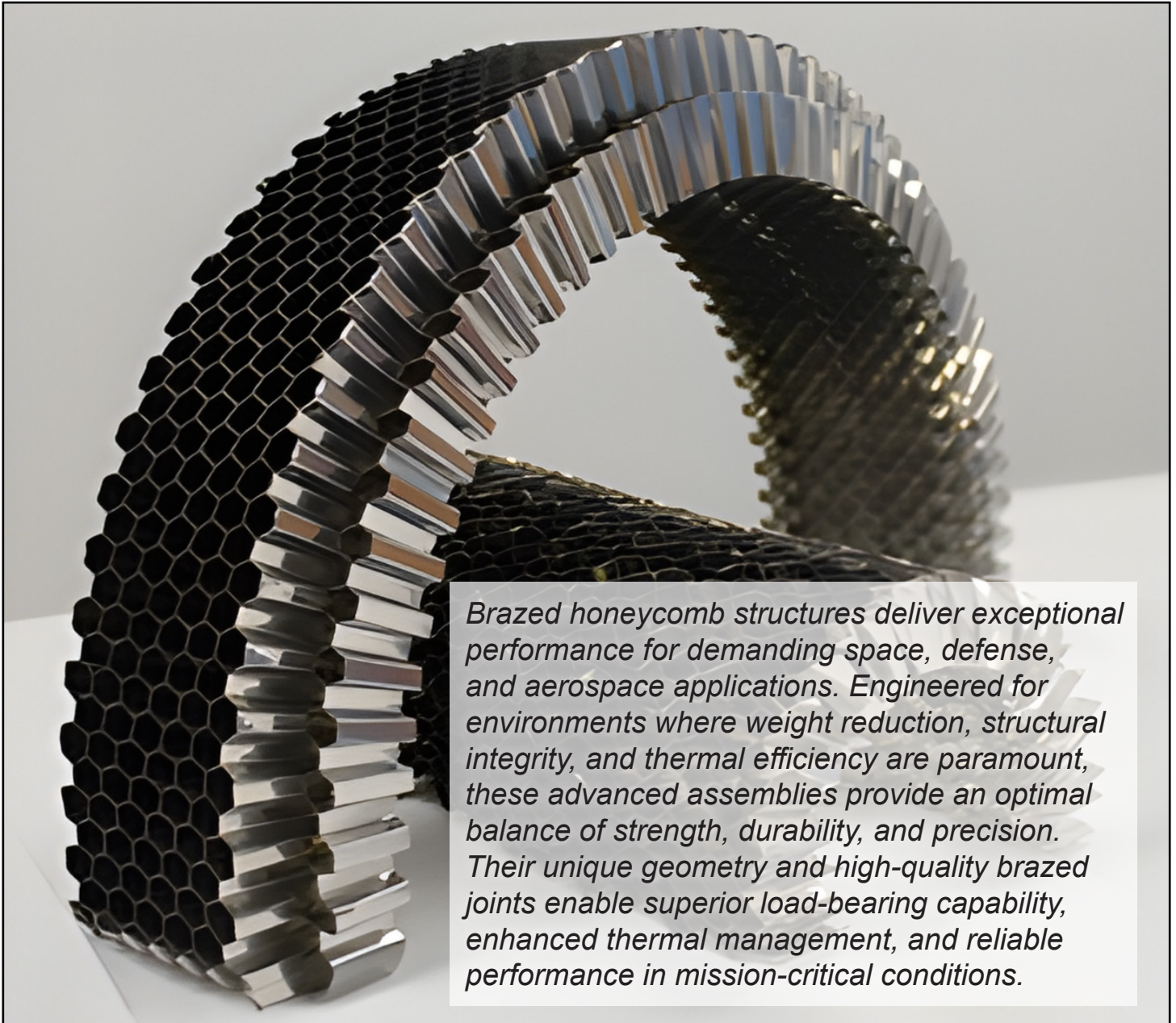
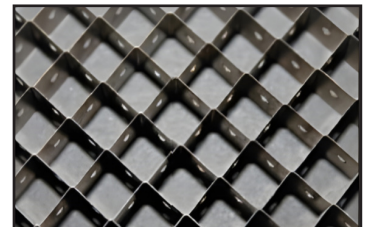
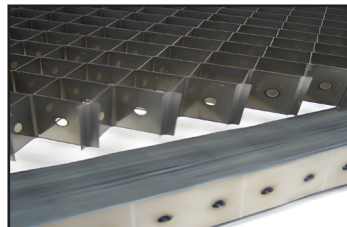
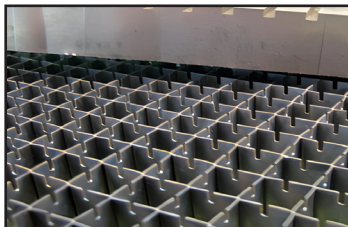
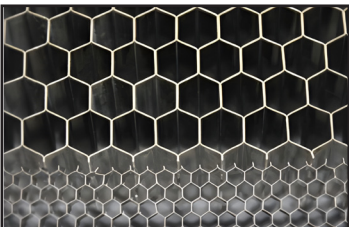


# ADVANTAGES OF BRAZED HONEYCOMB STRUCTURES



ULTRA-LIGHTWEIGHT • HIGH-STRENGTH • THERMALLY-EFFICIENT • ENVIRONMENT-RESILIENT



## KEY BENEFITS

### 1. High Strength-to-Weight Ratio

Honeycomb structures are designed to maximize strength while minimizing weight. The brazing process further enhances the joint between the honeycomb core and the outer materials, increasing the overall structural integrity without adding significant weight. This is critical in applications like aerospace, where every gram counts.

### 2. Enhanced Stiffness

Brazed honeycomb structures provide excellent stiffness, especially under compression and shear forces. The brazing ensures a robust connection between the honeycomb core and the face sheets, improving the panel's resistance to bending and deformation.

### 3. Improved Heat and Vibration Resistance

Brazing offers better thermal conductivity and resistance to high temperatures compared to adhesives. This makes brazed honeycomb structures ideal for use in high-temperature environments, such as turbine components, heat shields, or exhaust systems. The structure also dampens vibrations, which is beneficial in environments with significant mechanical stress.

### 4. Superior Joint Strength

Brazing creates a metallurgical bond between the honeycomb core and the face sheets, providing superior joint strength with reduced weight compared to mechanical fastening or adhesives. This is especially advantageous in harsh environments where traditional adhesives may degrade.

### 5. Corrosion Resistance

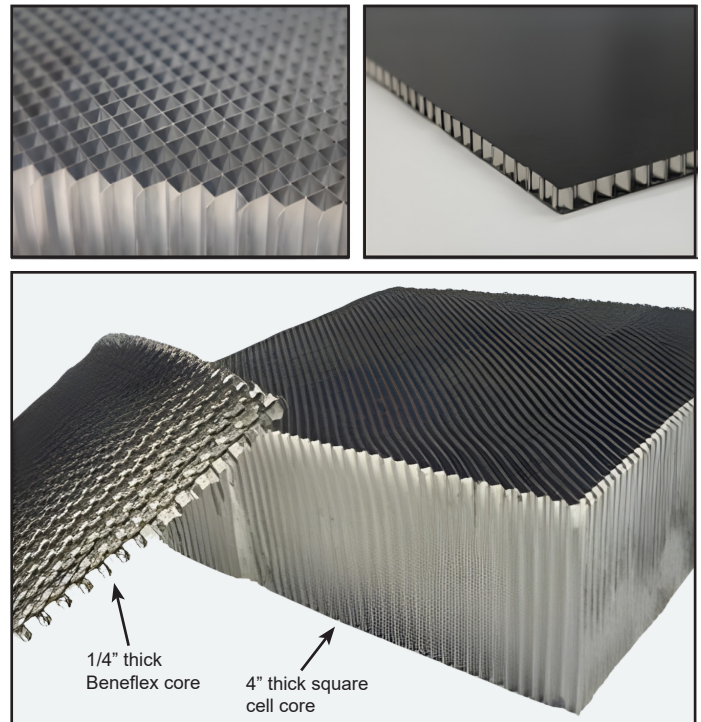
Many brazing materials, such as nickel-based alloys or stainless steel, offer excellent material properties as it related to resistance to corrosion. This is particularly important in aerospace and marine applications, where components are exposed to corrosive environments.

### 6. Customization

Brazed honeycomb structures can be tailored to specific application requirements, such as varying cell sizes, core thickness, and material combinations. This flexibility allows engineers to design components that meet precise mechanical, thermal, and environmental specifications.

### 7. Lightweight with Thermal Insulation

In addition to mechanical strength, the honeycomb structure provides good thermal insulation properties, making it useful in applications where thermal management is important, such as in heat shields or aerospace structures.



## ABOUT MAGELLAN AEROSPACE

Magellan Aerospace is a global aerospace company that provides complex assemblies and systems solutions to aircraft and engine manufacturers, and defence and space agencies worldwide. Magellan designs and manufactures aeroengine and aerostructure assemblies and components for aerospace markets, advanced proprietary products for military and space markets, and provides engine and component repair and overhaul services worldwide. Magellan is a public company whose shares trade on the Toronto Stock Exchange (TSX: MAL), with operating units throughout North America, Europe, and India.

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