



# series 2802

## BOOM TRUCKS



### features

- 28 Ton (24,4 mton) Capacity
- 4-Section 102' (31,0 m) Proportional Boom
- 4-Section 92' (28.0 m) Proportional Boom
- 2-Section 26' (7,9 m) to 46' (14,0 m) Telescopic Jib
- 157' (47,85 m) Maximum Tip Height with Telescopic Jib
- 111' (33,83 m) Maximum Main Boom Tip Height
- 19' 8", (6 m) Out-and-Down Outriggers at Full Extension
- Intermediate and Fully Extended Outrigger Charts are Standard
- 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
- Continuous Rotation
- Clamp-On Mounting
- Aeroquip STC (Snap to Connect) Hydraulic Fittings
- Manitex UPTIME Comprehensive Support



# product guide

# series 2802

## 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. **28102S** – 4-Section 28' 0" (8,5 m) to 92' 0" (28,0 m). 2-Section 26' (7,9 m) to 46' (14,0 m) jib.

**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 9P below horizontal to 80P 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 247 fpm (75,3 mpm). Maximum theoretical bottom-layer line pull 11,500 lb (5 227 kg). Two-speed planetary reducer. Spring applied, pressure-released internal brake.

**Wire Rope** – 335' (102,1 m) of 9/16" (14,3 mm) diameter 6 X 25 EIPS IWRC.

### SWING SYSTEM

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

### OUTRIGGERS

Fully extended, intermediate extension and fully retracted positions. Out-and-down type with double-acting hydraulic cylinders operated independently for precise leveling. Bubble level located near outrigger controls.

### MOUNTING

**Mounting** – Lower frame is mounted to chassis by threaded rods and clamp plates. No welding to truck chassis is required. 12" (305 mm) diameter.

**Rear Underride Protection** – Supplied on factory mounted cranes. Fabricated structure mounted under rear of carrier. Complies with Bureau of Motor Carrier Safety Standard 393.86.

**Lower Frame** – Torsion resistant, rigid 4-plate design with integrated outrigger and pedestal.

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

### CONTROL SYSTEM

Single operator platform and seat mounted to turret. Four single-axis crane controls, bubble level and system pressure gauge arranged to ANSI B30.5 standards. The operator station includes engine start/stop, air foot throttle, signal horn, load moment indicator console, boom-angle indicator, load chart and range diagram. Optional pilot operated controls not available on units configured with radio remote controls.

### HYDRAULICS

**Hydraulic System** – A 3-section vane pump direct-mounted to power take-off on truck transmission provides 32 gpm to the hoist, 21 gpm to the boom hoist and telescope circuit, and 8 gpm (80 lpm) to the swing and outrigger circuit. 70-gallon (265-liter) baffled reservoir with strainer and 25-micron filter in the return lines. Ball-type shutoff valve and strainer are provided in suction line. All fittings are ORS type and SAE. Aeroquip STC (Snap-to-Connect) on all hoses up to 1" virtually eliminates leaks.

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

### WARNING SYSTEMS

**Load Moment Indicator (LMI)** – 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 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.

**Back-Up Alarm** – 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.

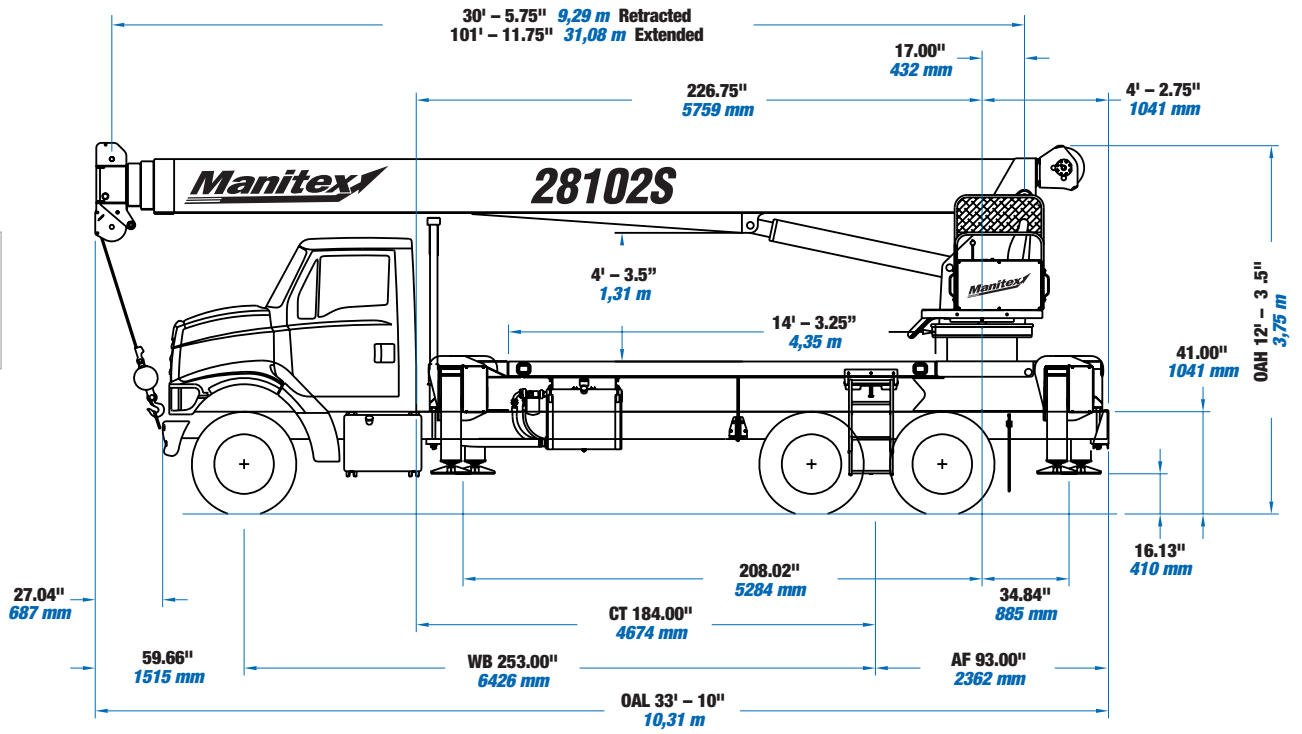
**Design/Welding** – Design conforms to ANSI B30.5. Welding conforms to AWS D1.1. Tested to SAE 1063 and SAE 765.

**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.

- OAH Overall Height
- CT Cab to Tandem
- CA Cab to Axle
- WB Wheel Base
- OAL Overall Length
- BBC Bumper to Back of Cab
- AF Afterframe

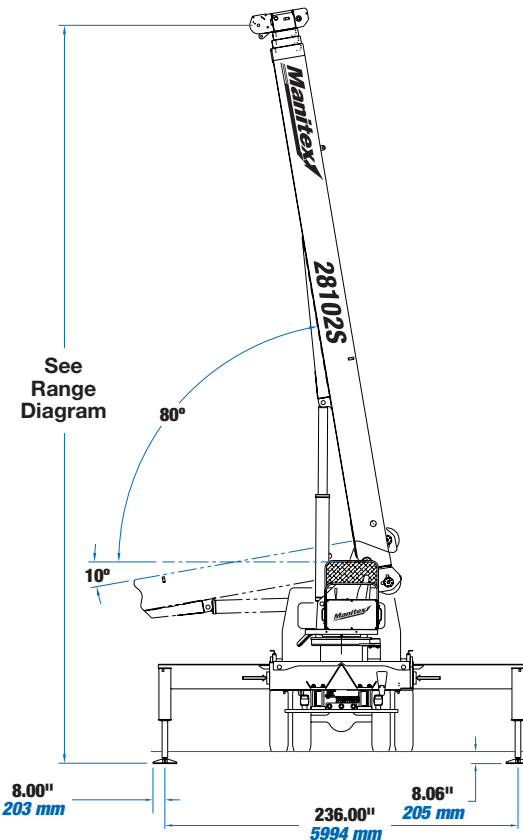


CHASSIS DATA	28102S/2892S
Wheelbase (WB)	253" 6 426 mm
Cab to Tandem (CT)	184" 4 674 mm
After Frame (AF)	93" 2 362 mm
Frame Section Modulus at 180° Area of Operation	20.0 in <sup>3</sup> 110,000 psi 758 422 kPa
Frame Section Modulus at 360° of Operation	20.0 in <sup>3</sup> 110,000 psi 758 422 kPa
Front Axle Gross Weight Rating	18,000 lb 8 182 kg
Rear Axle Gross Weight Rating	34,000 lb 15 455 kg
Minimum Truck Axle Weight - Front**	8,400 lb 3 810 kg
Minimum Truck Axle Weight - Back**	8,300 lb 3 773 kg
Nominal Frame Width	34" 864 mm

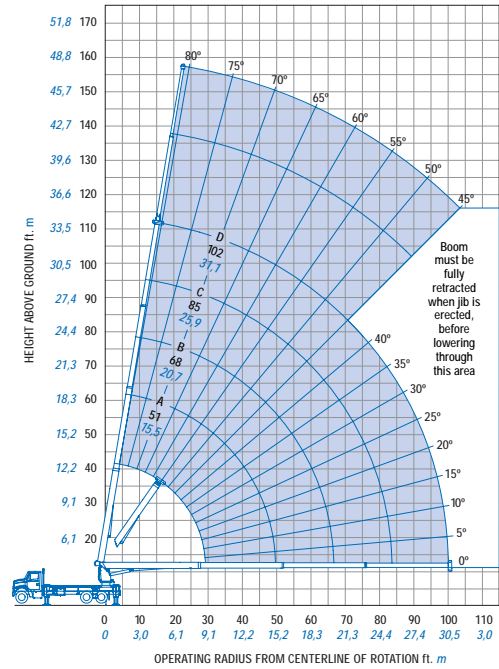
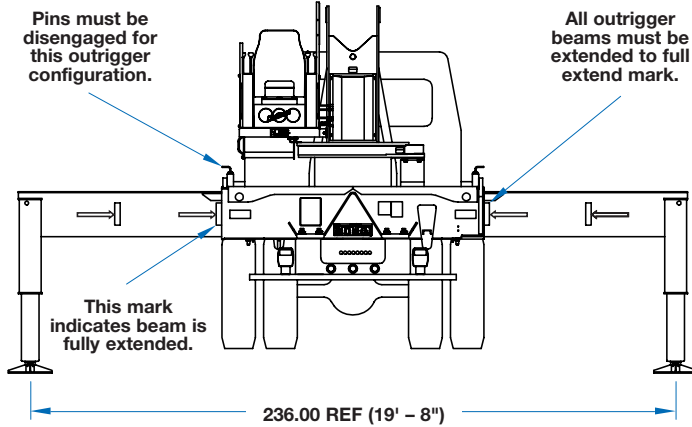
\*Frame section modulus at 360° area of operation requires front bumper stabilizer.  
\*\*Minimum chassis weight is required to meet 85% stability requirements.  
Chassis data is general - not for engineering. Some dimensions depend on truck selection.

MAXIMUM TIP HEIGHT	28102S	2892S
Configuration	Boom 102' 31,1 m	Boom 92' 28 m
Extended Boom	111' 9" 34,1 m	101' 9" 31 m
Fixed or Retracted Jib	138' 42,1 m	128' 39 m
Extended Jib	157' 9" 48.1 m	147' 9" 45 m

WEIGHTS	28102S	2892S
Cab Alone	575 lb 261 kg	575 lb 261 kg
Crane (Without Cab)	23,100 lb 10 478 kg	22,392 lb 10 157 kg
14' (4,27 m) Flat Bed	1,260 lb 573 kg	1,260 lb 572 kg
26' (7,92 m) Fixed Length Jib	832 lb 378 kg	832 lb 377 kg
26' (7,92 m) to 46' (14,02 m) Telescopic Jib	1,226 lb 557 kg	1,226 lb 557 kg



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

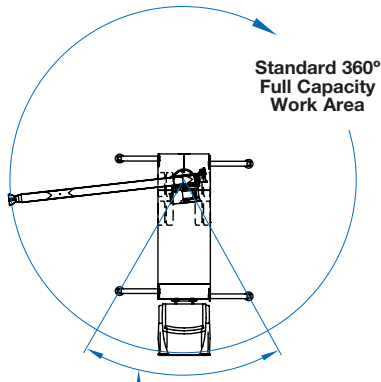


FULLY EXTENDED OUTRIGGER SPREAD: MODEL 28102S

MAIN BOOM LOAD RATINGS											JIB LOAD RATINGS						
Operating Radius	Boom Length		A		B		C		D		Fixed Jib		Telescopic Jib				
	30.5 Feet 9,29 Meters		51 Feet 15,54 Meters		68 Feet 20,72 Meters		85 Feet 25,90 Meters		102 Feet 31,08 Meters		26 Feet 7,92 Meters		26 Feet 7,92 Meters		46 Feet 14,02 Meters		
Feet Meters	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	lb. kg.	
5 1,52	80° 56,000 25 454																
8 2,43	75° 39,690 18 040																
10 4,04	71° 33,510 15 231	79 22,500 10 227															
12 3,65	67° 29,120 13 236	77 22,500 10 227															
15 4,57	60° 23,260 10 572	73 21,710 9 868	79 20,590 9 359														
20 6,09	48° 16,530 7 513	67 16,910 7 686	74 15,830 7 195	78 14,420 6 544	81 10,500 4 772												
25 7,62	33° 12,410 5 640	61 12,870 5 850	70 12,840 5 836	75 12,180 5 536	78 9,650 4 386	81 5,300 2 409	81 5,100 2 318										
30 9,14		54 10,110 4 595	65 10,260 4 663	72 10,140 4 609	76 8,670 3 940	79 5,300 2 409	79 5,100 2 318	81 3,050 1 386									
35 10,66		47 8,130 3 695	60 8,280 3 763	68 8,360 3 800	73 7,670 3 486	77 4,990 2 268	77 4,730 2 150	79 4,000 1 386									
40 12,19		38 6,630 3 013	55 6,790 3 086	64 6,870 3 122	70 6,490 2 950	75 4,580 2 081	75 4,310 1 959	77 3,050 1 386									
45 13,71		27 5,450 2 477	50 5,610 2 550	60 5,690 2 709	66 5,590 2 540	72 4,190 1 904	72 3,910 1 777	76 3,050 1 386									
50 15,24			43 4,670 2 122	56 4,750 2 159	63 4,800 2 181	70 3,830 1 740	70 3,550 1 613	74 2,910 1 322									
55 16,76			36 3,820 2 122	51 3,920 2 781	60 3,980 1 809	68 3,480 1 581	68 3,110 1 413	72 2,740 1 245									
60 18,28			28 3,110 1 413	47 3,220 1 463	56 3,280 1 409	65 3,020 1 372	65 2,670 1 213	70 2,590 1 177									
65 19,81			15 2,520 1 145	41 2,640 1 200	53 2,700 1 227	63 2,630 1 195	63 2,280 1 036	68 2,410 1 095									
70 21,33				36 2,150 977	49 2,220 1 009	60 2,310 1 050	60 1,950 886	66 2,130 968									
75 22,86				29 1,740 790	45 1,810 822	57 1,910 868	57 1,620 736	63 1,880 854									
80 24,38				19 1,390 631	40 1,460 663	54 1,560 709	54 1,270 577	61 1,610 731									
85 25,90					36 1,150 522	51 1,250 568	51 960 436	59 1,400 636									
90 27,43					29 880 400	48 990 450	48 990 313	56 1,150 522									
95 28,96					22 640 290	45 750 340		54 910 413									
100 30,48								51 700 318									
105 32,00								48 510 231									
	490 222	290 131	220 100	180 81	150 68	Deductions: Stowed Fixed Jib											
	900 331	440 200	330 150	260 180	220 100	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



### WARNING

The front tires must be in contact with the ground and the machine level when operating in this area.

## DEDUCTIONS

Auxiliary Block	50 lb 22.72 kg
Auxiliary Block	50 lb 22.72 kg
Load Block	See block manufacturer nameplate
Overhaul Ball	See overhaul ball manufacturer nameplate
Hose Reel	140 lb 63.64 kg
Swing Around Jib* (Stowed)	See load rating chart

## WEIGHTS

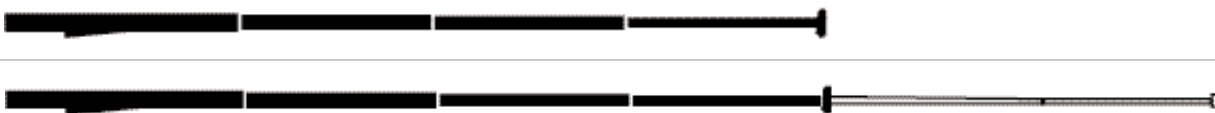
1 Part Line	2 Part Line	3 Part Line	4 Part Line	5 Part Line	6 Part Line	7 Part Line	WARNING
							<p>Anti-two-block system must be in good operating condition before operating crane. Refer to the owner's manual. Keep at least three wraps of load line on the drum at all times.</p> <p>.5625" rot resistant (5.0:1 SF) - 37000 lb. min. breaking strength</p> <p>.5625" 6 x 25 IWRC (3.5:1 SF) - 29750 lb. min. breaking strength</p>
8,500 lb 3 864 kg	17,000 lb 7 727 kg	25,500 lb 11 591 kg	34,000 lb 15 455 kg	42,500 lb 19 318 kg	51,000 lb 23 182 kg	56,000 lb 25 455 kg	
7,400 lb 3 364 kg	14,800 lb 6 727 kg	22,200 lb 10 091 kg	29,600 lb 13 455 kg	37,000 lb 16 818 kg	44,400 lb 20 182 kg	51,800 lb 23 545 kg	

## BOOM AND JIB COMBINATIONS

28102S      102'      4 Section      Boom      26' - 46' 2 - Section Jib



2892S      92'      4 Section      Boom      26' - 46' 2 - Section Jib



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

***UPTime*** 

- Includes 24-7-365 parts shipments.
- 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.
- Involves every Manitex team member in the support of every Manitex customer.

**What does UPTime mean to Manitex customers?**

***UPTime*** means reliability.

***UPTime*** means utilization.

***UPTime*** means profitability.



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