

Mast Specification

| Type                              | Fork Lift Height<br>h <sub>3</sub> |      | Mast Lowered<br>h <sub>1</sub> |      | Mast Extended<br>h <sub>4</sub> |      | Free Lift Height |      | Capacity                    |      |
|-----------------------------------|------------------------------------|------|--------------------------------|------|---------------------------------|------|------------------|------|-----------------------------|------|
|                                   |                                    |      |                                |      |                                 |      |                  |      | Load Capacity at 24in/600mm |      |
|                                   |                                    |      |                                |      |                                 |      |                  |      | WRS14Li                     |      |
| Limited Free Lift<br>2 Stage Mast | in                                 | mm   | in                             | mm   | in                              | mm   | in               | mm   | lb                          | kg   |
|                                   | 98.4                               | 2500 | 76.4                           | 1940 | 139.8                           | 3552 | 3.7              | 95   | 3000                        | 1361 |
|                                   | 106.3                              | 2700 | 80.3                           | 2040 | 147.7                           | 3752 | 3.7              | 95   | 3000                        | 1361 |
|                                   | 118.1                              | 3000 | 86.2                           | 2190 | 159.5                           | 4052 | 3.7              | 95   | 3000                        | 1361 |
|                                   | 129.9                              | 3300 | 92.1                           | 2340 | 171.3                           | 4352 | 3.7              | 95   | 3000                        | 1361 |
|                                   | 137.8                              | 3500 | 96.1                           | 2440 | 179.2                           | 4552 | 3.7              | 95   | 3000                        | 1361 |
|                                   | 141.7                              | 3600 | 98.0                           | 2490 | 183.1                           | 4652 | 3.7              | 95   | 2950                        | 1338 |
|                                   | 145.7                              | 3700 | 100.0                          | 2540 | 187.1                           | 4752 | 3.7              | 95   | 2900                        | 1315 |
|                                   | 149.6                              | 3800 | 102.0                          | 2590 | 191.0                           | 4852 | 3.7              | 95   | 2850                        | 1293 |
|                                   | 157.5                              | 4000 | 109.8                          | 2790 | 198.9                           | 5052 | 3.7              | 95   | 2750                        | 1247 |
| Full Free Lift<br>3 Stage Mast    | 169.3                              | 4300 | 115.7                          | 2940 | 210.7                           | 5352 | 3.7              | 95   | 2650                        | 1202 |
|                                   | 177.2                              | 4500 | 119.7                          | 3040 | 218.6                           | 5552 | 3.7              | 95   | 2550                        | 1157 |
|                                   | 137.8                              | 3500 | 77.8                           | 1975 | 179.2                           | 4552 | 36.3             | 923  | 3000                        | 1361 |
|                                   | 145.7                              | 3700 | 80.3                           | 2040 | 187.1                           | 4752 | 38.9             | 988  | 2900                        | 1315 |
|                                   | 157.5                              | 4000 | 84.3                           | 2140 | 198.9                           | 5052 | 42.8             | 1088 | 2750                        | 1247 |
|                                   | 169.3                              | 4300 | 88.2                           | 2240 | 210.7                           | 5352 | 46.8             | 1188 | 2650                        | 1202 |
|                                   | 177.2                              | 4500 | 90.2                           | 2290 | 218.6                           | 5552 | 48.7             | 1238 | 2550                        | 1157 |
|                                   | 185.0                              | 4700 | 94.1                           | 2390 | 226.5                           | 5752 | 52.7             | 1338 | 2500                        | 1134 |
|                                   | 196.9                              | 5000 | 98.0                           | 2490 | 238.7                           | 6062 | 56.6             | 1438 | 2400                        | 1089 |
|                                   | 204.7                              | 5200 | 100.0                          | 2540 | 246.1                           | 6252 | 58.6             | 1488 | 2350                        | 1066 |
|                                   | 216.5                              | 5500 | 103.9                          | 2640 | 258.0                           | 6552 | 62.5             | 1588 | 2200                        | 998  |

Aisle Requirement-Right Angle Stack-WRS14Li

| Aisle Requirement-Right Angle Stack <sup>①</sup> |          | Load Length |            |            |             |             |
|--|----------|-------------|------------|------------|-------------|-------------|
| Load Width                                       |          | in(mm)      | 36(915)    | 40(1016)   | 42(1067)    | 48(1220)    |
|  | 36(915)  | in(mm)      | 92.0(2337) | 95.1(2416) | 96.8(2458)  | 101.9(2589) |
|  | 40(1016) | in(mm)      | 93.3(2370) | 96.3(2447) | 97.9(2487)  | 103.0(2615) |
|  | 42(1067) | in(mm)      | 94.0(2388) | 97.0(2463) | 98.5(2503)  | 103.5(2628) |
|  | 48(1220) | in(mm)      | 96.2(2444) | 99.0(2514) | 100.4(2551) | 105.2(2671) |

① Add a minimum of 12in (300mm) for maneuverability.



HC FORKLIFT AMERICA CORPORATION

Company address:  
10405-A Granite Street  
Charlotte, NC 28273

Toll Free: (888) 652-8395  
Phone: (980) 888-8335  
Fax: (980) 888-8336

america@hcforklift.com  
www.hcforkliftamerica.com



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A Series Electric Lithium-ion  
Industrial Walkie Reach Stacker  
with capacities of 3000lbs



Making Material Handling Easier  
SINCE 1956



## Industrial Walkie Stacker Series

The Industrial Walkie Reach, Straddle, and Counterbalance Stacker make up a series of industrial walkie stackers that can handle dock-to-stock and everything in between. Hangcha's Industrial Walkie Stacker product line offer advantageous head-length and a multi-function control handle with Electric Power Steering (EPS). This system, combined with the standard creep speed feature, gives the operator incredible load handling control with excellent maneuverability. The Industrial Walkie Stacker Series excels in the most demanding operational environments to bring your materials handling capabilities to their full potential.





# A Series Industrial Walkie Reach Stacker

The Industrial Walkie Reach Stacker from Hangcha is designed for versatility in the Industrial Walkie Stacker Series. It can act both as a counterbalanced stacker and a straddle stacker thanks to the scissor fork extension system. It acts as a counterbalanced stacker when its forks are extended. This allows it to handle non-standard pallets, enclosed pallets, and enclosed shelves easily. The reach stacker also acts as a straddle stacker when its forks are retracted allowing it to operate flexibly in narrow passages. This makes it perfect for warehouses, supermarkets, and workshops.

Easy  
Efficient  
Economical

## High Performance

- / The Electric Power Steering (EPS) system makes maneuvering and load handling extremely easy.
- / The brushless AC travel motor features excellent acceleration, outstanding climbing ability, low heat emission, and is maintenance-free.
- / The latest CURTIS AC control system is highly efficient thanks to its accurate and stable control.
- / The CANBUS structure makes communication between all of the machine's functions faster and more reliable.
- / The truck's regenerative braking prevents it from sliding on a grade.
- / Tiller, switches, plug connectors, meters, and other components are all parts from industry known suppliers to ensure reliability, performance, and ease of service.
- / The forks and load backrest have a backward and forward tilt function as apart of the standard configuration. This creates a safer experience when loading and unloading goods.

## Maintenance

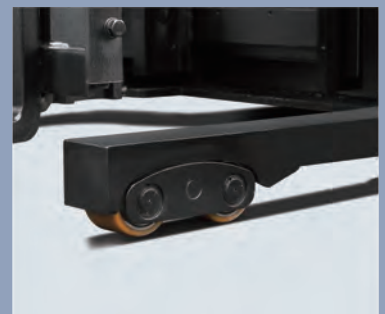
- / The brushless AC motor reduces operation costs significantly because it is maintenance-free.
- / The integrated battery indicator meter, timer, and fault self-diagnosis are convenient for maintenance.
- / The back cover can be opened fully to reveal all key components and parts. This is extremely convenient for the maintenance of the entire machine.



FREI Multi-Function Tiller  
1: Forks move forward / backward  
2: Lifting / lowering of forks  
3: Forward / backwards tilting of forks



Travel speed is reduced automatically when the forks are lifted past a specified height.



The structure of rotary load wheel offers better rolling ability and stability.



The forks' tilting function is easy for loading and unloading pallets.





Reliability

- / The three-support-point, low center of gravity, and the high-strength steel plate structure feature a large residual load-bearing capacity and a long service life.
- / All wires and cables are protected to increase the reliability of the electrical system significantly.
- / The non-contact proximity switch features a long service life and is reliable.
- / The power plug is fastened to the stacker’s body. This prevents the plug from being damaged due to impact when the lithium-ion battery is lifted for installation.

Safety

- / As the truck’s steering angle increases, the truck’s speed decreases. This is a standard safety feature.
- / The reach stacker features three types of braking functions, release braking, reverse braking, and emergency braking, for safe operation.
- / The anti-sliding function on a grade ensures a safe operational workspace.
- / The emergency reversing button at top of the tiller protects the operator from being injured in case of an emergency during the backward operation of the truck.
- / The soft landing function reduces the mast’s lowering speed automatically when the forks are lowered to a height less than 3.9” from the ground. This is designed to protect the goods from hitting the ground too hard.

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 (LiFePO4 ) battery packs with a 5 year or 10,000 hour warranty.
- / See warranty certificate for specific warranty information on the Lithium Iron Phosphate battery packs.

Comfort

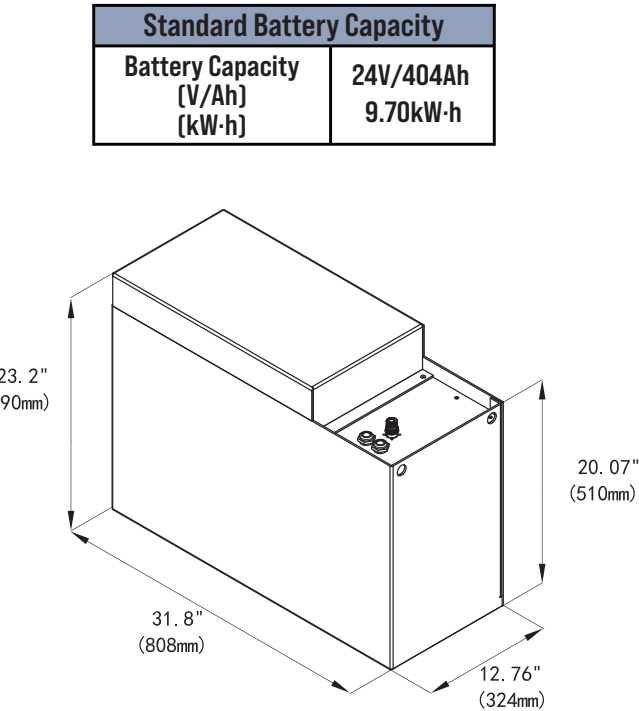
- / All movements of the fork can be regulated with step-less speed. This provides more accurate and stable handling of goods.
- / The imported tiller’s function buttons are designed to allow the operator to comfortably operate the stacker.
- / The standard configuration creep speed driving function allows the truck to move at slow speeds. This increases the stacker’s maneuverability and allows it to stack goods even in confined spaces.
- / The stacker’s compact body and large rounded corner design make the truck perfect for narrow aisle operation.
- / The optional battery side roll out makes swapping out the battery fast and easy.

Standard Specification

- / AC Drive Motor
- / CURTIS AC Drive Motor & Oil Pump Motor Controller
- / Electric Power Steering System
- / Automatic Deceleration at Turns
- / Proportional Speed Regulation for all Fork Operations
- / Multi-Function Battery Condition Meter
- / High-Performance Load Wheels
- / 42” Fork Length
- / 7.9-33.5” Range for the Adjustable Outer Distance of Forks
- / Forward and Backward Tilt of the Fork, by 3° and 5° Respectively
- / Load Backrest
- / 106.3” Limited Free Lift 2 Stage Mast with Double Lifting Cylinders
- / Soft Landing System
- / Multi-Function Tiller
- / Speed Limited when Fork is at Elevated Location
- / Horn
- / Key Switch
- / Creep Speed Function
- / Emergency Reversing Function
- / 23.2” Forward Extension Distance of Fork

Options

- / Other Mast Heights (see mast parameter list for details)
- / Various Fork Lengths
- / Sideshifter
- / Battery Side Extraction
- / Freezer
- / Wire Mesh Mast Screen



A Series Electric Lithium-ion Industrial Walkie Reach Stacker Specification

|                      |      |   |               |  |
|----------------------|------|---|---------------|--|
| Distinguishing Marks | 1.1  | Manufacturer  |               | HANGCHA GROUP CO.,LTD.                 |
|                      |      | HCFA Model  |               | WRS14Li                                |
|                      | 1.2  | Manufacturer's Type Designation                             |               | CQDB14-AC1-JNAI                        |
|                      | 1.3  | Drive: electric(battery or mains),diesel,petrol,fuel gas    |               | Electric                               |
|                      | 1.4  | Operator Type: hand,pedestrian,standing,seated,order-picker |               | Walkie                                 |
|                      | 1.5  | Rated Capacity/Rated Load                                   | Q (lb/kg)     | 3000/1400                              |
|                      | 1.6  | Load Centre Distance  | c (in/mm)     | 24/600                                 |
|                      | 1.8  | Load Distance, centre of drive axle to fork                 | x (in/mm)     | 15/379                                 |
|                      | 1.9  | Wheelbase   | y (in/mm)     | 57/1451                                |
| Weights              | 2.1  | Service Weight without Battery                              | lb/kg         | 4850/2200                              |
| Wheels/ Chassis      | 3.1  | Tires: solid rubber, superelastic, pneumatic, polyurethane  |               | PU                                     |
|                      | 3.2  | Tire Size, front  | in/mm         | Φ9.8×3.9 / Φ250×100                    |
|                      | 3.3  | Tire Size, rear   | in/mm         | Φ3.9×2.8 / Φ100×70                     |
|                      | 3.5  | Wheels, number front / rear (x = driven wheels)             |               | 1×/4                                   |
|                      | 3.7  | Tread, rear   | b11 (in/mm)   | 46.1/1170                              |
| Basic Dimensions     | 4.1  | Tilt of Mast Forward/Backward                               | α/β(°)        | 3/5                                    |
|                      | 4.2  | Height, mast lowered  | h1 (in/mm)    | 80.3/2040                              |
|                      | 4.4  | Lift  | h3 (in/mm)    | 106.3/2700                             |
|                      | 4.5  | Height, mast extended                                       | h4 (in/mm)    | 147.7/3752                             |
|                      | 4.9  | Height of Tiller in Drive Position, min./max.               | h14 (in/mm)   | 1475/755 (58.1/29.7)                   |
|                      | 4.10 | Height of Wheel Arms  | h8 (in/mm)    | 5.1/130                                |
|                      | 4.15 | Height, lowered   | h13 (in/mm)   | 1.4/35                                 |
|                      | 4.19 | Overall Length  | l1 (in/mm)    | 91.5 <sup>1)</sup> /2323 <sup>1)</sup> |
|                      | 4.20 | Length to Face of Forks                                     | l2 (in/mm)    | 49.3 <sup>3)</sup> /1253 <sup>3)</sup> |
|                      | 4.21 | Overall Width   | b1/b2 (in/mm) | 1270/870 (50/34.3)                     |
|                      | 4.22 | Fork Dimensions   | s/e/l (in/mm) | 1.4/3.9/42.1(35/100/1070)              |
|                      | 4.24 | Fork-Carriage Width   | b3 (in/mm)    | 36.2/920                               |
|                      | 4.25 | Distance between Fork-Arms                                  | b5 (in/mm)    | 8.3~33.5 (210~850)                     |
|                      | 4.26 | Distance between Wheel Arms                                 | b4 (in/mm)    | 42~50 (1070~1270) <sup>2)</sup>        |
|                      | 4.28 | Reach Distance  | l4 (in/mm)    | 23.2/590                               |
|                      | 4.32 | Ground Clearance, centre of wheelbase                       | m2 (in/mm)    | 2.8/70                                 |
|                      | 4.35 | Turning Radius  | Wa (in/mm)    | 64.3/1632                              |
|                      | 4.37 | Length Across Wheel Arms                                    | l7 (in/mm)    | 69.96/1777                             |
|                      |      | Battery Compartment Width                                   | l8 (in/mm)    | 13.4/340                               |
|                      |      | Battery Compartment Length                                  | b6 (in/mm)    | 32.2/817                               |
|                      |      | Battery Floor Height w/ Optional Rollers                    | in/mm         | 9.4/240                                |
|                      |      | Load Backrest Height  | h12 (in/mm)   | 41.3/1050                              |
|                      |      | Grade Clearance   | D(%)          | 46.57                                  |
|                      |      | Top Vertical Braking Arc                                    | Q(°)          | 15                                     |
|                      |      | Bottom Braking Arc  | M(°)          | 10                                     |
|                      |      | Handle Operating Arc  | S(°)          | 65                                     |
| Performance Data     | 5.1  | Travel Speed, laden/unladen                                 | mph (kph)     | 3.4/3.4 (5.5/5.5)                      |
|                      | 5.2  | Lift Speed, laden/unladen                                   | ft/min (m/s)  | 18.66/26.58 (0.095/0.135)              |
|                      | 5.3  | Lowering Speed, laden/unladen                               | ft/min (m/s)  | 37.38/29.52 (0.190/0.150)              |
|                      | 5.8  | Max. Gradeability, laden/unladen                            | %             | 8/13                                   |
|                      | 5.10 | Service Brake   |               | Electromagnetic braking                |
|                      |      |   |               |  |
| Electric Motor       | 6.1  | Drive Motor Rating S2 60 min.                               | hp/kW         | 4.0/3.0                                |
|                      | 6.2  | Lift Motor Rating at S3 15%                                 | hp/kW         | 4.0/3.0                                |
|                      | 6.4  | Battery Voltage/Nominal Capacity K5                         | V/Ah          | 24/404                                 |
|                      |      | Minimum Battery Weight                                      | lb/kg         | 276/125                                |
|                      |      | Maximum Battery Weight                                      | lb/kg         | 496/225                                |
|                      |      |   |               |  |
| Others               | 8.1  | Type of Drive Control                                       |               | AC CURTIS                              |
|                      | 10.5 | Steering Design   |               | Electric Power Steering                |
|                      | 10.7 | Sound Pressure Level at the Driver's Seat                   | dB(A)         | 70                                     |

Note:1). Full Free Lift 3 Stage Mast +11mm(0.43in)

2). 50mm (2in) increments

Specifications are subject to change without notice.

