

ARTICULATED FORKLIFT MJ20 SERIES

Indoor&Outdoor One-Stop Handling and Intensive Storage



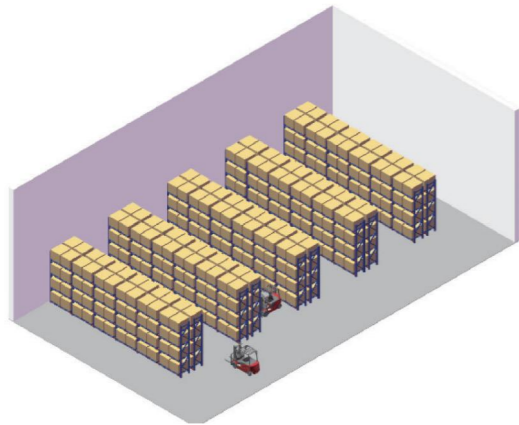
BANYITONG SCIENCE & TECHNOLOGY DEVELOPING CO.,LTD.
Add: Crossing of Daihe Road and Cailun Road,Hefei,China
Tel: +86 551 6219 3112
E-mail: sales@mimachina.com
Website: www.mimaforklift.com



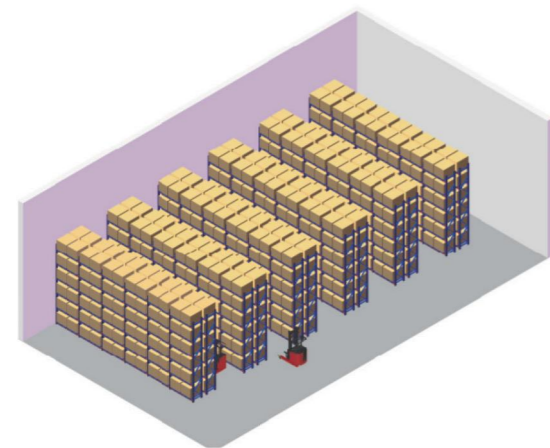
Website



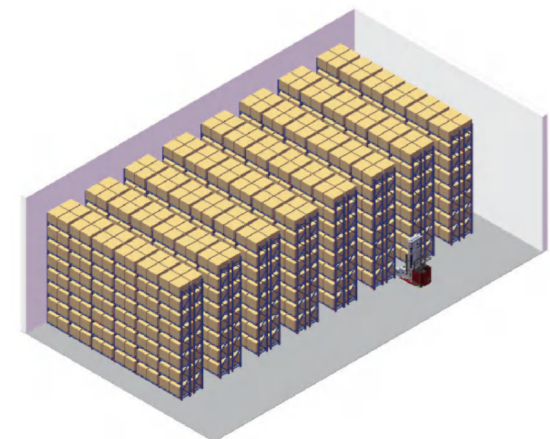
Ultra-high storage capacity



Electric counterbalanced forklift

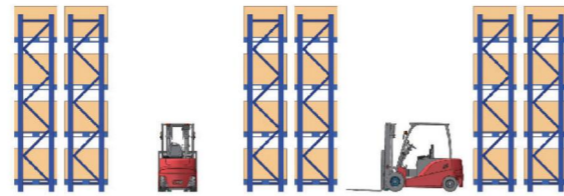


Reach Truck

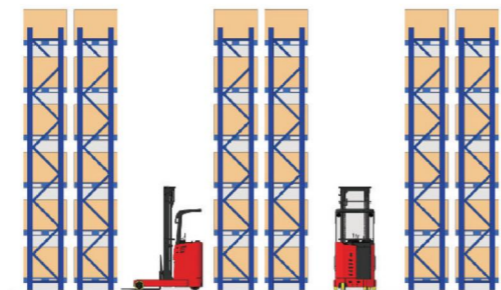


Articulated forklift

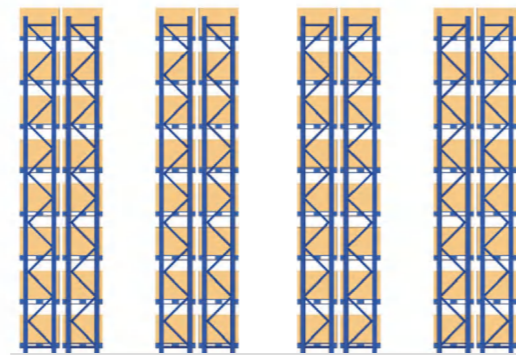
Narrow aisle



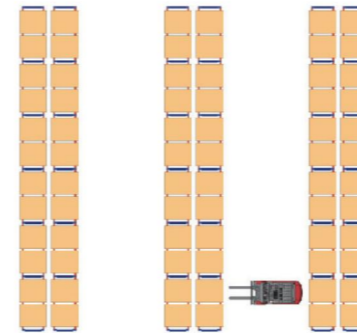
Rack height 5M



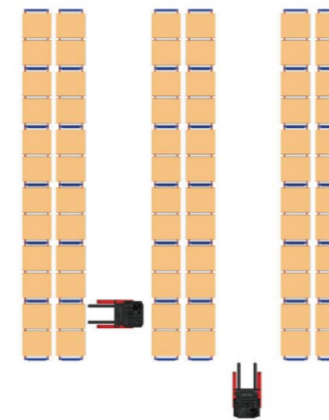
Rack height 7.5M



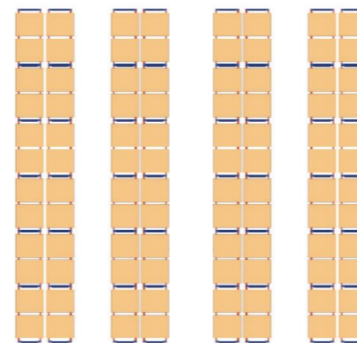
Rack height $\geq 10M$, Up to 12.5m



Aisle width 4M



Aisle width 3M



Aisle width 1.9M-2.2M

- Electric counterbalanced forklift
- Few pallet positions
- Large aisle width (Around 4M)
- Low rack height (Around 5M)
- High cost for single pallet position



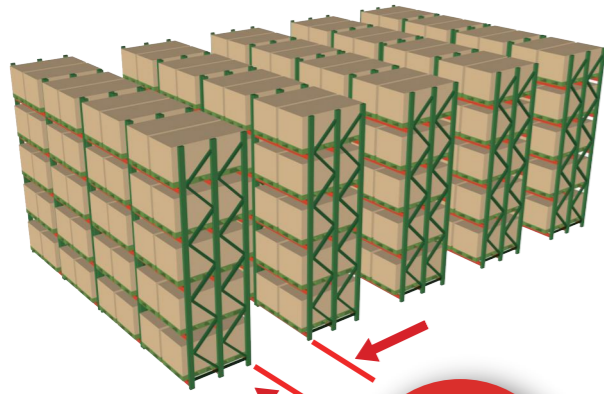
- Reach Truck
- Compared with counterbalanced forklift
- Pallet positions have increased by 80%
- Rack height has increased by 40% (Around 7.5M)
- Aisle width has decreased by 25% (Around 3M)
- Based on same storage area
- Cost for single pallet position has decreased by 40%



- Articulated forklift
- Compared with counterbalanced forklift
- Pallet positions have increased by 200%
- Rack height has increased by 100% ($\geq 10M$)
- Aisle width has decreased by 45% (1.9M)
- Based on same storage area
- Cost for single pallet position has decreased by 60%



NARROW AISLE AND HIGH STORAGE CAPACITY



Compared with the traditional rack arrangement scheme, the racking aisle suitable for the articulated forklift can be reduced to a minimum of 1.9 meters, so that the storage capacity can be greatly increased.

Min. Aisle Width $\geq 1,900\text{MM}$

MJ Series Articulated Forklift

It can be used conveniently both indoors and outdoors. The operator can complete a series of operations such as loading/unloading, handling and stacking through an articulated forklift. The forklift is equipped with solid rubber tires, with a mast swing angle of 210 degrees, an ultra-small turning radius, and flexible and comfortable operation.



210° mast swing angle

Load Capacity
2000KG

Max. Lifting Height
Up to 12,500MM

The articulated forklift is designed for faster and more efficient loading and unloading goods outdoor and indoor, as well as meeting the narrow aisle intensive storage. The articulated forklift has the functions of traditional counter-balanced forklift, pallet truck and high-level storage forklift, and truly achieves one-stop indoor and outdoor material handling and storage.

The forklift is equipped with maintenance-free full AC motors, and the high-speed ratio gearbox provides sufficient power for driving and climbing. Excellent ergonomic design ensures high efficiency and comfortable driving.



UP TO 12,500 MM



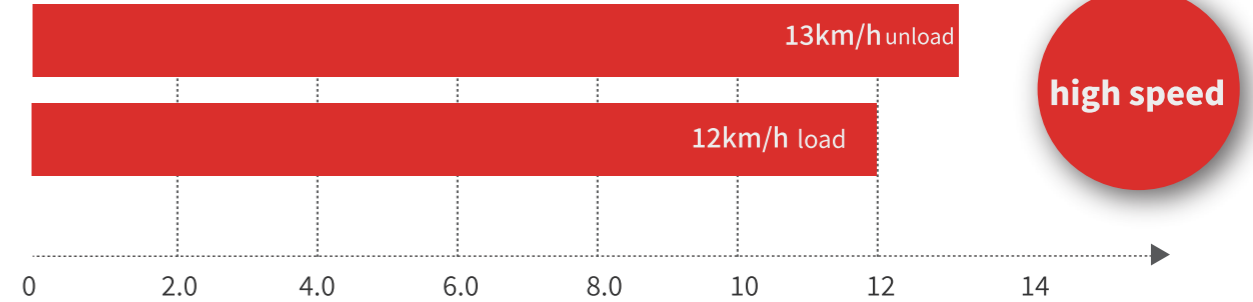
Indoors and Outdoors Using



The forklift is equipped with front and rear solid rubber tires, which can adapt to various indoor and outdoor ground conditions. The high chassis design has excellent trafficability. Besides, the forklift adopts a high-power AC drive motor with a better climbing performance.



High speed driving High efficient work



The articulated forklift is equipped with super high-power AC drive motor to provide sufficient power;
The max driving speed with full load can reach 12km/h, and the max driving speed with no load can reach 13km/h

Flexible steering Easy Operation in Narrow Aisle Width

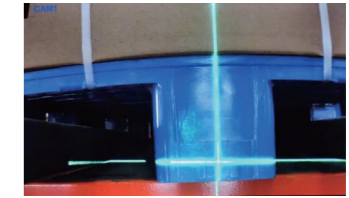
The mast swing angle is 210 degree. When turning, the max. mast swing angle is 210 degree.



Various configuration Comfortable operation



| | |
|-------------------------------|-------------------|
| Lift height | 4600--12500mm |
| Rated capacity | 2000kg |
| Load center | 600mm |
| Drive speed, load/unload | 12/13km/h |
| Max.gradeability, load/unload | 12%/13% |
| Drive motor type | AC |
| Lift motor type | AC |
| Battery, voltage/capacity | 48V900AH/80V500AH |
| Turning radius | 2200mm |



Laser-assisted alignment of forks
Laser-assisted alignment of forklift



HD camera display



Options:Electric proportion integrated handle, easier operation and more accurate



LCD display



High strength overhead guard for safer protection
Grid top design for better view

Super power

Low energy consumption

Long work life

- 48V system with AC 18.5KW drive motor
- 80V system with AC 16.3KW drive motor
- High power maintenance-free AC drive motor provides super power
- High power AC 15KW lift motor provides sufficient power for hydraulic system, which makes operation more stable
- 80V system with higher voltage and lower current, which makes the energy consumption more optimized and provide long work life

Specification

| Standard | | | | | |
|----------|----------------|---------------|--------------|---------------|--------------|
| 1.1 | Manufacturer | MiMA | MiMA | MiMA | MiMA |
| 1.2 | Model | MJ20 (narrow) | MJ20H (wide) | MJ20 (narrow) | MJ20H (wide) |
| 1.3 | Power type | Battery | Battery | Battery | Battery |
| 1.4 | Operation type | Seated | Seated | Seated | Seated |
| 1.5 | Rated capacity | Q(kg) | 2000 | 2000 | 2000 |
| 1.6 | Load center | C(mm) | 600 | 600 | 600 |
| 1.7 | Load distance | x(mm) | 285 | 285 | 285 |
| 1.8 | Wheelbase | y(mm) | 1720 | 1720 | 1720 |

| Weights | | | | | | |
|---------|--|----|-----------|-----------|-----------|-----------|
| 2.1 | Service weight (incl.battery) | kg | 7460 | 8140 | 7460 | 8140 |
| 2.2 | Axle load with load, drive side/load side | kg | 5290/4250 | 5600/4650 | 5290/4250 | 5600/4650 |
| 2.3 | Axle load without load, drive side/load side | kg | 2250/5210 | 2470/5670 | 2250/5210 | 2470/5670 |

| Tyres | | | | | | |
|-------|--------------------------------------|---------|-------------------|-------------------|-------------------|-------------------|
| 3.1 | Tyre type | | Solid rubber tire | Solid rubber tire | Solid rubber tire | Solid rubber tire |
| 3.2 | Tyre size, load side | mm | Φ457×178 | Φ457×178 | Φ457×178 | Φ457×178 |
| 3.3 | Tyre size, Drive wheel | mm | Φ415×178 | Φ415×178 | Φ415×178 | Φ415×178 |
| 3.4 | Number of wheels, front/rear X=drive | | 2X/2 | 2X/2 | 2X/2 | 2X/2 |
| 3.5 | Tread, drive side | b10(mm) | 800 | 800 | 800 | 800 |
| 3.6 | Tread, load side | b11(mm) | 1090 | 1090 | 1090 | 1220 |

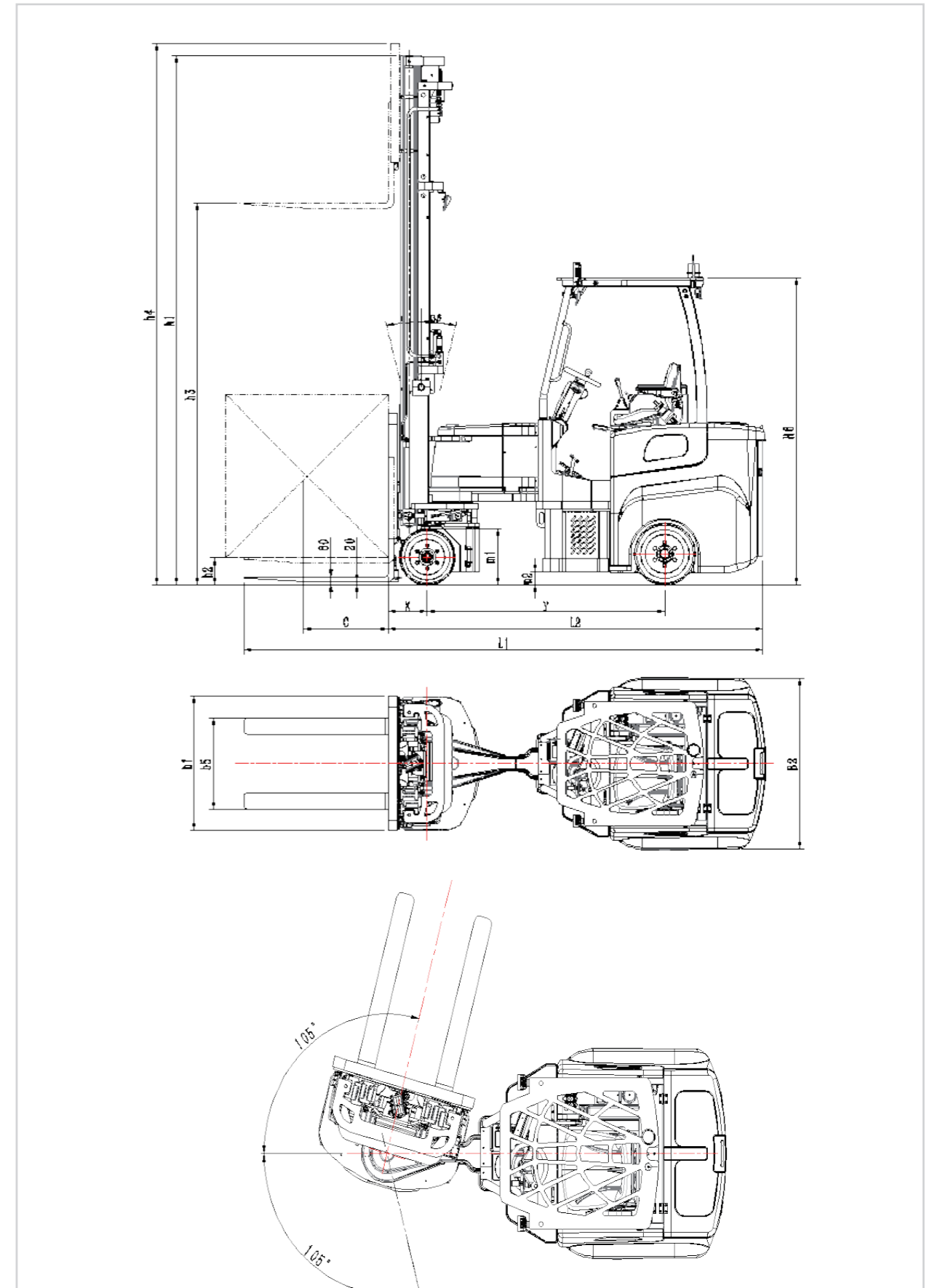
| Dimension | | | | | | |
|-----------|---|-----------|------------------------------|------------------------------|------------------------------|------------------------------|
| 4.1 | Mast tilt, forward/backward | α/β(°) | 1/3 | 1/3 | 1/3 | 1/3 |
| 4.2 | Mast swing angle | (°) | 210 | 210 | 210 | 210 |
| 4.3 | Height, mast closed | h1(mm) | See the mast parameter table | See the mast parameter table | See the mast parameter table | See the mast parameter table |
| 4.4 | Free lift height | h2(mm) | See the mast parameter table | See the mast parameter table | See the mast parameter table | See the mast parameter table |
| 4.5 | Rated weight lift height | h3(mm) | 3300 | 3300 | 3300 | 3300 |
| 4.6 | Lift height range | h3(mm) | 4600~10000 | 4600~12500 | 4600~10000 | 4600~12500 |
| 4.7 | Height, mast extended | h4(mm) | See the mast parameter table | See the mast parameter table | See the mast parameter table | See the mast parameter table |
| 4.8 | Overhead guard height | h6(mm) | 2250 | 2250 | 2250 | 2250 |
| 4.9 | Seat height | h7(mm) | 1230 | 1230 | 1230 | 1230 |
| 4.10 | Overall length | L1(mm) | 3830 | 3830 | 3830 | 3830 |
| 4.11 | Overall length without forks | L2(mm) | 2730 | 2730 | 2730 | 2730 |
| 4.12 | Overall width | b1/b2(mm) | 980/1260 | 980/1400 | 980/1260 | 980/1400 |
| 4.13 | Fork size | l/e/s(mm) | 1100/100/50 | 1100/100/50 | 1100/100/50 | 1100/100/50 |
| 4.14 | Installation level | II | II | II | II | II |
| 4.15 | Fork carriage width | b3(mm) | 990 | 990 | 990 | 990 |
| 4.16 | Outside distance between forks | b5(mm) | 250~890 | 250~890 | 250~890 | 250~890 |
| 4.17 | Side shift distance | mm | ±100 | ±100 | ±100 | ±100 |
| 4.18 | Min. ground clearance of mast | m1(mm) | 70 | 70 | 50 | 50 |
| 4.19 | Min. Ground clearance of chassis | m2(mm) | 100 | 100 | 100 | 100 |
| 4.20★ | Min. stacking aisle width (800X1200mm pallet,C=600mm)mm | | 1900 | 2100 | 1900 | 2100 |
| | Efficiency aisle Distance between goods to goods ≥ | mm | 2000 | 2200 | 2000 | 2200 |
| | Distance between rack to rack ≥ | mm | 2200 | 2400 | 2200 | 2400 |
| | More other stacking aisle width | mm | See aisle parameter table | See aisle parameter table | See aisle parameter table | See aisle parameter table |
| 4.21 | Min. main aisle (800X1200mm pallet) | mm | 2650 | 2650 | 2650 | 2650 |
| 4.22 | Turning radius | Wa(mm) | 2200 | 2200 | 2200 | 2200 |

| Performance | | | | | | |
|-------------|--|---------|-----------|-----------|-----------|-----------|
| 5.1 | Driving speed, load/unload | km/h | 12/13 | 12/13 | 15/12 | 15/12 |
| 5.2 | Lifting speed, load/unload | mm/s | 400/420 | 400/420 | 400/420 | 400/420 |
| 5.3 | Lowering speed, load/unload | mm/s | 280/200 | 280/200 | 280/200 | 280/200 |
| 5.4 | Traction (S2-5min) | N | | | | |
| 5.5★ | Max. Gradeability from slope load/unload (S2-5min) | %(tanθ) | 15/15 | 15/15 | 1 / 15 | 15/15 |
| 5.6 | Braking type | | Hydraulic | Hydraulic | Hydraulic | Hydraulic |

| Driving | | | | | | |
|---------|---------------------------|------|-----------|-----------|-----------|-----------|
| 6.1 | Drive motor (S2-60min) | kw | AC18.5 | AC18.5 | AC16.3 | AC16.3 |
| 6.2 | Lifting motor (S3-15%) | kw | AC15 | AC15 | AC15 | AC15 |
| 6.3 | Battery, voltage/capacity | V/Ah | 48/900 | 48/900 | 80/500 | 80/500 |
| 6.4 | Battery weight | kg | 1400 | 1400 | 1380 | 1380 |
| 6.5 | Steering type | | Hydraulic | Hydraulic | Hydraulic | Hydraulic |

| Others | | | | | | |
|--------|--|------|--------|--------|--------|--------|
| 7.1 | Lithium battery, voltage/capacity (standard) | V/Ah | 48/600 | 48/600 | 80/460 | 80/460 |
| 7.2 | (Optional) | V/Ah | 48/700 | 48/700 | 80/400 | 80/400 |

Marks: Above data is for standard model. Varies depending on different configuration. 4.20★ The minimum aisle is the net width between goods and goods, and the distance between rack and rack should be increased accordingly, it is recommended to add 200 mm or more. 5.5★ It is the maximum gradeability from the slope, and the maximum gradeability (load/unload) is 15/15.



| Load capacity parameter | | | | | | | | | MJ20 Narrow model |
|---------------------------|-------|------------|------------|------------|------------|------------|------------|------------|-------------------|
| Lift height (mm) | | | | | | | | | Capacity kg |
| | 10000 | 500 | 470 | 450 | 430 | 410 | 390 | 370 | |
| | 9500 | 650 | 620 | 580 | 560 | 530 | 510 | 490 | |
| | 9000 | 780 | 740 | 700 | 670 | 640 | 610 | 580 | |
| | 8500 | 880 | 830 | 790 | 750 | 720 | 690 | 660 | |
| | 8000 | 950 | 900 | 850 | 810 | 780 | 740 | 710 | |
| | 7500 | 1050 | 990 | 940 | 900 | 860 | 820 | 790 | |
| | 7150 | 1080 | 1020 | 970 | 920 | 880 | 840 | 810 | |
| | 7000 | 1100 | 1040 | 990 | 940 | 900 | 860 | 820 | |
| | 6750 | 1150 | 1090 | 1030 | 980 | 940 | 900 | 860 | |
| 6300 | 1200 | 1140 | 1080 | 1030 | 980 | 940 | 900 | | |
| 5700 | 1300 | 1230 | 1170 | 1110 | 1060 | 1010 | 970 | | |
| 5400 | 1350 | 1280 | 1210 | 1160 | 1100 | 1050 | 1010 | | |
| 4800 | 1400 | 1330 | 1260 | 1200 | 1140 | 1090 | 1050 | | |
| 4600 | 1450 | 1370 | 1300 | 1240 | 1180 | 1130 | 1080 | | |
| 3300 | 2000 | 1890 | 1800 | 1710 | 1630 | 1560 | 1500 | | |
| | | 600 | 650 | 700 | 750 | 800 | 850 | 900 | |
| Horizontal load center mm | | | | | | | | | |

| Load capacity parameter | | | | | | | | | MJ20W Semi-wide model |
|---------------------------|-------|------------|------------|------------|------------|------------|------------|------------|-----------------------|
| Lift height (mm) | | | | | | | | | Capacity kg |
| | 12500 | / | / | / | / | / | / | / | |
| | 12000 | / | / | / | / | / | / | / | |
| | 11500 | / | / | / | / | / | / | / | |
| | 11000 | / | / | / | / | / | / | / | |
| | 10800 | / | / | / | / | / | / | / | |
| | 10500 | / | / | / | / | / | / | / | |
| | 10000 | 800 | 760 | 720 | 680 | 660 | 620 | 600 | |
| | 9500 | 900 | 850 | 810 | 770 | 730 | 700 | 670 | |
| | 9000 | 950 | 900 | 850 | 810 | 780 | 740 | 710 | |
| 8500 | 1050 | 990 | 940 | 900 | 860 | 820 | 790 | | |
| 8000 | 1150 | 1090 | 1030 | 980 | 940 | 900 | 860 | | |
| 7500 | 1250 | 1180 | 1120 | 1070 | 1020 | 980 | 930 | | |
| 7150 | 1300 | 1230 | 1170 | 1110 | 1060 | 1010 | 970 | | |
| 7000 | 1350 | 1280 | 1210 | 1160 | 1100 | 1050 | 1010 | | |
| 6750 | 1380 | 1310 | 1240 | 1180 | 1130 | 1080 | 1030 | | |
| 6300 | 1450 | 1370 | 1300 | 1240 | 1180 | 1130 | 1080 | | |
| 5700 | 1530 | 1450 | 1380 | 1310 | 1250 | 1190 | 1140 | | |
| 5400 | 1600 | 1510 | 1440 | 1370 | 1310 | 1250 | 1200 | | |
| 4800 | 1680 | 1590 | 1510 | 1440 | 1370 | 1310 | 1260 | | |
| 4600 | 1750 | 1660 | 1570 | 1500 | 1430 | 1370 | 1310 | | |
| 3300 | 2000 | 1890 | 1800 | 1710 | 1630 | 1560 | 1500 | | |
| | | 600 | 650 | 700 | 750 | 800 | 850 | 900 | |
| Horizontal load center mm | | | | | | | | | |

| Load capacity parameter | | | | | | | | | MJ20H Wide model |
|---------------------------|-------|------------|------------|------------|------------|------------|------------|------------|------------------|
| Lift height (mm) | | | | | | | | | Capacity kg |
| | 12500 | 900 | 850 | 810 | 770 | 730 | 700 | 670 | |
| | 12000 | 950 | 900 | 850 | 810 | 780 | 740 | 710 | |
| | 11500 | 1000 | 950 | 900 | 860 | 820 | 780 | 750 | |
| | 11000 | 1050 | 990 | 940 | 900 | 860 | 820 | 790 | |
| | 10800 | 1070 | 1010 | 960 | 920 | 870 | 840 | 800 | |
| | 10500 | 1100 | 1040 | 990 | 940 | 900 | 860 | 820 | |
| | 10000 | 1200 | 1140 | 1080 | 1030 | 980 | 940 | 900 | |
| | 9500 | 1230 | 1160 | 1110 | 1050 | 1000 | 960 | 920 | |
| | 9000 | 1250 | 1180 | 1120 | 1070 | 1020 | 980 | 930 | |
| 8500 | 1300 | 1230 | 1170 | 1110 | 1060 | 1010 | 970 | | |
| 8000 | 1350 | 1280 | 1210 | 1160 | 1100 | 1050 | 1010 | | |
| 7500 | 1400 | 1330 | 1260 | 1200 | 1140 | 1090 | 1050 | | |
| 7150 | 1430 | 1350 | 1290 | 1220 | 1170 | 1120 | 1070 | | |
| 7000 | 1500 | 1420 | 1350 | 1280 | 1220 | 1170 | 1120 | | |
| 6750 | 1530 | 1450 | 1380 | 1310 | 1250 | 1190 | 1140 | | |
| 6300 | 1550 | 1470 | 1390 | 1330 | 1270 | 1210 | 1160 | | |
| 5700 | 1600 | 1510 | 1440 | 1370 | 1310 | 1250 | 1200 | | |
| 5400 | 1630 | 1540 | 1470 | 1390 | 1330 | 1270 | 1220 | | |
| 4800 | 1730 | 1640 | 1560 | 1480 | 1410 | 1350 | 1290 | | |
| 4600 | 1800 | 1700 | 1620 | 1540 | 1470 | 1410 | 1350 | | |
| 3300 | 2000 | 1890 | 1800 | 1710 | 1630 | 1560 | 1500 | | |
| | | 600 | 650 | 700 | 750 | 800 | 850 | 900 | |
| Horizontal load center mm | | | | | | | | | |

| Mast parameter | | | | | | | | | | | |
|------------------------|--------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Triplex full free mast | | | | | | | | | | | |
| Model | MJ20 | 46 | 48 | 54 | 57 | 63 | 67 | 70 | 71 | 75 | 80 |
| Lift height | h3(mm) | 4620 | 4820 | 5420 | 5720 | 6320 | 6770 | 7020 | 7170 | 7520 | 8020 |
| Mast extended height | h4(mm) | 5800 | 6000 | 6600 | 6900 | 7500 | 8000 | 8200 | 8400 | 8700 | 9200 |
| Mast closed height | h1(mm) | 2818 | 2885 | 3085 | 3185 | 3385 | 3485 | 3568 | 3618 | 3734 | 3900 |
| Free lift height | h2(mm) | 1134 | 1200 | 1400 | 1500 | 1700 | 1950 | 2034 | 2084 | 2202 | 2368 |
| Triplex full free mast | | | | | | | | | | | |
| Model | MJ20 | 85 | 90 | 95 | 100 | 105 | 108 | 110 | 115 | 120 | 125 |
| Lift height | h3(mm) | 8520 | 9020 | 9520 | 10020 | 10520 | 10820 | 11020 | 11520 | 12020 | 12520 |
| Mast extended height | h4(mm) | 9700 | 10200 | 10700 | 11200 | 11700 | 12000 | 12200 | 12700 | 13200 | 13700 |
| Mast closed height | h1(mm) | 4067 | 4234 | 4400 | 4567 | 4734 | 4834 | 4900 | 5067 | 5234 | 5400 |
| Free lift height | h2(mm) | 2534 | 2700 | 2868 | 3034 | 3200 | 3300 | 3368 | 3534 | 3700 | 3868 |

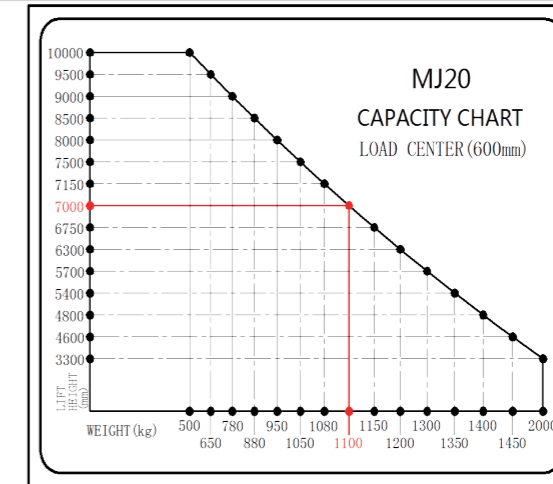
Stacking aisle width parameter MJ20 Narrow model

| | | Pallet size along forks direction (L) | | | | | | | | | Swing angle |
|--|------|---------------------------------------|------|------|------|------|------|------|------|------|-------------|
| | | mm | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | |
| Pallet size across forks direction (w) | 800 | / | / | 1900 | 2050 | 2150 | 2250 | / | / | / | ±105 |
| | 900 | / | / | 1950 | 2080 | 2180 | 2280 | / | / | / | |
| | 1000 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 | 2600 | |
| | 1100 | 1830 | 1930 | 2030 | 2130 | 2230 | 2330 | 2430 | 2530 | 2630 | ±100 |
| | 1200 | 1850 | 1950 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | |
| | 1300 | 1900 | 2000 | 2150 | 2200 | 2300 | 2400 | 2500 | 2600 | 2700 | ±95 |
| | 1400 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 | 2600 | 2700 | 2800 | ±90 |
| | 1500 | 2350 | 2450 | 2550 | 2650 | 2750 | 2850 | 2950 | 3050 | 3150 | |
| 1600 | 2400 | 2500 | 2600 | 2700 | 2800 | 2900 | 3000 | 3100 | 3200 | | |

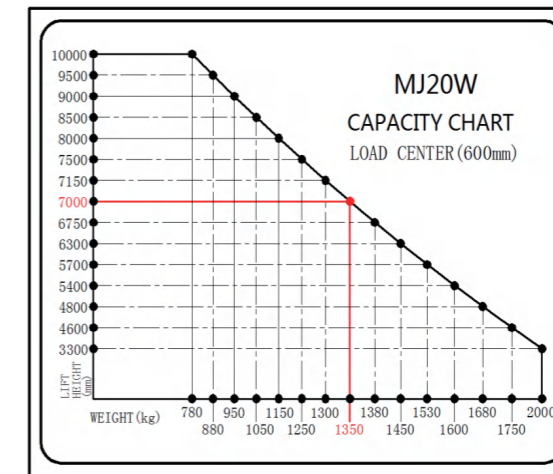
Stacking aisle width parameter MJ20W Semi-wide model MJ20H Wide model

| | | Pallet size along forks direction (L) | | | | | | | | | Swing angle |
|--|------|---------------------------------------|------|------|------|------|------|------|------|------|-------------|
| | | mm | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | |
| Pallet size across forks direction (w) | 800 | / | / | 2100 | 2250 | 2350 | 2450 | / | / | / | ±105 |
| | 900 | / | / | 2150 | 2280 | 2380 | 2480 | / | / | / | |
| | 1000 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 | 2600 | 2700 | 2800 | |
| | 1100 | 2030 | 2130 | 2230 | 2330 | 2430 | 2530 | 2630 | 2730 | 2830 | ±100 |
| | 1200 | 2050 | 2150 | 2250 | 2350 | 2450 | 2550 | 2650 | 2750 | 2850 | |
| | 1300 | 2100 | 2200 | 2300 | 2400 | 2500 | 2600 | 2700 | 2800 | 2900 | ±95 |
| | 1400 | 2200 | 2300 | 2400 | 2500 | 2600 | 2700 | 2800 | 2900 | 3000 | ±90 |
| | 1500 | 2350 | 2450 | 2550 | 2650 | 2750 | 2850 | 2950 | 3050 | 3150 | |
| 1600 | 2400 | 2500 | 2600 | 2700 | 2800 | 2900 | 3000 | 3100 | 3200 | | |

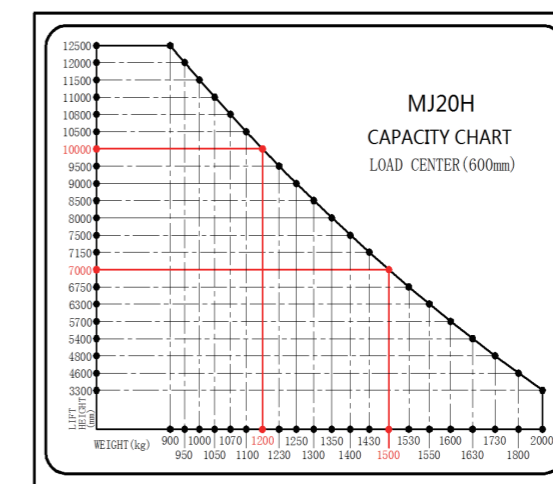
Note 1: The above indicates minimum aisle width, which is the net aisle width between goods; when the goods extend out of racks, the aisle width needs to be increased accordingly, recommended to be added 200 or more, efficiency net aisle width needs to be added 100 or more.
 Note 2: When W is bigger than 1200mm, lift height is less than 2500mm, the swing angle will be less than 210 degree. The larger W, the smaller swing angle.



Capacity Chart-MJ20



Capacity Chart -MJ20W



Capacity Chart-MJ20H