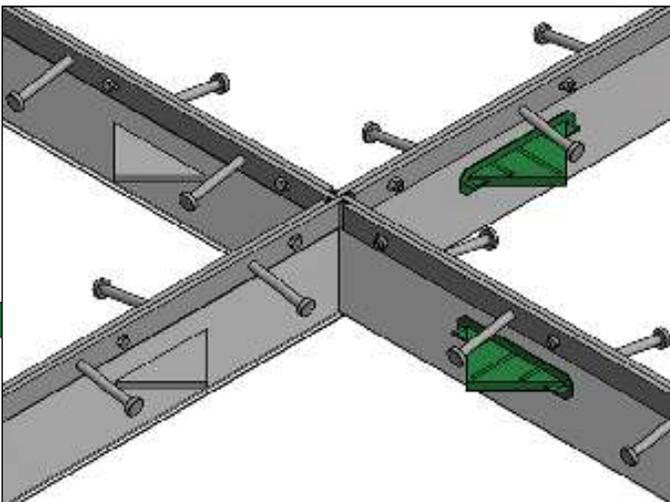
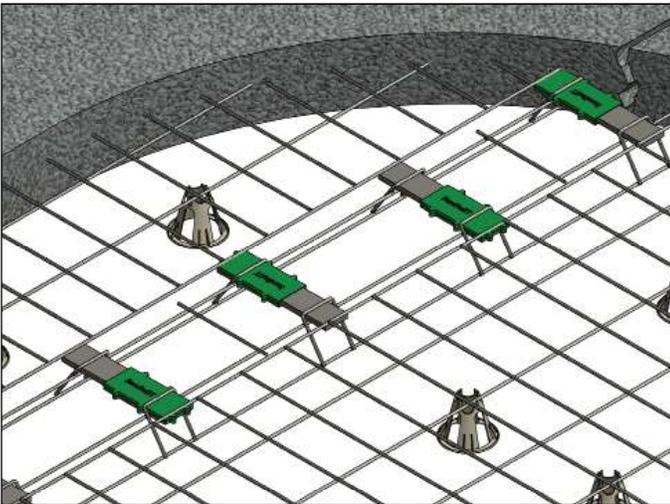




## Floor Dowel and Joint Systems



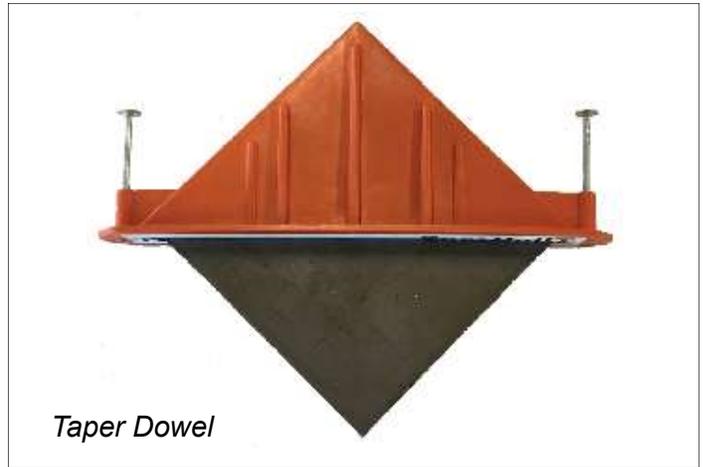
## Taper Dowel

### Diamond-shaped load transfer system for concrete joints

The size and diamond-shape of the Taper Dowel provides concrete joint stability, load transfer and smooth slab-to-slab transition, without restraining floor movement.

The plastic sleeve is nailed to lumber edge forms before concrete placement and the steel plate slides into the sleeve after forms are removed in preparation for the adjoining slab.

The plastic sleeve allows movement and the steel plate provides maximum bearing, bending and punching resistance, without the risk of slab interlock common with other methods.



Taper Dowel Set (One Sleeve and One Plate)			
Part No.	Description	Slab	Spacing*
SBTD14SL	SB Taper Dowel 1/4" - Sleeve Only (Orange)	5" to 6-1/2"	18"
SBTD14PL	SB Taper Dowel 1/4" - Plate Only 1/4" x 4-1/2" x 4-1/2"		
SBTD38SL	SB Taper Dowel 3/8" - Sleeve Only (Yellow)	7" to 9"	18"
SBTD38PL	SB Taper Dowel 3/8" - Plate Only 3/8" x 4-1/2" x 4-1/2"		
SBTD34SL	SB Taper Dowel 3/4" - Sleeve Only (Green)	9" to 12"	18"
SBTD34PL	SB Taper Dowel 3/4" - Plate Only 3/4" x 4-1/2" x 4-1/2"		

\* Spacing shown based on ACI 360 Design of Slabs-on-Ground.

### Dowel Specification

A properly installed plate dowel (Taper or Square) is recommended for joints up to 0.20" wide and is suitable for all types of ground level concrete slabs, such as jointed floors, flatwork and pavement.

A plate dowel (Taper or Square) installation conforms to ACI 302.1R Guide for Concrete Floor and Slab Construction and ACI 360 Design of Slabs-on-Ground.



*Dowels are inserted into sleeves after edge forms have been removed.*

## Square Dowel

### Alternate style load transfer system for concrete joints

The size and rectangular-shape of the Square Dowel provides concrete joint stability, load transfer and smooth slab-to-slab transition, without restraining floor movement.

The plastic sleeve is nailed to lumber edge forms before concrete placement and the steel plate slides into the sleeve after forms are removed in preparation for the adjoining slab.

The Square Dowel simplifies dowel installation, eliminates slab edge drilling and reduces labor costs for all types of ground level concrete slabs, including floors, flatwork and pavement.



*Square Dowel*

Square Dowel Set (One Sleeve and One Plate)			
Part No.	Description	Slab	Spacing*
SBSD14SL	SB Square Dowel 1/4" Sleeve Only (Blue)	5" to 6"	18"
SBSD14PL	SB Square Dowel 1/4" Plate Only 1/4" x 4" x 6"		
SBSD38SL	SB Square Dowel 3/8" Sleeve Only (Red)	7" to 8"	18"
SBSD38PL	SB Square Dowel 3/8" Plate Only 3/8" x 4" x 6"		

\* Spacing shown based on ACI 360 Design of Slabs-on-Ground.

### Dowel Installation

1. Mark the horizontal line on formwork for the half slab thickness. Mark a vertical line for the center-to-center spacing of the sleeve. They should be carefully aligned so they remain parallel in a horizontal plane. Fasten sleeves securely at each location. Position and tie any remaining slab reinforcement. Sleeves should be no closer than 6" to the intersection of any joints.
2. Place concrete normally, completely surrounding each sleeve location. Vibration is required to properly consolidate concrete and eliminate air entrapment. Do not strike or damage sleeves with the vibrator.
3. When concrete reaches sufficient strength, the adjoining slab base can be leveled and compacted. Insert the steel plates into the sleeves by puncturing the cover strips. The plates should be completely inserted into the sleeves.
4. Position, support and tie any remaining slab reinforcement. The adjoining concrete can now be placed against the edge of the first and the exposed steel plates. Place concrete normally, completely surrounding each plate dowel.

## Dowel Basket\*

### Dowel assembly for concrete floor and pavement joint locations

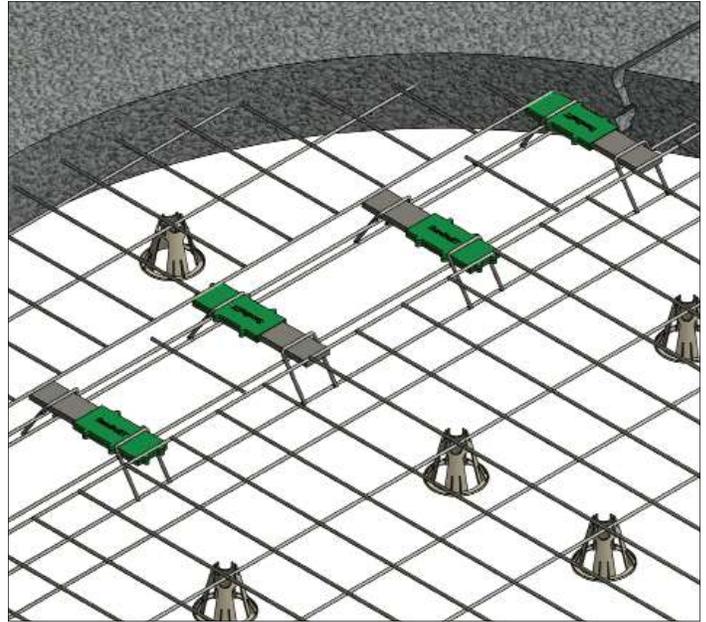
The Dowel Basket provides joint stability, reliable load transfer and smooth slab-to-slab transition, in a single cost-effective assembly.

A properly installed Dowel Basket minimizes joint spalling, eliminates tripping hazards and improves joint filler appearance.

The patent-pending plastic sleeve allows movement and the steel plate provides bearing capacity, without the risk of slab interlock and cracking, to assure a high-quality slab.

A properly installed Dowel Basket is recommended for joints up to 0.20" wide and is suitable for all types of ground level concrete slabs, such as jointed floors, flatwork and pavement.

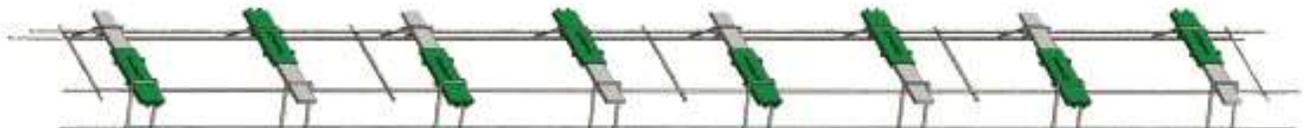
A Dowel Basket installation conforms to ACI 302.1R Guide for Concrete Floor and Slab Construction and ACI 360 Design of Slabs-on-Ground.



*The labor-saving 12' Dowel Basket is placed as a single unit at every planned concrete joint, along with typical chairs and reinforcement.*

Dowel Basket				
Part No.	Description (height x length)	Slab	Plate Size	Spacing*
SBDB382S18	SB Dowel Basket 3" x 12'	6"	3/8" x 2" x 12"	18" OC
SBDB382S24	SB Dowel Basket 3-1/2" x 12'	7"	3/8" x 2" x 12"	24" OC
SBDB12212S18	SB Dowel Basket 3-1/2" x 12'	7"	1/2" x 2-1/2" x 12"	18" OC
SBDB12212S24	SB Dowel Basket 4" x 12"	8"	1/2" x 2-1/2" x 12"	24" OC
SBDB34212S18	SB Dowel Basket 4-1/2" x 12'	9"	3/4" x 2-1/2" x 12"	18" OC
SBDB34212S24	SB Dowel Basket 5" x 12'	10"	3/4" x 2-1/2" x 12"	24" OC

\* Spacing shown based on ACI 360 Design of Slabs-on-Ground.



\* Dowel Basket sleeve U.S. Patent Pending

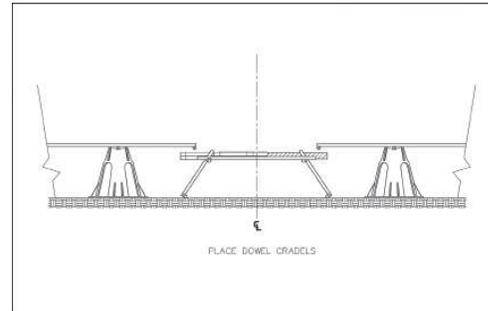
## Dowel Basket Installation

1. Each Dowel Basket should remain parallel in the horizontal plane during placing and finishing operations. Dowels should not be closer than 12" to the intersection of any joint.

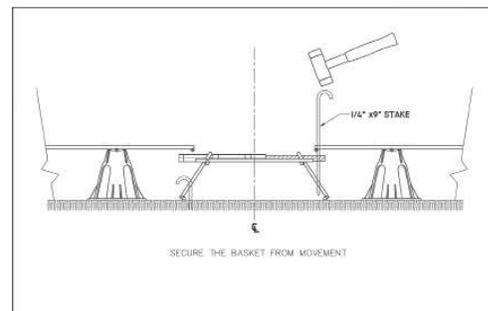
2. Stake the Dowel Basket assembly to ensure it remains in the planned joint location. Position and tie the slab reinforcement.

3. Place concrete normally, completely surrounding each Dowel Basket location. Dowel Baskets require vibration to properly consolidate concrete and eliminate air entrapment. Do not strike or damage Dowel Basket assembly with the vibrator.

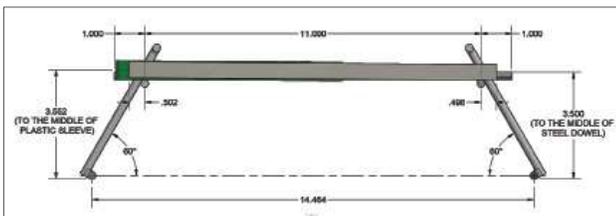
4. When concrete has been finished and reaches sufficient strength, saw cut the joint along the line of each Dowel Basket location.



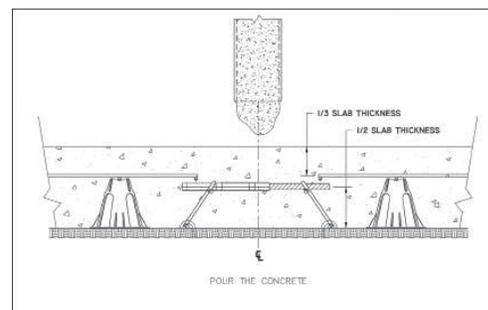
1. Place basket at each joint.



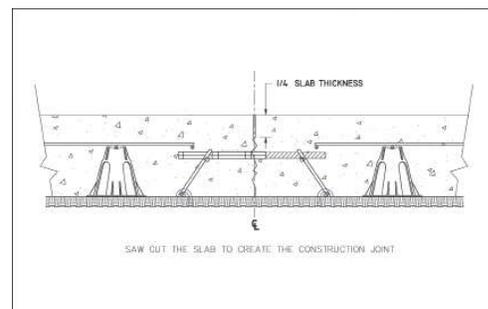
2. Anchor basket with stake.



*Dowel Basket height is typically the midpoint of the slab. Dowel Basket length is typically 12', but can be cut-to-size. Plates can be 3/8" or 1/2" or 3/4" depending on project requirements, anticipated loads and slab thickness.*



3. Pour and consolidate concrete.



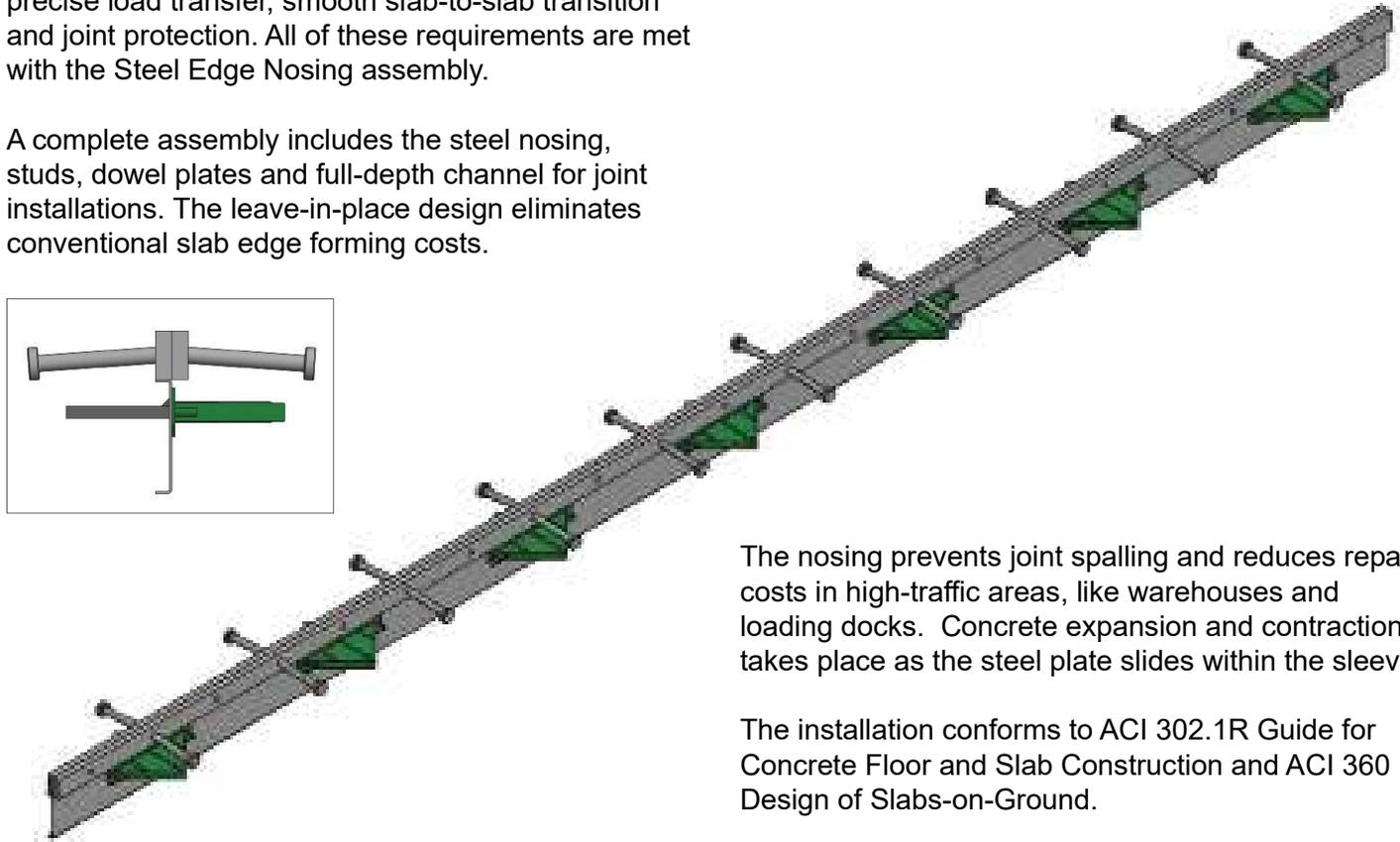
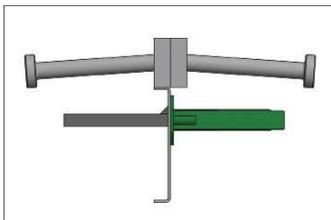
4. Saw cut concrete at joint location.

## Steel Edge Nosing

### Joint edge protection and precise load transfer in a single assembly

High-traffic industrial floors and pavements require precise load transfer, smooth slab-to-slab transition and joint protection. All of these requirements are met with the Steel Edge Nosing assembly.

A complete assembly includes the steel nosing, studs, dowel plates and full-depth channel for joint installations. The leave-in-place design eliminates conventional slab edge forming costs.



The nosing prevents joint spalling and reduces repair costs in high-traffic areas, like warehouses and loading docks. Concrete expansion and contraction takes place as the steel plate slides within the sleeve.

The installation conforms to ACI 302.1R Guide for Concrete Floor and Slab Construction and ACI 360 Design of Slabs-on-Ground.

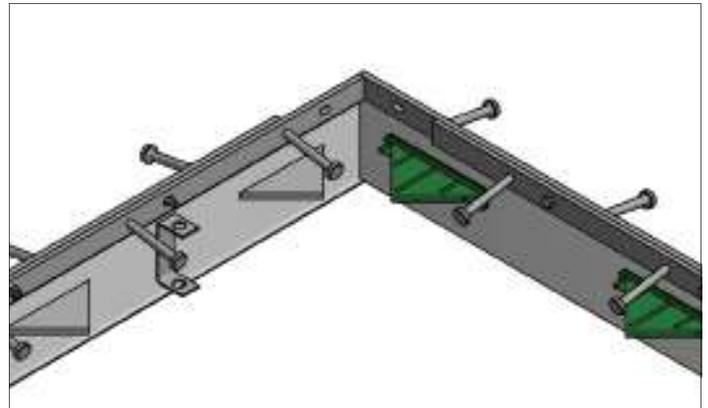
**Steel Edge Nosing with Taper Dowel**

Part No.	Description	Slab	Plate Size	Spacing*
SBSEN6	SB Steel Edge Nosing 6"x10'	6"	1/4" x 4-1/2" x 4-1/2"	18"
SBSEN6WC	SB Steel Edge Nosing 6"x10' w/Clip	6"	1/4" x 4-1/2" x 4-1/2"	18"
SBSEN7	SB Steel Edge Nosing 7"x10'	7"	3/8" x 4-1/2" x 4-1/2"	18"
SBSEN7WC	SB Steel Edge Nosing 7"x10' w/Clip	7"	3/8" x 4-1/2" x 4-1/2"	18"
SBSEN8	SB Steel Edge Nosing 8"x10'	8"	3/8" x 4-1/2" x 4-1/2"	18"
SBSEN8WC	SB Steel Edge Nosing 8"x10' w/Clip	8"	3/8" x 4-1/2" x 4-1/2"	18"

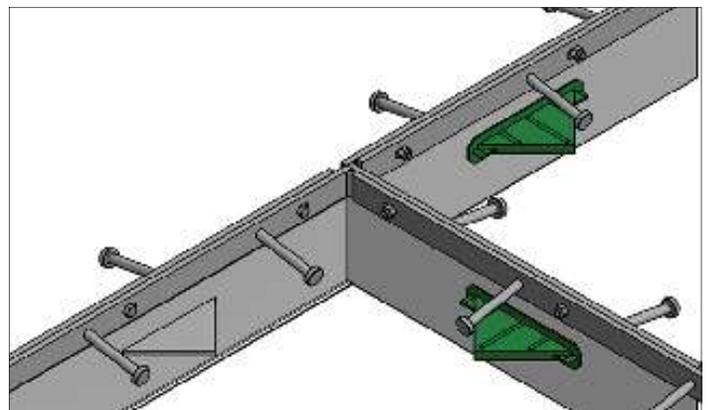
\* Spacing shown based on ACI 360 Design of Slabs-on-Ground.

### Steel Edge Nosing Installation

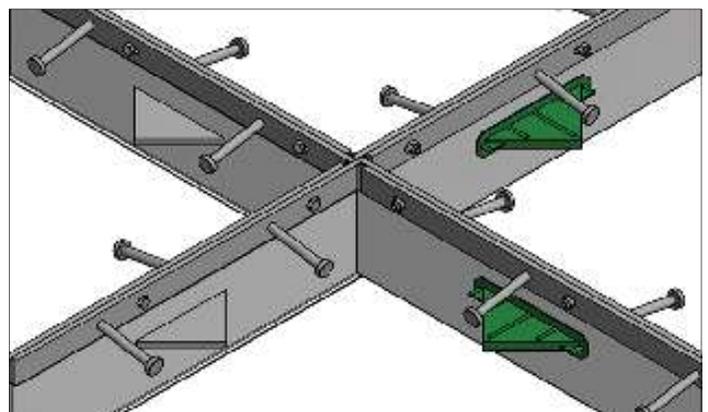
1. Steel Edge Nosing assemblies should be placed in the planned joint location. Dowel plates should be no closer than 6" to joint intersections.
2. Steel Edge Nosing assemblies should remain plumb/parallel during placing. Position, support and tie slab reinforcement to the studs.
3. Place concrete normally, completely surrounding each dowel sleeve/plate location. Vibration is required to properly consolidate concrete and eliminate air entrapment. Do not strike or damage sleeves/plates with the vibrator.
4. The Steel Edge Nosing, with studs tied to the concrete slab reinforcement, provides joint edge protection and a smooth transition under load from one concrete section to another.



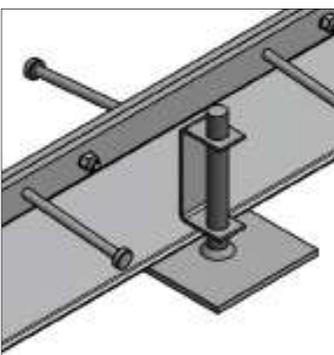
*Steel Edge Nosing w/Clip - 2-Way Intersection*



*Steel Edge Nosing w/Clip - 3-Way Intersection*



*Steel Edge Nosing w/Clip - 4-Way Intersection*



*Optional welded Clips can be provided to support the assembly, using Steel Stakes or Base Plates (as shown).*

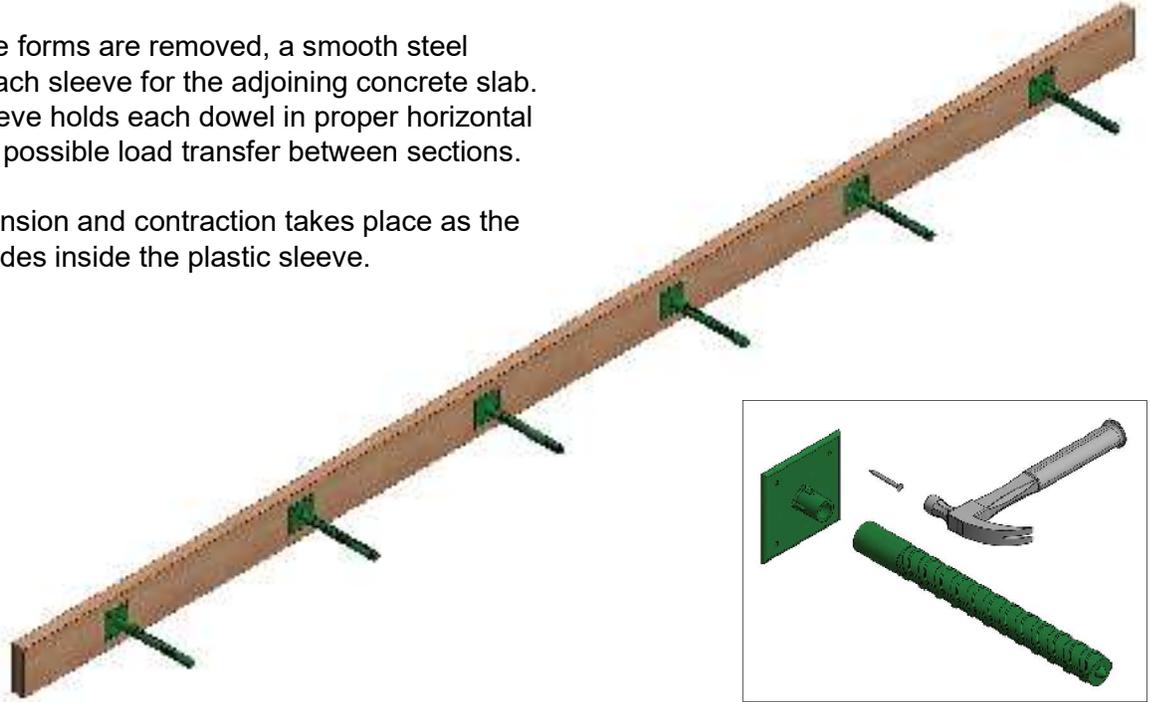
## Dowel Sleeve - Construction Joint Type

Used with lumber edge forms to position smooth dowels at construction joints

Positioning smooth dowels with lumber edge forms is easy with the plastic Dowel Sleeve and Nailing Plate. The plate is attached to the form at the required spacing and the sleeve is pushed onto the plate before concrete placement.

When the lumber edge forms are removed, a smooth steel dowel is placed into each sleeve for the adjoining concrete slab. The plastic Dowel Sleeve holds each dowel in proper horizontal alignment for the best possible load transfer between sections.

Normal concrete expansion and contraction takes place as the smooth steel dowel slides inside the plastic sleeve.



Dowel Sleeve and Nailing Plate for construction joints*				
Part No.	Description	Sleeve Diameter	Sleeve Length	Dowel Size**
SBDSCJ129	SB Dowel Sleeve and Nailing Plate - 1/2" x 9"	1/2"	9"	1/2" x 18"
SBDSCJ349	SB Dowel Sleeve and Nailing Plate - 3/4" x 9"	3/4"	9"	3/4" x 18"
SBDSCJ19	SB Dowel Sleeve and Nailing Plate - 1" x 9"	1"	9"	1" x 18"
SBDSCJ1149	SB Dowel Sleeve and Nailing Plate - 1-1/4" x 9"	1-1/4"	9"	1-1/4" x 18"

\* Consult project engineer for required dowel size and spacing.

\*\* Dowels sold separately.

## Dowel Sleeve - Expansion Joint Type

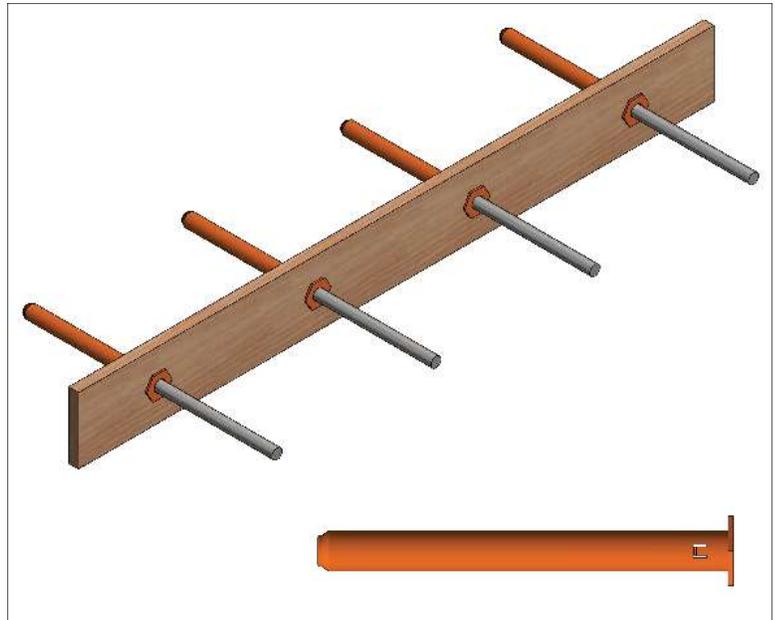
Used with stay-in-place expansion board to position smooth dowels

Positioning smooth dowels with leave-in-place expansion boards, like cedar or polypropylene, is easy with the Dowel Sleeve.

Expansion boards are predrilled to the proper hole size and spacing to meet specifications. Once the predrilled boards are in position, the sleeves are quickly snapped into place. Integrated collar tabs keep each sleeve in position and perpendicular to the board face.

The plastic sleeve holds each smooth steel dowel in proper horizontal alignment for the best possible load transfer between concrete pavement sections.

Normal concrete expansion and contraction takes place as the smooth steel dowel bar slides inside the sleeve.



*Plastic sleeves are used with predrilled expansion boards, like cedar or polypropylene, to accurately position and align smooth steel dowels in the adjoining concrete section.*

Dowel Sleeve for expansion board*				
Part No.	Description	Sleeve Diameter	Sleeve Length	Dowel Size**
SBDSEJ129	SB Dowel Sleeve for Expansion Board 1/2" x 9"	1/2"	9"	1/2" x 18"
SBDSEJ349	SB Dowel Sleeve for Expansion Board 3/4" x 9"	3/4"	9"	3/4" x 18"
SBDSEJ19	SB Dowel Sleeve for Expansion Board 1" x 9"	1"	9"	1" x 18"
SBDSEJ1149	SB Dowel Sleeve for Expansion Board 1-1/4" x 9"	1-1/4"	9"	1-1/4" x 18"

\* Consult project engineer for required dowel size and spacing.

\*\* Expansion board and dowels sold separately.

**Bar Support** – Wire slab bolsters and high chairs, with optional epoxy-coat, plastic-dip, plastic-tip or plate, to meet almost any slab requirement.

**Bridge Deck** – Overhang brackets and hangers provide an efficient deck forming solution for precast concrete or steel I-beam bridge structures.

**Coil Ties** – 2-Strut and 4-Strut designs, in standard and heavy-duty capacities, with optional cones, waterseals or custom combination, for job-built forming.

**Dowels** – Plates, sleeves, baskets and joint nosings for high-performance concrete floors.

**Euro Rod** – 15mm and 20mm taper ties, she-bolts, inner ties, washers and wing nuts compatible with European-brand forming systems.

**Metal Rib** – Leave-in-place, expanded galvanized mesh to form footings, bulkheads, grade beams, pier caps and blindside walls.

**Pipe Braces** – Contractor-preferred braces, with rated capacities and lengths ranging from 7'6" to 62'6", for almost any forming application.

**Precast** – Inserts, anchors, connectors and lifting systems for efficient precast concrete production.

**Self-Riser** – Integrated hydraulic system for multi-story building cores that virtually eliminates crane time.

**Shoring** – A conventional 12K load/leg system, with base plates, cross braces, screw jacks and U-heads, for productive deck support.

**Snap Ties** – Ties and brackets, with ¾" plywood and 2x4 lumber, create a simple and effective plywood forming system.

**Staybox** – A pre-engineered and pre-assembled rebar keyway that simplifies forming at wall and deck intersections.

**Stud Rail** – A reinforced column-to-deck connection that reduces shearing, transfers load further into the slab and eliminates column capitals.

**SureCurve™ RC** – Concrete tanks and curved walls quickly take shape with this flexible gangform system.

**SurePly™** – An industry-recognized handset system, with more than 80 standard panel and filler sizes, for almost any forming application.

**Tilt-Up** – A start-to-finish system of lifting inserts, plates and hardware for tilt-up panel construction.

**Walers** – Double channel walers align panels, carry taper tie loads and maximize the surface area of almost any gang.