

**LI-ION**  
TECHNOLOGY

INNOVATIVE LITHIUM-ION



# A Series Four Wheel Electric Pneumatic Tire Forklift Truck

with capacities of 8,000 to 10,000lbs

*The World of Hangcha*



# LET THE LUMEN POWER BE KE



HANGCHA provides Li-Ion battery (LiFePO4) with 10 years or 20000 hours warranty.

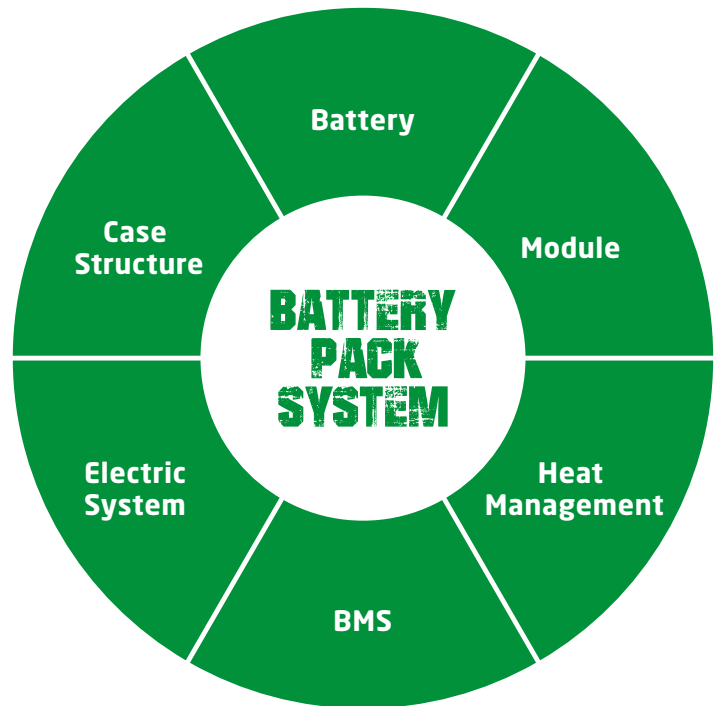


**10 YEAR  
WARRANTY**

# 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 °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 2hours.
- / 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

Type		FB40Li	FB45Li	FB50Li
Battery voltage, capacity	V/Ah	80/542	80/542	80/542
Titans charger		SLC-80200	SLC-80200	SLC-80200



## High Performance

- / Electromagnetic brake is used as service brake, instead of traditional hand brake, which realizes intelligent parking brake, with lower labor intensity of the operator, and higher safety.
- / Soft landing system lowers descending speed automatically when fork reaches the height range of 3.9-2.4" from the ground, so as to reduce vibration of the entire truck, and provide effective protection for goods.
- / Full AC configuration includes AC traction motor + AC pump motor; With higher performance of entire truck, and longer battery life.
- / Efficient driving control system of high-frequency MOSFET integrated controller guarantees smooth and accurate control on driving and lifting, superior speed regulation performance, with regenerative braking, reverse braking, anti-slipping on slope and other functions, resulting in more efficient, safer, and more comfortable operations.
- / The application of load sensing hydraulic power steering technology realizes reliable, sensitive, and easy steering; distribution of optimized oil in steering oil circuit and working oil circuit increases efficiency of hydraulic system.
- / LED lights for entire truck reduce energy consumption.

## Appearance

- / It follows the entire profile of appearance of A series, with clear lines on side of the truck, and smooth transition to counter weight. These lines are shaped as an integral whole, with powerful visual tension.

## Maintenance

- / Fully-openable cover enables easy maintenance of battery.
- / Easy-to-open airtight cover plate realizes easier debugging and maintenance of electric control system, and avoids the system from invasion of rain and dust.
- / The brushless, maintenance-free AC drive motor reduces operation cost significantly.
- / The option of side roll out battery is very convenient for fast, efficient, and safe replacement of battery, and is suitable for continuous work conditions.



## Comfort

- / The adjustable, small-diameter steering wheel with tilt designed based on ergonomics offers good hand feeling, and the seat can also be adjusted forward and backward, which can provide best driving position for the operator.
- / Head-up display are applied to increase visibility, operability of meters, thus with higher driving safety.
- / Silent running of entire truck, with extremely small vibration, offers more comfortable acoustical environment for the operator.
- / Integrated control valve makes levers be placed at the most comfortable position for hands, resulting in lower labor intensity of the operator.

## Stability

- / The internationally advanced parallel arrangement is adopted for traction motor, and the battery is sunken to chassis, resulting in lower gravity center and better stability of entire truck.
- / Flexible steering system, with smaller turning radius, allows stable turnaround within confined passageway.

## Reliability & Safety

- / Major electrical components such as motor controller, contactor, power plug, and emergency power off switch are all of foreign famous brands.
- / Major load bearing parts such as carriage, drive axle, steering axle, and mast are all designed with high strength to satisfy high-strength work conditions.
- / As a standard configuration, the emergency power off switch complies with European safety standards.
- / Dual overload protection systems of electronic and hydraulic modes are adopted.



Ergonomic design



Easy to see display



Easy for maintenance



Smaller turning radius

## 8000lbs A Series Mast Specification

Type	Max. fork height	Lowered	Overall height		Free lift		Tilting range		Capacity	
			With backrest	Without backrest	With backrest	Without backrest	F	R	Load capacity at 24in	
			in	in	in	in	(°)	(°)	Single tire	Double tire
STD Duplex	98.4	76.1	144.4	128.7	5.9	5.9	6	11	8000	8000
	106.2	80.1	152.3	254.7	5.9	5.9	6	11	8000	8000
	118.1	86	164.1	148.4	5.9	5.9	6	11	8000	8000
	129.9	91.9	175.9	160	5.9	5.9	6	11	8000	8000
	137.7	95.8	183.8	168.1	5.9	5.9	6	11	8000	8000
	141.7	97.8	187.7	172	5.9	5.9	6	11	8000	8000
	157.4	107.6	203.5	187.7	5.9	5.9	6	11	8000	8000
	169.2	114.1	215.3	199.6	5.9	5.9	6	6	8000	8000
	177.1	118.5	223.2	207.4	5.9	5.9	6	6	8000	8000
	188.9	125	235	219.2	5.9	5.9	6	6	8000	8000
	196.8	129.3	242.9	227.1	5.9	5.9	6	6	8000	8000
	Full Free Lift	98.4	75.4	144.4	130.1	29.5	43.8	6	11	8000
108.2		80.3	154.3	139.9	34.3	48.7	6	11	8000	8000
118.1		85.2	164.1	149.8	39.3	53.7	6	11	8000	8000
129.9		91.1	175.9	161.6	45.2	59.6	6	11	8000	8000
Triplex	157.4	79.5	203.5	189.1	33.4	47.9	6	11	8000	8000
	169.2	83.4	215.3	200.9	37.4	51.8	6	6	8000	8000
	177.1	86	223.2	208.8	40	54.3	6	6	8000	8000
	188.9	89.7	235	220.6	43.7	58.1	6	6	8000	8000
	196.8	92.5	242.9	228.5	46.4	60.9	6	6	7600	8000
	216.5	99	262.5	248.2	53	67.3	3	6	7400	7600
	236.2	107.4	278.3	267.9	61.4	75.9	3	6	7200	7400

With sideshifter minus 440lb(200kg),with integral sideshifter minus 440lb(200kg).

## 9000lbs A Series Mast Specification

Type	Max. fork height	Lowered	Overall height		Free lift		Tilting range		Capacity	
			With backrest	Without backrest	With backrest	Without backrest	F	R	Load capacity at 24in	
			in	in	in	in	(°)	(°)	Single tire	Double tire
STD Duplex	98.4	76.1	144.4	128.7	5.9	5.9	6	11	9000	9000
	106.2	80.1	152.3	254.7	5.9	5.9	6	11	9000	9000
	118.1	86	164.1	148.4	5.9	5.9	6	11	9000	9000
	129.9	91.9	175.9	160	5.9	5.9	6	11	9000	9000
	137.7	95.8	183.8	168.1	5.9	5.9	6	11	9000	9000
	141.7	97.8	187.7	172	5.9	5.9	6	11	9000	9000
	157.4	107.6	203.5	187.7	5.9	5.9	6	11	9000	9000
	169.2	114.1	215.3	199.6	5.9	5.9	6	6	9000	9000
	177.1	118.5	223.2	207.4	5.9	5.9	6	6	9000	9000
	188.9	125	235	219.2	5.9	5.9	6	6	8900	9000
	196.8	129.3	242.9	227.1	5.9	5.9	6	6	8800	9000
	Full Free Lift	98.4	75.4	144.4	130.1	29.5	43.8	6	11	9000
108.2		80.3	154.3	139.9	34.3	48.7	6	11	9000	9000
118.1		85.2	164.1	149.8	39.3	53.7	6	11	9000	9000
129.9		91.1	175.9	161.6	45.2	59.6	6	11	9000	9000
Triplex	157.4	79.5	203.5	189.1	33.4	47.9	6	11	9000	9000
	169.2	83.4	215.3	200.9	37.4	51.8	6	6	9000	9000
	177.1	86	223.2	208.8	40	54.3	6	6	8800	9000
	188.9	89.7	235	220.6	43.7	58.1	6	6	8600	8800
	196.8	92.5	242.9	228.5	46.4	60.9	6	6	8400	8600
	216.5	99	262.5	248.2	53	67.3	3	6	8000	8400
	236.2	107.4	278.3	267.9	61.4	75.9	3	6	7600	8000

With sideshifter minus 440lb(200kg),with integral sideshifter minus 440lb(200kg).

## 10000lbs A Series Mast Specification

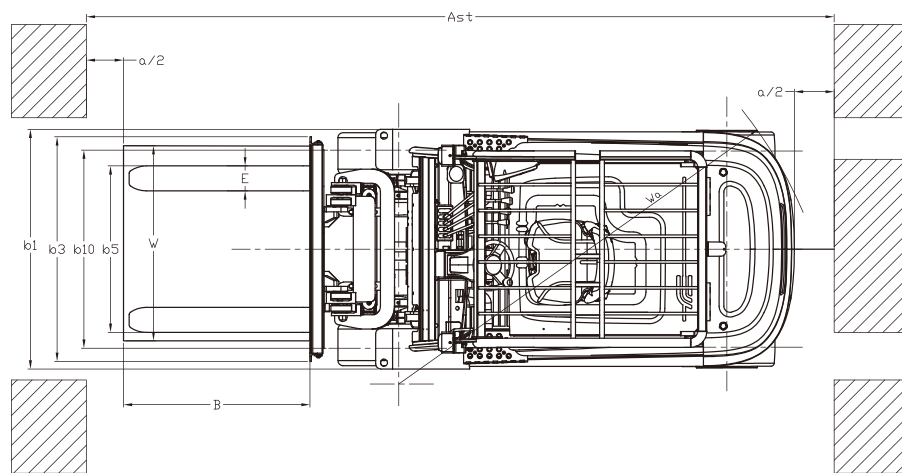
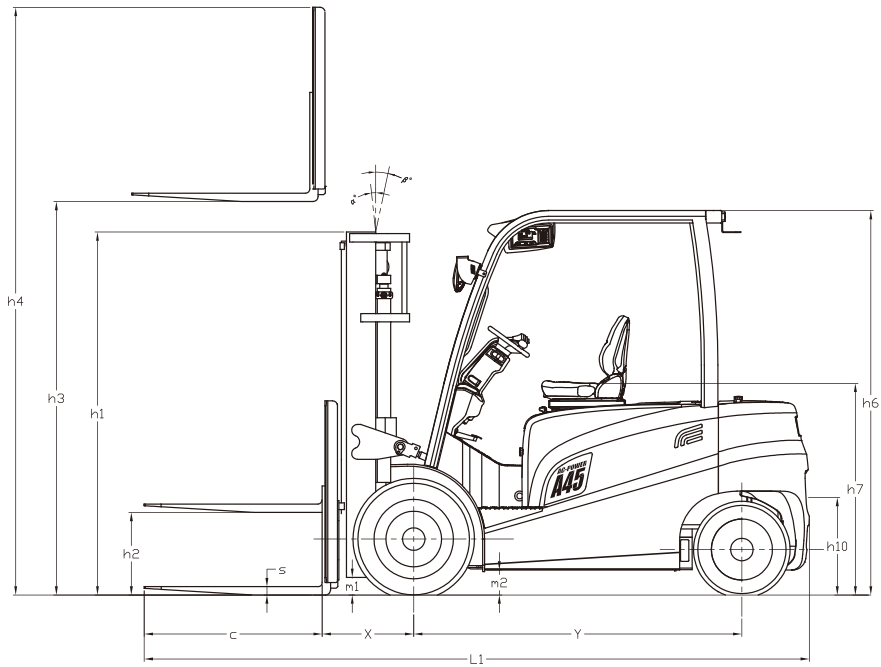
Type	Max. fork height	Lowered	Overall height		Free lift		Tilting range		Capacity	
			With backrest	Without backrest	With backrest	Without backrest	F	R	Load capacity at 24in	
			in	in	in	in	(°)	(°)	Single tire	Double tire
STD Duplex	98.4	76.1	144.4	128.7	5.9	5.9	6	11	9980	9980
	106.2	80.1	152.3	254.7	5.9	5.9	6	11	9980	9980
	118.1	86	164.1	148.4	5.9	5.9	6	11	9980	9980
	129.9	91.9	175.9	160	5.9	5.9	6	11	9980	9980
	137.7	95.8	183.8	168.1	5.9	5.9	6	11	9980	9980
	141.7	97.8	187.7	172	5.9	5.9	6	11	9980	9980
	157.4	107.6	203.5	187.7	5.9	5.9	6	11	9980	9980
	169.2	114.1	215.3	199.6	5.9	5.9	6	6	9900	9980
	177.1	118.5	223.2	207.4	5.9	5.9	6	6	9800	9980
	188.9	125	235	219.2	5.9	5.9	6	6	9600	9800
	196.8	129.3	242.9	227.1	5.9	5.9	6	6	9400	9600
	Full Free Lift	98.4	75.4	144.4	130.1	29.5	43.8	6	11	9980
108.2		80.3	154.3	139.9	34.3	48.7	6	11	9980	9980
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	169.2	83.4	215.3	200.9	37.4	51.8	6	6	9800	9980
	177.1	86	223.2	208.8	40	54.3	6	6	9600	9800
	188.9	89.7	235	220.6	43.7	58.1	6	6	9400	9600
	196.8	92.5	242.9	228.5	46.4	60.9	6	6	9200	9400
	216.5	99	262.5	248.2	53	67.3	3	6	8800	9200
	236.2	107.4	278.3	267.9	61.4	75.9	3	6	8200	8600

With sideshifter minus 440lb(200kg),with integral sideshifter minus 440lb(200kg).

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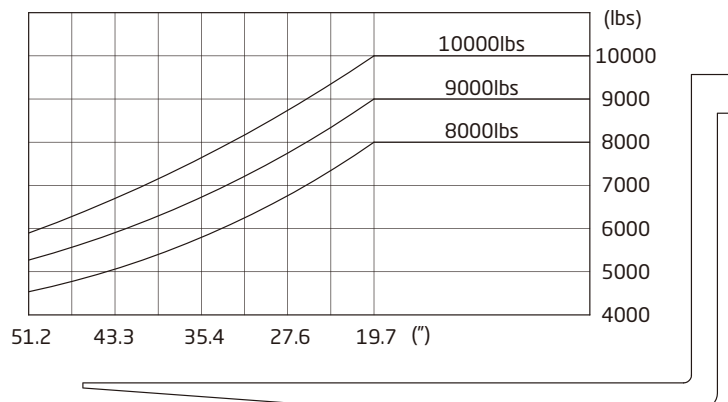
			HANGCHA GROUP CO.,LTD.			
			FB40	FB45	FB50	
Distinguishing mark	1.1	Manufacturer (abbreviation)				
		HCFA Model		FB40	FB45	FB50
	1.2	Manufacturers type designation		CPD40-AC4	CPD45-AC4	CPD50-AC4
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		electric	electric	electric
	1.4	Operator type: sit-down		sit-down	sit-down	sit-down
	1.5	Load capacity/rated load	Q (lbs)	8000	9000	10000
	1.6	Load centre distance	c (in)	24	24	24
	1.8	Load distance, centre of drive axle to fork	x (in)	21.6	21.6	21.8
	1.9	Wheelbase	y (in)	77.5	77.5	77.5
Weight	2.1	Service Weight	lbs	14771	15322	15917
	2.2	Axle loading, laden front/rear	lbs	21010/2579	22597/2645	24206/2733
	2.3	Axle loading, unladen front/rear	lbs	7253/7518	7341/7981	7352/8565
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		pneumatic	pneumatic	pneumatic
	3.2	Tyre size, front		250 - 15	250 - 15	28x12.5 - 15
	3.3	Tyre size, rear		23x10 - 12	23x10 - 12	23x10 - 12
	3.5	Wheels, number front rear (x = driven wheels)		2x/2	2x/2	2x/2
	3.6	Tread, front	b10 (in)	45.2	45.2	45.2
	3.7	Tread, rear	b11 (in)	46.2	46.2	46.2
	Dimensions	4.1	Tilt of mast/fork carriage forward/backward	Grad	6/11	6/11
4.2		Height, mast lowered	h1 (in)	86	86	86
4.3		Free lift	h2 (in)	5.9	5.9	5.9
4.4		Lift	h3 (in)	118.1	118.1	118.1
4.5		Height, mast extended	h4 (in)	164.1	164.1	164.1
4.7		Height of overhead guard STD.	h6 (in)	90.9	90.9	90.9
4.8		Seat height/stand height	h7 (in)	48.8	48.8	48.8
4.12		Coupling height	h10 (in)	13.7	13.7	13.7
4.19		Overall length	l1 (in)	157.3	157.3	158.9
4.20		Length to face of forks	l2 (in)	115.2	115.2	116.8
4.21		Overall width	b1 (in)	56.6	56.6	57.8
4.22		Fork dimensions	s/e/l (in)	1.9/4.8/42.1	1.9/5.9/42.1	2.1/5.9/42.1
4.23		Fork carriage DIN 15 173 --- ISO 2328, class/type A,B		ISO2328 3A	ISO2328 3A	ISO2328 3A
4.24		Fork-carriage width	b3 (in)	49.2	49.2	49.2
4.25		Distance between fork-arms	b5 (in)	12.2/49.2	12.2/49.2	12.2/49.2
4.31		Ground clearance, laden, below mast	m1 (in)	4.3	4.3	4.3
4.32		Ground clearance, centre of wheelbase	m2 (in)	5.9	5.9	5.9
4.33		Aisle width for pallets 39.4 x 47.2 crossways	Ast (in)	172.8	172.8	174.2
4.34		Aisle width for pallets 31.5 x 47.2 crossways	Ast (in)	180.7	180.7	182
4.35		Turning radius	Wa (in)	103.9	103.9	105.3
4.36	Internal turning radius	b13 (in)	31.8	31.8	31.8	
Performance Data	5.1	Travel speed, laden/unladen	mph	8.6/8.6	8.3/8.6	8/8.3
	5.2	Lift speed, laden/unladen	fpm	53.1/84.6	51.1/82.6	49.2/78.7
	5.3	Lowering speed, laden/unladen	fpm	84.6/94.9	86.5/94.4	86.5/94.4
	5.5	Drawbar pull, laden/unladen	lbf	3687 /3822	3507/3642	3417/3507
	5.6	Max. Drawbar pull, laden/unladen	lbf	5395	5845	6070
	5.7	Gradeability, laden/unladen	%	14.5/15.5	14/15	13/14
	5.8	Max. gradeability, laden/unladen	%	16/28	15/27	14/25
	5.9	Acceleration time, laden/unladen (0-10m)	s	5.2/5.4	5.3/5.5	5.4/5.6
	5.10	Service brake		Hydraulic	Hydraulic	Hydraulic
	5.11	Parking brake		electric	electric	electric
	Electric-engine	6.1	Drive motor rating S2 60 min	kW	16.6 AC	16.6 AC
6.2		Lift motor rating at S3 15%	kW	25.4 AC	25.4 AC	25.4 AC
6.3		Battery acc. to DIN 43 531/35/36 A,B,C, no		DIN 43536A	DIN 43536A	DIN 43536A
6.4		Battery voltage, nominal capacity K5	V/Ah	80/700	80/700	80/700
6.5		Battery weight	lbs	4107	4107	4107
6.6		Battery dimensions	l/b/h(in)	40.5×33.7×30.9	40.5×33.7×30.9	40.5×33.7×30.9
6.7		Energy consumption acc. to VDI cycle	kWh/h	12.5	13	13.5
6.8		Min. battery weight	lbs	3968	3968	3968
6.9		Max. battery weight	lbs	4299	4299	4299
Addition data	8.1	Type of drive control		MOSFET/AC	MOSFET/AC	MOSFET/AC
		Manufacturer		CURTIS	CURTIS	CURTIS
	8.2	Operating pressure for attachments	bar	185	185	185
	8.3	Oil volume for attachments	l/min	65	65	65
	8.4	Sound level at the driver's ear according to EN / DIN 12 053	dB (A)	75	75	76
	8.5	Towing coupling, type DIN		Φ24 Pin	Φ24 Pin	Φ24 Pin
9.1	Hydraulic Tank - capacity (drain & refill)	liter	10.1	10.1	10.1	

AC4: means CURTIS AC traveling system with AC Pump system, full-AC system



$a=7.9''$  safety clearance  
 $AST=a+Wa+X+B$

### LOAD CHART





**Simple/  
Solid/  
Smart**



## Standard Specification

- / High efficiency AC driving motor
- / Multi-functions instrument
- / Rubber floor mat
- / PC Platfond
- / Emergency disconnect switch
- / Pneumatic tyre
- / Electronic parking brake
- / Battery slung removing
- / 2-way-valve
- / LED combination headlight
- / LED rear combination light
- / Panoramic rearview mirror (in the middle position of the overhead guard)
- / 118" duplex mast
- / Adjustable steering column
- / Full electronic controlled traveling, lifting and steering
- / Horn and reversing buzzer
- / CAN-BUS system
- / Low noise gear pump (Brand: Shimadzu, Made in Japan)
- / Full hydraulic power steering
- / Soft landing system
- / OPS system

## Options

- / Solid pneumatic tyre
- / Non-marking tyre
- / 3rd or 4th hydraulic function
- / 98.4-196.8" duplex mast
- / 157.5-236.2" triplex mast
- / Rear working LED light
- / Rear handle with horn
- / Integrated side shift
- / Other attachments
- / Other dimension forks
- / Special carriage and backrest
- / Battery side extraction
- / Minilever control on the adjustable armrest
- / Suspension seat
- / Freezer
- / Full closed cabin
- / Blue spot light
- / Strobe light
- / Left and right mirror



## HC FORKLIFT AMERICA CORPORATION

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