

## TADANO CARGO CRANE

MODEL : **TM-ZE296M**  
**TM-ZE296MH** ----- with hook stowing device

## CRANE SPECIFICATIONS

CRANE CAPACITY

3,030 kg at 1.4 m (4-part lines)

BOOM

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

Retracted length ----- 3.23 m

Extended length ----- 12.8 m

Extending speed ----- 9.57 m / 17 s

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

Elevating speed ----- 1° to 76° / 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 STOWING DEVICE

Mechanically stowed beneath boom top portion

[TM-ZE296MH only]

SWING Hydraulic motor driven Worm gear speed reduction  
Continuous 360° full circle swing on ball bearing slew ring  
Automatic swing lock  
Swing speed ----- 2.5 min<sup>-1</sup> {rpm}

OUTRIGGERS Manually extended sliders and hydraulically extended jacks  
Integral with crane frame Power up and down  
Extension width ----- Min. 1,720 mm  
Mid. 2,900 mm, 2,400 mm  
Full 3,400 mm

REAR OUTRIGGERS (Locally provided)  
Full extension width ---- Not less than 2,400 mm

HYDRAULICS Hydraulic pump ----- Single gear pump  
Hydraulic motors ----- Axial piston type for winch  
Axial piston type for swing  
Control valves ----- Multiple control valves with integral  
safety valve  
Oil tank capacity ----- approx. 22 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

CRANE MASS Approx. 1,195 kg (with standardized mounting parts included)

NOTE : Operating speeds of the crane are guaranteed under the condition that the pump delivery is 53 L/min.

## RATED LIFTING CAPACITIES IN KILOGRAMS

### Crane Strength Rated Capacities

Load Radius	3.23 m / 5.17 m Boom		Load Radius	7.1 m Boom	Load Radius	9.0 m Boom	Load Radius	10.9 m Boom	Load Radius	12.8 m Boom
	Extension width of outriggers			Extension width of outriggers						
	Full	Minimum		Full		Full		Full		Full
1.45 m and below	3,030	1,580	2.2 m and below	1,880	3.0 m and below	980	4.0 m and below	580	5.3 m and below	280
2.0 m	2,180	1,130	2.5 m	1,680	3.5 m	900	4.5 m	530	6.0 m	250
2.5 m	1,730	730	3.0 m	1,430	4.0 m	830	5.0 m	480	7.0 m	220
3.0 m	1,430	530	3.5 m	1,180	5.0 m	680	6.0 m	400	8.0 m	200
3.5 m	1,230	380	4.0 m	1,030	6.0 m	580	7.0 m	330	9.0 m	180
4.0 m	1,050	280	4.5 m	880	7.0 m	480	8.0 m	280	10.0m	160
4.5 m	900	230	5.0 m	780	8.0 m	380	9.0 m	250	11.0m	140
4.97m	800	180	5.5 m	680	8.8 m	330	10.0 m	230	12.6m	120
			6.0 m	600			10.7 m	210		
			6.9 m	500						

- NOTES : 1. The mass of hook block (30kg), 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

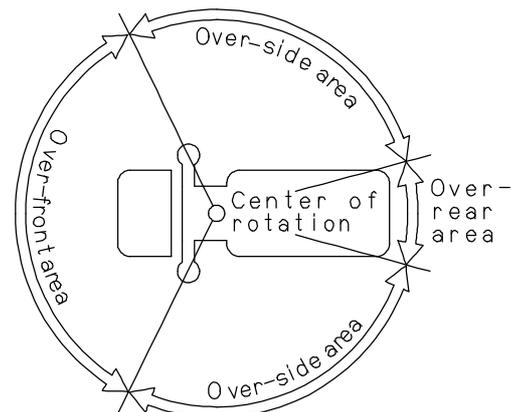
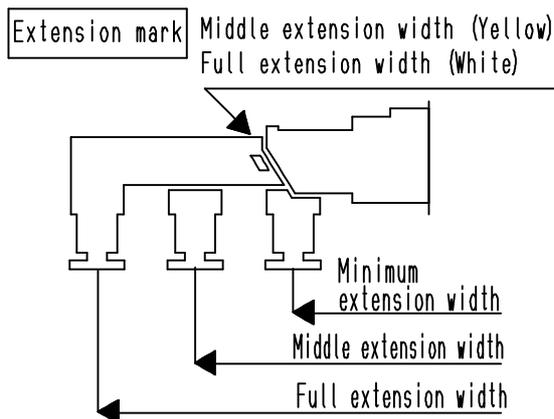
Table C

Load Radius	3.23 m / 5.17 m Boom		Load Radius	7.1 m Boom	Load Radius	9.0 m Boom	Load Radius	10.9 m Boom	Load Radius	12.8 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers		Extension width of outriggers		
	Full	Minimum		Full		Full		Full		
1.4 m and below	3,030	1,580	2.2 m and below	1,730	3.0 m and below	930	4.0 m and below	480	5.3 m and below	280
2.0 m	2,130	1,130	2.5 m	1,530	3.5 m	830	4.5 m	430	6.0 m	240
2.5 m	1,730	730	3.0 m	1,280	4.0 m	730	5.0 m	380	7.0 m	210
3.0 m	1,430	530	3.5 m	1,080	5.0 m	580	6.0 m	300	8.0 m	180
3.5 m	1,230	380	4.0 m	930	6.0 m	480	7.0 m	260	9.0 m	160
4.0 m	1,030	280	4.5 m	780	7.0 m	380	8.0 m	230	10.0m	140
4.5 m	830	230	5.0 m	680	8.0 m	280	9.0 m	200	11.0m	130
4.97m	680	180	5.5 m	580	8.8 m	230	10.0 m	180	12.6m	100
			6.0 m	480			10.7 m	150		
			6.9 m	380						

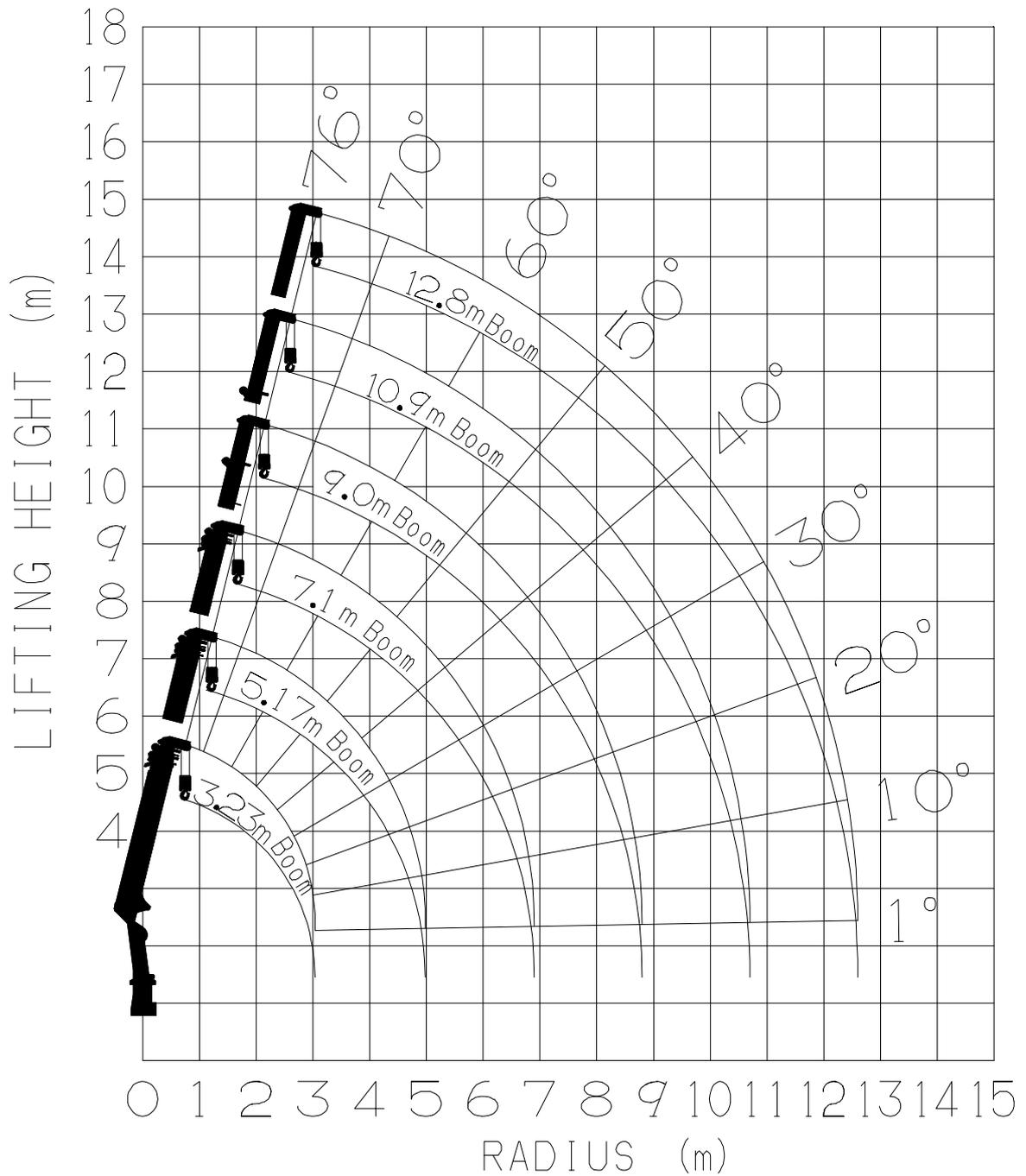
Table D

Load Radius	3.23 m / 5.17 m Boom		Load Radius	7.1 m Boom	Load Radius	9.0 m Boom	Load Radius	10.9 m Boom	Load Radius	12.8 m Boom
	Extension width of outriggers			Extension width of outriggers						
	Full	Minimum		Full		Full		Full		Full
1.45 m and below	3,030	1,580	2.2 m and below	1,880	3.0 m and below	980	4.0 m and below	580	5.3 m and below	280
2.0 m	2,180	1,130	2.5 m	1,680	3.5 m	900	4.5 m	530	6.0 m	250
2.5 m	1,730	730	3.0 m	1,430	4.0 m	830	5.0 m	480	7.0 m	220
3.0 m	1,430	530	3.5 m	1,180	5.0 m	680	6.0 m	400	8.0 m	200
3.5 m	1,230	380	4.0 m	1,030	6.0 m	580	7.0 m	330	9.0 m	180
4.0 m	1,050	280	4.5 m	880	7.0 m	480	8.0 m	280	10.0m	160
4.5 m	900	230	5.0 m	780	8.0 m	380	9.0 m	250	11.0m	140
4.97m	800	180	5.5 m	680	8.8 m	330	10.0 m	230	12.6m	120
			6.0 m	600			10.7 m	210		
			6.9 m	500						

- 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 hook block (30 kg), slings and all similarly used load handling devices must be added to the mass of load.
  3. For boom lengths not shown, use the rated lifting capacity of next longer boom.
  4. When front outriggers are extended to middle extension width, use the rated lifting capacities for outriggers are extended to minimum extension width .
  5. For boom lengths longer than 5.17m, extend front outriggers and rear outriggers to full extension width.
  6. When the boom length is 9.0 m, a half of the first  $\square$  mark on lateral face of the 4th boom section is exposed out of the 3rd boom section.
  7. When the boom length is 10.9 m, a half of the second  $\square$  mark on lateral face of the 4th boom section is exposed out of the 3rd boom section.
  8. Empty Chassis Rated Capacities table C and D depend on the types of chassis.
  9. Empty Chassis Rated Capacities are shown for over-side areas and over-rear area. These capacities for over-front area may be lowered depending on the types of chassis.

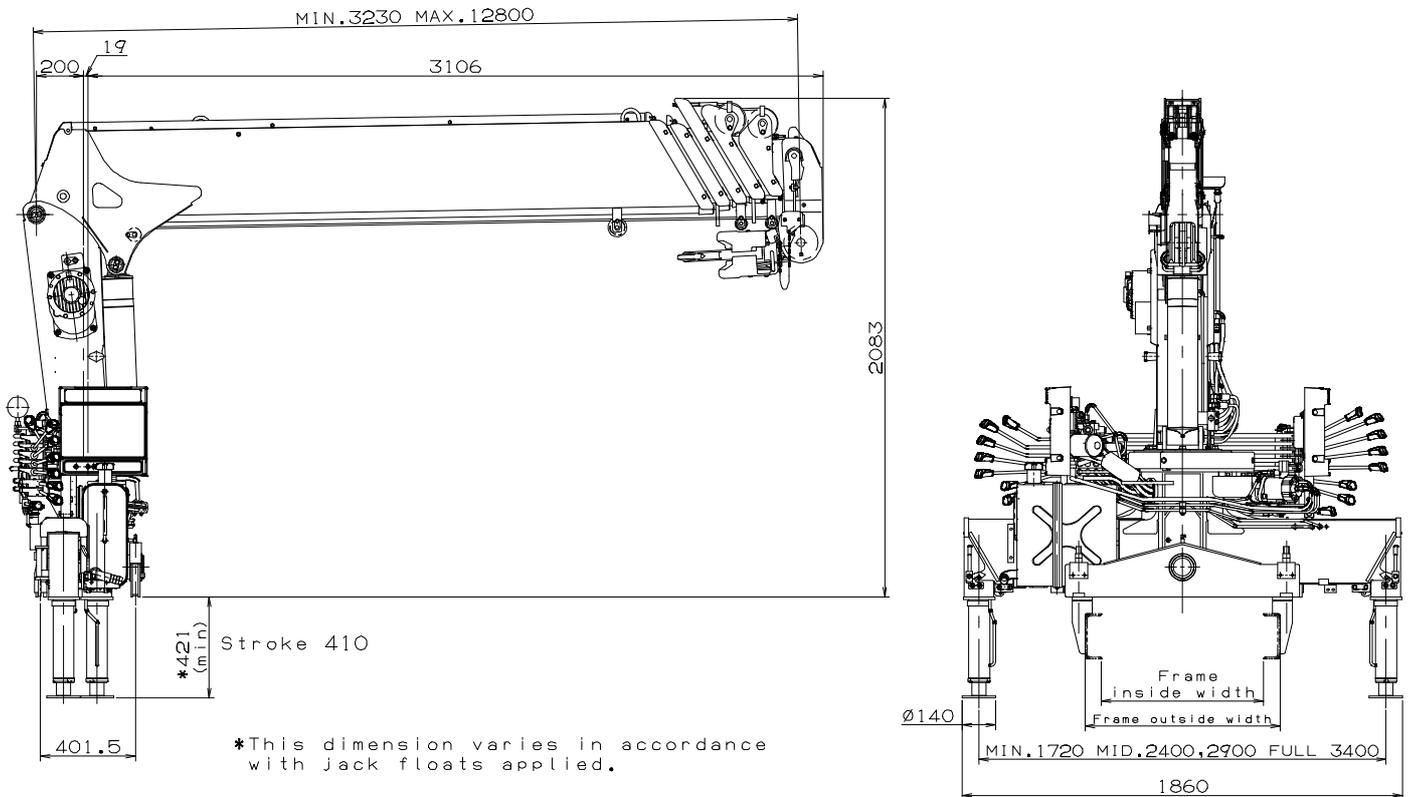


### WORKING RANGE



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 [TM-ZE296MH]



## GENERAL DATA FOR SUITABLE TRUCKS

Gross vehicle mass (including crane mass) -----	4,500 to 8,000 kg
P.T.O. torque -----	140 N-m {14.3 kgf-m} min.
P.T.O. revolution -----	Approx. 300 to 1,700 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 frame top) -----	Approx. 1,010 mm max.
	(Height of crane mounting base can be changed by combination of jack floats and crane bases)