

# MAKESHIFT TANDEM



Custom Classic MakeShift w/Rohloff  
14-sp, ovalized tubing and disc drag  
brake

Toucan ST MakeShift w/Alfine-8sp  
and fully independent pedaling for  
both riders

SHIMANO



	MakeShift ST 8-speed Alfine \$4,399	MakeShift Double Roller 14-speed Rohloff \$6,499	Included on MakeShift Tandems
<b>Base Prices</b>			
Frame	Custom Rodriguez Cro-mo	Custom Rodriguez Cro-mo	• Basic tandem round tube set
Fork	Steel Tandem	Steel Tandem	• Clearance for wide tires
Shift levers	Rapid Fire	Rohloff Twist Grip	• Braze-ons for cantilever brakes
Brake Levers	Tektro ATB	Tektro	• All brake and shifting cable routing
Brakes	Tektro Cantilever	Trillium Big Squeeze <sup>TM</sup>	• Braze-ons for rear disc (drag) brake
Bottom Brackets	Shimano Sealed	Shimano Sealed	• Braze-ons for 4 water bottles
Cranks	Alloy Tandem	Alloy Tandem	• Pump mount (water bottle style)
Wheels	Hand-built 3-year warranty	Hand-built 3-year warranty	• Rear rack braze-ons for standard rack
Rims	ZAC19 26" 36°	ZAC19 26" 36°	• Front rack braze-ons for standard rack
Spokes	Stainless 14G	Stainless 14G	• Hidden fender mounts
Rear Hub	Alfine 8-sp	Rohloff Speedhub 14-sp 36°	• Custom kickstand mount
Front hub	Shimano 36°	Shimano 36°	• Stainless steel bottle opener
Tires	Serfas Seca 26x1.25"	Serfas Seca 26x1.25"	
Handlebar(s)	Alloy Flat	Alloy Flat or Alloy Drop bars	Note: We can add to, or subtract from the standard braze-ons for a fee starting at \$25. For orders involving multiple changes, the price will be quoted before we start work.
Head Set	FSA 1 1/8" Sealed	FSA 1 1/8" Sealed	
Captain Stem	Alloy 1 1/8" threadless	Alloy 1 1/8" threadless	
Stoker Stem	Rodriguez Custom adjustable	Rodriguez Custom adjustable	
Bar tape/grips	Black ATB Grips	Black ATB Grips/Black Cork	
Seat posts	Alloy 27.2	Alloy 27.2	
Seats	WTB Speed V	WTB Speed V	
<b>Upgrades</b>			
	Drop bars w/STI shifters \$250	Custom shifter doohicky \$100	<b>MakeShift Tandem Upgrades</b>
	Disc drag brake \$225	Disc drag brake \$400	Custom Sizing - FREE
	11-speed \$400	Ovalized tubing \$200	Stoker control braze-ons for drag brake \$100
	ST travel package \$1,699	Classic travel package \$1,999	Custom Paint - \$100 ~ \$600
			Carbon Handle Bar \$250 (each)
			Da Vinci Cranks \$695
			Phil Wood Front Hub \$130
			Shimano Dynamo Front Hub \$130
			Schmidt Generator Front Hub \$250
			Independent pedaling - \$200 per rider

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[www.rodcycle.com](http://www.rodcycle.com)

# MAKESHIFT

## What is a Rohloff?

Rohloff is a German company that has designed and built the Rohloff Speedhub for several years now. The design is like a really high tech version of your old 3-speed hub. 14 gears are housed inside the rear hub. The reason for the design is to eliminate the use of derailleurs on your bike.

### "Do I want Rohloff?"

Over the last several years, we've built a number of bikes using this hub, and the customers like them. Most of these customers have come in asking for a Rohloff equipped bike, and had already studied and made that decision before talking with us.

The reasons that these people chose the Rohloff hub include ease of shifting, lower maintenance, and perceived 'ease of use'. The reason I use the word perceived is because a Rohloff bicycle frame can be designed in such a way as to make changing the rear tire much more difficult.

The Rohloff hub presents some specific design challenges when building the frame to keep things 'user friendly'. A lot of Rohloff equipped bikes have a 'make shift' style engineering to address these challenges. The crew here at R+E Cycles has developed some techniques that distinguish our Rodriguez Rohloff bikes from the other brands, and make our bikes not only look better, but work much better as well.

R+E Cycles 'ease of use' engineering for Rohloff equipped bikes:

Chain adjustment - We use a Bushnell Eccentric bottom bracket (ebb) for chain adjustment on our Rohloff bicycles. This makes it much, much easier to remove and install the rear wheel, as well as adjust the chain tension when needed. Using the Bushnell ebb also ensures that the bike is equipped with the lightest and most accepted ebb available. This is the same mechanism we use to adjust the timing chain on our tandems, as well as a recommended product by Rohloff themselves. (Read more about the Bushnell ebb at [www.bushnelltandems.com](http://www.bushnelltandems.com))

Dropouts and braze-ons - The Rohloff hub requires special rear dropouts (where the rear wheel bolts on) and cable braze-ons specifically designed for the hub. At R+E Cycles, we machine our own design of Rohloff dropouts and cable braze-ons that allow for much easier removal and reinstallation of the rear wheel.

We even have people with other brands of Rohloff equipped bicycles bring their bike in to have our braze-ons installed. We've seen a lot of Rohloff equipped bicycles that don't take these concerns into their designs. If not properly thought out, a Rohloff rear hub can make removing the rear wheel a big chore, and may even require you to adjust your shifting every time after reinstalling the wheel. At R+E Cycles, we are always designing for comfort as well as reliability and ease of use. This adds to the short term cost of the bicycle, but the first time you have a flat tire, it pays for itself.

## Pros and Cons of a Rohloff Speedhub

### Pros:

- No fuss: The sealed gearbox ensures reliability and durability even under the toughest conditions. The even increments of 13.6% from gear to gear make it possible to always ride at the peak performance. There is no overlap in the gear range, so all 14 gears are usable. In a traditional 27 speed set-up, you've only got about 14 usable gears anyway.

### Cons:

- Cost: Many people assume that the price will be lower than traditional set-up because there are fewer components to buy. Actually, the price of the hub added to the additional amount of customization required on the frame makes the total price higher than a derailleur set-up. Look at it like a Swiss watch.

- Versatility: Since the gear ratio is pre-set, you cannot change the range of gearing between high and low. You can change the front chain ring or rear cog but it will affect the whole range. In short, if you want a 'lower' low gear, then all your gears have to be lower and visa versa.

- Noise: Some of the gears can be a little bit 'rumbly' or 'noisy'. Not really bad, but if you are kind of 'obsessive' about such things, and you've already resigned yourself to the noise of a derailleur set-up, you should try one out before investing in it.

