TFT

HNRS 4531

Built for container handling and more

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FAST

Higher pressure pump

Higher pressure-rated hydraulic pump from top brands enables faster heavy container lifting speeds compared to other brands

CAN Bus Communication

Latest CAN bus technology and updated control program enable our faster responsiveness and precise handle synchronization

Self-leveling Spreader

We are the first in the industry to adopt an electro-proportional valve active leveling system for our spreaders. Whether tilting, traveling, or operating, they maintain a flatness within 3°, enabling instant container pickup and release—simple, swift, and seamless

SAFE

360° panoramic reversing camera （optional）

The system is equipped with a 360° panoramic reversing camera and humanoid recognition technology, capable of detecting humans within 3 meters and objects within 5 meters. The driver cabin's visual reversing system automatically triggers alerts and warnings.Additionally, the millimeter-wave radar sensing system detects obstacles over 15 meters away, combined with intelligent braking assistance, ensuring safety for both operators and equipment

Real-time detection of the reach stacker's hydraulic pressure, boom length, angle, and tipping detection signals to achieve torque protection. When the tipping torque reaches a certain value or a tipping signal is detected, the control unit only allows the boom to retract, thus providing intelligent anti-tipping safety protection.

The precision weighing system accurately measures the weight at all four corners of the container to calculate its center of gravity, thereby detecting potential load imbalance

Automatic fire suppression system

Automatically detect Fire, preventing Fire hazard from happening. Mechanically triggered and environment friendly.

The control program intelligently sets the rotation range of the lifting attachment based on parameters such as the boom's lift angle, boom extension length, and whether a container is being lifted. This prevents collisions between the attachment, frame, boom, cylinder, or other objects during rotation or lateral movement.

Real-time monitoring of the reach stacker's hydraulic pressure, boom length, angle, and vehicle speed to achieve dynamic torque protection. The system calculates and limits the vehicle speed to a value below the potential tipping danger threshold, thus preventing the possibility of tipping.

EASY

Movable Cabin

The cab utilizes a snap-on connection design. Once closed, it is securely fixed by a self locking mechanism. Simply lift off the cab to reposition it, making inspection and maintenance significantly more easierspecial cabinet types such as ISO.

Automatic lubrication System (optional)

The lubrication system automatically supplies lubricant to each lubrication point in precise, timed, and measured amounts based on their specific oil requirements. Compared to manual lubrication, this ensures more timely and accurate lubrication for all points while significantly reducing workers' labor intensity.

Integrated operation handle

The centralized control handle integrates all operational buttons, including the 20/40-foot switching function. The spreader's rotation and lateral movement are proportionally controlled, allowing for precise and flexible container handling operationsand accurate lubrication for all points while significantly reducing workers' labor intensity.

RELIABLE

By referencing a wide range of failure cases from both domestic and international sources, and by compiling extensive data on customer usage patterns, we utilize finite element analysis and dynamic simulation techniques to enhance our designs.

The critical load-bearing components of the spreader are crafted from high strength material, which boasts a yield strength of 700 MPa.

The steel structure is designed to withstand a fatigue life of over 30,000 hours of operation.

ECONOMICAL

10% less energy consumption

The variable load-sensitive hydraulic system supplies flow on necessary demand, avoiding overflow heat loss at various points

The control program integrated with engine characteristic curves effectively operates within the lowest fuel consumption range.

The boom is retracted and lowered by its own weight and load to minimize energy consumption

Massive simulating the steering motion of the entire vehicle, analyze the differences in the steering angles between the inner and outer wheels under various turning conditions.

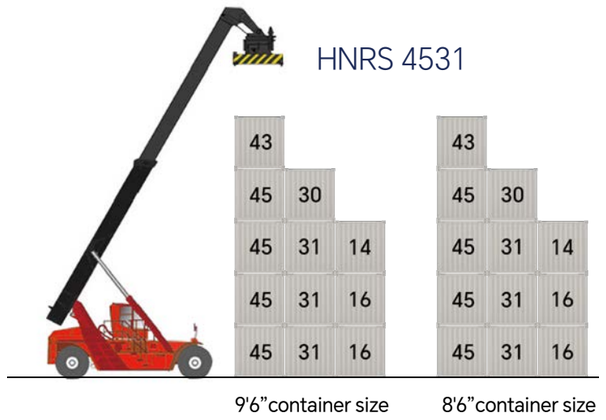
The most optimal sizes of the steering cylinder, steering knuckle, and linkages.

Under the same working conditions, the same type of tire has a longer service life.

COMFORTABLE

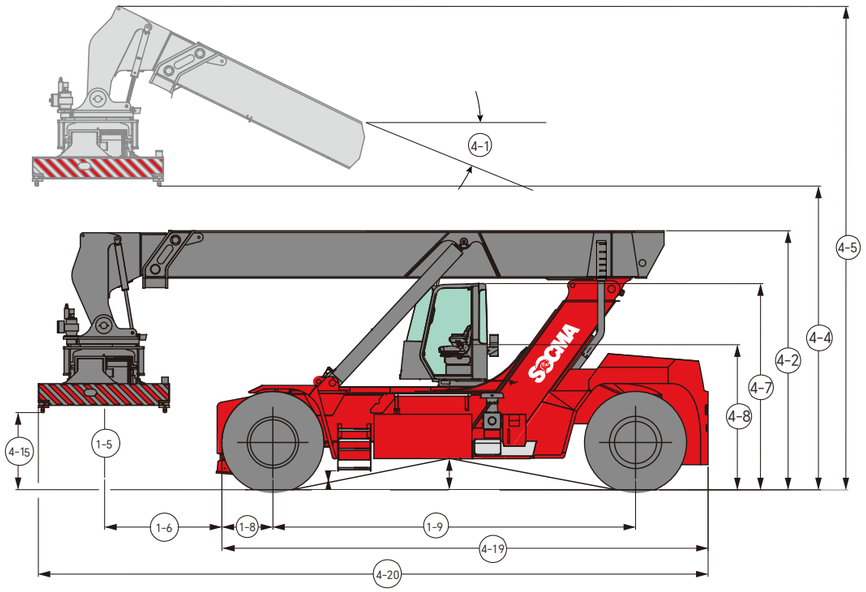
By employing flow amplification technology, even we use larger cylinders, our steering force is only 3N

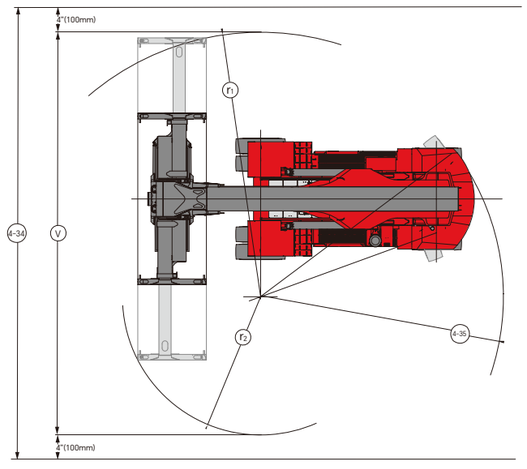
Extra-large cab. Grammer suspension seat, Extra-large cooling capacity air conditioner.

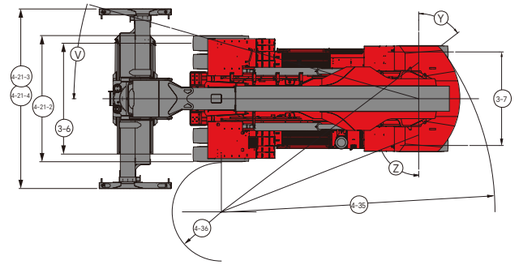


		Unit	HNRS4531
General	Standard engine		Cuminns QSM 11
	Standard transmission		DANA 15.5HR36432
	1-5 Load capacity at load center distance c1, C2, C3	ton	45/31/16
	1-6 Load center distance C1 ,C2, C3	mm	1965/3815/6315
	Stacking height at 1st 2nd 3rd row 9'6" / 8'6"		5/5-4/4-3/3
	1-8 Load distance, center of drive axle to face of front tires	mm	838
	1-9 Wheelbase	mm	6000
Weight	Service weight	ton	72
	Axle loading with load (c1), front/rear	KN	101/16
	Axle loading without load (c1), front/rear	KN	34/38
Tire	Tire type	mpa	1
	Tire size, front		18-25X40PR
	Tire size, rear		18-25X40PR
	Number of tires, front/rear (X driven)		4/2
	3-6 Tread, front	mm	3048
	3-7 Tread, rear	mm	2790
	Ground Pressure Front/Rear	mpa	0.95
Dimensions	4-1 Boom angle minimum/maximum	deg	0/60
	4-2 Height of boom lowered	mm	4623
	4-4-1 Lift height at load center c1	mm	15100
	4-4-2 Lift height at load center c2	mm	13700
	4-5 Height, boom extended	mm	17952
	4-7 Height of overhead guard (cabin)	mm	3656
	4-8 Seat height to SIP	mm	2360
	4-15 Height under twistlock - lowered	mm	1181
	4-19 Overall length	mm	8021
	4-20 Overall length including boom retracted	mm	11370
	4-21-2 Overall width across all of truck	mm	4142
	4-21-3 Overall width across spreader 20'	mm	6053
	4-21-4 Overall width across spreader 40'	mm	12185
	Ground clearance	mm	355
	4-34-1 Aisle width: 20' container - Add clearance	mm	11797
	4-34-2 Aisle width: 40' container - Add clearance	mm	13965
	4-35 Outside turning radius	mm	8000
	4-36 Internal turning radius	mm	1200
Spreader	Lateral Displacement	mm	±800
	Rotation Angle	°	+105/-195
	Weight	ton	8.3
Hydraulics&Oil tank	Maximum Working Pressure Boom/Spreader	bar	260
	Hydraulic Oil Tank Volume	L	850
	Fuel Tank Volume	L	400
Performance	5-1 Travel speed, with/without load	km/h	21/25
	5-2 Lifting speed, with/without load	mm/s	250/420
	5-3 Lowering speed, with/without load	mm/s	300/450
	5-7 Gradeability - with/without load	%	32%/39%
	Drawbar Pull	KN	330
	Noise Level (Inside Cab)	dBA	72

Note: The above data are subject to change without prior notice







r_1 = radius of swing of container rear corner
r_2 = radius of swing of container front corner
W_a = outside turning radius of the truck
a = total operating clearance:
= 200 mm (100 mm each side acc. VDI) see VDI line 4-34-3 and 4-34-4
V = (theoretical) 90 ~ stacking aisle width, no intrusive stacking:
V = r_2 + the larger of r_1 or W_a
4-34 (Ast)= (practical) 90 ~ stacking aisle width, no intrusive stacking and with clearance ; V + a