



ROUGH TERRAIN CRANE

60 TONS

GROVE RT700E

BOOM LENGTHS:
36 TO 110 FT

JIB LENGTHS:
33 TO 56 FT

JIB OFFSETS:
0 - 25 - 45



NOTES:

Specifications

Superstructure



Boom

11 m - 33,5 m (36 ft - 110 ft) four-section, full-power sequenced synchronized boom.

Maximum tip height: 36,4 m (119 ft).



* Optional fixed swingaway extension

10,1 m (33 ft) offsettable lattice swingaway extension. Offsettable at 0°, 25° and 45°. Stows alongside base boom section.

Maximum tip height: 45,8 m (150 ft).



* Optional bi-fold swingaway extension

10,1 m - 17,1 m (33 ft - 56 ft) bi-fold lattice swingaway extension. Offsettable at 0°, 25° and 45°. Stows alongside base boom section. Maximum tip height: 53,2 m (174.5 ft).



* Optional 6.1 m (20 ft) or 12.2 m (40 ft) inserts

Installs between boom nose and bi-fold extension, non-stowable. Maximum tip height: 59,1 m (194 ft) with 20 ft insert, 65,2 m (214 ft) with 40 ft insert.



Boom nose

Three nylon sheaves (four with 60 USt rating) mounted on heavy-duty tapered roller bearings with removable pin-type rope guards. Quick-reeve type boom nose.

*Optional removable 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 78°.



Load moment and anti-two block system

Standard "Graphic Display" load moment and anti-two block system with audio-visual warning and control lever lockout. These systems provide electronic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition. The standard 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 job-site obstructions.



Cab

Full-vision, all-steel fabricated with acoustical lining and tinted safety glass throughout. Deluxe seat incorporates armrest-mounted hydraulic single-axis controllers. Dash panel incorporates gauges for all engine functions. Other standard features include: hot water heater, air-conditioning, cab circulating air fan, sliding side and rear windows, sliding skylight with electric wiper and sunscreen, electric windshield wash/wipe, fire extinguisher and seat belt.



Swing

Planetary swing with foot-applied multi-disc brake. Spring applied, hydraulically-released swing brake and plunger-type, one position, mechanical house lock operated from cab. *Optional 360° mechanical swing lock. Maximum speed: 2.5 rpm.



Counterweight

5553 kg (12,242 lb) pinned to superstructure.



Hydraulic system

Three main gear pumps with a combined capacity of 391 LPM (103 GPM), 511 LPM (135 GPM) with optional air conditioning.

Maximum operating pressure: 27,6 MPa (4000 psi). Two individual post pressure compensated valve banks.

Return line type filter with full flow by-pass protection and service indicator. Replaceable cartridge with micron filtration rating of 5/12/16. 500 L (132 gallon) reservoir. Integral oil cooler. System pressure test ports.



Hoist Specifications (HP30A-19G) main and auxiliary hoist

Main and auxiliary hoist: Model HP30A-19G

Planetary reduction with automatic spring applied multi-disc brake. Grooved drum. Electronic hoist drum rotation indicator and hoist drum cable followers.

Maximum single line pull: 8246 kg (20,250 lb)

Maximum single line speed: 179 m/min (542 fpm)

Maximum permissible line pull:

7620 kg (16,800 lb) with standard 6 x 37 class rope

7620 kg (16,800 lb) with optional 35 x 7 class rope

*Denotes optional equipment



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Specifications

Superstructure continued

Rope diameter: 19 mm (3/4 in)

Rope length: 152 m (500 ft)

*Optional 168 m (550 ft) 35 x 7 class rope

Rope type: 6 x 37 class EIPS IWRC

*Optional 35 x 7 class rotation resistant

Maximum rope stowage: 256 m (841 ft).

Carrier



Chassis

Box section frame fabricated from high-strength, low alloy steel. Integral outrigger housings and front/rear towing, lifting, and tie down lugs.



Outrigger system

Four hydraulic telescoping single-stage double box beam outriggers with inverted jacks and integral holding valves. Three position settings, 100%, 50% and fully retracted. All steel fabricated, quick-release type round outrigger floats, 610 mm (24 in) diameter. Maximum outrigger pad load: 36 606 kg (80,700 lb).



Outrigger controls

Controls and crane level indicator located in cab.



Engine (Tier III)

Cummins QSB 6.7 L diesel, six cylinders, turbocharged, 179 kW (240 bhp) (Gross) @ 2500 rpm. Maximum torque: 987 N-m (728 ft lb) @ 1 500 rpm.



Fuel tank capacity

273 L (72 gal)



Transmission

Spicer powershift with 6 forward and 6 reverse speeds (3 speeds high and 3 speeds low). Front axle disconnect for 4 x 2 travel.



Electrical system

Two 12-volt maintenance free batteries. 12-volt starting and lighting, circuit breakers, battery disconnect switch.



Drive

4 x 4



Steering

Fully independent power steering:

Front: Full hydraulic, steering wheel controlled.

Rear: Full hydraulic, switch controlled.

Provides infinite variations of 4 main steering modes: front only, rear only, crab and coordinated.

Rear steer centered indicating light.

4 wheel turning radius - 6,7 m (22 ft 2 in).



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 permit 203 mm (8 in) oscillation only with boom centered over the front.



Brakes

Full hydraulic split circuit brakes operating on all wheels. Spring-applied, hydraulically released axle-mounted parking brake.



Tires

29.5 x 25 - 28PR bias earthmover type.



Lights

Full lighting package including turn indicators, head, tail, brake and hazard warning lights.



Maximum speed

37 km/h (23 mph).

Specifications

Carrier continued



Gradeability (theoretical)

75% (Based on 40 802 kg [89,951 lb] GVW) 29.5 x 25 tires, pumps engaged, 33,6 m (110 ft) boom, bi-fold extension, aux. hoist and cable, and 60 USt hookblock.

Miscellaneous standard equipment

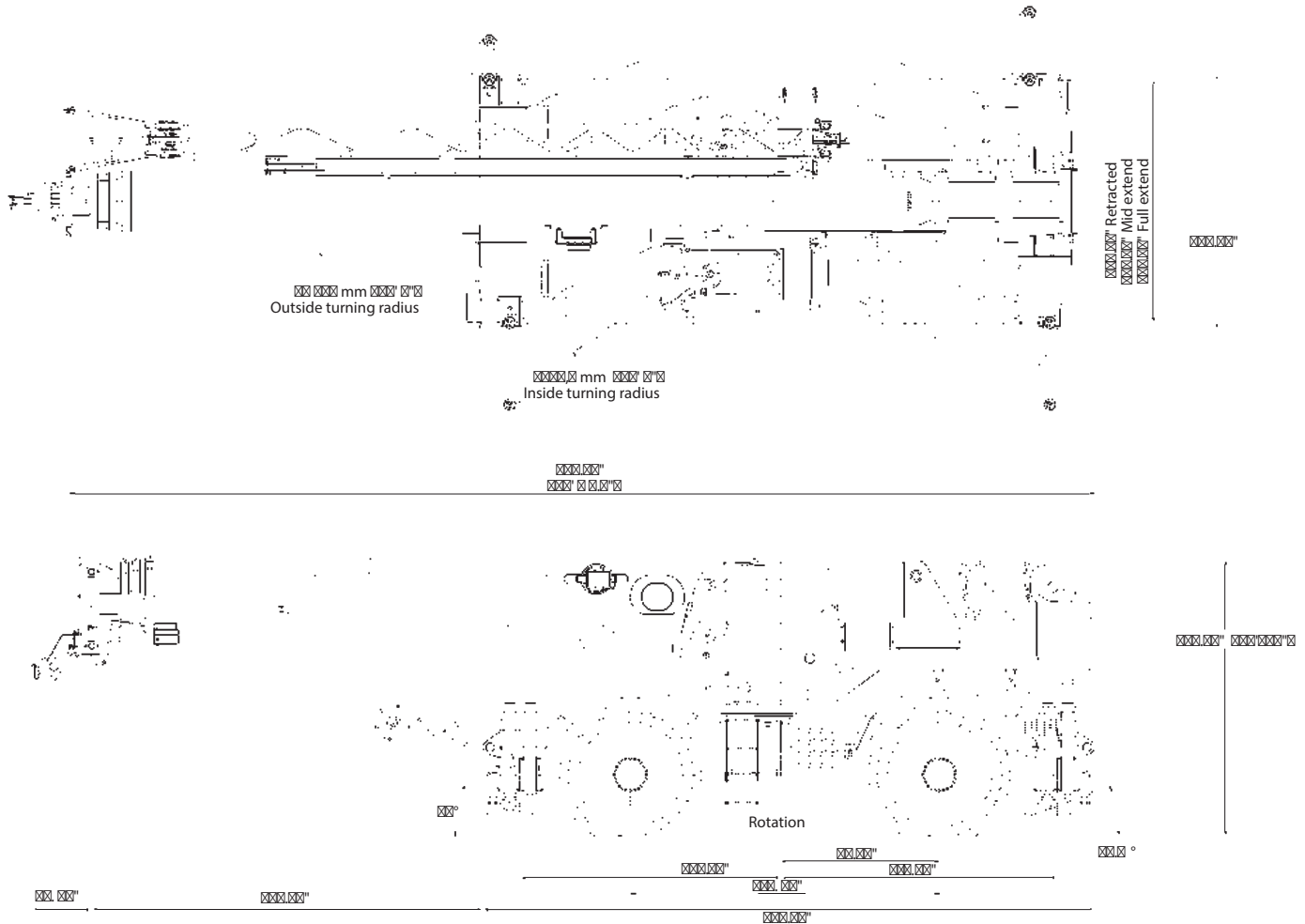
Full width steel fenders, dual rear view mirrors, hookblock tiedown, electronic back-up alarm, light package, front stowage well, tachometer, rear wheel position indicator, 36,000 BTU hot water heater, air conditioning package with 28,500 BTU hydraulic driven air conditioning, hoist mirrors, engine distress A/V warning system. Auxiliary hoist control valve arrangement (less hoist). Cold start aid and immersion type engine block heater, 120V 1500 watt.

* Optional equipment

- ▶ Auxiliary Hoist Package (includes Model HP30A-19G auxiliary hoist with electronic hoist drum rotation indicator, hoist drum cable follower, 152 m (500 ft) of 19 mm (3/4 in) 35 X 7 class wire rope, auxiliary single sheave boom nose.
- ▶ Auxiliary Light and Convenience Package: includes cab mounted amber flashing light, in-cab LMI light bar, 360° rotation spotlight and dual base boom mounted floodlights, rubber mat for stowage trough
- ▶ "CE" Mark Conformance (sound abatement foam kits, 3rd wrap indicator, emergency auxiliary steering, dual axis joystick controllers)
- ▶ Cross axle differential locks (front and rear)
- ▶ Full-length aluminum decking
- ▶ Manual pump disconnect
- ▶ Pintle hook - rear
- ▶ 360° NYC style positive swinglock
- ▶ PAT event recorder
- ▶ Aluminum fender protectors
- ▶ Hydraulic removable counterweight

Dimensions and weights

Dimensions

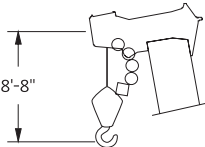
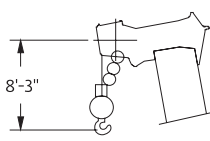
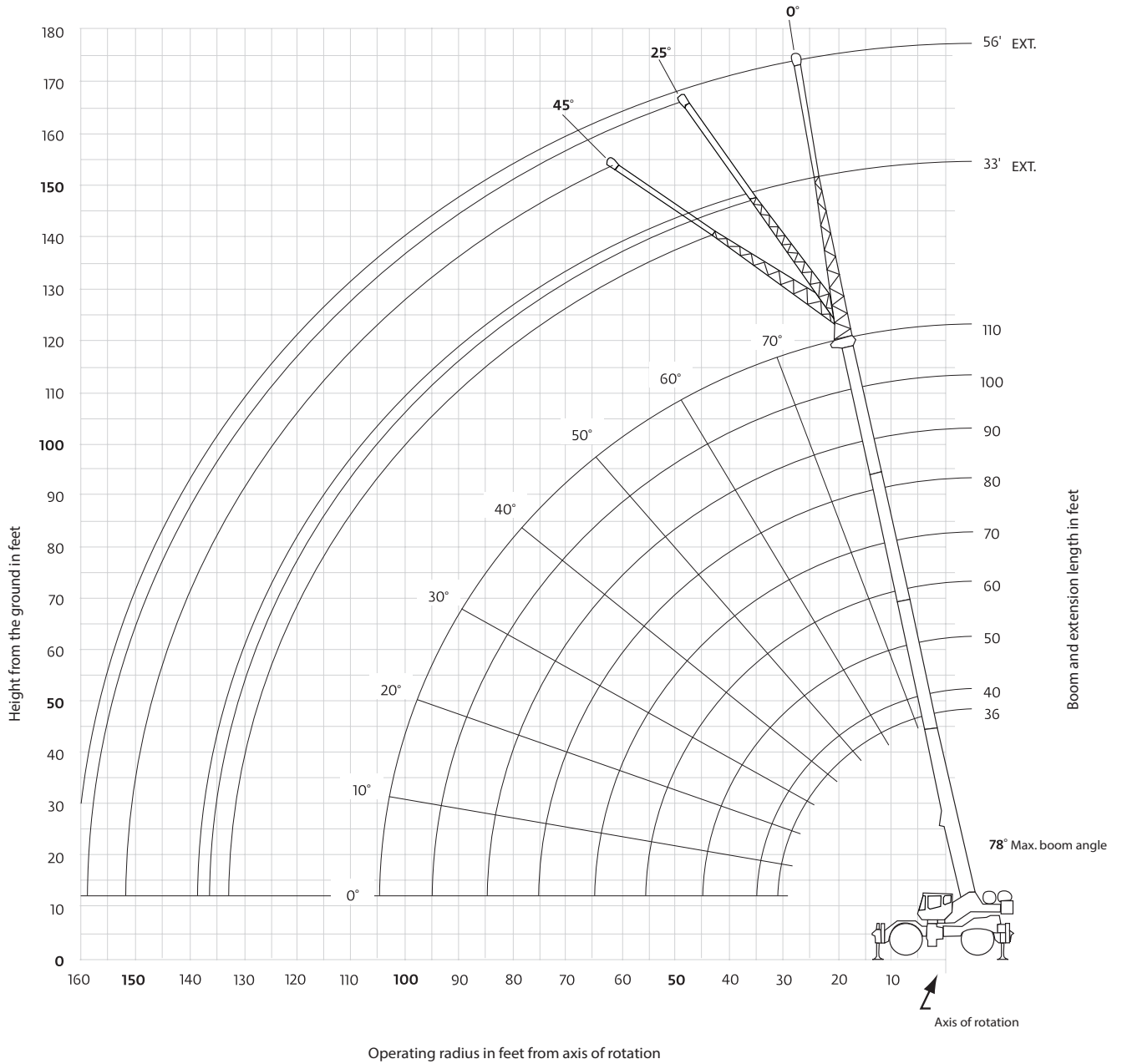


Weights

| | GVW | | Front | | Rear | |
|--|--------|-----------|--------|----------|--------|-----------|
| | kg | (lb) | kg | (lb) | kg | (lb) |
| RT700E Basic Machine: Including 110 ft main boom, main hoist with 500 ft of wire rope, IPO, full pinned counterweight | 38 618 | (85,136) | 18 513 | (40,813) | 20 105 | (44,323) |
| Add: 33 ft - 56 ft bi-fold swingaway + extension carrier brackets | 1275 | (2810) | 2008 | (4426) | -733 | (-1616) |
| Add: 500 ft of wire rope on auxiliary hoist and auxiliary boom nose | -284 | (625) | -104 | (-230) | -388 | (855) |
| Add: Auxiliary boom nose | 59 | (130) | 170 | (374) | -111 | (-244) |
| Add: 45 t (50 USt) 3-sheave hookblock | 454 | (1000) | 454 | (1000) | 0 | (0) |
| Add: 55 t (60 USt) 5-sheave hookblock | 567 | (1250) | 567 | (1250) | 0 | (0) |
| Add: 7,5 t (8.3 USt) headache ball | 157 | (347) | 256 | (565) | -99 | (-218) |
| Add: Full aluminum decking | 75 | (165) | 38 | (83) | 38 | (83) |
| Remove: Hydraulic removal counterweight | -6042 | (-13,320) | 206 | (4550) | -8106 | (-17,870) |

Working range

110 ft main boom and 33 ft - 56 ft bi-fold swingaway



Dimensions are for largest Grove furnished hookblock and headache ball, with anti-two block activated.



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Load chart RT760E

 36 ft - 110 ft
  12,242 lb
  100%
  360°

23 ft 4 in spread

| Feet | 36 | 40 | 50 | **60 | 70 | 80 | 90 | 100 | 110 |
|------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 10 | 120,000 (69) | 84,400 (72) | 80,200 (76) | *62,500 (78) | | | | | |
| 12 | 100,000 (65.5) | 84,400 (68.5) | 80,200 (73.5) | 62,500 (77) | *36,800 (78) | | | | |
| 15 | 85,400 (59.5) | 82,700 (63.5) | 80,200 (70) | 61,000 (74) | 36,800 (76.5) | *36,800 (78) | *31,000 (78) | | |
| 20 | 65,700 (49) | 65,000 (55) | 64,300 (63.5) | 50,650 (69) | 36,800 (72) | 36,800 (75) | 31,000 (77) | *29,100 (78) | *24,000 (78) |
| 25 | 52,800 (36) | 52,450 (45) | 51,850 (56.5) | 41,800 (63.5) | 36,800 (68) | 34,000 (71) | 30,000 (73.5) | 27,000 (76) | 24,000 (77.5) |
| 30 | | 42,150 (31.5) | 39,600 (48.5) | 38,000 (57.5) | 33,400 (63) | 29,000 (67) | 25,300 (70.5) | 24,200 (72.5) | 22,000 (75) |
| 35 | | | 31,750 (40) | 29,750 (51.5) | 28,700 (58) | 25,000 (63) | 22,200 (67) | 21,750 (69.5) | 20,000 (72) |
| 40 | | | 24,450 (28) | 24,750 (45) | 23,600 (53) | 22,000 (59) | 20,200 (63) | 19,000 (66.5) | 18,500 (69) |
| 45 | | | | 19,750 (37) | 19,700 (47.5) | 18,800 (54.5) | 17,800 (59.5) | 17,300 (63) | 17,300 (66.5) |
| 50 | | | | 16,000 (26.5) | 16,750 (41) | 16,500 (49.5) | 16,000 (55.5) | 16,000 (60) | 16,000 (63.5) |
| 55 | | | | | 13,650 (33.5) | 14,300 (44.5) | 14,100 (51) | 14,100 (56.5) | 14,100 (60) |
| 60 | | | | | 11,150 (24) | 12,000 (38.5) | 12,200 (47) | 12,200 (52.5) | 12,200 (57) |
| 65 | | | | | | 10,100 (31.5) | 10,800 (42) | 10,600 (48.5) | 10,600 (53.5) |
| 70 | | | | | | 8480 (22.5) | 9410 (36.5) | 9000 (44.5) | 9000 (50) |
| 75 | | | | | | | 8100 (30) | 7800 (40) | 7800 (46.5) |
| 80 | | | | | | | 6920 (21.5) | 6600 (34.5) | 6600 (42.5) |
| 85 | | | | | | | | 5800 (28.5) | 5800 (38) |
| 90 | | | | | | | | 5000 (20.5) | 5000 (33) |
| 95 | | | | | | | | | 4440 (27.5) |
| 100 | | | | | | | | | 3880 (19.5) |

Minimum boom angle (°) for indicated length (no load) 0
 Maximum boom length (ft) at 0° boom angle (no load) 110

NOTE: () Boom angles are in degrees.
 #LMI operating code. Refer to LMI manual for operating instructions.
 *This capacity is based on maximum boom angle.

Lifting capacities at zero degree boom angle on outriggers fully extended - 360°

| Boom angle | Main boom length in feet | | | | | | | | |
|------------|--------------------------|------------------|------------------|------------------|----------------|----------------|----------------|----------------|-----------------|
| | 36 | 40 | 50 | **60 | 70 | 80 | 90 | 100 | 110 |
| 0° | 29,050 (29.8) | 24,450 (34.2) | 17,050 (44.2) | 11,950 (54.6) | 9400 (64.2) | 7310 (74.2) | 6050 (84.2) | 4660 (94.2) | 3350 (104.2) |

NOTE: () Reference radii in feet.
 ** Boom length is with inner-mid fully extended and outer-mid & fly fully retracted.



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Load chart RT700E



| Pounds | | | | | | |
|---|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|
| Feet | 33 ft LENGTH | | | 56 ft LENGTH | | |
| | 0° | 25° | 45° | 0° | 25° | 45° |
| | OFFSET #0021 | OFFSET #0022 | OFFSET #0023 | OFFSET #0041 | OFFSET #0042 | OFFSET #0043 |
| 30 | 12,900 (78) | | | | | |
| 35 | 12,900 (76) | | | *8330 (78) | | |
| 40 | 12,900 (74) | *10,850 (78) | | 8330 (77.5) | | |
| 45 | 12,900 (72) | 10,450 (77) | *7410 (78) | 8330 (76) | | |
| 50 | 12,100 (70) | 10,000 (74.5) | 7200 (77.5) | 8330 (74.5) | | |
| 55 | 11,100 (68) | 9220 (72.5) | 6990 (75) | 8250 (73) | *5300 (78) | |
| 60 | 10,100 (66) | 8550 (70.5) | 6800 (72.5) | 7540 (71) | 5140 (77) | |
| 65 | 9130 (63.5) | 7930 (68) | 6650 (70.5) | 7160 (69) | 5100 (75) | *3860 (78) |
| 70 | 8460 (61.5) | 7380 (65.5) | 6490 (68) | 6820 (67.5) | 5100 (73) | 3790 (77.5) |
| 75 | 7840 (59) | 6900 (63) | 6370 (65.5) | 6300 (65.5) | 4800 (71) | 3660 (75) |
| 80 | 7230 (56.5) | 6470 (60.5) | 6110 (62.5) | 5810 (63.5) | 4580 (69) | 3550 (73) |
| 85 | 6690 (54) | 6070 (58) | 5780 (60) | 5370 (61.5) | 4470 (67.5) | 3450 (71) |
| 90 | 6140 (51) | 5720 (55.5) | 5480 (57) | 4980 (59.5) | 4330 (65.5) | 3410 (68.5) |
| 95 | 5670 (48.5) | 5400 (52.5) | 5200 (54) | 4630 (57) | 4070 (63) | 3300 (66.5) |
| 100 | 5020 (45.5) | 5100 (49.5) | 4950 (51) | 4320 (55) | 3830 (61) | 3260 (64) |
| 105 | 4350 (42.5) | 4760 (46.5) | 4650 (47.5) | 4040 (52.5) | 3620 (58.5) | 3220 (62) |
| 110 | 3750 (39.5) | 4160 (43) | | 3770 (50.5) | 3410 (56) | 3180 (59.5) |
| 115 | 3210 (36) | 3600 (39.5) | | 3540 (48) | 3230 (53.5) | 3060 (56.5) |
| 120 | 2720 (32) | 3100 (35) | | 3300 (45.5) | 3050 (51) | 2940 (53.5) |
| 125 | 2270 (27.5) | 2640 (30.5) | | 2870 (42.5) | 2890 (48.5) | 2800 (50.5) |
| 130 | 1860 (22) | | | 2470 (39.5) | 2730 (45.5) | |
| 135 | | | | 2110 (36.5) | 2590 (42.5) | |
| 140 | | | | 1770 (33) | 2250 (38.5) | |
| 145 | | | | 1460 (29.5) | 1880 (34.5) | |
| 150 | | | | 1170 (25) | | |
| Minimum boom angle (°) for indicated length | 21 | 25 | 45 | 25 | 28 | 45 |
| Maximum boom length (ft) at 0° boom angle (no load) | 100 | | | 90 | | |

NOTES:

- All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.
- 33 ft and 56 ft boom extension lengths may be used for single line lifting service.
- Radii listed are for a fully extended boom with the boom extension erected. For main boom lengths less than fully extended, 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 configured. For boom angles not shown, use the 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 fully extended and vertical jacks set only.

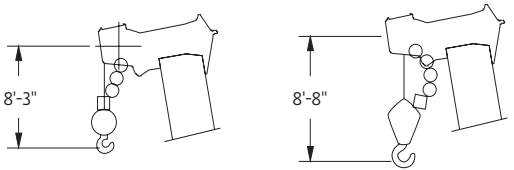
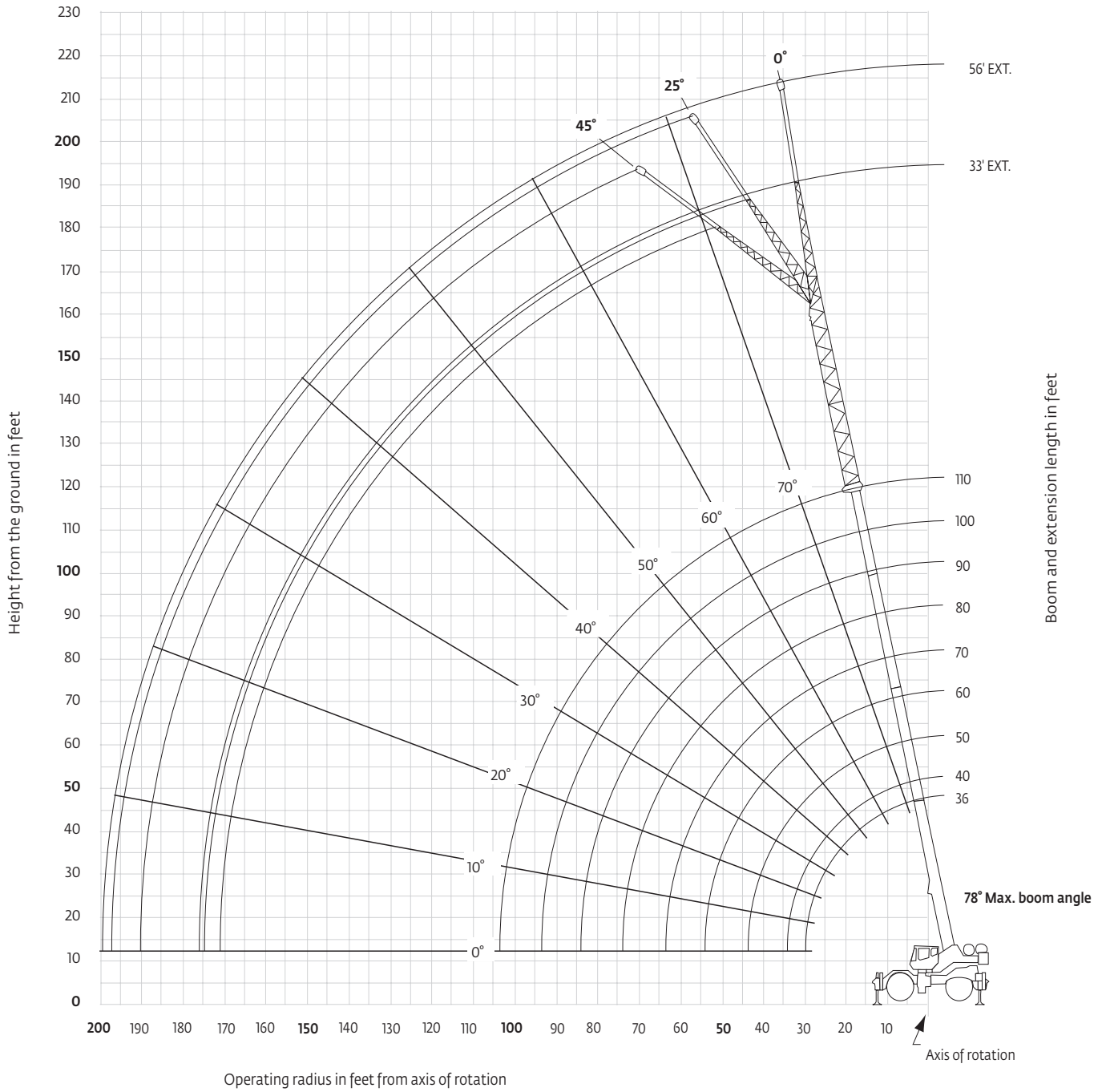
NOTE: () Boom angles are in degrees. A6-829-101289
 #LMI operating code. Refer to LMI manual for operating instructions.
 *This capacity is based upon maximum boom angle.



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Working range

110 ft main boom, bi-fold swingaway and 20 ft and 40 ft inserts



Dimensions are for largest Grove furnished hookblock and headache ball, with anti-two block activated.



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Load chart RT700E



| Pounds | | | | | | |
|---|-----------------|------------------|------------------|-----------------|------------------|------------------|
| Feet | 33 ft LENGTH | | | 56 ft LENGTH | | |
| | 0° OFFSET #0064 | 25° OFFSET #0065 | 45° OFFSET #0066 | 0° OFFSET #0084 | 25° OFFSET #0085 | 45° OFFSET #0086 |
| 35 | *9360 (78) | | | | | |
| 40 | 9360 (77) | | | *6300 (78) | | |
| 45 | 8480 (75.5) | *7480 (78) | | 6300 (77.5) | | |
| 50 | 7680 (73.5) | 7070 (77.5) | *5880 (78) | 6000 (76.5) | | |
| 55 | 6990 (71.5) | 6470 (76) | 5880 (77.5) | 5990 (75) | | |
| 60 | 6390 (70) | 5970 (74) | 5480 (76.5) | 5980 (73.5) | *4840 (78) | |
| 65 | 5890 (68) | 5570 (72) | 5080 (74.5) | 5510 (72) | 4840 (77.5) | |
| 70 | 5390 (66) | 5070 (70) | 4780 (72.5) | 5010 (70) | 4440 (76.5) | |
| 75 | 4990 (64) | 4770 (68) | 4480 (70.5) | 4560 (68.5) | 4050 (74.5) | *3760 (78) |
| 80 | 4650 (62) | 4400 (66) | 4190 (68.5) | 4170 (67) | 3870 (73) | 3460 (76.5) |
| 85 | 4300 (60) | 4150 (64) | 3890 (66) | 3820 (65) | 3570 (71) | 3260 (74.5) |
| 90 | 4000 (58) | 3850 (62) | 3690 (64) | 3520 (63.5) | 3320 (69.5) | 2960 (73) |
| 95 | 3760 (55.5) | 3650 (59.5) | 3500 (61.5) | 3220 (61.5) | 3070 (67.5) | 2770 (71) |
| 100 | 3510 (53.5) | 3410 (57.5) | 3300 (59.5) | 2980 (60) | 2880 (66) | 2570 (69) |
| 105 | 3260 (51) | 3210 (55) | 3100 (57) | 2780 (58) | 2680 (64) | 2460 (67) |
| 110 | 3070 (48.5) | 3020 (52.5) | 2930 (54.5) | 2530 (56) | 2480 (62) | 2340 (65) |
| 115 | 2870 (46) | 2870 (50) | 2780 (51.5) | 2340 (54) | 2280 (60) | 2200 (63) |
| 120 | 2730 (43.5) | 2730 (47) | | 2190 (52) | 2140 (58) | 2050 (60.5) |
| 125 | 2530 (40.5) | 2580 (44) | | 2000 (50) | 1990 (55.5) | 1910 (58.5) |
| 130 | 2210 (37.5) | 2440 (41) | | 1850 (48) | 1850 (53.5) | 1810 (56) |
| 135 | 1850 (34.5) | 2150 (37.5) | | 1720 (45.5) | 1750 (51) | 1670 (53.5) |
| 140 | 1510 (30.5) | 1750 (34) | | 1610 (43) | 1610 (48.5) | |
| 145 | 1200 (26.5) | | | | 1520 (46) | |
| 150 | | | | | 1370 (43) | |
| Minimum boom angle (°) for indicated length (no load) | 20 | 25 | 45 | 40 | 41 | 45 |
| Maximum boom length (ft) at 0° boom angle (no load) | | 90 | | 70 | | |

A6-829-101371A

NOTE: () Boom angles are in degrees.

#LMI operating code. Refer to LMI manual for operating instructions.

*This capacity is based upon maximum boom angle.

NOTES:

1. All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.

2. 33 ft and 56 ft boom extension lengths may be used for single line lifting service only.

3. For main boom lengths less than 110 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.

4. Boom angle is the angle above or below horizontal of the longitudinal axis of the boom base section after lifting rated load.

6. Capacities listed are with outriggers fully extended and vertical jacks set only.



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Load chart



| Pounds | | | | | | |
|--------|-----------------------|------------------------|------------------------|-----------------------|------------------------|------------------------|
| Feet | 33 ft LENGTH | | | 56 ft LENGTH | | |
| | 0° OFFSET #0064 | 25° OFFSET #0065 | 45° OFFSET #0066 | 0° OFFSET #0084 | 25° OFFSET #0085 | 45° OFFSET #0086 |
| 45 | 6560 (78) | | | | | |
| 50 | 5960 (76) | | | 4510 (78) | | |
| 55 | 5360 (74.5) | 5860 (78) | | 4210 (77.5) | | |
| 60 | 4860 (73) | 5260 (76.5) | *5170 (78) | 3910 (76) | | |
| 65 | 4370 (71) | 4870 (75) | 4670 (77.5) | 3710 (74.5) | | |
| 70 | 3970 (69.5) | 4370 (73) | 4270 (75.5) | 3410 (73) | *3710 (78) | |
| 75 | 3670 (67.5) | 4070 (71.5) | 3980 (73.5) | 3220 (71.5) | 3420 (77.5) | |
| 80 | 3270 (66) | 3670 (69.5) | 3680 (72) | 2820 (70) | 3120 (76) | |
| 85 | 2980 (64) | 3370 (68) | 3380 (70) | 2520 (68.5) | 2820 (74.5) | 2730 (77.5) |
| 90 | 2780 (62.5) | 3080 (66) | 3080 (68) | 2320 (66.5) | 2620 (72.5) | 2530 (76) |
| 95 | 2480 (60.5) | 2880 (64) | 2890 (66) | 2030 (65) | 2330 (71) | 2340 (74.5) |
| 100 | 2290 (58.5) | 2580 (62) | 2690 (64) | 1830 (63.5) | 2130 (69.5) | 2140 (72.5) |
| 105 | 2090 (56.5) | 2390 (60) | 2390 (62) | 1630 (62) | 1930 (68) | 1940 (71) |
| 110 | 1900 (54.5) | 2190 (58) | 2200 (60) | 1440 (60) | 1730 (66) | 1740 (69) |
| 115 | 1700 (52.5) | 2000 (56) | 2100 (58) | 1240 (58.5) | 1540 (64.5) | 1550 (67) |
| 120 | 1600 (50.5) | 1800 (54) | 1910 (55.5) | 1140 (57) | 1340 (62.5) | 1450 (65) |
| 125 | 1410 (48) | 1700 (51.5) | 1710 (53) | | 1240 (61) | 1260 (63.5) |
| 130 | 1310 (46) | 1510 (49.5) | 1520 (50.5) | | 1050 (59) | 1160 (61.5) |
| 135 | 1120 (43.5) | 1420 (47) | 1420 (48) | | | |
| 140 | 1030 (41) | 1220 (44.5) | | | | |
| 145 | | 1130 (41.5) | | | | |
| 150 | | 1040 (38.5) | | | | |

No load stability data

| | | | | | | |
|---------------------------------------|-------|-----|-----|-------|-----|-----|
| Min. boom angle at 110 ft boom length | 37° | 37° | 45° | 54° | 56° | 58° |
| Max. boom length at 0° boom angle | 70 ft | | | 40 ft | | |

NOTE: () Boom angles are in degrees. A6-829-101581

*This capacity is based upon maximum boom angle.

#LMI operating code. Refer to LMI manual for instructions.

NOTES:

1. All capacities above the bold line are based on structural strength of boom extension and do not exceed 85% of tipping loads, in accordance with SAE J-765.

2. 33 ft and 56 ft boom extension lengths may be used for single line lifting service only.

3. For main boom lengths less than 110 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.

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 fully extended and vertical jacks set only.



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Load charts RT700E

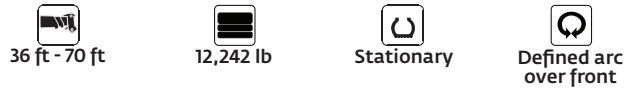


| Pounds | | | | | |
|--------|--------------------------|------------------|------------------|------------------|----------------|
| #9005 | | | | | |
| Feet | Main boom length in feet | | | | |
| | 36 | 40 | 50 | *60 | 70 |
| 10 | 45,300 (69) | 39,700 (72) | | | |
| 12 | 41,750 (65.5) | 39,700 (68.5) | 29,600 (73.5) | | |
| 15 | 29,350 (59.5) | 26,450 (63.5) | 26,450 (70) | 20,900 (74) | |
| 20 | 17,800 (49) | 17,650 (55) | 17,050 (63.5) | 16,250 (69) | 16,250 (72) |
| 25 | 11,750 (36) | 11,700 (45) | 11,350 (56.5) | 10,850 (63.5) | 10,850 (68) |
| 30 | | 8040 (31.5) | 7820 (48.5) | 7470 (57.5) | 7470 (63) |
| 35 | | | 5400 (40) | 5120 (51.5) | 5120 (58) |
| 40 | | | 3660 (28) | 3200 (45) | 3430 (53) |
| 45 | | | | 1000 (37) | 2150 (47.5) |
| 50 | | | | | 1150 (41.0) |

Lifting capacities at zero degree boom angle on rubber - stationary 360°

| Boom angle | Main boom length in feet | | | |
|------------|--------------------------|----------------|----------------|-----|
| | 36 | 40 | 50 | *60 |
| 0° | 8180 (29.7) | 5890 (34.2) | 2170 (44.2) | |

Note: () Reference radii in feet. A6-829-101048A
 #LMI operating code. Refer to LMI manual for instructions.
 *60 ft boom length is with inner-mid extended and outer-mid & fly retracted.



| Pounds | | | | | |
|--------|--------------------------|------------------|------------------|------------------|------------------|
| #9005 | | | | | |
| Feet | Main boom length in feet | | | | |
| | 36 | 40 | 50 | *60 | 70 |
| 10 | 45,300 (69) | 42,850 (72) | 29,600 (73.5) | | |
| 12 | 43,650 (65.5) | 41,350 (68.5) | 29,600 (73.5) | | |
| 15 | 38,300 (59.5) | 36,300 (63.5) | 29,600 (70) | 20,900 (74) | 17,300 (76.5) |
| 20 | 31,150 (49) | 29,550 (55) | 25,900 (63.5) | 20,900 (69) | 17,300 (72) |
| 25 | 24,100 (36) | 24,150 (45) | 21,800 (56.5) | 18,800 (63.5) | 17,300 (68) |
| 30 | | 17,400 (31.5) | 17,200 (48.5) | 15,300 (57.5) | 15,300 (63) |
| 35 | | | 12,800 (40) | 12,500 (51.5) | 11,000 (58) |
| 40 | | | 9,720 (28) | 9,390 (45) | 9,390 (53) |
| 45 | | | | 7,090 (37) | 7,090 (47.5) |
| 50 | | | | 5,310 (26.5) | 5,310 (41) |
| 55 | | | | | 3,870 (33.5) |
| 60 | | | | | 3,170 (24) |

Lifting capacities at zero degree boom angle on rubber - defined arc over front

| Boom angle | Main boom length in feet | | | |
|------------|--------------------------|------------------|-----------------|-----------------|
| | 36 | 40 | 50 | *60 |
| 0° | 17,600 (29.7) | 13,600 (34.2) | 7,750 (44.2) | 4,010 (54.6) |

Note: () Reference radii in feet. A6-829-101047
 #LMI operating code. Refer to LMI manual for instructions.
 *60 ft boom length is with inner-mid extended and outer-mid & fly retracted.

NOTES TO ALL RUBBER CAPACITY CHARTS:

- Capacities are in pounds and do not exceed 75% of tipping loads as determined by test in accordance with SAE J765.
- Capacities are applicable to machines equipped with 29.5 x 25 (28 ply) tires at 65 psi cold inflation pressure.
- Defined Arc - Over front includes 6° on either side of longitudinal centerline of machine (ref. drawing C6-829-003529).
- Capacities appearing above the bold line are based on structural strength and tipping should not be relied upon as a capacity limitation.
- Capacities are applicable only with machine on firm level surface.
- On rubber lifting with boom extensions not permitted.
- For pick and carry operation, boom must be centered over front of machine, mechanical swing lock engaged and load restrained from swinging. When handling loads in the structural range with capacities close to maximum ratings, travel should be reduced to creep speeds.
- Axle lockouts must be functioning when lifting on rubber.
- 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.
- Creep - not over 200 ft of movement in any 30 minute period and not exceeding 1 mph.



| Pounds | | | | | |
|--------|--------------------------|------------------|------------------|------------------|------------------|
| #9006 | | | | | |
| Feet | Main boom length in feet | | | | |
| | 36 | 40 | 50 | *60 | 70 |
| 10 | 42,500 (69) | 37,600 (72) | 30,700 (76) | | |
| 12 | 42,500 (65.5) | 37,600 (68.5) | 30,700 (73.5) | 23,450 (77) | |
| 15 | 37,600 (59.5) | 37,600 (63.5) | 30,700 (70) | 19,700 (74) | 16,250 (76.5) |
| 20 | 32,950 (49) | 32,900 (55) | 30,700 (63.5) | 19,700 (69) | 16,250 (72) |
| 25 | 24,100 (36) | 24,150 (45) | 23,850 (56.5) | 19,700 (63.5) | 16,250 (68) |
| 30 | | 17,400 (31.5) | 17,200 (48.5) | 16,800 (57.5) | 16,250 (63) |
| 35 | | | 12,800 (40) | 12,500 (51.5) | 12,500 (58) |
| 40 | | | 9,720 (28) | 9,390 (45) | 9,390 (53) |
| 45 | | | | 7,090 (37) | 7,090 (47.5) |
| 50 | | | | 5,310 (26.5) | 5,310 (41) |
| 55 | | | | | 3,870 (33.5) |
| 60 | | | | | 3,090 (24) |

Lifting capacities at zero degree boom angle on rubber - pick and carry

| Boom angle | Main boom length in feet | | | |
|------------|--------------------------|------------------|-----------------|-----------------|
| | 36 | 40 | 50 | *60 |
| 0° | 17,600 (29.7) | 13,600 (34.2) | 7,750 (44.2) | 4,010 (54.6) |

Note: () Reference radii in feet. A6-829-101049
 #LMI operating code. Refer to LMI manual for instructions.
 *60 ft boom length is with inner-mid extended and outer-mid & fly retracted.



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Load chart

Rigging chart: Installation and removal of 12,000 lb counterweight on outriggers fully extended 360°



#0801

Main boom length
in feet

| Feet | *36 | 40 |
|------|------------------|------------------|
| 10 | 18,000 (69) | 18,000 (72) |
| 12 | 18,000 (65.5) | 18,000 (68.5) |
| 15 | 18,000 (59.5) | 18,000 (63.5) |
| 20 | 18,000 (49) | 18,000 (55) |
| 25 | 18,000 (36) | 18,000 (45) |
| 30 | | 18,000 (31.5) |

NOTE: () Boom angles are in degrees.
#LMI operating code. Refer to LMI manual for
operating instructions.

| Boom angle | Main boom length in feet | |
|---------------|-----------------------------|------------------|
| | *36 | 40 |
| 0° | 18,000 (29.8) | 18,000 (34.2) |

A6-829-102134

NOTE: () Reference radii in feet.
*Boom must be fully retracted.



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Load handling

Weight reductions for load handling devices

33 ft - 56 ft Folding boom extension

| | |
|------------------------------|-----------|
| *33 ft extension (erected) - | 5080 lb |
| *56 ft extension (erected) - | 11,330 lb |

Folding extension with 20 ft insert

| | |
|------------------------------|-----------|
| *33 ft extension (erected) - | 11,248 lb |
| *56 ft extension (erected) - | 19,372 lb |

Folding extension with 40 ft insert

| | |
|------------------------------|-----------|
| *33 ft extension (erected) - | 19,671 lb |
| *56 ft extension (erected) - | 29,671 lb |

*Reduction of main boom capacities
(no deduct required for stowed boom extension)

When lifting over swingaway and/or jib combinations, deduct total weight of all load handling devices reeved over main boom nose directly from swingaway or jib capacity.

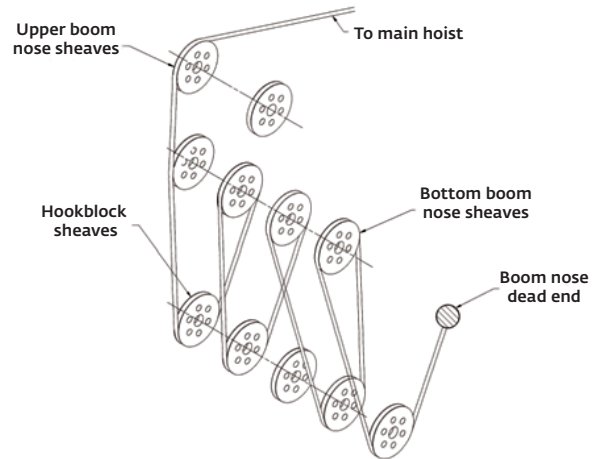
NOTE: All load handling devices and boom attachments are considered part of the load and suitable allowances **MUST BE MADE** for their combined weights. Weights are for Grove furnished equipment.

Line pulls and reeving information

| Hoists | Cable specs | Permissible line pulls | Nominal cable length |
|--------------------|---|------------------------|----------------------|
| Main | 19 mm (3/4 in) 6 x 37 class, EIPS, IWRC Special Flexible Min. Breaking Str. 58,800 lb | 16,800 lb | 500 ft |
| Main and auxiliary | 19 mm (3/4 in) Flex-X 35 Rotation resistant (non-rotating) Min. breaking Str. 85,800 lb | 16,800 lb | 500 ft |

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

60 USt reeving diagram



Line pulls and reeving information

| | |
|---------------------------------------|-----------|
| Auxiliary boom nose | 137 lb |
| Hookblocks and headache balls: | |
| 60 USt, 5 Sheave | 1250 lb + |
| 50 USt, 4 Sheave | 1000 lb + |
| 50 USt, 3 Sheave | 1000 lb + |
| 8.3 USt headache ball (non-swivel) | 350 lb + |
| 8.3 USt headache ball (swivel) | 370 lb + |

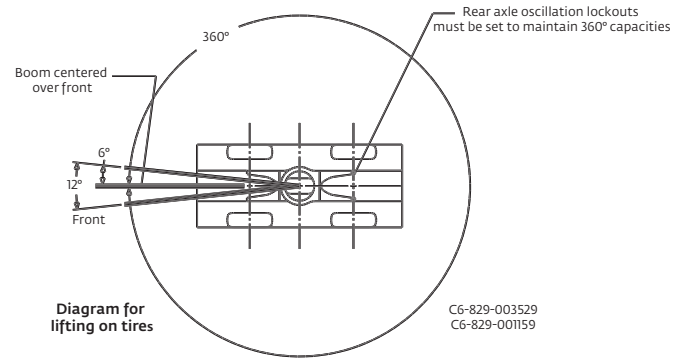
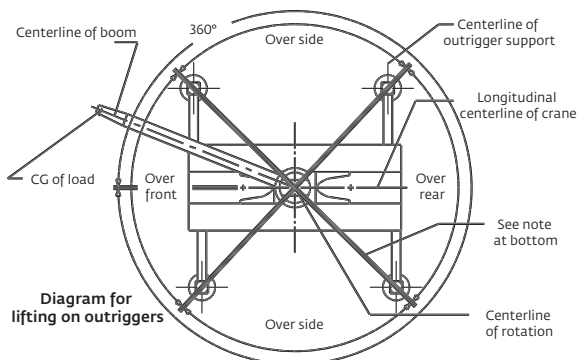
+Refer to rating plate for actual weight.

Hoist performance

| Wire rope layer | Hoist line pulls two-speed hoist | | Drum rope capacity (ft) | | | |
|-----------------|----------------------------------|--------------------------------|-------------------------|------------------|------------------|------------------|
| | Low available lb ^o | High available lb ^o | Layer 16 in drum | Total 16 in drum | Layer 26 in drum | Total 26 in drum |
| 1 | 18,134 | 9067 | 78 | 78 | 132 | 132 |
| 2 | 16,668 | 8334 | 85 | 164 | 144 | 276 |
| 3 | 15,420 | 7710 | 92 | 256 | 156 | 432 |
| 4 | 14,347 | 7174 | 99 | 356 | 167 | 599 |
| 5 | 13,413 | 6707 | 106 | 462 | 179 | 778 |
| 6 | 12,594 | 6297 | 113 | 575 | 190 | 968 |

^o Max lifting capacity: 6 x 37 class or 35 x 7 class = 16,800 lb

Working area diagram



CG-829-003529
CG-829-001159

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



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