

# MFZ16/20

## ELECTRIC REACH TRUCK(SEATED)

**MiMA**<sup>®</sup>  
Min Space, Max Performance

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The final interpretation right belongs to banyitong science&technology developing co.,ltd



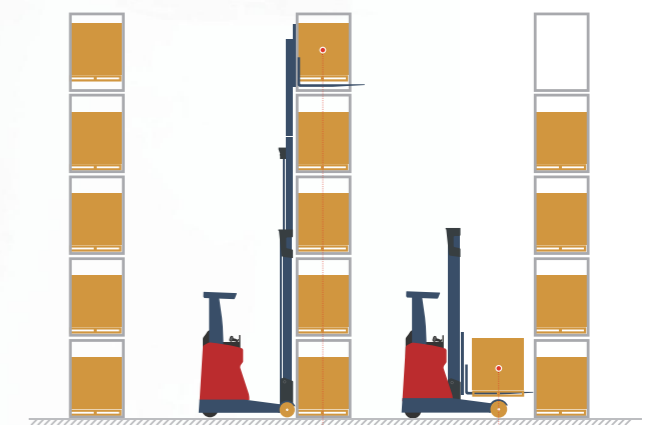
Max.lifting height  
12500mm

## ELECTRIC REACH TRUCK (SEATED)

MFZ16 / MFZ20

MiMA has launched a new type of reach truck – MFZ16/20 series model, after careful design and improvement. This model has the traditional advantages of a reach truck such as high load, high lifting, and narrow aisle, and has made great improvements in efficiency and vision. Compared with the existing models on the market, it has achieved obvious advantages, especially driving speed, lifting speed, lowering speed and mast stability. Using this model can improve the efficiency and utilization of your warehouse.

Model	MFZ16	MFZ20
Load Capacity	1600kgs	2000kgs
Max.Lifting Height	10500mm	12500mm
Driving Type	Seated	Seated



When loading and unloading goods, the mast rises and moves forward, and the center of gravity of the goods falls outside the body of the vehicle.

When transporting and walking, the mast is retracted and lowered, and the center of gravity of the cargo falls on the body of the vehicle.

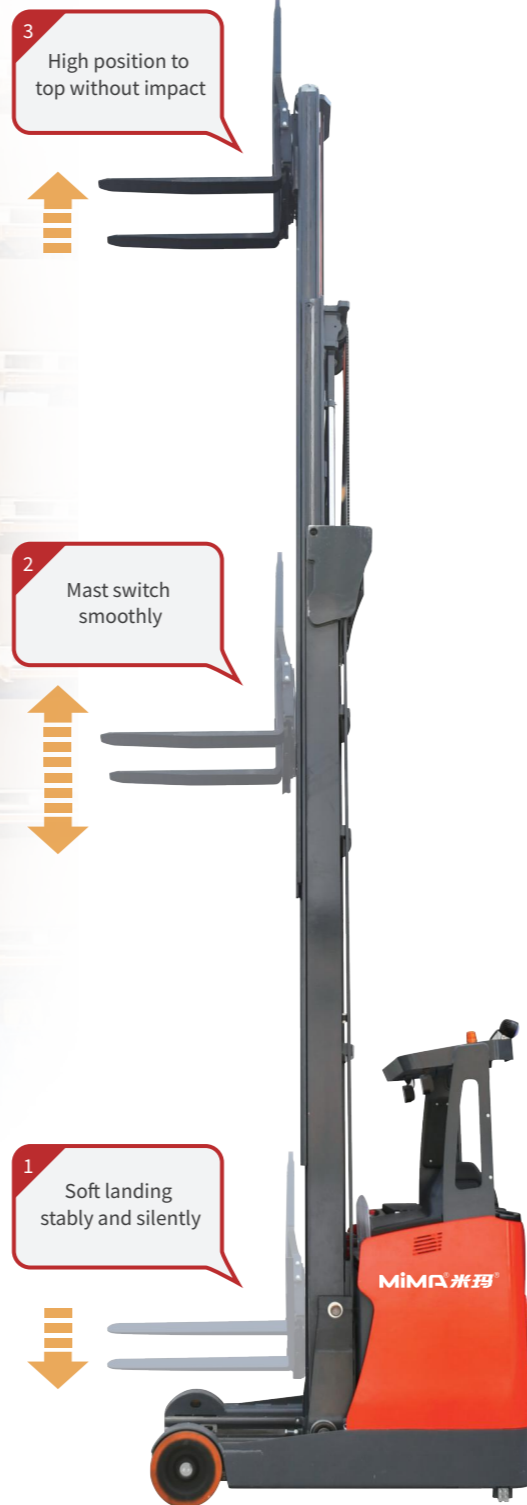


## Narrower Aisle, Higher Lift

MiMA's new MFZ model has a 60mm-90mm stacking aisle reduction compared with the old model. Compared with well-known forklift brands at home and abroad, it is in the first echelon in terms of stacking aisle and has a greater competitive advantage. The weight without loss of load and high load are at the highest level compared with well-known domestic manufacturers.

### High Capacity Mast

High-precision mast has no loss of load below 6300mm and excellent performance on-highloads

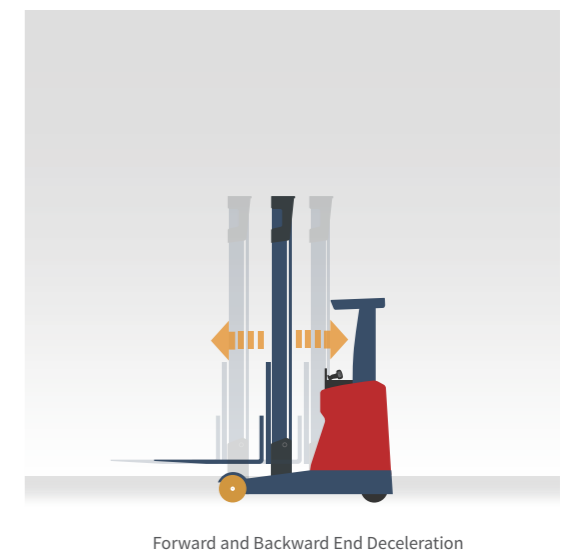


## Mast Buffer System, More Stable Operation

Productivity goes hand in hand with forklift stability because operational stability enhances the operator's confidence and sense of security, allowing him to operate faster. MiMA's new MFZ seated reach truck has a stable design of the mast buffer system, which greatly reduces the shaking of the mast at high positions. Compared with the same model, it has achieved greater benefits. The high sway of the old model is about 100-150mm, and the new model is about 40mm or less. Shaking time is reduced by 50%-80%.

At the same time, this model also has a more stable design. For example, when the middle mast is lifted, the forward and backward movement speed of the mast, the driving speed, and the acceleration and deceleration rate are reduced, and the acceleration and deceleration are softer and more stable; movement deceleration at the ends of moving forward and backward, etc., ensure the smoothness and precision of operation control, and further improve the operator's confidence and work efficiency.

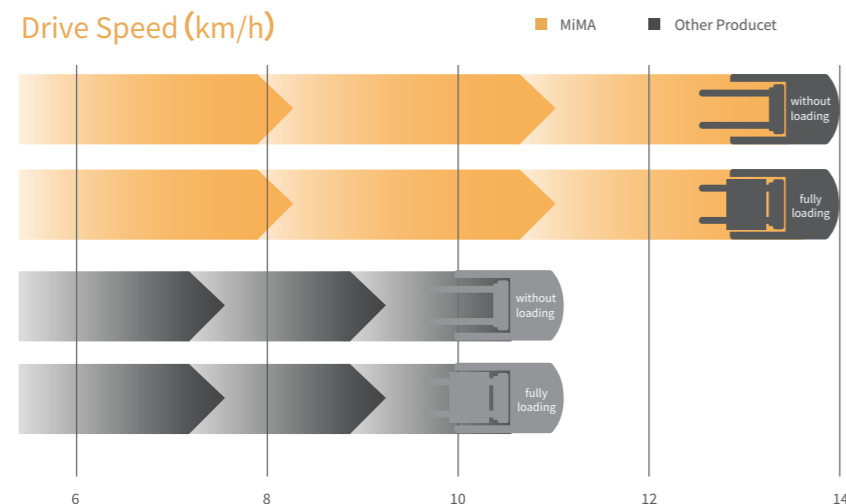
Shake Distance Reduced 60%~70%  
Shake Time Reduced 50%~80%



# Faster More efficient

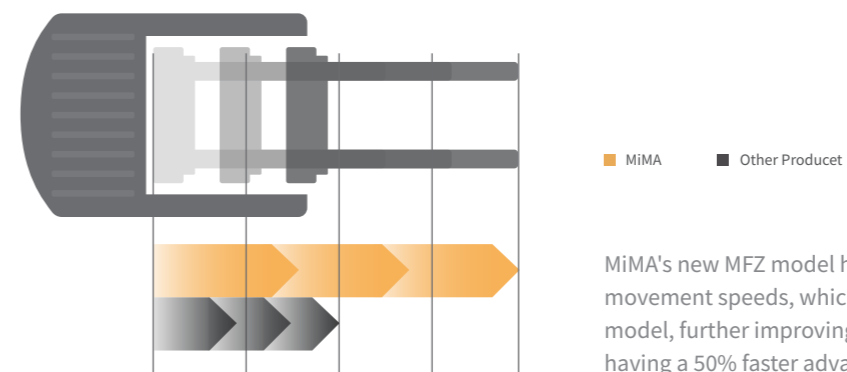
MiMA's new MFZ model has obvious speed advantage, and its lifting speed, descending speed and forward and backward moving speed are all the best in China at present. The lift motor is increased to 14KW, and the drive motor is increased to 8KW. Every operation of the operator has been improved and the production efficiency has been improved.

## Drive Speed (km/h)



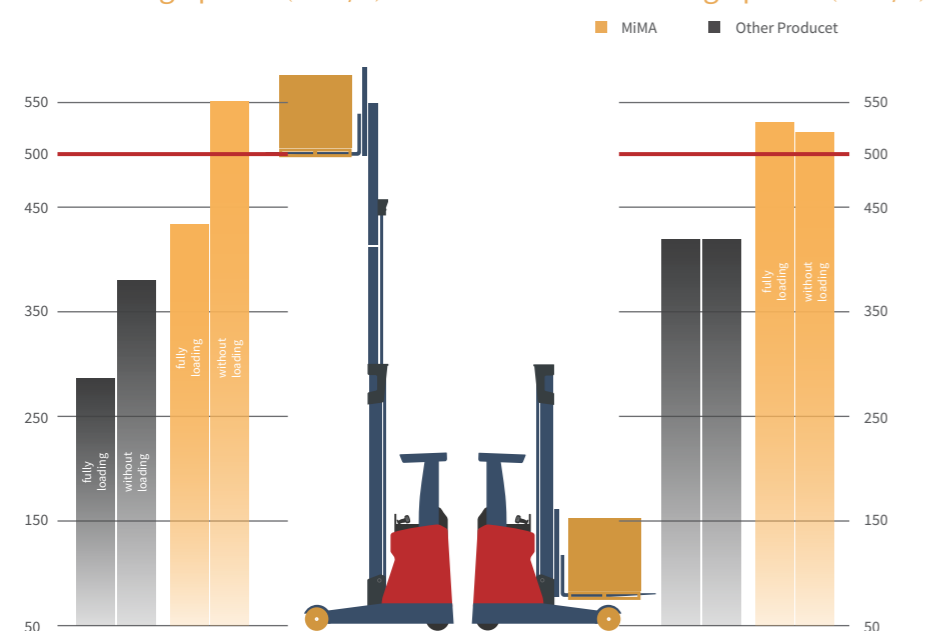
The productivity advantage of MiMA's new MFZ model comes first and foremost from the faster driving speed, which can work faster. The driving speed is up to 14km/h, which is 30% faster than other products' speed of 11 km/h.

## Forward and Backward Speed (mm/s)

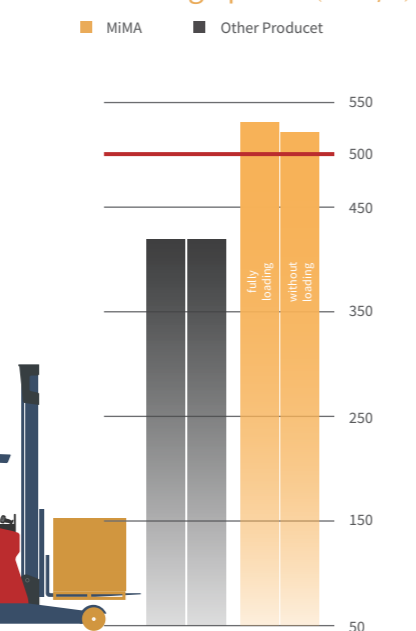


MiMA's new MFZ model has faster forward and backward movement speeds, which is another strength of the MFZ model, further improving production efficiency and having a 50% faster advantage than other models.

## Mast Lifting Speed (mm/s)



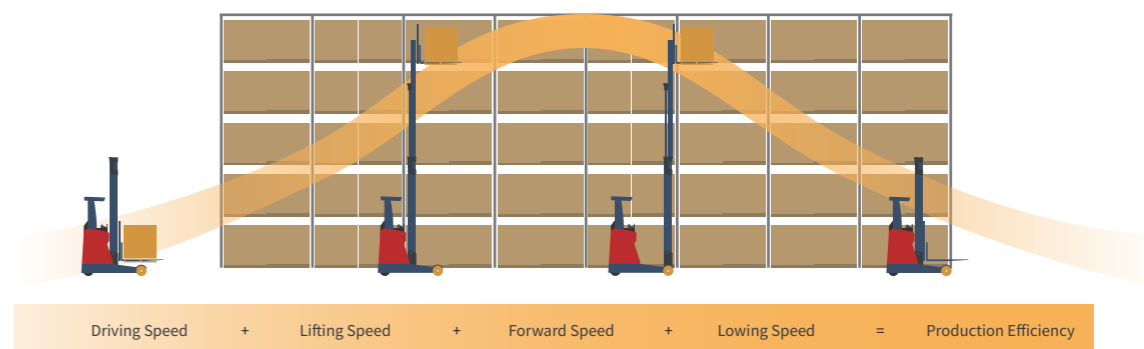
## Mast Lowering Speed (mm/s)



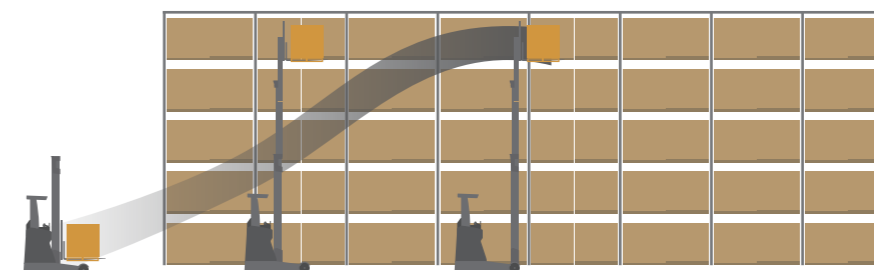
When fully loaded, the lifting speed of the mast is 15% faster than other models, and the descending speed is 20% faster.

## Advantages of Productivity

MiMA



Other Product



MiMA's new MFZ model is dedicated to improving the operation and efficiency of tasks, providing the safest and most efficient mode of operation, so at the end of each day, MFZ can always complete more tasks.

## Narrow mast design Vision optimization

Visual field is another important factor that affects the operation efficiency, because a good visual field can provide operators with sufficient confidence and make their operation more convenient and fast. The new MFZ model is designed with a narrow mast, which has a good lateral view and middle view, which is convenient for operators to observe the cargo status and improve efficiency.

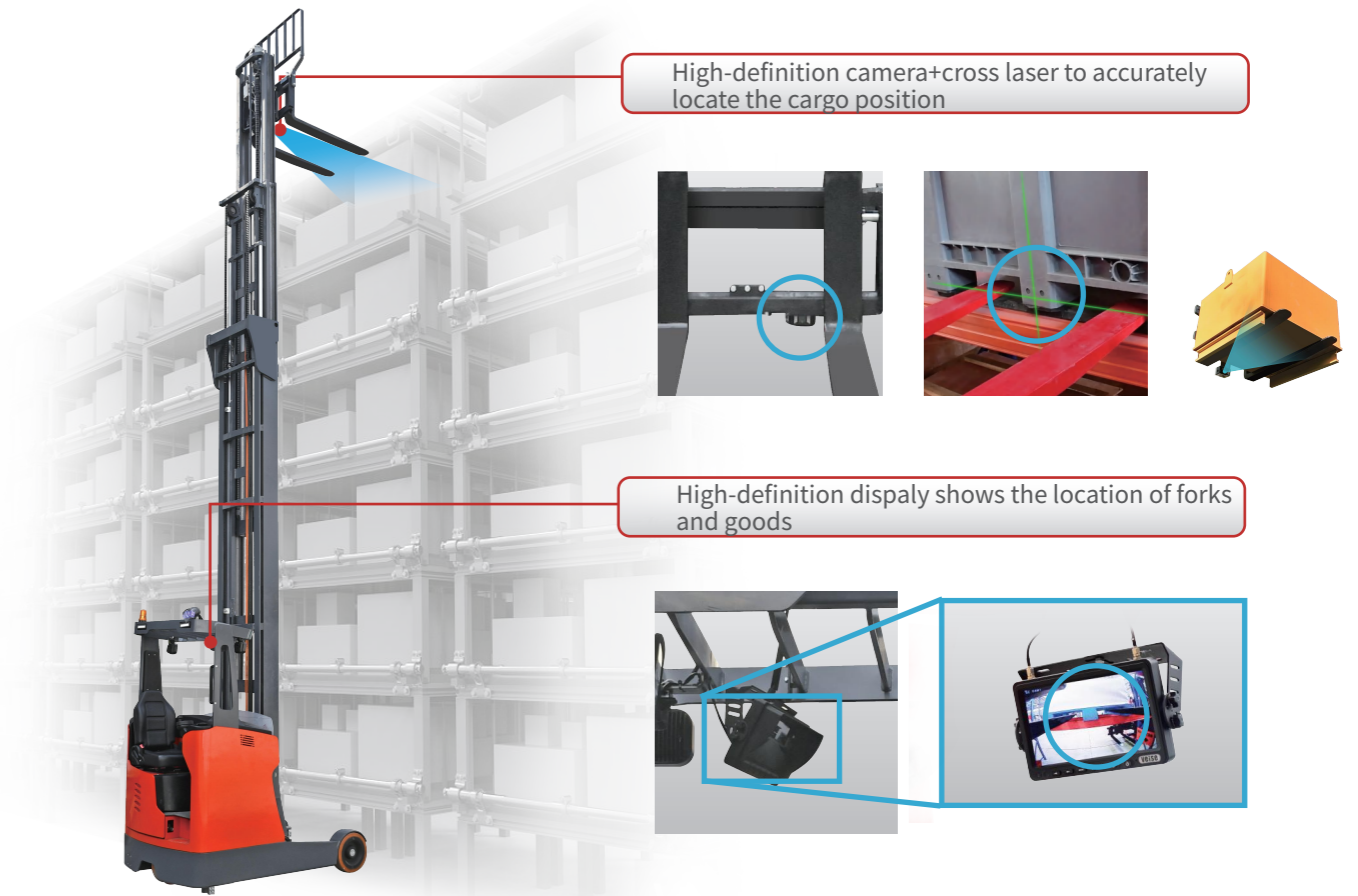


## Visual field assistance

## Convenient operation

### Fork vision system

The vision system of the fork ensures that the forklift still has a good vision and operability when working at a high position. A high-definition camera is installed at the root of the fork, and the cross laser is used for accurate positioning. The operator can clearly observe the position of the goods through the high-definition display, which improves efficiency and safety.



### Driving wheel display

Equipped with drive wheel angle display function, it displays drive wheel angle, which is easier to operate.



## Easy to operate and comfortable to improve efficiency

### Integrated joystick(Optional)

Integrated all hydraulic action, horn button, driving direction operating switch, simplify the operation process, reasonable ergonomic design, more convenient operation, improve operating efficiency



### Steering tiller

Intuitive steering tiller, operator centered design, effectively simplifies control operations.



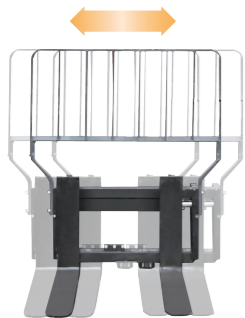
### Suspension seat(Optional)

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



### Built-in (integrated) side shifter

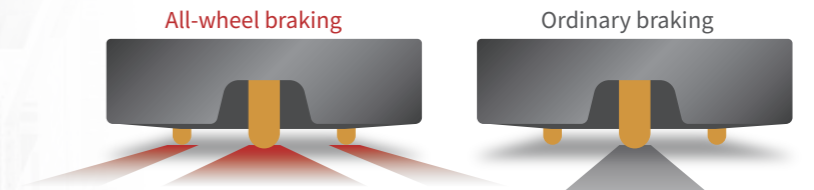
Standard configuration forks can be side shifted left and right, is convenient to adjust the position of the forks to take goods.



Noise Level  
≤68dB

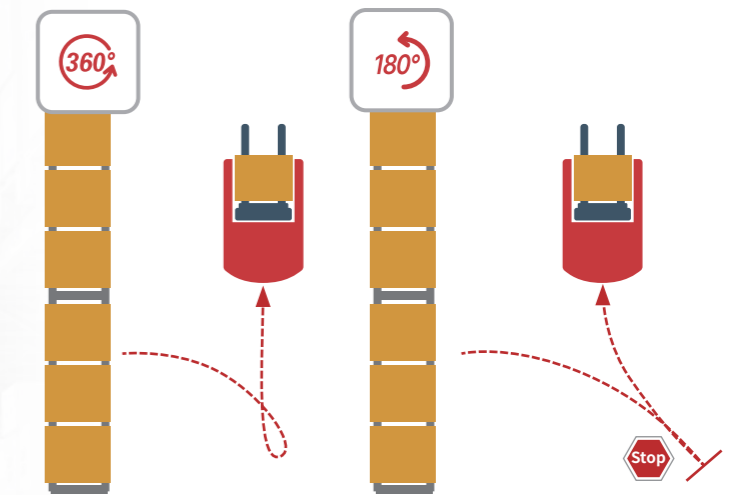
### All-wheel electromagnetic braking

The vehicle is equipped with all-wheel braking, with both front and rear wheel brakes. Compared with regular brakes, it offers shorter braking distances, better braking performance, and enhances operator's safety during operation. The load wheels are configured with drum brake and electromagnetic brake, electromagnetic brake can further enhance the stability of the mast at high positions.



### 180°/360°steering mode

Switch between 180°/ 360°mode can improve working efficiency in the aisle. In 360° mode, there is no need to stop to switch the direction switch (forward/backward), while in 180° (conventional mode), you need to stop and then switch the direction switch (forward/backward) before turning the steering wheel.



### One-Key Return to Center

When the position of the driving wheel cannot be quickly identified due to excessive steering operations, the two one click for turn-back keys can be pressed at the same time, and the driving wheel will automatically turn-back to the center.



### OPS

The vehicle has OPS in-position sensing function, mainly including pedal switch and seat switch. Only when the operator is in position, step on the pedal switch to start running, hydraulic functions and other functions to ensure vehicle safety.

Standard			
1.1	Brand	MiMA	MiMA
1.2	Model	MFZ16M	MFZ20M
1.3	Power type	Battery	Battery
1.4	Operation type	Seated	Seated
1.5	Rated capacity	1600	2000
1.6	Load center	600	600
1.7	Distance from fork surface to front wheel center	364	407
1.8	Front overhang	184	205
1.9	Wheelbase	1400	1500
Weight			
2.1	Vehicle weight (including battery)	kg	3700
2.2			4131
2.3	Axle capacity with no load, drive side/load side	kg	2309/1391
2.4	Axle capacity with full load when fork forward,drive side/load side	kg	799/4501
2.5	Axle capacity with full load when fork backward,drive side/load side	kg	2042/3258
2.6			2196/3761
Wheel			
3.1	Wheel type, Drive wheel/Load wheel	PU/PU	PU/PU
3.2	Size, load wheel	mm	φ300×120[1]
3.3	Size, drive wheel	mm	φ343×120
3.4	Number of wheels, front/rear(x=drive wheel)		2/ 1X
3.5	Wheel tread, load side	b11(mm)	1170[1]
Size			
4.1	Fork tilt range, front/rear	α/β(°)	2/4
4.2	Mast closed height	h1(mm)	2253
4.3	Free lift height	h2(mm)	1013[2]
4.4	Lift height	h3(mm)	4600
4.5	Mast extended height with load-backrest	h4(mm)	5800[3]
4.6			5800[3]
4.7	Overhead guard height	h6(mm)	2200
4.8	Seat height	h7(mm)	1122
4.9	Lateral travel		±50
4.10	Leg height	h8(mm)	320
4.11			363
4.12	Overall length	l1(mm)	2354
4.13			2409
4.14	Distance to fork surface	l2(mm)	1275
4.15			1339
4.16	Overall width	b1/b2(mm)	1270/1290[1]
4.17			1270/1290[1]
4.18	Fork size	l/e/s(mm)	1070×100×35
4.19			1070×122×40
4.20	Overhead guard width	b3(mm)	1024
4.21			1024
4.22	Fork outside width	b5(mm)	232-728
4.23			232-750
4.24	Inner leg width	b4(mm)	890
4.25			890
4.26	Reach stroke	l4(mm)	555
4.27			613
4.28	Mast ground clearance	m1(mm)	75
4.29			75
4.30	Aisle width for pallet 1000* 1200mm(C=500mm)	Ast(mm)	2716
4.31			2791
4.32	Aisle width for pallet 800* 1200mm(C=600mm)	Ast(mm)	2767
4.33			2835
4.34	Turning radius	Wa(mm)	1647
4.35			1747
4.36	Overall length (excluding fork)	l7(mm)	1796
4.37			1918
Function			
5.1	Driving speed(load/unload)	km/h	14/14
5.2	Lifting speed(load/unload)	mm/s	430/550
5.3	Lowering speed(load/unload)	mm/s	530/520
5.4			530/520
5.5	Mast movement speed, forward/retract	mm/s	200
5.6			200
5.7	Max. Grade ability(load/unload)(S2-5min)	%(tanθ)	10
5.8			10
5.9	Brake type		Hydraulic
5.10			Hydraulic
Motor			
6.1	Driving motor(S2-60min)	kw	8.0
6.2	Lifting motor(S3-15%)	kw	14
6.3	Steering motor power (S2-60min)	kw	0.6
6.4			0.6
6.5	Battery voltage/capacity	V/Ah	48/420
6.6			48/560
6.7	Lithium battery voltage/capacity (optional)	V/Ah	48/300
6.8			48/460[4]
6.9	Battery weight	kg	715
6.10			920
Other			
7.1	Battery replacement type		Hoist
7.2			Hoist
8.4	Noise	dB(A)	68
8.5			68

[1]:[1]When the electromagnetic brake is configured, the tire width is 115mm, the wheel base is 1155mm and the body width is 1270mm; [2]:Free lifting height increases when there is no stop shelf; [3]:The maximum lifting height of the shelf without gear is reduced by 348mm.

Standard			
1.1	Brand	MiMA	MiMA
1.2	Model	MFZ16H	MFZ20H
1.3	Power type	Battery	Battery
1.4	Operation type	Seated	Seated
1.5	Rated	Q(kg)	1600
1.6	Load center	C(mm)	600
1.7	Distance from fork surface to front wheel center	x(mm)	307
1.8	Front overhang	x1(mm)	184
1.9	Wheelbase	y(mm)	1400
1.10			1500
Weight			
2.1	Vehicle weight (including battery)	kg	4120
2.2			4346
2.3	Axle capacity with no load, drive side/load side	kg	2453/1467
2.4	Axle capacity with full load when fork forward,drive side/load side	kg	931/4789
2.5	Axle capacity with full load when fork backward,drive side/load side	kg	2020/3600
2.6			2205/4141
Wheel			
3.1	Wheel type, Drive wheel/Load wheel	PU/PU	PU/PU
3.2	Size, load wheel	mm	φ300×120[1]
3.3	Size, drive wheel	mm	φ343×120
3.4	Number of wheels, front/rear(x=drive wheel)		2/ 1X
3.5	Wheel tread, load side	b11(mm)	1170[1]
3.6			1170[1]
Size			
4.1	Fork tilt range, front/rear	α/β(°)	2/4
4.2	Mast closed height	h1(mm)	2820
4.3	Free lift height	h2(mm)	1580[2]
4.4	Lift height	h3(mm)	6300
4.5	Mast extended height with load-backrest	h4(mm)	7500[3]
4.6			7500[3]
4.7	Overhead guard height	h6(mm)	2200
4.8	Seat height	h7(mm)	1122
4.9	Lateral travel		±50
4.10	Leg height	h8(mm)	320
4.11			363
4.12	Overall length	l1(mm)	2404
4.13			2481
4.14	Distance to fork surface	l2(mm)	1334
4.15			1411
4.16	Overall width	b1/b2(mm)	1270/1290[1]
4.17			1270/1290[1]
4.18	Fork size	l/e/s(mm)	1070×100×35
4.19			1070×122×40
4.20	Overhead guard width	b3(mm)	1024
4.21			1024
4.22	Fork outside width	b5(mm)	232-728
4.23			232-750
4.24	Inner leg width	b4(mm)	890
4.25			890
4.26	Reach stroke	l4(mm)	496
4.27			541
4.28	Mast ground clearance	m1(mm)	75
4.29			75
4.30	Aisle width for pallet 1000* 1200mm(C=500mm)	Ast(mm)	2760
4.31			2843
4.32	Aisle width for pallet 800* 1200mm(C=600mm)	Ast(mm)	2821
4.33			2900
4.34	Turning radius	Wa(mm)	1647
4.35			1747
4.36	Overall length (excluding fork)	l7(mm)	1796
4.37			1918
Function			
5.1	Driving speed(load/unload)	km/h	14/14
5.2	Lifting speed(load/unload)	mm/s	430/550
5.3	Lowering speed(load/unload)	mm/s	530/520
5.4			530/520
5.5	Mast movement speed, forward/retract	mm/s	200
5.6			200
5.7	Max. Grade ability(load/unload)(S2-5min)	%(tanθ)	10
5.8			10
5.9	Brake type		Hydraulic
5.10			Hydraulic
Motor			
6.1	Driving motor(S2-60min)	kw	8.0
6.2	Lifting motor(S3-15%)	kw	14
6.3	Steering motor power (S2-60min)	kw	0.4
6.4			0.4
6.5	Battery voltage/capacity	V/Ah	48/560
6.6			48/700
6.7	Lithium battery voltage/capacity (optional)	V/Ah	48/300
6.8			48/460
6.9	Battery weight	kg	715
6.10			920
Other			
7.1	Battery replacement type		Hoist
7.2			Hoist
8.4	Noise	dB(A)	68
8.5			68

[1]:[1]When the electromagnetic brake is configured, the tire width is 115mm, the wheel base is 1155mm and the body width is 1270mm; [2]:Free lifting height increases when there is no stop shelf; [3]:The maximum lifting height of the shelf without gear is reduced by 348mm.

Load parameter

Model	h3 (mm)	5400	5700	6000	6300	6500	6750	7000	7150	7500	8000	8500	9000	9500	10000	10500	10800	11000	11500	12000	12500
MFZ20M (48V560AH) Q (kg)	C=600mm	2000	1950	1900	1850	1800	1750	1700	1700	1600	1500	1350	1200	1100	1050	900	800	750	700	650	600
	C=700mm	1770	1730	1690	1640	1600	1550	1500	1500	1420	1330	1200	1060	970	930	800	700	660	620	570	530
	C=800mm	1600	1560	1520	1480	1440	1400	1360	1360	1280	1200	1080	960	880	840	720	640	600	560	520	480
	C=900mm	1310	1280	1240	1210	1180	1140	1110	1110	1050	980	880	780	720	690	590	520	490	460	420	390
	C=1000mm	1130	1100	1080	1050	1020	1000	960	960	910	850	760	680	620	600	510	450	420	400	370	341
MFZ20H (48V700AH) Q (kg)	C=600mm	2000	2000	2000	2000	1950	1850	1800	1800	1650	1600	1450	1350	1300	1200	1100	1050	1000	950	850	800
	C=700mm	1770	1770	1770	1770	1730	1640	1600	1600	1460	1420	1300	1200	1150	1060	970	970	890	840	750	700
	C=800mm	1600	1600	1600	1600	1560	1480	1440	1440	1320	1280	1160	1080	1040	960	880	880	700	700	680	640
	C=900mm	1310	1310	1310	1310	1280	1210	1180	1180	1080	1050	950	880	850	780	650	720	600	560	550	520
	C=1000mm	1130	1130	1130	1130	1100	1050	1020	1020	930	910	820	760	730	680	620	620	560	530	480	450
MFZ16M (48V420AH) Q (kg)	C=600mm	1600	1600	1600	1600	1600	1550	1500	1500	1400	1300	1200	1050	900	/	/	/	/	/	/	/
	C=700mm	1420	1420	1420	1420	1420	1370	1330	1330	1240	1150	1060	970	890	/	/	/	/	/	/	/
	C=800mm	1280	1280	1280	1280	1280	1240	1200	1200	1120	1040	960	880	700	/	/	/	/	/	/	/
	C=900mm	950	950	950	950	950	920	890	894	830	770	710	650	600	/	/	/	/	/	/	/
	C=1000mm	900	900	900	900	900	870	840	844	790	730	670	620	560	/	/	/	/	/	/	/
MFZ16H (48V560AH) Q (kg)	C=600mm	1600	1600	1600	1600	1600	1550	1550	1450	1350	1250	1150	1000	950	800	/	/	/	/	/	/
	C=700mm	1420	1420	1420	1420	1420	1370	1370	1300	1200	1100	1020	890	840	700	/	/	/	/	/	/
	C=800mm	1280	1280	1280	1280	1280	1240	1240	1160	1080	1000	920	700	760	640	/	/	/	/	/	/
	C=900mm	950	950	950	950	950	920	920	950	880	800	690	600	560	520	/	/	/	/	/	/
	C=1000mm	900	900	900	900	900	870	870	820	760	700	650	560	530	450	/	/	/	/	/	/

Mast parameter

Triplex full free mast MFZ16M: 4600-9500mm; MFZ16H: 4600-10500mm;																							
Model	MFZ16	16T-46	16T-48	16T-54	16T-57	16T-60	16T-63	16T-65	16T-67	16T-70	16T-71	16T-75	16T-80	16T-85	16T-90	16T-95	16T-100	16T-105					
Lift Height	h3(mm)	4600	4800	5400	5700	6000	6300	6500	6750	7000	7150	7500	8000	8500	9000	9500	10000	10500					
Mast extended height with load backrest	h4(mm)[1]	5800	6000	6600	6900	7200	7500	7700	7950	8200	8350	8700	9200	9700	10200	10700	11200	11700					
Mast closed height	h1(mm)	2253	2320	2520	2620	2720	2820	2887	3070	3153	3203	3319	3486	3653	3920	4086	4253	4420					
Free lift height (including load backrest)	h2(mm)	1013	1080	1280	1380	1480	1580	1647	1830	1913	1963	2079	2246	2413	2680	2846	3013	3180					
Free lift height (excluding load backrest)	h2(mm)	1118	1186	1186	1486	1586	1686	1754	1936	2018	2068	2182	2350	2518	2886	3050	3218	3386					
Triplex full free mast MFZ20M: 4600-12500mm; MFZ20N: 4600-9500mm;																							
Model	MFZ20	20T-46	20T-48	20T-54	20T-57	20T-60	20T-63	20T-65	20T-67	20T-70	20T-71	20T-75	20T-80	20T-85	20T-90	20T-95	20T-100	20T-105	20T-108	20T-110	20T-115	20T-120	20T-125
Lift Height	h3(mm)	4600	4800	5400	5700	6000	6300	6500	6750	7000	7150	7500	8000	8500	9000	9500	10000	10500	10800	11000	11500	12000	12500
Mast extended height with load backrest	h4(mm)[1]	5800	6000	6600	6900	7200	7500	7700	7950	8200	8350	8700	9200	9700	10200	10700	11200	11700	12000	12200	12700	13200	13700
Mast closed height	h1(mm)	2253	2320	2520	2620	2720	2820	2887	3070	3153	3203	3319	3486	3653	3920	4086	4253	4420	4520	4586	4753	4920	5086
Free lift height (including load backrest)	h2(mm)	1013	1013	1280	1380	1480	1580	1647	1830	1913	1963	2079	2246	2413	2680	2846	3013	3180	3280	3346	3513	3680	3846
Free lift height (excluding load backrest)	h2(mm)	1118	1186	1386	1486	1586	1686	1754	1936	2018	2068	2182	2350	2518	2886	3050	3218	3386	3486	3550	3718	3886	4050

Note [1]: The maximum height of the gantry during lifting is the size of the gantry with the stop shelf included. If the standard stop shelf is not included, 348mm shall be deducted;

