

Elites L

GFRP L-shaped connector for structural reinforcement in CRM systems.

AR fiberglass preformed connector designed for structural reinforcement of masonry, arches and vaults, and characterized by improve adhesion. It is suitable for seismic adjustment of structures located in areas at risk.

BENEFITS

- Durability;
- Can be used with lime or cement-based mortars;
- Perfect compatibility to any hydraulic or chemical matrix used for the sealing.
- High tensile and shear strength;
- Ready to use, easy and quick to apply;
- Limited invasiveness;
- Low cost of installation;
- Suitable for interventions on buildings of historical and cultural interest.

COLOUR

White.

APPLICATION FIELDS

GFRP performer fiberglass connector designed for structural reinforcement of arches, vaults, and masonry. It is ideal be used for the structural reinforcement of masonry buildings using CRM technology. *Elites L* is designed to be used in combination with a fibreglass structural reinforcing mesh ideal (see *Polites AR 330*), the vinyl ester resin called *Sismabond* and with the thermo-structural mortar *Diathonite Sismactive* (see data sheets)

STORAGE

Elites L must be stored in protected and well-ventilated environments, away from direct sunlight, water and frost, at temperatures between +1 °C and +35 °C.

PREPARATION OF THE SUPPORT

Ensure that the support is completely hardened, clean and free of efflorescence and salts.

The temperature of the substrate must be between +5 °C (+ 41°F) and +35 °C (+ 95°F). Never apply mortars to frozen substrates. For the support preparation methods, please refer to the indications reported on the technical data sheets of those products with which the AR fiberglass connector *Elites L* is used in combination with.

APPLICATION IN THE CRM STRUCTURAL REINFORCEMENT SYSTEMS

Application on one side of the masonry - GFRP fiberglass connector *Elites L*

1. Wash and wet the surface of the substrate until saturated. If necessary, rebuild parts of missing or particularly damaged masonry.
2. To set up the connectors, proceed with drilling the guide holes for a depth of 2/3 of the masonry thickness. The number of holes must be planned in advance, calculated on the diameter of *Elites L*, and never less than 4/m². The depth of the holes must be calculated according to the thickness of the masonry. In addition, the holes must be kept perpendicular to the wall, and the expected diameter for each hole must be equal to that of the connector increased by at least 4 mm ($d_{holes} = d_{connector} + 4 \text{ mm}$). Holes are to be drilled in those compact areas of the masonry, preferably with rotating tools.
3. After drilling the hole, remove all dust and loose material with compressed air.
4. Insert preformed inert cylindrical tool into the holes for their subsequent detection.



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5. Apply a first layer of *Diathonite Sismactive* (see data sheet), by hand or by machine, making sure not to pass with the mortar over the holes. If applied with plastering machine, it is recommended to spray the product from bottom to top, with few interruptions.
6. Proceed with the installation of the mesh. Place *Polites AR 330* into the first layer of *Diathonite Sismactive* when it is still fresh, making sure to partially incorporate it into the mortar. We recommend an overlap of the mesh bands for about 15 - 20 cm in order to ensure mechanical continuity. *Polites AR 330* shall not be crinkled or blistered.
7. When the mortar is still fresh, remove the cylindrical tools from the guidelines holes previously drilled, then inject the *Sismabond* vinyl ester resin (see data sheet) into each hole. Afterwards, insert a preformed *Elites L* fiberglass connector by its "long" side into each hole, making sure to direct the short side downwards.
8. Rotate the short side of the *Elites L* connector by 45°, making it fall on the diagonal of the mesh.
9. Wait for the first layer of *Diathonite Sismactive* to dry (12-24 h depending on weather conditions), then apply the second layer by hand or by machine.

Application on both sides of the masonry – double GFRP fiberglass connector *Elites L*

1. Wash and wet the surface of the substrate until saturated. If necessary, rebuild parts of missing or particularly damaged masonry.
2. To set up the connectors, proceed with drilling the guide holes from one side to the other of the masonry. The number of holes must be planned in advance, calculated on the total diameter of *Elites L*, and never less than 4/m². In addition, the holes must be kept perpendicular to the wall. Holes are to be drilled in those compact areas of the masonry, preferably with rotating tools.
3. After drilling the hole, remove all dust and loose material with compressed air.
4. Insert preformed inert cylindrical tool into

- the holes for their subsequent detection.
5. Apply a first layer of *Diathonite Sismactive* (see data sheet), by hand or by machine, making sure not to pass with the mortar over the holes. If applied with plastering machine, it is recommended to spray the product from bottom to top, with few interruptions.
 6. Proceed with the installation of the mesh. Place *Polites AR 330* into the first layer of *Diathonite Sismactive* when it is still fresh, making sure to partially incorporate it into the mortar. We recommend an overlap of the mesh bands for about 15 - 20 cm in order to ensure mechanical continuity. *Polites AR 330* shall not be crinkled or blistered.
 7. When the mortar is still fresh, remove the cylindrical tools from the guideline holes previously drilled, then inject the *Sismabond* vinyl ester resin (see data sheet) into each hole. Afterwards, insert a preformed *Elites L* fiberglass connector by its "long" side into each hole, making sure to direct the short side downwards.
 8. Rotate the short side of the *Elites L* connector by 45°, making it fall on the diagonal of the mesh.
 9. Wait for the first layer of *Diathonite Sismactive* to dry (12-24 h depending on weather conditions), then apply the second layer by hand or by machine.

SUGGESTIONS

- Do not apply at environmental temperature or at support temperature lower than +5°C (34°F) and higher than +35°C (95°F).
- During summer season, apply the product in the cooler hours of the day, away from sunlight.
- Do not apply with imminent threat of rain or frost, in conditions of strong fog or with relative humidity higher than 70%.
- Follow the indications reported on the technical data sheets of those products with which the mesh *Elites L* is used in combination with.

ARMORS – AR fiberglass connector

The indications and prescriptions given, while representing our best experience and knowledge, are to be considered indicative and must be confirmed by comprehensive practical applications. Diasen does not know the specificities of the process, let alone the determining characteristics of the application support. Therefore, before using the product, the applicator must in any case carry out preliminary tests, to verify the perfect suitability for the intended use and, in any case, assumes any responsibility that may arise from its use. In case of uncertainties and doubts, please contact the technical office of the company before the start of the work, it being understood that this support is a simple aid for the applicator, which must in any case guarantee the possession of adequate skills and experience for the laying of the product and for the identification of the most appropriate solutions. Always refer to the latest updated version of the data sheet, available on the website www.diasen.com that cancels and replaces each other.

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SAFETY

While handling, always use personal protective equipment (PPE) and respect the instructions described in product safety data sheet.

FEATURES*	NOMINAL VALUE	UNITS
Material	Fiberglass with resin	-
Resistant area	11,5	mm ²
Mean tensile strength	18.900	N
Elastic modulus	80.400	MPa
Glass-liquid transition temperature	> 100	°C
TYPE	DIAMETER Ø	DIMENSIONS (cm)
Fiberglass "L" shaped connector	8 mm	10 x 20
Fiberglass "L" shaped connector	8 mm	10 x 50
Fiberglass "L" shaped connector	8 mm	10 x 70

* The following data, even if carried out according to standard test methods, are indicative and may be subject to changes to the specific site conditions.



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