

## TADANO CARGO CRANE

MODEL : **TM-ZE296MH**

## CRANE SPECIFICATIONS

CRANE CAPACITY

3,030 kg at 1.5 m (4-part lines)

BOOM

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

Fully retracted length ----- 3.23 m

Fully extended length ----- 12.8 m

Extending speed ----- 9.57 m in 17 s

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

Raising speed ----- 1° to 76° in 6 s

Boom point ----- 2 sheaves

WINCH

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

Single line pull ----- 7.45 kN {760 kgf}

Single line speed ----- 68 m/min (at 4th layer)

Wire rope

Diameter x length ----- 8 mm x 75 m

Breaking strength ----- 43.1 kN {4.39 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<sup>-1</sup> {rpm}

Specifications are subject to change without notice.

OUTRIGGERS

Manually operated beams and hydraulically operated jacks

Integral with crane frame

Extension width ----- Min. 1,720 mm center to center  
 (1,860 mm outer to outer)  
 Mid. 2,400 mm center to center  
 (2,540 mm outer to outer)  
 Mid. 2,900 mm center to center  
 (3,040 mm outer to outer)  
 Max. 3,400 mm center to center  
 (3,540 mm outer to outer)

REAR OUTRIGGERS (Locally provided)

Minimum extension width ----- 1,700 mm or more

HYDRAULIC SYSTEM

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. 28.7 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

Emergency hydraulic pump

Outrigger pads

Rear outriggers (outrigger beam extension type)

CRANE MASS

Approx. 1,120 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.

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

## RATED LIFTING CAPACITIES (kg)

Table C

LOAD RADIUS	3.23 m / 5.17 m BOOM			LOAD RADIUS	7.1 m BOOM	
	CRANE STRENGTH	EMPTY CHASSIS			CRANE STRENGTH	EMPTY CHASSIS
		extension width of outriggers				extension width of outriggers
		MAX.	MIN.			MAX.
1.5 m and below	3,030	3,030	1,580	2.2 m and below	1,880	1,880
2.0 m	2,180	2,180	1,130	2.5 m	1,680	1,680
2.5 m	1,730	1,730	730	3.0 m	1,430	1,430
3.0 m	1,430	1,430	530	3.5 m	1,180	1,150
3.5 m	1,230	1,230	380	4.0 m	1,030	930
4.0 m	1,050	1,030	280	4.5 m	880	780
4.5 m	900	830	230	5.0 m	780	680
4.97 m	800	680	180	5.5 m	680	580
				6.0 m	600	480
				6.9 m	500	380

LOAD RADIUS	9.0 m BOOM		LOAD RADIUS	10.9 m BOOM		LOAD RADIUS	12.8 m BOOM	
	CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH	EMPTY CHASSIS
		extension width of outriggers			extension width of outriggers			extension width of outriggers
		MAX.			MAX.			MAX.
3.0 m and below	900	900	4.0 m and below	680	530	5.3 m and below	280	280
3.5 m	900	900	4.5 m	630	450	6.0 m	250	250
4.0 m	830	800	5.0 m	580	400	7.0 m	220	220
5.0 m	680	600	6.0 m	480	330	8.0 m	200	190
6.0 m	580	480	7.0 m	400	280	9.0 m	180	160
7.0 m	500	380	8.0 m	350	250	10.0 m	160	140
8.0 m	430	280	9.0 m	300	200	11.0 m	140	130
8.8 m	350	230	10.0 m	250	180	12.6 m	120	120
			10.7 m	230	150			

Table D

LOAD RADIUS	3.23 m / 5.17 m BOOM			LOAD RADIUS	7.1 m BOOM	
	CRANE STRENGTH	EMPTY CHASSIS			CRANE STRENGTH	EMPTY CHASSIS
		extension width of outriggers				
		MAX.	MIN.			MAX.
1.5 m and below	3,030	3,030	1,580	2.2 m and below	1,880	1,880
2.0 m	2,180	2,180	1,130	2.5 m	1,680	1,680
2.5 m	1,730	1,730	730	3.0 m	1,430	1,430
3.0 m	1,430	1,430	530	3.5 m	1,180	1,180
3.5 m	1,230	1,230	380	4.0 m	1,030	1,030
4.0 m	1,050	1,050	280	4.5 m	880	880
4.5 m	900	900	230	5.0 m	780	780
4.97 m	800	800	180	5.5 m	680	680
				6.0 m	600	600
				6.9 m	500	500

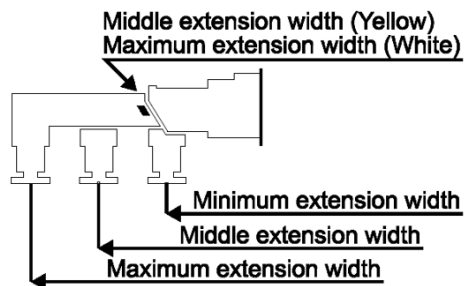
LOAD RADIUS	9.0 m BOOM		LOAD RADIUS	10.9 m BOOM		LOAD RADIUS	12.8 m BOOM	
	CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH	EMPTY CHASSIS
		extension width of outriggers			extension width of outriggers			extension width of outriggers
		MAX.			MAX.			MAX.
3.0 m and below	900	900	4.0 m and below	680	680	5.3 m and below	280	280
3.5 m	900	900	4.5 m	630	630	6.0 m	250	250
4.0 m	830	830	5.0 m	580	580	7.0 m	220	220
5.0 m	680	680	6.0 m	480	480	8.0 m	200	200
6.0 m	580	580	7.0 m	400	400	9.0 m	180	180
7.0 m	500	500	8.0 m	350	350	10.0 m	160	160
8.0 m	430	430	9.0 m	300	300	11.0 m	140	140
8.8 m	350	350	10.0 m	250	250	12.6 m	120	120
			10.7 m	230	230			

- NOTE :
1. Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground.
  2. This value includes the mass of lifting devices such as hook block (30kg).
  3. When the outriggers are extended to the middle width, read the capacities rated for the minimum extension width.
  4. Fully extend the front outriggers when working with a boom length exceeding 5.17m.
  5. This load radius shows actual load radius which includes boom deflection.
  6. If the boom length exceeds the table value even a little, the performance is limited to the performance of the next boom length.
  7. When the boom length is 9.0 m, a half of the first  $\nabla$  mark on lateral face of the 4th boom section is exposed out of 3rd boom section.
  8. When the boom length is 10.9 m, a half of the second  $\nabla$  mark on lateral face of the 4th boom section is exposed out of 3rd boom section.
  9. Empty chassis rated lifting capacity varies according to the working area.
    - Front mounting <over-side, over-rear area> : 100%
    - <over-front area> : 25%
  10. Empty Chassis Rated Capacities table C and D depend on the types of chassis.  
(The following table shows guidelines for bodywork vehicles that can achieve the rated lifting capacity table C for vehicles. The rated lifting capacity may not be applicable depending on vehicle specifications. Be sure to carry out a stability inspection to determine which rated lifting capacity tables to apply.)

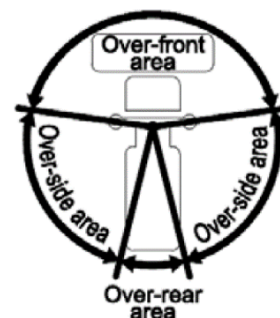
C	4.5 t ≤ GVW < 8.0 t, 3395 mm ≤ WB (*1), 1995mm ≤ Vehicle width (Must be set up the rear outrigger.)
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\*1 : From the front axle to the farthest rear axle.

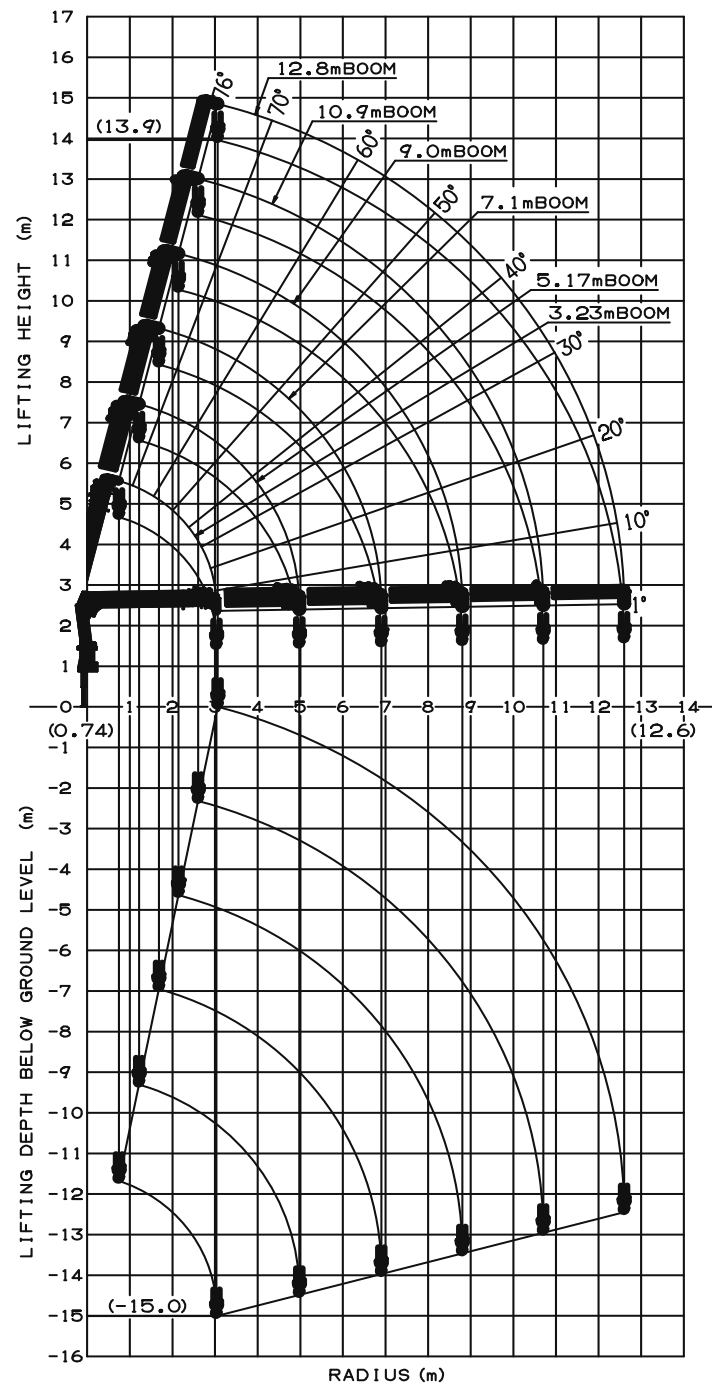
Extension mark



Front mounting

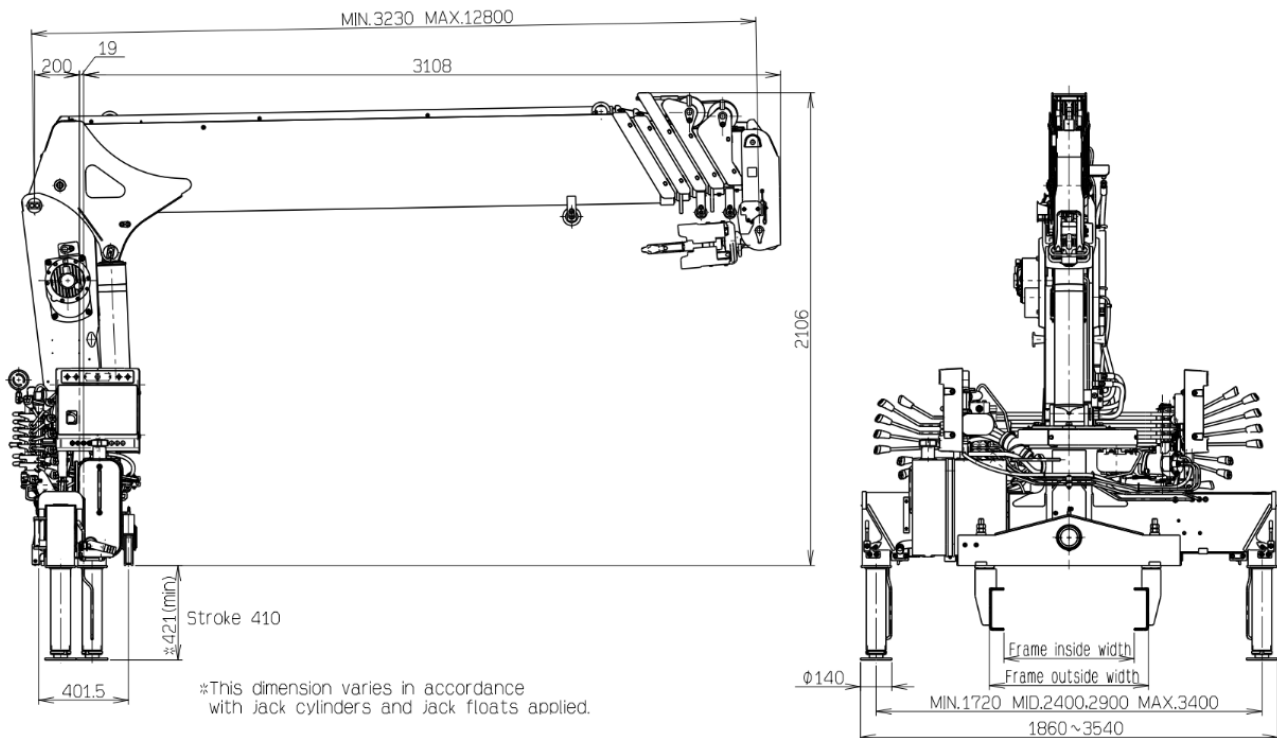


## WORKING RANGE



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

Even within range of this data, bodywork may not be possible depending on the specifications of the truck.

Gross vehicle weight	4,500 to 8,000 kg
Wheel base (※1)	3,395 mm min.
P.T.O. torque	140 N·m {14.3 kgf·m} min.
P.T.O. revolution range of use (min. to max.)	Approx. 350 to 1,360 min <sup>-1</sup> {rpm}
Width for crane mounting	Approx. 605 mm min.
Frame	Weight distribution and frame strength should be calculated for each truck
Frame width range (inside to outside)	Approx. 680 to 860 mm
Frame height (ground to chassis frame top) (※2)	Approx. 640 to 760 mm
Chassis frame section modulus (※3)	70 cm <sup>3</sup> min.

※1 From the front axle to the farthest rear axle.

※2 Height of crane mounting surface is changed by crane bases.

※3 The chassis frame material must meet the following conditions at the crane mounting location.

—Yield point : 392 N/mm<sup>2</sup>

—Tensile strength : 540 N/mm<sup>2</sup>