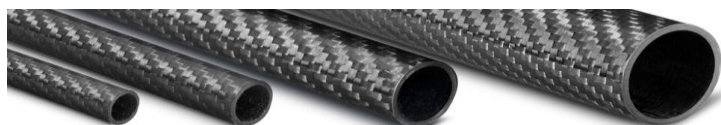
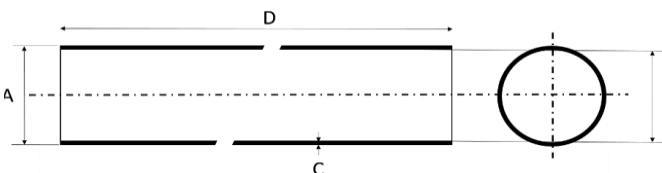


PRODUCT DATA SHEET

Product group:	HIGH PERFORMANCE CARBON FIBER EPOXY TUBES ROUND	document nr.: PDSCFctubes round
main characteristics	High Strength Tube with optimal bending and torsional stiffness Transparent painted for visual use	Issue Date: 15-12-2016
production process:	Prepreg Lamination Technology	Revision: 3
		Revision Date: 14-6-2021



PRODUCT SPECIFICATIONS FOR ALL SPECIFIED PRODUCTS IN THIS DATASHEET



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PRODUCT DIMENSIONS			PRODUCT QUALITY	
A: Outer dimensions:	mm	≤ 40mm Ø OUT +/- 0,2 mm >40mm Ø OUT +/- 0,3 mm	Visual Grade on surface	Painted Surface Industrial Grade
B: Inner dimension:	mm	Ø IN +/- 0,2mm		Small pinholes may occur, this is due to production process
C: Wall thickness:	mm	≤ Ø OUT 40mm +/- 0,2 mm > Ø OUT 40mm +/- 0,3 mm	Fiber Fabric Weave	The surface fabric can have some spread
D: Length	mm	+/- 1mm	Surface finish:	UV Protective Paint
E: Straightness	mm	Product Specific	Skin material:	Carbon Fiber Twill weave
Fibers:		High Strength Carbon Fiber Tow 3K	Core Material:	App. 80% UD-0° fibers placed in length direction of the tube
Resin:		standard grade Epoxy Resin		App. 20% UD-90° fibers placed 90° on length direction of tube
Glass Transition Temperature		80°C (temperature resistance)	Product Packaging	Product individually and grouped packed in standard packaging

PRODUCT REFERENCES

approximate properties for reference only		DIMENSIONS IN MM						PRODUCT SPECIFICS									
		Dia OUT	Dia IN	Wall	Length	Straight	Finishing		Weight	Density	Fiber Volume Content	Young's Modulus	Tensile Strength	Specific Stiffness		Bending Stiffness	Torsional Stiffness
Product reference	Product description	A	B	C	D	E	Skin	W	ρ	FV	E	σt	E/p		EI	G*J/L	
								gr	kg/m^3	%	Gpa	N/mm2	MN*m/kg		N*m^2	N*m/rad	

HIGH PERFORMANCE CARBON FIBER EPOXY TUBES ROUND

CBU 0604 1005 TG	Carbon Fiber Epoxy Tube Round 06x04x1005 Twill Glossy Paint	6,0	4,0	1,0	1.005	3mm/1m	Twill	Glossy	24	1.600	61	67	420	42		3,42x10^3	
CBU 0806 1005 TG	Carbon Fiber Epoxy Tube Round 08x06x1005 Twill Glossy Paint	8,0	6,0	1,0	1.005	3mm/1m	Twill	Glossy	32	1.600	61	67	420	42		9,21x10^3	
CBU 1008 1005 TG	Carbon Fiber Epoxy Tube Round 10x08x1005 Twill Glossy Paint	10,0	8,0	1,0	1.005	3mm/1m	Twill	Glossy	43	1.600	61	67	420	42		1,94x10^4	
CBU 1008 1005 TM	Carbon Fiber Epoxy Tube Round 10x08x1005 Twill Matt Paint	10,0	8,0	1,0	1.005	3mm/1m	Twill	Matt	43	1.600	61	67	420	42		1,94x10^4	
CBU 1008 2010 TG	Carbon Fiber Epoxy Tube Round 10x08x2010 Twill Glossy Paint	10,0	8,0	1,0	2.010	3mm/1m	Twill	Glossy	86	1.600	61	67	420	42		1,94x10^4	
CBU 1008 2010 TM	Carbon Fiber Epoxy Tube Round 10x08x2010 Twill Matt Paint	10,0	8,0	1,0	2.010	3mm/1m	Twill	Matt	86	1.600	61	67	420	42		1,94x10^4	
CBU 1209 1005 TG	Carbon Fiber Epoxy Tube Round 12x09x1005 Twill Glossy Paint	12,0	9,0	1,5	1.005	2mm/1m	Twill	Glossy	76	1.600	61	79	469	49		5,50x10^4	
CBU 1209 2010 TG	Carbon Fiber Epoxy Tube Round 12x09x2010 Twill Glossy Paint	12,0	9,0	1,5	2.010	2mm/1m	Twill	Glossy	151	1.600	61	79	469	49		5,50x10^4	
CBU 1210 1005 TG	Carbon Fiber Epoxy Tube Round 12x10x1005 Twill Glossy Paint	12,0	10,0	1,0	1.005	2mm/1m	Twill	Glossy	53	1.600	61	67	420	42		3,53x10^4	
CBU 1210 2010 TG	Carbon Fiber Epoxy Tube Round 12x10x2010 Twill Glossy Paint	12,0	10,0	1,0	2.010	2mm/1m	Twill	Glossy	106	1.600	61	67	420	42		3,53x10^4	
CBU 1512 1005 TG	Carbon Fiber Epoxy Tube Round 15x12x1005 Twill Glossy Paint	15,0	12,0	1,5	1.005	2mm/1m	Twill	Glossy	96	1.600	61	79	469	49		1,16x10^5	
CBU 1512 2010 TG	Carbon Fiber Epoxy Tube Round 15x12x2010 Twill Glossy Paint	15,0	12,0	1,5	2.010	2mm/1m	Twill	Glossy	193	1.600	61	79	469	49		1,16x10^5	
CBU 1513 1005 TG	Carbon Fiber Epoxy Tube Round 15x13x1005 Twill Glossy Paint	15,0	13,0	1,0	1.005	2mm/1m	Twill	Glossy	66	1.600	61	67	420	42		7,26x10^4	
CBU 1513 2010 TG	Carbon Fiber Epoxy Tube Round 15x13x2010 Twill Glossy Paint	15,0	13,0	1,0	2.010	2mm/1m	Twill	Glossy	132	1.600	61	67	420	42		7,26x10^4	

approximate properties for reference only		DIMENSIONS IN MM								PRODUCT SPECIFICS									
		Dia OUT	Dia IN	Wall	Length	Straight	Finishing		Weight	Density	Fiber Volume Content	Young's Modulus	Tensile Strength	Specific Stiffness		Bending Stiffness	Torsional Stiffness		
									W	ρ	FV	E	σt	E/p		EI	G*/L		
CBU 1613 1005 TG	Carbon Fiber Epoxy Tube Round 16x13x1005 Twill Glossy Paint	16,0	13,0	1,5	1.005	2mm/1m	Twill	Glossy	109	1.600	61	79	469	49		1,43x10^5			
CBU 1613 2010 TG	Carbon Fiber Epoxy Tube Round 16x13x2010 Twill Glossy Paint	16,0	13,0	1,5	2.010	2mm/1m	Twill	Glossy	218	1.600	61	79	469	49		1,43x10^5			
CBU 1815 1005 TG	Carbon Fiber Epoxy Tube Round 18x15x1005 Twill Glossy Paint	18,0	15,0	1,5	1.005	2mm/1m	Twill	Glossy	121	1.600	61	79	469	49		2,11x10^5			
CBU 1815 2010 TG	Carbon Fiber Epoxy Tube Round 18x15x2010 Twill Glossy Paint	18,0	15,0	1,5	2.010	2mm/1m	Twill	Glossy	243	1.600	61	79	469	49		2,11x10^5			
CBU 1816 1005 TG	Carbon Fiber Epoxy Tube Round 18x16x1005 Twill Glossy Paint	18,0	16,0	1,0	1.005	2mm/1m	Twill	Glossy	82	1.600	61	67	420	42		1,30x10^5			
CBU 1816 2010 TG	Carbon Fiber Epoxy Tube Round 18x16x2010 Twill Glossy Paint	18,0	16,0	1,0	2.010	2mm/1m	Twill	Glossy	164	1.600	61	67	420	42		1,30x10^5			
CBU 2017 1005 TG	Carbon Fiber Epoxy Tube Round 20x17x1005 Twill Glossy Paint	20,0	17,0	1,5	1.005	2mm/1m	Twill	Glossy	143	1.600	61	79	469	49		2,97x10^5			
CBU 2017 2010 TG	Carbon Fiber Epoxy Tube Round 20x17x2010 Twill Glossy Paint	20,0	17,0	1,5	2.010	2mm/1m	Twill	Glossy	286	1.600	61	79	469	49		2,97x10^5			
CBU 2018 1005 TG	Carbon Fiber Epoxy Tube Round 20x18x1005 Twill Glossy Paint	20,0	17,0	1,5	1.005	2mm/1m	Twill	Glossy	88	1.600	61	79	469	49		2,97x10^5			
CBU 2018 2010 TG	Carbon Fiber Epoxy Tube Round 20x18x2010 Twill Glossy Paint	20,0	17,0	1,5	2.010	2mm/1m	Twill	Glossy	176	1.600	61	79	469	49		2,97x10^5			
CBU 2220 1005 TG	Carbon Fiber Epoxy Tube Round 22x20x1005 Twill Glossy Paint	22,0	20,0	1,0	1.005	2mm/1m	Twill	Glossy	100	1.600	61	67	420	42		2,44x10^5			
CBU 2220 2010 TG	Carbon Fiber Epoxy Tube Round 22x20x2010 Twill Glossy Paint	22,0	20,0	1,0	2.010	2mm/1m	Twill	Glossy	200	1.600	61	67	420	42		2,44x10^5			
CBU 2522 1005 TG	Carbon Fiber Epoxy Tube Round 25x22x1005 Twill Glossy Paint	25,0	22,0	1,5	1.005	2mm/1m	Twill	Glossy	174	1.600	61	79	469	49		6,06x10^5			
CBU 2522 2010 TG	Carbon Fiber Epoxy Tube Round 25x22x2010 Twill Glossy Paint	25,0	22,0	1,5	2.010	2mm/1m	Twill	Glossy	348	1.600	61	79	469	49		6,06x10^5			
CBU 2523 1005 TG	Carbon Fiber Epoxy Tube Round 25x23x1005 Twill Glossy Paint	25,0	23,0	1,0	1.005	2mm/1m	Twill	Glossy	123	1.600	61	67	420	42		3,64x10^5			
CBU 2523 2010 TG	Carbon Fiber Epoxy Tube Round 25x23x2010 Twill Glossy Paint	25,0	23,0	1,0	2.010	2mm/1m	Twill	Glossy	245	1.600	61	67	420	42		3,64x10^5			
CBU 2523 2010 TM	Carbon Fiber Epoxy Tube Round 25x23x2010 Twill Matt Paint	25,0	23,0	1,0	2.010	2mm/1m	Twill	Matt	245	1.600	61	67	420	42		3,64x10^5			
CBU 3027 1005 TG	Carbon Fiber Epoxy Tube Round 30x27x1005 Twill Glossy Paint	30,0	27,0	1,5	1.005	2mm/1m	Twill	Glossy	201	1.600	61	79	469	49		1,08x10^6	109		
CBU 3027 2010 TG	Carbon Fiber Epoxy Tube Round 30x27x2010 Twill Glossy Paint	30,0	27,0	1,5	2.010	2mm/1m	Twill	Glossy	402	1.600	61	79	469	49		1,08x10^6	109		
CBU 3028 1005 TG	Carbon Fiber Epoxy Tube Round 30x28x1005 Twill Glossy Paint	30,0	28,0	1,0	1.005	2mm/1m	Twill	Glossy	146	1.600	61	67	420	42		6,42x10^5	83		
CBU 3028 2010 TG	Carbon Fiber Epoxy Tube Round 30x28x2010 Twill Glossy Paint	30,0	28,0	1,0	2.010	2mm/1m	Twill	Glossy	291	1.600	61	67	420	42		6,42x10^5	83		
CBU 3532 1005 TG	Carbon Fiber Epoxy Tube Round 35x32x1005 Twill Glossy Paint	35,0	32,0	1,5	1.005	2mm/1m	Twill	Glossy	238	1.600	61	79	469	49		1,75x10^6			
CBU 3532 2010 TG	Carbon Fiber Epoxy Tube Round 35x32x2010 Twill Glossy Paint	35,0	32,0	1,5	2.010	2mm/1m	Twill	Glossy	475	1.600	61	79	469	49		1,75x10^6			
CBU 3533 1005 TG	Carbon Fiber Epoxy Tube Round 35x33x1005 Twill Glossy Paint	35,0	33,0	1,0	1.005	2mm/1m	Twill	Glossy	170	1.600	61	67	420	42		1,04x10^6			
CBU 3533 2010 TG	Carbon Fiber Epoxy Tube Round 35x33x2010 Twill Glossy Paint	35,0	33,0	1,0	2.010	2mm/1m	Twill	Glossy	340	1.600	61	67	420	42		1,04x10^6			
CBU 4036 1005 TG	Carbon Fiber Epoxy Tube Round 40x36x1005 Twill Glossy Paint	40,0	36,0	2,0	1.005	2mm/1m	Twill	Glossy	368	1.600	61								
CBU 4036 2010 TG	Carbon Fiber Epoxy Tube Round 40x36x2010 Twill Glossy Paint	40,0	36,0	2,0	2.010	2mm/1m	Twill	Glossy	735	1.600	61								
CBU 4037 1005 TM	Carbon Fiber Epoxy Tube Round 40x37x1005 Twill Matt Paint	40,0	37,0	1,5	1.005	2mm/1m	Twill	Matt	281	1.600	61								
CBU 4037 2010 TM	Carbon Fiber Epoxy Tube Round 40x37x2010 Twill Matt Paint	40,0	37,0	1,5	2.010	2mm/1m	Twill	Matt	562	1.600	61								
CBU 5046 1005 TG	Carbon Fiber Epoxy Tube Round 50x46x1005 Twill Glossy Paint	50,0	46,0	2,0	1.005	3mm/1m	Twill	Glossy	458	1.600	61						562		
CBU 5046 2010 TG	Carbon Fiber Epoxy Tube Round 50x46x2010 Twill Glossy Paint	50,0	46,0	2,0	2.010	3mm/1m	Twill	Glossy	916	1.600	61						562		
CBU 6054 1005 TG	Carbon Fiber Epoxy Tube Round 60x54x1005 Twill Glossy Paint	60,0	54,0	3,0	1.005	3mm/1m	Twill	Glossy	815	1.600	61								
CBU 6054 2010 TG	Carbon Fiber Epoxy Tube Round 60x54x2010 Twill Glossy Paint	60,0	54,0	3,0	2.010	3mm/1m	Twill	Glossy	1.629	1.600	61								
CBU 6056 1005 TG	Carbon Fiber Epoxy Tube Round 60x56x1005 Twill Glossy Paint	60,0	56,0	2,0	1.005	3mm/1m	Twill	Glossy	543	1.600	61								

approximate properties for reference only		DIMENSIONS IN MM							PRODUCT SPECIFICS									
		Dia OUT	Dia IN	Wall	Length	Straight	Finishing		Weight	Density	Fiber Volume Content	Young's Modulus	Tensile Strength	Specific Stiffness		Bending Stiffness	Torsional Stiffness	
									W	ρ	FV	E	σt	E/ρ		EI	G*J/L	
CBU 6056 2010 TG	Carbon Fiber Epoxy Tube Round 60x56x2010 Twill Glossy Paint	60,0	56,0	2,0	2.010	3mm/1m	Twill	Glossy	1.086	1.600	61							
CBU 8074 1005 TG	Carbon Fiber Epoxy Tube Round 80x74x1005 Twill Glossy Paint	80,0	74,0	3,0	1.005	3mm/1m	Twill	Glossy	728	1.600	61							
CBU 8074 2010 TG	Carbon Fiber Epoxy Tube Round 80x74x2010 Twill Glossy Paint	80,0	74,0	3,0	2.010	3mm/1m	Twill	Glossy	1.455	1.600	61							
CBU 8076 1005 TG	Carbon Fiber Epoxy Tube Round 80x76x1005 Twill Glossy Paint	80,0	76,0	2,0	1.005	3mm/1m	Twill	Glossy	728	1.600	61							
CBU 8076 2010 TG	Carbon Fiber Epoxy Tube Round 80x76x2010 Twill Glossy Paint	80,0	76,0	2,0	2.010	3mm/1m	Twill	Glossy	1.456	1.600	61							

ULTRA LIGHT CARBON FIBER EPOXY TUBES ROUND

CBU 1514 1000 TG	Carbon Fiber Epoxy Tube Round 15x14x1000 Twill Glossy Paint ULTRA LIGHT	15,0	14,0	0,5	1.000	2mm/1m	Twill	Glossy	33	1.600	61							
CBU 1817 1000 TG	Carbon Fiber Epoxy Tube Round 15x14x1000 Twill Glossy Paint ULTRA LIGHT	18,0	17,0	0,5	1.000	2mm/1m	Twill	Glossy	42	1.600	61							
CBU 2019 1000 TG	Carbon Fiber Epoxy Tube Round 20x19x1000 Twill Glossy Paint ULTRA LIGHT	20,0	19,0	0,5	1.000	2mm/1m	Twill	Glossy	47	1.600	61							
CBU 2524 1000 TG	Carbon Fiber Epoxy Tube Round 24x24x1000 Twill Glossy Paint ULTRA LIGHT	25,0	24,0	0,5	1.000	2mm/1m	Twill	Glossy	60	1.600	61							
CBU 3029 1000 TG	Carbon Fiber Epoxy Tube Round 30x29x1000 Twill Glossy Paint ULTRA LIGHT	30,0	29,0	0,5	1.000	2mm/1m	Twill	Glossy	73	1.600	61							

disclaimer: The data in this sheets are approximate values, based on general purpose calculations and technical data sheets from material suppliers.
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