ZAP SCREWLOK[®] DATA SHEET – Dimensions and Data [inch-pound units]

	REBAR	PRODUCT	COUPLER	LENGTH	΄ Δ'	'В'	΄ Ω'	·χ,	NUMBER	AVERAGE SCREW	MIN. IMPACT WRENCH	
	SIZE	TYPE2 EPOXY	(lb)	∟ (in)	(in)	(in)	(in)	(in)	PER BAR	TORQUE (ft-lbs)	RATING (ft-lbs)	(after Assembly)
ZAP SCREWLOK TYPE 2/	3	3ZB 3ZE	1.0	5	13/16	5/8	7/16	1 1⁄8	2			
EPOXY SERIES	4	4ZB 4ZE	2.2	7	1 1/16	11/16 3/1	1/2 5/0	13/8	3	50	250	sizes #3 - #11
	6	6ZB 6ZE	3.4 4.7	9 11	1 3/16	15/16	11/16	1 3/4	4 5			
	7	7ZB 7ZE	7.6	13	1 1/4	1 1/16	13/16	2 1/16	5	100	500	
	8	8ZB 8ZE	10.9	15 1/4	1 5/16	1 1/16	7/8	2 1/4	6	100	500	
	9	9 <u>ZB</u> 9 <u>ZE</u> 107 <u>B</u> 107E	17.6 21.4	16 3/4 10 1/9	1 5/8 1 11/16	1 1/4	1 1/16 1 1/9	2 5/8	6	200	660	В
	11	11ZB 11ZE	25.4	21 1/2	1 13/16	1 1/2	1 1/4	2 15/16	8	200	000	
	14	14ZB 14ZE	31.7	153/8	2 5/16	1 3/4	1 1/2	3 3/4	9	350	1000	
	18	18ZB 18ZE	74.0	29 1⁄2	2 1/2	2 1/4	1 13/16	4 3⁄8	21			
	4	4SZB	1.5	5	1 1/16	11/16	1/2	13/8	2	50	250	sizes #14, #18
ZAP 'SL' SERIES	6	6SZB	2.6	9	1 3/16	3/4 15/16	3/8 11/16	1 3/4	4	50	250	T PAAC
	7	7SZB	6.2	103/4	1 1/4	1 1/16	13/16	2 1/16	4	100	500	
	8	8SZB	9.3	13	1 5/16	1 1/16	7/8	2 1/4	5	100	000	<u>▼</u> ↓ <u></u> (+))/
	10	952B 10SZB	14.3	16 1/2	1 ³ /8 1 11/16	1 7/16	1 1/16 1 1/8	2 3/8 2 3/4	4	200	660	
	11	11SZB	22.3	19 1/8	1 13/16	1 1/2	1 1/4	2 15/16	6			\leftarrow
	14	14SZB	26.0	13	2 5/16	1 3/4	1 1/2	33/4	7	350	1000	X
	18	10520	58.4	23 1/2	Z	Z 1/4	1 13/16	4 3/8	10		l	
	5/4 6/4	5/4ZB 6/4ZB	3.0	8	1 1⁄8	3/4	5/8	1 5⁄8	3	50	250	
TRANSITION	6/5	6/5ZB	4.3	10	1 3/16	15/16	11/16	1 3/4	4	50	230	<u>sizes #4 - #11</u>
	7/5	7/5ZB	6.8	12	1 1⁄4	1 1⁄16	13/16	2 1/16	4			
	7/6	7/6ZB 8/5ZB								100	500	
L L	8/6	8/6ZB	9.9	14 1⁄8	1 5/16	1 1⁄8	7⁄8	2 1/4	5	100	000	
	8/7	8/7ZB										$ \xrightarrow{-}_{X} ^{X \square}$
	9/6 9/7	9/62B 9/7ZB	16.2	159/16	1 5/8	1 1/4	1 1/16	2 5/8	5			~
	9/8	9/8ZB			. /0	. , .	. ,	- /0	-			Transition
	10/7	10/7ZB	20.1	171540	1 11 40	1 7/40	1 1/0	0.2/4	6	200	660	<u>size #14</u>
	10/8	10/82B	20.1	1/15/16	I 11/16	I //16	1 //8	Z 3/4	0	200	000	T AS
	11/7	11/7ZB										
	11/8	11/8ZB	20.1	17 15/16	1 13/16	1 1⁄2	1 1⁄4	2 13/16	6			
	11/10	11/107B	22.8	20 5/16	1 13/16	1 1/2	1 1⁄4	2 13/16	7			B
				/								
	14/10	14/10ZB	26.0	13	2 5/16	1 3/4	1 1⁄2	33/4	7	350	1000	l ∢
	14/10	14/10ZB 14/11ZB	26.0	13 RLENGTH	2 5/16	1 3/4	1 1⁄2	3 3/4	7 NUMBER	350 average	1000 MIN. IMPACT	I ∢ x→ I
	14/10 14/11 REBAR	14/10ZB 14/11ZB PRODUCT	26.0 CONNECTOR WEIGHT	13 R LENGTH ' L '	2 5/16	1 3/4 , в,	1 1⁄2	33/4	7 NUMBER SCREWS	350 AVERAGE SCREW TORQUE	1000 MIN. IMPACT WRENCH RATING	
740 (SI)	14/10 14/11 REBAR SIZE	14/10ZB 14/11ZB PRODUCT CODE	26.0 CONNECTOR WEIGHT (Ib)	13 R LENGTH 'L' (in)	2 5/16	1 3/4 ' B ' (in) 11/16	1 1/2 , D , (in) 1 7/16	3 3/4 'W' (in) 3/46	7 NUMBER SCREWS PER BAR	350 AVERAGE SCREW TORQUE (ft-lbs)	1000 MIN. IMPACT WRENCH RATING (ft-lbs)	END VIEW (after Assembly)
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC	26.0 CONNECTOR WEIGHT (Ib) 0.9 1.5	13 R LENGTH 'L' (in) 3 1/8 4 1/8	2 5/16 (A, (in) 1 1/16 1 1/8	1 3/4 ' B ' (in) 11/16 3/4	1 1/2 , D , (in) 1 7/16 1 11/16	33/4 'W' (in) 3/16 1/4	7 NUMBER SCREWS PER BAR 2 3	350 AVERAGE SCREW TORQUE (ft-lbs) 50	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250	Image: Wight of the second
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC	26.0 CONNECTOR WEIGHT (Ib) 0.9 1.5 2.3	13 R LENGTH 'L' (in) 3 1/8 4 1/8 5 3/8	2 5/16 , A , (in) 1 1/16 1 1/8 1 3/16	1 3/4 ' B ' (in) 11/16 3/4 15/16	1 1/2 ' D ' (in) 1 7/16 1 11/16 1 7/8	3 3/4 'W' (in) 3/16 1/4 1/4	7 NUMBER SCREWS PER BAR 2 3 4	350 AVERAGE SCREW TORQUE (ft-lbs) 50	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250	I ← X → I END VIEW (after Assembly) Sizes #4 - #11 ↓ D → I
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 8	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 6SZSC 7SZSC 8SZSC	26.0 CONNECTOR WEIGHT (lb) 0.9 1.5 2.3 3.6 5.5	13 R LENGTH 'L' (in) 3 1/8 4 1/8 5 3/8 6 3/8 7 7/2	2 5/16 (A', (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/16	1 1/2 , D, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/46	3 3/4 'W' (in) 3/16 1/4 1/4 5/16 3/8	7 NUMBER SCREWS PER BAR 2 3 4 4 5	350 AVERAGE SCREW TORQUE (ft-lbs) 50 100	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500	END VIEW (after Assembly) sizes #4 - #11
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 8 9	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC	26.0 CONNECTOR WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6	13 RLENGTH 'L' (in) 3 1/8 4 1/8 5 3/8 6 3/8 6 3/8 7 7/8 8	2 5/16 (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16 1 5/8	1 3/4 ' B , (in) 11/16 3/4 15/16 1 1/16 1 1/16 1 1/16 1 1/16	1 1/2 , D , (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16	33/4 • W , (in) 3/16 1/4 1/4 5/16 3/8 7/16	7 NUMBER SCREWS PER BAR 2 3 4 4 4 5 5 4	350 AVERAGE SCREW TORQUE (ft-lbs) 50 100	1000 MIN. IMPACT WRENCH RATING (ft-Ibs) 250 500	$\frac{\mathbf{END VIEW}}{(after Assembly)}$
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 8 9 9 10	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 10SZSC	26.0 CONNECTOR WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 9.6	13 R LENGTH 'L' (in) 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 9 1/2	2 5/16 (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16 1 5/8 1 11/16	1 3/4 'B'' (in) 11/16 3/4 15/16 1 1/16 1 1/16 1 1/16 1 1/4 1 7/16	1 1/2 , D, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8	33/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 4 5 4 5 5	350 AVERAGE SCRW TORQUE (ft-lbs) 50 100 200	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660	END VIEW (after Assembly) sizes #4 - #11
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 11	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 6SZSC 7SZSC 8SZSC 10SZSC 11SZSC 14SZSC	26.0 CONNECTOI WEIGHT (lb) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0	13 * L (in) 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 9 1/2 11 1/8 8 7/8	2 5/16 (A , (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16 1 13/16 1 13/16 2 5/16	1 3/4 'B', (in) 11/16 3/4 15/16 1 1/16 1 1/16	1 1/2 , D, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 3 13/16	33/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16	7 NUMBER SCREWS PER BAR 2 3 4 4 5 4 5 5 6 7	350 AVERAGE SCREW TORQUE (ft-lbs) 50 100 200	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660	END VIEW (after Assembly) Sizes #4 - #11
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 7 8 9 9 10 11 11 14 18	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 6SZSC 7SZSC 8SZSC 10SZSC 10SZSC 11SZSC 14SZSC 18SZSC	26.0 CONNECTOI WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5	13 'LENGTH 'L' (in) 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 9 1/2 11 1/8 8 7/8 15 3/8	2 5/16 (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16 1 5/8 1 11/16 1 13/16 2 5/16 2 1/2	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/2 1 3/4 2 1/4 2 1/4	1 1/2 , D, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 3 13/16 4 1/2	33/4 , W, (in) 3/16 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 4 5 6 6 7 7 16	350 AVERAGE SCREW TORQUE (ft-lbs) 100 200 350	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660 1000	END VIEW (after Assembly) sizes #4 - #11
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 7 8 9 10 11 14 18 BEBAB	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 10SZSC 11SZSC 14SZSC 18SZSC	26.0 CONNECTOR WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER	13 R LENGTH 'L' (in) 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 9 1/2 11 1/8 8 7/8 15 3/8 LENGTH	2 5/16 (in) 1 1/16 1 1/18 1 3/16 1 3/16 1 5/8 1 11/16 1 13/16 2 5/16 2 1/2 (, , ,	1 3/4 'B', (in) 11/16 3/4 15/16 1 1/16 1 1/2 1 3/4 2 1/4 2 1/4 1 3/4 2 1/4	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 3 13/16 4 1/2 , s,	3 3/4 (w, (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 7 16 NUMBER SCREWS	350 AVERAGE SCREW TORQUE (ft-lbs) 100 200 350 AVERAGE SCREW	1000 MIN. IMPACT WRENCH RATING (ft-Ibs) 250 500 660 1000 MIN. IMPACT WRENCH	END VIEW (after Assembly) sizes #4 - #11
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 10SZSC 11SZSC 14SZSC 18SZSC PRODUCT CODE	26.0 CONNECTOI WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (Ib)	13 R LENGTH 'L' (in) 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 9 1/2 11 1/8 8 7/8 15 3/8 LENGTH 'L' (in)	2 5/16 (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16 1 1/4 1 5/16 1 13/16 2 5/16 2 1/2 (in)	1 3/4 , B, (in) 11/16 3/4 15/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/2 1 3/4 2 1/4 , C, (in)	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 3 13/16 4 1/2 , S, (in)	3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in)	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 7 16 NUMBER SCREWS PER BAR	350 AVERAGE SCREW TORQUE (ft-lbs) 50 100 200 350 AVERAGE SCREW TORQUE (ft-lbs)	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs)	END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly)
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 6SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 10SZSC 11SZSC 14SZSC 14SZSC 14SZSC PRODUCT CODE 3DBZ	26.0 CONNECTOI WEIGHT (lb) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (lb) 1.3	13 14 15 16 17 18 11 18 11 18 178 111 153/8 <td< th=""><th>$\begin{array}{c} 2 \ 5/16 \\ \hline \\ (in) \\ 1 \ 1/16 \\ 1 \ 1/8 \\ 1 \ 3/16 \\ 1 \ 1/4 \\ 1 \ 5/16 \\ 1 \ 1/1 \\ 1 \ 5/16 \\ 1 \ 1/1$</th><th>1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/2 1 3/4 2 1/4 ' C ' (in) 3/8</th><th>1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , s, (in) 15/16</th><th>3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8</th><th>7 NUMBER SCREWS PER BAR 2 3 4 4 5 4 5 6 7 16 7 16 NUMBER SCREWS PER BAR 2</th><th>350 AVERAGE SCREW TORQUE (ft-lbs)</th><th>1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs)</th><th>END VIEW (after Assembly) sizes #4 - #11</th></td<>	$\begin{array}{c} 2 \ 5/16 \\ \hline \\ (in) \\ 1 \ 1/16 \\ 1 \ 1/8 \\ 1 \ 3/16 \\ 1 \ 1/4 \\ 1 \ 5/16 \\ 1 \ 1/1 \\ 1 \ 5/16 \\ 1 \ 1/1$	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/2 1 3/4 2 1/4 ' C ' (in) 3/8	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , s, (in) 15/16	3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8	7 NUMBER SCREWS PER BAR 2 3 4 4 5 4 5 6 7 16 7 16 NUMBER SCREWS PER BAR 2	350 AVERAGE SCREW TORQUE (ft-lbs)	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs)	END VIEW (after Assembly) sizes #4 - #11
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3 4	14/10ZB 14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 11SZSC 14SZSC 18SZSC 9RODUCT CODE 3DBZ 4DBZ	26.0 CONNECTOI WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (Ib) 1.3 1.3	13 R LENGTH ' L', (in) 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 7 7/8 8 9 1/2 11 1/8 8 7/8 15 3/8 15 3/8 15 3/8 2 1/8 2 1/8 2 1/8	2 5/16 (in) 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 2 5/16 2 1/2 (A, (in) 1 1/8 1 1/16 1 1/16	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/16 1 1/16 1 1/2 1 3/4 2 1/4 ' C ' (in) 3/8 1/2	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 3 13/16 4 1/2 , s, (in) 15/16 15/16	3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2	7 NUMBER SCREWS PER BAR 2 3 4 4 4 5 5 6 6 7 16 NUMBER SCREWS PER BAR 2 2 2	350 AVERAGE SCREW TORQUE (ft-lbs) 100 200 350 AVERAGE SCREW TORQUE (ft-lbs)	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs)	END VIEW (after Assembly) sizes #4 - #11
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3 4 5	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 6SZSC 9SZSC 10SZSC 10SZSC 10SZSC 11SZSC 14SZSC 14SZSC 14SZSC 18SZSC 9SDBZ 4DBZ 5DBZ	26.0 CONNECTOR WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (Ib) 1.3 1.3 2.3	13 13 R LENGTH ' L', (in) 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 9 1/2 11 1/8 8 7/8 15 3/8 15 3/8 (in) 2 1/8 2 1/8 3	2 5/16 (A , (in) 1 1/16 1 1/8 1 3/16 1 3/16 1 3/16 1 5/8 1 11/16 1 13/16 2 5/16 2 1/2 (A , (in) 1 1/4 1 3/16 1 1/4 1 3/16 1 1/4 1 3/16 1 1/4 1 1/4	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/2 1 3/4 2 1/4 ' C ', (in) 3/8 1/2 5/8	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , s, (in) 15/16 15/16	3 3/4 'W', (in) 3/16 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 7 16 NUMBER SCREWS PER BAR 2 2 3	350 AVERAGE SCREW TORQUE (ft-lbs) 100 200 350 AVERAGE SCREW TORQUE (ft-lbs)	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250	END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly)
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3 4 5 5 6	14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 14SZSC 14SZSC 14SZSC 14SZSC 14SZSC 14SZSC 9SZSC 14SZSC	26.0 CONNECTOI WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (Ib) 1.3 1.3 2.3 3.2	13 * LENGTH * L' (in) 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 9 1/2 11 1/8 8 7/8 15 3/8 LENGTH * L' (in) 2 1/8 3 3 7/8	2 5/16 (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16 1 15/8 1 11/16 1 13/16 2 5/16 2 1/2 (in) 1 1/8 1 1/16 1 1/8 1 3/16	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/2 1 3/4 2 1/4 ' C ' (in) 3/8 1/2 5/8 3/4	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , s, (in) 15/16 15/16 15/16	3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8 3/4	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 6 7 6 6 7 16 NUMBER SCREWS PER BAR 2 2 2 3 3 4	350 AVERAGE SCREW TORQUE (ft-lbs) 100 200 350 350 AVERAGE SCREW TORQUE (ft-lbs)	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250	END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly)
ZAP 'SL' STRUCTURAL CONNECTOR	14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3 4 5 6 7 6 7 6 7	14/10ZB 14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 11SZSC 14SZSC 18SZSC PRODUCT CODE 3DBZ 4DBZ 5DBZ 6DBZ 7DBZ	26.0 CONNECTOI WEIGHT (b) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (b) 1.3 1.3 2.3 3.2 7.1	13 13 * LENGTH * L', (in) 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 9 1/2 11 1/8 8 7/8 15 3/8 LENGTH * L', (in) 2 1/8 3 7/8 5 3/8	2 5/16 (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16 1 13/16 1 13/16 2 5/16 2 1/2 (in) 1 1/8 1 1/1/6 1 3/16 1 3/16 1 5/16	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/14 1 7/16 1 1/14 1 7/16 1 1/14 2 1/4 ' C ' (in) 3/8 1/2 5/8 3/4 7/8	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , s, (in) 15/16 15/16 15/16 15/16 13/8	3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8 3/4 7/8	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 6 7 7 16 NUMBER SCREWS PER BAR 2 2 2 2 3 3 4 4	350 AVERAGE SCREW TORQUE (ft-lbs) 100 200 350 350 AVERAGE SCREW (ft-lbs) 50	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250	END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly)
ZAP 'SL' STRUCTURAL CONNECTOR Image: Construction of the second sec	14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3 4 5 6 7 8	14/10ZB 14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 11SZSC 14SZSC 18SZSC PRODUCT CODE 3DBZ 4DBZ 5DBZ 6DBZ 7DBZ 8DBZ	26.0 CONNECTOI WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (Ib) 1.3 1.3 2.3 3.2 7.1 10.7	13 13 R LENGTH 11 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 9 1/2 11 1/8 8 7/8 15 3/8 15 3/8 15 3/8 2 1/8 2 1/8 3 7/8 5 3/8 6 3/8	2 5/16 (in) 1 1/16 1 1/18 1 3/16 1 1/4 1 5/16 1 13/16 1 13/16 2 5/16 2 1/2 (A, (in)) 1 1/8 1 11/16 2 5/16 1 3/16 1 3/16 1 5/16 1 3/4	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 3/4 1 /2 1 /78 1 1	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , s, (in) 15/16 15/16 15/16 15/16 15/16 15/16	3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8 3/4 7/8 1	7 NUMBER SCREWS PER BAR 2 3 4 4 4 5 5 6 6 7 16 NUMBER SCREWS PER BAR 2 2 2 2 2 3 3 4 4 4 5 5 5 5 5	350 AVERAGE SCREW TORQUE (ft-lbs) 200 200 350 AVERAGE SCREW TORQUE (ft-lbs) 50	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500	END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly)
STRUCTURAL CONNECTOR Image: Construction of the second seco	14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3 4 5 6 7 8 4 5 6 7 8 4/3	14/10ZB 14/10ZB 14/11ZB PRODUCT cODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 11SZSC 14SZSC 18SZSC 9RODUCT CODE 3DBZ 4DBZ 5DBZ 6DBZ 7DBZ 8DBZ 4/3DBZ	26.0 CONNECTOR WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (Ib) 1.3 1.3 2.3 3.2 7.1 10.7 1.3	13 13 13 13 13 13 13 13 13 13 13 13 13 13 13 13 13 14 153/8 121/8 121/8 121/8 <th>2 5/16 (in) 1 1/16 1 1/18 1 3/16 1 1/4 1 3/16 1 5/18 1 11/16 1 5/16 1 1/16 1 5/16 1 3/4 1 1/16</th> <th>1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/2 1 3/4 2 1/4 ' C ' 5/8 3/4 7/8 1 1 3/8</th> <th>1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , s, (in) 15/16 15/16 1 5/16 1 3/8 1 1/8 15/16</th> <th>3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8 3/4 7/8 1 1 3/8</th> <th>7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 7 16 NUMBER SCREWS PER BAR 2 2 2 2 3 3 4 4 4 5 5 2 2 3 3 4 2 2 3 3 4 2 2 3 3 2 2 3 3 4 2 2 3 3 4 2 2 2 3 3 2 2 3 3 4 2 2 3 3 2 2 3 3 4 2 2 3 3 3 4 3 3 3 3</th> <th>350 AVERAGE SCREW TORQUE (ft-lbs) 200 200 350 AVERAGE SCREW TORQUE (ft-lbs) 50</th> <th>1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500</th> <th>END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly)</th>	2 5/16 (in) 1 1/16 1 1/18 1 3/16 1 1/4 1 3/16 1 5/18 1 11/16 1 5/16 1 1/16 1 5/16 1 3/4 1 1/16	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/2 1 3/4 2 1/4 ' C ' 5/8 3/4 7/8 1 1 3/8	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , s, (in) 15/16 15/16 1 5/16 1 3/8 1 1/8 15/16	3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8 3/4 7/8 1 1 3/8	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 7 16 NUMBER SCREWS PER BAR 2 2 2 2 3 3 4 4 4 5 5 2 2 3 3 4 2 2 3 3 4 2 2 3 3 2 2 3 3 4 2 2 3 3 4 2 2 2 3 3 2 2 3 3 4 2 2 3 3 2 2 3 3 4 2 2 3 3 3 4 3 3 3 3	350 AVERAGE SCREW TORQUE (ft-lbs) 200 200 350 AVERAGE SCREW TORQUE (ft-lbs) 50	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500	END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly)
ZAP 'SL' STRUCTURAL CONNECTOR Image: structure of the str	Initial Initial <t< th=""><th>14/10ZB 14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC 11SZSC 14SZSC 14SZSC</th><th>26.0 CONNECTOI WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (Ib) 1.3 1.3 2.3 3.2 7.1 10.7 1.3 2.3</th><th>13 13 13 14 153/8 63/8 77/8 8 91/2 111/8 153/8 153/8 21/8 3 37/8 53/8 61/2 21/8 3 3/8 53/8 61/2 21/8 3 3 53/8 61/2 21/8 3</th><th>2 5/16 (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16 1 1/4 1 5/16 1 1/4 1 5/16 1 1/1 2 5/16 2 1/2 (in) 1 1/16 1 1/8 1 3/16 1 1/8 1 1/16 1 3/16 1 3/16 1 1/8 1 3/16 1 1/8 1 1/16 1 3/16 1 1/8 1 1/16 1 3/16 1 1/8 1 1/16 1 1/8 1 3/16 1 1/8 1 1/16 1 1/8 1 1/8 1 1/16 1 1/8 1 1/8 1 1/16 1 1/8 1 1/</th><th>1 3/4 ' B', (in) 11/16 3/4 15/16 1 1/16 1 1/2 1 3/4 2 1/4 ' C ', (in) 3/8 3/4 7/8 1 1 3/8 1/2</th><th>1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , s, (in) 15/16 15/16 15/16 15/16 15/16 15/16 15/16</th><th>33/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8 3/4 7/8 1 3/8 1/2</th><th>7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 7 16 NUMBER SCREWS PER BAR 2 2 2 2 3 3 4 4 5 5 5 5 2 3 3 4 3 3 4 3 3 3 3 3 3 3 3 3 3 3 3</th><th>350 AVERAGE SCREW TORQUE (ft-lbs) 100 200 350 350 AVERAGE SCREW TORQUE (ft-lbs) 50</th><th>1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500</th><th>END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly) (after Assembly)</th></t<>	14/10ZB 14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC 11SZSC 14SZSC	26.0 CONNECTOI WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (Ib) 1.3 1.3 2.3 3.2 7.1 10.7 1.3 2.3	13 13 13 14 153/8 63/8 77/8 8 91/2 111/8 153/8 153/8 21/8 3 37/8 53/8 61/2 21/8 3 3/8 53/8 61/2 21/8 3 3 53/8 61/2 21/8 3	2 5/16 (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16 1 1/4 1 5/16 1 1/4 1 5/16 1 1/1 2 5/16 2 1/2 (in) 1 1/16 1 1/8 1 3/16 1 1/8 1 1/16 1 3/16 1 3/16 1 1/8 1 3/16 1 1/8 1 1/16 1 3/16 1 1/8 1 1/16 1 3/16 1 1/8 1 1/16 1 1/8 1 3/16 1 1/8 1 1/16 1 1/8 1 1/8 1 1/16 1 1/8 1 1/8 1 1/16 1 1/8 1 1/	1 3/4 ' B', (in) 11/16 3/4 15/16 1 1/16 1 1/2 1 3/4 2 1/4 ' C ', (in) 3/8 3/4 7/8 1 1 3/8 1/2	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , s, (in) 15/16 15/16 15/16 15/16 15/16 15/16 15/16	33/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8 3/4 7/8 1 3/8 1/2	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 7 16 NUMBER SCREWS PER BAR 2 2 2 2 3 3 4 4 5 5 5 5 2 3 3 4 3 3 4 3 3 3 3 3 3 3 3 3 3 3 3	350 AVERAGE SCREW TORQUE (ft-lbs) 100 200 350 350 AVERAGE SCREW TORQUE (ft-lbs) 50	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500	END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly) (after Assembly)
ZAP 'SL' STRUCTURAL CONNECTOR Image: Construction of the structure	Interference 14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3 4 5 6 7 8 4/3 5/4 6/4	14/10ZB 14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 11SZSC 14SZSC 18SZSC PRODUCT CODE 3DBZ 4DBZ 5DBZ 6DBZ 7DBZ 8DBZ 4/3DBZ 5/4DBZ 6/4DBZ	26.0 CONNECTOI WEIGHT (b) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (b) 1.3 1.3 2.3 3.2 7.1 10.7 1.3 2.3	13 13 R LENGTH ' L', (in) 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 9 1/2 11 1/8 8 7/8 15 3/8 15 3/8 15 3/8 2 1/8 3 7/8 5 3/8 6 1/2 2 1/8 3	2 5/16 (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16 1 1/4 1 5/16 1 13/16 2 5/16 2 1/2 (in) 1 1/8 1 1/16 1 3/16 1 3/16 1 3/16 1 3/16 1 3/16 1 1/8 1 3/16 1 1/8 1 3/16 1 1/8 1 1/16 1 3/16 1 3/16 1 1/8 1 1/16 1 3/16 1 1/8 1 1/16 1 3/16 1 1/8 1 1/16 1 1/8 1 1/8 1 1/16 1 1/8 1 1/16 1 1/8 1 1/8 1 1/16 1 1/8 1 1/16 1 1/8 1 1/8 1 1/8 1 1/8 1 1/16 1 1/8 1	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/12 1 3/4 2 1/4 ' C ' (in) 3/8 1/2 5/8 3/4 7/8 1 	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , s, (in) 15/16 15/16 15/16 15/16 15/16 15/16	3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8 3/4 7/8 1 3/8 1/2 5/16	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 6 7 7 6 8 7 7 16 NUMBER SCREWS PER BAR 2 2 2 3 3 4 4 4 5 5 3 3 3 4 2 3 3 3 4 3 3 3 4 3 3 3 3 3 3 3	350 AVERAGE SCREW TORQUE (ft-lbs) 100 200 350 AVERAGE SCREW 100 100 50 100	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500	END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly)
ZAP 'SL' STRUCTURAL CONNECTOR Image: Construction Image: Construction Image: Construction Image: Construction Image: Construction	Interface 14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3 4 5 6 7 8 4/3 5/4 6/4 6/5	14/10ZB 14/10ZB 14/11ZB PRODUCT CODE 4SZSC 5SZSC 6SZSC 7SZSC 9SZSC 10SZSC 11SZSC 14XZSC 18SZSC 9SZSC 3DBZ 4DBZ 5DBZ 6DBZ 7DBZ 8DBZ 4/3DBZ 5/4DBZ 6/4DBZ 6/5DBZ	26.0 CONNECTOI WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (Ib) 1.3 1.3 2.3 3.2 7.1 10.7 1.3 2.3 3.2	13 14 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 137/8	2 5/16 (in) 1 1/16 1 1/1 1 1/16 1 1/1 1 3/16 1 1/1 1 5/16 1 11/16 1 1/16 1 3/16 1 3/16 1 3/16	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 3/4 1 1/2 5/8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1/2 , D, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , S, (in) 15/16 15/16 15/16 15/16 15/16	3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8 3/4 1/2 5/8	7 NUMBER SCREWS PER BAR 2 3 4 4 4 5 5 6 7 16 NUMBER SCREWS PER BAR 2 2 2 2 3 3 4 4 4 5 5 2 2 3 3 4 2 2 3 3 4 4 4 2 2 3 3 4 4 4 4	350 AVERAGE SCREW TORQUE (ft-lbs) 200 200 350 AVERAGE SCREW TORQUE (ft-lbs) 100	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500	END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly)
ZAP 'SL' STRUCTURAL CONNECTOR Image: Construction of the structure	Interface 14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3 4 5 6 7 8 3 4 5 6 7 8 4/3 5/4 6/4 6/5 7/5	14/10ZB 14/10ZB 14/11ZB PRODUCT cODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 11SZSC 14XZSC 18SZSC 9RODUCT cODE 3DBZ 4DBZ 5DBZ 6DBZ 7DBZ 8DBZ 4/3DBZ 5/4DBZ 6/5DBZ 6/5DBZ 7/5DBZ	26.0 CONNECTOR WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (Ib) 1.3 1.3 2.3 3.2 7.1 10.7 1.3 2.3 3.2	13 13 R LENGTH 11 3 1/8 4 1/8 5 3/8 6 3/8 7 7/8 8 9 1/2 11 1/8 8 7/8 15 3/8 15 3/8 15 3/8 15 3/8 15 3/8 2 1/8 2 1/8 3 3 7/8 3 3 7/8 3 3 7/8	2 5/16 (A , (in) 1 1/16 1 1/8 1 3/16 1 1/4 1 5/16 1 1/4 1 5/16 1 1/4 1 3/16 2 5/16 1 1/4 1 3/16 1 3/16 1 3/16	1 3/4 ' B ' (in) 11/16 3/4 15/16 1 1/16 1 1/2 1 3/4 2 1/4 ' C ' 5/8 3/4 1/2 5/8 1/2 5/8 	1 1/2 , D, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 13/16 4 1/2 , S, (in) 15/16 15/16 15/16 15/16 15/16 15/16 15/16	3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8 3/4 7/8 1/2 5/8	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 7 16 NUMBER SCREWS PER BAR 2 2 2 3 3 4 4 4 5 5 5 2 3 3 4 4 4 2 3 3 4 4 4 4 5 5 2 3 3 4 4 4 4 2 2 3 3 4 4 4 4 5 5 7 16 8 0 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	350 AVERAGE SCREW TORQUE (ft-lbs) 200 200 350 AVERAGE SCREW TORQUE (ft-lbs) 100	1000 MIN. IMPACT WRENCH RATING (ft-Ibs) 250 660 1000 MIN. IMPACT WRENCH RATING (ft-Ibs) 250 500	END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly)
ZAP 'SL' STRUCTURAL CONNECTOR Image: structural connector <	Interface 14/10 14/11 REBAR SIZE 4 5 6 7 8 9 10 11 14 18 REBAR SIZE 3 4 5 6 7 8 4 5 6 7 8 4/3 5/4 6/5 7/5 7/6	14/10ZB 14/10ZB 14/11ZB PRODUCT cODE 4SZSC 5SZSC 6SZSC 7SZSC 8SZSC 9SZSC 10SZSC 11SZSC 14SZSC 14SZSC 18SZSC 9RODUCT CODE 3DBZ 4DBZ 5DBZ 6DBZ 7DBZ 8DBZ 4/3DBZ 5/4DBZ 6/4DBZ 6/5DBZ 7/5DBZ 7/5DBZ 7/6DBZ	26.0 CONNECTOR WEIGHT (Ib) 0.9 1.5 2.3 3.6 5.5 7.6 9.6 12.1 18.0 37.5 COUPLER WEIGHT (Ib) 1.3 1.3 2.3 3.2 7.1 10.7 1.3 2.3 3.2 7.1	13 13 13 13 13 13 13 13 13 13 13 13 13 13 13 13 13 14 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8 153/8	2 5/16 (A , (in) 1 1/16 1 1/18 1 3/16 1 5/16 1 5/16 1 1/14 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16 1 1/16	1 3/4 ' B', (in) 11/16 3/4 15/16 1 1/16 1 1/12 1 3/4 2 1/4 ' C , (in) 3/8 1/2 5/8 3/4 1 1/2 5/8 3/4 3/8 1/2 5/8 3/4 3/4	1 1/2 , p, (in) 1 7/16 1 11/16 1 7/8 2 1/8 2 5/16 2 11/16 2 7/8 3 3 13/16 4 1/2 , s, (in) 15/16 15/16 15/16 15/16 15/16 15/16 15/16 15/16 15/16	3 3/4 'W', (in) 3/16 1/4 1/4 5/16 3/8 7/16 1/2 9/16 11/16 7/8 'd', (in) 3/8 1/2 5/8 3/4 7/8 1 3/8 1/2 5/8 3/4	7 NUMBER SCREWS PER BAR 2 3 4 4 5 5 6 7 16 NUMBER SCREWS PER BAR 2 2 2 3 4 4 4 5 5 3 4 4 5 3 3 4 4 4 5 5 3 3 4 4 4 4	350 AVERAGE SCREW TORQUE (ft-lbs) 100 200 350 AVERAGE SCREW TORQUE (ft-lbs) 100 100	1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 660 1000 MIN. IMPACT WRENCH RATING (ft-lbs) 250 500 250	END VIEW (after Assembly) sizes #4 - #11 (sizes #14 & #18 have two rows of screws) END VIEW (after Assembly) (after Assembly)

ZAP SCREWLOK[®] Mechanical Splices and Connectors for Reinforcing Bars – Review...

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 axes 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. Assembly instructions are normally supplied with your order or can otherwise be obtained directly from Barsplice Products, Inc.

During mechanical splice assembly, as screws are tightened, they embed themselves into the rebar surface and then the heads twist off at a prescribed tightening torque. Force from the screws causes 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 or hand-held ratchet 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.

When making splices between fixed points, a coupler sleeve without a center stop can be slipped entirely onto one bar and subsequently repositioned over the two bar ends being spliced.

> **Mechanical butt splices** and connectors are available for reinforcing bar sizes No. 3 through 18 (Ø10 through 57 mm) per BPI's **Dimensions and Data** charts. Transition splices are used to connect rebars of different sizes.

> Mechanical lap splices are available for bar sizes No. 3 through 8 (Ø 10 through 25 mm).

Epoxy-coated steel reinforcing bars that comply with ASTM A775 can be spliced by means of epoxy coated coupling sleeves without shielding or removing the epoxy coating from the bar. Zinc coated (galvanized) bars can be mechanically spliced by means of galvanized coupling sleeves. Different types of ZAP SCREWLOK[®] mechanical splices are selectable for new construction, field repair applications, and the splicing of older types of reinforcing bars.

ZAP SCREWLOK® is a positive tension and compression mechanical splice system whose strength is independent of the concrete which surrounds it, thereby providing true structural continuity. Applications include heavy construction, field splicing of column steel, beam reinforcement, concrete piles and deck steel. The system is used for rehab projects, retrofit, strengthening, and up-grading concrete elements. Type 2 splices are used for mechanically splicing reinforcement in members resisting earthquake induced forces. Other uses may include extending deck steel to widen bridges, highway patch and repair projects and splicing of bars across closure pours.

Benefits to using ZAP SCREWLOK[®] include positive mechanical splicing, choices for Type 1 and Type 2 applications, splices for black or galvanized or epoxy coated bars, easy visual inspection, no specialized equipment, minimal clearance requirements and positive center-stop. ZAP SCREWLOK[®] is ideal in remote areas and tight access areas; it is suitable for new construction repair or retrofit and compatible with sheared, flame-cut or saw-cut bars.

Headed Anchorage suitable for Grade 60 reinforcing can be created by welding Zap Structural Connectors and structural steel plates*. For simplicity, locally-sourced plate that has been cut square and has a side length 'S' as specified in the table below will be more than adequate for many applications. However, other sizes and shapes of plate can be attached to suit structural demands.

ACI 318 Section 12.6 allows any mechanical device to be used as anchorage that is capable of developing at least the strength of the bar $\{f_y\}$ without damage to concrete.



Single Row #3 - #11

BEFORE

AND AFTER

ASSEMBLY

Double Row #14 & #18

BEFORE AND

AFTER ASSEMBLY

(plate and welding by others)

Reinforcing bar sizes No.4 through No.18 (Ø12 through 57 mm) that meet the deformation requirements of ASTM A615 or ASTM A706 can be anchored by this method. Applications might include the substitution of hook bars in congested areas, or in renovation and repair work, to enhance straight bar, where development length is inadequate. Headed bars reduce the development length of bars by transmitting a proportion of force from bar to concrete via head bearing area.

Square Headed Mechanical Anchorage Dimensions

Anh **	Rebar and Zap 'SL' Structural Connector Size	4	5	6	7	8	9	10	11	14	18
4A _b	Square plate side length 'S' (in.)	1 3⁄4	2 1⁄4	2 1⁄2	2 3/4	3 1/4	3 34	4	4 1⁄4	5 14	6 1/2
9Ab	Square plate side length 'S' (in.)	2	2 1/2	2 3/4	3 1⁄4	3 34	4 1⁄4	4 3/4	5	6 1/4	8
	Plate thickness (in.)	1⁄2	1/2	5/8	5⁄8	3⁄4	3/4	7/8	1	1 1/4	1 3⁄4

*Welder qualification, weld procedure, integrity and strength are the responsibility of others. **Anh = net bearing area of the head in tension. 4Ab = 4 x area of reinforcing bar. 9Ab = 9 x area of reinforcing bar.

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