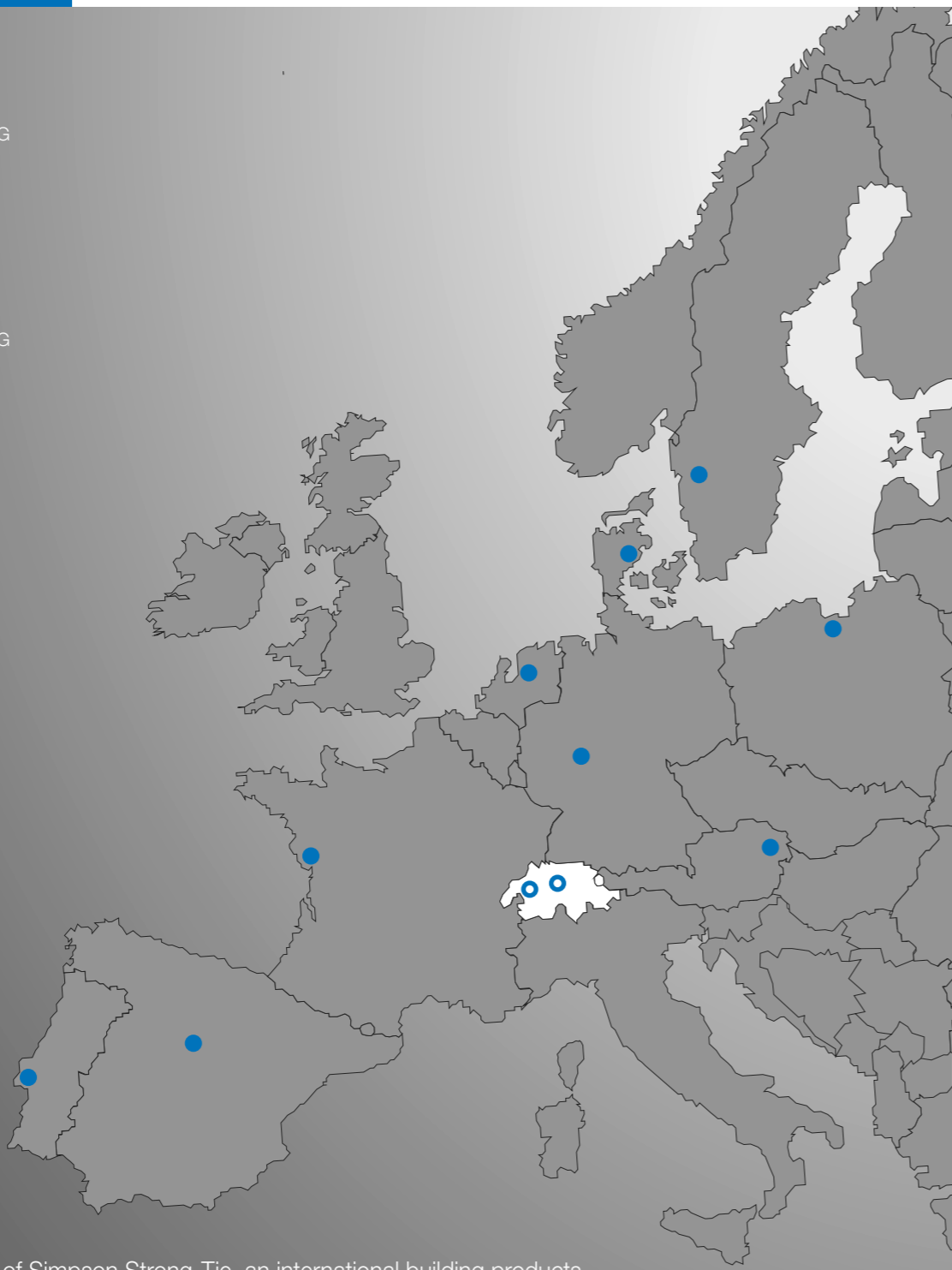


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 Denmark
 France
 Germany
 Poland
 Portugal
 Spain
 Sweden



Since 2012 S&P has been part of Simpson Strong-Tie, an international building products company based in California with multiple locations across Europe.

Simpson Strong-Tie was founded in 1956 and has established itself as the world-wide leader in wood-to-wood, wood-to-steel and wood-to-concrete structural connectors.

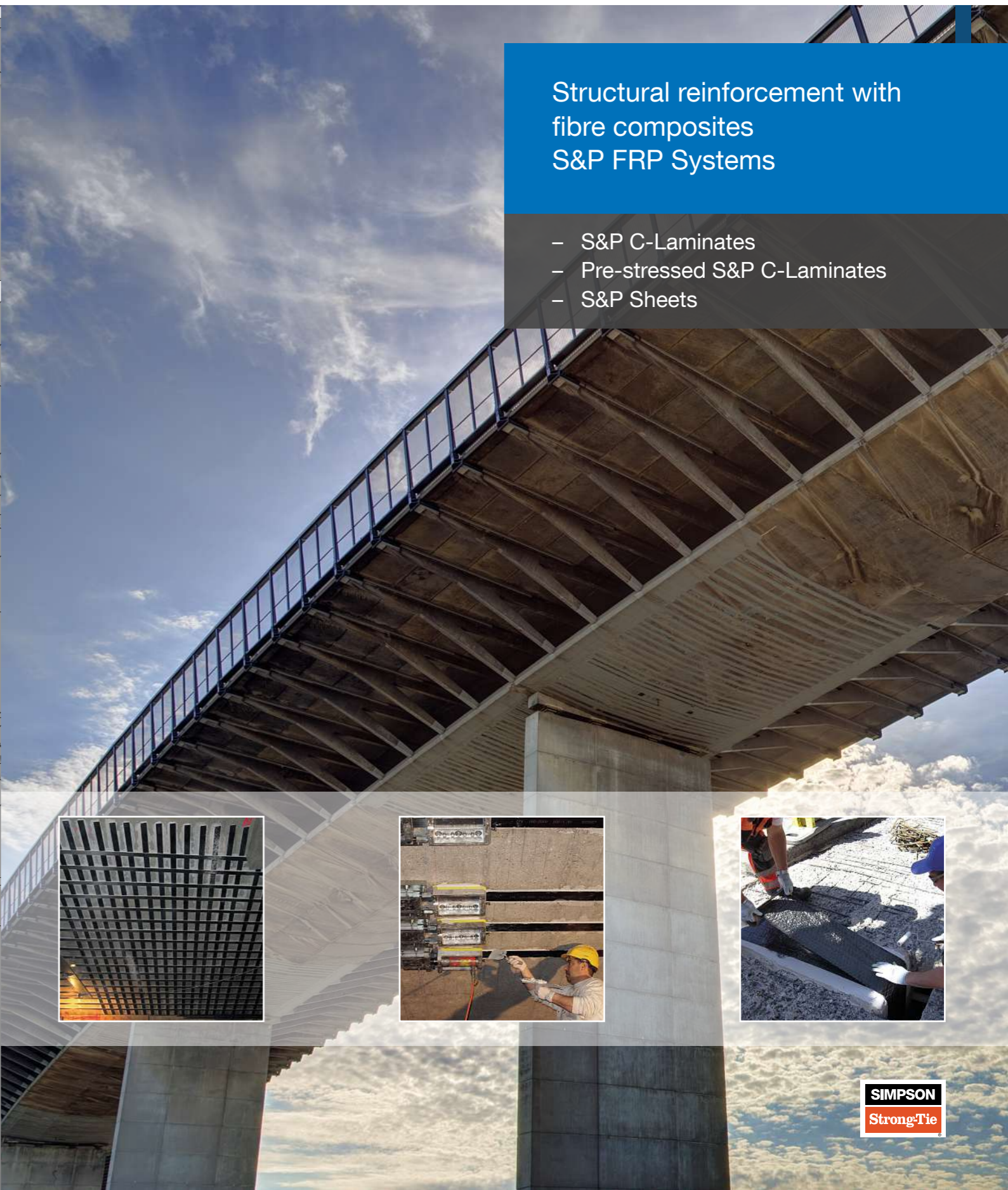
The company is committed to helping customers succeed by providing exceptional code-listed products, full-service engineering and field support, product testing and training, and on-time product delivery. With the acquisition of S&P, Simpson Strong-Tie continues to expand its offering to include a full array of concrete repair, protection and strengthening solutions. By combining the strengths of our two brands, Simpson Strong-Tie and S&P can offer the highest level of quality and service to meet all your concrete repair, strengthening and restoration needs. We look forward to working with you on your next project.

Contact us: +41 41 825 00 70



Structural reinforcement with fibre composites S&P FRP Systems

- S&P C-Laminates
- Pre-stressed S&P C-Laminates
- S&P Sheets

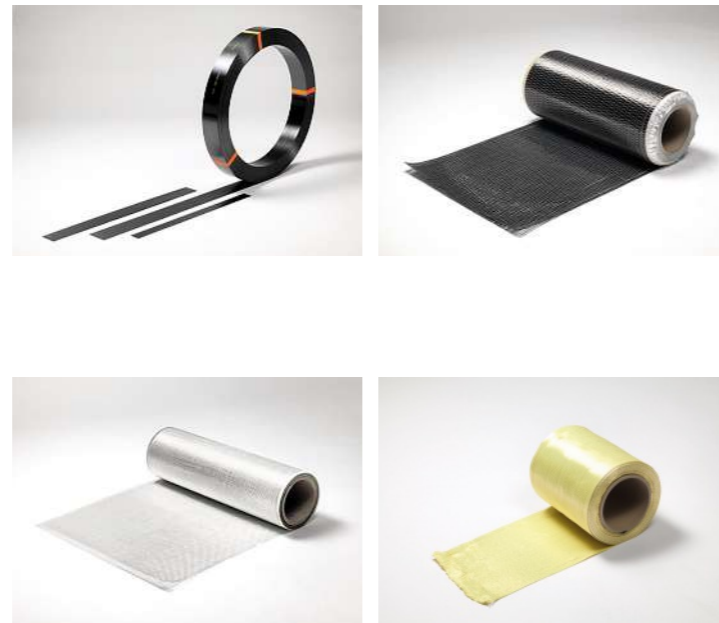


S&P FRP Systems

S&P FRP systems are made from carbon, aramid and glass fibres, which are installed using tested and certified epoxy adhesives and saturants. In civil and structural engineering, FRP systems are used for static reinforcement of structures during conversions, system adaptations or building upgrades. Depending on the structure material (concrete, masonry, steel, wood) or static requirement (bending moment, shear force, normal force, seismic load), either S&P C-Laminates or S&P Sheets can be installed. In cases where it is required to combat larger deflection or vibrations, pre-stressed S&P C-Laminates are often the preferred option. The high strength, lightweight and corrosion resistant reinforcement products and systems can be used in many applications. With the help of the S&P Adhesive-forming unit and the S&P Wet-lay-up machine for the pre-impregnation of S&P sheets, the application of the reinforcement on the construction site can be economically and efficiently improved. The S&P Software applications FRP Lamella and FRP Colonna provide assistance for the required static calculations.

ADVANTAGES

- Very high tensile strength
- Durable, corrosion resistant materials
- Low deadweight and building height
- Any delivery length
- Excellent behaviour in fatigue
- Water vapour permeable epoxy resin
- Special types upon request (cross section, E-Modulus)
- Simple, flexible and economic technology
- Advice/Engineering throughout all phases
- Own production facilities for laminates and sheets in Europe
- Tested system solution with system guarantee



Our Product range at a glance

S&P C-Laminate (surface applied / slot-applied / pre-stressed)

| Type SM * (150/2000) E ≥ 170 kN/mm ² | Type HM * (200/2000) E ≥ 205 kN/mm ² | * SM = Standard E-Modulus / HM = High E-Modulus |
|---|---|---|
| Cross sections from 10/1.4 to 150/1.4 mm | Cross sections from 20/1.4 to 120/1.4 mm | |
| Roll length: 100 or 150 m * | Roll length: 100 or 150 m * | * or cut to size |

S&P Sheets

| | |
|---------------------|---|
| Types | S&P C-Sheet 240, S&P C-Sheet 640, S&P A-Sheet 120, S&P G-Sheet E/AR 50/50, S&P G-Sheet E/AR 90/10 |
| Fibre weight | from 200 g/m ² to 800 g/m ² in main fibre direction |
| Roll length | 50 m or 100 m or cut to size |
| Roll width | 200 / 300 / 600 / 670 mm depending on type |

S&P Epoxy Adhesives / Laminating Resins

S&P Resin 55 HP (laminating resin), S&P Resin 220, S&P Resicem HP (water vapour permeable), S&P Resin 230 (levelling mortar)

Delivery form single units or by the pallet



Devices and Processing aids

Roll dispenser for laminates, adhesive-forming unit, wet-lay-up machine, rubber spatula, press roller (teflon), aramid scissors

(Sale and/or rental)



Design Software

| | |
|--------------------|---|
| FRP Lamella | Design software for flexural and/or shear reinforcement with S&P FRP Systems |
| FRP Colonna | Design software for reinforcement of centrally loaded concrete columns by wrapping S&P FRP Sheets |

Please visit our website at www.sp-reinforcement.eu for further information:
References/Technical data sheets/Text of specification/Research reports/Publications

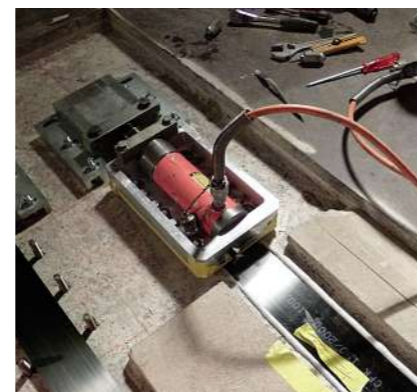
Application



1 Surface applied S&P C-Laminate (Bending)



2 Slot-applied S&P C-Laminate (Bending)



3 Pre-stressed S&P C-Laminate (Deflection)



4 Beam with S&P C-Sheet 640 (Shear force)



5 Column with S&P C-Sheet 240 (Normal force)



6 Strengthening of masonry with S&P G-Sheet (Seismic enhancement)