

## **Carbon-Fiber, High-Strength Screw Non-magnetic for CT/PET/PT Scanners**



## Our Product



Globe has formulated a high-performance, injection-molded material that:

- Is very *cost-effective*
- Is *non-magnetic*
- Meets the most stringent performance requirements for strength
- Remains completely transparent to scanners

The screw is used to attach various components (such as head rest, leg rest, etc.) to the bed of the scanner. Since these parts are often removed or moved on the scanner bed, the screws or fasteners sometimes are dropped accidentally onto or into the bed of the scanner -- creating quite a bit of trouble to remove the misplaced screws from the magnetic 'X-ray' machines. Globe Composite Solutions' carbon-fiber screw solves this worry. Since it's carbon-fiber and not metal, it's completely invisible to the scanner and won't damage the machine. Yet, it's even stronger and more durable than if it had been made from metal.

## Client's Requirements

Globe Composite's carbon-fiber screw needed to meet the most stringent performance requirements for cost, strength and C/T or magnetic transparency. To reach that goal, we identified over 10 suitable Globe materials, meeting the client's requirements, from which they could choose. Once the ideal material was selected, Globe produced and submitted several machined prototypes to the customer for final mechanical, magnetic, and C/T transparency testing.

## Client's Savings

Approximately **\$300,000 per year** has been saved for this customer by using Globe's carbon-fiber screw.



## How We Solved It

Globe Composite Solutions solved this client's need through the use of our proprietary injection-molded materials and rapid prototyping. Globe formulated the material, designed the part, and manufactured rapid prototypes in less than seven months.

### The Material

The material the client selected was [Brandonite® 9211-CF](#). It's an:

- Injection-molded, carbon-fiber reinforced thermoplastic
- Has high strength and high temperature resistance
- Excellent chemical and wear resistance
- V-0 flame rated
- RoHS compliant
- ***Non-magnetic***
- High shear strength
- ***Transparent to C/T and X-rays***

## Why Use Globe Composites

Globe's composite materials are ideal for use in many applications. Brandonite® 9211-CF specifically is suited for applications:

- Needing greater than 1,000 parts per year
- Requiring superior strength
- Resistant to adverse conditions and/or weather
- That must be lightweight
- Are non-magnetic and C/T transparent

## Typical Industries

A variety of industries use Globe's Brandonite® 9211-CF for components, including but not limited to:

- Military (Aerospace, Radar, Weapons, Acoustic industries)
- Medical (C/T, X-Ray, Diagnostics, Prosthetics, Medical Device industries)

- Appliances & Plumbing industries
- Automotive industry