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ISO14001:2015

ISO9001:2015

HANGCHA trucks conform to the European Safety Requirements.

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# A Series High Capacity Electric Forklift Truck

with capacities of 12,000 to 16,000kg

*The World of Hangcha*

# A Series 12-16t Electric Forklift Truck

The electric forklift truck, with key parts of associated products from world-renowned manufacturers, features excellent performance, reliability and durability, high safety, as well as elegant, steady, simple but bright appearance. The product can be applied for a wide range of purposes, and is suitable for various working conditions including indoor and outdoor spaces.




## Drive System

/ The AC travel motor of world-renowned brand features strong power, complete protection functions, and is maintenance-free, with substantially increased reliability and service life, and reduced maintenance and service costs; the heavy-duty drive axle of world-renowned brand features two-stage reduction, dual motor drive, multi-plate wet travel brake and motor auxiliary brake, safety and reliability, and the system is fully enclosed, maintenance-free, and suitable for heavy-duty working condition.

## Hydraulic System

/ The system is equipped with electro-hydraulic proportional sectional valve of world-renowned brand, silent gear pump, pilot electric control handle, and AC oil pump motor. The load sensing hydraulic system reduces continuous load on oil pump motor; the remote electric control operating mode is simple, easy, and flexible. Several hydraulic pressure detection points are added to simplify maintenance and service work.

## Mast System

/ The duplex mast has increased width, higher resistance to torsion, and broader view; oil circuit with dual governing valves features higher safety. Hydraulic fork width adjustment is a standard configuration.

## Braking System

/ The system is equipped with Poclain hydraulic brake valve, multi-plate wet travel brake and spring action, and hydraulic release caliper disc parking brake system.

## Steering System

/ The system is equipped with horizontally placed oil cylinder steering axle of single dual-action oil cylinder, features fully hydraulic power steering, steering priority, with load sensing function, and can realize easy steering.



You can open the door on each side, it make the motor, oil pump and electrical controller maintenance is very convenient, provide good waterproof and dustproof



It's very easy for charging the battery



The tippable structure that is available for both electric and manual operations is convenient for daily maintenance




The integrated fan cooling system ensures the stability of the electric control system, and the fully opened hood make the maintenance more convenient



A series features battery side roll out as standard



## Electric System

/ The full AC controller of state of the art in the world is adopted, achieving electronic control for traveling, lifting, braking, and steering actions of the forklift. It features smooth and accurate control, superior speed regulation performance, with regenerative braking, reverse braking, and anti-slipping on slope and other functions, enabling more effective operation, higher safety and comfort. The MMI instrument of world-leading brand is adopted, with large screen LCD battery indication, timing, failure self-diagnosis, and mode selection, and accurate display even in severe environment. The LED lighting system is adopted for energy saving.





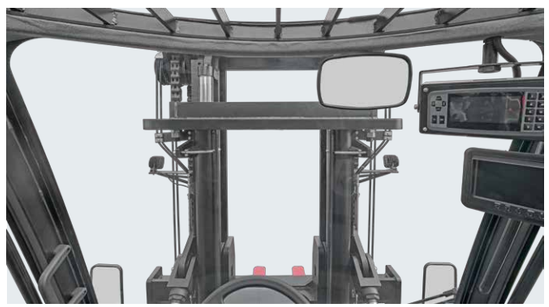



## Cabin

/ The cabin is integrated and fully enclosed. Four-point rubber vibration-reducing connection of the cab can reduce vibration, and its tippable structure that is available for both electric and manual operations is convenient for daily maintenance; spacious cab floor, and ample overhead clearance and leg room allow easy access and exit of the driver at any time; the fully enclosed cab is thermally insulated, dust-proof, and waterproof; sliding curtain is provided inside the cab; filler is equipped at inlet of fresh air, and the internal recycling fan is adjustable. Comfortable temperature can be maintained in the cab with air conditioner and hot air device. The seat is forward and backward adjustable, tilting angle of seat back is also adjustable, which can increase comfort level for the driver. All glass is of safety glass. Front, rear, and top windscreens are equipped with cleaner and wiper. Both front and rear windscreens are equipped with defroster.





## Standard specification

/ Handle
/ Headlight guard
/ Air conditioning
/ Single fork positioner
/ Cab
/ Fully-hydraulic power steering
/ Traction pin
/ Front combined lamps
/ Rear combined lamps
/ Headlamp
/ Electric horn
/ Multi-functional colored display
/ Neutral switch
/ Patterned oil resistant tire
/ Up & down tiltable steering column
/ Rearview mirror
/ On-truck tool kit
/ Inclined oil circuit self-closing valve
/ Four-section multi-way valve
/ Lifting oil circuit speed limit valve
/ Hydraulic oil tank level indicator
/ Key switch
/ OPS system
/ Alarm light
/ Backup buzzer
/ Wide-view mast
/ Rubber pedal pad

## Options

/ Customized color
/ Solid tire / environmentally friendly solid tire
/ Work lamp
/ Other sizes of fork
/ Rearview system
/ Battery charger

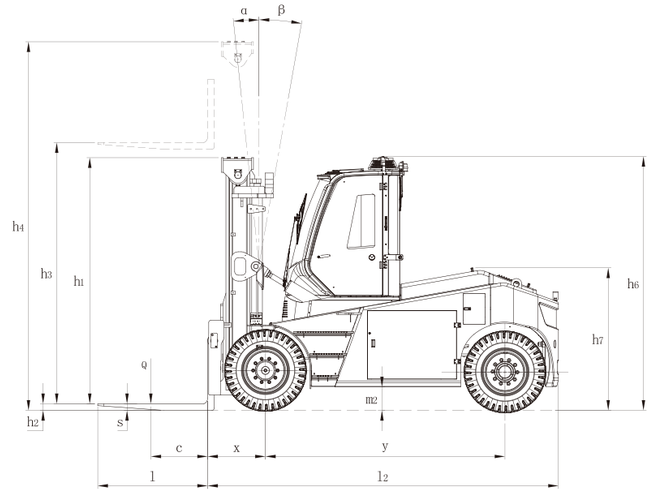


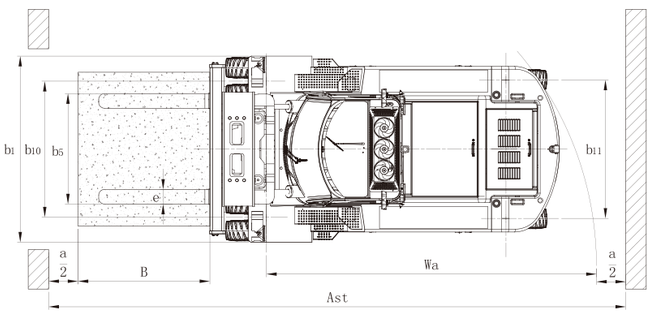
# A Series 12-16t Electric Forklift Truck

| | | | | | | |
|---|---|---|---|---|---|---|
| Distinguishing mark | 1.1 | Manufacturer | | HANGCHA GROUP CO.,LTD. | | |
| | 1.2 | Manufacturer's type designation | | CPD120-AXZ4 | CPD140-AXZ4 | CPD160-AXZ4 |
| | 1.3 | Drive: electric (battery or mains), diesel, petrol, fuel gas | | Electric | Electric | Electric |
| | 1.4 | Operator type: hand, pedestrian, standing, seated, order-picker | | Seated | Seated | Seated |
| | 1.5 | Rated capacity/rated load | Q (kg) | 12000 | 14000 | 16000 |
| | 1.6 | Load centre distance | c (mm) | 600 | 600 | 600 |
| | 1.8 | Load distance, centre of drive axle to fork | x (mm) | 760 | 770 | 790 |
| | 1.9 | Wheelbase | y (mm) | 2980 | 3100 | 3250 |
| Weight | 2.1 | Service Weight | kg | 18500 | 21000 | 22500 |
| | 2.2 | Axle loading, laden front/rear | kg | 27300/3200 | 31700/3300 | 34900/3600 |
| | 2.3 | Axle loading, unladen front/rear | kg | 9900/8600 | 11500/9500 | 12000/10500 |
| Tyres, chassis | 3.1 | Tyres: solid rubber, superelastic, pneumatic, polyurethane | | Peumatic | Peumatic | Peumatic |
| | 3.2 | Tyre size, front | | 10.00-20-18PR | 11.00-20-18PR | 12.00-20-20PR |
| | 3.3 | Tyre size, rear | | 10.00-20-18PR | 11.00-20-18PR | 12.00-20-20PR |
| | 3.5 | Wheels, number front / rear (x = driven wheels) | | 4/2 | 4/2 | 4/2 |
| | 3.6 | Tread, front | $b_{10}$ (mm) | 1840 | 1856 | 1856 |
| | 3.7 | Tread, rear | $b_{11}$ (mm) | 1890 | 1890 | 1890 |
| Dimensions | 4.1 | Tilt of mast/fork carriage forward/backward | α /β(°) | 6/10 | 6/10 | 6/10 |
| | 4.2 | Height, mast lowered | $h_1$ (mm) | 3330 | 3430 | 3450 |
| | 4.3 | Free lift | $h_2$ (mm) | 80 | 85 | 90 |
| | 4.4 | Lift | $h_3$ (mm) | 3300 | 3300 | 3300 |
| | 4.5 | Height, mast extended | $h_4$ (mm) | 4980 | 5080 | 5100 |
| | 4.7 | Height of overhead guard (cabin) | $h_6$ (mm) | 3435 | 3450 | 3470 |
| | 4.8 | Seat height/stand height | $h_7$ (mm) | 2080 | 2095 | 2115 |
| | 4.12 | Coupling height | $h_{10}$ (mm) | 555 | 570 | 590 |
| | 4.19 | Overall length | $l_1$ (mm) | 5970 | 6080 | 6290 |
| | 4.20 | Length to face of forks | $l_2$ (mm) | 4470 | 4580 | 4790 |
| | 4.21 | Overall width | $b_1$ (mm) | 2500 | 2500 | 2540 |
| | 4.22 | Fork dimensions | s/e/l (mm) | 80/200/1500 | 85/200/1500 | 90/200/1500 |
| | 4.24 | Fork-carriage width | $b_3$ (mm) | 2365 | 2365 | 2365 |
| | 4.25 | Distance between fork-arms | $b_5$ (mm) | 520-2200 | 520-2200 | 520-2200 |
| | 4.31 | Ground clearance, laden, below mast | $m_1$ (mm) | 245 | 260 | 260 |
| | 4.32 | Ground clearance, centre of wheelbase | $m_2$ (mm) | 260 | 275 | 295 |
| | 4.34.1 | Aisle width for pallets 1000 x 1200 crossways | Ast (mm) | 6110 | 6270 | 6440 |
| | 4.34.2 | Aisle width for pallets 800 x 1200 lengthways | Ast (mm) | 6310 | 6470 | 6640 |
| | 4.35 | Turning radius | Wa (mm) | 4150 | 4300 | 4450 |
| | 4.36 | Internal turning radius | $b_{13}$ (mm) | 130 | 220 | 320 |
| Performance data | 5.1 | Travel speed, laden/unladen | km/h | 16/18 | 16/18 | 16/18 |
| | 5.2 | Lift speed, laden/unladen | m/s | 0.26/0.33 | 0.25/0.33 | 0.24/0.33 |
| | 5.3 | Lowering speed, laden/unladen | m/s | 0.35/0.30 | 0.35/0.30 | 0.35/0.30 |
| | 5.5 | Drawbar pull, laden/unladen | N | 40000 | 40000 | 40000 |
| | 5.6 | Max. Drawbar pull, laden/unladen | N | 48000 | 48000 | 48000 |
| | 5.7 | Gradeability, laden/unladen | % | 10/17 | 9/16 | 8/15 |
| | 5.8 | Max. gradeability, laden/unladen | % | 12/19 | 11/18 | 10/17 |
| | 5.9 | Acceleration time, laden/unladen (0-10m) | s | 3.5/3.0 | 3.5/3.0 | 3.5/3.0 |
| | 5.10 | Service brake | | Hydraulic | Hydraulic | Hydraulic |
| | | Parking brake | | Electric | Electric | Electric |
| Electric-engine | 6.1 | Drive motor rating S2 60 min | kW | 2x34 | 2x34 | 2x34 |
| | 6.2 | Lift motor rating at S3 15% | kW | 2x47 | 2x47 | 2x47 |
| | 6.4 | Battery voltage, nominal capacity K5 | V/Ah | 120/1200 | 120/1350 | 120/1650 |
| | 6.5 | Battery weight | kg | 2x2280 | 2x2550 | 2x3050 |
| | | Battery dimensions | l/b/h(mm) | 952/1018/853 | 1018/1060/853 | 1210/1073/853 |
| | 6.6 | Energy consumption acc. to VDI cycle | kWh/h | 20 | 23 | 25 |
| | | Max. battery weight | kg | 4560 | 5100 | 6100 |
| | | Min. battery weight | kg | 4200 | 4800 | 5800 |
| | 8.1 | Type of drive unit | | MOFET | MOFET | MOFET |
| | 9.1 | Manufacturer/Type | | ZAPI | ZAPI | ZAPI |
| Addition data | 10.1 | Operating pressure for attachments | bar | 150 | 150 | 150 |
| | 10.2 | Oil volume for attachments | l/min | 60 | 60 | 60 |
| | 10.3 | Hydraulic Tank - capacity (drain & refill) | liter | 220 | 220 | 220 |
| | 10.7 | Sound pressure level at the driver´s seat | dB (A) | 70 | 70 | 70 |
| | 10.8 | Towing coupling, type DIN 15170 | PI | Φ50 | Φ50 | Φ50 |

# 12.0-16.0t Mast specification

| Type | Model | Lifting height | Overall height | | Front Overhang | Tilt Range | Capacity |
|---|---|---|---|---|---|---|---|
| | | | Lowered | Extended | | F/R | Load capacity at 600mm |
| | | mm | mm | mm | mm | (°) | kg |
| 12t Duplex mast | AP120M300-000000-000 | 3000 | 3180 | 4680 | 740 | 6°/10° | 12000 |
| | AP120M330-000000-000 | 3300 | 3330 | 4980 | 740 | 6°/10° | 12000 |
| | AP120M360-000000-000 | 3600 | 3480 | 5280 | 740 | 6°/10° | 12000 |
| | AP120M400-000000-000 | 4000 | 3680 | 5680 | 740 | 6°/10° | 12000 |
| | AP120M430-000000-000 | 4300 | 3880 | 6030 | 740 | 6°/6° | 12000 |
| | AP120M450-000000-000 | 4500 | 3980 | 6230 | 740 | 6°/6° | 12000 |
| | AP120M480-000000-000 | 4800 | 4130 | 6530 | 740 | 6°/6° | 12000 |
| | AP120M500-000000-000 | 5000 | 4230 | 6730 | 740 | 6°/6° | 12000 |
| | AP120M550-000000-000 | 5500 | 4530 | 7280 | 740 | 3°/6° | 10000 |
| | AP120M600-000000-000 | 6000 | 4780 | 7780 | 740 | 3°/6° | 8000 |
| | AP120M650-000000-000 | 6500 | 5080 | 8330 | 740 | 3°/6° | 6000 |
| 14t Duplex mast | AP140M300-000000-000 | 3000 | 3280 | 4780 | 770 | 6°/10° | 14000 |
| | AP140M330-000000-000 | 3300 | 3430 | 5080 | 770 | 6°/10° | 14000 |
| | AP140M360-000000-000 | 3600 | 3580 | 5380 | 770 | 6°/10° | 14000 |
| | AP140M400-000000-000 | 4000 | 3780 | 5780 | 770 | 6°/10° | 14000 |
| | AP140M430-000000-000 | 4300 | 3980 | 6130 | 770 | 6°/6° | 14000 |
| | AP140M450-000000-000 | 4500 | 4080 | 6330 | 770 | 6°/6° | 14000 |
| | AP140M480-000000-000 | 4800 | 4230 | 6630 | 770 | 6°/6° | 14000 |
| | AP140M500-000000-000 | 5000 | 4330 | 6830 | 770 | 6°/6° | 14000 |
| | AP140M550-000000-000 | 5500 | 4630 | 7380 | 770 | 3°/6° | 12000 |
| | AP140M600-000000-000 | 6000 | 4880 | 7880 | 770 | 3°/6° | 10000 |
| | AP140M650-000000-000 | 6500 | 5180 | 8430 | 770 | 3°/6° | 8000 |
| 16t Duplex mast | AP160M300-000000-000 | 3000 | 3300 | 4800 | 790 | 6°/10° | 16000 |
| | AP160M330-000000-000 | 3300 | 3450 | 5100 | 790 | 6°/10° | 16000 |
| | AP160M360-000000-000 | 3600 | 3600 | 5400 | 790 | 6°/10° | 16000 |
| | AP160M400-000000-000 | 4000 | 3800 | 5800 | 790 | 6°/10° | 16000 |
| | AP160M430-000000-000 | 4300 | 4000 | 6150 | 790 | 6°/6° | 16000 |
| | AP160M450-000000-000 | 4500 | 4100 | 6350 | 790 | 6°/6° | 16000 |
| | AP160M480-000000-000 | 4800 | 4250 | 6650 | 790 | 6°/6° | 16000 |
| | AP160M500-000000-000 | 5000 | 4350 | 6850 | 790 | 6°/6° | 16000 |
| | AP160M550-000000-000 | 5500 | 4650 | 7400 | 790 | 3°/6° | 14000 |
| | AP160M600-000000-000 | 6000 | 4900 | 7900 | 790 | 3°/6° | 12000 |
| | AP160M650-000000-000 | 6500 | 5200 | 8450 | 790 | 3°/6° | 10000 |




AST=B+Wa+x+a
a=200mm

LOAD CHART

