COUPLER SYSTEM

Technical Data & Specifications

Swiftcore

Swiftcore™ COUPLER SYSTEM

BUILT FOR EFFECTIVE BUILDERS

By eliminating labour intensive lapped bars, screw on couplers and torque testing, Swiftcore's simple on-site coupler connection allows pain-free installation resulting in earlier critical path task completion.

OVERVIEW

The Swiftcore Coupler is one of the quickest and most effective ways to mechanically splice two reinforcing bars. These innovative couplers are forged using 40Cr Alloy Structure Steel and applied to the reinforcing bars using a friction welding method. This process consists of spinning the coupler at 2500 rpm while applying up to 6 tonnes of pressure to the reinforcing bar to fuse the two products.

DESIGN

Based on a Morse Taper design, the couplers have locking pins that stop the longitudinal movement or slip. It inevitably introduces a bending load to the coupler. The patented ramp walls provide strong bending resistance that limits the bending deformation and increases the couplers strength under extreme loads.

It was designed using state of art FEA stress analysis to optimize the shape and minimize the deformation or slippage.

A tie wire must be tied around the couplers to ensure the connection sees no movement due to potential vibrations or heavy knocks prior to the concrete poor.

The tie wire acts only as a precaution and does not affect the structural characteristics of the couplers. (Refer to the coupler specifications table for wire tie requirements).

All Swiftcore Couplers are fitted with a 40uM thick shrink wrap to protect the coupler from concrete. The wrap has a simple tear tab enabling quick stripping when couplers are ready to be connected.

BENEFITS

- **Faster connection process on-site**
- **Less labour intensive than traditional methods**
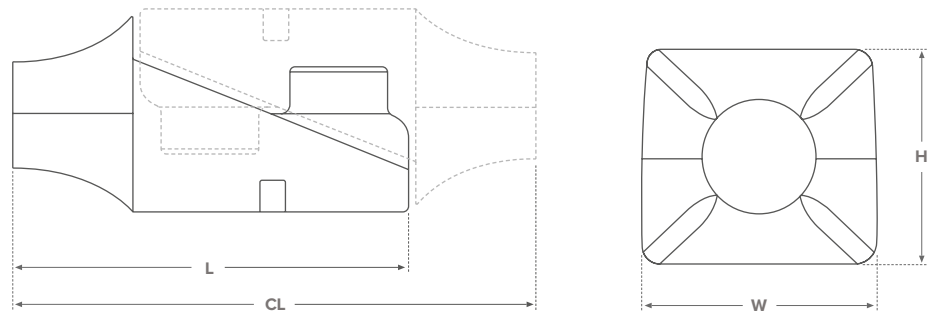- **Reduces rebar congestion in tight spaces**

COMPLIANCE

Swiftcore Couplers are friction welded to grade 500N ACRS approved reinforcing bars with a minimum yield of 500MPa which meets the AS/NZS 4671:2001 requirements. All bars have a minimum uniform elongation A.gt 5% and are bent to comply with AS/NZS 4671:2001. The Mechanical performance of Swiftcore Couplers have been tested by a NATA approved laboratory and meet AS/NZS 4671:2001 requirements.
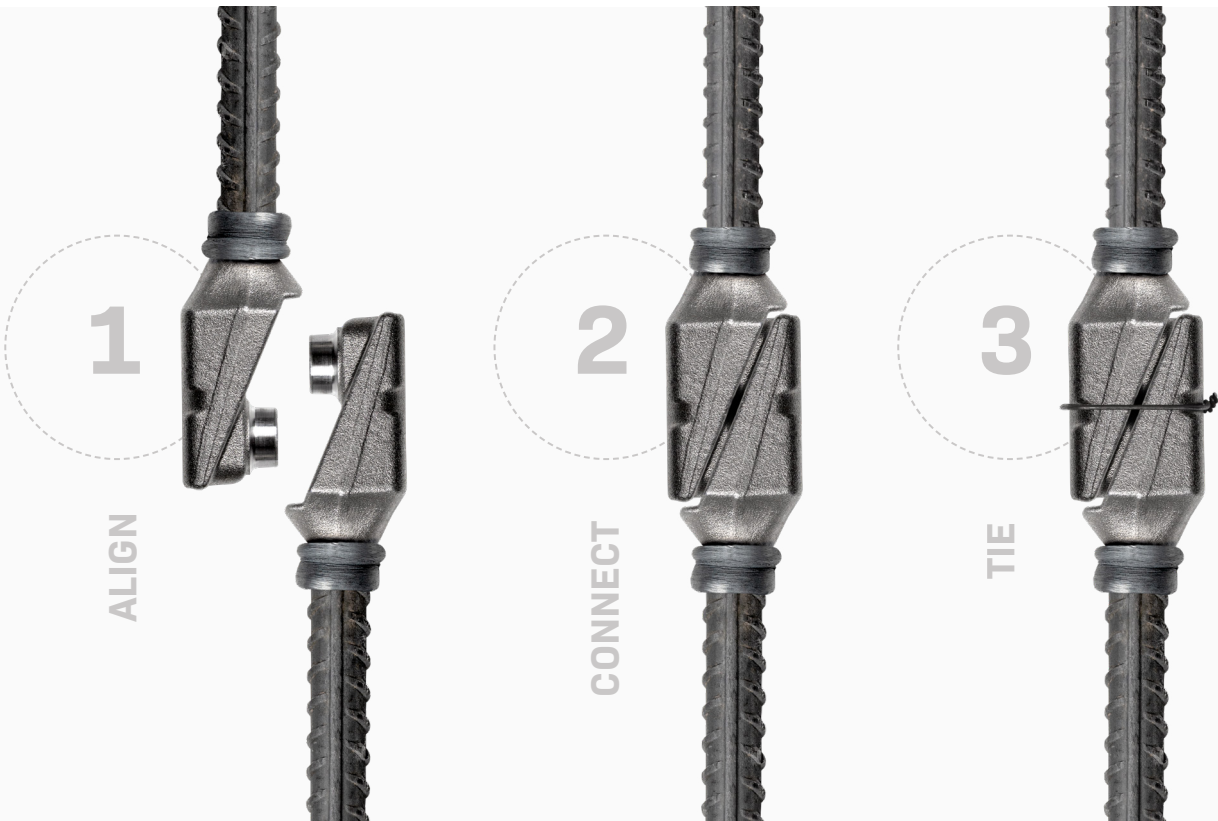
COUPLER SPECIFICATIONS

DETAILS

Swiftcore Coupler sizes range from 16mm – 40mm. They are installed in three easy steps. Refer to the coupler specifications table and install guide below.

COUPLER SPECIFICATIONS

Size (mm)	Code	Description	Weight (kg)	Length (mm)	Width (mm)	Height (mm)	Connected Length (mm)	Tie Wire Requirment Min (1.5mm)
				L	W	H	CL	
16	SWIFTCORE16	Swiftcore 16mm Coupler	0.314	70	37	34	91	1
20	SWIFTCORE20	Swiftcore 20mm Coupler	0.547	83	45	41	108	1
24	SWIFTCORE24	Swiftcore 24mm Coupler	0.901	97	53	49	126	1
28	SWIFTCORE28	Swiftcore 28mm Coupler	1.414	112	62	57	145	2
32	SWIFTCORE32	Swiftcore 32mm Coupler	2.151	124	73	67	161	2
36	SWIFTCORE36	Swiftcore 36mm Coupler	2.776	135	80	72	176	2

1 ALIGN

2 CONNECT

3 TIE

QUALITY ASSURANCE

QUALITY ASSURANCE

Swiftcore Couplers manufacturing process complies to the IATF 16949:2016 International Standard for Automotive Quality Management System. This is applicable to – the manufacture of metal precision forged parts and machined parts.

Agency	Standard	Certificate
nqa.	IATF 16949: 2016	NQA # T 12507 IATF# 0323539

STANDARDS

Swiftcore Coupler bar assemblies have been tested by a NATA accredited laboratory and deemed compliant with the mechanical property's as required by AS/NZS 4671: 2001. Other applicable standards that passed slip option 2 and tensile testing requirements ISO 15835-1: 2018, ISO 15835-2: 2018, ISO 15835-3: 2018.

Agency	Standard	Certificate
IMTS MELBOURNE TESTING SERVICES	AS/NZS 4671 : 2001	T 12507

IDENTIFICATION

Each Swiftcore Coupler has an embedded mark on the top face to identify the size quickly. Refer to the table below for reference.

Bar Size (Metric)	Identification
16	Swiftcore 16
20	Swiftcore 20
24	Swiftcore 24
28	Swiftcore 28
32	Swiftcore 32
36	Swiftcore 36
40	Swiftcore 40

Disclaimer

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information
& pricing**