

Messol-S

Embodied Intelligent Loading and Unloading Robot



Single-control Gripper
Capable of gripping cartons of any size



3D AI Vision
For visual recognition and positioning



Multi-piece Gripping
Maximizing operation efficiency



Flexible Conveyor Line
600-1200 cartons/hour



Case Studies & Structure



Well-known E-commerce Enterprise
Solves complex loading and unloading challenges for mixed-size carton scenarios



Single-control Gripper

Independent control for each suction cup, compatible with cartons of all sizes



Parameters

Performance Indicators		Messol-S
Basic Parameters	Overall Dimensions	L 1260 mm × W 1060 mm × H 2180 mm (L 49.61 in × W 41.73 in × H 85.83 in)
	Robot Arm Reach	2000 mm (78.74 in)
	Compatible Vehicles	20 ft / 40 ft shipping containers & trucks Max inner compartment height: 2.7 m (8.86 ft) Max inner compartment width: 2.47 m (8.10 ft)
	Machine Weight	900 kg (1984.16 lbs)
	Rated Payload	40 kg (88.18 lbs)
	Single Carton Dimension Range	100-700 mm (3.94–27.56 in)
	Gripping Tool Type	Vacuum suction cup
	Throughput Efficiency	800–1200 cartons / hour
	Driving Mode	Omni-directional travel
	Max Travel Speed	1.1 m/s (3.61 ft/s)
	Obstacle Surmounting	Cross 20 mm (0.79 in) steps, bridge 50 mm (1.97 in) gaps
	Gradeability	10° slope
	Rated Battery Voltage	48 V
	Battery Capacity	150 Ah
	Continuous Runtime	8 hours non-stop operation; Supports work while charging
Environmental Parameters	In-container Navigation Technology	SLAM
	Operating Temperature	-5 °C ~ +45 °C (23 °F ~ 113 °F)
	Ambient Humidity Limit	≤95% relative humidity
Safety Protection	Operating Noise	<75 dB
	Safety Fence	Included
	Safety Light Curtain + Safety Radar	Included
	Emergency Stop Pushbutton	Included



Applicable Cargo Types

Requirements	Cargo Details	Diagram
Category	carton boxes	
Carton Size Range	100-700 mm (3.94–27.56 in)	
Stacking Scenario	Mixed stacking of multiple SKUs	

