumbing prop is a combination of Push-Pull Prop, Kicker Base, Brace Connector, and Base Plate. This is used to provide means for plumbing and securing the panels against wind loads. They are connected to the panel ribs through provided  $\text{Ø}24$  holes using Brace Connectors. They may be connected to vertical or horizontal ribs. Kicker Brace is connected to Push-Pull Prop's connecting plate which is then connected to Base Plates using 16 diameter pins.

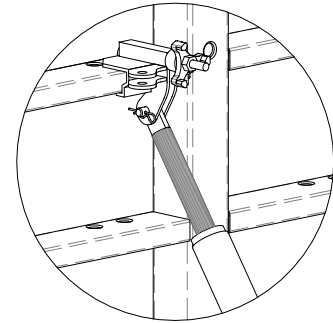
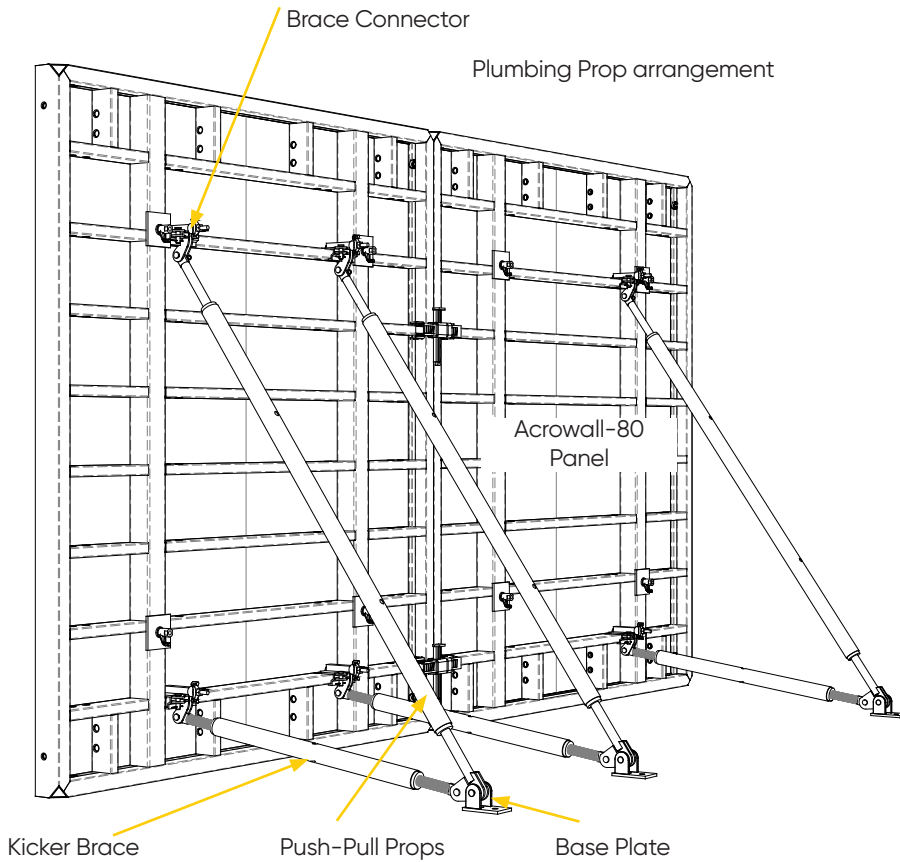
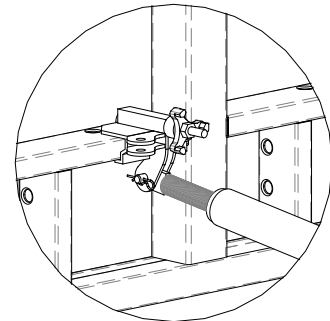
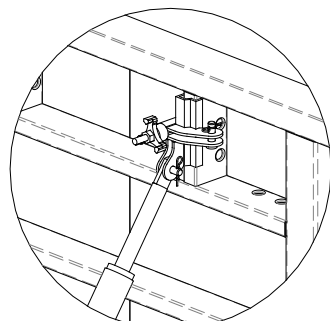


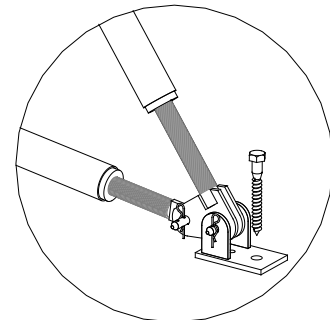
Figure 22  
Brace Connector Connects Push-Pull Prop to horizontal panel rib



Brace Connector Connects Push-Pull Prop to horizontal panel rib



Brace Connector Connects Push-Pull Prop to vertical panel rib



Kicker Brace and Push-Pull Prop connected to Base Plate

**Note:**

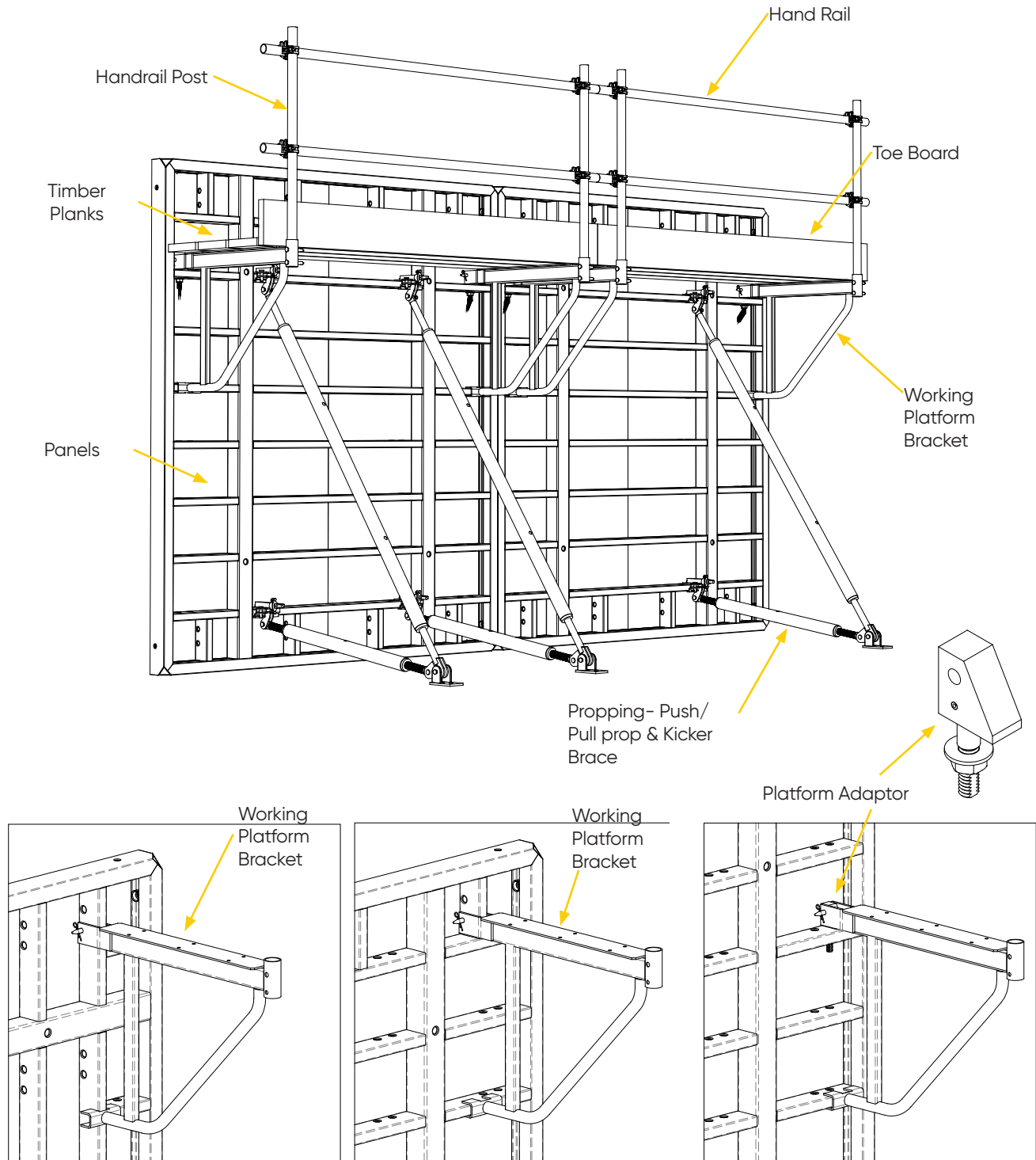
The first panel is generally secured in place with minimum two plumbing props to provide a stable structure. As the other panels are connected to the first panel they are also secured in place with plumbing prop at the required spacing.



## 5. Assembly Details

### Working Platform Bracket

Working Platform Bracket can be used in either vertical or horizontal panel rib. Maximum allowable spacing of 1.8m and with a uniformly distributed imposed load of 2.0kPa.



Working Platform Bracket connected to vertical panel rib

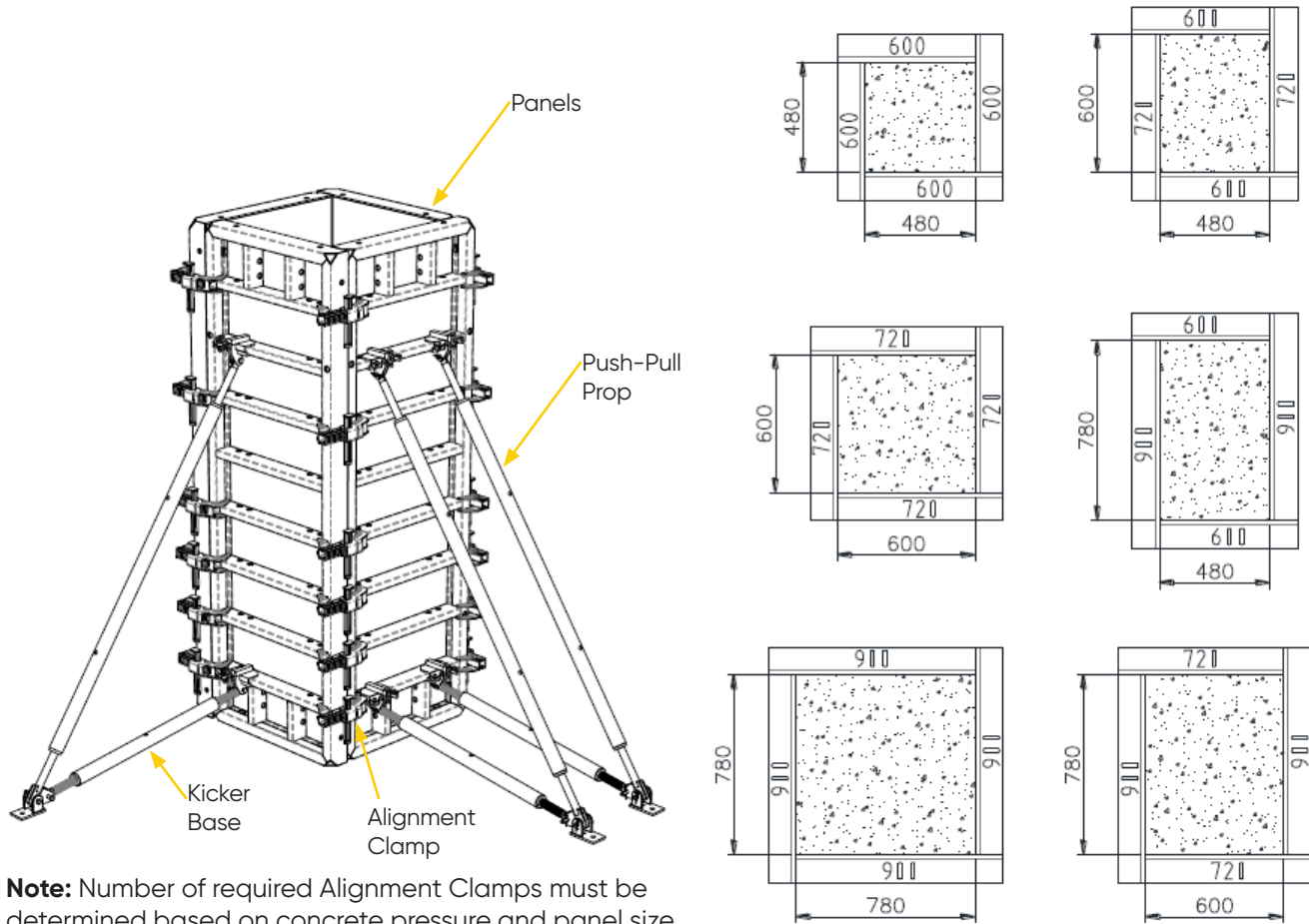
Working Platform Bracket connected to horizontal panel rib

Working Platform Bracket connected to horizontal panel rib using Platform Adaptor

### 5. Assembly Details

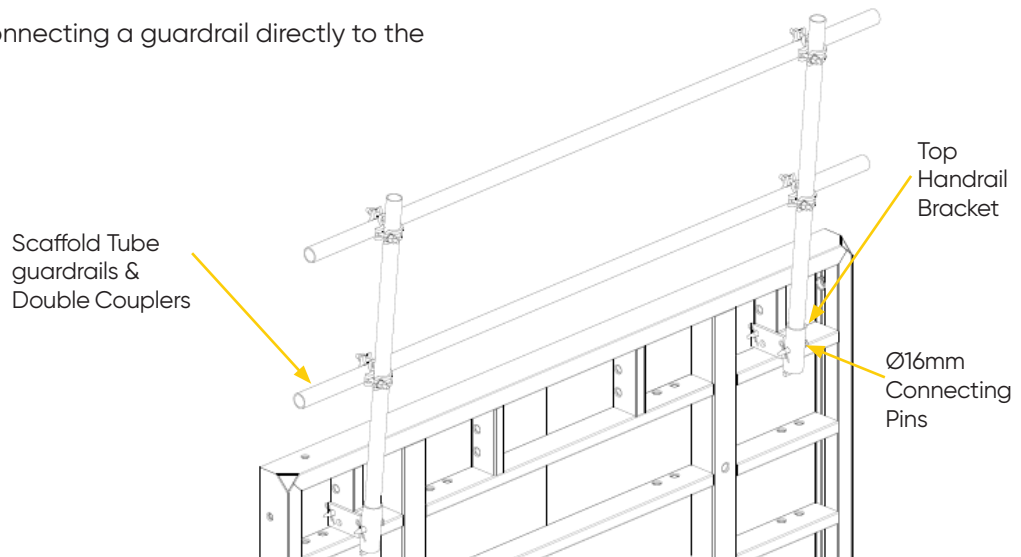
#### Column Formwork

The Acrowall-80 Panels (i.e. 600, 720, 900) are highly suitable for shuttering columns with square and rectangular cross-sections, and they can be connected by means of Alignment Clamp.



#### Top Handrail Bracket

Provides a means of connecting a guardrail directly to the top of the shutter

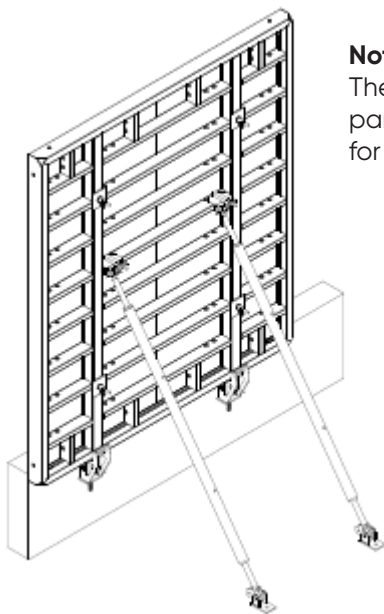
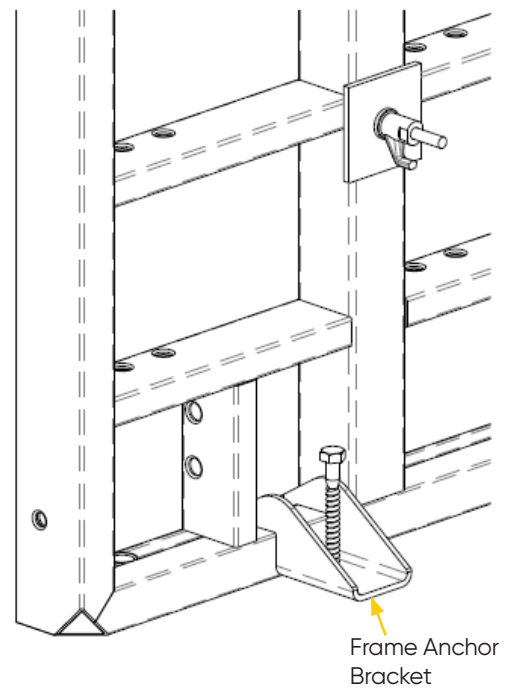
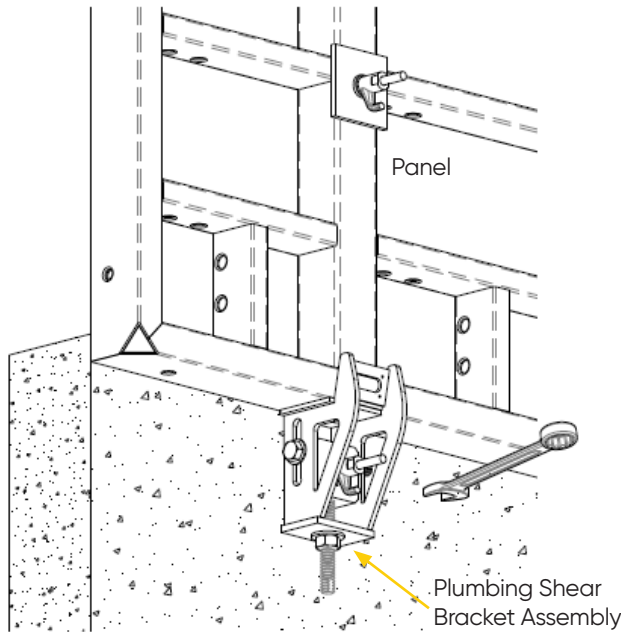




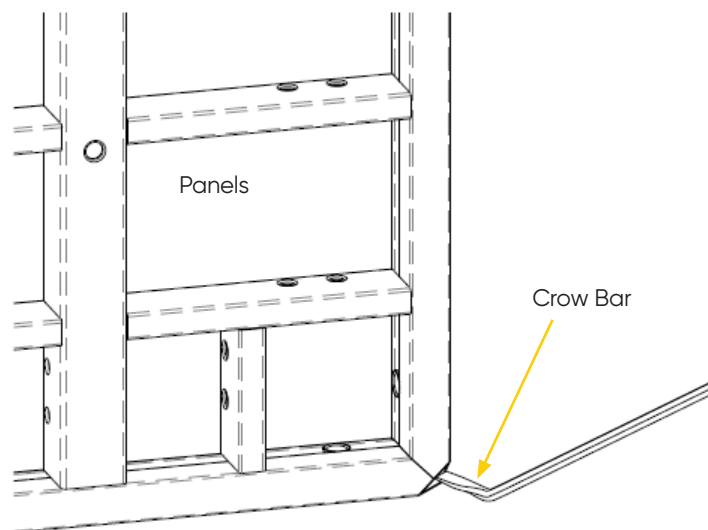
## 5. Assembly Details

### Other Applications

Plumbing Shear Bracket Assembly used to support panels off the ground or around the perimeter of footings.  
Frame Anchor Bracket used to hold the panel from the uplift due to wind loads.



**Note:**  
The Plumbing Shear Bracket Assembly is used for supporting panels close to ground or concrete slab. It is not to be used for supporting panels at height.



Acrowall 80 can be levered into place with a crow bar

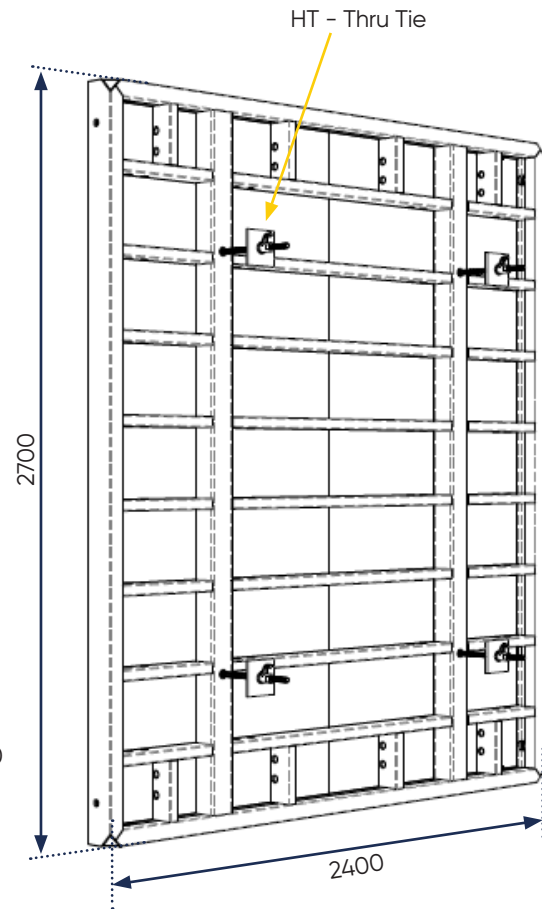
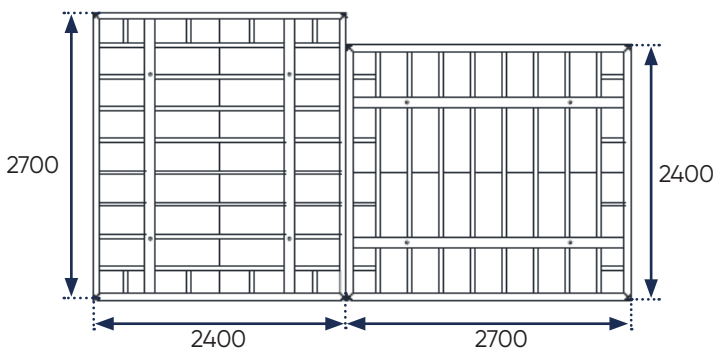
## 5. Assembly Details

### Achievable Heights

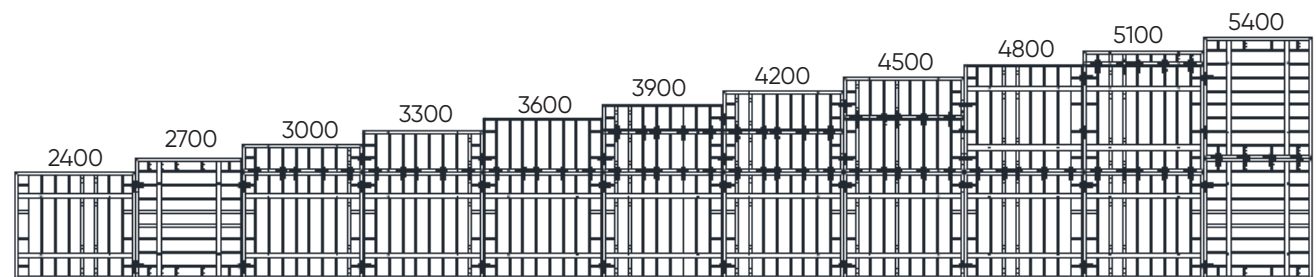
The four range of panel sizes and together the possible connecting or assembly arrangements of Acrowall-80 panels allow the wall form height to be adjusted in increments of 0.3m.

The benefits of using 2700x2400 panels:

- High structural stiffness for reduced deflection.
- Optimum size for transport.
- Maximum utilization of the full area of the panel.
- No plugging of holes, simple stopends and wall junctions.
- More achievable heights when combined with other panels.



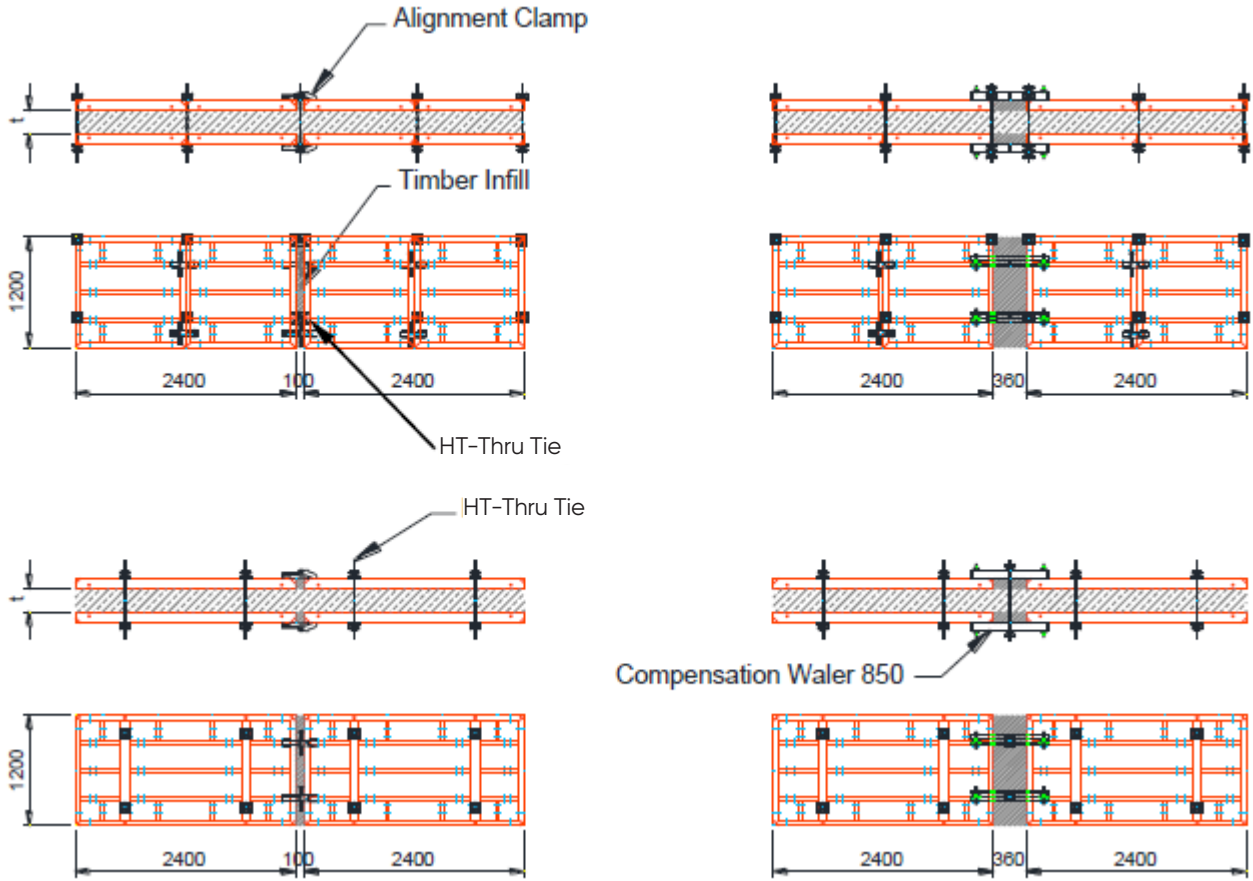
The achievable heights when 2700x2400 Acrowall-80 panel combined with other panels



## 5. Assembly Details

### Vertical Panel Joints

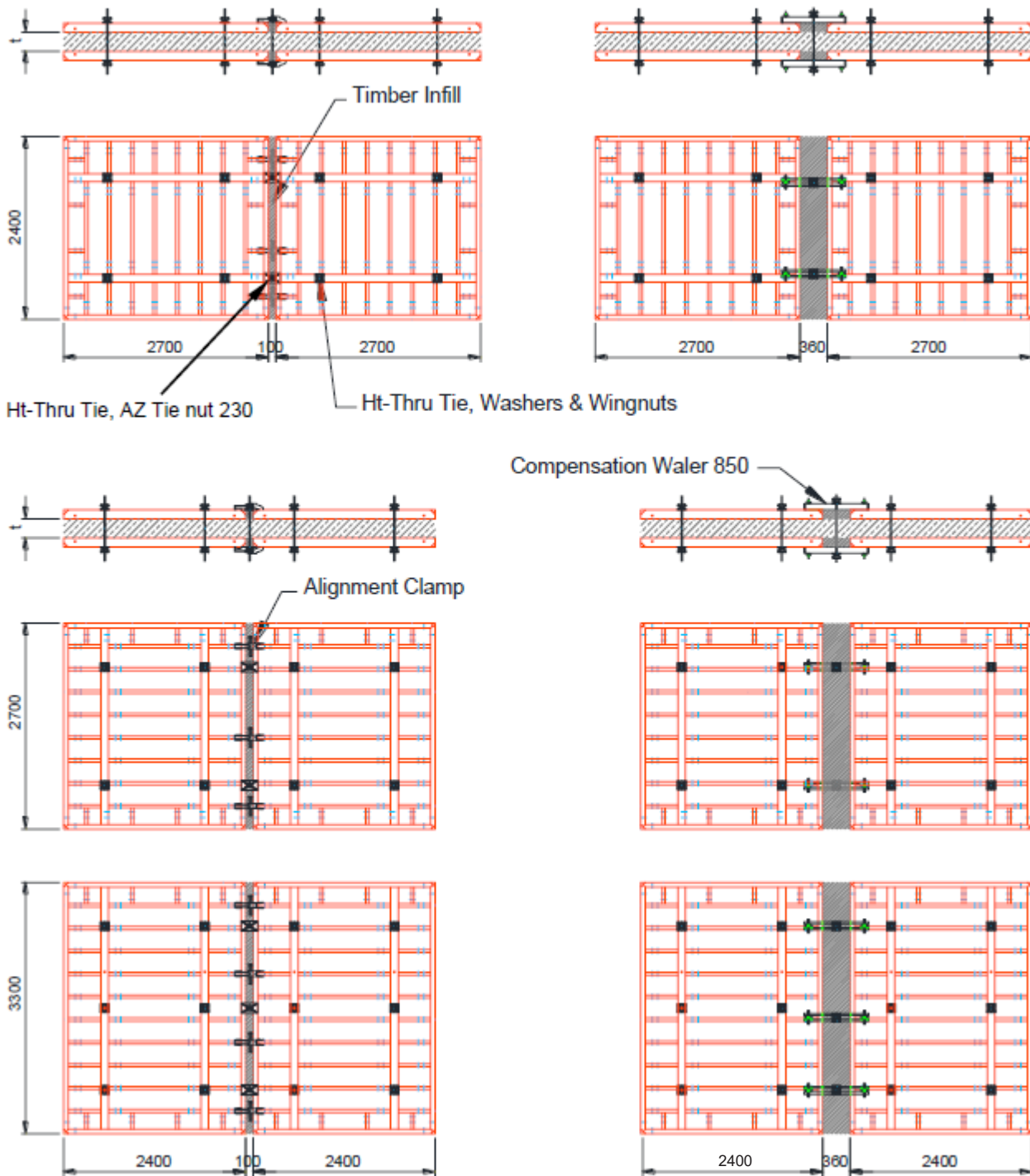
Infills up to 100mm can be made vertically between panels using Alignment Clamps (excluding corners) and up to 360mm using Compensation Waler 850.



### 5. Assembly Details

#### Vertical Panel Joints

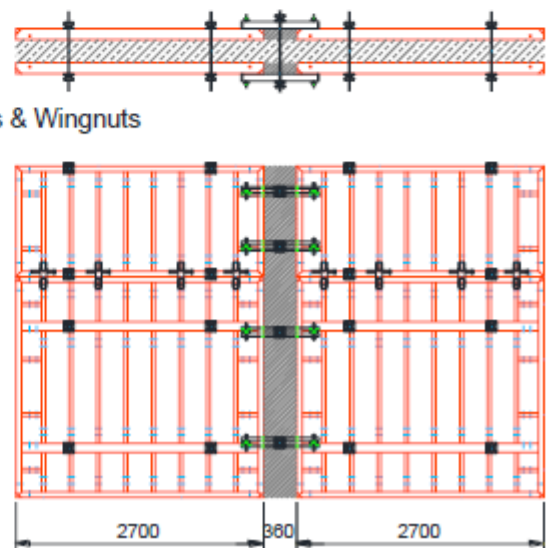
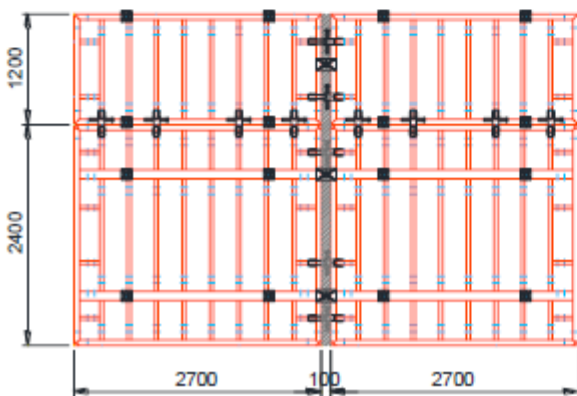
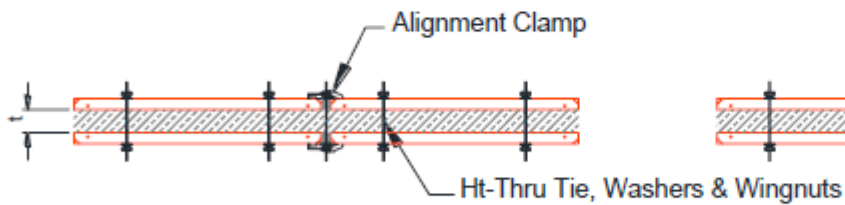
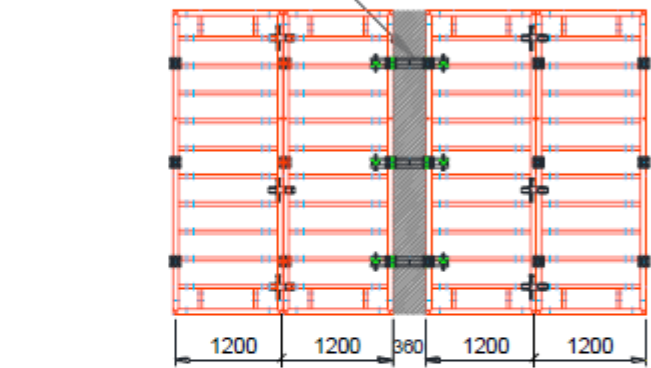
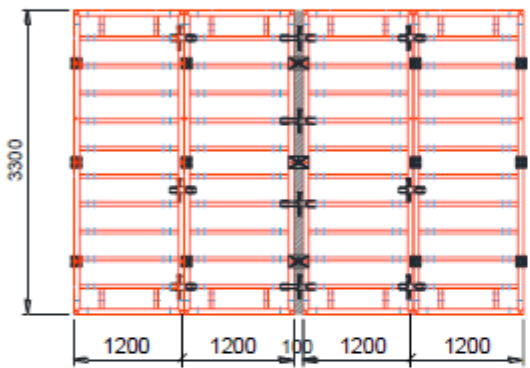
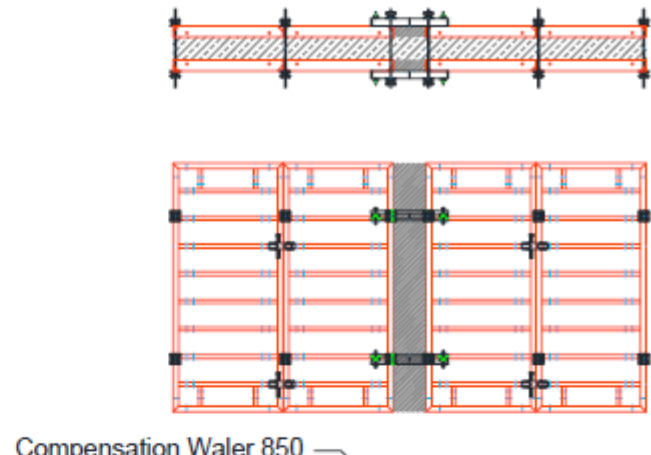
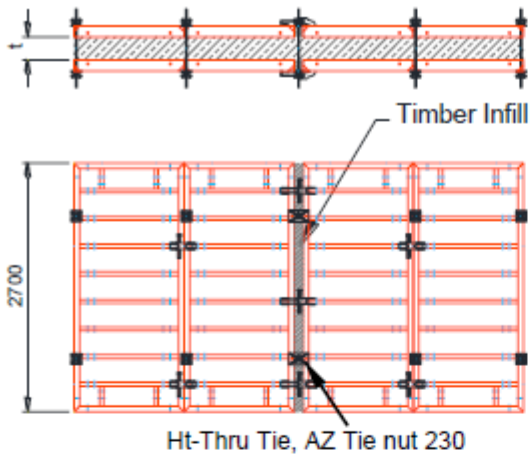
#### Vertical Panel Joints with Timber Infill (Cont'd)



### 5. Assembly Details

#### Vertical Panel Joints

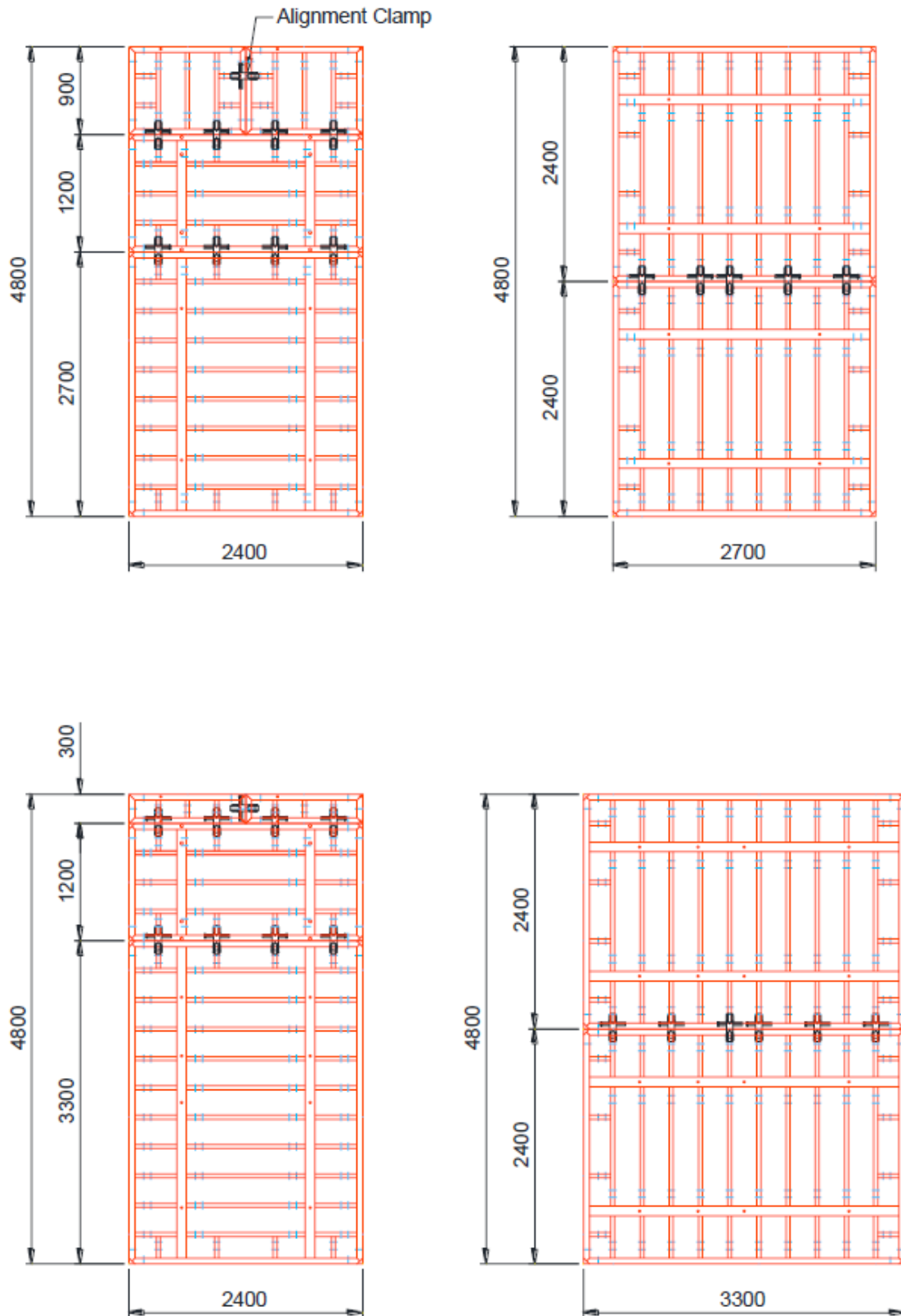
#### Vertical Panel Joints with Timber Infill (Cont'd)



## 5. Assembly Details

### Horizontal Panel Joints

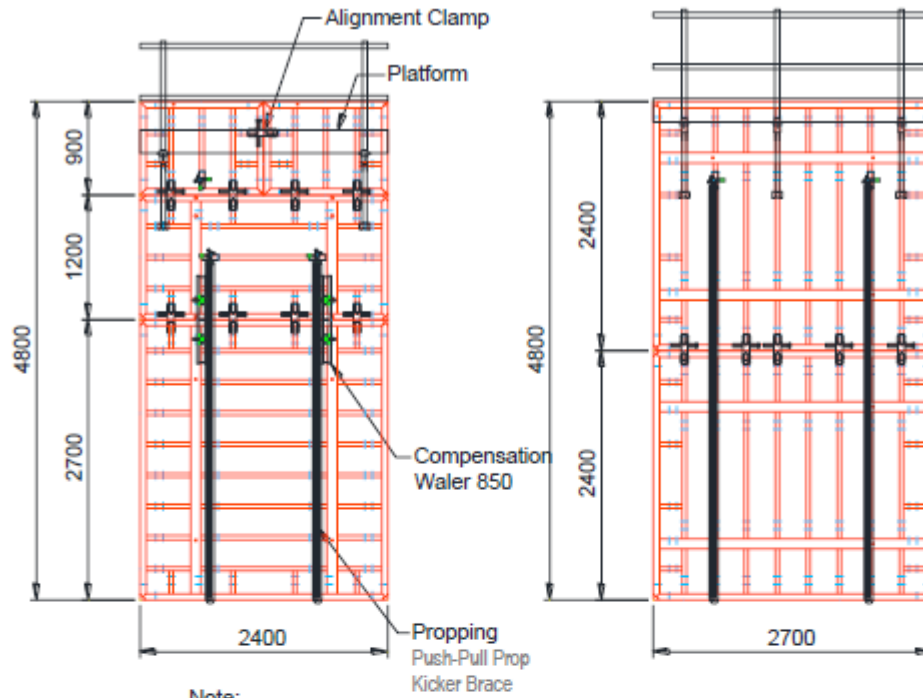
For Crane Handling. Clamping arrangements for 4.8m high single panel long shutters with no other attachments. Lifting from horizontal position to vertical:



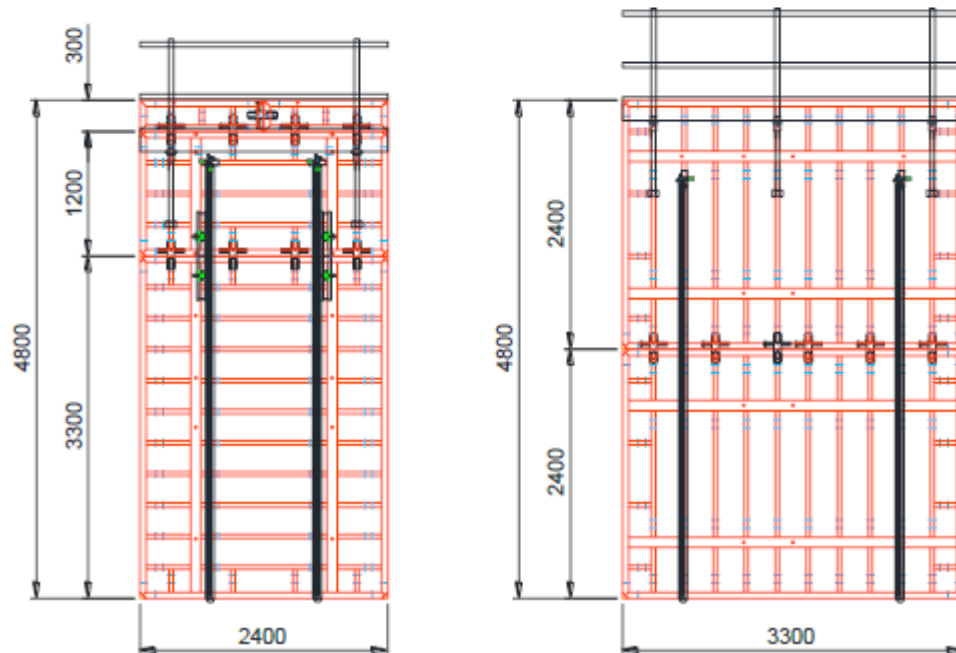
## 5. Assembly Details

### Horizontal Panel Joints

For Crane Handling. Clamping arrangements for 4.8m high single panel long shutters with no other attachments. Lifting from horizontal position to vertical:



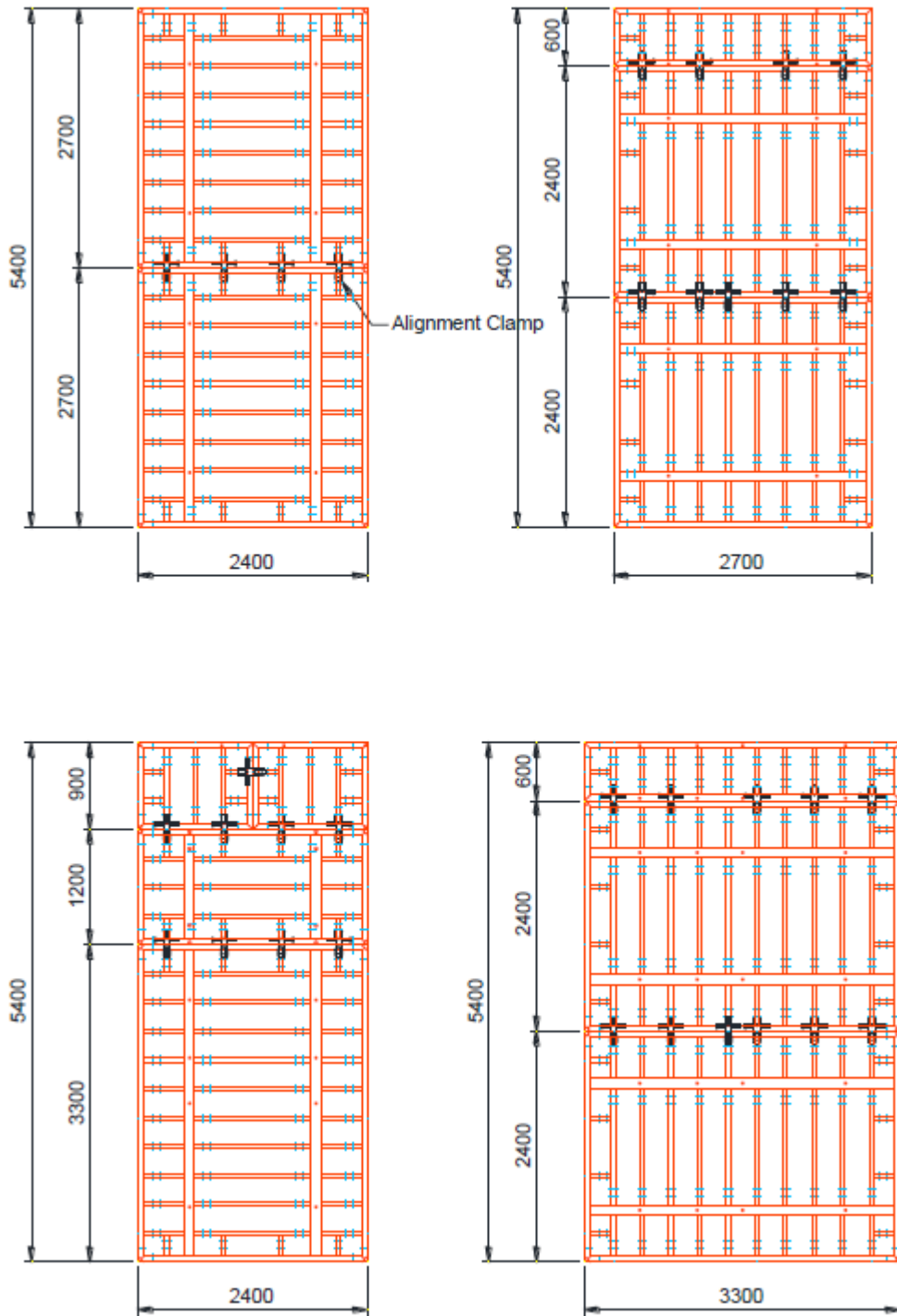
Note:  
 Remove Compensation Waler 850 to access Tie Holes when in vertical position.  
 Reinsert for reverse operation.



## 5. Assembly Details

### Horizontal Panel Joints

For Crane Handling. Clamping arrangements for 5.4m high single panel long shutters with no other attachments. Lifting from horizontal position to vertical:

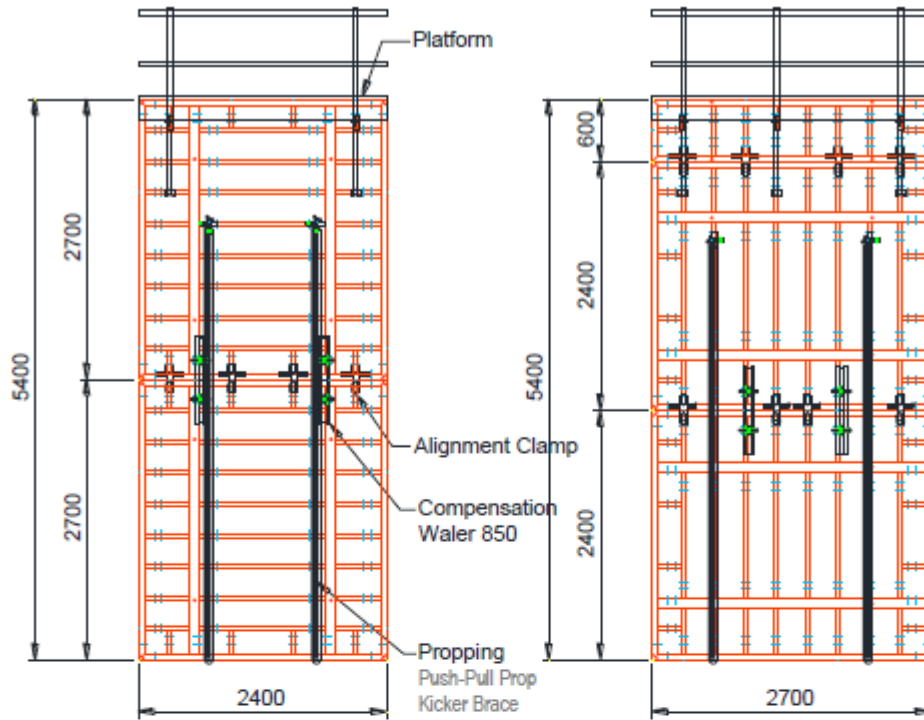




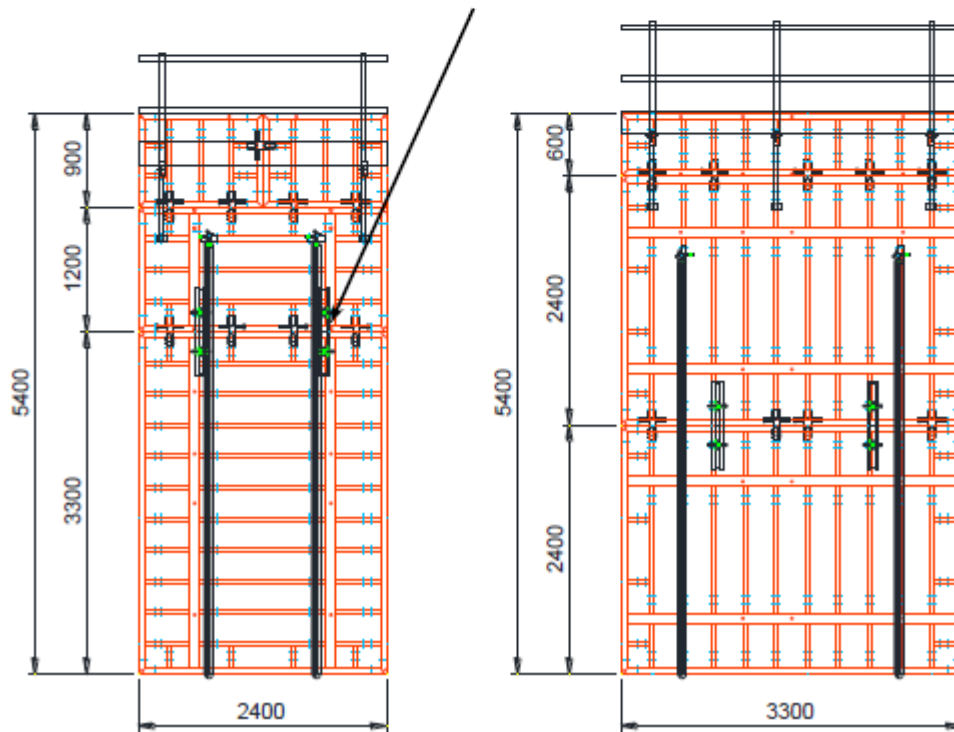
## 5. Assembly Details

### Horizontal Panel Joints

For Crane Handling. Clamping arrangements for 5.4m high single panel long shutters with working platform and propping attached as shown. Lifting from horizontal position to vertical:



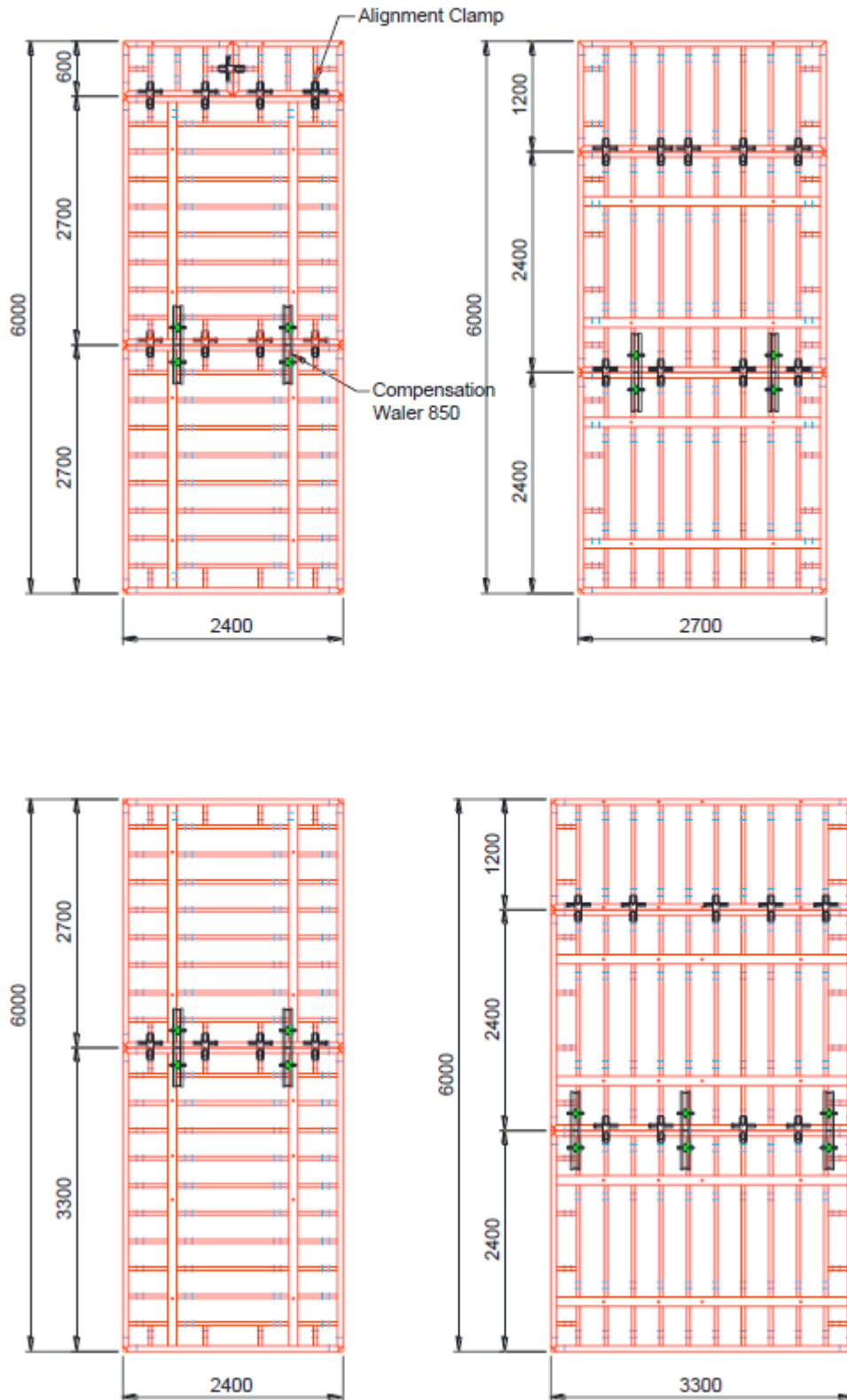
Note:  
Remove Compensation Waler 850 to access Tie Holes when in vertical position. Reinsert for reverse operation.



## 5. Assembly Details

### Horizontal Panel Joints

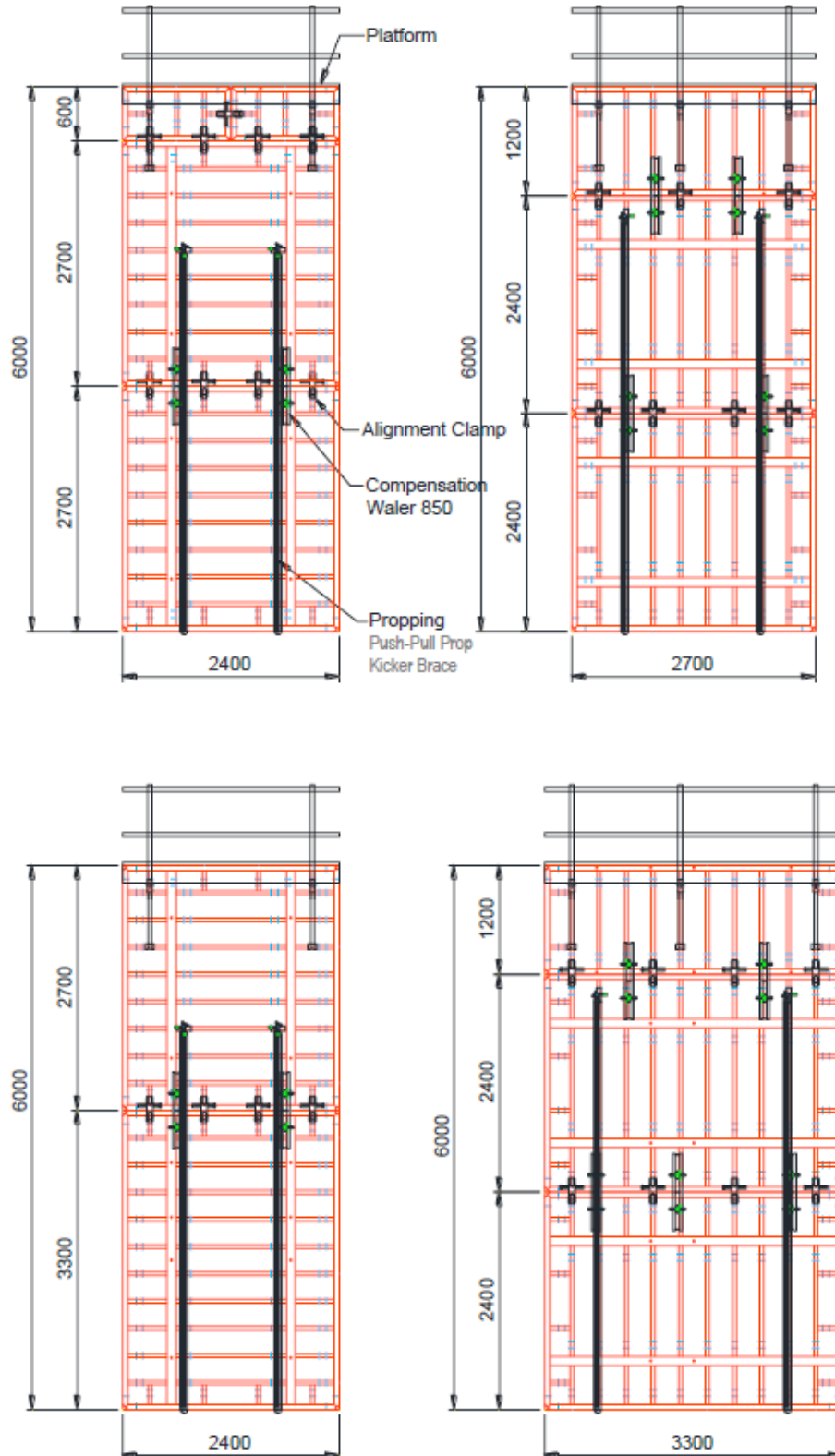
For Crane Handling. Clamping arrangements for 6.0m high single panel long shutters with no other attachments. Lifting from horizontal position to vertical:



## 5. Assembly Details

### Horizontal Panel Joints

For Crane Handling. Clamping arrangements for 6.0m high single panel long shutters with no other attachments. Lifting from horizontal position to vertical:

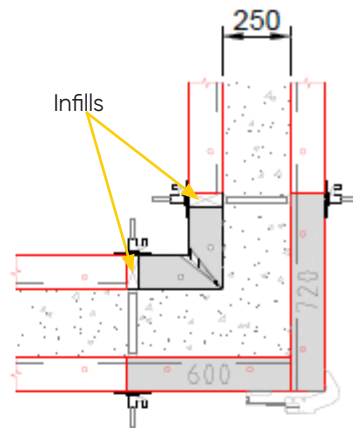
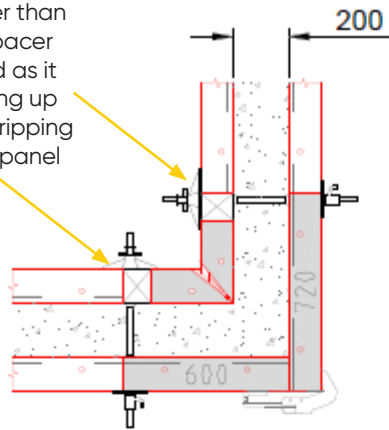


## 5. Assembly Details

### 90° Corners

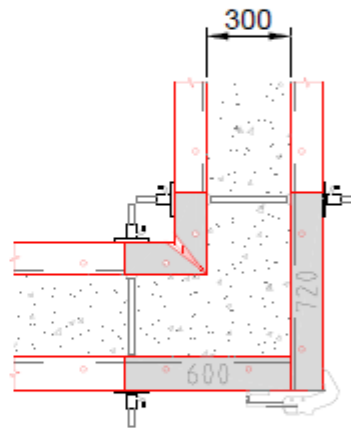
90° corners up to 400mm are made using 720 and 600 long Panels for external corners, and Internal Corner Panels for internal corners. The number and position of Alignment Clamps between the panels depend on the lateral concrete pressure, wall thickness and size of panels. This is shown for the external panels on the following pages for the maximum concrete pour height = shutter height as shown on the elevations. The internal panels are connected to each other in normal ways. Infills are placed between internal panels for wall thicknesses less than 300 and between externals for thicknesses more than 300 up to 400mm as shown below.

Where infills are wider than 50mm the 220mm spacer washer must be used as it is capable of spanning up to 100mm of infill & gripping both side ribs at the panel joint.

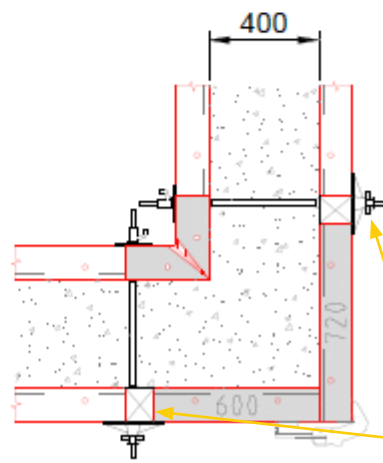
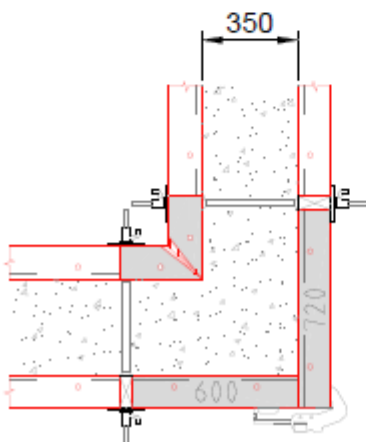


**Infills Inside**

Note: Alignment clamps at panel joints omitted for clarity.



**No Infills Required**

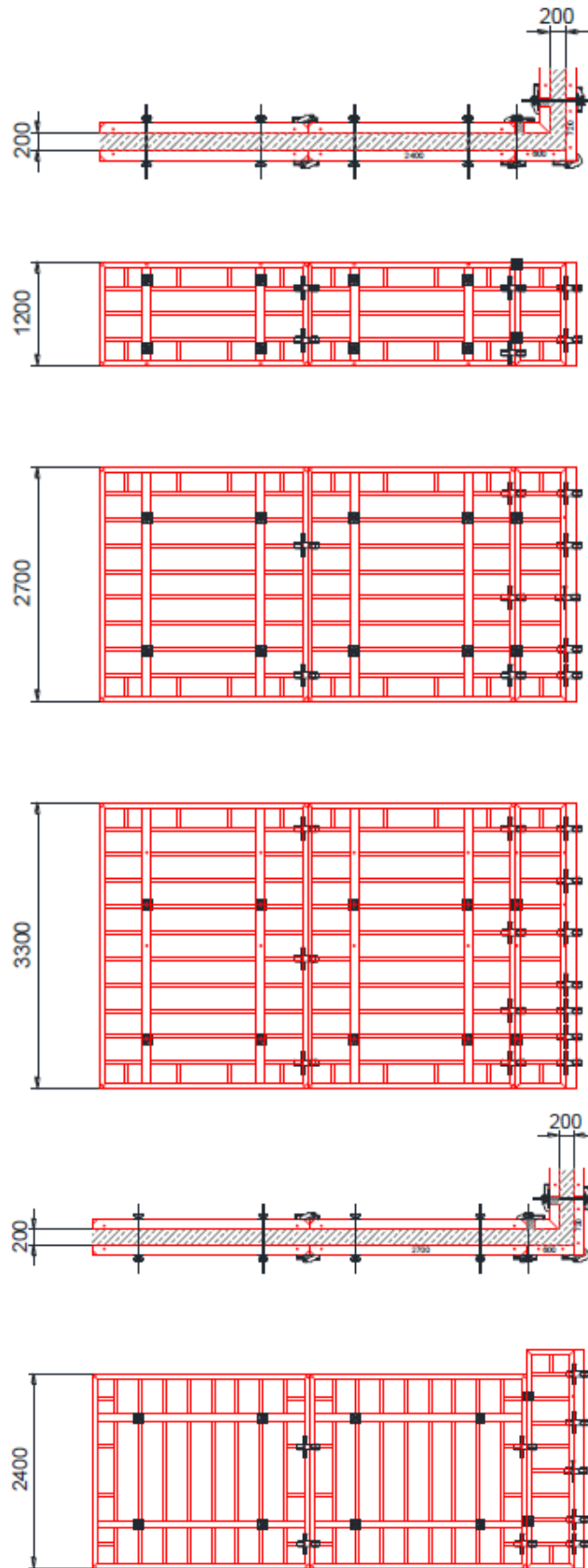


**Infills Outside**

Infills

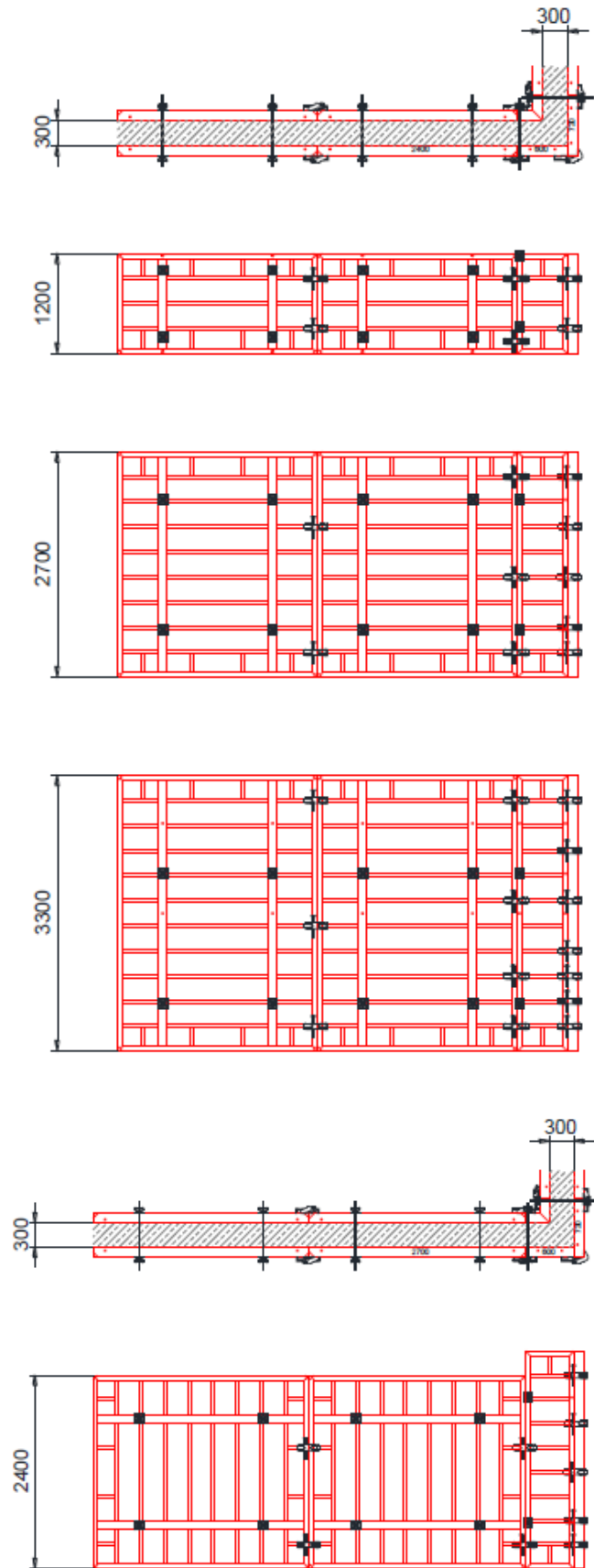
## 5. Assembly Details

### 90° Corners



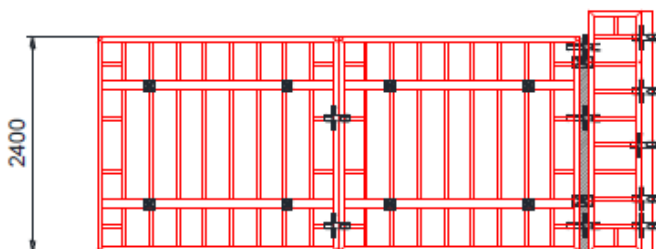
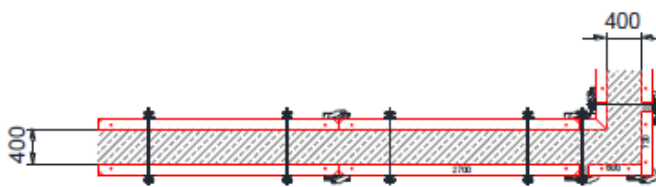
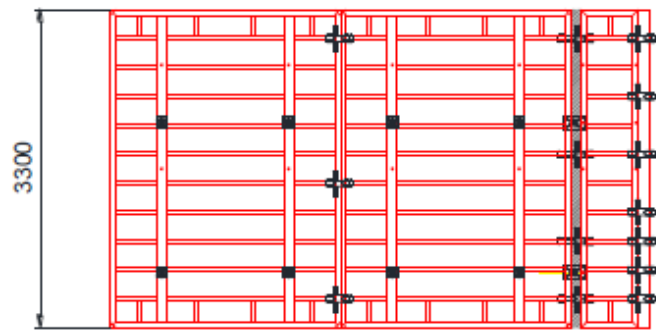
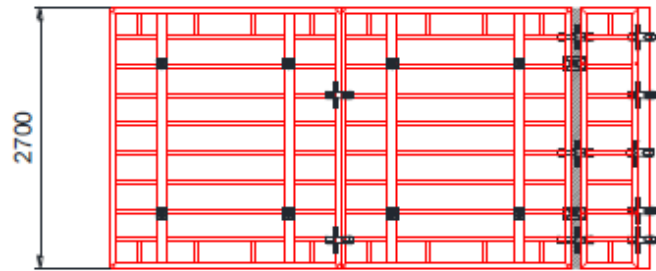
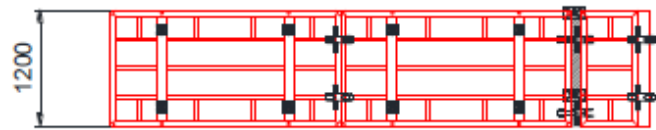
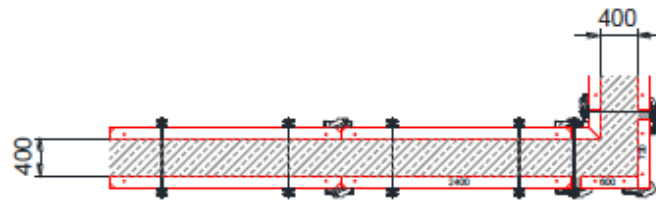
### 5. Assembly Details

#### 90° Corners



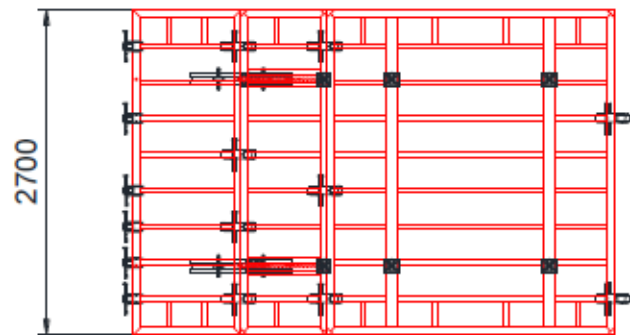
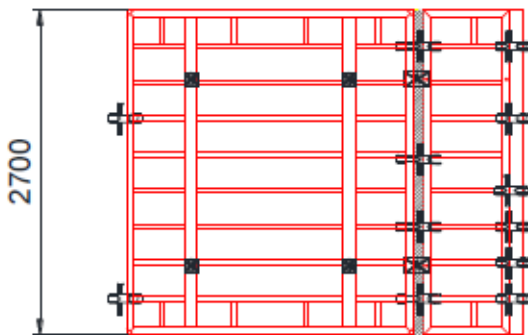
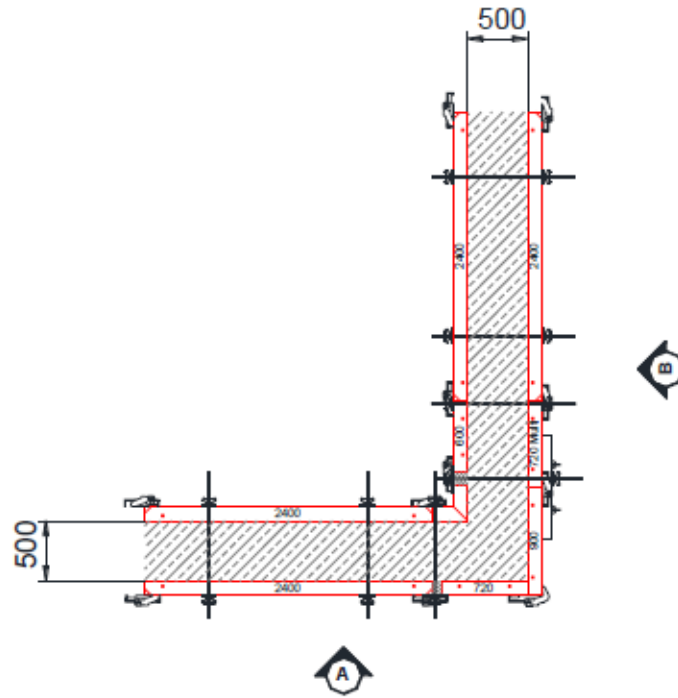
## 5. Assembly Details

### 90° Corners



### 5. Assembly Details

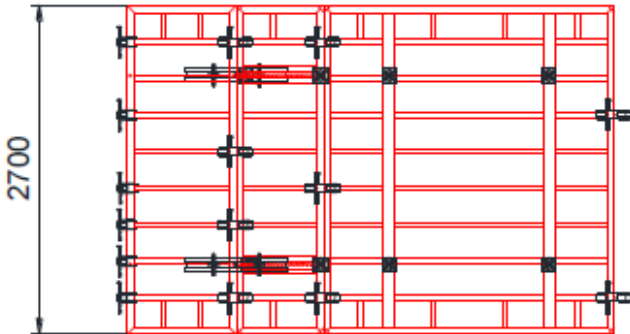
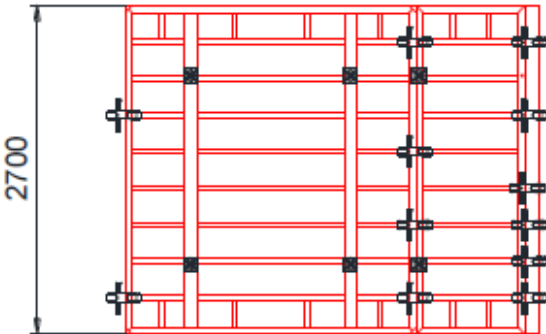
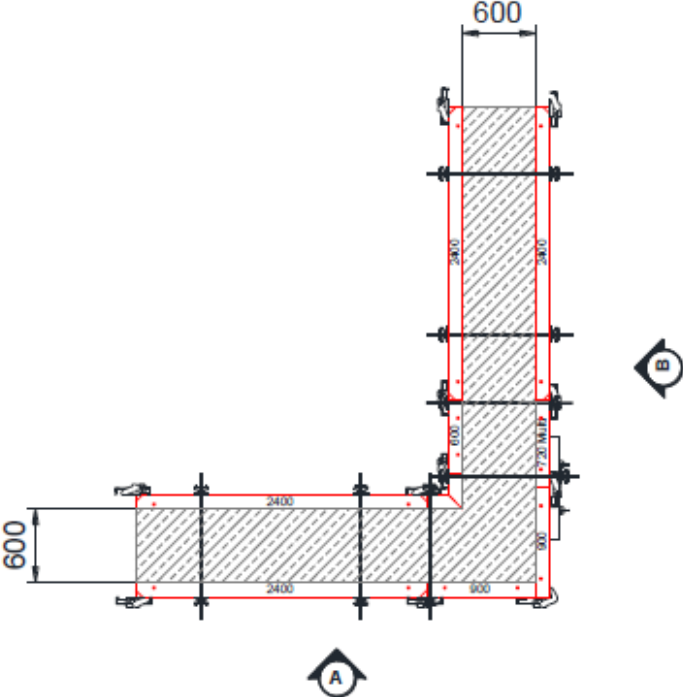
90° Corners





### 5. Assembly Details

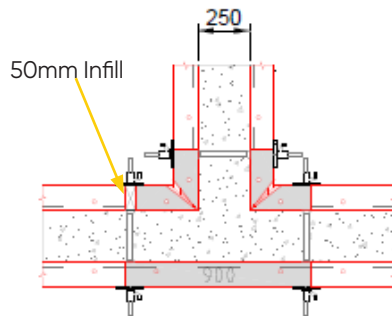
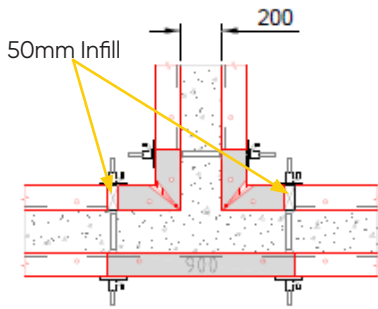
90° Corners



## 5. Assembly Details

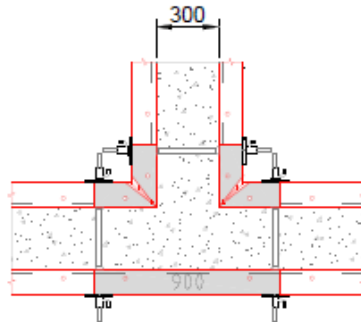
### T-Junctions

T Junctions up to 400mm are made using 900mm long Panels and Internal Corner Panels. The number and position of Alignment Clamps between the Internal Corner Panels and adjacent panels depend on the concrete lateral pressure, wall thickness and panel size which determine the amount of unbalanced force in the ties that need to be resisted by panels. This is shown on the following pages for the maximum concrete pour height = shutter height as shown on the elevations. Other panels are joined together in normal ways. Infills are placed between internal panels for wall thicknesses less than 300 and between externals for thicknesses more than 300 up to 400mm as shown below.



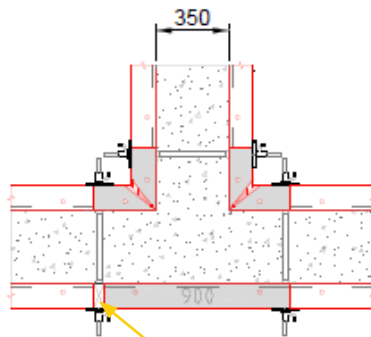
**Infills Inside**

Note: Alignment clamps at panel joints omitted for clarity.

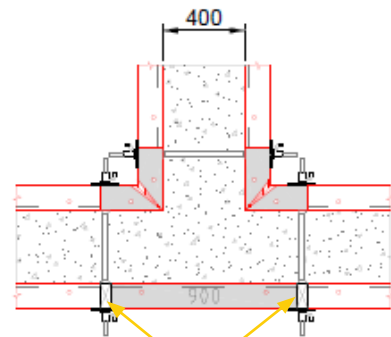


**No Infills Required**

**Infills Outside**



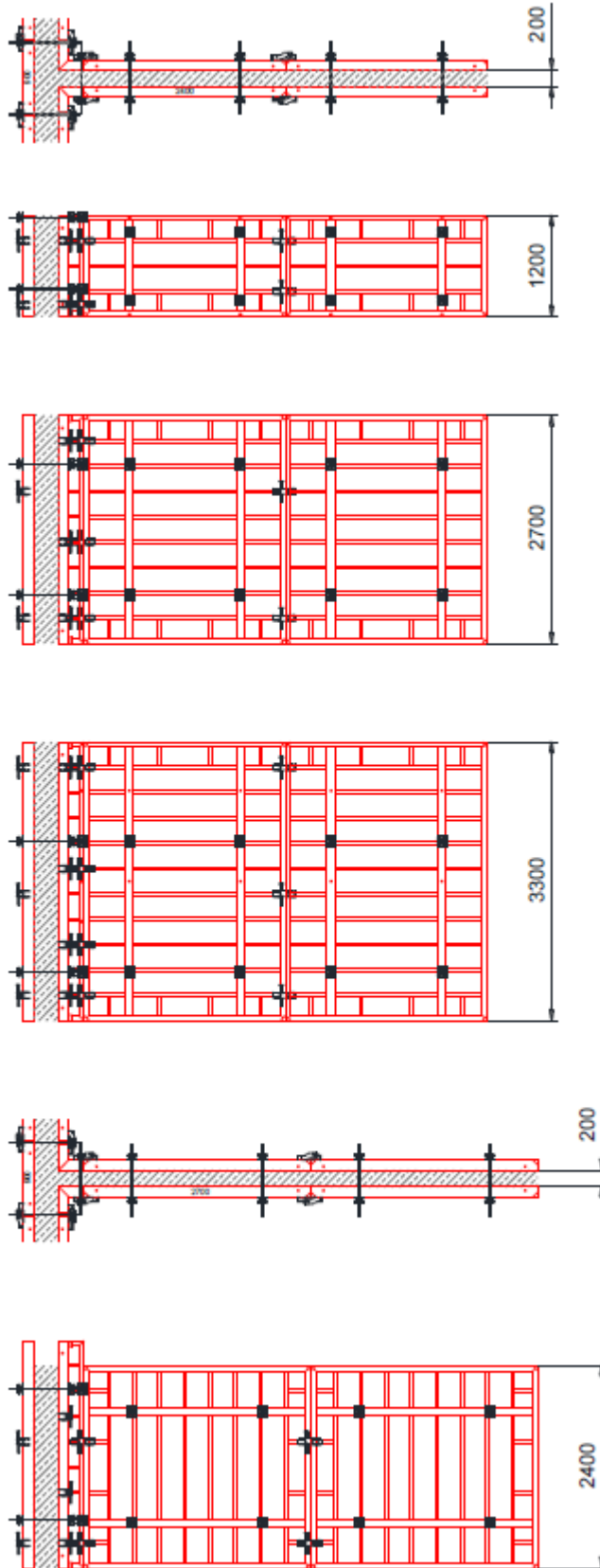
50mm Infill



50mm Infill

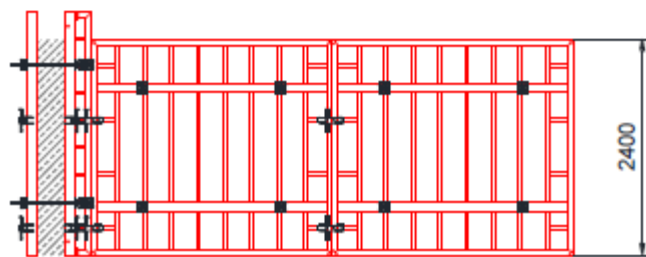
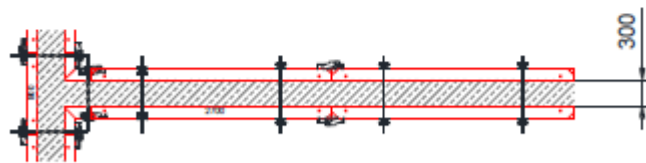
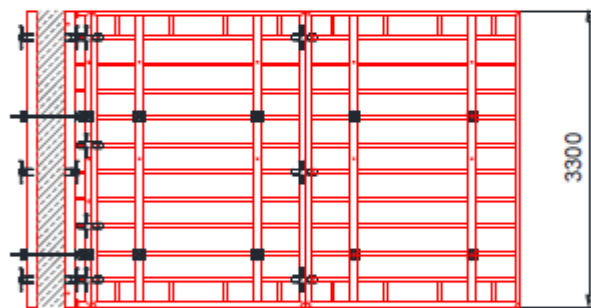
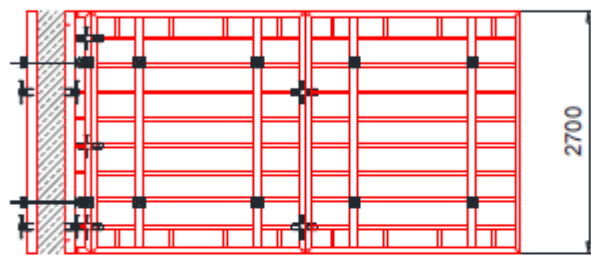
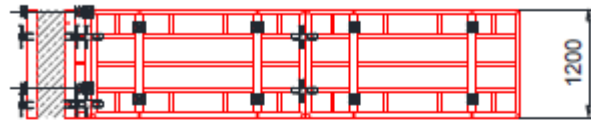
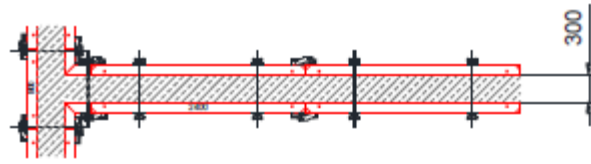
## 5. Assembly Details

### T-Junctions



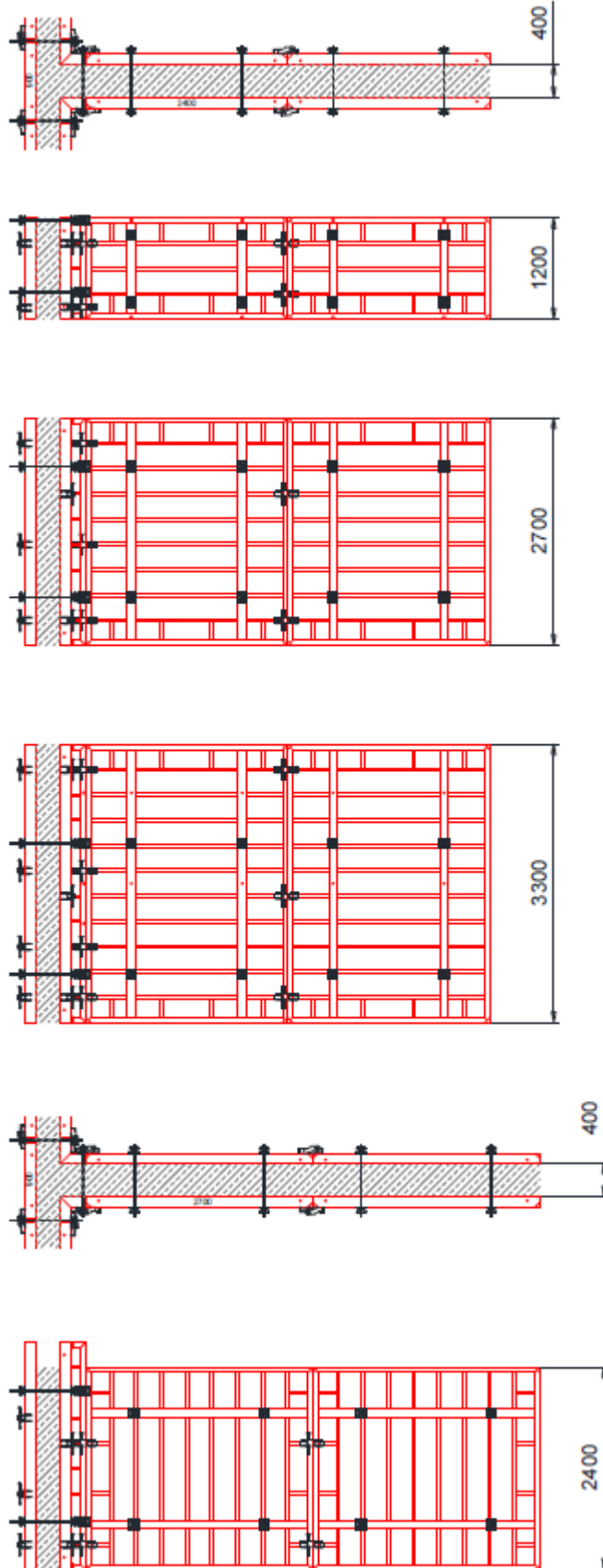
### 5. Assembly Details

#### T-Junctions



## 5. Assembly Details

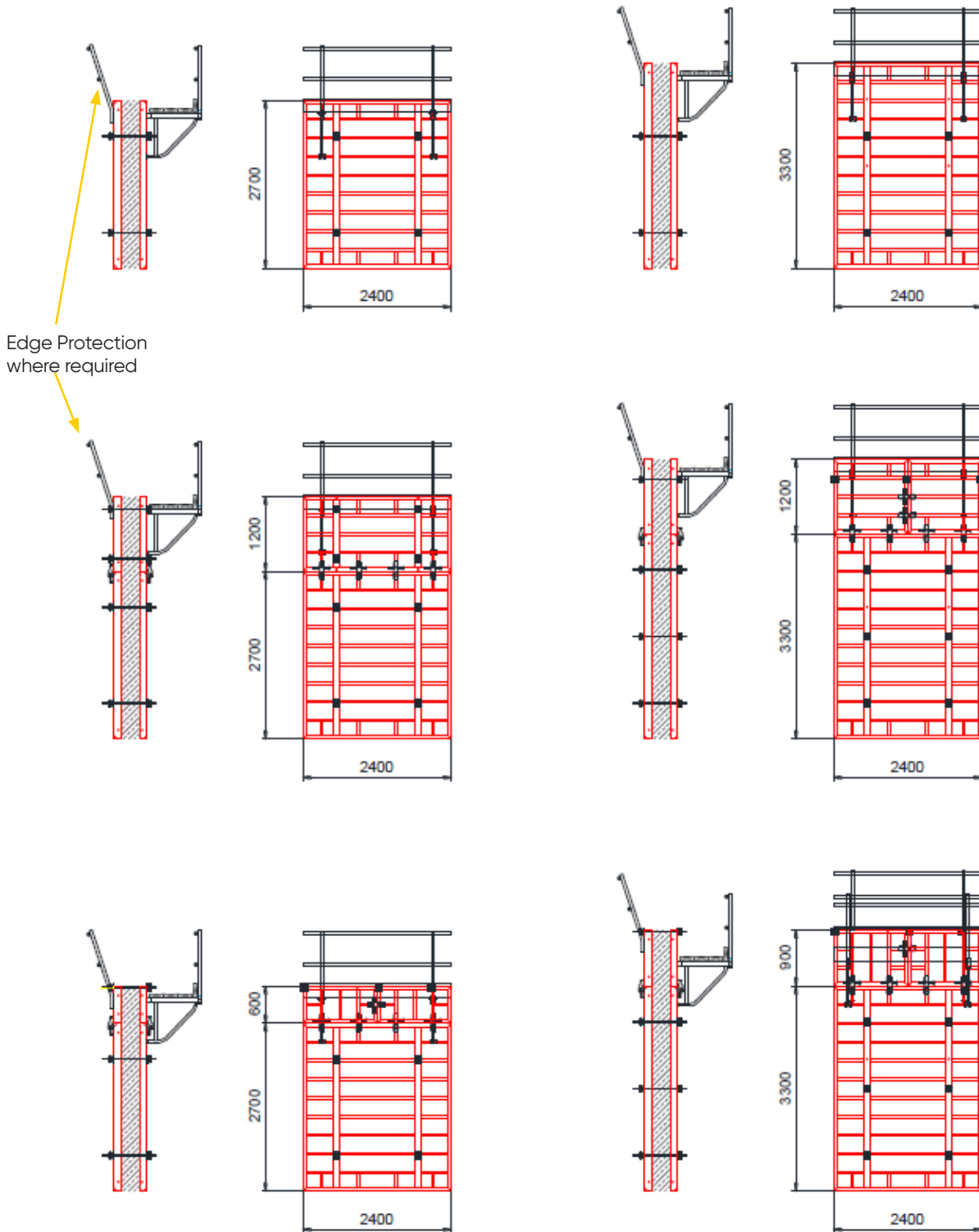
### T-Junctions



## 5. Assembly Details

### Working Platform Bracket

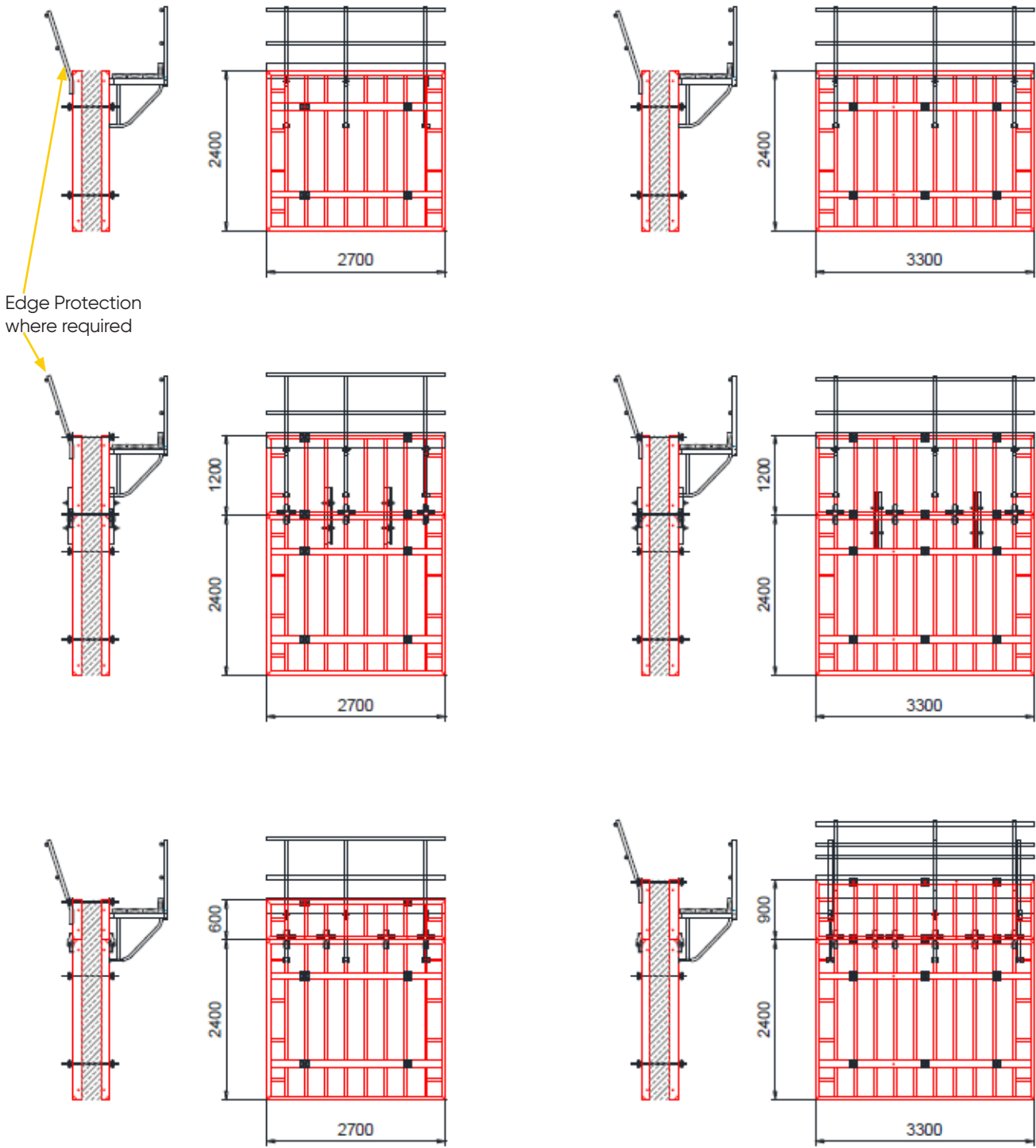
The maximum spacing between the brackets is 1.8m. Working Load Limit per bracket is 2kPa (200kg/m<sup>2</sup>) or 2kN (200kg) point load max (this point load is not in addition to 2kPa load). Please note stability of the shutters has to be checked separately. Following illustrations show some of locations to which the top Working Platform Bracket may be connected without using Platform Bracket Adapter. Platform Bracket Adapter enables Platform Bracket to be connected between horizontal ribs (refer to page 5.11). Push-Pull Props & Kicker Braces not shown for clarity.



### 5. Assembly Details

#### Working Platform Bracket,

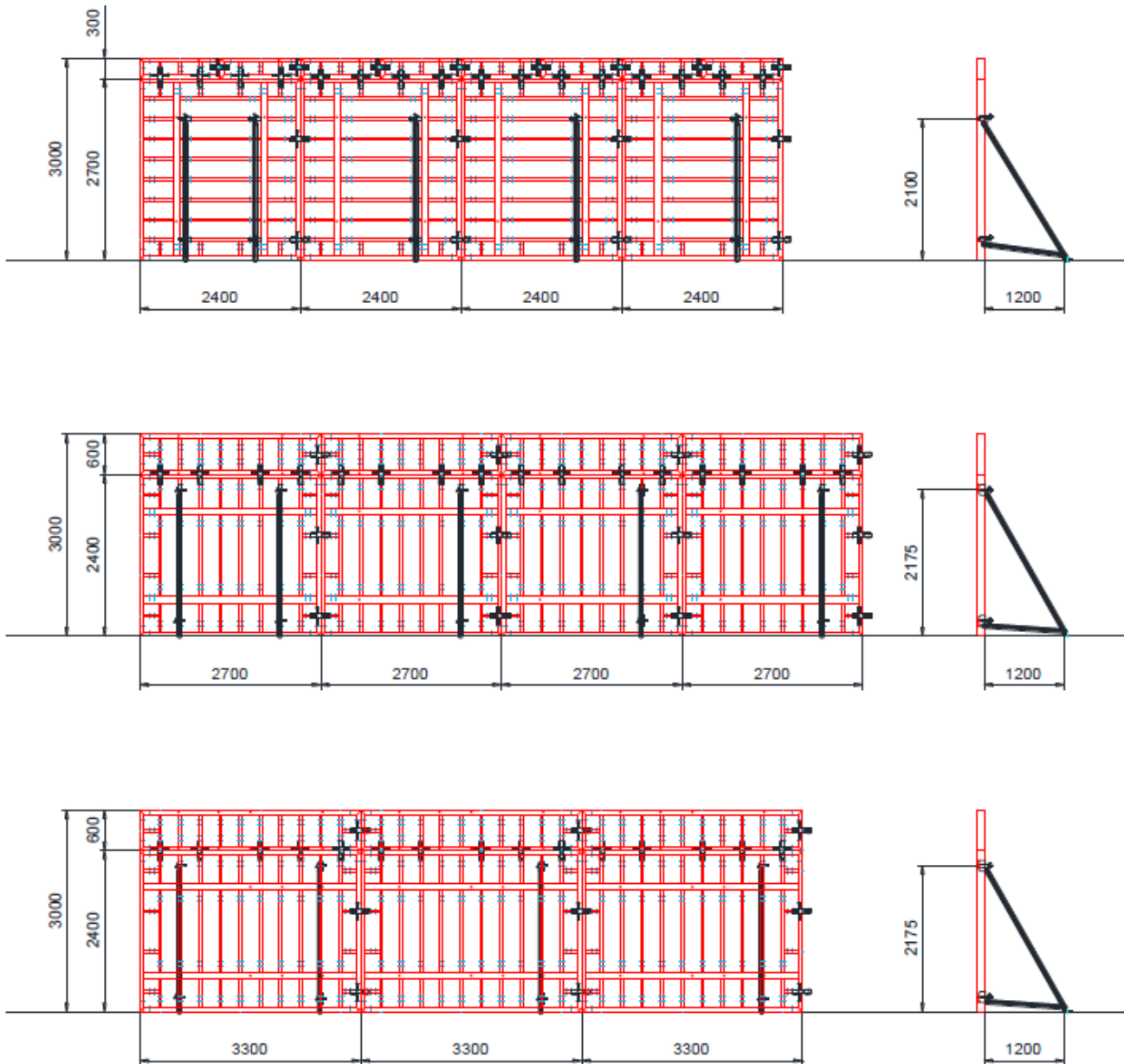
Push-Pull Props & Kicker Braces not shown for clarity.



### 5. Assembly Details

#### Push-Pull Props & Kicker Braces

Typical examples, wind load for region A terrain category 3 to AS/NZS1170.2.

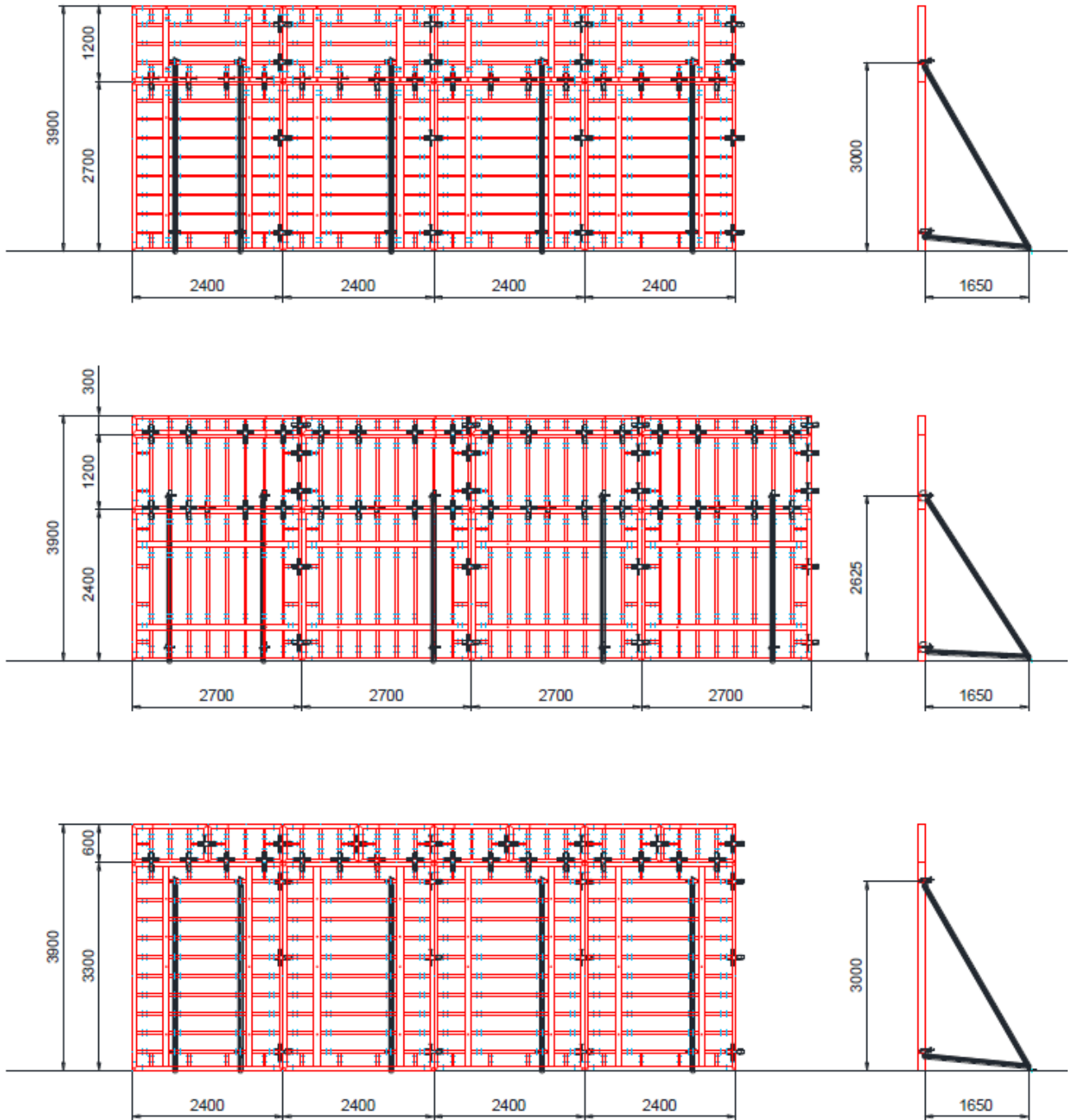




## 5. Assembly Details

### Push-Pull Props & Kicker Braces

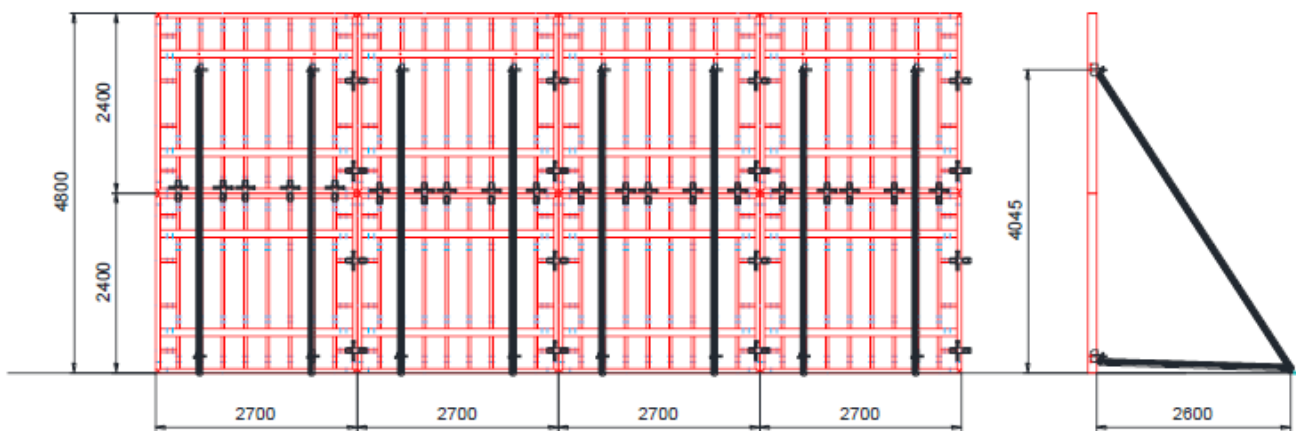
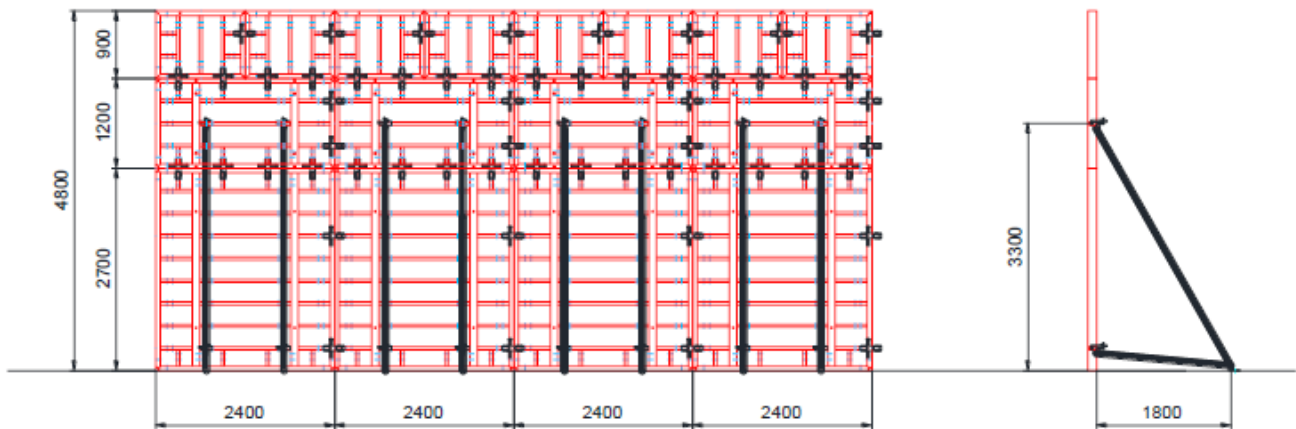
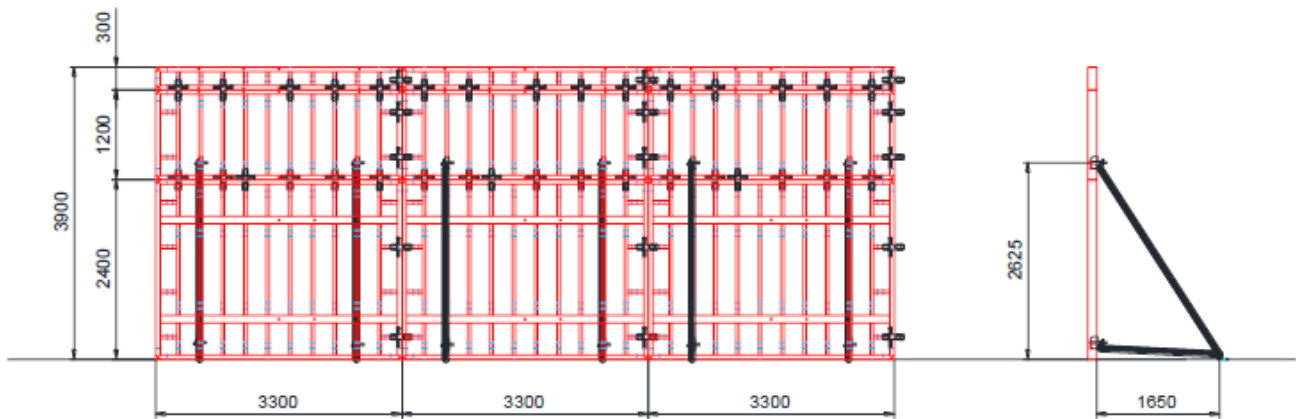
Typical examples, wind load for region A terrain category 3 to AS/NZS1170.2.



### 5. Assembly Details

#### Push-Pull Props & Kicker Braces

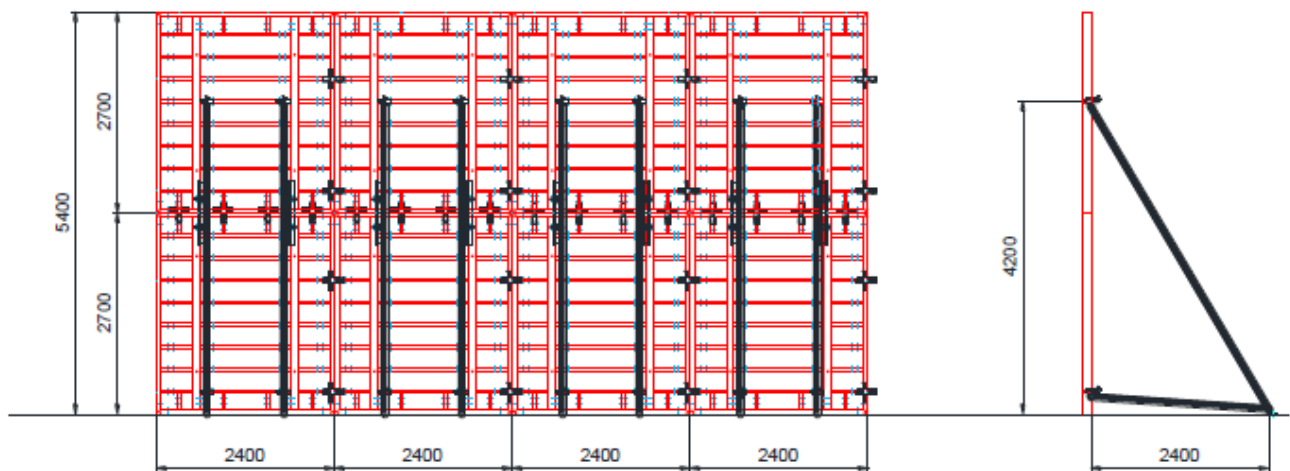
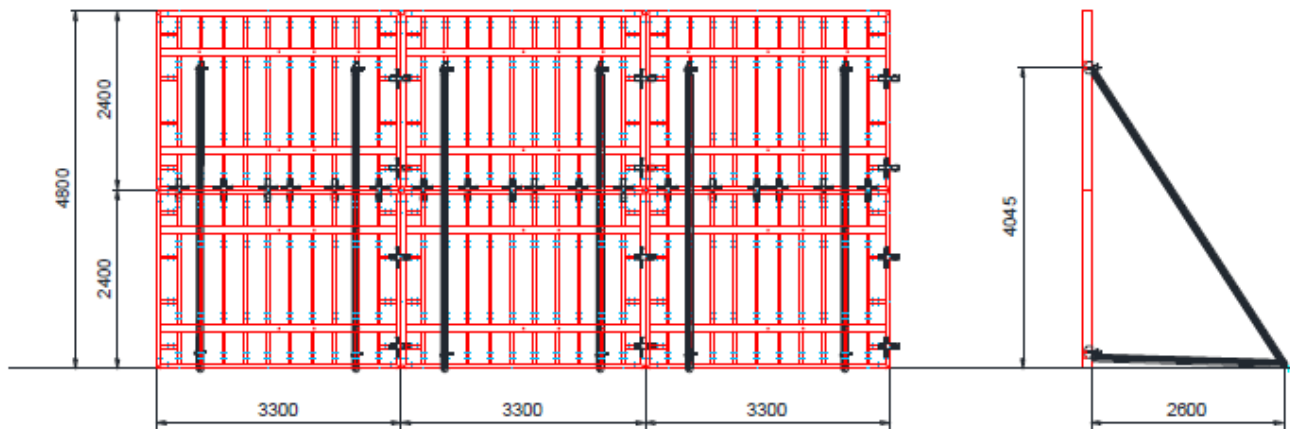
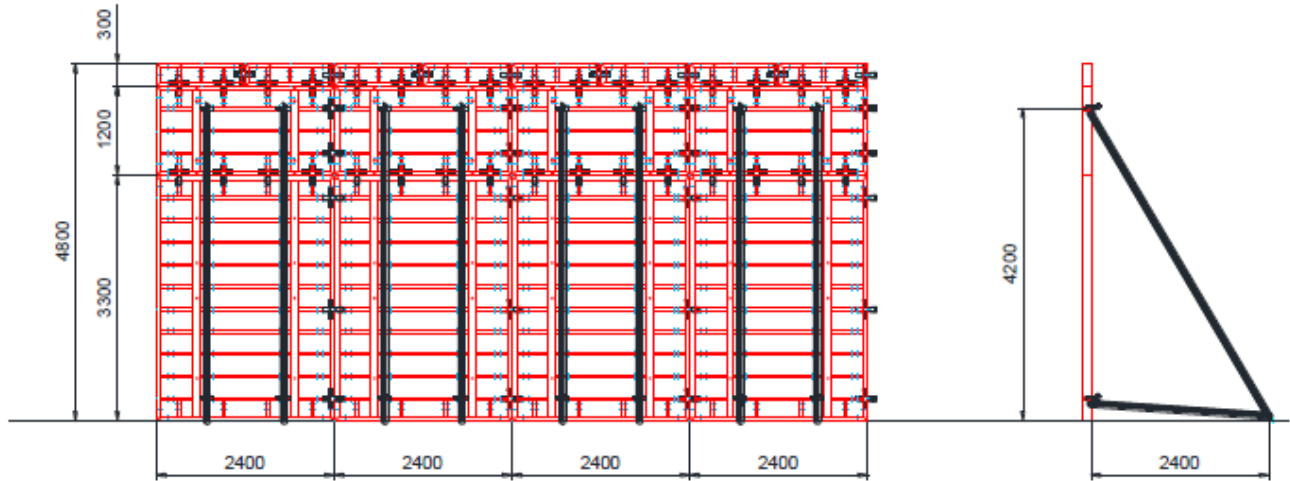
Typical examples, wind load for region A terrain category 3 to AS/NZS1170.2.



## 5. Assembly Details

### Push-Pull Props & Kicker Braces

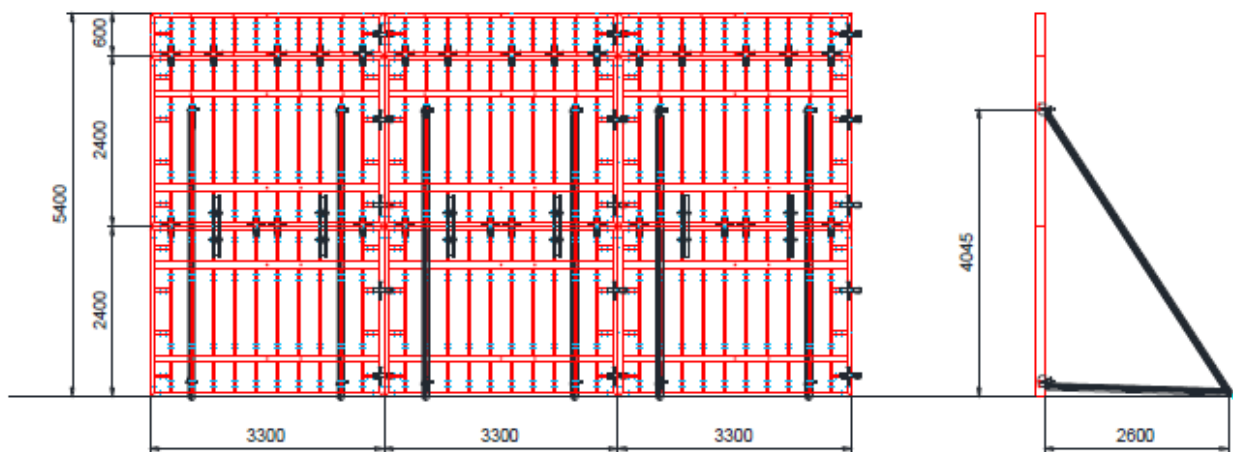
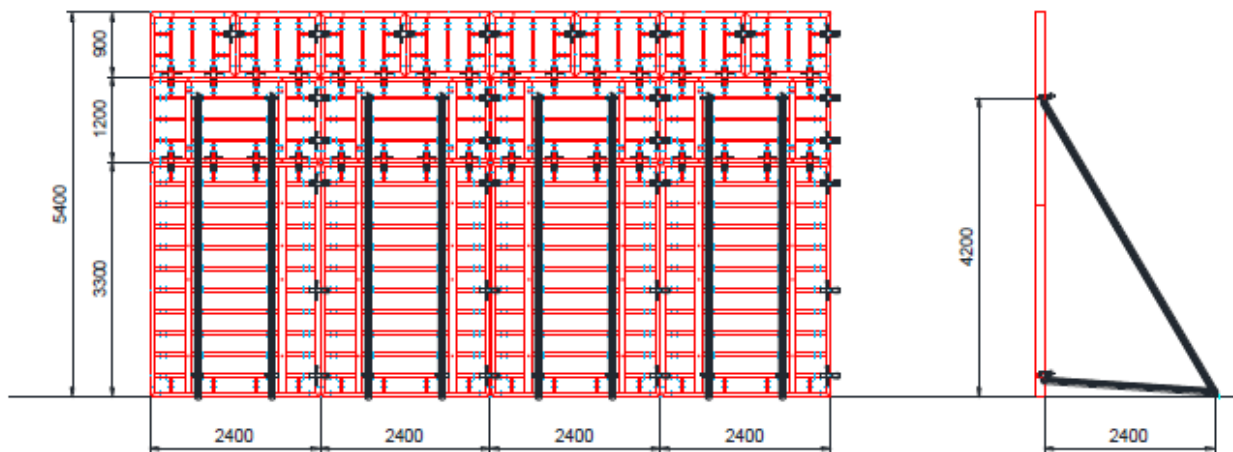
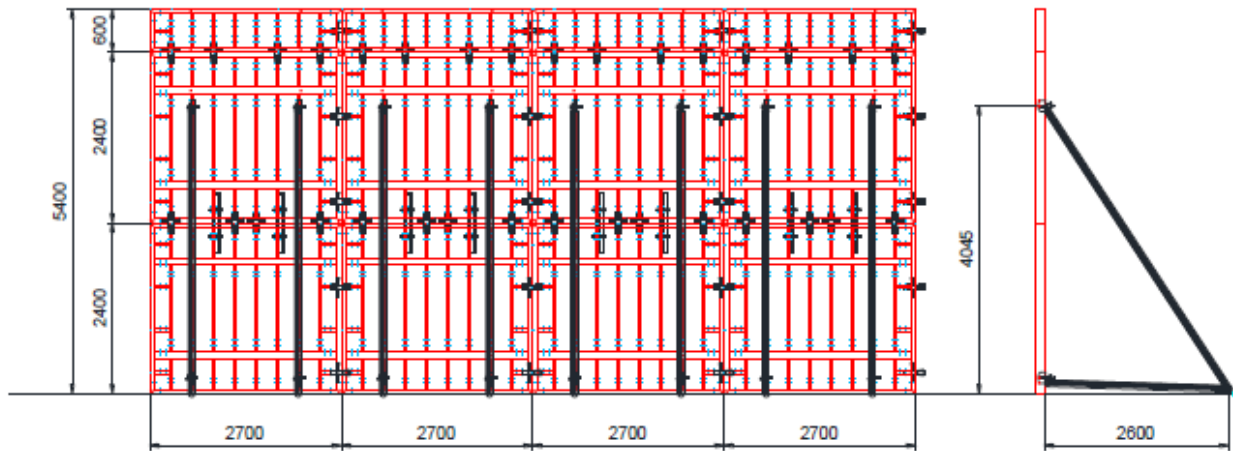
Typical examples, wind load for region A terrain category 3 to AS/NZS1170.2.



### 5. Assembly Details

#### Push-Pull Props & Kicker Braces

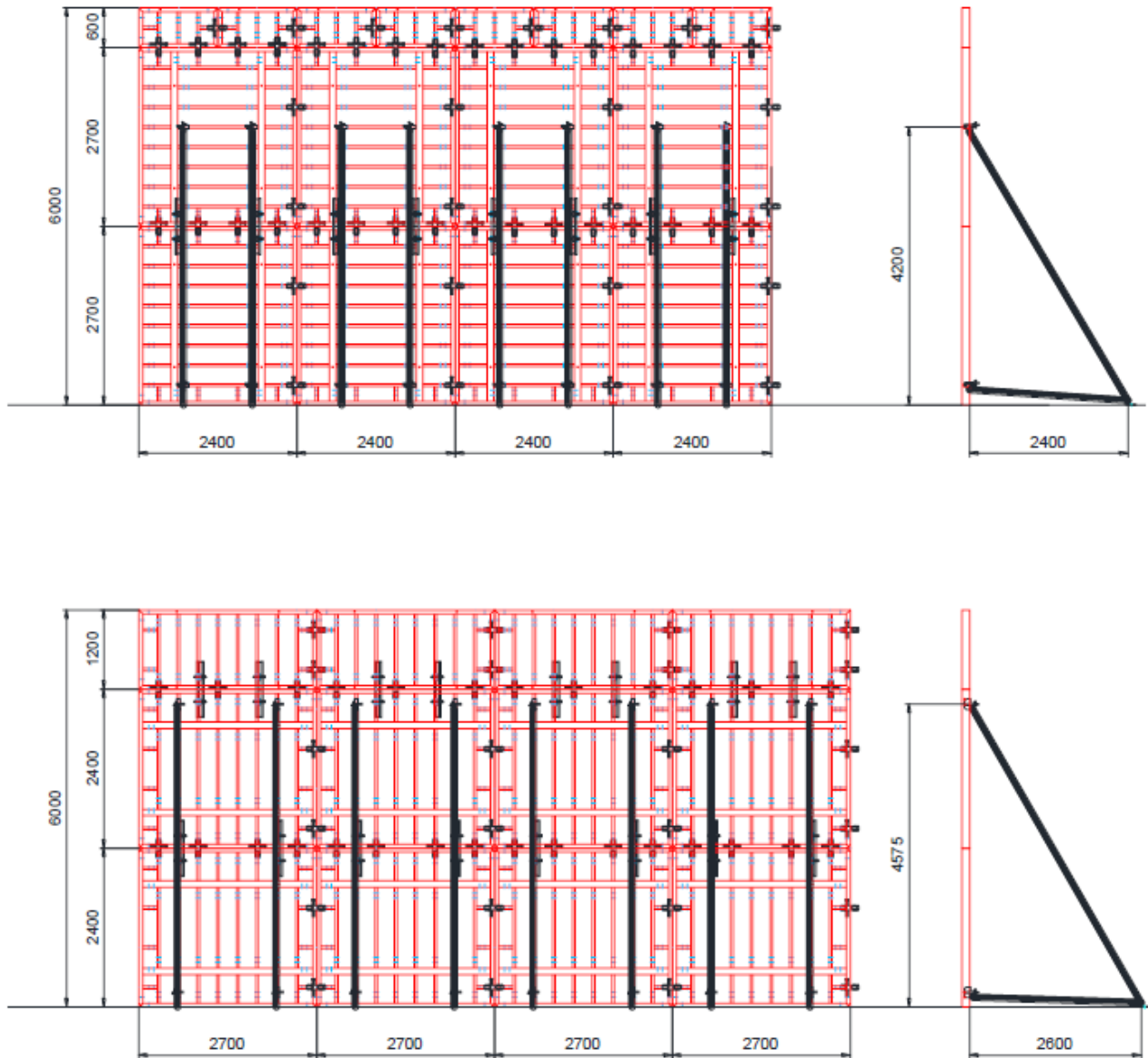
Typical examples, wind load for region A terrain category 3 to AS/NZS1170.2.



## 5. Assembly Details

### Push-Pull Props & Kicker Braces

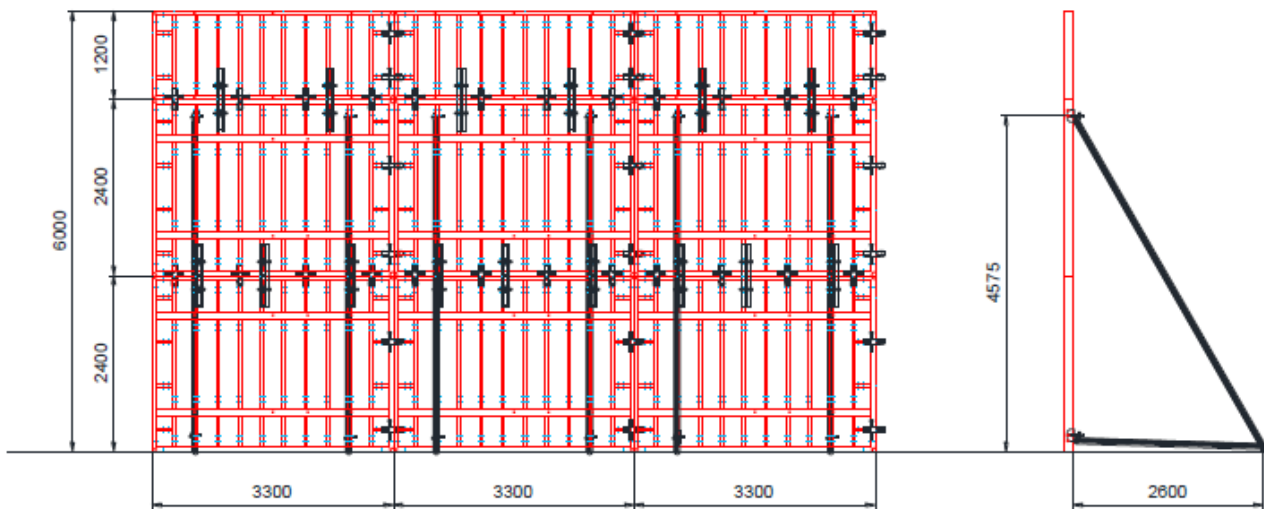
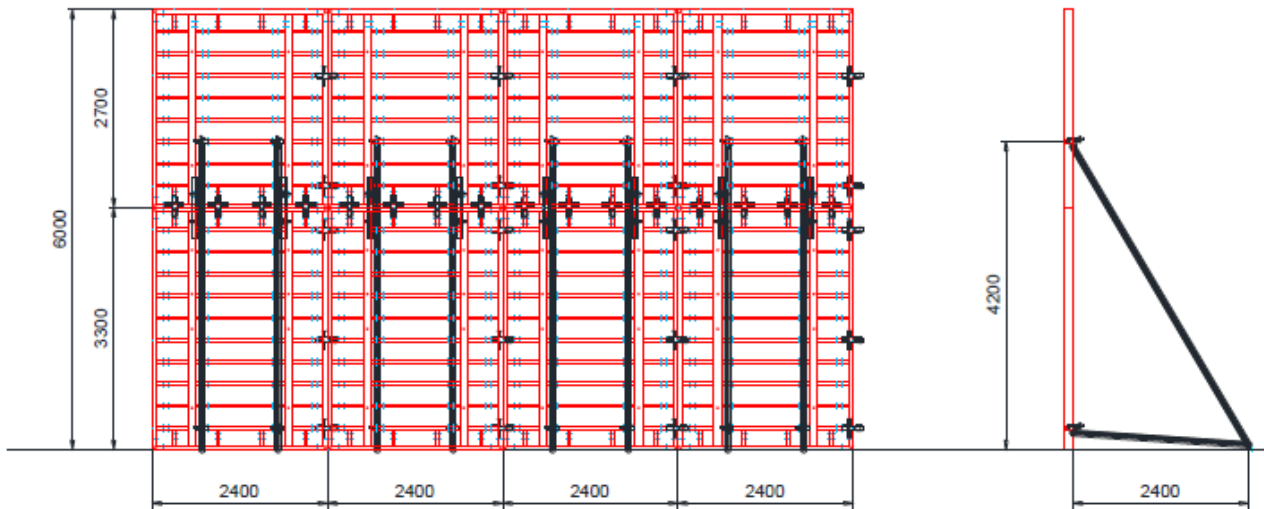
Typical examples, wind load for region A terrain category 3 to AS/NZS1170.2.



## 5. Assembly Details

### Push-Pull Props & Kicker Braces

Typical examples, wind load for region A terrain category 3 to AS/NZS1170.2.



## 6. TRANSPORT & HANDLING

## 6. Transport & Handling

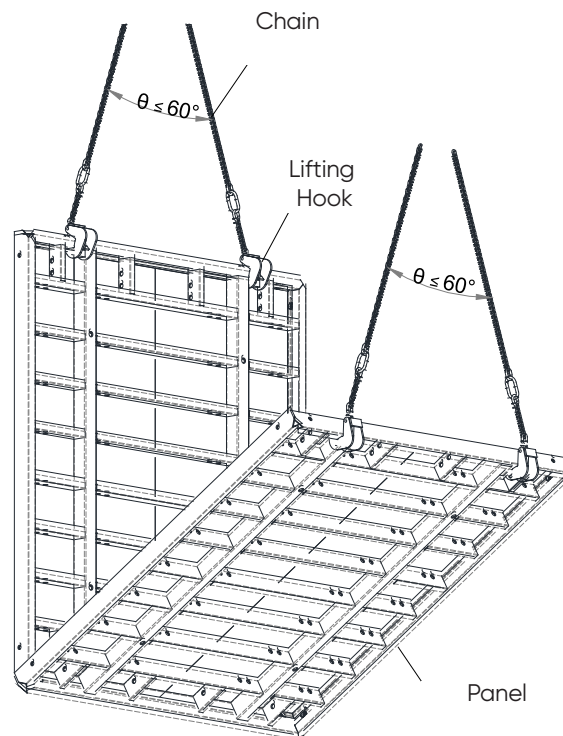
### Crane Handling

#### Lifting Hooks

- The Lifting Hooks must be used in pairs to crane handle panels.
- They are self locking and can be released from the ground or slab using a tie bar or piece of timber.
- The Working Load Limit for a pair of Lifting Hooks is 3000kg.
- The angle 'θ' of spread between crane chains must not exceed 60°.

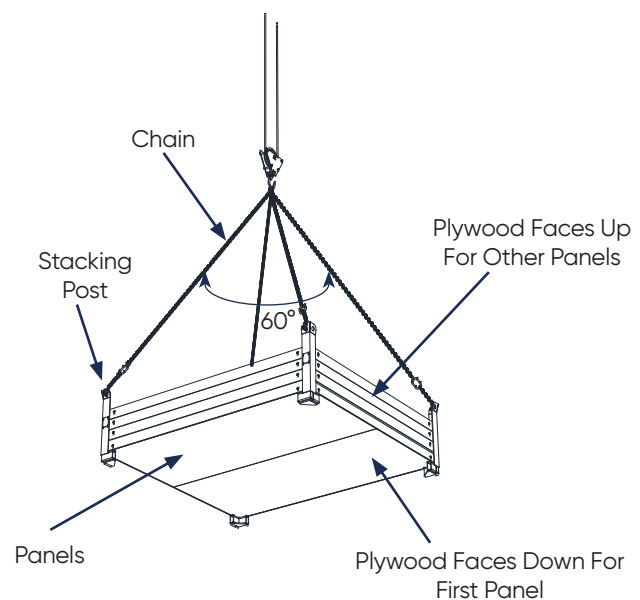
Lifting the Acrowall-80 Panel from horizontal to vertical position.

When panels are used horizontally in a multi-height gang form to be crane handled, additional Alignment Clamps and Compensation Walers will be required.



### Stacking Posts

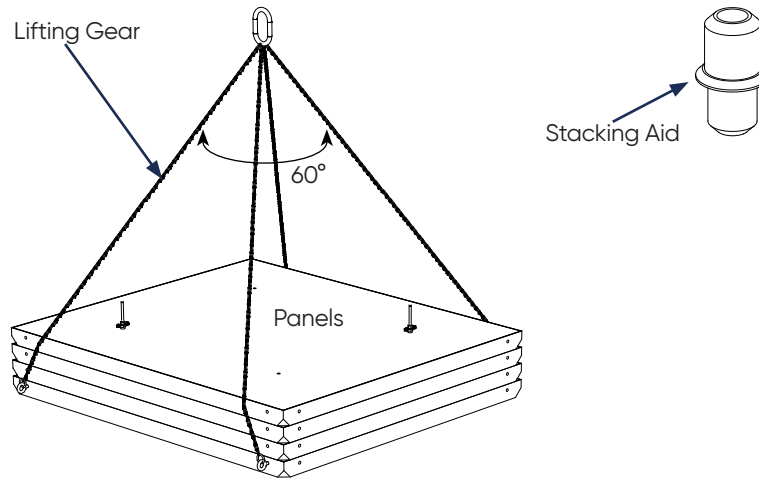
The Stacking Post is used to handle up to 5 panels of any size except 3300x2400 which must be lifted 4 panels in a stack. Working Load Limit of 500kg per Stacking Post. The Lifting Chain is connected to each Stacking Post and can safely take 2000kg with angle of spread between crane chains must not exceed 60°. Stacking Acrowall-80 Panels using Stacking Posts.





## 6. Transport & Handling

### Lifting Gear and Lifting Pins



Stacking Acrowall-80 Panels using Lifting Gear and Lifting Pins. Stacking Aids or HT Thru Ties & Wingnuts must be used to prevent panels from slipping when panels are lifted as shown above.

The Lifting Gear and Lifting Pins are used to handle up to:

- 4 panels 3.3m × 2.4m or
- 5 panels 2.7m × 2.4m or
- 8 panels 1.2m × 2.4m or smaller

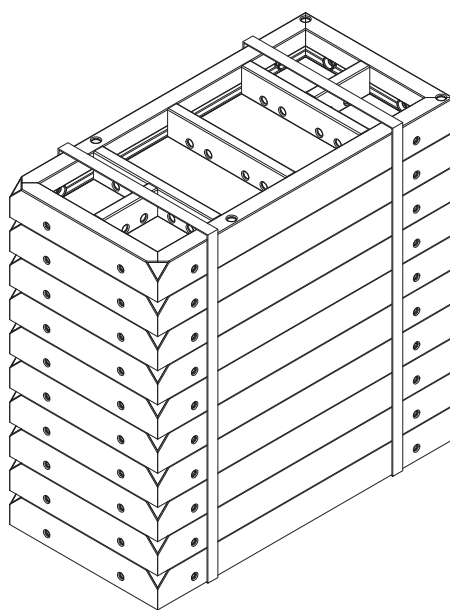
Working Load Limit per Pair = 3000kg. Angle of spread between crane chains must not exceed 60°.

## 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.



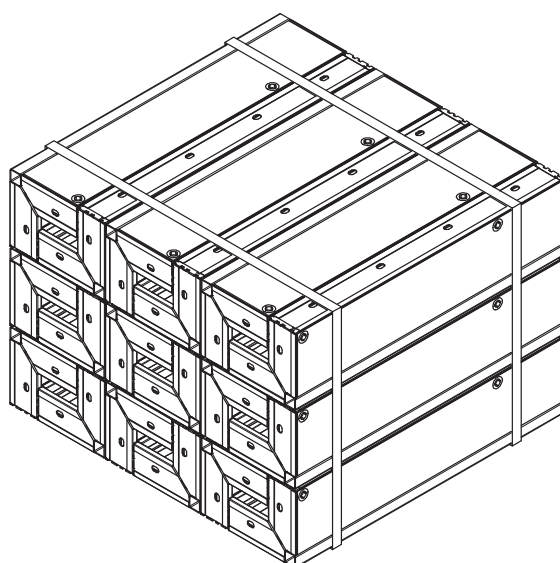
| DESCRIPTION                   | UNIT MASS (KG) | QTY PER BUNDLE | TOTAL MASS PER BUNDLE (KG) | ACROW STILLAGE TYPE |
|-------------------------------|----------------|----------------|----------------------------|---------------------|
| 1200 Panel Range 240 - 720mm  | 60.0 max       | 5              | 300                        | Bundle              |
| 1200 Panel Range 900 - 2400mm | 195.0 max      | 5              | 975                        | Bundle              |
| 2700 Panel Range 240 - 720mm  | 121.0 max      | 5              | 605                        | Bundle              |
| 2700 Panel Range 900 - 2400mm | 392.0max       | 5              | 1960                       | Bundle              |
| 3300 Panel Range 240 - 720mm  | 145.0max       | 5              | 725                        | Bundle              |
| 3300 Panel Range 900 - 2400mm | 472.0 max      | 5              | 2360                       | Bundle              |
| MP Panels 1200 x 720          | 72.0           | 5              | 360                        | Bundle              |
| MP Panels 2700 x 720          | 135.0          | 5              | 675                        | Bundle              |
| MP Panels 3300 x 720          | 176.0          | 5              | 880                        | Bundle              |
| 600 High Panels 600 x 300     | 20.0           | 5              | 100                        | Bundle              |
| 600 High Panels 600 x 600     | 32.0           | 5              | 160                        | Bundle              |
| 600 High Panels 600 x 720     | 37.0           | 5              | 185                        | Bundle              |
| 600 High Panels 600 x 900     | 43.0           | 5              | 215                        | Bundle              |

## 6. Transport & Handling

### Corner & Articulated 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.



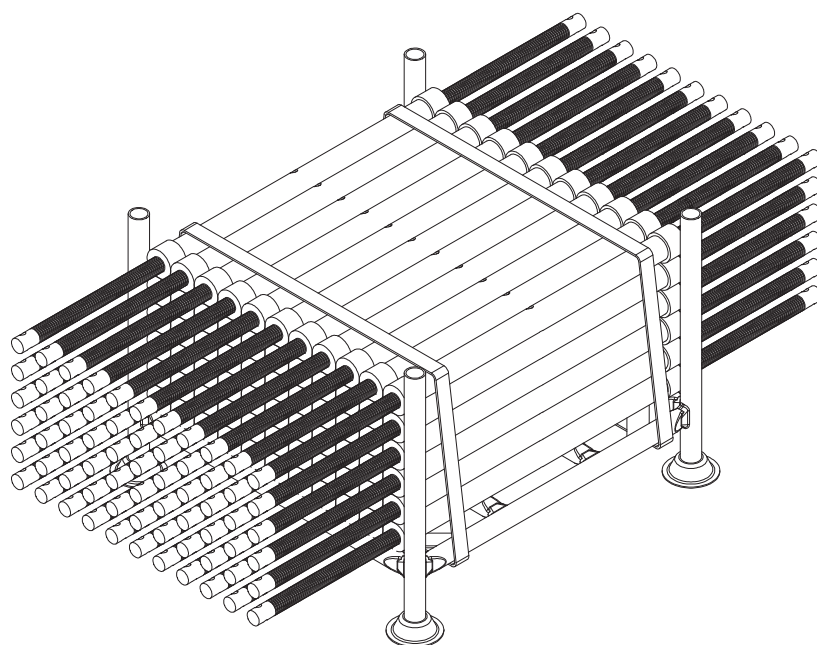
| DESCRIPTION           | UNIT MASS (KG) | QTY PER STILLAGE | TOTAL MASS PER STILLAGE (KG) | ACROW STILLAGE TYPE |
|-----------------------|----------------|------------------|------------------------------|---------------------|
| ICP 600 x 300 x 300   | 31.0           | 18               | 558                          | Bundle              |
| ICP 1200 x 300 x 300  | 63.0           | 18               | 1134                         | Bundle              |
| ICP 2700 x 300 x 300  | 108.0          | 10               | 1080                         | Bundle              |
| ICP 3300 x 300 x 300  | 131.0          | 10               | 1310                         | Bundle              |
| ACP 1200 x 292 x 292  | 78.0           | 18               | 1404                         | Bundle              |
| ACP 2700 x 292 x 292  | 164.0          | 8                | 1312                         | Bundle              |
| ACP 13000 x 292 x 292 | 199.0          | 8                | 1592                         | Bundle              |

## 6. Transport & Handling

### Kicker Brace / Push-Pull Prop

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.



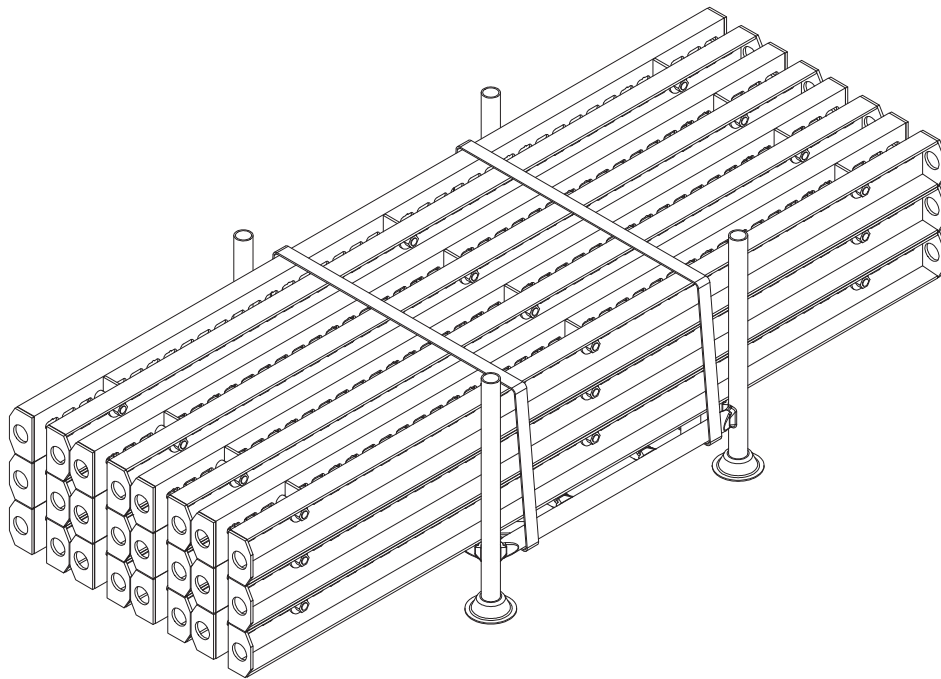
| DESCRIPTION                  | UNIT MASS (KG) | QTY PER STILLAGE | TOTAL MASS PER STILLAGE (KG) | ACROW STILLAGE TYPE |
|------------------------------|----------------|------------------|------------------------------|---------------------|
| Push/Pull Prop (2050-2940mm) | 27.0           | 40               | 1080                         | SP                  |
| Push/Pull Prop (2900-3800mm) | 31.0           | 35               | 1085                         | SP                  |
| Push/Pull Prop (4600-6000mm) | 69.0           | 15               | 1035                         | SP                  |
| Kicker Brace (1080-1400mm)   | 14.0           | 60               | 840                          | SP                  |
| Kicker Brace (1280-2100mm)   | 20.0           | 50               | 1000                         | SP                  |
| Kicker Brace (2030-12940mm)  | 26.0           | 40               | 1040                         | SP                  |

## 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:

- 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 |
|-------------------------|----------------|------------------|------------------------------|---------------------|
| Compensation Waler 850  | 13.5           | 12               | 162                          | MP                  |
| Compensation Waler 1200 | 19.0           | 12               | 228                          | SP                  |
| Universal Waler         | 89.0           | 12               | 1068                         | SP                  |

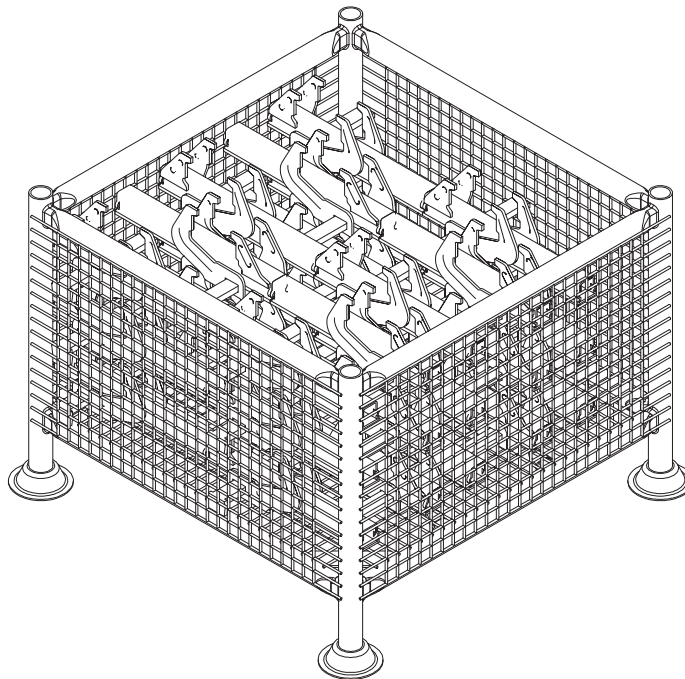
## 6. Transport & Handling

### Alignment Clamp / Brackets

The Acrow stillage is used to store a set number of items per a stillage. 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.



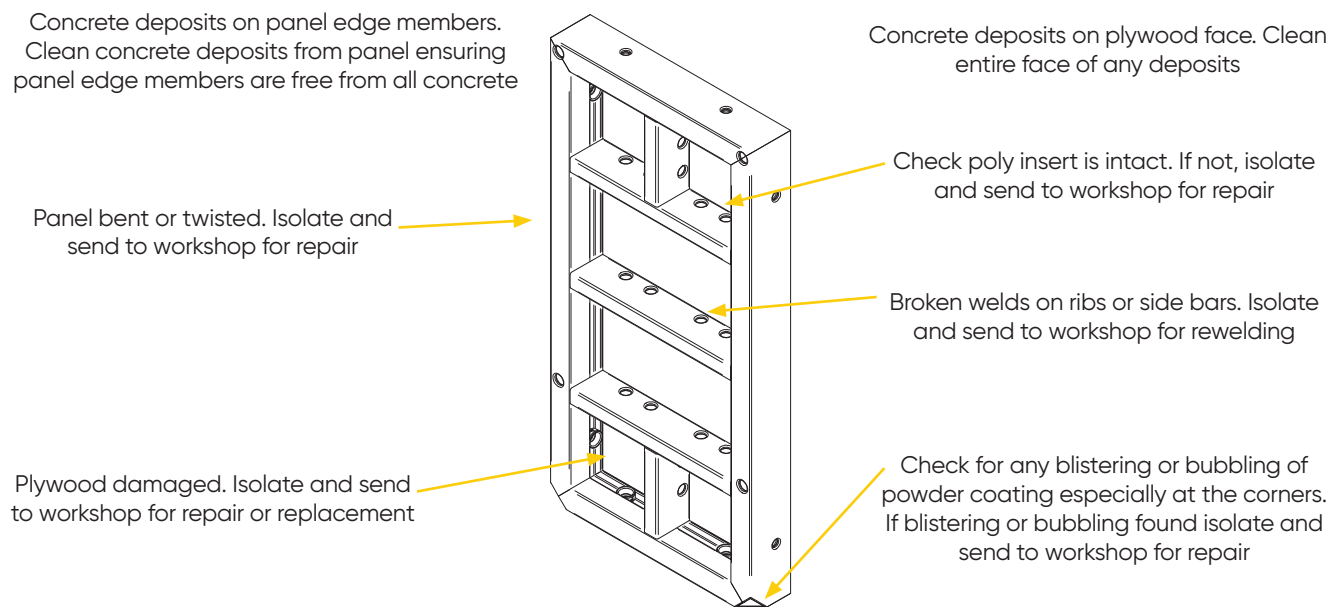
| DESCRIPTION               | UNIT MASS (KG) | QTY PER STILLAGE | TOTAL MASS PER STILLAGE (KG) | ACROW STILLAGE TYPE |
|---------------------------|----------------|------------------|------------------------------|---------------------|
| Alignment Clamp           | 4.5            | 32               | 144                          | MEP                 |
| Alignmant Clamp 380       | 5.5            | 32               | 176                          | MEP                 |
| Top Handrail Post Bracket | 1.8            | 60               | 108                          | MEP                 |
| Frame Anchor Bracket      | 2.3            | 100              | 230                          | MEP                 |
| Plumbing Shear Bracket    | 14.0           | 40               | 560                          | MEP                 |
| Working Platform Bracket  | 17.0           | 20               | 340                          | MP                  |

## 7. MAINTENANCE & INSPECTION

## 7. Maintenance & Inspection

### Panel

The panel is the main component in the Acrowall-80 system. The panel's plywood surface forms the surface finish for the wall being poured, it is therefore of the utmost 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.



### Inspection

Generally, visual inspection checking for the possible faults listed below.

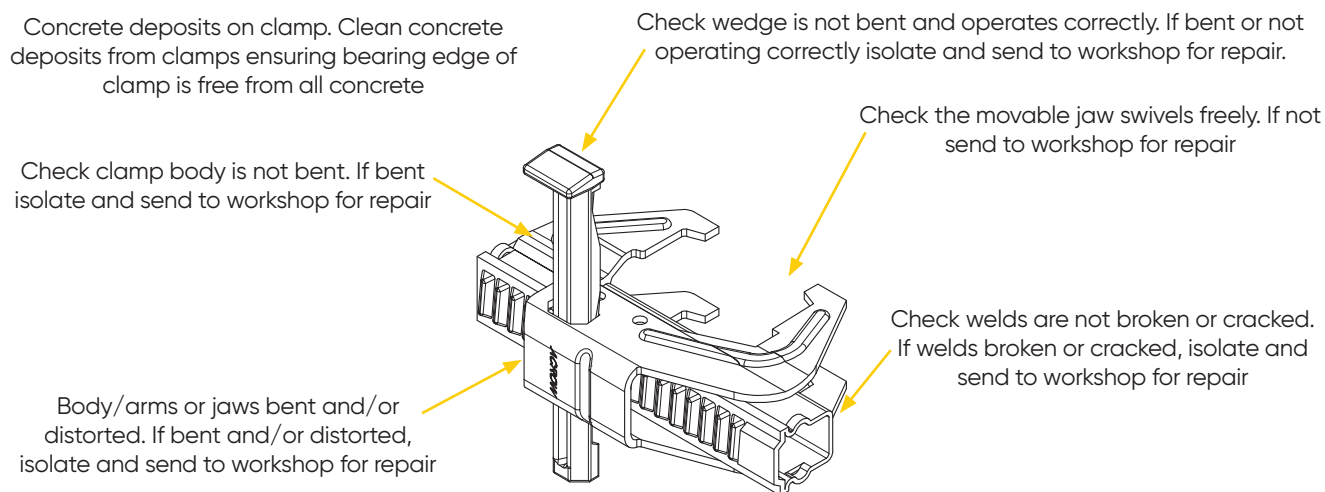
| POSSIBLE FAULTS                          | DAMAGE LIMITS FOR REPAIR   | RECOMMENDED ACTION  |
|--|--|---|
| Panel bent or twisted                    | Panel must be straight and free of twist   | Straighten if possible otherwise scrap* (* See WI-GE-103)   |
| Welds broken or cracked                  | All welds must be intact   | Grind back & reweld* (* See WI-GE-100)  |
| Ribs or edge members buckled or damaged  | Ribs and edge members must be straight   | Straighten or replace if possible otherwise scrap* (* See WI-GE-103)  |
| Concrete deposits on plywood face        | Plywood face must be clear of any concrete deposits                              | Clean off all concrete deposits<br><b>DO NOT USE WATER BLASTER ON PLYWOOD SURFACE</b>   |
| Concrete deposits on edge members        | Edge members must be free of all concrete  | Clean off all concrete with scraper or water blaster  |
| Plywood damaged                          | Small nail holes acceptable  | Replacing plywood if damage not repairable  |
| Poly inserts missing                     | Poly inserts must be in place otherwise concrete leakage will occur              | Replace ply ensuring ply has poly inserts   |
| Blistering or bubbling of powder coating | Blistering or bubbling indicates rust under the paintwork which must be treated. | Clean paint away and remove/treat the rust. If damage is detrimental to the strength of the panel then replace affected components & repaint. |



## 7. Maintenance & Inspection

### Aligning Clamps

Acrowall-80 aligning clamps are used to keep the panels to the true alignment.



### Inspection

Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS                                | DAMAGE LIMITS FOR REPAIR                                   | RECOMMENDED ACTION   |
|--|--|--|
| Clamp body bent                                | Body must be straight                                      | Straighten if possible, otherwise scrap* (* See WI-GE-103)                                       |
| Concrete deposits on clamps                    | Clamps must be free of concrete                            | Clean concrete deposits from clamps ensuring the bearing edge of clamp is free of concrete       |
| Welds broken or cracked                        | Welds must be intact                                       | Grind back and reweld* (* See WI-GE-100)   |
| Check wedge is not bent and operates correctly | Wedge must operate freely and lock clamp in position       | Straighten wedge and clear any obstructions. If not possible replace wedge.                      |
| Movable jaws stiff or frozen                   | Movable jaws must swivel & move freely                     | Oil and straighten and tap with hammer to free up, if not possible then scrap* (* See WI-GE-103) |
| Body/arms or jaws bent and/or distorted        | Body, arms and jaws must be intact and the correct profile | Straighten if possible , if not possible then scrap* (* See WI-GE-103)                           |

## 7. Maintenance & Inspection

### Articulated Corner Panel

Articulating Corner Panels are used in an Acrowall -80 arrangement where the return section of the wall to be poured is not a true right angle.

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

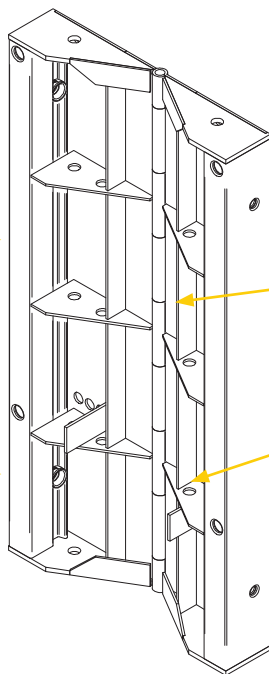
Concrete deposits on steel face. Clean entire face of any deposits, then oil surface

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

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

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

Broken welds on ribs or side bars. Isolate and send to indentations in steel face workshop for rewelding



### Inspection

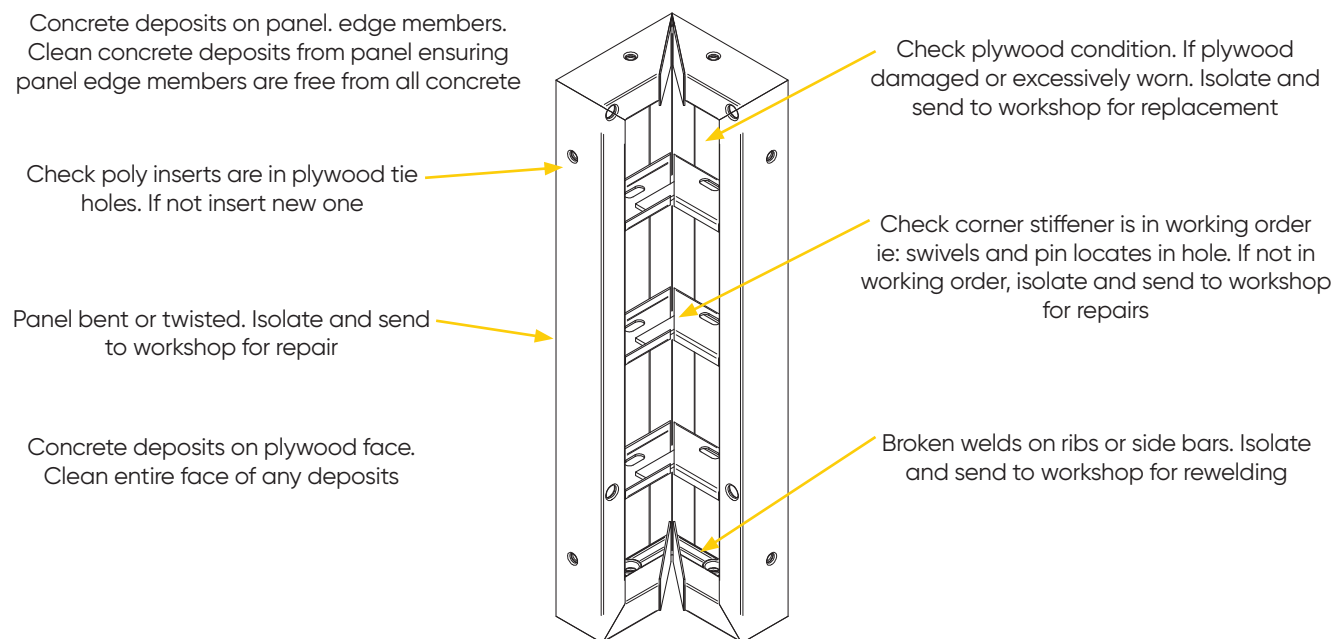
Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS                    | DAMAGE LIMITS FOR REPAIR               | RECOMMENDED ACTION   |
|------------------------------------|--|--|
| Panel bent or twisted              | Panel must be straight                 | Straighten if possible, otherwise scrap* (* See WI-GE-103)   |
| Concrete deposits on edge members  | Edge members must be free of concrete  | Clean concrete deposits from edge members with scraper   |
| Concrete deposits on Panel surface | Panel surface must be free of concrete | Clean concrete deposits from clamps ensuring the bearing edge of clamp is free of concrete   |
| Welds broken or cracked            | Welds must be intact                   | Grind back and reweld* (* See WI-GE-100)   |
| Hinge does not work freely         | Hinge must open & shut freely          | Oil and force move back and forth to loosen hinge, seek any problem source and rectify. If unable to free hinge then the panel should be scrapped* (* See WI-GE-103) |
| Indentations in steel face         | Steel face should be dent free         | Panel beat out any indentations  |

## 7. Maintenance & Inspection

### Internal Corner Panel

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



### Inspection

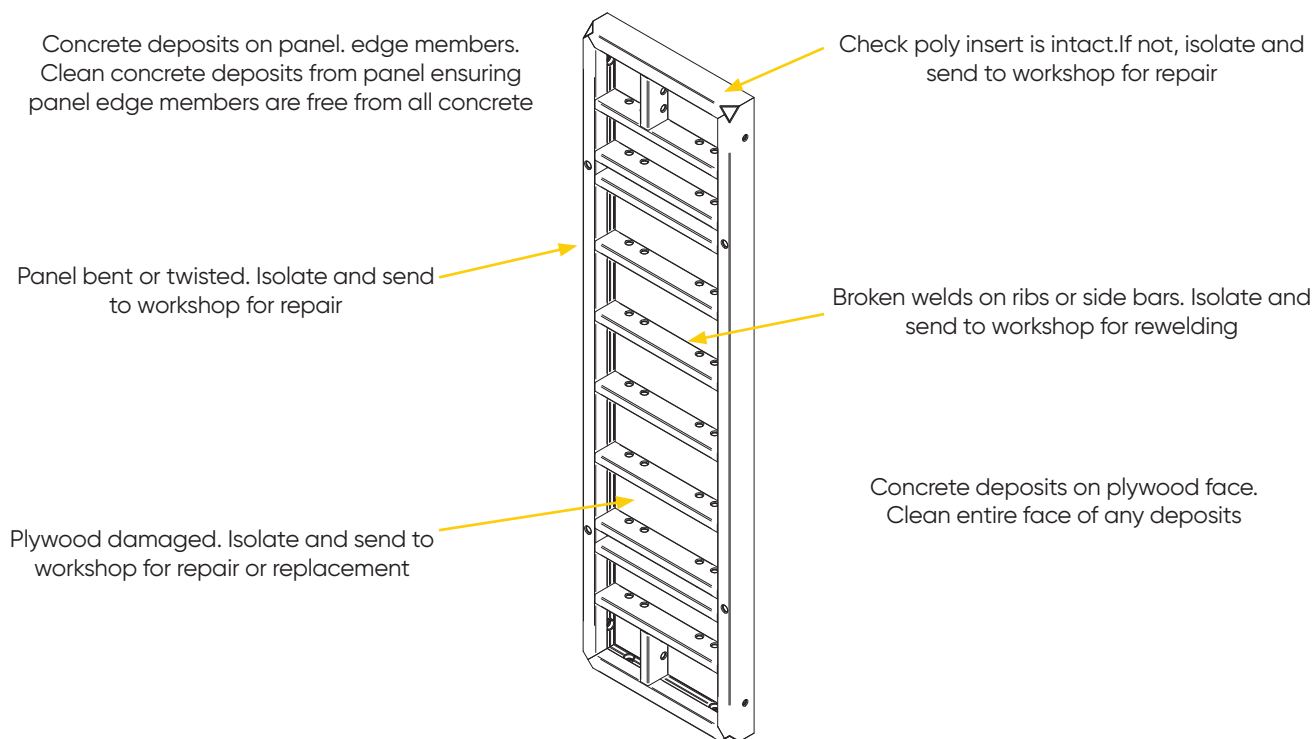
Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS   | DAMAGE LIMITS FOR REPAIR  | RECOMMENDED ACTION   |
|---|---|--|
| Panel bent or twisted   | Panel must be straight  | Straighten if possible, otherwise scrap* (* See WI-GE-103) |
| Concrete deposits on edge members                               | Edge members must be free of concrete                                     | Clean concrete deposits from edge members with scraper     |
| Concrete deposits on plywood face                               | Plywood face must be free of concrete                                     | Clean concrete deposits from plywood face                  |
| Welds broken or cracked   | Welds must be intact  | Grind back and reweld* (* See WI – GE-100)                 |
| Corner stiffener does not swivel or pin does not locate in hole | Corner stiffener must swivel and pin must locate in hole                  | Straighten if bent, otherwise replace with new stiffener   |
| Ply damaged or excessively worn                                 | Ply must be in acceptable condition to provide reasonable concrete finish | Replace ply ensuring ply has poly inserts                  |
| Poly insert missing in plywood at tie holes                     | Tie holes must have poly insert   | Insert new poly inserts                                    |

## 7. Maintenance & Inspection

### Multi Panels

The Acrowall-80 Multi panel is used in the external form at corner junctions to enable a tie position in the external form to line up with the internal form.



### Inspection

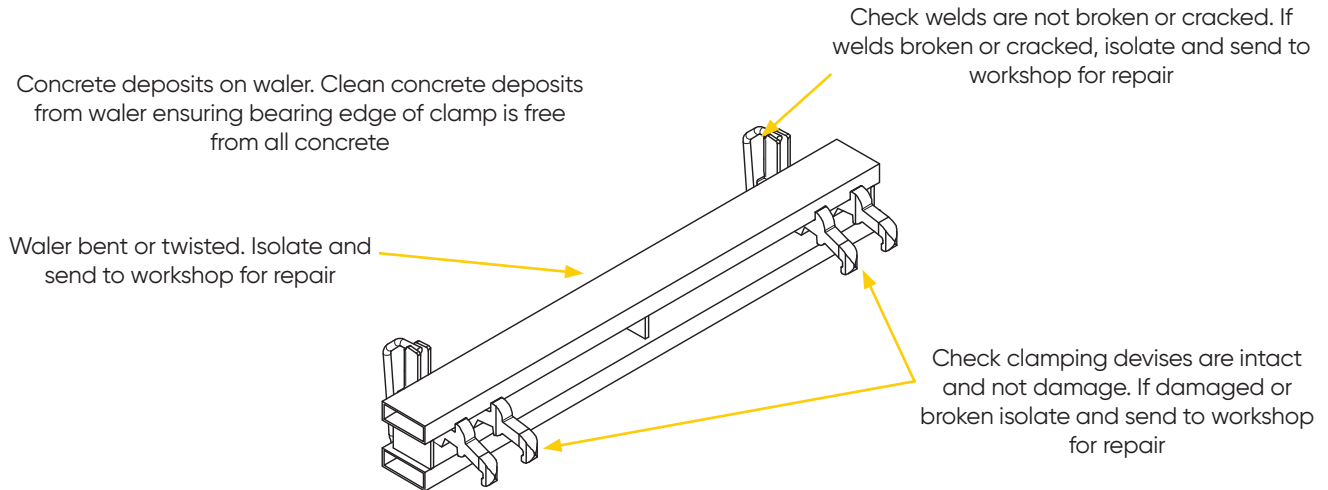
Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS                         | DAMAGE LIMITS FOR REPAIR   | RECOMMENDED ACTION   |
|---|--|--|
| Panel bent or twisted                   | Panel must be straight and free of twist                           | Straighten if possible otherwise scrap* (* See WI-GE-103)                      |
| Welds broken or cracked                 | All welds must be intact   | Grind back & reweld* (* See WI-GE-100)   |
| Ribs or edge members buckled or damaged | Ribs and edge members must be straight                             | Straighten or replace if possible otherwise scrap* (* See WI-GE-103)           |
| Concrete deposits on plywood face       | Plywood face must be clear of any concrete deposits                | Clean off all concrete deposits<br>DO NOT USE WATER BLASTER ON PLYWOOD SURFACE |
| Concrete deposits on edge members       | Edge members must be free of all concrete                          | Clean off all concrete with scraper or water blaster                           |
| Plywood damaged                         | Small nail holes acceptable  | Replacing plywood if damage not repairable                                     |
| Poly inserts missing                    | Poly insets must be in place otherwise concrete leakage will occur | Replace ply ensuring ply has poly inserts                                      |

## 7. Maintenance & Inspection

### Compensation Walers

Waler is used as an alignment member.



### Inspection

Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS                    | DAMAGE LIMITS FOR REPAIR   | RECOMMENDED ACTION   |
|------------------------------------|--|--|
| Waler bent                         | Waler must be straight   | Straighten if possible, otherwise scrap* (* See WI-GE-103)                                 |
| Concrete deposits on waler         | Waler must be free of concrete                                     | Clean concrete deposits from walers ensuring the bearing edge of waler is free of concrete |
| Welds broken or cracked            | Welds must be intact   | Grind back and reweld* (* See WI-GE-100)   |
| Clamping devices broken or damaged | Clamping devices must not be damaged and must operate functionally | Repair or replace if unrepairable  |

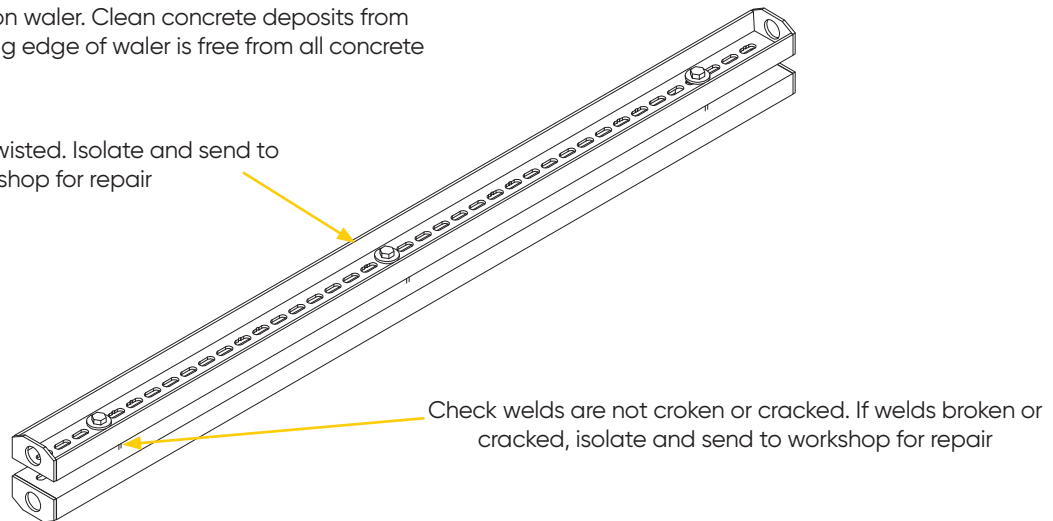
## 7. Maintenance & Inspection

### Universal Waler

Walers are used as an alignment member

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

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



### Inspection

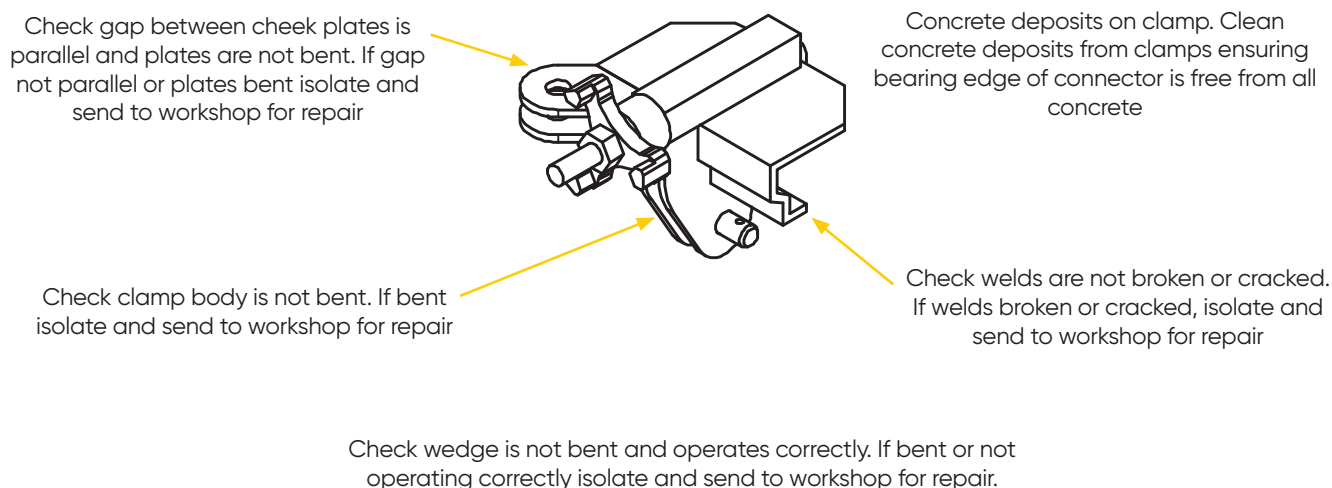
Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS             | DAMAGE LIMITS FOR REPAIR        | RECOMMENDED ACTION   |
|-----------------------------|---------------------------------|--|
| Walers bent                 | Walers must be straight         | Straighten if possible, otherwise scrap* (* See WI-GE-103)                                 |
| Concrete deposits on walers | Walers must be free of concrete | Clean concrete deposits from walers ensuring the bearing edge of waler is free of concrete |
| Welds broken or cracked     | Welds must be intact            | Grind back and reweld* (* See WI-GE-100)   |

## 7. Maintenance & Inspection

### Brace Connector

The Brace Connector is used when a raking brace needs to be connected to the panel assembly to provide stability.



### Inspection

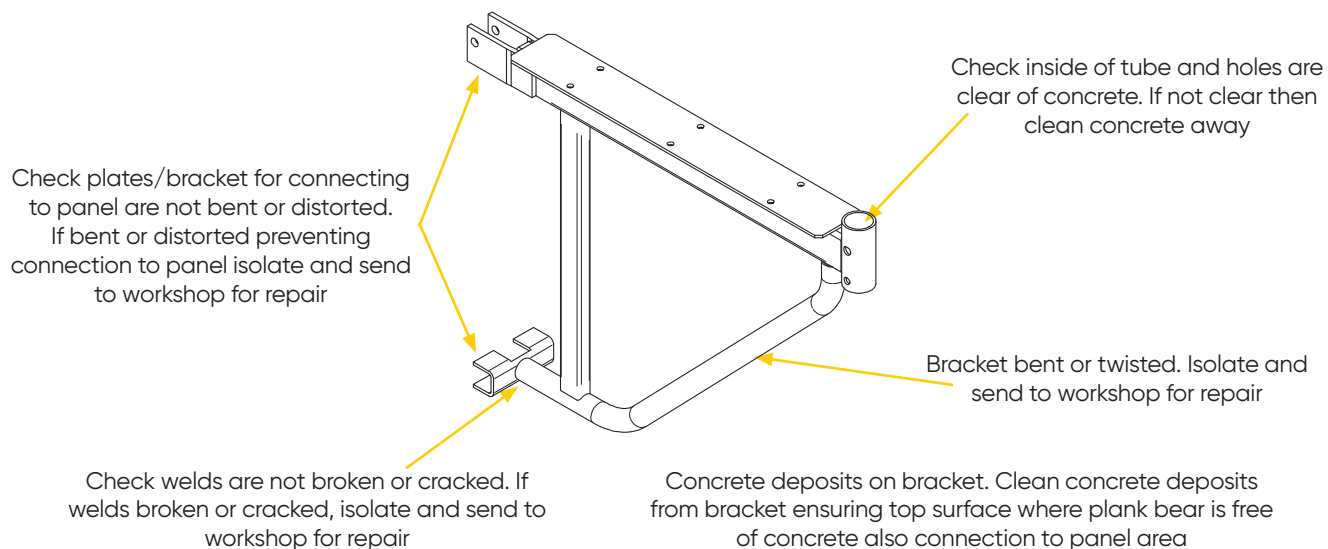
Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS                                | DAMAGE LIMITS FOR REPAIR  | RECOMMENDED ACTION  |
|--|---|---|
| Clamp body bent                                | Body must be straight   | Straighten if possible, otherwise scrap* (* See WI-GE-103)                                      |
| Concrete deposits on clamps                    | Clamps must be free of concrete                                       | Clean concrete deposits from clamps ensuring the bearing edges of connector is free of concrete |
| Welds broken or cracked                        | Welds must be intact  | Grind back and reweld* (* See WI-GE-100)  |
| Check wedge is not bent and operates correctly | Wedge must operate freely and lock connector in position              | Straighten wedge and clear any obstructions If not possible replace wedge.                      |
| Gap between cheek plates not parallel          | Gap must be parallel  | Straighten and check gap size   |
| Cheek plates bent                              | Cheek plates must be straight and not bent from body of the connector | Straighten and check gap size   |

## 7. Maintenance & Inspection

### Working Platform Bracket

The Walkway Bracket provides a 3 board wide access way along the form face.



### Inspection

Generally, visual inspection checking for the possible faults listed below.

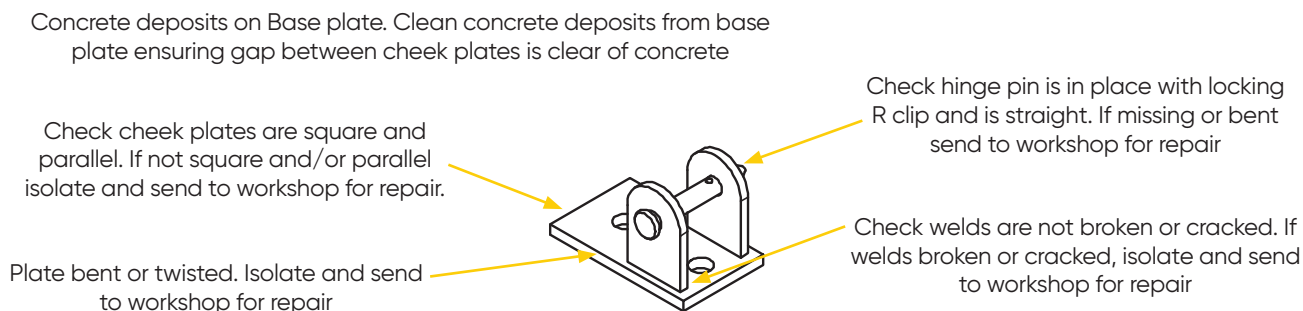
| POSSIBLE FAULTS   | DAMAGE LIMITS FOR REPAIR   | RECOMMENDED ACTION   |
|---|--|--|
| Bracket bent or twisted                                 | Bracket must be straight   | Straighten if possible, otherwise scrap* (* See WI-GE-103)                                     |
| Concrete deposits on bracket                            | Bracket must be free of concrete                                     | Clean concrete deposits from bracket ensuring the top edge of bracket is free of concrete      |
| Welds broken or cracked                                 | Welds must be intact   | Grind back and reweld* (* See WI-GE-100)   |
| Handrail socket clogged with concrete                   | Handrail socket must be totally free of concrete deposits            | Clean concrete deposits from socket ensuring the inside of tube and holes are free of concrete |
| Plate/bracket for connection to panel bent or distorted | Plates/bracket for connecting to panel must not be bent or distorted | Straightened or replace  |



## 7. Maintenance & Inspection

### Base Plate

The Base Plate is used to secure the Push-Pull Prop or the Kicker Brace to the slab or footing.



### Inspection

Generally, visual inspection checking for the possible faults listed below.

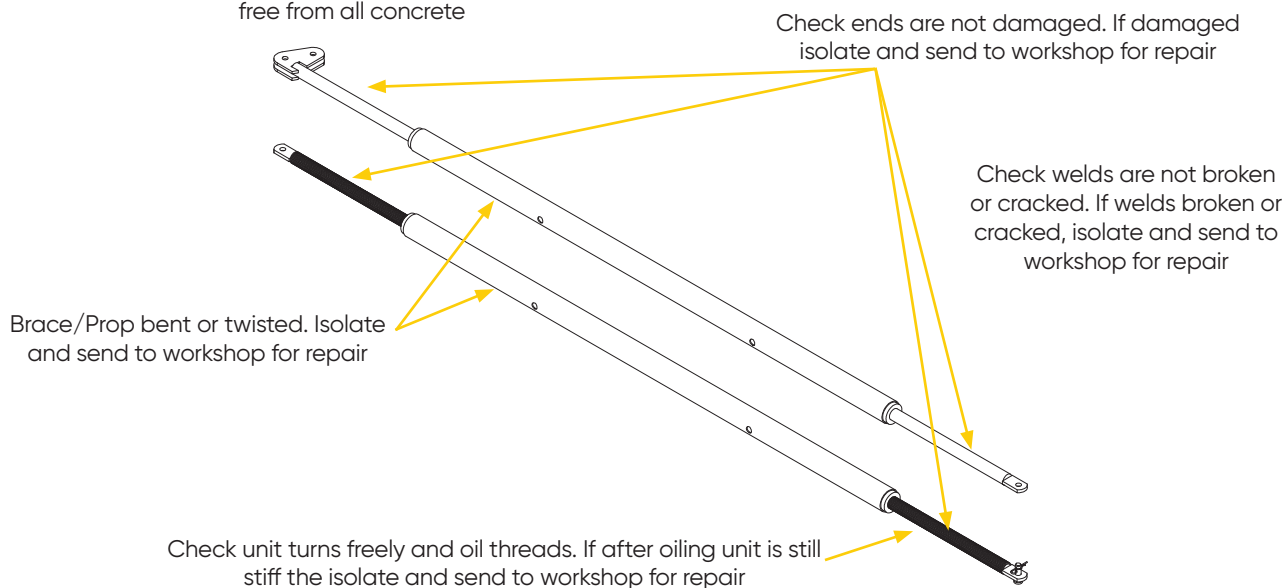
| POSSIBLE FAULTS                         | DAMAGE LIMITS FOR REPAIR                        | RECOMMENDED ACTION   |
|---|---|--|
| Concrete deposits on Base Plate         | Base Plate must be free of all concrete         | Clean off all concrete with scraper or water blaster                                   |
| Welds broken or cracked                 | All welds must be intact                        | Grind back & reweld* (* See WI-GE-100)   |
| Cheek plates not square and/or parallel | Cheek Plates must be square and parallel        | Straighten if not possible remove and weld new cheek plate or scrap* (* See WI-GE-103) |
| Hinge pin missing or bent or missing    | Hinge pin must be in place and must be straight | Replace hinge pin  |
| R clip missing on hinge pin             | Hinge pin must have an R clip                   | Replace R pin  |
| Anchor plate bent or twisted            | Anchor plate must be straight                   | Straighten if possible otherwise scrap* (* See WI-GE-103)                              |

## 7. Maintenance & Inspection

### Kicker Brace/Push-Pull prop

Used to plumb panels

Concrete deposits on brace/prop members. Clean concrete deposits from brace ensuring all fixing and swiveling members are free from all concrete



### Inspection

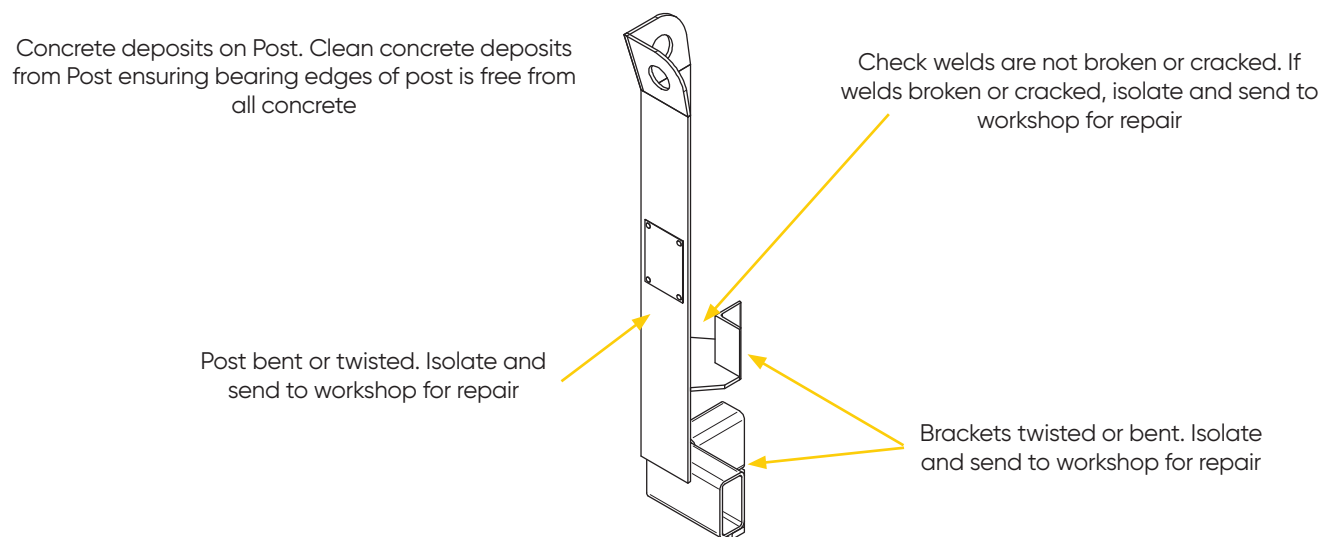
Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS                        | DAMAGE LIMITS FOR REPAIR               | RECOMMENDED ACTION   |
|--|--|--|
| Brace/Prop bent                        | Kicker Brace/Prop must be straight     | Straighten if possible, otherwise scrap* (* See WI-GE-103)   |
| Ends do not turn freely                | Ends must turn freely                  | Oil shaft and remove any obstructions on thread and force turn ends until they turn freely, if not possible scrap* (*See WI 145) |
| Welds broken or cracked                | Welds must be intact                   | Grind back and reweld* (* See WI-GE-100)   |
| Ends damaged                           | Ends must be undamaged                 | Repair and straighten if possible, otherwise scrap* (* See WI-GE-103)  |
| Concrete deposits on Prop/kicker brace | Prop must be free of concrete deposits | Clean concrete off Brace particularly around thread and ends   |

## 7. Maintenance & Inspection

### Stacking Post

The Stacking Post is used in conjunction with the Acrowall-80 Lifting Gear to lift and transport stacks of Acrowall-80 panel.



### Inspection

Generally, visual inspection checking for the possible faults listed below.

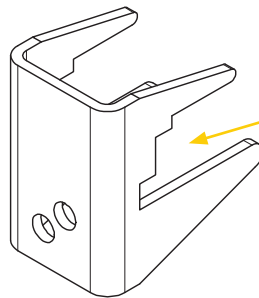
| POSSIBLE FAULTS                           | DAMAGE LIMITS FOR REPAIR                    | RECOMMENDED ACTION  |
|---|---|---|
| Post bent or twisted                      | Post must be straight and free of twist     | Straighten if possible otherwise scrap* (* See WI-GE-103)         |
| Welds broken or cracked                   | All welds must be intact                    | Grind back & reweld* (* See WI-GE-100)                            |
| Bottom bracket members buckled or damaged | All members of the Post must be undistorted | Tighten or replace if possible otherwise scrap* (* See WI-GE-103) |
| Concrete deposits on post                 | Post must be free of all concrete           | Clean off all concrete with scraper or water blaster              |

## 7. Maintenance & Inspection

### Top Tie Bracket

The Top Tie Bracket is used to provide a tie fixing above the top of the panels with the tie not being placed within the concrete.

Concrete deposits on Bracket. Clean concrete deposits from Bracket ensuring bearing edges are free from all concrete



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

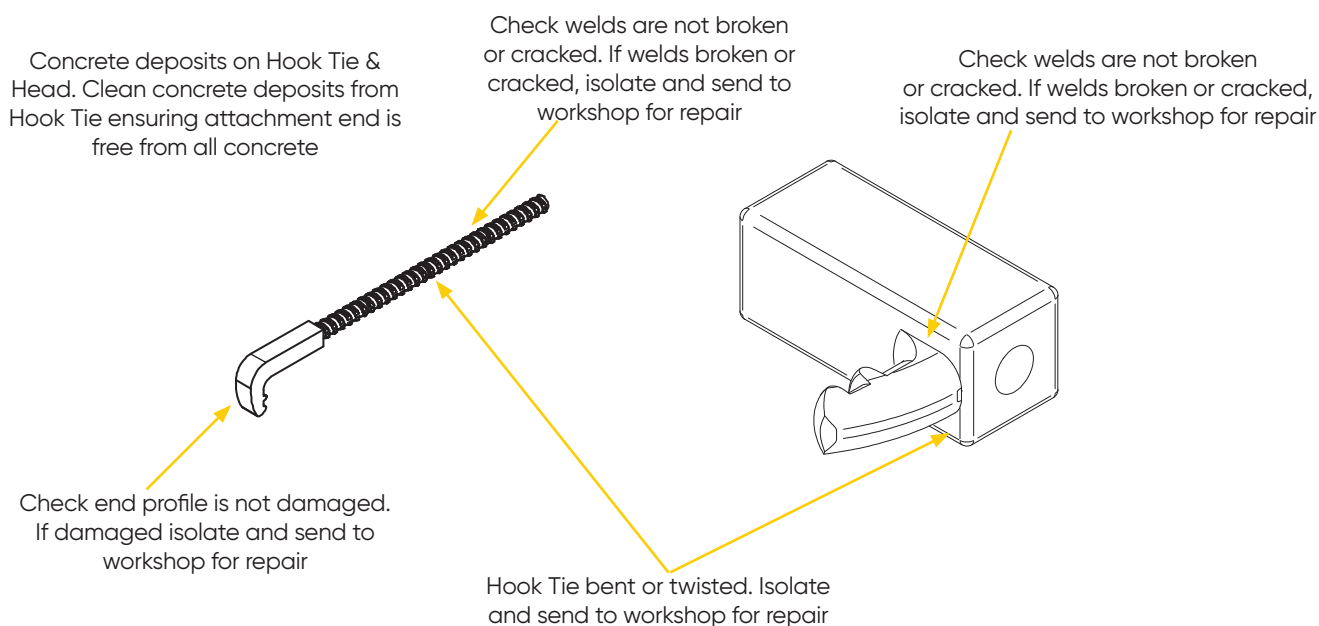
### Inspection

Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS              | DAMAGE LIMITS FOR REPAIR             | RECOMMENDED ACTION  |
|------------------------------|--------------------------------------|---|
| Bracket buckled or damaged   | Bracket must be straight             | Straighten if possible otherwise scrap* (* See WI-GE-103) |
| Concrete deposits on Bracket | Bracket must be free of all concrete | Clean off all concrete with scraper or water blaster      |

## 7. Maintenance & Inspection

### Hook Tie DW15 & Hook Tie Head DW15



### Inspection

Generally, visual inspection checking for the possible faults listed below.

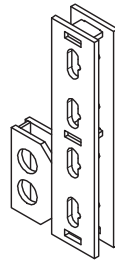
| POSSIBLE FAULTS               | DAMAGE LIMITS FOR REPAIR                    | RECOMMENDED ACTION                                       |
|-------------------------------|---|--|
| Hook Tie bent or twisted      | Hook Tie must be straight and free of twist | Straighten if possible otherwise scrap* (*See WI-GE-103) |
| Welds broken or cracked       | All welds must be intact                    | Grind back & reweld* (* See WI-GE-100)                   |
| Concrete deposits on Hook Tie | Hook Tie must be free of all concrete       | Clean off all concrete with scraper or water blaster     |
| End profile damaged           | End profile must be correct profile         | Straighten if possible otherwise scrap                   |

## 7. Maintenance & Inspection

### Waler Stop

The Waler Stop is used external corner of a wall in conjunction with a Waler Stop Tie to connect it to a Universal Waler at the external corner of a wall.

Concrete deposits on Waler Stop. Clean concrete deposits from Waler ensuring bearing edge and holes are free from all concrete



Welds broken or cracked. Send to workshop for repair

Waler Stop bent or twisted. Isolate and send to workshop for repair

### Inspection

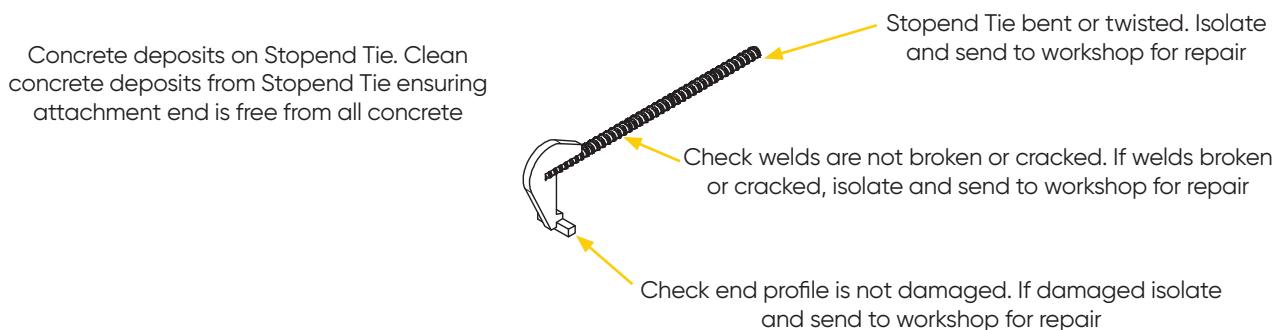
Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS                 | DAMAGE LIMITS FOR REPAIR                | RECOMMENDED ACTION  |
|---------------------------------|---|---|
| Waler Stop bent or twisted      | Waler Stop must be straight             | Straighten if possible otherwise scrap* (* See WI-GE-103) |
| Concrete deposits on Waler Stop | Waler Stop must be free of all concrete | Clean off all concrete with scraper or water blaster      |

## 7. Maintenance & Inspection

### Waler Stopend

The Stopend Tie is used in conjunction with the Waler Stopend to tie the two form faces together at the external corner position of a wall.



### Inspection

Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS                  | DAMAGE LIMITS FOR REPAIR                       | RECOMMENDED ACTION  |
|----------------------------------|--|---|
| Stopend Tie bent or twisted      | Stopend Tie must be straight and free of twist | Straighten if possible otherwise scrap* (* See WI-GE-103) |
| Welds broken or cracked          | All welds must be intact                       | Grind back & reweld* (* See WI-GE-100)                    |
| Concrete deposits on Stopend Tie | Stopend Tie must be free of all concrete       | Clean off all concrete with scraper or water blaster      |
| End profile damaged              | End profile must be correct profile            | Straighten if possible otherwise scrap                    |

## 7. Maintenance & Inspection

### Lifting Hook

The Acrowall-80 Lifting Hooks are used in pairs to lift panel assemblies. Must be in original shape and strength.

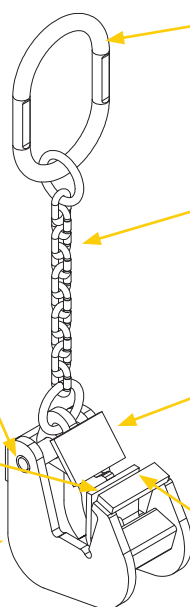
Concrete deposits on Lifting Hook. Clean concrete deposits from the Lifting Hook ensuring the throat mechanism is free from all concrete

Check name plate and test plate are attached. If missing isolate and send to workshop for repair

Welds broken or cracked. Send to workshop for repair

Check retaining lip is not bent or damaged. If bent or damaged isolate and send to workshop for repair

Check body is not bent or distorted. If bent or distorted isolate and send to workshop for repair



Check lifting link is not worn or distorted. If worn or distorted, isolate and send to workshop for repair

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

Check leg spring is functioning correctly. If not still applying strong force the isolate and send to workshop for replacement

Check pressure plates are not damaged or bent. If damaged or bent isolate and send to workshop for repair

### Inspection

Generally, visual inspection checking for the possible faults listed below.

| POSSIBLE FAULTS  | DAMAGE LIMITS FOR REPAIR   | RECOMMENDED ACTION  |
|--|--|---|
| Concrete deposits on Lifting Hook                                    | Lifting Hook must be free of all concrete                                      | Clean off all concrete particularly in the throat mechanism |
| Welds broken or cracked  | All welds must be intact   | Grind back & reweld* (* See WI-GE-100)                      |
| Chain links are worn or distorted                                    | Chain links must free from wear or distorted                                   | Replace chain   |
| Lifting link is worn or distorted                                    | Lifting link must free from wear or distorted                                  | Replace lifting link  |
| Leg spring not functioning correctly<br>Spring has lost its strength | Spring must be strong and force the Lifting Hook to clamp tightly to the panel | Replace the spring  |
| Pressure plates damaged or bent                                      | Pressure plates must be undamaged and straight                                 | Straighten and repair or replace                            |
| Body bent or distorted   | Body must be straight  | Straighten if possible otherwise scrap                      |
| Retaining lip bent or damaged  | Retaining lip must be straight and intact                                      | Straighten and repair or replace                            |
| Mane plate and/or test plate missing                                 | Mane plate and/or test plate must be attached                                  | Attach name and/or test plate                               |



# 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

### Screens Head Office

13-15 Vallance Street

St Marys NSW 2760

P: 02 9219 1566

## QUEENSLAND

### Formwork & Scaffold

280 Bilsen Road

Geebung QLD 4034

P: 07 3265 2266

F: 07 3865 0277

### Screens & Formwork

2 Morrison Lane

Beenleigh QLD 4207

P: 07 3807 9800

### Industrial Scaffold

22a Spanns Road

Beenleigh QLD 4207

P: 07 3442 4000

## TASMANIA

### Formwork & Scaffold

93 Lampton Avenue

Moonah TAS 7009

P: 03 6277 1212

F: 03 6277 1290

### Formwork & Scaffold

65 Boland Street

Launceston TAS 7250

P: 03 6324 8282

F: 03 6324 8250

## WESTERN AUSTRALIA

### Formwork & Scaffold

11 Jackson Street

Bassendean WA 6054

P: 08 9373 7200

F: 08 9379 3488

## SOUTH AUSTRALIA

### Formwork & Scaffold

26 Circuit Drive

Hendon SA 5014

P: 08 8359 9700

F: 08 8359 1366

## VICTORIA

### Formwork, Scaffold & Screens

1651-1657 Centre Road

Springvale VIC 3171

P: 03 9582 2777



**acrow.**

ENGINEERING & CONSTRUCTION

## Contact

Phone: 1300 138 362

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