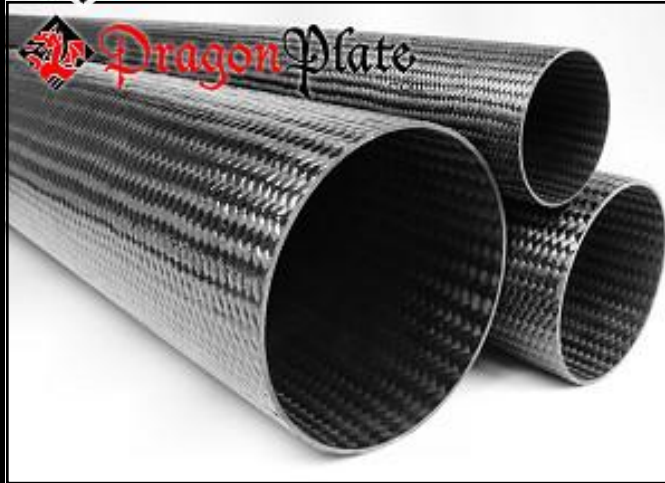




DragonPlate™

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Material Specifications



Braided Carbon Fiber Round Tube

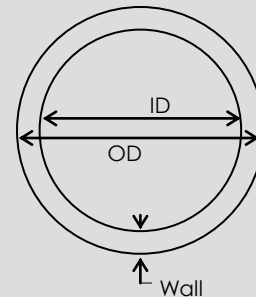
Comprised of carbon fiber braid and Unidirectional Fabrics our round tube is ideal for building light weight frames and structures such as trusses. Engineered to be much stronger under torsional and side loading than pultruded tubing and significantly lighter. Designed so that the unidirectional layers are captured, eliminating longitudinal cracking and splitting.

STANDARD SIZES

SMALL SIZES	ID	WEIGHT (lbs/ft)
0.415" ± 0.015 OD	0.29" (± 0.010)	0.04
0.53" ± 0.015 OD	0.40" (± 0.010)	0.05
0.79" ± 0.015 OD	0.54" (± 0.010)	0.16
LARGE SIZES	WALL THICKNESS	WEIGHT (lbs/ft)
0.75" (0.75 ± 0.010) ID	0.040" (± 0.010)	0.06
1" (1.000 ± 0.010) ID	0.040" (± 0.010)	0.08
1.5" (1.500 ± 0.010) ID	0.040" (± 0.010)	0.11
2" (2.015 ± 0.010) ID	0.045" (± 0.015)	0.15
3" (3.012 ± 0.010) ID	0.085" (± 0.015)	0.47
4" (4.013 ± 0.010) ID*	0.080" (± 0.015)	0.56
6" (6.010 ± 0.010) ID*	0.080" (± 0.015)	0.90

Lengths: 96", 72", 48", 24" (-0, +0.5)
* Only available up to 48"

Finishes: Natural, Gloss



Additional Options

- Custom Sizes
- Custom Lengths
- Custom Wall Thickness
- CNC Machining
- Design and Engineering Services

TECHNICAL SPECIFICATIONS

Properties of Braid Fiber

Tensile Strength: 640 ksi
Modulus of Elasticity: 34 Msi

Properties of UNI Fiber (Large Sizes)

Tensile Strength: 640 ksi
Modulus of Elasticity: 34 Msi

Properties of UNI Fiber (Small Sizes)

Tensile Strength: 600 ksi
Modulus of Elasticity: 34 Msi

Resin

Epoxy resin that accounts for approximately 50% of the composition

$W_f \approx 50\%$

Lay Up Schedule (Large Sizes)

± 45° bi-axial CF braid
0° uni-directional CF $[\pm 45/\bar{0}]_s$
± 45° bi-axial CF braid

Lay Up Schedule (Small Sizes)

0° uni-directional CF
± 45° bi-axial CF braid $[0/\pm 45]_T$