# Table of Contents

Components ........................................................................................................... 4

Assembly Instructions

General Requirements ............................................................................................. 8

Assembly of the First Scaffold Bay

2.1 Bearing Surface ................................................................................................. 8
2.2 Screw Jacks with Base Plates ............................................................................ 8
2.3 Base Support ...................................................................................................... 8
2.4 Base Frames ..................................................................................................... 9
2.5 Walk-Through Frames ....................................................................................... 10
2.6 Bracing ............................................................................................................ 10
2.7 Installing Platforms ......................................................................................... 12
2.8 Adjustments ..................................................................................................... 12

Erecting Successive Bays

3.1 Standard Bays ................................................................................................. 13
3.2 Corner Arrangement ......................................................................................... 13

Erecting Additional Scaffold Lifts

4.1 Moving Components to Higher Levels ........................................................... 18
4.2 Erecting Additional Scaffold Lifts ................................................................. 18
4.3 Allowable Scaffold Height Versus Platform Loading ..................................... 20
4.4 Installing Scaffold Platform Access ............................................................... 21
4.5 Vertical Diagonal Bracing ............................................................................... 21
4.6 Anchoring the Scaffold .................................................................................. 24

Installing Guarding Systems

5.1 Completing the Top Platform ......................................................................... 27
5.2 Intermediate Platform Guards ....................................................................... 28
5.3 Side Bracket Hold Down and Guarding ........................................................ 29
5.4 Toeboards ....................................................................................................... 29

Installing Auxiliary Components

6.1 Side Brackets .................................................................................................. 30

Girts

7.1 Installation ....................................................................................................... 30
7.2 Getting Started ............................................................................................... 30
7.3 Installing the Girts ......................................................................................... 31
7.4 Completing the Platform ............................................................................... 32

Installing Trusses

8.1 Truss Members ............................................................................................... 32
8.2 Allowable Truss Assembly Loading .............................................................. 33

Dismantling .......................................................................................................... 34

Safety Guidelines ................................................................................................. 35
Foreword

The SafMax® Frame System is an integrated scaffold system that includes a wide range of components to allow the erector/user to scaffold a variety of structures.

In order to provide a well-built scaffold, a thorough job of planning is required prior to beginning erection. For example, if the top platform elevation is critical, the frame stack-up must be calculated so that any short frames are used at the base. This will allow the SafMax® access ladder system to be used at all levels above the base.

All illustrations shown in this guide provide the erector/user answers to some common questions on how to erect the scaffold in certain situations.

Any scaffold situation encountered in the use or erection of this product line that is not covered in any of BrandSafway’s instructional materials shall be designed by a qualified engineer familiar with this product.

This document is subject to periodic revision and updating. Before designing a scaffold, contact BrandSafway to be sure you are using the most current revision.

Contact BrandSafway for all scaffold loading not covered in this document.

**WARNING**

This document is intended to serve as a basis for proper application of the SafMax® Frame System. Use by unqualified persons may result in death, serious personal injury or property damage.

All scaffolds shall be erected, dismantled, modified, repaired, inspected and maintained under the supervision of a competent person. A competent person shall train all persons engaged in erecting or dismantling scaffolds.

**WARNING**

Serious injury or death can result from your failure to familiarize yourself, and comply with all applicable safety requirements of federal, state, provincial and local regulations and the SafMax® Frame System Safety Guidelines (included in this document) before erecting, using or dismantling this scaffold.

**WARNING**

Fall arrest equipment attached to scaffold may not prevent serious injury or death if a fall occurs.

**WARNING**

Information contained in this document is based upon the load-carrying capacity of the individual components. The total loads (component weight, plank weight, live load, material load, wind load, etc.) to be imposed on the complete assembly must be considered. All loads on individual members are transmitted to other components and ultimately to the ground. Compensation for these cumulative vertical and horizontal loads must be provided for each individual scaffold application.

All drawings in this guide are for illustrative purposes only. This guide is intended for general information purposes only. Because of the many variables which affect the performance of the product line, some of the information in this brochure may not apply. For specific applications, contact BrandSafway.

Note: All scaffolds shall be erected, modified and dismantled only under the supervision of a Competent Person. Erection, use, maintenance and disassembly must conform to current manufacturer’s instructions as well as all federal, state, provincial and local regulations. Copies of complete Safety Guidelines for these and other products are available from BrandSafway without charge.

©2018 Brand Industrial Services, Inc. All rights reserved.
### Frames

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Width</th>
<th>Height</th>
<th>Weight</th>
<th>Max. Allowable Compressive Load per Frame Leg when Rated for Scaffold Use*</th>
</tr>
</thead>
<tbody>
<tr>
<td>MXF1</td>
<td>Frame 100 x 101</td>
<td>39½&quot;</td>
<td>39¾&quot;</td>
<td>20.9 lbs.</td>
<td></td>
</tr>
<tr>
<td>MXF15</td>
<td>Frame 150 x 101</td>
<td>39¾&quot;</td>
<td>59&quot;</td>
<td>29.7 lbs.</td>
<td></td>
</tr>
<tr>
<td>MXF2</td>
<td>Frame 200 x 101</td>
<td>39¾&quot;</td>
<td>78¾&quot;</td>
<td>56.3 lbs.</td>
<td></td>
</tr>
</tbody>
</table>

1.90" diameter tubular posts. Equipped with attachment points for guardrails, toeboards and diagonals.

*Wall ties each 3rd frame tier vertically. See Section 2.6 for required bracing and compression/tension ties.

### Screw Jacks

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Height</th>
<th>Weight</th>
<th>Minimum Extension</th>
<th>Maximum Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLSJ66</td>
<td>Screw Jack 66</td>
<td>2’ 2½₁₆&quot;</td>
<td>7.7 lbs.</td>
<td>2&quot;</td>
<td>19&quot;</td>
</tr>
<tr>
<td>STSJ1</td>
<td>Systems™ Screw Jack</td>
<td>1’ 9&quot;</td>
<td>8 lbs.</td>
<td>2&quot;</td>
<td>14&quot;</td>
</tr>
</tbody>
</table>

Screw jack extensions are measured from the bottom of the frame leg to the bottom of the base plate.

### Steel Planks

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Width</th>
<th>Length</th>
<th>Weight</th>
<th>Maximum Allowable Loads</th>
</tr>
</thead>
<tbody>
<tr>
<td>MXP1</td>
<td>Plank Steel 101</td>
<td>12½&quot;</td>
<td>39¾&quot;</td>
<td>18.9 lbs.</td>
<td>Concentrated: 300 lbs. Uniform: 90 lbs./ft².</td>
</tr>
<tr>
<td>MXP2</td>
<td>Plank Steel 200</td>
<td>12½&quot;</td>
<td>6’ 6¼&quot;</td>
<td>34.8 lbs.</td>
<td>Concentrated: 300 lbs. Uniform: 90 lbs./ft².</td>
</tr>
<tr>
<td>MXP25</td>
<td>Plank Steel 250</td>
<td>12½&quot;</td>
<td>8’ 2½&quot;</td>
<td>42.8 lbs.</td>
<td>Concentrated: 300 lbs. Uniform: 75 lbs./ft².</td>
</tr>
<tr>
<td>MXP3</td>
<td>Plank Steel 300</td>
<td>12½&quot;</td>
<td>9’ 10&quot;</td>
<td>50.7 lbs.</td>
<td>Concentrated: 300 lbs. Uniform: 60 lbs./ft².</td>
</tr>
</tbody>
</table>
Components

**Vertical Diagonals**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Length</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MXVD2</td>
<td>Vertical Diagonal 200 x 200</td>
<td>8' 10¾&quot;</td>
<td>13.9 lbs.</td>
</tr>
<tr>
<td>MXVD25</td>
<td>Vertical Diagonal 250 x 200</td>
<td>10' 1¼&quot;</td>
<td>15 lbs.</td>
</tr>
<tr>
<td>MXVD3</td>
<td>Vertical Diagonal 300 x 200</td>
<td>11' 6&quot;</td>
<td>17.4 lbs.</td>
</tr>
</tbody>
</table>

For longitudinal stiffening of the scaffold. Hook the top end into the frame U-section and slide the bottom end over the drop lock stud.

**Guardrails**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Length</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MXGR1</td>
<td>MX Guardrail 101</td>
<td>39¾&quot;</td>
<td>3.8 lbs.</td>
</tr>
<tr>
<td>SLGR2</td>
<td>Guardrail 200</td>
<td>6' 6¼&quot;</td>
<td>7.9 lbs.</td>
</tr>
<tr>
<td>SLGR25</td>
<td>Guardrail 250</td>
<td>8' 2½&quot;</td>
<td>9.3 lbs.</td>
</tr>
<tr>
<td>SLGR3</td>
<td>Guardrail 300</td>
<td>9' 10&quot;</td>
<td>11.5 lbs.</td>
</tr>
</tbody>
</table>

Slide both ends over the drop lock stud.

**Guardrail Panels, Posts and Planks**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Width</th>
<th>Height</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MXIGPE</td>
<td>Guardrail Panel – Intermediate End</td>
<td>39¾&quot;</td>
<td></td>
<td>9.5 lbs.</td>
</tr>
<tr>
<td>MXGRPE</td>
<td>Guardrail Panel – End</td>
<td>39¾&quot;</td>
<td>48⅞&quot;</td>
<td>32.6 lbs.</td>
</tr>
<tr>
<td>MXGRP</td>
<td>Guardrail Post – without Hold Down</td>
<td>48⅞&quot;</td>
<td></td>
<td>8.6 lbs.</td>
</tr>
<tr>
<td>MXGRPM</td>
<td>Guardrail Post – without Hold Down – M</td>
<td>48⅞&quot;</td>
<td></td>
<td>12.6 lbs.</td>
</tr>
<tr>
<td>MXGRPHD</td>
<td>Guardrail Plank Hold Down</td>
<td>39¾&quot;</td>
<td>48⅞&quot;</td>
<td>7.7 lbs.</td>
</tr>
<tr>
<td>MXGRPWHD</td>
<td>Guardrail Post Unit – with Hold Down</td>
<td>39¾&quot;</td>
<td>48⅞&quot;</td>
<td>18.5 lbs.</td>
</tr>
</tbody>
</table>

**Toeboards**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Length</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MXTB1</td>
<td>Toeboard WD 101</td>
<td>39¾&quot;</td>
<td>7.5 lbs.</td>
</tr>
<tr>
<td>MXTB2</td>
<td>Toeboard WD 200</td>
<td>6' 6¼&quot;</td>
<td>15 lbs.</td>
</tr>
<tr>
<td>MXTB25</td>
<td>Toeboard WD 250</td>
<td>8' 2½&quot;</td>
<td>17.4 lbs.</td>
</tr>
<tr>
<td>MXTB3</td>
<td>Toeboard WD 300</td>
<td>9' 10&quot;</td>
<td>19.8 lbs.</td>
</tr>
<tr>
<td>MXTBE</td>
<td>Toeboard WD End</td>
<td>39¾&quot;</td>
<td>10.1 lbs.</td>
</tr>
</tbody>
</table>

©2018 Brand Industrial Services, Inc. All rights reserved.
Components

Aluminum Hatch Decks with Ladder

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Length</th>
<th>Weight</th>
<th>Concentrated</th>
<th>Uniform</th>
</tr>
</thead>
<tbody>
<tr>
<td>MXDWL25</td>
<td>Deck 250 with Ladder</td>
<td>8' 2½&quot;</td>
<td>53 lbs.</td>
<td>250 lbs.</td>
<td>25 lbs./ft²</td>
</tr>
<tr>
<td>MXDWL3</td>
<td>Deck 300 with Ladder</td>
<td>9' 10&quot;</td>
<td>61 lbs.</td>
<td>250 lbs.</td>
<td>25 lbs./ft²</td>
</tr>
<tr>
<td>MXDWLS</td>
<td>Deck Ladder Starter</td>
<td>31⅜&quot;</td>
<td>4.8 lbs.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For interior access at a lift height of 2.0 m.

Side Brackets

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Length</th>
<th>Weight</th>
<th>Maximum Allowable Concentrated Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>MXBR1S</td>
<td>Extension Bracket - 1 Plank</td>
<td>13¾&quot;</td>
<td>13.5 lbs.</td>
<td>500 lbs.</td>
</tr>
<tr>
<td>MXBR2S</td>
<td>Side Bracket - 2 Planks</td>
<td>29½&quot;</td>
<td>19.4 lbs.</td>
<td>500 lbs.</td>
</tr>
<tr>
<td>MXBRPHD</td>
<td>Side Bracket Plank Hold Down</td>
<td>29½&quot;</td>
<td>5.3 lbs.</td>
<td></td>
</tr>
</tbody>
</table>

Tying Components

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Length</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLTT</td>
<td>Tie Tube 0.5 meter</td>
<td>19⅛&quot;</td>
<td>4.4 lbs.</td>
</tr>
<tr>
<td>SLTT1</td>
<td>Tie Tube 1.1 meter</td>
<td>43⅛&quot;</td>
<td>9.7 lbs.</td>
</tr>
<tr>
<td>SLTTB1</td>
<td>Tie Tube Eyebolt (welded)</td>
<td></td>
<td>0.2 lbs.</td>
</tr>
<tr>
<td>SLTLS1</td>
<td>Tie Lag Shield ¾ - Short</td>
<td></td>
<td>0.1 lbs.</td>
</tr>
<tr>
<td>SLTC</td>
<td>Tie Clamp</td>
<td></td>
<td>3.1 lbs.</td>
</tr>
</tbody>
</table>

©2018 Brand Industrial Services, Inc. All rights reserved.
## Components

### Girts

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Length</th>
<th>Weight</th>
<th>Allowable Concentrated Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>MXGT5</td>
<td>Girt 500 with Clamp</td>
<td>16' 4¾&quot; (5 m)</td>
<td>130.5 lbs.</td>
<td>1700 lbs. at Center</td>
</tr>
<tr>
<td>MXGT75</td>
<td>Girt 750 with Clamps</td>
<td>24' 7¾&quot;</td>
<td>189.9 lbs.</td>
<td>1000 lbs. at Third Points</td>
</tr>
<tr>
<td>MXGTSP</td>
<td>Girt Spreader</td>
<td>39¾&quot;</td>
<td>15.2 lbs.</td>
<td></td>
</tr>
</tbody>
</table>

### Trusses

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Length</th>
<th>Centerline</th>
<th>Weight</th>
<th>Maximum Allowable Loads</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Concentrated</td>
</tr>
<tr>
<td>SLTR51</td>
<td>Truss 40 - 510</td>
<td>16' 8¾&quot; (5.1 m)</td>
<td>15¾&quot;</td>
<td>108 lbs.</td>
<td>600 lbs.</td>
</tr>
<tr>
<td>SLTR76</td>
<td>Truss 40 - 760</td>
<td>24' 11¾&quot; (7.6 m)</td>
<td>15¾&quot;</td>
<td>161 lbs.</td>
<td>600 lbs.</td>
</tr>
<tr>
<td>SLTRD5</td>
<td>Truss 75 - 500 Deep</td>
<td>16' 4¾&quot; (5 m)</td>
<td>27¾&quot;</td>
<td>121.9 lbs.</td>
<td>1100 lbs.</td>
</tr>
<tr>
<td>SLTRD7</td>
<td>Truss 75 - 700 Deep</td>
<td>22' 11¾&quot; (7 m)</td>
<td>27¾&quot;</td>
<td>170.2 lbs.</td>
<td>1100 lbs.</td>
</tr>
<tr>
<td>SLTRCP</td>
<td>Truss Coupling Pin</td>
<td>17¾&quot;</td>
<td></td>
<td>9.7 lbs.</td>
<td></td>
</tr>
</tbody>
</table>

### Miscellaneous

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLC DL</td>
<td>Clamp with Drop Lock</td>
<td>2 lbs.</td>
</tr>
<tr>
<td>CRA19</td>
<td>Right Angle Clamp</td>
<td>2.8 lbs.</td>
</tr>
<tr>
<td>CSA19</td>
<td>Swivel Clamp</td>
<td>3.5 lbs.</td>
</tr>
<tr>
<td>MXP5</td>
<td>Plank Support</td>
<td>17.4 lbs.</td>
</tr>
<tr>
<td>MXPTP</td>
<td>Pigtail Pin</td>
<td>0.4 lbs.</td>
</tr>
</tbody>
</table>

©2018 Brand Industrial Services, Inc. All rights reserved.
Assembly Instructions

General Requirements

1. Inspect all SafMax® Frame System components prior to erecting them. Do not use damaged components.

2. To properly erect the SafMax® Frame System, the following steps must be completed in the order they are discussed.

Assembly of the First Scaffold Bay

2.1 Bearing Surface

The SafMax® Frame System must only be erected on suitable load bearing surfaces. If the surfaces are not capable of supporting the scaffold load, sills or other load distribution means must be used.

2.2 Screw Jacks with Base Plates

Scaffold frames must always be supported by means of screw jacks with base plates and sills where required (Section 2.1; Fig. 1). Two lengths of screw jacks are available, the Systems™ Screw Jack (STSJ1) and the SafMax® Screw Jack 66 (SLSJ66). Refer to the Components list on page 4 for dimensions and extensions.

Screw jack extensions longer than 14 in. (35.6 cm) will reduce the erected scaffold load capacity and may require that additional bracing be installed at the scaffold base.

2.3 Base Support

A horizontal rail (MXGR_ or SLGR_) is required at the base of all SafMax® Frame System installations. This member is:

- installed on the outside frame leg of the SafMax® frame
- is continuous on run scaffolds
- is fastened to the bottom drop lock stud on the frame leg (Fig. 2)
2.4 Base Frames

Sloping surfaces, height differences and the need to reach certain working heights are accomplished by using various height SafMax® frames in combination with the STSJ1 and the longer SLSJ66 screw jacks (Figs. 3–5).

Figure 3 – Erecting SafMax® on Sloped Surfaces

Figure 4 – Bracing Base on Uneven Ground – Stepped Ground (Elevation View of Outside Frame Leg)

Figure 5 – Bracing Base on Uneven Ground – Sloped Ground (Elevation View of Outside Frame Leg)
Assembly of the First Scaffold Bay

2.5 Walk-Through Frames

- Begin erecting the first bay by placing two walk-through frames (MXF2) with their drop lock studs on the outer leg, on screw jacks.
- Install a vertical diagonal brace (MXVD_) from the inside slot in the channel at the top of one frame to the opposite frame drop lock which is located near the bottom of the MXF2 frame. When properly installed, these bracing members will form a triangle with one of the scaffold frames.
- Install a rail (MXGR_ or SLGR_) on the top guardrail studs to connect the two frames.
- Install three scaffold planks on the channels of the two frames.
- Adjust screw jacks until frames are plumb and level (Figs. 6, 3.1).
- Install a side bracket (MXBR1S or MXBR2S) on each frame if side brackets are to be used (Section 6.1). Check to assure the platform is at the correct distance from the working surfaces.

2.6 Bracing

Vertical diagonal bracing must first be placed in the inside slot on the bottom of the top horizontal member of the first scaffold frame and then placed over the drop lock stud on the bottom of the other frame in the bay (Fig. 6). A vertical diagonal brace must also be installed in each vertical lift as the scaffold is erected higher. These additional braces can be placed in a tower fashion using either the zigzag pattern or a parallel pattern (Figs. 7–8).

- Install these additional braces from the slot in the top horizontal member of the frame to the bottom drop lock stud on the adjacent frame.
- Repeat this pattern in both end bays and every fourth bay along a scaffold run (Section 3.1).
- When repeating the pattern along the run, alternate the brace direction (Fig. 13).
- Horizontal bracing must be installed along the entire run at the base and repeated at the top guardrail stud level (Fig. 13).

Figure 6 – Location of Bracing Members
Assembly of the First Scaffold Bay

Figure 7 – Vertical Diagonal Bracing Zigzag Pattern

Figure 8 – Vertical Diagonal Bracing Parallel Pattern

Figure 9 – Bracing First Lift for MXF2 or MXF15
(Elevation View of Outside Frame Leg)

Figure 10 – Bracing First Lift for MXF1
(Elevation View of Outside Frame Leg)

MXVD_
MXP_
MXVD for MXF2, T&C for MXF15
Outer Leg of MXF2 or MXF15
SLGR_*
SLSJ66 / STSJ1

* MXGR1 used for 1.01 m Bay.
2.7 Installing Platforms

All SafMax® Frame System lifts must be fully planked. Only SafMax® steel scaffold planks (MXP) must be used to form SafMax® scaffold platforms. Three 12½ in. (32 cm) wide planks are required to completely deck a single bay. The planks are installed by placing the hooks over one side of the top channel member of each of the frames that define the bay (Figs. 11–12). Each plank is locked into place when the frame above the platform is installed or when guardrail posts with hold down devices (MXGRPWH) are installed on the top platform.

2.8 Adjustments

Position each frame the required distance from the work surface. Then level and plumb the first scaffold bay both horizontally and vertically using a spirit level. Continue erecting and leveling additional bays in turn.
Erecting Successive Bays

3.1 Standard Bays

Successive bays can be erected as follows:

- Install a rail (MXGR_ or SLGR_) on the bottom drop lock stud of the last frame in the starter bay and use it to space the new screw jacks at the desired distance from this bay.
- Place two screw jacks on sills at the desired bay distance away from the starter bay.
- Install the desired frame on the screw jacks and attach the free end of the rail to the bottom drop lock stud on the newly installed frame.
- Tie the newly installed frame to the run by installing a rail (MXGR_ or SLGR_) between the top guardrail drop lock studs on the frames (Fig. 13).
- Secure the installed frame to the starter bay by installing three scaffold planks on the top channel members to form a continuous deck.
- Position the frame the desired distance from the work surface and level.
- Repeat this process to install additional bays.
- Install a vertical diagonal brace (Section 2.6) every fourth bay and at each end (Section 4.4 and Figure 4.5) for information on installing access.

3.2 Corner Arrangement

Corners can be erected as follows:

- Extend a run SafMax® Frame System bay sufficiently past the desired corner to allow installation of the butted frame line plus sufficient set back clearance to form the corner.
- Place the opposite leg of the abutted frame on a single sill and screw jack.
- Place the abutted frame leg against the outer frame leg of the run bay.
- Clamp the two frame legs together using two swivel clamps (CSA19).
- Position the top swivel clamp as close to the header as possible and the base clamp as close to the base as possible (Fig. 14).
- Additional clamps are required every second frame in height.

When using this method, only one screw jack is required to support both clamped frame legs.
Erecting Successive Bays

Figure 16 – Outside Corner (Option 1)

* MXGR1 used for 1.01 m Bay.

Figure 17 – Outside Corner (Option 2)

* MXGR1 used for 1.01 m Bay.
Figure 18 – Outside Corner (Option 3)

- SLFC Frame Clamps
- MXP_
- Cover Gaps with Plywood
- SLGR_ (typ.)
- MXIGPE
- MXVD_
- MXF2
- SLSJ66 or STSJ1 (typical)
- Building Line

Figure 19 – Outside Corner (Option 4)

- Planks must be near the end of MXP_
- End Bay not recommended for Ladder Access Bay
- 10' Max
- Tube & Clamp GR
- Scaffold Grade Plank
- SLGR_ (typ.)
- MXP_
- MXVD_
- MXIGPE
- MXF2
- SLSJ66 or STSJ1 (typical)
- Building Line

Erecting Successive Bays
Erecting Successive Bays

Figure 20 – Inside Corner (Option 1)

Figure 21 – Inside Corner (Option 2)
Erecting Successive Bays

**Figure 22 – Inside Corner (Option 3)**

- Clamp GR with SLCDL
- SLFC Frame Clamps
- Cover gaps with plywood
- MXP
- MXIGPE
- SLGR (typical)
- MXF2 (typical)
- MXVD
- MXVDS (typical)
- ST_SG with BP1SG
- SLSJ66 or STSJ1 (typical)

**Figure 23 – Inside Corner (Option 4)**

- Clamp GR with SLCDL
- End Bay not recommended for Ladder Access Bay
- Planks must be near the end of MXP
- 10' Max
- MXP
- MXIGPE
- SLGR (typical)
- MXF2
- MXVD
- MXVDS (typical)
- ST_SG with BP1SG
- SLSJ66 or STSJ1 (typical)
Erecting Additional Scaffold Lifts

**WARNING**
ADDITIONAL TIES MAY BE REQUIRED WHEN USING HOISTING DEVICES ATTACHED TO THE SCAFFOLD TO LIFT FRAMES AND COMPONENTS. REFER TO SECTION 4.6 FOR TIE INFORMATION.

### 4.1 Moving Components to Higher Levels

When lifting frames or materials by hand, always stand on platform surfaces that are equipped with guardrails and midrails. In addition at least one person is required on each lift to pass the scaffold components to the next lift.

### 4.2 Erecting Additional Scaffold Lifts

- Begin at a bay closest to the bay in which the components are being lifted (the transportation bay).
- Erect the frames in each bay as you progress away from the transportation bay.
- Install all guardrails, midrails, and toeboards in each bay before installing the next frame.
- Install three planks on the top channel of each frame (Section 2.7). Following this procedure will require that you carry the frame to be installed horizontally through the frame tunnel.

This will allow you to transport components at the installation level within a fully planked and guarded platform (Fig. 24). Be sure to install intermediate end guardrail panels (MXIGPE) and toeboards (MXTBE) on the open ends of runs at each platform level (Section 5.2).

![Figure 24 – Erecting Additional Levels](image1)

![Figure 25 – Intermediate End Guardrail Panel and Toeboards](image2)
**Erecting Additional Scaffold Lifts**

### 4.3 Allowable Scaffold Height Versus Platform Loading

This section contains illustrations and load ratings for various BrandSafway SafMax® Frame System Assemblies. The load ratings are based on the capability of individual components and scaffolds when assembled, braced and tied in accordance with this document. A qualified person must reduce the allowable loads to compensate for job specific loading conditions applicable to each job location. Typical job specific loads may be generated by wind, snow, base condition, moving loads etc.

Based On Wall Tie Configuration I (Section 4.6)

**a) Multiple Bay Scaffold - Without Side Brackets**

**Light Duty** - 25 lbs./ft². Uniformly distributed platform loading

<table>
<thead>
<tr>
<th>Bay Length</th>
<th>Max Number of Work Levels</th>
<th>Max Allowable Scaffold Height</th>
<th>Max Allowable Scaffold Height</th>
<th>Max Allowable Scaffold Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 m (6' 6¾&quot;)</td>
<td>1</td>
<td>145 ft.*</td>
<td>125 ft.*</td>
<td>99 ft.</td>
</tr>
<tr>
<td>2.5 m (8' 2⅞&quot;)</td>
<td>2</td>
<td>125 ft.</td>
<td>112 ft.</td>
<td>86 ft.</td>
</tr>
<tr>
<td>3.0 m (9' 10⅛&quot;)</td>
<td>3</td>
<td>112 ft.</td>
<td>93 ft.</td>
<td>73 ft.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>99 ft.</td>
<td>79 ft.</td>
<td>53 ft.</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>86 ft.</td>
<td>66 ft.</td>
<td>40 ft.</td>
</tr>
</tbody>
</table>

**Medium Duty** - 50 lbs./ft². Uniformly Distributed Platform Loading

<table>
<thead>
<tr>
<th>Bay Length</th>
<th>Max Number of Work Levels</th>
<th>Max Allowable Scaffold Height</th>
<th>Max Allowable Scaffold Height</th>
<th>Max Allowable Scaffold Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 m (6' 6¾&quot;)</td>
<td>1</td>
<td>125 ft.</td>
<td>106 ft.</td>
<td>86 ft.</td>
</tr>
<tr>
<td>2.5 m (8' 2⅞&quot;)</td>
<td>2</td>
<td>99 ft.</td>
<td>79 ft.</td>
<td>53 ft.</td>
</tr>
<tr>
<td>3.0 m (9' 10⅛&quot;)</td>
<td>3</td>
<td>73 ft.</td>
<td>46 ft.</td>
<td>20 ft.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>46 ft.</td>
<td>Not Allowed</td>
<td>Not Allowed</td>
</tr>
</tbody>
</table>

*Scaffolds over 125 ft. must be designed by a professional engineer.

**b) Multiple Bay Scaffold - With SLBR2 Side Brackets**

**Light Duty** - 25 lbs./ft². Uniformly distributed platform loading on the bracket platform(s) and the frame platform(s)

<table>
<thead>
<tr>
<th>Bay Length</th>
<th>Number of Bracket Platforms Installed and Worked</th>
<th>Max Allowable Scaffold Height</th>
<th>Max Allowable Scaffold Height</th>
<th>Max Allowable Scaffold Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0 m (6' 6&quot;)</td>
<td>1</td>
<td>99 ft.</td>
<td>79 ft.</td>
<td>66 ft.</td>
</tr>
<tr>
<td>2.5 m (8' 2⅞&quot;)</td>
<td>2</td>
<td>86 ft.</td>
<td>66 ft.</td>
<td>53 ft.</td>
</tr>
<tr>
<td>3.0 m (9' 10⅛&quot;)</td>
<td>3</td>
<td>73 ft.</td>
<td>53 ft.</td>
<td>40 ft.</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>60 ft.</td>
<td>40 ft.</td>
<td>27 ft.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>79 ft.</td>
<td>66 ft.</td>
<td>53 ft.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>66 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>66 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>31</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>32</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>33</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>34</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>36</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>38</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>39</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>42</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>43</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>44</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>46</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>47</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>49</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>53 ft.</td>
<td>60 ft.</td>
<td>46 ft.</td>
</tr>
</tbody>
</table>

Note: All scaffold bays and tiers must be planked with MXLP_ planks or MXDWL decks. Bays with hatch plank and ladder must never be rated for loads exceeding 25 lbs./ft². The scaffold base, cribbing and sills must be designed to safely support a maximum leg load of 2900 lbs. load at each frame leg.
4.4 Installing Scaffold Platform Access

Worker access to each lift is achieved by installing a combination deck with the ladder access system (MXDWL_) as each lift is completed. They are 25 in. (63 cm) wide and must be used in conjunction with one 12½ in. (32 cm) steel scaffold plank.

When the first deck with ladder access system is installed, a deck ladder starter (MXDWLS) must be installed on the bottom of the frame. This starter will provide a support that positions the access ladder at a safe angle for climbing (Fig. 28).

Install the decks on the outside (guardrail side) of the frame.

When installing access decks on additional lifts, alternate the direction of the deck so that the ladder will not interfere with the hatch below (Fig. 24). Access ladders may also be staggered in adjacent bays.

Keep hatch closed when not using the ladder.
4.5 Vertical Diagonal Bracing

Install bracing as each lift is installed. Prior to installing vertical diagonals, each scaffold frame leg must be pinned to the frame below using an external pigtail pin (MXPTP) (Figs. 30–31).

Follow the bracing pattern and assembly procedure (Section 2.6). Diagonal braces will be installed in the designated bays from frame to frame (Figs. 6–8).
Erecting Additional Scaffold Lifts

Figure 33 – Vertical Diagonal Bracing (Option 2): Using Tube & Clamp

<table>
<thead>
<tr>
<th>Bay Length</th>
<th>Tube Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 m</td>
<td>10’</td>
</tr>
<tr>
<td>2.5 m</td>
<td>13’</td>
</tr>
<tr>
<td>3 m</td>
<td>13’</td>
</tr>
</tbody>
</table>

Requires plumbing of each level.

Figure 34 – Vertical Diagonal Bracing (Option 3)
Using Systems™ SDCs (2 m Bay)

Figure 35 – Vertical Diagonal Bracing (Option 3)
Using Systems™ SDCs (2.5 m Bay)

Figure 36 – Vertical Diagonal Bracing (Option 3): Using Systems™ SDCs (3 m Bay)

Requires plumbing of each level.
Erecting Additional Scaffold Lifts

4.6 Anchoring the Scaffold

Scaffolds must be continuously anchored or guyed when their height exceeds 4 times (3 times in California) their smallest base dimension (length or width) and every 20 feet vertically thereafter.

- The uppermost tie should be placed as close to the top platform as possible, and in no case, more than 4 times (3 times in California) the minimum base dimension (length or width) from the top.

- When tie levels are reached during the installation phase, the scaffold must be tied before proceeding with the next level.

- Both inside legs of a single bay tower must be tied. In addition, tie a run scaffold at its end and every third bay in between.

- Place ties from the structure surface to a frame post, and locate them just below the frame header.

- When tying the scaffold to a masonry or concrete surface use ⅜ in. (9.5 mm) diameter tie tube eyebolts (SLTTB1). These eyebolts can be fastened into the masonry or concrete by drilling ⅝ in. holes into the masonry or concrete and using metal tie lag shields (SLTLS1). Use the SL Scaffold tie tube (SLTT) as the tie.

! WARNING
DO NOT ENCLOSE THE SAFMAX® FRAME SCAFFOLD OR GUY IT WITHOUT THE CONSULTATION OF AN ENGINEER KNOWLEDGABLE IN SCAFFOLD DESIGN.

! WARNING
DO NOT SUBSTITUTE OTHER TIE METHODS WITHOUT APPROVAL OF THE BRANDSAFWAY ENGINEERING DEPARTMENT.

- In setback areas use a tie clamp (SLTC) in conjunction with the desired length BrandSafway ST__SG tubes.

- Insert the curved bar of the tie tube into the installed eyebolt.

- Rotate it and fasten the tie tube to the scaffold leg using a BrandSafway CRA19 right angle clamp (Figs. 39–40).

- Install ties as the scaffold installation progresses. When installing these ties, install them at opposing angles to the horizontal to reduce scaffold sway. Do not remove these ties until the scaffold is dismantled to the tie level. If overturning forces such as those caused by side brackets, cantilevered platforms, pulleys and hoist arms are present, or if the scaffold is to be enclosed, is on a sloped surface, or if wind conditions are present, additional ties may be required at more frequent locations. Contact BrandSafway Engineering for more information.

Figure 37 – Federal OSHA Tie Locations
(for 101 cm Wide Frame)
Erecting Additional Scaffold Lifts

Quantities and location of ties, guys and braces will vary depending upon the scaffold size, weight, shape and load conditions. The following general guidelines indicate minimum BrandSafway requirements and are not all inclusive. When designing scaffolds with unique configurations or special loading conditions, consult with BrandSafway engineering or a professional structural engineer familiar with scaffold design prior to design finalization.

BrandSafway Tube & Clamp components may be substituted for BrandSafway SafMax® Frame Scaffold bracing members, horizontal or horizontal diagonal members. When doing so, the load capacity of these components and their effect on the completed scaffold must be considered.

Assure ties, stand-offs or guys are located as close to frame horizontals as possible.

Note: Proper access, platforms and toeboards are required on all scaffolds. These items have been eliminated from the illustrations in this chapter for clarity purposes only.

Figure 38 – Tie Assemblies And Load Rating:
SafMax® Tie Specifications

Maximum Tensile Load: 1000 lbs.
(2000 psi concrete, clean hole)

Minimum Embedment: 1¾”

Drill Diameter: ¾”
Erecting Additional Scaffold Lifts

Figure 39 – Typical Scaffold Anchors (Option 1)

Figure 40 – Typical Scaffold Anchors (Option 2)

Figure 41 – Engineered Ties: Tube & Clamp

Figure 42 – Engineered Ties: Tie Clamp

Figure 43 – Engineered Ties: SL Short Tube

Figure 44 – Engineered Ties: SL Long Tube
5.1 Completing the Top Platform

The open sides and ends of the top platform must be guarded. To guard the top platform, use the combination guardrail post with plank hold down (MXGRPWHD), top rails and mid rails. When installed, the MXGRPWHD captures the top platform plank to prevent uplift as well as acts as a guardrail post.

- Install the guardrail post with hold down by inserting over the coupling pins of the top frame, with the post on the outer leg.
- Secure each post end with a pigtail pin.
- Guard the ends of the platforms with guardrail panel ends (MXGRPE). To do this, install a guardrail panel end (MXGRPE) on the end frame coupling pins and fasten them to each end frame with pigtail pins (Fig. 48).

*MXGR1 used for 1.01 m Bay.
### 5.2 Intermediate Platform Guards

Ends of the intermediate scaffold runs are guarded by using the intermediate end guardrail panel (MXIGPE). The intermediate end guardrail panel is installed by inserting the open tube end of the guardrail panel over the top drop lock stud, then clamping the clamp end of the guardrail panel onto the end frame inner leg (Fig. 48). In the event an inside guardrail is required at intermediate platform levels, attach the guardrail and midrail at the required height using the half clamps with drop locks (SLCDL) fastened to the inner frame legs. When installing the SLCDL, be sure the drop lock faces in toward the platform.

---

**Figure 47 – Guardrail (Top Deck with Additional Frame): Standard SafMax® Guardrail Components**

*MXGR1 used for 1.01 m Bay.*

**Figure 48 – Guardrails and Guardrail Panel Ends**
5.3 Side Bracket Hold Down and Guarding

Side bracket planks are also held down to prevent uplift. On the one-board extension bracket (MXBR1S) the planks are held down automatically by the plank hold-down tab next to the guardrail post socket. When the two-board side bracket (MXBR2S) is used, the side bracket plank hold down (MXBRPHD) is used to secure the planks.

Capture the frame leg that the MXBR2S is attached to with the metal tabs on the MXBRPHD and then insert the coupling pin end of the MXBRPHD into the socket on the end of the MXBR2S.

Ends of side bracket runs are guarded using a guardrail post (MXGRPM) inserted into the socket at the end of the side bracket with Tube & Clamp installed as a top and midrail. To do this, use tubing of sufficient length to span across the scaffold frame and bracket.

Install with the tubes on the platform side.

In the event the side bracket platform run must be guarded on the inside, install a guardrail post (MXGRPM) on each side bracket and the appropriate length of guardrail and midrail.

Fasten all guardrail posts to brackets using pigtail pins.

5.4 Toeboards

Toeboards along the run are installed by capturing the frame legs or guardrail posts at each end of the bay with the metal tabs on each end of the toeboard. The metal tabs are offset so that the toeboards will rest directly on the platforms without a gap. When properly installed, the Safway logo on the toeboards will be right side up.
Installing Auxiliary Components

6.1 Side Brackets

- The MXBR1S extension bracket may only be used at the top of a frame to extend a platform.
- The MXBR2S may be used at the top of a frame to extend a platform or at any location on a frame as a separate work platform.
- When used at the top of a frame, install the bracket (MXBR_S) with the notch of the upper hook resting on the pigtail pin (MXPTP). Note that the pigtail pin must be oriented so that the notch rests on the straight end of the pin.
- Tighten the fastening clamp.
- Install a second bracket on the adjacent frame and install the steel plank (MXP_).
- Continue until the run is complete.
- Install guardrail and toeboards (Section 5.0).

- When used at a location on a leg other than the top of a frame (Fig. 52), position the bracket (MXBR2S) at the desired height and tighten the clamp.
- Install a second bracket on the adjacent frame approximately level with the first bracket.
- Install a steel plank (MXP_) on the brackets and level the assembly by sliding the second bracket up or down until the plank is level. Install the second plank.
- Continue until the run is complete.
- Finish the platform by installing a bracket plank hold down device (MXBRPHD) (Section 5.3), guardrail and toeboards (Section 5.0).

Girts

Girts are truss members used to span across openings to provide a support from which additional scaffold lifts can be erected. Girts contain sockets which accept a girt spreader (MXGTS) and are fastened to adjacent scaffold frames with "T" bolt clamps.

7.1 Installation

Girts (MXGTS and MXGT75) are installed between scaffold runs or towers and must be assembled in pairs. The distance between the frames on each side of the opening is critical to their successful installation.

7.2 Getting Started

Begin girt installation when the base scaffold level is installed. Do not attempt to install girts between independent scaffolds as an afterthought.

At the base level, install screw jacks, frames and rail members (as required by Section 3.0) along the entire run (which includes the girt area) and level each bay as it is erected (Fig. 53). This will assure proper girt spacing.
Assembly Instructions

If you are going to span across a door or drive, block the door or drive to restrict through traffic during the girt erection process. The girt length will be a multiple of the frame space and its span will be determined by the spacing rails used.

7.3 Installing the Girts

Erect the scaffold run or towers one level below the desired girt height. Omit the frames in the proposed girt area.

Install two SafMax® frames and rails on both sides of the opening to which the girt is to be placed, but do not install platform planks above or vertical diagonal braces at this time.

Remove the "T" bolt from each girt clamp. Lift and position the girt at the desired location (this may require moving the scaffold frames to properly seat the girt clamps), insert the "T" bolts in the girt end clamps and fasten the girt at one end.

Girts are heavy (as much as 190 lbs.) therefore it will require at least two, possibly three erectors to lift and position each girt. Level the girt and tighten the remaining clamps on the second girt. Check level between the two girts (Figs. 54–55).

Temporary Jacks & Base Frame
Temporarily install jacks & base frame horizontal rails to accurately space and level frames on each side of opening. Remove after girt is installed.

Note: Block access to through traffic during girt erection.
7.4 Completing the Platform

Install the platform planking on the frames above and any required vertical diagonal bracing in both adjacent bays.

Install a girt spreader (MXGTSP) at the required location.

Install one MXGTSP at the mid-span of a MXGT5 and one MXGTSP at each third point of the MXGT75 by inserting the coupling pins on the MXGTSP into the vertical tubes at these locations.

Temporarily use short cleated scaffold grade plank to install the spreader. Install plank on the channels (Fig. 56).

Remove screw jacks, frames and rails from below the installed girts to provide the desired passage opening.

---

Installing Trusses

8.1 Truss Members

Truss members are available for use with the SafMax® Frame System. Trusses are installed by clamping the top and bottom chords to the frame legs at each end using CRA-19 clamps. Level by moving one end up or down the frame leg. Platforms are installed using Scaffold Grade Plank and plywood (skip plank and plywood) (Fig. 58).
Assembly Instructions

The following chart specifies the maximum allowable load that may be imposed on BrandSafway SL trusses. The chart is valid only when the trusses are installed with BrandSafway ST__SG lateral bracing on the top chord at intervals not to exceed 1 meter (3' 3") (Fig. 59). Trusses must be fastened to frames with BrandSafway CRA19 Rigid Clamps only, no substitutes allowed.

8.2 Allowable Truss Assembly Loading

The following chart applies to the truss components only. A qualified person must evaluate the load carrying capacity of the platform material, truss fasteners, frames, braces etc. to support the loading shown. Never couple trusses together to make longer spans without consulting BrandSafway Engineering for each specific application.
Assembly Instructions

Allowable Truss Assembly Loading

Multiple Bay Scaffold
a) SLTR_ Steel Trusses - 0.40 m (15.75") deep

<table>
<thead>
<tr>
<th>Truss Spacing</th>
<th>2.0 m</th>
<th>2.5 m (6' 6¾&quot;)</th>
<th>3.0 m (8' 2¾&quot;)</th>
<th>(9' 10¼&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLTR51</td>
<td>3 m</td>
<td>300 lbs./ft.</td>
<td>1500 lbs.</td>
<td>30 lbs./ft²</td>
</tr>
<tr>
<td>SLTR51</td>
<td>4 m</td>
<td>170 lbs./ft.</td>
<td>1110 lbs.</td>
<td>20 lbs./ft²</td>
</tr>
<tr>
<td>SLTR51/76</td>
<td>5 m</td>
<td>105 lbs./ft.</td>
<td>880 lbs.</td>
<td>12 lbs./ft²</td>
</tr>
<tr>
<td>SLTR76</td>
<td>6 m</td>
<td>70 lbs./ft.</td>
<td>700 lbs.</td>
<td>8 lbs./ft²</td>
</tr>
<tr>
<td>SLTR76</td>
<td>7 m</td>
<td>50 lbs./ft.</td>
<td>600 lbs.</td>
<td>6 lbs./ft²</td>
</tr>
</tbody>
</table>

*Note: Total load includes live load and all dead loads (decking, etc.).

Multiple Bay Scaffold
b) SLTRD_ Steel Trusses - 0.70 m (27.6") deep

<table>
<thead>
<tr>
<th>Truss Spacing</th>
<th>2.0 m</th>
<th>2.5 m (6' 6¾&quot;)</th>
<th>3.0 m (8' 2¾&quot;)</th>
<th>(9' 10¼&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLTRD5</td>
<td>3 m</td>
<td>530 lbs./ft.</td>
<td>2640 lbs.</td>
<td>53 lbs./ft²</td>
</tr>
<tr>
<td>SLTRD5</td>
<td>4 m</td>
<td>300 lbs./ft.</td>
<td>1970 lbs.</td>
<td>30 lbs./ft²</td>
</tr>
<tr>
<td>SLTRD5</td>
<td>5 m</td>
<td>190 lbs./ft.</td>
<td>1570 lbs.</td>
<td>19 lbs./ft²</td>
</tr>
<tr>
<td>SLTR7D</td>
<td>6 m</td>
<td>130 lbs./ft.</td>
<td>1290 lbs.</td>
<td>13 lbs./ft²</td>
</tr>
<tr>
<td>SLTR7D</td>
<td>7 m</td>
<td>95 lbs./ft.</td>
<td>1100 lbs.</td>
<td>9 lbs./ft²</td>
</tr>
</tbody>
</table>

*Note: Total load includes live load and all dead loads (decking, etc.).

Dismantling

9.1 Inspect Scaffold
Prior to dismantling scaffold, inspect it to assure it has not been altered. If it has, restore it to a safe condition.

9.2 Ties
If ties have been removed, reinstall them or buttress scaffold before attempting to dismantle it.

9.3 Begin Dismantling
Begin dismantling at top and progress down. Do not remove ties until scaffold above has been dismantled to the tie level.

9.4 Dismantle Equipment
Do not store removed equipment on the scaffold; hand it down and store it in an orderly manner on the ground.
SafMax® Frame System
Safety Guidelines

Scaffold safety is everyone’s responsibility!
Everyone’s safety depends upon the design, erection, use, and dismantling of scaffolds by Competent Persons only. Inspect your scaffold before each use to see that the assembly has not been altered and is safe for your use.

**WARNING**
SERIOUS INJURY OR DEATH CAN RESULT FROM YOUR FAILURE TO FAMILIARIZE YOURSELF, AND COMPLY WITH ALL APPLICABLE SAFETY REQUIREMENTS OF FEDERAL, STATE, PROVINCIAL AND LOCAL REGULATIONS AND THESE SAFETY GUIDELINES BEFORE ERECTING, USING OR DISMANTLING THIS SCAFFOLD.

Safety must come first!
The SafMax® Frame System Scaffold is designed and manufactured with the user in mind. The safety that goes into each piece of equipment, however, cannot offset carelessness on the part of the erector or the user. Follow these safety guidelines in order to prevent injury to the users of BrandSafway equipment.

**WARNING**
SAFMAX® FRAME SYSTEM AND SL FRAME SYSTEM™ SCAFFOLDS ARE EACH A UNIQUE SCAFFOLD PRODUCT LINE. THE COMPONENTS SHALL NOT BE INTERMIXED WITHOUT THE PRIOR APPROVAL OF THE MANUFACTURER/SUPPLIER.

I. Erection of the SafMax® Frame System
A. Prior to Erection – All Scaffolding Assemblies
1. Job site must be inspected to determine ground conditions, strength of supporting structure, proximity of electric power lines, overhead obstructions, wind conditions, and the need for overhead or weather protection. These conditions must be evaluated and adequately addressed.
2. Frame spacing and sill size can only be determined after the total loads to be imposed on the scaffold and the weight of the scaffold have been calculated.
3. SafMax® Frame System scaffolds taller than 80 ft. must be designed by a qualified engineer.
4. Stationary scaffolds over 125 ft. in height must be designed by a professional engineer.

**WARNING**
USE ONLY STEEL PLANK SPECIALLY DESIGNED FOR USE WITH SAFMAX® FRAME SYSTEM. SUBSTITUTIONS COULD CAUSE A SCAFFOLD COLLAPSE.

5. All equipment must be inspected to see that it is in good condition and is serviceable. Damaged or deteriorated equipment must not be used.
6. SafMax® scaffold plank must be inspected before use to assure it is sound, in good condition, free of kinks and sides are straight (not collapsed or parallelogramed).
7. A fully qualified and Competent Person can deviate from these guidelines only if it can be shown that the resulting scaffold design complies with applicable codes and generally accepted scaffold engineering practices.
8. The scaffold assembly must be designed to comply with local, state, provincial and federal requirements.

B. Erection of Fixed Scaffold

**WARNING**
FALL ARREST EQUIPMENT ATTACHED TO SCAFFOLD MAY NOT PREVENT SERIOUS INJURY OR DEATH IF A FALL OCCURS.

SafMax® Frame Scaffolds must be erected, moved, or disassembled only under the supervision of Competent Persons. Personal safety equipment including safety glasses and hard hats must be worn by all persons erecting, moving, dismantling or using scaffolds. Read, understand and follow the SafMax® Frame System Assembly Instructions (ORN 703).

1. Base plates must be used on all scaffolds, centered on the sills, and be in firm contact with both sills and frame legs. Be especially careful when scaffolds are to be erected on soft or frozen ground. Any part of a building or structure used to support the scaffold must be capable of supporting the load to be applied.
2. Compensate for uneven ground by using screw jacks and base plates with sills if required by base conditions. Do not use unstable objects such as blocks, loose bricks, and similar objects or materials.
3. Plumb and level scaffold. Vertical diagonal braces are required on all lifts throughout the scaffold height. On wall erected scaffolds, these braces shall be placed on the outer row of scaffold legs in the first and last bay and in at least every fourth bay in between. On free standing scaffolds, these braces shall be placed on both the inner row and outer row of scaffold legs in the first and last bay and in at least every fourth bay in between. Be sure scaffold stays plumb and level as erection progresses.

4. Ties or guys and bracing are needed to assure a safe stable scaffold assembly. The height of the scaffold in relation to the minimum base dimension (length or width), wind loads, the use of brackets or cantilevered platforms and imposed scaffold loads determines the need for sway and stability bracing. The following general guidelines apply:

**WARNING**
OUTRIGGERS, OR OTHER MEANS, MAY BE USED TO INCREASE THE MINIMUM BASE DIMENSION OF A SCAFFOLD TOWER. THE RESULTING BASE DIMENSION, HOWEVER, MAY NO LONGER BE THE MINIMUM (OR LIMITING) BASE DIMENSION.

a. Only use ties specifically made for use with SafMax® Frame System.
b. A scaffold must always be secured when the height of the scaffold exceeds 4 times the minimum base dimension (length or width). See Footnote 1.
c. Ties must be placed as near as possible to horizontal members. The bottom tie must be placed no higher than 4 times the minimum base dimension (length or width) and every 20 ft. vertically thereafter. The uppermost tie should be placed as close to the top platform as possible and, in no case, more than 4 times the minimum base dimension (length or width) from the top. See Footnote 1.
d. Horizontally, ties must be placed at the ends of the scaffold runs and at no more than every third bay in between.
e. Ties must be installed as the erection progresses, and not removed until scaffold is dismantled to that height.
f. Side brackets, cantilevered platforms, pulleys, hoist arms, enclosed scaffolds, sloped surfaces and windy conditions introduce overturning and uplift forces which must be considered, and compensated for. These situations require additional bracing, tying or guyings.
g. Circular scaffolds erected completely around or within a structure may be restrained from tipping by use of “stand off” bracing members.
h. A free standing tower must be guyed at the intervals outlined above or otherwise restrained to prevent tipping or overturning.

5. SafMax® frames can be used as outriggers to increase the minimum base width of free standing towers. If used, they must be installed on both sides of the tower.
6. All rectangular scaffold lifts must be fully planked with SafMax® plank units which are in good sound condition. When the SafMax® Frame System is used to conform to irregular shapes, the gaps between rectangular sections may be filled using other structural platform materials.

7. Guardrails must be used on all open sides and ends of scaffold platforms. Both top and midrails are required. Local codes specify minimum platform heights where guardrails are required. Use at lower heights if falls can cause injury.

8. Toeboards must be installed whenever people are required to work or pass under a scaffold platform. When materials are to be stacked higher than the toeboard, screening is required from the toeboard or platform to the top guardrail.

9. Safe access must be provided to all platform levels. Use the SafMax® access system only.

10. Do not store materials on side or end bracket platforms.

11. Cantilevered platforms must be specifically designed for that purpose, the frames pinned to prevent uplift and adequate ties provided to prevent overturning.

12. Materials must never be placed on cantilevered platforms unless the assembly has been designed to support material loads by a qualified person. These types of platforms cause overturning and uplift forces which must be compensated for.

13. After erecting scaffold, be sure screw jacks are in firm contact with frame legs.

14. Special care must be taken when trusses or girts are used:
   a. Trusses must only be installed using right angle clamps, with all bolts and nuts installed and tightened.
   b. Trusses must overhang their supports by at least 6 in.
   c. Lateral bracing is required for all truss spans.
   d. Trusses used as side or end brackets require special mountings and special bracing. Consult a qualified person.
   e. Always use girt spreaders to support platforms when planking girts or when installing frames above the girts.
   f. Do not couple trusses together to form longer truss members without assuring the longer truss members and scaffold assembly will support all the imposed loads. Consult a qualified person.

15. Do not install platforms between free standing towers.

16. Material hoists and derricks should not be mounted on a scaffold unless the scaffold is specifically designed for that purpose.

17. Check the entire scaffold assembly before use. Thoroughly inspect the completed assembly to see that it complies with all safety codes, all fasteners are in place and tightened, it is level and plumb, work platforms are fully decked, guardrails are in place and safe access is provided. Correct any deficiencies prior to use.

II. Use of Scaffolds

A. All Scaffolds

1. Before you use the scaffold, a Competent Person must: inspect the scaffold assembly to be sure it has not been altered, is assembled correctly, is level and plumb, all base plates are in firm contact with sills, all bracing is in place and securely fastened, all lifts are fully decked, all guardrails are in place, safe access is provided, it is properly tied and/or guyed, there are no overhead obstructions, there are no energized electric power lines within 10 ft. of the scaffold assembly, and all screw jacks are in contact with frame legs. Correct any deficiencies prior to use.

2. Use only proper access. Do not climb bracing or guardrails. Do not climb any scaffold component unless it is specifically designed for that purpose.

3. Climb safely!
   a. Face the rungs as you climb up or down.
   b. Use both hands.
   c. Do not try to carry materials while you climb.
   d. Be sure of your footing and balance before you let go with your hands. Keep one hand firmly on frame or ladder at all times.
   e. Clean shoes and rungs to avoid slipping.

4. Do not work on slippery platforms.

5. Do not overload platforms with materials. Special care must be taken when trusses or girts are used.

6. Do not store materials on platforms supported by trusses unless designed by a qualified person for that purpose.

7. Do not extend working heights by standing on planked guardrails, boxes, ladders or other materials on scaffold platforms.

8. Do not loosen, detach or remove any component of a scaffold assembly except under the supervision of a Competent Person. Components that have been removed must be replaced immediately.

9. Do not erect scaffolds on wagons, trucks or other wheeled vehicles.

10. Stand only within the platform area; do not try to extend work area by leaning out over guardrails.

III. Dismantling Scaffolds

**WARNING**

IT MAY BE NECESSARY TO ADD PARTS TO A SCAFFOLD BEFORE IT CAN BE DISMANTLED SAFELY.

The following additional precautions apply when dismantling scaffolds:

1. Prior to removal or loosening of any component, consider the effect the removal of the component, or the loosening of a joint, will have on the strength of the remaining assembly.

2. Check to see if scaffold or ties have been altered in any way which would make the scaffold unsafe. If so, reconstruct where necessary before beginning the dismantling process.

3. Use only proper access. Do not climb braces, guardrails or vertical members. Do not climb scaffold components unless they are specifically designed for that purpose.

4. Do not remove ties until scaffold above has been removed.

5. Visually inspect each plank to be sure it is supported on both ends and is safe to stand or work on.

6. Do not accumulate removed components or equipment on the scaffold.

7. Lower components in a safe manner as soon as dismantled. Do not throw components off scaffold.

8. Stockpile dismantled equipment in an orderly manner.

9. Remove scaffold components immediately after detaching from scaffold.

Understanding and following these safety guidelines will increase your personal safety and the safety of your fellow workers.

---

Footnote 1: California and some other states require a height-to-minimum base width ratio of three to one (3:1). Refer to the governing codes for your job location. Minimum base dimension may be length or width measured from center line of tubes.

Footnote 2: Additional instructions and information are available from BrandSafway regarding:

- Training & software resources
- Competent Person training
- Step-by-step erection and disassembly videos
- Individual & group training CD programs
- Safety guidelines for each product line
- Material management & utilization software
- Equipment estimating & drafting software