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ISO14001  
ISO14001:2015



ISO9001  
ISO9001:2015



HANGCHA trucks conform  
to the European Safety  
Requirements.

2020 VERSION 2

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## A Series 3 Wheel Electric Forklift Truck

with capacities of 1,300 to 2,000kg

The World of Hangcha



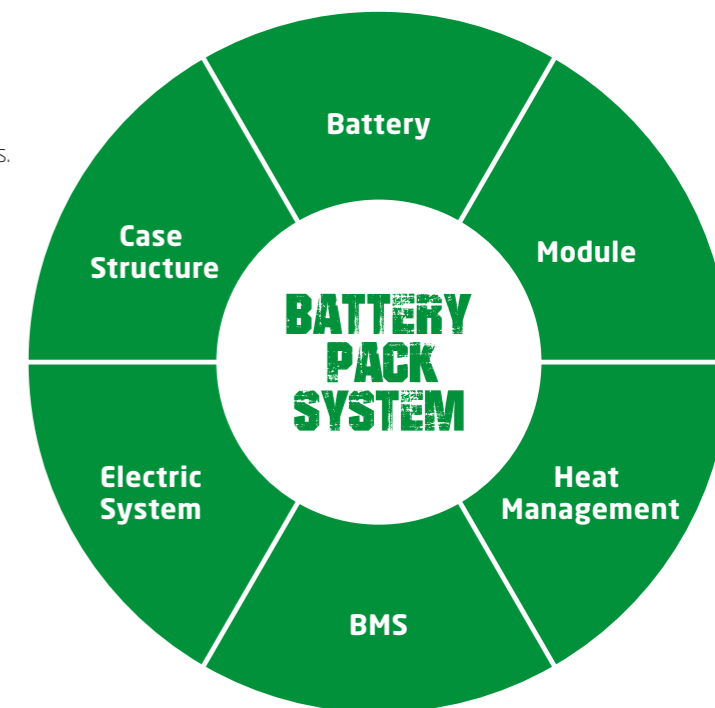
# LI-ION POWER



# INNOVATIVE SOLUTIONS NEW POWER NOW

Innovative, reliable lithium-ion technology (Lithium Iron-Phosphate), which are developed jointly by HANGCHA and CATL. Battery cells and modules are from CATL, with reliable quality, exclusively for HANGCHA.

- / We use square lithium iron phosphate batteries and modules used in large quantities by commercial vehicles in mature economies.
- / The module uses an aluminum alloy frame which is sturdy, lightweight and with excellent heat dissipation.
- / Safe and effective: Charging efficiency as high as 98%, thermal runaway temperature 600 °C or above.
- / Adapted to low temperatures: Comes standard with an electrical heating feature, ensuring normal operation in low temperatures.
- / Quick charging: Can charge and operate at the same time, fully charged in 2 hours.
- / Long-working: 4000 charging cycles, capacity retention greater than 80%.
- / Maintenance-free: Battery does not require manual maintenance.
- / Green and clean: Pollution-free, zero emissions.



Li-Ion  
2 hours  
100%

Lead-acid batteries  
8-10 hours 100%

**Rapid charging and opportunity charging ensure continuous availability of vehicles**

Li-Ion powered forklifts are always available. They allow for fast full charging or boost charging (100 % charge in 2 hours). They are maintenance free and do not require a battery change when used for multi-shift operations.



TITANS CHARGER



Customer can order A series 3W 1.6-2.0t with lithium battery power from HANGCHA now.

Lightweight design, flexible, high level of energy efficiency, maintenance-free, provide long service life.



**5 YEARS  
WARRANTY**

## Li-Ion Battery Pack specification

Manufacturers type designation		CPDS16-AD6-I CPDS16-AC6-I	CPDS18-AD6-I CPDS18-AC6-I	CPDS20-AD6-I CPDS20-AC6-I
Battery voltage, capacity	V/Ah	48/480	48/480	48/480
Titans charger		SLC-48200	SLC-48200	SLC-48200
Battery weight	kg	270	270	270



## Appearance

- / Compact design meets the limited space operation requirement. Eyeball catching designed smooth outline and metal material applied for exposed parts, all provide robust construction of the A series three-pivot electric counterbalance forklift truck.

## Maneuverability

- / Front dual separated driving motors can realize the wheels forward or backward independently, the small turning radius is suitable for narrow channel; Imported reducer, high power driving motor provides a reliable and strong performance.

## High Efficiency

- / High power pump motor and low noise gear pump, both improve the lifting speed and work efficiency.
- / Regenerative braking during deceleration is more energy saving and effectively.

## Comfort

- / Thanks to the new designed adjustable levers, the operator can work more comfortable. New designed dashboard is easy to see and provides friendly human-computer interaction and with running hours, self diagnosis functions and the battery power show.
- / Both the steering column and seat can be adjusted easily, every operator can find the best driving position.
- / Low vibration and suspension seat reduce the driver's fatigue.

## Stability

- / Sinking type battery layout provides good stability especially during cornering.
- / The soft landing system protects the forks from dashing against the ground.

## Safety

- / Emergency switch is standard specification which meets the Euro safety regulation.
- / Both electronics and hydraulic system are equipped with overloading protection system.
- / Driving speed is automatically reduction during cornering.

## Maintenance

- / Full opened battery cover is easy for battery service and changing.
- / The service engineer can remove the front floor board without any tool, it is convenient for the maintenance.

## Advance

- / World famous controller, connectors, battery plug and emergency switch are applied to ensure the reliability of the performance and provides easy service.
- / High frequency MOSFET integrated control system provides accurate control of travelling, lifting and better adjustable performance that better matches with the motor. No roll-back on ramp is also provided thanks to MOSFET controller. Motor brake is for regenerative braking during deceleration, direction changing, and downward slope.

## Standard Specification

- / High efficiency AC driving motor
- / Multi-functions instrument
- / Front dual driving motors
- / Rubber floor mat
- / Solid tyre
- / Emergency disconnect switch
- / 2-valve inside chassis
- / LED headlight
- / Rear combination LED light
- / Panoramic rearview mirror (in the middle position of the overhead guard)
- / 3 meters duplex wide view mast
- / Adjustable steering column
- / Full electronic controlled travelling, lifting and steering
- / Horn and reversing buzzer
- / Toolbox and file folder
- / CAN-BUS system
- / Low noise gear pump (Brand: Shimadzu, Made in Japan)
- / Full hydraulic steering
- / Soft landing system
- / Non suspension seat: Grammer GS12 with switch
- / ZF reducer and SCHABMULLER traveling motor

## Options

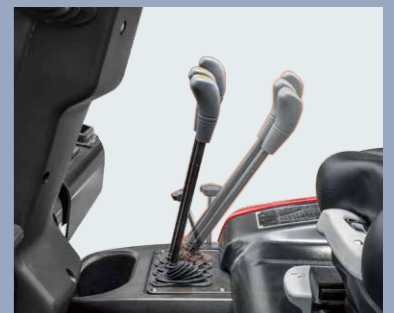
- / 3rd or 4th hydraulic function
- / 2.5-4.5 meters duplex mast
- / 4.3-6.5 meters triplex mast
- / Rear working LED light
- / Reversing assist grip with horn button
- / Integrated sideshifter
- / Other attachments
- / Other dimension forks
- / Special carriage and backrest
- / Big capacity battery
- / CATL lithium battery pack
- / Non-marking tyre
- / Battery charger
- / Battery side roll-out (Using pallet truck or trolley)(Not for Lithium battery)
- / Fingertip control on the adjustable armrest
- / Cold store protection(Not for Lithium battery)
- / Suspension seat
- / Full closed cabin
- / Socket for other equipment
- / Blue spot light
- / OPS system



Front dual separated motors



Panoramic rearview mirror



Cover can be easily opened by adjusting the levels forward

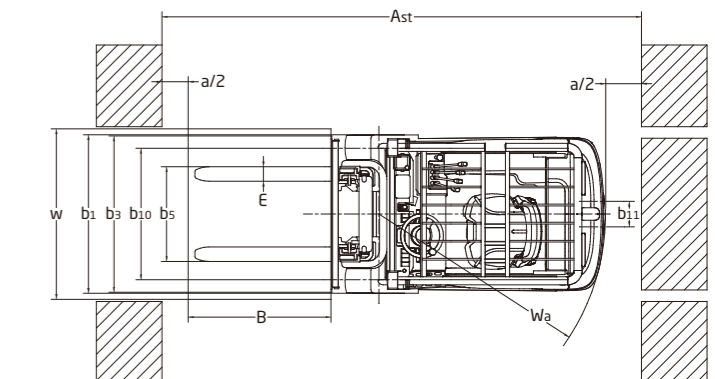
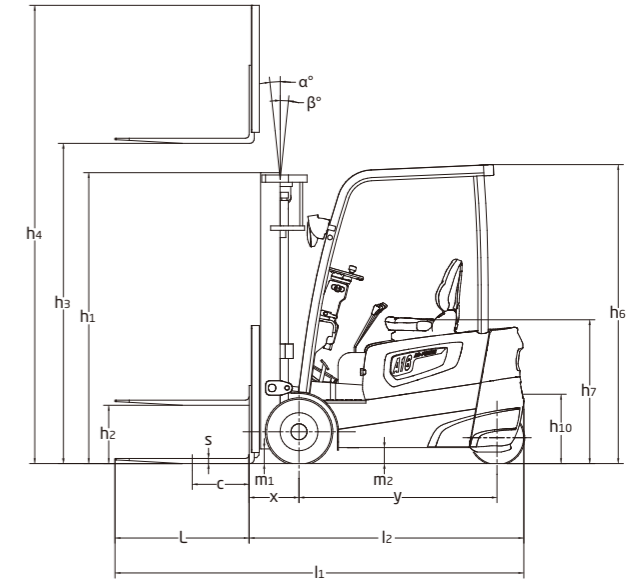


The small turning radius is suitable for narrow channel

# A Series 3-pivot Electric Forklift Truck

		HANGCHA GROUP CO., LTD.									
Distinguishing mark	Manufacturer										
	Manufacturers type designation										
1.1	Manufacturer	HANGCHA GROUP CO., LTD.									
1.2	Manufacturers type designation	CPDS13-AC5/Z5/D5 CPDS15-AC5/Z5/D5 CPDS16-AC5/Z5/D5 CPDS18-AC5/Z5/D5 CPDS20-AC5/Z5/D5 CPDS13-AC6/Z6/D6 CPDS15-AC6/Z6/D6 CPDS16-AC6/Z6/D6 CPDS18-AC6/Z6/D6 CPDS20-AC6/Z6/D6									
1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	electric electric electric electric electric electric electric electric electric electric electric									
1.4	Operator type: hand, pedestrian, standing, seated, order-picker	seated seated seated seated seated seated seated seated seated seated seated									
1.5	Load capacity/rated load	1300 1500 1600 1800 2000 1300 1500 1600 1800 2000									
1.6	Load centre distance	500 500 500 500 500 500 500 500 500 500									
1.8	Load distance, centre of drive axle to fork	355 355 360 360 360 355 355 355 360 360									
1.9	Wheelbase	1250 1250 1358 1358 1466 1250 1250 1358 1358 1466									
2.1	Service Weight	2860 2980 3120 3240 3470 2860 2980 3120 3240 3470									
2.2	Axle loading, laden front/rear	3600/560 3890/590 4100/620 4350/690 4750/720 3600/560 3890/590 4100/620 4350/690 4750/720									
2.3	Axle loading, unladen front/rear	1350/1510 1350/1630 1440/1680 1440/1800 1530/1940 1350/1510 1350/1630 1440/1680 1440/1800 1530/1940									
3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane	solid solid solid solid solid solid solid solid solid solid solid									
3.2	Tyre size, front	18x7 - 8 18x7 - 8 18x7 - 8 18x7 - 8 200/50-10 18x7 - 8 18x7 - 8 18x7 - 8 18x7 - 8 200/50-10									
3.3	Tyre size, rear	15x4.5 - 8 15x4.5 - 8 15x4.5 - 8 15x4.5 - 8 15x4.5 - 8 15x4.5 - 8 15x4.5 - 8 15x4.5 - 8 15x4.5 - 8 15x4.5 - 8									
3.5	Wheels, number front rear (x = driven wheels)	2x/2 2x/2 2x/2 2x/2 2x/2 2x/2 2x/2 2x/2 2x/2 2x/2									
3.6	Tread, front	910 910 910 910 915 910 910 910 910 915									
3.7	Tread, rear	175 175 175 175 175 175 175 175 175 175									
4.1	Tilt of mast/fork carriage forward/backward	6/6 6/6 6/6 5.5/6 5.5/6 6/6 6/6 6/6 5.5/6 5.5/6									
4.2	Height, mast lowered	1995 1995 1995 1995 1995 1995 1995 1995 1995 1995									
4.3	Free lift	145 145 145 145 145 145 145 145 145 145									
4.4	Lift	3000 3000 3000 3000 3000 3000 3000 3000 3000 3000									
4.5	Height, mast extended	3945 3945 3945 3945 3945 3945 3945 3945 3945 3945									
4.7	Height of overhead guard STD.	2040 2040 2040 2040 2040 2040 2040 2040 2040 2040									
4.9	Seat height/stand height	1000 1000 1000 1000 1000 1000 1000 1000 1000 1000									
4.12	Coupling height	500 500 500 500 500 500 500 500 500 500									
4.19	Overall length	2710 2710 2818 2823 2930 2710 2710 2818 2823 2930									
4.20	Length to face of forks	1790 1790 1898 1903 2010 1790 1790 1898 1903 2010									
4.21	Overall width	1086 1086 1086 1086 1120 1086 1086 1086 1086 1120									
4.22	Fork dimensions	35/100/920 35/100/920 35/100/920 35/100/920 40/122/1070 35/100/920 35/100/920 35/100/920 35/100/920 40/122/1070									
4.23	Fork carriage DIN 15 173 --- ISO 2328, class/type A,B	ISO2328 2A ISO2328 2A ISO2328 2A ISO2328 2A ISO2328 2A ISO2328 2A ISO2328 2A ISO2328 2A ISO2328 2A ISO2328 2A									
4.24	Fork-carriage width	1000 1000 1000 1000 1000 1000 1000 1000 1000 1000									
4.25	Distance between fork-arms	200/1000 200/1000 200/1000 240/1000 240/1000 200/1000 200/1000 200/1000 240/1000 240/1000									
4.31	Ground clearance, laden, below mast	100 100 100 100 100 100 100 100 100 100									
4.32	Ground clearance, centre of wheelbase	110 110 110 110 110 110 110 110 110 110									
4.34.1	Aisle width for pallets 1000 x 1200 crossways	3134 3134 3237 3237 3342 3134 3134 3237 3237 3342									
4.34.2	Aisle width for pallets 800 x 1200 lengthways	3257 3257 3360 3360 3465 3257 3257 3360 3360 3465									
4.35	Turning radius	1452 1452 1555 1555 1660 1452 1452 1555 1555 1660									
4.36	Internal turning radius	620 620 680 730 730 620 620 680 730 730									
5.1	Travel speed, laden/unladen	16/16 16/16 16/16 16/16 15/15 16/16 16/16 16/16 16/16 15/15									
5.2	Lift speed, laden/unladen	0.300/0.470 0.290/0.470 0.280/0.470 0.270/0.450 0.240/0.450 0.400/0.470 0.390/0.470 0.380/0.470 0.370/0.450 0.350/0.450									
5.3	Lowering speed, laden/unladen	0.460/0.440 0.460/0.440 0.460/0.440 0.460/0.420 0.470/0.420 0.460/0.440 0.460/0.440 0.460/0.440 0.460/0.420 0.470/0.420									
5.5	Drawbar pull, laden/unladen	3500/3900 3400/3950 3300/3900 3200/3800 3050/3700 3500/4000 3400/3950 3300/3900 3200/3800 3050/3700									
5.6	Max. Drawbar pull, laden/unladen	12000/12000 12000/12000 11600/11500 11500/11400 11200/11000 12000/12000 12000/12000 11600/11500 11500/11400 11200/11000									
5.7	Gradeability, laden/unladen	16/18 16/18 16/18 16/18 13/15 16/18 16/18 16/18 15/17 13/15									
5.8	Max. gradeability, laden/unladen	20/20 20/20 20/20 18/20 15/18 20/20 20/20 20/20 18/20 15/18									
5.9	Acceleration time, laden/unladen (0-10m)	4.5/4.1 4.6/4.2 4.7/4.3 4.8/4.4 4.9/4.5 4.5/4.1 4.6/4.2 4.7/4.3 4.8/4.4 4.9/4.5									
5.10	Service brake	Hydraulic Hydraulic Hydraulic Hydraulic Hydraulic Hydraulic Hydraulic Hydraulic Hydraulic Hydraulic									
5.11	Parking brake	Mechanical Mechanical Mechanical Mechanical Mechanical Mechanical Mechanical Mechanical Mechanical Mechanical									
6.1	Drive motor rating S2 60 min	4.75x2 AC 4.75x2 AC 4.75x2 AC 4.75x2 AC 4.75x2 AC 4.75x2 AC 4.75x2 AC 4.75x2 AC 4.75x2 AC 4.75x2 AC									
6.2	Lift motor rating at S3 15%	8.6 DC 8.6 DC 8.6 DC 8.6 DC 8.6 DC 8.6 DC 8.6 DC 8.6 DC 8.6 DC 8.6 DC									
6.3	Battery acc. to DIN 43 531/35/36 A,B,C, no	DIN43531 A DIN43531 A DIN43531 A DIN43531 A DIN43531 A DIN43531 A DIN43531 A DIN43531 A DIN43531 A DIN43531 A									
6.4	Battery voltage, nominal capacity K5	48/400 48/400 48/500 48/500 48/600 48/400 48/400 48/500 48/500 48/600									
6.5	Battery weight	920 920 1000 1000 1000 920 920 1000 1000 1000									
6.6	Battery dimensions	830*522*627 830*522*627 830*630*627 830*630*627 830*738*627 830*522*627 830*522*627 830*630*627 830*630*627 830*738*627									
6.6	Energy consumption acc. to VDI cycle	4.4 4.4 4.4 5.0 5.5 4.4 4.4 4.4 5.0 5.5									
6.6	Min. battery weight	610 610 850 850 900 610 610 850 850 900									
6.6	Max. battery weight	750 750 1000 1000 1100 750 750 1000 1000 1100									
8.1	Type of drive control	MOSFET/AC MOSFET/AC MOSFET/AC MOSFET/AC MOSFET/AC MOSFET/AC MOSFET/AC MOSFET/AC MOSFET/AC MOSFET/AC									
9.1	Manufacturer	CURTIS / ZAPI / INMOTION+CURTIS CURTIS / ZAPI / INMOTION									
10.1	Operating pressure for attachments	140 150 150 150 150 140 150 150 150 150									
10.2	Oil volume for attachments	35 35 35 35 35 35 35 35 35 35									
10.3	Hydraulic Tank - capacity (drain & refill)	24 24 26 26 29 24 24 26 26 29									
10.7	Sound level at the driver's ear according to EN / DIN 12 053	72 72 73 73 74 72 72 73 73 74									
10.8	Towing coupling, type DIN	Ø24 Pin Ø24 Pin Ø24 Pin Ø24 Pin Ø24 Pin Ø24 Pin Ø24 Pin Ø24 Pin Ø24 Pin Ø24 Pin									

AC5: means Curtis AC traveling system with DC Pump system, semi-AC system AC6: means Curtis AC traveling system with AC Pump system, full-AC system  
 AZ5: means ZAPI AC traveling system with DC Pump system, semi-AC system AZ6: means ZAPI AC traveling system with AC Pump system, full-AC system  
 AD5: means Inmotion AC traveling system with DC Pump system, semi-AC system AD6: means Inmotion AC traveling system with AC Pump system, full-AC system



a=200mm safety clearance  
 $Ast=a+Wa+\sqrt{(X+B)^2+(W/2)^2}$

X: Load distance  
 B: Length of load or forks which is longer

## 1.3-2.0t Mast Specification:

NO.	Type	Model	Lifting height	Lowered overall height	Overall height		Free lifting height		Tilting range		Capacity				
					With backrest	Without backrest	With backrest	Without backrest	Forward	Backward	Load center@500mm				
					mm	mm	mm	mm	(°)	(°)	1.3t	1.5t	1.6t	1.8t	2.0t
1	Duplex wide view mast	M250	2500	1745	3445	3065	145	145	5.5	6	1300	1500	1600	1800	2000
2		M270	2700	1845	3645	3265	145	145	5.5	6	1300	1500	1600	1800	2000
3		M300	3000	1995	3945	3565	145	145	5.5	6	1300	1500	1600	1800	2000
4		M330	3300	2145	4245	3865	145	145	5.5	6	1300	1500	1600	1800	2000
5		M350	3500	2245	4445	4065	145	145	5.5	6	1300	1500	1600	1800	2000
6		M360	3600	2295	4545	4165	145	145	5.5	6	1300	1500	1600	1800	2000
7		M400	4000	2545	4945	4565	145	145	3.5	5	1300	1500	1600	1800	2000
8		M430	4300	2710	5245	4865	145	145	3.5	5	1200	1450	1600	1800	1950
9		M450	4500	2820	5445	5065	145	145	3.5	5	1100	1400	1500	1700	1900
1		Duplex full-free lifting mast	U250	2500	1745	3455	3095	800	1160	5.5	6	1300	1500	1600	1800
2	U270		2700	1845	3655	3295	900	1260	5.5	6	1300	1500	1600	1800	2000
3	U300		3000	1995	3955	3595	1050	1410	5.5	6	1300	1500	1600	1800	2000
4	U330		3300	2145	4255	3895	1200	1560	5.5	6	1300	1500	1600	1800	2000
5	U350		3500	2245	4455	4095	1300	1660	5.5	6	1300	1500	1600	1800	2000
6	U360		3600	2295	4555	4195	1350	1710	5.5	6	1300	1500	1600	1800	2000
7	U400		4000	2545	4955	4595	1600	1960	3.5	5	1300	1500	1600	1800	2000
8	N400		4000	1910	4955	4595	965	1325	3.5	5	1300	1500	1600	1800	2000
9	N430		4300	2010	5255	4895	1065	1425	3.5	5	1200	1400	1550	1700	1900
10	N450		4500	2075	5455	5095	1130	1490	3.5	5	1100	1350	1500	1600	1800
1	Triplex full-free lifting mast	N480	4800	2175	5755	5395	1230	1590	3.5	5	1000	1300	1450	1600	1700
2		N500	5000	2240	5955	5595	1295	1655	3.5	5	900	1250	1400	1500	1600
3		N550	5500	2410	6455	6095	1465	1825	3.5	5	800	1150	1250	1300	1500
4		N600	6000	2625	6955	6625	1680	2010	3.5	5	700	1000	1100	1200	1300
5		N650	6500	2840	7455	7170	1895	2180	3.5	5	530	800	900	1000	1100

