

Background Information

Swissloop at a Glance

Zürich, 23. May 2018

Swissloop is an association of 20 students from ETH Zurich, University of Zurich, ZHAW and FHNW. Starting in 2016, bachelor and master students have begun developing hyperloop prototypes and taking part in the yearly Hyperloop Pod Competition by Elon Musk and SpaceX in Los Angeles, CA. ETH Zurich and over 50 industry sponsors support the project.

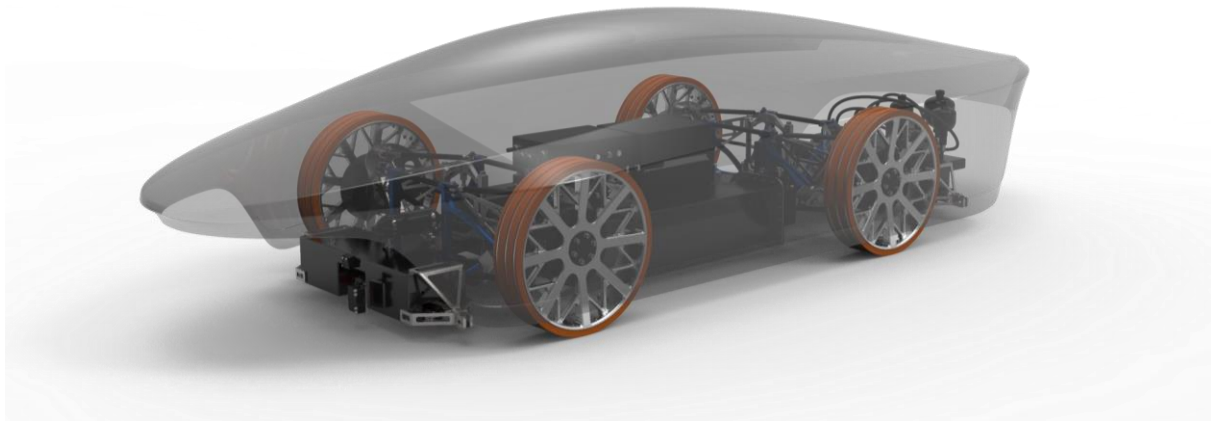


The Hyperloop Vision of Elon Musk

In 2013, Elon Musk presented a whitepaper of his Hyperloop vision: “In the future, people and goods should be transported with up to 1’200 km/h in vacuum tunnels.” Since 2015, to advance the technology, he has invited student teams from around the globe to Los Angeles. There, they can test their prototypes in a competitive setting in a 1.25 km long vacuum tunnel. On the 22nd of July 2018, the third Hyperloop Pod Competition will take place.

Pod “Mujinga”

“Mujinga” is the second prototype designed by Swissloop. The team developed the prototype between September 2017 and May 2018. On the 22nd of July, “Mujinga” and the Swissloop team will compete in the third Hyperloop Pod Competition finale in Los Angeles, CA. The pod received its name in honour of the fastest Swiss athlete, an Olympic and World Championship sprinter, Mujinga Kambundji. Clocking in at 11.07 seconds over 100 meters, she is the fastest Swiss sprinter of all time.



Propulsion

Motor	4 synchronous electric motors
Power	540 HP
Acceleration	1,5 g
Battery	2 batteries with a total of 540 cells
Voltage	700 Volts

Brakes

Braking System	2 hydraulic brakes
Deceleration	5 g

Stability

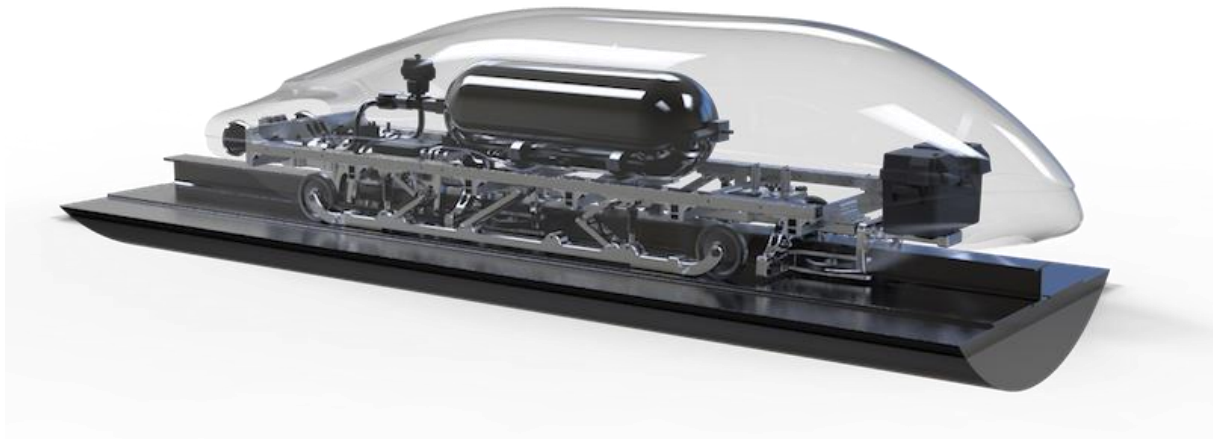
Clamping Mechanism	2 pneumatic clamping mechanisms
Stability Wheels	4 wheels along the I-beam

General

Weight	320 kg
Individual Parts	700+
Chassis	carbon monocoque

Pod Escher

In summer 2017, Swissloop's first prototype reached the 3rd place in the second Hyperloop Pod Competition held by Elon Musk. The team dedicated the pod to the Swiss railway pioneer Alfred Escher.



Propulsion

Propulsion System	cold gas drive with compressed air
Pressure	150 bar
Acceleration	1 g

Brakes

Braking System	2 hydraulic brakes
Deceleration	4 g

Stability

Stability Wheels	4 wheels along the I-beam
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Chassis

Sled	milled aluminium part
Levitation	4 Halbach arrays with a total of 32 magnets

General

Weight	250 kg
Individual Parts	800+

www.swissloop.ch →

www.facebook.com/HyperloopETHZurich →