



Quality Changes the World

# REACH STACKER



Quality Changes the World



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[www.sanygroup.com](http://www.sanygroup.com)

# SANY REACH STACKER ACHIEVEMENT OF PROFESSIONAL QUALITY

COMPREHENSIVE  
PRODUCT SERIES  
**01**

SAFE AND RELIABLE  
**03**

HIGH-EFFICIENCY  
**05**

ENERGY-SAVING  
**07**



# COMPREHENSIVE PRODUCT SERIES

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

SANY Reach Stacker is mainly used in ports, wharfs and storage yards to handle, transfer and stack various container and other materials. It is safe, reliable, and energy saving embedded with several international advanced core technology such as dynamic anti-rollover protection, anti-collision of the spreaders, vertical lift of the booms, patent technology of power driven counterweight, automatic fire extinguishing technology. All the performance indexes are world leading, making our products your most reliable choice.

With products of several series like heavy, overweight hurdling, light, empty container and off-road reach stackers, SANY Reach Stacker can accommodate to the use of various industries as logistics, energy, chemical engineering, wind power and forestry, bringing you the maximum economic benefits.



# 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 Anti-collision Technology of the Spreaders while Revolving

Intelligent control of the positions of spreaders and booms can effectively prevent collision among the spreader, frame and boom, avoiding accidents by faulty operation and greatly reducing labor intensity.

## 3 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.

## 4 Solid Tyre 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, raised operation comfort and prolonged component longevity.

## 5 Automatic Braking Technology upon Reversing

Adopting technologies like laser scanning and graphic identification, the machine can precisely detect people or obstacles within the driving route and then brakes automatically to prevent accidents. It is highly intelligent with high safety.

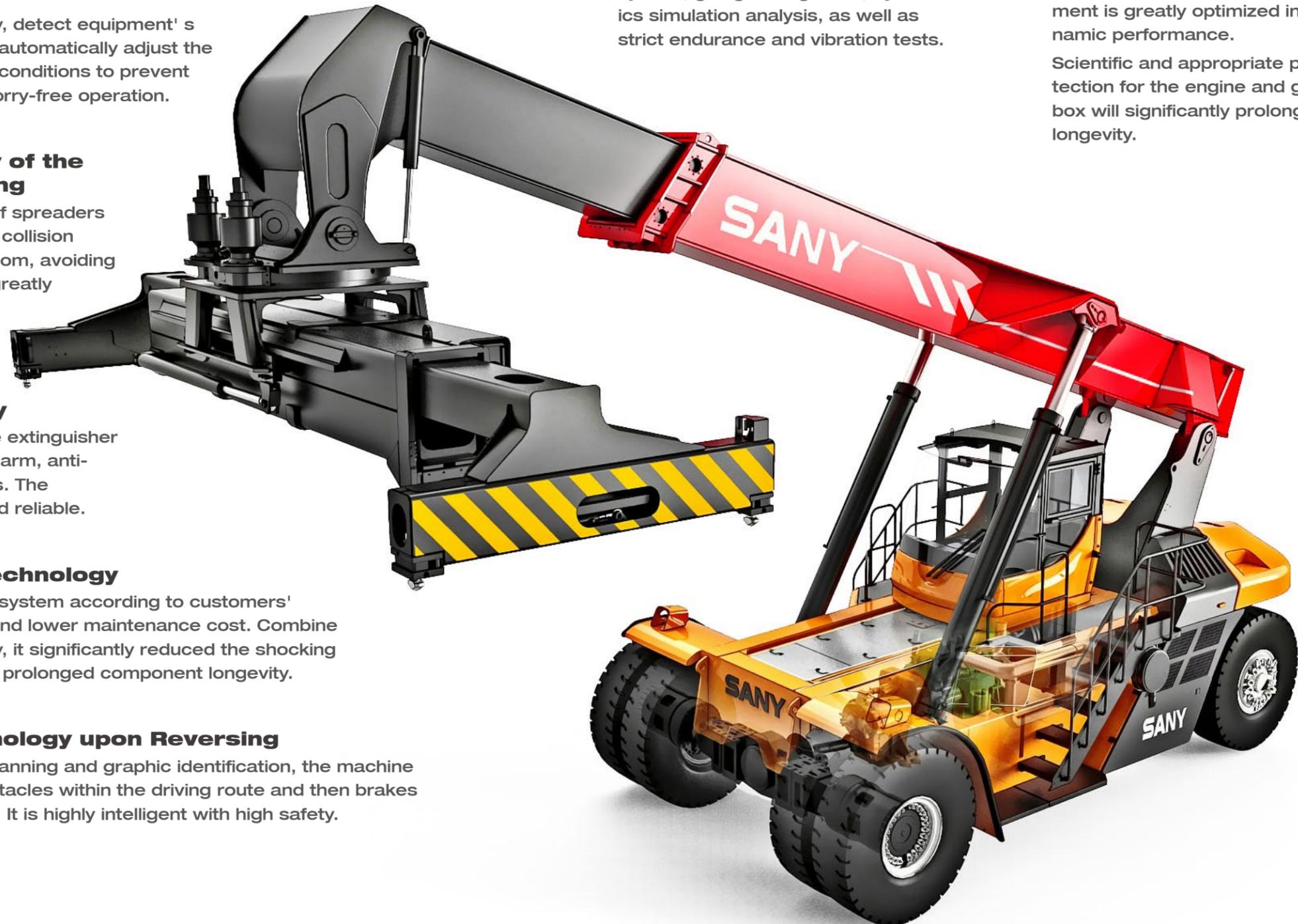
## 6 Reliable Structure Design

Designed by China and Germany together, the equipment is assured to be highly reliable and enduring 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 Vertical Lifting Technologies of Boom**

The intelligent controller monitors the boom's parameters at real-time, and automatically adjust the position of the boom to ensure vertical lifting of the spreader, which makes stacking safer and improves work efficiency significantly.
- 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 Bulk Container Handling Technology**

The Bulk Reach Stacker broke through the bottleneck of bulk container handling and simplified the handling process, dramatically improved work efficiency and environmental protection.



# 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.



# H8 GE & CN TOP TECHNOLOGIES

## INTEGRATION & DISTINGUISHED

SANY SRSC45H8 Reach Stacker incorporated the cutting-edge technology from China and Germany, owing 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 reclaiming system, comprehensively save energy up to 25%.

**High efficiency:** adopt multi-motion linkage design, spreader motion ratio control technology and micro-move 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, patent technology of mobile counterweight, all meeting European safety standards.

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

**Highly comfortable:** concentrated joystick, 360 degree view, full-range headlamp, steering dynamic response, new-style pedal design, all providing a comfortable experience.

**H-type Spreader:** single main beam patented technology; self-weight of spreader is less than 7t; the components passed through millions of times equivalent fatigue test; performance steady and reliable.

**High maintainability:** spacious maintenance room, preventative maintenance system, over 200 malfunction diagnosis programs.

**High return:** saving energy by 25%, saving \$12,888 per year if 90,000 containers are stacked per year.



# ATTACHMENT OPTIONS

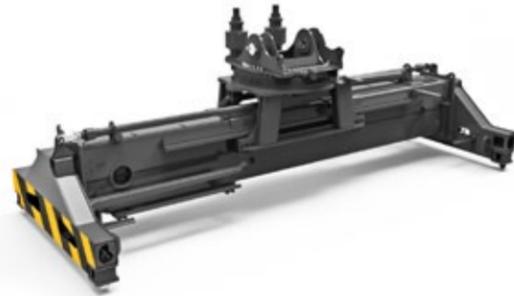
*All for customers, all from innovation*

## 45t Container Spreader

SANY 45T container spreader is used in reach stacker to stack, load or unload ISO standard 20', 40' and 45' containers. Based on market needs, Sany Port Machinery has developed numerous container spreaders of reasonable structure with good design, strong safety protection function and cost effective, sufficiently meeting different requirements of the customers.

**SDJ450H:** *New model of spreader, light weight design, more energy saving and lower fuel consumption*

Rated capacity: 45t  
Application: ISO 20'/40'/45' Containers



**SDJ450F:** *SANY classic spreader*

Rated capacity: 45t  
Application: ISO 20'/40'/45' Containers



## Empty Container Spreader

SANY SDJE100 spreader is applicable to the transfer and stacking of ISO standard 20', 40' and 45' container or refrigerator. It is the first of its kind in China. Flexible, convenient and economic, it will be your best choice.

**SDJE100:** *Empty container stacking, flexible and convenient*

Rated capacity: 10t  
Application: ISO 20'/40'/45' Containers



## Combined Spreader

SANY SDJE450P spreader is applicable to the transfer and stacking of ISO standard 20', 40' and 45' container or the transfer of EN284 non-stacking container. It is of multiple uses, meeting the European and American intermodal working mode requirement.

**SDJ450P:** *Workable at multi-conditions, quick response to container-aligning operation*

Rated capacity: 45t  
Application: ISO 20'/30'/35'/40'/45' Containers  
EN284 non-stacking containers



## Log Spreader

SANY SWG310 spreader is applicable to transfer, load and unload log or other special materials. This product has perfectly solved the difficulty of transporting and loading specific materials such as log, bringing high profit for customers

**SWG310:** *Highly efficient log grabs*

Rated capacity: 31t  
Application: wood



## Tilt Spreader

SANY SDJS320 spreader is designed for Reach Stacker to transport, load and unload bulk materials. This product has perfectly solved the difficulty of transporting and loading bulk materials. It fills in the domestic blank, breaks through the bottleneck of loading bulk materials, and highly improves the efficiency and environment-protection performance.

**SDJS320:** *A born bulk cargo handling expert*

Rated capacity: 32t  
Tilt angle: 0~50°  
Application: ISO 20' Containers



## Tube Spreader

SANY tube spreader applies to transfer and hoist not only tube and pipe like material, but also container or bulk cargo.

**STP450**

Rated capacity: 45t  
Application: Pipeline, ISO 20'/40' Containers



**STH350**

Rated capacity: 35t  
Application: Large tube

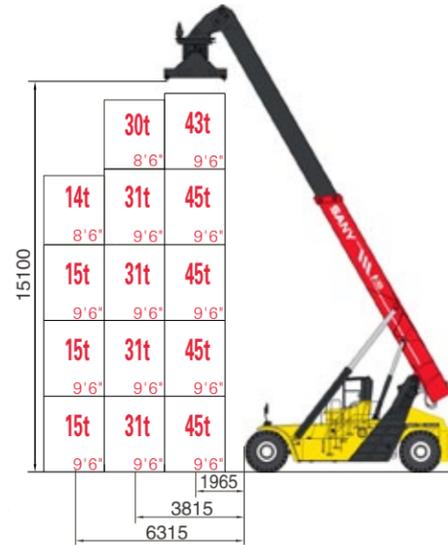


**SDJ400G**

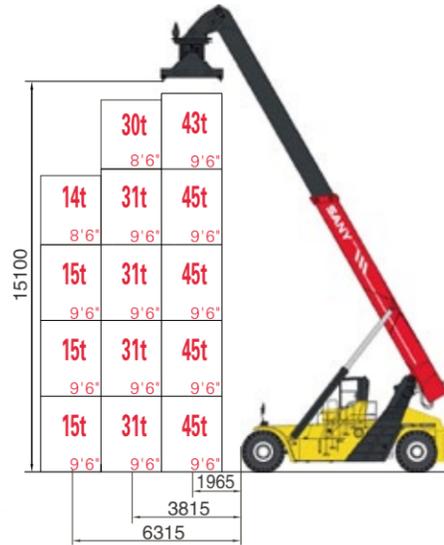
Rated capacity: 40t  
Application: Large tube, bulk cargo



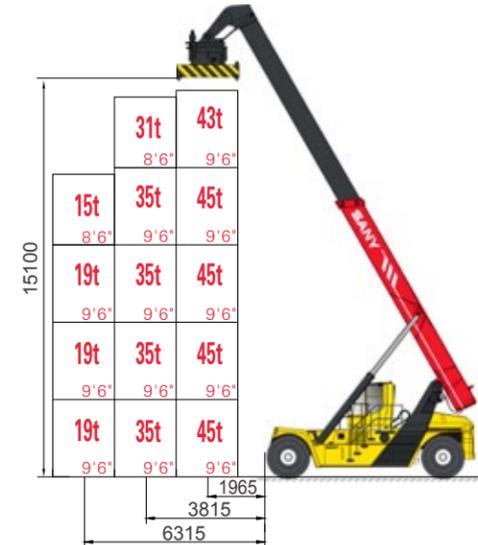
# LOAD CAPACITY DIAGRAM



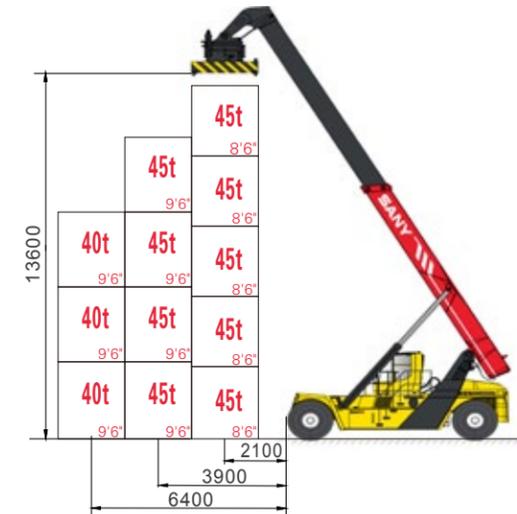
SRSC45H8 SERIES  
CONTAINER REACH STACKER



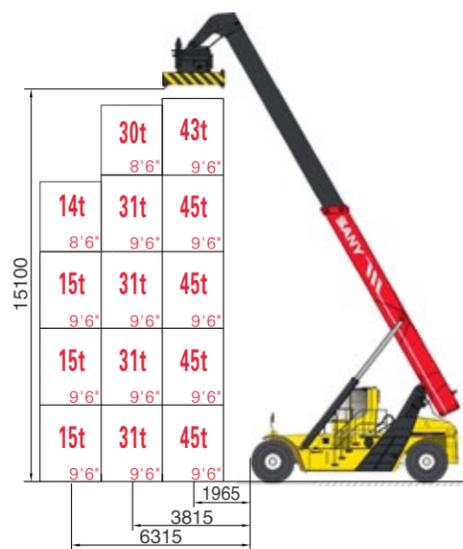
SRSC45H SERIES  
CONTAINER REACH STACKER



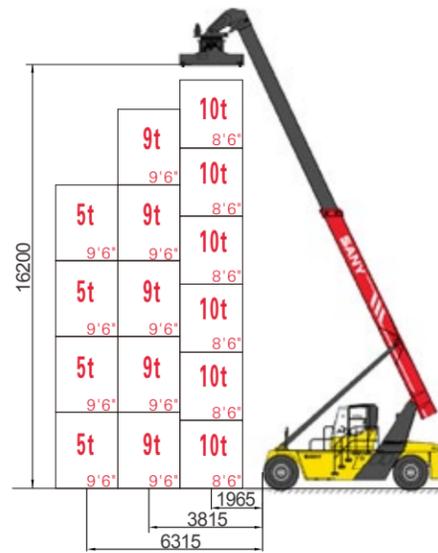
SRSC4535H SERIES HEAVYWEIGHT  
CONTAINER REACH STACKER



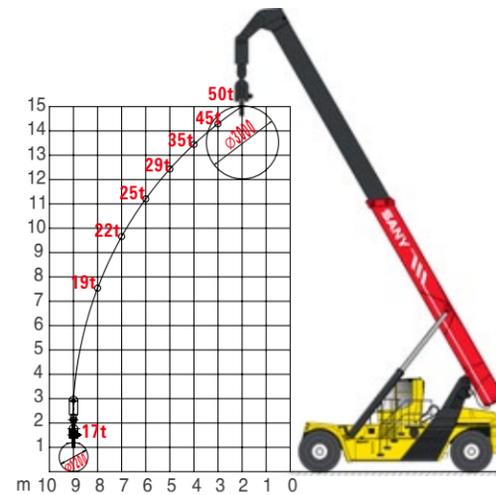
SRSC4545H SERIES OVERWEIGHT  
CONTAINER REACH STACKER



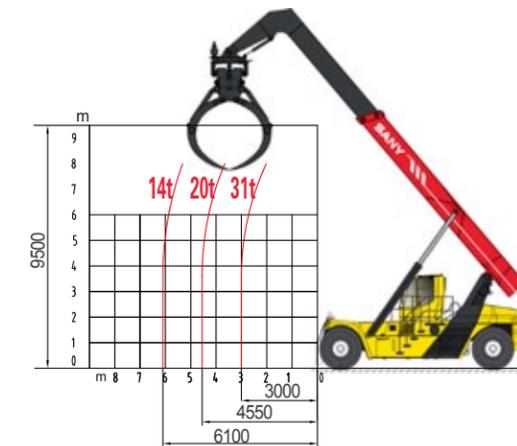
SRSC45GC SERIES  
CONTAINER REACH STACKER



SRSC1009-6E EMPTY  
CONTAINER REACH STACKER

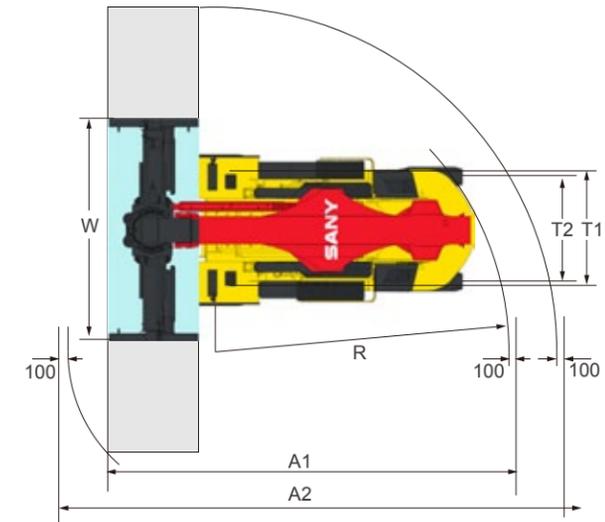
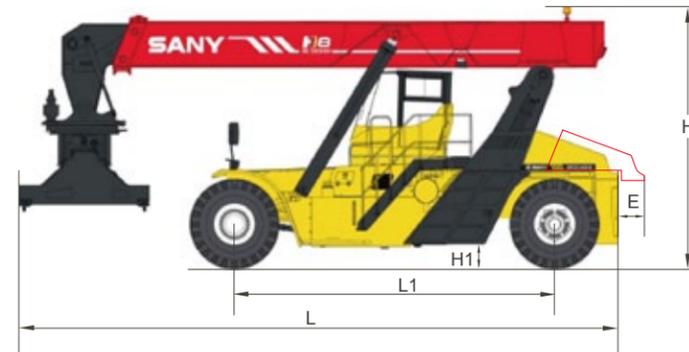


SRST50H1-H  
TUBE REACH STACKER



SRSW31H1  
LOG REACH STACKER

# TECHNICAL PARAMETER



Parameter	Unit	SRSC45H8 Series	SRSC45H Series	SRSC45GC	SRSC4535GC	SRSC1009-6E	SRSC4535H1	SRSC4545H1	SRST50H1-H	SRSW31H1
Max. Hoisting speed (Non-load/Load)	mm/s	420/250	420/250	420/250	420/250	450/400	420/250	400/220	420/250	420/250
Max. Descending speed (Non-load/Load)	mm/s	360/300	360/300	360/300	360/300	400/400	360/300	360/280	360/300	360/300
Max. Travel speed (Non-load/Load)	km/h	25/21	25/21	25/21	25/18	28/25	25/18	20/15	25/21	25/21
Grade-ability (Non-load/Load)	%	39/32	39/32	39/32	38/24	33/27	38/24	26/17	39/32	39/32
Working pressure of hydraulic system	bar	260	260	260	260	220	260	260	260	260
Overall weight	t	73	72	74	76.5	39	76.5	96.5	65.5	74.5
Max. Load	t	45	45	45	45	10	45	45	50	31
Layer of stack	-	5 (9'6"/8'6")	5 (9'6"/8'6")	5 (9'6"/8'6")	5 (9'6"/8'6")	6 (8'6")	5 (9'6"/8'6")	5 (8'6")	-	-
Max. Hoisting height	mm	15100	15100	15100	15100	16200	15100	13600	15100	9500
Boom Tilt angle	deg	0~60	0~60	0~60	0~58	0~64.5	0~58	0~50	0~60	0~55
Overall length L	mm	11340	11340	11258	11960	11000	11845	13270	10580	12600
Wheel base L1	mm	6000	6000	6000	6500	5000	6500	8000	6000	6000
Overall height H	mm	4770	4770	4770	4870	4000	4870	5230	4770	6660
Min. ground clearance H1	mm	350	350	350	350	250	350	420	350	100
Overall width W	mm	6053-12185	6053-12185	6053-12185	6053-12185	6053-12185	6053-12185	6053-12185	4188	4188
Weight motion distance E	mm	500	-	500	500	-	-	-	-	-
Front track width T1	mm	3033	3033	3033	3033	3280	3033	3060	3033	3033
Rear track width T2	mm	2790	2790	2790	2790	2450	2790	3120	2790	2790
Min. turning radius R	mm	8000	8000	8000	8800	6800	8800	10600	8000	8000
Aisle width with 20' container A1	mm	11300	11300	11300	12000	10000	12000	14500	11300	11300
Aisle width with 40' container A2	mm	13600	13600	13600	13600	13600	13600	15200	13600	13600
Series of products	-	New H Series	New H Series	G Series	G Series	Empty Container Reach Stacker	Heavyweight Container Reach Stacker	Overweight Container Reach Stacker	Tube Reach Stacker	Wood Reach Stacker

# CONFIGURATION PARAMETER

Parameter		Unit	SRSC45H8 Series	SRSC45H Series			SRSC45GC	SRSC4535GC	SRSC1009-6E	
Engine	Type	-	VOLVO TAD1151	VOLVO TAD1151	CUMMINS QSM11	VOLVO TAD1171VE	CUMMINS QSL9	VOLVO TAD1171VE	VOLVO TAD1171VE	CUMMINS QSB 6.7
	Rated power	kW/rpm	265/2100	265/2100	250/2100	265/2100	261/2100	265/2100	265/2100	164/2300
	Max. torque	Nm/rpm	1780/1260	1780/1260	1674/1400	1785/1260	1628/1500	1785/1260	1785/1260	949/1400
	Exhaust standard	-	III Stage	III Stage	III Stage	IV Stage	IV Stage	IV Stage	IV Stage	III Stage
Gearbox	-	DANA 15.5HR36000	DANA 15.5HR36000			DANA 15.5HR36000	DANA 15.5HR36000	CLARK 13.7HR32334		
Drive Axle	-	Kessler D102 PL341	Kessler D102 PL341			Kessler D102 PL341	Kessler D102 PL341	Kessler D81 PL488		
Spreader	Type	-	SDJ450H	SDJ450F			SDJ450F	SDJ450F	SDJE100	
	Side shift range	mm	±800	±800			±800	±800	±800	
	Rotary angle	deg	+105/-195	+105/-195			+105/-195	+105/-195	+105/-195	
	Self-weight	t	7.15	7.8			7.8	7.8	4.7	
	Application	-	ISO 20'/40'/45' Containers	ISO 20'/40'/45' Containers			ISO 20'/40'/45' Containers	ISO 20'/40'/45' Containers	ISO 20'/40'/45' Containers	
Tyre	-	18.00-25 40PR (Solid tyre for option)	18.00-25 40PR			18.00-25 40PR	18.00-33 36PR	14.00-24 28PR		

Parameter		Unit	SRSC4535H1	SRSC4545H1	SRST50H1-H	SRSW31H1	No.	Function	H8 Series	H Series
Engine	Type	-	VOLVO TAD1151	VOLVO TAD1151	VOLVO TAD1151	VOLVO TAD1151	1	Energy recycling system	●	○
	Rated power	kW/rpm	265/2100	265/2100	265/2100	265/2100	2	Dynamic anti-rollover protection system	●	●
	Max. torque	Nm/rpm	1780/1260	1780/1260	1780/1260	1780/1260	3	Automatic fire extinguishing system	●	Conventional
	Exhaust standard	-	III Stage	III Stage	III Stage	III Stage	4	Connector water identifying system	●	●
Gearbox	-	DANA 15.5HR36000	DANA 15.5HR36000	DANA 15.5HR36000	DANA 15.5HR36000	5	Rear image integration system	●	○	
Drive Axle	-	KESSLER D102 PL341	KESSLER D106 PL341	KESSLER D102 PL341	KESSLER D102 PL341	6	Maintenance reminding system	●	●	
Spreader	Type	-	SDJ450F	SDJ450F	SDJ400G	SWG310	7	Fault diagnosis system	●	●
	Side shift range	mm	±800	±800	-	±500	8	Oil accounting function	●	●
	Rotary angle	deg	+105/-195	+105/-195	360	+20 /-20	9	Broadened lighting strength and angle	●	○
	Self-weight	t	7.8	7.8	1.2	8.1	10	3D rocker switch	●	○
	Application	-	ISO 20'/40'/45' Containers	ISO 20'/40'/45' Containers	Tube	Wood	11	Movable balance weight system	●	○
Tyre	-	18.00-33 36PR	21.00-35 36PR	18.00-25 40PR	18.00-25 40PR	12	Mobile cabin structure	●	●	
						13	Boom vertical lift technology	●	●	

● Standard ○ Optional

## ADD-ON OPTIONS

FUNCTION	BRAND	CODE	NOTE
Heat preservation device for extremely cold district	SANY	13816251	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	13816342	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
Spreader quick change function system	SANY	12774238	Use an oil cylinder pushing pin shaft to quickly unload spreader from the boom.
Spreader guiding function	SANY	11138129	Added two guide plates, easier for container-aligning operation.
Twist lock counter	SANY	11446031	Twist lock counter of the spreader
Engine hour meter	SANY	11446498	Hour meter for the engine's working hours
Amplifying alarm system	SANY	11447670	Including the amplifier and the alarm
Reach stacker LED lamp	SANY	13526507	Including: headlamp, rear lamp, boom work light, steering lamp, alarm lamp, etc.
Spreader tri-color indication light in cab	SANY	12308787	The tri-color indication light in the cab shows the conditions of the spreader: open, closed, positioning status.
Rear counterweight alarm lamp	SANY	11447452	One alarm lamp for the rear counterweight
Cab reading lamp	SANY	11446638	Brand fluorescent lamp, installed on the top of the cab.
Outdoor cab top lamp intensifier	SANY	13206545	Four xenon lamps on the cab top to increase the lighting level ahead.
Spreader front lock lamp intensifier	SANY	12304893	Used in SANY self-made spreader. Add two lamps in the outside sides to enhance lighting.

FUNCTION	BRAND	CODE	NOTE
12V power supply	SANY	11446544	Provide 12V power socket (on the top of the electric control cabinet in the cab)
24V power supply	SANY	11447306	Provide 24V power socket (on the top of the electric control cabinet in the cab)
3m range reversing radar system	SANY	11446721	Visible reversing radar with 3m range sensor
5m range reversing radar system	SANY	12764589	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.
Auxiliary rear braking system	SANY	13714802	It is used to examine precisely the person and obstacle within travelling range and brake automatically .
Video storage function	SANY	13519577	Used in the camera system to enhance storage function; can store channel 1 to 4 video signal.
Video monitoring system (2 cameras)	SANY	13519573	Camera system (9" screen + 2 cameras)
Video monitoring system (4 cameras)	SANY	13519574	Camera system (9" screen + 4 cameras)
Spreader shock-proof camera	SANY	13519578	Shock-proof camera
Precise weighting, system	SANY	13206542	Used in SANY self-manufactured spreader, weighting the lock and protect unbalance condition.
Radio	SANY	13206553	Including radio, speaker and antenna.
Automatic engine turn off function	SANY	13206551	Power switch adopted associated contactor; when the main switch is turned off, so is the engine.
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 on fire.
Mobile counterweight system	SANY	12395059	Patent mobile counterweight system (significantly improve load capacity)
Automatic fire extinguishing system	SANY	13132018	SANY automatic fire extinguishing system (has the function of fire detecting and automatic fire extinguishing)

# CONSTRUCTION CASES

2010, Guangzhou Port



2013, Shanghai Port



2014, Tianjin International Logistics



2014, Qingdao, Shandong



2013, Taicang Port, Jiangsu



2014, Los Angeles, USA



2013, Sydney, Australia



2014, Dammam, Saudi Arabia



2012, Kuantan, Malaysia



2010, Port of Luanda, Angola



# 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.

