



# CARBON Nect



CARBONNect™ 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.

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

For more information, contact us:

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### BASICS:

- The CARBONNect™ product line includes 27 kits with 9 types of connector joints.
- The system accommodates 1", 1.5", and 2" interior diameter carbon fiber tubes of varying thicknesses and plates of varying size or thickness.
- The joints are made of 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 CARBONnect™ 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



### 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



### 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



### 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



### 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



### 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



### 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



### Angle Adapter

Allows for nearly 180 degrees of adjustability.

- Used for a variety of fixture angles
- Strategically placed lightening holes
- Central screw included with other hardware



### Fixed Angle Adapter

The Fixed Angle Adapter will connect a Main Block with an Adapter to create a 45 degree connection between tubes. It is a light weight alternative to using the adjustable connector.

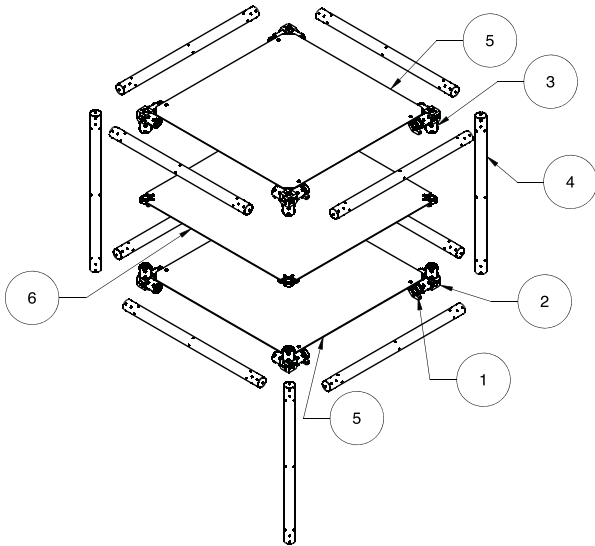
- Keeps tubes inline to ease design and keep system lightweight
- Used to build truss structures
- Joins a Main Block to an Adapter

Disclaimer: This data and information shown should not in any way be used for design purposes as actual properties will vary based on many factors including, but not limited to, material variation, loading conditions, environment exposure and others. The end user is ultimately responsible for ensuring the use of our products and/or information is safe for their application. RWC strongly urges users of our products and/or information to seek suitable engineering guidance, including but NOT limited to determining an appropriate factor of safety, when using our products and/or information for any application.

## DESIGN & ENGINEERING

Does your CARBONect™ structure need to meet specific strength, dimensional stability, or other requirements? The Rock West Composites engineering team can assist you in determining the best configuration to meet qualifications for your project. Using modeling and simulation software tools, RWC can predict the behavior of the finished system or structure to be sure it will achieve factors for safety, reliability, stiffness, stress, fatigue, and other points of measure.

### EXAMPLES:



## CUSTOM ASSEMBLY

Our CARBONect™ product line is a system that uses mechanical construction and requires no bonding. While CARBONect™ is designed to be easily constructed, you may not have time to build your design, especially if there are multiple or complex structures to build. Rock West Composites can easily and affordably provide this service for you or your business.

### TOOLKITS & ACCESSORIES

We offer two types of toolkits and one other accessory.



#### Drill Jig Kit

Our Drill Jig Kit comes in three sizes to work with our 1", 1.5", and 2.0" systems.

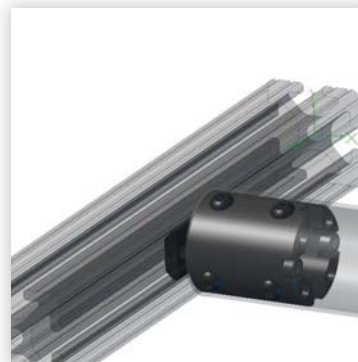
- Each kit includes a drill jig, drill bit, and two Allen wrenches



#### Professional Drill Jig

Our Drill Jig Kit comes in three sizes to work with our 1", 1.5", and 2.0" systems.

- For high volume users with precision requirements



#### Nut Plate Adapter

The Nut Plate Adapter for T-slot Aluminum Systems connects to 1" and 1.5" tubes. Works with tubes of up to 1/8" wall thickness.

- Can create 90-degree angle off a T-slot bar
- Used to create hybrid systems where multiple considerations such as cost, weight, or stiffness need to be accommodated

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