



# XH SERIES HIGH-VOLTAGE LITHIUM BATTERY FORKLIFT

with capacity of 2,000 to 3,800kg



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ISO45001:2018	ISO14001:2015	ISO9001:2015	HANGCHA trucks conform to the European Safety Requirements.

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The World of Hangcha



VOLTAGE

**309 V**

100% CHARGE FOR

**1 Hour**

WATER RESISTANCE

**IPX4**

SPEED MODELS

**3**

PROTECTION RATE

**IP67**



THE *Plus*  
FOR YOUR  
BUSINESS

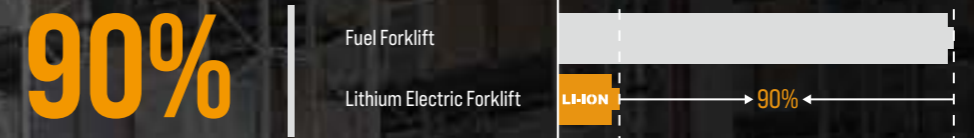
# COMMITTED TO IMPROVING

## FASTER & MORE EFFICIENT

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



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



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

## POWER PERFORMANCE COMPARISON

	High Voltage Lithium Electric Forklift	Fuel Forklift
Travel speed, laden/unladen	21/21.5km/h	15-20km/h
Lift speed, laden/unladen	435/500mm/s	430/470mm/s
Max. gradeability, S2=5min, laden/unladen	20%/25%	15%-20%

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

Get the battery fully charge:



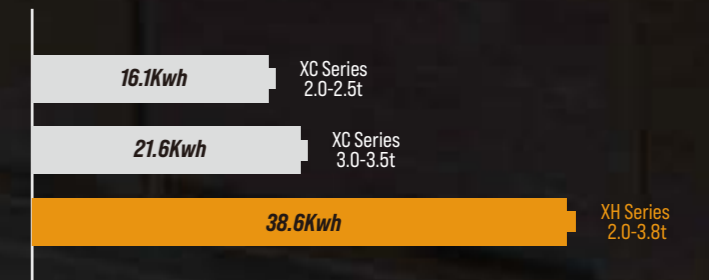
Hangcha High Voltage Electric Forklift



Electric Forklift

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

Battery capacity



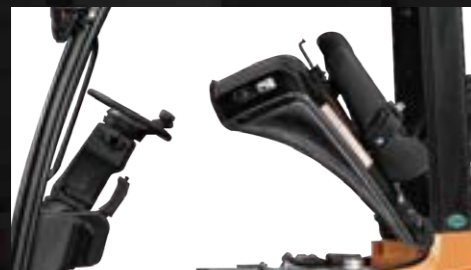
# XH Series High-voltage Lithium Battery Forklift

Independently developed by Hangcha on the basis of decades of deep understanding of electric forklifts and internal combustion forklifts, the dedicated XH series high voltage lithium battery forklifts are a new series of electric counterweight forklifts with a new energy vehicle voltage platform and a pioneered special structure that represents a breakthrough over the traditional design concept. Representing a redefinition of electric forklifts in terms of efficiency, power, reliability, etc., this series of electric forklift models will supersede the internal combustion forklifts.



## Exterior

/ With the inherited exterior design of the dedicated XC lithium battery forklift and a smooth and sturdy profile, the whole vehicle is impact, elegant, stylish, sturdy and powerful.

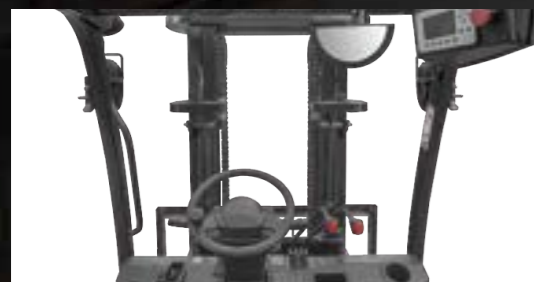


## Maintainability

/ Equipped with a lock, the hood designed to be back-flipped open to and facilitate charging, liquid replenishment and maintenance.  
/ The water tank lid can be removed quickly and easily without a tool to enable a large operating area for cleaning and maintenance.

## Comfort

/ The wide-view mast with optimized design is unlikely to obstruct the operator's line of sight. The enlarged opening size of the fork carriage enables a wider view, a large operation space, and excellent ergonomic design.  
/ The multifunctional color-screen instruments are designed to have graphical interfaces and display data clearly. Three speed gears are provided to adapt to different operating environments. The interfaces can be switched to be shown in Chinese and English to meet the needs of customers at home and abroad.  
/ The enlarged brake pedal and appropriate regenerative braking function can effectively reduce the driver's fatigue.



Wide-view mast



Multifunctional color-screen instruments



# INTELLIGENT. INTUITIVE. INNOVATIVE.



## Advancement

- / Both the drive and operating systems are vehicle-grade permanent magnet synchronization systems, equipped with a high-speed ratio gearbox with a driving speed, upslope degree and acceleration performance rival that of internal combustion vehicles, and the environmental performance better than that of internal combustion vehicles.
- / The vehicle uses an overall controller, and the drive system and operating system are assembled with motors electronically controlled, to form a highly independent light, efficient, and intelligent drive system.
- / The vehicle's 309V high-voltage platform is equipped with a long-lasting large-capacity lithium battery, which is powerful, efficient and energy-saving, adopts a super-fast charging technology that enables a short charging time.
- / A water-cooling system with a good heat dissipation effect is used on a new energy forklift for the first time, so that the forklift can absolutely carry out long-time and high-intensity operations as internal combustion forklifts.



## Safety

- / The cover of the vehicle is designed to be sealed to the water resistance level of IPX4. All the motor, electronic controls and high-voltage components reach the dust and water resistance level of IP67, a high protection level adequate to withstand harsh operating environments and ensure safety and reliability.
- / The electrical system is equipped with high-voltage interlocks, and insulation detection, insulation monitoring and vehicle-grade safety means. The MSD maintenance switch enables one-click power-down and safer maintenance.
- / The standard configuration provides electronic control functions for buffering the fork's descending and ascending to better protect goods.
- / The handbrake can be optionally equipped with an alarm buzzer to prompt the driver to pull up the handbrake before leaving the vehicle.
- / The optional descending lock function can disable the descending function when the driver leaves the seat and enable high safety.



## Standard Specification

- / Multi-function color-screen combination instrument
- / Large integral rubber pedal pads
- / Standard duplex mast, fork, fork carriage and load backrest
- / Stamped iron hood, stamped iron side plates
- / Stamped stainless steel boarding step
- / The gas spring of the hood with a touch-proof mechanism
- / Handbrake with a touch-proof mechanism
- / Integrated fuse box
- / Charging muzzle meeting national standards
- / Reverse buzzer
- / Lithium battery pack
- / Low temperature electric heating systems
- / Permanent magnet AC traction motor controller
- / Permanent magnet AC oil pump motor controller
- / DC-DC power supply
- / VCU controller
- / MSD maintenance switch
- / Emergency power off switch
- / Mileage display, operating time display
- / Load sensing steering system
- / Turning deceleration function
- / Soft landing
- / SPE power selection
- / Electronic water pump
- / Electronic fan
- / Heat dissipater
- / Expansion tank
- / Double multi-way valve
- / Low noise gear pump
- / Traction pin
- / LED combination headlights, LED rear combination three-color taillights

## Options

- / Solid tire
- / Left and right rear-view mirrors
- / Reversing video
- / Front/rear blue lights
- / Rear operation lights
- / Lithium battery charger
- / Cold storage
- / Reverse armrest (with a horn button)
- / OPS system
- / Triple multi-way valve
- / Quadruple multi-way valve
- / Quintuple multi-way valve
- / Widened / heightened load backrest
- / Widened fork carriage
- / Forks of other lengths
- / Free duplex mast
- / Free triplex mast
- / Built-in side shifter
- / Accessories for other specifications
- / Grammer MSG531 suspended seat
- / Start with a PIN code or by swiping a card
- / Coloring solid environmentally friendly seamless tire
- / Fork ascending buffering
- / Fingertip control system
- / Toolbox, folder



## Optional battery list

Capacity (Ah)	2.0-3.8t 309V(CATL)	2.0-3.8t 307V(EVE)
105		●
125	○	
150	○	

Note: ● Standard battery capacity; ○ Optional battery capacity

## 2.0-2.5t Mast Specification

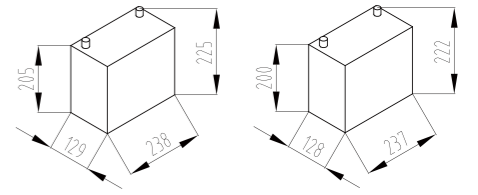
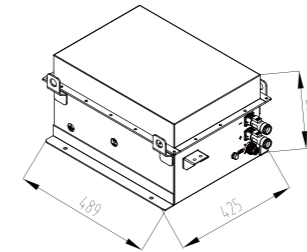
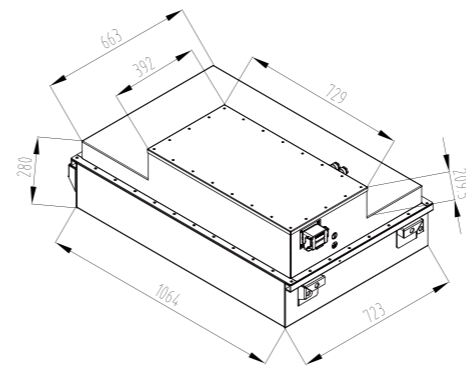
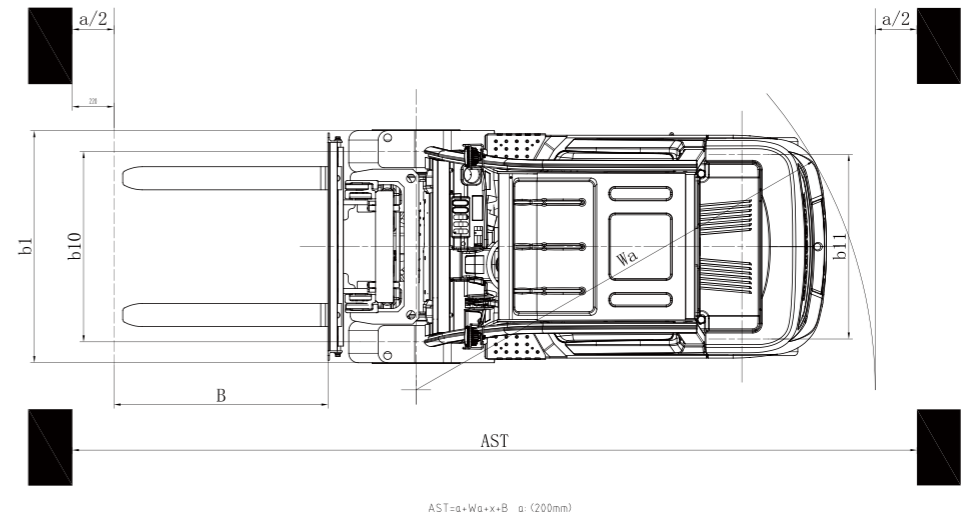
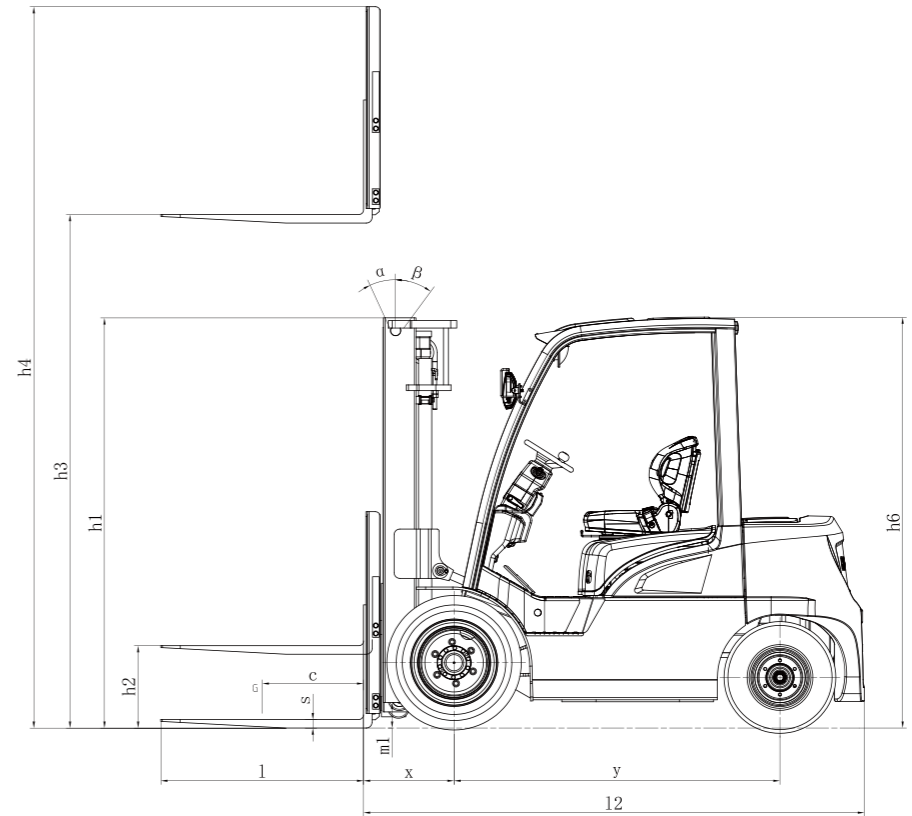
Type	Model	Lifting height mm	Lowered overall height mm	Overall height		Free lifting height		Tilt range F/R	Capacity			
				Without backrest	With backrest	Without backrest	With backrest		Load center@500mm			
				mm	mm	mm	mm	Single tire		Double tire		
2-stage wide view mast	XIPY25M200	2000	1498	2706	3046	140	140	6/6	2000	2500	2000	2500
	XIPY25M250	2500	1748	3206	3546	140	140	6/12	2000	2500	2000	2500
	XIPY25M270	2700	1848	3406	3746	140	140	6/12	2000	2500	2000	2500
	XIPY25M300	3000	1998	3706	4046	140	140	6/12	2000	2500	2000	2500
	XIPY25M330	3300	2148	4006	4346	140	140	6/12	2000	2500	2000	2500
	XIPY25M360	3600	2348	4306	4646	140	140	6/12	2000	2500	2000	2500
	XIPY25M400	4000	2598	4706	5046	140	140	6/12	2000	2500	2000	2500
	XIPY25M430	4300	2748	5006	5346	140	140	6/6	2000	2500	2000	2500
	XIPY25M450	4500	2848	5206	5546	140	140	6/6	2000	2450	2000	2500
	XIPY25M480	4800	2998	5506	5846	140	140	6/6	1950	2350	2000	2450
	XIPY25M500	5000	3098	5706	6046	140	140	6/6	1850	2300	1950	2350
	XIPY25M550	5500	3348	6206	6546	140	140	3/6	1750	2150	1900	2200
XIPY25M600	6000	3598	6706	7046	140	140	3/6	1550	1900	1800	2000	
2-stage full-free lifting mast	XIPY25U250	2500	1783	3238	3546	1045	737	6/12	2000	2500	2000	2500
	XIPY25U270	2700	1883	3438	3746	1145	837	6/12	2000	2500	2000	2500
	XIPY25U300	3000	2033	3738	4046	1295	987	6/12	2000	2500	2000	2500
	XIPY25U330	3300	2183	4038	4346	1445	1137	6/12	2000	2500	2000	2500
	XIPY25U360	3600	2333	4338	4646	1595	1287	6/12	2000	2500	2000	2500
	XIPY25U400	4000	2583	4738	5046	1845	1537	6/12	2000	2500	2000	2500
3-stage full-free lifting mast	XIPY25N400	4000	1963	4738	5046	1225	917	6/6	2000	2500	2000	2500
	XIPY25N430	4300	2063	5038	5346	1325	1017	6/6	2000	2450	2000	2500
	XIPY25N450	4500	2113	5238	5546	1375	1067	6/6	2000	2350	2000	2450
	XIPY25N470	4700	2213	5438	5746	1475	1167	6/6	1950	2250	2000	2350
	XIPY25N480	4800	2263	5538	5846	1525	1217	6/6	1950	2250	2000	2350
	XIPY25N500	5000	2363	5738	6046	1625	1317	6/6	1850	2150	1950	2250
	XIPY25N550	5500	2563	6238	6546	1825	1517	3/6	1750	2050	1900	2100
	XIPY25N600	6000	2813	6738	7046	2075	1767	3/6	1550	1850	1800	1950
	XIPY25N650	6500	3013	7238	7546	2275	1967	3/6	/	/	1550	1800
	XIPY25N700	7000	3263	7763	8046	2500	2217	3/6	/	/	1150	1450

## 3.0-3.8t Mast Specification

Type	Model	Lifting height mm	Lowered overall height mm	Overall height		Free lifting height		Tilt range F/R	Capacity					
				Without backrest	With backrest	Without backrest 3.0/3.5t	With backrest 3.0/3.5		Single tire			Double tire		
				mm	mm	mm	mm	mm	mm	3.0t	3.5t	3.8t	3.0t	3.5t
2-stage wide view mast	XIPY35M200	2000	1670	2781	3142	145/150	145/150	6/6	3000	3500	3800	3000	3500	3800
	XIPY35M250	2500	1920	3281	3642	145/150	145/150	6/12	3000	3500	3800	3000	3500	3800
	XIPY35M270	2700	2020	3481	3842	145/150	145/150	6/12	3000	3500	3800	3000	3500	3800
	XIPY35M300	3000	2170	3781	4142	145/150	145/150	6/12	3000	3500	3800	3000	3500	3800
	XIPY35M330	3300	2320	4081	4442	145/150	145/150	6/12	3000	3500	3800	3000	3500	3800
	XIPY35M360	3600	2470	4381	4742	145/150	145/150	6/12	3000	3500	3800	3000	3500	3800
	XIPY35M400	4000	2770	4781	5142	145/150	145/150	6/12	3000	3500	3750	3000	3500	3800
	XIPY35M430	4300	2920	5081	5442	145/150	145/150	6/6	3000	3400	3600	3000	3500	3700
	XIPY35M450	4500	3020	5281	5642	145/150	145/150	6/6	3000	3300	3450	3000	3400	3550
	XIPY35M480	4800	3170	5581	5942	145/150	145/150	6/6	2950	3200	3300	3000	3300	3400
	XIPY35M500	5000	3270	5781	6142	145/150	145/150	6/6	2850	3100	3200	2900	3200	3300
	XIPY35M550	5500	3520	6281	6642	145/150	145/150	3/6	2670	3000	3100	2750	3100	3200
XIPY35M600	6000	3770	6781	7142	145/150	145/150	3/6	2350	2650	2750	2500	2800	2900	
2-stage full-free lifting mast	XIPY35U250	2500	1920	3328	3642	1092	778	6/12	3000	3500	3800	3000	3500	3800
	XIPY35U270	2700	2020	3528	3842	1192	878	6/12	3000	3500	3800	3000	3500	3800
	XIPY35U300	3000	2170	3828	4142	1342	1028	6/12	3000	3500	3800	3000	3500	3800
	XIPY35U330	3300	2320	4128	4442	1492	1178	6/12	3000	3500	3800	3000	3500	3800
	XIPY35U360	3600	2470	4428	4742	1642	1328	6/12	3000	3500	3800	3000	3500	3800
	XIPY35U400	4000	2720	4828	5142	1892	1578	6/12	3000	3500	3750	3000	3500	3800
3-stage full-free lifting mast	XIPY35N400	4000	2120	4828	5142	1292	978	6/6	3000	3400	3650	3000	3500	3750
	XIPY35N430	4300	2220	5128	5442	1392	1078	6/6	3000	3300	3500	3000	3400	3600
	XIPY35N450	4500	2320	5328	5642	1492	1178	6/6	3000	3200	3350	3000	3300	3450
	XIPY35N470	4700	2420	5528	5842	1592	1278	6/6	2900	3100	3200	2950	3200	3300
	XIPY35N480	4800	2470	5670	5942	1600	1328	6/6	2900	3100	3200	2950	3200	3300
	XIPY35N500	5000	2620	5828	6142	1792	1478	6/6	2850	3100	3200	2900	3200	3300
	XIPY35N550	5500	2870	6370	6642	2000	1728	3/6	2670	3000	3100	2750	3100	3200
	XIPY35N600	6000	3120	6920	7142	2200	1978	3/6	2350	2650	2750	2500	2800	2900
	XIPY35N650	6500	3370	7370	7642	2500	2228	3/6	/	/	/	2200	2400	2500
	XIPY35N700	7000	3620	7920	8142	2700	2478	3/6	/	/	/	1850	2050	2150

# XH Series High-voltage Lithium Battery Forklift Specification

Distinguishing mark	HANGCHA GROUP CO., LTD.									
	1.1	Manufacturer		CPD20-XY2G-SI24	CPD25-XY2G-SI24	CPD30-XY2G-SI24	CPD35-XY2G-SI24	CPD38-XY2G-SI24		
1.2	Manufacturer's type designation									
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	Q (kg)	2000	2500	3000	3500	3800			
1.6	Load centre distance	c (mm)	500	500	500	500	500			
1.8	Load distance, centre of drive axle to fork	x (mm)	464	464	479	484	484			
1.9	Wheelbase	y (mm)	1700	1700	1720	1720	1720			
Weight	2.1	Service Weight	kg	3670	3900	4570	4800	5030		
	2.2	Axle loading, laden front/rear	kg	4930/740	5710/690	6620/950	7400/900	7840/990		
	2.3	Axle loading, unladen front/rear	kg	1785/1885	1780/2120	1915/2655	1900/2900	1865/3165		
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Pneumatic	Pneumatic	Pneumatic	Pneumatic	Pneumatic		
	3.2	Tyre size, front		7.00-12-12PR	7.00-12-12PR	28×9-15-14PR	28×9-15-14PR	28×9-15-14PR		
	3.3	Tyre size, rear		6.00-9-10PR	6.00-9-10PR	6.50-10-10PR	6.50-10-10PR	6.50-10-10PR		
	3.5	Wheels, number front / rear (x = driven wheels)		2x/2	2x/2	2x/2	2x/2	2x/2		
	3.6	Tread, front	b10(mm)	968	968	1005	1005	1005		
	3.7	Tread, rear	b11(mm)	975	975	975	975	975		
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	$\alpha/\beta(^{\circ})$	6/12	6/12	6/12	6/12	6/12		
	4.2	Height, mast lowered	h1(mm)	1998	1998	2170	2170	2170		
	4.3	Free lift	h2(mm)	140	140	145	150	150		
	4.4	Lift	h3(mm)	3000	3000	3000	3000	3000		
	4.5	Height, mast extended	h4(mm)	3970	3970	4065	4065	4065		
	4.7	Height of overhead guard	h5(mm)	2165	2165	2167	2167	2167		
	4.8	Seat height/stand height	h7(mm)	1165	1165	1167	1167	1167		
	4.12	Coupling height	h10(mm)	503	503	505	505	505		
	4.19	Overall length	l1(mm)	3605	3605	3715	3720	3760		
	4.20	Length to face of forks	l2(mm)	2535	2535	2645	2650	2690		
	4.21	Overall width	b1(mm)	1195	1195	1225	1225	1225		
	4.22	Fork dimensions	s/e/l (mm)	40/122/1070	40/122/1070	45/122/1070	50/122/1070	50/122/1070		
	4.24	Fork-carriage width	bs(mm)	1038	1038	1100	1100	1100		
	4.25	Distance between fork-arms	bs(mm)	226/1008	226/1008	290/1100	290/1100	290/1100		
	4.31	Ground clearance, laden, below mast	m1(mm)	118	118	135	135	135		
	4.32	Ground clearance, centre of wheelbase	m2(mm)	137	137	139	139	139		
	4.34.1	Aisle width for pallets 1000 x 1200 crossways	Ast1(mm)	4024	4024	4099	4104	4144		
	4.34.2	Aisle width for pallets 800 x 1200 lengthways	Ast2(mm)	3824	3824	3899	3904	3944		
	4.35	Turning radius	Wa(mm)	2360	2360	2420	2420	2460		
	Performance data	5.1	Travel speed, laden/unladen	km/h	21/21.5	21/21.5	21/21.5	21/21.5	21/21.5	
		5.2	Lift speed, laden/unladen	m/s	0.62/0.66	0.62/0.66	0.445/0.525	0.445/0.525	0.445/0.525	
5.3		Lowering speed, laden/unladen	m/s	0.41/0.42	0.41/0.42	0.41/0.42	0.41/0.42	0.415/0.450		
5.6		Max. Drawbar pull, laden/unladen	N	19000	19000	19000	19000	22000		
5.8		Max. gradeability, laden/unladen	%	25/25	25/25	24/25	22/25	20/25		
5.10		Service brake		Hydraulic	Hydraulic	Hydraulic	Hydraulic	Hydraulic		
	Parking brake		Mechanical	Mechanical	Mechanical	Mechanical	Mechanical			
Electric-engine	6.1	Drive motor rating S2 60 min	kW	20AC	20AC	20AC	20AC	20AC		
	6.2	Lift motor rating at S3 15%	kW	24AC	24AC	24AC	24AC	24AC		
	6.4	Battery voltage, nominal capacity K5	V/Ah	307/105	307/105	307/105	307/105	307/105		
	6.5	Battery weight	kg	300	300	300	300	300		
		Battery dimensions	l/b/h(mm)	1144/723/414	1144/723/414	1144/723/414	1144/723/414	1144/723/414		
		Max. battery weight	kg	400	400	400	400	400		
	Min. battery weight	kg	300	300	300	300	300			
8.1	Type of drive unit		AC	AC	AC	AC	AC			
9.1	Manufacturer/Type		Enpower/MC3902	Enpower/MC3902	Enpower/MC3902	Enpower/MC3902	Enpower/MC3902			
Addition data	10.1	Operating pressure for attachments	bar	185	185	185	185	185		
	10.8	Towing coupling, type DIN 15170		Φ 25 Pin	Φ 25 Pin	Φ 30 Pin	Φ 30 Pin	Φ 30 Pin		



Dimension of lithium battery main box

Dimension of lithium battery secondary box

12V battery size

**PERFORMANCE  
REDEFINED**

