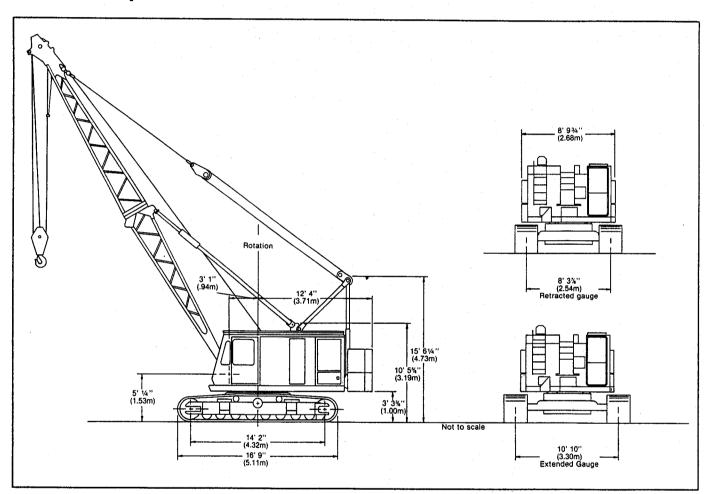


# LS-108C Specifications

45 ton (40 metric ton)

# Wire rope crawler crane/excavator



General dimensions	Feet	meters
Basic angle boom length,	40'0"	12.19
Overall width side frames extended		
-30" (0.76 m) track shoes	13' 3-7/8"	4.06
-36" (0.91 m) track shoes	13′ 9-7/8″	4.22
Overall width side frames retracted		-
-30" (0.76 m) track shoes	10' 10"	3.30
-36" (0.91 m) track shoes	11'4"	3.46
Minimum ground clearance	11-5/8"	0.29

General dimensions	Feet	meters
Ground clearance - ctwt. "A"	3′ 3-3/8″	1.0
Ground clearance - ctwt. "AB"	3′ 3-3/8″	1.0
Overall width of counterweight	9′ 10″	3.0
Tailswing of counterweight "A"	12'4"	3.76
Tailswing of counterweight "AB"	12'4"	3.76
Overall width less catwalks	8' 9-3/4"	2.68
Overall height for transport, gantry lowered	10′ 5-5/8″	3.19



# Machine working weights - approximate

implete basic machine with Isuzu 6SA1 diesel engine and friction clutch, turntable bearing, independent swing and travel, swing brake, front and	Track shoes			
rear drum laggings with necessary hoist lines, independent boomhoist with lowering clutch, 40' (12.19 m) angle boom but no bucket or	30" (0.76 m)	36" (0.91 m)		
hookblock.	pounds	pounds		
11, 680 pound counterweight "A" 21,160 pound counterweight "AB"	73,900 83,500	78,020 87,620		

### Ground contact area

Note; Determining ground bearing pressure - divide the total weight of machine as shown above by the respective ground contact area.

Track	shoes	Ground contact areas			
inches	meters	in <sup>2</sup>	cm <sup>2</sup>		
30	0.76	10,860	70,050		
36	0.91	13,050	84,220		

# Weight deductions for transporting – approximate

Deduct for the removal of the following components:	pounds
Counterweight "A" Counterweight "AB"	11,680 21,160
Basic 40' ( 34" ) angle boom: Tip: (includes head machinery) Base (includes backstops, bridle frame, boom pendants and necessary wire rope.) Catwalk	1,905 3,625 175
Side frames 30" track shoes 36" track shoes	19,530 23,650
Add for: Fairlead 10' extension and pendants 20' extension and pendants	600 780 1,325
Tagline winder (single drum)	325







# **LS-108C Performance Specifications**

Wire rope and rope drum data

Main load hoist wire rope length – using 3/4" (19 mm) diameter wire rope

	ļ						Boom l	engths						
Parts of	40' (1	2.19 m)	50*	(15.24 m)	60' (1	18.29 m)	70' (	21. <b>34</b> m)	80. (	24.38 m)	90' (2	27.43 m)	100' (30	).48 m)
line	ft.	meters	ft.	meters	ft.	meters	ft.	meters	ft.	meters	ft.	meters	ft.	meter
1	95	28.96	115	35.05	135	41.15	155	47.24	175	53.34	195	59.44	215	65.53
2	140	42.67	170	51.82	200	60.96	230	70.10	260	79.25	290	88.39	320	97.54
3	185	56.39	225	65.58	265	80.77	305	92.96	345	105,16	385	117.35	425	129.54
4	230	70.10	280	85.34	330	100.58	380	115.82	430	131.06	480	146.30	530	161.54
5	275	83.82	335	102.11	395	120.40	455	138.68	515	156.97	575	175.26	635	
6	320	97.54	390	118.87	460	140.21	530	161.54	600	182.88	670	204.22	740	193.5 225.5

# Dragline or clamshell wire rope lengths - using one part of line

		Boom Lengths							
Attachments		40′ (12.12 m)		50′ (1	5.24 m)	60' (18.29 m)			
	Function	Feet	meters	Feet	meters	Feet	meters		
Clamshell	Holding Closing	105 140	32.00 42.76	125 160	38.10 48.77	145 180	44.20 54.86		
Dragline	Hoist Inhaul	95 52	28.96 15.85	115 64	35.05 19.51	135 76	41.15 23.16		

### Drum wire rope capacities:

Front or rear drum -14-1/4" (0.36m wire root diameter grooved lagging, 3/4 (19 mm) wire rope				rd drum - 12 eter smoot (16 mm)	h lagging	, 5/8″	Boomhoist drum - 12" (0.30m) root diameter grooved lagging, 5/8" (16 mm) wire rope						
layer	Rope	per layer	Total v	vire rope	Rope	per layer	Total v	vire rope	Rope per layer		Total v	Total wire rope	
	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	Feet	meters	
1	74	22.7	74	22.7	74	22.6	74	22.6	38	11.6	38	11.6	
2	82	25.0	156	47.8	81	24.8	155	47.5	41	12.7	79	24.3	
3	89	27.3	246	75.1	88	27.1	244	74.6	45	13.9	124	38.2	
4	97	29.6	343	104.6	96	29.3	340	103.5	49	15.0	174	53.2	
5	104	31.8	447	136.5	103	31.6	444	135.5	53	16.2	227	69.4	
6	111	34.1	559	170.6	111	33.8	555	169.3	56	17.3	284	86.7	
7		1			118	36.1	673	205.4					



# **LS-108C Load Hoisting Performance**

allable line speed and line pull - based on ISUZU 6SA1 with friction clutch, at 1850 rpm full load speed.

Line pulls are not based on wire rope strength. See wire rope chart for maximum permissible single part of line working loads.

Rope Layer	1	41" Front o	r Rear Dru	m:		12" Thi	rd Drum	
	fpm	m/min	pounds	kilograms	fpm	m/min	pounds	kilograms
1	212	64.5	19,555	8870	204	62.3	18,740	8378
2	233	70.9	17,792	8066	225	68.5	16,803	7622
3	254	77.4	16,303	7395	245	74.7	15,412	6991
4	275	83.8	15.051	6827	265	80.9	14,233	6456
5	296	90.2	13,977	6340	285	87.0	13,221	5997
6	317	96.7	13,749	5919	306	93.2	12,343	5599
7					326	99.4	11,576	5251

### Wire rope: size, type and working strength

inches 5/8	mm		pounds	kilograms
5/8				1
3/4	16	W	11,700	5307
	19	N	16,800	7620
3/4	19	M	16,800	7620
3/4	19		16,800	7620
3/4	19	N	16,800	7620
3/4	19	N	16,800	7620
5/8	16	N	11,700	5307
1-1/8	29	N	31,700	16829
	3/4	3/4 19	3/4 19 M	3/4 19 M 16,800
	3/4	3/4 19	3/4 19 N	3/4 19 N 16,800
	3/4	3/4 19	3/4 19 N	3/4 19 N 16,800
	3/4	3/4 19	3/4 19 N	3/4 19 N 16,800
	5/8	5/8 16	5/8 16 N	5/8 16 N 11,700

### Wire rope: types available

- Type "M" 6 X 25 (6 X 19 class), filler wire, extra improved plow steel, preformed, independent wire rope center, right lay, lang lay.
- Type "N" 6. X 25 (6 X 19 class), filler wire, extra improved plow steel, preformed, independent wire rope center, right lay, regular lay.
- Type "W" 6. X 26 (6 X 19 class), extra improved plow steel, preformed, independent wire rope center, right lay, alternate lay.





# **General Specifications**

# **Crawler lower**

Lower frame	Tr
All welded precision machined; line bored 10' 10" extended, 8'3-7/8" retracted gauge X 16'9" length.	Eight per sid lifetime lubri
Turntable bearing	Т
Outer race with integral external swing gear bolted to lower frame. Inner race bolted to upper frame.	Two tractor t each crawler lifetime lubri
Crawler side frames	Tra
Hydraulically extended / retracted and removable without disconnecting track drive chains.	Heat treated, track shoes joi pins: 53 shoes shoes 30" wide
Track drive sprockets and idler wheels	Track chain ad adjusted by po sprocket with j adjusted with
Cast steel, heat treated; mounted on bronze brushings. Sealed for lifetime lubrication.	attached to tra
Revolving upperstruc	ture

7	Track	rollers	

le. Tractor type, oil filled for ication.

### rack carrier rollers

type rollers mounted on top of side frame. Oil filled for ication.

### acks

self cleaning, multiple hinged ined by one piece full floating per side frame. Standard e; optional shoes 36" wide.

ijustment - Track drive chain ositioning axle of chain drive jack screw and shims. Track threaded adjusting bolt ack idler (wheel) axle.

### Independent travel

Travel independent of swing; permits simultaneous swing and travel with separate set of shafts and clutches. Horizontal traction shaft powered through bevel gear drive enclosed in oil. Travel / steer jaw clutch splined to shaft; all shaft components mounted within lower frame.

Travel speed - 1.18 mph (1.9 km/h)

Gradeability - 30%

Steering - Power hydraulic. Travel/steer jaw clutches hydraulically engaged, spring released. Spring applied, hydraulically released travel/steer/digging/parking external contracting band brakes simultaneously released by interconnecting mechanical linkage to jaw clutches. Brakes automatically set when steer lever is in neutral. Two 18" diameter by 4" wide brake bands. Steer brakes also serve as parking/digging brakes.

**Frame** All-welded, precision machined unit; machinery side housing bolted to upper frame.

Fuel tank

66 gallon (250 L) capacity

Engine Specifications	Isuzu 6SA1 with friction clutch	
Number of cylinders  Bore and stroke - inch - (mm)  Piston displacement	6 4 - 17/32 X 5 - 5/16 (115 X 135)	
- cubic inches - (cm²)	513 (8413)	
Engine rpm at full load speed	1850	
Net engine horsepower at full load speed, (H P)	120 (89520W)	
Peak torque - foot pounds - (joule) Peak torque - rpm	376 510 1200	
Electrical system Batteries Type of clutch or take-off	24 volt 2 - 12 volt Single plate, dry	

### Load lowering clutches - Optional; wer train Load hoisting and available on front and rear main **lowering** operating drums. Clutch drums 18" diameter, 4 1 " face width. Swept area is Independent load hoisting and lowering. **Transmission** 254 square inches. Standard - hoisting controlled by Speedo-Matic® power hydraulic two-shoe clutch Quadruple roller chain enclosed in oiland lowering controlled by foot tight chain case and running in oil. controlled brake. Optional - load **Drum brakes** lowering controlled by Speed-o-Matic\* power hydraulic two-shoe clutch in External contracting band type; brake addition to foot controlled brake. drum splined to shaft. Mechanically foot Machinery gear train pedal operated; each brake foot pedal equipped with latch to permit locking "Full function" design: two directional brake in applied position. power available to all operating shafts; Load hoist drums Front and rear main drums - Brake drum shafts mounted on anti-friction bearings 27" diameter, 4" face width. Swept area is in precision bored machinery side Front and rear main operating drums, 339 square inches. housings. Load hoist, swing and boomtwo piece, removable grooved laggings hoist functions completely independent bolted to brake drums which are splined Optional third drum - Brake drum 22" of one another. to drum shaft. Lift crane, dragline and diameter 3" face width. Swept area is 207 clamshell laggings are grooved, 14-1/4" square inches. root diameter. Principal operating Third operating drum - Optional mounts **Drum rotation indicators** forward of front main operating drum. **functions** Two piece 12" root diameter smooth drum lagging bolted to brake drum. Optional for front and rear drums. Brake drum splined to shaft. Control system Audible-type indicators. **Note: Third drum limitations** For dragline operation third drum shaft Speed-o-Matic® power hydraulic control cannot be mounted. For crane / clamshell system, a variable pressure system Swing system operations, quantity of front drum wire requiring no bleeding. Operating rope must be limited in some cases to pressure transmitted to all two-shoe Spur gear driven, single bevel gears avoid interference between front drum clutch cylinders, and other hydraulic (enclosed and running in oil) on rope and third drum brake enclosure. clutches as required. System includes a horizontal swing shaft. Swing pinion constant displacement, engine driven, splined to vertical swing shaft, meshes vane type hydraulic pump to provide with external teeth of swing gear. constant flow of oil; accumulator to maintain system operating pressure, unloader valve to control pressure in **Drum clutches** accumulator, relief valve to limit maximum pressure build-up in system, Speed-o-Matic® power hydraulic two-shoe Swing clutches full-flow 40 micron disposable filter and clutches; internal expanding, lined shoes. variable control valves. Clutch spiders are splined to shafts; clutch Clutch drums 20" diameter 5" face width. drums are bolted to drum spur gears and Swept area is 314 sq. inches. mounted on shafts on anti-friction Independent travel Swing brake - External contracting band; hearings.

drum18" diameter, 43" face width. Swept

Load hoist clutches - Front and rear main

drums - clutch drums 18" diameter, 4 1"

face width. Swept area is 254 square

Optional third operating drum - clutch

area is 254 square inches.

Travel independent of all other functions

hes – One clutch each for forward

standard; spur gear driven single speed

and reverse. Clutch drum 18" diameter,

41" wide. Swept area is 254 sq. in..

spring applied, hydraulically released by

operator controlled lever. Brake drum

Swing lock - Mechanically controlled

Maximum swing speed - 4.3 rpm.

14" diameter, 1\(\frac{1}{2}\)" face width.

drop pin.





GENERAL INFORMATION ONLY		
Boomhoist / lowering system	Operator's cab	Counterweight
Independent, spur gear driven. Precision control boom hoisting and lowering through power hydraulic two-shoe clutches.	Modular type cab with hinged door and safety glass panels. Standard equipment includes dry chemical fire extinguisher, bubble-type level, electric windshield wiper, cab heater, defroster fan and sound reduction material.	Removable, held in position by hooks.  Power raising and lowering by standard retractable high gantry - controlled by boom hoist or boom lowering system.  "A" (11,680 lbs.) used for dragline,
Boomhoist drum		clamshell and magnet service.
Single grooved lagging splined to shaft. 12" root diameter.	Machinery cab	"AB" (21,160 lbs.) used for lifting crane service only.
Boomhoist drum locking pawl	Hinged doors on both sides for machinery access. Equipped with roof-top access ladder, electric warning horn and machinery guards.	
Operator controlled spring applied and mechanically released.	Catwalks	Booms
 Boomhoist / lowering clutches	Standard for operator's side, optional on right side of cab. includes hand grab rails.	34" (0.86m) angle boom
One each for boom hoisting and boom lowering; clutch drum 18" diameter, 4\frace width.	Hinged to permit folding to reduce overall width.	Two piece 40'basic length 34" wide, 34" deep at center line of connections. Main chord angles high strength low alloy steel
Boomhoist brake	Gantry	base section 3½" X 3½" X 3/8" top section and extensions 3½ X 3½ X 5/16". Maximum boom length 100'.
External contracting band brake; automatic, spring applied, hydraulically released.  Boomhoist limiting device - When properl adjusted, device limits booming up beyone		Boom base section – 20' long; boom feet 2-1" thick on 38-5/8" centers.
predetermined operating radius.	Gantry bail	<b>Boom extensions</b> – Available in 10' and 20 lengths with appropriate length pendants
Electrical system	Pinned to retractable high gantry. Five sheaves are provided for 12-part boomhoist	Boom connections – pin connections.
24 volt negative ground system. Includes: two 12-volt batteries. Standard battery lighting system includes one interior light	wire rope reeving. Sheaves mounted on anti-friction bearings, sealed for lifetime lubrication.	Boom top section – Open throat 20' long.
and two adjustable floodlights on front of R.H. machinery cab roof and in front of L.H platform. <i>Optional</i> : one adjustable floodlight mounted on boom.		Boompoint machinery – 18" root diameter head sheaves mounted on anti-friction bearings. Three for lift crane, two for
Note: Three flood lights are the maximum quantity recommended.		dragline or clamshell. <i>Optional:</i> single wide flared sheave for dragline.







### **Boom stops**

Dual, tubular telescopic type with spring loaded bumper ends.

Boomhoist bridle

Serves as connection between boom pendants and boomhoist reeving. Equipped with 9½" root diameter sheaves mounted on anti-friction bearings, sealed for lifetime lubrication. 6 sheaves required for 12-part boomhoist reeving.

Boompoint sheave guards - Standard: rigid, round steel rod bolted over top of sheaves and rigid round rods between sheaves. Optional: roller-type guards, mounted on anti-friction bearings, mounted on brackets beneath sheaves.

**Note:** Roller type guards do not permit use of center sheave unless center guard is removed.

Deflector rollers – to deflect main drum load hoist line over top side of boom; also required when third drum load hoist line passes over top side of boom. Rollers mounted on anti-friction bearings.

**Basic boom** – One roller standard on top section.

**Recommended:** Optional rollers: one per boom extension.

### **Auxiliary equipment**

Boom angle indicator

Pendulum type, mounted on operator's side of boom base section.

Fairlead Fairlead

Optional: full revolving type with barrel, sheaves and guide rollers mounted on antifriction bearings.

Rud-o-Matic<sup>®</sup> model 648; spring wound, drum-type.



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

Link-Belt Construction Equipment Company Lexington, Kentucky

arrangan baharah sa ahalarah barangan baharah barangan baharah baharah baharah baharah baharah baharah baharah