

SureBuilt

Concrete Forms & Accessories



Articulated Waler Forming System

Build the radius forms you need with the beams you already have... then turn the screws to change the radius and start forming again... fewer parts, more versatility, lower cost and a smooth concrete surface.





Build and reconfigure the forms you need with the joists or beams you already own.

Radius forming from 20' to 180', with 3/4" plywood, aluminum joists or wood beams, and adjustable walers

Curved concrete structures and tanks never seem easy to form, and changing radius and wall dimensions only add to the complexity.

It becomes a real advantage to build and then reconfigure the radius forms you need, especially with the aluminum joists or wood beams you already own.

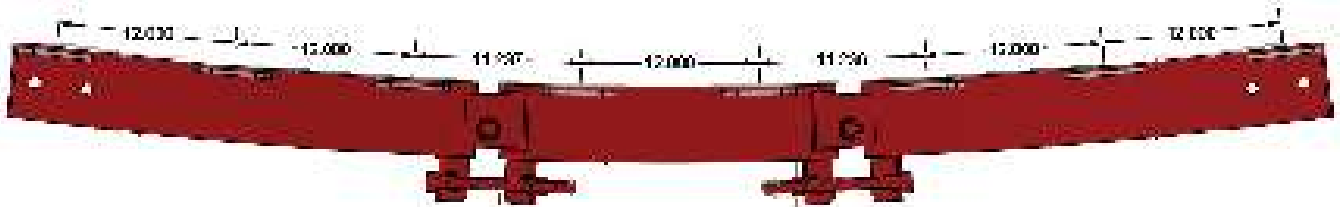
The Articulated Waler forming system provides that advantage by connecting the beams, flexing the radius and spacing the ties.

Imagine starting with 3/4" plywood, aluminum joists or wood beams, connecting hardware, and the Articulated Waler, then building the radius forms you need to meet project specifications.

Standard taper ties or she-bolts, with flat washers and nuts, complete the forming assembly. These ties are widely available and reusable, but spacing must conform to the rated tie capacity.



Articulated Waler - Inside Radius



Articulated Waler - Outside Radius

***Build the forms you need, then
change the radius and start forming
concrete all over again***

When using Aluma or Safway joists, an A-Clamp assembly is used for the waler connection. When using Symons joists, a Symons Aluminum Beam Clamp is used for the waler connection. When using H20 wood beams, an H20 Beam Flange Clamp is used for the waler connection.

Steel angles or filler angles are used as the side rails. Consecutive form segments are positioned, clamped or bolted together, and braced for support.

Longer joists or beams can be mixed or staggered with shorter lengths and used for taller walls. Scaffold Brackets with walkways can be attached to the joists or beams for access and concrete placement.

After building the radius forms you need and placing concrete, you can strip, move and reconfigure them for the next phase of the project.



Radius forms can be reconfigured to match changing radius and wall dimensions.

Articulated Waler	
Part No.	Description
SBAW8IR	Articulated Waler 8' Inside Radius
SBAW8OR	Articulated Waler 8' Outside Radius
SBAWSB	Articulated Waler Scaffold Bracket
SBAWLB	Articulated Waler Lift Bracket

Articulated Waler Gang Assembly

Note: *The contractor is responsible for all required lumber, beams, plywood, fasteners and tools.*

1. Construct the exterior gang on a flat, relatively level, working surface. A concrete slab or shop floor is suitable. The dimensions will depend on the gang size, structure radius, and type of aluminum joists or wood beams. (SureBuilt can provide recommendations, drawings and spacings.)
2. A typical exterior gang will be 8' wide x 16' long. Lumber sleepers are placed/squared on the slab for the top, center and bottom of the gang. The center line for each joist/beam location, starting 6" from the edge and spaced 12" apart, should be marked on the lumber sleepers.
3. A typical exterior gang will have eight joists/beams. Check the bottom flange dimension of the joist/beam to determine the center line and spacing. Use wood spacers to block the joist/beam to the centerlines marked on the lumber sleepers.
4. Start the exterior gang assembly by placing the joists/beams between the wood blocks. The joists/beams should be straight and in good condition. The attachment rail should be facing down (waler side of gang) and the nailing strip should be facing up (plywood side of gang).
5. Place and center 3/4" plywood across the joists/beams and fasten to the nailing strips with 2" drywall screws at a maximum spacing of 12" on-center. Be sure the plywood and gang remain square during the plywood installation.
6. Fasten steel angles along the vertical edges of the exterior gang. When using SureBuilt Filler Angles along the vertical edges, fasten the Filler Angle and a 2x4 lumber stiffener behind the plywood with a 1/4"x 2-3/4" elevator bolt/nut at 12" on-center.
7. Tie holes can be marked according to the drawing and drilled with a paddle bit or hole saw (drilling through the face minimizes splintering). The tie spacing and hole size will depend on the type of tie and rated capacity. (SureBuilt can provide recommendations, drawings and spacings.)
8. Turn the gang over (use a nylon strap through the tie holes) and lay it over 4x4 lumber centered along the entire length of the gang. This will support the center of the exterior gang and cause the unsupported edges to sag, starting the radius.
9. Mark the position for each Articulated Waler across the joists/beams, typically starting 18" from the bottom of the gang and spaced 4' on center. With the Articulated Waler in a "neutral" position, place the "flat" side against the joists/beams and clamp top/bottom at each intersection.
10. Construct a jig to support the exterior gang at the desired radius. Place the gang on the jig and use the adjustment screws to "flex" the Articulated Waler to the desired radius. Make small adjustments to every screw on every waler, gradually and evenly shaping the gang.
11. Once the desired radius is established, tighten all the clamps. Attach any other hardware, including scaffold brackets, walkways, guardrails, brace shoe, and lift brackets.

12. The interior gang is constructed following the same procedure outlined above, though the gang will be slightly less than 8' wide. The plywood must be trimmed to the smaller width, allowing for the smaller interior radius and proper exterior form alignment.
13. Construct a jig to support the interior gang at the desired radius. Place the gang on the jig and use the adjustment screws to "flex" the Articulated Waler to the desired radius. Make small adjustments to every screw on every waler, gradually and evenly shaping the gang.
14. The number of Articulated Waler gangs needed will depend on the structure dimensions and construction cycle planned by the contractor. Pre-assembled gangs can be stacked and staged until needed.
15. The Articulated Waler is reusable. It should be cleaned, oiled and properly stored when not in use.

Note: *The contractor is responsible for all required lumber, beams, plywood, fasteners and tools.*

Articulated Waler – Radius forming from 20' to 180', with 3/4" plywood, aluminum or wood beams, and an adjustable waler.

Bar Support – Wire slab bolsters and high chairs, with optional epoxy-coat, plastic-dip, plastic-tip or plate, to meet almost any slab requirement.

Bridge Deck – Overhang brackets and hangers provide an efficient deck forming solution for precast concrete or steel I-beam bridge structures.

Coil Ties – 2-Strut and 4-Strut designs, in standard and heavy-duty capacities, with optional cones, waterseals or custom combination, for job-built forming.

Euro Rod – 15mm and 20mm taper ties, she-bolts, inner ties, washers and wing nuts compatible with European-brand forming systems.

Floor Dowels – Plates, sleeves, baskets and joint nosings for high-performance concrete floors.

Pipe Braces – Contractor-preferred braces, with rated capacities and lengths ranging from 7'6" to 62'6", for almost any forming application.

Precast – Inserts, anchors, connectors and lifting systems for efficient precast concrete production.

Self-Riser – Integrated hydraulic system for multi-story building cores that virtually eliminates crane time.

Shoring – A conventional 10K load/leg system, with base plates, cross braces, screw jacks and U-heads, for productive deck support.

Snap Ties – Ties and brackets, with 3/4" plywood and 2x4 lumber, create a simple and effective plywood forming system.

Staybox – A pre-engineered and pre-assembled rebar keyway that simplifies forming at wall and deck intersections.

Stud Rail – A reinforced column-to-deck connection that reduces shearing, transfers load further into the slab and eliminates column capitals.

SureCurve™ – Concrete tanks and curved walls quickly take shape with this flexible and reusable gangform system.

SurePly™ – An industry-recognized handset system, with more than 80 standard panel and filler sizes, for almost any forming application.

Tilt-Up – A start-to-finish system of lifting inserts, plates and hardware for tilt-up panel construction.

Walers – Double channel walers align panels, carry taper tie loads and maximize the surface area of almost any gang.



840 South 25th Ave
Bellwood, IL 60104
708-493-9569
www.surebuilt-usa.com

