

Grove TMS700E

Product Guide



Features

Swingaway extension inserts

Optional 6,1 m (20 ft) or 12,2 m (40 ft) swingaway extension inserts offer excellent capacities with an unprecedented tip height of up to 212 ft.





Suspension system

Standard front and rear air ride suspension provides a comfortable ride at maximum speed of 105 km/h (65 mph).

MEGAFORM™ boom

The 11 m - 33.5 m (36 ft - 110 ft) four-section full power sequenced synchronized MEGAFORMTM boom is designed for maximum vertical and lateral strength.



Cummins diesel carrier engine

Cummins QSM 402 diesel carrier engine delivers the horsepower and torque needed to negotiate tough job sites and achieve highway travel speeds.



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Specifications

Superstructure



Boom

11 m – 33,5 m (36 ft – 110 ft) four (4) section, full power sequenced synchronized boom.

Maximum tip height: 35,9 m (118 ft).



Folding lattice extension

10,1 m - 17,1 m (33 ft - 56 ft) folding lattice swingaway extension offsettable at 0°, 25° or 45°. Stows alongside base boom section.

Maximum tip height: 52,6 m (172.5 ft).



*Lattice extensions

Two (2) 6,1 m (20 ft) lattice extensions used with the swingaway extension to increase the length to 23,2 m (76 ft) or 29,3 m (96 ft).

Maximum tip height: 64,6 m (212 ft).



Boom nose

Quick reeving type boom nose with 3 nylatron sheaves (TMS750E), (4 for TMS760E [60 ton rating]) mounted on heavy duty tapered roller bearings with removable pin-type rope guards. 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 "Graphics Display" load moment and anti-two block system with audio-visual warning and control lever lockout. These systems provide electronic display of boom angle, boom 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

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



Swing

Planetary swing with foot applied multi-disc wet brake. Spring applied, hydraulically released parking brake. Two position plunger type and 360 ° mechanical house locks operated from cab.

Maximum speed: 2.0 rpm.



Counterweight

4990 kg (11,000 lb) consisting of (2) 2495 kg ([2] 5500 lb) sections. *Optional "Heavy Lift" package consisting of (1) additional 2495 kg (5500 lb) section, for a total of 7484 kg (16,500 lb). Hydraulic installation/removal.



Hydraulic system

Four main gear pumps with a combined capacity of 513 L/m (135.4 gpm). Individual pressure compensated valve banks. Maximum operating pressure: 27,6 Mpa (4000 psi).

Return line type filter with full flow by-pass protection and service indicator. Replaceable cartridge with beta rating of 5/12/16. 643 L (170 gal) reservoir. Remote mounted oil cooler with thermostatically controlled electric motor driven fan.

Specifications

Superstructure, continued



Hoist specifications main and auxiliary hoists-model HP30A-19G

Planetary reduction with integral automatic brake, electronic hoist drum rotation indicator, and hoist drum cable follower. Grooved drum.

Single line pull: 1st layer: 8226 kg (18,134 lb)

3rd layer: 6994 kg (15,420 lb) 5th layer: 6084 kg (13,413 lb)

Maximum single line speed: 162 m/min

(531 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

Rope diameter: 19 mm (.75 in)

Rope length: 152 m (500 ft)

Rope type: 6 x 36 EIPS IWRC

special flexible Optional 35 x 7 rotation resistant

Maximum rope stowage: 256 m (841 ft)

Carrier



Chassis

Triple box section, four-axle carrier, fabricated from high strength, low alloy steel with towing and tie-down lugs.

Outrigger system

Four hydraulic telescoping, single stage, double box beam outriggers with inverted jack and integral holding valves. Quick release type steel outrigger floats 610 mm (24 in) diameter. Three position setting with fully extended, intermediate (50%) extended and fully retracted capacities.

Maximum outrigger pad load: 90,890 lb



Outrigger controls

Located in the superstructure cab and both sides of chassis. Level indicator at each control station.



Engine

Cummins QSM 402, 10,8 L diesel (Off Highway EPA Certified) six cylinders, after cooled 300 kW (402 bhp) at 1800 rpm. Maximum torque 1898 Nm (1400 ft lb) at 1400 rpm.

Fuel requirement — Maximum of 5000 ppm sulfur content.

Equipped with engine compression brake, block heater, cold start aid (less canister) and audio-visual engine distress system.



Fuel tank capacity

379 L (100 gal).



Transmission

Roadranger 11 speeds forward, 3 reverse.

Carrier, continued



Drive 8 x 4 x 4.



Steering

Front axles, single circuit, mechanical steering with hydraulic assist.

Specifications



Axles

Front: (2) beam-type steering axles, 2,1 m (83.3 in) track.

Rear: (2) single reduction drive axles, 1,9 m (75.1 in) track. Inter-axle differential lock.



Brakes

S-cam, dual system operating on all wheels. Spring applied air released parking brake acting on rear axles. Air dryer.



Suspension

Front: Walking beam with air bags and shock absorbers.

Rear: Walking beam with air bags and shock absorbers.



Tires

Front: 445/65R 22.5, tubeless, mounted on aluminum disc wheels.

Rear: 315/80R 22.5, tubeless, mounted on aluminum disc wheels, steel inner.



Lights

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



Cab

One man design, all steel fabricated with acoustical lining and tinted safety glass throughout. Deluxe fabric covered, fully adjustable air ride seat. Complete driving controls and engine instrumentation including tilt telescope steering wheel, tachometer, speedometer, voltmeter, water temp., oil pressure, fuel level, air pressure gauge with A/V warning and engine high temp./low oil pressure A/V warning. Other standard items include hot water heater/defroster, electric windshield wash/wipe, fire extinguisher, seat belt, air conditioning, air horn and door lock.



Electrical system

Two (2) 12V batteries. 12V lighting/starting. Battery disconnect standard equipment.



Maximum speed

104 km/h (65 mph)



Gradeability (theoretical)

70%

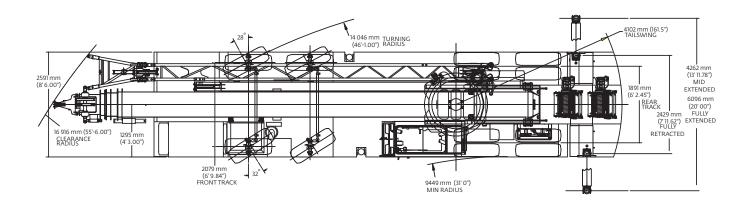
Miscellaneous standard equipment

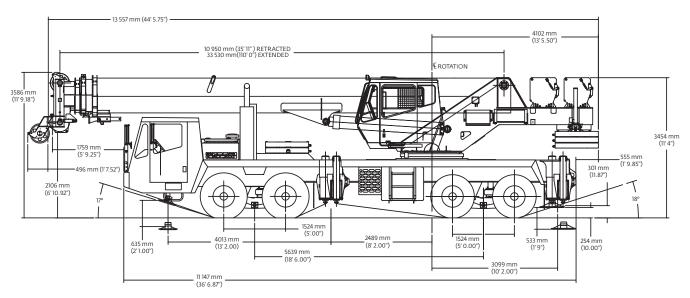
Aluminum fenders with rear storage compartments; dual rear view mirrors; electronic back-up alarm; pump disconnect; tire inflation kit; air cleaner restriction indicator; headache ball stowage; chrome package which includes aluminum wheels, and LMI event recorder.

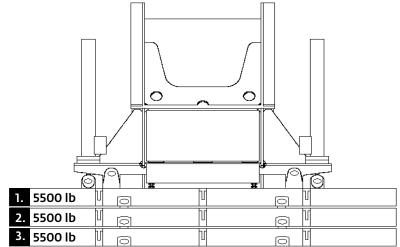
*Optional equipment

- Auxiliary Lighting and Convenience Package includes amber strobe for superstructure and carrier cabs, dual boom base mounted floodlights, and LMI light bar (in cab)
- Trailing Boom Package includes trailer air and electrical disconnects, no spin differential and trailing boom kit (less dolly)
- Wind speed indicator
- ► Hook blocks
- Rear pintle hook
- Cross axle differential locks
- Winter front radiator cover
- Aluminum outrigger pads
- Tow cable
- LMI calibration for on rubber

Dimensions





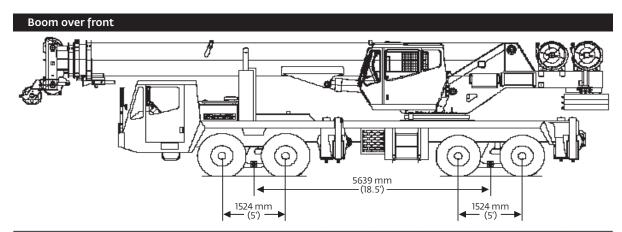


		_	ر			
Counterweight configuration						
Zero						
2495 kg (5500 lb)	•					
4990 kg (11,000 lb)	•	•				
7485 kg (16,500 lb)	•	•	•			

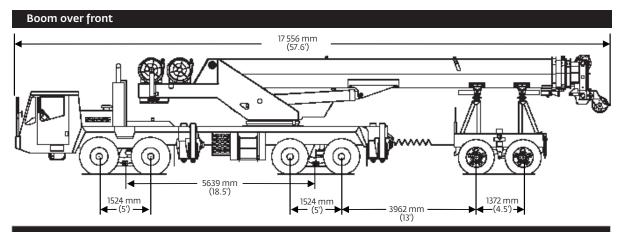
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Grove TMS700E

Travel proposals



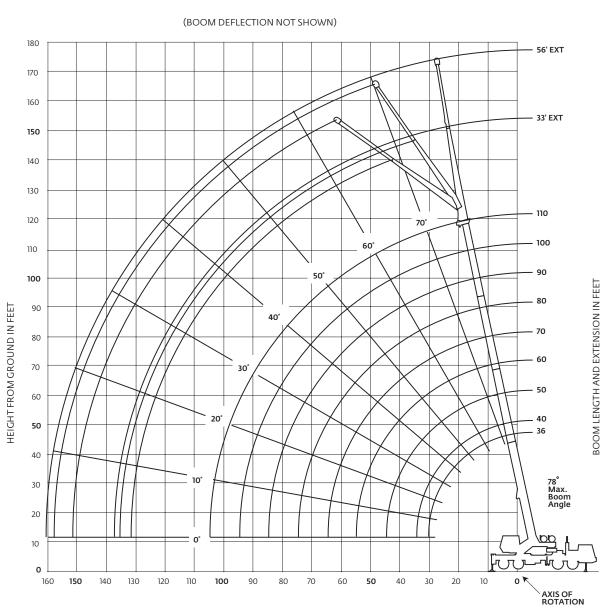
Unit configuration kg (lb)	Gr	oss	Fr	ont	R	ear
Basic machine including 33,5 m (110 ft) main boom, main and auxiliary hoists with cable, driver and no counterweight.	33 634	(74,149)	16 664	(36,738)	16 970	(37,411)
Additions: 2495 kg (5500 lb) counterweight pinned on superstructure	2495	(5500)	1004	(-2214)	3499	(7714)
4990 kg (11,000 lb) counterweight pinned on superstructure	4990	(11,000)	2009	(-4428)	6998	(15,428)
7485 kg (16,500 lb) counterweight pinned on superstructure	7484	(16,500)	3013	(-6642)	10 497	(23,142)
2495 kg (5500 lb) counterweight stowed on carrier deck	2495	(5500)	2128	(4692)	367	(808)
4990 kg (11,000 lb) counterweight stowed on carrier deck	4990	(11,000)	4257	(9384)	733	(1616)
Swingaway carrier brackets	150	(330)	128	(282)	22	(48)
10,1 m (33 ft) swingaway	785	(1730)	895	(1972)	-110	(-242)
10,1 m – 17,1 m (33 ft - 56 ft) swingaway	1125	(2480)	1135	(2502)	-10	(-22)
Auxiliary boom nose	59	(130)	114	(251)	-55	(-121)
35 t (40 USt) hook block stowed at bumper	363	(800)	557	(1229)	-195	(-429)
45 t (50 USt) hook block stowed at bumper	454	(1000)	697	(1536)	-243	(-536)
55 t (60 USt) hook block stowed at bumper	567	(1250)	871	(1920)	-304	(-670)
7,5 t (8.3 USt) headache ball stowed in trough	168	(371)	240	(530)	-72	(-159)
Air conditioning superstructure cab	129	(285)	5	(10)	125	(275)
Air conditioning chassis cab	40	(88)	52	(115)	-12	(-27)



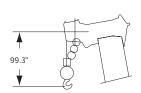
Unit configuration kg (lb)		ross	Fr	ont	R	.ear	D	olly
Basic machine including 33,5 m (110 ft) main boom, main and auxiliary hoists with cable, driver, no counterweight and 2722 kg (6000 lb) tandem axle dolly.	36 357	(80,152)	15 020	(33,113)	13 173	(29,041)	8164	(17,998)
Additions: 2495 kg (5500 lb) counterweight stowed on carrier deck.	2495	(5500)	2128	(4692)	367	(808)	0	(0)
4990 kg (11,000 lb) counterweight stowed on carrier deck.	4990	(11,000)	4257	(9384)	733	(1616)	0	(0)
10,1 m (33 ft) swingaway with brackets.	934	(2060)	107	(236)	91	(201)	936	(1623)
10,1 m – 17,1 m (33 ft – 56 ft) swingaway with brackets.	1275	(2810)	194	(427)	165	(363)	916	(2020)
Auxiliary boom nose.	59	(130)	-11	(-24)	-9	(-20)	79	(174)
35 t (40 USt) hook block hanging at boom nose.	363	(800)	-57	(-126)	-49	(-107)	469	(1033)
45 t (50 USt) hook block hanging at boom nose.	454	(1000)	-71	(-157)	-61	(-134)	586	(1291)
55 t (60 USt) hook block hanging at boom nose.	567	(1250)	-89	(-197)	-76	(-167)	732	(1614)
7,5 t (8.3 USt) headache ball hanging at boom nose.	168	(371)	-26	(-58)	-23	(-50)	217	(479)

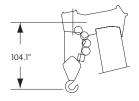
Working range

36 ft - 110 ft main boom and 33 ft - 56 ft lattice extension



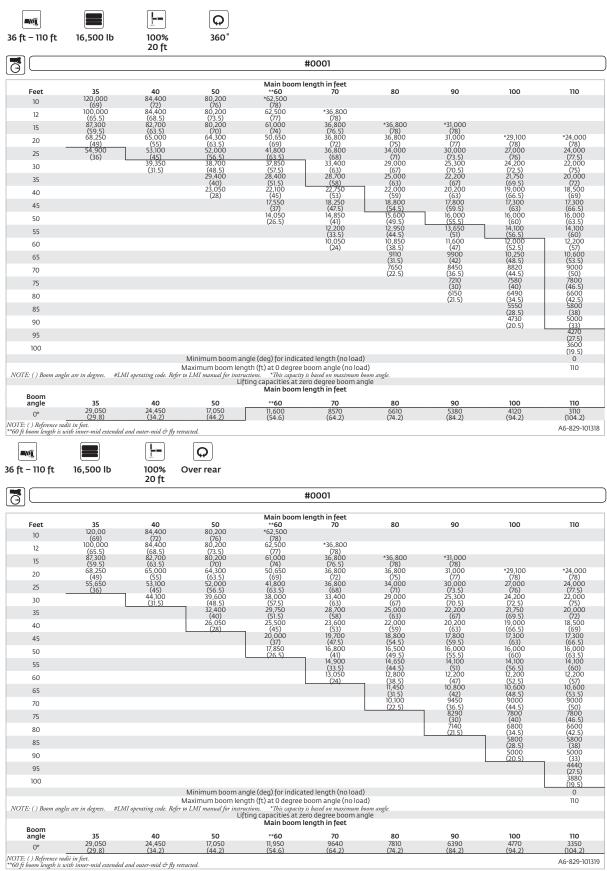






Dimensions are for largest Grove furnished hook block and headache ball, with anti-two block activated.

TMS760E load charts





			Po	unds		
Feet	#0021 0° Offset	33 ft lengtl #0022 25° Offset	h #0023 45° Offset	#0041 0° Offset	6 ft lengtl #0042 25° Offset	1 #0043 45° Offset
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	6470 (54)	6070 (58)	5780 (60)	5370 (61.5)	4470 (67.5)	3450 (71)
90	5670 (51)	5720 (55.5)	5480 (57)	4980 (59.5)	4330 (65.5)	3410 (68.5)
95	4970 (48.5)	5400 (52.5)	5200 (54)	4630 (57)	4070 (63)	3300 (66.5)
100	4350 (45.5)	4840 (49.5)	4950 (51)	4320 (55)	3830 (61)	3260 (64)
105	3790 (42.5)	4210 (46.5)	4470 (47.5)	4040 (52.5)	3620 (58.5)	3220 (62)
110	3290 (39.5)	3640 (43)		3760 (50.5)	3410 (56)	3180 (59.5)
115	2830 (36)	3130 (39.5)		3290 (48)	3230 (53.5)	3060 (56.5)
120	2420 (32)	2660 (35)		2860 (45.5)	3050 (51)	2940 (53.5)
125	2040 (27.5)	2240 (30.5)		2470 (42.5)	2890 (48.5)	2800 (50.5)
130	1700 (22)			2120 (39.5)	2590 (45.5)	
135				1790 (36.5)	2200 (42.5)	
140				1480 (33)	1840 (38.5)	
145			4	1200 (29.5)	1500 (34.5)	
Min. boom angle for indicated length	21°	No lo	oad stabili 45°	ty data 28°	28°	45°
Max. boon length at 0 boom ang	le	100 ft			90 ft	
NOTE: () Bo	om angles a	ire in degrees.			A6-8	329-10133

NOTE: () Boom angles are in degrees.

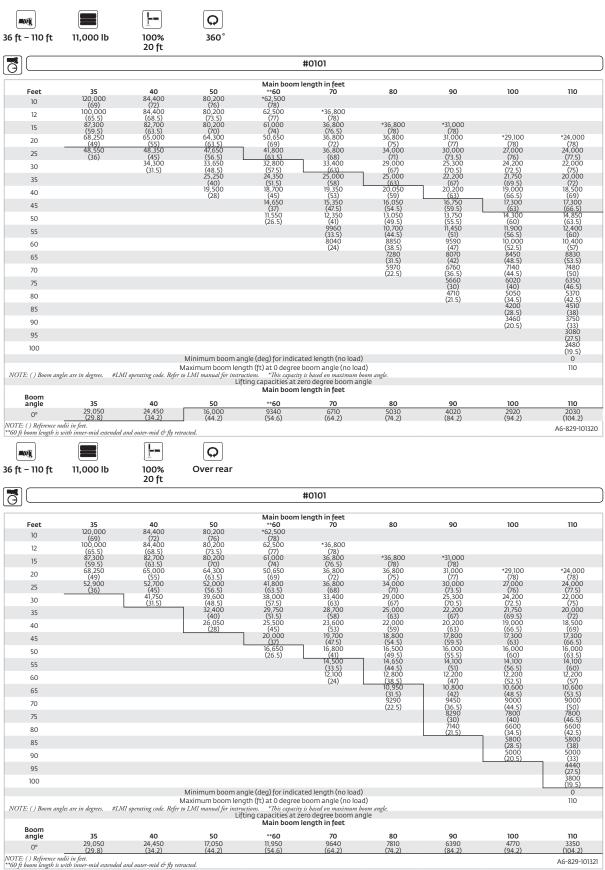
*This capacity is based upon maximum boom angle.

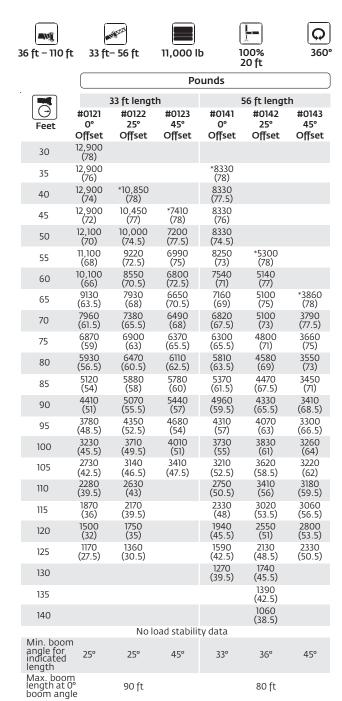
#LMI operating code. Refer to LMI manual for instructions.

NOTES:

- 1. All capacities above the bold line are based on structural strength of boom extension.
- 2. 33 ft and 56 ft boom extension lengths may be used for single line lifting service.
- 3. 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.
- 4. 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.
- 5. 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 properly extended and vertical jacks set only.

TMS760E load charts





NOTE: () Boom angles are in degrees.

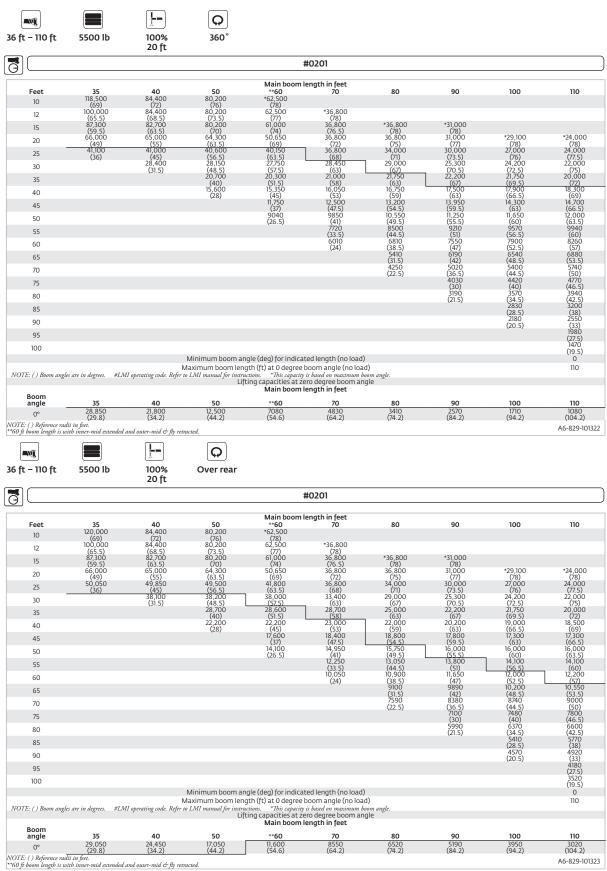
*This capacity is based upon maximum boom angle.
#LMI operating code. Refer to LMI manual for instructions.

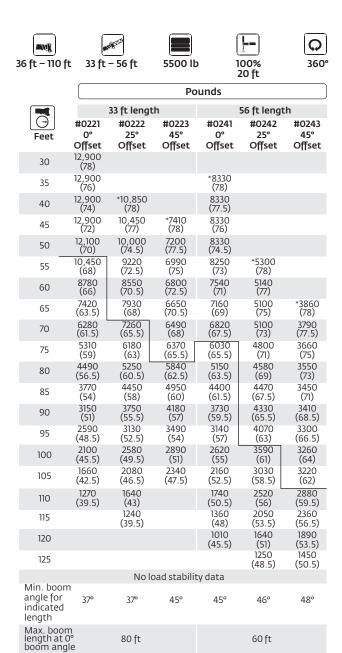
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TMS760E load charts





NOTE: () Boom angles are in degrees.

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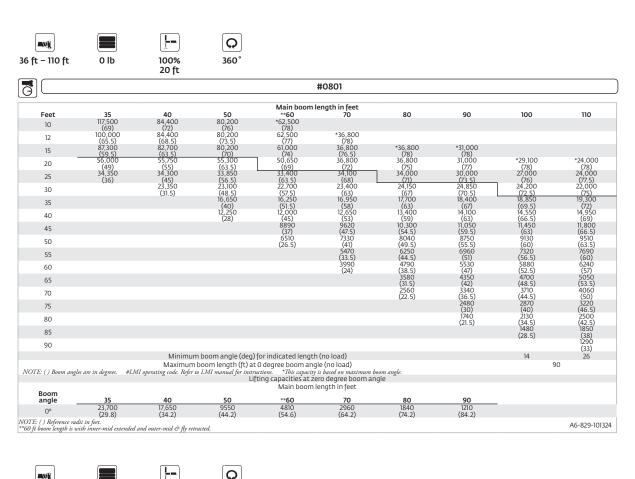
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- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.

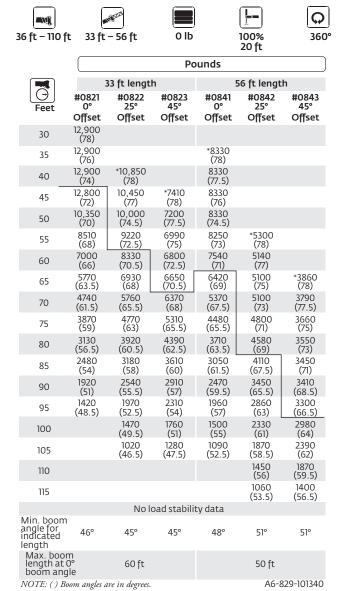
^{*}This capacity is based upon maximum boom angle.

[#]I.MI operating code. Refer to I.MI manual for instructions.

TMS760E load charts



-nil		<u> </u>	42						
5 ft – 110 ft	0 lb	100% 20 ft	Over rear						
3]					#0801				
					length in feet				
Feet	35 120,000	40 84,400	50 80,200	** 60 *62,500	70	80	90	100	110
10	(69) 100,000	(72) 84,400	(76) 80,200	(78) 62,500	*36,800				
12	(65.5) 87,300	(68.5) 82,700	(73.5) 80,200	(77)	(78) 36,800				
15	87,300 (59.5)	(63.5)	80,200 (70)	61,000 (74)	(76.5)	*36,800 (78)	*31,000 (78)		
20	62,400 (49)	62,200 (55)	61,8Ó0 (63.5)	50,650 (69)	36,800 (72)	36,800 (75)	31,0óo (77)	*29,100 (78)	*24,000 (78)
25	47,250	47,050	46,700	41,800	36.800	34,000	30.000	27,000	24.000
30	(36)	32,950 (31.5)	(56.5) 33,100	(63.5) 33,050	(68) 33,400	(71) 29,000	(73.5) 25,300	(76) 24,200	(77.5) 22,000
		(31.5)	(48.5) 24,600	(57.5) 24,500	(63) 25,350	(67) 25.000	(70.5) 22,200	(72.5) 21,750 (69.5)	(75) 20.000
35			(40)	(51.5)	(58)	(63)	(67)	(69.5)	(72)
40			18,8Ó0 (28)	18,750 (45)	19,600 (53)	20,450 (59)	20,200 (63)	19,000 (66.5)	18,5Ó0 (69)
45				14,650 (37)	15,500 (47.5)	16,300 (54.5)	17,100 (59.5)	17,300 (63)	17,300 (66.5)
50				11,550 (26.5)	12 400	(54.5) 13,200 (49.5)	14,000 (55.5) 11,550	14,350 (60) 11,900	14.750
55				(20.5)	(41) 9990	10.800	11,550	11,900	(63.5) 12,300
					(33.5) 8020	(44.5) 8860	(51) 9620	(56.5) 9980	(60) 10,300
60					(24)	(38.5) 7240	(47) 8030 (42) 6680	(52.5) 8370	(57) 8720
65						(31.5) 5890	(42)	(48.5) 7040	(53.5) 7380
70						(22.5)	(36.5) 5520	(44.5) 5910	(50) 6240
75							5520 (30)	`5910´ (40)	6240 (46.5)
80							4540 (21.5)	4910 (34.5)	5270 (42.5)
85							(21.5)	4050	4410
								(28.5) 3300	4410 (38) 3650
90								(20.5)	(33)
95									2980 (27.5)
100									238Ó (19.5)
			Minimum boom ang	le (deg) for indica	ted length (no load)				0
OTE: () Boom angles	are in degrees. #LN		Maximum boom lengt to LMI manual for instruct Liftii	ions. *This capacity		oom angle.			110
Room					length in feet				
Boom angle	35	40	50	**60	70	80	90	100	110
0°	29,050 (29.8)	24,450 (34.2)	15,250 (44.2)	9320 (54.6)	6660 (64.2)	4930 (74.2)	3820 (84.2)	2740 (94.2)	1940 (104.2)
E: () Reference radii	i in feet.	and outer-mid & fly ret		(54.0)	(0-4.2)	(7-1.2)	(04.2)	(54.2)	A6-829-10



- 1. All capacities above the bold line are based on structural strength of boom extension.
- 2. 33 ft and 56 ft boom extension lengths may be used for single line lifting service.
- 3. 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.
- 6. Capacities listed are with outriggers properly extended and vertical jacks set only.

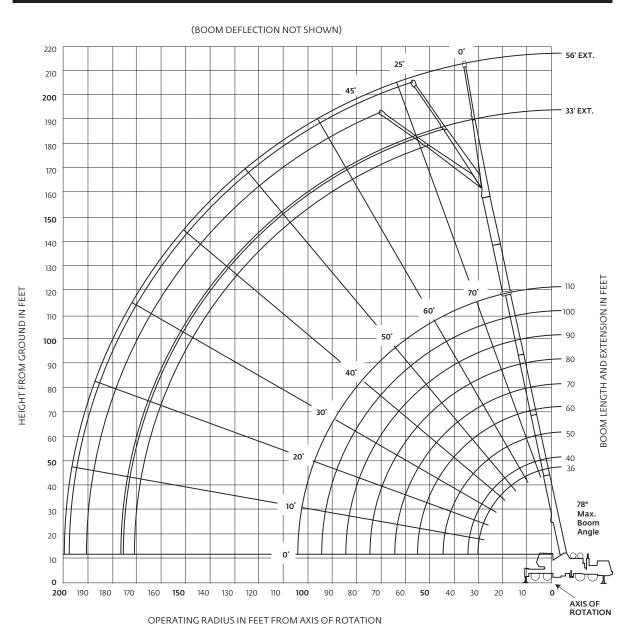
NOTES:

^{*}This capacity is based upon maximum boom angle.

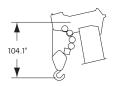
[#]LMI operating code. Refer to LMI manual for instructions.

Working range

36 ft - 110 ft main boom and 33 ft - 56 ft lattice extension with 40 ft insert







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













100%	
20 ft	

	Pounds					
		33 ft length			56 ft leng	th
[]	#0064 0°	#0065 25°	#0066 45°	#0084 0°	#0085 25°	#0086 45°
Feet	Offset	Offset	Offset	Offset	Offset	Offset
35	*9360 (78)					
40	9360 (77.5)			*6300 (78)		
45	8480 (76)	*7480 (78)		6300 (77.5)		
50	7680 (74)	7070 (77.5)		6000 (77)		
55	6990 (72)	6470 (76)	5880 (78)	5990 (75.5)		
60	6390 (70)	5970 (74)	5480 (76.5)	5980 (73.5)	*4840 (78)	
65	5890 (68.5)	5570 (72.5)	5080 (74.5)	5510 (72)	4840 (77.5)	
70	5390 (66.5)	5070 (70.5)	4780 (72.5)	5010 (70.5)	4440 (76.5)	
75	4990 (64.5)	4770 (68.5)	4480 (70.5)	4560 (68.5)	4050 (75)	*3760 (78)
80	4650 (62.5)	4400 (66)	4190 (68)	4170 (67)	3870 (73)	3460 (77)
85	4300 (60)	4150 (64)	3890 (66)	3820 (65)	3570 (71.5)	3260 (75)
90	4000 (58)	3850 (62)	3690 (63.5)	3520 (63.5)	3320 (69.5)	2960 (73)
95	3760 (56)	3650 (59.5)	3500 (61.5)	3220 (61.5)	3070 (67.5)	2770 (71)
100	3510 (53.5)	3410 (57.5)	3300 (59)	2980 (59.5)	2880 (66)	2570 (69)
105	3260 (51)	3210 (55)	3100 (56.5)	2780 (58)	2680 (64)	2460 (67)
110	3070 (48.5)	3020 (52.5)	2930 (54)	2530 (56)	2480 (62)	2340 (65)
115	2870 (46)	2870 (50)	2780 (51)	2340 (54)	2280 (60)	2200 (63)
120	2550 (43.5)	2730 (47)		2190 (52)	2140 (57.5)	2050 (60.5)
125	2170 (40.5)	2500 (44)		2000 (49.5)	1990 (55.5)	1910 (58)
130	1820 (37.5)	2100 (41)		1850 (47.5)	1850 (53)	1810 (55.5)
135	1500 (34.5)	1730 (37.5)		1720 (45)	1750 (51)	1670 (53)
140	1210 (30.5)	1390 (33.5)	•	1480 (42.5)	1610 (48.5)	
145					1520 (45.5)	
150					1370 (43)	
Min. boom		Nolo	oad stabilit	ty data		
angle at 110 f boom length	t 22°	29°	45°	38°	40°	45°
Max. boom length at 0° boom angle		100 ft			80 ft	
NOTE: () Boo	m angles a	re in degrees.			A6-	829-101484

NOTE: () Boom angles are in degrees.

#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.
- 2. 33 ft and 56 ft boom extension lengths may be used for single line lifting service.
- 3. 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.
- 4. 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.
- 5. 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 properly extended and vertical jacks set only.

^{*}This capacity is based upon maximum boom angle.











100)%
20	ft

66 ft	40 ft	16,500 lb	20
		Pounds	

		Pounds						
	:	33 ft Lengi	th	!	56 ft Leng	th		
[]	#0064 0°	#0065 25°	#0066 45°	#0084 0°	#0085 25°	#0086 45°		
Feet	Offset	Offset	Offset	Offset	Offset	Offset		
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		1070 (41.5)						
		No le	oad stabilit	y data				
Min. boom angle at 110 ft boom length	40°	40°	47°	56°	58°	60°		
Max. boon length at 0 boom angl)0	70 ft			40 ft			

NOTE: () Boom angles are in degrees.

#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.
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- 3. 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.
- 4. 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.
- 5. 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 properly extended and vertical jacks set only.

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^{*}This capacity is based upon maximum boom angle.

Load handling

Weight reductions for load ha	ndling devices					
33 ft-56 ft folding boom extension						
*33 ft extension (erected)	4350 lb					
*56 ft extension (erected)	9450 lb					
Folding ext. with 20 ft insert						
*33 ft extension (erected)	9410 lb					
*56 ft extension (erected)	16,010 lb					
Folding ext. with 40 ft insert						
*33 ft extension (erected)	16,280 lb					
*56 ft extension (erected)	24,390 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.

Auxiliary boom nose	137 lb
Hook blocks and headache balls:	
60 Ust, 5 sheave	1125 lb +

50 Ust, 3 sheave 1075 lb + 785 lb + 40 Ust, 3 sheave 8.3 Ust Headache ball (non-swivel) 350 lb + 8.3 Ust Headache ball (swivel) 370 lb +

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							
		Permissible	Nominal				
Hoists	pists Cable/Specs.		Cable length				
	19 mm (3/4 in) 6x37 Class,						
Main	EIPS, IWRC Special Flexible	16,800 lb	500 ft				
	Min. Breaking Strength 58,800 lb.						
	19 mm (.75 in) Class 35x7						
Main & Aux	Rotation resistant (non-rotating)	16,800 lb	500 ft				
	Min breaking strength 85,800 lb						

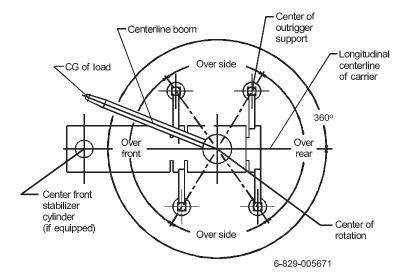
The approximate weight of 3/4 in wire rope is 1.5 lb/ft

Hoist performance							
	Wire Rope	Hoist line pulls Two speed hoist			m rope city (ft)		
	Layer	Low	High				
		Available lb*	Available lb*	Layer	Total		
	1	18,134	9067	101	101		
	2	16,668	8334	110	211		
	3	15,420	7710	120	331		
	4	14,347	7174	129	460		
	5	13,413	6707	139	599		
	6	12,594	6297	149	748		

^{*}Max. lifting capacity: 6x37 or 35x7 class = 16,800 lb

Working area diagram

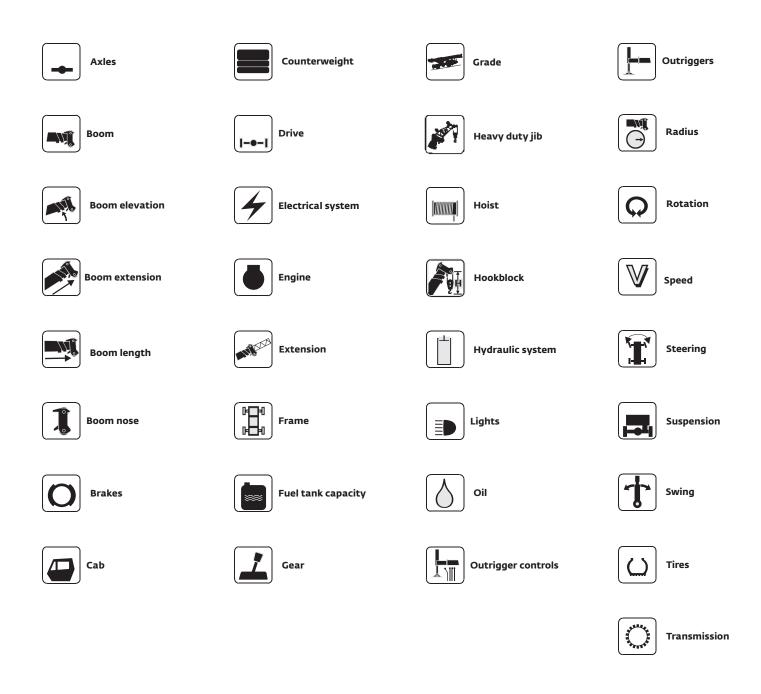
137 lb



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

⁺ Refer to rating plate for actual weight.

Symbols glossary



Notes

Grove TMS700E



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