

TADANO CARGO CRANE

MODEL : **TM-ZE296HS**

CRANE SPECIFICATIONS

CRANE CAPACITY

3,000 kg at 1.5 m (4-part lines)

BOOM

Six-sectioned, fully powered partly synchronized telescoping boom of heptagonal 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 ----- 7.35 kN {750 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

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⁻¹ {rpm}

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

REAR OUTRIGGERS (Locally provided)
 Maximum 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 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. 1,215 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
1.5 m And below	3,000	2.2 m And below	1,850	3.0 m And below	870	4.0 m And below	650	5.3 m And below	250
2.0 m	2,150	2.5 m	1,650	3.5 m	870	4.5 m	600	6.0 m	220
2.5 m	1,700	3.0 m	1,400	4.0 m	800	5.0 m	550	7.0 m	190
3.0 m	1,400	3.5 m	1,150	5.0 m	650	6.0 m	450	8.0 m	170
3.5 m	1,200	4.0 m	1,000	6.0 m	550	7.0 m	370	9.0 m	150
4.0 m	1,020	4.5 m	850	7.0 m	470	8.0 m	320	10.0m	130
4.5 m	870	5.0 m	750	8.0 m	400	9.0 m	270	11.0m	110
4.97m	770	5.5 m	650	8.8 m	320	10.0 m	220	12.6m	90
		6.0 m	570			10.7 m	200		
		6.9 m	470						

- 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

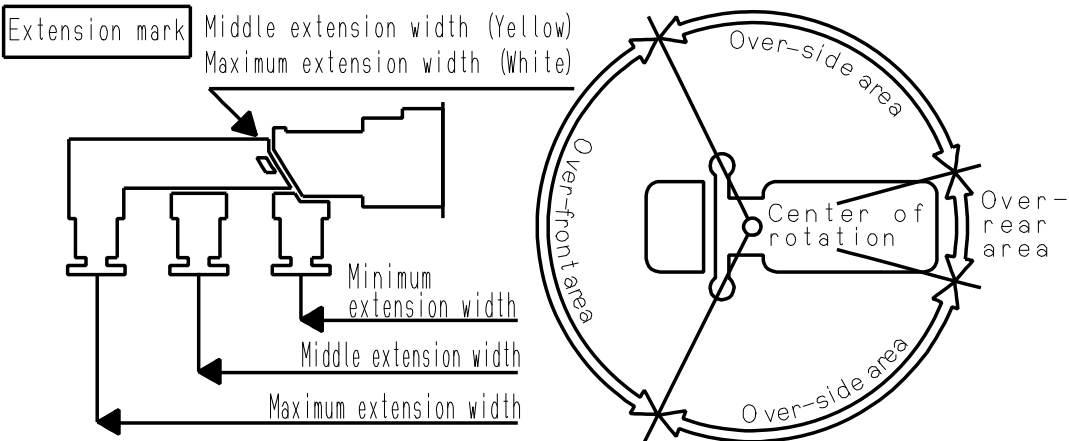
Table C

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		Extension width of outriggers
	Maximum	Minimum		Maximum		Maximum		Maximum		Maximum
1.5 m And below	3,000	1,550	2.2 m And below	1,850	3.0 m And below	870	4.0 m And below	500	5.3 m And below	250
2.0 m	2,150	1,100	2.5 m	1,650	3.5 m	870	4.5 m	420	6.0 m	220
2.5 m	1,700	700	3.0 m	1,400	4.0 m	770	5.0 m	370	7.0 m	190
3.0 m	1,400	500	3.5 m	1,120	5.0 m	570	6.0 m	300	8.0 m	160
3.5 m	1,200	350	4.0 m	900	6.0 m	450	7.0 m	250	9.0 m	130
4.0 m	1,000	250	4.5 m	750	7.0 m	350	8.0 m	220	10.0m	110
4.5 m	800	200	5.0 m	650	8.0 m	250	9.0 m	170	11.0m	100
4.97m	650	150	5.5 m	550	8.8 m	200	10.0 m	150	12.6m	90
			6.0 m	450			10.7 m	120		
			6.9 m	350						

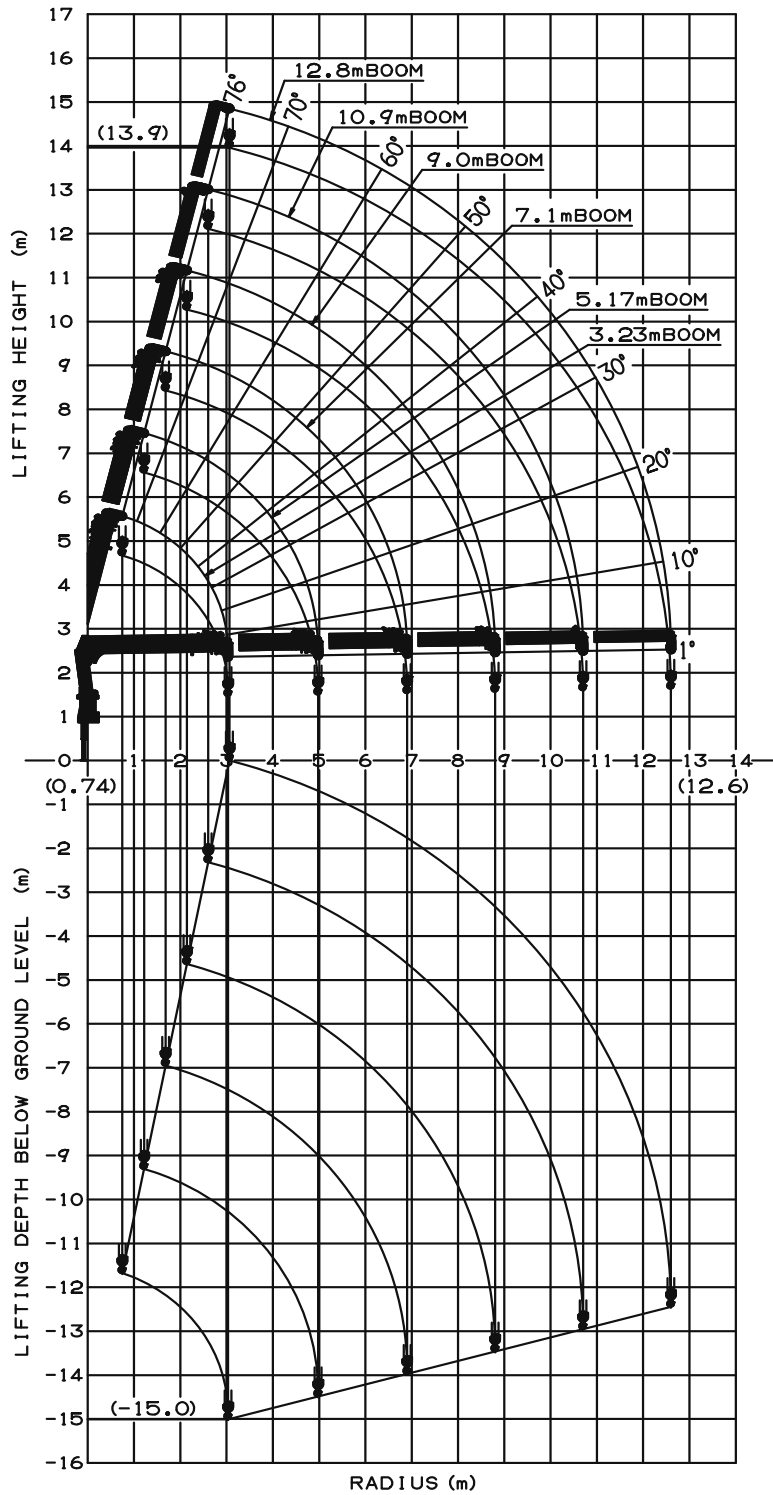
Table D

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		Extension width of outriggers		Extension width of outriggers		Extension width of outriggers
	Maximum	Minimum		Maximum		Maximum		Maximum		Maximum
1.5 m And below	3,000	1,550	2.2 m And below	1,850	3.0 m And below	870	4.0 m And below	650	5.3 m And below	250
2.0 m	2,150	1,100	2.5 m	1,650	3.5 m	870	4.5 m	600	6.0 m	220
2.5 m	1,700	700	3.0 m	1,400	4.0 m	800	5.0 m	550	7.0 m	190
3.0 m	1,400	500	3.5 m	1,150	5.0 m	650	6.0 m	450	8.0 m	170
3.5 m	1,200	350	4.0 m	1,000	6.0 m	550	7.0 m	370	9.0 m	150
4.0 m	1,020	250	4.5 m	850	7.0 m	470	8.0 m	320	10.0m	130
4.5 m	870	200	5.0 m	750	8.0 m	400	9.0 m	270	11.0m	110
4.97m	770	150	5.5 m	650	8.8 m	320	10.0 m	220	12.6m	90
			6.0 m	570			10.7 m	200		
			6.9 m	470						

- 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 front 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 5.17m, extend front outriggers and rear outriggers to maximum extension width.
 7. 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.
 8. 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.
 9. Empty Chassis Rated Capacities table C and D depend on the types of chassis.
 10. 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.



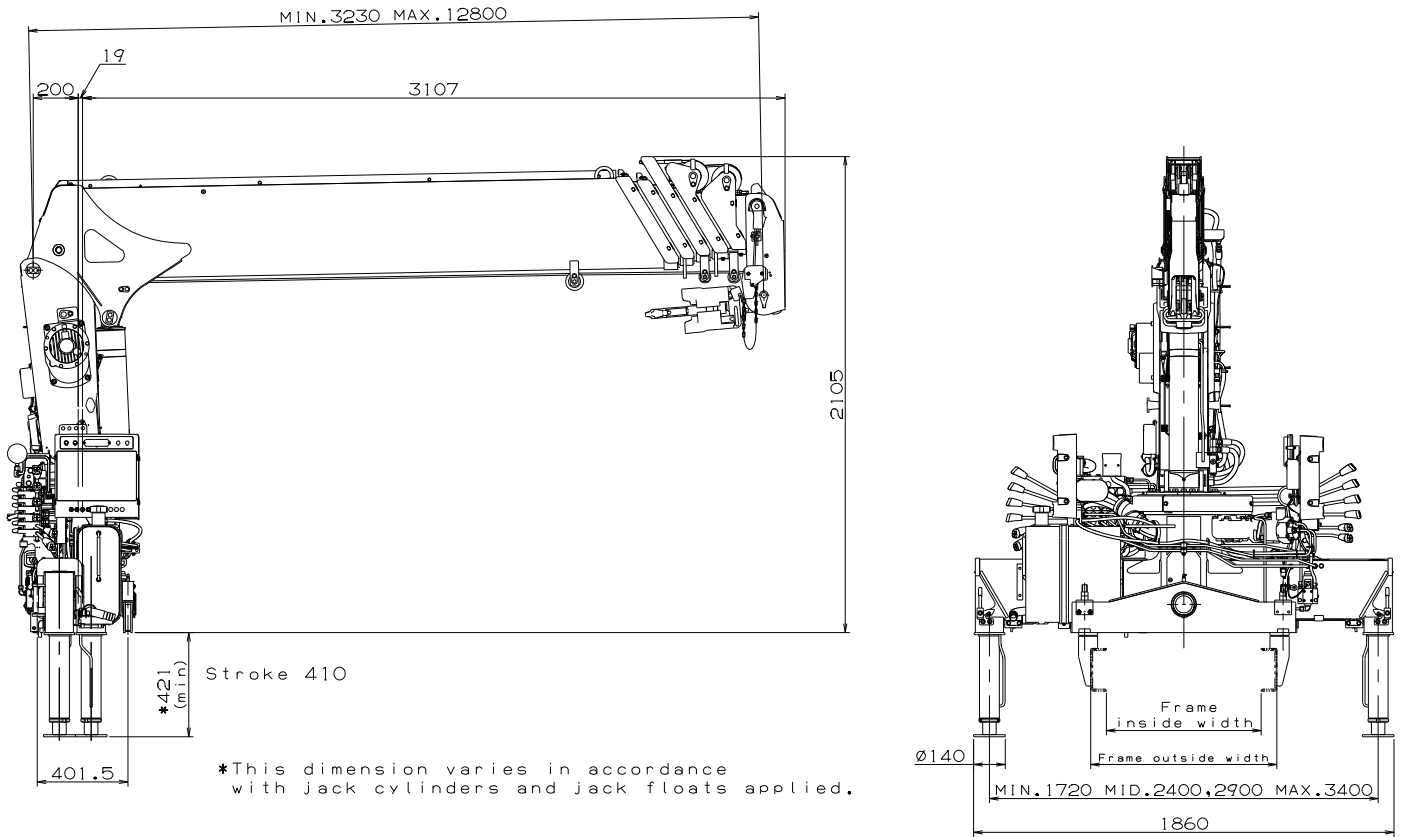
WORKING RANGE



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⁻¹ {rpm}
 - Width for crane mounting ----- Approx. 605 mm min.
 - Frame ----- Weight distribution and frame strength should be calculated for each truck
 - Frame outside width range ----- 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)