

# ZAP SCREWLOK® FX SERIES

SHEAR SCREW AND WEDGE MECHANICAL SPLICE COUPLING SLEEVE FOR GRADE 100 REINFORCING BARS



- **HIGH STRENGTH SPLICE** – Develops in tension or compression, as required, at least 1.25  $f_y$  of the bar, ASTM A1035 Grade 100.
- **COMMERCIAL APPLICATIONS** – For Structural Concrete – product is used in columns, beams, walls, mats, tanks, condominiums.
- **SUPERIOR TO TENSION LAP SPLICES** – Strength is independent of surrounding concrete and cover. Takes up less space than rebar lap.
- **NEW CONSTRUCTION or RENOVATION / REPAIR** – Suited for butt-splicing bars.
- **FOR HIGH STRENGTH REINFORCING BAR** – ASTM A615, A706, A1035 and equal deformed bars – capable of exceeding 125% x specified yield,  $f_y$ , Grades 75, 80 & 100.
- **CONVENIENCE** – Field installed – No specialized installation equipment – No special bar end preparation or thread cutting – Easy visual inspection. For bars #4 – #18 (Dia.13 – 57 mm).

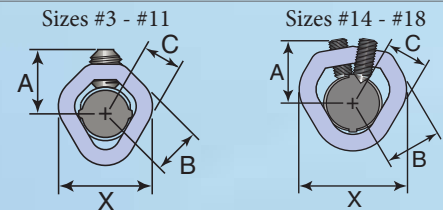


# ZAP SCREWLOK® FX TRANSITIONS

- **PURPOSE** – For butt-splicing bars of different sizes, such as 11-to-10, 11-to-9 and so on.
- **APPLICATIONS** – Columns, Walls, Piers, Caissons, Parking Garages, High Rise Buildings – usually vertical bars.
- **SIMPLE DESIGN** – One piece device with converging sides for wedging of different bar sizes – Made from seamless shaped tubing with no welds – Includes center stop.
- **STRENGTH** – Capable of developing 125% x specified yield strength of smaller bars, ASTM A615, A706, A1035 Grades 75, 80 & 100.
- **CONVENIENCE** – Field installed – No specialized installation equipment – No special bar end preparation or thread cutting – Easy visual inspection.

## ZAP SCREWLOK® FX Dimensions & Data [inch-pound units]

END VIEW  
(AFTER ASSEMBLY)



ZAP SCREWLOK FX SERIES		REBAR SIZE	PRODUCT CODE FX SERIES	COUPLER WEIGHT (LB)	LENGTH 'L' (IN)	'A' (IN)	'B' (IN)	'C' (IN)	'X' (IN)	NUMBER SCREWS PER BAR	AVERAGE SCREW TORQUE (FT-LB)	MIN. IMPACT WRENCH RATING (FT-LB)
	4	04ZFXA	2.2	7	1 1/16	1 1/16	1/2	1 3/8	3	60	250	
	5	05ZFXA	3.4	9	1 1/8	3/4	5/8	1 5/8	4			
	6	06ZFXA	4.7	11	1 3/16	15/16	1 1/16	1 3/4	5			
	105	7	07ZFXA	7.6	13	1 1/4	1 1/16	13/16	2 1/16	5		
		8	08ZFXA	10.9	15 1/4	1 5/16	1 1/16	7/8	2 1/4	6		
		9	09ZFXA	17.6	16 3/4	1 5/8	1 1/4	1 1/16	2 5/8	6		
		10	10ZFXA	21.4	19 1/8	1 11/16	1 7/16	1 1/8	2 3/4	7		
		11	11ZFXA	25.4	21 1/2	1 13/16	1 1/2	1 1/4	2 15/16	8		
	350	14	14ZFXA	42.0	20 1/8	2 5/16	1 3/4	1 1/2	3 3/4	12		
18		18ZFXA	74.0	29 1/2	2 1/2	2 1/4	1 13/16	4 3/8	21			
ZAP SCREWLOK FX TRANSITION		REBAR SIZE	PRODUCT CODE FX TRANSITION	COUPLER WEIGHT (LB)	LENGTH 'L' (IN)	'A' (IN)	'B' (IN)	'C' (IN)	'X' (IN)	NUMBER SCREWS PER BAR	AVERAGE SCREW TORQUE (FT-LB)	MIN. IMPACT WRENCH RATING (FT-LB)
	5/4	05/04ZFXA	3.0	8	1 1/8	3/4	5/8	1 5/8	3	60	250	
	6/4	06/04ZFXA	4.3	10	1 3/16	15/16	1 1/16	1 3/4	4			
	6/5	06/05ZFXA										
	7/5	07/05ZFXA	6.8	12	1 1/4	1 1/16	13/16	2 1/16	4			
	7/6	07/06ZFXA										
	8/5	08/05ZFXA	9.9	14 1/8	1 5/16	1 1/8	7/8	2 1/4	5			
	8/6	08/06ZFXA										
	8/7	08/07ZFXA										
	9/6	09/06ZFXA	16.2	15 9/16	1 5/8	1 1/4	1 1/16	2 5/8	5			
	9/7	09/07ZFXA										
	9/8	09/08ZFXA										
	10/7	10/07ZFXA	20.1	17 15/16	1 11/16	1 7/16	1 1/8	2 3/4	6			
	10/8	10/08ZFXA										
	10/9	10/09ZFXA										
	11/7	11/07ZFXA	20.1	17 15/16	1 13/16	1 1/2	1 1/4	2 13/16	6			
11/8	11/08ZFXA											
11/9	11/09ZFXA											
11/10	11/10ZFXA	22.8	20 5/16	1 13/16	1 1/2	1 1/4	2 13/16	7	215	750		

# ZAP SCREWLOK® FX Mechanical Splices for High Strength Reinforcing Bars

ZAP SCREWLOK® FX mechanical splices are high-strength based devices compatible with reinforcing bars that comply with ASTM A615, A706 & A1035 or equal and consist of smooth, shaped, steel sleeves with converging sides. A series of cone-pointed hex-head screws with specially hardened tips are arranged along the longitudinal axes in one or two rows. 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.

**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. 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.

**ZAP FX Mechanical splices** are available for reinforcing bar sizes No. 4 through 18 (Ø13 through 57 mm) per BPI's **Dimensions and Data** charts. Transition splices are used to connect rebars of different sizes.

ZAP SCREWLOK® FX mechanical splices are suitable for new construction and field repair applications when the rebar specification calls for Higher Strength Grade 75, Grade 80 or Grade 100.

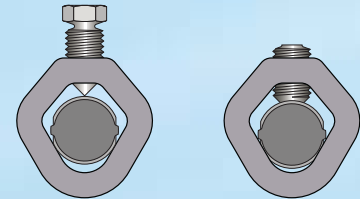
ZAP SCREWLOK® FX is a positive tension and compression mechanical splice system whose strength is independent of the concrete which surrounds it, thereby providing true structural continuity. Applications include heavy construction, field splicing of column steel, beam reinforcement, concrete piles and deck steel. The system is used for rehab projects, retrofit, strengthening, and up-grading concrete elements. 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® FX** include positive mechanical splicing, easy visual inspection, no specialized equipment, minimal clearance requirements and positive center-stop. ZAP SCREWLOK® FX 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.



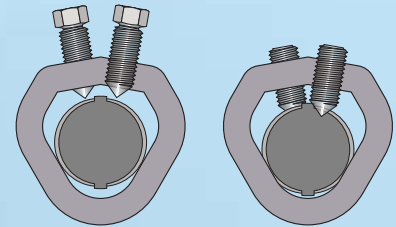
Single Row  
#4 - #11

BEFORE  
AND  
AFTER  
ASSEMBLY



Double Row  
#14 - #18

BEFORE  
AND  
AFTER  
ASSEMBLY



## \*\* HOW TO SPECIFY ZAP SCREWLOK® FX SPLICES

	By Name:	By Generic Description:
<b>BAR-TO-BAR</b> <i>mechanical butt splice</i>	Zap Screwlok® FX Series by BarSplice Products, Inc., Dayton OH	<b>Mechanical butt splices shall be the tension-compression shear screw and wedge coupling sleeve type</b> , with smooth converging sides and cone-pointed hex-head screws, to develop a strength in the bar equal to 125% x specified yield, Grades 75, 80 or 100.

\*\* Include bar size(s), bar type and grade. Include statement: "Parts shall be manufactured to the quality requirements of ISO 9001."

*Field splicing of reinforcing bars by the Zap Screwlok® FX method is most popular because of the systems simplicity, cost effectiveness and adaptability. Instructions provided with splices explain step-by-step installation and safety information.*

**NOTE:** The Zap Screwlok® FX is a strength-based series of mechanical splice. The coupler bodies are made from plain carbon steel for functionality and ductility. When special corrosion resistance is required, consider encapsulating the splice with a heat shrink sleeve.

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