

## DIMENSIONS AND DATA SHEET INCH-POUND UNITS

# Zap Screwlok\*

ZAP SCREWLOK® TYPE 2 SERIES UNCOATED, EPOXY & GALVANIZED



REBAR	ZAP <b>T</b>	YPE 2*	COUPLER		DIM	ENSIONS	NUMBER		MIN.IMPACT		
SIZE US [Metric]	PRODUC BLACK		WEIGHT (lb)	LENGTH 'L'	<b>'A'</b>	`B′	`C′	<b>`X</b> ′	SCREWS PER BAR	SCREW TORQUE (ft-lbs)	WRENCH RATING (ft-lbs)
#3 [10]	03ZBA	03ZEA	1.57	5	13/16	5/8	7/16	1 1/8	2		
#4 [13]	04ZBA	04ZEA	2.19	7	1 <sup>1</sup> / <sub>16</sub>	11/16	1/2	1 3/8	3	60	250
#5 [16]	05ZBA	05ZEA	3.38	9	1 1/8	3/4	5/8	1 5/8	4		
#6 [19]	06ZBA	06ZEA	4.68	11	1 3/16	15/16	11/16	1 3/4	5		
#7 [22]	07ZBA	07ZEA	7.85	13	1 1/4	1 <sup>1</sup> / <sub>16</sub>	13/16	2 1/16	5	40.5	500
#8 [25]	08ZBA	08ZEA	11.0	15 1/4	1 5/16	1 1/16	7/8	2 1/4	6	105	
#9 [29]	09ZBA	09ZEA	17.6	16 <sup>3</sup> / <sub>4</sub>	1 5/8	1 1/4	1 <sup>1</sup> / <sub>16</sub>	2 5/8	6		
#10 [32]	10ZBA	10ZEA	21.5	19 <sup>1</sup> /8	1 11/16	1 <sup>7</sup> / <sub>16</sub>	1 1/8	2 3/4	7	215	750
#11 [36]	11ZBA	11ZEA	27	21 1/2	1 3/4	1 1/2	1 1/4	2 15/16	8	1	
#14 [43]	14ZBA2	14ZEA2	37	18	2 5/16	1 3/4	1 1/2	3 3/4	10	350	1000
#18 [57]*	18ZBA	18ZEA	79	29 1/2	2 1/2	2 3/8	1 7/8	4 1/2	21		

<sup>\*</sup> FOR GALVANIZED COUPLER, SUBSTITUTE 'ZGA' FOR 'ZBA' IN PART CODE. \* ALSO FOR USE ON SIZE #18J [60] REINFORCEMENT.

ALL DIMENSIONS ARE APPROXIMATE

ZAP SCREWLOK® SL SERIES UNCOATED, EPOXY & GALVANIZED



REBAR	ZAP <b>SL*</b>								COUPLER		DIM	ENSIONS		NUMBER		MIN.IMPACT
SIZE US [Metric]	PRODUC BLACK	EPOXY	WEIGHT (lb)	LENGTH <b>`L</b> '	<b>'A</b> '	`B′	`C′	`X′	SCREWS PER BAR	SCREW TORQUE (ft-lbs)	WRENCH RATING (ft-lbs)					
#4 [13]	04SZBA	04SZEA	1.53	5	1 <sup>1</sup> / <sub>16</sub>	11/16	1/2	1 3/8	2							
#5 [16]	05SZBA	05SZEA	2.59	7	1 1/8	3/4	5/8	1 <sup>5</sup> / <sub>8</sub>	3	60	250					
#6 [19]	06SZBA	06SZEA	3.78	9	1 3/16	15/16	11/16	1 3/4	4							
#7 [22]	07SZBA	07SZEA	6.47	10 3/4	1 1/4	1 <sup>1</sup> / <sub>16</sub>	<sup>13</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>16</sub>	4		500					
#8 [25]	08SZBA	08SZEA	9.24	13	1 <sup>5</sup> /16	1 <sup>1</sup> / <sub>16</sub>	7/8	2 1/4	5	105						
#9 [29]	09SZBA	09SZEA	14.3	13 7/8	1 5/8	1 1/4	1 <sup>1</sup> /16	2 5/8	4							
#10 [32]	10SZBA	10SZEA	18.3	16 <sup>1</sup> / <sub>2</sub>	1 11/16	1 7/16	1 1/8	2 3/4	5	215	750					
#11 [36]	11SZBA	11SZEA	23.7	19 1/8	1 3/4	1 1/2	1 1/4	2 15/16	6	1						
#14 [43]	14SZBA1	14SZEA1	33	15 <sup>3</sup> /8	2 <sup>5</sup> / <sub>16</sub>	1 3/4	1 1/2	3 3/4	8							
#18 [57]*	18SZBA	18SZEA	63	23 1/2	2 1/2	2 3/8	1 7/8	4 1/2	16	350	1000					

<sup>\*</sup>FOR GALVANIZED COUPLER, SUBSTITUTE 'SZGA' FOR 'SZBA' IN PART CODE. \*ALSO FOR USE ON SIZE #18J [60] REINFORCEMENT.

ALL DIMENSIONS ARE APPROXIMATE

### ZAP SCREWLOK® TRANSITIONS UNCOATED, EPOXY & GALVANIZED



LARGER BAR

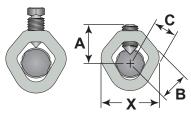
SMALLER BAR

REBAR	ZAP PRODUCT	COUPLER	PLER DIMENSIONS (in)							MIN.IMPACT
SIZE (US/US)	CODE TRANSITION*	WEIGHT (lb)	LENGTH ` <b>L</b> '	<b>`A</b> ′	'B'	`C′	<b>'X</b> ′	SCREWS PER BAR	SCREW TORQUE (ft-lbs)	WRENCH RATING (ft-lbs)
5/4	05/04ZBA	2.59	7	1 1/8	3/4	5/8	1 5/8	3		
6/4 6/5	06/04ZBA 06/05ZBA	3.78	9	1 <sup>3</sup> / <sub>16</sub>	<sup>15</sup> /16	11/16	1 3/4	4	60	250
7/5 7/6	07/05ZBA 07/06ZBA	6.47	10 <sup>3</sup> / <sub>4</sub>	1 1/4	1 1/16	13/16	2 1/16	4		500
8/5 8/6 8/7	08/05ZBA 08/06ZBA 08/07ZBA	9.24	13	1 <sup>5</sup> / <sub>16</sub>	1 1/16	7/8	2 1/4	5	105	
9/6 9/7 9/8	09/06ZBA 09/07ZBA 09/08ZBA	14.3	13 7/8	1 <sup>5</sup> / <sub>8</sub>	1 1/4	1 1/16	2 5/8	4		
10/7 10/8 10/9	10/07ZBA 10/08ZBA 10/09ZBA	18.3	16 <sup>1</sup> / <sub>2</sub>	1 11/16	1 <sup>7</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>16</sub>	2 3/4	5	215	750
11/7 11/8 11/9	11/07ZBA 11/08ZBA 11/09ZBA	18.3	16 <sup>1</sup> / <sub>2</sub>	1 <sup>13</sup> / <sub>16</sub>	1 1/2	1 1/4	2 3/4	5		
11/10	11/10ZBA	23.7	19 1/8	1 3/4	1 1/2	1 1/4	2 15/16	6		
14/9 14/10 14/11	14/09ZBA 14/10ZBA 14/11ZBA	33	15 <sup>3</sup> /8	2 <sup>5</sup> /16	1 3/4	1 <sup>1</sup> / <sub>2</sub>	3 3/4	8	350	1000
18/11* 18/14*	18/11ZBA 18/14ZBA	56	18 <sup>9</sup> / <sub>16</sub>	2 1/2	2 1/4	1 13/16	4 3/8	12		

<sup>\*</sup>FOR EPOXY & GALVANIZED TRANSITION COUPLERS, SUBSTITUTE 'ZEA' OR 'ZGA' FOR 'ZBA' IN PART CODE. \*ALSO FOR USE ON SIZE #18J [60] REINFORCEMENT.

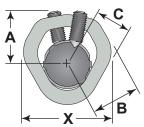
ALL DIMENSIONS ARE APPROXIMATE

SINGLE ROW ZAP SCREWLOK® (SIZES #3 – #11) BEFORE AND AFTER ASSEMBLY



DOUBLE ROW ZAP SCREWLOK® (SIZES #14 – #18) BEFORE AND AFTER ASSEMBLY



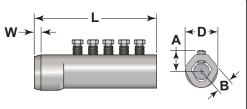




## DIMENSIONS AND DATA SHEET INCH-POUND UNITS

## Zap Screylok®

#### ZAP STRUCTURAL CONNECTOR

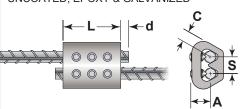


REBAR	ZAP PRODUCT	COUPLER		DIMI	ENSIONS	NUMBER				
SIZE US [Metric]	CODE STR.CONNECTOR	WEIGHT (lb)	LENGTH ` <b>L</b> '	<b>`A</b> ′	`B′	DIA. ' <b>D</b> '	`W′	SCREWS PER BAR	SCREW TORQUE (ft-lbs)	WRENCH RATING (ft-lbs)
#4 [13]	04SZSC	0.95	3 1/8	1 1/16	11/16	1 7/16	3/16	2		
#5 [16]	05SZSC	1.53	4 1/8	1 1/8	3/4	1 5/8	1/4	3	60	250
#6 [19]	06SZSC	2.26	5 3/8	1 3/16	15/16	1 13/16	1/4	4		
#7 [22]	07SZSC	3.81	6 3/8	1 1/4	1 1/16	2 1/16	3/8	4	405	500
#8 [25]	08SZSC	5.53	7 7/8	1 <sup>5</sup> / <sub>16</sub>	1 1/16	2 <sup>5</sup> /16	3/8	5	105	
#9 [29]	09SZSC	8.19	8	1 5/8	1 1/4	2 5/8	7/16	4		
#10 [32]	10SZSC	10.4	9 1/2	1 11/16	1 7/16	2 13/16	1/2	5	215	750
#11 [36]	11SZSC	13.6	11 1/8	1 3/4	1 1/2	2 15/16	9/16	6		
#14 [43]	14SZSC	19.8	9 3/4	2 5/16	1 3/4	3 3/4	11/16	8	050	4000
#18 [57]*	18SZSC	18SZSC 40	15 <sup>3</sup> /8	2 1/2	2 1/4	4 1/2	7/8	16	350	1000

<sup>\*</sup> ALSO FOR USE ON SIZE #18J [60] REINFORCEMENT.

ALL DIMENSIONS ARE APPROXIMATE

### **DOUBLE BARREL ZAP SCREWLOK®** UNCOATED, EPOXY & GALVANIZED

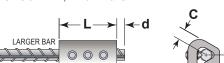


REBAR	DOUBLE	BARREL	COUPLER		DIME	ENSIONS	6 (in)		NUMBER		MIN. IMPACT
SIZE US [Metric]		CT CODE*	WEIGHT (lb)	LENGTH 'L'	`A′	`C`	`S′	`d′	SCREWS PER BAR	SCREW TORQUE (ft-lbs)	WRENCH RATING (ft-lbs)
#3 [10]	03DBZA	03DBZEA	1.41	2 1/8	1 1/8	3/8	<sup>15</sup> /16	3/8	2		
#4 [13]	04DBZA	04DBZEA	1.38	2 1/8	1 1/16	1/2	<sup>15</sup> /16	1/2	2	60	250
#5 [16]	05DBZA	05DBZEA	2.17	3	1 1/8	5/8	<sup>15/</sup> 16	5/8	3	00	230
#6 [19]	06DBZA	06DBZEA	3.07	3 7/8	1 3/16	3/4	15/16	3/4	4		
#7 [22]	07DBZA	07DBZEA	6.76	5 3/8	1 <sup>5</sup> / <sub>16</sub>	7/8	1 3/8	7/8	4	105	500
#8 [25]	08DBZA	08DBZEA	10.2	6 1/2	1 3/4	1	1 3/16	1	5	100	500

<sup>\*</sup> FOR GALVANIZED COUPLER, SUBSTITUTE 'DBZGA' FOR 'DBZA' IN PART CODE.

ALL DIMENSIONS ARE APPROXIMATE

### **DOUBLE BARREL ZAP TRANSITIONS**UNCOATED, EPOXY & GALVANIZED



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REBAR	DOUBLE BARREL	COUPLER	DIMENSIONS (in)					NUMBER	CODEW	MIN. IMPACT
SIZE (US/US)	PRODUCT CODE* TRANSITION	WEIGHT (lb)	LENGTH ' <b>L</b> '	<b>'A</b> '	ý	`S'	'd'	SCREWS PER BAR	SCREW TORQUE (ft-lbs)	WRENCH RATING (ft-lbs)
4/3	04/03DBZA	1.40	2 1/8	1 1/16	1/2	<sup>15</sup> / <sub>16</sub>	1/2	2		
5/4	05/04DBZA	2.20	3	1 1/8	5/8	15/16	5/8	3	60	250
6/4	06/04DBZA	3.11	3 <sup>7</sup> /8	1 3/16	3/4	<sup>15</sup> /16	3/4	4		250
6/5	06/05DBZA	3.11	3 1/8	1 9/16	0/4		-74			
7/5	07/05DBZA	6.86	5 3/8	1 <sup>5</sup> / <sub>16</sub>	7/8	1 3/8	/8 7/8	4		
7/6	07/06DBZA	0.00	5 9/8						105	500
8/7	08/07DBZA	10.3	6 1/2	1 3/4	1	1 <sup>3</sup> / <sub>16</sub>	1	5		

<sup>\*</sup> FOR EPOXY & GALVANIZED TRANS. COUPLERS, SUBSTITUTE 'DBZEA' OR 'DBZGA' FOR 'DBZA' IN PART CODE

ALL DIMENSIONS ARE APPROXIMATE

#### ZAP SCREWLOK® MECHANICAL SPLICES AND CONNECTORS FOR REINFORCING BARS

ZAP SCREWLOK® mechanical splices and connectors are compatible with reinforcing bars that comply with ASTM A615, ASTM A706, ASTM A996, or equal, and consist of smooth, shaped, steel sleeves with converging sides. A series of cone-pointed hex-head screws are arranged along the longitudinal axis in one or two rows. In the case of butt splices, reinforcing bars are inserted from each end to a center stop. No special bar-end preparation is required, so ends can be sheared, sawed, or flame-cut. When a splice is required between fixed points, the center pin can be knocked out completely allowing the coupler sleeve to be slipped entirely onto one bar and subsequently repositioned over both bar ends being spliced.

During mechanical splice assembly, the specially designed screws are tightened until they embed into the rebar surface whereupon the heads twist off at a prescribed tightening torque. Forces from the screws cause rebar deformations to interlock within the coupler wedge. The DUAL mechanical action results in a full positive connection for transferring tension or compression forces from bar-to-bar. Screws can be tightened using suitable impact wrenches. Linear alignment is preserved across the splice by using reinforcing bars with straight ends and securing the continuation bar in the desired position at the time of assembly.

Mechanical butt splices and connectors are available for reinforcing bar sizes #3 through #18J (Ø10-60 mm), and mechanical lap splices are available for bar sizes #3 through #8 (Ø10-25 mm), per the above *Dimensions and Data* charts. Transition splices are used to connect reinforcement bars of different sizes or different types, such as square bar or threaded rod.

Epoxy-coated reinforcing bars that comply with ASTM A775 can be spliced by means of epoxy coated Zap Screwlok® couplers without shielding or removing the epoxy coating from the bar. Zinc-coated (galvanized) bars per ASTM A767 or A1094 can be mechanically spliced by means of galvanized Zap Screwlok® couplers.

ZAP SCREWLOK® is an engineered mechanical splice system whose strength is independent of the concrete which surrounds it, thereby providing true structural continuity. Applications include new construction, field repairs, splicing of column steel, beam reinforcement, concrete piles and deck steel, and splicing of older types of reinforcing bars. The Zap Screwlok® system is commonly used for rehab/retrofit projects, strengthening and upgrading concrete elements, extending deck steel to widen bridges, highway patch and repair projects, and splicing bars across closure pours. Zap Screwlok® Type 2 splices can be used for mechanically splicing reinforcement in members resisting earthquake induced forces. Benefits include a field installed splice with easy visual inspection, no specialized equipment, minimal clearance requirements, a positive rebar center-stop and no rebar end preparation.

Field splicing of reinforcing bars by the Zap Screwlok® method is most popular because of the systems simplicity, cost effectiveness and adaptability. Instructions provided with Zap Screwlok® splices and connectors, or available at www.barsplice.com, explain step-by-step installation and safety information.

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Barsplice Products, Inc., 4900 Webster Street, Dayton OH 45414, USA Tel: 937-275-8700 ● www.barsplice.com ● e-mail: bar@barsplice.com

