



Upper Machinery

UPPER FRAME: All-welded, stress relieved, precision machined unit with integral machinery side housings.

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 the lagging adapter 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 --- Dual drum and worm gear assembly; power raised and lowered through spur gear driven 2-shoe 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 and power hydraulically released. Mounted on deck of upper frame.

Lock --- Mechanically controlled double pawl.

Speed --- 3.1 r.p.m.

Independent swing/travel --- Standard.

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

COUNTERWEIGHT: Removable, held in place by "T-bolt"; Counterweight is power raised with rear drum hoist clutch and lowered against rear drum brake.

CATWALKS AND RAILINGS: Standard.

POWER UNITS:

	Standard
Make & Model	GM8V-71
Type	Water-cooled, 2-cycle, diesel engine
No. of cylinders	8
Bore & Stroke	108 x 125 mm
Displacement	9,308 cc
Rated output	256 PS/ 1,960 r.p.m.
Maximum torque	106.5 kg-m/ 1,200 r.p.m.
Fuel tank	378 liters
Power take-off	Torque converter
2-speed transmission	Standard

Lower Machinery

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

TRACK ROLLERS:

Bottom --- Heat treated, mounted on bushings, fourteen per side frame.

Top --- Two track carrier rollers per side frame, mounted on bushings.

TRACKS: Heat treated, self-cleaning, multiple hinged shoes; 52 per side frame.

SHOE WIDTH: 1,118 mm.

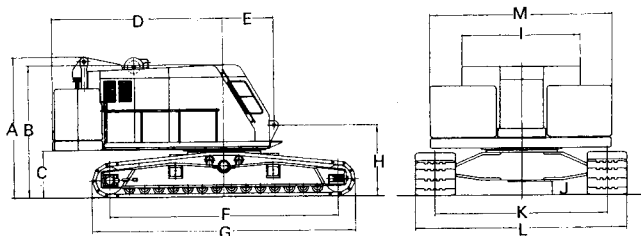
POWER HYDRAULIC STEER/TRAVEL: For travel or steer, jaw clutches of traction shaft are power hydraulically engaged with jaws on brake drums, automatically releasing spring-applied steer/digging brakes. Brakes are external contracting band type.

TRAVEL SPEED: 1.6 km/h.

SIDE FRAMES: Removable from lower frame, leaving track drive chains connected.

General Dimensions

- A: Height, over boomhoist unit 4.060 m
- B: Height of cab 3.790 m
- C: Counterweight ground clearance
(with counterweight "A" + "B") 1.295 m
- D: Radius of rear end
(with counterweight "A" + "B") 4.826 m
- E: Center of rotation to boom foot pin 1.422 m
- F: Center to center distance of tumbler 6.417 m
- G: Overall length of crawler 7.404 m
- H: Height from ground to boom foot pin 1.994 m
- I: Overall width of cab 3.357 m
- J: Ground clearance 0.425 m
- K: Center to center distance of crawler 4.877 m
- L: Overall width of crawler
(with 1,118 mm shoe) 5.995 m
- M: Overall width of upper machine 5.107 m





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, **18.3 m** basic length; 9.15 m base and 9.15 m top section; 1.58 m deep and 1.78 m wide at connections.
- Boom point machinery Six head sheaves mounted on anti-friction bearings.
- Boom extensions Available in 3.05 m, 6.1 m and 9.15 m lengths with pendants. Maximum boom length **70.1 m**.
- Jib Two-piece; 9.15 m basic length with 4.55 m long base and top sections, available in 3.05 m and 4.55 m jib extensions.
- Boom plus jib length 70.1 m + 9.15 m
70.1 m + 15.25 m
70.1 m + 21.35 m (max.)

HOOK BLOCK:

- 136 t, six sheaves Standard.
- 35t hook is recommended for machine with booms over 57.9 m Optional extra.
- 65 t Optional extra.
- 9t Standard for jib.

BOOM LIVE MAST: Mounts on front of upper frame; mast can be used as a short boom and for machine dismantling. Maximum 21 t, hook block is optional extra.

BOOM HOIST ASSEMBLY: With power lowering clutch.

- 22-part boom hoist reeving Standard.
- Boom hoist line speed (raising) @19.3 m/min (high).
@5.8 m/min (low).
- Boom hoist line speed (lowering) @22.3 m/min (high).
@6.7 m/min (low).

LINE PULL AND LINE SPEED:

Drums	Root dia.	Type	Line pull	Line speed	Cable dia.
Front (aux. hoist)	486 mm	Smooth	23,970 kg	@36.3 m/min (high) @10.9 m/min (low)	25 mm
Rear (main hoist)	486 mm	Smooth	23,030 kg	@36.6 m/min (high) @11.0 m/min (low)	30 mm

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

HOIST REEVING:

No. of parts of line	Main hoist												Aux. hoist
	12	11	10	9	8	7	6	5	4	3	2	1	1
Max. load (t)	136.0	133.8	122.7	111.5	100.0	87.5	75.0	62.5	50.0	37.5	25.0	12.5	9.0

WORKING WEIGHT AND GROUND PRESSURE:

Shoe width	Weight	Pressure
1,118 mm	129.5 t	0.86 kg/cm ²

With basic boom and counterweight "A" + "B".

COUNTERWEIGHT: "A" (9,300 kg) + "B" (33,700 kg).

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

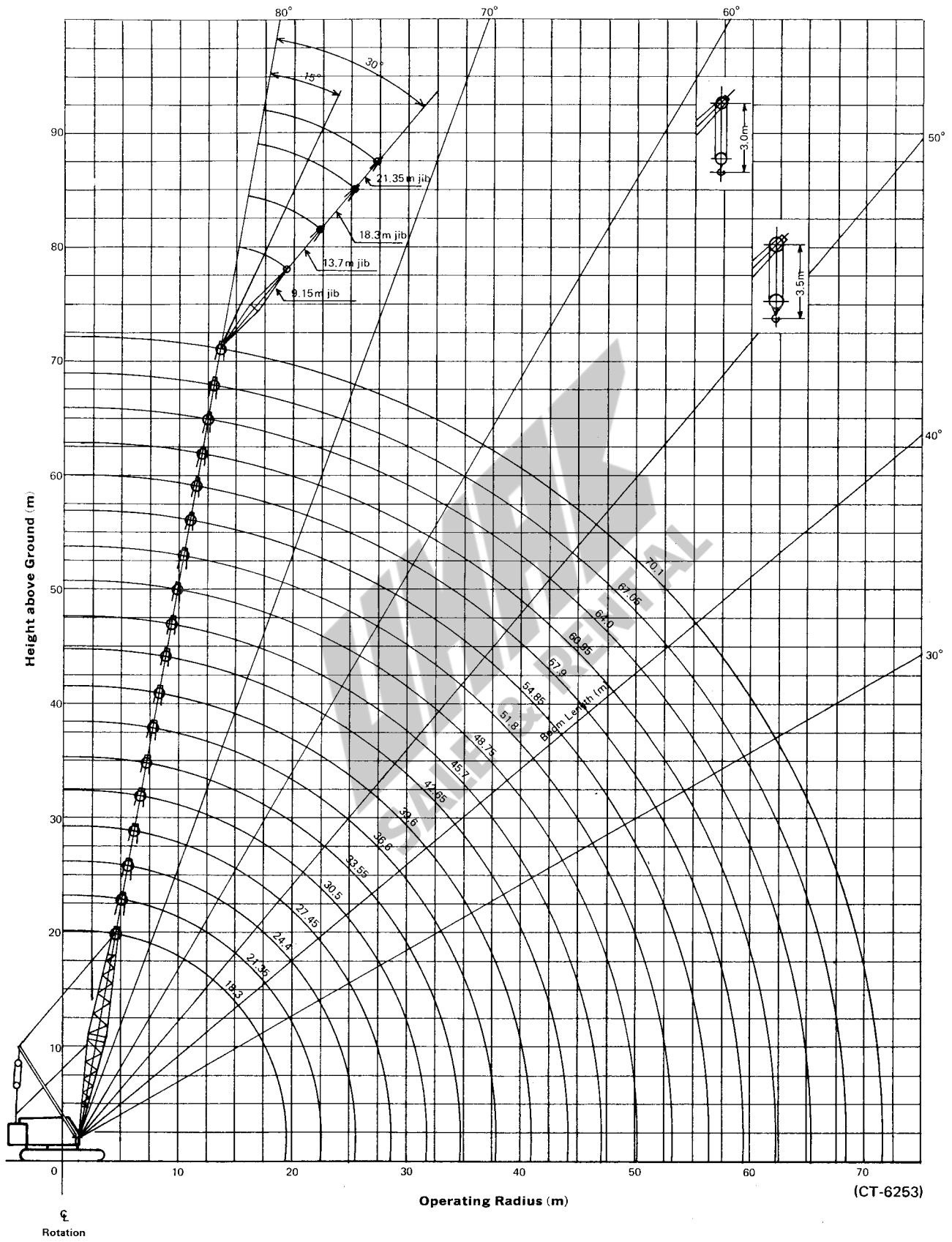
GRADEABILITY: 30% (17°).

POWER LOAD LOWERING CLUTCH:

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



LS-518J CRANE WORKING RANGES:



LS-518J CRANE CAPACITIES :

Operating radius (m)	Boom length (m)											
	18.3	21.35	24.4	27.45	30.5	33.55	36.6	39.6	42.65	45.7	48.75	
4.6	136.0	129.0/4.9										
5.0	130.0	127.0	115.0/5.5									
6.0	102.5	102.5	102.5	102.5								
7.0	79.5	79.5	79.5	79.5	69.0/7.6	69.0/7.6	69.0/7.6					
8.0	64.0	64.0	64.0	64.0	64.0	64.0	64.0					
9.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0	52.3/9.1	52.3/9.1	52.2/9.1		
10.0	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5	46.5	41.8/10.7	
12.0	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.4	36.3
14.0	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.5	29.4	29.3	29.2
16.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.9	24.8	24.7	24.6	24.5
18.0	21.5	21.5	21.5	21.5	21.5	21.4	21.3	21.2	21.1	21.0	20.9	
20.0		18.5	18.5	18.5	18.5	18.4	18.3	18.2	18.1	18.0	17.9	
22.0		17.3/21.0	16.5	16.5	16.4	16.3	16.2	16.1	15.9	15.3	15.7	
24.0			14.5	14.5	14.4	14.3	14.2	14.1	14.0	13.9	13.8	
26.0				12.9	12.8	12.7	12.6	12.5	12.4	12.3	12.2	
28.0				12.3/27.0	11.7	11.6	11.5	11.4	11.3	11.2	11.1	
30.0					10.6	10.5	10.4	10.3	10.2	10.1	10.0	
32.0						9.5	9.4	9.3	9.2	9.1	9.0	
34.0							8.5	8.4	8.3	8.2	8.1	
36.0								7.7	7.6	7.5	7.4	
38.0								7.0	6.9	6.8	6.7	
40.0									6.3	6.2	6.1	
42.0										5.7	5.6	
44.0											5.1	
46.0												
48.0												
50.0												
52.0												
54.0												
56.0												
58.0												
60.0												
62.0												

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.

Kind of hook block	136t	65t	35t	9t
Weight of hook block (t)	2.0	0.79	0.8	0.26

- 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)	9.15	12.2	13.7	15.25	16.75	18.3	21.35
Weight to be deducted (t)	1.0	1.15	1.22	1.3	1.37	1.45	1.6