

TADANO CARGO CRANE

MODEL : **TM-ZE555MH**

CRANE SPECIFICATIONS

CRANE CAPACITY

5,050 kg at 2.5 m (5-part line)

BOOM

Five-sectioned, fully powered partly synchronized telescoping boom of heptagonal box construction

Fully retracted length ----- 3.77 m

Fully extended length ----- 13.34 m

Extending speed ----- 9.57 m in 25 s

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

Raising speed ----- 1° to 78° in 12 s

Boom point ----- 3 sheaves

WINCH

Hydraulic motor driven Spur gear speed reduction, provided with mechanical brake and cable follower

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 97 m

Breaking strength ----- 50.1 kN {5.1 tf}

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

Hook block ----- 2 sheaves

HOOK BLOCK STOWING DEVICE

Hook-in (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⁻¹ {rpm}

OUTRIGGERS

Manually operated beams and hydraulically operated jacks

Integral with crane frame

Extended width ----- Min. 2,200 mm center to center
(2,360 mm outer to outer)Mid. 3,000 mm center to center
(3,160 mm outer to outer)Max. 3,800 mm center to center
(3,960 mm outer to outer)HYDRAULIC SYSTEM

Hydraulic pump ----- Single gear pump

Hydraulic motors ----- Axial piston type for winch
Axial piston type for slewingControl valves ----- Multiple control valves with integral
safety valve

Oil tank capacity ----- Approx. 57.6 L

SAFETY DEVICES

Anti-two-block device

Boom angle indicator

Load indicator

Load meter

Hook safety latch

Spirit level

Hydraulic safety valves, check valves and holding valves

OPTIONAL EQUIPMENT

Outrigger pads

Oil cooler

Rear outriggers (outrigger beam non-extension type)

Large capacity oil tank

CRANE MASS

Approx. 1,810 kg

(Except crane options and mounting parts.)

NOTE : Each operating speeds show the value when there is no load conditions and the pump delivery is the following conditions.

- 36 L/min (Slewing speed)
- 60 L/min (BOOM : Extending speed, Raising speed WINCH : Single line speed)

RATED LIFTING CAPACITIES (kg)

Crane Strength Rated Capacities

LOAD RADIUS	3.77 m BOOM	LOAD RADIUS	6.21 m BOOM	LOAD RADIUS	8.59 m BOOM	LOAD RADIUS	10.97 m BOOM	LOAD RADIUS	13.34 m BOOM
2.5 m and below	5,050	2.5 m and below	4,050	2.5 m and below	3,130	4.0 m and below	2,230	5.0 m and below	1,430
2.8 m	4,050	2.8 m	4,050	3.0 m	3,130	4.5 m	2,180	6.0 m	1,330
3.55 m	3,150	3.6 m	3,130	3.6 m	3,130	5.0 m	2,030	7.0 m	1,230
		3.9 m	2,930	3.9 m	2,930	6.0 m	1,730	8.0 m	1,080
		4.5 m	2,580	4.5 m	2,530	7.0 m	1,430	9.0 m	980
		5.0 m	2,330	5.0 m	2,230	8.0 m	1,230	10.0 m	880
		5.5 m	1,980	5.5 m	1,980	9.0 m	1,080	11.0 m	800
		5.99 m	1,780	6.0 m	1,780	10.0 m	980	12.0 m	730
				6.5 m	1,630	10.75 m	900	13.12 m	650
				7.0 m	1,480				
				7.5 m	1,380				
				8.37 m	1,180				

- NOTE :
1. 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.
 2. This value includes the mass of lifting devices such as hook block (45kg).
 3. This load radius shows actual load radius which includes boom deflection.
 4. If the boom length exceeds the table value even a little, the performance is limited to the performance of the next boom length.
 5. When the boom length is 10.97 m, a half of the \sphericalangle mark on lateral face of the 4th boom section is exposed out of 3rd boom section.

Empty Chassis Rated Capacities

Table A

LOAD RADIUS	3.77 m BOOM		LOAD RADIUS	6.21 m BOOM		LOAD RADIUS	8.59 m BOOM		LOAD RADIUS	10.97 m BOOM	LOAD RADIUS	13.34 m BOOM
	extension width of outriggers			extension width of outriggers			extension width of outriggers			extension width of outriggers		extension width of outriggers
	MAX.	MIN.		MAX.	MIN.		MAX.	MIN.		MAX.		MAX.
2.5 m and below	5,050	2,430	2.6 m and below	4,050	2,430	2.6 m and below	3,130	2,430	4.0 m and below	2,230	5.0 m and below	1,430
2.8 m	4,050	2,130	2.8 m	4,050	2,130	3.4 m	3,130	1,530	4.5 m	1,930	6.0 m	1,130
3.55 m	2,950	1,380	3.6 m	2,930	1,380	3.6 m	2,930	1,380	5.0 m	1,580	7.0 m	900
			3.9 m	2,530	1,180	3.9 m	2,530	1,180	6.0 m	1,130	8.0 m	700
			4.5 m	1,930	930	4.5 m	1,930	930	7.0 m	900	9.0 m	550
			5.0 m	1,630	730	5.0 m	1,630	730	8.0 m	700	10.0 m	500
			5.5 m	1,380	630	5.5 m	1,380	630	9.0 m	550	11.0 m	430
			5.99 m	1,130	500	6.0 m	1,130	500	10.0 m	500	12.0 m	400
						6.5 m	1,050	480	10.75 m	450	13.12 m	350
						7.0 m	930	400				
						7.5 m	830	350				
						8.37 m	650	250				

Table B

LOAD RADIUS	3.77 m BOOM		LOAD RADIUS	6.21 m BOOM		LOAD RADIUS	8.59 m BOOM		LOAD RADIUS	10.97 m BOOM	LOAD RADIUS	13.34 m BOOM
	extension width of outriggers			extension width of outriggers			extension width of outriggers			extension width of outriggers		extension width of outriggers
	MAX.	MIN.		MAX.	MIN.		MAX.	MIN.		MAX.		MAX.
2.5 m and below	5,050	3,130	2.5 m and below	4,050	3,130	2.5 m and below	3,130	3,130	4.0 m and below	2,230	5.0 m and below	1,430
2.8 m	4,050	2,530	2.8 m	4,050	2,530	3.0 m	3,130	2,280	4.5 m	2,180	6.0 m	1,330
3.55 m	3,150	1,680	3.6 m	3,130	1,680	3.6 m	3,130	1,680	5.0 m	1,930	7.0 m	1,130
			3.9 m	2,930	1,430	3.9 m	2,930	1,430	6.0 m	1,430	8.0 m	880
			4.5 m	2,430	1,130	4.5 m	2,430	1,130	7.0 m	1,130	9.0 m	730
			5.0 m	1,980	930	5.0 m	1,980	930	8.0 m	880	10.0 m	650
			5.5 m	1,680	780	5.5 m	1,680	780	9.0 m	730	11.0 m	550
			5.99 m	1,430	650	6.0 m	1,430	650	10.0 m	650	12.0 m	500
						6.5 m	1,280	630	10.75 m	580	13.12 m	430
						7.0 m	1,130	530				
						7.5 m	1,030	480				
						8.37 m	830	350				

Table C

LOAD RADIUS	3.77 m BOOM		LOAD RADIUS	6.21 m BOOM		LOAD RADIUS	8.59 m BOOM		LOAD RADIUS	10.97 m BOOM	LOAD RADIUS	13.34 m BOOM
	extension width of outriggers			extension width of outriggers			extension width of outriggers			extension width of outriggers		extension width of outriggers
	MAX.	MIN.		MAX.	MIN.		MAX.	MIN.		MAX.		MAX.
2.5 m and below	5,050	3,130	2.5 m and below	4,050	3,130	2.5 m and below	3,130	3,130	4.0 m and below	2,230	5.0 m and below	1,430
2.8 m	4,050	2,730	2.8 m	4,050	2,730	3.0 m	3,130	2,580	4.5 m	2,180	6.0 m	1,330
3.55 m	3,150	1,880	3.6 m	3,130	1,880	3.6 m	3,130	1,880	5.0 m	2,030	7.0 m	1,230
			3.9 m	2,930	1,630	3.9 m	2,930	1,630	6.0 m	1,730	8.0 m	1,080
			4.5 m	2,530	1,330	4.5 m	2,530	1,330	7.0 m	1,400	9.0 m	950
			5.0 m	2,230	1,080	5.0 m	2,230	1,080	8.0 m	1,100	10.0 m	800
			5.5 m	1,980	930	5.5 m	1,980	930	9.0 m	950	11.0 m	700
			5.99 m	1,730	780	6.0 m	1,730	780	10.0 m	800	12.0 m	630
						6.5 m	1,580	700	10.75 m	730	13.12 m	530
						7.0 m	1,430	630				
						7.5 m	1,250	550				
						8.37 m	1,050	430				

Table D

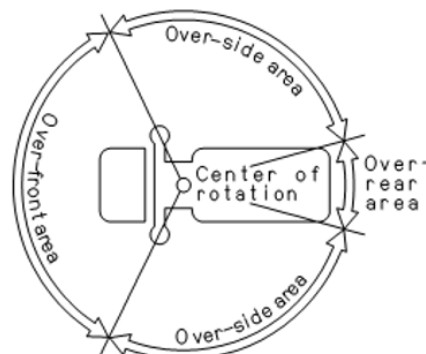
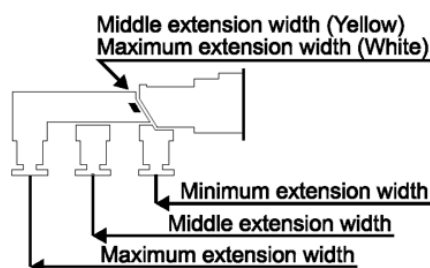
LOAD RADIUS	3.77 m BOOM		LOAD RADIUS	6.21 m BOOM		LOAD RADIUS	8.59 m BOOM		LOAD RADIUS	10.97 m BOOM	LOAD RADIUS	13.34 m BOOM
	extension width of outriggers			extension width of outriggers			extension width of outriggers			extension width of outriggers		extension width of outriggers
	MAX.	MIN.		MAX.	MIN.		MAX.	MIN.		MAX.		MAX.
2.5 m and below	5,050	3,380	2.5 m and below	4,050	3,380	2.5 m and below	3,130	3,130	4.0 m and below	2,230	5.0 m and below	1,430
2.8 m	4,050	2,730	2.8 m	4,050	2,730	3.0 m	3,130	2,580	4.5 m	2,180	6.0 m	1,330
3.55 m	3,150	1,880	3.6 m	3,130	1,880	3.6 m	3,130	1,880	5.0 m	2,030	7.0 m	1,230
			3.9 m	2,930	1,630	3.9 m	2,930	1,630	6.0 m	1,730	8.0 m	1,080
			4.5 m	2,530	1,330	4.5 m	2,530	1,330	7.0 m	1,430	9.0 m	980
			5.0 m	2,230	1,080	5.0 m	2,230	1,080	8.0 m	1,230	10.0m	880
			5.5 m	1,980	930	5.5 m	1,980	930	9.0 m	1,080	11.0 m	800
			5.99 m	1,780	780	6.0 m	1,780	780	10.0 m	980	12.0 m	730
						6.5 m	1,630	700	10.75 m	900	13.12 m	650
						7.0 m	1,480	630				
						7.5 m	1,380	550				
						8.37 m	1,180	430				

- NOTE :
- Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground.
 - This value includes the mass of lifting devices such as hook block (45kg).
 - When the outriggers are extended to the middle width, read the capacities rated for the minimum extension width.
 - This load radius shows actual load radius which includes boom deflection.
 - If the boom length exceeds the table value even a little, the performance is limited to the performance of the next boom length.
 - When the boom length is 10.97 m, a half of the \square mark on lateral face of the 4th boom section is exposed out of 3rd boom section.
 - Empty chassis rated lifting capacity varies according to the working area.
 - <over-side, over-rear area> : 100%
 - <over-front area> : 25%
 - Empty Chassis Rated Capacities table A, B, C and D depend on the types of chassis. (The following table shows guidelines for bodywork vehicles that can achieve the rated lifting capacity tables A, B, C and D for vehicles. Be sure to carry out a stability inspection to determine which performance to apply.)

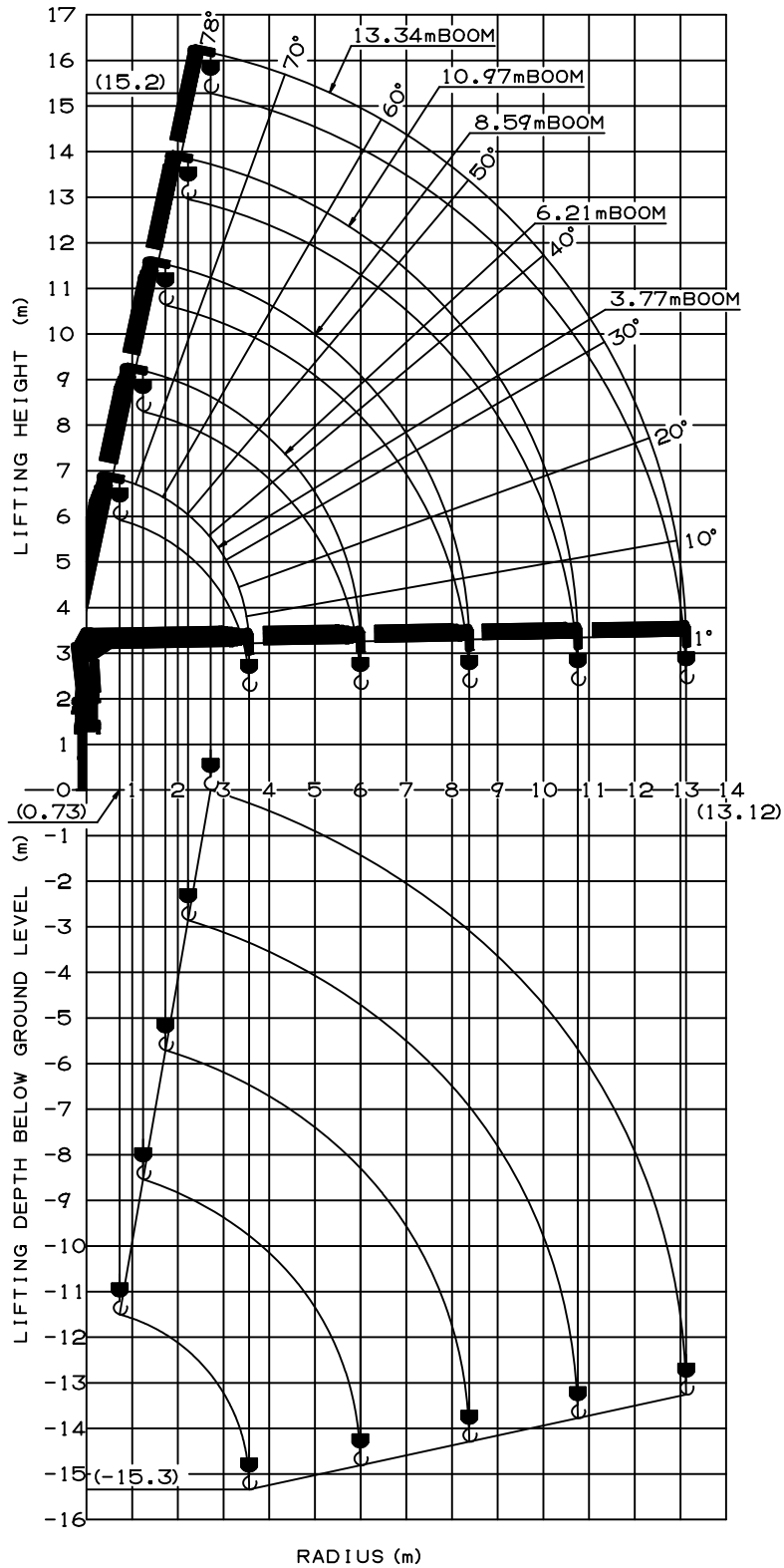
A	14.6 t ≤ GVW < 20 t
B	15 t ≤ GVW < 20 t, 3.8 t ≤ CAWf (*1)
C	20 t ≤ GVW < 25 t, 3.8 t ≤ CAWf (*1)

*1 : Chassis front axle weight (excluding crane and mounting parts mass).

Extension mark

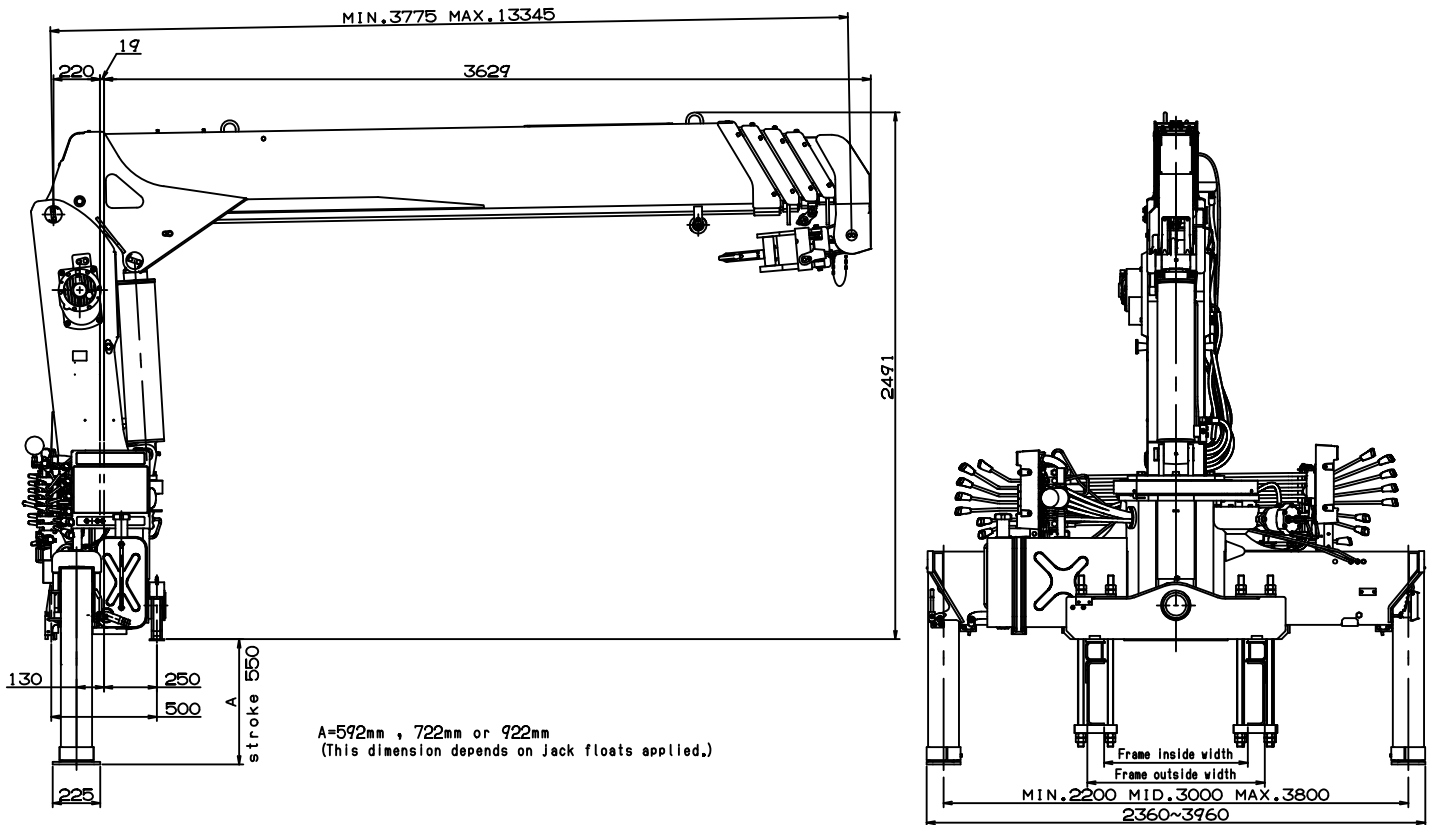


WORKING RANGE



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.

DIMENSIONS



GENERAL DATA FOR SUITABLE TRUCKS

Gross vehicle weight	15,000 to 25,000 kg
P.T.O. torque	190 N·m {19.4 kgf·m} min.
P.T.O. revolution range of use (min. to max.)	Approx. 350 to 1,300 min ⁻¹ {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 chassis frame top) (*1)	Approx. 700 to 1,445 mm
Chassis frame section modulus (*2)	485 cm ³ min.

*1 Height of crane mounting surface is changed by crane bases.

*2 The chassis frame material must meet the following conditions at the crane mounting location.

- Yield point : 392 N/mm²
- Tensile strength : 540 N/mm²