PSA Forge Bar System - Couplers

Installation Guide – October 2025

PSA Forge Bar Couplers are designed to join two reinforcing bars of the same size. They can be used to connect two joining reinforcement bars within the same concrete pour or connect bars to create reinforcement continuity through construction joints.

The following items are covered by this document:

Bar Size	Coupler	Starter bar	Lock Nut	Colour
N12	FBC12	FBSB12540	FBLN12	Purple
N16	FBC16	FBSB16700	FBLN16	Blue
N20	FBC20	FBSB20800, FBSB201000	FBLN20	Yellow
N24	FBC24	FBSB241000, FBSB241200	FBLN24	Black
N28	FBC28	FBSB281170, FBSB281400	FBLN28	Brown
N32	FBC32	FBSB321330, FBSB321600	FBLN32	White
N36	FBC36	FBSB361600	FBLN36	Green
N40	FBC40	FBSB401800	FBLN40	Orange

For easy identification, all couplers and nailing plates for the PSA Forge Bar system are colour coded using the colours in the table above.

PSA Forge Bars are available with 3 different threads:

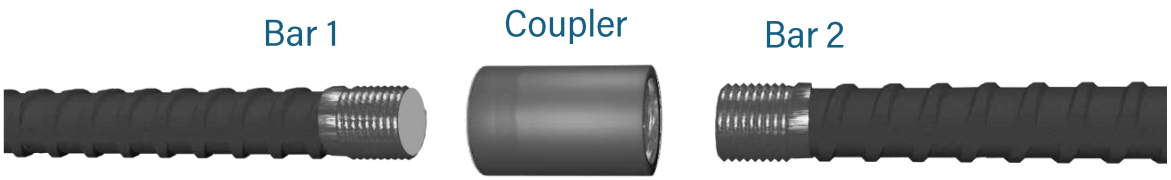
Bar Size	Length Thread A (mm)	Length Thread C1 (mm)	Length Thread C2 (mm)
N12	15	27	42
N16	20	32	52
N20	24	36	60
N24	30	45	75
N28	33	48	81
N32	36	51	87
N36	42.5	62.5	105
N40	45	65	110

Installation of a PSA Forge Bar Type A coupler connection:

Type A Connection is the standard solution for achieving full-strength reinforcement bar joints in a wide range of applications. Its installation requires that the second bar (Bar 2) can be freely rotated to engage the threaded connection.

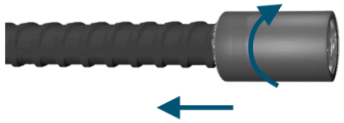
System Components

The connection comprises two reinforcement bars with Type A threads—either PSA FB Bars or PSA FBSB Starter Bars of standard length—and one FBC Coupler. This configuration ensures reliable performance and seamless integration within reinforced concrete systems.



Installation Sequence

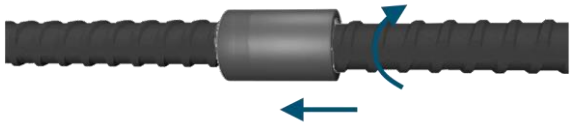
Step 1



If the first bar is not already supplied with a coupler installed, screw the coupler on the bar.

If the coupler connection is used in a construction joint and concrete is poured before the second bar is installed, it is important to protect the coupler opening from concrete ingress by applying a coupler cap or nailing plate!

Step 2



Screw the second bar into the coupler by rotating the bar, tighten by hand or wrench. No more than 1 thread should be exposed once tightened.

Any handling of the bar that results in cold working—especially bending within the threaded section—is strictly prohibited, as it has the potential to compromise the integrity of the connection.

Installation of a PSA Forge Bar Type C coupler connection:

Type C Connection is designed for reinforcement bar applications where the second bar (Bar 2) cannot be freely rotated during installation. This scenario typically arises when Bar 2 is bent or when large-diameter bars are used, making unrestricted rotation impractical due to their weight and geometry.

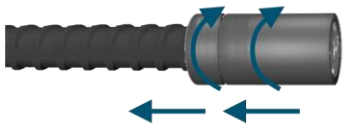
Connection Components

The connection consists of:

- One bar FBC1 with a **Type C1 thread** (half coupler length plus full lock nut length)
- One bar FBC2 with a **Type C2 thread** (full coupler length plus full lock nut length)
- One coupler FBC
- Two lock nuts FBLN

Installation Sequence

Step 1



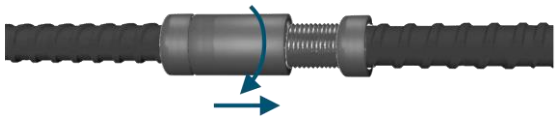
Screw the lock nut followed by the coupler to the threaded section of the bar with the type C2 thread (the bar with the longer thread of the 2) The bar end should be flush with the open end of the coupler.

If using a Type C Connection at a construction joint where the first concrete pour is done before the second bar is placed, install the coupler after stripping the formwork of the first concrete pour. Leave a block-out (e.g. polystyrene) around the first bar's thread, sized to allow coupler installation and lock nut rotation.

Step 2

Screw the second lock nut on the bar with the type C1 thread (shorter thread). The lock nut should be screwed to the end of the thread.

Step 3



Locate the second bar centrally against the open end of the coupler and rotate the coupler on the second bar. Tighten the lock nut and the coupler against each other by hand or using a wrench.

Step 4

Tighten the second lock nut against the coupler by hand or using a wrench.

Any handling of the bar that results in cold working—especially bending within the threaded section—is strictly prohibited, as it compromises the integrity of the connection.

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