

**ROKAE**

**ROKAE Collaborative Robot**

**Intelligent Palletizing** Solution



# ROKAE Collaborative Robot Palletizing Workstation

Create a Zero-Code intelligent palletizing solution for customers

- Complete installation and debugging within **1 hour**
- Set a new stack type within **5 minutes**
- **9 to 20** boxes per minute
- Create up to **1,000** palletizing paths for a single recipe

- The maximum supported pallet size is **1,400mm×1,400mm**
- Stack **2 types of** products at a time
- Support **label orientation**
- Achieve free switch between **single mode and double suction** mode

## Flexible collaborative robot

Heavy-payload flexible collaborative robot for palletizing, with a maximum payload of 45 kg, which is safe, efficient, and cost-effective

## Workstation base

Portable mobile fixed/lifting base  
The maximum palletizing height is 2,600 mm

## Palletizing process package

13.3-inch high-sensitivity capacitive touch screen intelligent palletizing package, 0 programming

## Pallet positioning system

Pallet detection and mechanical positioning system, with auxiliary positioning accuracy of 1 mm

## End suction cup

High-suction sponge/vacuum suction cup  
Applicable to products of various sizes, weights, and materials

## Control button

One-key start, pause, emergency stop, and reset of the device

## Roller line (optional)

Adjustable height 650 mm-730 mm for quick adaptation to the production line

## Electric box control cabinet

Self-developed highly integrated control cabinet with low energy consumption

## Safety system (optional)

Partition cooperation mode and safety stop function are available due to optional safety lidar/safety grating



# Product Advantages

## 45Kg Ultra-Large Payload

Optional professional 5-axis collaborative palletizing robot  
Easily adapts to food & beverage, medical, daily chemical industries

## TÜV-Class Ultimate Safety

≥21 TÜV safety certifications, German TÜV functional safety certified (whole machine)  
SIL3 independent safety controller with dual-channel redundant monitoring

## Joint Force Sensing Tech Upgrade

Built-in joint torque sensors (no extra installation)  
Extremely sensitive flexible drag teaching & collision stop

## 9~20 boxes/min Ultra-High Efficiency

Singularity-free design for smooth movements  
Global vibration suppression tech ensures fast & neat operation

## 0-Code Fast Deployment

Graphical programming & drag teaching for quick mastery (no experience required)  
Automatic pallet pattern & path generation, 5-minute rapid palletizing type change

## Multi-Functional Flexible Production

500+ programs storage; quick switch between single/double grippers & single/dual lines; flexible production via multi-robot collaboration  
Expandable IO, full bus communication, adaptable to various scenarios

# Palletizing Process Package

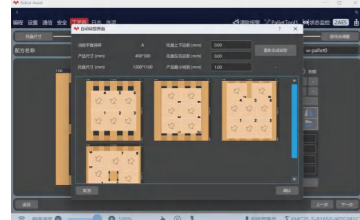
## Visual configuration

4-step setup for new palletizing patterns



- i. Set pallet size
- ii. Set product size
- iii. Automatically generate palletizing pattern
- iv. Set stacking style

## Auto Palletizing Pattern



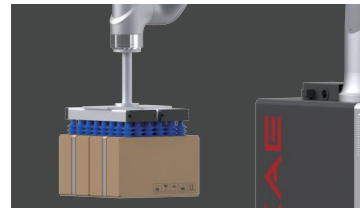
Supports automatic generation of various palletizing patterns — array, cross, and loop — based on pallet or box dimensions. Custom patterns can also be defined. The palletizing layout can be configured in just 2 minutes, greatly improving setup efficiency.

## One-Click Product Changeover



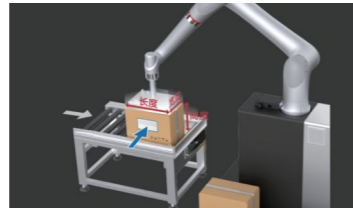
The operation interface supports one-click changeover for fast and efficient product switching.

## Multi-Grip Modes



Supports multiple gripping strategies, including multi-pick & multi-place, multi-pick & sequential-place, and single-pick & single-place, improving palletizing efficiency by up to 80%.

## Labeling



Allows unified label orientation and configurable box entry direction to meet more complex palletizing requirements.

# Technical Parameters

	RKE-PAR17 (fixed)	RKE-PAR17 (lifting)	RKE-PAR25 (fixed)	RKE-PAR25 (lifting)	RKE-PAR35 (fixed)	RKE-PAR45 (fixed)
Maximum payload* (including suction device)	17 kg		25 kg		35 kg	45 kg
Maximum working radius	2,047 mm		1,798 mm		2,246 mm	1,947 mm
Maximum palletizing height* (including pallets)	1,950 mm	2,450 mm	1,650 mm	2,150 mm	2,200 mm / 2600 mm*	1,850 mm
Maximum palletizing speed*	Single grip: ≤10 boxes/minute				Dual grip: < 20 boxes/minute	
Repeated positioning accuracy	±0.05 mm					
Communication mode	TCP/IP, Modbus TCP, EtherCAT, Profinet, Ethernet/IP, DeviceNet, CC-Link, CC-Link IE Field Basic					
IO quantity	32 digital input, 32 digital output					
IP protection level	IP67 for robot body					
Temperature range	0 ~ 50°C					
Power source	AC 200-240V, 50-60Hz					
Maximum power	2.5 kw	3.5 kw	2.5 kw	3.5 kw	4 kw	4 kw
Total weight*	About 400 kg	About 450 kg	About 400 kg	About 450 kg	About 800 kg	About 800 kg
Floor area	1,300 mm × 1,650 mm				1,600 mm × 1,650 mm	
Minimum Factory Height	3 m	3.6 m	2.5 m	3.1 m	3.5 m / 3.8 m	2.7 m
Compatible product size	Length (250-550) mm × width (200-500) mm × height (150-400) mm, those of special sizes shall be equipped with a suction device					
Safety function	Support over 21 adjustable safety functions such as collision detection, virtual wall, and cooperative mode					
Certification	ISO/TS 15066, ISO 13849-1/PL d, ISO10218-1, ISO 12100, EU CE Certification, NSF Certification					

- When configured with the accompanying suction cups, the maximum payload of the product without end effectors is 14 kg, 20 kg, 30 kg, or 38 kg.
- The actual palletizing speed depends on product characteristics and palletizing pattern; for single-piece handling, the maximum palletizing speed is 10 boxes/min.
- The actual palletizing height depends on product dimensions, palletizing pattern, and gripper type. When using a 1200 mm × 1200 mm pallet, the maximum palletizing height can generally be achieved.
- The actual minimum factory height depends on the actual palletizing height. When using a 1200 mm × 1200 mm pallet and reaching the maximum palletizing height, the above minimum factory height applies.

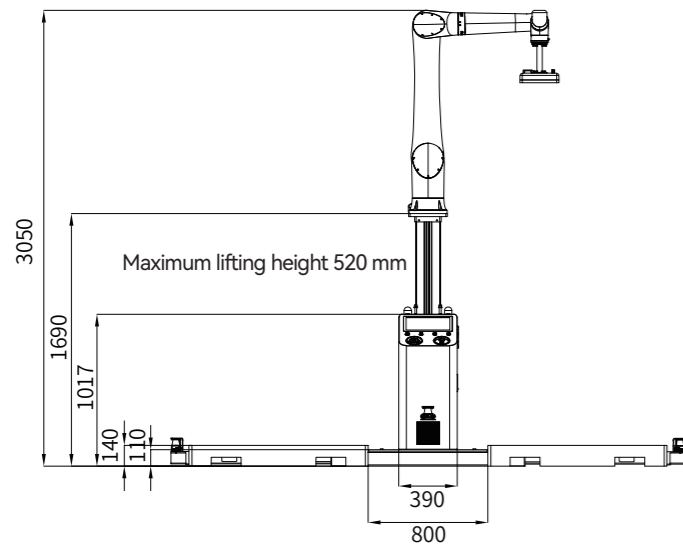
# Configuration List

Name	Quantity	Option	Remarks
Collaborative robot	1	Standard configuration	CR20 series or CR35 series collaborative robot, controller
Electric box control cabinet	1	Standard configuration	Integrated control cabinet
Workstation base	1	Standard configuration	Mobile fixed column/lifting column base, pallet positioning system
Palletizing process package	1	Standard configuration	Programming-free palletizing process package
End suction cup	1	Standard configuration	High-suction pneumatic sponge suction cup
Safety system	1	Optional	Safety radar/safety grating/safety vision/safety fence
Roller line	1	Optional	Length 1,000 mm × width 750 mm × height 650 mm

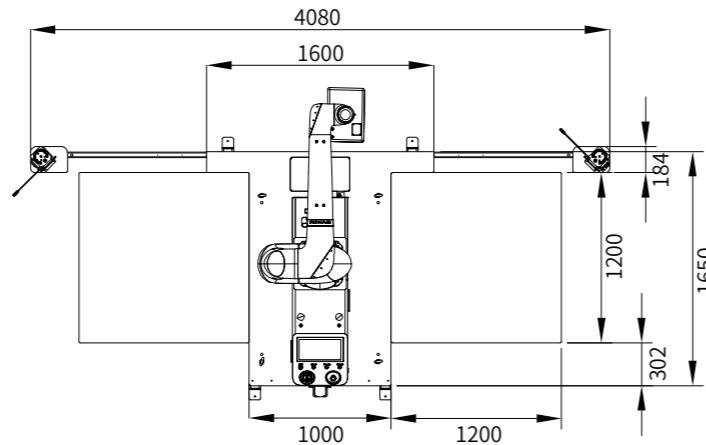
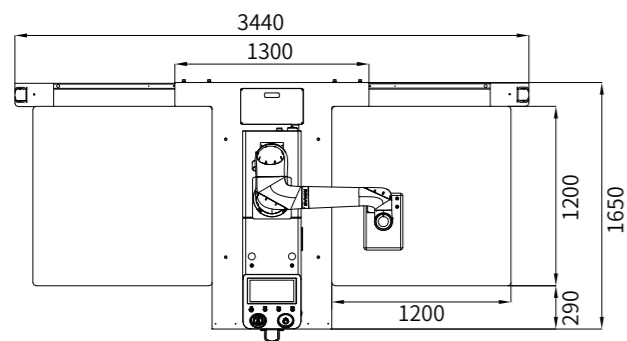
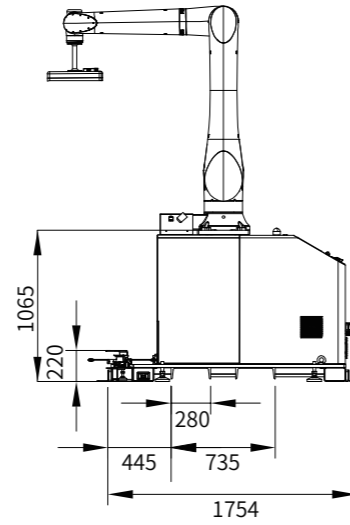
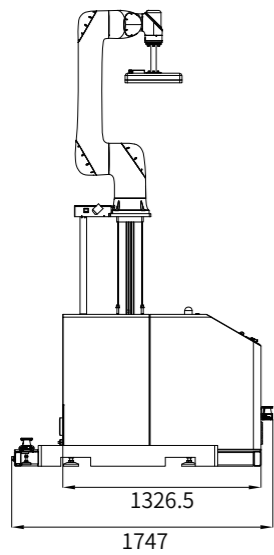
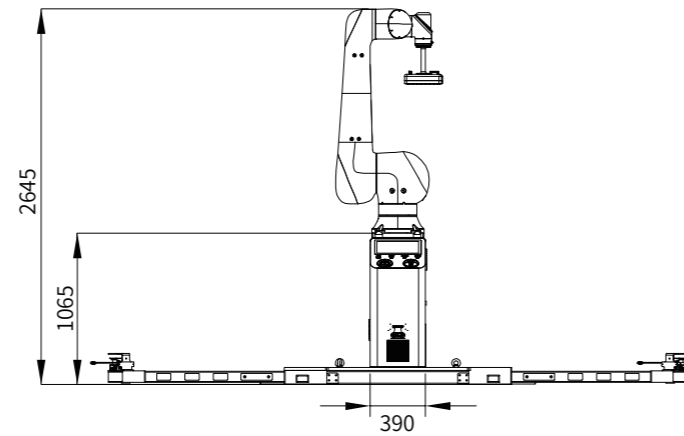
# Product Dimension Diagram

Unit: mm

## RKE-PAR25 and below



## PAR-RKE35 and above



# Applications

## Food & Beverage Industry



Pet Treat Carton Palletizing



Condiment Carton Palletizing



Solid Beverage Carton Palletizing



Alcoholic Beverage Carton Palletizing



Bread Carton Palletizing

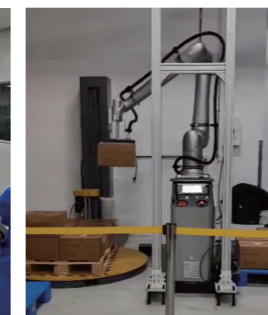


Snack Carton Palletizing

## Pharmaceutical Industry



Chemical Drug Carton Palletizing



Medical Supplies 3D Vision Depalletizing

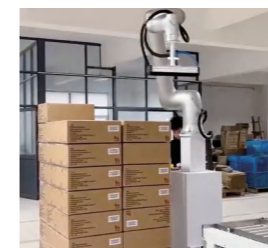


Medical Supplies Carton Palletizing



Traditional Chinese Medicine (TCM) Formula Carton Palletizing

## Daily Chemical Industry



Plastic Product Carton Palletizing



Cleaning Supplies Carton Palletizing

## Small Home Appliance Industry



Small Home Appliance Carton Palletizing

## New Energy Industry



New Energy Aluminum Battery Case Palletizing

# ROKAE



**ROKAE Robotics**

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