

## TADANO CARGO CRANE

MODEL : **TM-ZE503GHS**

## CRANE SPECIFICATIONS

<u>CRANE CAPACITY</u>	4,000 kg at 2.95 m (5-part line)
<u>BOOM</u>	Three-sectioned, fully hydraulic telescoping boom of heptagonal box construction Retracted length ----- 3.47 m Extended length ----- 8.31 m Extending speed ----- 4.84 m / 18 s Elevation ----- Elevated by a double-acting hydraulic cylinder Elevating speed ----- 1° to 78° / 12 s Boom point ----- 3 sheaves
<u>WINCH</u>	Hydraulic motor driven    Spur gear speed reduction, provided with mechanical brake Single line pull ----- 7.84 kN{800 kgf} Single line speed ----- 76 m/min.(at 4th layer) Wire rope Diameter x length ----- 8 mm x 67 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

Specifications are subject to change without notice.

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. 1,730 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	3.47 m / 5.91m Boom		Load Radius	8.31m Boom	
	Extension width of outriggers			Extension width of outriggers	
	Full	Minimum		Full	Minimum
2.6 m and below	4,000	3,230	2.6 m and below	3,080	3,080
2.95 m	4,000	2,680	3.0 m	3,080	2,630
3.8 m	3,080	1,780	3.8 m	3,080	1,780
4.1 m	2,880	1,580	4.1 m	2,880	1,580
4.5 m	2,580	1,380	4.5 m	2,580	1,380
5.0 m	2,330	1,130	5.0 m	2,330	1,130
5.5 m	2,130	980	5.5 m	2,130	980
5.69 m	2,030	930	6.0 m	1,930	880
			6.5 m	1,780	800
			7.0 m	1,630	730
			7.5 m	1,480	650
			8.09 m	1,380	550

- 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 (45kg).
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	3.47 m / 5.91 m Boom		Load Radius	8.31 m Boom	
	Extension width of outriggers			Extension width of outriggers	
	Full	Minimum		Full	Minimum
2.6 m and below	4,000	2,330	2.6 m and below	3,080	2,330
2.8 m	4,000	2,080	3.4 m	3,080	1,480
3.3 m	3,230	1,580	3.8 m	2,630	1,280
3.6 m	2,880	1,380	4.1 m	2,380	1,130
4.1 m	2,380	1,130	4.5 m	1,980	930
4.5 m	1,980	930	5.0 m	1,680	830
5.0 m	1,680	830	5.5 m	1,380	680
5.5 m	1,380	680	6.0 m	1,280	580
5.69 m	1,330	630	6.5 m	1,130	530
			7.0 m	980	480
			7.5 m	880	430
			8.09 m	780	380

Table B

Load Radius	3.47 m / 5.91 m Boom		Load Radius	8.31 m Boom	
	Extension width of outriggers			Extension width of outriggers	
	Full	Minimum		Full	Minimum
2.6 m and below	4,000	2,680	2.6 m and below	3,080	2,680
2.95 m	4,000	2,280	3.5 m	3,080	1,680
3.5 m	3,330	1,680	3.8 m	3,080	1,530
4.1 m	2,880	1,380	4.1 m	2,880	1,380
4.5 m	2,430	1,180	4.5 m	2,430	1,180
5.0 m	2,030	980	5.0 m	2,030	980
5.5 m	1,730	880	5.5 m	1,730	880
5.69 m	1,630	780	6.0 m	1,530	730
			6.5 m	1,380	680
			7.0 m	1,230	600
			7.5 m	1,080	530
			8.09 m	980	480

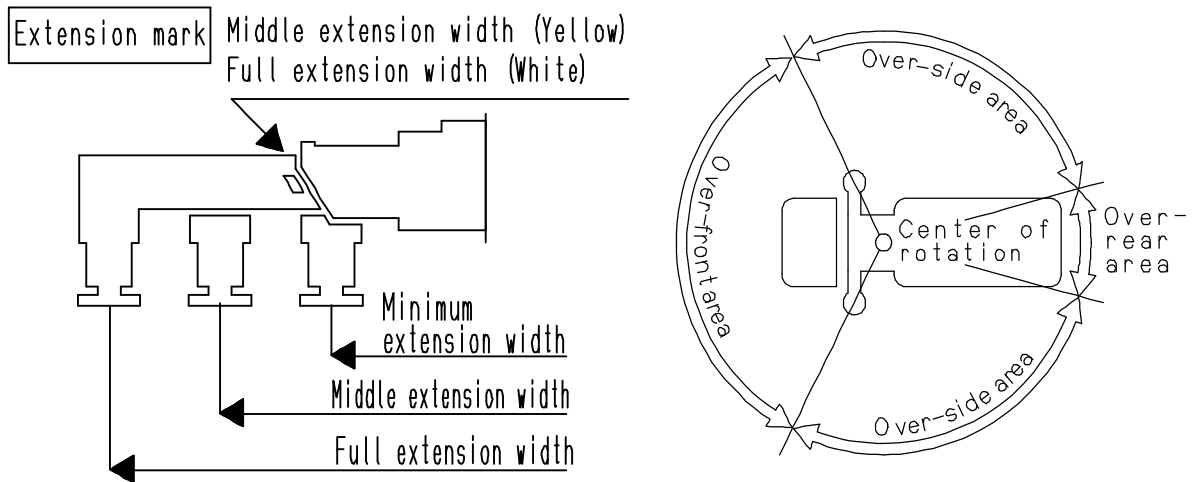
Table C

Load Radius	3.47 m / 5.91 m Boom		Load Radius	8.31 m Boom	
	Extension width of outriggers			Extension width of outriggers	
	Full	Minimum		Full	Minimum
2.6 m and below	4,000	3,080	2.6 m and below	3,080	3,080
2.95 m	4,000	2,680	3.0 m	3,080	2,630
3.8 m	3,080	1,780	3.8 m	3,080	1,780
4.1 m	2,880	1,580	4.1 m	2,880	1,580
4.5 m	2,580	1,380	4.5 m	2,580	1,380
5.0 m	2,330	1,130	5.0 m	2,330	1,130
5.5 m	2,080	980	5.5 m	2,080	980
5.69 m	1,980	930	6.0 m	1,830	880
			6.5 m	1,680	800
			7.0 m	1,480	730
			7.5 m	1,330	650
			8.09 m	1,180	550

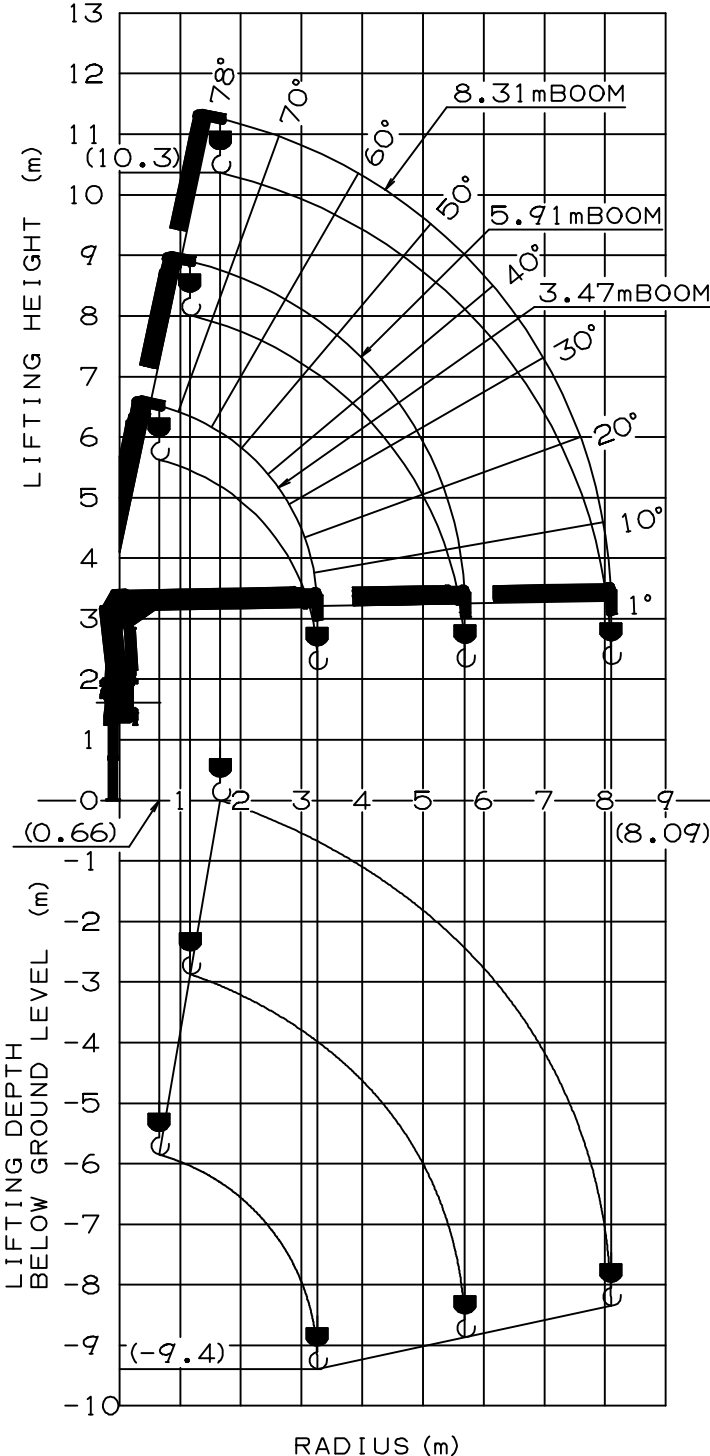
Table D

Load Radius	3.47 m / 5.91m Boom		Load Radius	8.31 m Boom	
	Extension width of outriggers			Extension width of outriggers	
	Full	Minimum		Full	Minimum
2.6 m and below	4,000	3,230	2.6 m and below	3,080	3,080
2.95 m	4,000	2,680	3.0 m	3,080	2,630
3.8 m	3,080	1,780	3.8 m	3,080	1,780
4.1 m	2,880	1,580	4.1 m	2,880	1,580
4.5 m	2,580	1,380	4.5 m	2,580	1,380
5.0 m	2,330	1,130	5.0 m	2,330	1,130
5.5 m	2,130	980	5.5 m	2,130	980
5.69 m	2,030	930	6.0 m	1,930	880
			6.5 m	1,780	800
			7.0 m	1,630	730
			7.5 m	1,480	650
			8.09 m	1,380	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 (45kg).
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. Empty Chassis Rated Capacities table A, B, C and D depend on the types of chassis.
6. 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.

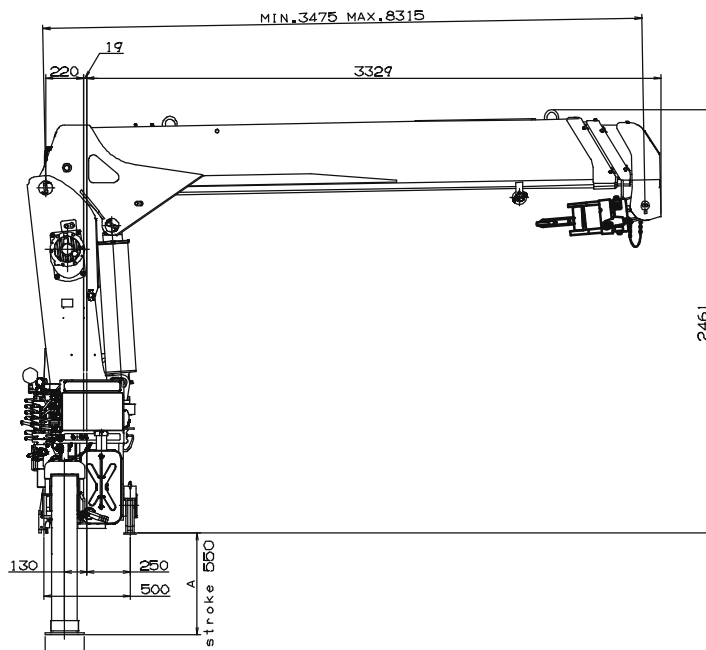


### WORKING RANGE

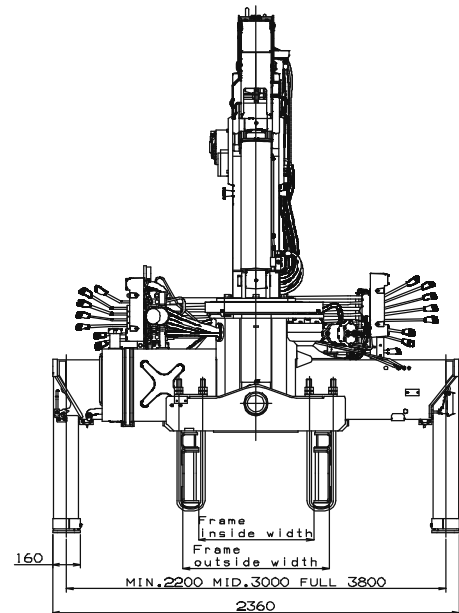


NOTE: The above lifting heights and boom angles are based on a straight (unladen) boom, and allowance should be made for boom deflection obtained under laden conditions.

## DIMENSIONS



A= 592mm or 722mm or 922mm  
(This dimension depends on Jack floats applied.)



## 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)