

## TADANO CARGO CRANE

MODEL : **TM-ZE294HS**

## CRANE SPECIFICATIONS

CRANE CAPACITY

3,000 kg at 1.6 m (4-part lines)

BOOM

Four-sectioned, fully powered partly synchronized telescoping boom of heptagonal 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 and cable follower

Single line pull ----- 7.35 kN {750 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

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}

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  
Max.3,400 mm

HYDRAULICS

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. 22 L

SAFETY DEVICES

AML(Automatic Moment Limiter)  
Load indication  
Load moment ratio to rated load indication  
Warning alarm  
Over load limiter(stop)  
WHL(Working Height Limiter)  
Load meter  
Load indicator  
Over-unwinding prevention  
Terminal for emergency stop switch  
Over-winding alarm  
Anti-two-block device  
Hook safety latch  
Hydraulic safety valves, check valves and holding valves  
Level gauge

CRANE MASS

Approx. 1,050 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
1.6 m and below	3,000	2.2 m and below	1,850	3.0 m and below	1,050
2.0 m	2,300	2.5 m	1,650	3.5 m	1,050
2.5 m	1,850	3.0 m	1,400	4.0 m	950
3.0 m	1,470	3.5 m	1,200	5.0 m	750
3.5 m	1,220	4.0 m	1,050	6.0 m	620
4.0 m	1,050	4.5 m	900	7.0 m	520
4.5 m	900	5.0 m	800	8.0 m	450
4.92m	820	5.5 m	700	8.7 m	400
		6.0 m	620		
		6.81m	550		

- NOTES : 1. Capacities in above tables include slings and similarly used load lifting devices, and they must be added to the mass of the load. They don't, however, include the mass of hook block (30kg)
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, the types of the chassis and extension width of outriggers.

### 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
	Maximum	Minimum		Maximum		Maximum
1.6 m and below	3,000	1,550	2.2 m and below	1,850	3.0 m and below	1,050
2.0 m	2,300	950	2.5 m	1,650	3.5 m	900
2.5 m	1,770	650	3.0 m	1,220	4.0 m	700
3.0 m	1,220	450	3.5 m	900	5.0 m	470
3.5 m	900	350	4.0 m	700	6.0 m	320
4.0 m	700	250	4.5 m	550	7.0 m	250
4.5 m	550	220	5.0 m	470	8.0 m	200
4.92m	500	200	5.5 m	400	8.7 m	170
			6.0 m	320		
			6.81m	270		

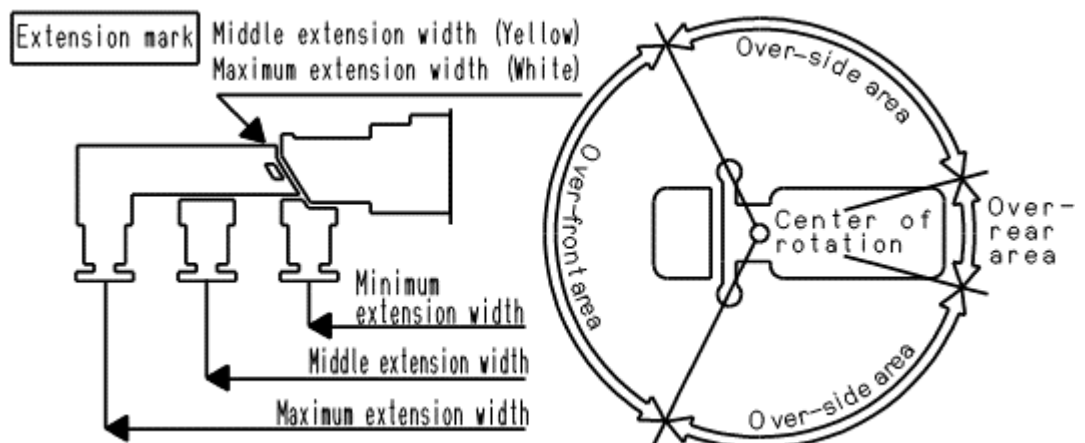
Table C

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
	Maximum	Minimum		Maximum		Maximum
1.6 m and below	3,000	1,550	2.2 m and below	1,850	3.0 m and below	1,050
2.0 m	2,300	950	2.5 m	1,650	3.5 m	1,050
2.5 m	1,850	650	3.0 m	1,370	4.0 m	850
3.0 m	1,470	450	3.5 m	1,070	5.0 m	570
3.5 m	1,070	350	4.0 m	850	6.0 m	420
4.0 m	850	270	4.5 m	670	7.0 m	320
4.5 m	670	220	5.0 m	570	8.0 m	250
4.92m	570	200	5.5 m	500	8.7 m	220
			6.0 m	420		
			6.81m	320		

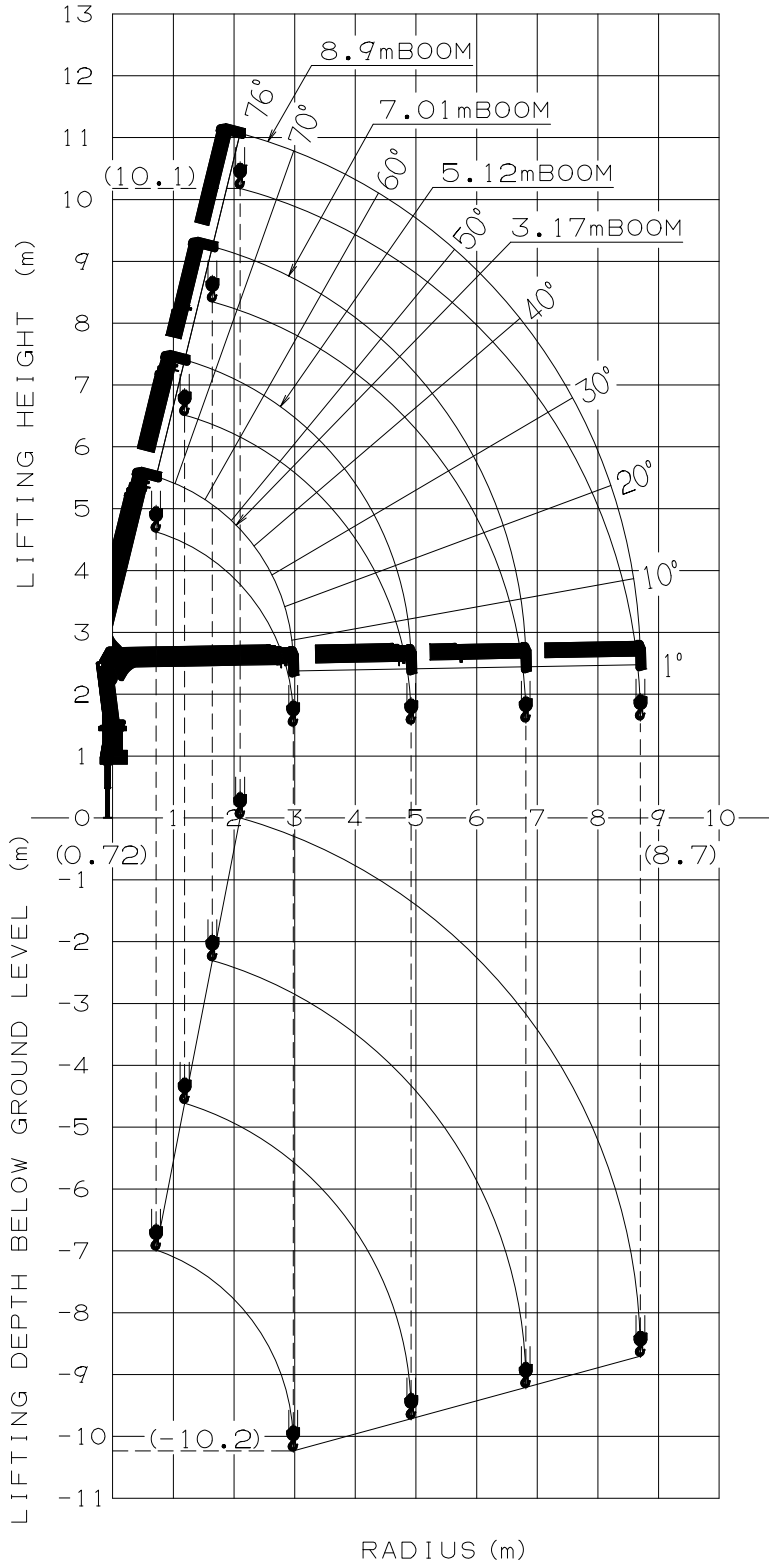
Table D

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
	Maximum	Minimum		Maximum		Maximum
1.6 m and below	3,000	1,550	2.2 m and below	1,850	3.0 m and below	1,050
2.0 m	2,300	950	2.5 m	1,650	3.5 m	1,050
2.5 m	1,850	650	3.0 m	1,400	4.0 m	950
3.0 m	1,470	450	3.5 m	1,200	5.0 m	750
3.5 m	1,220	350	4.0 m	1,050	6.0 m	620
4.0 m	1,050	270	4.5 m	900	7.0 m	520
4.5 m	900	220	5.0 m	800	8.0 m	450
4.92m	820	200	5.5 m	700	8.7 m	400
			6.0 m	620		
			6.81m	550		

- NOTES :
1. Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground.
  2. Capacities in these tables include slings and similarly used load handling devices, and they must be added to the mass of the load. They don't, however, include the mass of hook block (30kg).
  3. When the outriggers are extended to the middle extension width, read the capacities rated for the minimum extension width.
  4. This load radius shows actual load radius which includes boom deflection.
  5. If the boom length exceeds the table value even a little, the performance is limited to the performance of the next boom length.
  6. For boom lengths longer than 5.12m, extend outriggers to maximum extension width.
  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 the 2nd boom section.
  8. Empty Chassis Rated Capacities table A, 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.



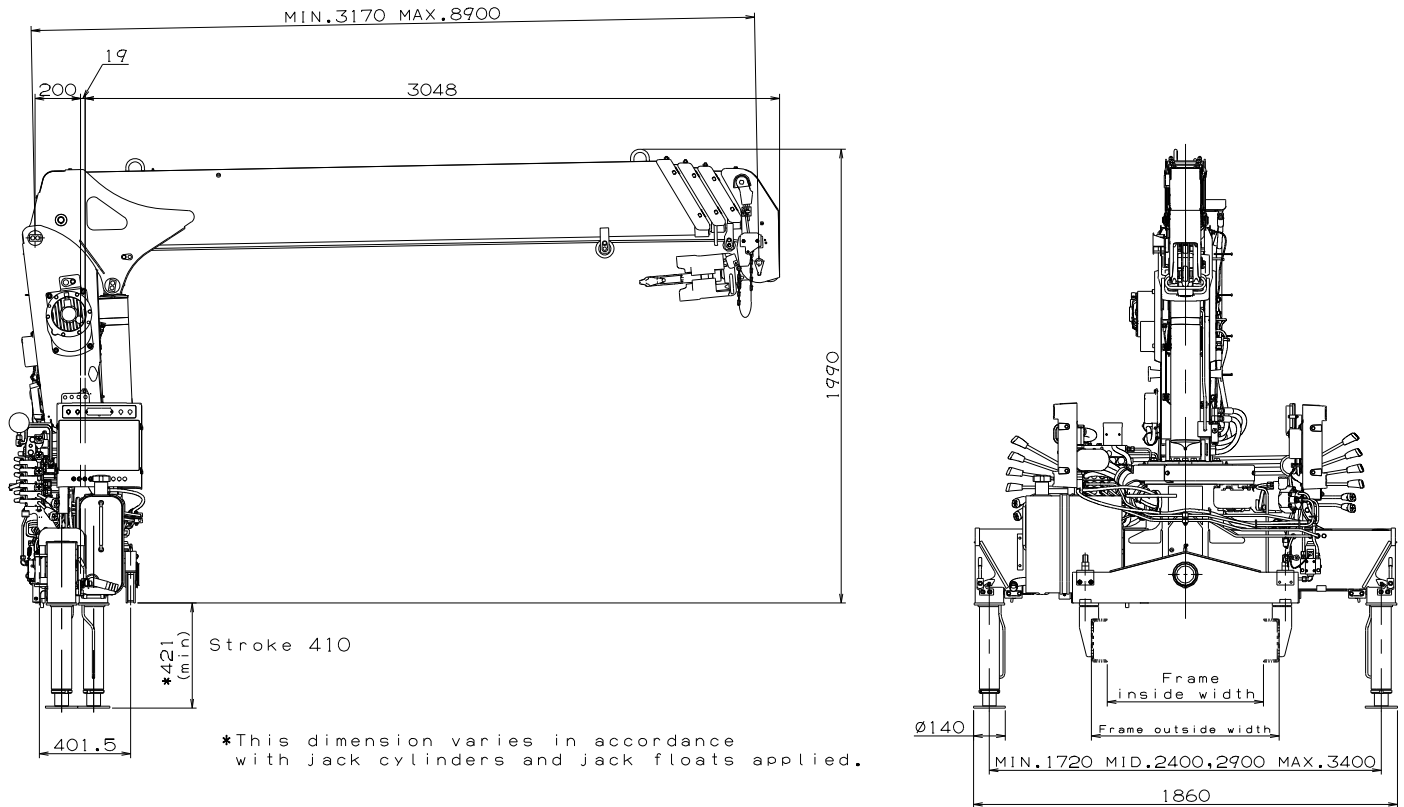
### WORKING RANGE



**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



## 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. 785 mm max.  
(Height of crane mounting base can be  
changed by combination of jack floats and  
crane bases)