



series 3500

BOOM TRUCKS

features

- 35 Ton (31,8 mton) Capacity
- 5-Section 124' (37,8 m) Proportional Boom
- 4-Section 100' (30,5 m) Proportional Boom
- 3-Section 77' (23,5 m) Proportional Boom
- 1 and 2-Section 30' 6" (9,3 m) to 55' (16,8 m) Jib
- 165' 11" (50,6 m) Maximum Tip Height
- 22', 1.25" (6,7 m) Out-and-Down Outriggers at Full Extension
- Intermediate and Fully Extended Outrigger Charts are Standard
- FirstUp for Optional Front Stabilizer Auto Retract
- 2-Speed Planetary Hoist with Grooved Drum and Negative Draft Flange
- Load Moment Indicator with Digital Display, CAN Bus, Overload Shutdown and Internal Boom Length Cable
- Radio ATB
- Rugged, Weatherproof Electrical System with Circuit Status LEDs
- Removable Boom Rest
- System Pressure Gauge
- Clamp-On Mounting
- Manitex UPTIME Comprehensive Support



product guide

series 3500

GENERAL SPECIFICATIONS

BOOM

Booms – Inverted T-cross section, 3, 4, or 5-section telescoping type, extended and retracted proportionally by a double-acting hydraulic cylinder and cable-crowd system. **35100** – 4-Section 30' 6" (9,3 m) to 100' 0" (30,5 m). 2-section, 31' (9,5 m) to 55' (16,8 m) jib. **35124C** – 5-section 31' 5/8" (9,5 m) to 123' 8 5/8" (37,7 m). 1-section, 31' (9,5 m) jib. **3577C** – 3-section, 29' 5" (9 m) to 77' (23,5 m).

Quick Reeve Boom Point – Three high-density nylon load sheaves mounted on heavy-duty roller bearings. Two removable pin-type rope guards.

Boom Elevation – Double-acting hydraulic cylinder. Working range from 10° below horizontal to 80° above.

Load Hook – 5-ton (4,5 mton) capacity hook with heavy-duty swivel and weight is provided for single-line operation.

HOIST

Hoist – Maximum theoretical line speed 453 fpm (138 mpm). Maximum theoretical bottom-layer line pull 14,500 lb (6 577 kg). Two-speed planetary reducer. Wet multi-disc internal brake is spring-applied, pressure-released.

Wire Rope – 380' (115,8 m) of 5/8" (16 mm) rotation resistant type.

SWING SYSTEM

Externally mounted, double-reduction planetary driven by hydraulic motor. Maximum theoretical swing speed 1.5 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

Out-and-down style outriggers, operated independently for precise leveling. 22' 1 1/4" (6,8 m) spread at full extension and 13' 4" (4,1 m) spread at intermediate extension. 16" (406 mm) diameter floats. Bubble level located near outrigger controls.

STABILIZERS

8' (2,4 m) retracted; 18' 6" (5,6 m) extended. Operated independently for precise leveling. Double-acting hydraulic cylinders. Fixed pad size is 12" (305 mm) diameter.

Front Bumper stabilizer (option) – Single stabilizer mounted at the front of the truck for lifting operation over the front (360° area of operation). Maximum float load is controlled by preset counterbalance valve to prevent overloading the stabilizer. Stabilizer cylinder protected by auto-retract feature to prevent drive away damage. This option may require front frame extensions-consult factory.

MOUNTING

Mounting – Pedestal and subframe are mounted to chassis by threaded rods and clamp plates. No welding, drilling, or bolting to truck frame is required.

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.

Boom Rest – Heavy-duty fabrication. Easily removed to simplify loading and unloading truck deck.

CONTROL SYSTEM

Dual operator platforms are equipped with four 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, boom-angle indicator, bubble levels, beverage container, load chart and range diagram.

HYDRAULICS

Hydraulic System – A 3-section vane pump direct-mounted to power take-off on truck transmission provides 38 gpm (145 lpm) to the

hoist, 27 gpm (102 lpm) to the boom hoist and telescope circuit, and 11 gpm (45 lpm) to the swing and outrigger circuit. 100-gallon (379-liter) baffled reservoir includes suction ball valve with strainer two 25-micron filters in the return line. Use of SAE O-ring and face seal O-ring hydraulic fittings throughout system.

Hydraulic Cylinders – All load-holding cylinders are equipped with integral holding valves.

WARNING SYSTEMS

Load Moment Indicator – CAN bus system maximizes expansion capabilities. Senses boom hoist cylinder pressure, boom length and boom angle. Audio-visual warning indicated overload conditions and overload shutoff feature prevents continuing overload. Operator can access all relative crane configuration and load conditions via display at the operator station. Internal boom length cable.

Radio Anti-Two-Block System – Audible warning and shutoff functions prevent hook from contacting boom point. Switch is potted to ensure reliability.

Back-Up Alarm – Supplied on factory-mounted cranes, electronic audible motion alarm activated when truck transmission is in reverse gear.

GENERAL

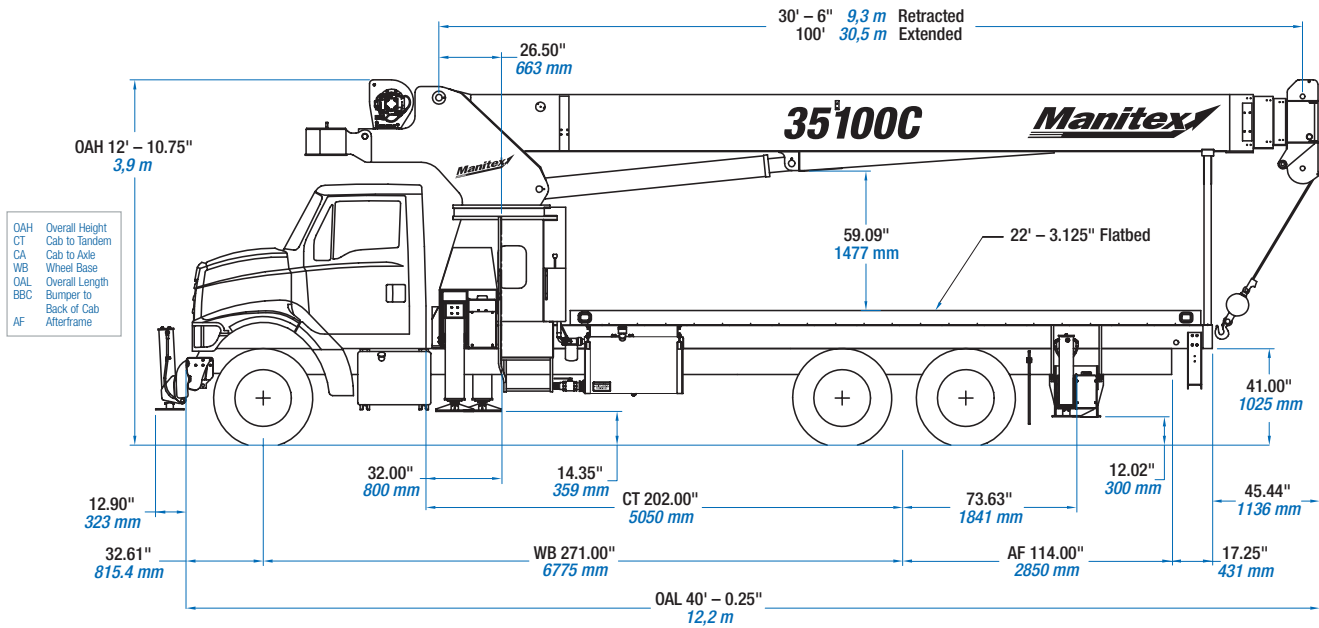
Electrical – State-of-the-art, weather-resistant components throughout. Hermetically sealed power in relays. Enclosure includes power in relays and circuit status LEDs. Designed to withstand high pressure washing and varying climates.

Design/Welding – Design conforms to ANSI B30.5. Welding conforms to AWS D1.1. Tested to SAE 1063 and SAE 765.

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 and workmanship.

* In order to ensure continuous improvement, specifications may change without notice.

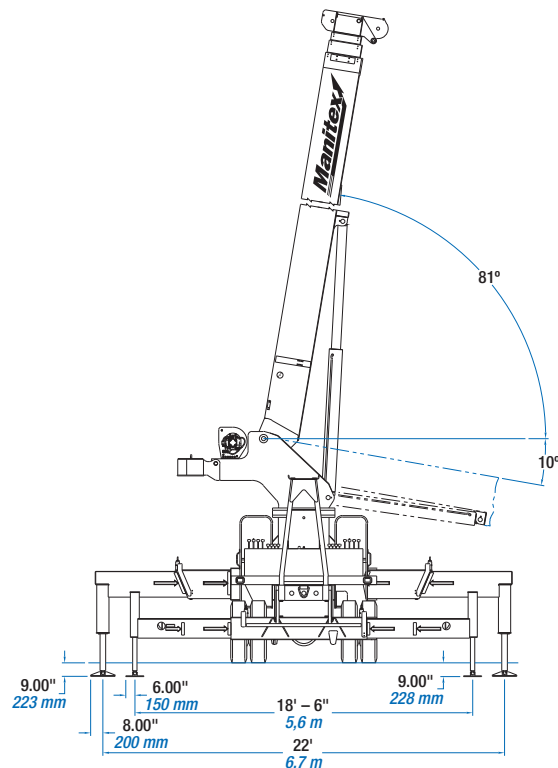


CHASSIS DATA	35100C/35124C
Wheelbase (WB)	271" 6 883 mm
Cab to Tandem (CT)	202" 4 877 mm
After Frame (AF)	114" 2 896 mm
Frame Section Modulus at 180° Area of Operation	30.0 in ³ 125,000 psi 861 875 kPa
Frame Section Modulus at 360° of Operation	30.0 in ³ 125,000 psi 861 875 kPa
Front Axle Gross Weight Rating	20,000 lb 8 165 kg
Rear Axle Gross Weight Rating	40,000 lb 18 144 kg
Minimum Truck Axle Weight - Front**	8,450 lb 3 674 kg
Minimum Truck Axle Weight - Back**	8,300 lb 3 765 kg
Nominal Frame Width	34" 864 mm

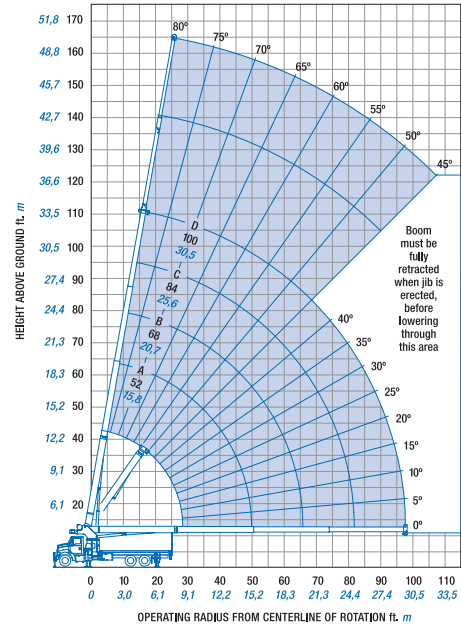
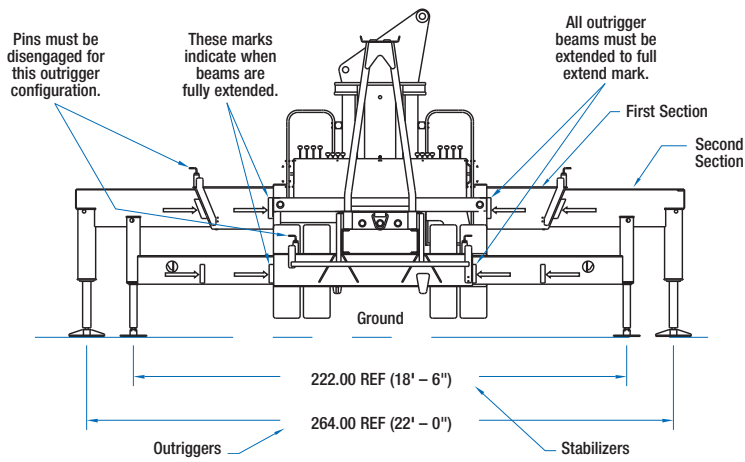
*Frame section modulus at 360° area of operation requires front bumper stabilizer.
 **Minimum chassis weight is required to meet 85% stability requirements.
 Chassis data is general – not for engineering. Some dimensions depend on truck selection.

MAXIMUM TIP HEIGHT	35100C	35124C
Configuration	Boom 100' 30,5 m	Boom 124' 37,8 m
Extended Boom	111' 4" 33,9 m	134' 8" 41,1 m
Fixed or Retracted Jib	142' 1" 43,3 m	165' 11" 50,6 m
Extended Jib	166' 8" 50,8 m	—

WEIGHTS	35100C	35124C
Total Crane - Out-and-Down Outriggers	29,706 lb 13 502 kg	31,126 lb 14 148 kg
22' (6,71 m) Flat Bed	2,000 lb 907 kg	2,000 lb 907 kg
30' 6" (9,30 m) Fixed Length Jib	1,126 lb 511 kg	—
31' (9,45 m) Fixed Length Jib	—	850 lb 386 kg
30' 6" - 55' (9,30 m - 16,80 m) Telescopic Jib	1,754 lb 796 kg	—



USE THIS CHART ONLY WHEN
OUTRIGGERS AND STABILIZERS ARE
FULLY EXTENDED.



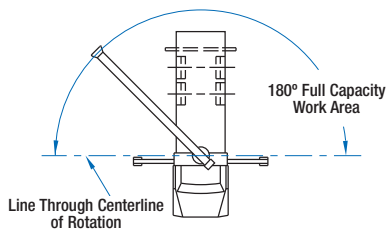
FULLY EXTENDED OUTRIGGER SPREAD: MODEL 35100C

MAIN BOOM LOAD RATINGS												JIB LOAD RATINGS					
Operating Radius	Boom Length		A		B		C		D		Fixed Jib		Telescopic Jib				
	30.5 Feet 9,30 Meters		52 Feet 15,85 Meters		68 Feet 20,73 Meters		84 Feet 25,60 Meters		100 Feet 30,48 Meters		30.5 Feet 9,30 Meters		30.5 Feet 9,30 Meters		55 Feet 16,76 Meters		
	Feet	Meters	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.	
6	1,83	80°	70,000	31 751													
8	2,44	76°	53,500	24 267													
10	3,05	72°	45,670	20 716													
12	3,66	68°	39,830	18 067	78	31,500	14 288										
15	4,57	61°	33,660	15 268	75	30,330	13 757	79	28,500	12 927							
20	6,10	49°	24,380	11 059	69	23,790	10 791	75	22,580	10 242	79	21,780	9 879	80	14,000	6 350	
25	7,62	33°	18,310	8 305	62	18,810	8 532	70	18,470	8 378	75	17,690	8 024	78	13,500	6 123	
30	9,14				56	14,700	6 668	65	14,850	6 736	71	14,760	6 695	75	13,000	5 897	
35	10,67				48	11,350	5 148	60	11,530	5 230	67	11,630	5 275	72	11,700	5 307	
40	12,19				40	8,910	4 042	55	9,070	4 114	63	9,170	4 159	69	9,240	4 191	
45	13,72				29	7,120	3 230	50	7,290	3 307	59	7,380	3 348	66	7,440	3 375	
50	15,24							43	5,930	2 690	55	6,020	2 731	62	6,080	2 758	
55	16,76							36	4,860	2 204	51	4,950	2 245	59	5,000	2 268	
60	18,29							27	3,990	1 810	46	4,080	1 851	55	4,140	1 878	
65	19,81							12	3,280	1 488	40	3,370	1 529	51	3,430	1 556	
70	21,34										34	2,770	1 256	47	2,830	1 284	
75	22,86										27	2,270	1 030	43	2,320	1 052	
80	24,38										15	1,830	830	38	1,880	853	
85	25,91													33	1,500	680	
90	27,43													26	1,170	531	
95	28,96													17	870	395	
100	30,48																
105	32,00																
110	33,53																
			600	272	350	159	270	122	220	100	180	82	Deductions: Stowed Fixed Jib				
			900	408	530	240	400	181	330	150	290	132	Deductions: Stowed Telescopic Jib				

Meets ANSI B30.5 Requirements - Do not operate crane or accessories within 10' (3,05m) of live power lines.
NOTICE: This chart is for reference only and must not be used for lifting purposes. Consult factory for other boom options.



AREA OF OPERATION



DEDUCTIONS

Auxiliary Block	50 lb 22.72 kg
Load Block	See block manufacturer nameplate
Overhaul Ball	See overhaul ball manufacturer nameplate
Hose Reel	260 lb 118.18 kg
Swing Around Jib* (Stowed)	See load rating chart

WEIGHTS

1 Part Line	2 Part Line	3 Part Line	4 Part Line	5 Part Line	6 Part Line	7 Part Line	8 Part Line	WARNING
								<p>Anti-two-block system must be in good operating condition before operating crane. Refer to the owner's manual. Keep at least three wraps of load line on the drum at all times.</p> <p>.625" rot resistant (5.0:1 SF) - 45400 lb. min. breaking strength</p> <p>.625" 6 x 25 IWRC (3.5:1 SF) - 33250 lb. min. breaking strength</p>
9,080 lb 4 119 kg	18,160 lb 8 237 kg	27,240 lb 12 356 kg	36,320 lb 16 474 kg	45,400 lb 20 593 kg	54,480 lb 24 712 kg	63,560 lb 28 830 kg	70,000 lb 31 751 kg	
9,500 lb 4 309 kg	19,000 lb 8 618 kg	28,500 lb 12 927 kg	38,000 lb 17 237 kg	47,500 lb 21 546 kg	57,000 lb 25 855 kg	66,500 lb 30 164 kg	70,000 lb 31 751 kg	

BOOM AND JIB COMBINATIONS

3577C	77' Powered	3 Section Boom	
35100C	100'	4 Section Boom	31' - 55' 2- Section Jib
35124C	124'	5 Section Boom	31' 1- Section Jib



UPTime is the Manitex commitment to complete support of thousands of units working every day.

UPTime

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