# **Multiway Robotics**

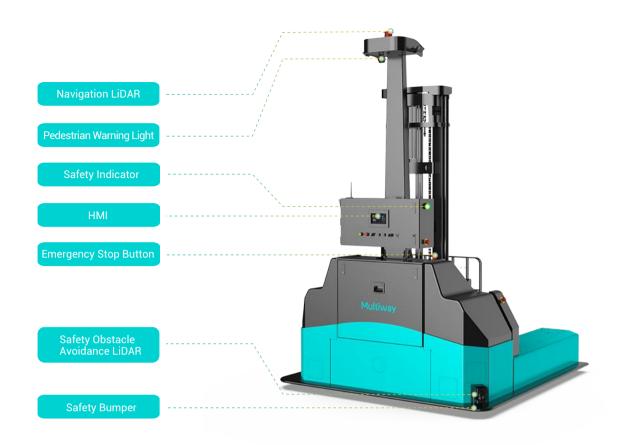
# Series

# Sideloader Unmanned Forklift Truck

015/020/030







# Introduction

Sideloader Forklift MW-O Series is widely used in ground handling and high-position loading/unloading in multiple scenarios, like high-density and VNA (Very Narrow Aisle)storage. Its biggest feature is that the fork extends from the side, and allows barrier-free operation in very narrow aisle, maximizing aisle space savings. With a load capacity of up to 3000 kg, a lifting height of up to 4500 mm, high precision of ±10mm, MW-O Series can ensure the safety and stability of high-position stacking and loading/unloading, greatly improves the storage capacity rate.

# **Features**



#### **Environment Adaptive**

With laser navigation and positioning, there's no need to renovate the on-site environment



#### **Dense Storage**

The narrowest roadway is only 2.3 meters



#### **Highly Intelligent**

A whole range of functions such as mapping, path planning, auto-charging, and intelligent operations for various scenarios.



#### **Intelligent Safety**

Comprehensive fault self-detection 360° obstacle avoidance and sound & light warning

# **Scenarios**



#### Long materials handling

Suitable for handling and stacking long volume materials such as metal, steel, pipe, wood, etc. Effectively avoid the problem of space occupation by using ordinary forklifts.



#### **Automatic (un)loading**

Compatible multiple models (wing door, flat door).

Compatible with multiple sizes of cargo (automatic allocation).



#### **Narrow roadway handling**

MW-O Series is widely used in ground handling and high-position loading/unloading in multiple scenarios, such as high-density and VNA (Very Narrow Aisle) storage.



#### Large tonnage material handling

Its biggest feature is that the fork extends from the side, and allows barrier-free operation in very narrow aisle, maximizing aisle space savings; With a load capacity of up to 3000 kg, a lifting height of up to 8000 mm, greatly improves the storage capacity rate.

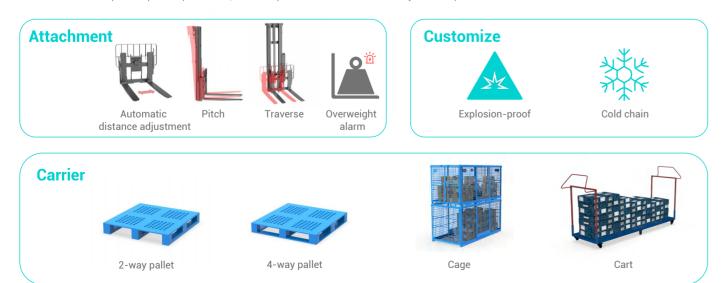
Multiway Robotics

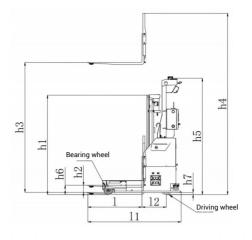
# O Series O15/020/030 Sideloader Unmanned Forklift Truck

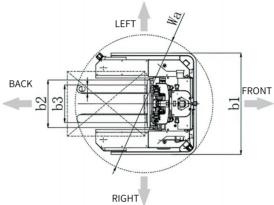
# **Specifications**

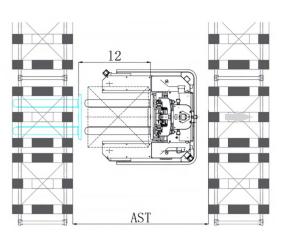
		015	020	030				
	Navigation	Laser/ Sky Navigation/ Mixed Navigation						
	Communication	Wi-Fi/ 5G/ Optical Communication						
	Driving Features	Forward, Reverse, and Turn						
	Control Mode	Auto/Manual						
	Rated Load Q (kg)	1500	2000	3000				
	Load Center C (mm)		500					
	Weight (Including battery) (kg)	2200~2400	2960~3160	4770~5120				
Basic Parameter	Turning Radius Wa (mm)	1075	1530	1650				
	Aisle Width (mm)	2300	2740	2830				
	Maximum Lifting Height (mm)	4500	5000	8000				
	Dimensions L×W×H (mm)	1850x1580x (2350~2980)	2380x2110x (2350~3444)	2470x2220x (2350~3562				
	Fork Dimensions lxexs (mm)	1220x122x40	1220x125x45	1220x150x50				
	Fork Outer Space b3 (mm)		600					
	Minimum Height of Fork From the Ground h6 (mm)	50±5	55±5	60±5				
	Positioning precision/ Stop Angle (Center of bearing wheel) (mm/°)		±10/±1					
	Obstacle Clearing Capability	≤10						
	Climbing Capacity	≤3° (5%)						
Movement	Cross-Groove Capability (mm)	≤30						
Specifications	Max Driving Speed (No Load/Full Load) (m/s)	1.38/1.5						
	Max Lifting Speed (No Load/Full Load) (mm/s) 140/		100/65	220/200				
	Max Descent Speed (No Load/Full Load) (mm/s)	95/	200/260					
	Mast Forward speed (No Load/Full Load) (mm/s)	90/90						
	Max Climb Capability (No Load/Full Load) (S2-5min) $\%$ (tan $\theta$ )		≤5° 120	/120				
Battery Specifications	Battery Voltage/Capacity (V/Ah)	24V/200AH	24V/200AH	48V/300AH				
	Charging Mode		Auto/Manual					
	Run time	6~8h						
	Battery Life	Complete charge-discharge 2500 times ≥70%						

Note: In the real-time update of product parameters, the above parameters are for reference only and shall prevail.







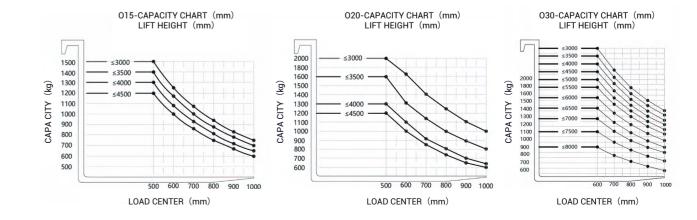


Aisle Width										
Model		015	020	O30						
1000↑x1000mm Pallet										
1000↑x1200mm Pallet	AST (mm)	2300	2740	2830						
1200 ↑ x1200mm Pallet										

# **Mast Specification**

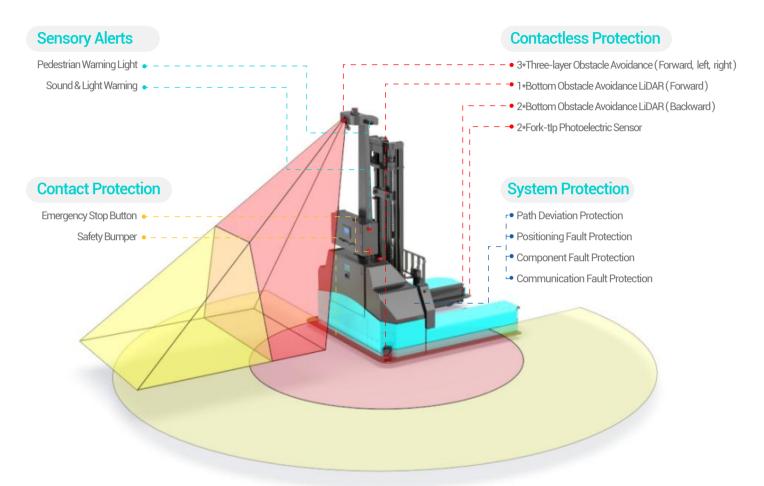
Duplex Mast														
Model		015/020						O30						
Lifting height	h3 (mm)	2500	3000	3300	3500	3700	4000	4500	3000	3300	3500	3700	4000	4500
Mast closure height	h1 (mm)	1980	2230	2380	2480	2580	2730	2980	2750	2900	3000	3100	3250	3500
Mast height when lifting	h4 (mm)	3427	3927	4227	4427	4627	4927	5427	4200	4050	4550	4900	5200	5700
Free lifting height	h2 (mm)							0						

#### **Load curve**



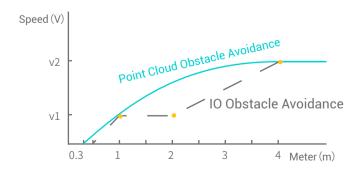
# Comprehensive safety protection:

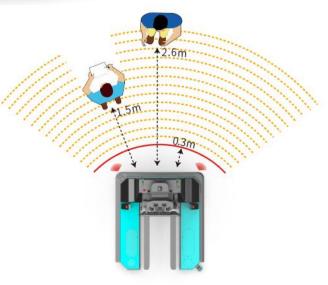
Sound perception + obstacle avoidance + touch reception, 360° omnidirectional three-layer protection



#### **Point Cloud Obstacle Avoidance:**

The forward simulation algorithm can measure the distance to obstacles, autonomously plan the moving speed, ensure the vehicle accelerates and decelerates smoothly without sudden changes in speed.





# **Multiway Robotics**

Multiway Robotics, a leading intelligent intralogistics solution provider, with the mission of "Establish a new and efficient employment mode", is dedicated to drive continuous upgrades in social productive forces.

Global headquarter and laboratory are located in Shenzhen, China, with production facilities in Hefei. Multiway has also established sub sidiaries in the United States, Germany, Japan, South Korea, and more, extending business, operations, and services to 30+ countries and regions worldwide. Focusing on advanced robotics and AI technology, Multiway Robotics is committed to delivering cutting-edge intelligent manufacturing and smart logistics solutions to our customers. Multiway offers a comprehensive, integrated innovation delivery platform and solutions, ranging from core sensors and algorithms to self-developed unmanned forklifts and upper-level control systems. Hardware products include a full range of unmanned forklifts and four-way shuttle, while software systems encompass Multiway Cloud, WMS, RCS, WCS, on-site management systems, and various visual solutions.

After successfully delivering numerous benchmark projects in industries such as factories, warehousing, and logistics, Multiway has become a trusted and ongoing collaborative partner for many industry-leading customers.



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