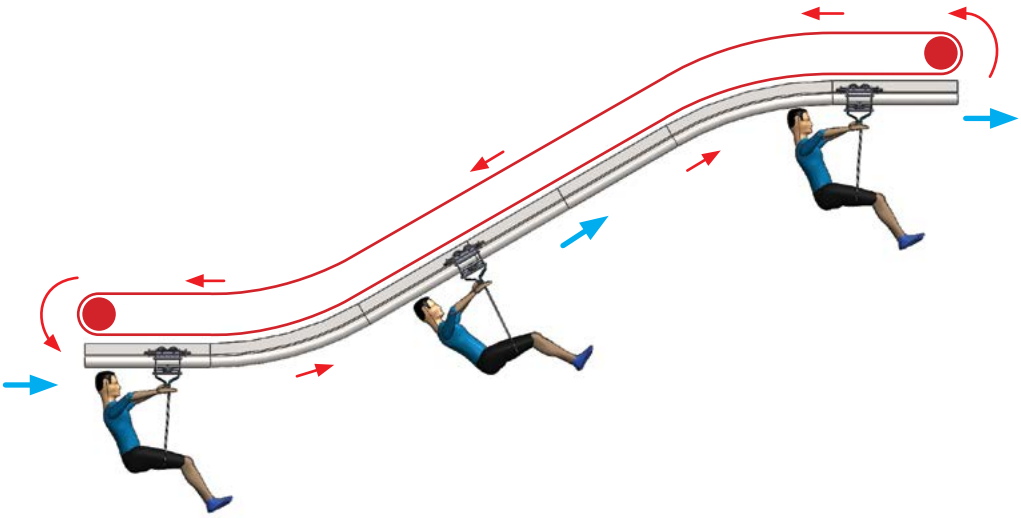
WALLTOPIA

ROLLGLIDER

Chain inclined lifting system



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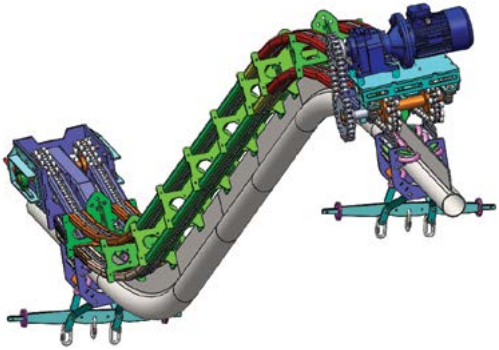
1 Overview

The Inclined Chain Lift is designed to transport the Rollglider participants from a single start/finish platform to the highest point of the line - the start of the ride track. The chain lift allows design and construction of a Rollglider line without a separate starting platform – the start and finish happens on one and the same platform at the lowest point of the line. The lifting is fully automated.

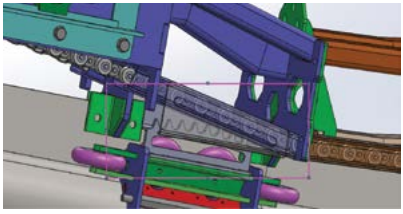
Key parameters

- Speed: up to 2m/sec;
- Inclination: up to 30 degrees;
- Multiple participants at once;
- Only one platform needed to operate the Rollglider line
- Reduced staff



2 Working principle

The towing system uses a chain with rolls that moves within a channel. The chain is interlocked to a rack, that is mounted to the Rollglider trolley. At the upper part of the system there is an electric motor with a reducer which actuates the chain that tows the participant to the beginning of the ride.



3 Modules

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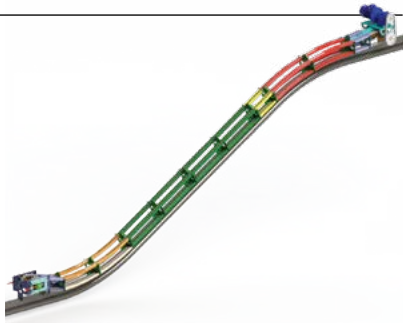
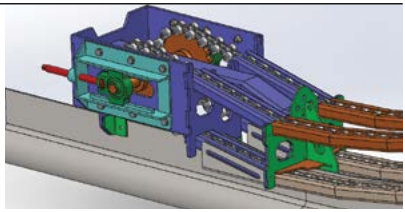


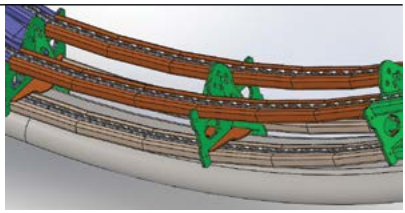
3.1 Starting Module

The beginning of the towing system. It consists of double pivot chain and idler shaft with gear wheels. The starting module catches the participant and starts towing him/her upwards. The inner radius is the next to be mounted.



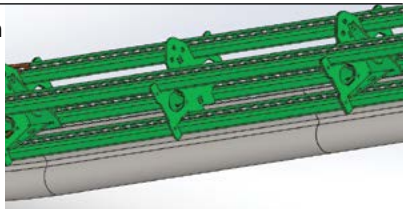
3.2 Inner turn

A curved part of the line with a fixed radius. Placed after the starting module, it has a pair of idle gear wheels with a bearing.



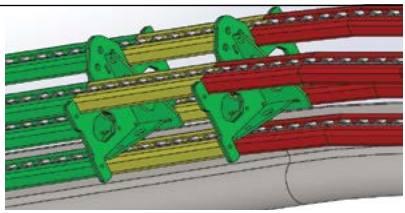
3.3 Middle straight module 150 cm

A module with a set length of 1500 mm. The length of the inclined straight line determines the number of single straight moduled to be placed. Chain tensioner can be mounted on any of the straight 1500mm modules if needed.



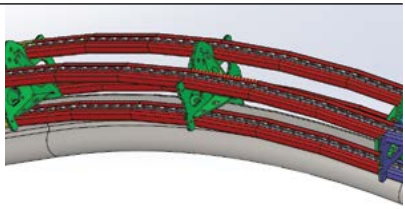
3.4 Additional module

A straight module with varying length depending on the overall length of the line. It equals the whole length - N*1500mm, N representing the number of 1500mm modules needed for the specific project.



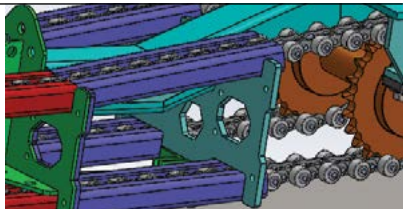
3.5 Outer turn

The module on the upper arc of the line. The radius is fixed analogous to the Inner radius.



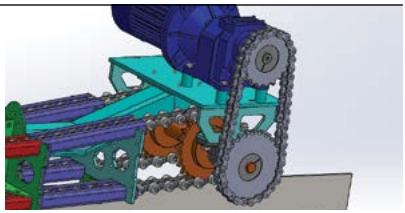
3.6 Closing module

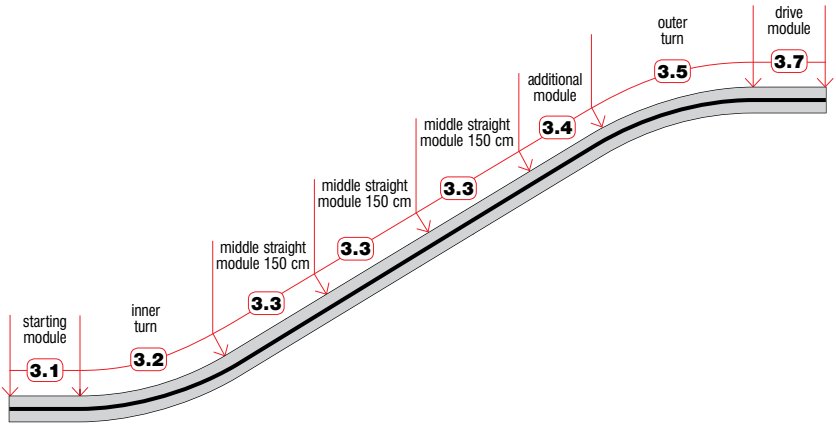
Transitional module that connects the outer radius and the actuating module via a plate.



3.7 Drive module

The module on the upper arc of the line. The radius is fixed analogous to the Inner radius.





4 System implementation

The inner and outer radius are set first, then the actuating and starting modules are placed. The inclined part of the line is divided into 150 cm modules and the remaining length is being filled with an additional module of varying custom size depending on the individual placement of each Rollglider line.