



## features

- 22 Ton (19,9 mton) Capacity
- 4-Section 81' (24,7 m) Proportional Boom
- 3-Section 77' (23,5 m) Proportional Boom
- 3-Section 62' (18,9 m) Proportional Boom
- 3-Section 50' (15,2 m) Proportional Boom
- 92'6" (28,2 m) Maximum Main Boom Height
- 133'2" (40,6 m) Maximum Tip Height with Telescopic Jib
- Various Tractor Mount Options
- 21'6" (6,6 m) A-Frame Outriggers
- 10' (3 m) A-Frame Rear Stabilizer
- 2-Speed Planetary Hoist with Grooved Drum and Negative Draft Flange
- Load Sensing Systems with Digital Display and Overload Shutdown
- Radio ATB
- Rugged, Weatherproof Electrical System with Circuit Status LEDs
- Removable Behind Cab Boom Rests on Tractor Mounts
- System Pressure Gauge
- Clamp-On Mounting
- Manitex UPTIME Comprehensive Support



# series 2201

## BOOM TRUCKS

## product guide

# series 2201

## GENERAL SPECIFICATIONS

### BOOM

**Booms** - Inverted T-cross section, 4-section telescoping type, extended and retracted proportionally by a double acting hydraulic cylinder and cable-crowd system. Easily replaceable and adjustable high-density nylon slide pads.

- 2281 - 4-Section 21'6" to 81' boom, 2-Section 24' to 41' jib
- 2277 - 3-Section 29'6" to 77' boom, 2-Section 29' to 52' jib
- 2262 - 3-Section 24' to 62' boom, 2-Section 24' to 42' jib
- 2250 - 3-Section 20' to 50' boom, 2-Section 20' to 34' jib

**Quick Reeve Boom Point** - Two 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 9.5° below horizontal to 80.5° 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 300 fpm (91,4 mpm). Maximum theoretical bottom-layer line pull 11,500 lb (5 216 kg). Two-speed planetary reducer. Wet multi-disc internal brake is spring applied, pressure-released.

**Wire Rope** - 300' (91,4 m) of 9/16" (16 mm) 6 x 25 EIPS IWRC.

### SWING SYSTEM

Externally mounted, double-reduction planetary driven by hydraulic motor. Maximum theoretical swing speed 1.5 rpm. Spring-applied, pressure-released parking brake. Ball-bearing swing circle with external gear.

372° non-continuous rotation.

### OUTRIGGERS

A-frame link type with double-acting hydraulic cylinders operated independently for precise leveling.

Bubble level located near outrigger controls.

### STABILIZERS

A-frame, 10' extension, operated independently for precise leveling.

### 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 holder, load chart, and range diagram.

### HYDRAULICS

**Hydraulic System** - A 3-section gear pump direct-mounted to power take-off on truck transmission provides 32 gpm (133 lpm) to the hoist, 8 gpm (30 lpm) to the swing circuit and 21 gpm to the other crane functions. 70-gallon baffled reservoir includes suction ball valve with strainer and two 25-micron filters in the return line. Use of SAE o-ring and face seal o-ring hydraulic fittings throughout system.

### WARNING SYSTEMS

**Hydraulic Capacity Alert System (HYCAS)** - Hydraulically senses boom hoist cylinder pressure, audio warning indicates overload condition and overload shutoff feature prevents continuing overload. This system is standard on this crane series.

**Load Moment Indicator (LMI)** - CAN bus system maximize expansion capabilities. Senses boom hoist cylinder pressure, boom length and boom angle. Features an internal boom length cable. For model 2281 only.

Audio-visual warning indicates overload condition and overload shutoff feature prevents continuing overload. Operator can access all load conditions via display at the operator station.

**Radio Anti-Two-Block System** - Audible warning and shutoff functions prevent hook from contacting boom point. Wireless system minimizes down time typically associated with damaged cables in wired systems.

**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 enclosure includes power in relays and circuit status LEDs. Designed to withstand high pressure washing and varying climates.

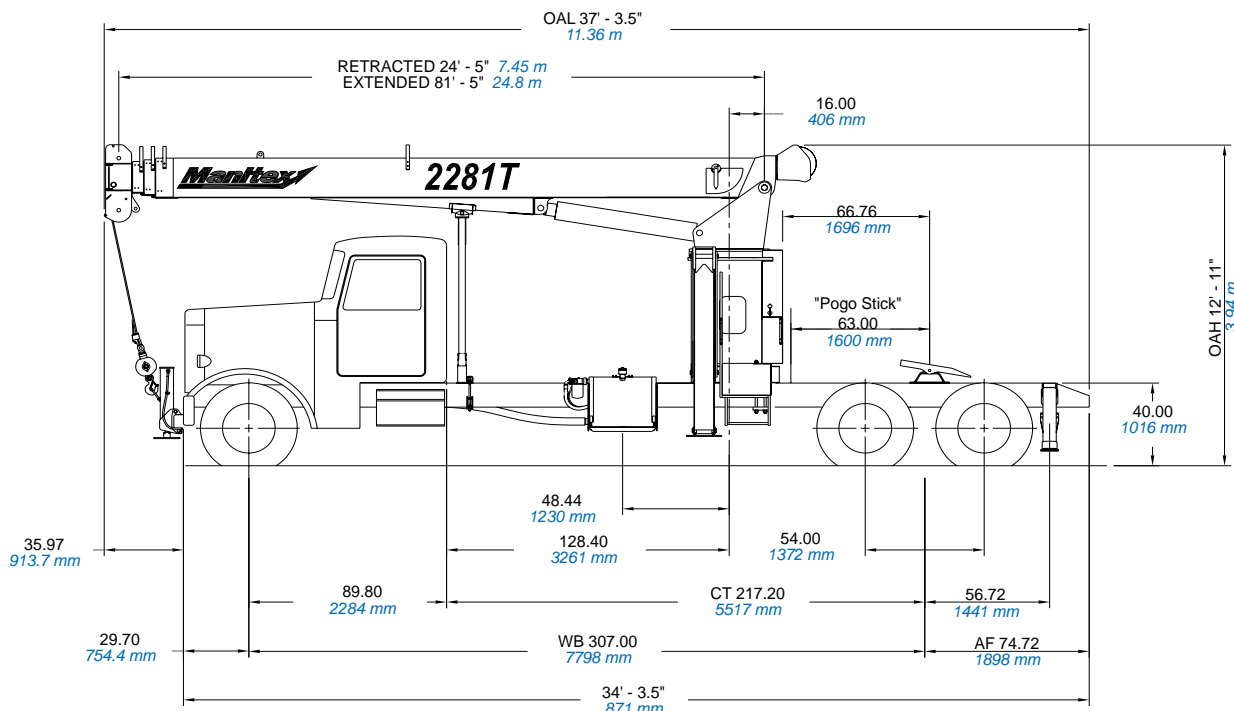
**Design/Welding** - Design conforms to ANSI B30.5. Welding conforms to AWS D1.1. Tested to SAE 1063 and SAE 765.

**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.



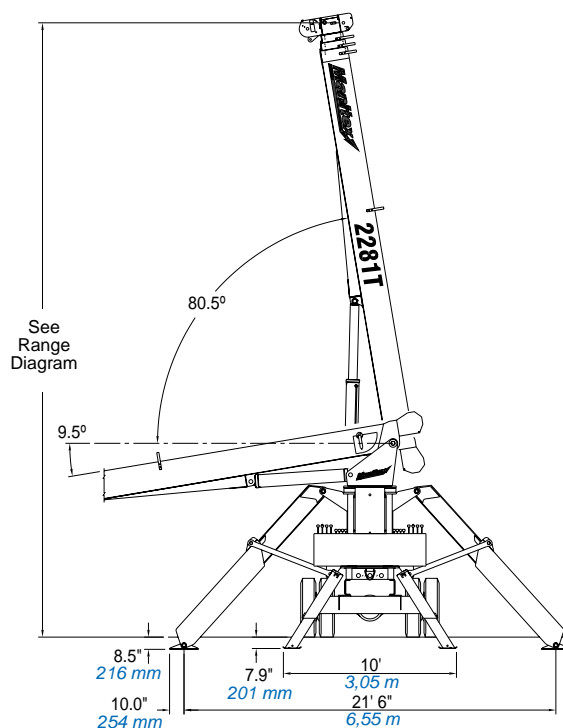


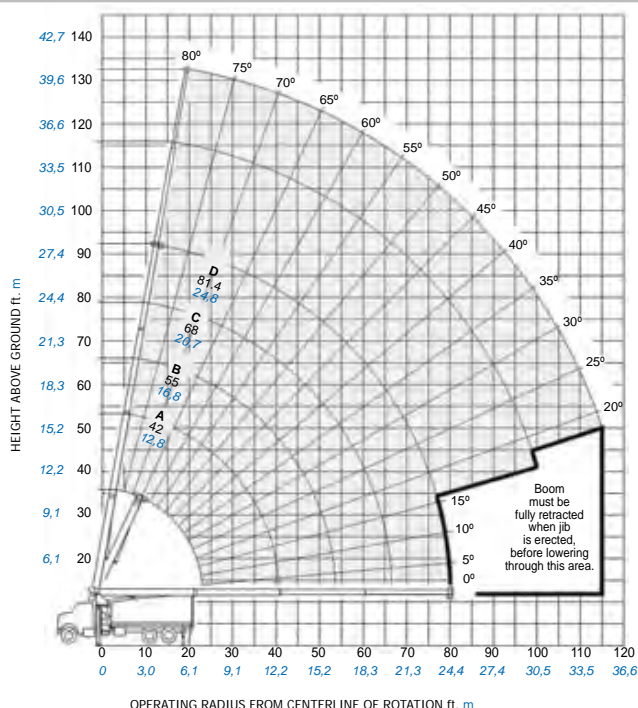
CHASSIS DATA	2281C	All Tractor Mounts
Wheelbase (WB)	292" (7 416 mm)	292" (7 416 mm)
Cab to Tandem (CT)	228" (5 791 mm)	228" (5 791 mm)
After Frame (AF)	70" (1 778 mm)	70" (1 778 mm)
Frame Section Modulus	20 in <sup>3</sup> 110,000 psi 758 423 kPa	30 in <sup>3</sup> 110,000 psi 758 423 kPa
Front Axle Gross Weight Rating	16,000 lb (7 257 kg)	20,000 lb (9 072 kg)
Rear Axle Gross Weight Rating	34,000 lb (15 422 kg)	40,000 lb (18 144 kg)
Minimum Truck Axle Weight - Front*	7,100 lb (3 221 kg)	consult factory
Minimum Truck Axle Weight - Back*	7,400 lb (3 357 kg)	consult factory
Nominal Frame Width	34" (864 mm)	34" (864 mm)

\* 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	2250C/T	2262C/T	2277C/T	2281C/T
Configuration	Boom 50' (15,2 m)	Boom 62' (18,9 m)	Boom 77' (23,5 m)	Boom 81' (24,7 m)
Extended Boom	61' 6" (18,7 m)	73' 4" (22,3 m)	88' 2" (26,9 m)	92' 6" (28,2 m)
Fixed or Retracted Jib	81' 11" (25 m)	29' 8" (9,0 m)	117' 5" (35,8 m)	116' 5" (35,5 m)
Extended Jib	95' 8" (29,2 m)	115' 5" (35,6 m)	140' 1" (42,7 m)	133' 2" (40,6 m)

WEIGHTS	2250C/T	2262C/T	2277C/T	2281C/T
Total Crane - Standard	15,445 lb (7 006 kg)	16,056 lb (7 283 kg)	16,870 lb (7 652 kg)	17,163 lb (7 785 kg)
Tractor Subframe	(2,015 lb) (914 kg)	(2,015 lb) (914 kg)	(2,015 lb) (914 kg)	(2,015 lb) (914 kg)
18' (5,49 m) Flat Bed*	-	1,550 lb (703 kg)	-	-
22' (6,7 m) Flat Bed*	-	-	1,890 lb (857 kg)	-
Telescopic Jib	939.2 lb (426 kg)	1085 lb (492 kg)	1318 lb (598 kg)	827 lb (375 kg)
Fixed JIB	615 lb (279 kg)	815 lb (370 kg)	857 lb (389 kg)	542 lb (246 kg)





### FULLY EXTENDED OUTRIGGER SPREAD: MODEL 2281C/T

#### MAIN BOOM LOAD RATINGS

Operating Radius	Boom Length		A		B		C		D	
	24.4 Feet 7.44 Meters		42 Feet 12.80 Meters		55 Feet 16.76 Meters		68 Feet 20.73 Meters		81.4 Feet 24.81 Meters	
Feet	Meters	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.	lb.
5	1,52	78° 44,000	19958							
8	2,44	70° 35,150	15944							
10	3,05	65° 29,700	13472	76° 14,500	6577					
12	3,65	60° 24,640	11177	74° 14,500	6577	78° 14,500	6577			
14	4,27	54° 20,870	9466	71° 14,500	6577	76° 14,500	6577	80° 13,050	5919	
17	5,18	44° 16,830	7634	66° 14,500	6577	73° 14,500	6577	77° 11,700	5307	80° 9,200
20	6,10	32° 13,940	6323	62° 14,270	6473	70° 13,430	6092	75° 10,550	4785	78° 8,500
25	7,62			54° 10,990	4985	64° 11,000	4990	70° 9,000	4082	75° 7,550
30	9,14			44° 8,780	3983	58° 8,880	4028	66° 8,120	3683	71° 6,640
35	10,67			32° 7,180	3257	51° 7,290	3307	61° 7,120	3230	67° 5,880
40	12,19			13° 5,620	2549	44° 5,770	2617	56° 5,840	2649	63° 5,260
45	13,72					35° 4,650	2190	50° 4,720	2141	59° 4,700
50	15,24					24° 3,800	1724	44° 3,880	1760	55° 3,930
55	16,76					9° 2,940	1334	37° 3,230	1465	50° 3,270
60	18,29							28° 2,700	1225	45° 2,750
65	19,81							15° 2,260	1025	39° 2,320
70	21,34									32° 1,960
75	22,86									24° 1,650
80	24,38									3° 1,380
85	25,91									
90	27,43									
95	28,96									
100	30,48									
105	32,00									
110	33,53									
115	35,05									

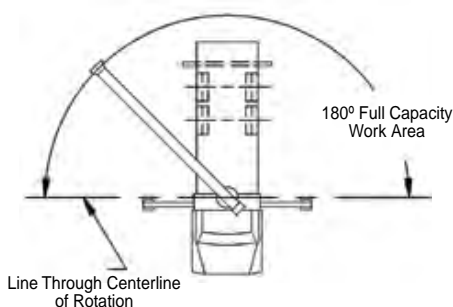
#### JIB LOAD RATINGS

Fixed Jib		Telescopic Jib			
24 Feet 7,32 Meters		24 Feet 7,32 Meters		41 Feet 12,49 Meters	
lb.	kg.	lb.	kg.	lb.	kg.
80° 4,650	2109	80° 4,450	2018		
78° 4,360	1978	78° 4,160	1887	80° 3,000	1361
76° 3,900	1769	76° 3,700	1678	78° 2,740	1243
73° 3,500	1588	73° 3,290	1492	76° 2,490	1129
70° 3,160	1433	70° 2,940	1334	73° 2,260	1025
67° 2,850	1293	67° 2,640	1197	70° 2,070	939
64° 2,590	1175	64° 2,370	1075	69° 1,900	862
61° 2,370	1075	61° 2,140	971	66° 1,730	785
58° 2,170	984	58° 1,950	885	64° 1,580	717
55° 2,000	907	55° 1,770	803	61° 1,430	649
51° 1,840	835	51° 1,620	735	58° 1,310	594
47° 1,710	776	47° 1,470	667	55° 1,210	549
43° 1,490	676	43° 1,260	572	52° 1,110	503
39° 1,260	572	39° 1,030	467	49° 1,020	463
34° 1,070	485	34° 830	376	46° 940	426
27° 890	404	27° 650	295	42° 870	395
19° 730	331	19° 500	227	38° 790	358
				34° 650	295
				29° 520	236
				22° 410	186

Meets ANSI B30.5 Requirements - Do not operate crane or accessories within 10' (3,05 m) 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

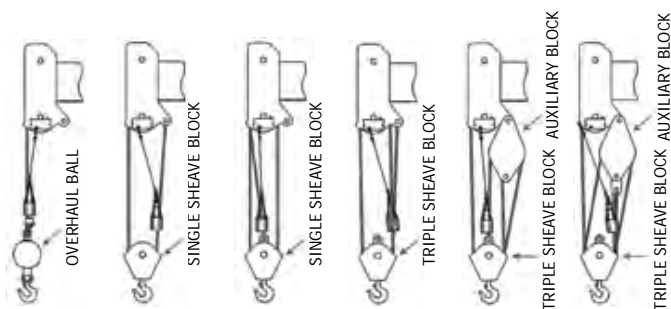


## DEDUCTIONS

Auxiliary Block	50 lb 23 kg
Overhaul Ball	See Overhaul Ball MFGR. Nameplate
Load Block	See Block MFGR. Nameplate
Hose Reel	160 lb 73 kg
Swing Around Jib	See Load Chart

## WEIGHTS

1 Part Line   2 Part Line   3 Part Line   4 Part Line   5 Part Line   6 Part Line



8,500 lb 3 856 kg	17,000 lb 7 711 kg	25,500 lb 11 567 kg	34,000 lb 15 422 kg	42,500 lb 19 278 kg	51,000 lb 23 134 kg
7,400 lb 3 357 kg	14,800 lb 6 713 kg	22,200 lb 10 070 kg	29,600 lb 13 427 kg	37,000 lb 16 783 kg	44,400 lb 20 140 kg

## WARNING

Anti-two-block system must be in good operating condition before operating crane.

Refer to the owner's manual.

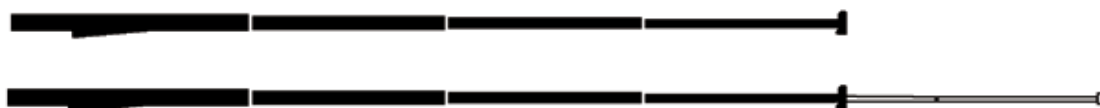
Keep at least three wraps of loadline on the drum at all times.

9/16" 6 x 25 IWRC  
(3.5:1 SF) - 29,750 lb  
min. breaking strength

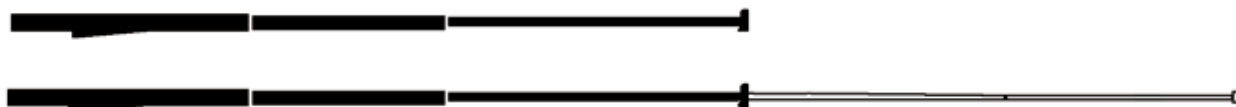
9/16" rotation resistant  
(5.0:1 SF) - 37,000 lb  
min. breaking strength

## BOOM AND JIB COMBINATIONS

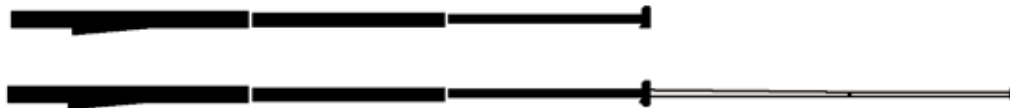
2281C/T   81'   4-Section Boom   24' - 41' 2 - Section Jib



2277C/T   77'   3-Section Boom   29' - 52' 2 - Section Jib



2262C/T   62'   3-Section Boom   24' - 42' 2 - Section Jib



2250C/T   50'   3-Section Boom   20' - 34' 2 - Section Jib



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***UPTime***

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- Utilizes the efficiency of UPNet online parts order system.
- Relies on Manitex's UPTrak support tracking system for performance analysis and resource allocation.
- Features REMan, Manitex's cost effective rebuild/exchange program.
- Provides expert service technicians for troubleshooting and site visits.
- Mandates training; at our facility and yours. It includes coordinated support from all component suppliers.
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10700 Bigge Avenue  
San Leandro, CA 94577  
Phone: (888) 337-BIGGE or (510) 638-8100  
Fax: (510) 639-4053  
Email: info@bigge.com  
Web site: www.bigge.com



Manitex  
3000 South Austin Avenue  
Georgetown, TX, USA 78627-1609  
Telephone 512-942-3000  
Facsimile 512-863-3776  
www.manitex.com

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