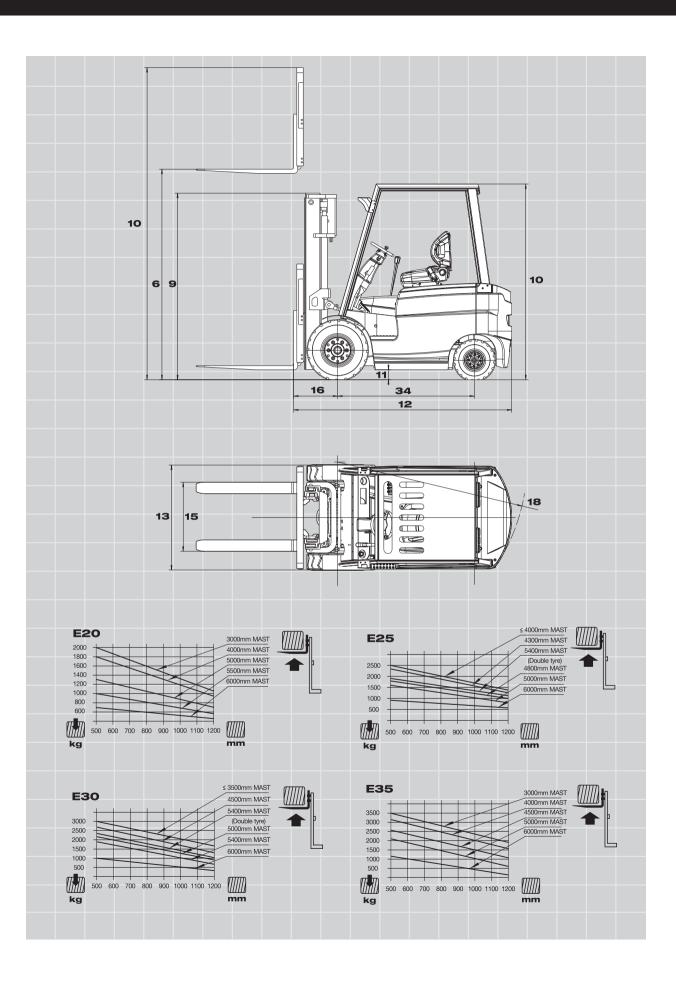


# **SPECIFICATION**

4-WHEEL ELECTRIC FORKLIFT

2.0-3.5ton



| Z             | 1  | Manufacturer  |      | RY                   | RY              | RY           | RY              |  |  |
|---------------|----|---|------|----------------------|-----------------|--------------|-----------------|--|--|
| ATIO          | 2  | Model   |      | E20                  | E25             | E30          | E35             |  |  |
| SPECIFICATION | 3  | Power Type  |      | Electric             | Electric        | Electric     | Electric        |  |  |
| ECI           | 4  | Rated Load Capacity   | kg   | 2000                 | 2500            | 3000         | 3500            |  |  |
| ß             | 5  | Load Centre   | mm   | 500                  | 500             | 500          | 500             |  |  |
|               | 6  | Rated Lift Height   | mm   | 3000                 | 3000            | 3000         | 3000            |  |  |
|               | 7  | Free Lift Height  | mm   | 140                  | 140             | 145          | 145             |  |  |
|               | 8  | Tilting Angle (F/R, α°/β°)                                  | Deg  | 6°/12°               | 6°/12°          | 6°/12°       | 6°/12°          |  |  |
|               | 9  | Height When Mast Lowered                                    | mm   | 2045                 | 2045            | 2060         | 2060            |  |  |
|               | 10 | Height to Safeguard   | mm   | 2150                 | 2150            | 2150         | 2150            |  |  |
|               | 11 | Min. Ground Clearance                                       | mm   | 120                  | 120             | 130          | 130             |  |  |
| Š             | 12 | Length (to Fork Face)                                       | mm   | 2388                 | 2388            | 2518         | 2578            |  |  |
| Ö             | 13 | Width   | mm   | 1150                 | 1150            | 1225         | 1225            |  |  |
| N N           | 14 | Fork Size (L×W×T)   | mm   | 1070×                | 1070×125×40     |              | 125×45          |  |  |
| DIMENSIONS    | 15 | Fork Spread (Min./Max.)                                     | mm   | mm 250/1040 250/1040 |                 | 250/1100     | 250/1100        |  |  |
| _             | 16 | Overhang Front  | mm   | 478                  | 478             | 483          | 483             |  |  |
|               | 17 | Overhang Rear   | mm   | 410                  | 410             | 435          | 495             |  |  |
|               | 18 | Min. Turning Radius   | mm   | 2080                 | 2080            | 2260         | 2320            |  |  |
|               | 19 | Height when Mast Lifted                                     | mm   | 4145                 | 4145            | 4160         | 4160            |  |  |
|               | 20 | Working Aisle Width with Pallet (Ast)*, 1000×1200 Crossways | mm   | 3925                 | 3925            | 4080         | 4140            |  |  |
|               | 21 | Working Aisle Width with Pallet (Ast)*, 800×1200 Lengthways | mm   | 4025                 | 4025            | 4180         | 4240            |  |  |
|               | 22 | Travel Speed (Full Load)                                    | km/h | 12                   | 12              | 12           | 12              |  |  |
|               | 23 | Travel Speed (No Load)                                      | km/h | 13                   | 13              | 13           | 13              |  |  |
| 5             | 24 | Lifting Speed (Full Load)                                   | mm/s | 290                  | 290             | 280          | 280             |  |  |
| MAN           | 25 | Lifting Speed (No Load)                                     | mm/s | 400                  | 400             | 400          | 400             |  |  |
| OR            | 26 | Gradeability (Full Load)                                    | %    | 15                   | 15              | 15           | 12              |  |  |
| PERFORMANCE   | 27 | Gradeability (No Load)                                      | %    | 15                   | 15              | 15           | 13              |  |  |
| ₫             | 28 | Service Brake (Operation/Control)                           |      | Foot/Pov             | Foot/Powershift |              | Foot/Powershift |  |  |
|               | 29 | Parking Brake (Operation/Control)                           |      | Hand/Mechanical      |                 | Hand/Me      | echanical       |  |  |
|               | 30 | Tyre (FrontX2)  |      | 7.00-12-12PR         | 7.00-12-12PR    | 28×9-15-12PR | 28×9-15-12PR    |  |  |
| ш             | 31 | Tyre (RearX2)   |      | 18×7-8-14PR          | 18×7-8-14PR     | 18×7-8-14PR  | 18×7-8-14PR     |  |  |
| RIVE          | 32 | Tread (Front)   | mm   | 970                  | 970             | 1000         | 1000            |  |  |
| DA            | 33 | Tread (Rear)  | mm   | 950                  | 950             | 970          | 970             |  |  |
|               | 34 | Wheelbase   | mm   | 1500                 | 1500            | 1600         | 1600            |  |  |
|               | 35 | Total Weight (Include Battery Box)                          | kg   | 4060                 | 4260            | 5150         | 5570            |  |  |
| 토             | 36 | Front Axle Weight Distribution (Full Load)                  | kg   | 5180                 | 5823            | 7210         | 8070            |  |  |
| WEIGHT        | 37 | Rear Axle Weight Distribution (Full Load)                   | kg   | 880                  | 937             | 940          | 1000            |  |  |
| \$            | 38 | Front Axle Weight Distribution (No Load)                    | kg   | 1675                 | 1665            | 2318         | 2520            |  |  |
|               | 39 | Rear Axle Weight Distribution (No Load)                     | kg   | 2385                 | 2595            | 2832         | 3050            |  |  |
|               | 40 | Drive Motor   | kw   | 11                   | 11              | 12           | 12              |  |  |
| l lii         | 41 | Pump Motor  | kw   | 11                   | 11              |              | 12              |  |  |
| DRIVE         | 42 | Standard Battery  | V/Ah | 48/560               | 48/560          | 80/500       | 80/500          |  |  |
| ā             | 43 | Controller Type   |      | AC                   | AC              | AC           | AC              |  |  |
|               | 44 | Controller Manufacturer                                     |      | ZAPI                 | ZAPI            | ZAPI         | ZAPI            |  |  |
|               | 45 | Operating Pressure for Attachment                           | Мра  | 17.5                 | 17.5            | 17.5         | 17.5            |  |  |
|               |    |   |      |                      |                 |              |                 |  |  |

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| MACT TYPE                        | MAST    | MAX.<br>FORK HEIGHT<br>(mm) | LOAD CAPACITY(LOAD CENTRE 500mm)(kg) |      |      |      |  |  |
|----------------------------------|---------|-----------------------------|--------------------------------------|------|------|------|--|--|
| MAST TYPE                        | NAME    |                             | E20                                  | E25  | E30  | E35  |  |  |
| 2-Stage Wide View Mast           | BM300   | 3000                        | 2000                                 | 2500 | 3000 | 3500 |  |  |
| -                                | BM330   | 3300                        | 2000                                 | 2500 | 3000 | 3500 |  |  |
|                                  | BM350   | 3500                        | 2000                                 | 2500 | 3000 | 3500 |  |  |
|                                  | BM400   | 4000                        | 2000                                 | 2400 | 3000 | 3500 |  |  |
|                                  | BM450   | 4500                        | 1800                                 | 2150 | 2700 | 3200 |  |  |
|                                  | BM500   | 5000                        | 1600                                 | 1600 | 2200 | 2700 |  |  |
|                                  | BM550   | 5500                        | 1500                                 | 1500 | 2000 | 2500 |  |  |
|                                  | BM600   | 6000                        | 950                                  | 950  | 1300 | 1800 |  |  |
| 2-Stage Full Free Wide View Mast | BFM300  | 3000                        | 2000                                 | 2500 | 3000 | 3500 |  |  |
| <u> </u>                         | BFM330  | 3300                        | 2000                                 | 2500 | 3000 | 3500 |  |  |
|                                  | BFM350  | 3500                        | 2000                                 | 2500 | 3000 | 3500 |  |  |
|                                  | BFM370  | 3700                        | 2000                                 | 2450 | 3000 | 3500 |  |  |
|                                  | BFM400  | 4000                        | 2000                                 | 2400 | 3000 | 3500 |  |  |
| 3-Stage Full Free Wide View Mast | BTFM430 | 4300                        | 1850                                 | 2200 | 2700 | 3200 |  |  |
| ů.                               | BTFM450 | 4500                        | 1750                                 | 2100 | 2600 | 3100 |  |  |
|                                  | BTFM470 | 4700                        | 1720                                 | 2000 | 2500 | 3000 |  |  |
|                                  | BTFM500 | 5000                        | 1600                                 | 1600 | 2100 | 2600 |  |  |
|                                  | BTFM550 | 5500                        | 1500                                 | 1500 | 2000 | 2500 |  |  |
|                                  | BTFM600 | 6000                        | 950                                  | 950  | 1300 | 1800 |  |  |
|                                  | BTFM650 | 6500                        | 600                                  | 600  | 900  | 1400 |  |  |
|                                  |         |                             |                                      |      |      |      |  |  |

|                                  |              | OVERALL HEIGHT(mm) |                       |         |                       |               |  |
|----------------------------------|--------------|--------------------|-----------------------|---------|-----------------------|---------------|--|
| MAST TYPE                        | MAST<br>NAME | LOWEDED            | EXTENDED              | LOWERED | EXTENDED              | TILT<br>ANGLE |  |
|                                  |              | LOWERED            | WITHOUT/WITH BACKREST |         | WITHOUT/WITH BACKREST |               |  |
|                                  |              | E20/E25            |                       |         |                       |               |  |
| 2-Stage Wide View Mast           | BM300        | 2045               | 3585 / 4145           | 2060    | 3680 / 4160           | 6-12          |  |
| · ·                              | BM330        | 2195               | 3885 / 4445           | 2210    | 3980 / 4460           | 6-12          |  |
|                                  | BM350        | 2295               | 4085 / 4645           | 2310    | 4180 / 4660           | 6-12          |  |
|                                  | BM400        | 2595               | 4585 / 5145           | 2610    | 4680 / 5160           | 6-6           |  |
|                                  | BM450        | 2840               | 5085 / 5645           | 2860    | 5180 / 5660           | 6-6           |  |
|                                  | BM500        | 3145               | 5585 / 6145           | 3160    | 5680 / 6160           | 6-6           |  |
|                                  | BM550        | 3395               | 6085 / 6645           | 3410    | 6180 / 6660           | 3-6           |  |
|                                  | BM600        | 3645               | 6585 / 7145           | 3660    | 6680 / 7160           | 3-6           |  |
| 2-Stage Full Free Wide View Mast | BFM300       | 2045               | 3595 / 4160           | 2060    | 3690 / 4175           | 6-12          |  |
| _                                | BFM330       | 2195               | 3895 / 4460           | 2210    | 3990 / 4475           | 6-12          |  |
|                                  | BFM350       | 2295               | 4095 / 4660           | 2310    | 4190 / 4675           | 6-12          |  |
|                                  | BFM370       | 2395               | 4295 / 4860           | 2410    | 4390 / 4875           | 6-6           |  |
|                                  | BFM400       | 2595               | 4595 / 5160           | 2610    | 4690 / 5175           | 6-6           |  |
| 3-Stage Full Free Wide View Mast | BTFM430      | 2010               | 4950 / 5510           | 2025    | 5045 / 5525           | 6-6           |  |
| ű                                | BTFM450      | 2120               | 5100 / 5660           | 2135    | 5195 / 5675           | 6-6           |  |
|                                  | BTFM470      | 2160               | 5300 / 5860           | 2175    | 5395 / 5875           | 6-6           |  |
|                                  | BTFM500      | 2260               | 5600 / 6160           | 2275    | 5695 / 6175           | 6-6           |  |
|                                  | BTFM550      | 2440               | 6000 / 6560           | 2455    | 6095 / 6575           | 3-6           |  |
|                                  | BTFM600      | 2660               | 6600 / 7160           | 2675    | 6695 / 7172           | 3-6           |  |
|                                  | BTFM650      | 2810               | 7100 / 7660           | 2825    | 7195 / 7672           | 3-6           |  |

|                                  | MAST    | FREE LIFT(mm)         |             |                  |      | TOTAL WEIGHT |      |      |  |
|----------------------------------|---------|-----------------------|-------------|------------------|------|--------------|------|------|--|
| MAST TYPE                        | NAME    | WITH/WITHOUT BACKREST | WITH/WITHOU | VITHOUT BACKREST |      | (K           | g)   |      |  |
|                                  |         | E20/E25               | E30/E35     |                  |      | E25          | E30  | E35  |  |
| 2-Stage Wide View Mast           | BM300   | 140 / 140             | 145 /       | 150              | 4160 | 4360         | 5150 | 5570 |  |
|                                  | BM330   | 140 / 140             | 145 /       | 150              | 4185 | 4395         | 5170 | 5590 |  |
|                                  | BM350   | 140 / 140             | 145 / 150   |                  |      | 4400         | 5190 | 5610 |  |
|                                  | BM400   | 140 / 140             | 145 /       | 150              | 4240 | 4445         | 5240 | 5660 |  |
|                                  | BM450   | 140 / 140             | 145 /       | 150              | 4280 | 4500         | 5280 | 5700 |  |
|                                  | BM500   | 140 / 140             | 145 / 150   |                  |      | 4540         | 5320 | 5740 |  |
|                                  | BM550   | 140 / 140             | 145 / 150   |                  |      | 4590         | 5360 | 5780 |  |
|                                  | BM600   | 140 / 140             | 145 /       | 150              | 4400 | 4640         | 5400 | 5820 |  |
| 2-Stage Full Free Wide View Mast | BFM300  | 1515 / 930            | 1425        | / 945            | 4200 | 4375         | 5220 | 5660 |  |
|                                  | BFM330  | 1665 / 1080           | 1575 /      | 1095             | 4225 | 4395         | 5240 | 5680 |  |
|                                  | BFM350  | 1765 / 1180           | 1675 / 1195 |                  | 4240 | 4410         | 5260 | 5700 |  |
|                                  | BFM370  | 1865 / 1285           | 1775 /      | 1295             | 4255 | 4430         | 5280 | 5720 |  |
|                                  | BFM400  | 2065 / 1480           | 2025 / 1545 | 1975 / 1495      | 4280 | 4465         | 5310 | 5750 |  |
| 3-Stage Full Free Wide View Mast | BTFM430 | 1440 / 1040           | 1445 / 940  | 1450 / 950       | 4310 | 4650         | 5280 | 5700 |  |
|                                  | BTFM450 | 1500 / 1090           | 1525 / 995  | 1530 / 1000      | 4340 | 4670         | 5320 | 5740 |  |
|                                  | BTFM470 | 1550 / 1140           | 1575 / 1045 | 1590 / 1050      | 4380 | 4710         | 5360 | 5780 |  |
|                                  | BTFM500 | 1650 / 1240           | 1675 / 1145 | 1680 / 1150      | 4400 | 4740         | 5400 | 5820 |  |
|                                  | BTFM550 | 1850 / 1440           | 1855 / 1345 | 1860 / 1350      | 4440 | 4770         | 5420 | 5840 |  |
|                                  | BTFM600 | 2050 / 1640           | 2040 / 1545 | 2045 / 1550      | 4480 | 4810         | 5460 | 5880 |  |
|                                  | BTFM650 | 2355 / 1750           | 2410 / 1695 | 2415 / 1670      | 4510 | 4840         | 5480 | 5900 |  |
|                                  |         |                       |             |                  |      |              |      |      |  |

Notice: With side shifter, load capacity subtract 200Kg.

#### COMFORT & ERGONOMICS

#### Smaller Steering Wheel

With 60mm less in diameter of the steering wheel, RY forklift dramatically improves the operation vision; it's easy to operate and reduce the operator's arm and shoulder's workload. The easy handling steering wheel column with tilt adjustment helps to provide the ideal operating position and improve the performance a lot.

## Ergonomic Designed Operation Handler

According to the ergonomic theory, RY forklift works out the best moment arm of force, to have the operation handler in the best position. This can provide the operator with the best comfort of operation and also increase the better visibility.

#### **Excellent Visibility**

- Newly designed backrest and fork carriage with excelled fork tip visibility.
- Newly designed overhead guard with wide upward visibility.
- Super wide view mast with hiden hose design dramatically improves the front and lifting visibility, ensuring the safety of operation.

#### **Low Vibration & Noise**

Full AC system of motors and controller reduces the noise dramatically. The RY forklift also reduces noise harmful to the operator and environment by treatment of hydraulic system.

## **Great Comfort and Productivity**

Taking ergonomic design into fully consideration, RY forklift enlarges the foot operation space by 20% compared to conventional forklifts to provide operators with a surprisingly comfortable way to get through each working minute.

#### **Multifunctional LCD Display Meter**

The large and easy-to-see Multifunctional LCD display meter can have the operator check on all operational status at a glance. The key components and connectors have been protected to meet rain-proof and dust-proof level.

# HIGH EFFICIENCY & PRODUCTIVITY

#### **Faster Lifting & Lowering Speed**

Considering safety and energy-saving, RY forklift attaches close attention to the development of hydrualic system, and increases lifting and lowering speed to ensure the productivity.

### **Precisely Steering**

The new axle provides wider steering angles to 85 degree to present a superior smart turning radius of RY forklift, and plus the compact design, RY forklift can navigate the narrow and conjested space.

#### **Higher Acceleration Ability**

20% higher acceleration ability, surprisingly shortens the working time at the same working distance and dramatically improves the working efficiency.

## Superior Intelligent Control System

This device can adjust the lifting & lowering speed, travelling speed, acceleration & driving brake time according to different working condition, in order to improve the working efficiency and the comfort of the operator.

# Faster & Safer Battery Change

With side-door battery change design, the battery can be easily taken out from side by using a pallet truck, stacker or forklift. Compare to conventional forklifts which needs to take battery from top of the overhead guard, RY forklift battery change is faster, easier and safer.

### **Regeneration System**

RY forklifts are adopted new energy-saving system. When forklift slowing down during travel, or parking, or braking or driving on the ramp during working, the battery will get recharged and can save energy in order to improve working efficiency by prolonging working hours.

#### **SAFETY**

#### **Low Truck Gravity**

According to the Gravity Balance Principle, low gravity design is applied to RY Forklift to ensure the stable and safe operations.

#### **Integral Heavy Duty Chassis**

An integral heavy duty chassis provides the driver with 20% more protection from falling loades.

#### **Steering Self-control Device**

RY 4-wheel battery forklift can adjust travelling speed according to the turning angle with steering self-control device. It can reduce some accidents due to high travelling speed at a bigger turnning angle, ensuring more safety.

#### Mast Intelligent Buffering System

With intelligently declining buffer sensor on the two ends of the cylinder, the falling speed of the fork slows down automatically before it is 10cm from the ground, and the lifting speed to the top also slows down to avoid quick hit on the top, it super increases the safety of the goods and forklifts.

#### Operator Presense Security System

With operator presense security system, RY forklift can have the forklift stop moving forward when the operator leaves the seat which ensure the safety of goods and people around at emergency situation.

### **Fuzzy Logic Acceleration Control**

With this system, RY 4-wheel battery forklift enables the operator very accurate forklift truck control. A forklift truck acceleration curve is selected according to the speed with which pedal is depressed.

#### Mast Self-locking Device (Option)

For conventional forklifts, when mast extended and forklift powered off, the operator can still lower the mast. For RY forklift, with optional mast self-locking device, the forklift will be locked and lifting & lowering can not be operated in order to avoid from some unexpected accidents.

#### Mast Tilt-controlled Device (Option)

With mast tilt-controlled device, RY forklift can decelerate as the lifting height increase when the tilt angle over 3M. Thus, it can prevent the cargo from falling when lifting and avoid unnecessary loss and accidents.

### Parking Brake Warning Buzzer (Option)

An automatic-style parking brake adds to the convinience and safety. The warning buzzer will sound when the operator leaves the seat without parking the forklift.

# SUPERIOR & ECONOMIC SERVICEABILITY

#### **Open Structural Design**

The open structural design combined with the location of different system of forklift, RY forklift engineers design this forklift with an idea to assemble & disassemble forklift from different ways. This design dramatically improves the serviceablity and lowers the service labor cost.

#### **Easy Service & Maintenance**

The bolt mounted foot step cover can be easily taken off to do inspection and service.

#### **Reliable Hydraulic System**

With reliable hydraulic design and components, the hydraulic components are with high durability which can lower the cost in repair and replacement.

#### **Malfunction Diagnose**

RY 4-wheel battery forklifts are equipped with the central controller system and divided function system. When there is any malfunction happens, RY forklift will present wrong code and warning. The operator can tell the reason of the malfuction easily and then to service the truck more accurate and faster.

#### **RELIABLE RY FORKLIFT**

#### Reliable Forklift Quality

With the international testing standard,more reliable supplier chain, higher quality control to ensure the stability and quality of forklifts.

#### Perfect After Sales Service System

With perfect after sales service and I-NET system, RY forklift can analyze each forklift issue easier, faster and more accurate.

#### **Comprehensive Parts Supply System**

Parts supply system complied with multifunctional parts warehouse and I-NET system, RY forklift can provide clients with different type spare parts in time and accuracy.

#### Experienced Technical Support Team

There are very experienced technical support team in RY forklift to provide professional training to clients from different country.

#### STANDARD EQUIPMENT

#### **Efficiency and Stability System**

ZAPI Controller,Full AC System Swerve & Speed Proportion Control Device 2-Stage 3m Wide View Mast Acceleration Curve Memory Function

#### High Performance and Durability System

SHIMADZU Multi-way Control Valve Hawker Battery 48-volt System

#### **Regenerative Braking System**

#### **Drivability**

Adjustable Steering Wheel
Cup Holder
Luxurious Floor Mat
Large Floorboard
Luxurious Accelerator and Brake Pedal
Accessible Battery Cover

## Maintenance Friendly Standard

ZAPI-SMART Display Meter Self-diagnose Indicator NOK Hydraulic Seals Side Romoval Battery Change Device

#### Safety System

Multi-Functional Combined Switch
Emergency Switch
Seat Sensor
Multi-Functional Safe Seat
Mast Intelligent Buffering System
Integral Covering
Bar Type Forks
Load Backrest
Front & Rear Pneumatic Tyres
2nd Valve & Pipe
Rearview Mirror
Buzzer
Electric Horn

Excellent Water-proof Components
Excellent Dust-proof Components
RY Label
Reverse Alarming Light
Front Combined Lamp
Rear Combined Lamp
Tool Box
Operation Manual
Maintenance Manual

Spare Parts Manual

Inspection Certificate

### **OPTIONAL EQUIPMENT**

#### **Mast Variations**

2-Stage Full Free Wide View Mast 3-Stage Full Free Wide View Mast

#### Valve & Pipe

3rd Valve & Pipe 4th Valve & Pipe

#### **Attachment**

Cascade Side Shift Integrative Side Shift Special Attachments

# Efficiency and Stability System

Joy Stick Automatic Water Filling System

#### **Safety System**

Mast Locking System Mast Top Limited System No-marking Solid Tyre Fork Extensions Extended Forks
Widen Backrest or Carriage
Fire Extinguisher
Suspension Seat
Large Capacity Battery
Battery Charger
Fast Battery Charger
Camera & Display
Seat Belt Alarming Device
Handbrake Alarming Device
Cabin
Cold Storage Type



**ROYAL FORKLIFT (JIANGSU) CO., LTD.** 





