



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

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| 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

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| 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

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| 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

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| 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

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| 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

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| 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

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| 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

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| 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

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| 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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