

SLINGSHOT



GREENDALE BICYCLE CO.
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"THE BIKE PEOPLE WITH THE UNRIGID IDEAS"

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MEET THE SLINGSHOT. . . THE BIKE WITH A UNIQUE SUSPENSION FRAME!

It's the Slingshot, an All Terrain bicycle with a suspension frame designed to store energy as you pedal. Energy is stored in two stainless steel spring tensioned cables that serve as the downtube in a conventional bike. A Kevlar spring plate unit joins the bike near the seat tube, which helps the suspension system store energy that's released on every down power stroke of the pedal. The frame thus absorbs road shock at the same time helping to use pedal energy more efficiently, according to the manufacturer.

Here's how it works. As each pedal starts on its downstroke, frame-stored energy is released. The result, a bicycle that's easier to pedal uphill and that is more comfortable on rough roads. On fast descents down rough mountain trails the bike's energy absorbing frame soaks up the bumps for a safer, more controllable downhill run.

On uphill climbs the Slingshot's frame works in reverse. In a conventional bicycle, there is always some frame flex, so that when you pedal the frame flexes slightly from side to side. In the Slingshot, this flexing is stored in the frame itself, in the cables, the cable springs and the Kevlar joint. The result, as one pedal is pushed downward, energy is stored in the frame. When the rider begins a downstroke with the opposite pedal, stored energy moves to that pedal.

The action, says the manufacturer, is similar to what happens when a tennis ball hits the center "sweet spot" of a tennis racquet. The maker, Greendale Bicycle Company, Grand Rapids, MI, says that on tough hill climbs, riders report a release of energy at the beginning of each downstroke, greater control on descents and while cornering fast around sharp curves. Experienced off-road cyclists also report that "body english" is more effective with the Slingshot than it is with conventional ATBs. "Body english" with the Slingshot is used to maximize energy storage and release, something like an acrobat who times descents on a trampoline for maximum rebound effect.

The wheelbase on the 18 inch frame is 42 inches, with chainstays only 16 3/8 inches, making for a nimble, responsive frame, according to the manufacturer. The Slingshot's frame is T.I.G. welded of 4130 chrome-moly steel with a yield strength of some 80,000 lbs/sq.in. The two stainless steel cables each have a breaking strength of 1,760 lbs. The Kevlar 49 light weight spring plate in the time tube is the same material used in bullet proof vests.

Spring tension on the bike's twin cables can be reduced for a smoother ride on flat roads or for descents on bumpy trails. Cable tension can be increased to adjust to a heavier rider or for hill climbs.

After five years of research and a half million frame cycle torture tests in the laboratory, the Slingshot appears to be well on the way to a new approach in bicycle technology and design.

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Components include SunTour XC hubs and derailleurs, Arraya RM25 rims, SunTour cam action brakes or Shimano Di-Ore XT cantilever brakes for stopping power and control on speedy descents. The Kevlar joint is laminated on both sides with spring steel.

Frame sizes range from 17 to 25 inches in one inch increments. List price is \$975.00. For literature or information on the Slingshot, write Greendale Bicycle Company, 41 Commerce Street, Grand Rapids, MI 49503, or ask your bicycle dealer.

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Editor's Note: Four line drawings show how the Slingshot works.