

mt propeller

5-BLADE NATURAL COMPOSITE PROPELLER

PILATUS PC-12



THE FINEST IN GERMAN ENGINEERING



Jon Eriksson Youngblut

ADVANTAGES OF THE MT 5-BLADE NATURAL COMPOSITE PROPELLER

Reduced Vibration

Aluminum supports harmonic vibration, natural composite does not.

Ever hit a wood bat, and then an aluminum one?

The MT-Propeller blade is crafted from the finest natural composite material, resulting in significantly less vibration, so the rest of your plane (avionics, engine mounts, engine drive shaft and bearings, cowlings, control surfaces, etc.) will live longer, healthier lives with our propeller.

We compared the natural composite construction of MT Propellers with structural composite and aluminum propeller blades of other manufacturers. **The Vibration Comparison Test** compares the deflection of the propeller blade tips by stimulation of the first resonance frequency with an acceleration of 1 g. The left chart shows the deflection of all 3 blades. Another result of the test is that the damping of the first resonance frequency of the structural composite blade is more than 40% less than the damping of the MT-Propeller blade resulting in higher vibration and possible limitations. This outcome is pictured on the right side.

Good: Structural Composite

All carbon-fiber blades with a foam core and shallow nickel leading edge.

Good: Aluminum

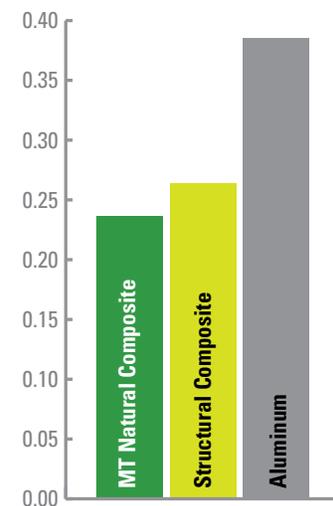
All aluminum blades with an aluminum leading edge.

BEST: Natural Composite

Laminated and compressed wood core blades with carbon-fiber outside. Deep nickel alloy leading edge – **MT PROPELLER**

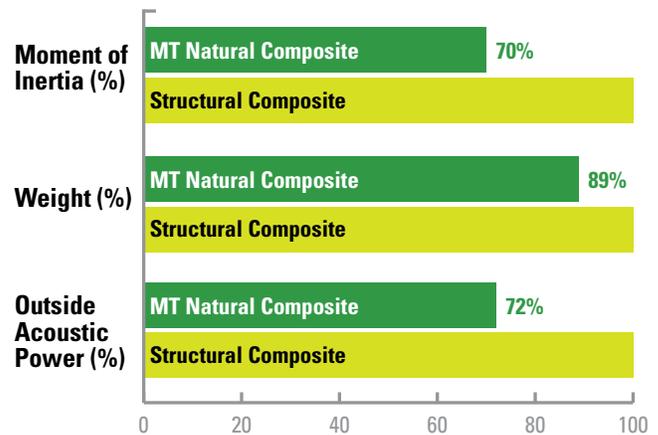
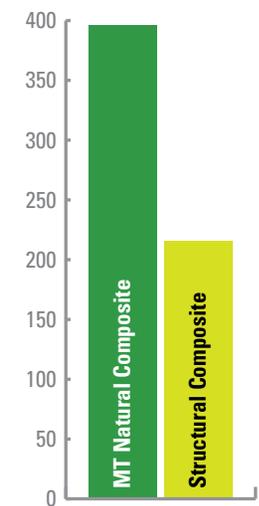
Vibration

Deflection with Same Stimulation



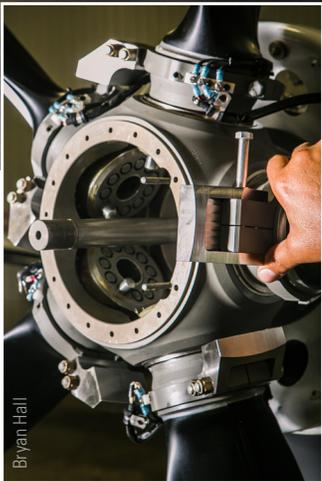
Damping

of the First Resonance Frequency





Bryan Hall



Bryan Hall

Easy Field Installation

*Simply bolt it on, and use your existing prop speed governor.
Blades can be replaced while prop is on the aircraft.*

MT has 60 Factory Authorized Service Centers located around the globe.



Bryan Hall



NEW THIS YEAR!

New 3rd Generation Deice Boots.

New Wide Span Nickel Cobalt Alloy Leading Edge.

New Composite Flex Paint, developed for Boeing 787.

Quieter

Five-blade conversions result in smaller propeller diameters, shortening the blades and reducing propeller noise due to lower tip speeds.

More Takeoff & Climb Thrust

Five blades means more propeller surface area. Lower tip speeds maintain smooth airflow over the blades. The result is greater thrust available for takeoff and climb.

Better Icing Performance

The natural composite material has low heat conductivity, meaning your de-ice boots stay hotter where heat is needed with less electrical draw when compared to aluminum.

Reduced Weight

MT Natural Composite Propellers are significantly lighter than aluminum propeller systems, meaning more useful load and lower engine stresses and starting temperatures.

No Blade Life Limits

Unlike aluminum propellers, MT Natural Composite Propeller blades do not fatigue. They are easily dressed and repaired to proper dimensions in the field. This equals reduced maintenance costs and downtime for your plane.

More Ground Clearance

A smaller diameter propeller increases the margin of safety between the blade tip path and the ground, reducing the chances of prop damage. MT Natural Composite blades create less damage to engines in strike/sudden stoppage incidents when compared to aluminum blades.



Dan Owen

Adds Resale Value

The proven 5-bladed MT Natural Composite Propellers are quickly replacing their older 4-bladed predecessors. You'll enjoy more performance and safety while you fly it, as well as added resale value.

Ramp Appeal

Face it, the 5-bladed curves of the MT natural Composite Propellers just look awesome.

Full Manufacturer's Warranty from MT Propeller

Two years or 1,000 hours, whichever occurs first, for any manufacturing defects.

Comparisons

Takeoff Runway Length	15% Less
Max Rate of Climb	15% Increase
Cruise Speeds	No Change
Outside Takeoff Noise	4dB Less
Cabin and Cockpit Noise	6-7 dB Less
Weight, Compared to Aluminum Prop	4.2 Less Pounds



For more information, contact

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