STRYPE

SIMPLIFY. SOLVE.

FORTIS Bolt Coupler

MECHANICAL SPLICING INSTALLATION GUIDE

Full-strength mechanical rebar splicing with NO threading,
NO welding and NO off-site bar-end preparation.

FORTIS Bolt Coupler Range

FORTIS Bolt Couplers are offered in eight (8) sizes to suit all standard sizes of ***AS/NZS 4671:2019*** Grade 500N reinforcing bar, from N12 to N40 (inclusive).

Each coupler is uniquely designed to optimise strength while minimising installation complexities, with attributes such as length, diameter, bolt quantity and bolt sizing all varying by coupler size.

All FORTIS Bolt couplers are imprinted with specific batch numbers corresponding to the batch in which they were manufactured. Batch-specific material certificates are provided following delivery of the products to site. This ensures full traceability of the product and its raw materials right back to the origins of manufacture.

The proceeding pages provide details on the required installation methodology for FORTIS Bolt Couplers.

Details of the available FORTIS Bolt Couplers shown below:

Item Code	Bar Size	External Diameter (mm)	Length (mm)	Bolt QTY	Socket Size (mm)	Nominal Torque (Nm)	Unit Weight (kg)
FBC12	N12	33	127	6	14	205	0.7
FBC16	N16	37	159	6	14	205	1..1
FBC20	N20	44	191	8	14	205	1.8
FBC24	N24	54	311	10	16	475	4.0
FBC28	N28	60	311	10	16	475	5.0
FBC32	N32	65	396	10	22	680	7.5
FBC36	N36	72	430	12	22	750	9.6
FBC40	N40	80	440	12	22	790	12.8

FORTIS Bolt Coupler Installation

The information provided in this document is intended to assist installers on the recommended approach to the installation of FORTIS Bolt Couplers on site. This information is provided as a guide only and all information on this page should be read thoroughly and well understood prior to commencing installation. If further guidance is required or if anything is unclear, the STRYPE team may be contacted for further assistance.

IMPORTANT SAFETY NOTE

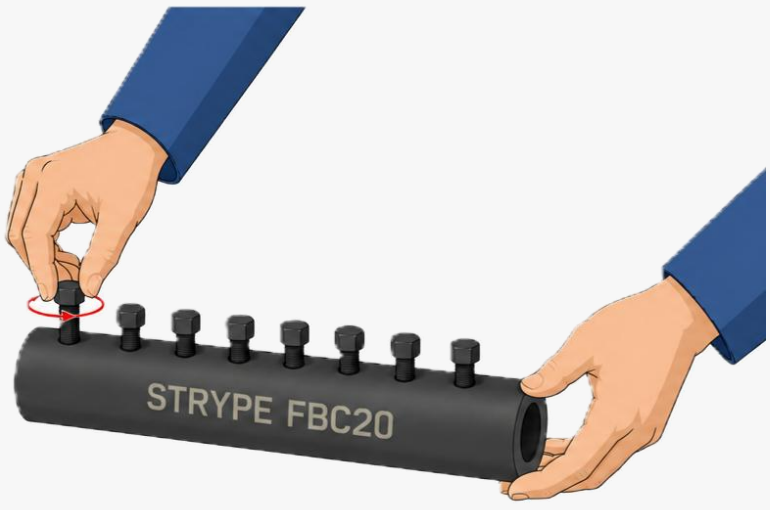
1. Impact power tools should not be used.
2. Appropriate hex sockets should be used.
3. Extension pipes/bars are not to be used to aid leverage if using hand wrenches.
4. Consider using appropriate power tools for N24 bars and above.
5. Appropriate PPE must be worn.

STEP 1

Remove the FORTIS Bolt Coupler from the packaging.

STEP 2

Partially unscrew all bolts anti-clockwise (as required) to allow unobstructed access of the bars into the FORTIS Bolt Coupler. Do not remove the bolts completely.



STEP 3

Gently slide the FORTIS Bolt Coupler over Bar 1 until the bar is flush with the centre pin. If it will not be possible to install Bar 2 once the bolts of Bar 1 have been hand-tightened, skip to step 12 of this installation guide.

STEP 4

On the Bar 1 half of the FORTIS Bolt Coupler, hand-tighten the bolts in sequence (1,2,3,4 etc) by rotating them clockwise. Start with the centre-most bolt (bolt 1 in this graphic), then work progressively outward towards the end of the coupler where Bar 1 was inserted. Hand-tighten the bolts only. Do not apply torque at this stage.

STEP 5

Gently insert Bar 2 into the FORTIS Bolt Coupler until the bar is flush with the centre pin.

STEP 6

Repeat step 4 for the remaining bolts.

STEP 7

Review the alignment of Bar 1 and 2 and ensure that the FORTIS Bolt Coupler is oriented to allow clear access for your chosen tooling. Adjust the alignment of both bars and the FORTIS Bolt Coupler as required.

STEP 8

On the Bar 1 half of the FORTIS Bolt Coupler, torque the bolts in sequence by rotating them clockwise using a suitable hand wrench, torque wrench or nut runner (as deemed necessary). Start with the centre-most bolt (bolt 1 in this graphic), then work progressively outward towards the end of the coupler where Bar 1 was inserted. Fully tighten each bolt until the heads of the bolts shear off. Bolt heads will shear off once the required torque has been applied.

STEP 9

Repeat step 8 for the remaining bolts.

STEP 10

Recycle or otherwise dispose of the bolt heads responsibly.

STEP 11

The installation of the FORTIS Bolt Coupler is complete. Steps 12-18 are only applicable for installations where it will not be possible to install Bar 2 once the bolts of Bar 1 have been hand-tightened.

STEP 12

Where it will not be possible to install Bar 2 once the bolts of Bar 1 have been hand-tightened, insert a suitably sized flat blade screwdriver (or other lever) into the FORTIS Bolt Coupler and gently pry the centre pin outwards from the body of the FORTIS Bolt Coupler. Do not remove the pin completely.

STEP 13

Slide the FORTIS Bolt Coupler over Bar 1 until the end of bar 1 exits the coupler.

STEP 14

Align the end of Bar 2 with the end of Bar 1, allowing only a small gap to accommodate the centre pin.

STEP 15

Slide the FORTIS Bolt Coupler over Bar 2 until the centre pin is positioned between Bar 1 and 2.

STEP 16

Gently press the centre pin back into the FORTIS Bolt Coupler. This will ensure that each bar is adequately inserted into the FORTIS Bolt Coupler.

STEP 17

Manipulate both bars and the FORTIS Bolt Coupler (as required) to ensure that each bar is in contact with the centre pin and that the bars are aligned for the applicable installation.

STEP 18

Complete step 4, then 6-10 to complete the installation.

FORTIS BOLT COUPLER

CROSS SECTION

The FORTIS Bolt Coupler develops full bar strength through mechanical interlock and bearing.

LOCKSHEAR BOLTS

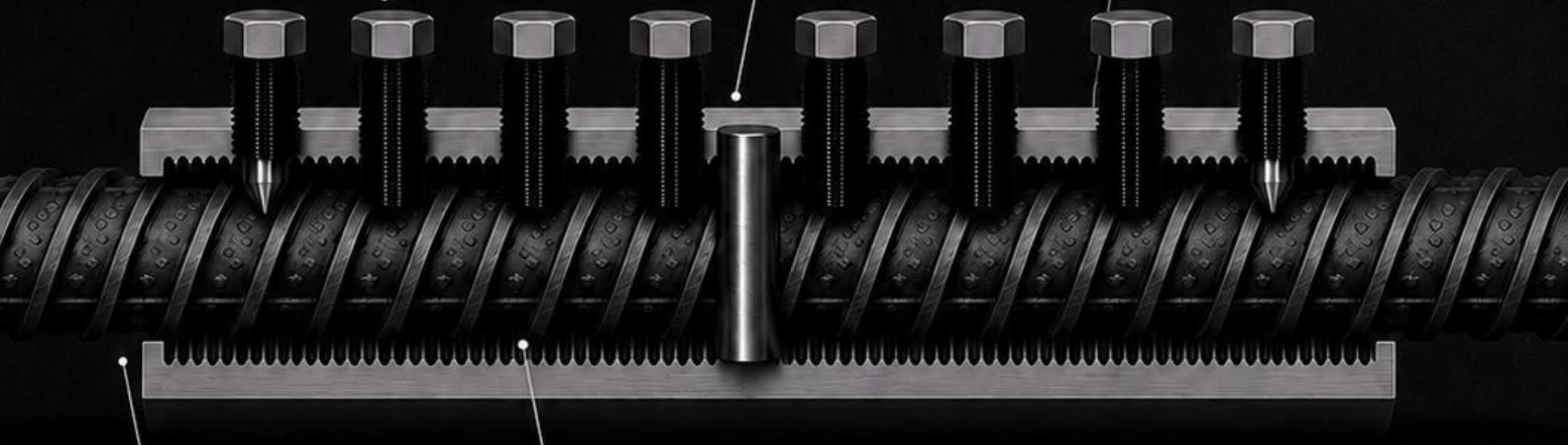
Bolts are tightened to the specified torque. The bolts shear off to provide visual verification of correct installation.

STOPPING PIN

The stopping pin ensures proper bar engagement between the bars.

COUPLER BODY

High strength steel body provides confinement and transfers load between reinforcing bars.



HIGH STRENGTH REBAR

Grade 500N reinforcing bar inserted into coupler.

MECHANICAL INTERLOCK

Precision cut metric threads run the entire length of the coupler and engage the reinforcing bars for maximum strength and reliability, creating a strong mechanical interlock and ensuring full load transfer.

FORTIS BOLT COUPLERS ARE IDEAL FOR:

NEW CONSTRUCTION

INFRASTRUCTURE PROJECTS

RETROFIT & STRENGTHENING

PILE CAPS

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