



FLEXIBLE COMPOSITE HINGE CONNECTION

Innovative compact hinge system enabling spontaneous deployment and locking

Technological advantages

A compact, composite hinge

Reduced dimensions
Low folding radius
Minimised weight

A high-performance system

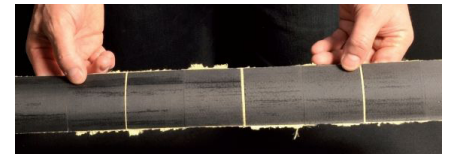
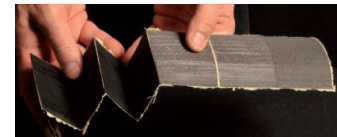
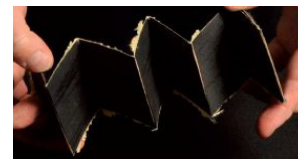
Pivot-type guidance
No friction
Low backlash
Self-deployable
Can be folded/unfolded
Self-locking when deployed

Mechanical characteristics

Continuity of stiffness and longitudinal mechanical strength when deployed
Flexible pivot makes it possible to connect tape-spring such as «Carpentier joint» systems



Deployment of hinge



Overview of invention

Angular amplitude of hinge movement from 0° to 180°, or even up to 360°.
Possibility of introducing an end stop to limit the hinge opening in a given direction or from a specified angle.

Potential applications

- Articulated appendages on satellites or drones
- Joining of articulated elements for masts and deployable antennas

Commercial benefits

Manufacturing process can be industrialised

Simple manufacturing
Low manufacturing costs

An integrated composite hinge system, offering an alternative to existing mechanical systems

Dimensions can be adapted to specifications

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Patented invention, available under licence