

#### TADANO CARGO CRANE

# MODEL: TM-ZE554MH

### CRANE SPECIFICATIONS

<u>CRANE CAPACITY</u> 5,050 kg at 2.5 m (5-part line)

BOOM Four-sectioned, fully powered partly synchronized telescoping boom

of heptagonal box construction

Retracted length----- 3.55 m Extended length -----10.8 m

Extending speed ----- 7.25 m / 21 s

Elevation ----- Elevated by a double-acting hydraulic

cylinder

Elevating speed -----  $1^{\circ}$  to  $78^{\circ}$  / 12 s

Boom point ----- 3 sheaves

<u>WINCH</u> Hydraulic motor driven Spur gear speed reduction, provided with

mechanical brake

Single line pull ----- 9.90 kN {1,010 kgf} Single line speed ----- 66 m/min (at 4th layer)

Wire rope

Diameter x length --- 8 mm x 82 m

Breaking strength --- 50.1 kN {5.1 tf}

Construction ----- 7 x 7 + 6 x WS(26)

Hook block ----- 2 sheaves

HOOK STOWING DEVICE Mechanically stowed beneath boom top portion

SLEWING Hydraulic motor driven Worm gear speed reduction

Continuous 360° full circle slewing on ball bearing slew ring

Automatic slewing lock

Slewing speed ----- 2.5 min<sup>-1</sup> {rpm}

OUTRIGGERS Manually extended sliders and hydraulically extended jacks

Integral with crane frame Power up and down

Extended width ----- Min. 2,200 mm

Mid. 3,000 mm Full 3,800 mm

<u>HYDRAULICS</u> Hydraulic pump ----- Single gear pump

Hydraulic motors ----- Axial piston type for winch

Axial piston type for slewing

Control valves ----- Multiple control valves with integral

safety valve

Oil tank capacity ----- approx. 48 L

SAFETY DEVICES Load meter

Load indicator

Over-winding alarm

Hoisting limiter

P.T.O. indicator lamp

Hook safety latch

Hydraulic safety valves, check valves and holding valves

Level gauge

<u>CRANE MASS</u> Approx. 1,845 kg (includes standardized mounting parts)

NOTE: Operating speeds of the crane are guaranteed under the condition that the pump delivery is 60 L/min.

#### RATED LIFTING CAPACITIES IN KILOGRAMS

#### **Crane Strength Rated Capacities**

	3.55 m	Boom		5.99 m Boom			8.39 m Boom Extension width of			10.8 m Boom	
Load	Extension	n width of	Load Extension		n width of	Load			Load	Extension width of	
Radius	outrig	ggers	Radius	outri	ggers	Radius	outriç	ggers	Radius	outriç	ggers
	Full	Minimum		Full	Minimum		Full	Minimum		Full	Minimum
2.5 m and below	5,050	3,380	2.5 m and below	4,050	3,380	2.5m and below	3,130	3,130	3.5 m and below	2,130	1,930
2.9 m	4,050	2,680	2.9 m	4,050	2,680	3.0 m	3,130	2,630	4.5 m	2,130	1,330
3.33m	3,550	2,230	3.7 m	3,130	1,870	3.7 m	3,130	1,870	5.0 m	2,030	1,080
			4.0 m	2,930	1,630	4.0 m	2,930	1,630	6.0 m	1,780	780
			4.5 m	2,580	1,380	4.5 m	2,580	1,380	7.0 m	1,530	730
			5.0 m	2,330	1,130	5.0 m	2,330	1,130	8.0m	1,380	550
			5.77m	2,030	930	5.5 m	2,080	930	9.0m	1,200	500
						6.0 m	1,930	830	10.0 m	1,050	430
						6.5 m	1,780	780	10.58m	1,000	380
						7.0 m	1,630	730			
						7.5 m	1,480	650			
						8.17m	1,380	550			

- NOTES: 1. The mass of hook block (45kg), slings and all similarly used load handling devices must be added to the mass of the load.
  - 2. The above numerical values of total rated loads are based on crane strength only. The total rated loads based on stability may lower than those in the above table depending on the loading conditions and the types of the chassis.

#### **Empty Chassis Rated Capacities**

#### Table A

	3.55 m	Boom		5.99 m Boom			8.39 m Boom			10.8 m Boom	
Load	Extension	n width of	Load	Extension width of		Load	Extension width of		Load	Extension	n width of
Radius	outriç	ggers	Radius	outri	ggers	Radius	outriggers		Radius	outriggers	
	Full	Minimum		Full	Minimum		Full	Minimum		Full	Minimum
2.5 m and below	5,050	2,480	2.6 m and below	4,050	2,480	2.6m and below	3,130	2,480	3.5 m and below	2,130	1,480
2.8 m	4,050	2,130	2.8 m	4,050	2,130	3.0 m	3,130	1,880	4.0 m	2,130	1,180
3.33m	3,250	1,630	3.6 m	2,930	1,430	3.6 m	2,930	1,430	4.5 m	1,980	930
·			4.0 m	2,430	1,180	4.0 m	2,430	1,180	5.0 m	1,630	780
			4.5 m	1,980	930	4.5 m	1,980	930	6.0 m	1,180	580
			5.0 m	1,680	830	5.0 m	1,680	830	7.0 m	1,000	450
			5.77m	1,330	680	5.5 m	1,430	680	8.0 m	800	380
						6.0 m	1,180	580	9.0 m	680	330
						6.5 m	1,130	550	10.0 m	580	280
						7.0 m	1,000	480	10.58m	550	250
						7.5 m	900	430			
						8.17m	780	380			

Table B

	3.55 m	Boom	5.99 m Boom		8.39 m Bo		Boom		10.8 m Boom		
Load	Extension	xtension width of Load Extension widt		n width of	Load	Extension width of		Load	Extension width of		
Radius	outrig	ggers	Radius	outri	ggers	Radius	outri	ggers	Radius	outriç	ggers
	Full	Minimum		Full	Minimum		Full	Minimum		Full	Minimum
2.5 m and below	5,050	2,730	2.3 m and below	4,050	3,130	2.3m and below	3,130	3,130	3.5 m and below	2,130	1,730
2.9 m	4,050	2,380	2.9 m	4,050	2,380	3.0 m	3,130	2,280	4.0 m	2,130	1,430
3.33m	3,550	1,930	3.7 m	3,130	1,580	3.7 m	3,130	1,580	4.5 m	2,130	1,180
			4.0 m	2,930	1,430	4.0 m	2,930	1,430	5.0 m	1,980	930
			4.5 m	2,430	1,180	4.5 m	2,430	1,180	6.0 m	1,480	730
			5.0 m	2,030	980	5.0 m	2,030	980	7.0 m	1,180	580
			5.77m	1,630	780	5.5 m	1,730	830	8.0 m	950	480
						6.0 m	1,480	730	9.0 m	880	430
						6.5 m	1,380	680	10.0 m	730	350
						7.0 m	1,230	630	10.58m	680	330
						7.5 m	1,080	530			
						8.17m	980	480			

Table C

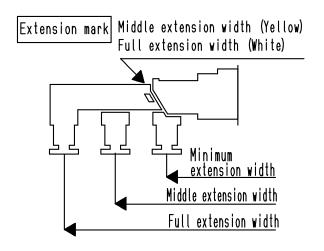
Load Radius         Extension width of outriggers         Load Radius         Extension width of outriggers         Load Radius         Extension width of outriggers         Extension width of outriggers         Extension width of outriggers         Full Minimum         Minimum         Load Radius         Extension width of outriggers         Full Minimum         Minimum         Full Minimum         S.5 m         2,130         1,930         1,930         1,930         3,130         3,130         3,130         3,130         3,130         3,130         3,130         4,5 m         2,130         1,330         1,330         4,5 m         2,930         1,630         4.0 m         2,930         1,630         4.0 m         2,930         1,630         6.0 m         1,780         7.0 m         1,480         7.0 m		3.55 m	Boom					8.39 m Boom			10.8 m Boom	
Full   Minimum   Full   Minimum   Full   Minimum   Full   Minimum   Full   Minimum   Full   Minimum   Mi	Load	Extension	n width of	Load			Load	Extension width of		Load	Extension width of	
2.5 m and below         5,050         3,130         2.6 m and below         4,050         3,130         2.5m and below         3,130         3,130         3,130         3.5 m and below         2,130         1,930           2.9 m         4,050         2,680         2.9 m         4,050         2,680         3.0 m         3,130         2,630         4.5 m         2,130         1,330           3.33m         3,550         2,230         3.7 m         3,130         1,870         3.7 m         3,130         1,870         5.0 m         2,030         1,080           4.0 m         2,930         1,630         4.0 m         2,930         1,630         6.0 m         1,780         780           4.5 m         2,580         1,380         4.5 m         2,580         1,380         7.0 m         1,480         730           5.0 m         2,330         1,130         5.0 m         2,330         1,130         8.0 m         1,200         550           5.77m         2,030         930         5.5 m         2,030         930         9.0 m         1,030         500           6.5 m         1,650         780         10.58m         830         380           7.5 m         1,350 <td>Radius</td> <td>outriç</td> <td>ggers</td> <td>Radius</td> <td>Radius</td> <td>outriç</td> <td>ggers</td> <td>Radius</td> <td>outriç</td> <td>ggers</td>	Radius	outriç	ggers	Radius			Radius	outriç	ggers	Radius	outriç	ggers
and below         5,050         3,130         and below         4,050         2,680         2.9 m         4,050         2,680         3.0 m         3,130         2,630         4.5 m         2,130         1,330           3.33m         3,550         2,230         3.7 m         3,130         1,870         3.7 m         3,130         1,870         5.0 m         2,030         1,080           4.0 m         2,930         1,630         4.0 m         2,930         1,630         4.0 m         2,930         1,630         6.0 m         1,780         780           4.5 m         2,580         1,380         4.5 m         2,580         1,380         4.5 m         2,580         1,380         7.0 m         1,480         730           5.0 m         2,330         1,130         5.0 m         2,330         1,130         8.0 m         1,200         550           5.77m         2,030         930         5.5 m         2,030         930         9.0 m         1,030         500           6.5 m         1,650         780         10.58m         830         380           7.0 m         1,480         730         7.5 m         1,350         650		Full	Minimum		Full	Minimum		Full	Minimum		Full	Minimum
3.33m         3,550         2,230         3.7 m         3,130         1,870         3.7 m         3,130         1,870         5.0 m         2,030         1,080           4.0 m         2,930         1,630         4.0 m         2,930         1,630         6.0 m         1,780         780           4.5 m         2,580         1,380         4.5 m         2,580         1,380         7.0 m         1,480         730           5.0 m         2,330         1,130         5.0 m         2,330         1,130         8.0 m         1,200         550           5.77m         2,030         930         5.5 m         2,030         930         9.0 m         1,030         500           6.5 m         1,650         780         10.58m         830         380           7.0 m         1,480         730         7.5 m         1,350         650		5,050	3,130		4,050	3,130		3,130	3,130		2,130	1,930
4.0 m       2,930       1,630       4.0 m       2,930       1,630       6.0 m       1,780       780         4.5 m       2,580       1,380       4.5 m       2,580       1,380       7.0 m       1,480       730         5.0 m       2,330       1,130       5.0 m       2,330       1,130       8.0 m       1,200       550         5.77m       2,030       930       5.5 m       2,030       930       9.0 m       1,030       500         6.5 m       1,650       780       10.58m       830       380         7.0 m       1,480       730         7.5 m       1,350       650	2.9 m	4,050	2,680	2.9 m	4,050	2,680	3.0 m	3,130	2,630	4.5 m	2,130	1,330
4.5 m       2,580       1,380       4.5 m       2,580       1,380       7.0 m       1,480       730         5.0 m       2,330       1,130       5.0 m       2,330       1,130       8.0 m       1,200       550         5.77m       2,030       930       5.5 m       2,030       930       9.0 m       1,030       500         6.0 m       1,830       830       10.0 m       900       430         6.5 m       1,650       780       10.58m       830       380         7.0 m       1,480       730         7.5 m       1,350       650	3.33m	3,550	2,230	3.7 m	3,130	1,870	3.7 m	3,130	1,870	5.0 m	2,030	1,080
5.0 m         2,330         1,130         5.0 m         2,330         1,130         8.0 m         1,200         550           5.77m         2,030         930         5.5 m         2,030         930         9.0 m         1,030         500           6.0 m         1,830         830         10.0 m         900         430           6.5 m         1,650         780         10.58m         830         380           7.0 m         1,480         730           7.5 m         1,350         650				4.0 m	2,930	1,630	4.0 m	2,930	1,630	6.0 m	1,780	780
5.77m         2,030         930         5.5 m         2,030         930         9.0 m         1,030         500           6.0 m         1,830         830         10.0 m         900         430           6.5 m         1,650         780         10.58m         830         380           7.0 m         1,480         730           7.5 m         1,350         650				4.5 m	2,580	1,380	4.5 m	2,580	1,380	7.0 m	1,480	730
6.0 m     1,830     830     10.0 m     900     430       6.5 m     1,650     780     10.58m     830     380       7.0 m     1,480     730       7.5 m     1,350     650				5.0 m	2,330	1,130	5.0 m	2,330	1,130	8.0 m	1,200	550
6.5 m     1,650     780     10.58m     830     380       7.0 m     1,480     730       7.5 m     1,350     650				5.77m	2,030	930	5.5 m	2,030	930	9.0 m	1,030	500
7.0 m 1,480 730 7.5 m 1,350 650							6.0 m	1,830	830	10.0 m	900	430
7.5 m 1,350 650							6.5 m	1,650	780	10.58m	830	380
							7.0 m	1,480	730			
8.17m 1,180 550							7.5 m	1,350	650			
							8.17m	1,180	550			

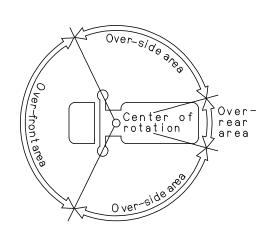
Table D

	3.55 m	Boom		5.99 m Boom Extension width of			8.39 m Boom			10.8 m l	Boom
Load	Extension	n width of	Load			Load	Extension width of		Load	Extension width of	
Radius	outriç	gers	Radius	outri	ggers	Radius	outriç	ggers	Radius	outriggers	
	Full	Minimum		Full	Minimum		Full	Minimum		Full	Minimum
2.5 m and below	5,050	3,380	2.5 m and below	4,050	3,380	2.5m and below	3,130	3,130	3.5 m and below	2,130	1,930
2.9 m	4,050	2,680	2.9 m	4,050	2,680	3.0 m	3,130	2,630	4.5 m	2,130	1,330
3.33m	3,550	2,230	3.7 m	3,130	1,870	3.7 m	3,130	1,870	5.0 m	2,030	1,080
			4.0 m	2,930	1,630	4.0 m	2,930	1,630	6.0 m	1,780	780
			4.5 m	2,580	1,380	4.5 m	2,580	1,380	7.0 m	1,530	730
			5.0 m	2,330	1,130	5.0 m	2,330	1,130	8.0 m	1,380	550
			5.77m	2,030	930	5.5 m	2,080	930	9.0 m	1,200	500
						6.0 m	1,930	830	10.0m	1,050	430
						6.5 m	1,780	780	10.58m	1,000	380
						7.0 m	1,630	730			_
						7.5 m	1,480	650			
						8.17m	1,380	550			

- NOTES: 1. Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground.
  - 2. The mass of the hook (45 kg), slings and all similarly used load handling devices must be added to the mass of the load.
  - 3. For boom lengths not shown, use the rated lifting capacity of next longer boom.
  - 4. When outriggers are extended to middle extension width, use the rated lifting capacities for outriggers are extended to minimum extension width.
  - 5. 8.39m boom means  $\square$  mark on 3rd boom section side plate is half seen.
  - 6. Empty Chassis Rated Capacities table A, B, C and D depend on the types of chassis.
  - 7. Empty Chassis Rated Capacities are shown for over side areas and over rear area.

These capacities for over - front area may lowered depending on the types of chassis.





# **WORKING RANGE** Ŏ 70.8mB00m 8.39mBoom γç

16

15

14

13

12

5.99mB20m

R. S. Songoon

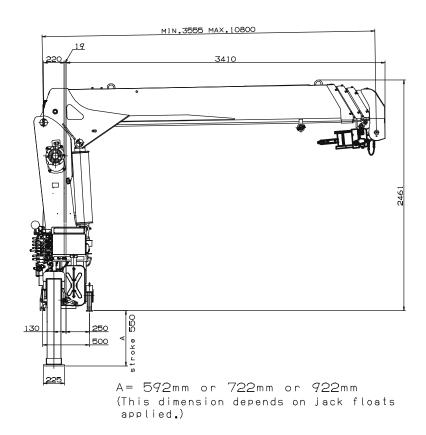
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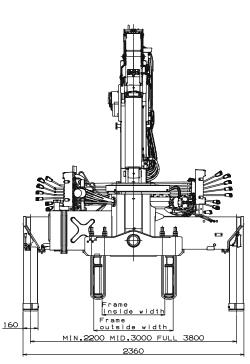
NOTE: The above lifting heights and boom angles are based on a straight (unladen) boom, and allowance should be made for boom deflection obtained under laden conditions.

3 4 5 6 7 8 *9* 10 11 12 RADIUS (m)

# **DIMENSIONS**

## [TM-ZE554MH]





# GENERAL DATA FOR SUITABLE TRUCKS

Gross vehicle mass (including crane mass)	12,000 to 25,000 kg
P.T.O. torque	157 N-m{16 kgf-m} min.
P.T.O. revolution	Approx. 270 to 2,800 min <sup>-1</sup> {rpm}
Width for crane mounting	Approx. 750 mm min.
Frame	Weight distribution and frame strength
•	should be calculated for each truck
Frame width range (inside to outside)	Approx. 610 to 960 mm
Frame height (ground to frame top)	Approx. 1,235 mm max.
(	Height of crane mounting base can be changed
	by combination of jack floats and crane bases)