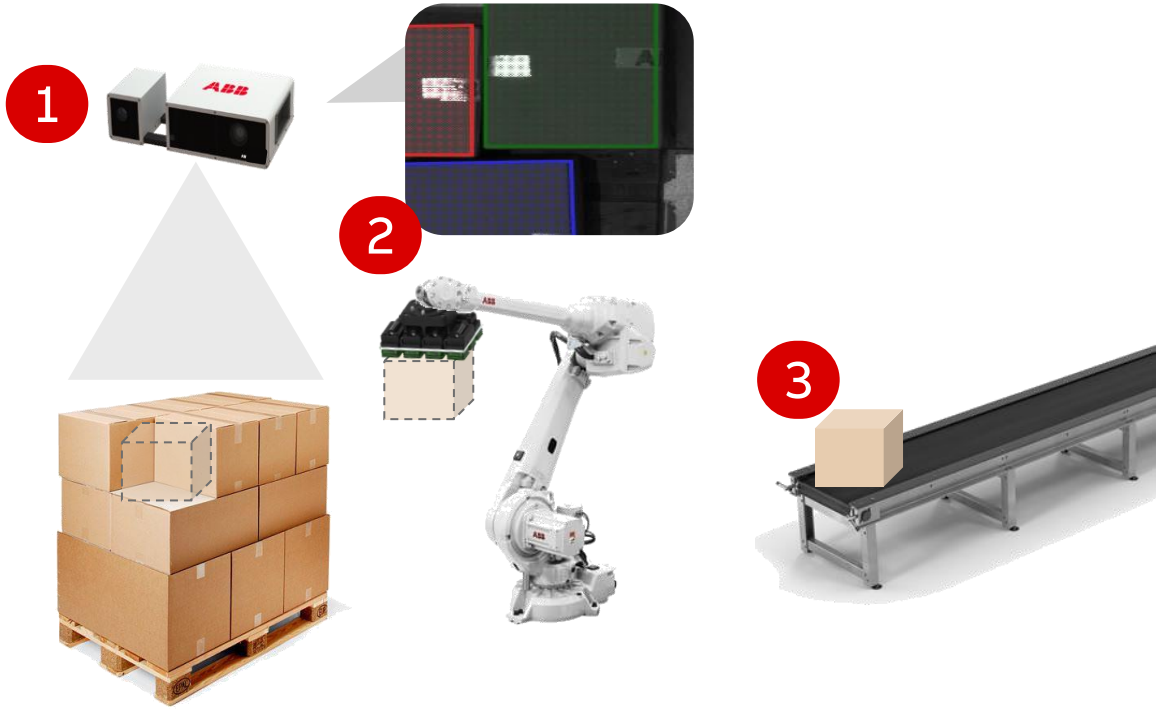
ABB ROBOTICS, CONSUMER SEGMENTS & SERVICE ROBOTICS

Robotic Depalletizer

ABB's ultimate solution for faster and simpler depalletizing

ABB Robotic Depalletizer

How it works



How the solution works:

1. The vision sensor detects boxes on the presented **pallet**
2. The machine vision software determines the most optimal **grasping point per box** which is send to the **robot**
3. The robot picks the detected box according to provided grasp point and places it on **the conveyor**

Problem: Complexity increases with a varying mix of boxes to be depalletized. Legacy solutions are not easy to adapt towards changes in pallet patterns or box sizes in worst case requiring overhaul or re-integration.

Solution: The ABB functional module for mixed case depalletizing solves this problem by using advanced machine vision and software.

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Robotic Depalletizer

Benefits

Our solution aims to support customers in logistics, e-commerce, consumer packaged goods, retail and healthcare in maximizing throughput and managing complexity thanks to an automated module:

EASY TO INTEGRATE

3 modular configurations fitting a wide range of customers cases

ONE SKILL FITS ALL

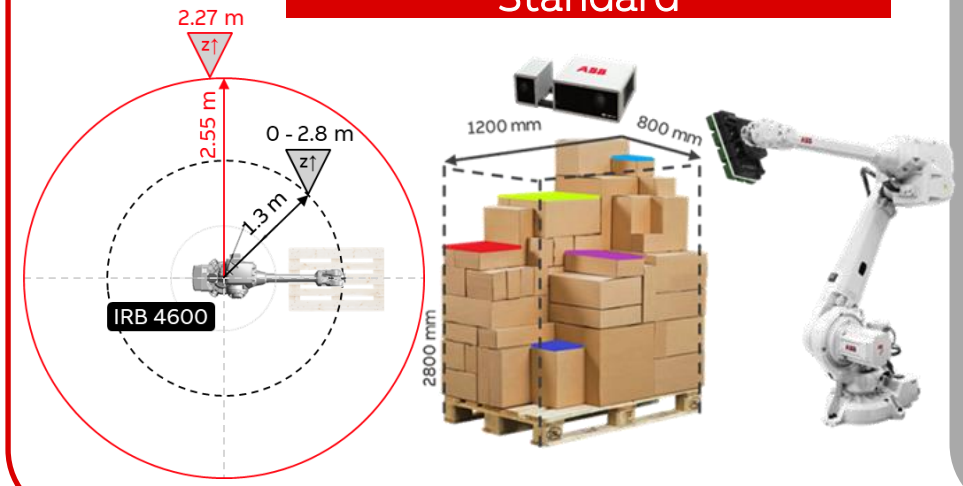
Unique solution: depalletizing various pallet patterns, product mix, size and height

EASY TO OPERATE

Pre-configured software: ready to be connected with customers' control software

Robotic Depalletizer – Value add options

Robotic Depalletizer Standard



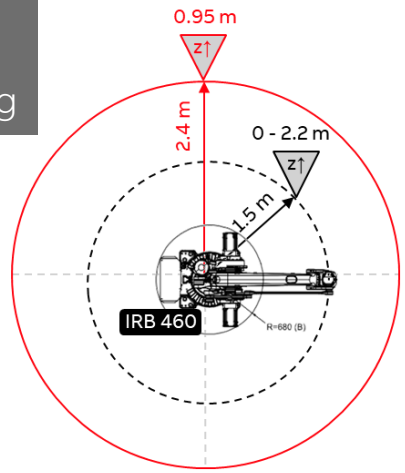
Mixed Robotic Depalletizer:

- → for pallets up to 2.8 m high
- → fully fledged system capable to depalletize mixed, single SKU and rainbow pallets
- → vision sensor & software for reliable detection of single SKU and rainbow pallets
- → fully integrated hardware and software solution with modular design

Performance up to 750 pph!*

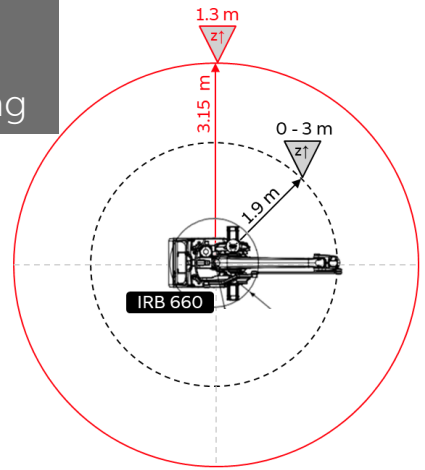
Option 1

- ✓ Lower vertical reach
- ✓ Higher payload depalletizing



Option 2

- ✓ Higher horizontal reach
- ✓ Higher payload depalletizing



*pph=pieces per hour, depending on customer case

Robotic Depalletizer
Characteristics

FLEXIBLE GRIPPER

12 suction cups divided into 6 dynamic suction zones

Capable of picking various product types and sizes

Modular

NO PROGRAMMING

Module configuration < 3 days

(Vs. usual robot programming taking multiple weeks)

Easy to integrate into any level of automation landscape

MINIMUM FOOTPRINT

10-<15 m²

Less space and investments vs. traditional automation

Singulation & depalletization at once

Robotic Depalletizer
Components Groups

Robot Group

(Robot, Riser)

Vision Group

(3D vision sensor, server, software)

Gripper Group

(Gripper with suction cups)

Software Group

(Application software, HMI, PC)

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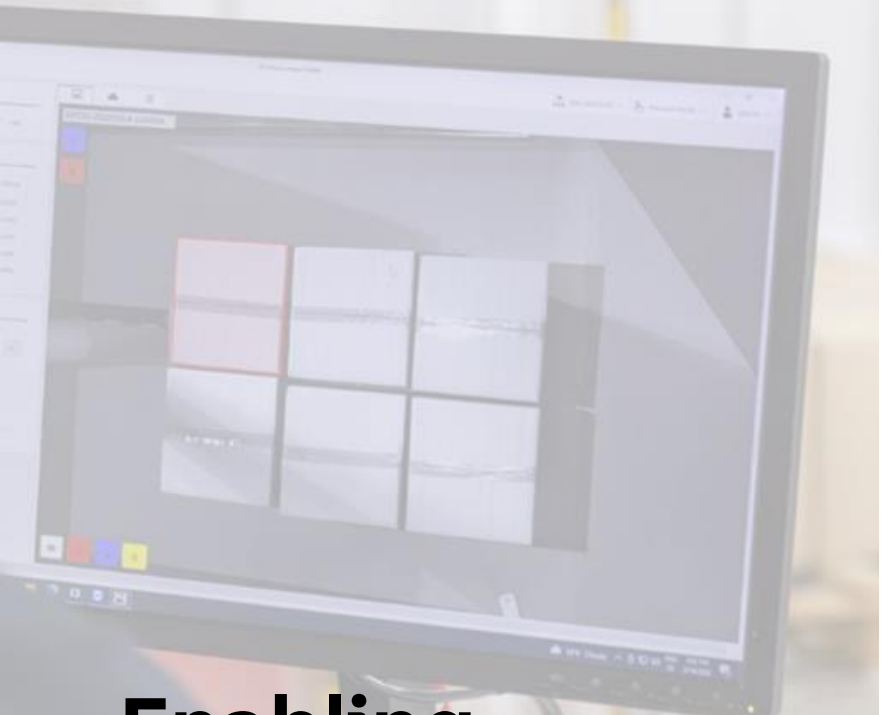
ABB´s Technology



Enabling Efficient Autonomous Operations

ABB 3D VISION TECHNOLOGY

DEPALLETIZING EVEN UNSTRUCTURED PALLET PATTERNS

Recognition of mixed boxes with varying dimension, weight, shape and material

DUAL VISION SYSTEM (OPTION)

NO PAUSE

Dual depalletizing

Up to 2 vision systems

MACHINE LEARNING

MAINTAINING OPERATIONAL EXCELLENCE

Ready to adapt to changes

ABB