



Intelligent Forklift AGV Series Product Manual

Intelligent Forklift AGV Series Models DF-B/D/P/Q

Product Overview

Dasun's range of intelligent forklift AGV's includes pallet handling, stacking, counterbalance and reach type AGV's which provide comprehensive and reliable logistics product handling solutions for customers in many fields such as e-commerce, manufacturing and warehousing.

Features

- AGV's utilise visual navigation (VSLAM) and laser navigation technology.
They are fitted with multiple safety measures including laser safety sensor, ultrasonic obstacle avoidance and collision avoidance as well as other safety measures.
Intelligent BMS power management system. Set multi-level battery thresholds. 24 hours uninterrupted operation.
Uses wireless local area network to ensure AGV achieves fast and seamless roaming.
- The AC controller provides stepless speed regulation and reverse braking function.
Advanced vertical AC drive system provides more powerful and efficient operation with better acceleration.
The forklift is strong and sturdy. The front end of the fork is made of high strength, impact resistant cast steel and is difficult to deform.
- The controller is equipped with protection functions including, overvoltage, overcurrent, undervoltage, high temperature, short circuit as well as other protection functions.
A floating bracket is installed in the centre of the drive system to ensure stable operation of the vehicle. The forklift body remains stable and does not tilt when turning.
Masts are equipped with a lifting limit function as standard. When the fork is raised to the top, the system automatically cuts off the power supply and stops smoothly.
- As standard, the system is equipped with an advanced, electronic power steering system.
The AC controller provides the system with unparalleled flexibility and accurate speed control.
Equipped with a pressurized oil cylinder, high speed output with low energy consumption is achieved and slipping under heavy loads is prevented.
- AC motors require fewer components providing durability with low maintenance.
The controller is equipped with a self-diagnostics function. After connecting with the controller, the handheld unit can display the fault code which assists in quickly and accurately troubleshooting the fault.
The battery is easily replaced using the battery pull device which is fitted as standard.

Advantages

1. Highly accurate positioning

Dasun utilizes visual / laser navigation technology to achieve accurate, real time positioning.

2. High reliability

Strong product performance and accurate operational control ensure maximum efficiency at all times. Product handling and transportation operations are more accurate.

3. Competitive pricing

AGV's are appointed with advanced technology but are priced lower than similar products in the marketplace helping customers minimize costs.

4. Low maintenance costs

Dasun series forklifts use high quality components which are durable and efficient. The components require less maintenance and provide reliability for the lifespan of the vehicle.

5. Easy to use

Precise movement of the vehicle can be easily achieved without the need for additional auxiliary positioning equipment in the factory. Deployment is simple and operation is easy.

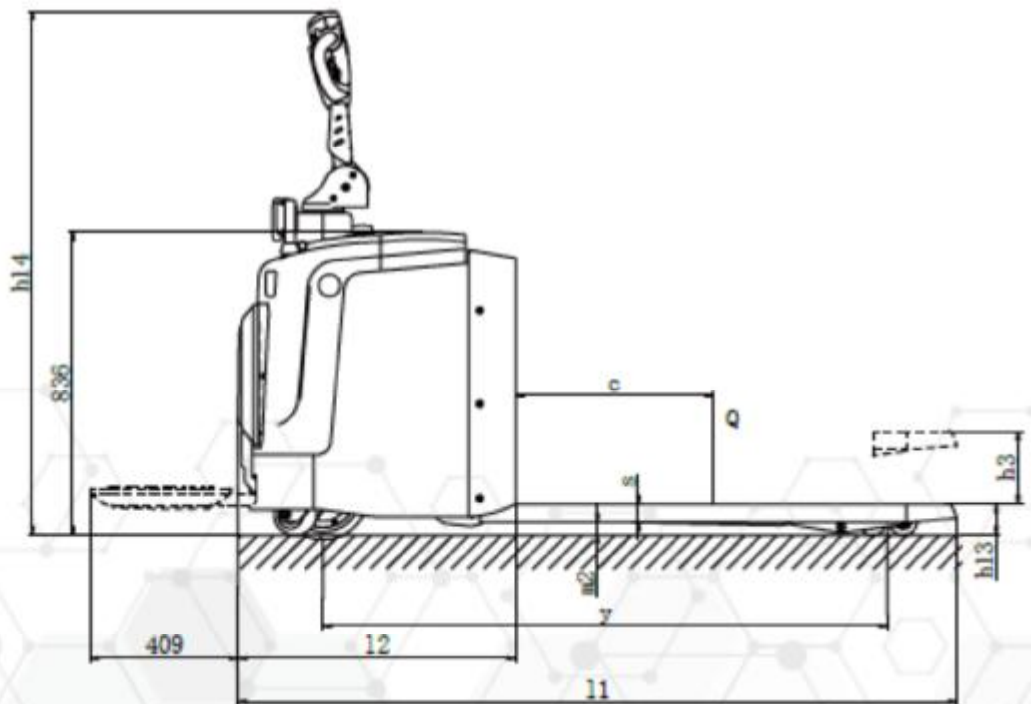
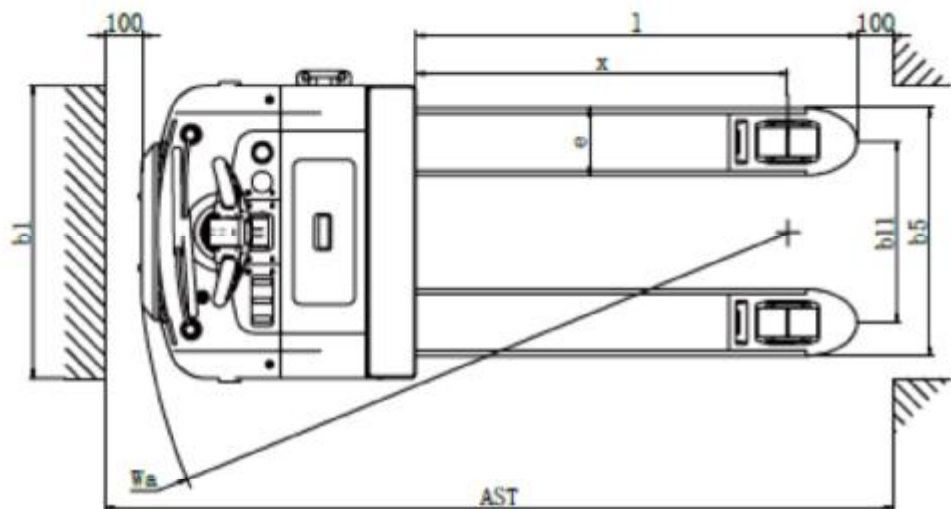
Electric Handling Type Forklift

Introduction:

The intelligent DFB series forklift utilises visual and laser navigation and provides single level handling ability for moving pallets. The high level computer system can provide multi-vehicle scheduling, seamlessly connectivity with the MES management system or WMS warehouse management system and display the running state of AGV in real time. It can be used in existing factories, warehouses, distribution centres and other sites to provide rapid transportation of goods.



Intelligent Forklift AGV | DFB Series



- b10: Track width of drive-end;
- b11: Track width of bearer end ;
- h13: Lowered fork height;
- l1: overall width ;
- l2: Length to fork height;
- b1: Overall length;
- S/e/t: Fork dimensions;
- b5: Width of forks;
- h1: Height of mast, lowered;
- h2: Free Lift;
- h3: Lift;
- h4: Height of mast, extended;
- y: Wheel base;

Technical Specifications

Model		DF2000B	DF2500B	DF3000B
Rated load capacity	kg	2000	2500	3000
Fork length	mm	1150/1220	1150/1220	1150/1220
Minimum height of fork	mm	85	85	85
Maximum height of fork	mm	200	200	200
Total height	mm	1450	1450	1450
Total length (pedal down)	mm	1925 (2320)	1925 (2320)	1925 (2320)
Total width	mm	808	808	808
Weight including battery	kg	810	830	850
Tire type		PU	PU	PU
Safety protection		Laser, ultrasonic, anti-collision edge	Laser, ultrasonic, anti-collision edge	Laser, ultrasonic, anti-collision edge
Rated running speed	m/s	1	1	1
Guide positioning precision	mm	±5	±5	±5
Stop positioning precision	mm	±5	±5	±5
Driving direction		Forward/Reverse	Forward/Reverse	Forward/Reverse
Rotation ability		360° rotation	360° rotation	360° rotation
Lifting pump power	kW	24V/0.8	24V/1.5	24V/1.5
Drive motor power	kW	24V/1.5	24V/2.0	24V/2.5
Battery capacity	Ah	200Ah/24V	200Ah/24V	200Ah/24V

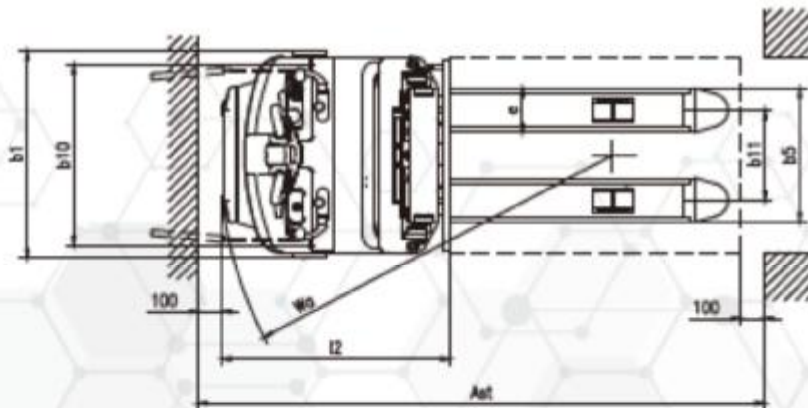
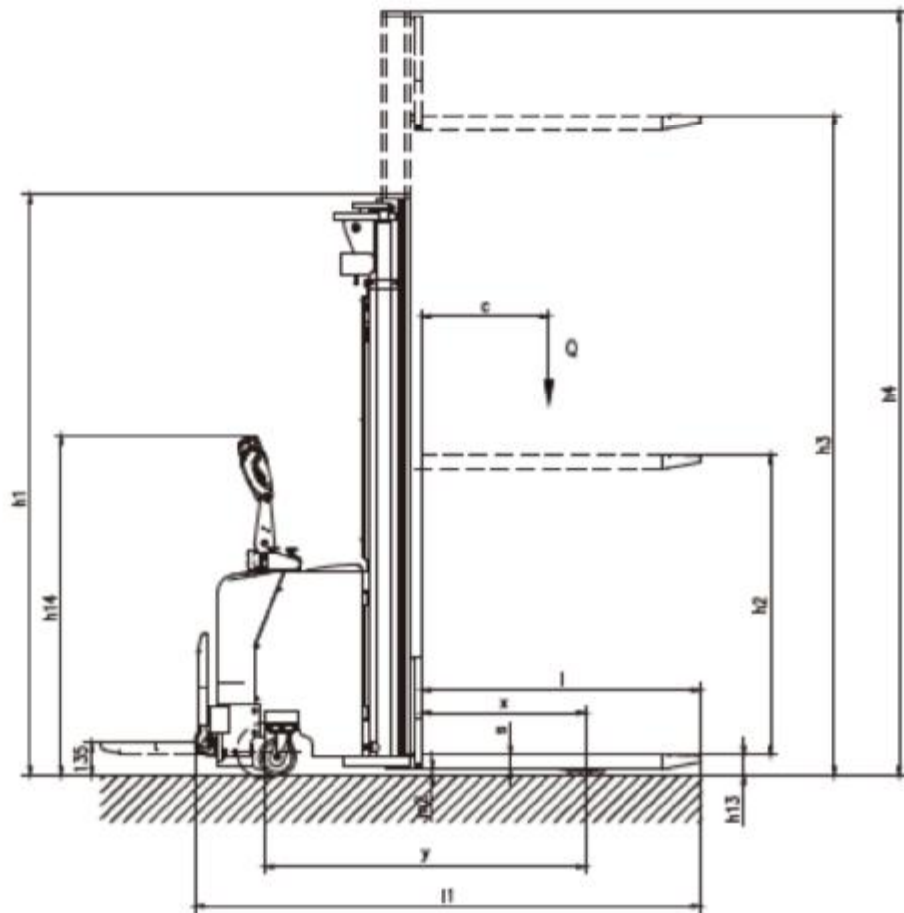
Electric Stacking Type Forklift

Introduction:

The intelligent DFD series forklift utilises visual and laser navigation and can complete efficient and orderly operation of pallet movement. The maximum stacking height can reach up to 5 meters providing three dimensional storage of pallets and meet the functional requirements of automation upgrades to existing warehouses to maximize warehouse utilization.



Intelligent Forklift AGV | DFD Series



- b10:Track width of drive-end;
- b11:Track width of bearer end ;
- h13:Lowered fork height;
- I1:overall width ;
- I2:Length to fork height;
- b1:Overall length;
- S,e,t:Fork dimensions;
- b5:Width of forks;
- h1:Height of mast,lowered;
- h2: Free Lift;
- h3:Lift;
- h4:Height of mast,extended;
- y:Wheel base;

Technical Specifications

Model		DF1500D	DF2000D
Rated load capacity	kg	1500	2000
Fork length	mm	1150	1150
Minimum height of fork	mm	86	86
Maximum lifting height	mm	5000	5000
Total length	mm	2085	2085
Total width	mm	850	850
Minimum height of mast	mm	2420	2420
Maximum height of mast	mm	6102	6102
Weight including battery	kg	1532	1680
Tire type		PU	PU
Safety protection		Laser, ultrasonic, anti-collision edge	Laser, ultrasonic, anti-collision edge
Rated running speed	m/s	1	1
Guide positioning precision	mm	±5	±5
Stop positioning precision	mm	±5	±5
Driving direction		Forward / Reverse	Forward / Reverse
Rotation ability		360° rotation	360° rotation
Turning radius	mm	1620	1620
Lifting pump power	kW	3.0	5.0
Drive motor power	kW	1.5	2.5
Battery capacity	Ah	200Ah/24V	200Ah/24V

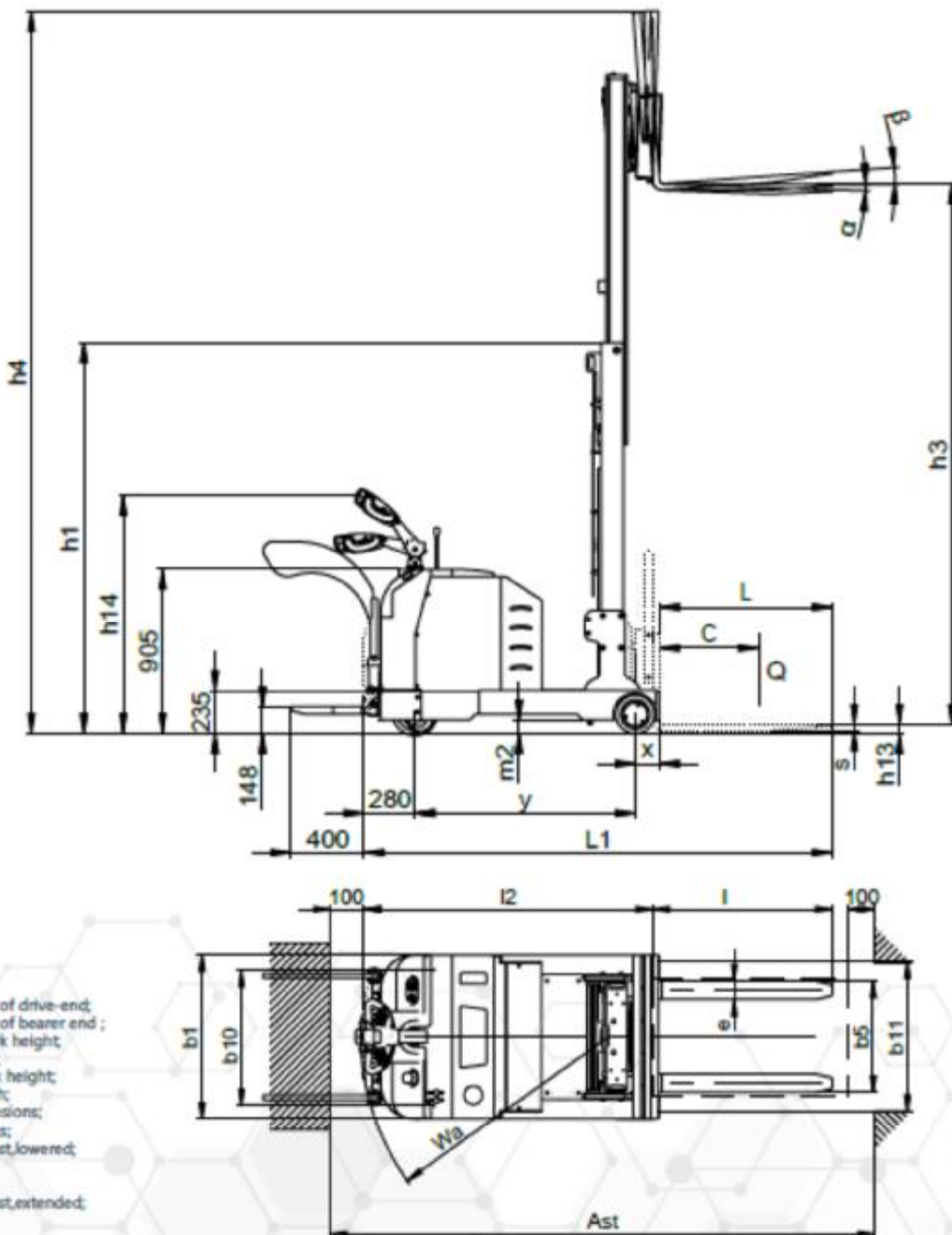
Counterbalance Type Forklift

Introduction

The intelligent DFP series forklift utilises visual and laser navigation. It is counter balanced to provide high stability and requires no additional supports under the fork. The maximum lifting height can reach up to 3 meters and is ideally suited for interfacing with all kinds of conveying lines and equipment to achieve maximum work efficiency.



Intelligent Forklift AGV | DFP Series



- b10:Track width of drive-end;
- b11:Track width of bearer end;
- h13:Lowered fork height;
- I1:overall width ;
- I2:Length to fork height;
- b1:Overall length;
- S/e/f:Fork dimensions;
- b5:Width of forks;
- h1:Height of mast,lowered;
- h2: Free Lift;
- h3:Lift;
- h4:Height of mast,extended;
- y:Wheel base;

Technical Specifications

Model	DF1200P	
Rated load capacity	kg	1200
Rated load capacity at the highest point	kg	1000
Fork length	mm	950
Minimum height of fork	mm	50
Maximum lifting height	mm	3000
Total length	mm	2085 (2485)
Total width	mm	850
Minimum height of mast	mm	2420
Maximum height of mast	mm	6102
Weight including battery	kg	1640
Tire type	PU	
Safety protection	Laser, ultrasonic, anti-collision edge	
Rated running speed	m/s	1
Guide positioning precision	mm	±5
Stop positioning precision	mm	±5
Driving direction	Forward / Reverse	
Rotation ability	360° rotation	
Turning radius	mm	1620
Lifting pump power	kW	3.0
Drive motor power	kW	1.5
Battery capacity	Ah	200Ah/24V

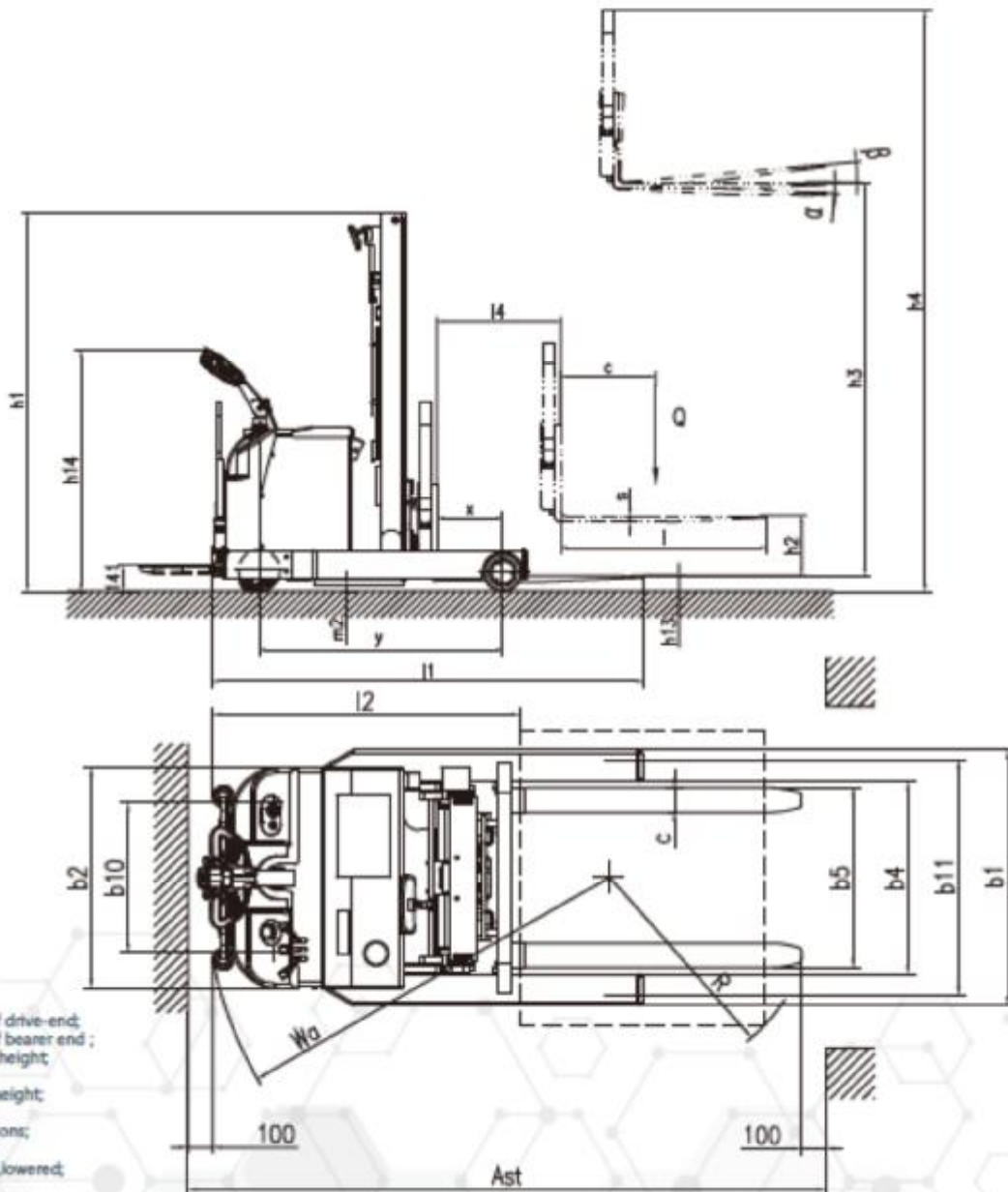
Reach Type Forklift

Introduction:

The intelligent DFQ series forklift utilises visual and laser navigation. It is counter balanced to provide high stability and requires no additional supports under the fork. The maximum lifting height can reach up to 4.5 meters. The forks have the ability move forward to pick up the goods and is stable and reliable. It can achieve the special working requirements of picking up goods from various types of machines and conveyor lines.



Intelligent Forklift AGV | DFQ Series



- b10:Track width of drive-end;
- b11:Track width of bearer end ;
- h13:Lowered fork height;
- l1:overall width ;
- l2:Length to fork height;
- l1:Overall length;
- S/e/y:Fork dimensions;
- b5:Width of forks;
- h1:Height of mast,lowered;
- h2: Free Lift;
- h3:Lift;
- h4:Height of mast,extended;
- y:Wheel base;

Technical Specifications

Model		DF500Q	DF1000Q	DF1300Q
Rated load capacity	kg	1500	1500	1500
Rated load capacity at the highest point	kg	500	1000	1300
Fork length	mm	950 (1150)	950 (1150)	950 (1150)
Minimum height of fork	mm	50	50	50
Maximum lifting height	mm	1600	3000	4500
Mast tilt angle		3° forward 5° backward	3° forward 5° backward	3° forward 5° backward
Total width	mm	1042	1042	1042
Minimum height of mast	mm	2095	2121	2155
Maximum height of mast	mm	2535	4040	5512
Weight including battery	kg	1745	1840	2110
Tire type		PU	PU	PU
Safety protection		Laser, ultrasonic, anti-collision edge	Laser, ultrasonic, anti-collision edge	Laser, ultrasonic, anti-collision edge
Rated running speed	m/s	1	1	1
Guide positioning precision	mm	±5	±5	±5
Stop positioning precision	mm	±5	±5	±5
Driving direction		Forward / Reverse	Forward / Reverse	Forward / Reverse
Rotation ability		360° rotation	360° rotation	360° rotation
Turning radius	mm	1670	1670	1670
Lifting pump power	kW	3.0	3.0	3.0
Drive motor power	kW	1.5	1.5	1.5
Battery capacity	Ah	270Ah/24V	270Ah/24V	270Ah/24V

ABOUT DAMON



DAMON

Zhejiang Damon Technology Co., Ltd (hereinafter referred to as Damon) is one of the leading intelligent logistics system solutions and key equipment providers in China and is dedicated to the research and development of advanced technology in intelligent logistics conveying and sorting. Based on an innovation history of 20 years, Damon has five business sectors: Intelligent AGV's, conveyors, sorters, high density storage and components. Headquartered in Huzhou, Zhejiang province, Damon now has almost 1,000 employees and operates in many countries and regions around the world. Damon has manufacturing bases and R&D test centres in Zhejiang, Shanghai, Australia, Europe as well as other counties around the globe. Damon has established a modern logistics technology research institute and collaborate with Germany, the Netherlands and Japan as well as other senior research institutions and universities and well-known logistics equipment companies to establish a strategic partnership of technological innovation, research and development.

Zhejiang Dasun Intelligent Technology Co., Ltd (hereinafter referred to as Dasun) was founded in 2015 and is a subsidiary of Zhejiang Damon Technology Co., Ltd. Until now, we have been focusing on the research and development, design and manufacture of intelligent AGV products. Dasun provides intelligent AGV products with different functions to suit many industries such as forklift type, piggyback type, submerged pull type, tail pull type, lifting type, omnidirectional type and heavy-duty platform type. Dasun has grown to be one of the most widely used mobile robot suppliers in China. The intelligent AGV's use visual recognition, laser, two-dimensional code recognition, inertial navigation, magnetic and other navigation technologies. The carrying capacity ranges from 50kg to 9000kg which meets the needs of various forms of intelligent flexible transportation in industrial and commercial fields. Various types of products and overall solutions have been applied in many top 500 companies around the world covering automotive, consumer electronics, electrical, power, special equipment and other industries.



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