

**TM-ZR500XL  
SERIES**



**TADANO**



MAXIMUM LIFTING CAPACITY: 10,000 lbs  
EXTENDED LENGTH: 51.4' (TM-ZR506XL)

**Telescoping boom truck mounted crane**

*Known World Wide, TADANO Quality in North America*



# TM-ZR500XL SERIES CRANE SPECIFICATION

	MODEL : TM-ZR503XL	MODEL : TM-ZR504XL
<b>MAXIMUM LIFTING CAPACITY</b>	10,000 lbs. @ 5' (5-part lines)	
<b>CRANE CAPACITY</b>	7,100 lbs. @ 12' (5-part lines)	
<b>BOOM</b> <i>Fully powered synchronized telescoping boom of pentagonal box construction</i>	3-sectioned <i>Retracted length: 11.40'</i> <i>Extended length: 27.28'</i> <i>Extended speed: 15.88' / 18 s</i> <i>Elevation: Elevated by a double-acting hydraulic cylinder</i>  <i>Elevation speed: 1° to 78° / 12 s</i> <i>Boom point: 3 sheaves</i>	4-sectioned <i>Retracted length: 11.66'</i> <i>Extended length: 35.43'</i> <i>Extended speed: 23.77' / 21 s</i> <i>Elevation: Elevated by a double-acting hydraulic cylinder</i>  <i>Elevation speed: 1° to 78° / 12 s</i> <i>Boom point: 3 sheaves</i>
<b>WINCH</b> <i>Hydraulic motor driven Spur gear speed reduction, provided with mechanical brake and cable follower.</i>	Single line pull: 2,000 lbs. Single line speed: 249 FPM (@ 4th layer) Wire rope. <i>Diameter x length: 5/16" (8mm) x 217'</i> <i>Breaking strength: 9,680 lbs.</i> <i>Construction: 7 X 7 + 6 X WS(26).</i> Hook block: 2 sheaves	Single line pull: 2,000 lbs. Single line speed: 249 FPM (@ 4th layer) Wire rope. <i>Diameter x length: 5/16" (8mm) x 262'</i> <i>Breaking strength: 9,680 lbs.</i> <i>Construction: 7 X 7 + 6 X WS(26).</i> Hook block: 2 sheaves
<b>SWING</b>	Hydraulic motor driven, Worm gear speed reduction, Continuous Swing speed:	
<b>HOOK STOWING DEVICE</b>	Mechanically stowed See picture	
<b>OUTRIGGERS</b>	Manually extended sliders and hydraulically up and down. Easy grab type grips lock and unlock Extended width Min. Mid. Max.	
<b>HYDRAULICS</b>	Hydraulic motor Axial piston type for Control valves Multiple control valves Recommended hydraulic Pressure: Delivery:	
<b>ELECTRICAL SYSTEM</b>	Power supply:	
<b>SAFETY DEVICES</b>	Anti-two-block with alarm Hook safety latch Level gauge Hydraulic safety valves, Over load alert with load Load indication Load moment ratio to Audible warning External warning lamps	
<b>CRANE WEIGHT</b>	Approx. 3,330 lbs. (crane bare)	Approx. 3,590 lbs. (crane bare)

NOTE: Max. operating speeds of the crane are performed under the condition that the pump delivery is 15.8 GPM.



**MODEL : TM-ZR505XL**

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10,000 lbs. @ 5' (5-part lines)  
7,000 lbs. @ 5' (4-part lines)

7,000 lbs. @ 10' (4-part lines)

6,800 lbs. @ 12' (4-part lines)

6,800 lbs. @ 12' (4-part lines)

5-sectioned  
*Retracted length:* 12.38'  
*Extended length:* 43.78'  
*Extended speed:* 31.4' / 25 s  
*Elevation:* Elevated by a double-acting hydraulic cylinder  
*Elevation speed:* 1° to 78° / 12 s  
*Boom point:* 2 sheaves (7,000lbs.)  
 3 sheaves (10, 000lbs.)

6-sectioned  
*Retracted length:* 12.64'  
*Extended length:* 51.49'  
*Extended speed:* 38.85' / 21 s  
*Elevation:* Elevated by a double-acting hydraulic cylinder  
*Elevation speed:* 1° to 78° / 12 s  
*Boom point:* 2 sheaves

Single line pull: 1,750 lbs.  
 Single line speed: 249 FPM (@ 4th layer)  
 Wire rope.  
*Diameter x length:* 5/16" (8mm) x 262'  
*Breaking strength:* 9,680 lbs.  
*Construction:* 7 X 7 + 6 X WS(26).  
 Hook block: 2 sheaves

Single line pull: 1,750 lbs.  
 Single line speed: 249 FPM (@ 4th layer)  
 Wire rope.  
*Diameter x length:* 5/16" (8mm) x 302'  
*Breaking strength:* 9,680 lbs.  
*Construction:* 7 X 7 + 6 X WS(26).  
 Hook block: 2 sheaves

360° full circle swing on ball bearing slew ring, Automatic swing lock 2.5 rpm.

beneath boom top portion to the right

extended jacks, Integral with crane frame, Power sliders position and double lock pins for storage position.

7' 2 5/8"  
 9' 10 1/8"  
 12' 5 19/32"



**Hook Stowing Device**

winch and swing

with integral safety valve pump  
 Max. 2,915 PSI capacity  
 Max. 15.8 GPM capacity

DC12V

check valves and holding valves indicator

rated load indication



Approx. 3,950 lbs. (crane bare)

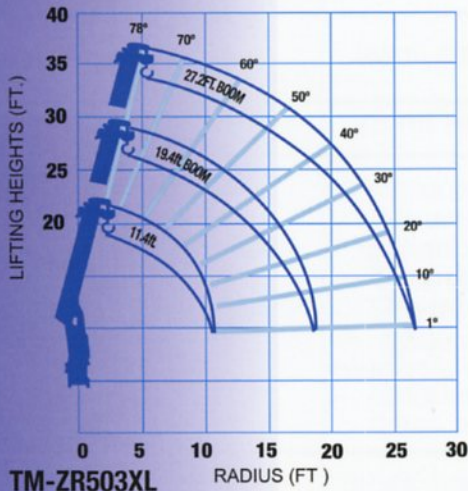
Approx. 4,150 lbs. (crane bare)



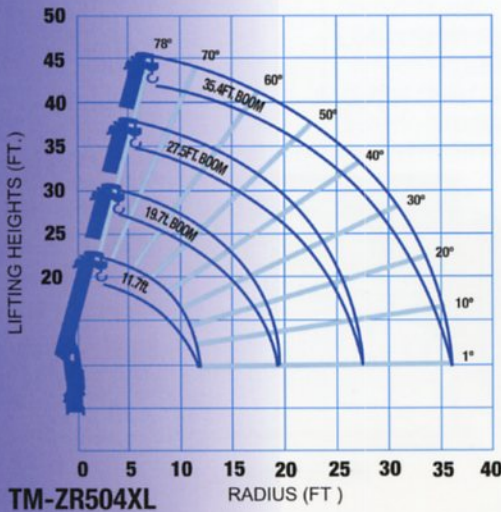
**Radio Remote Control**  
 (Full proportional handheld type)



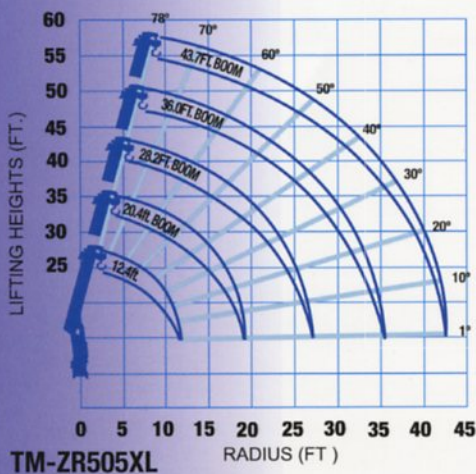
### WORKING RANGE CHART



TM-ZR503XL



TM-ZR504XL



TM-ZR505XL

**NOTE:** The above lifting heights and boom angles are based on a straight (unladen) boom, and allowance should be made for boom deflection obtained under laden condition.

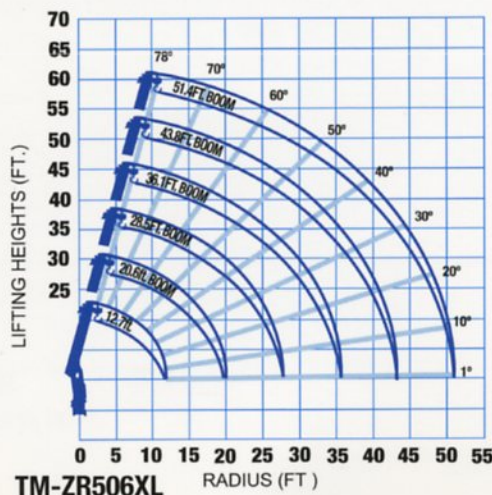
### RATED LIFTING CAPACITIES (IN POUNDS)

MODEL : TM-ZR503XL CAPACITY CHART ; D

Load Radius (ft)	11.4 ft Boom		19.4 ft Boom		27.2 ft Boom				
	Boom ∠	Outriggers Extended Max.	Outriggers Extended Min.	Boom ∠	Outriggers Extended Max.	Outriggers Extended Min.	Boom ∠	Outriggers Extended Max.	Outriggers Extended Min.
5	63°	10000	7000	76°	10000	7000			
6	57°	9700	7000	73°	9700	7000			
8	44°	9100	6800	67°	9100	6800	75°	7000	6800
10	24°	8500	5400	60°	8500	5400	70°	7000	5400
12				52°	7100	4100	66°	6500	4100
14				44°	6000	3300	61°	5700	3300
16				34°	5100	2800	56°	5000	2800
20							44°	3900	2000
25							23°	3000	1550
	1°	8100	5000	1°	4300	2300	1°	2700	1450
		(10.7ft.)			(18.7ft.)			(26.6ft.)	

MODEL : TM-ZR503XL CAPACITY CHART ; A

Load Radius (ft)	11.4 ft Boom		19.4 ft Boom		27.2 ft Boom				
	Boom ∠	Outriggers Extended Max.	Outriggers Extended Min.	Boom ∠	Outriggers Extended Max.	Outriggers Extended Min.	Boom ∠	Outriggers Extended Max.	Outriggers Extended Min.
5	63°	10000	7000	76°	10000	7000			
6	57°	9700	6000	73°	9700	6000			
8	44°	8800	4500	67°	8800	4500	75°	7000	4500
10	24°	6800	3400	60°	6800	3400	70°	6800	3400
12				52°	5200	2600	66°	5200	2600
14				44°	4000	2000	61°	4000	2000
16				34°	3100	1550	56°	3100	1550
20							44°	2200	1100
25							23°	1600	800
	1°	6200	3100	1°	2500	1250	1°	1500	750
		(10.7ft.)			(18.7ft.)			(26.6ft.)	



TM-ZR506XL

**NOTE:**

- Rated lifting capacities on this chart show maximum allowable loads with the outriggers properly extended on a firm surface and the crane leveled and mounted on a factory recommended truck. The rated lifting capacities in shade area are based on crane strength and others, on its stability(not to exceed 85% of tipping).
- The weight of handling devices such as hook block (65lbs.), slings, etc., must be considered part of the load and must be deducted from the rated lifting capacities.



**MODEL : TM-ZR504XL CAPACITY CHART ; D**

Load Radius (ft)	11.7 ft Boom			19.7 ft Boom			27.5 ft Boom			35.4 ft Boom		
	Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended	
		Max.	Min.		Max.	Min.		Max.	Min.		Max.	Min.
5	64°	10000	7000	76°	10000	7000						
6	58°	9700	7000	73°	9700	7000	78°	7000	7000			
8	45°	9100	6800	67°	9100	6800	75°	7000	6800	78°	4400	4400
10	27°	8500	5400	60°	8500	5400	71°	7000	5400	76°	4400	4400
12				53°	7100	4100	66°	6500	4100	73°	4400	4100
14				45°	6000	3300	61°	5700	3300	69°	4400	3300
16				35°	5100	2800	56°	5000	2800	66°	4100	2800
20							45°	3900	1950	58°	3200	1950
25							25°	3000	1500	47°	2400	1500
30										34°	2000	1150
	1°	7900	4800	1°	4200	2200	1°	2700	1350	1°	1750	900
		(10.9ft.)			(18.9ft.)			(26.8ft.)			(34.7ft.)	

**MODEL : TM-ZR504XL CAPACITY CHART ; A**

Load Radius (ft)	11.7 ft Boom			19.7 ft Boom			27.5 ft Boom			35.4 ft Boom		
	Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended	
		Max.	Min.		Max.	Min.		Max.	Min.		Max.	Min.
5	64°	10000	7000	76°	10000	7000						
6	58°	9700	6000	73°	9700	6000	78°	7000	6000			
8	45°	8800	4500	67°	8800	4500	75°	7000	4500	78°	4400	4400
10	27°	6800	3400	60°	6800	3400	71°	6800	3400	76°	4400	3400
12				53°	5200	2600	66°	5200	2600	73°	4400	2600
14				45°	4000	2000	61°	4000	2000	69°	4000	2000
16				35°	3100	1550	56°	3100	1550	66°	3100	1550
20							45°	2200	1100	58°	2200	1100
25							25°	1550	750	47°	1550	750
30										34°	1550	550
	1°	6000	3000	1°	2400	1200	1°	1400	650	1°	900	400
		(10.9ft.)			(18.9ft.)			(26.8ft.)			(34.7ft.)	

- The operator must reduce loads to allow for such factors as wind, ground conditions, operating speed and the effects of freely suspended loads such as boom deflection.
- For boom lengths not shown, use the rated lifting capacity of next longer boom.
- When outriggers are extended to mid position, use the rated lifting capacities for outriggers extended to min. position.
- For boom lengths longer than 28.5 ft., extend outriggers to max.
- 7.36.1 ft. boom means 1st mark on 4th boom section side plate is half visible.
- 8.43.8 ft. boom means 2nd mark on 4th boom section side plate is half visible.





### RATED LIFTING CAPACITIES (IN POUNDS)

MODEL : TM-ZR505XL CAPACITY CHART ; D

Load Radius (ft)	12.4 ft Boom			20.4 ft Boom			28.2 ft Boom			36.0 ft Boom		43.7 ft Boom	
	Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended Max.	Boom ∠	Outriggers Extended Max.
		Max.	Min.		Max.	Min.		Max.	Min.				
5	66°	*10000	7000	76°	7000	7000							
8	49°	7000	6800	67°	7000	6800	75°	7000	6800	78°	4400		
10	33°	7000	5400	61°	7000	5400	71°	7000	5400	75°	4400	78°	2900
12				54°	6800	3900	66°	6500	3900	72°	4400	76°	2900
14				47°	5700	3100	62°	5700	3100	69°	4400	73°	2900
10,000lbs. @ 5' (5-part lines) 7,000 lbs. @ 5' (4-part lines)													
16				38°	4800	2650	57°	4800	2600	66°	4100	71°	2900
20							46°	3500	1800	58°	3200	65°	2400
25							27°	2600	1350	47°	2400	57°	1900
30										34°	1900	49°	1550
35												38°	1350
40												25°	1150
	1°	6800	4200	1°	3600	1850	1°	2300	1150	1°	1600	1°	1100
		(11.7ft.)			(19.7ft.)			(27.5ft.)			(35.3ft.)		(43.1ft.)

MODEL : TM-ZR505XL CAPACITY CHART ; A

Load Radius (ft)	12.4 ft Boom			20.4 ft Boom			28.2 ft Boom			36.0 ft Boom		43.7 ft Boom	
	Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended Max.	Boom ∠	Outriggers Extended Max.
		Max.	Min.		Max.	Min.		Max.	Min.				
5	66°	*10000	7000	76°	7000	7000							
8	49°	7000	4500	67°	7000	4500	75°	6000	4500	78°	4400		
10	33°	6800	3400	61°	6800	3400	71°	6800	3400	75°	4400	78°	2900
12				54°	5200	2500	66°	5200	2500	72°	4400	76°	2900
14				47°	3900	1900	62°	3900	1900	69°	3900	73°	2900
10,000lbs. @ 5' (5-part lines) 7,000 lbs. @ 5' (4-part lines)													
16				38°	3000	1450	57°	3000	1450	66°	3000	71°	2900
20							46°	2000	950	58°	2000	65°	2000
25							27°	1350	600	47°	1350	57°	1350
30										34°	1050	49°	1050
35												38°	850
40												25°	700
	1°	5500	2700	1°	2100	1000	1°	1200	500	1°	800	1°	600
		(11.7ft.)			(19.7ft.)			(27.5ft.)			(35.3ft.)		(43.1ft.)



**MODEL : TM-ZR506XL CAPACITY CHART ; D**

Load Radius (ft)	12.7 ft Boom			20.6 ft Boom			28.5 ft Boom			36.1ft Boom		43.8 ft Boom		51.4 ft Boom	
	Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended Max.	Boom ∠	Outriggers Extended Max.	Boom ∠	Outriggers Extended Max.
		Max.	Min.		Max.	Min.		Max.	Min.						
5	67°	7000	7000	77°	7000	7000									
8	50°	7000	6800	68°	7000	6800	75°	7000	6800	78°	4400				
10	36°	7000	5400	62°	7000	5400	71°	7000	5400	75°	4400	78°	2900		
12				55°	6800	3900	67°	6500	3900	72°	4400	76°	2900	78°	1100
14				48°	5700	3100	62°	5700	3100	69°	4400	73°	2900	76°	1100
16				39°	4800	2600	57°	4800	2600	66°	4100	71°	2900	73°	1100
20							46°	3500	1750	58°	3200	65°	2400	69°	1100
25							28°	2600	1300	48°	2400	57°	1900	63°	900
30										35°	1900	49°	1550	56°	800
35												38°	1350	49°	700
40												25°	1150	40°	600
45														30°	550
50															
	1°	6800	4000	1°	3500	1800	1°	2200	1100	1°	1600	1°	1100	1°	500
		(11.9ft.)			(19.9ft.)			(27.7ft.)			(35.4ft.)		(43.1ft.)		(50.8ft.)

**MODEL : TM-ZR506XL CAPACITY CHART ; A**

Load Radius (ft)	12.7 ft Boom			20.6 ft Boom			28.5 ft Boom			36.1ft Boom		43.8 ft Boom		51.4 ft Boom	
	Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended		Boom ∠	Outriggers Extended Max.	Boom ∠	Outriggers Extended Max.	Boom ∠	Outriggers Extended Max.
		Max.	Min.		Max.	Min.		Max.	Min.						
5	67°	7000	7000	77°	7000	7000									
8	50°	7000	4500	68°	7000	4500	75°	7000	4500	78°	4400				
10	36°	6800	3400	62°	6800	3400	71°	6800	3400	75°	4400	78°	2900		
12				55°	5100	2400	67°	5100	2400	72°	4400	76°	2900	78°	1100
14				48°	3800	1800	62°	3800	1800	69°	3800	73°	2900	76°	1100
16				39°	3000	1400	57°	3000	1400	66°	3000	71°	2900	73°	1100
20							46°	2000	900	58°	2000	65°	2000	69°	1100
25							28°	1300	550	48°	1300	57°	1300	63°	900
30										35°	1000	49°	1000	56°	800
35												38°	750	49°	700
40												25°	600	40°	550
45														30°	450
50															
	1°	5200	2500	1°	2000	900	1°	1100	400	1°	700	1°	500	1°	350
		(11.9ft.)			(19.9ft.)			(27.7ft.)			(35.4ft.)		(43.1ft.)		(50.8ft.)



## GENERAL DATA FOR SUITABLE TRUCKS

### CAPACITY; A

Gross Axle Weight Rating  
(GAWR), front.....9,000 lbs. or more.

Gross Axle Weight Rating  
(GAWR), rear.....17,000 lbs. or more

Gross Vehicle Weight Rating.....26,000 to 55,000 lb.

Cab to Axle / trunnion (CA/CT).....145 to 215"

### CAPACITY; D

Gross Axle Weight Rating  
(GAWR), front.....1,200 lbs. or more

Gross Axle Weight Rating  
(GAWR), rear .....21,000 lbs. or more

Gross Vehicle Weight Rating.....33,000 to 55,100 lbs.

Frame Section Modulus(SM)  
under crane; (per rail).....10 cu. inch 110,000PSI  
22 cu. inch 50,000PSI

Frame Section Modulus (SM)  
over rear spring hanger;  
(per rail).....10 cu. inch 110,000PSI

PTO torque.....115 ft-lbs. Min.

PTO revolution.....Approx. 270 to 2800 rpm

Width for crane mounting.....Approx. 2' 5 1/2" min.

Frame width range  
(inside to outside).....Approx. 2' to 3' 1 7/8"

Frame height  
(ground to frame top).....Approx. 3'9" Max.  
(Height of crane mounting base can be changed by combination  
of jack floats and crane bases)



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