

AMERICANO ROHLOFF + GATES

It's still early in the game, but belt-drive technology is coming

by Dan D'Ambrosio

Co-Motion's Oregon-built Americano is a pack mule of a bicycle, built for the long haul, your ambassador to the world, as its name suggests. "It's incredibly durable, intended to carry the very heavy loads that a self-supported tourer would need," said Ben Moore, Co-Motion's marketing director. Handmade with large-diameter Reynolds 725 tubes and Co-Motion's taper gauge

fork with a beefy tandem steerer (Co-Motion made its reputation first for its tandems, hence the name of the company), Moore said the bike also features 145-mm spacing for a dishless rear wheel, "providing a much stronger ability to carry weight from the start."

"One of the reasons a lot of people really like the bike is that it rides really well unloaded, but it's also designed to ride great with a bunch of weight on it as well," Moore said. "A touring bike like the Americano is set apart from other bikes with rack braze-ons in the way it feels nimble going around a corner under braking with panniers on."

The Americano I rode on the back roads of Vermont, called the Americano Rohloff, is also at the vanguard of nothing short of a revolution in touring bikes, with a drivetrain comprised of the Rohloff SpeedHub, a 14-speed internally geared, German-built hub, powered by a Gates Carbon Drive belt and pulleys.

The polyurethane belt has a nylon running surface on its 11-mm teeth — deeper than the 8-mm teeth used on standard industrial belts — and is reinforced with a carbon cord that absolutely will not stretch, meaning the belt basi-



cally never needs to be adjusted. Neither does it require lubrication. According to Gates, "If the system gets dirty, just hose it off."

The Rohloff's gearing is ideal, running from a low of 17.11 inches to a high of 90 inches, with perfect steps in between: 19.38, 22.1, 25.1, 28.5, 32.39, 36.8, 41.8, 47.5, 54.1, 61.4, 69.6, and 79.28. And, remember, each of these gears is available instantly with a simple twist of the gear changer mounted on the bar end.

Here's what British cyclist James Bowthorpe had to say to *Adventure Journal*, an online magazine, after his 174-day, 18,000-mile ride around the world ending in September 2009, with a Rohloff hub and Gates belt drive on a Santos Travelmaster bike: "I didn't have to lubricate it or do any maintenance. I didn't alter the tension on the belt for the

whole 18,000 miles."

Bear in mind that Gates first developed the material in this belt for Harley Davidson, which required it to last for at least 70,000 miles on its motorcycles. Frank Scurlock, global business development manager for Gates Corporation, said the belt Gates makes for Harley exceeds their requirement of 70,000 miles of use, and while he was reluctant to make any specific mileage claims concerning how long the bike belt would last, I'll leave it to your imagination given the performance of the motorcycle belt.

"A belt will last roughly twice as long as a chain, primarily because the belt does not stretch," Scurlock said.

Scurlock said the biggest downfall of a chain is that it has so many moving parts.

"With your first pedal stroke, that chain is starting to elongate," he said. "The maintenance you do, or don't do, affects the life of a chain, which decreases substantially faster than a belt. A belt is not stretching, and there are no moving parts."

Bowthorpe had high praise for the Rohloff hub as well, saying he only had to change the oil twice as recommended by the manufacturer. Founded in 1986, Rohloff began by making chains that were quickly accepted on the Tour de France, rocketing the company to fame and resulting in a partnership with Campagnolo that lasted from 1989 to 1993.

In 1994, Rohloff split with Campagnolo and two years later, in 1996, introduced the SpeedHub, designed to replace the traditional 27-speed chain and derailleur drivetrain. Today, Rohloff sells about 20,000 SpeedHubs annually around the world, and the conventional wisdom is that there has never been a failure of one of these hubs, which are

literally handmade. (Check out Rohloff on YouTube for videos on how these things are made.)

Following his nearly six-month journey through every condition imaginable, Bowthorpe is a believer in the belt-driven Rohloff.

"Hub gearing makes sense for people who don't want to spend hours on maintenance, and the belt drive is a logical step because chains are designed for derailleurs," he told *Adventure Journal*. "I reckon belts are the future. Anything that makes cycling easier and simpler is a great innovation."

Now for the bad news. A Rohloff SpeedHub will set you back about \$1,400. The Gates belt and pulley system isn't as shocking — at around \$325. But here's what the complete system does to the price of a bike.

An Americano with a standard drivetrain retails for \$3,615. An Americano Rohloff with Gates belt drive, a classic trim package consisting of a Brooks B17 saddle, leather bar tape, and metal head-tube badge, which is the bike I rode, retails for \$5,810, the most expensive bike I've ever swung a leg over.

Part of what you pay for on a bike like this one is performance, in this case game-changing performance, given the combination of the Rohloff hub and Gates belt drive. But part of what you pay for are pure aesthetics — downright, unadulterated beauty.

The guys at SkiRack, the Burlington bike shop that put the bike together for me, noticed. They were wowed by this metallic black beauty, and when I picked it up, raved about the "silent" belt drive. The Americano, sitting in a rack among the workaday mass-production bikes one finds in any good bike shop, was truly like a gem surrounded by gravel.

As John Schubert, the esteemed technical editor of *Adventure Cyclist*, wrote in his review of the Americano in the January 2001 issue: "It's the welds that catch your eyes first. Underneath the gleaming blue paint, the Co-Motion Americano's welds are like none other I've ever seen. Forsaking the 'row of BBs' look of most expert welds, Co-Motion's

Specifications: Americano Plus

Price: \$5,810

Sizes available: 46cm, 50cm, 52cm, 54cm, 56cm, 58cm, 60cm, 62cm. Custom sizing for an additional \$300.

Size tested: 56cm

Weight: About 27 pounds

TEST BIKE MEASUREMENTS

Seat tube: 53cm (20.9 inches)

Top tube: 54.5cm (21.5 inches)

Head tube angle: 72 degrees

Seat tube angle: 73.5 degrees

Chainstays: 45cm (17.7 inches)

Bottom bracket height: 26.4cm (10.4 inches)

Wheelbase: 103cm (40.6 inches)

Standover height: 79.1cm (31.1 inches)

Frame and fork: Large diameter Reynolds 725 tubes. Co-Motion taper gauge fork with CNC tandem steerer. Chris King Inset Internal headset.

Rims: Velocity Dyad

Hubs: DT540/Rohloff hubs

Tires: Vittoria Randonneur Pro 700 x 35

Crankset: Race Face Deus XC (44t)

Shifters: Rohloff Twist Shifter

Brake levers: Avid

Brakes: Avid BB7 disk brakes, with 160mm rotors

Pedals: Your choice

Seatpost: Kalloy Uno Seraph 29.8 x 30mm, black

Stem: FSA OS150

Headset: Chris King Inset Internal

Handlebar: FSA Omega

Saddle: Selle Italia Nekkar Flow (Brooks B17 on test bike with classic trim package.)

Drivetrain: Rohloff SpeedHub with Gates belt drive

Gearing in inches: 17.11, 19.38, 22.1, 25.1, 28.5, 32.39, 36.8, 41.8, 47.5, 54.1, 61.4, 69.6, 79.28, 90

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are as smooth as silk. It's a flawlessly executed detail, and the welds look that good without any finish work."

I fully agree, and only need to change "gleaming blue paint" to "shimmering black paint."

Now, as to that silent belt drive. It's not, except in gears 8 through 14. When I was in gears 7 on down to 1, which was most of the time, given the extreme grades Vermont likes to throw at cyclists in exchange for its picture-perfect rural countryside with sugar houses and dairy farms, red barns, black and white cows, and plenty of Massey Ferguson tractors, the Rohloff made a slight grinding noise that I found disconcerting, given the price tag of this hub.

I should note that the sound had nothing to do with performance. The hub performed flawlessly any time, anywhere, in any circumstance. With the Rohloff, you can literally shift while standing still. You can shift from gear 14 to gear 1 in the middle of a climb up a 12 percent grade without missing a beat. You can always, always, be in the gear you want to be in, and if you're not, you can get there right now, without a prob-

lem, whether you're climbing, descending, or going nowhere.

Still, a grinding noise? Moore confirmed that he had heard the same complaint from others using the Rohloff, but said it's something people quickly get used to.

"One of the things the belt does is make you so much more aware of other noises you never heard before," said Scurlock. "A chain has vibration, and it's noisy, so it covers up other niggles with the bike."

Co-Motion designed the rear dropouts on the Americano Rohloff specifically to accommodate the internally geared hub and belt drive, dropping the wheel down vertically rather than sliding it out horizontally as conventional bikes do.

To remove the rear wheel, you first have to loosen the set screw on the cable housing for the Rohloff hub and take the outer housing off, letting it hang out of the way on the dual cables that shift the gears up and down. Then you undo the quick release and drop the wheel down like any other bike.

To put the wheel back on, you sim-

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ply slide it back up into the dropouts and replace the outer cable housing onto the inner housing, which remains attached to the wheel. There's a nut in the outer housing that fits into a receiver in the inner housing, and you may have to jiggle things a bit to get it to slide back in.

The great thing about this shifting system, however, is that all the indexing takes place inside the hub and has nothing to do with these cables or this hous-

ing, so you literally can't screw things up. Co-Motion has designed the dropout so that the simple act of replacing the wheel also ensures that the belt is properly tensioned. Easy as pie.

Moore recommended you take an extra belt along with you on tour in the highly unlikely event that you break a belt. The spare belt will cost you about \$60. The Americano Rohloff frame splits on the drive side where the seat stay meets the top of the dropout. You remove a small set screw with an allen key and pull the frame

apart to get the new belt into the triangle.

The chances of you ever having to perform this operation, by the way, are about as remote as the chance I will ever have the money to buy this bike. If you have \$6,000 sitting around, run to the phone and order this baby now. **AC**

Dan D'Ambrosio is a staff writer covering business for the Burlington Free Press in Burlington, Vermont.