GUAY

series 2801
BOOM TRUCKS

Model 2892C

Manitex
MOVING FORWARD FASTER

features

- 28 Ton (24,4 mton) Capacity
- 4-Section 92' (28 m) Proportional Boom
- 3-Section 71' (21.6 m) Proportional Boom
- 149' 1" (45,4 m) Maximum Tip Height
- 103' (31,4 m) Maximum Main Boom Tip Height
- 2-Section 26' (7,9 m) to 46' (14 m) Jib
- 2-Speed Planetary Hoist with Grooved Drum and Negative Draft Flange
- Capacity Alert Warning System Audio/Visual with Overload Shutoff and Internal Boom Length Cable
- 21' 6" (6,6 m) A-Frame Outriggers
- 13' 11" (4,23 m) Out-and-Down Rear Stabilizers
- Rugged, Weatherproof Electrical System with Circuit Status LEDs
- Removable Boom Rest
- System Pressure Gauge
- Clamp-On Mounting
- Manitex UPTime Comprehensive Support



product guide

series 2801

GENERAL SPECIFICATIONS

BOOM

Booms - Inverted T-cross section, 4-section telescoping type, extended and retracted proportionally by double-acting hydraulic cylinder and cable-crowd system. Easily replaceable and adjustable high-density nylon slide pads.
2892C - 4-Section 28' (8.5 m) to 92' (28,0 m). Maximum main boom tip height 103' (31,4 m). 2-Section, 26' (7,9 m) to 46' (14,0 m) jib. Maximum tip height 149' 1" (45,4 m).
2871C - 3-Section 28' (8.5 m) to 71' (21,6 m). Maximum main boom tip height 82' (25 m).

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° 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

Maximum theoretical line speed 247 fpm (75,3 mpm). Maximum theoretical bottom-layer line pull 12,000 lb (5 443 kg). Two-speed planetary reducer. Spring-applied, pressure-released internal brake. Wet multi-disc internal brake is spring-applied, pressure-released.

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

Stabilizers - Underframe out-and-down type with double-acting hydraulic cylinders 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 - Torsion 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 of 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, 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 (145 lpm) to the hoist, 8 gpm (36 lpm) to the swing circuit and 21 gpm (95 lpm) to other crane functions. 70-gallon (318 liter) baffled reservoir includes suction ball valve with strainer and 25-micron filter 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

Overload Protection System - Senses boom hoist cylinder pressure, boom length and boom angle. Audio-visual warning indicates overload conditions and overload shutoff feature prevents continuing overload. Operator can access relative crane configuration and load conditions via display at the operator station. Upper and lower boom angle alarms can be set by the operator.

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

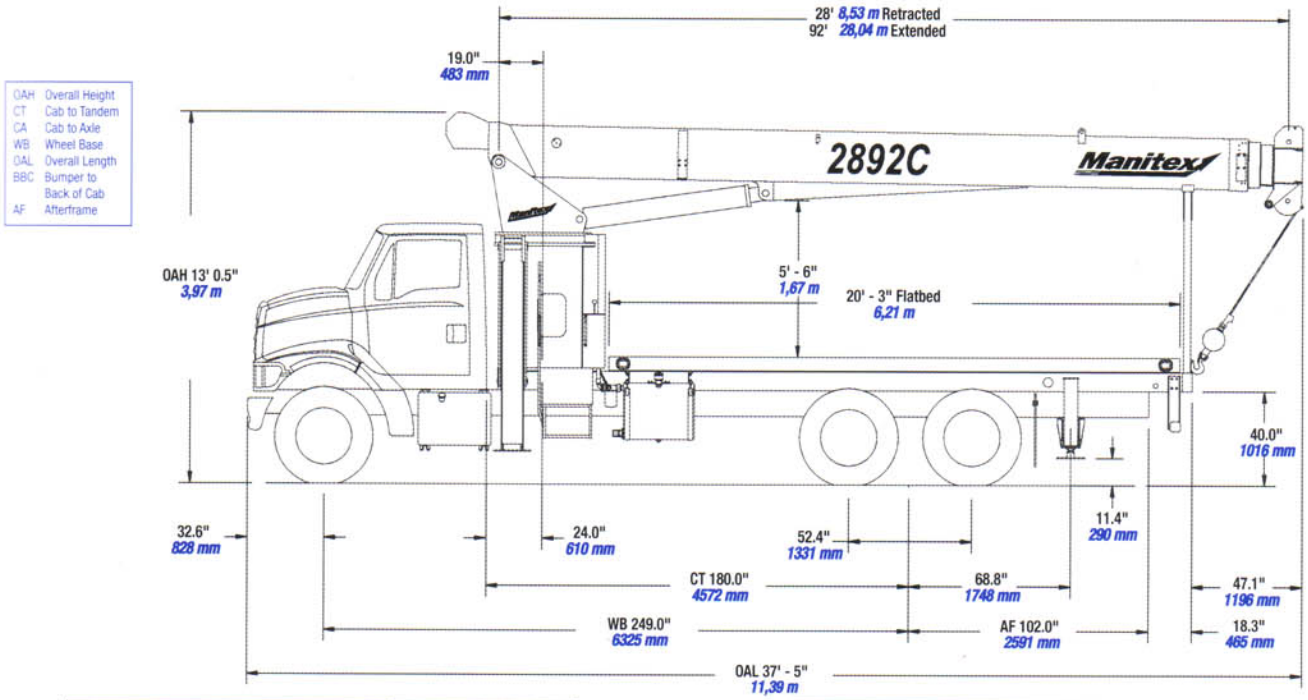
Electrical - State-of-the-art, weather-resistant components throughout. Hermetically sealed power in relays. Enclosure includes power in relays and circuit status LEDs. Designed to withstand high pressure washing and varying climates.

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.

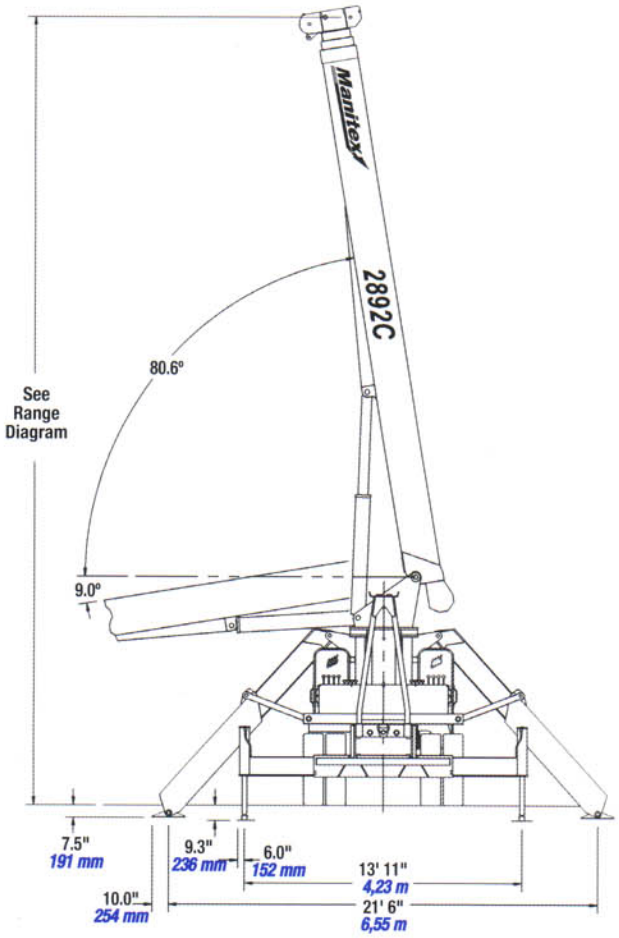


CHASSIS DATA	2892C
Wheelbase (WB)	249" *6 426 mm*
Cab to Tandem (CT)	180" *4 527 mm*
After Frame (AF)	102" *2 591 mm*
Frame Section Modulus	23.0 in^3 110,000 psi *758 422 kPa*
Front Axle Gross Weight Rating	16,000 lb *7 257 kg*
Rear Axle Gross Weight Rating	34,000 lb *15 422 kg*
Minimum Truck Axle Weight - Front*	8,000 lb *3 628 kg*
Minimum Truck Axle Weight - Back*	8300 lb *3 764 kg*
Nominal Frame Width	34" *664 mm*

*Minimum chassis weight is required to meet 85% stability requirements.
Chassis data is general - not for engineering. Some dimensions depend on truck selection.

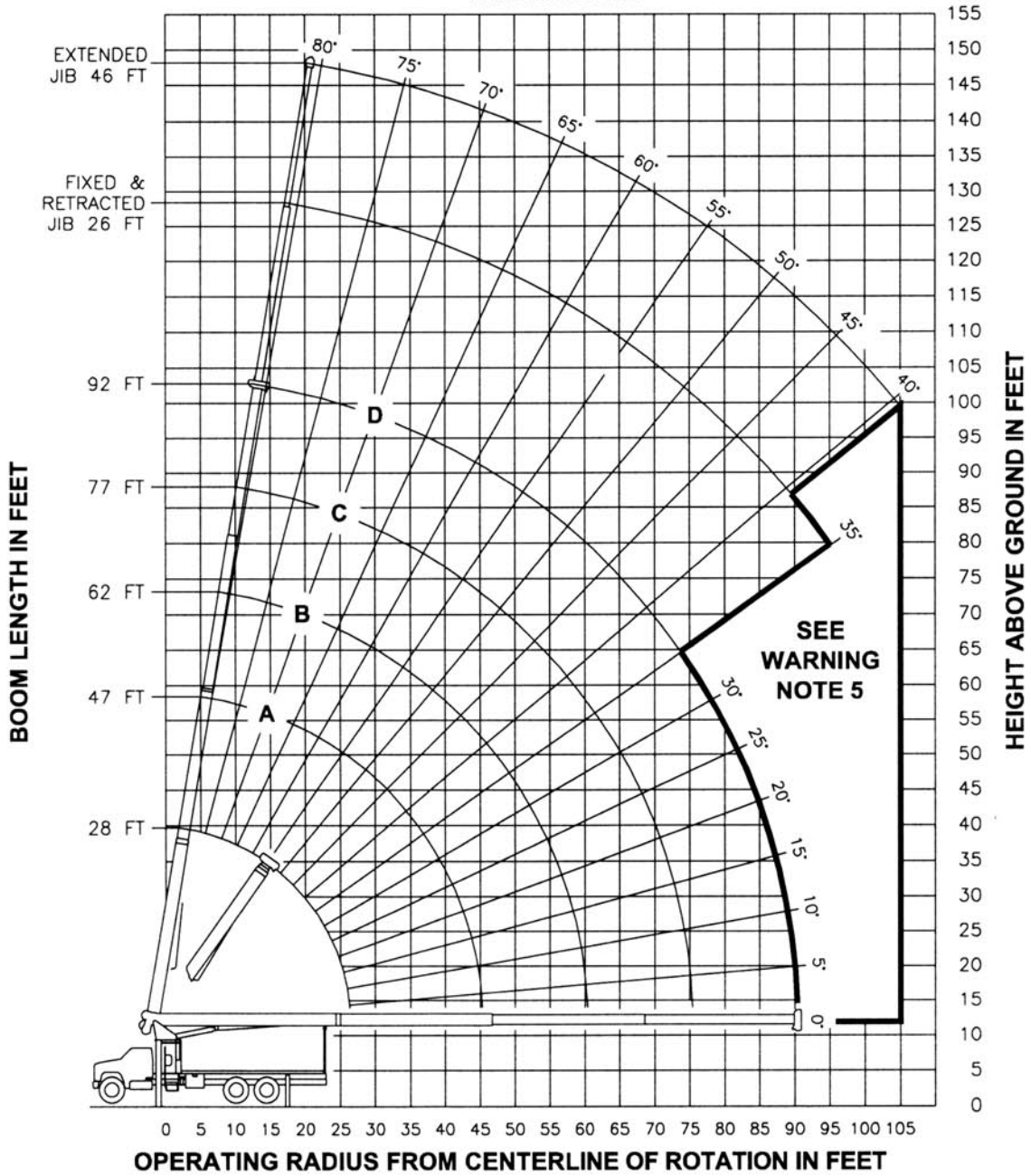
WEIGHTS	2892C
Total Crane - Standard	20,452 lb *9 292 kg*
Total Crane - Out-and-Down Outriggers (Out-and-Down outrigger configuration only available on LMI unit)	24,612 lb *11 184 kg*
20' *(6,10 m)* Flat Bed - Standard Outriggers	1,840 lb *835 kg*
22' *(6,71 m)* Flat Bed - Out-and-Down Outriggers	2,000 lb *907 kg*
26' *(7,93 m)* Fixed Length Jib	832 lb *377 kg*
26' *(7,92 m)* to 46' *(14,02 m)* Telescopic Jib	1,226 lb *556 kg*

MAXIMUM TIP HEIGHT	2892C
Configuration	Boom 92' *28,0 m*
Extended Boom	103' *31,4 m*
Fixed or Retracted Jib	129' 4" *39,4 m*
Extended Jib	149' *45,4 m*



MODÈLE 2892C-LMI

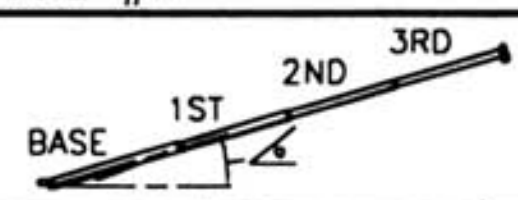
RANGE DIAGRAM



LMI OPERATING CODES			
SETTING	CRANE CONFIGURATION	SETTING	CRANE WITH PERSONNEL LIFTING PLATFORM
#1---	MAIN BOOM	#5---	PERSONNEL LIFTING PLATFORM ON MAIN BOOM
#2---	FIXED JIB	#6---	PERSONNEL LIFTING PLATFORM ON FIXED JIB
#3---	TELESCOPIC JIB–RETRACTED	#7---	PERSONNEL LIFTING PLATFORM ON TELESCOPIC JIB–RETRACTED
#4---	TELESCOPIC JIB–EXTENDED	#8---	PERSONNEL LIFTING PLATFORM ON TELESCOPIC JIB–EXTENDED

Manitex MODÈLE 2892C-LMI

LOAD RATINGS IN LBS WITH OUTRIGGERS AND STABILIZERS EXTENDED — LMI CODE #1



OPERATING RADIUS FT	LOADED BOOM ANGLE	BOOM LENGTH AND MARKER 28 FT	A ∠	A 47 FT	B ∠	B 62 FT	C ∠	C 77 FT	D ∠	D 92 FT
5	79	56000								
8	72	41560								
10	68	35030	78	20500						
12	63	30330	75	20500	79	20500				
15	56	25230	71	20500	77	20500	80	15900		
20	42	19300	65	17780	72	16780	76	13540	79	10200
25	21	13760	58	14460	67	13610	73	11710	76	9290
30			50	11810	62	11390	69	10160	73	8330
35			41	8800	56	8960	64	8830	70	7320
40			30	6800	50	6950	60	7040	66	6460
45			10	5350	43	5530	55	5610	63	5660
50					36	4460	51	4540	59	4590
55					26	3620	45	3710	55	3760
60					9	2940	39	3050	51	3100
65							33	2500	47	2550
70							24	2050	42	2100
75							8	1650	36	1720
80									30	1390
85									22	1100
90									8	840
95										
100										
105										
DEDUCTIONS FOR STOWED FIXED JIB	460 LBS.		270 LBS.		210 LBS.		170 LBS.		140 LBS.	
DEDUCTIONS FOR STOWED TELESCOPIC JIB	690 LBS.		410 LBS.		310 LBS.		250 LBS.		210 LBS.	

JIB LOAD RATINGS WITH OUTRIGGERS AND STABILIZERS EXTENDED

OPERATING RADIUS FT	FIXED JIB — LMI CODE #2 — LOADED BOOM ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4 — 26 FT	TELESCOPIC JIB — LMI CODE #3 — LOADED BOOM ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4 — 26 FT	TELESCOPIC JIB — LMI CODE #4 — LOADED BOOM ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4 — 46 FT
10						
12						
15						
20						
25	79	5600	79	5400		
30	77	5300	77	5100	79	3400
35	75	4960	75	4700	77	3300
40	72	4490	72	4230	76	3200
45	70	4080	70	3820	74	3040
50	67	3710	67	3440	72	2800
55	65	3380	65	3100	69	2630
60	62	3080	62	2810	67	2480
65	59	2690	59	2400	65	2310
70	56	2230	56	1940	63	2110
75	53	1850	53	1560	60	1940
80	50	1510	50	1220	58	1680
85	46	1230	46	940	55	1390
90	42	980	42	680	52	1140
95	38	750	38	460	49	910
100					46	710
105					43	530

DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES SUPPLIED BY MANITEX

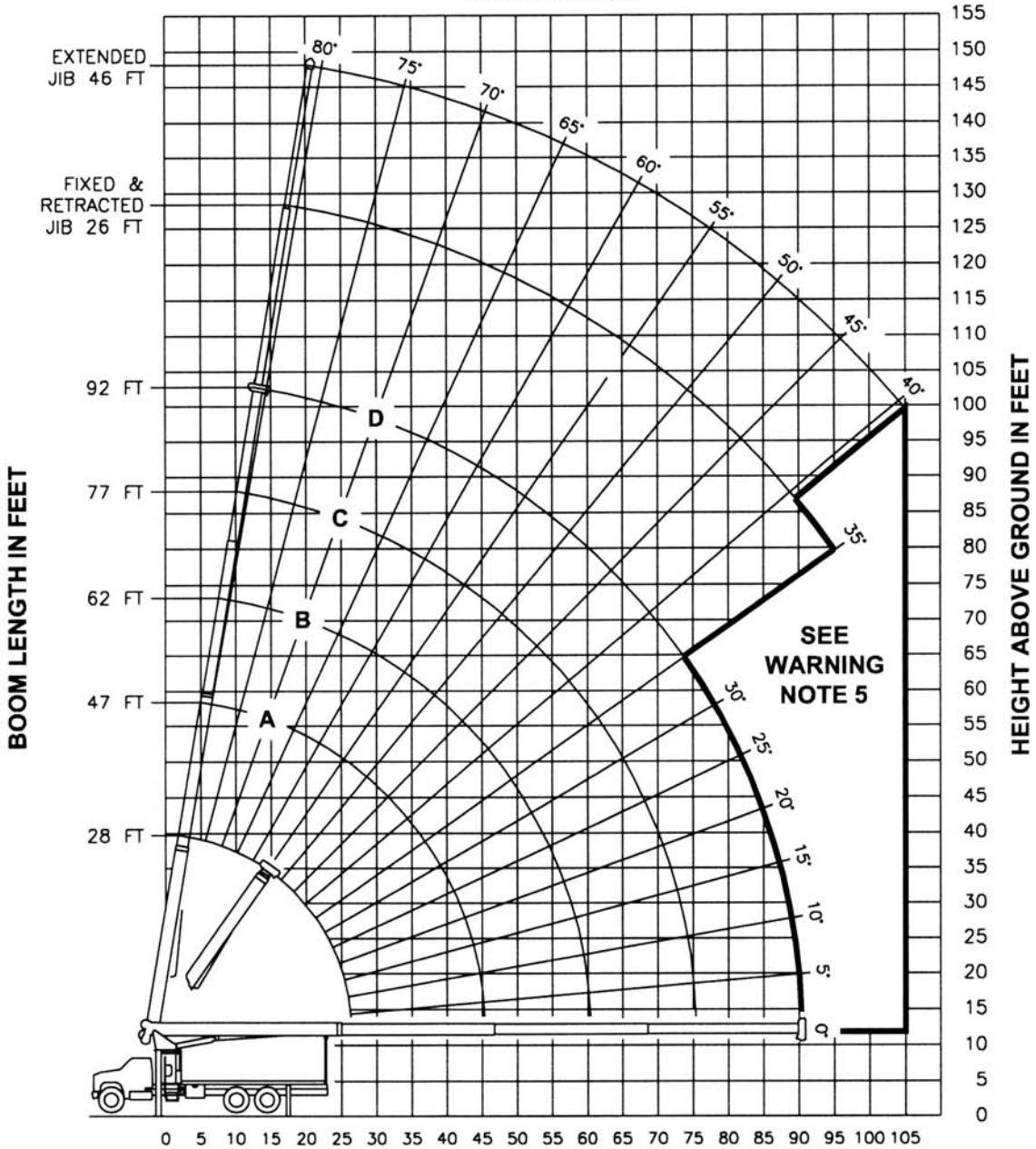
AUXILIARY BLOCK — 50 LBS
AUXILIARY SHEAVE — 50 LBS
OVERHAUL BALL — — — — — — — — — — — — — — SEE OVERHAUL BALL MFGR. NAMEPLATE
LOAD BLOCK — SEE BLOCK MFGR. NAMEPLATE
HOSE REEL — 140 LBS
SWING AROUND JIB — SEE LOAD CHART

WARNING

LIFTING OFF THE MAIN BOOM POINT WHILE THE SWING AROUND JIB IS ERECTED IS NOT INTENDED OR APPROVED.

MODÈLE
2892C-HYCAS

RANGE DIAGRAM



OPERATING RADIUS FROM CENTERLINE OF ROTATION IN FEET

MODÈLE 2892C-HYCAS

LOAD RATINGS IN LBS WITH OUTRIGGERS AND STABILIZERS EXTENDED

OPERATING RADIUS FT	LOADED BOOM ANGLE / BOOM LENGTH AND MARKER		A		B		C		D	
	∠°	28 FT	∠°	47 FT	∠°	62 FT	∠°	77 FT	∠°	92 FT
5	79	56000								
8	73	40670								
10	69	34520	78	22500						
12	64	30130	76	21510	80	20400				
15	57	25430	72	17730	77	16660	80	15920		
20	43	20130	65	13720	72	12720	77	12030	79	10700
25	22	15630	58	11160	67	10240	73	9600	76	9120
30			50	9330	62	8530	69	7930	73	7460
35			41	7900	57	7240	65	6680	70	6250
40			30	6580	51	6230	60	5730	67	5330
45			11	4740	44	5380	56	4960	63	4580
50					36	4620	51	4330	59	3980
55					27	3760	46	3770	55	3470
60					10	2670	40	3170	51	3040
65							33	2610	47	2650
70							24	2140	42	2200
75							9	1430	37	1800
80									31	1460
85									23	1170
90										
95										
100										
105										
	460 LBS		270 LBS		210 LBS		170 LBS		140 LBS	
	690 LBS		410 LBS		310 LBS		250 LBS		210 LBS	

JIB LOAD RATINGS WITH OUTRIGGERS AND STABILIZERS EXTENDED

OPERATING RADIUS FT	LOADED BOOM ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4	LOADED BOOM ANG	JIB LENGTH FOR ALL BOOM LENGTHS SEE WARNING NOTE 4
	∠°	26 FT	∠°	46 FT
10				
12				
15				
20				
25	79	5400		
30	77	5100	79	3400
35	75	4700	77	3300
40	72	4230	76	3200
45	70	3630	74	3040
50	67	3060	72	2800
55	64	2580	69	2630
60	62	2180	67	2420
65	59	1830	65	2080
70	56	1530	62	1800
75	53	1260	60	1540
80	49	1020	57	1320
85	46	800	55	1110
90	42	580	52	930
95	38	380	49	750
100			46	600
105			43	440
	DEDUCTIONS FOR STOWED FIXED JIB			
	DEDUCTIONS FOR STOWED TELESCOPIC JIB			

DEDUCTIONS FROM RATED LOADS FOR LOAD HANDLING DEVICES SUPPLIED BY MANITEX

AUXILIARY BLOCK — 50 LBS
AUXILIARY SHEAVE — 50 LBS
OVERHAUL BALL — SEE OVERHAUL BALL MFGR. NAMEPLATE
LOAD BLOCK — SEE BLOCK MFGR. NAMEPLATE
HOSE REEL — 140 LBS
SWING AROUND JIB — SEE LOAD CHART

WARNING

LIFTING OFF THE MAIN BOOM POINT WHILE THE SWING AROUND JIB IS ERECTED IS NOT INTENDED OR APPROVED.

Manitex **MODÈLE 2892C**

WARNING

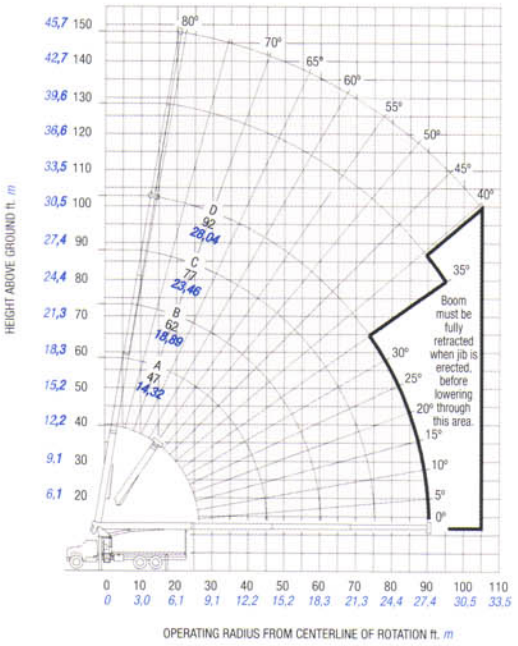
1. THE OPERATOR MUST READ AND UNDERSTAND THE OWNER'S MANUAL BEFORE OPERATING THIS CRANE.
2. POSITIONING OR OPERATION OF CRANE BEYOND AREAS SHOWN ON THIS CHART IS NOT INTENDED OR APPROVED EXCEPT WHERE SPECIFIED IN OWNER'S MANUAL.
3. LOADED BOOM ANGLES AT SPECIFIED BOOM LENGTHS GIVE ONLY AN APPROXIMATION OF THE OPERATING RADIUS. THE BOOM ANGLE BEFORE LOADING SHOULD BE GREATER TO ACCOUNT FOR DEFLECTIONS. DO NOT EXCEED THE OPERATING RADIUS FOR RATED LOADS.
4. THE OPERATING RADIUS SHOWN IN THE JIB 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.
5. BOOM MUST BE FULLY RETRACTED WHEN JIB IS ERECTED, BEFORE LOWERING BOOM THRU THIS AREA.
6. FOR BOOM ANGLES NOT SHOWN ON JIB LOAD RATING CHART, USE RATING OF NEXT LOWER BOOM ANGLE.
7. FOR BOOM LENGTHS NOT SHOWN, USE RATING OF NEXT SHORTER OR LONGER BOOM LENGTH, WHICHEVER IS LESS. FOR RADII NOT SHOWN, USE RATING OF NEXT LONGER RADIUS.
8. 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.
9. PRACTICAL WORKING LOADS DEPEND ON SUPPORTING SURFACE, WIND, AND OTHER FACTORS AFFECTING STABILITY SUCH AS HAZARDOUS SURROUNDINGS, EXPERIENCE OF PERSONNEL, AND PROPER HANDLING, ALL OF WHICH MUST BE TAKEN INTO ACCOUNT BY THE OPERATOR.
10. THE MAXIMUM LOAD WHICH MAY BE TELESCOPED IS LIMITED BY HYDRAULIC PRESSURE, BOOM ANGLE, AND BOOM LUBRICATION. IT IS SAFE TO ATTEMPT TO TELESCOPE ANY LOAD WITHIN THE LIMITS OF THE LOAD RATING CHART. BOOM MUST BE FULLY RETRACTED AGAINST BOOM STOPS AT ALL TIMES WHEN LIFTING MINIMUM BOOM LENGTH CAPACITY LOADS.

INFORMATION

1. 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.
2. CRANE LOAD RATINGS WITH OUTRIGGERS ARE BASED ON OUTRIGGERS AND STABILIZERS EXTENDED AND SET WITH MACHINE LEVELED.
3. LOAD RATINGS ABOVE THE HEAVY LINE ARE STRUCTURALLY LIMITED CAPACITIES. LOAD RATINGS BELOW THE HEAVY LINE ARE STABILITY LIMITED CAPACITIES AND DO NOT EXCEED 85% OF TIPPING.

DEFINITIONS

1. OPERATING RADIUS IS THE HORIZONTAL DISTANCE FROM THE AXIS OF ROTATION TO THE CENTER OF THE VERTICAL HOIST LINE OR TACKLE WITH LOAD APPLIED.
2. LOADED BOOM ANGLE AS SHOWN IN THE COLUMN HEADED BY $\measuredangle$, IS THE INCLUDED ANGLE BETWEEN THE HORIZONTAL AND LONGITUDINAL AXES OF THE BOOM BASE AFTER LIFTING RATED LOAD AT RATED RADIUS.



FULLY EXTENDED OUTRIGGER SPREAD: MODEL 2892C

MAIN BOOM LOAD RATINGS

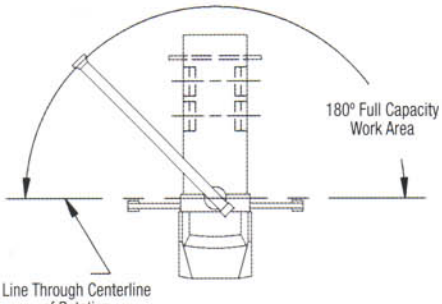
Operating Radius		Boom Length	A		B		C		D	
		28 Feet 8,53 Meters	47 Feet 14,32 Meters		62 Feet 18,85 Meters		77 Feet 23,46 Meters		92 Feet 28,04 Meters	
Feet	Meters	lb.	lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.
5	1,52	79° 56,000								
8	2,43	73° 40,670								
10	4,04	69° 34,520	78° 22,500	10 206						
12	3,65	64° 30,130	76° 22,500	10 206	80° 22,500	10 206				
15	4,57	57° 25,430	72° 22,310	10 120	77° 20,960	9 507	80° 15,920	7 221		
20	6,09	43° 20,130	65° 17,540	7 956	72° 16,290	7 389	77° 13,540	6 142	79° 10,700	4 854
25	7,62	22° 15,630	58° 14,500	6 577	67° 13,340	6 051	73° 11,710	5 312	76° 9,290	4 214
30	9,14		50° 12,120	5 498	62° 11,290	5 121	69° 10,160	4 609	73° 8,330	3 778
35	10,66		41° 9,040	4 101	57° 9,200	4 173	65° 8,830	4 005	70° 7,320	3 320
40	12,19		30° 6,990	3 171	51° 7,150	3 243	60° 7,240	3 284	66° 6,460	2 930
45	13,71		11° 5,510	2 499	44° 5,700	2 586	56° 5,780	2 622	63° 5,730	2 599
50	15,24				36° 4,600	2 087	51° 4,690	2 127	59° 4,740	2 150
55	16,76				27° 3,750	1 701	46° 3,840	1 742	55° 3,890	1 765
60	18,28				10° 3,050	1 383	40° 3,160	1 433	51° 3,210	1 456
65	19,81						33° 2,610	1 184	47° 2,660	1 207
70	21,33						24° 2,140	971	42° 2,200	998
75	22,86						9° 1,730	785	37° 1,800	816
80	24,38								31° 1,470	667
85	25,90								23° 1,170	531
90	27,43								9° 910	413
95	28,96									
100	30,48									
105	32,00									
		460	270	122	210	95	170	77	140	64
		690	410	186	310	141	250	113	210	95

JIB LOAD RATINGS

Operating Radius		Fixed Jib	Telescopic Jib		
		26 Feet 7,92 Meters	26 Feet 7,92 Meters		46 Feet 14,02 Meters
Feet	Meters	lb.	kg.	lb.	kg.	lb.	kg.
5	1,52						
8	2,43						
10	4,04						
12	3,65						
15	4,57						
20	6,09						
25	7,62	79° 5,600	2 540	79° 5,400	2 449		
30	9,14	77° 5,300	2 404	77° 5,100	2 313	79° 3400	1 542
35	10,66	75° 4,960	2 250	75° 4,700	2 132	77° 3,300	1 497
40	12,19	72° 4,490	2 037	72° 4,230	1 919	76° 3,200	1 452
45	13,71	70° 4,080	1 851	70° 3,820	1 733	74° 3,040	1 379
50	15,24	67° 3,710	1 683	67° 3,440	1 560	72° 2,800	1 270
55	16,76	65° 3,380	1 533	65° 3,100	1 406	69° 2,630	1 193
60	18,28	62° 3,080	1 397	62° 2,810	1 275	67° 2,490	1 125
65	19,81	59° 2,790	1 266	59° 2,500	1 134	65° 2,310	1 048
70	21,33	56° 2,320	1 052	56° 2,030	921	63° 2,100	957
75	22,86	53° 1,930	875	53° 1,640	744	60° 1,940	880
80	24,38	50° 1,590	721	50° 1,300	590	58° 1,760	798
85	25,90	46° 1,300	590	46° 1,010	458	55° 1,460	662
90	27,43	42° 1,040	472	42° 750	340	52° 1,200	544
95	28,96	38° 810	367	38° 520	236	49° 970	440
100	30,48					46° 770	349
105	32,00					43° 580	263
		Deductions: Stowed Fixed Jib					
		Deductions: Stowed Telescopic Jib					

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.

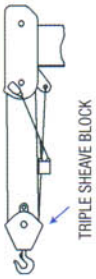
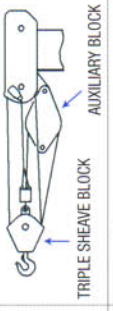
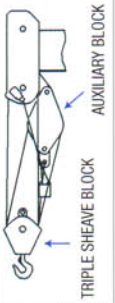
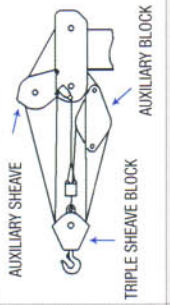
AREA OF OPERATION



DEDUCTIONS

Auxiliary Block	50 lb *22.72 kg*
Auxiliary Sheave	50 lb *22.72 kg*
Overhaul Ball	See Overhaul Ball MFGR. Nameplate
Load Block	See Block MFGR. Nameplate
Hose Reel	140 lb *63.64 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	7 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	56,000 lb 25 402 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	51,800 lb 23 496 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 load line 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

2892C **92'** **4-Section Boom** **26' - 46' 2 - Section Jib**

