

# Mechanical Bar Splicers



## Dowel Bar Splicer System

### Dowel Bar Splicer (DB-SAE):

The DB-SAE Splicer is a one-piece unit, integrally forged from Grade 60 rebar material. It is available in #4 through #11 sizes and is designed to achieve 150% of specified yield (full mechanical ultimate).



DB-SAE's are available straight (cut to length), hooked, double-ended and bolt-headed in plain or epoxy coated finish. It is also possible to order the Splicer with a reduced washer and/or a clipped washer.

### Dowel-In (DI):

The Dowel-In is manufactured from Grade 60 rebar material and is available in sizes corresponding to the DB-SAE Splicer. The end of the Dowel-In is enlarged by forging before threading so that the cross-sectional area of the bar is not



reduced during threading operations – thus assuring 150% of yield.

### Completed Splice:

Both pieces of the completed splice are manufactured from one single size of rebar material. The System does not require bars of different sizes or special, super-strength material, yet it still offers 150% of yield.



The System is forged from 100% rebar material and requires no welding, couplers, extra pieces, etc. No special tools are required for installation. It is simple two piece splice that will save you time and labor.

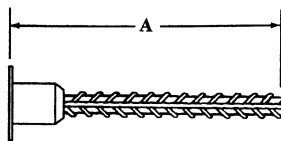
Division 3

Specified or Required Dowel Bar Size

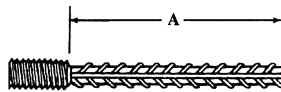
Recommended Dowel Bar Splicer and Dowel-In Sizes

Bar Size	Grade 60 Rebar Loads Lbs.			System Thread Size*	DB-SAE Bar Size	Dowel-In Bar Size	Min. System Stress Area	Grade 60 Rebar Loads Lbs.		
	Py	1.25 Py	P ult					Py	1.25 Py	P ult
#4	12,000	15,000	18,000	5/8"-11	#4	#4	.20	12,000	15,000	18,000
#5	18,600	23,250	27,900	3/4"-10	#5	#5	.31	18,600	23,250	27,900
#6	26,400	33,000	39,600	7/8"-9	#6	#6	.44	26,400	33,000	39,600
#7	36,000	45,000	54,000	1"-8	#7	#7	.60	36,000	45,000	54,000
#8	47,400	59,250	71,100	1-1/8"-8	#8	#8	.79	47,400	59,250	71,100
#9	60,000	75,000	90,000	1-1/4"-8	#9	#9	1.00	60,000	75,000	90,000
#10	76,200	95,250	114,300	1-7/16"-8	#10	#10	1.27	76,200	95,250	114,300
#11	93,600	117,000	140,400	1-9/16"-8	#11	#11	1.56	93,600	117,000	140,400

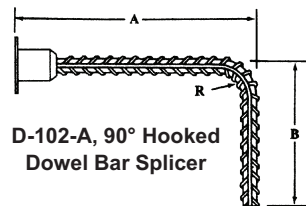
\* 5/8", 3/4", 7/8" & 1" sizes have UNC threads. 1-1/8" & larger sizes equipped with UN threads.



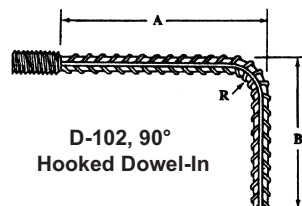
D-101-A, Straight Dowel Bar Splicer



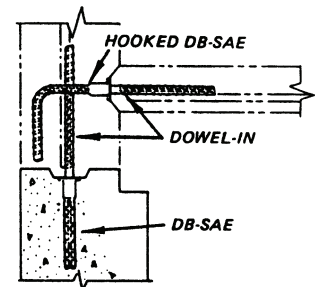
D-101, Straight Dowel-In



D-102-A, 90° Hooked Dowel Bar Splicer



D-102, 90° Hooked Dowel-In



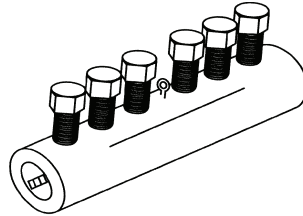
# Mechanical Bar Splicers



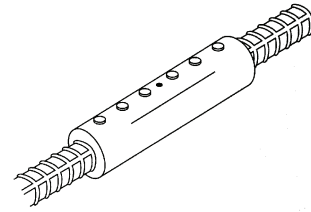
## Bar-Lock Coupler System

### D-250 Bar-Lock S-Series Coupler

The D-250 Bar-Lock S-Series Couplers are designed for use in most tension and compression applications. They are available in rebar sizes #4 through #18 and exceed 125% of specified yield of Grade 60 rebar. The S-Series couplers are approved for use by most State DOTs, are recognized as an ICBO Type 1 Splice and meet ACI specifications. S-Series couplers are also available in transition sizes, as a weldable half coupler and epoxy coated.



D-250 Bar-Lock S-Series Coupler

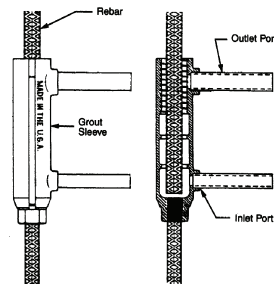
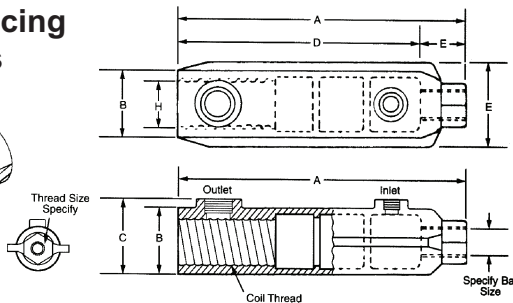
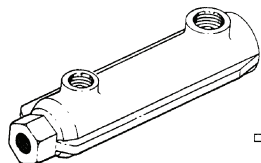


Typical Bar-Lock Coupler System Splice

### D-250 Bar-Lock S-Series Couplers

Coupler Designation	For Rebar Size In. mm	Barrel Stamp ID	Tube Specifications			Bolt Specifications			Meets or Exceeds		
			OD In.	Lgth. In.	Wt. Lbs.	Qty.	Head Size In.	Nom. Shear Torque Ft.-Lbs.	Min % Fy	CAL TRANS Service	ICBO Type1
4S	#4-13M	4S...CA	1.3	3.9	1.0	2	0.5	40	135	X	X
5S	#5-16M	5S...CA	1.7	4.5	1.8	2	0.5	80	135	X	X
6S	#6-19M	6S...CA	1.9	6.3	3.5	3	0.5	80	135	X	X
7S	#7-22M	7S...CA	1.9	8.0	4.1	4	0.5	80	135	X	X
8S	#8-25M	8S	2.2	8.0	5.7	3	0.625	180	125		X
9S	#9-29M	9S...CA	2.9	9.0	11.4	3	0.75	280	135	X	X
10S	#10-32M	10S...	2.9	9.0	11.5	3	0.75	350	125		X
11S	#11-36M	11S...	3.1	11.5	17.0	4	0.75	350	125		X
14S	#14-43M	14S...CA	3.5	16.5	26.0	6	0.75	350	135	X	X
18S	#18-57M	18S...CA	4.3	27.1	60.0	10	0.75	475	135	X	X

### Grouted Splicing Systems



Completed DB Grout Sleeve Splice

### D-119 DB Grout Sleeve

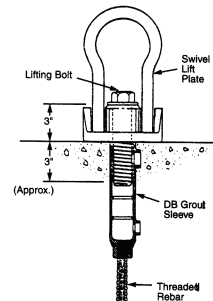
ICBO Evaluation Report No. 5261

The Dayton-Richmond D-119 DB Grout Sleeve provides a two-piece splicing technique for splicing rebar of like size or different sizes. The mechanical connections can accommodate bar sizes #4 through #14. Typical applications include splicing rebar in precast concrete construction and cast-in-place concrete structures. The DB Grout Sleeve is a ductile casting with a minimum yield strength of 55,000 PSI and a minimum tensile strength of 80,000 PSI. The grout sleeve system exceeds all known building codes and agency standards. The 160% Fy strength criterion is achieved by using a specially formulated, non-shrink, high strength grout and the Dayton-Richmond method of upsized threads on the splice bars.

### Unique Application:

The D-119 Grout Sleeve is unique in that it can also be utilized to lift, handle and place precast concrete elements. The grout sleeves will accept coil thread lifting bolts, as shown in the chart.

Sleeve Size	Dim. In.					Coil Thread Dia. In.
	A	B	C	D	E	
#4-#6	8.875	2.000	2.375	7.500	2.625	1-1/2
#5-#9	11.609	2.500	2.875	9.453	3.000	2
#8-#11	13.781	3.000	3.375	11.422	3.500	2
#11-#14	19.500	3.500	3.938	16.531	4.000	3



DB Grout Sleeve Lifting Application

Division 3

# Mechanical Bar Splicers



## BPI Standard Barsplicer System

BarSplice Products BARSPLICER is supplied as a two-piece mechanical dowel bar replacement "DBR" for concrete structures. Bars are manufactured from American made ASTM A 615 Grade 60 [420] reinforcing steel to develop more than 125% of the specified yield strength of grade 60 reinforcing bar. Our BARSPLICER fully complies with ACI 318 specifications. The system saves time, provides flexibility on the job site, reduces form work and increases safety by eliminating protruding rebars.

A BARSPLICER is composed of setting bar and a splice bar. At your option, setting bars are supplied with or without a flange on the coupler. Couplers on the setting bars are power-locked by BPI to be integral with rebar. Our couplers will not loosen during transportation, placing and service.

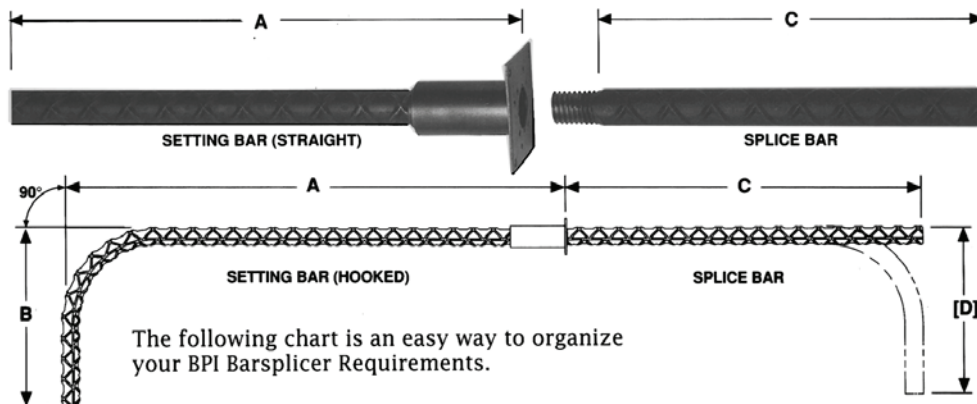
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### Standards and Test Data

ASTM A615 Grade 60 Reinforcing Bar Data					
Bar No.	Weight Lbs. Per Linear Ft.	Nom. Dia. In.	Cross-Sectional Area Sq. In.	Min. Load Lbs.	
				Yield (Py)	1.25 Py*
#4 (13)	0.668	0.500	0.20	12,000	15,000
#5 (16)	1.043	0.625	0.31	18,600	23,250
#6 (19)	1.502	0.750	0.44	26,400	33,000
#7 (22)	2.044	0.875	0.60	36,000	45,000
#8 (25)	2.670	1.000	0.79	47,400	59,250
#9 (29)	3.400	1.128	1.00	60,000	75,000
#10 (32)	4.303	1.270	1.27	76,200	95,250
#11 (36)	5.313	1.410	1.56	93,600	117,000

Coupler Data					
Coupler Size	Thread Size	Coupler Wt. Lbs.	Coupler Lgth. In.	Coupler OD In.	Flange
					Size Sq. In.
4 (13)	1/2"-13NC	0.20	1-3/4	7/8	2 x 2
5 (16)	5/8"-11NC	0.25	2	1	2 x 2
6 (19)	3/4"-10NC	0.35	2-1/8	1-1/8	2 x 2
7 (22)	7/8"-9NC	0.50	2-1/2	1-1/4	2 x 2
8 (25)	1"-8NC	0.90	3	1-3/4	3 x 3
9 (29)	1-1/8"-7NC	1.50	3-1/2	1-3/4	3 x 3
10 (32)	1-1/4"-7NC	2.35	4	2	3 x 3
11 (36)	1-3/8"-6NC	2.40	4-1/2	2	3 x 3

\*Py= specified yield; fy x Cross Sectional Area



Qty.	Size	Epoxy or Black	Flange Y/N	Setting Bar		Splice Bar	
				"A" Feet - Inches	"B" Feet - Inches <small>if needed</small>	"C" Feet - Inches	"D" Feet - Inches <small>if needed</small>
				-	-	-	-
				-	-	-	-
				-	-	-	-

FOR OTHER REBAR CONFIGURATIONS SUPPLY A SKETCH OR PLAN DRAWING. BENDS WILL BE PER ACI DETAILING MANUAL SP-66 UNLESS OTHERWISE REQUESTED.

TOLL FREE 800-892-7224  
800-821-7735

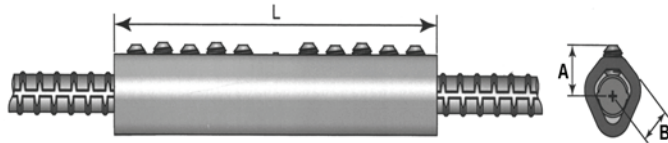
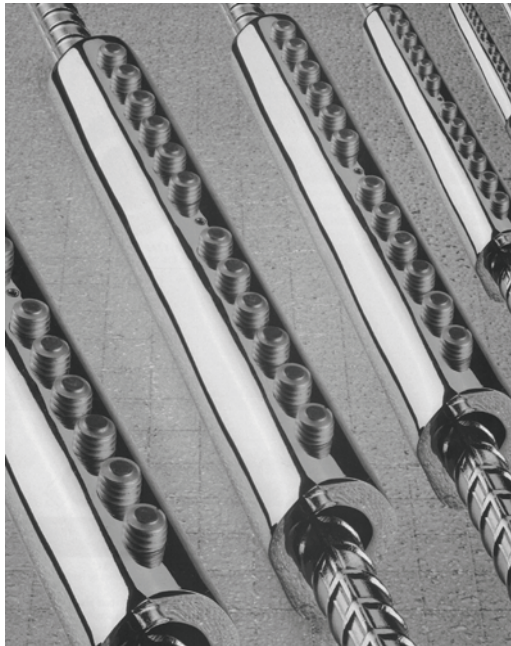


LOCAL 816-525-3640  
FAX 816-525-4533

# Mechanical Bar Splicers



## ZAP SCREWLOK®



### TYPE 2 SERIES DIMENSIONS

Rebar Size US	Nom. Coupler Wt. Lbs.	Dim. In.			No. Screws Per Bar	Torque Ft.-Lbs.
		L	A	B		
#3	1.0	5	13/16	5/8	2	50
#4	1.9	7	1-1/16	11/16	3	50
#5	3.7	9	1-1/8	3/4	4	50
#6	5.2	11	1-3/16	15/16	5	50
#7	7.6	13	1-1/4	1-1/16	5	100
#8	10.3	15-1/4	1-5/16	1-1/16	6	100
#9	16.9	16-3/4	1-5/8	1-1/4	6	200
#10	24.7	21-1/2	1-13/16	1-1/2	8	200
#11	24.7	21-1/2	1-13/16	1-1/2	8	200

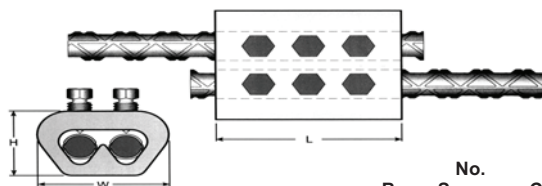
### ZAP 'SL' Series

Rebar Size US	Nom. Coupler Wt. Lbs.	Dim. In.			No. Screws Per Bar	Torque Ft.-Lbs.
		L	A	B		
#7 (22)	6.0	10-3/4	1-1/4	1-1/16	4	100
#8 (25)	9.5	13	1-5/16	1-1/16	5	100
#9 (29)	13.5	13-7/8	1-5/8	1-1/4	4	200
#10 (32)	18.0	16-1/2	1-11/16	1-7/16	5	200
#11 (36)	22.5	19-1/8	1-13/16	1-1/2	6	200
#14 (43)	39.5	22-1/4	2-1/4	1-7/8	7	350

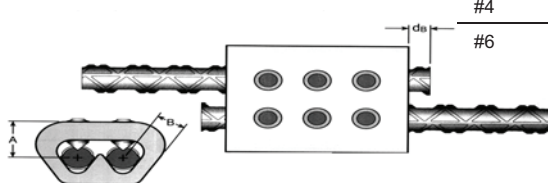
ZAP SCREWLOK® – A positive full tension and compression mechanical splice system whose strength is independent of the concrete which surrounds it and capable of developing the specified tensile strength of the spliced bar.

## Double Barrel Zap Screwlok®

COUPLER BEFORE INSTALLATION



INSTALLED SPLICE



Bar Size	No. Screws Per Side	Coupler Wt. Lbs.	Dim. In.					
			W	H	L	Dia.	A	B
#4	2	1.34	2-3/8	1-5/8	2-1/8	1/2	1-1/16	1/2
#4	3	2.29	2-5/8	1-3/4	3	5/8	1-1/8	5/8
#6	4	3.24	2-3/4	1-7/8	3-7/8	3/4	1-3/16	3/4

Division 3