

## TADANO CARGO CRANE

MODEL : **TM-ZE294HRS**

## CRANE SPECIFICATIONS

CRANE CAPACITY

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

BOOM

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

Retracted length ----- 3.17 m

Extended length ----- 8.9 m

Extending speed ----- 5.73 m / 13 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

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

HOOK STOWING DEVICE

Mechanically stowed beneath boom top portion

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

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

RADIO CONTROLLER

Model : RCS-F  
 Control functions of boom telescoping, hoisting up and down,  
 boom elevating, swing, acceleration, speed mode selection,  
 working height limiting, Hook-in, Hook-out, horn and  
 emergency stop  
 Frequency ----- 40 frequencies in 433 MHz band  
 Operating power supply  
   Transmitter ----- 6V DC, Dry battery R6P(SUM-3) x 4  
   Control unit ----- 24V DC, Vehicle battery  
 Transmitter mass ----- Approx. 576 g (includes batteries)

SAFETY DEVICES

AML(Automatic Moment Limiter)  
 Load indication  
 Load moment ratio to rated load indication  
 Warning alarm  
 Over load limiter  
 WHL(Working Height Limiter)  
 Load meter  
 Radius indicator  
 Emergency stop switch on radio controller  
 Terminal for emergency stop switch  
 Over-winding alarm  
 Hoisting limiter  
 Jack interlock  
 P.T.O indicator lamp  
 Hook safety latch  
 Hydraulic safety valves, check valves and holding valves  
 Level gauge

CRANE MASS

Approx. 1,045 kg (includes standardized mounting parts)

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	3.17 m / 5.12 m Boom		Load Radius	7.01 m Boom	Load Radius	8.9 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880	3.0 m and below	1,030
2.0 m	2,330	980	2.5 m	1,680	3.5 m	930
2.5 m	1,880	680	3.0 m	1,430	4.0 m	830
3.0 m	1,500	480	3.5 m	1,230	5.0 m	680
3.5 m	1,250	380	4.0 m	1,080	6.0 m	580
4.0 m	1,080	280	4.5 m	930	7.0 m	480
4.5 m	930	250	5.0 m	830	8.0 m	400
4.92m	850	230	5.5 m	730	8.7 m	350
			6.0 m	650		
			6.81m	580		

- NOTES : 1. The mass of hook block (30kg), slings and all similarly used load handling devices must be added to the mass of 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 A

Load Radius	3.17 m / 5.12 m Boom		Load Radius	7.01 m Boom	Load Radius	8.9 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880	3.0 m and below	980
2.0 m	2,280	980	2.5 m	1,630	3.5 m	830
2.5 m	1,730	680	3.0 m	1,150	4.0 m	680
3.0 m	1,180	480	3.5 m	880	5.0 m	450
3.5 m	880	380	4.0 m	680	6.0 m	350
4.0 m	680	280	4.5 m	580	7.0 m	280
4.5 m	580	250	5.0 m	480	8.0 m	230
4.92m	530	230	5.5 m	400	8.7 m	200
			6.0 m	350		
			6.81m	300		

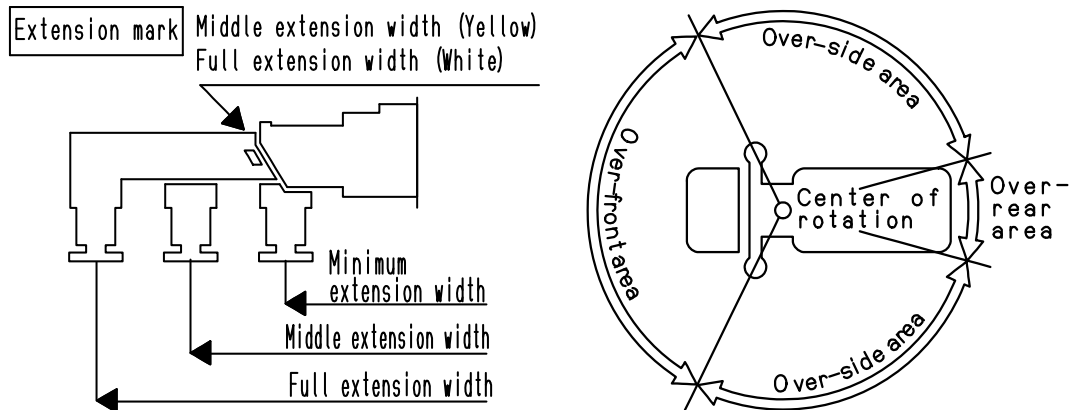
Table C

Load Radius	3.17 m / 5.12 m Boom		Load Radius	7.01 m Boom	Load Radius	8.9 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880	3.0 m and below	980
2.0 m	2,280	980	2.5 m	1,630	3.5 m	880
2.5 m	1,830	680	3.0 m	1,330	4.0 m	780
3.0 m	1,380	480	3.5 m	1,030	5.0 m	550
3.5 m	1,030	380	4.0 m	800	6.0 m	430
4.0 m	830	280	4.5 m	680	7.0 m	330
4.5 m	680	250	5.0 m	580	8.0 m	280
4.92m	580	230	5.5 m	480	8.7 m	250
			6.0 m	430		
			6.81m	350		

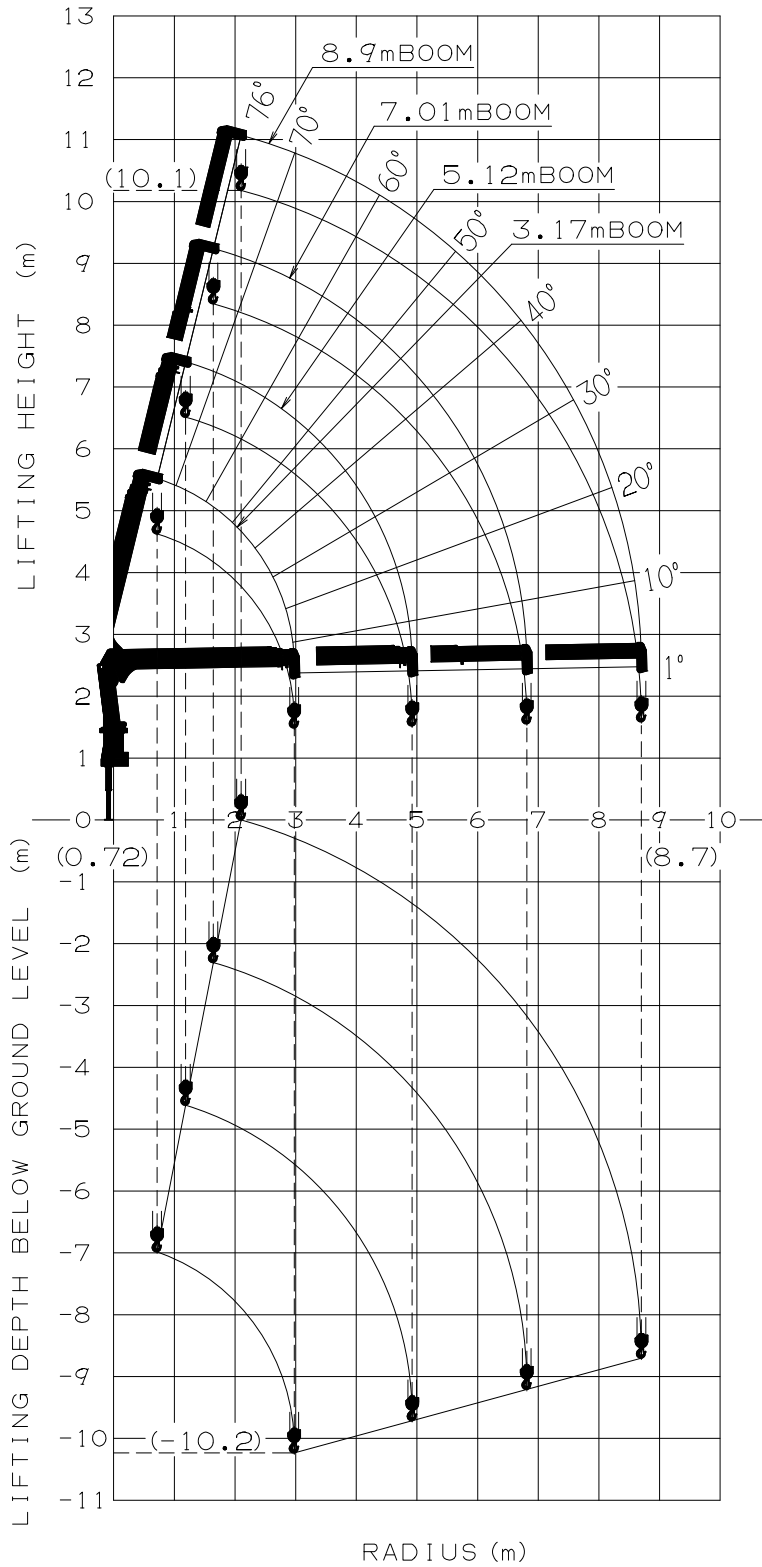
Table D

Load Radius	3.17 m / 5.12 m Boom		Load Radius	7.01 m Boom	Load Radius	8.9 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880	3.0 m and below	1,030
2.0 m	2,330	980	2.5 m	1,680	3.5 m	930
2.5 m	1,880	680	3.0 m	1,430	4.0 m	830
3.0 m	1,500	480	3.5 m	1,230	5.0 m	680
3.5 m	1,250	380	4.0 m	1,080	6.0 m	580
4.0 m	1,080	280	4.5 m	930	7.0 m	480
4.5 m	930	250	5.0 m	830	8.0 m	400
4.92m	850	230	5.5 m	730	8.7 m	350
			6.0 m	650		
			6.81m	580		

- 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 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 5.12m, extend outriggers to full extension width.
  6. When the boom length is 7.01 m, a half of the  $\sphericalangle$  mark on lateral face of the 3rd boom section is exposed out of the 2nd boom section.
  7. Empty Chassis Rated Capacities table A ,C and D depend on the types of chassis.
  8. 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.



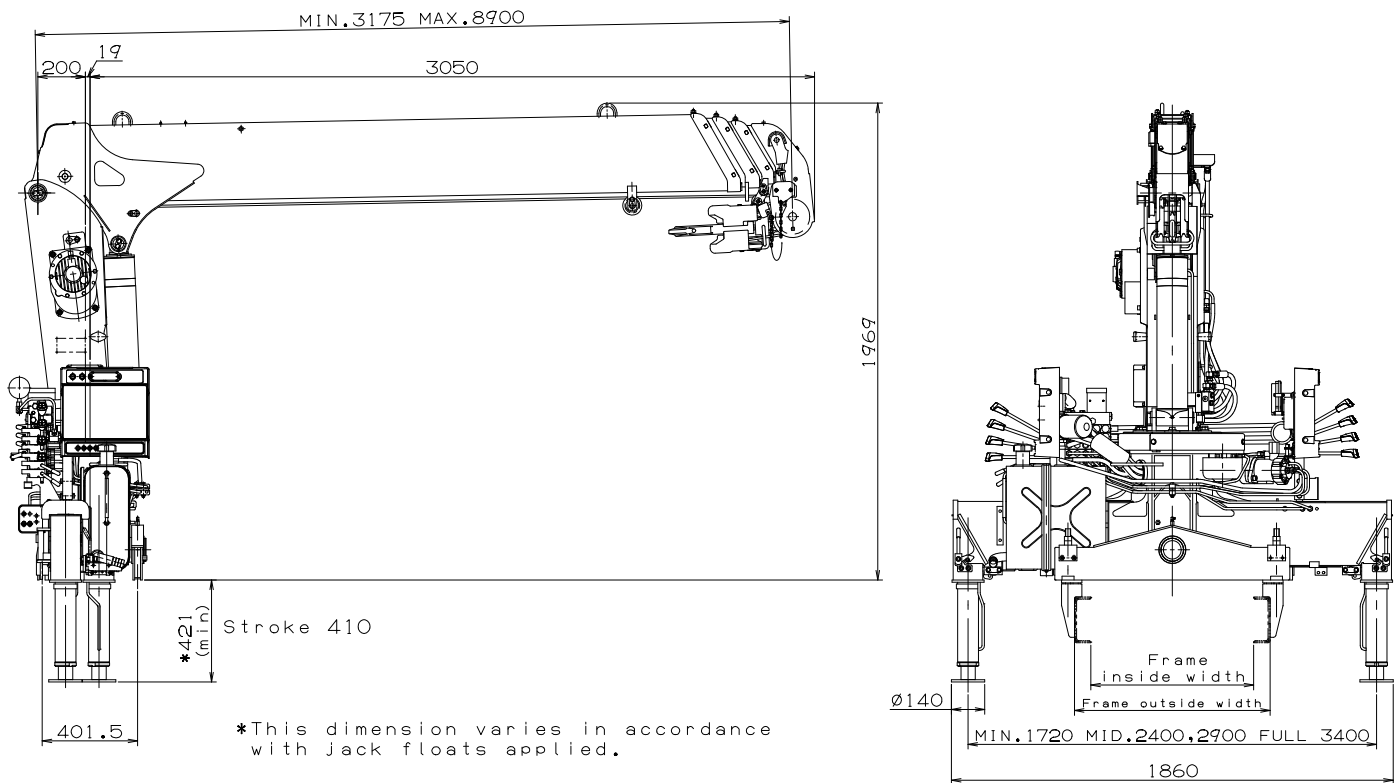
### WORKING RANGE



**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



## 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)