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# A Series Electric Lithium-ion Three-Wheel High Level Order Picker

with capacities of 3,000lbs



INNOVATIVE LITHIUM-ION



**Making Material Handling Easier**  
SINCE 1956

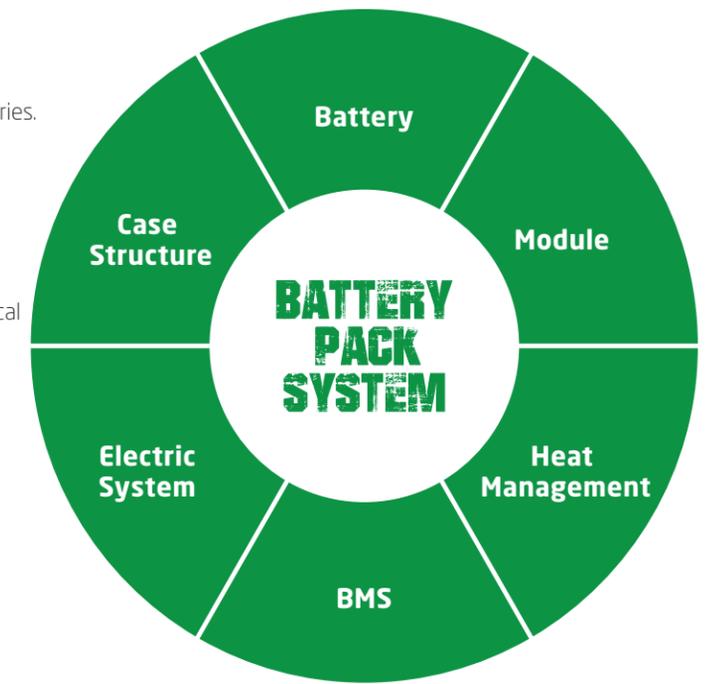
# LET THE LIUM POWER BE FREED



# INNOVATIVE SOLUTIONS NEW POWER NOW

Lithium-ion technology (Lithium Iron-Phosphate), was developed jointly by HANGCHA and CATL for use in material handling equipment applications. These innovative and reliable battery cells and modules are manufactured to the highest standard by CATL exclusively for HANGCHA's forklift line.

- / **Battery Technology:** We use square lithium iron phosphate batteries. These are the same type of batteries used in new electric vehicles.
- / **Design:** The module uses a sturdy and lightweight aluminum alloy frame. It is also designed to provide excellent heat dissipation.
- / **Safe and Effective:** Charging efficiency as high as 98% and the thermal runaway temperature is at 600 °C and above.
- / **Adapted to Low Temperatures:** Comes standard with an electrical heating feature, ensuring normal operation in low temperatures.
- / **Quick Charging:** Fully charges in 2 hours.
- / **Efficient:** Can use opportunity charging to allow for continuous use in multi-shift operations.
- / **Long-Lasting:** 4000 charging cycles with a capacity retention greater than 80%.
- / **Maintenance-Free:** Lithium-ion batteries do not require manual maintenance such as watering.
- / **Green and clean:** The batteries are pollution-free, release zero emissions, and are recyclable.



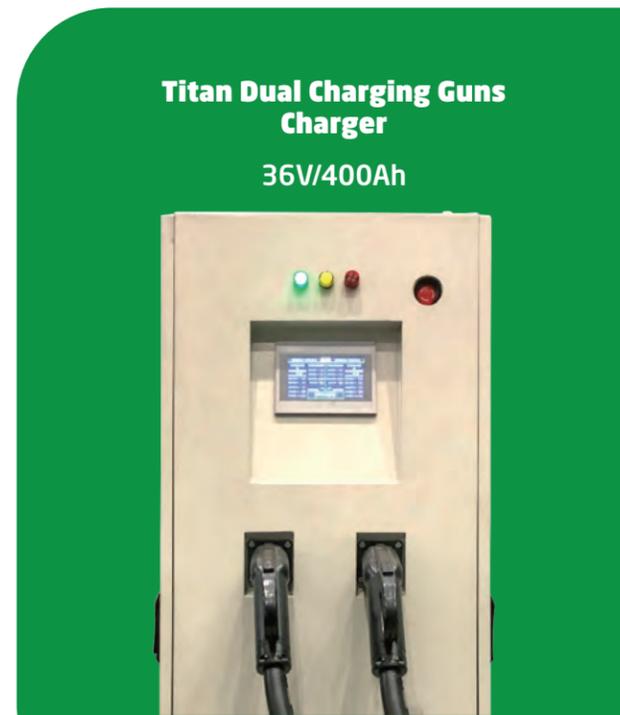
## RAPID CHARGING

Li-Ion  
**2 hours**  
100%

Lead-acid batteries  
**8-10 hours** 100%

**Rapid and opportunity charging ensure continuous availability of material handling equipment**

The chargers allow for fast full charging or boost charging (100 % charge in 2 hours). The lithium-ion batteries are maintenance free and do not require a battery change when used in multi-shift operations. Instead, the batteries can be charged during user breaks and shift changes which allows the forklift to continuously run during multi-shift operations.



HANGCHA PROVIDES UP TO A  
**10 YEAR OR 20000 HOUR** GUARANTEE  
ON THE LITHIUM-ION BATTERY PACKS.



**10 YEAR**  
**WARRANTY**

# A Series Electric Lithium-ion Three-Wheel High Level Order Picker

The A Series Three-Wheel High Level Order Picker is designed to meet order fulfillment needs in narrow aisle environments. This order picker has a comprehensive safety protection system, excellent ergonomics, and an advanced control system. Being reliable, comfortable, safe, and stable, all while providing excellent performance, it is perfect choice for stock picking in a stereoscopic warehouse of 197"-366" in height.

## NARROW-ASLE SOLUTIONS

### High performance

- / The maximum full-load travel speed is 7.5mph. This allows for an increase in productivity.
- / The German ZF gearbox and German Schabmueller AC drive and steering motors provide performance, stability, and are reliable.
- / The AC hydraulic lifting system is highly efficient and maintenance-free.
- / The advanced CURTIS control system provides precise, smooth, and efficient control of the order picker.
- / CANBUS structure allows for the whole vehicle to communicate faster and more reliably.





## Comfort

- / As a part of the standard configuration, a height sensor is provided.
- / Shifting and lifting or lowering of the mast are buffered to enable more comfort.
- / CURTIS multi-function instruments include functions such as mode selection and wheel position. The instruments also clearly display various information about the order picker.

## Safety

- / The full body harness provides protection for the operator.
- / A tilt switch sensor is provided to improve operational safety.
- / The left and right guardrails are equipped with safety switches.
- / The function of proportional speed reduction in corners is equipped as standard to ensure smooth and safe turning.
- / An emergency lowering feature is included standard. This operation can be carried out via the control platform or from the rear of the vehicle, respectively.

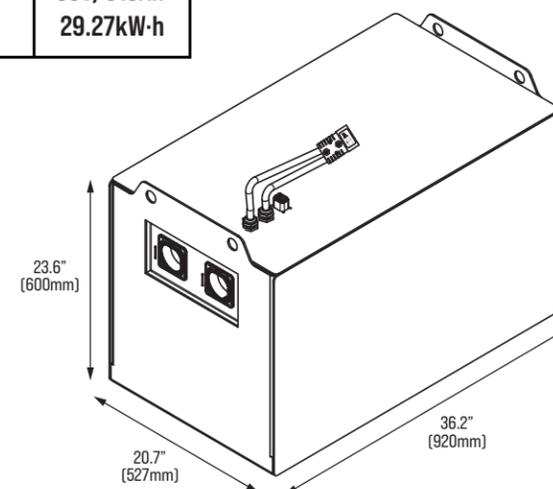
## Reliability

- / The vehicle's frame is robust and reliable thanks to its high-strength steel frame structure.
- / All of the order picker's wires and cables are protected. This greatly improves the reliability of the electrical system.
- / Switches, connectors, instruments, and other key parts are all high-quality products with excellent performance and quality.

## CATL Lithium Iron Phosphate Battery Packs

- / Integrated Battery Management System (BMS) continually monitors energy management and ensures reliable operation.
- / HANGCHA provides these Lithium Iron Phosphate (LiFePO<sub>4</sub>) battery packs with a 10 year or 20,000 hour warranty.
- / See warranty certificate for specific warranty information on the Lithium Iron Phosphate battery packs.

| Standard Battery Capacity |           |
|---------------------------|-----------|
| Battery Capacity (V/Ah)   | 36V/813Ah |
|                           | 29.27kW-h |



The A Series Order Picker provides operators with an unobstructed view contributing to an increase in the operator's confidence at height.



Fully variable lift and lower speeds provide precise control.



The LORD steering gear with torque feedback is provided to enable higher operating safety and operator comfort.



With a safety factor of 10, the mast chain is equipped with a chain safety switch.



The manual-locking pallet clamp works on a wide range of pallets. It also accommodates pallet stringers ranging from 1" to 2" so operators can safely handle any pallet.

## Maintenance

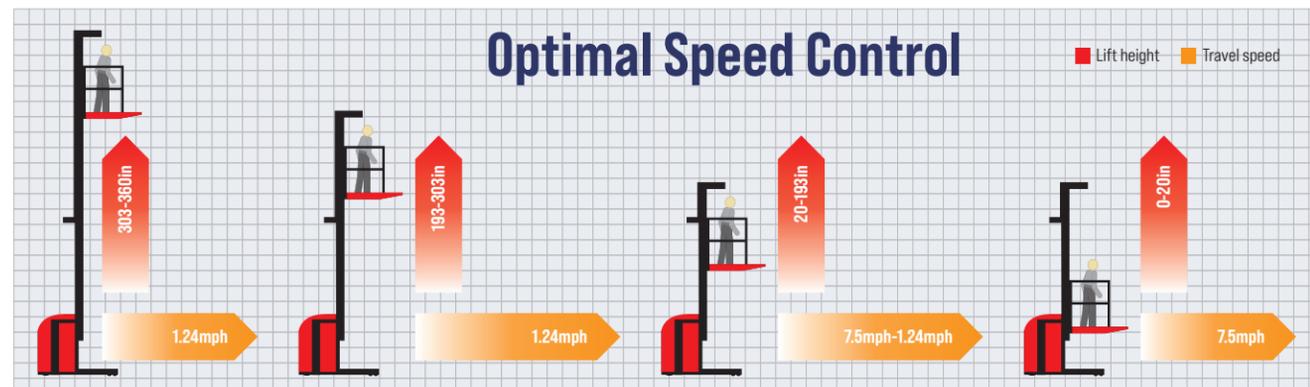
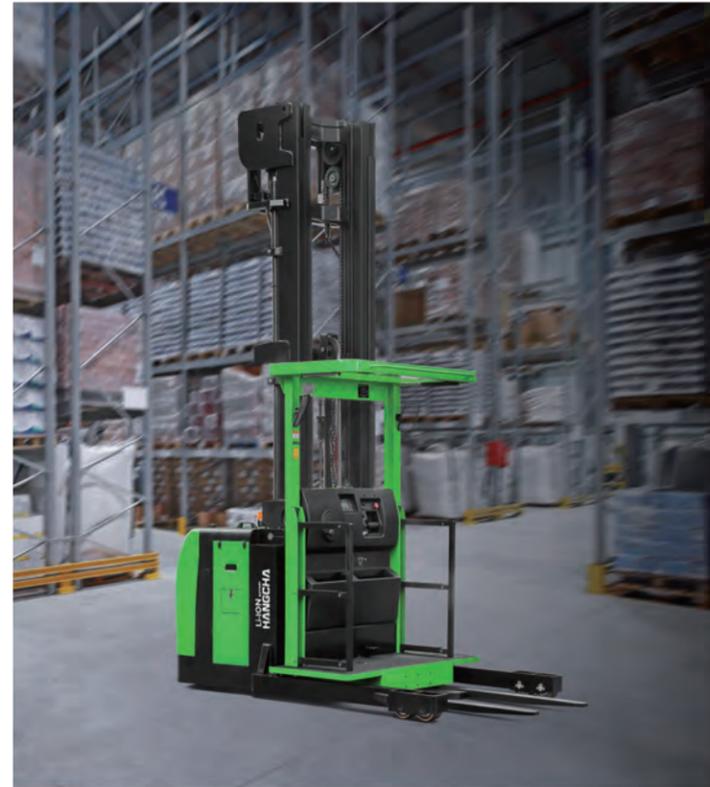
- / The brushless AC motor is maintenance-free. This saves the end-user time and money.
- / The integrated power display, timing, and fault self-diagnosis meter are convenient for maintenance.
- / The rear hood can be easily removed without tools. This is convenient for maintenance of the hydraulic unit, electric control, motor, and other parts.

## Standard Specification

- / 36V Electrical System
- / ZF drive Unit
- / INTORQ Electromagnetic Brake
- / LORD Steering Gear
- / CURTIS AC Motor Controller
- / CURTIS Multi-Function Instrument Display
- / Chain Saftey Switch
- / Guard Rail Switch
- / Reflective Mirror
- / LED Ceiling Light
- / LED Side Light
- / Emergency Cut Off Switch
- / Alarm Light
- / Height Sensor
- / Safety Pedal
- / Tilt Switch
- / Left and Right Guard Rail
- / Electrostatic Belt
- / Electromagnetic Brake
- / Full Body Harness & Energy-Absorbing Tether
- / Pallet Clamp
- / Fully Variable Lift/Lower Controls
- / Manual Emergency Lowering
- / Work Material Storage Compartments
- / Cushioned Mast Stops
- / Cushioned Mast Staging
- / Automatic Return to Center Drive Wheel upon Start-Up
- / Electronic Power Steering
- / Battery Compartment Rollers

## Options

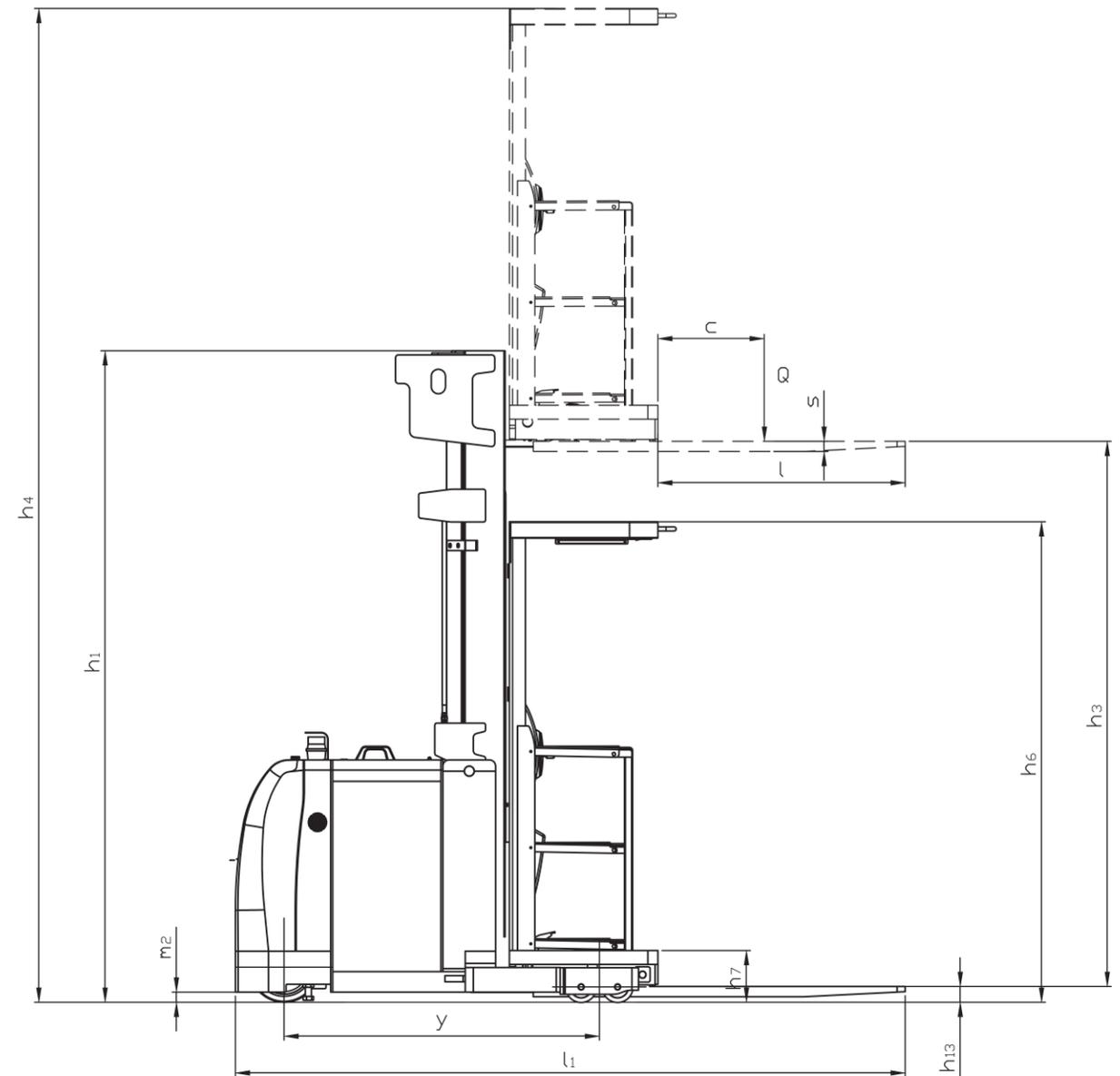
- / Side Roller
- / Blue Light
- / Head Lamp
- / Wire Mesh Screen



The A Series Order Picker is available with the advanced intellispeed system. This system smoothly coordinates travel speeds and load height. Compared to conventional speed control, intellispeed maximizes truck speed as the platform rises, capitalizing on an area of opportunity for providing faster travel between picks.

# A Series Electric Lithium-ion Three-Wheel High Level Order Picker Specification

|                      |   |                        |                            |
|----------------------|---|------------------------|----------------------------|
| Distinguishing Marks | Manufacturer  | HANGCHA GROUP CO.,LTD. |                            |
|                      | HCFA Model  | OPHT13LI               |                            |
|                      | Model   | CJD13-AC2-HNAI         |                            |
|                      | Drive: electric (battery or mains),diesel,petrol,fuel gas   | Electric               |                            |
|                      | Operator Type: hand,pedestrian,standing,seated,order-picker | Order Picker           |                            |
|                      | Rated Capacity/Rated Load                                   | Q(lb/kg)               | 3000/1360                  |
|                      | Load Centre Distance  | c(in/mm)               | 24/600                     |
|                      | Wheelbase   | y(in/mm)               | 61.3/1556                  |
| Weight               | Service Weight(without battery)                             | See table 1            |                            |
| Tires & Chassis      | Tires: solid rubber, superelastic, pneumatic, polyurethane  | Polyurethane           |                            |
|                      | Tire size, front  | in/mm                  | Ø13.5×5.5 Ø343×140         |
|                      | Tire size, rear   | in/mm                  | Ø6×4 Ø150×100              |
|                      | Wheels, number front/rear (× = driven wheels)               | 1×, /4                 |                            |
| Dimensions           | Height, mast lowered  | See table 1            |                            |
|                      | Lift  | See table 1            |                            |
|                      | Height, mast extended                                       | See table 1            |                            |
|                      | Height of Overhead Guard (cabin)                            | h <sub>6</sub> (in/mm) | 92.3/2345                  |
|                      | Standing Height   | h <sub>r</sub> (in/mm) | 10/253                     |
|                      | Height, lowered   | h <sub>u</sub> (in/mm) | 3/75                       |
|                      | Overall Length  | l <sub>1</sub> (in/mm) | 130.1/3305                 |
|                      | Overall Width   | See table 1            |                            |
|                      | Fork Dimensions DIN ISO 2331                                | s/e/l(in/mm)           | 2/4/48 50/100/1220         |
|                      | Width Across Forks  | b <sub>s</sub> (in/mm) | 24-30/610-760              |
| Performance Data     | Ground Clearance, centre of wheelbase                       | m <sub>z</sub> (in/mm) | 2/50                       |
|                      | Turning Radius  | W <sub>a</sub> (in/mm) | 71.3/1810                  |
|                      | Travel Speed, laden/unladen                                 | See table 2            |                            |
|                      | Lift Speed, laden/unladen                                   | fpm mm/s               | 69/94.6 350/480            |
|                      | Lowering Speed,laden/unladen                                | fpm mm/s               | 78.8/78.8 400/400          |
|                      | Gradeability, laden/unladen                                 | %                      | 5/10                       |
| Electric Motor       | Service Brake   | Electromagnetic        |                            |
|                      | Drive Motor Rating S2 60 min                                | hp/kw                  | 8.6/6.4                    |
|                      | Lift Motor Rating at S3 15 %                                | hp/kw                  | 17.2/12.8                  |
|                      | Battery Voltage/Nominal Capacity K5                         | V/Ah                   | 36/813                     |
|                      | Battery Size  | in/mm                  | 36.7×20.7×23.6 931×527×600 |
| Additional Data      | Battery Weight  | lb/kg                  | 715.9/325                  |
|                      | Sound Pressure Level at the Driver's Seat                   | dB(A)                  | 69                         |

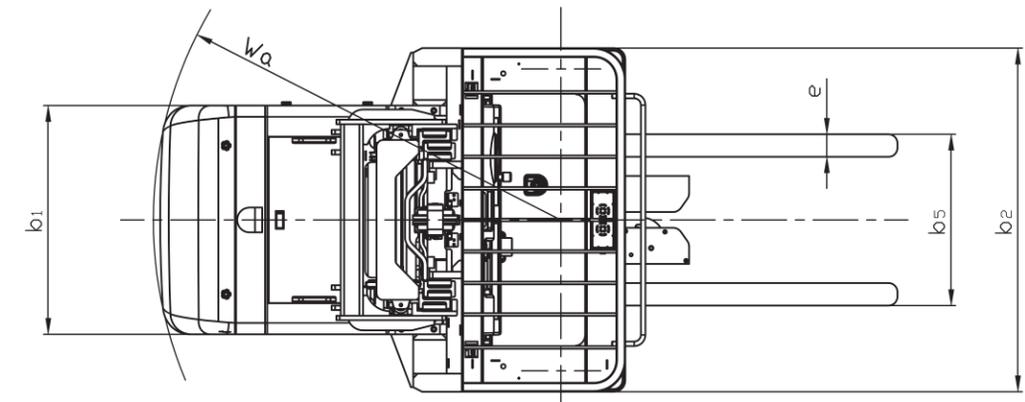


**Table 1**

|       | Lift Height            | Height, mast lowered   | Height, mast extended  | Stand Height, elevated | Service Weight (without battery) | Overall Width                          |
|-------|------------------------|------------------------|------------------------|------------------------|----------------------------------|--|
|       | h <sub>3</sub> (in/mm) | h <sub>u</sub> (in/mm) | h <sub>e</sub> (in/mm) | h <sub>s</sub> (in/mm) | lb/kg                            | b <sub>1</sub> /b <sub>2</sub> (in/mm) |
| N5000 | 197/5000               | 100/2540               | 289/7345               | 206.7/5250             | 8053.5/3656.3                    | 40/42 1015/1220                        |
| N6100 | 240/6100               | 114.4/2905             | 332.5/8445             | 250/6350               | 8307/3771.4                      | 40/42 1015/1220                        |
| N7000 | 275.5/7000             | 126.2/3205             | 368/9345               | 285.4/7250             | 8529.7/3872.5                    | 40/54 1015/1370                        |
| N8000 | 315/8000               | 139.4/3540             | 407.3/10345            | 324.8/8250             | 8759/3976.6                      | 40/54 1015/1370                        |
| N9300 | 366/9300               | 156.3/3970             | 458.5/11645            | 376/9550               | 9056.6/4111.7                    | 40/60 1015/1525                        |

**Table 2**

| Lift Height h <sub>3</sub> in(mm) | Travel Speed mph(km/h) |
|-----------------------------------|------------------------|
| 0-20(0-500)                       | 7.5(12)                |
| 20-193(500-4900)                  | 7.5-1.24(12-2)         |
| 193-303(4900-7700)                | 1.24(2)                |
| 303-366(7700-9300)                | 1.24(2)                |



CJD13-AC2-HNA