

TADANO CARGO CRANE

MODEL : **TM-ZE304MH**

CRANE SPECIFICATIONS

<u>CRANE CAPACITY</u>	3,030 kg at 2.6 m (4-part lines)
<u>BOOM</u>	Four-sectioned, fully powered partly synchronized telescoping boom of heptagonal box construction Fully retracted length ----- 3.34 m Fully extended length ----- 10.0 m Extending speed ----- 6.66 m in 14 s Elevation ----- Elevated by a double-acting hydraulic cylinder Raising speed ----- 1° to 78° in 7.5 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 ----- 76 m/min (at 4th layer) Wire rope Diameter x length ----- 8 mm x 63 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 ⁻¹ {rpm}

Specifications are subject to change without notice.

OUTRIGGERS

Manually operated beams and hydraulically operated jacks
Integral with crane frame

Extension width ----- Min. 2,000 mm center to center
(2,150 mm outer to outer)
Mid. 2,700 mm center to center
(2,850 mm outer to outer)
Max. 3,400 mm center to center
(3,550 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. 43.0 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
Oil cooler
Rear outriggers (outrigger beam extension type)

CRANE MASS

Approx. 1,170 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.

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

RATED LIFTING CAPACITIES (kg)

Table A

LOAD RADIUS	3.34 m / 5.57 m BOOM			LOAD RADIUS	7.78 m BOOM		LOAD RADIUS	10.0 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.	
2.4 m and below	3,030	3,030	1,380	2.7 m and below	2,330	2,330	4.0 m and below	1,330	1,230		
2.6 m	3,030	2,850	1,180	3.2 m	2,030	1,900	5.0 m	1,100	800		
3.0 m	2,480	2,100	930	3.5 m	1,830	1,550	6.0 m	930	630		
3.5 m	2,080	1,550	680	4.0 m	1,630	1,230	7.0 m	800	500		
4.0 m	1,780	1,230	530	4.5 m	1,480	1,000	8.0 m	700	400		
4.5 m	1,580	1,000	450	5.0 m	1,330	800	9.0 m	630	330		
5.0 m	1,380	800	380	5.5 m	1,230	730	9.8 m	580	280		
5.37 m	1,280	730	330	6.0 m	1,130	630					
				6.5 m	1,030	550					
				7.0 m	950	500					
				7.58 m	880	430					

Table C

LOAD RADIUS	3.34 m / 5.57 m BOOM			LOAD RADIUS	7.78 m BOOM		LOAD RADIUS	10.0 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.	
2.4 m and below	3,030	3,030	1,630	2.7 m and below	2,330	2,330	4.0 m and below	1,330	1,330		
2.6 m	3,030	3,030	1,400	3.2 m	2,030	2,030	5.0 m	1,100	1,050		
3.0 m	2,480	2,480	1,080	3.5 m	1,830	1,830	6.0 m	930	800		
3.5 m	2,080	2,000	830	4.0 m	1,630	1,580	7.0 m	800	630		
4.0 m	1,780	1,580	650	4.5 m	1,480	1,280	8.0 m	700	530		
4.5 m	1,580	1,280	530	5.0 m	1,330	1,050	9.0 m	630	430		
5.0 m	1,380	1,050	430	5.5 m	1,230	930	9.8 m	580	350		
5.37 m	1,280	930	380	6.0 m	1,130	800					
				6.5 m	1,030	700					
				7.0 m	950	630					
				7.58 m	880	550					

Table D

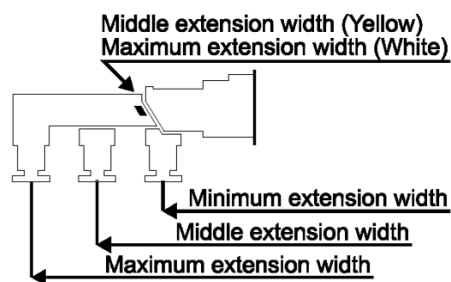
LOAD RADIUS	3.34 m / 5.57 m BOOM			LOAD RADIUS	7.78 m BOOM		LOAD RADIUS	10.0 m BOOM	
	CRANE STRENGTH	EMPTY CHASSIS			CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH	EMPTY CHASSIS
		extension width of outriggers							
		MAX.	MIN.			MAX.		MAX.	
2.4 m and below	3,030	3,030	1,630	2.7 m and below	2,330	2,330	4.0 m and below	1,330	1,330
2.6 m	3,030	3,030	1,400	3.2 m	2,030	2,030	5.0 m	1,100	1,100
3.0 m	2,480	2,480	1,080	3.5 m	1,830	1,830	6.0 m	930	930
3.5 m	2,080	2,080	830	4.0 m	1,630	1,630	7.0 m	800	800
4.0 m	1,780	1,780	650	4.5 m	1,480	1,480	8.0 m	700	700
4.5 m	1,580	1,580	530	5.0 m	1,330	1,330	9.0 m	630	630
5.0 m	1,380	1,380	430	5.5 m	1,230	1,230	9.8 m	580	580
5.37 m	1,280	1,280	380	6.0 m	1,130	1,130			
				6.5 m	1,030	1,030			
				7.0 m	950	950			
				7.58 m	880	880			

- 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 5.57m.
 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 7.78 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.)

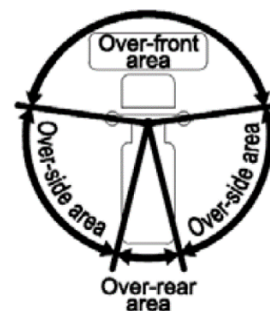
A	8.0 t ≤ GVW < 14.5 t
C	11.0 t ≤ GVW < 14.5 t, 4200 mm ≤ WB (*1)

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

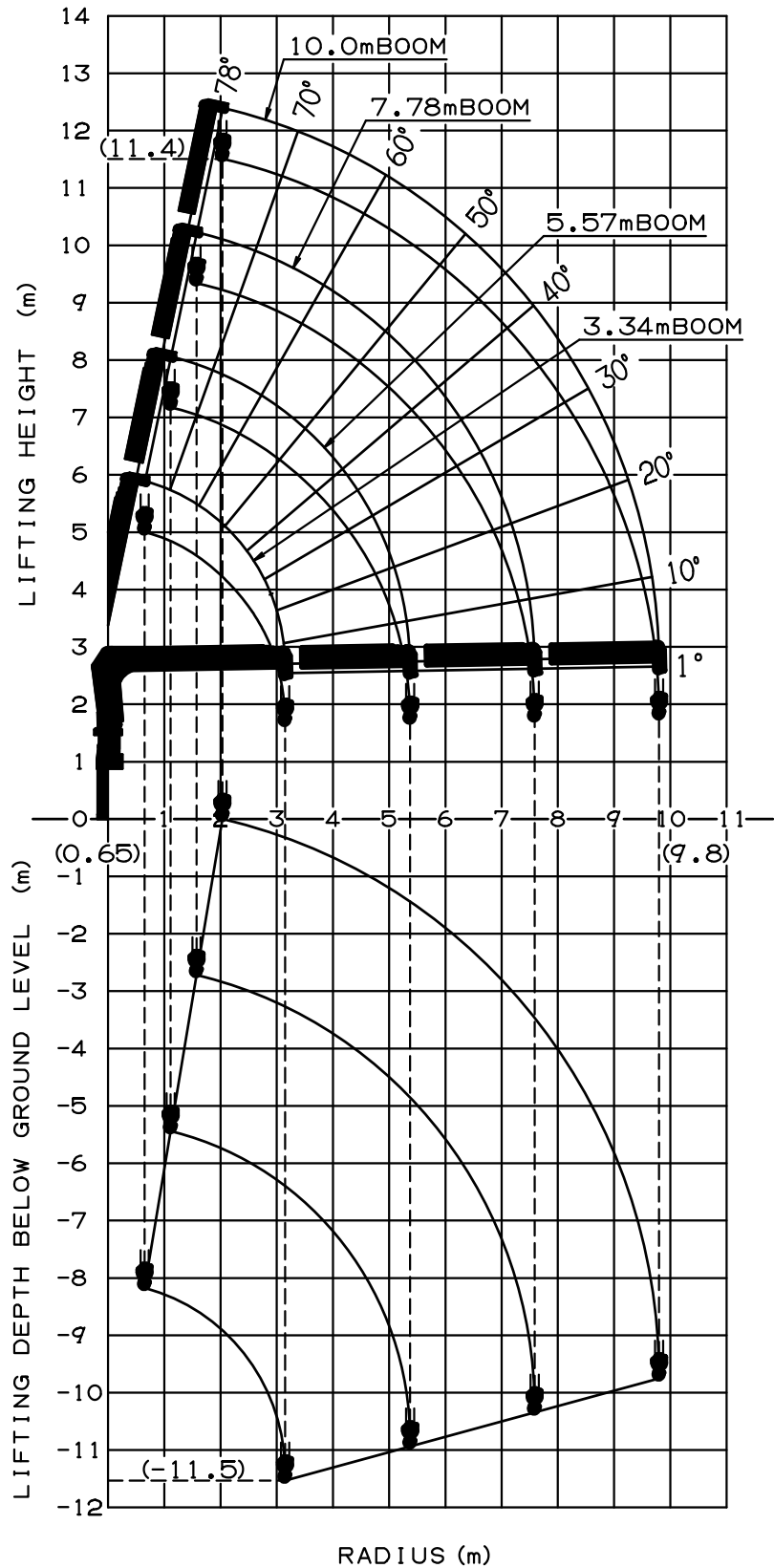
Extension mark



Front mounting

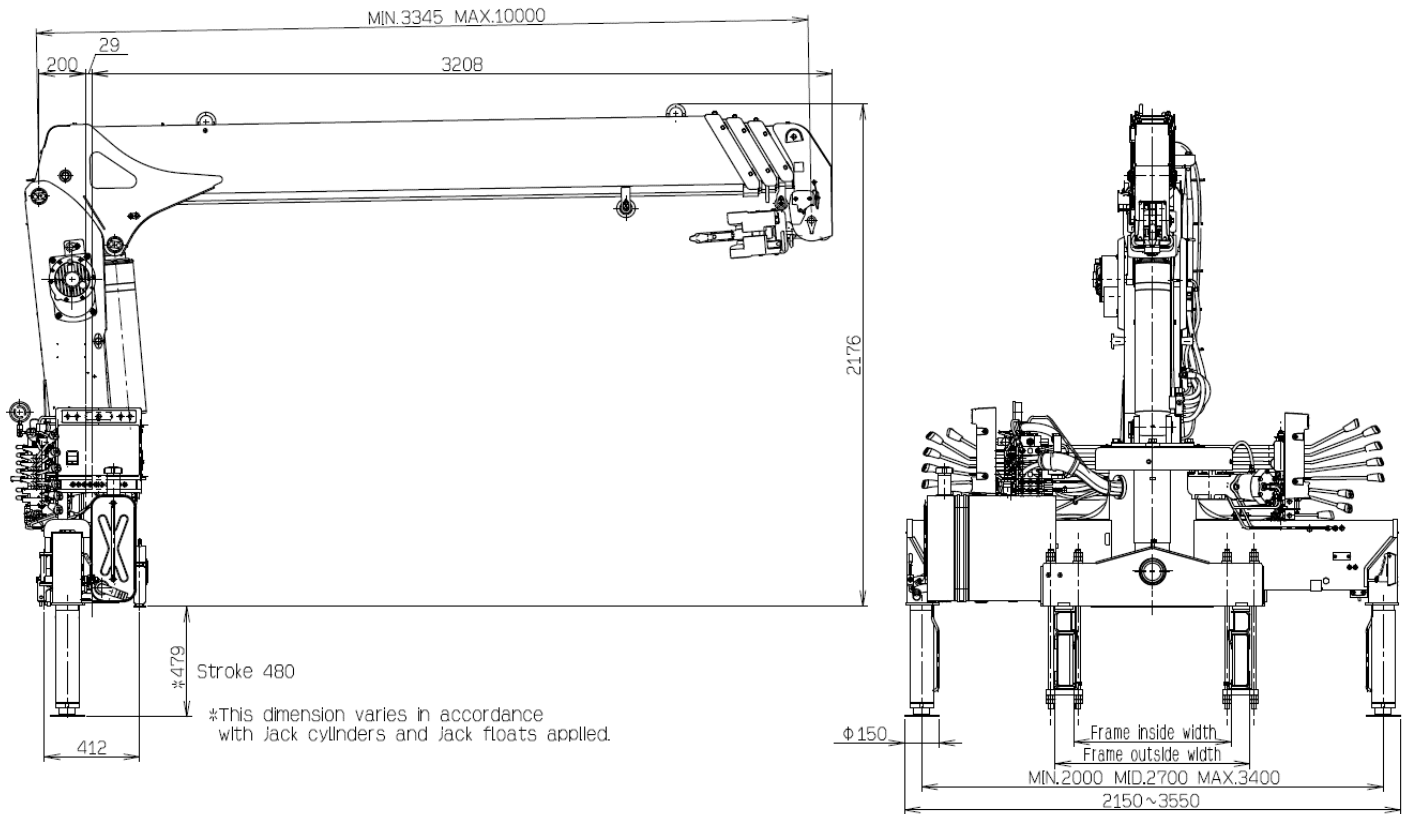


WORKING RANGE



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	8,000 to 14,500 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. 640 mm min.
Frame	Weight distribution and frame strength should be calculated for each truck
Frame width range (inside to outside)	Approx. 610 to 860 mm
Frame height (ground to chassis frame top) (*1)	Approx. 655 to 785 mm
Chassis frame section modulus (*2)	238 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