

Table of Contents

<u>Introduction</u>	2-8
<u>Why Consider WTF?</u>	3-8
<u>Standard and Specialty Forms</u>	9-32
<u>Standard Forms</u>	9-21
<u>8-8 / 8-24</u>	9
<u>6-12</u>	10
<u>6-12 Double Bracing</u>	11
<u>Super Light</u>	12
<u>Commercial</u>	13
<u>International Housing Forms</u>	14
<u>Radius Forms</u>	15
<u>Bricks</u>	16-17
<u>Gang Adapter</u>	18-19
<u>Big Panel</u>	20-21
<u>Corner Forms</u>	22-25
<u>Standard Corners</u>	22-23
<u>Specialty Corners</u>	23-25
<u>Brickledge Forms</u>	26
<u>Stoops</u>	27
<u>Pilaster Forms</u>	27
<u>Round Column Forms</u>	28
<u>Wall Barrier Forms</u>	28
<u>Square Adjustable Column Forms</u>	28
<u>Jump Fillers</u>	29
<u>Offset Endbar Panel</u>	29
<u>Control Joint</u>	29
<u>Chamfer</u>	29
<u>Laydown Forms</u>	29
<u>Deck Components</u>	30
<u>Deck Assembly</u>	31
<u>Monolithic Slab Forms</u>	32
<u>Stemwall Forms</u>	32
<u>Products and Accessories</u>	33-66
<u>Systems</u>	67-90
<u>Foundation Systems</u>	68-69
<u>Crawl Space Systems</u>	70-71
<u>Precast Forms Systems</u>	72-73
<u>Agricultural Systems</u>	74-75
<u>Concrete Step Systems</u>	76-77
<u>Fence Systems</u>	78
<u>Post & Beam Systems</u>	79
<u>Swimming Pool & Spa Systems</u>	80-81
<u>Concrete Housing Systems</u>	82-84
<u>Safe Room/Security Room Systems</u>	85
<u>International Housing</u>	86-89
<u>Burial Chamber Forms</u>	90
<u>Credit Application</u>	91-92

QUALITY ASSURANCE AND UNPARALLELED SERVICE

Quality control extends beyond our manufacturing plant. We are actively engaged in custom design and engineering to improve our product line. We constantly re-evaluate our products, and regularly consult with contractors, builders, and distributors. We also conduct on-site training and inspections to ensure our clients' success.

Listening to your needs and providing solutions has been the hallmark of our business since day one. We design products that meet your requirements and demands, not ours. Special applications and custom design are a challenge, not a problem. That's why we lead the industry in developing solutions through new designs.

Consider the quality...It's the impression you leave

Beautiful Face...

"What attracted me to these concrete forms is the inset face sheet. It gives the forms strength to keep from bending at the corner. Yet they give you a beautiful face. They are light enough that one man can carry a 3' x 9' concrete form so I need fewer people to unload, set and strip. We've discovered we can have all three sides of an impossible triangle - good, fast and profitable."

---Larry Swearingin, Lawson, MO



Quality

Workmanship...

"Over the last 30 years I have purchased and used concrete forms from several different manufacturers. All aspects of the Wall-Ties & Forms' forming equipment, from manufacture to on-the-job use, is superior to any other concrete forming system I have used."

---Curt Fields, Raleigh-Durham, NC



Innovation...

"In over 30 years in the concrete equipment supply business it is my experience that WTF is the most innovative company in the concrete form industry. Their ability and willingness to design around customer needs is second to none."

---John Hess, Belleville, IL



Wall-Ties & Forms, Inc. manufactures products in over a 100,000 sq. ft. facility located in Bonner Springs, KS. WTF utilizes advanced robotics, fiber optics, and the latest in computer technology to produce the best quality product at a competitive price.



WHY CONSIDER WTF CONCRETE FORMS?

LABOR SAVINGS

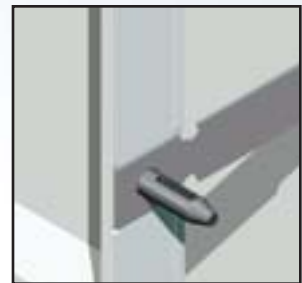
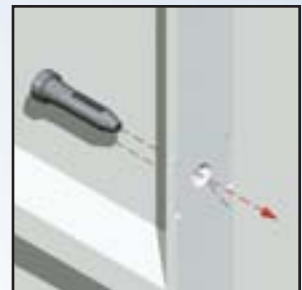
Lightweight Aluminum

The concrete forms are made of lightweight aluminum which allows the largest components to be hand carried.



Simplicity

Simple Tie, Pin, and Wedge system is used to set the concrete forms. This allows unskilled labor to be quickly trained in the use of the equipment. (see page #34). Also available is the WTF Attached Pin (see page #36).



Speed

The system is fast. It is not uncommon for a contractor to double or triple the output of their concrete form crews when they convert from a wood faced form system to WTF forms.

Faster production, cost efficiency, and more attractive walls caused Tom Schreivogel and his son-in-law, Brian Hladik, to abandon wood forms for concrete forms. "The handwriting was on the wall," says Schreivogel.



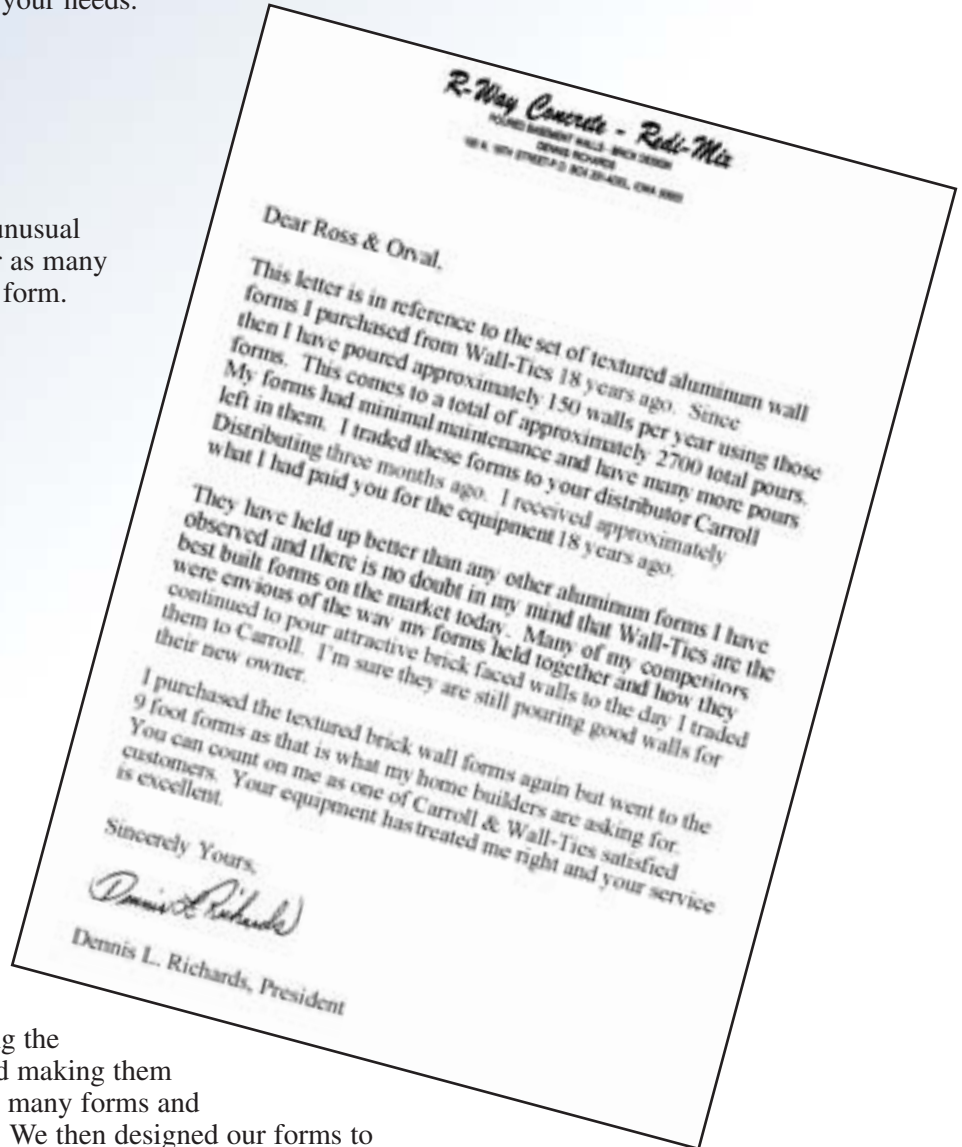
LONG LIFE OF CONCRETE FORMS

OUR DESIGNS REVOLUTIONIZED THE INDUSTRY!

WTF is committed to engineering and manufacturing the best, strongest, most durable concrete forming systems available in the marketplace. The key to our success and your satisfaction is our strict adherence to a basic business principle: Products are designed and built to fit your needs.

Minimal Maintenance

With minimal maintenance, it is not unusual for a contractor to get 1,000, 2,000 or as many as 3,000 uses with the WTF concrete form.



Longevity

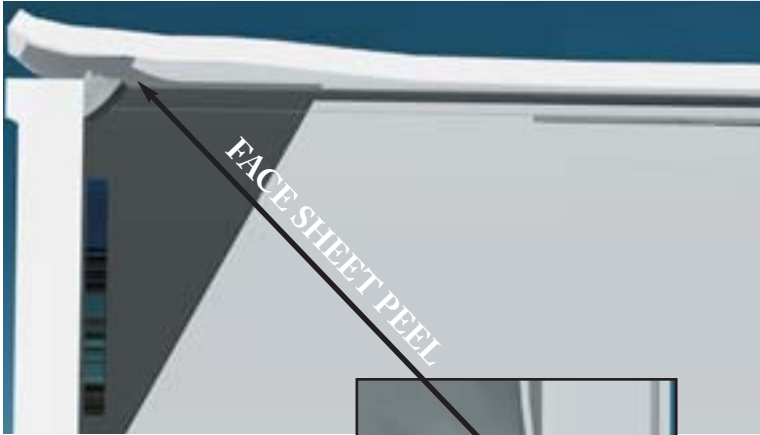
The increased longevity of our forms was accomplished by examining the weaknesses of other form systems and making them our strengths. WTF founders repaired many forms and discovered four common weaknesses. We then designed our forms to improve or solve those weaknesses. When looking at concrete form systems, there are four areas to evaluate before making your form purchase decision:

Face Sheet Protection	Weld Life
Bushing Strength	Bracing Construction

The following several pages is a glimpse of how we took others' weaknesses and made them our strengths.

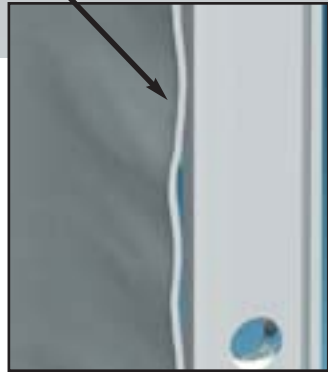


FACE SHEET PROTECTION



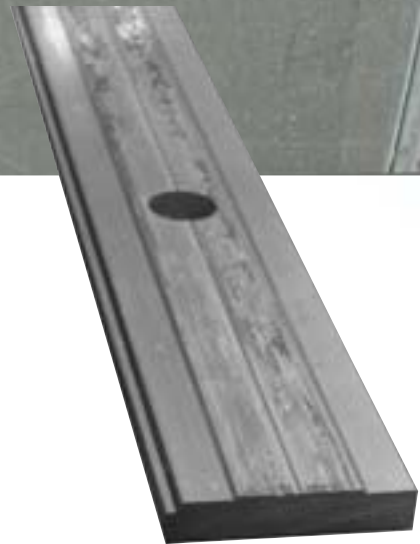
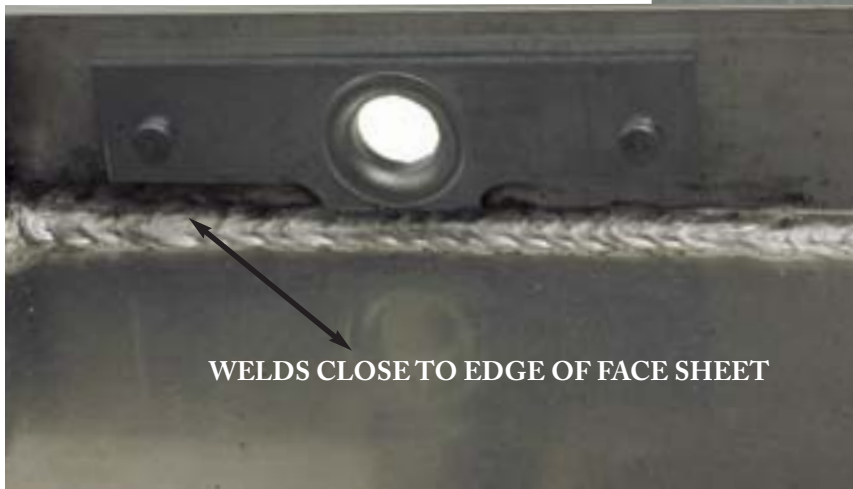
Face sheet protection is a critical area in determining life of the concrete form. Face sheet peel is a common problem because many manufacturers simply overlap the siderail with the face sheet. Over time the face sheet with a thickness of .090 to .125 will pull away from the siderail adversely affecting the concrete wall appearance and ultimately decreasing form life.

WTF solved this problem by inventing the Inset Face Sheet. Because the face sheet is inset, it is not only protected by the siderail and endbar, but the weld is also much closer to the face sheet edge. This innovation provides for a much stronger concrete form.



WTF Total Perimeter Inset Method:

- ~ Ensures stronger bond with welds closer to the edge of face sheet
- ~ Prevents damage and wear to edges
- ~ Provides uniform wall appearance



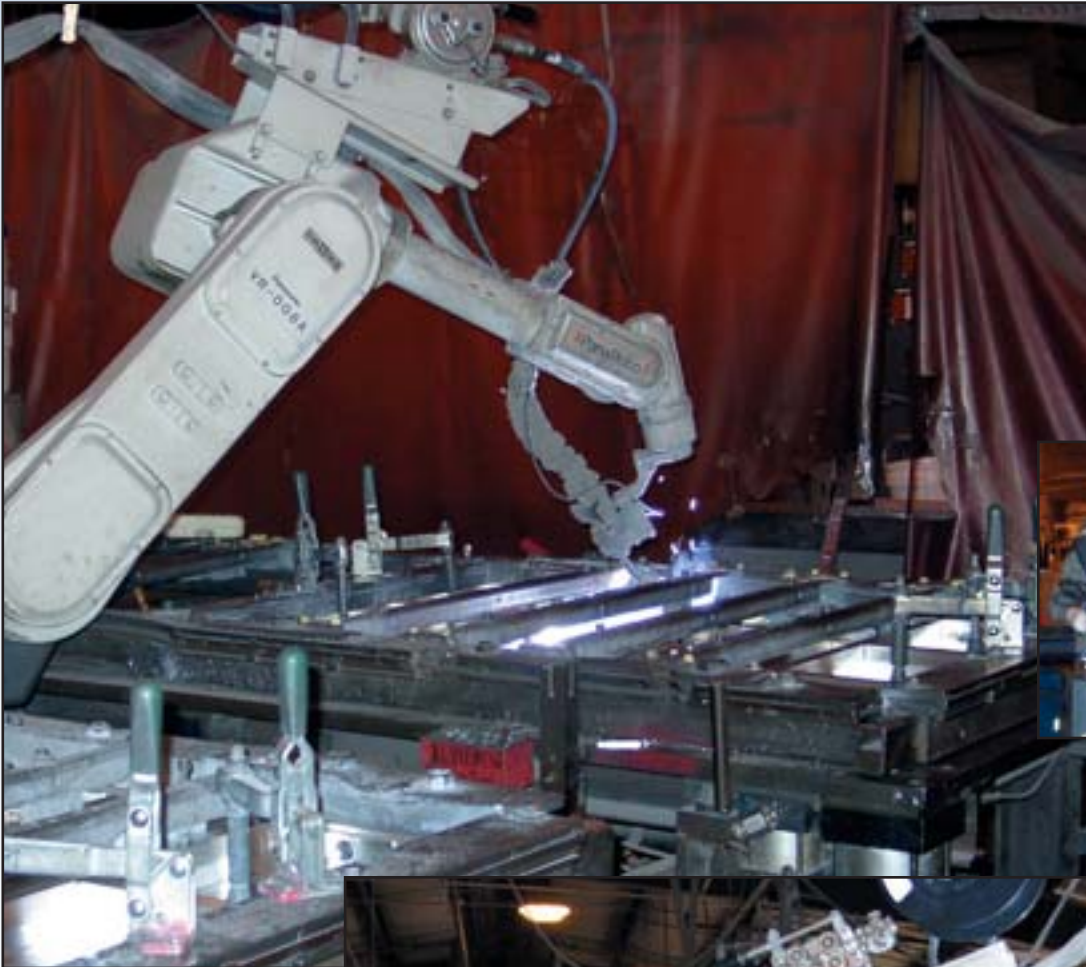
THICKENED ENDBAR

Unique feature of WTF forms is the endbar design that allows standard pin and wedge to tighten when stacking concrete forms.



WELD LIFE

WTF has extended the life of welds by using a state-of-the-art robotics welding system on full panels. These panels receive the most concrete placement pressure. A soft alloy weld wire is utilized in the weld process. This ensures greater flexibility without sacrificing strength when the concrete form is in use. This greatly reduces, if not eliminates, broken welds.



~ Hand welds tested for quality assurance

~ Robotics ensure quality and consistency

~ Continuous welds around perimeter provide longer concrete form life

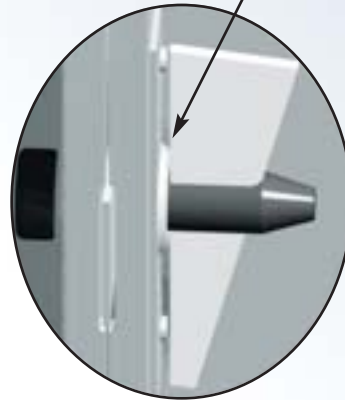


BUSHING STRENGTH

Bushings are a crucial area to take into consideration when purchasing concrete forms. The bushing protects the siderail pinhole from wear and tear. Bushing failure is expensive to repair and will greatly reduce the life of an aluminum form. The WTF design has been in place since 1979 and has not been changed, because it works under normal conditions.

Wall-Ties uses a 4¾" case hardened, plated and crowned steel bushing. The bushing is made of solid steel and is installed using ¼" heavy duty rivets. We have the largest rivet used in the industry. Rivets are countersunk for ease of cleaning the siderail. We guarantee our bushings to last as long as, or longer than, the form.

- ~ 4¾" steel bushing allows pressure to be distributed
- ~ Bushings contain medium carbon steel and are heat treated which increases tensile strength thus reducing "egg-shaping" the pinhole, cracking the siderail and ultimately siderail failure
- ~ ¼" solid steel plated rivets to ensure a secure hold



Crowned bushing makes it easier to tighten and loosen wedge since it only contacts in two places.



WTF RIVETS

- ~ ¼" solid steel plated rivets ensure long life of the bushing
- ~ Rivets are countersunk for ease of siderail cleaning

EXTRUDED ALUMINUM SIDERAILS

- ~ Notched for inset face sheet
- ~ Dual contact
- ~ Easily cleaned



Countersunk rivets for ease of siderail cleaning.

SHOE BUSHING

WTF utilizes a shoe bushing on all extruded fillers (12" and smaller). This feature is also available on all larger panels by request. WTF employs a "roll over" method of shoe bushing placement.

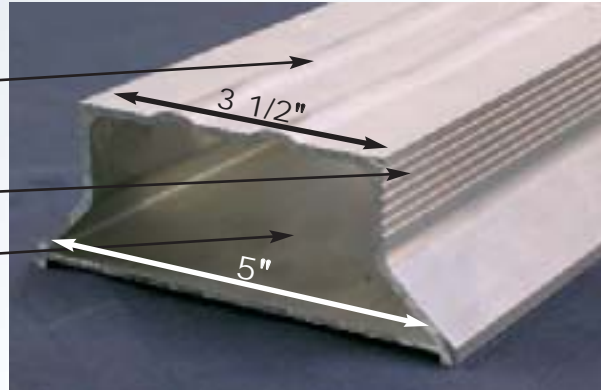


BRACING CONSTRUCTION

Bracing construction is extremely important to avoid weight gain through concrete accumulation under the horizontal brace. Concrete accumulation can occur when there is an open hat section. Weight gain shortens form life and increases the likelihood of back injuries. By enclosing the hat section, WTF ensures no accumulation of concrete, subsequently, no weight gain. WTF braces are serrated to simplify carrying and using of the concrete forms.

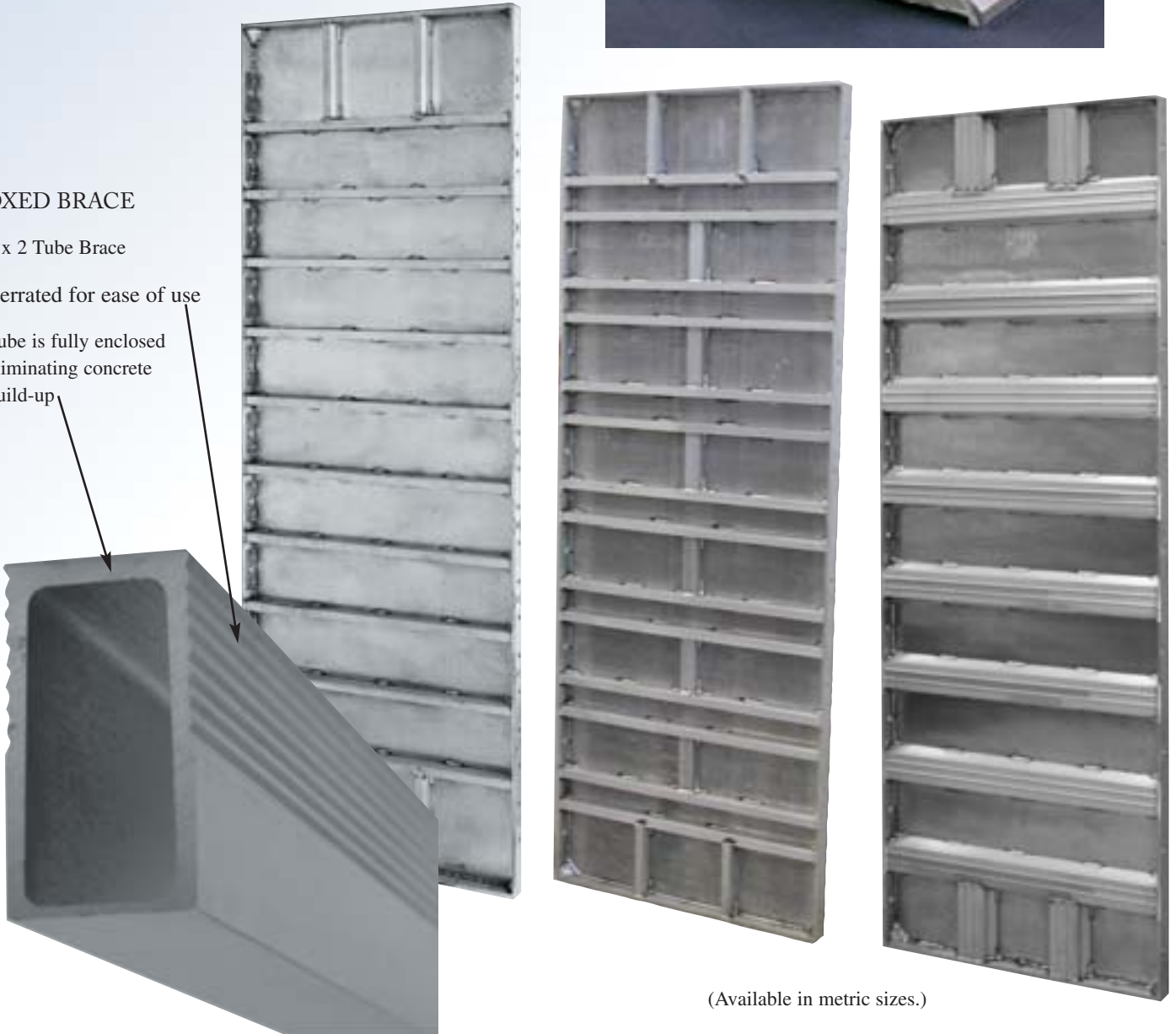
5" CHANNEL BRACE

- ~ Aluminum tube to control deflection, "ridges" on bracing provide additional strength and dent resistance
- ~ Serrated for ease of use
- ~ 5" fully enclosed brace, eliminates concrete accumulation inside the brace



BOXED BRACE

- ~ 1 x 2 Tube Brace
- ~ Serrated for ease of use
- ~ Tube is fully enclosed eliminating concrete build-up



(Available in metric sizes.)



STANDARD AND SPECIALTY CONCRETE FORMS

8-8 / 8-24

This hole pattern makes the 8-8 / 8-24 ideal in markets converting from block to poured walls. This allows the contractor to easily accomplish 8" jumps.

~ Widths from 36" - 1"

~ Heights up to 120"

~ Standard face sheet thickness .125

~ Also available in .115

~ Brace is 1 x 2 tube

~ 36" x 96", .125 thickness weighs 84#

~ 36" x 108", .125 thickness weighs 90#

7" spacing between horizontal braces

TOTAL PERIMETER INSET FACE SHEET

- * Prevents damage and wear to face sheet edges.
- * Superior weld penetration achieved by placing weld near the edge of the face sheet.
- * Increases overall strength and life of panel without leaving unsightly seams.
- * Corner gussets added to reinforce corner.

BRACING

- * "Boxed" design makes it impossible for concrete to enter and accumulate inside brace.
- * Ends are welded on sides and tops to strengthen the form and ensure concrete cannot enter brace.
- * Extruded Braces are serrated to prevent slipping and aid in handling, yet will not accumulate concrete.



SIDERAIL

- * Heavy duty extruded aluminum extends life of panel.
- * Dual contact for ease of alignment.
- * Notch for inset face sheet strengthens panel.

BUSHINGS



- * Heat-treated and plated bushings are held in place by heavy duty 1/4 inch solid steel plated rivets.
- * Crowned bushing allows for easy release of wedges.
- * Bushings increase strength of siderail, not weaken it like swedged bushings.
- * Rivets are flush with siderail to reduce accumulation of concrete and make cleaning easier.

WELDING

- * Continuous weld around concrete form, including over top of bracing.
- * Full panels are welded with computerized Robot to ensure consistency and quality.
- * Certified Quality Control Program.

THICKENED ENDBAR

- * Unique feature of WTF forms is the endbar design that allows standard pin and wedge to tighten when stacking concrete forms.

(Available in metric sizes.)



8-8 / 8-24 CONCRETE FORMS

9

6-12

The 6/12 hole pattern allows the contractor to easily accomplish 12" jumps.

~ Available in widths from 36" - 1" and heights up to 120"

~ Standard face sheet thickness .125

~ Also available in .115

~ 36" x 96", .125 thickness weighs 93#

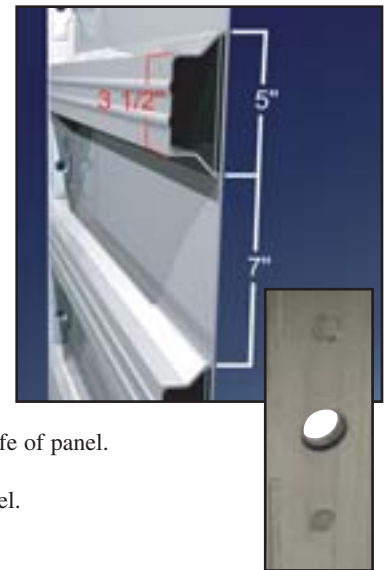
~ 36" x 108", .125 thickness weighs 102#

TOTAL PERIMETER INSET FACE SHEET

- * Prevents damage and wear to face sheet edges.
- * Superior weld penetration achieved by placing weld near the edge of the face sheet.
- * Increases overall strength and life of panel without leaving unsightly seams.
- * Corner gussets added to reinforce corner.

BRACING

- * 5" fully enclosed brace design makes it impossible for concrete to enter and accumulate inside brace.
- * Ends are welded on sides and tops to strengthen the form and ensure concrete cannot enter brace.
- * Extruded Braces are serrated to prevent slipping and aid in handling, yet will not accumulate concrete.
- * Two convexed "ridges" on bracing provide additional strength and dent resistance.



SIDERAIL

- * Heavy duty extruded aluminum extends life of panel.
- * Dual point contact for ease of alignment.
- * Notch for inset face sheet strengthens panel.

BUSHINGS

- * Heat-treated and plated bushings are held in place by heavy duty 1/4 inch solid steel plated rivets.
- * Crowned bushing allows for easy release of wedges.
- * Bushings increase strength of siderail, not weaken it like swedged bushings.
- * Rivets are countersunk into siderail to reduce accumulation of concrete and make cleaning easier.

WELDING

- * Continuous weld around form, including over top of bracing.
- * Full panels are welded with computerized Robot to ensure consistency and quality.
- * Certified Quality Control Program.

THICKENED ENDBAR

- * Unique feature of WTF forms is the endbar design that allows standard pin and wedge to tighten when stacking concrete forms.

(Available in metric sizes.)



6-12 DOUBLE BRACING

Every Panel is Built to Last...

In addition to the 6-12 we offer 6-12 Double Bracing. This upgrade is constructed with a double 1 x 2 tube providing less weight, easier handling and more nailing area. This concrete form has the durability for any project residential or light commercial.

- ~ Widths from 36" - 110"
- ~ Heights up to 120"
- ~ 1 x 2 Tube Brace
- ~ Standard face sheet thickness .125
- ~ Also available in .115
- ~ 36" x 96", .125 thickness weighs 91#
- ~ 36" x 108", .125 thickness weighs 100#



7" spacing between horizontal braces

TOTAL PERIMETER INSET FACE SHEET

- * Prevents damage and wear to face sheet edges.
- * Superior weld penetration achieved by placing weld near the edge of the face sheet.
- * Increases overall strength and life of panel without leaving unsightly seams.
- * Corner gussets added to reinforce corner.



BRACING

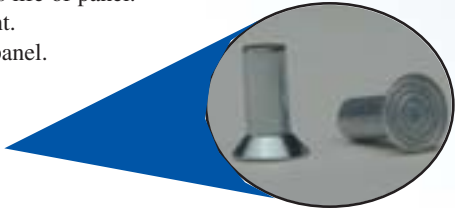
- * "Boxed" design makes it impossible for concrete to enter and accumulate inside brace.
- * Ends are welded on sides and tops to strengthen the form and ensure concrete cannot enter brace.
- * Extruded Braces are serrated to prevent slipping and aid in handling, yet will not accumulate concrete. Includes vertical brace.

SIDERAIL

- * Heavy duty extruded aluminum extends life of panel.
- * Dual point contact for ease of alignment.
- * Notch for inset face sheet strengthens panel.

BUSHINGS

- * Heat-treated and plated bushings are held in place by heavy duty 1/4 inch solid steel plated rivets.
- * Crowned bushing allows for easy release of wedges.
- * Bushings increase strength of siderail, not weaken it like swedged bushings.
- * Rivets are countersunk into siderail to reduce accumulation of concrete and make cleaning easier.



WELDING

- * Continuous weld around form, including over top of bracing.
- * Full panels are welded with computerized Robot to ensure consistency and quality.
- * Certified Quality Control Program.

THICKENED ENDBAR

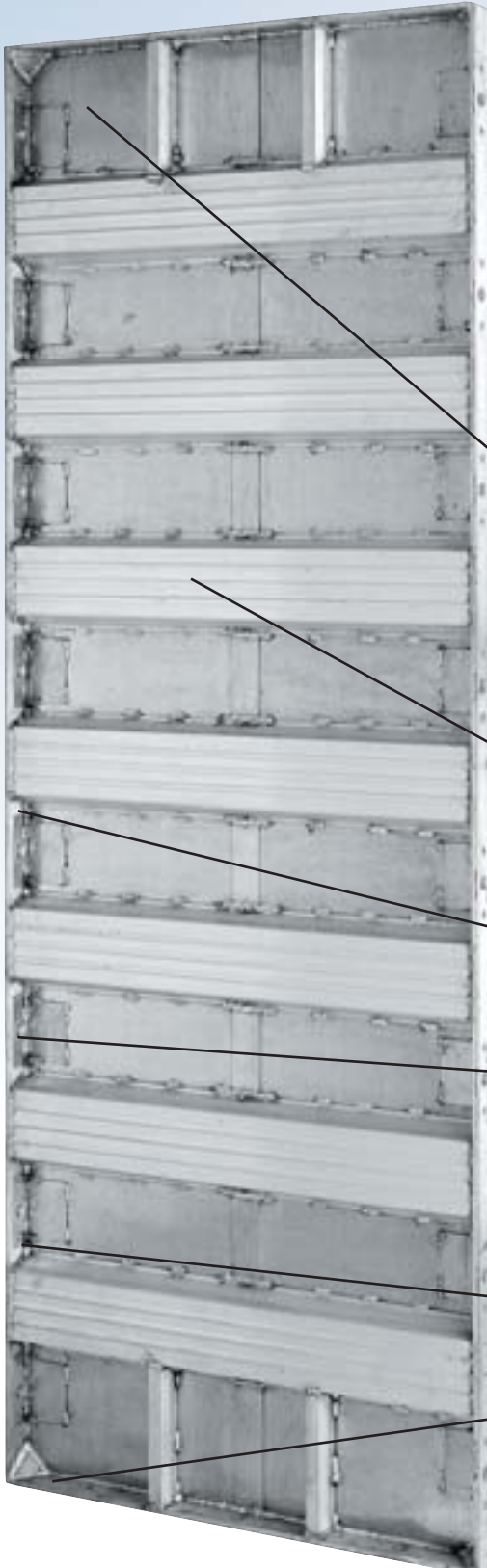
- * Unique feature of WTF forms is the endbar design that allows standard pin and wedge to tighten when stacking concrete forms.

(Available in metric sizes.)





SUPER LIGHT



Is weight an issue with your concrete forms? The Super Light panel is the form for you. Consistent care increases the longevity of this panel.

- Available in:
- ~ 36" x 120" weighs only 90#
 - ~ 36" x 108" weighs only 81#
 - ~ 36" x 96" weighs only 73#

TOTAL PERIMETER INSET FACE SHEET

- * Prevents damage and wear to face sheet edges.
- * Superior weld penetration achieved by placing weld near the edge of the face sheet.
- * Increases overall strength and life of panel without leaving unsightly seams.
- * Corner gussets added to reinforce corner.
- * Striker pads for protection of .094 face sheet.



BRACING

- * Ends are welded on sides and tops to strengthen the form and ensure concrete cannot enter brace.
- * Three convexed "ridges" on bracing provide additional strength and dent resistance.
- * Backbone added for reduction in pillowcasing.

SIDERAIL

- * Heavy duty extruded aluminum extends life of panel.
- * Dual point contact for ease of alignment.
- * Notch for inset face sheet strengthens panel.



BUSHINGS

- * Heat-treated and plated bushings are held in place by heavy duty 1/4 inch solid steel plated rivets.
- * Crowned bushing allows for easy release of wedges.
- * Bushings increase strength of siderail, not weaken it like swedged bushings.
- * Rivets are countersunk into siderail to reduce accumulation of concrete and make cleaning easier.

WELDING

- * Continuous weld around form, including over top of bracing.
- * Certified Quality Control Program.

THICKENED ENDBAR

- * Unique feature of WTF forms is the endbar design that allows standard pin and wedge to tighten when stacking concrete forms.

(Available in metric sizes.)



COMMERCIAL FORM

Accurate, Reliable...

Because this concrete form is engineered for minimal deflection and pillowcasing, it is ideal for commercial applications requiring the flattest possible wall surface. This is accomplished by manufacturing the form 24" wide with a .156 face sheet. This form is built with the 8-8 or 6-12 hole pattern. The Commercial Form is used in the SecureTech Building System.

- ~ Width 24" ~ Heights up to 144" ~ 1 x 2 Tube Brace
- ~ Face sheet .156 - thickest aluminum face sheet available in the industry
- also available with .125 face sheet
- ~ 24" X 96" weighs 64# ~ 24" x 108" weighs 71#
(Available in metric sizes)

TOTAL PERIMETER INSET FACE SHEET

- * Prevents damage and wear to face sheet edges.
- * Superior weld penetration achieved by placing weld near the edge of the face sheet.
- * Increases overall strength and life of panel without leaving unsightly seams.
- * Corner gussets added to reinforce corner.

BRACING

- * "Boxed" design makes it impossible for concrete to enter and accumulate inside brace.
- * Ends are welded on sides and tops to strengthen the form and ensure concrete cannot enter brace.
- * Extruded Braces are serrated to prevent slipping and aid in handling, yet will not accumulate concrete.



SIDERAIL

- * Heavy duty extruded aluminum extends life of panel.
- * Dual point contact for ease of alignment.
- * Notch for inset face sheet strengthens panel.

BUSHINGS



- * Heat-treated and plated bushings are held in place by heavy duty 1/4 inch solid steel plated rivets.
- * Crowned bushing allows for easy release of wedges.
- * Bushings increase strength of siderail, not weaken it like swedged bushings.
- * Rivets are countersunk into siderail to reduce accumulation of concrete and make cleaning easier.

WELDING

- * Continuous weld around form, including over top of bracing.
- * Full panels are welded with computerized Robot to ensure consistency and quality.
- * Certified Quality Control Program.

THICKENED ENDBAR

- * Unique feature of WTF forms is the endbar design that allows standard pin and wedge to tighten when stacking concrete forms.



INTERNATIONAL HOUSING FORM

Having been involved in several international mass housing projects, we know first-hand the fast and rigorous pace of these projects. This form is built with 20cm or 15-30cm hole patterns. Evolving from these experiences is the best concrete forming system available today.

- ~ Standard Width 60cm
- ~ Face sheet 4mm - used on all standard wall panels
- ~ 60cm x 2.40m weighs 29.1 kg
- ~ 60cm x 2.70m weighs 32.3 kg
- ~ 25mm x 48mm Tube Brace

Special sizes and shapes available!

TOTAL PERIMETER INSET FACE SHEET

- * Prevents damage and wear to face sheet edges.
- * Superior weld penetration achieved by placing weld near the edge of the face sheet.
- * Increases overall strength and life of panel without leaving unsightly seams.
- * Backbone added for reduction in pillowcasing.
- * Corner gussets added to reinforce corner.
- * 4mm aluminum face sheet.



BRACING

- * Ends are welded on sides and tops to strengthen the form and ensure concrete cannot enter brace.
- * Three convexed "ridges" on bracing provide additional strength.

SIDERAIL

- * Heavy duty extruded aluminum extends life of panel.
- * Dual point contact for ease of alignment.
- * Notch for inset face sheet strengthens panel.
- * 20cm hole spacing.



BUSHINGS

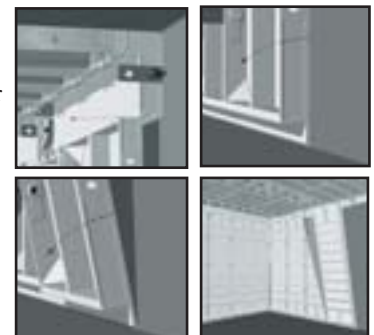
- * Heat-treated and plated bushings are held in place by heavy duty 1/4 inch solid steel plated rivets.
- * Crowned bushing allows for easy release of wedges.
- * Bushings increase strength of siderail, not weaken it like swedged bushings.
- * Rivets are countersunk into siderail to reduce accumulation of concrete and make cleaning easier.

WELDING

- * Continuous weld around form, including over top of bracing.
- * Certified Quality Control Program.

THICKENED ENDBAR

- * Unique feature of WTF forms is the endbar design that allows standard pin and wedge to tighten when stacking concrete forms.

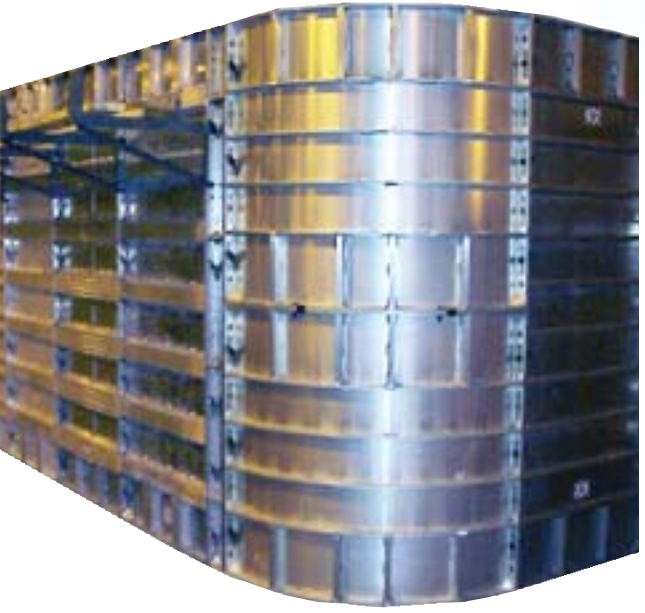


Available with the stripping angle when utilized with poured deck applications. The stripping angle is for ease of concrete form removal.



RADIUS FORMS

Easily stacked to obtain desired wall height and can be purchased in multiple piece corner sets. Available in heights of 12", 24", 36" and 48".



A 90° turn with a 6", 24", 36", or 48" radius produces a more decorative appearance than a standard 90° corner.



Our radius forms are also available in smooth, textured and VertiBrick patterns.



BRICKS

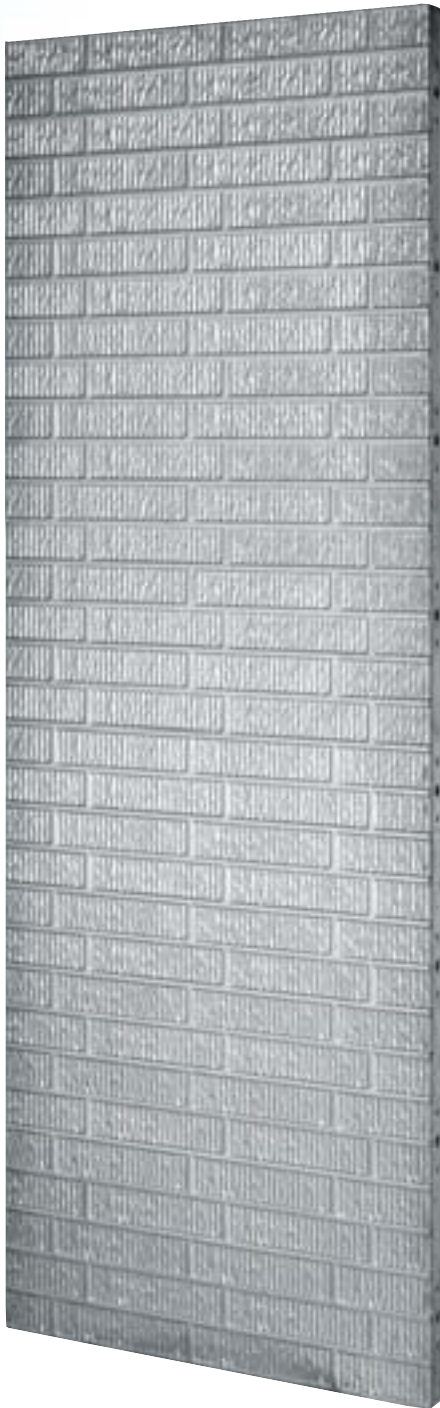
SMOOTH



TEXTURED



VERTIBRICK



Designed For Those Who Want More Choices

Looks like brick...Feels like brick... WTF's natural "brick-look" concrete forms leave a lasting impression. Residential or commercial applications can easily be painted or two-toned for a decorative look. Forms are compatible to pouring brick on one side and smooth on the other.

Smooth Brick, Textured Brick and VertiBrick

All our brick concrete forms give you a deep brick design providing a realistic finished look.

~ Width 36" - 1"

~ Heights up to 108"

~ Available in any hole pattern

6-12

8-8

8-24

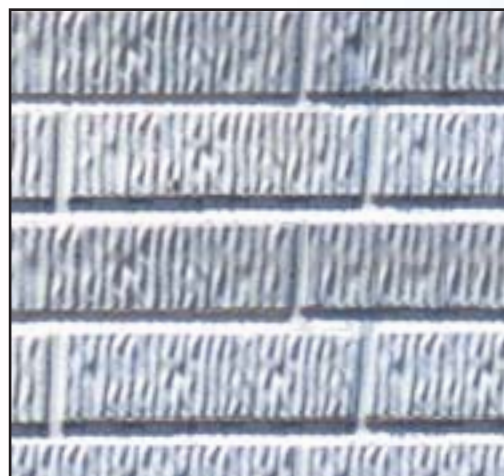
~ VertiBrick is also available in metric sizes



SMOOTH BRICK



TEXTURED BRICK



VERTIBRICK

BRACING

- * "Boxed" design makes it impossible for concrete to enter and accumulate inside brace.
- * Ends are welded on sides and tops to strengthen the form and ensure concrete can not enter brace.

SIDERAIL

- * Heavy duty extruded aluminum extends life of panel.
- * Exposed corners are mitered to reduce the accumulation of concrete.

BUSHINGS

- * Heat-treated and plated bushings are held in place by heavy duty ¼ inch solid steel plated rivets.
- * Crowned bushing allows for easy release of wedges.
- * Bushings increase strength of siderail, not weaken it like swedged bushings.
- * Rivets are countersunk into siderail to reduce accumulation of concrete and make cleaning easier.

WELDING

- * Continuous weld around form, over top of bracing.
- * Certified Quality Control Program.



GANG ADAPTER

(Patent #6,523,323)

- ~ 6" wide and less than 5 1/2" deep when fully assembled.
- ~ Has a permanent waler built into the top and bottom of the system.
- ~ Uses a tapered reusable cone with a rod tie.
- ~ Available in Smooth, Smooth Brick, Textured Brick and Vertibrick.
- ~ Attached wall braces, rod ties, and scaffold brackets are stored on the concrete form.
- ~ Simple system assembly.
- ~ 6-12 and 8-24 hole pattern included in the siderail to allow for use of fillers and corners.
- ~ Uses only 2 ties up to 10' tall. The ties are spaced on 42" intervals vertically.
- ~ Dry tie available for top of form on 10' and taller walls.
- ~ Weighs less than 7 lbs. per square foot fully assembled.

The WTF Gang Adapter enables a contractor to create gangs utilizing 36" wide concrete forms.



The WTF Gang Adapter allows contractors to easily gang concrete forms together. The system can be used for 8', 9' and 10' walls and requires only two ties at the gang adapter.

The Gang Adapter allows contractors to easily transition to handset panels by using the standard pin and wedge.





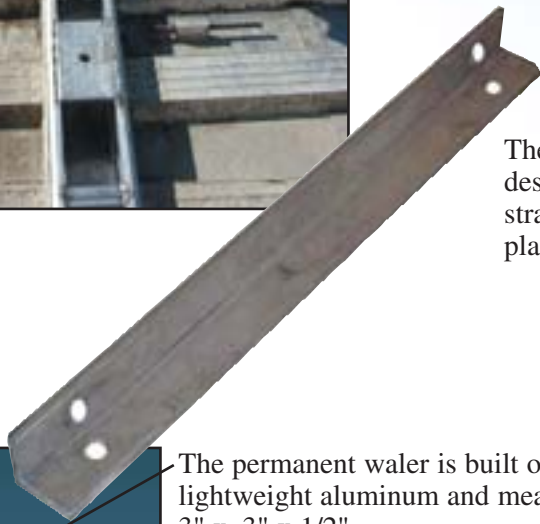
Assembly of the system is very simple, requiring few tools. The adapters are attached to the wall panels using locking nuts and bolts provided by WTF.

An 8" bolt is used to attach the gang adapter to forms on both sides.

A 2" bolt is provided for attachment of a single form at the end of the gang.



The Aligner Waler Angle - this piece is made to match desired gang lengths and is used to ensure the system is straight. The Gang Adapter allows the Waler Angle to be placed at the top and the bottom of the concrete form.



The permanent waler is built of lightweight aluminum and measures 3" x 3" x 1/2".



Once assembled the gang weighs less than 7 lbs. per square foot.



Scaffold brackets attach easily and require no loose hardware. Various types and sizes are available.



BIG PANEL

Amazingly Large, Fast Forming...

Just as its name implies, these concrete forms are built large. The WTF Big Panel is ideal for repetitive tall wall construction -

Available in:

- ~ 8' x 8'
- ~ 8' x 9'
- ~ 8' x 10' plus various size fillers and corners
- ~ Face Sheet thickness of .156 to provide flat walls
- ~ Weighs 7 lbs per square foot including all accessories and bracing
- ~ Panels are only 4 3/4" deep



Side Rail allows for the attachment of WTF handset forms using a standard Pin and Wedge.



- ~ Utilizes a one piece outside corner
- ~ Brace and accessories are stored on the form
- ~ Uses a tapered reusable cone with rod tie
- ~ AW Clamp is also a Waler piece



Agricultural project with 2" offset in wall.



Big Panels stacked to achieve a 16' wall on a commercial project.

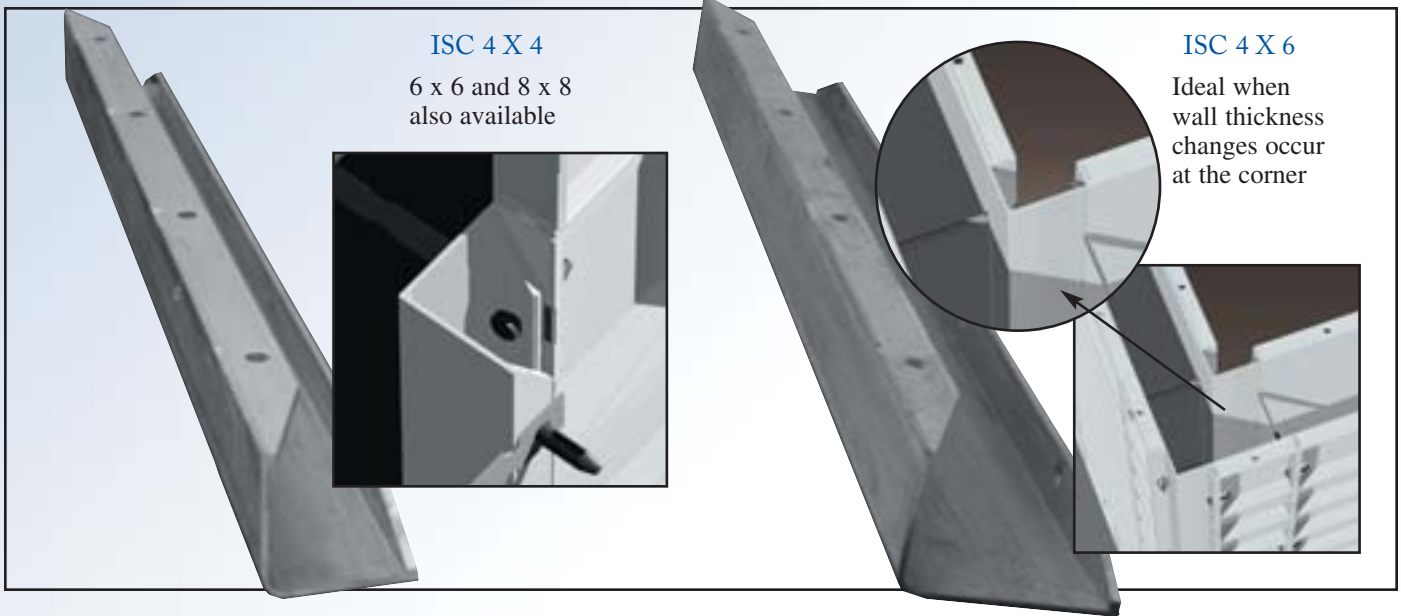


CORNER CONCRETE FORMS

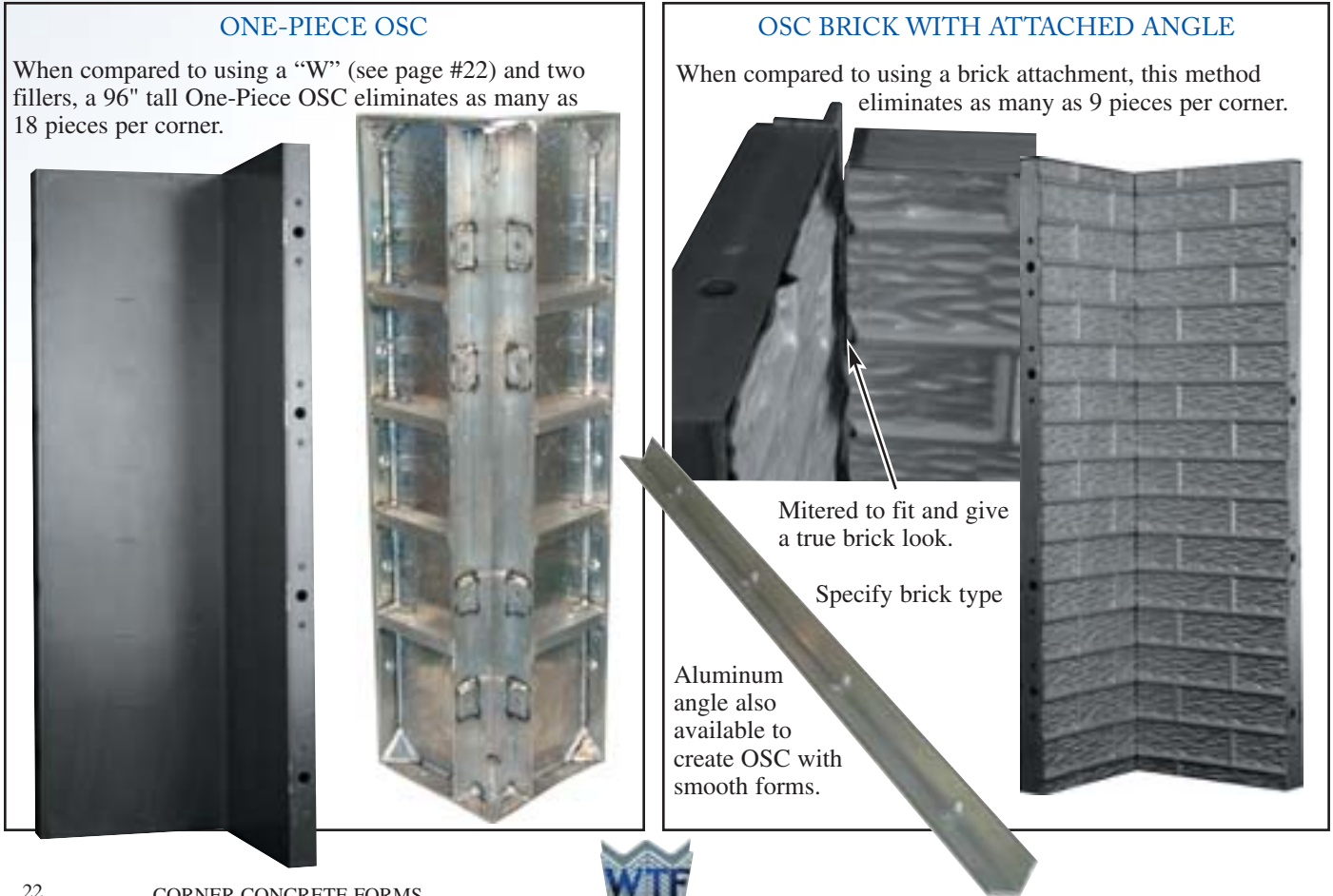
STANDARD CORNERS

- ~ All corners available up to 144"
- ~ All corners available in brick patterns
- ~ Specify Nominal or Full

INSIDE CORNERS (ISC)



OUTSIDE CORNERS (OSC)



OSC ATTACHMENT ("W")

The OSC Attachment is used to build outside corners using fillers.

Available in smooth and brick concrete forms
 Sizes are 2", 3" and 4"

Different wall thicknesses are easily achieved by utilizing different size fillers or different size attachments to form an OSC.

SPECIALTY CORNERS ~ All corners are available up to 144"
 ~ Specify Nominal or Full

HINGED INSIDE CORNER (HISC)

HINGED OUTSIDE CORNER (HOSC)

The HISC can be used across from standard fillers utilizing the 45° angle clip (see page #51) or the HOSC to create an angled corner for bay window applications.

Different wall thicknesses are easily achieved by utilizing different size fillers for OSC. Change angles by adding fillers.

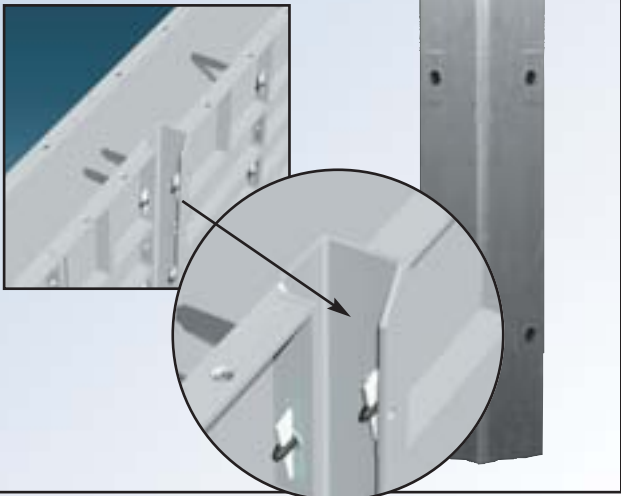
Specify wall thickness

Eliminates as many as 13 pieces per corner when compared to using two fillers and 45° angle clips.



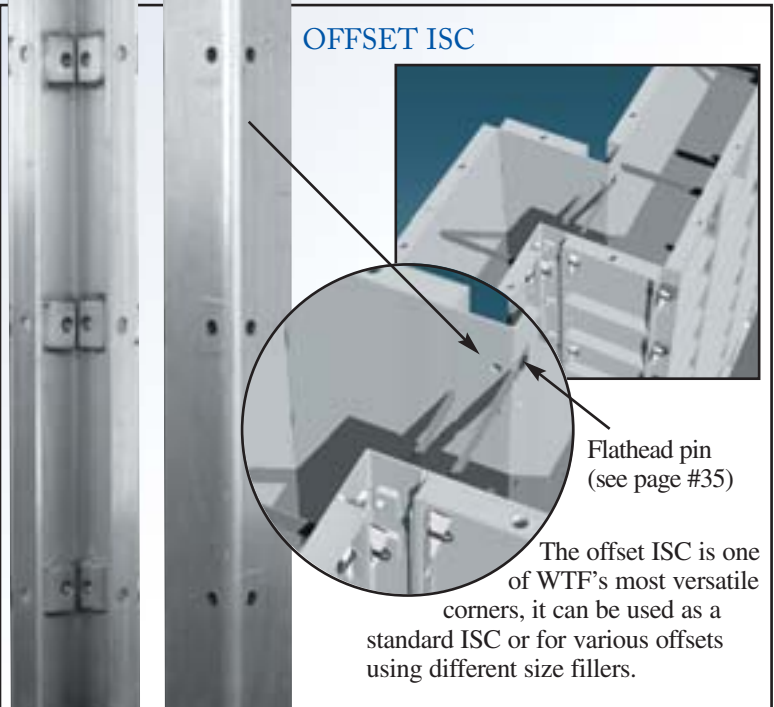
ISC 4 X 4 w/WALL THICKNESS CHANGE OPTION

Face sheet holes allow ISC to be used for 2" wall thickness changes.



This image shows a vertical metal corner piece with four holes on each face. A circular inset provides a close-up view of the corner joint, showing how the piece fits into a concrete formwork corner.

OFFSET ISC



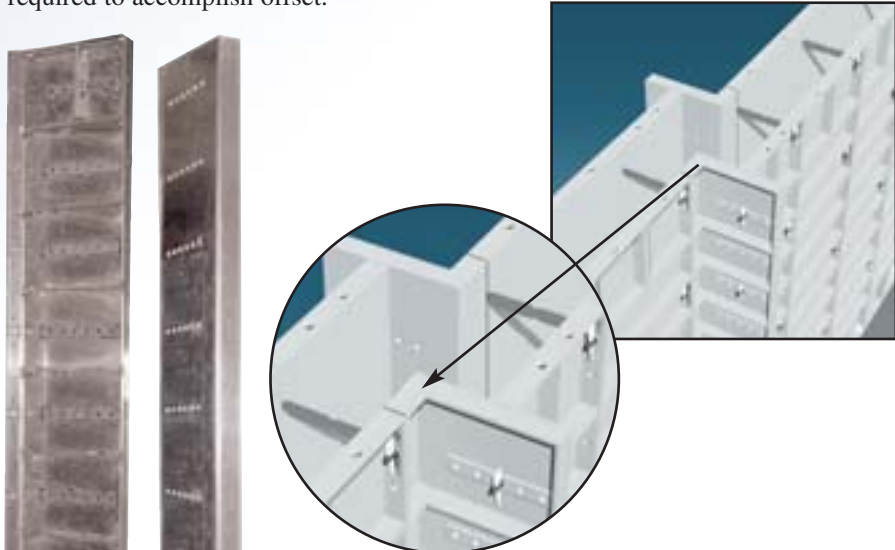
This image shows two vertical metal corner pieces. One is a standard corner, and the other is an offset corner. A circular inset shows a close-up of the offset corner joint, with an arrow pointing to a flathead pin. A text label reads: "Flathead pin (see page #35)". Another inset shows the corner being used in a formwork corner.

The offset ISC is one of WTF's most versatile corners, it can be used as a standard ISC or for various offsets using different size fillers.

ADJUSTABLE OFFSET ISC

ADJUSTABLE OFFSET ISC

Note: The Adjustable Offset is a one piece ISC. One pair required to accomplish offset.




This image shows two vertical metal corner pieces with a textured brick pattern. A circular inset shows a close-up of the corner joint, with an arrow pointing to a flathead pin. Another inset shows the corner being used in a formwork corner.

The Adjustable Offset ISC is used for a variety of different offsets without the need for different sized fillers. Standard offsets are 6"-14" on 2" increments. Also available in smooth and textured brick.

See also Adjustable Pilaster Form (see page #27.)

BRICK ADJUSTABLE OFFSET ISC



This image shows two vertical metal corner pieces with a textured brick pattern. One is a standard corner, and the other is an offset corner.



COLLAPSIBLE CORNER

The Collapsible ISC is ideal for core wall applications. It works well with WTF Gang Adapter, and Big Panel Systems.



Gang Adapter (see page #18-19)
Big Panel Systems (see page #20-21)

DIAGONAL ISC

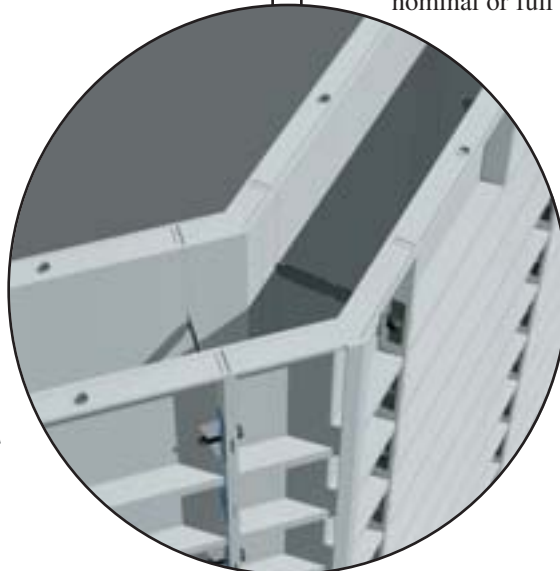
The Diagonal ISC is designed to provide the chamfered corner required in many box culverts and tunnels. This is also used in various Lined Swimming Pool applications. Available in custom sizes.



FIXED 45° ISC



Ideal when you consistently have 45° corners and do not need the added flexibility provided by the HISC (see page #23).



FIXED 45° OSC

Specify wall thickness - nominal or full



Also available in Fixed 30° for ISC and OSC.

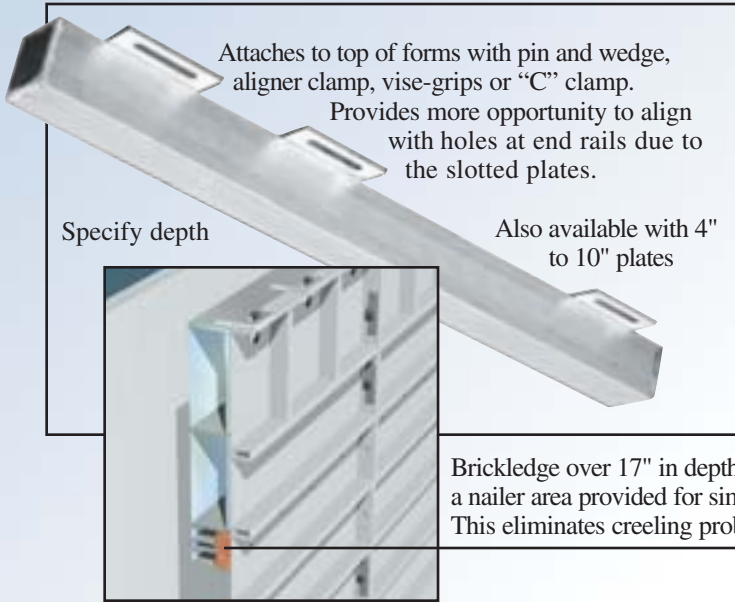


BRICKLEDGE CONCRETE FORMS

Our aluminum brickledge forms are used when adding a brickledge around the outside of a foundation wall.

6" X 6" PLATE BRACKET with 4" SLOT

LUG BRACKET with 1" OBROUND HOLE

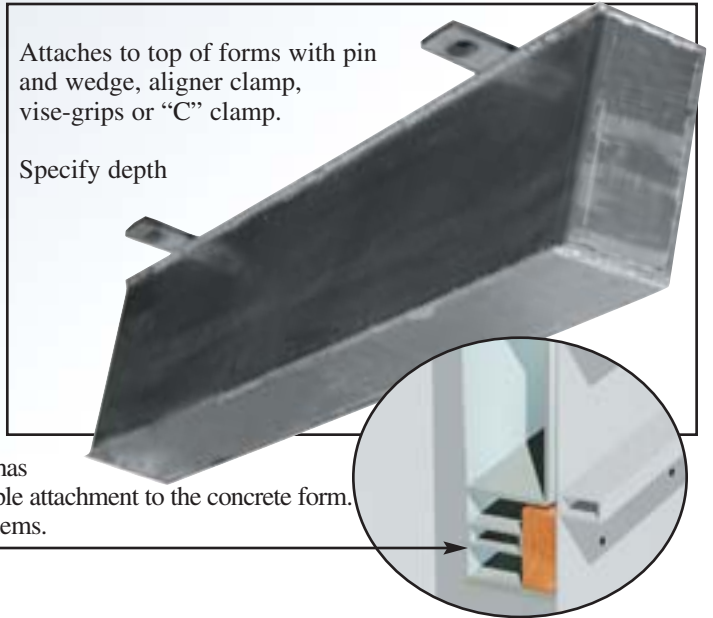


Attaches to top of forms with pin and wedge, aligner clamp, vise-grips or "C" clamp.
Provides more opportunity to align with holes at end rails due to the slotted plates.

Specify depth

Also available with 4" to 10" plates

Brickledge over 17" in depth has a nailer area provided for simple attachment to the concrete form. This eliminates creeling problems.

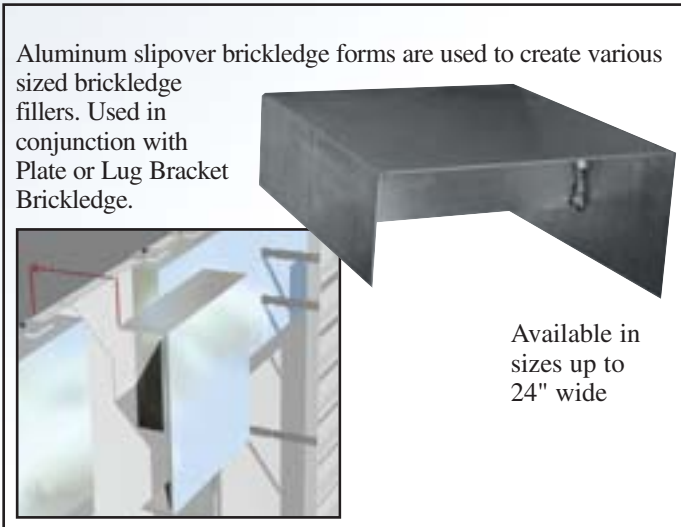


Attaches to top of forms with pin and wedge, aligner clamp, vise-grips or "C" clamp.

Specify depth

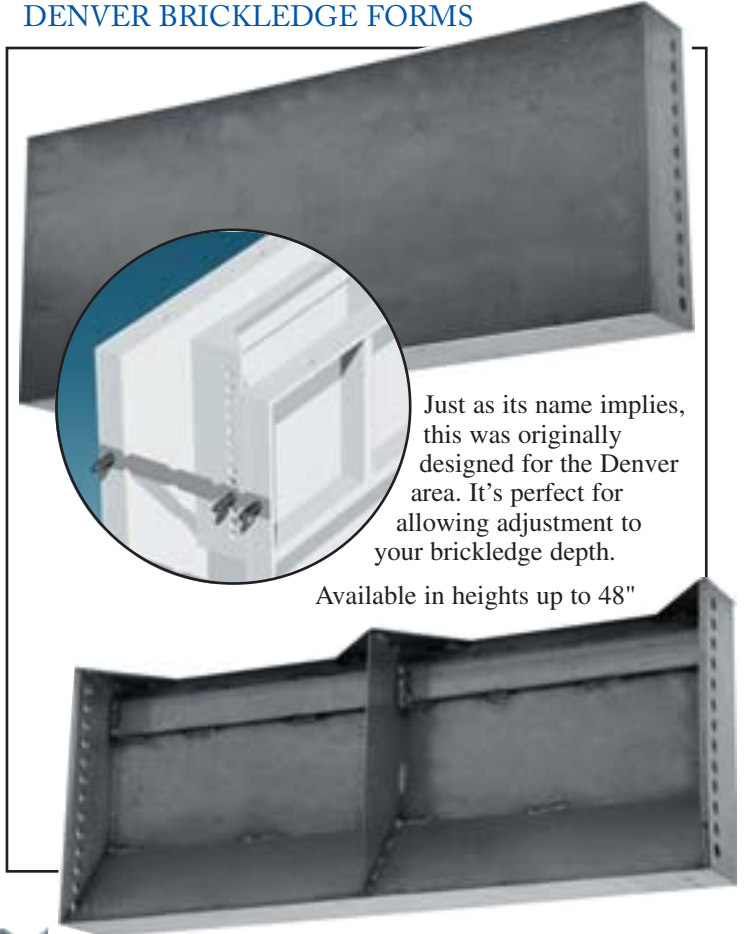
SLIPOVER BRICKLEDGE FORMS

DENVER BRICKLEDGE FORMS



Aluminum slipover brickledge forms are used to create various sized brickledge fillers. Used in conjunction with Plate or Lug Bracket Brickledge.

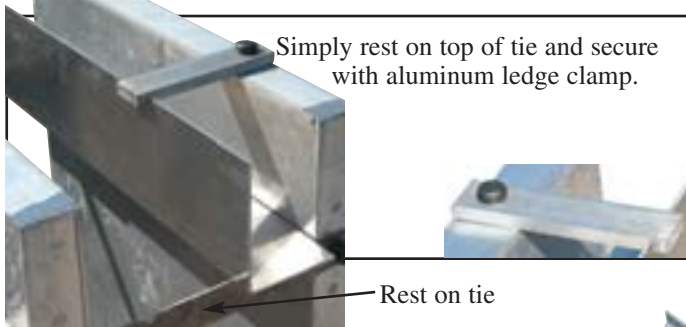
Available in sizes up to 24" wide



Just as its name implies, this was originally designed for the Denver area. It's perfect for allowing adjustment to your brickledge depth.

Available in heights up to 48"

GREEN BAY BRICKLEDGE FORMS



Simply rest on top of tie and secure with aluminum ledge clamp.

Rest on tie



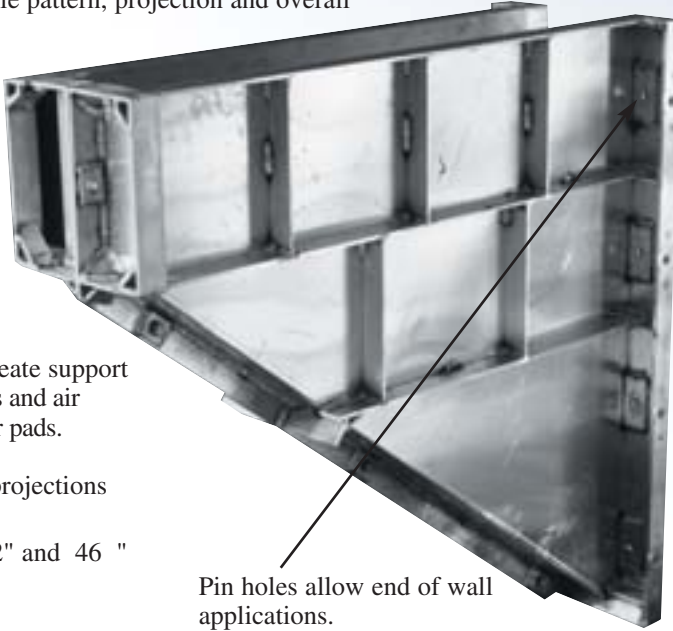
ASSORTED CONCRETE FORMS

STOOP SET

PILASTER FORMS

Stoop set includes 2 arms and 2 stoop bottoms.

Specify hole pattern, projection and overall height.



Used to create support for porches and air conditioner pads.

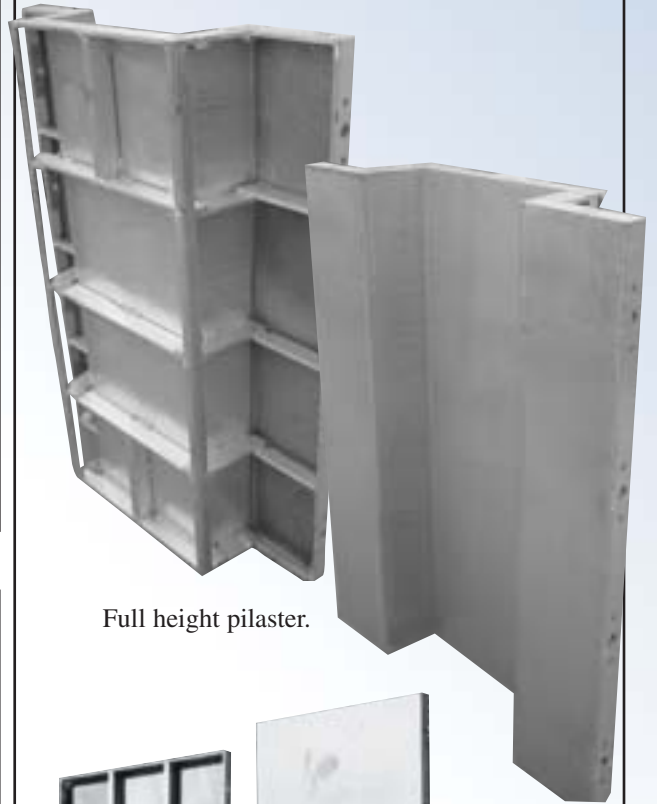
Standard projections available:

22" and 46 "

Pin holes allow end of wall applications.

Used for long wall applications to create additional strength in the concrete wall. Specify hole pattern and pilaster height, width and depth.

FIXED PILASTER FORMS



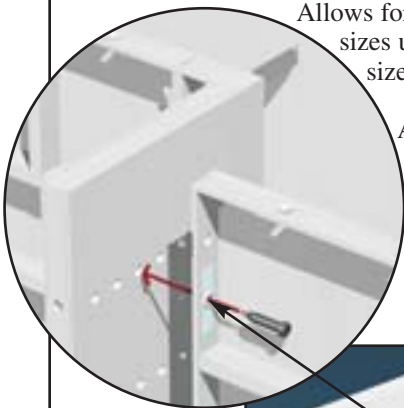
Full height pilaster.

Tapered pilaster.

ADJUSTABLE PILASTER FORMS

Allows for various pilaster sizes utilizing different size fillers.

Also available in brick.



(See also Adjustable Offset ISC Corner page #24)



ROUND COLUMN FORMS

The WTF Round Column Forms are easily stackable to achieve various column heights and nest for simplicity of transportation.

Available in heights from 12" to 120"



Larger sizes available upon request.



Diameter sizes available:
10", 12", 14", 16", 18", 20", 22", 24"



WALL BARRIER FORMS



Wall Barrier Forms built to contractor specifications. The Wall Barrier Forms use Breakback Ties. (see page #40)

LARGE COLUMN FORMS

Large Column Forms built to contractor specifications, while the maximum height is 48" the forms are easily stacked to create the desired height.



Forms for Hollow Column applications also available.

SQUARE ADJUSTABLE COLUMN FORMS

Achieves multiple widths, for both square or rectangular columns.



Available in smooth or brick textured, up to 144" in height.

JUMP FILLERS

These fillers are built with holes on 1" or 2" centers to allow a contractor to easily achieve different elevation changes.

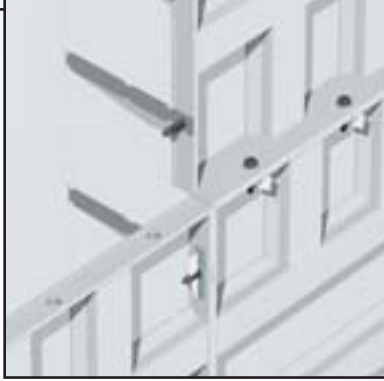
Standard sizes of jump filler:

- 6"
- 8"
- 10"
- 12"

Other sizes available.

Specify hole pattern.

OFFSET ENDBAR PANEL



Commonly used in confinement systems (see page #74).

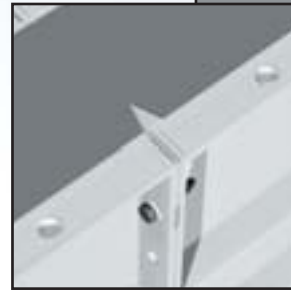


Also available with a 4" offset for brickledge applications.

ALUMINUM CONTROL JOINT

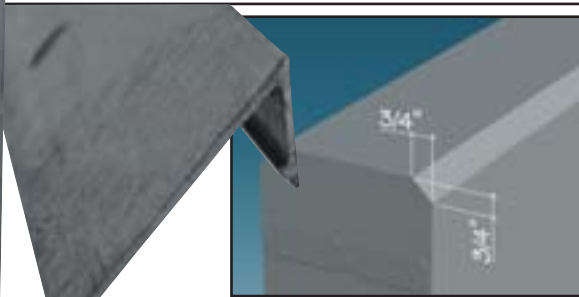
Creates a tapered 1 1/2" x 1" control joint within wall.

Attaches to the WTF form with pins.



Specify hole pattern.

ALUMINUM CHAMFER STRIP

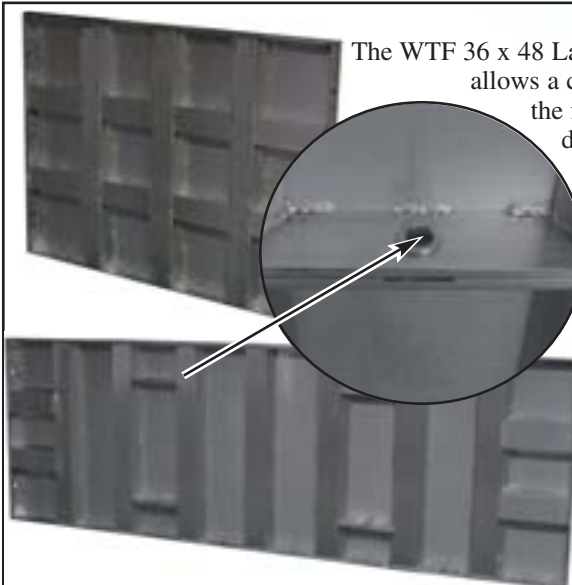


Attaches to the WTF form with flathead pins to create a 3/4" x 3/4" chamfer for top of walls and square columns.



Specify hole pattern.

LAYDOWN FORMS



The WTF 36 x 48 Laydown Panel allows a contractor to lay the form either direction. This form is not designed to be put on the bottom of stacked forms.

In addition WTF manufactures forms with tie slots to allow for laydown applications.

WTF has perfected several methods for laydown application utilizing standard forms (see page #47).



DECK COMPONENTS

LEDGER

STANDARD LEDGER

The ledger handles the transition from wall to deck. Available in 6" x 4" or 8" x 4". Also available in different lengths.



Also available in standard full, nominal.

CROWN MOLD LEDGER

The crown mold ledger provides a decorative crown molding in concrete. Available in 8" x 4" size.



*Both Ledgers utilizes deck slide clamp for attachment. (see page #52)

DROP HEAD DECK BEAM ASSEMBLY

Patent #6,513,785

DECK PANELS

To accommodate overhead usage, deck panels are built with the .115 face sheet to reduce weight, with attached hardware for ease of installation.



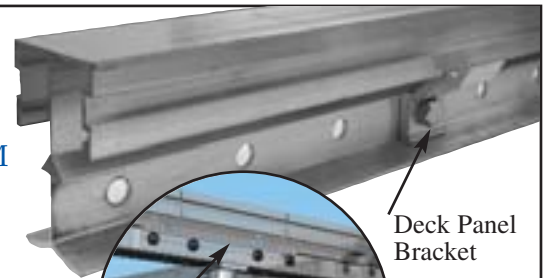
The siderail has a small miter which allows for ease in stripping.



BEAM BAR



BEAM



Deck Panel Bracket

Jack post comes equipped with adjustable screw.



DROP HEAD BEAM / DROP HEAD JACK POST

STEEL HEAD / BEAM SUPPORT



Accepts 4 x 4 aluminum beam or wood for additional deck support.



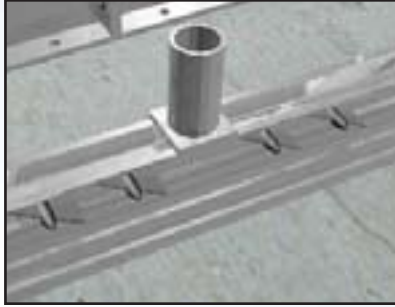
DECK ASSEMBLY

The Deck Assembly is designed for the most efficient cycling of the forming system once structure achieves minimum design strength.

The drop head, beam bars, and beams are assembled using standard pins and wedges.



Deck beam fully assembled.



The jack posts are put into place.



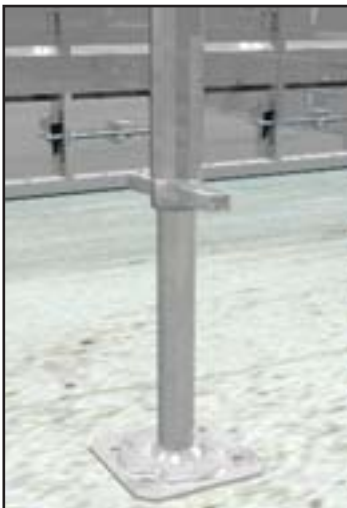
The Drop Head Deck Beam Assembly is then lifted and put into the desired location.



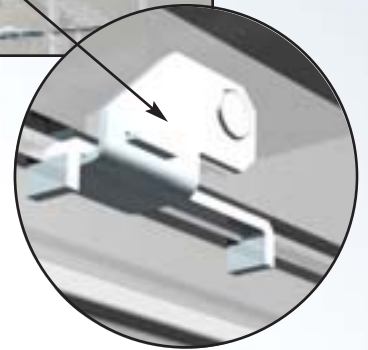
The first deck panel is connected to the deck beam assembly and ledger utilizing the deck slide clamp.



An adjustable screw is provided to allow for any adjustments needed in the deck.



This process is continued until all deck panels are in place.



Deck Slide Clamp
(see page #52)

Once the concrete is placed and at minimum required strength, the deck beam assembly and deck panels can be disassembled, leaving the drop head in place for the required time.



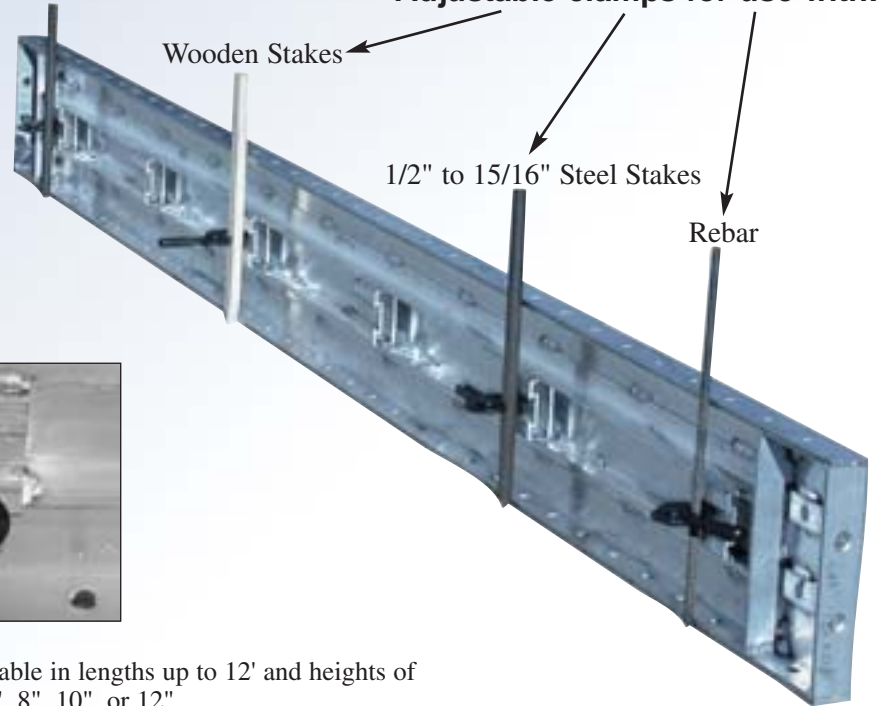
MONOLITHIC SLAB FORMS

The versatile concrete slab form is made of lightweight high strength aluminum. This allows for a long lasting, easily portable form that is simple to assemble. In slab uses, a simple windmill method is used to create outside corners. Inside and outside corner forms are available for more complex slab applications as well as footing uses. Also available in brick patterns.

Adjustable Camlock



Adjustable clamps for use with:



Available in lengths up to 12' and heights of 4", 6", 8", 10", or 12".



MONOLITHIC SLAB/STEMWALL FORMS

Commonly used:

1. In areas of slab construction with high water tables.
2. Slabs with garage elevation changes.
3. When stemwalls are used for tunnel form alignment.



Concrete Forms Products and Accessories

Table of Contents

Products and Accessories	33-66
Standard Pin and Wedges	34
Standard Pin	34
Straight Wedge	34
Curved Wedge	34
Specialty Pins	35
Flathead Pin	35
Filler Pins	35
Pax Pin	35
Curved Pin	35
Attached Hardware	36
Long Away Pin	36
Short Away Pin	36
Short Against Pin	36
Waler Brackets	37-39
Steel Walers	37
Adjustable Steel Waler	37
Locking Waler with Pin	38
Vertical Stiffener	38
Aluminum Waler	38
Vertical Waler	38
Aluminum Waler Board	39
Scfld Brkt/Waler Combo	39
Standard Wall Ties	40-45
Two Hole Ties	40
Three Hole Ties	40
Four Hole Comb. Ties	40
Round End Ties	40
Breakback Ties	40
Tie Placement Charts	41-45
Specialty Wall Ties	46
Reusable Alum. Bar Ties	46
Reusable Wall Ties	46
Concrete Housing Ties	46
Laydown Applications	47
Flat Steel U-Ties	47
Wire Base Ties	47
Base Tie Pin (Silver Bullet)	47
Flathead Pin	47
Blockouts	48-49
Beam Blocks	48
45 Degree Beam Block	48
Pier Block-Out.....	48
Drain Tile Block-Out.....	48
Egress Step Block-Out.....	49
Blockdowns	49-50
Steel Blockdowns	49-50
Aluminum Blockdowns	49
Adjustable Blockdowns	50
Blockoffs	50
Special Application Hardware	51-52
Angle Clips	51
Aluminum Cap Clip	51
Cap/Filler Bracket	51
Saddle Bracket	51
Brickledge Bar	51
Continuous Brickledge Bar.....	52
Deck Slide Clamp	52
Window Clamp	52
Plywood Adapter	52
Parapet Bracket	52
Aligner Clamps.....	52
Essential Extras	53-54
Wall Aligner	53
Aluminum Wall Brace.....	53
Hand Punch.....	53
Wall Puller	53
Form & Corner Puller	53
String Line Attachment	53
Siderail Puller	53
Turn Buckles	53
Wire Ties	54
Tie Breaker Bar.....	54
Rod Support	54
Tie Twister	54
Bolts	54
Hurricane Strap	54
Slide Hammer	54
Pouring Accessories	55-56
5 Gal. Spray Tanks.....	55
60 Gal. Spray Tanks	55
Footing Chute	55
Pouring Boards	55
Pouring Shovel	56
Concrete Chutes	56
Aluminum Puddle Stick	56
Release Agents	57
Material Handling Equipment	58-59
Full Panel Baskets	58
Filler Baskets	59
WTF Insulation	60-61
Insulation Tie.....	60
Foam	60
F-Section	60
I-Section	60
T-Section	60
Dampproofing and Waterproofing	62-63
Deco 20	62-63
Platon	63
Windows	64-66

Wall-Ties & Forms, Inc. always recommends that when using or installing our products that all OSHA guidelines and regulations be followed and that our products be used exclusively for their specifically intended purposes and uses.

STANDARD PIN AND WEDGES

We offer a wide variety of pins and wedges designed to increase efficiency no matter what application.



STANDARD PIN

Our round, tapered pins have a milled wedge slot. The shank is designed to eliminate pin sag and improve ease of stripping. Pins are made from steel and are heat-treated for long life.

250/bucket

Product #SPI10000000000



~Typical connection with pin and straight wedge~

WEDGES

STRAIGHT

Wedges are used with pins to tighten adjoining forms. Securing the tie and form in place.

250/bag

Product

#SWE10000000000



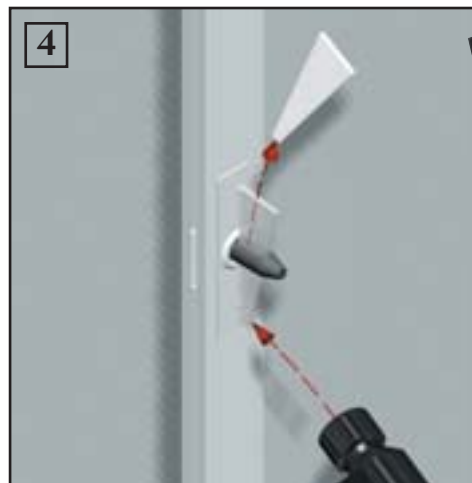
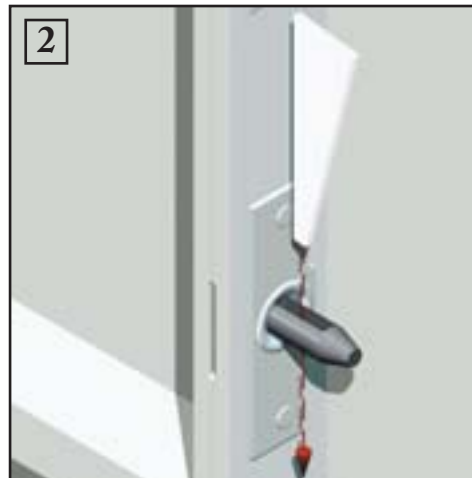
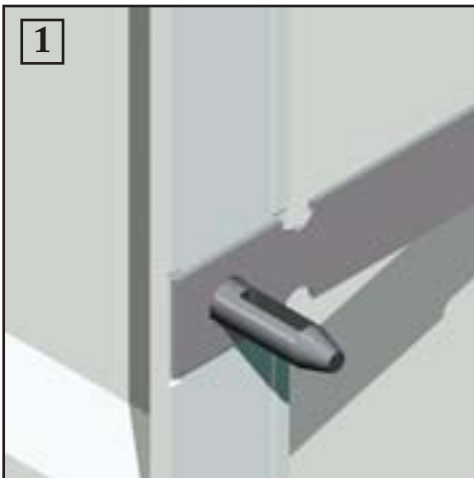
CURVED

Curved wedges have the same function as straight wedges but the curved shape allows for easy insertion and less risk of damage to face of form.

250/bag

Product

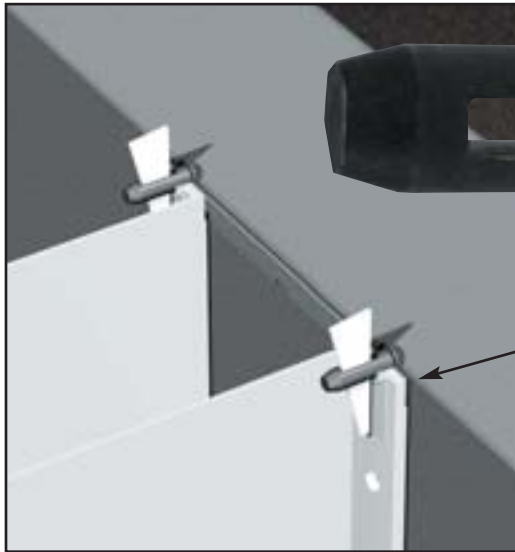
#SWE20000000000



SPECIALTY PINS

FLATHEAD PIN

The flathead pin is used when pinning through a single rail or when placing concrete against an existing wall. Also used in laydown applications, such as 36" x 96" panel, to pour a 36" tall concrete wall. (See laydown application on page #47 for specific example.)



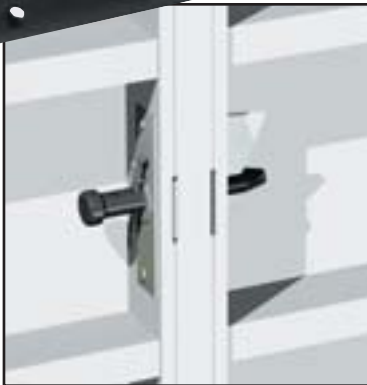
For smooth wall applications. Brick application requires filler or ISC at location.

Product #SPI20000000000

COMBINATION FILLER PIN WITH HEAD



This pin passes completely through 2" aluminum fillers and connects adjoining panels with a wedge. To convert to either 1" or 1½" filler simply insert duplex nail in the appropriate hole.



Combination with head - 1", 1½", 2"

Product #SPI01152000000

STRAIGHT FILLER PIN

These pins pass through appropriate size fillers and are connected to adjoining panels with wedges.



Straight filler pins

Product #
 1" ~ SPI01000000000
 2" ~ SPI02000000000
 3" ~ SPI03000000000
 4" ~ SPI04000000000
 6" ~ SPI06000000000

PAX PIN

Pax pin is slightly longer than our standard pin. Used with pax forms and special applications.



Product #SPI30000000000

CURVED PIN

The curved pin is used in special corner and radius applications.

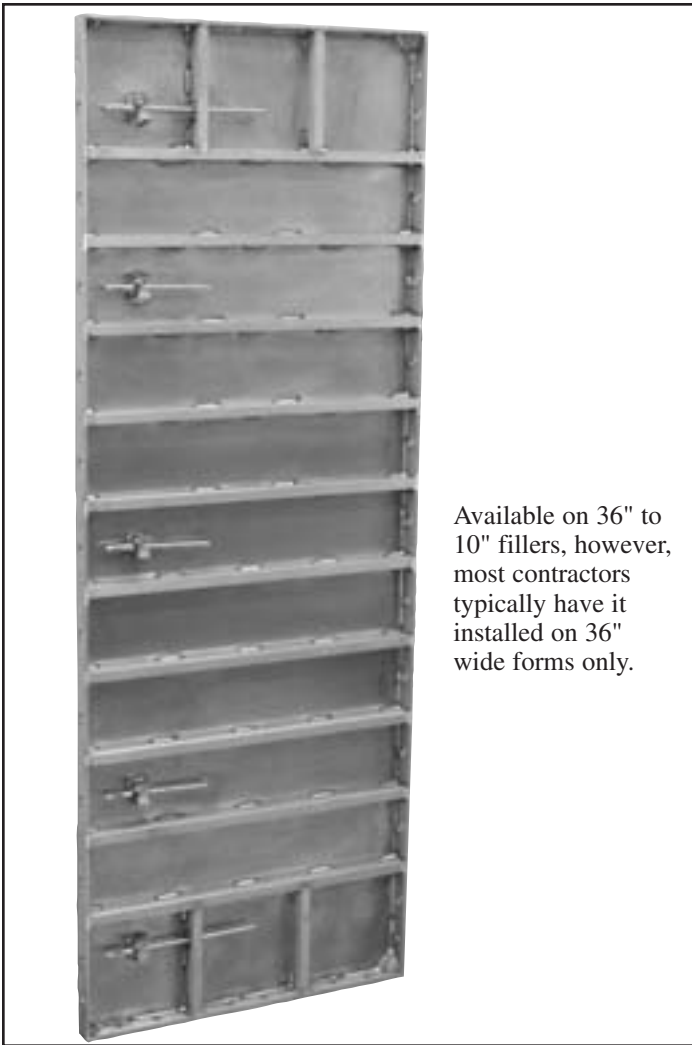


Product #SPI40000000000



ATTACHED HARDWARE

Factory installed permanent pin system.
When forms are outfitted with attached hardware, wedging is only required at top and bottom pin.



Available on 36" to 10" fillers, however, most contractors typically have it installed on 36" wide forms only.

LONG AWAY

Long away pins are used on top and bottom pinholes of form where rod must pass through vertical braces. Can be retracted and loose pins used.



Available for panels 36" - 16" wide
Product #SPI5000000000

SHORT AWAY

Short away pins are used on all holes except top and bottom holes on 36" - 16" wide panels. Can be retracted and loose pins used.



Product
#SPI5100000000

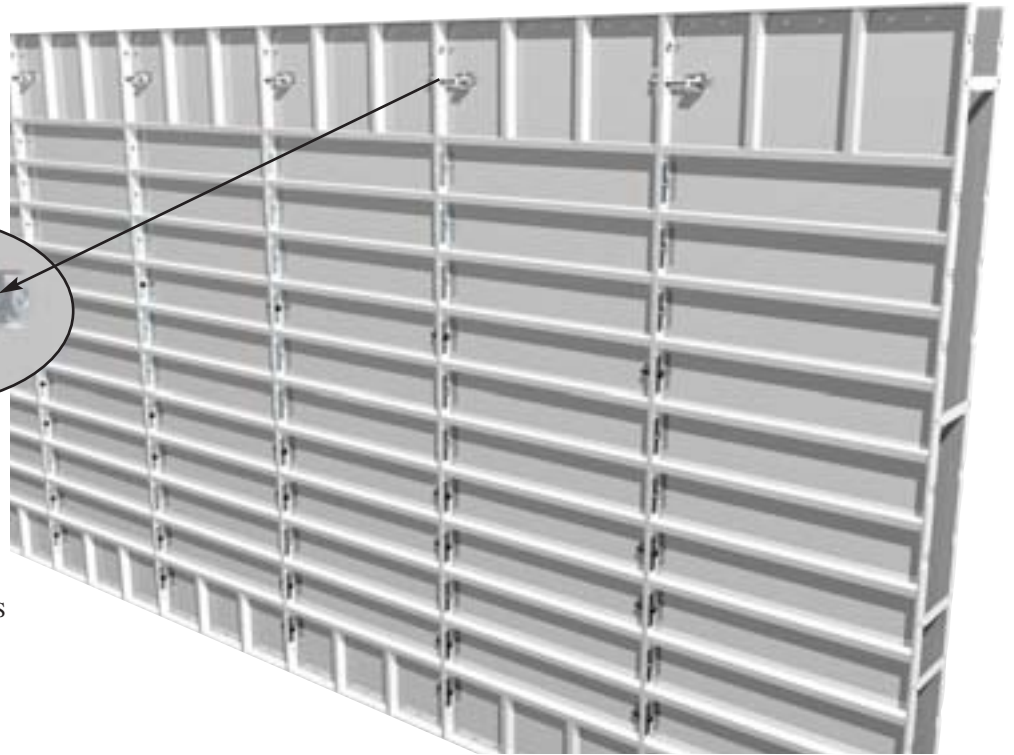
SHORT AGAINST

The short against pin is popular among contractors using 9' forms. Pins are attached at the top hole where tie placement is not necessary for alignment. Short against pins are also used on fillers 15" - 10" wide. These pins cannot be retracted in order to use loose pins.



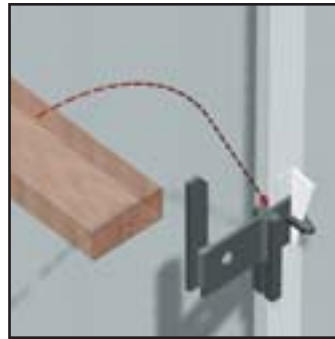
Product #SPI5200000000

On 108" forms, most contractors do not utilize the top hole for a tie, therefore, many choose to place an attached pin, aiding in alignment by simply engaging the pin.



WALER BRACKETS

WTF steel waler brackets can be used with standard wood boards or aluminum waler board. Brackets attach directly to the forms to straighten the wall and minimize the need for additional bracing. In most residential construction, one row of walers at the top of the wall is usually sufficient.



STANDARD STEEL WALER

Standard waler brackets are top notch to provide a fast and efficient attachment directly to the form panel. Used with smooth aluminum, smooth brick, and VertiBrick forms.

- Available in:
- 2" x 3" ~ Product #SWA23000000000
 - 2" x 4" ~ Product #SWA24000000000
 - 2" x 6" ~ Product #SWA26000000000
 - 2" x 8" ~ Product #SWA28000000000

Wall Brace attachment hole

COMBINATION STEEL WALER

Combination waler bracket features combination holes. To be used with textured brick or smooth forms.

- Available in:
- 2" x 3" ~ Product #SWA23000000090
 - 2" x 4" ~ Product #SWA24000000090
 - 2" x 6" ~ Product #SWA26000000090
 - 2" x 8" ~ Product #SWA28000000090

Wall Brace attachment hole

ADJUSTABLE STEEL WALER BRACKET

WTF adjustable waler bracket is one of our newest innovations.

Adjustable steel waler bracket is designed to use with the WTF aluminum waler board. May also be used with 2" x 4" or 2" x 6" lumber.

- Available in:
- 2 x 4 ~ Product #SWA02040000000
 - 2 x 6 ~ Product #SWA02060000000

Wall Brace attachment hole

~Tightening of waler board~



~Removal of waler board~



WTF Aluminum Waler Board
(see page #39)

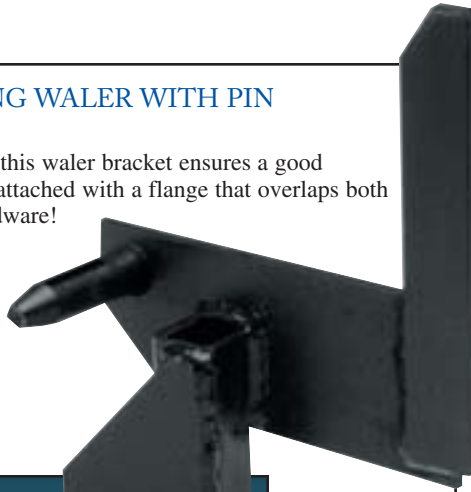
Overlap 24" at waler joint to ensure proper alignment.



LOCKING WALER WITH PIN

The locking feature on this waler bracket ensures a good connection. The pin is attached with a flange that overlaps both siderails. No loose hardware!

Available in:
2" x 3" ~ Product #SWA23000000099
2" x 4" ~ Product #SWA24000000099
2" x 6" ~ Product #SWA26000000099



Not to be used in tie location.

ALUMINUM WALER

Aluminum waler brackets are designed to be used with a three hole tie at the top of the wall. Simply insert over the three hole tie. This bracket does not require loose pins or wedges.

Available in:
2" x 4" ~ Product #AWA24000000000
2" x 6" ~ Product #AWA26000000000



Note: When utilized with the WTF tie, stripping is accomplished by striking downward with a 2" x 4" from the top of the wall.

VERTICAL WALER

When stacking forms, vertical waling may be necessary to prevent creeling. This bracket is used in conjunction with 2" x 4" lumber. It is used on the side opposite of the waler bracket. Saves time when stacking by eliminating the need to stagger or stack short and tall forms.

Product #SWA10000000000



Note: 2" x 4" lumber is used on both sides of bracket

VERTICAL STIFFENER

Used in much the same manner as the vertical waler. Vertical stiffeners are faster than vertical walers because there is no lumber required. Used on opposite side of the wall from walers. Saves time when stacking by eliminating the need to stagger or stack short and tall forms.

Specify hole pattern:
6/12 ~ Product #AWA10000000010
8/8 ~ Product #AWA10000000020



ALUMINUM WALER BOARD



While the traditional waler board is made of wood, the aluminum waler board is being used more and more because of the consistent dimensions and long life it provides. Can be used in place of 2" x 4" or 2" x 6" lumber.

Lengths: 150" ~ Product #AWA35000001200
 300" ~ Product #AWA35000002400

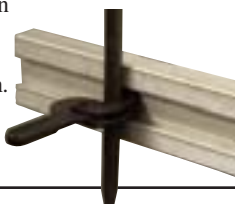
Note:

This can be used with most waler brackets. However, the aluminum waler board was designed with the adjustable steel waler bracket in mind.

(See page #37)



Also used in Footing Form Application.



SCAFFOLD BRACKET WALER COMBINATION

SCAFFOLD BRACKET



Our standard scaffold easily attaches to the top of form providing a walkway for additional safety. Standard section receives two 2" x 10" pieces of lumber along with a 2" x 4" or 2" x 6" waler board.

Other sizes available upon request.

Specify size of waler board:

2" x 4" ~ Product #SBK00240002800
 2" x 6" ~ Product #SBK00260002800



Note: Kicker board attaches to the base of scaffold bracket.

SCAFFOLD BRACKET WITH POST



Wall-Ties' scaffold and post can accommodate a safety rail around the wall. A 2" x 4" slips into post holder and is attached with two nails. Easily attaches to the top of form providing a stable platform for yourself and your crew.

2" x 4" ~ Product #SBK00240002890
 2" x 6" ~ Product #SBK00260002890



STANDARD WALL TIES

WTF ties are manufactured to meet the requirements of today's various pouring methods. They are made of cold rolled steel. We continually perform quality control testing to ensure that all of our ties yield a minimum pull strength of 7,200#.

TWO HOLE



Single Rod Notch (SRN)



Double Rod Notch (DRN)



Triple Rod Notch (TRN)

4" Single Notch only 6" Single or Double Notch
8", 9", 10", 12" Available in Single, Double or Triple Notch
Specify Nominal or Full
Unlimited tie length available

THREE HOLE



Three Hole Tie: Used at top of form with the aluminum waler brackets

4" - 6" Single Notch only 6" - 8" Single or Double Notch
8" - 10" Available in Single, Double or Triple Notch

Specify Nominal or Full

Additional sizes - Single or Double Notch only

Pin ONLY at shortest length (ex: DO NOT USE an 8" - 10" tie as a 10" tie)



FOUR HOLE COMBINATION TIES

Multi-dimensional ties are used when changing wall thickness. We recommend use of 50% more four hole ties in seam than would normally be used.



Single Rod Notch - any length Specify Nominal or Full

Ties available in metric sizes

ROUND END TIES

Available in 6" SRN, 8" TRN, 10" TRN



Specify Nominal or Full

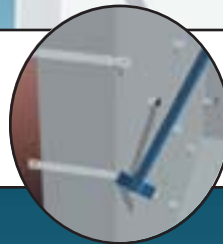
BREAKBACK TIES



Breakback ties are vertical break ties designed to break back into the wall at specified dimensions.

3/4" - Standard Breakback Other depths available
Any length Specify Nominal or Full

Breaking ties is accomplished by striking downward with hammer or utilizing the WTF Tie Breaker Bar (see page #54).



**The following four pages are tie placement charts.
Note that 3 ft. and 2 ft. wide systems differ.**

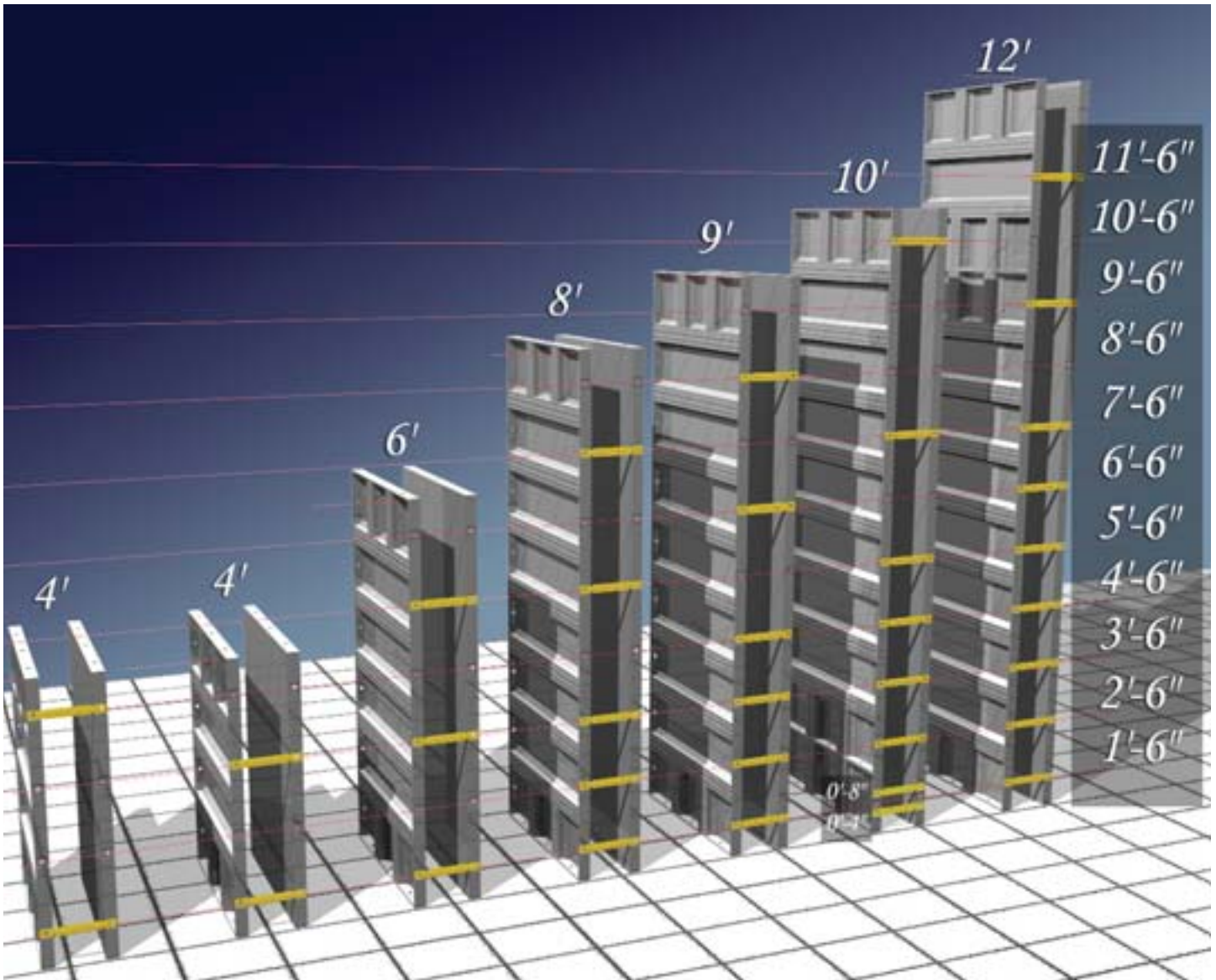


**WTF produces and ships over
over 35 million ties a year!**

3 ft. Wide Forming System

TIE PLACEMENT CHARTS

6/12 HOLE PATTERN



Tie Maximum Load - 7,200#

NOTE: Wall-Ties & Forms recommends placing cap form on the bottom for speed.

Conditions that affect lateral concrete pressure:

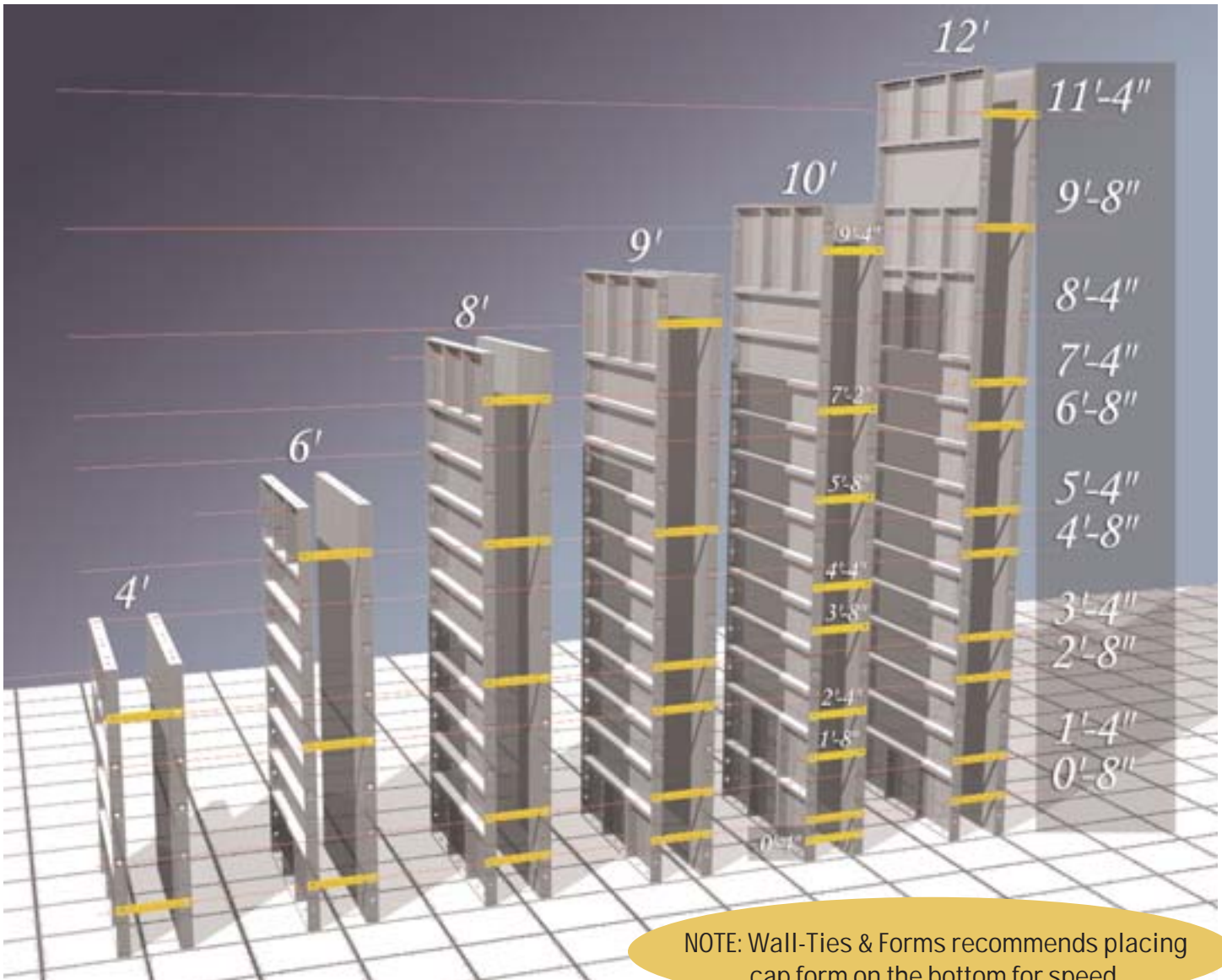
1. Height of the wall
2. Fill rate
3. Temperature
4. Type of concrete (chemical additives)
5. Weight of concrete
6. Slump of concrete
7. Vibration of concrete



3 ft. Wide Forming System

TIE PLACEMENT CHARTS

8/8 HOLE PATTERN

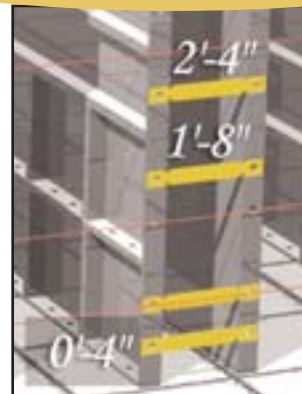


Tie Maximum Load - 7,200#

Be certain to meet all OSHA requirements including fill rate

**OSHA safety requirements will not be exceeded if:

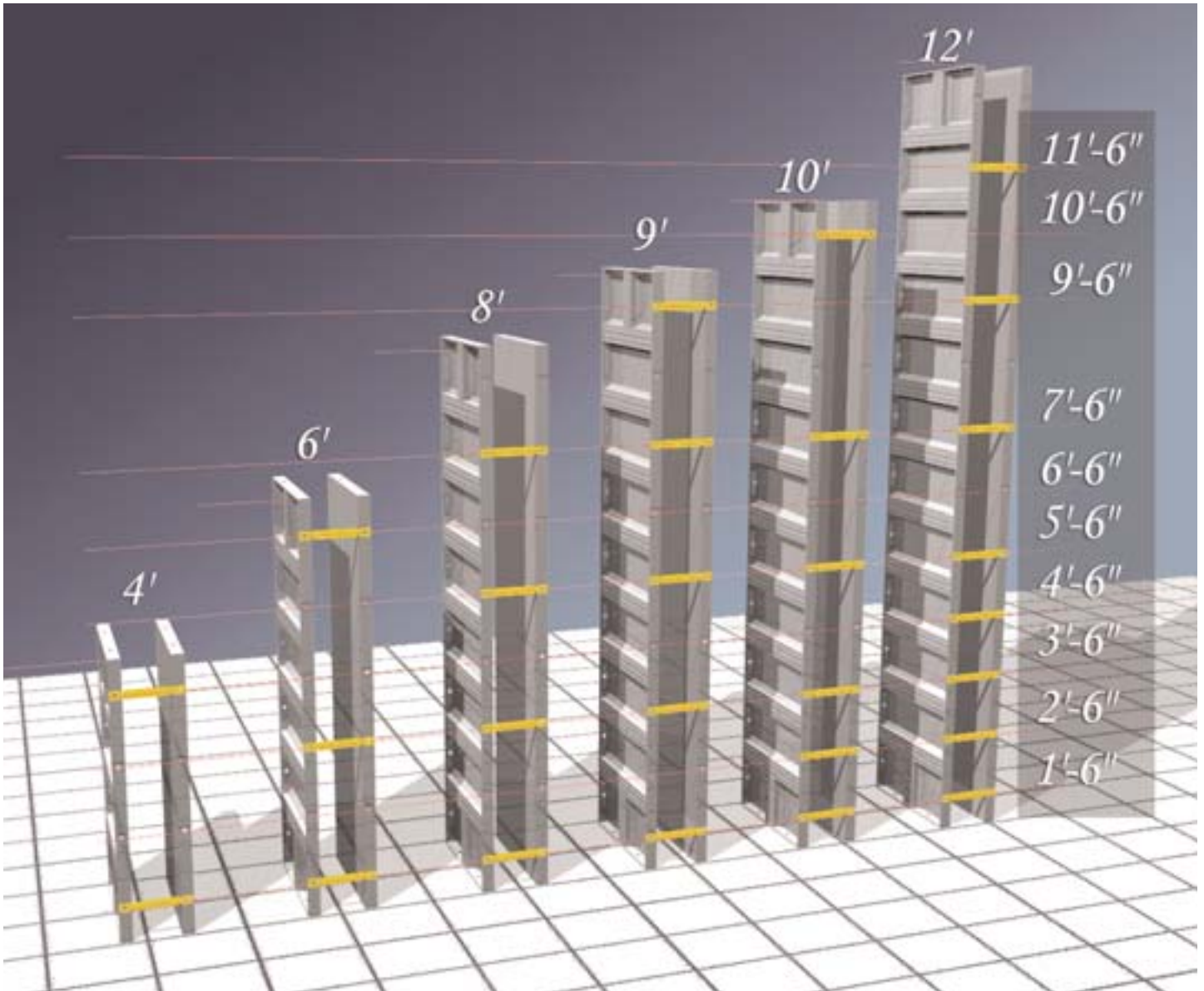
1. Fill rate does not exceed 8'0"/hour.
2. Tie is used in every hole on walls over 8'0".



2 ft. Wide Forming System

TIE PLACEMENT CHARTS

6/12 HOLE PATTERN



Tie Maximum Load - 7,200#

Be certain to meet all OSHA requirements including fill rate

**OSHA safety requirements will not be exceeded if:

1. Fill rate does not exceed 8'0"/hour.
2. Tie is used in every hole on walls over 8'0".



2 ft. Wide Forming System

TIE PLACEMENT CHARTS

8/8 HOLE PATTERN



Tie Maximum Load - 7,200#

Be certain to meet all OSHA requirements including fill rate

**OSHA safety requirements will not be exceeded if:

1. Fill rate does not exceed 8'0"/hour.
2. Tie is used in every hole on walls over 8'0".

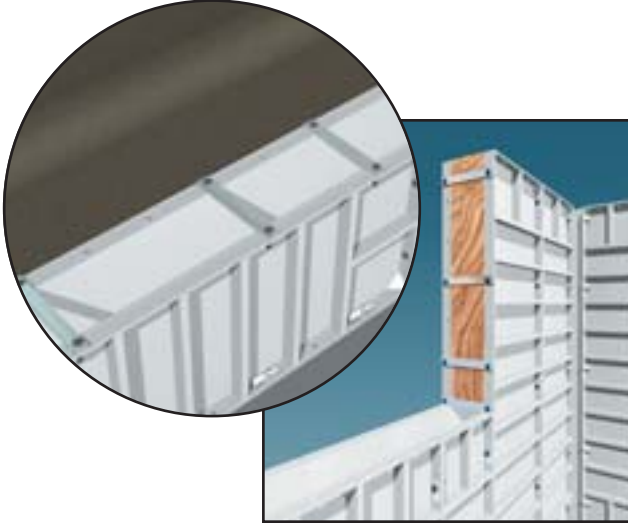


SPECIALTY WALL TIES

REUSABLE ALUMINUM BAR TIES

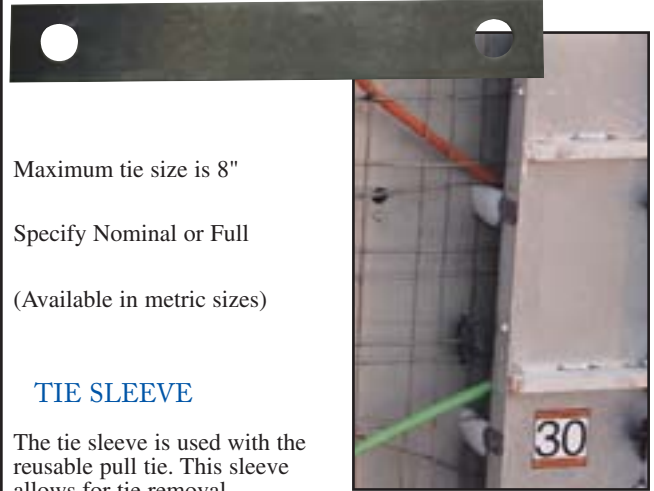
Reusable aluminum bar ties are used as bulkhead bars as well as top ties for laydown applications. May be used with the standard pin and wedge. These can be used as brickledge bars to nail wooden brickledge to top of forms.

3/8" x 1 1/2" x wall thickness to 12" Single or Combination
 2" x 2" x 3/8" x wall thickness greater than 12"
 Specify Nominal or Full and Length



REUSABLE WALL TIES

Designed without rod notches and break-offs for ease of removal from a wall and reused. This is designed for markets with very low labor costs.



Maximum tie size is 8"

Specify Nominal or Full

(Available in metric sizes)

TIE SLEEVE

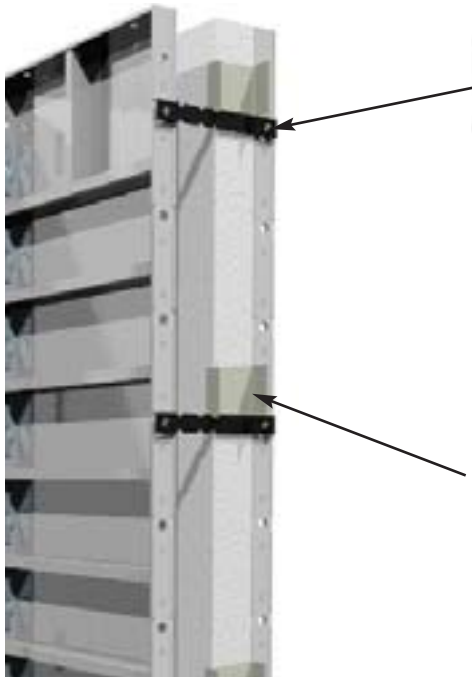
The tie sleeve is used with the reusable pull tie. This sleeve allows for tie removal.



Tie sleeves available from WTF in various lengths.

CONCRETE HOUSING TIES

INSULATION TIE



This tie is used to incorporate foam insulation. Designed with a specific breaking point for clean break off the insulation to eliminate thermal bleeding. It also has a notch to hold the I-Section in place, which eliminates any foam notching which is required in other insulating systems. Breakback is determined by thickness of foam.



I-SECTION

The I-Section along with the insulation tie ensures that insulation stays in place for concrete placement. Also provides an additional attaching point.

Patent #5,987,830

See page #60

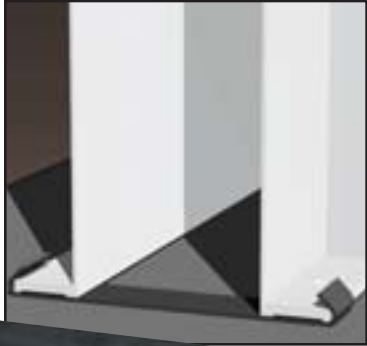


LAYDOWN APPLICATIONS

WTF has many form designs that allow the form to be laid on its side. The 36x48 laydown (see page #29) has additional bracing to allow for this use. For customers with forms that are not designed to be laid on their side WTF has perfected hardware for this application. We recommend the following guidelines.

FLAT STEEL U-TIE

For laydown applications ONLY! Not to be used in close trench conditions where stripping requires pulling top of form down toward ground. No pins or wedges required.

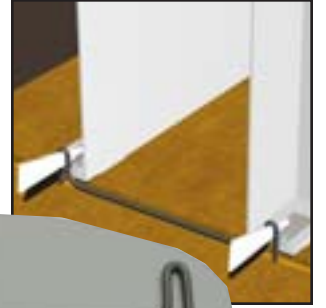


Maximum wall height: 36"
Maximum tie spacing: 24"

Up to 36" ~ Specify Nominal or Full

WIRE BASE TIE

Wire base ties are used in laydown form applications. Drive wedges through raised loops to secure base tie through rail.



Maximum wall height: 36"
Maximum tie spacing: 24"

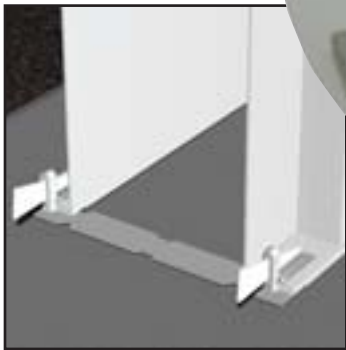
Up to 20" ~ Specify Nominal or Full

BASE TIE PIN (SILVER BULLET)

For laydown applications ONLY!
Base tie pins hold tie in place at the base of the form.

Maximum wall height: 36"
Maximum tie spacing: 24"

Product #API10000000000

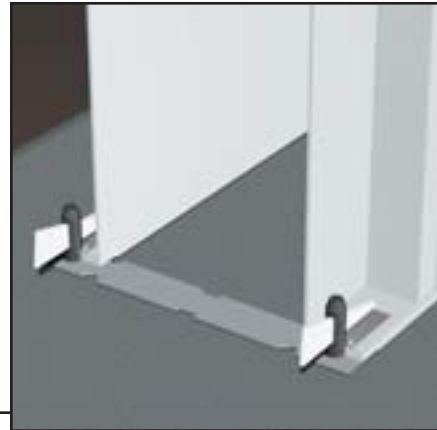


FLATHEAD PIN



The flathead pin is used in laydown applications with standard ties. Can also be used when pouring a concrete wall against an existing structure (see page #35). This pin is the only design used in laydown applications in walls over 36" tall.

Product #SPI20000000000

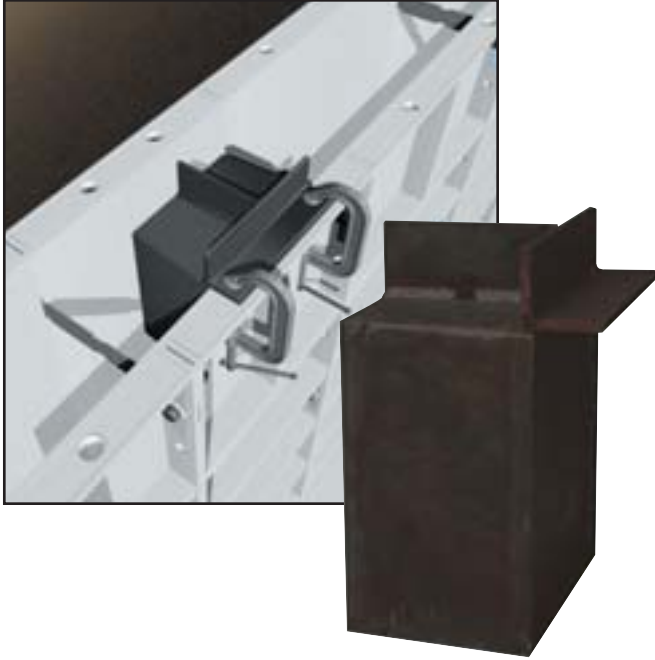


BLOCKOUTS

BEAM BLOCKS

Heavyweight beam block ready to attach to your form with a simple "C" clamp. For use with a standard 8" deep I-beam. Other sizes available.

Order by height, width and front to back.



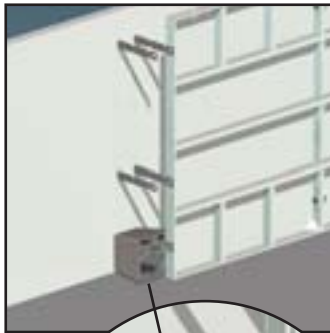
45° BEAM BLOCKS

The 45° degree blockout is used to create beam void for use of beams in bay areas.

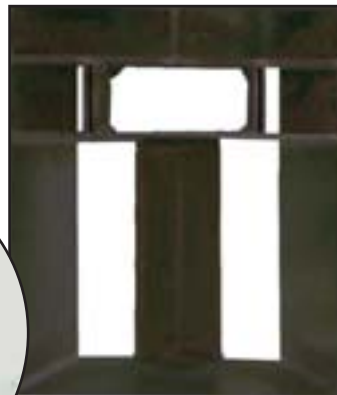


Heavyweight beam block ready to attach to your form with a simple "C" clamp. For use with a standard 8" deep I-beam. Other sizes available.

DRAIN TILE BLOCKOUT



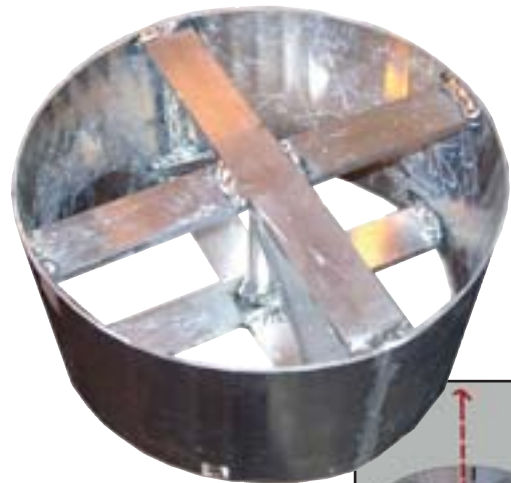
Drain Tile Blockout allows ease of installation of Drain Tile.



Specify size and hole pattern.
Available in steel or aluminum

PIER BLOCKOUT

Pier Blockout is placed on Pier Pad prior to slab pour.

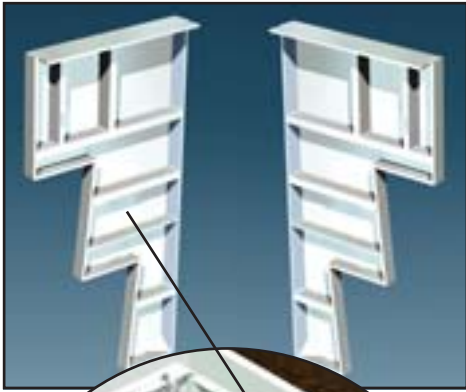


Once concrete is poured and cured Blockout is removed for installation of Pier.

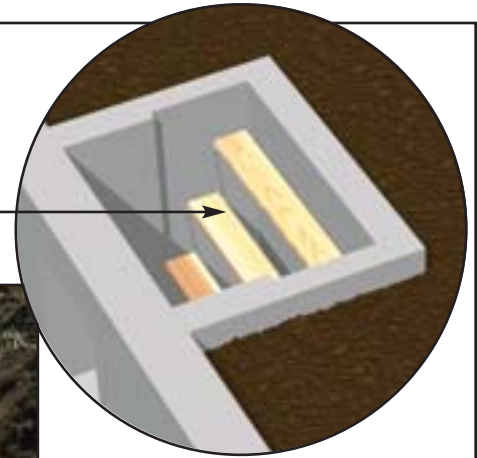


BLOCKOUTS

EGRESS STEP BLOCKOUT



Egress Step Blockout allows for step ledges to be poured at same time as wall for concrete Egress Bays. Treated lumber is affixed and used for steps.



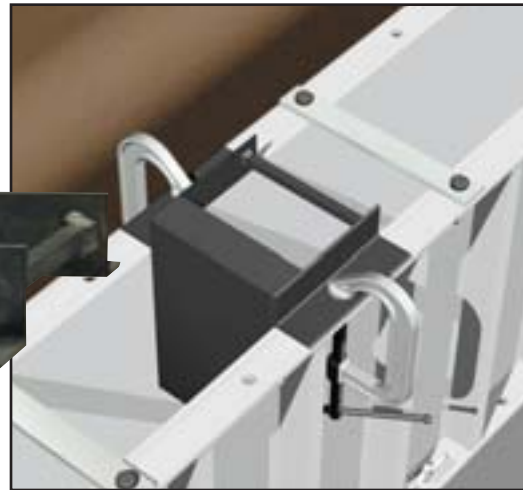
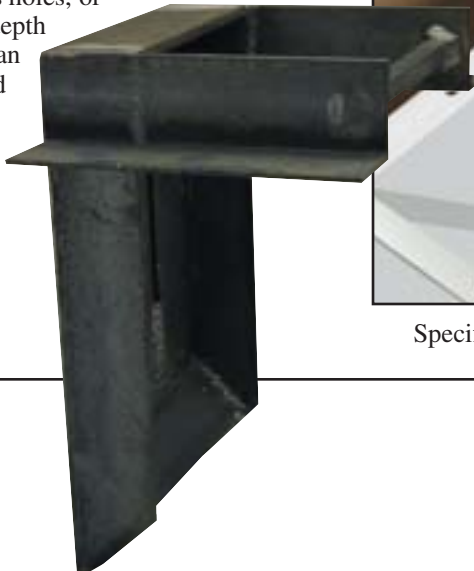
The Concrete Egress Bay can be placed at time of foundation pour or as a secondary operation.

Specify riser height, tread depth and hole pattern.

BLOCKDOWNS

STEEL BLOCKDOWNS

One-piece specific width steel blockdowns create bulkheads for forming garage door openings, access holes, or other specific depth blockdowns. Can be "C" clamped into position.



ALUMINUM BLOCKDOWNS

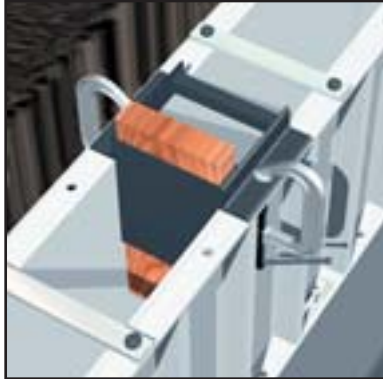
Lightweight aluminum provides ease in handling for those jobs that need fast and easy placement. "C" clamp to top of the wall.

Specify nominal or full, width and depth.



ALL STEEL DENVER BLOCKDOWN

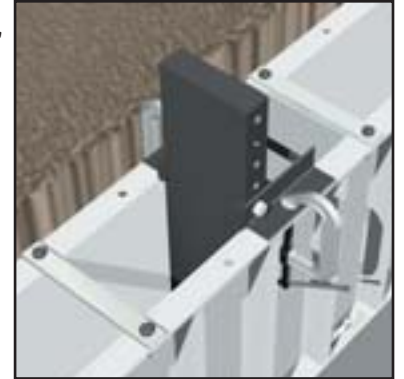
Our one-piece steel blockdown is used with lumber to form garages or other blockdown applications of various depths. Can be used for depths of 4" to 16".



Specify nominal or full, depth, and wall thickness

ALL STEEL ADJUSTABLE BLOCKDOWN

The adjustable blockdown allows for depths of 8"-12" and 14"-24".



Specify nominal or full and wall thickness

TWO-PIECE STEEL ADJUSTABLE BLOCKDOWN

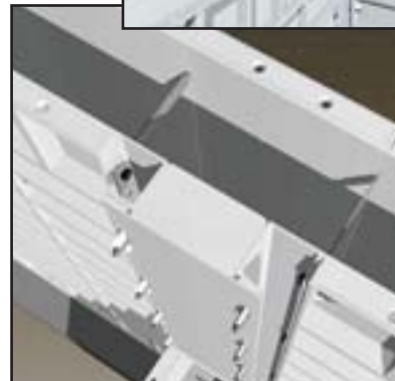
Our two-piece steel blockdown is used with lumber to form garages or other blockdown applications of various widths and depths. Can be used for depths of 4" to 16".

Product #SBD08000000150



BLOCKOFF/BLOCKBACK

The blockoff/blockback combination is used for blocking off wall ends. It can also be used to blockback a nominal or full corner, usually at a "T" wall where the height drops. Can be turned around and used as a blockoff.



BLOCKOFFS

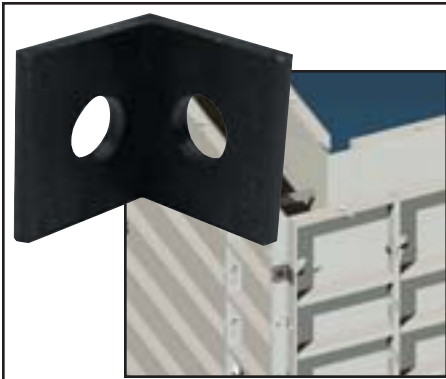
Aluminum bulkhead plates are designed for blocking off wall ends or to bridge over dig from basement to garage (jumps). Available in single or combination widths x height.

Specify Nominal or Full, wall thickness and hole pattern.



SPECIAL APPLICATION HARDWARE

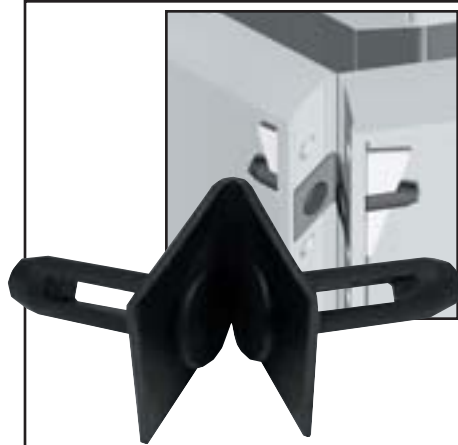
90° ANGLE CLIP



Versatile 90° angle clip can be a substitute for full length outside corner angle to create an outside corner using fillers.

Steel Product #SCL9000000000
Aluminum Product #ACL9000000000

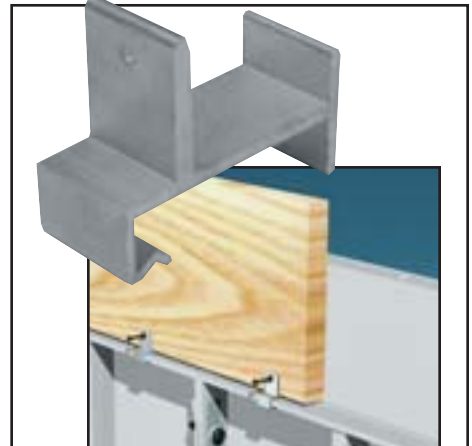
45° ANGLE CLIP



Our 45° angle clip with rotating pins will affix two filler panels to form outside corner opposite a hinged inside corner. Can form 35° to 55°, depending upon the tightness of wedges.

Product #SCL4500000000

ALUMINUM CAP CLIP



The aluminum cap clip is designed to create a cap with 2"x12" lumber.

Product #ACL1000000000

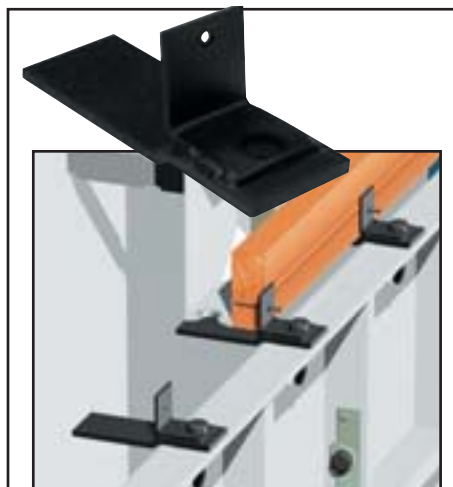
CAP/FILLER BRACKET

Cap/filler brackets are used in conjunction with lumber to add height to a wall. The cap filler bracket pin is inserted into the top of the form and the lumber is then nailed to the bracket. May also be used to construct job site plywood fillers when you need an extra filler or where you need to pass a pipe or other object through the form.



Product #SBK1000000000

SADDLE BRACKET



Unique brackets that allow another option for brickledge. The brackets pin onto the top rail of the lower form and allows the next stacked forms to be inset 4 inches or 6 inches.

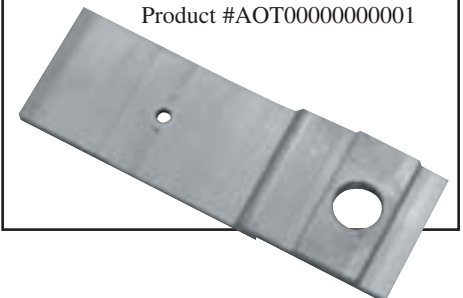
4"~Product #SBK0400000000
6"~Product #SBK0600000000

BRICKLEDGE BAR



The Brickledge Bar permits another option for brickledge. The brackets pin onto the top rail of the lower form, then wood is nailed to under side of bracket. Upper panel is then placed on top of brickledge bar to create a 4" brickledge.

Product #AOT0000000001



SPECIAL APPLICATION HARDWARE

CONTINUOUS BRICKLEDGE BAR

The Continuous Brickledge Bar permits another option for brickledge, the bar pins onto the top rail of the lower form. The upper panel is then placed to the upper brickledge. This method eliminates the use of lumber.



ALIGNER CLAMPS

Aligner clamp with 5/8" pin, 3/4" gap is used to pin aluminum brickledge to top of forms. Also used to pin top rail to bottom rail in stacking and cap form applications.



LONG



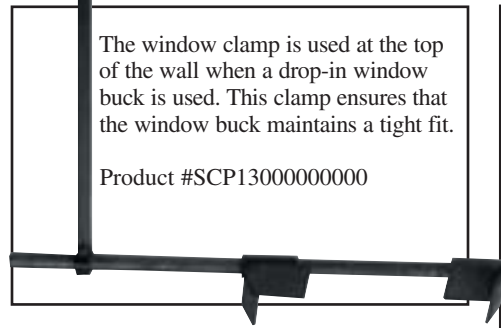
SHORT

For use when stacking and enbar holes do not line up.

WINDOW CLAMP

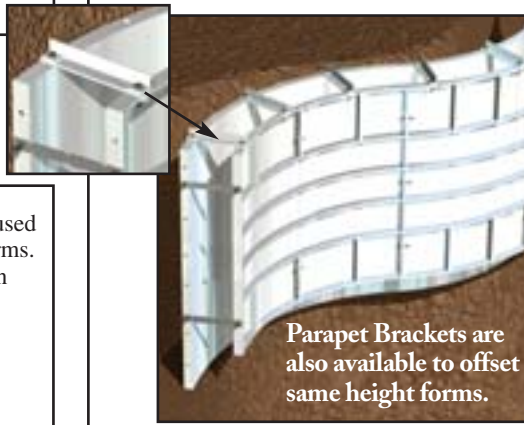
The window clamp is used at the top of the wall when a drop-in window buck is used. This clamp ensures that the window buck maintains a tight fit.

Product #SCP13000000000



PARAPET BRACKET

The Parapet Bracket is used in suspending the formwork on one side of the wall from the opposite side. This is commonly used in concrete pool systems.



PLYWOOD ADAPTER

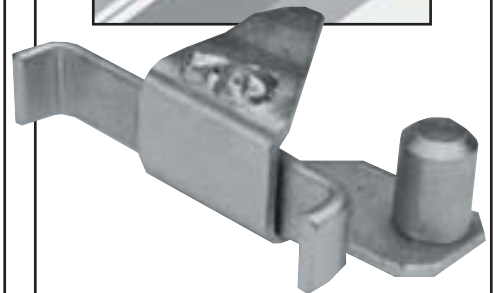
The plywood adapter allows the contractor to produce a filler using 1/2" or 3/4" plywood. Specify hole pattern and plywood thickness.



DECK SLIDE CLAMP

The deck slide clamp is used with the WTF ledger system. Works with both the straight ledger and the crown mold ledger. The deck slide clamp pin is placed through the end bar hole into the ledger slot and then the slide is engaged.

Product #SCP120000000000



ESSENTIAL EXTRAS

WALL ALIGNER

This practical tool creates movement of wall when prying against footing. Permits one-person leverage to move forms and square corners. The heavy-duty steel chain is attached to the pin on the bottom of the form. Leverage end is heat-treated for extended life.

Also available with hook for chain adjustment.

Product #AOT10000000000



ALUMINUM WALL BRACE

Available in the following sizes:

13'6" - Ideal for 9' tall walls
Product #ABR00000013600

10'6" - Ideal for 8' tall walls
Product #ABR00000010600

5'3" - Ideal for 4' tall walls
Product #ABR00000005300



HAND PUNCH

Our hand punch will add random pinholes with just a little punch. Holes can be added to side or end rails quickly in the field.

Shipped with one 11/16" die set. Other die sets available. Handles sold separately.

Product #SOT40000000000



WALL PULLER

This tool is for moving the wall after forms are set.

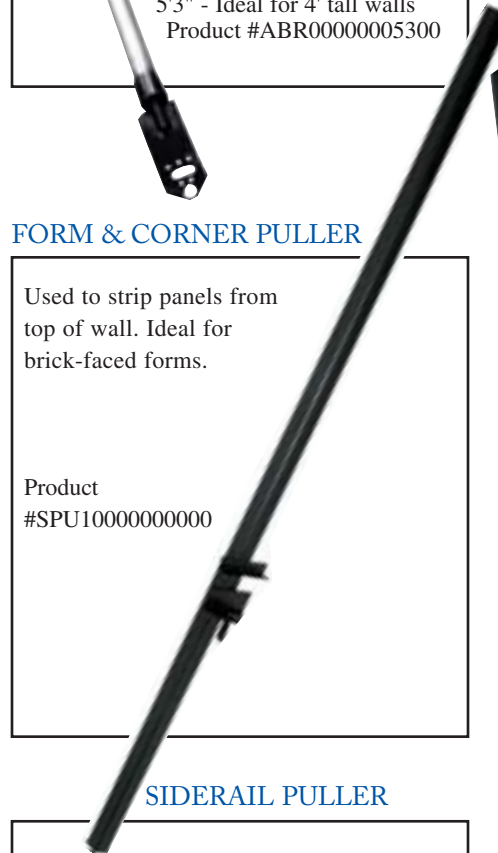
Product #AOT20000000000



FORM & CORNER PULLER

Used to strip panels from top of wall. Ideal for brick-faced forms.

Product #SPU10000000000



STRING LINE ATTACHMENT

String line attachment is clamped to the top of the OSC and is used to align the wall.

Product #SOT20000000000



TURNBUCKLES

The turnbuckle allows adjustment without moving brace. Easily attached to either lumber or metal pipe to manipulate wall braces that pin to the form.

Product #SBR10000000000

Designed to remove panels from ground level.

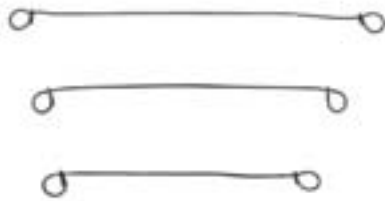
Specify left or right hand.

Product #SOT10000000000



ESSENTIAL EXTRAS

WIRE TIES




5 1/2" ~Product #SWT55000000000
 6 1/2" ~Product #SWT65000000000
 8" ~Product #SWT80000000000

5,000 per roll

TIE TWISTER

Used to tie wire ties quickly and easily.
 Works with any size wire tie.



Product #SOT30000000000

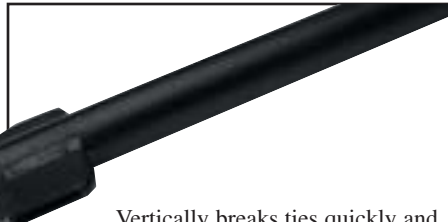
BOLTS

Foundation bolts, 100 per bag
 1/2" x 8" ~ Product #SB005080000000
 1/2" x 10" ~ Non-Galvanized
 Product #SB005100000000
 1/2" x 10" ~ Galvanized
 Product #SB0G5100000000

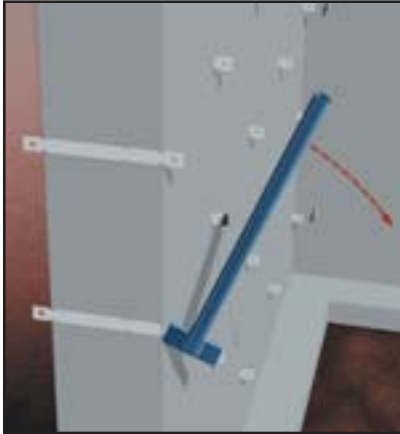
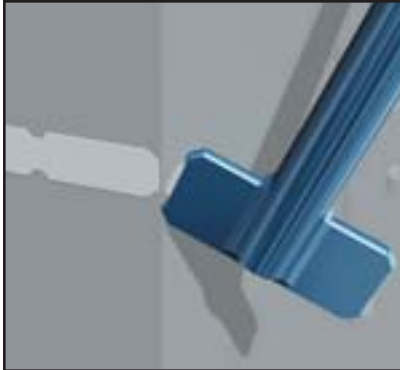


Also available with nut and washer.
 Additional sizes available.

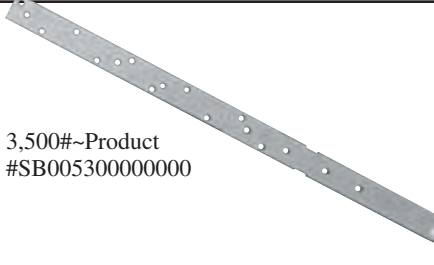
TIE BREAKER BAR



Vertically breaks ties quickly and easily without gouging the wall.
 Product # SOT15000000000



HURRICANE STRAP



3,500#~Product #SB005300000000

ROD SUPPORT

Designed to hold rebar in position while placing concrete in footings.





Single~ Product #SR010000000000
 Double~ Product #SR020000000000

SLIDE HAMMER

Used to strip ledger and to break ties in crown mold ledger applications. The slide hammer is used to ease the stripping process of crown molding and wall panels under a deck. Also used to vertically break crown molding ties.

Product #SOT10000000000


POURING ACCESSORIES

5 GALLON SPRAY TANKS

Compact 5 gallon hand tank allows for easy application to forms. Lightweight stainless steel with 4' hose and gun.

Replacement parts are available.

5 gallon tank w/Cresset .80015 tip

~Product #SPRA1000000061

5 gallon tank w/Regular .4005 tip

~Product #SPRA1000000062



60 GALLON SPRAY TANKS

Our 60 gallon spray tank comes complete with a 100' hose and a 4' wand. When ordering please specify spray tip size.

Replacement parts are available.

60 gallon tank

w/Cresset tip

~Product

#SPRA1100000000

60 gallon tank

w/Regular tip

~Product

#SPRA1400000000



*Spray tanks should not be filled over 2/3 full. Both tanks are designed with safety filler caps.

FOOTING CHUTE

Hooks quickly and easily onto a ready-to-mix chute. The WTF 5' vinyl tube trunk allows direct flow in cumbersome areas. Splashing and overspills are greatly reduced, making it ideal for concrete placement in footings, piers, and flatwork.

FOOTING CHUTE COMPLETE

Product #CUF1000000000

FOOTING CHUTE CLAMP

Product #CUF1300000000

FOOTING CHUTE TRUNK

Product #CUF1200000000

FOOTING CHUTE HOPPER

Product #CUF1100000000



Can be modified for use with skid loader mounted concrete buckets.

POURING BOARDS

STANDARD BOARD

Lightweight, totally aluminum board constructed with "L" shaped bracket on back that slips over the top of the form. Naturally helps reduce spillage and removal of form oil off panels at discharge locations. Directs uniform flow of concrete during placement.

Product

#APO1000000000



EXTENDED BOARD

Designed with an extended handle for ease of use.

Product

#APO1100000000



CONCRETE CHUTES

STANDARD CHUTES

WTF smooth flow aluminum chute is durable and lightweight. Our chutes are made of extruded heavy gauge aluminum and reinforced with cross beams and secured attachment chain.

Available sizes: 6' - 24' on 2' increments

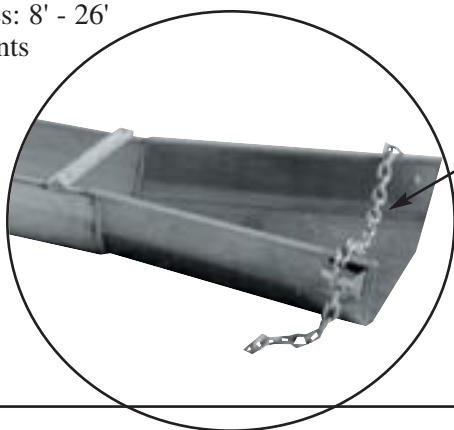
The aluminum chute weighs less than 5 lbs. per foot which makes it easy to handle by a single worker.



STANDARD CHUTES WITH FLARE

Flare added for ease of use.

Available sizes: 8' - 26' on 2' increments



Chutes for special applications also available.

ALUMINUM PUDDLE STICK

Used to assist in the consolidation and flow of concrete.



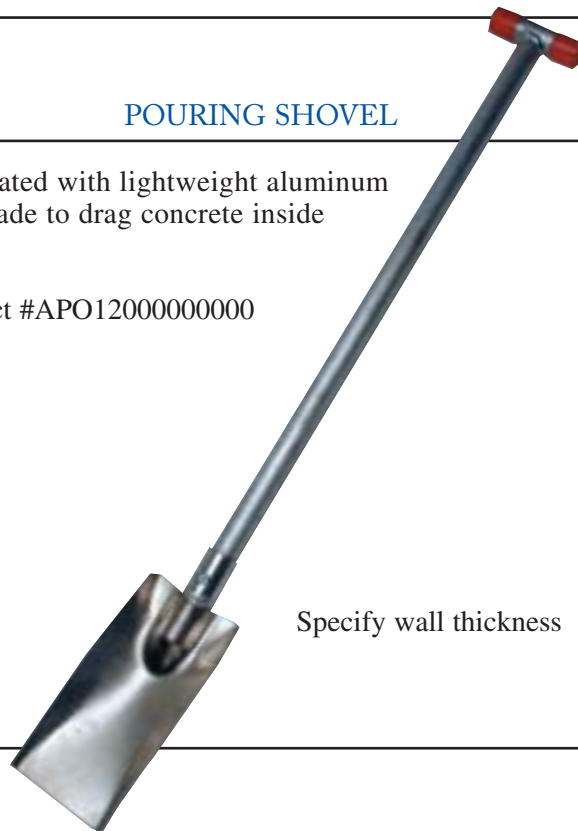
Made of lightweight aluminum tube. It will not splinter or break.

Available in 12' length ~
Product #AOT3000000000

POURING SHOVEL

Fabricated with lightweight aluminum and made to drag concrete inside forms.

Product #APO12000000000



Specify wall thickness



RELEASE AGENTS

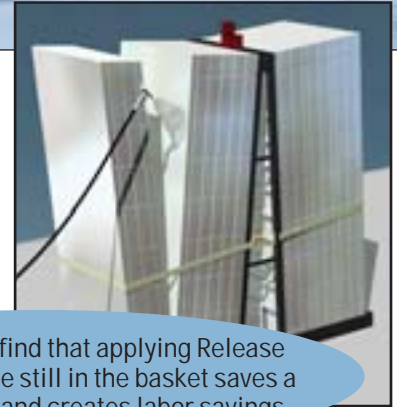
"I've tried other release agents, but with Crete-Lease 727, I've never been more satisfied. It's easy to use, one light spray and my forms stay clean. I never have to clean my forms."

Bill Curth
Shawnee, Kansas



"As a 2nd generation poured wall contractor, I have used a variety of release agent oils. Cresset Crete-Lease 727 uses less oil per foundation keeping my cost per wall the same as some of the cheaper oils. I don't have to clean my forms after using Crete-Lease 727. It is the best oil and best value."

Paul Dusselier
Raymore, Missouri



Many contractors find that applying Release Agent to forms while still in the basket saves a step in form setup and creates labor savings.

Crete-Lease 727 Release Agent

Crete-Lease 727 is a mineral based release agent that has been used for more than 25 years. It applies at low and high ambient temperatures and it exceeds all state and federal VOC regulations.

Advantages: Crete-Lease 727 permits easy stain-free removal of forms, formliners, pallets, etc. from hardened concrete. It:

- ~ Cuts form clean-up time up to 70% when properly applied.
- ~ Can reduce bugholes on concrete surfaces.
- ~ Does not interfere with adhesion of caulk, architectural coatings, paint, sealers, and curing compounds on cured concrete surfaces when properly applied.
- ~ Works superbly on aluminum forms.
- ~ Can be applied in sub-freezing or very hot temperatures.
- ~ Reduces incidences of skin rashes to an absolute minimum.
- ~ Can produce both high visual impact (CCS 2) and typical concrete surfaces (CCS 3, CCS 4, CCS 5).

Ready to use - Available in:

- 5 Gal. Pail ~ Product #CMCR7270000005
- 55 Gal. Drum ~ Product #CMCR7270000055
- 275 Gal. Mega Pack ~ Product #CMCR7270000275



Crete-Lease "BREAK-IN" Aluminum Form Conditioner

"Seasons" new aluminum forms before first use. Reduces reaction with new aluminum and concrete.

Crete-Lease "Break-In" oxidizes the aluminum surface to reduce reaction.

- ~ Conditions forms even at 45°F.
- ~ Is not as messy as "liming".
- ~ Removes residual oils.
- ~ Is biodegradable.

Available in: 5 Gal. Pail ~ Product #CMCR7280000005



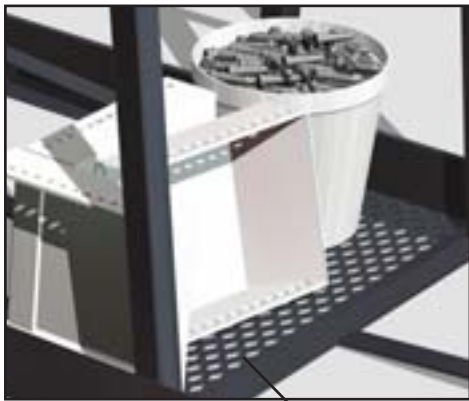
MATERIAL HANDLING EQUIPMENT

FULL PANEL BASKETS

If you have invested money in a quality crane truck, now may be the time to invest in quality material handling equipment. In the past two decades we have proven to be the leader and innovator of material handling baskets. WTF designs and manufactures the highest quality form baskets in the industry.

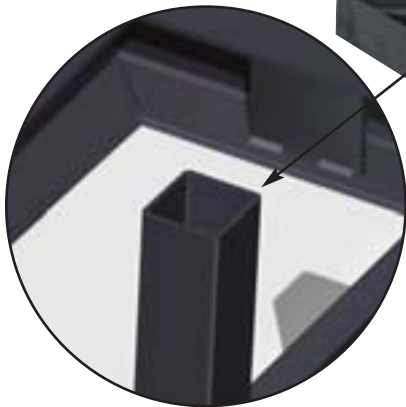
WTF builds heavy duty baskets. Each full panel basket is equipped with two 2"x12' nylon straps with a ratchet handle and four wear pads. The capacity of the forms held in each basket is determined by your crane's lifting capacity. When ordering please specify lifting bell or loop.

A-Frame Basket available for all heights on 36" wide panels.

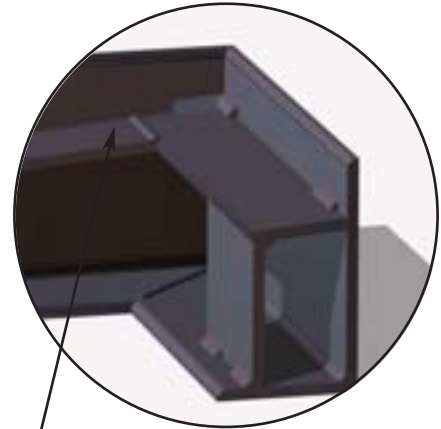


Expanded metal is placed in center of basket to allow for storage of accessories needed on the job site.

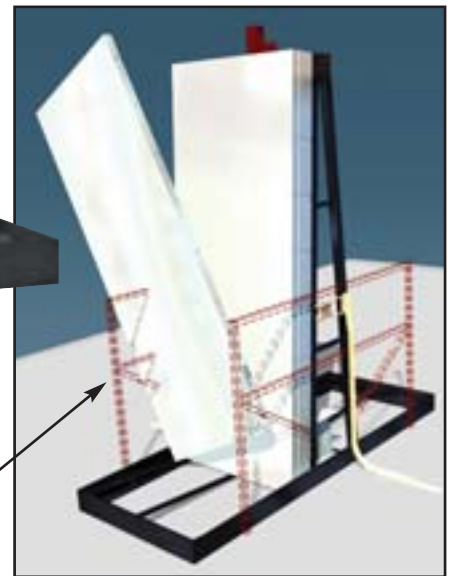
Safety Chains are also included in A-Frame Baskets.



Heavy Tube construction allows minimal bracing. This allows for easier form storage and removal. Because of lighter construction many form baskets in the industry require additional side bracing. This type of basket construction can create additional labor when removing or storing forms.



The Baskets are built with a taper at the base to add additional stability to forms being stored.



MATERIAL HANDLING EQUIPMENT

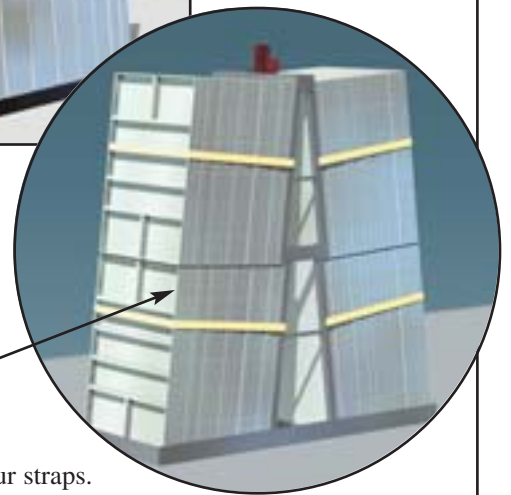
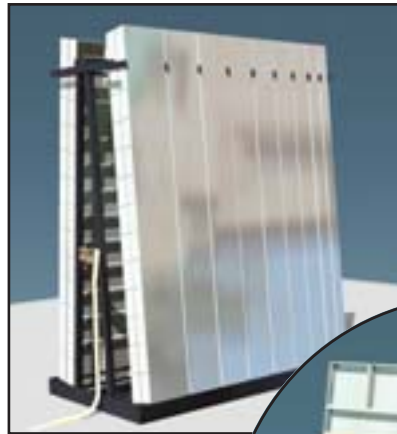
FILLER BASKETS

A wide variety of different basket designs are available. These include the Laydown Filler Basket and the Standup Filler Basket. WTF designs the baskets to accommodate the equipment of the contractor.

LAYDOWN FILLER BASKET



STANDUP FILLER BASKET



48" stacker basket also available.

*Note: Has four straps.

FILLER BEDS

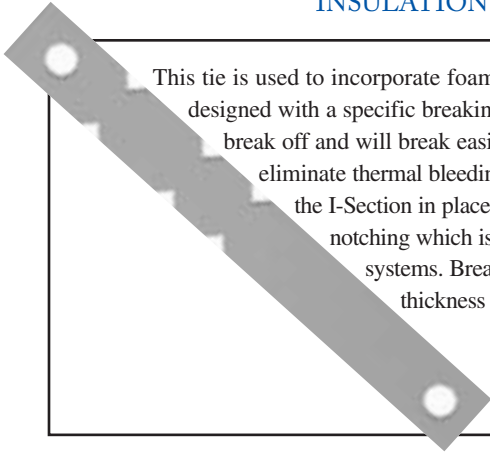


WTF custom designs filler beds around the customer's truck and forms.



WTF INSULATION

INSULATION TIE



This tie is used to incorporate foam insulation. These ties are designed with a specific breaking point so there is a clean break off and will break easily behind the insulation to eliminate thermal bleeding. It also has a notch to hold the I-Section in place, which eliminates any foam notching which is required in other insulating systems. Breakback is determined by thickness of foam.

Product #TTSP0400002101

FOAM

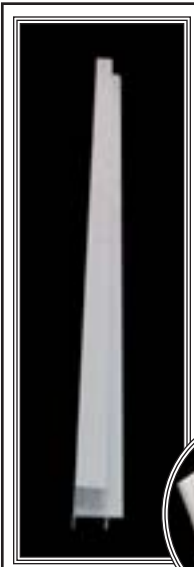
WTF utilizes a 2 lb. density PerformGuard® EPS, a termite resistant expanded polystyrene insulation.

- ~ Resistant to termite damage
- ~ Resistant to carpenter ant damage
- ~ Non-toxic, safe to handle
- ~ Incorporates EPA registered material
- ~ Meets code requirements for ground contact use
- ~ Cost effective

Various sizes available



F-SECTION



The F Section is used at corner transitions, window and door openings, top of concrete wall, deck, and structural slab to create additional attaching points and a termite barrier.

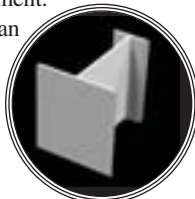


Patent #5,987,830

I-SECTION



The I-Section along with the insulation tie ensures that insulation stays in place for concrete placement. Also provides an additional attaching point.



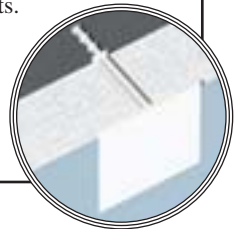
Patent #5,987,830

T-SECTION



The T-Section is utilized in 36" wide insulation applications (such as foundations). It is placed in the center of insulation to create additional attaching points for exterior wall treatments.

Sold in 2 1/2" lengths



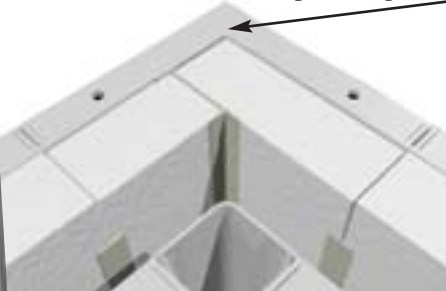
WTF INSULATION PROCESS



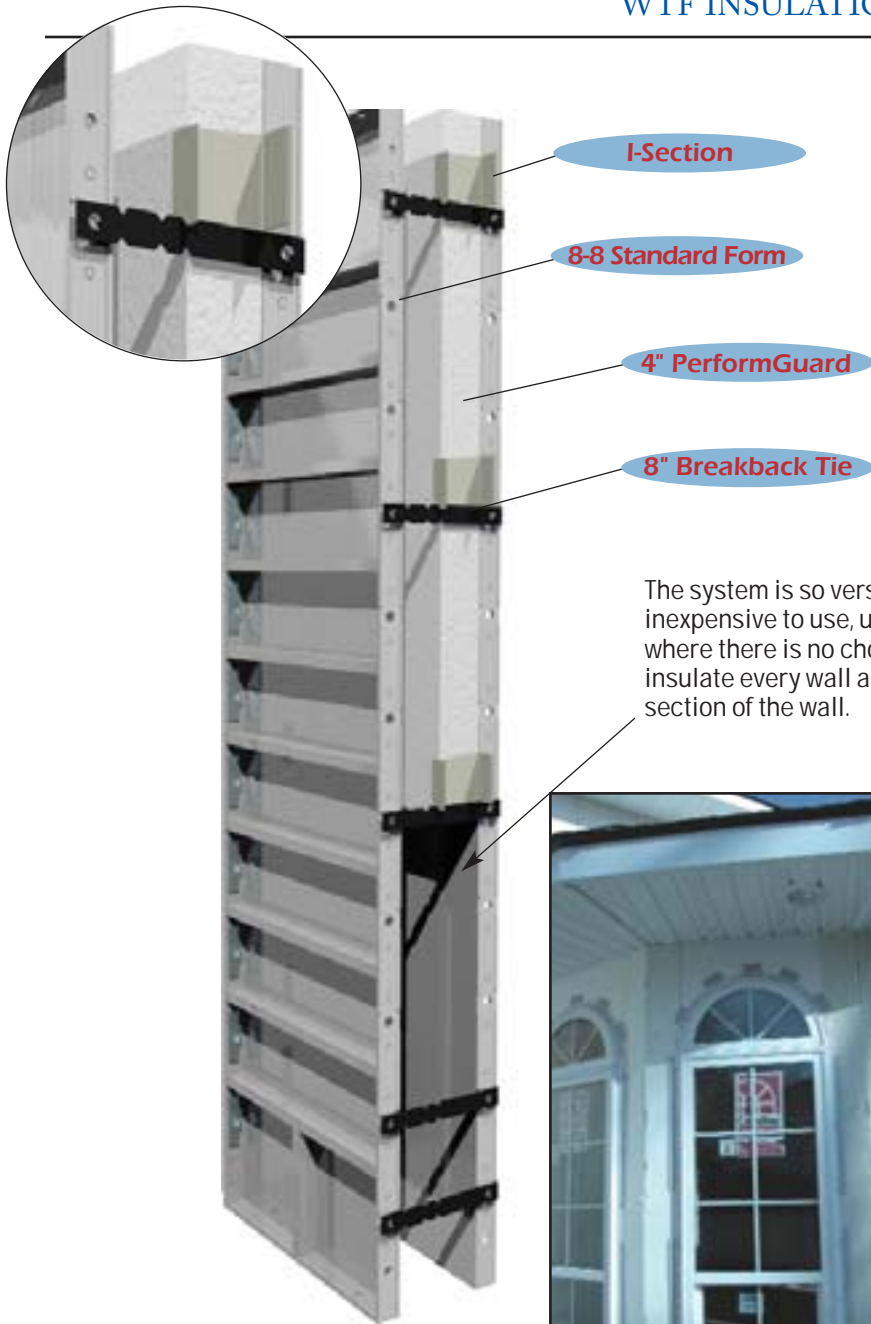
Insulation is begun at the corner utilizing the WTF F-Section.



Outside form is put into place.



WTF INSULATION



The system is so versatile and inexpensive to use, unlike ICF's where there is no choice but to insulate every wall and every section of the wall.



The process is then continued throughout the wall. Fillers will need to be sized for appropriate locations and "T" walls. Once the setting is complete, concrete can be placed.



Once the concrete work is complete, the F, I and T Sections can be utilized as attaching points for various external finishes.



When testing the adhesion between the insulation and poured in place concrete with no retainers used, the conversion rate is 1,150 lbs. of pull per square feet.

Wall-Ties & Forms recommends PerformGuard® EPS, a (registered) trademark of AFM Corporation. *Tested against termites and carpenter ants. Manufacturer has specific species on file. PerformGuard is not a barrier system. Insects may enter through other access areas. AFM products are produced exclusively by Partner Plants in AFM Corporation. PerformGuard, and AFM are registered trademarks of AFM Corporation.

**Protected under U.S. Patents No. 5,194,323 and No. 5,720,108. Other U.S. and Foreign Patents Pending.

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WATERPROOFING AND DAMPPROOFING PRODUCTS

DECO 20 SEAL™

DECO 20 SEAL is a code approved waterproof gray coating. The product will bridge cracks and stop water that is under hydrostatic pressure. DECO 20 SEAL is used with an airless sprayer to waterproof the exterior of poured concrete, pre-cast, or masonry block foundation walls. DECO Tie Patch replaces tar patching products used to seal tie ends.

- ~ NO SPECIAL CLOTHES OR RESPIRATORS NEEDED FOR APPLICATION
- ~ WATER CLEAN UP
- ~ CAN BE PAINTED
- ~ CAN WATERPROOF THE ENTIRE WALL TOP TO BOTTOM
- ~ NO GRADE LINE PROBLEMS
- ~ CAN APPLY TO DAMP WALLS
- ~ MANUFACTURER'S WARRANTY

Available in:

DECO 20 Seal-55 gal. drum #DECO2020000000
 DECO 20 Seal-5 gal. pail #DECO2010000000
 DECO Tie Patch-1 gal. pail #DECO0500001000



SEE ICC Evaluation Service Report #1416.

DECO 20 CLEAR™



SEE ICC Evaluation Service Legacy Report #93-04.

DECO 20 CLEAR is a code approved penetrating sealer. The product is primarily used to dampproof the exterior of poured concrete, pre-cast, or masonry block foundation walls. DECO 20 CLEAR can also be applied to the inside of existing walls to stop moisture penetration.

- ~ NO SPECIAL CLOTHES OR RESPIRATORS NEEDED FOR APPLICATION
- ~ NO VOC'S MEANS NO SOIL CONTAMINATION
- ~ SPRAYER AND HANDS CLEAN UP WITH WATER
- ~ CAN BE PAINTED OR COATED
- ~ CAN BE APPLIED TO DAMP WALLS
- ~ CAN BE APPLIED TO THE COMPLETE FOUNDATION WALL
- ~ NO GRADE LINE PROBLEMS ASSOCIATED WITH TAR
- ~ DRIES CLEAR WITHIN 2 HOURS, NO BACKFILL INTERRUPTIONS
- ~ APPLY WITH HAND SPRAYER, NO EXPENSIVE EQUIPMENT
- ~ FAST APPLICATION SAVES TIME
- ~ MANUFACTURER'S WARRANTY

Available in:

5 gal. pail ~ Product #DECO2000000000

Lightweight stainless steel hand held tank with 4' hose and gun.



5 gal. spray tank ~ Product #SPRA1000000062



WATERPROOFING AND DAMPPROOFING PRODUCTS

DECO 20 DAMPPROOF COATING™

DECO 20 Dampproof Coating is an emulsion material for dampproofing of concrete and masonry block foundation walls. DECO 20 Dampproof Coating is a special formulated coating designed for the environmental requirements in the dampproofing industry. DECO 20 Dampproof Coating contains no mineral spirits or petroleum products. DECO 20 Dampproof Coating meets EPA and OSHA requirements for clean air.

- ~ CAN BE APPLIED DIRECTLY TO DAMP WALLS AND TOP OF FOUNDATION WALLS
- ~ NO GRADE-LINE PROBLEMS ASSOCIATED WITH TAR
- ~ ONLY ONE APPLICATION REQUIRED
- ~ DRIES GRAY, NO ODOR
- ~ SURFACE CURE WITHIN 24 HOURS
- ~ CAN BE PAINTED OVER COATING
- ~ AIRLESS SPRAYER APPLIED
- ~ CONTINUOUS COATING, ELIMINATES SEAMS
- ~ TESTED BY SGS U.S. TESTING CO., INC.
- ~ TECHNICAL ASSISTANCE AVAILABLE



PLATON FOUNDATION PROTECTOR

Eliminate leakage callbacks with this performance proven, environmentally friendly HDPE membrane.

Double Leakage Protection

- Platon provides a Permanent Barrier**
The uniquely dimpled, 24-mil, high density polyethylene membrane provides a waterproof barrier from finished grade to the footing drain. The wall can shift, crack and settle over time without affecting PLATON's performance.
- Platon provides Drainage – (Only if needed)**
The dimples create a ¼" air gap behind the membrane. If punctured, any water leaking by flows to the footing drain, not into the basement.
- For Triple Leakage Protection (the ultimate) install PLATON over DECO 20 SEAL.

Features and Benefits Ordering Information



National Evaluation Service Report
#NER 514

New Speedclip Installation is twice as fast and three times stronger than “plug and washer” installations.

All weather installation makes scheduling easy. Platon can be hand nailed (green concrete) while the forming crew is on the job-site stripping forms.

No additional protection needed.

Exceptional (¼"+) crack bridging ability.

Overlap 6" horizontally for deep foundations to 16'.

Use under slab instead of 6-mil poly (which gets brittle over time) for a permanent moisture barrier.

Platon Membrane – 65'6" rolls x 8' rolls (525 sq. ft)

#WATR0000100000

Platon Speedclips – Box Of 325 (for 5 rolls)

#WATR0000140000

Platon Plugs – bag of 250

#WATR0000110000

Platon Washers – bag of 65

#WATR0000120000

Platon Moulding – 6'6" strip

#WATR0000130000



WINDOWS

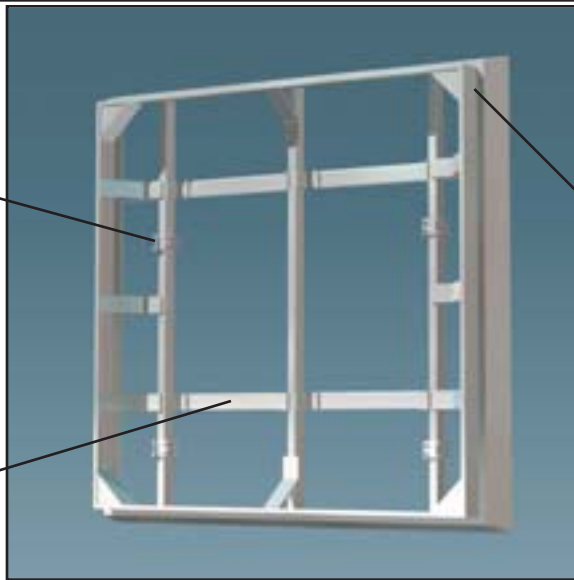
WTF WINDOW MOLD



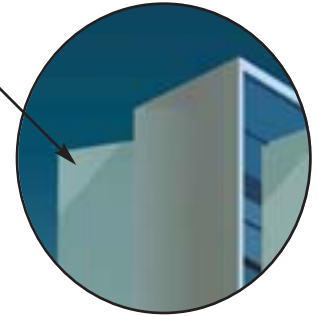
Window mold is designed to hang from ties.



Can also be built to allow attachment to forms with nails.



One-piece window mold allows use of the following three window systems.



Other window molds and window systems available including Pour in Place Windows.

Various sizes available
Specify wall thickness

Collapsible window mold available
Patent Pending

WTF VINYL EXTERIOR MOUNT WINDOW

Available sizes:

- 2814
- 2818
- 4036
- 4040
- 5040
- 6040



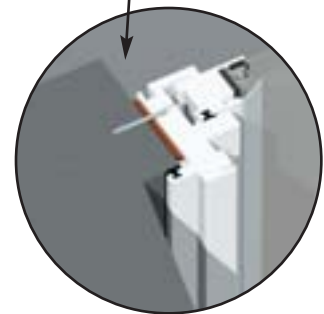
Window well and well clips available

This window is made of vinyl and is double glazed. Also includes screen.

Meets NFRC 100 certification

Also available with:
~ Window grids
~ Low E
~ Argon filled

Window is installed using tapcons and caulk. The window is mounted from the exterior of the wall.



WTF VINYL INTERIOR MOUNT WINDOW

Available sizes:

2814
2818
4036
4040
5040
6040

Also available with:

~ Window grids
~ Low E
~ Argon filled

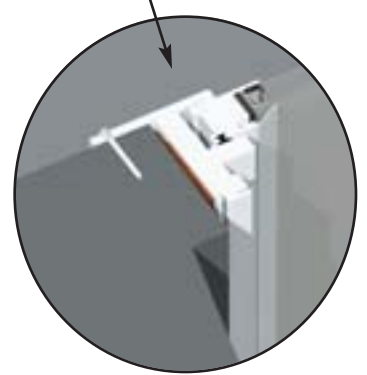
Window well and well clips available



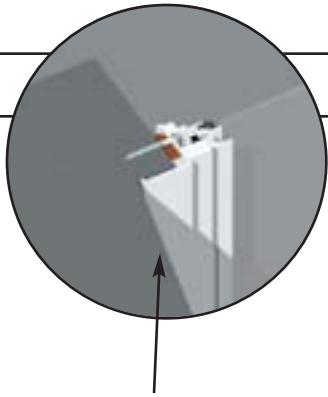
This window is made of vinyl and is double glazed. Also includes screen.

Meets NFRC 100 certification

Window is installed using tapcons and caulk. The window is mounted from the interior of the wall.



EXTERIOR/WHITE PAINTED ALUMINUM WINDOW



Window is installed using tapcons and caulk. The window is mounted from the exterior of the wall.

Available sizes:

2814
2818



Available in single glaze

BUCKO VENTS

Constructed of painted steel. Manufactured with sloping sills to fit most wall thicknesses. This buck stands on its own strength, no auxiliary bracing needed during pour. Complete with screen and adjustable louvre's.



FOUNDATION VENTS

Our foundation vents are die cast, all metal, and open to the outside. The foundation vent is placed with the WTF Reusable Steel Buck.



VENT BUCKS



Vent Buck extensions also available.



STAY IN PLACE WINDOW BUCK/FRAME

ENERGY EFFICIENT WINDOW

- Easy care
- Insulated
- No condensation or frost build-up
- Clean appearance



STEEL SAFETY-GRATE

- Provides security and protection from debris and fall-ins
- Lightweight for quick and easy escape



EASY-WELL

- Strong 1" profile 18 gauge white painted steel
- Double-ribbed, extra strength corners reduce bracing needs
- Now available in one piece up to 60"



HIGH-GRADE STEEL EGRESS LADDER

- Provided where needed for quick and easy emergency escape
- "Sure-step" rungs provide slip resistant use



EASY ASSEMBLY

- Well mounts easily and directly to Buck frame using 1/4" case hardened screws
- No drilling required
- No wedge anchors required
- Simple, yet durable mounting saves time and money

BUCK FRAME

- Heavy-duty galvanized steel
- Extra strength 3" profile
- Precision engineered, non-welded corner joints
- Rust and corrosion free



EASY-BUCK



Buck frames are manufactured from 18 gauge galvanized steel and feature a precision engineered 3" profile, offering superior strength and lifetime durability. Corners are constructed by an advanced non-welded manufacturing process, eliminating potential points of weakness and areas for rust formation.

INSULATED VINYL OR MILL FINISH WINDOW



Made of attractive white vinyl, Easy-Buck insulated windows are not only clean in appearance and easy to care for, they provide an increased insulation (R) value, greatly reducing heat-loss and completely eliminating condensation and frost formation. ***Optional aluminum is also available.**

EASY WELL



The Well is made from heavy duty 18 gauge white painted steel. It features a 1" profile with expertly designed double-ribbed corners for added strength, reducing the need for extra bracing.

SAFETY-GRATE



Strong enough to stand on, yet light enough to push off for emergency escape, the safety grate shields windows from flying debris, and more importantly, provides protection for individuals from accidental missteps.

(see page #49 for pour-in-place Egress Well.)



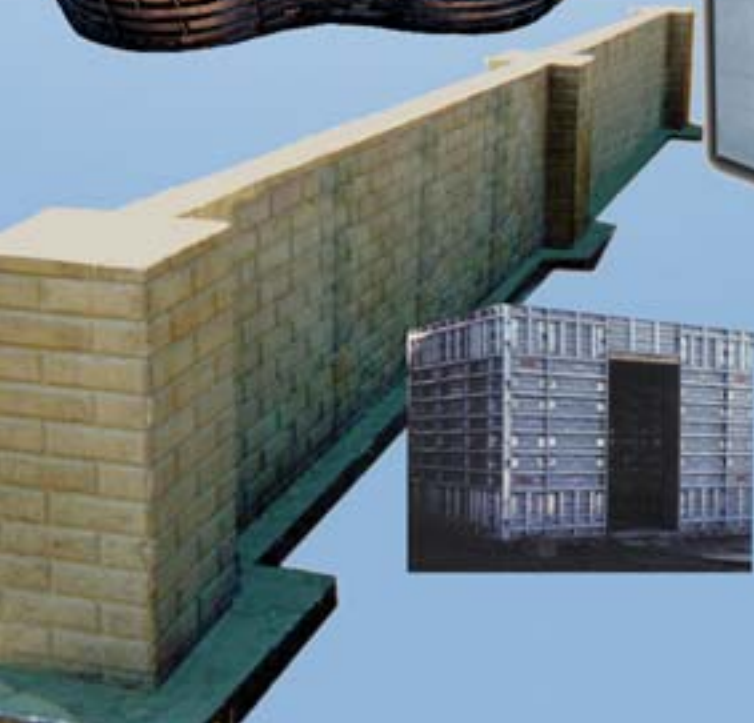
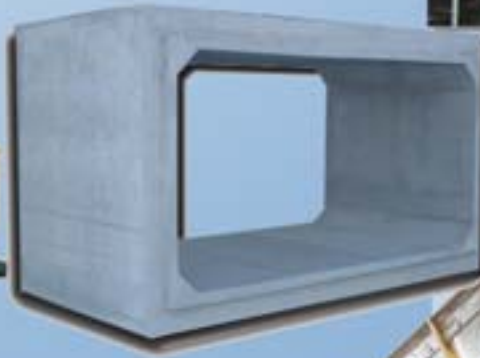


Foundations • Crawl Spaces • Concrete Housing
International Housing • Swimming Pools
Safe Rooms • Post & Beam • Fence • Steps



SYSTEMS

While WTF forms can be used for an infinite number of concrete forming applications, the following systems are areas WTF has received industry recognition as the world leader.

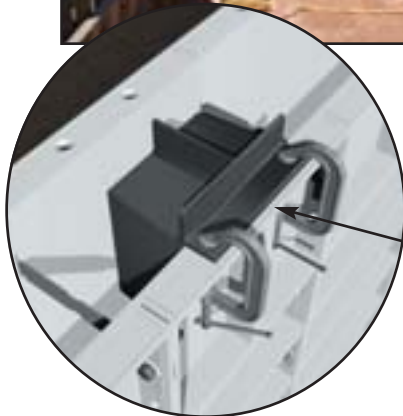


Foundation Systems

As the premier manufacturer and distributor of concrete forming products, Wall-Ties & Forms has developed the Foundation System for contractors specializing in concrete foundation work. Regardless of the application, from simple structures to the most complex custom homes, our Foundation System will meet your needs.



The key to your success in the competitive foundation construction industry is profitability. We know that lower costs and higher profits are determined by productivity. That's why we designed our foundation wall forming system to be fast and easy to use. WTF equipment is lightweight, and incredibly durable ensuring years of on-the-job use.



Beam Block (see page #48)

Hole Patterns Available:

6-12

8-8

8-24

Other hole patterns available upon request

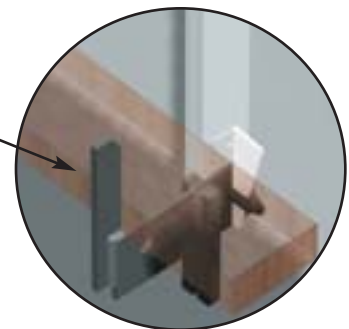
Full Panels 36" wide

Fillers 35" - 1" wide in 1" increments

Largest selection of smooth and brick-faced forms available in the market today.



The WTF Foundation System comes with all the equipment you need to form and pour concrete walls in virtually any configuration. You won't find a more versatile system in the marketplace.



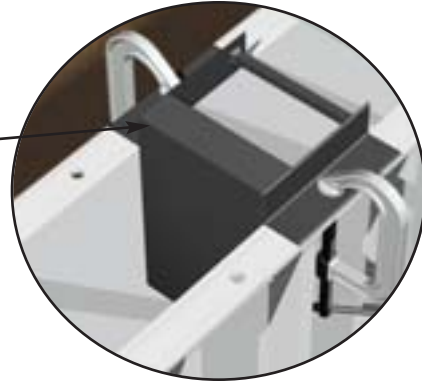
Steel Waler Bracket (see page #37)



Foundation Systems



Blockdown (see page #49)



Blockoff/Blockback (see page #50)



In addition to the Foundation System WTF offers unique and innovative form designs for crawl space applications.

- ~Our panels have been field-tested for over 20 year and stand up to rugged daily use.
- ~They're stronger, lighter and have more surface area than wood-component panels.
- ~Uncomplicated pin, wedge and flat tie assembly makes on-site placement and stripping fast and easy.
- ~Our tough, sturdy aluminum forms are easy to transport, handle and set.

All these factors increase
your bottom line!



Crawl Space Systems

Round Column
(see page #28).



1. Panels are available in smooth or brick design.
2. Laydown Panels are recommended for low crawl space heights, greatly reducing time and labor required for installation.
3. Forms for columns are available in a wide range of sizes and shapes including circular as shown here.



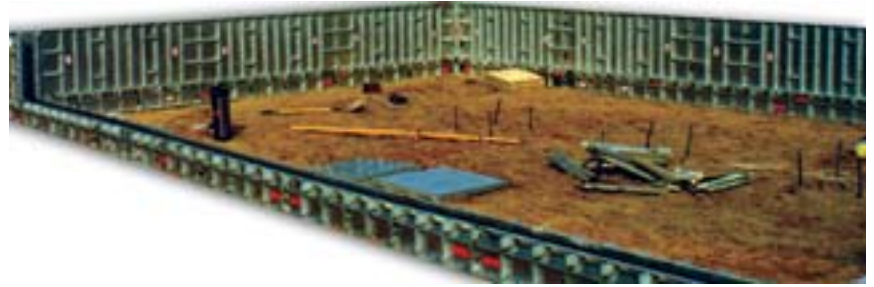
Cast in placed Vents are available and installed prior to concrete pouring thereby reducing installation costs.



Smooth Brick Forms (see page #16).



Crawl Space Systems



4. The WTF Crawl Space System is designed to suit the customers' requirements.

Specially designed system for integrated wall and footing construction is one of our latest innovations. The systems allows for the monolithic concreting of footings and walls resulting in:



9' Sections allow for fast setup and tear down. (see page #29)



- A. Reduced construction time and labor cost.
- B. Less susceptibility to water leaks because footing/wall joints are eliminated.
- C. Simplified inspection process in many cases.



Column and footing design in one placement.



Precast Concrete Forms Systems

With over 20 years of providing form solutions for precast professionals WTF Precast Concrete Form Systems are ideal for many precast challenges. WTF lightweight modular forms can create an infinite number of size and shaped precast concrete structures including but not limited to the following.



BOX CULVERT





JUNCTION BOX



MODULAR JUNCTION BOX



GRATE INLET



CURB INLET

We provide cost efficient solutions to complex forming problems by giving you:

1. Simple to use form systems.
2. Heavy duty, yet lightweight forms.
3. Long lasting, low maintenance system.
4. A form system that will help you produce higher quality end products.



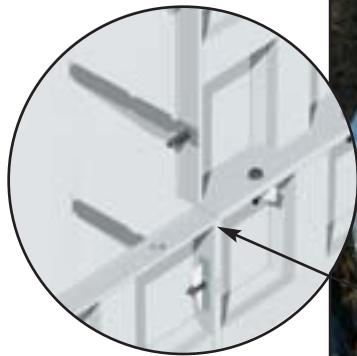
Agricultural Systems

Wall-Ties & Forms has served the agricultural community for over two decades and our commitment to providing the best concrete forming system grows each year. WTF's innovative design, long lasting products, ease of setup and speed of construction assure that you won't be confined by inferior or restrictive products. Whatever size or shape you need to produce, whatever type of enclosure you want to build, the Wall-Ties' Agricultural Systems has a confinement system for farm related operations that will meet your specific demands.

Animal Confinement Systems

The Wall-Ties' Animal Confinement System contains everything you need to pour a concrete walled pit for sewage storage. Our design uses a double-punched end bar to produce an offset ledge to support the slats.

WTF Animal Confinement concrete forms can be designed for use both horizontally and vertically to produce varying wall heights and odd-sized confinement pens. Whether specific requirements call for Deep Pit construction with an 11' pump-out pit or Shallow Pit construction with a 1' deep holding tank, Wall-Ties Systems' concrete forms do the job pour after pour.



Offset Endbar Panel
(see page #29)



Round Column Form
(see page #28)



Water Storage Systems



Standard flat panels from Wall-Ties & Forms produce round, square or rectangular tanks, regardless of size. The basic Water Confinement System can be configured to fit any job site and meet any contractor need. All the legendary aspects of WTF Agricultural Series forms - speed of construction, reusable forms, minimal maintenance and the simplicity of the system - are contained in the Water Confinement System.



"Speed of construction, reusable concrete forms, minimal maintenance and the simplicity of the system - are contained in the Water Confinement System."



Concrete Forms Step Systems

The WTF Concrete Steps are custom built to the customers specifications.

- Residential Steps
- Commercial Steps
- Available in open or closed Tread Steps



Concrete Forms Step Systems

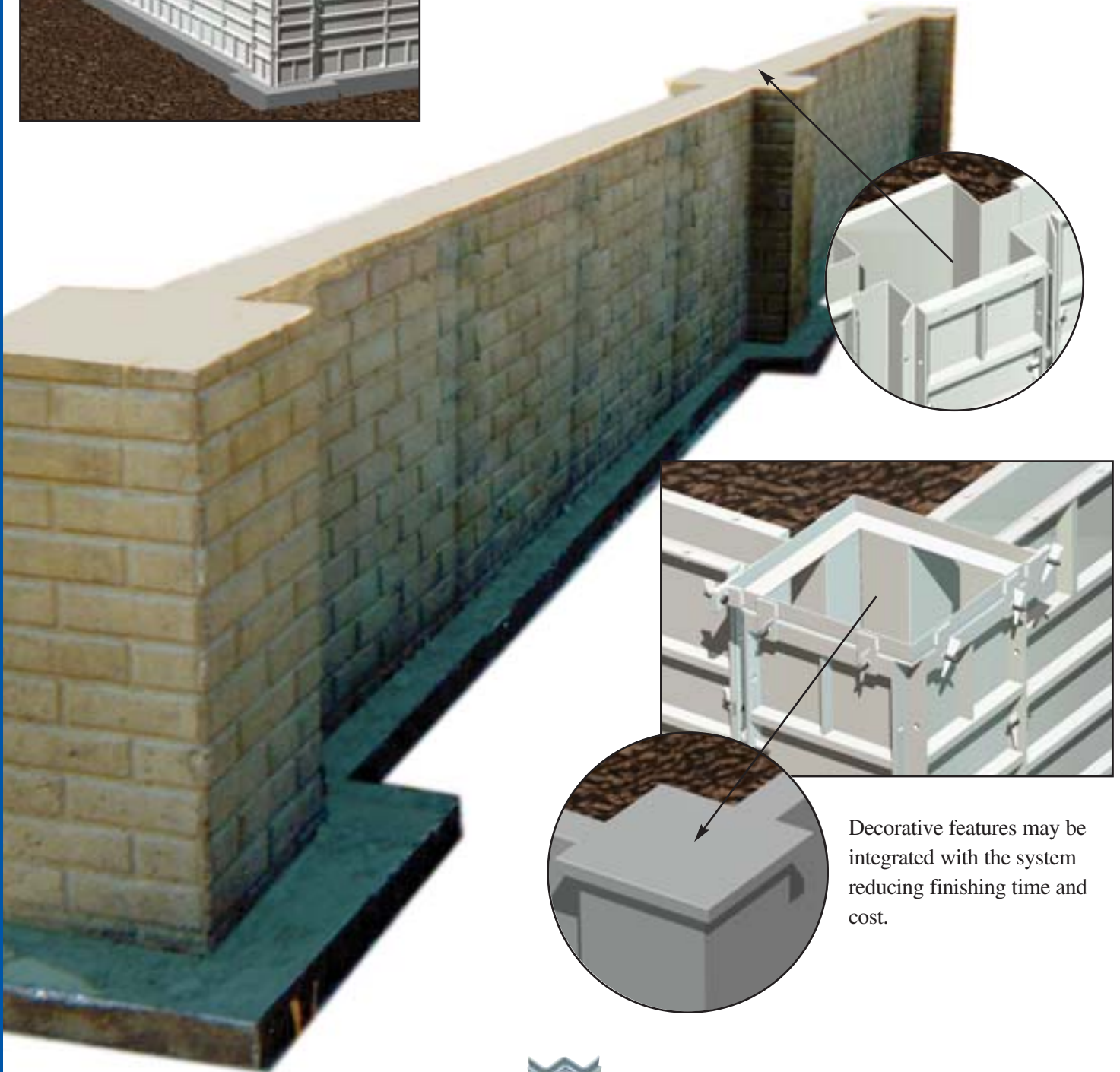
Our step system is easy to install, professional looking and a beautiful addition to any home.



Concrete Fence Systems



WTF Fence System is designed for ease of use with minimal maintenance. Our systems offer flexibility and a wide variety of designs. Face sheets are available in smooth, smooth brick, textured brick and vertibrick designs. Walls are designed to integrate with columns, column spacings are adjustable with the use of fillers.



Decorative features may be integrated with the system reducing finishing time and cost.



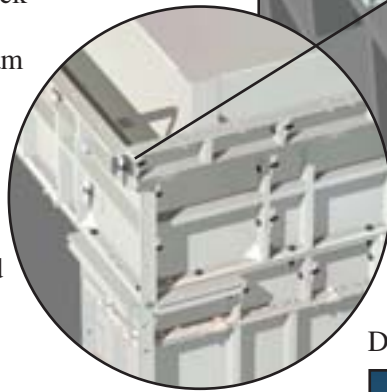
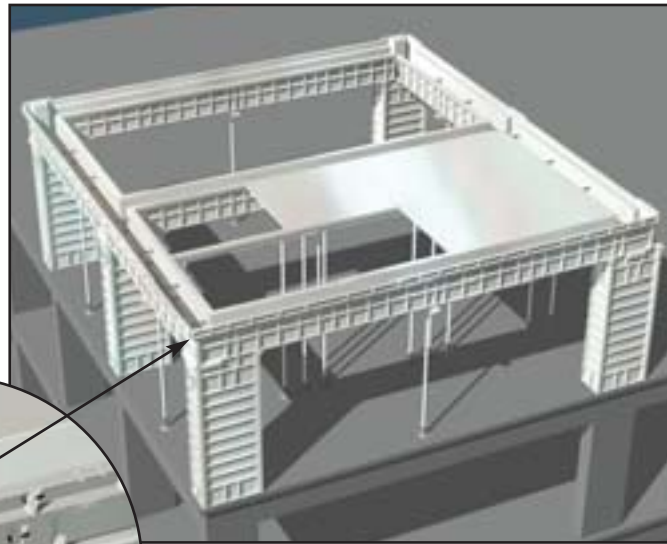
Post & Beam Systems

WTF has designed Post & Beam Systems for many applications in the International and Domestic markets.

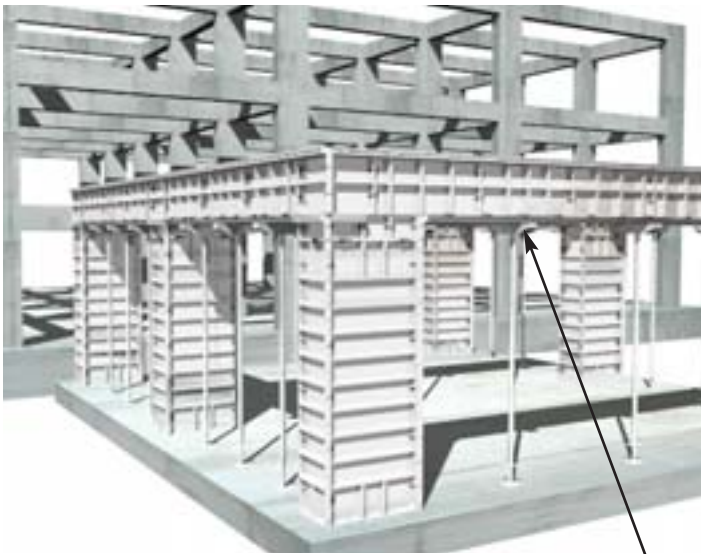
Our Post and Beam Concrete Forms are optimally designed to produce variable concrete sections, keeping forming costs to a minimum. The design process is centered around the customers needs by providing the following options:

1. Combination of any structural members:
Post, Beam, Walls and Deck
2. Blocked-out areas for Beam interconnection
3. Fixed or adjustable Post & Beams
4. Arched Beams and Round Columns available

Deck System may be incorporated into the Post & Beam System (see page #30-31).



Decorative Cantilever Beams and Deck available.



Beams are designed with drop head jack post to enable stripping of forms once minimum required strength is achieved. The drop head stays in place until design strength is reached. (see page #30-31)



Swimming Pool & Spa Systems

After many years of product engineering, evaluation, consultation with installers, and on-site inspections, Swim-crete Pool Products, a division of Wall-Ties & Forms, Inc. continues with our revolution in vinyl liner and all-concrete pool construction. We are ready to explain the simplicity of the system and show you how unskilled labor and readily available materials can cut costs and building time while allowing your customer a better product. We know you'll be impressed by the ease of construction utilizing the Swim-crete system as well as the number of possible configurations available.

Vinyl Liner Pool Construction

Vinyl lined concrete walled pools, built with Swim-crete Concrete Forming System, are assured to have more strength and durability than current traditional methods. Utilizing the Swim-crete Swimming Pool System you'll do more pool installations each year. Additional profit gain is guaranteed because you take the forms home when you're finished, not leaving them buried in someone's back yard! The advantages of Swim-crete Pool Systems are numerous:

- 1. You set, pour and strip in 24 hours
- 2. Integrated steps
- 3. No expensive pool kits
- 4. Over 100 different pool configurations



EXCAVATION



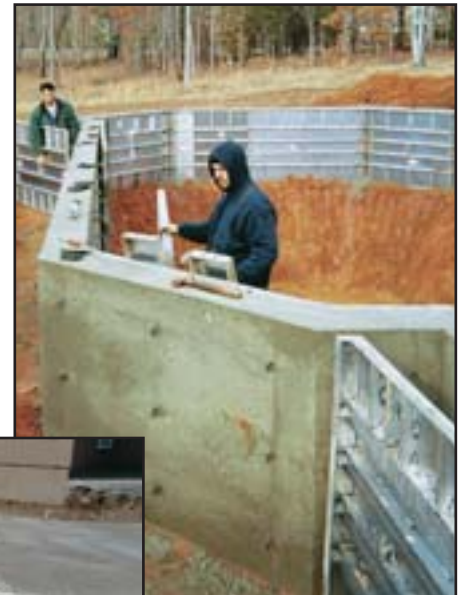
SETTING FORMS



CONCRETE STEPS



FIBERGLASS STEPS



FORM REMOVAL



PLACING CONCRETE

Swim-crete's vinyl liner concrete forming systems can easily be designed to also construct all-concrete swimming pools.



Radius Form (see page #15)



A division of Wall-Ties & Forms, Inc.



Swimming Pool & Spa Systems

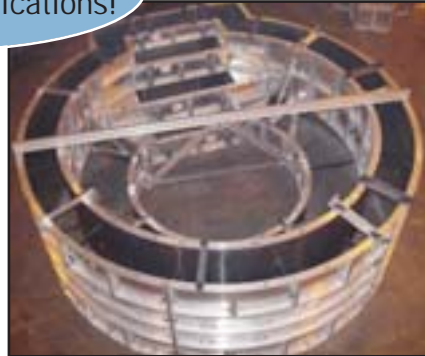
All-Concrete Pool & Spa Construction

The Swim-crete all-concrete pool system gives the gunite pool installers another option ensuring faster and more efficient construction. Swim-crete's all-concrete pool system is designed utilizing a monolithic pouring process for the swimming pool floor and walls. These are the advantages offered over the gunite method:

1. The simplicity of the system enables unskilled labor to be easily trained.
2. Concrete forming equipment is virtually maintenance free and it is not unusual to have a life span of 2,000 pours or more.
3. Smooth concrete wall finish upon stripping of forms reduces plastering materials and finishing time.
4. The design flexibility allows a concrete pool dealer to also install concrete wall vinyl liner pools.



Built to meet
Pool Dealer specifications!



SWIMMING POOL
& SPA SYSTEMS

Concrete Housing System

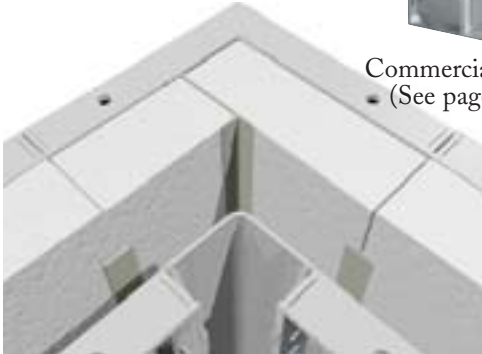
The Ultimate in Residential and Commercial Construction



Ledger System
(See page #30)



Deck System
(See page #30-31)



Commercial Forms
(See page #13)

Affordable
Energy Efficient
Low Maintenance
Comfortable and Quiet
Environmentally Friendly
Unparalleled Safety and Security

Insulation System
(See page #60-61)

SecureTech's state-of-the-art construction technology allows the contractor utilizing WTF components (commercial concrete forms, ledger system, deck system, and insulation system) to create a monolithic concrete structure that is unsurpassed in energy efficiency and strength.

**The SecureTech
Building System™
Is a Recognized
PATH Technology**
www.pathnet.org



From Unfinished Concrete to
Finished Steps and Walls



Concrete Housing System

Energy Efficiency

Because of concrete's natural thermal properties, SecureTech built homes stay warmer in the winter and cooler in the summer than traditional homes. SecureTech Homes™ consistently earn the EPA five-star rating. Homes with the ENERGY STAR label are designed to use less energy, help you save money on utility bills, and help protect the environment.



From Stripping of Concrete Forms to Finished Home

Appearance and Maintenance

Once cast, SecureTech Homes can be veneered with a wide range of attractive, low-maintenance materials: from stucco to vinyl siding to brick or stone.

SecureTech Homes can be built in your choice of architectural styles, including contemporary ranch, two-story colonial, detached or attached homes. Inside, plaster-finished walls with built-in concrete crown moldings achieve a superior appearance at a minimal cost compared to that of conventional construction.



From Unfinished Concrete Walls to Finished Kitchen



Concrete Housing System

Strength

In independent tests simulating 250 mile-per-hour ground level wind speeds equal to the strongest tornadoes and hurricanes, concrete walls consistently outperformed wood- and steel-framed walls for 1) stopping flying debris, the greatest hazard to homeowners during this life-threatening weather and 2) withstand collapsing and structure damage. Researchers under the direction of Ernst Kiesling, Ph.D., P.E. Professor of Civil Engineering, Wing Engineering Research Center at Texas Tech University concluded that walls built with wood or steel studs lack the strength and mass to resist the impact of wind-driven debris, while concrete walls consistently stood up to the test.



In various strength tests, concrete proved two to four times stronger than the maximum wind load and five to nine times stronger than the maximum earthquake load - bending strength considerably greater than the standards required by the Uniform Building Code.

In countless fire wall tests, concrete has proven itself as one of the most fire- and heat-resistant construction materials. Unlike wood or steel, concrete does not burn, soften, or bend, so concrete structures are most likely to remain standing through a fire.

Unlike wood framing, concrete is not susceptible to rotting wood or damage by insects, like termites, that can cost thousand of dollars to treat or repair.

Rock Solid: The SecureTech Construction Process

SecureTech state-of-the-art construction technology allows your builder to cost efficiently create a home that is structurally safe, secure, low maintenance, low insurance cost, environmentally friendly, comfortable and quiet.

1. Wall Forms: After placing a reinforced structural slab for the home, aluminum concrete forms (8' plus tall) are erected creating 4" reinforced concrete walls with 2" of insulation on the exterior and 6" concrete floor/ceiling.

2. Electrical: Electrical boxes, conduit, plumbing, and mechanical sleeves are cast in place.

3. Placing Concrete: Concrete is placed into the wall and deck forms. In just one day, the reinforced concrete achieves minimum design strength and forms are removed with the jack posts staying in place. Work begins on the second level if a two-story structure. Walls, ceilings, and stairs are placed monolithically.

4. Interior Wall: Because the finished interior concrete walls and ceiling are so flat and smooth, drywall is not needed. Walls and ceilings are plastered, sanded, touched up, and painted.

5. Exterior and Roof: The exterior can be finished with stucco, brick, or other commonly used siding materials. The roof is conventionally framed of dimensional lumber or wood or steel trusses atop the concrete deck that forms the first or second level's ceiling. This allows architectural flexibility in roof design while keeping the wood or steel used for the roof framing outside of the home's fire-resistant thermal concrete envelope.

6. Finished Product: A beautiful new SecureTech built home.

1



WTF Safe Room/Concrete Forming System

Texas Tech researchers collaborated with FEMA on the development of safe rooms, drawing on 25 years of field research. Their work has included studies of the performance of buildings following dozens of tornadoes throughout the United States and laboratory testing on the performance of building materials and systems when impacted by airborne debris. These shelters are designed to provide near absolute protection to you and your family from the high winds expected during tornadoes and hurricanes and from associated flying debris, such as wood studs, that tornadoes and hurricanes usually create.



Properly constructed concrete safe rooms will withstand up to an F5 tornado. Living proof: May 3, 1999 Del City, Oklahoma - this master bedroom closet, a concrete safe room, protected the owner and her family from an F5 tornado with winds in excess of 260 mph.



The WTF Safe Room Concrete Forming System incorporates wall, ledger and deck forms to create the desired size of safe room which enables the contractor to pour a monolithic structure that meets FEMA guidelines. This system was designed to meet contractor specifications. The Insulation System may also be incorporated into safe room structures. Safe rooms can be built detached or incorporated into the design of a home. Above ground shelters offer easy access for all ages and anyone with special needs.



Federal Emergency Management Agency



WTF Saferoom/
Concrete Forming System

International Housing

Single Family, Mass Housing & Multi Stories

With the demand for well-constructed, affordable housing at an all-time high, WTF International Housing Systems provide:

- ~ Lower Material & Labor Costs
- ~ Speedy Construction
- ~ Increased Worker Productivity
- ~ Higher Profits
- ~ Ease of Use
- ~ Simple Assembly
- ~ Strong & Durable Forms
- ~ Superior Finished Products



Tijuana, Mexico



Our International Aluminum Forming System provides low cost construction and rapid completion of residential or commercial, single or multi-level structures.



Guadalajara, Mexico



International Housing

- ~ Aluminum forms and concrete construction are very cost effective - especially when wood products are scarce.
- ~ Poured concrete has greater strength compared to block construction. The quality of a poured concrete wall made with aluminum forms is superior to alternative methods.
- ~ Aluminum concrete forms are very durable. With proper use and maintenance, they will last for a decade or more.
- ~ One crew can set forms for a 60 square meter home in one day.
- ~ Aluminum forms are a lightweight, hand-set system. The largest component can be handled by one person.
- ~ With a simple training program, transform your unskilled labor into a highly productive workforce.



Philippines



Jamaica



International Housing

POUR IN PLACE DOOR BUCK

The Pour in Place Door Buck creates the opening and door jamb in concrete. The standard bucks are designed with the Stanley Door Hinge & Strike placement.

Standard sizes available:

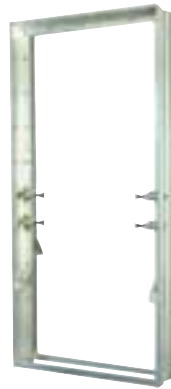
2'8" x 6'8"

3'0" x 6'8"

6'0" x 6'8"

Other sizes available upon request.

The Door Buck can be manufactured with different hinge & strike placement upon customer request. Specify for **footing use or slab use**.

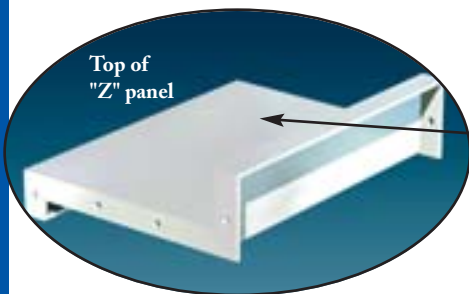


DOOR SPACER

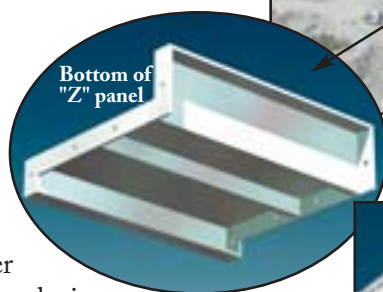


Medium-High Rise Housing

For the last several years WTF has been involved with medium and high rise construction in South America and Asia.



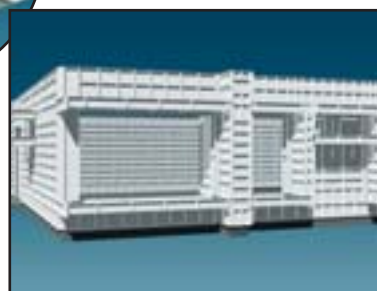
Top of "Z" panel



Bottom of "Z" panel

One of our design innovations is the Z-Panel. This simplifies the form assembly for Bay Windows and other cantilevered features by reducing the number of parts needed.

We are constantly developing time-saving solutions to many of the forming challenges of high rise construction.



Our Form Systems allow integration of all structural members (load-bearing walls, columns, beams, decks, stairs) as well as non-structural members (partitions, architectural features).

Concrete Housing System

Wall-Ties & Forms, Inc. is Partnered with or Endorses the following Government Programs in conjunction with SecureTech Building™ and Safe Room Systems.



The ENERGY STAR® Homes Program, established by the Department of Energy and the Environmental Protection Agency, promotes partnerships with homebuilder's to construct highly energy-efficient new homes. An energy efficient, ENERGY STAR Home significantly lowers utility bills, reduces air pollution, and increases resale value. An ENERGY STAR Home uses at least 30 percent less energy for heating, cooling and water heating than a home based on the Model Energy Code, while protecting the environment and saving money.

SecureTech Homes™ consistently achieve energy rating under the EPA Energy Star Program.



The Partnership for Advancing Technology in Housing (PATH), established by the Department of Housing and Urban Development, is a voluntary initiative that seeks to accelerate the creation and widespread use of advanced technologies. The objectives of the PATH program are to improve the quality, affordability, durability, and energy efficiency of today's new and existing homes, to further strengthen infrastructures in the United States, and to improve the next generation of American housing. The partnership aims to develop innovative housing components, designs, and production methods that will reduce by 50 percent the time needed to move quality technologies to market.

The SecureTech Building System is recognized as a PATH technology.

FEMA

Federal Emergency Management Agency

Wall-Ties & Forms, Inc. has been named by the U.S. Federal Emergency Management Agency as "The Disaster Resistant Business of the Year".



The National Association of Home Builders (NAHB) Concrete Home Building Council represents the interests of concrete suppliers and concrete home builders. The CHBC's primary focus is to promote benefits of systems-built housing within the industry and to consumers and identify and work towards resolution of regulatory and legislative issues particular to systems-built housing.

The CHBC provides information, as well as a thorough introduction into systems-built housing and the benefits of this technology.

Wall-Ties & Forms, Inc. is a charter member of NAHB's Concrete Home Building Council.



Burial Chamber Forms



WTF was approached to design and manufacture a concrete forming system for multiple burial chambers in the Philippines. The final product is a concrete forming system that allowed the contractor to build eighty burial chambers or crypts per day using two sets of forms. This system is designed for multi-story use, a total of eight stories in this particular project. This enabled the owner to maximize the use of the land.



Each chamber is formed using a 4-piece panel set and 2 to 3 end block-offs. The concrete forms are designed to minimize the use of ties. Ties are used only on the outside end walls.





Wall-Ties & Forms, Inc.

4000 Bonner Industrial Drive Shawnee, Kansas 66226 USA
Telephone: (913) 441-0073 Fax: (913) 441-0076
Toll Free: (800) 444-9692

Credit Application

To induce Wall-Ties & Forms, Inc. (Seller) to permit _____ (Buyer) to purchase goods on credit (open account), Buyer represents and warrants that the following information is true and correct and agrees that Seller may rely upon the same as continuing to be true until notified in writing to the contrary by Buyer: (Fill out completely and, if faxed, please forward original.)

Firm Name _____ Phone No. _____

Office Address _____ Fax No. _____

City _____ Zip Code _____

Mailing Address _____ Type of Business _____

City _____ Zip Code _____

Name of Parent Company if subsidiary _____ Contractor's License No. _____

License in what name. _____ e-mail: _____

Operating as a Corporation Partnership Limited Partnership Individual State of Incorporation or Organization: _____

Bank _____ Branch _____ Phone No. _____

Address _____ Checking Account No. _____

In business since _____

Owner or Officer _____ Title _____ Home Phone No. _____

Residence Address _____ Social Security No. _____

Owner or Officer _____ Title _____ Home Phone No. _____

Residence Address _____ Social Security No. _____

Owner or Officer _____ Title _____ Home Phone No. _____

Residence Address _____ Social Security No. _____

Continued on reverse side

References: Please list your current major suppliers (at least three). Give only names of those you buy from on open account. *Please do not list subcontractors or revolving credit accounts. For maximum credit, please include your most recent financial statement.*

Name	Address	Phone No.	Account No.
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

Buyer certifies that the above information is true and correct and agrees to pay for all goods purchased in compliance with the terms of the Seller. Unless otherwise agreed to in writing, said terms are that all goods are to be paid in full 30 calendar days after the invoice date. If default be made in payment when due, the entire outstanding account balance, plus interest at the rate of 1.5% per month (18% per annum thereon, together with reasonable attorney's fee and all costs of collection that Seller may reasonably incur in the enforcement of the obligation. Seller and Buyer agrees that this contract is entered into at Shawnee, Kansas. Buyer expressly consents to venue, at Seller's option, exclusively in the District Court of Johnson County, Kansas. Buyer authorizes Seller to investigate from time to time Buyer's credit background through credit reporting agencies and references listed herein, and for all references to release any and all information. Buyer releases Seller from all liabilities resulting from any information released or obtained. Buyer acknowledges that Seller is under no obligation to sell goods to Buyer on open account or otherwise and such sales are at Seller's sold discretion.

_____	_____
FULL NAME OF COMPANY	SIGNATURE
_____	_____
DATE	NAME AND TITLE

CONTINUING PERSONAL GUARANTEE

(IF A CORPORATION IS APPLYING FOR CREDIT, THIS GUARANTEE MUST BE SIGNED BY A CORPORATE OFFICER(S).)

For and in consideration of selling any goods or materials to the above Buyer on account, or otherwise, by Wall-Ties & Forms, Inc., (Seller) I /We hereby, jointly and severally, absolutely and unconditionally guarantee the credit account, debt or obligation of the above named Buyer. This is a continuing guarantee and shall continue so long as credit is extended or the account, debt or obligation is open. I/We expressly waive notice of default, diligence, resort to security, any obligation to proceed first against debtor or any other guarantor, and joinder of debtor or other guarantors. I/We further agree to pay all attorney's fees, and costs and other expenses incurred in enforcement of the underlying obligation and this guarantee and agree that in the event of litigation, suit may be brought in the District Court of Johnson County, Kansas, at Seller's option. I acknowledge that this guarantee is binding upon me/us personally regardless of any corporate or other title I/we may affix or write next to my/our name(s) and/or signature(s).

Dated this _____ day of _____ 200_____

 GUARANTOR SIGNATURE / ALSO PRINT

The signature on this Credit Application, if transmitted by facsimile machine, will be acceptable and binding as if it were in the original.

 GUARANTOR SIGNATURE / ALSO PRINT

Wall-Ties & Forms is pleased to endorse the Concrete Foundations Association. . .

The Concrete Foundations Association was established in 1974 by a dedicated group of foundation contractors and suppliers for the expressed purpose of improving the quality and acceptance of cast-in-place concrete foundations. The group was originally called the Poured Concrete Wall Contractors Association but the name was changed in 1990 to encompass the full spectrum of concrete foundation construction.

The Concrete Foundation Association (CFA) provides promotional materials, educational seminars, opportunities for networking, technical and informative meetings for members. The CFA also publishes a newsletter to keep its members abreast of important developments in the industry and to inform them of progress on Board activities and committees.

The CFA also represents the interests of its members and the industry on several code and regulatory bodies. One of these entities is The American Concrete Institute (ACI). ACI is the recognized organization for the development of standards, guidelines, and design methods for the concrete industry.

•••••Partners in Concrete Foundations•••••

“The Concrete Foundations Association (CFA) has been important to the growth of our business since we joined in 1992. During that time we have had the opportunity to meet and become friends with members who have had similar experiences and challenges that come with owning and operating their businesses. Our business is family-owned, and our entire family benefits from the CFA meetings and the networking opportunities they provide. One new idea, whether it is from another contractor or a seminar can pay for all future trips to meetings.”

---Barry Herbert
Herbert Construction Company
Marietta, Georgia

“Membership in the CFA has been a great way for us to learn new technologies and operating methods that have truly added value to our business. We find the annual conventions a time to meet old and new friends in a very family-oriented forum. The seminars are educational and they keep us on top of the industry. I'm committed to the CFA. It's made all the difference in our business.”

---Bryan Herboldsheimer
H & B Foundations, Inc.
Denver, Colorado

“We have been members of the CFA since our business began in the late '80's and have loved every minute of it. In addition to being an invaluable arena for sharing ideas and learning great formulas for success, we've always felt we received a five-to-one return on our investment. Now, as a member of the Board of Directors, I have an opportunity to give back what I've gained from the CFA. It's a great organization to be a part of.”

---Tim Parrish
Cornerstone Foundations, Inc.
Harrisonburg, Virginia

For More Information on the CFA
Call 800-444-9692



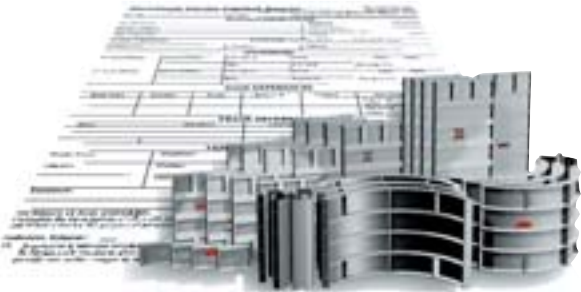
Need help with financing?

Aluminum Forms Capital Source knows and understands the concrete forming business. They have developed a number of leasing plans and provided financing for numerous contractors--from established companies to start-up businesses. And they're easy to work with. That's why WTF has formed an exclusive working arrangement with Aluminum Forms Capital Source.

Think about it. With a nominal down payment and minimal monthly payments, you can start pouring immediately with state-of-the-art aluminum forms from WTF. Typical lease terms range from two to five years and with the variety of plans available, one is sure to be right for you.

Compare the one time investment you make with aluminum forms to the continuous replacement costs you have with conventional forming systems. When you get right down to it, leasing WTF forms through Aluminum Forms Capital Source makes a lot of sense.

If you'd like further information about the advantages of leasing or would like to discuss your individual requirements, call today.



**ONE EASY FORM...
...ONE EASY FORM SYSTEM**
**AFCS is the best choice to obtain
financing for your business.**



Aluminum Forms Capital Source

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Kansas City, Missouri 64152

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Fax: (913) 441-0076

www.wallties.com



Wall-Ties & Forms, Inc.
Product Catalog



IT ALL STARTED WITH A WALL TIE...

Wall-Ties & Forms, Inc. (WTF) is one of the world's largest companies in the aluminum forming business, as well as the premier designer and manufacturer of aluminum forming systems. Over 25 years ago as a new business, WTF manufactured ties by the thousands. Today we produce and ship nearly 30 million ties a year and over 100,000 aluminum concrete forms.

It started in 1976 when Orval Engelken and Ross Worley, two men with extensive knowledge of the construction industry, chose to pursue the American Dream. They left long and successful careers, one a national sales manager and the other a product design and manufacturing expert, knowing they could do a better job.

Three principles guided them:

1. Produce the best quality and most labor friendly product.
2. Offer unsurpassed customer service.
3. Provide it all at a competitive price.

The rest is history!

Adherence to these core principles over the years has resulted in a nationwide distributor network and international recognition. WTF is the most successful manufacturer and distributor of forming systems in the aluminum forming industry today.

Orval Engelken and Ross Worley, founders of Wall-Ties & Forms, Inc.



- ~ **Customer-Oriented**
- ~ **Competitive Prices**
- ~ **Top Notch Quality Products**
- ~ **Superior Technical Support**
- ~ **Making Your Job Faster and Easier**

Wall-Ties & Forms, Inc.
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