

CARBON ERECTOR™

Carbon Erector™ is a system of joint connector kits that, in conjunction with carbon fiber tubes and plates, can be used to create an almost infinite variety of structures.

Using aircraft-grade aluminum joints and screws, the system is designed to be used with three sizes of standard, off-the-shelf carbon fiber tubes and any carbon fiber plates. Standardization offers weight, schedule, and cost savings.

Advantages:

- Lightweight** About 1/3 that of aluminum or steel comparable technologies
- Strong** Appropriate for aerospace and industrial applications
- Modular** Can be reconfigured
- Mechanical Connections** Eliminates potential adhesive and bond failures

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Possible Applications



Truss Structures
Scientific Structures
Medical Equipment
Racks/Fixtures/Furniture



Photo courtesy of the US Marines



Camera and Monitor Systems
Robotics
High Speed Equipment
Military, Aerospace, and Industrial
Unmanned Systems



KUKA Roboter GmbH, Bachmann (CC BY 2.0)

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Basics:

- The Carbon Erector™ product line includes 24 kits with 8 types of connector joints.
- The system accommodates 1", 1.5", and 2" interior diameter carbon fiber tubes of varying thicknesses and plates of any size or thickness.
- The joints are made of aircraft-grade 6061-T6 black anodized aluminum.
- Matching screws with 170,000 PSI tensile strength come with the kit.
- Connection strength has been tested, and design services are available for specific requirements.



Main Block and Adapters

The heart of the Carbon Erector system! Form nearly any configuration using a combination of Main Blocks and Adapters.

- Add up to 6 Adapters to 1 Main Block (every side)
- Assemble 90° angle, "T" corner or any combination joint
- Use with an Adjustable Connector to form a 360° joint



Removable Connector

Add a 90° removable connection that can be separated by removing just the two main attach screws. Requires tubes with 1/16" wall thickness.

- Form a Removable "T" Connector at any point along a tube
- Use for easy field assembly and dis-assembly of equipment
- Use in multiples to remove complete assemblies in one go



Attach Bracket

Brackets have two through holes that can be attached to any combination of tubes or plates. Requires tubes with 1/16" wall thickness.

- Attach a strong bracket at any point along a tube
- Can drill the bracket to attach more specific hardware
- Use to attach trays or shelves in an enclosure



Adjustable Connector

These kits come with a light weight filled composite handle that after tightening can be rotated and positioned out of the way and a machine screw that can be used in place of the adjustable handle.

- Use to connect two Main Blocks to form an adjustable joint
- Tighten in any position – 360° adjustability
- Use for camera or monitor mounts



Side Wall Bracket

This bracket allows for a composite sheet to be added to the carbon tubing to form a wall or enclosure. Requires tubes with 1/16" wall thickness.

- Used to attach panels to tubes
- Add to a frame and create an enclosure
- Also doubles as an attachment bracket



Mounting Plate

Mount carbon tubing to any flat surface. These kits can be used to construct stanchions and be combined with other connector kits for multiple formations.

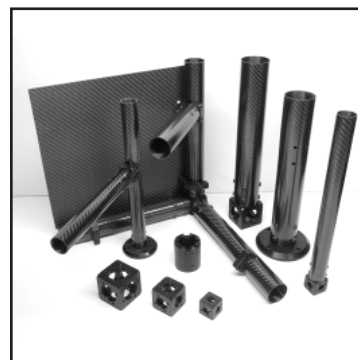
- Form a solid attachment between a tube and a surface
- Use to build hand rail systems
- Use to form antenna mounts



Fixed Connector

Add a 90° connection to any point on a tube. This is a lighter weight connection than the removable version. Requires tubes with 1/16" wall thickness.

- Form a "T" connection at any point along a tube
- Use to form handrails
- Use to form trusses



Custom Assemblies

Rock West Composites can design and assemble different structures for you to save you time and labor.

- Engineering services
- Wide variety of high quality tubes and plates that will fit your project requirements
- Volume production