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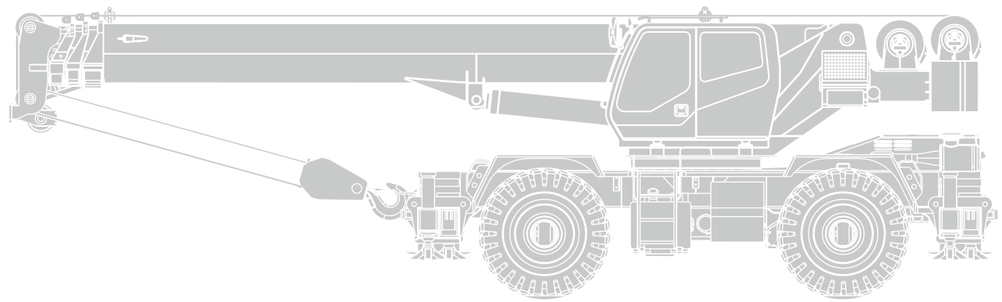
LOAD CHART MANUAL FOR RT60 ROUGH TERRAIN CRANE



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RT60 ROUGH TERRAIN CRANE

LOAD RATINGS

Edition 1

Dec. 2013

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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:

Danger

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

Warning

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

Caution

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

Attention

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

Note

Refers to a tip or hint in the operation instructions.

Important

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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Chapter 1 Informational data

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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)	6000	12000	18000	24000	30000	36000	42000	48000	54000	60000
MAXIMUM PERMISSIBLE HOIST LINE LOAD (LBS)	13230	26455	39680	52910	66140	79365	92595	105820	119050	132280

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

Weight: 173 Kg/100m (1.16LBS/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 1.6 Km/h（1 MPH）**	**TRAVEL**
26.50-25-32PR	580 kpa（85 PSI）	580 kpa（85 PSI）	450 kpa（65 PSI）

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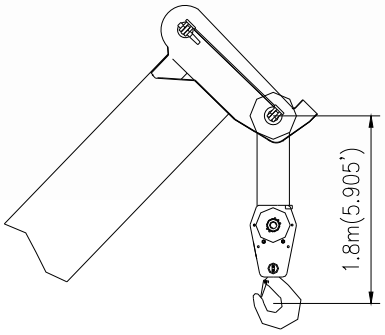
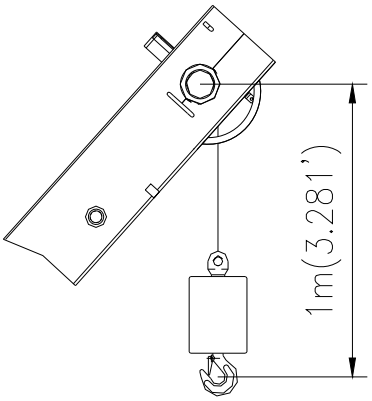
1.3 WEIGHTS

Table 01 – 3 Weights

HOOK BLOCK WEIGHTS	DIMENSIONS ARE FOR MAIN HOOK AND AUXILIARY HOOK.
Main hook weight: 650 kg（1433 LBS）	
Auxiliary hook weight: 120 kg（265 LBS）	

MACHINE EQUIPMENT

1. COUNTERWEIGHT: 7000 kg（15432 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 11.4 m(37.4 ft) retracted to 43 m(141 ft) extended
4. Crane height 3.75 m(12 ft-3.5 in),length 13.66 m(43ft-9.8 in), width 3.3 m(10ft-10in), wheelbase 3.95 m(12 ft-11.5 in)

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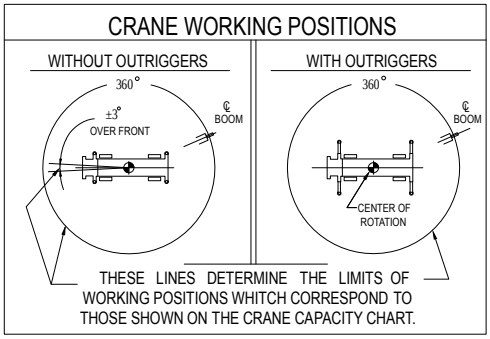
⚠ WARNING

1.4 GENERAL

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.
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* and *Maintenance and Service Manual* supplied with this machine. If these manuals are missing, order replacements from the manufacturer through your distributor.
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* .
4. This crane and its load ratings are in accordance with ASME/ANSI B30.5. .

1.5 DEFINITIONS

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.
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.
3. WORKING AREA – Areas measured in a circular arc about the centerline of rotation as shown in the diagram.
4. FREELY SUSPENDED LOAD – Load hanging free with no direct external force applied except by the hoist rope.



5. Side load – Horizontal force applied to the lifted load either on the ground or in the air.
6. EXTRA-CAUTION ZONE – Tipping can occur with some boom/jib combinations at radii within this area without any load on the hook.
7. BOOM SIDE OF CRANE – The side of the crane over which the boom is positioned when in an OVER SIDE working position.

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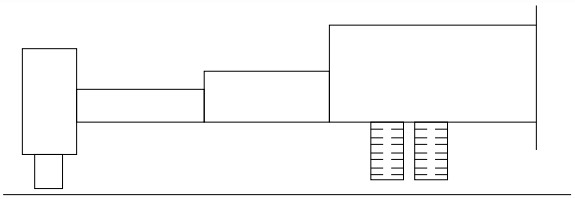
WARNING

1.6 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 appropriate position, and the tires raised free of the supporting surface.



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* or *Maintenance and Service Manual* for precautions.
4. Consult appropriate section of the *Operator's Manual* for more exact description of hoist line reeving.
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.
6. Properly maintained wire rope is essential for safe crane operation. Consult *Maintenance and Service Manual* for proper maintenance and inspection requirements.
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.

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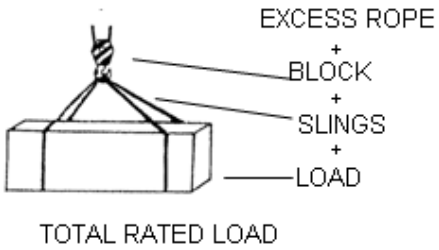
1.7 OPERATION

1. CRANE LOAD RATINGS MUST NOT BE EXCEEDED. DO NOT 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. 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.
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.
5. All telescopic sections must be extended synchronically.

⚠ WARNING

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.



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.

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.

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)).

7. Rated loads do not exceed 85% on outriggers or 75% on tires, of the tipping load as determined by ASME/ANSI B30.5.
8. Rated loads are based on freely suspended loads. No attempt shall be made to drag a load horizontally on the ground in any direction.

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9. 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.
10. Load ratings are dependent upon the crane being maintained according to manufacturer's specifications.
11. It is recommended that load handling devices, including hooks, and hook blocks, be kept away from boom head at all times.

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LOAD RATINGS FOR ROUGH TERRAIN CRANE

Chapter 2 Lifts with outrigger beams fully extended

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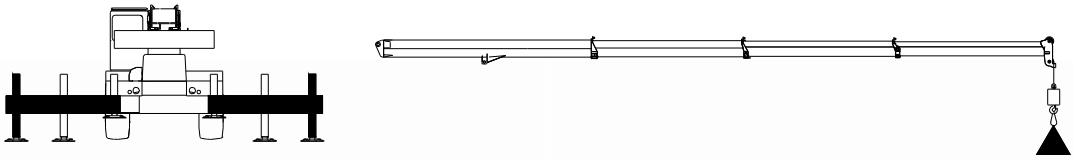
2.1 MAIN BOOM RATED LOADS

USE THIS CHART ONLY WHEN ALL OUTRIGGERS ARE FULLY EXTENDED



Rated loads on outriggers fully extended - 360°
(Rated load unit: kg)

BOOM LENGTH (MM)	11400		15350		19300		27200		35100		43000	
LOAD RADIUS (MM)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)
2800	70.1	60000										
3000	68.5	55000	74.3	45000	77.6	35000						
3500	65.7	51150	72.3	45000	76.1	35000						
4000	62.8	47150	70.3	42690	74.5	35000						
4500	59.8	42800	68.3	39890	73.0	32950						
5000	56.7	39100	66.2	37440	71.4	30950	76.9	20590				
5500	53.4	35900	64.1	35240	69.8	29150	75.9	20590				
6000	50.0	33080	61.9	32690	68.1	27550	74.8	20590				
6500	46.4	30650	59.7	30240	66.5	26100	73.7	19640	77.4	13590		
7000	42.5	28460	57.5	28040	64.8	24800	72.5	18790	76.6	13590		
7500	38.2	26560	55.1	26150	63.2	23600	71.4	18040	75.7	13590		
8000	33.4	24000	52.7	23340	61.4	22500	70.3	17340	74.9	13590	77.7	9190
9000	20.2	18960	47.6	18390	57.9	17960	68.0	16040	73.2	12840	76.4	9190
9433	0	16160										
10000			42.0	14950	54.2	14510	65.7	14890	71.5	12090	75.0	8690
11000			35.6	12360	50.3	11950	63.3	13040	69.7	11490	73.6	8190
12000			27.7	10370	46.2	10000	60.9	11050	67.9	10840	72.2	7740
13375			0	8280								
14000					36.7	7200	55.8	8200	64.3	8630	69.3	7040
16000					23.9	5280	50.4	6260	60.6	6680	66.4	6390
17320					0	4300						
18000							44.6	4850	56.7	5270	63.5	5490
20000							37.9	3780	52.6	4200	60.4	4430
22000							30.0	2940	48.3	3360	57.3	3590
24000							19.0	2260	43.7	2690	54.0	2910
26000									38.5	2130	50.6	2360
28000									32.7	1670	46.9	1900
30000									25.7	1280	43.1	1510
32000									15.9	940	38.9	1170

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Lifts with outrigger beams fully extended

Rated loads on outriggers fully extended - 360°
(Rated load unit: lb)

BOOM LENGTH (ft))	37.4ft		50.4ft		63.3ft		89.2ft		115.2ft		141.1ft	
LOAD RADIUS (ft))	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)
9	70.2	132280										
10	68.2	121000	74.1	99200	77.5	77160						
12	64.8	109780	71.7	98550	75.6	77160						
15	59.3	92950	68.0	86890	72.7	71830	77.9	45390				
20	49.3	71740	61.5	70830	67.8	59950	74.5	44870				
25	37.1	57400	54.5	56530	62.7	51260	71.2	39260	75.5	29960		
30	17.3	45510	46.8	44130	57.4	43070	67.7	34860	72.9	28040	76.2	20120
30.95	0	35600										
35			37.8	32540	51.6	31520	64.1	31340	70.3	25730	74.0	18360
40			25.9	24890	45.3	23990	60.4	26550	67.6	23530	71.9	16930
43.88			0	20560								
45					38.2	18680	56.6	21160	64.8	21660	69.7	15610
50					29.4	14740	52.5	17160	62.0	18210	67.5	14510
55					16.4	11680	48.3	14080	59.1	15130	65.3	13630
56.82					0	10730						
60							43.7	11630	56.1	12670	63.0	12750
65							38.6	9630	53.0	10680	60.7	11220
70							32.8	7970	49.8	9020	58.3	9570
75							25.9	6570	46.4	7630	55.9	8170
80							16.0	5380	42.7	6440	53.3	6990
85									38.8	5410	50.7	5960
90									34.5	4510	48.0	5070
95									29.6	3720	45.1	4280
100									23.8	3030	42.1	3590
105									15.9	2410	38.9	2970
110											35.5	2410

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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.

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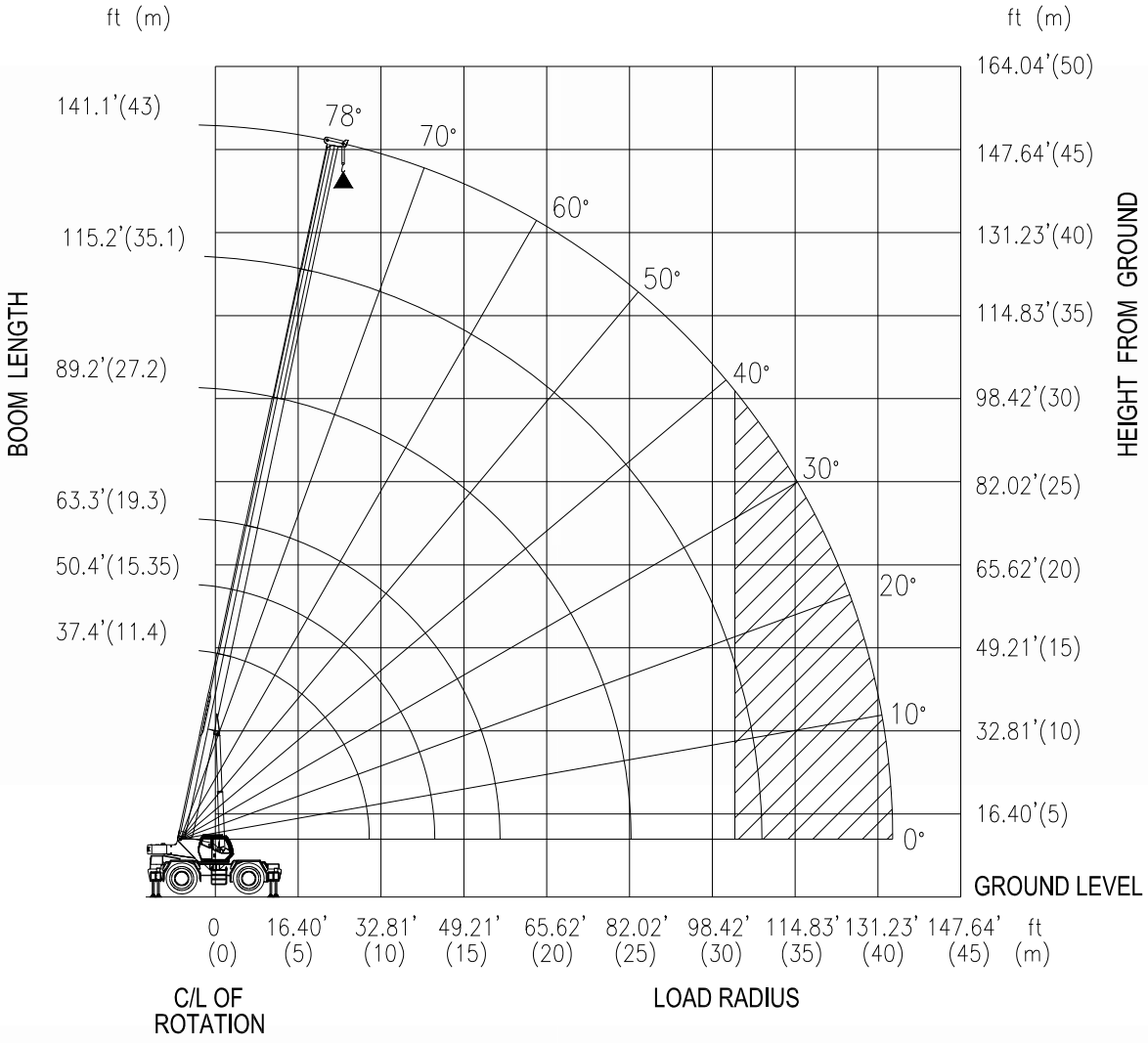
Lifts with outrigger beams fully extended

BOOM DEFLECTIONS NOT SHOWN



Lift Height on Outriggers Fully Extended

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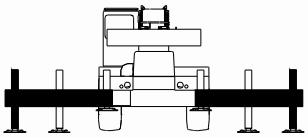
2.2 10 M JIB RATED LOADS

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



Rated loads on outriggers fully extended - 360° (Rated load unit: Kg)								
0° OFFSET			20° OFFSET			40° OFFSET		
BOOM ANGLE (°)	LOAD RADIUS (MM)	360° (KG)	BOOM ANGLE (°)	LOAD RADIUS (MM)	360° (KG)	BOOM ANGLE (°)	LOAD RADIUS (MM)	360° (KG)
78	9020	5140	78	11887	2840	78	14186	2090
76	10823	4740	76	13648	2740	76	15873	2040
74	12610	4390	74	15389	2640	74	17538	1990
72	14379	4090	72	17110	2540	72	19179	1940
70	16128	3840	70	18807	2440	70	20795	1890
68	17856	3640	68	20478	2340	68	22382	1840
66	19559	3440	66	22123	2290	66	23940	1840
64	21235	3240	64	23738	2240	64	25467	1790
62	22884	3090	62	25321	2140	62	26960	1790
60	24502	2940	60	26871	2090	60	28418	1740
58	26088	2540	58	28386	2040	58	29838	1740
56	27640	2190	56	29864	1990	56	31220	1740
54	29155	1890	54	31304	1740	54	32561	1650
52	30633	1630	52	32702	1510	52	33861	1440
50	32071	1400	50	34059	1310	50	35116	1250
48	33467	1200	48	35371	1130	48	36327	1080
46	34820	1030	46	36638	970	46	37490	930
44	36128	870	44	37858	820	44	38606	790

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Lifts with outrigger beams fully extended

Rated loads on outriggers fully extended - 360° (Rated load unit: lb)								
0° OFFSET			20° OFFSET			40° OFFSET		
BOOM ANGLE (°)	LOAD RADIUS (ft)	360° (lb)	BOOM ANGLE (°)	LOAD RADIUS (ft)	360° (lb)	BOOM ANGLE (°)	LOAD RADIUS (ft)	360° (lb)
78	29.59	11330	78	39.00	6260	78	46.54	4600
76	35.51	10440	76	44.78	6040	76	52.08	4490
74	41.37	9670	74	50.49	5820	74	57.54	4380
72	47.18	9010	72	56.14	5590	72	62.92	4270
70	52.91	8460	70	61.70	5370	70	68.23	4160
68	58.58	8020	68	67.19	5150	68	73.43	4050
66	64.17	7580	66	72.58	5040	66	78.54	4050
64	69.67	7140	64	77.88	4930	64	83.55	3940
62	75.08	6810	62	83.07	4710	62	88.45	3940
60	80.39	6480	60	88.16	4600	60	93.23	3830
58	85.59	5590	58	93.13	4490	58	97.89	3830
56	90.68	4820	56	97.98	4380	56	102.43	3830
54	95.65	4160	54	102.70	3830	54	106.83	3630
52	100.50	3590	52	107.29	3320	52	111.09	3170
50	105.22	3080	50	111.74	2880	50	115.21	2750
48	109.80	2640	48	116.05	2490	48	119.18	2380
46	114.24	2270	46	120.20	2130	46	123.00	2050
44	118.53	1910	44	124.21	1800	44	126.66	1740

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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.

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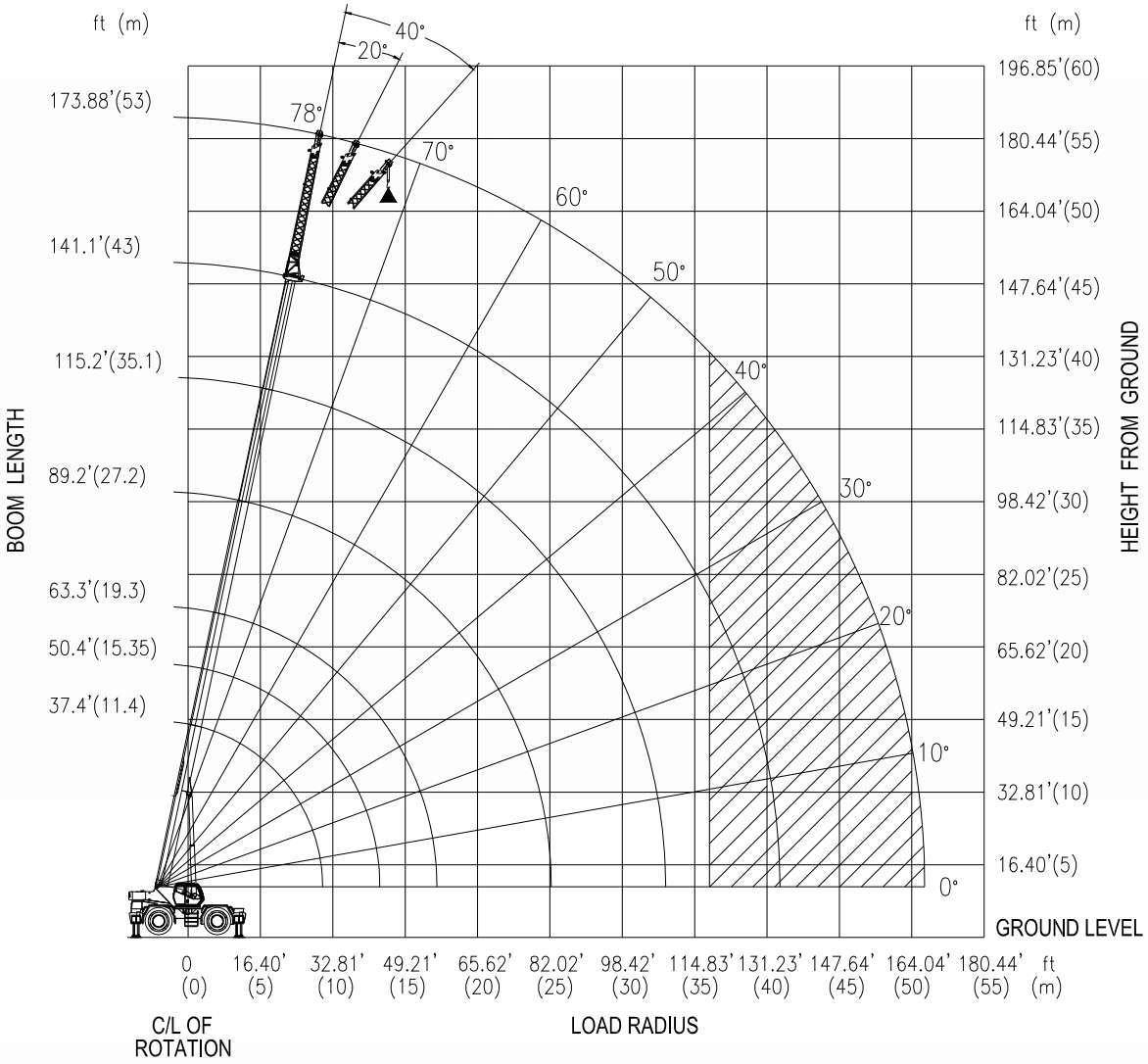
Lifts with outrigger beams fully extended

BOOM DEFLECTIONS NOT SHOWN



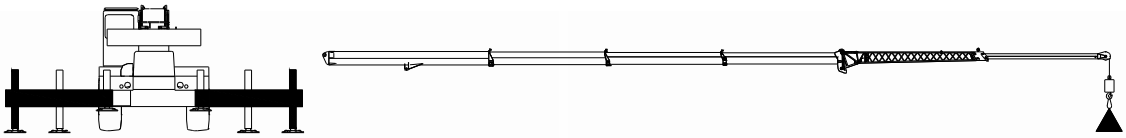
Lift Height on Jib Section 1 Erected

https://truckmanualshub.com/

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



Rated loads on outriggers fully extended - 360°
(Rated load unit: Kg)

0° OFFSET			20° OFFSET			40° OFFSET		
BOOM ANGLE (°)	LOAD RADIUS (MM)	360° (KG)	BOOM ANGLE (°)	LOAD RADIUS (MM)	360° (KG)	BOOM ANGLE (°)	LOAD RADIUS (MM)	360° (KG)
78	10475	2640	78	15596	1390	78	19700	1040
76	12516	2390	76	17561	1340	76	21534	990
74	14539	2240	74	19503	1290	74	23339	990
72	16541	2090	72	21418	1240	72	25114	940
70	18522	1940	70	23305	1190	70	26855	940
68	20477	1840	68	25161	1190	68	28561	940
66	22405	1740	66	26984	1140	66	30230	890
64	24303	1640	64	28771	1090	64	31860	890
62	26169	1540	62	30521	1090	62	33448	890
60	28001	1490	60	32232	1040	60	34993	890
58	29796	1390	58	33901	1040	58	36493	890
56	31553	1340	56	35526	990	56	37947	840
54	33268	1290	54	37105	990	54	39351	840
52	34941	1240	52	38637	940	52	40706	840
50	36569	1180	50	40119	940	50	42008	840
48	38149	1010	48	41550	910	48	43256	840
46	39681	860	46	42927	780	46	44450	730
44	41162	720	44	44250	660	44	45587	620

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Lifts with outrigger beams fully extended

Rated loads on outriggers fully extended - 360° (Rated load unit: lb)								
0° OFFSET			20° OFFSET			40° OFFSET		
BOOM ANGLE (°)	LOAD RADIUS (ft)	360° (lb)	BOOM ANGLE (°)	LOAD RADIUS (ft)	360° (lb)	BOOM ANGLE (°)	LOAD RADIUS (ft)	360° (lb)
78	34.37	5820	78	51.17	3060	78	64.63	2290
76	41.06	5260	76	57.61	2950	76	70.65	2180
74	47.70	4930	74	63.99	2840	74	76.57	2180
72	54.27	4600	72	70.27	2730	72	82.40	2070
70	60.77	4270	70	76.46	2620	70	88.11	2070
68	67.18	4050	68	82.55	2620	68	93.70	2070
66	73.51	3830	66	88.53	2510	66	99.18	1960
64	79.73	3610	64	94.39	2400	64	104.53	1960
62	85.86	3390	62	100.13	2400	62	109.74	1960
60	91.87	3280	60	105.75	2290	60	114.81	1960
58	97.76	3060	58	111.22	2290	58	119.73	1960
56	103.52	2950	56	116.56	2180	56	124.50	1850
54	109.15	2840	54	121.74	2180	54	129.10	1850
52	114.64	2730	52	126.76	2070	52	133.55	1850
50	119.98	2600	50	131.62	2070	50	137.82	1850
48	125.16	2220	48	136.32	2000	48	141.92	1850
46	130.19	1890	46	140.84	1710	46	145.83	1600
44	135.05	1580	44	145.18	1450	44	149.56	1360

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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.

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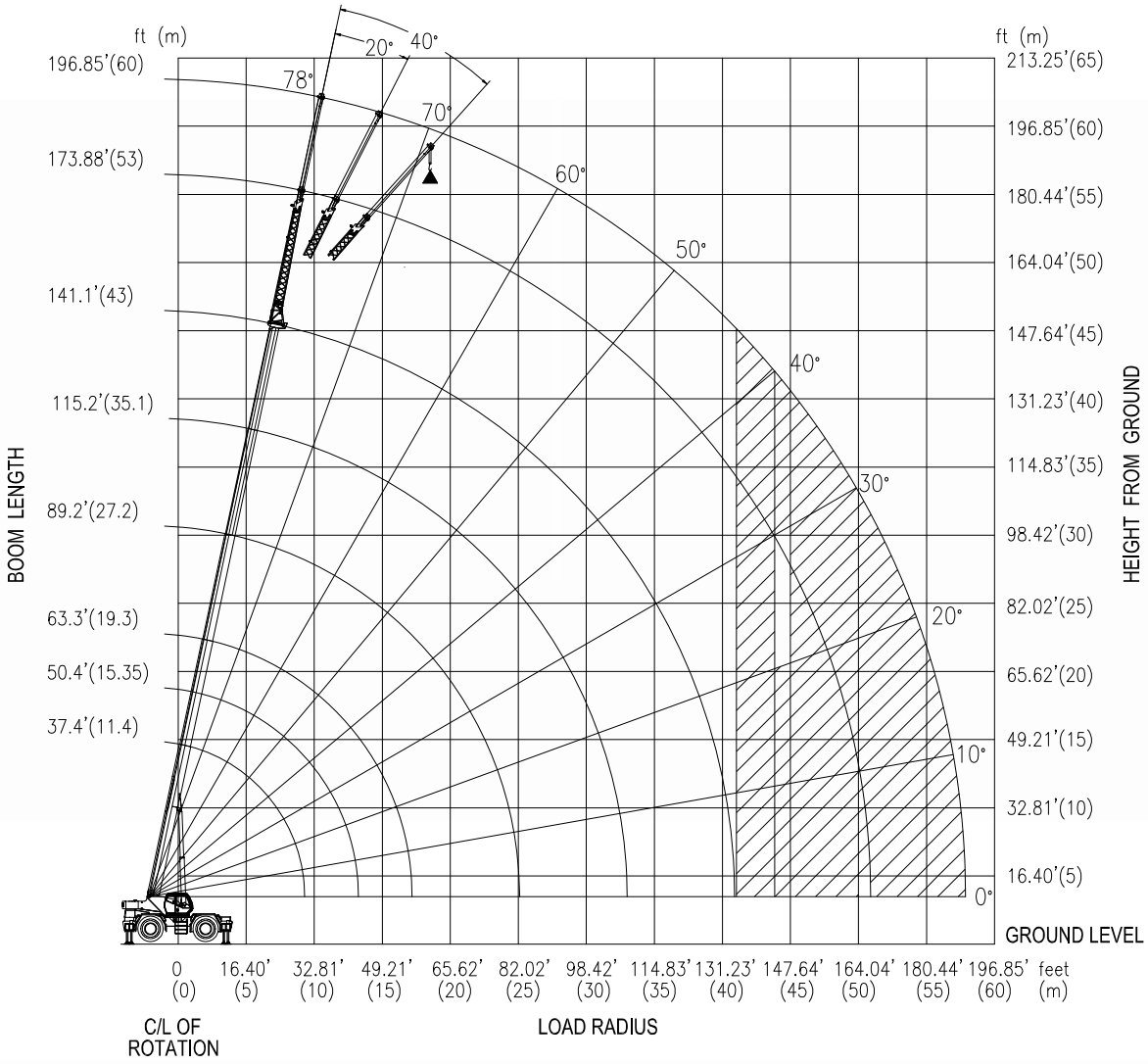
Lifts with outrigger beams fully extended

BOOM DEFLECTIONS NOT SHOWN



Lift Height on Jib Section 2 Erected

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ZOOMLION

LOAD RATINGS FOR ROUGH TERRAIN CRANE

Chapter 3 Lifts with outrigger beams at mid-position

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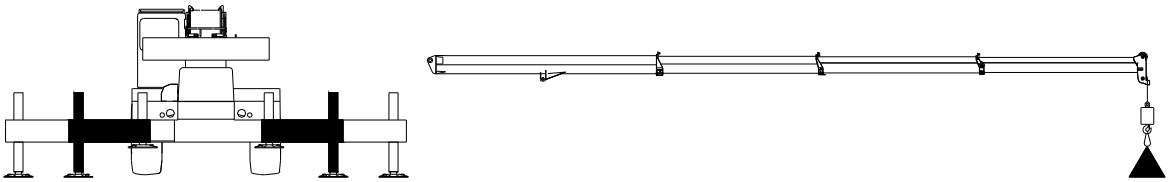
3.1 MAIN BOOM RATED LOADS

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)

BOOM LENGTH (MM)	11400		15350		19300		27200		35100		43000	
LOAD RADIUS (MM)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)
3000	68.5	51050	74.3	45000	77.6	35000						
3500	65.7	45350	72.3	44940	76.1	35000						
4000	62.8	40650	70.3	40190	74.5	35000						
4500	59.8	36700	68.3	36240	73.0	32950						
5000	56.7	33350	66.2	32890	71.4	30950	76.9	20590				
5500	53.4	28370	64.1	27620	69.8	27030	75.9	20590				
6000	50.0	23910	61.9	23230	68.1	22690	74.8	20590				
6500	46.4	20540	59.7	19910	66.5	19420	73.7	19640	77.4	13590		
7000	42.5	17910	57.5	17320	64.8	16870	72.5	17830	76.6	13590		
7500	38.2	15800	55.1	15240	63.2	14760	71.4	15750	75.7	13590		
8000	33.4	14060	52.7	13490	61.4	13020	70.3	14040	74.9	13590	77.7	9190
9000	20.2	11310	47.6	10760	57.9	10340	68.0	11350	73.2	11740	76.4	9190
9433	0	10370										
10000			42.0	8750	54.2	8360	65.7	9340	71.5	9730	75.0	8690
11000			35.6	7200	50.3	6840	63.3	7790	69.7	8180	73.6	8190
12000			27.7	5970	46.2	5630	60.9	6570	67.9	6950	72.2	7140
13375			0	4620								
14000					36.7	3830	55.8	4750	64.3	5140	69.3	5330
16000					23.9	2560	50.4	3460	60.6	3850	66.4	4050
17320					0	1890						
18000							44.6	2500	56.7	2900	63.5	3100
20000							37.9	1760	52.6	2160	60.4	2370
22000							30.0	1170	48.3	1580	57.3	1790
24000									43.7	1100	54.0	1310

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

BOOM LENGTH (ft))	37.4ft		50.4ft		63.3ft		89.2ft		115.2ft		141.1ft	
LOAD RADIUS (ft))	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)
10	68.2	111100	74.1	99200	77.5	77160						
12	64.8	96360	71.7	95360	75.6	77160						
15	59.3	79530	68.0	78640	72.7	71830	77.9	45390				
20	49.3	55120	61.5	53530	67.8	52270	74.5	44870				
25	37.1	36480	54.5	35150	62.7	34020	71.2	36380	75.5	29960		
30	17.3	26090	46.8	24820	57.4	23830	67.7	26200	72.9	27130	76.2	20120
30.95	0	24660										
35			37.8	18270	51.6	17390	64.1	19650	70.3	20570	74.0	18360
40			25.9	13730	45.3	12940	60.4	15140	67.6	16050	71.9	16490
43.88			0	11020								
45					38.2	9680	56.6	11840	64.8	12750	69.7	13210
50					29.4	7180	52.5	9310	62.0	10230	67.5	10700
55					16.4	5190	48.3	7330	59.1	8250	65.3	8720
56.82					0	4550						
60							43.7	5720	56.1	6650	63.0	7130
65							38.6	4390	53.0	5330	60.7	5810
70							32.8	3270	49.8	4220	58.3	4710
75							25.9	2320	46.4	3280	55.9	3770
80									42.7	2470	53.3	2970
85											50.7	2270

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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.

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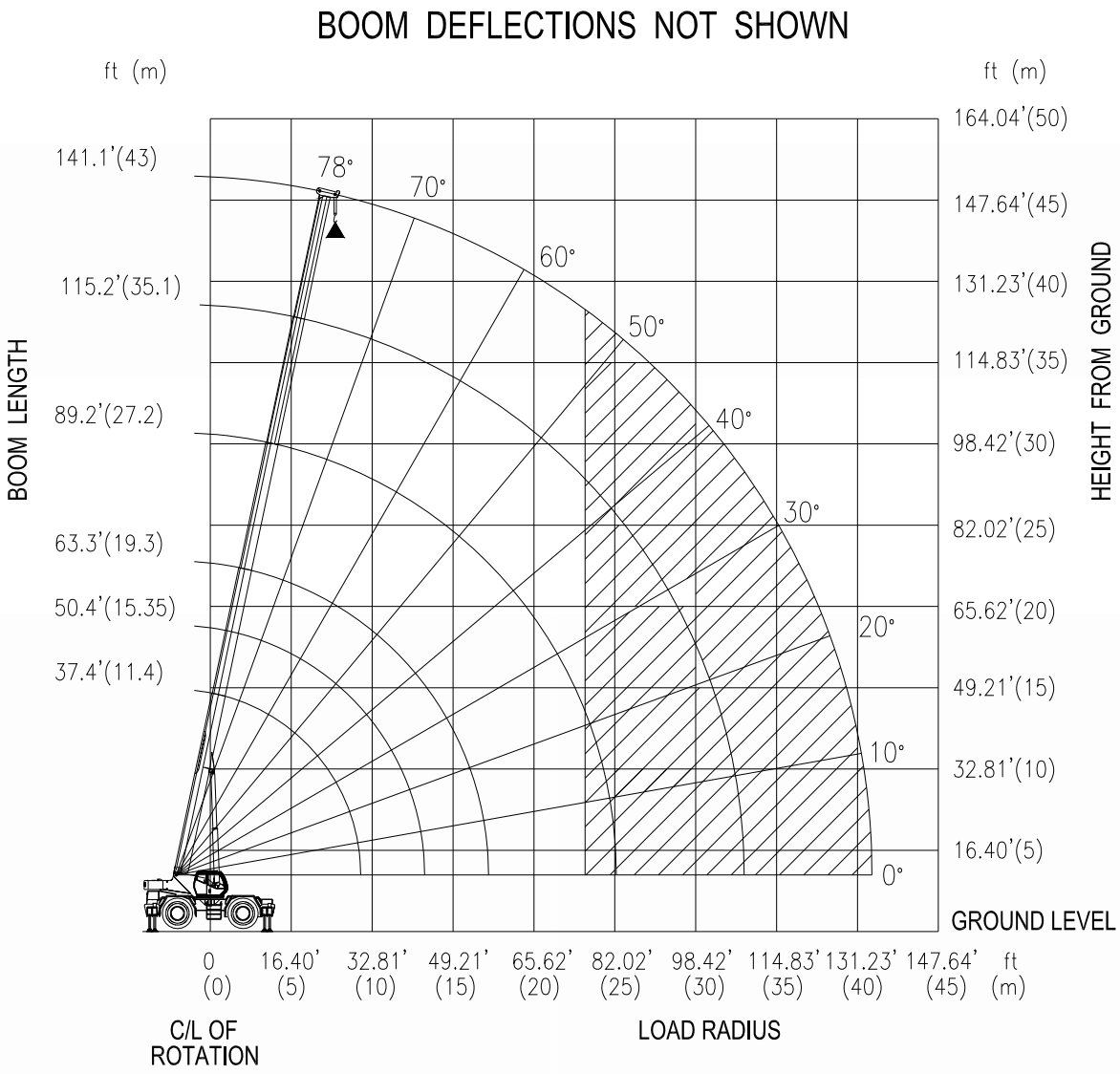

Lift Height on Outriggers Pinned in the Mid-position

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ZOOMLION

LOAD RATINGS FOR ROUGH TERRAIN CRANE

Chapter 4 Lifts with outrigger beams fully retracted

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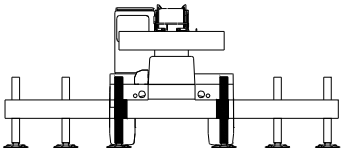
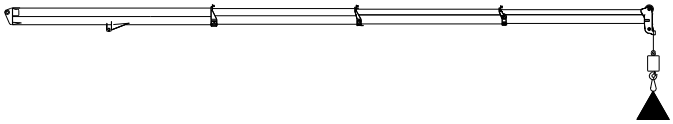
4.1 MAIN BOOM RATED LOADS

USE THIS CHART WHEN ALL OUTRIGGERS ARE FULLY RETRACTED





Rated loads on outriggers are fully retracted - 360°
(Rated load unit: kg)

BOOM LENGTH (MM)	11400		15350		19300		27200		35100		43000	
LOAD RADIUS (MM)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)	BOOM ANGLE (°)	360° (KG)
3000	68.5	40960	74.3	39640	77.6	35000						
3500	65.7	30170	72.3	29340	76.1	28650						
4000	62.8	23710	70.3	22990	74.5	22390						
4500	59.8	19330	68.3	18680	73.0	18160						
5000	56.7	16170	66.2	15580	71.4	15080	76.9	15970				
5500	53.4	13780	64.1	13210	69.8	12700	75.9	13620				
6000	50.0	11910	61.9	11300	68.1	10820	74.8	11770				
6500	46.4	10350	59.7	9760	66.5	9310	73.7	10240	77.4	10570		
7000	42.5	9060	57.5	8500	64.8	8070	72.5	8980	76.6	9310		
7500	38.2	7980	55.1	7440	63.2	7020	71.4	7920	75.7	8260		
8000	33.4	7060	52.7	6540	61.4	6140	70.3	7030	74.9	7360	77.7	7490
9000	20.2	5570	47.6	5080	57.9	4710	68.0	5580	73.2	5920	76.4	6060
9433	0	5030										
10000			42.0	3960	54.2	3610	65.7	4470	71.5	4810	75.0	4960
11000			35.6	3070	50.3	2740	63.3	3590	69.7	3940	73.6	4100
12000			27.7	2350	46.2	2030	60.9	2880	67.9	3220	72.2	3390
13375			0	1520								
14000							55.8	1790	64.3	2140	69.3	2310
16000									60.6	1350	66.4	1540

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Rated loads on outriggers are fully retracted - 360° (Rated load unit: lb)												
BOOM LENGTH (ft))	37.4ft		50.4ft		63.3ft		89.2ft		115.2ft		141.1ft	
LOAD RADIUS (ft))	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)	BOOM ANGLE (°)	360° (lb)
10	68.2	79200	74.1	78120	77.5	77160						
12	64.8	61220	71.7	59480	75.6	58040						
15	59.3	41390	68.0	39990	72.7	38850	77.9	40870				
20	49.3	25490	61.5	24160	67.8	23120	74.5	25200				
25	37.1	17040	54.5	15860	62.7	14960	71.2	16940	75.5	17670		
30	17.3	11840	46.8	10800	57.4	9990	67.7	11900	72.9	12640	76.2	12950
30.95	0	11080										
35			37.8	7370	51.6	6630	64.1	8510	70.3	9260	74.0	9600
40			25.9	4890	45.3	4210	60.4	6070	67.6	6830	71.9	7200
43.88			0	3340								
45					38.2	2380	56.6	4230	64.8	5010	69.7	5390
50							52.5	2790	62.0	3580	67.5	3980
55									59.1	2450	65.3	2850

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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.

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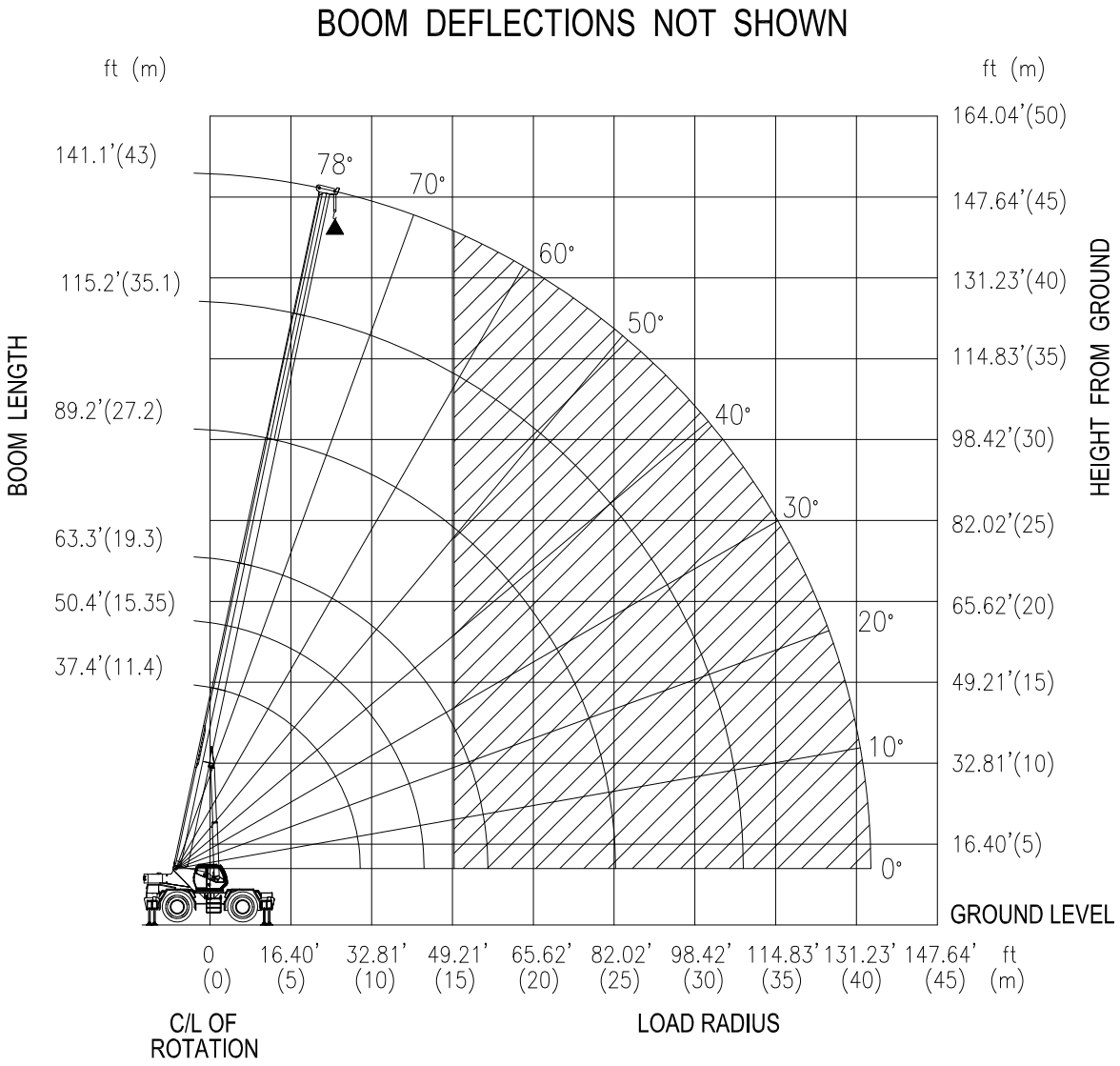

Lift Height on Outriggers Fully Retracted

Lifts with outrigger beams fully retracted

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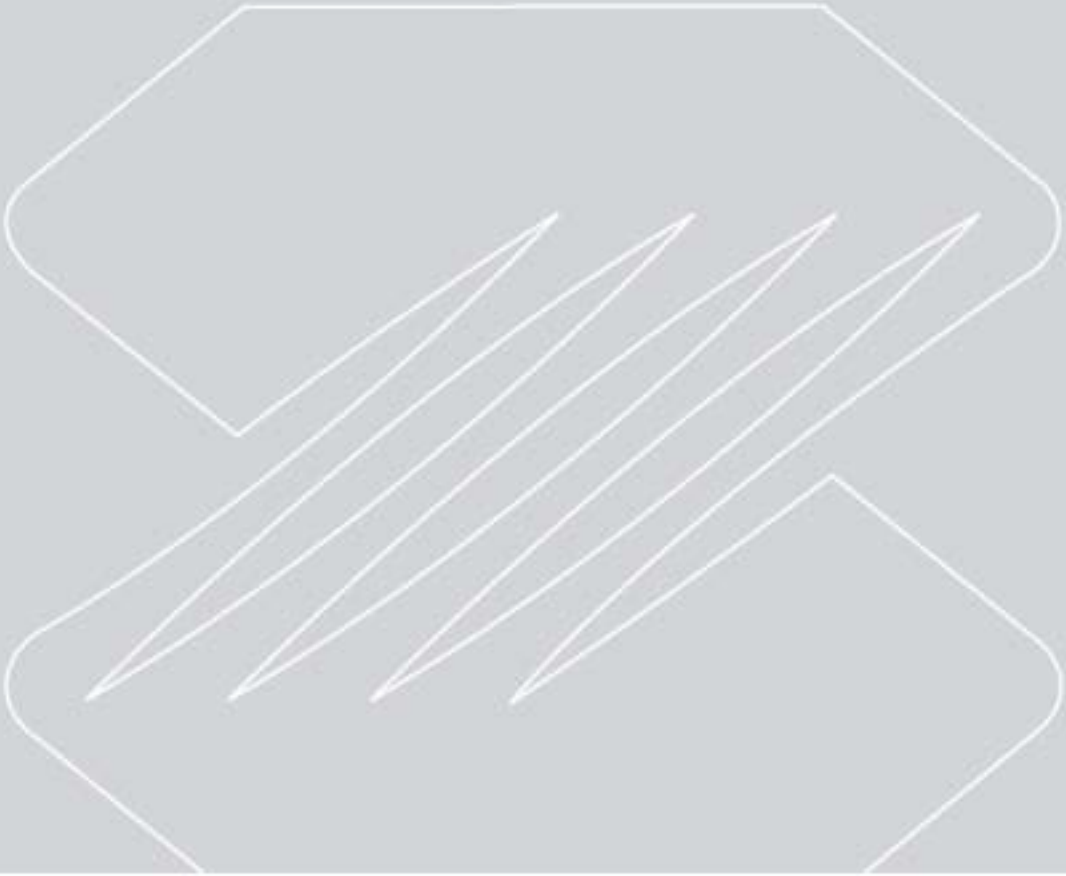
ZOOMLION

LOAD RATINGS FOR ROUGH TERRAIN CRANE

Chapter 5 Lifts on tires



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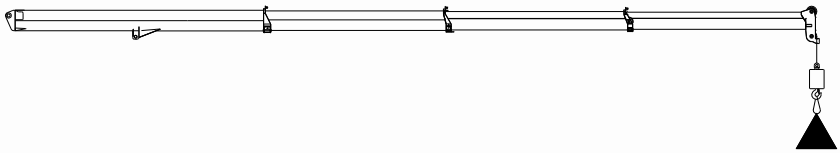
5.1 MAIN BOOM RATED LOADS

USE THIS CHART DURING ON-TIRE LIFTS



Rated loads on tires (Rated load unit: kg)												
BOOM LENGTH (MM)	11400				15350				19300			
LOAD RADIUS (MM)	BOOM ANGLE (°)	360° (KG)	OVER FRONT (KG)	CREEP (KG)	BOOM ANGLE (°)	360° (KG)	OVER FRONT (KG)	CREEP (KG)	BOOM ANGLE (°)	360° (KG)	OVER FRONT (KG)	CREEP (KG)
3000	68.5	21000	26800	20400	74.3	20460	26350	19900	77.6	19950	25900	19500
3500	65.7	18050	23800	18010	72.3	17500	23350	17550	76.1	17030	22950	17160
4000	62.8	15670	21300	16010	70.3	15120	20850	15550	74.5	14700	20470	15180
4500	59.8	13740	19200	14360	68.3	13210	18740	13920	73.0	12800	18380	13510
5000	56.7	12160	17410	12950	66.2	11630	16940	12480	71.4	11220	16610	12140
5500	53.4	10780	15870	11690	64.1	10290	15420	11280	69.8	9840	15040	10880
6000	50.0	9650	14520	10640	61.9	9100	14060	10180	68.1	8730	13740	9820
6500	46.4	8630	13350	9700	59.7	8110	12880	9260	66.5	7760	12540	8890
7000	42.5	7770	12280	8850	57.5	7260	11850	8410	64.8	6880	11520	8090
7500	38.2	6990	11360	8120	55.1	6510	10920	7660	63.2	6100	10570	7310
8000	33.4	6320	10490	7450	52.7	5800	10070	7010	61.4	5460	9740	6680
9000	20.2	5100	9030	6290	47.6	4670	8610	5840	57.9	4300	8310	5540
9433	0	4690	8500	5850								
10000					42.0	3650	7100	4910	54.2	3300	6730	4580
11000					35.6	2800	5800	4100	50.3	2470	5450	3800
12000					27.7	2100	4760	3420	46.2	1790	4430	3080
14000									36.7	——	2900	2010
16000									23.9	——	1790	1120

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Rated loads on tires (Rated load unit: lb)												
BOOM LENGTH (ft))	37.4ft				50.4ft				63.3ft			
LOAD RADIUS (ft))	BOOM ANGLE (°)	360° (KG)	OVER FRONT (KG)	CREEP (KG)	BOOM ANGLE (°)	360° (KG)	OVER FRONT (KG)	CREEP (KG)	BOOM ANGLE (°)	360° (KG)	OVER FRONT (KG)	CREEP (KG)
10	68.2	45560	58300	44330	74.1	44310	57200	43230	77.5	43220	56320	42350
12	64.8	37940	50530	38150	71.7	36700	49440	37080	75.6	35670	48660	36250
15	59.3	29670	41640	31140	68.0	28560	40660	30090	72.7	27620	39780	29310
20	49.3	20710	31440	23040	61.5	19580	30450	22020	67.8	18770	29640	21250
25	37.1	14950	24530	17490	54.5	13980	23570	16480	62.7	13090	22800	15730
30	17.3	10940	19490	13410	46.8	10000	18580	12550	57.4	9210	17820	11900
30.95	0	10340	18720	12870								
35					37.8	6990	13650	9580	51.6	6280	12870	8900
40					25.9	4770	10090	7170	45.3	4130	9380	6560
45									38.2	2270	6790	4690
50									29.4	——	4780	3120
55									16.4	——	3180	——

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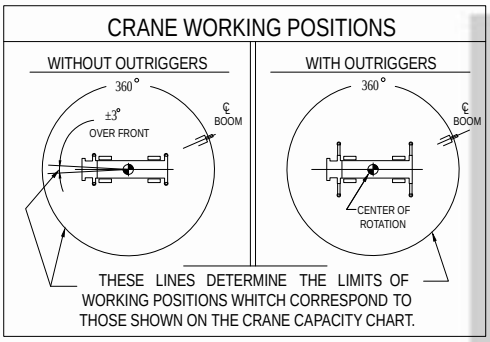
SET-UP



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).

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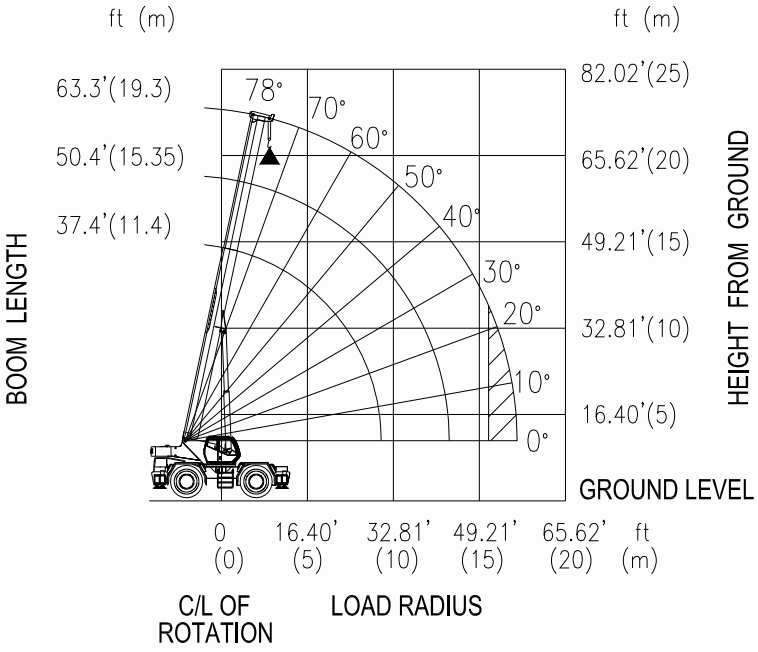
BOOM DEFLECTIONS NOT SHOWN



Lift Heigth on Tires