



World Human-Powered
Speed Challenge

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Press Kit 2015



The award-winning team that broke new ground in human powered flight is now chasing the world human powered speed record.



"Eta" is Aerovelo's fastest speedbike to date.

Photo: Bas de Meijer

Todd Reichert and **Cameron Robertson** have a knack for achieving the seemingly unachievable. They led the teams that mastered the human-powered ornithopter (flapping-wing aircraft) in 2010 and the human-powered helicopter in 2013 - the latter feat winning Aerovelo the prestigious quarter million dollar A.H.S. Sikorsky prize. Having conquered two major aeronautical challenges, Aerovelo now has its sites set on conquering speed. This September Aerovelo will enter their speed bike "eta" into the World Human Power Speed Challenge (WHPSC) in Battle Mountain, Nevada. Here teams from across the globe will race aerodynamic speed bikes down a 5 mile stretch of Highway 305 as they try break the world speed record and take home the title of the *world's fastest human*.



The World Human Powered Speed Challenge. September 14-19, 2015. Battle Mountain Nevada.

Project Overview



Photo: Chris Chrisman

Eta - named after the Greek symbol for efficiency - is the fastest bike ever produced by Aerovelo, and they hope - will soon be the fastest un-assisted human powered vehicle on earth. Eta has been designed to reach speeds in excess of 140kph (87mph). When even the fastest Tour-de-France riders hit average speeds of only 40kph (25mph), Eta is a mind-blowing leap in aerodynamic efficiency and vehicle technology. Eta's aerodynamic shell gives it 100 times less drag than a modern car and the unique ultra-efficient design makes it capable of exceeding highway speeds using less than 1 horsepower.

Setting a new world record will require and innovative engineering and extraordinary athleticism

The other half of Eta's potential to break the record this year rests with it's pilot, Todd Reichert. Reichert is an extremely strong athlete who has trained specifically to maximize power output for piloting Aerovelo's human powered vehicles. On top of his responsibilities for the design and construction of Eta, Todd undergoes rigorous physical training and power-testing with the support of expert physical trainers so that his body can output the raw horsepower needed to take Eta to record breaking speeds.

Current world record:
133 kph / 83 mph

Eta top design speed:
140 kph / 87 mph

Eta top achieved speed:
126.27 kph / 78.46 mph
(2014)

Team Leads

Cameron Robertson (left), Todd Reichert. Photo: Chris Chrisman



Todd & Cameron founded Aerovelo in 2010 while working together on the human-powered ornithopter project. Since then they have proven to be a truly unstoppable engineering duo. Under their leadership Aerovelo has won numerous accolades, including the Belt of Orion Award for Excellent from the Canadian Aviation Hall of Fame (2015), the A.H.S. Sikorsky Prize for the helicopter “Atlas” (2013), the Trans-Canada McKee Trophy from the Canadian Aeronautics and Space Institute (2011), and have a place in the Guinness Book of World Records for the first human powered aircraft with flapping wings (2012).

Cameron Robertson. Structural Engineer

Cameron is a highly skilled leader, engineer and master organizer (and crew ‘mom’). He graduated from University of Toronto’s Engineering Science in 2008 and earned his MASc from the U of T’s Institute for Aerospace Studies in 2009. He is an expert in structural design, advanced composite materials, and mechanical design & manufacture. In addition to ongoing work in Aerovelo, Cameron has spent 2 years developing small unmanned aircraft systems.

Todd Reichert. Pilot. Aerodynamicist

Todd is not just the co-designer of the world’s first human powered ornithopter and helicopter, but he’s the literal human machine behind them as well. With an output of 1 horsepower over 1 minute, Todd’s legs have powered the groundbreaking flights of Snowbird and Atlas, and now aim to drive the ultra-fast speed bike Eta into the history books. Earning his PhD in Aerospace Engineering at the University of Toronto, Todd’s speciality lies in the aerodynamic design of both aircraft and streamlined land-vehicles.

Press Materials & Inquiries

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