EZ Dowel™ System

Rectangular Plate Dowels for Formed Construction Joints

Superior Load Transfer System

The EZdowel™ load transfer plate dowel is designed to provide superior load transfer while saving time and labor during the installation process.

The EZdowel system ™ helps you:

- Limit your Liability
- Reduce your call backs and save labor
- Optimize the amount of steel in a project
- Collect your retainage
- Deliver cost-effective slabs-on-ground

Fast and Easy Installation

- The EZ Dowel simply slides into the pre-cut dowel slot eliminating issues with plastic dowel holder installation, mis-alignment, deflection or compression
- Eliminates drilling bulkheads, greasing/spinning dowels and installing dowels into plastic holders
- Allows for easy stripping of forms
- Ensures positive load transfer and eliminates cracking from restraint with reliable dowel alignment
- Unique shape allows for better consolidation

More Cost Efficient

- The EZ Dowel ™ installation is the fastest and most perfectly aligned plate dowel installation in the market today.
- Forms are pre-cut, pre-chamfered and slotted eliminating the need for on site sawing and measuring

Optimizes the use of Steel

- EZ Dowel plates can be spaced farther apart than other conventional dowels. Thus you achieve superior load transfer at the construction joint with less steel.
- EZ Dowels unique shape provides 20% more steel closer to the centerline of the joint

In areas subjected to wheeled traffic, heavy loads or both, joints with dowels are recommended.
— ACI 360R-06

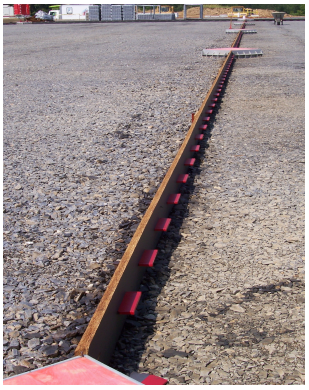
Performance Based Engineering

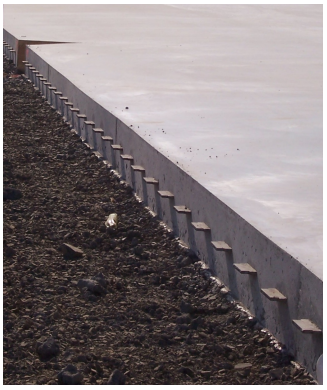
- Dowels are always in perfect alignment horizontally and vertically
- Unique shape and edge banding allows the slab to move horizontally in all directions without restraint
- Unique shape and edge banding also allow for 0.375 inch of lateral movement at a joint that opens 1/8 inch
- Provides positive alignment to ensure free movement of the joint
- Less deflection across the joint
- Provides 20% more steel at the joint where the bearing, shear and flexural stress are the highest

Performance Based Dowel Design

Table 1: Equivalency table of plate dowels vs. round dowels.

EQUIVALENCY TABLE						
	¾ inch		1 inch		Slab Size	Max Load
	12" oc	18" oc	12" oc	18" oc	(inches)	(lbs)
EZform System						
3/16 x 6.5 x 3.5	14 inch	20 inch			4, 5	5030
¼ x 6.5 x 3.5	18 inch	24 inch	14 inch	20 inch	6, 7	7750
5/16 x 6.5 x 3.5			18 inch	24 inch	7, 8	9330
3/8 x 6.5 x 3.5			18 inch	24 inch	9, 10	12,900





EZ Dowel™ System

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EZdowel™ SPECIFICATION

• All EZform™ construction joint systems will be supplied by EZform Inc. 1-866-913-8363.

EZdowel™

• EZdowel™ plate dowels will be cut from hot rolled plate per ASTM A36 to within 0.010" of specified size.

• Specially designed elastomer with compressible side material will be fitted to one side of the EZdowel™.

• EZdowel™ is available in 1/4, 3/16, 5/16 and 3/8 inch thicknesses.

EZform™-board

• EZform™ boards will be manufactured engineered wood products developed for concrete forming using advanced resin technology.

• EZform™ boards will be overlaid with a resin impregnated Kraft paper in a primary process.

• Thickness of the form board is 1.125 inches with a tolerance of plus or minus .03125 inch

• Width of the EZform™ board is manufactured to specified depth of slab to a tolerance of plus or minus 0.010 inch.

• The slots that accept the EZdowel™ are spaced according to the structural design of the slab to a tolerance of plus or minus 0.010 inch.

• The slots that accept the EZdowel™ are centered in the form (unless specified otherwise) to a tolerance of 0.010 inch.

• EZform™ boards will be pre-chamfered at a 30º angle on the top of the form

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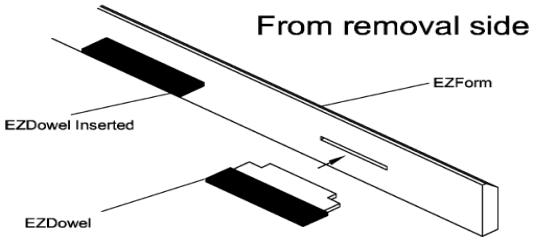


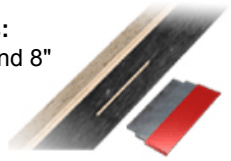
Cast in Place Slab Side

EZ Dowel™ System

Material Specification and Product Information

The EZform™ Concrete Joint System consists of two patent pending units: the EZform™ Board, as well as the accompanying EZdowel™. The EZform™ Board is an overlaid concrete construction joint board made by bonding an overlay of resin-impregnated paper sheets onto the surface of an engineered form board with advanced resin technology. The overlay provides a smoother finish than is possible with BB Plyform or CDX sheathing. Overlays allow the board to be stripped easily from the concrete and permit multiple reuses of the board as long as proper care is given to preparing and handling the board before, during, and after the pour. The EZform™ Board's strength is engineered not to be significantly different than dimensional lumber. The board resists warping and twisting due to stronger fiber orientation and advanced resin composition.

EZform™ Form Board
General Specifications:
Widths: 4", 5", 5½", 6" and 8"
Lengths: 8' and 16'
Thickness: 1.125"



Property	Value	ASTM Method
Thickness	1.125"	ASTM D-1037
EI (lb-in²) Stiffness	2,300,000	ASTM D-1037
MOR - psi	6,500	ASTM D-1037
MOE - psi	1,300,000	ASTM D-1037
Linear Expansion	0.16%	ASTM D-1037
Thickness Swell	4.0 - 6.1%	ASTM D-1037
Nail Withdrawal - lbf	225	ASTM D-1037
Straightness	+/- 1/64" per linear ft.	TECO
Squareness	+/- 1/64" per linear ft.	TECO

EZdowel™ is engineered to provide optimal use of steel, shape, and thickness to provide a stronger dowel for concrete construction joints. The unique design of EZdowel™ provides 20% more steel closer to the higher stress area in a typical construction joint verses comparable plate dowels. EZdowel™ has a specially engineered red covering on top and bottom (3/1000") allowing a bond break between the steel load transfer plate dowel and concrete. The coated edge banding (250/1000" or greater) allows for lateral movement if needed for slab shrinkage.

EZdowel™ SIZING CHART

SLAB THICKNESS (INCH)	CONCRETE STRENGTH (PSI)	ALLOWABLE LOAD (LBS)	RECOMMENDED PLATE (INCH)
4	3000	3400	3/16"
4	4000	3720	3/16"
5	3000	4350	3/16"
5	4000	5030	1/4"
6	3000	5600	1/4"
6	4000	6480	1/4"
7	3000	6450	1/4"
7	4000	7750	1/4"
8	3000	8080	5/16"
8	4000	9330	5/16"
9	3000	9570	5/16"
9	4000	11050	5/16"
10	3000	11360	3/8"
10	4000	12900	3/8"

Shear strength of the concrete based upon ACI recommended equations for allowable load. Plate recommendations based on ductile failure. 24 inch on center spacing.

EZ Dowel™ System

Plate Dowels defined by ACI 360

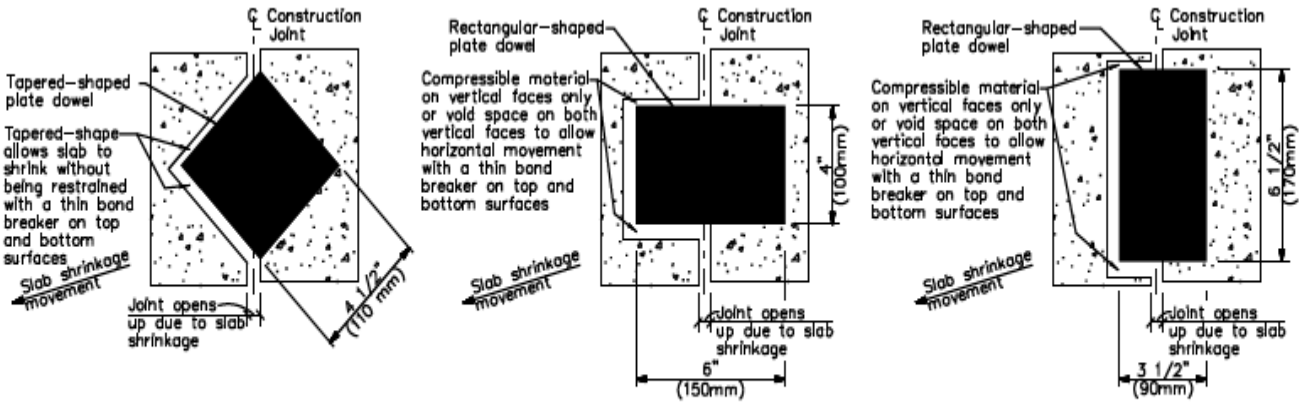


Fig. 5.11 – Different types of plate dowels at construction joints.

Table 5.1—Dowel size and spacing for construction and contraction joints[1]

Slab depth, in. (mm)	Dowel dimensions, in. (mm)			Dowel spacing center-to center, in. (mm)		
	Round[4]	Square[3,5]	Plate Dowel	Round[4]	Square[3,5]	Plate Dowel
5 to 6 (130 to 150)	3/4 x 14 (19 x 360)	3/4 x 14 (19 x 360)	M/R[2]	12 (300)	14 (360)	18 (460)
7 to 8 (180 to 200)	1 x 16 (25 x 410)	1 x16 (25 x 410)	M/R[2]	12 (300)	14 (360)	18 (460)
9 to 11 (230 to 280)	1-1/4 x 18 (32 x 460)	1-1/4 x 18 (32 x 450)	M/R[2]	12 (300)	12 (300)	18 (460)

1. Table values based on a maximum joint opening of 0.20 in. (5 mm). Dowels must be carefully aligned and supported during concrete operations. Misaligned dowels may lead to cracking. Spacings are based on dowels in direct contact on the concrete with a thin bond breaker. Total dowel length includes allowance made for joint opening and minor errors in positioning dowels.
2. M/R= Manufacturers' Recommendations. Because of the various plate dowel geometries and installation devices available from the different manufacturers, the manufacturers should be consulted for their recommended plate dowel size and spacing.
3. Square dowels should have compressible material securely attached on both vertical faces.
4. ACI Committee 325 (1956)
5. Walker and Holland (1998)