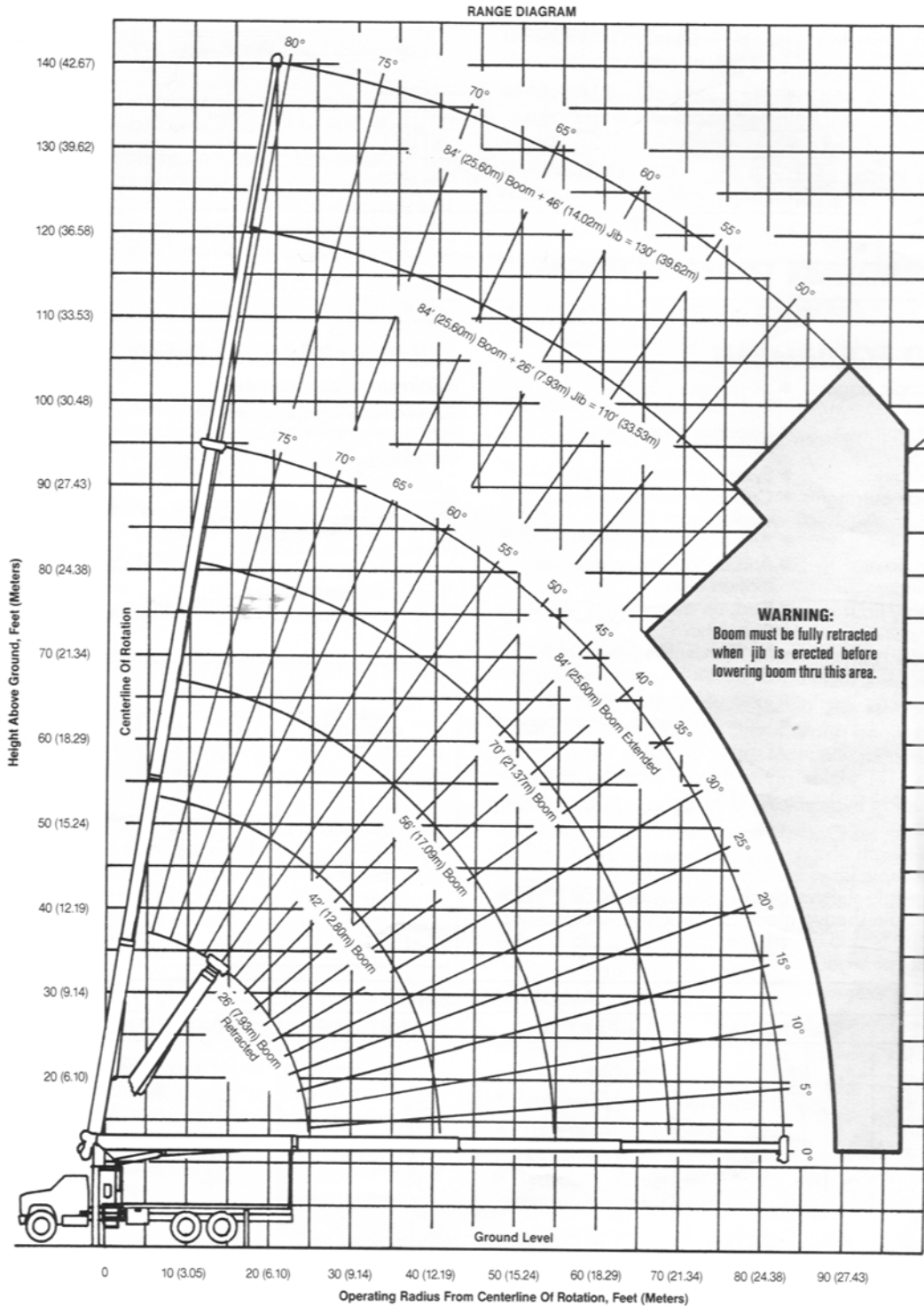




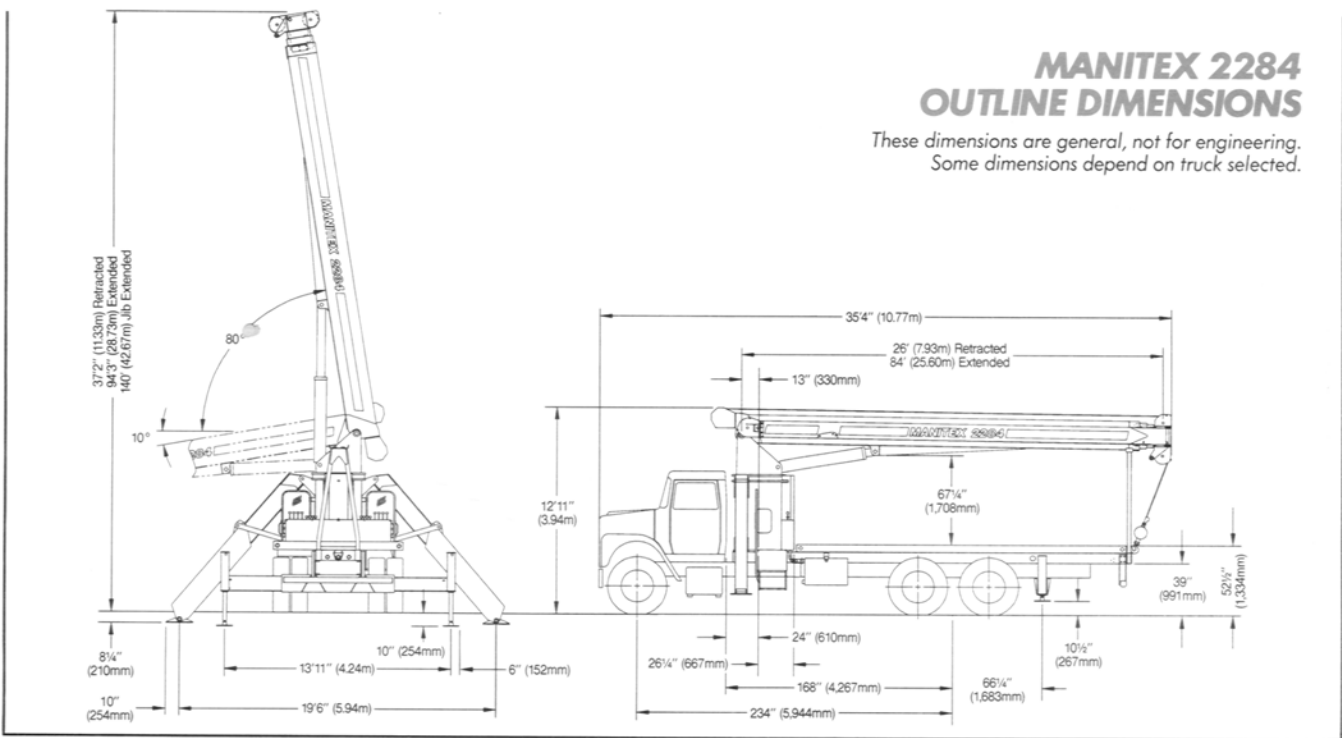
# GENERAL SPECIFICATIONS

## MODEL 2284 TRUCK-MOUNTED CRANE



# MANITEX 2284 OUTLINE DIMENSIONS

These dimensions are general, not for engineering.  
Some dimensions depend on truck selected.



## STANDARD EQUIPMENT

- 4-section telescopic boom 26' (7.93m) to 84' (25.60m)
- Pedestal, turret, rotation bearing & swing system
- 20' (6.10m) subframe
- A-frame link-type outriggers
- Out-and-down rear stabilizers
- 3-sheave boom point
- Boom-hoist cylinder
- 2-speed planetary hoist
- Dual operator stations
- Removable boom rest
- 5-ton (4.5-mt) hook & ball
- 372° non-continuous rotation
- 56-gallon (212-liter) hydraulic reservoir
- 3-section vane-type hydraulic pump
- System pressure gauge
- Capacity-alert system, audio/visual
- Anti-two-block shutoff
- Audible outrigger/stabilizer motion alarm
- Back-up alarm
- Signal horn
- 300' (91.44m) of 9/16" (14.3mm) EIPS IWRC wire rope
- Finish paint in Manitex colors
- Operator/service/parts manuals

## TRUCK CHASSIS DATA

### Minimum Requirements:

Some configurations and options may increase requirements

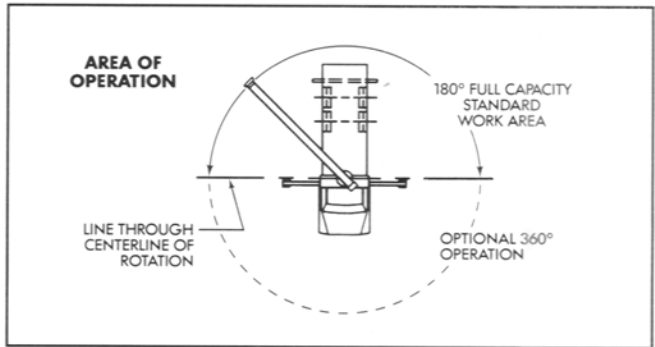
Wheelbase	234"	5,944mm
Cab to axle	168"	4,267mm
Front axle gross weight rating	14,000 lbs	6,350 kgs
Rear axle gross weight rating	38,000 lbs	17,237 kgs
Frame section modulus	20.0 in <sup>3</sup>	328 cc
	110,000 psi	758,450 kPa
Nominal frame width	34"	864mm

## WEIGHTS

Total crane, including hydraulic fluid ..... 19,200 Lbs. 8,709 Kgs.

### Additions:

26' (7.93m) fixed-length jib	819	372
46' (14.02m) telescopic jib	1,220	553
15-ton (13.6-mt) single-sheave block	263	119
25-ton (22.7-mt) triple-sheave block	380	172
Hanger sheave for 5- and 6-part line	38	17
20'4" (6.20m) steel or wood bed	1,900	862



## ALLOWABLE LINE PULL

1-PART LINE	2-PART LINE	3-PART LINE	4-PART LINE	5-PART LINE	6-PART LINE
8,500 Lbs. (3,856 Kgs.) <sup>1</sup> 7,400 Lbs. (3,357 Kgs.) <sup>2</sup>	17,000 Lbs. (7,711 Kgs.) <sup>1</sup> 14,800 Lbs. (6,713 Kgs.) <sup>2</sup>	25,500 Lbs. (11,567 Kgs.) <sup>1</sup> 22,200 Lbs. (10,070 Kgs.) <sup>2</sup>	34,000 Lbs. (15,422 Kgs.) <sup>1</sup> 29,600 Lbs. (13,426 Kgs.) <sup>2</sup>	42,500 Lbs. (19,278 Kgs.) <sup>1</sup> 37,000 Lbs. (16,783 Kgs.) <sup>2</sup>	44,000 Lbs. (19,958 Kgs.) <sup>1</sup> 44,000 Lbs. (19,958 Kgs.) <sup>2</sup>
<b>WARNING:</b> Anti-two block system must be in good operating condition before operating crane. Refer to Owner's Manual. Keep at least 3 wraps of load line on drum at all times.		<sup>1</sup> With 9/16" (14.3mm) 6 x 25 IWRC (3.5:1 S.F.) 29,750 Lbs. (13,494 Kgs.) Minimum Breaking Strength <sup>2</sup> With 9/16" (14.3mm) Rotation Resistant (5.0:1 S.F.) 37,000 Lbs. (16,783 Kgs.) Minimum Breaking Strength			

## STANDARD SPECIFICATIONS AND FEATURES

**BOOM**—26' (7.93m) to 84' (25.60m). Inverted-T cross section. 4-section telescoping type, extended and retracted proportionally by double-acting hydraulic cylinder and cable-crowd system. Maximum tip height 94' (28.65m).

**BOOM POINT**—Three high-density nylon sheaves mounted on heavy-duty roller bearings. Two removable pin-type rope guards.

**HOIST**—Maximum line speed 247 fpm (75.25 mpm). Maximum bottom-layer line pull 12,000 lbs. (5,443 kgs). Two-speed planetary reducer. Spring-applied, pressure-released internal brake.

**WIRE ROPE**—300' (91.44m) of  $\frac{1}{16}$ " (14.3mm) diameter 6 x 25 EIPS IWRC.

**BOOM ELEVATION**—Double-acting hydraulic cylinder. Working range from 10° below horizontal to 80° above.

**SWING SYSTEM**—Externally mounted, double-reduction planetary driven by hydraulic motor. Maximum swing speed 1.50 rpm. Wet multi-disc internal brake is spring applied, pressure released. Oversized diameter ball bearing swing circle with external gear. 372° non-continuous rotation.

**OUTRIGGERS**—8' (2.44m) retracted; 19'6" (5.94m) extended. A-frame link type. Operated independently for precise leveling. Equipped with double-acting hydraulic cylinders. 16" (406mm) x 20" (508mm) pivoting pads.  $8\frac{1}{4}$ " (210mm) maximum rise.

**STABILIZERS**—8' (2.44m) retracted; 13'7" (4.14m) extended. Out-and-down type. Operated independently for precise leveling. Double-acting hydraulic cylinders. 12" (305mm) diameter pivoting pads.  $9\frac{1}{4}$ " (235mm) maximum rise.

**SUBFRAME**—Torsionally resistant, rigid 4-plate design. Mounted under crane full length of truck frame.

**REAR UNDERRIDE PROTECTION**—Supplied on factory-mounted cranes. Fabricated structure mounted under rear of bed. Complies with Bureau Motor Carrier Safety standard 393.86.

**BACK-UP ALARM**—Supplied on factory-mounted cranes. Electronic audible motion alarm activated when truck transmission is in reverse gear.

**MOUNTING**—Pedestal and subframe are mounted to chassis by threaded rods and clamp plates. No welding, drilling, or bolting to truck.

**CONTROL SYSTEM**—Dual operator stations are equipped with 4 single-lever crane controls arranged to ANSI B30.5 standards. Fully proportional control valves and system pressure gauge. Each station also includes outrigger and stabilizer controls, engine start/stop, foot throttle, signal horn, overload gauges, boom-angle indicator, bubble levels, load chart and range diagram.

**HYDRAULIC SYSTEM**—A 3-section vane pump direct mounted to power takeoff on truck transmission provides 35 gpm (133 lpm) to the hoist, 8 gpm (30 lpm) to the swing circuit and 18 gpm (68 lpm) to other crane functions. 56-gallon (212-liter) baffled reservoir includes 10-micron filter in the return line. All fittings meet SAE standards and have O-ring face seals.

**HYDRAULIC CYLINDERS**—All are equipped with integral holding valves.

**BOOM REST**—Heavy-duty fabrication. Easily removed to simplify loading and unloading.

**LOAD HOOK**—5-ton (4.5-mt) capacity hook with heavy-duty swivel and weight is provided for single-line operation.

**CAPACITY-ALERT SYSTEM**—Monitors boom-hoist cylinder pressure. Color-coded gauge at each operator station and audible alarm indicate approaching overload. Optional shutdown system hydraulically prevents continuing overload.

**ANTI-TWO-BLOCK SYSTEM**—Audible warning and shutoff functions prevent hook from contacting boom point.

**ELECTRICAL**—12-volt direct current. Environmentally sealed enclosure.

**DESIGN/WELDING**—Design conforms to ANSI B30.5. Welding conforms to AWS D1.1.

**MANUALS**—Operator, service and parts manuals depict correct crane operation, maintenance procedures and parts listing.

**WARRANTY**—12-month warranty covers parts and labor resulting from defects in material or workmanship.

## OPERATOR ASSIST FEATURES

- Anti-two-block warning and shutoff
- Capacity-alert system, audio/visual
- Load chart/range diagram
- Boom-angle indicator
- Audible outrigger/stabilizer motion alarm
- Engine start/stop
- Signal horn
- Back-up alarm

## OPTIONS

**FIXED SWING-AROUND JIB**—26' (7.92m) fixed length. Stows along boom base. Maximum tip height 121' (36.88m).

**TELESCOPIC SWING-AROUND JIB**—Working lengths 26' (7.92m) and 46' (14.02m). Stows along boom base. Telescopic section stows inside jib base. Manually pinned in retracted or extended position. Maximum tip height 141' (42.98m).

**BED**—8' (2.44m) x 20'4" (6.20m). Deck of high-density hardwood or diamond steel tread plate. Cross sills on 12" (305mm) centers. Bolts to subframe.

- $\frac{1}{16}$ " (14.3mm) rotation-resistant wire rope
- Hook block for 2- to 6-part load line
- Hanger sheave for 5- and 6-part line
- Aerial baskets, 1- or 2-person
- Remote-control operation
- Front-bumper stabilizer for 360° operation
- Hydraulic swivel for continuous rotation
- Capacity overload shutdown system
- Dunnage/tool boxes
- Air throttle
- Various mountings
- Special paint
- A-frame rear stabilizers
- Roofer's package
  - Pallet forks
  - Clamshell buckets
  - Hydraulic hose reel
  - Trash dumpster
  - Gravel hopper
  - Oil cooler for duty-cycle applications

# MODEL 2284 LOAD RATING CHART

This capacity chart is for reference use only and must not be used for a specific serial number crane. Lifting off the main boom point while the swing-around jib is erected is not approved.

MEETS  
ANSI B30.5  
REQUIREMENTS

OUTRIGGERS AND STABILIZERS EXTENDED																	
Operating Radius		Load Rating 26' (7.92m) Boom			Load Rating 42' (12.80m) Boom			Load Rating 56' (17.07m) Boom			Load Rating 70' (21.34m) Boom			Load Rating 84' (25.60m) Boom			
		Loaded Bm. Angle	Pounds	Kilograms	Loaded Bm. Angle	Pounds	Kilograms	Loaded Bm. Angle	Pounds	Kilograms	Loaded Bm. Angle	Pounds	Kilograms	Loaded Bm. Angle	Pounds	Kilograms	
4'	1.22	80°	44,000	19,958													
6'	1.83	77°	34,600	15,695													
8'	2.44	72°	27,800	12,610													
10'	3.05	67°	23,350	10,591	77°	20,000	9,072										
12'	3.66	62°	20,200	9,163	74°	17,860	8,101	79°	16,400	7,439							
14'	4.27	57°	17,780	8,065	71°	15,660	7,103	76°	14,400	6,532	80°	13,320	6,042				
16'	4.88	51°	15,870	7,199	68°	13,930	6,319	74°	12,780	5,797	78°	11,770	5,339				
20'	6.10	38°	12,800	5,806	62°	11,400	5,171	70°	10,400	4,717	75°	9,570	4,341	78°	8,900	4,037	
25'	7.62				54°	9,230	4,187	64°	8,400	3,810	70°	7,710	3,497	74°	7,180	3,257	
30'	9.14				44°	7,630	3,461	58°	7,000	3,175	66°	6,410	2,908	71°	5,910	2,681	
35'	10.67				33°	6,260	2,839	52°	5,910	2,681	61°	5,410	2,454	67°	4,980	2,259	
40'	12.19				14°	4,500	2,041	45°	5,040	2,286	56°	4,630	2,100	63°	4,260	1,932	
45'	13.72							37°	4,260	1,932	51°	4,000	1,814	59°	3,670	1,665	
50'	15.24							26°	3,470	1,574	45°	3,460	1,569	55°	3,190	1,447	
55'	16.76										39°	2,960	1,343	51°	2,770	1,256	
60'	18.28										31°	2,430	1,102	46°	2,390	1,084	
65'	19.81										21°	1,920	871	41°	2,010	912	
70'	21.34													35°	1,620	735	
75'	22.86													27°	1,300	590	
80'	24.38													19°	990	449	
<b>Deduction for Stowed Jib</b>																	
			650	295			400	181			300	136		250	113	200	91

JIB LOAD RATING IN LBS./KGS. WITH OUTRIGGERS AND STABILIZERS EXTENDED							
Operating Radius		Jib Load Rating 26' (7.92m) Jib For All Boom Lengths			Jib Load Rating 46' (14.02m) Jib For All Boom Lengths		
		Loaded Bm. Angle	Pounds	Kilograms	Loaded Bm. Angle	Pounds	Kilograms
25'	7.62	79°	4,510	2,046			
30'	9.14	76°	3,890	1,765	79°	3,100	1,406
35'	10.67	74°	3,350	1,519	72°	2,800	1,270
40'	12.19	71°	2,900	1,315	75°	2,520	1,143
45'	13.71	68°	2,500	1,134	72°	2,240	1,016
50'	15.24	65°	2,170	984	70°	1,980	898
55'	16.76	62°	1,870	848	67°	1,750	794
60'	18.23	59°	1,520	689	65°	1,550	703
65'	19.81	56°	1,240	562	63°	1,370	621
70'	21.34	52°	980	445	60°	1,210	549
75'	22.86	49°	760	345	57°	1,050	476
80'	24.38	45°	570	258	54°	850	386
85'	25.91				51°	680	308
90'	27.43				48°	520	236

**INFORMATION:** Deductions must be made from rated loads for stowed jib, optional attachments, hooks, and load blocks (see deduction chart). Weights of slings and all other load handling devices shall be considered a part of the load.

Deductions From Rated Loads For Manitex Supplied Load Handling Devices	
Hanger Sheave . . . . .	50 Lbs. (23 Kgs.)
Overhaul Ball . . . . .	120 Lbs. (54 Kgs.)
Single Sheave Load Block . . . . .	280 Lbs. (127 Kgs.)
Double Sheave Load Block . . . . .	350 Lbs. (159 Kgs.)
Triple Sheave Load Block . . . . .	380 Lbs. (172 Kgs.)
Hose Reel . . . . .	140 Lbs. (64 Kgs.)
Swing-Around Jib . . . . .	See load chart



**WARNING:** Before operating any Manitex crane, the operator must read and understand the owner's manual and other instructions for a specific serial number crane. This chart is only a guide. The notes and warnings are for illustration only and cannot be used to operate a crane.

The operating radius shown in the jib load rating chart is for fully extended boom only. When boom is not fully extended, use only loaded boom angle to determine load rating of jib. Do not rely on capacity-alert system when lifting from jib.

Main boom load ratings above the heavy line are based on a constant hoist cylinder pressure, machine structural competence, and do not exceed 85% of tipping. Jib load ratings above the heavy line are based only on machine structural competence and do not exceed 85% of tipping.

**DO NOT OPERATE A MANITEX TRUCK-MOUNTED CRANE OR ACCESSORIES WITHIN 10' (3.05m) OF LIVE POWER LINES.**

Crane load ratings on outriggers are based on freely suspended loads with the machine leveled and standing on a firm uniform supporting surface. No attempt shall be made to move a load horizontally on the ground in any direction.

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Because of continuing improvements, Manitex reserves the right to change product specifications without notice.

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