

# C-JOINT

fka Ruredil X Joint

Carbon fiber connector to anchor  
FRP systems on concrete and masonry



**C-JOINT** is a connection system made of unidirectional carbon fibers for the construction of an anchor between existing structures and carbon FRP structural strengthening systems.

The connection must be made on site and consists of a bundle of long unidirectional carbon fibers held together in a special mesh which gives the bundle a cylindrical shape.

## THE SYSTEM IS MADE UP OF:



### ► C-JOINT

Carbon fiber connection element,  $\varnothing$  6, 10 and 12 mm, 10 m long.



### ► C-RESIN JOINT

Special epoxy resin with high adhesive power for the application of the C-JOINT connector.

## PROPERTIES OF THE SYSTEM

- It eliminates the risk of triggering local collapse mechanisms due to the overturning of infill walls, thanks also to the connector that is inserted between the wall and the beam/slab;
- Effective connection between the building structure and the applied strengthening systems, to achieve the continuity necessary to guarantee the reliability of the reinforcement;
- Excellent adhesion to any building material: normal and pre-stressed reinforced concrete, or masonry.



## TECHNICAL CHARACTERISTICS

### PROPERTIES OF CARBON FIBERS

Tensile strength	4,9 GPa
Elastic modulus	250 GPa
Fiber density	1,82 g/cm <sup>3</sup>

### PROPERTIES OF THE CONNECTOR C-JOINT

Nominal diameter	6 mm	10 mm	12 mm
Tensile strength	1225 MPa	1221 MPa	1263 MPa

### SPECIFICATIONS FOR THE SUPPLY

Package	10 m dispenser
Consumption	In addition to the length required for the hole itself calculate an additional 15 cm for each end.

### PROPERTIES OF THE ADHESIVE

### C-RESIN JOINT

Catalysis ratio (A:B)	2:1
Specific weight (A + B)	0,90 - 0,96 kg/liter
Workability (EN ISO 9514) at 23°C	25 minutes (on 150g mass)
Compressive strength (ASTM D965)	≥ 50 MPa
Adherence/bond strength (EN 12188)	≥ 16 MPa
Reaction to fire (EN 13501-1)	Euroclass E
Glass transition temperature (DSC ISO 11357-2)	+45 °C

### SPECIFICATIONS FOR THE SUPPLY

Resin package	4 + 2 kg buckets (A + B)
Consumption	About 1.5 kg/liter of volume to be filled, also considering the impregnation of the connector



## FIELDS OF APPLICATION

- ▶ Connection of FRP strengthening systems;
- ▶ Realization of structural connections where it is not possible to close the carbon mesh wrap on itself;
- ▶ Anchoring of the traditional reinforced slab with carbon mesh.