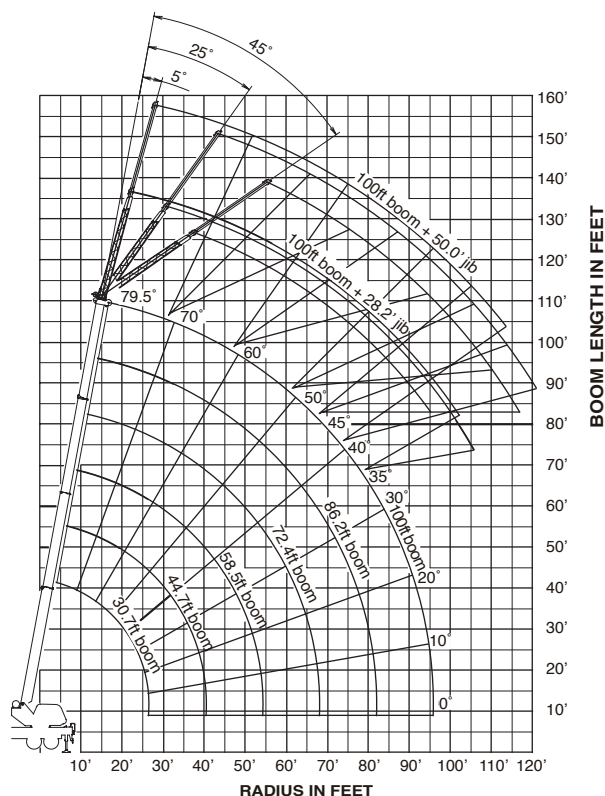




LIFTING CHARTS - Boom Trucks

TADANO MODEL TM-35100 - 35 TON CAPACITY

WORKING RANGE



CARRIER REQUIREMENTS

- Wheelbase (WB)** - Minimum 260 in (6,600 mm)
- Cab to Axle/trunnion (CA/CT)** - Minimum 190 in (4,820 mm)
- After frame (AF)** - Minimum 58 in (1,473 mm)
- Frame Section Modulus (SM)** - Minimum 30 in³ (492 cm³)
per rail (110,000 PSI steel)
- PTO torque** - 350 in-lbs (470 N-m)
- PTO revolution** - Maximum 2,150rpm

Minimum Permissible Axle Load

	Pounds			Kilograms		
	GVW	Front	Rear	GVW	Front	Rear
Permissible axle load	54,000	20,000	34,000	24,400	9,000	15,400

NOTE: Boom and jib geometry shown are for unloaded condition and machine standing level on firm supporting surface. Boom deflection and subsequent radius and boom angle change must be accounted for when applying load to hook.

STERLING CRANE

TM-35100 Load Chart (Fully extended O/R)

ON OUTRIGGERS FULLY EXTENDED 23' 7 1/2"(7.2m) + FRONT STABILIZER EXTENDED (360°)
ON OUTRIGGERS FULLY EXTENDED 23' 7 1/2"(7.2m) (OVER SIDES AND REAR)

(Pounds)

Boom Length Radius (ft)	30.7ft		44.7ft		58.5ft		72.4ft		86.2ft		100ft	
	Loaded boom angle		Loaded boom angle		Loaded boom angle		Loaded boom angle		Loaded boom angle		Loaded boom angle	
6'	75.6°	70,000										
8'	71.6°	61,000										
10'	67.4°	53,500	75.3°	32,000								
12'	63.1°	48,000	72.6°	32,000	77.3°	27,000						
15'	56.3°	40,500	68.6°	32,000	74.4°	27,000	78.0°	22,000				
20'	42.9°	30,000	61.3°	30,000	69.3°	26,500	74.1°	21,500	77.1°	17,000	79.5°	15,400
25'			53.3°	22,700	63.9°	23,000	70.0°	18,900	73.9°	16,700	76.9°	14,600
30'			44.1°	16,800	58.0°	17,100	65.7°	16,900	70.5°	14,900	74.0°	13,000
35'			32.5°	13,000	51.6°	13,300	61.0°	13,500	66.9°	13,400	71.1°	11,700
40'					44.8°	10,800	56.3°	11,000	63.2°	11,100	68.2°	10,700
45'					36.2°	8,800	50.8°	8,900	59.0°	9,100	64.8°	9,200
50'					25.4°	7,300	45.1°	7,400	54.7°	7,600	61.3°	7,700
55'							38.7°	6,300	50.3°	6,400	57.8°	6,500
60'							30.9°	5,300	45.4°	5,400	54.1°	5,500
65'									40.1°	4,600	50.1°	4,600
70'									34.0°	4,000	46.0°	4,000
75'									26.6°	3,400	41.5°	3,400
80'											36.5°	2,900
85'											30.6°	2,500
90'											23.3°	2,000
95'											10.7°	1,500
∠												0°

∠: Minimum boom angle (°) for indicated length (no load)

Loaded boom angle	Load radius		Load radius		Load radius		Load radius		Load radius		Load radius	
0°	26.2'	15,000	40.1'	10,000	54.0'	4,900	67.9'	3,000	81.7'	1,900	95.6'	1,500

TM-35100 with Jib Load Chart (Fully extended O/R)

(Pounds)

Boom Angle in Degree	100ft (30.5m) Boom + 28.2 ft (8.62m) Jib						100ft (30.5m) Boom + 50 ft (15.2m) Jib					
	5° Tilt		25° Tilt		45° Tilt		5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W	R	W	R	W	R	W
79.5°	29.0	6,900	37.6	3,750	44.0	2,650	36.1	2,900	51.9	1,750	62.7	1,200
76°	37.5	6,000	45.9	3,600	51.8	2,600	46.8	2,800	61.7	1,700	71.4	1,200
72°	46.8	5,100	55.0	3,350	60.3	2,500	58.3	2,600	72.1	1,550	80.7	1,150
70°	51.2	4,700	59.3	3,200	64.4	2,450	63.9	2,500	77.2	1,500	85.3	1,150
65°	61.9	4,000	69.8	2,950	74.1	2,350	77.0	2,200	89.4	1,400	95.8	1,100
60°	72.0	3,500	79.5	2,750	83.2	2,300	89.2	1,900	100.4	1,250	105.5	1,050
55°	81.3	3,000	88.4	2,550	91.5	2,250	100.2	1,650	110.7	1,200	114.2	1,000
50°	89.7	2,500	96.3	2,300	98.4	2,000	110.6	1,500	119.4	1,000	121.0	700
45°	96.9	1,900	102.9	1,800	104.0	1,500	118.5	1,000	126.4	700	127.0	500
40°	103.4	1,400	108.4	1,300			126.0	700	132.7	500		
35°	109.2	1,000	113.7	800								

R: Load radius in feet W: Rated lifting capacity in pounds

NOTE: The chart is only for reference and should not be used for operation.

Maintain clearances at least 10 feet between any part of the crane, load line or load and any electrical line carrying up to 50,000 volts. One-foot additional clearance is required for every additional 30,000 volts or less. (Refer the operation manual).

NOTE: The lifting capacity data stored in the LOAD MOMENT INDICATOR(AML-L) is based on the standard number of parts of line listed in the chart.

Boom length	30.7'	30.7 to 72.4'	72.4 to 100.0'	JIB
Number of parts of lines	8	4	2	1
Max. of load in pounds	70,000	35,280	17,640	8,820

STERLING CRANE

TM-35100 Load Chart (Mid 2 extended O/R)

ON OUTRIGGERS MID2 EXTENDED 18' 2 1/8"(5.54m) + FRONT STABILIZER EXTENDED (360°)
ON OUTRIGGERS MID2 EXTENDED 18' 2 1/8"(5.54m) (OVER SIDES AND REAR)

(Pounds)

Boom Length Radius (ft)	Loaded boom angle	30.7ft		44.7ft		58.5ft		72.4ft		86.2ft		100ft	
		Loaded boom angle		Loaded boom angle		Loaded boom angle		Loaded boom angle		Loaded boom angle		Loaded boom angle	
6'	75.6°	70,000											
8'	71.6°	61,000											
10'	67.4°	53,500	75.3°	32,000									
12'	63.1°	48,000	72.6°	32,000	77.3°	27,000							
15'	56.3°	40,500	68.6°	32,000	74.4°	27,000	78.0°	22,000					
20'	42.8°	25,100	61.2°	26,300	69.3°	26,500	74.1°	21,500	77.1°	17,000	79.5°	15,400	
25'			53.1°	16,600	63.6°	17,000	69.9°	17,300	73.9°	16,700	76.9°	14,600	
30'			43.8°	11,600	57.6°	12,000	65.3°	12,200	70.2°	12,300	73.9°	12,500	
35'			32.3°	8,500	51.2°	8,900	60.5°	9,100	66.3°	9,200	70.6°	9,400	
40'					44.5°	6,900	55.8°	7,100	62.6°	7,100	67.5°	7,300	
45'					35.8°	5,300	50.3°	5,400	58.3°	5,500	64.0°	5,700	
50'					25.0°	4,100	44.6°	4,300	54.1°	4,400	60.5°	4,500	
55'							38.1°	3,400	49.6°	3,500	57.0°	3,600	
60'							30.4°	2,700	44.8°	2,800	53.3°	2,900	
65'									39.5°	2,200	49.4°	2,300	
70'									33.4°	1,700	45.2°	1,800	
75'									26.0°	1,300	40.7°	1,400	
80'											35.7°	1,100	
85'											29.8°	700	
∠							0°						28°

∠: Minimum boom angle (°) for indicated length (no load)

Loaded boom angle	Load radius		Load radius		Load radius		Load radius		Load radius	
0°	26.2'	14,100	40.1'	6,300	54.0'	3,400	67.9'	1,700	81.7'	800

TM-35100 with Jib Load Chart (Mid 2 extended O/R)

(Pounds)

Boom Angle in Degree	100ft (30.5m) Boom + 28.2 ft (8.62m) Jib						100ft (30.5m) Boom + 50 ft (15.2m) Jib					
	5° Tilt		25° Tilt		45° Tilt		5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W	R	W	R	W	R	W
79.5°	29.0	6,900	37.6	3,750	44.0	2,650	36.1	2,900	51.9	1,750	62.7	1,200
76°	37.5	6,000	45.9	3,600	51.8	2,600	46.8	2,800	61.7	1,700	71.4	1,200
72°	46.8	5,100	55.0	3,350	60.3	2,500	58.3	2,600	72.1	1,550	80.7	1,150
70°	51.2	4,700	59.3	3,200	64.4	2,450	63.9	2,500	77.2	1,500	85.3	1,150
65°	60.9	3,100	69.2	2,600	74.1	2,350	77.0	2,200	89.4	1,400	95.8	1,100
60°	70.0	1,900	77.5	1,600	81.7	1,500	87.5	1,400	99.9	1,100	105.1	900
55°	78.6	1,000	85.4	900	88.5	800	97.5	700	108.2	500	112.3	400
50°	86.5	400										

R: Load radius in feet W: Rated lifting capacity in pounds

NOTE: The chart is only for reference and should not be used for operation.

Maintain clearances at least 10 feet between any part of the crane, load line or load and any electrical line carrying up to 50,000 volts. One-foot additional clearance is required for every additional 30,000 volts or less. (Refer the operation manual).

STERLING CRANE

TM-35100 Load Chart (Mid 1 extended O/R)

ON OUTRIGGERS MID1 EXTENDED 12' 8 3/4"(3.88m) + FRONT STABILIZER EXTENDED (360°)
ON OUTRIGGERS MID1 EXTENDED 12' 9 3/4"(3.88m) (OVER SIDES AND REAR)

(Pounds)

Boom Length Radius (ft)	30.7ft		44.7ft		58.5ft		72.4ft		86.2ft		100ft	
	Loaded boom angle		Loaded boom angle		Loaded boom angle		Loaded boom angle		Loaded boom angle		Loaded boom angle	
6'	75.6°	70,000										
8'	71.6°	61,000										
10'	67.4°	53,500	75.4°	32,000								
12'	63.1°	36,700	72.7°	32,000	77.5°	27,000						
15'	56.2°	22,200	68.5°	23,300	74.4°	23,800	78.0°	22,000				
20'	42.7°	12,300	60.9°	13,200	68.9°	13,600	73.6°	13,800	77.1°	13,900	79.5°	14,200
25'			52.9°	8,500	63.3°	8,800	69.2°	9,100	73.3°	9,100	76.3°	9,400
30'			43.7°	5,800	57.4°	6,100	64.7°	6,300	69.6°	6,400	73.1°	6,600
35'			32.1°	4,000	51.0°	4,300	60.0°	4,500	65.8°	4,600	69.9°	4,800
40'					44.3°	3,200	55.3°	3,300	62.2°	3,400	66.8°	3,600
45'					35.6°	2,200	49.9°	2,400	57.9°	2,400	63.3°	2,600
50'					24.8°	1,500	44.2°	1,600	53.7°	1,700	59.9°	1,900
55'							37.7°	1,100	49.3°	1,100	56.4°	1,300
60'							30.0°	600	44.4°	700	52.7°	800
∠	0°						29°		44°		52°	

∠: Minimum boom angle (°) for indicated length (no load)

Loaded boom angle	30.7ft		44.7ft		58.5ft	
	Load radius		Load radius		Load radius	
0°	26.2'	6,900	40.1'	2,800	54.0'	1,100

TM-35100 with Jib Load Chart (Mid 1 extended O/R)

(Pounds)

Boom Angle in Degree	100ft (30.5m) Boom + 28.2 ft (8.62m) Jib						100ft (30.5m) Boom + 50 ft (15.2m) Jib					
	5° Tilt		25° Tilt		45° Tilt		5° Tilt		25° Tilt		45° Tilt	
	R	W	R	W	R	W	R	W	R	W	R	W
79.5°	29.0	6,900	37.6	3,750	44.0	2,650	36.1	2,900	51.8	1,750	62.7	1,200
76°	36.6	4,800	45.8	3,500	51.6	2,600	46.8	2,800	61.6	1,700	71.4	1,200
72°	44.5	2,700	53.3	2,100	59.0	1,800	57.2	2,000	71.4	1,300	80.7	1,000
70°	48.5	2,000	57.0	1,600	62.4	1,400	61.6	1,400	75.3	900	84.8	700
65°	58.0	700	65.8	500	70.6	500	72.7	400				

R: Load radius in feet W: Rated lifting capacity in pounds

TM-35100 Load Chart (Min. extended O/R)

ON OUTRIGGERS MIN EXTENDED
7' 2 7/8"(2.21m) (360°)

Boom Length Radius (ft)	30.7ft		44.7ft	
	Loaded boom angle		Loaded boom angle	
6'	75.6°	40,000		
8'	71.5°	28,000		
10'	67.3°	17,700	75.5°	18,700
12'	63.0°	12,300	72.6°	13,200
15'	56.1°	7,700	68.3°	8,600
20'	42.7°	3,800	60.9°	4,600
25'			52.8°	2,500
30'			43.6°	1,200
∠	0°		32°	

∠: Minimum boom angle (°) for indicated length (no load)

Loaded boom angle	30.7ft	
	Load radius	
0°	26.2'	1,800

NOTE: The chart is only for reference and should not be used for operation.

Maintain clearances at least 10 feet between any part of the crane, load line or load and any electrical line carrying up to 50,000 volts. One-foot additional clearance is required for every additional 30,000 volts or less. (Refer the operation manual).

STERLING CRANE

MAXIMUM LIFTING CAPACITY

70,000 lbs at 6 feet

BOOM

4-section full power synchronized telescoping boom of round box construction.

The synchronization system consists of a telescopic cylinder, extension and retraction cables.

Retracted length	30.7' (9.35 m)
Extended length	100' (30.5 m)
Extend speed	69.3' / 75 s
Elevation	By a double action hydraulic cylinder with holding valves
Elevation speed	-8° ~ 79.5° in 45sec.
Boom point	4 sheaves

JIB

Base lattice and top box construction two stage jib, stowed on base boom section.

Retracted length	28.2' (8.62m)
Extended length	50' (15.2m)
Jib offset angle	5°, 25° and 45°

WINCH

Hydraulic axial piston motor through winch speed reducer.

Equipped with automatic brake (neutral brake), counterbalance valves, cable follower and drum rotation indicator.

Single line pull	12,600 lbs (5,710 kg) at maximum permissible line pull (1st layer)
Single line speed	459 FPM (140 m/min) maximum line speed (6th layer)
Drum capacity	720' (219.5 m) 6 layers
Wire rope strength	426' of 5/8" diameter (130 m of 16 mm)
*Maximum permissible line pull may be affected by wire rope strength.	
Hook block	Swivel hook with safety latch for single line use 4 ton (3.63 metric ton) capacity (Standard)

SWING

Hydraulic axial piston motor driven through planetary speed reducer.

Equipped with manually locked/released swing brake.

Continuous 360 degree full circle swing on ball bearing turntable

Swing speed	2.8 RPM
Twin swing system	Free swing or lock swing by selector switch in crane cab

OUTRIGGERS

Four hydraulic, three-section beam and jack outriggers. Vertical jack cylinders equipped with internal holding valves.

Outrigger extension length detectors are equipped.

Each outrigger beam and jack is controlled independently from either side of truck.

Three extension lengths are provided with corresponding "RATED LIFITING CAPACITIES" for crane duty in confined area.

Extend width	Min. 7'2-5/8" (2.2 m) *React to within 8' (2.44 m) overall width.
(Center to center)	Mid.1 12'8-3/4" (3.88 m)
	Mid.2 18'2-1/8" (5.54 m)
	Max. 23'7-1/2" (7.2 m)

Float size (Diameter) 24" (0.61 m) (Aluminium, Ditachable)

Single front stabilizer

Mounted to the front frame of truck. Hydraulic cylinder equipped with integral holding valve and steel float.

Float size 10" x 6" (0.25 m x 0.15m)

STERLING CRANE

HYDRAULIC

Control valves	Multiple valves actuated by pilot pressure with integral pressure relief valves.
Hydraulic pump	Two variable piston pumps for crane functions. Tandem gear pump for swing and outriggers.
Reservoir	94.5 gallon (358 lit.) capacity
Filtration	26 micron return filter, full flow with bypass protection, located inside of hydraulic reservoir.
Oil cooler	Air cooled fan type. (STANDARD)

ELECTRICAL SYSTEM

Power supply	DC12V
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CAB

Left side, 1 man type, steel construction with sliding door access and safety glass windows opening at side.
Door window is powered control. Windshield glass window and roof glass window are shatter-resistant with wiper and washer.
Self centering finger control levers with pilot control.
Adjustable control lever stands for swing, boom elevation, boom telescoping and hoist.
Control lever stands can change neutral positions and tilt for easy access to cab.
Engine throttle knob. 3 way adjustable cloth seat with armrests.
Foot operated controls: boom elevation, boom telescoping and engine throttle.
Hot water cab heater and air conditioning. (TAC STANDARD)
Dash-mounted engine start/stop, monitor lamps, cigarette lighter, front washer and wiper switch, power window switch, swing brake switch, free swing / lock swing selector switch and ashtray.
Correct jib status select switch. Upper console includes roof wiper switch, emergency outrigger set up key switch.
Instruments - Hydraulic oil pressure is monitored and displayed on the AML-L display panel.

CONTROLS AND SAFETY DEVICE

Tadano electronic LOAD MOMENT INDICATOR system (AML-L) including:

- Control lever lockout function.
- Load radius / boom angle / tip height / swing range preset function
- Warning buzzer
- Boom angle / boom length / jib offset angle / load radius / rated lifting capacities / actual loads read out
- Ratio of actual load moment to rated load moment indication.
- Automatic Speed Reduction and Soft Stop function on boom elevation and swing (swing range restricted only)
- Working condition register switch
- External warning lamp (OPTIONAL)

*TADANO AML-L monitors outrigger extended length and automatically programs the corresponding "RATED LIFTING CAPACITIES" table.

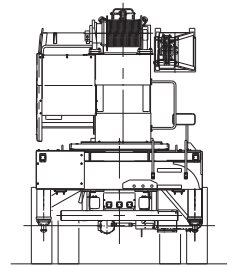
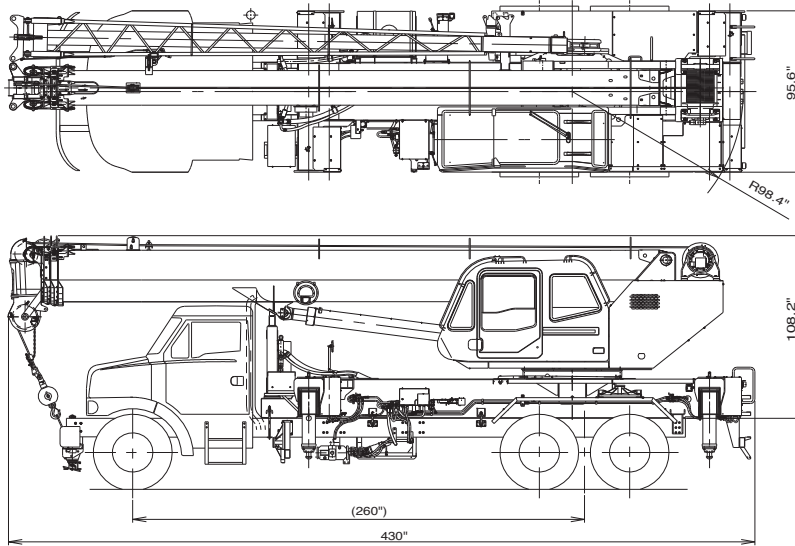
Anti-Two Block
Pendant type over-winding cut out device with audio / visible warning system.

OPTIONS AND ACCESSORIES

- + 35 ton (31.75 metric ton) 4 sheaves hook block (7 & 8 part line)
- + 16 ton (14.52 metric ton) 2 sheaves hook block (4 & 5 part line)
- + 9 ton (8.16 metric ton) 1 sheave hook block (2 & 3 part line)
- + Hot water cab heater and air conditioner (Upper cab/ TAC Standard)
- + Two-person basket with Radio Remote for basket
- + One-person basket with Radio Remote for basket
- + Electric fan in cab

STERLING CRANE

TM-35100 (35 ton) crane dimensional specifications



* Overall length depends on truck.