KRC

SMART AUTOMATION FOR SEAMLESS PRODUCTION FLOW

AUTOMATED RACK TRANSPORT SYSTEM

The KOMA Rack Commander is a fully automated trolley transport system designed to move product-loaded racks smoothly and reliably through one or multiple KOMA installations. Whether used for proofing, shock freezing, or storage transitions, the KRC ensures a constant, programmed product flow — minimizing manual labor and maintaining consistent product quality.

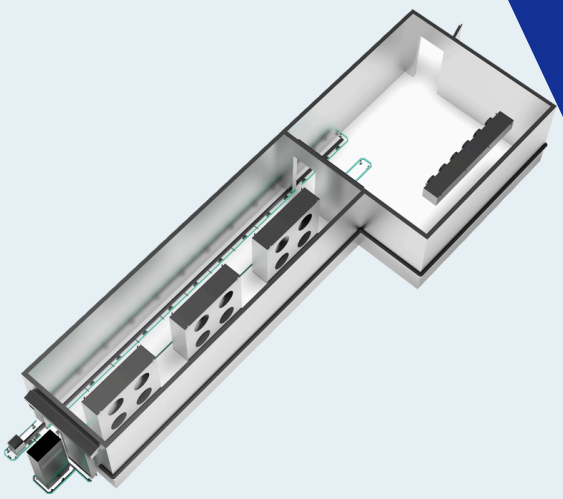
Automated drive system and intelligent control

Engineered in-house and customized to fit each client's specific production process, the KRC is the only chain-free system on the market. A robust, externally mounted electric motor drives a trapezoidal shaft, which guides swivel-mounted hooks through stainless steel profiles. These hooks automatically pick up, move, and reposition the racks inside the installation based on pre-programmed product cycles.

The KRC transport system is controlled by an intelligent PLC interface with integrated frequency and proximity sensors. A touchscreen display provides intuitive operation, product menu input, and real-time status updates.

YOUR BENEFITS:

- **Consistent product handling:** Racks move through installations at set intervals, ensuring equal processing times and quality for every batch.
- **Minimum labor, maximum efficiency:** Operators only need to position the trolleys; all transport is automated.
- **Energy-saving operation:** Electronically controlled sliding doors reduce cold air loss during in- and outtake. In tunnel setups, only one door opens at a time for optimal insulation.
- **Built-in safety:** Emergency stop buttons, safety signage, torque monitoring, and anti-freeze movement cycles ensure safe and reliable operation.



THE KRC TRANSFORMS COMPLEX PRODUCTION FLOWS INTO A SEAMLESS, FULLY AUTOMATED PROCESS

SPECIFICATIONS

KOMA RACK COMMANDER (KRC)

OPERATION & PROCESS EXAMPLE:

1. **Proofing (CDS/GR):** Trolleys are automatically transported through the proofer over a desired cycle.
2. **Blast Freezing (IBF/KTT):** Post-proofing, trolleys enter the blast freezer for a desired cycle, reaching a core product temperature of -7°C.
3. **Storage (RDV):** Trolleys are moved to a docking station where they await manual removal or further processing.

SYSTEM COMPONENTS:

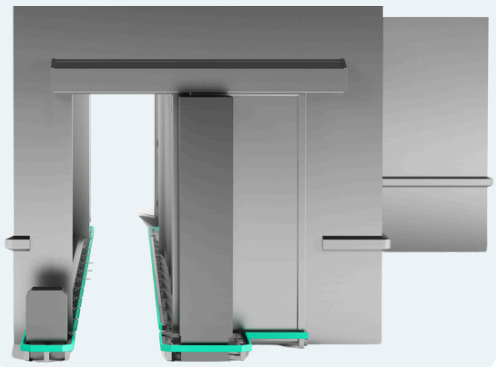
- **External drive assembly:** All critical components, including the motor, are mounted externally to simplify maintenance access.
- **Automatic docking options:** All critical components, including the motor, are mounted externally to simplify maintenance access.
- **Smooth and safe movement:** Carriages slide along side rails, engaging and repositioning trolleys with spring-assisted hooks and intelligent feedback loops.
- **Real-time detection and feedback:** Optical and acoustic signals indicate free/occupied positions. Proximity sensors embedded in the guide profiles ensure precise detection.

SAFETY MEASURES

- Emergency stop buttons at all entry and exit points.
- Separate OFF switches on control panels and switch cabinets.
- Visual warning signs at all doorways.
- Real-time torque monitoring via frequency inverters for obstruction detection.
- Spare parts package included for fast maintenance and uptime assurance.

ADVANCED TECHNOLOGY

- **User-friendly display** for easy programming of product-specific transport cycles based on type and size.
- **Smart detection & positioning** ensure precise rack tracking and error-free operation throughout the process.
- Side-mounted components keep the floor area clear, allowing **easy access for cleaning** and maintenance.



KOMA UK
T +44 (0) 1332 480243
sales@koma-uk.com
www.koma.com

KOMA Head Office
Energieweg 2
6045 JE Roermond
The Netherlands