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LIFT PLANNING DATA + RATED CAPACITY CHARTS

AT-20

20 tonne articulated pick and carry crane

For developers, engineers, builders and lift planners

20,000 kg
Maximum rated capacity
fixed lug, 0.86 to 1.26 m radius

16,800 kg
Maximum on the winch
1.6 to 2.0 m radius

13.85 m
Powered boom length
5.67 m retracted

20.83 m
Longest configuration
manual extension plus fly jib

This document sets out the lifting capacities and planning data for our AT-20 so you can check early whether a lift is workable: what it will pick up, at what radius, on which lifting point, and what has to be allowed for. The capacity figures are transcribed from the manufacturer's rated capacity manual for this model. Operator instructions are left out.

Planning reference only

Use this document to plan and price a lift, not to operate the crane. The rated capacity manual carried in the crane and the crane's load moment indicator (LMI) govern every lift, and final lift planning is confirmed by Whitsunday Crane Hire against site conditions on the day.

CICA The Crane Industry Council of Australia

CraneSafe®

Talk to us about your lift

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WCH-AT20-LPD Rev A October 2026. Capacity data source: Manufacturer's Rated Capacity Manual, Model AT-20, book 16C1320 Rev C.
Crane designed to AS 1418.1 and AS 1418.5 and tested to those standards for pick and carry operation on tyres.

Crane at a glance

Headline figures for a first-pass check. Full charts follow.

Specification

Item	Value
Crane type	Hydraulic all terrain articulated pick and carry crane, model AT-20
Maximum rated capacity	20,000 kg on the fixed lug (0.86 to 1.26 m radius)
Maximum on the winch	16,800 kg at 1.6 to 2.0 m radius (4 parts of rope, articulation under 10°)
Powered boom	5.67 m to 13.85 m at the winch head (5.97 m to 14.16 m at the rhino hook)
Manual third extension	Takes the boom to 17.90 m (winch) or 18.20 m (rhino hook)
Fly jib	0° offset: 16.78 m, or 20.83 m with the manual extension set. 12.5° offset: 16.74 m, or 20.79 m
Maximum working radius	On the winch with the boom at 0°: 11.75 m powered boom, 15.80 m with manual extension. Fly jib with manual extension: 18.73 m
Articulation	Up to 40° each way. Capacity reduces beyond 10°
Pick and carry	Permitted through the full articulation range. Maximum speed 0.4 m/s (1.44 km/h), transfer case in low range
Rated ground condition	Firm, level, uniform surface. Maximum 1% slope (0.6°)
Wind allowance	Wind on the boom up to 10 m/s (36 km/h) is included. Wind on the load is not
Winch rope	14 mm 35W x 7 non-rotating Compak, minimum breaking force 165 kN
Rope length	65 m (one speed winch) or 100 m (two speed winch)
Tyres	12.00 x 20, dual fitment. Front 120 psi, rear 100 psi
Tyre load rating	Pick and carry (under 1.44 km/h): 8,680 kg per tyre at 120 psi. Highway (90 km/h): 3,000 kg per tyre at 100 psi
Design standards	AS 1418.1 and AS 1418.5

Lifting configurations

LMI duty	Lifting point	Boom length (m)	Max RC (kg)	Max radius (m)	RC at max radius <10° / >10° (kg)	Page
01	Winch, powered sections	5.67 to 13.85	**16,800**	11.75	2,250 / 1,850	7
02	Rhino hook, powered sections	5.97 to 14.16	**10,000**	12.00	2,200 / 1,850	8
03	Winch, manual extension set	17.90	**2,550**	15.80	1,600 / 1,300	9
04	Rhino hook, manual extension set	18.20	**2,400**	16.11	1,550 / 1,300	9
05	Fly jib, 0° offset	16.78	**1,500**	14.68	750 / 750	9
06	Fly jib, 0° offset, manual extension set	20.83	**1,500**	18.73	750 / 750	9
07	Fly jib, 12.5° offset	16.74	**1,500**	14.64	750 / 750	9
08	Fly jib, 12.5° offset, manual extension set	20.79	**1,300**	18.69	750 / 750	9
09	Fixed lug on boom butt	3.36	**20,000**	1.26	20,000 / 20,000	10
10	Inner lug on first extension	4.16 to 8.25	**20,000**	6.15	4,300 / 3,600	10
11	Outer lug on first extension	4.95 to 9.04	**20,000**	6.94	3,800 / 3,150	11
12	Man basket, powered sections	13.85	**275**	13.25	275 / 275	12
13	Man basket, manual extension set	17.90	**275**	17.30	275 / 205	12

RC = rated capacity, the gross load on the lifting point including hook block and all lifting gear. Maximum radius is with the boom at 0°. Only one lifting point may be used at a time. Fly jib, man basket and spreader bars are attachments: confirm with us what is fitted for your job.

How to use the charts

What the rated capacities include, and what you need to allow for.

Basis of the ratings

- Gross load. Rated capacity includes the hook block, hook, slings, spreader bars and any other lifting gear. Deduct their mass to get the net load you can lift.
- Freely suspended loads only. No dragging, pushing or side loading of the boom or load.
- Firm, level ground. Ratings assume a firm, uniform surface within 1% (0.6°) of level. Soft, uneven or sloping ground reduces capacity.
- Radius is measured horizontally from the centre of the front wheels forward to the centre of the rope or tackle, with the load applied.
- Two capacity sets. The crane steers by articulating. Ratings are given for less than 10° and greater than 10° of articulation either side of straight ahead. If the crane will articulate more than 10° at any point in the lift or carry, the greater than 10° figures apply.
- Structural or stability. Capacities above the red line in each chart are limited by structural or hydraulic strength. Capacities below it are limited by stability.
- Between listed values. Where the boom length or radius falls between chart values, use the smallest capacity shown at either the next larger radius or boom length (or the interpolated value shown on the LMI).
- Boom angles are loaded boom angles and a setup guide only. They make no allowance for boom or tyre deflection, so plan to the radius.
- Wind. Wind on the boom up to 10 m/s (36 km/h) is built in. Any extra side loading from wind on the load reduces the rated capacity and must be considered.
- Extensions and attachments. Manual extension, fly jib and man basket ratings are set by boom angle and do not increase when the powered sections are retracted.
- Hook reach. The range diagram on page 5 shows the areas where the fall block can reach the ground on 3 or 4 parts of rope.
- People. Personnel may only be lifted in the manufacturer's man basket correctly installed on the boom head (LMI duties 12 and 13), or other approved arrangement.
- Site factors. The operator reduces the working capacity for conditions on the day: ground, load swing, multi-crane lifts, powerlines, weather and surroundings.

Hook block capacity by parts of rope

Parts of rope	Maximum hook block RC (kg)
1	4,200
2	8,400
3	12,600
4	16,800

Attachment masses to deduct

Attachment	Part no.	Mass (kg)
Single part hook block	PL16M2090	30
Two / three part hook block	PL16A3010	95
Four part hook block	PL16A3058	125
Four part hook block	PL16A3074	180
20 tonne hook	PP2190100	15
12 tonne spreader bar	PL16A3035	94
15 tonne spreader bar	PL15A8023	107

Masses apply to manufacturer supplied equipment. Slings, shackles and other rigging are additional.

Side slopes up to 5° (8.75%)

Travelling with a suspended load across a slope should be avoided (AS 2550.5). Where a side slope of up to 5° cannot be avoided, the rated capacity must be reduced by a percentage that depends on where the lifting point sits in the working range. In the manufacturer's side slope chart the reduction runs from 10% to 60%. It generally increases with the height of the lifting point: 10% applies with the lifting point low, 60% with the powered boom raised steeply. The LMI does not apply this reduction automatically. Potholes and depressions have the same effect as a slope.

The manufacturer's side slope chart and worked example are on page 4.

Tell us early if your site has cross fall. We will work out the reduction for the actual lift position.

Not covered by the capacity charts: ask us

- Crane mass, axle loads and wheel loads for ground bearing, suspended slab, pavement and services checks.
- Overall dimensions, turning and access clearances for your site.
- Which hook block, fly jib, man basket and spreader bars are fitted or available for your job, and the crane's current inspection status.

Side slope reduction chart

Percentage reduction in rated capacity for the AT-20 on a 5° (8.75%) side slope.

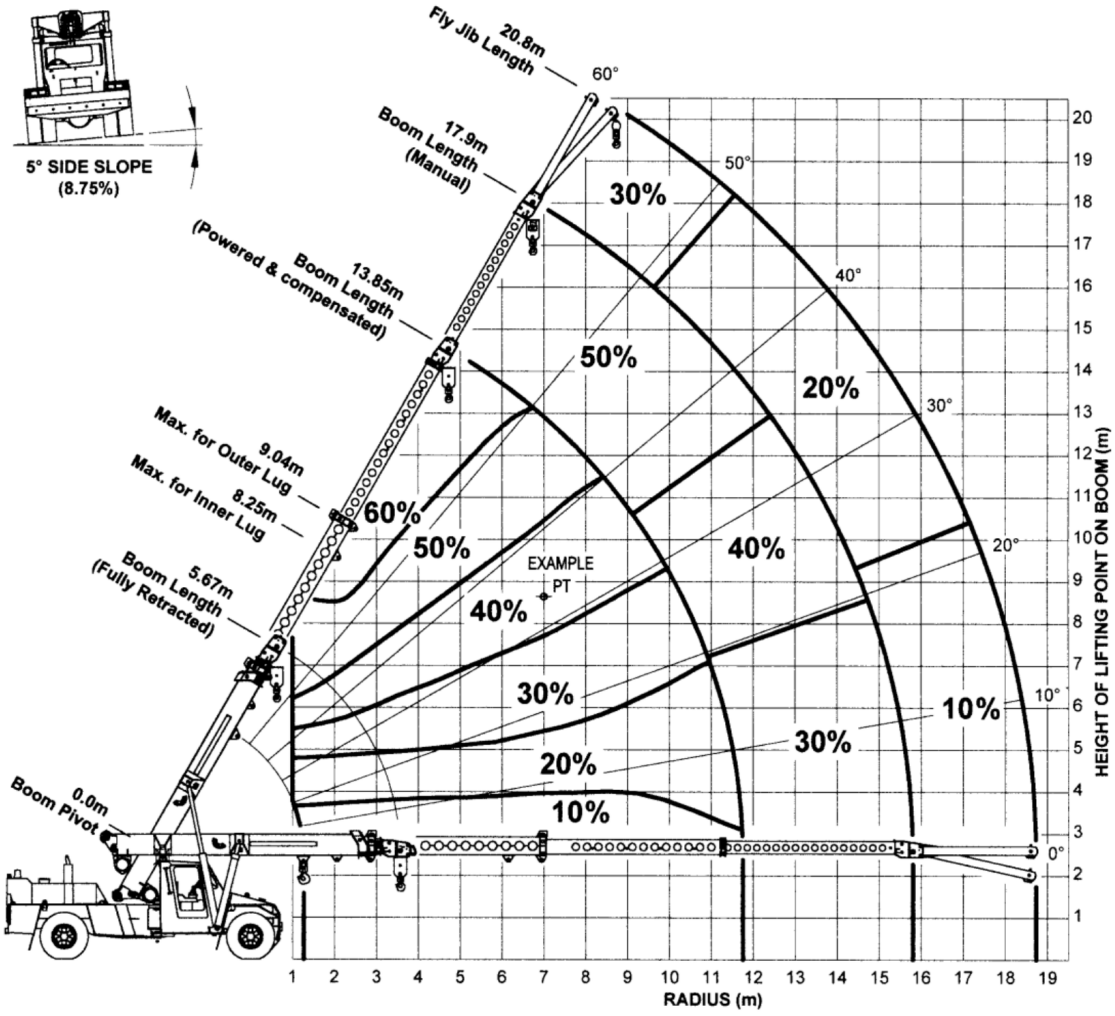


Diagram from the manufacturer's rated capacity manual for the AT-20.

Chart notes

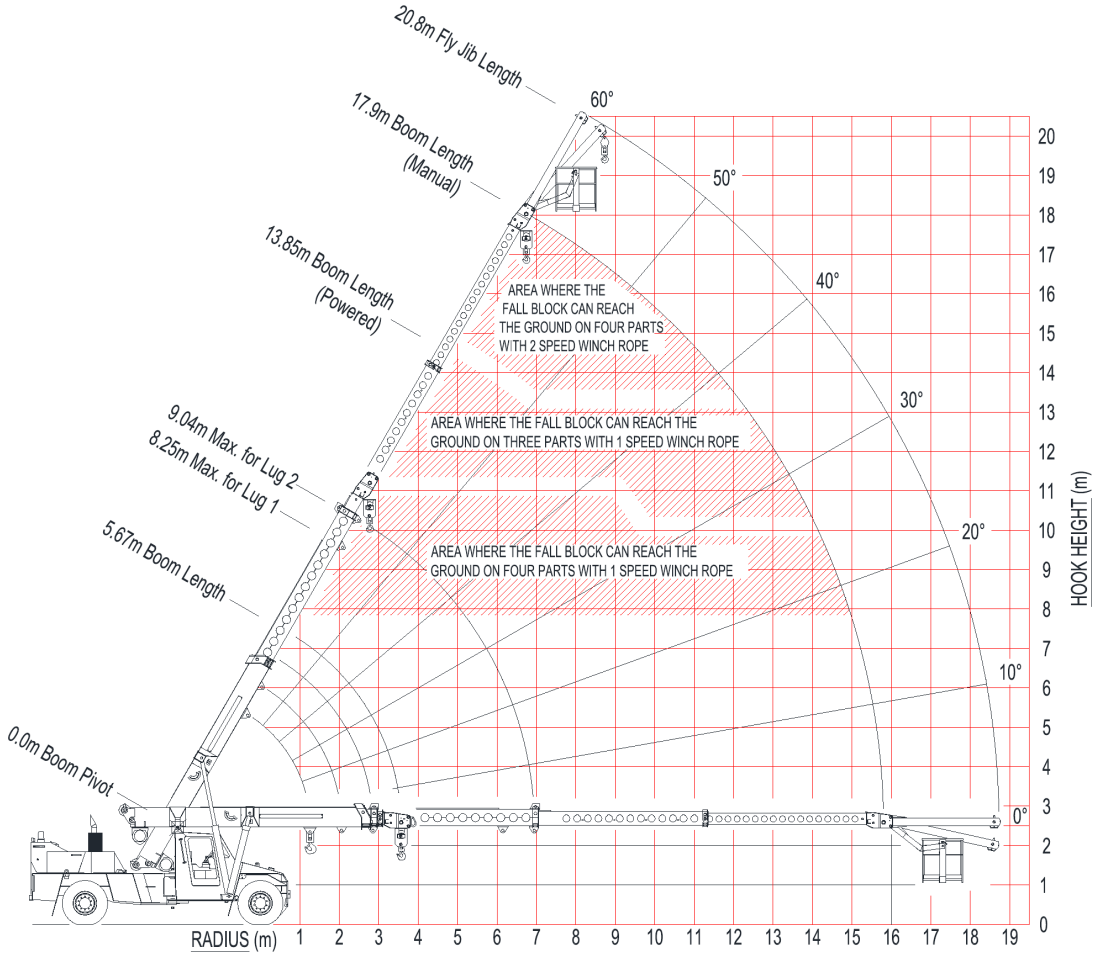
- The chart is based on 66.6% stability as per AS 1418.5 with the crane on a firm side slope of 5° (8.75% gradient).
- The percentage reduction depends on the location of the lifting point on the boom.
- Apply the percentage to the rated capacity read from the capacity chart for the applicable boom length, loaded boom angle, load radius and articulation angle.
- The crane's load indicator does not apply this reduction automatically.

WORKED EXAMPLE FROM THE MANUFACTURER

Winch (LMI duty 01), boom 11.0 m, loaded boom angle 34°, radius 7.0 m, articulation greater than 10°. This is the "example pt" marked on the chart.
Rated capacity on level ground: 3,750 kg.
Reduction at 5° side slope: 40%.
Rated capacity on the slope: 3,750 kg less 40% = 2,250 kg.

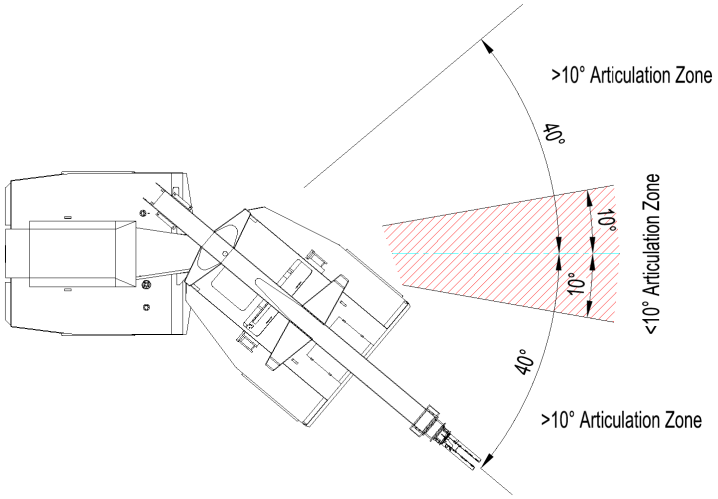
Range diagram and working area

Hook height against radius for all lifting configurations, and the two articulation zones.



Hatched areas show where the fall block can reach the ground: on four parts with the two speed winch rope, on three parts with the one speed winch rope, and on four parts with the one speed winch rope. Diagram from the manufacturer's rated capacity manual for the AT-20.

Working area diagram

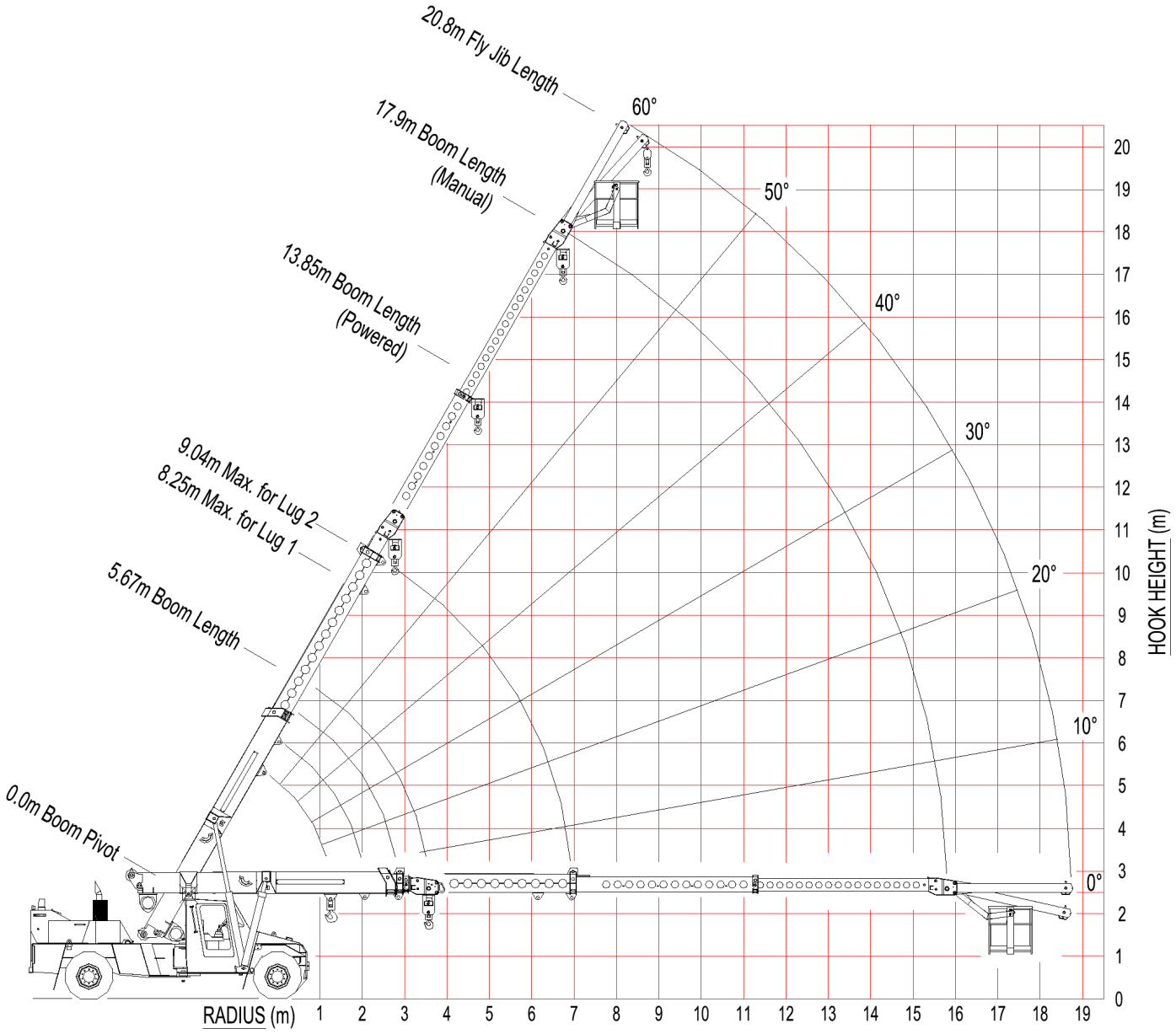


Rated capacities are given for two working areas: less than 10° of articulation, and greater than 10° of articulation, in either direction from straight ahead. Up to 40° of articulation is possible in either direction.

In the capacity charts the bold figures apply in the less than 10° zone and the shaded figures in the greater than 10° zone.

Range diagram

Showing all lift configurations. Hook height (m) against radius (m).



Boom positions shown: 5.67 m boom length, 8.25 m maximum for lug 1 (inner lug), 9.04 m maximum for lug 2 (outer lug), 13.85 m powered boom length, 17.9 m boom length with manual extension, and 20.8 m fly jib length. Radius is measured from the centre of the front wheels. Diagram from the manufacturer's rated capacity manual for the AT-20.

Lifting on the winch, powered sections

LMI Duty 01. Boom length 5.67 m to 13.85 m.

12,600 Rated capacity in kg. Bold = articulation less than 10°. Articulation greater than 10°. Above the red line: structural limit. Below: stability limit.

48 Loaded boom angle in degrees (setup guide only). A figure in brackets is the radius in metres with the boom at 0°. Gross ratings: deduct hook block, slings and all lifting gear.

Radius (m)		Boom length (m)																	
		5.67	6.00	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50	13.00	13.50	13.85
1.6	<10°	**16,800**	**16,250**	**15,450**	**14,900**														
	>10°	12,600	12,600	12,600	12,600														
	angle	*48*	*51*	*54*	*57*														
2.0	<10°	**16,800**	**16,800**	**16,500**	**15,700**	**15,100**	**14,700**	**14,350**											
	>10°	12,600	12,600	12,600	12,600	12,600	12,600	12,600											
	angle	*42*	*46*	*50*	*53*	*56*	*58*	*60*											
2.5	<10°	**13,900**	**13,900**	**13,900**	**13,850**	**13,850**	**13,850**	**13,850**	**13,200**	**13,000**									
	>10°	12,150	12,150	12,100	12,100	12,100	12,100	12,100	12,050	12,050									
	angle	*34*	*39*	*44*	*48*	*51*	*54*	*56*	*58*	*60*									
3.0	<10°	**11,450**	**11,450**	**11,450**	**11,400**	**11,400**	**11,400**	**11,400**	**11,400**	**11,400**	**11,150**	**10,250**							
	>10°	9,950	9,950	9,950	9,950	9,950	9,950	9,900	9,900	9,900	9,900	9,900							
	angle	*25*	*31*	*37*	*42*	*46*	*49*	*52*	*55*	*57*	*59*	*60*							
3.5	<10°	**9,650**	**9,650**	**9,650**	**9,650**	**9,650**	**9,650**	**9,650**	**9,650**	**9,650**	**9,650**	**9,500**	**8,150**	**7,500**					
	>10°	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,400	8,350	8,350	8,350	8,150	7,500					
	angle	*8*	*20*	*29*	*36*	*41*	*45*	*48*	*51*	*53*	*55*	*57*	*59*	*60*					
4.0	<10°	**9,450**	**8,550**	**8,350**	**8,350**	**8,350**	**8,350**	**8,350**	**8,350**	**8,300**	**8,300**	**8,300**	**7,600**	**7,000**	**6,700**	**6,450**			
	>10°	8,200	7,450	7,250	7,250	7,250	7,250	7,250	7,250	7,200	7,200	7,200	7,200	7,000	6,700	6,450			
	angle	*(3.57)*	*(3.90)*	*19*	*28*	*35*	*39*	*43*	*47*	*49*	*52*	*54*	*56*	*57*	*59*	*60*			
4.5	<10°			**7,500**	**7,300**	**7,300**	**7,300**	**7,300**	**7,300**	**7,300**	**7,300**	**7,300**	**7,150**	**6,550**	**6,250**	**6,050**	**5,800**	**5,650**	
	>10°			6,500	6,350	6,350	6,350	6,350	6,350	6,300	6,300	6,300	6,300	6,300	6,250	6,050	5,800	5,650	
	angle			*(4.40)*	*19*	*27*	*34*	*38*	*42*	*45*	*48*	*50*	*52*	*54*	*56*	*58*	*59*	*60*	
5.0	<10°				**6,650**	**6,500**	**6,500**	**6,500**	**6,500**	**6,500**	**6,500**	**6,500**	**6,500**	**6,150**	**5,900**	**5,650**	**5,450**	**5,300**	**5,150**
	>10°				5,750	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,600	5,450	5,300	5,150
	angle				*(4.90)*	*18*	*27*	*33*	*37*	*41*	*44*	*47*	*49*	*51*	*53*	*55*	*56*	*58*	*59*
6.0	<10°					**5,950**	**5,350**	**5,250**	**5,250**	**5,250**	**5,250**	**5,250**	**5,250**	**5,250**	**5,250**	**5,050**	**4,850**	**4,700**	**4,600**
	>10°					5,100	4,600	4,550	4,550	4,550	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500
	angle					*(5.40)*	*(5.90)*	*17*	*25*	*31*	*35*	*39*	*42*	*45*	*47*	*49*	*51*	*53*	*54*
7.0	<10°							**4,850**	**4,450**	**4,400**	**4,400**	**4,400**	**4,400**	**4,400**	**4,350**	**4,350**	**4,350**	**4,200**	**3,950**
	>10°							4,200	3,800	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750
	angle							*(6.40)*	*(6.90)*	*16*	*24*	*29*	*34*	*37*	*40*	*43*	*45*	*47*	*48*
8.0	<10°									**4,100**	**3,750**	**3,700**	**3,700**	**3,700**	**3,700**	**3,700**	**3,700**	**3,700**	**3,600**
	>10°									3,500	3,200	3,150	3,150	3,150	3,150	3,150	3,150	3,150	3,150
	angle									*(7.40)*	*(7.90)*	*15*	*23*	*28*	*32*	*36*	*38*	*41*	*43*
9.0	<10°											**3,500**	**3,250**	**3,200**	**3,200**	**3,200**	**3,200**	**3,200**	**3,200**
	>10°											2,950	2,750	2,700	2,700	2,700	2,700	2,700	2,700
	angle											*(8.40)*	*(8.90)*	*15*	*22*	*27*	*31*	*34*	*36*
10.0	<10°													**3,000**	**2,800**	**2,800**	**2,800**	**2,800**	**2,800**
	>10°													2,550	2,400	2,350	2,350	2,350	2,350
	angle													*(9.40)*	*(9.90)*	*14*	*21*	*26*	*29*
11.0	<10°															**2,650**	**2,500**	**2,450**	**2,450**
	>10°															2,200	2,100	2,050	2,050
	angle															*(10.40)*	*(10.90)*	*13*	*18*
11.75	<10°																	**2,350**	**2,250**
	>10°																	1,950	1,850
	angle																	*(11.40)*	*(11.75)*

Lifting on the rhino hook, powered sections

LMI Duty 02. Boom length 5.97 m to 14.16 m.

12,600 Rated capacity in kg. Bold = articulation less than 10°. Articulation greater than 10°. Above the red line: structural limit. Below: stability limit.

48 Loaded boom angle in degrees (setup guide only). A figure in brackets is the radius in metres with the boom at 0°. Gross ratings: deduct hook block, slings and all lifting gear.

Radius (m)		Boom length (m)																	
		5.97	6.50	7.00	7.50	8.00	8.50	9.00	9.50	10.00	10.50	11.00	11.50	12.00	12.50	13.00	13.50	14.00	14.16
1.6	<10°	**10,000**	**10,000**	**10,000**	**10,000**														
	>10°	10,000	10,000	10,000	10,000														
	angle	*51*	*54*	*57*	*60*														
2.0	<10°	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**												
	>10°	10,000	10,000	10,000	10,000	10,000	10,000												
	angle	*46*	*50*	*53*	*56*	*58*	*60*												
2.5	<10°	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**										
	>10°	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000										
	angle	*39*	*44*	*48*	*51*	*54*	*57*	*59*	*60*										
3.0	<10°	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**								
	>10°	10,000	10,000	10,000	10,000	10,000	10,000	9,950	9,950	9,950	9,950								
	angle	*30*	*37*	*42*	*46*	*50*	*52*	*55*	*57*	*59*	*60*								
3.5	<10°	**9,750**	**9,750**	**9,750**	**9,700**	**9,700**	**9,700**	**9,700**	**9,700**	**9,700**	**9,650**	**8,850**	**7,650**						
	>10°	8,500	8,500	8,450	8,450	8,450	8,450	8,450	8,400	8,400	8,400	8,400	7,650						
	angle	*19*	*30*	*36*	*41*	*45*	*48*	*51*	*53*	*55*	*57*	*59*	*60*						
4.0	<10°	**8,700**	**8,400**	**8,400**	**8,400**	**8,400**	**8,400**	**8,400**	**8,350**	**8,350**	**8,350**	**8,100**	**7,100**	**6,750**	**6,500**				
	>10°	7,550	7,300	7,300	7,300	7,300	7,300	7,300	7,250	7,250	7,250	7,250	7,100	6,750	6,500				
	angle	*(3.88)*	*19*	*29*	*35*	*40*	*43*	*47*	*49*	*52*	*54*	*56*	*57*	*59*	*60*				
4.5	<10°		**7,550**	**7,400**	**7,400**	**7,350**	**7,350**	**7,350**	**7,350**	**7,350**	**7,350**	**7,350**	**6,650**	**6,300**	**6,100**	**5,850**	**5,700**		
	>10°		6,550	6,400	6,400	6,400	6,400	6,400	6,350	6,350	6,350	6,350	6,350	6,300	6,100	5,850	5,700		
	angle		*(4.40)*	*19*	*28*	*34*	*38*	*42*	*45*	*48*	*50*	*53*	*54*	*56*	*58*	*59*	*60*		
5.0	<10°			**6,700**	**6,550**	**6,550**	**6,550**	**6,550**	**6,550**	**6,550**	**6,500**	**6,500**	**6,250**	**5,950**	**5,700**	**5,500**	**5,350**	**5,150**	**5,100**
	>10°			5,800	5,650	5,650	5,650	5,650	5,650	5,650	5,650	5,650	5,650	5,600	5,600	5,500	5,350	5,150	5,100
	angle			*(4.90)*	*18*	*27*	*33*	*37*	*41*	*44*	*47*	*49*	*51*	*53*	*55*	*56*	*58*	*59*	*59*
6.0	<10°				**6,000**	**5,400**	**5,300**	**5,300**	**5,300**	**5,300**	**5,300**	**5,300**	**5,300**	**5,300**	**5,100**	**4,900**	**4,750**	**4,600**	**4,550**
	>10°				5,150	4,650	4,550	4,550	4,550	4,550	4,550	4,550	4,550	4,550	4,550	4,550	4,550	4,550	4,550
	angle				*(5.40)*	*(5.90)*	*17*	*25*	*31*	*35*	*39*	*42*	*45*	*47*	*49*	*51*	*53*	*54*	*55*
7.0	<10°						**4,900**	**4,500**	**4,400**	**4,400**	**4,400**	**4,400**	**4,400**	**4,400**	**4,400**	**4,400**	**4,250**	**4,000**	**3,950**
	>10°						4,200	3,850	3,800	3,800	3,800	3,800	3,800	3,800	3,750	3,750	3,750	3,750	3,750
	angle						*(6.40)*	*(6.90)*	*16*	*24*	*29*	*34*	*37*	*40*	*43*	*45*	*47*	*49*	*50*
8.0	<10°								**4,100**	**3,800**	**3,750**	**3,750**	**3,750**	**3,750**	**3,750**	**3,750**	**3,750**	**3,600**	**3,550**
	>10°								3,550	3,250	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200	3,200
	angle								*(7.40)*	*(7.90)*	*15*	*23*	*28*	*32*	*36*	*39*	*41*	*43*	*44*
9.0	<10°										**3,500**	**3,250**	**3,250**	**3,250**	**3,250**	**3,250**	**3,250**	**3,250**	**3,250**
	>10°										3,000	2,800	2,750	2,750	2,750	2,750	2,750	2,750	2,750
	angle										*(8.40)*	*(8.90)*	*15*	*22*	*27*	*31*	*34*	*37*	*38*
10.0	<10°												**3,050**	**2,850**	**2,800**	**2,800**	**2,800**	**2,800**	**2,800**
	>10°												2,600	2,400	2,400	2,400	2,400	2,400	2,400
	angle												*(9.40)*	*(9.90)*	*14*	*21*	*26*	*30*	*31*
11.0	<10°														**2,650**	**2,500**	**2,500**	**2,500**	**2,500**
	>10°														2,250	2,100	2,100	2,100	2,100
	angle														*(10.40)*	*(10.90)*	*14*	*20*	*22*
12.00	<10°																**2,350**	**2,200**	**2,200**
	>10°																1,950	1,850	1,850
	angle																*(11.40)*	*(11.90)*	*(12.00)*

Manual extension and fly jib

LMI Duties 03 to 08. Rated capacity by loaded boom angle.

LMI DUTY 03

Winch, manual extension set

Maximum boom length 17.90 m

Boom angle	Radius (m)	RC <10° (kg)	RC >10° (kg)
60°	6.74	**2,550**	2,550
50°	9.31	**2,250**	2,250
40°	11.53	**2,050**	2,050
30°	13.34	**1,900**	1,700
20°	14.67	**1,800**	1,500
10°	15.51	**1,650**	1,350
0°	15.80	**1,600**	1,300

17.9 m boom length includes the manual third extension. Ratings for the manual extension are structural and based on boom angle, not radius. They do not change if the powered sections are retracted. Loads above the bold red line are structural.

LMI DUTY 04

Rhino hook, manual extension set

Maximum boom length 18.20 m

Boom angle	Radius (m)	RC <10° (kg)	RC >10° (kg)
60°	6.91	**2,400**	2,400
50°	9.52	**2,100**	2,100
40°	11.78	**1,900**	1,900
30°	13.62	**1,800**	1,650
20°	14.97	**1,750**	1,450
10°	15.81	**1,550**	1,350
0°	16.11	**1,550**	1,300

18.2 m boom length includes the manual third extension. Ratings for the manual extension are structural and based on boom angle, not radius. They do not change if the powered sections are retracted. Loads above the bold red line are structural.

LMI DUTY 05

Fly jib, 0° offset

Maximum boom length 16.78 m

Boom angle	Radius (m)	RC <10° (kg)	RC >10° (kg)
60°	6.23	**1,500**	1,500
50°	8.62	**1,200**	1,200
40°	10.69	**970**	970
30°	12.38	**850**	850
20°	13.63	**770**	770
10°	14.40	**750**	750
0°	14.68	**750**	750

16.78 m boom length includes the fly jib. Ratings for the fly jib are structural and based on boom angle, not radius. They do not change if the powered sections are retracted. Loads above the bold red line are structural.

LMI DUTY 06

Fly jib, 0° offset, manual extension set

Maximum boom length 20.83 m

Boom angle	Radius (m)	RC <10° (kg)	RC >10° (kg)
60°	8.25	**1,500**	1,500
50°	11.22	**1,200**	1,200
40°	13.79	**970**	970
30°	15.88	**850**	850
20°	17.43	**770**	770
10°	18.39	**750**	750
0°	18.73	**750**	750

20.83 m boom length includes the manual third extension and fly jib. Ratings for the fly jib are structural and based on boom angle, not radius. They do not change if the powered sections are retracted. Loads above the bold red line are structural.

LMI DUTY 07

Fly jib, 12.5° offset

Maximum boom length 16.74 m

Boom angle	Radius (m)	RC <10° (kg)	RC >10° (kg)
60°	6.70	**1,500**	1,500
50°	9.03	**1,200**	1,200
40°	11.03	**970**	970
30°	12.63	**850**	850
20°	13.78	**770**	770
10°	14.46	**750**	750
0°	14.64	**750**	750

16.74 m boom length includes the fly jib. Ratings for the fly jib are structural and based on boom angle, not radius. They do not change if the powered sections are retracted. Loads above the bold red line are structural.

LMI DUTY 08

Fly jib, 12.5° offset, manual extension set

Maximum boom length 20.79 m

Boom angle	Radius (m)	RC <10° (kg)	RC >10° (kg)
60°	8.73	**1,300**	1,300
50°	11.64	**1,120**	1,120
40°	14.13	**920**	920
30°	16.14	**820**	820
20°	17.59	**770**	770
10°	18.45	**750**	750
0°	18.69	**750**	750

20.79 m boom length includes the manual third extension and fly jib. Ratings for the fly jib are structural and based on boom angle, not radius. They do not change if the powered sections are retracted. Loads above the bold red line are structural.

Fixed lug and inner lug

LMI Duty 09 (fixed lug on boom butt) and LMI Duty 10 (inner lug on first extension).

LMI DUTY 09

Fixed lug on boom butt

Boom length 3.36 m

Boom angle	Radius (m)	RC <10° (kg)	RC >10° (kg)
30°	0.86	**20,000**	20,000
20°	1.09	**20,000**	20,000
10°	1.23	**20,000**	20,000
0°	1.26	**20,000**	20,000

Loads above the bold red line are structural.

LMI DUTY 10

Inner lug on first extension

Boom length 4.16 m to 8.25 m

Radius (m)		Boom length (m)								
		4.16	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.25
1.4	<10°	**20,000**	**20,000**	**20,000**	**19,300**	**18,100**	**17,200**			
	>10°	16,000	16,000	16,000	16,000	16,000	16,000			
	angle	*34*	*40*	*46*	*51*	*55*	*58*			
1.7	<10°	**19,000**	**19,000**	**19,000**	**18,700**	**17,600**	**16,500**	**15,600**	**15,000**	
	>10°	16,000	16,000	16,000	16,000	16,000	16,000	15,600	15,000	
	angle	*25*	*33*	*41*	*47*	*51*	*55*	*58*	*60*	
2.0	<10°	**16,950**	**16,900**	**16,800**	**16,700**	**16,650**	**16,000**	**14,650**	**14,100**	
	>10°	14,750	14,700	14,600	14,500	14,400	14,350	14,300	14,100	
	angle	*11*	*25*	*36*	*43*	*48*	*52*	*55*	*57*	
2.5	<10°	**16,400**	**13,800**	**13,150**	**13,100**	**13,050**	**12,950**	**12,900**	**12,750**	**11,350**
	>10°	14,300	11,950	11,400	11,350	11,250	11,200	11,150	11,100	11,050
	angle	*(2.06)*	*(2.40)*	*24*	*34*	*41*	*46*	*50*	*53*	*57*
3.0	<10°			**11,100**	**10,700**	**10,650**	**10,600**	**10,550**	**10,500**	**10,450**
	>10°			9,600	9,200	9,150	9,100	9,050	9,000	8,950
	angle			*(2.90)*	*23*	*33*	*39*	*44*	*48*	*52*
3.5	<10°				**9,200**	**8,900**	**8,850**	**8,800**	**8,800**	**8,750**
	>10°				7,900	7,650	7,600	7,550	7,500	7,450
	angle				*(3.40)*	*22*	*31*	*38*	*42*	*48*
4.0	<10°					**7,800**	**7,550**	**7,550**	**7,500**	**7,450**
	>10°					6,700	6,450	6,450	6,400	6,350
	angle					*(3.90)*	*21*	*30*	*36*	*43*
4.5	<10°						**6,700**	**6,550**	**6,500**	**6,450**
	>10°						5,700	5,550	5,500	5,500
	angle						*(4.40)*	*20*	*29*	*37*
5.0	<10°							**5,850**	**5,700**	**5,650**
	>10°							4,950	4,800	4,800
	angle							*(4.90)*	*19*	*31*
5.5	<10°								**5,150**	**5,000**
	>10°								4,350	4,200
	angle								*(5.40)*	*23*
6.0	<10°									**4,450**
	>10°									3,700
	angle									*11*
6.15	<10°									**4,300**
	>10°									3,600
	angle									*(6.15)*

Bold = articulation under 10°. Shaded = articulation over 10°. Italic = loaded boom angle (brackets: radius in m at 0°).
Above the red line: structural limit. Below it: stability limit. Rated capacity in kg, gross. Deduct slings and all lifting gear.

Lifting on the outer lug

LMI Duty 11. Outer lug on first extension. Boom length 4.95 m to 9.04 m.

Radius (m)		Boom length (m)								
		4.95	5.30	5.80	6.30	6.80	7.30	7.80	8.30	9.04
1.4	<10°	**20,000**	**20,000**	**20,000**	**19,900**					
	>10°	16,000	16,000	16,000	16,000					
	angle	*46*	*50*	*54*	*57*					
1.7	<10°	**19,000**	**19,000**	**19,000**	**18,850**	**17,400**	**15,650**			
	>10°	16,000	16,000	16,000	16,000	16,000	15,650			
	angle	*41*	*45*	*50*	*54*	*57*	*59*			
2.0	<10°	**17,400**	**17,300**	**17,150**	**17,050**	**16,350**	**14,700**	**13,400**		
	>10°	15,200	15,100	14,950	14,850	14,750	14,650	13,400		
	angle	*35*	*40*	*46*	*50*	*54*	*56*	*59*		
2.5	<10°	**13,700**	**13,600**	**13,500**	**13,400**	**13,300**	**13,250**	**12,350**	**11,150**	**10,150**
	>10°	11,950	11,850	11,750	11,650	11,550	11,500	11,400	11,150	10,150
	angle	*23*	*31*	*38*	*44*	*48*	*52*	*54*	*57*	*60*
3.0	<10°	**11,850**	**11,150**	**11,050**	**11,000**	**10,900**	**10,850**	**10,750**	**10,300**	**9,350**
	>10°	10,300	9,700	9,600	9,500	9,450	9,350	9,300	9,250	9,150
	angle	*(2.85)*	*17*	*29*	*37*	*42*	*46*	*50*	*53*	*56*
3.5	<10°		**10,350**	**9,300**	**9,250**	**9,150**	**9,100**	**9,050**	**9,000**	**8,650**
	>10°		9,000	8,050	8,000	7,900	7,850	7,800	7,750	7,650
	angle		*(3.20)*	*16*	*28*	*35*	*41*	*45*	*48*	*52*
4.0	<10°			**8,700**	**7,900**	**7,850**	**7,800**	**7,750**	**7,700**	**7,650**
	>10°			7,550	6,800	6,750	6,700	6,650	6,600	6,550
	angle			*(3.70)*	*15*	*27*	*34*	*39*	*43*	*48*
4.5	<10°				**7,450**	**6,850**	**6,800**	**6,750**	**6,700**	**6,650**
	>10°				6,400	5,850	5,800	5,750	5,750	5,650
	angle				*(4.20)*	*15*	*26*	*33*	*38*	*44*
5.0	<10°					**6,500**	**6,000**	**5,950**	**5,900**	**5,850**
	>10°					5,550	5,100	5,050	5,000	4,950
	angle					*(4.70)*	*14*	*25*	*32*	*39*
5.5	<10°						**5,700**	**5,250**	**5,250**	**5,200**
	>10°						4,850	4,450	4,450	4,400
	angle						*(5.20)*	*14*	*24*	*33*
6.0	<10°							**5,050**	**4,700**	**4,650**
	>10°							4,250	3,950	3,900
	angle							*(5.70)*	*13*	*27*
6.5	<10°								**4,500**	**4,200**
	>10°								3,750	3,500
	angle								*(6.20)*	*19*
6.9	<10°									**3,800**
	>10°									3,150
	angle									*(6.94)*

Bold = articulation under 10°. Shaded = articulation over 10°. Italic = loaded boom angle (brackets: radius in m at 0°).
Above the red line: structural limit. Below it: stability limit. Rated capacity in kg, gross. Deduct slings and all lifting gear.

Man basket

LMI Duties 12 and 13. Rated capacity in the basket by loaded boom angle.

LMI DUTY 12

Man basket, powered sections

Maximum boom length 13.85 m

Boom angle	Radius (m)	RC <10° (kg)	RC >10° (kg)
60°	5.98	**275**	275
50°	8.12	**275**	275
40°	9.96	**275**	275
30°	11.43	**275**	275
20°	12.48	**275**	275
10°	13.09	**275**	275
0°	13.25	**275**	275

13.85 m boom length does not include the man basket. Ratings for the man basket are structural and based on boom angle, not radius. They do not change if the powered sections are retracted. Loads above the bold red line are structural.

LMI DUTY 13

Man basket, manual extension set

Maximum boom length 17.90 m

Boom angle	Radius (m)	RC <10° (kg)	RC >10° (kg)
60°	8.01	**275**	275
50°	10.73	**275**	275
40°	13.06	**275**	275
30°	14.95	**275**	275
20°	16.29	**275**	275
10°	17.08	**275**	225
0°	17.30	**275**	205

17.90 m boom length includes the manual third extension but not the man basket. Ratings for the man basket are structural and based on boom angle, not radius. They do not change if the powered sections are retracted. Loads above the bold red line are structural.

Terms used in this document

Rated capacity (RC)	The total freely suspended load, including the load and all load handling equipment, that the crane can safely lift under ideal conditions at a given boom length and load radius.
Load radius	Horizontal distance from the centre of the front wheels forward to the centre of the winch rope or tackle with the load applied.
Loaded boom angle	Given to assist in setting up the crane only. It gives only an approximation of the load radius for a specified boom length. No allowance is made for boom or tyre deflection.
Articulation	The crane pivots in the middle to steer and to slew the load, up to 40° either way. Working areas for rating purposes are less than 10° and greater than 10° from straight ahead.
Deration	A decrease in rated capacity due to external influences, expressed as a percentage.
Side load	Any external force applied to the boom or the load in a horizontal direction.
LMI	Load moment indicator. A system that indicates, visually and audibly, to the operator when the rated capacity is approached and reached.

Planning a lift? Send us the details.

Load mass and dimensions, pick up and set down positions, access, ground conditions and any overhead services.

Jack 0438 461 185 **Casey 0438 060 694** **whitsundaycranes.com.au**

Capacity data in this document is transcribed from the Manufacturer's Rated Capacity Manual, Model AT-20, book 16C1320 Rev C, for the crane as originally manufactured. Ratings apply only when the manufacturer's instructions are followed, and modifications or non-specified attachments can reduce them. If anything here differs from the manual carried in the crane, the manual in the crane applies.