

Precision Rollers You Can Rely On™

Carbon Fiber Composite Tube
with Sacrificial White Resin
Layer Protecting Structural Fibers



Composite Rollers

Composite (Carbon Fiber and Glass Inforced Epoxy) Rollers

What this is:

- Carbon fiber (filament wound) and glass reinforced epoxy composite rolls

Who this is for:

- Converting machinery
- Cast and blown film extrusion lines
- Coating lines, Paper, film and foil
- Steel mills

Why this is special:

- Our people have been trained to assemble the composites by a company that builds aircraft quality composites. The Imperial designs have a sacrificial "white" layer that protects the composite from damage during the recovering process. Most composite manufacturers do not offer this and every time their roll is recovered, the structure is weakened when the old rubber is stripped off.
- Imperial composite rolls last longer; this extended life reduces the frequency with which you need maintenance performed
- Reduced weight compared with aluminum or steel rolls provides better tension control and quicker responses to changes in web or strip speeds
- Lighter weight consumes less horsepower and makes more efficient use of existing drives
- Reduced bearing load increases bearing life reducing maintenance costs
- Greater stiffness may reduce deflection and prevent web tracking issues

Availability, and when it can be delivered:

- A fast-track engineering program delivers a working design in a short amount of time. Some composite rolls can be produced in as little as 15 days after receipt of order.

Comparison to competitive products:

- Some competitors fasten the shaft to the core with a pin, which weakens the assembly. Imperial does NOT pin the shaft to the composite. Our "best-practices" construction methods use aerospace bonding technology to secure the steel or aluminum shaft assembly to the tube.
- Most other roll companies promote their ability to "furnish" carbon fiber composite rolls; what they mean is that they purchase them from an outside source. The Imperial difference is that while we have the composite tube engineered and manufactured by our qualified supplier, we manufacture the journal assemblies in-house, to our customers' specific requirements, and take full responsibility for ensuring your complete satisfaction with the final product. We have assembled hundreds of carbon graphite composite rolls and proven them in the field with very satisfied customers.
- Filament wound composites superior in strength, lower in deflection for the same size as "braided composite composites" (ask us and we can explain more about how to tell the difference).

Features:

- Shaft is NOT pinned to the composite
- A thin, replaceable sacrificial white-layer protects the carbon filaments when recovered, and protects the integrity of the roll throughout its service life
- Covered in Imperial's vacuum static-cast polyurethane for exceptional wear resistance or by our continuous-extrusion system for synthetic rubber
- Recovering process does not cause damage to carbon graphite core
- Ultra-light roll uses a direct bond method to fasten high-strength aircraft aluminum or steel shafts/journals to the carbon graphite composite core for the ultimate in weight savings

Typical Applications:

- Idler rolls
- Nip rolls
- Dancer rolls
- Swing gate rolls
- Table rolls
- Felt rolls
- Wire return rolls

- Superior Quality
- On-time Shipping
- Responsive Customer Service

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Corporate Brochure
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