MiMA®
Min Space,Max Performance

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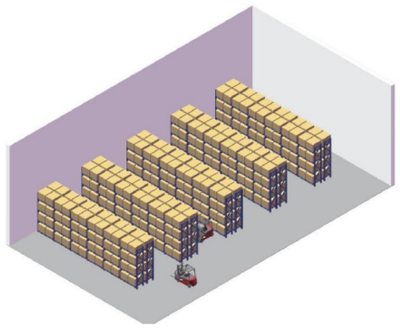
3-WAY PALLET STACKER

SEATED TYPE

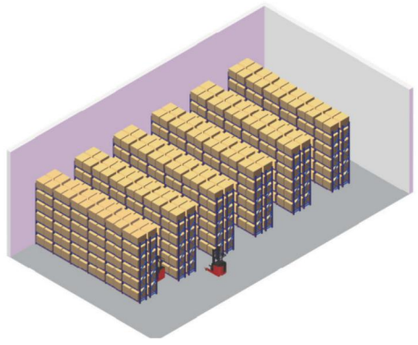
MCA16

Super-high storage capacity, Super-narrow aisle



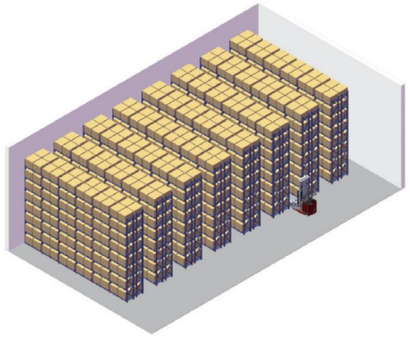
Counterbalance Forklift

- counterbalance forklift
- less pallet space
- large rack width(about 4M)
- low rack height(about 5M)
- high cost per pallet position



Reach Truck

- reach truck
- compared with counterbalance forklift
- 80% increase in the number of pallet positions
- rack height increased by 40%(about 7.5M)
- aisle width reduced by 25%(about 3M)
- 40% reduction in the cost of a single pallet with the same storage area



VNA 3-way Pallet Stacker

- VNA 3-way pallet stacker
- compared with counterbalance forklift
- 200% increase in the number of pallet positions
- rack height increased by 100%(up to 12M)
- 55% reduction in aisle width(down to 1.6M)
- 60% reduction in the cost of a single pallet with the same storage area

SEATED TYPE 3-WAY PALLET STACKER MCA16

Model: MCA16

Rated Capacity: 1600kg

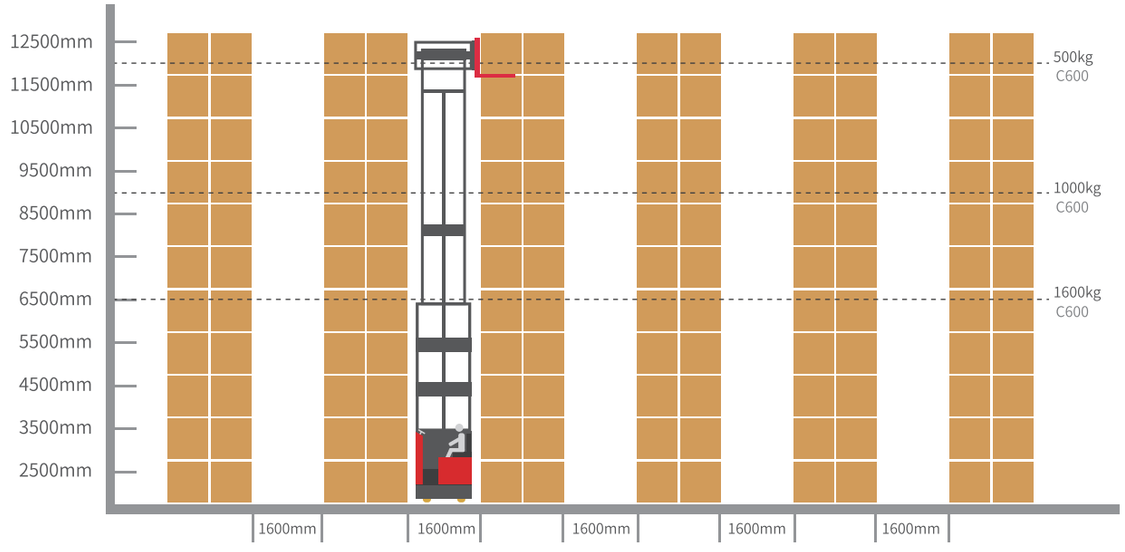
Max. Lifting Height: 12000mm

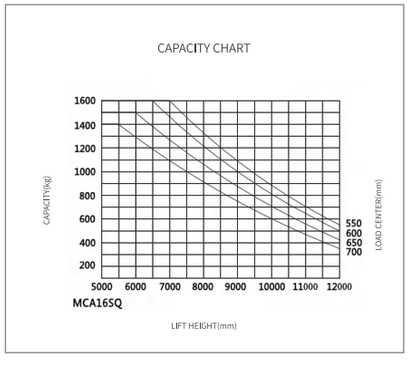
Min. Stacking Aisle: 1600mm

Driving Mode: seated type

Pallet Type:

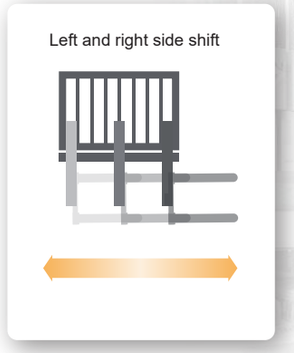
C=1/2*L
L: pallet length
C: load center

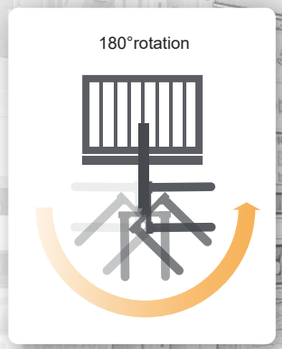


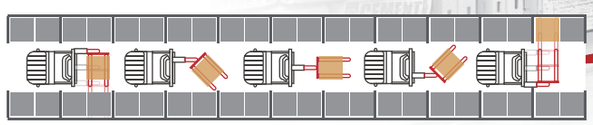


Fork left and right side shift + 180°rotation

The fork has left and right side shift and 180% rotation functionIn the roadway, the goods on the left and right racks can be pickedand placed by the rotation and lateral movement of the fork, and theforklift does not need to turn, which greatly reduces the stacking aisleand improves the storage capacity of the warehouse.

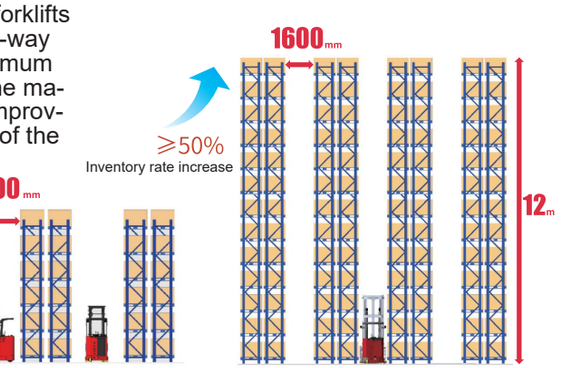


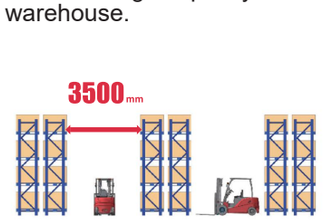




Min. Stacking aisle 1.6M Max. Lifting height 12M

Compared with traditional counterbalance forklifts and reach forklifts, MiMA seated type three-way pallet stacker significantly reduces the minimum stacking aisle distance to only 1600mm. The maximum lifting reaches 12m, which greatly improves the storage capacity and utilization rate of the warehouse.

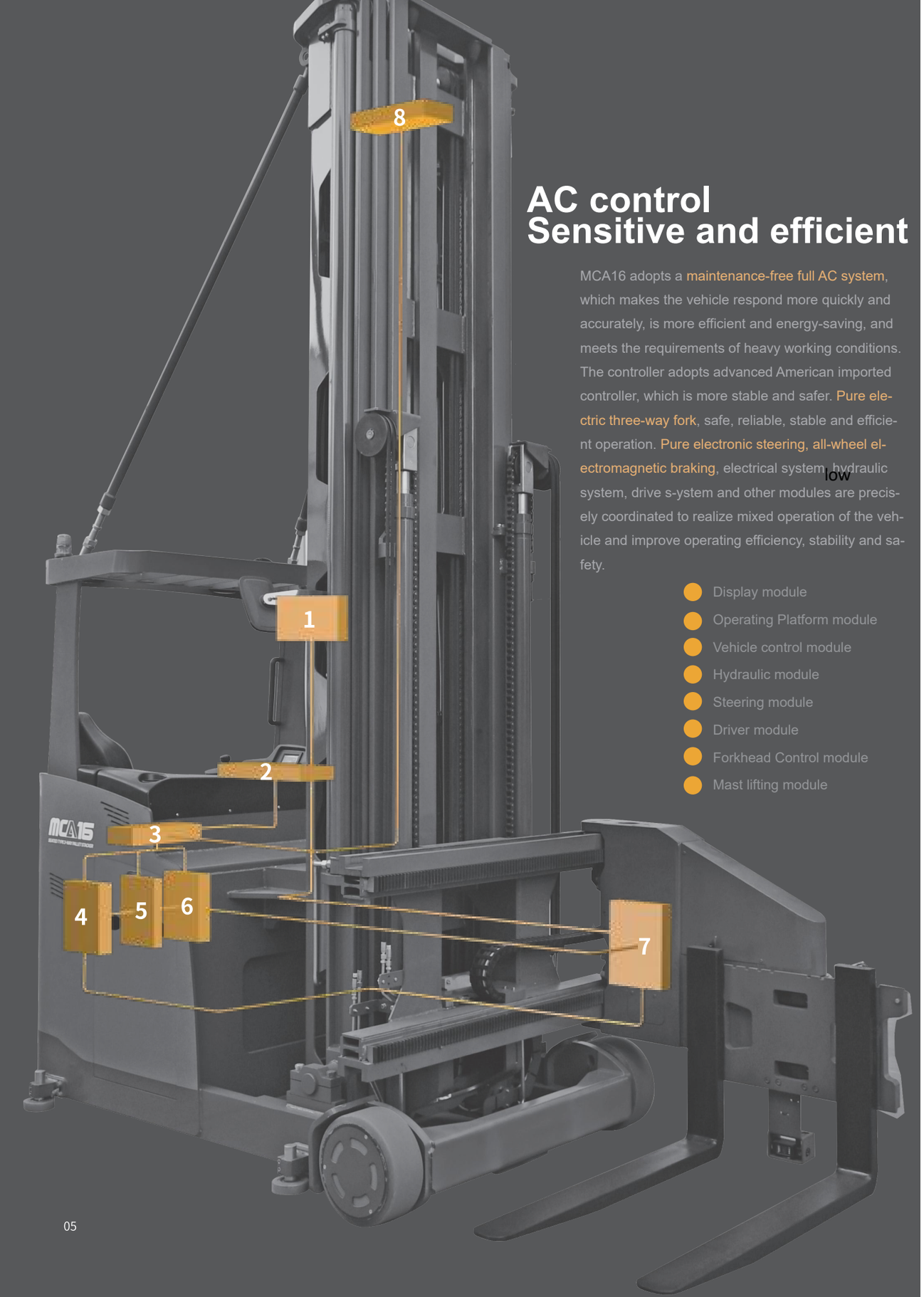




Counterbalance Forklift

Reach Truck

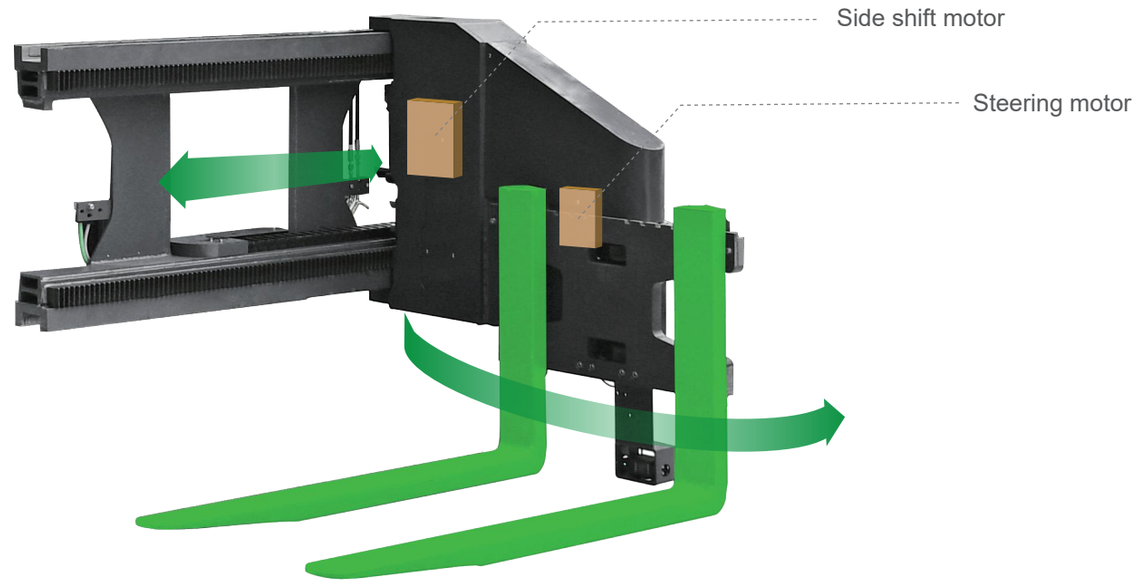
Seated 3-way Pallet Stacker



AC control Sensitive and efficient

MCA16 adopts a maintenance-free full AC system, which makes the vehicle respond more quickly and accurately, is more efficient and energy-saving, and meets the requirements of heavy working conditions. The controller adopts advanced American imported controller, which is more stable and safer. Pure electric three-way fork, safe, reliable, stable and efficient operation. Pure electronic steering, all-wheel electromagnetic braking, electrical system, hydraulic system, drive s-ystem and other modules are precisely coordinated to realize mixed operation of the vehicle and improve operating efficiency, stability and safety.

- Display module
- Operating Platform module
- Vehicle control module
- Hydraulic module
- Steering module
- Driver module
- Forkhead Control module
- Mast lifting module



Electric fork

Compared with the traditional hydraulic drive fork head, the electric fork head has the following advantages: reduce energy consumption, improve vehicle endurance, reduce system heat, and improve vehicle reliability; motor-driven fork head structure, no need for oil pipes, motor maintenance-free, no Hydraulic oil and other media that pollute the environment have a high degree of cleanliness; the design uses a low-noise geared motor without noise pollution; improves the controllability and precision of rotation and side shifting, improves the stability of fork rotation and side shifting, and reduces the time for stacking goods. The amo-unt of shaking of the mast can be improv-ed to improve the performance of the whole vehicle. The bridge frame of the electric fork head is designed to be narrower, and the safety distance of the aisle is larger.

Low energy consumption

Compared with the hydraulic fork head, the energy consumption is reduced by about 80%, and the energy consumption of the whole vehicle is reduced by 20%.

More stable

Improve the stability of the fork and reduce shaking

Low noise

Low noise geared motor

Pollution-free

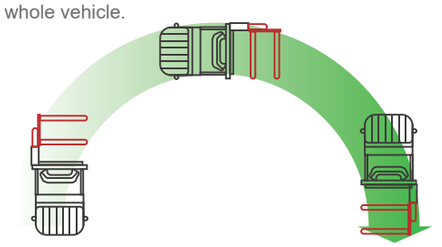
No oil pipe required, motor maintenance-free

All-wheel electromagnetic brake

All-wheel electromagnetic brake, equipped with front wheel & rear wheel brake, compared with ordinary brake, has shorter braking distance, better braking effect, and safer operation for the operator.

Pure electronic steering system

The pure electronic steering system has lower energy consumption and high control precision, which can reduce the energy consumption of the whole vehicle, make the control more precise and efficient, and ensure the performance of the whole vehicle.



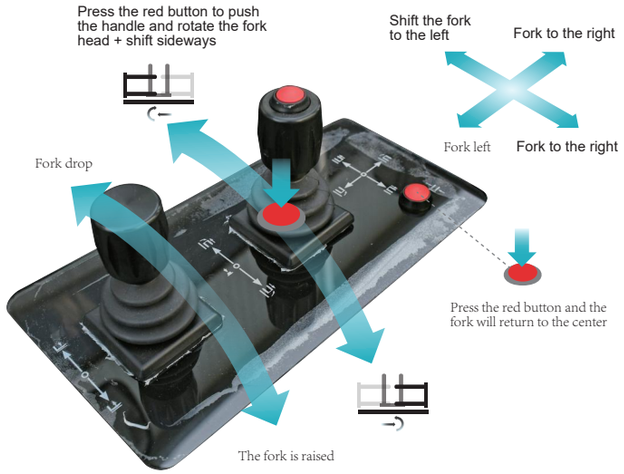
Easy and efficient operation

The operation of the operator mainly depends on the hands, eyes and feet. Reasonable ergonomic design, comfortable and convenient, MCA16 can improve work efficiency and reduce fatigue. The electric proportional handle controls the movement of the cargo fork, which is accurate and sensitive, simple and fast operation. The steering wheel controls the steering of the vehicle, and the full AC maintenance-free electronic system makes the response faster. All-wheels electromagnetic braking, the braking distance is shorter and safer.

The field of view is also an important factor in the efficiency of the operationMCA16 unique narrow mast and open slide mast design, no matter in the driving or at the high loading and unloading of goods, have a good vision, the vehicle is also equipped with cargo fork video system and wheel display function, convenient operator observation, improve work efficiency.

1 Operating handle

Handle operation, efficient and fast, easy to operate
Function easy to operate, improve work efficiency



2 Steering control handle

3 Driving and braking

All-wheel electromagnetic braking, equipped with front wheel and rear wheel braking, better braking effect, safer operation

Comfort and safety improve efficiency

With the MCA16, the operator is sure to experience the operating comfort and efficiency of the cab. Suspension seat, the seat can be the whole forward or backward and the backr-est can be adjusted, which improve the operator comfort and reduce the operation fatigue strength. When step on the foot switch, the vehicle will drive. The design ensure the safety of the vehicle and the driver. The vehicle is also equipped with a fork video system to provide a good view when working high. The combination of warning lights and rear view mirrors is convenient to display the position of the forklift truck, observe the surrounding working conditions， and provide more vehicle position information for the operator to ensure safety and efficiency.

Warning light group

Warning light group indicates the vehicle position to ensure safety

Rear view mirror assembly

Convenient observation of vehicle conditions to ensure safety and improve efficiency

Suspension seat

The seat can be adjusted forward and backward, and the backrest can be adjusted to improve operator comfort and reduce fatigue

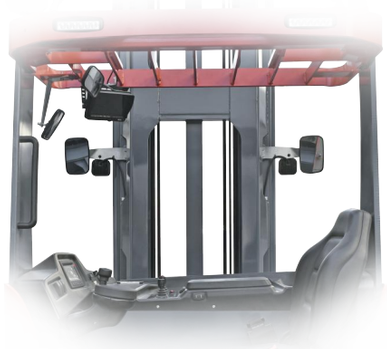
Foot switch

Ensure the safety of the vehicle, step on the foot switch, to drive the vehicle

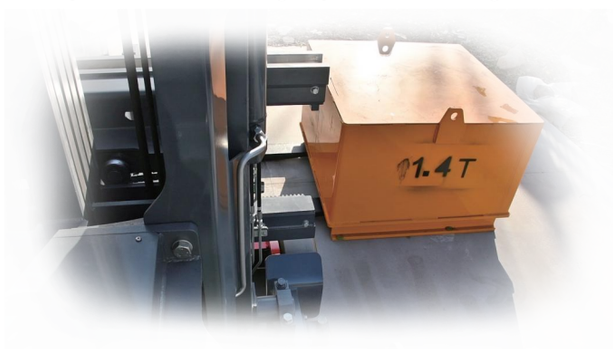
Superior vision and precise positioning

Narrow door frame design and open slide frame design ensure that the driver still has a good vision when operating at high level, convenient to observe the fork and cargo position, improve safety and efficiency.

Narrow frame design Superior vision



Open slide frame High operation field is good



Fork video system

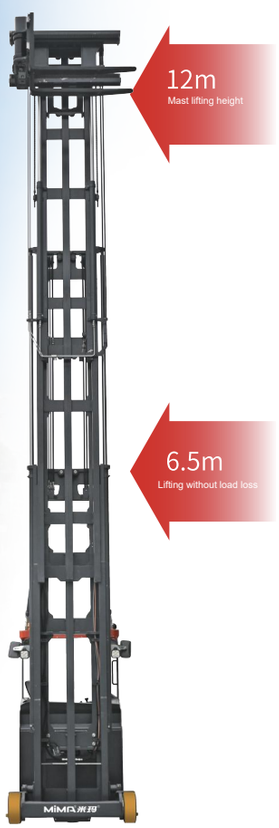
The fork video system ensures that the three-way forklift truck still has a good vision and maneuverability when working at the high level. The high-definition camera is installed at the root of the fork, and the cross laser is positioned accurately. The driver can clearly observe the position of the cargo through the high-definition display, improving efficiency and safety.

Driving wheel display

Equipped with driving wheel Angle display function, display driving wheel Angle, easier to operate.

High load-bearing capacity that has been rigorously tested.

The production efficiency and stability of a three-way forklift are inseparable because stable operation enhances the operator's confidence and sense of safety, improving operational efficiency. The MCA16 uses a high-strength mast and has good stability and minimal tilting even at a high level. MiMA manufactured and tested MCA16 according to the strictest standards to demonstrate that the MCA16's maximum load-bearing capacity at high position, The MCA 16 can lift up to 6.5 meters without losing load and can still maintain excellent stability and load-bearing capacity at its maximum height of 12 meters."



Mechanical Guide Rail Mode

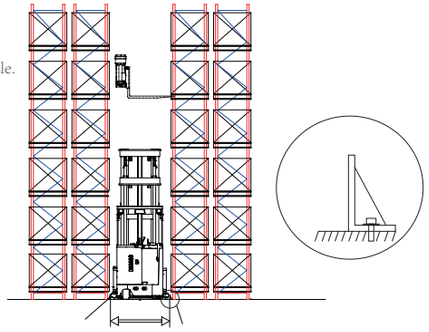
Install crossbeams at the bottom of the shelves and guide rails on the ground inside the aisle. Vehicles can travel efficiently and safely along the track in the aisle.

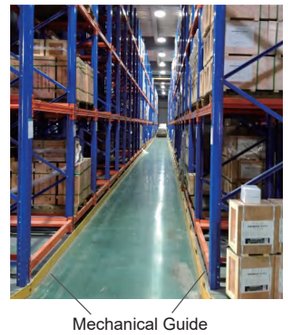
- **Mechanical guide rail roadway mode**

  There is no need to operate the steering wheel inside the aisle. The lifting and moving can be operated synchronously, which improves work efficiency.

- **Low rail guidance mode (optional)**

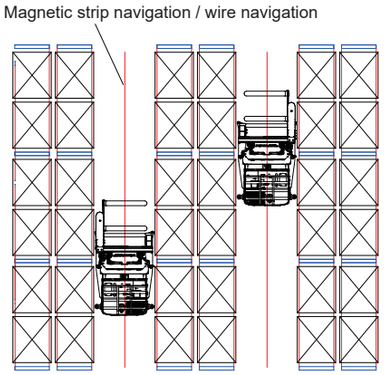
  The rail height is 50mm/40mm. The bottom goods can be directly placed on the ground without adding crossbeams.

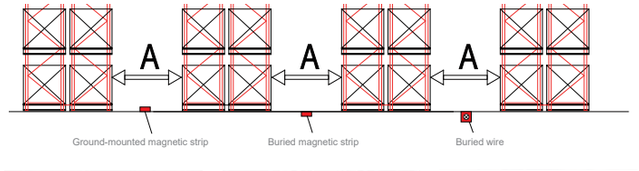




Magnetic navigation mode (optional)

Saving the bottom crossbeams, goods can be directly placed on the ground without installing ground guide rails, which reduces warehouse construction costs.





Ground-mounted magnetic strip

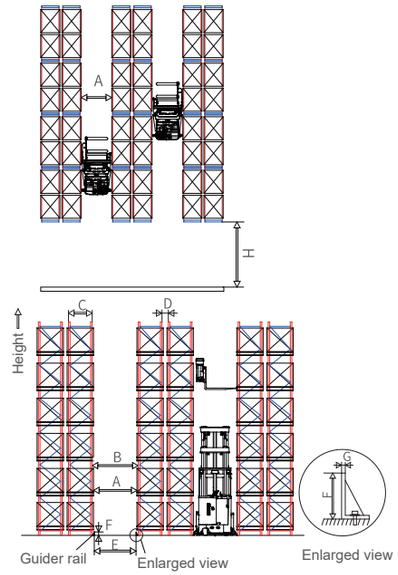
Buried magnetic strip

Buried wire

Dimension Sheet

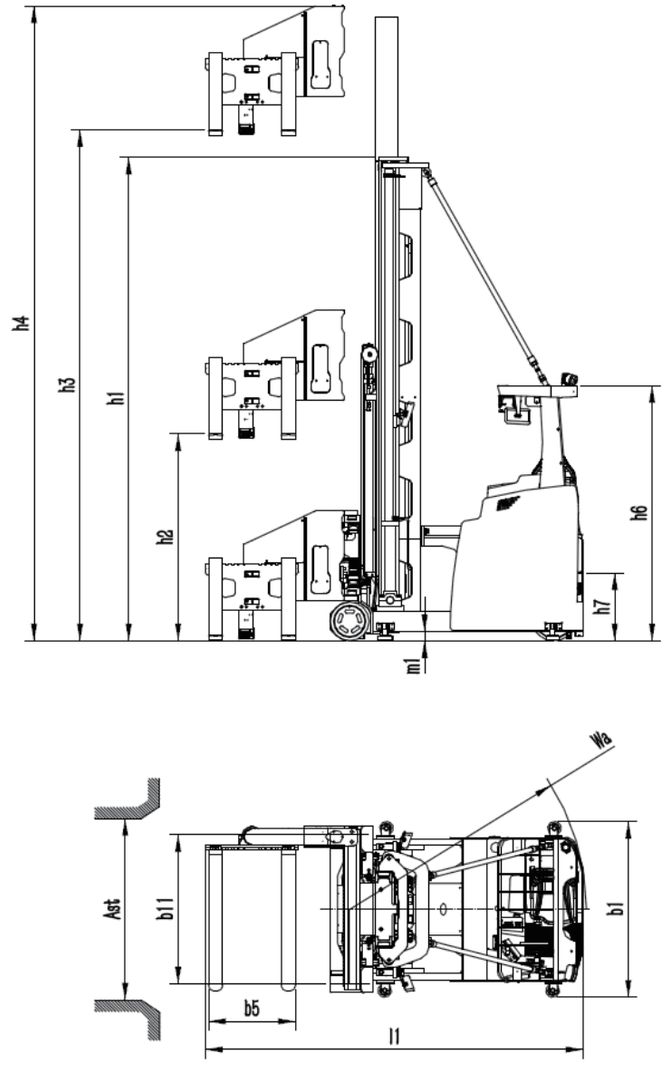
Mode	MCA16		
Pallet Size	1000×1000 1000×1200	1100×1100	1200×1200 1000×1200
Load Center	C500	C550	C600
Fork Length	1000	1100	1200
A Net width of aisle /goods to goods	1600/1650(1)		
B The beam spacing between the rack	1800/1850(1)		
C Net deeps of rack	800	900	1000
D Rack spacing	⩾300		
H Main aisle width	4300/4800(1)		
E Inner side of the rail	1580^{+5}_{0}		
F Rail height	⩾100		
G Rail thickness	⩾10		

Remarks: (1) Tail mark is the net aisle size of the rack in magnetic navigation mode.



Standard			
1.1	Manufacturer		MiMA
1.2	Model		MCA16SQ
1.3	Power Type		Battery
1.4	Driving Style		Seated
1.5	Rated Load	Q(kg)	1600
1.6	Load Center	C(mm)	600
1.7	Front Overhang	x(mm)	860
1.8	Wheelbase	y(mm)	1800
Weight			
2.1	Service Weight(incl.battery)	kg	6000
Wheel			
3.1	Wheel Type		PU
3.2	Load Wheel Size	mm	ϕ343×150
3.3	Drive Wheel Size	mm	ϕ400×160
3.4	Number of wheel,front/rear(x=drive wheel)		2 / 1X
3.5	Wheel tread, Load side	b11(mm)	1315
Size			
4.1	Mast Closed Height	h1(mm)	2765
4.2	Free Lift Height	h2(mm)	1670
4.3	LIFT Height	h3(mm)	4500
4.4	Mast Extened Height with Load Backrest	h4(mm)	5650
4.5	Overhead Guard Height	h6(mm)	2250
4.6	Stand on Height	h7(mm)	600
4.7	Overall Length	l1(mm)	3330
4.8	Overall Width	b1(mm)	1575[1]
4.9	Fork Size	l/e/s(mm)	1200/125/50
4.10	Installation Level		II B
4.11	Fork Outside Width	b5(mm)	265~765
4.12	Min. ground Clearance	m1(mm)	80
4.13	Aisle Width for pallet 1200x1200mm	Ast(mm)	1600[2]
4.14	Turning Radius	Wa(mm)	2080
4.15	Main Aisle Width for pallet 1200x1200mm	mm	⩾(3900+400)[3]
Function			
5.1	Driving Speed (Load/Unload)	km/h	8/8
5.2	Lifting Speed(Load/Unloaded)	mm/s	300/300
5.3	Lowering Speed(Load/Unloaded)	mm/s	340/340
5.4	Max. gradeability(Unload)		8%
5.5	Driving Brake Method		Regenerative brake/Hydraulic brake
5.6	Parking Brake Method		Electromagnetic brake
Drive			
6.1	Driving Motor Power(S2-60min)	kw	8 AC
6.2	Lifting Motor Power(S3-15%)	kw	15 AC
6.3	Lead Acid Battery, voltage/capacity	V/Ah	48/600[4]
6.4	Battery Weight	kg	945
6.5	Steering System		Electric power steering
Other			
7.1	Battery Replacement Method		Side pull

The standard vehicle parameters may vary depending on the configuration, and changes will not be notified separately.
[1]: The overall width of the vehicle without guide wheels is 1470mm;
[2]: The stacker aisle width is 1650mm for models with optional magnetic navigation function;
[3]: The main aisle width for models with mechanical guide rails requires a safety margin of +400mm, while models with magnetic guide rails require a safety margin of +900mm;
[4]: The maximum optional capacity of the lead-acid battery is 48V880AH, and optional lithium battery specifications include 48V460Ah and 48V/600Ah.



Mast Specification (Free Triplex Mast)

Model	MCA	16SQ-45	16SQ-50	16SQ-55	16SQ-60	16SQ-65	16SQ-70	16SQ-75	16SQ-80	16SQ-85	16SQ-90	16SQ-95	16SQ-100	16SQ-105	16SQ-110	16SQ-115	16SQ-120
Lift Height	h3(mm)	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	9500	10000	10500	11000	11500	12000
Mast extended height with load-backrest	h4(mm)	5650	6150	6650	7150	7650	8150	8650	9150	9650	10150	10650	11150	11650	12150	12650	13150
Mast Closed Height	h1(mm)	2765	2935	3100	3265	3435	3600	3765	3935	4100	4265	4435	4600	4765	4935	5100	5265
Free Lift Height	h2(mm)	1670	1830	2000	2170	2330	2500	2670	2830	3000	3170	3330	3500	3670	3830	4000	4170