TADANO

SPEC. SHEET No. TM-50Z-5-03454/R-01
DATE November, 2010

TADANO CARGO CRANE

MODEL : TM-ZE504HS

CRANE SPECIFICATIONS

CRANE CAPACITY 3,100 kg at 3.7 m (4-part line)

BOOM Four-sectioned, fully powered partly synchronized telescoping boom of heptagonal box construction

- Retracted length --------- 3.55 m
- Extended length ----------10.8 m
- Extending speed --------- 7.25 m / 21 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 69 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

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. 1,820 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	3.55 m / 5.99 m / 8.39m Extension width of outriggers		Load Radius	10.8 m Boom Extension width of outriggers	
	Full	Minimum		Full	Minimum
2.5 m and below	3,100	3,100	3.5 m and below	2,100	1,900
3.0 m	3,100	2,600	4.5 m	2,100	1,300
3.7 m	3,100	1,840	5.0 m	2,000	1,050
4.0 m	2,900	1,600	6.0 m	1,750	750
4.5 m	2,550	1,350	7.0 m	1,500	700
5.0 m	2,300	1,100	8.0 m	1,350	520
5.5 m	2,050	900	9.0 m	1,170	470
6.0 m	1,900	800	10.0 m	1,020	400
6.5 m	1,750	750	10.58 m	970	350
7.0 m	1,600	700			
7.5 m	1,450	620			
8.17 m	1,350	520			

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	3.55 m / 5.99 m / 8.39m Extension width of outriggers		Load Radius	10.8 m Boom Extension width of outriggers	
	Full	Minimum		Full	Minimum
2.6 m and below	3,100	2,450	3.5 m and below	2,100	1,450
3.4 m	3,100	1,550	4.0 m	2,100	1,150
3.6 m	2,900	1,400	4.5 m	1,950	900
4.0 m	2,400	1,150	5.0 m	1,600	750
4.5 m	1,950	900	6.0 m	1,150	550
5.0 m	1,650	800	7.0 m	970	420
5.5 m	1,400	650	8.0 m	770	350
6.0 m	1,150	550	9.0 m	650	300
6.5 m	1,100	520	10.0 m	550	250
7.0 m	970	450	10.58 m	520	220
7.5 m	870	400			
8.17 m	750	350			

Table B

Load Radius	3.55 m / 5.99 m / 8.39m Extension width of outriggers		Load Radius	10.8 m Boom Extension width of outriggers	
	Full	Minimum		Full	Minimum
2.3 m and below	3,100	3,100	3.5 m and below	2,100	1,700
3.0 m	3,100	2,250	4.0 m	2,100	1,400
3.7 m	3,100	1,550	4.5 m	2,100	1,150
4.0 m	2,900	1,400	5.0 m	1,950	900
4.5 m	2,400	1,150	6.0 m	1,450	700
5.0 m	2,000	950	7.0 m	1,150	550
5.5 m	1,700	800	8.0 m	920	450
6.0 m	1,450	700	9.0 m	850	400
6.5 m	1,350	650	10.0 m	700	320
7.0 m	1,200	600	10.58 m	650	300
7.5 m	1,050	500			
8.17 m	950	450			

Table C

Load Radius	3.55 m / 5.99 m / 8.39m Extension width of outriggers		Load Radius	10.8 m Boom Extension width of outriggers	
	Full	Minimum		Full	Minimum
2.5 m and below	3,100	3,100	3.5 m and below	2,100	1,900
3.0 m	3,100	2,600	4.5 m	2,100	1,300
3.7 m	3,100	1,840	5.0 m	2,000	1,050
4.0 m	2,900	1,600	6.0 m	1,750	750
4.5 m	2,550	1,350	7.0 m	1,450	700
5.0 m	2,300	1,100	8.0 m	1,170	520
5.5 m	2,000	900	9.0 m	1,000	470
6.0 m	1,800	800	10.0 m	870	400
6.5 m	1,620	750	10.58 m	800	350
7.0 m	1,450	700			
7.5 m	1,320	620			
8.17 m	1,150	520			

Table D

Load Radius	3.55 m / 5.99 m / 8.39m Extension width of outriggers		Load Radius	10.8 m Boom Extension width of outriggers	
	Full	Minimum		Full	Minimum
2.5 m and below	3,100	3,100	3.5 m and below	2,100	1,900
3.0 m	3,100	2,600	4.5 m	2,100	1,300
3.7 m	3,100	1,840	5.0 m	2,000	1,050
4.0 m	2,900	1,600	6.0 m	1,750	750
4.5 m	2,550	1,350	7.0 m	1,500	700
5.0 m	2,300	1,100	8.0 m	1,350	520
5.5 m	2,050	900	9.0 m	1,170	470
6.0 m	1,900	800	10.0 m	1,020	400
6.5 m	1,750	750	10.58 m	970	350
7.0 m	1,600	700			
7.5 m	1,450	620			
8.17 m	1,350	520			

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).

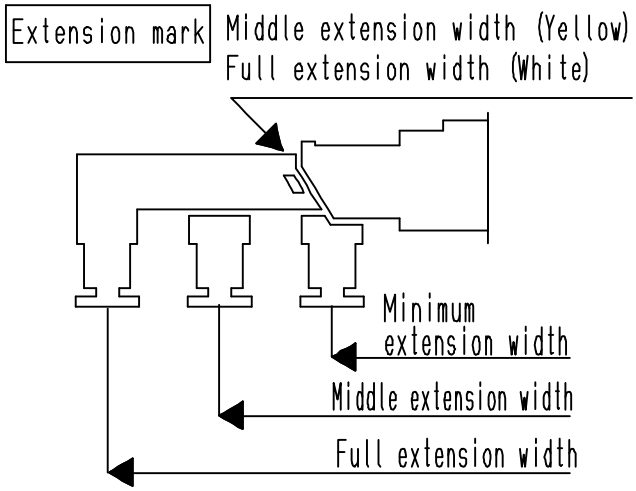
3. For boom lengths not shown, use the rated lifting capacity of next longer boom.

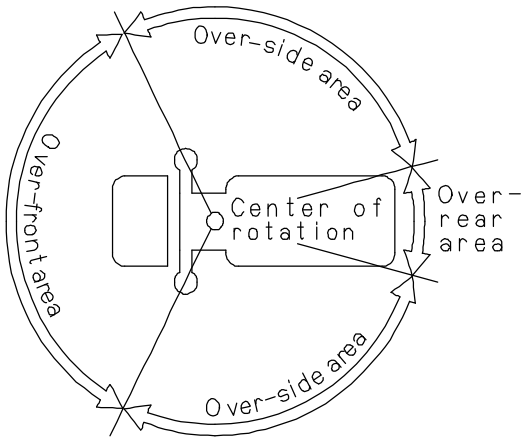
4.When outriggers are extended to middle extension width, use the rated lifting capacities for outriggers are extended to minimum extension width.

5. 8.39m boom means ▱ mark on 3rd boom section side plate is half seen.

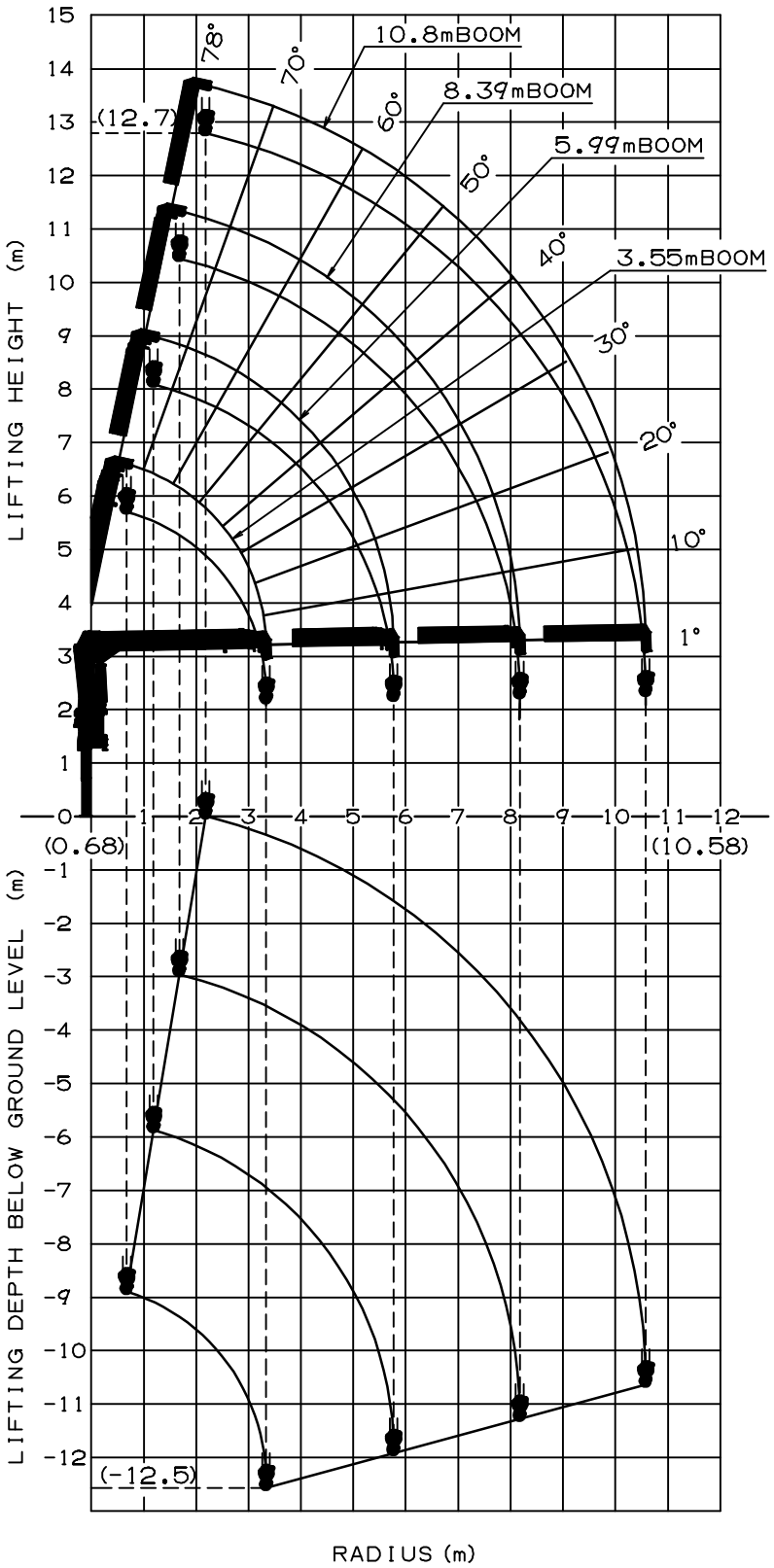
6. Empty Chassis Rated Capacities table A, B, C and D depend on the types of chassis.

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



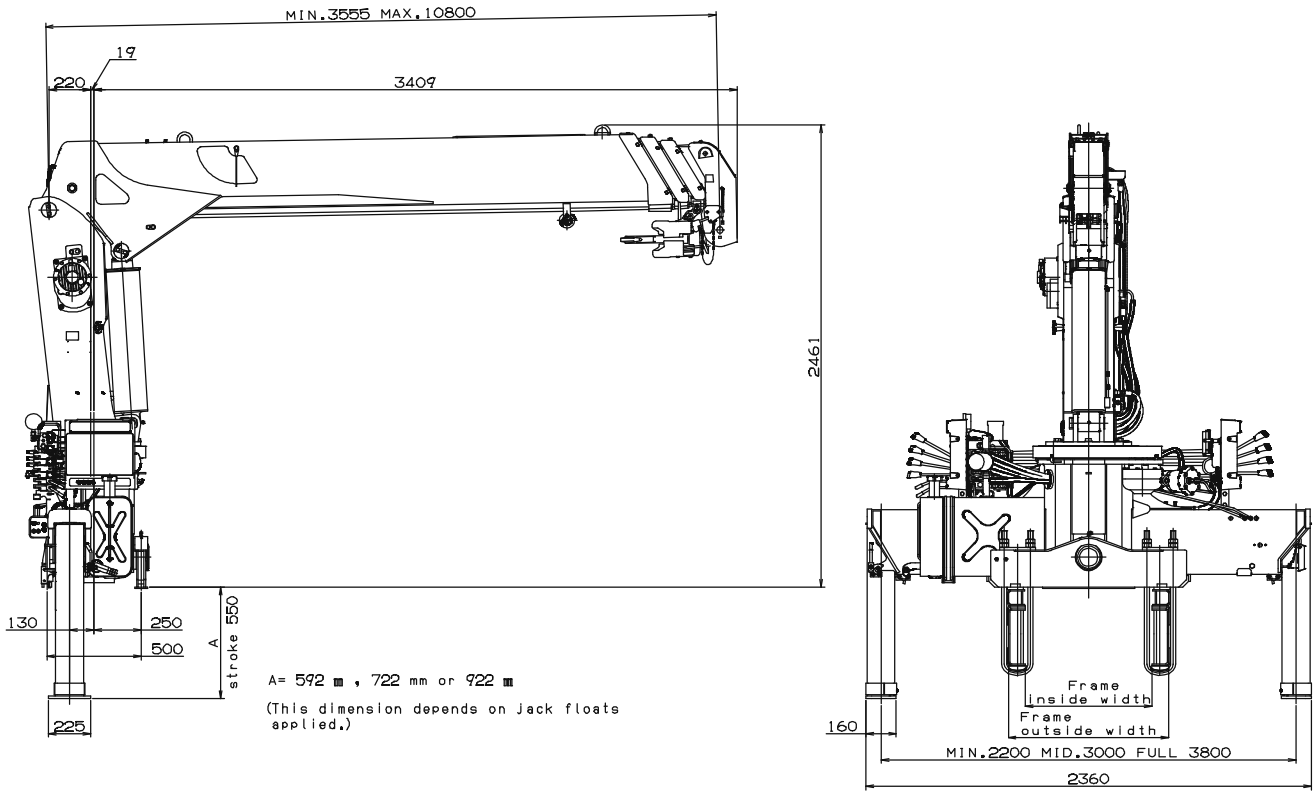


WORKING RANGE



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)