

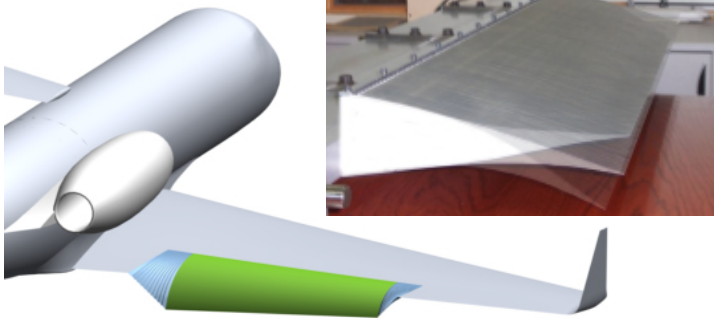
flexfoil™

Variable Geometry Control Surfaces



- Fuel Savings 3–12% ✓
- 40% Noise Reduction ✓
- Lightweight ✓
- High Reliability ✓
- Enhanced Control Authority ✓

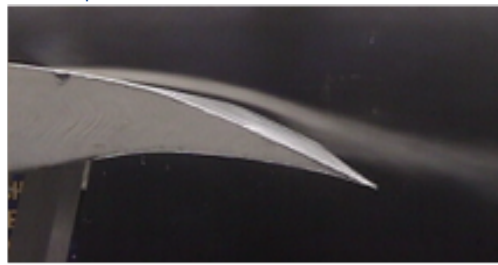
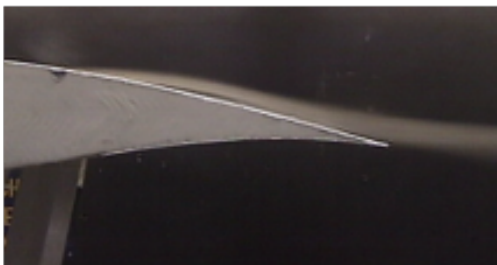
Our Technology is READY TO FLY!



flexsys is a leading authority in variable geometry control surfaces that offer significant reduction in fuel-burn (emissions), aerodynamic noise and stresses. Leveraging its pioneering compliant systems design methodology which has no moving parts in the shape-adapting mechanism, FlexSys has successfully developed lightweight, reliable and cost-effective seamless shape-adaptive control surfaces — our **FlexFoil™** technology. Using aerospace-grade materials and actuators, the **FlexFoil™** control surface is able to

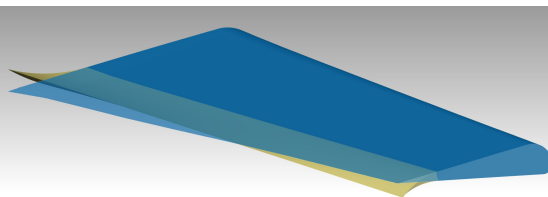
produce large camber changes (-9 to +40 degrees), span-wise twist and high response rates (50 degrees/sec) throughout the flight regime. Flight testing is currently underway.

US Patents: 5971328, 6491262, 7384016 B1, European Patents: 1047593, 1603798, DE 69934210T2 — other US and intl. patents pending.



These wind tunnel tests show how our seamless compliant adaptive airfoil can change camber and twist while maintaining attached flow.

The Flexfoil™ wing's span-wise twist reduces wing root bending moments by shifting loads inboard and lowering induced drag.



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FlexRotor — Expanding the Rotorcraft Envelope



Bell 222a

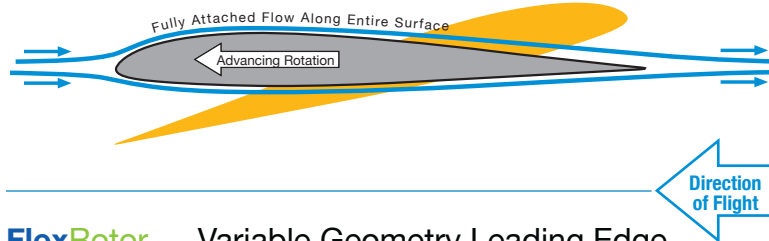
FlexRotor variable geometry rotorcraft leading and trailing edges can **lower drag on the advancing blade** and **delay dynamic stall on the retreating blade**. This makes for significant improvements in hover and forward speed performance. It also **eliminates the Swash Plate** and **reduces vibration and dynamic stress** while allowing for increased payloads and flight ceilings.

FlexRotor — Adaptive Compliant Helicopter Leading Edge

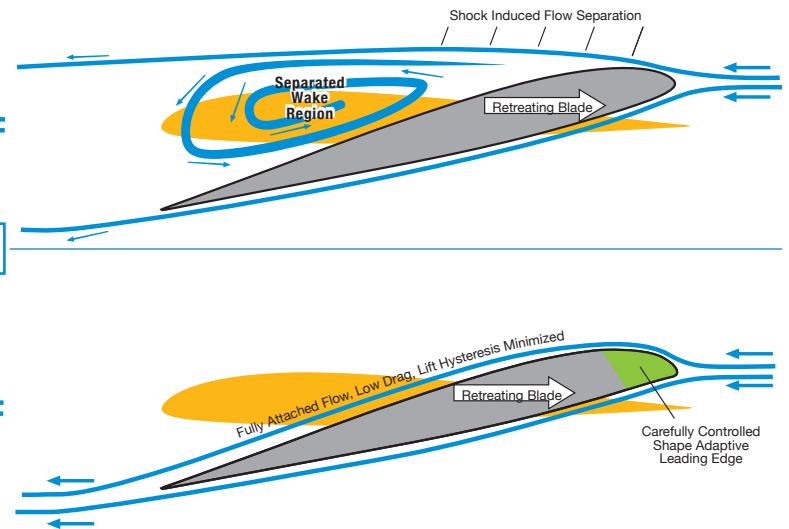
Significant improvements in forward speed and payload

CONVENTIONAL ROTOR

Blade Stall occurs at the outer 1/3 of rotor span

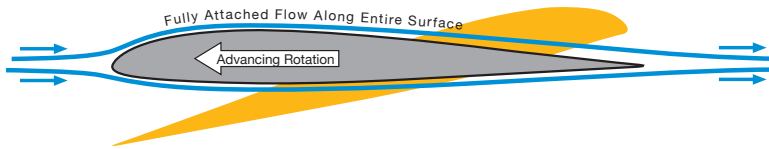


FlexFoil™ variable geometry leading edge



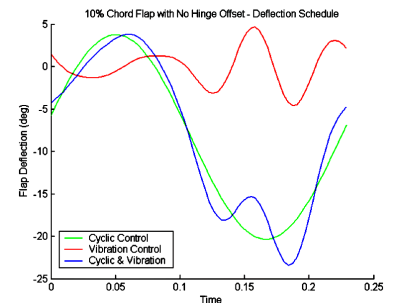
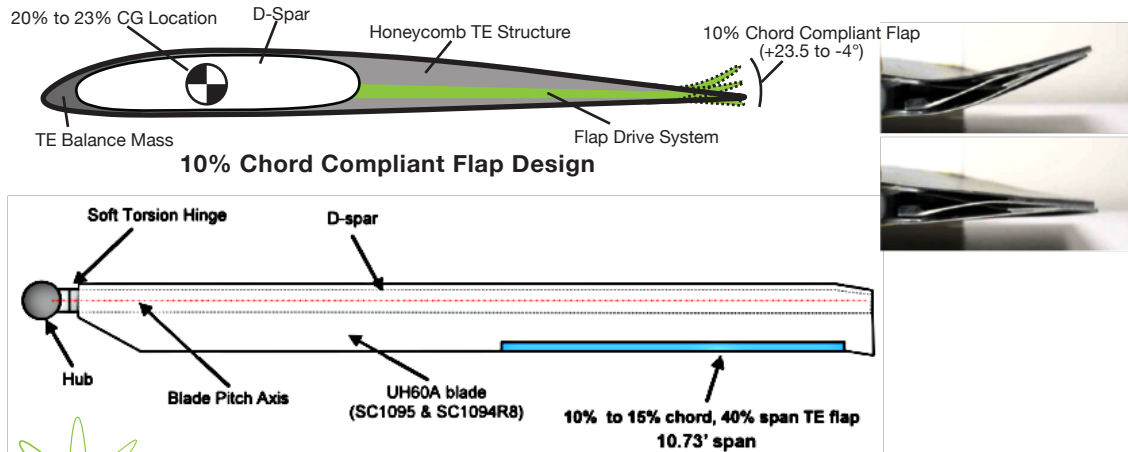
FlexRotor — Variable Geometry Leading Edge

No Blade Stall occurs anywhere along rotor span



FlexRotor — Adaptive Compliant Trailing Edge

Performance and Reliability



The FlexRotor variable geometry trailing edge has lower drag on the advancing blade and higher lift and delayed dynamic stall on the retreating blade.

