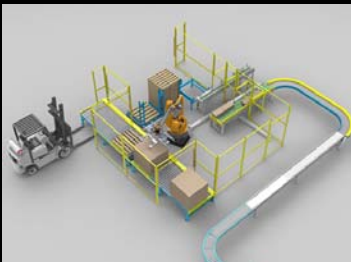


KUKA

KUKA Systems Corporation North America

KUKA End-of-Line Palletizing



■ End-of-Line Palletizing

- ... if you need to reduce labor and increase productivity.
- ... if you need to reduce repetitive motion injuries.
- ... if you need boost end-of-line throughput and operating efficiency.
- ... if your package types are challenging to palletize.

KUKA Systems Corporation North America is a leading, experienced integrator of complete End-Of-Line Palletizing solutions. Whether your need is simple stacking of products on pallets or whether you need a complete centralized palletizing solution that can palletize multiple package types and multiple palletizing patterns, KUKA designs the right solution for your need. Our solutions can be designed to meet any requirements including **ARCTIC** applications. Our custom-designed End-Effectors can manipulate various products and package types, including trays, bags, rolls, sheets, pails, **frozen** goods, to name a few. Our HMI interface is simple, intuitive, robust, and customizable to your needs.

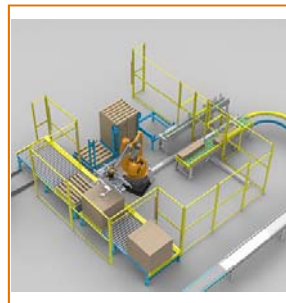
End-of-Arm Tool Design

The critical component of any robotic end-of-line palletizing system is the tool that will grip and handle the product called the “End-of-Arm Tool” or “End Effector”. The end-of-arm tool design touches and secures the product and is key to the overall solution to ensure that each product handled is picked accurately every time.

KUKA Systems understands material handling and more importantly, robotic handling. KUKA designs result in high levels of picking reliability. Adding to these benefits, the throughput of each packaging system is enhanced since the robot can handle multiple products per cycle

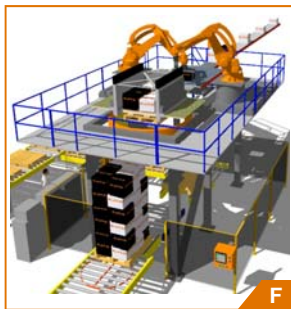
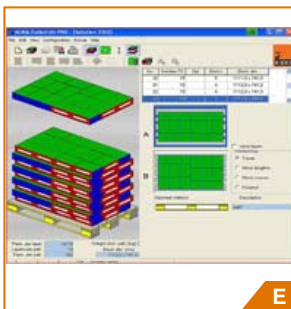
Custom End-Effectors:

- Types: Vacuum pad, Clamp, Fork, Segmented, Combination
- Products: Cases, Pails, Empty Pallets, Slip-Sheets, Bags, Bottles, etc.
- Actuation: Pneumatic, Servo, Hydraulic, Electronic, Vacuum (Blower)



THE BENEFITS

- Single-source solution, from planning to the world-wide after sales support
- Optimized cycle times giving maximum cost-effectiveness
- Custom end effectors to ensure a robust, flexible solution
- Complete customer support from proposal to installation and beyond
- High level of standardization (reduction in cost)
- High palletizing performance and reliability means high efficiency
- Small floor space requirement
- Scalable to your production needs
- Easily modified for additional SKU capability and new production tasks



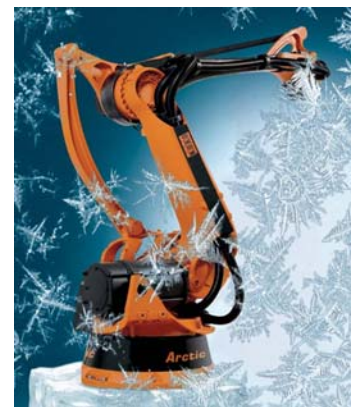
MAIN SYSTEM COMPONENTS

- A** KUKA KR100/180 PA Robot
- B** KUKA Robot Control
- C** Cell Controller with Teach Pendant & Safety Control
- D** Custom Palletizing End Effector
- E** KUKA.PalletTech Software for easy pallet patterns
- F** Cell Equipment, Guarding, and Safety

ONE COOL PALLETIZER

Pizza, ice cream and frozen meals are a growing market. However, frozen products are associated with more demanding conditions and higher costs. As the cold chain must not be broken, special cold-resistant equipment must be used at every stage in the logistics chain. The KUKA KR 180 PA Arctic robot offers you decisive advantages in this respect.

Designed for temperatures as low as -30 °C, the KR 180-2 PA Arctic is ideally suited to the palletizing of frozen foods in cold storage areas without the loss of food quality due to temperature fluctuations. Even the energy supply system is specially adapted to the deep-freeze environment.



TECHNICAL DATA

■ Palletizing Performance	Up to 10 picks per minute per robot (depending on cell layout, packaging type, and/or site factors)
■ Temperature Range	-22°F to +110°F
■ Minimum Case Dimensions	4" x 4" 2"
■ Maximum Case Dimensions	24" x 16" x 16"
■ Maximum Case Weight	Up to 100 lbs.
■ Gripper Technology	Case, Pail, Pallet, Bag, Layer, Sheet, etc.
■ Energy Supply	480 VAC or Local voltage and frequency

KR 180-2 PA ARCTIC ROBOT- ADVANTAGES

- No protective suit for heating required reducing energy costs
- Simple installation and operation
- No additional maintenance-related costs
- Low risk of failure thanks to the use of proven standard components
- Optional: food-compatible oil (H1)

KUKA



WOULD YOU LIKE MORE INFORMATION ABOUT HOW KUKA SYSTEMS CAN HELP YOU REDUCE YOUR COSTS, OPTIMIZE YOUR OPERATIONS, AND IMPLEMENT A FLEXIBLE SOLUTION FOR NOW AND THE FUTURE?

CONTACT US AT LOGISTICSSOLUTIONS@KUKANAO.COM OR CALL +1 586 795 2000.



ROBOGISTICS™. ROBOTICS IN LOGISTICS.

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