SureLock Scaffolding System

SureLock – functional design with simplicity of connection
The SureLock system has been designed and developed to meet the requirements of the Australian construction and housing industries. SureLock principal design features include:
- Speed of assembly
- Low maintenance required to keep it in top working condition
- Versatility of application
- Simplicity of components and their connection
- Galvanised components improve corrosion resistance
- No special tools required for assembly (hammer and spirit level only).

SureLock – easy to erect
The Standard features robust rosettes onto which all horizontal and diagonal components attach. The simple connection between components ensures ease of erection and dismantling. No additional loose parts are required to join components in the system.

SureLock – versatile in use
With the facility to connect at eight positions around the rosette on the Standard, SureLock can be used to go around curved or angled structures.

SureLock – proven design with safety accessories
The SureLock system has a proven performance history on an extensive number of sites, meeting the requirements of the various statutory bodies. A full range of accessories is available to cater for safety requirements such as guardrails, mesh panels, ladder access, staircase access and components to provide overhead protection.

SureLock – versatile in use
With the facility to connect at eight positions around the rosette on the Standard, SureLock can be used to go around curved or angled structures.

Important
The erection and application instructions contained in this booklet are intended as expressing the diversity and possible applications of the product and as such must not be used as assembly instructions.

Safety Warning
It is recommended that users of the SureLock system employ and implement appropriate procedures and controls measures to eliminate or control any risk of Musculoskeletal disorder/injury while manually handling SureLock components. 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.

Product Codes
The product codes shown on pages 3 to 7 are sales codes. To determine the hire code, remove the letter Z. Example: Sale code SureLock Standard 3000mm is ZSLS30. Hire code is SLS30.

Availability
Acrow Formwork & Scaffolding Pty Ltd hire more than one type of scaffold system, however, some branches may only carry one type. Please check the availability of the system carried by your local Acrow Formwork & Scaffolding Pty Ltd outlet. Characteristics of our systems are outlined in Acrow Formwork & Scaffolding Pty Ltd technical brochures.

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Every effort has been made to give appropriate guidelines for the use of this product, however, Acrow Formwork & Scaffolding Pty Ltd accepts no responsibility for any loss or damage suffered by any person acting or refraining from action as a result of this information. Should the users require any further information or guidance, they are encouraged to contact their local Acrow Formwork & Scaffolding Pty Ltd outlet.

Disclaimer
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In line with Acrow Formwork & Scaffolding Pty Ltd’s commitment to continuous product development and improvement, the information contained in this brochure may be changed without notice.

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### SureLock Scaffolding System

#### SureLock Ledgers
The Ledgers are manufactured from 48.3 mm O.D. tube with a cast steel Ledger head and wedge welded at each end. Ledgers are also used as guard rails.

<table>
<thead>
<tr>
<th>Product</th>
<th>Code No.</th>
<th>Mass kg (nom.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SureLock Ledgers 0.6m</td>
<td>SLL06</td>
<td>3.2</td>
</tr>
<tr>
<td>SureLock Ledgers 0.9m</td>
<td>SLL09</td>
<td>4.0</td>
</tr>
<tr>
<td>SureLock Ledgers 1.2m</td>
<td>SLL12</td>
<td>5.6</td>
</tr>
<tr>
<td>SureLock Ledgers 1.8m</td>
<td>SLL18</td>
<td>8.0</td>
</tr>
<tr>
<td>SureLock Ledgers 2.4m</td>
<td>SLL24</td>
<td>10.4</td>
</tr>
<tr>
<td>SureLock Ledgers 3.0m</td>
<td>SLL30</td>
<td>12.7</td>
</tr>
</tbody>
</table>

#### SureLock Diagonal Braces
Diagonal braces are made from 42.4mm dia tube with a swivel ledger head and wedge secured at each end for connection to the rosette on the Standard. Their function is to provide transverse and longitudinal bracing to the scaffold structure. The brace is available in various lengths to suit the combination of bay widths and heights.

<table>
<thead>
<tr>
<th>Product</th>
<th>Code No.</th>
<th>Bay Length x Height (m)</th>
<th>Brace Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SureLock Brace 1.6m</td>
<td>SLB16</td>
<td>3.0 x 2.0</td>
<td>5.8</td>
</tr>
<tr>
<td>SureLock Brace 1.7m</td>
<td>SLB17</td>
<td>2.4 x 2.0</td>
<td>6.0</td>
</tr>
<tr>
<td>SureLock Brace 2.3m</td>
<td>SLB23</td>
<td>1.8 x 2.0</td>
<td>7.6</td>
</tr>
<tr>
<td>SureLock Brace 2.6m</td>
<td>SLB26</td>
<td>1.5 x 2.0</td>
<td>8.4</td>
</tr>
<tr>
<td>SureLock Brace 3.0m</td>
<td>SLB30</td>
<td>1.2 x 2.0</td>
<td>9.5</td>
</tr>
<tr>
<td>SureLock Brace 3.5m</td>
<td>SLB35</td>
<td>0.9 x 1.5</td>
<td>10.7</td>
</tr>
</tbody>
</table>

#### SureLock Platform Brackets
Platform Brackets enable 1 or 2 plank wide platforms to be placed between the scaffold and the workface. The end universal hook locates into the rosette on the Standard. When decked out with SureLock Planks which are self-captivating they provide a rigid platform. The 2 plank unit features a socket at its end to accept a handrail Standard.

<table>
<thead>
<tr>
<th>Product</th>
<th>Code No.</th>
<th>Bay Length x Height (m)</th>
<th>Brace Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SureLock Platform Bracket 1 Plank</td>
<td>SLHUB1</td>
<td>3.0 x 2.0</td>
<td>2.5</td>
</tr>
<tr>
<td>SureLock Platform Bracket 2 Plank</td>
<td>SLHUB2</td>
<td>2.0 x 1.5</td>
<td>5.9</td>
</tr>
</tbody>
</table>

#### SureLock Corner Panel
The Corner Panel is designed to fill the gap left where two runs of Platform Brackets intersect on an internal corner of the building. The unit attaches to the corner Standard and is supported by the Platform Brackets. Available in 2 sizes to suit Platform Bracket widths.

<table>
<thead>
<tr>
<th>Product</th>
<th>Code No.</th>
<th>Bay Length x Height (m)</th>
<th>Brace Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SureLock Corner Panel 1 Plank</td>
<td>SLCP1PLK</td>
<td>6.0 x 3.0</td>
<td>4.0</td>
</tr>
<tr>
<td>SureLock Corner Panel 2 Plank</td>
<td>SLCP2PLK</td>
<td>3.0 x 2.0</td>
<td>8.0</td>
</tr>
</tbody>
</table>

#### General Technical and Application Manual

#### SureLock Transom Beam
Transom Beam is designed for special duty load applications. Allows high deck capacity and large grid patterns. Contact Acrow Formwork & Scaffolding Engineering Department for loading details.

<table>
<thead>
<tr>
<th>Product</th>
<th>Code No.</th>
<th>Bay Length x Height (m)</th>
<th>Brace Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SureLock Transom Beam 3.0m</td>
<td>SLT30</td>
<td>3.0 x 2.0</td>
<td>38.0</td>
</tr>
</tbody>
</table>

#### SureLock Transom Truss
The Transom Truss is designed for high capacity loading platforms and overhead protective structures. Connects at 4 points, enhancing the rigidity of the scaffold. Contact Acrow Formwork & Scaffolding Engineering Department for loading details.

<table>
<thead>
<tr>
<th>Product</th>
<th>Code No.</th>
<th>Bay Length x Height (m)</th>
<th>Brace Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SureLock Transom Truss 1.8m</td>
<td>SLTT18</td>
<td>1.8 x 2.0</td>
<td>32.7</td>
</tr>
<tr>
<td>SureLock Transom Truss 2.4m</td>
<td>SLTT24</td>
<td>2.4 x 2.0</td>
<td>44.8</td>
</tr>
<tr>
<td>SureLock Transom Truss 3.0m</td>
<td>SLTT30</td>
<td>3.0 x 2.0</td>
<td>51.2</td>
</tr>
</tbody>
</table>

#### SureLock Ladder Transom
The Ladder Transom is used to provide an opening in a bay allowing a ladder to pass through it. The Ladder Transom is attached to and spans between the Ledgers in the bay. The Transom is available in 3 sizes.

<table>
<thead>
<tr>
<th>Product</th>
<th>Code No.</th>
<th>Bay Length x Height (m)</th>
<th>Brace Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SureLock Ladder Transom 0.9m</td>
<td>SLTL09</td>
<td>0.9 x 1.5</td>
<td>6.6</td>
</tr>
<tr>
<td>SureLock Ladder Transom 1.2m</td>
<td>SLTL12</td>
<td>1.2 x 1.5</td>
<td>8.7</td>
</tr>
<tr>
<td>SureLock Ladder Transom 1.8m</td>
<td>SLTL18</td>
<td>1.8 x 1.5</td>
<td>10.9</td>
</tr>
</tbody>
</table>

#### SureLock Parallel Bracket
The Parallel Bracket is used to join two Standards closely together for applications such as constructing an overhead hoarding support structure.

<table>
<thead>
<tr>
<th>Product</th>
<th>Code No.</th>
<th>Bay Length x Height (m)</th>
<th>Brace Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SureLock Parallel Bracket</td>
<td>SLPB</td>
<td>2.0 x 1.5</td>
<td>2.0</td>
</tr>
</tbody>
</table>
### SureLock Scaffolding System

#### General Technical and Application Manual

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Code No.</th>
<th>Mass kg (nom.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adjustable Base</strong></td>
<td>The Adjustable Base is a generic Acrow Formwork &amp; Scaffolding product which is used with all scaffold systems and with some Acrow Formwork &amp; Scaffolding formwork systems. It has a nut restraint to ensure the stem always has a minimum engagement into the Standard of 150 mm.</td>
<td>ABSFS</td>
<td>7.1</td>
</tr>
<tr>
<td><strong>SureLock Endlock Planks</strong></td>
<td>Endlock Planks are formed from Galvabond steel sheet with a perforated tread to provide a non-skid surface. Perforations are taken close to the ends and edges of the plank to provide even coverage over the whole assembled deck. A profiled section is welded into the ends of the plank to positively lock into the Transom's W section. Endlock planks at the edge of a bay will all sit over the W section of any adjacent Transom eliminating the need for return Transoms to be used when planked bays are at right angles to each other.</td>
<td>SLEP06</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>SLEP09</td>
<td>6.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SLEP12</td>
<td>9.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SLEP18</td>
<td>14.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SLEP24</td>
<td>18.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SLEP30</td>
<td>22.0</td>
<td></td>
</tr>
<tr>
<td><strong>SureLock Mesh Panels</strong></td>
<td>Mesh Panels are hung from the guardrail to provide a full protection screen 1 metre high along the length of the platform. The unit incorporates a built in kick plate and typically a midrail is not used when Mesh Panels are in place. Available in the nominal bay lengths.</td>
<td>SLMP12</td>
<td>11.9</td>
</tr>
<tr>
<td></td>
<td>SLMP18</td>
<td>16.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SLMP24</td>
<td>21.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SLMP30</td>
<td>25.7</td>
<td></td>
</tr>
<tr>
<td><strong>Scaffold Castor</strong></td>
<td>The Scaffold Castor is designed to fit into the bottom of a Standard. It features a swivel facility and a dual function locking mechanism which locks both swivel and rolling motion of the Castor.</td>
<td>CC200</td>
<td>4.5</td>
</tr>
</tbody>
</table>

#### SureLock Star Stringer

- **SureLock Star Stringer**
  - The Star Stringer is a steel frame used in pairs in conjunction with Endlock planks to form a full-width access stair up to 1.8m wide.
  - Star Stringers are available in 3 sizes:
    - to be used in 2.4m long bays to provide a rise of 2m vertical between Transoms
    - to be used in 1.8m long bays to provide a rise of 1.5m vertical between Transoms
    - to be used in 1.2m long bays to provide a rise of 1m vertical between Transoms.

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Code No.</th>
<th>Mass kg (nom.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SureLock Access Steps</strong></td>
<td>Access steps are used to accommodate the gap between the ground level and the first head of the Star Stringer.</td>
<td>SLAS12</td>
<td>26.0</td>
</tr>
<tr>
<td></td>
<td>SLAS18</td>
<td>36.0</td>
<td></td>
</tr>
<tr>
<td><strong>SureLock Upper Deck Extensions</strong></td>
<td>Upper Deck Extensions are used to cover the gap between the top step of the Star Stringer and the Endlock Planks of the deck level.</td>
<td>SLTE</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td>SLUDE15R</td>
<td>16.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SLUDE10R</td>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td><strong>SureLock Star Stringer Handrail</strong></td>
<td>Handrails designed to use with 1.5m rise x 1.8m go and 1.0m rise x 1.2m go Star Stringers. This 2.0m rise x 2.4m go Star Stringer uses a Standard 3.1m brace.</td>
<td>SLBH10</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>SLBH15</td>
<td>6.5</td>
<td></td>
</tr>
</tbody>
</table>
SureLock Scaffolding System

Transoms

Note:
1. Loads W and P shown are not simultaneous loads. Refer AS/NZS1576.1-2010, Clause 2.5.3.2.
2. The Transom Working Load Limits shown in the table above are governed by the Operational requirements of AS/NZS1576.1 Section 3. Typically, this limitation applies to working platform widths equal to Transom size L shown.
3. Where Special Duty design is required or design loads exceed Duty Live Load shown then contact your local Acrow Formwork & Scaffolding Engineering Department for design advice.

Planks

• All planks meet point load requirement specified for Heavy Duty Loading to AS/NZS1576.1
• The sum of individual loads applied to planks must not exceed the Duty Live Load for the platform per bay.

Platform Brackets

P = 2.0kN

General Notes:
- P = Working Load Limit for point load.
- W = Working Load Limit for Uniformly Distributed Load.
- Working Load Limits (P & W) may be limited by other components or assemblies.
- Minimum bearing length for point loads = 200mm.
- Reduction for self weight has not been considered in Working Load Limits above. The designer must allow for the self weight.

Transom Working Load Limits

<table>
<thead>
<tr>
<th>L (m)</th>
<th>W (kN)</th>
<th>P (kN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2</td>
<td>4.3</td>
<td>1.0</td>
</tr>
<tr>
<td>1.8</td>
<td>2.9</td>
<td>2</td>
</tr>
<tr>
<td>2.4</td>
<td>2.2</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>2.0</td>
<td>4</td>
</tr>
</tbody>
</table>

Transom Section

General Technical and Application Manual

SureLock Assembly Recommendations
The following scaffold Assembly Recommendations will give you the foundation principles to assemble a basic scaffold structure. Through experience with the system, different and more complex configurations can be assembled.

For assistance with these recommendations contact your local Acrow Formwork & Scaffolding outlet.

Persons erecting or dismantling the components should be competent in this type of work.

For safety reasons, we recommend that no less than two erectors work as a team to erect SureLock.

Note:
• Where assistance is required in erecting more complex designs other than Standard façade type independent scaffolding and configurations not shown in these recommendations, contact your local Acrow Formwork & Scaffolding Representative.
• In certain areas scaffolding may be exposed to high winds and as such special precautions regarding tying in and cladding removal can apply. For assistance with design of scaffolding that may be exposed to high winds contact your local Acrow Formwork & Scaffolding Engineering office.
• In some cases, particular configurations of scaffolds and particular sites may require scaffolders to use safety harnesses and lanyard systems to provide protection against a fall when erecting the scaffold over a void or lean out from the scaffold or supporting structure without the protection of a guardrail. In such cases do not attach harness systems to scaffolding supplied by Acrow Formwork & Scaffolding Pty Ltd unless attachment points for such systems are approved by Acrow Formwork & Scaffolding Engineers.

Compliance to Statutory Regulations
Scaffolding must be erected in compliance with the requirements of Statutory Regulations and Australian Standards for Scaffolding (AS/NZS1576 and AS/NZS 4576 ‘Guidelines for Scaffolding’) as applicable.

In addition, below are some specific areas for your attention:
• Erection of scaffolding over 4 metres in height
Personnel who erect, alter or dismantle scaffolding over 4m in height must hold a current National, State or Territory Certificate in Scaffolding to the appropriate class.
• Risk Management
When planning the erection of any scaffolding, a site specific Risk Assessment process must be carried out. Generic Hazard Identification/Risk Assessments/Control methods profiles and Safe Work Methods Statements for the erection, dismantling and the usage of scaffolding equipment are available from Acrow Formwork & Scaffolding Branches. Site specific Hazard Identification and Risk assessments and Safe Work Methods Statements would need to be generated for specific projects.
• Manual Handling
As part of the risk management processes we draw your attention to the requirement that scaffolders must, as part of their competency, be competent in manual lifting techniques. Therefore, Scaffolders erecting, altering or dismantling scaffolding must follow the manual handling guidelines published by Regulatory Authorities or other approved and recognised guidelines.
SureLock Scaffolding System

1 Before commencing the erection of any SureLock scaffold, care should be taken to see that the ground is suitable and clear of loose rubble to provide a stable base and clear access for erection. Where the ground is soft or made up, it should be consolidated and the scaffold should be erected on adequate timber soleplates. As a general rule, each soleplate should be long enough so that it supports at least two Standards. Bricks or masonry blocks are not suitable and should not be used.

2 Commence erection - where possible - on the highest point of the ground and work down the incline - this will make levelling easier as the scaffolding progresses horizontally.

3 Check whether or not platform brackets are required adjacent to the workface. If so, you will need to make allowance for the width of the platform brackets and increase the distance between the workface and the closest Standard.

4 Set the nut of the Adjustable Base near (not at) the bottom of the threaded stem to allow maximum adjustment as the scaffold progresses to lower ground levels.

5 Lay out the Ledgers and Transoms for the first bay in the approximate positions. Then insert an Adjustable Base into each of the first pair of Standards.

6 At the starting point, place a 2m and a 3m Standard onto Adjustable Bases which have been approximately levelled.

7 Form the first frame by joining the Standards with a Transom attached to the lowest rosette. Position the frame so that the 2m Standard is closest to the workface and the 3m Standard away from it. Ensure that components are seated properly.

8 With one erector still holding the first frame square to the workface, the second erector inserts an Adjustable Base into a 2m Standard and connects it to the frame with a Ledger. The structure is now self-supporting and the second erector completes the rectangle with a further Transom, Ledger and 3m Standard. Always continue the scaffold with a 3 metre Standard on the outside face and a 2 metre Standard on the inside for the base run of the scaffold.

DO NOT TIGHTEN THE WEDGES - YET.

9 The bay can now be levelled. Starting from the highest point use a spirit level to adjust the bases so that Ledgers and Transoms are level. Accuracy in levelling at this stage makes for a good start.

DO NOT TIGHTEN THE WEDGES - YET.

10 Place SureLock planks on Transoms at the base level and complete the first lift of SureLock with Transoms and Ledgers at the desired platform height (not more than 2m above the base members).

11 The bay should now be squared in plan and correctly located in relation to the structure being scaffolded. Checking squareness is assisted by placing the recommended number of planks between Transoms and ensuring that planks sit correctly with an even gap between the ends of the planks and the supporting Transom.

Fix a diagonal brace to the outer face and end face of the first bay. Always start by fixing the brace to the upper rosette first: this makes for safer handling.

Wedges can now be tightened in first bay.

Tap home wedge.

No need for heavy hammering.
12 Now complete the base layout by adding bays longitudinally, levelling and positioning each bay as you go before tightening wedges. Continue the 2m and 3m Standard combination for the full run. Once the base lift has been completely levelled for the length of the scaffold, your spirit level should no longer be required.

Note:
Erection and dismantling of scaffold bays should be carried out from a fully decked platform or a platform of at least two planks wide. Refer to local statutory regulations.

13 Planks are now moved up to fully deck out the first lift. When these planks remain in place as a working platform, Ledgers are positioned at 0.5m and 1m above the planked level to form a guardrail and midrail. For working platforms, toeboards on the outer face are also required. A Mesh Panel which is 1m high incorporates a toeboard and can be used in lieu of a midrail and toeboard. Mesh Panels are supported from the guardrail.

14 Additional lifts can now be constructed simply by adding further Standards into spigots of the Standards of the lower lift and staggering joints wherever possible. Transoms and Ledgers are placed at platform levels. Working levels should be fully decked out and fitted with guardrails, midrails and toeboards (or mesh guards) at the required positions.

Fully complete the longitudinal erection of a lift before progressing to the next lift.

Stagger joints in Standards wherever possible. If 2.0m Standards were used on the inside face of the first lift and 3.0m Standards on the outside face of the first lift and each successive lift uses Standards of the same height ie inside and outside Standards both 3.0m or both 2.5m or 2.0m, then the initial stagger of the joints will remain through the height of the scaffold.

15 Face Bracing
All scaffolds require a certain amount of Diagonal Face Bracing to eliminate any tendency for the scaffold to distort or sway. Before the scaffold goes beyond the second lift, bracing should be added to the outside face and on the ends. Braces attach to the outward face of the Standard.

Further bracing must be placed on the scaffold as it progresses in length and height. Braces should span from lift level to lift level and cross over joints in Standards and be positioned at the top of the scaffold.

Diagonal Braces provide stability to the scaffold and are used to brace adjacent Standards longitudinally or transversely. Face Diagonal Braces are positioned in the end bays of a scaffold run on the external face of the scaffold. They extend from the first cup near ground level to the top working level. They are typically arranged in an alternating (zig-zag) manner to provide more stability to the scaffold. For long scaffold runs exceeding 5 bays in length, intermediate bracing is required where Diagonal Face Braces are placed every 4 bays maximum. Variations to this spacing must be checked by the appropriate designer and specified in the design layout.

End Diagonal Braces are used between end pair of Standards in the transverse direction. They extend from the first rosette near ground level to the top working level in an alternating manner.
16 Ties

It is essential that scaffolds be tied to the building or suitable structure to prevent inwards or outwards movement of the scaffold. As such they provide stability and enable effective performance of the scaffold structure as it grows in height and length.

As a general rule, ties need to commence where the scaffold height exceeds 3 times its least width. Typically ties comprise scaffold tube and right angle scaffold couplers and are connected to the Standards with right angled scaffold couplers. Care must be taken that ties do not obstruct clear access along the full length of the working and access platforms. Scaffold must not be built to allow it to cantilever more than 4m above the last level of ties.

Below are some examples showing some types of tie configurations eg. around columns and through openings.

**Warning**

Tie tubes must not be attached to Ledgers. Tie tubes must be attached directly to Standards, if this is not possible then scaffold tube must be fixed between Standards with Right Angled Couplers and the tie tube is attached to this scaffold tube.

**Tie Configuration**

The diagram below shows an example of staggered tie configuration for scaffolding assembled with 2m lifts and without any cladding, such as shade cloth other semi or non porous material. Ties are installed at no more than 3 bays apart (7.2m) based on a maximum bay length of 2.4m in the longitudinal direction and 2 bays apart for bay lengths of 3.05m. Ties should have a 4m overlap in the vertical direction. Cladding the scaffold will cause wind loads to increase and tie spacings may need to reduce accordingly. Contact your local Acrow Formwork & Scaffolding Engineering Representative for assistance with tie spacing for clad scaffolds.

**Maximum Height of Scaffolding**

When determining the maximum height of a scaffold, a number of factors must be considered.

- Live load of working platforms (ie: Heavy Duty, Medium Duty or Light Duty)
- Number of working platforms
- Live load of platform brackets
- Dead load of scaffold (eg Standards, Transoms, Ledgers, guardrails, Mesh Panels, Platform Brackets, planks, bracing, shaded cloth and chainwire mesh)
- The position of the top tie in relation to the top of the scaffold
- Wind Loading (in relation to tie forces)
- Strength of the supporting structure for the scaffold.

Scaffolding configurations can vary greatly, so for a Surelock scaffold of typically 1.2m wide, constructed using 2m lifts, braced and tied in accordance with patterns given in these recommendations without cladding, with a maximum of two Heavy Duty working platform levels (6.6kN as per AS 4576 and AS/NZS1576.1), two levels of planks and Platform Brackets, guardrails at the outside face at 1m vertical spacing for full height of scaffold, diagonal bracing for full height, the maximum height of the scaffold constructed with bay lengths of 3.0m or less is 45m.

Note:

Any additional equipment such as additional planked levels, working platforms, Platform Brackets, spurs or the like will increase leg load and hence reduce the maximum height of the scaffold. Therefore, where assessment shows that scaffold configuration exceeds the above conditions, consult your local Acrow Formwork & Scaffolding Engineering Representative for technical design assistance with the maximum heights of SureLock and tying configurations to suit your specific needs.
17 Access and Egress Methods

Every working platform level must be provided with a safe and suitable access. This can be achieved by means of a built-in ladder or stair access tower or by direct access from within the building or structure.

Outlined on the following pages are the following basic types of access:

(a) **Ladder Access**
Ladder access is typically used where only a few people need access to the working platform and where tools and equipment can be delivered separately to the working platform (such as by rope and gin wheel, materials hoist or crane).

(b) **Stair Access**

### (a) Ladder Access

Ladder access bays can be constructed within the main run of the scaffold, however, where space permits it is preferable that a separate ladder access bay be placed adjacent to the main run.

Single ladders need to extend at least 0.9m above the landing level, secured at top and base and successive landing levels should be vertically spaced at no more that 6m.

SureLock Ladder Access Putlogs are used to enable the formation of an opening within the deck through which the ladder can pass. These Putlogs span between Ledgers and are typically positioned at mid-span of the Ledgers or at the appropriate position to support two shorter length planks. The remaining bay width is decked out with planks that span between Transoms in the usual manner.

**Important:**
Ensure that guarding and edge protection is installed around openings in Ladder Access Bays that are in or beside working platforms.

### (b) SureLock Stair Stringers

SureLock Stair Stringers are available to suit three bay lengths, 2.4m, 1.8m and 1.2m. The vertical rise of the stairs is dictated by the bay lengths to maintain the correct tread spacing (2.0m rise for 2.4m bay, 1.5m rise for 1.8m bay and 1.0m rise for the 1.2m bay). The lower end of the Stringer sits on a Ledger whilst the upper end clamps to the Standard.

SureLock Planks are used for the treads (1.2m or 1.8m) and are held captive on the Stringer with an R-clip. Alternatively, timber planks can be used, however these need to be bolted through the tread support plate on the Stringer.

Landings for the stair access are constructed with 1.2m square bays at each end of the Stringers. Typically, a 12 Standard configuration is used to assemble the stairway giving nominal overall plan dimensions of 2.4m x 4.8m. This bay can either be incorporated within the main run of scaffold or adjacent to the run. The stair access bay typically shares common Standards with the main run, however this detail needs to be checked during the scaffold design phase as height conditions and wind loading can vary from site to site.

**Note:**
- Edge protection (guardrails, midrails and toeboards) is required at access and egress points of working platforms.
- Care is to be taken to ensure that head clearance of 2m (nom) is maintained at these points.
- Gaps between the stair access landing and working platform levels may occur and these should be kept to a minimum. Suitable infill should be installed.
Localised overloading by stacking of dismantled equipment on partially dismantled scaffold must be avoided.

Ledgers should not be removed from any working level before the removal of scaffold planks from the same level.

Do not remove diagonal braces until it is necessary to remove the Standard that it is attached to.

Do not remove ties until dismantling of the scaffold reaches the level of the ties.

Removal of ties to the permanent structure should progress at the same rate as the dismantling process.

After removal of materials and equipment from the working platforms, dismantle the scaffolding generally in the reverse order of the erection sequence.

Care must be taken when dismantling scaffold as the stability of the scaffold must be maintained at all times.

Do not remove ties until dismantling of the scaffold reaches the level of the ties.

Do not remove diagonal braces until it is necessary to remove the Standard that it is attached to.

Ledgers should not be removed from any working level before the removal of scaffold planks from the same level.

Localised overloading by stacking of dismantled equipment on partially dismantled scaffold must be avoided.

SureLock Scaffolding System

18 Platform (Hop Up) Brackets

Platform brackets (previously known as ‘Hop Up’ brackets) are used to enable a platform to be placed between the scaffold and the building or structure and are therefore attached to the Standard closest to the workplace. Widths available in one to two planks wide. Platform Brackets are usually installed such that they provide a platform at the same level as the work platform or 0.5m below the work platform.

Corner infill panels are also available to enable continuity of Platform Brackets around the internal corners of buildings. These panels sit on two adjacent Platform Brackets and attach to the Standard at the rosette.

SureLock Plank Arrangement

- 8 plank plus toeboard
- 6 plank plus toeboard
- 4 plank plus toeboard
- 2 plank plus toeboard

2.4m Bay

0.8m Bay

1.8m Bay

1.2m Bay

19 Dismantling

Care must be taken when dismantling scaffold as the stability of the scaffold must be maintained at all times.

Removal of ties to the permanent structure should progress at the same rate as the dismantling process.

Do not remove ties until dismantling of the scaffold reaches the level of the ties.

Do not remove diagonal braces until it is necessary to remove the Standard that it is attached to.

Ledgers should not be removed from any working level before the removal of scaffold planks from the same level.

Localised overloading by stacking of dismantled equipment on partially dismantled scaffold must be avoided.

General Technical and Application Manual

20 Scaffolding Safety Rules

The following are some common sense rules designed to promote safety in the use of scaffolding. These rules do not purport to be all inclusive or to supplant or replace other additional safety and precautionary measures. They are not intended to conflict with or supersede the requirements of statutory or government regulations; reference to such specific authorities should be made by the user.

- Inspect all equipment before using.
- Never use any equipment that is damaged or deteriorated in any way.
- If in doubt contact your supplier.
- Inspect erected scaffolds regularly to ensure that they are maintained in a safe condition.
- Consult Acrow Formwork & Scaffolding when in doubt. Don’t Take Chances.
- Always check foundations and use adequate soleplates, especially on soft ground.
- Use Adjustable Bases instead of packing to adjust uneven grade conditions.
- When scaffolds are to be partially or fully enclosed, specific precautions must be taken to assure frequency and adequacy of ties attaching to the building due to increased load conditions resulting from effects of wind and rain. The scaffolding components to which the ties are attached must also be checked for additional loads. Consult your Acrow Formwork & Scaffolding Engineering representative.
- Equip all planked or working levels with proper guardrails, midrails and toeboards along all open sides and ends of scaffold platforms.
- Power lines near scaffolds are dangerous - use caution and consult the power authorities for advice and local requirements.
- Do not use ladders or makeshift devices on top of scaffolds to increase the height.
- Do not overload scaffolds.
- Planking
  - (a) Use SureLock steel planks only.
  - (b) Timber scaffold planks may be used if intermediate putlogs are attached to SureLock Ledgers either side of the Standards to provide adequate support within plank span limit requirements. Timber planks must not be supported only on SureLock Transoms.
- Adjustable Bases when fully extended shall have a minimum engagement of 150mm length of the spindle remaining inside the Standard tube. In any case, the maximum extension from the baseplate to the bottom of the Standard shall not exceed 450mm.
- Connections between components should be secured firmly.
- All scaffolding and accessories shall be installed in accordance with the recommendations of Acrow Formwork & Scaffolding Pty Ltd.
- Important! Always ensure that any joints in standards are below the last transom position. Under no circumstances are guardrails to be attached to a standard cantilevering from a joint above the platform level.
- When a scaffold has been completely erected it must be fully inspected by a qualified Scaffolder and a Handover Certificate issued to the user verifying the scaffold is complete and safe to use. See your local Acrow Formwork & Scaffolding Branch for further details.

Notes:

- The term Engineer referred to herein is in accordance with the definition of a person qualified for corporate membership of the Institute of Engineers, Australia, and with experience in the area of Scaffolding.
- The term Competent Person referred to herein refers to a person who has been adequately trained, has a number of years practical experience in the Scaffolding construction industry and is capable of interpreting and applying the design requirements as specified in the Scaffolding documentation.