



Ganged Forming System







The Rapid Clamp system is a high-strength concrete forming system designed for fast-paced gangform operations. It has the strength required for the large contact areas and fast pour rates common in large gangform applications.





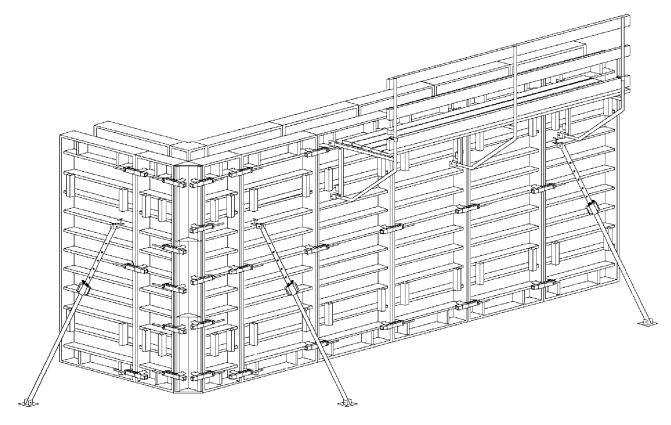
Table of Contents

I.	Int	roduction	1
II.	Par	nels and Fillers	2
	Α.	Standard Panels2	
	Β.	Adjustable Panel	
III.	Cla	mps	4
	Α.	Connecting Clamps4	
	Β.	Adjustable Clamps5	
IV.	Co	rners	6
	Α.	Rigid Corners	
	Β.	Flex Corner	
	C.	Hinged Corners	
	D.	Bay Corners	
	Ε.	Three-Piece Stripping Corner7	
	F.	Core Wall Stripping and Lifting	
V.	Aco	cessories	11
	Α.	Transition Fillers	
	Β.	Walkway Brackets11	
	C.	Bulkhead Rod12	
	D.	Lift Brackets12	
	Ε.	Tie-Off Rod and Nut13	
	F.	Aligner Connector13	
	G.	Brace Kicker Bracket13	
	Η.	Filler Angle13	
	Ι.	Rapid Clamp Tie Down Bracket14	
	J.	Rapid Clamp Handling Hook14	
	K.	Support Brackets14	
VI.	Wa	lers	15
		ll Ties	
		r Height Clamp Distribution	
		er Height Clamp Distribution	
5 Meter Height Clamp Distribution19			
6 N	lete	r Height Clamp Distribution	20

I. Introduction

Rapid Clamp components and accessories illustrated herein have been designed with safety and performance in mind to help achieve a safe and productive forming operation. It is recommended that all construction personnel thoroughly familiarize themselves and comply with the applicable industry standards and safe practices established by the American Concrete Institute, the Occupational Safety and Health Administration and the Scaffold, Shoring and Forming Institute. All Rapid Clamp components and accessories must be inspected regularly for damage or excessive wear. Equipment found to be in these conditions must be replaced immediately and not reused.

NOTE: The procedures outlined in this Application Guide describe standard application procedures for the Rapid Clamp concrete forming system. Since field conditions vary and are beyond the control of Symons, *safe and proper use of this equipment is the responsibility of the user.*

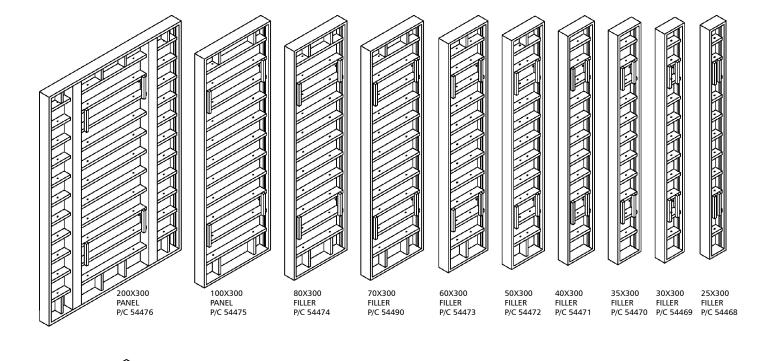


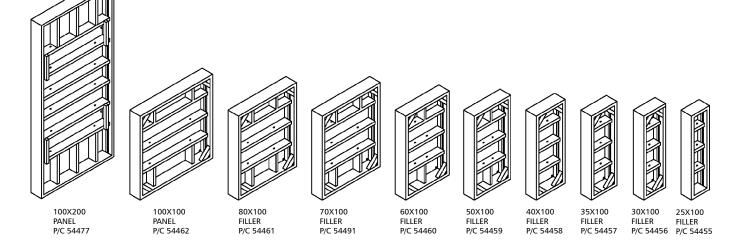
Rapid Clamp Forming System Forms, Hardware and Accessories

II. Panels and Fillers

A. Standard Panels

Rapid Clamp is a modular metric system. Panels have a 14.5cm ($5^{3}/4^{"}$) deep steel frame and an overlaid 15mm ($5^{"}$) plywood face. The plywood face is recessed into the steel frame as protection from moisture and edge damage. Panels and fillers are designed based on a maximum allowable concrete pressure of 1250 psf. The Rapid Clamp system is available in widths from 25 to 200cm, and heights of 1 and 3 meters. A 100 x 200cm panel is also available, but without the filler heights. Crossmembers are spaced at approximately 25cm (10 inches) on centers with four tie locations per panel and filler. Rapid Clamp forms can be used horizontally or vertically, even within the same gang.





Rapid Clamp Panel and Filler Sizes

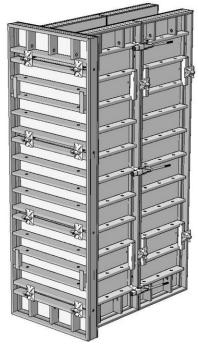
The siderail of the Rapid Clamp panels and fillers are uniquely designed to except the Rapid Clamp connecting clamps. The gang size determines the number of clamps required (see pages 17-20 for examples).

B. Adjustable Panel

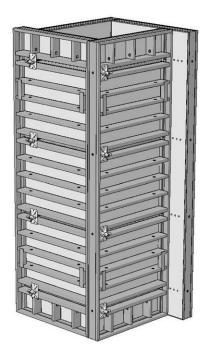
The Adjustable Panel forms columns and corners of varying dimensions. Columns from 8" to 30" in 2" increments can be formed without internal ties.

When forming columns, four Type 2 Adjustable Panel Connectors, with washers and connecting nuts, are used for each 300 cm high form, and two Type 2 Adjustable Panel Connectors, with washers and connecting nuts are used for each 100 cm high form.

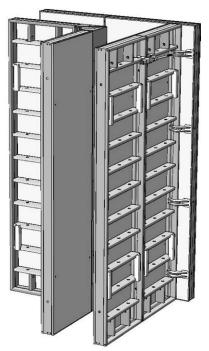
At corner details, four Type 1 Adjustable Panel Connectors, with washers and connecting nuts are used for each 300 cm high form, and two Type 1 Adjustable Panel Connectors, with washers and connecting nuts, are used for each 100 cm high form.



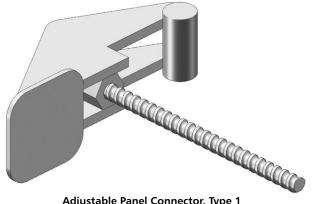
Bulkhead with Bulkhead Rod or Adjustable Panel Connector, Type 1



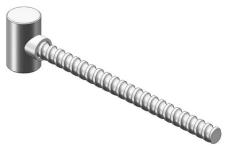
Column with Adjustable Panel Connector, Type 2



Corner with Adjustable Panel Connector, Type 1



Adjustable Panel Connector, Type 1



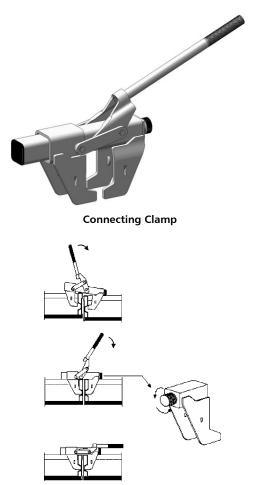
Adjustable Panel Connector, Type 2

III. Clamps

A. Connecting Clamps

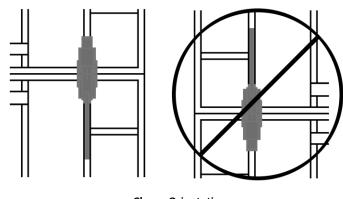
Rapid Clamp clamps connect panels and fillers, and eliminate the need for sockets, wrenches or any other specials tools typically required for other forming systems.

The number of clamps will depend on the size of the gang (see pages 17-20). Typically, three clamps are required for a vertical 300cm panel or filler. Additional clamps are required at horizontal joints due to the forces transferred by the weight and size of the gang.

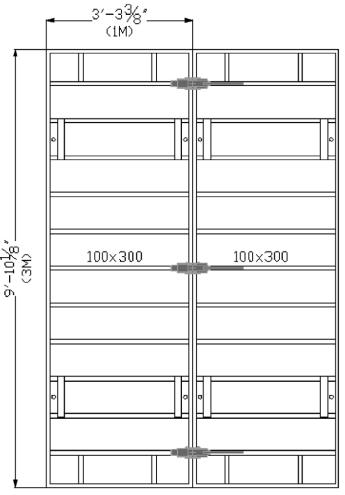


Connecting Clamp Attachment

CAUTION: To avoid disengagement from the panel, all clamp handles must be pointed in the down position at all horizontal joints.



Clamp Orientation for Horizontal Joints



Typical Connecting Clamp Configuration for Vertical Joints

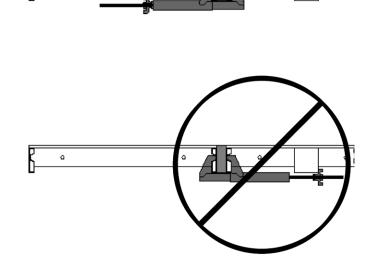


B. Adjustable Clamps

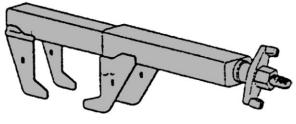
The Adjustable Clamp connects wood fillers up to 25cm (10") wide. The number of clamps required depend on the size of the gang. Typically, four Adjustable Clamps are required for a vertical 300cm panel or filler.

The threaded end of the Adjustable Clamp only requires a standard wing nut for final adjustment.

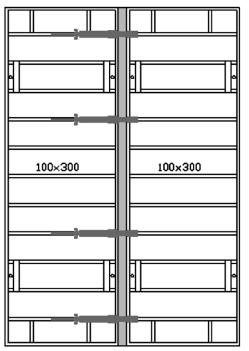
NOTE: Due to the clamp and panel interference, the Adjustable Clamp should not be used with the 200cm x 300cm panel unless used at end rail locations or the handles are pointed away from the 200cm x 300cm panel.



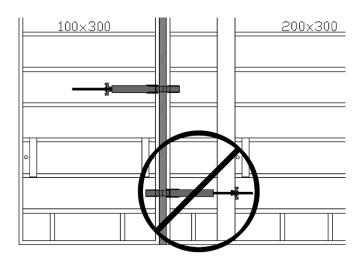
Þ



Adjustable Clamp



Typical Adjustable Clamp Configuration

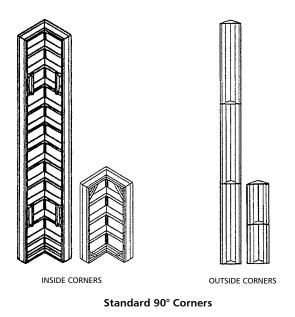


Adjustable Clamp Orientation for Vertical Joints ΡÝ

IV. Corners

A. Rigid Corners

Rapid Clamp Standard 90° Inside and Outside Corners are available in 1m and 3m heights. The Inside Corners come in three face size dimensions. The standard size 30cm x 30cm (approximately 12" x 12",), but they are also available in 25cm x 25cm and 35cm x 35cm (approximately 10" x 10" and 14" x 14").



B. Flex Corner

The 30cm x 30cm Inside Flex Corner allows some flexing to make stripping easier. A locking bar is positioned in the lock position prior to pouring, and removed from locked position for stripping.



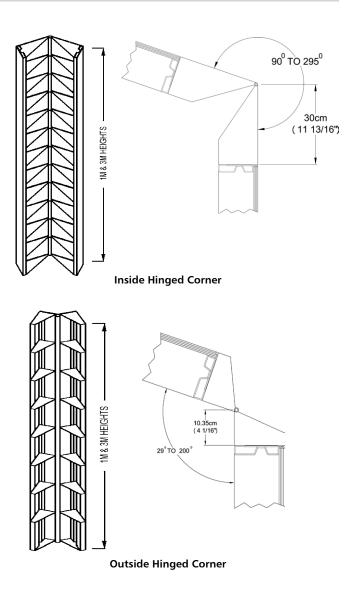
30x30x100 cm Inside Flex Corner

C. Hinged Corners

The Inside Hinged Corner may be used to form inside corners from 90° up to 295°. They are 30cm x 30cm (approximately $11^{13}/_{16}$ " x $11^{13}/_{16}$ ") and are available in 1m and 3m heights.

The Outside Hinged Corner forms outside corners from 200° down to 29°. The Outside Hinge has a dimension of 10.35 cm x 10.35cm (4" x 4"), and are available in 1m and 3m heights.

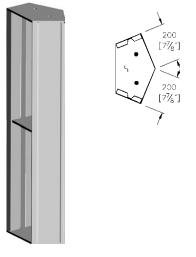
CAUTION: Due to the inherent flexibility of hinges, corner forms must be braced and blocked as required.



D. Bay Corners

Inside Bay Corners opposite Outside Hinge Corners form a 135° angle corner. The Inside Bay Corner has a 20cm x 20cm (approximately $7^{7}/8^{"} \times 7^{7}/8^{"})$ face dimension, and are available in 1m, 2m and 3m heights.

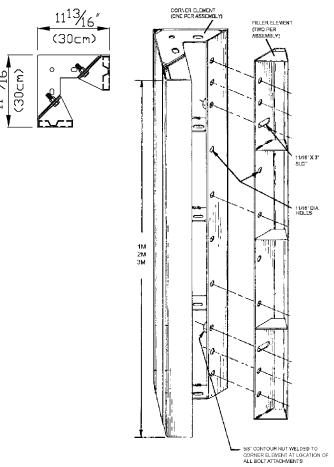
Bay Corners can be used horizontally or vertically to form 135° corners or to form wall haunches and "Y" Walls.





E. Three-Piece Stripping Corner

Three-Piece Stripping Corners for Rapid Clamp are used when gangs are confined between pilasters, intersecting walls or core walls.



Three-Piece Stripping Corner

The 30cm x 30cm $(11^{13}/_{16}" \times 11^{13}/_{16}")$ Stripping Corner consist of three elements: the $10^{1}/_{2}" \times 10^{1}/_{2}"$ corner element, and two $1^{5}/_{16}"$ filler elements. The fillers are attached to the corner element with $5/_{8}"$ Fit-Up Bolts. Nuts have been welded to the inside face of the corner element.

The filler elements have ${}^{11}/{}_{16}$ " x 3" slots that allow them to slide inward during the form stripping sequence.

In the set position $\frac{5}{8}$ " x 2" bolts must be at each hole location. In the set position, the Three-Piece Stripping Corner is equivalent to a standard 30cm x 30cm rigid corner.

F. Core Wall Stripping and Lifting

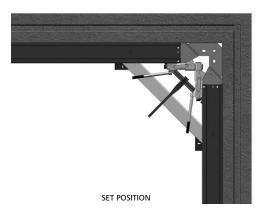
Three-Piece Stripping Corners allow core wall gangs to be stripped, lifted and reset without dismantling the gangs.

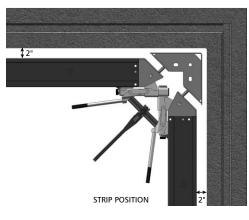
The filler elements and attached formwork move inward 2" from each wall face to shorten the overall corner-to-corner length of each wall gang by 4".

To strip the Three-Piece Stripping Corner:

- 1. Remove all Fit-Up Bolts except the Fit-Up Bolts at the location where the filler element has the slotted hole.
- 2. Back off the remaining Fit-Up Bolts until the point of the bolt is flush with the welded nut in the corner element.
- Retract the gangform inward with turnbuckles or ratchets until stripping clearance is about 2" between the poured wall and form.

CAUTION: During the stripping procedure, back the tie nuts about 2" toward the end of the tie and *do not* remove the ties until the crane is hooked to the gang and the gang is free from the poured wall.

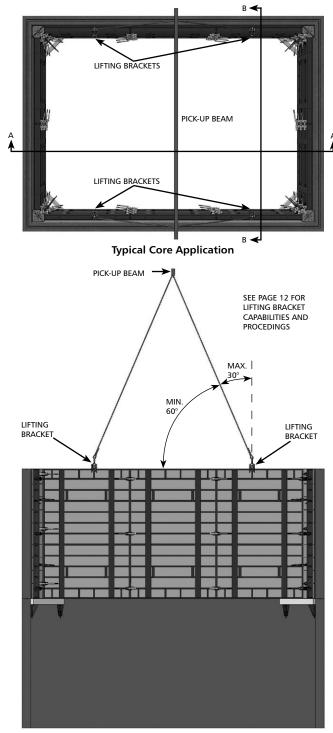




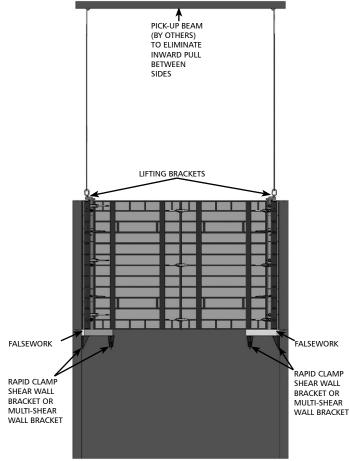
Stripping Procedure

To lift the corewall gang:

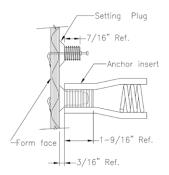
- 1. Attach a sling hook to each Lifting Bracket.
- 2. The Lifting Brackets should be mounted on the two longer wall gangs.
- 3. Sling lines should not be angled inward between opposite wall Lifting Brackets. Resulting inward pull may rack the formwork out of position.
- 4. Use a pick-up beam to position sling lines for straight up pull.



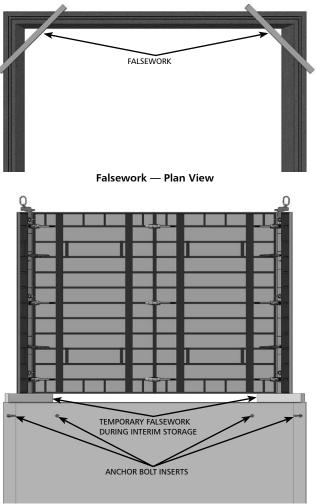
A-A



B-B



Anchor Insert Installation



Typical Falsework Support Before Bracket Installation

Lift rigid box coreform approximately one foot above top of corewall.

Place 4x4s across the corners at the top of the corewall concrete as temporary falsework support, then set the coreform on the falsework.

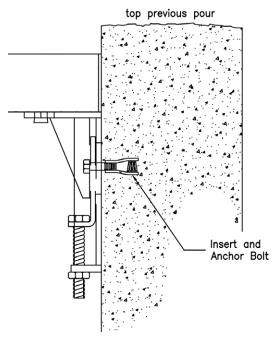
While the coreform is resting on the temporary falsework, the Shearwall Brackets can be repositioned for the next lift, the re-bar erected, inserts installed, and the forms can be cleaned and oiled.

An 8d nail secures the threaded plastic Setting Plug (F-74, P/C D60426) to the form face.

 $\frac{3}{4}$ " - 10 UNC x 1½" Expanded Coil Insert (F-57, P/C D40561) is then attached to the form face by threading onto the Setting Plug.

Install Shear Wall Brackets and appropriately sized falsework. Safe load rating 3,000 lbs. at 3:1 safety factory in 3,500 psi concrete.

Use only $\frac{3}{4}$ " 10 NCx1 $\frac{1}{2}$ " long zinc coated Grade 5 Anchor Bolts. A standard $\frac{3}{4}$ " x 1 $\frac{1}{2}$ " long bolt does *not* contain adequate thread to fully engage the insert and clamp the Shear Wall Bracket.



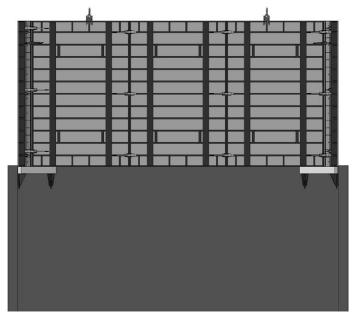
Shear Wall Bracket Installation

CAUTIONS: Check core form weight to be sure that the Shear Wall Brackets will not be overloaded.

Do not use the Rapid Clamp Shear Wall Bracket for core applications. The welded guide plates will interfere with lumber falsework. Have the crane lift the core form enough to permit removal of the temporary falsework.

Then, lower the core form onto the falsework supported by the Shear Wall Bracket. Crane time is momentary because expanding the Three-Piece Stripping Corner back to full core form dimensions is accomplished after the crane is released.

Expand the core form by adjusting all Turnbuckles outward. Set the corners by installing %" Fit-Up Bolts.



Corewall Forms on Falsework and Shear Wall Brackets

V. Accessories

A. Transition Fillers

There are two generations of Transition Filler: an all-steel filler, and one with a plywood face. The most common use of the Transition Filler is for forming details, such as corners and pilasters.

The Transition Fillers provide a convenient connection between Rapid Clamp and Steel-Ply[®] or the Max-A-Form[®] concrete forming systems.

The plywood-faced Transition Filler connects Rapid Clamp to Steel-Ply or Max-A-Form. It is lighter than the all-steel Transition Filler which can also connect to Versiform[®].

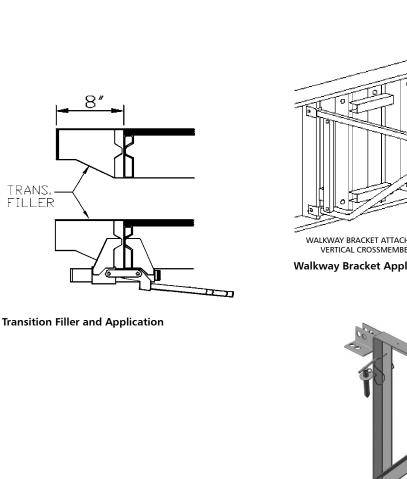
One side rail of the Transition Filler is clamped to an Rapid Clamp panel or filler and the other side rail is wedge bolted or bolted to the adjacent panel (depending on the system).

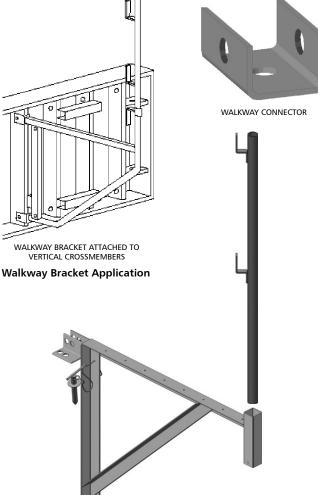
B. Walkway Brackets

Symons offers two types of walkway bracket.

The Rapid Clamp Walkway Bracket is manufactured with a guardrail post. The guardrail post has two "L" brackets with nail holes welded to it for attachment of lumber guardrails. At the bottom of the post is a sliding "L" bracket with nail holes to attach a toeboard. The Walkway Bracket is attached to the forms at one of the accessory holes on vertical crossmembers with the attached pin. If the crossmembers are running in the horizontal direction, the Walkway Connector is bolted to the crossmember and the Walkway Bracket is attached to the Walkway Connector. The capacity of the Walkway Bracket is 400 lbs. at a 4:1 safety factor (5 ft. maximum spacing).

The Scaffold Bracket is designed to connect to either the vertical or horizontal crossmembers with an attachment pin (included). The Guard Rail Post must be ordered with the Scaffold Bracket.

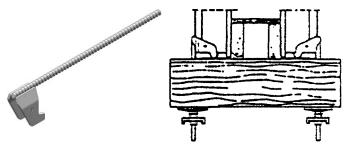




Scaffold Bracket and Guard Rail Post

C. Bulkhead Rod

The Bulkhead Rod is used with double 2x lumber or steel walers, plywood or solid lumber and plate and nut to create a job-built bulkhead. The capacity of the Bulkhead Rod is 5,500 lbs. at a 2:1 safety factor.



Bulkhead Rod and Typical Application

D. Lift Brackets

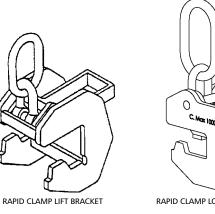
Symons offers two types of Lifting Bracket. One locks the lifting handle, and the other does not lock the lifting handle. Either one is safe to use.

The Rapid Clamp Lift Bracket is attached by lifting the release handle, sliding the Lift Bracket onto the form and, with a downward motion of the lever, securing the Lifting Bracket to the panel. The Lift Bracket can be attached anywhere along the endrails or siderails.

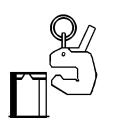
The safe load rating of the Rapid Clamp Lift Bracket is 2200 lbs at a 5:1 safety factor. The number of Lift Brackets required shall be determined by the contractor based upon the weight of the gang to be lifted. The rigging must be designed by the contractor to assure that any one Gang Lifting Bracket is not overloaded. Load equalizer beams are recommended for all but simple two point lifts.

A minimum of two lift lines must be used to control movement of the gang form. Do not allow personnel on or directly under any gang form while it is being moved or suspended in air.

CAUTION: Do not initiate breaking a gang form loose from a wall by lifting or tugging backward through the Rapid Clamp Lift Bracket.

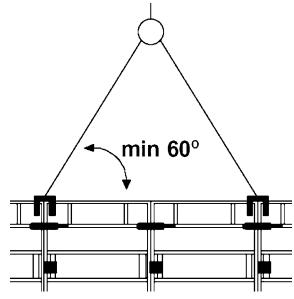


RAPID CLAMP LOCKING LIFT BRACKET





Lift Bracket Attachment



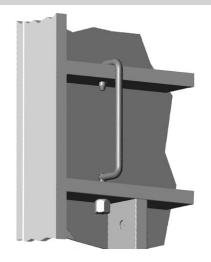
Typical Lift with Two Lines

E. Tie-Off Rod and Nut

The installation of the Tie-Off Rod and Nut on Rapid Clamp allows easy attachment of personal fall protection equipment while working on forms; although work platforms are recommended and normally provide a more efficient working condition.

The Tie-Off Rod for personal fall protection attachment should be spaced per job requirements and attached to crossmembers as shown.

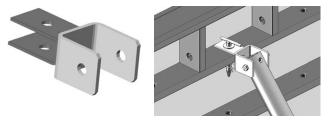
CAUTION: Do not use the Tie-Off Rods as a Lifting Bracket. Check that the nut is tight before hooking to the Tie-Off Rods.



Typical Tie-Off Rod and Nut Application

F. Aligner Connector

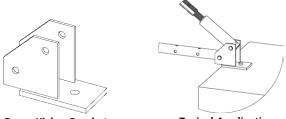
The Aligner Connector is used to attach a brace when the crossmembers of the Rapid Clamp forms are running in the horizontal direction. If the crossmembers are in the vertical direction, the brace may be pinned directly to the form.



Aligner Connector and Brace Connection to Horizontal Crossmembers

G. Brace Kicker Bracket

The Brace Kicker Bracket is designed to be used with any Symons forming system as an efficient way to align and plumb the forms using just one bracket.



Brace Kicker Bracket

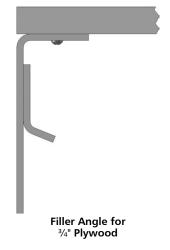
Typical Application

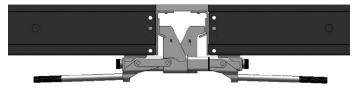
H. Filler Angle

Symons offers two types of Filler Angles — one which accommodates $\frac{5}{8}$ " plywood, and one which accommodates $\frac{3}{4}$ " plywood.

Filler Angles allow a custom filler of plywood to be clamped to the adjacent Rapid Clamp panel or filler.

Plywood fillers with Filler Angles are recommended where reinforcing steel, pipes, or other penetrations must protrude through the form face.

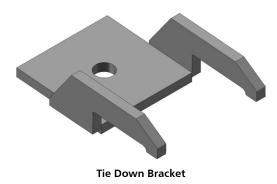




Typical Application

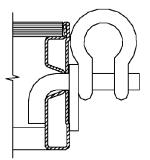
I. Rapid Clamp Tie Down Bracket

The Rapid Clamp Tie Down Bracket may be used to secure panels to footings or slabs to prevent movement during the concrete pour.

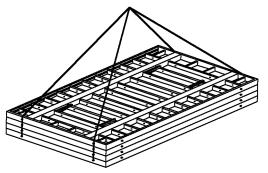


J. Rapid Clamp Handling Hook

The Handling Hook allows stacks of Rapid Clamp panels to be moved as one. Insert one hook (curve down) into holes at each corner of the panel at the bottom of a stack of as many as 4 panels (approx. 2800 lbs for 200 x 300 cm panels), attach a line, and relocate the forms. Stacks of fillers may be higher as long as the weight does not exceed 2800 lbs.



Handling Hook in Position



Typical Handling Hook Application

NOTE: Not all Rapid Clamp forms have holes in the side and end rails. When stacking forms for transport, be sure the bottom form has holes.

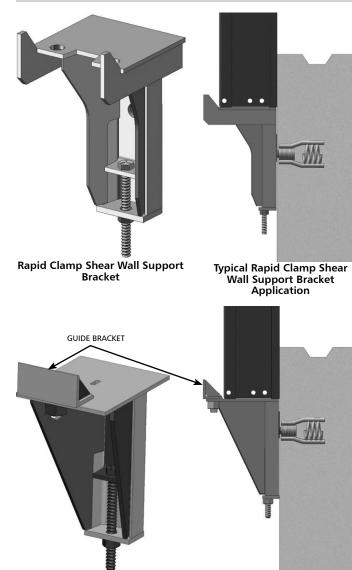
K. Support Brackets

The Rapid Clamp or the Multi-Shear Wall Support Bracket supports gangform weight at subsequent pour elevations. They should not be subjected to tension loads.

The Rapid Clamp Bracket has a built-in guide. The Multi-Shear Bracket uses a guide plate secured with a Transition Bolt and $\frac{1}{2}$ " Contour Nut

When properly mounted in 3,500 psi concrete, the Support Bracket safe loading rating is 3,000 lbs. at a 3:1 safety factor.

CAUTION: Make sure that the inset alignment is perpendicular to the form face and is not disturbed during concrete placement.



Multi-Shear Wall Support Bracket

Typical Multi-Shear Wall Support Bracket Application

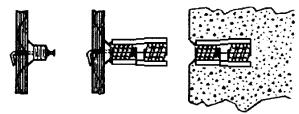
The Support Bracket adjustment range is $2\frac{3}{8}$ ", from $3\frac{1}{2}$ " to $5\frac{7}{8}$ ". They must be installed a minimum of 6" from the top of the previously poured concrete for proper anchor strength.

After forms are stripped, a fully threaded highstrength $\frac{3}{4}$ " bolt attaches the Support Bracket to the insert. Expanded Coil Inserts are a closed ferrule structural connection.

NOTE: On applications with form liners or when the 300cm x 100cm panel is horizontal, consult the Symons branch for technical service for proper installation procedures.

Support Bracket Installation Procedure:

- 1. Attach adapter plug to form face with a nail at or below the prescribed minimum 6" dimension. Clinch the nail behind the plywood.
- 2. Thread the concrete insert onto the adapter plug. The assembly is now ready for concrete.
- 3. When it is time to strip the concrete forms, straighten the nail, remove the forms and adapter plug.
- 4. Attach a shear wall bracket with a $\frac{3}{4}$ " x $1\frac{1}{2}$ " high-strength bolt.



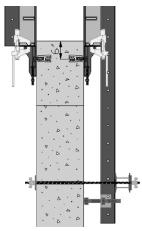
Support Bracket Installation Procedure

See pages 9 and 10 for anchor and bolt sizes.

VI. Walers

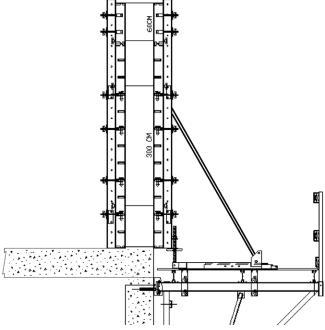
Rapid Clamp is designed as a walerless forming system, but there are forming situations were a waler would be required or may be added as an option:

1. If a project is to be poured in multiple lifts, a trailing waler could be added to the gang for aligning purposes.



Typical Trailing Waler Application for Walls with Multiple Lifts

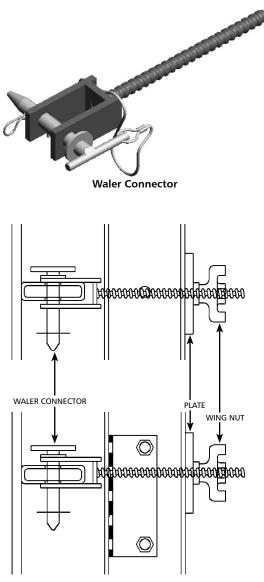
 If Rapid Clamp is used with the Space-Lift[™] or Sky-Lift[™] systems, 5" Versiform[®] Walers must be added to the gang.



Typical Waler Attachment with Sky-Lift System

3. Gang heights exceeding 16 feet may require walers. Contact Symons Technical Service for application information.

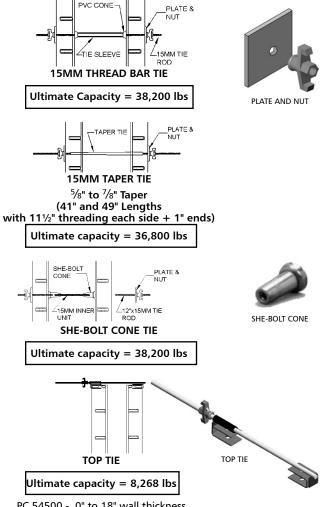
A Waler Connector with plate and wing nut is required to attach the Versiform Waler to Rapid Clamp.



Typical Waler Connector Applications

VII. Wall Ties

Wall Ties and their installation must be in compliance with industry standards and safe practices established by the American Concrete Institute, The American National Standards Institute, The Occupational Safety and Health Administration, and the Scaffolding, Shoring and Forming Institute. Illustrations and capacities of Taper Ties, Thread Bar, Top Tie and She-Bolt Ties are shown below.



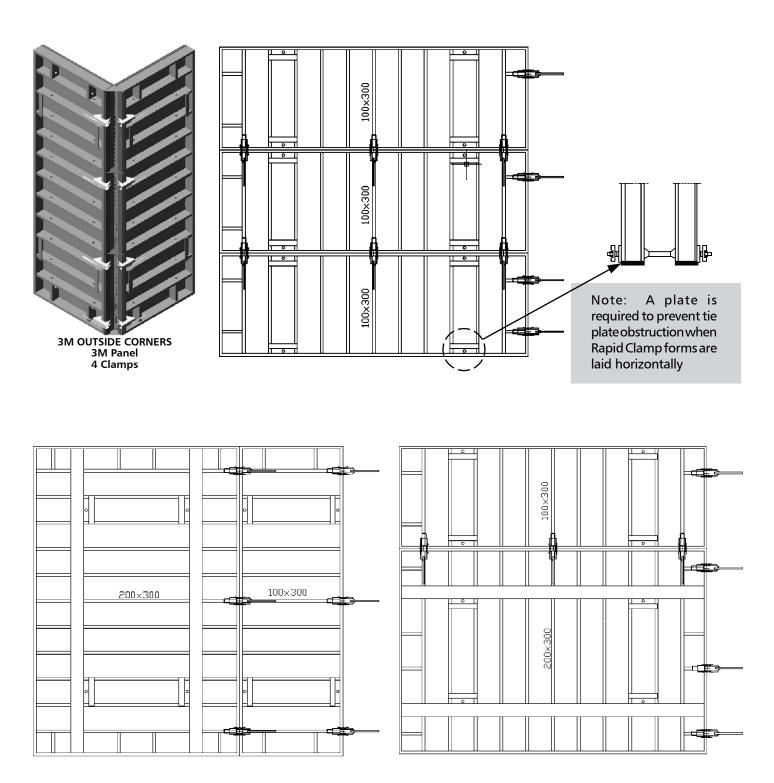
PC 54500 - 0" to 18" wall thickness PC 54501 - 18" to 36" wall thickness

NOTE: Application drawings indicate safe load capacities of Taper Ties, Thread Bar and She-Bolt assemblies, when both outer unit and inner ties are supplied by Symons.

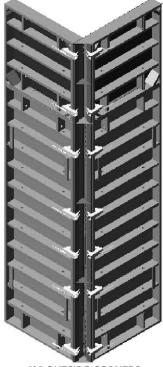
NOTE: Applications using 200 cm or 100 cm wide panels require the allowable concrete pressure to be reduced to 1161 psf for 37,500 ties.

NOTE: It is the contractors' responsibility to control concrete mix and placement procedures to assure that the maximum formwork design pressure is not exceeded.

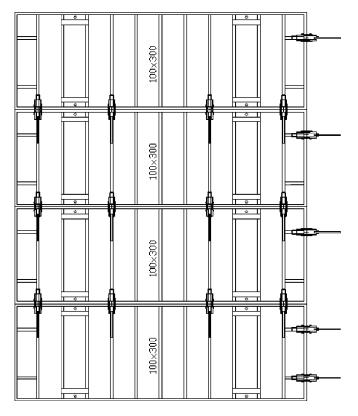
<u>3 Meter Height Clamp Distribution</u>

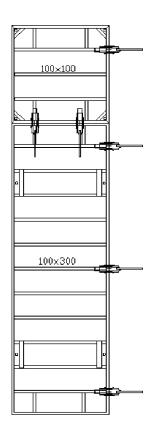


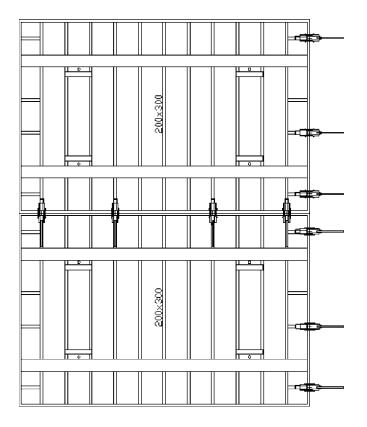
4 Meter Height Clamp Distribution

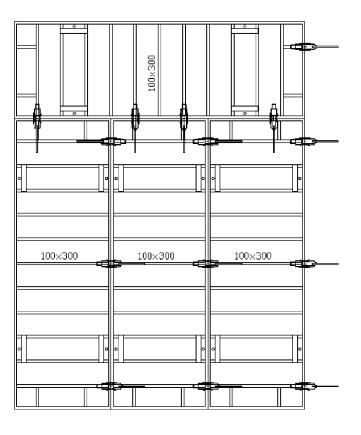


4M OUTSIDE CORNERS 3M+1M Panels 5 Clamps lower panel 2 Clamps upper panel





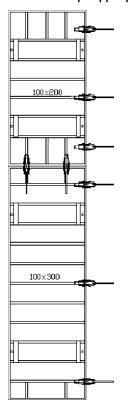


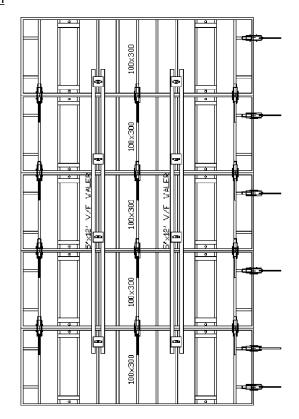


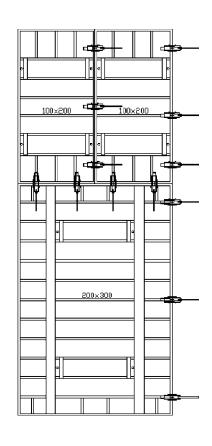
5 Meter Height Clamp Distribution

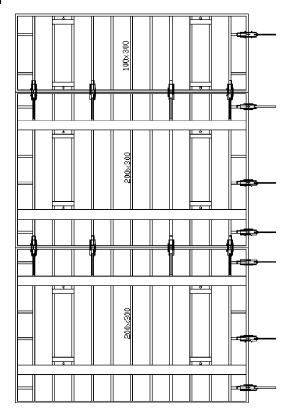


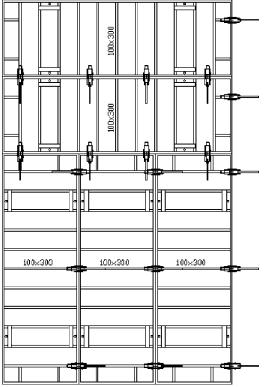
5M OUTSIDE CORNERS 3M+1M+1M Panels 5 Clamps lower panel 2 Clamps middle panel 2 Clamps upper panel



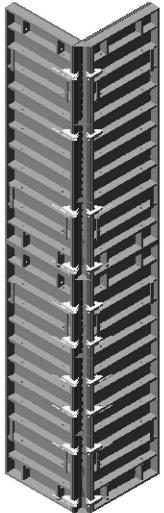




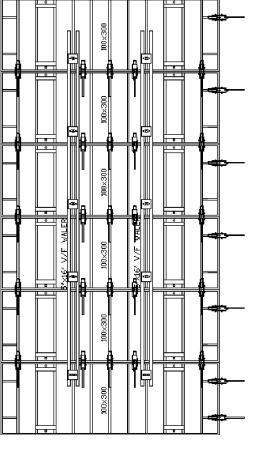


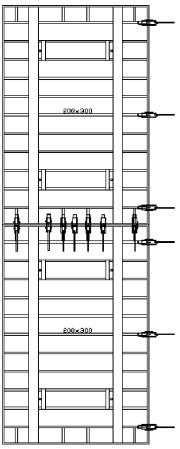


6 Meter Height Clamp Distribution

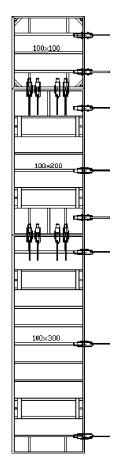


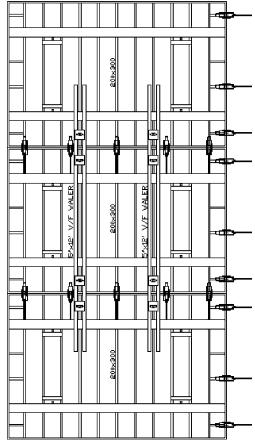
6M OUTSIDE CORNERS 3M+3M Panels 6 Clamps lower panel 4 Clamps upper panel











Index

15mm Thread Bar Tie	16
90° Inside Corners	6
90° Outside Corners	6
135° Angle Corner	7

Α

Accessories	
Adjustable Clamps	5
Adjustable Panel	
Aligner Connector	
5	

В

Bay Corners	7
Brace Connection	13
Bulkhead Rod	3,12

С

Clamps	4
Column Connectors	
Concrete pressure	2
Connecting Clamps	4
Cores	
Corner Connectors	
Corners	6

Ε

Expanded Coil Inserts 15

F

Filler Angle	
Filler Sizes	2
Flex Corner	6
Form Liners	15

н

Handling Hook 14 Hinged Corners 6 L

Inside Bay Corners......7 L Lifting Gangs...... 12

Lift Bracket 12

0	
Outside Corners	6
Outside Hinged Corner	6
Outside Hinge Corners	7

Ρ

P	
Panel Sizes	. 2
Panel Design	. 2

R

Rigid Corners

S

•	
She-Bolt Cone Tie	
She-Bolt Tie	
Sky-Lift [™]	15
Space-Lift [™]	
Standard Inside Corners	6
Standard Panels	2
Stripping Corner	7
Support Bracket	13,14

Т

Taper Tie	
Thread Bar Tie	
Three-Piece Stripping Corner	7
Tie Down Bracket	14
Tie-Off Rod	13
Tie Capacities	
Top Tie	
Trailing Waler	15
Transition Filler	11

V

15

W

Walers	15
Waler Connector	16
Walkway Bracket	11
Wall Ties	16

Safety Information





Improper Use of Concrete Accessories Can Cause Severe Injury or Death

Read, understand and follow the information and instructions in this publication before using any of the Dayton Superior concrete accessories displayed herein. When in doubt about the proper use or installation of any Dayton Superior concrete accessory, immediately contact the nearest Dayton Superior Service Center or Technical Service Department for clarification. See back cover for your nearest location.

Dayton Superior products are intended for use by trained, qualified and experienced workmen only. Misuse or lack of supervision and/or inspection can contribute to serious accidents or deaths. Any application other than those shown in this publication should be carefully tested before use.

The user of Dayton Superior products must evaluate the product application, determine the safe working load and control all field conditions to prevent applications of loads in excess of a product's safe working load. Safety factors shown in this publication are approximate minimum values. The data used to develop safe working loads for products displayed in this publication are a combination of actual testing and/or other industry sources. Recommended safe working loads given for the products in this publication must never be exceeded.

Worn Working Parts

For safety, concrete accessories must be properly used and maintained. Concrete accessories shown in this publication may be subject to wear, overloading, corrosion, deformation, intentional alteration and other factors that may affect the device's performance. All reusable accessories must be inspected regularly by the user to determine if they may be used at the rated safe working load or should be removed from service. The frequency of inspections depends upon factors such as (but not limited to) the amount of use, period of service and environment. It is the responsibility of the user to schedule accessory hardware inspections for wear and remove the hardware from service when wear is noted.

Shop or Field Modification

Welding can compromise a product's safe working load value and cause hazardous situations. Knowledge of materials, heat treating and welding procedures is necessary for proper welding. Consult a local welding supply dealer for assistance in determining required welding procedures.

Since Dayton Superior cannot control workmanship or conditions in which modifications are done, Dayton Superior cannot be responsible for any product altered in the field.

Interchangeability

Many concrete accessory products that Dayton Superior manufactures are designed as part of a system. Dayton Superior strongly discourages efforts to interchange products supplied by other manufacturers with components supplied by Dayton Superior. When used properly, and in accordance with published instructions, Dayton Superior products have proven to be among the best designed and safest in the industry. Used improperly or with incompatible components supplied by other manufacturers, Dayton Superior products or systems may be rendered unsafe.

Installation

WARNING

- 1. Dayton Superior Corporation products shall be installed and used only as indicated on the Dayton Superior Corporation installation guidelines and training materials.
- 2. Dayton Superior Corporation products must never be used for a purpose other than the purpose for which they were designed or in a manner that exceeds specific load ratings.
- 3. All instructions are to be completely followed to ensure proper and safe installation and performance
- 4. Any improper misuse, misapplication, installation, or other failure to follow Dayton Superior Corporation's instruction may cause product malfunction, property damage, serious bodily injury and death.

THE CUSTOMER IS RESPONSIBLE FOR THE FOLLOWING:

- 1. Conformance to all governing codes
- 2. Use of appropriate industry standard hardware
- 3. The integrity of structures to which the products are attached, including their capability to safely accept the loads imposed, as evaluated by a qualified engineer.

SAFETY INSTRUCTIONS:

All governing codes and regulations and those required by the job site must be observed. Always use appropriate safety equipment

Design Changes

Dayton Superior reserves the right to change product designs, rated loads and product dimensions at any time without prior notice. Note: See Safety Notes and Safety Factor Information.



DAYTON SUPERIOR BRANDS

CONCRETE ACCESSORIES

Accubrace [®] Aztec[®] Bar Lock [®] Corewall [®] Fleet-Lift[™] Swift Lift [®] Taper-Lock[®] CONSTRUCTION CHEMICALS Unitex[®]

FORMING PRODUCTS

Symons[®] Max-A-Form[®] Steel-Ply[®] Sym-Ply[®]

DAYTON SUPERIOR PRODUCTS

BRIDGE DECK FORMING

Adjustable Joist Hangers Bridge Overhang Brackets Haunch and Fillet Forming Pres-Steel, Coil Rod and Con-Beam Hangers Screed Supports

CHEMICALS

Bond Breakers Cleaners / Strippers Concrete Repair/Restoration Curing Compounds / Sealers Epoxies Floor Levelers Form Release Agents Grout Hardeners / Industrial Toppings Liquid Densifiers Surface Retarders

FORMING AND SHORING

Aluminum Shoring Ganged Formwork Garage Beam System Handset Formwork Highway Forms Jump Forms Modular Deck Shoring One Sided Frames Self Spanning Forms Steel Frame Shoring

FORMLINERS ABS Plastic

ABS Plastic Polystyrene Plastic

PAVING

Dowel Bar Expansion Caps Dowel Bar Retrofit System Elastomeric and Hot Pour Joint Seal Metal Keyway Form Systems Tie Bar Assemblies Transverse Bar Assemblies Welded Dowel Assemblies Wire Baskets without Dowels

PRECAST

Anchors and Lift Systems Coil / Ferrule Inserts Core Plugs Magnets Precast Forms Rustications/Chamfers Sandwich Panel Connector Shear Connectors Slotted Inserts

REBAR SPLICING

Forged Dowel Bar Couplers Lockshear Bolt Couplers Shear Resistance Products Straight Thread Couplers Taper Thread Couplers

REBAR SUPPORTS

Concrete Dobies Continuous Plastic and Steel Bar Supports Individual Plastic and Steel Bar Supports Mesh Chairs Paving Chairs Side Form Spacers

TIES AND ACCESSORIES

Modular Form Ties Single Waler System Ties and Accessories

TILT-UP

Braces and Brace Anchors Helical Ground Anchors Setting Plugs Strongback System Tilt-Up Anchors and Lifting Systems

CONTACT INFORMATION



48575 Downing Street Wixom, MI 48393 800.876.4857 I info@formtechinc.com formtechinc.com

SYM102 08/10 Give us a call at any of our branch locations, email us at info@formtechinc.com, or click on <u>formtechinc.com/quote</u> to get a quote. Our experienced Form Tech representatives will answer your questions, and help you get your project started with some of the best concrete forming, shoring, and accessory products in the industry, backed by a professional and detail-oriented staff.



Charleston, SC 7377 Peppermill Lane North Charleston, SC 29418 843.628.3434



Detroit, MI

Corporate Headquarters 975 Ladd Road Walled Lake, MI 48390 Branch: 248.344.8260 Corporate: 248.344.8265



Charleston, WV 161 Industrial Road St. Albans, WV 25177 304.722.6804



Pittsburgh, PA 2850-A Kramer Road Gibsonia, PA 15044 412.331.4500



Charlotte, NC 1000 Thomasboro Road Charlotte, NC 28208 704.395.9910



Raleigh, NC 115 Petfinder Lane

Raleigh, NC 27603 919.833.0911



Cleveland, OH 20801 Miles Road North Randall, OH 44128 216.692.0497



TRUSTED FORMWORK & ACCESSORY SPECIALISTS 800-876-4857 | info@formtechinc.com | formtechinc.com