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ISO45001

ISO45001:2018

ISO14001

ISO14001:2015

ISO9001

ISO9001:2015

HANGCHA trucks conform to the European Safety Requirements.

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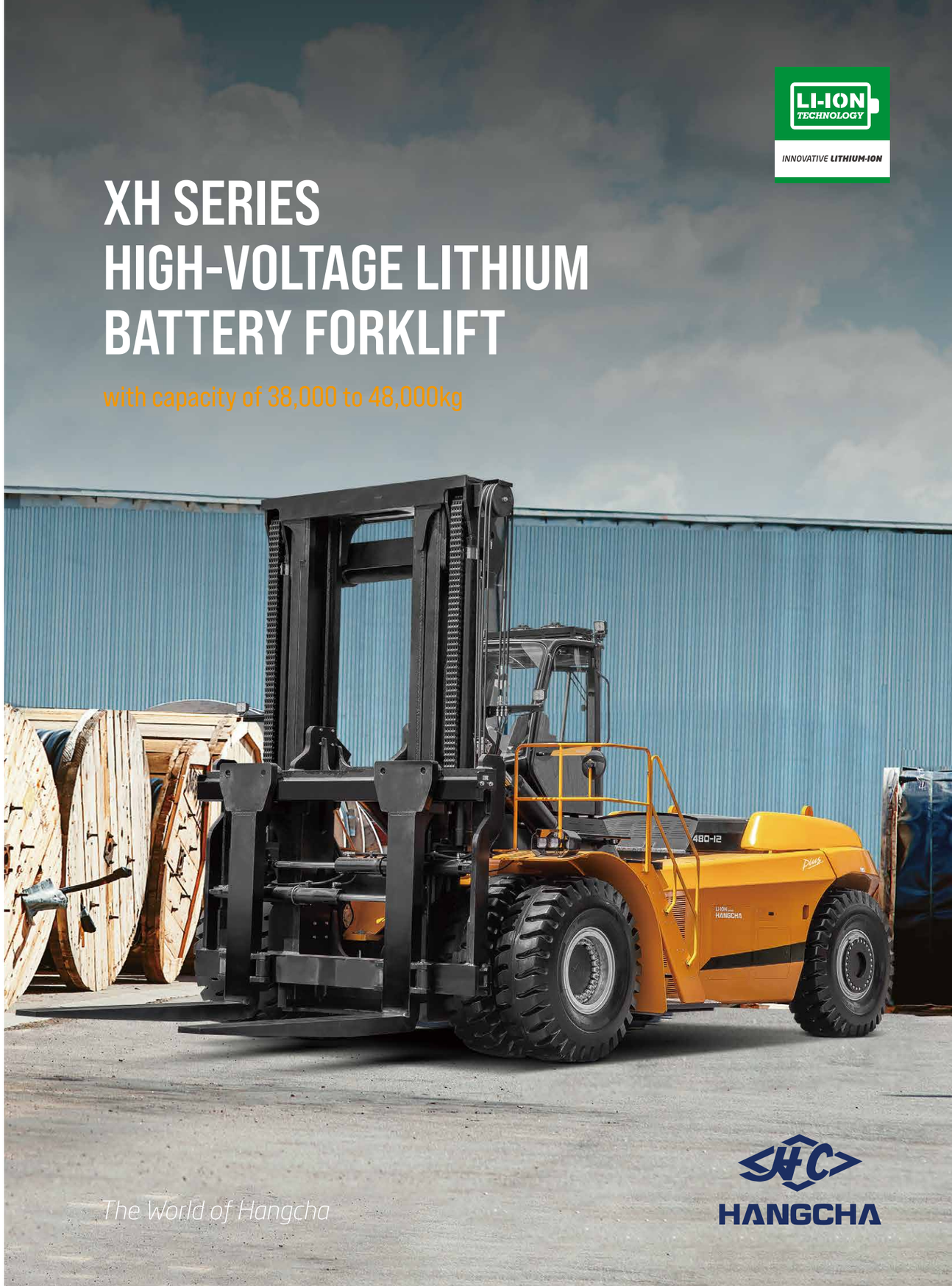
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LI-ION TECHNOLOGY

INNOVATIVE **LITHIUM-ION**

XH SERIES HIGH-VOLTAGE LITHIUM BATTERY FORKLIFT

with capacity of 38,000 to 48,000kg



The World of Hangcha

HANGCHA

XH SERIES HIGH-VOLTAGE LITHIUM BATTERY FORKLIFT

THE *Plus* FOR YOUR BUSINESS

Independently developed by Hangcha on the basis of decades of deep understanding of electric forklifts and internal combustion forklifts, XH series high-voltage counterweight lithium battery forklifts are a new series of high-voltage counterweight lithium battery forklifts that first use a new energy vehicle voltage platform and represent a breakthrough over the traditional design concept. Representing a redefinition of electric forklifts in terms of efficiency, power, reliability, etc., XH series forklift models have performance and operating condition completely superseding that of the internal combustion forklifts.

VOLTAGE
618 V

SPEED MODELS
3 S/P/E mode (Super/Power/Eco)

CHARGING TIME (20-100%)
1.5 Hour

PROTECTION RATE
IP67

VEHICLE WATER RESISTANCE
IPX4



Stylish appearance

/ With the inherited exterior design of X series internal combustion forklifts and a smooth and sturdy profile, the whole vehicle is stylish, sturdy and powerful, showing modern industrial aesthetics.

FASTER & MORE EFFICIENCY.

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

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

LI-ION TECHNOLOGY | 6 YEARS WARRANTY

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

HIGH VOLTAGE
LITHIUM ION

ULTRA LONG BATTERY LIFE

/ A large-capacity lithium battery for the standard configuration can meet the long battery life need.
/ Both the drive and operating systems are efficient and energy-saving vehicle-grade permanent magnet synchronization systems.
/ High-voltage platform, less vehicle current and minimal system heat loss.
/ Braking energy recovery effectively prolongs operating time.

A double-drive motor system increases the range of high efficiency and saves energy significantly.

Advancement

A high-torque permanent magnet synchronous motor provides strong power for the vehicle with performance indicators benchmarked against that of internal combustion forklifts.

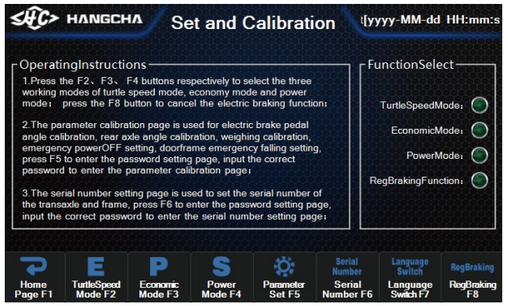
618V

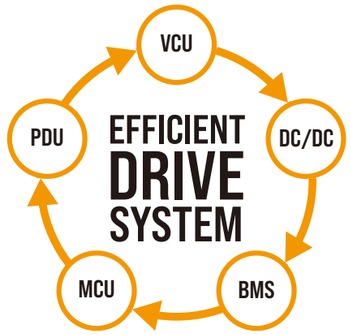
A high-voltage platform with low system loss, a standard chilled water tank for heavy-duty truck to achieve good heat dissipation.

With motor, electric control and battery adopting liquid-cooling heat dissipation, the forklift can absolutely carry out long-time and high-intensity operations as internal combustion forklifts.

Braking energy recovery strategy

/ When the gear switch is in N gear or the accelerator pedal is released, the braking energy recovery function is activated, and vehicle decelerates and stops based on braking force and friction (without stepping on the foot brake), and the braking feedback current meets the allowable range of the battery.





The vehicle has independently developed VCU program along with PDU+MCU+BMS+DC/DC to form a reliable and efficient drive system with flexible function configuration.



Intelligence

/ A vehicle central controller is provided, which has bus architecture, several built-in diagnosis and management functions and a central fault alarm function.
/ An optional intelligent management system is provided to enable intelligent remote monitoring and easier equipment management and logistics management.



Maintainability

/ The overturnable cab and electric tipping cylinder make tipping easier and more labor-saving.
/ The wide-opened hood and removable cover better facilitate repair and maintenance of electrical components.



SAFE AND RELIABLE

/ The cover of the vehicle is designed to be sealed to the water resistance level of IPX4.
/ The electrical system has high-voltage interlocking, insulation monitoring and potential balancing functions to offer vehicle-grade safety.



Both the battery and junction box have MSD(Manual Service Disconnect) maintenance switches to enable one-click power-down and safer maintenance.

CERTIFIED
INTERNAL COMBUSTION FORKLIFTS

Key structural parts have been verified highly reliable by the market for many years while being used by internal combustion forklifts.

All the motor and electronic controls reach the dust and water resistance level of IP67, a high protection level adequate to withstand harsh operating environments.

The high-voltage lithium battery is equipped with an automatic fire extinguisher for the standard configuration. The vehicle is equipped with a pipe network automatic fire extinguisher for the standard configuration.

A turning deceleration function effectively reduces risk of tipping over.

38-40t Mast Specification

Type	Model	Max. Fork Height	Lowered	Extended	Front Overhang	Tilt range
						F/R
		mm	mm	mm	mm	(°)
2-stage wide view mast	G400M360	3600	4400	6170	1290	6/10
	G400M400	4000	4600	6570	1290	6/10
	G400M430	4300	4750	6870	1260	6/10
	G400M450	4500	4850	7070	1290	6/10
	G400M480	4800	5000	7370	1290	6/10
	G400M500	5000	5100	7570	1290	6/10
	G400M550	5500	5350	8070	1290	3/6
	G400M600	6000	5600	8570	1290	3/6
	G400M650	6500	5850	9070	1290	3/6
	G400M700	7000	6100	9570	1290	3/6

46-48t Mast Specification

Type	Model	Max. Fork Height	Lowered	Extended	Front Overhang	Tilt range
						F/R
		mm	mm	mm	mm	(°)
2-stage wide view mast	G480M360	3600	4800	6570	1290	6/10
	G480M400	4000	5000	6970	1290	6/10
	G480M430	4300	5150	7270	1260	6/10
	G480M450	4500	5250	7470	1290	6/10
	G480M480	4800	5400	7770	1290	6/10
	G480M500	5000	5500	7970	1290	6/10
	G480M550	5500	5750	8470	1290	3/6
	G480M600	6000	6000	8970	1290	3/6
	G480M650	6500	6250	9470	1290	3/6
	G480M700	7000	6500	9970	1290	3/6

Features

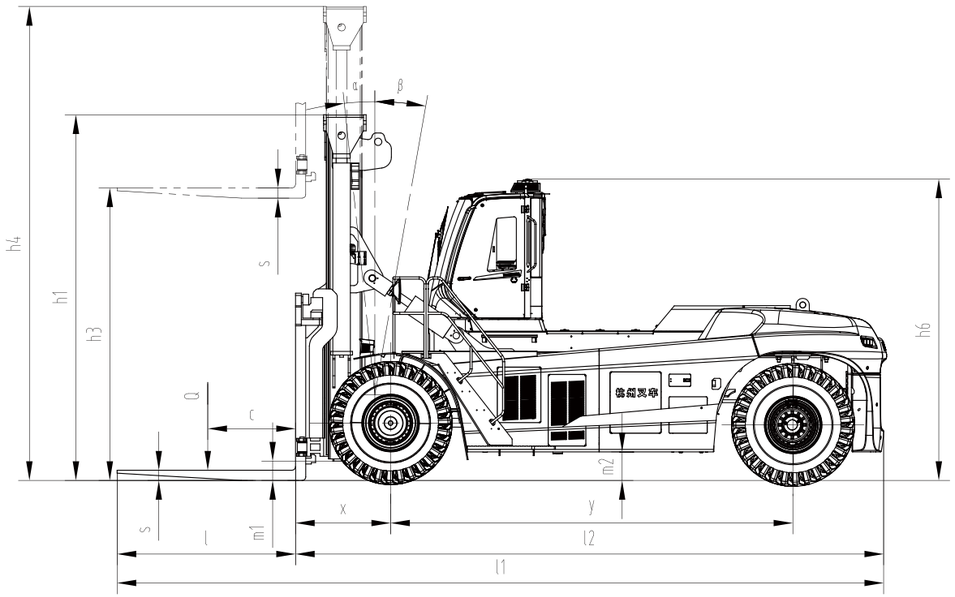
Transmission	Standard	Options
Pneumatic tyre	●	
Solid tyre		○
Steering system		
Fully hydraulic power steering	●	
Centralized lubrication system (machine)		○
Automatic Lubrication System		○
Truck		
Tow pin	●	
Electrostatic discharge chain		○
Rear-view mirror on right & left mudguards	●	
Separate brake oil tank	●	
Operating system		
Integrated joystick	●	
Adjustable steering column	●	
Adjustable armrest	●	
Hydraulic system		
Variable hydraulic pump system	●	
Four-way hydraulic valve	●	
Operation proportion control	●	
Cab		
Cabin	●	
Climate control system (air-conditioning and heater)	●	
Manual tilting cabin	●	
Electric tilting cabin	●	
Radio	●	
Sunshade	●	
USB charging interface	●	
Clothes hanger hook	●	
Reading light	●	
1 x 24V power supply		○
1 x 12V power supply		○
License plate frame		○
Fan	●	
Lifting components		
Duplex mast	●	
Standard lifting height	●	
Optional lifting height		○
Standard fork	●	
Other fork specifications		○
Fork hook on type		○
Hydraulic Fork Positioning	●	
Independently-adjustable fork		○
Built in Sideshift	●	
Emergency descent		○
Other		
Standard color	●	
User defined colour		○
Fire extinguisher (2kg/4kg)		○
Vehicle toolkit	●	
FIMS(Fleet intelligent management system)	●	

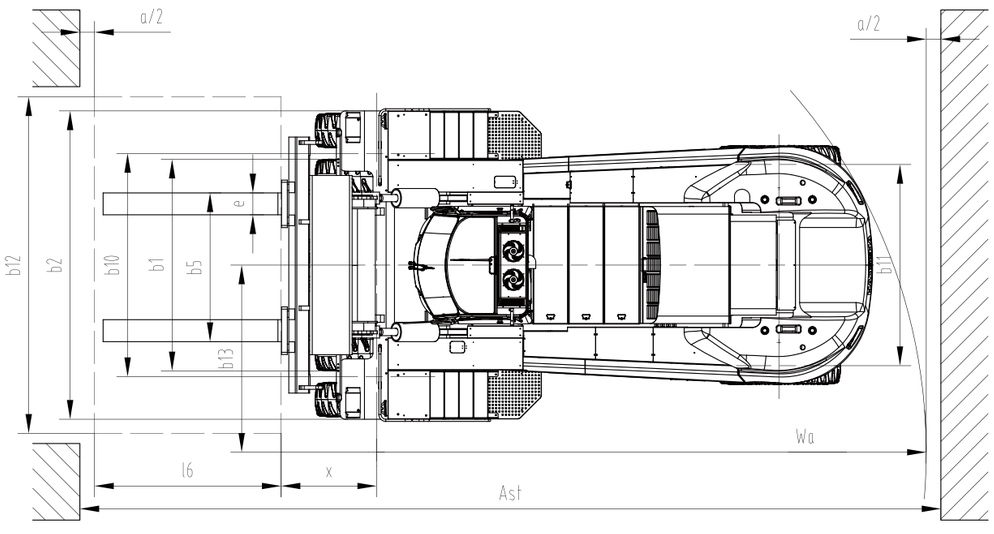
Electrical System	Standard	Options
Operator Presense System (OPS) with buzzer	●	
LCD display screen	●	
Main power switch	●	
Emergency power off switch	●	
Maintenance-free 24V lead acid battery	●	
Reverse buzzer	●	
High decible horn	●	
LED lights (entire vehicle)	●	
2 x Working light on front mudguard	●	
2 x Front working light on top of cabin	●	
2 x Rear working light on top of cabin	●	
2 x Working light on both sides of mast	●	
Reverse sensor	●	
Rearview camera system		○
Rearview camera system with memory		○
Front & rearview camera system	●	
Front & rearview camera system with memory		○
4 directions camera system with single display		○
4 directions camera recording system with single display		○
Rear blue safety light		○
Front and rear blue safety light		○
Three sided blue danger zone light		○
Overspeed alarm		○
Speed limitation		○
Voice reverse alarm		○
Two-way radio		○
Weight indicator in display		○
Flashing warning light (non rotating) with control switch	●	
Tyre pressure monitoring		○
On-board diagnostics system	●	
Water cooling system for lithium battery	●	
Automatic fire suppression system	●	
Automatic fire suppression system for lithium battery pack	●	
Manual Service Disconnect (MSD) switch	●	
High voltage interlock	●	
Insulation protection	●	
Power-on self-test	●	
Energy recovery (braking regeneration)	●	
Vehicle Control Unit (VCU)	●	
Dual charging ports	●	
Turning deceleration		○
Hour meter	●	
Battery charge indicator	●	
Low hydraulic pressure alarm indicator	●	
Hydraulic oil filter warning indicator	●	
Drive mode indicator	●	
Parking brake indicator	●	
Service indicator	●	
In cabin CCTV		○

XH Series High-voltage Lithium Battery Forklift Specification

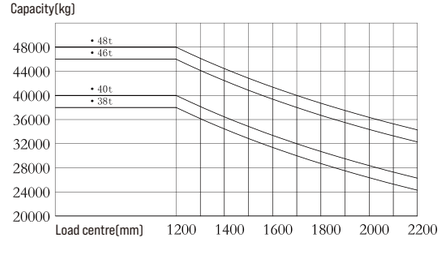
Distinguishing mark	1.1	Manufacturer		HANGCHA GROUP CO.,LTD.			
	1.2	Manufacturer's type designation		CPD380-XHJG CPD380-XHJG-A*	CPD400-XHJG CPD400-XHJG-A*	CPD460-XHJG CPD460-XHJG-A*	CPD480-XHJG CPD480-XHJG-A*
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Electric	Electric	Electric	Electric
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Seated	Seated	Seated	Seated
	1.5	Rated capacity/rated load	kg	38000	40000	46000	48000
	1.6	Load centre distance	c (mm)	1200	1200	1200	1200
	1.8	Load distance, centre of drive axle to fork	x (mm)	1290	1290	1300	1300
	1.9	Wheelbase	y (mm)	5500	5500	5500	5500
Weight	2.1	Service Weight	kg	57000	58000	62000	64500
	2.2	Axle loading, laden front/rear	kg	83500/11500	86900/11100	97600/10400	10170/10800
	2.3	Axle loading, unladen front/rear	kg	28200/28800	28700/29300	30700/31300	31900/32600
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		pneumatic	pneumatic	pneumatic	pneumatic
	3.2	Tyre size, front		18.00-25-40PR	18.00-25-40PR	18.00-25-40PR	18.00-25-40PR
	3.3	Tyre size, rear		18.00-25-40PR	18.00-25-40PR	18.00-25-40PR	18.00-25-40PR
	3.5	Wheels, number front / rear (x = driven wheels)		4x/2	4x/2	4x/2	4x/2
	3.6	Tread, front	b_{10} (mm)	3050	3050	3050	3050
	3.7	Tread, rear	b_{11} (mm)	2790	2790	2790	2790
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β (°)	6/10	6/10	6/10	6/10
	4.2	Height, mast lowered	h_1 (mm)	4600	4600	5000	5000
	4.3	Free lift	h_2 (mm)	125	125	140	140
	4.4	Lift	h_3 (mm)	4000	4000	4000	4000
	4.5	Height, mast extended	h_4 (mm)	6570	6570	6970	6970
	4.7	Height of cabin	h_6 (mm)	4120	4120	4120	4120
	4.8	Seat height/stand height	h_7 (mm)	2880	2880	2880	2880
	4.12	Coupling height	h_{10} (mm)	880	880	880	880
	4.19	Overall length	l_1 (mm)	10470	10470	10480	10480
	4.2	Length to face of forks	l_2 (mm)	8030	8030	8040	8040
	4.21	Overall width	b_2 (mm)	4215	4215	4215	4215
	4.22	Fork dimensions	s/e/l (mm)	125/300/2440	125/300/2440	140/300/2440	140/300/2440
	4.24	Fork-carriage width	b_3 (mm)	3350	3350	3350	3350
	4.31	Ground clearance, laden, below mast	m_1 (mm)	220	220	220	220
	4.32	Ground clearance, centre of wheelbase	m_2 (mm)	390	390	390	390
	4.34.1	Aisle width with load length 1800mm	A_{st} (mm)	11500	11500	11500	11500
	4.34.2	Aisle width with load length 2400mm	A_{st} (mm)	11500	11500	11500	11500
	4.35	Turning radius	W_a (mm)	7500	7500	7500	7500
	4.36	Internal turning radius	b_{13} (mm)	1000	1000	1000	1000
Performance data	5.1	Travel speed, laden/unladen	km/h	24/24	24/24	23/24	23/24
	5.2	Lift speed, laden/unladen	m/s	0.32/0.35	0.32/0.35	0.30/0.32	0.30/0.32
	5.3	Lowering speed, laden/unladen	m/s	0.35/0.35	0.35/0.35	0.35/0.35	0.35/0.35
	5.6	Max. Drawbar pull, laden/unladen	N	230000	230000	230000	230000
	5.8	Max. gradeability, laden/unladen	%	20/25	20/25	20/25	20/25
	5.9	Acceleration time, laden/unladen (0-10m)	s	6.2/5.2	6.2/5.2	6.5/5.5	6.5/5.5
	5.1	Service brake		Wet disc brake system(WDB)			
		Parking brake		Spring Applied,Hydraulic release multidisc brake(SAHR)			
Electric drivetrain	6.1	Drive motor rating S9 60 min Rated/Peak	kW	214/380	214/380	214/380	214/380
	6.2	Lift motor rating at S9 15% Rated/Peak	kW	2 X 89/160	2 X 89/160	2 X 89/160	2 X 89/160
	6.4	Battery Capacity	kWh / Ah	423/684	423/684	423/684	423/684
		Nominal Voltage	V	618	618	618	618
	6.5	Battery weight	kg	3500	3500	3500	3500
Addition data	10.1	Operating pressure for attachments	MPa	21	21	21	21
	10.2	Oil volume for attachments	L/min	125	125	125	125
	10.3	Hydraulic Tank - capacity (drain & refill)	liter	520	520	520	520
	10.7	Sound pressure level at the driver´s seat	dB (A)	70	70	70	70

* A: Anti-corrosion protection, the type A is suitable for enviroments with C5-I and C5-M ratings.





Ast=l6+Wa+x+a L6: load length a: Clearance (200mm)




HANGCHA
480-12
Plus
Li-ION BATTERY
HANGCHA