SUMITOMO · LINK-BELT

LS-108BS Basic Machine

Upper Machinery

UPPER FRAME: All-welded, stress relieved, precision machined unit, machinery side housing bolted to upper frame.

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: "Speed-O-Matic" power hydraulic system that includes a gear pump to provide a constant flow of oil, an accumulator to maintain operating pressure and variable pressure control valves to regulate this pressure to all the clutches, and to release swing brake, boomhoist brake.

CLUTCHES: "Speed-O-Matic" power hydraulic actuated, internal expanding, self-adjusting 2-shoe type for all functions. Clutches are interchangeable.

DRUMS: Front and rear main, and optional third, operating drums.

Drum laggings --- 2-piece, removable; bolted to brake drum which is involute splined to shaft mounted in line bores on ball bearing.

Brakes --- External contracting band; mechanically foot pedal operated, with locking latch.

BOOM HOIST ASSEMBLY:

Independent boom hoist --- Spur gear driven with precision boom hoisting and lowering through clutches.

Brake --- Spring applied, hydraulically released band type with drum locking pawl.

SWING: 2 sets of "Speed-O-Matic" clutches transmit swing power smoothly into the swing pinion.

Brake --- Two-directional, external contracting band, spring applied, power hydraulically released.

Lock --- Mechanically controlled lock pin drops into lock hole of lower frame.

Speed --- 3.5 r.p.m. (high). 1.2 r.p.m. (low)

Independent swing/travel --- Standard.

GANTRY: Retractable high gantry.

OPERATOR'S CAB: Full-vision compartment with safety glass panels, separated from upper machinery with an inside door.

COUNTERWEIGHT: Removable, held in place by pins and bolts. Power raising and lowering by counterweight lowering device.

POWER UNITS:

	Standard	Optional extra
Make & Model	Mitsubishi 6DB10C	Cat 3304T
Type	Water-cooled, 4-cycle, diesel engine	Water-cooled, 4-cycle, diesel engine
No. of cylinders	6	4
Bore & Stroke	110 x 150 mm	121 x 152 mm
Displacement	8,550 cc	6,990 cc
Rated output	120 PS/ 1,850 r.p.m.	120PS/ 1,850 r.p.m.
Maximum torque	52 kg-m/ 1,200 r.p.m.	52 kg-m/ 1,300 r.p.m.
Fuel tank	226 liters	226 liters
Power take-off	Friction clutch	Friction clutch
2-speed transmission	Standard	Standard

Lower Machinery

LOWER FRAME: All-welded, stress relieved, precision machined, line bored for horizontal traction shaft.

TRACK ROLLERS: Heat treated, all rollers mounted on bushes with floating seals requiring no further lubrication.

TRACK SHOES: Heat treated, self-cleaning.

SHOE WIDTH: 762 mm --- Standard.

POWER HYDRAULIC STEER/TRAVEL: For travel or steer, jaw clutches of traction shaft are power hydraulically engaged with jaws on brake drums, automatically releasing spring-applied steer/digging brakes. Brakes are external contracting band type.

TRAVEL SPEED: 1.3 km/h.

SIDE FRAMES: Side frames can be extended or retracted by two power hydraulic cylinders and are removable, leaving track drive chains connected.

General Dimensions

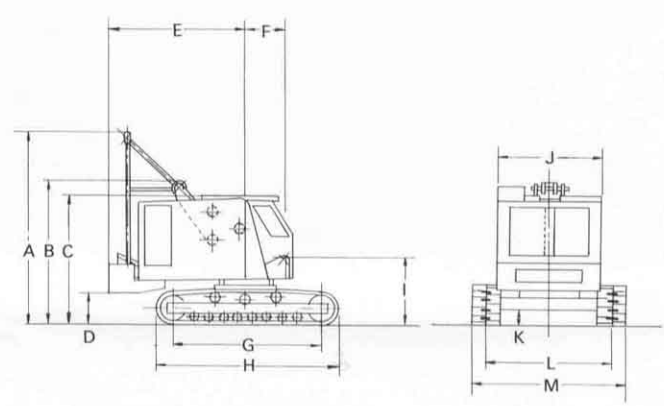
A: Height of high gantry
- raised 4.681m
- lowered (for transporting) 3.373m

B: Height of low gantry 3.373m
C: Height of cab 3.248m
D: Counterweight ground clearance
- (with counterweight "A" + "B") 1.017m

E: Radius of rear end
- (with counterweight "A" + "B") 3.880m

F: Center of rotation to boom foot pin 0.965m
G: Center to center distance of tumbler 4.600m
H: Overall length of crawler 5.486m
I: Height from ground to boom foot pin 1.600m
J: Overall width of cab 2.773m
K: Ground clearance 0.370m
L: Center to center distance of crawler
- (with 762mm shoe) extended 3.538m
- retracted 2.538m

M: Overall width of crawler
- (with 762mm shoe) extended 4.300m
- retracted 3.300m



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

SUMITOMO HEAVY INDUSTRIES, LTD.

International Sales
Construction Machinery Division : 1, Kanda, Mitoshiro-cho, Chiyoda-ku, Tokyo, Japan

L065-0778(RI)

Printed in Japan

SUMITOMO · LINK-BELT

LS-108BS Crane 50 metric tons

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

- **Boom connections** ---------- Pin connections.
- **Basic boom** ---------- Two-piece, 9.3m basic length; 4.5m basic and 4.8m top section; 1.20m deep and 1.27m wide at connections.
- **Boom point machinery** ---------- Five head sheaves mounted on anti-friction bearings.
- **Boom extensions** ---------- Available in 3.05m, 6.1m and 9.15m lengths with pendants. Maximum boom length 45.9m.
- **Jib** ---------- Two-pieces; 6.1m basic length with 3.05m long base and top sections, available in 3.05m jib extension.
- **Boom plus jib length** ---------- 39.8m + 12.2m (max)

HOOK BLOCK:

- **50t four sheaves** ..... Standard
- **14t** ..... Optional extra
- **4.5t** ..... Standard for jib

BOOM HOIST ASSEMBLY: With power lowering clutch.

- **14-part boom hoist reeving** ---------- Standard.
- **Boom hoist line speed (raising)** ---------- @45m/min (high) @15m/min (low-opt.)
- **Boom hoist line speed (lowering)** ---------- @42m/min (high) @14m/min (low-opt.)

LINE PULL AND LINE SPEED:

Drums	Root dia.	Type	Line pull	Line speed	Cable dia.
Front (aux. hoist)	306mm	Smooth	12,100 kg	@47m/min (high) @15.6m/min (low)	20mm
Rear (main hoist)	306mm	Smooth	11,800 kg	@47m/min (high) @15.6m/min (low)	20mm

(Available line pull – Not based on wire rope strength)

HOIST REEVING:

	Main hoist								Aux. hoist
No. of parts of line	9	8	7	6	5	4	3	2	1
Max. load (t)	50	43.8	39.1	33.5	28.5	22.8	17.4	11.6	4.5

GANTRY: High gantry.

WORKING WEIGHT AND GROUND PRESSURE:

Shoe width	762 mm
Weight	43.5 t
Pressure	0.58 kg/cm^2

With basic boom and counterweight "A+B"

COUNTERWEIGHT:
"A" (6,511 kg) + "B" (4,529 kg)

SAFETY DEVICE: Hook over hoist alarm, boom hoist limiting device, boom angle indicator, boom back stop.

GRADEABILITY: 30% (17°)

POWER LOAD LOWERING CLUTCH:

- **On front drum** ---------- Optional extra.
- **On rear drum** ---------- Standard

LOAD MOMENT ALARM/INDICATOR: Optional extra.

MID-POINT CABLE: Required for boom length 42.85m or longer.

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

SUMITOMO HEAVY INDUSTRIES, LTD.
International Sales
Construction Machinery Division : 1, Kanda, Mitoshiro-cho, Chiyoda-ku, Tokyo, Japan

L066-0778(RI)

Printed in Japan

LS-108BS CRANE CAPACITIES: (in metric tons)

Operating radius (m)	Boom length (m)												
	9.30	12.35	15.40	18.45	21.50	24.55	27.60	30.65	33.70	36.75	39.80	42.85	45.90
3.5	50.00	50.00											
4.0	38.00	37.95	37.90										
4.5	30.95	30.90	30.85	30.75									
5.0	26.05	26.00	25.95	25.85	25.75								
5.5	22.45	22.40	22.35	22.25	22.15	22.05							
6.0	19.75	19.70	19.65	19.55	19.45	19.35	19.25						
7.0	15.85	15.80	15.75	15.65	15.55	15.45	15.35	15.25	15.15				
8.0	13.20	13.15	13.10	13.00	12.90	12.80	12.75	12.65	12.55	12.45	12.35		
9.0	11.30	11.25	11.20	11.10	11.00	10.90	10.85	10.75	10.65	10.55	10.45	10.35	
10.0		9.80	9.75	9.65	9.55	9.45	9.40	9.30	9.20	9.10	9.00	8.90	8.80
12.0		7.75	7.70	7.60	7.50	7.40	7.35	7.25	7.15	7.05	6.95	6.85	6.75
14.0			6.30	6.20	6.10	6.00	5.95	5.85	5.75	5.65	5.60	5.50	5.40
16.0				5.20	5.10	5.00	4.95	4.85	4.75	4.65	4.60	4.50	4.40
18.0					4.35	4.25	4.20	4.10	4.00	3.90	3.80	3.70	3.60
20.0						3.60	3.55	3.45	3.35	3.25	3.20	3.10	3.00
22.0						3.10	3.05	2.95	2.85	2.75	2.70	2.60	2.50
24.0							2.65	2.55	2.45	2.35	2.30	2.20	2.10
26.0								2.20	2.10	2.00	1.95	1.85	1.75
28.0									1.85	1.75	1.70	1.60	1.50
30.0									1.60	1.50	1.45	1.35	1.25

(CT-6748)

Notes:

1. 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.

Kind of hook block	50t	14t	4.5t
Weight of hook block (t)	0.38	0.16	0.12

2. When operating off the main boom peak sheaves with jib on boom, the following deductions in machine lifting capacities must be made.

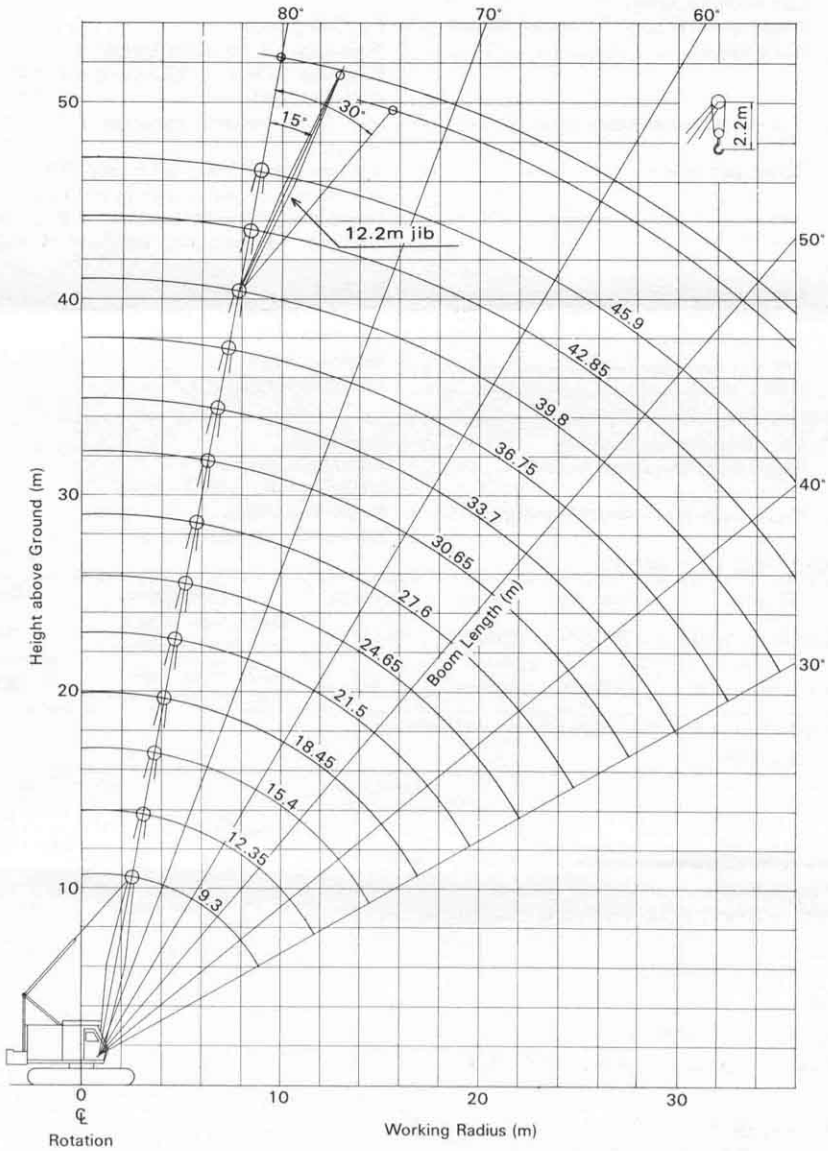
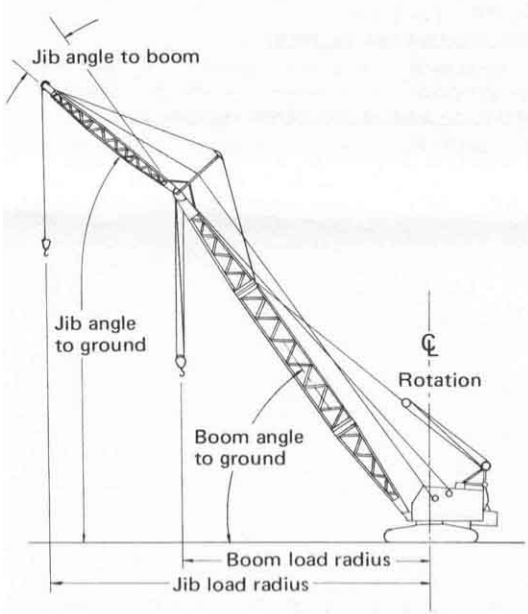
Jib length (m)	6.1	9.15	12.2
Weight to be deducted (t)	0.75	0.85	1.0

LS-108BS JIB CAPACITIES: (in metric tons)

Jib length (m)	Jib angle		
	0°	15°	30°
6.1	4.5	4.5	3.6
9.15	4.5	3.6	2.8
12.2	3.6	2.8	1.8

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. The jib angle to boom must not exceed 30° when lifting.

Crane 50 metric tons

LS-108BS CRANE WORKING RANGES: