



Quality Changes the World

## EMPTY CONTAINER HANDLER



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# SANY EMPTY CONTAINER HANDLER

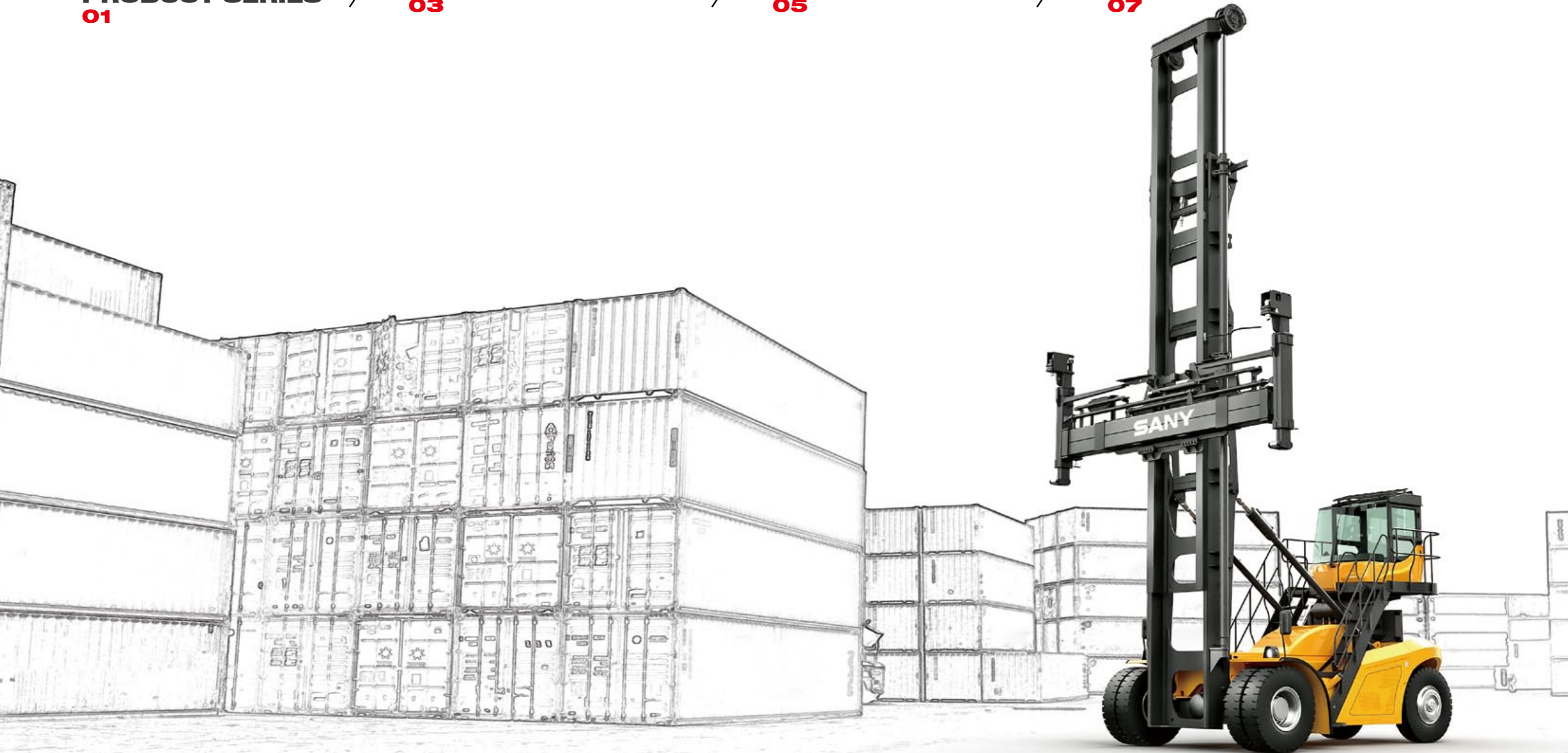
## ACHIEVEMENT OF PROFESSIONAL QUALITY

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 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

Work Mode

H-series

6/7/8 layers ISO standard empty container  
20'/40'/45'

Twin Container Handler

ISO standard twin container 20'/40'

Loaded Container Handler

ISO standard hurdling container 20'/40'/45'



## 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 optional 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-digit 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

The optional system is used to 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

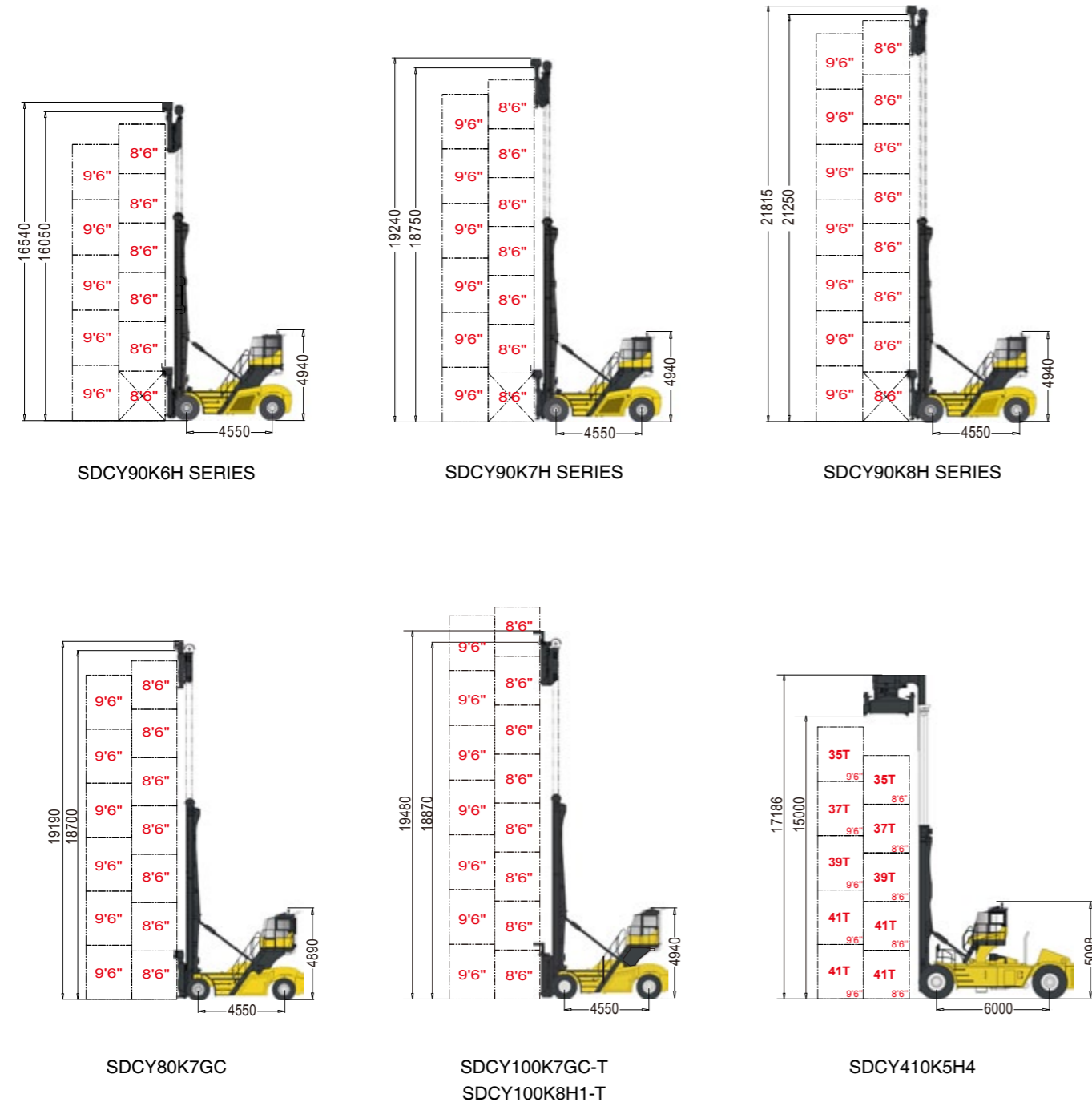
Automatically recognize dynamic power according to load change and adjust engine speed accordingly. The output power automatically accommodate to load and work conditions, greatly reducing energy consumption.

## 3 Design for Lighter

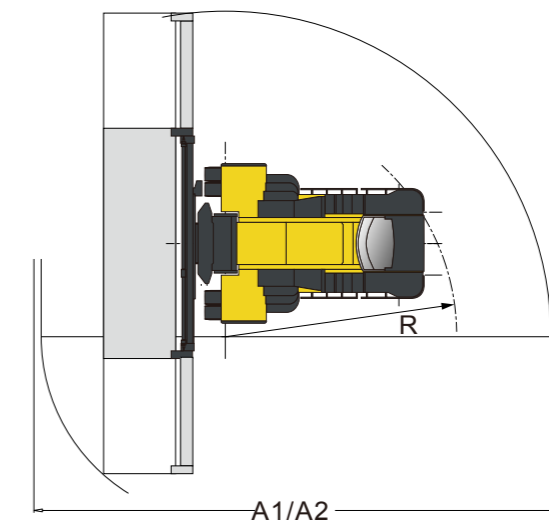
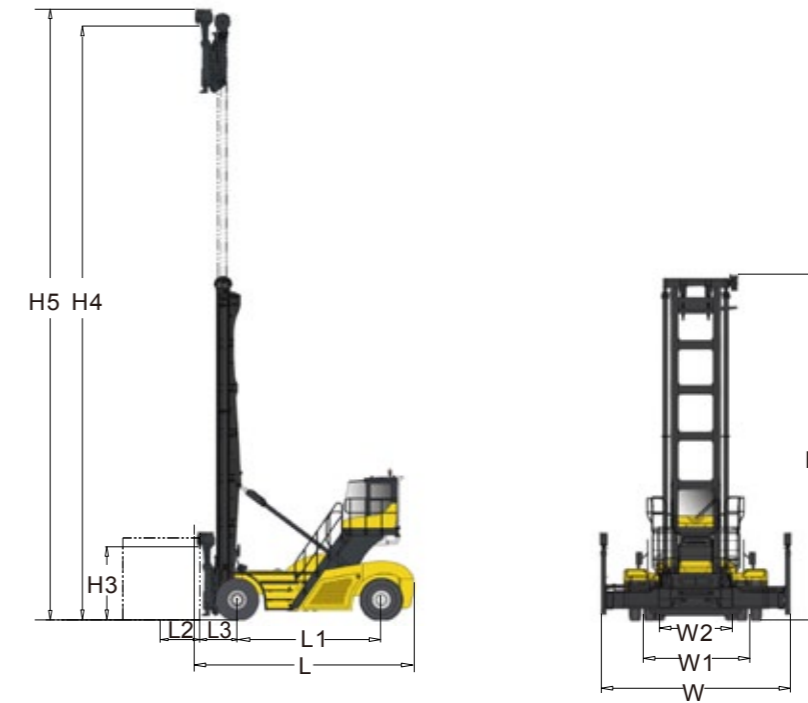
Optimize the structure to make it lighter and stronger.



# LOAD CAPACITY DIAGRAM



# DIMENSION MEASUREMENT IDENTIFIERS





# CONFIGURATION PARAMETER

Parameter		Unit	SDCY90K8H Series	SDCY90K7H Series	SDCY90K6H Series	
Configuration parameters	Engine	Type	VOLVO TAD851VE	CUMMINS QSB 6.7	VOLVO TAD871VE	CUMMINS QSB 6.7
		Rated power	185/2200	164/2300	185/2200	168/2200
		Max. torque	1160/1350	949/1400	1160/1200	1044/1500
		Exhaust standard	III Stage	III Stage	IV Stage	IV Stage
		Gearbox	-	DANA 13.7HR32000		
		Drive Axle	-	KESSLER D81 PL488		
	Spreader		Type	SDJ90 II		
			Side shift range	±600 mm		
			Application	ISO 20'/40' Containers		
		Tyre	-	14.00-24 28PR		

Parameter		Unit	SDCY80K7GC	SDCY100K8H1-T	SDCY100K7GC-T	SDCY410K5H4	
Configuration parameters	Engine	Type	VOLVO TAD871VE	VOLVO TAD851VE	VOLVO TAD871VE	CUMMINS QSL9 4F	
		Rated power	185/2200	185/2200	185/2200	261/2100	
		Max. torque	1160/1200	1160/1350	1160/1200	1628/1500	
		Exhaust standard	IV Stage	III Stage	IV Stage	IV Stage	
		Gearbox	-	DANA 340TE17000	DANA 13.7HR32000	DANA 340TE17000	DANA 15.5HR36000
		Drive Axle	-	KESSLER D81 PL478	KESSLER D81 PL488	KESSLER D81 PL489	KESSLER D101
	Spreader		Type	SDJ90 II	SDJT100-D1	SDJT90	SDJP410
			Side shift range	±600	±300	±300	±300
			Application	ISO 20'/40' Containers	ISO 20'/40' Containers	ISO 20'/40' Containers	ISO 20'/40'/45' Containers WTP 20'/40'/45' Containers
		Tyre	-	12.00-24 24PR	14.00-24 28PR	14.00-24 28PR	18.00-33 36PR

# 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



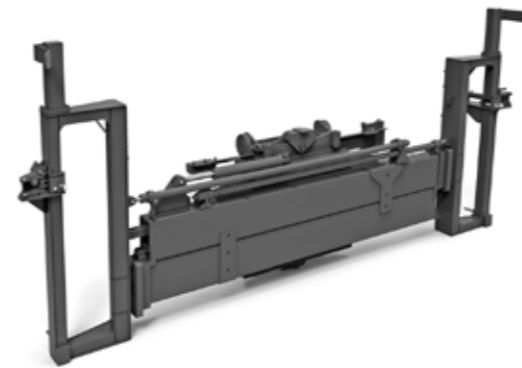
## Twin Container Spreader

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

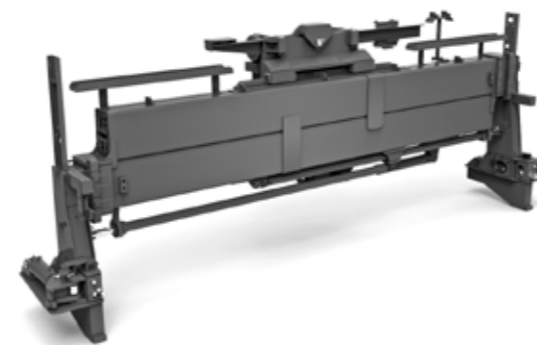
Rated capacity	10t	Weight	5t
Application	ISO 20'/40' Containers	Side shift range	±300mm



*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**

## 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
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.
Rear counterweight alarm lamp	SANY	11447452	One alarm lamp for the rear counterweight

FUNCTION	BRAND	CODE	NOTE
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.
APP monitor system	SANY	13873318	Used to monitor the working condition, to check the alarm information, to inform the maintenance and check the history data. GCP access is needed.
Dry powder extinguisher 2KG	-	A229900004007	ABC dry powder extinguisher 2KG (MFZL-2)
2KG fire extinguisher stand	-	B229900001277	Fire extinguisher stand E0740030AA
Fire extinguisher	-	60256188	Fire extinguisher BFM2.5LB UL listed

# CONSTRUCTION CASES

Yantian Port, Shenzhen



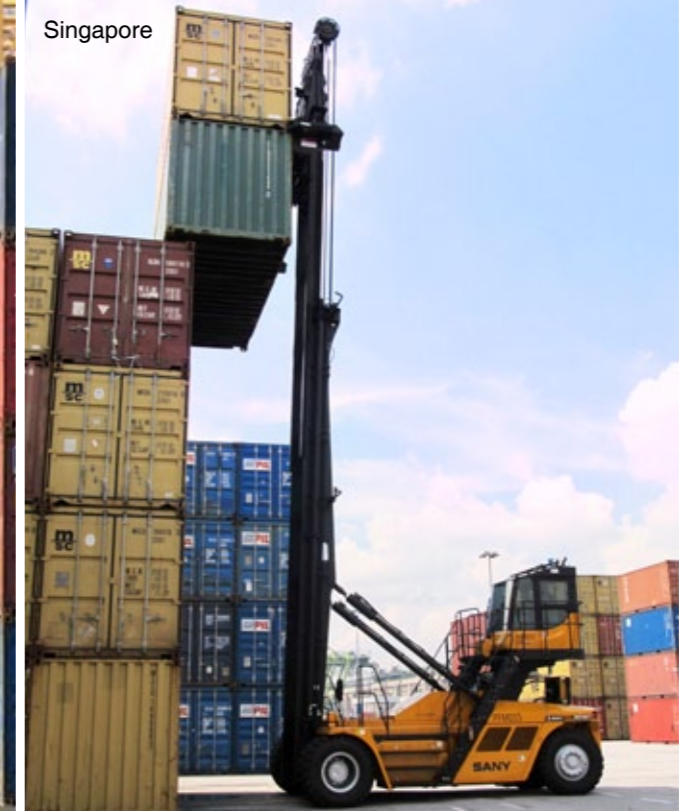
Port of Guangzhou



Tianjin



Singapore



Zhuai International Container Terminal



Port of Shanghai



Dammam, Saudi Arabia



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 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.



