

# GROVE®

# TMS900E

## product guide

### features

- 90 ton (80 mton) capacity
- 37-142 ft (11.2 - 43.2 m) 5 section full power boom
- Patented TWIN-LOCK boom pinning system
- 33 - 56 ft (10 - 17m) bifold lattice swingaway extension
- Optional 33 - 56 ft (10 - 17 m) hydraulically offsettable bifold swingaway
- Optional lattice insert extensions for a 237 ft (72.2 m) maximum tip height
- Grove MEGAFORM boom
- Hydraulically tiltable cab up to 15°
- Up to 31,500 lbs hydraulically installed/removed counterweight
- Cummins 6 cylinder, turbo-charged after cooled diesel engine
- 65 mph (104 kph) travel speed



Truck Crane

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# features

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A powerful superstructure on a powerful chassis makes this 90 US ton truck crane unbeatable on the road and on the jobsite.



The superstructure features a full power five section MEGAFORM boom that can reach to a maximum tip height of 150 ft. The TWIN-LOCK boom pinning system provides pre-selection of boom extension modes to efficiently pin boom sections automatically.



Front and rear air over walking beam suspension provides a smooth ride at 65 mph. Aluminum wheels, fenders and decking are also standard features.



Up to 31,500 lbs of counterweight can be power installed and removed from the superstructure cab, making transporting a breeze.



A bi-fold swingaway lattice extension easily stows on the side of the base boom for easy transport. The choice of a manual or optional hydraulically offsettable extension is available. To take it even further, up to two additional extension inserts can be added to provide up to 237 ft. of tip height.



Crane functions are controlled by ECOS (Electronic Crane Operating System) with CAN-BUS. The EKS4 load moment indicator provides detailed feedback and control of the cranes operating functions.



Electronically controlled ISM 450 diesel engine delivers plenty of power on and off the jobsite.



Two-stage inverted jack outriggers provide 3 position settings – 0%, 50% and 100%.

# specifications

## Superstructure

### Boom

37 ft. - 142 ft. (11.2 m - 43.2 m) five section, full power boom with patented TWIN-LOCK™ boom pinning system. Maximum tip height: 150 ft. (45.8 m). Trailing Boom float kit

### Boom Nose

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

### Boom Elevation

Single lift cylinder with safety valve provides boom angle from -3° to +82°.

### Offsettable Lattice Extension

33 ft. - 56 ft. (10 m - 17 m) bifold lattice swingaway extension manual offsettable from 0°, 20°, 40°. Maximum tip height: 204 ft (62.3 m)

### \* Hydraulically Offsettable Lattice Extension

33 ft. - 56 ft. (10 m - 17 m) bifold lattice swingaway extension hydraulically offsettable and luffing under load from 5° - 40°. Controlled from the crane cab. Maximum tip height: 204 ft (62.3 m)

### \* Lattice Jib Extensions

Two 16 ft. (5 m) inserts for use with lattice swingaway extension to increase length up to 72 ft. (22 m) or 88 ft. (27 m). Maximum tip height: 237 ft (72.2 m)

### Load Moment & Anti-Two Block System

Load moment and anti-two block system with audio/visual warning and control lever lockout provides electronic display of boom angle, length, radius, tip height, relative load moment, maximum permissible load, load indication and warning of impending two-block condition.

### Cab

All aluminum construction cab with acoustical lining is hydraulically tiltable (- 5° to +15°) and includes tinted safety glass, adjustable operator's seat with hydraulic suspension, sliding windows in side and cab rear, hinged front window with wiper, sunvisor and window shade. Other features include diesel heater/defroster, armrest integrated crane controls, and ergonomically arranged instrumentation.

### Crane Control System

Full electronic control of all crane movements using electrical control levers with automatic reset to zero. Controls are integrated with the LMI and engine management system by CAN-BUS. ECOS system with graphic display.

### Swing

Axial piston fixed displacement motor and planetary gear box. Infinitely variable to 1.7 rpm. Holding brake and service brake.

### Counterweight

12,900 lbs. (5,851 kg) consisting of various sections with hydraulic installation/removal system controlled from the superstructure cab. An optional heavy counterweight package is available consisting of an additional 7,600 lbs and 11,000 lbs for a total of 31,500 lbs of counterweight.

### Hydraulic System

2 separate circuits, 1 axial piston variable displacement pump (load sensing) with electronic power limiting control and 1 gear pump for swing. Combined capacity is 122.2 gpm (462 l/min) Dual thermostatically controlled oil coolers keep oil at optimum operating temperature. Tank capacity: 134 gal. (508 l)

### Hoist

Main and auxiliary hoist are powered by axial piston motor with planetary gear and brake. "Thumthumper" hoist drum rotation indicator alerts operator of hoist movement.

	Main	Auxiliary
Line length:	720 ft. (220 m)	720 ft. (220 m)
Rope diameter:	16 mm	16 mm
Line speed:	410 ft./min. (125 m/min)	410 ft./min. (125 m/min)
Line pull:	11,240 lbs. (50 kN)	11,240 lbs. (50 kN)

\*Denotes optional equipment

# specifications

## Carrier

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### Chassis

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

### Outrigger System

Four hydraulic telescoping, two-stage, double box beam outriggers with inverted jack and integral holding valves. Quick release type outrigger floats 24 in. (610 mm) diameter. Three position setting with fully extended, intermediate (50%) extended and fully retracted capacities. Maximum outrigger pad load: 100,000 lbs. (45 360 kg).

### Outrigger Controls

Located in the superstructure cab and on either side of carrier. Requires two hand operation. Crane level indicator (sight bubble) on right side console.

### Engine

Cummins ISM450 six cylinder, turbocharged and after cooled diesel engine, 661 cu. in. (10.8 L), 450 bhp (336 kW) (gross) @ 1800 RPM. Maximum torque 1,450 ft. lbs. (1966 Nm) @ 1200 RPM. Equipped with engine brake and audio-visual engine distress system, and ether cold start aid.

### Fuel Tank Capacity

100 gallons (376 L).

### Transmission

Roadranger 11 speeds forward, 3 reverse.  
Drive 8 x 4 x 4.

### Steering

Front axle, single circuit, mechanical steering with hydraulic power assist. Turning radius: 45' 3".

### Axles

Front: (2) beam-type steering axles, 84 in. (2.13 m) track.  
Rear: (2) single reduction drive axles, 75.06 in. (1.89 m) track. Inter-axle differential locks.

### Brakes

S-cam, dual air split 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 Goodyear G286, tubeless, mounted on aluminum disc wheels.  
Rear: 315/80R 22.5 Goodyear G286, tubeless, mounted on aluminum disc wheels.

### \*Optional Tires

Front: 445/65R 22.5 Bridgestone M844F, tubeless.  
445/65R 22.5 Michelin XZY (WB), tubeless.  
Rear: 315/80R 22.5 Bridgestone M843, tubeless.  
315/80R 22.5 Michelin XZY-1 tubeless.

### 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 seat with air height adjustment. 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, door lock.

### Electrical System

Two 12 V - maintenance free batteries provides 24 V electrical system. Standard battery disconnect.

### Maximum Speed

65 MPH (104 kph).

### Gradeability (Theoretical)

70%.

### Miscellaneous Standard Equipment

Aluminum fenders with rear storage compartments; dual rear view mirrors; electronic back-up alarm; sling/tool box; tire inflation kit; air cleaner restriction indicator; block and ball stowage; aluminum wheels.

### \*Optional Equipment

- \*Flashing Light Package (Includes amber strobe for superstructure and carrier cabs).
- \*Air conditioning.
- \*Hookblocks
- \*Rear headache ball stowage
- \*Pintle hook (rear).
- \*Cross axle differential locks.
- \*Trailing Boom Package
- \*Aluminum outrigger pads.
- \*Air horn
- \*Heavy Counterweight package
- \*Rear Chassis counterweight stowage bracket

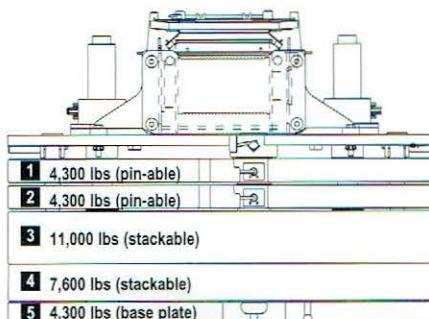
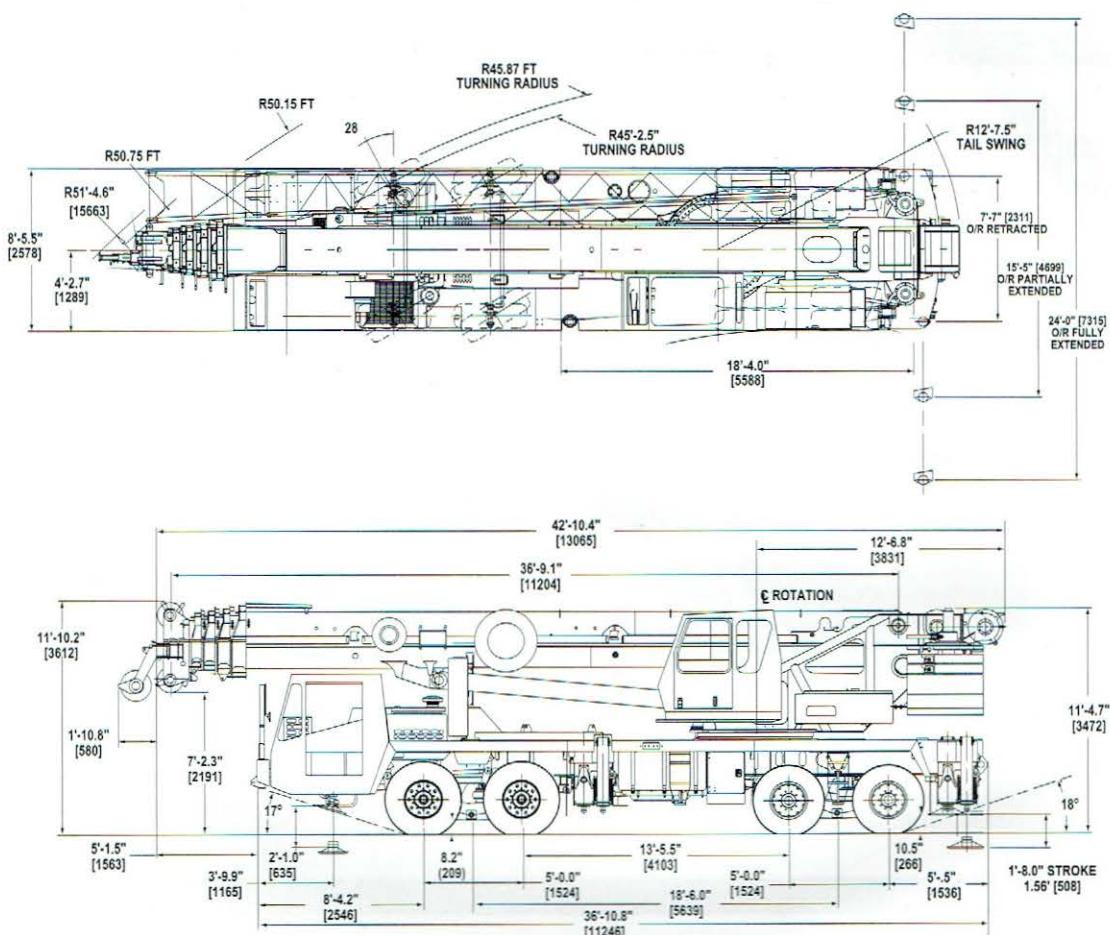
\*Denotes optional equipment

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# dimensions

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1 2 3 4 5

Zero

4,300 lbs	●				
8,600 lbs	●		●		
12,900 lbs	●	●		●	●
20,500 lbs	●	●		●	●
27,200 lbs	●	●	●	●	●
31,500 lbs	●	●	●	●	●

Counterweight Configuration

	31,500	27,200	20,500	12,900	8,600	4,300	0
Main Boom	✗	✗	✗	✗	✗	✗	✗
33 ft. Swingaway	✗	✗	✗	✗	✗	✗	✗
56 ft. Swingaway	✗	✗	✗	✗	✗	✗	✗
72 ft. Swingaway	✗	✗	✗	✗	✗	✗	✗
88 ft. Swingaway	✗	✗	✗	✗	✗	✗	✗

Outrigger span - 100%: ✗ 50%: ■ 0%: ●

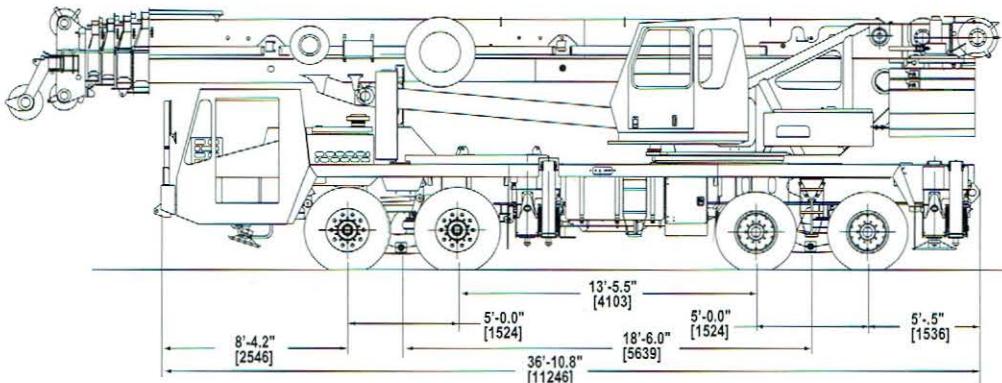
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# travel proposals

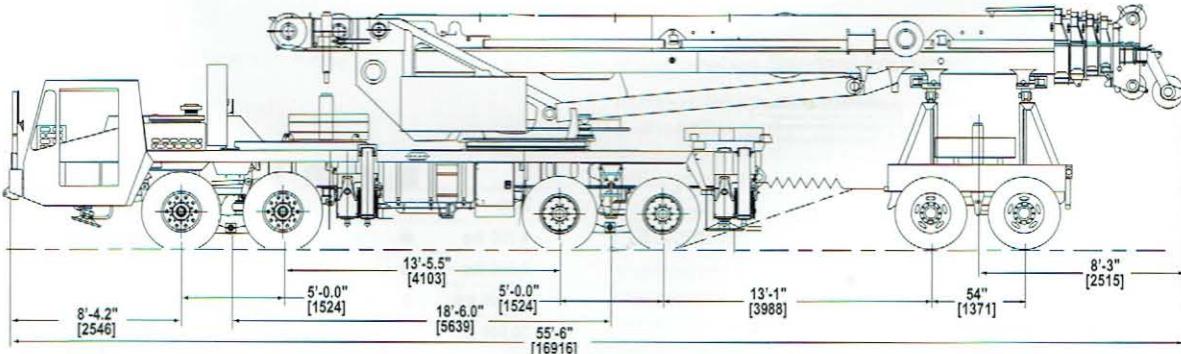
## Boom over front

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Unit equipped with:	Gross (lb.)	Front (lb.)	Rear (lb.)
Basic machine including 142 ft. main boom, main and auxiliary hoists with rope, no removable counterweight and driver.	79,943	39,461	40,482
Add 4,300 lb. slab on superstructure.	4,300	-1,295	5,595
Add 4,300 lb. (baseplate) on carrier front deck.	4,300	3,232	1,068
Add 7,600 lb. slab on carrier front deck.	7,600	5,712	1,888
Add manual offset swingaway.	2,890	2,920	-30
Add hydraulic luffing swingaway.	3,070	3,077	-7
Add 6 ton headache ball (stowed in front trough).	315	464	-149
Add 6 ton headache ball (stowed on rear chassis mount), includes mount weight.	375	-166	541
Add 55 ton hookblock (stowed in front trough).	1,500	2,127	-627

## Trailing boom dolly



Unit equipped with:	Gross (lb.)	Front (lb.)	Rear (lb.)	Dolly (lb.)
Basic machine including 142 ft. main boom, main and auxiliary hoists with rope, hydraulic luffing bifold swingaway, no removable cwt, 6 ton headache ball (front chassis stowage), 55 ton hookblock (front chassis stowage), driver and 6,000 lb. split tower boom dolly.	90,858	37,321	31,232	22,306
Add (2) 4,300 lb. slabs to superstructure or front chassis storage, (1) 4,300 lb. slab on rear chassis storage, 7,600 lb. slab, 6 ton headache ball and 55 ton hookblock on dolly (20,500 lb. cwt).	111,358	39,899	39,738	31,721
Add (2) 4,300 lb. slabs to superstructure or front chassis storage, 7,600 lb. slab on rear chassis storage, (1) 4,300 lb. slab and 11,000 lb. slab on dolly. 6 ton headache ball and 55 ton hookblock on dolly (31,500 lb. cwt).	122,358	42,906	40,032	39,421

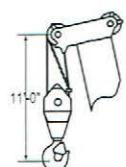
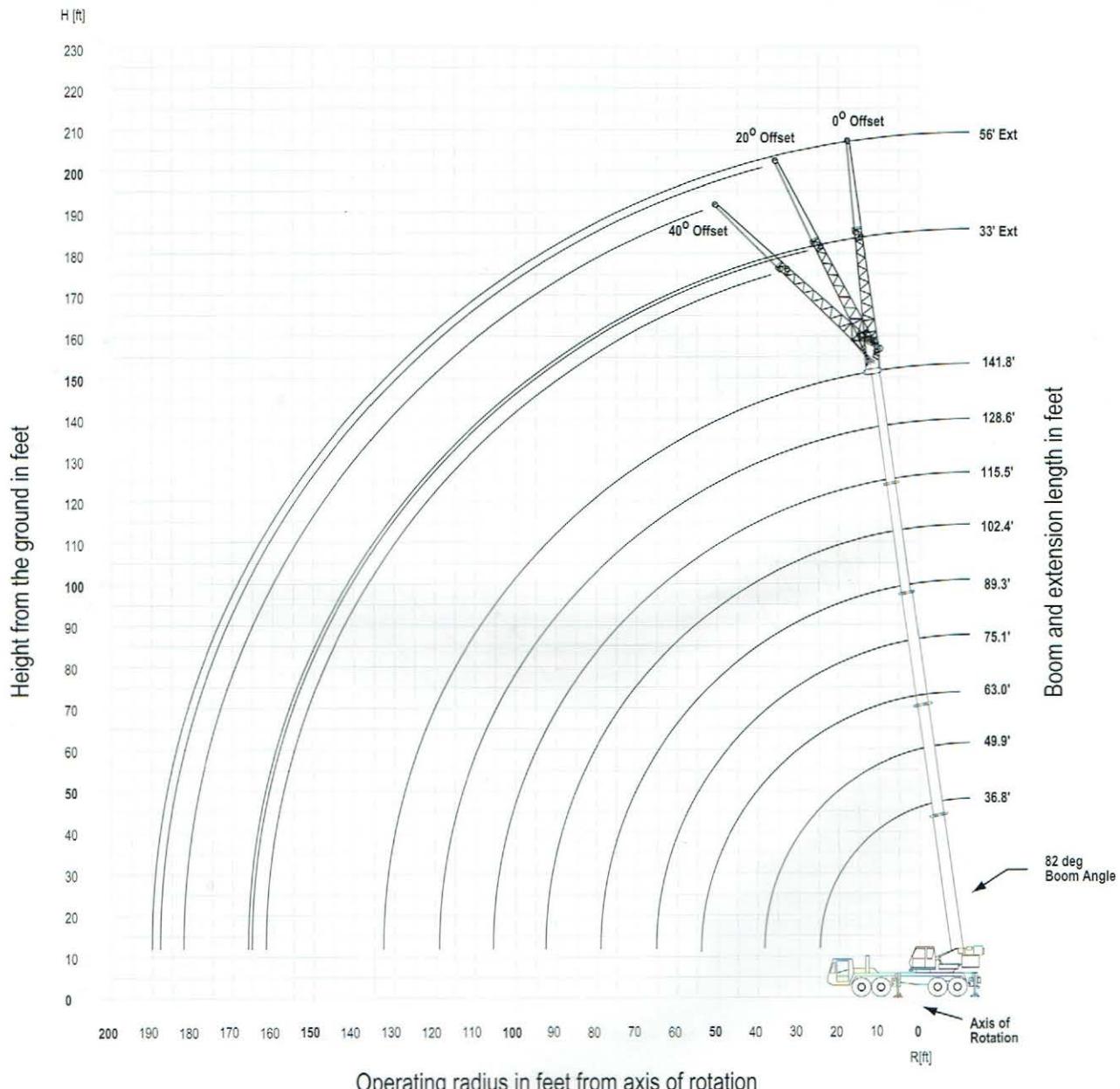
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# working range

**37-142' main boom + 33-56' lattice extension**

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

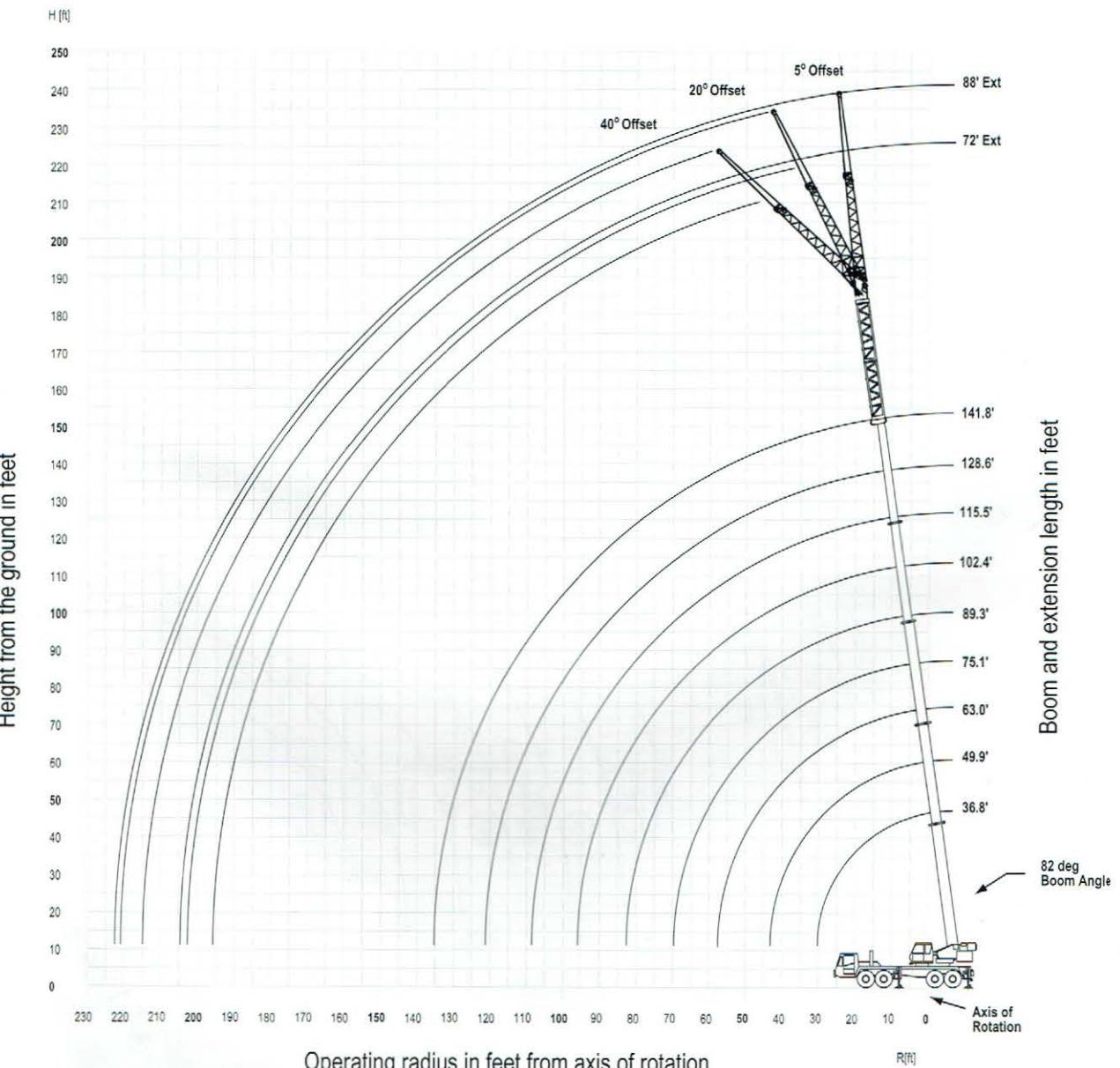
THIS CHART IS ONLY A GUIDE AND SHOULD NOT BE USED TO OPERATE THE CRANE. The individual crane's load chart, operating instructions and other instructional plates must be read and understood prior to operating the crane.

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# working range

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**TMS 900E**

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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.

# load charts

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	37 - 142 ft Fixed lengths	31,500 lbs	100% 24'-0"	360	Pounds	
Feet	36.8	49.9	63.0	76.1	89.3	102.4
8	*180,000				81,000	59,000
10	155,000	138,000	129,000	123,000		
15	116,000	112,000	105,000	99,000	81,000	57,000
20	88,700	90,350	89,000	84,000	81,000	46,000
25	69,950	72,200	72,400	71,150	71,000	51,000
30	56,350	57,000	57,000	58,150	56,950	46,000
35	46,600	47,550	47,400	47,400	46,200	41,600
40	39,750	39,600	38,450	38,450	38,200	32,200
45	33,550	33,500	32,600	33,500	33,600	29,400
50		28,300	28,300	29,400	28,600	26,600
55			24,250	25,350	24,600	24,800
60				22,000	22,150	21,750
65					19,550	19,400
70					17,300	17,600
75						15,400
80						14,100
85						12,700
90						11,500
95						10,100
100						9,140
105						7,950
110						7,180
115						6,480
120						5,340
125						4,760
130						4,230

\* Requires special equipment

	37 - 142 ft Telescoping	31,500 lbs	100% 24'-0"	360	Pounds	
Feet	36.8 - 49.9	49.9 - 63.0	63.0 - 76.1	76.1 - 89.3	89.3 - 102.4	102.4 - 115.5
10	74,000	68,000	63,000	62,000	57,000	54,000
15	72,000	65,000	60,000	57,000	52,000	50,000
20	70,000	63,000	57,000	52,000	48,000	37,400
25	67,000	59,000	55,000	50,000	46,000	37,400
30	55,000	55,000	53,000	48,000	41,600	34,000
35	45,000	46,000	47,400	46,000	37,800	31,000
40	38,850	39,600	38,450	38,450	34,600	28,200
45	33,200	33,500	32,600	32,600	31,800	26,000
50		28,300	28,300	27,750	28,600	24,000
55			24,250	23,750	24,600	22,600
60			21,050	22,150	21,450	20,800
65			18,600	19,550	18,800	19,100
70				17,300	16,650	16,900
75					15,400	15,550
80						13,950
85						12,700
90						11,500
95						9,850
100						8,890
105						7,950
110						7,180
115						6,480
120						5,340
125						4,760
130						4,230



# load charts

89'-142' ft  
 72 ft (16'+56 ft)  
 31,500 lbs  
 100% 24'-0"  
 360

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Feet	16' Insert + 56' Hydraulic Bi-Fold Swingaway Extension 5 Deg Fixed Offset Angle					16' Insert + 55.8' Hydraulic Bi-Fold Swingaway Extension 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
35	11,000									
40	11,000	10,800	9,800							
45	11,000	10,800	9,800	8,000						
50	11,000	10,600	9,800	8,000	6,600					
55	10,600	10,400	9,600	8,000	6,600					
60	10,200	10,200	9,600	8,000	6,600	6,800				
65	9,800	9,800	9,400	8,000	6,600	6,600				
70	9,200	9,400	9,200	8,000	6,600	6,600	6,600			
75	8,800	9,000	9,000	8,000	6,600	6,400	6,400	6,400	6,400	6,200
80	8,400	8,600	8,600	8,000	6,600	6,200	6,400	6,400	6,400	6,200
85	8,000	8,400	8,400	8,000	6,600	6,200	6,200	6,200	6,200	6,200
90	7,800	8,000	8,000	7,800	6,600	6,000	6,200	6,200	6,200	6,200
95	7,400	7,600	7,800	7,600	6,600	6,000	6,000	6,000	6,200	6,000
100	7,200	7,400	7,600	7,400	6,600	5,800	6,000	6,000	6,000	6,000
105	6,800	7,200	7,400	7,200	6,600	5,800	5,800	6,000	6,000	6,000
110	6,600	7,000	7,000	7,000	6,400	5,800	5,800	5,800	5,800	5,800
115	6,400	6,600	6,440	6,440	6,200	5,800	5,800	5,800	5,800	5,800
120	6,200	6,120	5,790	5,800	5,940	5,800	5,800	5,800	5,800	5,800
125	6,000	5,520	5,200	5,400	5,340	5,800	5,800	5,800	5,800	5,800
130	5,760	4,970	4,800	5,200	4,780		5,600	5,430	5,530	5,400
135	5,240	4,600	4,600	4,830	4,270		4,970	5,000	5,200	5,150
140	4,770	4,400	4,200	4,360	3,800			4,800	5,000	4,800
145	4,340	4,200	4,000	3,920	3,360			4,400	4,500	4,080
150	3,930	4,000	3,800	3,520	2,960				4,020	3,600
155	3,800	3,600	3,140	2,580					3,560	3,150
160	3,600	3,200	2,790	2,230						2,730
165	2,940	2,470	1,910							2,330
170	2,640	2,160	1,600							
175	2,400	2,350	1,880	1,320						
180				1,610	1,050					

Feet	32' Insert + 56' Hydraulic Bi-Fold Swingaway Extension 5 Deg Fixed Offset Angle					32' Insert + 56' Hydraulic Bi-Fold Swingaway Extension 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
40	9,600	9,200								
45	9,200	9,000	7,800							
50	9,000	8,600	7,600	6,400	5,000					
55	8,800	8,400	7,800	6,400	5,000					
60	8,200	8,200	7,600	6,400	5,000					
65	7,800	7,800	7,400	6,400	5,000					
70	7,400	7,600	7,200	6,400	5,000	6,200	6,200			
75	7,200	7,200	7,000	6,400	5,000	6,000	6,000	6,000		
80	6,800	7,000	6,800	6,400	5,000	5,800	5,800	5,800	5,600	5,000
85	6,600	6,600	6,600	6,200	5,000	5,600	5,600	5,600	5,600	5,000
90	6,200	6,400	6,400	6,200	5,000	5,400	5,400	5,400	5,400	5,000
95	6,000	6,200	6,200	6,000	5,000	5,200	5,400	5,400	5,200	5,000
100	5,800	6,000	6,000	5,800	5,000	5,200	5,200	5,200	5,200	5,000
105	5,600	5,800	5,800	5,800	5,000	5,000	5,000	5,200	5,000	5,000
110	5,200	5,400	5,600	5,600	5,000	4,800	5,000	5,000	5,000	4,800
115	5,000	5,200	5,400	5,400	5,000	4,800	4,800	4,800	4,800	4,800
120	4,800	5,000	5,200	5,200	4,800	4,600	4,800	4,800	4,800	4,600
125	4,600	4,800	5,000	5,000	4,600	4,600	4,600	4,600	4,600	4,600
130	4,400	4,800	4,720	4,670	4,400	4,400	4,600	4,600	4,600	4,400
135	4,400	4,560	4,200	4,200	4,200	4,400	4,400	4,600	4,600	4,400
140	4,200	4,080	3,800	4,000	3,780	4,200	4,400	4,400	4,400	4,200
145	4,000	3,640	3,600	3,800	3,340		4,160	3,950	4,000	4,000
150	3,800	3,240	3,400	3,490	2,940		3,660	3,600	3,800	3,690
155	3,620	3,000	3,200	3,110	2,560		3,400	3,600	3,240	
160	3,270	3,000	3,000	2,760	2,210		3,200	3,250	2,820	
165	2,800	2,600	2,430	1,880				2,850	2,430	
170	2,600	2,400	2,120	1,570				2,450	2,060	
175	2,400	2,310	1,830	1,280					1,710	
180		2,040	1,560	1,010					1,370	
185		1,780	1,310							
190		1,550	1,070							





# load charts

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	37 - 142 ft Fixed lengths		27,200 lbs		100% 24'-0"		360		Pounds
Feet	36.8	49.9	63.0	76.1	89.3	102.4	115.5	128.6	141.8
10	155,000	138,000	129,000	123,000	81,000	59,000	42,400	34,000	
15	115,000	112,000	105,000	99,000	81,000	57,000	42,400	34,000	26,600
20	87,400	89,050	89,000	84,000	81,000	51,000	42,400	34,000	26,600
25	67,550	69,800	70,000	68,750	70,400	51,000	46,000	39,600	33,800
30		55,000	56,400	56,200	55,000	46,000	39,600	33,800	26,600
35		45,000	45,850	45,750	44,500	41,600	35,800	32,000	26,600
40			38,000	37,900	37,050	38,100	32,200	29,400	26,600
45			31,450	31,400	32,000	31,700	29,400	27,000	24,800
50			26,450	26,500	27,550	26,800	26,400	24,800	22,800
55				23,850	23,750	22,950	23,250	21,900	21,200
60				20,750	20,700	20,800	20,250	20,150	19,550
65				18,200	18,200	18,500	17,750	17,650	17,050
70					16,200	16,400	15,950	15,550	15,000
75					14,450	14,600	14,200	13,800	13,250
80						13,050	12,700	12,300	11,700
85						11,750	11,350	11,000	10,450
90						10,600	10,250	9,860	9,310
95							9,220	8,840	8,290
100							8,280	7,930	7,390
105								7,120	6,580
110								6,370	5,860
115								5,700	5,200
120									4,610
125									4,050
130									3,550

\* Requires special equipment

	89-142 ft		33 ft		27,200 lbs		100% 24'-0"		Pounds
<b>Feet</b>									
<b>33' Hydraulic Bi-Fold Swingaway</b>									
5 Deg Fixed Offset Angle									
89.3	102.4	115.5	128.6	141.8		89.3	102.4	115.5	128.6
20	22,000					89.3	102.4	115.5	128.6
25	22,000	22,000				89.3	102.4	115.5	128.6
30	22,000	22,000	22,000	17,800		89.3	102.4	115.5	128.6
35	22,000	22,000	21,800	17,800	13,800	89.3	102.4	115.5	128.6
40	22,000	22,000	21,400	17,800	13,800	89.3	102.4	115.5	128.6
45	21,600	22,000	21,000	17,800	13,800	89.3	102.4	115.5	128.6
50	19,800	21,000	20,400	17,800	13,800	89.3	102.4	115.5	128.6
55	18,400	19,400	19,800	17,200	13,800	89.3	102.4	115.5	128.6
60	17,400	18,200	18,600	16,800	13,800	89.3	102.4	115.5	128.6
65	16,400	17,100	16,850	15,800	13,800	89.3	102.4	115.5	128.6
70	15,600	14,950	14,700	14,900	13,800	89.3	102.4	115.5	128.6
75	14,050	13,150	12,900	13,100	13,000	89.3	102.4	115.5	128.6
80	12,500	11,600	11,400	12,000	11,900	89.3	102.4	115.5	128.6
85	11,200	10,800	10,600	11,200	10,650	89.3	102.4	115.5	128.6
90	10,200	10,000	9,800	10,050	9,490	89.3	102.4	115.5	128.6
95	9,600	9,200	9,000	9,030	8,440	89.3	102.4	115.5	128.6
100	9,000	8,600	8,200	8,090	7,500	89.3	102.4	115.5	128.6
105	8,270	8,200	7,730	7,250	6,670	89.3	102.4	115.5	128.6
110	7,520	7,480	6,970	6,500	5,920	89.3	102.4	115.5	128.6
115		6,800	6,290	5,830	5,250	89.3	102.4	115.5	128.6
120		6,190	5,680	5,210	4,640	89.3	102.4	115.5	128.6
125			5,120	4,650	4,080	89.3	102.4	115.5	128.6
130			4,610	4,140	3,570	89.3	102.4	115.5	128.6
135				4,140	3,680	89.3	102.4	115.5	128.6
140					3,250	89.3	102.4	115.5	128.6
145					2,850	89.3	102.4	115.5	128.6
150					2,490	89.3	102.4	115.5	128.6
155						1,570	89.3	102.4	115.5
160						1,260	89.3	102.4	115.5

TMS 900E

GROVE

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.

# load charts

 89-142 ft  
  56 ft  
  27,200 lbs  
  100%  
24'-0"  
  360

15

Feet	56' Hydraulic Bifold Swingaway 5 Deg Fixed Offset Angle					56' Hydraulic Bifold Swingaway 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
30	11,000	11,000	11,000	9,800						
35	11,000	11,000	11,000	9,800						
40	11,000	11,000	11,000	9,800	8,200					
45	11,000	11,000	11,000	9,800	8,200					
50	11,000	11,000	11,000	9,800	8,200					
55	10,600	11,000	11,000	9,800	8,200	7,000	7,000			
60	10,200	10,600	10,800	9,800	8,200	6,800	6,800	7,000		
65	9,600	10,000	10,200	9,800	8,200	6,600	6,800	6,800		
70	9,200	9,600	9,800	9,600	8,200	6,400	6,600	6,600	6,600	
75	8,800	9,200	9,400	9,600	8,200	6,400	6,400	6,400	6,400	
80	8,400	8,800	9,000	9,200	8,200	6,200	6,200	6,400	6,400	6,400
85	8,000	8,400	8,800	8,800	8,200	6,000	6,200	6,200	6,200	
90	7,600	8,200	8,400	8,600	8,200	6,000	6,000	6,200	6,200	
95	7,400	7,800	8,200	8,200	8,200	6,000	6,000	6,000	6,000	
100	7,200	7,400	7,800	8,000	8,000	5,800	6,000	6,000	6,000	
105	6,800	7,200	7,200	7,600	7,380	5,800	5,800	6,000	6,000	
110	6,600	6,800	6,800	7,180	6,610	5,800	5,800	5,800	5,800	
115	6,400	6,400	6,400	6,490	5,920		5,800	5,800	5,800	
120	6,120	6,200	6,200	5,860	5,290		5,800	5,800	5,800	
125	5,800	6,000	5,760	5,290	4,720		5,800	5,800	5,660	
130	5,600	5,600	5,240	4,760	4,200		5,750	5,450	5,040	
135	5,280	4,750	4,280	3,720				4,870	4,470	
140	4,810	4,310	3,840	3,280				4,330	3,940	
145		3,900	3,430	2,870					3,450	
150		3,520	3,050	2,490					2,980	
155		3,170	2,700	2,140						
160			2,370	1,810						
165			2,070	1,510						
170			1,780	1,220						
175				1,140						

 89-142 ft  
  72 ft  
(16+56 ft)  
  27,200 lbs  
  100%  
24'-0"  
  360

Feet	16' Insert + 56' Hydraulic Bi-Fold Swingaway Extension 5 Deg Fixed Offset Angle					16' Insert + 56' Hydraulic Bi-Fold Swingaway Extension 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
35	11,000									
40	11,000	10,800	9,800							
45	11,000	10,800	9,800	8,000						
50	11,000	10,600	9,800	8,000	6,600					
55	10,600	10,400	9,600	8,000	6,600					
60	10,200	10,200	9,600	8,000	6,600	6,800				
65	9,600	9,800	9,400	8,000	6,600	6,600				
70	9,200	9,400	9,200	8,000	6,600	6,600	6,600	6,600		
75	8,800	9,000	9,000	8,000	6,600	6,400	6,400	6,400	6,400	6,200
80	8,400	8,600	8,600	8,000	6,600	6,200	6,400	6,400	6,400	6,200
85	8,000	8,400	8,400	8,000	6,600	6,200	6,200	6,200	6,200	
90	7,800	8,000	8,000	7,800	6,600	6,000	6,200	6,200	6,200	
95	7,400	7,600	7,800	7,800	6,600	6,000	6,000	6,000	6,000	
100	7,200	7,400	7,600	7,400	6,600	5,800	6,000	6,000	6,000	
105	6,800	7,200	7,160	7,160	6,600	5,800	5,800	6,000	6,000	
110	6,600	6,730	6,390	6,380	6,400	5,800	5,800	5,800	5,800	
115	6,400	6,030	5,800	6,000	5,840	5,800	5,800	5,800	5,800	
120	6,190	5,400	5,400	5,780	5,210	5,800	5,800	5,800	5,800	
125	5,610	5,000	5,200	5,200	4,630	5,800	5,570	5,590	5,490	5,600
130	5,080	4,800	4,800	4,570	4,110		4,930	5,200	5,200	5,080
135	4,600	4,600	4,600	4,190	3,620		4,800	5,000	4,920	4,500
140	4,150	4,400	4,200	3,740	3,180			4,730	4,390	3,970
145	4,000	4,200	3,800	3,330	2,770			4,230	3,900	3,480
150	3,800	3,930	3,420	2,940	2,380				3,440	3,020
155	3,570	3,060	2,590	2,030					3,010	2,600
160	3,240	2,730	2,260	1,700						2,190
165		2,420	1,950	1,390						1,810
170		2,130	1,660	1,100						
175		1,870	1,390							
180			1,140							



# load charts



**17**

Feet	56' Manual Offset Bi-Fold Swingaway Extension 0 Deg Fixed Offset Angle					56' Manual Offset Bi-Fold Swingaway Extension 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
25	11,000									
30	11,000	11,000	11,000	9,800						
35	11,000	11,000	11,000	9,800	7,800					
40	11,000	11,000	11,000	9,800	7,800					
45	11,000	11,000	11,000	9,800	7,800					
50	11,000	11,000	11,000	9,800	7,800					
55	10,800	11,000	11,000	9,800	7,800	7,000	7,000			
60	10,200	10,600	10,800	9,800	7,800	6,800	6,800	7,000		
65	9,600	10,000	10,200	9,800	7,800	6,600	6,800	6,800		
70	9,200	9,600	9,800	9,600	7,800	6,400	6,600	6,600	6,600	
75	8,800	9,200	9,400	9,600	7,800	6,400	6,400	6,400	6,400	6,400
80	8,400	8,800	9,000	9,200	7,800	6,200	6,200	6,400	6,400	6,400
85	8,000	8,400	8,800	8,800	7,800	6,000	6,200	6,200	6,200	6,200
90	7,600	8,200	8,400	8,600	7,800	6,000	6,000	6,200	6,200	6,200
95	7,400	7,800	8,200	8,200	7,800	6,000	6,000	6,000	6,000	6,000
100	7,200	7,400	7,600	7,800	7,800	5,800	6,000	6,000	6,000	6,000
105	6,800	7,180	7,200	7,600	7,130	5,800	5,800	6,000	6,000	6,000
110	6,600	6,800	6,800	6,980	6,380	5,800	5,800	5,800	5,800	5,800
115	6,400	6,400	6,400	6,300	5,710		5,800	5,800	5,800	5,800
120	6,010	6,200	6,190	5,690	5,100		5,800	5,800	5,800	5,800
125	5,800	6,000	5,630	5,130	4,540		5,800	5,800	5,660	
130	5,600	5,600	5,120	4,620	1,030			5,750	5,450	5,040
135	5,190		4,650	4,150	3,560				4,870	4,470
140		4,760	4,220	3,720	3,130				4,330	3,940
145			3,820	3,320	2,740					3,450
150				3,450	2,960	2,370				2,980
155				3,120	2,620	2,030				
160					2,300	1,720				
165					2,010	1,420				
170					1,750	1,150				
175										
180										

Feet	16' Insert + 56' Manual Offset Bi-fold Swingaway 0 Deg Fixed Offset Angle					16' Insert + 56' Manual Offset Bi-fold Swingaway 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
30	11,000									
35	11,000	11,000								
40	11,000	10,800	9,400	8,000						
45	11,000	10,800	9,400	8,000	6,400					
50	11,000	10,600	9,400	8,000	6,400					
55	10,600	10,400	9,400	8,000	6,400					
60	10,200	10,200	9,400	8,000	6,400	6,800				
65	9,600	9,800	9,400	8,000	6,400	6,600				
70	9,200	9,400	9,200	8,000	6,400	6,600	6,600	6,600		
75	8,800	9,000	9,000	8,000	6,400	6,400	6,400	6,400	6,400	6,200
80	8,400	8,600	8,600	8,000	6,400	6,200	6,400	6,400	6,400	6,200
85	8,000	8,400	8,400	8,000	6,400	6,200	6,200	6,200	6,200	6,200
90	7,800	8,000	8,000	7,800	6,400	6,000	6,200	6,200	6,200	6,200
95	7,400	7,600	7,800	7,600	6,400	6,000	6,000	6,000	6,200	6,000
100	7,200	7,400	7,600	7,400	6,400	5,800	6,000	6,000	6,000	6,000
105	6,800	7,200	6,900	6,890	6,400	5,800	5,800	6,000	6,000	6,000
110	6,600	6,520	6,150	6,200	6,290	5,800	5,800	5,800	5,800	5,800
115	6,400	5,840	5,800	6,000	5,610	5,800	5,800	5,800	5,800	5,800
120	6,050	5,220	5,400	5,590	5,000	5,800	5,800	5,800	5,800	5,800
125	5,490	5,000	5,200	5,020	4,430	5,800	5,570	5,390	5,490	5,600
130	4,980	4,800	4,800	4,510	3,920	4,930	5,200	5,200	5,080	
135	4,510	4,600	4,540	4,030	3,450	4,800	5,000	4,920	4,500	
140	4,080	4,400	4,100	3,600	3,020		4,730	4,390	3,970	
145	4,000	4,200	3,700	3,200	2,620		4,230	3,900	3,480	
150	3,800	3,860	3,330	2,830	2,240			3,440	3,020	
155		3,520	2,980	2,480	1,900				3,010	2,600
160		3,210	2,660	2,160	1,580					2,190
165			2,360	1,860	1,280					1,810
170			2,090	1,590	1,000					
175			1,840	1,330						
180			1,090							

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.

GROVE

TMS900E

# load charts

18

 89-142 ft  
 88 ft  
 27,200 lbs  
 100%  
 24'-0"  
 360

Pounds

Feet	32' Insert + 56' Manual Offset Bi-Fold Swingaway Extension 0 Deg Fixed Offset Angle					32' Insert + 56' Manual Offset Bi-Fold Swingaway Extension 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
35	10,000									
40	9,600	9,000	7,800							
45	9,200	9,000	7,800	6,400						
50	9,000	8,600	7,800	6,400	4,800					
55	8,600	8,400	7,800	6,400	4,800					
60	8,200	8,200	7,600	6,400	4,800					
65	7,800	7,800	7,400	6,400	4,800					
70	7,400	7,600	7,200	6,400	4,800	6,200	6,200			
75	7,200	7,200	7,000	6,400	4,800	6,000	6,000	6,000		
80	6,800	7,000	6,800	6,400	4,800	5,800	5,800	5,600	5,000	
85	6,600	6,600	6,600	6,200	4,800	5,600	5,600	5,600	5,000	
90	6,200	6,400	6,400	6,200	4,800	5,400	5,400	5,400	5,000	
95	6,000	6,200	6,200	6,000	4,800	5,200	5,400	5,400	5,200	5,000
100	5,800	6,000	6,000	5,800	4,800	5,200	5,200	5,200	5,000	
105	5,600	5,800	5,800	5,800	4,800	5,000	5,000	5,200	5,000	5,000
110	5,200	5,400	5,600	5,600	4,800	5,000	5,000	5,000	4,800	
115	5,000	5,200	5,400	5,400	4,800	4,800	4,800	4,800	4,800	
120	4,800	5,000	4,940	4,880	4,800	4,600	4,800	4,800	4,600	
125	4,600	4,760	4,400	4,600	4,420	4,600	4,600	4,600	4,800	4,600
130	4,400	4,240	4,200	4,400	3,900	4,400	4,600	4,600	4,800	4,400
135	4,400	3,800	4,000	4,000	3,430	4,400	4,400	4,380	4,430	4,400
140	4,120	3,600	3,800	3,560	2,990	4,200	4,070	4,000	4,000	4,060
145	3,720	3,400	3,600	3,180	2,580		3,600	3,800	3,990	3,570
150	3,350	3,200	3,280	2,780	2,210		3,400	3,600	3,540	3,110
155	3,000	3,000	2,930	2,430	1,860			3,400	3,110	2,680
160	2,690	3,000	2,600	2,110	1,540			3,050	2,710	2,280
165		2,800	2,300	1,810	1,240				2,330	1,910
170		2,550	2,020	1,530					1,980	1,550
175		2,290	1,780	1,260						1,220
180			1,510	1,010						
185			1,280							
190			1,070							

TMS900E

GROVE

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# load charts

19



37 - 142 ft  
Fixed lengths



20,500 lbs



100%  
24'-0"



360



Pounds

Feet	36.8	49.9	63.0	76.1	89.3	102.4	115.5	128.6	141.8
10	155,000	136,000	129,000	123,000	81,000				
15	112,500	112,000	105,000	99,000	81,000	59,000			
20	85,400	87,050	87,250	84,000	81,000	57,000	42,400	34,000	
25	62,750	64,980	65,150	66,850	65,600	51,000	42,400	34,000	26,600
30		50,550	52,500	52,350	51,100	46,000	39,600	33,800	26,600
35		40,450	42,650	42,500	41,300	41,600	35,800	32,000	26,600
40			34,200	34,100	35,000	34,400	32,200	29,400	26,600
45			28,200	28,600	29,250	28,450	28,600	27,000	24,800
50			23,800	24,900	24,750	24,200	24,250	23,200	22,800
55				21,350	21,250	21,550	20,800	20,700	20,100
60				18,500	18,600	18,750	18,300	17,850	17,250
65				16,150	16,250	16,350	15,900	15,450	14,900
70				14,250	14,400	13,950	13,500	12,950	
75				12,600	12,700	12,300	11,850	11,300	
80					11,300	10,950	10,550	9,990	
85					10,100	9,730	9,330	8,780	
90					9,040	8,670	8,280	7,730	
95						7,720	7,350	6,800	
100						6,880	6,530	5,980	
105							5,790	5,250	
110							5,110	4,590	
115								4,500	4,000
120									3,460
125									2,960
130									2,510



Pounds

Feet	33' Hydraulic Bi-Fold Swingaway					33' Hydraulic Bi-Fold Swingaway					
	5 Deg Fixed Offset Angle					40 Deg Fixed Offset Angle					
	89.3	102.4	115.5	128.6	141.8		89.3	102.4	115.5	128.6	141.8
20	22,000										
25	22,000	22,000									
30	22,000	22,000	22,000								
35	22,000	22,000	21,800	17,800	13,800		14,000	14,200			
40	22,000	22,000	21,400	17,800	13,800		13,600	13,800	13,800		
45	21,600	22,000	21,000	17,800	13,800		13,200	13,400	13,600	13,600	11,400
50	19,800	21,000	20,400	17,800	13,800		13,200	13,400	13,600	13,600	11,400
55	18,400	19,400	19,800	17,200	13,800		12,800	13,000	13,200	13,200	11,400
60	17,400	17,350	17,100	16,600	13,800		12,400	12,600	12,800	13,000	11,400
65	15,900	15,000	14,700	14,900	13,800		12,000	12,200	12,400	12,800	11,400
70	13,850	13,200	13,200	13,600	13,250		11,600	11,800	12,000	12,600	11,400
75	12,400	12,400	12,400	12,200	11,550		11,400	11,600	11,600	12,200	11,400
80	11,800	11,600	11,250	10,850	10,250		11,200	10,800	10,800	11,000	11,250
85	10,600	10,600	10,050	9,590	9,000		10,200	10,200	10,200	10,450	9,980
90	9,530	9,500	8,990	8,500	7,910		9,800	9,800	9,630	9,260	8,790
95	8,560	8,530	8,020	7,540	6,950		8,930	8,570	8,200	7,730	
100	7,700	7,670	7,160	6,680	6,100		7,980	7,620	7,260	6,790	
105	6,940	6,900	6,400	5,920	5,340			6,780	6,420	5,960	
110	6,280	6,210	5,710	5,240	4,660			6,010	5,670	5,200	
115	5,600	5,090	4,620	4,050					4,980	4,520	
120	5,040	4,530	4,070	3,490					4,350	3,900	
125		4,020	3,560	2,990						3,330	
130		3,560	3,100	2,520						2,800	
135		3,140	2,670	2,100							
140			2,280	1,710							
145			1,920	1,350							
150			1,600	1,020							
155											
160											

# load charts

**20**



89-142 ft



56 ft



20,500 lbs



100%  
24'-0"



360

Pounds

Feet

56' Hydraulic Bi-Fold Swingaway

5 Deg Fixed Offset Angle

89.3

102.4 115.5 128.6 141.8

56' Hydraulic Bi-Fold Swingaway

40 Deg Fixed Offset Angle

89.3

102.4 115.5 128.6 141.8

30	11,000	11,000	11,000	
35	11,000	11,000	11,000	9,800
40	11,000	11,000	11,000	9,800
45	11,000	11,000	11,000	8,200
50	11,000	11,000	11,000	9,800
55	10,600	11,000	11,000	9,800
60	10,200	10,600	10,800	9,800
65	9,600	10,000	10,200	9,800
70	9,200	9,600	9,800	9,600
75	8,800	9,200	9,400	9,600
80	8,400	8,800	9,000	9,200
85	8,000	8,400	8,800	8,200
90	7,600	8,200	8,390	8,450
95	7,400	7,720	7,800	8,200
100	7,200	7,400	7,600	7,400
105	6,800	7,000	7,110	6,620
110	6,600	6,800	6,400	5,920
115	6,200	6,280	5,770	5,290
120	5,830	5,700	5,190	4,710
125	5,300	5,170	4,670	4,190
130	4,820	4,690	4,190	3,710
135	4,250	3,750	3,280	2,710
140	3,850	3,340	2,870	2,310
145			2,970	2,500
150			2,620	2,150
155			2,300	1,830
160				1,540
165				1,260
170				1,000

100% 24'-0" 360



89-142 ft



72 ft  
(16'+56')



20,500 lbs



100%  
24'-0"



360

Pounds

Feet

16' Insert + 56' Hydraulic Bi-Fold Swingaway Extension

5 Deg Fixed Offset Angle

89.3

102.4 115.5 128.6 141.8

16' Insert + 56' Hydraulic Bi-Fold Swingaway Extension

40 Deg Fixed Offset Angle

89.3 102.4 115.5 128.6 141.8

35	11,000			
40	11,000	10,800	9,800	
45	11,000	10,800	9,800	8,000
50	11,000	10,600	9,800	8,000
55	10,600	10,400	9,600	8,000
60	10,200	10,200	9,600	8,000
65	9,600	9,800	9,400	8,000
70	9,200	9,400	9,200	8,000
75	8,800	9,000	9,000	8,000
80	8,400	8,600	8,600	8,000
85	8,000	8,400	8,400	8,000
90	7,800	8,000	8,000	7,800
95	7,400	7,600	7,490	7,490
100	7,200	6,960	6,610	6,800
105	6,800	6,170	6,200	5,400
110	6,270	5,800	6,000	5,850
115	5,630	5,400	5,700	5,210
120	5,050	5,200	5,120	4,630
125	4,800	5,000	4,590	4,100
130	4,400	4,610	4,110	3,620
135	4,200	4,170	3,660	3,180
140	3,940	3,760	3,250	2,770
145	3,560	3,380	2,870	2,390
150	3,210	3,030	2,520	2,050
155		2,710	2,200	1,720
160		2,410	1,890	1,420
165			1,610	1,140
170			1,350	
175			1,110	

100% 24'-0" 360

TMS 900E

GROVE

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# load charts

22



Pounds

Feet	56' Manual Bi-Fold Swingaway 0 Deg Fixed Offset Angle					56' Manual Bi-Fold Swingaway 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
25	11,000									
30	11,000	11,000	11,000	9,800						
35	11,000	11,000	11,000	9,800	7,800					
40	11,000	11,000	11,000	9,800	7,800					
45	11,000	11,000	11,000	9,800	7,800					
50	11,000	11,000	11,000	9,800	7,800					
55	10,800	11,000	11,000	9,800	7,800	7,000	7,000			
60	10,200	10,600	10,800	9,800	7,800	6,800	6,800	7,000		
65	9,600	10,000	10,200	9,800	7,800	6,600	6,600	6,800		
70	9,200	9,600	9,800	9,600	7,800	6,400	6,600	6,600	6,600	
75	8,800	9,200	9,400	9,600	7,800	6,400	6,400	6,400	6,400	
80	8,400	8,800	9,000	9,200	7,800	6,200	6,200	6,400	6,400	
85	8,000	8,400	8,800	8,800	7,800	6,000	6,200	6,200	6,200	
90	7,600	8,200	8,200	8,400	7,800	6,000	6,000	6,200	6,200	
95	7,400	7,600	7,800	8,010	7,400	6,000	6,000	6,000	6,000	
100	7,200	7,400	7,600	7,160	6,550	5,800	6,000	6,000	6,000	
105	6,800	7,000	6,910	6,400	5,800	5,800	5,800	6,000	6,000	
110	6,600	6,760	6,230	5,720	5,120	5,800	5,800	5,800	5,800	
115	6,200	6,140	5,610	5,100	4,500	5,800	5,800	5,800	5,800	
120	5,740	5,580	5,050	4,540	3,950		5,800	5,800	5,590	5,190
125	5,230	5,070	4,530	4,030	3,440			5,280	4,970	4,570
130	4,770	4,600	4,070	3,570	2,980		4,700	4,400	3,990	
135		4,180	3,640	3,150	2,560			3,860	3,460	
140		3,790	3,250	2,750	2,170			3,370	2,970	
145			2,890	2,390	1,810				2,510	
150			2,560	2,060	1,470				2,080	
155			2,280	1,750	1,170					
160				1,470						
165				1,200						
170										



Pounds

Feet	16' Insert + 56' Manual Bi-Fold Swingaway Extension 0 Deg Fixed Offset Angle					16' Insert + 56' Manual Bi-Fold Swingaway Extension 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
30	11,000									
35	11,000	11,000								
40	11,000	10,800	9,400	8,000						
45	11,000	10,800	9,400	8,000	6,400					
50	11,000	10,600	9,400	8,000	6,400					
55	10,800	10,400	9,400	8,000	6,400					
60	10,200	10,200	9,400	8,000	6,400	6,800				
65	9,600	9,800	9,400	8,000	6,400	6,600				
70	9,200	9,400	9,200	8,000	6,400	6,600	6,600	6,600		
75	8,800	9,000	9,000	8,000	6,400	6,400	6,400	6,400	6,200	
80	8,400	8,600	8,600	8,000	6,400	6,200	6,400	6,400	6,200	
85	8,000	8,400	8,400	8,000	6,400	6,200	6,200	6,200	6,200	
90	7,800	8,000	8,000	7,800	6,400	6,000	6,200	6,200	6,200	
95	7,400	7,560	7,190	7,180	6,400	6,000	6,000	6,200	6,000	
100	7,200	6,700	6,600	6,800	6,400	5,800	6,000	6,000	6,000	
105	6,780	6,000	6,200	6,320	5,720	5,800	5,800	6,000	6,000	
110	6,090	5,600	6,000	5,630	5,030	5,800	5,800	5,800	5,800	
115	5,470	5,400	5,520	5,000	4,410	5,800	5,800	5,630	5,800	
120	5,000	5,200	4,950	4,440	3,850	5,680	5,200	5,400	5,600	5,220
125	4,800	4,970	4,440	3,930	3,340	5,030	5,000	5,200	5,020	4,600
130	4,400	4,500	3,960	3,460	2,870		4,800	4,780	4,450	4,030
135	4,200	4,060	3,530	3,030	2,440		4,600	4,260	3,920	3,500
140	3,870	3,670	3,130	2,630	2,050			3,760	3,430	3,010
145	3,510	3,300	2,770	2,270	1,680			3,300	2,970	2,550
150	3,190	2,960	2,430	1,930	1,350				2,540	2,130
155	2,650	2,120	1,620	1,040					2,140	1,730
160	2,370	1,820	1,320							1,350
165		1,560	1,050							1,000
170		1,310								
175		1,080								
180										

TMS900E

GROVE

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# load charts

 89'-142' ft  
 88 ft  
 20,500 lbs  
 100%  
 24'-0" 360

Pounds

Feet	32' insert + 56' Manual Bifold Swingaway					32' insert + 56' Manual Bifold Swingaway					
	0 Deg Fixed Offset Angle					40 Deg Fixed Offset Angle					
	89.3	102.4	115.5	128.6	141.8		89.3	102.4	115.5	128.6	141.8
35	10,000										
40	9,600	9,000	7,800								
45	9,200	9,000	7,800	6,400							
50	9,000	8,800	7,800	6,400	4,800						
55	8,600	8,400	7,800	6,400	4,800						
60	8,200	8,200	7,600	6,400	4,800						
65	7,800	7,800	7,400	6,400	4,800						
70	7,400	7,600	7,200	6,400	4,800	6,200	6,200				
75	7,200	7,200	7,000	6,400	4,800	6,000	6,000	6,000			
80	6,800	7,000	6,800	6,400	4,800	5,800	5,800	5,800	5,600	5,000	
85	6,600	6,600	6,600	6,200	4,800	5,600	5,600	5,600	5,600	5,000	
90	6,200	6,400	6,400	6,200	4,800	5,400	5,400	5,400	5,400	5,000	
95	6,000	6,200	6,200	6,000	4,800	5,200	5,400	5,400	5,200	5,000	
100	5,800	6,000	6,000	5,800	4,800	5,200	5,200	5,200	5,200	5,000	
105	5,600	5,800	5,570	5,560	4,800	5,000	5,000	5,200	5,000	5,000	
110	5,200	5,250	5,000	5,200	4,800	4,800	5,000	5,000	5,000	4,800	
115	5,000	4,640	4,800	5,000	4,410	4,800	4,800	4,800	4,800	4,800	
120	4,800	4,400	4,600	4,440	3,850	4,800	4,800	4,800	4,800	4,600	
125	4,390	4,200	4,400	3,930	3,340	4,600	4,600	4,400	4,600	4,600	
130	3,930	4,000	3,980	3,460	2,870	4,400	4,150	4,200	4,400	4,110	
135	3,500	3,800	3,530	3,030	2,440	4,180	3,800	4,000	4,010	3,580	
140	3,400	3,600	3,130	2,630	2,050	3,670	3,800	3,880	3,520	3,090	
145	3,200	3,300	2,770	2,270	1,680		3,600	3,420	3,060	2,840	
150	3,000	2,960	2,430	1,930	1,350		3,350	2,990	2,640	2,210	
155		2,650	2,120	1,620	1,040			2,590	2,250	1,820	
160		2,370	1,820	1,320				2,220	1,870	1,450	
165		2,120	1,560	1,050					1,520	1,100	
170			1,310							1,190	
175			1,080								
180											

23

TMS 900E

# load charts

24



37 - 142 ft

Fixed lengths

12,900 lbs

100%

24'-0"

360

Feet	36.8	49.9	63.0	76.1	89.3	102.4	115.5	128.6	141.8
10	155,000	136,000	129,000	123,000	81,000				
15	109,500	111,000	105,000	99,000	81,000	59,000			
20	79,450	81,850	82,100	80,800	81,000	57,000	42,400	34,000	
25	57,750	61,000	62,050	61,900	60,600	51,000	42,400	34,000	26,600
30		47,500	48,500	48,300	47,100	46,000	39,600	33,800	26,600
35		36,300	37,450	37,350	36,600	37,700	35,700	32,000	26,600
40			29,950	31,200	31,000	30,200	30,500	28,900	26,600
45				24,700	25,750	25,600	25,900	25,100	24,950
50					20,500	21,550	21,700	21,250	20,750
55						18,250	18,300	18,450	17,950
60						15,650	15,700	15,800	15,350
65						13,500	13,600	13,700	13,250
70						11,850	11,950	11,500	11,150
75						10,400	10,550	10,100	9,730
80							9,310	8,890	8,480
85							8,200	7,810	7,410
90							7,240	6,870	6,480
95								6,030	5,660
100								5,280	4,930
105									4,280
110									3,680
115									3,140
120									2,160
125									1,720
130									1,320



12,900 lbs



Feet	33' Hydraulic Bi-Fold Swingaway 5 Deg Fixed Offset Angle					33' Hydraulic Bi-Fold Swingaway 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
20	22,000									
25	22,000	22,000								
30	22,000	22,000	22,000	17,800						
35	22,000	22,000	21,800	17,800	13,800					
40	22,000	22,000	21,400	17,800	13,800					
45	21,600	22,000	21,000	17,800	13,800					
50	19,800	20,500	20,200	17,800	13,800					
55	18,100	17,150	16,850	17,050	13,800					
60	15,450	15,200	15,200	15,400	13,800					
65	14,000	14,000	13,800	13,300	12,650					
70	12,600	12,550	12,000	11,450	10,950					
75	11,100	11,100	10,550	10,050	9,470					
80	9,840	9,810	9,290	8,790	8,180					
85	8,710	8,680	8,160	7,670	7,070					
90	7,730	7,700	7,190	6,700	6,110					
95	6,870	6,830	6,330	5,840	5,260					
100	6,110	6,070	5,560	5,090	4,500					
105	5,430	5,390	4,890	4,410	3,830					
110	4,830	4,780	4,280	3,810	3,230					
115		4,230	3,730	3,260	2,680					
120		3,740	3,230	2,770	2,190					
125			2,780	2,320	1,740					
130				2,370	1,910	1,330				
135				2,000	1,530					
140					1,180					
145										

TMS900E

GROVE

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# load charts

28



Pounds

Feet	32' Insert +56' Manual Offset Bi-Fold Swingaway 0 Deg Fixed Offset Angle					32' Insert +56' Manual Offset Bi-Fold Swingaway 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
35	10,000									
40	9,600	9,000	7,800							
45	9,200	9,000	7,800	6,400						
50	9,000	8,600	7,800	6,400	4,800					
55	8,600	8,400	7,800	6,400	4,800					
60	8,200	8,200	7,600	6,400	4,800					
65	7,800	7,800	7,400	6,400	4,800					
70	7,400	7,600	7,200	6,400	4,800	6,200	6,200			
75	7,200	7,200	7,000	6,400	4,800	6,000	6,000	6,000		
80	6,800	7,000	6,800	6,400	4,800	5,800	5,800	5,800	5,600	5,000
85	6,600	6,600	6,600	6,200	4,800	5,600	5,600	5,600	5,600	5,000
90	6,200	6,400	6,400	6,200	4,800	5,400	5,400	5,400	5,400	5,000
95	6,000	6,010	5,800	5,600	4,800	5,200	5,400	5,400	5,200	5,000
100	5,800	5,400	5,800	5,490	4,800	5,200	5,200	5,200	5,200	5,000
105	5,370	5,000	5,200	4,800	4,210	5,000	5,000	5,200	5,000	5,000
110	4,750	4,800	4,700	4,180	3,600	4,800	5,000	5,000	5,000	4,800
115	4,400	4,600	4,140	3,630	3,040	4,800	4,700	4,800	4,800	4,630
120	4,200	4,160	3,630	3,120	2,540	4,600	4,400	4,600	4,430	4,010
125	3,800	3,700	3,170	2,660	2,080	4,070	4,200	4,230	3,860	3,440
130	3,500	3,270	2,750	2,240	1,660	3,800	4,000	3,710	3,340	2,920
135	3,110	2,880	2,360	1,850	1,280	3,600	3,590	3,220	2,860	2,440
140	2,750	2,520	2,000	1,500		3,210	3,140	2,780	2,420	1,990
145	2,420	2,190	1,870	1,170			2,730	2,360	2,010	1,580
150	2,120	1,890	1,360				2,330	1,980	1,620	1,200
155	1,840	1,610	1,080					1,610	1,260	
160	1,580	1,350						1,270		
165		1,100								
170										

TMS 900E

GROVE

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# load charts

 89-142 ft  
 56 ft  
 8,600 lbs  
 100%  
 24'-0"

360

Pounds

Feet	56' Manual Bi-Fold Swingaway 0 Deg Fixed Offset Angle					56' Manual Bi-Fold Swingaway 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
25	11,000									
30	11,000	11,000	11,000	9,800						
35	11,000	11,000	11,000	9,800	7,800					
40	11,000	11,000	11,000	9,800	7,800					
45	11,000	11,000	11,000	9,800	7,800					
50	11,000	11,000	11,000	9,800	7,800					
55	10,600	11,000	11,000	9,800	7,800	7,000	7,000			
60	10,200	10,600	10,800	9,800	7,800	6,800	6,800	7,000		
65	9,800	10,000	10,200	9,800	7,800	6,800	6,800	6,800		
70	9,200	9,600	9,760	9,600	7,800	6,400	6,600	6,600	6,600	
75	8,800	8,800	9,200	8,800	7,800	6,400	6,400	6,400	6,400	6,400
80	8,400	8,600	8,650	8,100	7,470	6,200	6,200	6,400	6,400	6,400
85	7,800	8,150	7,600	7,060	6,440	6,000	6,200	6,200	6,200	6,200
90	7,390	7,240	6,690	6,160	5,540	6,000	6,000	6,200	6,200	6,200
95	6,580	6,430	5,890	5,370	4,760	6,000	6,000	6,000	6,000	6,000
100	5,870	5,720	5,180	4,560	4,060	5,800	5,800	6,000	6,000	5,850
105	5,240	5,090	4,550	4,030	3,430	5,800	5,800	5,800	5,470	5,070
110	4,670	4,520	3,980	3,470	2,870	5,370	5,420	5,100	4,770	4,370
115	4,160	4,010	3,470	2,970	2,370	4,780	4,460	4,140	3,730	
120	3,700	3,540	3,010	2,510	1,910		4,190	3,870	3,560	3,150
125	3,280	3,120	2,590	2,090	1,500			3,340	3,020	2,620
130	2,910	2,740	2,210	1,710	1,120			2,830	2,530	2,130
135	2,390	1,850	1,360						2,080	1,680
140	2,070	1,530	1,040						1,650	1,260
145			1,240							

150

31

TMS900E

# load charts

32



Pounds

Feet	36.8	49.9	63.0	76.1	89.3	102.4	115.5	128.6	141.8
10	152,000	136,000	129,000	123,000	81,000				
15	106,000	108,000	105,000	99,000	81,000	59,000			
20	72,050	74,450	75,000	76,550	75,150	57,000	42,400	34,000	
25	52,100	55,400	56,400	56,250	54,950	51,000	42,400	34,000	26,600
30	40,350	41,500	41,400	42,750	41,800	39,600	33,800	26,600	
35	30,400	31,800	33,000	32,800	32,000	32,300	30,450	26,600	
40		24,850	25,950	25,750	26,100	25,600	25,050	24,350	
45		19,950	21,000	21,050	21,200	20,750	20,200	19,550	
50		16,350	17,350	17,400	17,550	17,100	16,600	15,950	
55			14,550	14,600	14,750	14,300	13,800	13,200	
60				12,350	12,400	12,500	12,050	11,600	11,100
65				10,500	10,600	10,750	10,350	9,930	9,340
70					9,150	9,290	8,870	8,480	7,870
75					7,880	8,040	7,620	7,210	6,640
80						6,970	6,550	6,150	5,590
85						6,020	5,630	5,230	4,680
90						5,200	4,830	4,440	3,890
95							4,120	3,740	3,190
100							3,480	3,120	2,580
105								2,570	2,030
110								2,060	1,540
115								1,600	1,100
120									



Pounds

Feet	33' Hydraulic Bi-Fold Swingaway 5 Deg Fixed Offset Angle					33' Hydraulic Bi-Fold Swingaway 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
20	22,000									
25	22,000	22,000								
30	22,000	22,000	22,000	17,800						
35	22,000	22,000	21,800	17,800	13,800					
40	22,000	22,000	21,400	17,800	13,800	14,000	14,200			
45	21,100	20,100	19,800	17,800	13,800	13,600	13,800	13,800		
50	17,300	17,400	17,400	16,250	13,800	13,200	13,400	13,600	13,600	11,400
55	15,650	15,600	15,000	14,450	13,800	12,800	13,000	13,200	13,200	11,400
60	13,300	13,250	12,700	12,150	11,500	12,400	12,600	12,700	12,950	11,400
65	11,400	11,350	10,900	10,400	9,780	12,000	12,000	12,100	11,700	11,250
70	9,940	9,910	9,380	8,860	8,240	10,800	10,850	10,500	10,100	9,640
75	8,620	8,590	8,070	7,560	6,950	9,350	9,430	9,050	8,660	8,190
80	7,500	7,470	6,950	6,450	5,850	8,100	8,190	7,810	7,430	6,950
85	6,530	6,500	5,990	5,490	4,900	7,010	7,110	6,730	6,360	5,880
90	5,690	5,660	5,150	4,660	4,070	6,050	6,160	5,790	5,420	4,950
95	4,950	4,920	4,410	3,930	3,340		5,330	4,960	4,590	4,120
100	4,300	4,270	3,760	3,280	2,700		4,580	4,220	3,860	3,390
105	3,720	3,680	3,180	2,700	2,120			3,560	3,200	2,740
110	3,210	3,160	2,660	2,190	1,610			2,960	2,610	2,150
115	2,690	2,190	1,720	1,140					2,070	1,610
120	2,270	1,760	1,300						1,580	1,130
125		1,380								
130		1,020								
135										

TMS 900E

GROVE

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# load charts

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Pounds

Feet	56' Manual Bi-Fold Swingaway 0 Deg Fixed Offset Angle					56' Manual Bi-Fold Swingaway 40 Deg Fixed Offset Angle				
	89.3	102.4	115.5	128.6	141.8	89.3	102.4	115.5	128.6	141.8
25	11,000									
30	11,000	11,000	11,000	9,800						
35	11,000	11,000	11,000	9,800	7,800					
40	11,000	11,000	11,000	9,800	7,800					
45	11,000	11,000	11,000	9,800	7,800					
50	11,000	11,000	11,000	9,800	7,800					
55	10,600	11,000	11,000	9,800	7,800	7,000	7,000			
60	10,200	10,600	10,800	9,800	7,800	6,800	6,800	7,000		
65	9,600	10,000	9,920	9,800	7,800	6,600	6,600	6,800		
70	9,200	9,200	9,600	8,800	7,800	6,400	6,600	6,600	6,600	
75	8,600	8,800	8,600	8,040	7,410	6,400	6,400	6,400	6,400	
80	8,190	8,040	7,480	6,930	6,300	6,200	6,200	6,400	6,400	
85	7,220	7,070	6,510	5,970	5,350	6,000	6,200	6,200	6,200	
90	6,370	6,220	5,670	5,140	4,530	6,000	6,000	6,200	6,200	
95	5,630	5,480	4,930	4,410	3,800	6,000	6,000	6,000	6,000	
100	4,970	4,820	4,280	3,760	3,150	5,800	5,800	5,680	5,350	
105	4,380	4,230	3,690	3,180	2,580	5,240	5,280	4,950	4,620	
110	3,860	3,710	3,170	2,660	2,060	4,560	4,610	4,290	3,960	
115	3,390	3,240	2,700	2,190	1,600	4,010	3,690	3,370	2,960	
120	2,960	2,810	2,270	1,770	1,180	3,450	3,140	2,820	2,420	
125	2,580	2,420	1,890	1,390			2,630	2,320	1,920	
130	2,230	2,070	1,530	1,030			2,160	1,860	1,460	
135		1,750	1,210					1,430	1,030	
140		1,450							1,030	
145										



Pounds

Feet	36.8	49.9	63.0	76.1	89.3	102.4	115.5	128.6	141.8
10	149,500	136,000	129,000	123,000	81,000				
15	104,500	106,000	105,000	99,000	81,000	59,000			
20	68,350	70,750	73,050	72,850	71,450	57,000	42,400	34,000	
25	48,800	51,800	53,150	53,000	52,150	51,000	42,400	34,000	26,600
30		36,700	37,850	39,300	39,100	38,100	37,550	33,800	26,600
35		26,950	28,400	29,600	29,650	29,800	29,250	28,650	26,600
40			22,050	23,100	23,150	23,300	22,750	22,300	21,600
45			17,550	18,600	18,650	18,800	18,300	17,800	17,150
50			14,250	15,300	15,300	15,450	15,000	14,500	13,850
55				12,700	12,750	12,900	12,450	11,950	11,350
60				10,700	10,750	10,900	10,500	10,050	9,480
65				9,040	9,140	9,280	8,850	8,430	7,840
70					7,780	7,920	7,500	7,080	6,500
75					6,620	6,780	6,350	5,940	5,380
80						5,800	5,380	4,980	4,420
85						4,940	4,540	4,150	3,590
90						4,180	3,810	3,420	2,870
95							3,160	2,780	2,240
100							2,570	2,220	1,670
105								1,710	1,180
110								1,240	
115									

TMS 900E

GROVE

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## Symbols glossary

	Axle load		Lattice extension
	Boom elevation		Lights
	Boom telescoping		Luffing jib
	Brakes		Main boom
	Cab		Off road
	Counterweight		Oil
	Crane functions		Outriggers
	Crane travel		Outrigger controls
	Electrical Systems		Radius
	Engine		Rotation
	Fixed swingaway		Speed
	Frame		Steering
	Fuel tank capacity		Suspension
	Gear		Swing
	Gradeability		Tele-swingaway
	Heavy duty jib		Tires
	Main hoist		Transmission
	Auxiliary hoist		Travel speed
	Hook height		

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