

## Features

| Truck                                                                                    | Standard | Options |
|------------------------------------------------------------------------------------------|----------|---------|
| 48V permanent magnet synchronous drive motor                                             | ●        |         |
| Hydraulic power unit                                                                     | ●        |         |
| PU drive wheel                                                                           | ●        |         |
| 1350mm fork length                                                                       | ●        |         |
| 570mm outside fork width                                                                 | ●        |         |
| Lifting weight limit: 2.0t                                                               | ●        |         |
| Soft landing (only available for duplex mast)                                            | ●        |         |
| Balance wheels                                                                           | ●        |         |
| Double load wheels                                                                       | ●        |         |
| Fork lift & lower adopts stepless speed regulating                                       | ●        |         |
| Different length of forks                                                                |          | ○       |
| Different width of outside fork                                                          |          | ○       |
| Different mast lifting heights                                                           |          | ○       |
| 48V/105Ah lithium battery (EVE)                                                          | ●        |         |
| 48V/125Ah lithium battery (CATL)                                                         |          | ○       |
| Load basket                                                                              |          | ○       |
| Controls and instruments                                                                 |          |         |
| Interactive meter                                                                        | ●        |         |
| Multi-function tiller                                                                    | ●        |         |
| PIN code access                                                                          | ●        |         |
| USB power supply                                                                         | ●        |         |
| Key switch                                                                               |          | ○       |
| Electric steering (stand-on type)                                                        | ●        |         |
| Systech controller                                                                       | ●        |         |
| Safety                                                                                   |          |         |
| Emergency disconnect switch                                                              | ●        |         |
| Turning deceleration (stand-on type)                                                     | ●        |         |
| Mast protection                                                                          |          | ○       |
| Horn                                                                                     | ●        |         |
| Other                                                                                    |          |         |
| 48V/20A charger                                                                          |          | ○       |
| 48V/50A charger                                                                          |          | ○       |
| Lithium battery (48V/105Ah EVE) with the on-board charger (48V/20A) (Excluding model F2) |          | ○       |



# FORX

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**X SERIES**

HI-RANGE ELECTRIC STACKER  
WITH LITHIUM POWER

With capacity of 1,200 to 2,000kg

# X SERIES HI-RANGE ELECTRIC STACKER

X series Hi-Range Electric stackers are a new generation of products newly developed by Hangcha for warehousing and logistics applications. Using the advanced permanent magnet brushless drive technology and equipped with a new 48V system, the products have advanced performance, comfortable, safe and reliable operations and low use and maintenance costs, and are ideal tools for loading, unloading and handling palletized goods in warehouses, supermarkets and workshops.

**48V**  
VOLTAGE  
WITH  
PERMANENT MAGNET  
SYNCHRONOUS DRIVE MOTOR



## RUGGED ON THE OUTSIDE.

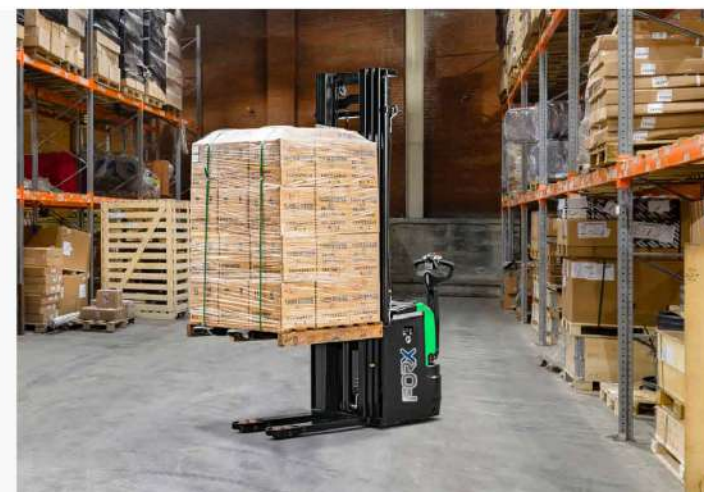
The X series Hi-Range Electric stackers adopts a professional industrial design of exterior and a series family design. The vehicle has a smooth vivid profile and a fully ergonomic design, following the latest exterior design trend.

Made of high-strength steel plates that are molded by stamping, the vehicle exterior is robust, durable and high-grade, and meets environmental protection requirements.



## SIMPLE OPERATION

System Stepless lifting and descending speed regulation is provided for the standard configuration, to and spillage more precise fork control and more stable goods lifting and descending.



The electronic steering provided for the standard configuration enables easier and more flexible operation.



## HIGH PERFORMANCE

- With high power drive motor, provides fast travel speed and good gradeability.
- The permanent magnet synchronous drive system has excellent performance and low energy consumption. The 48V power supply system has less heat generated.
- With the VCU control, the vehicle can be controlled accurately, stably and more efficiently.



(Option) Lithium battery with the on-board charger [48V, 20A]  
[Excluding model F2]

| Pedestrian type |                                             | Stand-on type |                                            |
|-----------------|---------------------------------------------|---------------|--------------------------------------------|
|                 | <b>6.0</b> km/h<br>Travel speed (laden)     |               | <b>9.0</b> km/h<br>Travel speed (laden)    |
|                 | <b>8.0</b> %<br>Gradeability (laden) [1.6t] |               | <b>10</b> %<br>Gradeability (laden) [1.6t] |

# ENJOY YOUR WORK.

- Optimized designing structure to offer a good visibility and easy entrance of the pallet.
- The compact body and big rounded design provide an ideal operation in limited space, and the wedge designed chassis greatly increases the passing ability.



The standing driving pedal with shock-absorbing design significantly improves standing driving comfort and reduces long-time driving fatigue.



Customer can choose different width of outside fork and length of forks to fit variable pallet.

## NEW TILLER

With the newly developed compact and stylish tiller, all operations can be completed with one hand.



PIN code access

Displayed turtle speed function applied to move slowly and helps to stack goods in narrow spaces.



## MAINTENANCE

- Maintenance-free permanent magnet synchronous motor.
- The fault information can be checked directly via the interactive instruments instead of the manual.
- Rear cover can be completely open, operator can see all the components, so the maintenance is very convenient.
- All shafts installed lubricated shaft sleeve and oil cup, provide convenient maintenance and long service life.



## MORE PROTECT

- With the four-point low center of gravity design and a high-strength steel frame structure, the vehicle frame has a large residual load capacity and a long service life.
- Using non-contact proximity switch, it can provide long life and reliable operation.
- H-type mast profile section to provide more stable and rigid performance.
- The battery is reliably fixed and the battery cover is supported by soft materials, so that the vibration and noise generated during the operation of the vehicle are reduced.



Pedestrian type use the new design drive system, the drive motor will not accompany the tiller rotation, it can keep all the cable connect to the drive motor avoid being bent.



With a low noise and low vibration hydraulic power unit to enable stable and reliable lifting and descending.



The power plug is fixed on the truck body to avoid damage from battery installation.



Punch-formed forks to provide more strength and tip guide to provide higher efficient operation.



Water-proof plugs and connectors applied to provide a reliable protection to electric system.

#### With three braking types:

Releasing brake, reversing brake and emergency brake, the driving safety has been ensured.



The applied slope anti-slip function ensures the safety of the operation.



The emergency button on the tiller head can effectively avoid the harm to the driver.



## ADVANCED SAFETY FEATURES

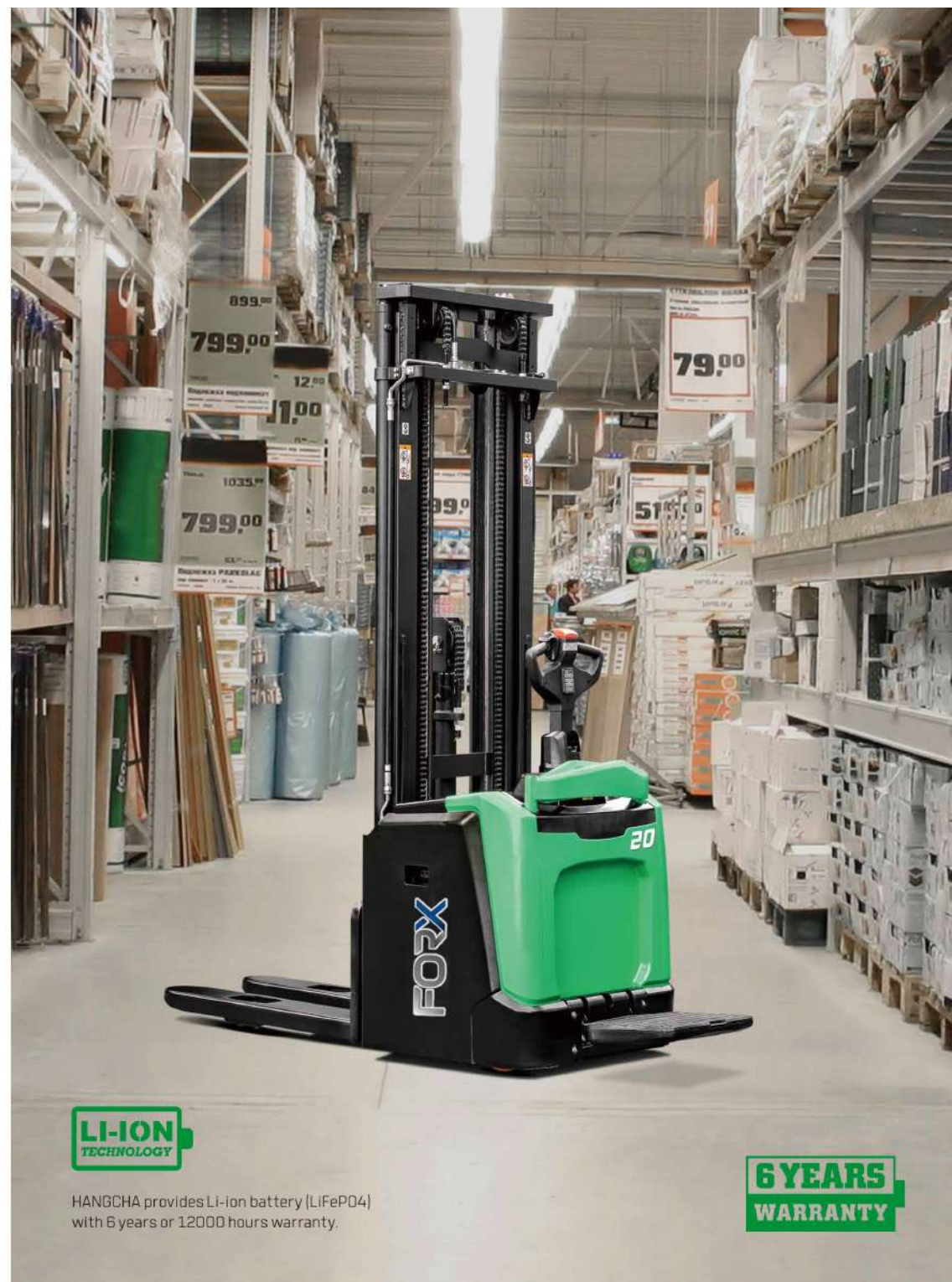
- 

After fork lifting 500mm.
  - 

Decrease speed when turning
  - 

Soft Landing (Lift)
  - 

Soft Landing (Lowering)
  - 
- Travel speed will be automatically reduced after fork lifting 500mm.
  - Turning speed is automatically reduced when steering only for stand-on.
  - A lifting soft landing is provided for the standard configuration so as to ensure the safety of the vehicle when the fork is lifted to the top. (only available for duplex mast)
  - It has an intelligent soft landing that automatically slows down the lowering speed when the fork is less than 100mm above the ground, effectively protecting cargo safety. (only available for duplex mast)
  - For the standard configuration, a function of stopping lifting when the lifting height reaches the limit of 1.8m and resuming the lifting after the guardrails are retracted is provided to facilitate personnel to escape when high-position goods fall.



**LI-ION**  
TECHNOLOGY

HANGCHA provides Li-ion battery (LiFePO4) with 6 years or 12000 hours warranty.

**6 YEARS**  
WARRANTY

# LITHIUM POWERED

## EMPOWER YOURSELF WITH THE BEST



Li  
Lithium

POWER THE POSSIBILITIES  
RELIABLE LITHIUM-ION TECHNOLOGY



## LITHIUM BATTERY ADVANTAGES



### Long service life

4000 full charging cycles with at least 75% residual capacity.



### Return on investment

Add flexibility to your operation, cost-saving in the long term, increased efficiencies.



### Maintenance free

No topping up of water or checking acid levels.



### High energy density

The high energy density of the Li-ion battery ensures long working times and increases the high availability.



### Cold area application

Li-ion batteries maintain high performance at temperatures below freezing.



### High safety and reliability

Intelligent battery management monitoring every important function, no emission of battery gasses.



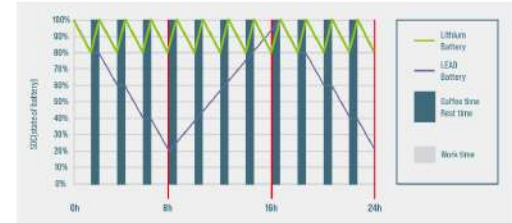
### Opportunity charging

Full performance during several shifts thanks to effective interim charging.

## FEATURES & BENEFITS THE DIFFERENCE

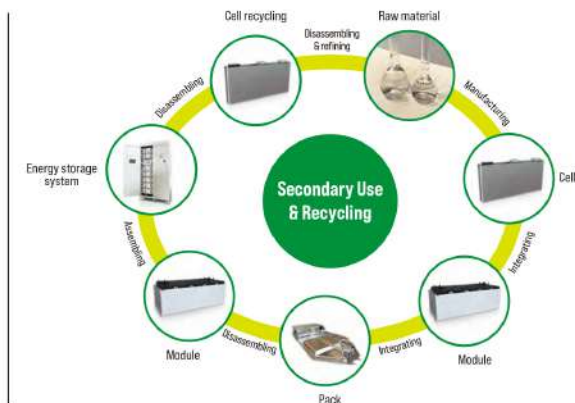
### Efficiency

By quick opportunity charging any downtime, such as a lunch break, can be efficiently used and the battery is recharged in a very short period of time. Interim charging does not affect the battery service life.



### Safety

- / Intelligent battery management monitoring every important function.
- / Higher user safety, thanks to acid-free use.
- / User friendly due to avoided battery change.
- / No emission of battery gasses.



### QUESTION 1

Q: What are the characteristics of lithium batteries, especially when used in high and low temperature environments?

Charging temperature: -30°C - 65°C  
Discharge temperature: -30°C - 65°C  
Storage environment temperature: -30°C - 65°C

After the truck key switch is closed, the instrument battery condition needs to be checked:

1. Confirm that there is no battery system alarm message on the instrument panel.
2. Please check the remaining power before use. It is recommended to use the SOC between 50% and 100%.
3. If the SOC is lower than 20%, it is not recommended to continue using it. Please charge it as soon as possible.

### QUESTION 2

Q: What is the charging time and usage time calculation of forklift lithium battery?

1. Available power of lithium battery (kWh) = rated voltage \* rated power \* 90% (To avoid over-discharge damaging the battery, the forklift is equipped with low power protection (less than 10%).)
  2. Charging time (h) = rated capacity of lithium battery (Ah) \* 90% / charger output current (A).
  3. The power consumed for charging (kWh) = the available power of the lithium battery \* 93% (the charging efficiency of the charger is calculated as 93%).
  4. Usage time (h) = available power of lithium battery / energy consumption data.
- For specific energy consumption values, please refer to the technical table on the sharing platform.

### QUESTION 3

Q: How does Hangcha BMS work to ensure the safety of the lithium battery?

HANGCHA BMS (battery management system) can monitor the cells at all times. As a result, hangcha lithium power is the reliable solution.



#### Battery Safety Management:

Overcharge / over discharge protection  
Overcurrent / over-temperature / low-temperature protection  
Multi-level fault diagnosis protection  
Double fault monitoring



#### Battery Parameter Detection:

Battery voltage detection and analysis  
Battery current detection and analysis  
Battery temperature detection and analysis



#### Equilibrium Management:

Equalization based on voltage mode  
Equalization based on time mode  
Equalization based on battery cell SOC  
Active / passive equalization optional



#### Other Features:

Low cost, low power consumption  
Historical data record  
Flexible cascade expansion  
CRC data validation

1.2t Mast Specification

| Type                              | Max. lifting height ft | Ground clearance, Fork (ft-inch) | Lowered height ft | Extended height ft | Free lift |
|-----------------------------------|------------------------|----------------------------------|-------------------|--------------------|-----------|
| Double cylinder, duplex with view | mm                     | mm                               | mm                | mm                 | mm        |
|                                   | 2100 <sup>1</sup>      | 2100                             | 1640              | 2550               | 90        |
|                                   | 2500 <sup>2</sup>      | 2500                             | 1740              | 2950               | 90        |
|                                   | 2700                   | 2700                             | 1840              | 3150               | 90        |
|                                   | 3000                   | 3000                             | 1890              | 3450               | 90        |
| Quadrupole, free with view        | mm                     | mm                               | mm                | mm                 | mm        |
|                                   | 2500                   | 2500                             | 1790              | 2950               | 90        |
|                                   | 2700                   | 2700                             | 1890              | 3150               | 90        |
|                                   | 3000                   | 3000                             | 1940              | 3450               | 90        |
|                                   | 3600                   | 3600                             | 2090              | 4050               | 120       |
| Triple full free with view        | mm                     | mm                               | mm                | mm                 | mm        |
|                                   | 2700 <sup>1</sup>      | 2700                             | 1840              | 3150               | 100       |
|                                   | 2900                   | 2900                             | 1890              | 3350               | 100       |
|                                   | 3000                   | 3000                             | 1940              | 3450               | 100       |
|                                   | 3600                   | 3600                             | 2090              | 4050               | 130       |

Note: 1) Optional feature for battery side roll-out was necessary, it can make changing the battery easier

1.4-1.6t Mast Specification

| Type                              | Max. lifting height ft | Ground clearance, Fork (ft-inch) | Lowered height ft | Extended height ft | Free lift |
|-----------------------------------|------------------------|----------------------------------|-------------------|--------------------|-----------|
| Double cylinder, duplex with view | mm                     | mm                               | mm                | mm                 | mm        |
|                                   | 2700 <sup>1</sup>      | 2700                             | 1640              | 2640               | 90        |
|                                   | 2900                   | 2900                             | 1740              | 2840               | 90        |
|                                   | 3000                   | 3000                             | 1840              | 2940               | 90        |
|                                   | 3300                   | 3300                             | 1890              | 3240               | 90        |
| Quadrupole, free with view        | mm                     | mm                               | mm                | mm                 | mm        |
|                                   | 2700                   | 2700                             | 1690              | 2640               | 90        |
|                                   | 2900                   | 2900                             | 1790              | 2840               | 90        |
|                                   | 3000                   | 3000                             | 1890              | 2940               | 90        |
|                                   | 3600                   | 3600                             | 2040              | 3540               | 120       |
| Triple full free with view        | mm                     | mm                               | mm                | mm                 | mm        |
|                                   | 2700 <sup>1</sup>      | 2700                             | 1690              | 2640               | 90        |
|                                   | 2900                   | 2900                             | 1790              | 2840               | 90        |
|                                   | 3000                   | 3000                             | 1890              | 2940               | 90        |
|                                   | 3600                   | 3600                             | 2040              | 3540               | 120       |

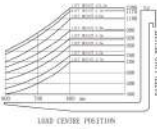
Note: 1) Optional feature for battery side roll-out was necessary, it can make changing the battery easier

2.0t Mast Specification

| Type                              | Max. lifting height ft | Ground clearance, Fork (ft-inch) | Lowered height ft | Extended height ft | Free lift |
|-----------------------------------|------------------------|----------------------------------|-------------------|--------------------|-----------|
| Double cylinder, duplex with view | mm                     | mm                               | mm                | mm                 | mm        |
|                                   | 2700 <sup>1</sup>      | 2700                             | 1690              | 2690               | 90        |
|                                   | 2900                   | 2900                             | 1790              | 2890               | 90        |
|                                   | 3000                   | 3000                             | 1890              | 2990               | 90        |
|                                   | 3300                   | 3300                             | 1940              | 3290               | 90        |
| Quadrupole, free with view        | mm                     | mm                               | mm                | mm                 | mm        |
|                                   | 2700                   | 2700                             | 1740              | 2690               | 90        |
|                                   | 2900                   | 2900                             | 1840              | 2890               | 90        |
|                                   | 3000                   | 3000                             | 1940              | 2990               | 90        |
|                                   | 3600                   | 3600                             | 2090              | 3590               | 120       |
| Triple full free with view        | mm                     | mm                               | mm                | mm                 | mm        |
|                                   | 2700 <sup>1</sup>      | 2700                             | 1740              | 2690               | 90        |
|                                   | 2900                   | 2900                             | 1840              | 2890               | 90        |
|                                   | 3000                   | 3000                             | 1940              | 2990               | 90        |
|                                   | 3600                   | 3600                             | 2090              | 3590               | 120       |

Note: 1) Optional feature for battery side roll-out was necessary, it can make changing the battery easier

Rated Capacities and Load Centres Graph

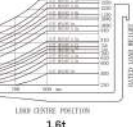


1.2t

Rated Capacities and Load Centres Graph

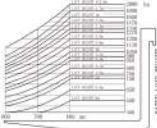


1.4t



1.6t

Rated Capacities and Load Centres Graph



2.0t

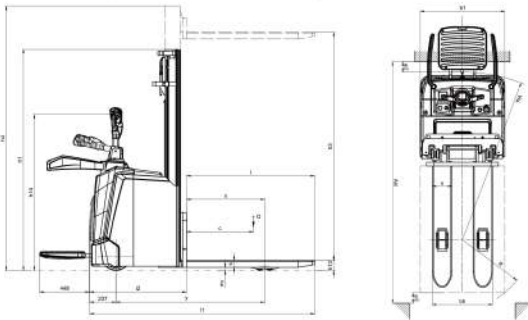
Technical data

| Type   | Description                                                        | HANSCHA GROUP CO., LTD.                        |                                                |                                                |                                                |
|--------|--------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|
|        |                                                                    | C0012-XT15-S<br>C0015-XT15-SF<br>C0016-XT15-SH | C0014-XT15-S<br>C0014-XT15-SF<br>C0014-XT15-SH | C0013-XT15-S<br>C0016-XT15-SF<br>C0016-XT15-SH | C0002-XT15-S<br>C0005-XT15-SF<br>C0002-XT15-SH |
| 1.1    | Manufacturer (abbreviation)                                        | HANSCHA GROUP CO., LTD.                        |                                                |                                                |                                                |
| 1.2    | Manufacturer's type designation                                    | Electric                                       |                                                |                                                |                                                |
| 1.3    | Drive electric (battery type, main, ...), diesel, petrol, fuel gas | Electric                                       |                                                |                                                |                                                |
| 1.4    | Operator type: hand, pedestrian, standing, seated, order-picker    | Standing                                       |                                                |                                                |                                                |
| 1.5    | Rated capacity / rated load                                        | kg                                             | 1200                                           | 1400                                           | 1600                                           |
| 1.6    | Load centre distance                                               | mm                                             | 600                                            | 800                                            | 1000                                           |
| 1.8    | Load distance, centre of drive axle to fork                        | mm                                             | 700                                            | 700                                            | 700                                            |
| 1.9    | Wheelbase                                                          | mm                                             | 1200                                           | 1300                                           | 1300                                           |
| 2.1    | Service weight                                                     | kg                                             | 1200                                           | 1200                                           | 1200                                           |
| 2.2    | Axle loading, laden front / rear                                   | kg                                             | 676/1524                                       | 656/1584                                       | 1035/1787                                      |
| 2.3    | Axle loading, unladen front / rear                                 | kg                                             | 840/360                                        | 854/386                                        | 861/389                                        |
| 2.1    | Tyres: solid rubber, superelastic, pneumatic, polyurethane         | PU                                             |                                                |                                                |                                                |
| 3.2    | Tyre size, front                                                   | Ø550-80                                        |                                                |                                                |                                                |
| 3.3    | Tyre size, rear                                                    | Ø63-80                                         |                                                |                                                |                                                |
| 3.4    | Additional wheels (dimensions)                                     | Ø140-55                                        |                                                |                                                |                                                |
| 3.6    | Wheels, number front / rear (x = driven wheels)                    | 1x+1/4                                         |                                                |                                                |                                                |
| 3.6    | Tread, front                                                       | mm                                             | 518                                            | 518                                            | 518                                            |
| 3.7    | Tread, rear                                                        | mm                                             | 385                                            | 385                                            | 385                                            |
| 4.2    | Height, mast lowered                                               | mm                                             | 1840                                           | 1890                                           | 1890                                           |
| 4.3    | Free lift                                                          | mm                                             | 90                                             | 90                                             | 90                                             |
| 4.4    | Lift                                                               | mm                                             | 2700                                           | 2700                                           | 2700                                           |
| 4.5    | Height, mast extended                                              | mm                                             | 3180                                           | 3240                                           | 3240                                           |
| 4.8    | Height (driving position) min. / max.                              | mm                                             | 1170/1400                                      | 1170/1400                                      | 1170/1400                                      |
| 4.15   | Height, lowered                                                    | mm                                             | 90                                             | 90                                             | 90                                             |
| 4.19   | Overall length                                                     | mm                                             | 1880 <sup>1</sup>                              | 2010 <sup>1</sup>                              | 2010 <sup>1</sup>                              |
| 4.20   | Length to face of forks                                            | mm                                             | 834 <sup>1</sup>                               | 889 <sup>1</sup>                               | 889 <sup>1</sup>                               |
| 4.21   | Overall width                                                      | mm                                             | 600                                            | 800                                            | 800                                            |
| 4.22   | Fork dimensions DIN ISO 2333                                       | mm                                             | 80/185/1150                                    | 80/185/1150                                    | 80/185/1150                                    |
| 4.25   | Fork spread                                                        | mm                                             | 370                                            | 370                                            | 370                                            |
| 4.32   | Ground clearance, centre of wheelbase                              | mm                                             | 25                                             | 25                                             | 25                                             |
| 4.34.1 | Aisle width for pallets 1000 x 1200 crossways                      | mm                                             | 2200(1067) <sup>1</sup>                        | 2200(1067) <sup>1</sup>                        | 2200(1067) <sup>1</sup>                        |
| 4.34.2 | Aisle width for pallets 800 x 1200 lengthways                      | mm                                             | 2500(1500) <sup>1</sup>                        | 2500(1500) <sup>1</sup>                        | 2500(1500) <sup>1</sup>                        |
| 4.35   | Turning radius                                                     | mm                                             | 1560(1182)                                     | 1560(1182)                                     | 1560(1182)                                     |
| 5.1    | Travel speed, laden / unladen                                      | km/h                                           | 9/11                                           | 9/11                                           | 9/10                                           |
| 5.2    | Lift speed, laden / unladen                                        | m/s                                            | 0.225/0.47                                     | 0.239/0.4                                      | 0.16/0.34                                      |
| 5.3    | Lowering speed, laden / unladen                                    | m/s                                            | 0.45/0.4                                       | 0.45/0.4                                       | 0.5/0.4                                        |
| 5.8    | Max. gradeability, laden / unladen                                 | %                                              | 30/36                                          | 30/38                                          | 8/16                                           |
| 5.10   | Service brake                                                      | Regenerative                                   | Regenerative                                   | Regenerative                                   | Regenerative                                   |
| 6.1    | Drive motor rating S2 60 min                                       | kW                                             | 2.2                                            | 2.2                                            | 2.2                                            |
| 6.2    | Lift motor rating at S3 35 %                                       | kW                                             | 4.2                                            | 4.2                                            | 4.2                                            |
| 6.4    | Battery voltage / nominal capacity                                 | V/Ah                                           | 48/105                                         | 48/105                                         | 48/105                                         |
| 6.5    | Battery weight                                                     | kg                                             | 60                                             | 60                                             | 60                                             |

Note: 1) According to V002198 standard-220mm, 2)According to V002198 standard-140mm, 3)Triple full free-21mm

⊗ F2 Means the cold storage truck model F2 are suitable for use in cold storage environments down to -30 °C

⊗ A Anti-corrosion protection, the type A is suitable for environments with CS-Land CS-M ratings



Technical data

| Type   | Description                                                        | HANSCHA GROUP CO., LTD.                        |                                                |                                                |                                                |
|--------|--------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|------------------------------------------------|
|        |                                                                    | C0012-XT15-S<br>C0015-XT15-SF<br>C0016-XT15-SH | C0014-XT15-S<br>C0014-XT15-SF<br>C0014-XT15-SH | C0013-XT15-S<br>C0016-XT15-SF<br>C0016-XT15-SH | C0002-XT15-S<br>C0005-XT15-SF<br>C0002-XT15-SH |
| 1.1    | Manufacturer (abbreviation)                                        | HANSCHA GROUP CO., LTD.                        |                                                |                                                |                                                |
| 1.2    | Manufacturer's type designation                                    | Electric                                       |                                                |                                                |                                                |
| 1.3    | Drive electric (battery type, main, ...), diesel, petrol, fuel gas | Electric                                       |                                                |                                                |                                                |
| 1.4    | Operator type: hand, pedestrian, standing, seated, order-picker    | Pedestrian                                     |                                                |                                                |                                                |
| 1.5    | Rated capacity / rated load                                        | kg                                             | 1200                                           | 1400                                           | 1600                                           |
| 1.6    | Load centre distance                                               | mm                                             | 600                                            | 800                                            | 1000                                           |
| 1.8    | Load distance, centre of drive axle to fork                        | mm                                             | 700                                            | 700                                            | 700                                            |
| 1.9    | Wheelbase                                                          | mm                                             | 1200                                           | 1300                                           | 1300                                           |
| 2.1    | Service weight                                                     | kg                                             | 1200                                           | 1200                                           | 1200                                           |
| 2.2    | Axle loading, laden front / rear                                   | kg                                             | 625/1595                                       | 685/1755                                       | 740/1860                                       |
| 2.3    | Axle loading, unladen front / rear                                 | kg                                             | 885/395                                        | 700/340                                        | 700/340                                        |
| 2.1    | Tyres: solid rubber, superelastic, pneumatic, polyurethane         | PU                                             |                                                |                                                |                                                |
| 3.2    | Tyre size, front                                                   | Ø550-80                                        |                                                |                                                |                                                |
| 3.3    | Tyre size, rear                                                    | Ø63-80                                         |                                                |                                                |                                                |
| 3.4    | Additional wheels (dimensions)                                     | Ø140-55                                        |                                                |                                                |                                                |
| 3.5    | Wheels, number front / rear (x = driven wheels)                    | 1x+1/4                                         |                                                |                                                |                                                |
| 3.6    | Tread, front                                                       | mm                                             | 518                                            | 518                                            | 518                                            |
| 3.7    | Tread, rear                                                        | mm                                             | 385                                            | 385                                            | 385                                            |
| 4.2    | Height, mast lowered                                               | mm                                             | 1840                                           | 1890                                           | 1890                                           |
| 4.3    | Free lift                                                          | mm                                             | 90                                             | 90                                             | 90                                             |
| 4.4    | Lift                                                               | mm                                             | 2700                                           | 2700                                           | 2700                                           |
| 4.5    | Height, mast extended                                              | mm                                             | 3180                                           | 3240                                           | 3240                                           |
| 4.8    | Height (driving position) min. / max.                              | mm                                             | 792/1296                                       | 792/1296                                       | 792/1296                                       |
| 4.15   | Height, lowered                                                    | mm                                             | 90                                             | 90                                             | 90                                             |
| 4.19   | Overall length                                                     | mm                                             | 1934 <sup>1</sup>                              | 1934 <sup>1</sup>                              | 1934 <sup>1</sup>                              |
| 4.20   | Length to face of forks                                            | mm                                             | 784 <sup>1</sup>                               | 784 <sup>1</sup>                               | 784 <sup>1</sup>                               |
| 4.21   | Overall width                                                      | mm                                             | 800                                            | 800                                            | 800                                            |
| 4.22   | Fork dimensions DIN ISO 2333                                       | mm                                             | 80/185/1190                                    | 80/185/1190                                    | 80/185/1190                                    |
| 4.25   | Fork spread                                                        | mm                                             | 370                                            | 370                                            | 370                                            |
| 4.32   | Ground clearance, centre of wheelbase                              | mm                                             | 25                                             | 25                                             | 25                                             |
| 4.34.1 | Aisle width for pallets 1000 x 1200 crossways                      | mm                                             | 2200 <sup>1</sup>                              | 2200 <sup>1</sup>                              | 2200 <sup>1</sup>                              |
| 4.34.2 | Aisle width for pallets 800 x 1200 lengthways                      | mm                                             | 2500 <sup>1</sup>                              | 2500 <sup>1</sup>                              | 2500 <sup>1</sup>                              |
| 4.35   | Turning radius                                                     | mm                                             | 1560                                           | 1560                                           | 1560                                           |
| 5.1    | Travel speed, laden / unladen                                      | km/h                                           | 6/6                                            | 6/6                                            | 6/6                                            |
| 5.2    | Lift speed, laden / unladen                                        | m/s                                            | 0.225/0.47                                     | 0.195/0.4                                      | 0.16/0.34                                      |
| 5.3    | Lowering speed, laden / unladen                                    | m/s                                            | 0.45/0.4                                       | 0.45/0.4                                       | 0.5/0.4                                        |
| 5.8    | Max. gradeability, laden / unladen                                 | %                                              | 6/16                                           | 6/16                                           | 6/16                                           |
| 5.10   | Service brake                                                      | Regenerative                                   | Regenerative                                   | Regenerative                                   | Regenerative                                   |
| 6.1    | Drive motor rating S2 60 min                                       | kW                                             | 2.2                                            | 2.2                                            | 2.2                                            |
| 6.2    | Lift motor rating at S3 35 %                                       | kW                                             | 4.2                                            | 4.2                                            | 4.2                                            |
| 6.4    | Battery voltage / nominal capacity                                 | V/Ah                                           | 48/105                                         | 48/105                                         | 48/105                                         |
| 6.5    | Battery weight                                                     | kg                                             | 60                                             | 60                                             | 60                                             |

Note: 1) According to V002198 standard-220mm, 2)According to V002198 standard-140mm, 3)Triple full free-21mm

