



Hamilton Form Company, Ltd

Custom forms. Custom equipment. Practical solutions.

Installation Guidelines for Grid-Type Casting Tables

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IF YOU HAVE ANY QUESTION REGARDING A PARTICULAR SITUATION, THEN YOU SHOULD ENGAGE THE PROFESSIONAL SERVICES OF A LICENSED AND QUALIFIED ENGINEER, EITHER THROUGH HAMILTON FORM COMPANY, LTD. OR WITH ANOTHER LICENSED AND QUALIFIED ENGINEER.

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Hamilton Form Company designs and builds custom forms to fit our customer's specifications. Detailed dimensions, load capacities, and installation requirements can change with every form. The specific dimensions, capacities, and requirements for your form will be shown on the final Approval Drawings provided to you prior to the form being released for production. An additional electronic copy of these drawings is available from Hamilton Form Company if needed. **All utility installations should meet local code and be completed by certified personnel.** The following are general guidelines to follow for installation and setup of your new grid-table:

PRIOR TO DELIVERY OF FORMWORK:

Evaluate the proposed site of the new form for the following:

- Space required for overall footprint of bed installation including safe access for personnel and equipment.
- Verify availability and access to required utilities (power, compressed air, heat curing source, etc.).

- Verify foundation requirements and capacities for formwork and abutment loads.
- All forms and abutments should be laid out using the centerline of the bed in both directions. Do not use the outside edge of a form or abutment for placement.
- Prepare the foundation to accept the entire form bed including abutments in a single flat plane. Anchor bolts for abutments and forms may be installed using the dimensions supplied on the specific form drawings provided for approval. It is the customer's choice as to which anchor bolt installations would be necessary prior to form and abutment placement. Some factors to consider are types of anchors required, ease of access, and quality of placement location.
- Prepare the leveling pads to be within +/- 1/8" of a flat plane. This is for the initial placement only.
- Plan for the placement of control and power units for safety and easy access.

UPON DELIVERY OF FORM LOADS:

- Inspect all loads using the **Guidelines for Receipt and Initial Inspection of Forms or Equipment**.
- Position and set one abutment in its required location. Multi-section abutments should be assembled in location and verified for level and dimension.
- Position and locate the second abutment where it will be spaced back 1" longer than the form length. Multi-section abutments should be assembled in location and verified for level and dimension.
- Verify sequence numbers on forms and maintain the proper sequence for placement.
- Start placing forms against the first abutment and progress toward the second abutment making sure to hold your centerline positioning throughout the process. Multi-section forms should be assembled in location and be verified for level and dimension.
- After all forms are set and pulled firmly toward the first abutment, move the second abutment in to contact the forms.

- Verify that the entire bed is straight and positioned laterally within 1/16" on the centerline.
- Shoot a final elevation from the top surface of the forms on both sides of the forms at 10' increments. Shoot the center elevation on split design forms if applicable. This final leveling should be held to +/- 1/16" on a plane. Shim as required to meet this position.
- Shoot the final elevation of the abutments in relationship to the form elevation. Shim as required to meet this position.
- Install anchor clips on the forms to maintain a straight lateral position on approximately 5'-0" centers.
- Install the u-clips on the abutments as specified on your approval drawings. (Note: the abutments must be able to move in and out for compression and expansion.)
- Install abutment cover platforms after all u-clip installations have been verified.
- Position Jacking Plates and Hanging Weldments per instructed on your Approval Drawings.

INSTALLATION OF UTILITIES AND POWERED COMPONENTS ON FORM:

- Prior to installation of the wooden casting surface, install all air lines, heat lines, electrical power lines, and hydraulic lines required for production processes and to power all components.
- Connect and test the vibration system to verify operational quality.
- Install all hydraulic cylinders and set side rails per drawings provided.
- Power up the hydraulic power unit and check motor rotation. Follow the start-up instructions in the power unit manual.
- Connect hydraulic lines to cylinders and bleed out system. Cycle the system several times to verify there is at least 1/8" clearance between the rails and the form. Leave the siderail in the open position for deck installation.

INSTALLATION OF WOOD CASTING SURFACE:

- Affix 2x6 dimensional lumber on top of all paired channel cross-members using carriage bolts. Make sure to sink all bolt heads below the top surface of the boards countersinking if necessary.
- Install one layer of $\frac{3}{4}$ " plywood on top of the 2x6 boards using decking screws making sure to stagger seams. Verify that the edges are straight and aligned with the form edges. There is a required holdback area on each bed end between the casting surface and the abutments. Consult the assembly drawings for that dimension and maintain that spacing.
- Secure a second layer of $\frac{3}{4}$ " plywood on top of the first layer using decking screws. Make sure all seams are staggered relative to the first layer.
- Fill all screw holes and imperfections with wood putty, prime, seal, and finish as directed by your coating manufacturer. Make sure to fill, seal, and coat the edges adjacent to the siderails to protect against leakage and degradation.

FINAL RAIL INSTALLATION AND ADJUSTMENT:

- When the casting surface and edges are cured, raise siderails up making sure there is clearance between the siderails and the edge of the casting surface.
- With the siderail in the closed position, push the siderail tight against the edge. Snug all connection hardware holding the siderail lateral position.
- Using a template or other tool, adjust and verify the siderails are perpendicular to the casting surface using the adjustment bolts.
- Cycle the siderail several times and re-verify position. Adjust if necessary.
- Install lap plates on rails if provided.



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