

- Ever Higher is Possible -
APM Flexible Storage System
An alternative to Accumulating Conveyor Belts

- Initial Situation:
 - Horizontal accumulating conveyor belts serve as buffer and transport components between manufacturing cells.
 - The length of the accumulating conveyor defines the layout of the cells and causes a huge consumption of layout space

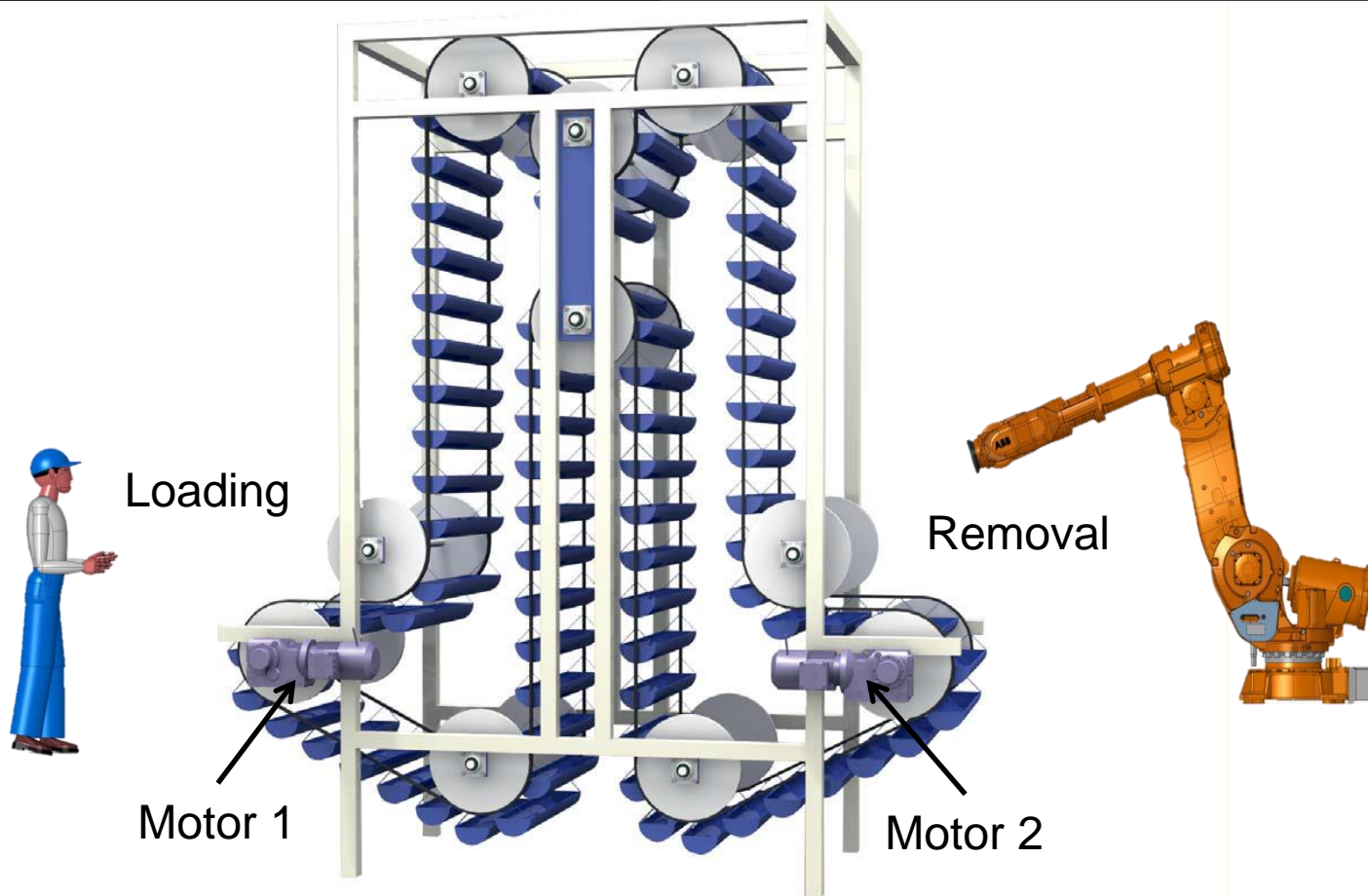
Solution:

Bring accumulating conveying into the vertical plane

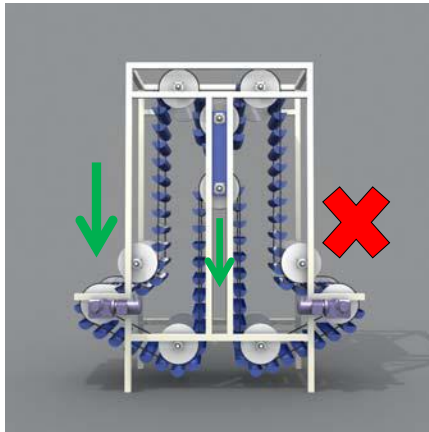
Vertical accumulating conveyor = APM flexible storage system

- Vertical accumulating conveying occupies a small amount floor space.
- Loss of space is prevented & floor space is released to use for other manufacturing processes.

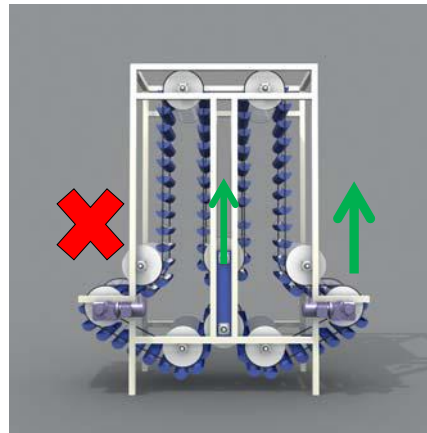
Constructional Design APM Flexible Storage System



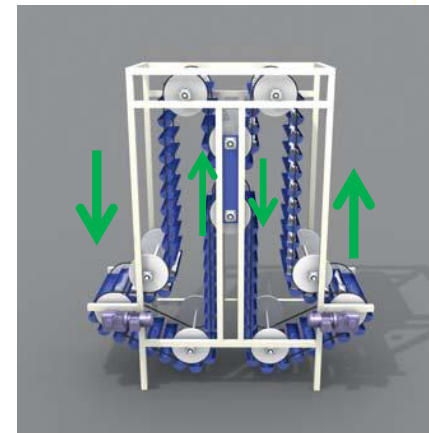
- Vertical chain-conveyor, component carrier in gondola design
- Two separately controllable motors for loading and removal area
- Central chain tower constructed as scale balancing the different frequencies of the loading and removal station



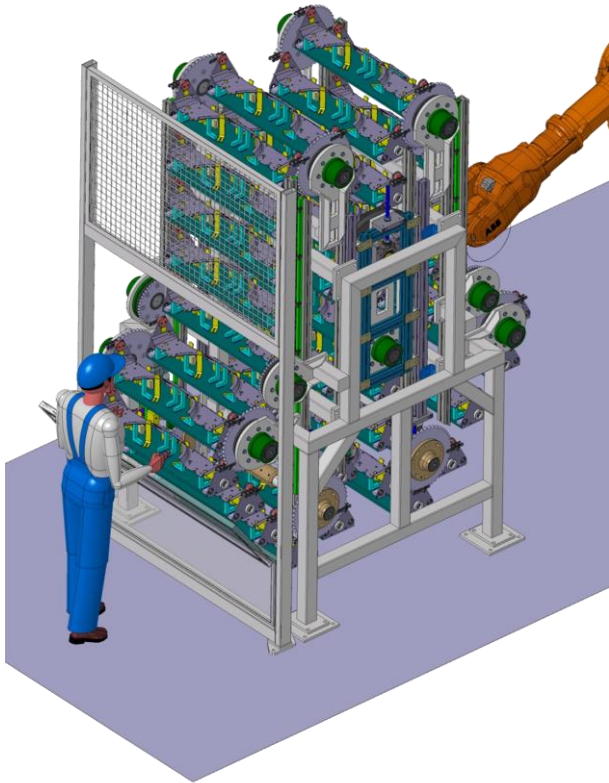
- Loading of the flexible storage system
- No removal
- Accumulator is filled, chain slats move downwards



- No loading
- Continuous removal
- Accumulator is emptied, chain slats move upwards



- Normal operation
- Continuous loading and removal
- The vertical movement of the storage cart compensates for line leaps



Concept of conveying and buffering
Component: Longitudinal carrier



Application at automotive supplier
Component: Transverse carrier

- Advantageous layout concept, space-saving component buffering by using available height.
- Flexible storage, loading and unloading operate independently
- Defined transfer position of work pieces
- Work piece sequence first in – first out

- Note:

Particularly suitable for narrow components due to the chain carrier



Component: Inner longitudinal carrier

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