

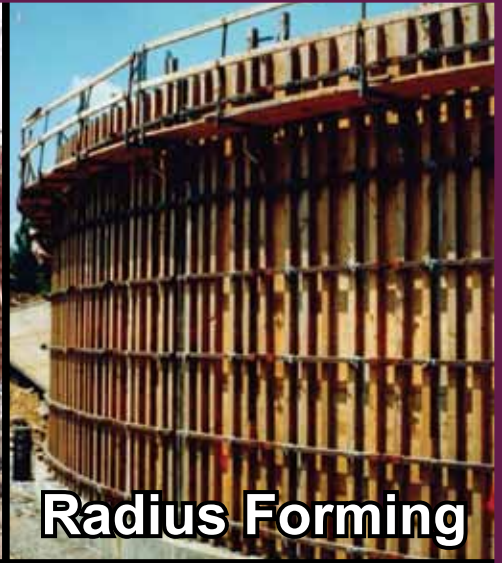
# COMMERCIAL FORMING SYSTEMS



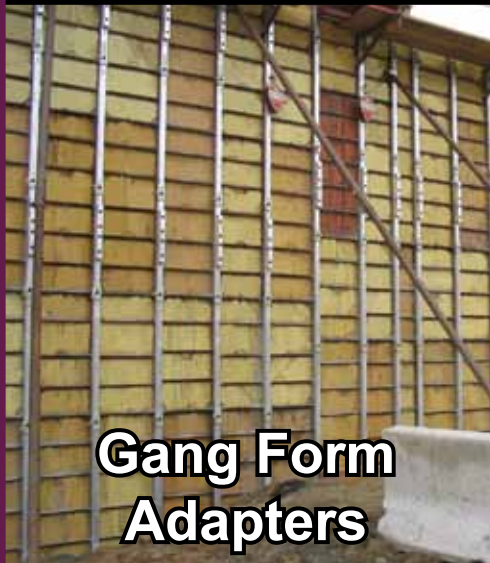
**Cam Lock**



**Gang Forming**



**Radius Forming**



**Gang Form  
Adapters**



**Elevator Shaft  
Forming/Safety  
Platform**



**Column Forming**



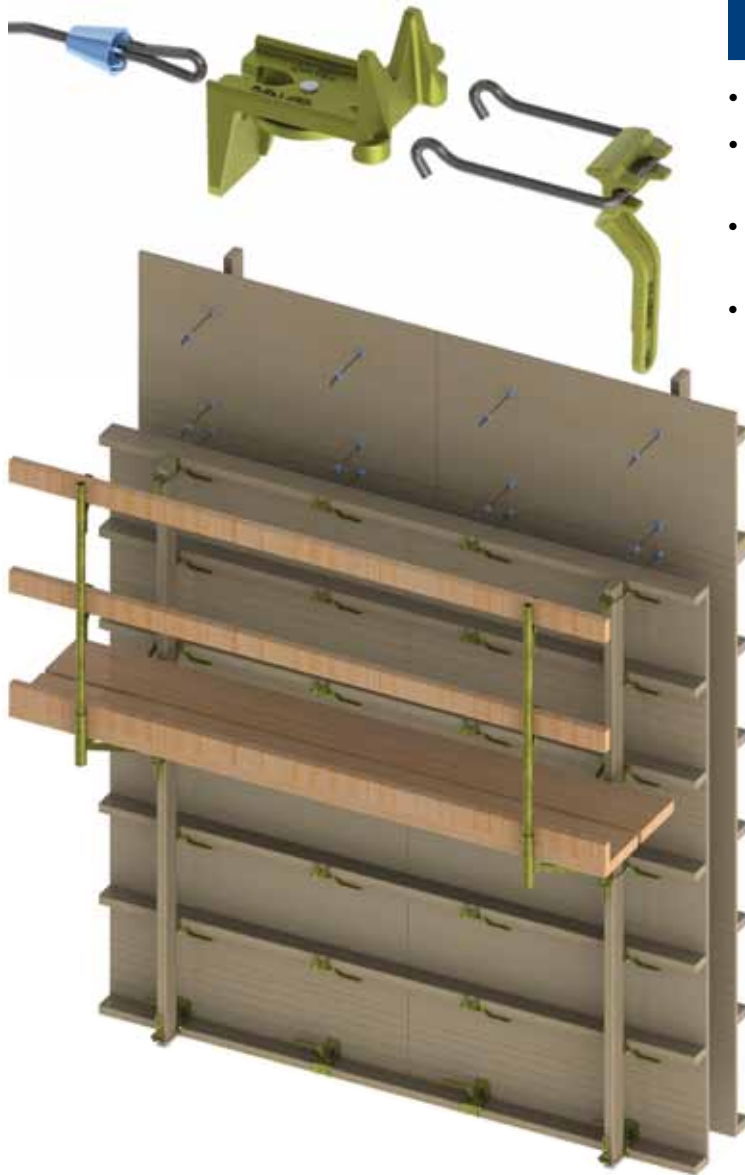
**Steel Products**



**Riser Forms**



**Custom Wood  
Forming**



### The Quicker Hand Set System

- Gates' hand-set forming system
- Cam Lock Bracket engages the loop-end tie, securely holding the 2x4 waler into place
- Stiffback Clamps attach to Cam Lock Brackets anywhere a 2x4 stiffback member is needed
- Self-centering plastic cushion cones seat tightly to the form providing a neat & clean breakback
  - Cam Lock ties are self spreading with a metal washer embedded into each cone
  - 1", 1 1/2", or 2" depth cones or washers
  - Cam Lock ties eliminate the need for long and short end ties by utilizing one standard end length

### Typical Form Design

- Typical tie pattern is 16"x24" using common forming materials (2x4 lumber and 3/4" plywood form face)
- 2250# safe working load (2:1 safety factor) adjust tie pattern/pour rate according to specific job requirements
- Uses less lumber and requires less nailing than other typical wood-based hand-set systems
- Customizable and flexible system—adaptable to most other types of wall forming systems
- Stackable—use with Gates Scaffold Brackets

### Versatile Forming System

- Great for radius forming—ask about pre-cut wood radius walers—form perfect curved walls
- Virtually all commercial jobsites have forming requirements ideally suited for the Cam Lock System—combine with Gates Anchor Lock Gang Systems
- Cam Lock Brackets, Stiffback Clamps, and Scaffold Brackets are plated for corrosion resistance—Gates hardware is available for rental



# #3 Anchor Lock

## Light Duty Gang Forming System



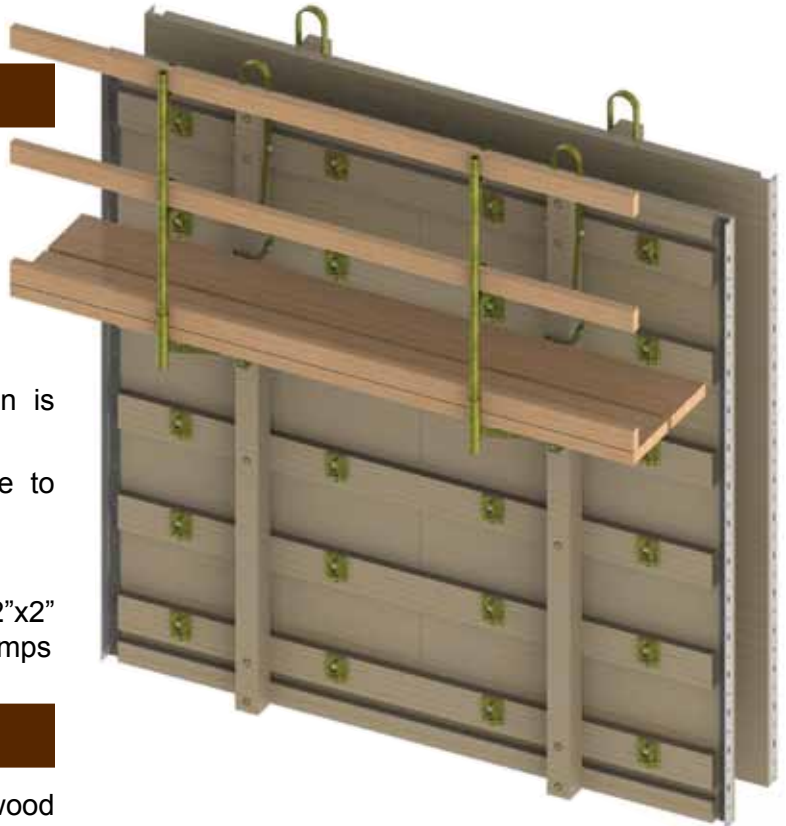
### Gates' Lightest Gang System

- Form Weight—approx 5#/sf (typical design)
- #3 Anchor Locks are attached to the form and lock the pass-thru ties with a 1 ½" breakback
- Plastic Tie Hole Sleeves are easy to build into the forms and fit closely around the cone preventing excessive grout loss
- Attached hardware and loop end ties hold forms apart while setting and yield a precise wall thickness—no internal spreader needed



### Typical Form Design

- Typical tie pattern is 16"x24" using common forming materials (2x6 and 4x4 lumber and ¾" plywood form face)
- 2250# safe working load (2:1 safety factor)—adjust tie pattern/pour rate according to specific job requirements
- Straightforward gang form fabrication design is quick to build and easy to modify
- Customizable and flexible system--adaptable to most other types of wall forming systems
- Assembled forms have no loose hardware
- Gang forms can be connected using Gates 2"x2" Punched Angle with loose or attached "U" Clamps

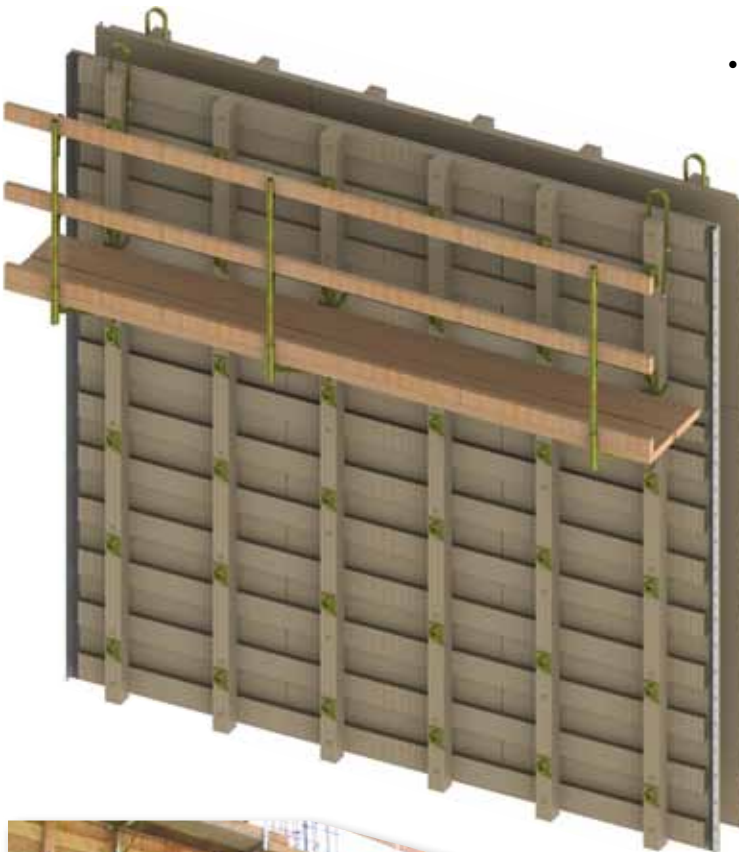


### Versatile Forming System

- Great for radius forming (ask about pre-cut wood radius walers or Gates Radius Steel Walers) form perfect curved walls
- Gates builds custom forms delivered to the jobsite ready to set with minimal assembly
- #3 Anchor Locks, Adjustable Form Braces and Scaffold Brackets are plated for corrosion resistance—Gates hardware is available for rental



### Gates' Mid Weight Gang System



- Form Weight—approx 7#/sf (typical design)
- #5 Anchor Locks are attached to the form and lock the pass-thru ties with a 1 1/2" breakback
- Can utilize taper ties or threaded 3/8" inner ties
- Plastic Tie Hole Sleeves are easy to build into the forms and fit closely around the cone preventing excessive grout loss
- Attached hardware and loop end ties hold forms apart while setting and yield a precise wall thickness—no internal spreader needed

### Typical Form Design

- Typical tie pattern is 24"x24" using common forming materials (2x6 and 4x4 lumber and 3/4" plywood form face)
- 3250# safe working load (2:1 safety factor) adjust tie pattern/pour rate according to specific job requirements
- Straightforward gang form fabrication design is quick to build and easy to modify
- Customizable and flexible system—adaptable to most other types of wall forming systems
- Assembled forms have no loose hardware
- Gang forms can be connected using Gates 2"x2" Punched Angle with loose or attached "U" Clamps



### Versatile Forming System

- Great for radius forming (ask about pre-cut wood radius walers or Gates Radius Steel Walers) form perfect curved walls
- Gates builds custom forms delivered to the jobsite ready to set with minimal assembly
- #5 Anchor Locks, Adjustable Form Braces and Scaffold Brackets are plated for corrosion resistance—Gates hardware is available for rental

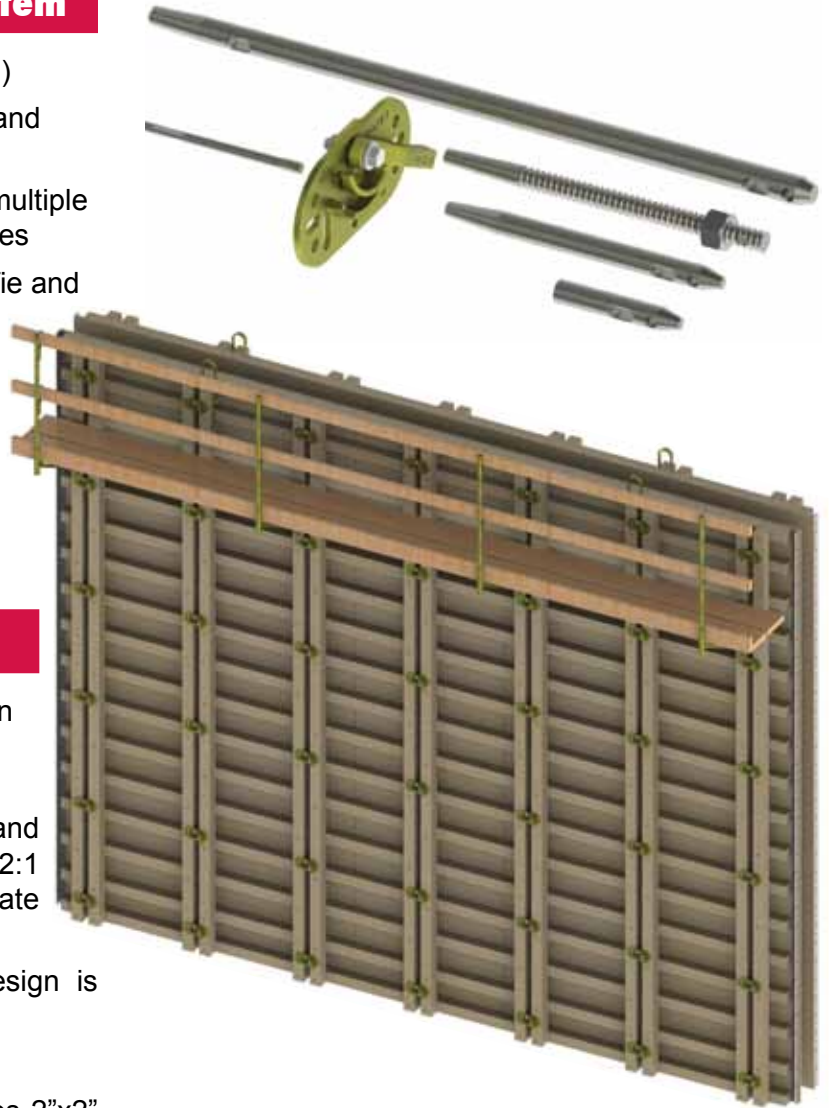
# #9 Anchor Lock

## Heavy Duty Gang Forming System



### Gates' Heavy Weight Gang System

- Form Weight—approx 9#/sf (typical design)
- #9 Anchor Locks are attached to the form and lock the taper ties or tie ends w/ inner ties
- Taper Ties with slotted ends designed for multiple wall thicknesses—removable for repeat uses
- Type “A” Tie End combines with 1/2” Inner Tie and produces a 1 1/2” setback when removed
- Type “B” Tie End combines with the 1/2” Inner Tie and removable vinyl sleeve—enables the reuse of Inner Ties
- Gates slotted Taper Tie hold forms apart while setting, yielding a precise wall thickness—no internal spreader needed



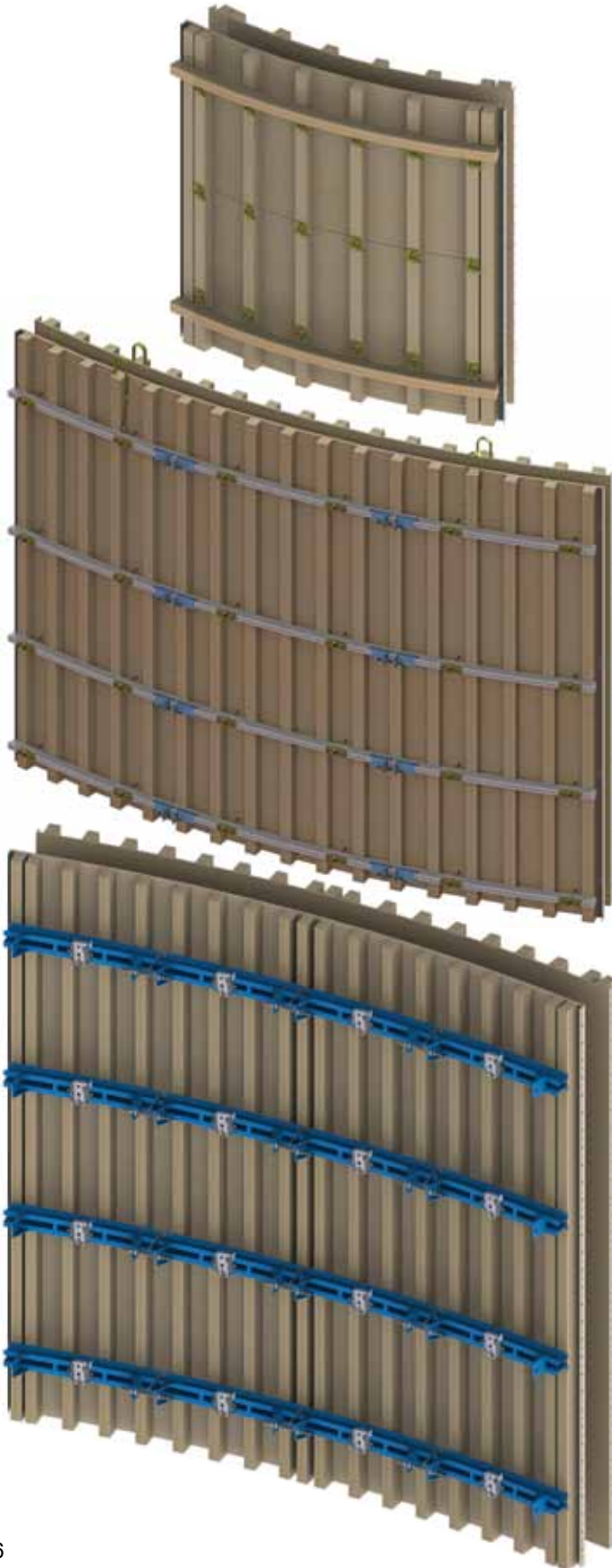
### Typical Form Design

- Typical tie pattern is 36”x36” using common forming materials (4x4 lumber and 3/4” plywood form face)
- Taper Ties: 10000# safe working load and Inner Ties: 9000# safe working load (2:1 safety factor)—adjust tie pattern or pour rate accordingly
- Straightforward gang form fabrication design is quick to build and easy to modify
- Assembled forms have no loose hardware
- Gang forms can be connected using Gates 2”x2” Punched Angle with loose or attached “U” Clamps

### Versatile Forming System

- Great for radius forming (ask about pre-cut wood radius walers or Gates Radius Steel Walers) form perfect curved walls
- Gates builds custom forms delivered to the jobsite ready to set with minimal assembly
- #9 Anchor Locks, Adjustable Form Braces and Scaffold Brackets are plated for corrosion resistance—Gates hardware is available for rental





## Various Radius Forming Options

- Gates offers Radius Forming methods compatible with our various systems (Cam Lock, #3, #5, #9 Anchor Lock and V-Lock) allowing contractors to utilize their existing equipment and familiar form ties
- Gates Radius Systems produce a true radius; don't settle for "segmented" curves
- Gates Radius Forms are ideal for projects ranging from low retaining walls all the way up to large water treatment tanks
- Achieve nearly any radius—no curve is too tight
- Radius walers can be made from either wood or steel members with steel or plywood forming surface

## Precise Results

- Gates Wood Radius Walers can be shaped to an infinite number of possibilities
- Gates Steel Radius Walers can also have attached adjusters allowing for multiple radii



# Gang Form Adapter

For Steel Frame Panels



## Quickly Gang Steel Frame Panels

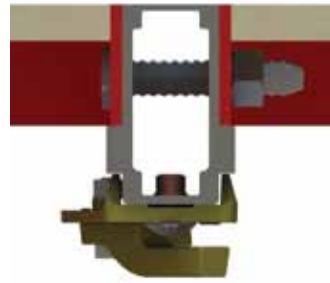
- Gang Form Adapter attaches to typical steel frame form panels—approx 10#/sf (typical design)
- Gates Anchor Locks are attached to the Gang Form Adapters and lock the Taper Ties or Tie Ends
- Taper Ties with slotted ends designed for multiple wall thickness—removable for repeat uses
- Gates Type “A” Tie End for this system combines with ½” Inner Tie and produces a 1 ½” setback when removed
- Gates Type “B” Tie End for this system combines with ½” Inner Tie and removable vinyl sleeve enabling reuse of Inner Tie
- Attached hardware and slotted Taper Ties hold forms apart while setting and yield a precise wall thickness—no need for an internal spreader

## Easily Adapt Form Dimensions

- Adapters are capable of supporting 1000#/sf safe working load (2:1 safety factor)
- System capacity varies based on type/brand of steel frame panel used
- No Loose Parts—gang forms assemble extremely quickly with a minimal amount of necessary accessories and are easy to modify (¾” Flat Coil Bolts hold the gang forms firmly together)
- Gang Form Splice Box Tubes vertically attach Gang Adapter members for a rigid connection

## Straight Wall Or Shaft Forming

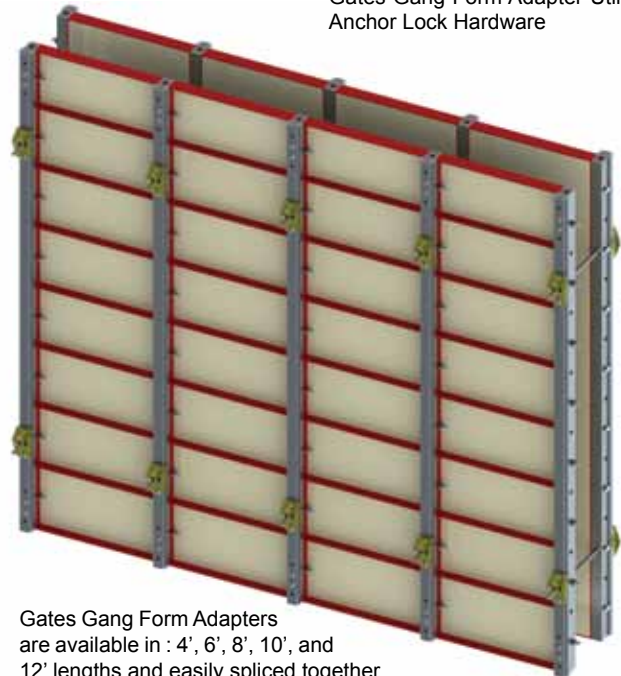
- Designed to work with Gates Collapsible Inside Corner and Lift ‘N Lock Safety Platform for a very effective elevator/shaft forming system
- Accessories are available to utilize typical steel frame panel scaffold brackets
- Gang Form Adapters are constructed of aluminum and plated steel parts for corrosion resistance  
Gates hardware is available for rental



The continuous shoulder on each adapter ensures precise vertical straightness



Gates Gang Form Adapter Utilizes Anchor Lock Hardware

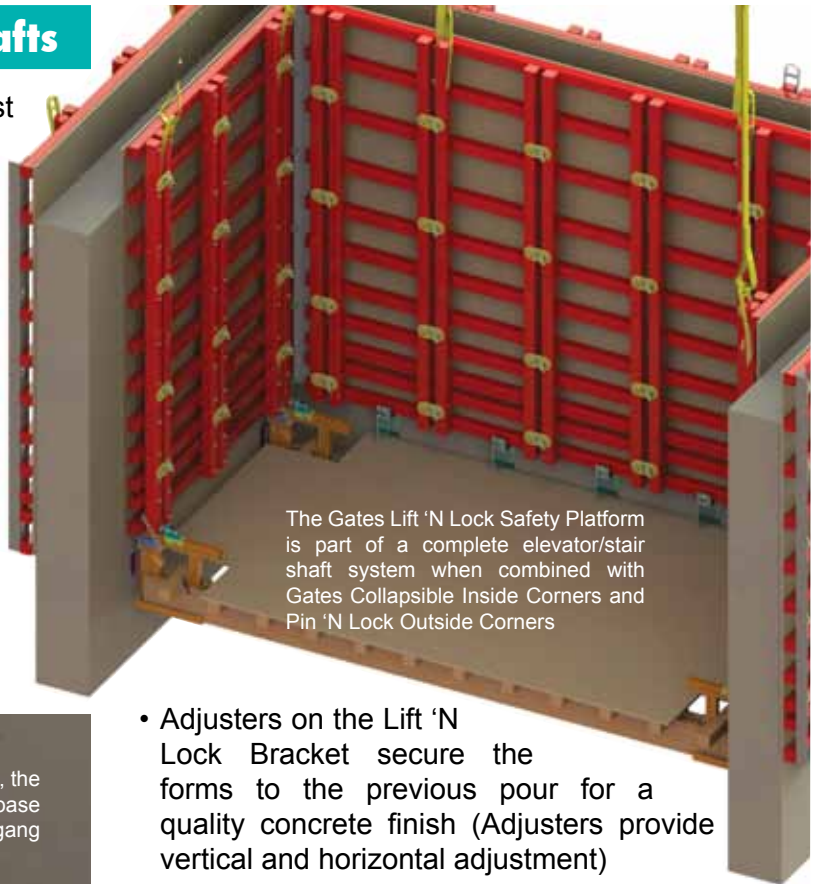


Gates Gang Form Adapters are available in : 4', 6', 8', 10', and 12' lengths and easily spliced together



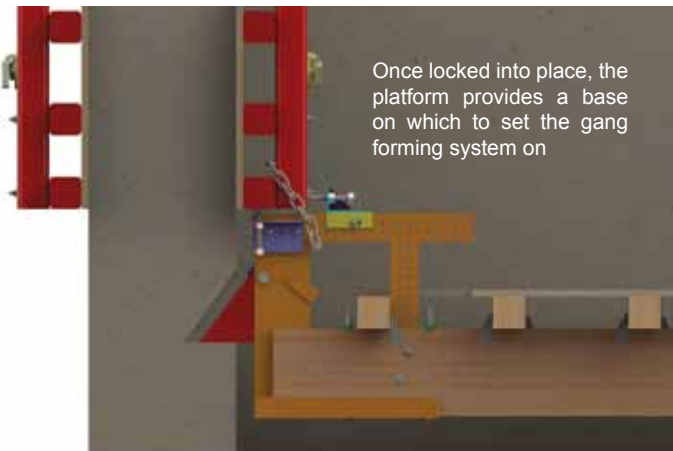
## For Pre-Cast or Cast-In-Place Shafts

- Versatile enough to be used with most vertical wall forming systems on the market today
- Platform is designed for the use of workers only and is not intended as a storage platform for equipment or construction materials (if special jobsite requirements exist they must be designed into the safe working load of the platform—consult Gates for details)
- The Gates Lift 'N Lock Safety Platform, when properly designed and constructed (with LVL beams, plywood deck, and bolted securely together) can be used to brace gang forms

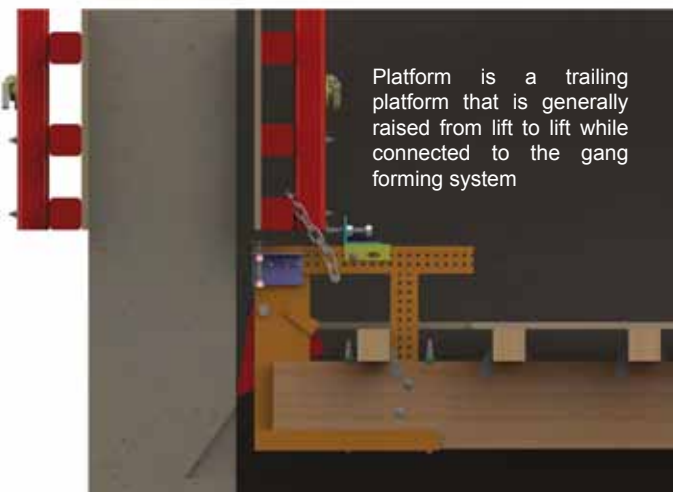


The Gates Lift 'N Lock Safety Platform is part of a complete elevator/stair shaft system when combined with Gates Collapsible Inside Corners and Pin 'N Lock Outside Corners

- Adjusters on the Lift 'N Lock Bracket secure the forms to the previous pour for a quality concrete finish (Adjusters provide vertical and horizontal adjustment)



Once locked into place, the platform provides a base on which to set the gang forming system on



Platform is a trailing platform that is generally raised from lift to lift while connected to the gang forming system





# Lok Fast Column Clamp

Column Forming

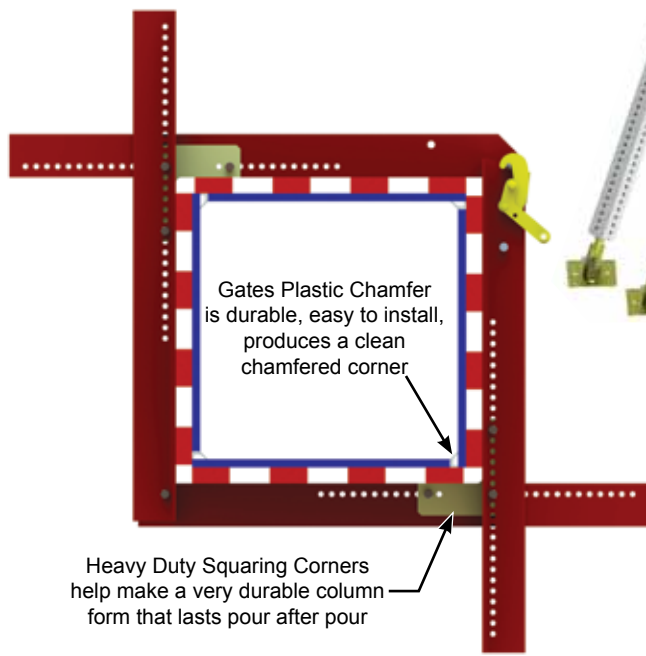
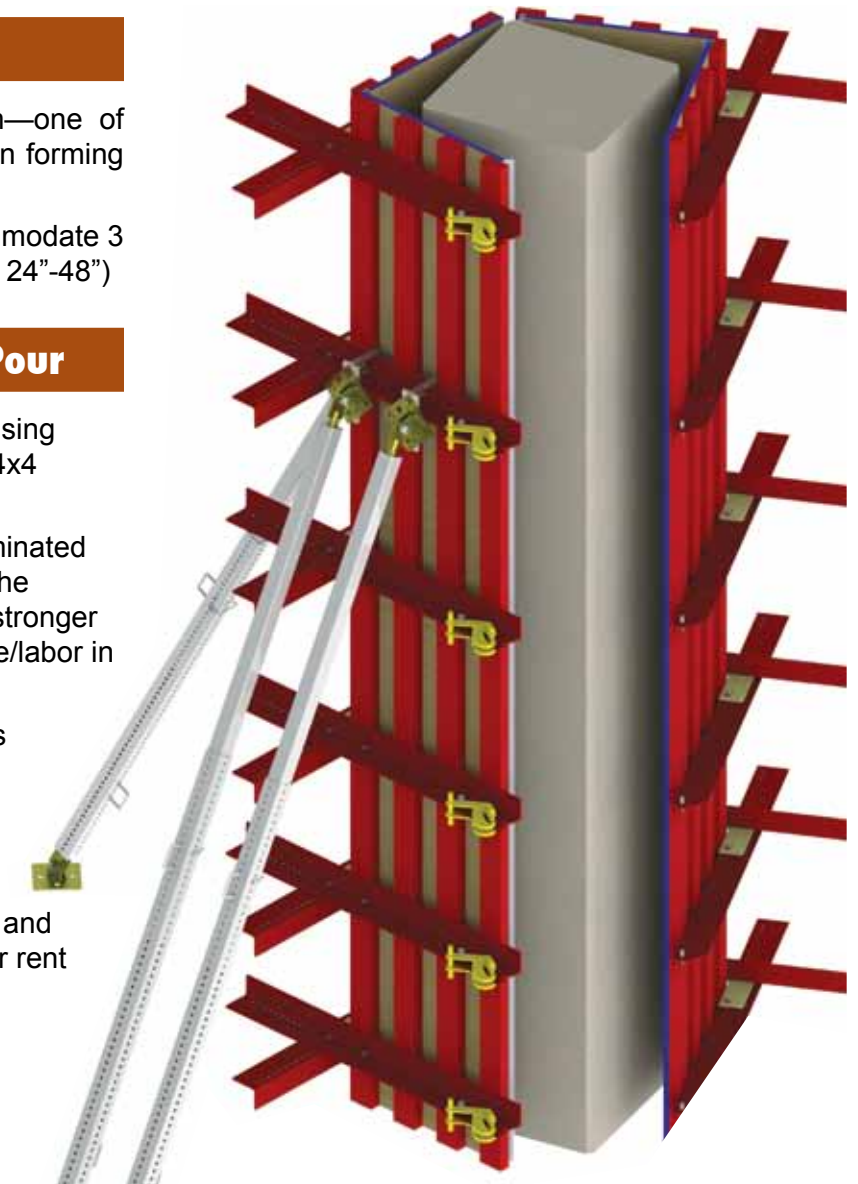


## Only Settle For The Best

- Gates flagship column forming system—one of the fastest and most widely used column forming systems on the market today
- Standard Clamps are available to accommodate 3 column size ranges (8"-24", 12"-36", and 24"-48")

## Excellent Results Pour After Pour

- Designed for rapid concrete placement using common forming materials (2x4, 2x6 or 4x4 lumber and 3/4" plywood form face)
- Gates recommends engineered LVL (laminated veneer lumber) to make efficient use of the strength of the Lok Fast Clamp—LVL is stronger and can mean fewer clamps—saves time/labor in form fabrication/use
- Straightforward form fabrication design is quick to build at the jobsite or fabrication facility—sembled forms have no loose parts
- Brace with Gates Adjustable Form Brace—Gates Lok Fast Column Clamps and accessories are durable and available for rent





## Extreme Durability

- Gates manufactures Custom Steel Forms and a variety of specialty items such as staircases, jobsite dumpsters, concrete washout pans, etc.
- Precast forms and some poured-in-place forms demand high reuse and almost always dictate the use of a steel form
- Steel forms are expertly crafted by Gates' skilled Metal Fabrication Department—Gates can design and build formwork for basic shapes all the way up to the most complex
- Gates' poured-in-place and precast median barrier forms are used across the country and provide superior concrete finish and include all necessary blockouts and bulkheads
- Gates rents cast-in-place forms for the Colorado Type-7 F-Shape median barrier



# Riser Forming

For Stadiums, Stairs, and Auditoriums



## Forms Delivered, Ready To Set

- Versatile & efficient gang form for stadium seating & stair applications—forms arrive at jobsite ready to set with minimal assembly
- Forms can be designed to accomplish nearly any rise/run and can form a precise radius—forms can also be modified to address the changing pitch of a parabolic stadium design
- Gates bracing hardware & rolling system make it a quick form to move and set with minimal need for crane time—system has no loose parts when used w/ Gates Attached “U” Clamp
- Replaceable form faces means less touch up to finished concrete
- Forms can be designed to maximize the amount of placed concrete per pour or to maximize the amount of reuse on the form

## When Gang Forms Aren't Practical

- Gates also offers hand-set Riser Form Ties that can be designed to work with various forming hardware systems—great for applications where cranes are not accessible or the reuse factor of a gang form is not economical
- Gates Riser Ties are an integral part of the Riser Solutions Tiered Concrete System





# Custom Wood Forms

Built For The Most Challenging Jobs

## Forms Delivered, Ready To Set

- Gates can handle virtually any forming need—with today's complex concrete shape demands, many structures can't be formed easily with job built or properly with modular forming systems
- Gates Custom Wood Forms are built with a combined experience level of more than 100 years with time tested methods and designs that utilize automated parts production to ensure an outstanding finished product
- Just because it's custom doesn't mean it has to be complicated or expensive—Gates can build forms for a challenging tunnel job or a basic column shape for a high rise office building
- Forms arrive at the jobsite ready to set with minimal assembly required using Gates labor efficient systems
- Forms can be bid for durability (for high reusability) or bid economically (for the one-time use project)



# Gates & Sons, Inc.

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