



The New Shape for Green and Sustainable Concrete Slab Load Transfer

Designed for Sustainable Concrete Slabs

Concrete flooring and paving must have the ability to withstand the rigors of service such as the abrasive and concentrated loads of wheeled traffic across the joints. The "W" Basket assembly is designed to help you reliably deliver a serviceable slab in a highly competitive environment. Designers will recognize the benefit of the "W" basket in any joint reinforcement planning.

Utilizing McTech's unique Single wire, double bar plate and compressible center geometry and a factory applied debonding agent,

the "W" basket assembly helps you:

- Save labor
- Optimize the amount of steel in a project
- Minimize your liability in warranty and retained earnings
- Deliver a greener and sustainable slab-on-ground

Installation Made Easy

- Fewer man hours
- Easy to handle, due to unique more than one can be carried at a time
- Designed to allow for misalignment in horizontal and perpendicular planes
- Placement friendly – less sideframe interference
- Fully welded assemblies and unique W design offer superior dowel support during installation
- Unique shape allows more baskets per truckload
- Shipping wires do not have to be cut during placement
- All basket sizes and configuration are available through our national distribution network.

Dowel Design- Load Capability

Typical Load / Spacing

2" x 1/2" x 12" "W" Basket

Slab Depth	Dowel Spacing		
	24"	30"	36"
8"	15739	11107	NR
10"	19517	15702	14183
12"	26874	21110	19193

Maximum load spacing capacity at dowel failure based on 3000 psi concrete. K value = 200

Load spacing at 24 inches. Contact manufacturer for additional load/ spacing info.

Engineered to Maximize Joint Performance

- Provides for horizontal and perpendicular deflection
- Provides increased bearing area at the joints, as compared to other competitive products.
- More efficient use of steel when compared to continuous mats
- Meets all ACI 360 performance criteria.
- Minimizes saw-cut construction tolerance
- Single wire design strong and efficient.
- Double bars with compressible center.
- Factory-applied debonding agent provides for Direct Dowel Contact with concrete



Superior Products for the Concrete Flooring Industry

1-866-913-8363
www.McTechGroup.com

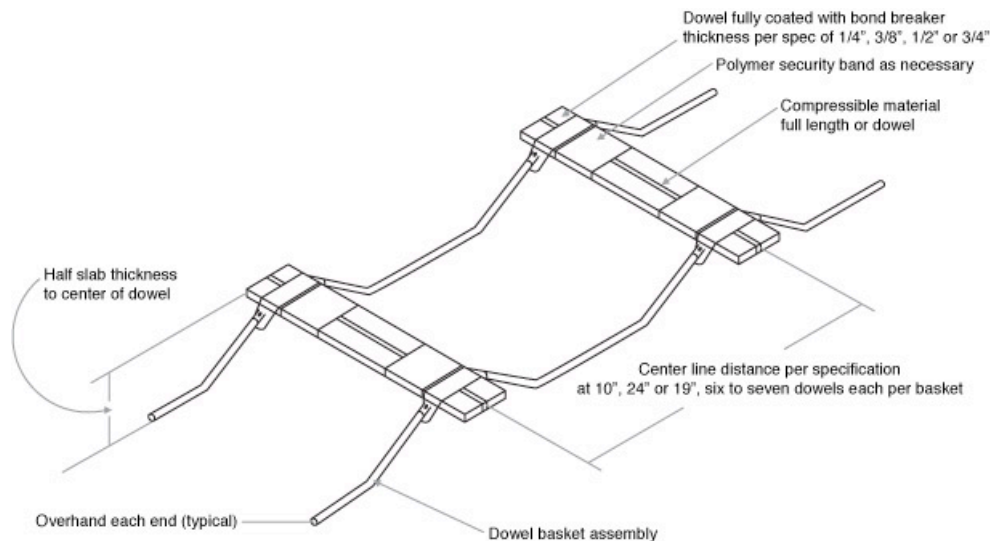
Double Bar Plate Dowels for Saw-Cut Contraction Joints

"W" EZbasketTM Specification

- All EZbasketTM products will be supplied by McTech Group Inc. 1-866-913-8363.
- Plate Dowels will be cut from hot rolled plate per ASTM A36 to within 0.010" of specified length.
- Side frame supports will be fabricated from 1/4" diameter cold drawn wire per ASTM A108 grade 1010-1020.
- Plate Dowels will be welded (on one end only) into the side frames, with the welds alternating along the length of the assembly.
- Specially designed elastomer with compressible material will be fitted between the Plate Dowels and should extend to within plus or minus 0.1875" of 2/3 the bar length.
- Eight gauge wires will be welded across the side frames at approximately 3' o/c to keep the assembly stable during shipping and installation or as needed.
- The finished assembly will hold the Plate Dowels to within plus or minus 1/8" of the required slab placement depth.
- The assemblies will be manufactured so that they stack on top of each other for transportation and remain stable under concrete placement.

Table 1: Equivalency Table

Rectangular Plate Dowel Size, Thickness x Width	3/4" Round Dowel Spacing	1" Round Dowel Spacing	1 1/4" Round Dowel Spacing
	12" 18"	12" 18"	12" 18"
3/8" x 2.00"	18" 24"		
1/2" x 2.50"		18" 24"	
3/4" x 2.50"			18" 24"



Dowel Baskets - Application

Load Capacities

Load capacities based upon the ACI 1956 Highway Dowel Design Report.
 Load capacities were obtained by calculations prepared by TKF Engineering.
 TKF calculations were reviewed and approved by CES, Inc.
 Load table for 2" wide by 12" long dowels, thickness varies, 36ksi steel.
 Point loads for approximately 3' x 3' area. Soil sub modulus (k)=200
 Axle load based upon 24" and 36" spacing between wheels.
 Dowels spacings of 24" and 18"

Slab thickness	Dowel thickness (in)	Maximum Single Point Load	Dowel Groups Maximum Load per Axle (lbs) Dowel plate spacing / load spacing			
			18 / 24	24 / 24	18 / 36	24 / 36
4"	0.2500	2766	7634	5634	9136	7294
	0.3125	3236	8378	6592	10689	8534
	0.3750	3678	9980	7492	12148	9698
5"	0.2500	2766	7164	5532	7634	8220
	0.3125	3236	8382	6472	8982	9618
	0.3750	3678	9525	7355	10151	10931
6"	0.2500	2766	8801	6638	10502	7952
	0.3125	3236	10297	7767	12882	9304
	0.3750	3678	11703	8827	13967	11033
7"	0.2500	2766	9078	7349	9415	8818
	0.3125	3236	10621	8599	11016	10317
	0.3750	3678	12070	9772	12519	11725
	0.5000	4497	14760	11949	15309	14337
8"	0.3785	3678	12240	10301	12949	12328
	0.5000	4497	15187	13042	15835	15075
	0.7500	5963	20137	16702	20996	19988
10"	0.3785	3678	14332	11390	16363	12045
	0.5000	4497	17526	13928	20009	14729
	0.7500	5963	23238	18467	26529	19529

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10" Inch Slab

Plate Size	Plate Spacing	Load Centered Number of Effective Plates	Load Centered Capacity	Load Between Number of Effective Plates	Load Centered Capacity
1/2"	24	2.62	36,822.95	2.52	35,417.49
1/2"	30	2.02	28,390.21	1.94	27,265.85
1/2"	36	1.78	25,017.12	1.65	23,190.03
1/2"	42	1.59	22,346.75	1.28	17,989.84
1/2"	48	1.39	19,535.84	1.17	16,443.84
5/8"	24	2.62	43,015.98	2.52	41,374.15
5/8"	30	2.02	33,164.99	1.94	31,851.53
5/8"	36	1.78	29,224.60	1.65	27,090.22
5/8"	42	1.59	26,105.12	1.28	21,015.44
5/8"	48	1.39	22,821.45	1.17	19,209.43
3/4"	24	2.62	48,822.46	2.52	46,959.01
3/4"	30	2.02	37,641.75	1.94	36,150.98
3/4"	36	1.78	33,169.46	1.65	30,746.97
3/4"	42	1.59	29,628.90	1.28	23,852.20
3/4"	48	1.39	25,901.99	1.17	21,802.40

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12" Inch Slab

Plate Size	Plate Spacing	Load Centered Number of Effective Plates	Load Centered Capacity	Load Between Number of Effective Plates	Load Centered Capacity
1/2"	24	2.88	44,047.14	2.78	39,071.68
1/2"	30	2.37	33,309.31	2.32	62,606.58
1/2"	36	1.94	27,265.85	1.97	27,687.45
1/2"	42	1.82	25,579.30	1.61	22,627.84
1/2"	48	1.60	22,487.30	1.31	18,411.47
5/8"	24	2.88	47,284.74	2.78	45,642.91
5/8"	30	2.37	38,911.40	2.32	38,090.48
5/8"	36	1.94	31,851.53	1.97	32,344.07
5/8"	42	1.82	29,881.33	1.61	26,433.48
5/8"	48	1.60	26,269.30	1.31	21,507.98
3/4"	24	2.88	53,667.40	2.78	51,803.99
3/4"	30	2.37	44,163.83	2.32	43,232.11
3/4"	36	1.94	36,150.98	1.97	36,710.02
3/4"	42	1.82	33,914.84	1.61	30,001.59
3/4"	48	1.60	29,815.24	1.31	24,411.23

Dowel Baskets – ACI 360

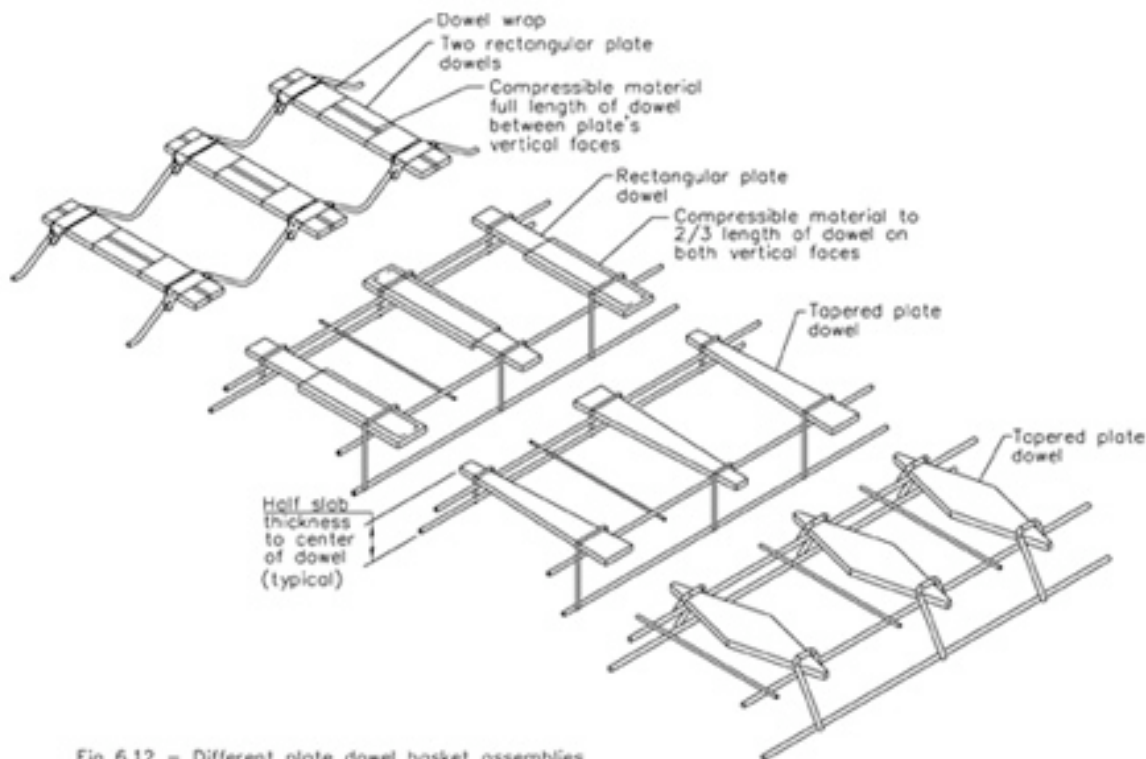


Fig 6.12 – Different plate dowel basket assemblies

Table 5.1 – Dowel size and spacing for construction and contraction joints¹

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 x 16 (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)