

COLD CHAIN WEBINAR

AUTOMATION & INNOVATIONS TOWARDS NET ZERO

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SSI SCHÄFER

Think Tomorrow.



AGENDA

01 Benefits of Automation
What advantages does automation provide for deep-freeze environment?

02 Automation & Sustainability
Video of SSI CEO and three examples including ORCA Cold Chain Solutions (Asia)

03 Innovations
Example of new shuttle technology for efficient case picking in deep-freeze

BENEFITS OF AUTOMATION

DEEP FREEZE ENVIRONMENT



Increased storage density

The first step to increase storage density is to use mobile racking, then automated cranes to make use of the height available. Increasing storage density reduces power consumption for cooling equipment.



Increased performance

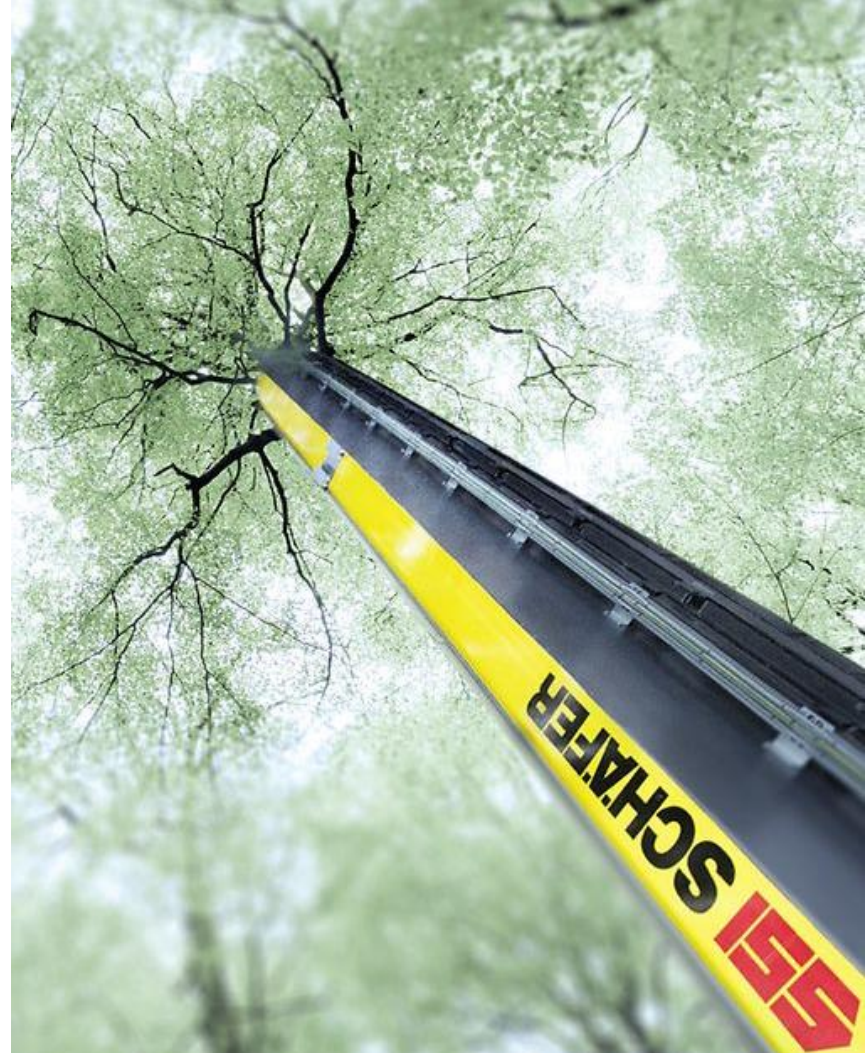
In a manual environment, the limitation is the number of fork lift trucks that can work in one area simultaneously and operations are regularly interrupted. With automation, these bottlenecks are removed and high performance solutions can be implemented within the same footprint.



Increased accuracy, reduced labour costs

Decrease in labour requirements as most activities done automatically. With advanced IT WMS systems, precise knowledge of stock levels, FIFO rules etc. lead to avoiding shortages, reducing waste and increased accuracy.

37% of the food manufactured globally is lost due to poor packing, poor storage, and poor handling



EFFICIENT AUTOMATION

CONTRIBUTION TOWARDS NET ZERO



Energy-efficient components & recovery of energy

When a crane breaks or when the load handling device is lowered, kinetic energy is converted into electrical power that can be used to run the automation or inducted into the power network



Lightweight design

Reducing material consumption during manufacturing but also energy requirements to run it. Friction minimization through suitable material combinations – this helps reducing waste energy but also reduce heat rejection and also noise pollution



ASRS intelligent power load management

When several cranes are running concurrently, the system controls the acceleration of the cranes to avoid all of them requiring maximum power load at the same time. When a piece of conveyor is not required to run, it is stopped automatically.



INNOVATION

NEW SHUTTLE FOR DEEP FREEZE



Innovative Energy Supply

Innovative energy supply for the shuttle uses supercapacitors to ensure the highest energy efficiency. It charges at the lift position hence no need for contact line in the aisles: less wear and tear, less material required and reduced heat rejection increasing energy efficiency.



Intelligent Energy Management

Energy efficiency with intelligent energy management using opportunity charging, recuperation of braking energy, no contact line wear.



Compact storage design

The flexi shuttle provides a very level of storage density for multiple load types.





Thank you!

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