NCK

NOVA HC65

Hydraulic Crawler Crane

DATA

SPECIFICATION

Crawler Units

Tracks: independently driven by a bent axis piston motor through a triple reduction gearbox, incorporating a multi-disc brake. This mechanism provides for independent control to travel, steer or contra-rotation for maximum manoeuvreability.
Hydraulic system also provides braking to prevent downhill movement.

Crawler Frames: Box section all welded construction, precision machined to accept drive gearbox and lower roller system. Drive sprocket, idler wheel and lower rollers are lifetime lubricated. Tension adjustment on track belt is provided hydraulically.

To ensure transportation within European Road Regulations crawler frames are provided with hydraulic cylinders to facilitate easy retractability.

Track Shoes: Heavy duty high tensile heat treated with abrasion resistant plate.

Carbody: High strength steel fabrication incorporating box section axle extensions to accept crawler frames. Forged steel top ring machined to accept bolt-on slew ring.

Power Unit

Caterpillar Model 3306B-DITA water cooled 4-stroke, 6-cylinder direct injected turbo-charged industrial diesel engine. (see page 5 for full specification).

Turntable

Welded steel structure consisting of two rolled beams as main longitudinal members connected by transverse beams and platework for strength and rigidity.

The structure is precision machined for hoist units, swing unit and lattice boom. The superstructure revolves on a totally enclosed anti-friction slewing ring.

Main and Auxiliary Hoist Units

Main and auxiliary hoist units are driven independently by slow speed, high torque radial piston motors. Rotational direction and speed is controlled through a single lever proportional valve for precise control of hoisting/lowering.

Drums: Main and auxiliary hoist drums are fabricated from rolled steel with cast steel flanges. Rope grooves are machined for controlled rope spooling.

Both drums are mounted on high strength alloy steel shafts which revolve on anti-friction bearings.

Clutches: Drum units are connected to the drive units through large diameter internal expanding friction bands, with replaceable linings. Clutches are spring set and power released.

Brakes: External contracting friction band type, spring applied and power released. Crane (fully powered operation) brakes are automatically released when hoist/lower direction is selected and fully applied with control lever in neutral. Cyclic operation (gravity lower) brake effort is precisely controlled by servo action foot pedals and together with synchronised clutch disconnect, provide excellent control for gravity lowering.

Swing Unit

Completely independent of all other motions, swing pinion is driven by reversible high torque radial piston motor incorporating multi-disc brake. Spring applied and power released, hydraulic system provides for controlled braking.

Boom Hoist Unit

Hoist/lower unit is driven by a bent axis piston motor through a double reduction gearbox incorporating a multi-disc brake which is spring applied and power released. The brake is automatically released when main boom is hoisted or lowered and fully applied with control lever in neutral.

Hydraulic system provides for precise control of boom position. A mechanical pawl lock is provided on the boom hoist drum.

SPECIFICATION

Operators Cab

Independent from the machinery house, cab module is mounted on a flexible sub-frame, rubber mounted windows on both sides and roof. Front and left side windows are opening. Side door gives easy access to operators position. Cab is environmentally insulated and fully equipped with instrumentation.

Machinery House

Steel constructed, covering the engine and all operating equipment. Easy access is available for all servicing and replacement of units.

Hydraulic System

Four hydraulic pumps driven via Splitter reduction gearbox.

Two variable displacement piston pumps (open circuit) for operation of travel, hoist drums and boom hoist. Simultaneous control or individually.

Single variable displacement piston pump (closed circuit) for independent control of swing motion.

Single gear pump for control of pilot circuit or ancillary equipment.

Main/auxiliary Motors: dual displacement radial piston type complete with counterbalance valve.

Boom Hoist Motor: bent axis piston motor complete with counterbalance valve.

Swing Motor: high torque radial piston motor.

Travel Motor: bent axis piston motor.

Hydraulic Valves: relief valves protect all motion and control circuits from overload. Main hoist winch and boom hoist circuits incorporate counterbalance valves to ensure safe controlled lowering.

Traction circuit also includes counterbalance valves to ensure safe travelling on inclines.

Front End Attachment

Tubular chord boom: lattice construction, high tensile steel tubular chord.
Base boom: – two piece, total length 12 metres.
Lower section: – 6 metres.
Outer section: – 6 metres.

Boom point: – offset boom head, 5 sheaves mounted on anti-friction bearings.

Boom inserts: – 3m, 6m and 9m long. Pin joint connected to increase main boom length.

Angle chord main boom is available as optional equipment.

Fly Jib

Lattice construction, high tensile steel main chord members.

Basic jib: – two piece construction, total length 9 metres.

Jib inserts: – 3 metres long, pin joint connected.

Jib point: – single sheave mounted on anti-friction bearings.

Main Boom Suspension

Pendant suspension from suspension mast which is pin connected to lower superstructure. Mast is hoisted and lowered on a 12-part rope system, located between the mast head and a fabricated frame at rear of turntable.

All suspension sheaves are mounted on anti-friction bearings and suspension mast can be removed without unreeving the rope system.

Safety Equipment

Boom overhoist: Maximum boom angle is restricted to 80° by automatic cutout, which neutralises the hoist valve and applies the brake.

Telescopic tubular backstops are also provided between main boom and superstructure.

Counterbalance valve: To ensure machine fails safe in the event of an hydraulic failure, a brake valve is incorporated into the travel, boom hoist, main and auxiliary hoist circuits. This valve is automatically activated.

Overhoist limit: When hook block reaches its set/safety limit, brakes are automatically engaged and audible alarm is activated.

Drum lock: Boom hoist drum is fitted with a safety pawl lock.

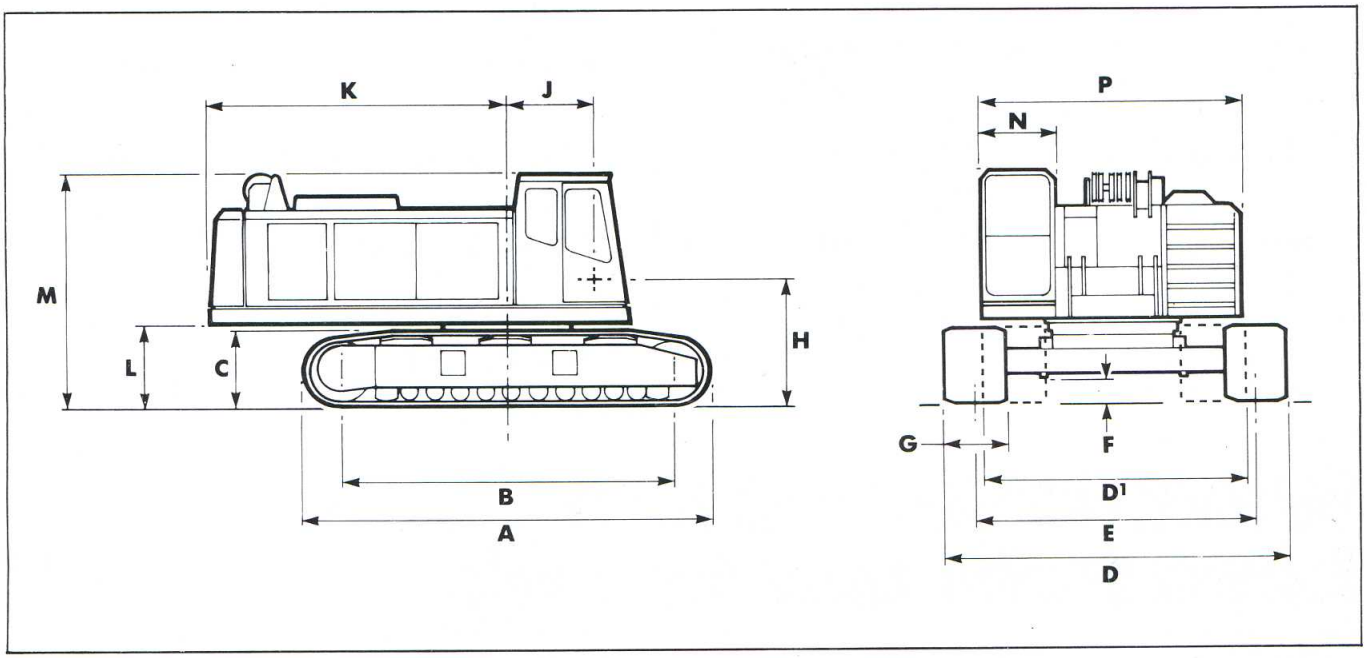
Brake system: To ensure maximum safety all brakes are fail safe type, spring applied and power released.

Safe load indicator: An electronic audible and visible automatic safe load indicator is available for main boom and fly jib operation.

Indicator records the operating radius, suspended load (actual) and the safe working load.

The load sensing unit is incorporated into the boom hoist system, making it suitable for cyclic duty and foundation applications, in addition to normal liftcrane loadings.

HC65 DATA



DIMENSIONS

		metres
A	Overall length of crawler units	6.03
B	Distance, centre to centre of tumblers	5.00
C	Height of crawler units	1.13
D	Overall width of crawlers: Extended – in working condition	4.60
D1	Retracted – in travelling condition	3.50
E	Centre to centre of crawler units in working condition	3.74
F	Ground clearance	420mm
G	Crawler shoe width	850mm

		metres
H	Height of boom foot	1.89
J	Distance centre line rotation to boom foot	1.16
K	Tailradius to rear of counterweight	4.27
L	Ground clearance under counterweight	1.295
M	Overall height of "A" frame sheave, and operators cab in working condition	3.39
N	Width of Operators Module	950mm
P	Overall width over machinery cab	3.44

POWER UNIT

Manufacturer	Caterpillar
Model	3306-DIT
Type	4-cycle diesel engine
Number of cylinders	6
Bore (mm)	121
Stroke (mm)	152
Output power – B.H.P. (kW)	240 (180)
Speed (rpm)	2000
Fuel tank capacity – litres (galls)	400 (88)
Electrical system (volts)	24

WINCH DRUM DATA
Rope Pulls and Speeds

LIFTCRANE

Main hoist drum P.C.D. (mm)	514
Drum length (mm)	585
Main hoist rope dia. (mm)	24
Max. rope capacity (M)	150
1st layer capacity (M)	34
Effective rope pull (kg)	15000
Max. rope pull (kg)	17740
Main/aux. rope speed (hoist/lower) (M/min)	0 – 126
Auxiliary hoist drum P.C.D. (mm)	514
Drum length (mm)	585
Aux. hoist rope dia. (mm)	24
Max. rope capacity (M)	150
1st layer capacity (M)	34

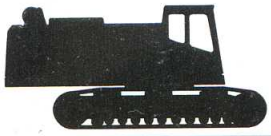
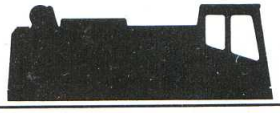
GRABCRANE

Closing/holding drum P.C.D. (mm)	590
Drum length (mm)	585
Closing/holding rope dia. (mm)	24
Max. rope capacity (M)	85
1st layer capacity (M)	39
Effective rope pull (kg)	15400
Rope speed (M/Min)	0 – 72

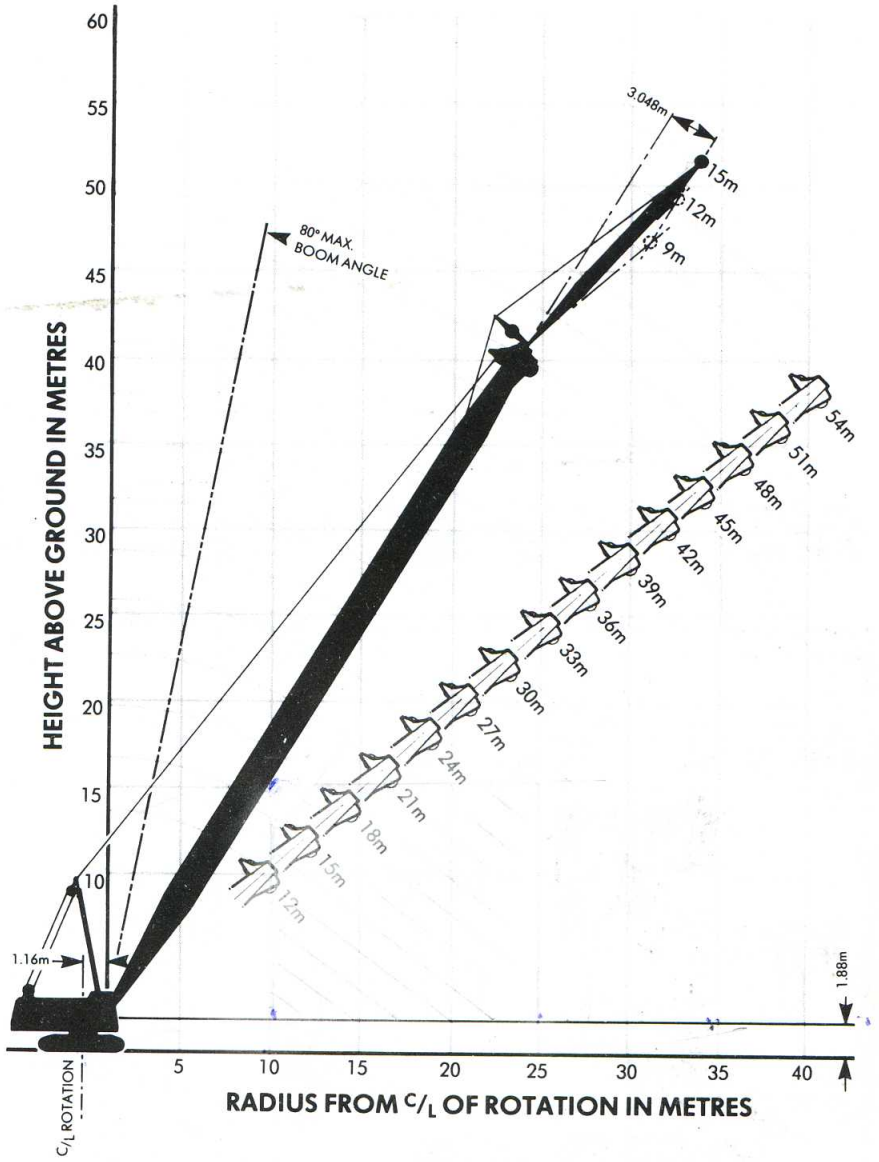
BOOM SUSPENSION

Type	Mast – Pendant
Boom hoist drum P.C.D. (mm)	385
Boom hoist rope dia. (mm)	16
Pendant rope dia. (mm)	26
Swing speed (rpm)	0 – 3
Travel speed (kM/hr)	0 -1.52

WEIGHTS of major components

	kg.
BASE MACHINE (without counterweight) 	43 860
UPPER UNIT (without counterweight) 	13 750
CRAWLER UNITS 	11 705
CARBODY 	6 700
BASIC BOOM (12M) 	1 840
BOOM INSERTS 3M  6M 9M	272 480 685
FLY JIBS 9M  12M 15M	610 750 890
COUNTERWEIGHT 	18 110

Offset Head Boom Radius Diagram



Users are referred to British Standards Code of Practice (CP 3010:1972) "Safe Use of Cranes", which gives guidance for the safe application and operation of mobile cranes.

The Gross Working Loads listed in the duty tables are to be used under the following conditions:

Warning

Operating this equipment in excess of the rated loads shown in the following capacity charts or contrary to our Instruction Manual will result in unsafe conditions, damage to the machine and invalidate the warranty.

I.S.O. 4305:1981, BS 1757:1986, D.I.N. 15019 pt. 2, Crane Ratings

Capacities in accordance with the requirements of Clause 11, Stability of BS 1757:1986 with wind forces to Table 2(a) and 3(a) of BS 2573, Part 1:1977 and also meet the Determination of Stability of International Standard ISO 4305, and Stability of Mobile Cranes DIN 15019 part 2.

Loads must be freely suspended and the machine standing on firm ground, level to less than 1 in 100.

Loads shown are gross and the weights of all hook blocks, slings, etc., must be deducted to determine nett working loads.

75% Crane Ratings

Rated loads do not exceed 75% of the tipping loads but in certain instances, are further governed by structural limitations.

Ratings are based on freely suspended loads and make no allowance for such factors as wind effects, ground conditions, out of level, operating speeds or any other conditions that could be detrimental to the safe operation of this equipment.

Loads shown are gross and the weights of all hook blocks, slings, etc., must be deducted to determine nett working loads.

Main Boom Loads

Main boom with off-set head – maximum capacity 65,000 kg., maximum length 54.0m.

When a fly jib is fitted the effective weight of all hook blocks, tackle, etc., must be deducted when calculating nett working loads. The main boom loads must be further reduced by the following, to allow for the weight of the fly jib:

9m	Fly jib – reduce by 916 kg
12m	Fly jib – reduce by 1098 kg
15m	Fly jib – reduce by 1270 kg

Maximum length of main boom, when fly jib is fitted – 45.0m.

Fly Jib Loads

Maximum fly jib gross loads:

9m Fly jib	6300 kg
12m Fly jib	5490 kg
15m Fly jib	4470 kg

Effective weight of all suspended hook blocks, slings and tackle must be deducted when calculating nett working loads.

Fly jib offset

With the standard pendant ropes supplied for each fly jib the offset of the fly jib head from the centre line of the main boom is 3.048m, regardless of fly jib length.

This offset dimension must be maintained at all times.

Liftcrane Hoist Rope Loads

24mm Rope

No. of Parts of Rope	Maximum Lifting Capacity Kg
1	9150
2	18120
3	26910
4	35540
5	44000
6	52300
7	60410
8	65000

The above capacities are derived from rope factors of safety to BS 1757:1986; also in accordance with P.C.S.A. Standard No. 1, and maximum pulls from hoist drums.

LIFTING CAPACITIES OFFSET HEAD BOOM

METRIC

MAIN BOOM (with maximum counterweight)

Boom length	Radius	Boom angle	GROSS WORKING LOAD	
			BS 1757:1986	75% Rating
m	m	degrees	kg	kg
12.0	3.6	80	65000	65000
	4.0	78	65000	65000
	5.0	73	47900	45000
	6.0	68	35800	33600
	7.0	63	28400	26700
	8.0	57	23500	22100
	9.0	51	20000	18900
	10.0	44	17300	16400
	12.0	27	13600	12800
15.0	4.1	80	60400	64000
	5.0	77	47900	45000
	6.0	73	35700	33600
	7.0	68	28400	26700
	8.0	64	23500	22100
	9.0	60	20000	18800
	10.0	55	17300	16300
	12.0	45	13600	12800
	14.0	32	11000	10500
18.0	4.6	80	52300	52000
	5.0	79	47900	45000
	6.0	76	35700	33600
	7.0	72	28400	26700
	8.0	69	23400	22100
	9.0	65	19900	18800
	10.0	62	17200	16300
	12.0	54	13500	12800
	14.0	46	11000	10400
	16.0	35	9200	8800
21.0	5.2	80	44000	42000
	6.0	78	35700	33600
	7.0	75	28300	26700
	8.0	72	23400	22100
	9.0	69	19900	18700
	10.0	66	17200	16200
	12.0	60	13500	12700
	14.0	53	11000	10400
	16.0	46	9200	8700
	18.0	38	7800	7500
24.0	5.7	80	38600	36400
	6.0	79	35700	33600
	7.0	77	28300	26700
	8.0	74	23400	22000
	9.0	72	19800	18700
	10.0	69	17100	16200
	12.0	64	13400	12700
	14.0	59	10900	10300
	16.0	53	9100	8700
	18.0	46	7800	7400
	20.0	39	6700	6400
	22.0	30	5900	5600
27.0	6.2	80	33800	31800
	7.0	78	28200	26600
	8.0	76	23300	22000
	9.0	74	19700	18600
	10.0	72	17100	16100
	12.0	67	13300	12600
	14.0	62	10800	10300
	16.0	57	9000	8600
	18.0	52	7700	7300
	20.0	46	6600	6300
	22.0	40	5800	5600
	24.0	33	5100	4900

Boom length	Radius	Boom angle	GROSS WORKING LOAD	
			BS 1757:1986	75% Rating
m	m	degrees	kg	kg
30.0	6.7	80	30100	28300
	7.0	79	28200	26600
	8.0	78	23200	21900
	9.0	76	19700	18600
	10.0	74	17000	16100
	12.0	70	13300	12600
	14.0	65	10800	10200
	16.0	61	9000	8500
	18.0	57	7600	7300
	20.0	52	6600	6300
	22.0	47	5700	5500
	24.0	41	5000	4900
	26.0	35	4500	4300
	28.0	27	4000	3900
33.0	7.2	80	26500	25400
	8.0	79	23100	21800
	9.0	77	19600	18500
	10.0	75	16900	16000
	12.0	71	13200	12500
	14.0	68	10700	10100
	16.0	64	8900	8500
	18.0	60	7500	7200
	20.0	56	6500	6200
	22.0	51	5600	5400
	24.0	47	4900	4800
	26.0	42	4400	4200
	28.0	36	3900	3800
	30.0	30	3500	3400
36.0	8.0	80	22800	21800
	9.0	78	19500	18400
	10.0	76	16800	15900
	12.0	73	13100	12400
	14.0	70	10600	10100
	16.0	66	8800	8400
	18.0	63	7400	7100
	20.0	59	6400	6100
	22.0	55	5500	5300
	24.0	51	4800	4700
	26.0	47	4300	4200
	28.0	42	3800	3700
	30.0	37	3400	3300
	32.0	32	3000	3000
39.0	8.3	80	19800	20600
	9.0	79	19400	18400
	10.0	77	16700	15900
	12.0	74	13000	12300
	14.0	71	10500	10000
	16.0	68	8700	8300
	18.0	65	7300	7000
	20.0	62	6300	6000
	22.0	58	5400	5300
	24.0	55	4700	4600
	26.0	51	4200	4100
	28.0	47	3700	3600
	30.0	43	3300	3200
	32.0	38	2900	2900
	34.0	33	2600	2600
	36.0	27	2400	2400

LIFTING CAPACITIES OFFSET HEAD BOOM

METRIC

MAIN BOOM (with maximum counterweight)

Boom length	Radius	Boom angle	GROSS WORKING LOAD	
			BS 1757:1986	75% Rating
m	m	degrees	kg	kg
42.0	8.8	80	16700	18900
	9.0	80	16400	18300
	10.0	78	16300	15800
	12.0	76	12900	12300
	14.0	73	10400	10000
	16.0	70	8600	8300
	18.0	67	7300	7000
	20.0	64	6200	6000
	22.0	61	5400	5200
	24.0	58	4700	4600
	26.0	54	4100	4000
	28.0	51	3600	3600
	30.0	47	3200	3200
	32.0	43	2900	2900
	34.0	39	2500	2600
	36.0	34	2300	2300
	38.0	29	2000	2100
	40.0	23	1800	1900
45.0	9.3	80	14500	17400
	10.0	79	14300	15800
	12.0	77	12800	12200
	14.0	74	10300	9900
	16.0	71	8500	8200
	18.0	68	7200	6900
	20.0	66	6100	5900
	22.0	63	5300	5100
	24.0	60	4600	4500
	26.0	57	4000	4000
	28.0	54	3500	3500
	30.0	51	3100	3100
	32.0	47	2800	2800
	34.0	44	2400	2500
	36.0	40	2200	2200
	38.0	35	1900	2000
	40.0	31	1700	1800
48.0	10.0	80	12600	15700
	12.0	77	12100	12100
	14.0	75	10200	9800
	16.0	72	8400	8100
	18.0	70	7100	6800
	20.0	67	6000	5800
	22.0	65	5200	5000
	24.0	62	4500	4400
	26.0	59	3900	3900
	28.0	56	3400	3400
	30.0	53	3000	3000
	32.0	50	2600	2700
	34.0	47	2300	2400
	36.0	44	2000	2100
	38.0	40	1800	1900
	40.0	36	1600	1700

Boom length	Radius	Boom angle	GROSS WORKING LOAD	
			BS 1757:1986	75% Rating
m	m	degrees	kg	kg
51.0	10.4	80	11100	14700
	12.0	78	10700	12000
	14.0	76	10100	9700
	16.0	73	8300	8000
	18.0	71	7000	6700
	20.0	69	5900	5700
	22.0	66	5100	5000
	24.0	64	4400	4300
	26.0	61	3800	3800
	28.0	59	3300	3300
	30.0	56	2900	2900
	32.0	53	2500	2600
	34.0	50	2200	2300
	36.0	47	1900	2000
	38.0	44	1700	1800
	40.0	41	1500	1600
54.0	11.0	80	9700	13500
	12.0	79	9500	12000
	14.0	77	9000	9600
	16.0	74	8200	7900
	18.0	72	6900	6600
	20.0	70	5800	5600
	22.0	68	5000	4900
	24.0	65	4300	4200
	26.0	63	3700	3700
	28.0	61	3200	3200
	30.0	58	2800	2800
	32.0	56	2400	2500
	34.0	53	2100	2200
	36.0	50	1800	1900
	38.0	47	1600	1700
	40.0	44	1400	1500

FLY JIB DUTIES

BS 1757:1986
75%

Rating	Radius m	Main Boom Lengths 9M FLY JIB								
		21M	24M	27M	30M	33M	36M	39M	42M	45M
		kg	kg	kg	kg	kg	kg	kg	kg	kg
BS 1757 *75%*	9.6	6300 *6300*								
BS 1757 *75%*	10.0	6300 *6300*								
BS 1757 *75%*	10.1		6300 *6300*							
BS 1757 *75%*	10.6			6300 *6300*						
BS 1757 *75%*	11.0	6300 *6300*	6300 *6300*	6300 *6300*						
BS 1757 *75%*	11.1				6300 *6300*					
BS 1757 *75%*	11.6					6300 *6300*				
BS 1757 *75%*	12.0	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*				
BS 1757 *75%*	12.1						6300 *6300*			
BS 1757 *75%*	12.7							6300 *6300*		
BS 1757 *75%*	13.0	6240 *6240*	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*			
BS 1757 *75%*	13.2								6300 *6300*	
BS 1757 *75%*	13.7									6300 *6300*
BS 1757 *75%*	14.0	6140 *6140*	6230 *6230*	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*
BS 1757 *75%*	15.0	6050 *6050*	6140 *6140*	6220 *6220*	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*
BS 1757 *75%*	16.0	5990 *5990*	6060 *6060*	6130 *6130*	6210 *6210*	6280 *6280*	6300 *6300*	6300 *6300*	6300 *6300*	6300 *6300*
BS 1757 *75%*	18.0	5540 *5540*	5940 *5940*	6010 *6010*	6070 *6070*	6130 *6130*	6200 *6200*	6260 *6260*	6300 *6300*	6300 *6300*
BS 1757 *75%*	20.0	5040 *5040*	5360 *5360*	5670 *5670*	5960 *5960*	6020 *6020*	6070 *6070*	6130 *6130*	6190 *6190*	6240 *6240*
BS 1757 *75%*	22.0		4940 *4940*	5230 *5230*	5500 *5500*	5770 *5770*	5990 *5990*	5850 *5680*	5750 *5600*	5650 *5510*
BS 1757 *75%*	24.0		4580 *4580*	4850 *4850*	5110 *5110*	5280 *5130*	5180 *5040*	5080 *4960*	4990 *4880*	4880 *4800*
BS 1757 *75%*	26.0			4530 *4530*	4750 *4620*	4640 *4530*	4540 *4450*	4440 *4370*	4350 *4280*	4240 *4200*
BS 1757 *75%*	28.0				4210 *4120*	4100 *4030*	4000 *3940*	3900 *3860*	3800 *3780*	3700 *3690*
BS 1757 *75%*	30.0					3640 *3590*	3540 *3510*	3440 *3430*	3340 *3340*	3230 *3250*
BS 1757 *75%*	32.0						3130 *3130*	3040 *3050*	2930 *2960*	2830 *2880*
BS 1757 *75%*	34.0						2780 *2800*	2680 *2720*	2580 *2630*	2470 *2540*
BS 1757 *75%*	36.0							2370 *2430*	2270 *2340*	2160 *2250*
BS 1757 *75%*	38.0								1990 *2080*	1880 *1990*
BS 1757 *75%*	40.0								1740 *1850*	1630 *1760*

VALUES BELOW BLACK LINE ARE STABILITY VALUES

FLY JIB DUTIES

BS 1757:1986
75%

Rating	Radius m	Main Boom Lengths 12M FLY JIB								
		21M	24M	27M	30M	33M	36M	39M	42M	45M
		kg	kg	kg	kg	kg	kg	kg	kg	kg
BS 1757 *75%*	10.1	5490 *5490*								
BS 1757 *75%*	10.7		5490 *5490*							
BS 1757 *75%*	11.0	5350 *5350*	5440 *5440*							
BS 1757 *75%*	11.2			5490 *5490*						
BS 1757 *75%*	11.7				5490 *5490*					
BS 1757 *75%*	12.0	5200 *5200*	5300 *5300*	5380 *5380*	5450 *5450*					
BS 1757 *75%*	12.2					5490 *5490*				
BS 1757 *75%*	12.8						5490 *5490*			
BS 1757 *75%*	13.0	5050 *5050*	5160 *5160*	5250 *5250*	5330 *5330*	5400 *5400*	5460 *5460*			
BS 1757 *75%*	13.3							5490 *5490*		
BS 1757 *75%*	13.8								5490 *5490*	
BS 1757 *75%*	14.0	4900 *4900*	5020 *5020*	5130 *5130*	5210 *5210*	5290 *5290*	5360 *5360*	5410 *5410*	5460 *5460*	
BS 1757 *75%*	14.3									5490 *5490*
BS 1757 *75%*	15.0	4740 *4740*	4880 *4880*	5000 *5000*	5100 *5100*	5180 *5180*	5250 *5250*	5320 *5320*	5370 *5370*	5420 *5420*
BS 1757 *75%*	16.0	4650 *4650*	4740 *4740*	4870 *4870*	4980 *4980*	5070 *5070*	5150 *5150*	5220 *5220*	5280 *5280*	5340 *5340*
BS 1757 *75%*	18.0	4520 *4520*	4610 *4610*	4650 *4650*	4740 *4740*	4850 *4850*	4940 *4940*	5030 *5030*	5100 *5100*	5170 *5170*
BS 1757 *75%*	20.0	4040 *4040*	4320 *4320*	4580 *4580*	4620 *4620*	4650 *4650*	4730 *4730*	4830 *4830*	4920 *4920*	5000 *5000*
BS 1757 *75%*	22.0		3910 *3910*	4160 *4160*	4390 *4390*	4600 *4600*	4630 *4630*	4660 *4660*	4730 *4730*	4820 *4820*
BS 1757 *75%*	24.0		3600 *3600*	3800 *3800*	4020 *4020*	4240 *4240*	4450 *4450*	4610 *4610*	4630 *4630*	4660 *4660*
BS 1757 *75%*	26.0			3500 *3500*	3710 *3710*	3910 *3910*	4110 *4110*	4300 *4300*	4350 *4290*	4250 *4200*
BS 1757 *75%*	28.0				3430 *3430*	3630 *3630*	3820 *3820*	3920 *3870*	3810 *3790*	3710 *3700*
BS 1757 *75%*	30.0				3200 *3200*	3380 *3380*	3550 *3520*	3450 *3440*	3350 *3350*	3240 *3260*
BS 1757 *75%*	32.0						3150 *3150*	3050 *3060*	2950 *2980*	2840 *2890*
BS 1757 *75%*	34.0						2800 *2820*	2700 *2730*	2590 *2650*	2490 *2560*
BS 1757 *75%*	36.0							2390 *2440*	2280 *2360*	2170 *2260*
BS 1757 *75%*	38.0								2000 *2100*	1900 *2000*
BS 1757 *75%*	40.0								1760 *1860*	1650 *1770*

VALUES BELOW BLACK LINE ARE STABILITY VALUES

FLY JIB DUTIES

BS 1757:1986
75%

Rating	Radius m	Main Boom Lengths 15M FLY JIB								
		21M	24M	27M	30M	33M	36M	39M	42M	45M
		kg	kg	kg	kg	kg	kg	kg	kg	kg
BS 1757 75%	10.7	4470 *4470*								
BS 1757 75%	11.0	4430 *4430*								
BS 1757 75%	11.2		4470 *4470*							
BS 1757 75%	11.7			4470 *4470*						
BS 1757 75%	12.0	4340 *4340*	4400 *4400*	4440 *4400*						
BS 1757 75%	12.2				4470 *4470*					
BS 1757 75%	12.8					4470 *4470*				
BS 1757 75%	13.0	4240 *4240*	4310 *4310*	4360 *4360*	4410 *4410*	4450 *4450*				
BS 1757 75%	13.3						4470 *4470*			
BS 1757 75%	13.8							4470 *4470*		
BS 1757 75%	14.0	4150 *4150*	4220 *4220*	4280 *4280*	4330 *4330*	4380 *4380*	4420 *4420*	4450 *4450*		
BS 1757 75%	14.3								4470 *4470*	
BS 1757 75%	14.8									4470 *4470*
BS 1757 75%	15.0	4050 *4050*	4130 *4130*	4200 *4200*	4260 *4260*	4310 *4310*	4350 *4350*	4390 *4390*	4430 *4430*	4460 *4460*
BS 1757 75%	16.0	3950 *3950*	4040 *4040*	4110 *4110*	4180 *4180*	4240 *4240*	4280 *4280*	4330 *4330*	4370 *4370*	4400 *4400*
BS 1757 75%	18.0	3780 *3780*	3870 *3870*	3950 *3950*	4020 *4020*	4090 *4090*	4150 *4150*	4200 *4200*	4250 *4250*	4290 *4290*
BS 1757 75%	20.0	3430 *3430*	3660 *3660*	3800 *3800*	3870 *3870*	3940 *3940*	4010 *4010*	4070 *4070*	4130 *4130*	4170 *4170*
BS 1757 75%	22.0		3270 *3270*	3480 *3480*	3680 *3680*	3820 *3820*	3880 *3880*	3940 *3940*	4000 *4000*	4060 *4060*
BS 1757 75%	24.0		2940 *2940*	3140 *3140*	3330 *3330*	3520 *3520*	3700 *3700*	3830 *3830*	3880 *3880*	3940 *3940*
BS 1757 75%	26.0		2670 *2670*	2850 *2850*	3030 *3030*	3210 *3210*	3380 *3380*	3540 *3540*	3710 *3710*	3840 *3840*
BS 1757 75%	28.0			2610 *2610*	2780 *2780*	2940 *2710*	3100 *3100*	3260 *3260*	3420 *3420*	3570 *3570*
BS 1757 75%	30.0						2860 *2860*	3010 *3010*	3160 *3160*	3220 *3240*
BS 1757 75%	32.0						2650 *2650*	2790 *2790*	2930 *2930*	2820 *2870*
BS 1757 75%	34.0						2460 *2460*	2600 *2600*	2570 *2630*	2460 *2540*
BS 1757 75%	36.0							2370 *2430*	2260 *2340*	2150 *2250*
BS 1757 75%	38.0								1990 *2080*	1880 *1990*
BS 1757 75%	40.0								1740 *1850*	1630 *1760*

VALUES BELOW BLACK LINE ARE STABILITY VALUES