

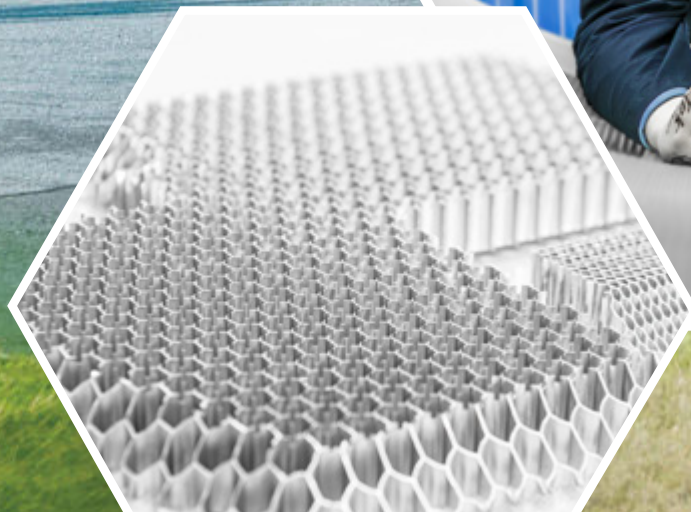
The Doorway

A Publication of The Gill Corporation

High-Performance Composite Products Since 1945 • www.thegillcorp.com

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A DEEP DIVE: TGC-MARYLAND



ANTIMICROBIAL TREATED

ADVANCED COMPOSITES & CORE PROCESSING

The Gill Corporation (TGC) is a leading global manufacturer of high-performance aerospace composites, specializing in honeycomb cores, sandwich panels, and laminates. With a strategic footprint spanning world-class facilities in California, Maryland, and France, we offer the aerospace industry unparalleled vertical integration. Through purposeful innovation and strategic growth, we have evolved from a modest operation in 1945 into a global, single-source solution, delivering to customers across the aerospace, space, defense, military, marine, and rail industries.

Our Maryland and France facilities are capable of converting raw alloys into metallic core blocks, precision-machining them into finished details, and delivering fully bonded, ready-for-installation assemblies. Furthermore, our value-added services are tailored to meet or exceed customer expectations while eliminating waste, time, and costs through custom packaging, kitting, and just-in-time delivery.

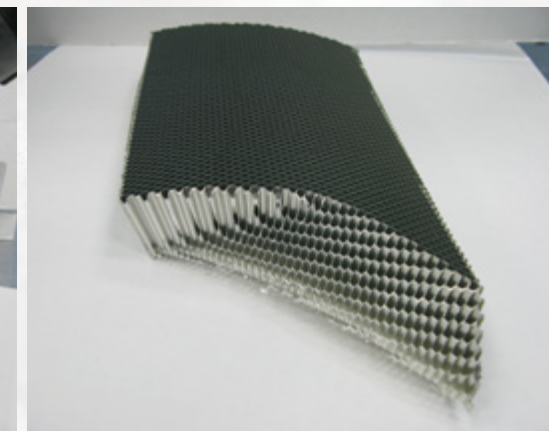
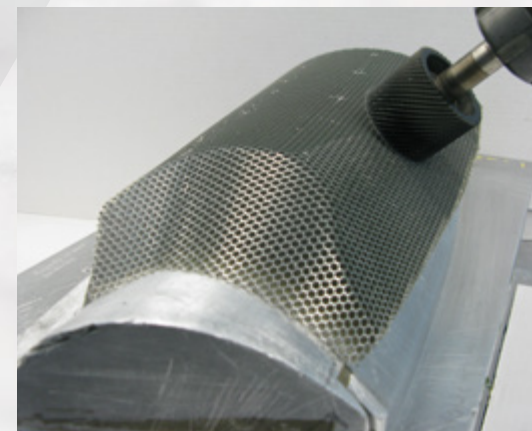
In this issue, we go behind the scenes at our premier Center of Excellence (CoE) for metallic innovation: TGC-Maryland (TGC-MD). Joining the TGC family in 2001, this Edgewood-based facility (formerly Alcore®) marked a pivotal era in our global expansion and our shift toward advanced, machined-core solutions. Our 212,000 ft² (19,695 m²) facility houses advanced machinery, experienced engineers, and expert CNC programming teams. Driven by a commitment to quality and a push for lighter, high-strength structures, TGC-MD provides unique regional advantages and specialized engineering expertise that keep TGC at the absolute forefront of the metallic honeycomb market.

Note: In upcoming issues of The Doorway, we will continue this series with dedicated deep dives into our France operations and our California Headquarters.

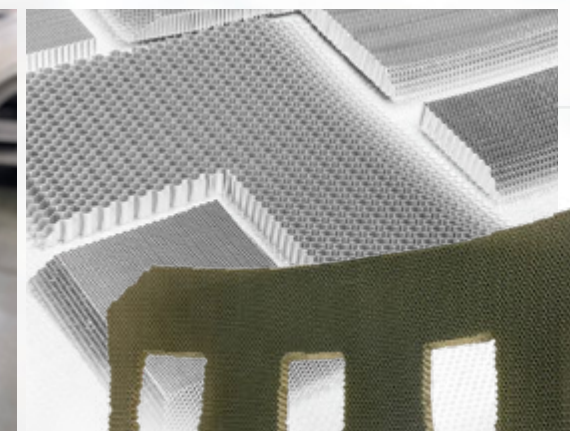
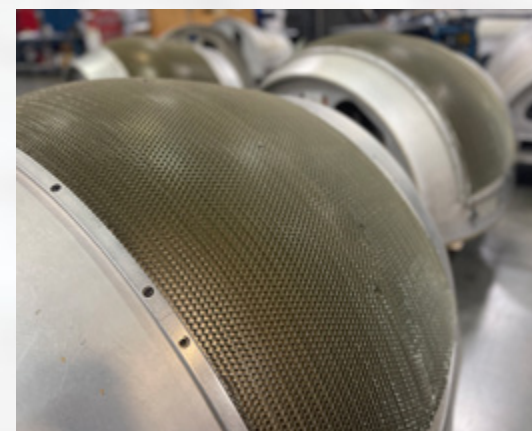
VERTICAL INTEGRATION: MOVING BEYOND “BLOCK AND SLICE”

The industry shift toward composite-heavy aircraft has fundamentally redefined structural requirements. Modern flight surfaces are increasingly contoured, requiring honeycomb core that is precision-machined, stabilized, and kitted long before skin application. By establishing dedicated CoEs, TGC has moved far beyond traditional “block and slice” production.

TGC-MD offers specialized processing capabilities designed to deliver 100% Form-B clean core compliant kitted details, ensuring all parts arrive at Tier 1 and Tier 2 assembly lines ready for immediate bonding without further downstream preparation.



**5-axis CNC
Machining**



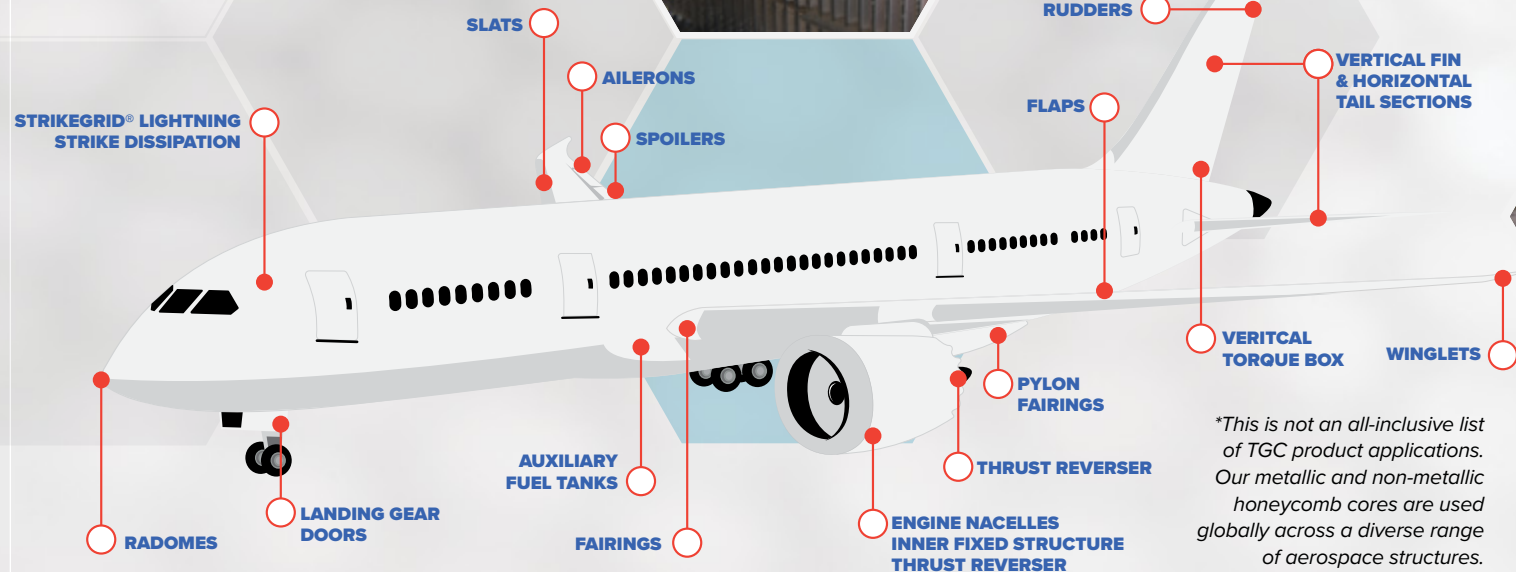
**Machined Aluminum
Aerospace Parts**



SPECIALIZED CORE PROCESSING CAPABILITIES

- 3- and 5-Axis CNC Machining
- CNC Programming
- Planform Trimming
- Horizontal Sawing
- Chamfering
- Cuette Milling and Expansion of Shapes
- Routing of Doublers or Rebates
- Core Slotting
- Roll Forming
- General Handwork
- Potting
- Heat Forming
- Custom Contouring (SHAPEGRID®)
- Splice and Septum Bonding
- Core Stabilization

AEROSPACE APPLICATIONS



**This is not an all-inclusive list of TGC product applications. Our metallic and non-metallic honeycomb cores are used globally across a diverse range of aerospace structures.*

MAJOR PROGRAM SUPPORT: STRATEGIC PARTNERSHIPS

The Maryland facility operates as a critical tier partner, delivering mission-critical components for the world's most advanced commercial aviation platforms to ensure structural integrity, acoustic performance, and weight optimization.

Boeing 787 Dreamliner: TGC-MD is a vital provider of proprietary PAA-CORE® (Phosphoric Acid Anodized) metallic honeycomb for the aircraft's propulsion systems. This specialized core is integrated into the Thrust Reverser Translating Sleeves (TLS) and Inner Fixed Structure (IFS). Engineered to withstand extreme thermal gradients and intense aerodynamic loads, our PAA-CORE® delivers industry-leading hot/wet corrosion resistance and long-term bonding durability. Additionally, the facility offers proprietary DURA-CORE® technology as a highly effective, cost-optimized alternative for targeted corrosion-resistant applications.

Boeing 737 & 777 Platforms: The facility supplies high-precision, CNC-machined metallic details for primary and secondary structures, including flight control surfaces, engine nacelles, and tail cones. TGC-MD also manufactures high-rate metallic honeycomb core for commercial cabin floor panels, supporting both OEM production lines and the fast-paced global aerospace aftermarket.

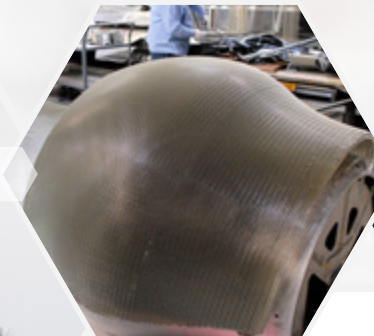
Metallic Core for Business Jet Interior Applications: TGC-MD manufactures PAA-CORE® and DURA-CORE® honeycomb in a wide variety of cell sizes and densities for interior galleys, cabinetry, and lavatories. Platforms supported include Dassault Falcon Jet, Gulfstream, and Learjet.

Airbus A320neo Family: Supporting the world's most popular narrow-body program, the Maryland facility manufactures flight-critical engine nacelle details. This includes high-performance core utilized in inlet cowls and blocker doors, where precise geometries are vital for optimal airflow management and noise attenuation.

Multi-Market Energy Absorption: Beyond aerospace, TGC-MD is a global leader in impact protection technology. Customers utilize our experience and expertise in how metals crush predictably, to manufacture impact limiters and barriers that absorb shock during transit, protecting everything from train passengers to hazardous freight.



Engine Nacelle Machined Parts



High-Speed Train Front Shield



ADVANCED PRODUCT PORTFOLIO

To support these specialized processes, TGC-MD maintains a diverse portfolio of core products engineered for specific environmental and structural challenges.

Product	Description	Key Benefits	Typical Applications
CGH® (Commercial Grade Honeycomb)	Specialized commercial-grade high-performance aluminum honeycomb core designed to bridge the gap between architectural and demanding industrial applications.	• Exceptional structural stability and flatness over large surface areas. • Excellent moisture resistance and durability under cyclic thermal exposure. • Highly cost-effective while maintaining tight cell-size tolerances.	Architectural interior ceiling systems, structural backing for stone/marble facades, high-end cleanroom panels, and clean energy battery enclosures.
DURA-CORE®	Premium aerospace-grade aluminum honeycomb core treated with a specialized chemical conversion coating for enhanced environmental protection.	• Superior node-bond flexibility prevents splitting during tight-radius forming. • Proven 30-day salt-fog corrosion resistance (ASTM B-117 / AMS-C-7438). • Provides a high-integrity substrate for structural adhesive bonding.	Lightweight aircraft primary and secondary flight structures, military enclosures, and secondary control surfaces.
PAA-CORE®	Industry-standard metallic honeycomb core treated via a proprietary Phosphoric Acid Anodization (PAA) process.	• Unsurpassed corrosion resistance in hot/wet environments (AMS-C-7438). • Maximizes long-term bond durability when paired with carbon-fiber or metallic skins. • Prevents galvanic corrosion at the core-to-skin interface.	Commercial aircraft engine nacelles, thrust reverser translating sleeves, trailing edges, and high-performance military flight surfaces.
STRIKEGRID®	Micro-precision engineered, expanded metal foil designed for seamless integration into outer composite plies.	• Rapidly dissipates high-voltage lightning strikes to prevent catastrophic composite delamination. • Extremely lightweight mesh adding minimal weight to the airframe. • Easily conforms to complex aerofoil curves.	Flight-critical exterior aircraft surfaces, radomes, wing tips, and fuselage skin panels.
HIGRID®	An ultra-high-density metallic honeycomb core, engineered from multi-layer bonded corrugated foil for extreme load-bearing performance.	• Unmatched compressive and uniform crush strength. • Serves as an excellent rigid structural insert. • High energy-absorption efficiency during impact events.	Localized fastener reinforcement zones, structural edge closures, composite panel joints, and crashworthy structures.
SHAPEGRID®	Custom-contoured and pre-machined metallic honeycomb core tailored to match exact engineering specifications.	• Optimally oriented node lines easily conform to tight, complex radii without cell distortion. • Eliminates core-crush and spring-back during skin layup. • Minimizes waste and reduces downstream assembly cycle times.	Highly contoured engine thrust reversers, curved wing-to-body fairings, and acoustic nacelle inlets.
TRUSSGRID®	Revolutionary three-dimensional cross-laminated corrugated aluminum structure that eliminates traditional hexagonal cell walls.	• Provides true isotropic strength with multidirectional mechanical stability. • Outstanding uniform energy absorption upon impact. • Allows for omnidirectional fluid or gas venting if required.	High-velocity kinetic impact absorbers, military vehicle blast mitigation panels, and specialized aerospace crush zones.

QUALITY, CERTIFICATION & REGULATORY COMPLIANCE

Quality is engineered into every stage at TGC-MD. With long-standing AS9100 compliance and Nadcap certifications in Quality Systems and Core Processing, our facility guarantees that all specialized processes, from horizontal sawing to kitted detail validation, meet or exceed exact aerospace OEM requirements.

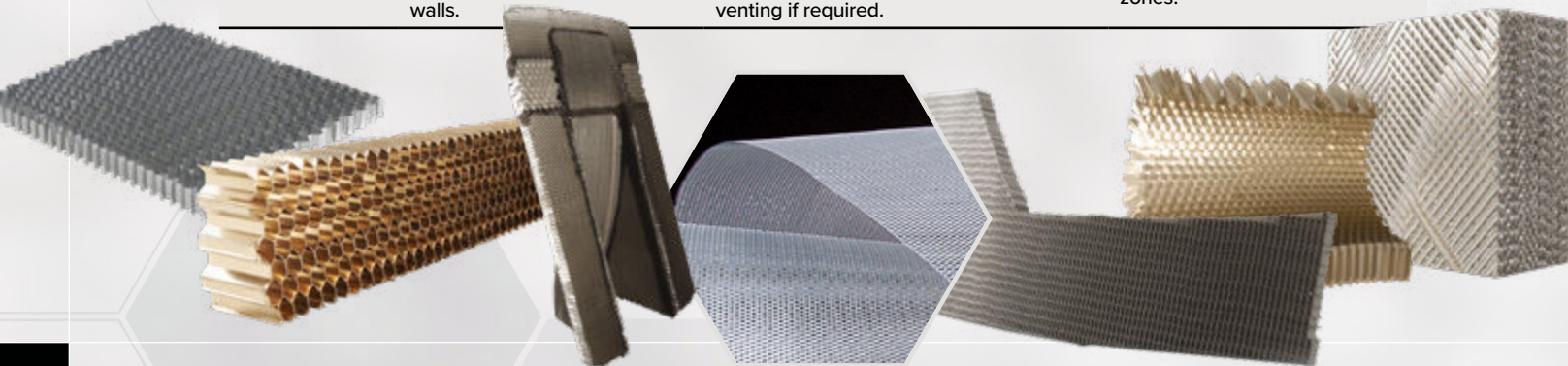
Building on this foundation, our dedicated engineering and quality compliance teams ensure all flight-critical replacement components satisfy strict regulatory mandates, offering operators a seamless, certified supply chain for ongoing fleet sustainment.

The technical capabilities housed within TGC-MD do not stand alone; they represent a vital pillar of TGC's unified global ecosystem. As the aerospace and industrial sectors demand increasingly complex, contoured, and lightweight components, our CoEs are already structured to exceed the challenge. By bridging localized metallurgical expertise with international manufacturing scale, TGC continues to deliver regional agility with a profound global impact, shaping the material solutions of tomorrow.



Original Equipment Manufacturer	Specification	Product
Airbus	AIMS 11-02-001	Dura-Core® Aluminum Honeycomb - 5052 Alloy
Airbus	AIMS 11-02-002	Dura-Core® Aluminum Honeycomb - 5056 Alloy
Airbus Helicopters	ECS2449-A	Dura-Core® or PAA Aluminum Honeycomb - 5056 Alloy
Airbus Helicopters	ECS2447-A	Dura-Core® or PAA Aluminum Honeycomb - 5056 Alloy
Airbus Helicopters	ECS2451-A	Dura-Core® or PAA Aluminum Honeycomb - 5056 Alloy
Airbus Helicopters	ECS2450-A	Dura-Core® or PAA Aluminum Honeycomb - 5056 Alloy
Airbus Helicopters	ECS2448-A	Dura-Core® or PAA Aluminum Honeycomb - 5056 Alloy
Bell Textron	299-947-059	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
Boeing	BMS 4-4	Dura-Core® or PAA Aluminum Honeycomb - 5052 Alloy
Boeing	BMS 4-25	PAA Aluminum Honeycomb - 5056 Alloy
Boeing St. Louis	MMS701, 714, 728	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
COMAC	CMS-CP-401	PAA Aluminum Honeycomb - 5052 Alloy
Decrane/Pats	PS-028	Dura-Core® Aluminum Honeycomb - 5052 Alloy
General Dynamics	P190	Dura-Core® Aluminum Honeycomb - 5052 Alloy
Goodrich	RMS026	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
Hispano Suiza	BLGG 500601	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
Hispano Suiza	BLGG 500801	PAA Aluminum Honeycomb - 5052 Alloy
Leonardo	MMS8010	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
Lockheed	FMS 3010	Dura-Core® Aluminum Honeycomb - 5052 Alloy
Lockheed	STM Y1071	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
Northrop Grumman	GC100B, GC100F	Dura-Core® Aluminum Honeycomb - 5052 Alloy
Northrop Grumman	NAI-1171	Dura-Core® Aluminum Honeycomb - 5052 Alloy
MRAS	STMM-Y100	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
Raytheon	BS 25017	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
SAAB	STD 124230	PAA Aluminum Honeycomb - 5056 Alloy
SAE	AMS-4348, AMS-4349	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
SAE	AMS-C-7438	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
Safran	HMRC 3001D	PAA Aluminum Honeycomb - 5056 Alloy
Safran	HMRC 3005	PAA Aluminum Honeycomb - 5052 Alloy
Safran	HMRC 3007	Dura-Core® Aluminum Honeycomb - 5052 Alloy
Shorts Brothers	SMS 58	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
Shorts Brothers	SMS 78	Dura-Core® or PAA Aluminum Honeycomb - 5052 or 5056 Alloy
Sonaca	SMS1003	PAA Aluminum Honeycomb - 5052 Alloy
Sonaca	SMS1005	Dura-Core® Aluminum Honeycomb - 5056 Alloy
Thales Alenia Space	10903820-5, 11014180-1	Dura-Core® or PAA Aluminum Honeycomb 5056 Alloy

Please scan the QR code to view the full Metallic Honeycomb Customer Qualifications Chart.



Fun Facts

Before finally being accepted, J.K. Rowling's original Harry Potter pitch was rejected by 12 publishers.

The Japanese term for a Shotgun Wedding is "Dekichatta kekkon," which literally translates to "oops-we-did-it-marriage."

Garlic is known to attract leeches.

In 1992, a shipping crate containing 28,000 rubber duckies fell overboard. They washed up around the world for the next 20 years.

It takes Uranus 84 years to orbit the Sun once.

A 26-sided shape is known as a rhombicuboctahedron.

Mob boss Vincent Gigante used to wander around New York in his bathrobe to convince the police he was insane and avoid capture.

The military has used silly string to detect tripwires in Iraq. Before entering a room, they can squirt it inside. If it hangs in the air, it may have revealed a wire.

By applying even pressure to an egg, it is nearly impossible to break the shell by squeezing it.

So far, two diseases have successfully been eradicated: smallpox and rinderpest. The last case of smallpox was in 1977, and the last of rinderpest was in 2001.

A recently discovered deep-sea snail, the Scaly-Foot Gastropod, has a shell that is impressively developed. So much so that the U.S. military is trying to use its design to inspire defensive layers in military armor.

There are over 6,000 known species of grass.

The total weight of all air on Earth is 11 quintillion pounds.

"Time anxiety" occurs in a person when they are perpetually afraid of being late or of others being late.

Ant queens can live for up to 30 years.

In 2014, Princeton researchers determined that Facebook would lose 80% of its users by 2017.

Orlando Bloom has swinophobia, which is a fear of pigs!

Eight of the ten largest statues in the world are of Buddha's.

In Bruges, Belgium, there is an underground pipeline that runs 2 miles to transfer beer from a brewery to the bottling plant.

Garrett McNamara holds the record for the largest wave ever surfed, set in 2011 in Nazare, Portugal. The wave was 78 feet tall.

The logo on the Red Bull cans is not cattle, but a type of bovine called a "gaur."



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