

# CHANGZHOU JLON COMPOSITE CO.,LTD

## Carbon Fiber Fabric Tube



### Introduction of Carbon Fiber Fabric Tube

Carbon fiber tubes/rods are high-performance structural components made from carbon fiber reinforced polymer (CFRP). They consist of carbon fibers (typically 3K6K, or 12K carbon yarn) embedded in a resin matrix (epoxy, thermoplastic). Available in hollow tubes or solid rods, they are prized for their lightweight, high strength-to-weight ratio and corrosion resistance.

Our carbon fiber tubes are made mainly from UD (unidirectional) carbon fiber. The outer surface has a 3K twill texture—a common weave that looks like diagonal lines. Most of our unidirectional tubes use layers of carbon fiber placed at 0 degree and 90 degree. Sometimes, we also add layers at 45 degree or 30 degree for special needs. The tube's surface is covered with 3K twill woven fabric.

We can also make the outer surface with 3K plain weave if you prefer. Some people like the twill pattern, while others like the plain weave (which has a checkerboard look).

Important thing: both twill and plain weaves cost the same and have the same strength. No need to worry about performance—choose the look you like!

The surface-- We can make a simple clean smooth finish, To keep the 3K twill texture carbon fibre tube's outer diameter (OD) accurate.

Carbon fiber tubes are extremely strong, often up to five times stronger than steel while being significantly lighter. We can also drill holes in carbon fiber tubes using proper techniques and tools to prevent delamination and damage.

### Specification of Carbon Fiber Fabric Tube

Strength-to-Mass Ratio with Specific Strength

Anti-Corrosion Property

Thermal and Electrical Conduction

Long-Term Durability and Service Life

Customization Capability

## Size of Carbon Fiber Fabric Tube

1. Outer Diameter (OD): 1.8mm (min.) - 300mm (max.)
2. Inner Diameter (ID): 1mm (min.)- 280mm (max.)

Model No.	Carbon Fiber Tube	Transport Package	Carbon Fiber Tube Packing Cartons or Customized
Material	Carbon Fiber	Standard	EN 10216-5
Color	Black or customize	Style	Plain/ Twill, Glossy/ Matte
Width	Customize	Trademark	JL
Delivery Time	Within 15day	Origin	China
HS Code	6815120000	Production Capacity	100000sqm/Day

## Applications of Carbon Fiber Fabric Tube

### Aerospace and Defense:

Carbon fiber tubes are widely used in the aerospace parts like wings&fuselages to support structures and benefit from lightweight&strong carbon fiber prepreg tubes, this enhances aircraft performance and fuel efficiencyby capitalizing on their exceptional strength-to-mass ratio.

### Sports and Recreation:

In sporting goods like golf clubs, fishing rods, bicycles, and hockey sticks, carbon fiber tubes are favored for their mechanical consistency and tensile strength. These properties enable optimal performance—for instance, bicycle frames requiring thermal and electrical conductivityin diverse environments, while fishing rods depend on their durability to withstand cyclic loading.

### Automotive Industry:

The automotive sector integrates carbon fiber piping into vehicle frames and components to achieve mass reduction and fuel efficiency gain. High-performance vehicles particularly utilize these tubes to lower curb weight, thereby enhancing acceleration and handling dynamics.

### Industrial Equipment and Robotics:

In robotics and industrial machinery, carbon fiber tubes are valued for their high stiffness-to-weight ratio and dimensional stability. These attributes make them ideal for robotic arms and precision equipment, where motion control and payload capacity are critical design parameters

We specialize in producing and exporting carbon fiber pipes, carbon fiber boards, and other carbon fiber composite material products. Our carbon fiber products are lightweight, have high hardness, and stable chemical properties. They are widely used in motorcycles, sports poles, photography equipment, flagpoles, window cleaning tools, airplane models, fishing rods, and more. After more than 7 years of professional development, we have established a highly skilled research team to ultimately determine and create ideal carbon fiber products for our customers. In addition, we pay special attention to restrictive inspections and strict testing processes to ensure that our products meet fully qualified specifications. Our company always adheres to the business philosophy of "customer first, integrity-based", and wholeheartedly cooperates with friends from all over the world.