

# TAKING A FLYER

## HYBRID RELIES ON HIGH-TECH FLYWHEEL

» NOT ALL HYBRIDS NEED big battery packs and generators. That's what Flybrid Systems of Silverstone, England, is suggesting with its kinetic energy recovery system.

The system eschews typical hybrid battery storage in favor of a mechanical system that employs a high-tech flywheel and a continuously variable transmission to convert energy normally lost during braking into additional power.

The Flybrid flywheel weighs less than 12 pounds and operates at speeds up to 64,500 rpm. The extreme speed and high temperatures

mean that the flywheel must operate in a vacuum. The flywheel's energy is converted to the Torotrak-built CVT via a thin gear that reduces speeds to 10,000 to 12,500 rpm.

The company is working with transmission specialists Xtrac and Torotrak to make the technology ready for Formula One race cars in 2009, says Jon Hilton, cofounder of Flybrid.

A testing agreement with an unnamed F1 team already has been announced.

Hilton admits that the first hurdle is proving the technology on the track, followed by cost reductions needed to transfer the system to production cars.

If the system is successful in competition, Hilton expects the Flybrid to make the leap from racetrack to driveway by 2012.

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