Dragline
Grabbing crane

30-RB

series two

HEAVY-DUTY LIFTING CRANE

30 tons 30,48 tonnes

EXPORT RATINGS

AIR CONTROL

Lifting crane

Booms: 40 ft 12,19 m to 130 ft 39,62 m

Extension jibs: 15 ft 4,57 m and 30 ft 9,14 m

Power-controlled load lowering

Convertible to dragline and grabbing crane up to 2 cubic yards 1530 litres capacity

Booms to 70 ft 21,34 m

Maximum load:
Dragline 10,000 lb 4535 kg
Grabbing crane 12,300 lb 5580 kg

Power units

Make and model: Ruston 5YEN Type: Diesel Type of drive: Direct
Cylinders, bore x stroke: Five, 5″ 127 mm x 5⅞″ 149 mm Rating for excavator service: 98 bhp at 1500 rpm
Fuel tank capacity: 58 gallons 264 litres Starting system: 24-volt electric

Alternatives include air-cooled engine and torque-converter drive
A 60 hp electric motor of suitable characteristics is available as a further alternative for dragline or grabbing crane

Laggings and ropes

Boom suspension

Mast-and-pendant suspension for all boom lengths
12-part tackle between A-frame and mast for lifting crane service. 8-part tackle between A-frame and mast for bucket service.

Tackle rope	18 mm dia.
Multi-piece pendants	28 mm dia.

Lifting crane

Main hoist—front drum

Hoist drum, grooved	17½″ 444 mm dia.
Hoist rope	20 mm dia.

Auxiliary hoist—rear drum

Hoist drum, grooved	18½″ 470 mm dia.
Hoist rope	19 mm dia.
Boom-point sheaves (3)	18″ 457 mm p. dia.

Dragline

Hoist drum, grooved	18½″ 470 mm dia.
Hoist rope, 1-part	19 mm dia.
Boom-point sheave (1)	18″ 457 mm p. dia.
Drag drum, grooved	17½″ 444 mm p. dia.
Drag rope, 1-part	22 mm dia.

Grabbing crane

Closing drum, grooved	17½″ 444 mm dia.
Closing rope, 1-part	20 mm dia.
Holding drum, grooved	18½″ 470 mm dia.
Holding rope, 1-part	19 mm dia.
Boom-point sheaves (2)	18″ 457 mm p. dia.

Rope pulls and speeds

Drum lagging	Diameter		1-part line pull		1-part line speed		2-part line pull		2-part line speed		3-part line pull		3-part line speed	
			lb	kg	fpm	mpm	lb	kg	fpm	mpm	lb	kg	fpm	mpm
Front drumshaft	17½″	444 mm	17,285	7830	156	47,50	32,850	14.900	78	23,80	46,800	21.200	52	15,85
Rear drumshaft	18½″	470 mm	16,673	7550	166	50,60	31,650	14.340	83	25,30	45,200	20.450	55	16,76
	22″	559 mm	14,020	6350	198	60,40	26,650	12.080	99	30,20	38,050	17.275	66	20,15

Torque converter drive:
When torque converter is stalled, line pulls are approximately twice those quoted above
Swing speed approximately 4 rpm Propel speed 88 fpm 26,8 m

Approximate weights

With standard diesel engine, long widespread mounting, 40′ 12,19 m boom and appropriate counterweight

	Lifting crane			Dragline			Grabbing crane		
	lb	tons	kg	lb	tons	kg	lb	tons	kg
Working	93,100	41.56	42.230	87,500	39.06	39.690	87,200	38.93	39.555
Domestic shipping	92,800	41.43	42.095	87,200	38.93	39.555	86,900	38.80	39.415
Packed for export	96,300	42.99	43.680	90,700	40.49	41.140	90,400	40.36	41.005

The above weights will vary several hundred pounds for different combinations
Buckets included in weights for dragline and grabbing crane

Counterweight included	Lifting crane		Dragline, grabbing crane or magnet crane	
5YEN diesel power unit	Amount	Location	Amount	Location
Power-unit compensating counterweight	500 lb 225 kg	One 500 lb weight beneath rear end	500 lb 225 kg	One 500 lb weight beneath rear end
Stability counterweight	21,000 lb 9525 kg	One 8000 lb and one 13,000 lb weight outside rear end	13,000 lb 5895 kg	One 13,000 lb weight outside rear end
Total	21,500 lb 9750 kg		13,500 lb 6120 kg	

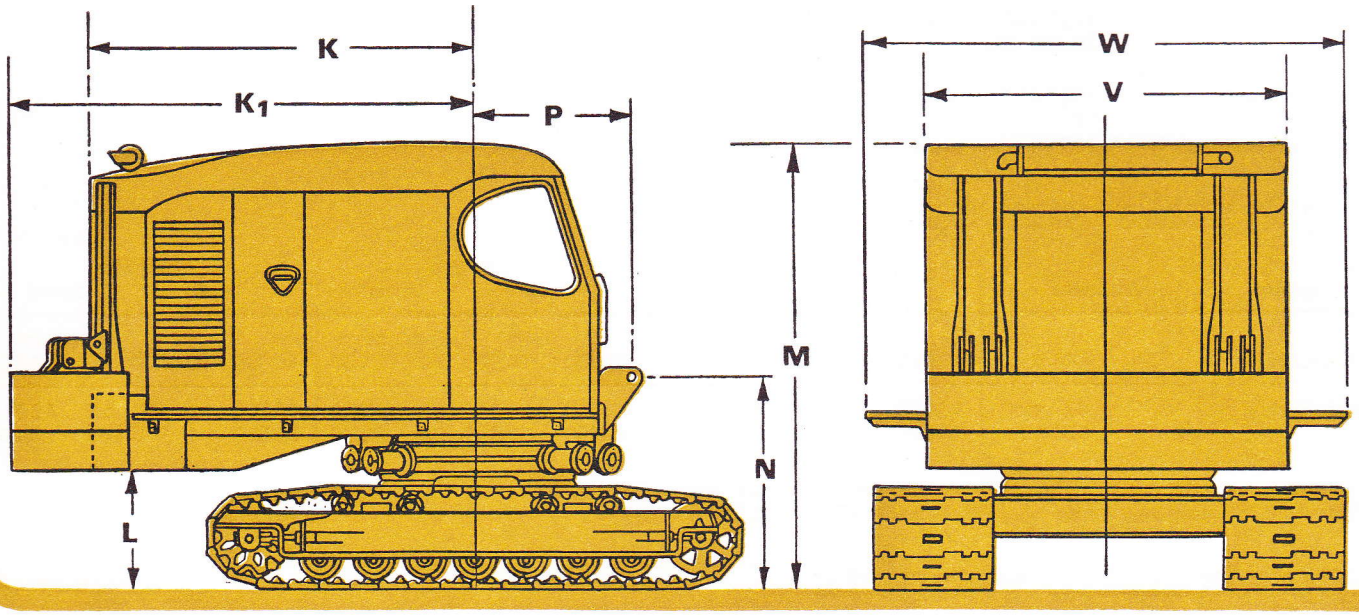
When air-cooled engine is fitted, in place of standard 5YEN, an extra 500 lb 225 kg weight is required beneath rear end.
When single electric motor is fitted (dragline or grabbing crane), in place of standard 5YEN, two extra 500 lb 225 kg weights are required beneath rear end.

Machine counterweight should always be adjusted to the correct figure, as stated above, for each front-end equipment.
In particular, any counterweight in excess of the amount quoted should be removed.

Crawler mounting

Mounting	Width of track links	Overall width over links	Centres of driving sprocket and take-up tumbler	Centre to centre of crawlers	Overall length approx.	Bearing area approx.	Clearance under axles	Clearance under housing	Height of crawler belts
Long, wide-spread frame	36″ 914 mm	11′ 10″ 3,61 m	12′ 1¼″ 3,69 m	8′ 10″ 2,69 m	14′ 8⅞″ 4,49 m	78.00 sq. ft. 7,25 sq. m	1′ 3½″ 394 mm	1′ 2″ 356 mm	2′ 8⅞″ 835 mm

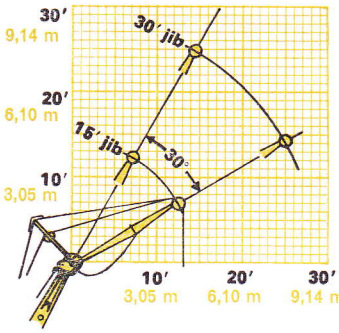
Clearance dimensions

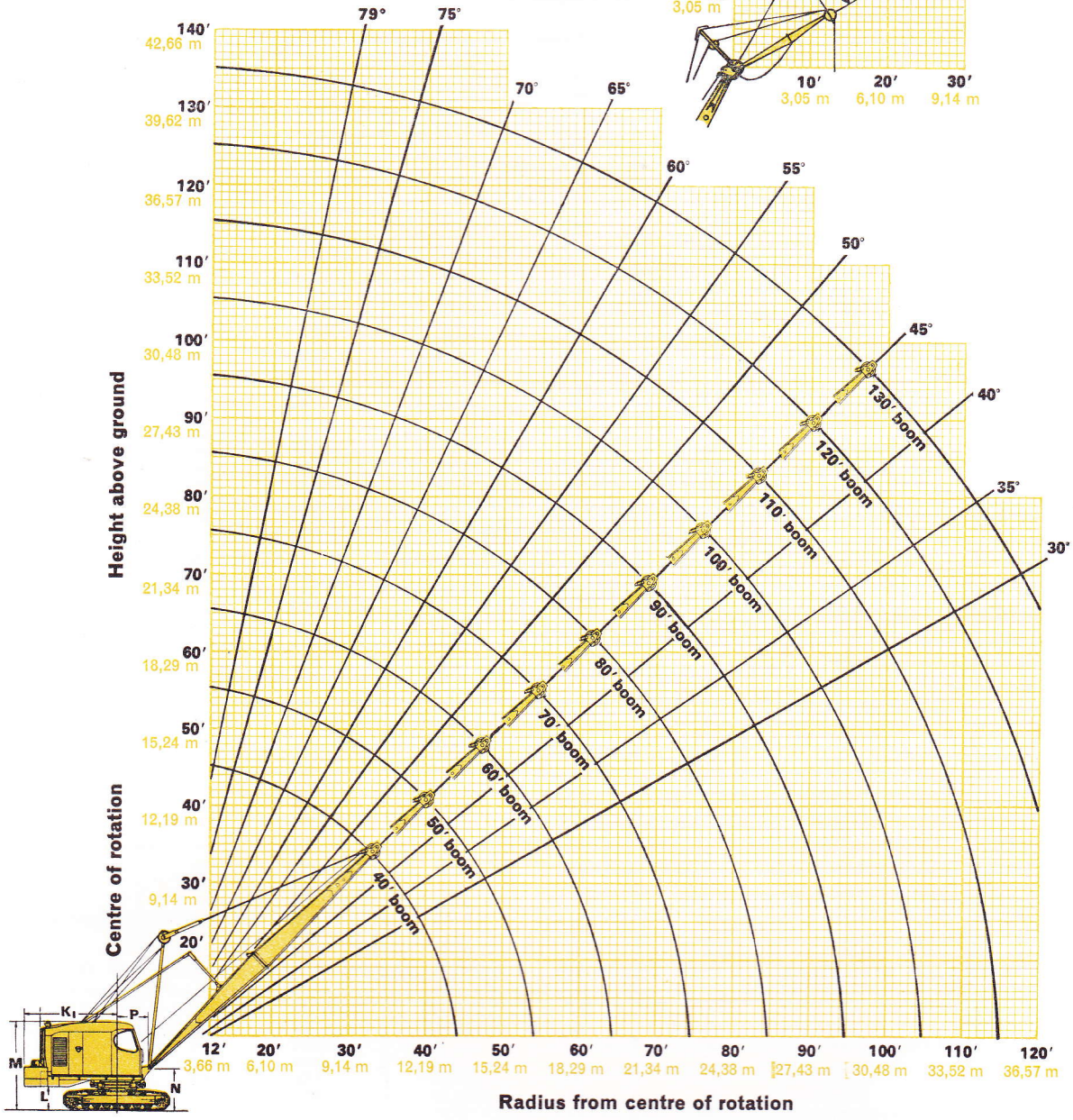


K	Clearance radius of revolving frame	10′ 0″	3,05 m
K_1	Clearance radius over external rear counterweight	12′ 3″	3,73 m
L	Clearance under frame to ground level	3′ 1¼″	946 mm
M	Clearance height of cab	11′ 1¼″	3,38 m
N	Height of boom-foot pin above ground level	5′ 4¼″	1,63 m
P	Distance from boom-foot pin to centre of rotation	4′ 0″	1,22 m
V	Width of cab	9′ 0½″	2,75 m
W	Width over superstructure	12′ 0½″	3,66 m

Lifting crane

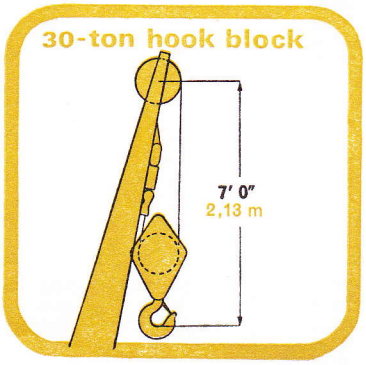
working radius and height above ground at various boom angles



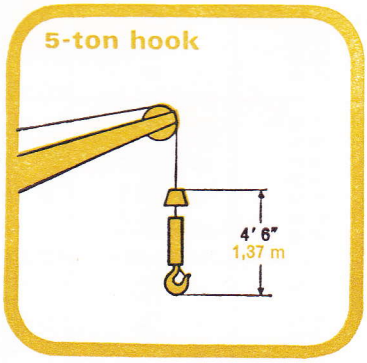


Radius from centre of rotation

Maximum boom angle 79°



Main hoist



Auxiliary hoist

Lifting crane main boom ratings

Length of boom		Operating radius		Equivalent angle of boom	Approx. height of boom-point sheave pin above ground		Lifting crane working load			
							Maximum counterweight		Dragline and grabbing crane counterweight	
ft	m	ft	m	degrees	ft	m	lb	kg	lb	kg
40	12,19	12	3,66	79	45	13,72	67,200	30.480	59,800	27.125
		15	4,57	74	44	13,41	47,100	21.365	42,100	19.095
		20	6,10	67	42	12,80	31,400	14.245	27,850	12.635
		24	7,32	60	40	12,19	22,800	10.340	21,750	9865
		30	9,14	50	38	11,58	17,020	7720	16,150	7325
		32	9,75	46	34	10,36	15,660	7105	14,850	6735
		35	10,67	40	31	9,45	14,000	6350	13,200	5985
		38	11,58	30	27	8,23	12,540	5690	11,850	5375
50	15,24	14	4,27	79	55	16,76	48,380	21.945	46,450	21.070
		20	6,10	72	53	16,15	28,900	12.900	27,500	12.475
		25	7,62	65	51	15,55	21,300	9660	20,200	9165
		29	8,84	60	49	14,94	17,470	7925	16,550	7505
		32	9,75	56	47	14,33	15,300	6940	14,450	6555
		35	10,67	52	45	13,72	13,550	6145	12,800	5805
		40	12,19	44	40	12,19	11,300	5125	10,700	4855
		42	12,80	41	38	11,58	10,600	4810	10,000	4535
		47	14,33	30	31	9,45	9180	4165	8600	3900
60	18,29	16	4,88	79	65	19,81	39,420	17.880	37,600	17.055
		20	6,10	75	64	19,51	28,670	13.005	27,200	12.340
		25	7,62	70	62	18,90	21,050	9550	19,900	9025
		34	10,36	60	58	17,68	13,900	6305	13,000	5895
		40	12,19	53	56	17,07	11,100	5035	10,300	4670
		41	12,50	52	53	16,15	10,730	4865	10,000	4535
		50	15,24	40	44	13,41	8180	3710	7500	3400
		56	17,07	30	36	10,97	6960	3155	6300	2860
70	21,34	18	5,49	79	74	22,56	32,820	14.885	31,400	14.245
		25	7,62	73	73	22,25	20,720	9400	19,650	8915
		30	9,14	69	71	21,64	16,130	7315	15,250	6915
		39	11,89	60	66	20,12	11,200	5080	10,500	4765
		40	12,19	59	65	19,81	10,810	4905	10,100	4580
		50	15,24	49	59	17,98	7840	3555	7250	3290
		60	18,29	37	48	14,63	5940	2695	5450	2470
		64	19,51	30	42	12,80	5380	2440	4900	2225
80	24,38	20	6,10	79	84	25,60	28,120	12.755		
		25	7,62	75	83	25,30	20,490	9295		
		30	9,14	71	81	24,69	15,900	7210		
		40	12,19	64	77	23,47	10,640	4825		
		50	15,24	55	71	21,64	7620	3455		
		60	18,29	46	63	19,20	5700	2585		
		73	22,25	30	46	14,02	4050	1835		
90	27,43	22	6,71	79	94	28,65	24,300	11.020		
		30	9,14	74	92	28,04	15,670	7110		
		40	12,19	67	88	26,82	10,300	4670		
		50	15,24	60	83	25,30	7300	3310		
		60	18,29	52	76	23,17	5380	2440		
		70	21,34	43	67	20,42	4050	1835		
		82	24,99	30	51	15,55	2950	1340		
100	30,48	24	7,32	79	104	31,70	21,180	9605		
		30	9,14	75	102	31,09	15,450	7010		
		40	12,19	69	99	30,18	10,070	4570		
		60	18,29	56	89	27,13	5820	2640		
		70	21,34	49	81	24,69	3920	1780		
		80	24,38	41	71	21,64	2900	1315		
		90	27,43	30	57	17,37	2240	1015		
110	33,53	26	7,93	79	114	34,75	18,710	8485		
		30	9,14	77	113	34,44	15,230	6910		
		40	12,19	71	110	33,53	9850	4470		
		50	15,24	66	106	32,31	6940	3150		
		60	18,29	60	100	30,48	5040	2285		
		80	24,38	47	85	25,91	2700	1225		
		90	27,43	39	74	22,56	1900	860		
120	36,57	28	8,53	79	123	37,49	16,950	7690		
		40	12,19	73	120	36,58	9740	4420		
		50	15,24	68	117	35,66	6710	3045		
		60	18,29	63	112	34,14	4820	2185		
		70	21,34	57	106	32,31	3470	1575		
		90	27,43	45	89	27,13	1780	805		
		100	30,48	37	78	23,77	1230	560		
130	39,62	29	8,84	79	133	40,54	15,450	7010		
		40	12,19	74	131	39,93	9400	4265		
		50	15,24	70	127	38,71	6400	2905		
		60	18,29	65	123	37,49	4480	2030		
		80	24,38	54	111	33,83	2240	1015		
		90	27,43	49	103	31,39	1450	660		
		100	30,48	43	93	28,35	900	410		

Lifting crane main boom service notes

Boom construction

The two-section basic boom is 40′ 0″ 12,19 m long and comprises a 20′ 0″ 6,10 m lower section and a 20′ 0″ 6,10 m upper section constructed from alloy-steel angles. Intermediate sections 10′ 0″3,05 m, 20′ 0″6,10 m and 30′ 0″ 9,14 m in length may be inserted to make booms up to 130′ 0″39,62 m long. Sections are connected by two-bolt butt-type machined joints. Knee-type boom-safety stops are fitted as standard equipment.

See page 8 for use of extension jibs on booms.

Working loads

The main boom working loads listed opposite for lifting crane service do not exceed 75% of tipping load with the machine standing on firm, level and uniform supporting surface and are for booms without extension jibs. Loads must be freely suspended. The radii specified are loaded radii. Working loads include blocks, hooks, slings and other equipment used in handling loads. Proper care must be exercised by the operator at all times to avoid shock or side loadings on the boom. Ratings apply only to machines having booms in first-class condition built and recommended by Ruston-Bucyrus. The machine should not be operated outside the tabulated range appropriate to the service and the equipment fitted.

Working load reduction for jib

The working loads over the main boom sheaves, at any radius, as given opposite, must be reduced in accordance with the following schedule when a jib is fitted (but not in use).

Length of jib		Working load reduction	
15′ 0″	4,57 m	2000 lb	910 kg
30′ 0″	9,14 m	2700 lb	1225 kg

Hook blocks

The weight of the hook block in use, together with any slings or other lifting tackle, must be deducted from the working load to arrive at the actual (net) load lifting capacity for any boom length and radius.

Standard equipment for main hoist: 30 tons 30,48 tonnes triple-sheave, swivel-hook block, 1340 lb 610 kg

Boom suspension

Mast-and-pendant type is standard for all boom lengths. 12-part rope, 18 mm dia., between A-frame and sheave frame at mast head.

Multi-piece pendants: 32 mm dia.

Main-load hoist ropes

Standard equipment for all boom lengths: 20 mm dia. six-strand (6/19) type with independent wire-rope core.

Optional equipment: 20 mm dia. multi-strand (17/7) non-rotating type.

Main-load hoist-rope reeving

Recommended parts of reeving with standard rope and hook block are as follows:

2-part line for loads up to 25,320 lb 11.485 kg
3-part line for loads up to 37,630 lb 17.070 kg
4-part line for loads up to 49,650 lb 22.520 kg
5-part line for loads up to 61,450 lb 27.875 kg
6-part line for greater loads

Load indicators

Standard indicator is of mechanical pendulum type with scales indicating boom angle and also load/radius for a specified boom length.

Additional load/radius scales for alternative boom lengths or boom/jib combinations are available.

A visible and audible automatic load indicator of approved make can be fitted as an optional extra.

Automatic load indicator standard calibration is based on the ratings listed and on the hoist-line reeving specified below.

Boom length		No. of parts main hoist line
40′ 0″	12,19 m	6
50′ 0″	15,24 m	4
60′ 0″	18,29 m	4
70′ 0″	21,34 m	3
80′ 0″	24,38 m	3
90′ 0″	27,43 m	2
100′ 0″	30,48 m	2
110′ 0″	33,53 m	2
120′ 0″	36,57 m	2
130′ 0″	39,62 m	2

Lifting crane extension jib service notes

Jib construction

Jibs are of all-welded lattice construction with alloy-steel angle-type chord members and mild-steel lacing members.

Basic length of jib is 15′ 0″ 4,57 m comprising 7′ 6″ 2,29 m upper and lower sections with three-bolt butt-type machined joints between the sections.

An intermediate section 15′ 0″ 4,57 m in length is available to enable a maximum jib length of 30′ 0″ 9,14 m to be obtained.

Jib service notes

Jibs are designed for load lifting purposes only and are not suitable for dragline or grabbing crane operation.

Jibs may be used in-line with, or at 30° offset to, the centre-line of the main boom.

The figures for the jib load radii and the heights of the jib-point sheave are based on the jib being in the 30° offset position.

All permissible combinations of boom and jib are given on the tables opposite and the machine should not be operated outside the tabulated range appropriate to the service and the equipment fitted.

Working loads

Jib working loads listed opposite are applicable to machines fitted with 12-part boom-suspension tackle and lifting crane counterweight.

Working loads are given in terms of boom-jib lengths and boom angles and apply to both in-line and offset jib positions. but must not exceed 10,000 lb 4535 kg with 15′ 0″ 4,57 m jib and 8960 lb 4065 kg with 30′ 0″ 9,14 m jib.

Working loads do not exceed 75% of tipping load and are for a machine standing on firm, level ground.

The weight of the hook in use, together with any slings or other lifting tackle, must be deducted from the working load to arrive at the actual (net) load capacity for any jib length and radius.

Standard equipment: 5 tons 5,08 tonnes, single-line swivel hook, 220 lb 100 kg.

Jib hoist rope

19 mm dia. multi-strand (17/7) non-rotating rope.

Single-part auxiliary hoist line is standard for all jib combinations and calibration of visible and audible safe-load indicator (when fitted) is based on standard reeving and with jib in offset position.

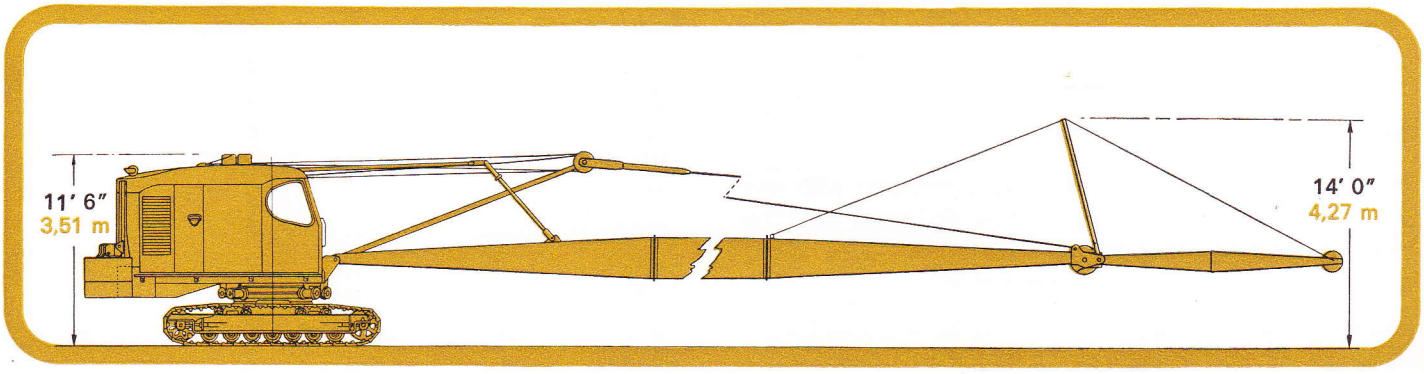
Boom handling

Boom (with or without jibs) should always be raised from or lowered to ground level over the end of the crawlers with the machine on firm, level ground.

Machines fitted with booms or boom/jib combination up to 100′ 0″ 30,48 m in length can be travelled with the boom horizontal and the forward mast lowered to base machine height by removing a link in the suspension.

Overall height with the main boom is 11′ 6″ 3,51 m.

Overall height with boom and extension jib in line is 14′ 0″ 4,27 m.



Lifting crane extension jib ratings

15 ft 4,57 m extension jib

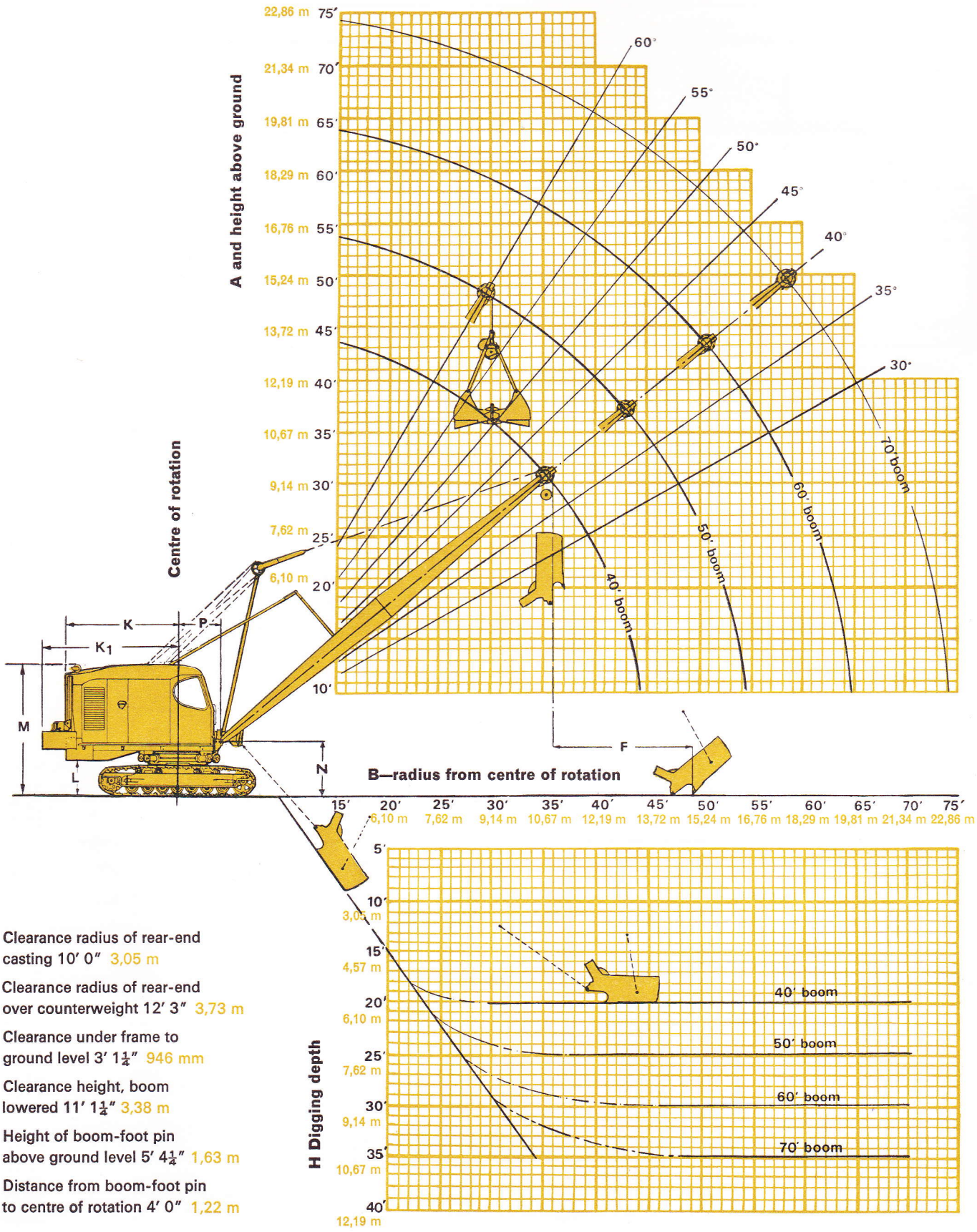
Length of main boom ft	Length of main boom m	Angle of main boom degrees	Working load over jib sheave lb	Working load over jib sheave kg	Jib load radius ft	Jib load radius m	Approx. height of jib point ft	Approx. height of jib point m
60	18,29	76	10,000	4535	29	8,84	75	22,86
		67	9810	4450	40	12,19	70	21,34
		58	6730	3055	50	15,24	64	19,51
		52	5460	2475	56	17,07	58	17,68
70	21,34	76	10,000	4535	32	9,75	85	25,91
		70	9580	4345	40	12,19	81	24,69
		62	6500	2950	50	15,24	76	23,17
		54	4520	2050	60	18,29	68	20,73
		50	3910	1775	64	19,51	64	19,51
80	24,38	76	10,000	4535	34	10,36	95	28,96
		72	9280	4210	40	12,19	92	28,04
		66	6180	2805	50	15,24	88	26,82
		58	4190	1900	60	18,29	81	24,69
		50	2800	1270	70	21,34	72	21,95
90	27,43	76	10,000	4535	37	11,28	104	31,70
		74	9050	4105	40	12,19	103	31,39
		68	5940	2695	50	15,24	99	30,18
		58	3940	1785	60	18,29	93	28,35
		55	2550	1155	70	21,34	86	26,21
		47	1520	690	80	24,38	76	23,17
100	30,48	76	9260	4200	39	11,89	114	34,75
		70	5730	2600	50	15,24	110	33,53
		65	3730	1690	60	18,29	105	32,00
		59	2330	1055	70	21,34	98	29,87
		52	1300	590	80	24,38	90	27,43
110	33,52	76	7790	3535	42	12,80	123	37,49
		72	5420	2460	50	15,24	121	36,88
		67	3410	1545	60	18,29	116	35,36
		62	2010	910	70	21,34	110	33,53
		56	970	440	80	24,38	103	31,39

30 ft 9,14 m extension jib

60	18,29	76	8960	4065	40	12,19	86	26,21
		72	8910	4040	45	13,72	83	25,30
		69	7510	3405	50	15,24	81	24,69
		64	6180	2805	56	17,07	77	23,47
70	21,34	76	8960	4065	42	12,80	96	29,26
		71	7300	3310	50	15,24	92	28,04
		64	5220	2370	60	18,29	86	26,21
		61	4580	2075	64	19,51	83	25,30
80	24,38	76	8470	3840	45	13,72	105	32,00
		73	7040	3195	50	15,24	103	31,39
		67	4940	2240	60	18,29	98	29,87
		61	3470	1575	70	21,34	91	27,74
90	27,43	76	7650	3470	47	14,33	115	35,05
		75	6830	3100	50	15,24	114	34,75
		69	4710	2135	60	18,29	109	33,22
		64	3240	1470	70	21,34	103	31,39
		57	2140	970	80	24,38	95	28,96
100	30,48	76	6650	3015	50	15,24	125	38,10
		71	4520	2050	60	18,29	120	36,58
		66	3040	1380	70	21,34	115	35,05
		60	1940	880	80	24,38	108	32,92
		55	1090	495	90	27,43	100	30,48

Dragline and grabbing crane

working ranges



K Clearance radius of rear-end casting 10′ 0″ 3,05 m

K1 Clearance radius of rear-end over counterweight 12′ 3″ 3,73 m

L Clearance under frame to ground level 3′ 1¼″ 946 mm

M Clearance height, boom lowered 11′ 1¼″ 3,38 m

N Height of boom-foot pin above ground level 5′ 4¼″ 1,63 m

P Distance from boom-foot pin to centre of rotation 4′ 0″ 1,22 m

Dragline and grabbing crane

ratings

Length of boom		Operating radius		Equivalent angle of boom	Approx. height of boom-point sheave pin above ground		Dragline working load		Grabbing crane or magnet crane working load allowing for fast swing	
ft	m	ft	m	degrees	ft	m	lb	kg	lb	kg
40	12,19	24	7,32	60	40	12,19	10,000*	4535	12,300†	5580
		30	9,14	50	38	11,58	10,000*	4535	12,300†	5580
		32	9,75	46	34	10,36	10,000*	4535	12,300†	5580
		35	10,67	40	31	9,45	10,000*	4535	11,220	5090
		38	11,58	30	27	8,23	10,000*	4535	10,080	4570
50	15,24	29	8,84	60	49	14,94	10,000*	4535	12,300†	5580
		32	9,75	56	47	14,33	10,000*	4535	12,300†	5580
		35	10,67	52	45	13,72	10,000*	4535	10,900	4945
		40	12,19	44	40	12,19	10,000*	4535	9100	4130
		42	12,80	41	38	11,58	10,000*	4535	8520	3865
		47	14,33	30	31	9,45	8600	3900	7300	3310
60	18,29	34	10,36	60	58	17,68	10,000*	4535	11,050	5010
		40	12,19	53	56	17,07	10,000*	4535	8300	3990
		41	12,50	52	53	16,15	10,000*	4535	8490	3850
		50	15,24	40	44	13,41	7500	3400	6380	2895
		56	17,07	30	36	10,97	6300	2860	5400	2450
70	21,34	39	11,89	60	66	20,12	10,000*	4535	8930	4050
		40	12,19	59	65	19,81	10,000*	4535	8600	3900
		50	15,24	49	59	17,98	7250	3290	6180	2805
		60	18,29	37	48	14,63	5450	2470	4640	2105
		64	19,51	30	42	12,80	4900	2225	4170	1890

Service notes

General Maximum length of boom for bucket service is 70′ 0″ 21,34 m. Loads must be reduced when operating on soft or uneven ground, for bucket suction, or other unfavourable operating conditions.
Boom angles greater than 60 degrees or less than 30 degrees are not recommended for bucket service, and the machine should not be operated outside the tabulated range appropriate to the service and the equipment fitted.

Booms The basic length is 40′ 0″ 12,19 m comprising a 20′ 0″ 6,10 m lower section and a 20′ 0″ 6,10 m upper section with two-bolt butt-type machined joints, and this can be extended to a maximum of 70′ 0″ 21,34 m for bucket service by the insertion of appropriate intermediate sections.
Mast-and-pendant type suspension is standard for all boom lengths, 8-part rope, 18 mm dia. between A-frame and sheave frame at mast head.
Multi-piece pendants 32 mm dia.

Dragline service Working loads listed above do not exceed 75% of tipping load for the machine when standing on firm and level ground with the boom in the least favourable position.
*Listed working loads represent the weight of bucket and contents, which must not exceed 10,000 lb 4535 kg.
Knee-type boom-safety stops may be fitted as optional equipment.

Grabbing (or magnet) crane service Working loads listed above do not exceed 64% of tipping load for the machine when standing on firm and level ground with the boom in the least favourable position.
†Listed working loads represent the weight of grab and contents (or magnet and load), which must not exceed 12,300 lb 5580 kg.
Knee-type boom-safety stops are fitted as standard equipment.

Working ranges

A Dumping height

Equal to the height of the boom-point pin, less vertical dimension R given in the tables on pages 12 and 13.

B Dumping radius

Approximately the same as the operating radius—see ratings table above.

F Throw of bucket beyond boom point

For a dragline this dimension, usually one-third to one-half of boom length, depends upon the ability of the operator, length of boom, height of boom head, depth of excavation and weight of bucket.

H Digging depth below ground level

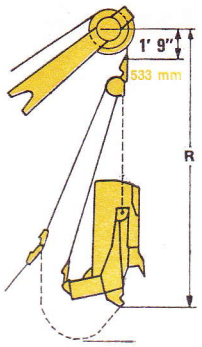
Depth shown on diagram is with standard ropes; one wrap on drum and boom in position indicated—depths for other boom positions may be determined by striking equal arcs from the proposed location of the boom-point pin.

Dragline
Half operating radius B is a fair average; actual depth depends on character of materials and conditions. It is possible when working conditions are unusually favourable and by using suitable ropes, to reach a depth equal to the operating radius.

Grabbing crane
Digging depth for grabbing crane, using standard ropes, is approximately 8′ 0″ 2,44 m greater than indicated for dragline.

Dragline

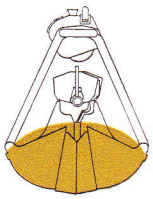
'Lincoln' bucket data



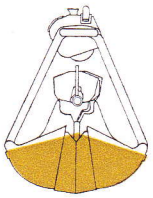
Capacity	cu. yd litres	2 1530	1¾ 1350	1½ 1150	1¼ 960	1 800	⅞ 700	¾ 600
Weight empty	lb kg	4250 1925	3300 1495	2900 1315	2300 1040	2100 950	1800 815	1650 750
Vertical dimension R		17' 11" 5,46 m	15' 7½" 4,76 m	15' 3" 4,65 m	14' 6" 4,42 m	13' 10" 4,22 m	13' 3" 4,04 m	12' 9" 3,89 m
Material	Weight per cu. yd. per cu. m	**Suspended load—weight of bucket and contents**						
Earth—moist	2500 lb 1490 kg	9250 4195	7675 3480	6650 3015	5425 2460	4600 2085	3935 1785	3525 1600
Sand—dry	2700 lb 1600 kg	9650 4375	8025 3640	6950 3150	5675 2575	4800 2175	4110 1865	3675 1665
Sand—wet	3300 lb 1960 kg	10,850 4920	9075 4115	7850 3560	6425 2915	5400 2450	4635 2100	4125 1870
Gravel	2900 lb 1720 kg	10,050 4560	8375 3795	7250 3290	5925 2685	5000 2270	4285 1945	3825 1735
Loose stone	2700 lb 1600 kg	9650 4375	8025 3640	6950 3150	5675 2575	4800 2175	4110 1865	3675 1665
Clay—wet	3000 lb 1780 kg	10,250 4650	8550 3875	7400 3355	6050 2745	5100 2315	4375 1985	3900 1770
Coal	1350 lb 800 kg	6950 3150	5660 2565	4920 2230	3985 1805	3450 1565	2930 1330	2660 1205

Grabbing crane

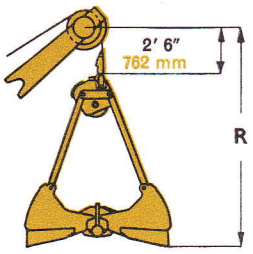
medium-weight grabs



Heaped



15° C.E.C.E.



Capacities given are heaped and 15° (C.E.C.E. rating)

Capacity	cu. ft litres	71/57 2000/ 1600	63/51 1750/ 1500	50/40 1400/ 1100	44/35 1250/ 1000	40/32 1100/ 900	31/25 875/ 700
Weight empty	lb kg	3900 1800	3850 1750	3050 1375	2950 1350	2300 1050	2200 1000
Vertical dimension R		12' 7" 3,83 m	12' 6" 3,81 m	11' 6" 3,50 m	11' 4" 3,45 m	10' 8" 3,25 m	10' 5" 3,17 m
Material	Weight per cu. yd per cu. m	**Suspended load—weight of bucket and contents**					
Earth—moist	2500 lb 1490 kg	10,470/ 9080 4750/ 4120	9675 8570 4390/ 3890	7675/ 6750 3480/ 3060	7110/ 6190 3225/ 2810	6000/ 5260 2720/ 2385	5070/ 4500 2300/ 2045
Sand—dry	2700 lb 1600 kg	11,000/ 9600 4990/ 4355	10,150/ 8950 4605/ 4060	8050 7050 3650/ 3200	7350/ 6450 3335/ 2925	6300/ 5500 2860/ 2495	5300/ 4700 2400/ 2130
Sand—wet	3300 lb 1960 kg	12,580/ 10,870 5705/ 4930	11,550/ 10,080 5240/ 4570	9160/ 7950 4155/ 3605	8330/ 7230 3780/ 3280	7200/ 6210 3265/ 2815	5995/ 5260 2720/ 2380
Gravel	2900 lb 1720 kg	11,520/ 10,020 5225/ 4545	10,620/ 9320 4815/ 4225	8420/ 7350 3820/ 3335	7670/ 6710 3480/ 3045	6600/ 5740 2995/ 2605	5530/ 4890 2500/ 2215
Loose stone	2700 lb 1600 kg	11,000/ 9600 4990/ 4355	10,150/ 8950 4605/ 4060	8050/ 7050 3650/ 3200	7350/ 6450 3335/ 2925	6300/ 5500 2860/ 2495	5300/ 4700 2400/ 2130
Clay—wet	3000 lb 1780 kg	11,790/ 10,230 5350/ 4640	10,850/ 9520 4920/ 4320	8610/ 7490 3905/ 3395	7840/ 6840 3555/ 3105	6740/ 5850 3055/ 2655	5645/ 4980 2555/ 2255
Coal	1350 lb 800 kg	7450/ 6750 3380/ 3060	7000/ 6400 3175/ 2905	5550/ 5050 2515/ 2290	5150/ 4700 2335/ 2130	4300/ 3900 1950/ 1770	3750/ 3450 1700/ 1565
Coke	850 lb 505 kg	6130/ 5690 2780/ 2580	5830/ 5450 2645/ 2470	4620/ 4310 2095/ 1955	4350/ 4050 1970/ 1835	3560/ 3010 1615/ 1365	3170/ 2985 1440/ 1355

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