



AUCTECH Makes Human Life
and Manufacturing More Convenient



AUCTECH AWP Series Palletizing/Depalletizing Workstation Catalog

AUCTECH Robotics

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AWP Series Palletizing/Depalletizing Workstation

 Industrial Safety
SIL2 Design

 Most Comprehensive
Functionality

 Professional-Grade
Palletizing Solution

Dual-Mode Depalletizing:
Vision-Based & Recipe-Based 

High-Performance &
High-Throughput Operation 

User-Friendly Operation &
Rapid Deployment 



AWP Series Palletizing/Depalletizing Workstation

AUCTECH can deeply cultivate the application of palletizing industry, cooperate with industry partners, and provide turnkey mode palletizing workstation products for end customers relying on AUCTECH's technical reserve and R&D capability. Excellent application interaction, rapid application deployment, and short investment return period make palletizing a very light work.

AWP-20S Payload: 30kg Reach: 1480mm	AWP-20 Payload: 25kg Reach: 1680mm	AWP-20L Payload: 20kg Reach: 1880mm
AWP-40S Payload: 50kg Reach: 1580mm	AWP-40 Payload: 45kg Reach: 1780mm	AWP-40L Payload: 40kg Reach: 1980mm

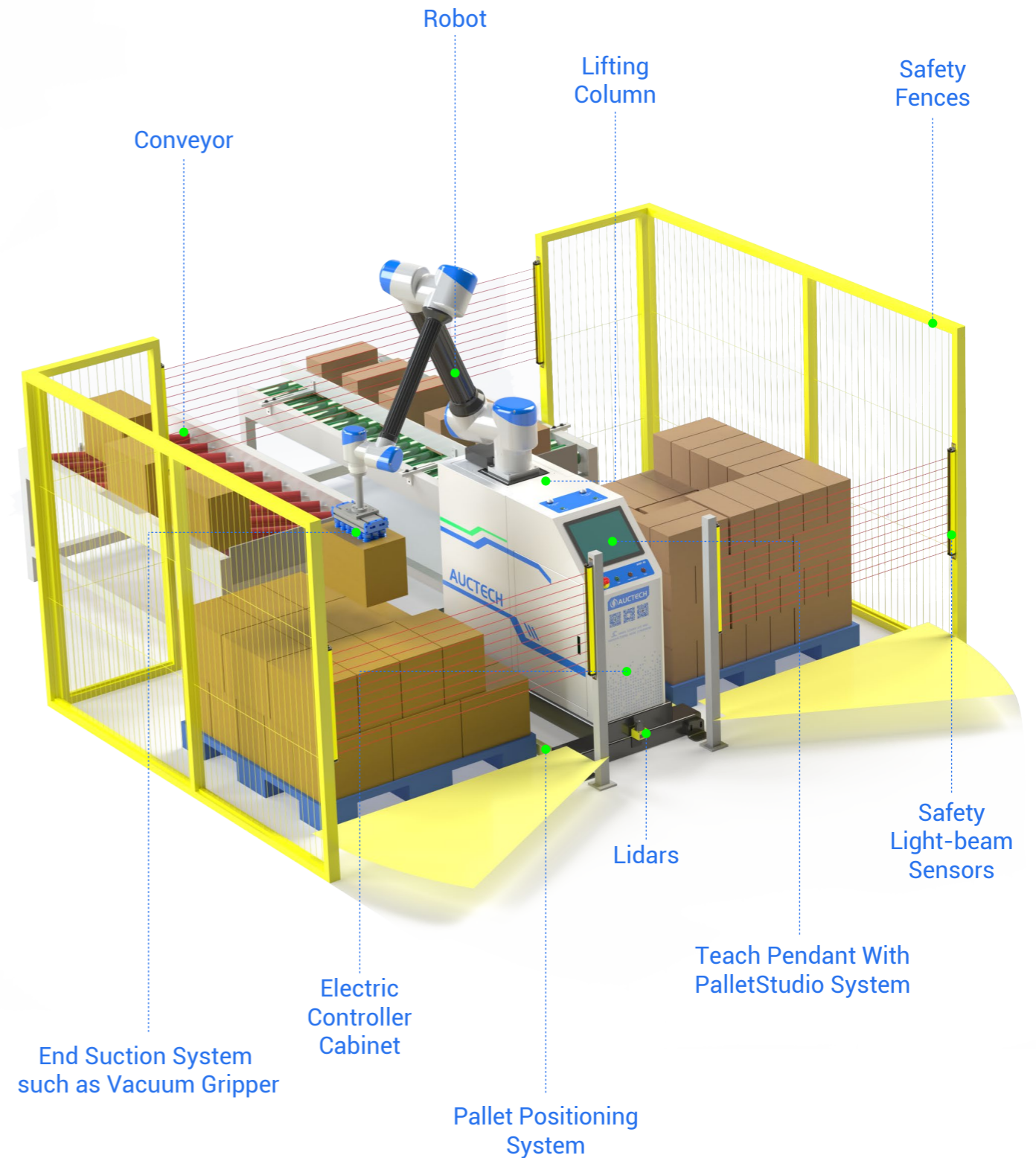
Notes:

1. Size limit of a single carton: ≤800mm*420mm (from top view)
2. If the weight of a single carton exceeds 30kg, please customize the suction system.

Product Information

AWP - 20 S - SF1			
AUCTECH Palletizing Workstation			
Payload		Version	
20S	30kg	None	Standard Version
20	25kg	SF1	Standard Safety Version
20L	20kg	DP0	Recipe-Based Depalletizing Version
40S	50kg	DP1	Off-arm Vision Depalletizing Version
40	45kg	DP2	On-arm Vision Depalletizing Version
40L	40kg	DP0/SF1	Recipe-Based Depalletizing+Standard Safety Version
		DP1/SF1	Off-arm Vision Depalletizing+Standard Safety Version
		DP2/SF1	On-arm Vision Depalletizing+Standard Safety Version

Product Composition



AWP-SF Series: Advanced Safety Architecture

Safety is the core design philosophy. From hardware protection to software standards compliance, the workstation delivers multi-layered safety assurance for industrial operations.

SIL2 Safety Version >>>



The complete safety system complies with SIL2 international safety standards, covering circuit design, software logic, and mechanical structure, providing industrial-grade functional safety protection and minimizing accident risks.



Active Collision Protection >>>

The built-in collision detection system identifies abnormal contact and initiates rapid stopping. Compared with traditional mechanical limit protection, it offers higher sensitivity and effectively prevents equipment damage and safety hazards caused by rigid impacts.



Multiple Safety Device Options >>>

Safety fences, safety light-beam sensors, and lidars can be flexibly combined according to workshop layout and safety level requirements. Protection zones are configurable to meet varying human-robot distance and operational safety standards.

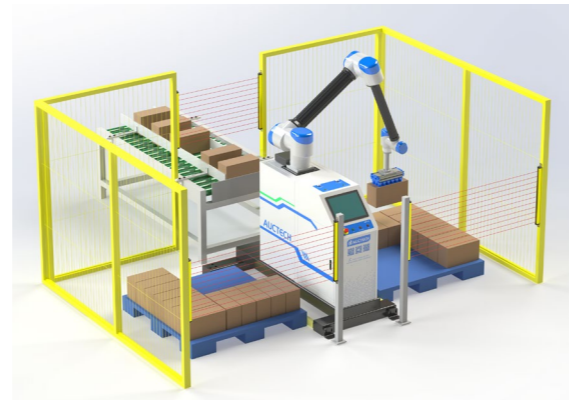
Safety Light-Beam Sensor Layout

Conveyor Entry Barrier:

Secures the front end of the conveyor to prevent personnel from mistakenly entering the robot's core operation area.

Left/Right Dual-Station Protection:

Independent detection zones are configured for the left and right palletizing stations to achieve a dynamic balance between production and material replenishment.



Action safety logic

Protection Zone	Trigger Scenario	Response Mechanism
Conveyor Entry Zone	Personnel enter while the robot is performing palletizing tasks.	Immediate Stop: Triggers a robot alarm and stops all robot movement immediately.
Active Working Zone	Same-side trigger: Personnel enter the specific side where the robot is currently working.	Protective Stop: Ensures absolute safety by stopping the robot when personnel enter the active working radius.
Non-Working Zone	Opposite-side trigger: Personnel enter the side that has completed its task while the robot works on the other side.	Continuous Operation: Allows personnel to safely perform tasks (e.g., clearing materials or loading pallets) in the inactive area without stopping the robot.

Three-Lidar Matrix Layout

HMI Operation Area Protection:

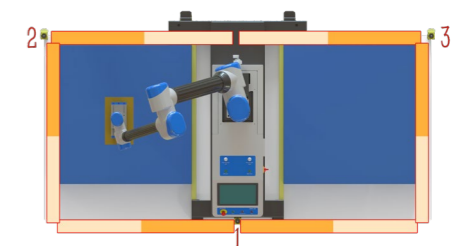
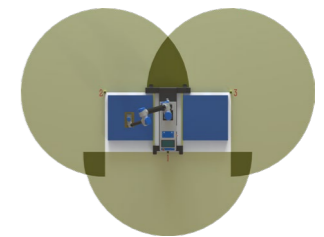
Covers the display screen operation area and supports dual-directional (left and right) strip-shaped detection zones.

Left Station Protection:

Provides real-time monitoring of the area directly in front of the left palletizing zone and the left-side blind spots.

Right Station Protection:

Provides deep coverage of the area directly in front of the right palletizing zone and the right-side operation area.



Action safety logic

Protection Zone	Trigger Scenario	Response Mechanism
Standard Detection Zone	Personnel enter any of the four strip-shaped radar trigger areas.	Immediate Stop: A robot alarm is triggered, and the robot stops immediately.
Deceleration Zone	Personnel enter the Orange functional detection area.	Speed Reduction: The robot slows down to a safe operating speed.
Immediate Stop Zone	Personnel enter the Light Yellow functional detection area.	Emergency Stop: The robot ceases all movement instantly.

Note: The default setting is for the robot to stop immediately upon detecting an intrusion; A deceleration zone and an emergency stop zone can be configured as optional.

AWP-DP Series: Adaptive Dual-Mode Depalletizing

Equipped with a high-resolution vision system capable of accurately locating randomly arranged materials (e.g., disordered cartons or bags) for automated depalletizing. Recipe-Based Depalletizing mode is also supported for structured stacks without vision assistance, enabling flexible adaptation to diverse warehouse conditions.

Depalletize Chaotic Stacks with 3D Vision



Recipe-Based Depalletizing



AWP Series All-Scenario Multi-Functional Palletizing Workstation

Intelligent Slip Sheet Handling (Optional)

Integrated automatic slip sheet placement function. The number of interlayers can be configured based on pallet height and load stability requirements, preventing stack collapse without manual intervention and supporting uneven layer heights or slippery materials.

(The maximum dimension of the slip sheet is as follows:
AWP-20L/40L: 600*600mm
AWP-20/20S/40/40S: 1200*1200mm)

Multi-Pick & Multi-Place High-Efficiency Operation (Optional)

Supports picking multiple items in a single cycle (e.g., multiple cartons or bags). Combined with customized end-of-arm tooling, synchronized transfer and stacking can significantly improve throughput compared with single-pick operation, especially suitable for standardized mass production.

(Software system built-in multi-pick & multi-place function. For standard version hardware supports 2-pick & 2-place, and can support up to 4-pick & 4-place as an option.)

Dual Conveyors Independent Operation (Optional)

Equipped with two independent left/right conveyors, each configurable with different palletizing recipes, material specifications, and stacking patterns. Enables parallel dual-line operation without production changeover downtime, ideal for mixed-product manufacturing or inbound sorting and palletizing scenarios.

Professional Palletizing Recipe Management

Built-in industry-standard pallet patterns with full support for custom stack layouts. Up to 70 of recipes can be stored and recalled instantly, eliminating repeated commissioning when changing products and supporting high-mix, low-volume production.

Fine-Grained Parameter Adjustment

Multi-dimensional adjustable parameters including delay, positional offset, and speed ramping, with minimum adjustment resolution down to 0.1 mm. Precisely optimized for different material properties (fragile goods, heavy loads) and stacking requirements, ensuring pallet stability and stacking accuracy.

Flexible Conveyor Specifications (Optional)

Conveyor width and load capacity can be customized according to material dimensions. Inclined roller conveyor options are also available for angled infeed or special layout requirements, improving overall workshop space utilization.

Wide End-of-Arm Tooling Compatibility (Optional)

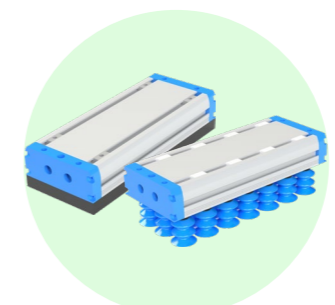
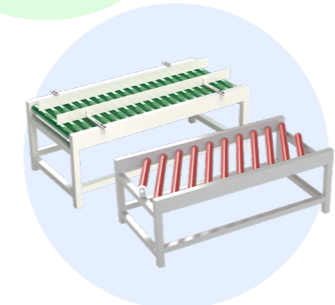
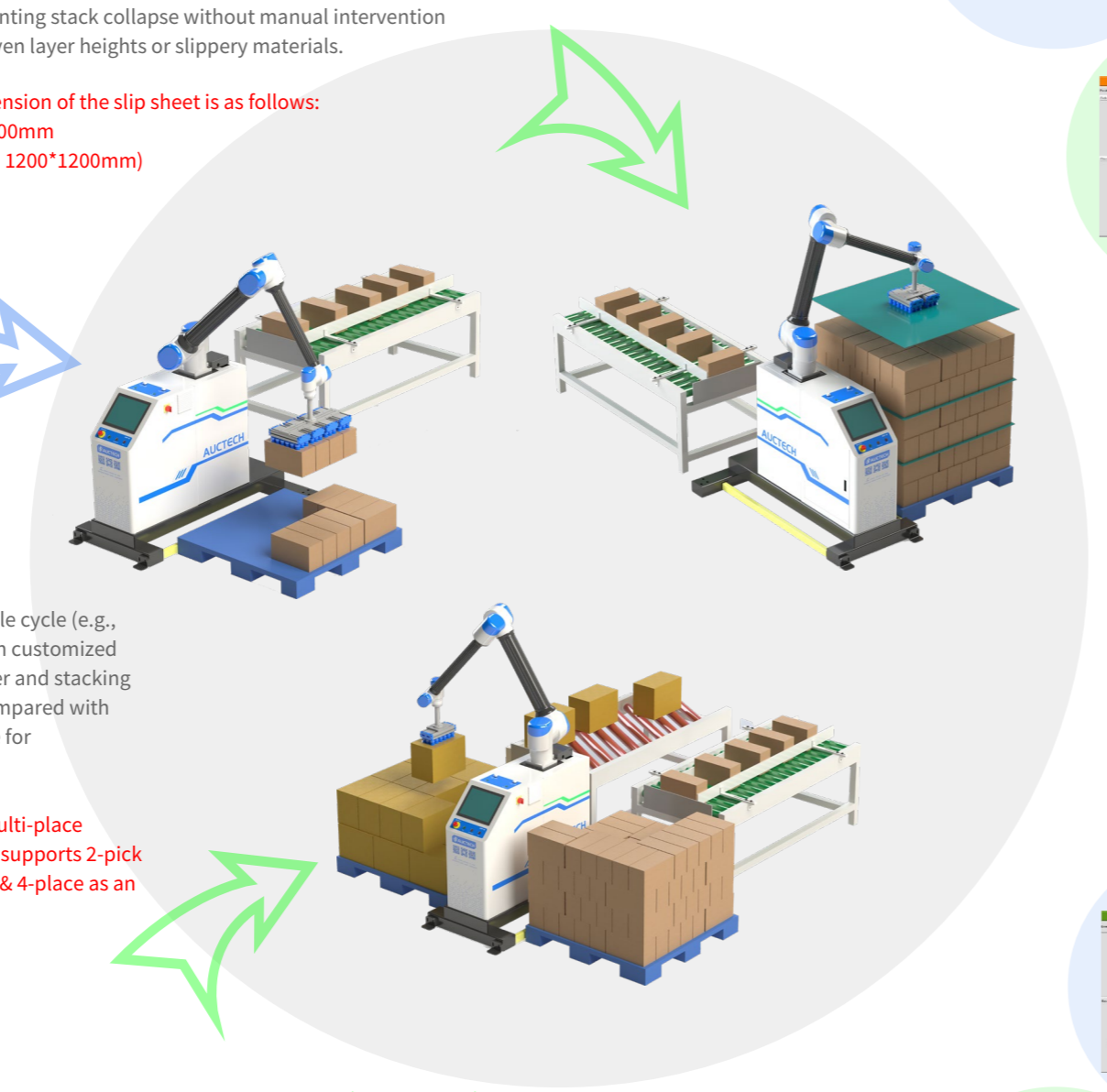
Supports suction cups, mechanical grippers, clamp grippers, and other tooling types. Custom designs are available for cartons, bags, drums, and irregular-shaped products, covering material handling requirements across food, chemical, building materials, 3C electronics, and more.

Full-Process Status Monitoring

Real-time monitoring of robot parameters, tooling status, and palletizing counts. The interface provides intuitive visualization of equipment utilization, fault types, and alarm information, enabling rapid troubleshooting and minimizing downtime.

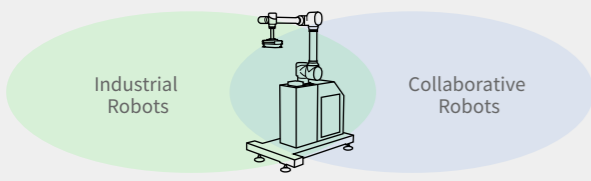
Intelligent Pallet Detection (Optional)

Integrated pallet presence and position detection. Automatic alarms and operation halt are triggered when pallets are missing, misaligned, or damaged, preventing invalid palletizing



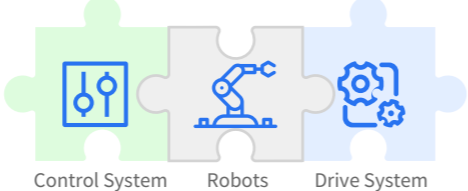
Note: For details on the additional hardware required for all optional feaes, please consult AUCTECH company.

High Rigidity, High Speed & Reliable • Extremely Simple & One-Click Operation



Hybrid Industrial & Collaborative Robot Advantages

Combines the high-speed operation, high structural rigidity (repeatability up to ± 0.04 mm), and high payload capacity of industrial robots with the inherent safety characteristics of collaborative robots, ensuring both productivity and human-robot coexistence.




Optimized Dynamics and Hardware Integration

Deep integration between robot mechanics, control systems, and drive systems ensures smooth, vibration-free motion. This not only improves stacking quality but also reduces mechanical wear and extends maintenance intervals.


Fast Deployment and Rapid Production Ramp-Up

Modular structural design with all components pre-assembled and pre-tested before shipment. On-site installation, wiring, and commissioning can be completed within one hour, compared with 8-12 hours for traditional palletizing systems, significantly shortening time-to-production.




Industry-Leading Cycle Time

With high-speed and high-rigidity design, the maximum cycle time reaches ≤ 12 cycle/min in single-pick mode, with further improvement in multi-pick mode. This represents over 20% higher throughput compared with the industry average, enabling significant capacity gains.


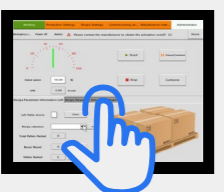


High Reliability and Reduced Downtime Costs

Core components such as motors, reducers, and controllers are sourced from internationally recognized brands, ensuring extremely low failure rates and significantly reducing maintenance costs and production losses.


Remote Firmware Upgrade (Optional)

Supports remote firmware updates, eliminating the need for on-site service visits, reducing maintenance time and travel costs, and ensuring systems always operate on the optimal software version.

Intuitive Human-Machine Interface

Equipped with a 10-inch color touchscreen featuring a clear and intuitive layout. Core functions such as recipe selection, parameter configuration, and status monitoring are accessible with one touch. Operators can achieve independent operation after only one hour of training.

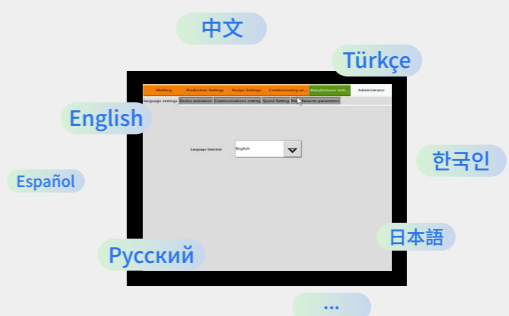


Graphical Recipe Configuration

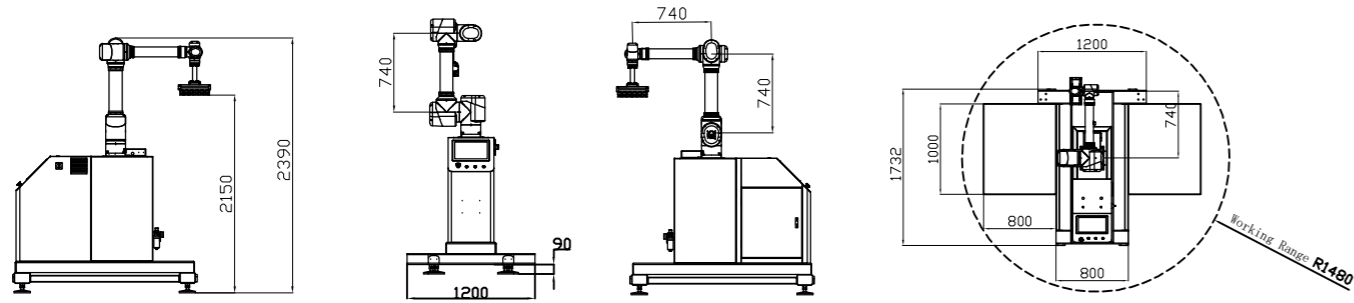
No programming background required. Palletizing recipes can be created, edited, and stored through drag-and-drop graphical operations with real-time visualization of stacking patterns, lowering the technical threshold for shop-floor operators.

Multi-Language Interface Support (Optional)

Supports Chinese, English, French, Turkish, Spanish, and other languages, enhancing global market adaptability.



Product Dimensions



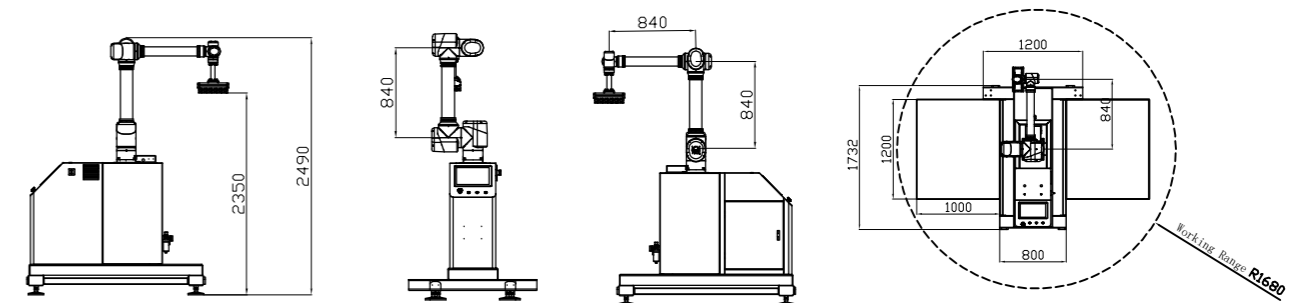
AWP-20S Dimensions (subject to actual objects)

Technical Parameters

Model	AWP-20S
Weight	About 600kg
Payload*	30kg
Suction cup weight	10kg
Maximum carton weight	20kg
Reach	1480mm
Maximum palletizing cycle	≤8cycle/min
Maximum palletizing height	≤2150mm (ceiling height requirement ≥3350mm)
Repeat positioning accuracy	±0.04mm
Pallet placement form	Manual, one left and one right
Maximum compatible pallet	1000mm*800mm
Dimensions	L1732mm*W1200mm*H2390mm
Dimensions of wooden boxes	L2200mm*W1450mm*H1900mm
Maximum power	3.5KW
Reference gas consumption	240-460L/min
Power supply requirements	AC220V±10%, 50/60Hz±5%
Gas supply requirements	0.5~0.7Mpa
Communication method	EtherCAT, Modbus TCP(master/slave)
IP level	Robot arm IP53/Cabinet IP54
Ambient temperature	0-50°C
Noise	<80dB
Main color	Blue gray
The quantity of suction cup	2
Lifting height	Standard configuration includes a 600mm lifting column (Customized lifting column of 600-800mm are available)
Roller conveyor	Standard:1 roll conveyor with dimensions of L(1m)*W(0.5m)*H(0.6m), equipped with box sensor and start/stop control.
Recommended pallet specifications	1000mm*800mm; 1000mm*1000mm; 1100mm*1000mm; 1100mm*1100mm; 1200mm*800mm

*Payload= Suction cup weight + Maximum carton weight

Product Dimensions



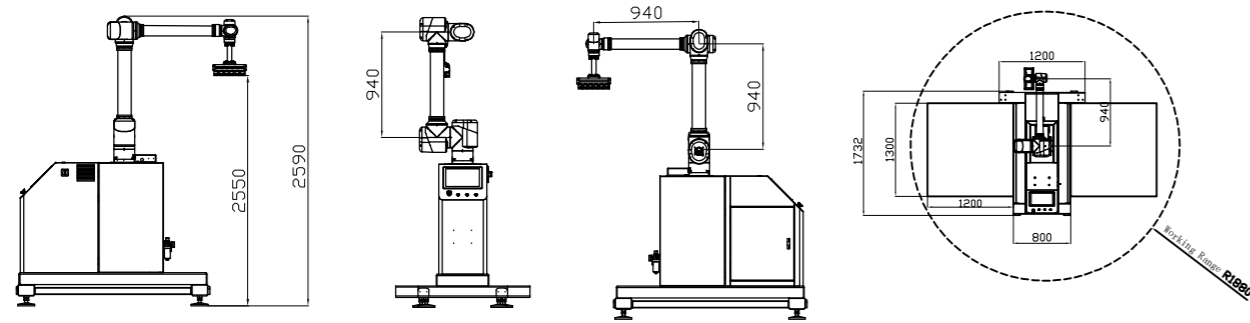
AWP-20 Dimensions (subject to actual objects)

Technical Parameters

Model	AWP-20
Weight	About 600kg
Payload*	25kg
Suction cup weight	7kg
Maximum carton weight	18kg
Reach	1680mm
Maximum palletizing cycle	≤10cycle/min
Maximum palletizing height	≤2350mm (ceiling height requirement ≥3550mm)
Repeat positioning accuracy	±0.04mm
Pallet placement form	Manual, one left and one right
Maximum compatible pallet	1200mm*1000mm
Dimensions	L1732mm*W1200mm*H2490mm
Dimensions of wooden boxes	L2200mm*W1450mm*H1900mm
Maximum power	3.5KW
Reference gas consumption	240-460L/min
Power supply requirements	AC220V±10%, 50/60Hz±5%
Gas supply requirements	0.5~0.7Mpa
Communication method	EtherCAT, Modbus TCP(master/slave)
IP level	Robot arm IP53/Cabinet IP54
Ambient temperature	0-50°C
Noise	<80dB
Main color	Blue gray
The quantity of suction cup	2
Lifting height	Standard configuration includes a 600mm lifting column (Customized lifting column of 600-800mm are available)
Roller conveyor	Standard:1 roll conveyor with dimensions of L(1m)*W(0.5m)*H(0.6m), equipped with box sensor and start/stop control.
Recommended pallet specifications	1000mm*800mm; 1000mm*1000mm; 1100mm*1000mm; 1100mm*1100mm; 1200mm*800mm; 1200mm*1000mm

*Payload= Suction cup weight + Maximum carton weight

Product Dimensions



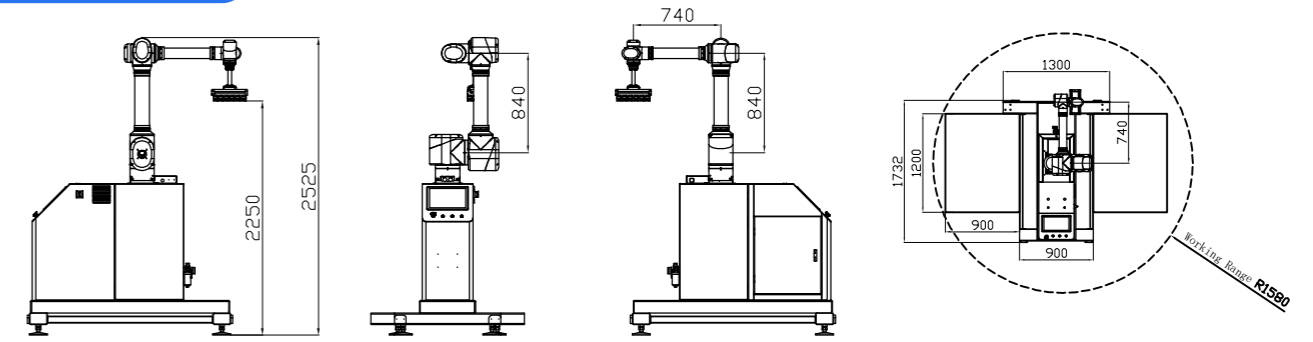
AWP-20L Dimensions (subject to actual objects)

Technical Parameters

Model	AWP-20L
Weight	About 600kg
Payload*	20kg
Suction cup weight	7kg
Maximum carton weight	13kg
Reach	1880mm
Maximum palletizing cycle	≤12cycle/min
Maximum palletizing height	≤2550mm (ceiling height requirement ≥3750mm)
Repeat positioning accuracy	±0.04mm
Pallet placement form	Manual, one left and one right
Maximum compatible pallet	1300mm*1200mm
Dimensions	L1732mm*W1200mm*H2590mm
Dimensions of wooden boxes	L2200mm*W1450mm*H2000mm
Maximum power	3.5KW
Reference gas consumption	240-460L/min
Power supply requirements	AC220V±10%, 50/60Hz±5%
Gas supply requirements	0.5~0.7Mpa
Communication method	EtherCAT, Modbus TCP(master/slave)
IP level	Robot arm IP53/Cabinet IP54
Ambient temperature	0-50°C
Noise	<80dB
Main color	Blue gray
The quantity of suction cup	2
Lifting height	Standard configuration includes a 600mm lifting column (Customized lifting column of 600-800mm are available)
Roller conveyor	Standard:1 roll conveyor with dimensions of L(1m)*W(0.5m)*H(0.6m), equipped with box sensor and start/stop control.
Recommended pallet specifications	1000mm*800mm; 1000mm*1000mm; 1100mm*1000mm; 1100mm*1100mm; 1200mm*800mm; 1200mm*1000mm; 1200mm*1100mm; 1200mm*1200mm; 1300mm*1100mm; 1300mm*1200mm

*Payload= Suction cup weight + Maximum carton weight

Product Dimensions



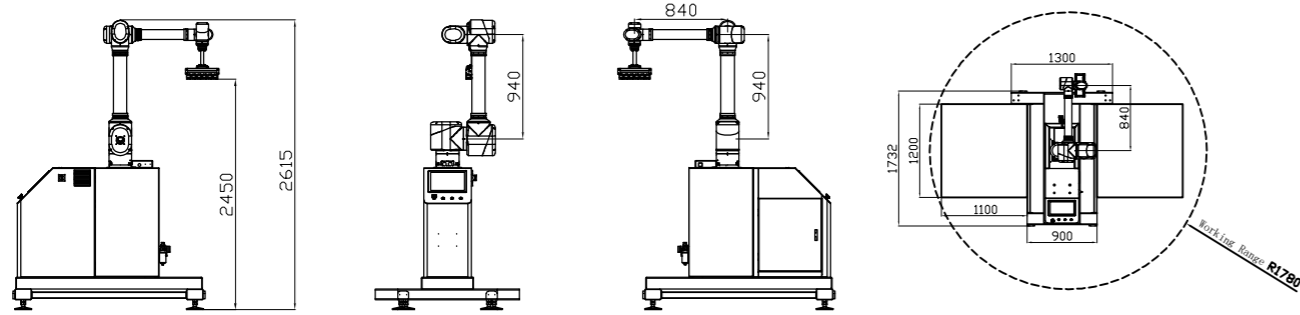
AWP-40S Dimensions (subject to actual objects)

Technical Parameters

Model	AWP-40S
Weight	About 650kg
Payload*	50kg
Suction cup weight	12kg
Maximum carton weight	38kg
Reach	1580mm
Maximum palletizing cycle	≤6cycle/min
Maximum palletizing height	≤2250mm (ceiling height requirement ≥3450mm)
Repeat positioning accuracy	±0.04mm
Pallet placement form	Manual, one left and one right
Maximum compatible pallet	1200mm*900mm
Dimensions	L1732mm*W1300mm*H2525mm
Dimensions of wooden boxes	L2250mm*W1450mm*H1900mm
Maximum power	3.5KW
Reference gas consumption	240-460L/min
Power supply requirements	AC220V±10%, 50/60Hz±5%
Gas supply requirements	0.5~0.7Mpa
Communication method	EtherCAT, Modbus TCP(master/slave)
IP level	Robot arm IP53/Cabinet IP54
Ambient temperature	0-50°C
Noise	<80dB
Main color	Blue gray
The quantity of suction cup	4
Lifting height	Standard configuration includes a 600mm lifting column (Customized lifting column of 600-800mm are available)
Roller conveyor	Standard:1 roll conveyor with dimensions of L(1m)*W(0.5m)*H(0.6m), equipped with box sensor and start/stop control.
Recommended pallet specifications	1000mm*800mm; 1000mm*1000mm; 1100mm*1000mm; 1100mm*1100mm; 1200mm*800mm

*Payload= Suction cup weight + Maximum carton weight

Product Dimensions



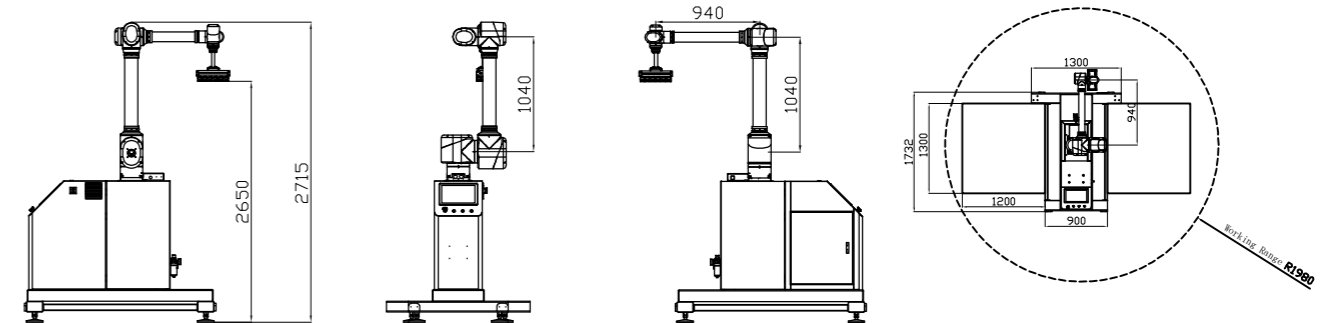
AWP-40 Dimensions (subject to actual objects)

Technical Parameters

Model	AWP-40
Weight	About 650kg
Payload*	45kg
Suction cup weight	12kg
Maximum carton weight	33kg
Reach	1780mm
Maximum palletizing cycle	≤6cycle/min
Maximum palletizing height	≤2450mm (ceiling height requirement ≥3650mm)
Repeat positioning accuracy	±0.04mm
Pallet placement form	Manual, one left and one right
Maximum compatible pallet	1200mm*1100mm
Dimensions	L1732mm*W1300mm*H2615mm
Dimensions of wooden boxes	L2250mm*W1450mm*H1900mm
Maximum power	3.5KW
Reference gas consumption	240-460L/min
Power supply requirements	AC220V±10%, 50/60Hz±5%
Gas supply requirements	0.5~0.7Mpa
Communication method	EtherCAT, Modbus TCP(master/slave)
IP level	Robot arm IP53/Cabinet IP54
Ambient temperature	0-50°C
Noise	<80dB
Main color	Blue gray
The quantity of suction cup	4
Lifting height	Standard configuration includes a 600mm lifting column (Customized lifting column of 600-800mm are available)
Roller conveyor	Standard:1 roll conveyor with dimensions of L(1m)*W(0.5m)*H(0.6m), equipped with box sensor and start/stop control.
Recommended pallet specifications	1000mm*800mm; 1000mm*1000mm; 1100mm*1000mm; 1100mm*1100mm; 1200mm*800mm; 1200mm*1000mm;1200mm*1100mm

*Payload= Suction cup weight + Maximum carton weight

Product Dimensions



AWP-40L Dimensions (subject to actual objects)

Technical Parameters

Model	AWP-40L
Weight	About 650kg
Payload*	40kg
Suction cup weight	10kg
Maximum carton weight	30kg
Reach	1980mm
Maximum palletizing cycle	≤6cycle/min
Maximum palletizing height	≤2650mm (ceiling height requirement ≥3850mm)
Repeat positioning accuracy	±0.04mm
Pallet placement form	Manual, one left and one right
Maximum compatible pallet	1300mm*1200mm
Dimensions	L1732mm*W1300mm*H2715mm
Dimensions of wooden boxes	L2250mm*W1450mm*H2000mm
Maximum power	3.5KW
Reference gas consumption	240-460L/min
Power supply requirements	AC220V±10%, 50/60Hz±5%
Gas supply requirements	0.5~0.7Mpa
Communication method	EtherCAT, Modbus TCP(master/slave)
IP level	Robot arm IP53/Cabinet IP54
Ambient temperature	0-50°C
Noise	<80dB
Main color	Blue gray
The quantity of suction cup	3
Lifting height	Standard configuration includes a 600mm lifting column (Customized lifting column of 600-800mm are available)
Roller conveyor	Standard:1 roll conveyor with dimensions of L(1m)*W(0.5m)*H(0.6m), equipped with box sensor and start/stop control.
Recommended pallet specifications	1000mm*800mm; 1000mm*1000mm; 1100mm*1000mm; 1100mm*1100mm; 1200mm*800mm; 1200mm*1000mm; 1200mm*1100mm; 1200mm*1200mm; 1300mm*1100mm; 1300mm*1200mm

*Payload= Suction cup weight + Maximum carton weight