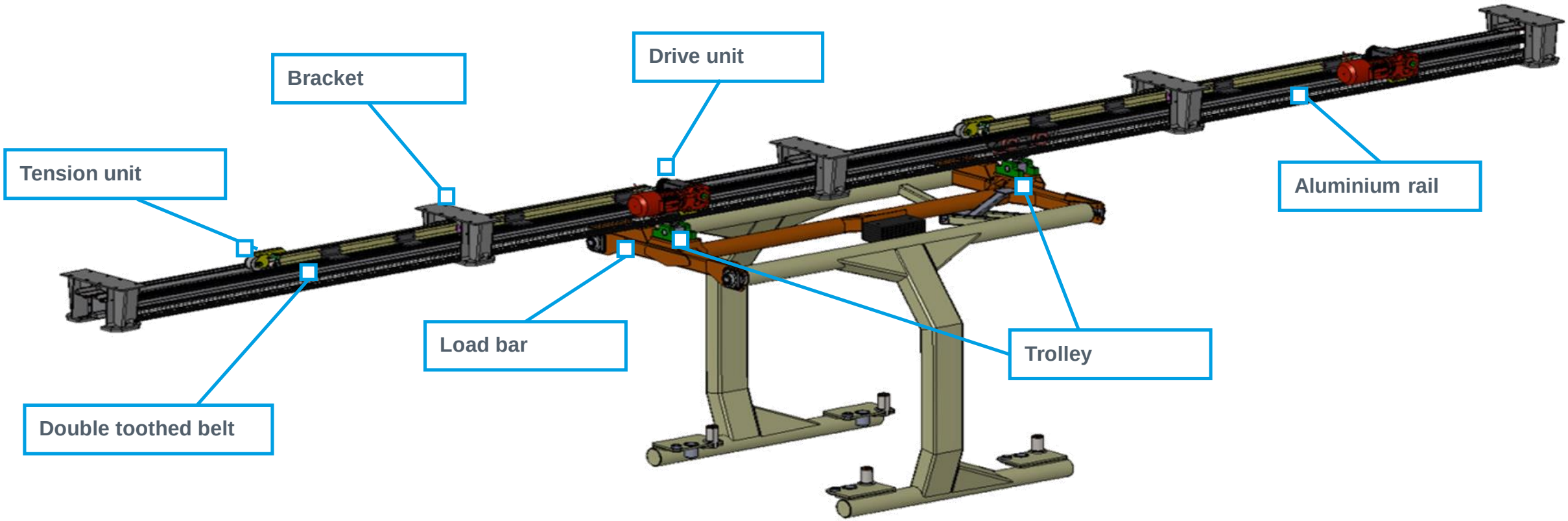
Twin Trolley System®
Conveyor System for BiW, PS, FA

The Twin Trolley System® (or T.T.S.®) is a system of modules used for the handling of loads in BiW, PS and FA

Twin Trolley System®

Base modules



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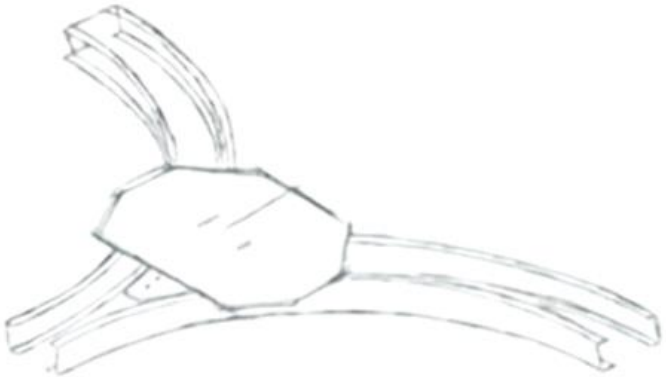
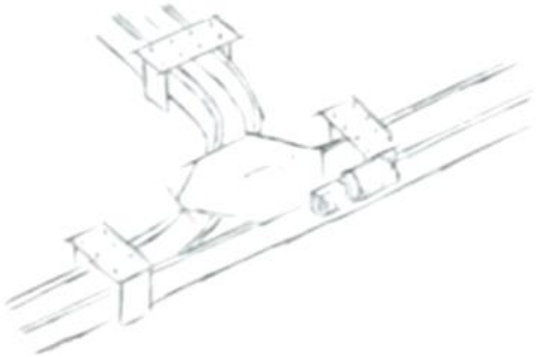
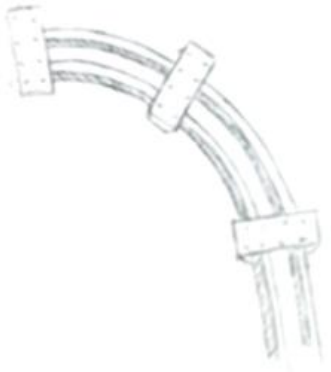
How it works

Every kind of layout







- The modules may be combined in many different ways
- The layout is completely customizable by adding switches, vertical and horizontal bends in the free stretches between one drive unit and the next

Twin Trolley System®

How it works

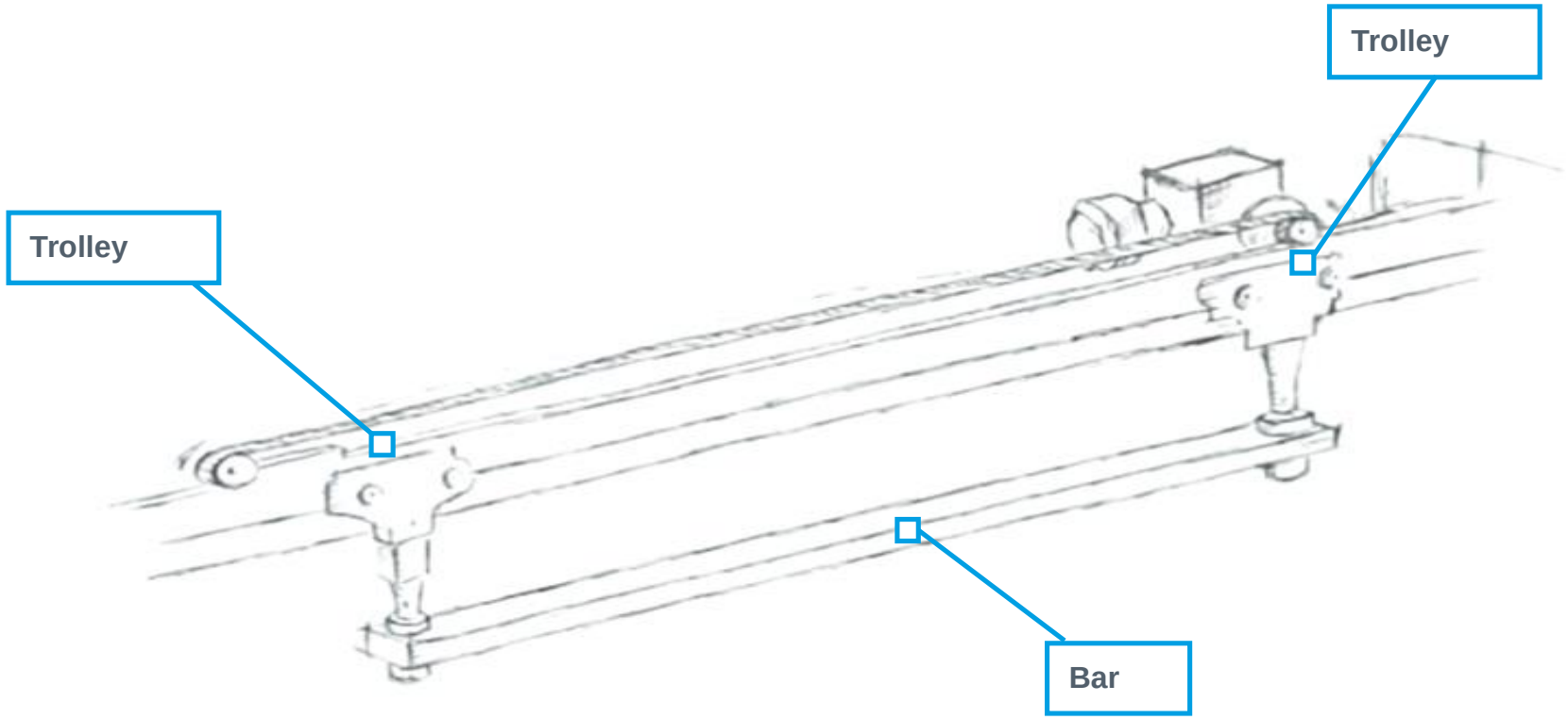
- The movement comes essentially from two trolleys

That’s why we call it twin

Twin Trolley System®

How it works

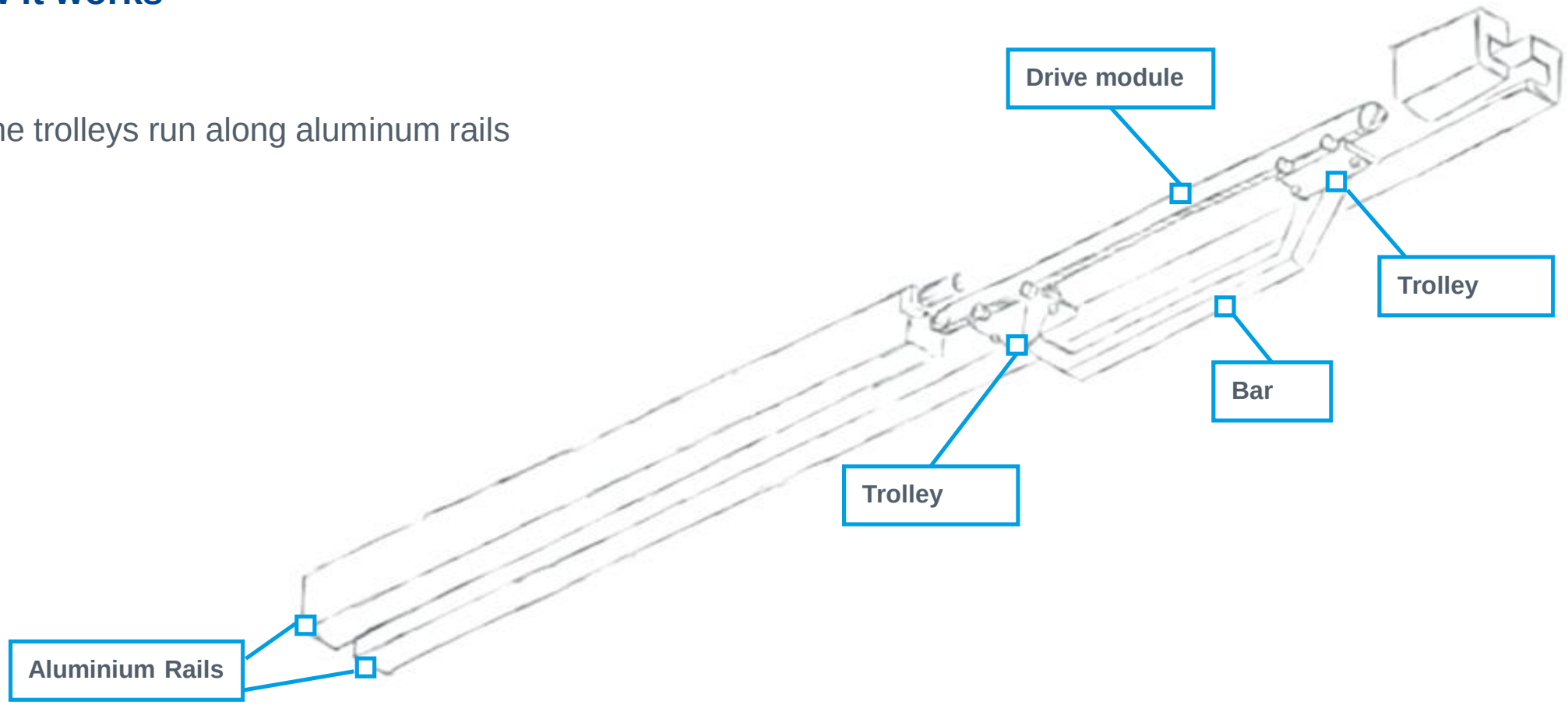
- The trolleys are connected by a bar comprised of different default lengths, according to the required payload



Twin Trolley System®

How it works

- The trolleys run along aluminum rails

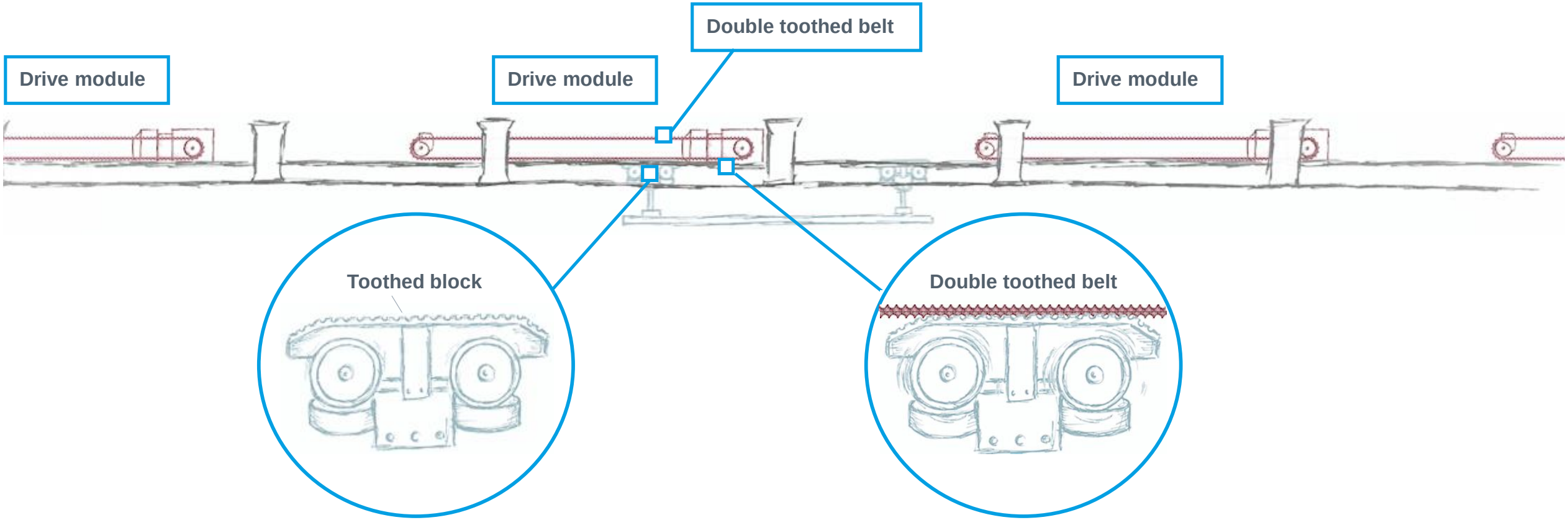


- On the upper part of the rail, at specific default distances, drive modules & free stretches build the line one after the other

Twin Trolley System®

How it works

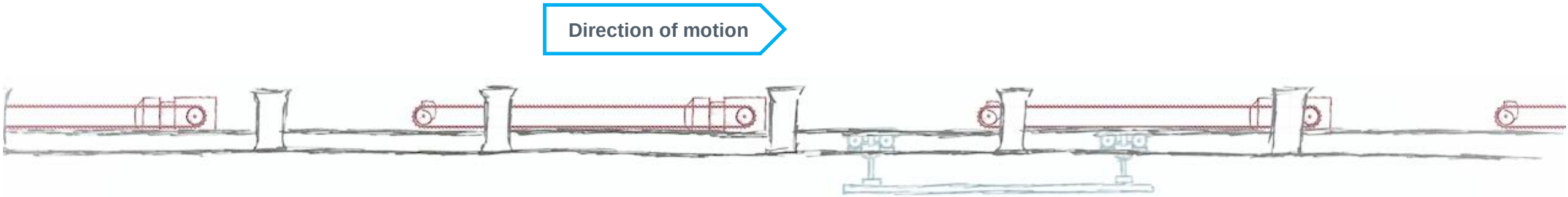
- Twin trolleys are moved along the rail by “drive modules”
- Toothed blocks installed on the trolleys connect to a double toothed belt attached to a drive module facilitating the movement



Twin Trolley System®

How it works

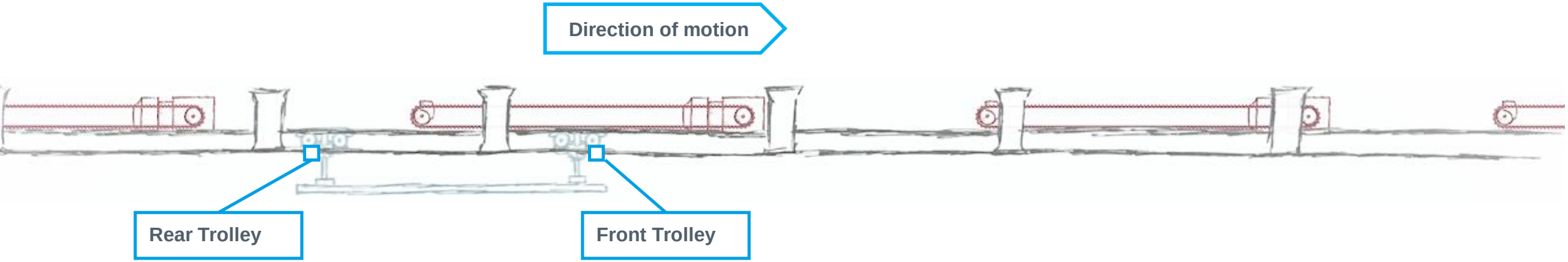
- The trolleys, connected by a bar, move simultaneously from one drive module to another



Twin Trolley System®

How it works

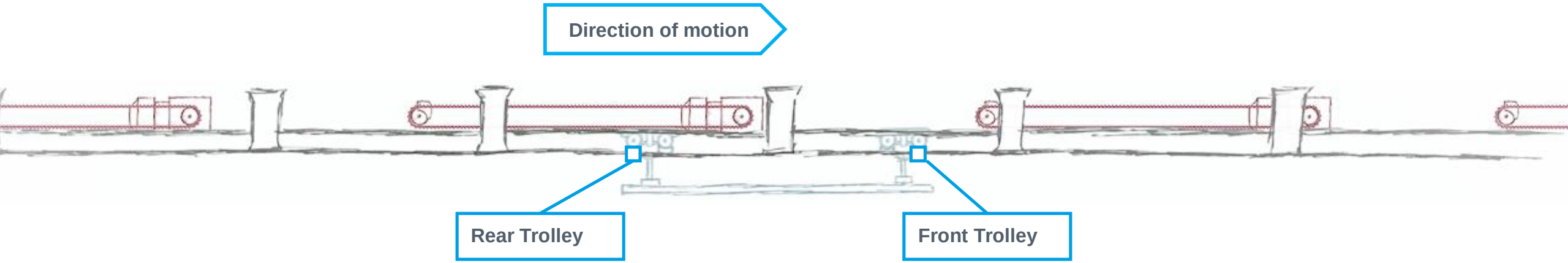
- First the front trolley reaches the rail-drive module where it receives its motion and move forward, pulling with it the rear trolley, which is now running in the free stretch



Twin Trolley System®

How it works

- Then, as the front trolley is moving forward, the rear trolley reaches the rail-drive module, receives its motion and pushes the front trolley, allowing the front trolley to then run free



This alternation in movement between the two trolleys creates a continuous and harmonic process

Twin Trolley System®

How it works

So we can have the drive module

- facilitating the motion of both trolleys at the same time
- of the front trolley alone, while the trolley in the rear runs free
- of the rear trolley alone while the front trolley runs free

In fact one trolley alone is able to move the entire payload

And, just imagine?
The motion is possible in both direction!

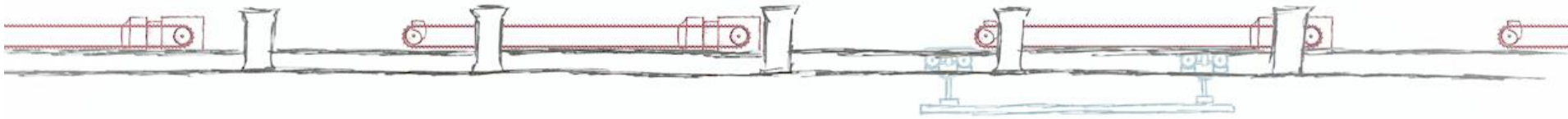
Twin Trolley System®

How it works

Direction of motion

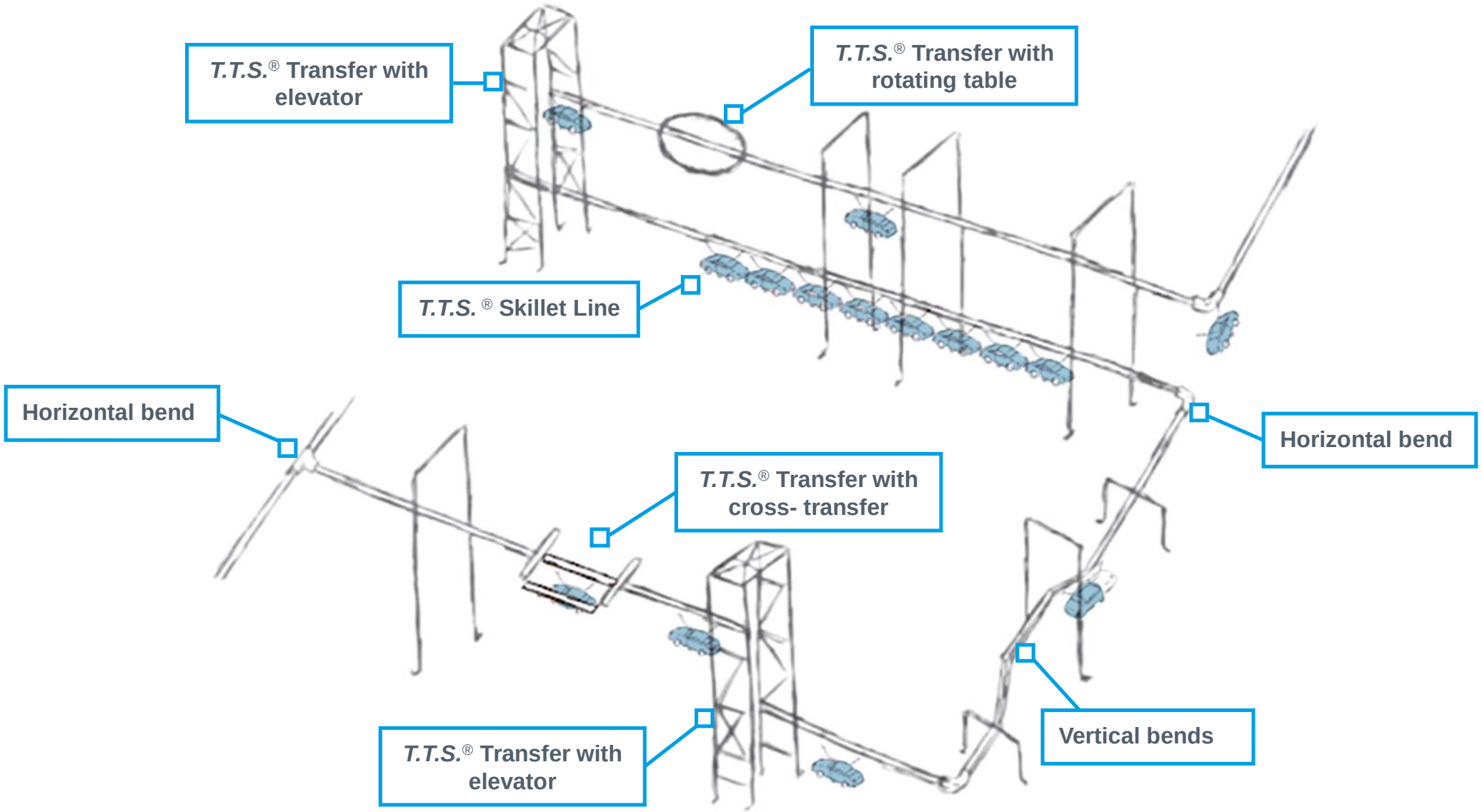
Same line

Direction of motion



Numerous and quick layout reconfigurations possible

Twin Trolley System®



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Added values

Simple

- 5 components
- Infinite solutions

Flexible

- Overhead or Floor conveyor
- Motion in both directions
- Continuous or Stop-and-Go Movement
- Flexible in length and height, easy to integrate into existing buildings and systems, no structural impacts
- Probably the most compact system available in the market

Reliable

- Standardized components
- High quality level
- Long life cycle
- Lean design

Cost-effective

- Complex layouts at reasonable cost
- Low ramp-up time
- Short build up time
- Plant extensions and reconfiguration with minimal effort
- Possibility to re-use modules and components for different applications
- Low cost of assembly, transport and building work
- Low cost of installation, maintenance, repair

Sustainable

- Low energy consumption
- Silent operation
- No lubrication
- Reduced spaces needed

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Product range

Twin Trolley System®

TTS® classic

- Medium payloads
- Top speed 100m/min

FCA Cassino Plant (I)

Twin Trolley System®

TTS® light

- Light components and bodies
- Payloads up to 500kg
- Top speed 120m/min

TTS® light at FCA Melfi Plant

Twin Trolley System®

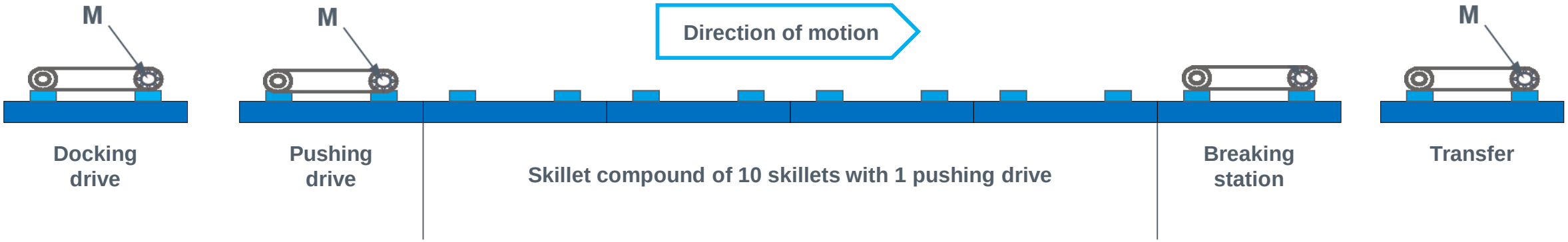
TTS® heavy

- Heavy loads duties (cars / trucks / aircraft parts)
- Payloads up to 6,500kg
- Top speed 40m/min

TTS® heavy at Lockheed Martin, Fort Worth (US)

Twin Trolley System®

TTS® skillet



Twin Trolley System®

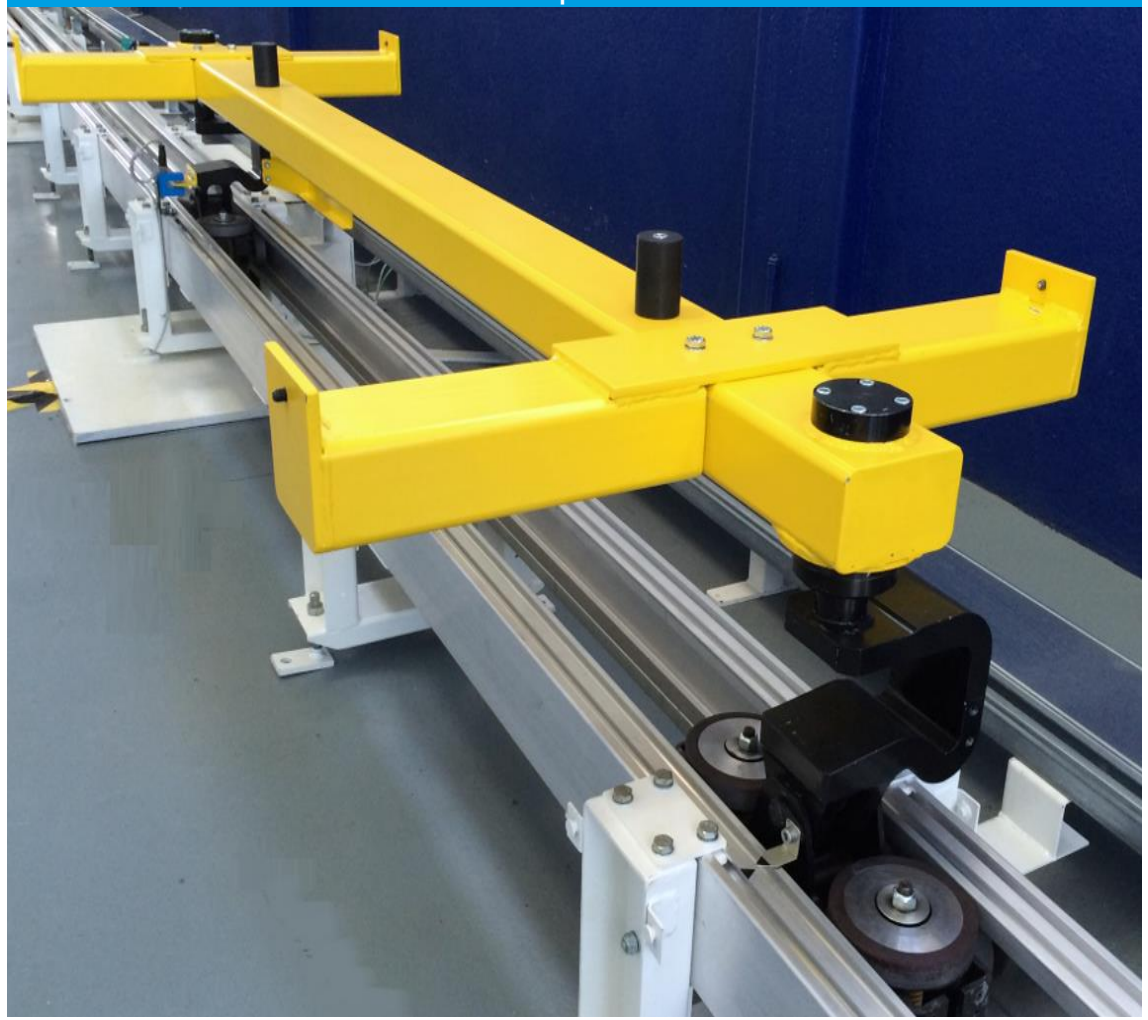
TTS® inverted

- Floor Conveyor

Advantages of T.T.S.® Inverted:

- Narrow construction
- Easy to inspect

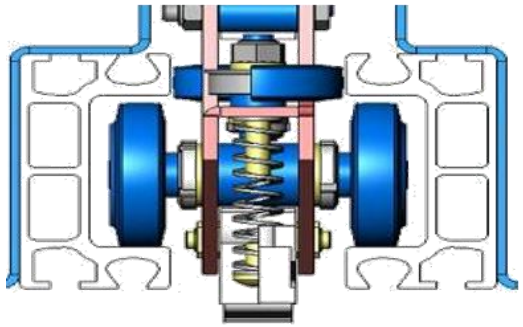
TTS® Inverted at CPM workshop

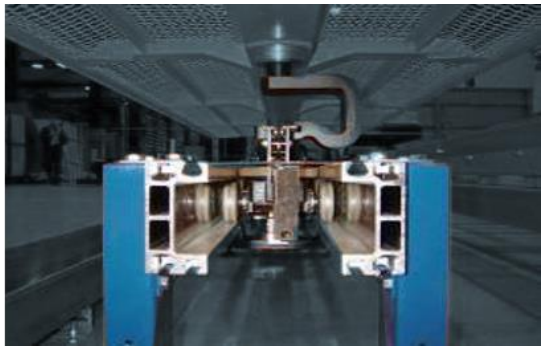


Twin Trolley System®

TTS® chain

- Drive chain for special requirements
- (e.g. temperature, contamination)





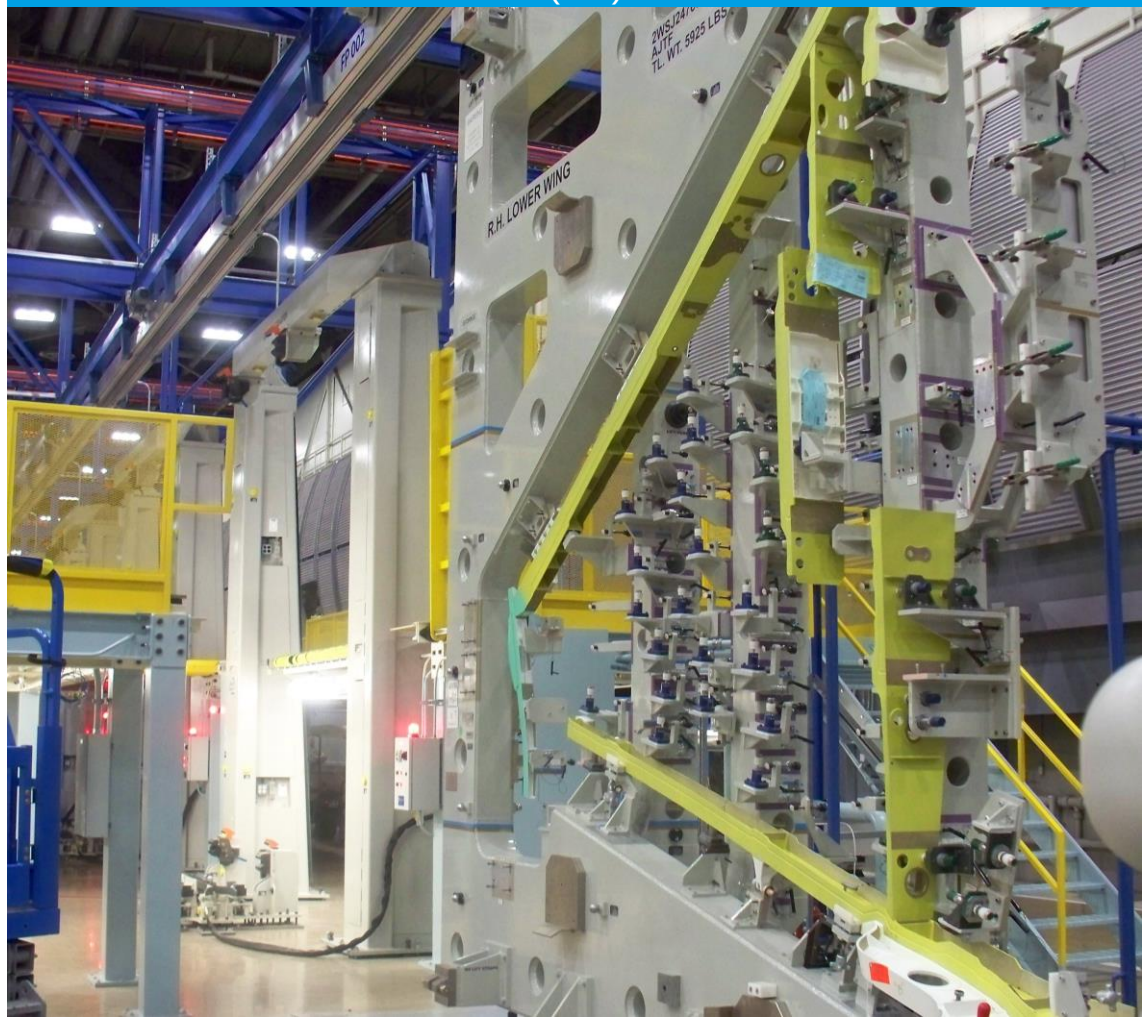
TTS® chain - Detail

Twin Trolley System®

TTS® transfer

- Handling of equipment for automatic stations
- It can be equipped with rotating tables, elevator, switches

Lockheed Martin – Fort Worth (US)



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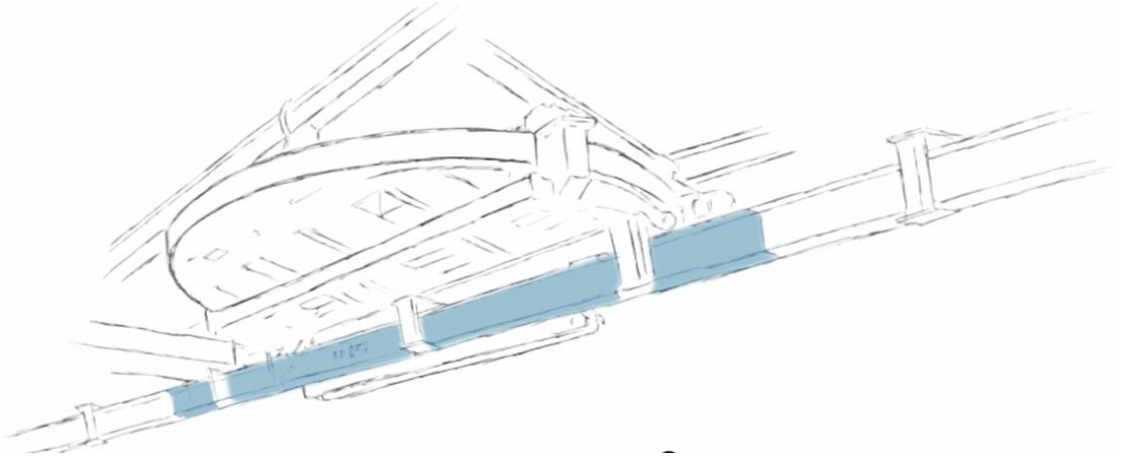
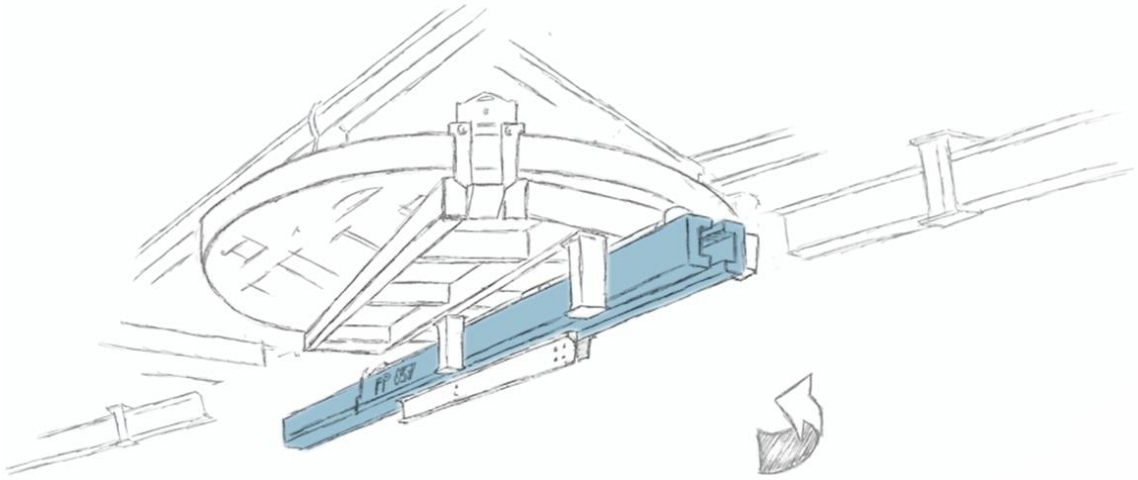
TTS® transfer – Special applications

- With rotating table
- To change direction in confined spaces (90° to 180°)





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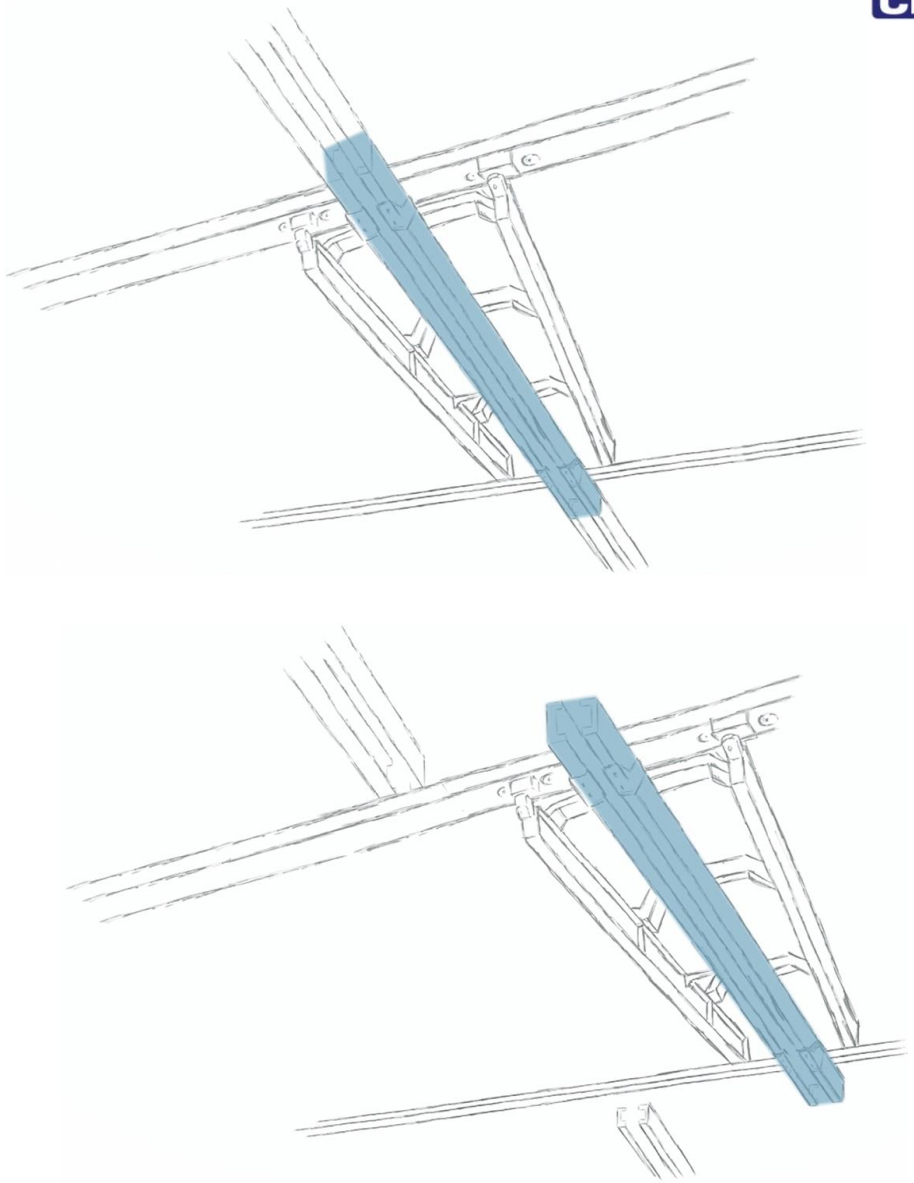
TTS® transfer - Special applications

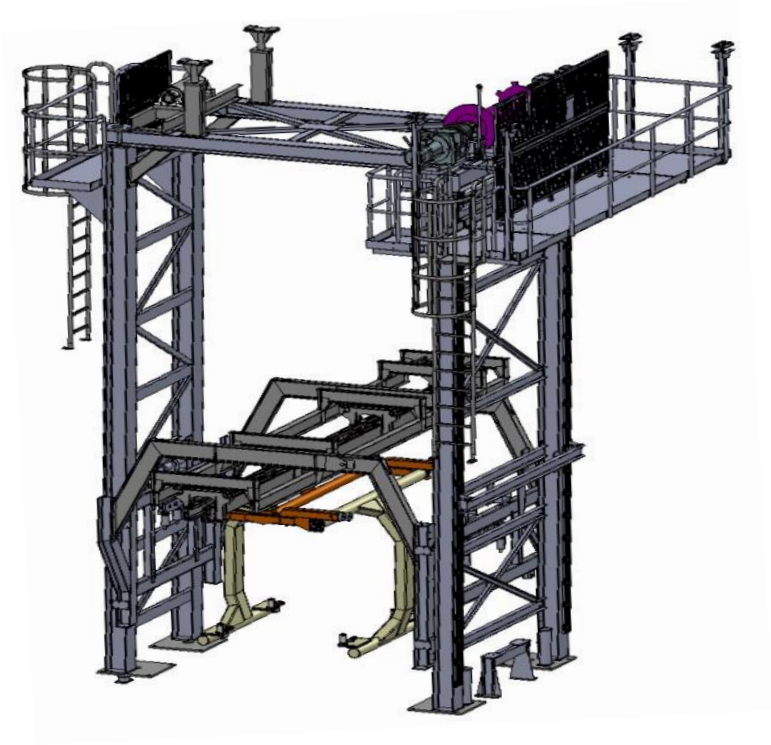
- With cross-transfer
- For a 2-transfer, for example to perform maintenance loops outside the main line

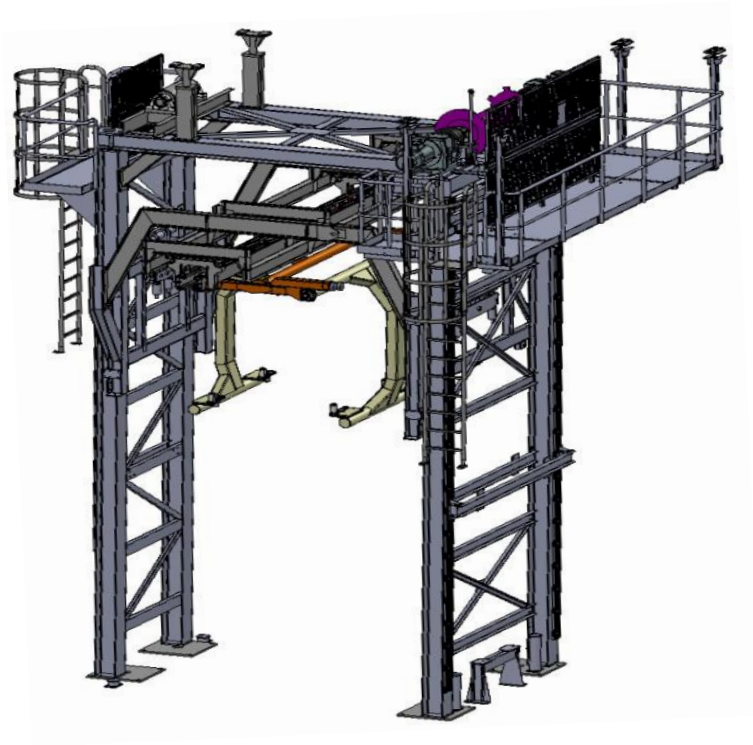


Twin Trolley System®

TTS® transfer - Special applications

- With elevator
- for vertical transfers / height changes



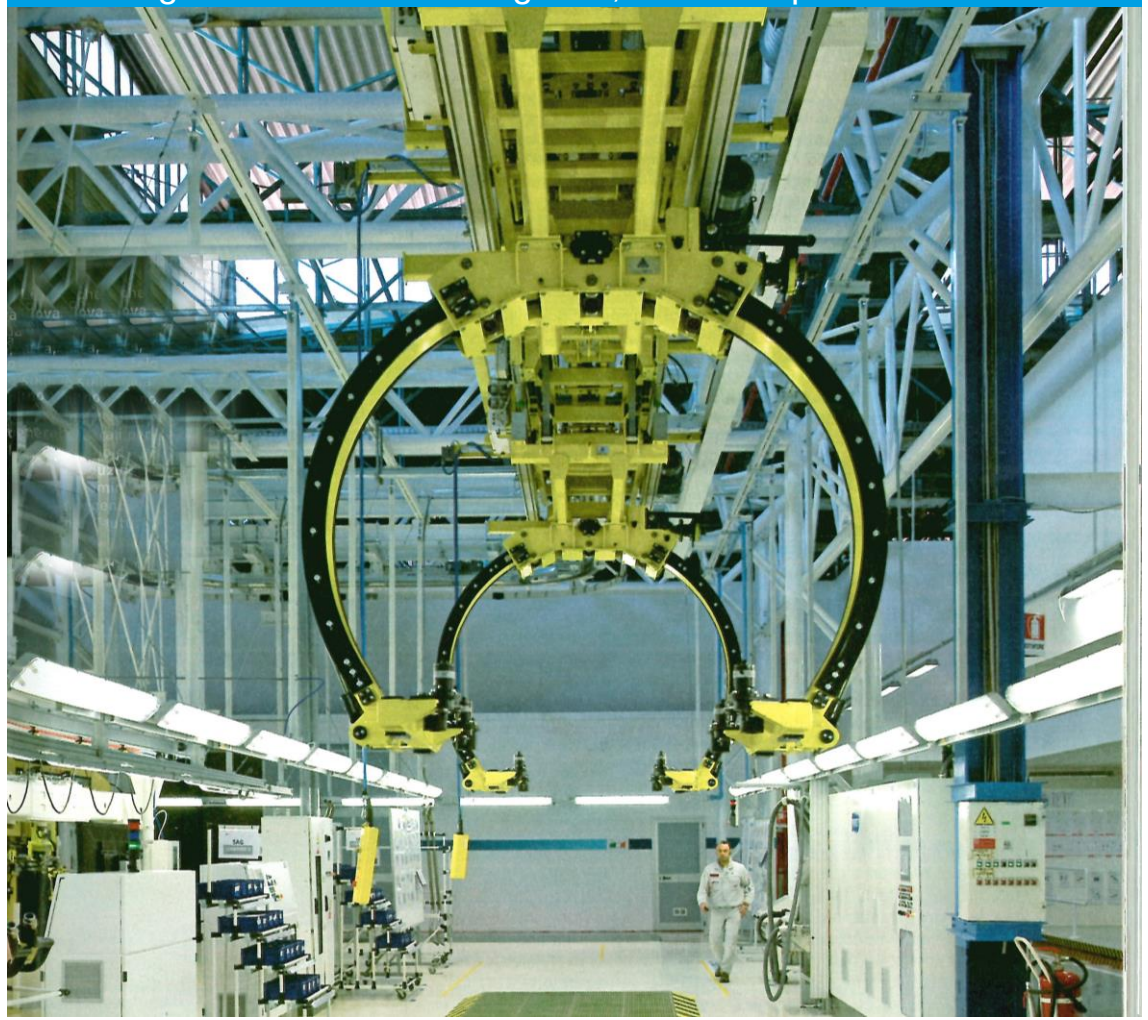


Twin Trolley System®

TTS® for FAStplant®

- The TTS® with a high-precision vertical adjustable and rotating carrier on board can be easily integrated in a **FAStplant**®, a modular production system.

Training center at FCA Pomigliano, with **FAS**tplant® and TTS®



Twin Trolley System®
The real alternative to the traditional conveyor systems

Over 60km of TTS® have been installed worldwide

3 continents, 30 customers, over 30 plants

www.durr.com

Twin Trolley System®
Conveyor System for BiW, PS, FA

“Subject to change. The information in this presentation contains only general descriptions or performance characteristics, which may vary in different cases. The requested performance characteristics are only binding it they are expressly agreed in the contract.”

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