TADANO

SPEC. SHEET No. TM-50Z-5-03453/R-01
DATE November, 2010

TADANO CARGO CRANE

MODEL : TM-ZE503HS

CRANE SPECIFICATIONS

CRANE CAPACITY	3,100 kg at 3.8 m (4-part line)
BOOM	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^{o} to 78^{o} / 12 s
	Boom point ---------- 2 sheaves
WINCH	Hydraulic motor driven Spur gear speed reduction, provided with mechanical brake
	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 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

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^{-1}{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. 1,700 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 / 5.91 m / 8.31m Extension width of outriggers	
	Full	Minimum
2.6 m and below	3,100	3,100
3.0 m	3,100	2,650
3.8 m	3,100	1,800
4.1 m	2,900	1,600
4.5 m	2,600	1,400
5.0 m	2,350	1,150
5.5 m	2,150	1,000
6.0 m	1,950	900
6.5 m	1,800	820
7.0 m	1,650	750
7.5 m	1,500	670
8.09 m	1,400	570

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 A

Load Radius	3.47 m / 5.91 m / 8.31m Extension width of outriggers	
	Full	Minimum
2.6 m and below	3,100	2,350
3.4 m	3,100	1,550
3.8 m	2,650	1,300
4.1 m	2,400	1,150
4.5 m	2,000	950
5.0 m	1,700	850
5.5 m	1,400	700
6.0 m	1,300	600
6.5 m	1,150	550
7.0 m	1,000	500
7.5 m	900	450
8.09 m	800	400

Table B

Load Radius	3.47 m / 5.91 m / 8.31m Extension width of outriggers	
	Full	Minimum
2.3 m and below	3,100	3,100
3.5 m	3,100	1,700
3.8 m	3,100	1,550
4.1 m	2,900	1,400
4.5 m	2,450	1,200
5.0 m	2,050	1,000
5.5 m	1,750	900
6.0 m	1,550	750
6.5 m	1,400	700
7.0 m	1,250	620
7.5 m	1,100	550
8.09 m	1,000	500

Table C

Load Radius	3.47 m / 5.91 m / 8.31m Extension width of outriggers	
	Full	Minimum
2.6 m and below	3,100	3,100
3.0 m	3,100	2,650
3.8 m	3,100	1,800
4.1 m	2,900	1,600
4.5 m	2,600	1,400
5.0 m	2,350	1,150
5.5 m	2,100	1,000
6.0 m	1,850	900
6.5 m	1,700	820
7.0 m	1,500	750
7.5 m	1,350	670
8.09 m	1,200	570

Table D

Load Radius	3.47 m / 5.91 m / 8.31m Extension width of outriggers	
	Full	Minimum
2.6 m and below	3,100	3,100
3.0 m	3,100	2,650
3.8 m	3,100	1,800
4.1 m	2,900	1,600
4.5 m	2,600	1,400
5.0 m	2,350	1,150
5.5 m	2,150	1,000
6.0 m	1,950	900
6.5 m	1,800	820
7.0 m	1,650	750
7.5 m	1,500	670
8.09 m	1,400	570

NOTES : 1. Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground.

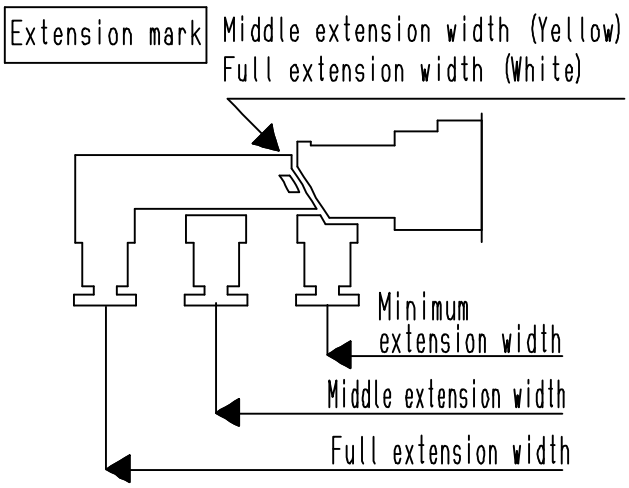
2. Capacities in these tables include slings and similarly used load handling devices, and they must be added to the mass of the load. They don't, however, include the mass of hook block (30kg).

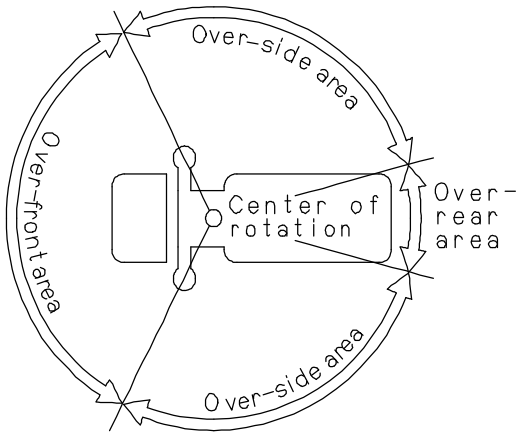
3. For boom lengths not shown, use the rated lifting capacity of next longer boom.

4. When outriggers are extended to middle extension width, use the rated lifting capacities for outriggers are extended to minimum extension width.

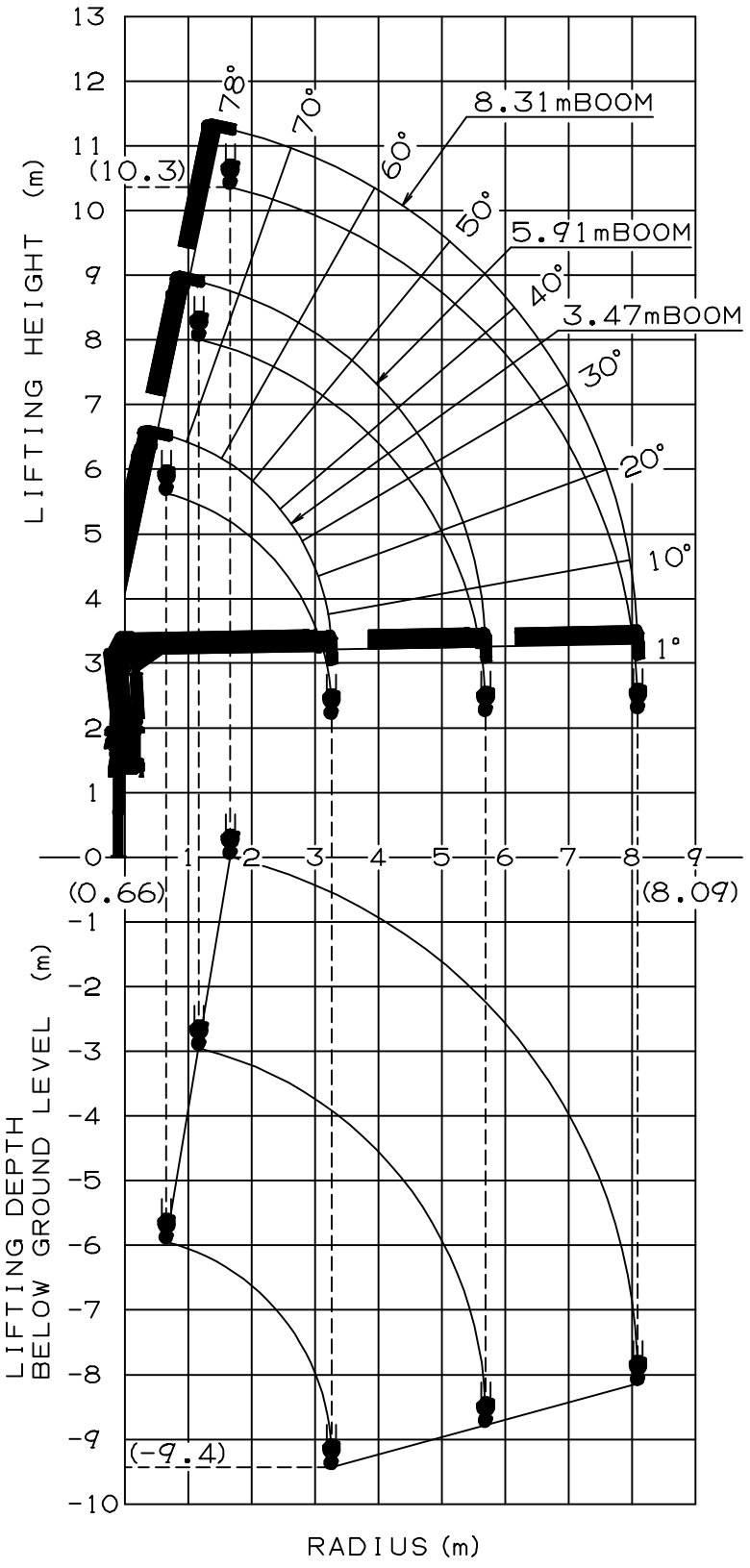
5. Empty Chassis Rated Capacities table A, B, C and D depend on the types of chassis.

6. Empty Chassis Rated Capacities are shown for over - sides areas and over - rear area.
These capacities for over - front area may lowered depending on the types of chassis.



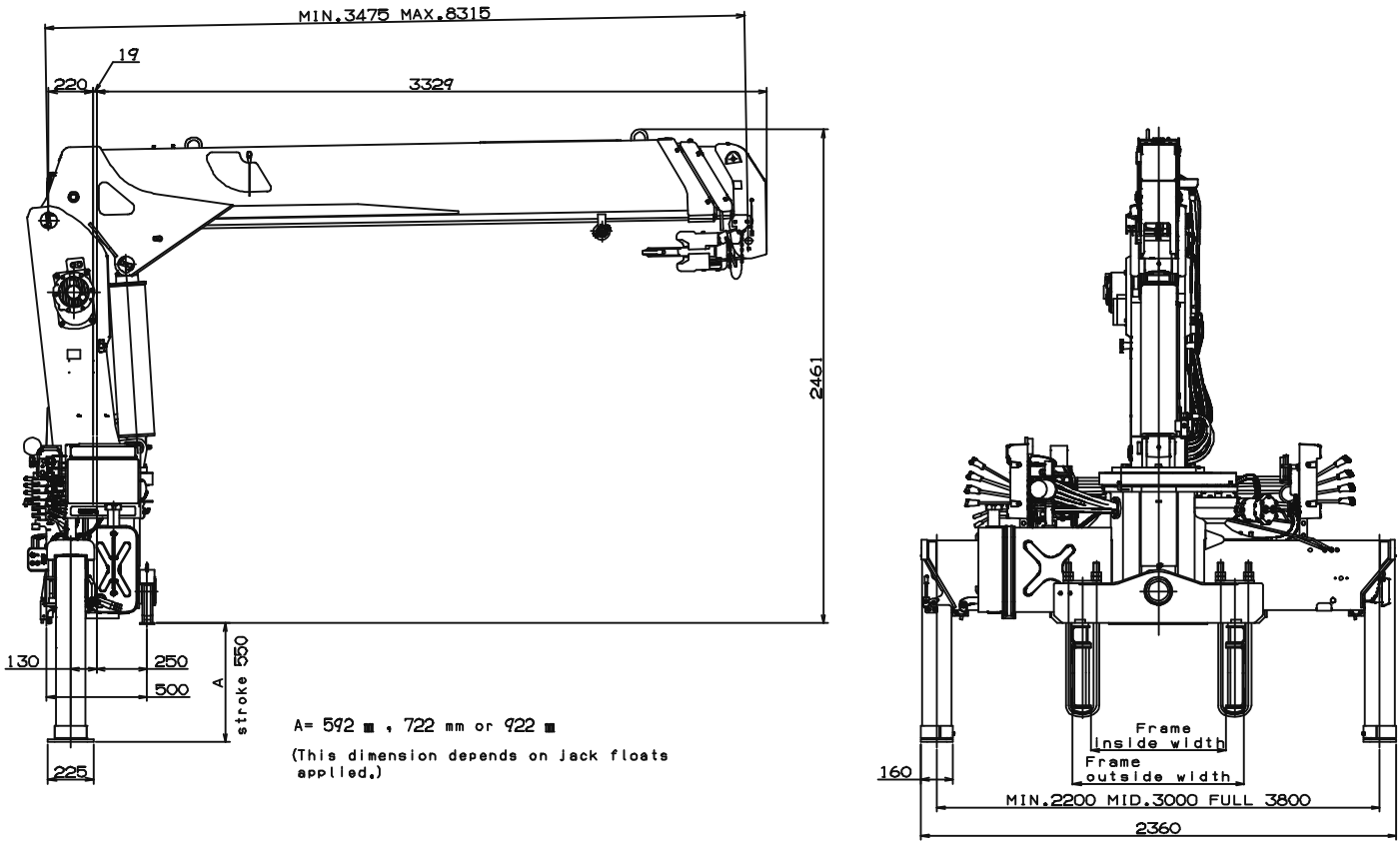


WORKING RANGE



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^{-1}{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)