

## GANG LIFTING ASSEMBLY - CAPACITY & LAYOUT

### Gang Lifting Assembly Guidelines

- When using two picking points, the approximate placement location for each lifting assembly is a distance from either end of one-third the overall gang length (Figure 2).
- When using three or more picking points, the approximate placement locations for each lifting assembly is a distance from either end of one-half the overall gang length divided by the number of pick points. The placement of the interior lifting assemblies are to be evenly spaced between the two end lifting assemblies (Figure 2). For example: if the overall gang length is 60' long and loading limit requires three lifting points, then the placement would be calculated at  $(60' / 2) / 3 = 10'$  from either end, plus a center point placed at or near the middle of the form gang.
- Rigging to lifting points should never exceed an angle of 30 degrees from the vertical axis at each location (Figure 2). In cases with extremely long and heavy lifts, it may be necessary to use a lifting bar to properly space rigging for placement to the picking locations.
- To determine the number of pick locations, calculate the total weight of the gang to be lifted and divide by the rating of the Lifting Assembly to be used and add one for any remaining fraction. (See Assembly Ratings in Figure 1).
- When using Alignment / Lifting Assembly, use the Standard Clamp / Two-Way Clip Assembly with supplied pins to connect Vertical Bar to a STD Panel Inner Rail. Use (2) 5/8" Grade 8 Bolts to attach Lifting Bracket to Vertical Bar (Only in cases where the assembly comes separately. Snuggly tighten Clamps to Panel Inner Rails prior to lifting the Formwork Gang. See figure 3. Sheet 2 for more installation detail.
- Top of Alignment Bar should be even with the Top End-Rail of the Gang. Stacking Clamp should be clamped onto the first inner rail below the Top End-Rail of the Gang.

Note: all components must be inspected for cracks, broken welds or any other visible defects prior to each use. Replace all components that are deemed to be unsafe for use.

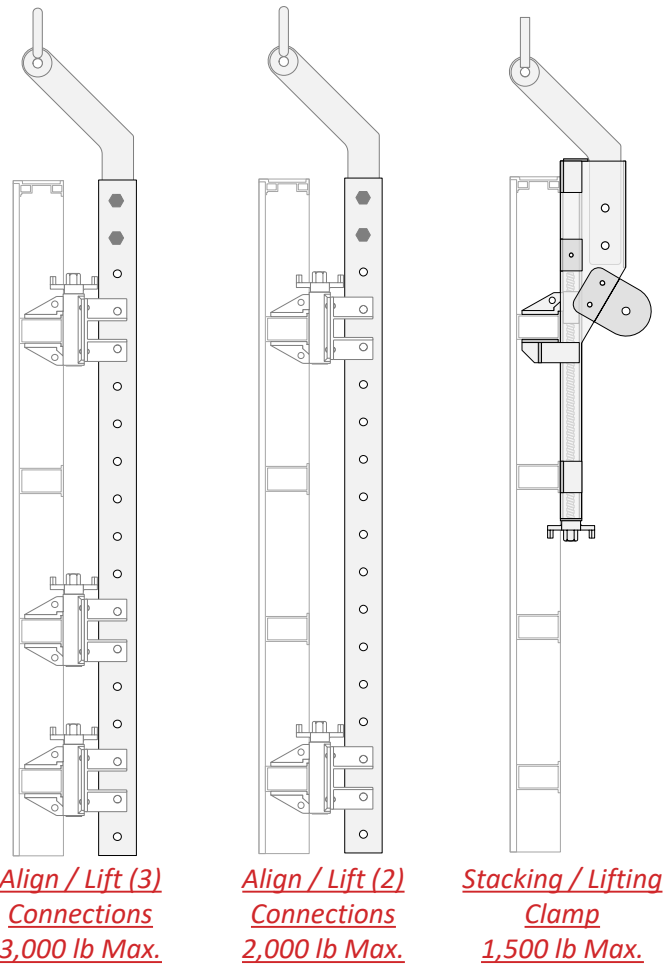


Figure 1. Alignment Bar and Stacking / Lifting Clamp. Allowable loads noted above **meet or exceed a 5 to 1 safety factor.** (Reference certification on page two)

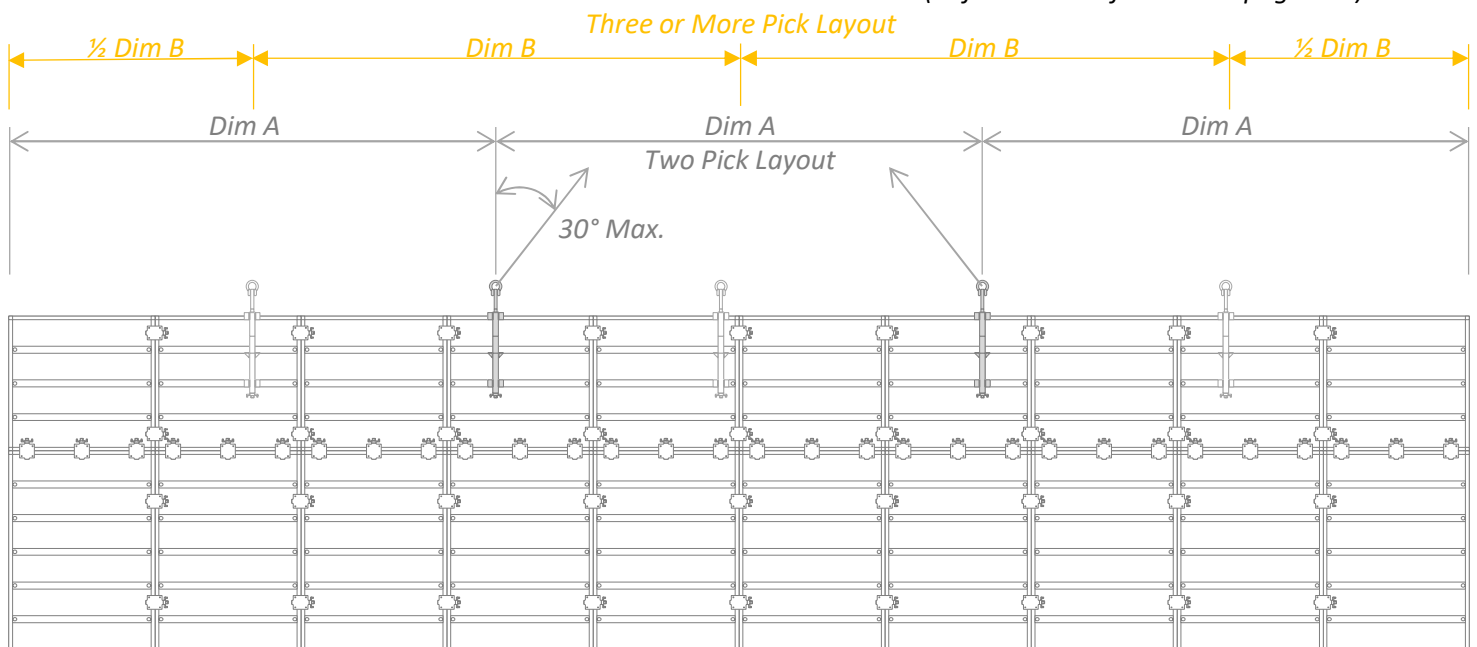


Figure 2. Example of Lifting Assembly Placement

## GANG LIFTING ASSEMBLY - POSITION & INSTALLATION

(SHEET 2 OF 2)

### Alignment / Lifting Assembly Installation Guidelines

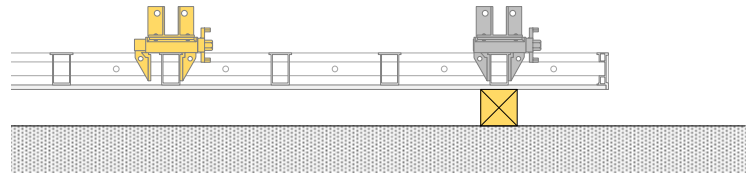
- Use the Alignment / Lifting Bar assembly for taller formwork gangs or when lifting higher loads.
- The first step is to layout all panels for a gang in the desired configuration on top of wood blocking or other level surface.
- In areas specified by the design, install a Clamp / Two-Way Clip assembly on the first inner rail below the top siderail, and tighten the clamp using a claw hammer or 12" long section of rebar. (Figure 3., Step 1.)
- Based on the desired capacity, place one or two more Clamp / Two-Way Clip assembly loosely on inner rails 2' and / or 3' below the top clamp assembly, keeping all the assemblies in a straight line (Figure 3., Step 1.)
- Place the Alignment / Lifting Bar inside the Two-Way Clips on all two or three clamp assemblies. Align the top of the alignment bar with the top of the panel and pin the Alignment Bar to all two or three Clamp / Two-Way Clip assemblies using both tethered pins attached to each assembly (Figure 3., Step 2.)
- Snuggly hand tighten the other one or two clamps, below the top clamp. There is no need to overtighten the other clamps to achieve greater loads (Figures 3., Step 3. & 4.). If tightening the other clamps are desired, use a ratchet with hex socket to tighten all other clamps to no more than 50 ft-lb torque.



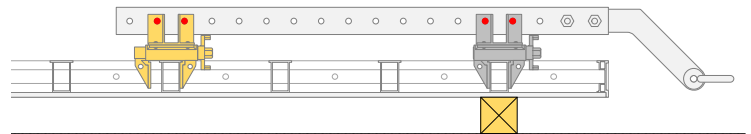
*Figure 4. Place Alignment / Lifting Bar In Any Position Between The Siderails And No Closer Than 6" To The Edge Of The Panel*



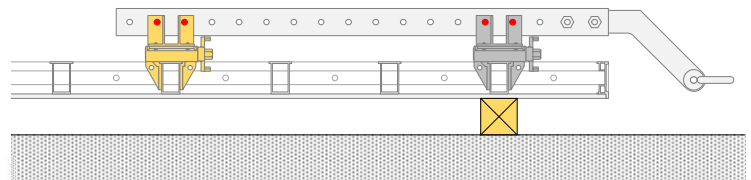
*Figure 5. Place Stacking Clamp / Lifting Bar In Any Position Between The Siderails And No Closer Than 6" To The Edge Of The Panel*



**Step 1.** Place All Clamp / Two-Way Assemblies Into Position & Tighten Top (Right) Clamp ONLY With Claw Hammer or 12" Long Rebar. Leave Other Clamp Or Clamps Loose



**Step 2.** Drop In Alignment / Lifting Bar Assembly & Insert Both Pins Through Two-Way Clips & Alignment Bar On All Clamps



**Step 3.** Hand Tighten Lower (Left) Clamp Or Clamps To Complete the Installation Of The Assembly

**Figure 3.** Alignment Lifting Bar Installation Sequence

### Stacking Clamp / Lifting Assembly Installation Guidelines

- Use the Stacking Clamp / Lifting Bar assembly for shorter formwork gangs or when lifting lighter loads.
- The first step is to layout all panels for a gang in the desired configuration on top of wood blocking or other level surface.
- In areas specified by the design, install a Stacking / Lifting Clamp center jaw on to the first inner rail below the top siderail, and tighten the clamp using a claw hammer or 12" long section of rebar. (Figure 5.)

**NOTE: WHEN ATTACHING THE LIFTING BRACKET TO EITHER THE ALIGNMENT BAR OR STACKING CLAMP, USE EITHER GRADE 8 BOLT ASSEMBLIES OR HIGH STRENGTH QUICK PINS WITH COTTER KEYS**