TADANO

SPEC. SHEET No. TM-50Z-5-03213/A-02
DATE November, 2011

TADANO CARGO CRANE

MODEL : TM-ZE503HRS

CRANE SPECIFICATIONS

CRANE CAPACITY — 3,130 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 ---------- 7.70 kN{785 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
Extension 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

RADIO CONTROLLER

Model : RCS-F
Control functions of boom telescoping, hoisting up and down, boom elevating, swing, acceleration, speed mode selection, working height limiting, Hook-in, Hook-out, horn and emergency stop
Frequency ---------- 40 frequencies in 433 MHz band
Operating power supply
Transmitter ----------6V DC, Dry battery R6P(SUM-3) x 4
Control unit ----------24V DC, Vehicle battery
Transmitter mass -------Approx. 576 g (includes batteries)

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 meter
Radius indicator
Emergency stop switch on radio controller
Terminal for emergency stop switch
Over-winding alarm
Hoisting limiter
Jack interlock
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 Boom	
	Extension width of outriggers	
	Full	Minimum
2.6 m and below	3,130	3,130
3.0 m	3,130	2,680
3.8 m	3,130	1,830
4.1 m	2,930	1,630
4.5 m	2,630	1,430
5.0 m	2,380	1,180
5.5 m	2,180	1,030
6.0 m	1,980	930
6.5 m	1,830	850
7.0 m	1,680	780
7.5 m	1,530	700
8.09 m	1,430	600

NOTES : 1. The mass of hook block (30kg), slings and all similarly used load handling devices must be added to the mass of the load.

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 Boom	
	Extension width of outriggers	
	Full	Minimum
2.6 m and below	3,130	2,380
3.4 m	3,130	1,580
3.8 m	2,680	1,330
4.1 m	2,430	1,180
4.5 m	2,030	980
5.0 m	1,730	880
5.5 m	1,430	730
6.0 m	1,330	630
6.5 m	1,180	580
7.0 m	1,030	530
7.5 m	930	480
8.09 m	830	430

Table B

Load Radius	3.47 m / 5.91 m / 8.31m Boom	
	Extension width of outriggers	
	Full	Minimum
2.3 m and below	3,130	3,130
3.5 m	3,130	1,730
3.8 m	3,130	1,580
4.1 m	2,930	1,430
4.5 m	2,480	1,230
5.0 m	2,080	1,030
5.5 m	1,780	930
6.0 m	1,580	780
6.5 m	1,430	730
7.0 m	1,280	650
7.5 m	1,130	580
8.09 m	1,030	530

Table C

Load Radius	3.47 m / 5.91 m / 8.31m Boom	
	Extension width of outriggers	
	Full	Minimum
2.6 m and below	3,130	3,130
3.0 m	3,130	2,680
3.8 m	3,130	1,830
4.1 m	2,930	1,630
4.5 m	2,630	1,430
5.0 m	2,380	1,180
5.5 m	2,130	1,030
6.0 m	1,880	930
6.5 m	1,730	850
7.0 m	1,530	780
7.5 m	1,380	700
8.09 m	1,230	600

Table D

Load Radius	3.47 m / 5.91 m / 8.31m Boom	
	Extension width of outriggers	
	Full	Minimum
2.6 m and below	3,130	3,130
3.0 m	3,130	2,680
3.8 m	3,130	1,830
4.1 m	2,930	1,630
4.5 m	2,630	1,430
5.0 m	2,380	1,180
5.5 m	2,180	1,030
6.0 m	1,980	930
6.5 m	1,830	850
7.0 m	1,680	780
7.5 m	1,530	700
8.09 m	1,430	600

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

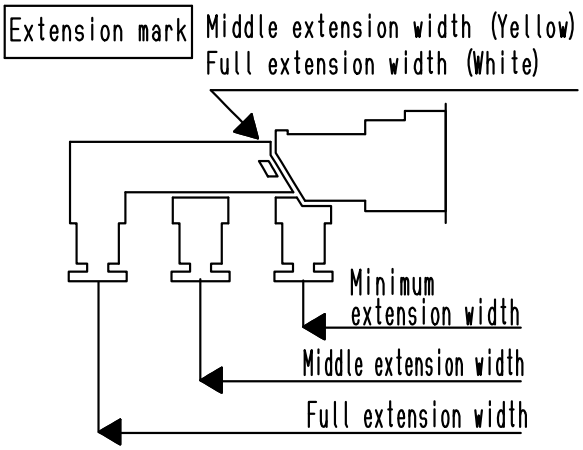
2. The mass of the hook (30 kg), slings and all similarly used load handling devices must be added to the mass of the load.

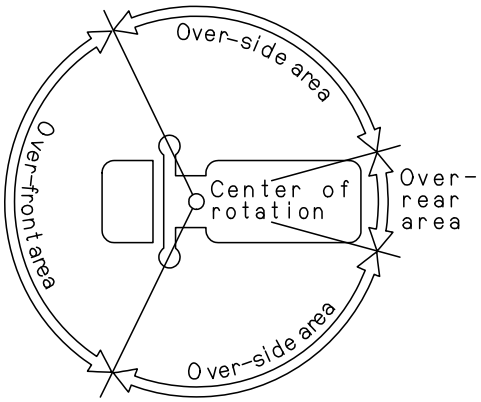
3. For boom lengths not shown, use the rated lifting capacity of next longer boom.

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

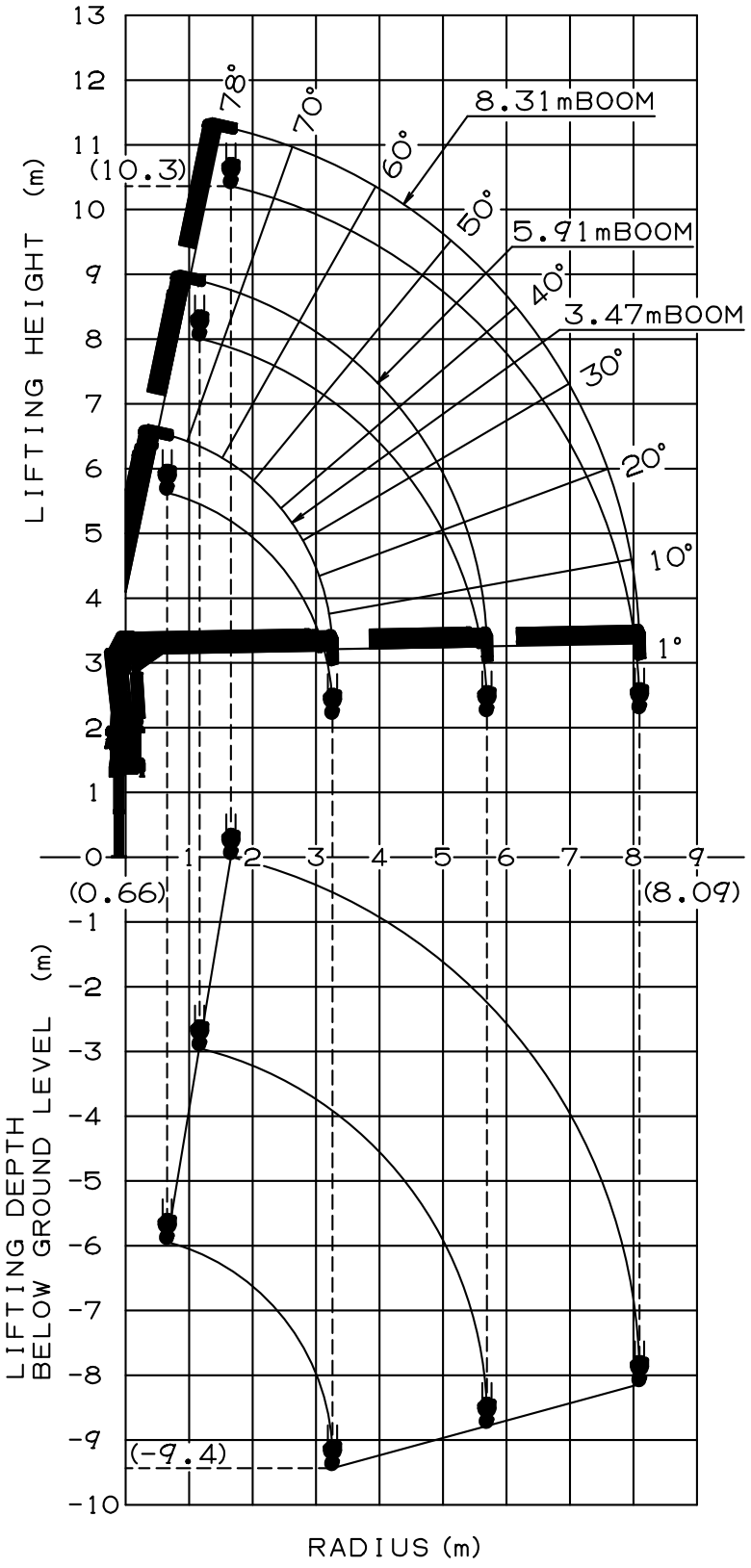
5. Empty Chassis Rated Capacities table A, B, C and D depend on the types of chassis.

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.





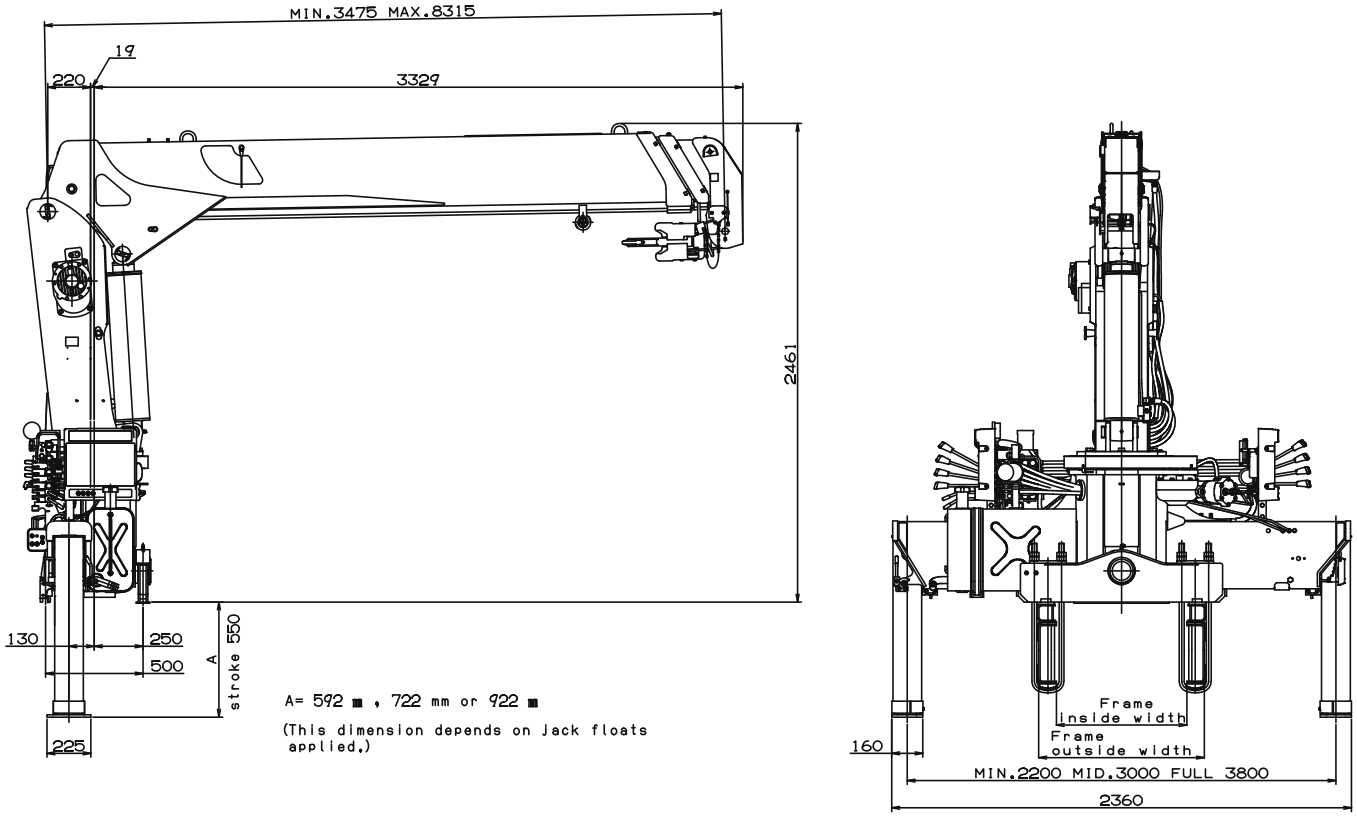
WORKING RANGE



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

[TM-ZE503HRS]



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)