

CERAMIC MATRIX COMPOSITES

THERMAL PROTECTION SYSTEMS

- WIDE RANGE OF GEOMETRICAL FEASIBILITY FOR SPACE AND RE-ENTRY VEHICLES
- EXCELLENT THERMAL PROPERTIES COMBINED WITH LOW DENSITY
- CUSTOMIZED MATERIALS & COMPONENTS DRIVEN BY THE CUSTOMER APPLICATION
- HIGH DEGREE OF AUTOMATION
- VARIETY OF JOINING SOLUTIONS TO THE MAIN STRUCTURE

Thermal Protection Systems

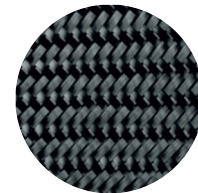
For decades, ArianeGroup has acquired a **strong heritage on thermal protection systems** utilizing the exceptional properties of Ceramic Matrix Composites.

Key characteristics:

- > **Application driven material and manufacturing process selection**
- > **Operation time:** short term single use up to long term reusable vehicles
- > **Operation temperature:** up to 2,000 °C
- > **Low density**
- > **High specific strength and stiffness**

ArianeGroup places strong emphasis on selecting material combinations and manufacturing technologies in a way that results in the most cost-effective product for the customer.

Owning all critical manufacturing capabilities of the process chain, allows the necessary high degree of agility and flexibility to develop these unique TPS solutions.



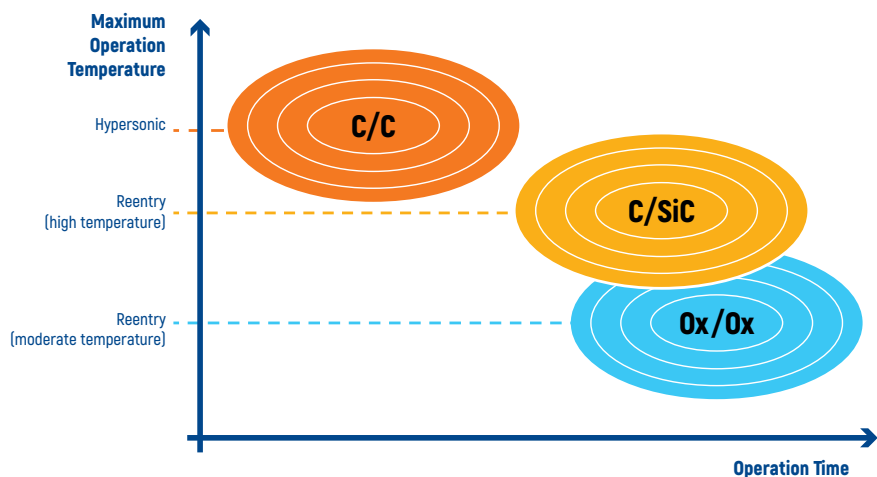
TEXTILE TECHNOLOGIES



HIGH TEMPERATURE TECHNOLOGIES



INFILTRATION & EBC TECHNOLOGIES



A UNIQUE EXPERTISE TO MEET OUR CUSTOMERS' NEEDS

On top of mastering high temperature materials and technologies, ArianeGroup offers reliable solutions to its customers thanks to unique competencies in design & engineering as well as mechanical & thermal analysis.

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