SCX550

HYDRAULIC CRAWLER CRANE

Specifications

ASIAN ISSUE

HITACHI SUMITOMO

SCX550
HYDRAULIC CRAWLER CRANE

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Note: • All "t" implies metric tons in this catalog.
• Specifications conform to the Safety Regulations for Cranes and Mobile Cranes in Japan.

■Dimensions

Unit: mm

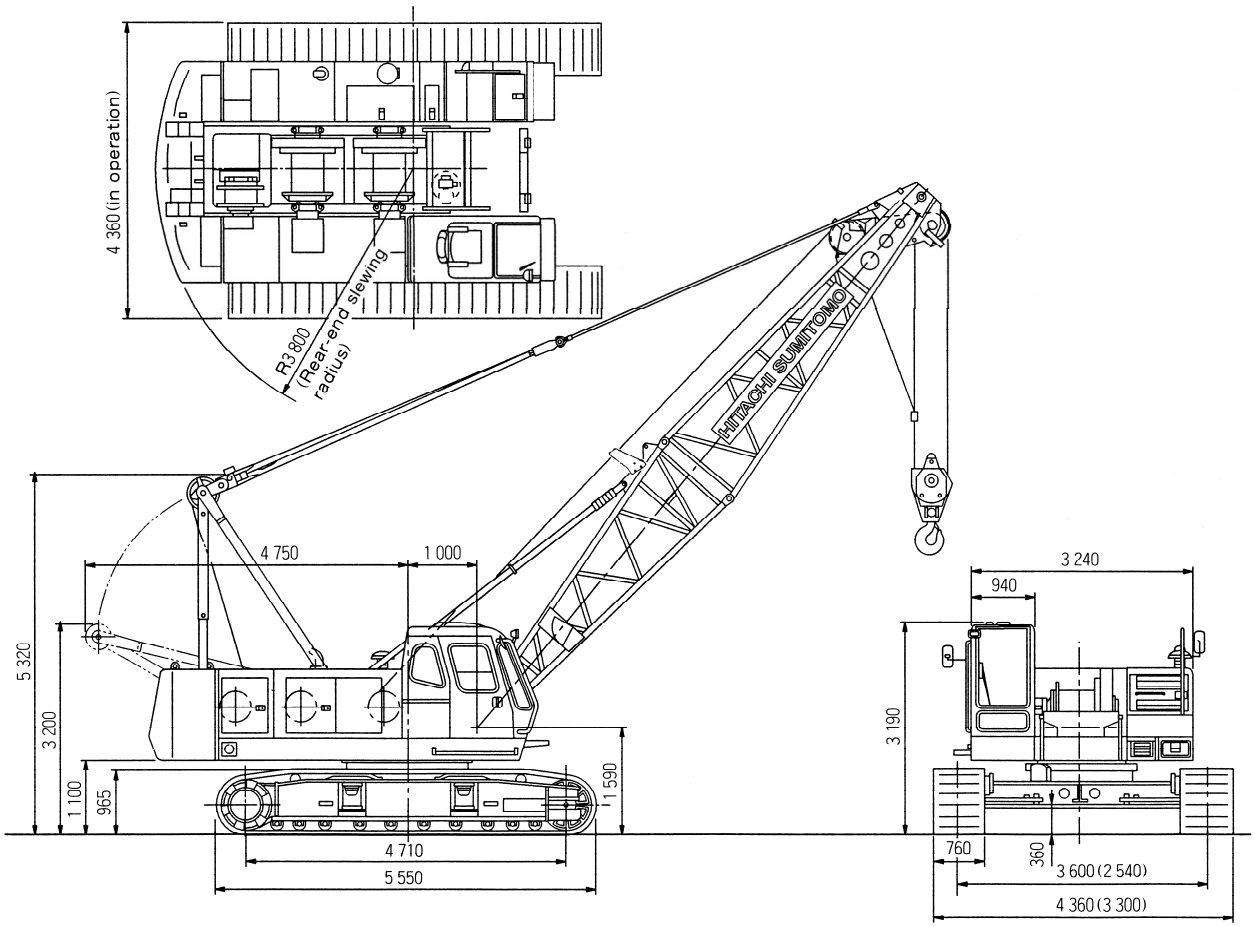


Figure in ( ) shows dimension when side frames are retracted for trailer transport

■Specifications

(1 t = 1 000 kg)

Maximum rated Load × Working radius		t × m	55×3.7
Basic boom length		m	10
Maximum boom length		m	52
Fly jib length			6 to 15
Boom + fly jib length			43+15
Winch			
Line speeds	Front main drum	m/min	*110/74/37
	Rear main drum	m/min	*110/74/37
	Boom hoist drum	m/min	*60
Slewing speed		min^{-1}(rpm)	3.7 (3.7)
Travel speed		km/h	2.0/1.5
Gradeability		% (°)	40 (22)
Diesel engine			Isuzu 4HK1X
Rated horsepower		kW/min^{-1}(PS/rpm)	147/2 100 (200/2 100)
Ground contact pressure		kPa(kgf/cm^2)	67.0 (0.68)
Operating weight		t	52.5 (including 10 m boom and 55 t capacity hook)

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

SUPERSTRUCTURE

Engine

Model..... Isuzu 4HK1X
Type ..... Water-cooled, 4-cycle, 4-cylinder, direct fuel injection type diesel engine
Rated horsepower ..... 147 kW (200 PS) at 2 100 min^{-1} (2 100 rpm)
Maximum torque..... 688 N·m (70 kgf·m) at 1 500 min^{-1} (1 500 rpm)
Piston displacement ..... 5.19 L
Fuel tank capacity..... 300 L
Electric system ..... DC 24 V

Notes:
1. The engine meets Stage/Tier 3 of current smoke emission regulations in Europe, America and Japan.
2. A 147 kW engine horsepower shown above is defined under a current international engine horsepower indication formula which includes necessary horsepower for engine alternator drive but excludes engine fan drive.

Main and Auxiliary Hoist Mechanism

- The SCX550 is equipped with dual hoist mechanisms, each consisting of independent front and rear 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.
- Front and rear 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.

Slewing Mechanism

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

Slewing Brake
The disc-type slewing brake can be hydraulically applied by the brake switch on the slewing lever.

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

Slewing 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.

A-frame
Lowerable for transportation.

Counterweight

Total weight		18 700 kg
Consisting of 3 sections :	One	3 600 kg
	One	7 100 kg
	One	8 000 kg

Boom

Tubular Chord Crane Boom
1 300 mm wide by 1 300 mm deep at connection, lattice construction using high-tensile steel tubular chords

Basic boom.....Total length 10.0 m, 2-piece construction; upper section 5.0 m and lower section 5.0 m
Boom point .....Offset boom point, 5 sheaves (462 mm PCD) mounted on anti-friction bearings on boom top
Boom extensions .....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

Fly Jib
550 mm wide by 480 mm deep at connection, lattice construction using high-tensile steel tubular chords.

Jib length .....Total length 6.0 m, 2-piece construction; upper section 3.0 m and lower section 3.0 m
Jib point .....1 sheave (462 mm PCD) mounted on anti-friction bearings on jib top
Jib extension .....3.0 m long available
Connection type.....Pin-connected
Short jib .....Optional. Attachable to the main boom top to hoist the light load quickly with a single rope

Note: Boom extension, fly jib, or short jib can be attached to the basic boom when needed. However, both fly jib and short jib cannot be attached simultaneously to the boom.

Tubular Chord Tower Crane Boom
1 300 mm wide by 1 300 mm deep at connection, lattice construction using high-tensile steel tubular chords

Tower boom length...22.0 m minimum
40.0 m maximum
Tower extensions .....1.5 m, 3.0 m, 6.0 m and 9.0 m tower extensions are in common with crane boom extensions
Connection type.....Pin-connected
Tower backstop .....Dual-rail, telescopic tubular construction with spring damper.
Tower hoist bridle .....Serves as connection between tower boom pendants and tower boom hoist wire rope reeving, equipped with 6 sheaves (340 mm PCD) for 12-part tower hoist wire rope reeving.

Tower Jib
940 mm wide by 750 mm deep at connection, lattice construction using high-tensile steel tubular chords

Jib length .....16.0 m to 28.0 m
Jib extensions.....3.0 m and 6.0 m long available
Connection type.....Pin-connected
Tower jib hoist bridle ....Serves as connection between tower jib pendants and tower jib hoist wire rope reeving, equipped with 4 sheaves (360 mm PCD × 3 & 420 mm PCD× 1) for 8-part tower jib hoist wire rope reeving.

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^2)	29.4 MPa (300 kgf/cm^2)
Max. Oil flow *	222 L/min	222 L/min

	Pump-3	Pump-4
Type of pump	Variable displacement	Gear
Pressure setting	23.0 MPa (235 kgf/cm^2)	4.9 MPa (50 kgf/cm^2)
Max. Oil flow *	130 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

Slewing Motor
Axial piston motor

Travel Motors
Axial piston motors with brake valve and spring-set/hydraulic-released multiplate disc brake

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.
- Brake valves (consisting of relief valve and counterbalance valve) are provided for travel circuit.

Pressure Settings
Main Circuit
- Main relief valves
  Hoist (front and rear) .....29.4 MPa (300 kgf/cm^2)
  Slewing .....23.0 MPa (235 kgf/cm^2)
- Overload relief valves
  Hoist (front and rear) circuits .....31.4 MPa (320 kgf/cm^2)
  Boom hoist circuit .....30.4 MPa (310 kgf/cm^2)
  Travel circuit .....29.4 MPa (300 kgf/cm^2)

Pilot Circuit
- Main relief valve..... 4.9 MPa (50 kgf/cm^2)

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.

UNDERCARRIAGE

Traction mechanism
- Each track is driven by an axial piston motor through reduction gear. This mechanism allows counter-rotation of tracks for maneuverability in close quarters.
- When the lever is in neutral position, both hydraulic brake and spring-set/hydraulic-released multiplate disc brake are automatically applied for stopping.

Track Frame
All-welded, stress-relieved, box-section construction.

Side Frames
Side frames of all-welded construction can be retracted for transportation.

Side-flame retract unit
- Side frame are extended and retracted with a hydraulic cylinder located inside the track frame. Hydraulic power source for the hydraulic cylinder is separated from other systems to allow combined operation of travel and side frame.
- The side frames are extended and retracted quickly without need for piping

Track Shoes
Heat-treated alloy steel castings with induction-hardened roller path and driving lugs.

No. of upper rollers (each side) 2
No. of lower rollers (each side) 10
No. of track shoes (each side) 59
Shoe width ..... 760 mm

CONTROLS

Boom, Main and Auxiliary Hoist, Slewing and Travel
Remote controlled hydraulic servo. Working speed can be precisely controlled according to lever stroke.

- **Accelerator Grip**
  Engine power can be controlled according to job needs by electric finger-touch grip atop the slewing lever, accelerator lever and engine foot throttle.

- **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.

Spring-Set/Hydraulic-Released Multiplate Disc Type Travel Brakes

Slewing Lock and Slewing Parking Brake

Drum Locks (Electric Type)
A pawl-type drum locks, provided at front drum, rear drum and boom drum, are automatically applied when the engine key is set to OFF or ACC position.

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

Devices for Crane Operation
- **Moment Limiter**
  Reliable safety is ensured by large screen display and interactive interface design.

- **Main Hook Over-Hoisting Limiter**
  When the hook reaches its hoist limit, the bell sounds and the auto-stop automatically actuates at the same time.

- **Boom Over-Hoisting Limiter**
  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 Over-Hoisting Limiter**
  In addition to the main-hook over hoisting limiter and boom over hoisting limiter, the secondary boom over hoisting limiter is provided. It actuates at a boom angle of 82° to avoid overhoisting of both the boom and/or hook.

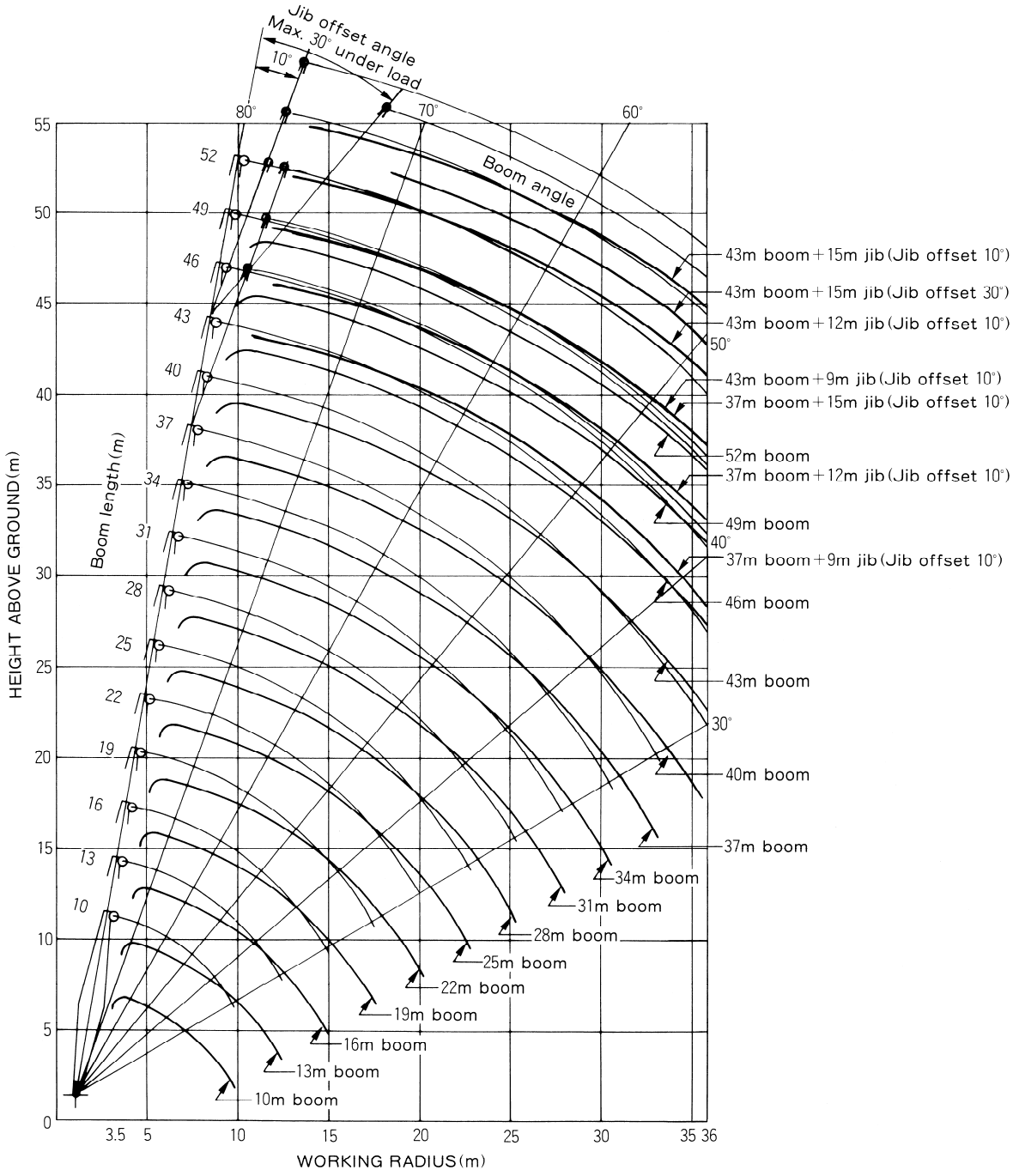
- **Lock lever (Fool Proof Shut-off Lever)**
  The lock lever (fool proof shut-off lever) shuts out the hydraulic pilot pressure to pilot control valves. With the pilot control shut-off lever in the LOCK position, the machine will not operate even if the lever is accidentally shifted.

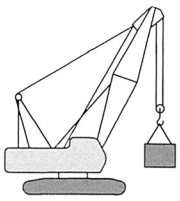
- **Faile Safe mechanism**
  The related movements stop automatically if an electric wire is broken.

SERVICE REFILL CAPACITIES

	Liter
Fuel tank	300
Engine coolant	27
Engine oil	23
Boom hoist reduction device	9.5
Winch hoist reduction device	12.5×2
Slewing reduction device	8
Travel reduction device	14×2
Hydraulic system, including tank capacity	305
Hydraulic tank	230

■Working Ranges





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

Unit: t

Working radius (m)	Boom length (m)														
	10	13	16	19	22	25	28	31	34	37	40	43	46	49	52
3.5	55.00	3.7×50.00													
4.0	51.20	51.00	4.4×43.80												
4.5	42.30	42.20	42.15												
5.0	35.80	35.75	35.65	35.65											
5.5	31.05	30.95	30.85	30.85	30.45										
6.0	27.35	27.25	27.20	27.15	27.10	6.1×26.30	6.7×23.10								
7.0	22.05	21.95	21.85	21.85	21.75	21.70	21.65	7.3×20.50	7.8×18.40						
8.0	18.45	18.30	18.25	18.20	18.10	18.05	18.00	17.95	17.85	8.4×16.60					
9.0	15.30	15.70	15.60	15.55	15.45	15.40	15.30	15.25	15.20	15.10	15.00	9.6×13.80			
10.0	9.8×12.55	13.70	13.60	13.50	13.45	13.40	13.30	13.25	13.15	13.10	13.00	12.95	10.1×12.65	10.7×10.70	11.3×9.35
12.0		10.70	10.75	10.65	10.60	10.55	10.45	10.40	10.30	10.20	10.10	10.10	10.00	9.90	9.15
14.0		12.4×9.90	8.80	8.75	8.65	8.60	8.50	8.45	8.35	8.25	8.15	8.15	8.05	7.95	7.85
16.0			15.0×8.00	7.35	7.25	7.20	7.10	7.05	6.95	6.85	6.75	6.75	6.65	6.55	6.45
18.0				17.6×6.50	6.25	6.15	6.05	6.00	5.90	5.80	5.70	5.65	5.60	5.50	5.40
20.0					5.45	5.35	5.25	5.15	5.10	5.00	4.90	4.85	4.75	4.65	4.55
22.0					20.2×5.35	4.70	4.60	4.50	4.40	4.30	4.20	4.20	4.10	4.00	3.90
24.0						22.8×4.50	4.05	4.00	3.90	3.80	3.70	3.65	3.55	3.45	3.35
26.0							25.4×3.75	3.55	3.45	3.35	3.25	3.20	3.10	3.00	2.90
28.0								3.15	3.05	2.95	2.85	2.80	2.70	2.55	2.45
30.0									2.75	2.65	2.50	2.45	2.30	2.20	2.10
32.0									30.6×2.65	2.35	2.20	2.10	2.00	1.90	1.75
34.0										33.2×2.15	1.95	1.85	1.75	1.60	1.50
36.0											35.8×1.75	1.60	1.50	1.35	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. The 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 slewing center to the center of gravity of a lifted load.
4. When the fly jib or the short jib is attached to the load to be actuarially lifted is the rated load minus the weight lifted below and the weight of the main and auxiliary hooks. Be careful that if the calculated load is less than 0.8 t, no crane operation is allowed.

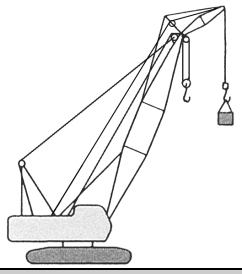
Jib length (m)	6	9	12	15	Short Jib
Weight to be reduced (t)	0.75	0.90	1.05	1.20	0.30

5. The counterweight is 18.7 t.
6. Be sure to fully extend the side frames before operating the machine.
7. Correlations between the number of hoist rope reevings, maximum rated loads, hook weights are shown in the table below.

Hook capacity (t)	Hook weight (t)	Maximum rated load (t)								
		9 Rope reevings	8 Rope reevings	7 Rope reevings	6 Rope reevings	5 Rope reevings	4 Rope reevings	3 Rope reevings	2 Rope reevings	1 Rope* reeving
50	0.70	55.0	52.0	45.5	39.0	32.5	26.0	19.5	13.0	—
30	0.36					30.0	26.0	19.5	13.0	—
15	0.32							15.0	13.0	—
6.5	0.18									6.5

* The boom length should be at least 13 m when operating the machine with a single suspension line.

8. Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).



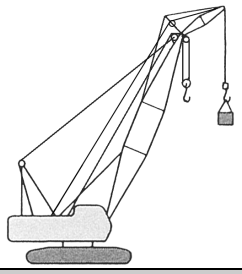
■Crane Ratings (Fly Jib in 360° Working Area)

Unit: t

Boom length (m)	22								25							
Jib length (m)	6		9		12		15		6		9		12		15	
Offset angle (°) / Working radius (m)	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30
8.1	6.50								8.8×6.50							
9.0	6.50	9.9×6.50	9.3×5.00						6.50		9.9×5.00					
10.0	6.50	6.50	5.00	11.9×5.00	10.4×4.10		11.5×3.30		6.50	10.5×6.50	5.00		11.0×4.10			
12.0	6.50	6.50	5.00	5.00	4.10	13.9×4.10	3.30		6.50	6.50	5.00	12.5×5.00	4.10		12.1×3.30	
14.0	6.50	6.50	5.00	5.00	4.10	4.10	3.30	15.9×3.30	6.50	6.50	5.00	5.00	4.10	14.5×4.10	3.30	
16.0	6.50	6.50	5.00	5.00	4.10	4.10	3.30	3.30	6.50	6.50	5.00	5.00	4.10	4.10	3.30	16.5×3.30
18.0	6.15	6.25	5.00	5.00	4.10	4.00	3.30	3.25	6.05	6.15	5.00	5.00	4.10	4.10	3.30	3.30
20.0	5.30	5.40	5.00	4.85	4.10	3.75	3.30	3.05	5.25	5.35	5.00	5.00	4.10	3.85	3.30	3.15
22.0	4.65	4.70	4.70	4.55	4.10	3.55	3.30	2.85	4.55	4.65	4.65	4.75	4.10	3.65	3.30	2.95
24.0	4.10	4.15	4.20	4.25	4.10	3.35	3.30	2.70	4.00	4.10	4.10	4.20	3.90	3.45	3.30	2.80
26.0	3.45	3.50	3.75	3.80	3.80	3.20	3.30	2.55	3.55	3.60	3.65	3.70	3.70	3.30	3.30	2.65
28.0	26.1×3.45	26.5×3.35	3.15	3.40	3.40	3.05	3.10	2.45	3.00	3.05	3.25	3.30	3.30	3.20	3.15	2.55
30.0			28.9×3.00	29.5×2.85	2.90	2.95	2.85	2.30	28.7×2.80	29.1×2.75	2.75	2.95	2.95	3.05	3.00	2.45
32.0					31.8×2.55	2.65	2.65	2.25			31.5×2.45	2.40	2.55	2.75	2.75	2.35
34.0						32.5×2.50	2.40	2.20				32.1×2.40	2.20	2.30	2.45	2.25
36.0							34.6×2.05	35.5×2.10					34.7×1.90	35.1×1.95	2.05	2.15

Boom length (m)	28								31							
Jib length (m)	6		9		12		15		6		9		12		15	
Offset angle (°) / Working radius (m)	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30
9.4	6.50															
10.0	6.50	11.1×6.50	10.5×5.00		11.6×4.10				6.50	11.8×6.50	11.1×5.00					
12.0	6.50	6.50	5.00	13.2×5.00	4.10		12.7×3.30		6.50	6.50	5.00	13.8×5.00	12.2×4.10		13.4×3.30	
14.0	6.50	6.50	5.00	5.00	4.10	15.2×4.10	3.30		6.50	6.50	5.00	5.00	4.10	15.8×4.10	3.30	
16.0	6.50	6.50	5.00	5.00	4.10	4.10	3.30	17.2×3.30	6.50	6.50	5.00	5.00	4.10	4.10	3.30	17.8×3.30
18.0	5.95	6.10	5.00	5.00	4.10	4.10	3.30	3.30	5.90	6.05	5.00	5.00	4.10	4.10	3.30	3.30
20.0	5.10	5.25	5.00	5.00	4.10	4.00	3.30	3.20	5.05	5.20	5.00	5.00	4.10	4.10	3.30	3.30
22.0	4.45	4.55	4.55	4.70	4.10	3.75	3.30	3.05	4.40	4.50	4.45	4.65	4.10	3.90	3.30	3.10
24.0	3.90	4.00	4.00	4.10	4.05	3.60	3.30	2.90	3.80	3.90	3.90	4.05	3.95	3.70	3.30	2.95
26.0	3.45	3.50	3.55	3.65	3.60	3.40	3.30	2.75	3.35	3.45	3.45	3.55	3.50	3.45	3.30	2.80
28.0	3.05	3.10	3.15	3.20	3.20	3.20	3.25	2.60	3.00	3.05	3.05	3.15	3.10	3.25	3.15	2.70
30.0	2.60	2.60	2.80	2.85	2.85	2.95	2.90	2.50	2.50	2.55	2.70	2.80	2.75	2.90	2.80	2.60
32.0	31.3×2.30	31.7×2.30	2.35	2.40	2.55	2.65	2.60	2.40	2.25	2.25	2.30	2.40	2.45	2.60	2.50	2.50
34.0			2.05	2.10	2.20	2.40	2.35	2.30	33.9×1.90	1.95	2.05	2.10	2.20	2.30	2.25	2.40
36.0			34.1×2.00	34.7×2.00	1.85	2.10	2.05	2.20		34.3×1.90	1.80	1.80	1.95	2.05	2.00	2.15

Boom length (m)	34								37							
Jib length (m)	6		9		12		15		6		9		12		15	
Offset angle (°) / Working radius (m)	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30
10.6	6.50		11.7×5.00						11.2×6.50							
12.0	6.50	12.4×6.50	5.00		12.9×4.10				6.50	13.0×6.50	12.4×5.00		13.5×4.10			
14.0	6.50	6.50	5.00	14.4×5.00	4.10		3.30		6.50	6.50	5.00	15.0×5.00	4.10		14.6×3.30	
16.0	6.45	6.50	5.00	5.00	4.10	16.4×4.10	3.30		6.30	6.50	5.00	5.00	4.10	17.0×4.10	3.30	
18.0	5.80	5.95	5.00	5.00	4.10	4.10	3.30	18.4×3.30	5.70	5.90	5.00	5.00	4.10	4.10	3.30	19.0×3.30
20.0	4.95	5.10	5.00	5.00	4.10	4.10	3.30	3.30	4.85	5.00	4.95	5.00	4.10	4.10	3.30	3.30
22.0	4.30	4.40	4.40	4.55	4.10	3.95	3.30	3.20	4.20	4.30	4.30	4.50	4.10	4.05	3.30	3.25
24.0	3.75	3.85	3.80	4.00	3.90	3.80	3.30	3.05	3.65	3.75	3.70	3.90	3.80	3.80	3.30	3.10
26.0	3.30	3.35	3.35	3.50	3.45	3.60	3.30	2.90	3.20	3.25	3.25	3.40	3.35	3.55	3.15	2.95
28.0	2.90	2.95	2.95	3.10	3.05	3.20	3.10	2.75	2.80	2.85	2.85	3.00	2.95	3.10	3.00	2.85
30.0	2.55	2.65	2.65	2.75	2.70	2.85	2.75	2.65	2.45	2.50	2.55	2.65	2.60	2.75	2.65	2.65
32.0	2.10	2.15	2.35	2.45	2.40	2.50	2.45	2.50	2.10	2.20	2.20	2.30	2.25	2.45	2.35	2.45
34.0	1.85	1.85	1.90	2.15	2.10	2.25	2.20	2.35	1.70	1.75	1.90	2.00	2.00	2.15	2.05	2.25
36.0	34.5×1.75	35.0×1.70	1.50	1.85	1.85	2.00	1.95	2.10	34.5×1.60	35.2×1.45	1.65	1.75	1.75	1.85	1.80	1.95



Unit: t

Boom length (m)	40								43							
Jib length (m)	6		9		12		15		6		9		12		15	
Offset angle (°) / Working radius (m)	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30
11.9	6.50															
12.0	6.50	13.6×6.50	13.0×5.00						12.5×6.50		13.6×5.00					
14.0	6.50	6.50	5.00	15.6×5.00	14.1×4.10		15.2×3.30		6.50	14.3×6.50	5.00		14.7×4.10		15.9×3.30	
16.0	6.30	6.50	5.00	5.00	4.10	17.7×4.10	3.30		6.50	6.50	5.00	16.3×5.00	4.10		3.30	
18.0	5.65	5.85	5.00	5.00	4.10	4.10	3.30	19.7×3.30	5.60	5.75	5.00	5.00	4.10	18.3×4.10	3.30	
20.0	4.80	5.00	4.90	5.00	4.10	4.10	3.30	3.30	4.70	4.90	4.80	5.00	4.10	4.10	3.30	20.3×3.30
22.0	4.15	4.30	4.25	4.45	4.10	4.10	3.30	3.30	4.05	4.20	4.15	4.35	4.10	4.10	3.30	3.30
24.0	3.60	3.70	3.65	3.85	3.75	4.00	3.30	3.15	3.50	3.60	3.60	3.80	3.65	3.90	3.30	3.20
26.0	3.15	3.20	3.20	3.35	3.25	3.50	3.30	3.00	3.05	3.15	3.10	3.30	3.20	3.40	3.25	3.05
28.0	2.75	2.85	2.80	2.95	2.90	3.05	2.95	2.90	2.60	2.75	2.70	2.85	2.80	3.00	2.85	2.90
30.0	2.35	2.45	2.45	2.60	2.55	2.70	2.60	2.70	2.25	2.35	2.35	2.50	2.40	2.60	2.50	2.75
32.0	2.05	2.10	2.15	2.25	2.20	2.40	2.25	2.50	1.90	2.00	2.00	2.15	2.05	2.30	2.15	2.40
34.0	1.75	1.85	1.85	1.95	1.90	2.10	1.95	2.20	1.65	1.70	1.70	1.85	1.80	1.95	1.85	2.10
36.0	1.50	1.55	1.60	1.70	1.65	1.80	1.70	1.90	1.40	1.45	1.45	1.60	1.55	1.70	1.60	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.

Hook capacity (t)	Weight (t)
55	0.70
30	0.36
15	0.32
6.5	0.18

3. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
4. Jib offset angle to main boom is set to loading condition.
5. The counterweight is 18.7 t.
6. Be sure to fully extend the side frames before operating the machine.
7. Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

■Crane Boom Construction

Elements \ Boom length (m)	10		13		16		19		22		25		28		31		34		37		40		43		46		49		52	
Boom base section 5 m	1		1		1		1		1		1		1		1		1		1		1		1		1		1		1	
Boom top section 5 m	1		1		1		1		1		1		1		1		1		1		1		1		1		1		1	
Boom extensions combination	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II
3 m boom extension			1		2		1		2	1	1	2	1	1	2	2	1	1	1	1	2	2	1	1	2	2	1	1	2	2
6 m boom extension							1		1		2		1	1	1	1	2	2	1	1	1	1	2	2	2	2	3	3	3	3
9 m boom extension													1		1		1		2	1	2	1	2	1	2	1	2	1	2	1
9 m (B) boom extension										1		1		1		1		1		1		1		1		1		1		1
Available fly jib									Jib length 6 m to 15 m																					
Available short jib																														

Boom inserts combination:

I : For operation of crane boom only

II : For operation of crane boom with fly jib

6 m boom extension can be replaced with two 3 m boom extensions, and 9 m boom extension with a combination of 3 m and 6 m boom extensions.

Note: When purchasing a 22 m boom, the boom cannot be transformed to 16 m in case of type II boom extensions. In this case, an additional 3 m boom extension is required.

■Fly Jib Construction

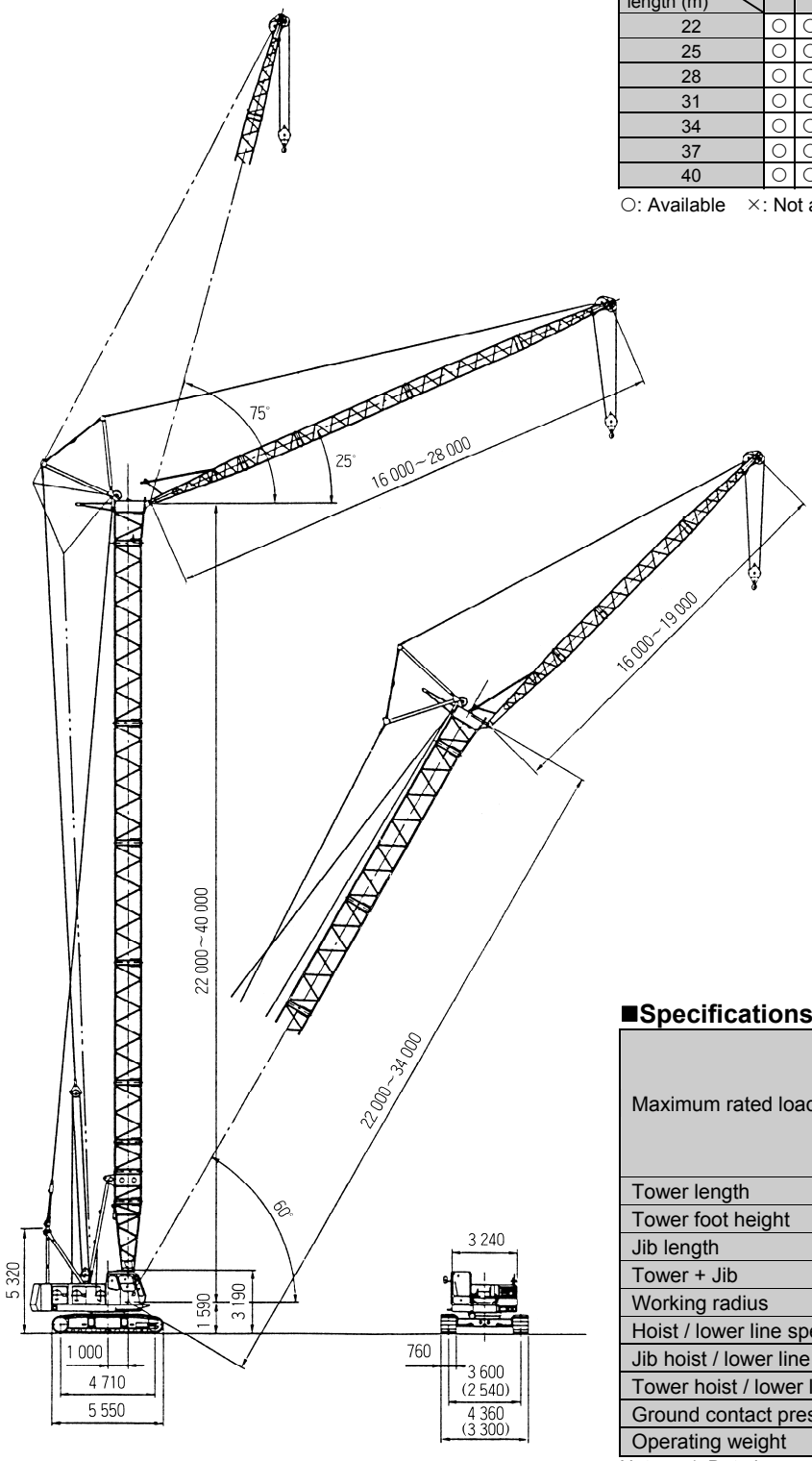
Elements \ Jib length (m)	6	9	12	15
Fly jib base section 3 m	1	1	1	1
Fly jib top section 3 m	1	1	1	1
3 m fly jib extension		1	2	3

■Component Weights and Dimensions for Transport

Components		Weight (t)	Length × Width × Height (m)			Remarks
Basic machine	Basic machine	29.9	7.50	3.30	3.20	Excluding boom base section, ropes and counterweight
	Counterweight	3.60	2.03	0.52	1.07	Inner
	Counterweight	7.10	2.77	0.69	1.53	Center
	Counterweight	8.00	3.24	0.97	1.53	Outer
Crane front	Boom base section	0.86	5.15	1.52	1.62	
	Boom top section	1.05	5.40	1.38	1.46	
	Backstop	0.13	4.00	0.13	0.13	
	Boom hoist rope	0.17	1.00	1.00	0.90	
	Bridle	0.27	1.61	0.63	0.28	
	3 m boom extension	0.28	3.10	1.40	1.46	
	6 m boom extension	0.45	6.10	1.40	1.46	
	9 m boom extension	0.66	9.10	1.40	1.46	
	9 m (B) boom extension	0.69	9.10	1.40	1.49	
	Fly jib base section	0.34	3.56	0.72	0.75	
	Fly jib top section	0.16	3.34	0.69	0.60	
	3 m fly jib extension	0.08	3.06	0.72	0.60	
	55 ton hook	0.70	1.66	0.62	0.44	
	30 ton hook	0.36	1.51	0.62	0.32	
	15 ton hook	0.32	1.36	0.62	0.29	
	6.5 ton hook	0.18	0.99	0.25	0.25	

■Dimensions

Unit: mm



Figures in ( ) indicate crawlers retracted.

■Tower Jib Construction

Jib length (m)	16				19				22				25				28			
Tower angle (°) / Tower length (m)	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
22	○	○	○	○	○	○	○	○	×	×	×	×	×	×	×	×	×	×	×	×
25	○	○	○	○	○	○	○	○	○	○	○	○	×	×	×	×	×	×	×	×
28	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	×	×	×	×	×
31	○	○	○	○	○	○	○	○	○	○	○	×	○	○	○	×	○	○	○	×
34	○	○	○	○	○	○	○	○	○	○	○	×	○	○	○	×	○	○	×	×
37	○	○	○	×	○	○	○	×	○	○	○	×	○	○	○	×	○	○	×	×
40	○	○	○	×	○	○	○	×	○	○	○	×	○	○	×	×	×	×	×	×

○: Available ×: Not available

■Specifications

(1 t =1 000 kg)

Maximum rated load	t × m	11.4 × 10.3 (22 m tower + 16 m jib)
		10.3 × 11.1 (22 m tower + 19 m jib)
		9.4 × 11.0 (28 m tower + 22 m jib)
		6.15 × 13.0 (37 m tower + 28 m jib)
		6.45 × 12.0 (40 m tower + 25 m jib)
Tower length	m	22 to 40
Tower foot height	m	1.59
Jib length	m	16 to 28
Tower + Jib	m	40+25
Working radius	m	8.0 to 38.1
Hoist / lower line speeds	m/min	*110/74/37
Jib hoist / lower line speed	m/min	*55/*37
Tower hoist / lower line speed	m/min	*60
Ground contact pressure	kPa (kgf/cm²)	74.3 (0.76)
Operating weight	t	58.2 (40 m tower + 25 m jib)

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.

22 m Tower (2-Rope Reevings)

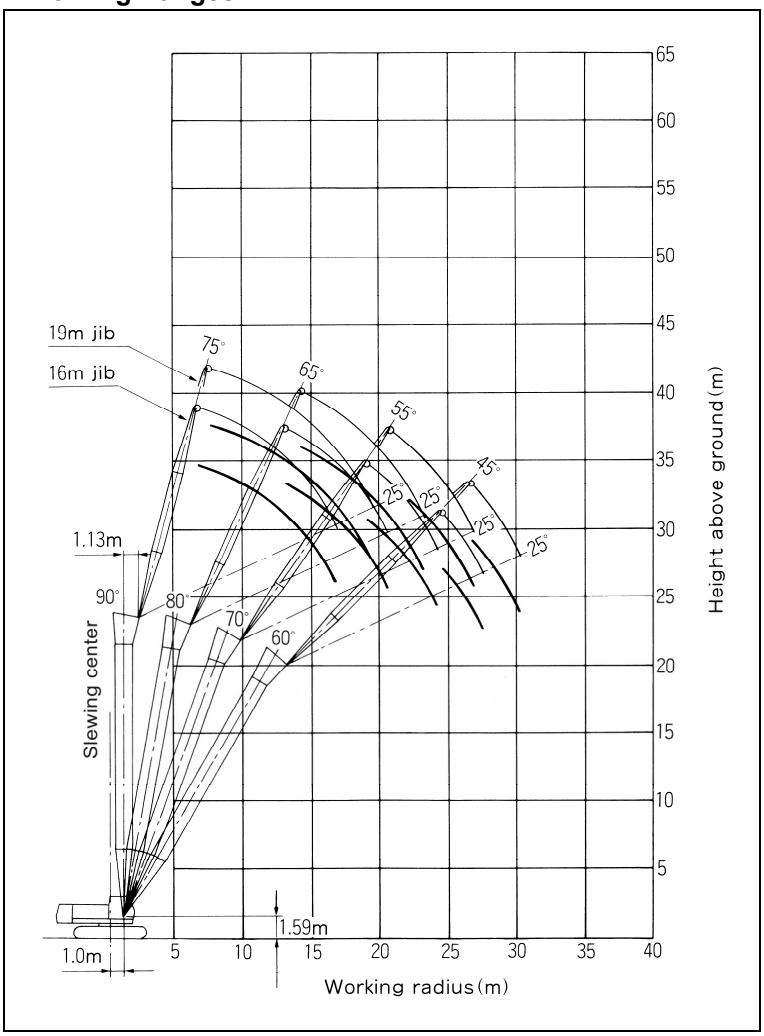
■Rated Loads for Tower Crane

Unit: t

Working radius (m)	Jib length (m)							
	16 m				19 m			
	90°	80°	70°	60°	90°	80°	70°	60°
8.0	11.50				9.0×11.40			
9.0	11.50				9.5×11.25			
10.0	10.3×11.40				10.90			
12.0	9.50	12.9×5.85			11.1×10.30			
14.0	7.80	5.85			7.80	14.2×5.20		
16.0	6.60	5.15			6.60	5.10		
18.0	16.7×6.30	4.45	18.9×3.70		5.70	4.45		
20.0		3.95	3.65		19.4×5.20	3.90	20.7×3.30	
22.0		20.5×3.80	3.25			3.50	3.20	
24.0			2.95	24.4×2.55		23.2×3.30	2.90	
26.0			24.2×2.95	2.45			2.65	26.6×2.25
28.0				27.6×2.30			26.9×2.50	2.20
30.0								2.00
30.3								2.00

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 mobile crane construction standards.
2. The load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.
15 ton hook.....weight 0.32 t
3. Working radius is a horizontal distance between slewing center of the machine and center of gravity of the load lifted.
4. Counterweight is 18.7 t.
5. In operation with 1-rope reeving, use a 6.5 t hook (option). In this case, the rated loads for tower crane (with 1-rope reeving) described in the Operation Manual will be applied.
6. Crawlers must be extended into position before crane operation.
7. Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

■Working Ranges



Working ranges are shown for unloading.

25 m Tower (2-Rope Reevings)

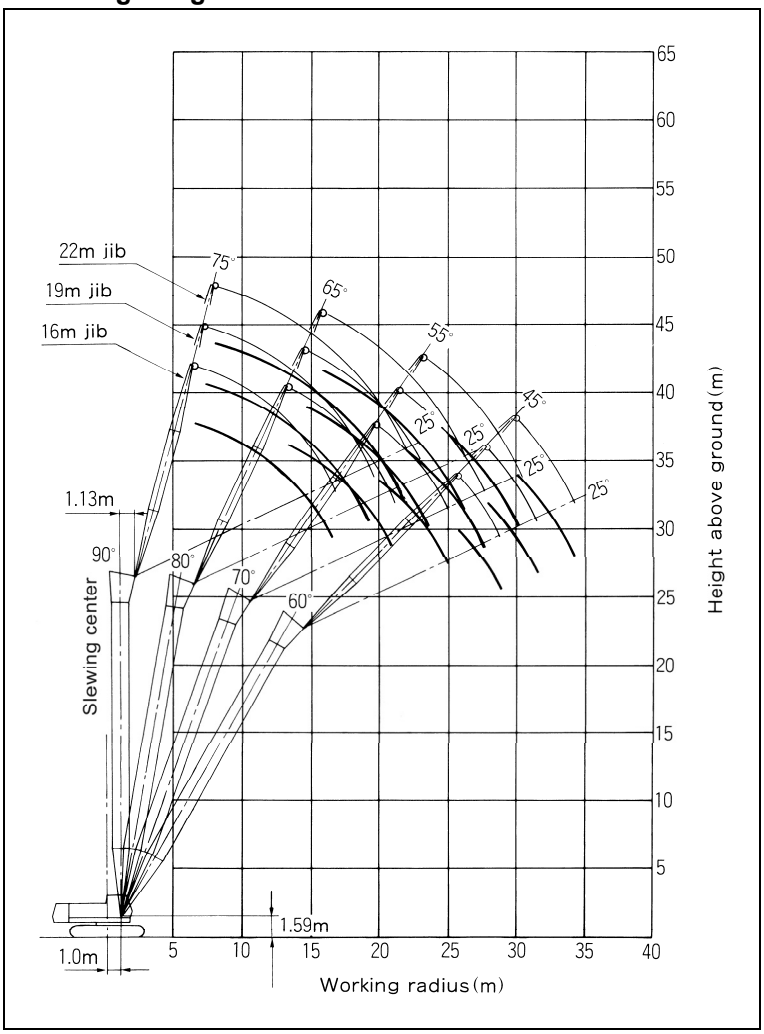
■Rated Loads for Tower Crane

Unit: t

Working radius (m)	Jib length (m)											
	16m				19m				22m			
	90°	80°	70°	60°	90°	80°	70°	60°	90°	80°	70°	60°
8.1	11.50											
9.0	11.50				9.1×10.50				10.0×9.40			
10.0	9.5×11.40				10.50				11.0×9.40			
12.0	10.7×10.90	13.4×5.50			11.6×9.75				9.00			
14.0	7.80	5.50			7.80	14.7×4.90			12.5×8.80	15.9×4.35		
16.0	6.60	5.05			6.60	4.90			6.60	4.35		
18.0	16.7×6.30	4.40			5.80	4.35			5.70	4.30		
20.0		3.90	3.40		19.4×5.20	3.85	21.7×3.00		5.00	3.80		
22.0		21.0×3.65	3.15			3.45	3.00		4.40	3.40	23.4×2.70	
24.0			2.85	25.9×2.25		23.8×3.10	2.80		22.2×4.35	3.05	2.70	
26.0			25.2×2.65	2.25			2.55			2.75	2.50	
28.0				2.15			27.9×2.30	28.1×2.00		26.5×2.65	2.25	
30.0				29.1×2.05				1.90			2.05	30.2×1.75
32.0								31.8×1.75			30.6×2.00	1.70
34.0												1.55
34.5												1.50

For notes, refer to those on the 22 m tower.

■Working Ranges



Working ranges are shown for unloading.

28 m Tower (2-Rope Reevings)

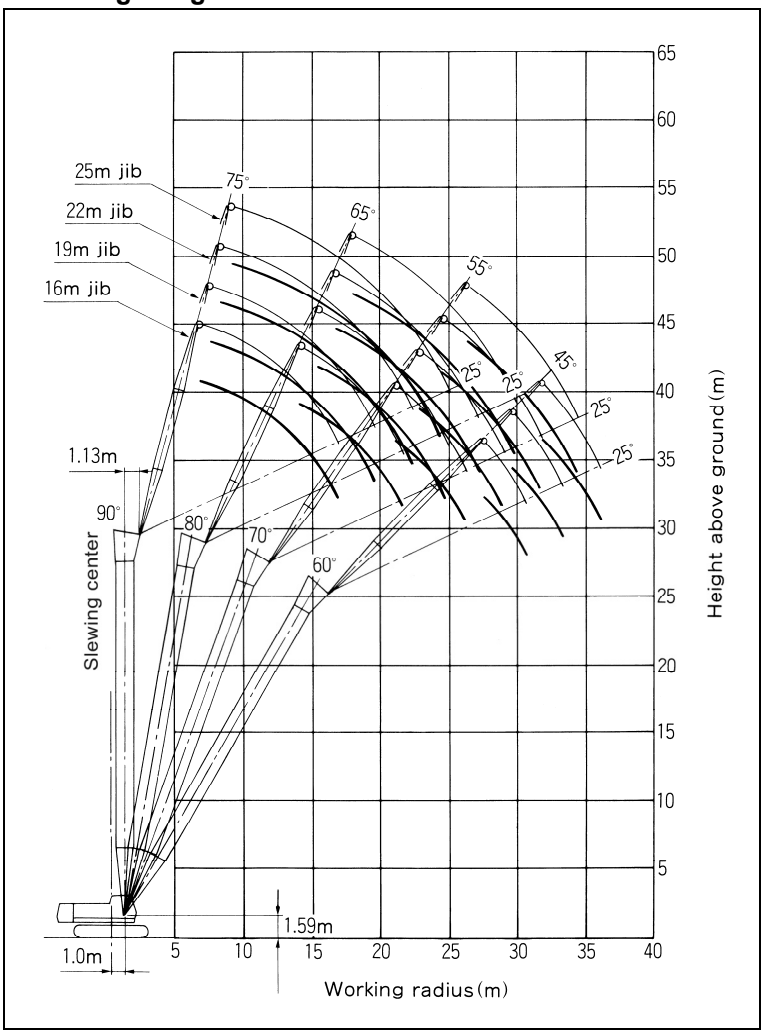
■Rated Loads for Tower Crane

Unit: t

Working radius (m)	Jib length (m)														
	16m				19m				22m				25m		
	90°	80°	70°	60°	90°	80°	70°	60°	90°	80°	70°	60°	90°	80°	70°
8.3	11.40														
9.0	11.40				9.2×10.50				10.1×9.40						
10.0	9.5×11.40				10.50				11.0×9.40				11.1×8.20		
12.0	10.7×10.90	13.9×5.15			11.6×9.75				9.00				8.20		
14.0	7.80	5.15			7.80	15.2×4.60			12.5×8.80				7.30		
16.0	6.60	5.00			6.60	4.60			6.60	16.5×4.10			15.5×6.70	17.7×3.70	
18.0	16.7×6.30	4.35			5.80	4.30			5.70	4.10			5.70	3.70	
20.0		3.80	21.0×3.05		19.4×5.20	3.80			5.00	3.70			5.00	3.65	
22.0		21.6×3.50	3.05			3.35	22.7×2.75		4.40	3.30			4.40	3.25	
24.0			2.75			3.05	2.70		22.2×4.35	2.95	24.4×2.45		3.90	2.95	
26.0			2.50	27.4×2.00		24.3×3.00	2.45			2.70	2.40		24.9×3.65	2.65	26.1×2.20
28.0			26.2×2.45	2.00			2.25	29.6×1.75		27.0×2.55	2.15			2.40	2.10
30.0				1.85			28.9×2.10	1.75			2.00	31.7×1.55		29.7×2.20	1.95
32.0				30.6×1.80				1.65			31.7×1.85	1.55			1.80
34.0								33.3×1.55				1.45			1.65
36.0												1.35			34.4×1.60

For notes, refer to those on the 22 m tower.

■Working Ranges



Working ranges are shown for unloading.

31 m Tower (2-Rope Reevings)

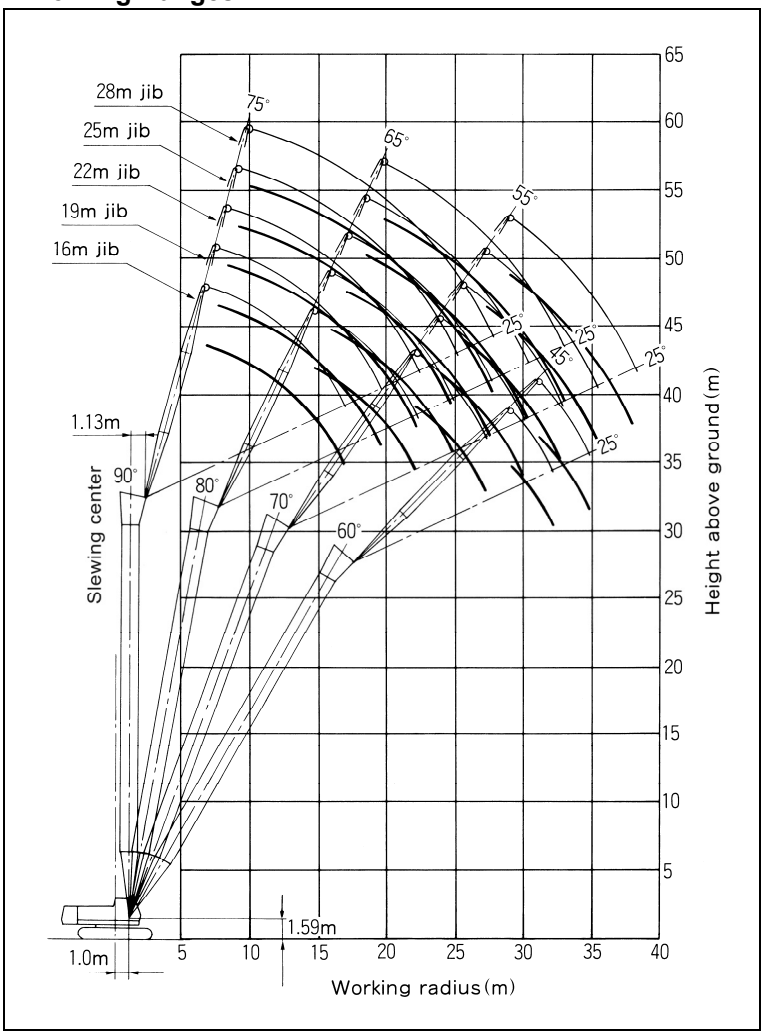
■Rated Loads for Tower Crane

Unit: t

Working radius (m)	Jib length (m)																
	16m				19m				22m			25m			28m		
	90°	80°	70°	60°	90°	80°	70°	60°	90°	80°	70°	90°	80°	70°	90°	80°	70°
8.4	10.40																
9.0	10.40				9.3×10.00				10.2×8.40								
10.0	10.00				10.00				11.0×8.40			11.2×7.60			12.1×6.20		
12.0	9.40				8.70				8.10			7.55			13.0×6.15		
14.0	7.80	14.4×4.80			13.1×8.35	15.7×4.30			14.2×7.55			7.05			5.80		
16.0	6.60	4.80			6.60	4.30			6.50	17.0×3.85		15.5×6.70			5.20		
18.0	16.7×6.30	4.25			5.80	4.20			5.70	3.85		5.60	18.3×3.50		4.70	19.5×3.15	
20.0		3.75			19.4×5.20	3.70			5.00	3.65		4.90	3.50		4.20	3.15	
22.0		3.35	2.75			3.30	23.7×2.50		4.40	3.25		4.40	3.20		3.80	3.15	
24.0		22.1×3.30	2.65			2.95	2.50		22.2×4.35	2.90	25.5×2.20	3.90	2.85		3.40	2.80	
26.0			2.40			24.8×2.80	2.35			2.65	2.20	24.9×3.65	2.60	27.2×2.00	3.00	2.55	
28.0			27.3×2.25	28.9×1.75			2.15			27.5×2.45	2.10		2.35	2.00	27.6×2.75	2.30	28.9×1.80
30.0				1.75			1.95	31.1×1.55			1.90		2.15	1.85		2.10	1.80
32.0				1.60				1.55			1.75		30.2×2.10	1.70		1.95	1.65
34.0				32.1×1.60				1.40			32.7×1.70			1.55		33.0×1.85	1.50
36.0								34.8×1.35						35.4×1.45			1.40
38.0																	1.30
38.1																	1.30

For notes, refer to those on the 22 m tower.

■Working Ranges



Working ranges are shown for unloading.

34 m Tower (2-Rope Reevings)

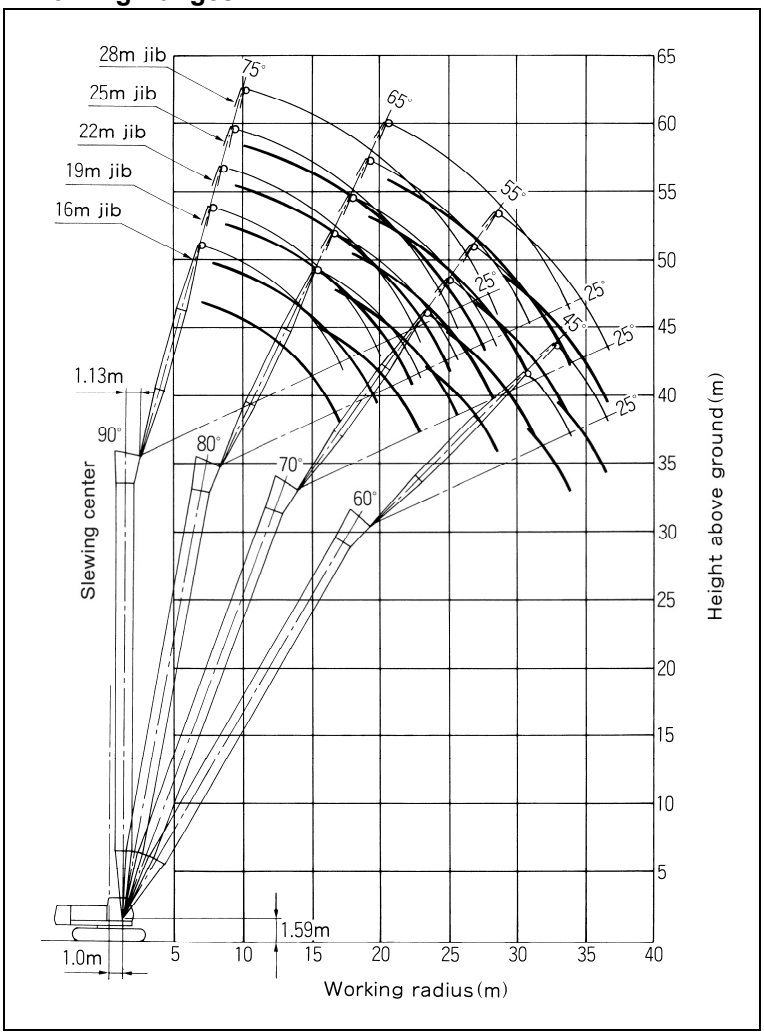
■Rated Loads for Tower Crane

Unit: t

Working radius (m)	Jib length (m)															
	16m				19m				22m			25m			28m	
	90°	80°	70°	60°	90°	80°	70°	60°	90°	80°	70°	90°	80°	70°	90°	80°
8.5	10.40															
9.0	10.40				9.4×9.50				10.3×8.40							
10.0	10.00				9.35				11.0×8.40			11.3×7.60			12.2×6.20	
12.0	9.40				8.70				8.10			7.55			13.0×6.15	
14.0	7.80	15.0×4.50			13.1×8.35				14.2×7.55			7.05			5.80	
16.0	6.60	4.50			6.60	16.2×4.05			6.50	17.5×3.65		15.5×6.70			5.20	
18.0	16.7×6.30	4.15			5.80	4.05			5.70	3.65		5.60	18.3×3.30		4.70	
20.0		3.65			19.4×5.20	3.60			5.00	3.55		4.90	3.30		4.20	3.00
22.0		3.25	23.0×2.50			3.25			4.40	3.15		4.40	3.10		3.80	3.00
24.0		22.6×3.15	2.50			2.90	24.8×2.25		22.2×4.35	2.85		3.90	2.80		3.40	2.75
26.0			2.30			25.3×2.70	2.25			2.55	26.5×2.00	24.9×3.65	2.55		3.00	2.45
28.0			2.10				2.05			2.35	2.00		2.30	28.2×1.80	27.6×2.75	2.25
30.0			28.3×2.05	30.4×1.05			1.85				1.80		2.10	1.75		2.05
32.0				1.45			31.0×1.80	32.6×1.35			1.65		30.8×2.00	1.60		1.90
34.0				33.6×1.35				1.30			33.7×1.55			1.50		33.5×1.80
36.0								1.20						1.35		
36.4								36.3×1.20						1.30		

For notes, refer to those on the 22 m tower.

■Working Ranges



Working ranges are shown for unloading.

37 m Tower (2-Rope Reevings)

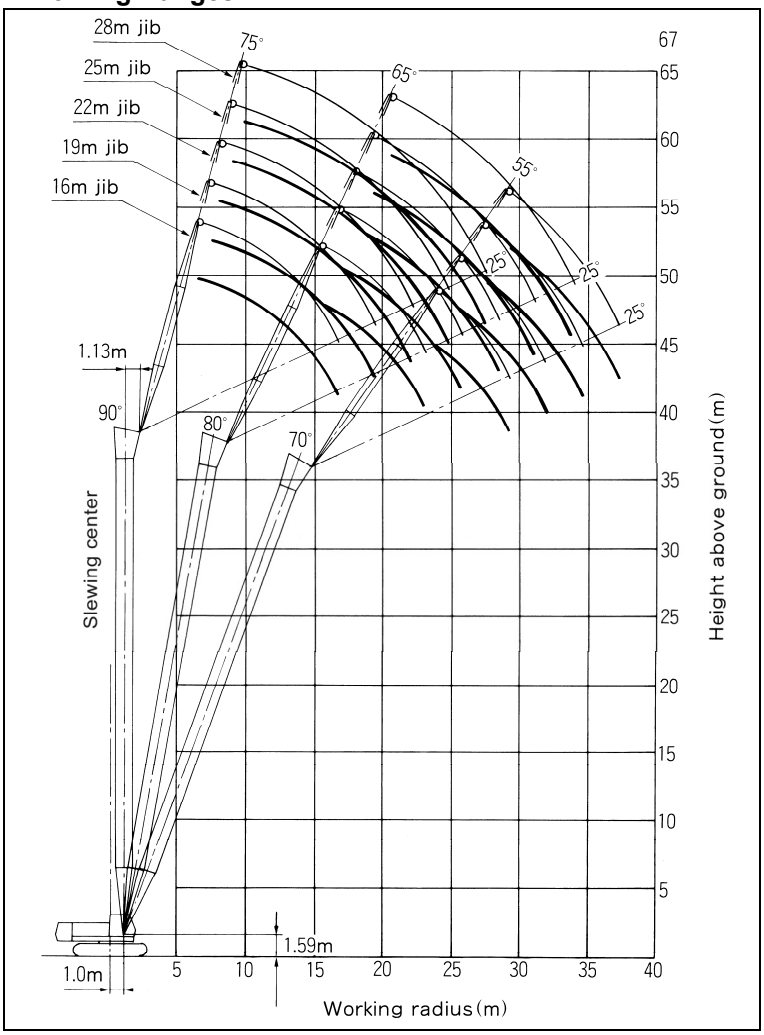
■Rated Loads for Tower Crane

Unit: t

Working radius (m)	Jib length (m)													
	16m			19m			22m			25m			28m	
	90°	80°	70°	90°	80°	70°	90°	80°	70°	90°	80°	70°	90°	80°
8.6	8.60													
9.0	8.60			9.5×8.00			10.4×7.20							
10.0	8.40			8.00			11.0×7.10			11.4×6.50			12.3×6.15	
12.0	8.05			8.00			6.90			6.45			13.0×6.15	
14.0	7.75	15.5×4.20		15.2×6.95			6.50			6.10			5.80	
16.0	6.60	4.20		6.60	16.8×3.80		16.7×6.15			5.75			5.20	
18.0	16.7×6.30	4.05		5.70	3.80		5.60	3.40		18.2×5.50	19.3×3.10		4.70	
20.0		3.60		19.4×5.20	3.55		5.00	3.40		4.90	3.10		4.20	20.6×2.80
22.0		3.20			3.15		4.40	3.10		4.40	3.05		3.80	2.80
24.0		23.1×3.00	24.1×2.30		2.85	25.8×2.05	22.2×4.35	2.75		3.90	2.75		3.40	2.65
26.0			2.20		25.8×2.55	2.05		2.50	27.5×1.80	24.9×3.65	2.45		3.00	2.40
28.0			2.00			1.95		2.30	1.80		2.25	29.2×1.60	27.6×2.75	2.20
30.0			29.3×1.85			1.75		28.6×2.20	1.70		2.05	1.60		2.00
32.0						1.60			1.55		31.3×1.90	1.50		1.80
34.0									1.45			1.40		1.70
36.0									34.7×1.40			1.30		
37.5												1.20		

For notes, refer to those on the 22 m tower.

■Working Ranges



Working ranges are shown for unloading.

40 m Tower (2-Rope Reevings)

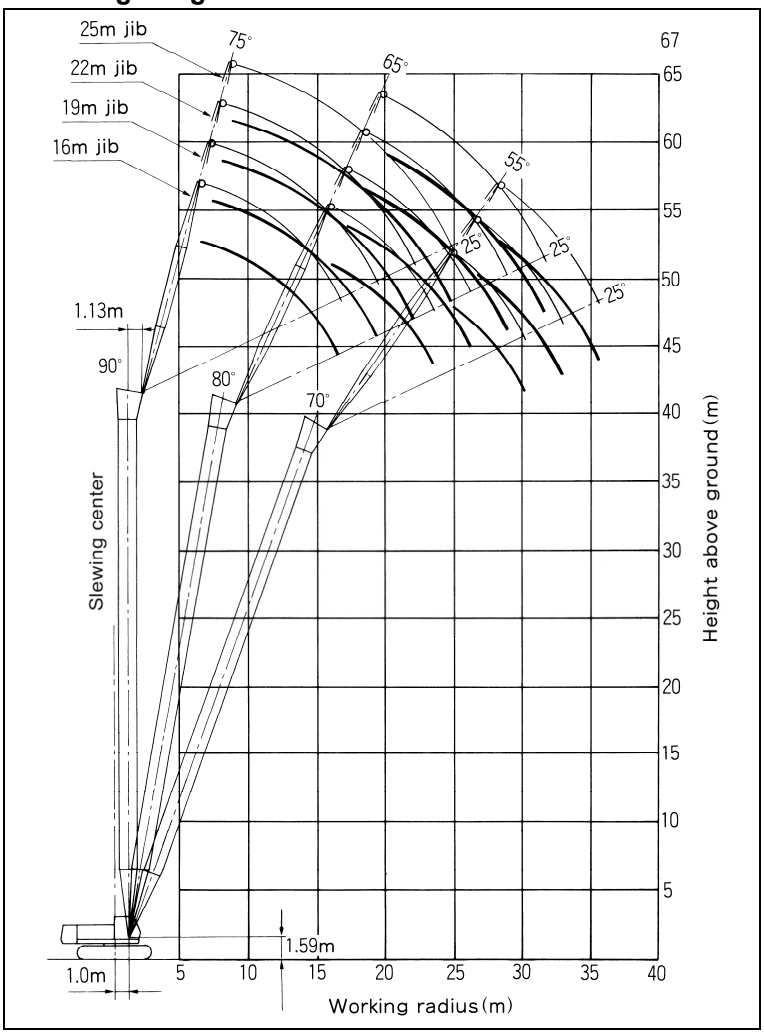
■Rated Loads for Tower Crane

Unit: t

Working radius (m)	Jib length (m)										
	16m			19m			22m			25m	
	90°	80°	70°	90°	80°	70°	90°	80°	70°	90°	80°
8.7	8.60										
9.0	8.60			9.6×7.80			10.5×7.20				
10.0	8.40			7.80			11.0×7.10			11.5×6.50	
12.0	8.05			7.45			6.90			6.45	
14.0	7.75			15.2×6.95			6.50			6.10	
16.0	6.60	3.95		6.60	17.3×3.55		16.7×6.15			5.75	
18.0	16.7×6.30	3.95		5.70	3.55		5.60	18.5×3.20		18.2×5.50	19.8×2.90
20.0		3.50		19.4×5.20	3.45		5.00	3.20		4.90	2.90
22.0		3.10			3.05		4.40	3.00		4.40	2.90
24.0		23.6×2.85	25.1×2.05		2.75		22.2×4.35	2.70		3.90	2.65
26.0			2.05		2.50	26.8×1.85		2.45		24.9×3.65	2.40
28.0			1.90		26.4×2.45	1.85		2.20	28.5×1.60		2.15
30.0			1.70			1.65		29.1×2.05	1.60		2.00
32.0			30.3×1.70			1.55			1.45		31.8×1.80
34.0						33.1×1.45			1.35		
35.8									1.25		

For notes, refer to those on the 22 m tower.

■Working Ranges



Working ranges are shown for unloading.

■Tower Boom Construction

Elements \ Tower length (m)		22	25	28	31	34	37	40
Tower base section	5 m	1	1	1	1	1	1	1
Tower top section	2 m	1	1	1	1	1	1	1
1.5 m tower extension, base section		1	1	1	1	1	1	1
1.5 m tower extension, top section		1	1	1	1	1	1	1
3 m tower extension		1		1		1		1
6 m tower extension			1	1	2	2	3	3
9 m (B) tower extension		1	1	1	1	1	1	1
Available tower jib	16 m	←	—	—	—	—	—	→
	19 m	←	—	—	—	—	—	→
	22 m		←	—	—	—	—	→
	25 m			←	—	—	—	→
	28 m				←	—	→	

■Tower Jib Construction

Elements \ Jib length (m)	16	19	22	25	28
Tower jib base section 5 m	1	1	1	1	1
Tower jib top section 5 m	1	1	1	1	1
3 m tower jib extension	2	1	2	1	2
6 m tower jib extension		1	1	2	2

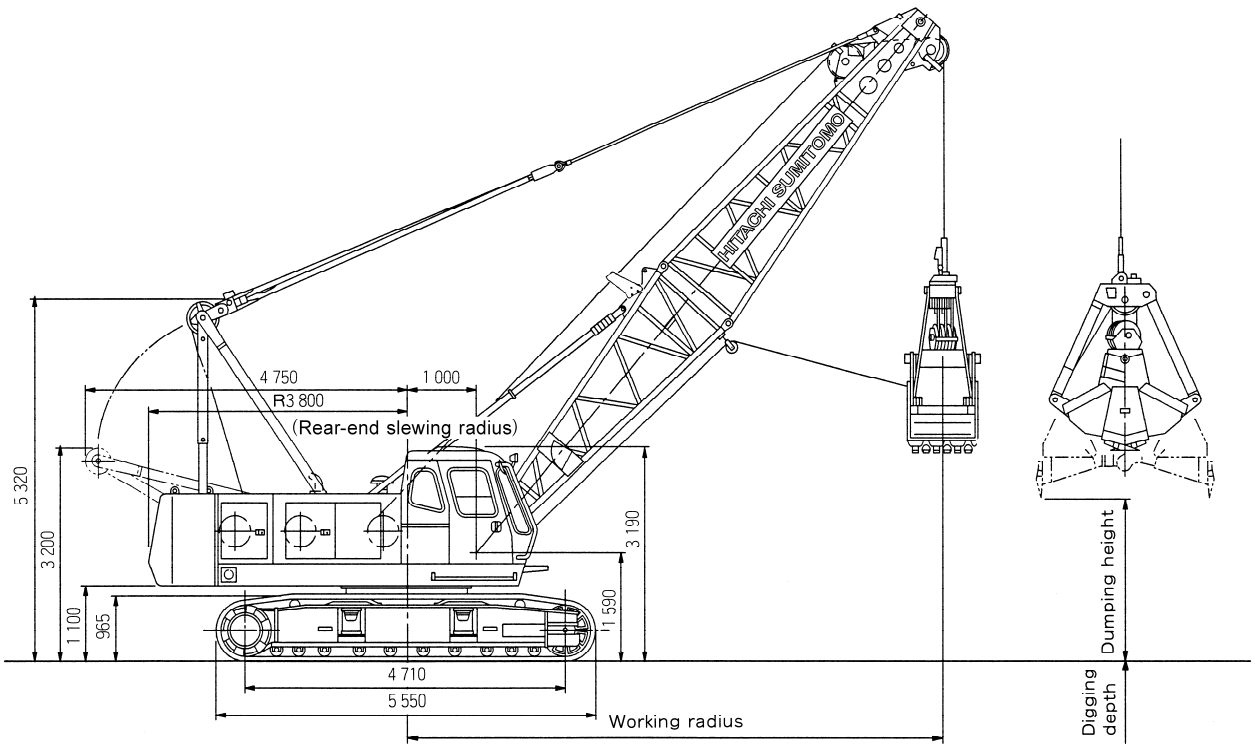
■Component Weights and Dimensions for Transport

Components		Weight (ton)	Length × Width × Height (m)			Remarks
Basic machine	Basic machine	29.90	7.50	3.30	3.20	Excluding boom base section, ropes and counterweight
	Counterweight	3.60	2.03	0.52	1.07	Inner
	Counterweight	7.10	2.77	0.69	1.53	Center
	Counterweight	8.00	3.24	0.97	1.53	Outer
Tower front	Tower base section	0.86	5.15	1.52	1.62	
	Tower top section	0.59	2.68	1.44	2.26	
	1.5 m tower extension, base section	0.45	1.60	1.40	1.93	
	1.5 m tower extension, top section	0.18	1.60	1.40	1.40	
	Slewing levers	0.59	4.48	1.40	0.67	3 levers included
	3 m boom extension	0.28	3.10	1.40	1.46	
	6 m boom extension	0.45	6.10	1.40	1.46	
	9 m boom extension	0.66	9.10	1.40	1.46	
	9 m (B) boom extension	0.69	9.10	1.40	1.49	
	Tower stop, right	0.39	5.55	0.20	0.20	
	Tower stop, left	0.40	5.55	0.20	0.40	Safety devices included
	Tower jib base section	0.26	5.21	1.14	1.36	Jib stop included
	Tower jib top section	0.35	5.46	1.01	0.99	
	3 m tower jib extension	0.12	3.08	1.01	0.83	
	6 m tower jib extension	0.20	6.08	1.01	0.83	
	15 t hook	0.32	1.36	0.62	0.29	
	6.5 t hook	0.18	0.99	0.25	0.25	

CLAMSHELL SCX550

■Dimensions

Unit: mm



■Specifications

Bucket capacity	m^3	0.8/1.0/1.2
Allowable clamshell gross weight	t	6.0
Boom length	m	10 to 19
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
Travel speeds	km/h	2.0/1.5
Ground contact pressure	kPa (kgf/cm^2)	70.0 (0.71)
Operating weight	t	54.8 (10 m boom + 1.2 m^3 bucket)

■Clamshell Bucket

Capacity (m^3)	Weight (t)	Use
0.8	2.00	Excavation
1.0	2.45	Excavation
1.2	3.10	Excavation
1.2	2.40	Light service

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.
3. *Line speeds will vary with the load.

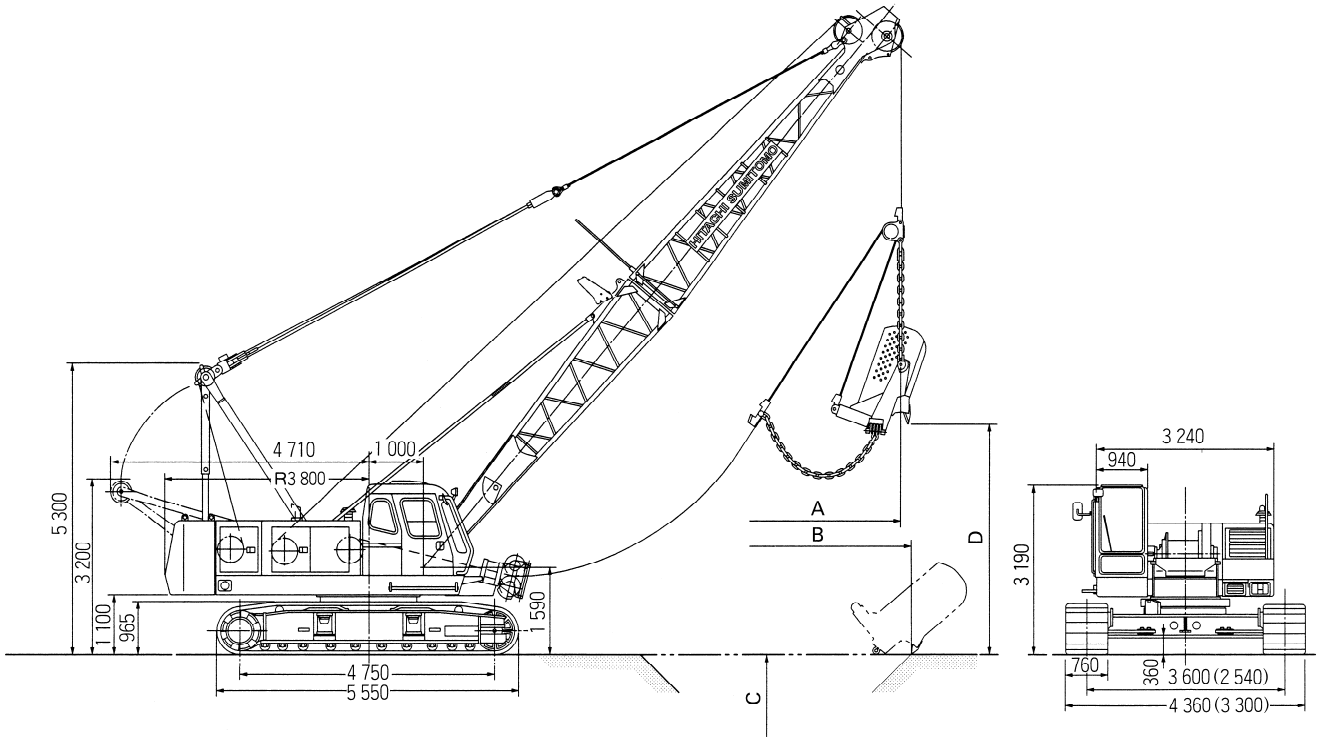
■Working Ranges

Boom length	m	10				13				16				19			
Boom angle	degree	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55	65
Working radius	m	9.4	8.3	7.0	5.6	11.8	10.4	8.7	6.8	14.3	12.6	10.5	8.1	16.8	14.7	12.2	9.4
Rated load	t	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.8	6.00	6.00	6.00
Bucket dumping height 0.8 m^3 bucket	m	2.0	3.3	4.5	5.4	3.7	5.5	7.0	8.1	5.4	7.6	9.4	10.8	7.1	9.7	11.9	13.6
1.0 m^3 bucket	m	1.8	3.1	4.3	5.2	3.5	5.3	6.8	7.9	5.2	7.4	9.2	10.6	6.6	9.5	11.7	13.4
1.2 m^3 bucket	m	1.6	2.9	4.1	5.0	3.3	5.1	6.6	7.7	5.0	7.2	9.0	10.4	6.7	9.3	11.5	13.2

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^3) × Specific gravity of load (t/m^3)+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 slewing center to the center of gravity of lifted load.
4. The bucket weight is 3.1 t. (Max)
5. The counterweight is 18.7 t.
6. Be sure to fully extend the side frames 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.

■Dimensions

Unit: mm



Dimensions shown in ( ) are with tracks retracted.

■Specifications

Bucket capacity	m^3	1.15/1.7	
Max. bare line pull (1st drum layer)	t	15.6	
Boom length	m	13 to 22	
Suspend line speeds	m/min	*74/37	Rope 22 mm dia.
Drag line speeds	m/min	*74/37	Rope 22 mm dia.
Boom hoist/lower line speed	m/min	*60	Rope 16 mm dia.
Travel speeds	km/h	2.0/1.5	
Slewing speeds	min^{-1}(rpm)	3.7 (3.7)	
Ground contact pressure	kPa (kgf/cm^2)	73.2 (0.74)	
Operating weight	t	53.5 (13 m boom + 1.15 m^3 bucket)	

■Dragline Bucket (Reference data)

Capacity (m^3)	Weight (t)	Use
1.15	1.28	Heavy duty
1.7	1.68	Medium service

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.
3. *Line speeds will vary with the load.

■Working Ranges

	Boom length	m	13			16			19			22		
	Boom angle	degree	30	40	50	30	40	50	30	40	50	30	40	50
A	Working radius	m	12.8	11.5	9.9	15.4	13.8	11.9	18.0	16.1	13.8	20.6	18.4	15.7
	Rated load	t	8.72	9.66	10.82	7.31	8.27	9.41	5.50	6.74	8.21	4.76	5.64	6.95
B	Max. digging reach	m	16.3	15.9	15.0	19.6	19.1	18.0	22.9	22.2	21.0	26.2	25.4	23.9
C	Max. digging depth	m	8.4	8.1	7.4	10.9	10.5	9.7	13.3	12.8	11.9	15.8	15.2	14.1
D	Boom point height	m	7.8	9.7	11.3	9.3	11.3	13.6	10.8	13.5	15.9	12.3	15.5	18.2

Notes: 1. The size of the bucket has to be determined according to local condition.
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 above, according to kinds of the loads handled.
Rated load = Bucket capacity (m^3) × Specific gravity of load (t/m^3) + 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 slewing center to the center of gravity of lifted load.
4. Maximum digging reach/depth may vary considerable depending on digging condition and the skill of the operator.
5. The counterweight is 18.7 t.
6. Be sure to fully extend the side frames before operating the machine.

■STANDARD EQUIPMENT

BASIC MACHINE

Undercarriage

- 760mm wide crawler shoes
- Crawler side step
- Side frame retract unit (1 pc)

Superstructure

- Working lights (2 pcs)
- Rear view mirrors (left and right)
- Drum mirror (boom hoist drum)
- Centralized lubrication system (for A-frame and slewing circle)
- Re-fuel pump
- Drum rotation speed controller(for boom hoisting and slew mechanism)
- Superstructure under-cover
- Cab side steps
- Speed controller
- Drum rotation sensor
- 18.7 t counterweight
- Spare parts
- A-frame (w/step)

Cab

- Dual intermittent window shield wipers with washer available on both front and roof windows
- Sunshade
- Sunvisor
- Cab floor mat
- Room light
- Built in type air conditioner
- AM/FM radio with clock
- Cigar lighter
- Ashtray
- Accelerator grip
- Engine foot throttle
- Electric tilt-type lever stand

Safety Devices

- Slew lock
- Drum pawl lock (front and rear, and boom hoist)
- Slewing alarm
- Non drum brake preventing device
- Slewing brake
- Engine start interlock system
- Lock lever (Fool proof shut-off lever)
- Before-work check monitor
- Speed slowdown device
- Free fall interlocking
- Fail safe mechanism
- Independent lever lock

FRONT ATTACHMENTS

Crane

- 10 m basic boom (base section 5 m, top section 5 m)
- Boom stop
- Boom angle indicator
- Main hoist cable (ϕ22 mm × 185 m)
- Boom hoist cable (ϕ16 mm × 135 m)
- Moment Limiter
- Over hoisting limiter (main hook, boom hoist, secondary)
- 55 t hook

Full-Luffing Tower Crane

- 40 m tower boom (base section: 5 m, 1.5 m × 2, 3 m × 1, 6 m × 3, 9 m × 1, top section: 2 m) (Up to 25 m tower jib is available to maximum 40 m tower.)
- 28 m tower jib (base section: 5 m, 3 m × 2, 6 m × 2, top section: 5 m)
- Tower stop
- 15 t hook
- Main hoist cable (ϕ22 mm × 215 m)
- Tower jib hoist cable (22 mm × 145 m)
- Tower hoist cable (ϕ16 mm × 150 m)
- Load moment indicator
- Over hoisting limiter (hook, tower, tower jib and secondary)
- Tower boom angle indicator
- Blocks for assembling 31 m or higher tower

Clamshell

- 10 m basic boom (base section 5 m, top section 5 m)
- Boom stop
- Boom angle indicator
- Open/close and suspend cable disengagement limiter (for tubular chord boom)
- Open/close cable (ϕ22 mm × 67 m)*
- Suspend cable (ϕ22 mm × 60 m)*
- Hydraulic tagline (with ϕ10 mm × 45 m cable)
- Boom hoist cable (ϕ16 mm × 135 m)

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

Lifting Magnet

- 13 m angle chord boom [base section 6.5 m, top section 6.5 m wide-angle sheave (with 2 boom-point sheaves)]
- Boom stop
- Boom angle indicator
- Hoist cable (ϕ22 mm × 185 m)
- Boom hoist cable (ϕ16 mm × 150 m)
- Hoist cable disengagement limiter (for angle chord boom)
- Hydraulic tagline (with ϕ10 mm × 45 m)
- Load moment indicator
- Over hoisting limiter (hook, boom hoist, secondary)
- 55 t hook (with hook lock)

Dragline

- 13 m angle chord boom [(base section 6.5 m, top section 6.5 m and wide-angle sheave (with 1 boom point sheave)]
- Boom stop
- Boom angle indicator
- Hoist cable (ϕ22 mm × 50 m)
- Drag cable (ϕ22 mm × 60 m)
- Boom hoist cable (ϕ16 mm × 150 m)
- Fair-lead
- Over hoisting limiter (Boom hoist and secondary)

■Standard and Optional Equipment

○: Standard equipment ●: Optional equipment —: Not recommended

Superstructure	CRAWLWER CRANE	FULL-LUFFING TOWER CRANE	CLAMSHELL	LIFTING MAGNET	DRAGLINE
3rd drum winch (free fall type, excluding cable)	●	—	—	—	—
3rd drum cable (ϕ20 mm × 170 m)	●	—	—	—	—
Drum cooler (for rear drum)	—	—	●	●	—
Drum rollers (available on front and rear drum)	●	●	●	●	●
Drum mirror (rear drum)	●	●	●	●	●
Drum light	●	●	●	●	●
Catwalk (folding type)	●	●	●	●	●
Gripping bar (for cab sidestep)	●	●	●	●	●
Add fuel filter	●	●	●	●	●
Add air cleaner element	●	●	●	●	●
Working light(left)	●	●	●	●	●
Cab					
Microphone & loud speaker	●	●	●	●	●
Fire extinguisher	●	●	●	●	●
Level gauge	●	○	●	●	●
Front/rear drum control lever & brake pedal arrangement change	●	●	●	●	●
Safety devices					
Three color percentage indicator	●	●	—	—	—
Anemometer	●	○	—	—	—
Drum & rear view camera	●	●	●	●	●
Cabin roof window guard	●	●	●	●	●
Travel alarm	●	●	●	●	●
Bucket over hoisting limiter	—	—	●	—	—
Boom lowering limiter	—	—	●	—	—
Front attachments for crane and tower crane					
55 t hook (9-rope reevings)	○	●*1	—	○*4	—
30 t hook (5-rope reevings)	●	●*2	—	●*4	—
15 t hook (3-rope reevings)	●	○	—	●*5	—
6.5 t hook	●	●	—	—	—
3 m boom extension	●	○	●	—	—
6 m boom extension	●	○	●	—	—
3 m angle chord boom extension	—	—	—	●	●
6 m angle chord boom extension	—	—	—	●	●
9 m boom extension	●	●	●	—	—
9 m (B) boom extension (for use with fly jib)	●	○	—	—	—
6 m fly jib assembly (6 m basic fly jib, aux. hook over-hoisting limiter, fly jib mast, short.jib cable (ϕ22 mm × 120 m), 6.5 t hook)	●	●*2	—	—	—
3 m fly jib extension	●	●*2	—	—	—
Short. jib assembly (short.jib, aux. hook over-hoisting lmiter, short.jib cable (ϕ22 mm × 120 m), 6.5 t hook)	●	●*2	—	—	—
Short. jib (short. jib, aux.hook over hoisting limiter)	●	●*2,*3	—	—	—
Crane kit (5 m boom top section, 55 t hook, boom stop, main hook over-hoisting limiter)	○	●	—	—	—
Front attachment for others					
0.8 m^3 clamshell bucket	—	—	●	—	—
1.0 m^3 clamshell bucket	—	—	●	—	—
1.2 m^3 clamshell bucket	—	—	●	—	—
1.2 m^3 clamshell bucket (light-service)	—	—	●	—	—
Hydraulic tagline	●	—	○	○	—
Open/close and suspend cable	—	—	○	—	—
1.15 m^3 Dragline bucket	—	—	—	—	●
Fair-lead	—	—	—	—	○
Skywalk (w/Stanchion)	●	●	●	●	●
Buffer	●	●	●	●	●
ϕ1 800 mm lifting magnet assembly	—	—	—	●	—
ϕ1 500 mm lifting magnet assembly	—	—	—	●	—

Notes: *1. Included in crane kit.
*2. Designed for use with crane kit
*3. When purchased together with jib assembly, these component, excluding common parts such as hook and wire rope, are added
*4. With hook lock
*5. Wide-angle quenched sheave with hook lock

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. 1407Ⓚ05H.EA242