



Upper Machinery

UPPER FRAME: All-welded, precision machined unit.

TURNABLE 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 for main hoist, aux. hoist, 3rd hoist (optional extra) and boom hoist. Mechanical linkage type for swing and travel. Working speed can be precisely controlled by lever stroke.

PUMP CONTROL SYSTEM: System reducing pump displacement enables both minute operation and saving energy.

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/3rd hoist/boom hoist/swing motor –

Radial piston motor with counterbalance valve.

Travel motor – 2-speed radial piston motors with brake valves.

Spring-set/hydraulic-released multiple disc brakes are fitted.

Hydraulic oil reservoir – 350 liter capacity.

LOAD HOIST ASSEMBLY: 2 drums (main and aux.) on one shaft driven by the bi-directional, radial piston motor through reduction gear powering the rope drum in either direction for hoisting or lowering load. 3rd drum (optional extra) on another shaft driven by the same mechanism as main and aux. drums.

Clutches – Power hydraulic actuated, internal expanding, self adjusting 1-shoe type.

Brakes – External contracting band type, mechanically foot pedal operated with locking latch. (hydraulic assist – optional extra).

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 1 set 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 – 2.7 rpm.

OPERATOR'S CAB: Full vision compartment with safety glass panels, the completely independent cab is insulated against noise and vibration.

COUNTERWEIGHT: Removable, 2 blocks mounted on rear of upper frame by bolts.

POWER UNIT:

Make & Model	NISSAN PD604
Type	Water-cooled, 4-cycle diesel engine
No. of cylinders	6
Bore & Stroke	125 x 140mm
Displacement	10,308 cc
Rated output	152 ps/2,000 rpm
Max. torque	55 kg-m/1,400 rpm
Fuel tank	250 liters

Lower Machinery

LOWER FRAME: All welded robust rolled steel, box construction.

SIDE FRAMES: All welded robust rolled steel. Retraction is available during operation in cab.

ROLLERS: Heat treated, mounted on bushings with floating seals requiring no further lubrication.

Bottom – 9 pcs. per side frame.

Top – 3 pcs. per side frame.

DRIVE SPROCKETS: Heat treated, involute splined to drive shaft mounted on antifriction bearings; with footing.

IDLERS: Heat treated, mounted on bushings with floating seals requiring no further lubrication.

TRACKS: Heat treated, self cleaning, two lug type, multiple hinged shoes, 58 pcs. per side frame.

Shoe width – 762 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 – 4-speed range

	Pump control "OFF" (ordinary)	Pump control "ON"
Low	1.0 km/h	0.2 km/h
High	2.0 km/h	0.4 km/h

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-118RH-3 CRANE CAPACITIES: (With crane boom)

(in metric ton)

Working radius (m)	Boom length (m)													Working radius (m)	
	12.20	15.25	18.30	21.35	24.40	27.45	30.50	33.55	36.60	39.65	42.70	45.75	48.80		51.85
3.7	50.0														3.7
4.0	43.7	43.5													4.0
4.5	36.2	36.2	36.1												4.5
5.0	30.5	30.4	30.3	30.2											5.0
5.5	26.2	26.2	26.1	26.0	25.9										5.5
6.0	23.1	23.0	22.9	22.8	22.7	22.6									6.0
7.0	18.4	18.3	18.2	18.1	18.0	18.0	17.9	17.8							7.0
8.0	15.3	15.2	15.1	15.0	15.0	14.9	14.8	14.8	14.7	14.6					8.0
9.0	13.1	13.0	12.9	12.8	12.7	12.6	12.6	12.5	12.5	12.4	12.3				9.0
10.0	11.4	11.3	11.2	11.1	11.1	11.0	10.9	10.8	10.8	10.3	10.6	10.5	10.5		10.0
12.0	9.0	8.9	8.8	8.7	8.7	8.6	8.5	8.4	8.4	8.3	8.2	8.1	8.1	8.0	12.0
14.0		7.3	7.2	7.1	7.0	6.9	6.9	6.8	6.7	6.6	6.6	6.5	6.4	6.3	14.0
16.0		7.0	6.1	6.0	5.9	5.8	5.7	5.6	5.6	5.5	5.4	5.3	5.3	5.2	16.0
18.0		5.7	5.2	5.1	5.0	5.0	4.9	4.8	4.7	4.6	4.6	4.5	4.4	4.3	18.0
20.0			4.4	4.3	4.2	4.2	4.1	4.0	3.9	3.8	3.7	3.7	3.6	3.6	20.0
22.0				3.8	3.7	3.6	3.5	3.5	3.4	3.3	3.2	3.2	3.1	3.1	22.0
24.0				3.7	3.6	3.3	3.2	3.1	3.0	2.9	2.9	2.8	2.7	2.6	24.0
26.0				3.0	2.8	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.2	2.2	26.0
28.0					2.5	2.4	2.3	2.2	2.1	2.0	1.9	1.8	1.8	1.8	28.0
30.0						2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.5	1.5	30.0
32.0						2.0	1.9	1.7	1.6	1.5	1.4	1.3	1.2	1.2	32.0
34.0						1.6	1.4	1.3	1.2	1.1	1.1	1.1	1.1	1.1	34.0

(ECA0040B)

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	50	14	4.5
Weight of hook block (t)	0.75 t	0.20 t	0.12 t

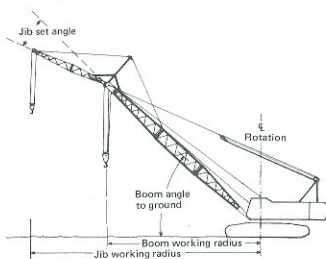
2. When operating off the main boom peak sheaves with jib on boom the following deductions in machine lifting capacities must be made.

Jib length (m)	6.10	9.15	12.20	15.25
Weight to be deducted (t)	0.75	0.85	1.00	1.10

LS-118RH-3 JIB CAPACITIES:

(in metric tons)

Jib length (m)	Jib set angle	Max. jib Capacities
6.10	0°	4.5
	15°	4.5
	30°	3.6
9.15	0°	4.5
	15°	3.6
	30°	2.8
12.20	0°	3.6
	15°	2.8
	30°	1.8
15.25	0°	2.3
	15°	1.8
	30°	—

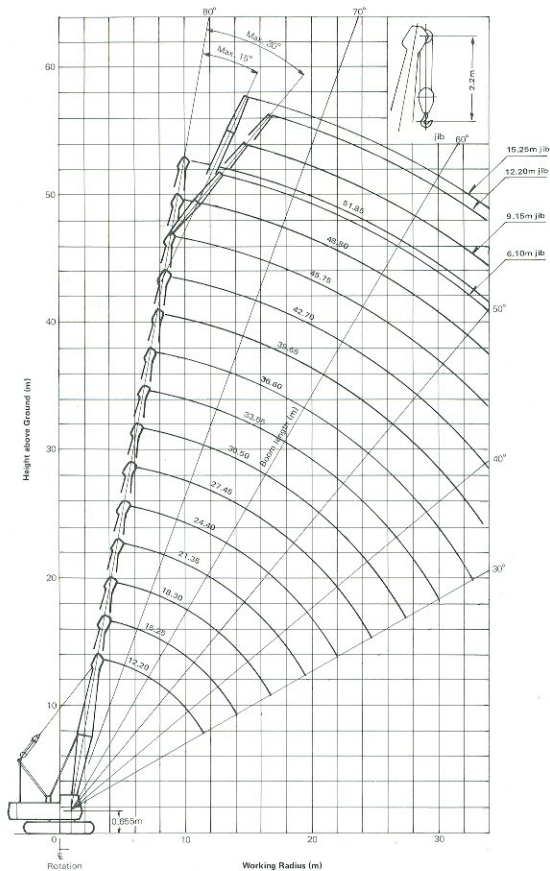


Notes:

- 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.
- Jib working radius does not exceed the working radius of the main boom which fits the jib.
- Deductions from the jib capacities must be made for weight of jib hook block.
- Available boom length to attach the jib is from 24.40m to 45.75m. The maximum jib length is 12.2m.
- The jib set angle to boom must not exceed 30°.



LS-118RH-3 CRANE WORKING RANGES:





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, 12.2 basic length; 6.1m base and 6.1m top section; 1.2m deep and 1.27m wide at connections.
Boom point machinery	Five head sheaves mounted on antifriction bearings.
Boom extensions	Available in 3.05m and 6.1m, lengths with pendants. Maximum boom length 51.85m.
Jib	Two-piece; 6.1m basic length with 3.05m long base and top sections, available in 3.05m jib extension. Maximum jib length 15.25m.
Boom plus jib length	42.70m + 15.25m 45.75m + 12.20m

HOOK BLOCK:

50 t, five sheaves	Standard
14 t, one sheave	Optional extra
4.5 t, no sheave	Standard for jib

HIGH GANTRY: Retractable high gantry.

LINE PULL AND LINE SPEED:

Drums	Root dia.	Type	Line pull	Line speed (Hoisting/Lowering)		Cable dia.
				Pump control "OFF" (Ordinary)	Pump control "ON"	
Main hoist	380mm	Parallel grooved	12.8 ton	High 70 m/min Low 35 m/min	High 16 m/min Low 8 m/min	20mm
Aux. hoist	380mm	Parallel grooved	12.8 ton	High 70 m/min Low 35 m/min	High 16 m/min Low 8 m/min	20mm
3rd drum (Optional extra)	380mm	Parallel grooved	12.8 ton	High 70 m/min Low 35 m/min	High 16 m/min Low 8 m/min	20mm
Boom hoist	270mm	Parallel grooved		High 50 m/min Low 12 m/min	N.A.	16mm

Hoisting line speed varies with load.

HOIST REEVING:

No. of parts of line	Main hoist										Aux. hoist
	10	9	8	7	6	5	4	3	2	1	1
Max. load (t)	50.0	45.6	40.9	36.1	31.3	26.3	21.3	16.1	10.8	5.4	4.5

WORKING WEIGHT AND GROUND PRESSURE:

Shoe width	Weight	Pressure
762mm	46.3 t	0.60 kg/cm ²

With basic boom and counterweight A and B.

Weight without counterweight and front attachment: approx. 29 t.

COUNTERWEIGHT: A (6.1 t), B (7.1 t)
Total ... 13.2 t

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

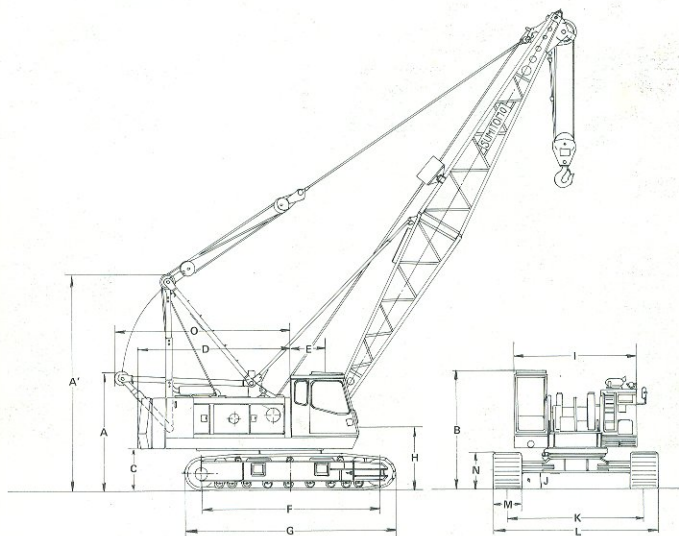
GRADEABILITY: 40% (22°)

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**LS-118RH-3
DIMENSIONS**



A:	Height, over low gantry unit.	3.132m
A':	Height over high gantry unit.	5.680m
B:	Height of cab	3.090m
C:	Counterweight ground clearance	1.085m
D:	Radius of rear end	4.149m
E:	Center of rotation to boom foot pin	0.950m
F:	Center to center distance of tumbler	4.740m
G:	Overall length of crawler	5.559m
H:	Height from ground to boom foot pin	1.855m
I:	Overall width of house	3.180m
J:	Ground clearance	0.404m
K:	Center to center distance of crawler	3.588m
	retracted	2.538m
L:	Overall width of crawler	4.350m
	retracted	3.300m
M:	Shoe width	0.762m
N:	Height of shoe	0.956m
O:	Tail swing radius at low gantry	4.663m