

## TADANO CARGO CRANE

MODEL : **TM-ZE505LHS**

## CRANE SPECIFICATIONS

<u>CRANE CAPACITY</u>	3,100 kg at 3.6 m (4-part line)
<u>BOOM</u>	Five-sectioned, fully powered partly synchronized telescoping boom of heptagonal box construction Retracted length ----- 4.32 m Extended length -----15.69 m Extending speed ----- 11.37 m / 29.5 s Elevation ----- Elevated by a double-acting hydraulic cylinder Elevating speed ----- 1° to 78° / 12 s Boom point ----- 2 sheaves
<u>WINCH</u>	Hydraulic motor driven Spur gear speed reduction, provided with mechanical brake and cable follower Single line pull ----- 7.60 kN {775 kgf} Single line speed ----- 76 m/min (at 4th layer) Wire rope Diameter x length --- 8 mm x 93 m Breaking strength --- 43.1 kN {4.39 tf} Construction ----- 7 x 7 + 6 x WS(26) Hook block ----- 2 sheaves
<u>HOOK STOWING DEVICE</u>	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  
 Extended width ----- Min. 2,200 mm  
 Mid. 3,000 mm  
 Full 3,800 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. 48 L

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 indicator  
 Over-unwinding prevention  
 Terminal for emergency stop switch  
 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. 2,130 kg (includes standardized mounting parts)

NOTE : Operating speeds of the crane are guaranteed under the condition that the pump  
 delivery is 60 L/min.

**RATED LIFTING CAPACITIES IN KILOGRAMS**  
 Crane Strength Rated Capacities

Load Radius	4.32 m / 7.21 m / 10.04m Boom		Load Radius	12.87 m Boom	Load Radius	15.69 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
3.0 m and below	3,100	2,600	4.0 m and below	1,950	5.0 m and below	500
3.6 m	3,100	1,850	4.5 m	1,900	6.0 m	500
3.9 m	2,900	1,600	5.0 m	1,800	7.0 m	500
4.5 m	2,450	1,250	6.0 m	1,550	8.0 m	500
5.0 m	2,150	1,050	7.0 m	1,300	9.0 m	500
5.5 m	1,900	850	8.0 m	1,100	10.0 m	500
6.0 m	1,700	720	9.0 m	920	11.0 m	500
6.5 m	1,500	620	10.0 m	820	12.0 m	500
7.0 m	1,350	500	11.0 m	750	13.0 m	500
8.0 m	1,150	400	12.0 m	670	14.0 m	500
9.0 m	950	270	12.65 m	620	15.47 m	500
9.82 m	850	200				

- NOTES
1. 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).
  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 B

Load Radius	4.32 m / 7.21 m / 10.04m Boom		Load Radius	12.87 m Boom	Load Radius	15.69 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
3.0 m and below	3,100	2,250	4.0 m and below	1,950	5.0 m and below	500
3.6 m	3,100	1,650	4.5 m	1,900	6.0 m	500
3.9 m	2,900	1,400	5.0 m	1,800	7.0 m	500
4.5 m	2,350	1,100	6.0 m	1,350	8.0 m	500
5.0 m	1,950	900	7.0 m	1,000	9.0 m	500
5.5 m	1,650	750	8.0 m	850	10.0 m	500
6.0 m	1,400	600	9.0 m	620	11.0 m	470
6.5 m	1,200	500	10.0 m	550	12.0 m	400
7.0 m	1,000	400	11.0 m	470	13.0 m	350
8.0 m	850	350	12.0 m	400	14.0 m	320
9.0 m	650	220	12.65 m	370	15.47 m	250
9.82 m	570	150				

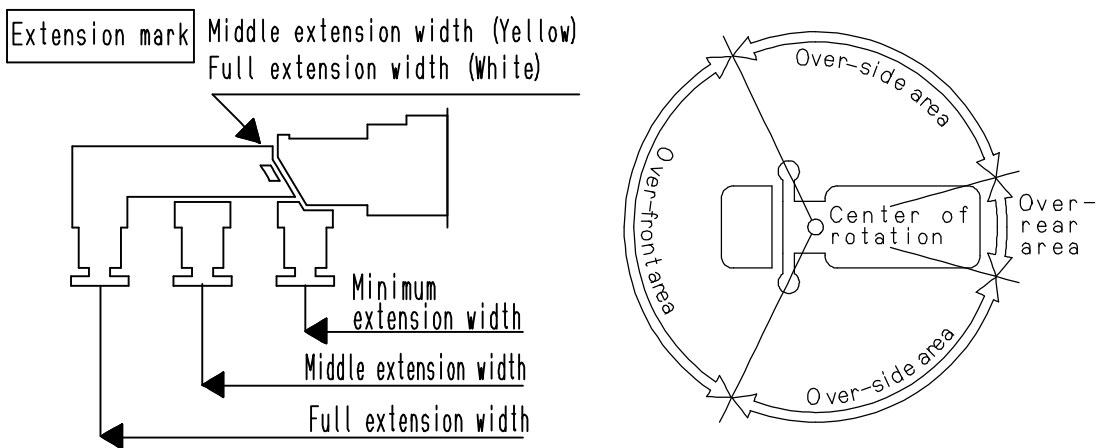
Table C

Load Radius	4.32 m / 7.21 m / 10.04m Boom		Load Radius	12.87 m Boom	Load Radius	15.69 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
3.0 m and below	3,100	2,600	4.0 m and below	1,950	5.0 m and below	500
3.6 m	3,100	1,850	4.5 m	1,900	6.0 m	500
3.9 m	2,900	1,600	5.0 m	1,800	7.0 m	500
4.5 m	2,450	1,250	6.0 m	1,550	8.0 m	500
5.0 m	2,150	1,050	7.0 m	1,300	9.0 m	500
5.5 m	1,900	850	8.0 m	1,050	10.0 m	500
6.0 m	1,700	720	9.0 m	800	11.0 m	500
6.5 m	1,500	620	10.0 m	700	12.0 m	500
7.0 m	1,300	500	11.0 m	620	13.0 m	470
8.0 m	1,050	400	12.0 m	550	14.0 m	420
9.0 m	850	270	12.65 m	500	15.47 m	350
9.82 m	720	200				

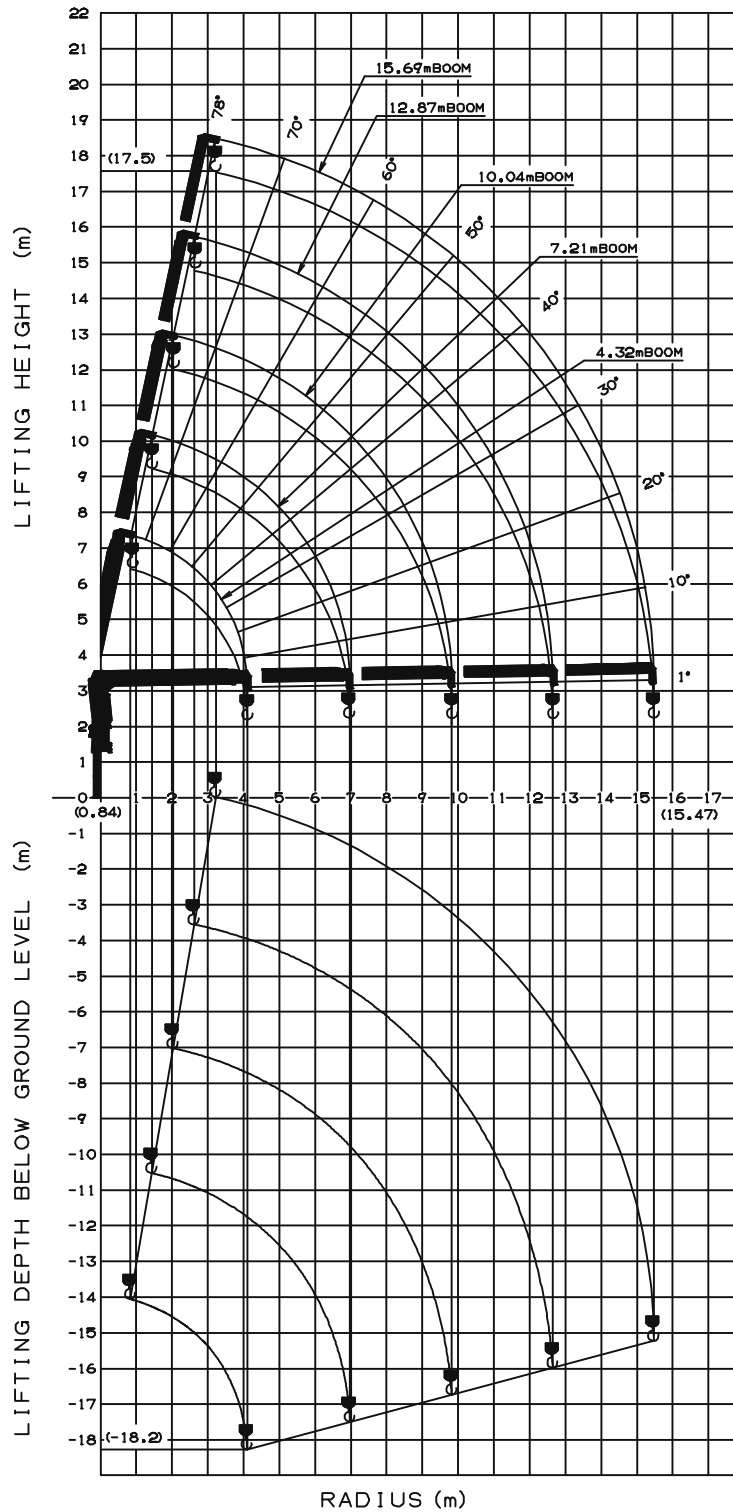
Table D

Load Radius	4.32 m / 7.21 m / 10.04m Boom		Load Radius	12.87 m Boom	Load Radius	15.69 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
3.0 m and below	3,100	2,600	4.0 m and below	1,950	5.0 m and below	500
3.6 m	3,100	1,850	4.5 m	1,900	6.0 m	500
3.9 m	2,900	1,600	5.0 m	1,800	7.0 m	500
4.5 m	2,450	1,250	6.0 m	1,550	8.0 m	500
5.0 m	2,150	1,050	7.0 m	1,300	9.0 m	500
5.5 m	1,900	850	8.0 m	1,100	10.0 m	500
6.0 m	1,700	720	9.0 m	920	11.0 m	500
6.5 m	1,500	620	10.0 m	820	12.0 m	500
7.0 m	1,350	500	11.0 m	750	13.0 m	500
8.0 m	1,150	400	12.0 m	670	14.0 m	500
9.0 m	950	270	12.65 m	620	15.47 m	500
9.82 m	850	200				

- 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. 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 10.04m, extend outriggers to maximum.
  6. 12.87m boom means  $\sphericalangle$  mark on 4th boom section side plate is half seen.
  7. Empty Chassis Rated Capacities table B, 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 lowered depending on the types of chassis.

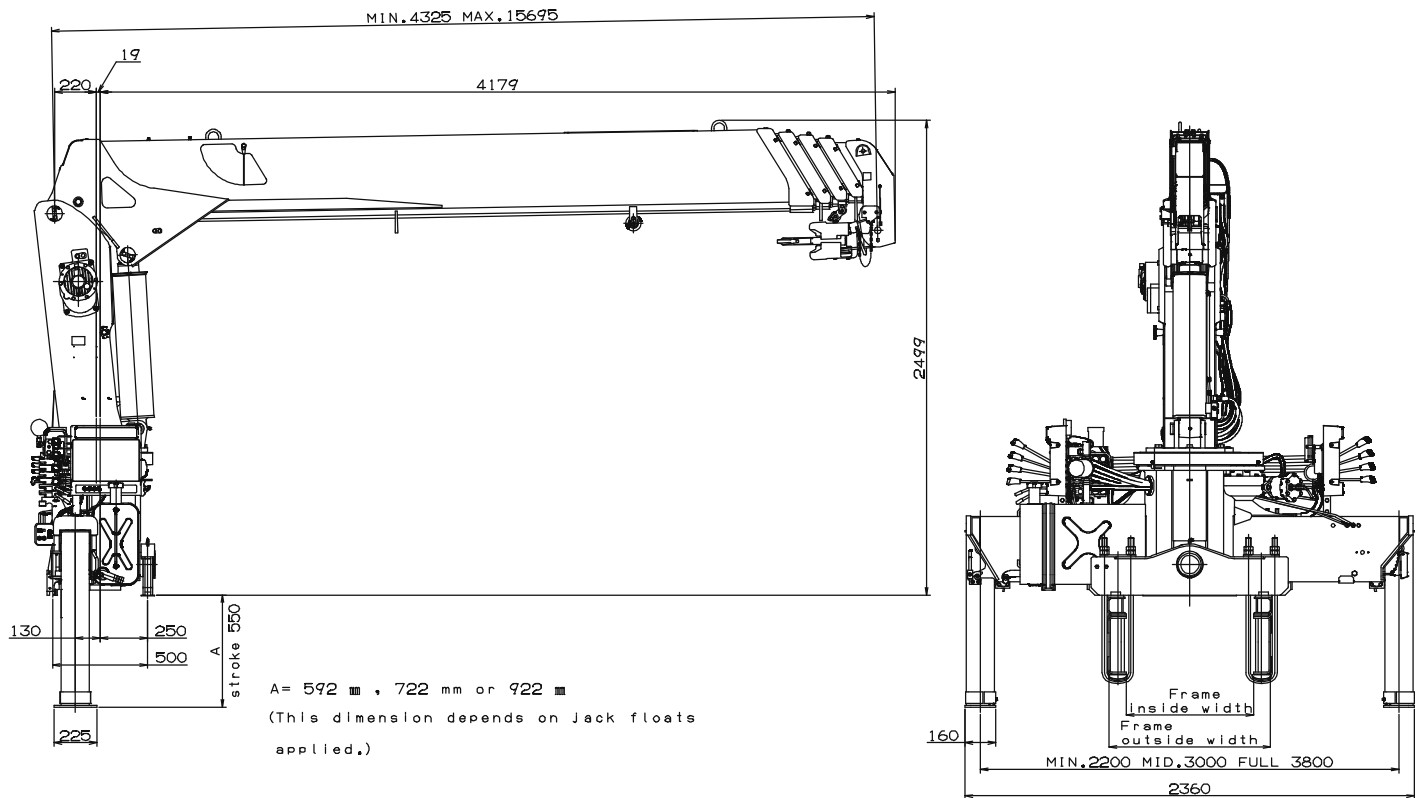


### WORKING RANGE



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) ----- 12,000 to 25,000 kg
- P.T.O. torque ----- 157 N-m{16 kgf-m} min.
- P.T.O. revolution ----- Approx. 270 to 2,800 min<sup>-1</sup>{rpm}
- Width for crane mounting ----- Approx. 750 mm min.
- Frame ----- Weight distribution and frame strength  
should be calculated for each truck
- Frame width range (inside to outside) ----- Approx. 610 to 960 mm
- Frame height (ground to frame top) ----- Approx. 1,235 mm max.  
(Height of crane mounting base can be changed  
by combination of jack floats and crane bases)