



**NCK-
RAPIER**

1495B

**CRAWLER
CRANE ★**



Manufactured under
licence from
Koehring Company

NCK-RAPIER

A Newton Chambers Company

NCK-RAPIER Limited, P.O. Box 1, Waterside Works, Ipswich, England
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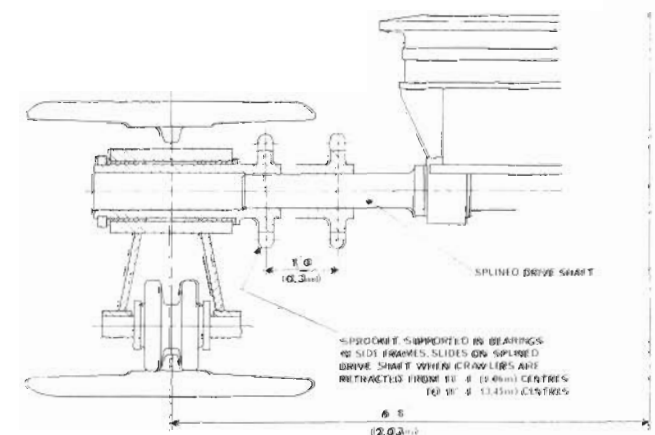
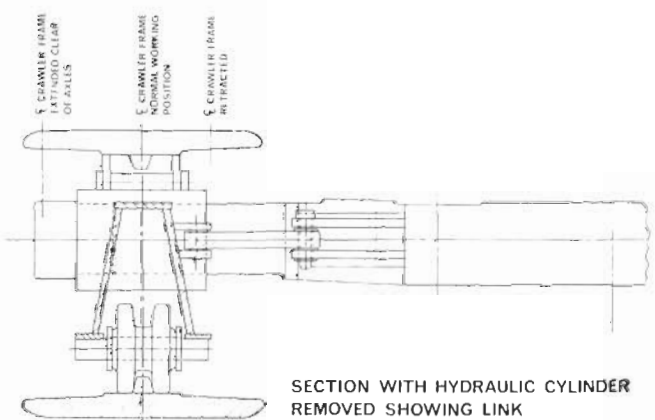
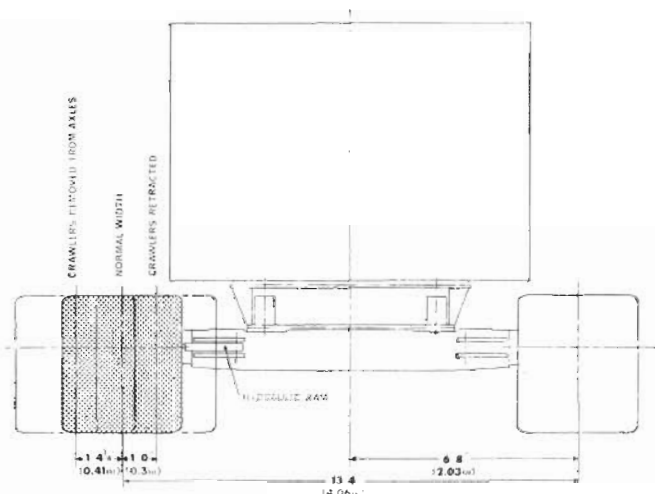




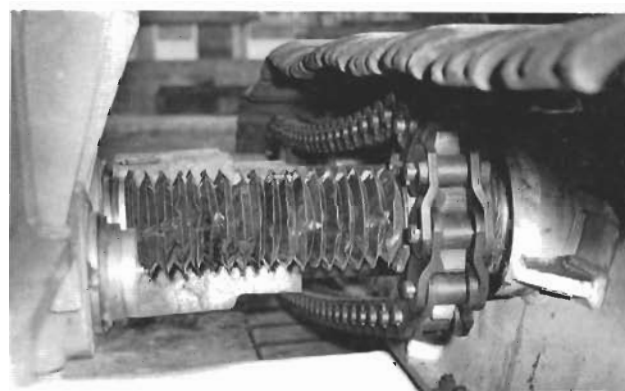
Hydraulic widening, retracting or removal of crawlers

The NCK-RAPIER 1495B normally operates with crawlers at 13ft. 4in. (4,06 m.) centres. To enable the crane to operate in confined spaces they can be retracted to 11ft. 4in. (3,45 m) centres. Normally the crawler frames are held in position by links. These are easily dis-

connected and double acting hydraulic cylinders are pinned into position to retract, extend or remove the crawlers. Each crawler assembly with its crawler belt and chain drive is removed as a complete unit. The adjustment of the belt and chain drive is not affected.



Removing the main pin for widening the crawlers.



Crawlers extended by hydraulic ram and splined drive shaft protected by bellows.



Crawlers at maximum working width with link in position.



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POWER: Diesel engine developing 328 b.h.p. at 2,000 r.p.m. full load speed. Nett input to Clark single stage torque convertor is 288 b.h.p. at 2,000 r.p.m. 24 volt electric starting equipment is standard with tropical radiator and all ancillary equipment. A foot accelerator is provided for crane duty and the torque convertor incorporates an overspeed device.

GRADES: Machine will climb a 1 in 3½ grade (30%).

TURNTABLE: A welded structure built up from steel castings and structural steel. The sidestands and bearings which support the horizontal shafts are an integral part of the turntable fabrication. All the horizontal and vertical shaft bearings are jig bored and remain in true alignment for the life of the machine. Revolving on six turntable rollers with six adjustable hook rollers.

CRAWLERS: The cast steel smooth faced totally enclosed crawler shoes are available in two widths. The NCK-RAPIER design of the crawler drive automatically sheds dirt and stones. The heavy cast welded carbody is secured to the two cast steel axles by four alloy steel corner studs. The axles have circular ends which fit in the circular housings in the crawler side frames, these incorporate rustproof sleeves to ensure easy removal. The crawler side frames are equipped with lower traction drive sprockets, which are connected to the crawler drive countershaft on the carbody through sliding splines. This design permits the removal of the complete crawler side frames from the axles without disconnecting either the crawler drive chains or crawler belt. Stripping down for transport is simple involving the removal of only four securing pins.

HYDRAULIC CRAWLER WIDENING: For operation in confined spaces the crawler width may be reduced by retracting the crawler side frames by hydraulic power. A hydraulic pump is driven from the main diesel engine. The remaining equipment—hydraulic control valve, two double-acting hydraulic rams with attaching pins and piping—is normally stored in the cab. When it is necessary to alter the crawler widths the rams are pinned in position; they have sufficient power to function under average ground conditions.

BOOMS: The standard boom is pin jointed and incorporates high tensile steel chords. The basic length of 60ft. (18,3 m.) can be extended by inserts to a maximum length of 210ft. (64 m.). The boom point is fitted with four large diameter head sheaves mounted on anti-frictional bearings which permits reeving the load block with 3 or 4 part lines. For loads requiring more falls of rope a sheave block is attached to pendulum links at the boom point. This eliminates the necessity for multiple sheaves at the boom point.
A 40ft. (12,2 m.) fly jib can be fitted on main booms up to 190ft. (58 m.).

SPECIFICATION

Heavy Duty Liftcrane

STEERING: Air controlled by means of two levers with finger-tip control. Can turn right or left while travelling forward or backward. Wear on parts and losses of power due to friction are at a minimum. Can readily steer on a slope as well as on level.

OPERATION: Air control valves for main and auxiliary operations mounted on a centralised console. The console itself is designed for maximum operator efficiency giving improved visibility and with valves arranged to minimise the amount of hand movement. Controls include swing, hoist, crowd, dipper trip, forward/reverse travel clutches. All engine instruments are also mounted on console. Boom hoist brake and boom hoist pawl are mechanically operated. Main drum brakes are mechanically operated with air assistance.

CLUTCHES: Main drum, boom hoist and retract clutches are inside band type. Swing and traction clutches are 2-shoe, internal-expanding type. All clutches are air operated, equipped with air chambers and quick-release valve to ensure positive engagement and release of clutch.

POWER BOOM LOWERING: An automatic self-energising internal expanding clutch controls the lowering of the boom by engine power and is standard equipment.

POWER LOAD LOWERING: Two independent planetary type clutch units to give power controlled lowering of the main load hook and fly jib hook are available as optional extras.

TRACTION BRAKES: Two external contracting friction brakes are provided, one for each crawler. These traction brakes are provided with a safety feature which permits the brake to be applied without disengaging the steering jaw clutch. Brakes are spring set with air power release. This enables the machine to work safely on gradients and prevent movement of machine toward drag bucket or away from faceshovel bucket. Traction brakes are released by air and steering is air controlled.

SHAFTS: All shafts are of large diameter and made from high carbon or alloy steels, heat treated for maximum strength. Power is transmitted through accurately machined involute splines, which combine highly efficient operation with quick replacement of worn parts, with a consequent saving in fitting time. All high-speed shafts run on ball or roller bearings.

SAFE LOAD INDICATORS: An audible and visible safe load indicator is available for use with liftcranes.

BOOM SUSPENSION: A rear mounted "A" Frame with mast type pendant boom suspension is standard. For booms up to 150ft. (45,7 m.) a 14 part boom hoist rope is used to the mast head. For booms of 160ft. (49,8 m.) and over 12 parts of boom hoist are reeved to the mast head with 2 parts reeved to the centre of the boom.

Drum Lagging capacities

Location	Application	Diameter		Width		Type	Effective Capacity 1st Layer		Maximum Effective Capacity to B.S. 1757		No. of Layers	Rope Size Diameter
		in.	mm.	in.	mm.		ft.	m.	ft.	m.		
R.H.	Crane Main—Hoist (PLL)	27½	698	14¼	362	Grooved	68	20,7	440	134,1	5	30
L.H.	Crane Fly Jib—Hoist (PLL)	27½	698	8	203	Grooved	26	7,9	245	74,7	5	30
R.H.	Crane Main—Hoist (No PLL) Grab Closing	30	762	19½	495	Grooved	100	30,5	518	157,9	4	30
L.H.	Crane Fly Jib—Hoist (No PLL)	30	762	13½	343	Grooved	65	19,8	354	107,9	4	30
—	Boom Hoist	11¼	300	12	305	Grooved	37	11,3	450	137,2	7	20
—	Third Drum	16½	419	9⅛	232	Grooved	42	12,8	156	47,5	3	19



TECHNICAL DATA

Crawler Data

Item	Distance C. to C. Tumblers			Width Frame C. to C. Girders			Length Over Crawlers			Width Over Crawlers			Width of Shoe		Pitch		No. of Shoes	Flat Bearing Surface	
	ft.	in.	m.	ft.	in.	m.	ft.	in.	m.	ft.	in.	m.	in.	m.	in.	m.		sq. ft.	sq. m.
1	18	10	5,74	13	4	4,06	22	6	6,86	16	10	5,13	42	1,07	12	0,3	96	135	12,5
2	18	10	5,74	13	4	4,06	22	6	6,86	17	4	5,28	48	1,22	12	0,3	96	154	14,3

When crawler frames are retracted, width over crawlers is reduced by 2ft. (0,61 m.).
Width Item 1 is reduced to 14ft. (4,37 m.) and Item 2 is reduced to 15ft. 4in. (4,67 m.).

GENERAL DATA

Tailradius	16ft. 3in.	4,95 m.
Height over "A" frame	18ft. 9in.	5,72 m.
Tailradius "A" frame	15ft. 11in.	4,85 m.
Ground clearance	1ft. 4in.	0,41 m.
Centre of Rotation to Centre of Boom foot	4ft. 3in.	1,30 m.
Height of Boom foot from ground	7ft. 8in.	2,34 m.
Width of Cab (maximum)	10ft. 11in.	3,33 m.
Length of Cab (maximum)	19ft. 3in.	5,87 m.
Height of Cab inside (max.)	7ft. 7in.	2,31 m.
Travel Speed	0-61 m.p.h.	0,98 km./hr.
Rotating Speed	2-44 r.p.m.	2,44 r.p.m.
Counterweight	50,400 lb.	22 860 kg.
Fuel Tank Capacity	180 gallons	815 litres

CLUTCHES

Main Drum	48in. x 7in.	1219 x 178 mm.
Swing and Traction	38in. x 8in.	965 x 203 mm.
Boom Hoist	20in. x 3in.	508 x 76 mm.
Power Boom Lowering	20in. x 3in.	508 x 76 mm.
All Internal Expanding Type.		

BRAKES

Main Drum	56in. x 6in.	1422 x 152 mm.
Boom Hoist	21 3/8in. x 3in.	543 x 76 mm.
Swing	36in. x 4in.	914 x 102 mm.
Traction	28in. x 3 1/2in.	711 x 89 mm.
Power Load Lowering	30in. x 5in.	762 x 127 mm.
All External Contracting Type.		

WEIGHT

Complete Crane, 42in. shoes and 180ft. Boom.	
No hook	238,000 lb. 108 000 kg.

LIFT CRANE

Capacities and Boom lengths, refer to chart.

Main Hoist and Fly Jib Hoist with Gravity Load Lowering:

Hoist Rope Speed (Single part rope)	175 ft./min.	53,4 m./min.
Hoist Rope Pull (Single part rope)	41,700 lb.	19 000 kg.
	85,000 lb. at stall	38 600 kg. at stall
Hoist Drum	30in. P.C.D.	762 mm. P.C.D.

Main Hoist and Fly Jib Hoist Planetary Power Load Lowering:

Hoist Rope Speed (Single part rope)	160-8 ft./min.	20,4 m./min.
Hoist Rope Pull (Single part rope)	45,500 lb.	20 650 kg.
	92,800 lb. at stall	42 200 kg. at stall
Lowering Speed (Single part rope)	31-7 ft./min.	9,7 m./min.
Hoist Drum	27 1/2in. P.C.D.	698 mm. P.C.D.
Boom Point Sheaves	30in. P.C.D.	762 mm. P.C.D.

Weight of Hooks:

100 tons	4,030 lb.	1 830 kg.
70 tons	3,900 lb.	1 770 kg.
55 tons	1,950 lb.	880 kg.
30 tons	1,500 lb.	680 kg.
20 tons	1,200 lb.	540 kg.
10 tons	450 lb.	200 kg.

Pendant Boom Suspension Ropes	1 1/2in. dia.	38 mm. dia.
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Rope Safety factors

Factors of Safety	B.S.S. 1757	75% Rating		
		4·5:1	5·0:1	5·5:1
Boom Length	Number of Falls of Hoist Rope			
60ft. 18,3 m.	9	8	9	9
70ft. 21,3 m.	6	6	7	7
80ft. 24,4 m.	5	5	6	6
90ft. 27,4 m.	5	5	5	5
100ft. 30,5 m.	4	4	4	5
110ft. 33,5 m.	4	4	4	5
120ft. 36,6 m.	3	3	4	4
130ft. 39,6 m.	3	3	3	4
140ft. 42,7 m.	3	3	3	3
150ft. 45,7 m.	2	3	3	3
160ft. 48,8 m.	2	2	3	3
170ft. 51,8 m.	2	2	2	3
180ft. 54,9 m.	2	2	2	2
190ft. 57,9 m.	2	2	2	2
200ft. 61,0 m.	2	2	2	2
210ft. 64,0 m.	2	2	2	2

Falls of hoist rope and Factors of Safety are based on maximum working loads at minimum radii. At greater radii Factors of Safety increase.

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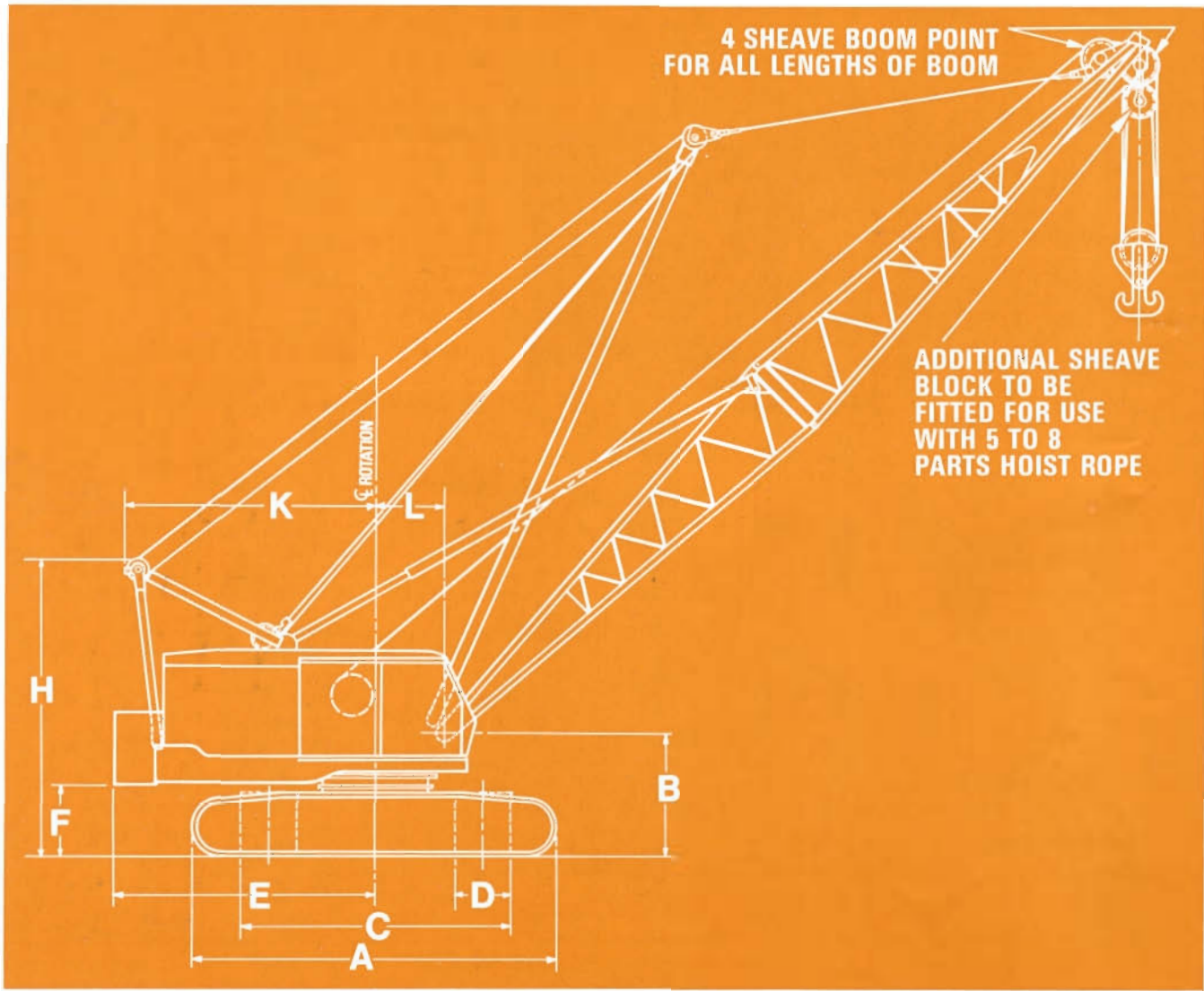




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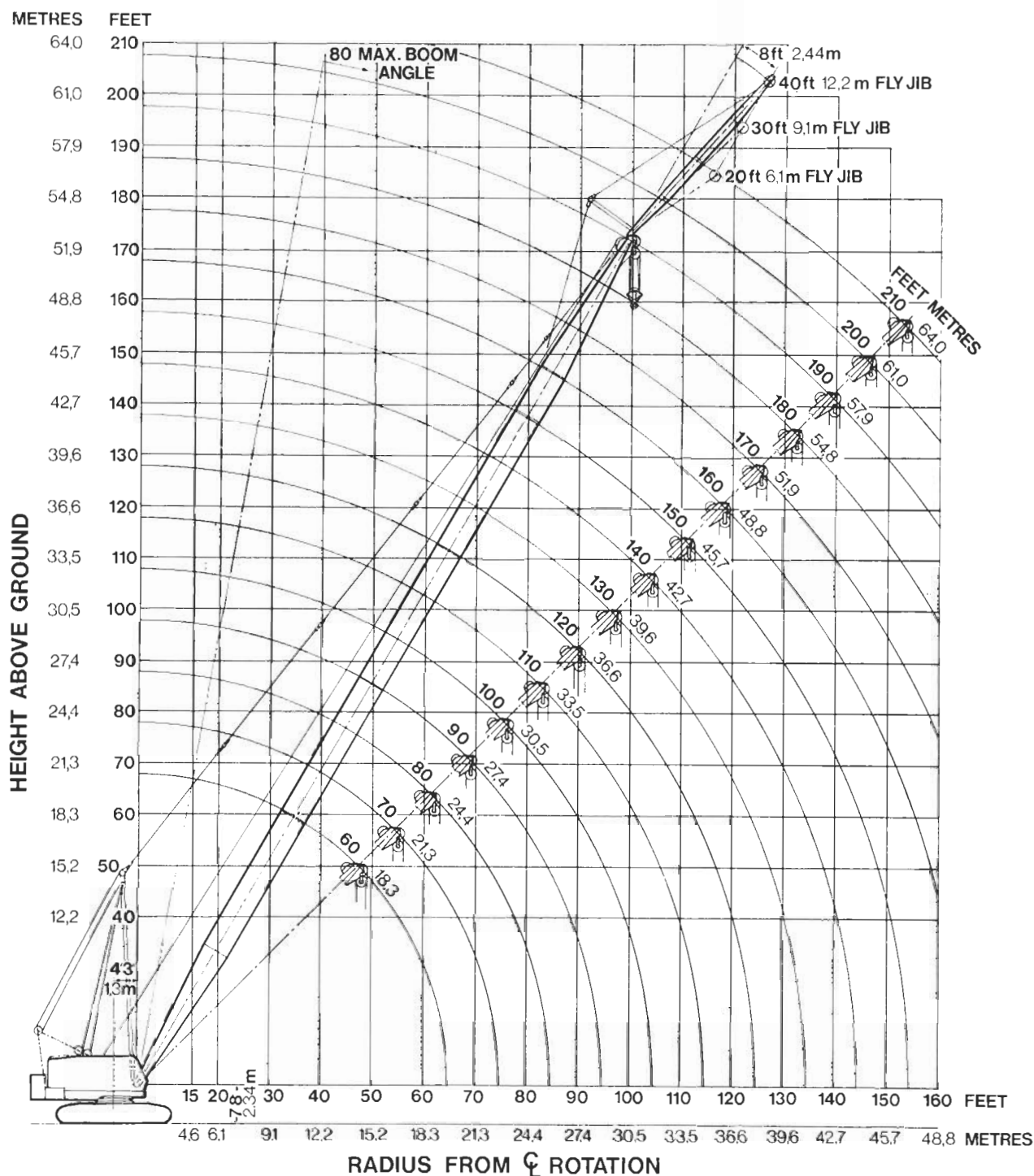


		ft.	in.	m.
A	Overall length Std. Crawlers	22	6	6,86
B	Boom Foot centre above ground	7	8	2,34
C	Overall width—Crawlers extended with 42in. shoes	16	10	5,13
	Overall width—Crawlers extended with 48in. shoes	17	4	5,28
	Overall width—Crawlers retracted with 42in. shoes	14	10	4,52
	Overall width—Crawlers retracted with 48in. shoes	15	4	4,67
D	Width of shoes	3	6	1,07
	Width of shoes	4	0	1,22
E	Tail radius over counterweight	16	3	4,95
F	Clearance under counterweight	4	5	1,35
H	Height of "A" frame	18	8	5,69
K	Tail radius over "A" frame	15	11	4,85
L	Distance C.L. Boom Foot to C.L. rotation	4	3	1,29



RADIUS DIAGRAM

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Maximum length of Main Boom is 210ft. (64 m.).

Maximum length of Fly Jib 40ft. (12.2 m.). Maximum length of Main Boom with Fly Jib fitted is 190ft. (57.9 m.).

Main Boom Loads: Chart loads are gross loads. Allowances must be made for the weight of suspended Hook Blocks, Slings, etc., when calculating nett working loads.

When a Fly Jib is fitted the weight of all suspended Hook Blocks, Slings, etc., must be deducted when calculating nett working loads. The Main Boom loads must be further reduced by the following loads when a Fly Jib is fitted:

20ft. (6.1 m.) Fly Jib reduce 1,850 lb. (840 kg.).

30ft. (9.1 m.) Fly Jib reduce 2,230 lb. (1 010 kg.).

40ft. (12.2 m.) Fly Jib reduce 2,610 lb. (1 180 kg.).

Fly Jib Loads: Fly Jib gross loads are the same as Main Boom gross chart loads at any given radius, but must not exceed rated capacity of Fly Jib. Maximum Fly Jib Capacity 22,400 lb. (10 160 kg.). Weight of all suspended Hook Blocks must be deducted when calculating nett working loads. Fly Jib must not be used for Dragline or Grabcrane duties.

Fly Jib Offset: Regardless of Fly Jib length, the Offset must not exceed or be less than 8ft. (2.44 m.).

Weight of Hook Blocks:

100 ton (101 600 kg.)—4,030 lb. (1 830 kg.).

70 ton (71 120 kg.)—3,900 lb. (1 770 kg.).

55 ton (55 880 kg.)—1,950 lb. (880 kg.).

30 ton (30 480 kg.)—1,500 lb. (680 kg.).

20 ton (20 320 kg.)—1,200 lb. (540 kg.).

10 ton (10 160 kg.)—450 lb. (200 kg.).



Lifting capacities

English and Metric

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Length of Boom		Load Radius		Angle of Boom	GROSS WORKING LOAD				
					CRAWLERS EXTENDED				
					OVERALL WIDTH OF 16ft. 10in. (5,13 m.) OR MORE				
					B.S.S. 1757:1964 Rating			75% Rating	
ft.	m.	ft.	m.	degrees	Tons	lb.	kg.	lb.	kg.
60	18,3	14	4,27	82	100	224,000	101 600	224,000	101 600
		15	4,6	80	89.7	201,000	91 170	201,000	91 170
		20	6,1	76	58.4	130,650	59 260	130,650	59 260
		25	7,6	71	42.7	95,650	43 380	95,650	43 380
		30	9,1	65	32.1	71,980	32 640	71,980	32 640
		35	10,7	60	25.9	58,040	26 320	58,040	26 320
		40	12,2	54	21.7	48,770	22 120	48,770	22 120
		50	15,2	41	16.0	36,000	16 320	36,000	16 320
70	21,3	17	5,2	80	74.1	166,000	75 290	166,000	75 290
		20	6,1	78	58.2	130,180	59 040	130,180	59 040
		25	7,6	74	42.5	95,260	43 200	95,260	43 200
		30	9,1	69	31.8	71,400	32 380	71,400	32 380
		35	10,7	65	25.6	57,520	26 090	57,520	26 090
		40	12,2	60	21.5	48,300	21 900	48,300	21 900
		50	15,2	50	15.9	35,650	16 170	35,650	16 170
		60	18,3	38	12.4	27,800	12 600	27,800	12 600
80	24,4	19	5,8	80	61.6	138,000	62 590	138 000	62 590
		20	6,1	79	58.0	129,760	58 850	129,760	58 850
		25	7,6	76	42.3	94,870	43 030	94,870	43 030
		30	9,1	72	31.6	71,040	32 220	71,040	32 220
		35	10,7	68	25.4	56,900	25 800	56,900	25 800
		40	12,2	64	21.2	47,650	21 610	47,650	21 610
		50	15,2	56	15.6	35,000	15 870	35,000	15 870
		60	18,3	47	12.1	27,210	12 340	27,210	12 340
90	27,4	70	21,3	36	8.9	20,000	9 070	21,720	9 850
		21	6,4	80	54.3	121,600	55 150	121,600	55 150
		25	7,6	77	42.1	94,500	42 860	94,500	42 860
		30	9,1	74	31.5	70,680	32 050	70,680	32 050
		35	10,7	71	25.2	56,590	25 660	56,590	25 660
		40	12,2	67	21.1	47,360	21 480	47,360	21 480
		50	15,2	60	15.4	34,590	15 680	34,590	15 680
		60	18,3	52	11.9	26,800	12 150	26,820	12 160
100	30,5	70	21,3	44	8.7	19,350	8 770	21,240	9 630
		80	24,4	33	7.0	15,780	7 150	17,770	8 060
		23	7,0	80	47.7	107,000	48 530	107,000	48 530
		25	7,6	79	41.9	93,780	42 530	93,780	42 530
		30	9,1	76	31.3	70,230	31 850	70,230	31 850
		35	10,7	73	25.0	56,070	25 430	56,070	25 430
		40	12,2	70	21.0	47,000	21 310	47,000	21 310
		50	15,2	63	15.2	34,170	15 490	34,170	15 490
110	33,5	60	18,3	57	11.6	26,000	11 790	26,240	11 900
		70	21,3	49	8.3	18,600	8 430	20,760	9 410
		80	24,4	41	6.8	15,210	6 890	17,110	7 760
		90	27,4	32	5.5	12,400	5 620	13,960	6 330
		24	7,3	80	43.3	97,000	43 990	99,200	44 990
		25	7,6	79	41.4	92,860	42 120	92,680	42 120
		30	9,1	77	31.0	69,440	31 490	69,440	31 490
		35	10,7	74	24.8	55,550	25 190	55,550	25 190
120	36,6	40	12,2	71	20.6	46,350	21 020	46,350	21 020
		50	15,2	66	15.0	33,570	15 220	33,570	15 220
		60	18,3	60	11.3	25,350	11 490	25,790	11 690
		70	21,3	54	8.0	18,050	8 180	20,290	9 200
		80	24,4	47	6.5	14,640	6 640	16,520	7 490
		90	27,4	39	5.3	11,940	5 410	13,450	6 100
		100	30,5	30	4.4	9,960	4 510	11,210	5 080
		26	7,9	80	37.1	83,200	37 730	85,800	38 910
130	39,6	30	9,1	78	30.6	68,700	31 160	68,700	31 160
		35	10,7	76	24.6	55,040	24 960	55,040	24 960
		40	12,2	73	20.3	45,620	20 690	45,620	20 690
		50	15,2	68	14.7	32,990	14 960	32,990	14 960
		60	18,3	63	10.9	24,500	11 110	25,130	11 390
		70	21,3	57	7.8	17,560	7 960	19,760	8 960
		80	24,4	51	6.3	14,200	6 440	15,990	7 250
		90	27,4	45	5.1	11,420	5 180	12,860	5 830
		100	30,5	38	4.2	9,400	4 260	10,580	4 790
		110	33,5	29	3.4	7,710	3 490	8,680	3 930
		28	8,5	80	32.1	71,900	32 610	74,470	33 770
		30	9,1	79	30.2	67,760	30 730	67,760	30 730
		35	10,7	77	24.3	54,520	24 720	54,520	24 720
		40	12,2	75	20.1	45,140	20 470	45,140	20 470
		50	15,2	70	14.5	32,610	14 790	32,610	14 790
		60	18,3	65	10.6	23,900	10 840	24,690	11 190
		70	21,3	60	7.6	17,100	7 750	19,260	8 730
		80	24,4	55	6.1	13,810	6 260	15,550	7 050
		90	27,4	49	4.9	10,980	4 980	12,350	5 600
		100	30,5	43	4.0	8,950	4 050	10,090	4 570
		110	33,5	36	3.2	7,310	3 310	8,230	3 730
		120	36,6	28	2.6	5,950	2 690	6,690	3 030



Lifting capacities

English and Metric

Length of Boom		Load Radius		Angle of Boom	GROSS WORKING LOAD				
					CRAWLERS EXTENDED				
					OVERALL WIDTH OF 16ft. 10in. (5,13 m.) OR MORE				
					B.S.S. 1757:1964 Rating			75% Rating	
ft.	m.	ft.	m.	degrees	Tons	lb.	kg.	lb.	kg.
140	42,7	30	9,1	80	28-1	63,000	28 570	66,840	30 310
		35	10,7	78	24-0	53,900	24 440	53,900	24 440
		40	12,2	76	19-9	44,610	20 230	44,610	20 230
		50	15,2	71	14-3	32,120	14 560	32,120	14 560
		60	18,3	67	10-3	23,100	10 470	24,060	10 910
		70	21,3	62	7-3	16,510	7 480	18,580	8 420
		80	24,4	58	5-9	13,250	6 010	14,910	6 760
		90	27,4	53	4-7	10,580	4 790	11,790	5 340
		100	30,5	47	3-7	8,430	3 820	9,490	4 300
		110	33,5	41	3-0	6,780	3 070	7,630	3 460
		120	36,6	35	2-4	5,430	2 460	6,110	2 770
		130	39,6	27	1-9	4,360	1 970	4,900	2 220
150	45,8	31	9,4	80	24-1	54,000	24 490	63,000	28 570
		35	10,7	78	23-7	53,280	24 160	53,280	24 160
		40	12,2	76	19-7	44,210	20 050	44,210	20 050
		50	15,2	72	14-1	31,580	14 320	31,580	14 320
		60	18,3	68	9-9	22,300	10 110	23,510	10 660
		70	21,3	64	7-2	16,120	7 310	18,130	8 220
		80	24,4	60	5-7	12,770	5 790	14,370	6 510
		90	27,4	55	4-5	10,100	4 580	11,380	5 160
		100	30,5	50	3-6	8,060	3 650	9,070	4 110
		110	33,5	45	2-8	6,400	2 900	7,210	3 270
		120	36,6	40	2-2	5,080	2 300	5,720	2 590
		130	39,6	34	1-7	3,860	1 750	4,340	1 960
160	48,8	33	10,1	80	21-5	48,300	21 900	57,000	25 850
		35	10,7	79	21-2	47,500	21 540	52,780	23 940
		40	12,2	77	19-5	43,670	19 800	43,670	19 800
		50	15,2	74	13-8	31,080	14 090	31,080	14 090
		60	18,3	70	9-6	21,600	9 790	22,970	10 410
		70	21,3	66	6-9	15,600	7 070	17,580	7 970
		80	24,4	62	5-4	12,290	5 570	13,820	6 260
		90	27,4	58	4-3	9,630	4 360	10,830	4 910
		100	30,5	54	3-3	7,560	3 420	8,520	3 860
		110	33,5	49	2-6	5,910	2 680	6,660	3 020
		120	36,6	44	2-0	4,590	2 080	5,170	2 340
		130	39,6	39	1-5	3,370	1 520	3,790	1 710
170	51,8	35	10,7	80	18-2	40,900	18 550	50,000	22 680
		40	12,2	78	17-8	40,000	18 140	43,000	19 500
		50	15,2	75	13-4	30,000	13 600	30,000	13 600
		60	18,3	71	9-3	20,950	9 500	22,420	10 160
		70	21,3	67	6-7	15,120	6 850	17,020	7 720
		80	24,4	64	5-2	11,790	5 340	13,270	6 010
		90	27,4	60	4-0	9,110	4 130	10,250	4 640
		100	30,5	56	3-1	7,060	3 200	7,950	3 600
		110	33,5	52	2-4	5,420	2 450	6,100	2 760
		120	36,6	48	1-8	4,090	1 850	4,600	2 080
		130	39,6	43	1-2	2,840	1 280	3,200	1 450
180	54,9	36	11,0	80	16-1	36,000	16 320	43,000	19 500
		40	12,2	79	15-8	35,500	16 100	42,100	19 090
		50	15,2	75	12-9	29,000	13 190	29,100	13 190
		60	18,3	72	9-0	20,200	9 160	21,870	9 920
		70	21,3	69	6-5	14,630	6 630	16,480	7 470
		80	24,4	65	5-0	11,280	5 110	12,700	5 760
		90	27,4	62	3-7	8,440	3 820	9,500	4 300
		100	30,5	58	2-9	6,530	2 960	7,350	3 330
		110	33,5	54	2-1	4,890	2 210	5,500	2 490
		120	36,6	50	1-5	3,550	1 610	4,000	1 810
		130	39,6	46	1-0	2,310	1 040	2,600	1 170
190	57,9	38	11,6	80	14-0	31,500	14 280	38,000	17 230
		40	12,2	79	13-8	31,000	14 060	37,200	16 870
		50	15,2	76	12-5	28,000	12 700	28,000	12 700
		60	18,3	73	8-7	19,430	8 810	21,320	9 670
		70	21,3	70	6-3	14,130	6 400	15,900	7 210
		80	24,4	67	4-8	10,750	4 870	12,100	5 480
		90	27,4	63	3-5	7,910	3 580	8,900	4 030
		100	30,5	60	2-6	5,910	2 680	6,650	3 010
		110	33,5	56	1-9	4,360	1 970	4,900	2 220
		120	36,6	53	1-3	3,020	1 360	3,400	1 540
200	61,0	40	12,2	80	12-3	27,600	12 510	33,200	15 060
		50	15,2	77	12-0	26,000	11 790	27,000	12 240
		60	18,3	74	8-4	18,900	8 570	20,770	9 420
		70	21,3	71	6-1	13,610	6 170	15,320	6 940
		80	24,4	68	4-5	10,230	4 640	11,520	5 220
		90	27,4	65	3-2	7,370	3 340	8,300	3 760
		100	30,5	62	2-4	5,370	2 430	6,050	2 740
		110	33,5	58	1-7	3,910	1 770	4,300	1 950
		120	36,6	55	1-1	2,580	1 170	2,900	1 310
210	64,0	42	12,8	80	10-7	24,000	10 880	28,800	13 060
		50	15,2	78	9-8	22,000	9 970	26,000	11 790
		60	18,3	75	8-0	18,040	8 180	20,220	9 170
		70	21,3	72	5-8	13,100	5 940	14,740	6 680
		80	24,4	69	4-3	9,720	4 400	10,940	4 960
		90	27,4	66	3-0	6,840	3 100	7,700	3 490
		100	30,5	63	2-1	4,840	2 190	5,450	2 470
		110	33,5	60	1-5	3,380	1 530	3,700	1 670
		120	36,6	57	0-9	2,130	960	2,400	1 080



Lifting capacities

English and Metric

**NCK-
RAPIER**

**1495
B**

**CRAWLER
CRANE**

Length of Boom		Load Radius		Angle of Boom degrees	GROSS WORKING LOAD				
					CRAWLERS RETRACTED				
					OVERALL WIDTH OF 15ft. 4in. (4,67 m.) OR LESS				
					B.S.S. 1757:1964 Rating			75% Rating	
ft.	m.	ft.	m.		Tons	lb.	kg.	lb.	kg.
60	18,3	14	4,27	82	77.3	173,000	78 470	173,000	78 470
		15	4,6	80	72.2	161,800	73 390	161,800	73 390
		20	6,1	76	49.2	109,900	49 840	109,900	49 840
		25	7,6	71	36.7	82,170	37 270	82,170	37 270
		30	9,1	65	27.7	62,100	28 160	62,100	28 160
		35	10,7	60	22.5	50,440	22 870	50,440	22 870
		40	12,2	54	19.0	42,600	19 320	42,600	19 320
		50	15,2	41	14.0	31,450	14 260	31,450	14 260
70	21,3	17	5,2	80	57.3	128,500	58 280	128,500	58 280
		20	6,1	78	48.9	109,200	49 530	109,200	49 530
		25	7,6	74	36.5	81,780	37 090	81,780	37 090
		30	9,1	69	27.5	61,700	27 980	61,700	27 980
		35	10,7	65	22.3	49,920	22 640	49,920	22 640
		40	12,2	60	18.8	42,150	19 110	42,150	19 110
		50	15,2	50	13.9	31,150	14 120	31,150	14 120
		60	18,3	38	10.4	23,330	10 580	24,200	10 970
80	24,4	19	5,8	80	51.3	115,000	52 160	115,000	52 160
		20	6,1	79	48.7	108,900	49 390	108,900	49 390
		25	7,6	76	36.3	81,390	36 910	81,390	36 910
		30	9,1	72	27.3	61,300	27 800	61,300	27 800
		35	10,7	68	22.0	49,300	22 360	49,300	22 360
		40	12,2	64	18.5	41,600	18 860	41,600	18 860
		50	15,2	56	13.5	30,400	13 780	30,400	13 780
		60	18,3	47	10.0	22,580	10 240	23,650	10 720
90	27,4	70	21,3	36	7.4	16,720	7 580	18,800	8 520
		21	6,4	80	45.7	102,500	46 490	102,500	46 490
		25	7,6	77	36.2	81,020	36 750	81,020	36 750
		30	9,1	74	27.2	61,000	27 660	61,000	27 660
		35	10,7	71	21.8	48,990	22 220	48,990	22 220
		40	12,2	67	18.3	41,100	18 640	41,100	18 640
		50	15,2	60	13.4	30,050	13 630	30,050	13 630
		60	18,3	52	9.8	22,080	10 010	23,250	10 540
100	30,5	70	21,3	44	7.2	16,300	7 390	18,330	8 310
		80	24,4	33	6.0	13,580	6 150	15,260	6 920
		23	7,0	80	41.0	92,000	41 730	92,000	41 730
		25	7,6	79	35.8	80,300	36 420	80,300	36 420
		30	9,1	76	27.0	60,500	27 440	60,500	27 440
		35	10,7	73	21.6	48,470	21 980	48,470	21 980
		40	12,2	70	18.2	40,800	18 500	40,800	18 500
		50	15,2	63	13.2	29,580	13 410	29,580	13 410
110	33,5	60	18,3	57	9.5	21,280	9 650	22,680	10 280
		70	21,3	49	7.0	15,830	7 180	17,810	8 070
		80	24,4	41	5.8	12,980	5 880	14,610	6 620
		90	27,4	32	4.7	10,540	4 780	11,860	5 370
		24	7,3	80	37.8	84,700	38 410	84,700	38 410
		25	7,6	79	35.4	79,380	36 000	79,380	36 000
		30	9,1	77	26.6	59,700	27 070	59,700	27 070
		35	10,7	74	21.4	47,950	21 740	47,950	21 740
120	36,6	40	12,2	71	17.9	40,100	18 180	40,100	18 180
		50	15,2	66	12.9	29,000	13 150	29,000	13 150
		60	18,3	60	9.2	20,660	9 370	22,230	10 090
		70	21,3	54	6.9	15,430	6 990	17,350	7 860
		80	24,4	47	5.5	12,450	5 640	14,010	6 350
		90	27,4	39	4.5	10,100	4 580	11,340	5 140
		100	30,5	30	3.6	8,250	3 740	9,280	4 200
		26	7,9	80	32.8	73,500	33 330	73,500	33 330
130	39,6	30	9,1	78	26.3	59,000	26 760	59,000	26 760
		35	10,7	76	21.2	47,440	21 510	47,440	21 510
		40	12,2	73	17.6	39,600	17 960	39,600	17 960
		50	15,2	68	12.6	28,400	12 880	28,400	12 880
		60	18,3	63	8.8	19,880	9 010	21,600	9 790
		70	21,3	57	6.6	14,950	6 780	16,850	7 640
		80	24,4	51	5.3	11,980	5 430	13,470	6 100
		90	27,4	45	4.2	9,560	4 330	10,770	4 880
		100	30,5	38	3.4	7,690	3 480	8 630	3 910
		110	33,5	29	2.7	6,200	2 810	6,970	3 160
		28	8,5	80	28.3	63,450	28 780	63,450	28 780
		30	9,1	79	25.9	58,030	26 320	58,030	26 320
		35	10,7	77	20.9	46,920	21 280	46,920	21 280
		40	12,2	75	17.3	38,900	17 640	38,900	17 640
		50	15,2	70	12.5	28,100	12 740	28,100	12 740
		60	18,3	65	8.5	19,180	8 700	21,100	9 570
		70	21,3	60	6.4	14,500	6 570	16,300	7 390
		80	24,4	55	5.1	11,600	5 260	13,040	5 910
		90	27,4	49	4.0	9,130	4 140	10,260	4 650
		100	30,5	43	3.2	7,250	3 280	8,160	3 700
		110	33,5	36	2.5	5,760	2 610	6,480	2 930
		120	36,6	28	2.0	4,660	2 110	5,130	2 320



Lifting capacities

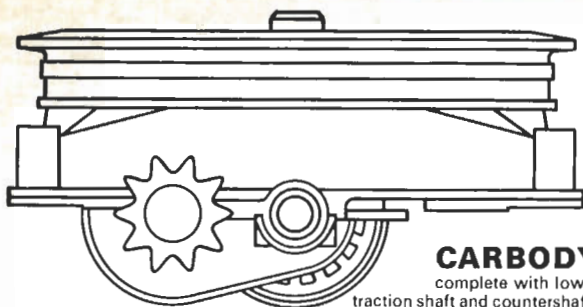
English and Metric

Length of Boom		Load Radius		Angle of Boom	GROSS WORKING LOAD				
					CRAWLERS RETRACTED				
					OVERALL WIDTH OF 15ft. 4in. (4,67 m.) OR LESS				
					B.S.S. 1757:1964 Rating			75% Rating	
ft.	m.	ft.	m.	degrees	Tons	lb.	kg.	lb.	kg.
140	42,7	30	9,1	80	25.5	57,110	25 900	57,110	25 900
		35	10,7	78	20.7	46,300	21 000	46,300	21 000
		40	12,2	76	17.1	38,400	17 410	38,400	17 410
		50	15,2	71	12.3	27,550	12 490	27,550	12 490
		60	18,3	67	8.2	18,340	8 310	20,480	9 290
		70	21,3	62	6.2	14,000	6 350	15,720	7 130
		80	24,4	58	4.9	11,040	5 000	12,420	5 630
		90	27,4	53	3.8	8,600	3 900	9,680	4 390
		100	30,5	47	3.0	6,720	3 040	7,560	3 420
		110	33,5	41	2.3	5,260	2 380	5,910	2 680
		120	36,6	35	1.8	4,040	1 830	4,550	2 060
150	45,8	31	9,4	80	24.0	53,850	24 420	53,850	24 420
		35	10,7	78	20.4	45,680	20 720	45,680	20 720
		40	12,2	76	16.9	37,900	17 190	37,900	17 190
		50	15,2	72	12.0	27,030	12 260	27,030	12 260
		60	18,3	68	7.9	17,700	8 020	19,930	9 040
		70	21,3	64	6.0	13,510	6 120	15,200	6 890
		80	24,4	60	4.7	10,590	4 800	11,800	5 350
		90	27,4	55	3.6	8,250	3 740	9,210	4,170
		100	30,5	50	2.8	6,360	2 880	7,150	3 240
		110	33,5	45	2.1	4,870	2 200	5,480	2 480
		120	36,6	40	1.6	3,690	1 670	4,150	1 880
160	48,8	33	10,1	80	21.5	48,300	21 900	48,900	22 180
		35	10,7	79	20.2	45,180	20 490	45,180	20 490
		40	12,2	77	16.7	37,400	16 960	37,400	16 960
		50	15,2	74	11.7	26,400	11 970	26,500	12 020
		60	18,3	70	7.7	17,230	7 810	19,400	8 800
		70	21,3	66	5.8	12,980	5 880	14,600	6 620
		80	24,4	62	4.4	10,050	4 550	11,300	5 120
		90	27,4	58	3.4	7,780	3 520	8,730	3 960
		100	30,5	54	2.6	5,880	2 660	6,610	2 990
		110	33,5	49	1.9	4,400	1 990	4,950	2 240
		120	36,6	44	1.4	3,200	1 450	3,710	1 680
170	51,8	33	10,1	80	21.5	48,300	21 900	48,900	22 180
		35	10,7	79	20.2	45,180	20 490	45,180	20 490
		40	12,2	77	16.7	37,400	16 960	37,400	16 960
		50	15,2	74	11.7	26,400	11 970	26,500	12 020
		60	18,3	70	7.7	17,230	7 810	19,400	8 800
		70	21,3	66	5.8	12,980	5 880	14,600	6 620
		80	24,4	62	4.4	10,050	4 550	11,300	5 120
		90	27,4	58	3.4	7,780	3 520	8,730	3 960
		100	30,5	54	2.6	5,880	2 660	6,610	2 990
		110	33,5	49	1.9	4,400	1 990	4,950	2 240
		120	36,6	44	1.4	3,200	1 450	3,710	1 680
180	54,9	36	11,0	80	16.1	36,000	16 320	42,900	19 450
		40	12,2	79	15.8	35,500	16 100	35,950	16 300
		50	15,2	75	10.5	23,600	10 700	24,400	11 060
		60	18,3	72	7.2	16,250	7 370	18,280	8 290
		70	21,3	69	5.3	12,020	5 450	13,520	6 130
		80	24,4	65	4.0	9,060	4 100	10,200	4 620
		90	27,4	62	2.9	6,590	2 980	7,410	3 360
		100	30,5	58	2.1	4,830	2 190	5,430	2 460
		110	33,5	54	1.5	3,360	1 520	3,780	1 710
		120	36,6	50	0.9	2,170	980	2,440	1 100
190	57,9	38	11,6	80	14.0	31,500	14 280	38,000	17 230
		40	12,2	79	13.8	31,000	14 060	34,850	15 800
		50	15,2	76	9.9	22,300	10 110	23,400	10 610
		60	18,3	73	7.0	15,760	7 140	17,720	8 030
		70	21,3	70	5.1	11,510	5 220	12,960	5 870
		80	24,4	67	3.8	8,540	3 870	9,600	4 350
		90	27,4	63	2.7	6,050	2 740	6,810	3 080
		100	30,5	60	1.8	4,200	1 900	4,720	2 140
		110	33,5	56	1.2	2,820	1 270	3,170	1 430
		120	36,6	53	0.7	1,640	740	1,840	830
200	61,0	40	12,2	80	12.3	27,600	12 510	33,200	15 060
		50	15,2	77	9.3	21,000	9 520	22,450	10 180
		60	18,3	74	6.8	15,250	6 910	17,160	7 780
		70	21,3	71	4.9	11,020	4 990	12,400	5 620
		80	24,4	68	3.5	8,030	3 640	9,030	4 090
		90	27,4	65	2.4	5,530	2 500	6,220	2 820
		100	30,5	62	1.6	3,670	1 660	4,130	1 870
		110	33,5	58	1.0	2,280	1 030	2,570	1 160
210	64,0	42	12,8	80	10.7	24,000	10 880	25,950	11 770
		50	15,2	78	8.5	19,000	8 610	21,400	9 700
		60	18,3	75	6.6	14,820	6 720	16,700	7 570
		70	21,3	72	4.7	10,500	4 760	11,800	5 350
		80	24,4	69	3.3	7,510	3 400	8,450	3 830
		90	27,4	66	2.2	4,990	2 260	5,610	2 540
		100	30,5	63	1.4	3,130	1 410	3,520	1 590
		110	33,5	60	0.7	1,750	790	1,970	890

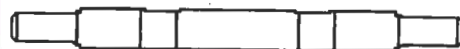




WEIGHTS OF MAJOR COMPONENTS

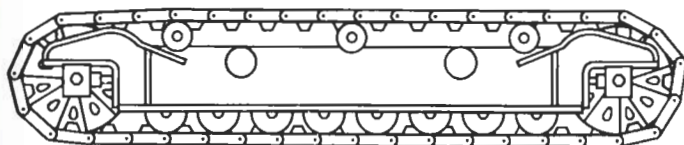


CARBODY
complete with lower
traction shaft and countershafts
15,300 lb. 6 940 kg.



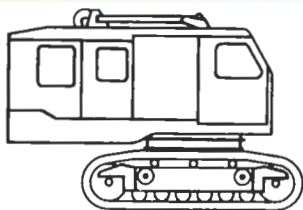
CRAWLER AXLES

EACH 7,830 lb. 3 550 kg.
PAIR 15,660 lb. 7 100 kg.



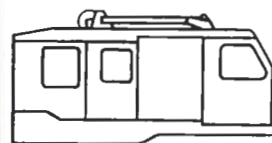
CRAWLER ASSEMBLIES

	EACH	PAIR
42in. Shoes:	28,000 lb. 12 700 kg.	56,000 lb. 25 400 kg.
48in. Shoes	29,000 lb. 13 150 kg.	58,000 lb. 26 300 kg.



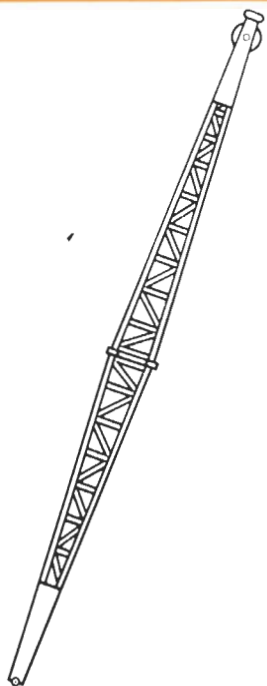
BASE MACHINE

No external counterweight
42in. Shoes:
155,360 lb. 70 470 kg.
48in. Shoes:
157,360 lb. 71 380 kg.



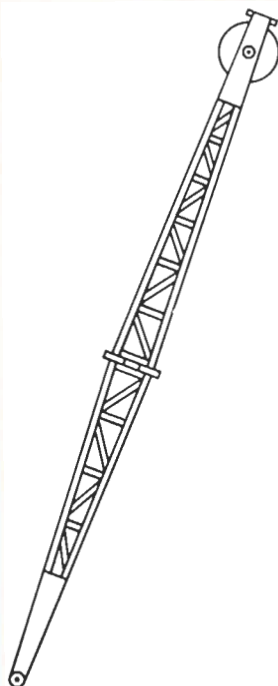
UPPER UNIT

No counterweight
68,400 lb. 31 025 kg.



BASIC BOOM

60ft. 18,3 m.
9,300 lb. 4 220 kg.



FLY JIBS

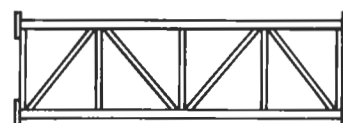
20ft. (6,1 m.) 1,350 lb. 610 kg.
30ft. (9,1 m.) 1,700 lb. 770 kg.
40ft. (12,2 m.) 2,050 lb. 930 kg.

COUNTERWEIGHT

External: 50,400 lb. 22 860 kg.



INSERTS 10ft. (3,05 m.) 1,073 lb. 490 kg.
20ft. (6,1 m.) 1,790 lb. 810 kg.
30ft. (9,1 m.) 2,504 lb. 1 140 kg.



OTHER EQUIPMENT

Hook blocks	100 tons	4,030 lb.	1 830 kg.
	70 tons	3,900 lb.	1 770 kg.
	55 tons	1,950 lb.	880 kg.
	30 tons	1,500 lb.	680 kg.
	20 tons	1,200 lb.	540 kg.
	10 tons	450 lb.	200 kg.
Telescopic Boom Backstops		870 lb.	395 kg.
Mast		4,550 lb.	2 065 kg.
Rear "A" Frame		2,700 lb.	1 225 kg.
2 x Basic Pendants		545 lb.	250 kg.
2 x 10ft. pendants		400 lb.	180 kg.
2 x 20ft. pendants		530 lb.	240 kg.
2 x 30ft. pendants		580 lb.	260 kg.

In accordance with our established policy of constant improvement we reserve the right to amend these specifications at any time without notice.



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