

Swimmer

STANDARD CYBORG

2015 Nominet Trust 100 Winner

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2015

AFFORDABLE AND WATERPROOF PROSTHETIC LIMBS

Project URL: www.standardcyborg.com

Project Twitter: [@standardcyborg](https://twitter.com/standardcyborg)

Organisation URL: www.standardcyborg.com

- Community Engagement
- Education

The human body is an excellent multi-purpose tool, adaptable to almost any circumstance. But if a person loses the use of any of their limbs, it can be incredibly expensive to replace a single function of their body with a machine.

Jeff Huber was born with a non-functioning fibula bone in his lower left leg, forcing doctors to amputate it when he was just one year old. Ever since, he's used a prosthetic despite the expense of around \$23,000 (£15,000). Although they can improve the quality of life for many amputees, there are still many activities, such as swimming, that amputees are unable to perform with their usual prosthetics. A waterproof prosthetic leg costs \$5,000 (£3,250), making 'water legs' prohibitively expensive. Until now.

Huber attracted funding from Y Combinator, and has been featured in the media a number of times since for his 3D-printed, affordable, waterproof prosthetic limbs suitable for use in swimming pools. Huber's prosthetics cost \$800 (£520) – a fraction of the cost of alternatives.

It took a lot of development until Huber hit upon the winning formula: combining a light but durable plastic frame with a cover of a super-strong material woven from carbon threads. 3D printers build the frames out of tiny layers of plastic, with each leg customised for every individual. Even with finishing touches by hand, the result is a much cheaper prosthetic accessible to people who previously had no hope of using this technology.

With 1.8 million amputees in the US alone, this could change the lives of many people. Currently Standard Cyborg is working with a third of the clinics and

hospitals in California but Huber hopes that as his company becomes better known, it will spread further in the US – and then the world.

Image 'Swimming (58)' courtesy of EYOF.

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