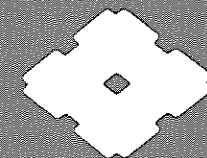


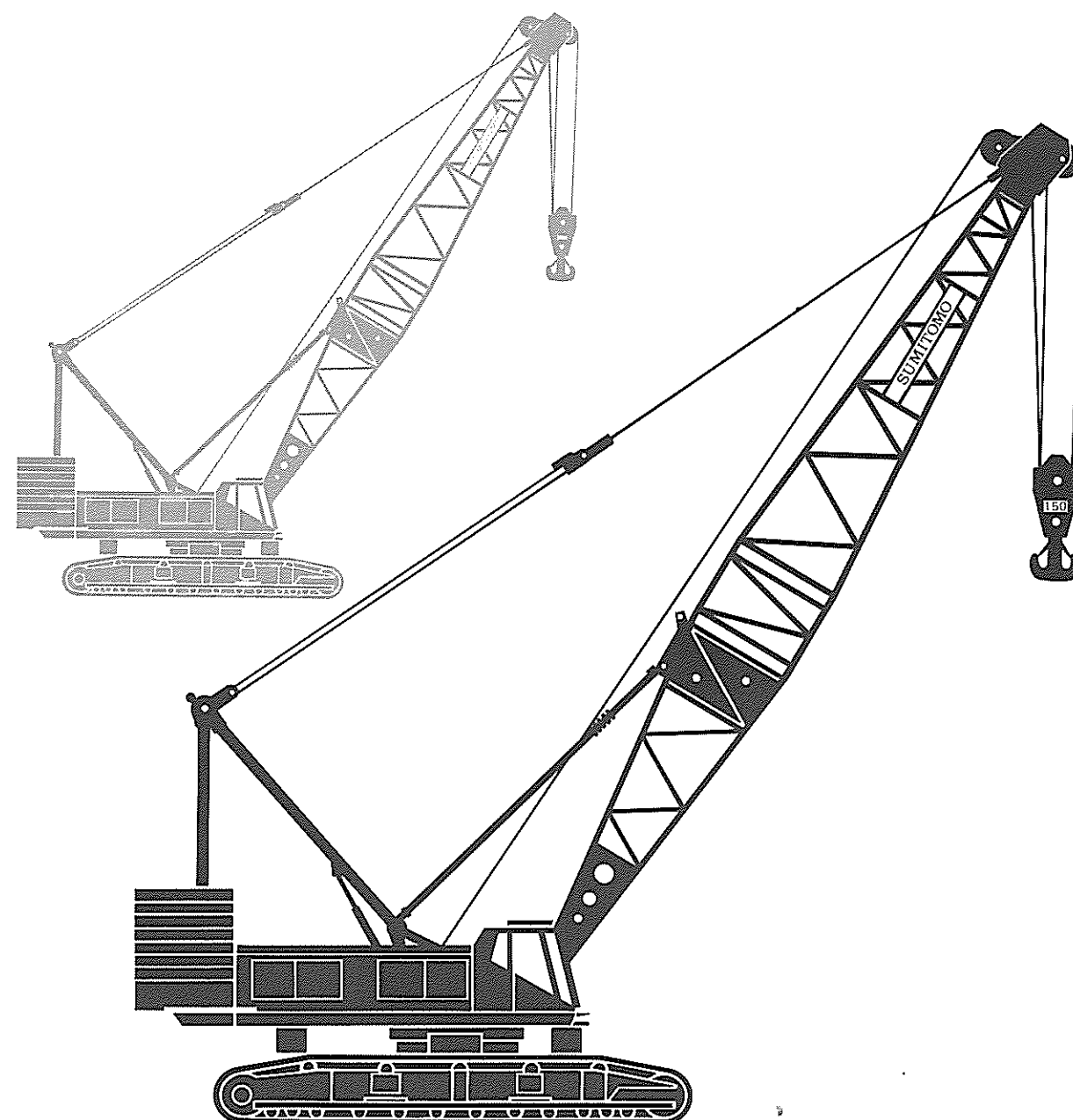
SUMITOMO LS-248RH-5

Note: We are constantly improving our products and therefore reserve the right to change designs and specifications.



SUMITOMO LS-248RH-5

150-M ton Hydraulic Crawler Crane



SUMITOMO (S.H.I.) CONSTRUCTION MACHINERY CO., LTD.

International Sales Div.
1-21, Kanda Nishiki-cho
Chiyoda-ku, Tokyo, Japan
Phone: Tokyo (03) 296-5230
Cable: "SHIKENKA TOKYO"
Telefax: (03) 233-0138
Telex: J27961 (AAB SHIKENKI)

Address Inquires to:

Highest lifting performance, best work-efficiency.

SUMITOMO New 150 Tonner Hydraulic Crawler Crane, LS-248RH-5

*Strong answer
by SUMITOMO
around the world*

To answer all of demands and requirements throughout the world, SUMITOMO now offers new 150 tonner hydraulic crawler cranes, LS-248RH-5.

LS-248RH-5 has been developed as one of "RH-5" series hydraulic crawler cranes under SUMITOMO's quite new design concept through owned experiences and accumulated techniques in the past. Thus, LS-248RH-5 makes and correspondingly offers following far superior points to other competitors: (a) highest lifting performance (b) smooth and precise minute operations with pump control system (c) best work-efficiency with 4-rope line speed control (d) best fuel economy with powerful turbo-charged diesel engine etc. Believe SUMITOMO, nothing comes close to LS-248RH-5. And you can then see the result in dollars and cents.

SUMITOMO, of course, takes into consideration other design techniques on machine safety, transportation ease, operator's comfort, less assembling/disassembling time etc. The new 150 tonner hydraulic crawler crane, he is from SUMITOMO's strategy all over the world.

Specifications

SUMITOMO

LS-248RH-5

Basic Machine

Upper Machinery

UPPER REVOLVING FRAME: All-welded, precision machined, box type construction. A machined surface provided for mounting turntable bearing.

TURNTABLE BEARING WITH INTERNAL SWING GEAR:

Single shear ball type; outer race of turntable bearing bolted to upper revolving frame and inner race with integral, internal swing (ring) gear bolted to carbody deck.

Optional — Single shear ball/retainer ring type; inner race of turntable bearing with integral, internal swing (ring) gear connected to retainer by retainer ring. The retainer bolted to carbody deck. Outer race of turntable bearing bolted to upper revolving frame. Inner race of turntable bearing and retainer can be quickly connected and disconnected by retainer ring be extended/retracted by hydraulic cylinder.

CONTROL SYSTEM: System contains one quadruplicate and one triplicate tandem valves which direct oil to various machine function and are actuated by remote controlled hydraulic servo for main hoist, auxiliary hoist, boom hoist and travel motions, and by mechanical linkage for swing motion through control levers. Working speeds can be precisely controlled by lever stroke in cooperation with engine rpm and pump controls.

Pump control system — Manually controlled by ON-OFF switching of push button attached on a control lever; system allows minute operation and energy saving by means of reducing pump displacement.

HYDRAULIC SYSTEM: System provided with two variable displacement axial piston pumps and one fixed displacement triplicate tandem gear pump for both independent and combined operations of all functions. Gear pump also used for system valves and cylinders' control.

Main/aux. crane hoist motors — Axial piston type with countervalance valve.

Boom hoist motor — Axial piston type with counterbalance valve and spring-applied/hydraulically released multiple wet-disc type automatic brake.

Swing motor — Two-axial piston type with spring-applied/hydraulically released multiple wet-disc type manually controlled brake.

Travel motors — Axial piston type with brake valve and spring-applied/hydraulically released multiple wet-disc type automatic brake.

Hydraulic oil reservoir — 300 liters capacity.

LOAD HOIST ASSEMBLY: Front and rear main operating drums driven by independent hydraulic motor of bi-directional, axial piston motor through planetary and spur gear reduction units powering the rope drum in either direction for hoisting and lowering load. Each of drum sized in same dimension.

Clutches — Power hydraulic actuated, internal expanding, self-adjusting 2-shoe type; provided with no clutch levers as clutches automatically engaged and disengaged when operating main/auxiliary hoist control levers and/or switching brake mode change toggle.

Brakes — External contracting band type; free fall brake mode operated by foot pedal with hydraulic booster and automatic brake mode spring-applied, power hydraulically released are available on both front/rear main operating drums as standard. Two brake modes can be selected by switch.

Drums — One piece, parallel grooved type with locking ratchet wheel cast integral; mounted on drum shaft through anti-friction bearings.

Drum locks — Electrically operated pawl.

BOOM HOIST ASSEMBLY: Driven by bi-directional, axial piston hydraulic motor through planetary and spur gear reduction units powering the rope drum in either direction for hoisting and lowering boom.

Brake — Spring-applied, power hydraulically released multiple wet-disc type automatic brake.

Drum — One piece, parallel grooved type with locking ratchet wheel cast integral; involute-splined to drum shaft.

Drum lock — Electrically operated pawl.

SWING: Driven by two units of bi-directional, axial piston hydraulic motors through a spur-and-planetary gear reduction unit powering swing pinion. Swing pinion meshes with internal teeth of swing (ring) gear of turntable bearing inner race.

Brakes — Manually controlled; spring-applied, power hydraulically released; provided on each of hydraulic motor.

Lock — Mechanically operated drop pin.

Speed — 1.98rpm (High), 1.21rpm (Low).

GANTRY: A-frame type; raised and lowered by power hydraulic cylinders. Gantry equipped with bail frame with sheaves for 16-part boom hoist rope reeving.

OPERATOR'S CAB: Full-vision, cushion rubber mounted, well-ventilated, full compartment, roomy operator's cab with safety glass panels.

Instrument panel — Contains engine monitoring lamps; located at left of operator's seat.

Operator's seat — Full adjustable reclining type.

MACHINERY CAB: Equipped with hinged doors on both sides for machinery access and inspection.

CATWALKS: Hitched in place along both sides of machinery cab.

UPPER MACHINERY JACK-UP DEVICE: Optional extra; this device contains four hydraulically operated outrigger beams and jacks for self-dismounting upper machinery from carbody quickly in cooperation with optional retainer ring type turntable bearing.

WIRE REEVING WINCH: Optional extra; available for crane hoist cable handling ease.

COUNTERWEIGHTS: 55.8 ton in total, removable, mounted on rear of upper revolving frame by bolts.

ELECTRICAL SYSTEM: 24-volt negative ground system; provided with two maintenance free 12-volt batteries.

POWER UNIT:

Make & Model	Mitsubishi 6D22T
Type	Water-cooled, 4-cycle, direct injection, turbo-charged diesel
No. of cylinders	Six (6)
Bore & Stroke	130 x 140mm
Displacement	11,149cc
Rated output	250ps/2,200rpm
Max. torque	105 kg-m/1,200rpm
Fuel tank	450 liters

Lower Machinery

CARBODY FRAME: All-welded, precision machined, box type construction. A machined surface provided for mounting turntable bearing.

CARBODY JACK-UP DEVICE: This device contains four hydraulic jack cylinders attached on carbody frame for disassembling/assembling ease of crawler side frames.

CRAWLER SIDE FRAMES: All-welded, precision machined; positioned on carbody frame cross axles by dowels and held in place with two patented, adjustable wedgebacks per side frame.

Retract cylinders — Optional extra; available for extending/retracting, or assisting in removing, side frames.

TRACK DRIVE SPROCKETS: Cast steel, heat treated; one per side frame. Track drive sprocket assembly involute-splined to shaft, mounted on anti-friction bearing, sealed for lifetime lubrication. Each track drive sprocket is powered by a hydraulic motor through planetary and 3-stage spur gear reduction drive units.

TRACK IDLER WHEELS: Cast steel, heat treated; one per side frame. Mounted on two bronze bushings, sealed for lifetime lubrication.

TRACK ROLLERS: Twelve double flange, heat treated rollers per side frame; each mounted on two bronze bushings, sealed for lifetime lubrication.

TRACK CARRIER ROLLERS: Three double flange, heat treated rollers per side frame; each mounted on two bronze bushings, sealed for lifetime lubrication.

TRACKS: 1,118mm wide, heat treated, self-cleaning, multiple hinged track shoes joined by full floating pins; 63 shoes per side frame.

Track adjustment — Idler wheels automatically adjusted while operation by means of hydraulic cylinder provided at each idler wheel block. Hydraulic power to the cylinder supplied from operational hydraulic pump of superstructure.

TRAVEL AND STEERING: Hydrostatic drive; A bi-directional, axial piston hydraulic motor bolted to a speed reducer at inner drive end of each crawler side frame.

Travel/steering power transmitted from the hydraulic motors through gear reduction unit into track drive sprocket.

Steering is provided through the travel hydraulic motors which can be powered simultaneously or individually for straight-line travel (forward or reverse), pivot or differential turns. Also, the tracks can be counter rotated for spin turns.

Brake — Spring-applied, hydraulically released multiple wet-disc type automatic brake; located within hydraulic motor. Brakes automatically set when travel levers are in neutral or when engine is shut down.

Travel speed — 1.0km/hr. (High), 0.5km/hr. (Low).

Gradeability — 30% permissible based on basic machine without front-end attachment.

TWO STEEL BLOCKS: Optional extra; required when boom or boom plus fly jib length is 85.40m or longer, and/or when mounting 30.50m through 45.75m tower jib on tower boom from 50.325m through 56.425m for self-erection. This blocks to be placed under track idler wheels each of crawler mounting.

CRANE BOOM: Lattice construction, round tubular main chords, alloy, hi-ten steel, with bracing of round steel tubing.
Boom connections In-line pin connections at 2m deep and 2m wide.
Basic boom Three-piece, 18.30m basic length; 7.625m bottom section, one 1.525m extension and 9.15m tapered crane top section.

Hydraulically operated boom foot pins Optional extra; available for assembling/disassembling ease of boom bottom section.
Boom head machinery Four head sheaves and two hanger sheaves mounted on anti-friction bearings.
Heavy-duty type boom extensions Optional extra; available in 3.05m, 6.10m and 9.15m lengths with pendants.
Light-duty type boom extensions Optional extra; available in 9.15m length with pendants.
Maximum boom length 82.35m

FLY JIB: Optional extra; lattice construction, round tubular main chords, alloy, hi-ten steel, with bracing of round steel tubing having in-line pin connections at 0.76m deep and 0.914m wide, and jib head machinery with single sheave mounted on anti-friction bearings. This attachment can be mounted on an optional 9.15m tapered top section, and is available for light load lifting operation with less than 15ton with 2-part hoist line.
Basic fly jib Two-piece, 12.20m basic length; 6.10m bottom and top sections.
Fly jib extensions Available in 6.10m length with pendants.
Maximum fly jib length 30.50m.
Boom plus fly jib length Max. 73.20m + 30.50m

AUXILIARY SHORT JIB: Optional extra; all-welded construction having single sheave head machinery. This attachment is pinned to an optional 9.15m tapered top section, and is available for 13.5ton lift as maximum with single part hoist line.

HOOK BLOCKS:
150t, five sheaves plus one in-lined hanger sheave Standard.
100t, five sheaves Standard; available from a 150ton hook block by dismounting an in-lined hanger sheave.
60t, two sheaves Optional extra.
25t, single sheave Standard for fly jib.
13.5t, ball hook Standard for auxiliary short jib.

BRIDLE: All-welded construction; provided with sheave machinery for 16-part boom hoist rope reeving between the bridle and A-frame gantry bail.

BOOM LIVE MAST: Optional extra; required when boom length is 61.00m or longer. All-welded box type construction; mounted in front of upper revolving frame. Mast attaches the bridle with sheaves as a standard equipment for 16-part boom hoist rope reeving. Hydraulically operated boom live mast foot pins are available as an optional extra for assembling/disassembling ease of the boom live mast.

MID-POINT CABLE: Optional extra; required when boom length is 79.30m or longer.

LINE SPEEDS:

Drums	Root dia.	Type	Line speeds (Hoisting, Lowering)		Cable
			Pump control with "OFF"	Pump control with "ON"	
Front (main crane hoist)	532mm	Parallel grooved	@60m/min (high) @30m/min (low)	@15m/min (high) @7.5m/min (low)	28mm
Rear (aux. crane hoist)	532mm	Parallel grooved	@60m/min (high) @30m/min (low)	@15m/min (high) @7.5m/min (low)	28mm
Boom hoist	426mm	Parallel grooved	@40m/min	@10m/min	22.4mm

- Notes:
1. No high/low control provided on boom hoist drum winch.
2. Hoisting line speed varies under load and operating conditions.

HOIST REEVING:

	Main hoist											Aux. hoist
No. of part line	12	11	10	9	8	7	6	5	4	3	2	1
Max. load (ton)	150.0	138.5	127.0	115.5	103.0	90.5	78.0	65.5	53.0	40.0	27.0	13.5

SAFETY DEVICES: Hook over-hoist limiting device with automatic hydraulic motor locking and warning buzzer, boom over-hoist limiting device with automatic hydraulic motor locking and warning buzzer, boom backstops, boom angle indicator, drum pawl locks for front, rear and boom hoist drums, swing lock, swing warning device with buzzer and lamp, swing brake lamp, and signal horn. Over-load indication light and fly jib/auxiliary short jib hook over-hoist limiting device with automatic hydraulic motor locking and warning buzzer are available as optional extra.

LOAD MOMENT LIMITER: Optional extra; computerized automatic over-load preventing device consisting of load detector attached at the end of boom hoist cable, boom angle detector, amplifier with computerized load calculation device and digital type meter that indicates present lifting load/marginal lifting load/rated load, boom angle/working radius, and load ratio between rated and present lifting loads. This device also provides three warning lamps for overloading, hook overhoisting and boom overhoisting/overlowering. If lifting load is in excess of 90% of the rated load, a pre-warning is given with lamp, or if it is 100%, a warning is given with lamp and buzzer and load hoisting/boom lowering motions automatically stopped with automatic hydraulic motor locking. The machine, however, can be operated for lowering the load and hoisting the boom as safety side operation.

CABLES:
For front drum Sraf Nuflex rope, 28mm dia./360m length, breaking load 71.2ton.
For rear drum Optional extra; Sraf Nuflex rope, 28mm dia./360m length, braking load 71.2ton.
For boom hoist drum Tough Super rope, 22.4mm dia./310m length, breaking load 42.5ton.

WORKING WEIGHT: With 18.30m basic boom, 55.8t counterweight, 1,118mm wide track shoes and 150 hook block: Approx. 152ton.

GROUND PRESSURE:
0.81kg/cm² with 1,118mm track shoes and 152ton working weight mentioned above.

LS-248RH-5 LIFTING CRANE CAPACITIES:

Working radius (m)	Boom length (m)																		
	18.30	21.35	24.40	27.45	30.50	33.55	36.60	39.65	42.70	45.75	48.80	51.85	54.90	57.95	61.00	64.05	67.10	70.15	
5.0	150.0 (100.0)	133.6/5.5 (100.0/5.5)																	
6.0	140.0 (100.0)	128.1 (100.0)	116.8 (100.0)	104.3/6.5 (100.0/6.5)															
7.0	118.8 (100.0)	117.0 (100.0)	111.5 (100.0)	102.5 (100.0)	94.4	85.2/ 7.5													
8.0	99.2	98.9	98.8	96.2	90.7	83.8	77.8	70.1/ 8.5											
9.0	79.4	79.2	79.1	78.9	78.8	75.9	75.2	69.6	64.0	58.4/ 9.5									
10.0	67.9	67.7	67.6	67.5	67.4	67.3	66.6	66.5	62.3	57.8	52.3	48.0/ 10.5	44.3/ 11.0						
12.0	52.6	52.3	52.2	52.0	51.8	51.7	51.5	51.3	51.3	50.3	49.7	46.9	43.5	40.0	38.0/ 12.5	36.7/ 13.0	33.7/ 13.5		
14.0	42.9	42.6	42.4	42.3	42.0	41.9	41.6	41.5	41.3	41.2	41.1	40.2	38.8	38.1	37.0	36.2	33.5	30.3	
16.0	36.2	35.8	35.7	35.5	35.2	35.1	35.0	34.9	34.8	34.7	34.6	34.5	34.4	34.3	34.2	33.8	32.7	29.6	
18.0	33.2/ 17.0	30.9	30.7	30.5	30.2	30.0	29.9	29.8	29.7	29.6	29.6	29.5	29.4	29.3	29.2	29.1	29.0	28.8	
20.0		26.9	26.8	26.6	26.3	26.2	26.0	25.9	25.8	25.7	25.7	25.6	25.5	25.4	25.3	25.2	25.1	25.0	
22.0			23.8	23.6	23.4	23.2	22.9	22.8	22.7	22.6	22.5	22.4	22.3	22.2	22.1	22.0	21.9	21.8	
24.0				21.2	20.9	20.7	20.4	20.2	20.1	20.0	19.9	19.8	19.7	19.6	19.5	19.3	19.2	19.2	
26.0				20.2/ 25.0	18.8	18.7	18.4	18.2	18.1	17.9	17.8	17.7	17.6	17.5	17.4	17.3	17.2	17.1	
28.0					17.1	16.9	16.6	16.4	16.3	16.2	16.1	16.0	15.9	15.8	15.7	15.6	15.5	15.4	
30.0						15.6	15.2	15.0	14.9	14.6	14.5	14.4	14.3	14.2	14.1	14.0	13.9	13.8	
32.0							13.9	13.8	13.6	13.4	13.2	13.1	13.0	12.9	12.8	12.7	12.6	12.5	
34.0							13.0/ 33.0	12.7	12.5	12.3	12.2	11.9	11.8	11.7	11.6	11.5	11.4	11.3	
36.0								11.7	11.5	11.3	11.2	11.0	10.9	10.8	10.7	10.6	10.5	10.4	
38.0									10.8	10.5	10.3	10.1	10.0	9.9	9.8	9.7	9.6	9.5	
40.0										9.8	9.5	9.3	9.2	9.1	9.0	8.9	8.8	8.7	
42.0										9.4/ 41.0	8.8	8.7	8.5	8.4	8.3	8.1	7.9	7.9	
44.0											8.4/ 43.5	8.0	7.9	7.8	7.7	7.4	7.3	7.2	
46.0												7.5	7.2	7.1	7.1	6.7	6.7	6.6	
48.0													6.7	6.5	6.5	6.2	6.2	6.1	
50.0													6.4/ 49.0	6.1	6.0	5.7	5.7	5.5	
52.0														5.7/ 51.5	5.6	5.2	5.2	5.0	
54.0															5.2	4.8	4.8	4.5	
56.0																4.3	4.3	4.1	
58.0																4.1/ 57.0	3.9	3.8	
60.0																	3.6/ 59.5	3.4	
62.0																		3.1	

(in metric tons)				Working radius (m)
73.20	76.25	79.30	82.35	
				5.0
				6.0
				7.0
				8.0
				9.0
				10.0
				12.0
28.7/ 14.5	25.3/ 15.0	23.0/ 15.5		14.0
27.1	25.0	22.8	20.3	16.0
26.4	24.4	22.1	19.7	18.0
24.9	23.8	21.6	19.2	20.0
21.6	21.5	21.0	18.6	22.0
19.0	18.9	18.8	18.0	24.0
16.9	16.8	16.7	16.3	26.0
15.1	15.0	14.9	14.8	28.0
13.6	13.5	13.4	13.3	30.0
12.2	12.1	12.0	12.0	32.0
11.1	11.0	10.8	10.8	34.0
10.1	10.0	9.7	9.6	36.0
9.1	8.9	8.8	8.8	38.0
8.3	8.2	8.0	7.9	40.0
7.6	7.5	7.3	7.0	42.0
6.9	6.8	6.6	6.3	44.0
6.3	6.2	6.0	5.8	46.0
5.8	5.6	5.4	5.1	48.0
5.2	5.1	4.8	4.6	50.0
4.7	4.5	4.3	4.1	52.0
4.2	4.0	3.8	3.7	54.0
3.8	3.7	3.4	3.3	56.0
3.5	3.3	3.0	2.8	58.0
3.1	2.9	2.8	2.4	60.0
2.7	2.5	2.3	2.1	62.0

(ECP00083B)

Crane Working Ranges

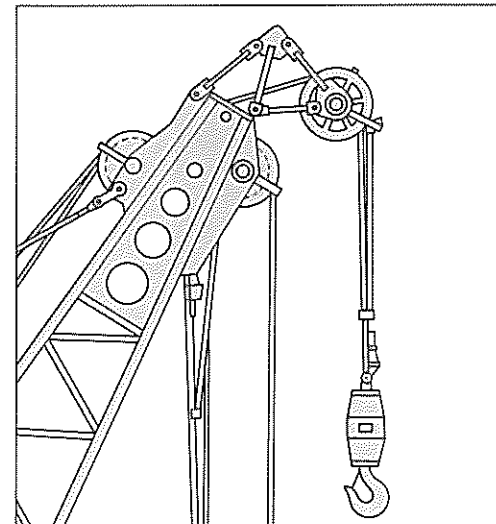
Notes — Lifting crane capacities

- Capacities included in this chart are the maximum allowable, and are based on machine standing level on firm supporting surface under ideal job conditions.
- Capacities are in metric tons, and are not more than 75% of minimum tipping loads unless marked with a shaded color (□). Shaded color indicates capacities are based on factors other than those which would cause a tipping condition.
- Capacities ranged by machine stability limitation on this chart are determined in condition of no two hanger sheaves be attached on a 9.15m tapered crane top section head machinery. If lifting operation with the two hanger sheaves, the reduction of a 0.3ton must be made from the capacities referred above. In case that lifting operation without the two hanger sheaves, capacities are determined to the figures shown in parenthesis for the portion of over 100ton capacity.
- Capacities are under crawler extended condition with 5,620 mm.
- Capacities are based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, and operating speeds. Operator must reduce load ratings to take such conditions into account. Deduction from rated capacities must be made for weight of jib, hook block, weighted ball/hook, sling, spreader bar, or other suspended gear.
SUMITOMO's hook block weight is as follows:
150t . . . 2.6t 100t . . . 2.2t 60t . . . 1.3t
25t . . . 1.1t 13.5t . . . 0.5t
- All capacities are rated for 360° swing.
- Least stable rated condition is over the side.
- Mid-point cable is required when boom length is 79.30m or longer.
- Boom live mast is also required when boom length is 61.00m or longer.
- Counterweight must be 55.8ton for all capacities on this chart.
- Attachment must be erected and lowered over the ends of the crawler mounting. When boom and jib combination length is more than 85.40m, two steel blocks be placed under track idler wheels each of the crawler are required for lifting off ground the attachment without any outside assistance.
- Main boom length must not exceed 82.35m.
Maximum fly jib length permitted—30.50m.
Maximum boom and fly jib combination length permitted—73.20m boom plus 30.50m fly jib.
- Determining lifting crane capacities with fly jib or auxiliary short jib mounted on boom:
When handling load off main boom head sheaves, the following reductions in rated lifting crane capacities must be made to compensate for fly jib weight including 25 hook block, or for auxiliary short jib including 13.5t hook block:
12.20m fly jib—2,900kg
18.30m fly jib—3,900kg
24.40m fly jib—5,000kg
30.50m fly jib—6,300kg
Auxiliary short jib—800kg
- Boom combination shall be in accordance with manufacturer's standard described in "Boom Combination Diagram". In configuration of boom combination, it is required to just position heavy-duty boom extensions or 1.525m boom extension on to the 7.625m bottom section. It is also required to position any of heavy-duty boom extensions between 7.625m bottom section and a 1.525m boom extension, and to position 9.15m light-duty boom extension(s) between 9.15m tapered top section and a 1.525m boom extension.

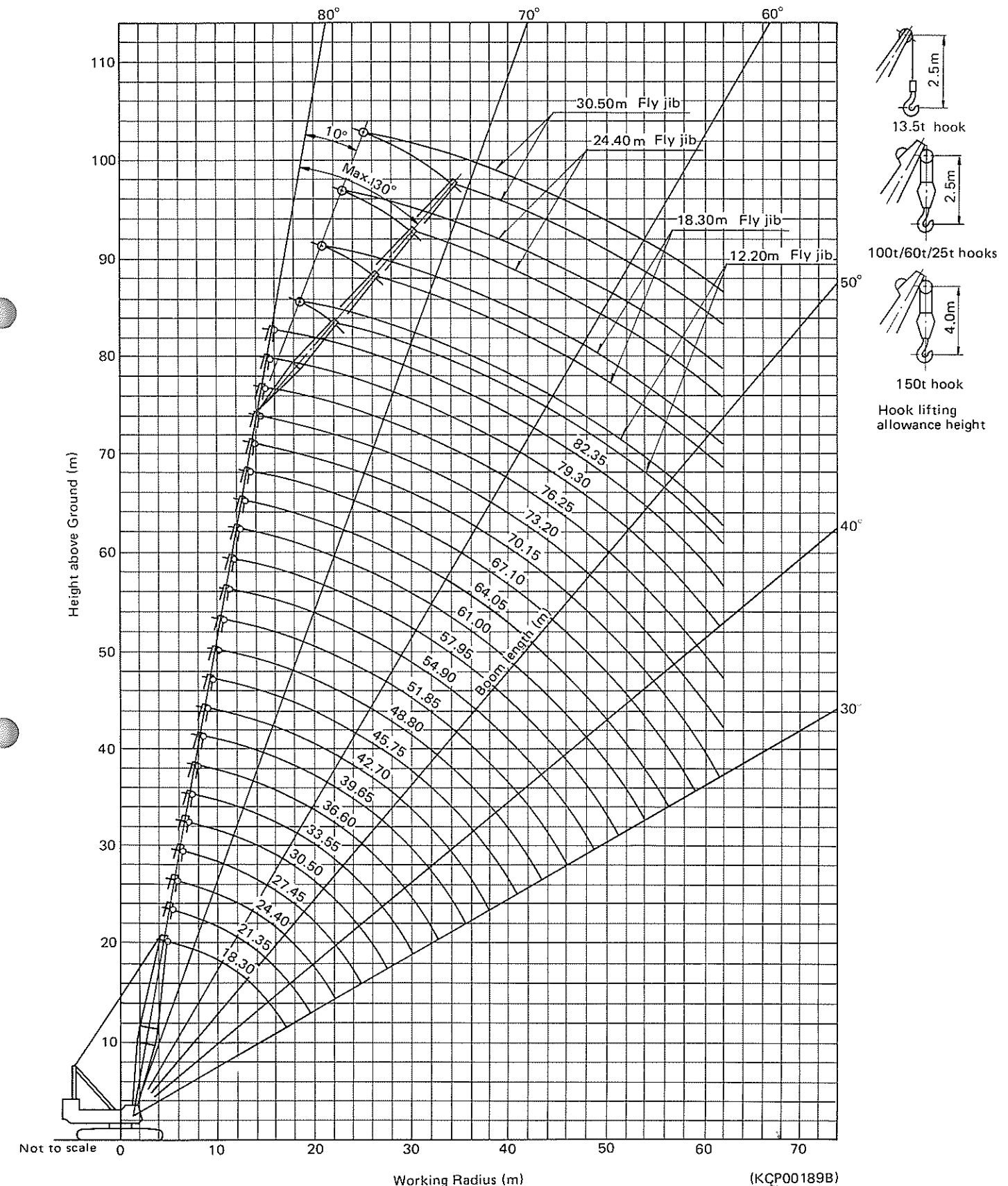
- Capacities apply only to the machine as originally manufactured and normally equipped by Sumitomo (S.H.I.) Construction Machinery Co., Ltd.

LS-248RH-5 AUXILIARY SHORT JIB CAPCITIES: Max. 13.5ton

Note: Jib capacities is equal to the figures made by the deduction of a 300kg from the lifting crane capacities unless restricted by the maximum jib capacity shown above.

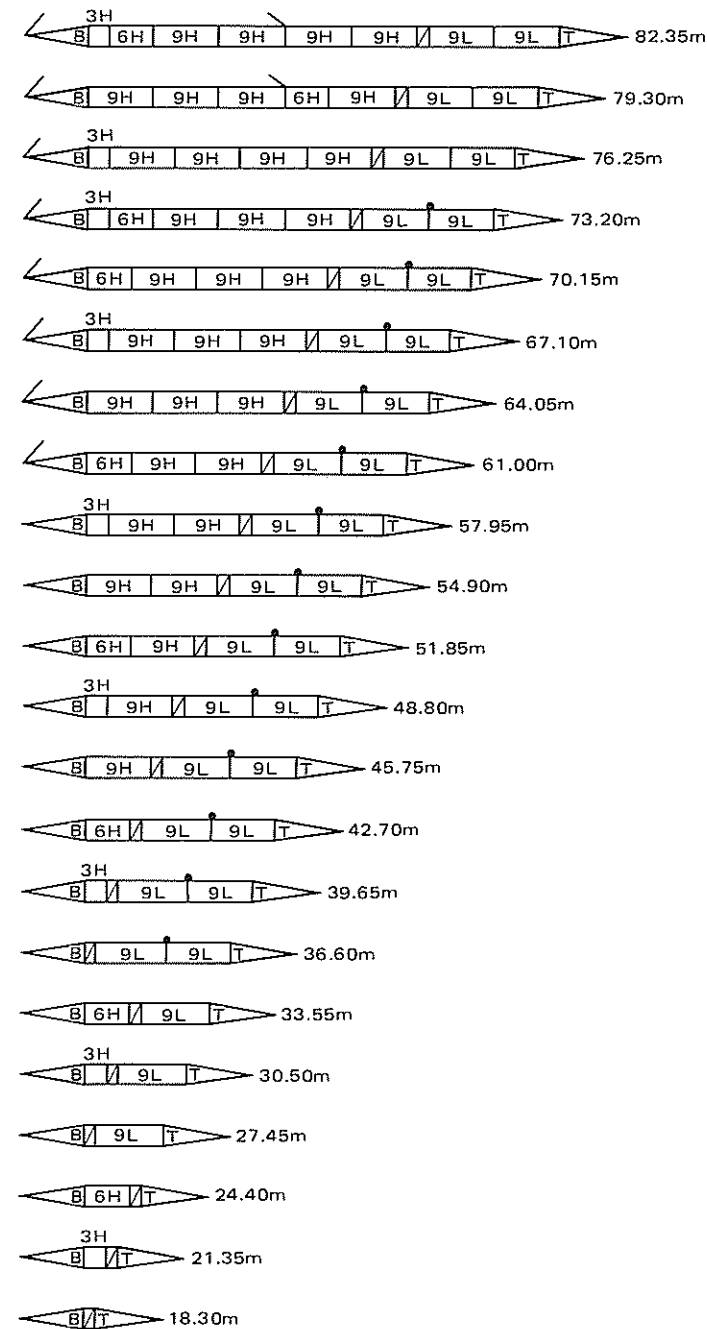


Auxiliary short jib (Option)



Boom Combination Diagram

Boom combination with tapered top section



Note:

The meaning of figures and symbols shown here are as follows:

9H : 9.15m heavy-duty type boom extension

9L : 9.15m light-duty type boom extension

6H : 6.10m heavy-duty type boom extension

3H : 3.05m heavy-duty type boom extension

1.525m : 1.525m boom extension

T : 9.15m tapered top section

7.625m : 7.625m bottom section

Mid-point cable installing position; the mid-point cable is required when boom length is 79.30m or larger.

Boom live mast; required when boom length is 61.00m or larger.

Boom guyline cables installing position; the boom guyline cables are required for fly jib attachment which can be mounted on boom from 36.60m up to 73.20m.

Fly Jib Capacities

Boom length (m)	36.60							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
12.0	15.0							
14.0	15.0							
16.0	15.0	12.5	11.5					
18.0	15.0	12.5	11.5		7.7			
20.0	15.0	12.5	11.5	7.7	7.7		3.8	
22.0	15.0	12.5	11.5	7.7	7.7		3.8	
24.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	
26.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	
28.0	15.0	12.3	11.5	7.7	7.7	5.8	3.8	2.9
30.0	15.0	12.0	11.3	7.7	7.7	5.8	3.8	2.9
32.0	13.9	11.5	11.1	7.7	7.2	5.8	3.8	2.9

(ECP00089A-1/13)

Boom length (m)	39.65							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
12.0	15.0/13.0							
14.0	15.0							
16.0	15.0	12.5	11.5					
18.0	15.0	12.5	11.5		7.7			
20.0	15.0	12.5	11.5	7.7	7.7		3.8	
22.0	15.0	12.5	11.5	7.7	7.7		3.8	
24.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	
26.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	
28.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	2.9
30.0	15.0	12.4	11.5	7.7	7.7	5.8	3.8	2.9
32.0	13.8	12.0	11.5	7.7	7.4	5.8	3.8	2.9
34.0	12.7	11.5	11.3	7.7	7.2	5.8	3.8	2.9
36.0	11.7	11.3	11.1	7.7	6.9	5.8	3.8	2.9

(ECP00089A-2/13)

Boom length (m)	42.70							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
14.0	15.0							
16.0	15.0	12.5/17.0	11.5					
18.0	15.0	12.5	11.5		7.7/19.0			
20.0	15.0	12.5	11.5		7.7			
22.0	15.0	12.5	11.5	7.7/21.0	7.7		3.8/21.0	
24.0	15.0	12.5	11.5	7.7	7.7		3.8	
26.0	15.0	12.5	11.5	7.7	7.7	5.8/25.0	3.8	
28.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	2.9
30.0	14.9	12.5	11.5	7.7	7.7	5.8	3.8	2.9
32.0	13.6	12.3	11.5	7.7	7.6	5.8	3.8	2.9
34.0	12.5	12.0	11.3	7.7	7.4	5.8	3.8	2.9
36.0	11.5	11.3	11.1	7.7	7.2	5.8	3.8	2.9
38.0	10.8	10.6	10.5	7.7	7.0	5.8	3.8	2.9

(ECP00089A-3/13)

Boom length (m)	45.75							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
14.0	15.0							
16.0	15.0							
18.0	15.0	12.5	11.5					
20.0	15.0	12.5	11.5		7.7			
22.0	15.0	12.5	11.5	7.7	7.7		3.8	
24.0	15.0	12.5	11.5	7.7	7.7		3.8	
26.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	
28.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	
30.0	14.6	12.5	11.5	7.7	7.7	5.8	3.8	2.9
32.0	13.4	12.4	11.5	7.7	7.6	5.8	3.8	2.9
34.0	12.3	12.1	11.5	7.7	7.4	5.8	3.8	2.9
36.0	11.3	11.3	11.2	7.7	7.2	5.8	3.8	2.9
38.0	10.5	10.5	10.4	7.7	7.0	5.8	3.8	2.9
40.0	9.8	9.8	9.8	7.7	6.8	5.5	3.8	2.9

(ECP00089A-4/13)

Boom length (m)	48.80							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
14.0	15.0							
16.0	15.0							
18.0	15.0	12.5	11.5					
20.0	15.0	12.5	11.5		7.7			
22.0	15.0	12.5	11.5		7.7		3.8	
24.0	15.0	12.5	11.5	7.7	7.7		3.8	
26.0	15.0	12.5	11.5	7.7	7.7		3.8	
28.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	
30.0	14.5	12.5	11.5	7.7	7.7	5.8	3.8	2.9
32.0	13.2	12.3	11.5	7.7	7.7	5.8	3.8	2.9
34.0	12.2	12.0	11.5	7.7	7.4	5.8	3.8	2.9
36.0	11.2	11.2	11.2	7.7	7.2	5.8	3.8	2.9
38.0	10.3	10.3	10.3	7.7	7.0	5.8	3.8	2.9
40.0	9.5	9.5	9.5	7.7	6.8	5.8	3.8	2.9
42.0	8.8	8.8	8.8	7.7	6.6	5.8	3.8	2.9

(ECP00089A-5/13)

Boom length (m)	51.85							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
16.0	15.0							
18.0	15.0		11.5					
20.0	15.0	12.5	11.5		7.7			
22.0	15.0	12.5	11.5		7.7		3.8	
24.0	15.0	12.5	11.5	7.7	7.7		3.8	
26.0	15.0	12.5	11.5	7.7	7.7		3.8	
28.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	
30.0	14.4	12.5	11.5	7.7	7.7	5.8	3.8	
32.0	13.1	12.2	11.5	7.7	7.7	5.8	3.8	2.9
34.0	11.9	11.5	11.5	7.7	7.4	5.8	3.8	2.9
36.0	11.0	10.6	11.0	7.7	7.2	5.8	3.8	2.9
38.0	10.1	10.1	10.1	7.7	7.0	5.8	3.8	2.9
40.0	9.3	9.3	9.3	7.7	6.8	5.8	3.8	2.9
42.0	8.7	8.7	8.7	7.7	6.6	5.8	3.8	2.9
44.0	8.0	8.0	8.0	7.7	6.4	5.6	3.8	2.9
46.0	7.5	7.5	7.5	7.2	6.3	5.4	3.7	2.9

(ECP00089A-6/13)

Boom length (m)	54.90							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
16.0	15.0							
18.0	15.0		11.5					
20.0	15.0	12.5	11.5					
22.0	15.0	12.5	11.5		7.7		3.8	
24.0	15.0	12.5	11.5	7.7	7.7		3.8	
26.0	15.0	12.5	11.5	7.7	7.7		3.8	
28.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	
30.0	14.3	12.5	11.5	7.7	7.7	5.8	3.8	
32.0	13.0	12.5	11.5	7.7	7.7	5.8	3.8	2.9
34.0	11.8	11.8	11.5	7.7	7.7	5.8	3.8	2.9
36.0	10.9	10.9	10.9	7.7	7.6	5.8	3.8	2.9
38.0	10.0	10.0	10.0	7.7	7.4	5.8	3.8	2.9
40.0	9.2	9.2	9.2	7.7	7.2	5.8	3.8	2.9
42.0	8.5	8.5	8.5	7.7	7.1	5.8	3.8	2.9
44.0	7.9	7.9	7.9	7.7	7.0	5.6	3.8	2.9
46.0	7.2	7.2	7.2	7.1	6.7	5.5	3.8	2.9
48.0	6.7	6.7	6.7	6.7	6.3	5.4	3.7	2.9

(ECP00089A-7/13)

Boom length (m)	57.95							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
16.0	15.0							
18.0	15.0							
20.0	15.0	12.5	11.5					
22.0	15.0	12.5	11.5		7.7			
24.0	15.0	12.5	11.5	7.7	7.7		3.8	
26.0	15.0	12.5	11.5	7.7	7.7		3.8	
28.0	15.0	12.5	11.5	7.7	7.7	5.8	3.8	
30.0	14.2	12.5	11.5	7.7	7.7	5.8	3.8	
32.0	12.9	12.5	11.5	7.7	7.7	5.8	3.8	2.9
34.0	11.7	11.7	11.5	7.7	7.7	5.8	3.8	2.9
36.0	10.8	10.8	10.8	7.7	7.6	5.8	3.8	2.9
38.0	9.9	9.9	9.9	7.7	7.4	5.8	3.8	2.9
40.0	9.1	9.1	9.1	7.7	7.2	5.8	3.8	2.9
42.0	8.4	8.4	8.4	7.7	7.1	5.7	3.8	2.9
44.0	7.8	7.8	7.8	7.6	7.0	5.6	3.8	2.9
46.0	7.1	7.1	7.1	7.1	6.7	5.5	3.8	2.9
48.0	6.5	6.5	6.5	6.5	6.3	5.3	3.7	2.9
50.0	6.1	6.1	6.1	6.1	5.9	5.0	3.5	2.9

(ECP00089A-8/13)

Boom length (m)	61.00							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
18.0	15.0							
20.0	15.0	12.5	11.5					
22.0	15.0	12.5	11.5		7.7			
24.0	15.0	12.5	11.5		7.7		3.8	
26.0	15.0	12.5	11.5	7.7	7.7		3.8	
28.0	15.0	12.5	11.5	7.7	7.7		3.8	
30.0	14.1	12.5	11.5	7.7	7.7	5.8	3.8	
32.0	12.8	12.5	11.5	7.7	7.7	5.8	3.8	2.9
34.0	11.6	11.5	11.5	7.7	7.7	5.8	3.8	2.9
36.0	10.7	10.7	10.7	7.7	7.6	5.8	3.8	2.9
38.0	9.8	9.8	9.8	7.7	7.4	5.8	3.8	2.9
40.0	9.0	9.0	9.0	7.7	7.2	5.8	3.8	2.9
42.0	8.3	8.3	8.3	7.7	7.1	5.7	3.8	2.9
44.0	7.7	7.7	7.7	7.7	7.0	5.6	3.8	2.9
46.0	7.1	7.1	7.1	7.1	6.6	5.5	3.8	2.9
48.0	6.5	6.5	6.5	6.5	6.3	5.3	3.7	2.9
50.0	6.0	6.0	6.0	6.0	6.0	5.1	3.5	2.9
52.0	5.6	5.6	5.6	5.6	5.6	5.0	3.4	2.8
54.0	5.2	5.2	5.2	5.2	4.9	4.9	3.3	2.7

(ECP00089A-9/13)

Boom length (m)	64.05							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
18.0	15.0							
20.0	15.0		11.5					
22.0	15.0	12.5	11.5		7.7			
24.0	15.0	12.5	11.5		7.7		3.8	
26.0	15.0	12.5	11.5	7.7	7.7		3.8	
28.0	15.0	12.5	11.5	7.7	7.7		3.8	
30.0	14.0	12.5	11.5	7.7	7.7	5.8	3.8	
32.0	12.7	12.5	11.5	7.7	7.7	5.8	3.8	
34.0	11.5	11.5	11.5	7.7	7.7	5.8	3.8	2.9
36.0	10.6	10.6	10.6	7.7	7.6	5.8	3.8	2.9
38.0	9.7	9.7	9.7	7.7	7.4	5.8	3.8	2.9
40.0	8.9	8.9	8.9	7.7	7.2	5.8	3.8	2.9
42.0	8.1	8.1	8.1	7.7	7.1	5.8	3.8	2.9
44.0	7.4	7.4	7.4	7.4	7.0	5.6	3.8	2.9
46.0	6.7	6.7	6.7	6.7	6.6	5.4	3.8	2.9
48.0	6.2	6.2	6.2	6.2	6.2	5.2	3.8	2.9
50.0	5.7	5.7	5.7	5.7	5.7	5.1	3.7	2.9
52.0	5.2	5.2	5.2	5.2	5.2	4.9	3.5	2.9
54.0	4.8	4.8	4.8	4.8	4.8	4.8	3.4	2.8
56.0	4.3	4.3	4.3	4.3	4.3	4.3	3.3	2.7

(ECP00089A-10/13)

Boom length (m)	67.10							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
18.0	15.0							
20.0	15.0		11.5					
22.0	15.0	12.5	11.5					
24.0	15.0	12.5	11.5		7.7		3.8	
26.0	15.0	12.5	11.5	7.7	7.7		3.8	
28.0	15.0	12.5	11.5	7.7	7.7		3.8	
30.0	13.9	12.5	11.5	7.7	7.7	5.8	3.8	
32.0	12.6	12.5	11.5	7.7	7.7	5.8	3.8	
34.0	11.4	11.4	11.4	7.7	7.6	5.8	3.8	2.9
36.0	10.5	10.5	10.5	7.7	7.5	5.8	3.8	2.9
38.0	9.6	9.6	9.6	7.7	7.3	5.8	3.8	2.9
40.0	8.8	8.8	8.8	7.7	7.2	5.8	3.8	2.9
42.0	7.9	7.9	7.9	7.7	7.1	5.8	3.8	2.9
44.0	7.3	7.3	7.3	7.3	7.0	5.6	3.8	2.9
46.0	6.7	6.7	6.7	6.7	6.6	5.4	3.8	2.9
48.0	6.2	6.2	6.2	6.2	6.2	5.2	3.8	2.9
50.0	5.7	5.7	5.7	5.7	5.7	5.1	3.7	2.9
52.0	5.2	5.2	5.2	5.2	5.2	4.9	3.5	2.8
54.0	4.8	4.8	4.8	4.8	4.8	4.8	3.4	2.7
56.0	4.3	4.3	4.3	4.3	4.3	4.3	3.3	2.5
58.0	3.9	3.9	3.9	3.9	3.9	3.9	3.1	2.6

(ECP00089A-11/13)

Boom length (m)	70.15							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
18.0	15.0							
20.0	15.0							
22.0	15.0	12.5	11.5					
24.0	15.0	12.5	11.5		7.7			
26.0	15.0	12.5	11.5	7.7	7.7		3.8	
28.0	15.0	12.5	11.5	7.7	7.7		3.8	
30.0	13.8	12.5	11.5	7.7	7.7		3.8	
32.0	12.5	12.5	11.5	7.7	7.7	5.8	3.8	
34.0	11.3	11.3	11.3	7.7	7.6	5.8	3.8	2.9
36.0	10.4	10.4	10.4	7.7	7.5	5.8	3.8	2.9
38.0	9.5	9.5	9.5	7.7	7.3	5.8	3.8	2.9
40.0	8.7	8.7	8.7	7.7	7.2	5.8	3.8	2.9
42.0	7.9	7.9	7.9	7.7	7.1	5.8	3.8	2.9
44.0	7.2	7.2	7.2	7.2	7.0	5.6	3.8	2.9
46.0	6.6	6.6	6.6	6.6	6.6	5.4	3.8	2.9
48.0	6.1	6.1	6.1	6.1	6.1	5.2	3.8	2.9
50.0	5.5	5.5	5.5	5.5	5.5	5.0	3.6	2.9
52.0	5.0	5.0	5.0	5.0	5.0	4.8	3.5	2.8
54.0	4.5	4.5	4.5	4.5	4.5	4.5	3.4	2.7
56.0	4.1	4.1	4.1	4.1	4.1	4.1	3.3	2.7
58.0	3.8	3.8	3.8	3.8	3.8	3.8	3.1	2.6
60.0	3.4	3.4	3.4	3.4	3.4	3.4	3.0	2.5
62.0	3.1	3.1	3.1	3.1	3.1	3.1	2.9	2.4

(ECP00089A-12/13)

Tower Crane 20metric tons

Boom length (m)	73.20							
Fly jib length (m)	12.20		18.30		24.40		30.50	
Fly jib offset angle (°)	10	30	10	30	10	30	10	30
Working radius (m)								
18.0	15.0							
20.0	15.0							
22.0	15.0	12.5	11.5					
24.0	15.0	12.5	11.5		7.7			
26.0	15.0	12.5	11.5		7.7		3.8	
28.0	15.0	12.5	11.5	7.7	7.7		3.8	
30.0	13.6	12.5	11.5	7.7	7.7		3.8	
32.0	12.2	12.2	11.5	7.7	7.7	5.8	3.8	
34.0	11.1	11.1	11.1	7.7	7.7	5.8	3.8	
36.0	10.1	10.1	10.1	7.7	7.5	5.8	3.8	2.9
38.0	9.1	9.1	9.1	7.7	7.4	5.8	3.8	2.9
40.0	8.3	8.3	8.3	7.7	7.2	5.8	3.8	2.9
42.0	7.6	7.6	7.6	7.5	7.1	5.8	3.8	2.9
44.0	6.9	6.9	6.9	6.9	6.9	5.6	3.8	2.9
46.0	6.3	6.3	6.3	6.3	6.3	5.4	3.8	2.9
48.0	5.8	5.8	5.8	5.8	5.8	5.1	3.8	2.9
50.0	5.2	5.2	5.2	5.2	5.2	4.9	3.6	2.9
52.0	4.7	4.7	4.7	4.7	4.7	4.7	3.5	2.8
54.0	4.2	4.2	4.2	4.2	4.2	4.2	3.4	2.7
56.0	3.8	3.8	3.8	3.8	3.8	3.8	3.3	2.7
58.0	3.5	3.5	3.5	3.5	3.5	3.5	3.1	2.6
60.0	3.1	3.1	3.1	3.1	3.1	3.1	3.0	2.5
62.0	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.4

(ECP00089A-13/13)

Notes — Fly jib capacities

- Capacities included in this chart are the maximum allowable, and are based on machine standing level on firm supporting surface under ideal job conditions.
- Capacities are in metric tons, and are based on 75% of minimum tipping loads unless marked with a shaded color (). Shaded color indicates capacities are based on factors other than those which would cause a tipping condition.
- Capacities are under crawler extended condition with 5,620 mm.
- Capacities are based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, and operating speeds. Operator must reduce load ratings to take such conditions into account. Deduction from rated jib capacities must be made for weight of hook block, weighted ball/hook, sling, load weighing devices, or other suspended gear.
SUMITOMO's hook block weight is as follows:
25t ... 1.1t 13.5t ... 0.5t
- All capacities are rated for 360° swing.
- Least stable rated position is over the side.
- Boom live mast must be installed when boom length is 61.00m or longer.
- Counterweight must be 55.8ton for all capacities on this chart.
- Attachment must be erected and lowered over the ends of the crawler mounting. When boom and jib combination length is more than 85.40m, two steel blocks be placed under track idler rollers each of the crawler are required for lifting off ground the attachment without any outside assistance.
- Maximum fly jib length permitted is 30.50m, and maximum boom and fly jib combination length permitted is 73.20m boom plus 30.50m fly jib.
- Capacities apply only to the machine as originally manufactured and normally equipped by Sumitomo (S.H.I.) Construction Machinery Co., Ltd.

TOWER BOOM: Lattice construction, round tubular main chords, alloy, hi-ten steel, with bracing of round steel tubing.

Tower boom connections In-line pin connections at 2m deep and 2m wide.
Basic tower Six-piece, 32.025m basic length; 7.625m bottom section, one 3.05m heavy-duty type extension, two 9.15m heavy-duty type extensions, one 1.525m extension and 1.525m tower cap.

Hydraulically operated tower boom foot pins Optional extra; available for assembling/disassembling ease of the two bottom section.

Tower boom extensions Optional extra; heavy-duty type, available in 3.05m, 6.10m and 9.15m lengths with pendants.

Maximum tower boom length 56.425m.

*Tower boom extensions and bottom section can be converted to main crane boom for general lifting crane attachment.
In conversion of 56.425m tower boom to the general lifting crane attachment, the crane attachment can perform 150ton lift by using optional 9.15m tapered crane top section and 150ton hook block, and can extend up to 82.35m length by adding optional two 9.15m light-duty crane boom extensions and 9.15m tapered crane top section.

TOWER JIB: Lattice construction, round tubular main chords, alloy, hi-ten steel, with bracing of round steel tubing.

Tower jib connections In-line pin connections at 1.55m deep and 1.55m wide.
Basic tower jib Three-piece, 24.40m basic length; 9.15m bottom section, one 6.10m extension and 9.15m tower jib top section.

Tower jib top head machinery Single sheave mounted on anti-friction bearings.
Tower jib extensions Optional extra; available in 3.05m and 9.15m lengths with pendants.

Maximum tower jib length 45.75m.

Maximum tower boom plus jib length 53.375m + 45.75m/56.425m + 42.70m.

TOWER POST: All-welded construction; pinned to tower cap. The posts provided with a guide sheave for tower jib crane hoist cable.

TOWER JIB BAIL AND BRIDLE: All-welded construction; provided with sheave machinery on the bail and bridle respectively for 10-part rope reeving between the bail and bridle. The bail is pinned to gantry foot, and the bridle is suspended between the bail and pendant ropes connecting to tower post at the other end.

TOWER BOOM BRIDLE: All-welded construction; provided with sheave machinery for 16-part tower boom hoist rope reeving between the bridle and A-frame gantry bail.

FLY JIB: Optional extra; available when converting tower boom to crane attachment. Lattice construction, round tubular main chords, alloy, hi-ten steel, with bracing of round steel tubing having in-line pin connections at 0.76m deep and 0.914m wide, and jib head machinery with single sheave mounted on anti-friction bearings. This attachment can be mounted on an optional 9.15m tapered crane top section, and is available for light load lifting operation with less than 15ton with 2-part hoist line.

Basic fly jib Two-piece, 12.20m basic length; 6.10m bottom and top sections.
Fly jib extensions Available in 6.10m length with pendants.
Maximum fly jib length 30.50m.
Boom plus fly jib length Max. 73.20m + 30.50m.

AUXILIARY SHORT JIB: Optional extra; available when converting tower boom to crane attachment. All-welded construction having single sheave head machinery. This attachment is pinned to an optional 9.15m tapered crane top section, and is available for 13.5ton lift as maximum with single part hoist line.

TAPERED CRANE TOP SECTION: Optional extra; 9.15m length, lattice construction round tubular main chords, alloy, hi-ten steel, with bracing of round steel tubing having in-line pin connections at 2m deep and 2m wide, and head machinery with four head and two hanger sheaves mounted on anti-friction bearings. This attachment is pinned to a 1.525m tower/crane boom extension, or an optional 9.15m light-duty type crane boom extension when using tower boom as crane application, and is available for 150ton lift as maximum.

LIGHT-DUTY TYPE CRANE BOOM EXTENSION: Optional extra; 9.15m length, lattice construction, round tubular main chords, alloy, hi-ten steel, with bracing of round steel tubing. In-line pin connections at 2m deep and 2m wide provided. This two extensions required to extend crane boom length up to 82.35m when converting 56.425m full tower boom to crane attachment.

BOOM LIVE MAST: Optional extra; required when crane boom length is 61.00m or longer. All-welded box type construction; mounted in front of upper revolving frame. Mast attaches the tower boom bridle with sheaves as a standard equipment for 16-part boom hoist rope reeving. Hydraulically operated boom live mast foot pins are available as an optional extra for assembling/dis-assembling ease of the boom live mast.

HOOK BLOCKS:
25t, single sheave Standard.
150t, five sheaves plus one in-lined hanger sheave . . . Optional extra.
100t, five sheaves Optional extra; available from a 150ton hook block by dismounting an in-lined hanger sheave.
60t, two sheaves Optional extra.
13.5t, ball hook Standard for auxiliary short jib.

MID-POINT CABLE: Optional extra; required when crane boom length is 79.30m or longer.

LINE SPEEDS:

Drums	Root dia.	Type	Line speeds (Hoisting, Lowering)		Cable
			Pump control with "OFF"	Pump control with "ON"	
Front (tower jib/ main crane hoist)	532mm	Parallel grooved	@60m/min (high) @30m/min (low)	@15m/min (high) @7.5m/min (low)	28mm
Rear (tower jib hoist/ aux. crane hoist)	532mm	Parallel grooved	@60m/min (high) @30m/min (low)	@15m/min (high) @7.5m/min (low)	28mm
Boom hoist (tower boom hoist)	426mm	Parallel grooved	@40m/min	@10m/min	22.4mm

- Notes:**
1. No high/low control provided on boom hoist drum winch.
2. Hoisting line speed varies under load and operating conditions.

HOIST REEVING:

	Main hoist										Main/tower jib crane hoist	Aux. hoist
No. of part line	12	11	10	9	8	7	6	5	4	3	2	1
Max. load (ton)	150.0	138.5	127.0	115.5	103.0	90.5	78.0	65.5	53.0	40.0	27.0/20.0	13.5

SAFETY DEVICES: Tower jib hook over-hoist limiting device with automatic hydraulic motor locking and warning buzzer, tower boom and tower jib over-hoist limiting devices with automatic hydraulic motor locking and warning buzzer, tower boom backstops, tower boom angle indicator, drum pawl locks for front, rear and boom hoist drums, swing lock, swing warning device with buzzer and lamp, swing brake lamp, and signal horn. Over-load indication light, and fly jib/ auxiliary short jib hook over-hoist limiting device with automatic hydraulic motor locking and warning buzzer are available as optional extra.

LOAD MOMENT LIMITER: Optional extra; computerized automatic over-load preventing device consisting of load detector attached at the end of tower jib hoist rope, boom angle detector, amplifier with computerized load calculation device and digital type meter that indicates present lifting load/marginal lifting load/rated load, tower jib angle/working radius, and load ratio between rated and present lifting loads. This device also provides three warning lumps for overloading, hook overhoisting and tower jib overhoisting/overlowering. If lifting load is in excess of 90% of the rated load, a pre-warning is given with lamp, or if it is 100%, a warning is given with lamp and buzzer and load hoisting/tower jib lowering motions automatically stopped with automatic hydraulic motor locking. The machine, however, can be operated for lowering the load and hoisting the tower jib as safety side operation.

CABLES:
For front drum Tough Nuflex rope, 28mm dia./360m length, breaking load 71.2ton.
For rear drum Tough Nuflex rope, 28mm dia./360m length, breaking load 71.2ton.
For boom hoist drum Tough Super rope, 22.4mm dia./310m length, breaking load 42.5ton.

WORKING WEIGHTS:

With 32.025m tower boom, 24.4m tower jib, 55.8ton counterweight, 1,118mm track shoes and 25t hook block: Approx. 165.2ton.
With 53.375m tower boom, 45.75m full tower jib, 55.8ton counterweight, 1,118mm track shoes and 25t hook block: Approx. 171.5ton.

GROUND PRESSURE: 0.92kg/cm² with 1,118mm track shoes and 171.5ton working weight mentioned above.

Tower Crane Working Ranges

LS-248RH-5 TOWER CRANE CAPACITIES (With 90° tower boom angle)

Tower jib length (m)	24.40	27.45	30.50	33.55	36.60	39.65	42.70	45.75
Tower boom length (m)	32.025	35.075	35.075	38.125	41.175	44.225	47.275	50.325
Working radius (m)	56.425	56.425	56.425	56.425	56.425	56.425	56.425	53.375
10.0	20.0/10.2	20.0/10.9	20.0/11.7					
12.0	20.0	20.0	20.0	19.4/12.5	17.8/13.3			
14.0	20.0	20.0	20.0	19.4	17.8	16.3/14.1	14.8/14.9	
15.0	20.0/15.8	20.0/15.8	20.0/15.8	19.4/15.8	17.8	16.3	14.8	13.3/15.7
16.0	19.6	19.6	19.6	19.0	17.8/16.4	16.3/17.5	14.8	13.3
18.0	17.8	17.8	17.8	17.8	17.1	16.1	14.8/18.6	13.3/19.7
20.0	16.2	16.2	16.2	16.2	16.2	15.3	14.3	13.2
22.0	14.8	14.8	14.8	14.8	14.8	14.4	13.7	12.6
24.0	13.5	13.5	13.5	13.5	13.5	13.5	12.8	12.2
26.0	12.4/25.7	12.2	12.2	12.2	12.2	12.2	12.2	11.5
28.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0
30.0		10.7/28.4	9.9	9.9	9.9	9.9	9.9	9.9
32.0			9.4/31.2	9.1	9.1	9.1	9.1	9.1
34.0				9.4	8.4	8.4	8.4	8.4
36.0					7.7	7.7	7.7	7.7
38.0					7.5/36.7	7.1	7.1	7.1
40.0						6.7/39.5	6.5	6.5
42.0							6.0	6.0
44.0							5.9/42.2	5.6
46.0								5.3/45.0

(ECP00087A)

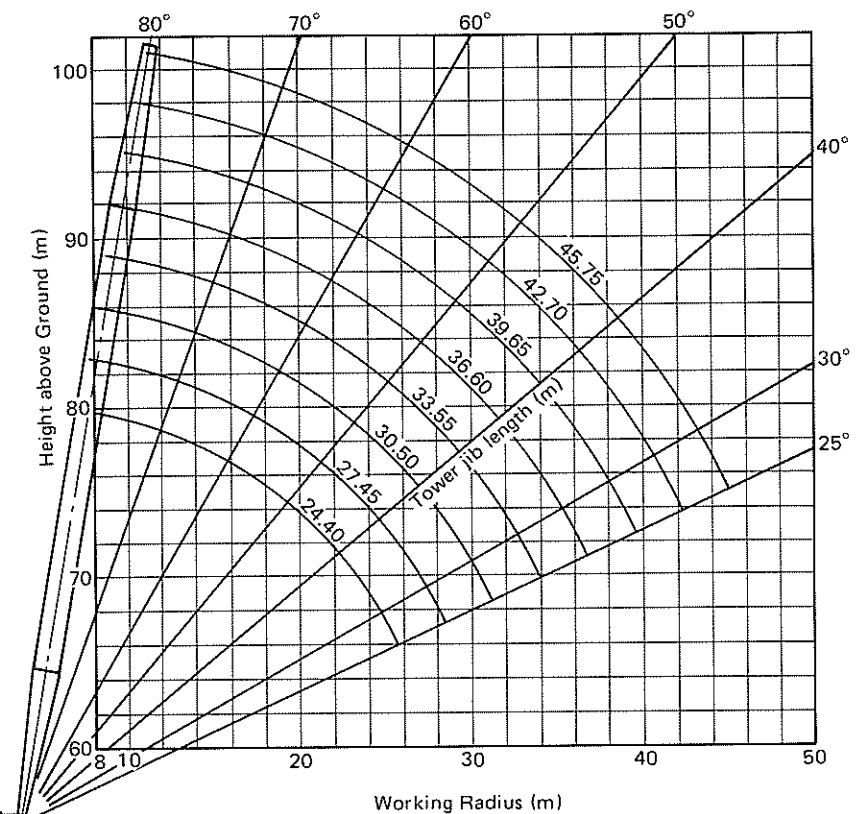
Notes — Tower crane capacities

- Capacities included in this chart are the maximum allowable, and are based on machine standing level on firm supporting surface under ideal job conditions.
- Capacities are in metric tons, and are based on machine structural limitation factors other than those which would cause a tipping condition that regulates 75% of minimum tipping loads.
- Capacities are under crawler extended condition with 5,620 mm.
- Capacities are based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, and operating speeds. Operator must reduce load ratings to take such conditions into account. Deduction from rated capacities must be made for weight of hook block, weighted ball/hook, sling, spreader bar, or other suspended gear. SUMITOMO's hook block weight is as follows:
25t 1.1t 13.5t 0.5t
- All capacities are rated for 360° swing.
- Least stable rated condition is over the side.
- Tower crane attachment requires 55.8ton counterweight for all capacities on this chart.
- Attachment must be erected and lowered over the front of the crawler mounting. When mounting 30.50m through 45.75m tower jib on tower boom from 50.325m through 56.425m, two steel blocks be placed under track idler wheels each of crawler are required for lifting off ground the attachment without any outside assistance.
- Capacities apply only to the machine as originally manufactured and normally equipped by Sumitomo (S.H.I.) Construction Machinery Co., Ltd.

LS-248RH-5 TOWER BOOM CRANE LIFTING CAPACITIES:

All of the lifting crane capacities of the tower boom crane as case of converting tower boom to crane attachment are exactly same as those of lifting crane capacities mentioned in to "Crane 150 metric tons" herein provided that boom combination shall be in accordance with manufacturer's standard stated in "Boom Combination Diagram". Other specifications of the tower boom crane such as maximum boom length are also exactly same as those mentioned in to "Crane 150 metric tons", and accordingly its working ranges can be referred to "Crane Working Ranges" described herein.

With 90° tower boom angle



Note:

This diagram is based on 53.375m tower length. Following deduction/increase in Height above Ground mentioned above must be made when operation with less than 50.325m and/or more than 56.425m tower:

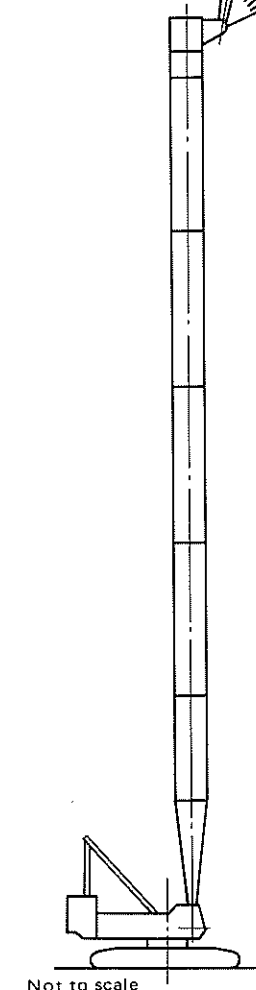
Tower length (m)	32.025	35.075	38.125	41.175	44.225	47.275	50.325	56.425
Height to be deducted / increased (m)	-21.35	-18.30	-15.25	-12.20	-9.15	-6.10	-3.05	+3.05

Tower boom and jib combination table:

Tower jib length (m)	24.40	27.45	30.50	33.55	36.60	39.65	42.70	45.75
Tower boom length (m)								
32.025	○	X	X	X	X	X	X	X
35.075	○	○	○	X	X	X	X	X
38.125	○	○	○	○	X	X	X	X
41.175	○	○	○	○	○	X	X	X
44.225	○	○	○	○	○	○	X	X
47.275	○	○	○	○	○	○	○	X
50.325	○	○	○	○	○	○	○	○
53.375	○	○	○	○	○	○	○	○
56.425	○	○	○	○	○	○	○	X

Notes:

- Attachment must be erected and lowered over the front of the crawler mounting.
- Two steel blocks be placed under track idler wheels each of crawler are required when mounting 30.50m through 45.75m tower jib on tower boom from 50.325m through 56.425m for lifting off ground the attachment without any outside assistance.
- Symbol with "○" indicates two upper connect pins between tower jib top section and jib extension must be pulled out when erecting and lowering the attachment.



LS-248RH-5 TOWER CRANE CAPACITIES (With 80° tower boom angle)

Tower boom length (m)	32.025
Tower jib length (m)	24.40
Working radius (m)	
19.0	16.5/19.6
20.0	16.2
22.0	14.8
24.0	13.5
26.0	12.4/25.7
28.0	11.0
30.0	9.9
32.0	9.1
34.0	8.9/32.6

(ECP00091A-1/9)

Tower boom length (m)	35.075		
Tower jib length (m)	24.40	27.45	30.50
Working radius (m)			
20.0	16.1/20.1	15.2/21.4	
22.0	14.8	14.8	14.3/22.7
24.0	13.5	13.5	13.5
26.0	12.4/25.7	12.2	12.2
28.0	11.0	11.0	11.0
30.0	9.9	10.7/28.4	9.9
32.0	9.1	9.1	9.4/31.2
34.0	8.7/33.1	8.4	8.4
36.0		7.7	7.7
38.0			7.1
40.0			6.8/39.0

(ECP00091A-2/9)

Tower boom length (m)	38.125			
Tower jib length (m)	24.40	27.45	30.50	33.55
Working radius (m)				
20.0	15.7/20.7			
22.0	14.8	14.8	14.0/23.2	
24.0	13.5	13.5	13.5	13.5/24.5
26.0	12.4/25.7	12.2	12.2	12.2
28.0	11.0	11.0	11.0	11.0
30.0	9.9	10.7/28.4	9.9	9.9
32.0	9.1	9.1	9.4/31.2	9.1
34.0	8.5/33.6	8.4	8.4	8.4
36.0		7.7	7.7	7.7
38.0		7.5/36.6	7.1	7.1
40.0			6.7/39.5	6.5
42.0				6.0
44.0				5.9/42.4

(ECP00091A-3/9)

Tower boom length (m)	47.275						
Tower jib length (m)	24.40	27.45	30.50	33.55	36.60	39.65	42.70
Working radius (m)							
22.0	14.6/22.3	13.8/23.5					
24.0	13.5	13.5	13.0/24.8				
26.0	12.4/25.7	12.2	12.2	12.2/26.1	11.4/27.4		
28.0	11.0	11.0	11.0	11.0	11.0	10.7/28.7	
30.0	9.9	10.7/28.4	9.9	9.9	9.9	9.9	9.9
32.0	9.1	9.1	9.4/31.2	9.1	9.1	9.1	9.1
34.0	8.4	8.4	8.4	8.4	8.4	8.4	8.4
36.0	8.0/35.2	7.7	7.7	7.7	7.7	7.7	7.7
38.0		7.1	7.1	7.1	7.5/36.7	7.1	7.1
40.0		7.1/38.1	6.5	6.5	6.5	6.7/39.5	6.5
42.0			6.2/41.1	6.0	6.0	6.0	6.0
44.0				5.6	5.6	5.6	5.6
46.0					5.1	5.1	5.1
48.0					4.9/47.0	4.9	4.9
50.0						4.4/49.9	4.4
52.0							4.1
54.0							4.0/52.9

(ECP00091A-6/9)

Tower boom length (m)	41.175				
Tower jib length (m)	24.40	27.45	30.50	33.55	36.60
Working radius (m)					
20.0	15.4/21.2				
22.0	14.8	14.5/22.5	13.6/23.8		
24.0	13.5	13.5	13.5	12.8/25.1	
26.0	12.4/25.7	12.2	12.2	12.2	12.0/26.4
28.0	11.0	11.0	11.0	11.0	11.0
30.0	9.9	10.7/28.4	9.9	9.9	9.9
32.0	9.1	9.1	9.4/31.2	9.1	9.1
34.0	8.4	8.4	8.4	8.4	8.4
36.0	8.4/34.1	7.7	7.7	7.7	7.7
38.0		7.4/37.1	7.1	7.1	7.5/36.7
40.0			6.5	6.5	6.5
42.0				6.0	6.0
44.0				5.8/43.0	5.6
46.0					5.2/45.9

(ECP00091A-4/9)

Tower boom length (m)	44.225					
Tower jib length (m)	24.40	27.45	30.50	33.55	36.60	39.65
Working radius (m)						
20.0	15.0/21.7					
22.0	14.8	14.2/23.0				
24.0	13.5	13.5	13.3/24.3	12.5/25.6		
26.0	12.4/25.7	12.2	12.2	12.2	11.7/26.9	
28.0	11.0	11.0	11.0	11.0	11.0	10.9/28.2
30.0	9.9	10.7/28.4	9.9	9.9	9.9	9.9
32.0	9.1	9.1	9.4/31.2	9.1	9.1	9.1
34.0	8.4	8.4	8.4	8.4	8.4	8.4
36.0	8.2/34.7	7.7	7.7	7.7	7.7	7.7
38.0		7.2/37.6	7.1	7.1	7.5/36.7	7.1
40.0			6.5	6.5	6.5	6.7/39.5
42.0			6.4/40.6	6.0	6.0	6.0
44.0				5.7/43.5	5.6	5.6
46.0					5.1	5.1
48.0					5.1/46.4	4.9
50.0						4.5/49.4

(ECP00091A-5/9)

Tower boom length (m)	50.325							
Tower jib length (m)	24.40	27.45	30.50	33.55	36.60	39.65	42.70	45.75
Working radius (m)								
22.0	14.3/22.8							
24.0	13.5	13.5/24.1	12.7/25.4					
26.0	12.4/25.7	12.2	12.2	11.9/26.7	11.0/27.9			
28.0	11.0	11.0	11.0	11.0	11.0	10.6/29.2		
30.0	9.9	10.7/28.4	9.9	9.9	9.9	9.9	9.7/30.5	9.2/31.8
32.0	9.1	9.1	9.4/31.2	9.1	9.1	9.1	9.1	9.1
34.0	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
36.0	7.8/35.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
38.0		7.1	7.1	7.1	7.5/36.7	7.1	7.1	7.1
40.0		6.9/38.7	6.5	6.5	6.5	6.7/39.5	6.5	6.5
42.0			6.1/41.6	6.0	6.0	6.0	6.0	6.0
44.0				5.6	5.6	5.6	5.9/42.2	5.6
46.0				5.5/44.6	5.1	5.1	5.1	5.3/45.0
48.0					4.8/47.5	4.7	4.7	4.7
50.0						4.4	4.4	4.4
52.0						4.3/50.4	4.1	4.1
54.0							3.9/53.4	3.8
56.0								3.5
58.0								3.4/56.3

(ECP00091A-7/9)

Tower boom length (m)	53.375							
Tower jib length (m)	24.40	27.45	30.50	33.55	36.60	39.65	42.70	45.75
Working radius (m)								
22.0	14.0/23.3							
24.0	13.5	13.1/24.6	12.2/25.9					
26.0	12.4/25.7	12.2	12.2	11.6/27.2				
28.0	11.0	11.0	11.0	11.0	10.8/28.5	10.1/29.8		
30.0	9.9	10.7/28.4	9.9	9.9	9.9	9.9	9.5/31.0	
32.0	9.1	9.1	9.4/31.2	9.1	9.1	9.1	9.1	9.0/32.3
34.0	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
36.0	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
38.0	7.6/36.3	7.1	7.1	7.1	7.5/36.7	7.1	7.1	7.1
40.0		7.0/39.2	6.5	6.5	6.5	6.7/39.5	6.5	6.5
42.0			6.0	6.0	6.0	6.0	6.0	6.0
44.0			6.0/42.1	5.6	5.6	5.6	5.9/42.2	5.6
46.0				5.3/45.1	5.1	5.1	5.1	5.3/45.0
48.0					4.7	4.7	4.7	4.7
50.0						4.4	4.4	4.4
52.0						4.2/51.0	3.8/53.9	4.1
54.0								3.8
56.0								3.5
58.0								3.4/56.9

(ECP00091A-8/9)

Tower Crane Working Ranges

With 80° tower boom angle

Tower boom length (m)	56.425						
Tower jib length (m)	24.40	27.45	30.50	33.55	36.60	39.65	42.70
Working radius (m)							
22.0	13.7/23.8						
24.0	13.5	12.8/25.1					
26.0	12.4/25.7	12.2	12.0/26.4	11.2/27.7			
28.0	11.0	11.0	11.0	11.0	10.6/29.0		
30.0	9.9	10.7/28.4	9.9	9.9	9.9	9.9/30.3	9.3/31.6
32.0	9.1	9.1	9.4/31.2	9.1	9.1	9.1	9.1
34.0	8.4	8.4	8.4	8.4	8.4	8.4	8.4
36.0	7.7	7.7	7.7	7.7	7.7	7.7	7.7
38.0	7.5/36.8	7.1	7.1	7.1	7.5/36.7	7.1	7.1
40.0		6.6/39.7	6.5	6.5	6.5	6.7/39.5	6.5
42.0			6.0	6.0	6.0	6.0	6.0
44.0			5.9/42.7	5.6	5.6	5.6	5.9/42.2
46.0				5.2/45.6	5.1	5.1	5.1
48.0					4.7	4.7	4.7
50.0					4.6/48.6	4.4	4.4
52.0						4.2/51.5	4.1
54.0							3.8
56.0							3.7/54.5

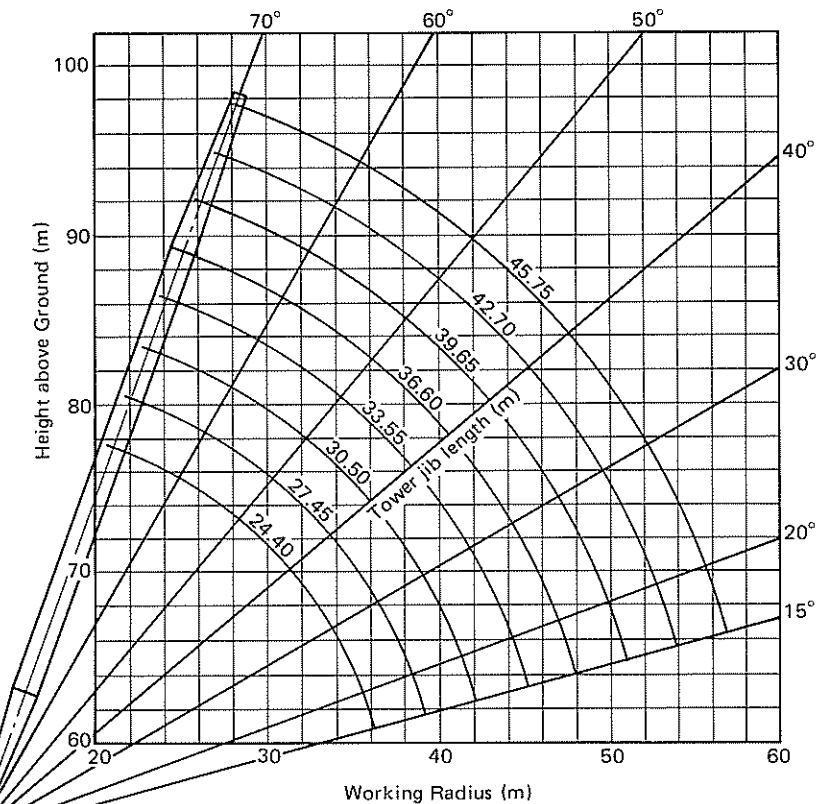
(ECP00091A-9/9)

Notes — Tower crane capacities

- Capacities included in this chart are the maximum allowable, and are based on machine standing level on firm supporting surface under ideal job conditions.
- Capacities are in metric tons, and are based on machine structural limitation factors other than those which would cause a tipping condition that regulates 75% of minimum tipping loads.
- Capacities are under crawler extended condition with 5,620 mm.
- Capacities are based on freely suspended loads and make no allowance for such factors as the effect of wind, sudden stopping of loads, supporting surface conditions, and operating speeds. Operator must reduce load ratings to take such conditions into account. Deduction from rated capacities must be made for weight of hook block, weighted ball/hook, sling, spreader bar, or other suspended gear. SUMITOMO's hook block weight is as follows:
25t 1.1t 13.5t 0.5t
- All capacities are rated for 360° swing.
- Least stable rated condition is over the side.
- Tower crane attachment requires 55.8ton counterweight for all capacities on this chart.
- Attachment must be erected and lowered over the front of the crawler mounting. When mounting 30.50m through 45.75m tower jib on tower boom from 50.325m through 56.425m, two steel blocks be placed under track idler wheels each of crawler are required for lifting off ground the attachment without any outside assistance.
- Capacities apply only to the machine as originally manufactured and normally equipped by Sumitomo (S.H.I.) Construction Machinery Co., Ltd.

LS-248RH-5 TOWER BOOM CRANE LIFTING CAPACITIES:

All of the lifting crane capacities of the tower boom crane as case of converting tower boom to crane attachment are exactly same as those of lifting crane capacities mentioned in to "Crane 150 metric tons" herein provided that boom combination shall be in accordance with manufacturer's standard stated in "Boom Combination Diagram". Other specifications of the tower boom crane such as maximum boom length are also exactly same as those mentioned in to "Crane 150 metric tons", and accordingly its working ranges can be referred to "Crane Working Ranges" described herein.



Note:
This diagram is based on 53.375m tower length. Following deduction/increase in Height above Ground and Working Radius mentioned above must be made when operation with less than 50.325m and/or more than 56.425m tower:

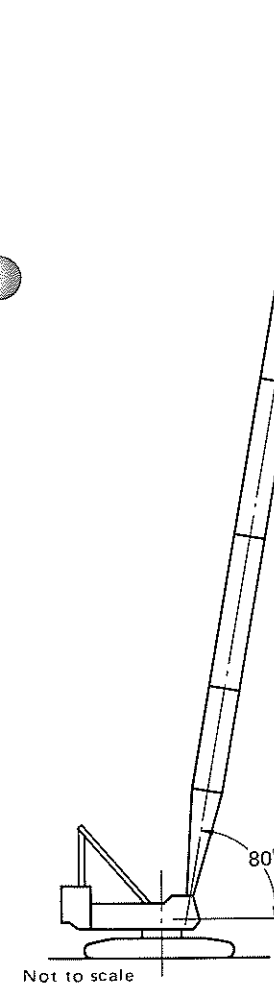
Tower length (m)	32.025	35.075	38.125	41.175	44.225	47.275	50.325	56.425
Height to be deducted (m)	-21.00	-18.00	-15.00	-12.00	-9.00	-6.00	-3.00	+3.00
Radius to be deducted/increased (m)	-3.71	-3.18	-2.65	-2.12	-1.59	-1.06	-0.53	+0.53

Tower boom and jib combination table:

Tower jib length (m)	24.40	27.45	30.50	33.55	36.60	39.65	42.70	45.75
Tower boom length (m)								
32.025	○	X	X	X	X	X	X	X
35.075	○	○	○	X	X	X	X	X
38.125	○	○	○	○	X	X	X	X
41.175	○	○	○	○	○	X	X	X
44.225	○	○	○	○	○	○	X	X
47.275	○	○	○	○	○	○	○	X
50.325	○	○	○	○	○	○	○	○
53.375	○	○	○	○	○	○	○	○
56.425	○	○	○	○	○	○	○	X

Notes:

- Attachment must be erected and lowered over the front of the crawler mounting.
- Two steel blocks be placed under track idler wheels each of crawler are required when mounting 30.50m through 45.75m tower jib on tower boom from 50.325m through 56.425m for lifting off ground the attachment without any outside assistance.
- Symbol with "○" indicates two upper connect pins between tower jib top section and jib extension must be pulled out when erecting and lowering the attachment.



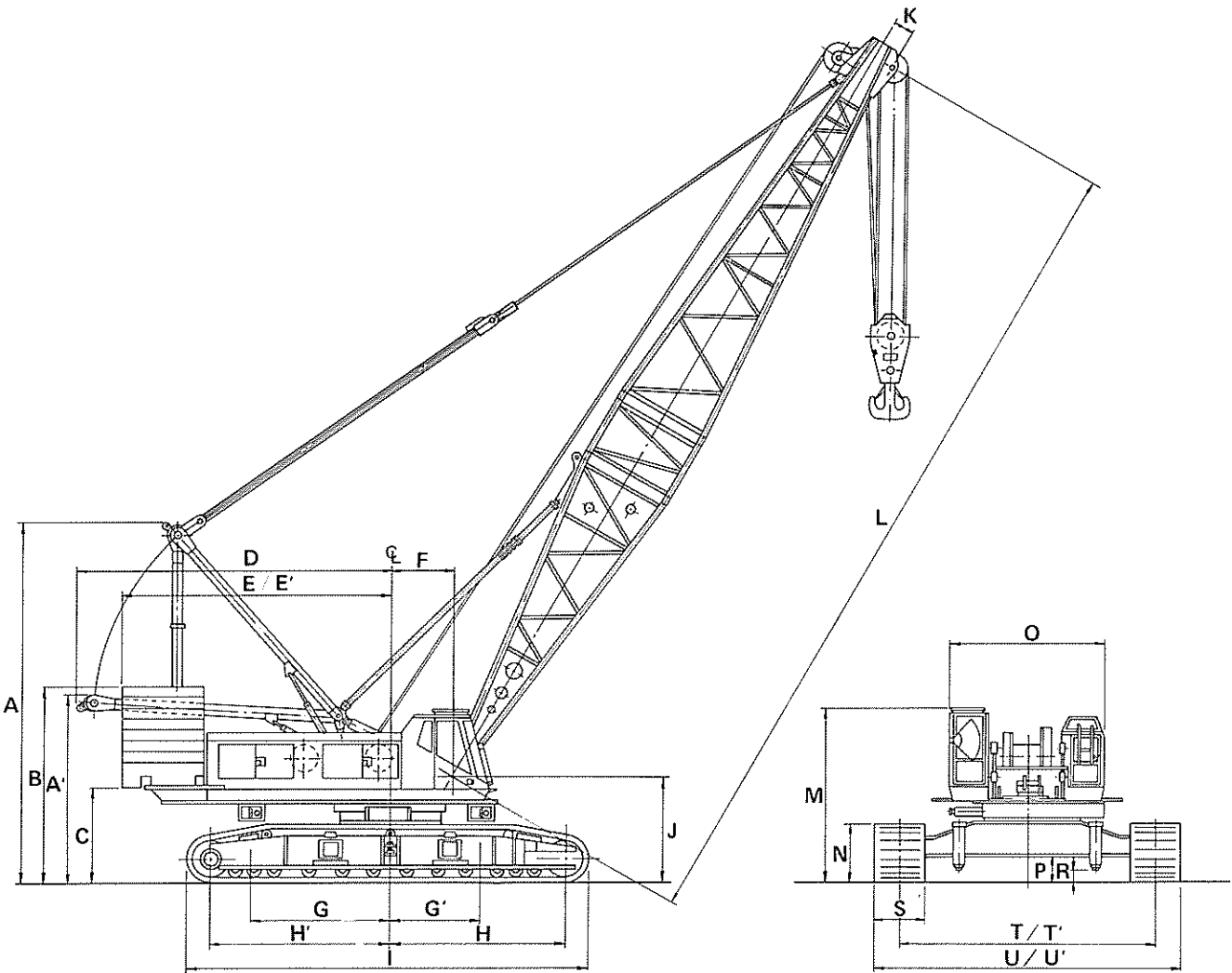
Standard and Optional Equipments

	Standard equipments	Optional equipments
Upper Machinery	• Mitsubishi 6D22T diesel • Hydraulic system with two variable displacement axial piston pumps and one fixed displacement triplicate tandem gear pump • Control system with two quadruplicate tandem valves and floor type levers • Main/auxiliary hoist drum winches with hydraulic motors, external contracting band type brakes w/automatic and free fall braking modes, and automatically engaged/disengaged clutches • Boom hoist drum winches with hydraulic motor and wet-disc type automatic brake • Swing mechanism with 2-hydraulic motor with wet-disc type brake and turntable bearing • A-frame type gantry with bail and hydraulic cylinders • Counterweights; 55.8ton • Machinery cab with hinged doors • 24-volt electrical system with two 12-volt batteries • Full-vision type operator's cab with reclining type seat and floor mat • Cigarette lighter • Ash tray • Interior cab light • Electric socket; 24V • Manual holder • Engine monitoring lamps • Fuel gauges; provided in cab gauge panel and fuel tank • Engine glow indication lamp • Engine tachometer • Thermometer • Hydraulic oil pressure gauge • Hydraulic oil temperature gauge • Level gauge • Foot/hand throttles • Wind wipers with blade; provided on front and roof wind glasses • Two headlights • Two back mirrors • Catwalks along both sides of machinery cab • Superstructure under-cover; provided at lower parts of cab and engine	• Upper machinery jack-up device with 4-hydraulically operated beam and jack cylinder • Retainer ring type turntable bearing instead of standard • Wire reeving winch • Anemometer; recommended for tower crane operation • Monitor television; recommended for tower crane operation • Radio • Cab heater • Air-conditioner • Drum rotation indicators • Drum mirrors • Fire extinguisher • Cab fan • Sunvisor • Sunshade • Radiophone • Microphone with loud-speaker • Bilge pump

	Standard equipments	Optional equipments
Upper Machinery — continued —	• Slipless mats; provided on machinery cab upper-part • Spare parts and tools	
Undercarriage	• 5,620mm gauge by 8,966mm long crawler lower with removable/retractable side frames • Carbody jack-up cylinders • Hydrostatic crawler drive units with wet-disc type automatic brakes • 1,118mm wide track shoes • Automatic track tension adjusting device • Lifetime lubricated track components • Level gauge	• Side frame retract cylinders • Two steel blocks; necessary when boom or boom plus jib length is 82.35m or longer, and/or when mounting 30.50m thru 45.75m tower jib on tower boom from 50.325m thru 53.375m for self-erection
Crane Attachment	• 18.30m basic crane boom; 7.625m bottom section, one 1.525m extension and 9.15m tapered crane top section • Boom bridle • 150/100ton hook block • Main crane hoist cable; 28mm dia./360m length • Boom hoist cable; 22.4mm dia./310m length • Cord reel; provided for crane boom electric wiring	• Heavy-duty type boom extensions; available in 3.05, 6.10 and 9.15m with pendants • Light-duty type boom extension; available in 9.15m with pendants * Max. crane boom length is 82.35m. • 12.20m basic fly jib; 6.10m bottom and top sections with strut and guyline pendants • Fly jib extensions; available in 6.10m with pendants * Max. fly jib length is 30.50m, and max. boom and fly jib combination length permitted is 73.20m plus 30.50m. • 25ton hook block; necessary for fly jib operation • Cable; 28mm dia./360m length as necessary for fly jib/auxiliary short jib operations • Auxiliary short jib • 13.5ton hook block; necessary for auxiliary short jib operation • Mid-point cable; necessary when boom length is 79.30m or longer • Boom live mast; necessary when boom length is 61.00m or longer • 60ton hook block • Hydraulically operated boom foot pins instead of standard • Hydraulically operated boom live mast foot pins instead of standard • Cord reel; provided for fly jib electric wiring • Boom skywalks; available for extension booms

General Dimensions

	Standard equipments	Optional equipments
Tower Crane Attachment	• 32.025m basic tower boom; 7.625m bottom section, one 3.050m heavy-duty type extension, two 9.15m heavy-duty type extensions, one 1.525m extension and 1.525m tower cap. • 24.40m basic tower jib; 9.15m bottom section, one 6.10m extension and 9.150m top section • Tower boom bridle • Tower jib bail/bridle • Tower post • 25ton hook block • Tower jib crane hoist cable; 28mm dia./360m length • Tower boom hoist cable; 22.4mm dia./310m length • Tower jib hoist cable; 28mm dia./360m length • Four cord reels; provided for tower boom/jib electric wiring	• Tower boom extensions; heavy-duty type, available in 3.05, 6.10 and 9.15m with pendants * Max. tower boom length is 53.375m. • Tower jib extensions; available in 3.05, and 9.15m * Max. tower jib length is 45.75m, and max. tower boom and jib combination length permitted is 53.375m plus 45.75m. • 9.15m tapered crane top section with pendants/150ton hook block; necessary when 150ton maximum lift is required in case of using tower boom as crane application * All of optional items shown in column of "Crane Attachment" is available in case of using tower boom as crane application.
Safety Devices	• Main/auxiliary drum locks • Boom hoist drum lock • Swing lock • Main crane/tower jib hook over-hoist limiting device with automatic hydraulic motor locking and warning buzzer • Crane/tower boom over-hoist limiting device with automatic hydraulic motor locking and warning buzzer • Tower jib over-hoist limiting device with automatic hydraulic motor locking and warning buzzer; applied only for tower crane attachment • Crane/tower boom backstops • Tower jib backstops; applied only for tower crane attachment • Crane/tower boom angle indicator • Swing warning device with buzzer/lamp • Swing brake lamp • Signal horn	• Load moment limiter • Over-load indication light • Fly jib/auxiliary short jib hook over-hoist limiting device with automatic hydraulic motor locking and warning buzzer



A : Height of gantry unit at operating position	7.164m
A' : Height of gantry unit at lowered position	4.041m
B : Height of counterweight upper surface	4.351m
C : Ground clearance of superstructure	1.781m
D : Center of rotation to gantry unit at lowered position	7.006m
E : Center of rotation to counterweight rear end	5.940m
E' : Radius of counterweight rear end	6.000m
F : Center of rotation to boom foot pin center	1.380m
G : Center of rotation to center of superstructure rear outrigger	3.100m
G' : Center of rotation to center of superstructure front outrigger	2.020m
H : Center of rotation to center of idler wheels	3.995m
H' : Center of rotation to center of drive sprockets	3.865m
I : Overall length of crawlers	8.966m
J : Height of boom foot pin center	2.332m
K : Offset of 9.15m tapered crane top section sheave machinery	0.340m
L : Length of standard basic boom w/9.15m tapered crane top section	18.300m
M : Height of operator's cab	3.784m
N : Height of crawler side frames	1.316m
O : Width of machinery cab	3.400m
P : Ground clearance of carbody frame	0.541m
R : Ground clearance of lower jack-up cylinders	0.230m
S : Width of track shoes	1.118m
T : Gauge of crawler extended	5.620m
T' : Gauge of crawler retracted	4.780m
U : Overall width of crawler extended	6.738m
U' : Overall width of crawler retracted	5.898m