



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 A 1035 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 DUAL CERTIFIED GRADE 75-80 / 100 REINFORCING BARS** – ASTM A 1035 and equal deformed bars – capable of exceeding 125% x specified yield, f_y , Grades 75, 80 and 100.
- **CONVENIENCE** – Field installed – No specialized installation equipment – No special bar end preparation or thread cutting – Easy visual inspection. For bars #4 – 14 (Dia.13 – 43 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** – Develops 125% x specified yield strength of *smaller* bars, ASTM A 1035 Grades 75, 80 and 100.
- **CONVENIENCE** – Field installed – No specialized installation equipment – No special bar end preparation or thread cutting – Easy visual inspection.

ZAP SCREWLOK® FX — Dimensions and Data [inch-pound units]

	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 TORQUE (ft-lbs)	END VIEW (after Assembly)	
ZAP SCREWLOK® FX SERIES 	4	4ZFX	2.2	7	1 1/16	11/16	1/2	1 3/8	3	50	sizes #4 - #11 	
	5	5ZFX	3.4	9	1 1/8	3/4	5/8	1 5/8	4	50		
	6	6ZFX	4.7	11	1 3/16	15/16	11/16	1 3/4	5	50		
	7	7ZFX	7.6	13	1 1/4	1 1/16	13/16	2 1/16	5	100		
	8	8ZFX	10.9	15 1/4	1 5/16	1 1/16	7/8	2 1/4	6	100		
	9	9ZFX	17.6	16 3/4	1 5/8	1 1/4	1 1/16	2 5/8	6	200		
	10	10ZFX	21.4	19 1/8	1 11/16	1 7/16	1 1/8	2 3/4	7	200		
11	11ZFX	25.4	21 1/2	1 13/16	1 1/2	1 1/4	2 15/16	8	200			
14	14ZFX	41.2	20 1/8	2 5/16	1 3/4	1 1/2	3 3/4	13	350			
ZAP SCREWLOK® FX TRANSITIONS 	5/4	5/4ZFX	3.0	8	1 1/8	3/4	5/8	1 5/8	3	50		size #14
	6/4	6/4ZFX	4.3	10	1 3/16	15/16	11/16	1 3/4	4	50		
	6/5	6/5ZFX										
	7/5	7/5ZFX	6.8	12	1 1/4	1 1/16	13/16	2 1/16	4	100		
	7/6	7/6ZFX										
	8/5	8/5ZFX	9.9	14 1/8	1 5/16	1 1/8	7/8	2 1/4	5	100		
	8/6	8/6ZFX										
	8/7	8/7ZFX										
	9/6	9/6ZFX										
	9/7	9/7ZFX	16.2	15 9/16	1 5/8	1 1/4	1 1/16	2 5/8	5	200		
	9/8	9/8ZFX										
	10/7	10/7ZFX										
	10/8	10/8ZFX	20.1	17 15/16	1 11/16	1 7/16	1 1/8	2 3/4	6	200		
	10/9	10/9ZFX										
11/7	11/7ZFX											
11/8	11/8ZFX	20.1	17 15/16	1 13/16	1 1/2	1 1/4	2 13/16	6	200			
11/9	11/9ZFX											
11/10	11/10ZFX	22.8	20 5/16	1 13/16	1 1/2	1 1/4	2 13/16	7	200			

ZAP SCREWLOK® FX Mechanical Splices for Grade 100 Reinforcing Bars

ZAP SCREWLOK® FX mechanical splices are strength-based devices compatible with reinforcing bars that comply with ASTM A 1035 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.

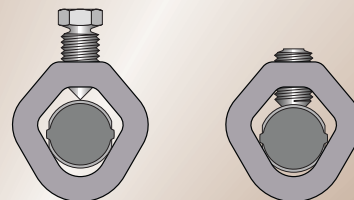
During mechanical splice assembly, as screws are tightened, they embed themselves into the rebar surface and then the heads twist off at a prescribed tightening torque. Force from the screws causes rebar deformations to interlock within the coupler wedge. The DUAL mechanical action, results in a full 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 14 (Ø13 through 43 mm) per BPI's **Dimensions and Data** charts. Transition splices are used to connect rebars of different sizes.

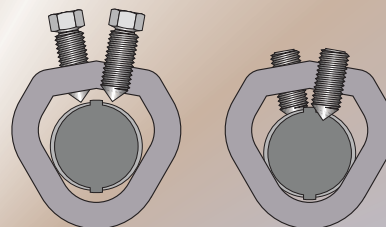
Single Row
#4 - #11

BEFORE
AND
AFTER
ASSEMBLY



Double Row
#14

BEFORE
AND
AFTER
ASSEMBLY



ZAP SCREWLOK® FX mechanical splices are suitable for new construction and field repair applications when the rebar specification is ASTM A 1035, 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.



** HOW TO SPECIFY ZAP SCREWLOK® FX SPLICES

	By Name:	By Generic Description:
BAR-TO-BAR <i>mechanical butt splice</i>	Zap Screwlok® FX Series by BarSplice Products, Inc., Dayton OH	Mechanical butt splices shall be the tension-compression shear screw and wedge coupling sleeve type, with smooth converging sides and cone-pointed hex-head screws, to develop a strength in the bar equal to 125% x specified yield, Grade 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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BarSplice Products, Inc., 4900 Webster Street, Dayton OH 45414, USA
 ●Tel: (937) 275-8700 ●Fax: (937) 275-9566 ●E-mail: bar@barsplice.com

