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**Astrof Concrete Hardware & Rentals
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Concrete Forms

PREMIUM CONCRETE FORM – OLYMPIC PANEL

Barrier Form

Product: Exclusive, premium Phenolic/Melamine, white overlaid plywood with superior alkalinity resistance and durability for glossy finishes.

Features and Benefits:

- For high alkaline and abrasive concrete
- White reflects heat for controlled pours
- Best in table, gang and engineered systems
- Minimal wood grain and no patch transfer
- Increased number of pours and reduced cost/pour

Specifications:

Strength Class/Stiffness: Structure 1 equivalent

Thicknesses: 1/2", 5/8", 3/4", 1-1/8"

Panel Sizes: 2'x8", 4'x8'

Multipour Plus

Product: Premium Phenolic surface film, brown overlaid plywood with good surface durability for high gloss finishes on vertical concrete

Features and Benefits:

- For architectural high gloss concrete
- Vertical application only
- Balanced construction ensures panel stability
- Minimal wood grain and no patch transfer
- Increased number of pours and reduced cost/pour

Specifications:

Strength Class/Stiffness: Structure 1 equivalent

Thicknesses: 1/2", 5/8", 3/4", 1-1/8"

Panel Sizes: 2'x8", 4'x8'

Multipour

Product: Premium, high density, buff overlaid plywood with excellent surface durability for semi gloss finishes.

Features and Benefits:

- For architectural - smooth, textured or coated concrete
- Reduces potential vibrator damage
- Balanced construction ensures panel stability
- Minimal wood grain and no patch transfer
- Increased number of pours and reduced cost/pour

Specifications:

Strength Class/Stiffness: Structure 1 equivalent

Thicknesses: 1/2", 5/8", 3/4", 1-1/8"

Panel Sizes: 2'x8", 4'x8'

Classic HDO

Product: Premium, high density, buff overlaid plywood with good surface durability for semi gloss finishes.

Features and Benefits:

- For smooth coated concrete and engineered systems
- Enhanced alkalinity resistance vs. Doug Fir faced HDO
- Controlled hydration reduces Tiger Striping
- Minimal wood grain and no patch transfer
- Increased number of pours and reduced cost/pour

Specifications:

Strength Class/Stiffness: Structure 1 equivalent or Class 1

Thicknesses: 1/2", 5/8", 3/4", 1-1/8"

Panel Sizes: 2'x8", 4'x8'

SPEC SHEET FOR CONCRETE FORMS AVAILABLE UPON REQUEST

STANDARD CONCRETE FORM – OLYMPIC PANEL

Basic HDO

Product: Standard, High Density, buff overlaid plywood for low gloss finishes on smooth or coated concrete

Features and Benefits:

- Standard 100/30 performance
- Tough, anti-abrasion overlay
- Smooth finish; moderate grain and slight patch transfer
- Increased # of pours and reduced cost/pour

Specifications:

Strength Class/Stiffness: Class 1

Thicknesses: 1/2", 5/8", 3/4"

Panel Sizes: 4'x8'

B-Matte

Product: Standard, Medium Density, brown overlaid plywood for matte finishes; release coating factory applied

Features and Benefits:

- Matte finish for coated concrete
- Factory applied Nox-Crete Form Coat
- 2X the form oil retention of regular MDO
- Increased # of pours and reduced cost/pour

Specifications:

Strength Class/Stiffness: Structure 1 equivalent or Class 1

Thicknesses: 1/2", 5/8", 3/4", 1-1/8"

Panel Sizes: 2'x8", 4'x8", 4'x10'

Basic MDO

Product: Standard, Economy, Medium Density, brown overlaid plywood for matte finishes with release coating factory applied.

Features and Benefits:

- Matte finish for coated concrete
- Factory applied Nox-Crete Form Coat
- Increased # of pours and reduced cost/pour vs. BBOES

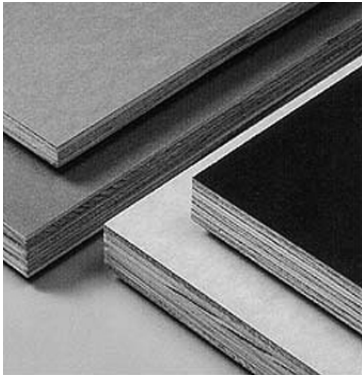
Specifications:

Strength Class/Stiffness: Class 1

Thicknesses: 3/4" only

Panel Sizes: 4'x8'

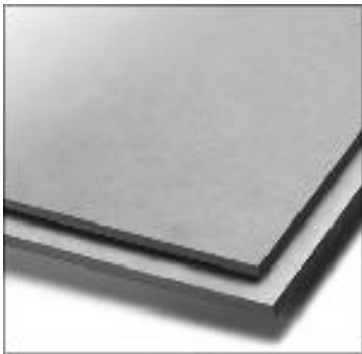
Panel Products



PREMIUM BARRIER FILM CONCRETE FORM

Barrier Film is an exclusive, premium Phenolic/Melamine, White overlaid plywood with superior alkalinity resistance & durability for glossy finishes. Panel is white to help reflect heat therefore a more controlled pour. Best in table, gang and Engineered Systems.

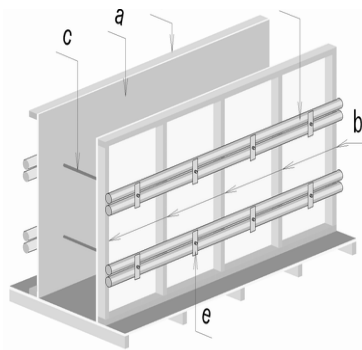
Description	Size	Additional Info
Barrier Film Panel	3/4" x 4' x 8'	44 Per Unit
Barrier Film Panel	1-1/8" x 2' x 8'	30 Per Unit
Additional Panel Sizes Available	1/2" 5/8" 3/4" 1-1/8"	Unit Sizes Vary



MULTI POUR CONCRETE FORM

Premium, High Density, Buff overlaid plywood with excellent surface durability for semi gloss finishes. For architectural - smooth, textured or coated concrete. Increased # of pours & reduced cost/pour.

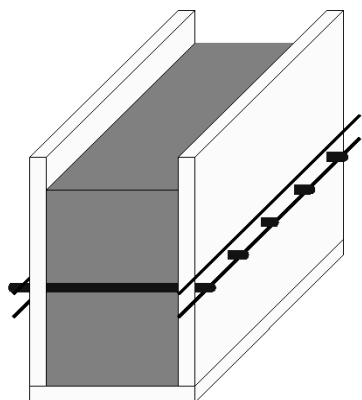
Description	Size	Additional Info
Multi Pour Panel	3/4" x 4' x 8' And 10'	44 Per Unit
Multi Pour Panel	1-1/8" x 2' x 8'	30 Per Unit
Additional Panel Sizes Available	1/2" 5/8" 3/4" 1-1/8"	Unit Sizes Vary



CLASSIC HDO CONCRETE FORM

This is the Highest Quality HDO Panel on the Market. Premium, High Density, Buff overlaid plywood with good surface durability for semi gloss finishes. For smooth coated concrete and engineered systems.

Description	Size	Additional Info
Classic HDO Panel	3/4" x 4' x 8' And 10'	44 Per Unit
Classic HDO Panel	1-1/8" x 2' x 8'	30 Per Unit
Additional Panel Sizes Available	1/2" 5/8" 3/4" 1-1/8"	Unit Sizes Vary



B-MATTE MDO CONCRETE FORM

Highest Quality MDO on the market. Standard, Medium Density, brown overlaid plywood for matte finishes; release coating factory applied. This is the most economical panel for Concrete Forming.

Description	Size	Additional Info
B Matte MDO	3/4" x 4' x 8'	44 per Unit
B Matte MDO	1-1/8" x 2' x 8'	30 per Unit
Additional Panel Sizes Available	1/2" 5/8" 3/4" 1-1/8"	Unit Sizes Vary

Rental Concrete Forms And Accessories

Rentals

Astrof Concrete Hardware rents a large variety of concrete forming accessories. Our forming accessories can be rented on a monthly, weekly, or daily basis. In addition to all the items below being available for rental, these items can also be purchased either new or used condition.

Next Day Delivery Is Available in most areas of Washington state and Northern Oregon for your rental needs and hardware accessories including pickup services when the job is completed. Call today to place your order (866) 787-9611

Two Week Rentals

These items are rented for a two week period with an additional one week grace period.

- 8'x 2'x 1 1/8" Concrete Forms - (Full Sheet)
- (7'thru1')x 2'x 1 1/8" Form Parts
- 8'x 1'x 1-1/8" Concrete Forms - (Full Sheet)
- (7'thru1') x 1'x 1 1/8" Form Parts
- 8'x 4'x 3/4" Concrete Forms - (Full Sheet)

Monthly Rentals

These items are rented for a one month period.

- Curb And Gutter Forms - (10' Steel)
- Sidewalk Forms - (10' Steel)
- Uni-Ply Commercial Forming - (Simons)
- Concrete Blankets
- 2"x (4"/6"/8"/10")x 12' Dementional Lumber
- Snaptie Wedge - (For Round Ties)
- Flat Wedge - (For Flat Ties)
- Jahn-A Shoe
- Jahn-Tie Extender
- Waler Brackets
- Liner Clamps
- Pencil Rod Clamps
- Form Brace Aligners - (Turnbuckles)
- Scaffold Bracket Round-Tie - (1 1/8" Forms)
- Scaffold Bracket Flat-Tie - (1 1/8" Forms)
- Scaffold Bracket Jahn - (3/4" Forms)
- Metal Stakes - (18" or 24" or 36")
- Screed Hooks
- Rebar Caps
- She Bolts
- Cat Heads
- Square Washers 3"x 3" - (Hole Size 1/2", 5/8", 3/4")

Daily Rentals

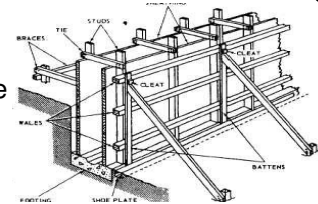
These items are rented for a 36 hour period.

- Concrete Stamps

RENTING VS. BUYING

1

We are experts in our field with over 20 years experience in the foundation and construction industry.

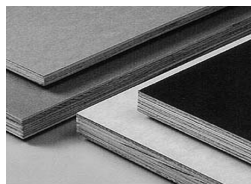
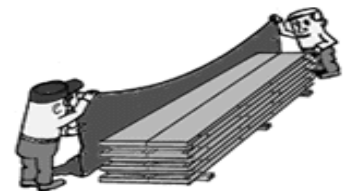


We Will read your blueprints to assure you have ordered the correct amount and type of equipment needed for your specific job, saving you valuable time and money.

2

3

No need to store items you use infrequently.



You will save money when you rent an item for only a fraction of the purchase price.

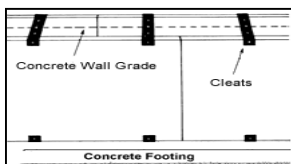
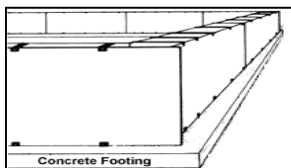
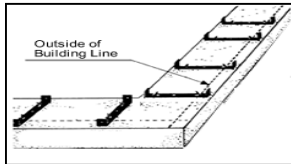
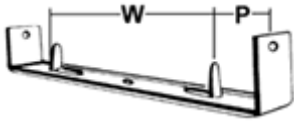
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We will save you time and money offering you next day delivery and pick up services.



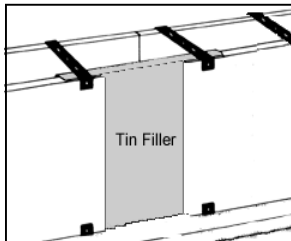
Forming Clips And Cleats



CLEATS FOR WALLS

Cleats are used to hold forms in place while placing concrete forms during a pour. The top cleats are removed during stripping and saved for the next job. Cleat widths are available in 1" increments from 5" to 24". Other sizes are also available upon request. Cleat ends are also available in 3/4", 1-1/8" & 2" for forming.

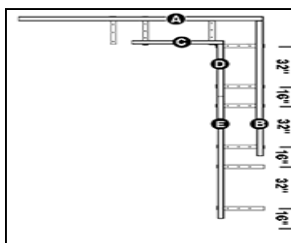
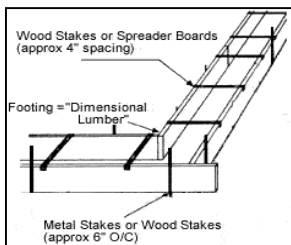
Description	Size	Additional Info
6" Cleats With 1-1/8" or 3/4" Ends	6" x 1-1/8" or 3/4"	100 To A Box
8" Cleats With 1-1/8" or 3/4" Ends	8" x 1-1/8" or 3/4"	100 To A Box
10" Cleats With 1-1/8" or 3/4" Ends	10" x 1-1/8" or 3/4"	100 To A Box
12" Cleats With 1-1/8" or 3/4" Ends	12" x 1-1/8" or 3/4"	100 To A Box
14" Cleats With 1-1/8" Ends	14" x 1-1/8"	50 To A Box
16" Cleats With 1-1/8" Ends	16" x 1-1/8"	50 To A Box
18" Cleats With 1-1/8" Ends	18" x 1-1/8"	50 To A Box
20" Cleats With 1-1/8" Ends	20" x 1-1/8"	50 To A Box
24" Cleats With 1-1/8" Ends	24" x 1-1/8"	50 To A Box



TIN PLATE FILLERS

Galvanized filler sheets used on the interior of concrete forms to compensate for odd wall lengths and eliminate the cutting of panels.

Description	Size	Additional Info
24" Tin Plate Filler	24"h x 18"w	Galvanized
12" Tin Plate Filler	12"h x 18"w	Galvanized



MONOLITHIC STRAPS

Monolithic forming straps are used to support your foundation forming on top of your footing forms to create a single concrete pour. This is some times referred to in the industry as a monolithic pour. For use on a single-pour, inverted "T" foundation pour.

Description	Size	Additional Info
15" Monolithic Strap	15" x 1-1/2"w	20 To A Box
17" Monolithic Strap	17" x 1-1/2"w	20 To A Box
19" Monolithic Strap	19" x 1-1/2"w	20 To A Box
23" Monolithic Strap	23" x 1-1/2"w	20 To A Box
27" Monolithic Strap	27" x 1-1/2"w	20 To A Box

Forming Tie Layout

How To Figure Snaptime Pressure

There are *three* basic factors in determining how much pressure a snaptie is carrying during a concrete pour.

1. Rate of Pour

The concrete is placed vertically into the forms per hour. The thickness of the wall is not a factor, only the vertical height of pour (lifts). Ideally concrete should be placed at 3' to 4' per hour. (Proper hardware placement is required).

2. Outside Temperature

Concrete will cure (harden) faster at a higher temperature, slower at a lower temperature. The quicker concrete hardens, the quicker pressure is relieved on the forming system. The faster concrete cures the faster lifts can be placed.

Example: At 70 degrees concrete cures in 1 hour. At 45 degrees concrete cures in 1 hour and 45 minutes.

3. Snaptime Spacing

The snaptie spacing is how many ties are placed into 4' x 8' plywood form panels and the spacing between ties. The further apart a snaptie is spaced the greater the area of form, or load, that the snaptie must carry. Snapties should not be spaced more than 24" apart. Ideally, snapties should be placed at 16" on center to assure form strength and a steady pour rate. Rap-I-Form snapties are rated as 4500 pound snapties. O.S.H.A. and the American Concrete Institute require 2 to 1 safety factor on all snapties. This means a 4500 pound snaptie has a safe working strength of 2250 pound per square foot.

Determining The Load

To determine the total load on a snaptie, figure the contributing area of form (equal to the distance between ties horizontally times the vertical distance between ties.)

Then multiply that number by the unit pressure PSFT of the concrete on that area of form (see chart Below)

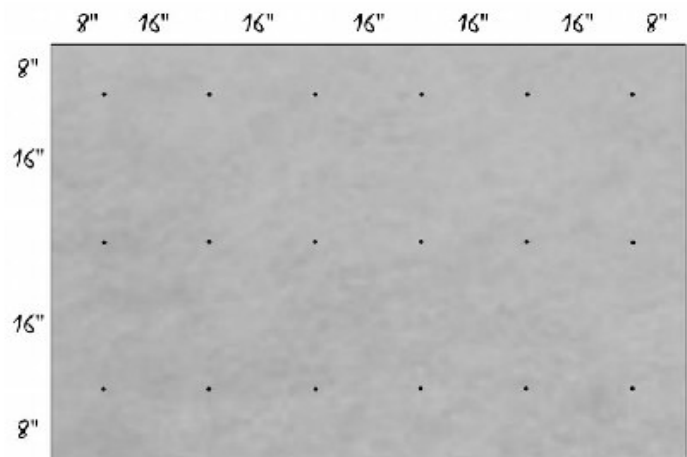
Common causes for snaptie failure in the field are twisting or bending the snaptie in the form placement. This weakens snapties and will lead to tie failure.

Also, when securing the snaptie wedges or forming brackets on the snaptie it is *NOT NECESSARY* to drive more than 1/2" to 3/4" of the wedge or bracket down onto the tie end. By forcing wedges or brackets farther causes tie distress and fracture, leading to snaptie failure.

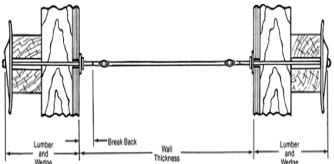
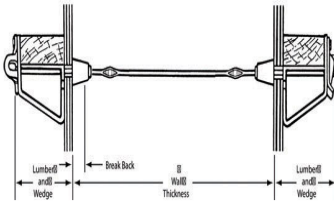
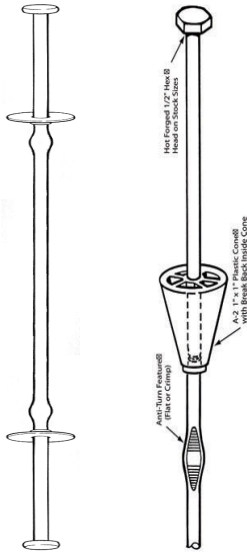
If there are any questions concerning form ties and their further applications please contact Rap-I-Form.

	Rate of Placement R. feet per hour		P. maximum lateral pressure, psf for temp. indicated			
	90F	80F	70F	60F	50F	40F
1	250	262	278	300	350	375
2	350	375	407	450	510	600
3	450	488	536	600	690	825
4	550	600	664	750	870	1050
5	650	712	793	900	1050	1275
6	750	825	921	1050	1230	1500
7	850	938	1050	1200	1410	1725
8	881	973	1090	1246	1466	1795
9	912	1008	1130	1293	1522	1865
10	943	1043	1170	1340	1578	1935

EXAMPLE DRILL PATTERN 4X8 FORM PANEL



Forming Clips And Ties



SNAPTIES FOR WALLS

Snapties and Flat Ties are used to spread and hold the middle of concrete forms during a pour. The ties are available with washers or cones and can be custom ordered to any specification.

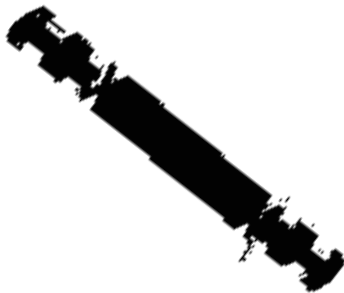
Stub End Use: 3/4" Form Only = 1-1/4" Ends ** 1-1/8" Form Only = 1-5/8" Ends
Short End Use: 3/4" Form + (1) 2X4 = 4-3/4" Ends ** 1-1/8" Form + (1) 2X4 = 5-1/8" Ends
Long End Use: 3/4" Form + (2) 2X4 = 8-1/4" Ends ** 1-1/8" Form + (2) 2X4 = 8-5/8" Ends

Description	"Stub End" Ties	Additional Info
6" Snapties	Available In 1-5/8" & 1-1/4" Ends	100 To A Box
8" Snapties	Available In 1-5/8" & 1-1/4" Ends	100 To A Box
10" Snapties	Available In 1-5/8" & 1-1/4" Ends	100 To A Box
12" Snapties	Available In 1-5/8" & 1-1/4" Ends	100 To A Box
Custom	Available In Any Size And Ends	3 Day Lead

Description	"Short End" Ties	Additional Info
6" Snapties	Available In 4-3/4" & 5-1/8" Ends	100 To A Box
8" Snapties	Available In 4-3/4" & 5-1/8" Ends	100 To A Box
10" Snapties	Available In 4-3/4" & 5-1/8" Ends	100 To A Box
12" Snapties	Available In 4-3/4" & 5-1/8" Ends	100 To A Box
Custom	Available In Any Size And Ends	3 Day Lead

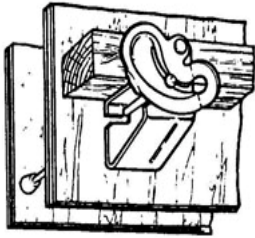
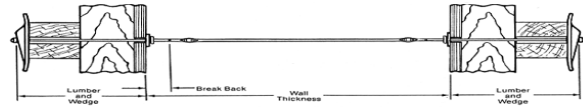
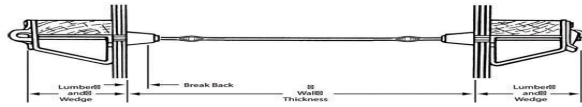
Description	"Long End" Ties	Additional Info
6" Snapties	Available In 8-1/4" & 8-5/8" Ends	100 To A Box
8" Snapties	Available In 8-1/4" & 8-5/8" Ends	100 To A Box
10" Snapties	Available In 8-1/4" & 8-5/8" Ends	100 To A Box
12" Snapties	Available In 8-1/4" & 8-5/8" Ends	100 To A Box
Custom	Available In Any Size And Ends	3 Day Lead

FLAT TIES FOR WALLS



Description	Flat Tie "Stub Ends"	Additional Info
6" Flat Ties	Available In 1-5/8" Ends	100 To A Box
8" Flat Ties	Available In 1-5/8" Ends	100 To A Box
10" Flat Ties	Available In 1-5/8" Ends	100 To A Box
12" Flat Ties	Available In 1-5/8" Ends	100 To A Box

Snaptie Brackets And Wedges

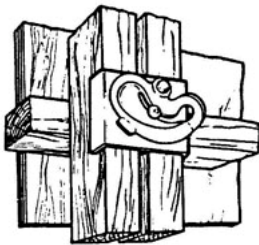


Single Linear Bracket Jahn-A

Designed to be used with a single 2x4 waler either vertically or horizontally against your concrete forms. This bracket is extremely fast and easy to install including the breakdown after the project is poured.

Single Waler Bracket M-Type

Designed to be used with a single 2x4 waler either vertically or horizontally against your concrete forms. This bracket is extremely fast and easy to install including the breakdown after the project is poured.

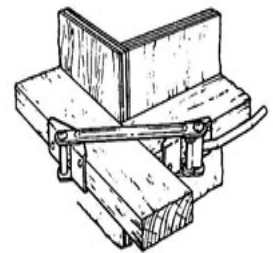


Strongback Bracket Jahn-C

For constructing vertical strongbacks where sturdy reinforcement is required. This bracket is designed to secure and sandwich two 2x4's vertically on either side of a snap tie.

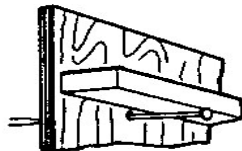
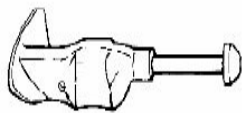
Corner Lock Bracket

This bracket is a quick and easy way to lock your 2x4 walers at the corners. Nail holes are provided to secure the bracket and a locking handle is used to create a true right angle.



Tie Extender

Tie extenders are a perfect way to convert a standard short tie to a long tie for a vertical strongback. Use a Strongback Bracket or flat shoe to complete this application.



Round Snaptie Wedge

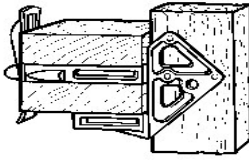
Wedge is used to take up and secure round snapties to the panels. The wedge is secured with a vertical hammer blow and is released during stripping with a reverse hammer action.

Flat Tie Wedge

Wedge is used to take up and secure flat ties to the panels. The wedge is secured with a vertical hammer blow and is released during stripping with a reverse hammer action.

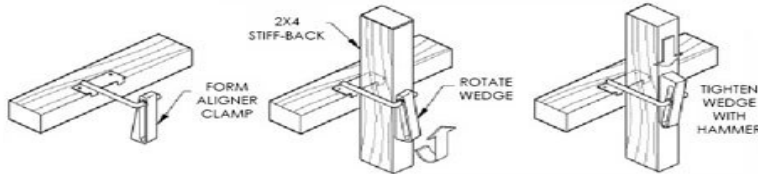


Snap Tie Brackets And Scaffolding



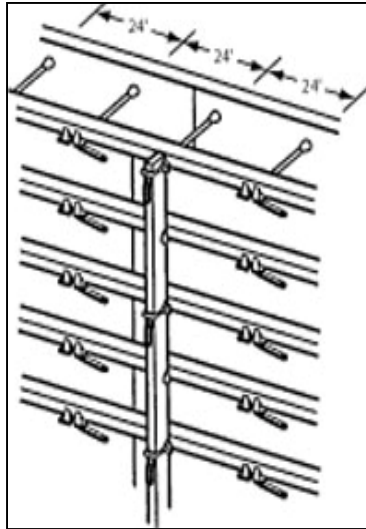
Waler Bracket

Fasten this bracket to studs with double head nails, insert walers and secure with a round snaptie wedge. Bracket eliminates the potential hazard of toe nailed walers separating from the studs.



Strongback Clamp

Strongback Clamps are specifically designed for use as a single 2 x 4 strong back clamp



Uni-Ply Ties

This tie is manufactured with self-centering 1" x 1" plastic cones that provide a nominal 1" break back. Other break backs and water seal washers are available for this tie on special orders.

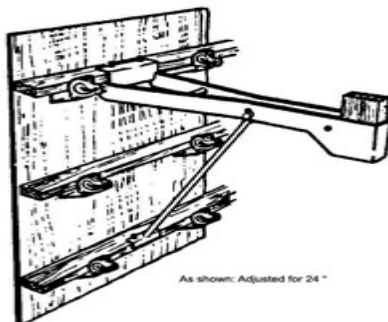


Liner Lock Bracket

The Liner Lock Bracket is a sturdy bracket with a rotating arm that captures the loop of a Uni-Ply Tie and firmly secures the tie and wale to the form.

Liner Wedge Clamp

Liner Wedge Clamps bracket attaches to the back of the Liner Lock Bracket and holds a 2 x 4 strong-back firmly to the form.



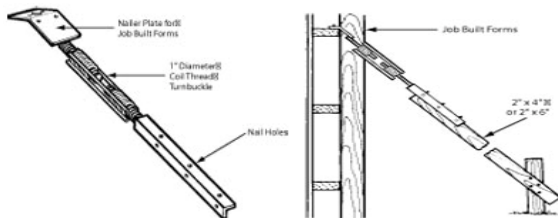
Scaffold Brackets

Scaffold brackets are placed near top of concrete forming for comfortable walking and working access. There is 2x4 pocket located at the end of the scaffold for a vertical 2x4 for temporary guardrail. Recommended spacing is 6' to 8' apart with two walking planks set on top.

Available For Use With: Single Linear Bracket (Jahn-A)

Available For Use With: Round Snaptie Wedge

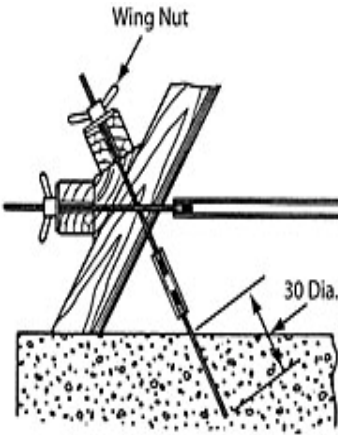
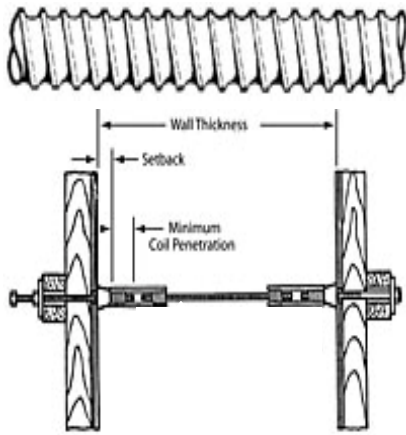
Available For Use With: Flat Tie Wedge



Turnbuckle Form Aligner Brace

Turnbuckles are designed to help vertically plumb concrete forms prior to a concrete pour. The buckle in the middle of the aligner turns in either direction, pushing or pulling forms into alignment. Use as necessary.

Coil Rod / Coil Bolts / Coil Nuts / Coil Ties



Coil Rod

Continuous coil threaded rod is used with other coil tie products in many different combinations and applications.

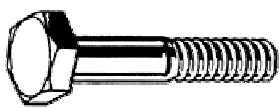
1/2"x12' Or Cut To Length (6,000 Shear)

3/4"x12' Or Cut To Length (12,000 Shear)

1"x12' Or Cut To Length (25,000 Shear)

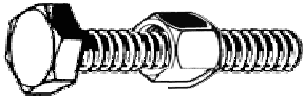
1-1/4"x12' Or Cut To Length (37,500 Shear)

1-1/2"x12' Or Cut To Length (45,000 Shear)



Coil Bolt

Coil Bolts have a hex head and are used with many different types of coil rod. **Available in 1/2", 3/4", 1", 1-1/4", 1-1/2" diameters.**

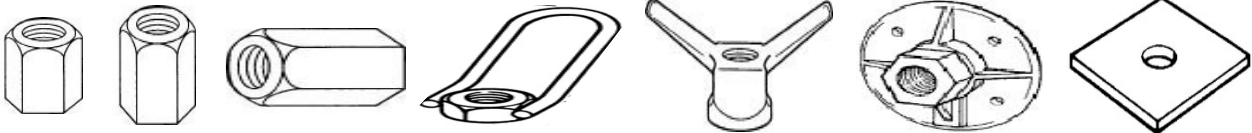


Adjustable Coil Bolt

Adjustable Coil Bolts are for special applications at corners and batter walls where one size may replace several different lengths. **Available in 1/2", 3/4", 1", 1-1/4", 1-1/2" diameters.**

Coil Nut / Coil Coupler / Handle Coil Nut / Coil Wing Nut / Coil Washer Nut / Square Washers

There are many different types of coil nuts. Coil Nut eliminates the need for a wrench and makes installation and stripping fast and simple. **Available in 1/2", 3/4", 1", 1-1/4", 1-1/2" diameters.**



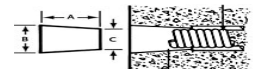
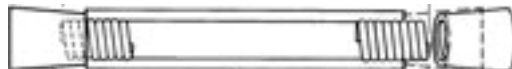
Coil Ties

Coil ties are strong, resistance welded ties designed for medium and heavy forming applications. Coil tie products are available in two and four struts, with screw on plastic cones and water resistant versions. **Available in 1/2", 3/4", 1", 1-1/4" diameters.**

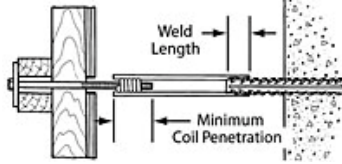


Coil Ties – Screw On

Designed with longer coil ties for medium and heavy forming applications. Plastic cones screw into coil tie to provide a positive setback. **Available in 1/2", 3/4", 1", 1-1/4" diameters.**

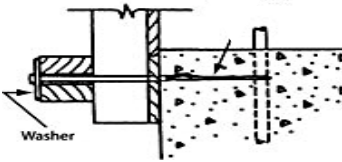
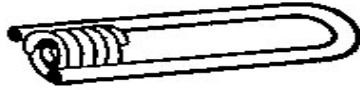


Coil Tie Inserts



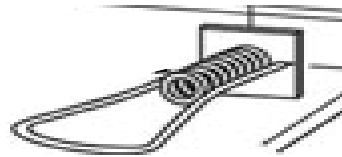
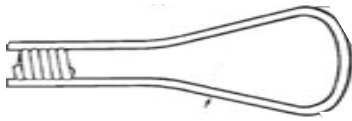
Welding Coil Tie

This coil tie can be field welded for heavy and special forming applications. **Available in 1/2", 3/4", 1" diameters.**



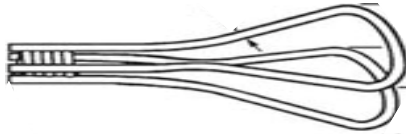
Coil Loop Insert

Coil Loop Inserts are made of a single looped wire welded to a helix coil. **Available in 1/2", 3/4", 1" diameters.**



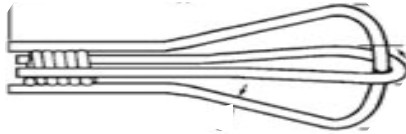
Single Flared Coil Insert

Coil loop is flared for greater anchorage in the concrete. **Available in 1/2", 3/4", 1" diameters.**



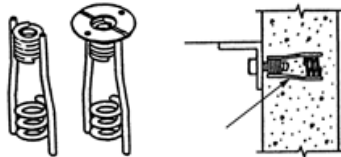
Double Flared Coil Insert

Coil loop is made with two looped wire struts welded to a helix coil. **Available in 1", 1-1/4", 1-1/2" diameters.**



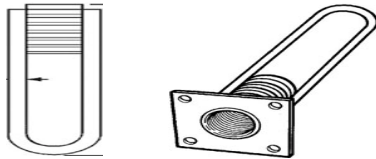
Flared Coil Loop Insert

Coil loop is made with two looped wire struts crisscrossed to straddle rebar. **Available in 1", 1-1/4", 1-1/2" diameters.**



Expanded Coil Inserts

This insert is available in two, four or six strut versions. Designed for a structural connection. **Available in 1/2", 3/4", 1", 1-1/4", 1-1/2" diameters.** With or without nailing washer.



Ferrule Loop Inserts

This insert is generally used to attach a precast wall panel to a building frame as well as provide attachment of other structural elements that may be required. **Designed for N.C. threaded bolts.**



Loop Ferrule Inserts

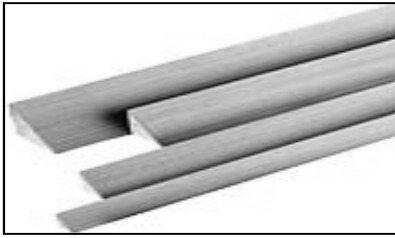
This insert is suited for structural connections and suspension of equipment, plumbing, piping, etc. **Available in 1/4" through 1" closed ferrules in 1/8" diameters.**



Thin Slab Inserts

Insert is used where the depth of embedment is limited. Specially designed to develop good working loads in very thin concrete slabs. **Available in 1/4" through 1", in 1/8" increments, closed ferrules.**

Chamfer And Reveal Strips

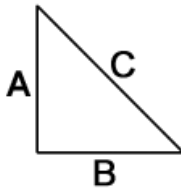


Chamfer and Reveal Strips

Chamfer and Reveal Strips are available in many different sizes and lengths. They are for accent forming and machined for surface smoothness, straightness, resistance to splitting during nailing, and minimal sugaring.

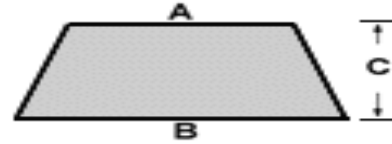
**Not All Chamfer May Be In Stock
Some Chamfer May Have To Be Special Ordered**

A	B	C
1/2"	1/2"	0.7"
3/4"	3/4"	0.9"
1"	1"	1.4"
1-1/2"	1-1/2"	2.1"
2"	2"	2.8"



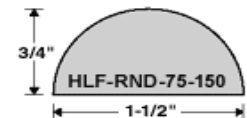
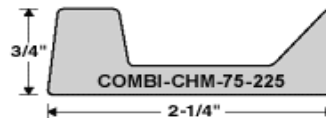
- **Wood Chamfers:**
Produced out of Ponderosa Pine
- **Poly Chamfers:**
Manufactured from recycled poly foam

Reveal Strips



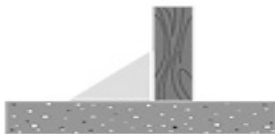
**Not All Reveals May Be In Stock
Some Reveals May Have To Be Special Ordered**

A	B	C
1/2"	1-1/2"	1/2"
1-1/2"	2-1/2"	1/2"
2"	3"	1/2"
2-1/2"	3-1/2"	1/2"
3"	4"	1/2"
1"	1-1/2"	3/4"
1/2"	2"	3/4"
1"	2-1/2"	3/4"
1-1/2"	3"	3/4"
2"	3-1/2"	3/4"
2-1/2"	4"	3/4"



Chamfer Strip is used on outside corners and top of wall for decorative walls and columns to enhance the appearance. Use brad nails to secure strips in place.

• 1/2" x 10' Chamfer Strip



• 3/4" x 10' Chamfer Strip

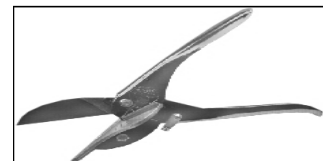


• 1" x 10' Chamfer Strip



CHAMFER STRIP CUTTERS

This is a quality tool for the craftsmen in the building trade. These cutters are indispensable for quick and accurate cutting of 45 degree and 90 degree angles in soft wood molding and chamfer strips. Easy to re-sharpen to give you years of reliable service.



Decorative Formliners



Spec Formliners Facts

- Spec Formliners has the largest concrete formliner selection in the universe.
- Most plastic concrete form liners are shipped in 5 days or less.
- Custom pattern concrete form liners can be produced in as little as two weeks.
- Most Spec Formliners patterns of concrete form liners are available in three material choices: *SINGLE-USE PLASTIC*, *MULTI-USE PLASTIC*, or *HIGH-USE URETHANE*.
- NEW! Spec Formliners introduces ElastoSpec Lite, a multi-use material meeting DOT specifications and priced between plastic and urethane.

Doing Business With Spec Formliners

- Architects appreciate the attention to detail they receive from Spec Formliners concrete formliners.
- Contractors value Spec Formliner's willingness and ability to customize panels for difficult concrete form liner forming applications.
- Engineers admire Spec Formliner's capacity to interpret complex construction plans and to create detailed shop drawings of their products.
- Dealers favor Spec Formliners level of support and service for concrete formliners.

- Spec Formliners Incorporated Patterns -

- Fractured Fin
- Wood Grain Textured
- Brick Patterns
- Block Patterns
- Rock Patterns
- Textured Patterns
- Smooth Flutes

Application:

Cast-in-place, Pre-cast, and Tilt-ups

Re-Use:

Several types of plastics are available that offer different re-use

Rate-Of-Pour:

Most plastic liners cannot withstand a rate-of-pour in excess of five feet per hour. When the rate-of-pour exceeds this standard, a higher grade formliner material will be recommended (fiberglass or urethane)

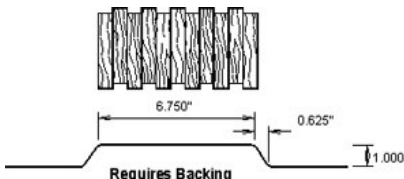
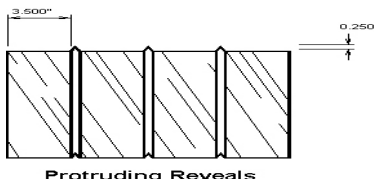
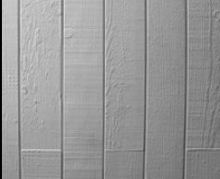
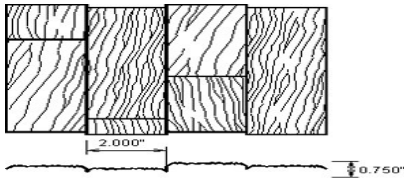
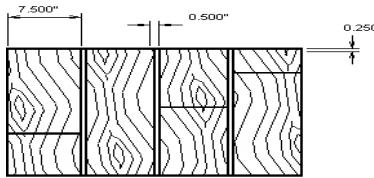

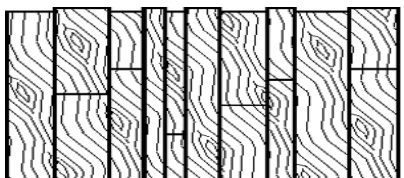


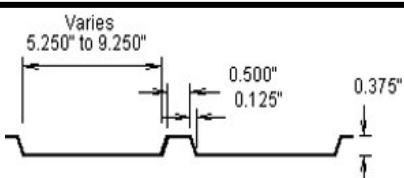
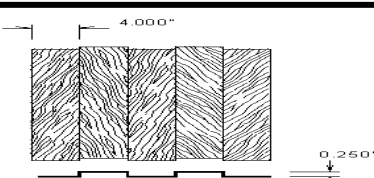
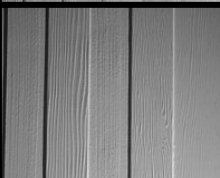
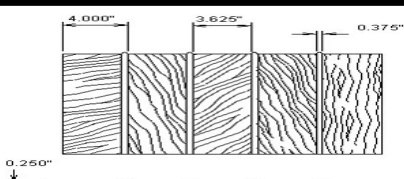
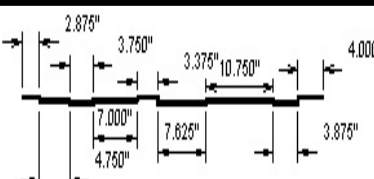
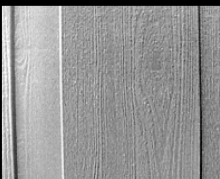
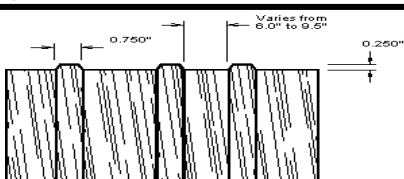


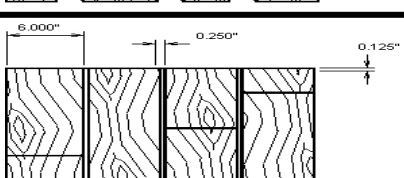
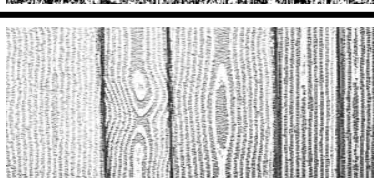

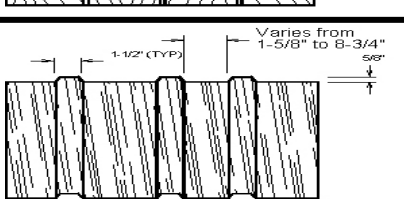
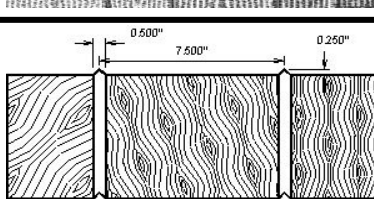
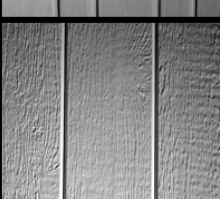
Finished Texture:

Detailed finishes are successfully and cost-effectively by using a lightweight formliner material, such as fiberglass.

Design Shape:

Geometric designs will be faithfully reproduced using fiberglass, ABS, or styrene plastic liners. Undercut designs will be successfully replicated using a highly flexible formliner material such as urethane.

Decorative Formliners - (Wood Grain Patterns)

<p>1201 Rough Sawn 8"</p>  <p>Requires Backing</p>		 <p>Protruding Reveals</p>	 <p>1212 Light Wood Grain</p>
<p>1202 Grape Stake</p> 			 <p>1213 Weathered Tongue</p>
<p>1203 Barn Wood</p> 			 <p>1215 6" Wood Grain Shiplap</p>
<p>1204 Random 3/8"</p> 			 <p>1216 Weathered Wood Grain</p>
<p>1207 Cedar Plank</p> 			 <p>1226 Random Cedar Board Form</p>
<p>1208 Rough Sawn</p> 			 <p>1231 Split Cedar Shingle</p>
<p>1209 6" Wood Pine</p> 			 <p>1235 Wire Brushed Grove Texture</p>
<p>1210 Random Pine</p>  <p>Requires Backing</p>			 <p>1236 Native Wood</p>

Decorative Formliners - (Brick Patterns)







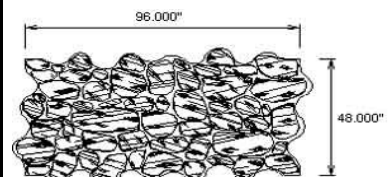


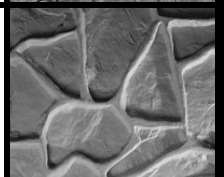

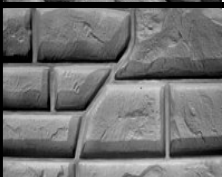
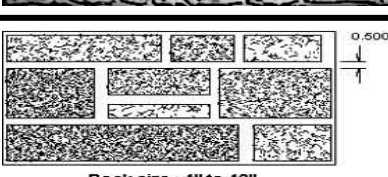



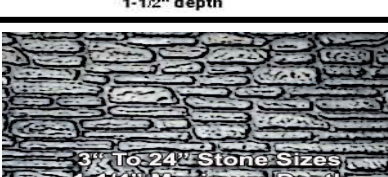
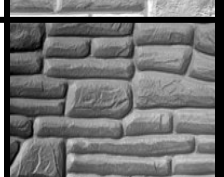




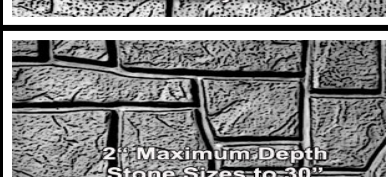

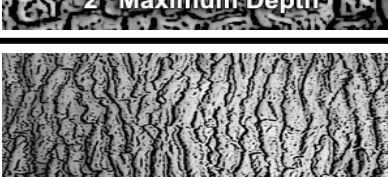
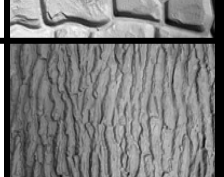
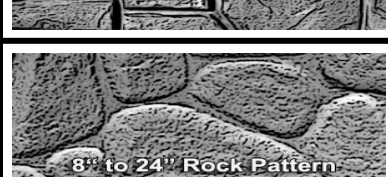
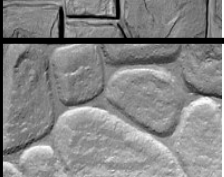


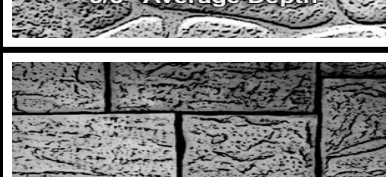

1301 Slump Block					1306 Smooth Brick
1302 Old Brick					1309 Rich Tex
1305 Random Split Face	<p>Block sizes: 8" x 16", 8" x 8", 4" x 16", 4" x 8"</p>				1311 Used Brick Running Bond 12"

***If You Don't See Your Pattern Or Need A Custom Formliner.
Call For Free Quote (425) 787-9611***

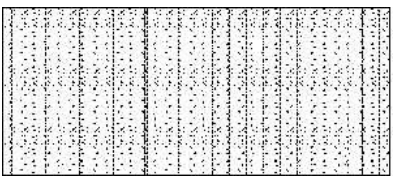

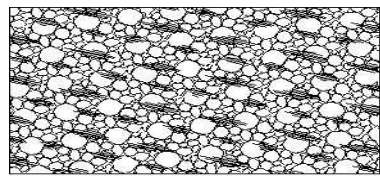

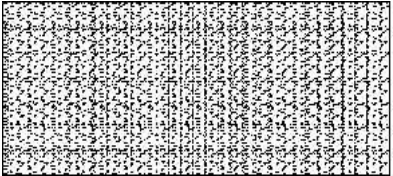

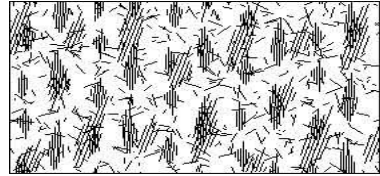

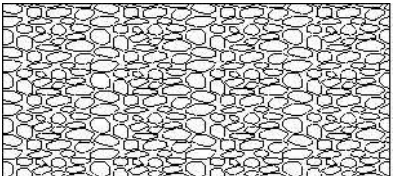

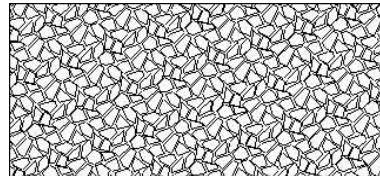
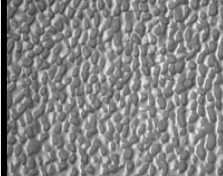
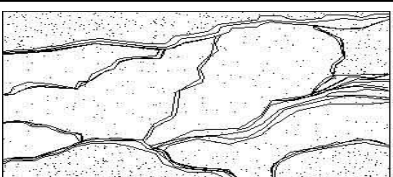
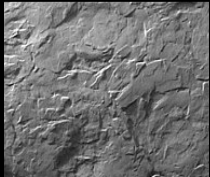
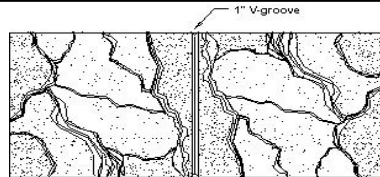

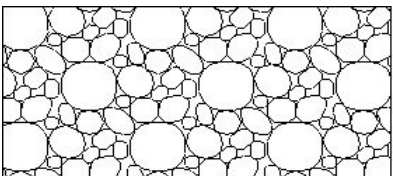
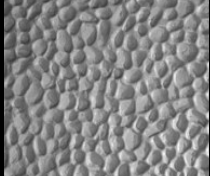
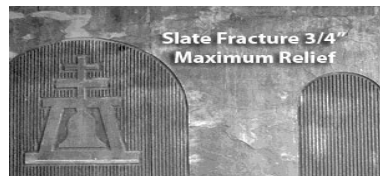

Decorative Formliners - (Block Patterns)

1403 8"x8" Split Face Block			<p>Standard size block - troveled mortar joints</p>		1409 8"x16" Smooth Face Block
1404 8"x16" Smooth Face Block					1413 8"x8" Standard CMU Block
1407 8"x16" Smooth Face Block					1425 Canon Bond Block

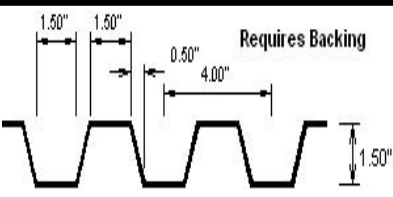

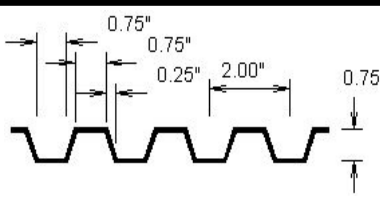
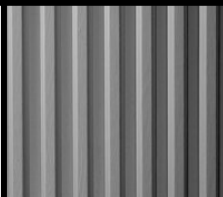
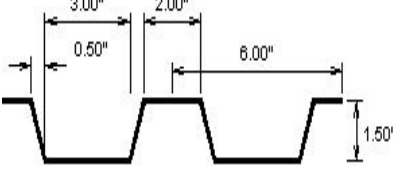

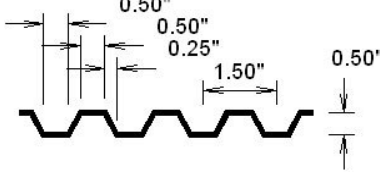
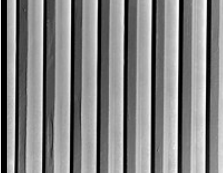
Decorative Formliners - (Rock Patterns)

1501 Dry Stack Stone	 3" to 18" Dry Stack Fieldstone		 4" To 20" Aged Cut Stone 3/4" To 1" Mortar Joint		1517 Saint Mary's Ashlar
1502 Ashlar Stone	 2-1/2" to 9" Stone Sizes 1-1/4" Depth 3/8" to 1" Mortar Joints		 96.000" 48.000"		1520 Batavia Random Field Stone
1505 Madera Flag Stone	 1-3/4" to 2" Relief Large Irregular Stone		 4" to 34" Stone Sizes 1-1/2" depth		1521 Tahoka Stone
1506 Random Block Ashlar Stone	 Rock size - 4" to 42" 1-1/2" depth		 1-1/2" Maximum Relief 7-1/4" x 22" Maximum Stone Size		1534 Large Running Bond Stone
1508 Large Dry Stack Field Stone	 3" To 24" Stone Sizes 1-1/4" Maximum Depth		 2" Depth Various Size Sedimentary Rock		1537 Colorado Red Flag Stone
1510 Rocky Mountain Flag Stone	 4" To 40" Stone Sizes 2" Maximum Depth		 2" Maximum Depth Stone Sizes to 30"		1541 Rush Creek Ashlar
1513 SC Fractured Granite	 3/4" To 1" Deep Fractured Granite Texture		 8" to 24" Rock Pattern 5/8" Average Depth		1545 Kona Rock
1515 SC Ashlar	 1-1/2" Depth Large Cut Ashlar Stone 3/4" Mortar Joint		 2-1/2" Maximum Depth 16" to 24" Stone Sizes		1552 Herkimer Drystack

Decorative Formliners - (Textured Patterns)

1601 Light To Medium Sand Blast					1615 Medium Bush Hammer
1602 Heavy Sand Blast					1616 Stucco Texture
1606 Random Large Aggregate					1617 Crushed Stone
1608 Split Slate					1621 Tasman Slate
1609 1" Round Stone					1626 Kleen Slate

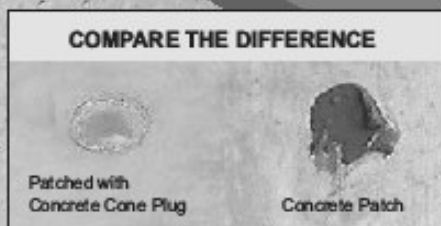
Decorative Formliners - (Smooth Flute Patterns)

1702 302 Standard Spec Flute					1704 304 Standard Spec Flute
1703 Filmore Flute					1705 305 Standard Spec Flute

Decorative Formliners - (Smooth Flutes Patterns)

1706 303 Standard Spec Flute			1715 San Diego Flute
1707 Lincoln Flute			1717 Santa Fe Flute
1708 Sine Wave 1/2"			1720 Taft Flute
1709 Houston Flute			1721 307 Standard Spec Flute
1710 Con- necticut Flute			1732 Random Reveal
1712 Utah Flute			1734 Adrian Flute
1713 Colorado Flute			1739 Gila Flute
1714 Wilson Flute			1741 Perris Flute

Concrete Cone Plug Kit



Universal Chemical Division
Wall Patching Products



SAVE YOUR CREW TIME AND MONEY

with Universal's
Concrete Cone Plug Kit

PROFESSIONAL MANUFACTURER

Universal has been the authority on handset and gang forming, along with providing quality accessories and chemicals for decades. We use this experience to bring you smart alternatives that save you time and labor costs.

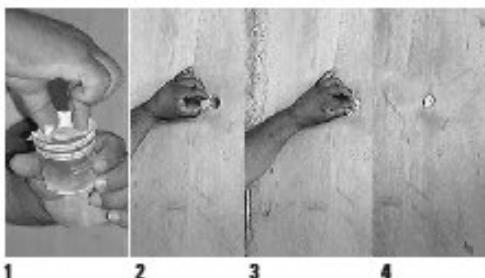
CONCRETE CONE PLUG SYSTEM

- Economical way to finish walls fast! Average of 50-100% labor savings at 200 holes an hour, compared to grout patching of 50-100 per hour.
- Field proven for quality and consistency
- Clean and efficient; no patch to mix and waste. Just grab a pail & go!
- Specially formulated, high strength grout used to create our concrete cones resists cone crumbling and cracks. Sands down smooth and flush with wall. Color formulated to match new concrete.
- Quick-setting concrete cone adhesive provides solid bonding to wall concrete.
- Packaged with an easy-to-tote 500 quantity pail and applicator bottle for easy of use.

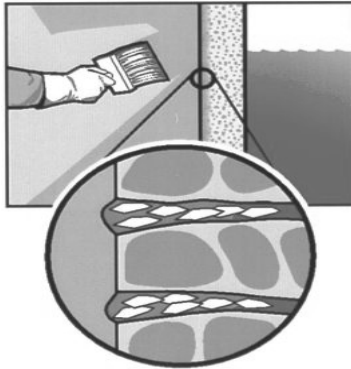
DIRECTIONS:

1. Break or twist snap-tie end off the cured wall.
2. Apply with plastic applicator bottle into void. For a cleaner finish, dip the end of a concrete cone into the adhesive solution to avoid drips.
3. Then simply push the cone firmly into the void. Adhesive holds instantly and fully cures within 15 minutes.
4. Sand flat if protruding.

Note: Works best in dry, flat conditions. UFC also recommends UNI-PATCH Concrete Patch for snap-tie cones that are embedded.



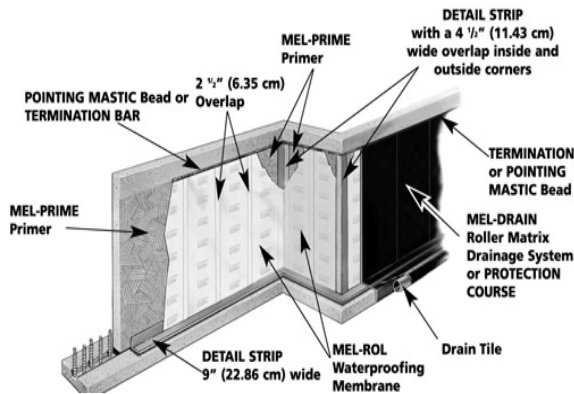
Water Proofing



DAMP PROOFING

Damp proofing products are used to allow moisture to escape thru the barrier while being resistant to water penetration. There are many products which will fit this application and many have a variety of application methods. (Spray Grade, Brush On and Trowel Grade)

Description	Size	Value Pricing
Asphalt Emulsion - (Damp Proofing)	5 Gallon	55 Gallon Drums
Mel-Rol LM - (Water Proofing)	5 Gallon	55 Gallon Drums
Additional Products Available	Specify Sizes	Special Order



MEL-ROL (PEEL AND STICK)

MEL-ROL waterproofing system is a flexible, versatile, dependable, roll-type waterproofing membrane. MEL-ROL can be used as the ideal product for vertical applications as well as below grade floors, between the slab waterproofing on plaza decks, parking decks and more.

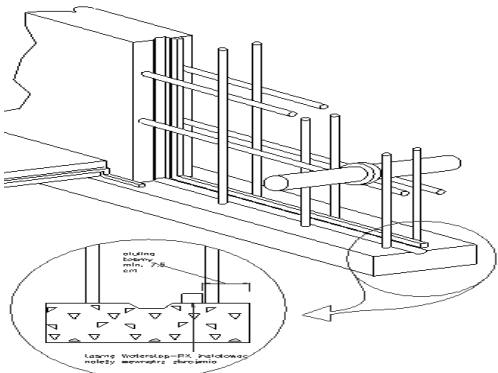
Description	Size	Coverage
Mel-Rol – 60mil.	38-1/2" x 60'	192-1/2 sq ft
Mel-Rol Detail Strip – 60mil.	9" x 60'	4 Rolls Per Carton
Mel-Prime – (Bonding Agent)	1 & 5 Gallon	250-350 sq ft Gal.



MEL-DRAIN (ROLLED MATRIX DRAINAGE SYSTEM)

MEL-DRAIN is a dimple-raised, molded polystyrene sheet bonded to high strength polypropylene fabric. This geo composite allows the passage of moisture through the fabric while preventing fine soils from entering the drainage channel.

Description	Size	Coverage
Mel Drain 5035	48" x 50"	200 sq ft
Mel-Prime – (Bonding Agent)	1 And 5 Gallon	250-350 sq ft Gallon
Additional Drain Board Available	Call For Specs	



BENTONITE WATER STOPS

Water stop RX101 is a sodium bentonite based water stop designed to stop water infiltration through cast-in place concrete construction joints by expanding upon contact with water to form a positive seal against the concrete.

Description	Size	Coverage
Volclay RX-101T Water Stop	3/4" x 1" x 20'	120' Per Box
Volclay WB Adhesive	1 Gallon	400 Lineal Feet
Additional Water Stops Available	Call For Specs	

Sonotube

Sonotubes are a very fast and efficient way to pour round or square columns. They are light weight and easy to set up multiple columns at a time. The sonotube has superior strength, can be cut or drilled, and has high heat resistances properties that eliminates deforming during the pour.

Important Instructions For Field Use

How to store

Store sonotube in a dry place at job site:

- For best results, store vertically to maintain roundness.
- Keep Ends covered at all times.
- If stored horizontally, elevate a minimum of 4 inches off the ground and support the full length of the forms.

Placing

Even the largest sonotube can be placed manually or lowered by over head devise.

- Position over a reinforcing bar cage if desired.
- Avoid damaging the inside surface
- Place individually or in groups for continuous pouring.

Bracing

Sonotube require minimal bracing to be brought to plumb:

- Use light lumber or scaffolding
- Secure the column with collars or dimensional lumber if necessary.
- Sonotubes can also be tied onto other forms or structural members.

Pouring

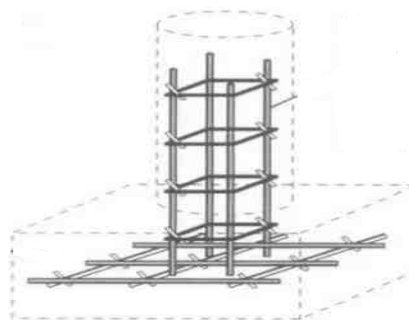
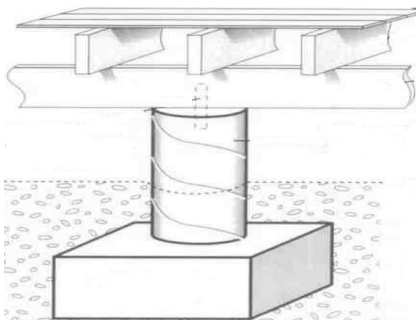
Sonotubes are engineered not to buckle, swell or lose shape. For large columns do not exceed the ACI recommended pour rates. Concrete must vibrated during pour.

Stripping

Strip the form as soon as possible after the concrete has set to prevent concrete from sticking to the form. Recommended time for the easiest and fastest stripping is 24 to 48 hours after the pour. Sonotube should not be left on the column for more than five days.

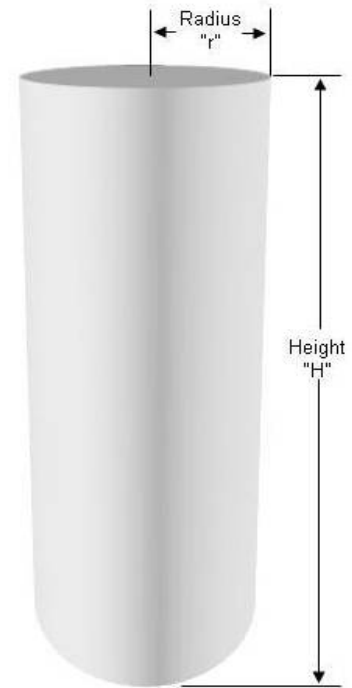
Stripping Options

- Use a circular power saw to make two vertical cuts on opposite sides of the forms. To prevent mar-ring, make sure the depth of cut is not set too deep. Remove the form.
- Use a utility knife to cut the form from the top down at least 12 inches. Use a broad-bladed tool such as a shovel and short strokes to pry the form away from the column in a spiral motion



Sonotube

Column Diameter	Weight Per LF	Cubic Yard Per Ft.
6" x 12' Sono Tube	0.8	.0073
8" x 12' Sono Tube	1.1	.0129
10" x 12' Sono Tube	1.5	.0202
12" x 12' Sono Tube	1.9	.0291
14" x 12' Sono Tube	2.5	.0396
16" x 12' Sono Tube	2.8	.0617
18" x 12' Sono Tube	3.6	.0654
20" x 12' Sono Tube	4.0	.0808
24" x 12' Sono Tube	5.4	.1164
30" x 12' Sono Tube	8.8	.1818
36" x 12' Sono Tube	10.5	.2618
42" x 12' Sono Tube	12.5	.3563
Larger Diameter Available	Call for Quote	Call for Quote



To Calculating Concrete For Your Sonotubes:

Concrete delivered to your project is sold by the yard (1 cubic yard = 27 square feet).
 60lb bag of concrete provides 0.45 cubic feet of cured concrete.
 80lb bag of concrete provides 0.6 cubic feet of cured concrete.

Using the following formula will calculate how much concrete you will require for a circle, tube or column pour.

$$3.14 \times r(\text{inches}) \times r(\text{inches}) \times H(\text{inches}) \div 1728 = \text{Cubic Feet Of Concrete (CF)}$$

Number Of Bags Of Concrete Needed:

$$\text{CF} \div 0.45 = \text{Number of 60lb bags}$$

$$\text{CF} \div 0.6 = \text{Number of 80lb bags}$$

Number Of Cubic Yards Of Concrete Needed:

$$\text{CF} \div 27 = \text{Cubic Yard}$$

R = Radius of the circle in inches (1/2 of the diameter)

H= Height in inches

CF = Cubic feet of concrete

Example:

A Column 8' High where the Column has a Radius of 5" (10" diameter)

$$3.14 \times 5 \times 5 \times 96 \div 1728 = 4.4 \text{ Cubic Feet of Concrete}$$

$$4.4 \div 0.45 = 10 \text{ (9.8) 60lb Bags of Concrete}$$

$$4.4 \div 0.6 = 8 \text{ (7.3) 80lb Bags of Concrete}$$

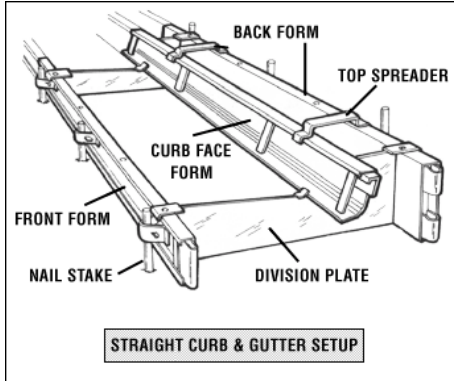
$$4.4 \div 27 = 0.16 \text{ Cubic Yards of Concrete}$$

Curb and Gutter

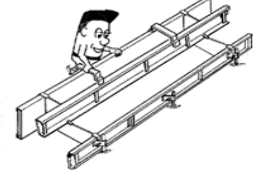
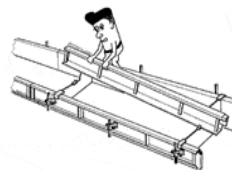
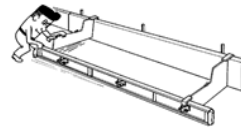
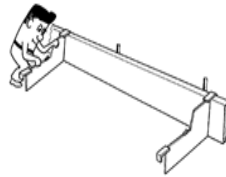
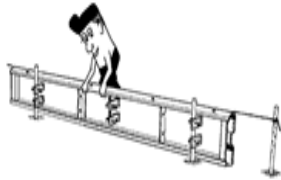
CURB AND GUTTER FORMS

Curb and Gutter Forms are available for rental or purchase w/ next day delivery to your site. Call today with your project specs and we will deliver next day! If you're not looking to invest in a Curb and Gutter inventory then take advantage of our easy rental terms.

dee CONCRETE ACCESSORIES



Curb And Gutter Forms	Size	Additional Info
Front Form	6" x 10'	Rental Or Purchase
Curb Face Form	6" x 10'	Rental Or Purchase
Back Form	12" x 10'	Rental Or Purchase
Back Form	16" x 10'	Rental Or Purchase
Spreader Cleats	5-1/2"	Rental Or Purchase
Spreader Cleats (City of Seattle)	6"	Rental Or Purchase
Division Plates	18" Wide	Rental Or Purchase
Division Plates	24" Wide	Rental Or Purchase
Division Plates (City of Seattle)	24" Wide	Rental Or Purchase

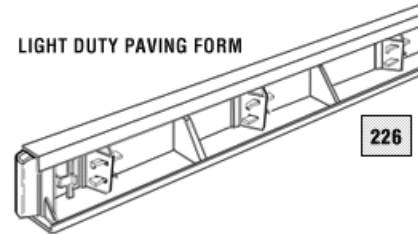


SIDEWALK FORMS

In many instances you will be required to set sidewalks with steel forms. We have the forms you need to maintain a straight edge for your sidewalks. Always Next Day Delivery!

Sidewalk Forms	Size	Additional Info
4"x10' Sidewalk Form	4" x 10'	Rental Or Purchase
6"x10' Sidewalk Form	6" x 10'	Rental Or Purchase

LIGHT DUTY PAVING FORM

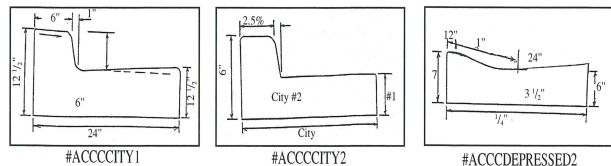


METAL STAKES

Metal Stakes are a necessity when forming Curb and Gutter. We buy only the best metal stakes to ensure against bending and breaking on site. Metal Stakes are available for rental or purchase.

Description	Size	Additional Info
18" Metal Stakes	3/4" x 18"	Rental Or Purchase
24" Metal Stakes	3/4" x 24"	Rental Or Purchase
36" Metal Stakes	3/4" x 36"	Rental Or Purchase

PRECUT CURB FELT



Precut Curb Felt

Precut Expansion Curb Felt 24"
Expansion Sidewalk Felt 1/2" x 4" x 10'

Nails

DUPLEX NAILS

Our High Quality Grip Rite Nails are for use in temporary concrete forming and scaffolding where nail removal is required. With the smooth, uncoated shank and double head they are easy to remove. Sold by the box or pound.



Description & Size	Additional Info
6dp Duplex (1-3/4")	Per 1lb.
8dp Duplex (2-1/2")	Per 1lb. / 30lb. Bucket / 50lb. Box
16dp Duplex (3")	Per 1lb. / 30lb. Bucket / 50lb. Box

COATED SINKERS

Coated nails are ideal for general construction, carpentry and framing.



Description & Size	Additional Info
6d Coated Sinker (1-7/8")	Per 1lb.
8d Coated Sinker (3")	Per 1lb. / 30lb. Bucket
16d Coated Sinker (3-1/4")	Per 1lb. / 30lb. Bucket

GALVANIZED SINKERS

Galvanized Sinker Nails are for use where the nail needs to be resistant to the elements. These nails are resistant to corrosion and rust. The thinner shank will help to reduce wood splitting.



Description & Size	Additional Info
8d Galvanized Sinkers (2-1/2")	Per 1lb. Box
16d Galvanized Sinkers (3-1/2")	Per 1lb. Box

CONCRETE NAILS

Concrete Nails are fluted in shape to connect wood or metal to concrete or masonry.



Description & Size	Additional Info
Concrete Nails 1/2", 3/4", 1", 1-1/2", 2, 2-1/2"	Per 1lb. / 50lb. Box

BRAD NAILS

Brad nails are ideal for securing chamfer or small detail strips to the interior of concrete forms prior to pour.



Brad Nails



Description & Size	Additional Info
3d Brad Nails (1-1/4")	Per 1lb. Box
Gun Brad nails (1")	5000 Per Box

Gun Nails, Screws And Spikes



GUN NAILS

If you are using pneumatic tools we have the right product for you. We carry a large assortment of nails to fit your gun and will deliver them next day. If you don't see your specific gun nail on the list call for pricing and next day delivery.

Description & Size	Additional Info
8d Gun Nails (2-3/16")	5000 Per Box
12d Gun Nails (3")	4000 Per Box
16d Gun Nails (3-1/4")	4000 Per Box

DRIVE PINS / DRIVE PIN WITH WASHER / .22 CALIBER SHOT TOOL / LOADS

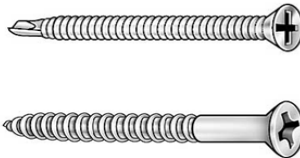


.22 Caliber single shot tools are designed for frequent use providing professional fastening results in a variety of concrete, masonry or steel application. There are many different styles of .22 caliber guns, .22 caliber loads and drive pins. Call today with your specifics and we will match you with the right tool and hardware for your job.

	Description & Size	Additional Info
Drive Pin	1/2" 3/4" 1" 1-1/4" 1-1/2" 2" 2-1/2" 3"	(Diameter .145) 100 Per Box
Drive Pin w/Washer	3/4" 1" 1-1/4" 1-1/2" 2" 2-1/2" 3"	(Diameter .145) 100 Per Box
.22 Caliber Shots	(Grey L1)(Brown L2)(Green L3)(Yellow L4)	100 Per Box
Hammer Actuated	.300 Fasteners 1/2" thru 3"	Single Shot
Trigger Actuated	.300 Fasteners 1/2" thru 3"	Single Shot
Semi-Automatic	Wide Range Of Fasteners	Semi-Automatic

EXTERIOR WOOD SCREWS

Outdoor construction exterior screws, PrimeGuard Plus Ten has a ten-year warranty against rust and corrosion including when used in treated lumber. For outdoor projects including decks and fences.



Description & Size	Additional Info
Exterior Wood Screw 2"	Per 1lb. Box
Exterior Wood Screw 2-1/2"	Per 1lb. Box
Exterior Wood Screw 3"	Per 1lb. Box
Exterior Wood Screw 3-1/2"	Per 1lb. Box

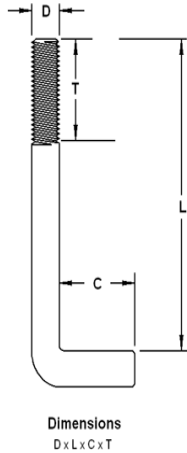


GALVANIZED ROAD SPIKE

This hot-dipped galvanized spike is used for heavy timber construction. Other applications include, survey marking and landscaping.

Description & Size	Additional Info
Galvanized Road Spike 12"	Per Piece / Box Of 50
Galvanized Road Spike 12"	Box Of 50

Anchor Bolts / Bearing Washers / MA Anchors



ANCHOR BOLTS

Anchor bolts are embedded in concrete and used to support structural wood and steel columns, light poles, highway sign structures, bridge rail, equipment, and many other applications.

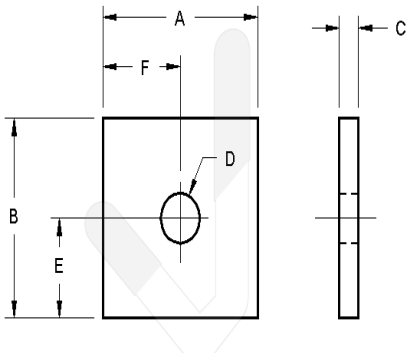
Description	Size	Additional Info
Galvanized Anchor Bolts w/Nut	1/2" x 10"	100 To A Bag
Galvanized Anchor Bolts w/Nut	1/2" x 12"	100 To A Bag
Galvanized Anchor Bolts w/Nut	5/8" x 10"	50 To A Bag
Galvanized Anchor Bolts w/Nut	5/8" x 12"	50 To A Bag
Galvanized Anchor Bolts w/Nut	3/4" x 12"	50 To A Bag
Plain Anchor Bolts w/Out Nut	3/4" x 18"	25 To A Bag
Plain Anchor Bolts w/Out Nut	7/8" x 12"	25 To A Bag

Special Order:

Custom bent anchor bolts are available in 3/8" thru 4" diameter to virtually any ASTM specification along with length. They are available in plain finish, hot-dip galvanized and stainless steel. Call for quote and availability.

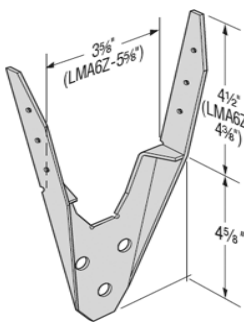
BEARING PLATES / PLATE WASHERS

Bearing plate washer for anchor bolts. Washers can also be used with all thread, coil bolts, she bolts, taper ties and coil nuts. Washers are designed to provide adequate bearing against wood from members.



Description	Bolt Diameter
Galvanized Plate Washer 2" x 2" x 3/16"	1/2"
Galvanized Plate Washer 3" x 3" x 1/4"	1/2"
Galvanized Plate Washer 2" x 2" x 3/16"	5/8"
Galvanized Plate Washer 3" x 3" x 1/4"	5/8"
Galvanized Plate Washer 3" x 3" x 1/4"	3/4"
Plain Plate Washer 3" x 3" x 1/4"	7/8"
Plain Anchor Bolts w/Out Nut	7/8"
Other Sizes Available Upon Request.	Call

MA - FOR SLAB OR STEM WALL CONSTRUCTION



Mudsill anchor provide an alternative to anchor bolts. They easily mount on forms and make finishing easier. The unique design provides installation flexibility, eliminating problems with misplaced anchor bolts. Suitable for stem wall or slab foundations, mudsill anchors are one piece so there are no more nuts and washers to lose.

Material: MA - 16 gauge **Finish:** MA - Galvanized (some available in **ZMAX®**)

SIMPSON Model No.	Sill Size.	Fasteners Sides	Fasteners Top
MA4	2x4	2-10d x 1-1/2	2-10d x 1-1/2
MA4	3x4	4-10d x 1-1/2	2-10d x 1-1/2
MA6	2x6	2-10d x 1-1/2	4-10d x 1-1/2
MA6	3x6	4-10d x 1-1/2	4-10d x 1-1/2

Stab Bolts / Anchor Stabilizers

STAB ANCHOR BOLTS

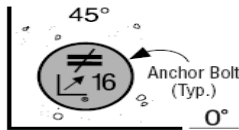
Stab anchor bolts are designed for maximum performance as an anchor bolt for hold downs and wall panels

FEATURES AND INSTALLATION:

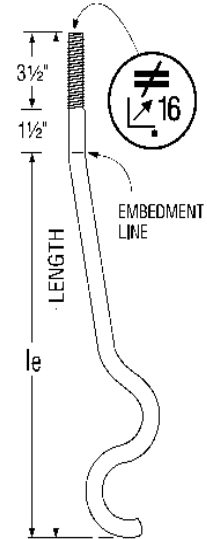
- Rolled threads for greater tensile strength.
- Threaded section serves as embedment line for use during installation.
- Stamp for post pour identification and orientation of an anchor placement.
- Design shape to reduce interference with rebar and concrete side bursting.
- Available in hot dip galvanize coating

For Engineering Please Refer To The Manufactures Catalog For Specific Allowable Load Design And Specifications

**Corner
Installation**
(Install with arrow
on top of the bolt
oriented as shown)



SIMPSON Model No.	KC METALS Model No.	Diameter (Inches)	L (Inches)	LE (Inches)	Thread (Inches)
SSTB16	KCAB16	5/8	17	12	5
SSTB20	KCAB20	5/8	21	16	5
SSTB24	KCAB24	5/8	25	20	5
SSTB28	KCAB28	7/8	29	24	5
SSTB34	KCAB34	7/8	34	26	6
SSTB36	KCAB36	7/8	36	28	8

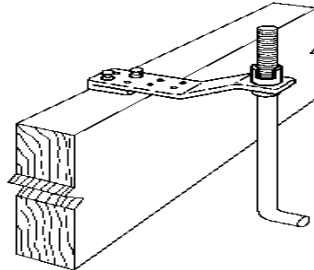
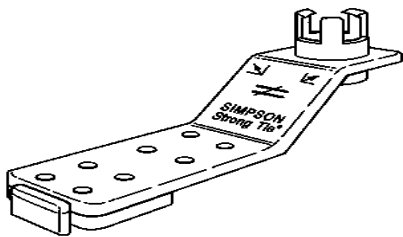


ANCHORMATE

Designed to hold anchor bolts or stab bolts in place before the concrete pour

FEATURES:

- Built in 2x4 and 2x6 stops for easy measuring and AnchorMate is reusable.
- Elevated bolt grippers allow easy trowel finishing with tread grippers to hold bolt in place.
- Easy to use color coding for easy size identification.
- Alignment arrows (*left or right*) match the stab bolt head arrows.



SIMPSON Model No.	Diameter (Inches)	L (Inches)
AM1/2	1/2	Yellow
AM5/8	5/8	Blue
AM3/4	3/4	Red
AM7/8	7/8	Green
AM1	1	Black

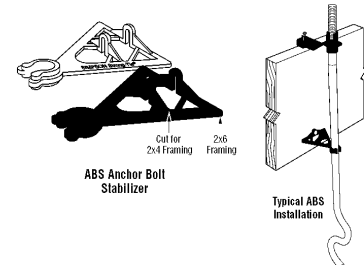
ANCHOR BOLT STABILIZER

SIMPSON Model No.	Diameter	Color
ABS5/8	5/8	Blue
ABS7/8	7/8	Green

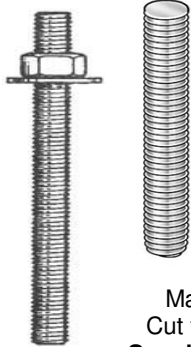
The ABS stabilizes the anchor bolt or stab bolt to prevent it from being pushed against the form during a concrete pour

FEATURES:

- Supports the bolt approx 8" below the top of the concrete.
- Sized for 2x4 and 2x6 mudsills.
- Thin section limits the effect of a cold joint.



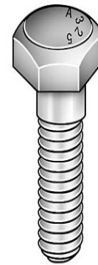
All Thread / Hex Bolts / Washers / Nuts / Couplers



ALL THREAD

1/2" x 12' All Thread Or Cut To Length
5/8" x 12' All Thread Or Cut To Length
3/4" x 12' All Thread Or Cut To Length
7/8" x 12' All Thread Or Cut To Length
1" x 12' All Thread Or Cut To Length
1-1/4" x 12' All Thread Or Cut To Length

Made From Low Carbon Steel - A307.
Cut to Length or Purchase in 12' Lengths.
Special Order In: Zinc, Galvanized, B7, S/S



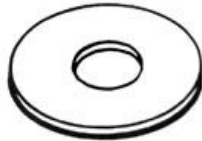
HEX BOLT

1/2" Hex Bolt - Available In Various Lengths
5/8" Hex Bolt - Available In Various Lengths
3/4" Hex Bolt - Available In Various Lengths
7/8" Hex Bolt - Available In Various Lengths
1" Hex Bolt - Available In Various Lengths
1-1/4" Hex Bolt - Available In Various Lengths

Made From Low Carbon Steel.
Available In Various Sizes And Lengths
Special Order In: Zinc, Galvanized, B7, S/S

WASHER

1/2" Washer
5/8" Washer
3/4" Washer
7/8" Washer
1" Washer
1-1/4" Washer



Made From Low Carbon Steel.
Special Order In:
Zinc, Galvanized, B7, S/S

NUT

1/2" Nut
5/8" Nut
3/4" Nut
7/8" Nut
1" Nut
1-1/4" Nut



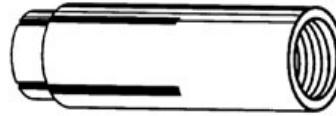
Made From Low Carbon Steel.
Special Order In:
Zinc, Galvanized, B7, S/S



Made From Low Carbon Steel.
Special Order In:
Zinc, Galvanized, B7, S/S

COUPLER NUT

1/2" Coupler Nut
5/8" Coupler Nut
3/4" Coupler Nut
7/8" Coupler Nut
1" Coupler Nut
1-1/4" Coupler Nut



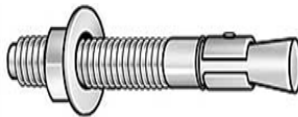
Insert this drop-in sleeve into a hole and insert bolt, threaded rod or coupler coil rod. The sleeve remains and bolt removable.

DROP-IN ANCHOR

1/4" Drop-In Anchor
3/8" Drop-In Anchor
1/2" Drop-In Anchor
5/8" Drop-In Anchor
3/4" Drop-In Anchor

WEDGE ANCHOR

1/4" Available (1-3/4" To 3-1/4")
5/16" Available (2-1/8" To 4")
3/8" Available (2-1/4" To 6-1/2")
1/2" Available (2-3/4" To 7")
5/8" Available (3-1/2" To 10")
3/4" Available (4-1/4" To 8-1/2")
7/8" Available (6" To 8")



A heavy duty, all steel, expansion wedge anchor designed to work under dead and variable loads in solid concrete.

WEDGE ANCHOR

3/8" Available (3" To 6")
1/2" Available (3" To 15")
5/8" Available (4" To 8")
3/4" Available (4" To 7")



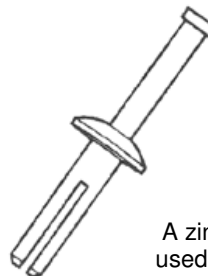
The Titan HD Anchor is a patented, high-strength screw anchor for concrete and masonry.



RAHL PIN - DSD ANCHOR

1/4" x 3" Rahl Pin

This duplex anchor is designed to temporarily secure forms or hardware to concrete or masonry materials. This double head and small diameter anchor is perfect for quick installation, removal.



HAMMER DRIVE

1/4" x 1" Hammer Drive
1/4" x 1-1/4" Hammer Drive
1/4" x 1-1/2" Hammer Drive
1/4" x 2" Hammer Drive

A zinc alloy shell with steel drive anchor used to secure light and medium loads in concrete and masonry.

Epoxy-Tie Adhesive

ET22 EPOXY-TIE SIMPSON EPOXY

ET Epoxy-Tie® is a two-component, 100% solids epoxy-based system for use as a high-strength, non-shrink anchor grouting material. Resin and hardener are dispensed and mixed simultaneously through the mixing nozzle. ET meets the ASTM C-881 specifications for Type I, II, IV and V, Grade 3, Classes B and C, except gel time.



USES:

- Threaded rod anchoring
- Rebar doweling
- Bonding hardened concrete to hardened concrete
- Pick-proof sealant around doors, windows and fixtures
- Paste-over for crack injection.

APPLICATION:

Surfaces to receive epoxy must be clean. For installations in or through standing water, see Simpson Manual for details. The base material temperature must be 40° F or above at the time of installation. For best results, material should be 70° F - 80° F at the time of application. Cartridges should not be immersed in water to facilitate warming. To warm cold material, the cartridges should be stored in a warm, uniformly heated area or storage container for a sufficient time to allow epoxy to warm completely. Mixed material in nozzle can harden in 5-7 minutes at a temperature of 40° F or above.

SHELF LIFE:

24 months from date of manufacture in unopened container

STORAGE CONDITIONS:

For best results store between 45° F - 90° F. To store partially used cartridges, leave hardened nozzle in place. To re-use, attach new nozzle.

CLEAN UP:

Uncured material — Wipe up with cotton cloths. If desired scrub area with abrasive, waterbased cleaner and flush with water. If approved, solvents such as ketones (MEK, acetone, etc.), lacquer thinner, or adhesive remover can be used. **DO NOT USE SOLVENTS TO CLEAN ADHESIVE FROM SKIN.** Take appropriate precautions when handling flammable solvents. Solvents may damage surfaces to which they are applied. Cured Material: Chip or grind off surface.

TEST CRITERIA:

Anchors installed with ET Epoxy-Tie® adhesive have been tested in accordance with ICC-ES's *Acceptance Criteria for Adhesive Anchors (AC508)* for the following:

- Seismic and wind Loading
- Long-term creep at elevated-temperature
- Static loading at elevated-temperature
- Damp holes
- Freeze-thaw conditions
- Critical and minimum edge distance and spacing

In addition, anchors installed with ET adhesive have been tested in accordance with ICC-ES's *Acceptance Criteria for Unreinforced Masonry Anchors (AC600)*.

AT30 ACRYLIC-TIE SIMPSON EPOXY

AT Acrylic-Tie® is a two component, high solids, 10:1 ratio acrylic-based adhesive for use as a high strength, anchor-grouting material. Formulated for use in all types of weather, AT is designed to dispense easily and cure at temperatures down to 0° F. Resin and initiator are dispensed and mixed simultaneously through the mixing nozzle. AT meets the physical requirements of ASTM C881, Type I & IV, Grade 3, Classes A, B & C, except Acrylic-Tie is a non-epoxy product formulated for fast cure time.



USES:

- Threaded rod anchoring
- Rebar doweling
- Pick-proof sealant around doors, windows and fixtures

APPLICATION:

Surfaces to receive adhesive must be clean and free of frost. The base material temperature must be 0° F or above at the time of installation. For information on installations below 0° F contact Simpson. Mixed material in nozzle can harden in 5-7 minutes. For installations in or through standing water, see Simpson manual for details.

SHELF LIFE:

12 months from date of manufacture in unopened container

STORAGE CONDITIONS:

For best results store between 32° F - 80° F. Partially used cartridges can be stored for a limited time by leaving nozzle in place. To re-use, attach new nozzle.

CLEAN UP:

Uncured material — Wipe up with cotton cloths. If desired scrub area with abrasive, waterbased cleaner and flush with water. If approved, solvents such as ketones (MEK, acetone, etc.), lacquer thinner, or adhesive remover can be used. **DO NOT USE SOLVENTS TO CLEAN ADHESIVE FROM SKIN.** Take appropriate precautions when handling flammable solvents. Solvents may damage surfaces to which they are applied. Cured material — Chip or grind off surface.

TEST CRITERIA:

Anchors installed with AT Acrylic-Tie® adhesive have been tested in accordance with ICC-ES's *Acceptance Criteria for Adhesive Anchors (AC508)* for the following:

- Seismic and wind Loading
- Long-term creep at elevated-temperature
- Static loading at elevated-temperature
- Damp and water-filled holes
- Freeze-thaw conditions
- Critical and minimum edge distance and spacing

In addition, anchors installed with AT Acrylic-Tie® adhesive have been tested in accordance with ICC-ES's *Acceptance Criteria for Unreinforced Masonry Anchors (AC600)* and NSF/ANSI Standard 61, Drinking Water System Components - Health Effects.

Epoxy-Tie Adhesive

SET-22 HIGH STRENGTH SIMPSON EPOXY

SET Epoxy-Tie® epoxy is a two-component, 1:1 ratio, high solids, epoxy-based adhesive for use as a high strength, non-shrink anchor grouting material. Resin and hardener are dispensed and mixed simultaneously through the mixing nozzle. SET meets or exceeds the requirements of ASTM C-881 specification for Type I, II, IV and V, Grade 3, Class B and C.



USES:

- Threaded rod anchoring
- Rebar doweling
- Bonding hardened concrete to hardened concrete
- Pick-proof sealant around doors, windows and fixtures
- Paste-over for crack injection.

APPLICATION:

Surfaces to receive epoxy must be clean. For installations in or through standing water, see Simpson Manual for details. The base material temperature must be 40° F or above at the time of installation. For best results, material should be 70° F - 80° F at the time of application. Cartridges should not be immersed in water to facilitate warming. To warm cold material, the cartridges should be stored in a warm, uniformly heated area or storage container for a sufficient time to allow epoxy to warm completely. Mixed material in nozzle can harden in 5-7 minutes at a temperature of 40° F or above.

SHELF LIFE:

24 months from date of manufacture in unopened side-by-side cartridge. SET-PAC EZ™ cartridge - 24 months from date of manufacture, unopened.

STORAGE CONDITIONS:

For best results store between 45° F - 90° F. To store partially used cartridges, leave hardened nozzle in place. To re-use, attach new nozzle.

CLEAN UP:

Uncured material — Wipe up with cotton cloths. If desired scrub area with abrasive, waterbased cleaner and flush with water. If approved, solvents such as ketones (MEK, acetone, etc.), lacquer thinner, or adhesive remover can be used. **DO NOT USE SOLVENTS TO CLEAN ADHESIVE FROM SKIN.** Take appropriate precautions when handling flammable solvents. Solvents may damage surfaces to which they are applied. Cured Material: Chip or grind off surface.

TEST CRITERIA:

Anchors installed with SET Epoxy-Tie® adhesive have been tested in accordance with ICC-ES's *Acceptance Criteria for Adhesive Anchors (AC58)* for the following:

- Seismic and wind Loading
- Long-term creep at elevated-temperature
- Static loading at elevated-temperature
- Damp holes
- Freeze-thaw conditions
- Critical and minimum edge distance and spacing

In addition, anchors installed with SET Epoxy-Tie® adhesive have been tested in accordance with ICC-ES's *Acceptance Criteria for Unreinforced Masonry Anchors (AC60)*.

SET-XP STRUCTURAL SIMPSON EPOXY

SET-XP™ is a 1:1 two component, high solids epoxy-based anchoring adhesive formulated for optimum performance in both cracked and uncracked concrete. SET-XP™ adhesive has been rigorously tested in accordance with ICC-ES AC308 and 2006 IBC requirements and has proven to offer increased reliability in the most adverse conditions, including performance in cracked concrete under static and seismic loading. SET-XP™ adhesive is teal in color in order to be identified as a high-performance adhesive for adverse conditions. Resin and hardener are dispensed and mixed simultaneously through the mixing nozzle. SET-XP™ adhesive exceeds the ASTM C881 specification for Type I and Type IV, Grade 3, Class C epoxy..

USES:

When SET-XP™ adhesive is used with the IXP anchor, all thread rod or rebar, the system can be used in tension and seismic zones where there is a risk of cracks occurring that pass through the anchor location. It is also suitable for uncracked concrete conditions.

APPLICATION:

Surfaces to receive epoxy must be clean. The base-material temperature must be 50° F or above at the time of installation. For best results, material should be 70–80° F at the time of application. Cartridges should not be immersed in water to facilitate warming. To warm cold material, the cartridges should be stored in a warm, uniformly-heated area or storage container for a sufficient time to allow epoxy to warm completely. Mixed material in nozzle can harden in 5–7 minutes at a temperature of 40° F or above.

SHELF LIFE:

24 months from date of manufacture in unopened side-by-side cartridge.

STORAGE CONDITIONS:

For best results store between 45° F - 90° F. To store partially used cartridges, leave hardened nozzle in place. To re-use, attach new nozzle.

CLEAN UP:

Uncured Material — Wipe up with cotton cloths. If desired, scrub area with abrasive, waterbased cleaner and flush with water. If approved, solvents such as ketones (MEK, acetone, etc.), lacquer thinner or adhesive remover can be used. **DO NOT USE SOLVENTS TO CLEAN ADHESIVE FROM SKIN.** Take appropriate precautions when handling flammable solvents. Solvents may damage surfaces to which they are applied. Cured Material — chip or grind off surface.








TEST CRITERIA:

Anchors installed with SET-XP™ Epoxy-Tie® adhesive have been tested in accordance with ICC-ES's *Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements (AC308)* for the following:

- Seismic and wind loading in cracked and uncracked concrete
- Static tension and shear loading in cracked and uncracked concrete
- Horizontal and overhead installations
- Long-term creep at elevated-temperatures
- Static loading at elevated-temperatures
- Damp holes
- Freeze-thaw conditions
- Critical and minimum edge distance and spacing

In addition, anchors installed with SET Epoxy-Tie® adhesive have been tested in accordance with ICC-ES's *Acceptance Criteria for Unreinforced Masonry Anchors (AC60)*.

Epoxy Dispensing Tools

<p>10oz. Manual Dispensing Tool Cartridge - CDT10</p> <p>The CDT10 features a high thrust drive mechanism and a molded fiber reinforced nylon body for ultimate strength and light weight. The handle is positioned under the cartridge for balance and ease of use. The drive mechanism is released by pushing forward on the drive handle. Cartridges “snap-lock” into position.</p>	
<p>22oz. Manual Dispensing Tool Cartridge – EDT22B</p> <p>The EDT22B features a molded fiber reinforced nylon body for ultimate strength and light weight. The handle is positioned under the cartridge for balance and ease of use. The drive mechanism is released by pushing forward on the drive handle. Cartridges “snap-lock” into position.</p>	
<p>22oz. Battery-Powered Dispensing Tool Cartridge – EDT22CKT</p> <p>The EDT22CKT offers power dispensing without the need for a hose or compressor. The tool features dosage and rate control for maximum efficiency. Each battery charge dispenses approximately 25 cartridges and recharging takes 1 hour. Tool comes complete with two 14.4V batteries and a charger.</p>	
<p>22oz. Pneumatic Dispensing Tool Cartridge – EDT22AP</p> <p>The EDT22AP has an ergonomically designed nylon handle that includes a flow rate adjustment. This lightweight tool (6 lbs.) also features a power piston return.</p>	
<p>56oz. Pneumatic Dispensing Tool Cartridge – EDT56AP</p> <p>The EDT56AP has an ergonomically designed nylon handle that includes a flow rate adjustment. This lightweight tool (9 lbs.) also features a power piston return.</p>	
<p>Acrylic 10oz. Manual Dispensing Tool Cartridge - ADT813B</p> <p>The ADT813B features a molded fiber-reinforced nylon body for ultimate strength and light weight. The handle is positioned under the cartridge for balance and ease of use. The drive mechanism is released by pushing forward on the drive handle. Cartridges “snap-lock” into position.</p>	
<p>Acrylic 30oz. Manual Dispensing Tool Cartridge - ADT30</p> <p>The ADT30 features a steel carriage and a molded fiber-reinforced nylon body for ultimate strength and light weight. The handle is positioned under the cartridge for balance and ease of use. The drive mechanism is released by pushing forward on the drive handle.</p>	
<p>Acrylic 30oz. Battery Powered Dispensing Tool Cartridge - ADT30CKT</p> <p>The ADT30CKT offers power dispensing without the need for a hose or compressor. The tool features dosage and rate control for maximum efficiency. Each battery charge dispenses approximately 25 cartridges and recharging takes 1 hour. Tool comes complete with two 14.4V batteries and a charger.</p>	
<p>Acrylic 30oz. Pneumatic Dispensing Tool Cartridges - ADT30P</p> <p>The ADT30P has an ergonomically designed nylon handle complete with flow rate adjustment. This lightweight 6lb.tool features a power piston return.</p>	

Seismic Straps

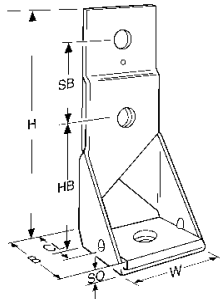
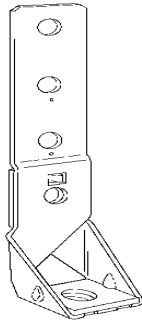
HD / HOLD DOWNS

There are a variety of anchor hold downs using bolts instead of screws to secure to framing.

FEATURES AND INSTALLATION:

- Offers the builder a lighter anchor hold down device with greater load capacity at a more affordable price.
- Seat design allows greater installation adjustability.
- Bolt holes shall be a minimum of 1/32" to a maximum of 1/16" larger than the bolt diameter.
- Stud bolts should be snugly tightened.

For Engineering Please Refer To The Manufactures Catalog For Specific Allowable Load Design And Specifications



SIMPSON Model No.	KC METALS Model No.	Material	Anchor Bolt Dia
HD2A	AD2A	12 ga.	5/8
HD5A	AD5A	10 ga.	5/8
HD6A	AD6A	7 ga.	7/8
HD8A	AD8A	7 ga.	7/8
HD10A	AD10A	7 ga.	7/8
HD14A	HD14A	3 ga.	1
HD15	AD15	3 ga.	1-1/4

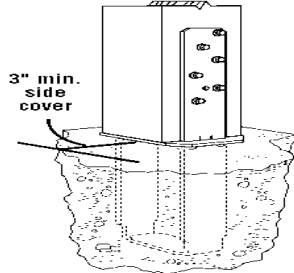
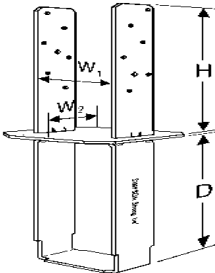
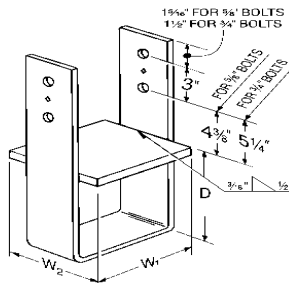
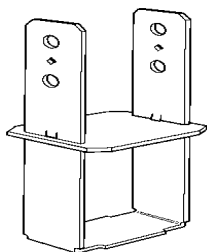
CB / HOLD DOWNS

These column base hold downs are designed to be poured in place as column supports.

INSTALLATION:

- Install all models with bottom of base plate flush with concrete.
- These models are designed for their high structural values to secure a variety of posts to concrete with bolts or screws.
- Available in many different size configurations than what is listed. Call for price and availability.
- Available in a variety of material including a light version of this model, gray paint, HDG, stainless and powder coated.

For Engineering Please Refer To The Manufactures Catalog For Specific Allowable Load Design And Specifications



SIMPSON Model No.	KC METALS Model No.	Material	Fastener Diameter
CB44	HA44	7 ga.	5/8
CB46	HA46	7 ga.	5/8
CB48	HA48	7 ga.	5/8
CB66	HA66	7 ga.	5/8
CB68	HA68	7 ga.	5/8
CB88	HA88	3 ga.	3/4
SIMPSON Model No.	KC METALS Model No.	Material	Fastener Diameter
CBSQ44	HASQ44	10 ga.	14 SDS
CBSQ46	HASQ46	10 ga.	14 SDS
CBSQ66	HASQ66	10 ga.	14 SDS
SIMPSON Model No.	KC METALS Model No.	Material	Fastener Diameter
CBQ44	HAQ44	7 ga.	12 SDS
CBQ46	HAQ46	7 ga.	12 SDS
CBQ66	HAQ66	7 ga.	12 SDS

Seismic Straps

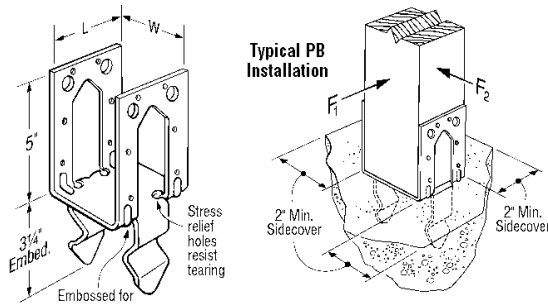
PB AND PBS / HOLD DOWNS

There are a variety of post bases used to secure wood to concrete.

FEATURES AND INSTALLATION:

- Install either nails or bolts.
- Post bases do not provide adequate resistance to prevent post from rotating (such as fences or free standing carports).
- PBS model provides a 1" standoff.
- The finish is galvanized, but is available in ZMAX and HDG coating.

For Engineering Please Refer To The Manufactures Catalog For Specific Allowable Load Design And Specifications



SIMPSON Model No.	KC METALS Model No.	Material	Anchor Bolt Dia
PB44	PA44	12 ga.	1/2 or 12-16d
PB46	PA46	12 ga.	1/2 or 12-16d
PB66	PA66	12 ga.	1/2 or 12-16d
PBS44A	PA44R	14 ga.	1/2 or 14-16d
PBS46	PA46R	14 ga.	1/2 or 14-16d
PBS66	PA66R	12 ga.	1/2 or 14-16d

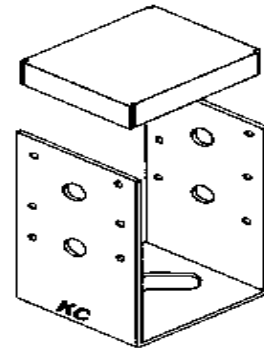
ABU AND ABE / HOLD DOWNS

There are a variety of adjustable post bases used to secure wood posts to concrete.

FEATURES AND INSTALLATION:

- Install either nails or bolts.
- Post bases do not provide adequate resistance to prevent post from rotating (such as fences or free standing carports).
- The finish is galvanized, but is available in ZMAX and HDG coating.

SIMPSON Model No.	KC METALS Model No.	Material	Anchor Bolt Dia
ABU44	AAE44L	12 ga.	5/8
ABU46	AAE46L	12 ga.	5/8
ABU66	AAE66L	12 ga.	5/8



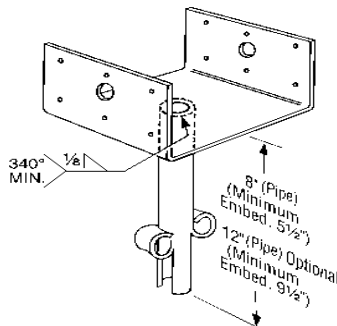
For Engineering Please Refer To The Manufactures Catalog For Specific Allowable Load Design And Specifications

EPB / HOLD DOWNS

There are a variety of post bases used to secure wood to concrete.

FEATURES AND INSTALLATION:

- Allows 1" to 2-1/2" clearance above concrete.
- Post bases do not provide adequate resistance to prevent post from rotating (such as fences or free standing carports).



SIMPSON Model No.	KC METALS Model No.	Material	Nails
EPB44	AAE44L	12 ga.	8-16d
EPB46	AAE46L	12 ga.	12-16d
EPB66	AAE66L	12 ga.	12-16d

For Engineering Please Refer To The Manufactures Catalog For Specific Allowable Load Design And Specifications

Seismic Straps

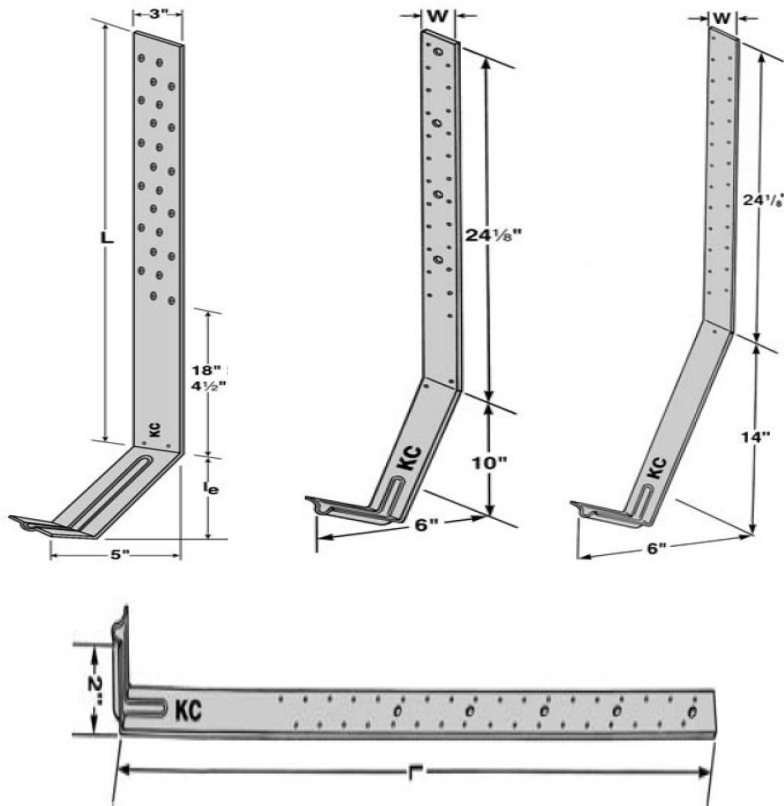
STRAP ANCHOR / HOLD DOWNS

There are a variety of strap anchors used to meet high load specifications for wood to concrete applications.

INSTALLATION:

- Install strap before concrete pour to the inside form with nails, a StrapMate or other holding device.
- Install one horizontal #4 rebar in the shear cone prior to pour.
- The staggered nailing pattern of the strap helps minimize splitting of wood and allows for the nailing to the edges of double 2x's.
- After pour, strap may be bent horizontally 90 degrees, then bent vertically 90 degrees to aid in wall placement.
- When nailing strap to framing, nail from the bottom up,

For Engineering Please Refer To The Manufactures Catalog For Specific Allowable Load Design And Specifications



SIMPSON Model No.	KC METALS Model No.	Material
STHD8	SSAD8	12 ga.
STHD8RJ	SSAD8RJ	12 ga.
STHD10	SSAD10	12 ga.
STHD10RJ	SSAD10RJ	12 ga.
STHD14	SSAD14	12 ga.
STHD14RJ	SSAD14RJ	12 ga.
SIMPSON Model No.	KC METALS Model No.	Material
LSTD8	LSSAD8	14 ga.
LSTD8RJ	LSSAD8RJ	14 ga.
SIMPSON Model No.	KC METALS Model No.	Material
PAHD42	SA2545	12 ga.
HPAHD22	HSA3522	10 ga.
SIMPSON Model No.	KC METALS Model No.	Material
PA18	SA18	12 ga.
PA23	SA23	12 ga.
PA28	SA28	12 ga.
PA35	SA35	12 ga.
PA51	SA51	12 ga.
PA68	SA68	12 ga.

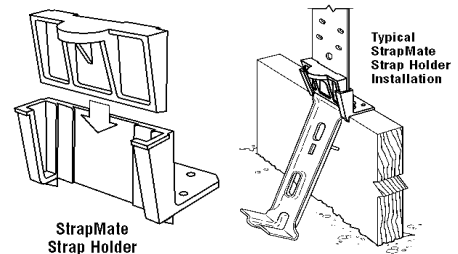
STRAPMATE

The StrapMate is designed to hold the strap anchors in place prior to pour.

INSTALLATION:

- StrapMate is reusable.
- Designed to fit 3/4" thru 1-1/8" forms or larger.
- The strap is positioned off the front edge of the form board.

SIMPSON Model No.	Nails
SM1	2-8d



Seismic Straps

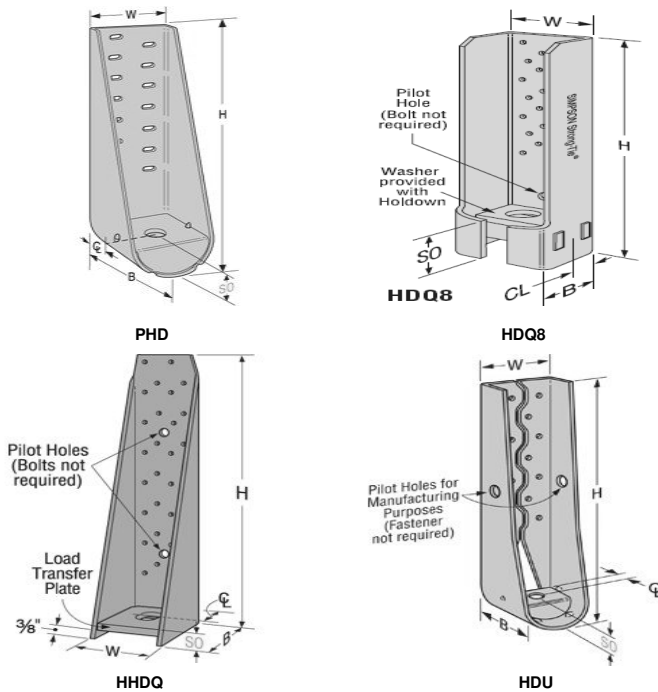
PHD & HDU / HOLD DOWNS

These hold downs are used to connect framing members to either concrete, using a suitable anchor bolt, or span between other framing members using threaded rods.

INSTALLATION:

- Heavy gauge load transfer plate reduces anchor down defection.
- Wood screws reduce slip due to over drilled bolt holes (*screws included*).
- Smaller centerline reduces eccentricity in the stud.
- Ideal for retro fit applications with no stud bolts to countersink.

For Engineering Please Refer To The Manufacturers Catalog For Specific Allowable Load Design And Specifications



SIMPSON Model No.	KC METALS Model No.	Material	Anchor Bolt Dia
PHD2	ADST2	14 ga.	5/8
PHD5	ADST5	14 ga.	5/8
PHD6	ADST6	12 ga.	7/8
SIMPSON Model No.	KC METALS Model No.	Material	Anchor Bolt Dia
HDQ8	ADQ8KIPS	7 ga.	7/8
SIMPSON Model No.	KC METALS Model No.	Material	Anchor Bolt Dia
HHDQ11	N/A	7 ga.	1
HHDQ14	N/A	7 ga.	1
SIMPSON Model No.	KC METALS Model No.	Material	Anchor Bolt Dia
HDU2	N/A	14 ga.	5/8
HDU4	N/A	14 ga.	5/8
HDU5	N/A	14 ga.	5/8
HDU8	N/A	10 ga.	7/8
HDU11	N/A	10 ga.	1
HDU14	N/A	7 ga.	1

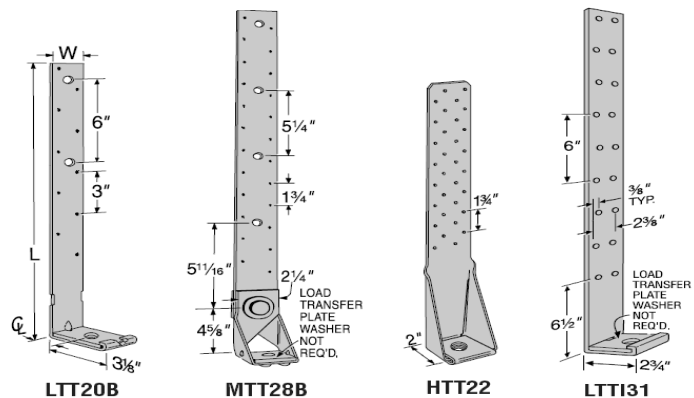
LTT / HTT / MTT

There are a variety of anchor downs using nails instead of bolts to secure to framing.

INSTALLATION:

- Designer must determine the fastener required.
- Nails are used to secure strap to framing..

SIMPSON Model No.	KC METALS Model No.	Steel Thickness	Anchor Bolt Dia	L (Inches)
LTT19	ADST2	5/16	5/8	19-1/8
LTT20B	ADST5	5/16	5/8	19-3/4
LTT131	ADST6	1/4	5/8	31
HTT16	ADST6	7/16	5/8	16
HTT22	ADQ8KIPS	7/16	5/8	22
MTT28B	ADST6	3/8	5/8	27



For Engineering Please Refer To The Manufactures Catalog For Specific Allowable Load Design And Specifications

Rebar

REBAR FABRICATION / EPOXY REBAR / REBAR CONNECTIONS

Astrof Concrete Hardware fabricates all rebar orders big and small. We routinely handle all types of rebar structures including residential housing, commercial and industrial buildings, institutional and heavy engineered projects.

Services provided include:

- Bulk rebar sales and fabrication—All size orders, big or small
- Professionally produced detailed placing drawings are available upon request. (*Shop Drawings*).
- Mill Certifications available upon request.
- Epoxy coated reinforcing steel
- Rebar delivered free locally and in most cases next day service.

Examples Rebar Bends

 00 A	 11 A+(B)-1/2r-d	 12 A+(B)-1/2R-d	 13 A+0.57B+ (C) -1.57d
 15 A+(C)	 21 A+B+(C)-r-2d	 25 A+B+(E)	 26 A+B+(C)
 31 A+B+C+(D)-1.5r-3d	 33 2A+3B+17d	 41 A+B+C+D+(E)-2r-4d	 44 A+B+C+D+(E)-2r-4d
 46 A+2B+C+(E)	 51 2(A+B+C)-2.5r-5d	 67 A	 77 Cπ (A-d)

Bar Size	Lbs. Per Foot	Weight Per 20' Length	Pieces Per Ton
#3 - (3/8")	0.376	7.52	288
#4 - (1/2")	0.668	13.36	150
#5 - (5/8")	1.043	20.86	96
#6 - (3/4")	1.502	30.04	68
#7 - (7/8")	2.044	40.88	50
#8 - (1")	2.670	53.40	40
#9 - (1-1/8")	3.400	68.00	29
#10 - (1-1/4")	4.303	89.06	23
#11 And Greater	Call	Call	Call

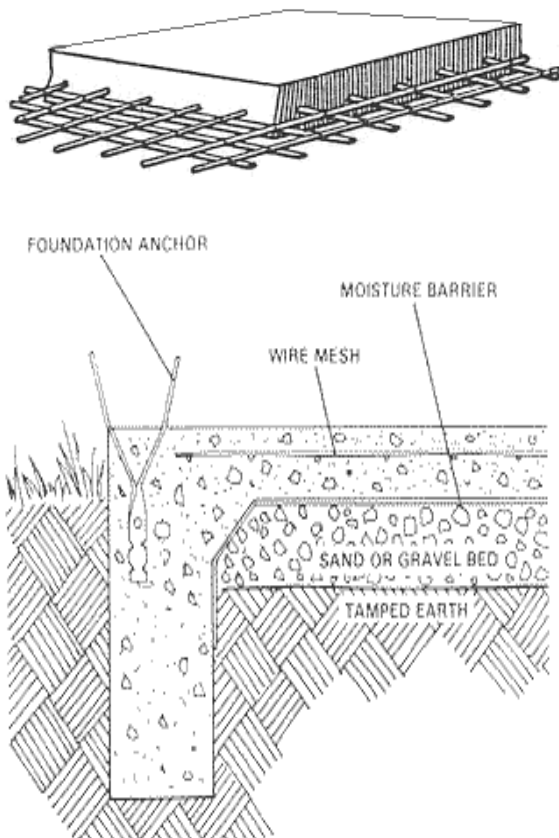
Wire Mesh

Benefits of Wire Reinforced Concrete Slabs

Here are the benefits of steel reinforced concrete slabs:

- Welded wire mesh is delivered in flat sheets (7'6" x 20') for easy installation.
- Reinforcing your concrete slab helps reduce cracking.
- Wire reinforcing reduces and controls crack width and helps maintain aggregate interlock.
- Displacement and curling can be minimized when wire reinforced concrete is provided.
- Strength is increased with wire reinforced concrete even the smallest cross sectional area of wire reinforcement will provide reserve strength of 16 percent and more.
- Most importantly, wire reinforcement saves money over the life of the slab.
- Finally, admixtures are not an alternative to wire reinforcement; they both do different things in the concrete. Therefore, admixtures cannot be substituted for wire reinforcement. It is also essential that steel reinforcement be sized, spaced, and placed properly. It is vital to have a well-graded and compacted granular sub base.
- Special orders available in galvanized, epoxy coatings and stainless. Call for quote on pricing and availability.
- Standard sheet size 7'6"x 20' with square sizes of 6"x 6".

Wire mesh is the number one choice for slab reinforcement with high product strength and labor saving properties. Delivering superior reinforcement properties and lowering overall cost.



Popular Sizes And Gauge

6X6	Gauge
W1.4	10
W2.1	8
W2.9	6
W4.0	4

Did your architect specify a different size or gauge? No problem, give us a call for a free consultation.

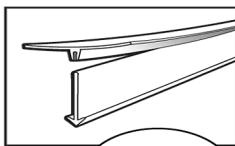
Don't Forget Your Under Slab Vapor Barrier, Insulating Foam Boards And Concrete Dobies.

Expansion Joint Products

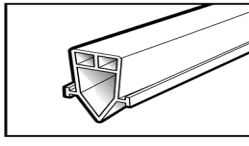
PLASTIC JOINT MATERIALS

We have all the expansion joints and joint fillers you will need for your next project. Call today with your specifications and we will make sure it is delivered to your site next day!

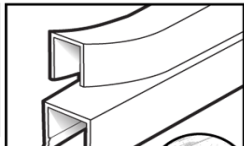
Description	Width	Depth	Length
Speed-E-Joint	1/8"	1" 1-1/2" 2"	10'
Deck-O-Joint	5/8"	1-3/8"	10'
Snap-Cap	3/8" 1/2" 3/4" 1"	1/2"	10'
Keyway	2-1/8" 3-3/4"	5/8" 1-3/8"	10'
Polyfoam	1/4" 1/2"	1-1/2" 2" 3" 4" 6" 8"	50'



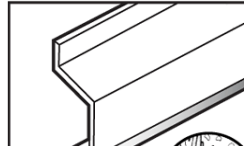
Speed-E-Joint



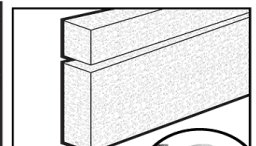
Deck-O-Joint



Snap-Cap



Keyway

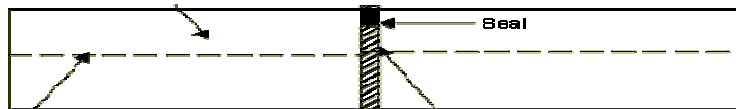


Polyfoam

FIBRE EXPANSION FELT AND ECO JOINT

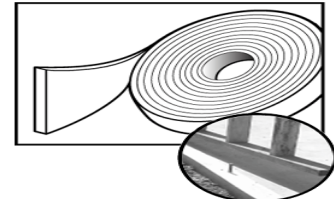
Fiber Felts can be used for sidewalks, against structures and Curb and Gutter. There are many options available so call today with your scope of work and we will match the right product to your project. Use w/ Snap Cap for best results.

Description	Width	Depth	Length
Fibre Expansion Joint	1/4" 3/8" 1/2" 3/4" 1"	2" 4" 6"	10' (Custom Sizes Available)
Eco-Joint — Synthetic Rubber	1/2" 3/4"	Various Depths	5' And 10'



Reinforcement (if used) should have EDM cover and terminate within 0-20mm of joint line.

Compressible filler board. It is top routed out later to receive hydrocarbon resistant joint sealant.

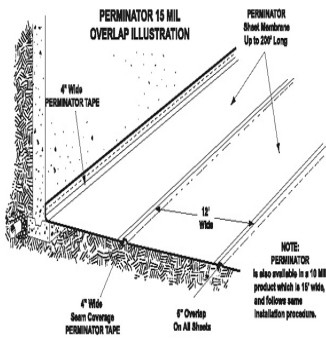


JOINT FILLERS

There are a variety of products that can be used to seal the joints on your residential or commercial project. Consult with us for the needs of your project and we will match the right product for your needs. Custom colors and other products available.

Description	Colors	Application
Sonolastic SL 1	Limestone White	Horizontal (Flowable)
Vulkem 921	Grey White	Vertical And Horizontal

Vapor Barriers / Insulation



UNDER SLAB VAPOR BARRIER

Perminator under slab vapor barrier is a new generation of polyolefin-based resin/chemical technology. This vapor barrier will help to reduce moisture and water vapor penetration into the building. Helps reduce fungus, mildew and mold growth.

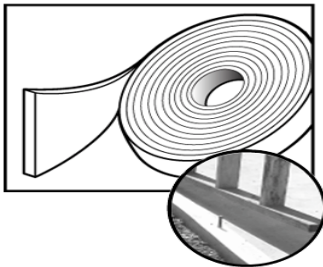
Description	Size	Moisture Transfer
Perminator 10 mil	15' x 200'	3lb/1000ft.2/24hrs
Perminator 15 mil	12' x 200'	3lb/1000ft.2/24hrs
Perminator Tape	4" x 180'	12 Rolls/Cartron



VISQUEEN

Standard black visqueen is used as a low grade vapor barrier as well as for soil protection. 6 mil visqueen is a cost reducing alternative to higher grade 10 and 15 mil vapor barriers.

Description	Size	Thickness
10'x50'	500 sq ft	6 mil
10'x100'	1000 sq ft	6 mil
20'x100'	2000 sq ft	6 mil



SILL PLATE SEAL

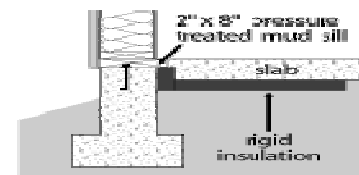
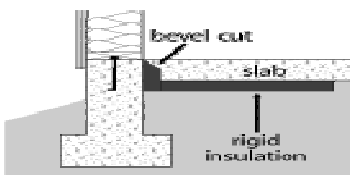
Many additional items available for completing your project on time and to specification.

Description	Size	Additional Info
Foam Sill Seal	1/4"x3"x50'	Sill Plate Seal
Foam Sill Seal	1/4"x5.5"x50'	Sill Plate Seal
Spray Foam	12oz/ R5	Medium Exp

INSULATION FOAM BOARDS

R10 Foam Insulation is used for exterior and underslab insulation. Insulating is an integral part of maintaining the energy efficiency of any home and is often specified by engineers and architects. Submit your plan to find out more!

Description	Size	Value Pricing
R10 Rigid Foam Insulation	2' x 8' x 2"	96 Per Unit
R10 Rigid Foam Insulation	4' x 8' x 2"	48 Per Unit
Additional Sizes Available	Additional Sizes Available	Call For Pricing





formrentals.com

Geomembrane And Geotextiles

Aqua Dam® Not only are Aqua Dams® easy to use, they deliver impressive results at a fraction of the cost of earthen dams, sandbags or sheet piling. Aqua Dams® are lightweight, easy to transport, and can be reused over and over again

Baffle Curtains - Floating & Fixed Systems are used in water treatment facilities to improve flow characteristics and to increase the effectiveness of water treatment.

Concrete Embedment Liner are designed to provide a synthetic lining surface on concrete structures or containments.

Debris Netting Layfield's Debris Netting is a lightweight, HDPE netting designed to protect workers and pedestrians walking near the base of scaffolding. Debris netting is an economical alternative to other enclosure systems when it is not necessary to completely isolate the work area from bad weather. Layfield's debris netting comes in rolls 10' wide by 164' long, and is available in black, green, or blue colors. Custom colors are also possible on large orders.

Drainage Composites often referred to as drainage board is a prefabricated drainage composite that can provide positive drainage in a very thin layer.

E'GRID Biaxial Geogrid (PP) are used in base reinforcement applications such as roads, storage yards and parking lots. Biaxial polypropylene geogrids provide good tensile strength in both principle directions

E'GRID Uni-Axial Geogrid (HDPE) are used for high strength applications such as retaining walls and embankment reinforcement. Geogrids are composed of pre-stressed, high strength bars, with excellent long term creep strengths.

Erosion Control Blankets - ECBs are used as a means of protecting open soils from erosion and promoting the establishment of a permanent vegetative cover.

Floating Silt Curtain often referred to as Turbidity Curtains provide an effective and price sensitive system for isolating silt or other hazardous materials while working in an aquatic ecosystem.

Geo Cell are specialty 3-dimensional structures that are used to confine fill materials to create structural stability. Geo Cell soil confinement systems allow the designer to build with otherwise unsuitable fill materials.

Geoblock is used when maximum load support and turf protection are required.

Geogrid Bi-Axial (PET) are used in base reinforcement applications such as roads and parking lots.

Geogrid Uniaxial (PET) S-Series S-series geogrids are typically used for soil reinforcement applications such as retaining walls, steepened slopes, embankments, sub grade stabilization, embankments over soft soils and waste containment.

Geogrid Uni-Axial (PET) T-Series The strength of a geogrid allows positive reinforcement of embankments and retaining walls. Geogrids interlock with the soil and have excellent long term creep strength.

Geomembrane - Arctic Liner NT Arctic Liner® NT is a carefully formulated alloy for hydrocarbon containment that combines chemical resistance with outstanding low temperature flexibility.

Geomembrane - Enviro Liner 2000 The Enviro Liner® 2000 series of geomembranes are Layfield's polyethylene liners made from reprocessed resins; an economical lining choice for use in seepage control.

Geomembrane - Enviro Liner 4000 The Enviro Liner® 4000 series is Layfield's line of flexible LLDPE geomembranes.

Geomembrane - Enviro Liner 4000 Series Textured With our new coextrusion capability at our Vancouver B.C. manufacturing plant, Layfield now offers Enviro Liner® 4000 series geomembranes with surface texturing on one or both sides.



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Geomembrane And Geotextiles

Geomembrane - Enviro Liner 6000 We are pleased to announce the recent National Sanitary Foundation 61 Certification of Enviro Liner®. This certification confirms that Enviro Liner® 6000 has been tested and certified to be used as a geomembrane for drinking water and potable water containment applications.

Geomembrane - Enviro Liner 6000 Series Textured A significant expansion of our manufacturing capabilities has been undertaken at our blown film facility in Vancouver, B.C. With the addition of a new Co-Extrusion line we can now texture Enviro Liner® 6000 series geomembranes on one or both sides.

Geomembrane - Enviro Liner 8000 Enviro Liner® 8000 is a new fabric-supported polyolefin geomembrane material with the strength and UV resistance for most lining and cover applications.

Geomembrane - EPDM Layfield's EPDM material is a nominal 45 mil thick non-reinforced elastomeric waterproofing liner used in recreational, commercial and industrial water containment applications. This liner material is specially formulated for long term exposed (& backfilled / buried) applications as it has excellent U.V., ozone, oxidation and cold temperature resistant properties. In addition, EPDM's excellent elongation and lay flat characteristics make it ideal for installing on irregular shaped pond sub-bases.

Geomembrane - GeoFlex GeoFlex geomembranes combine outstanding flexibility, elongation, cold temperature resistance, long term UV stability, with advanced chemical resistance.

Geomembrane - HAZGARD Layfield's HAZGARD® brand of geomembranes is specially designed to meet your requirements in secondary containment applications.

Geomembrane - HDPE The popularity of High Density Polyethylene (HDPE) is primarily due to its low initial material cost and excellent chemical resistance. This allows thicker sections to be used compared to other geomembrane materials.

Geomembrane - High Temp Layfield provides high service temperature geomembranes for your critical containment applications.

Geomembrane - Hypalon® is a highly durable lining material, offering excellent weathering resistance for water and waste water applications.

Geomembrane - PP (S) Supported Polypropylene styles have excellent cold temperature flexibility, long term UV resistance, and substantial tensile strength.

Geomembrane - PVC was one of the first materials used for geomembranes and remains an economical and versatile choice. PVC is an elastic material that can conform readily to irregular shapes and differential settlement.

Geomembrane - RPE RPE®'s are economical lining materials for seepage control, soil remediation, and interim landfill cap applications.

Geomembrane - Spray Applied Spray applied polyurethane and polyurea geomembrane lining materials are ideal for secondary containment applications with complex details such as multiple pipe penetrations.

Geomembrane - XR-5 XR-5® is a versatile alloy, formulated to provide good chemical resistance and outstanding long-term resistance to UV radiation.

Geomembranes - Specialty There are many other materials that can be provided for your lining needs. Layfield has access to a wide variety of materials including Hypalon, Polyurethane, many grades of PVC, alternate thicknesses for most materials, and specialty geomembrane materials. Some of these products require a minimum order quantity.



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Geomembrane And Geotextiles

Geomembranes - ULC Tested HAZGARD® 535 is rated for aboveground and is fire retardant and can be used for exposed applications. HAZGARD® 1000 is rated for above or belowground applications and must be backfilled.

Geo-Net and Geocomposite Drains Geo-Nets are used to provide lateral transmission of fluid in many applications. Geo-Nets provide effective drainage layers in multiple lining systems.

Geosynthetic Clay Liner Geosynthetic Clay Liners (GCL's) allow the placement of a thin layer of high quality bentonite as a replacement for thick compacted clay liners.

Geotextiles - High Strength High strength (HS) woven geotextiles are made from pre-stressed polypropylene (PP) or polyester (PET) fibres. Layfield's high strength geotextiles are made primarily of polypropylene fibers but can provide materials blended with polyester or even full polyester geotextiles.

Geotextiles - High Strength PET High strength geotextiles are used in high strength reinforcement applications such as sludge pond closures, retaining walls, and embankments.

Geotextiles - Monofilament Geotextiles Geotextiles are often used with erosion protection systems on shorelines to prevent undercutting and washout. Woven monofilament geotextiles are a special application of geotextiles that takes advantage of the excellent filtration properties of the textile.

Geotextiles - Nonwoven Non-woven needle-punched geotextiles offer excellent water flow properties for drainage and other applications.

Geotextiles - Typar Spun Bonded Non Woven Fabrics Typar® geotextiles combine strength with excellent retention of soil fines for drainage and other applications.

Geotextiles - Woven Woven Polypropylene slit-film geotextiles are used for sub grade stabilization and other applications requiring strength.

REVOC® Biogas Collection Covers Biogas Collection floating covers are your best choice for agricultural and waste water methane collection.

REVOC® Evaporation/Algae Covers Evaporation/Algae Control floating covers are an economical way to prevent water losses in arid climates and to prevent the growth of Algae in water treatment ponds and for the prevention of odor causing emissions.

REVOC® Modular Insulated Covers Insulated Covers are a special type of floating cover that insulates the top of a pond helping to maintain temperatures during cold periods.

Sediment Control - Silt Bag The Silt Bag is designed to filter water as it is pumped from a storage site, removing hazardous materials such as silt before they can damage the environment.

Sediment Control - Triangular Silt Dike Typical applications of TSD include replacing straw bales for checking runoff water flow in a newly constructed ditch, or creating a temporary flow path through an earthwork project.

Silt Fence Silt Fence is a temporary silt control device that helps to prevent the loss of silts from a site during rain, or other run-off events.

Silt Fence Green Layfield's Green Silt Fence is a temporary linear sediment barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff. The green color is more aesthetically appealing and provides a better visual barrier than the traditional black colored silt fence.



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Geomembrane And Geotextiles

Turf Reinforcement Mats - TRM's Turf Reinforcement Mats (TRM's) are synthetic fiber erosion control blankets that offer permanent support to vegetation. TRM's combine vegetative growth and synthetic materials to form a high strength mat that helps prevent soil erosion in drainage areas and on steep slopes.

Vapor Barriers - VaporFLEX® The VaporFLEX® product line has been designed to perform as highly effective vapor barriers that impede the infiltration of moisture and water vapor through concrete slabs and foundations. VaporFLEX® is used to discourage mold growth and to prevent harmful vapors from migrating through the concrete into building interiors. With the current environment of high insurance costs, health problems and substantial liabilities associated with mold in homes and businesses, VaporFLEX® provides a cost effective solution as a component in a building's water proofing design.

Wick Drains Wick Drain (also referred to as strip drain or prefabricated vertical drain) is used in both vertical and horizontal applications. In the vertical application (vertical wick drains), the wick drain is installed with specialized equipment which drives the wick drain into the ground. Vertical wick drains, in conjunction with a preload, provide a shorter drainage path for water saturated area's in order to reduce the time to consolidation. This can save the project time and money compared to a preload alone.

Wire Backed Silt Fence This variation on the traditional Silt Fence style provides rugged, reliable, and low maintenance silt control. Wire Backed Silt Fence will effectively protect storm water drainage systems from fouling with silt, and will protect you from environmental liability due to silt leaving your project site.



Erosion And Sediment Control Products

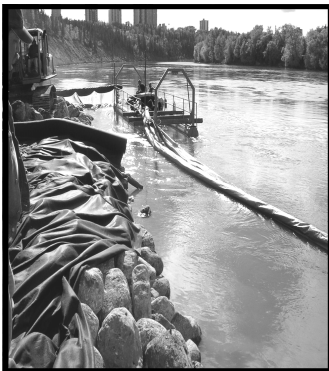


Silt Fence

- Wire backed reinforced silt fence.
- Standard silt fence 3' x 100' with wood post.
- Stock and custom products.

Triangular Silt Dikes

- Stream diversion.
- Portable check dam.
- Modular and reusable.
- Lightweight and economical.



Floating Silt Curtains

- Sediment control barriers.
- Modular and reusable.
- High strength filtration fabrics.
- Standard sizes.
- Heavy duty flotation system.

Soil Reinforcement And Drainage Products

- Geogris and high strength fabrics.
- Retaining walls and reinforced slopes.
- Geotextiles.
- Design services.

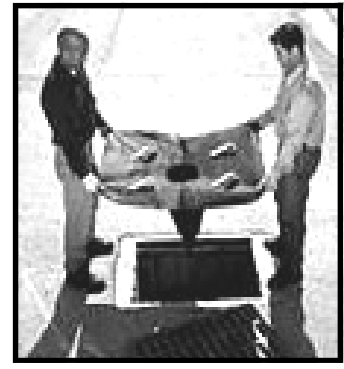


Sludge And Dewatering Tubes

- High strength sludge dewatering tubes.
- Dredged material management.
- Coastal, wetlands and reverie structures.
- Non-woven fabric dewatering bags.

Catch Basin Sediment Traps

- Catch basin protection.
- Reduce costly cleanout.
- Heavy duty lifting strap.
- Relief slot for overflow.



Aqua Dam Water Control Structures

- Portable coffer dams.
- Stream and river diversions.
- Environmental silt control.
- Flood control.
- Silt control dam.
- Emergency response dikes.

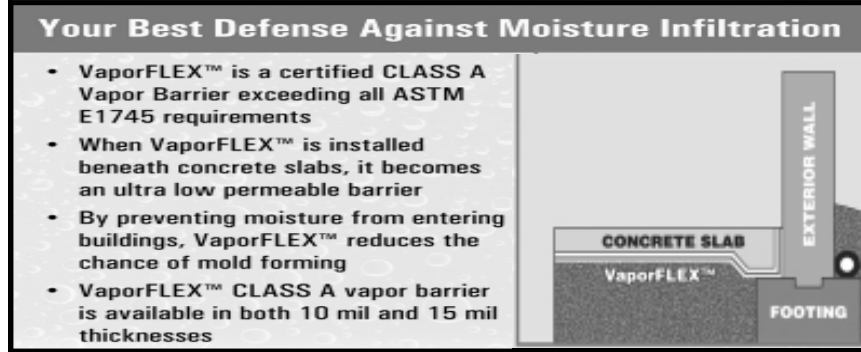
Erosion Control Products

- Degradable straw and coconut erosion control blankets.
- Permanent, high velocity flow turf-reinforcement mats.
- Coconut jute products.
- Organic wetland products.
- Geocell cellular confinement systems.



Vapor Barrier - VaporFLEX®

VaporFLEX® moisture and vapor barriers protect residential and commercial buildings from moisture and other unwanted vapors.



The VaporFLEX® product line has been designed to perform as highly effective vapor barriers that impede the infiltration of moisture and water vapor through concrete slabs and foundations. VaporFLEX® is used to discourage mold growth and to prevent harmful vapors from migrating through the concrete into building interiors. With the current environment of high insurance costs, health problems and substantial liabilities associated with mold in homes and businesses, VaporFLEX® provides a cost effective solution as a component in a building's water proofing design.

This high performance product is manufactured from a special blend of virgin polyolefin resins and performance additives to ensure it exceeds all of the standards for a CLASS A vapor barrier as set out by ASTM E1745 requirements. The Class A is ASTM's highest performance standard for "Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs."

VaporFLEX® vapor barriers are available in both a 15 mil and a 10 mil thick variation, each exceeding the physical requirements of ASTM E1745. They are available in easy-to-use rolls, 12' x 150' and 15' x 196' respectively, making them easy to transport and install. Field seams are completed with VaporFLEX® seam tape and a double sided tape is used to attach to foundations and other structures. VaporFLEX® is readily available through any of our locations, Canadian locations, or various National Distributor accounts.

	VaporFlex® Material Properties¹			
Test	ASTM	Class A Require²	VaporFlex® 15	VaporFlex® 10
Thickness(Nominal)	D5199	N/A	15 mil .375 mm	10 mil .250 mm
Baseline Water Vapor Permeance	E154 Sec. 7	0.30 Perms	0.020 Perms	0.044 Perms
Permeance after Wetting Drying and Soaking	E154 Sec. 8	0.30 Perms	0.050 Perms	0.057 Perms
Tensile Strength After Soaking	E154 Sec. 9	45 ppi ³	64.9 ppi	62 ppi
Resistance to Puncture	E154 Sec. 10	2200 grams	2968 grams	3500 grams
Resistance to Plastic Flow & Elevated Temperature	E154 Sec. 11	0.30 Perms	0.026 Perms	0.067 Perms
Effect of Low Temperature Bending	E154 Sec.12	0.30 Perms	0.038 Perms	0.068 Perms
Resistance to Organisms and Substrates in Contact	E154 Sec. 13	0.30 Perms	0.044 Perms	0.073 Perms
Roll Dimensions			12' x 150'	15' x 196'
(1) Properties tested by the CTT Group, not intended as minimum properties. (2) The requirements of a Class A vapor retarder according to ASTM E1745. (3) ppi = pounds (force)/inch width.				

Concrete Embedment Liner

Concrete Embedment Liners are designed to provide a synthetic lining surface on concrete structures or containments.



Concrete Embedment Liners are thick sections of High Density Polyethylene (DPE) with a number of studs protruding from one side. The embedment liner is fastened to the inside of forms before concrete is poured to create a surface that is lined with plastic. The concrete flows around the studs anchoring the sheet firmly in place.

Concrete Embedment Liners are ideal for protecting concrete from harsh environments. The thick sections of polymer are resistant to most acids, bases, hydrocarbons, vapors and microbiological materials; which are all environmental factors that can degrade concrete over time.

Installing Concrete Embedment Liners involves fastening the liner panels to the inside of concrete forms with the studs facing into the pour area and the smooth outer surface tight up against the form. Concrete is poured into the forms and vibrated into place. The studs have an undercut that securely fastens the sheeting to the surface of the concrete. The result is a protective coating of polymer with very high pullout resistance

Concrete Embedment Liners can be installed onto existing concrete structures with the addition of a layer of grout to hold the liner in place. It is also possible to line a concrete vessel with a double layer system to allow for leak detection.

Concrete Embedment Liners use hundreds of small studs to adhere strongly to concrete. This allows us to line a concrete structure completely with a chemically resistant plastic. Regular lining materials have to be attached at the top perimeter of a concrete tank and often at the bottom of the wall. Attempting to attach a liner below the water line can lead to leaks and premature failure. Metal batten bars are also not as chemically resistant as the plastic liner. Concrete Embedment Liners do not require any additional batten bars or attachments. All surfaces in contact with a liquid can be lined with chemically resistant plastic.

Concrete Embedment Liners can be adapted to almost any concrete surface including walls, floors, and ceilings. This allows almost any concrete structure to be lined with plastic. There are some arrangements that will not work with Concrete Embedment Liner, especially when adding liner to existing concrete. We recommend that you contact your representative to discuss a Concrete Embedment project at the initial design phase to get the best results.

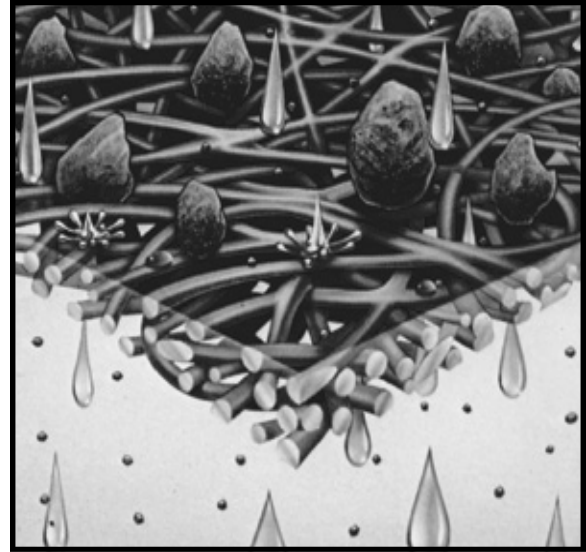
Another common use for Concrete Embedment Liners is the rehabilitation of large concrete tanks and containments. A typical use is in the rehabilitation of concrete clarifiers in sewage treatment plants. By using grout a Concrete Embedment Liner can be used to resurface the inside of the concrete tank. The use of Concrete Embedment Liner is an excellent way to rehabilitate deteriorated concrete tanks.

Finally, there is a growing use for Concrete Embedment Liners in the lining of concrete pipe and catch basins. Typically pipe and catch basin sections are lined at the precast plant and then assembled and welded on site.

Concrete Embedment Liner Typical Properties		
Property	Test Method	Typical Values
Density	D1505	0.94 g/cm ³
Strength at Yield	D638	2200 psi 15 MPa
Elongation at Break	D638	600%
Carbon Black Content	D1603	2 to 3 %
Roll Width (Standard) ¹		6.6 ft (2m)
Note ¹ Custom roll widths and lengths are available.		

Geotextiles - Typar®

Typar® geotextiles combine strength with excellent retention of soil fines for drainage and other applications.



Heat-bonded non-woven geotextiles (such as Typar®) are a variation of the non-woven geotextiles. Typar® geotextiles use continuous polypropylene fibers that are heated together to form a continuous mat. Typar® geotextiles have very good water flow performance and excellent retention of soil fines. Typar® has been used for drainage applications such as trench drains, as a wrapping for perforated pipe, and combined with three dimensional structures to create prefabricated drainage products. Typar® is used when very fine soil particles need to be retained. Heat-bonded non-woven geotextiles primary functions: filtration; separation; protection. Secondary functions: reinforcement.

	Typar® Geotextiles							
Property	ASTM	3201	3301	3341	3401	3601	3631	3801
Grab Tensile (lbs)	D4632	60	120	120	130	240	250	300
Elongation (%)	D4632	60	60	60	60	60	60	60
Trapezoidal Tear (lbs)	D4533	25	35	40	60	90	90	95
Puncture (lbs)	D4833	18	25	34	41	67	81	93
CBR Puncture (lbs)	D6241	n/a	n/a	n/a	225	370	345	510
AOS (sieve size)	D4751	30	50	60	70	140	140	170
Permittivity (sec-1)	D4491	1.0	0.8	0.7	0.7	0.1	0.2	0.1
Water Flow (gpm/ft ²) Typical	D4491	190	95	85	60	15	20	8
Weight (oz/yd ²) Typical	D3776	1.9	3.0	3.4	4.0	6.0	6.3	8.0
UV Resistance (500 hrs)	D4355	n/a	n/a	70%	70%	70%	70%	70%
Roll Size (ft)		12.58 x 300	12.58 x 300	12.58 x 300	12.58 x 300	12.58 x 300	15.6 x 300	15.6 x 300
Roll Weight (lbs)		58	87	97	118	165	219	275

Note ¹ - 150 Hours Exposure

While Typar® has been used to provide separation in paved and unpaved roads, it is predominately used in drainage applications such as trench drains, as a wrapping for perforated pipe, landscaping fabric, and combined with three dimensional structures to create prefabricated drainage products. Typar® is used when very fine soil particles need to be retained. Typar® is best known as a landscape fabric and is used extensively as a root barrier beneath paving stones or under decorative stones, bark or mulch.

Geotextiles - Woven

Woven Polypropylene slit-film geotextiles are used for sub grade stabilization and other applications requiring strength.

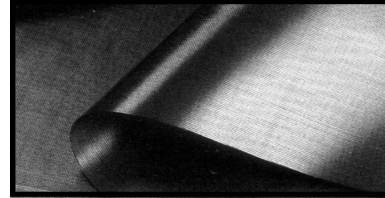


Standard woven slit-film polypropylene geotextiles, usually called "woven's" are an economical range of geotextiles that combine high strength with low cost. These materials are made by weaving pre-stressed polypropylene tapes in a simple weave pattern. The resulting fabric has a high strength to weight ratio. Slit-film woven's are used in road building and embankment construction. Slit-film woven's are excellent separators and help to speed construction. Slit-film woven geotextiles primary functions: separation; re-inforcement. Secondary functions: filtration.

	Woven Geotextiles			
Property	ASTM	LP 200	LP 250	LP 315 ¹
Grab Tensile (lbs)	D4632	200	250	315
Elongation (%)	D4632	15	15	15
Trapezoid Tear (lbs)	D4533	75	90	120
Puncture Strength (lbs)	D4833	90	100	120
AOS (sieve size)	D4751	50	40	40
Permittivity (sec ⁻¹)	D4491	0.07	0.05	0.05
Weight (oz/yd ²) (Nominal)	D3776	4.0	5.0	6.3
UV Resistance (500 hrs)	D4355	70	70	70
Roll Size (ft) ³ 12.5 Wide Available		15 x 360 17.4 x 308	15 x 360 17.4 x 308	15 x 300 17.4 x 260
Roll Weight (lbs) ³		180	200	210
Note ¹ - LP 315 replaces LP300. Improvements in manufacturing processes have increased the tensile strength of this product without impacting the price.				
Note ³ - Values may vary depending on inventory.				

Geotextiles - Woven Monofilament Material

Geotextiles are often used with erosion protection systems on shorelines to prevent undercutting and washout. Woven monofilament geotextiles are a special application of geotextiles that takes advantage of the excellent filtration properties of the textile.



In many cases a geotextile is a requirement with other erosion control systems. Geotextiles provide filtration underneath some type of energy dissipating structure. The energy dissipating structure may be gravel, rip-rap, large stone blocks, geo-cell, interlocking blocks, paving bricks, or just about any other type of erosion protection material. The geotextile supports this energy dissipating structure and prevents the sub-soil from washing out from behind the structure. The geotextile allows the water to flow, without letting the sub-soil wash away. Monofilament geotextiles have some of the highest flow rates available in any geotextile which make it ideal for use in flowing water applications. When used in Layfields floating silt curtains, monofilament geotextiles offer the ability to use the curtain in flowing water situations, especially tidal flow.

		Geotextiles-Woven Monofilament Material Properties				
Property		LP 40F	LP 35F	LP 47F	LP 44F	LP 32F
Wide Width Tensile Strength MD/CD	lbs/ft	2,760 / 2,700	2,400 / 1,680	3,240 / 2,700	3,000 / 2,760	2,196 / 3,000
Grab Tensile Strength MD/CD	lbs	400 / 335	365 / 200	425 / 350	400 / 315	325 / 425
Elongation MD/CD	%	20 / 15	24 / 10	21 / 21	15 / 15	15 / 15
Trapezoidal Tear MD/CD	Lbs	145 / 125	115 / 75	145 / 125	150 / 165	135 / 150
Puncture	Lbs	125	100	150	150	140
Mullen Burst	Psi	650	450	650	800	750
UV Stability	%	90	90	90	90	70
Permittivity	sec ⁻¹	1.50	2.1	0.96	0.90	0.51
Opening Size	US sieve	30	40	40	40	50
Water Flow Rate	gpm/ft ²	115	145	70	70	35
Roll Size	ft	12.5 x 300	12.5 x 300	12.5 x 300	15 x 300	12 x 300
Roll Weight	lbs	221	168	221	265	165

Woven monofilament geotextiles are a specialized type of geotextile often used for coastal protection. Woven monofilament geotextiles have very high strength which is often a requirement for heavy armor stone. Woven monofilament geotextiles also have low elongations and can help to reinforce the sub-base under the energy dissipating structure. Non-woven geotextiles have relatively high elongations and some movement can occur under very heavy stone in soft soils.

Often the selection of a non-woven or a woven monofilament may reflect local regulatory requirements; or may be a historical preference in that area. Woven monofilament geotextiles are very common in the South Eastern US, while needle-punched non-woven geotextiles are common in most other localities. Both non-woven and woven monofilament make excellent erosion control geotextiles.

Geotextiles are ideally suited to the very difficult erosion control applications that involve fluctuating water levels. These can occur in tidal areas, in areas prone to flooding, and in pond slope applications. In the reversing flow application the geotextile must allow the water to flow into the sub-soil freely, and then allow the water to flow out without washing out the soil behind the structure. Geotextiles can be reliably designed to accommodate this reversing flow.

A unique product that has been designed specifically for the erosion control market the woven monofilament geotextile combines high water flow rates with excellent strength.

Geotextiles - Non-Woven

Non-woven needle-punched geotextiles offer excellent water flow properties for drainage and other applications.



Needle-punched non-woven geotextiles are made from polypropylene fibers that are tangled together in a needle-punching process. The fibers may be made in continuous or short lengths and achieve their strength by interlocking. Needle-punched non-woven geotextiles have excellent water flow rates and are used for filtration of soil fines. Needle-punched non-woven geotextiles have been used in drainage applications including trench drains, as a wrapping for perforated pipe, for erosion protection, and combined with three-dimensional structures to create prefabricated drains. They are also commonly used with geomembranes to provide a protective cushion. Needle-punched non-woven primary functions: filtration; separation; protection; drainage. Secondary functions: reinforcement.

Property	Non-Woven Needle Punched Geotextiles									
	ASTM	LP3.5	LP4	LP4.5	LP6	LP7	LP8	LP10	LP12	LP16
Grab Tensile (lbs)	D4632	90	100	120	160	180	205	250	300	380
Elongation (%)	D4632	50	50	50	50	50	50	50	50	50
Tear (lbs)	D4533	40	50	50	65	75	85	100	115	145
Puncture (lbs)	D4833	60	65	70	90	105	130	160	180	240
AOS (sieve)	D4751	50	70	70	70	70	80	100	100	100
Permittivity (sec-1)	D4491	2.2	2.0	1.8	1.6	1.5	1.4	1.2	1.0	0.7
Water Flow (gpm/ft ²)	D4491	150	140	120	110	100	90	80	75	50
Weight ¹ (oz/yd ²) Nominal	D5261	3.5	4.0	4.5	6.0	7.0	8.0	10.0	12.0	16.0
Thickness ¹ (mil) Nominal	D5199	40	45	50	70	85	85	100	110	165
UV (500 hrs)	D4355	70%	70%	70%	70%	70%	70%	70%	70%	70%
Roll Size (ft)		15 x 360	15 x 360	15 x 360	15 x 300 ²	15 x 300 ²	15 x 300 ²	15 x 300	15 x 300	15 x 150
Roll Weight ¹ (lbs)		160	172	190	202	220	250	308	400	250

Note¹: Typical values. All other values are minimum average roll values (MARV).
Note²: LP6, LP7, and LP8 may be 15 x 360 ft depending on inventory

Erosion Control - Silt Fence Fabric

Layfield's Green Silt Fence is a temporary linear sediment barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff. The green color is more aesthetically appealing and provides a better visual barrier than the traditional black silt fence.

	Green Silt Fence Fabric Specifications	
Material	Polypropylene	
Color	Green Weft & White Warp	
Values	Test Method	Imperial
Grab Tensile Strength	ASTM D-4632	136 lbs
At Reinforcing Strips	ASTM D-4632	212 lbs
Mullen Burst	ASTM D-3786	350 psi
Flow Rate	ASTM D-4491	15 gpm/ft ²
A.O.S.	ASTM D-4791	40 Sieve Size
Grab Elongation	ASTM D-4632	21% x 17%
Permittivity	ASTM D-4491	0.17 sec ⁻¹
Construction (per inch)	10 X 10	
Weight	Fabric	108 g/m ²
	Reinforcing Strips	120 g/m ²
U.V.	U.V. inhibitors added	
Note: the reported values are Minimum Average Roll Values, average deviation shall be +/- 10% of the above values		



Properly installed and maintained silt fences allow sediment to settle from runoff before water leaves the construction site. This prevents sensitive natural habitats like streams, lakes and storm water catch basins from being polluted with soil fines. Layfield's Green Silt Fence is made from a polypropylene fabric with reinforcing strips for added strength.

This Green Silt fence is available in two styles; un-supported in rolls 3' x 100' c/w wood stakes installed every 6' on center and a reinforced product that is supported with a 14 gauge steel wire.

The reinforced Green Wire Back Silt Fence is (Green-WBSF) held vertical with 5' steel T Posts that are sold separately by Layfield. Roll sizes come 100' in length and have 48" wide fabric making it ideal for sites with ground irregularities. Layfield's Green-WBSF will stand up to the most demanding site conditions where there is high runoff and in regions that have high winds.

Typical applications for Layfield's line of Green Silt Fence are; below the toe of exposed and erodible slopes, down-slope of exposed soil areas, around stockpiles, along streams and channels and along the perimeter of a project site.

Design and layout of Green Silt Fence products should conform to the following standards and specifications:

- Maximum slope length of slope draining to any point along the silt fence shall be 61 m (200 ft) or less
- Slope of area draining to silt fence shall be less than 1:1 (V:H)
- Wood stakes and steel posts shall be positioned on the downstream side of the fence
- Silt Fences are not effective unless the fabric is trenched and keyed into the ground.

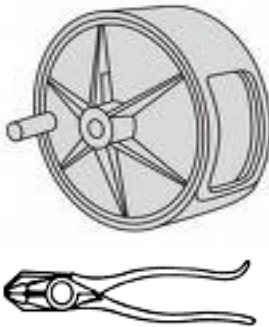
Wire And Tie Accessories



WIRE ROLL

Wire Rolls are 16 gauge black annealed wire used for tying rebar. PVC coated tie wire is also available for tying epoxy coated rebar where required. Available by the individual roll or carton.

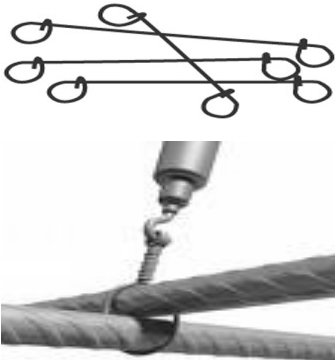
Description	Weight	Per Carton
Wire Roll	3.5 lb	20 Rolls
PVC Coated Wire Roll	3.5 lb	20 Rolls



WIRE REEL AND PLIERS

Wire reels are designed for fast easy dispensing of wire from a utility belt. The reels are light weight but heavy duty so they will last. These reels are designed to feed pre coiled wire quickly and smoothly.

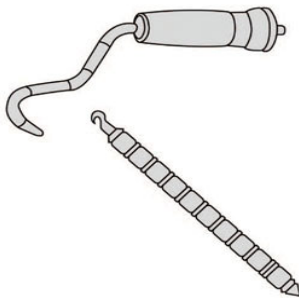
Description
Wire Reel (Reel Attaches To A Work Belt For Easy Installation Of Wire)
9" Ironworker Pliers (These Pliers Are A Favorite In The Industry For Cutting And Twisting Wire)



Bag Ties

Bag ties are 16 gauge wire used for tying rebar at intersections and overlapping locations. An adequate tool is required for using this project.

Description	Per Roll	Per Bag
6 " Bag Ties	1000	5000
8" Bag Ties	1000	5000
6" PVC Coated Bag Ties	1000	5000
8" PVC Coated Bag Ties	1000	5000



Bag Tie Tools

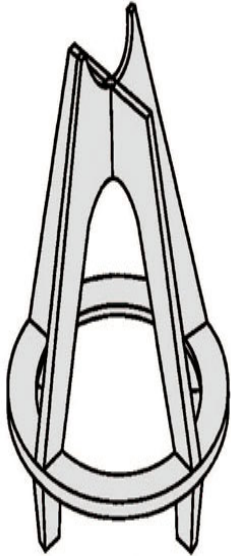
There are two tools available for use with the bag ties. The wooden handle twister tool is used in a spinning motion with the bag ties. The wire twisting tool is used in a pulling motion with the bag ties.

Description
Bag Tie Tool (Tool Is Designed To Hand Spin Wire Manually) - #1 Seller
Wire Twister Bar (Tool Uses A Pulling Motion To Twist The Wire)

Rebar Support

PLASTIC CHAIRS

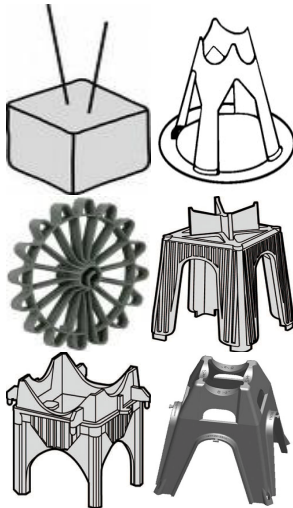
Plastic Chairs are designed for rebar support on slabs and panels. These chairs are designed for maximum aggregate flow and concrete consolidation. With minimal surface contact they are the perfect chair for any project. Some sizes available w/ support rings.



Description	Wt/Ea (lb)	Pieces per Box
3/4"	0.028	1000
1" & 1-1/2"	0.035	500
1-1/4" & 1-3/4"	0.062	500
2" & 2-1/2"	0.070	500
2-1/4" & 2-3/4"	0.076	500
3" & 3-1/2"	0.088	500
3-1/4" & 3-3/4"	0.092	250
4" & 4-1/2"	0.130	250
4-1/4" & 4-3/4"	0.132	250
5" & 5-1/2"	0.138	250
5-1/4" & 5-3/4"	0.145	250
6" & 6-1/2"	0.172	200
6-1/4" & 6-3/4"	0.174	200
7" & 7-1/2"	0.190	200
7-1/4" & 7-3/4"	0.254	200
8" & 8-1/2"	0.274	200
8-1/4" & 8-3/4"	0.294	200
9" & 9-1/2"	0.310	200
9-1/4" & 9-3/4"	0.314	200

ADDITIONAL BAR SUPPORT

If you have only one height requirement for your bar support we can help. Chairs are available in sizes from 3/4' to 10" in height.

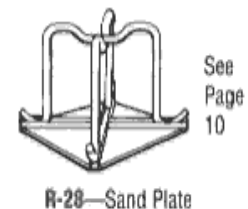
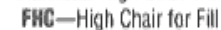
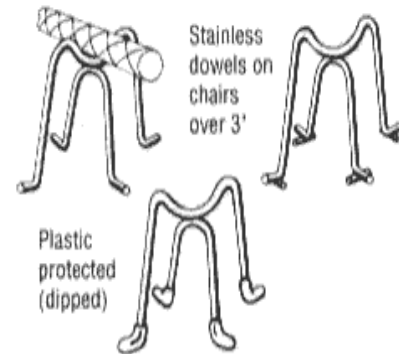
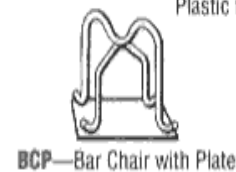
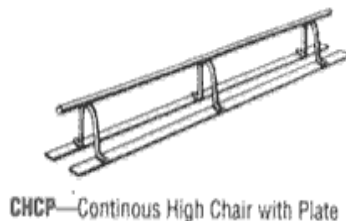
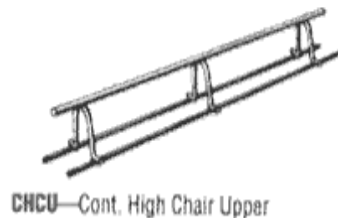
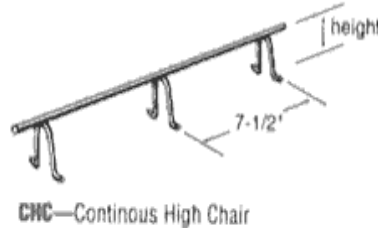
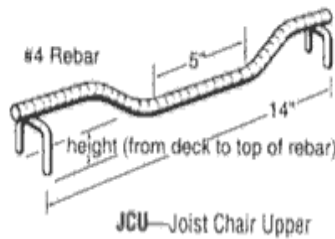
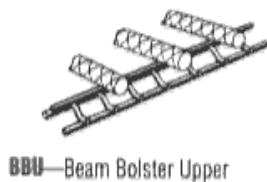
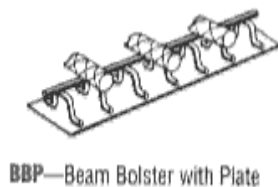
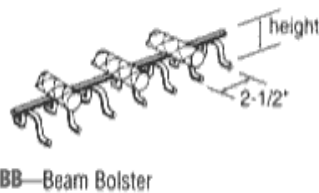
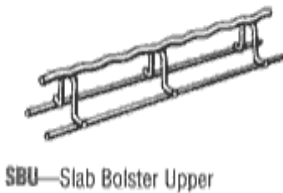
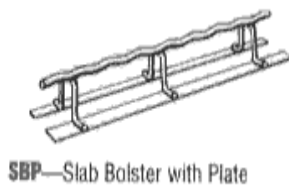
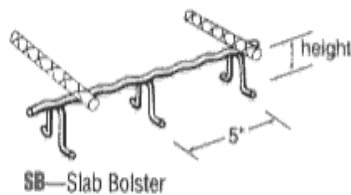


Description	Size	Additional Info
Concrete Dobies With Wire - (Most Popular)	1" thru 3"	Bundles Vary
Castle Chairs	1-1/2" thru 5-3/4"	Box Size Varies
Spacer Wheel	3/8" thru 3"	Rebar Size #3 #4 #5
Plastic Tower Chair	3/4" thru 10"	Box Size Varies
Plastic Bar Chair	3/4" thru 10"	Box Size Varies
Straddle Chair	3" thru 7-3/4"	Box Size Varies
Plastic Bar Chairs	3/4" thru 10"	Box Size Varies

Rebar Support

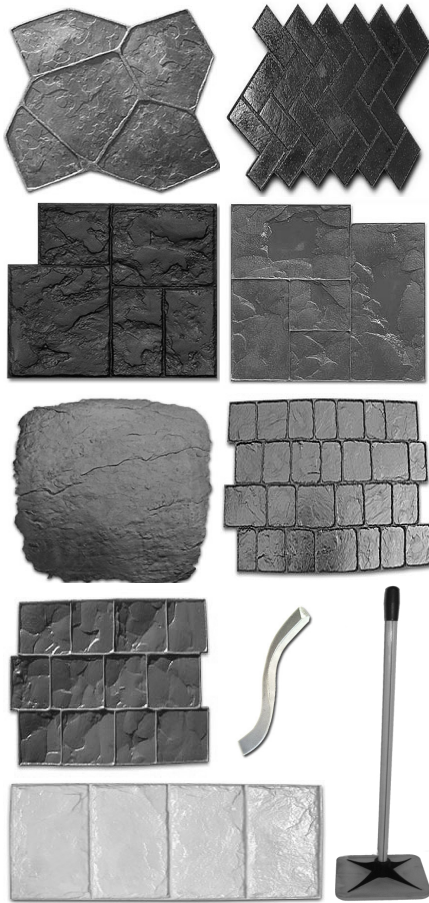
SLAB BOLSTERS AND METAL CHAIRS

Slab bolster, joist chair and metal bar chairs are used for supporting one layer of steel above another and spacing them to required distance. May be used on soft material or fill. Call regarding additional information, pricing and availability.



See
Page
10

Concrete Stamps And Rentals / Sealers



CONCRETE STAMPS FOR RENTAL OR PURCHASE

We have a variety of Concrete Stamps available for your next decorative project. These are contractor grade stamps will leave a lasting impression on your project. Ask about the many products available to ensure that your project goes smoothly.

Description	Set/Pieces	Coverage
Belgium Cobblestone	13 Pieces	50 square ft.
Basketweave Brick	16 Pieces	50 square ft.
California Fieldstone	16 Pieces	50 square ft.
Ashlar Slate	16 Pieces	50 square ft.
Basketweave Brick	16 Pieces	50 square ft.
Jumbo Slate Texture Mat	10 Pieces	135 square ft.
Jumbo Stone Texture Mat	10 Pieces	135 square ft.
Random Slate	20 Pieces	50 square ft.
Random Cobblestone	13 Pieces	55 square ft.
Single Framed Stone	16 Pieces	55 square ft.
Arizona Flagstone	13 Pieces	50 square ft.
Random Slate Border	18 Pieces	48 square ft.
Brick Border Set	18 Pieces	48 square ft.
Cobblestone Border Set	14 Pieces	44 square ft.

DECORATIVE CHEMICALS AND ADDITIVES

There are a variety of products that will be required for your next decorative pour. Call today and we will consult with you as to the best product for your project. We have a variety of Highlight Colors, Additives and Anti-Slip agents. Check out our Chemical Section for more information on Release Agents and Sealers.

Description	Size	Additional Info		
Color Hardeners - (<i>Call For Colors</i>)	60lb.	Coverage 100 sq. ft.		
Color Intense Highlights - (<i>Call For Colors</i>)	15lb.	Coverage Varies		
Integral Colors - (<i>Call For Colors</i>)	6lb. 9lb. 12lb.	1 To 2 Pails Per Yard		
Color Release Agents - (<i>Call For Colors</i>)	28lb.	Coverage 1000 sq. ft.		
Liquid Release Agents	5 gallon	Coverage 1000 sq ft		
Patina Stains - (<i>Call For Colors</i>)	1 Gallon	200 - 400 sq. ft.		
Sealers - (Medium And High Gloss)	5 Gallons	Coverage 700 sq. ft.		
Sealers - Cure And Seals	5 Gallons	Coverage 700 sq. ft.		
Anti Slip Additive	16oz.	16oz. Per 5 Gallon		
Fiber Mesh Reinforcement	1lb.	1lb. Per 1 Yard		

Finishing Tools



----- The Standard of Quality since 1890 -----

Focusing on quality and innovation for over 120 years, Marshalltown Company has grown to become one of the world's largest manufacturers of construction tools. MARSHALLTOWN's tools have been the standard of quality since 1890 and are used by professionals and homeowners throughout the world for use with brick, concrete, drywall, plaster and tile. These tools can be seen with the MARSHALLTOWN, and QLT by Marshalltown labels.

Don't See Your Tool In Stock?

*Order From MarshallTown's Catalog
And In Most Cases Receive It In
Three Working Days*

(866) 787-9611

Finishing Tools

MAGNESIUM HAND FLOAT

Soft Touch handles are comfortable and long lasting. Many sizes available to fit your preference.



Description	Type	Size
14" Hand Float – Magnesium	Extruded Float	14" x 3"
16" Hand Float – Magnesium	Extruded Float	16" x 3"
20" Hand Float – Magnesium	Extruded Float	20" x 3"
24" Hand Float – Magnesium	Extruded Float	24" x 3"

TROWEL ROUND END (BLUE STEEL)

Blue Steel Trowels feature a solid aluminum shank heat treated for hardness. Finishing surface is "Cross Ground" for maximum straightness and a "broken in" effect.



Description	Type	Size
16" Trowel Round End – Blue Steel	Soft Touch	16" x 4"
18" Trowel Round End – Blue Steel	Soft Touch	18" x 4"
20" Trowel Round End – Blue Steel	Soft Touch	20" x 4"
24" Trowel Round End – Blue Steel	Soft Touch	24" x 5"

TROWEL SQUARE END (BLUE STEEL)

Blue Steel Trowels feature a solid aluminum shank heat treated for hardness. Finishing surface is "Cross Ground" for maximum straightness and a "broken in" effect.



Description	Type	Size
12" Trowel Square End – Blue Steel	Soft Touch	12" x 3"
14" Trowel Square End – Blue Steel	Soft Touch	14" x 3"
16" Trowel Square End – Blue Steel	Soft Touch	16" x 4"
18" Trowel Square End – Blue Steel	Soft Touch	18" x 4"
20" Trowel Square End – Blue Steel	Soft Touch	20" x 4"

ADDITIONAL TROWELS

We carry a full line of CleForm Tool Company finishing products. Call today with the details of what you need and we will deliver next day.



Description	Type	Size
Wood Float	Mahogany	16" x 3-1/2"
Rubber Float (Black)	General Purpose	4" x 9-1/2" x 3/4"
Rubber Float (Red)	Sacking Trowel	4" x 10" x 1/2"

Finishing Tools

HAND EDGERS

All of our hand edgers feature Blue Steel Blades for the highest quality edgers available. Many additional sizes available.



Description	Radius	Length	Width	Depth
6" x 4" Hand Edger	1/4"	6"	4"	3/8"
6" x 4" Hand Edger	3/8"	6"	4"	1/2"
6" x 4" Hand Edger	1/2"	6"	4"	5/8"
6" x 4" Hand Edger	5/8"	6"	4"	3/4"
6" x 4" Hand Edger	3/4"	6"	4"	7/8"
6" x 4" Hand Edger	1"	6"	4"	1-1/4"
6" x 6" Hand Edger	1/2"	6"	6"	5/8"
6" x 6" Hand Edger	5/8"	6"	6"	3/4"
6" x 6" Hand Edger	3/4"	6"	6"	7/8"

HAND GROOVERS

Cleform hand groovers are designed to be easy to use and hold up to the rigorous conditions. The high quality of workmanship that goes into these products ensures that you will have a tool that lasts.



Description	Radius	Length	Width	Depth
6" x 3" Hand Groover	3/8" x 3/8"	6"	3'	1"
6" x 3" Hand Groover	1/2" x 1/2"	6"	3'	1/2"
6" x 3" Hand Groover	1/2" x 1/2"	6"	3'	1"
6" x 6" Hand Groover	3/8" x 3/8"	6"	6"	1"
6" x 6" Hand Groover	1/2" x 1/2"	6"	6"	1/2"
6" x 6" Hand Groover	1/2" x 1/2"	6"	6"	1"

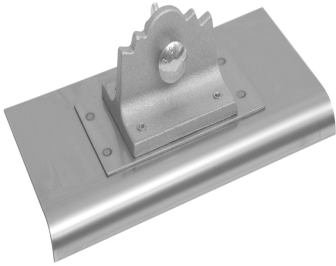
KNEE BOARDS

Cleform kneeboard sliders are made of lightweight stainless steel and have padded knees for added comfort. The Knee Board is designed with a hard plastic bottom and poly foam for extra knee protection while installing concrete or tile.



Description	Size	Material
Knee Board Sliders	29" x 7-3/4" x 1"	Stainless Steel
Knee Board	24" x 18" x 1"	Poly foam Plastic

Finishing Tools



WALKING EDGER

Used to produce a radius at the edge of a concrete slab to help prevent the edge from chipping off. This edger is used with a long pole so you can walk with it.

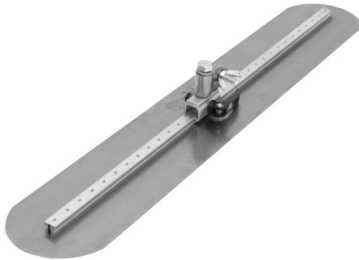
Description	Additional Info	Radius
9" x 6" Walking Edger - Blue Steel	Use #9 or #10 Pole	3/8" Radius
9" x 6" Walking Edger - Blue Steel	Use #9 or #10 Pole	1/2" Radius
9" x 6" Walking Edger - Blue Steel	Use #9 or #10 Pole	3/4" Radius



WALKING GROOVER

Made from high quality long wearing bronze. Finely finished to make smooth clean grooves. This edger is used with a long pole so you can walk with it.

Description	Additional Info	Radius / Depth
6" x 4-1/2" Walking Groover - Bronze	Use #9 or #10 Pole	3/8"R / 3/4"D
6" x 4-1/2" Walking Groover - Bronze	Use #9 or #10 Pole	1/2"R / 1-1/4"D



FRESNO TROWELS

Superior quality high carbon steel blade. Mounting block has a center hole for swivel type bracket and end holes for two hole brackets.

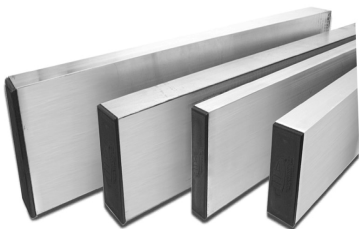
Description	Additional Info	Blade Type
36" x 5" Fresno Trowel	Carbon Steel Blade	Round
48" x 5" Fresno Trowel	Carbon Steel Blade	Round



BULL FLOATS

Made from the finest extruded magnesium available. This float is lightweight, long wearing and properly balanced to provide the finish you want.

Description	Additional Info	Blade Type
36" x 8" Bull Float	Extruded Magnesium	Round
45" x 8" Bull Float	Extruded Magnesium	Square
48" x 8" Bull Float	Extruded Magnesium	Round
60" x 8" Bull Float	Extruded Magnesium	Round



SCREEDS – HIGH STRENGTH

Screeds are lightweight, long wearing and rigid. The ends are capped to prevent concrete from getting in. Screeds can be special ordered from 6' to 24' long.

Description	Additional Info	Blade Type
12' x 2" x 4" Screeds – High Strength	Aluminum Alloy	Warp Resistant

Finishing Tools



PUSH BUTTON AND SCREW HANDLES

These Handles are heat treated, lightweight and constructed of thick-walled aluminum. Handles are available in 1-3/8" and 1-3/4" in either push button or threaded.

Description	Additional Info	Diameter
72" Push Button Handle	Aluminum Tubing	1-3/8" Handle
96" Push Button Handle	Aluminum Tubing	1-3/8" Handle
96" Push Button Handle	Aluminum Tubing	1-3/4" Handle
72" Threaded Handle	Aluminum Tubing	1-3/4" Handle

HANDLE ADAPTORS

Modify your tools with one of these adaptors. The #1 seller is the Rock-It and is most commonly used with bull floats. The Rock-It allows multi angle floating with full pitch controlled by a half turn of the handle.



Rock-It



Mini Rock-It



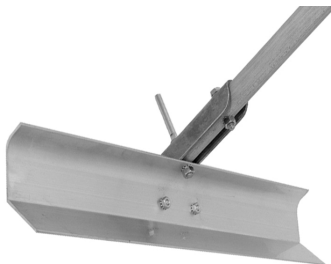
Bull Float Parts



Funny Adaptors



Trowel Adaptors



CONCRETE PLACERS

Made from the finest extruded magnesium available. This float is lightweight, long wearing and properly balanced to provide the finish you want.

Description	Additional Info	Handle Type
20" x 4" Steel Placers	12 Gauge Cold Rolled	Wood Handle
20" x 4" Aluminum Placers	Aluminum Construction	Aluminum Handle



CONCRETE BROOMS

Long wearing 3" black polypropylene bristles set solidly into a natural lacquered hardwood block. A threaded hole accepts any standard broom handle.

Description	Additional Info	Handle Type
24" Concrete Broom	Polypropylene Bristles	None



CONCRETE TAMPERS

These concrete tampers are built to take the pounding and stay flat. The tamper has properly balanced handles with rubber grips to ensure easy and safe handling.

Description	Additional Info	Handle Type
48" x 6-1/2" Concrete Tampers	Reinforced Grill	Properly Balanced

Masonry Tools

MARGIN TROWEL

When you need a tool to get into those hard to reach places the margin trowel will suit your needs. Made with a durable wood handle for easy use.



Description	Size	Handle
1-1/2" Margin Trowel	1-1/2" x 5"	One Piece Forged
2" Margin Trowel	2" x 5"	One Piece Forged
2" Margin Trowel	2" x 6"	One Piece Forged
2" Margin Trowel	2" x 8"	One Piece Forged

POINTING TROWEL

Pointing Trowels are used for mortar and cement. These high quality trowels are constructed with a wood handle and will last for years



Description	Size	Handle
5-1/2" Pointing Trowel	5-1/2"	Two Piece Welded
6" Pointing Trowel	6"	Two Piece Welded
7" Pointing Trowel	7"	Two Piece Welded

GROUT BAG

This grout bag has a poly coated lining and comes rubber tipped. Simply wash out after usage and this bag will last for a long time



Description	Size	Material
Grout Bag	12"x24"	Poly Coated

MUD MIXER

Recommended use for this mixer is 5 to 30 gal. Drywall and high density material.



Description	Diameter	Length	Capacity	Drill Size
Mud Mixer	5.5"	30"	60-80lbs	3/8"

SPONGES (Sold Individually or as a 3pack)

These sponges absorb and hold water well and are easy to clean.



Description	Size	Details
Contractor Sponge	7-1/2"	Semi Oval
Contractor Sponge	7-1/2"	Medium Pore
Contractor Sponge	7-1/2"	Fine Pore
Contractor Sponge 3 Pack	Includes All 3	Includes All 3

Brushes



MASONRY BRUSH

This red handled brush has five rows of Tampico bristles and is made to last. This brush is acid resistant and absorbent.

Description	Handle	Additional Info
Masonry Brush	3" Bristles	Plastic Handle



STEP AND CURB FINISHING BRUSH

This finishing brush is made with soft plastic fibers that are set into a contoured hardwood block handle.

Description	Size	Additional Info
Step and Curb Finishing Brush	12" x 3-1/4"	Wood Handle



HAND HELD CEMENT BRUSH

This brush features plastic fiber bristles for finishing concrete. This user friendly design is great for finishing curb, gutter and other tight spots.

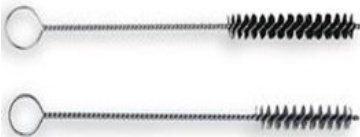
Description	Size	Additional Info
Cement Brush	12" x 3"	Wood Handle



WIRE BRUSH

Wood handled wire brush is good for cleaning paint and other hard to remove items. This brush features 1" hard steel bristles.

Description	Size	Additional Info
Wire Brush	14" x 1"	Wood Handle



TWISTED WIRE BRUSH

These wire brushes are perfect for cleaning holes. If you need to prepare a pre-dilled hole for epoxy this is the tool you need.

Description	Size	Additional Info
Wire Brush	Variety Available	Wire Handle



ABRASIVE RUBBING BRICK

Rubbing brick grit C24R/coarse with plastic handle. Perfect for removing concrete burs, etching and leveling top of concrete walls.

Description	Size	Additional Info
Abrasive Rubbing Brick	6" x 3" x 1"	Plastic Handle

Knee Pads

Do Your Concrete Flat Work In Comfort With **All-Terrain™** Gel Knee Pads



- Injected gel provides superior comfort and protection
 - All-Terrain™ cover easily snaps off and on
 - Raised heel evenly distributes body weight
- Extended feet absorb pressure while supporting the knee
 - Adjustable clip fastener
- Double straps eliminate binding behind knee



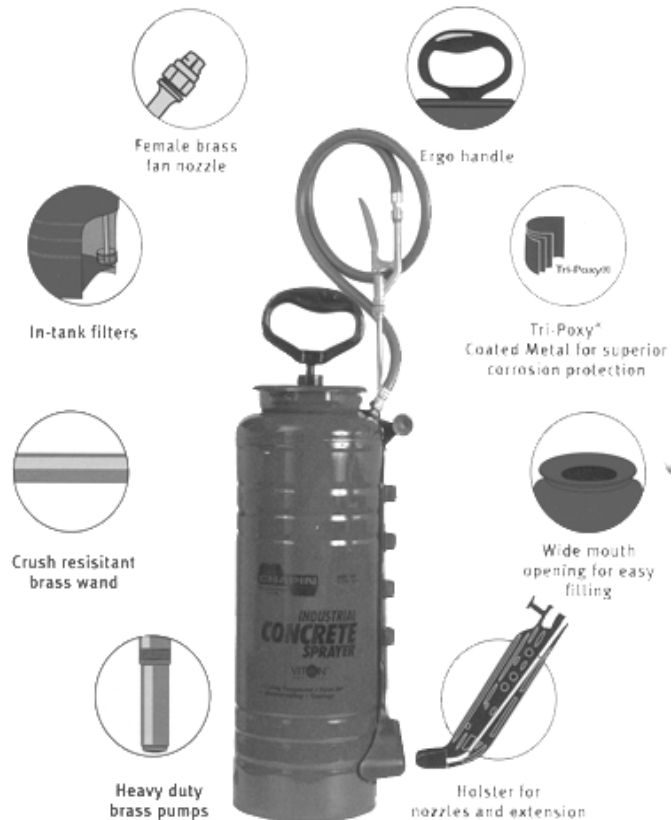
Industrial Sprayers

Chapin Industrial Sprayers

- Steel tank 3.5 gallons
- Sprays 30 to 35% solids
- Flexible heavy duty hose 48"
- Trigger has a lock on feature for easy use
- Heavy duty brass pump 14"
- Curved brass wand 24"
- Wide mouth opening for easy filling and cleaning
- Tri-poxy coated steel tank, rinses cleaner for multi use
- Holster for wand and nozzle storage
- Nozzle can attach directly to the trigger if you prefer
- Two brass nozzles are included 0.5gpm & 1gpm
- MADE IN THE USA!!

**Form Oil
Curing
Sealing**

Sprays up to 30-35% Solids



Designed and engineered for the professional. For use on masonry, concrete, cleaning and degreasing, agriculture, weed control or turf. The steel sprayer is the most durable sprayer on the market, the absolute favorite of the construction industry. Viton seals and gaskets. Chapin Manufacturing since 1884 in Batavia New York.

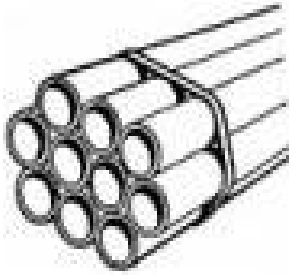
Can be used for a variety of tasks, from weed control to concrete curing. The tri-poxy coating inside of the tank inhibits corrosion on all interior seams, welds, bottoms and walls. Simply the most durable sprayer, at such a competitive price.

PARTS AND ACCESSORIES



Chapin has been a world leader in compressed air sprayers since they patented the first U.S. pump sprayer in 1902. Chapin concrete sprayers include TRI-POXY® lined steel for triple protection against corrosion, rust and damage from denting, a wide mouth for easy filling and cleaning, a Poly Holster to keep the wand secure and tip, metal ergo handle, a brass fan spray nozzle for even spray coverage and a brass spray handle designed with "Lock-on" and quick release.

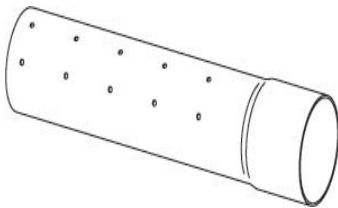
Pipe Material



PVC PIPE

Solid PVC Drain Pipe is used for downspout connections in most buildings. Check your local building codes to make sure you have the correct schedule of pipe for your project. Don't forget GLUE.

Description	Size	Value Pricing
Solid Schedule 2729	10' x 4"	40 To A Sling
Solid Schedule 40	10' x 4"	40 To A Sling
Different Pipe Schedule Available		



PERFORATED PIPE

Perforated Pipe is used around the envelope of the building to move ground water away from the building. With proper installation you can prevent water penetration to the building therefore adding to the life of your building. Don't forget GLUE

Description	Size	Value Pricing
Perforated Pipe Schedule 2729	10' x 4"	40 To A Sling
Perforated Pipe Schedule 40	10' x 4"	40 To A Sling
Different Pipe Schedule Available		



TEE



90 deg. Elbow



45 Deg. Elbow



1/4 Bend



1/8th Bend



Sanitary Tee



Sanitary Wye



Sanitary Wye & 1/8th Bend



Combo



Sanitary Cross

PVC FITTINGS

Many different connections may be required at the site for proper installation. We carry all your connection requirements and can do the take-off to ensure that you get everything you need.

Description	Description	Description
90 Degree Bends	T Connection	Cap
45 Degree Bends	Sewer Connection	Cap To Downspout
Y Connection	22-1/2 degree angle	Coupler



CONDUIT

Conduit is often used to provide a chase for electrical or telecommunications cables thru the concrete. This can be used either under slab or thru wall installation. Power Mast Sweeps are used to install underground power connection to electrical panel.

Description	Size	Value Pricing
3' Schedule 40	3" x 10'	Call for Pricing
Power Mast Sweep	3" x 8'	Call for Pricing
All Connections Available		

Underlayments And Overlayments

2 Component Cement Products

R-25 LATEX MORTAR UNDERLAYMENT - 2 Component Cement Products

Raeco R-25 is a two component, concrete repair and topping compound consisting of a uniform, premixed blend of Portland cements and graded washed silica aggregates with a liquid latex modifier to promote lasting surface adhesion, for renovation and new construction. R-25 can be applied from feathered edge to any depth, for thickness greater than 1/2" (12.7 mm.) use appropriate aggregate. R-25 is a fine textured underlayment especially formulated for linoleum, vinyl, carpet and other finished floor products. R-25 is used for horizontal surfaces. Intended for interior use, R-25 can be sanded to a very smooth finish. R-25 contains no gypsum, chlorides, ferrous metals or corrosive agents.

Must use with R-25 latex binder at a rate of .9 gallons of latex binder per 45lb bag of dry powder

- Underlayment for all finished floor products
- Horizontal applications
- Filling holes, cracks and spalled areas
- Elevation transitions
- Freeze-thaw resistant
- Leveling or creating pitch to drains
- Rained out or freeze damaged slabs
- Areas with varying weather cycle



R-50 LATEX MORTAR OVERLAYMENT - 2 Component Cement Products

Raeco R-50 is a two component, concrete repair and topping compound consisting of a uniform, premixed blend of Portland cements and graded washed silica aggregates with a liquid latex modifier to promote lasting surface adhesion, for renovation and new construction. R-50 can be applied from feathered edge to any depth, for thickness greater than 1/2" (12.7 mm.) use appropriate aggregate. R-50 should be used for horizontal surfaces. Suitable for interior and exterior use, a sealer or coating is recommended when used for a wearing surface. R-50 provides excellent freeze-thaw resistance against the penetration of deicing salts and other contaminants. R-50 contains no gypsum, chlorides, ferrous metals or corrosive agents.

Must use with R-50 latex binder at a rate of 1 gallon of latex per 50lb bag of dry powder

- Parking deck repairs and overlays
- Horizontal & vertical applications
- Exterior applications for walkways & ramps
- Warehouse & industrial repairs or overlays
- Areas exposed to heavy-duty loads
- Leveling or creating pitch to drains
- Rained out or freeze damaged slabs
- Areas with varying weather cycle
- Corrosion-resistant overlays



Underlayments And Overlayments

2 Component Cement Products

BUTTERCOAT FINE LATEX MORTAR - 2 Component Cement Products

Raeco Buttercoat is a two component, concrete repair and topping compound consisting of a uniform, premixed blend of Portland cements and graded aggregates with a liquid latex modifier to promote lasting surface adhesion. Used for renovation and new construction, Buttercoat can be applied from feathered edge to 1/8" (3.18 mm.) thick. Buttercoat is a fine textured powder that is designed to be mixed with either Raeco R-25 or R-50 latex binder. Buttercoat is excellent for smoothing rough floors, repairing pinholes, cracks and minor imperfections for linoleum, vinyl, carpet and other finished floor products. Buttercoat is used primarily for horizontal surfaces, for interior or exterior use, and can be sanded to a very smooth finish. Buttercoat contains no gypsum, chlorides, ferrous metals or corrosive agents.

Must use with R-25 or R-50 latex binder at a rate of 1.25 gallons of latex per 32lb bag of dry powder

- Underlayment for all finished floor products
- Horizontal applications
- Filling holes, cracks and spalled areas
- Elevation transitions
- Freeze-thaw resistant
- Overlay to achieve very smooth surface
- Rained out or freeze damaged slabs
- Areas with varying weather cycle
- Smoothing rough finished concrete



LEVEL-FLEX LATEX CEMENT UNDERLAYMENT - 2 Component Cement Products

Raeco Level-Flex is a two-component flexible repair and topping compound for wood, concrete, and steel floors. Level-Flex consists of a uniform premixed blend of Portland Cements and graded silica aggregates, mixed with a liquid latex modifier to promote lasting surface adhesion, for renovation and new construction. Level-Flex can be applied from feathered edge to 3/8" (9.53 mm.), for thickness greater than 3/8" use appropriate aggregate. Level-Flex is a fine textured underlayment especially formulated for substrates that have a higher amount of movement. The formulation in the synthetic latex and the dry powder creates a stable base for linoleum, vinyl, carpet and other finished floor products. Level-Flex can be used for horizontal surfaces or radius at wall line, and can be sanded to a smooth finish after the appropriate curing time. Level-Flex contains no gypsum, chlorides, ferrous metals or corrosive agents.

Must use with Level-Flex latex at a rate of 1.25 gallons of latex per 45lb bag of dry powder

- Underlayment for all finished floor products
- Embossing leveler*
- Filling cracks in concrete and wood floors
- Residential and Commercial applications
- Freeze-thaw resistant
- Areas with varying weather cycle
- Bonding difficulties due to movement (wood) and adhesion problems (steel, aluminum and gypsum based underlayments)



Underlayments And Overlayments

Single Component Cement Products (polymer-modified)

R-100 POLYMER MORTAR - Single Component Cement Products (polymer-modified)

Raeco R-100 is a single component topping compound consisting of a uniform, premixed blend of Portland cements and graded washed silica aggregates with polymer modification to promote lasting surface adhesion, for renovation and new construction. R-100 can be applied from a feathered edge to 1/2" (12.7 mm.), for thickness greater than 1/2" use appropriate aggregate. R-100 can be used for horizontal, interior and exterior use, a sealer or coating is recommended when used for a wearing surface. R-100 contains no gypsum, chlorides, ferrous metals or corrosive agents.

Raeco R-100 is mixed by adding clean water at a rate of approximately 4 to 5.5 quarts per 50lb sack

- Repair floors and concrete slabs
- Underlayment for all finished floor products
- Horizontal applications, may be covered up walls
- Exterior applications for walkways & ramps
- Filling holes, cracks and spalled areas
- Areas exposed to medium-duty loads
- Leveling or creating pitch to drains
- Areas with varying weather cycle
- Rained out or freeze damaged slabs
- Elevation transitions



SLU SELF LEVELING UNDERLAYMENT - Single Component Cement Products (polymer-modified)

Raeco SLU is a self-leveling, non-structural, interior, floor underlayment mortar containing cement, graded aggregate, polymer and control additives. Mix only with water, it becomes a free flowing material that seeks its own level and achieves a flat and smooth surface. SLU produces a smooth, hard and durable surface to receive a finish floor material, such as carpet, resilient, ceramic, wood, and most other flooring systems. SLU is easily applied and offers an economical installation. SLU can be applied from feathered edge to 1" (25.4 mm), for thickness greater than 1" (12.7 mm.) use 1/4"-3/8" pea gravel. Raeco R-2000 primer is required prior to installation.

Raeco SLU is mixed by adding clean water at a rate of approximately 5 to 6 quarts per 50lb sack

- Commercial and residential building floors
- Smoothing rough and uneven floors
- Both grade and below grade applications
- Pre-cast and cast in place concrete
- Underlayment for fast track projects
- Refurbish existing wood, tile, terrazzo and concrete floors to receive finish flooring



Underlayments And Overlayments

Single Component Cement Products (polymer-modified)

SLU-HS SELF LEVELING OVERLAYMENT - Single Component Cement Products (polymer-modified)

Raeco SLU-HS is a self-leveling, non-structural, interior or exterior floor topping mortar containing cement, graded aggregate, polymer and control additives. Mix only with water, it becomes a free flowing material that seeks its own level and achieves a flat and smooth surface. SLU-HS produces a smooth, hard and durable wearing surface or is ready to receive a finish floor. For a wearing surface, a quality water based sealer is recommended. SLU-HS is easily applied and offers an economical installation. The mortar can be applied from 1/8" to 1" (25.4 mm), for thickness greater than 1" (25.4 mm.) use 1/4"-3/8" pea gravel. Raeco R-2000 primer is required prior to installation. SLU-HS IS A NON-GYPSUM BASED PRODUCT.

Raeco SLU-HS is mixed by adding clean water at a rate of approximately 4 to 6 quarts per 50lb sack

- Commercial and residential building floors
- Smoothing rough and uneven floors
- Both on grade and below grade applications
- Pre-cast and cast in place concrete
- Overlayment for fast track projects
- Refurbish existing wood, tile, terrazzo and concrete floors to receive finish flooring



FEATHER SPREAD POLYMER COMPOUND - Single Component Cement Products (polymer-modified)

Raeco Feather Spread is a fast-setting, smooth textured, high strength, single component, concrete repair and topping compound. Consisting of a uniform, premixed blend of Portland Cements and graded silica aggregates with polymer modification to promote lasting surface adhesion, it is used for renovation and new construction. Feather Spread is for multi-purpose repairs and is especially formulated as a floor covering underlayment. Feather Spread can be applied from feathered edge to 1/2" thick (12.7 mm.). Feather Spread can be used for horizontal, vertical and overhead surfaces. Suitable for interior and exterior use, a sealer or coating is recommended when used for a wearing surface. Feather Spread contains no gypsum, chlorides, ferrous metals or corrosive agents.

Feather Spread is mixed by adding clean water at a rate of approximately 3 to 4 quarts per 25lb sack

- Overlays/patching for set time requirements
- Horizontal, vertical & overhead applications
- Interior and exterior applications
- Warehouse & industrial repairs or overlays
- Areas exposed to heavy-duty loads
- Rained out or freeze damaged slabs
- Repairing wood and cement-board type underlayments
- Underlayment for epoxy/urethane coatings
- Underlayment for all finished floor products
- Filling holes, cracks and spalled areas



Underlayments And Overlayments

Single Component Cement Products (polymer-modified)

QUICK-FIX POLYMER MORTAR - Single Component Cement Products (polymer-modified)

Raeco Quick-Fix is a single component, concrete repair and topping compound consisting of a uniform, premixed blend of Portland cements and graded washed silica aggregates with polymer modification to promote lasting surface adhesion, for renovation and new construction. Quick-Fix can be applied from feathered edge to 1/2" (12.7 mm.) as packaged, for thickness greater than 1/2" use appropriate aggregate. Quick-Fix can be used for horizontal, vertical and overhead surfaces. Suitable for interior and exterior use, a sealer or coating is recommended when used for a wearing surface. Quick-Fix contains no gypsum, chlorides, ferrous metals or corrosive agents.

Quick-fix is mixed by adding clean water at a rate of approximately 4 to 5 quarts per 50lb sack

- Overlays/patching for set time requirements
- Horizontal, vertical & overhead applications
- Exterior applications for walkways & ramps
- Warehouse & industrial repairs or overlays
- Areas exposed to heavy-duty loads
- Leveling or creating pitch to drains
- Underlayment for epoxy/urethane coatings
- Areas with varying weather cycle
- Parking deck resurfacing or patching
- Mud screeds for same day pour of cement products



SACK & PATCH POLYMER MORTAR - Single Component Cement Products (polymer-modified)

Raeco Sack & Patch is a single component, sacking mix and topping compound consisting of a uniform, premixed blend of Portland Cements and graded washed silica aggregates with polymer modification to promote lasting surface adhesion, for renovation and new construction. Sack & Patch can be applied from a feathered edge to 1/2" (12.7 mm), for thickness greater than 1/2" use appropriate aggregate. Sack & Patch can be used for horizontal, vertical and overhead surfaces. Suitable for interior and exterior use, a sealer or coating is recommended when used for a wearing surface. Sack & Patch contains no gypsum, chlorides, ferrous metals or corrosive agents. contains no gypsum, chlorides, ferrous metals or corrosive agents.

Sack & Patch is mixed by adding clean water at a rate of approximately 5 to 5.5 quarts per 50lb sack

- Repair Walls, tilt panels and columns
- Overlays/patching for set time requirements
- Horizontal, vertical and overhead applications
- Exterior applications for walkways and ramps
- Warehouse & industrial repairs or overlays
- Areas exposed to heavy-duty loads
- Leveling or creating pitch to drains
- Areas with varying weather cycle
- Parking deck resurfacing or patching
- Masonry repair
- Mud screeds for same day pour of cement products



Underlayments And Overlayments

Latex Admixture Additives

R-2000 RAECO BONDING AGENT - Latex Additives

Raeco R-2000 is a premium quality liquid latex bonding agent and mortar additive, suitable for interior and exterior applications. Raeco R-2000 is a low odor, one time re-emulsifiable copolymer emulsion designed to prepare surfaces for cementitious repair and leveling mortars. The superior adhesion, ultraviolet light resistance and water resistance of R-2000 provides superior bonding to substrates. Use Raeco R-2000 in the repair of plastered ceilings and walls, concrete and stucco surfaces. R-2000 is required over all substrates prior to installing Raeco Self Leveling Underlayment. Raeco R-2000 is ammonia free which eliminates a source of chemical irritation for field applications. This low odor feature is especially beneficial for interior construction or repair projects.

Mixing As Bonding Agent: Add one part water to one part Raeco R-2000. Mix thoroughly before applying to surface

Mixing As Admixture: Add 3 gallons of above 1 to 1 blend of premixed Raeco R-2000 per bag of cement. Normal mixes require 3 parts sand to 1 part cement. A small amount of water may be added to improve consistency.

- Interior and Exterior applications
- Bonding agent for cementitious mortars
- Wet and Dry areas
- Polymer modifier for cementitious materials
- Horizontal and Vertical areas
- Bonding agent for Self Leveling Underlayment
- Residential, Commercial and Industrial applications



R-25 LATEX ADMIXTURE - Latex Additives

Raeco R-25 Latex Admixture is a pre-blended styrene butadiene copolymer. It is supplied as a one component, white liquid designed for modifying portland cement compositions. R-25 Latex Admixture is not affected by moisture after curing, like polyvinyl acetates (PVA) emulsions. R-25 Latex Admixture can also be used with Raeco R-25 Powder as a two component, trowelable underlayment. Raeco R-25 Latex Admixture contains no solvents or corrosive agents and is VOC compliant. For exterior or interior use when modifying Portland Cement compositions.

DO NOT add water to Raeco R-25 Latex Admixture, product has been pre-blended to meet job site conditions

- Freeze-thaw resistant
- Varying weather cycles
- Non-toxic
- U.S.D.A. approved
- Substrates with deflection
- Strengthen gypsum based underlayment
- Improves strengths of cement mortars



Underlayments And Overlayments

Latex Admixture Additives

R-50 LATEX ADMIXTURE - Latex Additives

Raeco R-50 Latex Admixture is a pre-blended styrene butadiene copolymer. It is supplied as a one component, white liquid designed for modifying portland cement compositions. R-50 Latex Admixture is not affected by moisture after curing, like polyvinyl acetates (PVA) emulsions. R-50 Latex Admixture can also be used with Raeco R-50 Powder as a two component, trowelable topping mix, for interior or exterior use applications. Raeco R-50 Latex Admixture contains no solvents or corrosive agents and is VOC compliant. For exterior or interior use when modifying Portland Cement compositions.

DO NOT add water to Raeco R-50 Latex Admixture, product has been pre-blended to meet job site conditions

- Freeze-thaw resistant
- Varying weather cycles
- Non-toxic
- U.S.D.A. approved
- Substrates with deflection
- Strengthen gypsum based underlayment
- Parking deck repairs and overlays
- Walkways and ramps
- Warehouse & Industrial repairs and overlays
- Corrosion resistant overlays



LEVEL-FLEX LATEX ADMIXTURE - Latex Additives

Raeco Level-Flex Latex Admixture is a pre-blended acrylic latex polymer. It is supplied as a one component, white liquid designed for modifying Portland Cement compositions. Level-Flex Latex Admixture is not affected by moisture after curing, like polyvinyl acetates (PVA) emulsions. Level-Flex Latex Admixture can also be used with Raeco Level-Flex Powder as a two component, trowelable underlayment. Can be used as an embossing leveler when mixed with Raeco Buttercoat or Raeco Feather Spread Powder. Level-Flex Latex Admixture contains no solvents or corrosive agents and is VOC compliant. For exterior or interior use when modifying Portland Cement compositions.

DO NOT add water to Raeco Level-Flex Latex Admixture, product has been pre-blended to meet job site conditions

- Freeze-thaw resistant
- Varying weather cycles
- Non-toxic
- U.S.D.A. approved
- Substrates with deflection
- Embossing leveler
- Bonding difficulties due to movement in substrate
- Adhesion problem (steel, aluminum and wood)



Cleaners

RAECO CITRUS CLEANER - Cleaners

Raeco Citrus Cleaner is a concentrated cleaner and degreaser formulated for tough cleaning tasks. The water dilutable formula of Citrus Cleaner works hard to remove dirt, adhesives, latex and cement residue, oil, grease, asphalt, tar, ink, gum, polishing compounds and wax. Citrus cleaner is biodegradable, non-toxic, non-corrosive and free of chlorinated solvents and petroleum distillates. It's the eco-friendly alternative to hazardous solvents making it safe for workers and the environment. Citrus Cleaner replaces Trichloroethane, MEK, and petroleum distillates. It removes stubborn substances from surfaces such as:

Can be used full-strength or diluted helping to control costs by using only the amount needed. Citrus Cleaner can be used as a cleaner or degreaser and can be hand-wiped on or used with: Ultrasonic tanks, dip tanks, floor scrubbers, spray systems and pressure sprayers. Full Strength: 200-300 sq ft/gal Diluted 50 Percent: 400-500sq ft/gal

- Floors
- Walls
- Countertops
- Carpet
- UpholsteryMachinery
- Tires
- Tools
- Oil Pipes



RAECO NEUTRAL CLEANER - Cleaners

Raeco Neutral Cleaner is a highly concentrated, biodegradable, non-toxic and non-hazardous cleaner. It contains wetting agents, degreasers and surface-active detergents to penetrate, suspend, emulsify and dissolve dirt and grime. Pleasantly scented Neutral Cleaner contains no soap or harsh alkalies, and will not harm existing sealers, floor finishes, or waxes.

Coverage is 5,000 to 10,000 square feet per gallon average

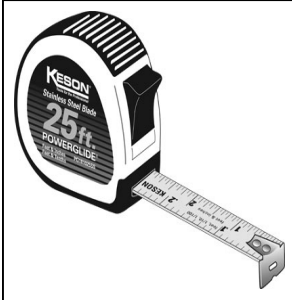
Areas Of Use: Neutral Cleaner is especially formulated for routine maintenance of all types of ceramic tile and masonry surfaces including quarry tile, sealed adobe, glazed tile, natural stone and marble. It cleans without dulling the shine. Use on virtually any surface not harmed by water; including asphalt, vinyl tile, plastic laminates, cultured marble, sealed or painted wood, and all types of masonry surfaces. Use for interior or exterior applications.

Surface Preparation: Sweep or vacuum the area first to remove loose debris

Application: Dilute Neutral Cleaner with water per instructions on container. It may be used full strength for problem stains or spots. Apply the solution with a clean rag, sponge or synthetic mop. Agitate with a scrub brush or scrub machine where necessary to remove ground-in dirt and soil from rough-textured surfaces. Rinse the mop and change the cleaning solution at least every 500 square feet, or as needed for large areas. Normally, rinsing is not required, but if residue remains, rinse with clean water and allow to dry. Ready for surface traffic in thirty minutes. Allow at least one hour drying time before applying sealer or any other type of coating.

Layout Tools

POCKET TAPE MEASURE



- Rubber grip tape measure with positive locking mechanism.
- True Zero hook with three rivets.
- Chrome plated case.
- Bumper cushion.

FIBERGLASS & REINFORCED TAPES

- Break resistant double nylon coated tapes.
- Extremely accurate.
- Easy to read and clean.
- Nylon coating helps resist rust.



MEASURING WHEEL



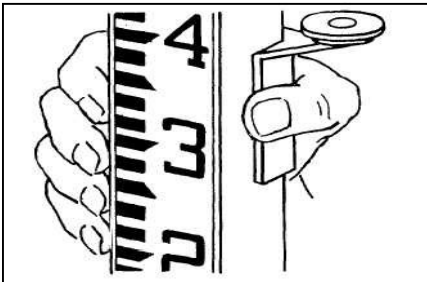
- Five digit easy to read magnified counter measure up to 9,999 feet.
- Heavy duty ABS wheel with a clean three spoke design.
- Curved telescoping handle adjusts to comfort level.
- Extremely popular.

HAND LEVELS

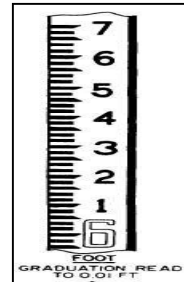
- Lightweight, top reading, aluminum box beam levels can stand up to any job.
- Shock absorbing end caps and ribbed wall design, along with large easy grip hand holes that provide reliable
- Professional results



LEVELING RODS



- The telescoping aluminum leveling rod features light, durable aluminum alloy construction that allows smooth extension and prevents unnecessary clattering.
- Gradations are imprinted on rod with special weather and corrosion resistant ink.
- Reliable wear resistant buttons lock sections.



MASON TWINE



Why Braided Twine:

Braided twine doesn't come apart even after multiple unwinding. It is perfect for large jobs and everyday use. Nick it with a trowel, and it won't unwind.

Why Twisted Twine:

Twisted twine is a fine choice for mason lines and other area marking needs and is economical.



Layout Tools

CHALK BOX



Whatever the application, we've got a chalk box that will meet your needs!

Classic, Geared Rewind, Little Giant.

CHALK BOX
Metal Chalk Box 100'
Plastic Speed Rewind 100'
Little Giant 100'
Replacement Chalk Line

MARKING CHALK



ProChalk is designed to provide very strong, sharp lines every time, with the brightest pigments in the industry.

MARKING CHALK
ProChalk (RED) - 8oz
ProChalk (BLACK) - 8oz
ProChalk (WHITE) - 8oz
ProChalk (YELLOW) - 8oz
ProChalk (RED) - 2.5lb

MARKING PAINT

Inverted marking paint for brilliant lines on the ground.

- Non-Clogging and lead free.
- Fast drying and safe on grass.

MARKING PAINT
Pink Marking Paint-17oz
Orange Marking Paint-17oz
Green Marking Paint-17oz



CHALK SAVER

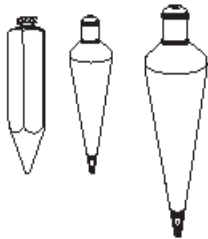
Clear spray protects chalk line from wind, rain and shuffling feet.

- Protects your layout.

CHALK SAVER
Upside Down Clear Spray-16oz



PLUMB BOB



The brass plumb bobs comply with the government specification.

Plumb Bob
Plumb Bob-8oz
Plumb Bob-16oz

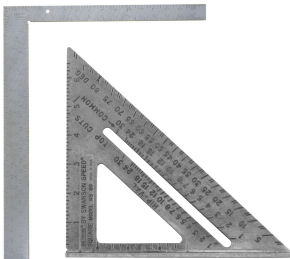
FLAGGING TAPE



Polar tape is thicker and specially engineered for cold weather use. Available in many colors and styles.

FLAGGING TAPE
Pink Flagging Tape-150ft
Orange Flagging Tape-150ft

SQUARES AND STRAIGHT EDGE



Squares
Multi-Purpose Squares
Straight Edges

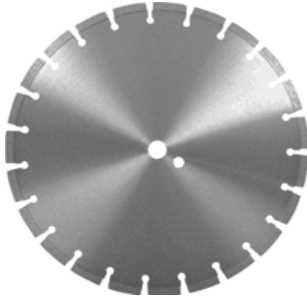
MARKING CRAYONS

MARKING CRAYONS
Lumber Crayons (BLACK)
Lumber Crayons (BLUE)
Lumber Crayons (PINK)
Lumber Crayons (RED)
Lumber Crayons (WHITE)
Lumber Crayons (YELLOW)

Soft lumber crayons.



Diamond Blades & Wheels / Abrasive Blades



DIAMOND BLADE

Diamond circular blade used for cutting concrete masonry. Wet and dry application.

Description	Additional Info	Arbor
7" Industrial Diamond Blade	Circular Saw	1" And 20mm
14" Industrial Diamond Blade	Cut Off Saw	1" And 20mm
14" Premium Diamond Blade	Circular Saw	1" And 20mm



DIAMOND GRINDING CUPS

These grinders are designed for smoothing concrete, masonry and stone surfaces. Many different sizes are available so call today with your specifics.

Description	Additional Info	Arbor
4-1/2" Diamond Grinding Cup Wheel	Angle Grinder	5/8-11
7" Diamond Grinding Cup Wheel	Angle Grinder	5/8-11



ABRASIVE BLADES

These abrasive blades are an economical way to cut concrete or rebar.

Description	Additional Info	Arbor
7" Concrete Abrasive Blade	Circular Saw	5/8"
12" Concrete Abrasive Blade	Cut Off Saw	1" And 20mm
14" Concrete Abrasive Blade	Cut Off Saw	1" And 20mm
7" Steel Abrasive Blade	Circular Saw	5/8"
12" Steel Abrasive Blade	Cut Off Saw	1" And 20mm
14" Steel Abrasive Blade	Cut Off Saw	1" And 20mm



ABRASIVE GRINDING WHEELS AND CUPS

These abrasive wheels and cups are an economical way to cut concrete or rebar.

Description	Additional Info	Arbor
4-1/2" Concrete Abrasive Wheel	Angle Grinder	5/8-11
4-1/2" Steel Abrasive Wheel	Angle Grinder	5/8-11
7" Concrete Abrasive Cup	Angle Grinder	5/8-11



ARBOR WASHER

This washer changes a 1" arbor to 20mm

20mm Arbor Washer	Cut Off Saw	5/8-11
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Rebar Eater – Rotary Only Rebar Cutters

STRAIGHT
SHANK



SDS+
SHANK



Rebar Eater - This is a one-piece system (shanks are non-removable)

Diameter	Overall Length	Wt.(lbs)	Suggested RPM's
3/8"	8"	0.3	850-1200
1/2"	12"	0.6	850-1200
1/2"	18"	1.0	850-1200
9/16"	12"	0.7	850-1200
5/8"	12"	0.8	750-1000
5/8"	18"	1.3	750-1000
11/16"	12"	0.9	750-1000
3/4"	12"	1.1	600-850
3/4"	18"	1.6	600-850
3/4"	24"	1.8	600-850
13/16"	12"	1.1	600-850

At last, the answer to drilling through concrete embedded rebar! No more broken or shattered hammer bits. Now you can drill through the rebar and not have to relocate the hole to avoid the rebar

Rebar Eater - This is a two-piece system (shanks and heads are sold separately)

REPLACEMENT CUTTER HEAD 7/8" & LARGER



REPLACEMENT SHANKS 7/8" & LARGER



STRAIGHT SHANK

SDS+ SHANK

Diameter	Suggested RPM's	Thread Size
7/8"	600-850	1/2-13 Female
1"	500-750	1/2-13 Female
1-1/8"	500-750	1/2-13 Female
1-1/4"	450-600	1/2-13 Female
1-3/8"	450-600	1/2-13 Female
1-1/2"	350-500	1/2-13 Female
1-5/8"	350-500	1/2-13 Female
1-3/4"	350-500	1/2-13 Female
2"	350-500	3/4-10 Female
2-1/2"	350-500	3/4-10 Female

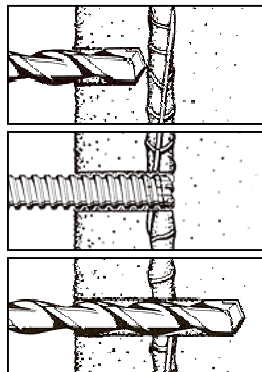
Follow power tool manufactures' recommendations for bit capacity. The operator of this tool assumes sole responsibility for any adverse structural effects of cutting rebar. Consult structural engineers if you have any concerns.

Shank	To Make OAL Bit Length	Thread Size
1/2"	9"	1/2-13 Male
1/2"	12"	1/2-13 Male
1/2"	18"	1/2-13 Male
1/2"	24"	1/2-13 Male
SDS	9"	1/2-13 Male
SDS	12"	1/2-13 Male
SDS	18"	1/2-13 Male
SDS	24"	1/2-13 Male
1/2"	9"	3/4-10 Female
1/2"	12"	3/4-10 Female
1/2"	18"	3/4-10 Female
1/2"	24"	3/4-10 Female
SDS	9"	3/4-10 Female
SDS	12"	3/4-10 Female
SDS	18"	3/4-10 Female
SDS	24"	3/4-10 Female

1. When rebar is encountered while drilling with a rotary hammer or carbide bit, immediately stop the hammer and remove the bit from the hole (failure to do this will severely damage the bit).

2. Mount a rotary rebar cutter in a standard 1/2" drill motor or 1/2" hammer-drill (with the selector in the rotary-only position); insert the rotary rebar cutter into the hole and drill through the embedded rebar.

3. Remove the rotary rebar cutter after the rebar has been drilled completely through and finish drilling the hole with the rotary hammer and hammer bit.



***THESE BITS TO BE USED IN
ROTARY-ONLY POSITION***

Hand Tools



ROUND POINT SHOVEL

Description	Additional Info
Round Point Shovel	48" Wood Handle
Round Point Shovel	48" Steel Handle

Our Steel Handled Badger Series Shovel is made with a Heavy Duty 14 gauge blade and riveted steel handle for durability. This shovel is one of the strongest in the industry. Economical Wood handle also available.



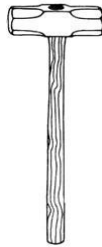
SQUARE POINT SHOVEL

Description	Additional Info
Square Point Shovel	48" Wood Handle
Square Point Shovel	48" Steel Handle

The heavy duty steel handled shovel is contractor grade with a tapered socket for added strength and a forward turned step for comfort and strength. Also available in a wood handle.

SLEDGE HAMMER

Description	Additional Info
4lb Sledge Hammer	10" Fiberglass Handle
8lb Sledge Hammer	16" Fiberglass Handle
16lb Sledge Hammer	36" Fiberglass Handle



TAMPER

Description	Additional Info
Tamper 10" x 10" x 1/4"	48" Steel Handle



This tamper is one piece heavy steel pipe with welded gussets for increased strength. Handles may be filled with sand for added weight.

Replaceable blades available for both are heavy and medium duty scrapers.



SCRAPERS

Scrapers
10" Blade Tile Scraper
14" Blade Floor Scraper
Replacement Blades Available

STREET BROOM



Description	Additional Info
Street Broom – 24"	60" Wood Handle

This heavy duty broom includes a 24" steel blade for scraping ice, snow and construction debris. Added reinforcement at broom head for stability and strength.

PRY BAR

Description	Additional Info
36" Wizard Bar	7/8" Diameter
48" Wizard Bar	7/8" Diameter
Breaking Bar	48" Steel Handle



YARD RAKE

Description	Additional Info
Yard Rake – 15"	60" Wood Handle



This rake features a 60" lacquered ash handle with metal ferrule.

BENDER BAR

Description	Additional Info
Hickey Bar – 3 Prong	Bends #5 Bar
Pry Bar – 60"	1-1/4" Diameter



MASON PLASTER HOE

Description	Additional Info
Mason Plaster Hoe	66" Wood Handle



This hoe has an ash handle with a perforated blade.

PICK

Description	Additional Info
Pick – 20" Head	36" Fiberglass Handle



CUTTER BENDER

Description	Additional Info
Hit Cutter Bender	Cut/Bends To #5 Bar

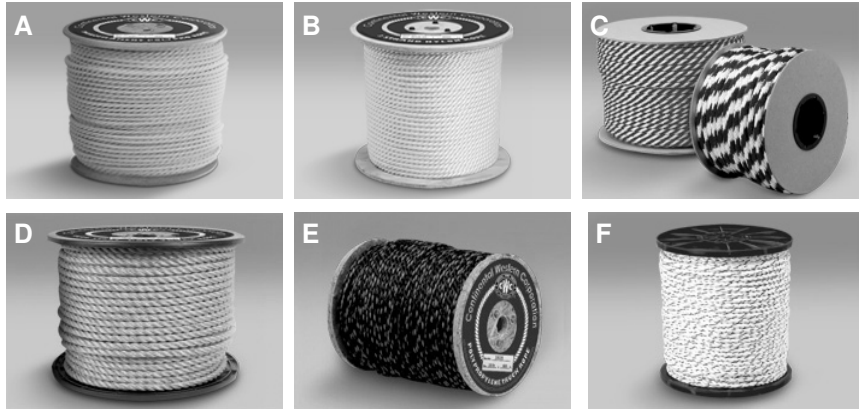


Rope, Packaging And Accessories

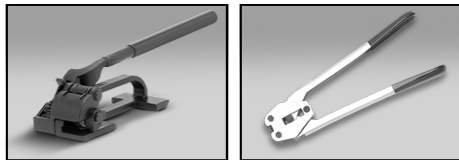
Rope

3 Strand Synthetic Ropes

- A. Yellow Poly Multifilament Rope
 - B. White Nylon Rope
 - C. Multifilament Poly Halter/Lead Rope
 - D. Blue Steel Poly Truck Rope
 - E. Poly Truck Rope
 - F. PolyPlus-Poly/Dac Truck Rope
- Above ropes are available in sizes 3/16" through 1" diameter on 600' reels.



Steel Strapping

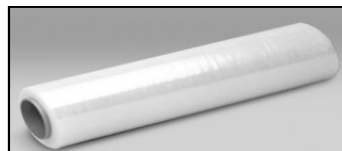


High Tensile Steel Strapping

Item Number	Width Thickness	Ft/ Lbs.	Nominal Break	Approx. Wt/Coil	Coils/ Pallet	Coil Winding	Strap Finish
177006	1/2 x .020	29.42	1485 lbs.	100 lbs.	14	OS	P/W
177019	5/8 x .020	23.53	1855 lbs	100 lbs.	14	OS	P/W
177024	5/8 x .020	23.53	1855 lbs	100 lbs.	14	OS	Z
177023	5/8 x .020	20.46	2130 lbs	100 lbs.	14	OS	P/W
177110	3/4 x .020	19.61	2380 lbs	100 lbs.	14	OS	P/W
177113	3/4 x .020	19.61	2380 lbs	100 lbs.	14	OS	Z
177014	3/4 x .025	15.69	2675 lbs	100 lbs.	14	OS,RW	P/W
177010	3/4 x .029	13.3	3305 lbs	100 lbs.	14	OS,RW	P/W
177015	3/4 x .031	12.65	3305 lbs	100 lbs.	14	OS,RW	P/W
177030	1-1/4 x .029	8.11	5450 lbs	100 lbs.	22	RW	P/W
177031	1-1/4 x .029	8.11	5450 lbs	100 lbs.	22	RW	Z
177032	1-1/4 x .031	7.59	5510 lbs	100 lbs.	22	RW	P/W
177029	1-1/4 x .031	7.59	5510 lbs	100 lbs.	22	RW	Z
177033	1-1/4 x .044	5.35	9280 lbs	100 lbs.	22	RW	P/W

Strapping Accessories

- Steel Strap Seals
- Heavy Duty Steel Strap Tensioner
- Heavy Duty Feedwheel Pusher Tensioner
- Steel Strap Shears
- Sealer Crimpers
- Edge Protectors
- Standard Duty Strap Dispenser
- Heavy Duty Steel and Poly Strap Dispenser
- Semi Automatic Strap Machine



Stretch Wrap

Available in:
70, 80, 90 gauge
12", 15", 18" widths



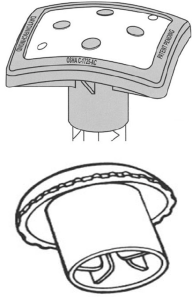
Duct Tape



Mason Twine

Colors:
Fluor-Orange, Fluor-Pink,
Fluor-Yellow, White. Also
available with handles.

Safety Equipment



REBAR CAPS

Rebar Caps are used for protection on the jobsite from impalement due to falls on protruding rebar. For the best protection use OSHA approved rebar caps. Remember that Safety is 1st and use OSHA Approved caps on your next project.

Description	Color	Rebar Size
OSHA Approved Rebar Cap	Orange	#3 - #7
Mushroom Rebar Cap	Orange	#3 - #7



RAINGEAR

We offer a Black 16" PVC Boots with a reinforced shank and cleated outsole. Also available is a .10mm, single ply PVC rain suit. This three piece suit comes with a detachable drawstring hood.

Description	Size	Color
16" PVC Boots	All Sizes Available	Black
Three Piece Rain Suit	Large-XL	Yellow



GLOVES

Our high quality Atlas gloves have proven to be the best glove in the industry. Protect your hands from the elements and minor cuts on the jobsite. These gloves can be reused several times and are washable.

Description	Size	Value pricing
Atlas Gloves – Fit	Large/X-Large	12 Pairs
Atlas Gloves – Thermal	Large/X-Large	12 Pairs



TOPPING GLOVES

When you need more protection from the elements and concrete use these gloves. PVC Double Dipped gloves will prevent damaged skin due to contact with concrete and other chemicals.

Description	Size	Color
Double Dipped PVC Gloves	Large/X-Large	Orange



SAFETY GLASSES

Description	Size	Lens Color
Safety Glasses	Universal	Yellow/Clear
Safety Goggles	Universal	Clear

Safety Equipment

CUSTOM LOGO/ LETTERING AVAILABLE!



Five Pocket Vest

Two Horizontal Stripes
5 Pockets (2 Inside, 3 Outside)
2" Scotchlite Trim
Front Zipper
Sizes Small Thru 5XL

ANSI Class II Compliant
Available in orange or yellow
Cool, breathable polyester (washable)

Five Pocket Sleeved Vest
One Horizontal Stripes (Striped Sleeves)
5 Pockets (2 Inside, 3 Outside)
2" Scotchlite Trim
Front Zipper
Sizes Small Thru 5XL



ANSI Class III Compliant
Available in orange or yellow
Washable polyester

Hook & Loop Vest
Two Horizontal Stripes
Solid Polyester Fabric
1.5" 3M Scotchlite Trim



ANSI Class II Compliant
Available in orange or yellow
Washable ANSI standard polyester



Technical Surveyor's Vest
Eleven Pockets
Solid Polyester Fabric
1.5" 3M Scotchlite Trim

ANSI Class II Compliant
Available in orange or yellow
Solid polyester material / snap closure



OK-4201 Bomber Jacket
ANSI Class III Compliant
Eight Pockets (4 Inside, 4 Outside)
Sizes Medium To 5XL

Lightweight poly-urethane shell (breathable, waterproof)
Fleece lining with elastic cuffs and waistband
Available in lime or lime/orange combo

OK-4201 Bomber Jacket
ANSI Class III Compliant
Four Pockets (3 Outside, 1 Inside)
Sizes Medium To 5XL



Lightweight coated polyester shell / 100% nylon lining
Removable sleeves for a lined class II vest
Available in orange and lime

ANSI Class II T-Shirt
Washable Polyester
2" 3M Scotchlite Tape
Single Front Pocket



Comfortable, breathable polyester (long sleeve available)
Available in orange and lime



Cold Weather Headwear
Watch Cap Style
Balaclava Style

One size fits most
available in high visibility
Available in orange and lime



ANSI Class E Pant
Two Front Pockets
1.5" Beaded Reflective Stripes
Drawstring And Elastic Waist

Available in orange or lime
ANSI Class III Compliance

Bib Overalls
.35mm Thick PVC Coated Polyester
Snap Front Fly
Heavy Duty Suspender w/ Snap Buckle
Sizes Medium To 5XL

Available in orange or lime
ANSI Class E Compliance





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