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ISO14001  
ISO14001:2015



ISO9001  
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# X Series Empty Container Handler

with capacities of 9,000kg



*The World of Hangcha*  
SINCE 1956



# X Series Empty Container Handler

A new generation high-quality professional product, which is newly developed on the basis of Hangcha's X series platforms and years of industry experience and extensively adopts advanced technologies, is mainly used in the loading, handling and stacking operations of empty 20ft and 40ft ISO containers.

## Reliable

- / The gearbox(DANA), drive axle(KESSLER), engine and key hydraulic parts are all have stable and reliable quality.
- / The accumulated years of industry experience, digital product design, finite element analysis, kinematic and dynamic simulation calculation, field verification, and fatigue, overload, strain tests ensure the reliable structure of the truck.
- / The mast is made of high-strength steel and has an ultra-wide structure designed. The installation point of the inclined oil cylinder is arranged at a high position to improve the rigidity and stability of the truck.
- / The truck's heat dissipation management system automatically adjusts the heat dissipation intensity, so that each system can quickly enter the efficient operating state. The large heat dissipation capacity design ensures the requirements for the heat dissipation in high temperature environments to be met.
- / With waterproof and dust-proof design, the electrical system has higher reliability.
- / The novel spreader has a higher reliability, a longer service life, a lower failure rate and a lower maintenance cost.





## Comfortable

- / The instruments with high-definition color screens display the truck status in real time and the fault alarm enable easier maintenance.
- / The new generation electronically-controlled gearbox enables flexible, smooth and comfortable gear shifting.



## Efficient

- / The throttle following control provided for controlling the engine speed, the single-hand joystick and the electric proportional control enable flexible, accurate and efficient control.
- / Higher lifting speed and faster dynamic response enable the operation efficiency to be effectively improved.
- / Easy maintenance design a wide-opened hood, a large-space electric control box, a larger cab space, multiple hydraulic inspection points, easy access to the oil and water during inspection, and built-in diagnostic and query functions of the smart instruments.



## Safe

- / 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 automatic fire extinguishing system, tire pressure monitoring, overload protection, etc. can be provided.



## Fully-suspended all-round vision cab

- / The large-stroke bodily-movable fully-suspended cab can be repaired and maintained easily, can easily switch to the manual movement mode, and easily move.
- / 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, speed-adjustable wipers and defrosting function make driving more comfortable.



## 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 optional ± 400 mm
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.

### 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:

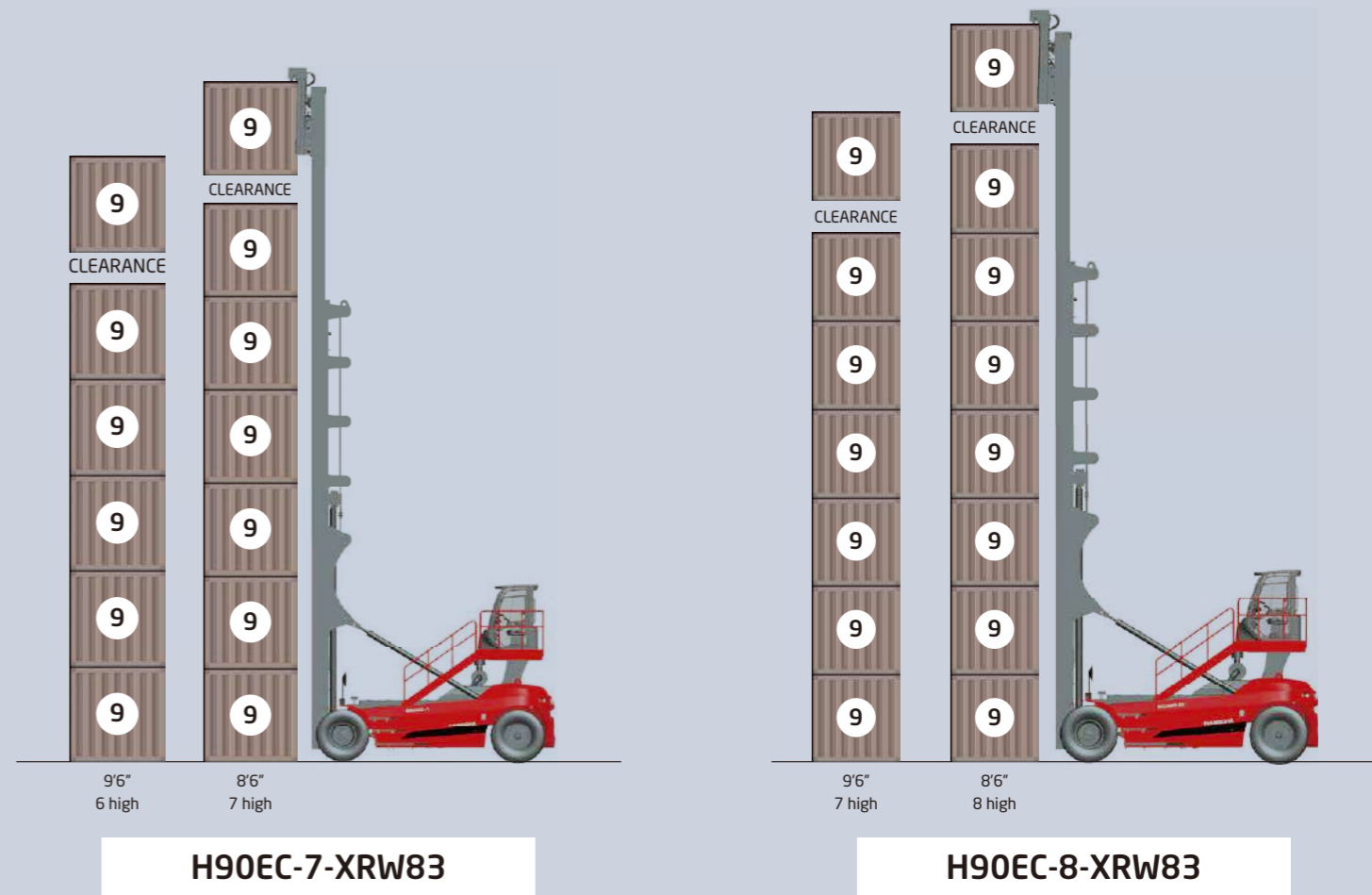
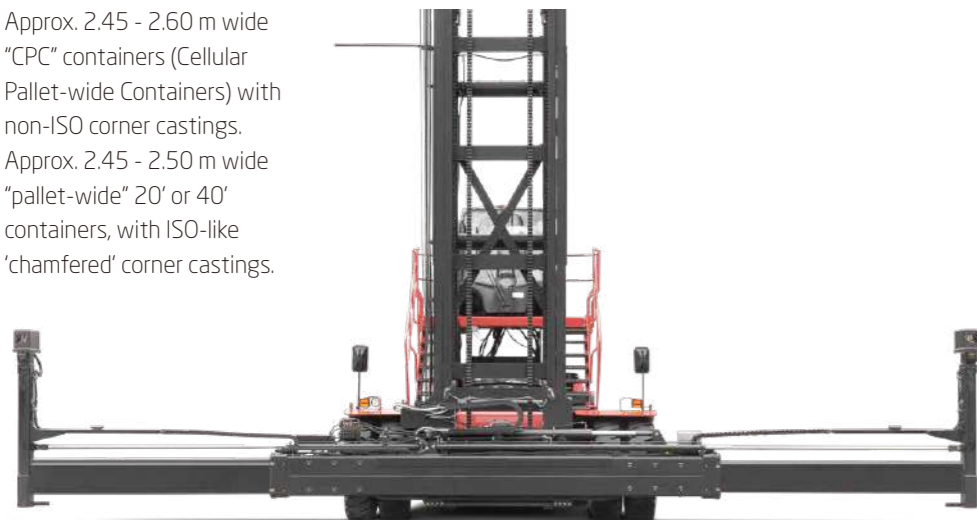
- / Approx. 2.45 - 2.60 m wide "CPC" containers (Cellular Pallet-wide Containers) with non-ISO corner castings.
- / Approx. 2.45 - 2.50 m wide "pallet-wide" 20' or 40' containers, with ISO-like 'chamfered' corner castings.



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



INNOVATION head.





## Standard Specification

- / Sunshade
- / Steering wheel column adjusting device
- / High-position exhaust
- / Torque converter temperature control management
- / Multifunctional instruments
- / Emergency lowering
- / Reading light
- / Armrest's multi-directional adjustment device
- / Traction device
- / LED lights
- / Reverse buzzer
- / Overtime idling will automatically turn off
- / Cooling and heating air conditioner
- / OPS system
- / Emergency power off switch
- / Snail horn
- / Maintenance reminding
- / Radio
- / Pneumatic tire
- / Fully hydraulic power steering
- / Visual reversing radar
- / Spreader twist-lock double protection
- / Fault diagnosis system

## Options

- / Customer painting
- / Fire extinguisher (2kg/4kg)
- / Overload protection devices
- / Reverse buzzer
- / Solid tire
- / Automatic fire extinguishing system
- / Speed limit alarm
- / Blue light
- / Tire pressure monitoring
- / Central lubrication system
- / Front view system (optionally with a memory)
- / Automatic Vertical mast
- / Spark arrester
- / Weighing system
- / Intercom
- / Soft landing



# X Series Empty Container Handler Specification

		HANGCHA GROUP CO.,LTD.			
Distinguishing mark	1.1	Manufacturer			
	1.2	Manufacturer's type designation	H90EC-7-XRW83	H90EC-8-XRW83	
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	Diesel	Diesel	
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker	Seated	Seated	
	1.5	Rated capacity/rated load	Q (kg)	9000	
	1.6	Stacking height, no. of containers (8'6" / 9'6")		7/6	
	1.7	Load centre distance	c (mm)	1220	
	1.8	Load distance, centre of drive axle to fork	x (mm)	1340	
	1.9	Wheelbase	y (mm)	4550	
Weight	2.1	Service Weight	kg	39800	
Tyres, chassis	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		Pneumatic	
	3.2	Tyre size, front		14.00-24-28PR	
	3.3	Tyre size, rear		14.00-24-28PR	
	3.5	Wheels, number front / rear (x = driven wheels)		4/2	
	3.6	Tread, front	b <sub>10</sub> (mm)	3280	
	3.7	Tread, rear	b <sub>11</sub> (mm)	2300	
	Dimensions	4.1	Tilt of mast/fork carriage forward/backward	$\alpha/\beta(^{\circ})$	3/4
4.2		Height, mast lowered	h <sub>1</sub> (mm)	10715	
4.3		Lift height, min in twist locks	h <sub>2</sub> (mm)	2200	
4.4		Lift height, max in twist locks	h <sub>3</sub> (mm)	18670	
4.5		Height, mast extended	h <sub>4</sub> (mm)	19100	
4.7		Height of overhead cabin	h <sub>6</sub> (mm)	4600	
4.8		Seat height relating to SIP	h <sub>7</sub> (mm)	3500	
4.12		Coupling height	h <sub>10</sub> (mm)	740	
4.19		Overall length	l <sub>1</sub> (mm)	7000	
4.20		Length to face of forks	l <sub>2</sub> (mm)	6850	
4.21		Overall width	b <sub>1</sub> /b <sub>2</sub> (mm)	4120/2700	
4.22		Spreader sideshift	mm	±600	
4.24		Spreader width, retracted	b <sub>3</sub> (mm)	6100	
4.25		Spreader width, extended	b <sub>5</sub> (mm)	12240	
4.31		Ground clearance, laden, below mast	m <sub>1</sub> (mm)	290	
4.32		Ground clearance, centre of wheelbase	m <sub>2</sub> (mm)	300	
4.34		Aisle width with(8'6" / 9'6")	A <sub>st</sub> (mm)	10200/14000	
4.35		Turning radius	W <sub>a</sub> (mm)	6000	
4.36		Minimum pivoting point distance	b <sub>13</sub> (mm)	2085	
Performance data		5.1	Travel speed, laden/unladen	km/h	26/28
		5.2	Lift speed, laden/unladen	m/s	0.55/0.62
	5.3	Lowering speed, laden/unladen	m/s	0.5/0.55	
	5.5	Drawbar pull, laden	N	160000	
	5.7	Gradeability, laden	%	22	
	5.10	Service brake		Wet disc brake	
		Parking brake		spring applied, hydraulic release multi-disc brake	
	7.1	Engine manufacturer/type		Volvo TAD851VE	
		Emission STD		StageIIIA/Tier3	
	7.2	Engine power	kW	185	
7.3	Rated speed	r/min	2200		
7.4	Number of cylinders/displacement	(-)/(cm <sup>3</sup> )	6/7700		
Combustion-engine	7.9	Vehicle electrical system voltage	V	24	
	7.10	Battery voltage/nominal capacity	V/Ah	2×12/150	
		Rated torque	N·m/r/min	1160/1350	
		Transmissions Manufacturer		DANA	
		Stage FWD/RVS		3/3	
Addition data	10.1	Operating pressure for attachments	bar	250	
	10.2	Oil volume for attachments	l/min	288	
	10.3	Hydraulic Tank - capacity (drain & refill)	liter	460	
	10.4	Fuel tank capacity	liter	620	
	10.7	Sound pressure level at the driver's seat	dB (A)	72	

