

SUMITOMO LS-248RH-5

150-M ton Hydraulic Crawler Crane



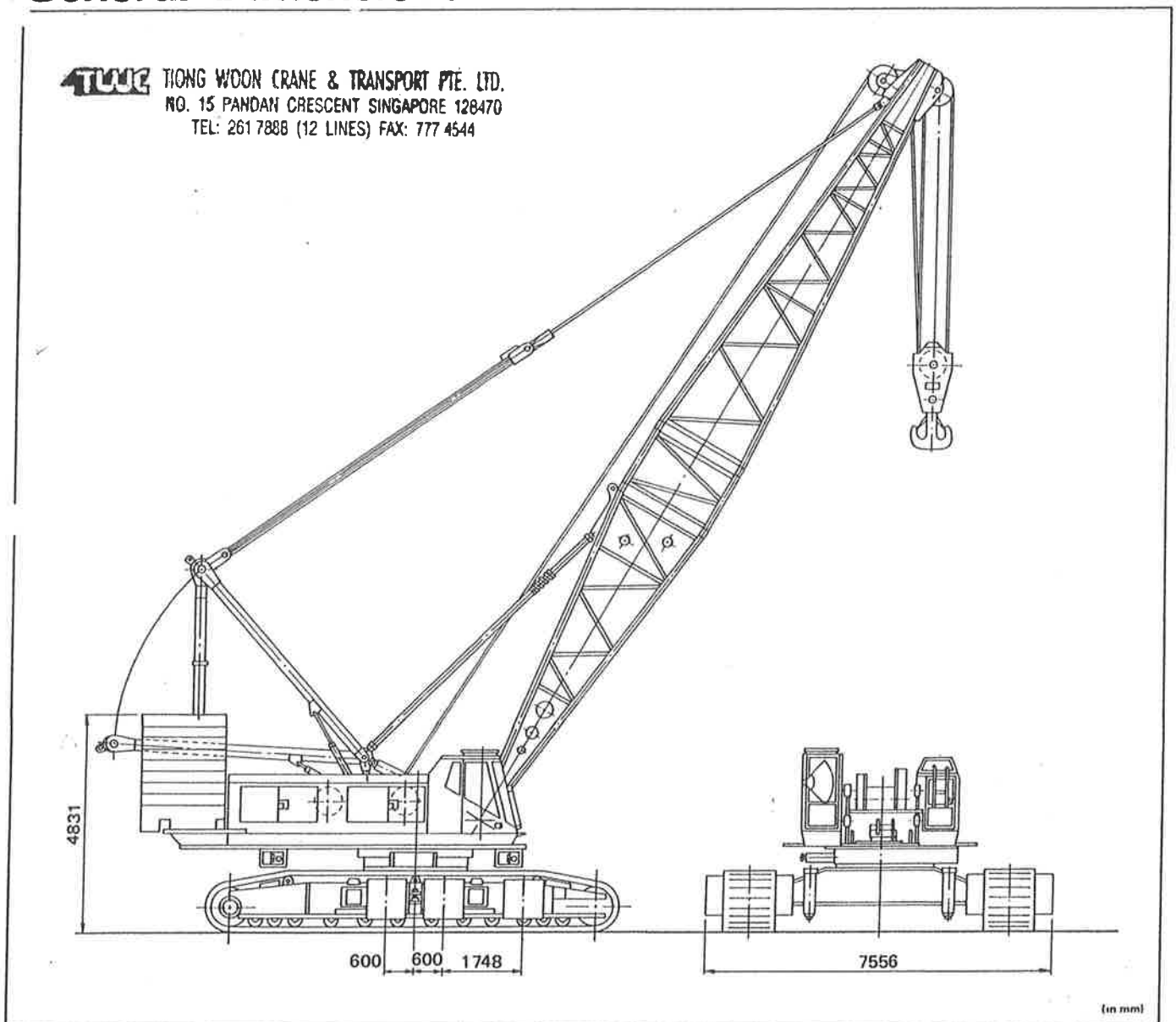
SUPPLEMENTARY

This catalog is for LOWER WEIGHT SPEC CRANE (LWC) attachment.

The LWC attachment can perform about 25% greater lifting crane capacity than that of standard lifting crane attachment shown in LS-248RH-5 catalog L315-0788(R3) in any ranges of working radius under boom length from 18.30m through 82.35m by means of adding counterweights of 11.3ton for upper and 22.0ton for lower to standard unit with no other specification changes for crane boom and so on.

Thus, the unit with LWC attachment can realize bigger lifting crane capacities rather than those of a 200ton class crawler crane without any specification change from standard unit.

General Dimensions



- Notes:**
1. Other dimensions except the above are exactly same as those which are mentioned in to LS-248RH-5 catalog L315-0788(R3) as separated one.
 2. Working weight is approx. 191.5ton with 18.30m basic boom, 150t hook block, 67.1ton upper counterweight, 22.0t lower counterweight and 1,118mm wide track shoes, and ground pressure is 1.03kg/cm² under 191.5ton working weight mentioned above.

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/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; two-speed type motors are optionally applied when Mitsubishi 6D22T engine as an optional extra is used.

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), 1.21 rpm (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 retainer ring type turntable bearing.

WIRE REEVING WINCH:

Optional extra; available for crane hoist cable handling ease.

COUNTERWEIGHTS:

57.2 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:

Stand:

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

Optional extra:

Make & Model	Mitsubishi 6D22TC
Type	Water-cooled, 4-cycle, direct injection, turbo-charged diesel with inter-cooler
No. of cylinders	Six (6)
Bore & Stroke	130 × 140mm
Displacement	11,149cc
Rated output	300ps/2,200rpm
Max. torque	117 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:

Optional extra; 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 wedgepacks 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:

1,120mm 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 bidirectional, 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 150 metric tons

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 3.05m, 6.10m and 9.15m lengths 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 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.

LINE SPEEDS: (with standard power unit and main/aux. crane motors):

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

LINE SPEEDS: (with optional power unit and two-speed type main/aux. crane hoist motors):

Drums	Root dia.	Type	Line speeds (Hoisting, Lowering)				Cable dia.
			Pump control with "OFF"		Pump control with "ON"		
			Motor cont. w/high speed	Motor cont. w/low speed	Motor cont. w/high speed	Motor cont. w/low speed	
Front (main crane hoist)	532mm	Parallel grooved	@90m/min (high) @45m/min (low)	@69m/min (high) @35m/min (low)	@23m/min (high) @11m/min (low)	@17m/min (high) @ 9m/min (low)	28mm
Rear (aux. crane hoist)	532mm	Parallel grooved	@90m/min (high) @45m/min (low)	@69m/min (high) @35m/min (low)	@23m/min (high) @11m/min (low)	@17m/min (high) @ 9m/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:

No. of part line	Main hoist											Aux. hoist
	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. This device functions that 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 Tough Nuflex rope, 28mm dia./360m length, breaking load 71.2ton.
- For rear drum Optional extra; Tough Nuflex rope, 28mm dia./310m length, breaking 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, 57.2 counterweight, 1,120mm wide track shoes and 150 hook block: Approx. 153.7ton.

GROUND PRESSURE:

0.87kg/cm² with 1,120mm track shoes and 158.9ton working weight mentioned above.

Attu: K C LEE

28 248

LIFTING CRANE CAPACITIES:

(in metric tons)

Working radius (m)	Boom length (m)																				Working radius (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	73.20	76.25		79.30	82.35			
5.0	150.0	133.655																						5.0		
6.0	140.0	128.1	116.8	104.365																				6.0		
7.0	123.6	121.7	111.5	102.5	94.4	85.275																		7.0		
8.0	99.2	98.9	98.8	96.2	90.7	83.8	77.8	70.165																8.0		
9.0	82.6	82.4	82.3	82.1	81.9	78.9	75.2	69.6	64.0	58.495														9.0		
10.0	70.6	70.4	70.3	70.2	70.1	70.0	69.3	66.5	62.3	57.8	52.3	48.0105												10.0		
12.0	54.7	54.4	54.3	54.1	53.9	53.8	53.6	53.4	53.3	52.3	49.7	46.9	44.3110	40.0	38.0125	36.7110	33.7135							12.0		
14.0	44.6	44.3	44.1	44.0	43.7	43.6	43.3	43.2	43.0	42.8	42.7	41.8	40.3	38.1	37.0	36.2	33.5	30.3	28.7145	25.3150	23.0155			14.0		
16.0	37.8	37.2	37.1	36.9	36.6	36.5	36.4	36.3	36.2	36.1	36.0	35.9	35.8	35.7	35.6	35.2	32.7	29.6	27.1	25.0	22.8	20.3		16.0		
18.0	34.517.0	32.1	31.9	31.7	31.4	31.2	31.1	31.0	30.9	30.8	30.8	30.7	30.6	30.5	30.4	30.3	30.2	28.8	26.4	24.4	22.1	19.7		18.0		
20.0		28.0	27.9	27.7	27.4	27.2	27.0	26.9	26.8	26.7	26.7	26.6	26.5	26.4	26.3	26.2	26.1	26.0	25.9	23.8	21.6	19.2		20.0		
22.0			24.8	24.5	24.3	24.1	23.8	23.7	23.6	23.5	23.4	23.3	23.2	23.1	23.0	22.9	22.8	22.7	22.5	22.4	21.0	18.6		22.0		
24.0				22.0	21.7	21.5	21.2	21.0	20.9	20.8	20.7	20.6	20.5	20.4	20.3	20.1	20.0	20.0	19.8	19.7	19.6	18.0		24.0		
26.0				21.025.0	19.6	19.4	19.1	18.9	18.8	18.6	18.5	18.4	18.3	18.2	18.1	18.0	17.9	17.8	17.6	17.5	17.4	16.9		26.0		
28.0					17.8	17.6	17.3	17.1	17.0	16.8	16.7	16.6	16.5	16.4	16.3	16.2	16.1	16.0	15.7	15.6	15.5	15.4		28.0		
30.0						16.2	15.8	15.6	15.5	15.2	15.1	15.0	14.9	14.8	14.7	14.6	14.5	14.4	14.1	14.0	13.9	13.8		30.0		
32.0							14.5	14.3	14.1	13.9	13.7	13.6	13.5	13.4	13.3	13.2	13.1	13.0	12.7	12.6	12.5	12.5		32.0		
34.0							13.523.0	13.2	13.0	12.8	12.7	12.4	12.3	12.2	12.1	12.0	11.9	11.8	11.5	11.4	11.2	11.2		34.0		
36.0								12.2	12.0	11.8	11.6	11.4	11.3	11.2	11.1	11.0	10.9	10.8	10.5	10.4	10.1	10.0		36.0		
38.0									11.2	10.9	10.7	10.5	10.4	10.3	10.2	10.1	10.0	9.9	9.5	9.3	9.1	9.1		38.0		
40.0										10.2	9.9	9.7	9.6	9.5	9.4	9.3	9.2	9.0	8.6	8.5	8.3	8.2		40.0		
42.0										9.841.0	9.2	9.0	8.8	8.7	8.6	8.4	8.2	8.2	7.9	7.8	7.6	7.3		42.0		
44.0											8.743.5	8.3	8.2	8.1	8.0	7.7	7.6	7.5	7.2	7.1	6.9	6.6		44.0		
46.0												7.8	7.5	7.4	7.4	7.0	7.0	6.9	6.6	6.4	6.2	6.0		46.0		
48.0													7.0	6.8	6.8	6.4	6.4	6.3	6.0	5.8	5.6	5.3		48.0		
50.0														6.749.0	6.3	6.2	5.9	5.9	5.7	5.4	5.3	5.0	4.8		50.0	
52.0															5.951.5	5.8	5.4	5.4	5.2	4.9	4.7	4.5	4.3		52.0	
54.0																5.4	5.0	5.0	4.7	4.4	4.2	4.0	3.8		54.0	
56.0																	4.5	4.5	4.3	4.0	3.8	3.5	3.4		56.0	
58.0																		4.357.0	4.1	3.9	3.6	3.4	3.1	2.9		58.0
60.0																			3.759.5	3.5	3.2	3.0	2.7	2.5		60.0
62.0																				3.2	2.8	2.6	2.4	2.2		62.0

Notes – Lifting crane capacities

1. Capacities included in this chart are the maximum allowable, and are based on machine standing level on firm supporting surface under ideal job conditions.
2. Capacities are in metric tons, and are not more than 78% 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.
3. Capacities for boom length from 30.50m through 82.35m 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, the lifting capacities of over 100ton on this chart are determined a 100ton as maximum.
4. Capacities are under crawler extended condition with 5,620mm.
5. 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		
6. All capacities are rated for 360° swing.
7. Least stable rated condition is over the side.
8. Boom live mast is required when boom length is 61.00m or longer.
9. Counterweight must 57.25ton for all capacities on this chart.
10. 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.
11. 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.
12. 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:

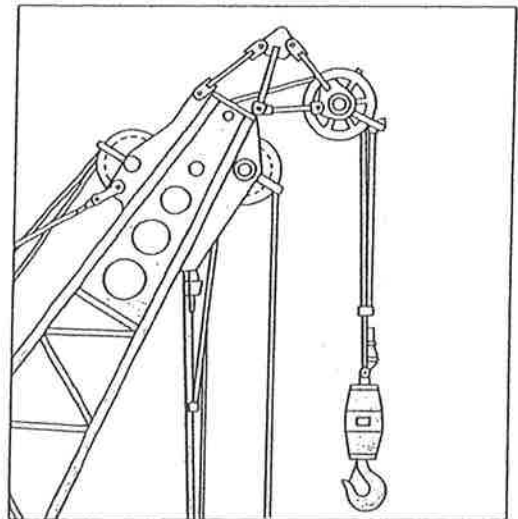
12.20m fly jib	–2,900kg
18.30m fly jib	–3,900kg
24.40m fly jib	–5,000kg
30.50m fly jib	–6,300kg
Auxiliary short jib	–800kg

13. 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.
14. Capacities apply only to the machine as originally manufactured and normally equipped by Sumitomo (S.H.I.) Construction machinery Co., Ltd.

AUXILIARY SHORT JIB CAPACITIES:

Max. 13.5ton

Note: Jib capacities is equal to the figures made by the deduction of a 800kg from the lifting crane capacities unless restricted by the maximum jib capacity shown above.



Auxiliary short jib (Option)

LS-248RH-5

(in metric tons)

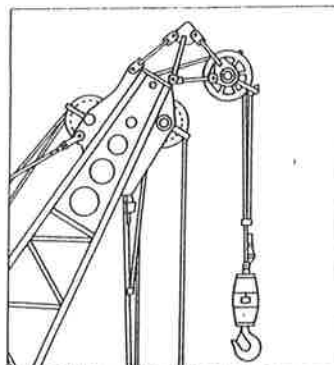
70.15	73.20	76.25	79.30	82.35	Working radius (m)
					5.0
					6.0
					7.0
					8.0
					9.0
					10.0
					12.0
30.3					14.0
29.6	27.1	25.0	22.8	20.3	16.0
28.8	26.4	24.4	22.1	19.7	18.0
27.8	25.9	23.8	21.6	19.2	20.0
27.0	24.8	22.4	21.0	18.6	22.0
24.8	24.1	22.3	20.2	18.0	24.0
22.3	22.0	21.7	19.6	17.3	26.0
20.0	19.8	19.7	19.0	16.7	28.0
18.2	17.9	17.8	17.6	15.9	30.0
16.5	16.3	16.1	15.9	15.0	32.0
15.1	14.8	14.7	14.5	13.8	34.0
13.9	13.6	13.5	13.3	12.8	36.0
12.8	12.5	12.4	12.2	11.8	38.0
11.8	11.5	11.4	11.2	11.0	40.0
10.8	10.5	10.4	10.2	10.1	42.0
10.0	9.7	9.6	9.4	9.2	44.0
9.3	9.1	8.9	8.7	8.5	46.0
8.6	8.3	8.2	8.0	7.8	48.0
8.0	7.7	7.5	7.3	7.2	50.0
7.4	7.1	7.0	6.8	6.6	52.0
6.9	6.6	6.4	6.2	6.1	54.0
6.4	6.1	5.9	5.6	5.5	56.0
6.0	5.6	5.4	5.1	5.0	58.0
5.5	5.2	5.0	4.7	4.5	60.0
5.1	4.7	4.5	4.3	4.1	62.0
	4.3	4.1	3.9	3.7	64.0

(ZCP00197B)

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 for boom length from 30.50m through 82.35m on this chart are determined in condition of no two hanger sheaves be attached on a 9.15m tapered 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, the lifting capacities of over 100ton on this chart are determined a 100ton as maximum.
- Capacities are under crawler extended condition with 5,620mm.
- 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.
- Boom live mast is required when boom length is 61.00m or longer.
- Counterweight must be 67.1ton for upper and 22.0ton for lower for all capacities on this chart.
- Attachment must be erected and lowered over the front of the crawler mounting.
- 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 shaves, 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 "Boom Combination Diagram" mentioned in to LS-248RH-5 catalog L315-0788(R3) as separated one. 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.
- Crane working ranges can be referred to that of standard lifting crane attachment described in LS-248RH-5 catalog L315-0788(R3) as separated one.
- 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 CAPACITIES: Max. 13.5ton



Auxiliary short jib (Option)

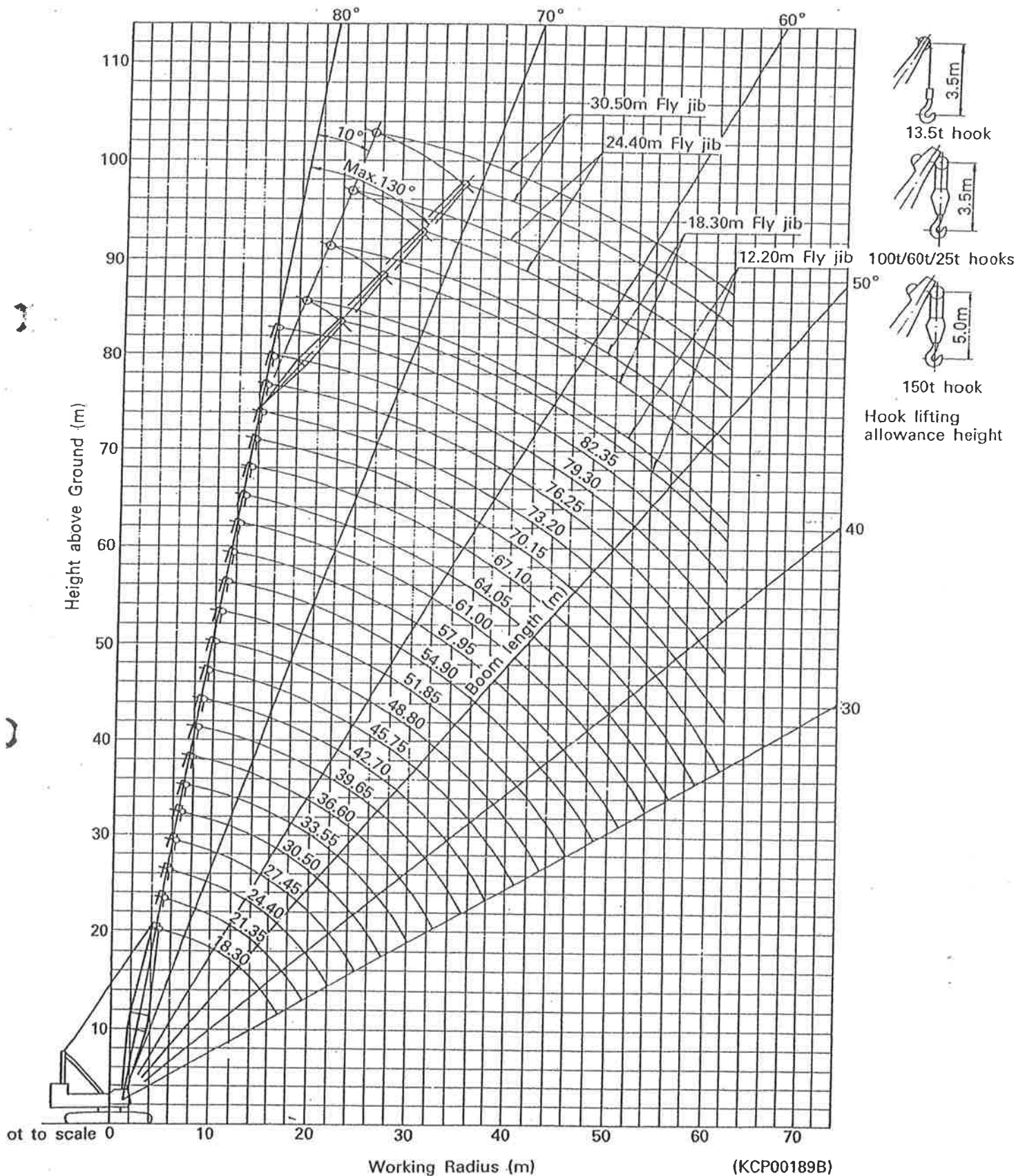
Note:

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.

LS-248RH-5 FLY JIB CAPACITIES: Max. 15ton

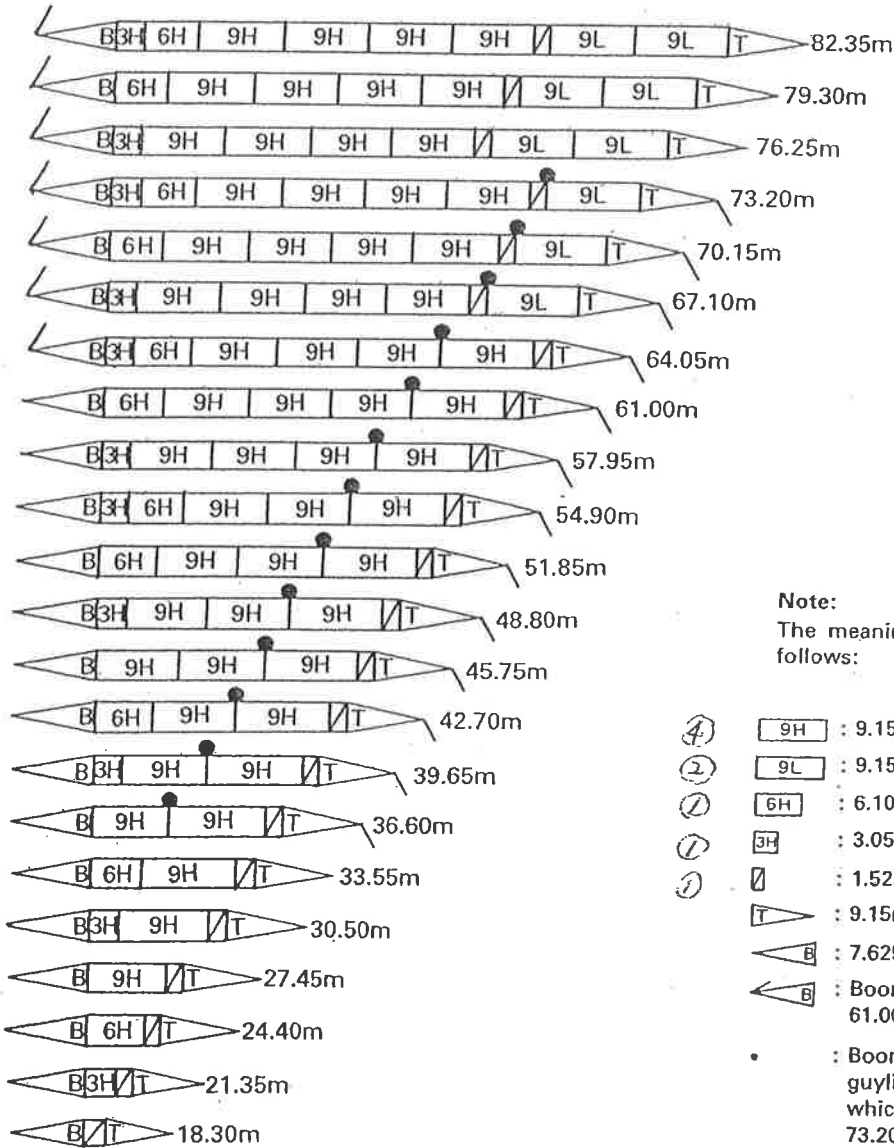
Note: Fly jib capacities of LWC attachment can be referred to those which are described in to LS-248RH-5 catalog L315-0788(R3) as separated one.

Crane Working Ranges



Boom Combination Diagram

Boom combination with tapered top section



Note:

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

- ④ 9H : 9.15m heavy-duty type boom extension
- ② 9L : 9.15m light-duty type boom extension
- ① 6H : 6.10m heavy-duty type boom extension
- ① 3H : 3.05m heavy-duty type boom extension
- ① ∅ : 1.525m boom extension
- T : 9.15m tapered top section
- B : 7.625m bottom section
- B : Boom live mast; required when boom length is 61.00m or longer.
- : 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.
- T : Fly jib attachment

Fly Jib Capacities

(in metric tons)

Boom length (m)	36.60								39.65								42.70									
	12.20		18.30		24.40		30.50		12.20		18.30		24.40		30.50		12.20		18.30		24.40		30.50			
Fly jib length (m)																										
Fly job offset angle (°)	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30		
Working radius (m)																										
12.0	15.0								13.0m	15.0																
14.0	15.0								15.0								15.0									
16.0	15.0	13.0	12.0						15.0	13.0	12.0						15.0	17.0m	13.0	12.0						
18.0	15.0	13.0	12.0		8.0				15.0	13.0	12.0		8.0				15.0	13.0	12.0		19.0m					
20.0	15.0	13.0	12.0	8.0	8.0		4.0		15.0	13.0	12.0	8.0	8.0		4.0		15.0	13.0	12.0		8.0					
22.0	15.0	13.0	12.0	8.0	8.0		4.0		15.0	13.0	12.0	8.0	8.0		4.0		15.0	13.0	12.0	21.0m	8.0	8.0		21.0m	4.0	
24.0	15.0	13.0	12.0	8.0	8.0	6.0	4.0		15.0	13.0	12.0	8.0	8.0	6.0	4.0		15.0	13.0	12.0	8.0	8.0		4.0			
26.0	15.0	13.0	12.0	8.0	8.0	6.0	4.0		15.0	13.0	12.0	8.0	8.0	6.0	4.0		15.0	13.0	12.0	8.0	8.0	25.0m		4.0		
28.0	15.0	12.8	12.0	8.0	8.0	6.0	4.0	3.0	15.0	13.0	12.0	8.0	8.0	6.0	4.0	3.0	15.0	13.0	12.0	8.0	8.0	6.0	4.0	3.0		
30.0	15.0	12.5	11.8	8.0	8.0	6.0	4.0	3.0	15.0	12.9	12.0	8.0	8.0	6.0	4.0	3.0	15.0	13.0	12.0	8.0	8.0	6.0	4.0	3.0		
32.0	14.5	12.0	11.5	8.0	7.5	6.0	4.0	3.0	14.3	12.5	12.0	8.0	7.7	6.0	4.0	3.0	14.1	12.8	12.0	8.0	7.9	6.0	4.0	3.0		
34.0									13.2	12.0	11.8	8.0	7.5	6.0	4.0	3.0	13.0	12.5	11.8	8.0	7.7	6.0	4.0	3.0		
36.0									12.2	11.7	11.5	8.0	7.2	6.0	4.0	3.0	12.0	11.8	11.5	8.0	7.5	6.0	4.0	3.0		
38.0																	11.2	11.0	10.9	8.0	7.3	6.0	4.0	3.0		

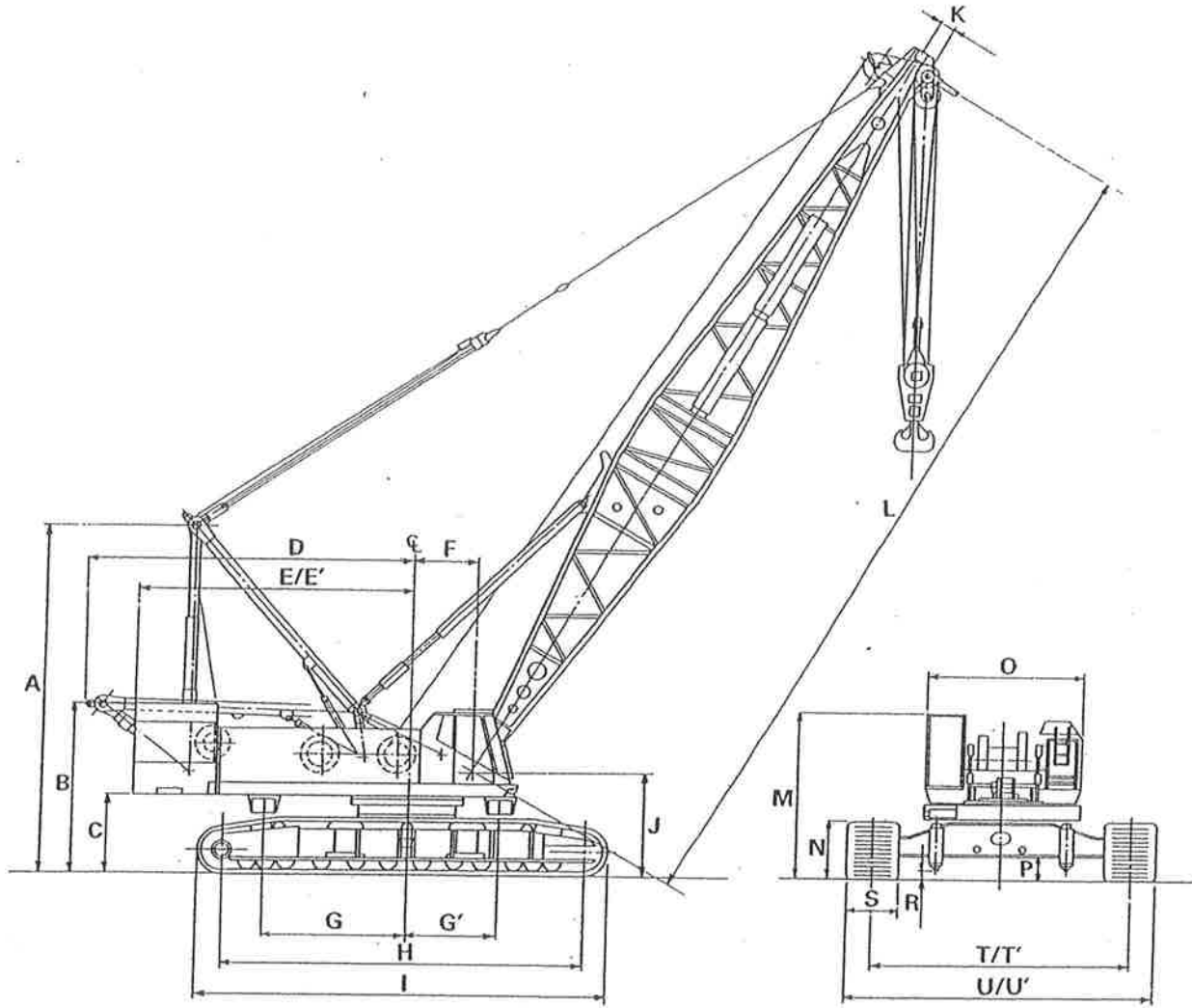
(in metric tons)

Boom length (m)	45.75								48.80								51.85									
	12.20		18.30		24.40		30.50		12.20		18.30		24.40		30.50		12.20		18.30		24.40		30.50			
Fly jib length (m)																										
Fly job offset angle (°)	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30	10	30		
Working radius (m)																										
14.0	15.0								15.0																	
16.0	15.0								15.0								15.0									
18.0	15.0	13.0	12.0						15.0	13.0	12.0						15.0		12.0							
20.0	15.0	13.0	12.0		8.0				15.0	13.0	12.0		8.0				15.0	13.0	12.0		8.0					
22.0	15.0	13.0	12.0	8.0	8.0		4.0		15.0	13.0	12.0		8.0		4.0		15.0	13.0	12.0		8.0			4.0		
24.0	15.0	13.0	12.0	8.0	8.0		4.0		15.0	13.0	12.0	8.0	8.0		4.0		15.0	13.0	12.0	8.0	8.0			4.0		
26.0	15.0	13.0	12.0	8.0	8.0	6.0	4.0		15.0	13.0	12.0	8.0	8.0		4.0		15.0	13.0	12.0	8.0	8.0			4.0		
28.0	15.0	13.0	12.0	8.0	8.0	6.0	4.0		15.0	13.0	12.0	8.0	8.0	6.0	4.0		15.0	13.0	12.0	8.0	8.0	6.0	4.0			
30.0	15.0	13.0	12.0	8.0	8.0	6.0	4.0	3.0	15.0	13.0	12.0	8.0	8.0	6.0	4.0	3.0	15.0	13.0	12.0	8.0	8.0	6.0	4.0			
32.0	13.9	12.9	12.0	8.0	7.9	6.0	4.0	3.0	13.7	12.8	12.0	8.0	8.0	6.0	4.0	3.0	13.6	12.7	12.0	8.0	8.0	6.0	4.0	3.0		
34.0	12.8	12.6	12.0	8.0	7.7	6.0	4.0	3.0	12.7	12.5	12.0	8.0	7.7	6.0	4.0	3.0	12.4	12.3	12.0	8.0	7.7	6.0	4.0	3.0		
36.0	11.8	11.7	11.6	8.0	7.5	6.0	4.0	3.0	11.6	11.6	11.6	8.0	7.5	6.0	4.0	3.0	11.4	11.3	11.4	8.0	7.5	6.0	4.0	3.0		
38.0	10.9	10.9	10.8	8.0	7.3	6.0	4.0	3.0	10.7	10.7	10.7	8.0	7.3	6.0	4.0	3.0	10.6	10.5	10.5	8.0	7.3	6.0	4.0	3.0		
40.0	10.2	10.2	10.2	8.0	7.1	5.7	4.0	3.0	9.9	9.9	9.9	8.0	7.1	6.0	4.0	3.0	9.7	9.7	9.7	8.0	7.1	6.0	4.0	3.0		
42.0									9.2	9.2	9.2	8.0	6.9	6.0	4.0	3.0	9.0	9.0	9.0	8.0	6.9	6.0	4.0	3.0		
44.0																	8.3	8.3	8.3	8.0	6.7	5.8	4.0	3.0		
46.0																	7.8	7.8	7.8	7.5	6.5	5.6	3.8	3.0		

Notes – Fly jib capacities

1. Capacities included in this chart are the maximum allowable, and are based on machine standing level on firm supporting surface under ideal job conditions.
2. Capacities are in metric tons, and are based on 78% 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.
3. Capacities are under crawler extended condition with 5,620mm.
4. 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
5. All capacities are rated for 360° swing.
6. Least stable rated position is over the side.
7. Boom live mast must be installed when boom length is 61.00m or longer.
8. Counterweight must be 57.2ton for all capacities on this chart.
9. 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.
10. 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.
11. Capacities apply only to the machine as originally manufactured and normally equipped by Sumitomo (S.H.I.) Construction Machinery Co., Ltd.

General Dimensions



A : Height of gantry unit at operating position	7.830m
B : Height of counterweight upper surface	3.850m
C : Ground clearance of superstructure	1.780m
D : Center of rotation to gantry unit at lowered position	7.005m
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 to center distance of tumbler	7.860m
I : Overall length of crawlers	8.965m
J : Height of boom foot pin center	2.330m
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	3.785m
N : Height of crawler side frames	1.315m
O : Width of machinery cab	3.400m
P : Ground clearance of carbody frame	0.540m
R : Ground clearance of lower jack-up cylinders	0.230m
S : Width of track shoes	1.120m
T : Gauge of crawler extended	5.620m
T' : Gauge of crawler retracted	4.780m
U : Overall width of crawler extended	6.740m
U' : Overall width of crawler retracted	5.900m



Upper Machinery

- UPPER FRAME** All welded, stress relieved, precision machined unit.
- TURNTABLE BEARING WITH INTEGRAL RING GEAR** Outer race is bolted to upper frame, inner race with internal ring gear is bolted to lower frame. Swing pinion meshes with internal, integral ring gear. A machined surface is provided for mounting turntable bearing.
- CONTROL SYSTEM** Remote controlled hydraulic servo. Working speed can be precisely controlled by lever stroke.
- HYDRAULIC SYSTEM** System combining variable displacement axial pumps and fixed displacement gear pumps provides both independent and combined operations of all functions.
 - Main hoist/aux. hoist/boom hoist/swing motor** — Radial piston motor with counterbalance valve.
 - Travel motor** — Radial piston motors with brake valves. Spring-set/hydraulic-released multiple disc brakes are fitted.
 - Hydraulic oil reservoir** — 300 liter capacity.
- LOAD HOIST ASSEMBLY:** Front (main) and rear (aux.) operating drums. Each driven by the bi-directional, radial piston motor through reduction gear powering the rope drum in either direction for hoisting or lowering load.
 - Clutches** — "Speed-O-Matic" power hydraulic actuated, internal expanding, self adjusting 2-shoe type.
 - Brakes** — External contracting band type, hydraulic assisted foot pedal with locking latch.
 - Locks** — Mechanically operated drum lock pawl.
- BOOM HOIST ASSEMBLY:** Driven by the bi-directional, radial piston motor through reduction gear powering the rope drum in either direction for hoisting or lowering boom.
 - Brake** — Spring applied, hydraulically released external contracting band type.
 - Lock** — Mechanically operated drum lock pawl.
- SWING:** Driven by 2 sets of radial piston motor, through reduction gear.
 - Brakes** — Positive (hydraulically applied) disc brake for operation, and negative (Spring applied, hydraulically released) disc brake for parking.
 - Lock** — Mechanically operated pin connection house lock.
 - Speed** — 1.9 rpm (High), 1.0 rpm (Low)
- OPERATOR'S CAB:** Full vision compartment with safety glass panels, the completely independent cab is insulated against noise and vibration.
- COUNTERWEIGHT:** Removable, 5 blocks mounted on rear of upper frame by bolts.
- CATWALKS:** Both sides of upper housing.
- POWER UNIT:**

Make & Model	Mitsubishi 8DC90C
Type	Water-cooled, 4-cycle diesel engine
No. of cylinders	6
Bore & Stroke	135 x 140mm
Displacement	16,031 cc
Rated output	250 ps/2,000 rpm
Max. torque	98 kg-m/1,400 rpm
Fuel tank	450 liters

Lower Machinery

- LOWER FRAME** All welded robust rolled steel, stress relieved box construction.
- AXLE BEAMS** All welded robust rolled steel, stress relieved. Pin connected to lower frame, removable for transportation.
- SIDE FRAMES** All welded robust rolled steel. Connected to axle beams by axle shim packs, removable for transportation.
- SELF LOADING DEVICE** Axle beams and side frames can be speedily removed and hydraulic jack cylinders allow base machine loaded onto a trailer. Travel motor pipings with self seal couplings provide quick disconnection.
- ROLLERS:** Heat treated, mounted on bushings with floating seals requiring no further lubrication. Double flange.
 - Bottom** — 12 pcs. per side frame.
 - Top** — 3 pcs. per side frame.
- DRIVE SPROCKETS:** Heat treated, involute splined to drive shaft mounted on antifriction bearings.
- IDLERS:** Heat treated, mounted on bushings with floating seals requiring no further lubrication.
- TRACKS:** Heat treated, self cleaning, one lug type, multiple hinged shoes, 62 pcs. per side frame.
 - Shoe width** — 1,118 mm
- TRACK TENSION ADJUSTER** Adjusted by hydraulic cylinders at the idler blocks. Tension can be automatically released when abnormal load occurred on tracks.
- TRAVEL AND STEER** Radial piston motor with reduction gear is located at inner drive end of each crawler side frame. Each track is driven simultaneously or individually for straight-line travel, or pivot turn, or the tracks can be counter-rotated for spin turns.
 - Brake** — Spring applied, hydraulically released multiple disc brakes applied automatically when control lever in neutral position.
 - Speed** — 1.0 km/h (High), 0.4 km/h (Low)

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

SUMITOMO HEAVY INDUSTRIES, LTD.
 International Sales Dept.
 Construction Machinery Group 1, Kanda, Mitoshiro cho, Chiyoda ku, Tokyo, Japan



LS-248RH-2 Crane 150 metric tons

CRANE BOOMS Lattice construction; round tubular main chords, alloy, hi-ten steel, with bracing of round steel tubing.

- Boom connections In-line pin connections.
- Basic boom Two-piece, 18.3m basic length; 9.15m base and 9.15m top section; 2m deep and 2m wide at connections.
- Boom point machinery Eight head sheaves mounted on antifriction bearings.
- Boom extensions Available in 3.05m, 6.1m, 9.15m and 12.2m lengths with pendants. Maximum boom length 82.30m.
- Jib Two-piece; 9.15m basic length with 4.55m long base and top sections, available in 3.05m and 6.1m jib extensions. Maximum jib length 30.50m.
- Boom plus jib length 70.10m + 30.50m
73.20m + 18.30m

- HOOK BLOCK :**
- 150 t, eight sheaves Standard
 - 100 t, five sheaves Optional extra
 - 60 t, three sheaves Optional extra
 - 30 t, one sheave Optional extra
 - 15 t, one sheave Standard for jib
 - 10 t, no sheave Optional extra

BOOM LIVE MAST : Mounted on front of upper frame.
HIGH GANTRY : Raised and lowered by hydraulic cylinders operated inside cab.
MID POINT SUSPENSION : Required when operate with 64.05m or longer boom length.

LINE PULL AND LINE SPEED:

Drums	Root dia.	Type	Line pull	Line speed		Cable dia.
				Hoisting	Lowering	
Front (main hoist)	500mm	Parallel grooved	15 ton	@60 m/min (high) @30 m/min (low)	@60 m/min (high) @30 m/min (low)	26 mm
Rear (aux. hoist)	500mm	Parallel grooved	15 ton	@60 m/min (high) @30 m/min (low)	@60 m/min (high) @30 m/min (low)	26 mm
Boom hoist	345mm	Parallel grooved		@40 m/min	@40 m/min	20 mm

HOIST REEVING :

No. of parts of line	Main hoist															Aux. hoist		
	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	2	1
Max. load (t)	150.0	148.5	140.0	131.3	122.4	113.4	103.9	94.4	84.8	74.9	64.8	53.6	44.1	33.4	22.5	11.3	15.0	11.3

WORKING WEIGHT AND GROUND PRESSURE :

Shoe width	Weight	Pressure
1,118 mm	148 t	0.81 kg/cm ²

With basic boom and counterweight A, B, C, D, and E.
 Weight without counterweight and front attachment: approx. 80 t.
COUNTERWEIGHT : A (12.4 t), B (8.8 t), C (9.4 t), D (10.0 t), E (15.2 t)
 Total . . . 55.8 t

SAFETY DEVICE : Hook over hoist limiting device, boom hoist limiting device, boom angle indicator, boom back stop, load moment limiter (optional extra)
GRADEABILITY : 30% (17°)

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

SUMITOMO HEAVY INDUSTRIES, LTD.
 International Sales Dept.,
 Construction Machinery Group, 1, Kanda, Mitohiro cho, Chiyoda ku, Tokyo, Japan

3/6

LS 248RH 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	73.20	
5.0	150.0																			
5.5	143.5																			
6.0	137.0	126.0	116.5																	
6.5	130.0	122.0	113.5																	
7.0	120.0	113.2	111.6	102.4	94.0															
7.5	105.0	103.5	102.5	100.3	91.4															
8.0	95.2	95.0	94.8	94.6	89.0	81.2	75.6													
9.0	79.2	79.0	78.9	78.8	78.7	78.2	72.0	66.1	60.8											
10.0	67.7	67.5	67.4	67.3	67.1	67.0	66.5	64.0	58.9	55.0	50.5	46.0	41.0							
12.0	52.2	52.0	51.9	51.8	51.6	51.5	51.4	51.3	51.2	51.1	48.2	44.7	42.0	39.8	38.0	34.0	31.0			
14.0	42.2	42.0	41.9	41.8	41.6	41.5	41.4	41.3	41.2	41.1	40.9	40.8	39.3	37.4	35.0	33.0	31.0	28.1		
16.0	35.3	35.1	35.0	34.9	34.7	34.6	34.5	34.3	34.2	34.1	33.9	33.8	33.8	33.7	33.7	31.2	29.7	27.6	25.8	
18.0	30.0	29.9	29.8	29.6	29.5	29.4	29.2	29.1	29.0	28.8	28.8	28.7	28.5	28.4	28.2	27.9	27.2	25.8	24.8	
20.0	26.1	26.0	25.9	25.7	25.6	25.5	25.3	25.2	25.1	24.9	24.8	24.7	24.5	24.4	24.2	24.0	23.8	23.7	23.7	
22.0		22.9	22.8	22.6	22.5	22.4	22.2	22.1	22.0	21.8	21.7	21.6	21.4	21.3	21.2	21.0	20.8	20.6	20.6	
24.0			20.2	20.0	19.9	19.8	19.6	19.5	19.4	19.2	19.1	19.0	18.8	18.8	18.6	18.4	18.2	18.0	18.0	
26.0				18.0	17.9	17.8	17.6	17.5	17.4	17.2	17.1	17.0	16.8	16.7	16.5	16.3	16.2	16.0	16.0	
28.0					16.2	16.1	15.9	15.8	15.7	15.5	15.4	15.3	15.1	15.0	14.8	14.6	14.4	14.2	14.2	
30.0						14.6	14.5	14.3	14.2	14.1	13.9	13.8	13.8	13.6	13.5	13.3	13.1	12.9	12.7	
32.0							13.3	13.1	13.0	12.9	12.7	12.6	12.5	12.3	12.2	12.0	11.8	11.6	11.4	
34.0								11.9	11.8	11.7	11.5	11.4	11.3	11.2	11.1	10.9	10.7	10.5	10.3	
36.0									10.9	10.8	10.6	10.5	10.4	10.2	10.1	9.9	9.7	9.5	9.3	
38.0									10.0	9.9	9.7	9.6	9.5	9.3	9.2	9.0	8.8	8.7	8.5	
40.0										9.7	9.0	8.9	8.8	8.7	8.6	8.4	8.2	8.0	7.8	
42.0											8.4	8.3	8.2	8.0	7.9	7.7	7.5	7.3	7.1	
44.0												7.7	7.6	7.4	7.3	7.1	6.9	6.7	6.5	
46.0													6.9	6.7	6.6	6.4	6.3	6.1	5.9	
48.0														6.3	6.2	6.1	5.9	5.7	5.5	
50.0															5.7	5.6	5.4	5.2	5.0	
52.0																5.1	4.9	4.7	4.5	
54.0																	4.4	4.2	4.0	
56.0																		3.8	3.7	
58.0																			3.5	
60.0																			3.2	
No. of parts of line	16	13	12	10	9	8	8	7	6	6	5	5	4	4	4	4	3	3	3	

Notes:

- Capacities shown are in metric tons and are based on 75% of minimum tipping loads - over the side - with machine standing level on firm supporting surface under ideal job conditions. Deductions from the lifting crane capacities must be made for weight of hook block. Capacities shaded are limited by strength of boom, or factors other than stability.

- Boom live mast is always required and gantry must be raised position for all operating conditions.
- Mid point suspension should be used when operate with 64.05m or longer boom length.
- 30t hook block should be used when boom length exceeds 67.10m.
- When operating of the main boom peak sheave with jib on boom, following deductions in machine lifting capacities must be made.

Kind of hook block	150t	100t	60t	30t	15t	10t
Weight of hook block (t)	2.1	1.3	1.0	0.85	0.8	0.4

Jib length (m)	9.15	12.20	15.25	18.30	21.35	24.40	27.45	30.50
Weight to be deducted (t)	2.1	2.6	3.1	3.6	4.3	4.9	5.6	6.3

LS-248RH-2 Crane 150 metric tons

4/6

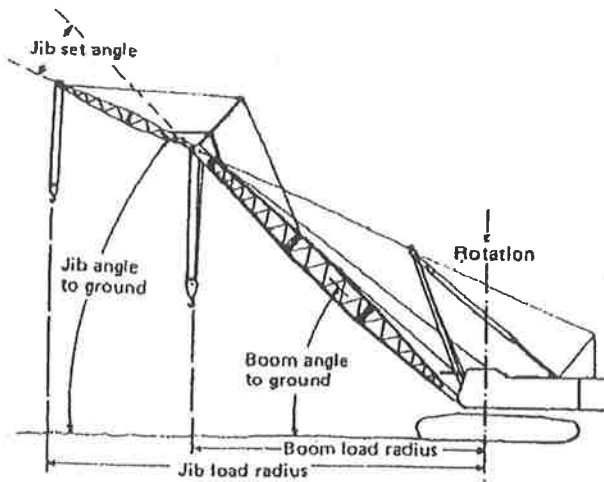
(in metric tons)

Working radius (m)	Boom length (m)		
	76.20	79.30	82.30
5.0			
5.5			
6.0			
6.5			
7.0			
7.5			
8.0			
9.0			
10.0			
12.0			
14.0			
16.0	22.0	21.0	20.0
18.0	22.6	20.8	19.6
20.0	22.4	21.2	19.2
22.0	20.5	19.7	18.9
24.0	17.8	17.5	17.2
26.0	15.8	15.5	15.2
28.0	14.0	13.8	13.5
30.0	12.5	12.2	11.9
32.0	11.3	11.0	10.7
34.0	10.1	9.8	9.5
36.0	9.1	8.8	8.6
38.0	8.3	8.0	7.7
40.0	7.6	7.3	7.0
42.0	6.9	6.6	6.3
44.0	6.3	6.1	5.8
46.0	5.7	5.4	5.1
48.0	5.1	4.8	4.5
50.0	4.6	4.3	4.0
52.0	4.1	3.8	3.6
54.0	3.7	3.4	3.1
56.0	3.3	3.0	2.7
58.0	3.0	2.7	2.4
60.0	2.7	2.4	2.1
No. of parts of line	3	2	2

LS 248RH-2 JIB CAPACITIES:

(in metric tons)

Jib length (m)	Jib set angle	Max. jib Capacities
9.15	0°	15.0
	15°	15.0
	30°	14.5
12.20	0°	15.0
	15°	13.0
	30°	11.0
15.25	0°	13.0
	15°	11.0
	30°	8.5
18.30	0°	11.6
	15°	9.0
	30°	7.0
21.35	0°	8.4
	15°	7.6
	30°	5.7
24.40	0°	6.0
	15°	5.2
	30°	4.8
27.45	0°	4.5
	15°	3.8
	30°	3.2
30.50	0°	3.1
	15°	2.5
	30°	2.2



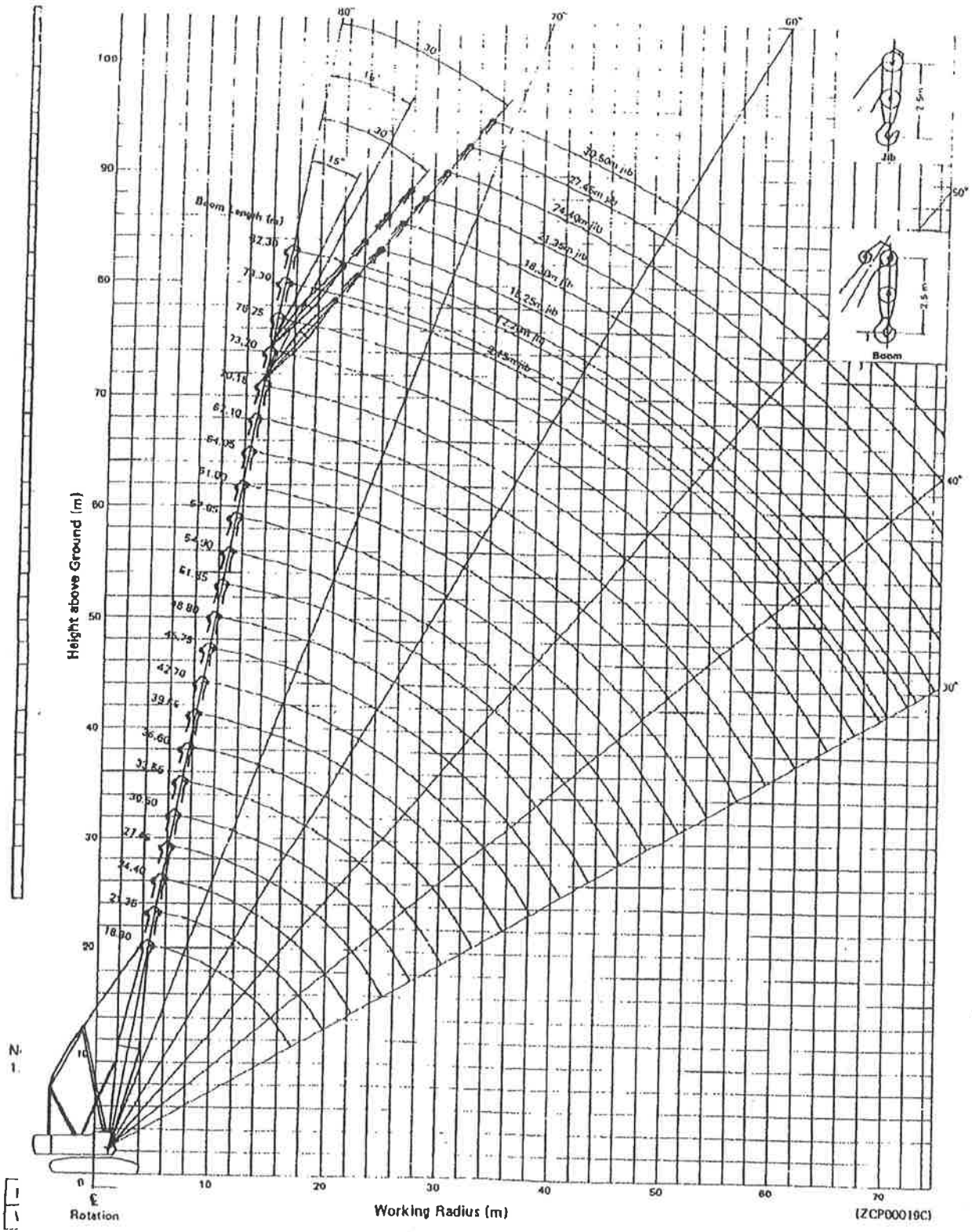
Notes:

1. The jib capacities are equal to the crane lifting capacities of the main boom on which the jib is fixed except that they are restricted by the maximum jib capacities shown above.
2. Jib working radius does not exceed the working radius of the main boom which fits the jib.
3. Deductions from the jib capacities must be made for weight of hook block.
4. Minimum boom length of jib setting is 36.60m.
5. The jib set angle to boom must not exceed 30°.

5/6

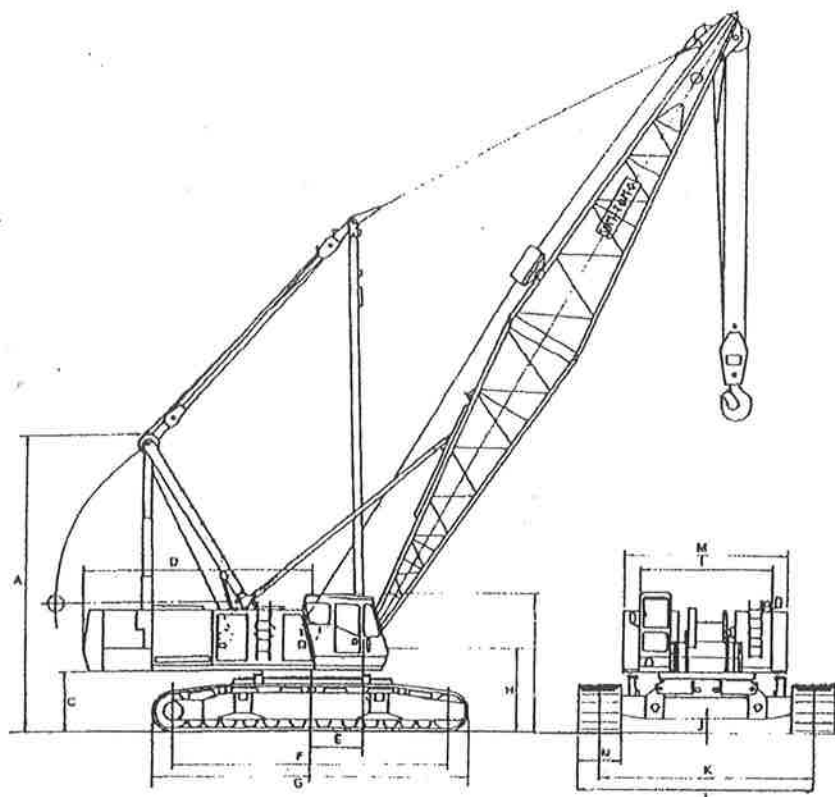


LS 248RH CRANE WORKING RANGES



6/6

LS 248RH - DIMENSIONS



- A: Height, over high gantry unit 7.728 m
- B: Height of cab 3.713 m
- C: Counterweight ground clearance 1.633 m
- D: Radius of rear end 5.885 m
- E: Center of rotation to boom foot pin 1.300 m
- F: Center to center distance of tumbler 7.730 m
- G: Overall length of crawler 8.836 m
- H: Height from ground to boom foot pin 2.283 m
- I: Overall width of house 3.370 m
- J: Ground clearance 0.378 m
- K: Center to center distance of crawler 5.550 m
- L: Overall width of crawler 6.668 m
(with 1.118mm shoe)
- M: Overall width of upper machine 4.170 m
- N: Shoe width 1.118 m

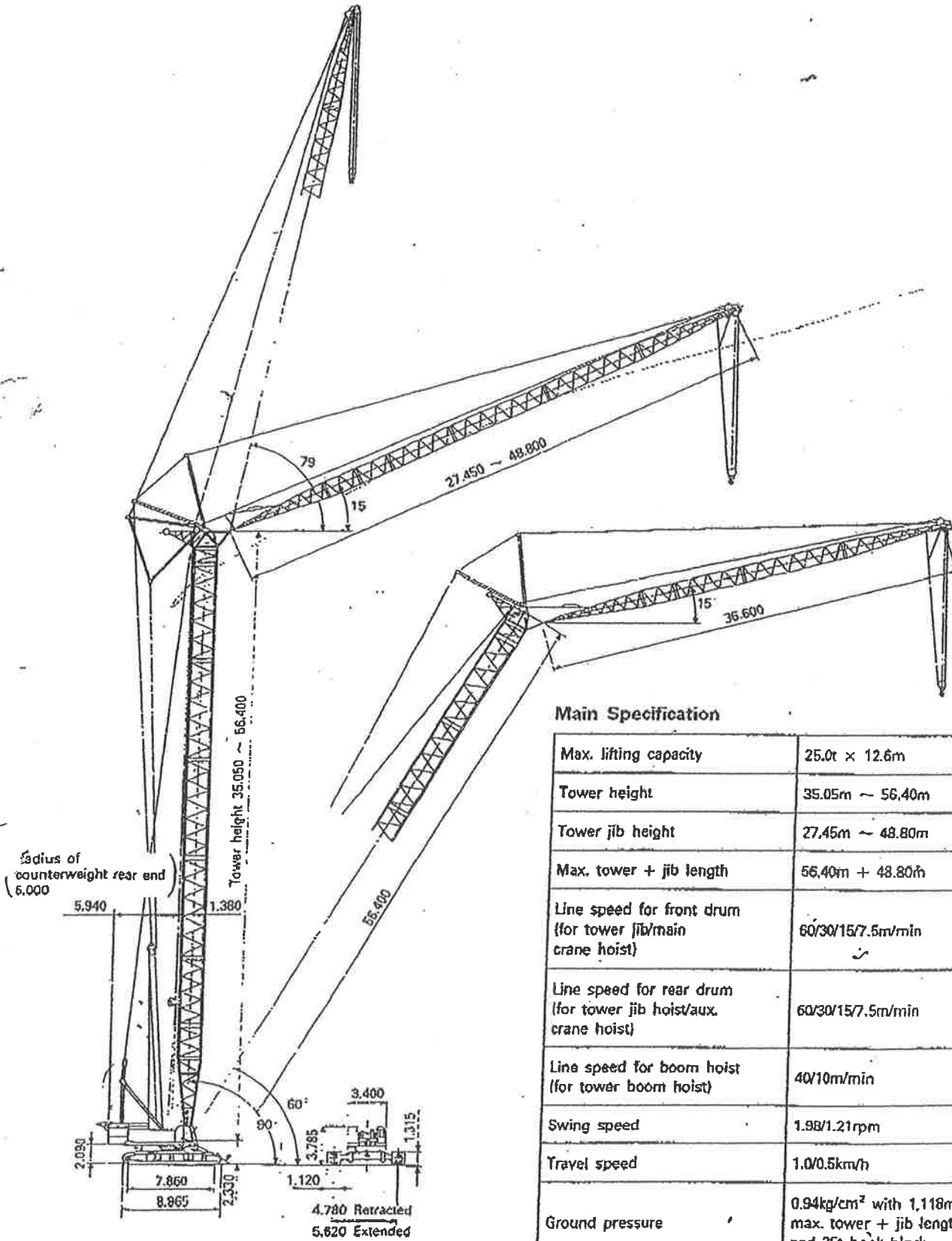
LS-248RH-2 MEASUREMENTS AND WEIGHTS IN TRANSPORTATION:

	L x W x H (m)/pc.	Weight (ton)/pc.		
Base machine without front attachment, counterweight, axle beams, and side frames	8.808 x 3.370 x 3.135 (with gantry)	30.8	3.05m extension boom with pendants	3.168 x 2.115 x 2.120 0.6
	7.757 x 3.370 x 3.135 (without gantry)	28.0	6.1m extension boom with pendants	6.215 x 2.115 x 2.120 1.0
Axle beam (2 pcs.)	6.110 x 0.650 x 0.903	4.5	9.15m extension boom with pendants	9.264 x 2.115 x 2.120 1.4
Side frame (2 pcs.)	8.836 x 2.275 x 1.300	20.5	12.2 extension boom with pendants	12.312 x 2.115 x 2.120 1.8
Jack cylinder (4 pcs.)	1.000 x 0.500 x 1.200	0.5	Bottom jib	4.694 x 0.820 x 0.972 0.2
Counterweight A	4.170 x 1.200 x 0.885	12.1	Top jib	4.943 x 0.820 x 0.972 0.3
Counterweight B	1.100 x 0.900 x 1.190	8.8	3.05m extension jib	3.118 x 0.820 x 0.972 0.1
Counterweight C	1.200 x 1.200 x 1.190	9.4	6.1m extension jib	6.166 x 0.820 x 0.972 0.2
Counterweight D	1.270 x 1.200 x 1.190	10.0	Jib strut	4.940 x 1.014 x 0.625 0.4
Counterweight E	4.170 x 1.630 x 0.480	15.2	150 t hook block	2.435 x 0.700 x 0.900 2.1
Bottom boom	9.344 x 2.115 x 2.120	1.7	100 t hook block	1.979 x 0.710 x 0.600 1.3
Top boom with pendants	9.898 x 2.115 x 2.120	2.9	60 t hook block	1.761 x 0.710 x 0.480 1.0
Boom live mast with bridle and bail	11.400 x 1.600 x 0.550	3.6	30 t hook block	1.662 x 1.370 x 0.330 0.9
Boom back stop (2 pcs.)	6.401 x 0.230 x 0.200	0.5	15 t hook block	1.404 x 0.670 x 0.480 0.8
			10 t hook block	1.279 x 0.327 x 0.255 0.4

Lifting Tower Crane General Specification

LS248RH5

Dimension (in m)



Main Specification

Max. lifting capacity	25.0t × 12.6m
Tower height	35.05m ~ 56.40m
Tower jib height	27.45m ~ 48.80m
Max. tower + jib length	56.40m + 48.80m
Line speed for front drum (for tower jib/main crane hoist)	60/30/15/7.5m/min
Line speed for rear drum (for tower jib hoist/aux. crane hoist)	60/30/15/7.5m/min
Line speed for boom hoist (for tower boom hoist)	40/10m/min
Swing speed	1.98/1.21rpm
Travel speed	1.0/0.5km/h
Ground pressure	0.94kg/cm ² with 1,118mm with max. tower + jib length and 25t hook block
Working weight	174.5t with 1,118mm with max. tower + jib length and 25t hook block

Tower Boom and Jib Combination Table

Tower jib length (m)	※27.45				※30.50				33.55				36.60			
Tower angle (°)	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
Tower height (m)	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
35.05	○	○	○	○	○	○	○	○	×	×	×	×	×	×	×	×
38.10	○	○	○	○	○	○	○	○	○	○	○	○	×	×	×	×
41.15	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
44.20	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
47.25	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
50.30	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
53.35	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
56.40	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Tower jib length (m)	39.65				42.70				45.75				48.80			
Tower angle (°)	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
Tower height (m)	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
35.05	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
38.10	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
41.15	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
44.20	○	○	○	○	×	×	×	×	×	×	×	×	×	×	×	×
47.25	○	○	○	○	○	○	○	○	×	×	×	×	×	×	×	×
50.30	○	○	○	○	○	○	○	○	○	○	○	○	×	×	×	×
53.35	○	○	○	○	○	○	○	○	○	○	○	×	○	○	○	×
56.40	○	○	○	×	○	○	○	×	○	○	○	×	○	○	○	×

Notes:

1. A combination of "○" marked tower boom and jib as shown in table above indicates two pieces of upper part connect pins between tower jib top section and jib extension must be pulled out when erecting and lowering the attachment.
2. A combination of "×" marked tower boom and jib as shown in table above shall not be applicable for operation.
3. Tower jib length with symbol "※" indicates tower jib head must be equipped with balanceweight.
4. It is necessary to place two steel blocks at the front of the crawler when erecting and lowering 56.4m tower boom plus jib with a combination as shown in table above.

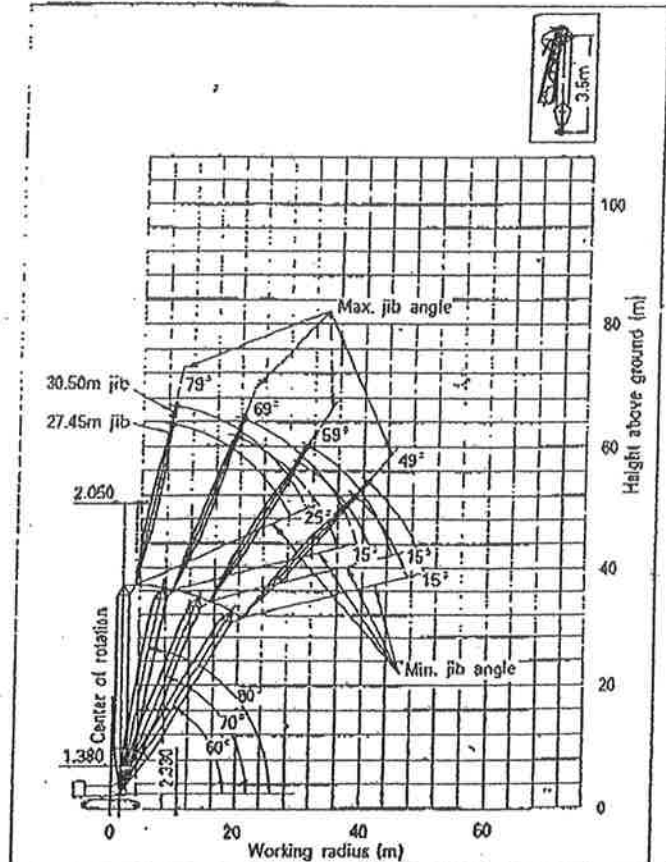
Tower jib length (m)	Tower angle (°)							
Working radius (m)	25	30	35	40	45	50	55	60
10.9	25.0					21.7/11.7		
12.0	25.0/12.6					21.7		
14.0	23.2					21.7/14.3		
16.0	20.6					20.5		
19.0	18.6					18.6		
20.0	16.8	15.0/21.4				16.8		
22.0	15.3	15.3				15.3	14.9/22.7	
24.0	13.9	13.9				13.9	13.9	
26.0	12.6	12.6				12.6	12.6	
28.0	11.4	11.4				11.4	11.4	
30.0	11.1/28.4	10.4	9.7/31.2			10.4	10.4	
32.0		9.6	9.4			9.9/31.2	9.6	9.1/32.9
34.0		8.9	8.7				8.9	8.7
36.0		8.2	8.0				8.2	8.0
38.0			7.4				7.6	7.4
40.0			6.8	6.7/40.1			7.3/39.0	6.8
42.0			6.4/41.5	6.3				6.3
44.0				5.8				5.8
46.0				5.4				5.7/44.5
48.0				5.3/46.9				5.0
50.0								4.7/49.8
Ranges for jib inclination angle	25°~75°	15°~65°	15°~55°	15°~45°	25°~75°	15°~65°	15°~55°	15°~45°

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 78% of minimum tipping loads. Capacities are under crawler extended condition with 5,620mm. 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 57.2ton counterweight for all capacities on this chart.
- Attachment must be erected and lowered over the front of the crawler mounting. When mounting 27.45m through 48.80m tower jib on 56.40m tower boom, two steel blocks be placed under track idler wheels each of crawler are required for lifting off ground the attachment without any outside assistance.

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

Working ranges



Tower Crane Capacities (with 38.10m tower boom length)

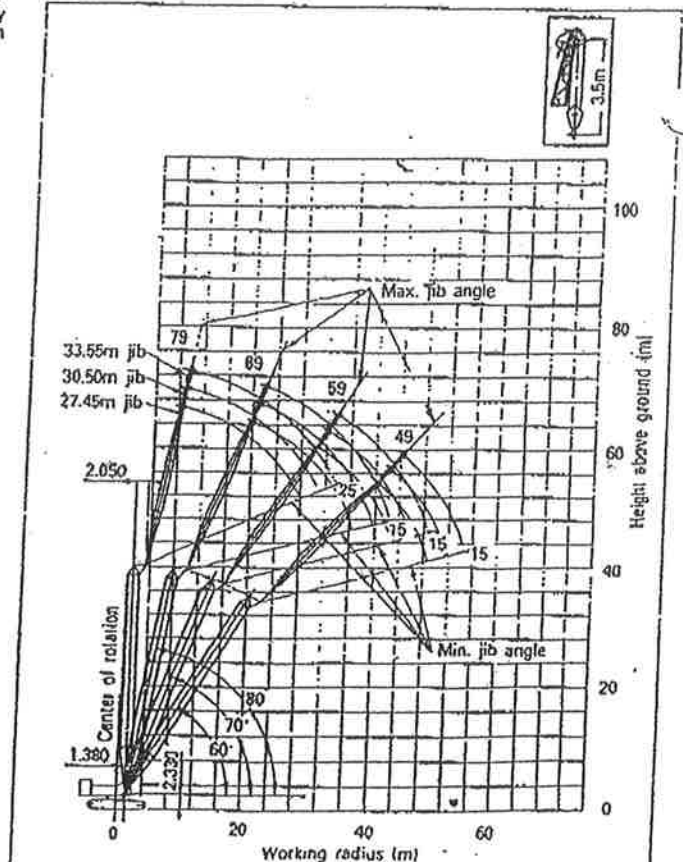
Tower jib length (m)	27.45				30.50				33.55			
	90	80	70	60	90	80	70	60	90	80	70	60
10.9	25.0				21.7/11.7							
12.0	25.0/12.6				21.7				20.5/12.5			
14.0	23.2				21.7/14.3				20.5/15.3			
16.0	20.6				20.5				20.1			
18.0	18.6				18.6				18.6			
20.0	16.8				16.8				16.8			
22.0	15.3	15.3			15.3	14.0/23.2			15.3			
24.0	13.9	13.9			13.9	13.9			13.9	13.6/24.5		
26.0	12.6	12.6			12.6	12.6			12.6	12.6		
28.0	11.4	11.4			11.4	11.4			11.4	11.4		
30.0	11.1/28.4	10.4			10.4	10.4			10.4	10.4		
32.0		9.6	9.4		9.9/31.2	9.6			9.6	9.6		
34.0		8.9	8.7			8.9	8.7		8.9	8.9	8.1/35.7	
36.0		8.2	8.0			8.2	8.0		8.2	8.2	8.0	
38.0		8.0/37.1	7.4			7.6	7.4		7.6	7.6	7.4	
40.0			6.8	6.5/41.6		7.2/39.5	6.8			7.0	6.8	
42.0			6.3	6.3			6.3	6.0/43.8		6.5	6.3	
44.0			6.2/42.5	5.8			5.8	5.8		6.4/42.4	5.8	
46.0				5.4			5.6/45.5	5.4			5.4	5.4
48.0				5.0				5.0			5.0	5.0
50.0				4.9/49.4				4.7			4.9/48.5	4.7
52.0								4.5/51.4				4.4
54.0												4.1
56.0												4.0/54.3
Ranged for jib inclination angle	25°~75°	15°~65°	15°~55°	15°~45°	25°~75°	15°~65°	15°~55°	15°~45°	25°~75°	15°~65°	15°~55°	15°~45°

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 78% of minimum tipping loads.
- Capacities are under crawler extended condition with 5,620mm.
- 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 57.2ton counterweight for all capacities on this chart.
- Attachment must be erected and lowered over the front of the crawler mounting. When mounting 27.45m through 48.80m tower jib on 56.40m tower boom, 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.

Working ranges



Tower Crane Capacities (with 41.15m tower boom length)

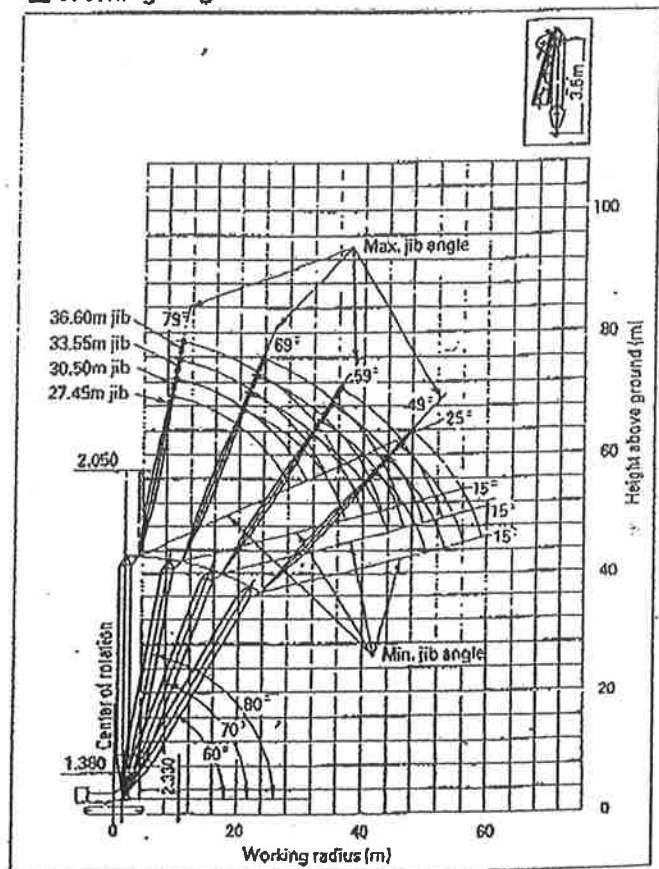
Tower jib length (m)	27.45				30.50				33.55				36.60			
	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
10.9	25.0				21.7/11.7											
12.0	25.0/12.6				21.7				20.5/12.5				18.9/13.3			
14.0					21.7/14.3				20.5/15.3				18.9			
16.0	20.6				20.5				20.1				18.9/16.4			
18.0	18.6				18.8				18.6				18.1			
20.0	16.8				16.8				16.8				16.8			
22.0	15.3	14.9/22.5			15.3	14.1/23.8			15.3				15.3			
24.0	13.9	13.9			13.9	13.9			13.9	13.2/25.1			13.9			
26.0	12.6	12.6			12.6	12.6			12.6	12.6			12.6	12.4/26.4		
28.0	11.4	11.4			11.4	11.4			11.4	11.4			11.4	11.4		
30.0	11.1/28.4	10.4			10.4	10.4			10.4	10.4			10.4	10.4		
32.0		9.8	8.9/33.3		9.9/31.2	9.6			9.8	9.6			9.6	9.6		
34.0		8.9	8.6		8.9	8.4/35.0			8.9	8.9			8.9	8.9		
36.0		8.2	8.0		8.2	8.0			8.2	7.8/36.8			8.2	8.2		
38.0		8.0/37.1	7.4		7.6	7.4			7.6	7.4			8.0/36.7	7.6	7.2/38.5	
40.0			6.8		7.0	6.8			7.0	6.8			7.0	6.8		
42.0			6.3	5.9/43.1		6.3			6.5	6.3			6.5	6.3		
44.0			5.9/43.6	5.8		5.8	5.6/45.3		6.3/43.0	5.8			6.0	5.8		
46.0				5.4		5.4	5.4			5.4	5.1/47.5		5.6/45.9	5.4		
48.0				5.0		5.0	5.0			5.0	5.0			5.0	4.8/49.6	
50.0				4.8/49.9		4.7				4.8/49.5	4.7			4.7	4.7	
52.0						4.4				4.4				4.4	4.4	
54.0						4.3/52.8								4.3/52.5	4.1	
56.0										3.9/55.8						3.8
58.0																3.6
60.0																3.5/58.8
Ranges for jib inclination angle	25°~75°	15°~65°	15°~55°	15°~45°	25°~75°	15°~65°	15°~55°	15°~45°	25°~75°	15°~65°	15°~55°	15°~45°	25°~75°	15°~65°	15°~55°	15°~45°

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 78% of minimum tipping loads.
- Capacities are under crawler extended condition with 5,620mm.
- 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 57.2ton counterweight for all capacities on this chart.
- Attachment must be erected and lowered over the front of the crawler mounting. When mounting 27.45m through 48.80m tower jib on 56.40m tower boom, two steel blocks be placed under track idler wheels each of crawler are required for lifting off ground the attachment without any outside assistance.

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

Working ranges



Tower Crane Capacities (with 47.25m tower boom length)

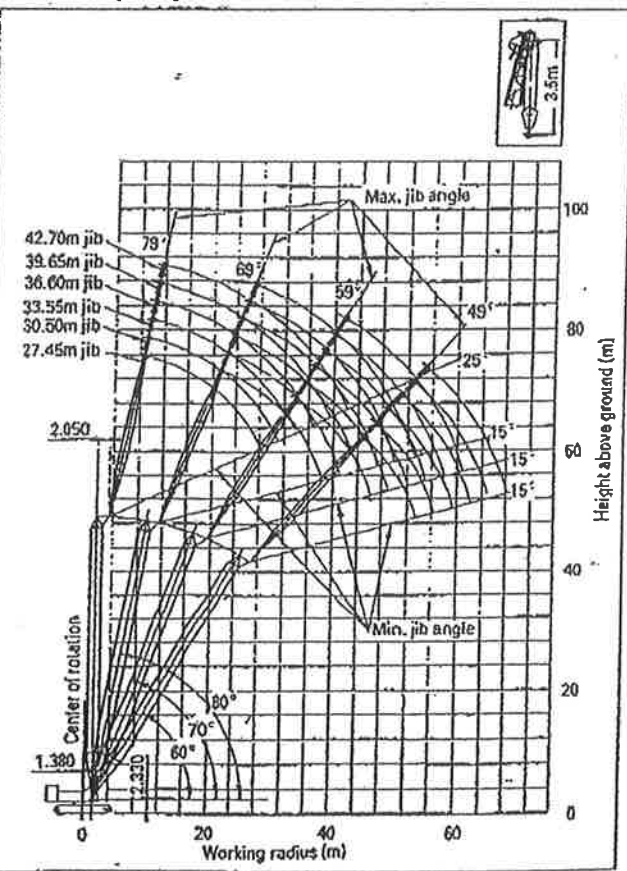
Tower jib length (m)	27.45				30.50				33.55				36.60				39.65				
	30	80	70	60	30	80	70	60	30	80	70	60	30	80	70	60	30	80	70	60	
10.9	25.0				21.7/11.7																
12.0	25.0/12.6				21.7				20.5/12.5				18.9/13.3								
14.0	23.2				21.7/14.3				20.5/15.3				18.9				17.4/14.1				
16.0	20.6				20.5				20.1				18.9/16.4				17.4				
18.0	18.6				18.6				18.6				18.1				17.4/17.1				
20.0	16.8				16.8				16.8				16.8				16.3				
22.0	15.3	14.2/23.5			15.3				15.3				15.3				15.2				
24.0	13.9	13.9			13.9	13.3/24.8			13.9				13.9				13.9				
26.0	12.6	12.6			12.6	12.6			12.6	12.5/26.1			12.6	11.7/27.4			12.6				
28.0	11.4	11.4			11.4	11.4			11.4	11.4			11.4	11.4			11.4	11.1/28.7			
30.0	11.1/28.4	10.4			10.4	10.4			10.4	10.4			10.4	10.4			10.4	10.4			
32.0		9.6			9.8/31.2	9.8			9.8	9.6			9.6	9.6			9.6	9.6			
34.0		8.9	8.1/25.3			8.9			8.9	8.9			8.9	8.9			8.9	8.9			
36.0		8.2	7.9			8.2	7.6/37.1			8.2			8.2	8.2			8.2	8.2			
38.0		7.6	7.3			7.6	7.3			7.6	7.1/38.6		8.0/36.7	7.6			7.6	7.6			
40.0		7.5/39.1	6.8			7.0	6.8			7.0	6.8			7.0	6.7/40.6		7.2/39.5	7.0			
42.0			6.3			6.7/41.1	6.3			6.5	6.3			6.5	6.3		6.5	6.3	6.5	6.2/42.3	
44.0			5.8				5.8			6.1	5.8			6.1	5.8		6.1	5.8	6.1	5.8	
46.0			5.5/45.7	5.1/46.2			5.4				5.4			5.6	5.4		5.6	5.4	5.6	5.4	
48.0				4.8			5.0	4.6/48.4			5.0			5.4/47.0	5.0		5.1	5.0	5.1	5.0	
50.0				4.5			4.9/48.6	4.5			4.7	4.4/50.5			4.7		4.8/49.3	4.7			
52.0				4.2				4.2			4.4/51.6	4.2			4.4	4.1/52.7		4.4	4.1	4.4	
54.0				4.0/53.0				3.9				3.9			4.1	3.9		4.1	3.9	4.1	3.8/51.8
56.0								3.8/55.9				3.7			4.0/54.5	3.7		3.9	3.7	3.9	3.7
58.0												3.5				3.5		3.7/57.5	3.5		
60.0												3.4/58.9				3.3		3.3	3.3	3.3	
62.0															3.2/61.9					3.1	
64.0																				2.9	
66.0																				2.8/64.1	
68.0																					2.8/64.1
68.0																					2.8/64.1
Range for jib inclination angle	25°-75°	15°-85°	15°-55°	15°-45°	25°-75°	15°-85°	15°-55°	15°-45°	25°-75°	15°-85°	15°-55°	15°-45°	25°-75°	15°-85°	15°-55°	15°-45°	25°-75°	15°-85°	15°-55°	15°-45°	15°-45°

Tower jib length (m)	42.70				
Tower angle (°)	90	80	70	60	
Working radius (m)					
10.9					
12.0					
14.0	15.1/14.9				
16.0	15.1				
18.0	15.1/19.6				
20.0	15.0				
22.0	14.3				
24.0	13.6				
26.0	12.6				
28.0	11.4				
30.0	10.3	10.3			
32.0	9.5	9.5			
34.0	8.8	8.8			
36.0	8.1	8.1			
38.0	7.5	7.5			
40.0	7.0	7.0			
42.0	6.5	6.5			
44.0	6.4/42.2	6.1	5.7/44.1		
46.0		5.6	5.4		
48.0		5.2	5.0		
50.0		4.8	4.7		
52.0		4.6	4.4		
54.0		4.5/52.9	4.1		
56.0			3.9	3.6/57.0	
58.0				3.6	3.5
60.0				3.5	3.3
62.0				3.4/60.4	3.1
64.0					2.9
66.0					2.7
68.0					2.6/67.2
Range for jib inclination angle	25°-75°	15°-85°	15°-55°	15°-45°	

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 78% of minimum tipping loads.
- Capacities are under crawler extended condition with 5,620mm. 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 ballhook, sling, spreader bar, or other suspended gear. SUMIYO-MO'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 57,2ton counterweight for all capacities on this chart.
- Attachment must be erected and lowered over the front of the crawler mounting. When mounting 27.45m through 48.80m tower jib on 56.40m tower boom, 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.) Construction Machinery Co., Ltd.

Working ranges



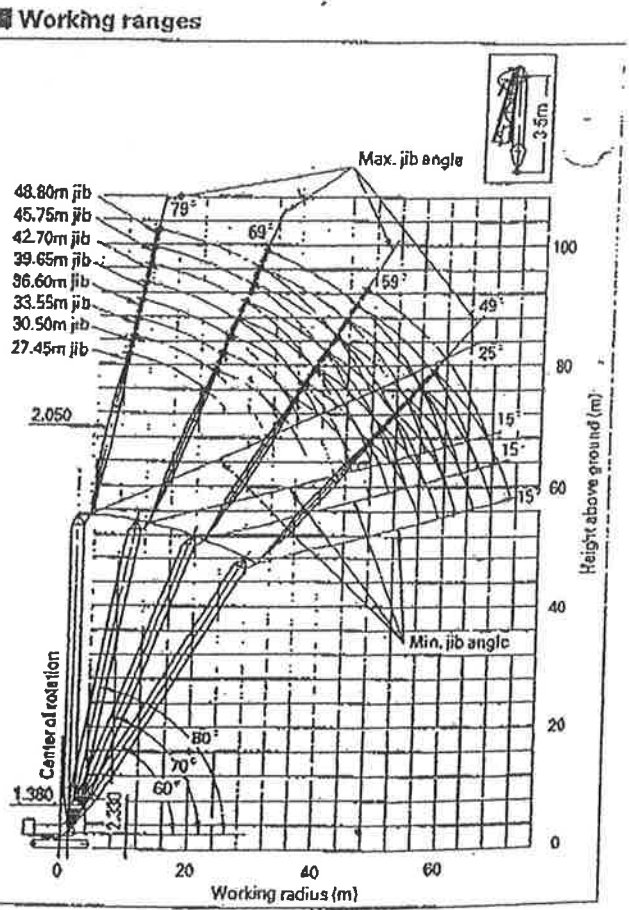
Tower Crane Capacities (with 53.35m tower boom length)

Tower jib length (m)	27.45				30.50				33.55				36.60				39.65				42.70			
	Tower angle (°)				90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
Working radius (m)	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60
10.9	25.0				21.7	11.7																		
12.0	25.0	12.6			21.7				20.5	12.3			18.9	13.3										
14.0	23.2	9.6			21.7	14.3			20.5	15.3			18.9											
16.0	20.6				20.5				20.1				18.9	16.4										
18.0	18.6				18.6				18.8				18.1											
20.0	16.8				16.8				16.8				16.8											
22.0	15.3				15.3				15.3				15.3											
24.0	13.9	13.5	24.6		13.9	12.2	25.9		13.9				13.9											
26.0	12.6	12.6			12.6	12.6			12.6	11.2	27.2		12.6											
28.0	11.4	11.4			11.4	11.4			11.4	11.4			11.4	11.2										
30.0	11.1	10.4			10.4	10.4			10.4	10.4			10.4	10.4										
32.0		9.6			9.6	9.6			9.6	9.6			9.6	9.6										
34.0		8.9			8.9	8.9			8.9	8.9			8.9	8.9										
36.0		8.2	7.5	7.7	8.2	8.2			8.2	8.2			8.2	8.2										
38.0		7.6	7.3		7.6	6.9	9.7		7.6	7.6			7.6	7.6										
40.0		7.3	6.9	7.2	7.0	6.8			7.0	6.8			7.0	6.8	6.3	4.9								
42.0		6.8	6.3		6.8	6.3			6.5	6.3			6.5	6.3	6.5	6.1	4.2							
44.0		6.3	5.8		6.4	6.1	5.8		6.1	5.8			6.0	5.8	6.0	5.7	4.4							
46.0		5.8	5.4		5.4	5.4			5.4	5.4			5.4	5.4	5.4	5.4	5.4							
48.0		5.4	5.0		5.0	5.0			5.0	5.0			5.0	5.0	5.0	5.0	5.0							
50.0		5.0	4.7		4.7	4.7			4.7	4.7			4.7	4.7	4.7	4.7	4.7							
52.0		4.7	4.4		4.6	4.4	3.7		4.4	4.4	3.5	3.6	4.4	4.4	4.4	4.4	4.4							
54.0		4.4	4.1		4.1	4.1			4.1	4.1	3.4	3.4	4.1	4.1	4.1	4.1	4.1							
56.0		4.1	3.8		3.8	3.8			3.8	3.8	3.2	3.2	3.8	3.8	3.8	3.8	3.8							
58.0		3.8	3.5		3.5	3.5			3.5	3.5	3.0	3.0	3.5	3.5	3.5	3.5	3.5							
60.0		3.5	3.2		3.2	3.2			3.2	3.2	2.9	2.9	3.2	3.2	3.2	3.2	3.2							
62.0		3.2	2.9		2.9	2.9			2.9	2.9	2.8	2.8	2.9	2.9	2.9	2.9	2.9							
64.0		2.9	2.6		2.6	2.6			2.6	2.6	2.5	2.5	2.6	2.6	2.6	2.6	2.6							
66.0		2.6	2.3		2.3	2.3			2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3							
68.0		2.3	2.0		2.0	2.0			2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0							
70.0		2.0	1.7		1.7	1.7			1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7							
72.0		1.7	1.4		1.4	1.4			1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4							
Ranges for jib inclination angle	25°-75°	15°-65°	15°-55°	15°-45°	15°-35°	15°-25°	15°-15°	15°-5°	15°-0°	15°-0°	15°-0°	15°-0°	15°-0°	15°-0°	15°-0°	15°-0°	15°-0°	15°-0°	15°-0°	15°-0°	15°-0°	15°-0°	15°-0°	

Tower jib length (m)	45.25			48.30		
	Tower angle (°)			90	80	70
Working radius (m)	90	80	70	90	80	70
10.9						
12.0						
14.0	14.0	15.7				
16.0	14.0			12.0	16.9	
18.0	14.0	13.0		12.0		
20.0	13.7			11.0		
22.0	12.2			11.4		
24.0	12.0			11.0		
26.0	11.9			10.5		
28.0	11.1			10.8		
30.0	10.3			9.5		
32.0	9.5	9.4	12.3	9.0	9.2	13.6
34.0	8.8	8.8		8.3	8.5	
36.0	8.1	8.1		8.0	8.1	
38.0	7.5	7.5		7.5	7.5	
40.0	7.0	7.0		7.0	7.0	
42.0	6.5	6.5		6.5	6.5	
44.0	6.0	6.0		6.0	6.0	
46.0	5.8	5.8	5.1	5.7	5.7	5.6
48.0	5.2	5.0	5.0	5.2	5.2	4.8
50.0	4.8	4.7		4.6	4.7	
52.0	4.5	4.4		4.2	4.2	
54.0	4.2	4.1		3.8	4.1	
56.0	3.8	3.8		3.8	3.8	
58.0	3.5	3.5		3.5	3.5	
60.0	3.3	3.3		3.4	3.8	3.3
62.0	3.1	3.1		3.1	3.1	
64.0	2.8	2.8		2.9	2.9	
66.0	2.6	2.6		2.6	2.6	
68.0	2.4	2.4		2.4	2.4	
70.0	2.2	2.2		2.2	2.2	
72.0	2.0	2.0		2.0	2.0	
Ranges for jib inclination angle	25°-75°	15°-65°	15°-55°	25°-75°	15°-65°	15°-55°

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 requires 78% of minimum tipping loads.
- Capacities are under crawler extended condition with 5.620mm.
- 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 ballhook, 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 57.2ton counterweight for all capacities on this chart.
- Attachment must be erected and lowered over the front of the crawler mounting. When mounting 27.45m through 48.80m tower jib on 56.40m tower boom, 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.L) Construction Machinery Co., Ltd.



Tower Crane Capacities (with 50.30m tower boom length)

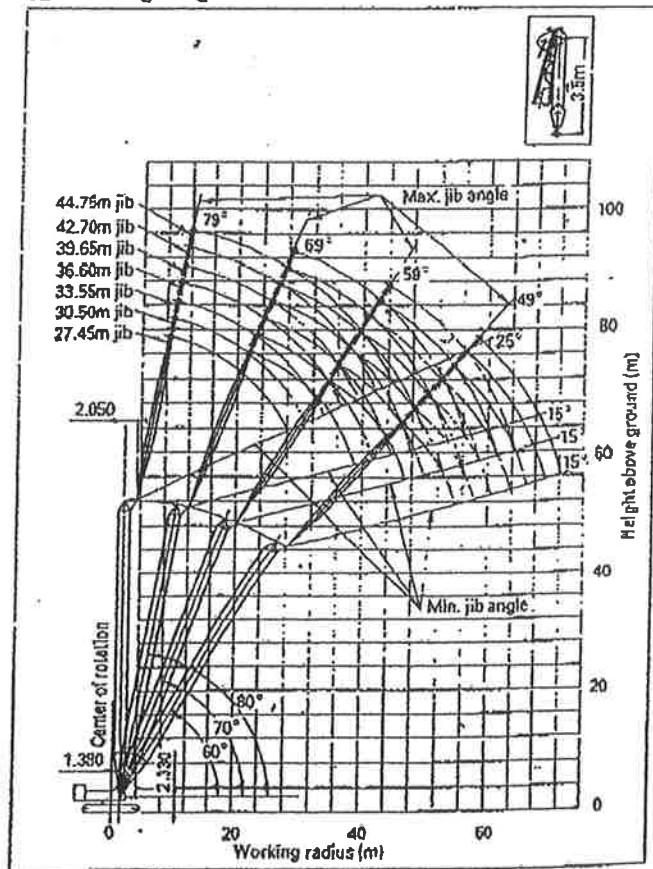
Tower jib length (m)	27.45				30.50				33.55				36.60				39.65				42.70			
	80	80	70	60	80	70	60	50	80	70	60	50	80	70	60	50	80	70	60	50	80	70	60	
10.9	25.0				21.7																			
12.0	25.0	12.6			21.7				20.5	12.6			18.9											
14.0	23.2				21.7	14.3			20.5	15.3			18.9											
16.0	20.6				20.5				20.1				18.9	18.4										
18.0	18.8				18.6				18.6				18.1											
20.0	16.8				16.8				16.8				16.8											
22.0	15.3				15.3				15.3				15.3											
24.0	13.9	13.9	24.1		13.9	13.0	25.4		13.9				13.9											
26.0	12.6	12.6			12.6				12.6	12.2	28.7		12.6	11.5	27.5									
28.0	11.4	11.4			11.4	11.4			11.4	11.4			11.4	11.4										
30.0	11.1	12.8	10.4		10.4	10.4			10.4	10.4			10.4	10.4										
32.0			9.6		9.6				9.6	9.6			9.6	9.6										
34.0			8.9		8.9				8.9	8.9			8.9	8.9										
36.0			8.2	7.8	9.4				8.2				8.2	8.2										
38.0			7.6	7.3					7.6	7.2	38.1		7.6	7.6										
40.0			7.4	3.8	7.6				7.0	6.8			7.0	6.4	41.8									
42.0			6.3						6.5	6.3			6.5	6.3										
44.0			5.8						5.8				6.0	5.8										
46.0			5.4	4.8	4.7				5.4				5.6	5.4										
48.0			5.3	4.6	4.7				5.0	4.3	43.9		5.3	4.5	5.0									
50.0			4.4						4.8	4.2			4.7											
52.0			4.1						4.4	3.9	52.1		4.4											
54.0			3.9						4.3	3.8			4.1	3.6	54.2									
56.0			3.8	5.4					3.8				3.5											
58.0									3.6				3.3											
60.0									3.4	5.7			3.2											
62.0									3.1	6.0			2.9											
64.0													2.7	6.3										
66.0																								
68.0																								
70.0																								
72.0																								
74.0																								
Ranges for jib inclination angle	75 ~ 75	75 ~ 65	75 ~ 55	15 ~ 45	25 ~ 75	15 ~ 65	15 ~ 55	15 ~ 45	25 ~ 75	15 ~ 65	15 ~ 55	15 ~ 45	25 ~ 75	15 ~ 65	15 ~ 55	15 ~ 45	25 ~ 75	15 ~ 65	15 ~ 55	15 ~ 45	25 ~ 75	15 ~ 65	15 ~ 55	

Tower jib length (m)	45.75			
Tower angle (°)	80	80	70	60
10.9				
12.0				
14.0	14.0	15.7		
16.0	14.0			
18.0	14.0	15.0		
20.0	13.7			
22.0	13.2			
24.0	12.6			
26.0	11.9			
28.0	11.1			
30.0	10.3	3.6	31.8	
32.0	9.5	9.5		
34.0	8.8	8.8		
36.0	8.1	8.1		
38.0	7.5	7.5		
40.0	7.0	7.0		
42.0	6.5	6.5		
44.0	6.0	6.0		
46.0	5.8	5.0	5.1	48.9
48.0		5.2	5.0	
50.0		4.9	4.7	
52.0		4.5	4.4	
54.0		4.2	4.1	
56.0		4.0	3.7	
58.0		3.9	3.6	
60.0		3.3	2.8	69.9
62.0		3.1	2.7	
64.0		3.0	2.5	
66.0		2.9	2.4	
68.0		2.8	2.3	
70.0		2.7	2.3	
72.0		2.6	2.0	
74.0		1.9	2.6	
Ranges for jib inclination angle	75 ~ 75	15 ~ 65	15 ~ 55	15 ~ 45

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 70% of minimum tipping loads.
- Capacities are under crawler extended condition with 5.620mm.
- 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 half/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 57.2ton counterweight for all capacities on this chart.
- Attachment must be erected and lowered over the front of the crawler mounting. When mounting 27.45m through 48.80m tower jib on 55.40m tower boom, two steel blocks be placed under track roller 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.F.J.) Construction Machinery Co., Ltd.

Working ranges



Tower Crane Capacities (with 56.40m tower boom length)

Tower jib length (m)	27.45				30.50				33.55				36.60				39.65			42.70		
	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70	60	90	80	70			
10.9	25.0				21.7	11.7																
12.0	25.0	12.6			21.7				20.5	12.5			18.9	12.3								
14.0	23.2				21.7	14.3			20.5	15.3			18.9	16.4			17.4	14.1	15.1			
16.0	20.6				20.5				20.5				18.1				17.4	17.1	15.1			
18.0	18.6				18.6				18.6				16.8				16.3		15.0			
20.0	16.8				16.8				16.8				15.3				15.2		14.3			
22.0	15.3				15.3				15.3				13.9				13.9		13.6			
24.0	13.9	13.2	5.1		13.9				13.9				12.6				12.6		12.6			
26.0	12.6	12.6			12.6	12.4	26.4		12.8	11.6	7.7		12.6				12.6		12.6			
28.0	11.4	11.4			11.4	11.4			11.4	11.4			11.4	10.0	10.0		11.4		11.4			
30.0	11.2	10.4			10.4	10.4			10.4	10.4			10.4	10.4			10.4	10.0	10.3			
32.0		9.6			9.6	9.6			9.6	9.6			9.6	9.6			9.6	9.6	9.5			
34.0		8.9			8.9	8.9			8.9	8.9			8.9	8.9			8.9	8.9	8.8			
36.0		8.2			8.2	8.2			8.2	8.2			8.2	8.2			8.2	8.2	8.1			
38.0		7.6	7.3	28.4	7.6	7.6			7.6	7.6			8.0	7.6			7.6	7.6	7.5			
40.0		7.0	6.8		7.0	6.8			7.0	7.0			7.0	7.0			7.0	7.0	7.0			
42.0		6.3			6.3	6.3			6.3	6.3			6.3	5.9	4.7		6.3	6.5	6.5			
44.0		5.8			5.8	5.8			5.8	5.8			5.8	5.8			5.8	5.8	5.8			
46.0		5.4			5.4	5.4			5.4	5.4			5.4	5.4			5.4	5.4	5.4			
48.0		5.0			5.0	5.0			5.0	5.0			5.0	5.0			5.0	5.0	5.0			
50.0		4.9	4.8	3.6	5.0	4.7			4.7	4.7			4.7	4.7			4.7	4.7	4.7			
52.0			3.4		4.5	4.1	3.2	2.9	4.4	4.4			4.4	4.4			4.4	4.4	4.4			
54.0			3.3		3.1	2.9			4.3	3.9	3.1		4.1	4.1			4.1	4.1	4.1			
56.0			3.1		2.9	2.9			4.2	3.7	2.9		3.9	3.9			3.9	3.9	3.9			
58.0			2.9	5.7	2.7	2.7			4.1	3.6	2.7		3.7	3.7			3.7	3.7	3.7			
60.0					2.7	2.7			4.0	3.5	2.7		3.6	3.6			3.6	3.6	3.6			
62.0					2.6	2.6			3.9	3.4	2.6		3.5	3.5			3.5	3.5	3.5			
64.0					2.6	2.6			3.8	3.3	2.6		3.4	3.4			3.4	3.4	3.4			
66.0					2.5	2.5			3.7	3.2	2.5		3.3	3.3			3.3	3.3	3.3			
68.0					2.5	2.5			3.6	3.1	2.5		3.2	3.2			3.2	3.2	3.2			
70.0					2.4	2.4			3.5	3.0	2.4		3.1	3.1			3.1	3.1	3.1			
72.0					2.4	2.4			3.4	2.9	2.4		3.0	3.0			3.0	3.0	3.0			
74.0					2.3	2.3			3.3	2.8	2.3		2.9	2.9			2.9	2.9	2.9			
76.0					2.3	2.3			3.2	2.7	2.3		2.8	2.8			2.8	2.8	2.8			
78.0					2.2	2.2			3.1	2.6	2.2		2.7	2.7			2.7	2.7	2.7			
80.0					2.2	2.2			3.0	2.5	2.2		2.6	2.6			2.6	2.6	2.6			
82.0					2.1	2.1			2.9	2.4	2.1		2.5	2.5			2.5	2.5	2.5			
84.0					2.1	2.1			2.8	2.3	2.1		2.4	2.4			2.4	2.4	2.4			
86.0					2.0	2.0			2.7	2.2	2.0		2.3	2.3			2.3	2.3	2.3			
88.0					2.0	2.0			2.6	2.1	2.0		2.2	2.2			2.2	2.2	2.2			
90.0					1.9	1.9			2.5	2.0	1.9		2.1	2.1			2.1	2.1	2.1			

Tower jib length (m)	46.75			48.60		
	90	80	70	90	80	70
10.9						
12.0						
14.0	14.0	15.7				
16.0	14.0			12.0	12.5	
18.0	14.0	14.0		12.0		
20.0	13.7			11.8		
22.0	13.2			11.4		
24.0	12.6			11.0		
26.0	11.9			10.5		
28.0	11.1			10.0		
30.0	10.3			9.5		
32.0	9.5	8.8	3.2	9.0		
34.0	8.8	8.5		8.5	8.5	
36.0	8.1	8.1		8.0	8.1	
38.0	7.5	7.5		7.5	7.5	
40.0	7.0	7.0		7.0	7.0	
42.0	6.5	6.8		6.5	6.5	
44.0	6.0	6.3		6.0	6.3	
46.0	5.8	6.0		5.5	6.0	
48.0	5.2	5.8	5.0	5.2		
50.0	4.8	4.9		4.6	4.5	5.0
52.0	4.5	4.4		4.2	4.4	
54.0	4.2	4.1		3.9	4.1	
56.0	3.9	3.9		3.7	3.9	
58.0	3.7	3.7		3.5	3.7	
60.0	3.5	3.5		3.3	3.5	
62.0	3.1			3.1		
64.0	2.8			2.9		
66.0	2.7			2.7		
68.0	2.7			2.7		
70.0	2.7			2.7		

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 78% of minimum tipping loads.
- Capacities are under crawler extended condition with 5,620mm.
- 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 bail/hook, sling, spreader bar, or other suspended gear. SUMITOMO's hook block weight is as follows:
 26t 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 57.2ton counterweight for all capacities on this chart.
- Attachment must be erected and lowered over the front of the crawler mounting. When mounting 27.45m through 48.60m tower jib on 56.40m tower boom, two steel blocks be placed under track idler wheels; each of crawler are required for lifting off ground the attachments 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.

Working ranges

