



Fact Sheet

Natural Composite Blades - Single Piece Hub Structural Composite Blades-2 Piece Split Hub + Grease Fittings

MT-Propeller Composite Blade	Structural FOAM Core Composite Blade
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1. Weight typical 5 bladed Turbo Prop Propeller

12 % lower, app. 143 lbs. (65 kg) Typical Blade with 88,5" diameter	app. 160 lbs. (72 kg) Typical Blade with 88,5" diameter
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2. Polar Moment of Inertia 5 bladed Propeller

30% lower, app. 17760 lbsin ² (5,2kgm ²) Typical Blade with 88,5" diameter	app. 23225 lbsin ² (6,8kgm ²) Typical Blade with 88,5" diameter
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3. Dampening coefficients

45% higher vibration dampening coefficient equals to 0,0396, therefore no ground or flight RPM restrictions	A vibration dampening coefficient of 0,0216 Ground RPM limitations and possible in flight vibration limitations
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4. Erosion Protection

2 inch wide Nickel Cobalt erosion sheath, bonded on the Blade, protects it against Rain, Hail, Ice, Sand and Stones.	Less erosion protection due to the small nickel erosion sheath (less than 1 inch), but increased maintenance effort due to complex design.
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5. Vibration

EXTREME LOW vibration due to high dampening coefficient and lower moment of inertia	Higher VIBRATION levels as a foam core has no vibration dampening at all plus the higher inertia moments. Close to Metal.
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6. Service Life

Unlimited because of the reparability, maintaining original dimensions during service life. 35 YEARS and 60000 plus blades in service with more than 110 Million Flying hrs.	Same service life expected. No long time experience available. Expensive overhaul costs.
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7. Performance

Performance improvement Special High Lift State of the art aerodynamic airfoils invented in close cooperation with the German aeronautic research institute DLR for better take off/ climb and same cruise.	Performance in take off and climb are critical due to thin airfoils which tends to stall partially due to sharp airfoil leading edge .
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8. Reparability

Unlimited replacements of erosion sheath. Rebuilding of blade tips. Maintaining always original blade dimensions.	Ground strike blade repair limits unknown. Hub replacement mandatory.
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9. Hub design

Single piece low maintenance hub. No ADs, No re-greasing needed between TBO. In field blade replacement on wing possible.	2 Piece hub with stress rising crack initiating grease fittings in the highest stressed hub area (blade bearing). Lots of ADs on those hubs. No on wing blade replacement possible
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