

**GROVE**<sup>®</sup>  
by **Manitowoc**

**GRT880**

**G**ROVE.

**R**EAL.

**T**OUGH.

  
**MADE  
— IN —  
AMERICA**

## GRT880

### Product guide

ASME B30.5  
Imperial 85%



### Features

- 80 t (80 Ust) capacity
- 12,6 m – 41,1 m (41.2 ft – 134.7 ft) four-section full-power boom
- 10,1 m – 17,1 m (33 ft – 56 ft) manual offsettable bi-fold lattice swingaway extension
- 9979 kg (22,000 lb) standard counterweight hydraulically installed and removed
- Intuitive, user friendly controls with electronic joysticks and operator customizable function speeds
- Full vision cab with 20° tilt feature

# GROVE GRT880

The GRT880 was designed after gathering feedback from crane owners and operators to ensure that it is loaded with the features and reliability you demand.

## Features

### > Cab

The cab is designed with operator comfort and productivity in mind with full-vision design and 20° tilt for improved viewing at high boom angles. The tilt/telescoping steering wheel can be positioned for optimum use.



### > Control system

The new Crane Control System (CCS) offers a user-friendly interface, two full graphic displays mounted vertically for easier viewing and a jog dial for easier navigation and data input. The system allows the electronic controllers to be reprogrammed by the operator for specific speed and reaction. Parts commonality across Grove, Manitowoc and Potain product lines enhances operator familiarization and serviceability.



### > Boom

Lifting performance is enhanced by the 12,6 m – 41,1 m (41.2 ft – 134.7 ft) four-section, full-power boom with sequenced, synchronized extension capability.



### > Backing up our promise

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**

## GRT880 benefits

- Higher nominal capacity and stronger load charts ensure higher rental rates.
- Outstanding height and reach provide higher utilization and greater versatility.
- The GRT880 transports to the jobsite quickly and efficiently with a weight under 41 127 kg (90,667 lb) after removal of counterweight and boom extension.
- Counterweight is hydraulically self-removable and installed by the crane.
- ECO mode for intelligent power management and decreased fuel consumption.



**Maniowoc Crane Care when you need it.**  
The assurance of the world's most advanced crane service and support to get you back to work fast.



**Maniowoc Finance helps you get right to work generating profits for your business.**  
Financial tools that help you capitalize on opportunity with solutions that fit your needs.

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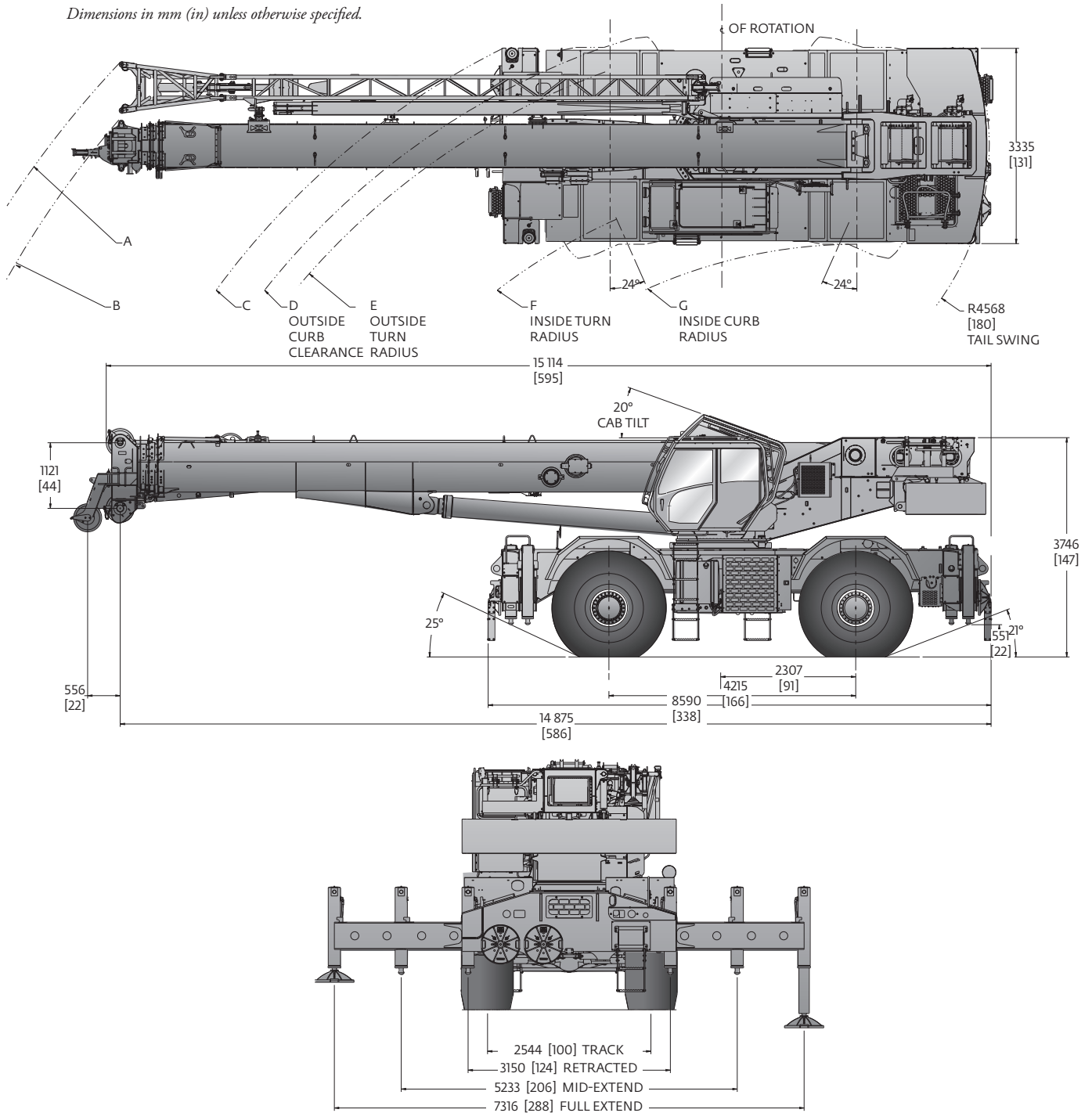


# Dimensions

**Tire Size: 29.5 x 25**

A	B	C	D	E	F	G	A	B	C	D	E	F	G
17,4 m (57'1")	16,7 m (54'8")	13,6 m (44'7")	12,9 m (42'4")	12,5 m (41'0")	10,1 m (33'2")	8,8 m (28'10")	13,2 m (43'4")	12,5 m (41'0")	8,4 m (27'7")	7,7 m (25'3")	7,3 m (23'11")	4,9 m (16'1")	4,6 m (15'1")
Two-Wheel Steer							Four-Wheel Steer						

*Dimensions in mm (in) unless otherwise specified.*



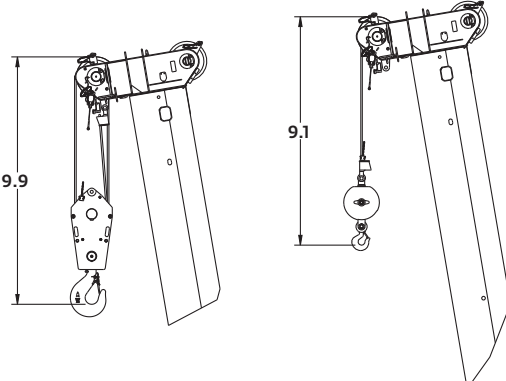
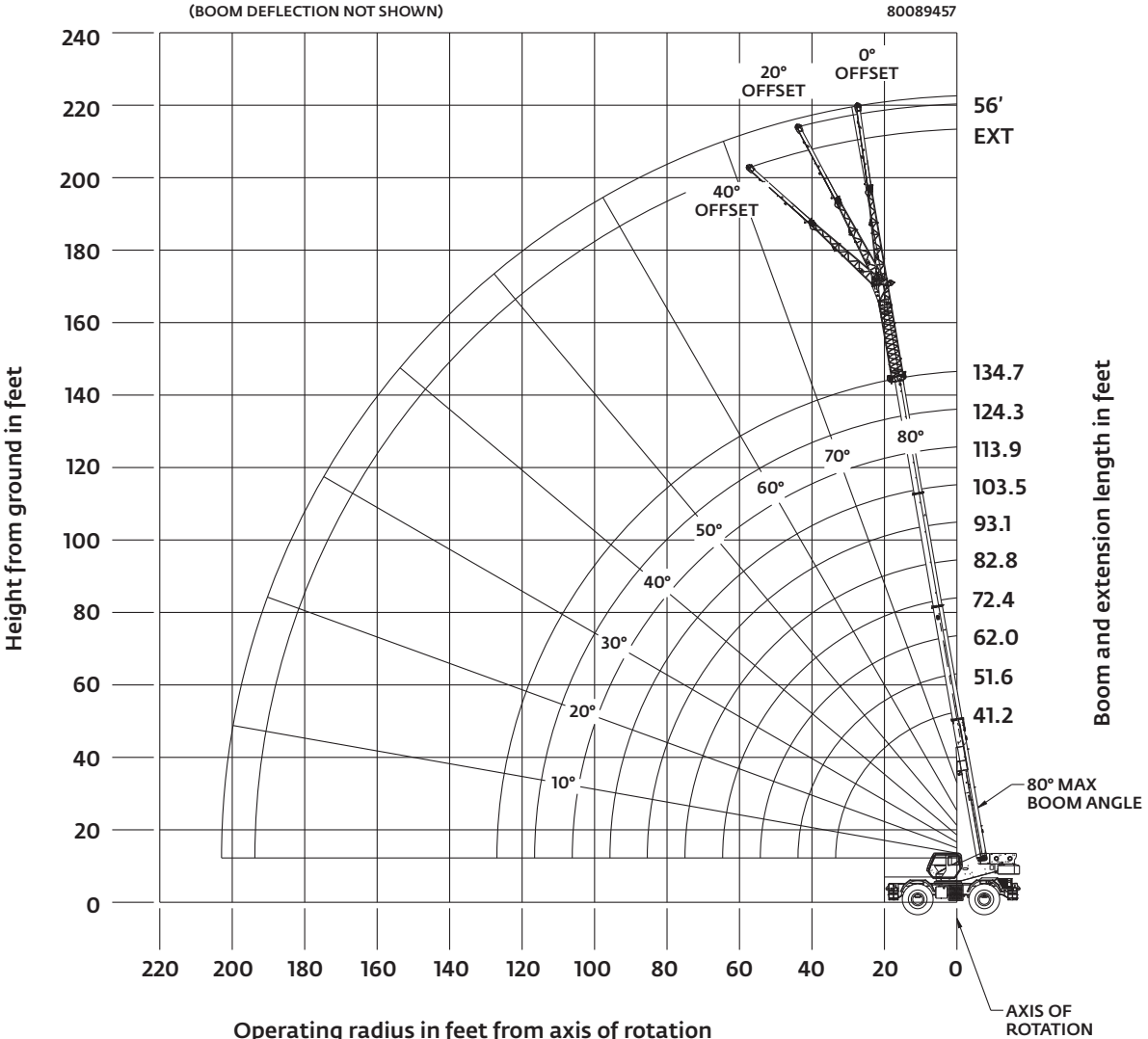
# Weights

Weights						
	Gross		Front		Rear	
	kg	lb	kg	lb	kg	lb
<b>Basic Machine (T4F):</b> including 41,1 m (134.7 ft) main boom, main hoist with 213,9 m (702 ft) of wire rope, 9979 kg (22,000 lb) full counterweight, 75 t (82.7 USt) hook block, 11,0 t (12 USt) headache ball, auxiliary boom nose, and air conditioning	50 500	111,333	24 626	54,290	25 875	57,043
<b>Add:</b> auxiliary hoist	488	988	157	346	-605	-1334
crane weight	50 948	112,321	24 469	53,944	26 480	58,377
<b>Add:</b> manual offsettable bi-fold swingaway and brackets	1502	3311	2797	6167	-1295	-2856
crane weight	52 451	115,632	27 266	60,111	25 184	55,521
<b>Remove:</b> counterweight	-10 000	-22,046	3735	8234	-13 735	-30,280
crane weight	42 459	93,586	31 001	68,345	11 449	25,241
<b>Remove:</b> manual bi-fold extension	-1324	-2919	-2508	-5529	1184	2610
crane weight	41 127	90,667	28 493	62,816	12 633	27,851

*THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE.  
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# Working range

## Working range diagram with bi-fold extension and insert



Dimensions are for the largest groove furnished hook block and overhaul ball, with anti-two block activated.

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# Load chart



41.2 ft – 134.7 ft



22,000 lb



100%



360°



Pounds

Radius in Feet	Main Boom Length in Feet									
	41.2	51.6	62	72.4	82.8	93.1	103.5	113.9	124.3	134.7
10	160,000 (70)	109,000 (74.5)	108,000 (77.5)	*69,350 (80)	—	—	—	—	—	—
12	150,000 (67)	109,000 (72)	108,000 (75.5)	69,350 (78)	*42,250 (80)	—	—	—	—	—
15	137,000 (62)	109,000 (68.5)	108,000 (72.5)	69,350 (75.5)	42,250 (78)	42,250 (80)	*42,150 (80)	—	—	—
20	104,500 (53)	104,000 (62)	89,450 (67.5)	69,350 (71.5)	42,250 (74)	42,250 (76.5)	42,150 (78.5)	*40,550 (80)	*32,950 (80)	—
25	81,300 (43)	80,850 (55)	75,400 (62)	61,050 (67)	42,250 (70.5)	42,250 (73)	42,150 (75.5)	40,550 (77.5)	32,950 (79)	*23,000 (80)
30	60,600 (29.5)	62,850 (47.5)	58,850 (56.5)	52,200 (62.5)	42,250 (66.5)	42,250 (70)	39,750 (72.5)	36,550 (74.5)	31,650 (76.5)	23,000 (78)
35	—	46,600 (39)	46,250 (50.5)	45,300 (58)	42,250 (63)	38,600 (66.5)	35,250 (69.5)	32,600 (72)	28,800 (74)	23,000 (75.5)
40	—	35,950 (27.5)	34,300 (44)	35,400 (52.5)	36,750 (58.5)	34,450 (63)	31,500 (66.5)	29,200 (69.5)	26,300 (71.5)	23,000 (73.5)
45	—	—	27,300 (36)	28,200 (47.5)	29,500 (54.5)	30,750 (59.5)	28,300 (63.5)	26,300 (66.5)	24,100 (69)	21,100 (71)
50	—	—	22,100 (26)	22,800 (41)	24,100 (50)	25,350 (55.5)	25,650 (60)	23,800 (63.5)	22,200 (66.5)	19,400 (69)
55	—	—	—	18,650 (34)	20,000 (45)	21,150 (52)	21,650 (57)	21,650 (60.5)	20,300 (64)	17,900 (66.5)
60	—	—	—	15,300 (25)	16,100 (39.5)	17,800 (47.5)	18,400 (53.5)	18,900 (57.5)	18,550 (61)	16,600 (64)
65	—	—	—	—	13,500 (32.5)	15,100 (43)	15,700 (49.5)	16,250 (54.5)	16,900 (58.5)	15,400 (61.5)
70	—	—	—	—	11,300 (24.5)	12,800 (38)	13,500 (45.5)	14,050 (51)	14,650 (55.5)	14,400 (59)
75	—	—	—	—	9480 (8.5)	10,850 (32)	11,600 (41.5)	12,200 (47.5)	12,800 (52.5)	13,250 (56.5)
80	—	—	—	—	—	9240 (24)	10,000 (36.5)	10,600 (44)	11,150 (49.5)	11,600 (54)
85	—	—	—	—	—	7820 (11)	8270 (31)	9250 (40)	9790 (46)	10,200 (51)
90	—	—	—	—	—	—	7070 (24)	8030 (35.5)	8530 (42.5)	8990 (48)
95	—	—	—	—	—	—	6010 (12)	6920 (30)	7410 (38.5)	7880 (45)
100	—	—	—	—	—	—	—	5930 (23.5)	6430 (34.5)	6890 (41.5)
105	—	—	—	—	—	—	—	5050 (13)	5300 (29.5)	6010 (38)
110	—	—	—	—	—	—	—	—	4550 (23.5)	5220 (33.5)
115	—	—	—	—	—	—	—	—	3860 (14)	4500 (29)
120	—	—	—	—	—	—	—	—	—	3850 (23)
125	—	—	—	—	—	—	—	—	—	3260 (15)

NOTE: ( ) Boom angles are in degrees.

\*This capacity is based on maximum boom angle.

Boom Angle	Main Boom Length in Feet									
	41.2	51.6	62	72.4	82.8	93.1	103.5	113.9	124.3	134.7
0°	28,000 (33.6)	19,050 (44)	13,850 (54.4)	9940 (64.8)	8040 (75.2)	7230 (85.6)	5800 (96)	4780 (106.4)	3620 (116.8)	3020 (127.2)

NOTE: ( ) Reference radii in feet.

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# Load chart



134.7 ft



33 ft - 56 ft



22,000 lb



100%



360°



Pounds

Radius in Feet	33 ft Length			56 ft Length		
	0° Offset	20° Offset	40° Offset	0° Offset	20° Offset	40° Offset
30	*14,650 (80)	—	—	—	—	—
35	14,650 (79)	—	—	*8290 (80)	—	—
40	13,600 (77.5)	*11,400 (80)	—	8290 (79)	—	—
45	12,600 (75.5)	10,900 (79)	—	8290 (78)	—	—
50	11,450 (74)	10,250 (77)	7730 (78.5)	8290 (76.5)	—	—
55	10,700 (72)	9660 (75)	7550 (77)	8290 (74.5)	*6490 (80)	—
60	9880 (70)	8980 (73)	7390 (75)	7770 (73)	6240 (79)	—
65	9320 (68.5)	8380 (71.5)	7250 (73)	7240 (71.5)	6020 (77)	*4810 (80)
70	8670 (66.5)	7990 (69.5)	7110 (71)	6760 (70)	5790 (75.5)	4710 (79)
75	8100 (64.5)	7510 (67.5)	6980 (69)	6340 (68.5)	5590 (74)	4710 (77)
80	7720 (62.5)	7090 (65.5)	6850 (67)	5970 (67)	5300 (72)	4710 (75.5)
85	7270 (60.5)	6710 (63.5)	6520 (65)	5630 (65.5)	5030 (70.5)	4630 (73.5)
90	6860 (58.5)	6380 (61)	6230 (63)	5230 (63.5)	4790 (68.5)	4540 (72)
95	6500 (56.5)	6080 (59)	5910 (60.5)	4960 (62)	4490 (67)	4290 (70)
100	6110 (54)	5810 (57)	5670 (58.5)	4640 (60)	4290 (65)	4070 (68)
105	5820 (52)	5500 (54.5)	5410 (56)	4420 (58.5)	4050 (63)	3920 (66.5)
110	5400 (49.5)	5290 (52)	5230 (53.5)	4150 (56.5)	3830 (61)	3730 (64.5)
115	4740 (47)	5050 (49.5)	5020 (51)	3920 (54.5)	3680 (59)	3560 (62)
120	4150 (44.5)	4480 (47)	4800 (48)	3710 (52.5)	3500 (57)	3410 (60)
125	3610 (42)	3900 (44)	4350 (45)	3560 (51)	3330 (55)	3230 (57.5)
130	3110 (39)	3370 (41)	3850 (42)	3340 (48.5)	3180 (53)	3110 (55.5)
135	2660 (36)	2880 (38)	—	3070 (46.5)	3010 (50.5)	3000 (53)
140	2240 (32.5)	2430 (34.5)	—	2660 (44)	2890 (48)	2870 (50.5)
145	1850 (28.5)	2010 (30.5)	—	2280 (42)	2750 (45.5)	2760 (47.5)
150	1490 (24)	1610 (25.5)	—	1920 (39)	2350 (43)	2480 (44.5)
155	1150 (18)	—	—	1590 (36.5)	1980 (40)	—
160	—	—	—	1290 (33.5)	1640 (37)	—
165	—	—	—	—	1310 (33.5)	—
170	—	—	—	—	1010 (29)	—

NOTE: ( ) Boom angles are in degrees.

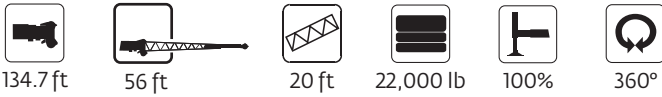
\*This capacity is based on maximum boom angle.

- 33 ft and 56 ft folding boom extension lengths may be used for single line lifting service only.
- For main boom lengths less than 134.7 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
- WARNING: Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
- Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
- Capacities listed are with outriggers properly extended and vertical jacks set only.
- When lifting over the main boom nose with the 33 ft or 56 ft extension erected, the outriggers must be fully extended.

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The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane

# Load chart



Radius in Feet	76 Ft. Length		
	0° Offset	20° Offset	40° Offset
45	6580 (80)	—	—
50	6580 (78.5)	—	—
55	6580 (77)	—	—
60	6400 (76)	*4840 (80)	—
65	5870 (74.5)	4670 (79)	—
70	5400 (73)	4510 (78)	*3400 (80)
75	4980 (71.5)	4360 (76.5)	3340 (79.5)
80	4740 (70)	4230 (75)	3270 (78)
85	4390 (69)	4070 (73.5)	3220 (76.5)
90	4090 (67.5)	3810 (72)	3160 (75)
95	3810 (66)	3570 (70.5)	3110 (73.5)
100	3560 (64.5)	3350 (68.5)	3070 (71.5)
105	3330 (63)	3150 (67)	3020 (70)
110	3130 (61)	2970 (65.5)	2930 (68.5)
115	2880 (59.5)	2800 (64)	2780 (66.5)
120	2710 (58)	2650 (62)	2590 (64.5)
125	2550 (56.5)	2460 (60.5)	2460 (63)
130	2370 (54.5)	2,330 (58.5)	2300 (61)
135	2240 (53)	2170 (56.5)	2190 (59)
140	2080 (51)	2060 (55)	2060 (57)
145	1940 (49)	1930 (53)	1940 (55)
150	1840 (47)	1800 (50.5)	1830 (52.5)
155	1690 (45)	1690 (48.5)	1700 (50.5)
160	1420 (43)	1590 (46.5)	1610 (48)
165	1160 (40.5)	1470 (44)	1510 (45)
170	—	1200 (41.5)	1170 (42.5)

NOTE: ( ) Boom angles are in degrees.  
 \*This capacity is based on maximum boom angle.

1. The 56 ft folding boom extension lengths may be used for single line lifting service only.
2. For main boom lengths less than 134.7 ft with the boom extension erected, the rated loads are determined by boom angle. Use only the column which corresponds to the boom extension length and offset for which the machine is set up. For boom angles not shown, use rating of the next lower boom angle.
3. **WARNING:** Operation of this machine with heavier loads than the capacities listed is strictly prohibited. Machine tipping with boom extension occurs rapidly and without advance warning.
4. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.
5. Capacities listed are with outriggers properly extended and vertical jacks set only.
6. When lifting over the main boom nose with the 56 ft extension erected and 20 ft insert, the outriggers must be fully extended.

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# Load chart



Radius in Feet	Main Boom Length in Feet			
	41.2	51.6	62	72.4
15	39,500 (62)	37,000 (68.5)	—	—
20	26,000 (54)	24,900 (62)	23,550 (67.5)	23,900 (71.5)
25	17,850 (44.5)	16,650 (55.5)	15,800 (62)	16,250 (67)
30	12,700 (31)	11,350 (48.5)	10,850 (57)	11,250 (62.5)
35	—	7640 (40.5)	7480 (51.5)	7670 (58)
40	—	4890 (29)	4980 (45)	4990 (53)
45	—	—	3070 (37)	2910 (48)
50	—	—	1560 (27)	1250 (42)

NOTE: ( ) Boom angles are in degrees.

Boom Angle	Main Boom Length in Feet			
	41.2	51.6	62	72.4
0°	10,000 (33.6)	3140 (44)	—	—

NOTE: ( ) Reference radii in feet.

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 General/Titan 29.5 x 25 (34 ply) bias ply tires, at 76 psi cold inflation pressure.
3. Capacities are applicable only with machine on 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 lifting capacity chart for tire used. Damaged tires are hazardous to safe operation of crane.
8. Creep - not over 200 ft of movement in any 30 minute period and not exceeding 1 mph.

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# Load chart



41.2 ft – 72.4 ft



22,000 lb



Over Front



Pick and carry  
up to 1 mph  
29.5 in x 25 in



Pounds

Radius in Feet	Main Boom Length in Feet			
	41.2	51.6	62	72.4
12	53,750 (67)	45,100 (72)	—	—
15	44,800 (62)	43,900 (68.5)	—	—
20	33,900 (54)	33,500 (62)	31,100 (67.5)	24,500 (71.5)
25	26,300 (44.5)	26,100 (55.5)	26,500 (62)	23,850 (67)
30	20,700 (31)	20,600 (48.5)	20,850 (57)	20,700 (62.5)
35	—	16,400 (40.5)	16,500 (51.5)	16,450 (58)
40	—	12,750 (29)	12,700 (45)	12,750 (53)
45	—	—	9530 (37)	9610 (48)
50	—	—	7050 (27)	7180 (42)
55	—	—	—	5240 (35)
60	—	—	—	3670 (25.5)

NOTE: ( ) Boom angles are in degrees.

Boom Angle	Main Boom Length in Feet			
	41.2	51.6	62	72.4
0°	17,450 (33.6)	10,150 (44)	5280 (54.4)	2410 (64.8)

NOTE: ( ) Reference radii in feet.

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# Load handling

Weight reductions for load handling devices	
Auxiliary boom nose	130 lb
<b>Hook blocks and headache balls:</b>	
82.7 USt, 5-sheave	1323 lb+
50 USt, 3-sheave	1014 lb+
28.7 USt, 1-sheave	717 lb+
12 USt overhaul ball	661 lb+

+Refer to rating plate for actual weight.

Tire inflation - PSI (bar)		
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)	E-3	76 (5.2)

Line pulls and reeving information			
Hoists	Cable Specs.	Permissible Line Pulls	Nominal Cable Length
Main and Auxiliary	19 mm (3/4 in) 35x8 Class Rotation Resistant (non-rotating) Min. Breaking strength 85,800 lb	17,160 lb*	702 ft
Main and Auxiliary	22 mm K100™ Hoist Rope Min. Breaking strength 84,000 lb	16,800 lb*	722 ft

The approximate weight of 3/4 in wire rope is 1.5 lb/ft.

The approximate weight of 22 mm synthetic rope is 0.21 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.

33 ft - 56 ft folding boom extension		
	Without block or ball	With 558 lb overhaul ball
*33 ft extension (erected)	3500 lb	5800 lb
*56 ft extension (erected)	7400 lb	11,100 lb
Folding ext. with 20 ft insert		
*56 ft extension (erected)	13,000 lb	17,900 lb

\*Reduction of main boom capacities

(no deduct required for stowed boom extension)

NOTE: All load handling devices and boom attachments are considered part of the load and suitable allowances MUST BE MADE for their combined weights. Weights are for Grove furnished equipment.

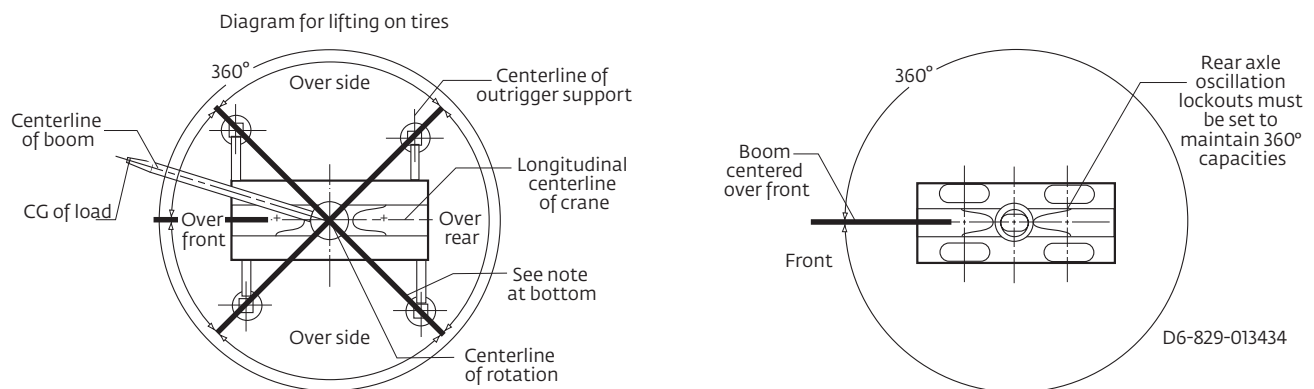
NOTE: When operating at temperatures below -40°F, capacities shall be derated 3.6% of rated load for each degree Fahrenheit below -40°F without shock load.

Hoist performance				
Wire rope layer	Hoist line pulls		Drum capacity (ft)	
	Two speed hoist		Layer	Total
	Low	High		
	Available lb	Available lb		
1	23,468	12,957	108.7	108.7
2	21,553	11,900	118.4	227.1
3	19,927	11,003	128.1	355.2
4	18,530	10,231	137.7	492.9
5	17,315	9560	147.4	640.3
6	16,250	8972	157.1	797.4

\*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.

## 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

12,6 m – 41,1 m (41.2 ft – 134.7 ft) four-section full-power boom, sequenced synchronized extension and retraction. Maximum tip height: 44,6 m (146.2 ft)



### \*Optional manual bi-fold swingaway extension

10,1 m – 17,1 m (33 ft – 56 ft) bi-fold lattice swingaway extension. Offsettable at 0°, 20°, and 40°. Stows alongside base boom section. Electric motor assist for pin alignment and stowing.

Maximum tip height: 61,9 m (203 ft)



### \*Optional lattice extension insert

(1) x 6,1 m (20 ft) lattice extension insert. Installs between boom nose and either optional extension. Maximum tip height: 68,0 m (223 ft)



### Boom nose

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



### Boom elevation

One double-acting hydraulic cylinder with integral holding valve provides elevation from -3° to +80°.



### Crane Control System (CCS)

“Graphic Display” RCL 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. The work area definition system allows the operator to pre-select and define safe working areas. If the crane approaches the pre-set limits, audio-visual warnings aid the operator in avoiding jobsite obstructions.



### Counterweight

Standard 9979 kg (22,000 lb). Hydraulically installed and removed. Controls located on superstructure.



### Cab

Operator-controlled 20° hydraulic tilt, full vision, all steel fabricated with acoustical lining and tinted safety glass throughout. Deluxe seat with headrest incorporates armrest-mounted electronic programmable single-axis or dual axis controllers and a jog dial for easier data input. Tilt/telescoping steering wheel with various controls incorporated into the steering column. Other standard features include hot water heater, cab circulating air fan, sliding side and opening rear window, sliding skylight with electric wiper and sunscreen, electric windshield wash/wipe, fire extinguisher, seat belt, air conditioning, and dual cab mounted work lights.



### Swing

Variable speed, planetary swing drive with foot applied multi-disc proportional wet brake. Spring applied, hydraulically released swing brake. Two position mechanical swing lock pin, operated from cab.

Maximum swing speed: 2.0 r.p.m.



### Hoist (main and auxiliary hoist)

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

Maximum hoist single line pull:

1st layer: 10 645 kg (23,468 lb)

3rd layer: 9038 kg (19,927 lb)

6th layer: 7371 kg (16,250 lb)

Maximum permissible single line pull: 7620 kg (16,800 lb) with 35 x 7 class rope

Maximum hoist single line speed (no load): 148 m/min (487 ft/min)

Rope construction: 35 x 7 rotation-resistant

Rope diameter: 19 mm (3/4 in.)

Rope length: Main hoist: 214 m (702 ft)

Auxiliary hoist: 214 m (702 ft)

Maximum usable rope: 241 m (790 ft) 6 layers

\* Denotes optional equipment

## 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. Aluminum fabricated outrigger floats 609,6 mm (24 in) diameter. Outrigger monitoring system with outrigger beam position display on R.C.L. screen. Maximum outrigger pad load: 57 244 kg (126,200 lb)

### Outrigger controls

Controls and crane leveling indicator located in cab. Extension and retraction are through the CCS system.

### Hydraulic system

Two main pumps [2] variable displacement piston and [1] gear with a combined output capacity of 496 L/min (131 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 4F)

Cummins QSB 6.7 L diesel, six cylinder, turbo-charged with Cummins Compact Catalyst (CCC) and Selective Catalytic Reduction (SCR) combo muffler, using diesel exhaust fluid (DEF) injection. Meets emissions per US EPA Tier 4 final and European Union Stage 4.

275 hp (205 kW) at 2500 rpm, Maximum torque: 730 lb/ft (990 Nm) at 1500 rpm. Fuel requirements: Maximum of 15 ppm ultra-low sulfur diesel fuel + diesel exhaust fluid (DEF).

*NOTE: Required for sale in areas with maximum 15 ppm sulfur content diesel fuel or country requirement.*

### Engine (Tier 3)

Cummins QSB 6.7 L diesel, six cylinder, turbo-charged with 275 hp (205 kW) at 2500 rpm, Maximum torque: 728 lb/ft (978 Nm) at 1500 rpm. Fuel requirements: Maximum of 5000 ppm. Sulfur diesel fuel.

*NOTE: Required for sale in areas with GREATER than 15ppm sulfur content diesel fuel.*

### Fuel tank capacity

312 L (82 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. 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 4 steering modes, front only, rear only, coordinated and crab.

Rear steer not aligned indicator.

Outside 4WS coordinated steer radius: 7,3 m (23.9 ft)

Inside 4WS coordinated steer radius: 4,9 m (16 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 lighting including turn indicators, head, tail, brake, and hazard warning, and two work lights mounted on cab front.

### Maximum Drive Speed

24.1 km/h (15 mph) with counterweight installed

### Gradeability (theoretical)

70% to drive train stall based on 52 450 kg (115,632 lb) GVW with 29.5 x 25 tires, standard counterweight, auxiliary hoist and manual bi-fold extension.

## Miscellaneous standard equipment

Full length steel fenders with full aluminum decking, dual rear view mirrors, hook block tie-down, electronic back-up alarm, front stowage tray, hot water cab heater / defroster, cab air conditioner, hoist mirrors, A/V warning system, combination lift/tie-down/towing lugs, coolant sight level indicator, hoist access platform.

## \*Optional equipment

- Auxiliary hoist package: includes MTW 19-241 hoist with electronic hoist drum rotation indicator, third wrap indicator with hoist function cut-out, 214 m (702 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 light, dual base boom mounted floodlights, in-cab, R.C.L., light bar and rubber mat for storage trough.
- 360° positive mechanical swing lock
- Rear pintle hitch
- Cab-controlled cross axle differential locks (front and rear)
- Wireless wind speed indicator
- Vertical external mounted L.M.I. light tower
- -29C / -20F cold weather package
- -40C / -40F arctic weather package
- Electric drive line retarder
- Emergency stop buttons on each side of carrier
- Second beacon light
- Refinery package (certified spark arrestor + engine air shutdown) (T3 engine only)
- C.E. certificate package
- Russian certificate package
- Synthetic rope for main and / or auxiliary hoist
- Boom position indicator light
- Crane STAR asset management system

*\* Denotes optional equipment*

# Symbols glossary



Axles



Crane control system



Heavy duty jib



Outriggers



Boom



Drive



Height (no max)



Radius



Boom elevation



Electrical system



Hoist



Rotation



Boom extension



Engine



Hook block



Speed



Boom length



Extension



Hydraulic system



Steering



Boom nose



Frame



Insert



Suspension



Brakes



Fuel tank capacity



Lights



Swing



Cab



Gear



Oil



Tires



Counterweight



Grade



Outrigger controls



Transmission



# Notes





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