



Fact Sheet
about
Natural Composite Blades
versus
Aluminum Blades

MT-Propeller Composite Blade	Aluminum Blade
1. Weight typical 3 bladed Propeller	
37,5% lower , app. 55 lbs. (25 kg) Typical Blade with 80" diameter Our 3 blade and 4 blade propeller weight less than a 2 blade metal	app. 88 lbs. (40 kg) Typical Blade with 80" diameter
2. Polar Moment of Inertia 3 bladed Propeller	
60% lower , app. 4100 lbsin ² (1,2kgm ²) Typical Blade with 80" diameter	app. 10300 lbsin ² (3,015kgm ²) Typical Blade with 80" diameter
3. Vibration Characteristics	
Less vibrations because of high damping composite material	None vibration dampening Aluminum material (Metal)
4. Fatigue	
No life limits established and no fatigue problems ever occurred and reported	Fatigue problems like broken blade tips, broken hubs occurred and reported
5. Erosion Protection	
Stainless Steel Erosion Sheath, 3 times harder than Aluminum, plus PU-Tape bonded on the Blade, protects it against Rain, Hail, Ice, Sand and Stones.	Not needed, but blades are subject to stone nicks and other damage, which may result in fatigue failures
6. Corrosion	
No corrosion possible because of the natural composite construction	Corrosion is the biggest enemy of Aluminum-Alloy Structure
7. Service Life	
Unlimited because of the repairability, maintaining original dimensions	Service Life limited due to blade repair limits
8. Performance	
Performance improvement with multibladed MT Propellers, using Natural Composite blades which maintain their dimensions during service life	Performance changes possible with every blade rework because of dimensional change by removing material.
9. Repairability	
Unlimited replacements of erosion sheath. Rebuilding of blade tips. Maintaining always original blade dimensions	Blades must be shortened or scraped after damage.