

Latent AMR

ALR-W2000 Series

Extreme Capacity. Omnidirectional Precision.

The ALR-W2000-2L2T is a heavy-duty latent lifting AMR engineered for high-mass industrial material handling. With a 2000 kg rated payload and true omnidirectional mobility, it delivers unmatched control when transporting large-format pallets and oversized industrial loads.

Designed for large-scale warehouses, manufacturing plants, and distribution hubs, the ALR-W2000 combines structural rigidity, precision motion control, and 360° safety awareness to enable safe, controlled automation of extreme payload workflows.



Heavy-Load Transport Optimization

Engineered specifically for high-weight pallet workflows, ensuring stable, repeatable material movement under sustained industrial duty cycles.

Advanced Safety Protection

360° laser scanning combined with rear obstacle detection ensures reliable human-robot interaction across dynamic factory floors.

Balanced Heavy-Duty Chassis Design

Rigid platform architecture maintains load stability and directional control during high-weight transport operations.

Applications



Large-Format Pallet Transport

Autonomous movement of oversized pallets and heavy industrial assemblies.



Distribution Hub Automation

High-capacity transfer across wide warehouse corridors and staging zones.



Heavy Manufacturing Material Flow

Transport of large mechanical components, molds, or bulk materials between production cells.



Omnidirectional Maneuvering in Constrained Heavy Zones

Sideways and diagonal movement allows precise alignment in tight loading bays.

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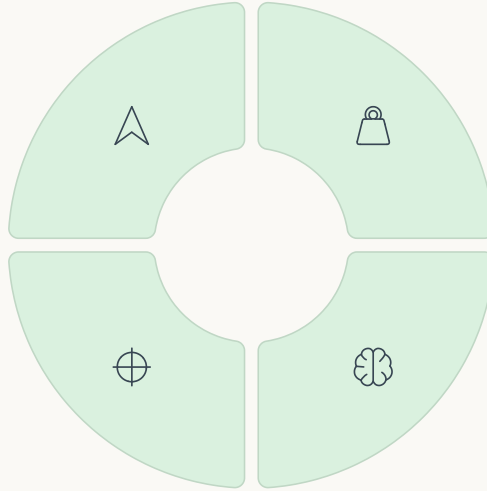
Features & Technical Specifications

True Omnidirectional Mobility

Quad differential drive enables forward, backward, lateral, and diagonal movement for unmatched positioning flexibility.

Extended Lifting Capability

100 mm lifting stroke supports large pallet engagement with controlled elevation under full load.



Reinforced Structural Platform

Large-format chassis with high rigidity ensures stable transport of 2000 kg payloads under dynamic motion.

Intelligent Hybrid Navigation

Laser SLAM, QR code, and texture-based positioning enable flexible deployment across structured and semi-structured facilities.

Technical Parameters

Product Model	ALR-W2000
Navigation Method	Laser SLAM / QR Code / Texture Hybrid
Dimensions (L×W×H)	1938 × 1179 × 305 mm Ground Clearance: 20 mm
Rotation Diameter	2215 mm
Lifting System	Motor-Driven latent lifting Lift Distance: 100 mm
Lifting plate size	1665 × 950 mm
Load Capacity	2000 kg rated
Drive Mode	Quad differential drive
Safety Features	360° laser scanner, marker lights, collision detection, sound and light alarms
Motion Performance	Max Speed : 1.2m/s(No load) 1.0m/s(Full load)
Moving Direction	Omnidirectional
Stop Position Accuracy	±10 mm ±1° Angle Accuracy
Battery Performance	Manual/Automatic + Manual Battery Replacement 8h runtime 2h fast charge 1500 Charge Cycles

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