SCX700

HYDRAULIC CRAWLER CRANE

Specifications

EN Rating

HITACHI SUMITOMO

SCX700

HYDRAULIC CRAWLER CRANE

CRAWLER CRANE

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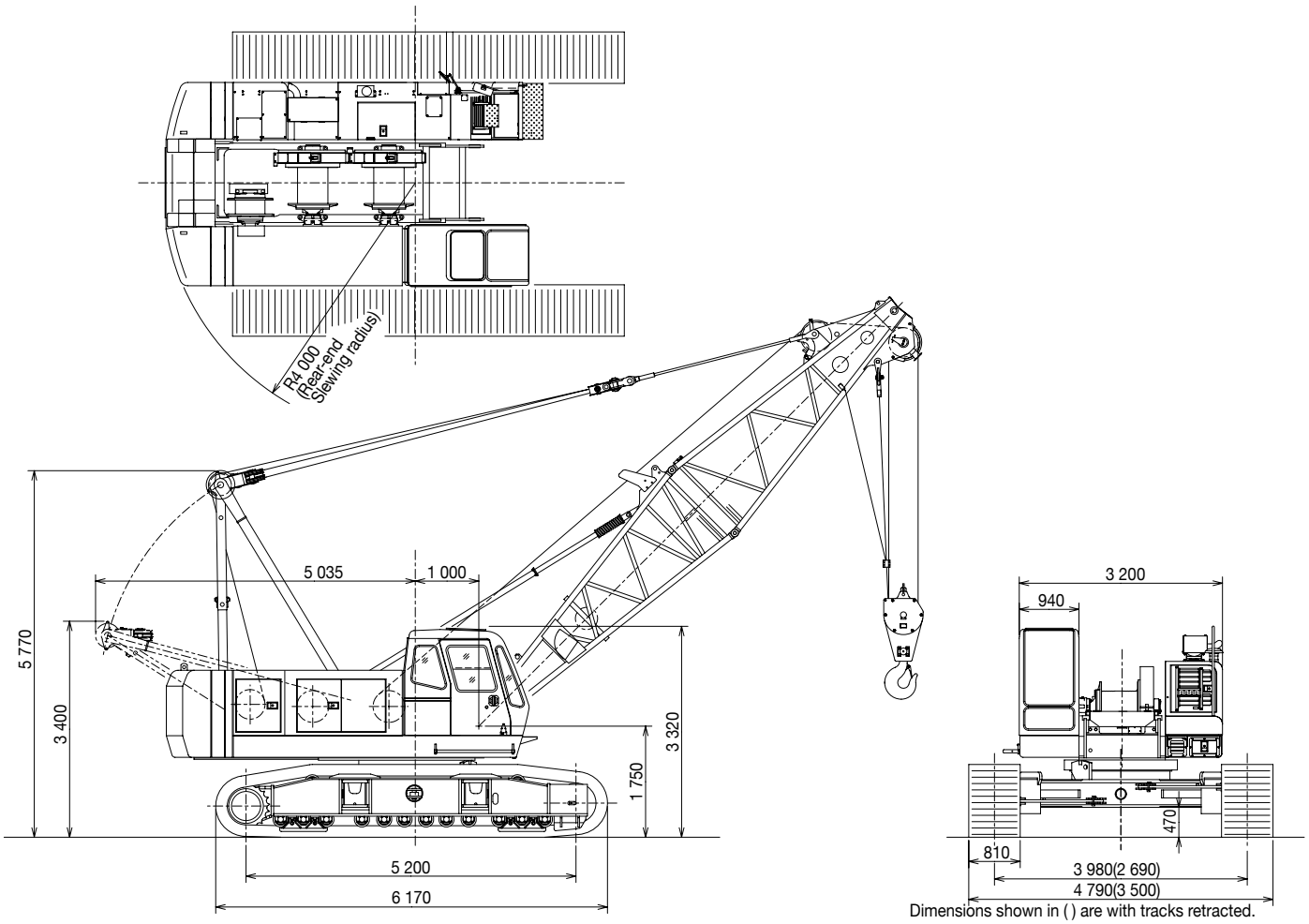
Note: All "ton" described in this catalog represent metric tons.

CRAWLER CRANE SCX700

■Dimensions

Unit : mm



Dimensions shown in ( ) are with tracks retracted.

■Specifications

Mode		SCX700
Maximum rated load	ton×m	70×3.7
Basic boom length	m	9
Max. boom length	m	54
Jib length	m	9 to 18
Max. boom with jib length	m	45+18
Main hoist drum	m/min	* 110
Aux. hoist drum	m/min	* 110
Boom hoist drum	m/min	* 60
Slewing speed	min^{-1} (rpm)	2.9 (2.9)
Travel speed	km/h	* 1.4
Gradeability	deg.(%)	22 (40)
Engine model		ISUZU 4HK1X
Rated power	kw/min^{-1} (PS/rpm)	147/2 100 (200/2 100)
Ground **contact** pressure	kPa (kgf/cm^2)	74.5 (0.76)
Operating weight	ton	68.2 (Equipped with 9m boom and 70ton capacity hook)

Notes: 1. Data expressed above are in SI units(International System of Unit), followed by data in conventional units in ( ).
2. *Data will vary with the load.

Superstructure

Engine

Model ····· ISUZU 4HK1X
Type ····· Water-cooled, 4-cycle, 4-cylinder, direct fuel injection type diesel engine
Rated power ····· 147 kW (200 PS) at 2 100 min^{-1} (DIN 6 271, net) (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

Main and Auxiliary Hoist Mechanism

- The Hitachi Sumitomo SCX700 is equipped with dual hoist mechanisms, each consisting of independent main and auxiliary hoist drumsdriven 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 bucket.
- Main and auxiliary hoist drums are each fitted with a pawl-type drum lock to positively hold the load in the air.
- The drum brake is an external contracting friction band-type using durable non-asbestos lining.
- The brake is controlled by the hydraulic servo system to reduce control force. With the hoist lever in neutral, auto braking or foot braking can be selected.

	Main Drum	Aux. Drum
Max. line pull	15 600 kgf	15 600 kgf
Drum diameter (P.C.D)	500 mm	500 mm
Rope diameter	22 mm	22 mm
Max. line speed	110 m/min	110 m/min
Rope length at first layer	38 m	38 m

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 drumlock.

	Boom Drum
Max. line pull	8 000 kgf
Rope diameter	16 mm
Max. line speed	60 m/min

Slewing Mechanism

- Independent operation separated from other functions.
- Driven by a 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.

Slew 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: 23 800 kg
Consisting of 3 sections: One 7 400 kg
One 7 900 kg
One 8 500 kg

Boom

Tubular Chord Crane Boom

1400 mm wide by 1400 mm deep at connection, lattice construction using high-tensile steel tubular chords.

Basic boom ····· Total length 9.0 m, 2-piece construction; top section 4.0 m and base section 5.0 m

Boom point ····· Offset boom point, 4 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

540 mm wide by 510 mm deep at connection, lattice construction using high-tensile steel tubular chords

Basic jib ····· Total length 9.0 m, 2-piece construction; top section 4.5 m and base section 4.5 m

Jib point ····· 1 sheave (520 mm PCD) mounted on anti-friction bearings on jib top.

Jib extension·····4.5 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.

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

- 2 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 power.

	Pump-1	Pump-2
Type of pump	Variable displacement	
Pressure setting	29.4 MPa (300 kgf/cm²)	29.4 MPa (300 kgf/cm²)
Max. oil flow*	216 L/min	216 L/min

	Pump-3	Pump-4
Type of pump	Variable displacement	Gear
Pressure setting	27.5 MPa (280 kgf/cm²)	4.9 MPa (50 kgf/cm²)
Max. oil flow*	126 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 (main and aux.) ····· 29.4 MPa (300 kgf/cm²)
  - Slewing ····· 23.0 MPa (235 kgf/cm²)
- Overload relief valves
  - Hoist (main and aux.) circuits ····· 31.4 MPa (320 kgf/cm²)
  - Boom hoist circuit ····· 30.4 MPa (310 kgf/cm²)
  - Travel circuit ····· 23.1 MPa (236 kgf/cm²)

Pilot Circuit
- Main relief valve ····· 4.9 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 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 Frame Retract Unit
- Side frames are extended and retracted with a hydraulic cylinder located inside the track frame. Hydraulic power source for a 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
Track shoes with triple grouser mode of induction-hardened rolled alloy. Heat-treated connecting pins with dirt seals. Hydraulic (grease) track adjusters with shock-absorbing recoil springs.

No. of upper rollers (each side) ····· 2
No. of lower rollers (each side) ····· 12
No. of track shoes (each side) ····· 59
Shoe width ····· 810 mm

Controls

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

●Engine Accelerator
Engine power can be controlled by two ways; the accelerator lever and foot throttle.

●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/or the buzzer sounds in the event of an abnormality.

Safety Devices

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

Slew Lock and Slewing Parking Brake

Drum Locks
The pawl-type drum locks are provided at main drum, auxiliary drum and boom drum.

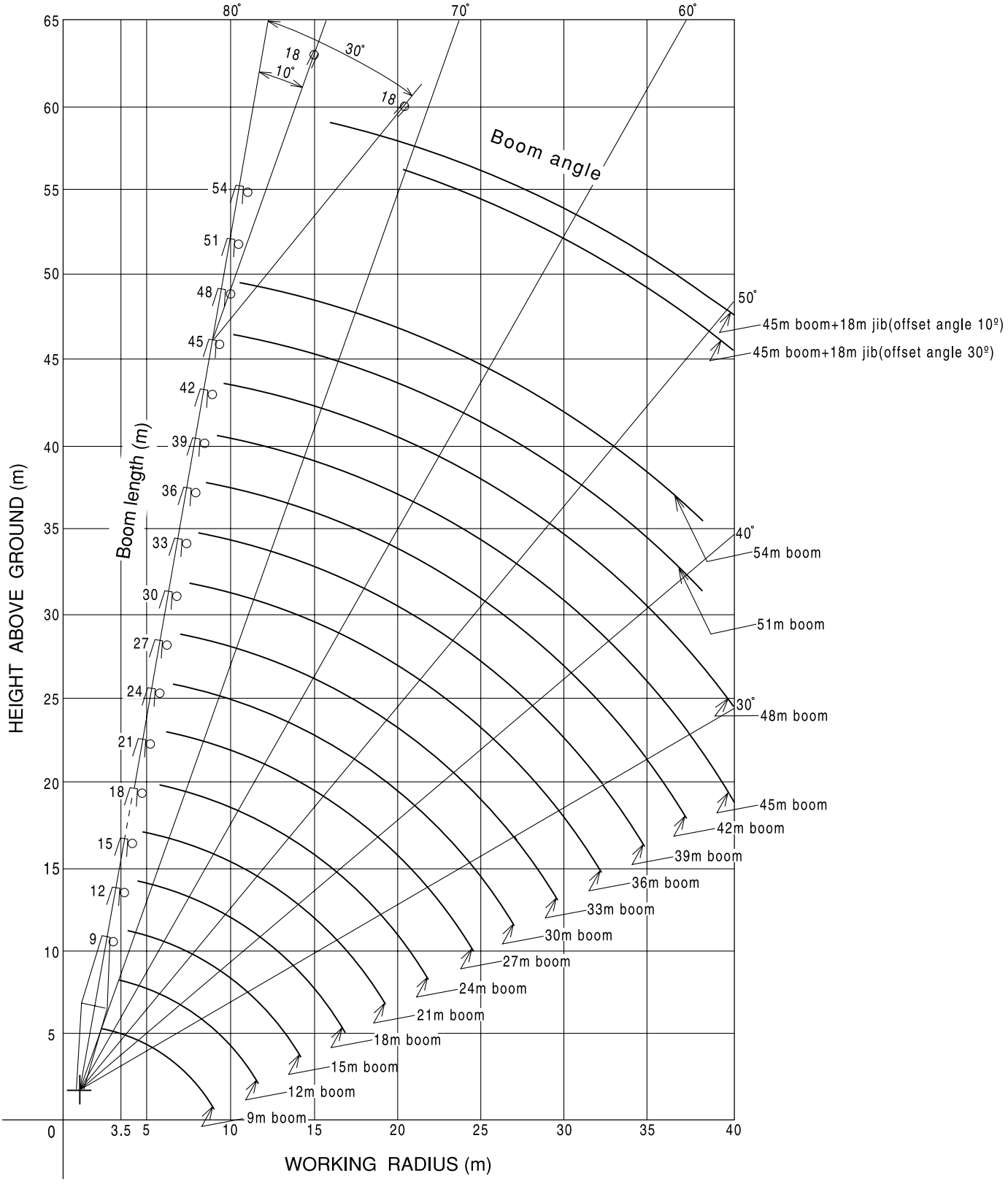
Devices for Crane Operation

- **Load Moment Indicator**
  On the load moment indicator, analog displays and pictorial load indications are functionally arranged for easy reading.
- **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 also provided.
- **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 lock 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.

Service Refill Capacities

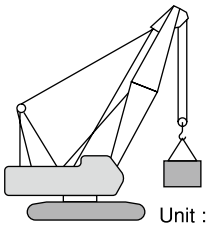
	Liter
Fuel tank	300
Engine coolant	27
Engine oil	23
Boom hoist reduction device	9.5
Winch hoist reduction device	12.5 x 2
Slewing reduction device	8
Travel reduction device	14 x 2
Hydraulic system , including tank capacity	305
Hydraulic tank	225

■Working Ranges



■ Correlation between the number of falls, maximum rated loads, hook weights are shown in the table below.

Hook Capacity (ton)	Hook Weight (ton)	Maximum Rated Loads (ton)									
		10	9	8	7	6	5	4	3	2	1
70.0	0.80	70.0	58.5	52.0	45.5	39.0	32.5	26.0	19.5	13.0	–
40.0	0.41	–	–	–	40.0	39.0	32.5	26.0	19.5	13.0	–
15.0	0.36	–	–	–	–	–	–	–	15.0	13.0	–
6.5	0.18	–	–	–	–	–	–	–	–	–	6.5



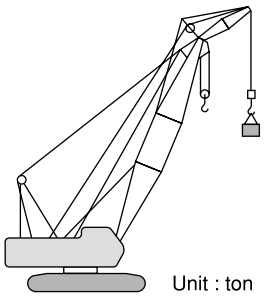
■Rated Loads for Main Boom (EN Rating)

Unit : ton

Working Radius (m)	Boom Length (m)							
	9	12	15	18	21	24	27	30
3.5	70.00	3.6m×70.00t						
4.0	65.00	64.80	4.2m×61.70t					
4.5	58.30	57.95	57.75	4.7m×55.25t				
5.0	52.05	51.90	51.80	51.75	5.3m×47.05t			
5.5	44.80	44.60	44.50	44.45	44.35	5.8m×40.80t		
6.0	39.25	39.05	38.95	38.90	38.80	38.70	6.4m×30.05t	6.9m×31.35t
7.0	31.40	31.20	31.05	31.00	30.90	30.80	30.75	30.70
8.0	25.00	25.85	25.70	25.65	25.55	25.45	25.35	25.35
9.0	19.25	22.05	21.90	21.80	21.70	21.60	21.50	21.45
10.0		19.15	19.00	18.90	18.80	18.70	18.60	18.55
12.0		11.6m×15.00t	14.95	14.85	14.70	14.60	14.50	14.45
14.0			12.25	12.15	12.00	11.90	11.75	11.70
16.0			14.2m×12.05t	10.20	10.05	9.95	9.80	9.75
18.0				16.8m×9.60t	8.60	8.45	8.30	8.25
20.0					19.4m×7.80t	7.35	7.15	7.10
22.0						6.40	6.25	6.15
24.0							5.50	5.40
26.0							24.6m×5.25t	4.75
28.0								27.2m×4.40t

Working Radius (m)	Boom Length (m)							
	33	36	39	42	45	48	51	54
7.0	7.5m×27.65t							
8.0	25.20	25.15	8.6m×22.60t					
9.0	21.35	21.30	21.20	9.1m×19.50t	9.7m×18.90t			
10.0	18.40	18.35	18.25	18.20	18.10	10.2m×17.50t	10.7m×16.20t	11.3m×13.00t
12.0	14.30	14.25	14.15	14.10	13.95	13.85	13.75	13.00
14.0	11.55	11.50	11.40	11.30	11.20	11.05	10.90	10.85
16.0	9.60	9.50	9.40	9.30	9.15	9.05	8.85	8.80
18.0	8.05	8.00	7.85	7.75	7.60	7.50	7.35	7.30
20.0	6.90	6.80	6.70	6.55	6.45	6.30	6.15	6.10
22.0	5.95	5.85	5.75	5.60	5.50	5.35	5.20	5.15
24.0	5.20	5.10	4.95	4.85	4.70	4.60	4.40	4.35
26.0	4.55	4.45	4.35	4.20	4.05	3.95	3.75	3.70
28.0	4.05	3.90	3.80	3.65	3.50	3.40	3.20	3.15
30.0	29.8m×3.65t	3.45	3.35	3.20	3.05	2.90	2.75	2.65
32.0		3.05	2.95	2.80	2.65	2.50	2.35	2.25
34.0		32.4m×2.95t	2.60	2.45	2.30	2.15	2.00	1.90
36.0			35.0m×2.40t	2.15	2.00	1.85	1.70	1.60
38.0				37.6m×1.90t	1.70	1.60	1.40	1.30
40.0					1.50	1.35		

Notes: 1. The rated loads are determined according to EN13000 rating on the condition that the machine is stationed on firm, level ground.
2. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as main and aux. hooks, 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. The counterweight is 23.8 ton.
5. Be sure to fully extend the side frames before operating the machine.
6. Rated line pull is 6 500 kgf when 22mm dia. wire rope is used.
7. Figures described as ○○m×○○t in the tables indicate working radius (m) × rated load (ton).



■Rated Loads for Jib Boom (EN Rating) (1)

Unit : ton

Main Boom Length (m)	27					
Jib Boom Length (m)	9		13.5		18	
Offset Angle (°) / Working Radius (m)	10	30	10	30	10	30
9.4	6.50					
10.0	6.50		11.0m×6.50t			
12.0	6.50	12.1m×6.50t	6.50		12.6m×5.90t	
14.0	6.50	6.50	6.50	15.0m×6.50t	5.70	
16.0	6.50	6.50	6.50	6.50	5.40	17.9m×4.30t
18.0	6.50	6.50	6.50	6.25	5.15	4.30
20.0	6.50	6.50	6.50	5.85	4.95	4.15
22.0	6.30	6.50	6.50	5.55	4.75	4.05
24.0	5.50	5.70	5.70	5.25	4.55	3.95
26.0	4.85	5.00	5.05	5.00	4.40	3.85
28.0	4.30	4.40	4.45	4.65	4.25	3.65
30.0	3.85	3.90	4.00	4.15	4.10	3.50
32.0	3.45	3.50	3.55	3.70	3.65	3.35
34.0	33.3m×3.20t	33.8m×3.10t	3.20	3.30	3.30	3.20
36.0			2.90	2.95	3.00	3.10
38.0			37.5m×2.65t	2.65	2.70	2.80
40.0				38.3m×2.60t	2.45	2.55
42.0					41.7m×2.20t	2.30
44.0						42.8m×2.15t

Unit : ton

Main Boom Length (m)	30					
Jib Boom Length (m)	9		13.5		18	
Offset Angle (°) / Working Radius (m)	10	30	10	30	10	30
10.0	6.50		11.5m×6.50t			
12.0	6.50	12.7m×6.50t	6.50		13.1m×5.90t	
14.0	6.50	6.50	6.50	15.6m×6.50t	5.80	
16.0	6.50	6.50	6.50	6.50	5.50	
18.0	6.50	6.50	6.50	6.35	5.25	18.5m×4.30t
20.0	6.50	6.50	6.50	6.00	5.05	4.20
22.0	6.20	6.45	6.40	5.70	4.85	4.10
24.0	5.40	5.60	5.60	5.40	4.65	4.00
26.0	4.75	4.90	4.95	5.15	4.50	3.90
28.0	4.20	4.35	4.35	4.60	4.35	3.75
30.0	3.70	3.85	3.90	4.10	4.00	3.60
32.0	3.30	3.40	3.45	3.65	3.55	3.45
34.0	2.95	3.00	3.10	3.25	3.20	3.30
36.0	35.9m×2.65t	2.70	2.80	2.90	2.85	3.05
38.0		36.4m×2.60t	2.50	2.55	2.60	2.75
40.0			2.25	2.30	2.35	2.45
42.0			40.1m×2.20t	40.9m×2.15t	2.10	2.20
44.0					1.90	1.95
45.4					44.3m×1.85t	1.80

Notes: 1. The rated loads are determined according to EN13000 rating on the condition that the machine is stationed on firm, level ground.
2. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as main and aux. hooks.
3. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
4. The offset angles shown are of jib boom offset angle against the main boom, under load.
5. The counterweight is 23.8ton.
6. Be sure to fully extend the side frames before operating the machine.
7. Figures described as ○○m×○○t in the tables indicate working radius (m) × rated load (ton).

■Rated Loads for Jib Boom (EN Rating) (2)

Unit : ton

Main Boom Length (m)	33					
Jib Boom Length (m)	9		13.5		18	
Offset Angle (°) / Working Radius (m)	10	30	10	30	10	30
10.5	6.50					
12.0	6.50	13.2m×6.50t	12.1m×6.50t		13.7m×5.90t	
14.0	6.50	6.50	6.50		5.85	
16.0	6.50	6.50	6.50	16.1m×6.50t	5.60	
18.0	6.50	6.50	6.50	6.50	5.35	19.0m×4.30t
20.0	6.50	6.50	6.50	6.15	5.15	4.20
22.0	6.05	6.30	6.25	5.85	4.95	4.10
24.0	5.25	5.45	5.40	5.55	4.75	4.00
26.0	4.55	4.75	4.75	5.05	4.60	3.95
28.0	4.00	4.15	4.20	4.45	4.30	3.85
30.0	3.55	3.65	3.70	3.95	3.80	3.70
32.0	3.10	3.25	3.25	3.50	3.40	3.55
34.0	2.75	2.85	2.90	3.10	3.00	3.30
36.0	2.45	2.50	2.60	2.75	2.70	2.90
38.0	2.20	2.20	2.30	2.40	2.40	2.60
40.0	38.5m×2.10t	39.0m×2.05t	2.05	2.15	2.15	2.30
42.0			1.85	1.90	1.90	2.05
44.0			42.7m×1.75t	43.5m×1.70t	1.70	1.80
46.0					1.50	1.60
48.0					46.9m×1.45t	1.40

Unit : ton

Main Boom Length (m)	36					
Jib Boom Length (m)	9		13.5		18	
Offset Angle (°) / Working Radius (m)	10	30	10	30	10	30
10.5	11.0m×6.50t					
12.0	6.50	13.7m×6.50t	12.6m×6.50t			
14.0	6.50	6.50	6.50		14.2m×5.90t	
16.0	6.50	6.50	6.50	16.7m×6.50t	5.65	
18.0	6.50	6.50	6.50	6.50	5.45	19.6m×4.25t
20.0	6.50	6.50	6.50	6.25	5.20	4.25
22.0	5.90	6.20	6.10	5.95	5.05	4.15
24.0	5.10	5.35	5.30	5.70	4.85	4.05
26.0	4.45	4.65	4.65	4.95	4.70	3.95
28.0	3.90	4.05	4.05	4.35	4.20	3.90
30.0	3.40	3.55	3.55	3.85	3.70	3.75
32.0	3.00	3.10	3.15	3.40	3.25	3.60
34.0	2.65	2.75	2.80	3.00	2.90	3.20
36.0	2.30	2.40	2.45	2.65	2.55	2.80
38.0	2.05	2.10	2.15	2.30	2.30	2.50
40.0	1.80	1.85	1.90	2.05	2.00	2.20
42.0	41.1m×1.65t	41.6m×1.65t	1.70	1.80	1.80	1.95
44.0			1.50	1.55	1.55	1.70
46.0			45.3m×1.35t	1.35	1.40	1.50
48.0				46.1m×1.30t		1.30

Notes: 1. The rated loads are determined according to EN13000 rating on the condition that the machine is stationed on firm, level ground.
2. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as main and aux. hooks.
3. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
4. The offset angles shown are of jib boom offset angle against the main boom, under load.
5. The counterweight is 23.8ton.
6. Be sure to fully extend the side frames before operating the machine.
7. Figures described as ○○m×○○t in the tables indicate working radius (m) × rated load (ton).

■Rated Loads for Jib Boom (EN Rating) (3)

Unit : ton

Main Boom Length (m)	39					
Jib Boom Length (m)	9		13.5		18	
Offset Angle (°) / Working Radius (m)	10	30	10	30	10	30
11.6	6.50					
12.0	6.50		13.2m×6.50t			
14.0	6.50	14.3m×6.50t	6.50		14.7m×5.90t	
16.0	6.50	6.50	6.50	17.2m×6.50t	5.75	
18.0	6.50	6.50	6.50	6.50	5.50	
20.0	6.50	6.50	6.50	6.40	5.30	20.1m×4.25t
22.0	5.80	6.10	6.00	6.10	5.10	4.15
24.0	5.00	5.25	5.20	5.60	4.95	4.05
26.0	4.30	4.55	4.50	4.85	4.65	4.00
28.0	3.75	3.95	3.95	4.25	4.05	3.90
30.0	3.25	3.45	3.45	3.75	3.55	3.85
32.0	2.85	3.00	3.00	3.25	3.15	3.50
34.0	2.50	2.60	2.65	2.85	2.75	3.10
36.0	2.15	2.30	2.30	2.50	2.45	2.70
38.0	1.90	2.00	2.05	2.20	2.15	2.40
40.0	1.65	1.70	1.80	1.90	1.90	2.10
42.0	1.45	1.45	1.55	1.65	1.65	1.85
44.0			1.35	1.45	1.45	1.60
46.0						1.40

Unit : ton

Main Boom Length (m)	42					
Jib Boom Length (m)	9		13.5		18	
Offset Angle (°) / Working Radius (m)	10	30	10	30	10	30
12.0	12.1m×6.50t		13.7m×6.50t			
14.0	6.50	14.8m×6.50t	6.50		15.3m×5.90t	
16.0	6.50	6.50	6.50	17.8m×6.50t	5.80	
18.0	6.50	6.50	6.50	6.50	5.60	
20.0	6.50	6.50	6.50	6.50	5.35	20.7m×4.25t
22.0	5.65	6.00	5.85	6.20	5.20	4.20
24.0	4.85	5.15	5.05	5.50	5.00	4.10
26.0	4.20	4.45	4.35	4.75	4.50	4.00
28.0	3.60	3.85	3.80	4.15	3.95	3.95
30.0	3.15	3.35	3.30	3.60	3.45	3.85
32.0	2.70	2.90	2.90	3.15	3.00	3.40
34.0	2.35	2.50	2.50	2.75	2.65	3.00
36.0	2.05	2.15	2.20	2.40	2.30	2.60
38.0	1.75	1.85	1.90	2.10	2.00	2.30
40.0	1.50	1.60	1.65	1.80	1.75	2.00
42.0		1.35	1.40	1.55	1.50	1.75
44.0				1.30	1.30	1.50

Notes: 1. The rated loads are determined according to EN13000 rating on the condition that the machine is stationed on firm, level ground.
2. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as main and aux. hooks.
3. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
4. The offset angles shown are of jib boom offset angle against the main boom, under load.
5. The counterweight is 23.8ton.
6. Be sure to fully extend the side frames before operating the machine.
7. Figures described as ○○m×○○t in the tables indicate working radius (m) × rated load (ton).

■Rated Loads for Jib Boom (EN Rating) (4)

Unit : ton

Main Boom Length (m)	45					
Jib Boom Length (m)	9		13.5		18	
Offset Angle (°) / Working Radius (m)	10	30	10	30	10	30
12.7	6.50					
14.0	6.50	15.4m×6.50t	14.3m×6.50t		15.8m×5.90t	
16.0	6.50	6.50	6.50		5.85	
18.0	6.50	6.50	6.50	18.3m×6.50t	5.65	
20.0	6.50	6.50	6.50	6.50	5.45	21.2m×4.25t
22.0	5.50	5.90	5.75	6.25	5.25	4.20
24.0	4.70	5.05	4.90	5.40	5.05	4.10
26.0	4.05	4.30	4.25	4.65	4.40	4.05
28.0	3.45	3.70	3.65	4.05	3.80	3.95
30.0	3.00	3.20	3.15	3.50	3.30	3.75
32.0	2.55	2.75	2.75	3.05	2.85	3.30
34.0	2.20	2.35	2.35	2.65	2.50	2.85
36.0	1.85	2.00	2.05	2.30	2.15	2.50
38.0	1.60	1.70	1.75	1.95	1.85	2.15
40.0	1.35	1.45	1.50	1.65	1.60	1.90
42.0			1.25	1.40	1.35	1.60
44.0						1.35

Notes: 1. The rated loads are determined according to EN13000 rating on the condition that the machine is stationed on firm, level ground.
2. To calculate the maximum load that can actually be lifted, deduct weight of all lifting accessories, such as main and aux. hooks.
3. Working radius is the horizontal distance from the slewing center to the center of gravity of a lifted load.
4. The offset angles shown are of jib boom offset angle against the main boom, under load.
5. The counterweight is 23.8ton.
6. Be sure to fully extend the side frames before operating the machine.
7. Figures described as ○○m×○○t in the tables indicate working radius (m) × rated load (ton).

■Crane Boom Construction

Boom Length (m) / Elements	9		12		15		18		21		24		27		30		33		36		39		42		45		48		51		54	
Boom Base Section 5m	1		1		1		1		1		1		1		1		1		1		1		1		1		1		1		1	
Boom Top Section 4m	1		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	Ⅰ	Ⅱ
3m Boom Extension			1		2		1		2		1		1	1	2	2	1	1	1	1	2	2	1	1	1	1	2	2	1	1	1	1
6m Boom Extension							1		1		2		1	1	1	1	2	2	1	1	1	1	2	2	1	1	1	1	2	2	1	1
9m Boom Extension													1		1		1		2	1	2	1	2	1	3	2	3	2	3	2	4	3
9m (B) Boom Extension														1		1		1		1		1		1		1		1		1		1
Available Jib	–		–		–		–		–		–		◄														–		–		–	

Boom extensions combination:

Ⅰ: For operation of crane boom without jib.

Ⅱ: For operation of crane boom with jib.

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

■Fly Jib Construction

Jib Length (m) / Elements	9	13.5	18
Jib Base Section 4.5m	1	1	1
Jib Top Section 4.5m	1	1	1
4.5m Jib Extension		1	2

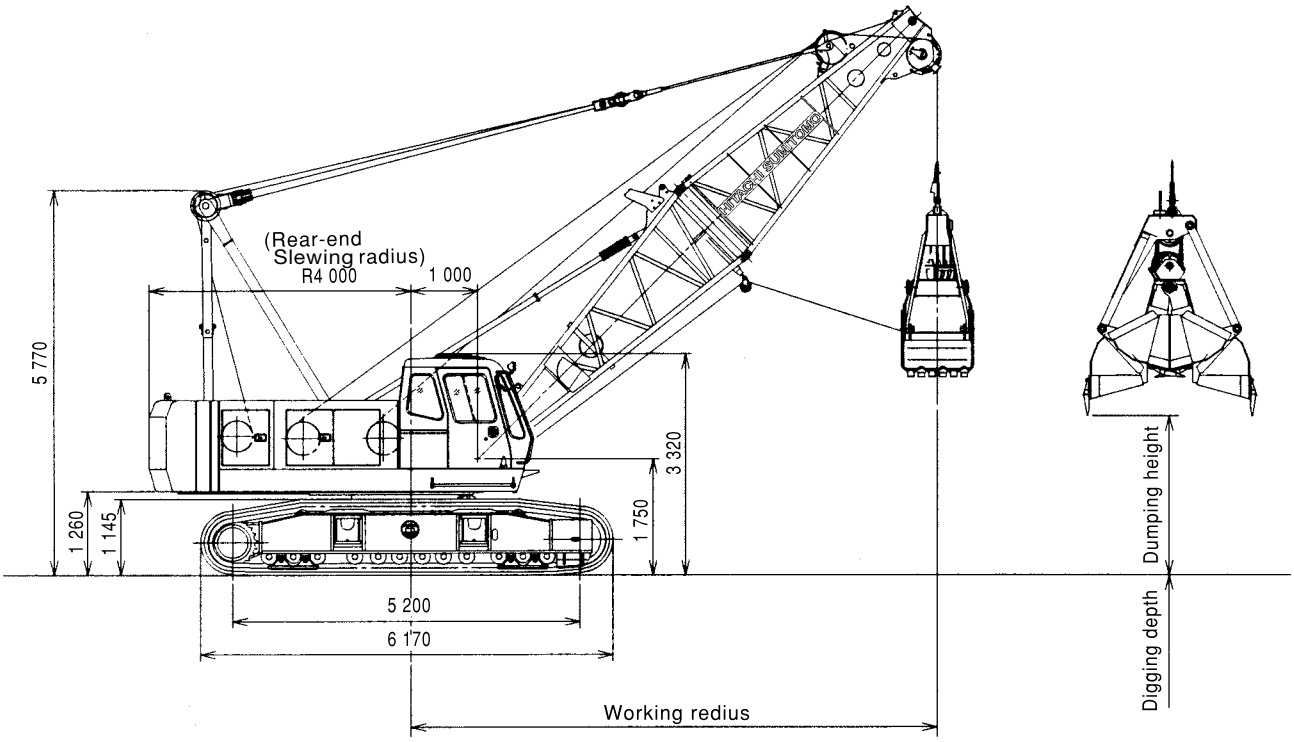
■Component Weights and Dimensions for Transport

Components		Weight (ton)	Q'ty	Length × Width × Height (m)			Remarks
Basic Machine	Basic Machine	36.8	1	7.98	3.20	3.40	**A-frame.ropes and side frames included,except counterweight**
	Aux. Counterweight	0.6	2	0.69	0.29	0.67	Mounted to side for raise winch
	Counterweight	7.4	1	3.20	0.62	1.37	Inner
	Counterweight	7.9	1	3.20	0.73	1.37	Center
	Counterweight	8.5	1	3.20	0.71	1.48	Outer
Crane Front	Boom Base Section	1.01	1	5.16	1.63	1.72	Backstop included
	Boom Top Section	1.14	1	4.43	1.49	1.54	**Pendant rope included**
	Bridle	0.29	1	1.72	0.69	0.28	
	3m Boom Extension	0.42	1	3.10	1.50	1.61	**Pendant rope included**
	6m Boom Extension	0.70	1	6.10	1.50	1.61	
	9m Boom Extension	0.93	1	9.10	1.50	1.61	
	9m (B) Boom Extension	0.94	1	9.10	1.50	1.62	
	Jib Base Section	0.57	1	4.62	0.82	0.75	Jib mast included
	Jib Top Section	0.25	1	4.93	0.78	1.11	
	4.5m Jib Extension	0.14	1	4.60	0.64	0.74	
	Short jib	0.21	1	1.26	0.82	0.87	
	70ton Hook	0.80	1	0.62	0.59	1.82	
	40ton Hook	0.41	1	0.62	0.32	1.59	
	15ton Hook	0.36	1	0.62	0.31	1.36	
	6.5ton Hook	0.18	1	0.30	0.30	0.84	

CLAMSHELL SCX700

■Dimensions

Unit : mm



■Specifications

Model		SCX700	
Bucket capacity	m^3	0.8/1.0/1.2	
Allowable clamshell gross weight	ton	6.0	
Max. bare line pull (1st drum layer)	ton	15.6	
Boom length	m	9–18	
Max. digging depth	m	36	
Suspend line speeds	m/min	* 74	Rope 22mm dia.
Open/close line speeds	m/min	* 74	Rope 22mm dia.
Boom hoist/lower line speed	m/min	* 60	Rope 16mm dia.
Travel speeds	km/h	* 1.4	
Slewing speed	min^{-1}(rpm)	2.9(2.9)	
Ground **contact** pressure	kPa (kgf/cm^2)	79.4(0.81)	
Operating weight	ton	66.7 (9m boom＋1.2m^3 bucket)	

■Clamshell Bucket

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

Notes: 1. Data is expressed in SI units, along with conventional units in ( ).
2. Other specifications, not shown, are similar to those for the crawler crane.
3. Data in the Bucket mode marked with an asterisk (＊) will vary with the load.

■Working Ranges

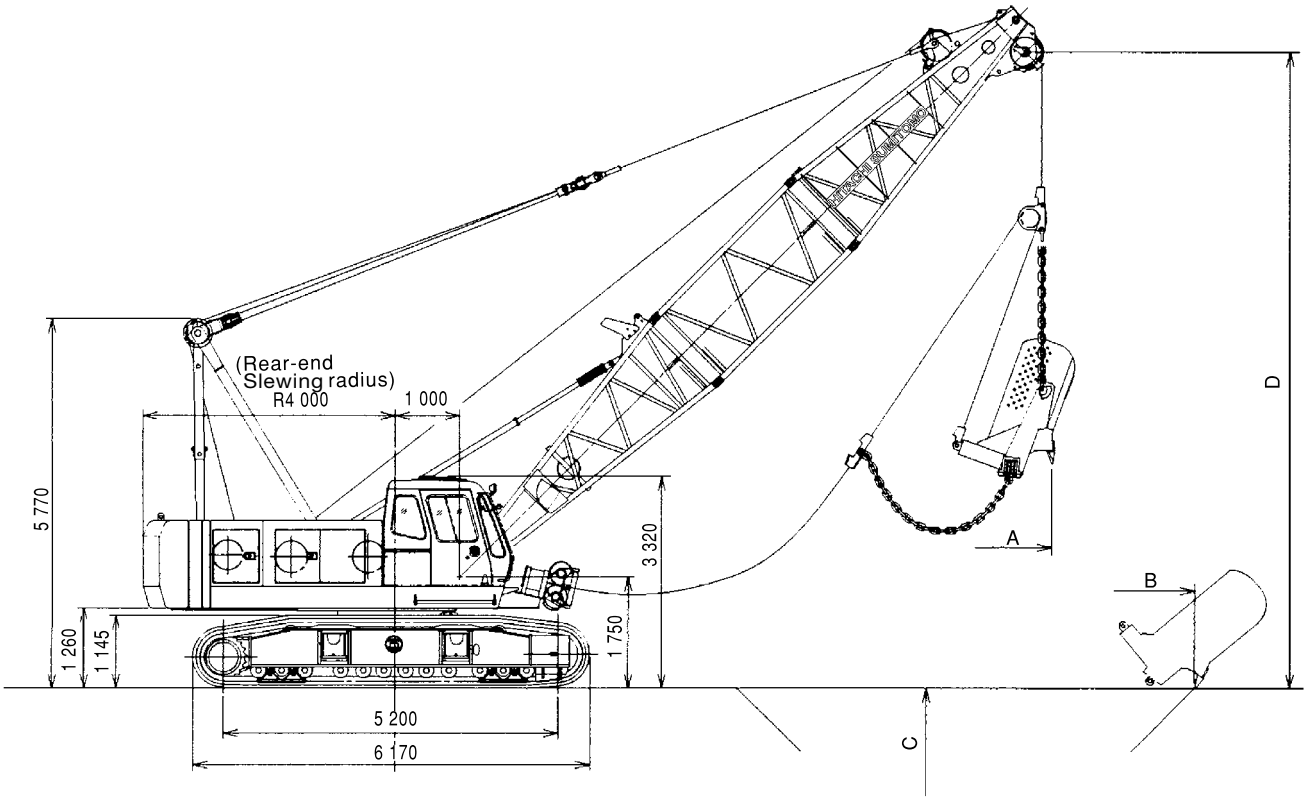
Boom length	m	9				12				15				18			
Boom angle	Degree	35	45	55	65	35	45	55	65	35	45	55	65	35	45	55	65
Working radius	m	8.8	7.9	6.7	5.4	11.3	10.0	8.4	6.7	13.7	12.1	10.2	7.9	16.2	14.2	11.9	9.2
Rated load	ton	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Bucket dumping height																	
0.8m^3 bucket	m	1.5	2.7	3.8	4.6	3.2	4.9	6.3	7.3	4.9	7.0	8.7	10.0	6.6	9.1	11.2	12.8
1.0m^3 bucket	m	1.3	2.5	3.6	4.4	3.0	4.7	6.1	7.1	4.7	6.8	8.5	9.8	6.4	8.9	11.0	12.6
1.2m^3 bucket	m	1.1	2.3	3.4	4.2	2.8	4.5	5.9	6.9	4.5	6.6	8.3	9.6	6.2	8.7	10.8	12.4

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(m^3) × Specific gravity of load(ton/m^3)+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 slewing center to the center of gravity of lifted load.
4. The bucket weight is 2.45 ton max.
5. The counterweight is 23.8 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 10m.

DRAGLINE SCX700

■Dimensions

Unit : mm



■Specifications

Model		SCX700	
Bucket capacity	m^3	1.2/1.7/2.5	
Max. bare line pull(1st drum layer)	ton	15.6	
Boom length	m	12–24	
Suspend line speeds	m/min	* 74	Rope 22mm dia.(Opt. 24mm)
Drag line speeds	m/min	* 74	Rope 22mm dia.(Opt. 24mm)
Boom hoist/lower line speed	m/min	* 60	Rope 16mm dia.
Travel speeds	km/h	* 1.4	
Slewing speed	min^{-1}(rpm)	* 2.9 (2.9)	
Ground **contact** pressure	kPa (kgf/cm^2)	75.0(0.77)	
Operating weight	ton	67.1(12m boom+ 2.5m^3 bucket)	

■Dragline Bucket

Capacity m^3	Weight ton	Use
1.2	1.60	Heavy duty
1.7	1.68	Medium service
2.5	2.14	Light service

Notes: 1. Data is expressed in SI units, along with conventional units in ( ).
2. Other specifications, not shown, are similar to those for the crawler crane.
3. Data in the bucket mode marked with an asterisk (*) will vary with the load.

■Working Ranges

	Boom length m	12			15			18			21			24		
	Boom angle Degree	30	40	50	30	40	50	30	40	50	30	40	50	30	40	50
A	Working radius m	12.1	10.9	9.4	14.7	13.2	11.3	17.3	15.5	13.3	19.9	17.8	15.2	22.5	20.1	17.1
	Rated load ton	13.84	15.82	18.29	10.24	12.08	14.85	8.16	9.74	11.91	6.62	7.98	9.87	5.7	6.66	8.36
B	Max. digging reach m	15.3	14.9	14.1	18.6	18.1	17.1	21.9	21.2	20.0	25.1	24.4	23.0	28.4	27.6	26.0
C	Max. digging depth m	7.5	7.2	6.6	10.0	9.6	8.8	12.4	12.0	11.1	14.9	14.3	13.3	17.3	16.7	15.5
D	Boom point height m	7.2	9.0	10.5	8.7	10.9	12.8	10.2	12.8	15.1	11.7	14.7	17.4	13.2	16.7	19.7

Notes: 1. The size of the bucket has to be determined according to local conditions.
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(ton/m^3)+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 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 23.8 ton.
6. Be sure to fully extend the side frames before operating the machine.

STANDARD AND OPTIONAL EQUIPMENT

BASIC MACHINE

	STANDARD	OPTION
Undercarriage	• Tractor type track with 810mm wide 3-bar grouser shoes • Side frame retract unit • Crawler side step	
Superstructure	• Working lights (2pc) • Rearview mirrors (left and right) • Drum mirror • Centralized lubrication system (for gantry and slewing circle) • Superstructure under-cover • Cab side step • Slewing speed controller • Speed controller • A-frame(w/o step) • Re-fuel pump • 23.8ton counterweight	• Third hoisting mechanism • Drum rollers (front and rear drum) • Catwalk • Machinery cab railing • Counterweight self-removal device • Working light • Drum light • Removable company nameplate • Hydraulic tagline • Add. fuel filter • Add. air cleaner element
Cab	• Dual, intermittant window shield wipers with washer ; available on both front and roof windows • Sunshade • Sunvisor • Cab floor mat • Room light • Cigar lighter • Ashtray • AM/FM radio with clock • Built-in type full air conditioner • Engine foot throttle • Electric tilt-type lever stand	• Microphone and loud-speaker • Fire extinguisher • Electric cab fan • Level gauge • Front/rear drum control lever and brake pedal arrangement
Safety Devices	• Load moment indicator • Lock lever (Pilot control shut-off lever) • Emergency engine stop switch • Engine start interlock system • Non drum brake preventing device • Free fall interlocking • Speed slowdown device • Before-work check monitor • Main hook over-hoisting limiter • Boom over-hoisting limiter • Secondary boom over hoisting limiter • Slewing alarm • Slew lock • Drum locks (main and aux. hoist, and boom hoist) • Boom angle indicator • Slewing brake • Fail-safe mechanism	• Three color percentage indicator • LMI mode select switch • Anemometer • Drum & rear view camera • Cabin roof window guard • Travel alarm • Aux. hook over-hoisting limiter • Drum rope over-payout limiter • Emergency escape hammer • Open/close and suspend cable disengagement limiter (for tubular chord boom)

STANDARD AND OPTIONAL EQUIPMENT

FRONT ATTACHMENTS

	STANDARD	OPTION
Crane	• 9m basic boom (base section 5m, top section 4m) • Boom back stop • Main hoist cable (22mm dia. X 215m) • Boom hoist cable (16mm dia. X 135m)	• 3m boom extension • 6m boom extension • Fly jib : basic jib length 6.0m • 3m jib extension • Short jib • Hook (70t,40t,15t, 6.5t) • Skywalk • Buffer
Clamshell	• 9m basic boom (base section 5m, top section 4m) • Boom back stop • Open/close and suspend cable disengagement limiter (for tubular chord boom) • Open/close cable (22mm dia. X 67m) • Suspend cable (22mm dia. X 60m)* • Hydraulic tagline (10mm dia. X 45m cable included) • Boom hoist cable (16mm dia. X 135m) * open/close and supend cables are determined based on 18m boom length and 12m digging depth.	• 3m boom extension • 6m boom extension • Buffer
Dragline	• 12m boom (base 5m, extension 3m, top 4m and wide-angle sheaves) • Boom backstop • Hoist cable (22mm dia. X 50m) • Drag cable (22mm dia. X 60m) • Boom hoist cable (16mm dia. X 135m) • Fair-lead • Over hoisting limiter (for boom hoist and secondary hoist)	• 3m boom extension • 6m boom extension

These specifications are subject to change without notice.

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