



SCX900

HYDRAULIC CRAWLER CRANE

Specifications

*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.*

Hitachi Sumitomo Heavy Industries Construction Cranes Co.,Ltd

Head Office : 12-14 Ueno 7-chome, Taito-ku,
Tokyo 110-005, Japan

Telephone : (03)3845-1386

Facsimile : (03)3845-1394

<http://www.hands-crane.com>

KC-E149

Printed in Japan. 02.07 (KAKA, HT₃)

HITACHI SUMITOMO

SCX900

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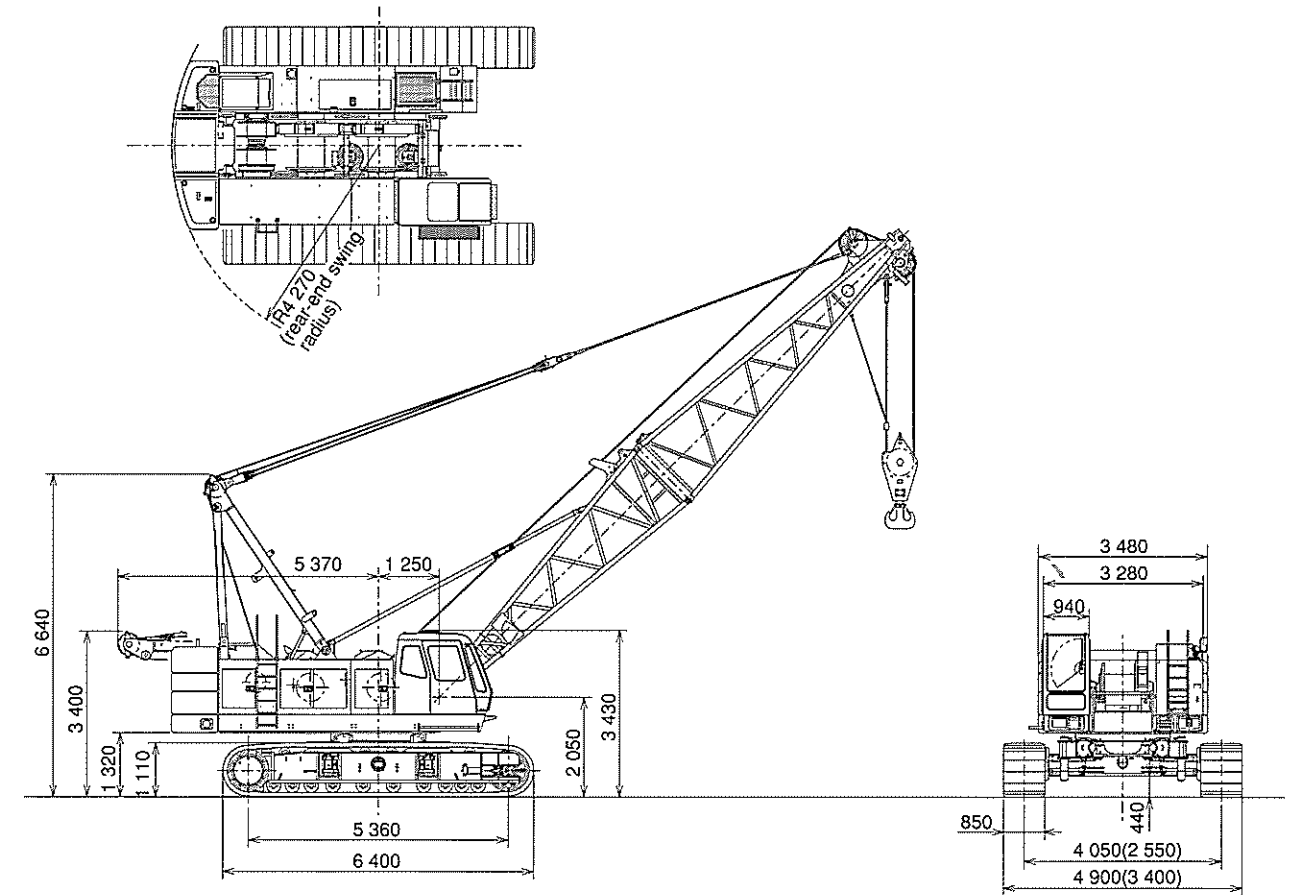
Note: • "ton" or "t" implies metric tons in this catalog.
 • Specifications conform to the Safety Regulations for Cranes and Mobile Cranes in Japan.

CRAWLER CRANE

SCX900

■Dimensions

Unit: mm



Dimensions shown in () are with side frames fully retracted.

■Specifications

Maximum rated Load × Working radius	ton × m	90×4
Basic boom length	m	13
Max. boom length	m	61
Jib length	m	10 - 28
Max. boom with jib length	m	49 + 28
Line speeds		
Main hoist drum	m/min	*105/60/30
Aux. hoist drum	m/min	*105/60/30
Boom hoist drum	m/min	*55
Swing speed	min ⁻¹ (rpm)	2.7 (2.7)
Travel speed	km/h	1.6/1.1
Gradeability	% (°)	30 (16)
Engine Model		Mitsubishi 6D24-T
Rated horsepower	kW/min ⁻¹ (PS/rpm)	184/2 000 (250/2 000)
Ground Pressure	kPa(kgf/cm ²)	89 (0.91)
Operating Weight	ton	87.5 (Equipped with 13 m boom and 90 ton capacity hook)

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

■ Technical Description



SUPERSTRUCTURE

Engine

Model	Mitsubishi 6D24-T
Type	Water-cooled, 4-cycle, 6-cylinder, direct fuel injection type diesel engine
Rated horsepower	184 kW (250 PS) at 2 000 min ⁻¹ (2 000 rpm)
Maximum torque	981 N·m (100 kgf·m) at 1 400 min ⁻¹ (1 400 rpm)
Piston displacement	11.945 L
Fuel tank capacity	415 L
Electric system	DC 24 V

Main and Auxiliary Hoist Mechanism

- The SCX900 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. Two brake modes are available; auto brake or free fall.

Boom Hoist Mechanism

- 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.
- Drum pawl lock is manually controlled from operator's seat.

Swing Mechanism

- Independent operation
- Driven by two hydraulic motors 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

Welded structure, total weight	30 400 kg
Consisting of 4 sections :	One 8 580 kg
	One 6 610 kg
	One 7 850 kg

Boom

Tubular Chord Crane Boom

1 500 mm wide by 1 500 mm deep at connection, lattice construction using high-tensile steel tubular chords

Basic boom Total length 13.0 m, 2-piece construction; upper section 6.5 m and lower section 6.5 m

Boom point Offset boom point, 4 sheaves (560 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 (420 mm PCD) for 12-part boom hoist wire rope reeving

Crane Jib

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

Jib length Total length 10.0 m, 2-piece construction; upper section 5.0 m and lower section 5.0 m

Jib point 1 sheave (560 mm PCD) mounted on anti-friction bearings on jib top

jib insert 6.0 m long available

Connection type Pin-connected

Auxiliary jib Optional. Attachable to the main boom top to hoist the light load quickly with a single rope

Note: Boom insert, crane jib, or auxiliary jib can be attached to the basic boom when needed. However, both crane jib and auxiliary jib cannot be attached simultaneously to the boom.

Tubular Chord Tower Crane Boom

1 500 mm wide by 1 500 mm deep at connection, lattice construction using high-tensile steel tubular chords

Tower boom length .. 27.0 m minimum
45.0 m maximum

Tower inserts 3.0 m, 6.0 m and 9.0 m tower inserts are in common with crane boom inserts

Connection type Pin-connected

Tower backstop Dual-rail, telescopic tubular construction with spring damper.

Tower hoist bridle Serves as connection between pendants and boom hoist wire rope reeving, equipped with 6 sheaves (420 mm PCD) for 12-part boom hoist wire rope reeving.

Tower Jib

1 150 mm wide by 1 150 mm deep at connection, lattice construction using high-tensile steel tubular chords

Jib length 19.0 m to 37.0 m

Jib inserts 3.0 m and 6.0 m long available

Connection type Pin-connected

Tower jib hoist bridle Serves as connection between tower boom pendants and tower boom hoist wire rope reeving, equipped with 4 sheaves (540 mm PCD) 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. Sliding, fold-in windshield swings up and stores in roof. Adjustable reclining seat.

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 *	236 L/min	236 L/min

	Pump-3	Pump-4
Type of pump	Variable displacement	Gear
Pressure setting	27.5 MPa (280 kgf/cm ²)	4.9 MPa (50 kgf/cm ²)
Max. Oil flow *	148 L/min	36 L/min

* with non-loaded condition

Main and Auxiliary Hoist Motors

Swashplate-type axial piston motors with counterbalance valves

Boom Hoist Motor

Bent axial piston motor with counterbalance valve

Swing Motor

Swashplate-type axial piston motor

Travel Motors

Swashplate-type 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 (main and aux.).....29.4 MPa (300 kgf/cm²)
 - Swing25.5 MPa (260 kgf/cm²)
- Overload relief valves
 - Hoist (main and aux.) circuits.....30.8 MPa (315 kgf/cm²)
 - Boom hoist circuit31.4 MPa (320 kgf/cm²)
 - Travel circuit.....29.4 MPa (300 kgf/cm²)

Pilot Circuit

- Main relief valve4.9 MPa (50 kgf/cm²)

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 a swashplate-type 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-Loading Device/Side Frame Removal Device (Optional)

With the self-loading device/side frame removal device, the basic machine can be jacked up and loaded on to a trailer, and both side frames can be removed. Travel motor piping is connected via self-seal couplings for quick disconnection.

Track Shoes

Heat-treated alloy steel castings with induction-hardened roller path and driving lugs. Shoes are connected by induction-hardened steel pins.

No. of upper rollers (each side).....	4
No. of lower rollers (each side).....	10
No. of track shoes (each side).....	55
Shoe width.....	850 mm

CONTROLS

Boom, Main and Auxiliary Hoist, Swing and Travel

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 Telling 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

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.

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.

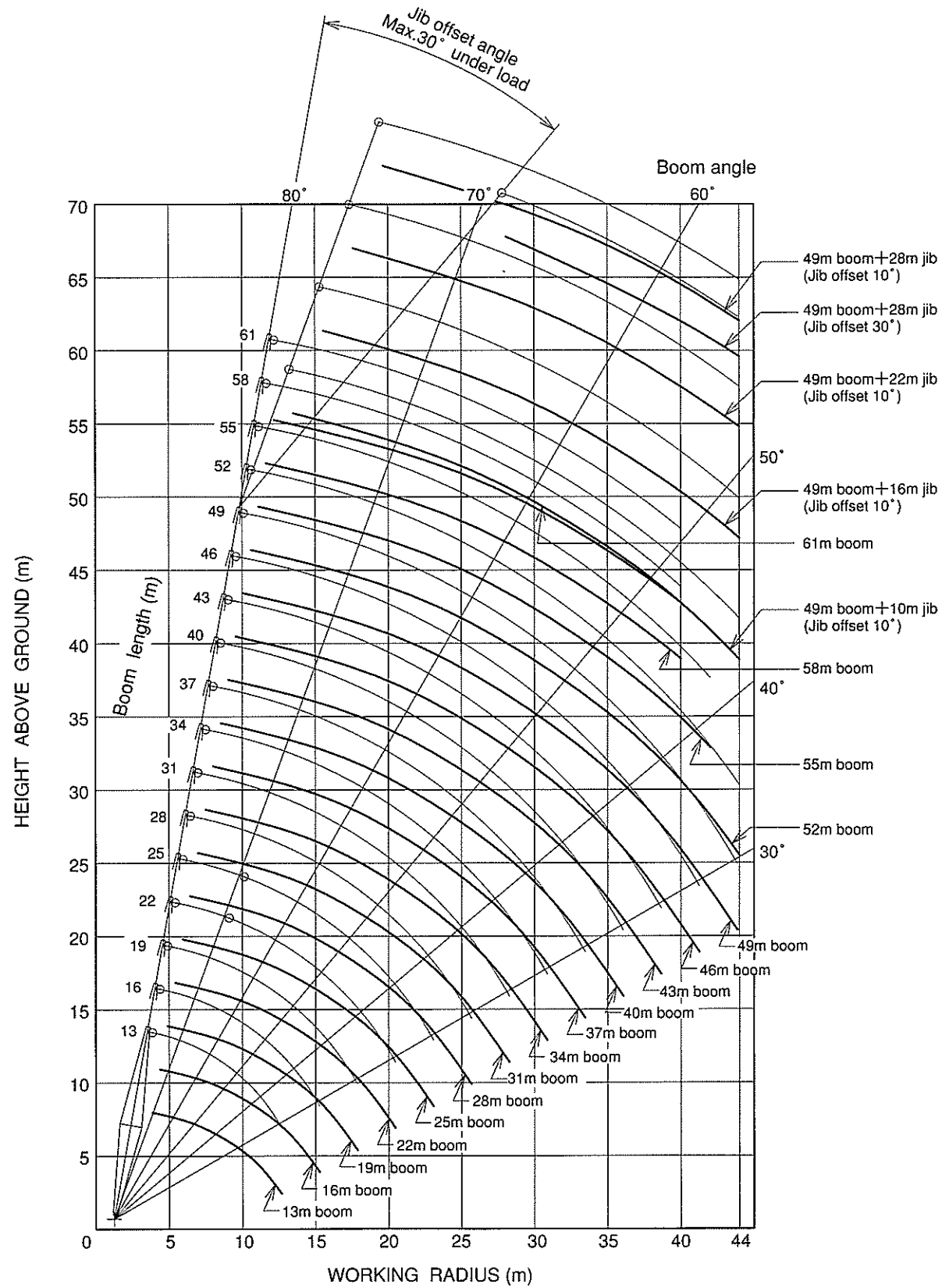
● Fail-safe mechanism

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

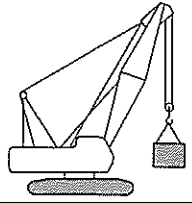
SERVICE REFILL CAPACITIES

	Liter
Fuel tank	415
Engine coolant	47
Engine oil	45
Pump transmission	2
Boom hoist reduction device	10
Winch hoist reduction device	19.5×2
Swing reduction device	17×2
Travel final device	25×2
Hydraulic system, including tank capacity	335
Hydraulic tank	255

■ Working Ranges



Note: Working ranges shown are under unloaded condition.



Unit: ton

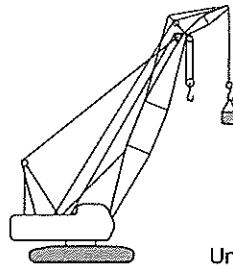
■ Crane Ratings (Main Boom in 360° Working Area)

Working Radius (m)	Boom Length (m)								
	13	16	19	22	25	28	31	34	37
4.0	90.00								
4.5	80.50	4.6m×78.45t							
5.0	70.80	70.60	5.1m×68.25t						
5.5	60.85	60.65	60.55	5.7m×57.25t					
6.0	53.35	53.10	53.00	52.95	6.2m×50.30t				
6.5	47.40	47.20	47.25	47.00	46.90	6.7m×44.00t			
7.0	42.65	42.40	42.25	42.20	42.10	42.05	7.3m×39.45t	7.8m×35.75t	
8.0	35.45	35.20	35.05	35.00	34.85	34.80	34.65	34.50	8.4m×32.15t
9.0	30.25	30.00	29.85	29.75	29.65	29.55	29.40	29.30	29.25
10.0	26.35	26.05	25.90	25.85	25.70	25.65	25.45	25.35	25.25
12.0	20.60	20.55	20.35	20.30	20.15	20.05	19.90	19.75	19.70
14.0	12.6m×18.40t	16.85	16.65	16.55	16.40	16.35	16.15	16.05	15.95
16.0		15.2m×14.90t	14.05	13.90	13.75	13.70	13.50	13.35	13.30
18.0			17.8m×12.25t	11.95	11.80	11.70	11.50	11.35	11.30
20.0				10.40	10.25	10.15	9.95	9.80	9.70
22.0				20.4m×10.15t	9.00	8.90	8.70	8.55	8.45
24.0					23.0m×8.50t	7.90	7.70	7.55	7.45
26.0						25.6m×7.20t	6.85	6.70	6.60
28.0							6.15	6.00	5.90
30.0							28.2m×6.10t	5.40	5.25
32.0								30.8m×5.20t	4.75
33.4									4.45

Working Radius (m)	Boom Length (m)							
	40	43	46	49	52	55	58	61
8.9	29.50							
9.0	29.05	9.5m×26.85t						
10.0	25.10	25.00	24.85	10.6m×22.00t	11.1m×21.25t	11.7m×19.60t		
12.0	19.55	19.40	19.25	19.20	19.05	18.90	12.2m×17.30t	12.8m×15.00t
14.0	15.80	15.65	15.50	15.45	15.30	15.15	15.00	14.50
16.0	13.10	12.95	12.85	12.75	12.60	12.45	12.30	12.15
18.0	11.10	10.95	10.80	10.75	10.60	10.45	10.30	10.10
20.0	9.55	9.40	9.25	9.15	9.05	8.90	8.70	8.55
22.0	8.30	8.15	8.00	7.90	7.75	7.60	7.45	7.30
24.0	7.25	7.10	6.95	6.90	6.75	6.60	6.40	6.25
26.0	6.40	6.25	6.10	6.00	5.90	5.75	5.55	5.35
28.0	5.70	5.55	5.40	5.30	5.15	4.95	4.75	4.50
30.0	5.10	4.95	4.80	4.65	4.45	4.25	4.05	3.80
32.0	4.55	4.40	4.20	4.05	3.85	3.65	3.45	3.20
34.0	4.10	3.90	3.70	3.55	3.35	3.15	2.90	2.70
36.0	3.65	3.45	3.25	3.05	2.90	2.70	2.45	2.25
38.0		3.05	2.85	2.65	2.50	2.30	2.05	1.80
40.0		38.6m×2.95t	2.50	2.30	2.10	1.90	1.70	39.7m×1.50t
42.0			41.2m×2.30t	2.00	1.80	1.60	41.1m×1.50t	
44.0				43.8m×1.75t	1.50	42.6m×1.50t		

- 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 load to be actually lifted, will be the rated load shown minus the weight of all lifting attachments, such as a hook.
 3. Working radius is the horizontal distance from the swing center to the center of gravity of a lifted load.
 4. The counterweight is 30.4 ton.
 5. Be sure to fully extend the side frames before operating the machine.
 6. Correlation among the number of rope reevings, maximum rated loads and hook weights are shown in the table below.

Hook Capacity (ton)	Hook Weight (ton)	Maximum Rated Load (ton)							
		8	7	6	5	4	3	2	1
90	0.97	90	77	66	55	44	—	—	—
45	0.62	—	—	—	—	44	33	22	—
22	0.60	—	—	—	—	—	—	22	—



■ Crane Ratings (Jib in 360° Working Area) (3)

Boom Length (m)	46							
Jib Length (m)	10		16		22		28	
Offset Angle (°)	10	30	10	30	10	30	10	30
Working Radius (m)								
13.5	11.00							
14.0	11.00		15.6m×11.0t					
16.0	11.00	16.5m×10.95t	11.00		17.7m×9.15t			
18.0	11.00	10.65	11.00		9.10		19.8m×5.00t	
20.0	9.35	9.85	9.65	20.4m×8.50t	8.75		4.95	
22.0	8.05	8.50	8.35	8.20	8.40		4.75	
24.0	7.00	7.40	7.25	7.90	7.45	24.3m×6.20t	4.55	
26.0	6.10	6.45	6.35	6.90	6.55	5.95	4.35	
28.0	5.35	5.65	5.60	6.10	5.80	5.70	4.20	28.2m×3.20t
30.0	4.75	5.00	4.95	5.40	5.15	5.45	4.05	3.15
32.0	4.20	4.40	4.40	4.80	4.55	5.15	3.90	3.05
34.0	3.70	3.90	3.90	4.25	4.05	4.60	3.75	3.00
36.0	3.25	3.45	3.45	3.80	3.60	4.10	3.65	2.95
38.0	2.90	3.05	3.10	3.40	3.25	3.65	3.35	2.85
40.0	2.55	2.70	2.75	3.00	2.90	3.25	3.00	2.80
42.0	2.25	2.40	2.45	2.65	2.55	2.90	2.70	2.75
44.0	2.00	2.10	2.15	2.35	2.30	2.60	2.40	2.70
46.0	1.75	1.85	1.90	2.10	2.05	2.30	2.15	2.55
48.0	47.2m×1.50t	1.50	1.70	1.85	1.80	2.05	1.90	2.25
50.0			49.5m×1.50t	1.60	1.60	1.80	1.70	2.00
52.0				50.7m×1.50t	51.0m×1.50t	1.60	1.50	1.80
54.0						53.0m×1.50t		1.55
54.6								1.50

Unit: ton

Boom Length (m)	49							
Jib Length (m)	10		16		22		28	
Offset Angle (°)	10	30	10	30	10	30	10	30
Working Radius (m)								
14.1	11.00							
16.0	11.00	17.1m×10.95t	16.2m×11.00t					
18.0	10.90	10.75	11.00			18.3m×9.15t		
20.0	9.25	9.80	9.55	21.0m×8.20t	8.85		20.4m×5.00t	
22.0	7.95	8.45	8.25	8.00	8.45		4.80	
24.0	6.90	7.30	7.15	7.65	7.35	24.9m×6.15t	4.60	
26.0	6.00	6.40	6.25	6.85	6.45	6.00	4.45	
28.0	5.25	5.60	5.50	6.05	5.70	5.75	4.25	28.8m×3.20t
30.0	4.65	4.90	4.85	5.35	5.05	5.50	4.10	3.15
32.0	4.05	4.30	4.30	4.70	4.45	5.05	3.95	3.10
34.0	3.60	3.80	3.80	4.20	3.95	4.50	3.85	3.00
36.0	3.15	3.35	3.35	3.70	3.50	4.00	3.65	2.95
38.0	2.80	2.95	2.95	3.30	3.10	3.60	3.25	2.90
40.0	2.45	2.60	2.60	2.90	2.75	3.20	2.90	2.85
42.0	2.15	2.25	2.30	2.55	2.45	2.85	2.55	2.75
44.0	1.85	2.00	2.05	2.25	2.15	2.50	2.30	2.70
46.0	1.60	1.70	1.80	2.00	1.90	2.25	2.00	2.45
48.0	46.6m×1.50t	47.5m×1.50t	1.55	1.75	1.70	1.95	1.80	2.15
50.0			48.5m×1.50t	1.50	49.5m×1.50t	1.70	1.55	1.90
52.0						1.50	50.5m×1.50t	1.70
54.0								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. The load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.

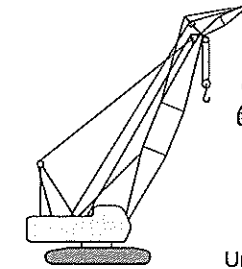
Hook Capacity (ton)	Weight (ton)
90	0.97
45	0.62
22	0.60
11	0.37

3. Working radius is the horizontal distance from the swing center to the center of gravity of a lifted load.

4. The counterweight is 30.4 ton.

5. Be sure to fully extend the side frames before operating the machine.

■ Crane Ratings (Jib in 360° Working Area) (4)



Unit: ton

Boom Length (m)	52			
Jib Length (m)	10		16	
Offset Angle (°)	10	30	10	30
Working Radius (m)				
14.6	11.00			
16.0	11.00	17.6m×10.20t	16.7m×11.00t	
18.0	10.75	10.10	11.00	
20.0	9.10	9.60	9.40	21.5m×7.7.10t
22.0	7.80	8.30	8.10	7.00
24.0	6.75	7.20	7.00	6.70
26.0	5.85	6.25	6.10	6.40
28.0	5.10	5.45	5.35	5.90
30.0	4.45	4.80	4.70	5.20
32.0	3.90	4.20	4.15	4.60
34.0	3.45	3.65	3.65	4.05
36.0	3.00	3.20	3.20	3.60
38.0	2.60	2.80	2.80	3.15
40.0	2.30	2.45	2.45	2.80
42.0	2.00	2.15	2.15	2.45
44.0	1.70	1.85	1.90	2.15
46.0	45.5m×1.50t	1.55	1.60	1.85
48.0		46.5m×1.50t	47.0m×1.50t	1.60
48.7				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.

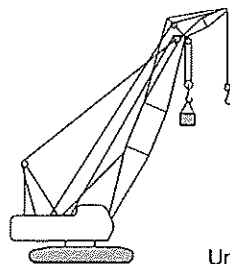
2. The load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.

Hook Capacity (ton)	Weight (ton)
90	0.97
45	0.62
22	0.60
11	0.37

3. Working radius is the horizontal distance from the swing center to the center of gravity of a lifted load.

4. The counterweight is 30.4 ton.

5. Be sure to fully extend the side frames before operating the machine.



Crane Ratings (Main boom with Jib in 360° Working Area) (1)

Unit: ton

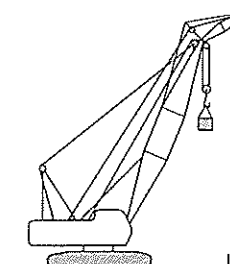
Boom Length (m)	34							
Jib Length (m)	10		16		22		28	
Offset Angle (°)	10	30	10	30	10	30	10	30
Working Radius (m)								
7.8	34.60	34.30	34.15	33.50	33.55	32.60	32.90	31.50
8.0	33.40	33.05	32.90	32.30	32.30	31.40	31.65	30.35
9.0	28.20	27.90	27.70	27.20	27.15	26.35	26.50	25.40
10.0	24.20	23.95	23.75	23.30	23.20	22.55	22.60	21.65
12.0	18.65	18.45	18.20	17.85	17.70	17.15	17.10	16.40
14.0	14.90	14.75	14.50	14.20	14.00	13.60	13.45	12.85
16.0	12.25	12.10	11.80	11.60	11.35	11.00	10.80	10.35
18.0	10.25	10.15	9.85	9.65	9.35	9.10	8.85	8.50
20.0	8.70	8.60	8.30	8.15	7.85	7.60	7.35	7.05
22.0	7.45	7.40	7.05	6.95	6.60	6.45	6.10	5.90
24.0	6.45	6.40	6.05	5.95	5.60	5.50	5.15	4.95
26.0	5.60	5.55	5.20	5.15	4.80	4.70	4.30	4.20
28.0	4.90	4.85	4.55	4.50	4.10	4.05	3.55	3.45
30.0	4.20	4.15	3.70	3.65	3.20	3.10	2.60	2.50
30.8	3.80	3.75	3.30	3.30	2.80	2.75	2.20	2.15

Boom Length (m)	37							
Jib Length (m)	10		16		22		28	
Offset Angle (°)	10	30	10	30	10	30	10	30
Working Radius (m)								
8.4	31.10	30.75	30.60	30.00	30.05	29.15	29.40	28.15
9.0	28.15	27.85	27.65	27.15	27.10	26.30	26.50	25.35
10.0	24.20	23.90	23.70	23.25	23.20	22.50	22.60	21.60
12.0	18.60	18.40	18.15	17.80	17.65	17.10	17.10	16.35
14.0	14.85	14.70	14.45	14.15	13.95	13.55	13.40	12.80
16.0	12.20	12.05	11.75	11.55	11.30	10.95	10.80	10.30
18.0	10.20	10.05	9.75	9.60	9.30	9.05	8.80	8.40
20.0	8.60	8.50	8.20	8.05	7.80	7.55	7.30	6.95
22.0	7.35	7.30	7.00	6.85	6.55	6.35	6.05	5.80
24.0	6.35	6.30	5.95	5.85	5.55	5.40	5.10	4.85
26.0	5.50	5.45	5.15	5.05	4.70	4.60	4.25	4.10
28.0	4.80	4.75	4.45	4.35	4.00	3.90	3.55	3.45
30.0	4.20	4.15	3.85	3.80	3.45	3.35	2.85	2.75
32.0	3.60	3.55	3.15	3.10	2.60	2.55	2.05	1.95
33.4	3.30	3.00	2.55	2.50	2.05	2.00	33.2m×1.50t	33.1m×1.50t

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 overfront stability stipulated by the mobile crane construction standards.

- The load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.
Auxiliary hook Hook capacity : 11 ton Hook weight : 0.37 ton
- Working radius is the horizontal distance from the swing center to the center of gravity of a lifted load.
- The counterweight is 30.4 ton.
- Be sure to fully extend the side frames before operating the machine.
- Correlations among the number of hoist rope reevings, maximum rated loads and hook weights are shown in the table below.

Hook Capacity (ton)	Hook Weight (ton)	Maximum Rated Load (ton)			
		4	3	2	1
45	0.62	34.6	33	22	—
22	0.60	—	—	22	—



Crane Ratings (Main boom with Jib in 360° Working Area) (2)

Unit: ton

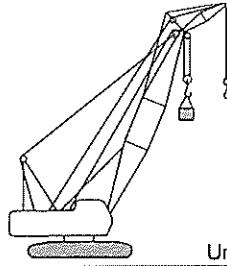
Boom Length (m)	40							
Jib Length (m)	10		16		22		28	
Offset Angle (°)	10	30	10	30	10	30	10	30
Working Radius (m)								
8.9	28.45	28.15	27.95	27.40	27.45	26.60	26.80	25.65
9.0	27.95	27.70	27.50	26.95	26.95	26.15	26.35	25.20
10.0	24.00	23.75	23.55	23.10	23.05	22.35	22.45	21.45
12.0	18.45	18.20	18.00	17.65	17.50	16.95	16.95	16.20
14.0	14.70	14.50	14.25	14.00	13.80	13.35	13.30	12.65
16.0	12.00	11.85	11.60	11.35	11.15	10.80	10.65	10.15
18.0	10.00	9.90	9.60	9.40	9.15	8.85	8.70	8.25
20.0	8.45	8.35	8.05	7.90	7.60	7.35	7.15	6.80
22.0	7.20	7.10	6.80	6.65	6.40	6.20	5.90	5.65
24.0	6.15	6.10	5.80	5.70	5.40	5.20	4.90	4.70
26.0	5.35	5.25	4.95	4.85	4.55	4.40	4.10	3.90
28.0	4.60	4.55	4.25	4.15	3.85	3.75	3.40	3.25
30.0	4.00	3.95	3.65	3.60	3.25	3.15	2.80	2.70
32.0	3.50	3.45	3.15	3.10	2.65	2.60	2.10	2.00
34.0	2.95	2.90	2.45	2.40	1.95	1.90	33.7m×1.50t	33.4m×1.50t
36.0	2.20	2.15	1.75	1.70	35.2m×1.50t	35.1m×1.50t		

Boom Length (m)	43							
Jib Length (m)	10		16		22		28	
Offset Angle (°)	10	30	10	30	10	30	10	30
Working Radius (m)								
9.5	25.75	25.45	25.30	24.75	24.75	24.00	24.20	23.10
10.0	23.90	23.60	23.45	22.95	22.95	22.20	22.35	21.35
12.0	18.30	18.10	17.85	17.50	17.40	16.80	16.85	16.05
14.0	14.55	14.35	14.15	13.85	13.70	13.25	13.15	12.55
16.0	11.85	11.70	11.45	11.20	11.05	10.65	10.55	10.00
18.0	9.85	9.75	9.45	9.25	9.05	8.70	8.55	8.15
20.0	8.30	8.20	7.90	7.75	7.50	7.20	7.00	6.65
22.0	7.05	6.95	6.65	6.50	6.25	6.05	5.80	5.50
24.0	6.00	5.95	5.65	5.50	5.25	5.05	4.80	4.55
26.0	5.15	5.10	4.80	4.70	4.40	4.25	3.95	3.75
28.0	4.45	4.40	4.10	4.00	3.70	3.55	3.25	3.10
30.0	3.85	3.80	3.50	3.40	3.10	3.00	2.70	2.55
32.0	3.35	3.30	3.00	2.90	2.60	2.50	2.10	1.95
34.0	2.85	2.85	2.50	2.40	2.00	1.90	33.8m×1.50t	33.3m×1.50t
36.0	2.30	2.25	1.85	1.80	35.5m×1.50t	35.3m×1.50t		
38.0	1.70	1.65	37.1m×1.50t	37.0m×1.50t				
38.6	1.50	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.

- The load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.
Auxiliary hook Hook capacity : 11 ton Hook weight : 0.37 ton
- Working radius is the horizontal distance from the swing center to the center of gravity of a lifted load.
- The counterweight is 30.4 ton.
- Be sure to fully extend the side frames before operating the machine.
- Correlations among the number of hoist rope reevings, maximum rated loads and hook weights are shown in the table below.

Hook Capacity (ton)	Hook Weight (ton)	Maximum Rated Load (ton)			
		4	3	2	1
45	0.62	34.6	33	22	—
22	0.60	—	—	22	—



■ Crane Ratings (Main boom with Jib in 360° Working Area) (3)

Unit: ton

Boom Length (m)	46							
Jib Length (m)	10		16		22		28	
Offset Angle (°)	10	30	10	30	10	30	10	30
Working Radius (m)								
10.0	23.75	23.50	23.30	22.85	22.80	22.05	22.25	21.20
12.0	18.15	17.95	17.75	17.35	17.25	16.70	16.75	15.95
14.0	14.40	14.25	14.00	13.70	13.55	13.10	13.05	12.40
16.0	11.70	11.55	1.35	11.10	10.90	10.50	10.40	9.90
18.0	9.70	9.60	9.35	9.10	8.90	8.60	8.45	8.00
20.0	8.15	8.05	7.75	7.60	7.35	7.10	6.90	6.50
22.0	6.90	6.80	6.50	6.35	6.10	5.90	5.65	5.35
24.0	5.85	5.80	5.50	5.35	5.10	4.90	4.65	4.40
26.0	5.00	4.95	4.65	4.55	4.25	4.10	3.85	3.60
28.0	4.30	4.25	3.95	3.85	3.55	3.40	3.15	2.95
30.0	3.70	3.65	3.35	3.25	2.95	2.85	2.55	2.40
32.0	3.15	3.10	2.80	2.75	2.45	2.35	2.00	1.80
34.0	2.70	2.65	2.35	2.30	1.90	1.80	33.6m×1.50t	33.0m×1.50t
36.0	2.30	2.25	1.85	1.75	35.4m×1.50t	35.0m×1.50t		
38.0	1.75	1.70	37.2m×1.50t	37.0m×1.50t				
38.9	1.50	38.7m×1.50t						

Boom Length (m)	49							
Jib Length (m)	10		16		22		28	
Offset Angle (°)	10	30	10	30	10	30	10	30
Working Radius (m)								
10.6	21.75	21.50	21.30	20.85	20.85	20.15	20.30	19.35
12.0	18.10	17.85	17.65	17.30	17.20	16.65	16.70	15.90
14.0	14.35	14.15	13.95	13.65	13.50	13.00	13.00	12.35
16.0	11.65	11.50	11.25	11.00	10.85	10.45	10.35	9.80
18.0	9.65	9.50	9.25	9.05	8.85	8.50	8.40	7.90
20.0	8.05	7.95	7.70	7.50	7.30	7.70	6.85	6.45
22.0	6.80	6.70	6.45	6.30	6.05	5.80	5.60	5.25
24.0	5.80	5.70	5.40	5.30	5.50	4.80	4.60	4.30
26.0	4.95	4.85	4.55	4.45	4.20	4.00	3.75	3.50
28.0	4.20	4.15	3.85	3.75	3.50	3.30	3.05	2.85
30.0	3.60	3.55	3.25	3.15	2.85	2.75	2.45	2.30
32.0	3.05	3.00	2.70	2.65	2.35	2.25	1.90	1.70
34.0	2.60	2.55	2.25	2.20	1.85	1.70	33.3m×1.50t	32.7m×1.50t
36.0	2.20	2.15	1.80	1.70	35.2m×1.50t	34.7m×1.50t		
38.0	1.70	1.65	37.2m×1.50t	36.7m×1.50t				
38.9	38.8m×1.50t	38.6m×1.50t						

- 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 overfront stability stipulated by the 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.
 Auxiliary hook Hook capacity : 11 ton Hook weight : 0.37 ton
 3. Working radius is the horizontal distance from the swing center to the center of gravity of a lifted load.
 4. The counterweight is 30.4 ton.
 5. Be sure to fully extend the side frames before operating the machine.
 6. Correlations among the number of hoist rope reevings, maximum rated loads and hook weights are shown in the table below.

Hook Capacity (ton)	Hook Weight (ton)	Maximum Rated Load (ton)			
		4	3	2	1
45	0.62	34.6	33	22	—
22	0.60	—	—	22	—

■ Crane Ratings (Main boom with Jib in 360° Working Area) (4)

Unit: ton

Boom Length (m)	52			
Jib Length (m)	10		16	
Offset Angle (°)	10	30	10	30
Working Radius (m)				
11.1	20.15	19.90	19.75	19.30
12.0	17.95	17.70	17.55	17.15
14.0	14.20	14.00	13.80	13.50
16.0	11.50	11.35	11.10	10.85
18.0	9.50	9.35	9.10	8.90
20.0	7.90	7.80	7.55	7.35
22.0	6.65	6.55	6.30	6.15
24.0	5.65	5.55	5.30	5.15
26.0	4.75	4.70	4.45	4.30
28.0	4.05	4.00	3.70	3.60
30.0	3.45	3.35	3.10	3.00
32.0	2.90	2.85	2.55	2.50
34.0	2.45	2.40	2.10	2.05
36.0	2.05	2.00	1.65	1.55
38.0	1.60	1.55	36.5m×1.50t	36.2m×1.50t
38.4	1.50	38.2m×1.50t		

- 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 overfront stability stipulated by the 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.
 Auxiliary hook Hook capacity : 11 ton Hook weight : 0.37 ton
 3. Working radius is the horizontal distance from the swing center to the center of gravity of a lifted load.
 4. The counterweight is 30.4 ton.
 5. Be sure to fully extend the side frames before operating the machine.
 6. Correlations among the number of hoist rope reevings, maximum rated loads and hook weights are shown in the table below.

Hook Capacity (ton)	Hook Weight (ton)	Maximum Rated Load (ton)			
		4	3	2	1
45	0.62	34.6	33	22	—
22	0.60	—	—	22	—

■Dimensions

Unit: mm

■Crane Boom Construction

Boom Length (m)		13	16	19	22	25	28	31	34	37	40	43	46	49	52	55	58	61
Elements		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lower Boom	6.5 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Upper Boom	6.5 m	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3 m Boom Insert			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3 m Boom Insert		1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6 m Boom Insert					1	1	1	1	2	2	2	2	2	2	2	2	2	2
9 m Boom Insert								1	1	1	1	2	2	2	2	3	3	3
Available Jib		Jib Length 10 m, 16 m																
		Jib Length 22 m, 28 m																
Available aux. Jib		←-----→																

Notes: 1. 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.
 2. When crane is transformed from tower crane by using tower boom of 52 m or longer, the following boom inserts are required.
 • 52 to 58 m boom : 9 m x 1
 • 61 m boom : 9 m x 1 + 3 m x 1

■Crane Jib Construction

Jib Length (m)		10	16	22	28
Elements		1	1	1	1
Lower Jib	5 m	1	1	1	1
Upper Jib	5 m	1	1	1	1
6 m Jib Insert			1	2	3

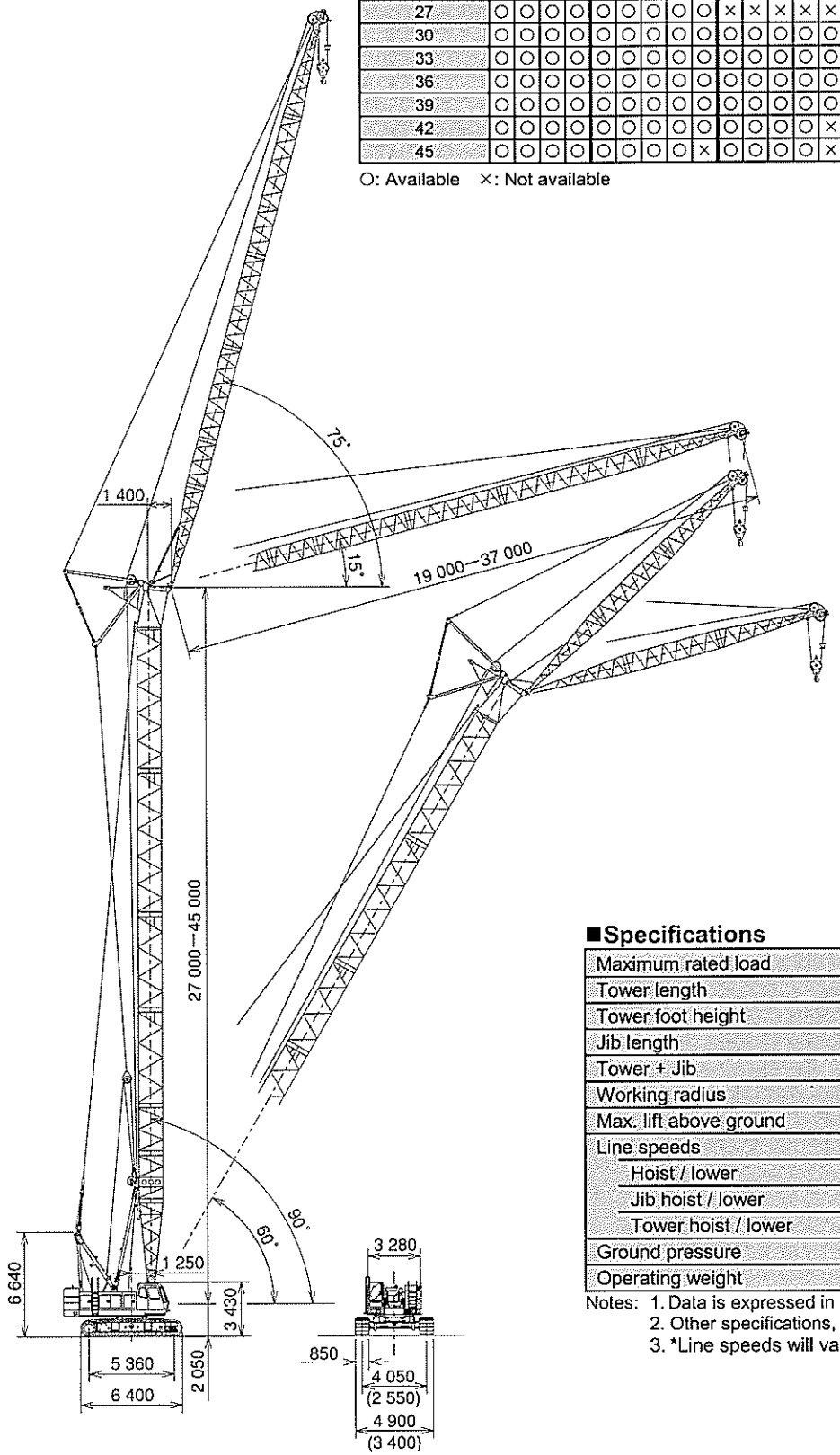
■Component Weights and Dimensions for Transport

Components		Weight (ton)	Q'ty	Length × Width × Height (m)			Remarks
Basic Machine	Basic Machine	35.1	1	3.11	13.2	3.28	Including A-frame, lower boom, wire ropes for main hoist and boom hoist Excluding side frames, counterweights and float
	Basic Machine	32.4	1	3.11	7.79	3.28	Including A-frame Excluding side frames, lower boom wire ropes for main hoist and boom hoist, counterweights, and float
	Basic Machine	54.7	1	3.43	13.2	3.40	Including A-frame, lower boom, wire ropes for main hoist and boom hoist and side frames Excluding counterweights
	Side Frame (one side)	9.75	2	1.11	6.40	0.93	
	Counterweight A	8.58	1	0.91	3.48	1.27	
	Counterweight B	7.35	1	0.62	3.48	0.96	
	Counterweight C	6.61	1	0.53	3.48	0.96	
Crane Front	Lower Boom	1.19	1	1.81	6.69	1.79	Including foot-pin and boom-joint pin
	Upper Boom	1.68	1	1.74	7.04	1.62	Including pendant ropes and hook overhoist cutoff switch
	Boom Stop (one side)	0.09	2	0.15	4.35	0.15	
	Bridle	0.39	1	0.30	1.85	0.63	
	3 m Boom Insert	0.43	1	1.73	3.14	1.79	Including joint pin Excluding pendant ropes
	6 m Boom Insert	0.70	1	1.73	6.14	1.79	Including joint pin Excluding pendant ropes
	9 m Boom Insert	1.01	1	1.73	9.14	1.79	Including joint pin Excluding pendant ropes
	Lower Jib	0.57	1	1.11	5.12	1.03	Including hook pin and jib mast
	Upper Jib	0.31	1	1.35	5.43	1.01	Including hook overhoist cutoff switch
	6 m Jib Insert	0.18	1	0.93	6.08	1.06	
	Jib Mast	0.35	1	0.62	4.80	0.85	
	Aux Jib	0.33	1	0.84	1.47	0.94	Including hook overhoist cutoff switch
	90 ton Hook	0.97	1	1.98	0.73	0.45	
45 ton Hook	0.62	1	1.76	0.73	0.36		
22 ton Hook	0.60	1	1.67	0.73	0.36		
11 ton Hook	0.37	1	1.03	0.45	0.45		

■Tower Jib Construction

Tower Angle (°)		19		22		25		28		31		34		37															
Tower Length (m)	Tower Angle (°)	90	80	70	60	90	80	70	65	60	90	80	70	65	60	90	80	70	65	60	90	80	75	70	90	80	75	70	
		27		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
30		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
33		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
36		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
39		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
42		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
45		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

○: Available ×: Not available



■Specifications

Maximum rated load	ton × m	15.0 × 14.0 (45 m tower + 25 m jib)
Tower length	m	27 to 45
Tower foot height	m	2.05
Jib length	m	19 to 37
Tower + Jib	m	45 + 37
Working radius	m	8.6 to 53.0
Max. lift above ground	m	78 (45m tower + 37m jib)
Line speeds		
Hoist / lower	m/min	*105/60/30
Jib hoist / lower	m/min	*50/30
Tower hoist / lower	m/min	*55
Ground pressure	kPa (kgf/cm ²)	101 (1.03)
Operating weight	ton	99.1 (45 m tower + 37 m jib)

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

Dimension shown in () are with side frames fully retracted.

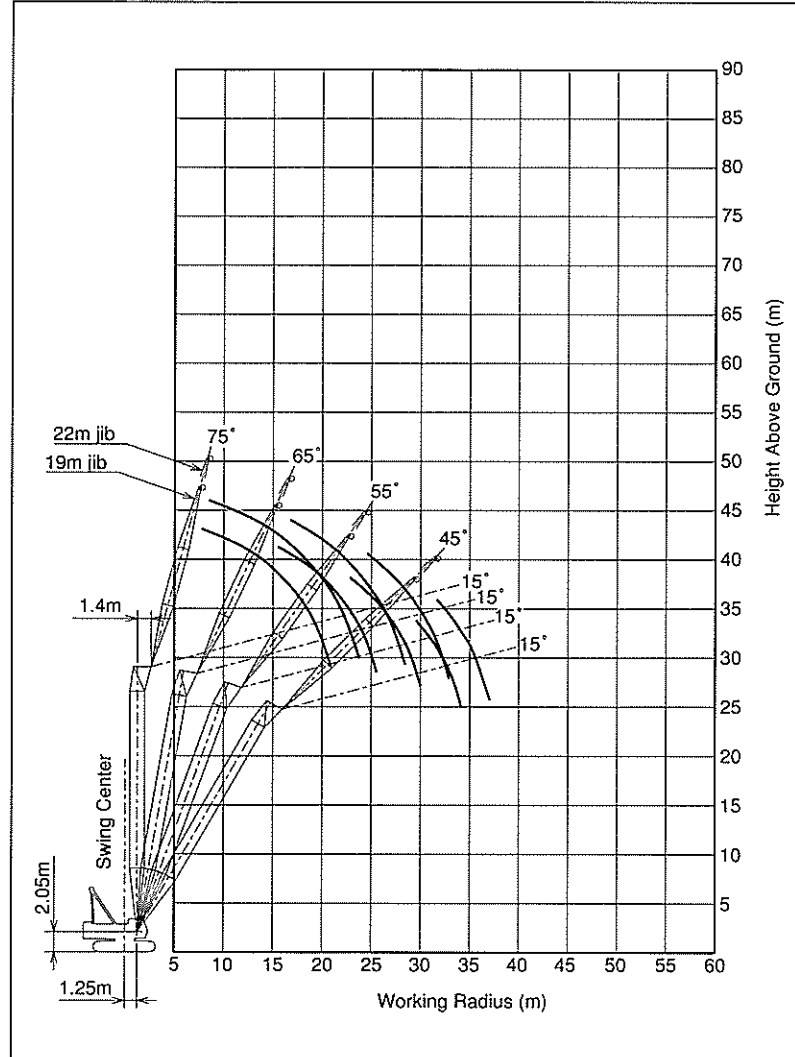
27 m Tower (2-Rope Reeving)

Rated Loads for Tower Crane

Unit: ton

Jib Length (m)	19				22			
	90	80	70	60	90	80	70	60
8.6	15.00							
9.0	15.00				9.5×5.00			
10.0	15.00				15.00			
12.0	15.00				15.00			
14.0	15.00	15.6×13.05			15.00			
16.0	13.60	12.65			13.55	16.9×11.70		
18.0	11.80	10.95			11.70	10.85		
20.0	10.35	9.60			10.25	9.50		
22.0	21.0×8.25	8.55	22.9×7.35		9.10	8.45		
24.0		7.65	6.95		23.9×7.05	7.55	24.6×6.60	
26.0		25.4×7.15	6.25			6.85	6.15	
28.0			5.70	29.5×4.80		6.20	5.60	
30.0			29.9×5.25	4.65		28.3×6.15	5.10	31.6×4.25
32.0				4.30			4.70	4.15
34.0				3.95			32.8×4.55	3.85
36.0				34.1×3.95				3.55
37.0								3.40

Working Ranges



Working ranges shown are under unloaded condition.

- Notes:
- 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.
 - The load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.

Hook Capacity (ton)	Hook Weight (ton)
22	0.60

- Working radius is a horizontal distance between swing center of the machine and center of gravity of the load lifted.
- Counterweight is 30.4 t.
- Be sure to fully extend the side frames before operating the machine.
- Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

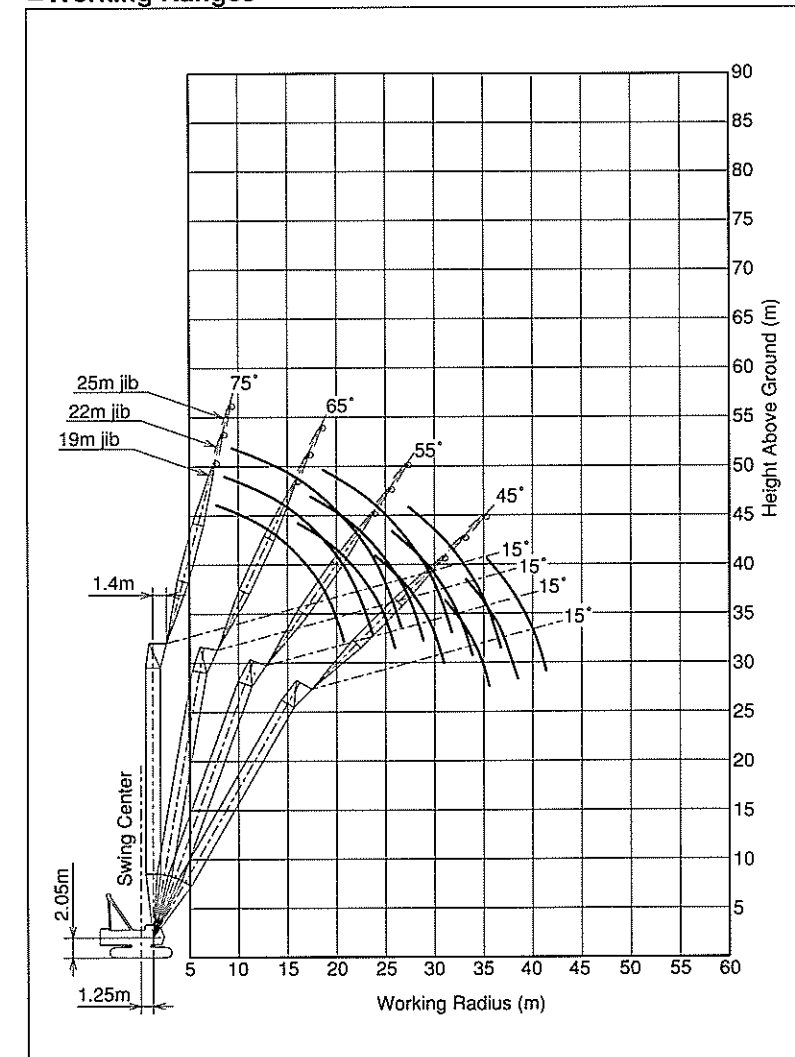
30 m Tower (2-Rope Reeving)

Rated Loads for Tower Crane

Unit: ton

Jib Length (m)	19				22				25			
	90	80	70	60	90	80	70	60	90	80	70	60
8.7	15.00											
9.0	15.00				9.5×15.00							
10.0	15.00				15.00				10.3×15.00			
12.0	15.00				15.00				15.00			
14.0	15.00				15.00				15.00			
16.0	13.60	16.1×12.40			13.50	17.4×11.15			13.40			
18.0	11.80	10.80			11.70	10.70			11.60	18.7×10.10		
20.0	10.35	9.50			10.25	9.40			10.15	9.25		
22.0	21.0×8.50	8.45	23.9×6.75		9.10	8.35			9.00	8.20		
24.0		7.55	6.70		23.9×7.25	7.45	25.6×6.05		8.05	7.35		
26.0		25.9×6.85	6.05			6.75	5.95		7.30	6.65	27.3×5.45	
28.0			5.50			6.15	5.40		26.8×6.25	6.00	5.25	
30.0			5.05	31.0×4.25		28.8×5.90	4.95	33.1×3.75		5.50	4.80	
32.0			30.9×4.85	4.05			4.55	3.60		31.7×5.10	4.40	
34.0				3.75			33.8×4.20	3.35			4.05	35.2×3.30
36.0				35.6×3.50				3.10			3.75	3.20
38.0								38.5×3.05			36.7×3.65	2.95
40.0												2.75
41.4												2.60

Working Ranges



Working ranges shown are under unloaded condition.

- Notes:
- 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.
 - The load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.

Hook Capacity (ton)	Hook Weight (ton)
22	0.60

- Working radius is a horizontal distance between swing center of the machine and center of gravity of the load lifted.
- Counterweight is 30.4 t.
- Be sure to fully extend the side frames before operating the machine.
- Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

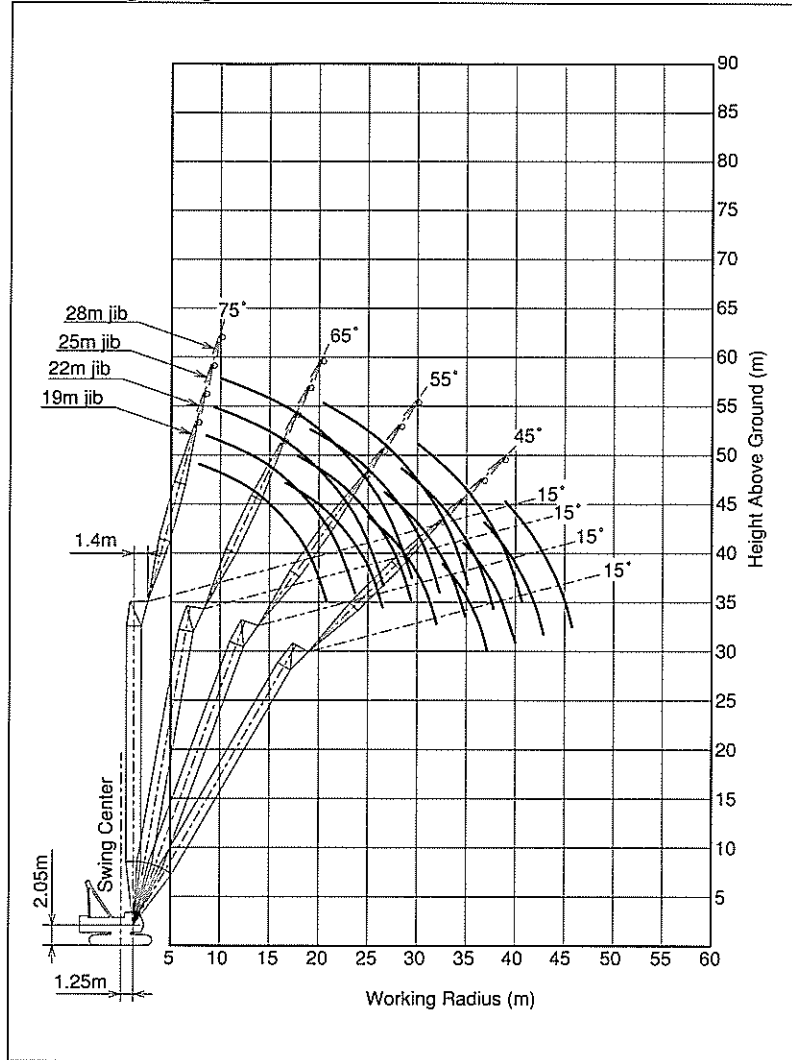
33 m Tower (2-Rope Reeving)

Rated Loads for Tower Crane

Unit: ton

Jib Length (m)	19				22				25				28			
Tower Angle (°)	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
8.7	15.00															
9.0	15.00				9.6×15.00											
10.0	15.00				15.00				10.4×15.00				11.2×15.00			
12.0	15.00				15.00				15.00				15.00			
14.0	15.00				15.00				15.00				15.00			
16.0	13.55	16.6×11.75			13.50	17.9×10.60			13.40				13.30			
18.0	11.75	10.65			11.65	10.55			11.55	19.2×9.60			11.45			
20.0	10.30	9.35			10.25	9.25			10.15	9.10			10.05	20.4×8.80		
22.0	21.0×8.70	8.30			9.10	8.20			9.00	8.05			8.90	7.95		
24.0		7.45	24.9×6.20		23.9×7.45	7.35			8.05	7.20			8.00	7.10		
26.0		6.70	5.85		6.65	26.6×5.55			7.30	6.50			7.20	6.40		
28.0		26.5×6.55	5.30		6.05	5.20			26.8×6.35	5.90	28.4×4.95		6.55	5.80		
30.0			4.85		29.4×5.65	4.75			5.40	4.60			29.7×5.45	5.30	30.1×4.45	
32.0			4.45	32.5×3.70		4.35			4.95	4.20			4.85	4.10		
34.0				3.50		4.00	34.6×3.30		32.3×4.90	3.85			4.50	3.75		
36.0				3.20			34.9×3.85	3.10		3.55	36.7×2.85		35.2×4.25	3.45		
38.0					31.7×3.10			2.85			37.7×3.35	2.70		3.20	38.8×2.50	
40.0								2.65				2.50		2.95	2.40	
42.0												2.35		40.6×2.90	2.20	
44.0													42.9×2.25		2.00	
45.8															1.85	

Working Ranges



- 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.
- The load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.

Hook Capacity (ton)	Hook Weight (ton)
22	0.60

- Working radius is a horizontal distance between swing center of the machine and center of gravity of the load lifted.
- Counterweight is 30.4 t.
- Be sure to fully extend the side frames before operating the machine.
- Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

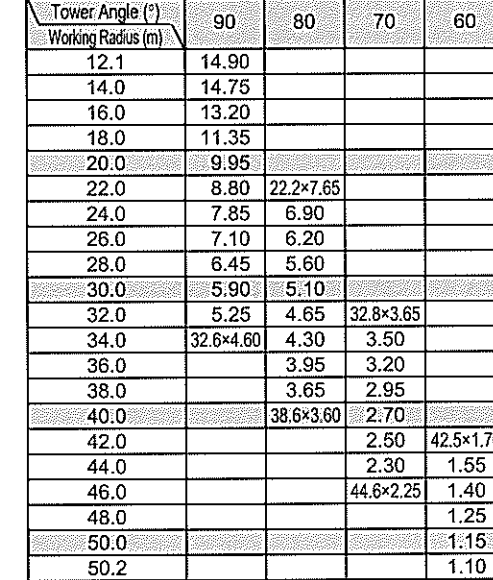
36 m Tower (2-Rope Reeving)

Rated Loads for Tower Crane

Unit: ton

Jib Length (m)	19				22				25				28			
Tower Angle (°)	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
8.8	15.00															
9.0	15.00				9.6×15.00											
10.0	15.00				15.00				10.4×15.00				11.3×15.00			
12.0	15.00				15.00				15.00				15.00			
14.0	15.00				15.00				15.00				15.00			
16.0	13.55	17.2×11.10			13.45				13.35				13.25			
18.0	11.70	10.50			11.65	18.4×10.10			11.55	19.7×9.15			11.45			
20.0	10.30	9.20			10.20	9.10			10.10	8.95			10.00	21.0×8.30		
22.0	21.0×8.55	8.15			9.05	8.05			8.95	7.95			8.90	7.85		
24.0		7.30	25.9×6.65		23.9×7.35	7.20			8.05	7.10			7.95	7.00		
26.0		6.60	5.65		6.50	27.7×5.05			7.25	6.40			7.20	6.30		
28.0		27.0×6.30	5.10		5.90	5.00			26.8×6.30	5.80	29.4×4.55		6.50	5.70		
30.0			4.65		29.9×5.45	4.55			5.30	4.40			29.7×5.40	5.20	31.1×4.10	
32.0			4.30			4.15			4.85	4.05			4.75	3.90		
34.0				33.0×4.10	3.25				3.85				3.70	3.60		
36.0					3.00				35.9×3.55	36.1×2.85			3.40		35.7×4.10	3.30
38.0									2.65				3.15	38.2×2.45		3.05
40.0									2.45				38.8×3.05	2.25		2.80
42.0										41.5×2.30			2.05			41.7×2.65
44.0													1.90			1.70
46.0														44.4×1.85		1.55
47.3																1.45

Working Ranges



- 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.
- The load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.

Hook Capacity (ton)	Hook Weight (ton)
22	0.60

- Working radius is a horizontal distance between swing center of the machine and center of gravity of the load lifted.
- Counterweight is 30.4 t.
- Be sure to fully extend the side frames before operating the machine.
- Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

39 m Tower (2-Rope Reeving)

Rated Loads for Tower Crane

Unit: ton

Jib Length (m)	19				22				25				28			
Tower Angle (°)	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
Working Radius (m)																
8.8	15.00															
9.0	15.00				9.7×15.00											
10.0	15.00				15.00				10.5×15.00				11.3×15.00			
12.0	15.00				15.00				15.00				15.00			
14.0	15.00				15.00				15.00				15.00			
16.0	13.50	17.7×10.55			13.45				13.30				13.25			
18.0	11.70	10.30			11.60	18.9×9.60			11.50				11.40			
20.0	10.25	9.05			10.20	8.95			10.10	20.2×8.70			10.00	21.5×7.90		
22.0	21.1×8.75	8.05			9.05	7.90			8.95	7.80			8.85	7.70		
24.0		7.20			7.50	7.10			8.00	6.95			7.95	6.85		
26.0		6.50	27.0×5.15		6.40				7.25	6.30			7.15	6.20		
28.0		27.5×6.05	4.90		5.80	28.7×4.60			26.9×6.35	5.70			6.50	5.60		
30.0			4.45		5.30	4.35			5.20	30.4×4.10			29.8×5.45	5.10		
32.0			4.10		30.4×5.20	4.00			4.75	3.85			4.65	32.1×3.70		
34.0			3.75	35.5×2.80		3.65			33.3×4.50	3.50			4.30	3.40		
36.0				2.75		3.35	37.6×2.40			3.25			3.95	3.10		
38.0				2.55		36.9×3.25	2.35		3.00	39.7×1.95			32.6×3.95	2.85		
40.0				2.30			2.15		39.8×2.80	1.95				2.65	41.8×1.60	
42.0				40.1×2.30			1.95			1.75				2.45	1.60	
44.0							43.0×1.85			1.60				42.7×2.40	1.40	
46.0										45.9×1.45					1.25	
48.0															1.15	
48.8															1.10	

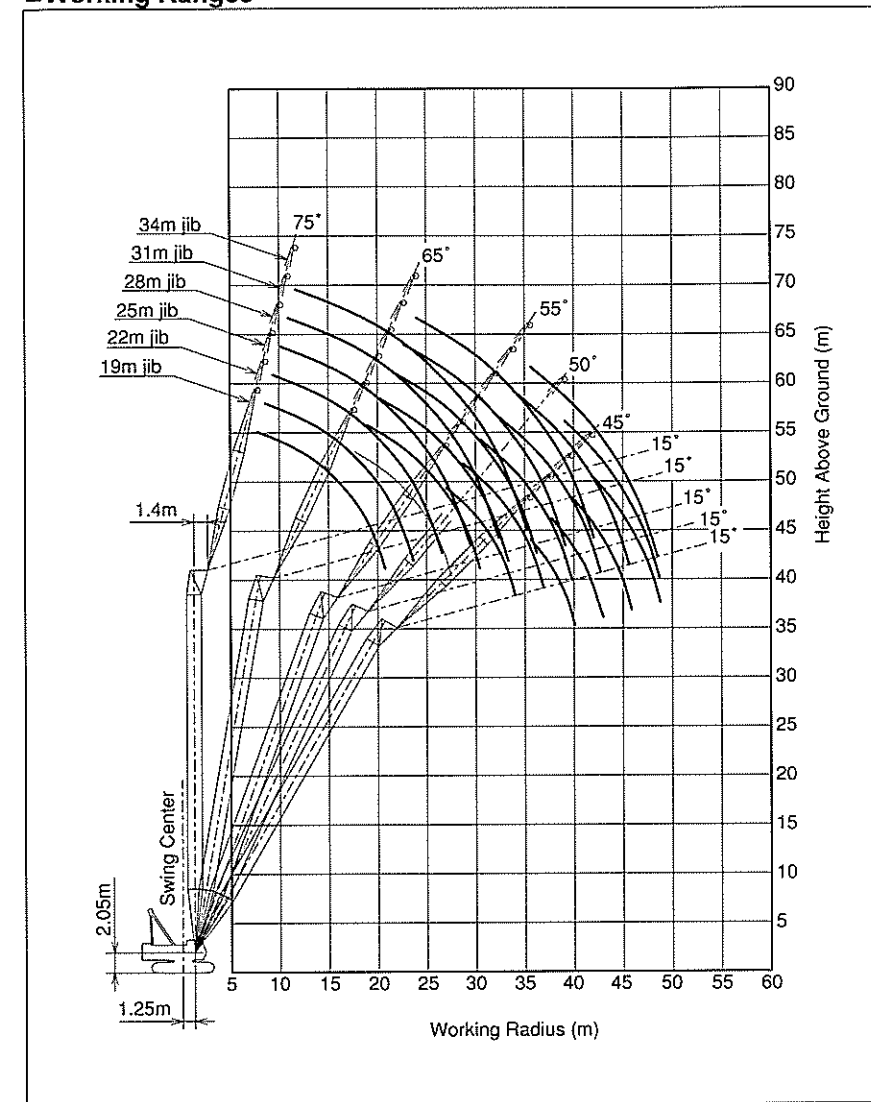
Jib Length (m)	31				34		
Tower Angle (°)	90	80	70	60	90	80	70
Working Radius (m)							
12.1	14.90				13.0×11.80		
14.0	14.55				11.60		
16.0	13.15				11.25		
18.0	11.35				10.90		
20.0	9.90				9.80		
22.0	8.80	22.8×7.25			8.70		
24.0	7.85	6.75			7.75	6.65	
26.0	7.05	6.10			7.00	5.95	
28.0	6.40	5.50			6.30	5.40	
30.0	5.85	5.00			5.75	4.90	
32.0	5.30	4.55	33.8×3.30		5.25	4.45	
34.0	32.7×4.65	4.20	3.30		4.85	4.10	35.6×2.95
36.0		3.85	3.00		35.6×4.00	3.75	2.90
38.0		3.60	2.75	39.0×2.20		3.20	2.65
40.0		39.1×3.45	2.55	2.10		3.00	2.40
42.0			2.35	1.90			2.20
44.0			2.15	1.70			2.00
46.0			45.6×2.05	1.55			1.80
48.0				1.40			1.65
48.7				1.35			48.5×1.60

- Notes:
- 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.
 - The load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.

Hook Capacity (ton)	Hook Weight (ton)
22	0.60

- Working radius is a horizontal distance between swing center of the machine and center of gravity of the load lifted.
- Counterweight is 30.4 t.
- Be sure to fully extend the side frames before operating the machine.
- Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

Working Ranges



Working ranges shown are under unloaded condition.

42 m Tower (2-Rope Reeving)

Rated Loads for Tower Crane

Unit: ton

Jib Length (m)	19				22				25				28			
Tower Angle (°)	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
Working Radius (m)																
8.9	15.00															
9.0	15.00				9.7×15.00											
10.0	15.00				15.00				10.5×15.00				11.4×15.00			
12.0	15.00				15.00				15.00				15.00			
14.0	15.00				15.00				15.00				15.00			
16.0	13.50				13.40				13.30				13.20			
18.0	11.65	18.2×10.00			11.60	19.5×9.05			11.45				11.40			
20.0	10.25	8.90			10.15	8.75			10.05	20.7×8.25			9.95			
22.0	21.1×8.90	7.90			9.00	7.75			8.90	7.65			8.85	7.55		
24.0		7.05			7.60	6.95			8.00	5.80			7.90	6.70		
26.0		6.35				6.25			7.20	6.15			7.15	6.05		
28.0		5.80	4.65		5.70	29.7×4.20			5.55				6.45	5.45		
30.0			4.25		5.20	4.10			5.10	31.4×3.70			29.8×5.50	5.00		
32.0			3.90		30.9×5.00	3.75			4.65	3.60			4.55	33.2×3.30		
34.0			3.55			3.45			33.8×4.30	3.30			4.20	3.20		
36.0			35.0×3.45	37.0×2.30		3.20			3.05	36.5×2.50			3.85	2.95		
38.0				2.15		37.9×2.95	39.1×1.85		2.80	2.30			36.7×3.75	2.70	38.4×2.10	
40.0				1.95			1.80		2.60	2.10			2.50	1.95		
42.0				41.6×1.85			1.60		40.8×2.50	1.90			2.30	1.75		
44.0							1.45			1.75			43.7×2.10	1.55		
46.0							44.5×1.45			44.2×1.70				1.40		
47.1														1.35		

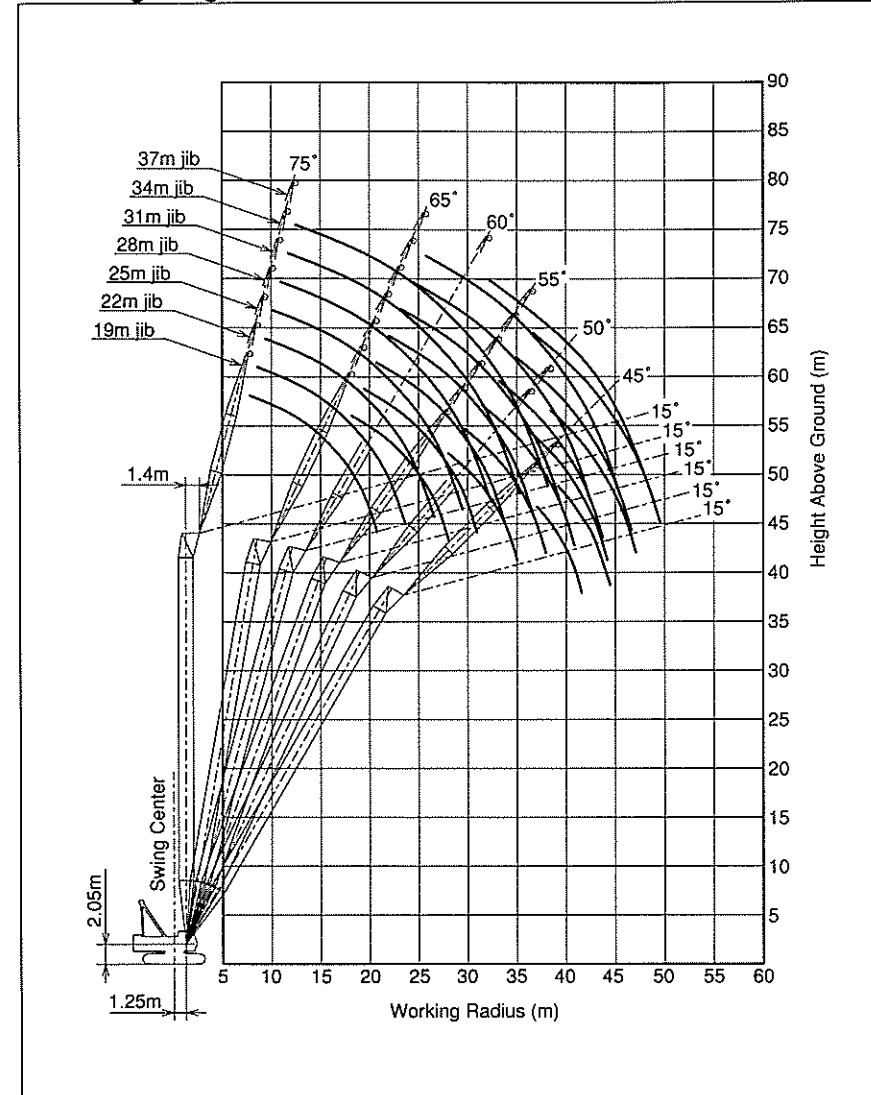
Jib Length (m)	31			34			37		
Tower Angle (°)	90	80	70	90	80	70	90	80	70
Working Radius (m)									
12.2	14.25			13.0×11.75			13.8×9.30		
14.0	13.95			11.60			9.30		
16.0	13.10			11.25			9.00		
18.0	11.30			10.90			8.70		
20.0	9.90			9.80			8.45		
22.0	8.75	23.3×6.90		8.65			8.20		
24.0	7.80	6.60		7.75	24.5×6.30		7.65	25.8×5.80	
26.0	7.05	5.95		6.95	5.80		6.85	5.70	
28.0	6.40	5.35		6.30	5.25		6.20	5.15	
30.0	5.85	4.90		5.75	4.75		5.65	4.65	
32.0	5.30	4.45		5.25	4.35		5.15	4.25	32.2×3.65
34.0	32.7×4.70	4.10	34.9×2.95	4.85	4.00		4.45	3.90	3.35
36.0		3.75	2.80	35.6×4.00	3.65	36.6×2.60	3.85	3.55	3.05
38.0		3.50	2.60		3.35	2.40	3.35	3.25	2.80
40.0		39.6×3.25	2.35		3.10	2.15	38.5×3.25	3.00	2.55
42.0			2.15		2.90	1.95		2.80	2.35
44.0			1.95		42.5×2.85	1.75		2.60	2.15
46.0			1.75			1.60		45.4×2.45	2.00
48.0			46.6×1.70			1.45			1.80
49.5						1.35			49.0×1.75

- 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 load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.

Hook Capacity (ton)	Hook Weight (ton)
22	0.60

3. Working radius is a horizontal distance between swing center of the machine and center of gravity of the load lifted.
 4. Counterweight is 30.4 t.
 5. Be sure to fully extend the side frames before operating the machine.
 6. Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

Working Ranges



Working ranges shown are under unloaded condition.

45 m Tower (2-Rope Reeving)

Rated Loads for Tower Crane

Unit: ton

Jib Length (m)	19				22				25				28		
Tower Angle (°)	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70
Working Radius (m)															
8.9	15.00														
9.0	15.00				9.8×15.00										
10.0	15.00				15.00				10.6×15.00				11.4×14.55		
12.0	15.00				15.00				15.00				14.55		
14.0	15.00				15.00				15.00				14.05		
16.0	13.45				13.35				13.25				13.15		
18.0	11.65	18.7×9.50			11.55				11.45				11.35		
20.0	10.20	8.70			10.10	8.60			10.00	21.3×7.80			9.95		
22.0	21.1×9.10	7.75			9.00	7.60			8.90	7.50			8.80	22.5×7.15	
24.0		6.90			7.65	6.80			7.95	6.70			7.90	6.55	
26.0		6.25			6.15				7.20	6.00			7.10	5.90	
28.0		5.65	29.0×4.20		5.55				26.9×6.50	5.45			6.45	5.35	
30.0		28.5×5.55	4.05		5.10	30.7×3.75			4.95				29.8×5.55	4.85	
32.0			3.70		31.4×4.80	3.55			4.55	32.5×3.35			4.45		
34.0			3.40			3.25	35.8×2.50		4.20	3.10			4.10	34.2×2.95	
36.0			3.10			3.00	2.45		34.3×4.15	2.85	37.7×2.05		3.75	2.75	
38.0			36.1×3.10	38.5×1.75		2.75	2.20		2.60	2.00			37.2×3.60	2.50	
40.0				1.65		39.0×2.65	2.00		2.40	1.80				2.25	
42.0				1.45			1.85		41.9×2.20	1.60				2.05	
44.0				43.1×1.40			42.5×1.80			1.45				1.85	
45.4									1.35					44.8×1.80	

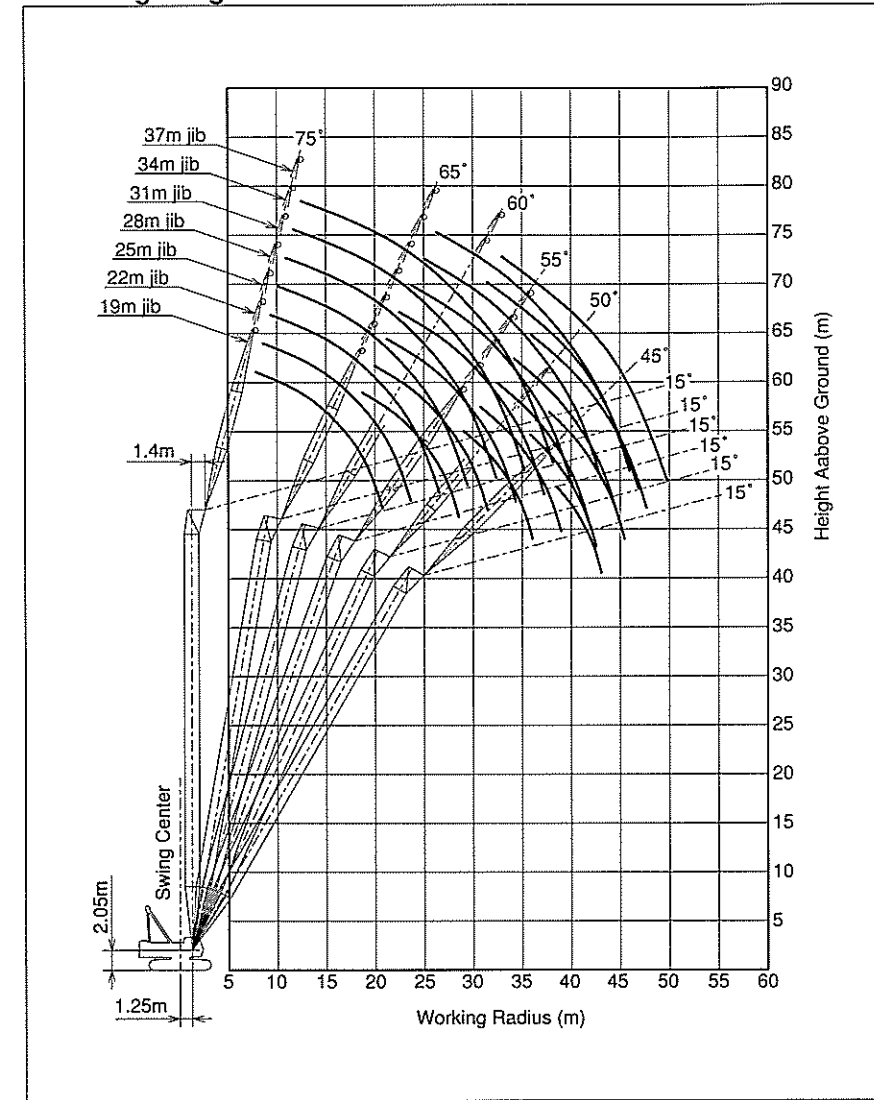
Jib Length (m)	31			34			37		
Tower Angle (°)	90	80	70	90	80	70	90	80	70
Working Radius (m)									
12.2	13.55			13.1×11.65			13.9×9.35		
14.0	13.00			11.55			9.30		
16.0	12.45			11.20			9.00		
18.0	11.25			10.90			8.70		
20.0	9.85			9.75			8.45		
22.0	8.70	23.8×6.55		8.60			8.15		
24.0	7.80	6.45		7.70	25.1×5.95		7.60		
26.0	7.00	5.80		6.90	5.70		6.85	26.3×5.50	
28.0	6.35	5.25		6.25	5.15		6.20	5.05	
30.0	5.80	4.75		5.70	4.65	31.5×3.70	5.65	4.55	
32.0	5.30	4.35		5.25	4.25	3.60	5.05	4.15	33.0×3.35
34.0	32.7×4.75	4.00	35.9×2.60	4.80	3.85	3.30	4.35	3.80	3.20
36.0		3.65	2.60	35.6×4.05	3.55	3.00	3.75	3.45	2.90
38.0		3.40	2.35		3.25	2.75	3.25	3.20	2.65
40.0		3.15	2.10		3.00	2.55	38.5×3.15	2.95	2.45
42.0		40.1×3.10	1.90		2.80	2.35		2.70	2.20
44.0			1.70		43.0×2.70	2.15		2.50	2.00
46.0			1.55			1.95		45.9×2.30	1.80
48.0			47.6×1.40			46.8×1.90			1.65
49.7									1.50

- Notes:
- 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.
 - The load to be actually lifted will be the rated load shown minus the weight of all lifting attachments such as a hook.

Hook Capacity (ton)	Hook Weight (ton)
22	0.60

- Working radius is a horizontal distance between swing center of the machine and center of gravity of the load lifted.
- Counterweight is 30.4 t.
- Be sure to fully extend the side frames before operating the machine.
- Figures described as ○○×○○ in the tables indicate working radius (m) × rated load (t).

Working Ranges



■ Tower Boom Construction

Tower Length (m)		27	30	33	36	39	42	45
Elements								
Lower tower	6.5 m	1	1	1	1	1	1	1
Upper tower	2.5 m	1	1	1	1	1	1	1
3 m(B) Boom Insert		1	1	1	1	1	1	1
3 m Tower Insert		1	1	2	1	1	2	1
6 m Tower Insert		2	1	1	2	2	1	2
9 m (B) Tower Insert		1	1	1	1	2	2	2
Available tower jib	19 m	←————→						
	22 m	←————→						
	25 m	←————→						
	28 m	←————→						
	31 m	←————→						
	34 m	←————→						
	37 m	←————→						

■ Crane Jib Construction

Jib Length (m)		19	22	25	28	31	34	37
Elements								
Lower Jib	6.5 m	1	1	1	1	1	1	1
Upper Jib	6.5 m	1	1	1	1	1	1	1
3 m Jib Insert		1	1	2	1	1	2	1
6 m Jjib Insert		1	1	1	2	1	1	2
9 m Jjib insert						1	1	1

■ Component Weights and Dimensions for Transport

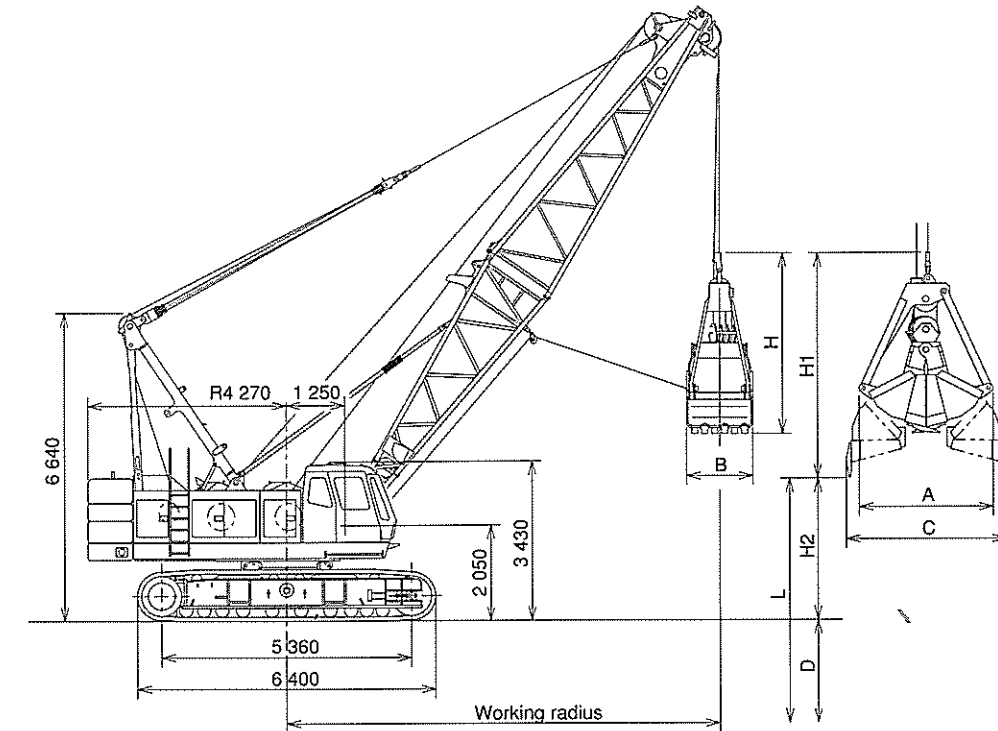
Components		Weight (ton)	Q'ty	Length × Width × Height (m)			Remarks
Basic Machine	Basic Machine	35.1	1	3.11	13.2	3.28	Including A-frame, lower boom, wire ropes for main hoist and boom hoist Excluding side frames, counterweights and float
	Basic Machine	32.4	1	3.11	7.79	3.28	Including A-frame Excluding side frames, lower boom wire ropes for main hoist and boom hoist, counterweights, and float
	Basic Machine	54.7	1	3.43	13.2	3.40	Including A-frame, lower boom, wire ropes for main hoist and boom hoist and side frames Excluding counterweights
	Side Frame (one side)	9.75	2	1.11	6.40	0.93	
	Counterweight A	8.58	1	0.91	3.48	1.27	
	Counterweight B	7.35	1	0.62	3.48	0.96	
	Counterweight C	6.61	1	0.53	3.48	0.96	
	Counterweight D	7.85	1	0.66	3.48	0.96	
Tower Front	Upper Tower	0.89	1	3.02	2.43	1.62	Excluding links and guide rollers
	3 m Tower Insert(B)	0.81	1	2.28	3.14	1.79	Excluding guide sheaves and jib hanger
	Guide Roller	0.23	1	2.45	2.14	0.83	
	Swing Levers	0.92	1	1.02	5.18	1.68	
	Lower Jib	0.62	1	1.25	6.95	1.68	Including jib stop
	Upper Jib	0.67	1	1.30	7.17	1.25	
	3 m Jib Insert	0.21	1	1.34	3.10	1.28	
	6 m Jib Insert	0.38	1	1.34	6.10	1.28	
	9 m Jib Insert	0.53	1	1.34	9.10	1.28	
	Tower stop, Right	0.48	1	0.35	6.59	0.33	
	Tower stop, Left	0.48	1	0.47	6.59	0.29	
	Tower Bridle	0.45	1	0.29	1.85	1.27	Including links for tower
	Hanger (Tower Jib)	0.33	1	0.40	1.62	1.28	
Bridle (Tower Jib)	0.31	1	0.69	0.83	0.87		

CLAMSHELL

SCX900

■ Dimensions

Unit: mm



■ Specifications

Bucket capacity	m ³	2.5
Allowable clamshell gross weight	ton	10.0
Boom length	m	13 to 22
Max. digging depth	m	36
Line speeds		
Suspend line	m/min	*105/60/30
Open/close line	m/min	*105/60/30
Boom hoist line	m/min	*55
		Rope 26mm dia.
		Rope 20mm dia.
Ground pressure	kPa (kgf/cm ²)	93.7 (0.96)
Operating weight	ton	92.0 (13 m boom + 2.5 m ³ 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 crawler crane.
3. *Line will vary with the load.

■ Clamshell Bucket

Capacity (m ³)	Weight (t)	A (mm)	B (mm)	C (mm)	H (mm)	H1 (mm)
2.5	5.5	2 880	1 400	3 450	4 180	5 130

■ Working Ranges

Boom length	m	13				16				19				22			
		35	45	55	65	35	45	55	65	35	45	55	65	35	45	55	65
Boom angle	degree	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55	65
Working radius	m	12.4	11.0	9.3	7.3	14.8	13.1	11.0	8.6	17.3	15.2	12.7	9.9	19.8	17.3	14.4	11.1
Rated load	ton	10	10	10	10	10	10	10	10	10	10	10	10	9.5	10	10	10
Lift L = D + H2	m	38.3	40.1	41.6	42.5	40.1	42.2	44.1	45.5	41.8	44.4	46.5	48.2	43.5	46.5	49.0	51.0
Max. digging depth D	m	36															
Dumping height H2	m	2.3	4.1	5.6	6.5	4.1	6.2	8.1	9.5	5.8	8.4	10.5	12.2	7.5	10.5	13.0	15.0

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 above, according to kinds of the loads handled.
Rated load = Bucket capacity (m³) × Specific gravity of load (ton/m³) + Bucket weight (ton)
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 5.5 ton max.
5. The counterweight is 30.4 ton.
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.

■ STANDARD EQUIPMENT

BASIC MACHINE

Undercarriage

- Crawler-type undercarriage (with 850 mm shoes)
- Side frame extend cylinder (tandem)

Superstructure

- Front lights (2 lights)
- Rearview mirrors (left and right)
- Centralized lubrication system (for gantry and swing circle)
- Electric refuel device
- Under-cover (at superstructure bottom)
- Cab climbing steps
- Ultra slow speed controller
- Drum rotation sensing system
- 30.4 t counterweight
- Standard tool kit

Cab

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

Safety Devices

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

STANDARD EQUIPMENT FOR RESPECTIVE FRONT ATTACHMENT

Crane

- 13 m basic boom (lower 6.5 m, upper 6.5 m)
- Boom stop
- Boom angle indicator
- 90 ton hook
- Main hoist rope (26 mm dia. × 200 m)
- Boom hoist rope (20 mm dia × 170 m)
- Moment limiter
- Overhoist prevention devices (Including secondary safety device for main hook and boom hoist)

Full-Luffing Tower Crane

- 45 m tower boom (lower: 6.5 m, 3 m × 2, 6 m × 2, 9 m × 2, upper: 2.5 m)
- 37 m tower jib (lower: 6.5 m, 3 m × 1, 6 m × 2, upper: 6.5 m)
- Tower stop
- Tower boom angle indicator
- 22 ton hook
- Main hoist rope (26 mm dia. × 260 m)
- Tower jib hoist rope (26 mm dia. × 150 m)
- Tower hoist rope (20 mm dia. × 180 m)
- Moment limiter
- Overhoist prevention devices (including secondary safety device for hook, tower and jib)
- Anemometer
- Foam type level
- Tower assembling pillow

Clamshell

- 13 m basic boom (lower 6.5 m, upper 6.5 m)
- Boom stop
- Boom angle indicator
- Open/close and suspend rope disengagement prevention device (for tubular chord boom)
- Open/close rope (26 mm dia. × 82 m)*
- Suspend rope (26 mm dia. × 70 m)*
- Hydraulic tagline (10 mm dia. × 55 m rope included) and Boom hoist rope (20 mm dia. × 170 m)

* Two lengths of open/close and suspend ropes are determined based on 22 m boom length and 12 m digging depth.

■ Standard and Optional Equipment

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

	CRAWLWER CRANE	FULL-LUFFING TOWER CRANE	CLAMSHELL
Front Attachment Crane			
90 ton hook	○	●*1	—
45 ton hook	●	●*2	—
22 ton hok	●	○	—
11 ton hook	●	●	—
3 m boom insert	●	○	●
6 m boom insert	●	○	●
9 m boom insert	●	●	●
10 m jib assembly [10 m basic jib, aux. Jib hook overhoist prevention device, jib mast, aux. Jib rope (26 mm dia. × 170 m), 11 ton hook]	●	●*2	—
6 m jib insert	●	●*2	—
Aux. jib assembly [aux. jib aux. jib hook overhoist prevention device, aux. jib rope (26 mm dia. × 170 m), 11 ton hook]	●	●*2	—
Aux. jib [aux. jib aux. jib hook overhoist prevention device]	●	●*2,*3	—
Crane kit (6.5 m upper boom, 9.0 ton hook, boom stop, main hoist hook overhoist prevention device)	—	●	—
Front Attachment for Clamshell			
2.5 m ³ clamshell bucket	—	—	●
Open/close and suspend ropes	—	—	●
Hydraulic tagline	—	—	●
Upperstructure			
Drum cooler (for aux. drum)	—	—	●
Side walk (folded type)	●	●	●
Side walk (fixed type with handrails)	●	●	●
Fuel double element	●	●	●
Engine air cleaner double element	●	●	●
Cab			
AM/FM radio	○	○	○
Fan	●	●	●
Loudspeaker	●	●	●
Air conditioner	●	●	●
Heater	●	●	●
Safety Device			
Boom lower limiter	—	—	●
Foam type level (in cab)	●	○	●
Bucket overhoist prevention device	—	—	●
Undercarriage			
Basic machine jack-up device (including side frame extend cylinders)	●	●	●

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