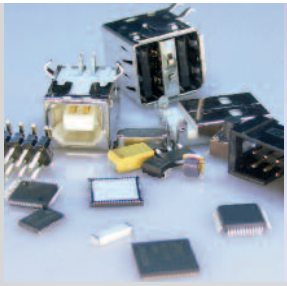
TECHNOLOGY GROUP

Tray transfer and handling system for IKLTs



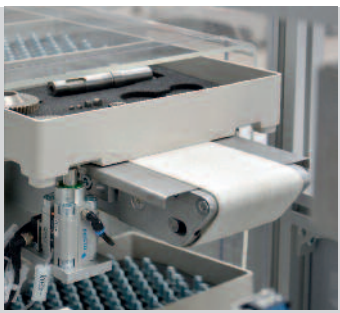

Efficient automated processes through multi-cycle tray-system

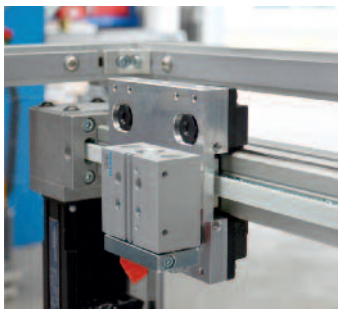
Tray transfer and handling system for IKLTs

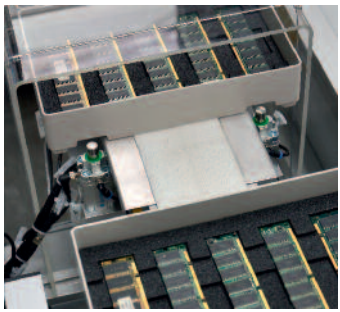
Reusable system enables efficient automated processes

Video

The new tray transfer and handling system has been specifically designed for a patented, automation capable and reusable tray system, the so-called IKLT (Innovative Small Load Tray). Even small batch production can be automated cost-effectively with this system. Products to be processed remain in a defined and







thus automation capable position throughout the entire value-added process chain.

Products can be automatically loaded, handled and processed during different processing operations. Products do not need to be sorted or repackaged during the production process, storage or transport. The system is based on two self-contained modules, which can be used independently of one another, according to tasks and requirements. The investment in such a system remains manageable and the system can be easily adapted to meet product conversion requirements or fluctuations in purchase quantities.

Module 1 (starter kit)

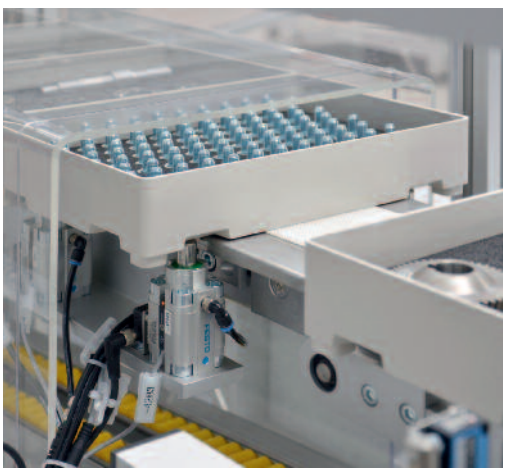
Tray transfer system

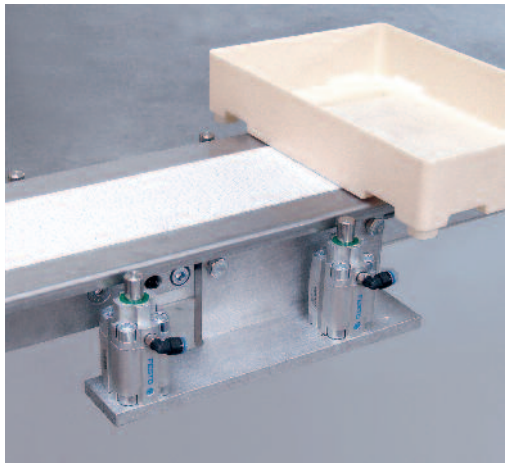
Tray transfer system for supply and discharge processes with semi-automatic transfer of trays, as a low cost automation measure.

Features

- GUF-P 2000 BF belt conveyor is used to supply protected areas or buffer lines, for instance
- ZRF-P 2025 AC timing belt conveyor is used for clocked unloading position for the removal by an LZR 2000-38.41-15* 2-axis pick & place unit
- Pneumatic lift unit for return process via gravity-fed roller conveyor
- Micro-controller for electric motor drives, auxiliary drives and BTK from Infranor

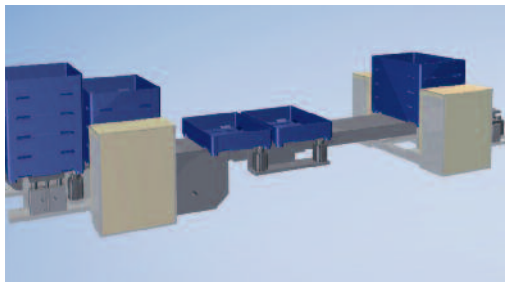
* 2-axis pick & place unit optionally available as supplementary equipment

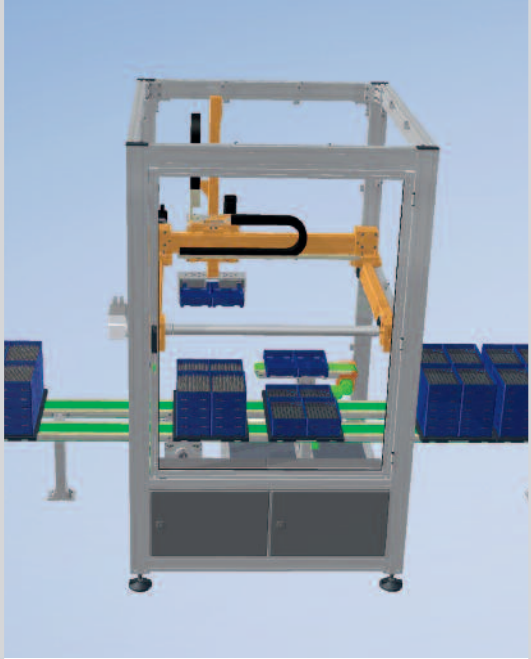




Module 1 variant

- Reducible to one level with a stop position on the belt conveyor
- Expandable by two stackers for manual stacking and unstacking processes





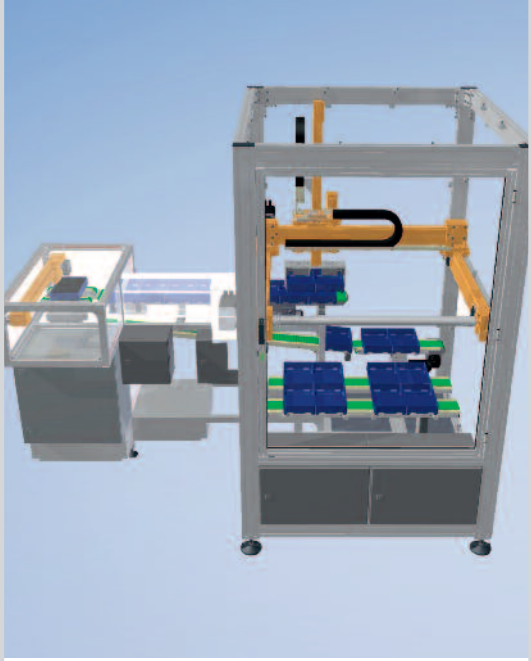
Module 2

Tray handling system

Automatic unstacking and stacking device for basic carrier trays of the transport box.

Features

- 3-axis portal with driven linear modules and gripper as well as Infranor controller
- Manual removal space for 2 boxes or optional variant as shown here with conveyor line
- Separating guarding in solid base frame
- LZR 2004-38.41-30 linear module with timing belt as basic X axis in dual arrangement
- LZR 2005-38.44-30 linear module with timing belt as Y axis with energy chain and Y-Z cross-carriage for Z axis with Omega drive
- LZR 2000-38.41-25 linear module with timing belt as Z axis specially designed with integrated Omega drive at Y axis
- Control applications can be created without special CoDeSys programming knowledge. The HMI can be used for all program editing and testing tasks



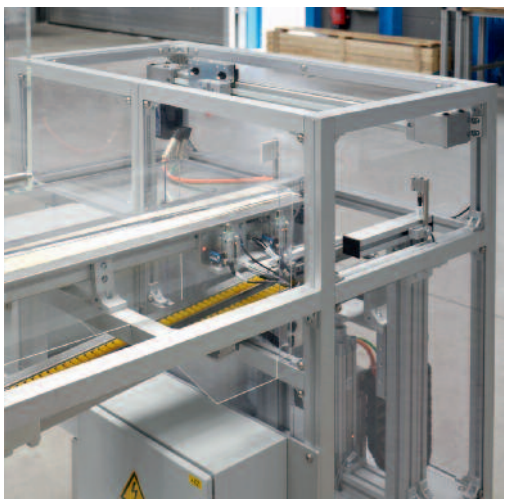
Modules 1 and 2

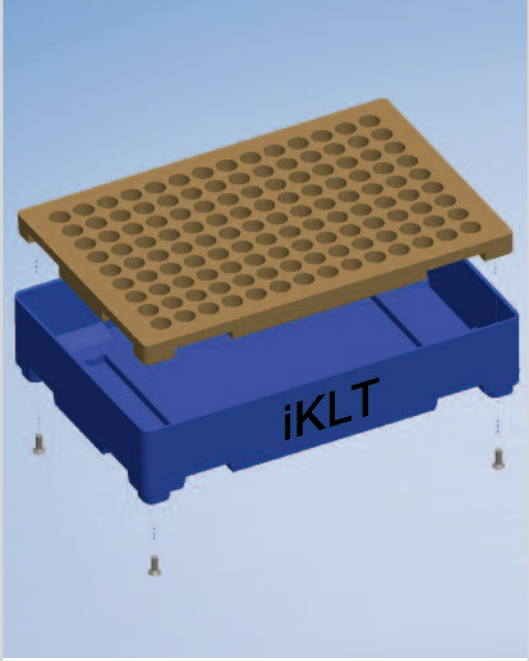
Tray transfer and handling system

The tray transfer system and tray handling system are quickly and easily combined.

Features

- From unstacking to supplying and discharging to restacking – one system can manage it all without complicated control programming
- Defined interfaces with plug-in connectors allow quick and easy connection of modules
- Changing trays at loading and unloading positions requires a minimum of time
- Tray capacity can be extended via transport box
- Additional expansion possible with automatic box supply and discharge





Reuseable tray

IKLT (Innovative Small Load Tray)

Features

- The same tray is used as workpiece carrier throughout all involved value-added process chains, from production processes to storage and transport.
- The products remain in a defined position and are thus automation capable.
- For switching products, only the inlay of the IKLT needs to be changed.
- The term "reusable tray" is used here to describe that these trays are reusable not only in the conventional sense, but also for more than one product or process chain.
- The IKLT can be universally used for manual, semiautomatic, or fully automatic processes, as well as kanban systems.
- The trays can be separated and clocked by a steering rack.
- Trays can be stacked in a transport box that is customized for the system. These transport boxes can in turn be stacked onto euro pallets; no additional packaging or repackaging is required.

Trays: 180 x 270 x 30/50/75 mm
or 270 x 380 x 30/50/75 mm

Transport box: 400 x 600 x 300 mm,
load capacity: up to 60 kg

Video

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