



# ULTRA-LIGHT COMPOSITE MAST

*Innovative system for linear deployment of mast with automatic deployment and locking functions*

## Technological advantages

### A modular system

Adaptable shapes, sizes and materials

### Stress-free implementation

Automatic deployment, without actuator

Deployment via pre-loaded spring or inflation

### Optimised structure

Ultra-light structure

Integrated hinges and components, made of composite materials

Precise deployment lengths and geometry

Automatic locking of structure

Materials compatible with space environment

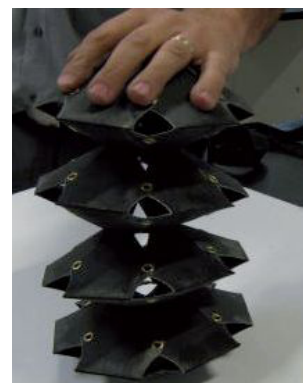
### Transportable mast

Minimised dimensions

Low weight

Highly compact

Can be retracted for reuse



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Mast deployment

## Overview of invention

System based on the Carpentier joint concept.

The sections are folded in an accordion configuration, and the straight joint assumes the desired shape as it becomes stiff.



Possible shapes that may be developed

## Commercial benefits

### Customised manufacturing via an industrialised process

Lower shipping and installation costs

Adapted storage

**TRL : 3-4 (2010)**

*Patented invention, available under license*

## Potential applications

Antenna deployment

Support mast for sensors and antennas

Elements in large deployable structures

Billboards, promotional products

Traffic cones, road signs