



# SCX500W

## TRUCK CRANE



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This catalog is not applicable to European and North America areas.  
The machine shown may vary according to territory Specifications.  
Specifications are subject to change without notice.

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Printed in Japan

# HITACHI SUMITOMO



# Enhanced Operator Comfort

Adjustable Deluxe Seat and Control Levers  
for Easy Operation with Less Fatigue



## Operator Comfort and Operating Ease

- Electric tilt-type lever stand and adjustable deluxe seat
- Large, curved front glass window for upward/downward visibility
- Short-type lever allowing lever-to-lever spacing adjustment
- Easy-to-read control panel
- Quiet cab thanks to shock-absorbing rubber mounts and well-sealed sliding door



## Fine Inching with the Lever-mounted Drum Rotation Sensing System

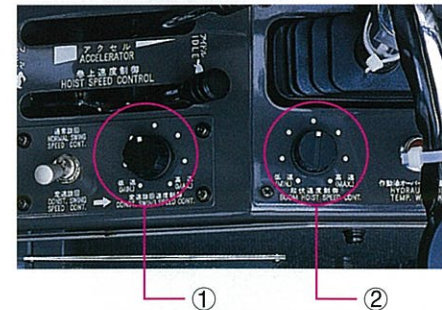
Dependable inching operation is ensured even when the load is invisible -- i.e., deep crane operation under the ground with the help of a signal man. The system enables the operator to feel drum rotation beginning at the fingertips. Coupled with the fine-speed control system featuring a wide control range, increases controllability and productivity are increased.



## Work mode switch crane/Bucket mode

## Electric Finger-Touch Accelerator Grip

The electric finger-touch accelerator grip, provided atop the swing lever, is a new control system, featuring good throttle response. The operator can choose from the accelerator grip, or the conventional accelerator lever and pedals according to job requirements.



## ① Constant-Speed Swing Control

With a dial switch, swing speed can be kept nearly constant within a certain range, regardless of engine speed. During high-lift operation, this feature is advantageous, permitting slow swing with quick hoisting. With a selector switch, normal swing can be selected.

## ② Independent Fine-Speed Control of the Boom

With a dial switch, boom hoisting/lowering speeds can be adjusted, continuously and independently, within a 20% to 100% range of normal speed to adapt to slight changes in working radius.

Note : ●Decal and caution plates, affixed to the machine, vary depending on countries. Pictured are those for the Japanese market.  
●Pictured includes optional equipment.  
●"Ton" or "t" implies metric ton in this catalog.

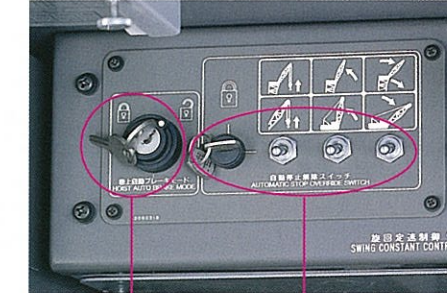
# Safety-First Design

Easy-to-Read Control Panel and Numerous Locking Mechanisms



## Cushioned Boom Stops

A cushioned boom stop mechanism is provided to reduce shock due to abrupt stops such as automatic stops from boom over-hoisting or overloading.

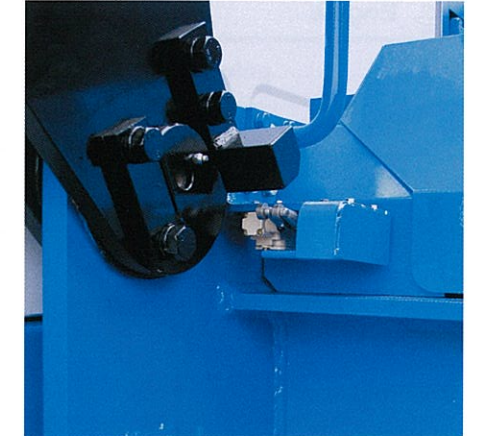


## ① Keyed Auto Brake Mode Release Switch

This switch disables transfer from auto brake mode to free fall mode.

## ② Keyed Auto Stop Release Switch

The auto stop release switch is fitted with a key to prevent inadvertent release of auto stop devices.



## Secondary Boom Overhoist Prevention Device

Even if the boom or hook overhoist prevention device fails, the secondary boom overhoist prevention device prevents boom and/or hook overhoisting. Alarm bell and buzzer sound to warn the operator. Also, the engine shut down to prevent damage due to boom imbalance.



## Drum Locking Mechanism

Each drum is locked automatically when the key switch is set to OFF or ACC position.

## Interlock System

This system does not allow the engine to start unless the swing brake is locked and the hoisting brake is set to the auto brake mode.

## Brake Mode Selector

The brake mode selector is provided on the lever stand. Indicators enable the operator to differentiate brake mode at a glance.

Auto brake mode(green indicator)

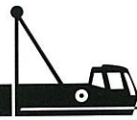
Free fall mode(red indicator)

## Pilot-Control Shut-off Lever Prevents Misoperation During Operator Ingress and Egress



Note : The machine is painted in customer's selected color. The photo shown by 2.5 m lift cab.





SUPERSTRUCTURE



Engine

Model .....	Isuzu BB-6HK1T
Type.....	Water-cooled, 4-cycle, 6-cylinder, direct fuel injection type diesel engine
Rated horsepower.....	136 kW (185 PS) at 2 000 min <sup>-1</sup> (2 000 rpm)
Maximum torque .....	735 N·m (75 kgf·m) at 1 600 min <sup>-1</sup> (1 600 rpm)
Piston displacement .....	7.79 L
Fuel tank capacity.....	300 L
Electric system.....	DC 24 V



Main and Auxiliary Hoist Mechanism

- The SCX500W is equipped with dual hoist mechanisms, each consisting of independent main and auxiliary hoist drums driven by a hydraulic motor.
- Hoisting and lowering the load is achieved by forward/reverse rotation of the hydraulic motor.
- Power lowering is carried out with a hydraulic brake.
- Hoisting and lowering can be carried out at three speeds-fast, medium and slow-to suit job requirements.
- Each drum is fitted with a friction band-type brake. This allows free fall (rapid lowering) of the hook.
- Main and auxiliary hoist drums are each fitted with a pawl-type drum lock to positively hold the load in the air.
- The drum brake is an external contracting friction band-type using durable non-asbestos lining.
- The brake is controlled by the hydraulic servo system to reduce control force. With the hoist lever in neutral, auto braking or foot braking can be selected.



Boom Hoist Mechanism

- Independent operation separated from other functions.
- Boom hoisting/lowering is done by forward/reverse rotation of a hydraulic motor. Boom lowering is made by power lowering through a hydraulic brake.
- Both hydraulic brake and spring-set/hydraulic-released multiplate disc type brake offer positive stopping of the boom. When the boom is hoisted or lowered, brakes are automatically released.
- Boom hoist drum is fitted with a pawl-type drum lock.



Swing Mechanism

- Independent operation separated from other functions.
- Driven by the hydraulic motor through reduction gear.  
Swing speeds are freely controllable from zero to maximum speed with a single lever.

Swing Brake

The disc-type swing brake can be hydraulically applied by the brake switch on the swing lever.

Swing Lock

Manual mechanical-lock with a rod tip engaged in the holder of the track frame for transportation.

Swing Circle

Single-row shear-type ball bearing with heat-treated internal gear.



Revolving Frame

All welded steel construction, stress-relieved, precision-machined for rigidity and strength.

Gantry

Lowerable for transportation.

Counterweight

Total weight      11 700 kg



Boom

Tubular Chord Crane Boom

1 400 mm wide by 1 400 mm deep at connection, lattice construction using high-tensile steel tubular chords

Basic boom .....	Total length 9.0 m, 2-piece construction; upper section 4.0 m and lower section 5.0 m
Boom point .....	Offset boom point, 4 sheaves (462 mm PCD) mounted on anti-friction bearings on boom top
Boom inserts.....	3.0 m, 6.0 m and 9.0 m long available
Connection type .....	Pin-connected
Boom backstop.....	Dual-rail, telescopic tubular construction with spring damper
Boom hoist bridle....	Serves as connection between pendants and boom hoist wire rope reeving, equipped with 6 sheaves (340 mm PCD) for 12-part boom hoist wire rope reeving
Auxiliary jib (Option)...	Attachable to the main boom top to hoist the light load quickly with a single rope



Operator's Cab

All-weather, well-ventilated, roomy operator's cab with good visibility. The independent cab is insulated against noise and vibration.



Hydraulic System

- 3 variable displacement piston pumps allow both independent and combined operations of all functions.
- Variable displacement piston pumps control working speeds, and make effective use of engine horsepower.

	Pump-1	Pump-2
Type of pump	Variable displacement	
Pressure setting	29.4 MPa (300 kgf/cm <sup>2</sup> )	29.4 MPa (300 kgf/cm <sup>2</sup> )
Max. Oil flow *	216 L/min	216 L/min

	Pump-3	Pump-4
Type of pump	Variable displacement	Gear
Pressure setting	27.5 MPa (280 kgf/cm <sup>2</sup> )	4.9 MPa (50 kgf/cm <sup>2</sup> )
Max. Oil flow *	135 L/min	32 L/min

\* with non-loaded condition

Main and Auxiliary Hoist Motors

Axial piston motors with counterbalance valves

Boom Hoist Motor

Axial piston motor with counterbalance valve

Swing Motor

Axial piston motor

Relief and Brake Valves

- Each hydraulic circuit incorporates large-capacity relief valves to protect circuit from overload and shock load.
- Counterbalance valves, provided for hoist motor, compensate load lowering and prevent accidental load drop if hydraulic power is suddenly reduced.

Pressure Settings

Main Circuit

- Main relief valves  
Hoist (main and aux.)..... 29.4 MPa (300 kgf/cm<sup>2</sup>)  
Swing ..... 23.0 MPa (235 kgf/cm<sup>2</sup>)
- Overload relief valves  
Hoist (main and aux.) circuits ..... 31.4 MPa (320 kgf/cm<sup>2</sup>)  
Boom hoist circuit ..... 30.4 MPa (310 kgf/cm<sup>2</sup>)

Pilot Circuit

- Main relief valve ..... 4.9 MPa ( 50 kgf/cm<sup>2</sup>)

Line Filters

High-filtration 10 μm full-flow filter element is incorporated in the return line. Pilot filter and suction filter are provided in each circuit.

CARRIER

Outriggers are operated by carrier's gear pump which is powered by transmission P.T.O.

Outrigger control levers are provided on both side of carrier.

Type of pump ..... Gear

Pressure setting ..... 17.2 MPa (175 kgf/cm<sup>2</sup>)



Controls

Boom, Main and Auxiliary Hoist and Swing

Remote controlled hydraulic servo. Working speed can be precisely controlled according to lever stroke.

● Electric Accelerator Grip

Engine power can be controlled according to job needs by electric finger-touch grip atop the swing lever, accelerator lever and accelerator pedal.

● Monitor Displaying Machine Conditions

With the monitor, the operator can check, at a glance, engine oil pressure, water temperature and fuel level, as well as levels of hydraulic oil, engine oil and coolant. The red light turns on and the buzzer sounds in the event of an abnormality.



Safety Device

Boom Angle Indicator

Mechanical-type boom angle indicator is provided at boom foot.

Counterbalance Valves (Brake Valves)

Counterbalance valves are each incorporated in travel motors, boom hoist motor, and main and auxiliary hoist motors. If the hydraulic line is broken, this valve is automatically actuated to prevent motor rotation.

Swing Lock and Swing Parking Brake

Drum Locks (Electric Type)

A pawl-type drum locks, provided at main drum, auxiliary drum and boom drum, are automatically applied when the engine key is set to OFF or ACC position.

Lever Locks

Main and auxiliary hoist levers, and boom hoist lever are each fitted with lock mechanisms to prevent mishandling.

Devices for Crane Operation

● Moment Limiter

On the moment limiter, analog displays and pictorial load indications are functionally arranged for easy reading.

● Hook Overhoist Prevention Device

When the hook reaches its hoist limit, the bell sounds and the auto-stop automatically actuates at the same time.

● Boom Overhoist Prevention Device

When the boom reaches its angle limit, the buzzer alarm sounds and boom hoisting automatically stops at the same time. The telescopic-type boom backstop is also provided.

● Secondary Boom Overhoist Prevention Device

In addition to the hook overhoist prevention device and boom overhoist prevention device, the secondary boom overhoist prevention device is provided. It actuates at a boom angle of 82° to avoid overhoisting of both the boom and/or hook.

● Pilot Control Shut-off Lever

The pilot control shut-off lever shuts out the hydraulic pilot pressure to pilot control valves. With the pilot control shut-off lever in the LOCK position, the machine will not operate even if the lever is accidentally shifted.

● Reliable mechanism

The related movements stop automatically if an electric wire is broken.





## CARRIER

Carrier Model ..... NISSAN  
KL-KG532VN .... Right-hand steering.

### Frame

ALL welded, reinforced ladder type construction made of high-tensile steel, especially designed for rigidity and strength.



### Engine

Model ..... NISSAN RG8  
Type ..... Water-cooled, 4-cycle, V-type  
8-cylinder, direct fuel injection type  
diesel engine.  
Maximum horsepower ..... 235 kW (320 PS) at 2 200 min<sup>-1</sup>  
(2 200 rpm)  
Maximum torque ..... 1 098 N·m (112 kgf·m)  
at 1 200 min<sup>-1</sup> (1 200 rpm)  
Piston displacement ..... 17.99 L  
Fuel tank capacity ..... 300 L  
Electric system ..... DC 24 V



### Power Transmission System

Engine - clutch - main transmission - propel shaft - auxiliary transmission - propel shaft - final reduction gear (differential gear) - drive shaft of vehicle (wheel).

**Drive system** ..... 8 × 4

**Clutch** ..... Dry, single plate, hydraulically operated type. Release mechanism with air assisted booster.

### Main Transmission

Type ..... 7 forward speeds and 1 reverse speeds.  
Constant-mesh on 2nd 3rd 4th 5th 6th 7th and reverse.  
Reduction ratio ..... 1st ..... 13.417  
2nd ..... 8.167  
3rd ..... 5.136  
4th ..... 3.188  
5th ..... 2.005  
6th ..... 1.363  
7th ..... 1.000  
Reverse ..... 10.398  
Transmission P.T.O ..... Attached on left side of transmission case.  
Allowable torque ..... 294 N·m (30 kgf·m)  
at 1 000 min<sup>-1</sup> (1 000 rpm)  
Reduction ratio ..... 1.571

### Final Drive (reduction)

Reduction ratio ..... 7.424 (4.875 × 1.523)

### Brakes

Service brake ..... Pneumatic brake on all wheels, safety dual air line system, internal expanding leading and trailing shoe type.

Parking brake ..... Mechanically operated by hand brake lever, internal expanding duoservo shoe type, acting on drum at rear end of auxiliary transmission case.

Engine retarder ..... Electric-pneumatic operated shutter. (exhaust brake)

### Front axle

Type ..... Tandem-welded axle ends, steel tube and forged steel, with reverse "ELLIOT" steering knuckles.

### Rear axle

Type ..... Fully floating, cast steel housing, in-line, tandem type.

### Suspension

Front ..... Underhanging, high tensile steel equalizer beams, including 4 torque rods.

Rear ..... Underhanging, high tensile steel equalizer beams, including 2 torque rods.

### Wheels

8.50 V × 20

### Tires

Front ..... 13.00-20-20PR (Single × 4)  
Rear ..... 13.00-20-20PR (Double × 4)  
Air pressure ..... 686 kPa (7.00 kgf/cm<sup>2</sup>)

### Steering

Recirculating ball screw type, linkage type with hydraulic power booster.

### Outriggers

Fully hydraulic operated "H" type. Control levers are provided on both sides of carrier.

### Max. travel speed

65 km/h  
at standard travel condition.

### Gradeability

19.8° (Sin  $\theta$  = 0.34)  
at standard travel condition.

### Minimum turning radius

11.6 m



## SERVICE REFILL CAPACITIES

### SUPERSTRUCTURE

	Liter
Fuel tank .....	300
Engine coolant.....	25.1
Engine oil .....	36
Pump transmission .....	2
Boom hoist reduction device .....	9.5
Winch hoist reduction device .....	12.5 × 2
Swing reduction device .....	8
Hydraulic system, including tank capacity.....	305
Hydraulic tank.....	230

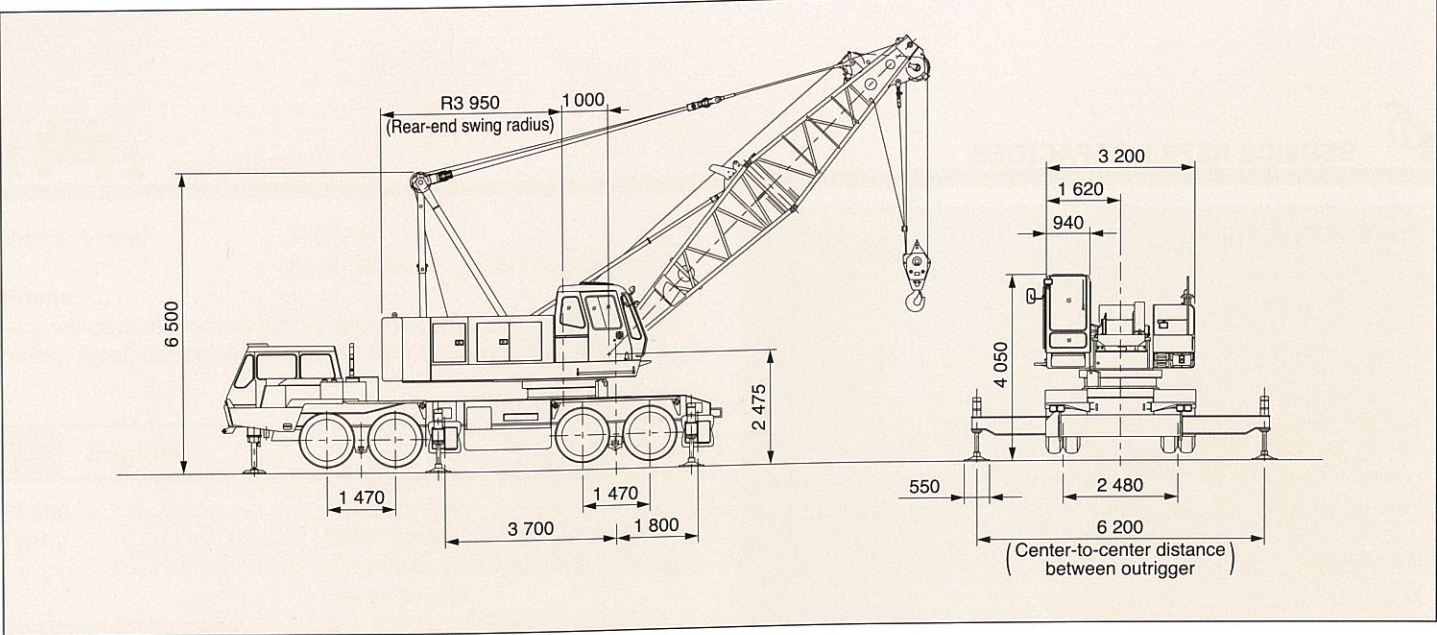
### CARRIER

	Liter
Fuel tank .....	300
Engine coolant.....	37
Engine oil .....	30



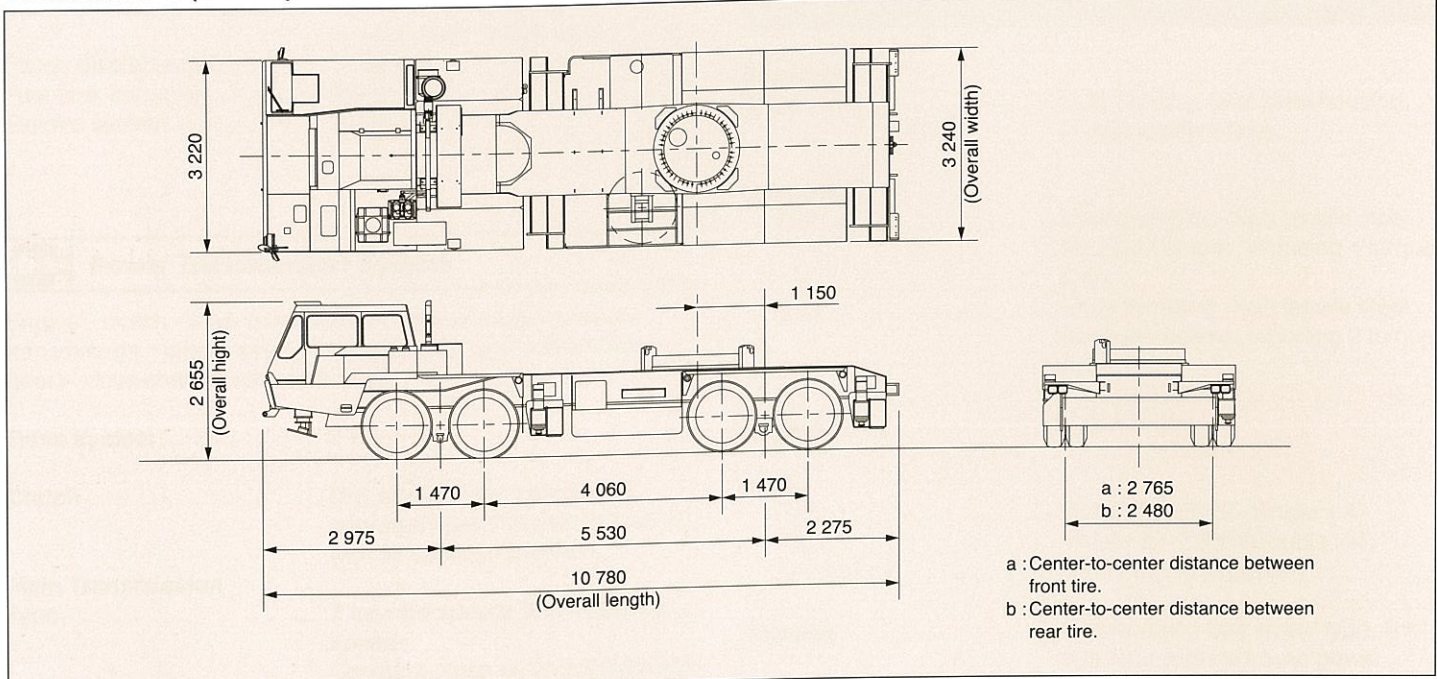
■Dimensions

Unit : mm



■Dimensions (Carrier)

Unit : mm



- Notes : 1. On-road travel condition is carrier only.  
2. Job site travel of carrier with superstructure fitted is possible with basic boom only and no counterweight.  
3. When traveling with counterweight and boom other basic read and fully nuderstand the Operation Manual before operating.

■Specifications

Maximum rated Load × Working radius		t × m	50 × 3.7
Basic boom length		m	9
Maximum boom length		m	51
Line speeds	Main hoist drum	m/min	* 100/65/32
	Auxiliary hoist drum	m/min	* 100/65/32
	Boom hoist drum	m/min	* 53
Swing speed		min <sup>-1</sup> (rpm)	3.0 (3.0)
Travel speed (Carrier only)		km/h	65
Gradeability (Carrier only)		%°	0.36
Superstructure	Diesel Engine		Isuzu BB6HK1T
	Rated horsepower	kW/min <sup>-1</sup> (PS/rpm)	136/2 000 (185/2 000)
Carrier	Diesel Engine		NISSAN RG8
	Rated horsepower	kW/min <sup>-1</sup> (PS/rpm)	235/2 200 (320/2 200)
	Weight	t	24.56
Operating Weight		t	55.4 (including 9 m boom and 50 t capacity hook)

- Notes : 1. Data is expressed in SI units, followed by conventional units in ( ).  
2. \*Line speeds will vary with the load.

■Crane Ratings (Main Boom in 360° Working Area)

Working radius (m)	Boom length (m)														
	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51
3.5	50.00														
3.7	50.00	50.00													
4.0	47.10	47.00	4.2×44.8												
4.5	42.50	42.40	42.30	4.7×40.4											
5.0	38.40	38.30	38.20	38.10	5.3×36.2										
5.5	35.10	35.00	34.90	34.80	34.70	5.8×32.5									
6.0	32.30	32.20	32.10	32.00	31.90	31.80	6.4×29.8	6.9×27.4							
7.0	27.60	27.50	27.40	27.30	27.20	27.10	27.00	26.90	7.5×25.0						
8.0	24.00	23.90	23.80	23.70	23.60	23.50	23.40	23.30	23.20	23.10	8.6×21.8				
9.0	19.30	21.10	21.00	20.90	20.80	20.70	20.60	20.50	20.40	20.30	20.20	9.1×19.5	9.7×18.5		
10.0		18.80	18.70	18.60	18.50	18.40	18.30	18.20	18.10	18.00	17.90	17.80	17.70	10.2×17.5	10.7×16.0
12.0		11.6×15.1	15.00	14.90	14.80	14.70	14.60	14.50	14.40	14.30	14.20	14.10	14.00	13.90	13.80
14.0			12.35	12.30	12.20	12.10	12.00	11.90	11.80	11.70	11.60	11.50	11.40	11.30	11.20
16.0			14.2×12.1	10.60	10.50	10.40	10.35	10.30	10.20	10.10	10.00	9.90	9.80	9.70	9.60
18.0				16.8×9.6	8.95	8.85	8.75	8.70	8.65	8.55	8.45	8.35	8.25	8.15	8.05
20.0					19.4×8.0	7.65	7.60	7.55	7.45	7.35	7.25	7.15	7.05	6.95	6.85
22.0						6.65	6.60	6.50	6.40	6.30	6.20	6.10	6.00	5.90	5.80
24.0							5.90	5.85	5.75	5.65	5.55	5.40	5.30	5.20	5.10
26.0							24.6×5.70	5.20	5.10	5.00	4.90	4.75	4.65	4.50	4.40
28.0								27.2×4.8	4.60	4.50	4.35	4.20	4.10	3.95	3.85
30.0									29.8×4.1	3.95	3.80	3.65	3.55	3.40	3.30
32.0										3.55	3.40	3.25	3.15	3.00	2.90
34.0										32.4×3.4	3.05	2.90	2.75	2.55	2.40
36.0											35.0×2.9	2.60	2.45	2.25	2.10
38.0												37.6×2.3	2.10	1.90	1.75
40.0													1.85	1.65	1.50

- Notes: 1. The rated loads shown do not exceed 78% of tipping load with the machine on firm level ground, and are not less than 1.15 times over-front stability stipulated by the mobile crane construction standards.  
2. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as main hook, from figures shown above.  
3. Working radius is the horizontal distance from the swing center to the center of gravity of a lifted load.  
4. The counterweight is 11.7 t.  
5. Be sure to fully extend the outriggers and front jack before operating the machine.  
6. Correlations between the number of hoist rope reevings, maximum rated loads, hook weights are shown in the table below.  
7. Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

Hook capacity (t)	Hook weight (t)	Maximum rated load (t)							
		8 Rope reevings	7 Rope reevings	6 Rope reevings	5 Rope reevings	4 Rope reevings	3 Rope reevings	2 Rope reevings	1 Rope reevings
50.0	0.61	50.0	45.5	39.0	32.5	26.0	19.5	13.0	—
30.0	0.36	—	—	—	30.0	26.0	19.5	13.0	—
15.0	0.32	—	—	—	—	—	15.0	13.0	—
6.5	0.18	—	—	—	—	—	—	—	6.5

■Crane Ratings (Auxiliary jib in 360° Working Area)

Working radius (m)	Boom length (m)											
	12	15	18	21	24	27	30	33	36	39	42	45
4.4	6.50											
4.5	6.50											
5.0	6.50	6.50										
5.5	6.50	6.50	6.50									
6.0	6.50	6.50	6.50	6.1×6.50	6.6×6.50							
7.0	6.50	6.50	6.50	6.50	6.50	7.2×6.50	7.7×6.50					
8.0	6.50	6.50	6.50	6.50	6.50	6.50	6.50	8.3×6.50	8.8×6.50			
9.0	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	9.3×6.50	9.9×6.50	
10.0	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	10.5×6.5
12.0	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
14.0	12.7×6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
16.0		15.3×6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
18.0			17.9×6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
20.0				6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
22.0				20.5×6.50	6.50	6.50	6.50	6.50	6.25	6.15	6.00	5.90
24.0					23.1×6.00	5.75	5.70	5.60	5.50	5.40	5.20	5.10
26.0						25.5×5.05	5.05	4.95	4.85	4.75	4.55	4.45
28.0								4.45	4.45	4.35	4.20	4.00
30.0								28.3×4.35	3.95	3.80	3.65	3.45
32.0									30.8×3.65	3.40	3.25	3.05
34.0										33.4×3.05	2.90	2.70
36.0											2.40	2.20
38.0												1.90
40.0												38.6×1.85

- Notes: 1. The rated loads shown do not exceed 78% of tipping load with the machine on firm level ground, and are not less than 1.15 times over-front stability stipulated by the mobile crane construction standards.  
2. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as main hook, from figures shown above.  
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Hook capacity (t)	Hook weight (t)
50.0	0.61
30.0	0.36
15.0	0.32
6.5	0.18



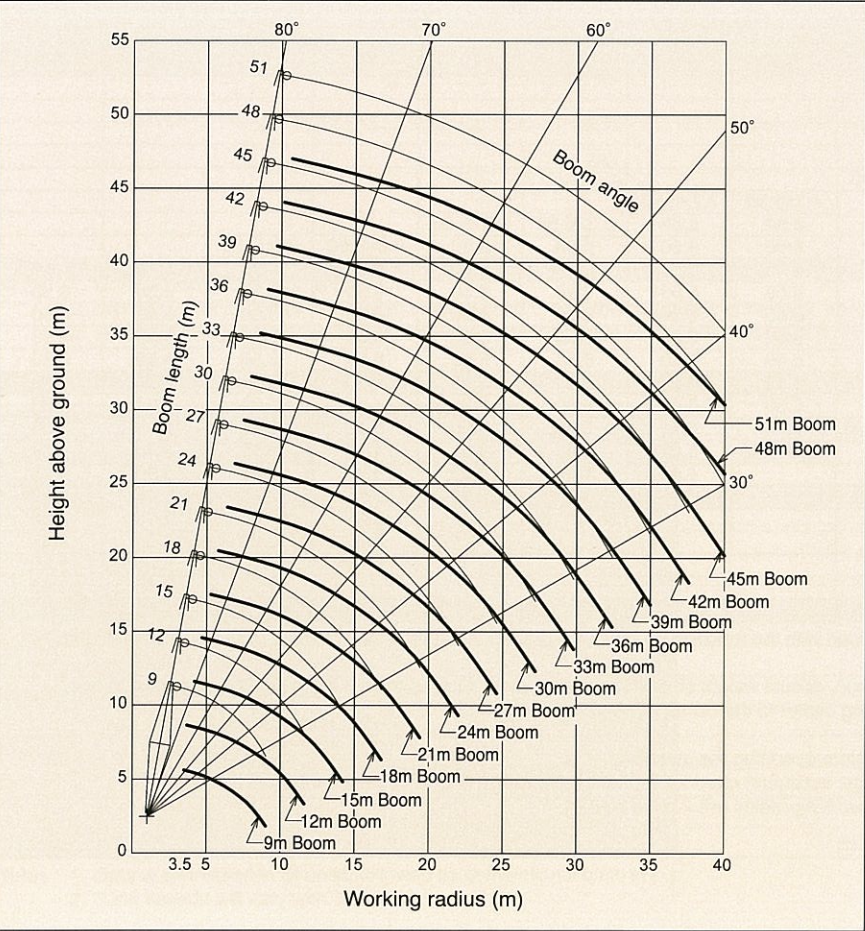
■Crane Ratings (Main Boom with Aux. jib in 360° Working Area)

Working radius (m)	Boom length (m)												
	12	15	18	21	24	27	30	33	36	39	42	45	48
3.7	50.00												
4.0	46.60	4.2×44.4											
4.5	42.00	41.90	4.7×40.0										
5.0	37.90	37.80	37.70	5.3×35.8									
5.5	34.60	34.50	34.40	34.30	5.8×32.1								
6.0	31.80	31.70	31.60	31.50	31.40	6.4×29.4	6.9×27.0						
7.0	27.10	27.00	26.90	26.80	26.70	26.60	26.50	7.5×24.6					
8.0	23.50	23.40	23.30	23.20	23.10	23.00	22.90	22.80	22.70	8.6×21.4			
9.0	20.70	20.60	20.50	20.40	20.30	20.20	20.10	20.00	19.90	19.80	9.1×19.1	9.7×18.1	
10.0	18.40	18.30	18.20	18.10	18.00	17.90	17.80	17.70	17.60	17.50	17.40	17.30	10.2×17.1
12.0	11.6×14.7	14.60	14.50	14.40	14.30	14.20	14.10	14.00	13.90	13.80	13.70	13.60	13.50
14.0		11.95	11.90	11.80	11.70	11.60	11.50	11.40	11.30	11.20	11.10	11.00	10.90
16.0		14.2×11.7	10.20	10.10	10.00	9.95	9.90	9.80	9.70	9.60	9.50	9.40	9.30
18.0			16.8×9.2	8.55	8.45	8.35	8.30	8.25	8.15	8.05	7.95	7.85	7.75
20.0				19.4×7.60	7.25	7.20	7.15	7.05	6.95	6.85	6.75	6.65	6.55
22.0					6.28	6.25	6.20	6.10	6.00	5.90	5.80	5.70	5.60
24.0						5.50	5.45	5.35	5.25	5.15	5.00	4.90	4.80
26.0						24.6×5.30	4.80	4.70	4.60	4.50	4.35	4.25	4.10
28.0							27.2×4.4	4.20	4.10	3.95	3.80	3.70	3.55
30.0								29.8×3.7	3.55	3.40	3.25	3.15	3.00
32.0									3.15	3.00	2.85	2.75	2.60
34.0									32.4×3.0	2.65	2.50	2.35	2.15
36.0										35.0×2.5	2.20	2.05	1.85
38.0											37.6×1.9	1.70	1.50
40.0												1.45	1.25

- Notes: 1. The rated loads shown do not exceed 78% of tipping load with the machine on firm level ground, and are not less than 1.15 times over-front stability stipulated by the mobile crane construction standards.
2. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as main hook, from figures shown above.
3. Working radius is the horizontal distance from the swing center to the center of gravity of a lifted load.
4. The counterweight is 11.7 t.
5. Be sure to fully extend the outriggers and front jack before operating the machine.
6. Correlations between the number of hoist rope reevings, maximum rated loads, hook weights are shown in the table below.
7. Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

Hook capacity (t)	Hook weight (t)	Maximum rated load (t)							
		8 Rope reevings	7 Rope reevings	6 Rope reevings	5 Rope reevings	4 Rope reevings	3 Rope reevings	2 Rope reevings	1 Rope reevings
50.0	0.61	50.0	45.5	39.0	32.5	26.0	19.5	13.0	—
30.0	0.36	—	—	—	30.0	26.0	19.5	13.0	—
15.0	0.32	—	—	—	—	—	15.0	13.0	—
6.5	0.18	—	—	—	—	—	—	—	6.5

■Working Ranges



■Crane Boom Construction

Boom length (m)	9	12	15	18	21	24	27	30
Elements								
Lower boom	1	1	1	1	1	1	1	1
Upper boom	1	1	1	1	1	1	1	1
3 m boom insert		1	2	1	2	1	1	2
6 m boom insert				1	1	2	1	1
9 m boom insert							1	1
Available aux. jib	↔							

Boom length (m)	33	36	39	42	45	48	51
Elements							
Lower boom	1	1	1	1	1	1	1
Upper boom	1	1	1	1	1	1	1
3 m boom insert	1	1	2	1	1	2	1
6 m boom insert	2	1	1	2	1	1	2
9 m boom insert	1	2	2	2	3	3	3
Available aux. jib	↔						

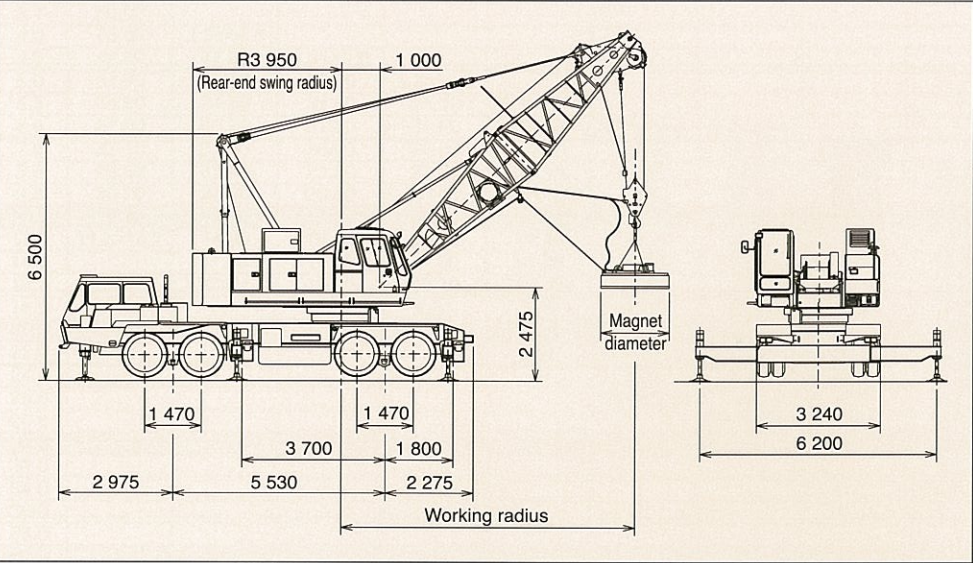
Boom inserts combination;  
6 m boom insert can be replaced with two 3 m boom inserts, and 9 m boom insert with a combination of 3 m and 6 m boom inserts.



# LIFTING MAGNET

SCX500W

## ■Dimensions



## ■Specifications

Maximum rated loads × Working radius	t × m	45 × 3.7
Boom length	m	9-21
Line speed	Hook hoist m/min	*100/65/32
	Hook lower m/min	*100/65/32
	Boom hoist m/min	*53
	Boom lower m/min	53
Swing speed	min <sup>-1</sup> (rpm)	3.0(3.0)
Magnet	Ø mm	1 300-1 800
Capacity of generator	kVA	15-25

Notes: 1. Data is expressed in SI units, followed by conventional units in ( ).  
2. Other specifications, not shown, are similar to those for the crane.  
\*Line speeds will vary with the load.

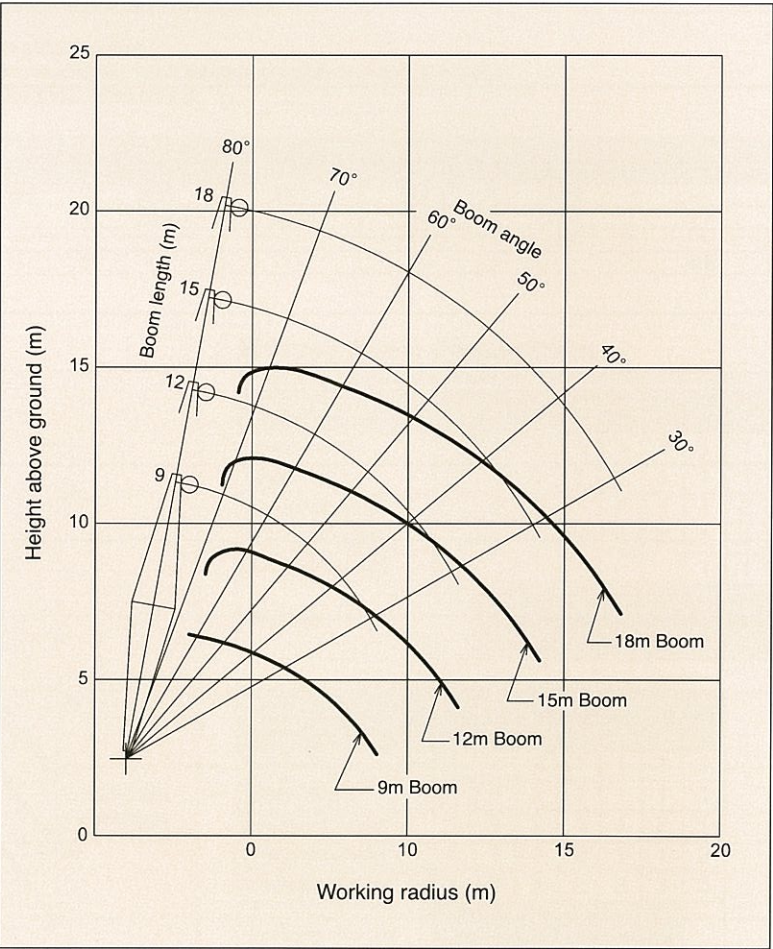
## ■Crane Ratings

Working radius (m)	Boom length (m)				
	9	12	15	18	21
3.5	45.00				
3.7	45.00	45.00			
4.0	42.40	42.30	4.2×40.3		
4.5	38.25	38.15	38.05	4.7×36.4	
5.0	34.55	34.45	34.40	34.30	5.3×32.6
5.5	31.60	31.50	31.40	31.30	31.25
6.0	29.05	29.00	28.90	28.80	28.70
7.0	24.85	24.75	24.65	24.55	24.50
8.0	21.60	21.50	21.40	21.35	21.25
9.0	17.35	19.00	18.90	18.80	18.70
10.0		16.90	16.85	16.75	16.65
12.0		11.6×13.6	13.50	13.40	13.30
14.0			11.10	11.05	11.00
16.0			14.2×10.9	9.55	9.45
18.0				16.8×8.6	8.05
19.4					7.2

Notes: 1. The rated loads shown do not exceed 70% of tipping load with the machine on firm level ground, and are not less than 1.15 times over-front stability stipulated by the mobile crane construction standards.  
2. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as main hook, from figures shown above.  
3. Working radius is the horizontal distance from the swing center to the center of gravity of a lifted load.  
4. The counterweight is 11.7 t.  
5. Be sure to fully extend the outriggers and front jack before operating the machine.  
6. Correlations between the number of hoist rope reevings, maximum rated loads, hook weights are shown in the table below.  
7. Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

Hook weight (t)	Hook weight (t)	Maximum rated load (t)						
		7 Rope reevings	6 Rope reevings	5 Rope reevings	4 Rope reevings	3 Rope reevings	2 Rope reevings	1 Rope reevings
50.0	0.61	45.0	39.0	32.5	26.0	19.5	13.0	—
30.0	0.36	—	—	30.0	26.0	19.5	13.0	—
15.0	0.32	—	—	—	—	15.0	13.0	—

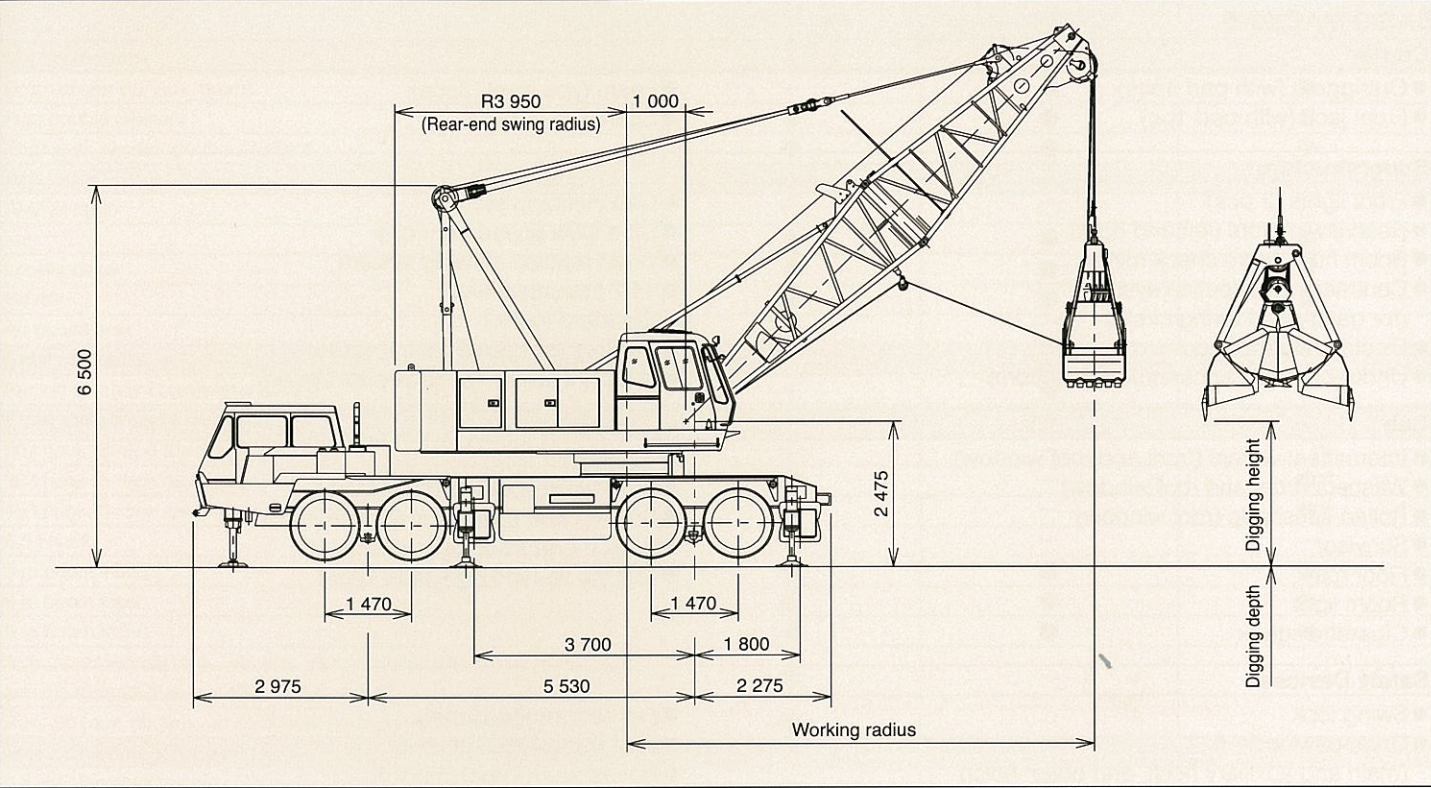
## ■Working Ranges



# CLAMSHELL

SCX500W

## ■Dimensions



## ■Specifications

Bucket capacity	m <sup>3</sup>	0.8/1.0/1.2
Allowable clamshell gross weight	t	6.0
Boom length	m	9-21
Max. digging depth	m	36
Suspend line speeds	m/min	*74/37
Open/close line speeds	m/min	*74/37
Boom hoist/ lower line speed	m/min	*60
Operating weight	t	57.1 (9 m boom + 1.2 m <sup>3</sup> bucket)

Notes: 1. Data is expressed in SI units, followed by conventional units in ( ).  
2. Other specifications, not shown, are similar to those for the crane.  
\*Line speeds will vary with the load.

## ■Clamshell Buckets

Capacity (m <sup>3</sup> )	Weight (t)	Use
0.8	2.0	Excavation
1.0	2.24	Excavation
1.2	2.4	Light service

## ■Working Ranges

Boom length	m	9				12				15				18				21			
Boom angle	degree	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55	65
Working radius	m	8.8	7.9	6.7	5.4	11.3	10.0	8.4	6.7	13.7	12.1	10.2	7.9	16.2	14.2	11.9	9.2	18.7	16.4	13.6	10.5
Rated load	t	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Bucket dumping height	m	2.2	3.4	4.5	5.3	3.9	5.6	7.0	8.0	5.6	7.7	9.4	10.7	7.3	9.8	11.9	13.5	9.0	11.9	14.3	16.2
1.0 m <sup>3</sup> bucket	m	2.0	3.2	4.3	5.1	3.7	5.4	6.8	7.8	5.4	7.5	9.2	10.5	7.2	9.6	11.7	13.3	8.8	11.7	14.1	16.0
1.2 m <sup>3</sup> bucket	m	1.8	3.0	4.1	4.9	3.5	5.2	6.6	7.6	5.2	7.3	9.0	10.3	6.9	9.4	11.5	13.1	8.6	11.5	13.9	15.8

Notes: 1. Rated loads for clamshell do not exceed 90% those for crane.  
2. The rated loads shown are upper limits determined by the following equation. Please select a bucket in such a manner that its rated load does not exceed the rated load shown below, according to kinds of the loads handled.  
Rated load = Bucket capacity (m<sup>3</sup>) × Specific gravity of load (t/m<sup>3</sup>) + Bucket weight (t)  
Be careful that brake will be overheated if the bucket is too heavy even within the rated loads.  
3. Working radius is the horizontal distance from the swing center to the center of gravity of lifted load.  
4. The bucket weight is 2.45 t. (Max)  
5. The counterweight is 11.7 t.  
6. Be sure to fully extend the outriggers and front jack before operating the machine.  
7. Free fall using brake will vary with operating conditions such as bucket weight and work cycle, but its height should be within 10 m.



TECHNICAL DATA

SCX500W

STANDARD EQUIPMENT

BASIC MACHINE

Carrier	
● Outriggers (with pad 4pcs)	● Foam type level (2pcs)
● Front jack (with pad 1pc)	● Spare tire (1 pc)

Superstructure	
● Front lights (2 pcs)	● Cab climbing steps
● Rearview mirrors (left and right)	● Ultra slow speed controller
● Boom hoist drum check mirror	● Drum rotation sensing system
● Centralized lubrication system (for gantry and swing circle)	● 11.7 t counterweight
● Electric refuel device	● Standard tool kit
● Under-cover (at superstructure bottom)	● Boom hoist speed control system
	● Constant swing speed control system

Cab	
● Intermittent-wipers (front and roof window)	● Ashtray
● Washers (front and roof window)	● Auto-tuning clock radio (AM/FM)
● Rolled sunshade (roof window)	● Brake mode selector switch (interlocked)
● Sunvisor	● Work mode selector (interlocked)
● Floor mat	● Electric tilt-type right side stand
● Room light	
● Cigarette lighter	

Safety Devices	
● Swing lock	● Fail safe brake system
● Drum pawl lock	● Pilot control shut-off lever
(main and auxiliary hoist, and boom hoist)	● Before-work check monitor
● Swing alarm	

FRONT ATTACHMENTS

Crane	
● 9 m basic boom (lower 5 m, upper 4 m)	● Boom hoist rope (ø16 mm × 135 m)
● Boom back stop	● Moment limiter
● Boom angle indicator	● Overhoist prevention devices
● 50 t hook	(main hook, boom hoist, secondary)
● Main hoist rope (ø22 mm × 215m)	

Lifting Magnet	
● 9m basic boom [Lower 5 m, upper 4 m, wide-angle sheave (with 2 boom-point sheaves)]	● Hoist rope disengagement prevention device (for angle chord boom)
● Boom stop	● Hydraulic tagline (with ø10 mm × 45 m rope)
● Boom angle indicator	● Moment limiter
● 50 t hook (with hook lock)	● Overhoist prevention device
● Hoist rope (ø22 mm × 215 m)	(hook, boom hoist, secondary)
● Boom hoist rope (ø16 mm × 135 m)	

Clamshell	
● 9 m basic boom (lower 5 m, upper 4 m)	● Suspend rope (ø22 mm × 66 m)*
● Boom stop	● Hydraulic tagline (with ø10 mm × 45 m rope)
● Boom angle indicator	● Boom hoist rope (ø16 mm × 135 m)
● Open/close and suspend rope disengagement prevention device (for tubular chord boom)	
● Open/close rope (ø22 mm × 73 m)*	

\* Open/close and suspend ropes are determined based on 19 m boom length and 12 m digging depth.

Component weight and Dimensions for Transport

		Weight (ton)	Qty	Length × Width × Height (m)	Remarks
Carrier		24.56	1	10.78 × 3.24 × 2.66	
Superstructure		17.7	1	6.67 × 3.20 × 2.55	
Aux. counterweight		0.6	2	0.69 × 0.29 × 0.67	Mounted to side for boom hoist drum
Counterweight		11.7	1	3.20 × 1.00 × 1.51	
Attachment	Lower boom	1.01	1	5.16 × 1.63 × 1.72	
	Upper boom	1.14	1	4.43 × 1.49 × 1.54	
	3 m boom insert	0.42	1	3.10 × 1.50 × 1.61	
	6 m boom insert	0.70	1	6.10 × 1.50 × 1.61	
	9 m boom insert	0.93	1	9.10 × 1.50 × 1.61	
	Aux. jib	0.22	1	1.25 × 0.77 × 0.78	
	50 t hook	0.61	1	0.62 × 0.42 × 1.61	
	30 t hook	0.36	1	0.62 × 0.30 × 1.51	
	15 t hook	0.32	1	0.62 × 0.29 × 1.36	
	6.5 t hook	0.18	1	0.25 × 0.25 × 0.97	

Standard and Optional Equipment

○: Standard ●: Option —: Not recommended

	LIFT CRANE	CLAMSHELL	LIFTING MAGNET
Superstructure			
Drum cooler (for aux. drum)	—	●	●
Fuel double element	●	●	●
Engine air cleaner double element	●	●	●
Cab			
AM/FM radio	○	○	○
Fan	●	●	●
Loudspeaker	●	●	●
Heater	●	●	●
Air conditioner	○	○	○
Safety devices			
Bucket overhoist prevention device	—	●	—
Front attachments for crane			
50 t hook (8-rope reevings)	○	—	○*1
30 t hook (5-rope reevings)	●	—	●*2
15 t hook (3-rope reevings)	●	—	●*2
6.5 t hook	●	—	—
3 m boom insert	●	●	●
6 m boom insert	●	●	●
9 m boom insert	●	●	●
Aux. Jib assembly (aux. Jib, aux. Jib hook overhoist prevention device, aux. jib rope (ø22 mm × 135 m), 6.5 t hook)	●	—	—
Aux. Jib (aux. jib, aux. jib hook over hoist prevention device)	●	—	—
Front attachment for other			
0.8 m³ clamshell bucket	—	●	—
1.0 m³ clamshell bucket	—	●	—
1.2 m³ clamshell bucket (light-service)	—	●	—
Hydraulic tagline	●	○	○
Open/close and suspend rope	—	○	—
ø1 800 mm lifting magnet assembly	—	—	●
ø1 500 mm lifting magnet assembly	—	—	●

Notes: \*1.With hook lock  
\*2.Wide-angle quenched sheave with hook lock