

Perfect Solutions for Palletizing and Conveying



Quality, reliability, process stability and a long life cycle – that's what palletizing robots from Körber stand for. A variety of infeeds and gripper systems make it possible to palletize almost any product. Due to their quick changeover times when it comes to different formats our palletizers are especially suited for handling high volumes and diverse packaging formats. Be it the stand-alone version or integrated in a palletizing center – high availability and a reliable high level of performance are the core characteristics of Körber machines.

Optimizing material flow results in faster cycle times, higher process exactness as well as improved working conditions, while at the same time reducing costs. We design and build tailor-made conveyor systems for inner plant transport tasks. Our

conveyor units transport our customer's products to any given position within the plant – from processing to the warehouse, from the warehouse to shipping. Your unique and individually planned transport and conveying installation evolves from a multitude of standard components.

Increasing productivity, optimizing processes and saving costs are factors that determine market success. An exact functioning system harmoniously integrated in a complete inner plant logistics forms the basis for optimal material flow. We are continually improving our components and adapting them to the needs of our customers to be able to constantly satisfy growing demands and requirements.

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Allrounder in palletizing

Langhammer Layer Palletizer PA 08

Use and Application

The **Langhammer Layer Palletizer PA 08** is a high performance palletizer perfect for palletizing items such as bundles, cartons, and containers. Thanks to its small footprint and ease of operation it can be ideally combined, either as a single-line or multi-line palletizer, with other palletizers to form a palletizing center.

The **PA 081** version is designed with a pallet run in the lengthwise direction – of importance when palletizing bags.

The **PA 082** version is constructed for palletizing heaviest pallet loads and pallets can run in the length or crosswise direction as required. A typical application is palletizing display pallets for the Hygienic Paper Industry.



Benefits

- **High output rate with a wide product range**
- **Precise operation allows for the direct production of sales pallets**
- **Simple and quick product changeovers due to toolless format changes**
- **Minimum space requirement facilitates the integration of the machine into existing production lines**
- **Modular palletizer design adapts easily to any given layout**
- **Extendable through the building block system**

Explore perfect solutions for higher output rates and wider product range: precise operation, complete sales pallets producible, quick changeovers, toolless format changes, minimum space, easy integration, modular design adaptable and always extendable.



High output
and wide
product range

The versatile solution for limited space

Langhammer Layer Palletizer PA 14 with Langhammer Case Stacker KST 05

Use and Application

Within limited space situations the fully automatic stacking and palletizing unit is the first choice for the flexible handling of all market formats. The slimly designed **Langhammer Case Stacker KST 05** proves itself to be economical and maintenance friendly when it comes to stacking plastic cases, meat crates and nestable carton trays or ones with stacking corners or mixed pallet commissioning. It can also stack cartons and trays or bakery baskets without pallets. Necessary product and format changeovers are software controlled and require no tools.

The **Langhammer Layer Palletizer PA 14** is ideally suited for palletizing pre-stacked containers and the upstream shuttle system allows for collecting different product stacks and creating mixed product pallet loads.



Our solution for limited space offers fully automated stacking and palletizing as an economic and maintenance friendly alternative, flexible heights, eliminated changeover times for gripper/format parts, automatic format change-overs, expanded performance with additional stackers, various pallet sizes applicable.



Economic and maintenance friendly



Benefits

- **Economic and maintenance friendly articulated arm robot alternative**
- **Flexible plastic case and carton tray stacking heights**
- **Changeover times for gripper and format parts are eliminated due to automatic format change-overs**
- **Unit performance can be expanded through additional stackers**
- **Use of Euro pallets, Duesseldorfer half pallets, and industrial pallets**

Solutions for a leap into new possibilities

Langhammer Layer Palletizer PA 15

Space-saving, gentle on products, modular in design and always expandable

Use and Function

With its modular design and resulting high flexibility the **Langhammer Layer Palletizer PA 15** fully meets central customer requirements. The Layer Palletizer PA 15 is one of the core elements - fast but at the same time very gentle when palletizing sensitive products.

One highlight is the floor-level-palletizing, but this can be adapted to handle a wide range of different heights and a variety of infeeds make adaptations to new requirements possible at all times. The modular system in three performance classes, various versions of the placement belt together with component interchangeability ensure maximum flexibility - all that combined with intuitive operation and maintenance. In the high-speed range the system can palletize up to 10 layers / min. at pallet heights up to max. 2800 mm, layer sizes up to 1500 x 1500 mm and layer weights up to 150 kg.

This new means of “conveying rather than pushing” conveys rows of products or entire layers instead of pushing them. The belt slides under the bundle, sets it down at its destination, secures it gently - and withdraws just as gently. For a continuous product flow, the product is gently palletized using a placement belt with a very small roller diameter and without grouping or format pushers.

This makes the system especially suitable for sensitive products that could otherwise be damaged when pushed (such as flour bags or paper rolls), and thereby minimizes product damage as well as machine malfunctions.

Formation of layer patterns containing gaps is also possible due to an innovative, intelligent control system. In addition, the upstream grouping system can grasp individual products and arrange them in any desired formation thus obtaining the highest possible configuration flexibility in layer formation. The **Langhammer Layer Palletizer PA 15** has an open control concept and is available with either Siemens (S7-1500) or Rockwell controls.

Our most flexible palletizing solution

It offers highest possible configuration flexibility of pallet layers/layout and variety of processable products. Fast and gentle, precisely aligned layer formation, floor-level-palletizing, easy programming, modular design and scalability meet all requirements.



**“Accuracy,
Efficiency, Strategy,
Strength and Speed
in focus.”**



Decisive Benefits

- **Easy programming:**
Pallet-Maker – well proven layer pattern designing tool
- **Industry 4.0 capable:**
Predictive and remote maintenance
- **Our most flexible palletizing solution:**
Highest possible configuration flexibility of pallet layers/layout and variety of processable products
- **Less space required:**
Smaller footprint and minimum control cabinet size make for optimal integration into existing production lines
- **Floor-level-palletizing:**
infeeds from various heights possible
- **Precisely aligned layer formation:**
thanks to four-sided compression
- **Gentle product palletizing:**
Conveying instead of pushing, placement belt without grouping or format pusher resulting in continuous product flow
- **Modular design and scalability:**
Adaptation to new/changed requirements always possible through extensions and upgrades

**Higher
performance
than ever
before**

Solution for perfect flexibility

Langhammer Robot Palletizer LR 03 Palletizing of Bundles, Boxes, and Displays

Use and Application

The **Langhammer Robot Palletizer LR 03** is a flexible palletizer and an economical solution for palletizing almost all products in the consumer goods industry and is ideally suited for palletizing bundles, boxes, bags, standard cases, bakery baskets and packs. In situations with low ceilings and limited space it is the perfect fit.

The **Robot Palletizer LR 03** impresses with its solid construction, use of high quality components and maintenance friendly design and ensures easy operation. This robot sets standards with a load capacity of up to 500 kg and a possible palletizing height of up to 2800 mm.



Benefits

- **Economic articulated arm robot alternative**
- **Conversion of braking energy into electrical current saves resources and the environment**
- **Easy and cost saving installation as no support foundation is required**
- **Easy operation due to clearly defined working area**
- **Flexible application due to compact and modular design**
- **Open control system allows for the installation of new pallet configurations at any time**

This flexible palletizer is an economical solution and saves resources as well as the environment. With easy and cost saving installation, easy operation, flexible application and open control system, it is a perfect alternative to articulated arm robots and particularly fits in situations with low ceilings and limited space.



Space saving palletizing solution

Langhammer Robot Palletizer AR 500 with Langhammer Layer Wave

Use and Application

Through its unique combination of conveying element and layer gripper **Langhammer Layer Wave** can pick complete product layers from the conveyor line and place them safely and gently on a pallet - regardless of product or layer pattern. **Langhammer Layer Wave** is the perfect solution for all sectors of the consumer goods industry and for almost all products. In contrast to conventional systems which use fork or clamp grippers, this compact design results in an enormous space saving of up to 40%.

The new **Langhammer Robot Palletizer AR 500** in combination with either Siemens or Rockwell controls guarantees the easiest programming and maintenance. Previous robot programming knowledge is not required as programming of the robot is done directly via the PLC.

By combining the **Robot Palletizer AR 500** with **Langhammer Layer Wave** we offer a coordinated solution for the complete material flow environment, one characterized by extreme accuracy and high-quality palletizing – and everything according to customer requirements – ready to go from a single source.

Benefits

- **Easy programming and maintenance via the PLC: no robot programming skills required**
- **Layer weights of up to 200 kg possible**
- **Gentle product handling of complete layers**
- **Consistent and proven operating concept allows easy configuration**





Space saving, gentle, reliable and flexible

With this easy to program system you have the best space saving and gentle product handling solution worldwide.

Discover this new combination of palletizing with either Siemens or Rockwell controls together with the space saving layer handling system Langhammer Layer Wave.

Up to
40%
space saving

High demand solutions

Langhammer Robot Palletizers Additional Industrial Robots

Highly flexible palletizing solution

Use and Application

Langhammer Industrial Robots AR offer highly flexible palletizing possibilities and are thus a real economical alternative. Especially profitable when with the corresponding performance two end packaging lines can be palletized by one machine.

Langhammer Industrial Robots AR from Körber come delivered with the complete material flow environment in exact accordance with customer preferences. A turnkey installation from a single source.

Benefits

- **Highly flexible palletizing solutions due to quick and easy re-configurations**
- **Extremely precise operation ensures high quality palletizing**
- **Use of a great variety of grippers makes for high flexibility**
- **Coordinated concept including material flow environment**



Consumer goods palletizer

Langhammer Gantry Robot PRO 03 and PRO 04

Reliable and economical automatic solution

Use and Application

The **Langhammer Gantry Robot PRO 03 and PRO 04** can be used for palletizing almost all products such as bundles, boxes, bags, standard cases, bakery baskets and packs. Equipped with a maintenance-free axis system, fixed lifting axis or telescopic lifting axis they are predestined for heavy-duty usage in the palletizing field. What characterizes our gantry robots is their high flexibility, wide operating range and precision in handling.

The gantry robot system meets the requirements needed for increasing the variety of handled products. In this way unit costs are optimized and processing safety heightened. The system's flexibility increases the machine's uptime and makes it possible to react faster to market requests. With these robots we offer a flexible, reliable and economical automatic solution.

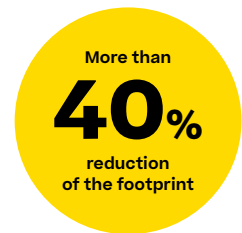
Benefits

- **High uptimes due to a maintenance-free guidance of the main axes**
- **Low headroom with optional telescoping axis**
- **Handling of very heavy loads with optional rigid Z-axis**
- **Highly flexible due to the use of a variety of grippers**
- **Interleaf and pallet handling possible**



Conveyor and layer gripper combined 'simply'

Langhammer Layer Wave



Use and Application

Langhammer Layer Wave is a unique combination of a conveyor element with a layer gripper resulting in a machine that can take complete product layers arriving from the conveyor lane and – independent of product type and configuration – place them safely onto a pallet.

Langhammer Layer Wave can be used in all sectors of the consumer industry branch and for almost all products. Its compact design makes it possible – in contrast to the usual systems using fork or clamp grippers – to save enormously on floor space.

Function

The principle applied in **Langhammer Layer Wave** is as simple as it is fascinating: Carried on the gentle wave of the conveyor belt the product is taken up by the split gripper apron. The four-sided compression aligns the layer formation exactly on all four sides. Positioned on the gripper apron and held in place by the compression unit the product layer is transported to the waiting pallet and gently placed onto it. It makes no difference if the layer pattern contains gaps or if full or half pallets are to be transported.

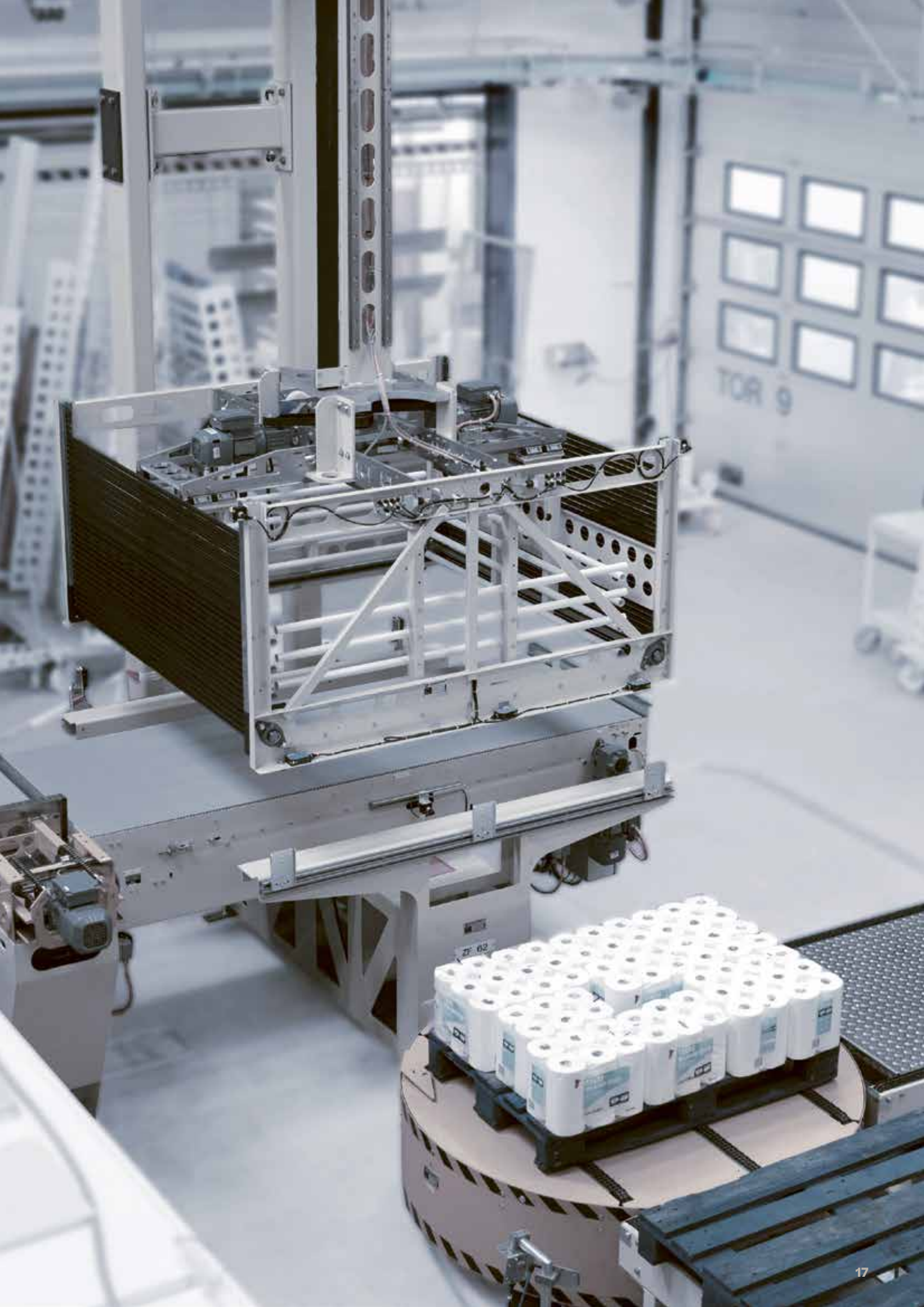
The standard clamp systems exert pressure on the product layer and require exchangeable format parts for layers including gaps. **Langhammer Layer Wave** requires no such parts for configurations with gaps and positions the layer gently and without pressure.

Benefits

- **Optimal use of space due to its compact design**
- **Reduction of the footprint by more than 40% in comparison to fork gripper systems**
- **Gentle handling of complete product layers**
- **Handling of a variety of pallet configurations with only one gripper**
- **Format parts are not required, thus reducing complexity and freeing warehouse space**

Move complete product layers with a gentle wave

Langhammer Layer Wave positions the layer gently and without pressure, no extra format parts for layers including gaps are required and no pressure is exerted on the product layer.



Large variety for every solution

Langhammer Gripper Systems

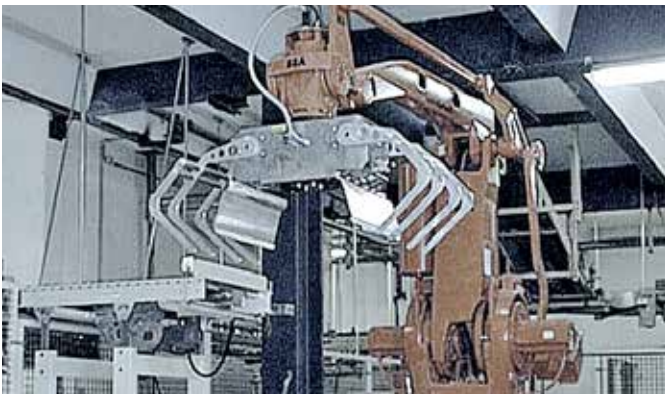
Use and Application

Langhammer Gripper Systems are usually used for palletizing with robots. Almost all possible products like cartons, boxes, baskets, trays, bags, foil packs, buckets or bottles can be handled. The right choice of the matching gripper is crucial for the palletizing result.

Of most importance is the required task which determines the design of the gripper. The more complex a palletizing task is, the higher the requirements on the gripper are. For exceptional products we develop special grippers as a special solution. Contact us!

Benefits

- **Large assortment of gripper types for a variety of usages/applications**
- **Clean pallet configuration through use of appropriate gripper**
- **Format changeovers possible without changes on the gripper for the majority of grippers**
- **Most grippers also handle interleaves and pallets thus reducing the number of machines required**



Bag Gripper GR 07

The Bag Gripper GR 07 gently grasps bags from the sides and below directly on the roller conveyor. The gripper fingers are adapted to the bags in such a way that no bag deformations result through the gripping action.



Box Gripper GR 16

With the suction gripper for boxes, boxes can be grasped and placed. Due to the multiple suction zones which can be controlled separately the gripper is able to lift boxes with varying formats alternatively.

**We
develop
grippers
for special
solutions**



Clamp Gripper GR 24

Springy carbon fingers clamp the product gently on its sides. The high quality servo drive technology allows for high speeds during the gripping and placing movements of the gripper. In this way high palletizing performance as well as palletizing exactness is possible.

Gripper Systems (GR)

Gripper Systems (GR) for palletizing applications can be generally classified in the following functional groups:

- Clamping grippers
- Fork grippers
- Suction grippers
- Magnetic grippers



Layer Gripper GR 171

The layer gripper can grasp complete product layers consisting of 4 bakery baskets, meat market cases/E2 containers, box trays with insertion plates and base cut-outs or simple boxes of 4 to 8 pieces per layer and place these by centering the previous layer exactly on or in each other.



Fork Gripper GR 25

With the universally usable fork gripper GR 25 a variety of products such as closed boxes, open box trays, bags, foil wrapped bundles, and containers can be palletized. With additional units on the gripper it is also possible to handle interleaves or empty pallets.



Bucket Gripper GR 26

With exchangeable hooks that are adapted to the to be palletized product the GR 26 can palletize buckets or bucket stacks of various shapes and sizes. The gripper can also handle empty pallets and paper or cardboard interleaves to form double pallets.



Layer Gripper GR 27

Complete layers of a wide variety of products can be handled with the universal layer gripper. Palletizing as well as depalletizing tasks can be carried out.



Clamp Gripper GR 40

Cartons and boxes in different formats can be palletized with the clamping gripper. Interleaves can be handled as well.

Solutions for optimal material flow

Langhammer Lightweight Conveyor System

Use and Application

Product transportation is an essential element of in-plant logistics. Exact and precise handling is a prerequisite for optimal material flow.

Langhammer Lightweight Conveyors are ideal for transporting light to moderately heavy products. There are a variety of drive and tension units to choose from depending on the belt length and load weight.

Langhammer Roller Conveyors can be adapted to a variety of space conditions. They are used for transporting light as well as heavy products, are impervious to dust and thus ideal for use in dusty environments.

Benefits

- **Quick throughput times, high processing exactness as well as improved working conditions through optimally planned material flow**
- **Compatible components reduce interfaces**

Types of Langhammer Lightweight Conveyors:

Belt:

- Curved Belt Conveyors
- Small Belt Conveyors
- Inclined Belt Conveyors

Roller:

- Wheel Conveyors
- Light Roller Conveyors
- Roller Conveyor Curves
- Gravity Roller Conveyors
- Driven Roller Conveyors

Chain:

- Traction Lifts

All-Round Systems



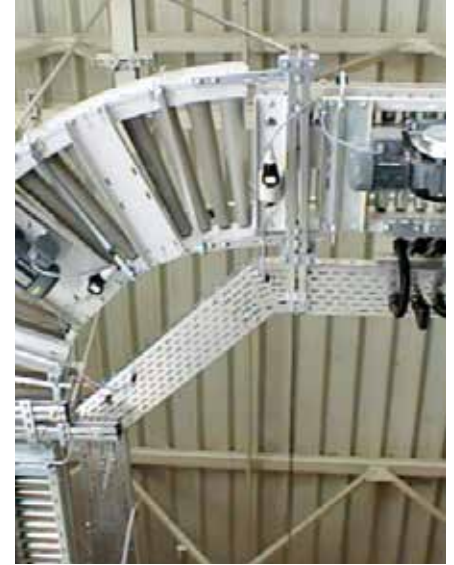
Langhammer Light-weight Conveyor (Roller) for transport/buffering lines

The simplest and most economical solution for the horizontal transport of light products such as packs, containers, cases, boxes and so on is the roller conveyor without drive. More sophisticated transport and distribution tasks are done with our driven roller conveyors. Our roller curve conveyors ensure that your product gets safely around the corner.



Langhammer Light-weight Conveyor (Belt F 81) for transporting consumer goods

The **Belt F 81** is the right choice for light consumer goods. When transporting moderately heavy goods the **Belt F 126** comes into play. There are a variety of drive and tension stations available depending on the belt length and load. Our extensive building block system also offers other elements such as leader belts, frame bends and curved idlers.



Wide assortment of building block accessories

Our building block design ensures that you can apply our products in a countless number of ways. **Körber Supply Chain Automation Eisenberg** supports: hangers and guide rails can be combined with all the elements of our standard program. The most important settings and adjustments can all be carried out with a single wrench.



Moving precisely up and down

Langhammer Lightweight Conveyor Vertical Lift SPF 01

**Gentle
transport
of the
products**

Use and Application

Langhammer Lightweight Conveyors Vertical Lift SPF 01

make material flow across several levels possible and are used wherever goods need to be transported vertically - they are ideal for the vertical transport of boxes, trays, plastic containers, bundles, pallets, and bags within automatic conveyor systems.

Vertical Platform SPF 01S

Transport direction in S form. Outfeed side always opposite the infeed side.

Vertical Platform SPF 01C

Transport direction in C form. Outfeed side always on the infeed side.

Function

The vertical lift consists of a frame structure with all-round protective housing. The lift platforms are hung into circulating roller chains and during the return movement are guided vertically.

Benefits

- **Gentle transport of products and high performance due to continuous chain run**
- **Intermediate buffering of several products possible**
- **Up and down movement with same side or opposite side infeed/outfeed**

Up and down movement is possible at any time, no matter if same side or opposite side infeed/outfeed.

A continuous chain run ensures a gentle transport of products and high performance. It is possible to buffer several products intermediately.



Components that get things moving

Langhammer Pallet Conveyor Systems (Transport Technology)

Use and Application

Stacking or separating empty and full pallets, moving pallets on different transport levels - these are just some of the tasks for which we offer the right solution. The wide range of roller conveyors available start with economical models without drive and continue onto driven roller conveyors with reversible transport direction and high pulling power.

Driven roller conveyors, e.g. for the lengthwise transport of Euro pallets, are ideally suited for lowest building heights, such as the manual shuttle car transfer level.

Transfer units and turntables make flexible pallet transport possible in the first place. They connect transport lines and change the transport direction of the pallet as required. Fully automatic pallet shuttle cars are used in modern palletizing systems and in the front zone of high-bay warehouses. In this case several material flow sources can be flexibly combined with an almost endless number of material flow targets.

Benefits

- **Complete building block system with modular standard components**
- **Individually planned conveyor units, fine-tuned to task requirements**

Langhammer Pallet Conveyor Systems offer a large assortment of pallet transport technology:

- Pallet Roller Conveyors
- Pallet Chain Conveyors
- Pallet Buffer Conveyors
- Pallet Turntables
- Pallet Transfer Units
- Pallet Shuttle Cars
- Empty Pallet Dispensers
- Empty Pallet Testers
- Pallet Lifts

All-Round Systems



Pallet Conveyors for length and crosswise transportation

The power driven pallet roller conveyor is the right solution for transporting empty and full pallets in the lengthwise direction. The large roller diameter and the narrow roller spacing guarantee quiet and smooth pallet transportation - even when transporting heavy pallet loads. Pallet chain conveyors are the right choice for transporting in the crosswise direction. The double chain with straight chain links has a high load capacity. Small idlers make for jerk-free transfers at connection points.



Transfer Units / Turntables for changing direction flow

When the transport direction needs to be changed at a 90° angle parallel lifts or swivel lift transfer units are the ideal solution. The pallet direction changes from lengthwise to crosswise - or the other way around - at the transfer station. The turntable makes any angle within the track run possible. The pallet transport orientation of either lengthwise or crosswise remains. The pallet turntable with continuous turn drive is ideal for use with large rotation angles, e.g. for all-round labeling or all-round visual inspection.



Building Block modules as supplement and completion

- Pallet lifts for pallet placement/removal via manual shuttle car
- Pallet shuttle cars for distribution or lane connection
- Platforms and crossovers for operating personnel
- Pallet dispensers for empty pallet distribution
- Accumulation roller lanes for buffering and provision
- Tailor-made designs for your special requirements.



Solutions from a single source

Hardware, Software and System Integration

Complete Solutions

Increasing productivity, optimizing processes, and reducing costs are all factors which determine market success. A perfectly functioning system, harmoniously integrated into the complete inner-plant logistics forms the foundation for an optimal material flow. We are constantly improving and adapting our components to meet our customers' needs and to be able to fulfill increasing market requirements.

Qualified Advice

Creative sales engineers and qualified project managers find the right solutions that match our customers' requirements for complex tasks.

You can count on:

- Development of system solutions
- Creation of technical specifications
- On-site advice
- AutoCAD layouts
- Presentations
- Calculations and quotes
- Negotiations
- Order confirmations
- Project support

Development, Project Support, Production

Designers, technicians and engineers develop innovative ideas and enable new solutions. Experienced teams in production and assembly provide timely and customer-oriented realization of projects.

We develop and plan mechanics, hardware and software.

This means:

- optimized project support
- avoidance of communication errors
- mechanics, hardware and software are all coordinated in the best possible way



**More
than 200
different
machines in
an unlimited
variety**

We are there for you when you need us

Customer Service

Service and After Sales

Our customers can count on machines and systems from Körber. Best quality and easy maintenance guarantee reliable operation and long life cycles. Our service technicians are there for you should any problems arise with your system. We get your system up and running again, pragmatically, competently and fast.

- Spare parts
- Individual maintenance program
- Upgrades, modifications, retrofitting
- Task Force, hotline, troubleshooting
- Training for users and maintenance staff
- Production support
- Worldwide service
- Optimization of individual processes

Customer Service and Help Desk

We will gladly answer your service questions:
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We adapt ourselves to your requirements.

Customer Service and After Sales Benefits

