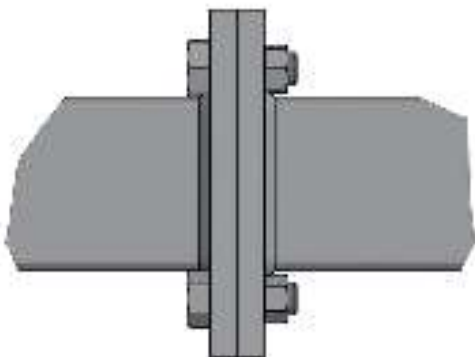




## Modular Brace

*The first real tilt-up bracing innovation in fifty years... the modular design covers more sizes... the higher capacity supports larger panels... and that means savings on every job!*



*Plate-to-plate bolting maintains load capacity.*

## Safety Information

Read, understand and follow the information in this publication before using any SureBuilt tilt-up products and accessories. When in doubt about the proper use or installation of any SureBuilt product, immediately contact the nearest SureBuilt branch for clarification.

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

The user of SureBuilt products must evaluate the application, determine the safe working load and control all field conditions to prevent load in excess of product(s) capacity. Safety factors shown in this publication are approximate minimum values. The data used to develop safe working loads for products is a combination of actual testing and/or other industry sources. Do not exceed the recommended safe working loads.

### Worn Parts

For safety, tilt-up products and accessories must be properly used and maintained. Products may be subject to wear, overloading, corrosion, deformation, alteration and other factors that may affect performance. It is the responsibility of the user to schedule regular inspections and remove worn and damaged parts from service.

### Field Modification

Field welding can compromise product performance, alter load capacities, and create hazardous situations. Consult with a local welding supply dealer to determine appropriate welding procedures. Do not weld any casting unless approved by a licensed metallurgical engineer. Since SureBuilt can not control workmanship or site conditions, SureBuilt can not be responsible for any product alterations or field modifications.

### Interchangeability

Tilt-up products manufactured and supplied by SureBuilt are designed as a system. When used properly, SureBuilt products have proven to be among the best designed and safest in the industry. SureBuilt strongly discourages efforts to interchange products supplied by other manufacturers because it may diminish performance and safety of the system.

### Design Changes

SureBuilt reserves the right to change product designs, specifications, capacities and/or dimensions at any time and without prior notice.

### Safety Factors

Safety factors established by the Occupational Safety and Health Administration (OSHA), Act Part 1910 and American National Standards Institute (ANSI 10.9) are recommended. Contact SureBuilt Engineering for questions or concerns regarding unforeseen site conditions. Safety factors should be adjusted when different or unusual conditions

Industry Recommendation	
Safety Factor*	Intended Application
1.67 to 1 **	Wall Braces
2 to 1	Brace Inserts
2 to 1	Lifting Inserts (single use)
3 to 1	Permanent panel connections
4 to 1	Panel handling (multiple lifts)
5 to 1	Lifting/Reusable Hardware

\* Minimum requirement.

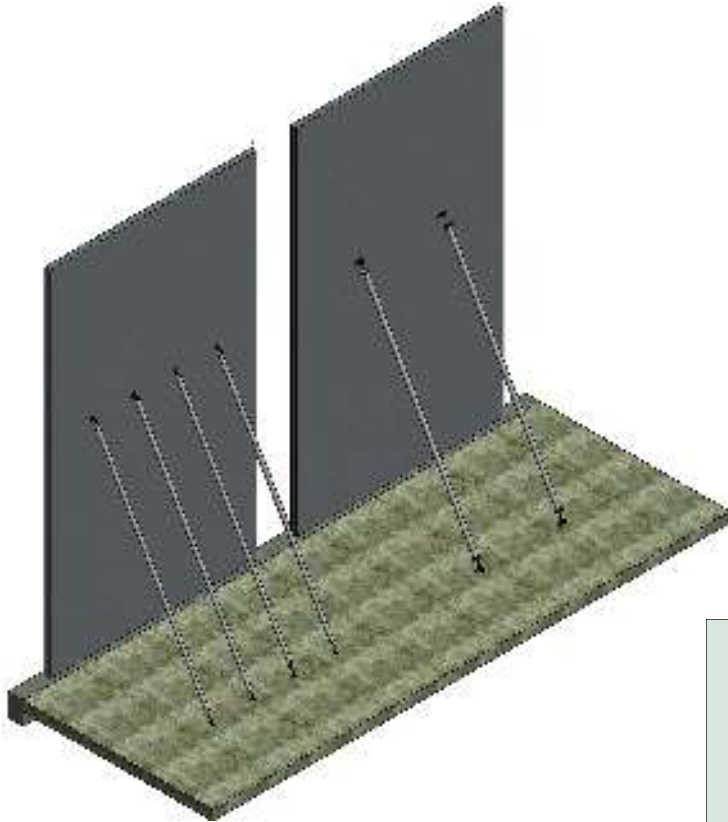
\*\* Assumes ASD loads.



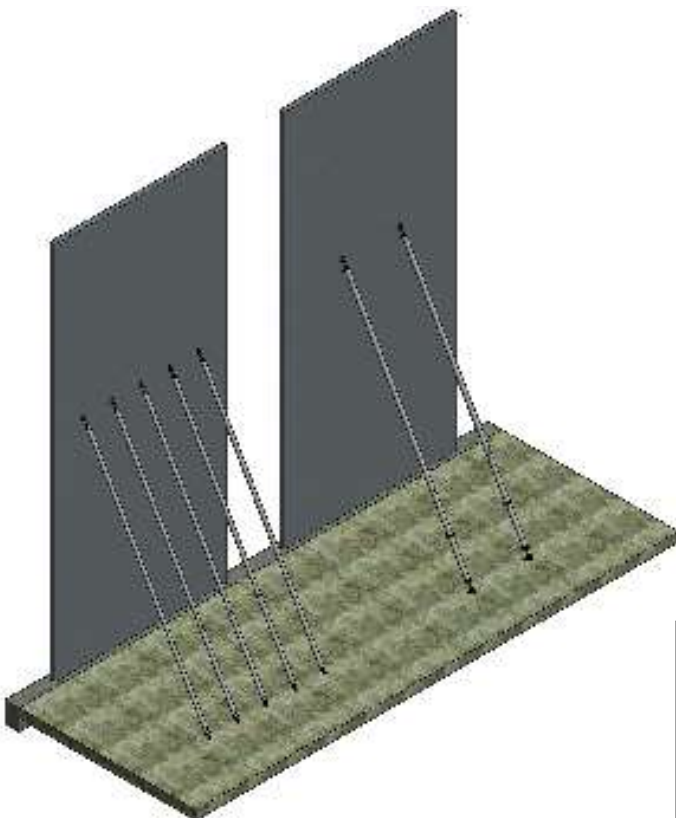
## Bigger Panels... Bigger Braces

As the tilt-up construction industry developed during the last fifty years, the panel designs grew in size and complexity. While the early panels were 25-30 feet in height, the latest panels are 75-80 feet and more.

As the panels increased in size, industry suppliers simply made longer versions of the same pipe brace. This approach created more sizes and reduced brace capacities. Even more braces were needed for the larger size panels.



With a typical 48' x 25' Panel  
you would need  
4 conventional 5-1/2" dia. braces 32 ft  
compared to just  
**2 Modular Braces** (6-5/8" dia) 32 ft



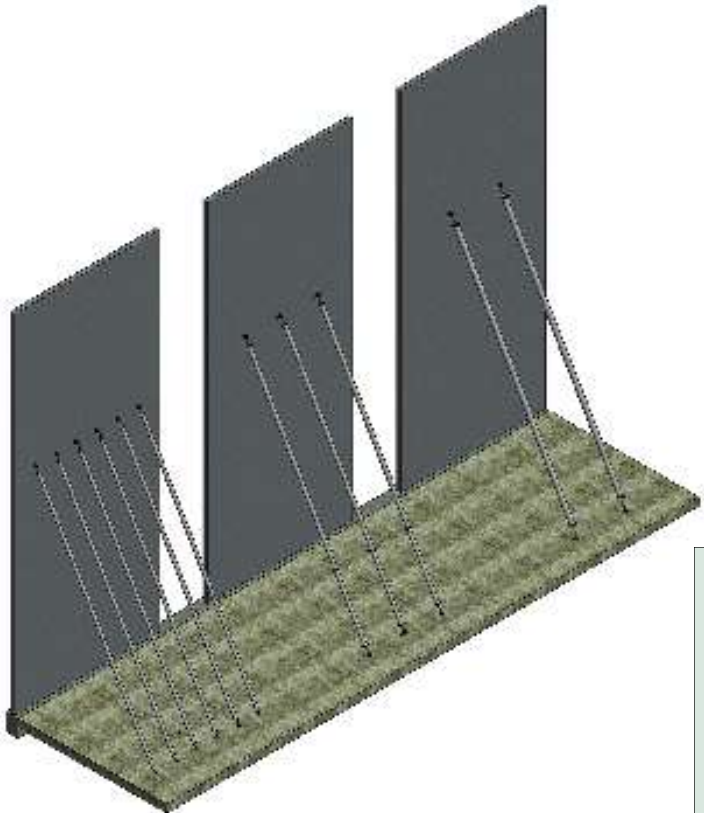
This has proven to be inefficient for tilt-up contractors. They need different brace lengths depending on the panel length and maybe more of them depending on the load. Handling and placing braces has become more costly on large tilt-up projects.

With a typical 55' x 25' Panel  
you would need  
5 conventional 5-1/2" dia. braces 37 ft  
compared to just  
**2 Modular Braces** (6-5/8" dia) 37 ft

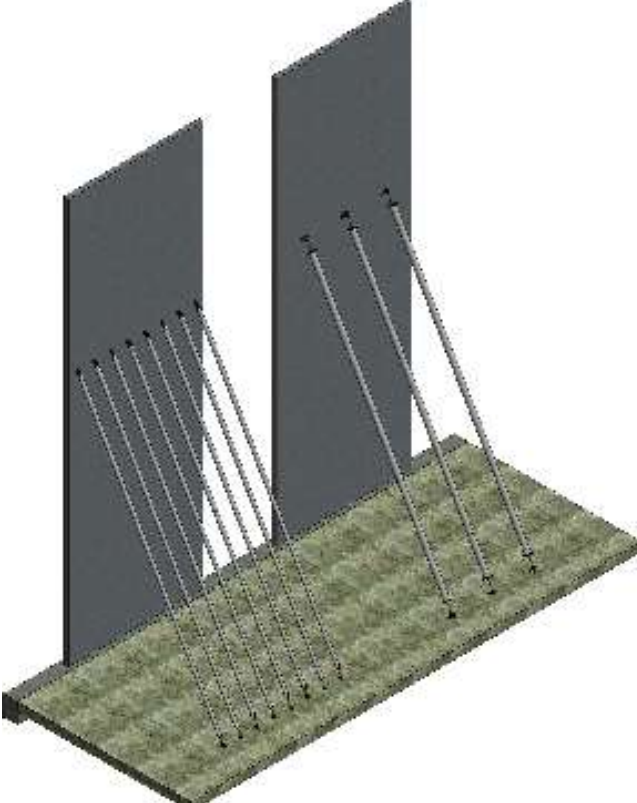
## Fewer Braces... More Savings

The bigger Modular Brace design requires 50% fewer braces for every typical application. Fewer braces reduce brace inventory, jobsite handling, panel attachments and dismantling time.

The Modular Brace savings are compounded when you consider all the small, but related steps, in the bracing process. There are 50% fewer brace inserts, 50% fewer brace attachments, 50% fewer bolts, 50% fewer man-lifts, and 50% fewer shipments.



With a typical 60' x 25' Panel  
you would need  
6 conventional 5-1/2" dia. braces 42 ft  
compared to just  
**3 Modular Braces** (6-5/8" dia.) 42 ft  
or just  
**2 Modular Braces** (8-5/8" dia.) 42 ft



The Modular Brace savings extend beyond the most recent job when you realize the components can be used for different sizes. Five basic components can be reconfigured for three brace lengths, covering a wide range of panel heights (see table page 10).

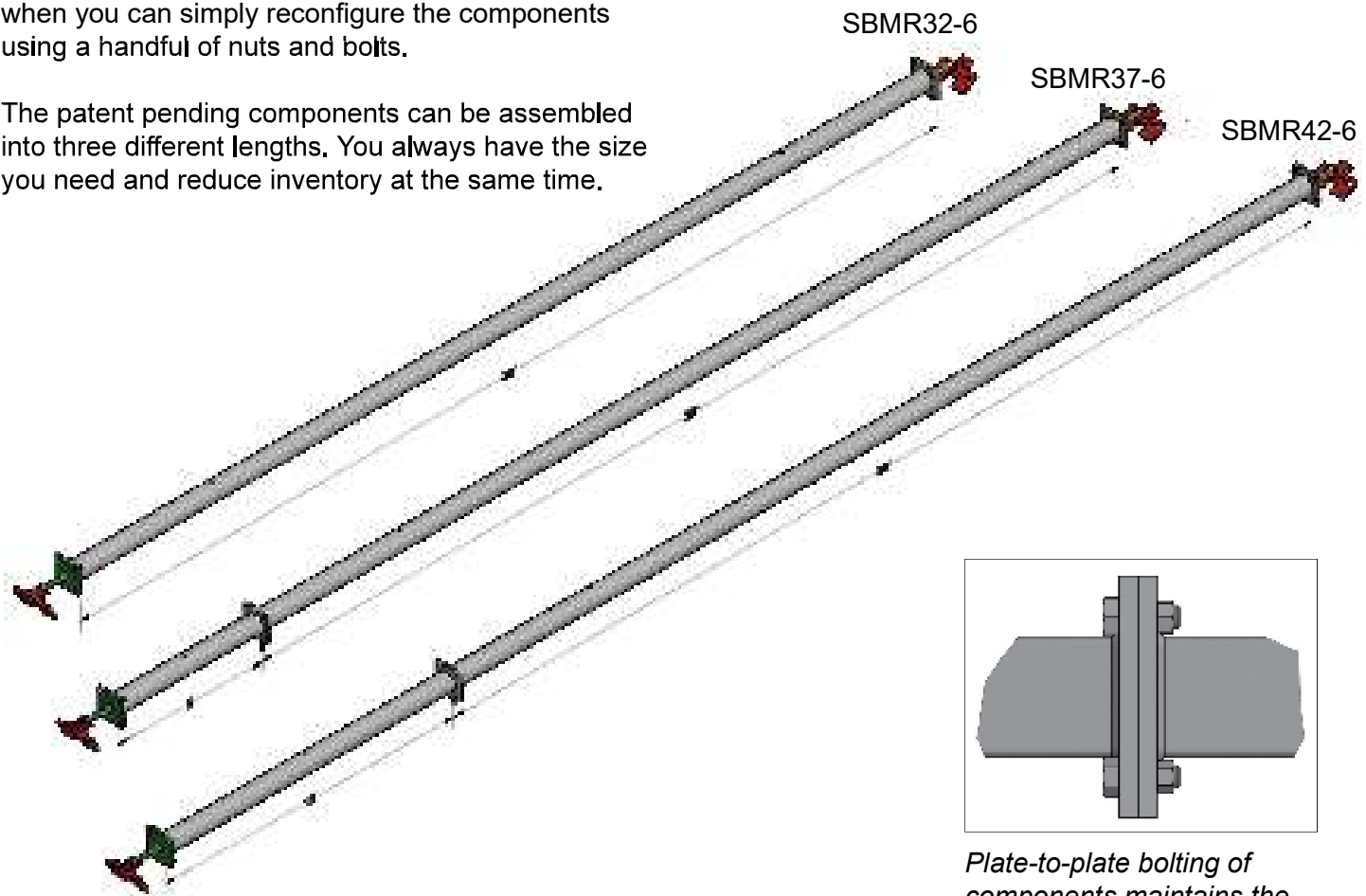
**Note:** The number of braces will vary based on panel size and openings. Contact SureBuilt Engineering for spacing..

With a typical 65' x 20' Panel  
you would need  
8 conventional 5-1/2" dia. braces 52 ft  
compared to just  
**3 Modular Braces** (8-5/8" dia.) 52 ft

## Modular Brace\* - 6-5/8" Pipe

There's no need to stock every possible brace size when you can simply reconfigure the components using a handful of nuts and bolts.

The patent pending components can be assembled into three different lengths. You always have the size you need and reduce inventory at the same time.



*Plate-to-plate bolting of components maintains the load capacity.*

*End Connector hardware has right- and left-hand threaded rods for a combined 24" total adjustment. The End Connectors are attached to a Triple-Slot Brace Shoe for anchoring. The type and number of bolts used with the shoe may limit brace loading.*

Modular Brace - 6-5/8" Pipe						
Part No.	Description	Min	Max	Weight	Double-Bolt Ultimate Load	Single-Bolt Ultimate Load
SBMR326	Modular Brace 32' Complete	31'-7"	33'-7"	382.3 lbs	25,250 lbs	15,000 lbs
SBMR376	Modular Brace 37' Complete	36'-8"	38'-8"	455.7 lbs	22,000 lbs	15,000 lbs
SBMR426	Modular Brace 42' Complete	41'-9"	43'-9"	499.1 lbs	14,440 lbs	14,440 lbs

*Each Modular Brace assembly has a right-hand and left-hand End Connector for a combined 24" adjustment. Loads based on actual test results. The full-moment connections require four 3/4"x2-1/2" Grade 5 (min) bolts, four structural washers, and four 3/4" Nylock nuts, torqued to a minimum of 150 ft-lbs.*

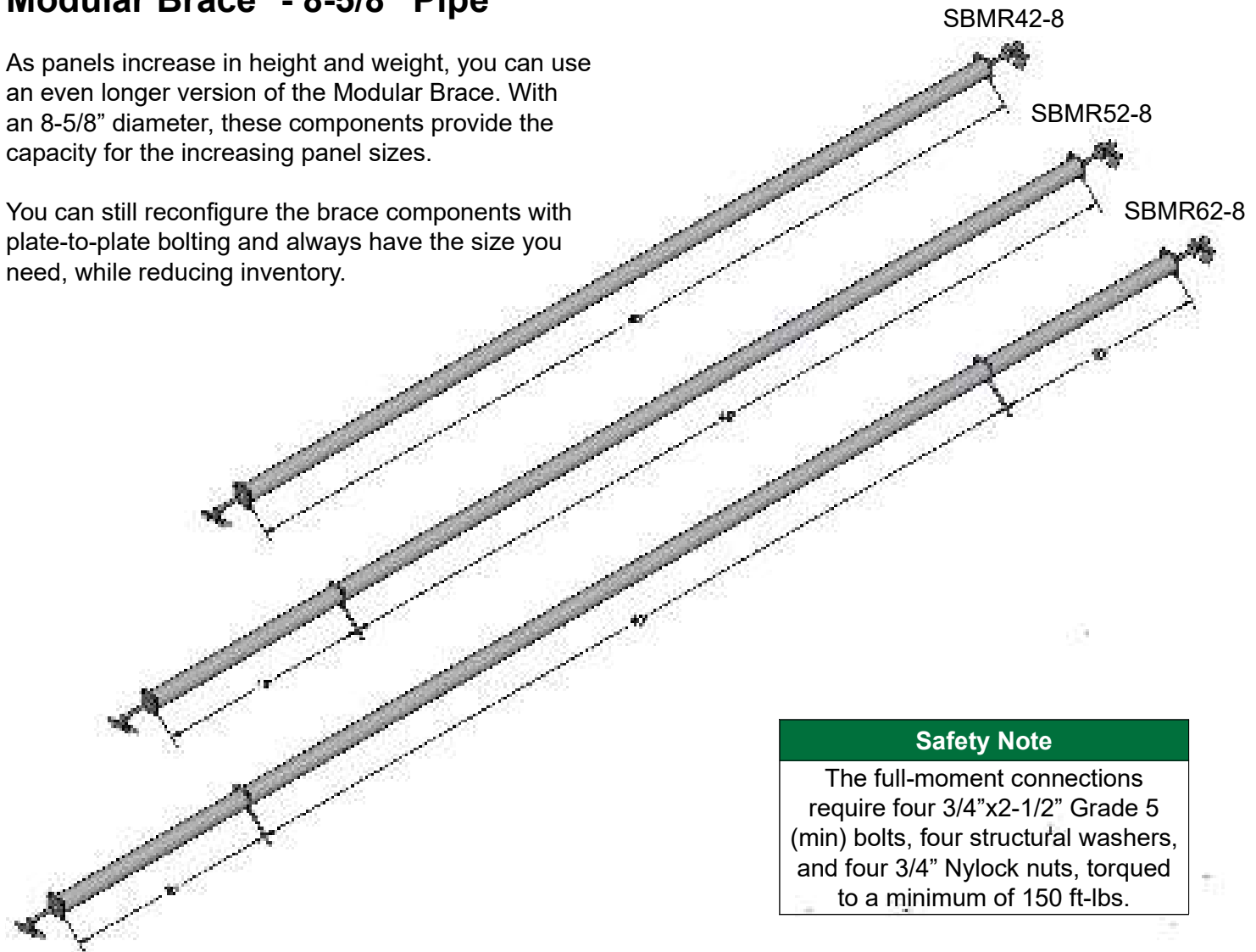
**\* U.S. Patent Pending**



## Modular Brace\* - 8-5/8" Pipe

As panels increase in height and weight, you can use an even longer version of the Modular Brace. With an 8-5/8" diameter, these components provide the capacity for the increasing panel sizes.

You can still reconfigure the brace components with plate-to-plate bolting and always have the size you need, while reducing inventory.



### Safety Note

The full-moment connections require four 3/4"x2-1/2" Grade 5 (min) bolts, four structural washers, and four 3/4" Nylock nuts, torqued to a minimum of 150 ft-lbs.

*End Connector hardware has right- and left-hand threaded rods for a combined 24" total adjustment. The End Connectors are attached to a Triple-Slot Brace Shoe for anchoring. The type and number of bolts used with the shoe may limit brace loading.*

Modular Brace - 8-5/8" Pipe						
Part No.	Description	Min	Max	Weight	Double-Bolt Ultimate Load	Single-Bolt Ultimate Load
SBMR428	Modular Brace 42' Complete	41'-7"	43'-7"	587.3 lbs	25,250 lbs	15,000 lbs
SBMR528	Modular Brace 52' Complete	51'-8"	53'-8"	733.6 lbs	19,850 lbs	15,000 lbs
SBMR628	Modular Brace 62' Complete	61'-9"	63'-9"	879.9 lbs	14,440 lbs	14,440 lbs

*Each Modular Brace assembly has a right-hand and left-hand End Connector for a combined 24" adjustment. Loads based on test results. The full-moment connections require four 3/4"x2-1/2" Grade 5 (min) bolts, four structural washers, and four 3/4" Nylock nuts, torqued to a minimum of 150 ft-lbs.*

**\* U.S. Patent Pending**

## Modular Brace\* Components

Each Modular Brace assembly has a right-hand (RH) and left-hand (LH) End Connector. In combination, the threaded rods provide 24" of adjustment, 6" more than conventional braces.

Each End Connector is attached to a Brace Shoe with Triple-Slots for anchoring. The type and number of bolts used with the shoe may limit the brace capacity.

End Connectors and Brace Shoes, including the Nuts and Bolts used for plate-to-plate connections, are interchangeable. The components can be used to assemble a Modular Brace, then reconfigured for another size.

### Modular Brace\* Components - 6-5/8" Pipe

Part No.	Description	Weight
SBMR306	Modular Pipe 30' Only	290.3 lbs
SBMR106	Modular Pipe 10' Only	116.8 lbs
SBMR56	Modular Pipe 5' Only	73.4 lbs

### Modular Brace\* Components - 8-5/8" Pipe

Part No.	Description	Weight
SBMR408	Modular Pipe 40' Only	495.3 lbs
SBMR108	Modular Pipe 10' Only	146.3 lbs

### Modular Brace\* Hardware

Part No.	Description	Weight
SBMECRH	End Connector RH Green	46.0 lbs
SBMECLH	End Connector LH Yellow	46.0 lbs
SBBS3B	Brace Shoe 3-Bolt	19.2 lbs
SBMRB34212	Bolt 3/4"x2-1/2" Grade 5	---
SBMRW	Washer 3/4" Structural	---
SBMRN34	Nylock Nut 3/4"	---



*End Connector RH (green)  
with Brace Shoe 3-Bolt*



*End Connector LH (yellow)  
with Brace Shoe 3-Bolt*

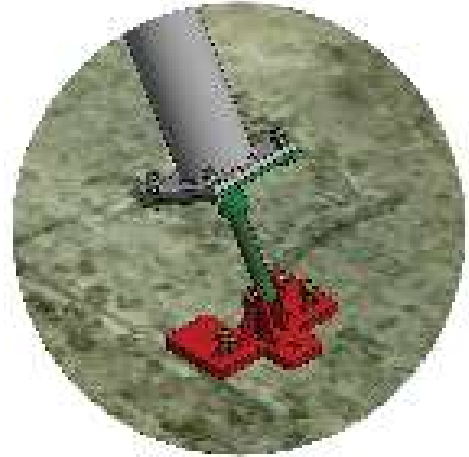
\* U.S. Patent Pending



## Taper Bolt

A reusable bolt and disposable expander nut for temporary brace installations.

- Removable bolt for temporary anchoring.
- Required hole diameter equals bolt dimension.
- Expander nut adjusts for variation in hole size.
- Taper Bolt assembly will work in “bottomless” hole.
- Torqued to obtain high-strength shear load value.
- Withstands static and vibratory loads.
- Bolt can be removed, cleaned and reused.



*The Taper Bolt and Nut are ideal for anchoring and then removing tilt-up braces.*

Taper Bolt and Nut*								
Part No.	Bolt Size**	Min Slab	Min Torque (ft/lbs)	Min Embed	Ultimate***			
					Single Bolt		Double Bolt (10" OC)	
					Tension (lbs)	Shear (lbs)	Tension (lbs)	Shear (lbs)
SBTB34418	3/4"x4-1/8"	5"	250	3-3/8"	7,200	14,440	14,800	29,700
SBTB34512	3/4"x5-1/2"	6"	250	4-1/2"	11,900	24,800	21,600	43,000
SBTB347	3/4"x7"	7"	250	6"	11,900	27,916	23,800	55,800
SBTB1558	1"x5-5/8"	6"	550	4-5/8"	12,900	25,900	22,300	44,600
SBTB1634	1"x6-3/4"	7"	550	5-3/4"	17,900	35,950	28,300	56,700
SBTB1714	1"x7-1/4"	8"	550	6-1/4"	20,300	36,257	31,200	62,400
SBTBN34	3/4" Nut							
SBTBN1	1" Nut							

\* Standard Grade 5, zinc-plated finish. Other metals and finishes available on request.

\*\* Required hole diameter equals bolt dimensions.

\*\*\* Ultimate load in 3,000 psi concrete. Tested by Pittsburgh Testing Laboratory PG-2170.

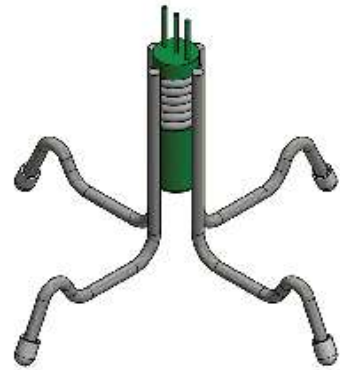
1. Drill a hole the same diameter as the Taper Bolt using the Brace Shoe as a template.
2. Clean hole and surrounding area with compressed air.
3. Drive Taper Bolt and Expander Nut into place leaving clearance for subsequent tightening.
4. Tighten Taper Bolt to recommended torque setting to expand nut.
5. For multiple Taper Bolt installation use an Impact Wrench for productivity.
6. Unscrew the Taper Bolt for removal. Expander Nut remains in hole.
7. Clean, lubricate and save the Taper Bolt for the next installation.



## Brace Insert

The Brace Insert has wire legs, welded to a coil insert, with a disposable plastic plug. The wire legs have plastic feet to prevent corrosion at the concrete face. The plastic plug has antennae to locate the insert after concrete placement. The number and location of Brace Inserts will vary based on the dimensions of each tilt-up panel. Other sizes are available on request.

When the disposable plastic plug is removed from the tilt-up panel the coil insert is exposed, providing the anchor point for subsequent bracing.



Brace Insert with Plug* (Bolt sold separately)		
Part No.	Description	SWL **
SBBI345	Brace Insert 3/4"x5" wPlug	7,200 lbs
SBBI346	Brace Insert 3/4"x6" wPlug	9,600 lbs
SBBI34612	Brace Insert 3/4"x6-1/2" wPlug	9,900 lbs
SBBI34714	Brace Insert 3/4"x7-1/4" wPlug	10,200 lbs
SBBI348	Brace Insert 3/4"x8" wPlug	11,600 lbs
SBBI34812	Brace Insert 3/4"x8-1/2" wPlug	11,600 lbs
SBBI34914	Brace Insert 3/4"x9-1/4" wPlug	11,600 lbs
SBBI3410	Brace Insert 3/4"x10" wPlug	11,600 lbs
SBBI341114	Brace Insert 3/4"x11-1/4" wPlug	11,600 lbs
SBBI3412	Brace Insert 3/4"x12" wPlug	11,600 lbs
SBCB344	Coil Bolt 3/4"x4"	---

\* Distance from edge must be minimum 12" or load is reduced.

\*\* Safe Working Load (SWL) based on 2:1 safety factor @ 3,000 psi.

## Inverted Brace Insert

The Inverted Brace Insert is designed for tilt-up panels where the anchor point for bracing is located on the bottom side of the concrete placement. Other sizes are available on request.

Inverted Brace Insert with Plug* (Bolt sold separately)		
Part No.	Description	SWL **
SBIBI346	Inverted Brace Insert 3/4"x6" wPlug	9,000 lbs
SBCB344	Coil Bolt 3/4"x4"	---

\* Distance from edge must be minimum 12" or load is reduced.

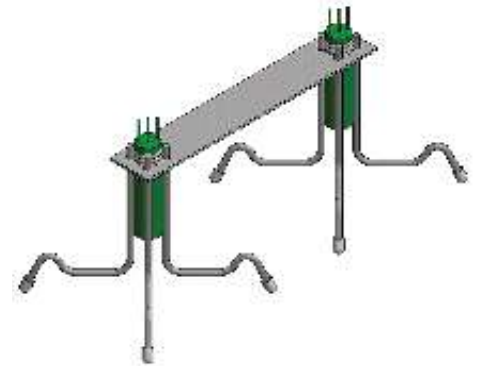
\*\* Safe Working Load (SWL) based on 2:1 safety factor @ 3,000 psi.



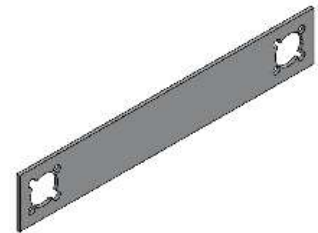
## Double Brace Insert

The Double Brace Insert (10" OC) has wire legs, welded to a coil insert with disposable plastic plugs, and Spacer Strap. The wire legs have plastic feet to prevent corrosion at the concrete face. The plastic plugs have antennae to locate the inserts after concrete placement. The Spacer Strap keeps the inserts properly positioned. The number and location will vary based on the dimensions of each panel.

When the disposable plugs are removed from the panel, the coil inserts are exposed, providing the bolt locations for subsequent bracing.



*Double Brace Insert (10" OC)  
with Spacer Strap*



*Spacer Strap (10" OC)*

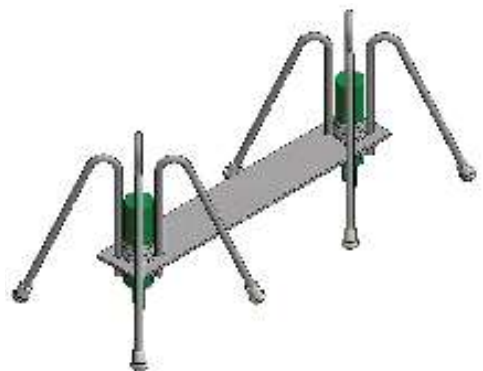
Double Brace Insert with Spacer Strap		
Part No.	Description	SWL **
SBDBI345	Double Brace Insert 3/4"x5"	12,960 lbs
SBDBI346	Double Brace Insert 3/4"x6"	17,280 lbs
SBDBI34612	Double Brace Insert 3/4"x6-1/2"	17,820 lbs
SBDBI34714	Double Brace Insert 3/4"x7-1/4"	18,360 lbs
SBDBI348	Double Brace Insert 3/4"x8"	20,880 lbs
SBDBI34812	Double Brace Insert 3/4"x8-1/2"	20,880 lbs
SBDBI34914	Double Brace Insert 3/4"x9-1/4"	20,880 lbs
SBDBI3410	Double Brace Insert 3/4"x10"	20,880 lbs
SBDBI341114	Double Brace Insert 3/4"x11-1/4"	20,880 lbs
SBDBI3412	Double Brace Insert 3/4"x12"	20,880 lbs
SBDBISS10	Spacer Strap 10" OC	--
SBCB344	Coil Bolt 3/4"x4"	---

\* Distance from edge must be minimum 12" or load is reduced.

\*\* Safe Working Load (SWL) based on 2:1 safety factor @ 3,000 psi.

## Double Inverted Brace Insert

The Double Inverted Brace Insert (10" OC) is designed for panels where the anchor points for bracing are located on the bottom side of the concrete placement. Other sizes are available on request.



*Double Inverted Brace Insert  
(10" OC) with Spacer Strap*

Double Inverted Brace Insert with Spacer Strap		
Part No.	Description	SWL **
SBDIBI346	Double Inv Brace Insert 3/4"x6"	17,280 lbs
SBCB344	Coil Bolt 3/4"x4"	---

\* Distance from edge must be minimum 12" or load is reduced.

\*\* Safe Working Load (SWL) based on 2:1 safety factor @ 3,000 psi.

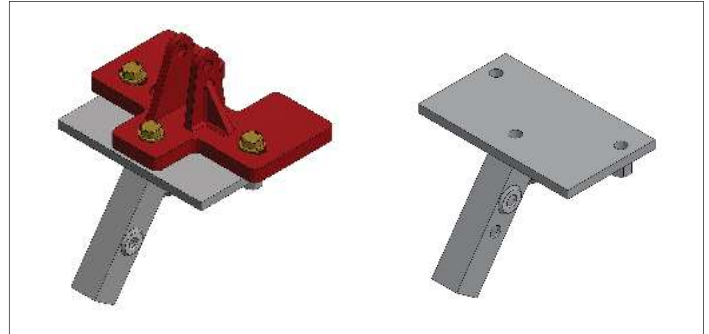
## HGA Bracket

The HGA Bracket provides a simple connection between helical ground anchors and Modular Braces. The design eliminates the need to remove, then reattach, brace shoes. The brace shoe bolts directly to nuts welded to the underside of the bracket.

The HGA Bracket is a 3-Bolt configuration. The tilt-up panel engineering, bracing and anchoring requirements will determine how the HGA Bracket is most effective.

*Note: The load-ratings of the helical ground anchor, tilt-up brace and HGA Bracket must be considered simultaneously for maximum allowable capacity and spacing.*

HGA Bracket	
Part No.	Description
SBHGA3PB	HGA Brace Bracket 3-Bolt



*The helical ground anchor-to-brace bracket (shown with and without the Brace Shoe 3-Bolt) eliminates the need to remove, then reattach, brace shoes.*

## Helical Ground Anchor

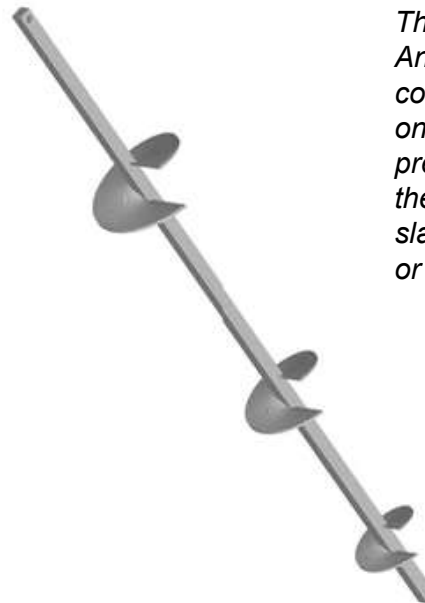
Helical Ground Anchors provide an engineered alternative to slab bolting or concrete deadmen. The anchor is a square steel shaft with helix plates that “screws” into the ground with continuous downward force. The anchor will establish a load capacity for subsequent brace attachment (depending on the soil condition and strata).

Helical Ground Anchor*	
Part No.	Description
SBHA7	Helical Ground Anchor 7'
SBHAE	Helical Ground Anchor Extension

\* Allowable torque for product is 2,200 ft-lbs.

\* Design by an experienced professional only.

\* Installation by a trained contractor only.

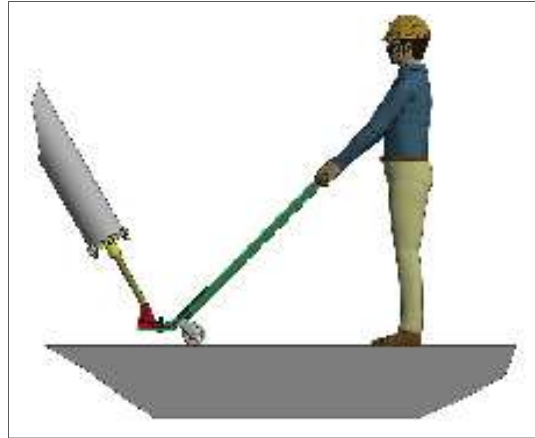


*The Helical Ground Anchor replaces concrete “deadmen” on tilt-up and precast sites when the concrete floor slab is unavailable or unsuitable.*

## Brace Dolly

The Brace Dolly is used to move or support braces during the erection and placement of tilt-up panels.

The swivel wheels provide easy movement and the long tubular steel handle provides leverage for final brace positioning and anchoring. The crane can be released sooner in the bracing process, saving time and money.



*The Brace Dolly is used for final positioning of braces.*

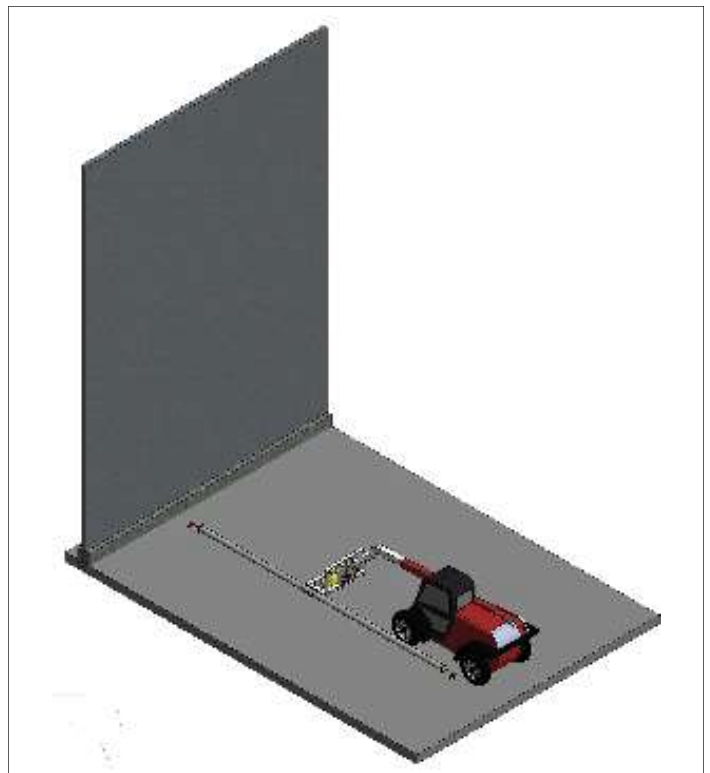


## Brace Saddle

The Brace Saddle is a telehandler fork attachment used to transport and lift braces, while eliminating crane time. The pipe brace rests in a saddle, visible to the machine operator and safely near the ground.

Once the brace has been moved and positioned on the site, the forks can be raised to complete the brace-to-panel connection.

Reversing this process and lowering the forks, means a brace is never dropped and damaged.



*The Brace Saddle simplifies handling, moving, setting and removing all types of pipe braces.*

Brace Specifications* (see notes)										
	SBPB417	SBPB422	SBPB427	SBPB432	SBPB51232	SBMR326	SBMR326	SBPB51237	SBMR376	SBMR376
	17'-0" Fixed	22'-0" Fixed	22'-0" Fixed w/5' Ext	22'-0" Fixed w/10' Ext	32'-0" Fixed	32'-0" Modular w/SBI	32'-0" Modular w/DBI	32'-0" Fixed w/5' Ext	37'-0" Modular w/SBI	37'-0" Modular w/DBI
Pipe diameter	4 in	4 in	4 in	4 in	5-1/2 in	6-5/8 in	6-5/8 in	5-1/2 in	6-5/8 in	6-5/8 in
Total length	17 ft	22 ft	27 ft	32 ft	32 ft	32 ft	32 ft	37 ft	37 ft	37 ft
Ultimate load*	9,750 lbs	9,750 lbs	7,200 lbs	5,400 lbs	13,500 lbs	15,000 lbs	25,250 lbs	12,000 lbs	15,000 lbs	22,000 lbs
B/Panel	15.93	20.02	24.12	28.21	28.21	28.21	28.21	32.31	32.31	32.31
Max height	26.54	33.37	40.20	47.02	47.02	47.02	47.02	53.85	53.85	53.85
Brace @ 50	15.02	18.85	22.68	26.51	26.51	26.51	26.51	30.34	30.34	30.34
Min height	17.023	20.85	24.68	28.51	28.51	28.51	28.51	32.34	32.34	32.34

\* Ultimate load based on shoe and brace only.

Brace Spacing* in Feet (see notes)										
	SBPB417	SBPB422	SBPB427	SBPB432	SBPB51232	SBMR326	SBMR326	SBPB51237	SBMR376	SBMR376
	17'-0" Fixed	22'-0" Fixed	22'-0" Fixed w/5' Ext	22'-0" Fixed w/10' Ext	32'-0" Fixed	32'-0" Modular w/SBI	32'-0" Modular w/DBI	32'-0" Fixed w/5' Ext	37'-0" Modular w/SBI	37'-0" Modular w/DBI
85' height										
80' height										
75' height										
70' height										
65' height										
60' height										
55' height										
50' height								7.09	8.87	13.01
45' height				3.55	8.88	9.87	16.61	9.04	11.30	16.57
40' height			5.30	4.65	11.63	12.93	21.76	11.84	14.80	21.71
35' height			7.20	6.32	15.79	17.55	29.53	16.07	20.09	29.47
30' height		11.49	10.22	8.97	22.43	24.92	41.95			
25' height	13.97	17.56	15.62							
20' height	23.42									

\* Calculations based on solid panels with 80 mph wind speed in worst condition.

#### Notes:

1. Minimum 20 foot wide panel. Minimum of two braces per panel. Round up to next integer.
2. Assumes two feet below finished floor. Different floor dimension may change spacing and height limits.
3. Brace bolt or concrete slab may be limiting factor for spacing and capacity.



Brace Specifications* (see notes)									
SBPB51242	SBMR426	SBMR426	SBMR428	SBMR428	SBPB51252	SBMR528	SBMR528	SBMR628	SBMR628
32'-0" Fixed w/10' Ext	42'-0" Modular w/SBI	42'-0" Modular w/DBI	42'-0" Modular w/SBI	42'-0" Modular w/DBI	32'-0" Fixed w/20' Ext	52'-0" Modular w/SBI	52'-0" Modular w/DBI	62'-0" Modular w/SBI	62'-0" Modular w/DBI
5-1/2 in	6-5/8 in	6-5/8 in	8-5/8 in	8-5/8 in	5-1/2 in	8-5/8 in	8-5/8 in	8-5/8 in	8-5/8 in
42 ft	42 ft	42 ft	42 ft	42 ft	52 ft	52 ft	52 ft	62 ft	62 ft
8,040 lbs	14,440 lbs	14,440 lbs	15,000 lbs	25,250 lbs	5,775 lbs	15,000 lbs	19,850 lbs	14,440 lbs	14,440 lbs
36.40	36.40	36.40	36.40	36.40	44.60	44.60	44.60	52.79	52.79
60.67	60.67	60.67	60.67	60.67	74.33	74.33	74.33	87.98	87.98
34.17	34.17	34.17	34.17	34.17	41.83	41.83	41.83	49.49	49.49
36.17	36.17	36.17	36.17	36.17	43.83	43.83	43.83	51.49	51.49

Brace Spacing* in Feet (see notes)									
SBPB51242	SBMR426	SBMR426	SBMR428	SBMR428	SBPB51252	SBMR528	SBMR528	SBMR628	SBMR628
32'-0" Fixed w/10' Ext	42'-0" Modular w/SBI	42'-0" Modular w/DBI	42'-0" Modular w/SBI	42'-0" Modular w/DBI	32'-0" Fixed w/20' Ext	52'-0" Modular w/SBI	52'-0" Modular w/DBI	62'-0" Modular w/SBI	62'-0" Modular w/DBI
								4.17	4.17
								4.77	4.77
								5.54	5.54
					2.19	5.70	7.54	6.49	6.49
					2.60	6.75	8.93	7.69	7.69
3.54	6.36	6.36	6.61	11.13	3.12	8.10	10.72	9.23	9.23
4.32	7.75	7.75	8.05	13.56	3.80	9.87	13.06	11.24	11.24
5.36	9.62	9.62	9.99	16.82	4.71	12.24	16.20		
6.83	12.26	12.26	12.73	21.43	6.01	15.60	20.64		
8.94	16.06	16.06	16.68	28.08					

**Bar Support** – Lightweight plastic castles, chairs, cradles, plates and slab bolster for rebar positioning and support.

**Brace Inserts** – Wire-legged panel anchors for subsequent brace attachment in single, double and inverted designs.

**Brace Bolt Inserts** – Unique wire-legged panel anchor with an integrated bolt means the hardware is always at hand for subsequent brace attachment.

**Construction Adhesive** – High-strength, pressure-sensitive adhesive for positioning chamfer, reveal and rustication in casting beds.

**Edge Connectors** – Wing-shaped rebar design for welding the edges of adjacent tilt-up concrete elements.

**Edge Form Brackets** – Stop cutting lumber blocks and start forming faster with the reusable plastic bracket for panel edge forming.

**HGA Bracket** – Simple and secure method for connecting helical ground anchors to pipe braces.

**Helical Ground Anchor** – A steel shaft with helix plates that screws into the ground as an anchor location for pipe braces.

**Pipe Braces** – Industry-preferred braces, with rated capacities and lengths ranging from 7'-6" to 52'-6", for tilt-up applications.

**Profiles** – Detailed line, chamfer, reveal and rustication options for a better concrete panel appearance.

**Ring-Lift Lifter** – Ground-release system to that connects the tilt-up panel insert to the crane rigging for lifting, handling and positioning.

**Slant Anchor** – This integral wall anchor is placed during tilt-up panel forming and connected to the footing during panel bracing.

**Straight Leg Erection Anchor** – An ideal anchor for horizontal-to-vertical edge lifts and shear rotation of thin-wall panels.

**Strongbacks** – Back-to-back steel channels used to reinforce and span critical areas of tilt-up panels during erection.

**Stud Extender** – An adjustable plastic support for accurately positioning embeds and weld plates .

**SureLift (SL) Insert** – High-strength insert with an integrated plastic former to identify the insert location and keep concrete out of the lifting recess.

**Truss** – The wire design connects the bottom layer of concrete, middle layer of insulation and top layer of concrete into a composite, energy-efficient panel.