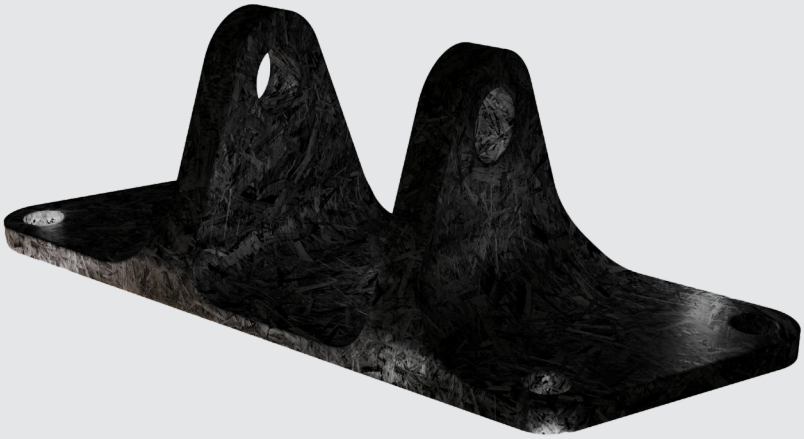
DIEHL
Aviation

ECO BRACKET

COST-EFFICIENT LIGHTWEIGHT DESIGN WITH RECYCLED MATERIALS



SUSTAINABLE FEATURES

WEIGHT SAVING

CO_2 SAVING

RECYCLED MATERIAL

CHARACTERISTICS

Aerospace interior production chains generate significant amounts of waste, underscoring the need to find ways to reuse materials for both economic and environmental reasons. **Diehl Aviation and 9T Labs** have developed a groundbreaking ultra-lightweight *ECO* Bracket made from recycled thermoplastic production scrap. Through an advanced manufacturing process, the *ECO* Bracket is intricately designed for optimal load distribution, seamlessly combining outstanding mechanical performance with cost-effectiveness. Applied to overhead bin brackets, this innovative upcycling process replaces aluminum, reduces waste, achieves significant weight reduction, and promotes environmental sustainability.

9T LABS

Diehl Aviation aims to contribute to the industry's goal of achieving net-zero aviation by utilizing lightweight, recycled, or bio-based materials to optimize resource consumption and reduce CO_2 emissions. These initiatives are at the core of the ECO efficiency product range.

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BENEFITS

- The *ECO* Bracket saves 1.6 kg per aircraft with just overhead bin brackets. The *ECO* Bracket design can be adapted for additional applications, achieving even greater weight reduction.
- Cost reduction through automated manufacturing and repurposed material
- Design freedom based on an additive manufacturing approach
- 96% reduction in part manufacturing emissions in comparison to aluminum machining
- The *ECO* Bracket enables, through weight saving, a reduction of 17.5 t CO_2eq emissions per aircraft over it‘s lifetime
- Operational cost reduction through lower fuel burn

SUSTAINABLE FEATURES*

WEIGHT SAVING

50 % weight reduction through the use of lightweight materials and design optimization.

CO_2 SAVING

An aircraft‘s lifecycle carbon footprint is reduced by 17.5 tons due to the weight reduction of the *ECO* Bracket.

RECYCLED MATERIAL

Trim waste is reused. The technology also facilitates the recycling of used components at the end of their product life. The *ECO* Bracket is made from 80% recycled material.

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*More Infos about the Sustainability Features you can find here:
https://www.diehl.com/aviation-highlights/en/eco-efficiency/