Our pre-engineered modular GRP platforms (glass reinforced plastic platforms), manufactured using Re-Struct GRP profiles, are versatile and can solve seemingly impossible access problems. What is more, because our access platforms are comparable to steel and aluminium, but can offer zero life cycle costs, they bring real savings in both money and time.

Our bespoke structural platforms can be employed for safe access for rooftop walkways, wastewater treatment works, rail driver walkways, chemical bund access, and many other industrial applications.

All our GRP platforms and structures are manufactured to BS EN ISO14122-3:2001 and BS5395-1-2010.

Design Services

Relinea’s design team has extensive experience in the design of cost effective, high performance composite structural systems. We look at projects from a different perspective and offer a practical solution to problems that arise. The team proactively design platform systems that are constructed to meet the long term requirements of the specified project, and further assure ease of installation. We use the latest CAD technology and finite analysis to ensure that all systems are designed to meet the highest standards of the various industry groupings we operate within.

Installation Services

Our Installation Teams are highly trained personnel with extensive experience of the installation of GRP Structures in a wide variety of industries.
1.01 Related documents
   a) Contract drawings, including general drawings and addenda drawings
   b) General specification sections.

1.02 Summary
   a) This section involves fabricated structures containing:
      1. GRP Profiles
      2. GRP Handrail
      3. GRP Fabrications
      4. GRP Moulded Grating

1.03 Scope of Work
   a) The Contractor shall furnish all labour, materials, equipment and incidentals as required to adequately install all of the GRP products specified herein.

1.04 Quality Assurance
   a) All GRP Products and Fabrications shall be supplied by an experienced firm who has continually engaged in the manufacture or fabrication of glass reinforced plastic products.
   b) The Installing Contractor shall ensure that all field dimensions are taken accurately and communicated effectively to the GRP Fabricator. The Installing Contractor will further ensure that other trades will not affect an adequate installation of the FRP, and that all manufacturer’s instructions and recommendations are followed.
   c) No substitution of materials will be accepted unless they are submitted for review, and the Architect/Engineer approves their use.

1.05 Design Requirements
   a) GRP profiles shall conform to:
      • EN 13706-1: Specifying the designation/labeling/marking of structural profiles with regard to selection of materials, selection of reinforcement, surface treatment, etc.
      • EN 13706-2: Indicating testing methods and tolerances for pultruded structural profiles. Guidelines for quality and quality assurance are also provided.
      • EN 13706-3: Indicating minimum values for the technical properties of structural profiles in relation to the standard’s two classes.
      • The standard BS EN 13706 – Specification for Pultruded Profiles, defines two grades of structural profiles.
      • All Engineered Composites structural profiles with a wall thickness of over 5mm thick meet the higher performance E23 grade while those at 3-5mm wall meets the E17 grade.
b) Design will conform to the following:
   - BS 5395-1:2010. Stairs Code of practice for the design of stairs with straight flights and winders
   - BS 5395-4:2011. Code of practice for the design of stairs for limited access

c) Calculations & Design

Design using RE-STRUCT profiles is based on values chosen that are characteristic of the material properties for pultrusions as defined in the Structural Design of Polymer Composites – EUROCOMP Design Code and Handbook1. These values were chosen because they form part of a unified design code for structural composite materials, which are readily accessible to all design engineers. Testing of RE-STRUCT profiles has shown that the EUROCOMP values may be treated as minimum guaranteed properties.

Load tables are provided in the RE-STRUCT design Manual and are based on the profiles being used at ambient temperature and in a non-aggressive environment so material coefficients of $\gamma_m = 3$ for strength and $\gamma_m = 1.3$ for stiffness have been assumed. If the profiles are likely to be used at elevated temperatures or in aggressive environments then further safety factors should be applied.

1.06 Submittals
   a) Submit complete shop drawings and engineering data for all GRP materials and fabrications as required by the scope of work.
   b) Product data;
      - Manufacturer’s catalogue with load data for all GRP profiles and grating.
   c) Drawings showing all GRP materials as required and include all dimensions, fasteners, tolerances, assembly and installation details as required.
Part 2 Products

2.01 General – Profiles
   a) All structural shapes are to be manufactured by the pultrusion process with a glass content minimum of 45%, maximum of 55% by weight. The structural shapes shall be composed of fibreglass reinforcement and resin in qualities, quantities, properties, arrangements and dimensions as necessary to meet the design requirements and dimensions as specified.
   b) All profile will be manufactured under ISO 9001-2008
   c) Fibreglass reinforcement shall be a combination of continuous roving, continuous strand mat, and surfacing veil in sufficient quantities as needed by the application and/or physical properties required.
   d) Resins shall be isophthalic polyester or vinyl ester with chemical formulation necessary to provide the corrosion resistance, strength and other physical properties as required.
   e) All finished surfaces of GRP items and fabrications shall be smooth, resin-rich, and free of voids and without dry spots, cracks, crazes or unreinforced areas. All glass fibres shall be well covered with resin to protect against their exposure due to wear or weathering.
   f) Suppliers, GRP Systems Ltd T/A Relinea, 14 Crosshill Road, Crumlin, Co Antrim, BT29 4BQ, Tel +44 (0) 2894 422270

2.02 General – Grating
   a) All GRP items under this section shall be composed of fibreglass reinforcement and resin qualities, quantities, properties, arrangements and dimensions as necessary to meet the design requirements and dimensions as specified in the Contract documents. All grating will be manufactured under ISO 9001-2008.
   b) All GRP materials will be manufactured with either orthophthalic polyester, Isophthalic polyester or vinyl ester resins.
   c) All moulded GRP grating products shall be fire retardant per ASTM E-84 Class 1 flame spread of 25 or less.
   d) All moulded GRP grating products are non-magnetic and non-conductive. Moulded grating can be supplied with a conductive anti-static finish if required.
   e) After fabrication of GRP, all cuts, holes and abrasions shall be sealed to prevent corrosion.
   f) All mechanical grating clips shall be Type 316SS (stainless steel)
Part 3 - Execution

3.01 Fabrication
   a) All fabrication will be carried out under ISO 9001-2008
   b) Measurements: Structural Shapes supplied shall meet the minimum dimensional requirements as shown or specified. The Contractor shall provide and/or verify measurements in field for work fabricated to fit field conditions as required by manufacturer to complete the work. Determine correct size and locations of required holes or coping from field dimensions before structural shape fabrication.
   c) Sealing: All shop fabricated cuts or drilling shall be coated with vinyl ester resin to provide maximum corrosion resistance. All field fabricated cuts or drilling shall be coated similarly by the contractor in accordance with the manufacturer’s instructions.
   d) Hardware: stainless steel bolts shall be provided where required.

3.02 Inspection
   a) Upon receipt of material at job site, the contractor shall inspect all materials for shipping damage

3.03 Handling and Storage
   a) Handle all GRP materials with reasonable care to prevent damage. Do not drag GRP material.
   b) If GRP materials are not being installed immediately, then store them to prevent twisting, bending or breakage of any kind.

3.04 Installation
   a) Installing contractor to coordinate and verify that other construction trades and materials have been installed per the contract drawings and that they are accurate in location, alignment, elevation, and are plumb and level.
   b) Any site cut edges or drilled holes to be resealed with resin.

Part 4 – Cleaning and Maintenance
   a) Cleaning of platforms to be carried out as required using mild detergent.
   b) Annual inspection should be carried out on the platform to ensure all fixings are secure and that there is no damage to the platform.
   c) Any damage should be reported to the manufacturer (GRP Systems Ltd T/A Relinea, 14 Crosshill Road, Crumlin, Co Antrim, BT29 4BQ, Tel +44 (0) 2894 422270) immediately.