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ISO45001:2018



ISO14001:2015



ISO9001:2015



HANGCHA trucks conform
to the European Safety
Requirements.

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XH SERIES HIGH-VOLTAGE LITHIUM BATTERY EMPTY CONTAINER HANDLER

with capacity of 9,000kg



INNOVATIVE LITHIUM-ION



HANGCHA

The World of Hangcha

XH SERIES HIGH-VOLTAGE LITHIUM BATTERY EMPTY CONTAINER HANDLER

Independently developed by Hangcha on the basis of decades of deep understanding of electric products and internal combustion products, XH series high-voltage counterweight lithium battery empty container handlers are a new series of high-voltage lithium battery empty container handlers that first use a new energy vehicle voltage platform and represent a breakthrough over the traditional design concept. With improved 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%)

1.3Hour

PROTECTION RATE

IP67

VEHICLE WATER RESISTANCE

IPX4

Appearance

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

THE *Plus*
FOR YOUR
BUSINESS





FASTER & MORE EFFICIENCY.

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

LI-ION
TECHNOLOGY

6 YEARS
WARRANTY

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

HIGH-VOLTAGE

423kWh

Battery capacity

EFFICIENT AND DURABLE

Advancement

- / A high-torque permanent magnet synchronous motor provides strong power for the vehicle with performance indicators benchmarked against that of internal combustion forklifts.
- / A 579V high-voltage platform with low system loss and a standard chilled water tank for heavy-duty truck to achieve good heat dissipation.
- / 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.
- / 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.

Reliable

- / The novel spreader has a higher reliability, a longer service life, a lower failure rate and a lower maintenance cost.

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 and potential energy recovery effectively prolongs operating time.



Safety

- / 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.
- / 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.



A turning deceleration function effectively reduces risk of tipping over.

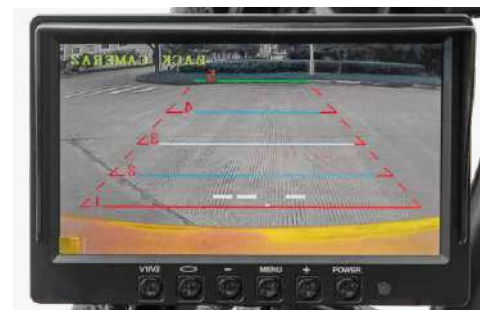


The high-voltage lithium battery is equipped with an automatic fire extinguisher for the standard configuration. The vehicle is equipped with a pipe network automatic fire extinguisher for the standard configuration.

- / The spreader twist-lock equipped with mechanical and electrical protection devices, lifting interruption control, OPS system, travel speed limiting and other functions ensure safe operations.
- / The LED lighting system ensures the brightness of the lighting within the operating range.
- / A visual reversing radar is provided for the standard configuration and other options such as an tire pressure monitoring, overload protection, etc. can be provided.

Fully-suspended all-round vision cab

- / The suspended cabin, easy for maintenance.
- / With the vehicle frame damper connected and the tight sound and heat insulation design, most vibration and noise are shielded.
- / The largely-curved front and rear windows, all-glass left and right doors and large glass ceiling enable a broad view.
- / An inclinable telescopic steering column and fully-suspended adjustable seat with a high backrest and safety belt, with seat sensing and driving position sensing functions.
- / A high-power cooling and heating air conditioner, two ventilation modes - internal and external circulation, sunshades, speedadjustable wipers and defrosting function make driving more comfortable.



SMART AND CONVENIENT

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.

Intelligence

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





TECHNICAL SPECIFICATIONS	
Type of lifting system	Two vertical twistlocks
Type of stacking	Normal and block stacking
Spreader weight (TW)	3 600 kgs
Carriage weight (MPS)	1 050 kgs
Lifting capacity (SWL)	9 tonnes
Telescopic positions	20 and 40ft
Telescoping speed, 20-40ft	< 12 sec.*
Telescoping speed, 40-20ft	< 14 sec.*
Sideshift	± 600
Mechanical pile slope (MPS), vertical floating end-posts	At 20ft position: approx. 200 mm At 40ft position: approx. 200 mm
Hydraulics, operating pressure up to	140 bar
Hydraulics, flow	40-60 L/min
Electric - control voltage	24 VDC
Communication	CAN 2.0B
Colour	Black grey RAL 7021

* Calculated speed at 60 L/min

Single handling container spreader Vertical Twistlocks.



Improved design with built-in cabling and larger bending radius for hydraulic hose between pocket and end-post.



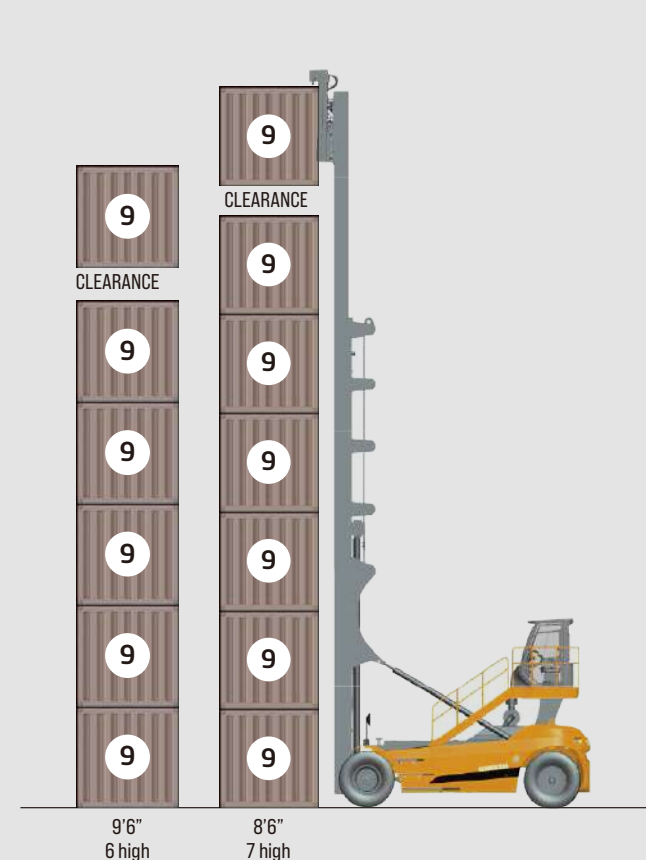
INNOVATION head.

Suitable for:

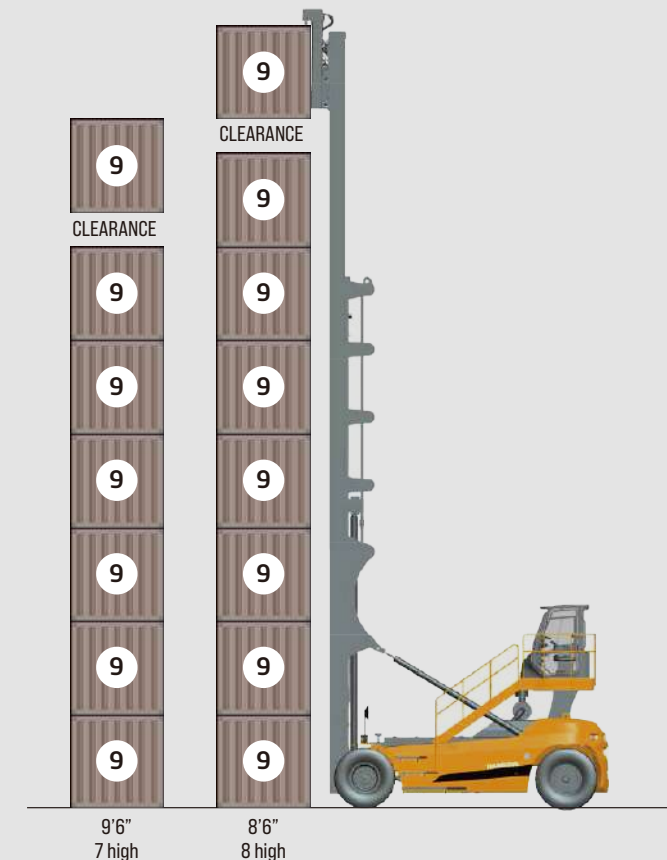
- / 20' or 40' ISO containers of 8' (2.44 m) width.
- / Approx. 2.45-2.50 m wide "pallet-wide" 20' or 40' containers, with ISO-like 'chamfered' corner castings.
- / With speed limitation for laden/unladen.

Not suitable for:

- / Approx. 2.45 - 2.60 m wide "CPC" containers (Cellular Pallet-wide Containers) with non-ISO corner castings.



H90EC-7-XHJG



H90EC-8-XHJG

Features

Transmission	Standard	Options
Pneumatic tyre	●	
Solid smooth tire		○
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	●	
Operation proportion control	●	
Cab		
Cabin	●	
Climate control system (air-conditioning and heater)	●	
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		○
Spreader & twistlock double protection	●	
Emergency descent	●	
Twistlock counter	●	
2 x Spreader twistlock light	●	
Other		
Standard color	●	
User defined colour		○
Fire extinguisher (2kg/4kg)		○
Vehicle toolkit	●	
Mast automatic vertical realignment	●	
Lifting height indicator on display	●	
Dynamic speed Limit depending of lift height(customer defined)		○
Heating pack for the cold region		○
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		○
In cabin CCTV		○
Rear blue safety light		○
Front and rear blue safety light		○
Three sided blue danger zone light		○
Overspeed alarm		○
Speed limitation		○
Voice reverse alarm		○
Automatic fire suppression system	●	
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 for lithium battery pack	●	
Manual Service Disconnect (MSD) switch	●	
High voltage interlock	●	
Insulation protection	●	
Power-on self-test	●	
Energy recovery (braking regeneration)		○
Energy recovery (descent regeneration)	●	
Vehicle Control Unit (VCU)	●	
Dual charging ports	●	
Override switch	●	
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	●	

XH Series High-voltage Lithium Battery Empty Container Handler Specification

Distinguishing mark	1.1	Manufacturer		HANGCHA GROUP CO.,LTD.			
	1.2	Manufacturer's type designation		H90EC-7-XHJG	H90EC-8-XHJG	H90EC-7-XHJG-C	H90EC-8-XHJG-C
	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	9000	9000	9000	9000
	1.6	Load centre distance	c (mm)	1220	1220	1220	1220
	1.7	Load distance, centre of drive axle to fork	x (mm)	1340	1340	1200	1200
	1.8	Wheelbase	y (mm)	4550	4550	4750	4750
	1.9	Stacking height, no. of containers (8'6" / 9'6")		7(8'6")/6(9'6")	8(8'6")/7(9'6")	7(8'6")/6(9'6")	8(8'6")/7(9'6")
Weight	2.1	Service Weight	kg	41300	42500	41800	43000
	2.2	Axle loading, laden front/rear	kg	34400/10800	35200/11200	40640/10160	41600/10400
	2.3	Axle loading, unladen front/rear	kg	25500/15800	26300/16200	22900/18810	23650/19350
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Pneumatic	Pneumatic	Pneumatic	Pneumatic
	3.2	Tyre size, front		14.00-24-28PR	14.00-24-28PR	14.00-24-28PR	14.00-24-28PR
	3.3	Tyre size, rear		14.00-24-28PR	14.00-24-28PR	14.00-24-28PR	14.00-24-28PR
	3.5	Wheels, number front / rear (x = driven wheels)		4x/2	4x/2	4x/2	4x/2
	3.6	Tread, front	b10 (mm)	3280	3280	3280	3280
	3.7	Tread, rear	b11 (mm)	2300	2300	2300	2300
	3.7	Tread, rear	b11 (mm)	2300	2300	2300	2300
Dimensions	4.1	Tilt of mast/fork carriage forward/backward	α/β (°)	3/3	3/3	3/3	3/3
	4.2	Height, mast lowered	h1 (mm)	10715	12015	10715	12015
	4.3	Free lift	h3 (mm)	18670/2200	21270/2200	18670/2200	21270/2200
	4.4	Height, mast extended	h4 (mm)	19100	21700	19100	21700
	4.5	Height of overhead guard (cabin)	h6 (mm)	4600	4600	4600	4600
	4.7	Seat height/stand height	h7 (mm)	3500	3500	3500	3500
	4.8	Coupling height	h10 (mm)	760	760	760	760
	4.12	Length to face of forks	l2 (mm)	6850	6850	7050	7050
	4.20	Overall width	b2 (mm)	4120	4120	4120	4120
	4.21	Spreader width	mm	6100	6100	6100	6100
	4.22	Spreader sideshifer	mm	±600	±600	±600	±600
	4.24	Ground clearance, laden, below mast	m1 (mm)	290	290	290	290
	4.25	Ground clearance, centre of wheelbase	m2 (mm)	330	330	300	300
	4.31	Aisle width for pallets 1000 x 1200 crossways	As1 (mm)	14500	14500	14500	14500
	4.32	Aisle width for pallets 800 x 1200 lengthways		10200	10200	10300	10300
	4.34	Turning radius	Wa (mm)	6000	6000	6350	6350
	4.35	Internal turning radius	b13 (mm)	800	800	1000	1000
	4.36	Travel speed, laden/unladen	km/h	23/24	23/24	23/24	23/24
Performance data	5.1	Lift speed, laden/unladen	m/s	0.55/0.62	0.55/0.62	0.55/0.62	0.55/0.62
	5.2	Lowering speed, laden/unladen	m/s	0.50/0.55	0.50/0.55	0.50/0.55	0.50/0.55
	5.3	Max. Drawbar pull, laden/unladen	N	120000	120000	120000	120000
	5.5	Max. gradeability, laden/unladen	%	22/	22/	22/	22/
	5.7	Acceleration time, laden/unladen (0-10m)	s	6.8/6.5	6.8/6.5	6.8/6.5	6.8/6.5
	5.10	Service brake		Wet disc brake	Wet disc brake	Wet disc brake	Wet disc brake
		Parking brake		spring applied, hydraulic release multi-disc brake			
Electric-engine	6.1	Drive motor rating S2 60 min	kW	143	143	143	143
	6.2	Lift motor rating at S3 15%	kW	89	89	89	89
	6.4	Battery Capacity	kWh / Ah	350/604	350/604	423/684	423/684
		Nominal Voltage	V	579.6	579.6	618	618
	6.5	Battery weight	kg	3200	3200	3600	3600
Addition data	10.1	Operating pressure for attachments	MPa	15	15	15	15
	10.2	Oil volume for attachments	l/min	120	120	120	120

