

GRT8120

Product guide

ASME B30.5
Imperial 85%



Features

- 120 t (120 USt) capacity
- 11,3 m - 60 m (37.2 ft - 197 ft) seven-section MEGAFORM™ boom
- 10,5 m - 17,6 m (34.5 ft - 57.6 ft) manual or hydraulic bi-fold lattice swingaway extension with offsets up to 45°
- Crane Control System (CCS)
- New wider full vision cab with 20° cab tilt
- MAXbase variable outrigger positioning system

GROVE GRT8120

The GRT8120 was designed after gathering feedback from crane owners and operators to ensure that it is loaded with the features and reliability you demand.

Features

> Unmatched reach with compact carrier

Class-leading lifting performance is enhanced by the 11,3 m to 60 m (37.2 ft to 197 ft) seven-section MEGAFORM™ boom with TWIN-LOCK™ boom pinning system. This amount of main boom length is typically reserved for rough terrain cranes in the 135 t - 150 t (150 USt -165 USt) class, however when combined with a compact carrier with dimensions of cranes in the 70 t- 90 t (80 USt- 100 USt) class, make the GRT8120 a truly versatile crane that should be in every crane owners fleet. Boosting overall reach is the 17,6 m (57.6 ft) manual or hydraulic swingaway jib for a maximum tip height of 80,8 m (265 ft).

> MAXbase variable outrigger positioning

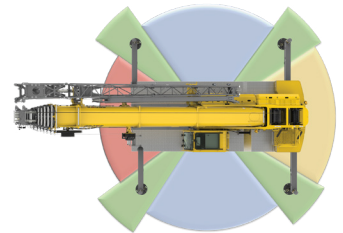
MAXbase provides increased versatility on the jobsite by allowing asymmetrical outrigger spans. This makes it easier to work in congested jobsites with obstructions, and allows for increased capacities when comparing to the standard 360° load charts.

> New wider full vision cab

The new wider full vision cab was designed with operator comfort, visibility and productivity in mind. Additional width, redesigned armrests and 20° cab tilt maximize the operator experience. Standard features include tilt/telescoping steering wheel, USB charging port, electronic seat adjustments, high-output heating and air conditioning system, large pivoting cup holder, windshield sun visor, added storage behind the seat, and three camera package. Additional optional equipment includes radio with Bluetooth and heated seat.

> Backing up our promise

Our new GRT line of Rough Terrain cranes have been designed from the ground up to provide class-leading specifications, and have undergone extensive testing to ensure they provide industry-leading quality and reliability. We stand behind our new line of GRT cranes, and we are willing to prove it. With new three, four or five-year extended warranty programs as well as a new two-year standard warranty, our GRT line of cranes are built to be GROVE. REAL. TOUGH.



**THE ONLY FIVE-YEAR
WARRANTY PROGRAM
AVAILABLE IN THE INDUSTRY**

GRT8120 benefits

- > Class-leading boom length and capacities maximize utilization.
- > Compact dimensions with self-rigging counterweight allow for efficient and easy transportation to the job.
- > Wireless rigging remote enables fast and convenient setup.
- > Flat aluminum decking, additional storage compartments and a full LED lighting package with new side-mounted carrier lights improve access and jobsite set up.
- > MAXbase variable outrigger positioning system - Increased lift capacities and easy access to any jobsite.
- > TWIN-LOCK™ boom pinning system maximizes capacities by reducing weight inside the extended boom.
- > Boom Configurator mode increases efficiency and simplifies telescoping operation.
- > Manual or hydraulic bi-fold swingaway with offset capability to 45° increases ability to reach over obstacles and increases jobsite versatility.
- > Innovative smart-sensing outrigger monitoring system offers reliable accuracy.
- > ECO mode supports intelligent power management and decreased fuel consumption.
- > New wider cab with 20° cab tilt and high-output heating and air conditioning system maximizes operator comfort.
- > Four modes of steering increase jobsite maneuverability and make crane positioning easier.



What you need, when you need it.

Get right to work with the right equipment — Manitowoc Finance gives you access to flexible, affordable financing you can use to seize profitable new opportunities as they arise.

Feel confident in your investment — rest easy with the assurance of the world's most advanced crane service and support network.

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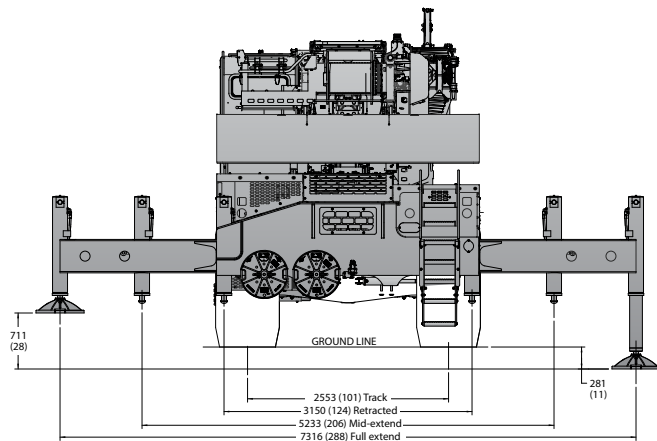
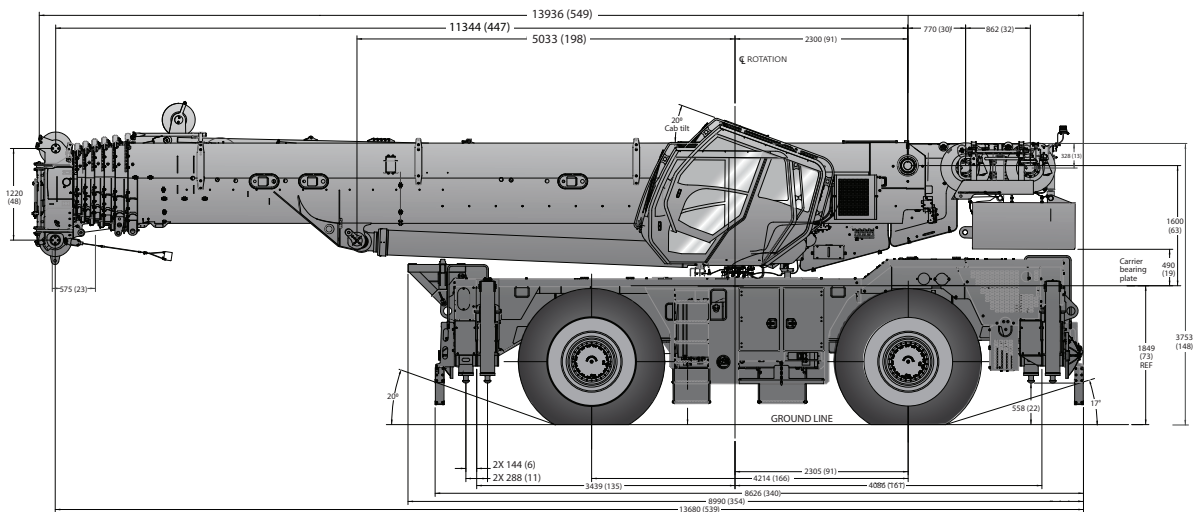
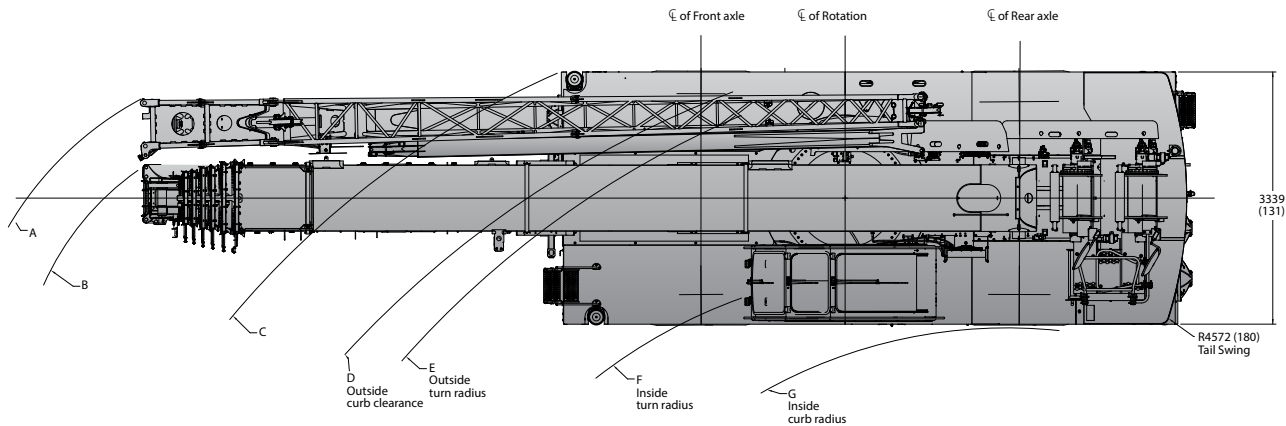
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Dimensions

Tire size: 29.5 x 25

A	B	C	D	E	F	G	A	B	C	D	E	F	G
17 526 mm (690")	16 713 mm (658")	14 630 mm (576")	13 970 mm (550")	13 564 mm (534")	11 278 mm (444")	9 957 mm (392")	11 938 mm (470")	11 227 mm (442")	8 661 mm (341")	7 798 mm (307")	7 493 mm (295")	4 826 mm (190")	4 521 mm (178")
Two-wheel steer							Four-wheel steer						

Dimensions in mm (in) unless otherwise specified.



Weights

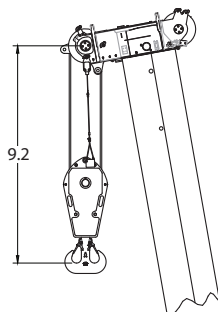
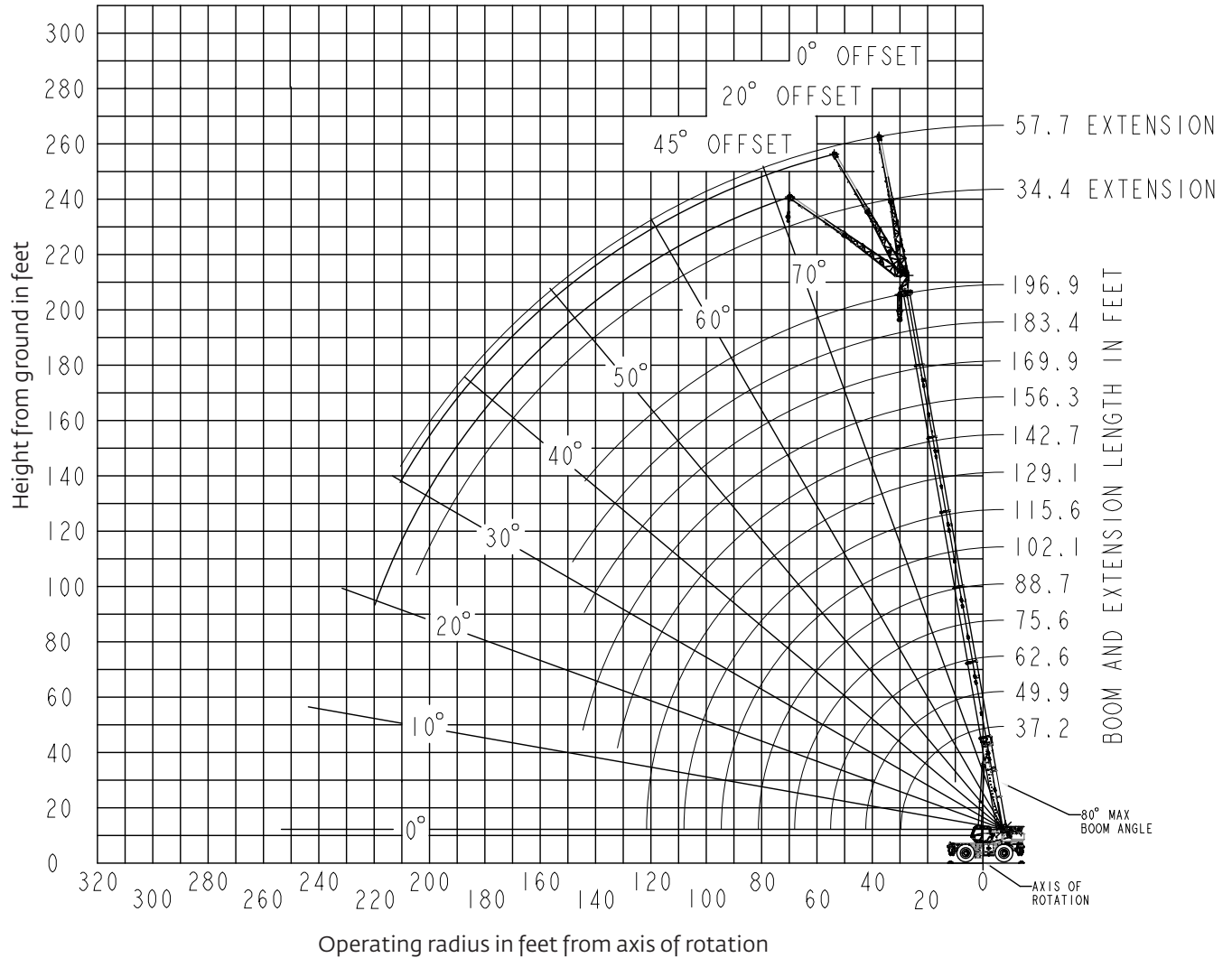
Weights						
	Gross		Axle 1		Axle 2	
	kg	lb	kg	lb	kg	lb
Basic crane with Cummins Stage V/T4F engine, 60 m (197 ft) main boom, main and auxiliary hoist with wire rope	42 814	94,388	28 870	63,648	13 944	30,740
Add 13 245 kg (29,200 lb) counterweight	13 245	29,200	-4907	-10,818	18 152	40,018
crane weight	56 059	123,588	23 963	52,829	32 096	70,759
Add 17.6 m (57.6 ft) manually offset bi-fold swingaway & stowage brackets	1671	3,683	2740	6,040	-1069	-2,357
crane weight	57 729	127,271	26 703	58,869	31 027	68,402
Add Auxiliary boom nose	88	194	245	541	-157	-347
crane weight	57 817	127,465	26 948	59,410	30 869	68,055
Add 9 t (10 USt) overhaul ball	310	683	496	1,094	-187	-411
crane weight	58 127	128,148	27 444	60,504	30 683	67,644
Add 75 t (83 USt) hookblock	1070	2,359	1715	3,780	-645	-1,421
crane weight	59 197	130,507	29 159	64,285	30 038	66,222

*THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.
The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane*

Working range

Working range diagram with bi-fold extension

(Boom deflection not shown)



Dimension shown is for the largest Grove furnished hookblock with anti-two block activated.

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Load chart

Main boom



37.2 ft - 197 ft



29,200 lb



100%



360°



Pounds

Radius in feet	Main boom length in feet											
	37.2	50.3 - 50.8	62 - 64.4	75.7 - 77.9	87 - 91.3	98 - 104.4	109.3 - 117	125.6 - 139.1	147.9 - 154.1	156.3 - 165.6	179 - 184.1	194.7 - 196.9
8	240,000*											
10	176,500	177,500	160,000									
12	158,000	159,000	145,000	125,000								
15	134,000	135,000	129,500	114,000	97,700							
20	101,000	103,000	102,000	95,700	85,750	80,250						
25	79,950	82,150	81,450	81,400	75,600	69,250	65,350	53,500				
30		65,000	66,050	65,900	64,800	62,800	58,700	53,500	36,600			
35		53,300	53,550	53,450	55,000	54,850	52,950	48,950	36,600	29,700		
40		43,250	43,700	44,850	44,100	45,500	44,200	43,050	36,600	29,350	22,000	
45			36,750	36,750	37,200	37,350	36,100	35,000	35,550	29,350	22,000	17,900
50			30,700	30,850	32,300	31,500	31,450	30,750	29,850	29,200	22,000	17,900
55			26,150	27,850	27,600	26,850	27,650	26,500	25,200	24,900	21,800	17,900
60				24,050	23,900	24,650	23,950	23,200	21,550	22,100	21,200	17,900
65				20,950	20,850	21,700	20,900	20,200	19,400	19,600	19,750	17,900
70				16,400	19,050	19,150	18,400	17,700	17,950	17,800	17,700	17,100
75					17,250	17,150	16,450	15,750	16,350	16,250	15,850	15,100
80					14,550	15,300	14,600	14,600	15,000	14,650	14,000	13,300
85						13,650	13,050	13,600	13,600	13,050	12,450	11,750
90						12,350	11,650	12,250	12,250	11,700	11,100	10,400
95						9,640	10,450	11,050	11,050	10,650	9,920	9,210
100							9,460	10,200	9,980	9,950	8,850	8,150
105							8,660	9,250	9,030	9,000	7,910	7,200
110								8,490	8,170	8,140	7,050	6,360
115								8,030	7,400	7,370	6,290	5,590
120								7,380	6,690	6,670	5,590	4,900
125								6,200	6,030	6,010	4,950	4,260
130								3,820	5,430	5,410	4,370	3,680
135									4,880	4,860	3,840	3,150
140									4,380	4,360	3,350	2,670
145									3,930	3,900	2,880	2,210
150										2,990	2,450	1,800
155										2,600	2,050	1,400
160											1,680	1,030
165											1,340	
170											1,030	

*Requires special equipment

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Load chart

Main boom - MAXbase 20° over outriggers



37.2 ft - 197 ft



29,200 lb



100%



MAXbase



Pounds

Radius in feet	Main boom length in feet											
	37.2	50.3 - 50.8	62 - 64.4	75.7 - 77.9	90 - 91.3	100.6 - 104.4	114.2 - 117	125.6 - 139.1	147.9 - 154.1	156.3 - 165.6	179 - 184.1	194.7 - 196.9
10	176,000	177,000	160,000									
12	157,500	158,500	145,000	125,500								
15	135,500	136,500	129,500	114,000	97,700							
20	105,000	105,500	105,000	95,700	85,750	80,250						
25	80,900	83,500	82,550	81,400	75,600	69,250	65,350	53,500				
30		65,450	66,400	66,100	64,900	62,800	58,700	53,500	36,600			
35		53,350	53,950	53,750	55,150	54,850	52,950	48,950	36,600	29,700		
40		44,550	44,800	45,250	46,150	47,400	46,250	43,850	36,600	29,150	22,000	
45			39,200	39,550	39,150	40,550	39,400	38,450	35,950	29,150	22,000	17,900
50			33,650	34,050	33,750	35,050	34,050	33,100	32,750	28,100	22,000	17,900
55			29,200	29,600	30,900	30,600	29,600	29,150	29,250	25,800	21,800	17,900
60				26,000	27,450	26,900	27,300	26,500	25,700	23,650	21,200	17,900
65				24,100	24,350	23,850	24,750	23,500	22,700	21,600	21,200	17,900
70				18,300	21,750	21,650	22,100	20,850	20,150	19,750	20,200	17,100
75					19,450	20,400	19,850	18,900	17,900	18,050	18,700	15,900
80					17,500	18,450	17,900	17,300	16,000	17,000	16,800	14,750
85						16,750	16,150	15,550	15,050	15,300	15,200	13,700
90						15,200	14,650	14,050	14,150	13,750	14,150	12,750
95						12,400	13,250	12,700	13,150	12,400	13,100	11,900
100							12,050	11,450	11,950	11,250	11,850	11,100
105							10,950	10,800	10,950	10,500	10,750	10,000
110								10,250	10,300	9,800	9,740	9,020
115								9,740	9,720	9,150	8,820	8,100
120								8,970	8,880	8,450	7,980	7,270
125								8,210	8,330	7,810	7,220	6,510
130								5,580	7,630	7,120	6,530	5,820
135									6,980	6,480	5,900	5,190
140									6,370	6,080	5,320	4,610
145									5,820	5,730	4,780	4,080
150										4,810	4,270	3,580
155										4,320	3,790	3,120
160											3,330	2,690
165											2,900	2,260
170											2,500	1,860
175											2,070	1,480
180												1,120

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Load chart

Manual bi-fold extension



37.2 ft - 197 ft



35 ft



29,200 lb



100%



360°



Pounds

Radius in feet	35 ft boom extension								
	167.7 - 169.9 ft boom length			183.4 - 184.1 ft boom length			194.7 - 196.9 ft boom length		
	0° offset	20° offset	45° offset	0° offset	20° offset	45° offset	0° offset	20° offset	45° offset
40	12,800								
45	12,800			11,650					
50	12,800			11,650			10,050		
55	12,800	13,350		11,650			10,050		
60	12,800	13,350		11,650	12,050		10,050		
65	12,800	13,350	11,350	11,650	12,050		10,050	10,350	
70	12,800	13,000	11,150	11,650	12,050	11,300	10,050	10,350	
75	12,450	12,250	10,950	11,650	12,050	11,100	10,050	10,350	10,800
80	11,550	11,550	10,750	11,650	12,050	10,900	10,050	10,350	10,800
85	10,750	10,800	10,600	11,100	12,050	10,750	10,050	10,350	10,750
90	10,000	10,100	10,300	10,250	10,700	10,550	9,780	10,350	10,600
95	9,300	9,450	9,720	9,260	9,830	10,200	8,600	9,470	10,250
100	8,670	8,820	9,150	8,200	8,950	9,590	7,540	8,350	9,060
105	7,960	8,240	8,540	7,260	7,950	8,530	6,600	7,350	8,000
110	7,100	7,680	7,970	6,410	7,050	7,580	5,760	6,460	7,040
115	6,330	6,860	7,260	5,640	6,240	6,710	5,000	5,650	6,180
120	5,630	6,120	6,470	4,950	5,500	5,930	4,310	4,910	5,390
125	5,000	5,450	5,760	4,320	4,830	5,210	3,680	4,240	4,680
130	4,420	4,830	5,100	3,740	4,210	4,550	3,100	3,630	4,020
135	3,880	4,260	4,490	3,210	3,650	3,940	2,570	3,060	3,410
140	3,390	3,740	3,930	2,720	3,120	3,390	2,090	2,540	2,850
145	2,940	3,250		2,270	2,640	2,870	1,640	2,060	2,340
150	2,520	2,800		1,850	2,190	2,390	1,220	1,610	1,860
155	2,130	2,390		1,460	1,780			1,200	1,410
160	1,770	2,000		1,100	1,390				
165	1,440	1,630			1,030				
170	1,130	1,290							

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Load chart

Manual bi-fold extension



37.2 ft - 197 ft



58 ft



29,200 lb



100%



360°



Pounds

Radius in feet	58 ft boom extension								
	167.7 - 169.9 ft boom length			183.4 - 184.1 ft boom length			194.7 - 196.9 ft boom length		
	0° offset	20° offset	45° offset	0° offset	20° offset	45° offset	0° offset	20° offset	45° offset
45	8,090								
50	8,090			7,570					
55	8,090			7,570			6,640		
60	8,090			7,570			6,640		
65	8,090			7,570			6,640		
70	8,090	7,080		7,570			6,640		
75	8,090	6,940		7,570	6,940		6,640		
80	8,090	6,810	5,690	7,570	6,820		6,640	6,660	
85	8,090	6,680	5,620	7,570	6,700	5,660	6,640	6,560	
90	8,000	6,570	5,560	7,570	6,590	5,600	6,640	6,470	
95	7,830	6,450	5,500	7,570	6,490	5,540	6,640	6,370	5,520
100	7,650	6,340	5,440	7,570	6,390	5,480	6,640	6,290	5,480
105	7,490	6,240	5,380	7,260	6,290	5,430	6,640	6,200	5,430
110	7,080	6,140	5,330	6,810	6,190	5,370	6,170	6,120	5,390
115	6,610	6,040	5,280	6,030	6,100	5,330	5,390	6,040	5,340
120	6,020	5,960	5,240	5,330	5,970	5,280	4,690	5,830	5,300
125	5,370	5,870	5,210	4,690	5,660	5,250	4,060	5,120	5,260
130	4,780	5,600	5,180	4,100	5,010	5,210	3,470	4,470	5,220
135	4,240	5,000	5,130	3,560	4,420	5,150	2,940	3,870	4,690
140	3,740	4,450	5,020	3,060	3,870	4,540	2,440	3,320	4,080
145	3,280	3,940	4,450	2,610	3,360	3,970	1,990	2,820	3,500
150	2,860	3,470	3,920	2,180	2,890	3,440	1,570	2,340	2,970
155	2,460	3,030	3,420	1,790	2,450	2,940	1,180	1,900	2,480
160	2,090	2,620	2,950	1,420	2,040	2,480		1,490	2,010
165	1,750	2,230	2,510	1,080	1,650	2,040		1,110	1,580
170	1,430	1,870			1,290	1,630			1,170
175	1,130	1,530				1,240			
180		1,210							

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Load chart

Hydraulic bi-fold extension



37.2 ft - 197 ft



35 ft



29,200 lb



100%



360°



Pounds

Radius in feet	35 ft boom extension								
	167.7 - 169.9 ft boom length			183.4 - 184.1 ft boom length			194.7 - 196.9 ft boom length		
	0° offset	0° - 20° offset	20° - 45° offset	0° offset	0° - 20° offset	20° - 45° offset	0° offset	0° - 20° offset	20° - 45° offset
45	12,900			11,650					
50	12,900			11,650			10,000		
55	12,900			11,650			10,000		
60	12,900	12,900		11,650	11,650		10,000		
65	12,900	12,900	11,350	11,650	11,650		10,000	10,000	
70	12,900	12,900	11,150	11,650	11,650	11,300	10,000	10,000	
75	12,450	12,200	10,950	11,650	11,650	11,100	10,000	10,000	10,300
80	11,550	11,450	10,750	11,650	11,650	10,900	10,000	10,000	10,300
85	10,700	10,700	10,600	11,050	11,050	10,750	10,000	10,000	10,300
90	9,960	9,960	10,100	10,200	10,200	10,550	9,750	9,750	10,300
95	9,270	9,270	9,420	9,230	9,230	9,800	8,560	8,560	9,440
100	8,630	8,630	8,790	8,170	8,170	8,920	7,510	7,510	8,320
105	7,920	7,920	8,200	7,220	7,220	7,920	6,570	6,570	7,320
110	7,070	7,070	7,650	6,370	6,370	7,020	5,720	5,720	6,420
115	6,300	6,300	6,830	5,610	5,610	6,210	4,960	4,960	5,610
120	5,600	5,600	6,090	4,910	4,910	5,470	4,270	4,270	4,880
125	4,960	4,960	5,410	4,280	4,280	4,790	3,640	3,640	4,210
130	4,380	4,380	4,800	3,700	3,700	4,180	3,070	3,070	3,590
135	3,850	3,850	4,230	3,170	3,170	3,610	2,540	2,540	3,030
140	3,360	3,360	3,700	2,680	2,680	3,090	2,050	2,050	2,510
145	2,910	2,910		2,230	2,230	2,610	1,600	1,600	2,030
150	2,490	2,490		1,810	1,810	2,160	1,190	1,190	1,580
155	2,100	2,100		1,430	1,430				1,160
160	1,740	1,740		1,070	1,070				
165	1,400	1,400							
170	1,090	1,090							

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Load chart

Hydraulic bi-fold extension



37.2 ft - 197 ft



58 ft



29,200 lb



100%



360°



Pounds

Radius in feet	58 ft boom extension								
	167.7 - 169.9 ft boom length			183.4 - 184.1 ft boom length			194.7 - 196.9 ft boom length		
	0° offset	0° - 20° offset	20° - 45° offset	0° offset	0° - 20° offset	20° - 45° offset	0° offset	0° - 20° offset	20° - 45° offset
45	8,070								
50	8,070			7,550					
55	8,070			7,550			6,620		
60	8,070			7,550			6,620		
65	8,070			7,550			6,620		
70	8,070	7,070		7,550			6,620		
75	8,070	6,940		7,550	6,930		6,620		
80	8,070	6,810	5,500	7,550	6,810		6,620	6,620	
85	8,070	6,680	5,440	7,550	6,700	5,470	6,620	6,560	
90	8,000	6,560	5,380	7,550	6,590	5,410	6,620	6,470	
95	7,820	6,440	5,320	7,550	6,480	5,360	6,620	6,370	5,360
100	7,650	6,310	5,270	7,550	6,380	5,310	6,620	6,280	5,320
105	7,480	6,180	5,230	7,240	6,290	5,260	6,620	6,200	5,270
110	7,050	6,070	5,190	6,770	6,170	5,220	6,130	6,110	5,230
115	6,580	5,950	5,150	6,000	6,000	5,180	5,360	5,360	5,190
120	5,990	5,840	5,120	5,300	5,300	5,150	4,660	4,660	5,150
125	5,340	5,340	5,090	4,650	4,650	5,110	4,020	4,020	5,090
130	4,750	4,750	5,070	4,070	4,070	4,990	3,440	3,440	4,440
135	4,210	4,210	4,980	3,530	3,530	4,390	2,910	2,910	3,850
140	3,710	3,710	4,420	3,030	3,030	3,840	2,410	2,410	3,300
145	3,250	3,250	3,910	2,580	2,580	3,330	1,960	1,960	2,790
150	2,830	2,830	3,440	2,150	2,150	2,860	1,540	1,540	2,310
155	2,430	2,430	3,000	1,760	1,760	2,420	1,140	1,140	1,880
160	2,060	2,060	2,590	1,390	1,390	2,010			1,470
165	1,720	1,720	2,200	1,050	1,050	1,620			1,080
170	1,400	1,400				1,260			
175	1,100	1,100							

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Load chart

Pick and carry



37.2 - 86.6 ft



29,200 lb



Pick and carry
Creep Speed
29.5 x 25 tires



Boom
over front

Boom centered over front						
Radius in feet	Main boom length in feet					
	37.2	49.9	60.5	62.6	75.6	86.6
Tele I	0%	0%	0%	0%	0%	0%
Tele II	0%	0%	0%	0%	0%	0%
Tele III	0%	0%	0%	0%	0%	0%
Tele IV	0%	0%	0%	0%	0%	0%
Tele V	0%	0%	0%	0%	50%	92%
Tele VI	0%	50%	92%	100%	100%	100%
12	49,400	43,000				
15	41,300	40,000	38,000	38,000		
20	32,000	34,250	32,000	32,000	27,000	24,000
25	24,000	27,550	28,000	28,000	24,000	22,500
30		21,750	23,200	23,150	22,500	21,500
35		17,650	19,550	19,500	21,000	20,300
40		14,500	15,750	16,000	17,750	17,550
45			13,100	13,350	15,050	15,100
50			10,950	11,200	12,700	12,950
55				9,370	10,650	11,050
60					8,910	9,330
65					7,350	7,770
70						6,350
75						5,060
Minimum boom angle (°) for indicated length (no load)						0°
Maximum boom length at 0° boom angle (no load)						86.6 ft

Boom angle	Lifting capacities at 0° boom angle					
	37.2	49.9	60.5	62.6	75.6	86.6
0°	18,450	13,300	9,830	9,360	6,500	4,110

NOTES FOR PICK & CARRY ON RUBBER

1. Capacities are in pounds and do not exceed 75% of tipping loads as determined by test in accordance with SAE J765.
2. Capacities are applicable to machines equipped with Titan ND LCM MCS - 29.5x25 (34 ply) tires at 76 psi (5.2 bar) cold inflation pressure.
3. Capacities are applicable only with the machine on a firm level surface.
4. On rubber lifting with boom extension not permitted.
5. For pick and carry operation, boom must be centered over front of machine, mechanical swing lock engaged, and load restrained from swinging.
6. Axle lockouts must be functioning when lifting on rubber.
7. All lifting depends on proper tire inflation, capacity and condition. Capacities must be reduced for lower tire inflation pressures. See the tire inflation table for tire specifications. Damaged tires are hazardous to safe operation of crane.
8. Creep - not over 200 ft (61 m) of movement in any 30 minute period and not exceeding 1 mph (1.6 km/h).

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Load chart

Stationary



37.2 - 86.6 ft



29,200 lb



Stationary



360°

Stationary capacities

Radius in feet	Main boom length in feet					
	37.2	49.9	60.5	62.6	75.6	86.6
Tele I	0%	0%	0%	0%	0%	0%
Tele II	0%	0%	0%	0%	0%	0%
Tele III	0%	0%	0%	0%	0%	0%
Tele IV	0%	0%	0%	0%	0%	0%
Tele V	0%	0%	0%	0%	50%	92%
Tele VI	0%	50%	92%	100%	100%	100%
20	31,000					
25	20,600	23,500				
30		17,150	19,300	19,550		
35		12,800	14,800	15,000	16,700	17,100
40		9,660	11,450	11,700	13,300	13,750
45			8,920	9,230	10,750	11,150
50			6,890	7,240	8,730	9,150
55				5,640	7,110	7,520
60					5,780	6,160
65					4,670	5,030
70						4,070
75						3,230
Minimum boom angle (°) for indicated length (no load)						0°
Maximum boom length at 0° boom angle (no load)						86.6 ft

Boom angle	Lifting capacities at 0° boom angle					
	37.2	49.9	60.5	62.6	75.6	86.6
0°	14,650	8,440	5,840	5,620	4,070	2,640

NOTES FOR STATIONARY ON RUBBER

1. Capacities are in pounds and do not exceed 75% of tipping loads as determined by test in accordance with SAE J765.
2. Capacities are applicable to machines equipped with Titan ND LCM MCS - 29.5x25 (34 ply) tires at 76 psi (5.2 bar) cold inflation pressure.
3. Capacities are applicable only with the machine on a firm level surface.
4. On rubber lifting with boom extension not permitted.
5. Axle lockouts must be functioning when lifting on rubber.
6. All lifting depends on proper tire inflation, capacity and condition. Capacities must be reduced for lower tire inflation pressures. See the tire inflation table for tire specifications. Damaged tires are hazardous to safe operation of crane.

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Rigging charts

Rigging chart for installation and removal of counterweight, on outriggers fully extended

Radius in feet	Main boom length in feet			
	37.2	49.9	62.9	76.4
Tele I	0%	50%	0%	0%
Tele II	0%	0%	0%	0%
Tele III	0%	0%	0%	0%
Tele IV	0%	0%	0%	50%
Tele V	0%	0%	50%	50%
Tele VI	0%	50%	50%	50%
10	170,500	77,500	84,050	
12	145,500	71,750	76,950	
15	118,000	64,550	68,200	75,400
20	82,500	55,400	57,250	63,100
25	55,550	48,650	49,100	54,100
30		41,550	42,850	44,450
35		30,750	32,800	33,400
40		23,300	25,550	26,100
45			20,450	21,000
50			16,550	17,150
55			13,500	14,350
60				11,900
65				9,950
Minimum boom angle (°) for indicated length (no load)				0°
Maximum boom length at 0° boom angle (no load)				76.4

Loading and unloading - on rubber (0 lb counterweight)

Radius in feet	Main boom length in feet
	37.2
Tele I	0%
Tele II	0%
Tele III	0%
Tele IV	0%
Tele V	0%
Tele VI	0%
12	5,400
15	5,400
20	5,400
25	5,400
Boom angle	Lifting capacities at 0° boom angle
	37.2
0°	5400

NOTE: For loading and unloading, the boom must be centered over front of machine and mechanical swing lock engaged. Hookback and overhaul weight/ball must be restrained from swinging.

Boom angle	Lifting capacities at 0° boom angle			
	37.2	49.9	62.9	76.4
0°	30,850	20,600	13,300	8,680

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Load handling

Weight reductions for load handling devices	
Auxiliary boom nose	88 kg (194 lb)
Hook blocks and overhaul weights:	
100 t (112 USt), 7-sheave	1140 kg (2513 lb)+
75 t (83 USt), 5-sheave	1070 kg (2359 lb)+
45 t (50 USt), 3-sheave	770 kg (1698 lb)+
26 t (29 USt), single sheave	535 kg (1179 lb)+
11 t (12 USt), overhaul weight	294 kg (648 lb)+
9 t (10 USt), overhaul ball	310 kg (683 lb)+

*Refer to rating plate for actual weight.

Line pulls and reeving information			
Hoists	Cable specs.	Permissible line pulls	Nominal cable length
Main	19 mm (3/4 in) 35x7 Class rotation resistant (non-rotating) Min. breaking strength 38 918 kg (85,800 lb)	7784 kg (17,160 lb)*	250 m (820 ft)
Auxiliary	19 mm (3/4 in) 35x7 Class rotation resistant (non-rotating) Min. breaking strength 38 918 kg (85,800 lb)	7784 kg (17,160 lb)*	185 m (607 ft)

The approximate weight of 19 mm (3/4 in) wire rope is 1.93 kg/m (1.3 lb/ft).

*With certain boom and hoist tackle combinations, the allowable line pull may be limited by hoist performance. Refer to Hoist performance table for lift planning to ensure adequate hoist performance on drum rope layer required.

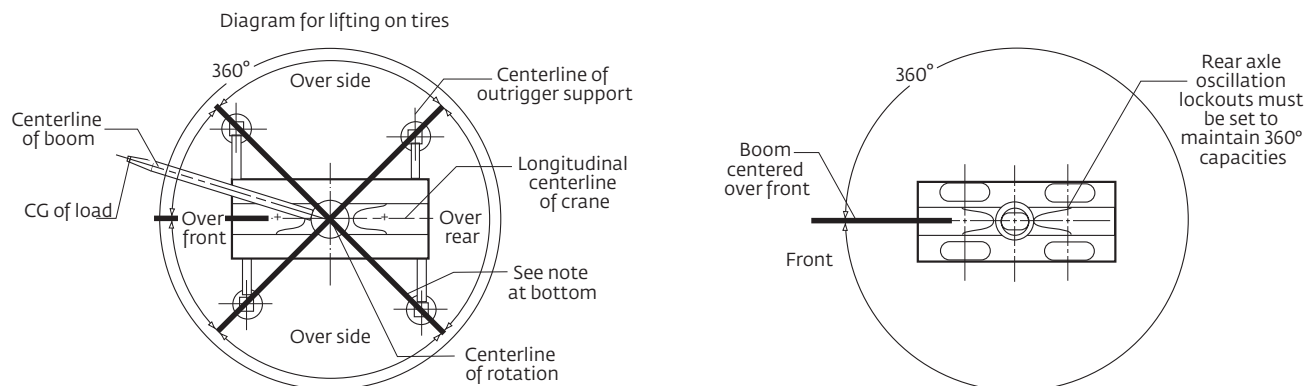
Hoist performance				
Wire rope layer	Hoist line pulls		Drum capacity (ft)	
	Two speed hoist		Layer	Total
	Low	High		
	Available lb	Available lb		
1	24,100	15,000	111	111
2	22,200	13,800	120	231
3	20,600	12,800	130	361
4	19,200	11,900	139	500
5	18,000	11,200	149	649
6	16,900	10,500	158	807

*Refer to Line Pulls and Reeving Information table for max. lifting capacity of wire rope.

Synthetic rope layer height may vary and may reduce available line pull per layer.

Tire inflation		
Size (front and rear)	TRA Code	Lifting service, general travel and extended travel
		Static, creep and 2.5 mph (4.0 km/h)
29.5 x 25 - 34 PR	E-3/L-3	5.2 bar (76 psi)

Working area diagram



Bold lines determine the limiting position of any load for operation within working areas indicated.

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Specifications

Superstructure



Boom

BOOM: 11,3 m - 60 m (37.2 ft - 197 ft) seven-section MEGAFORM™ boom with TWIN-LOCK™ boom pinning system.
Maximum tip height: 63.1 m (207 ft)



Boom nose

Five nylon sheaves mounted on heavy-duty tapered roller bearings with removable pin type guards. Quick reeve boom nose. Removable single sheave auxiliary boom nose with removable pin-type rope guard.



Boom elevation

Single hydraulic cylinder with integral holding valve provides boom elevation from -3° to +80°.



Manual bi-fold swingaway extension*

10,5 m - 17,6 m (34.5 ft - 57.6 ft) bi-fold lattice swingaway extension. Offsets at 0°, 20° and 45°. Stows alongside base boom section. Includes wireless rigging remote.
Maximum tip height: 80.8 m (265 ft)



Hydraulic bi-fold swingaway extension*

10,5 m - 17,6 m (34.5 ft - 57.6 ft) bi-fold lattice swingaway extension. Hydraulically offsets from 0° to 45°. Controlled from crane cab. Stows alongside base boom section. Includes wireless rigging remote.
Maximum tip height: 80.8 m (265 ft)



Crane Control System (CCS)

Rated Capacity Limiter (RCL) with graphical display. Load moment and anti-two block system with audio-visual warning and control lever lockout. This system provides electronic display of boom angle, boom length, load radius, boom tip height, maximum permissible load, actual load and warning of impending two-block condition. Also includes an Operating display which shows the crane operating indicators, levels, warnings and faults. Other features include a Working Range Limiter (WRL) which allows the operator to preselect and define working areas. If the crane approaches the operator preset limits, audio-visual warnings aid the operator in avoiding obstructions. ECO mode system to control engine rpm to lower noise and improve fuel consumption. Operator-programmable function speeds and ramps. On Crane Service Interface (oCSD) provides on-board diagnostics.



Cab

Operator-controlled 20° hydraulic cab tilt, full vision; all steel, galvanealed construction with acoustical lining and tinted safety glass throughout. Deluxe seat with electronic seat controls and headrest, incorporates armrest-mounted electronic programmable single-axis or dual-axis controllers and a jog dial for easy data input. Tilt/telescoping steering wheel with controls incorporated into the steering column. Other standard features include heater (hot water), circulating air fan, high-output air conditioning system, sliding skylight with sunscreen, windshield and skylight washer/wiper, windshield sun visor, fire extinguisher, seat belt, USB charging port, pivoting cup holder, and dual cab-mounted LED work lights, and

three camera package (rear-view, right side and hoists).



Swing

Variable speed, 360° continuous rotation. Planetary swing drive with foot actuated multi-disc brake. Spring-applied, hydraulically released swing brake. Two-position mechanical swing lock pin, operated from cab.
Maximum speed: 2 rpm



Counterweight

13 245 kg (29,200 lb) hydraulically installed and removed. Controls located on both sides of superstructure.

Hoist (main and optional auxiliary hoist)

Planetary reduction driven by axial piston motor. Grooved drum with automatic spring applied multi-disc wet brake. Electronic hoist drum rotation indicator. Third wrap indicator with hoist function cut-out standard.

Maximum hoist single line pull:

1st layer: 10 930 kg (24,100 lb)

3rd layer: 9344 kg (20,600 lb)

6th layer: 7666 kg (16,900 lb)

Maximum permissible single line pull:

7784 kg (17,160 lb)

Maximum hoist single line speed (no load):

131 m/min (430 ft/min)

Rope construction:

35 x 7 rotation – resistant

Rope diameter:

19 mm (3/4 in)

Rope length:

Main hoist: 250 m (820 ft)

Auxiliary hoist: 185 m (607 ft)

Carrier



Chassis

Parallel box section fabricated from high-strength, low-alloy steel with integral outrigger boxes, front and rear lift, tie-down, and towing lugs.



Outrigger system

Four hydraulic telescoping single stage double box beam outriggers with inverted jack cylinders and integral jack holding valves. Three position settings, 0%, 50%, and fully extended. Polymer outrigger floats 600 mm (23.6 in) diameter. Outrigger Monitoring System (OMS) with in-cylinder sensors. Outrigger beam position shown on RCL display.



Outrigger controls

Main controls and digital level shown on operating display in cab. Extension and retraction are through the CCS system as well as the wireless rigging remote. Includes automatic leveling feature.

* Denotes optional equipment

Specifications

Carrier *cont'd*



Hydraulic system

Two main pumps variable displacement piston and one gear with a combined output capacity of 507 L/min (134 gal/min).
Maximum operating pressure: 276 bar (4000 psi)
Return line in-tank filter with full flow by-pass protection and service indicator.
Replaceable cartridge with 4 micron filtration rating per ISO cleanliness level of 17/15/12. Carrier mounted oil cooler with thermostatically controlled hydraulic motor driven fan / air to oil. System pressure test ports.



Engine (Tier 4 Final / Stage V)

Cummins B6.7L diesel engine with after-treatment system. Six-cylinder, turbo-charged and water cooled engine. 224 kw (300 HP) at 2,500 rpm.
Maximum torque: 990 Nm (730 lb-ft) at 1500 rpm.
Meets emissions per U.S. EPA Tier 4 Final and E.U. Stage V.
Fuel requirement: Maximum of 15 ppm sulfur content (ultra low sulfur diesel). Diesel exhaust fluid required.
Please review your country's appropriate engine emissions standards before selecting an engine.



Engine (non-certified)

Cummins B6.7L diesel engine without aftertreatment system. Six-cylinder, turbo-charged and water cooled engine. 224 kw (300 HP) at 2,500 rpm.
Maximum torque: 1288 Nm (950 lb-ft) at 1500 rpm.
Fuel requirement: Maximum of 5000 ppm sulfur diesel fuel.
Please review your country's appropriate engine emissions standards before selecting an engine.



Fuel tank capacity

271 L (72 gal)



Transmission

Rangeshift with six forward and six reverse speeds.
(Three speeds high and three speeds low). Front axle disconnect for 4 x 2 drive.



Axles

FRONT: Drive / steer with differential and planetary reduction hubs rigid mounted to frame.
REAR: Drive / steer with differential and planetary reduction hubs pivot mounted to frame. Automatic full hydraulic lockouts on rear axle permits 254 mm (10 in) of oscillation only with boom centered over the front.



Brakes

Full hydraulic split (dual) circuit dry disc operating on all wheels with dual calipers. High pressure parking brake is spring applied / hydraulically released on the front axle input shaft.



Steering

Fully independent power steering.
Front: Fully hydraulic steering wheel controlled.
Rear: Fully hydraulic via separate momentary switch provides infinite variations 4 steering modes, front only, rear only, coordinated and crab.
Rear steer not aligned indicator.
Outside 4WS coordinated steer radius: 7,5 m (24.6 ft)
Inside 4WS coordinated steer radius: 4,8 m (15.8 ft)



Tires

29.5 x 25 – 34 bias ply rating



Electrical system

Two 12 V maintenance-free batteries with disconnect.
24 V system / 24 V lighting



Lighting

Full LED lighting package including turn indicators; head, tail, brake and hazard warning lights; carrier side mounted work lights and work lights mounted on cab front.



Maximum Drive Speed

24,1 km/h (15 mph) with counterweight installed.



Gradeability (theoretical)

99% to drive train stall based on 59 197 (130,507 lb) GVW with 29.5 x 25 tires, standard counterweight, auxiliary hoist and manual bi-fold extension.

Miscellaneous standard equipment

Full length aluminum decking, dual rear view mirrors, hook block tie-down, electronic back-up alarm, covered deck storage compartment, hot water cab heater / defroster, cab air conditioner, hourmeter, A/V warning system, combination lift/tie-down/towing lugs, coolant sight level indicator, hoist access platform, storage boxes on both sides of carrier and cribbing storage on left side of carrier.

*Optional equipment

- **Auxiliary Hoist Package:** Includes auxiliary hoist with electronic hoist drum rotation indicator, third wrap indicator with hoist function cut-out, 185 m (607 ft) of 19 mm (¾ in.) of 35 x 7 class rotation resistant wire rope.
- **Auxiliary Lighting and Convenience Package:** Includes superstructure mounted amber flashing beacon, dual base boom mounted LED work lights controlled from cab and in-cab RCL light bar.
- 10,5 m - 17,6 m (34.5 ft - 57.6 ft) manual bi-fold swingaway extension
- 10,5 m - 17,6 m (34.5 ft - 57.6 ft) hydraulic luffing extension
- 360° positive swing lock
- Rear pintle hitch
- Cab-controlled cross axle differential locks (front and rear)
- Wind speed indicator
- Boom mounted, boom position indicator light
- Vertical RCL light tower
- -29C / -20F cold weather package
- -40C / -40F arctic weather package
- Emergency stop buttons on each side of carrier
- Second beacon light
- Refinery package (certified spark arrestor + engine air shutdown) (T3 engine only)
- MAXbase - variable outrigger positioning system
- Bluetooth/AM/FM radio
- Heated seat
- CraneSTAR asset management system

** Denotes optional equipment*

The Manitowoc Company, Inc.

Regional headquarters

Americas

Milwaukee, Wisconsin, USA

Tel: +1 414 760 4600

Shady Grove, Pennsylvania, USA

Tel: +1 717 597 8121

Europe and Africa

Dardilly, France - TOWERS

Tel: +33 (0) 4 72 18 20 20

Wilhelmshaven, Germany - MOBILE

Tel: +49 (0) 4421 294 0

APAC

Shanghai, China

Tel: +86 21 6457 0066

Singapore

Tel: +65 6264 1188

Middle East and India

Dubai, UAE

Tel: +971 4 8862677

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