



Quality Changes the World

# EMPTY CONTAINER HANDLER



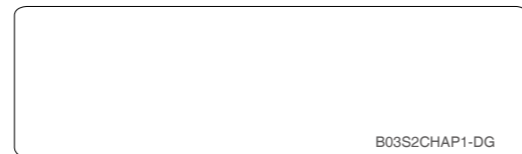
Quality Changes the World



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# SANY EMPTY CONTAINER HANDLER

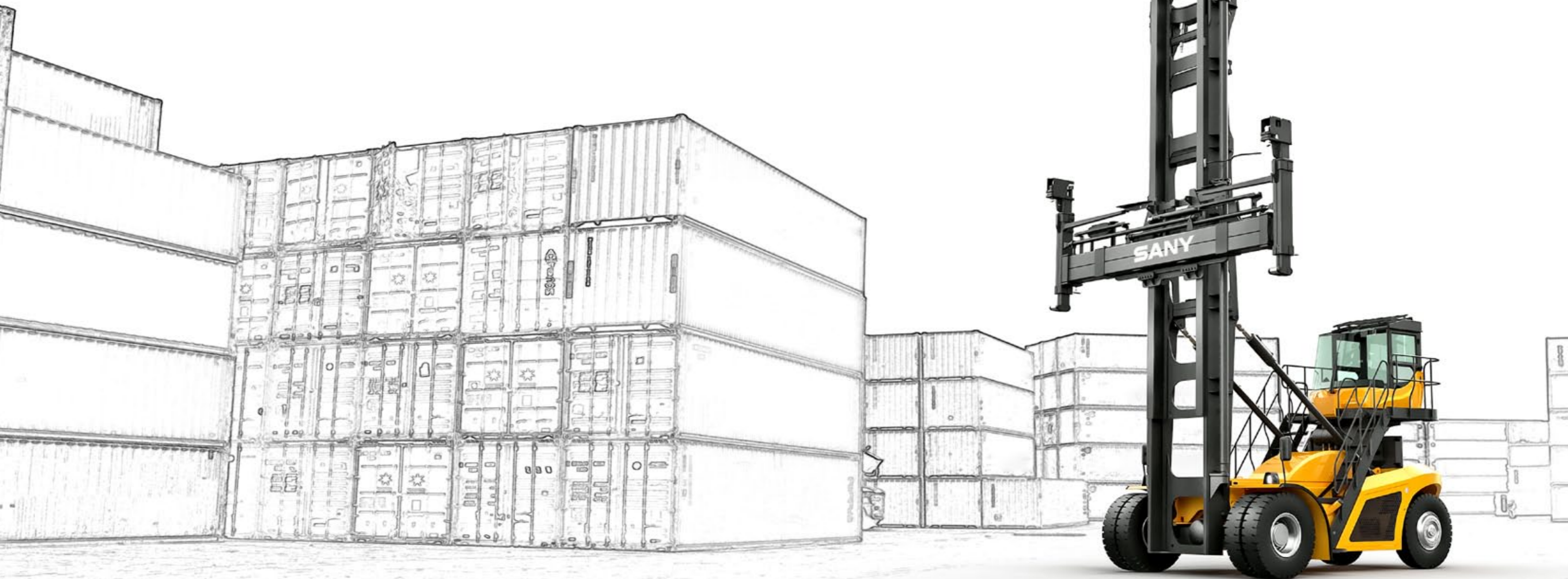
## ACHIEVEMENT OF PROFESSIONAL QUALITY

COMPREHENSIVE  
PRODUCT SERIES  
**01**

SAFE AND RELIABLE  
**03**

HIGH-EFFICIENCY  
**05**

ENERGY-SAVING  
**07**





# COMPREHENSIVE PRODUCT SERIES

Empty container handler is mainly used in ports, wharfs and storage yards to handle, transfer and stack empty containers of various specifications. SANY classic series Empty Container Handler provides many kinds of configurations for customers' choice. There are combinations of duplex and triplex mast, hurdling and double spreaders. It owns potential energy recovery technology, anti-rollover and safety protection technology, automatic fire extinguishing technology and mast clamping or blocking alarm patent technology. All the performance is world advanced to be your reliable choice.

**World class, No. 1 logistics equipment supplier in China**

**SANY Empty Container Handler**

- Brand new H8 Series
- Classic C-series
- Hurdling Container Handler
- Twin Container Handler
- LNG Empty Container Handler

**Work Mode**

- 6/7/8/9 layers ISO standard empty container 20'/40'/45'
- ISO standard twin container 20'/40'/45'
- ISO standard hurdling container 20'/40'/45'

## Brand new H8 Series

Designed in Germany,  
energy saving

## LNG Empty Container Handler

Economic and green

## Twin Container Handler

Efficient, safe and reliable

## Hurdling Container Handler

Meet hurdling work requirement





## SAFE AND RELIABLE

*Joint design of China and Germany,  
excellent quality assured*

### 1 Dynamic Anti-Rollover Protection Technology

Adopt intelligent control technology, detect equipment's real-time working parameters and automatically adjust the operating status under dangerous conditions to prevent rollover. It can achieve safe and worry-free operation.

### 2 Extra High Mast Design Technology

F-type mast is creatively developed to reduce shaking. It is curve and twist resisting and highly rigid, safe and reliable.

### 3 Patented Mast Clamping Alarm Technology

An intelligent monitoring device will detect the blocking and send alarm. The main electronic control system can lock the dangerous operations to prevent further damage, comprehensively eliminate safety hazards.

### 4 Automatic Fire Extinguishing Technology

The pipeline network automatic fire extinguisher with strong spray can realize fire alarm, anti-flaming and fire extinction functions. The fireproof performance is steady and reliable.

### 5 Solid Tyre Flexible Suspension Technology

Provide solid tyre flexible damping system according to customers' needs to achieve safer operation and lower maintenance cost. Combine with flexible suspension technology, it significantly reduced the shocking load, improved operation comfort and prolonged component longevity.

### 6 Reliable Structure Design

Designed by China and Germany together, the equipment is assured to be highly reliable and durable by adopting full-digital prototype design system, going through FEA, dynamics simulation analysis, as well as strict endurance and vibration tests.

### 7 Reliable Power System

Using world famous brand engines like VOLVO and CUMMINS which are reliable in quality and strong in power, combining the advanced power matching and control technology, the equipment is greatly optimized in dynamic performance.

Scientific and appropriate protection for the engine and gearbox will significantly prolong their longevity.







## HIGH-EFFICIENCY

- 1 Spreader Horizontal Slew Patent Technology**

Aligning and lifting container more conveniently and quickly. It greatly decreases the friction between tyre and floor, reduces fuel consumption and saves costs.
- 2 Efficient Control Technology**

The centralized joystick has inching control function. It can realize fine tuning to millimeter precision easily. All the spreaders' motions are under proportional control, providing an experience of man-machine unification. The machine also has multi-motion linkage design so that it can operate faster and more efficiently.
- 3 Comfortable Operation Environment**

The operator-oriented design includes a broad view of work condition. The controlling devices are placed in reasonable position to ease fatigue of operators.
- 4 Hurdling Twin Container Spreader**

Hurdling and twin container spreaders are developed to meet customers' needs. It can vertically rotate  $\pm 4^\circ$  to improve alignment efficiency.





## ENERGY-SAVING

- 1 Hydraulic Load Sensing System**  
Automatically adjust the pump displacement according to the load, realizing high precision flow control. The effect of energy saving and consumption reduction are remarkable.
- 2 Dynamic Power Matching Control System**  
Automatically recognize dynamic power according to load change and adjust engine speed accordingly. The output power automatically accommodate to load and work conditions, greatly reducing energy consumption.
- 3 Design for Lighter**  
Optimize the structure to make it lighter and stronger.
- 4 LNG New Fuel Technology**  
More economic and environmental friendly.





# H8 GE & CN TOP TECHNOLOGIES

## INTEGRATION & DISTINGUISHED

SANY H8 Series Empty Container Handler incorporated the advanced technology from China and Germany, with 8 core advantages of highly energy-saving, high efficiency, high security, high reliability, highly comfortable, H-shaped brand new spreader, high maintainability and high return. The performances have been improved in all aspects, starting a new chapter of Reach Stacker design.

**Highly energy-saving:** world's initiative energy recovery system, comprehensively save energy up to 19%.

**High efficiency:** adopt multi-motion linkage design, spreader proportional control technology and inching control technology; the equipment can be easily controlled.

**High security:** dynamic anti-rollover protection system, automatic fire extinguishing system, solid tyre and hydro-pneumatic suspension system, all meeting European safety standards.

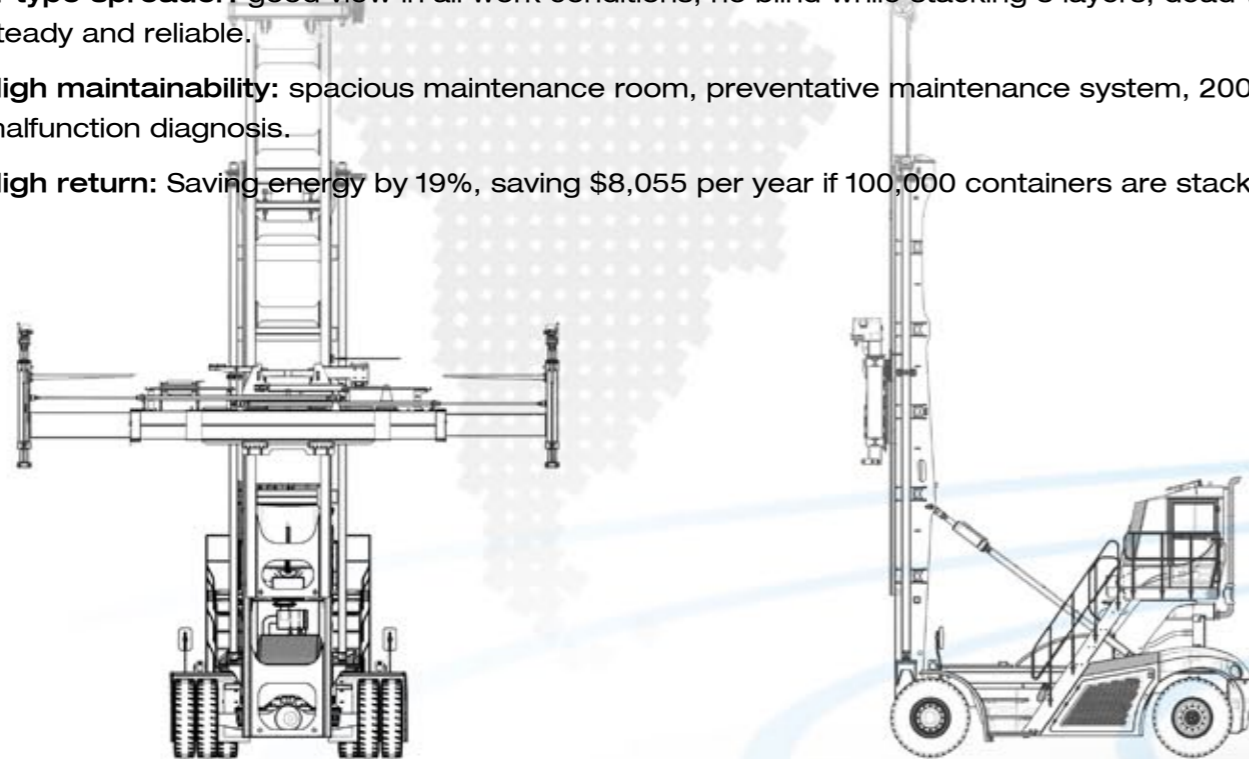
**High reliability:** water intake diagnosis technology of the connectors, CAN bus communication technology, digital platform design technology; German design, precise and reliable.

**Highly comfortable:** concentrated joystick, high definition color electric monitor, steering dynamic response, the appearance using industry modelling design, providing comfortable driving experience.

**H-type spreader:** good view in all work conditions; no blind while stacking 8 layers; dead weight below 4.1t, steady and reliable.

**High maintainability:** spacious maintenance room, preventative maintenance system, 200 procedures of malfunction diagnosis.

**High return:** Saving energy by 19%, saving \$8,055 per year if 100,000 containers are stacked per year.



# ATTACHMENT OPTIONS

## Single Container Spreader

SANY SDJ90 series spreader is used for Empty Container Handler to stack, load and unload international standard 20' or 40' container. The product is mature in technology, steady and reliable, meeting working requirement in various ports and wharfs.

*New model of spreader, designed for lighter, more energy saving and lower consumption.*

### SDJ90H

Rated capacity	9t	Weight	3.9t
Application	ISO 20'/40' Containers	Side shift range	±600mm



*SANY classic spreader*

### SDJ90 II

Rated capacity	9t	Weight	4.6t
Application	ISO 20'/40' Containers	Side shift range	±600mm



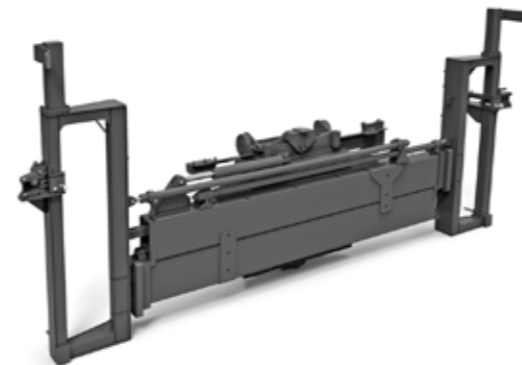
## Twin Container Spreader

SANY twin container spreader is used for Empty Container Handler to load and unload 20' or 40' twin container or single container. It gives operator a broad field of vision for positioning, which made it safe, steady and highly efficient.

*Easy for alignment, safe and efficient.*

### SDJT90

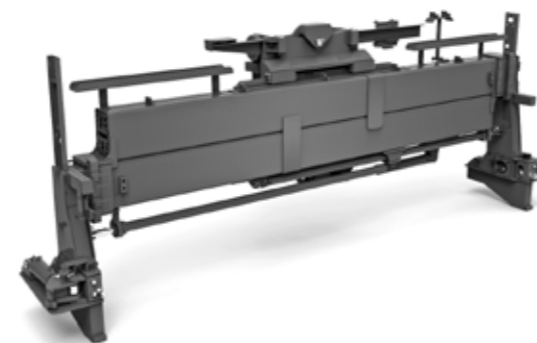
Rated capacity	9t	Weight	5t
Application	ISO 20'/40' Containers	Side shift range	±300mm



*Applicable for twin container hurdling, meeting customers' special requirement*

### SDJT100-D1

Rated capacity	10t	Weight	6.2t
Application	ISO 20'/40' Containers	Side shift range	±300mm



## Hurdling Spreader

SANY hurdling spreader is a loading and unloading attachment specially used for container truck with fence to transport containers. SANY developed and manufactured the single and twin hurdling container series attachments, perfectly solving the problems under special work conditions.

*Special loading and unloading attachments for Fencing Truck*

### SDJ90C1

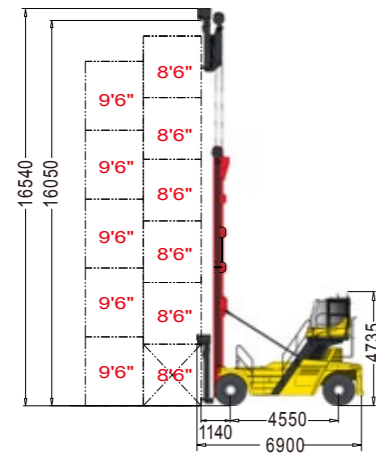
Rated capacity	9t	Weight	5t
Application	ISO 20'/40' Containers	Side shift range	±600mm



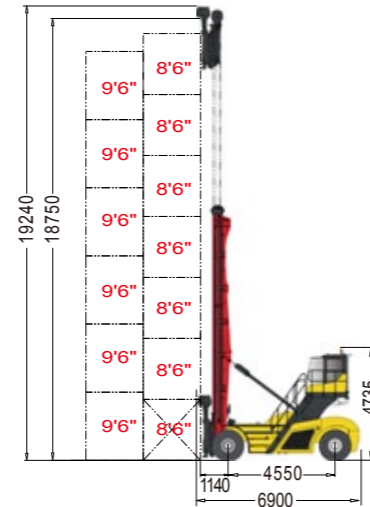
**ALL FOR CUSTOMERS,  
ALL FROM INNOVATION**



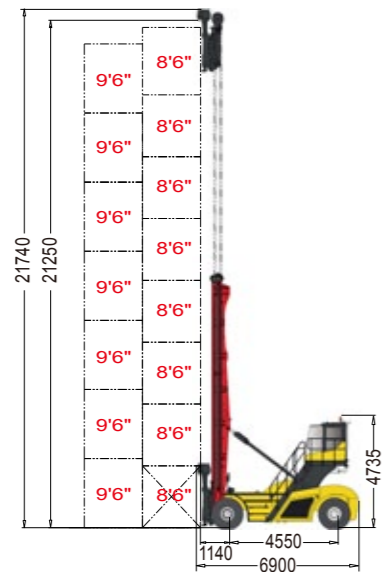
## LOAD CAPACITY DIAGRAM



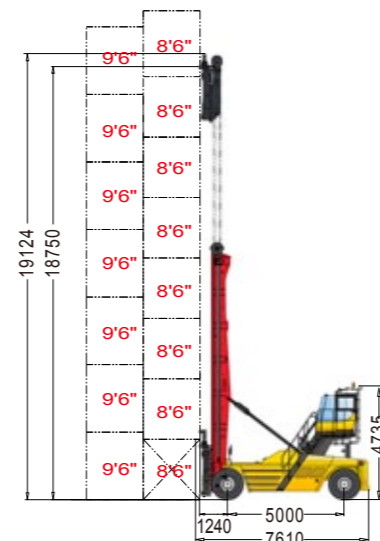
SDCY90K6H SERIES



SDCY90K7H SERIES

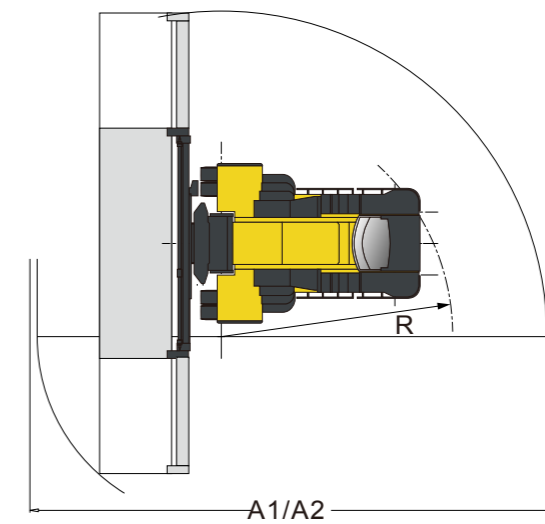
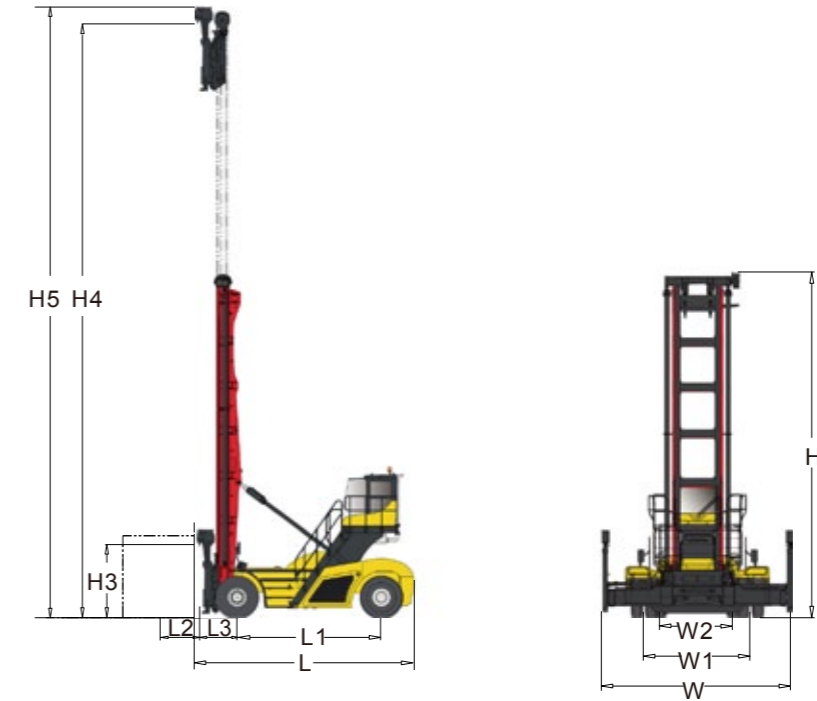


SDCY90K8H SERIES



SDCY100K8-T SERIES

## DIMENSION MEASUREMENT IDENTIFIERS





# TECHNICAL PARAMETER

Parameter		Unit	SDCY90K8H8 Series	SDCY90K7H8 Series	SDCY90K8H Series	SDCY90K7H Series	SDCY90K6H Series	SDCY80K7GC	SDCY90K7C15-H	SDCY100K7-TH	SDCY100K8-T	SDCY100K9C1-T	
Performance parameters	Overall weight	t	41	40	41	40	38.5	39	40	42	42	42	
	Max. loading capacity	t	9	9	9	9	9	8	9	10	10	10	
	Layer of stack	-	8(8'6")	7(8'6")	8(8'6")	7(8'6")	6(8'6")	7(8'6")	7(8'6")	7(8'6")	8(8'6")	9(8'6")	
	Max. hoisting speed (Non-load/Load)	mm/s	600/550	600/550	600/550	600/550	600/550	600/550	600/550	600/550	600/550	500/400	450/350
	Max. Descending speed (Non-load/Load)	mm/s	550/600	550/600	550/600	550/600	550/600	550/600	550/600	550/600	550/600	500/500	500/500
	Max. Travel speed (Non-load/Load)	km/h	28/26	28/26	28/26	28/26	28/26	28/26	28/26	28/26	28/26	28/26	28/26
	Grade-ability (Non-load/Load)	%	30/22	30/22	30/22	30/22	30/22	30/22	30/22	30/22	30/22	30/22	30/22
Main parameters	Overall length L	mm	6900	6900	6900	6900	6900	6900	7130	7700	7610	7610	
	Wheel base L1	mm	4550	4550	4550	4550	4550	4550	4550	5000	5000	5000	
	Load center L2	mm	1220	1220	1220	1220	1220	1220	1220	1220	1220	1220	
	Overhang front L3	mm	1140	1140	1140	1140	1140	1140	1350	1538	1240	1240	
	Mast height (retracted H / extended H5)	mm	12315/21740	10870/19240	12315/21740	10870/19240	9520/16540	10825/19190	10990/19325	10990/18660	10870/19124	12315/22037	
	Min. ground clearance H1	mm	320	320	320	320	320	320	320	320	320	320	
	Mast Min. hoisting height H3	mm	2250	2250	2250	2250	2250	2250	2297	715	2250	2250	
	Mast Max. hoisting height H4	mm	21250	18750	21250	18750	16050	18695	18750	16045	18750	21190	
	Overall width W	mm	6038~12170	6038~12170	6038~12170	6038~12170	6038~12170	6038~12170	6038~12170	6767~12900	6620~12750	6620~12750	
	Front track width W1	mm	3280	3280	3280	3280	3280	3300	3280	3280	3280	3280	
	Rear track width W2	mm	2150	2150	2150	2150	2150	2150	2150	2150	2150	2150	
	Sloping angle (Front □/ Rear □)	°	2/4	2/4	2/4	2/4	2/4	2/4	3/3	3/3	2/4	2/4	
	Min. turning radius R	mm	6000	6000	6000	6000	6000	6000	6000	6600	6600	6600	
	Aisle width with 20' container A1	mm	10000	10000	10000	10000	10000	10000	10200	10480	10550	10550	
	Aisle width with 40' container A2	mm	14000	14000	14000	14000	14000	14000	14200	14400	14100	14100	



# CONFIGURATION PARAMETER

Parameter		Unit	SDCY90K7H8 Series	SDCY90K8H8 Series	SDCY90K8H Series / SDCY90K7H Series / SDCY90K6H Series				SDCY80K7GC		
Configuration parameters	Engine	Type	-	VOLVO TAD851VE	VOLVO TAD851VE	VOLVO TAD851VE	CUMMINS QSB 6.7	VOLVO TAD871VE	CUMMINS QSB 6.7	VOLVO TAD871VE	
		Rated power	kW/rpm	185/2200	185/2200	185/2200	164/2300	185/2200	168/2200	185/2200	
		Max. torque	Nm/rpm	1160/1350	1160/1350	1160/1350	949/1400	1160/1200	1044/1500	1160/1200	
		Exhaust standard	-	III Stage	III Stage	III Stage	III Stage	IV Stage	IV Stage	IV Stage	
		Gearbox	-	CLARK 13.5HR32400	CLARK 13.5HR32400	CLARK 13.7HR32000				CLARK 340TE17000	
		Drive Axle	-	KESSLER D81 PL488	KESSLER D81 PL488	KESSLER D81 PL488				KESSLER D81 PL478	
		Spreader	Type	-	SDJ90H	SDJ90H	SDJ90 II				SDJ90 II
			Side shift range	mm	±600 mm	±600 mm	±600 mm				±600 mm
			Application	-	ISO 20'/40' Containers	ISO 20'/40' Containers	ISO 20'/40' Containers				ISO 20'/40' Containers
		Tyre	-	14.00-24 28PR (Solid tyre for option)	14.00-24 28PR (Solid tyre for option)	14.00-24 28PR				12.00-24 24PR	

技术指标		Unit	SDCY90K7C15-H	SDCY100K7-TH	SDCY100K8-T	SDCY100K9C1-T	No.	Function	H8 Series	H Series		
Configuration parameters	Engine	Type	-	VOLVO TAD851VE	VOLVO TAD851VE	CUMMINS QSB 6.7	VOLVO TAD851VE	1	Energy recycling system	●	○	
		Rated power	kW/rpm	185/2200	185/2200	164/2300	185/2200	2	Dynamic anti-rollover protection system	●	●	
		Max. torque	Nm/rpm	1160/1350	1160/1350	949/1400	1160/1350	3	F-type mast of high rigidity	●	●	
		Exhaust standard	-	III Stage	III Stage	III Stage	III Stage	4	Automatic fire extinguishing system	●	Conventional	
		Gearbox	-	CLARK 340TE17000	CLARK 340TE17000	CLARK 13.7HR32000	DANA 340TE17000	5	Connector water identifying system	●	●	
		Drive Axle	-	KESSLER D81 PL488	KESSLER D81 PL488	KESSLER D81 PL488	KESSLER D81 PL488	6	Rear image integration system	●	○	
		Spreader	Type	-	SDJ90C1	SDJT100-D1	SDJT90	SDJT90	7	Maintenance reminding system	●	●
			Side shift range	mm	±600 mm	±300 mm	±300 mm	±300 mm	8	Fault diagnosis system	●	●
			Application	-	ISO 20'/40' Containers	ISO 20'/40' Containers	ISO 20'/40' Containers	ISO 20'/40' Containers	9	Oil accounting function	●	●
		Tyre	-	14.00-24 28PR	14.00-24 28PR	14.00-24 28PR	14.00-24 28PR	10	3D rocker switch	●	○	

● Standard ○ Optional



## ADD-ON OPTIONS

FUNCTION	BRAND	CODE	NOTE
Heat preservation device for extremely cold district	SANY	13816299	It is mainly used in such extremely cold district as Russia. It is recommended for district where the temperature is below -15°C like North America, Russia and Europe. It is a must for district where the temperature is below -30°C.
Heating device for normal cold district	SANY	13816298	It is mainly used in the cold district in China. It is recommended for district where the temperature is below -5°C. It is a must for district where the temperature is below -15°C.
Cab assistant seat	SANY	12774971	Cab assistant seat
Anti-typhoon pin	SANY	13706450	Anti-typhoon pin that can pair with the storage device(12871008)
Anti-typhoon bolt device	SANY	12871008	Anti-typhoon bolt
3m range reversing radar system	SANY	11447501	Visible reversing radar with 3m range sensor
5m range reversing radar system	SANY	12764589	Visible reversing radar with 5m range sensor
Reversing image integrated system	SANY	13206541	On reverse gear, reversing image is shown on the screen in the cab, not including the reversing radar.
Spin lock counter	SANY	11446031	Spin lock counter of the spreader
Engine timer (by hour)	SANY	11446498	Timer for the engine's working hours
Amplifying alarm system	SANY	11447670	Including the amplifier and the alarm
Container Handler LED lamp	SANY	13526588	Including: headlamp, rear lamp, mast working lamp, tail lamp, steering indicating lamp, alarm lamp, working lamp on the cap top, all LED lamp.
Cab tri-color spreader lamp	SANY	12308787	The tri-color lamp in the cab indicating the conditions of the spreader: open, closed, working status.

FUNCTION	BRAND	CODE	NOTE
Rear counterweight alarm lamp	SANY	11447452	One alarm lamp for the rear counterweight
Cab reading lamp	SANY	11447665	Hella fluorescent lamp, installed on the top of the cab.
12V power supply	SANY	11446544	Provide 12V power socket (on the top of the electric control cabinet in the cab)
24V power supply	SANY	11447574	Provide 24V power socket (on the top of the electric control cabinet in the cab)
Main pump outlet pressure test device	SANY	11447468	Pressure sensor tests and show the main pump outlet pressure
Walkie talkie device	SANY	11994939	Install walkie talkie
Sensor	SANY	11995265	Sensor installing support
RPIS installing support	SANY	12719277	Install RPIS support
Radio	SANY	13206553	Including radio, speaker and antenna.
Automatic engine turn off function	SANY	13206551	Power switch adopted associated contactor; shut off the engine while shut down the battery switch.
Engine fire protection system	SANY	13336684	Used together with the supporting automatic fire extinguisher: 1. Automatically cut off the power when fire is detected. 2. Automatically stop the engine once fire is detected.



# CONSTRUCTION CASES

2012, Yantian Port, Shenzhen



2013, Port of Guagnzhou



2011, Port Klang, Malaysia



2014, Singapore



2010, Zhuhai International Container Terminal



2014, Port of Shanghai



2013, Dammam, Saudi Arabia



2014, Sydney, Australia





# SERVICE



Quality Changes the World Service Creates value



After-sales Service Hotline:

**4008 87 8318**

Consultation/Complaints Hotline:

**4008 87 9318**

## Service Concept

All for customers, creating value for customers.

## Service Strategy

Build unparalleled service; realize "First Brand of Global Service" of Port Machinery.

## Service Commitment

- 1** Contact the customer within 15 minutes after receiving service messages and immediately go to the site or call the customer to explain handling measures.
- 2** Time from receiving the service message to arrival at the trouble site: less than 2 hours to the main service areas.
- 3** 24 hours stand-by.
- 4** Solve general failure and provide common parts within 24 hours.

## Service Advantages

SANY has offices in over 200 countries and regions, with 30 agents in China, about 50 repair factories and 6S stores, over 3000 elite service engineers, 1000 offices and parts warehouse accommodating 100,000 kinds of parts worth more than RMB 600 million. We also have highly efficient logistics system by air, sea and land, which can transport genuine parts at any time.

Industry leading Enterprise Control Center (ECC): running for more than ten years, the ECC, as the industry initiative, is worth over RMB 30 million. It can realize real-time supervision and remote precision troubleshooting. With information promoting industrialization, it innovatively created SANY's service system of "Unity of man and heaven, synergy among 1st, 2nd and 3rd levels".

GCP, GPS and CSM system: customers can learn the working conditions & key work parameters through SANY's global portal and realize remote supervision. The system also supports parts and service search, providing convenient all-round equipment supervision.

