

# PolyCUT – AUTOMATED REMOVAL OF STRAPPING BANDS

## Process-reliable relief in goods-in through robot- assisted strap handling

With PolyCUT, Polyplan automates a previously manual, ergonomically unfavorable and time-consuming step in the incoming goods area: the removal of strapping bands from palletized small load carriers (KLTs) or packages.

The solution is aimed at companies with high goods throughput – in particular in the automotive industry and logistics – and creates the basis for fully automated de-/palletizing processes.



Contact us for  
detailed information  
on optimizing  
your processes  
and boosting  
efficiency.

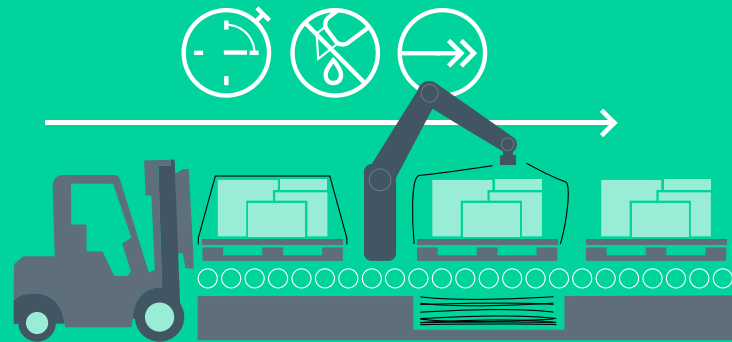


## Initial situation

In a conventional goods-in process, pallets are unloaded from the truck by forklift, transported to the incoming goods area and manually freed from their strapping bands.

- This procedure has several disadvantages:
- Additional manual work step before depalletizing
- Repeated getting on and off the forklift
- Ergonomic strain and potential safety risks
- Inefficient process chain and limited cycle times

With PolyCUT, this bottleneck is eliminated and the incoming goods area is prepared for subsequent automation steps.



## The solution: PolyCUT

PolyCUT is a modular system for the fully automatic detection, cutting and disposal of strapping bands on pallets.

The system essentially consists of two components:

### 1. Robot cutting head

- Detection of the strapping bands on the pallet
- Positioning at the optimal cutting point
- Pneumatic cutting of the bands
- Integrated hold-down device for safe clamping and guiding of the bands

### 2. Transfer unit

- Takeover of the released strapping bands from the robot
- Transfer to waste containers, shredders or extraction systems
- Optional multiple units for cycle time optimization

Detection of the bands is carried out by a laser light section sensor (vision / laser triangulation), which scans the pallet in several passes and thus determines the exact position of the strapping bands. On this basis, the cutting head positions itself at the calculated cutting point and triggers the cutting and clamping process.

## PolyCUT

### Integration & system environment

- Available as a standalone unit with its own PLC and integrated safety technology
- Alternatively, connection to existing control systems of conveyors, transport systems or warehouse control systems
- Easy integration into existing conveyor systems, warehouses and logistics centers
- Short commissioning times thanks to upstream system simulation
- Compatible with existing scanning technology

PolyCUT is an in-house development of Polyplan's Engineering and Plant Design department and integrates seamlessly into existing automation solutions – for example in combination with depalletizing systems such as PolyDeStack.

### Your benefits at a glance

#### + Automated goods-in process

Relief for personnel from monotonous, manual cutting operations

#### + Improved ergonomics

No repeated getting off the forklift, reduced physical strain

#### + Higher process reliability

Reproducible processes, fewer errors and less damage

#### + Suitable for common materials

Processing of all common plastic strapping bands (no steel bands)

#### + Independent of position and color

Strapping bands are detected regardless of color, position and twist

#### + Flexible disposal

Can be combined with waste containers, shredders or extraction systems

#### + Modularly expandable

Optional extension with a de-capping module, a module for removing the master label, or direct integration with depalletizing stations (e.g., PolyDeStack)

#### + Future-proof platform

Prepared for additional functions, e.g. mounting on a multi-function gripper



# POLYPLAN



#### Application

Automatic removal of plastic strapping bands from palletized small load carriers and packages

#### Industries

Automotive industry, logistics centers, industries with high goods throughput

#### Flexible system setup

Robot cutting head + transfer unit with optional transfer stations.

Modular and scalable, grows with your requirements: easily add additional robots and transfer stations to increase throughput and availability

#### Strap detection

Laser light section sensor/vision system (laser triangulation)

#### Strap material

All common plastic strapping bands (no steel bands)

#### Integration

Standalone with its own PLC or connection to existing conveyor and control systems

#### Modularity

Expandable with a lid module, combinable with depalletizing solutions (e.g., PolyDeStack), and optionally equipped with a module for removing the master label



Contact us for detailed information on optimizing your processes and boosting efficiency.