

## TADANO CARGO CRANE

MODEL : **TM-ZE294MH**

## CRANE SPECIFICATIONS

<u>CRANE CAPACITY</u>	3,030 kg at 1.6 m (4-part lines)
<u>BOOM</u>	Four-sectioned, fully powered partly synchronized telescoping boom of heptagonal box construction Fully retracted length ----- 3.17 m Fully extended length ----- 8.9 m Extending speed ----- 5.73 m in 13 s Elevation ----- Elevated by a double-acting hydraulic cylinder Raising speed ----- 1° to 76° in 6 s Boom point ----- 2 sheaves
<u>WINCH</u>	Hydraulic motor driven    Spur gear speed reduction, provided with mechanical brake 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 56 m Breaking strength ----- 43.1 kN {4.39 tf} Construction ----- 7 x 7 + 6 x WS (26) Hook block ----- 2 sheaves
<u>HOOK BLOCK STOWING DEVICE</u>	Hook-in (Mechanically stowed beneath boom top portion)
<u>SLEWING</u>	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)

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. 970 kg  
(Except crane options and munting 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 A

LOAD RADIUS	3.17 m / 5.12 m BOOM			LOAD RADIUS	7.01 m BOOM		LOAD RADIUS	8.9 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.	MIN.			MAX.			MAX.
1.6 m and below	3,030	3,030	1,580	2.2 m and below	1,880	1,880	3.0 m and below	1,080	1,080
2.0 m	2,330	2,330	980	2.5 m	1,680	1,680	3.5 m	1,080	930
2.5 m	1,880	1,800	680	3.0 m	1,430	1,250	4.0 m	980	730
3.0 m	1,500	1,250	480	3.5 m	1,230	930	5.0 m	780	500
3.5 m	1,250	930	380	4.0 m	1,080	730	6.0 m	650	350
4.0 m	1,080	730	280	4.5 m	930	580	7.0 m	550	280
4.5 m	930	580	250	5.0 m	830	500	8.0 m	480	230
4.92 m	850	530	230	5.5 m	730	430	8.7 m	430	200
				6.0 m	650	350			
				6.81 m	580	300			

Table C

LOAD RADIUS	3.17 m / 5.12 m BOOM			LOAD RADIUS	7.01 m BOOM		LOAD RADIUS	8.9 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.	MIN.			MAX.			MAX.
1.6 m and below	3,030	3,030	1,580	2.2 m and below	1,880	1,880	3.0 m and below	1,080	1,080
2.0 m	2,330	2,330	980	2.5 m	1,680	1,680	3.5 m	1,080	1,080
2.5 m	1,880	1,880	680	3.0 m	1,430	1,400	4.0 m	980	880
3.0 m	1,500	1,500	480	3.5 m	1,230	1,100	5.0 m	780	600
3.5 m	1,250	1,100	380	4.0 m	1,080	880	6.0 m	650	450
4.0 m	1,080	880	300	4.5 m	930	700	7.0 m	550	350
4.5 m	930	700	250	5.0 m	830	600	8.0 m	480	280
4.92 m	850	600	230	5.5 m	730	530	8.7 m	430	250
				6.0 m	650	450			
				6.81 m	580	350			

Table D

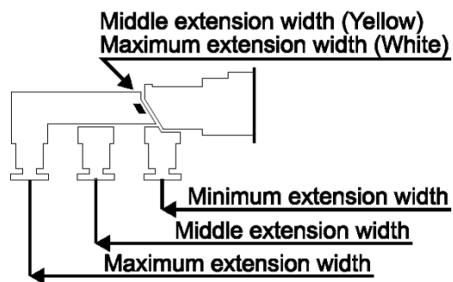
LOAD RADIUS	3.17 m / 5.12 m BOOM			LOAD RADIUS	7.01 m BOOM		LOAD RADIUS	8.9 m BOOM	
	CRANE STRENGTH	EMPTY CHASSIS			CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH	EMPTY CHASSIS
		extension width of outriggers				extension width of outriggers			
		MAX.	MIN.			MAX.			
1.6 m and below	3,030	3,030	1,580	2.2 m and below	1,880	1,880	3.0 m and below	1,080	1,080
2.0 m	2,330	2,330	980	2.5 m	1,680	1,680	3.5 m	1,080	1,080
2.5 m	1,880	1,880	680	3.0 m	1,430	1,430	4.0 m	980	980
3.0 m	1,500	1,500	480	3.5 m	1,230	1,230	5.0 m	780	780
3.5 m	1,250	1,250	380	4.0 m	1,080	1,080	6.0 m	650	650
4.0 m	1,080	1,080	300	4.5 m	930	930	7.0 m	550	550
4.5 m	930	930	250	5.0 m	830	830	8.0 m	480	480
4.92 m	850	850	230	5.5 m	730	730	8.7 m	430	430
				6.0 m	650	650			
				6.81 m	580	580			

- 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 5.12m.
  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 7.01 m, a half of the  $\square$  mark on lateral face of the 3rd boom section is exposed out of 2nd boom section.
  8. Empty chassis rated lifting capacity varies according to the working area.
    - Front mounting <over-side, over-rear area> : 100%
    - <over-front area> : 25%
  9. Empty Chassis Rated Capacities table A,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 and 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.)

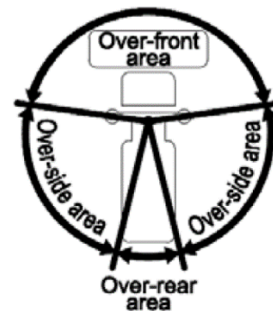
A	4.5 t ≤ GVW < 8.0 t, 2750 mm ≤ WB (*1)
C	4.5 t ≤ GVW < 8.0 t, 3395 mm ≤ WB (*1), 1995 mm ≤ Vehicle width

\*1 : From the front axle to the farthest rear axle.

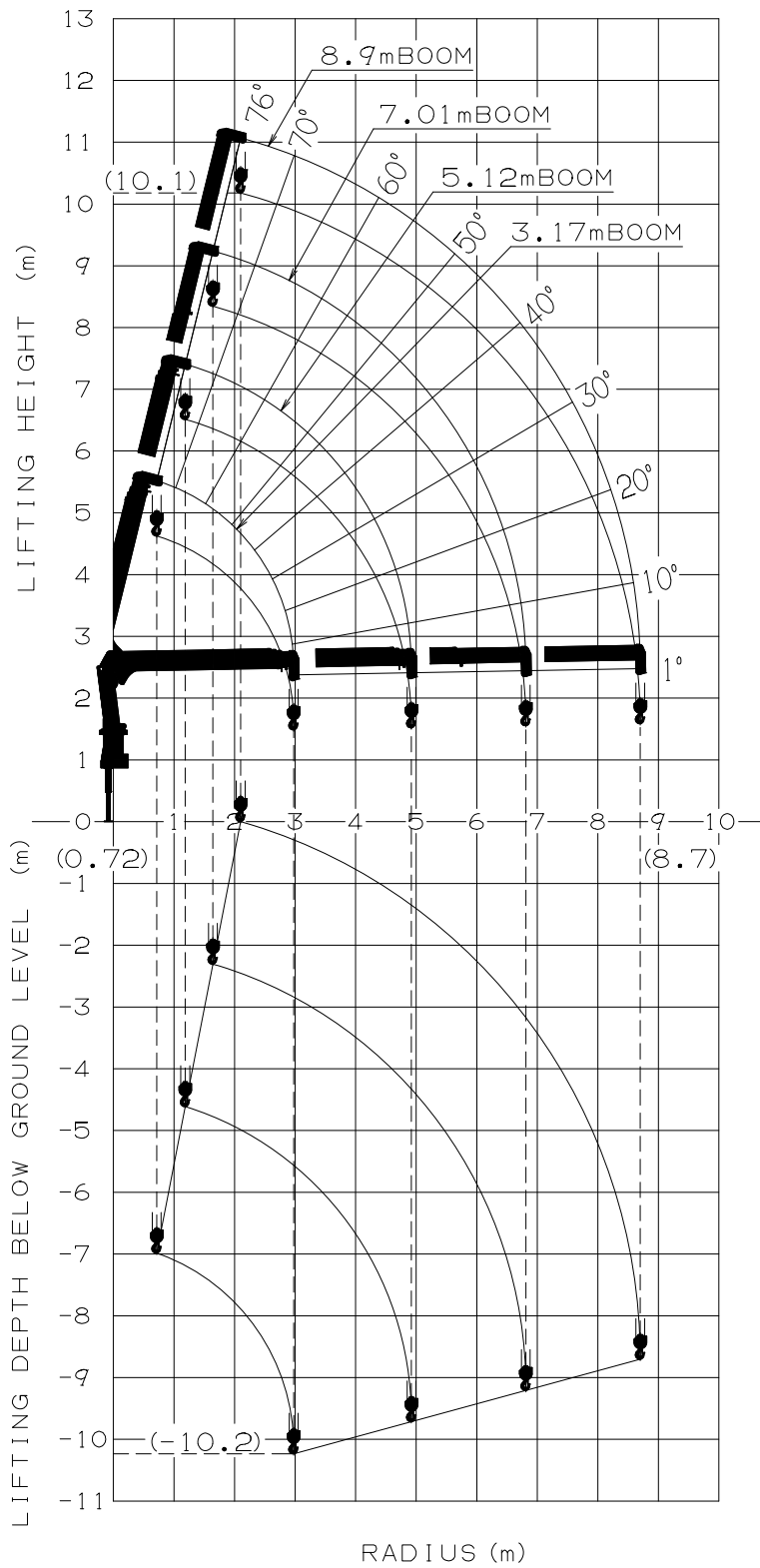
**Extension mark**



**Front mounting**

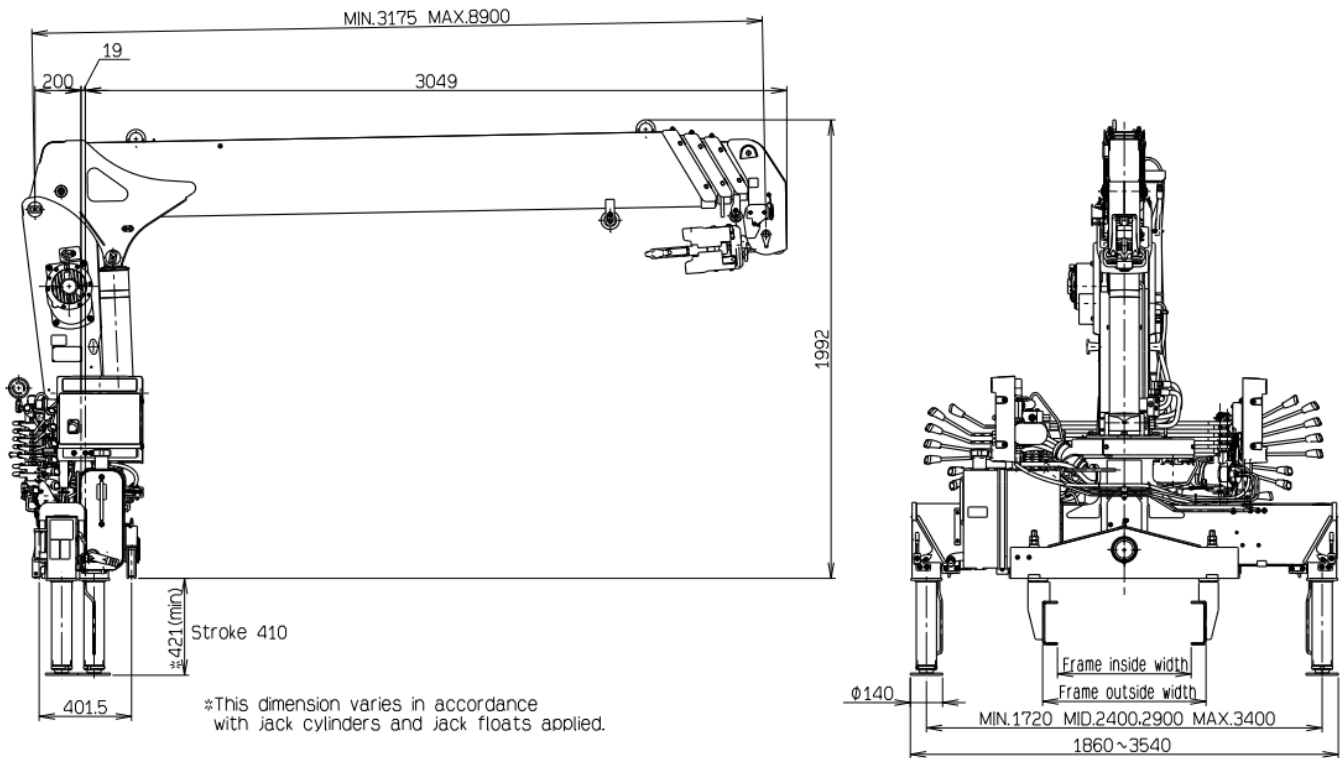


### WORKING RANGE



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)	2,750 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>