

A Series 3 Wheel Electric Forklift Truck

with capacities of 1,300 to 2,000kg

The World of Hangcha

HANGCHA

ZHEJIANG HANGCHA IMP. & EXP. CO., LTD.

Factory site: 666 Xiangfu Road,
Hangzhou, Zhejiang, China (311305)

Tel: +86-571-88926735 88926755
Fax: +86-571-88926789 88132890

sales@hcforklift.com
www.hcforklift.com

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ISO14001:2015

ISO9001:2015

HANGCHA trucks conform to the European Safety Requirements.

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LITHIUM POWERED



LI-ION TECHNOLOGY

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.

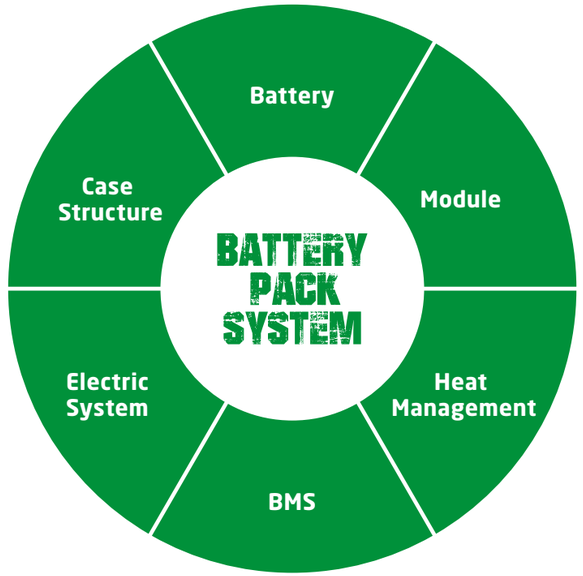
CHARGING 4000 CYCLES DISCHARGE

5 YEARS WARRANTY

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 ℃ or above.
/ Adapted to low temperatures: Comes standard with an electrical heating feature , ensuring normal operation in low temperatures.
/ Quick charging: 2 hours full charge, economic use of each break.
/ 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

Li-Ion Battery Pack specification

Manufacturers type designation		CPDS16-AD6-I CPDS16-AC8G-I	CPDS18-AD6-I CPDS18-AC8G-I	CPDS20-AD6-I CPDS20-AC8G-I
Battery voltage, capacity	V/Ah	51.52/500	51.52/500	51.52/500
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 matchs 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

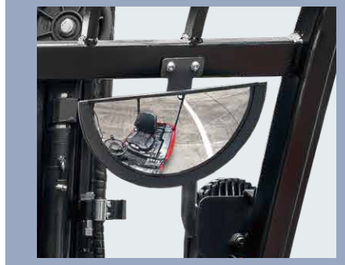
Options

/ 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





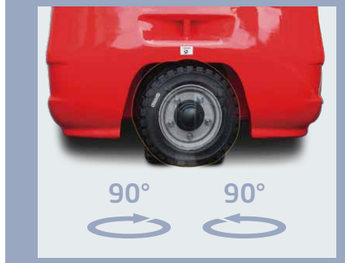
Front dual separated motors



Panoramic rearview mirror



Cover can be easily opened by adjusting the levels forward

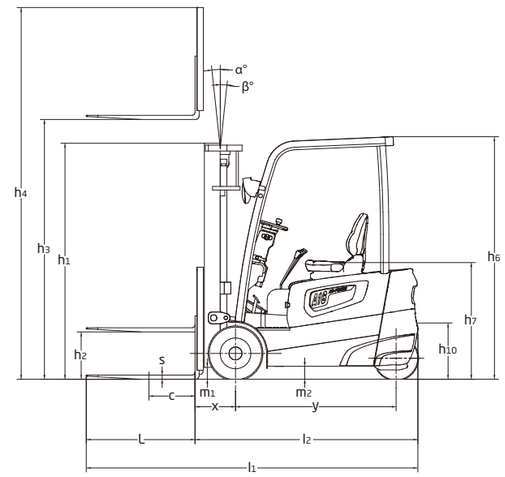


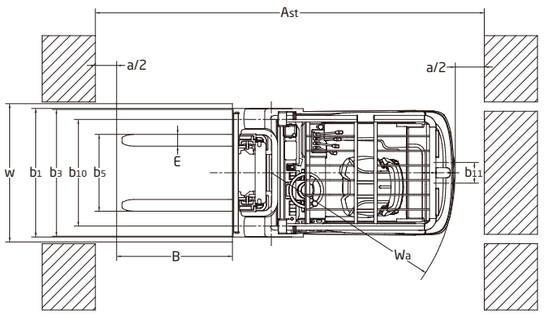
The small turning radius is suitable for narrow channel

A Series 3-pivot Electric Forklift Truck

				HANGCHA GROUP CO.,LTD.										
Distinguishing mark	1.1	Manufacturer												
	1.2	Manufacturers type designation		CPDS13-AC7G/Z5/D5	CPDS15-AC7G/Z5/D5	CPDS16-AC7G/Z5/D5	CPDS18-AC7G/Z5/D5	CPDS20-AC7G/Z5/D5	CPDS13-AC8G/Z6/D6	CPDS15-AC8G/Z6/D6	CPDS16-AC8G/Z6/D6	CPDS18-AC8G/Z6/D6	CPDS20-AC8G/Z6/D6	
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		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	
	1.5	Load capacity/rated load	Q (kg)	1300	1500	1600	1800	2000	1300	1500	1600	1800	2000	
	1.6	Load centre distance	c (mm)	500	500	500	500	500	500	500	500	500	500	
	1.8	Load distance, centre of drive axle to fork	x (mm)	355	355	355	360	360	355	355	355	360	360	
	1.9	Wheelbase	y (mm)	1250	1250	1358	1358	1466	1250	1250	1358	1358	1466	
Weight	2.1	Service Weight	kg	2860	2980	3120	3240	3470	2860	2980	3120	3240	3470	
	2.2	Axle loading, laden front/rear	kg	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	kg	1350/1510	1350/1630	1440/1680	1440/1800	1530/1940	1350/1510	1350/1630	1440/1680	1440/1800	1530/1940	
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		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	b_{10} (mm)	910	910	910	910	915	910	910	910	910	915	
	3.7	Tread, rear	b_{11} (mm)	175	175	175	175	175	175	175	175	175	175	
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β(°)	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	h_1 (mm)	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	
	4.3	Free lift	h_2 (mm)	145	145	145	145	145	145	145	145	145	145	
	4.4	Lift	h_3 (mm)	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	
	4.5	Height, mast extended	h_4 (mm)	3945	3945	3945	3945	3945	3945	3945	3945	3945	3945	
	4.7	Height of overhead guard STD.	h_6 (mm)	2040	2040	2040	2040	2040	2040	2040	2040	2040	2040	
	4.9	Seat height/stand height	h_7 (mm)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
	4.12	Coupling height	h_{10} (mm)	500	500	500	500	500	500	500	500	500	500	
	4.19	Overall length	l_1 (mm)	2710	2710	2818	2823	3080	2710	2710	2818	2823	3080	
	4.20	Length to face of forks	l_2 (mm)	1790	1790	1898	1903	2010	1790	1790	1898	1903	2010	
	4.21	Overall width	b_1 (mm)	1086	1086	1086	1086	1120	1086	1086	1086	1086	1120	
	4.22	Fork dimensions	s/e/l (mm)	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	b_3 (mm)	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
	4.25	Distance between fork-arms	b_5 (mm)	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	m_1 (mm)	100	100	100	100	100	100	100	100	100	100	
	4.32	Ground clearance, centre of wheelbase	m_2 (mm)	110	110	110	110	110	110	110	110	110	110	
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	3134	3134	3237	3237	3342	3134	3134	3237	3237	3342	
	4.34.2	Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	3257	3257	3360	3360	3465	3257	3257	3360	3360	3465	
	4.35	Turning radius	W_a (mm)	1452	1452	1555	1555	1660	1452	1452	1555	1555	1660	
	4.36	Internal turning radius	b_{13} (mm)	620	620	680	730	730	620	620	680	730	730	
Performance Data	5.1	Travel speed, laden/unladen	km/h	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	m/s	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	m/s	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	N	3500 /4000	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	N	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	15/17	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)	s	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	
Electric-engine	6.1	Drive motor rating S2 60 min	kW	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%	kW	8.6 DC	8.6 DC	8.6 DC	8.6 DC	8.6 DC	9.5 AC	9.5 AC	9.5 AC	9.5 AC	9.5 AC	
	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	V/Ah	48/400	48/400	48/500	48/500	48/600	48/400	48/400	48/500	48/500	48/600	
	6.5	Battery weight	kg	700	700	920	920	1000	700	700	920	920	1000	
		Battery dimensions	l/b/h(mm)	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	kWh/h	4.4	4.4	4.6	5.0	5.5	4.4	4.4	4.6	5.0	5.5	
		Min. battery weight	kg	610	610	850	850	900	610	610	850	850	900	
		Max. battery weight	kg	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					
Addition data	10.1	Operating pressure for attachments	bar	140	150	150	150	150	140	150	150	150	150	
	10.2	Oil volume for attachments	l/min	35	35	35	35	35	35	35	35	35	35	
	10.3	Hydraulic Tank - capacity (drain & refill)	liter	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	dB (A)	72	72	73	73	74	72	72	73	73	74	
	10.8	Towing coupling, type DIN		Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	Φ24 Pin	

AC7: means Curtis AC traveling system with DC Pump system, semi-AC system AC8: 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				
											1.3t	1.5t	1.6t	1.8t	2.0t
			mm	mm	mm	mm	mm	mm	(°)	(°)	kg	kg	kg	kg	kg
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	1700	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	2000
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
		U350	3500	2245	4455	4095	1300	1660	5.5	6	1300	1500	1600	1800	2000
5		U360	3600	2295	4555	4195	1350	1710	5.5	6	1300	1500	1600	1800	2000
6		U400	4000	2545	4955	4595	1600	1960	3.5	5	1300	1500	1600	1800	2000
1	Triplex full-free lifting mast	N400	4000	1910	4955	4595	965	1325	3.5	5	1300	1500	1600	1800	2000
2		N430	4300	2010	5255	4895	1065	1425	3.5	5	1200	1400	1550	1700	1900
3		N450	4500	2075	5455	5095	1130	1490	3.5	5	1100	1350	1500	1600	1800
4		N480	4800	2175	5755	5395	1230	1590	3.5	5	1000	1300	1450	1600	1700
5		N500	5000	2240	5955	5595	1295	1655	3.5	5	900	1250	1400	1500	1600
6		N550	5500	2410	6455	6095	1465	1825	3.5	5	800	1150	1250	1300	1500
7		N600	6000	2625	6955	6625	1680	2010	3.5	5	700	1000	1100	1200	1300
8		N650	6500	2840	7455	7170	1895	2180	3.5	5	530	800	900	1000	1100

