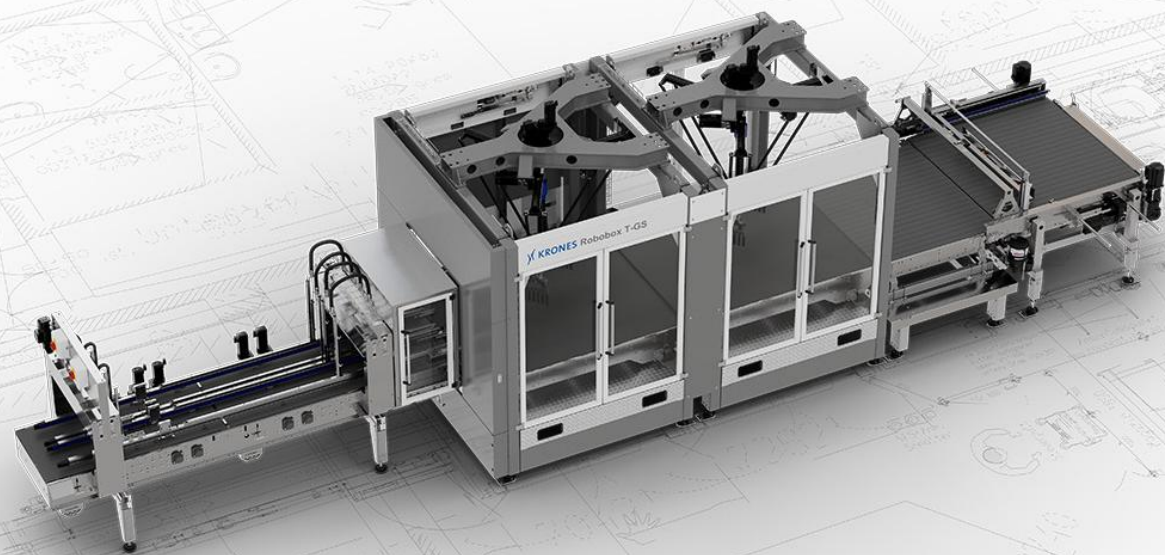




Robobox T-GS

Tripod solution for the palletising technology



The next step in evolution



The grouping system Robobox T-GS uses tripod robots with innovative parallel kinematics. This makes it faster, more robust and more precise than conventional grouping systems.

At a glance

- Grouping of packs in line with a specified layer pattern
- Processing range: All commercial non-returnable packs
- Top grouping speeds with only one module
- Reduced space requirement
- Shorter infeed lengths between the packer and palletiser
- Less maintenance and service work required thanks to steady, more harmonious movements
- New ergonomic feed with separate service and operating side (requires TIA control)

T-GS = Tripod Grouping System



Technical features



Robobox T-GS is a modular system which positions the non-returnable packs for the determined layer pattern. Positive-fit precision grippers guide the packs safely and gently to their pre-programmed position.

- One or two-lane pack infeed (clocked or continuous gap-free)
- Gripper head for positioning single or several packs
- Robot with parallel kinematics
- Gripper technology for all industry-standard packs, carton and shrink-wrapped packs as well as single packs
- Option: Automatic adjustment of the infeed conveyor guides



Innovative parallel kinematics



The Robobox T-GS uses a tripod robot with parallel kinematic structure.

This means:

- All axes operate simultaneously.
- The drives are installed at a fixed position so they do not have to be moved along with the rest of the system.

Advantages over portal robots with linear axis systems

- Higher load capacity of up to 50 kilogrammes
- Significant reduction in the net weight to be moved:
 - Enables increased outputs which reduce the cycle times
 - Second module for higher outputs
- Delta kinematics with servo drives for smooth operation
- Greater rigidity and torque monitoring for targeted release of the gripper heads in the event of collisions
- Almost all mechanical components of the parallel kinematics are maintenance-free



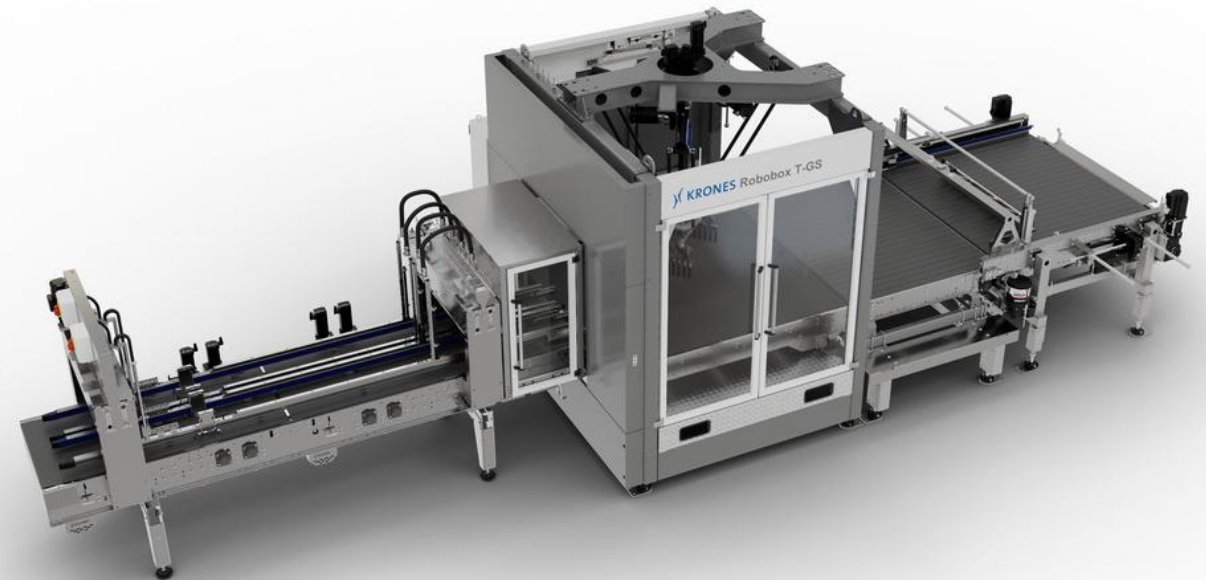
Continuous pack infeed (gap-free)



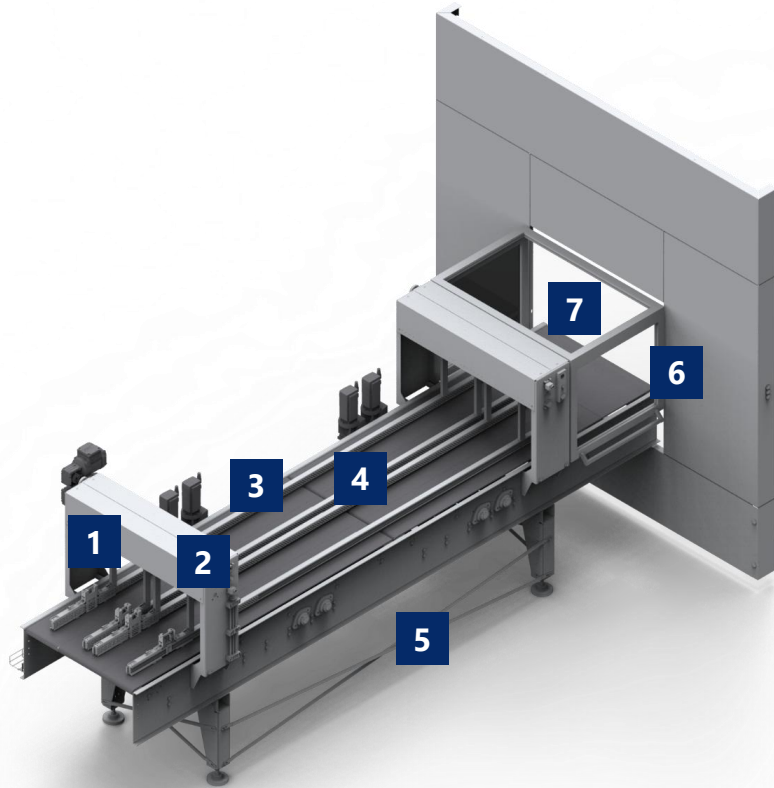
For single-module Robobox T-GS applications, the pack infeed can be processed continuously without any gaps. When using a double-module Robobox T-GS, the packs must be fed in intervals at the infeed.

Benefits to you

- Continuous pack infeed
- Enables a harmonic layer formation process
- Separation conveyors no longer required
- Reduced functional section inside the pack conveyor
- Increases the grouping speed compared to the same system when the infeed is operated at intervals



Redesign Robobox infeed PRO*



- 1** Reproducible rail adjustments
- 2 Improved adjustable sensors**
Function monitoring (e. g. detection of contaminations)
- 3 New chain tensioner**
With automatic re-tensioning function
- 4 Balanced ratio of back-up conveyor and flush-grid belt conveyor**
Improved protection against back-up pressure
- 5 Improved accessibility:**
 - **Service side** (drives, cable duct),
 - operator side** (easily accessible)
 - Fewer rail bridges
- 6 Additional light beam (only clocked infeed)**
Correction of the positioning accuracy of the containers
- 7 No spacing conveyor**
Required with the previously clocked infeed

* New Robobox infeed only with cHMI and TIA

Example for overall arrangement

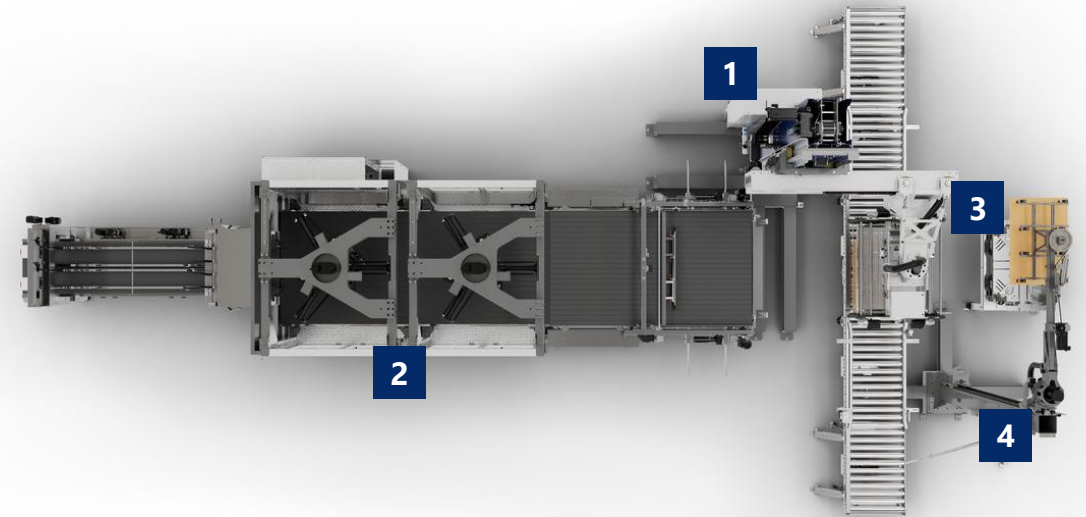
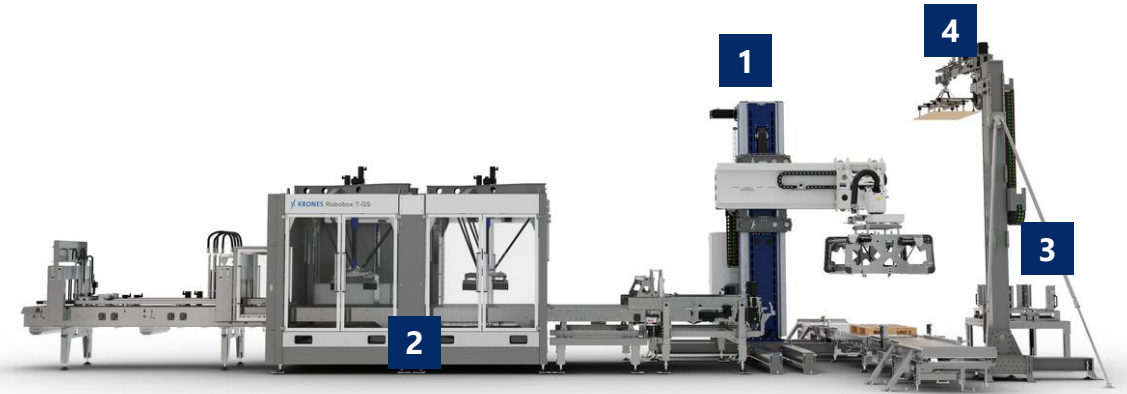
Practical modular component system

A double-module Robobox T-GS may be used to adjust the speed of the grouping system exactly to that of the entire line.

A winning team

Together with the palletising robots of the Modulpal Pro series, the Robobox T-GS forms a flexible and fast-acting system that is capable of achieving top performance in palletising.

- | | |
|-------------------|----------------------|
| 1 Modulpal Pro 2A | 3 Layer pad magazine |
| 2 Robobox T-GS | 4 Layer pad inserter |



Benefits to you



Gentle pack conveyance

Due to the fact that there are no transfer plates between the flush-grid belt tables, the packs are conveyed extremely gently. And another thing: Stop-and-go is a thing of the past thanks to the continuous infeed. The packs enter the grouping station continuously with very low impact.

Precise layer patterns

Positive-fit precision grippers guide the packs reliably and precisely to their intended position.

Efficient system

Depending on the respective task, the grouping system can be combined with additional machines from the Krones dry end. An especially effective combination: Together with a palletising robot, for example from the Modulpal Pro series, the Robobox T-GS achieves a lot in a small space.

Fast product change-over

In order to keep change-overs as short as possible, the Robobox T-GS requires hardly any product-specific components.

Benefits to you



Simple design

Due to its innovative parallel kinematics, the Robobox T-GS must move up to 70 percent less of its own mass than an articulated-arm or portal robot.

High outputs with compact design

Being a high-performance tripod robot, the Robobox T-GS groups up to 500 layers per hour with only one module.

Flexibility and efficiency

Depending on the requirements, the infeed comprises either one or two lanes. It is also possible to position several packs simultaneously.

Intelligent correction mode

The grouping system checks the position of the incoming packs and regulates it upon deviations.

New machine enquiry

You can easily enquire a non-binding quotation in our [Krones.shop](#).



Certified ecological efficiency

Machines with enviro seal



At Krones, the enviro label stands for excellent ecological efficiency. Products that bear the enviro label have proven in an objective test procedure that they efficiently use energy and media, and that they produce in an environmentally-friendly way. The requirements are defined by the EME standard that has been developed by the TÜV SÜD (technical inspection authority) for assessing production plants. The enviro test procedure has also been certified by TÜV SÜD as an independent expert. Therefore, you can be sure that: an enviro label stands for ecological efficiency.

Why the Robobox T-GS is enviro-classified

- It is only used with servo drives of efficiency class IE4
- Significant reduction in the moved masses thanks to parallel kinematics and carbon components
- Energy recovery via the modular B&R ACOPOSmulti drive system
- Energy measuring package and leakage detection
- Almost no pneumatic drives and locking systems to a large extent
- Use of enclosed lifetime-lubricated bearings
- Employment of enviro-compliant H1 lubrication grease and oil



Everything from a single source



Training sessions at the Krones Academy – trained personnel for an increased efficiency of your line

The multifaceted offer by the Krones Academy ranges from operation, servicing and maintenance courses through to management training. We will gladly also create your individual training programme.

Krones Lifecycle Service – Partner for Performance

It goes without saying that also after the purchase of new machines, Krones takes care of your lines: The Krones LCS experts are always there to help you reaching your goals and turn your wishes into optimal LCS solutions.

KIC Krones cleaning agents make your machine shine

Only if the production environment is immaculate, can your product be brilliant. KIC Krones provides you with the optimum cleaning agents and disinfectants for each individual production step.

KIC Krones lubricants for each production step

Whether for gears, chains or central lubrication systems – our greases and oils are true all-rounders. They can reach every lubrication point, protect your line and ensure gentle treatment for your products thanks to their food-grade quality.

**SOLUTIONS
BEYOND
TOMORROW**

