TADANO

SPEC. SHEET No. TM-50Z-5-03494/R-01
DATE December, 2010

TADANO CARGO CRANE

MODEL : TM-ZE504GHS

CRANE SPECIFICATIONS

CRANE CAPACITY 4,000 kg at 2.9m(5-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 ---------- 3 sheaves

WINCH 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 82 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. 1,850 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 Boom Extension width of outriggers		Load Radius	8.39 m Boom Extension width of outriggers		Load Radius	10.8 m Boom Extension width of outriggers	
	Full	Minimum		Full	Minimum		Full	Minimum
2.5 m and below	4,000	3,330	2.5 m and below	3,080	3,080	3.5 m and below	2,080	1,880
2.9 m	4,000	2,630	3.0 m	3,080	2,580	4.5 m	2,080	1,280
3.7 m	3,080	1,820	3.7 m	3,080	1,820	5.0 m	1,980	1,030
4.0 m	2,880	1,580	4.0 m	2,880	1,580	6.0 m	1,730	730
4.5 m	2,530	1,330	4.5 m	2,530	1,330	7.0 m	1,480	680
5.0 m	2,280	1,080	5.0 m	2,280	1,080	8.0 m	1,330	500
5.77 m	1,980	880	5.5 m	2,030	880	9.0 m	1,150	450
			6.0 m	1,880	780	10.0 m	1,000	380
			6.5 m	1,730	730	10.58 m	950	330
			7.0 m	1,580	680			
			7.5 m	1,430	600			
			8.17 m	1,330	500			

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	3.55 m / 5.99 m Boom Extension width of outriggers		Load Radius	8.39 m Boom Extension width of outriggers		Load Radius	10.8 m Boom Extension width of outriggers	
	Full	Minimum		Full	Minimum		Full	Minimum
2.6 m and below	4,000	2,430	2.6 m and below	3,080	2,430	3.5 m and below	2,080	1,430
2.8 m	4,000	2,080	3.0 m	3,080	1,830	4.0 m	2,080	1,130
3.6 m	2,880	1,380	3.6 m	2,880	1,380	4.5 m	1,930	880
4.0 m	2,380	1,130	4.0 m	2,380	1,130	5.0 m	1,580	730
4.5 m	1,930	880	4.5 m	1,930	880	6.0 m	1,130	530
5.0 m	1,630	780	5.0 m	1,630	780	7.0 m	950	400
5.77 m	1,280	630	5.5 m	1,380	630	8.0 m	750	330
			6.0 m	1,130	530	9.0 m	630	280
			6.5 m	1,080	500	10.0 m	530	230
			7.0 m	950	430	10.58 m	500	200
			7.5 m	850	380			
			8.17 m	730	330			

Table B

Load Radius	3.55 m / 5.99 m Boom Extension width of outriggers		Load Radius	8.39 m Boom Extension width of outriggers		Load Radius	10.8 m Boom Extension width of outriggers	
	Full	Minimum		Full	Minimum		Full	Minimum
2.6 m and below	4,000	2,680	2.3 m and below	3,080	3,080	3.5 m and below	2,080	1,680
2.9 m	4,000	2,230	3.0 m	3,080	2,230	4.0 m	2,080	1,380
3.7 m	3,080	1,530	3.7 m	3,080	1,530	4.5 m	2,080	1,130
4.0 m	2,880	1,380	4.0 m	2,880	1,380	5.0 m	1,930	880
4.5 m	2,380	1,130	4.5 m	2,380	1,130	6.0 m	1,430	680
5.0 m	1,980	930	5.0 m	1,980	930	7.0 m	1,130	530
5.77 m	1,580	730	5.5 m	1,680	780	8.0 m	900	430
			6.0 m	1,430	680	9.0 m	830	380
			6.5 m	1,330	630	10.0 m	680	300
			7.0 m	1,180	580	10.58 m	630	280
			7.5 m	1,030	480			
			8.17 m	930	430			

Table C

Load Radius	3.55 m / 5.99 m Boom Extension width of outriggers		Load Radius	8.39 m Boom Extension width of outriggers		Load Radius	10.8 m Boom Extension width of outriggers	
	Full	Minimum		Full	Minimum		Full	Minimum
2.6 m and below	4,000	3,080	2.5 m and below	3,080	3,080	3.5 m and below	2,080	1,880
2.9 m	4,000	2,630	3.0 m	3,080	2,580	4.5 m	2,080	1,280
3.7 m	3,080	1,820	3.7 m	3,080	1,820	5.0 m	1,980	1,030
4.0 m	2,880	1,580	4.0 m	2,880	1,580	6.0 m	1,730	730
4.5 m	2,530	1,330	4.5 m	2,530	1,330	7.0 m	1,430	680
5.0 m	2,280	1,080	5.0 m	2,280	1,080	8.0 m	1,150	500
5.77 m	1,980	880	5.5 m	1,980	880	9.0 m	980	450
			6.0 m	1,780	780	10.0 m	850	380
			6.5 m	1,600	730	10.58 m	780	330
			7.0 m	1,430	680			
			7.5 m	1,300	600			
			8.17 m	1,130	500			

Table D

Load Radius	3.55 m / 5.99 m Boom Extension width of outriggers		Load Radius	8.39 m Boom Extension width of outriggers		Load Radius	10.8 m Boom Extension width of outriggers	
	Full	Minimum		Full	Minimum		Full	Minimum
2.5 m and below	4,000	3,330	2.5 m and below	3,080	3,080	3.5 m and below	2,080	1,880
2.9 m	4,000	2,630	3.0 m	3,080	2,580	4.5 m	2,080	1,280
3.7 m	3,080	1,820	3.7 m	3,080	1,820	5.0 m	1,980	1,030
4.0 m	2,880	1,580	4.0 m	2,880	1,580	6.0 m	1,730	730
4.5 m	2,530	1,330	4.5 m	2,530	1,330	7.0 m	1,480	680
5.0 m	2,280	1,080	5.0 m	2,280	1,080	8.0 m	1,330	500
5.77 m	1,980	880	5.5 m	2,030	880	9.0 m	1,150	450
			6.0 m	1,880	780	10.0 m	1,000	380
			6.5 m	1,730	730	10.58 m	950	330
			7.0 m	1,580	680			
			7.5 m	1,430	600			
			8.17 m	1,330	500			

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).

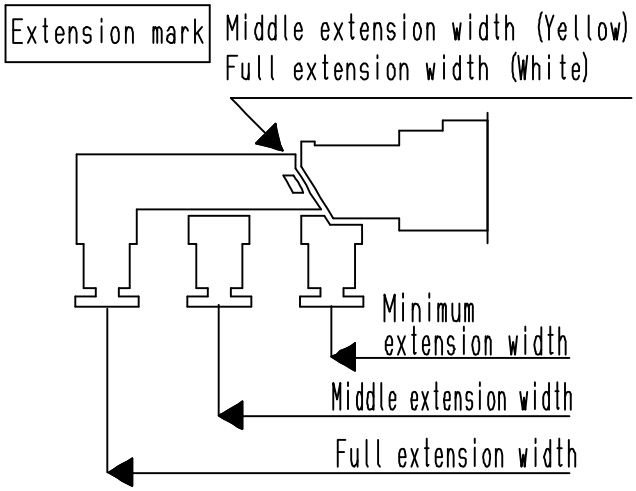
3. For boom lengths not shown, use the rated lifting capacity of next longer boom.

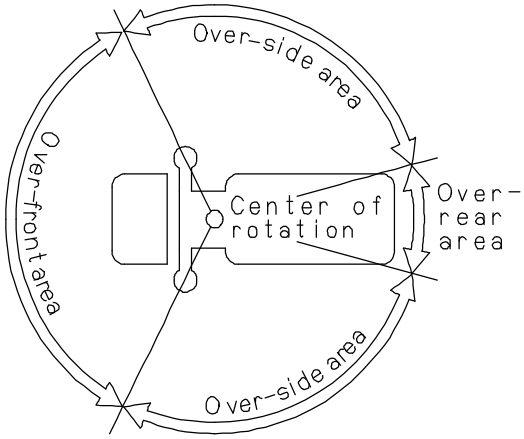
4. When outriggers are extended to middle extension width, use the rated lifting capacities for outriggers are extended to minimum extension width.

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

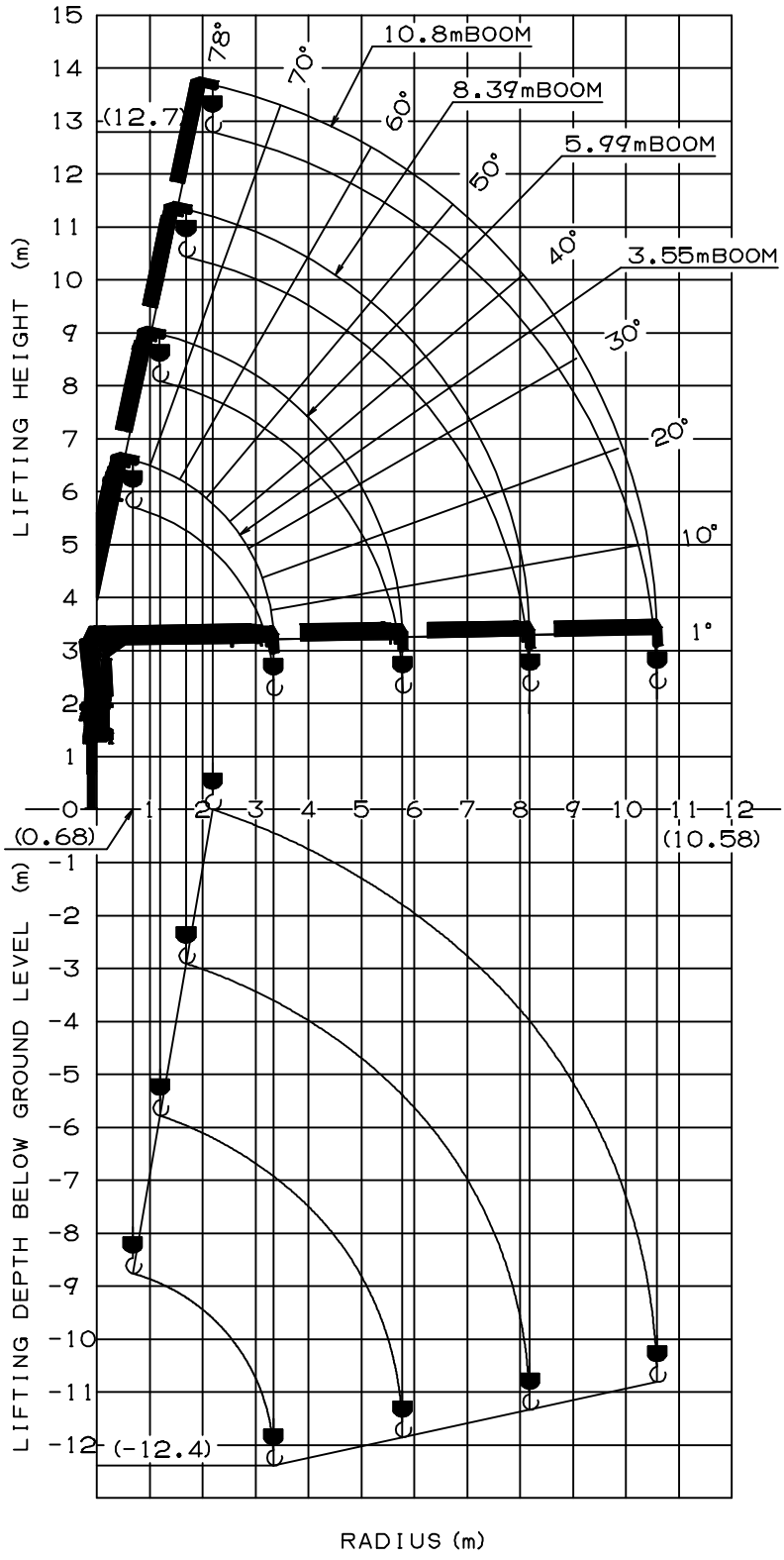
6. Empty Chassis Rated Capacities table A, B, C and D depend on the types of chassis.

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



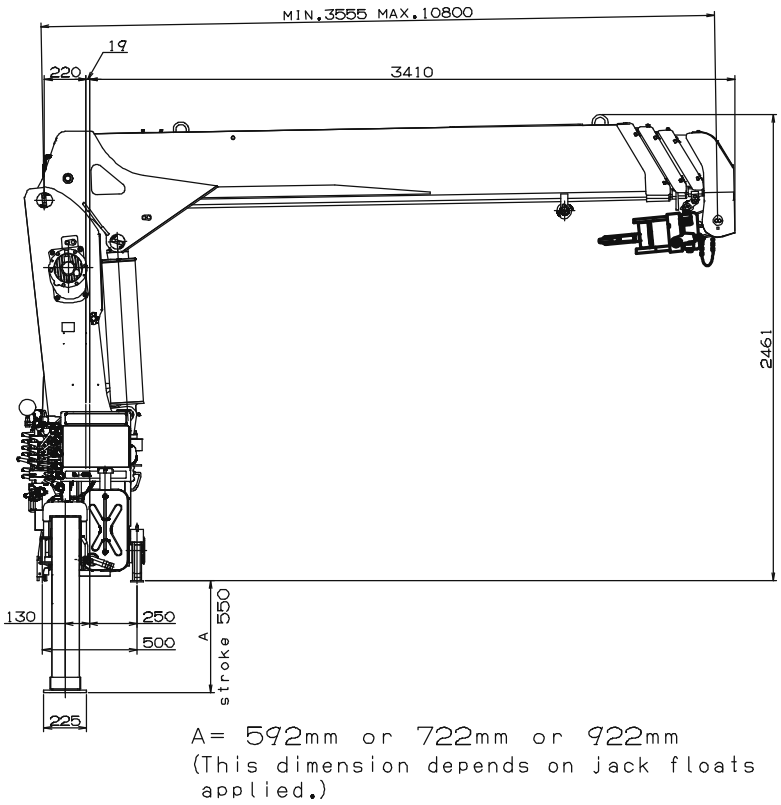


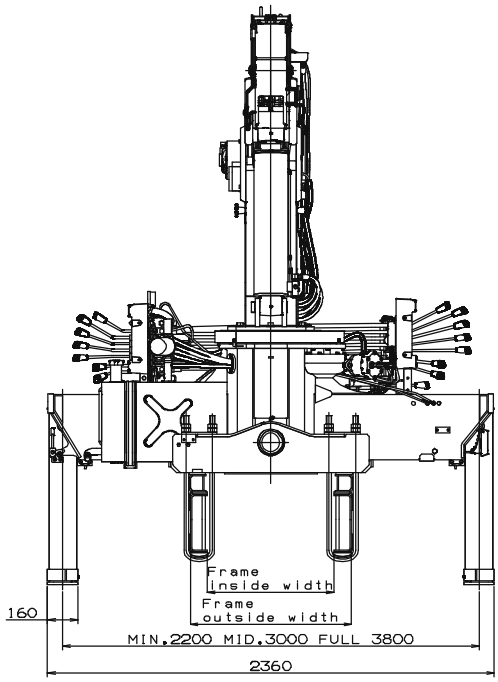
WORKING RANGE



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)