

LI-ION  
TECHNOLOGY

INNOVATIVE LITHIUM-ION

# HIGH-VOLTAGE LITHIUM BATTERY ROUGH TERRAIN FORKLIFT

with capacity of 2,500 to 3,500kg



*The World of Hangcha*  
SINCE 1956



**HANGCHA**

CANADA

# HIGH-VOLTAGE LITHIUM BATTERY ROUGH TERRAIN FORKLIFT

The 2.5-3.5t high-voltage lithium battery rough terrain forklifts are independently-developed new series lithium battery rough terrain products that combine the advantages of XH series dedicated heavy-duty high-voltage lithium battery forklifts and rough terrain internal combustion forklifts. Representing a breakthrough over the traditional design and a new generation of rough terrain forklifts, the forklift of this series is equipped with pioneered front and rear dual-motor forklift high-voltage drive systems and a new energy vehicle high-voltage platform to offer both performance of rough terrain forklift and comfort of electric forklift.

VOLTAGE

**317 V**

WATER RESISTANCE

**IP67**

SPEED MODELS

**3**

PROTECTION RATE

**IP67**

100% CHARGE FOR

**1.5Hour**

## Appearance

/ With the inherited classic exterior design of internal combustion off-road forklifts as well as a sturdy profile and a custom pitch-down streamlined design, the vehicle is robust and elegant in appearance.

**2WD & 4WD**  
ROUGH TERRAIN      ROUGH TERRAIN

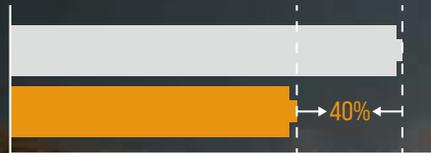


# FASTER & MORE EFFICIENCY.

Compared with low-voltage lithium battery forklifts, high-voltage lithium battery technology can save about 40% of the overall cost during the service cycle.

## 40%

Low Voltage Lithium Battery Forklift  
Hangcha High Voltage Lithium Electric Forklift



Compared with fuel forklifts, high-voltage lithium battery technology can save about 90% of the overall cost during the service cycle.

## 90%

Fuel Forklift  
Lithium Electric Forklift



**6 YEARS  
WARRANTY**

HANGCHA provides Li-ion battery (LiFePO4) with 6 years or 12000 hours warranty.

Through disruptive battery and fast charging technology, the charging time is greatly shortened.

Fast charging makes it possible for the whole vehicle to work continuously, shortening the waiting time and greatly improving efficiency.

Get the battery fully charge:



## 1.5h

Hangcha High Voltage Electric Forklift



## 10h

Electric Forklift

HIGH-VOLTAGE

# 46.368kWh

Battery capacity



HANGCHA

35

L110N  
HANGCHA

HANGCHA

# OFF ROAD PERFORMANCE

## Excellent passing performance

- The differential mechanism lock and one-click switchover between double-drive mode and four-drive mode are specially designed for rugged terrain and harsh natural environments.
- Low vehicle height and the optional low-height mast meet not only outdoor but also indoor and underground site operating requirements.



## Efficient operating performance

- The efficient high-torque permanent magnet synchronous motor and the high speed ratio speed reducer offer power performance and handling performance rival that of rough terrain internal combustion forklifts.
- The new front and rear drive design effectively increase the layout space. The vehicle controller controls the front and rear motor torque to be flexibly distributed according to various special operating conditions.



	High Voltage Lithium Battery Rough Terrain Forklift	Internal Combustion Rough Terrain Forklifts
Travel speed, laden/unladen	24/26km/h	24/26km/h
Lift speed, laden/unladen	620/660mm/s	620/640mm/s
Max. gradeability, S2=5min, laden/unladen	63-52%	58-52%



“ The design of large passing angle and large distance from the ground, as well as the large-tread tubeless tires, can perfectly adapt to various bad road conditions. ”  
— Hangcha R & D Center

Front tyre:14-17.5

Rear tyre:10.0/75-15.3



### ● Wide-base deep tread tyres

The drive axle is equipped with wide-base deep tread tires, wet brake, differential mechanism with electronic lock, as well as reinforced steering drive axle, and can better adapt to special working conditions.

Higher specification fork mounting level-3B, more weight can be loaded.



## Excellent heat dissipation performance

- The water chilling system for electric control and motor and the large vent design for rough terrain internal combustion forklift offer quick heat exchange and better heat dissipation performance.
- The external hydraulic tank integrated with the vehicle frame offers better heat dissipation and ensures the long reliable operations of the hydraulic parts.



# TOUGH TRIED AND TRUE

**1.5**  
HOUR  
CHARGING TIME

## Excellent Vision



The panoramic wide-view design offers a wide view through the mast and overhead guard. The horizontal level of the front and rear sides, the left and right sides.

## Energy saving and high efficiency

- Both the drive and operating systems are efficient vehicle-grade permanent magnet synchronization systems with low energy consumption.
- With a super fast charging technology, the long-lasting large-capacity lithium battery can be fully charged in about **1.5 hours** so that the time of waiting for operations is significantly reduced.
- The LED lighting system of the vehicle has low energy consumption and a longer service life.



Charging port



LED



## Safety and reliability

- The wet brake drive axle and the large swing angle steering drive axle, peers for rough terrain internal combustion forklifts, have good versatility and guaranteed quality.
- Electrical connectors of the vehicle are designed to be waterproof and main high-voltage electrical components reach the dust and water resistance level of IP67. The electrical system has high-voltage interlocking.



The MSD maintenance switch enables one-click power-down and safer maintenance.



Each product of this series is equipped with a CATL lithium battery and can be equipped with an optional automatic fire extinguisher for safer use. The suspended shock-absorbing battery pack offers higher reliability of the battery.

*Inherited from the rough terrain internal combustion series, the suspended overhead guard and the suspended shock-absorbing seat bring comfortable driving experience.*



## Comfort and convenience

- The multi functional color-screen instruments are designed to have graphical interfaces and display data clearly.
- The fully enclosed instrument cover and the low-noise gear pump further reduce the noise of the vehicle.
- The wide-opened hood, detachable front and rear baseplates and detachable double water tank lids facilitate repair and maintenance.

# Features

Truck	Standard	Options
Standard duplex mast, fork, fork carriage and load backrest	●	
Stamped iron hood	●	
Stamped stainless steel boarding step	●	
Load sensing steering system	●	
Fork descending buffering	●	
SPE power selection	●	
Electronic water pump	●	
Heat dissipater	●	
Expansion tank	●	
Duplex multiway valve	●	
Silent gear pump	●	
Widened load backrest	●	
Widened fork carriage	●	
Differential mechanism lock	●	
Free triplex mast		○
Built-in side shifter		○
Accessories for other specifications		○
Forks of other lengths		○
<b>Cab</b>		
Electronic fan	●	
Toolbox, folder	●	
Suspended safety seat	●	
Operator presence sensing system (OPS)		○
Start with a PIN code or by swiping a card		○
Cab		○
<b>Controls and instruments</b>		
Multi-function color-screen combination instrument	●	
Integrated fuse box	●	
Two-in-one permanent magnet AC traction motor controller	●	
Two-in-one permanent magnet AC oil pump motor controller	●	
Two-in-one DC-DC power supply	●	
VCU controller	●	
MSD maintenance switch	●	
Emergency shut-off switch	●	
Mileage display, operating time display	●	
<b>Safety</b>		
The gas spring of the hood with a touch-proof mechanism	●	
Handbrake with a touch-proof mechanism	●	
Reversing buzzer	●	
Reverse armrest (containing a horn button)	●	
Suspended overhead guard	●	
Tilt cylinder jacket	●	
Left and right rear view mirrors		○
Reversing video		○
Lockable hood		○
Fire extinguisher		○
High and low overhead guards		○
<b>Lights</b>		
LED combination headlights and tail lights	●	
Rear working light	●	
Alarm light	●	
Front/rear blue lights		○
<b>Other</b>		
Charging muzzle meets national standards	●	
Lithium battery pack	●	
Lithium battery pack with low temperature electric heating systems	●	
Traction pin	●	
Hangcha cloud intelligent management system	●	
Level	●	
Solid tire		○
Dedicated lithium battery charger		○
Triple multi-way valve		○
Quadruple multi-way valve		○
Quintuple multi-way valve		○

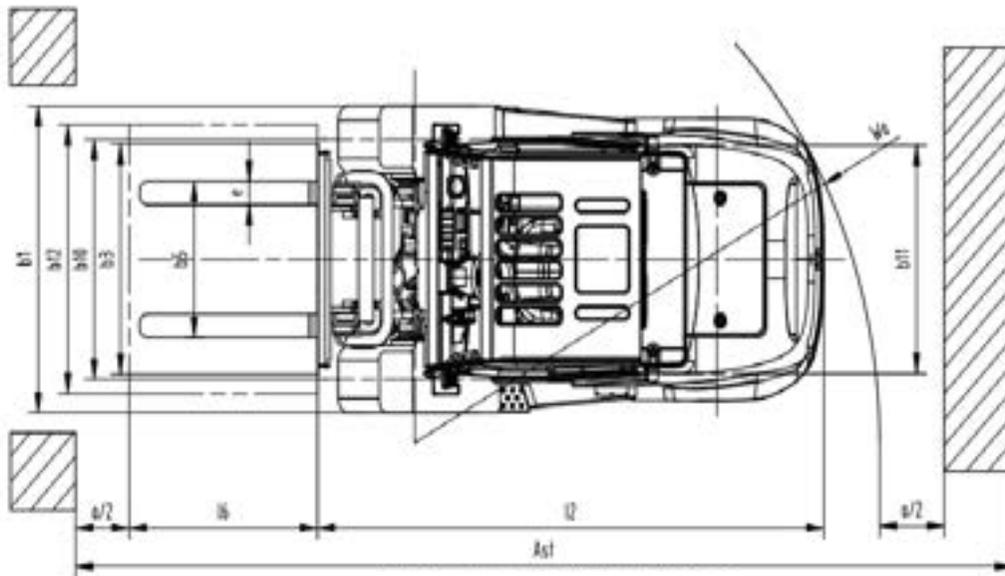
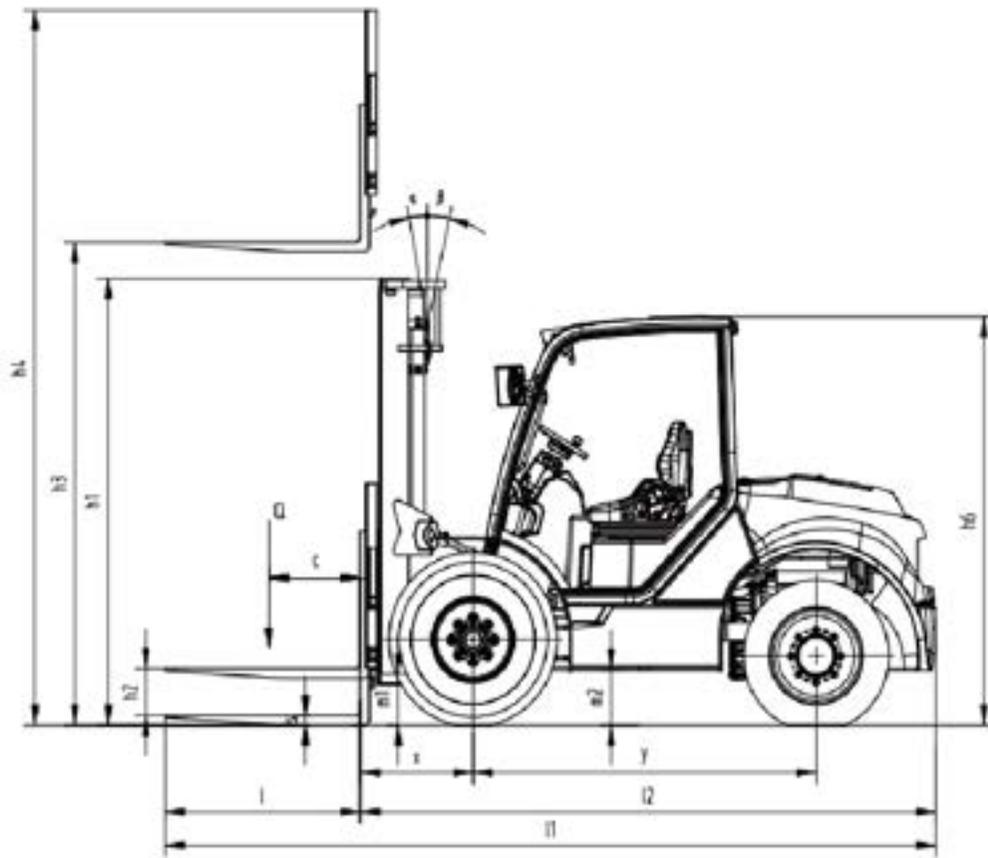
# 2.5-3.5t Mast Specification

Type	Model	Max. Fork Height	Overall height						Free lift				Front Overhang		Tilt range		Capacity max height					
			Lowered (mm)		Extended				With backrest (mm)		Without backrest (mm)				FWD	BWD	Load Center 500mm					
					With backrest (mm)		Without backrest (mm)										ISO 22915-2 Counterbalanced trucks with mast			ISO 22915-13 Rough-terrain trucks with mast		
			mm	2.5t	3/3.5t	2.5t	3/3.5t	2.5t	3/3.5t	2.5t	3/3.5t	2.5t	3/3.5t	2.5t	3t	3.5t	2.5t	3t	3.5t			
Wide view mast	RTH25/35M300	3000	2215	2350	3782	3993	4122	4269	140	150	140	150	585	600	10	12	2500	3000	3500	2500	3000	3500
	RTH25/35M330	3300	2365	2500	4082	4293	4422	4569	140	150	140	150	585	600	10	12	2500	3000	3500	2500	3000	3400
	RTH25/35M350	3500	2465	2600	4282	4493	4622	4769	140	150	140	150	585	600	10	12	2500	3000	3500	2500	2800	3200
	RTH25/35M370	3700	2615	2700	4482	4693	4822	4969	140	150	140	150	585	600	10	12	2500	3000	3500	2500	2600	2800
	RTH25/35M400	4000	2815	2950	4782	4993	5122	5269	140	150	140	150	585	600	10	12	2500	3000	3400	2100	2400	2500
Wide view Full free triplex mast	RTH25/35N400	4000	2115	2300	4860	5025	5122	5269	1255	1275	993	1031	593	618	10	12	2500	2900	3300	2000	2300	2400
	RTH25/35N430	4300	2215	2400	5160	5325	5422	5569	1355	1375	1093	1131	593	618	10	12	2400	2700	3000	1900	2100	2200
	RTH25/35N450	4500	2265	2450	5360	5525	5622	5769	1405	1425	1143	1181	593	618	10	12	2200	2500	2900	1700	1900	1900
	RTH25/35N470	4700	2365	2550	5560	5725	5822	5969	1505	1525	1243	1281	593	618	10	12	2000	2300	2700	1400	1500	1500
	RTH25/35N500	5000	2515	2700	5860	6025	6122	6269	1655	1675	1393	1431	593	618	6	6	1900	2100	2500	1100	1200	1200
	RTH25/35N550	5500	2715	2900	6360	6525	6622	6769	1855	1875	1593	1631	593	618	6	6	1500	1900	2300	800	900	900
RTH25/35N600	6000	2965	3150	6860	7025	7122	7269	2105	2125	1843	1881	593	618	6	6	1200	1600	1900	600	700	700	

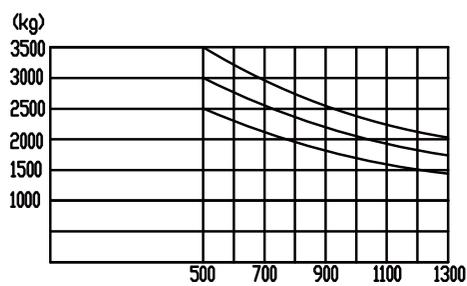
SUBTRACT 200kg WITH INTEGRAL SIDESHIFTER, SUBTRACT 300kg WITH EXTERNAL SIDESHIFTER.

# High-voltage Lithium Battery Rough Terrain Forklift Specification

Distinguishing mark	1.1	Manufacturer	HANGCHA GROUP CO.,LTD.							
	1.2	Manufacturer's type designation	CPD25-XY2GE-RT2	CPD30-XY2GE-RT2	CPD35-XY2GE-RT2	CPD25-XY2GC-RT4	CPD30-XY2GC-RT4	CPD35-XY2GC-RT4		
Distinguishing mark	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	Electric	Electric	Electric	Electric	Electric	Electric		
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker	Seated	Seated	Seated	Seated	Seated	Seated		
	1.5	Rated capacity/rated load	(kg) 2500	3000	3500	2500	3000	3500		
	1.6	Load centre distance	c (mm) 500	500	500	500	500	500		
	1.8	Load distance, centre of drive axle to fork	x (mm) 585	600	600	585	600	600		
	1.9	Wheelbase	y (mm) 1880	1880	1880	1880	1880	1880		
	Weight	2.1	Service Weight	kg 5000	5340	5600	5000	5340	5600	
		2.2	Axle loading, laden front/rear	kg 6200/1300	7200/1140	7900/1200	6200/1300	7200/1140	7900/1200	
		2.3	Axle loading, unladen front/rear	kg 2100/2900	2340/3000	2300/3300	2100/2900	2340/3000	2300/3300	
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic		
	3.2	Tyre size, front	12-16.5-14PR	14-17.5-14PR	14-17.5-14PR	12-16.5-14PR	14-17.5-14PR	14-17.5-14PR		
	3.3	Tyre size, rear	27×10-12-12PR	27×10-12-12PR	27×10-12-12PR	10.0/75-15.3-12PR	10.0/75-15.3-12PR	10.0/75-15.3-12PR		
	3.5	Wheels, number front / rear (x = driven wheels)	2×/2	2×/2	2×/2	2×/2*	2×/2*	2×/2*		
	3.6	Tread, front	b10 (mm) 1250	1250	1250	1250	1250	1250		
	3.7	Tread, rear	b11 (mm) 1205	1205	1205	1190	1190	1190		
	Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β(°) 10/12	10/12	10/12	10/12	10/12	10/12	
4.2		Height, mast lowered	h1 (mm) 2215	2350	2350	2215	2350	2350		
4.3		Free lift	h2 (mm) 140	150	150	140	150	150		
4.4		Lift	h3 (mm) 3000	3000	3000	3000	3000	3000		
4.5		Height, mast extended	h4 (mm) 4122	4142	4142	4122	4142	4142		
4.7		Height of overhead guard (cabin)	h6 (mm) 2200	2200	2200	2200	2200	2200		
4.20		Length to face of forks	l2 (mm) 3125	3140	3140	3125	3140	3140		
4.21		Overall width	b1 (mm) 1599	1599	1599	1599	1599	1599		
4.22		Fork dimensions	s/e/l(mm) 40×122×1220	50×122×1220	50×122×1220	40×122×1220	50×122×1220	50×122×1220		
4.24		Fork-carriage width	bs(mm) 1150	1150	1150	1150	1150	1150		
4.25		Distance between fork-arms	bs(mm) 290-1150	290-1150	290-1150	290-1150	290-1150	290-1150		
4.31		Ground clearance, laden, below mast	m1 (mm) 225	255	255	225	255	255		
4.32		Ground clearance, centre of wheelbase	m2 (mm) 260	290	290	260	290	290		
4.34.1		Aisle width for pallets 1000 x 1200 crossways	Ast (mm) 4635	4650	4650	5085	5100	5100		
4.34.2		Aisle width for pallets 800 x 1200 lengthways	4835	4850	4850	5285	5300	5300		
4.35	Turning radius	Wa (mm) 2850	2850	2850	3300	3300	3300			
Performance data	5.1	Travel speed, laden/unladen	km/h 24/26	24/26	24/26	24/26	24/26	24/26		
	5.2	Lift speed, laden/unladen	m/s 0.62/0.66	0.43/0.51	0.43/0.51	0.62/0.66	0.43/0.51	0.43/0.51		
	5.3	Lowering speed, laden/unladen	m/s 0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45	0.5/0.45		
	5.6	Max. Drawbar pull, laden/unladen	N 40000	42000	42000	40000	42000	42000		
	5.8	Max. gradeability, laden/unladen	% 63	55	52	63	55	52		
	5.10	Service brake	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic		
Electric-engine		Parking brake	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical	Mechanical		
	6.1	Drive motor rating S2 60 min ( front/rear)	kW 30AC/	30AC/	30AC/	30/15AC	30/15AC	30/15AC		
	6.2	Lift motor rating at S3 15%	kW 24AC	24AC	24AC	24AC	24AC	24AC		
	6.4	Battery voltage, nominal capacity K5	V/Ah 317/150	317/150	317/150	317/150	317/150	317/150		
	6.5	Battery weight	kg 590	590	590	590	590	590		
10.1	Operating pressure for attachments	MPa 16	16	16	16	16	16			



$A_{st} = 16 + x + W_a + a$  L6: load length a: Clearance (200mm)



**POWERFUL**  
**EFFICIENT**  
**RELIABLE**





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