

FORTEC

The Ultimate Splicing System



Dextra

www.dextragroup.com

Product Features

Fortec+ is a parallel threaded mechanical splicing system designed for the connection of concrete reinforcing bars from Ø12 to 50 mm (ASTM #4 to #18).

Fortec+ couplers are designed and manufactured in compliance with Eurocode 2, ASME Sec III Div 2.

Benefits

- No reduction of the bar cross section area.
- Allows full ductile elongation of bars.
- Systematic finishing process guaranteeing optimal thread performance exceeding project's requirement.
- Easy installation, no torque wrench required.
- One standard coupler for all splicing requirements (Standard / Position).
- Type 2 coupler suitable for seismic areas.
- Tested under reverse cyclic conditions.
- Solves bar congestion problems.

Site Equipment



The 4 machines necessary to Fortec+ system rebar preparation are engineered by Dextra.

Rebar Preparation: A 3-Steps Process

STEP 01 Cutting

The end of the 90° reinforcing bar is sawn square.



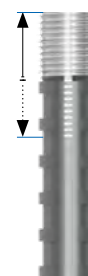
STEP 02 Cold forging

The sawn end of the reinforcing bar is then enlarged by a patented cold forging process. The core diameter of the bar is increased to a pre-determined size.



STEP 03 Threading

The enlarged end of the rebar is threaded to the required length.



Quality testing

The threaded bar end is then proof-tested by applying a tensile load. This is a non-destructive test since the load level remains within the elastic zone of the reinforcing bar.



[click to play](#)

Splicing Methods

Standard splice

Easy connection by bar rotation until full thread engagement.

Thanks to the parallel thread:

- No risk of thread mis-match.
- No risk of cross-threading.



TYPE
A

Position splice

Even when both bars cannot be turned, the Fortec+ system uses a standard coupler.

The coupler is fully engaged onto the extended thread of the connecting bar (step 1).

The assembly is simply completed by butting the bars end to end and screwing back the coupler onto the first bar until full engagement (step 2).



TYPE
B



TYPE
C

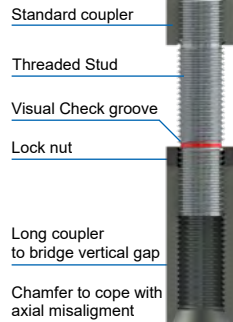
Position Type C is similar to Type B, with the addition of a lock-nut to maintain the second bar in position.

Applications

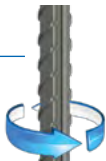
Caging splice

To connect cages that haven't been pre-fabricated together or sets of bars that can't be brought butt to butt, Fortec+ Caging Splice is your solution.

Both bars are threaded with a standard Fortec+ thread, then the free rotating elements of the Caging Splice will restore thread continuity and make the connection.



Smaller diameter rebar



click to play

Larger diameter rebar

Transition splice

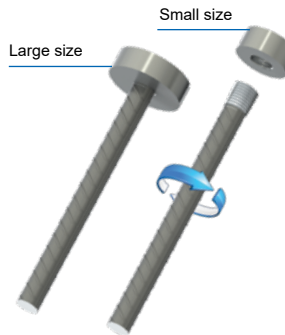
When there is a need to splice bars of different sizes, it is allowable in most cases to reduce the size of the larger bar and to use a standard coupler.

However the Fortec+ system also offers special transition couplers that conveniently avoid the difficult task of planning in advance the need of transitions.



Headed Bars

Also called "End Anchors" they are convenient alternative to hooked bars to provide end anchorages in congested areas. Fortec+ standard anchorage heads are circular and have a net bearing area of 4 times or 9 times the cross-section of the bar.



Weldable couplers

For composite construction where concrete reinforcement bars must be welded to structural steel, use Fortec+ weldable couplers, which are specially made from low carbon steel and which have a large chamfer for bevel welding.



Quality Assurance



Generic specification

- No reduction of the nominal cross section area of the parent bars.
- No reduction of the ductility of the reinforcing bar.
- Couplers are individually marked to allow full traceability of the material.
- Parallel-thread system.

Note : The information in this catalogue is considered up to date at the time of publication. We reserve the right to make technical and design changes at any time. Dextra shall not accept liability for the accuracy of the information in this publication or for any printing errors.

Major References



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Ostrovets 1&2 Nuclear Power Plant, Belarus

Commercial presence
in more than

55 countries



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