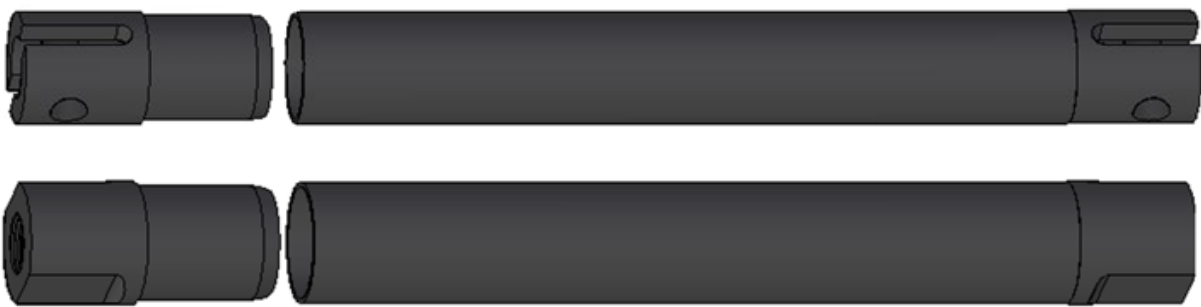




**A revolution in precision  
and mass reduction**

## BLACK STRUTS



- Satellite and Instrument Strut Elements
- 100% CFRP, No broken fibers, No metal
- 60% mass savings against Invar CTE=0 struts
- No cost gain compared to other strut solutions

- Coefficient of Moisture Expansion = 0
- Coefficient of Thermal Expansion = 0
- In-house Filament Winding manufacturing
- Performance test reports available upon request

## STRUT PERFORMANCE

	w. Clevis interfaces	w. Threaded interface	Analysis/Test
Mass [g]	171.15	180.62	Test
Size [mm]	Ø35/Ø12; L300	Ø35/M3/4"x1/8"; L300	Test
Tensile strength [N]	32911.0	43861.5	Test
Tensile strength/Mass [KN/Kg]	188	240	Test
Tension Spring constant [N/mm]	36699	49570	Analysis
1 <sup>st</sup> Eigen frequency (Free Free) [Hz]	1798	2095	Analysis
CME [1/‰]	$9.32 \cdot 10^{-5}$	$6.11 \cdot 10^{-5}$	Test
Total CME length increase [mm]	0.0047	0.0023	Test
CTE 0°C to 50°C [1/K]	$-0.47 \cdot 10^{-6}$	$-0.51 \cdot 10^{-6}$	Test
CTE 0°C to -175°C [1/K]	$0.05 \cdot 10^{-6}$	$-0.19 \cdot 10^{-6}$	Test



### One-Stop-Shop Space Composite Structures

SCSDK offers design, engineering, manufacturing, verification & integration support for all types of space vessel composite structures. We are a High-Tech firm focusing on disruptive approach to Space business:

**keep the quality / lower the cost.**

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