

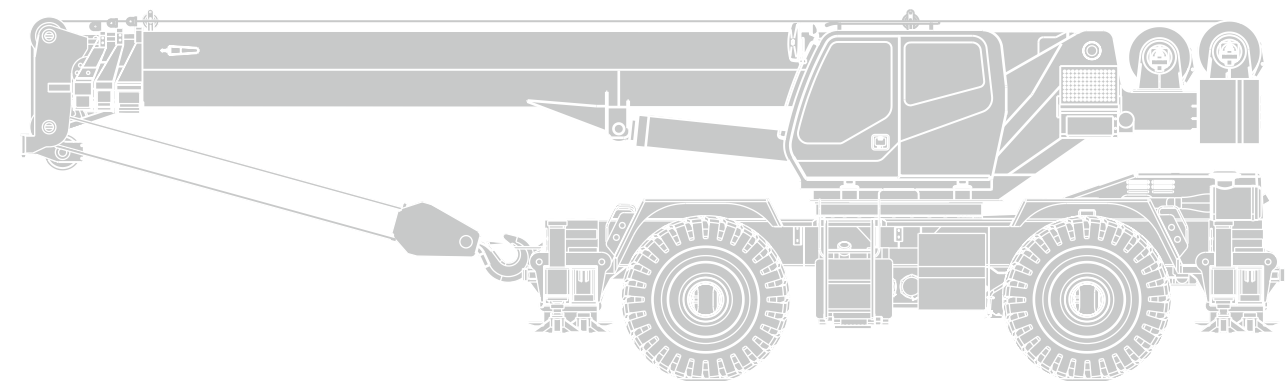
Vision creates future



LOAD CHART MANUAL FOR RT55 ROUGH TERRAIN CRANE

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ZOOMLION HEAVY INDUSTRY SCIENCE AND TECHNOLOGY CO.,LTD



RT55 ROUGH TERRAIN CRANE

LOAD RATINGS

Edition 1

Dec. 2013

To owners, users and operators

Zoomlion Cranes appreciates your selection of the ZOOMLION Rough Terrain Crane for your application.

No one should operate the crane unless they read and understand the information in this manual.

When you follow the instructions in this manual, your crane can operate at MAXIMUM EFFICIENCY.

The operator must keep this manual in the cab of the crane.

If there is anything in the manual that you do not understand, speak with us. We (Zoomlion Cranes) are NOT responsible for damages from an operator who does not obey the instructions in the *OPERATOR'S MANUAL*.

The OPERATOR'S MANUAL is an important part of the crane. If the crane becomes the property of a different person, make sure that the manual stays in the cab of the crane.

THANK YOU!

Mobile Crane Branch Company of ZOOMLION Heavy Industry Science and Technology Co., Ltd.

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Safety

Hazard Indicators

DANGER, WARNING, CAUTION, ATTENTION, NOTE, and IMPORTANT labels are on signs and decals, and as you read this manual to show important instructions. In this manual, DANGER, WARNING, and CAUTION labels are before the paragraph or item to which they apply. ATTENTION, NOTE, and IMPORTANT follow the paragraph or item they apply to. The markers are as follows:



Refers to a dangerous situation which, if you do not prevent, will cause death or injury.



Refers to a possible dangerous situation which, if you do not prevent, could cause death or injury.



Refers to a possible dangerous situation which, if you do not prevent, may cause light or moderate injury.



Refers to a situation which, if you do not prevent, may cause property or equipment damage.



Refers to a tip or hint in the operation instructions.



Emphasizes the importance of the data in this manual.



This symbol shows a step or procedure that is not approved and can cause a dangerous situation.

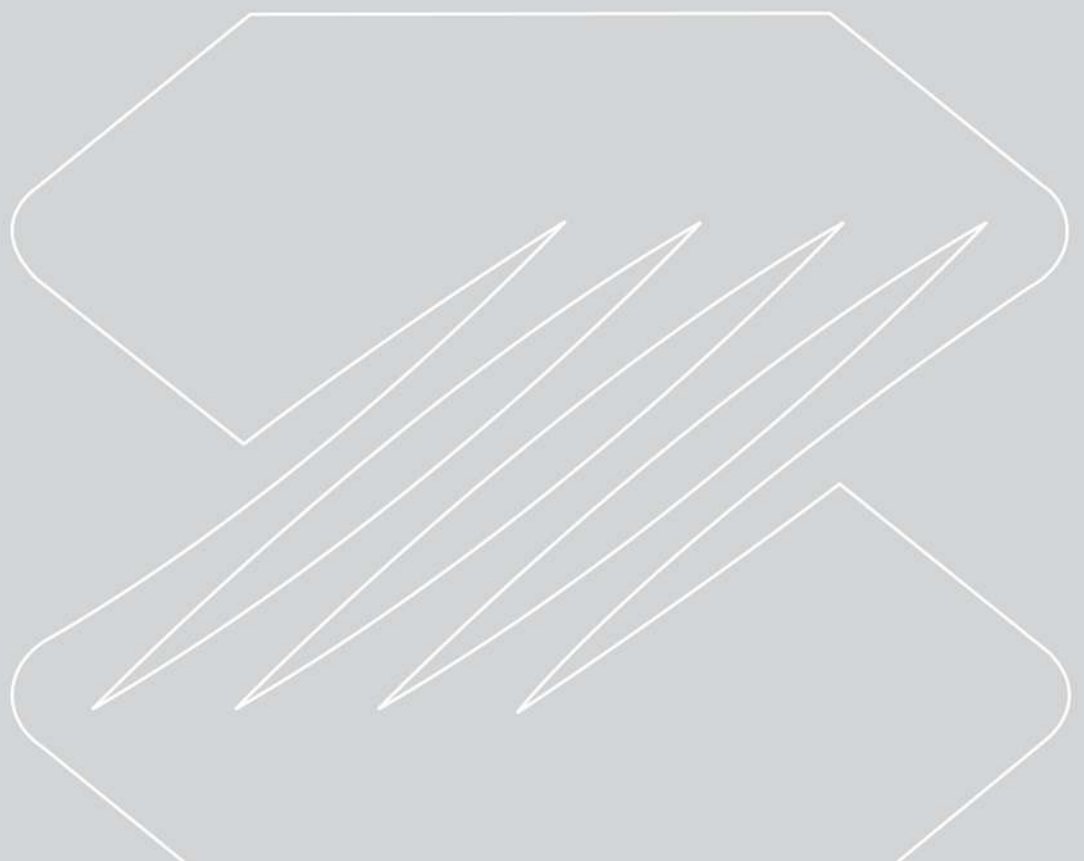
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LOAD RATINGS FOR ROUGH TERRAIN CRANE

Chapter 1 Informational data



1.1 HOIST TACKLE CHART

This chart only represents the maximum permissible hoist line load per parts of line. You must refer to the proper Lift Charts for machine rated loads.

Table 01 – 1 Line Parts

MAXIMUM PERMISSIBLE HOIST LINE LOAD										
LINE PARTS	1	2	3	4	5	6	7	8	9	10
MAXIMUM PERMISSIBLE HOIST LINE LOAD (KG)	5500	11000	16500	22000	27500	33000	38500	44000	49500	55000
MAXIMUM PERMISSIBLE HOIST LINE LOAD (LBS)	12125	24250	36375	48500	60625	72750	84875	97000	109125	121250

Wire rope: 19NAT-15×K7-IWRC-1960Mpa (3/4"ROTATION RESISTANT 15×K7 COMPACTED STRAND, GRADE 1960)

Weight: 160kg/100m (1.1LBS/FT) Minimum breaking strength: 31.1T (30.61TONS)

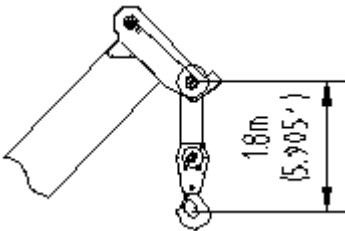
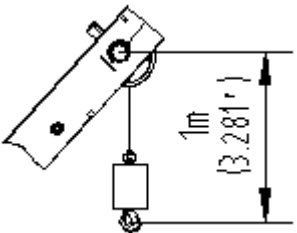
1.2 TIRE INFLATION CHART

Table 01 – 2 Tire Inflation Chart

RECOMMENDED TIRE PRESSURE			
TIRE SIZE	STATIONARY	CREEP (21/2MPH)	TRAVEL
26.50-25-32PR	580kpa (85 PSI)	580kpa (85 PSI)	450kpa (65 PSI)

1.3 WEIGHTS

Table 01 – 3 Weights

HOOK BLOCK WEIGHTS	DIMENSIONS ARE FOR MAIN HOOK AND AUXILIARY HOOKS.
Main hook weight: 650kg (1433 LBS)	
Auxiliary hook weight: 120kg (265 LBS)	
MACHINE EQUIPMENT	
1. COUNTERWEIGHT: 5000kg (1102 LBS)。	
2. OUTRIGGER SPREAD: 6.9 m (22.6 ft) from center of outrigger float to center of outrigger float across the longitudinal axis of the machine; 6.9 m (22.6 ft) from center of outrigger float to center of outrigger float across the transversal axis of the machine	
3. Powered boom length 10.8 m (35.43 ft) retracted to 34 m (111.55ft) extended	
4. Crane height 3.75m (12 ft-3.5 in), length 13.1m (43 ft), width 3.3m (10 ft-10 in), wheelbase 3.95m (8 ft-6.6 in)	

1.4 MAXIMUM OUTRIGGER FLOAT LOAD

When lifting loads shown in these capacity charts, no single float load will exceed 50000 kg (88,000 lb).

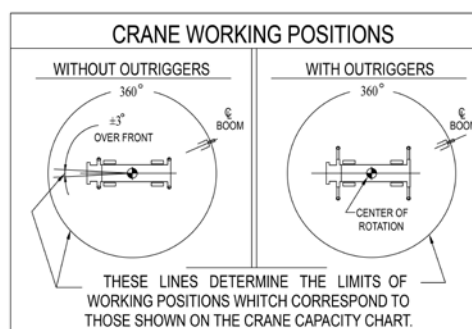
WARNING

1.5 GENERAL

- 1.5.1 Rated loads as shown on Lifting Charts pertain to this machine as originally manufactured and equipped. Modifications to the machine or use of optional equipment other than that specified can result in a reduction of capacity.
- 1.5.2 Construction equipment can be hazardous if improperly operated or maintained. Operation and maintenance of this machine shall be in compliance with the information in the *Operator's Manual* supplied with this machine. If these manuals are missing, order replacements from the manufacturer through your distributor.
- 1.5.3 These warnings do not constitute all of the operating conditions for the crane. The operator and job site supervision must read the *Operator's Manual*.
- 1.5.4 This crane and its load ratings are in accordance with ASME/ANSI B30.5.

1.6 DEFINITIONS

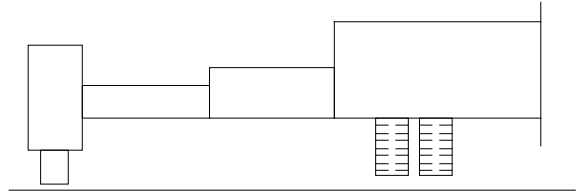
- 1.6.1. **LOAD RADIUS** – The horizontal distance from the axis of rotation before loading to the center of the vertical hoist line or tackle with a load applied.
- 1.6.2. **LOAD BOOM ANGLE** – It is the angle between the boom base section and the horizontal, after lifting the rated load at the rated radius. The boom angle before loading should be greater to account for deflections. The loaded boom angle combined with the boom length give only an approximation of the operating radius.
- 1.6.3. **WORKING AREA** – Areas measured in a circular arc about the centerline of rotation as shown in the diagram.
- 1.6.4. **FREELY SUSPENDED LOAD** – Load hanging free with no direct external force applied except by the hoist rope.
- 1.6.5. **Side load** – Horizontal force applied to the lifted load either on the ground or in the air.
- 1.6.6. **EXTRA-CAUTION ZONE** – Tipping can occur with some boom/jib combinations at radii within this area without any load on the hook.
- 1.6.7. **BOOM SIDE OF CRANE** – The side of the crane over which the boom is positioned when in an OVER SIDE working position.




WARNING

1.7 SET-UP

- 1.7.1. Crane load ratings are based on the crane being leveled and standing on a firm and uniform supporting surface.
- 1.7.2. Crane load ratings on outriggers are based on all outrigger beams being fully extended / retracted, or in the case of partial extension ratings mechanically pinned in the appropriate position, and the tires raised free of the supporting surface.
- 1.7.3. Crane load ratings on tires depend on appropriate inflation pressure and the tire conditions. Caution must be exercised when increasing air pressures in tires. Consult Operator's Manual for precautions.
- 1.7.4. Consult appropriate section of the Operator's Manual for more exact description of hoist line reeving.
- 1.7.5. The use of more parts of line than required by the load may result in having insufficient rope to allow the hook block to reach the ground.
- 1.7.6. Properly maintained wire rope is essential for safe crane operation. Consult Operator's Manual for proper maintenance and inspection requirements.
- 1.7.7. When spin-resistant wire rope is used, the allowable rope loading shall be the breaking strength divided by five (5), unless otherwise specified by the wire rope manufacturer.



1.8 OPERATION

- 1.8.1. CRANE LOAD RATINGS MUST NOT BE EXCEEDED. DO NOT ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
- 1.8.2. When either radius or boom length, or both, are between listed values, the smaller of the two listed load ratings shall be used.
- 1.8.3. Do not operate at longer radii than those listed on the applicable Lift Chart (cross hatched areas  shown on range diagrams) as tipping can occur without a load on the hook.
- 1.8.4. The boom angles shown on the Lift Charts give an approximation of the operating radius for a specified boom length. The boom angle, before loading, should be

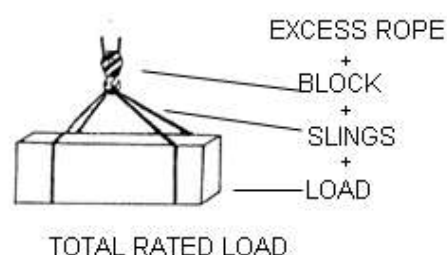
greater to account for boom deflection. It may be necessary to retract the boom if maximum boom angle is insufficient to maintain rated radius.

- 1.8.5. All telescopic sections must be extended synchronically.



- 1.8.6. Rated loads include the weight of hook block, slings, and auxiliary lifting devices. Their weights shall be subtracted from the listed rated load to obtain the net load that can be lifted.

- 1.8.7. When lifting over the jib, the weight of any hood block, slings, and auxiliary lifting devices at the boom head must be added to the load.



- 1.8.8. Rated lifting capacities are based on correct reeving. Deductions must be made for excessive reeving. Any reeving over the minimum required, (see Hoist Tackle Chart), is considered excessive and must be accounted for. Deduct for each meter of excessive wire rope before attempting to lift a load.

- 1.8.9. When jibs are erected but unused, add three (3) times the weight of jib, any hook block, slings, and auxiliary lifting devices at the jib head to the load (jib weight: 952 kg (2099 lbs)).

- 1.8.10. Rated loads do not exceed 85% on outriggers or 75% on tires, of the tipping load as determined by ASME/ANSI B30.5.

- 1.8.11. Rated loads are based on freely suspended loads. No attempt shall be made to drag a load horizontally on the ground in any direction.

- 1.8.12. The user shall operate at reduced ratings to allow for adverse job conditions, such as: soft or uneven ground, out of level conditions, high winds, side loads, pendulum action, jerking or sudden stopping off loads, hazardous conditions, experience of personnel, two-machine lifts, traveling with loads, electric wires, etc, (side pull on boom or jib is hazardous). If wind speed is higher than the maximum permissible value (45 ft/s (13.8 m/s), grade 6) or it is fulminous during crane operation, stop working and completely retract the boom and place it on the boom support for traveling.

- 1.8.13. Load ratings are dependent upon the crane being maintained according to manufacturer's specifications.

- 1.8.14. It is recommended that load handling devices, including hooks, and hook blocks, be kept away from boom head at all times.



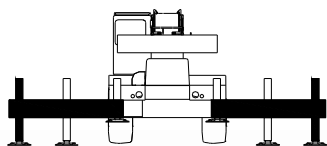
LOAD RATINGS FOR ROUGH TERRAIN CRANE

Chapter 2 Lifts with outrigger beams
fully extended



2.1 MAIN BOOM RATED LOADS

USE THIS CHART ONLY WHEN ALL OUTRIGGERS ARE FULLY EXTENDED



Rated loads on outriggers fully extended - 360° (Rated load unit: Kg)							
Working Radius (mm)	Boom Length (mm)						Working Radius (mm)
	10080	15440	20080	24720	29360	34000	
3000	55000	27200					3000
3500	51300	27200					3500
4000	47550	27200					4000
4500	43250	27200	26300				4500
5000	39200	27200	26300				5000
5500	35750	27200	26300				5500
6000	32790	27200	25300	20000			6000
6500	30240	27200	24300	19300			6500
7000	27950	26450	23000	18650			7000
7500	25670	25000	21800	18050	15290		7500
8000	22510	23200	20700	17400	14750		8000
8830	17460						8830
9000		18510	18750	15790	13850	10560	9000
10000		15250	15530	14500	12700	10560	10000
11000		12820	13100	13300	11700	10100	11000
12000		10960	11220	11410	10800	9350	12000
13000		9510	9730	9920	9930	8650	13000
13461		9030					13461
14000			8530	8700	8720	8040	14000
16000			6720	6860	6880	7040	16000
18000			5470	5540	5550	5700	18000
18096			5460				18096
20000				4540	4550	4680	20000
22000				3790	3780	3890	22000
22733				3610			22733
24000					3160	3260	24000
26000					2680	2740	26000
27371					2470		27371
28000						2310	28000
30000						1960	30000
32000						1700	32000
32009						1700	32009

Rated loads on outriggers fully extended - 360° (Rated load unit: lb)							
Working Radius (ft)	Boom Length (ft)						Working Radius (ft)
	35	51	66	81	96	112	
10	121000	60200					10
12	110110	60200					12
15	93830	60200	58190				15
20	71060	59400	51370	40810			20
25	52840	49720	43450	36520	31350		25
28	38380						28
30		38250	37290	31570	27610	23280	30
35		28750	29530	27610	24200	21120	35
40		22590	23260	23830	21450	18700	40
44		19110					44
45			18860	19370	19250	16720	45
50			15610	16070	16240	15070	50
55			13140	13530	13690	13640	55
59			11560				59
60				11520	11660	12060	60
65				9890	10020	10390	65
70				8570	8670	9010	70
74				7640			74
75					7540	7850	75
80					6580	6860	80
85					5780	6000	85
89					5220		89
90						5260	90
95						4620	95
100						4060	100
105						3600	105

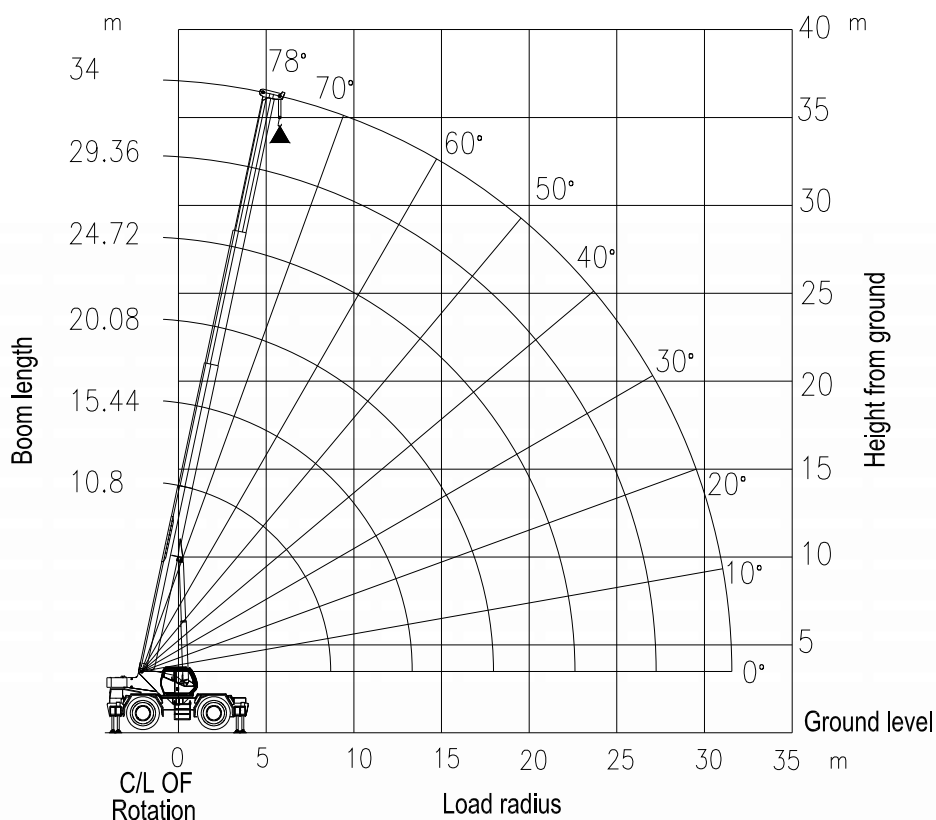
SET-UP

1. Crane load ratings are based on the crane being leveled and standing on a firm and uniform supporting surface.
2. Crane load ratings on outriggers are based on all outrigger beams being fully extended / retracted, or in the case of partial extension ratings mechanically pinned in the appropriated position, and the tires raised free of the supporting surface.

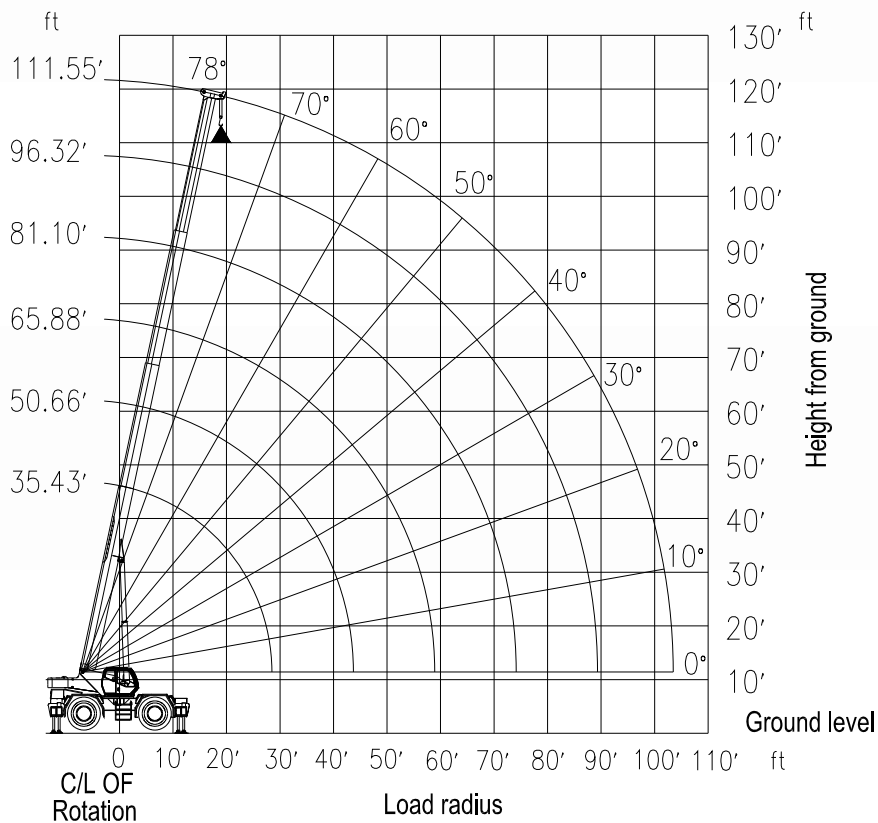
OPERATION

1. CRANE LOAD RATINGS MUST NOT BE EXCEEDED. NO ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
2. When either radius or boom length, or both, are between listed values, the smaller of the two listed load ratings shall be used.
3. EXTRA-CAUTION ZONE – Tipping can occur with some boom/jib combinations at radii within this area without any load on the hook.
4. The boom angles shown on the Lift Charts give an approximation of the operation radius for a specified boom length. The boom angle, before loading, should be greater to account for boom deflection. It may be necessary to retract the boom if maximum boom angle is insufficient to maintain rated radius.
5. Rated Loads include the weight of hook block, slings and auxiliary lifting devices. Their weights shall be subtracted from the listed rated load to obtain the net load that can be lifted. Rated lift ratings are based on correct reeving. Deductions must be made for excessive reeving. Any reeving over the minimum is considered excessive. Deduct for each foot of excessive wire rope before attempting to lift a load. See HOIST TACKLE CHART for rope information.
6. All telescopic sections must be extended synchronically.

BOOM DEFLECTIONS NOT SHOWN



BOOM DEFLECTIONS NOT SHOWN

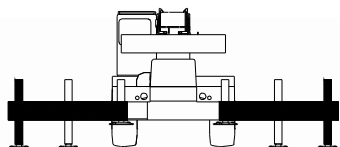


Lift Height on Outriggers Fully Extended

2.2 10 M JIB LIFTING CAPACITIES

USE THIS CHART ONLY WHEN ALL OUTRIGGERS ARE FULLY EXTENDED

USE THIS CHART ONLY WHEN JIB SECTION 2 IS NOT PULLED OUT FROM JIB SECTION 1



10 m jib lifting capacities - 360° (Lifting capacity unit: kg Working radius unit: mm)						
Derricking Angle (°)	0° Offset		20° Offset		40° Offset	
	Working Radius (mm)	360° (kg)	Working Radius (mm)	360° (kg)	Working Radius (mm)	360° (kg)
76	8645	5500	11471	2850	13695	1940
74	10129	5050	12909	2700	15057	1890
72	11598	4600	14329	2550	16398	1850
70	13050	4200	15729	2450	17716	1800
68	14484	3840	17107	2350	19011	1750
66	15898	3500	18462	2250	20280	1700
64	17290	3200	19792	2150	21522	1700
62	18659	2900	21096	2050	22735	1650
60	20002	2700	22371	1990	23918	1600
58	21319	2500	23617	1940	25069	1600
56	22607	2300	24832	1850	26187	1550
54	23865	2150	26013	1800	27271	1550
52	25092	1990	27161	1750	28320	1550
50	26285	1850	28273	1650	29331	1500
48	27445	1750	29349	1550	30304	1450
46	28568	1600	30386	1450	31238	1400
44	29654	1500	31384	1400	32132	1350
42	30702	1420	32341	1300	32984	1250
40	31709	1290	33256	1230	33793	1200
38	32676	1180	34128	1120	34558	1100

10 m jib lifting capacities - 360°						
(Lifting capacity unit: lb Working radius unit: ft)						
Derricking Angle (°)	0° Offset		20° Offset		40° Offset	
	Working Radius (ft)	360° (lb)	Working Radius (ft)	360° (lb)	Working Radius (ft)	360° (lb)
76	28	12100	37	6270	44	4290
74	33	11110	42	5940	49	4180
72	38	10120	47	5610	53	4070
70	42	9240	51	5390	58	3960
68	47	8470	56	5170	62	3850
66	52	7700	60	4950	66	3740
64	56	7040	64	4730	70	3740
62	61	6380	69	4510	74	3630
60	65	5940	73	4400	78	3520
58	69	5500	77	4290	82	3520
56	74	5060	81	4070	85	3410
54	78	4730	85	3960	89	3410
52	82	4400	89	3850	92	3410
50	86	4070	92	3630	96	3300
48	90	3850	96	3410	99	3190
46	93	3520	99	3190	102	3080
44	97	3300	102	3080	105	2970
42	100	3130	106	2860	108	2750
40	104	2850	109	2710	110	2640
38	107	2590	111	2480	113	2420

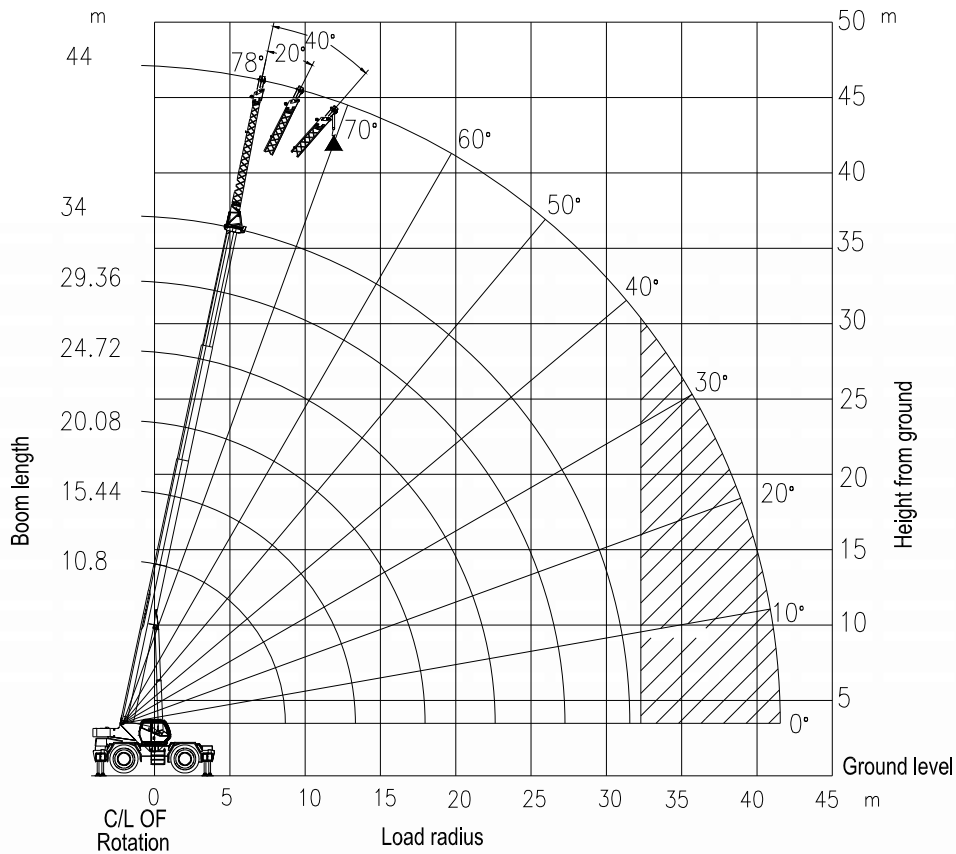
SET-UP

1. Crane load ratings are based on the crane being leveled and standing on a firm and uniform supporting surface.
2. Crane load ratings on outriggers are based on all outriggers beams being fully extended / retracted, or in the case of partial extension ratings mechanically pinned in the appropriate position, and the tires raised free of the supporting surface.

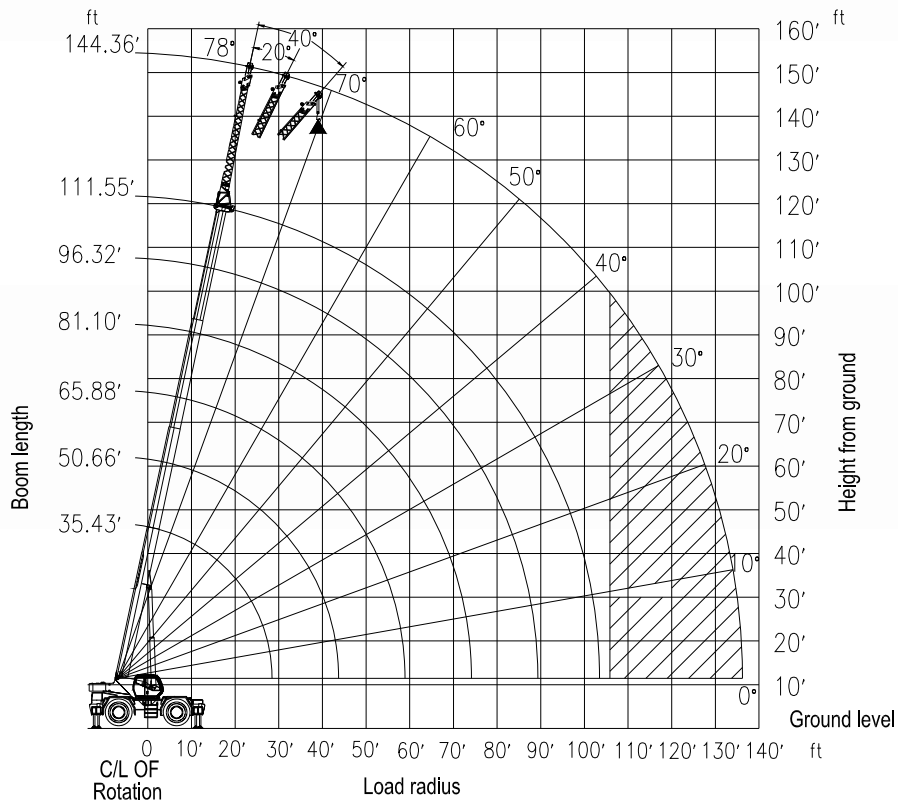
OPERATION

1. CRANE LOAD RATINGS MUST NOT BE EXCEEDED. NO ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
2. When either radius or boom length, or both, are between listed values, the smaller of the two listed load ratings shall be used.
3. EXTRA-CAUTION ZONE – Tipping can occur with some boom/jib combinations at radii within this area without any load on the hook.
4. The boom angles shown on the Lift Chart give an approximation of the operation radius for a specified boom length. The boom angle, before loading, should be greater to account for boom deflection. It may be necessary to retract the boom if maximum boom angle is insufficient to maintain rated radius.
5. Rated Loads include the weight of hook block, slings and auxiliary lifting devices. Their weights shall be subtracted from the listed rated load to obtain the net load that can be lifted. Rated lift ratings are based on correct reeving. Deductions must be made for excessive reeving. Any reeving over the minimum is considered excessive. Deduct for each foot of excessive wire rope before attempting to lift a load. See HOIST TACKLE CHART for rope information.
6. When lifting over the jib, the weight of any hook block, slings, and any auxiliary lifting devices at the boom head must be added to the load.
7. For all boom lengths less than the maximum with the jib erected, the rated loads are determined by boom angle only in the appropriate column.
8. For all boom lengths less than the listed boom length, the rated load is to be determined by boom angle.

BOOM DEFLECTIONS NOT SHOWN



BOOM DEFLECTIONS NOT SHOWN

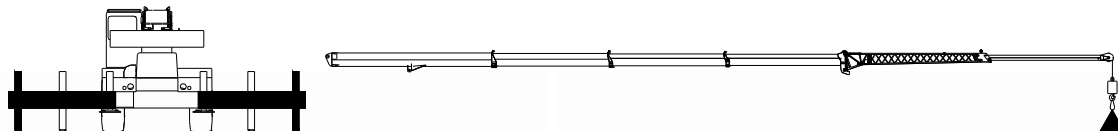


Lift Height on Jib Section 1 Erected

2.3 17 M JIB RATED LOADS

USE THIS CHART ONLY WHEN ALL OUTRIGGERS ARE FULLY EXTENDED

USE THIS CHART WHEN JIB SECTION 2 IS PULLED OUT FROM JIB SECTION 1



17 m jib rated loads - 360° (Rated load unit: kg Working radius unit: mm)						
Boom Angle (°)	0° Offset		20° Offset		40° Offset	
	Working Radius (mm)	360° (kg)	Working Radius (mm)	360° (kg)	Working Radius (mm)	360° (kg)
76	10338	3150	15384	1550	19357	1050
74	12058	2800	17022	1450	20858	990
72	13760	2550	18637	1400	22332	940
70	15444	2300	20227	1300	23777	940
68	17106	2150	21789	1250	25190	900
66	18744	1940	23323	1200	26569	900
64	20358	1850	24826	1150	27914	850
62	21944	1700	26296	1100	29223	850
60	23501	1600	27732	1050	30493	800
58	25027	1500	29131	990	31724	800
56	26520	1400	30493	940	32914	800
54	27978	1350	31815	940	34061	750
52	29400	1250	33096	900	35165	750
50	30784	1200	34334	850	36223	750
48	32127	1100	35527	850	37234	750
46	33429	990	36675	800	38198	750
44	34688	940	37776	800	39112	750
42	35902	850	38829	750	39977	700
40	37070	800	39831	700	40791	650
38	38190	750	40783	650	41552	650

17 m jib lifting capacities - 360°						
(Lifting capacity unit: lb Working radius unit: ft)						
Boom Angle (°)	0° Offset		20° Offset		40° Offset	
	Working Radius (ft)	360° (lb)	Working Radius (ft)	360° (lb)	Working Radius (ft)	360° (lb)
76	33	6930	50	3410	63	2310
74	39	6160	55	3190	68	2200
72	45	5610	61	3080	73	2090
70	50	5060	66	2860	78	2090
68	56	4730	71	2750	82	1980
66	61	4290	76	2640	87	1980
64	66	4070	81	2530	91	1870
62	71	3740	86	2420	95	1870
60	77	3520	90	2310	100	1760
58	82	3300	95	2200	104	1760
56	87	3080	100	2090	107	1760
54	91	2970	104	2090	111	1650
52	96	2750	108	1980	115	1650
50	100	2640	112	1870	118	1650
48	105	2420	116	1870	122	1650
46	109	2200	120	1760	125	1650
44	113	2090	123	1760	128	1650
42	117	1870	127	1650	131	1540
40	121	1760	130	1540	133	1430
38	125	1650	133	1430	136	1430

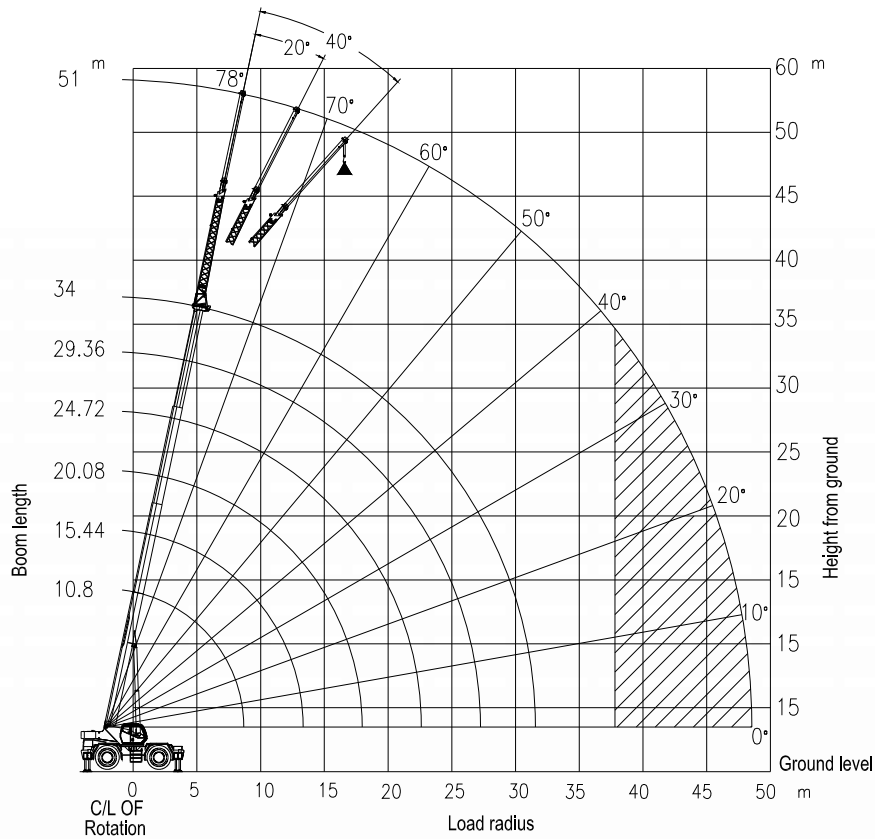
SET-UP

1. Crane load ratings are based on the crane being leveled and standing on a firm and uniform supporting surface.
2. Crane load ratings on outriggers are based on all outriggers beams being fully extended / retracted, or in the case of partial extension ratings mechanically pinned in the appropriate position, and the tires raised free of the supporting surface.

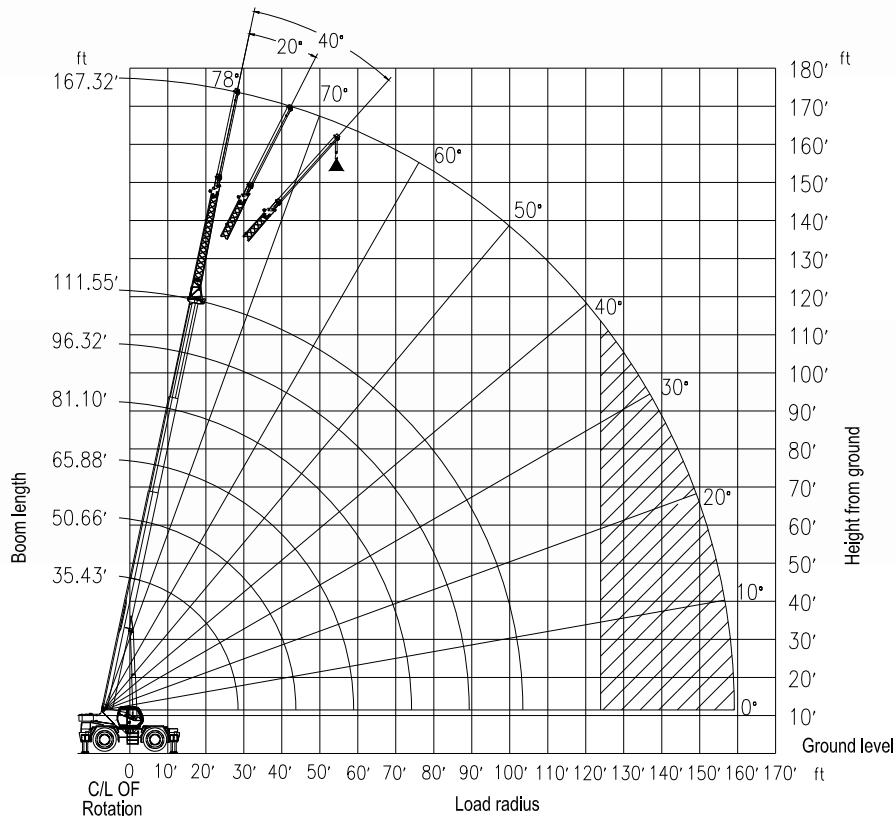
OPERATION

1. CRANE LOAD RATINGS MUST NOT BE EXCEEDED. NO ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
2. When either radius or boom length, or both, are between listed values, the smaller of the two listed load ratings shall be used.
3. EXTRA-CAUTION ZONE – Tipping can occur with some boom/jib combinations at radii within this area without any load on the hook.
4. The boom angles shown on the Lift Chart give an approximation of the operation radius for a specified boom length. The boom angle, before loading, should be greater to account for boom deflection. It may be necessary to retract the boom if maximum boom angle is insufficient to maintain rated radius.
5. Rated Loads include the weight of hook block, slings and auxiliary lifting devices. Their weights shall be subtracted from the listed rated load to obtain the net load that can be lifted. Rated lift ratings are based on correct reeving. Deductions must be made for excessive reeving. Any reeving over the minimum is considered excessive. Deduct for each foot of excessive wire rope before attempting to lift a load. See HOIST TACKLE CHART for rope information.
6. When lifting over the jib, the weight of any hook block, slings, and any auxiliary lifting devices at the boom head must be added to the load.
7. For all boom lengths less than the maximum with the jib erected, the rated loads are determined by boom angle only in the appropriate column.
8. For all boom lengths less than the listed boom length, the rated load is to be determined by boom angle.

BOOM DEFLECTIONS NOT SHOWN



BOOM DEFLECTIONS NOT SHOWN



Lift Height on Jib Section 2 Erected



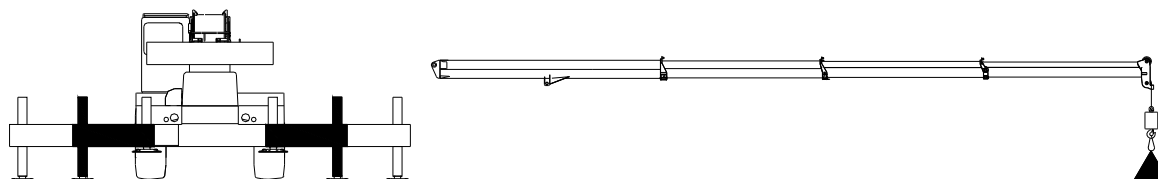
LOAD RATINGS FOR ROUGH TERRAIN CRANE

Chapter 3 Lifts with outrigger beams at mid-position



3.1 MAIN BOOM RATED LOADS

USE THIS CHART WHEN ALL OUTRIGGERS ARE PINNED IN THE MID-POSITION



Rated loads on outriggers pinned in mid-position - 360° (Rated load unit: kg)							
Working Radius (mm)	Boom Length (mm)						Working Radius (mm)
	10800	15440	20080	24720	29360	34000	
3000	51750	27200					3000
3500	45450	27200					3500
4000	40350	27200					4000
4500	36150	27200	26300				4500
5000	30380	27200	26300				5000
5500	24990	25610	25880				5500
6000	21110	21680	21930	20000			6000
6500	18180	18710	18950	19140			6500
7000	15870	16400	16630	16800			7000
7500	14010	14540	14760	14920	14900		7500
8000	12490	13000	13230	13380	13370		8000
8500	11230	11700	11940	12100	12080		8500
8830	10610						8830
9000		10610	10830	11000	10980	10560	9000
9500		9670	9890	10050	10030	10180	9500
10000		8850	9070	9220	9210	9360	10000
10500		8140	8350	8500	8500	8640	10500
11000		7510	7710	7860	7860	8000	11000
11500		6960	7150	7300	7300	7440	11500
12000		6460	6650	6790	6790	6930	12000
12500		6020	6190	6330	6340	6470	12500
13000		5630	5780	5920	5930	6060	13000
13461		5360					13461

Rated loads on outriggers pinned in mid-position - 360°
(Rated load unit: kg)

Working Radius (mm)	Boom Length (mm)						Working Radius (mm)
	10800	15440	20080	24720	29360	34000	
13500			5410	5550	5550	5680	13500
14000			5080	5200	5210	5340	14000
14500			4770	4890	4900	5030	14500
15000			4480	4600	4610	4740	15000
15500			4220	4340	4350	4470	15500
16000			3980	4090	4100	4220	16000
16500			3760	3860	3880	3990	16500
17000			3560	3650	3660	3780	17000
17500			3380	3460	3470	3580	17500
18000			3220	3270	3280	3390	18000
18096			3230				18096
18500				3100	3110	3220	18500
19000				2940	2950	3060	19000
19500				2790	2800	2900	19500
20000				2650	2650	2760	20000
20500				2520	2520	2620	20500
21000				2390	2390	2490	21000
21500				2280	2270	2370	21500
22000				2180	2160	2250	22000
22500				2080	2060	2140	22500
22733				2070			22733
23000					1950	2040	23000
23500					1860	1940	23500

Rated loads on outriggers pinned in mid-position - 360° (Rated load unit: lb)							
Working Radius (ft)	Boom Length (ft)						Working Radius (ft)
	35	51	66	81	96	112	
10	112530	60200					10
12	96360	60200					12
15	78320	60200	58190				15
20	46530	48300	49350	40810			20
25	30540	32020	32890	33590	31350		25
28	23520						28
30		23140	23900	24520	24720	23280	30
35		17560	18250	18810	18990	19510	35
40		13770	14370	14880	15050	15530	40
44		11600					44
45			11550	12020	12180	12630	45
50			9420	9840	10000	10420	50
55			7770	8140	8280	8680	55
59			6740				59
60				6770	6900	7280	60
65				5650	5770	6120	65
70				4740	4830	5160	70
74				4120			74
75					4040	4340	75
80					3370	3630	80
85					2810	3030	85
89					2440		89
90						2500	90

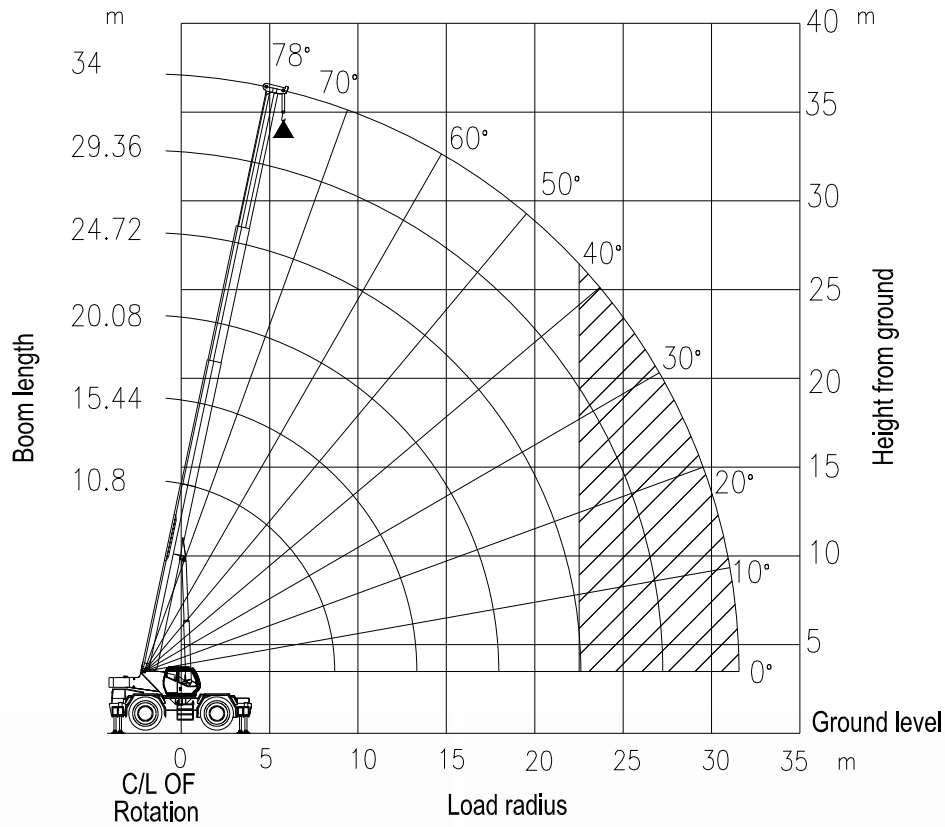
SET-UP

1. Crane load ratings are based on the crane being leveled and standing on a firm and uniform supporting surface.
2. Crane load ratings on outriggers are based on all outrigger beams being fully extended / retracted, or partial extension ratings mechanically pinned in the appropriated position, and the tyres raised free of the supporting surface.

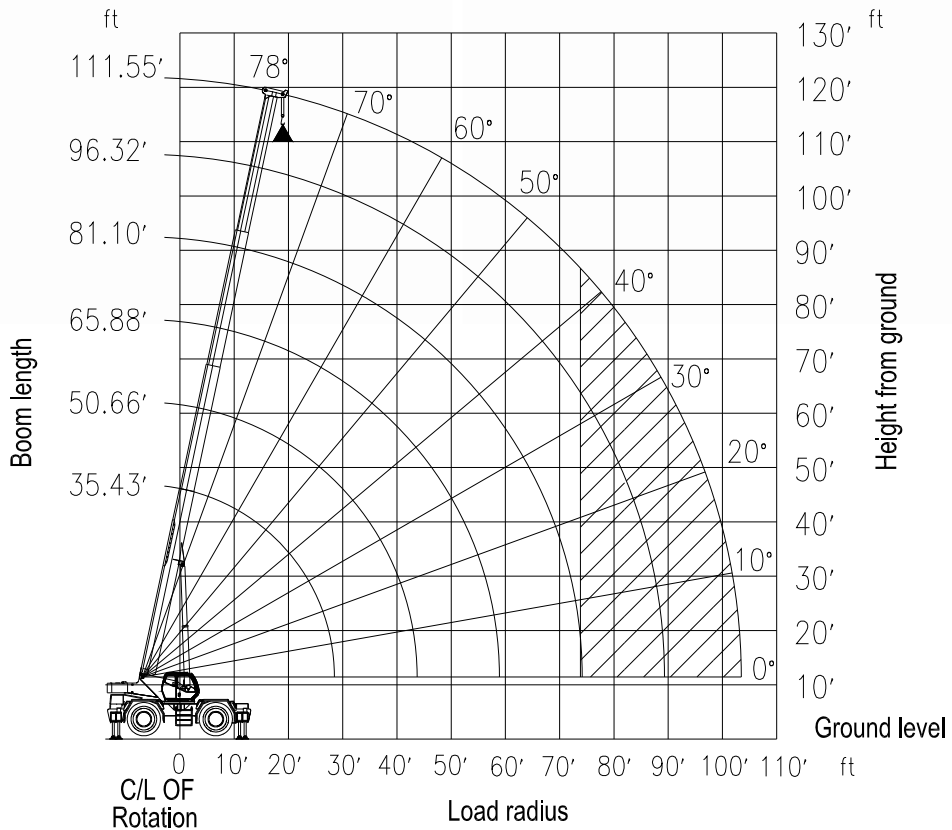
OPERATION

1. CRANE LOAD RATINGS MUST NOT BE EXCEEDED. NO ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
2. When either radius or boom length, or both, are between listed values, the smaller of the two listed load ratings shall be used.
3. EXTRA-CAUTION ZONE – Tipping can occur with some boom/jib combinations at radii within this area without any load on the hook.
4. The boom angles shown on the Lift Charts give an approximation of the operation radius for a specified boom length. The boom angle, before loading, should be greater to account for boom deflection. It may be necessary to retract the boom if maximum boom angle is insufficient to maintain rated radius.
5. Rated Loads include the weight of hook block, slings and auxiliary lifting devices. Their weights shall be subtracted from the listed rated load to obtain the net load that can be lifted. Rated lifting capacities are based on correct reeving. Deductions must be made for excessive reeving. Any reeving over the minimum is considered excessive. Deduct for each foot of excessive wire rope before attempting to lift a load. See HOIST TACKLE CHART for rope information.
6. All telescopic sections must be extended synchronously.

BOOM DEFLECTIONS NOT SHOWN



BOOM DEFLECTIONS NOT SHOWN



Lift Height on Outriggers Pinned in the Mid-position



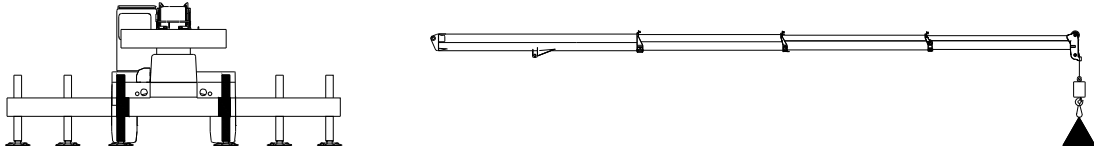
LOAD RATINGS FOR ROUGH TERRAIN CRANE

Chapter 4 Lifts with outrigger beams
fully retracted



4.1 MAIN BOOM RATED LOADS

USE THIS CHART WHEN ALL OUTRIGGERS ARE FULLY RETRACTED



Rated loads on outriggers are fully retracted - 360° (Rated load unit: kg)							
Working Radius (mm)	Boom Length (mm)						Working Radius (mm)
	10800	15440	20080	24720	29360	34000	
3000	33990	27200					3000
3500	25270	25920					3500
4000	19890	20470					4000
4500	16240	16770	16980				4500
5000	13570	14090	14290				5000
5500	11540	12050	12260				5500
6000	9950	10440	10650	10820			6000
6500	8670	9140	9350	9510			6500
7000	7620	8080	8290	8440			7000
7500	6750	7190	7400	7540	7520		7500
8000	6020	6440	6640	6780	6770		8000
8500	5390	5800	5990	6130	6120		8500
8830	5090						8830
9000		5240	5430	5570	5560	5690	9000
9500		4750	4940	5080	5070	5200	9500
10000		4320	4500	4640	4630	4760	10000
10500		3930	4120	4250	4250	4370	10500
11000		3590	3770	3900	3900	4030	11000
11500		3290	3460	3590	3590	3710	11500
12000		3010	3180	3310	3310	3430	12000
12500		2770	2920	3050	3060	3180	12500
13000		2550	2690	2820	2820	2940	13000
13461		2420					13461
13500			2480	2600	2610	2730	13500
14000			2290	2400	2410	2530	14000
14500			2110	2220	2230	2350	14500
15000			1940	2050	2060	2180	15000

Rated loads on outriggers are fully retracted - 360° (Rated load unit: lb)							
Working Radius (ft)	Boom Length (ft)						Working Radius (ft)
	35	51	66	81	96	112	
10	76010	60200					10
12	53440	55340					12
15	35750	37370	38340				15
20	21540	22910	23720	24380			20
25	14310	15530	16260	16840	17020		25
28	10850						28
30		11070	11730	12270	12440	12930	30
35		8100	8700	9200	9360	9820	35
40		6000	6540	7000	7160	7590	40
44		4820					44
45			4930	5350	5500	5910	45
50			3680	4070	4220	4610	50
55			2720	3050	3190	3560	55

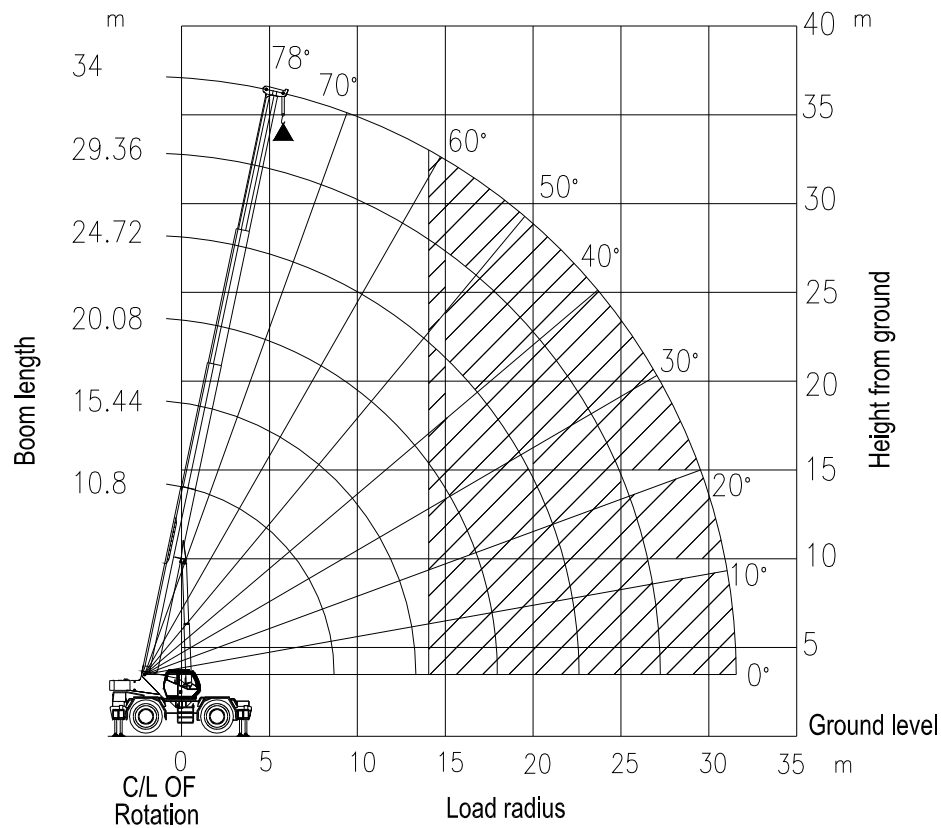
SET-UP

1. Crane load ratings are based on the crane being leveled and standing on a firm and uniform supporting surface.
2. Crane load ratings on outriggers are based on all outrigger beams being fully extended / retracted, or partial extension ratings mechanically pinned in the appropriated position, and the tyres raised free of the supporting surface.

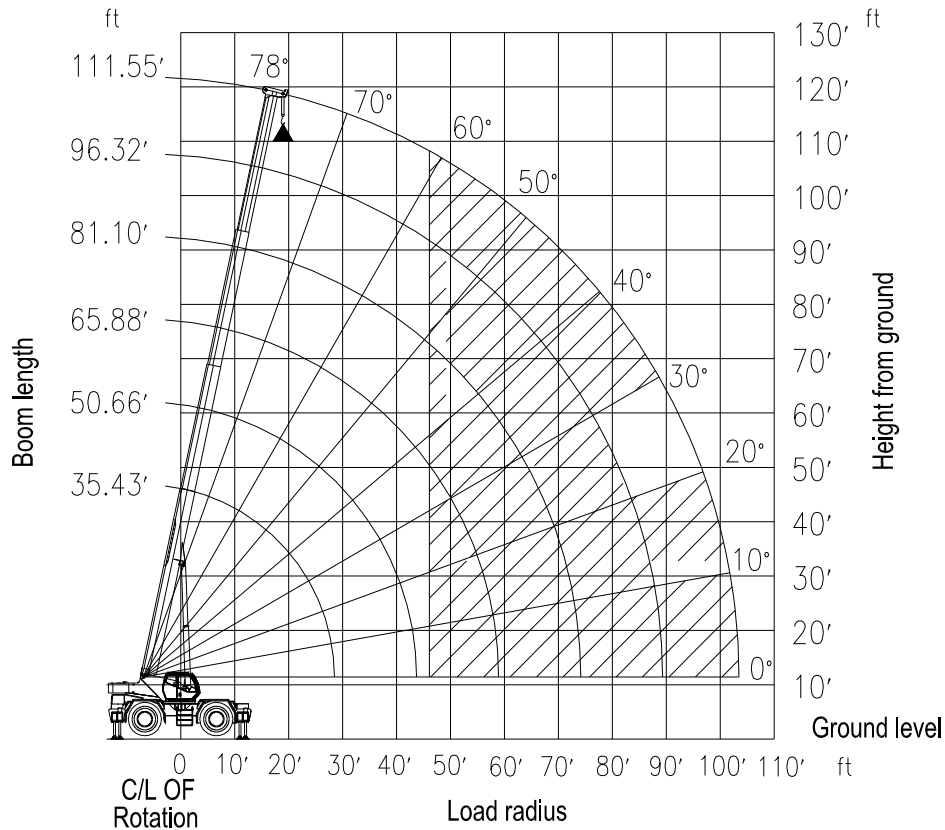
OPERATION

1. CRANE LOAD RATINGS MUST NOT BE EXCEEDED. NO ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
2. When either radius or boom length, or both, are between listed values, the smaller of the two listed load ratings shall be used.
3. EXTRA-CAUTION ZONE – Tipping can occur with some boom/jib combinations at radii within this area without any load on the hook.
4. The boom angles shown on the Lift Charts give an approximation of the operation radius for a specified boom length. The boom angle, before loading, should be greater to account for boom deflection. It may be necessary to retract the boom if maximum boom angle is insufficient to maintain rated radius.
5. Rated Loads include the weight of hook block, slings and auxiliary lifting devices. Their weights shall be subtracted from the listed rated load to obtain the net load that can be lifted. Rated lifting capacities are based on correct reeving. Deductions must be made for excessive reeving. Any reeving over the minimum is considered excessive. Deduct for each foot of excessive wire rope before attempting to lift a load. See HOIST TACKLE CHART for rope information.
6. All telescopic sections must be extended synchronously.

BOOM DEFLECTIONS NOT SHOWN



BOOM DEFLECTIONS NOT SHOWN

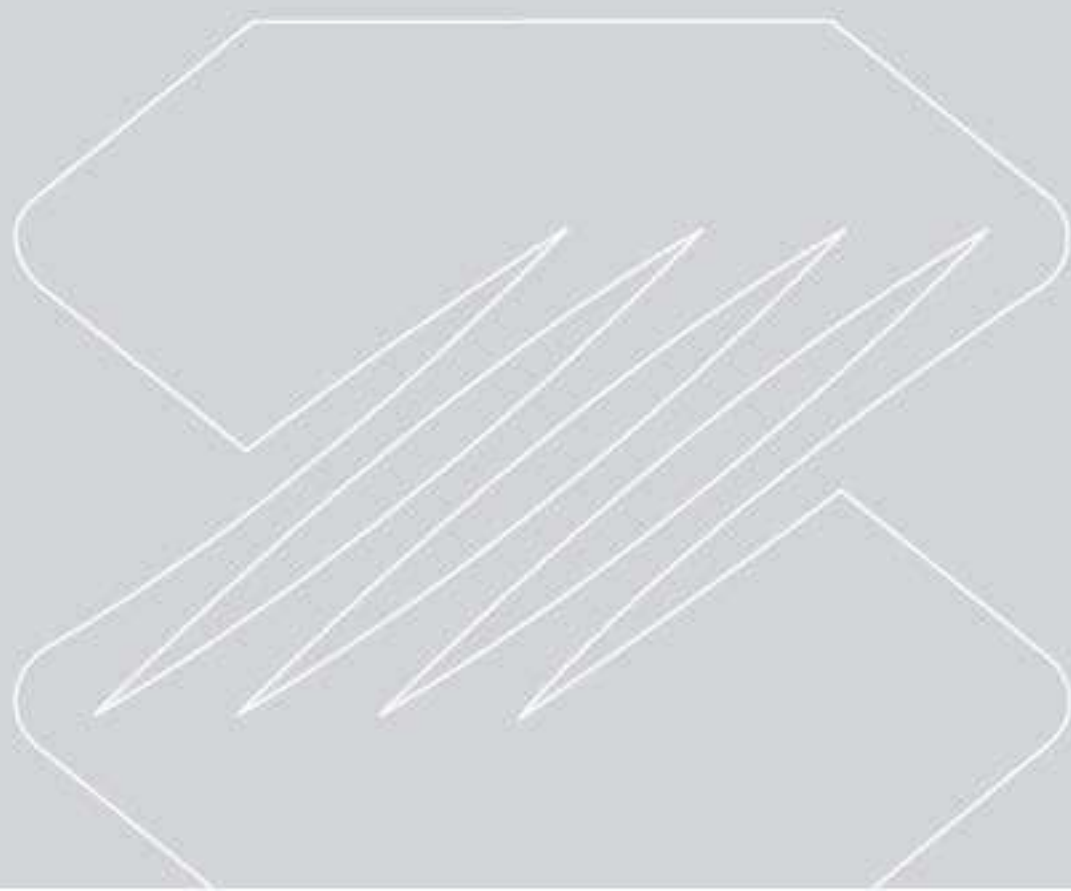


Lift Height on Outriggers Fully Retracted

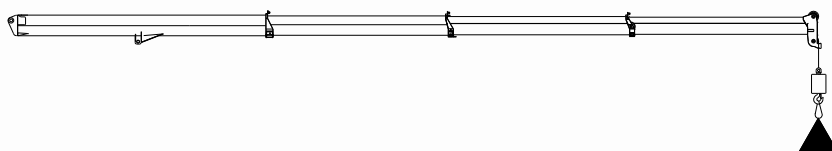


LOAD RATINGS FOR ROUGH TERRAIN CRANE

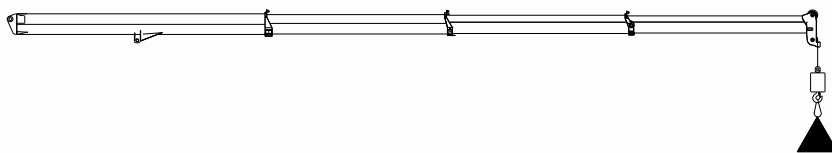
Chapter 5 Lifts on tires



5.1 MAIN BOOM RATED LOADS



Rated loads on tires (Rated load unit: kg)								
Boom Length of 10800 mm					Boom Length of 15440 mm			
Working Radius (mm)	Boom Angle (°)	360 (°)	Stationary over Front	Pick & Carry	Boom Angle (°)	360 (°)	Stationary over Front	Pick & Carry
3000	66.82	17360	27250	20200	74.15	17900	27520	20600
3500	63.79	14830	24200	17830	72.18	15360	24650	18250
4000	60.67	12800	21710	15890	70.18	13300	22150	16350
4500	57.43	11150	19580	14260	68.16	11700	20040	14710
5000	54.05	9790	17780	12850	66.10	10290	18210	13330
5500	50.48	8670	16220	11700	64.00	9140	16690	12120
6000	46.69	7670	14920	10640	61.86	8160	15350	11070
6500	42.61	6850	13560	9690	59.67	7320	14160	10140
7000	38.11	6110	11890	8920	57.42	6600	12460	9330
7500	33.01	5320	10520	8200	55.11	5850	11060	8630
8000	26.90	4620	9380	7510	52.72	5130	9900	7970
8500	18.51	4020	8420	6960	50.24	4500	8920	7390
9000	0	3720	7940	6690	47.66	3960	8080	6850
9500					44.96	3490	7350	6330
10000					42.11	3070	6710	5690
10500					39.07	2700	6160	5130
11000					35.79	2370	5660	4640
11500					32.19	2080	5220	4200
12000					28.13	1810	4830	3810
12500					23.33	1570	4470	3460
13000					17.05	1360	4160	3150
13500					0	1240	3940	2940

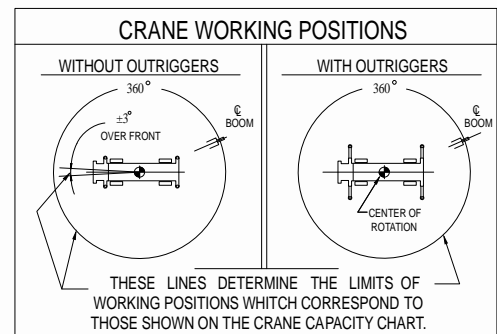


Rated loads on tires (Rated load unit: kg)								
Boom Length of 20080 mm					Boom Length of 24720 mm			
Working Radius (mm)	Boom Angle (°)	360 (°)	Stationary over Front	Pick & Carry	Boom Angle (°)	360 (°)	Stationary over Front	Pick & Carry
3000	77.91							
3500	76.44							
4000	74.95							
4500	73.45	11970	20280	14950				
5000	71.93	10630	18500	13570				
5500	70.41	9460	16950	12370				
6000	68.86	8460	15580	11350	73.02	8750	15790	11560
6500	67.30	7610	14420	10390	71.79	7890	14610	10640
7000	65.71	6880	12800	9620	70.55	7150	13070	9800
7500	64.11	6170	11390	8860	69.30	6420	11650	9080
8000	62.48	5430	10210	8230	68.04	5680	10460	8440
8500	60.82	4800	9220	7640	66.77	5040	9460	7840
9000	59.13	4250	8370	7090	65.48	4490	8600	7330
9500	57.41	3770	7630	6600	64.18	4000	7860	6830
10000	55.66	3350	6980	5960	62.86	3570	7210	6180
10500	53.86	2970	6420	5390	61.53	3190	6630	5610
11000	52.01	2630	5910	4890	60.18	2840	6120	5100
11500	50.12	2320	5460	4440	58.81	2530	5660	4640
12000	48.16	2050	5060	4030	57.41	2250	5250	4230
12500	46.14	1800	4690	3670	56.00	2000	4880	3860
13000	44.04	1570	4360	3340	54.55	1760	4550	3530
13500	41.85	1360	4060	3040	53.08	1550	4240	3220
14000	39.55	1170	3780	2760	51.58	1350	3960	2940
14500	37.13		3530	2510	50.04	1170	3700	2680
15000	34.55		3300	2280	48.47		3460	2440
15500	31.77		3080	2060	46.85		3240	2220
16000	28.72		2880	1870	45.19		3040	2020
16500	25.31		2700	1690	43.47		2850	1830
17000	21.33		2540	1520	41.70		2670	1650
17500	16.31		2380	1370	39.85		2500	1490
18000	7.94		2250	1250	37.93		2350	1330
18500	0		2250	1250	35.91		2210	1190

Rated loads on tires (Rated load unit: lb)								
Boom Length of 35 ft					Boom Length of 51 ft			
Working Radius (ft)	Boom Angle (°)	360 (°)	Stationary over Front	Pick & Carry	Boom Angle (°)	360 (°)	Stationary over Front	Pick & Carry
10	66.54	37620	59290	43890	73.97	38720	60170	44770
12	62.82	31160	51470	37880	71.56	32270	52360	38720
15	56.96	24080	42530	30930	67.87	25260	43510	31900
20	45.94	16540	32280	23000	61.45	17610	33220	23920
25	31.66	11320	22500	17620	54.54	12470	23680	18570
30	0	8200	17480	14720	46.90	8410	17290	14820
35					38.00	5700	13170	10920
40					26.40	3790	10310	8080
45					0	2720	8680	6470
Boom Length of 66 ft					Boom Length of 81 ft			
Working Radius (ft)	Boom Angle (°)	360 (°)	Stationary over Front	Pick & Carry	Working Radius (ft)	Boom Angle (°)	360 (°)	Stationary over Front
10								
12								
15	73.24	25950	44020	32410				
20	68.57	18270	33820	24520	72.78	18790	34270	24980
25	63.72	13160	24390	19160	69.00	13720	24960	19630
30	58.65	9040	17920	15330	65.11	9560	18430	15740
35	53.25	6270	13730	11480	61.08	6750	14200	11950
40	47.40	4290	10810	8560	56.87	4740	11240	9000
45	40.88	2810	8660	6420	52.44	3220	9060	6810
50	33.25	1670	7030	4790	47.70	2040	7380	5140
55	23.30		5750	3520	42.54	1110	6060	3820
60			4970	2760	36.78		4990	2760
65					30.02		4120	1890

SET-UP

1. Crane load ratings are based on the crane being leveled and standing on a firm and uniform supporting surface.
2. Crane load ratings on tires depend on appropriate inflation pressure and tire condition. Caution must be exercised when increasing air pressures in tires. Consult *Operator's Manual* for precautions.
3. Use of jib is not permitted for pick-and-carry operations.



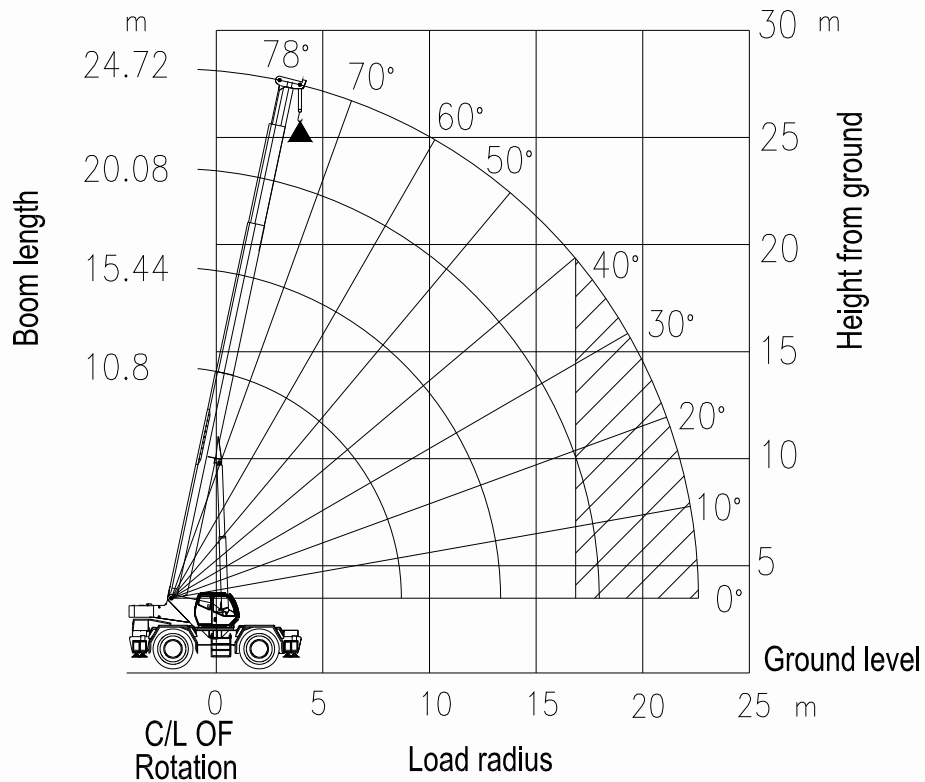
SET-UP

1. For pick-and-carry operations, boom must be centered over the front of the crane with swing and brake lock engaged. Use minimum boom point height and keep load close to ground surface. Travel must be on smooth level surface.
2. The load should be restrained from swinging. No on tire operation with jib erected.

OPERATION

1. CRANE LOAD RATINGS MUST NOT BE EXCEEDED. NO ATTEMPT TO TIP THE CRANE TO DETERMINE ALLOWABLE LOADS.
2. When radius is between listed values, the smaller of the two listed load ratings shall be used;
3. Do not operate at longer radii than those listed on the applicable *Lift Chart* as tipping can occur without a load on the hook.
4. All telescopic sections must be extended synchronously.
5. Without outriggers, never maneuver the boom beyond listed load radii for applicable tires used to ensure stability.
6. Creep speed is crane movement of less than 61 m (200ft) in 30-minutes period and not exceeding 1.6 KM/H (1MPH).

BOOM DEFLECTIONS NOT SHOWN



BOOM DEFLECTIONS NOT SHOWN

