TADANO

SPEC. SHEET No. TM-30Z-5-03455/R-02
DATE September, 2010

TADANO CARGO CRANE

MODEL : TM-ZE305HS

CRANE SPECIFICATIONS

CRANE CAPACITY	3,000 kg at 2.3 m (4-part lines)
BOOM	Five-sectioned, fully powered partly synchronized telescoping boom of pentagonal box construction Retracted length -------- 3.52 m Extended length -------- 12.3 m Extending speed ------- 8.78 m / 18 s Elevation ---------- Elevated by a double-acting hydraulic cylinder Elevating speed --------- 1^{o} to 78^{o} / 7.5 s Boom point ---------- 2 sheaves
WINCH	Hydraulic motor driven Spur gear speed reduction, provided with mechanical brake and cable follower Single line pull ---------- 7.35 kN{750 kgf} Single line speed ------- 76 m/min (at 4th layer) Wire rope Diameter x length --- 8 mm x 74 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. 2,000 mm Mid. 2,700 mm Full 3,400 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. 31 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 meter 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. 1,390 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	3.52 m / 5.75 m Boom Extension width of outriggers		Load Radius	7.95 m Boom Extension width of outriggers	Load Radius	10.1 m Boom Extension width of outriggers	Load Radius	12.3 m Boom Extension width of outriggers
	Full	Minimum		Full		Full		Full
2.3 m and below	3,000	1,350	2.7 m and below	2,300	4.0 m and below	1,000	4.5 m and below	730
2.5 m	2,800	1,200	3.0 m	2,100	5.0 m	850	5.0 m	670
3.0 m	2,400	850	3.5 m	1,800	6.0 m	700	6.0 m	550
3.5 m	2,000	650	4.0 m	1,600	7.0 m	600	7.0 m	470
4.0 m	1,700	500	4.5 m	1,450	8.0 m	550	8.0 m	400
4.5 m	1,450	400	5.0 m	1,300	9.0 m	480	9.0 m	350
5.0 m	1,300	350	5.5 m	1,120	9.92m	450	10.0m	300
5.55m	1,120	250	6.0 m	1,020			11.0m	270
			6.5 m	920			12.1m	250
			7.0 m	820				
			7.75m	700				

NOTES : 1. Capacities in above 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	3.52 m / 5.75 m Boom Extension width of outriggers		Load Radius	7.95 m Boom Extension width of outriggers	Load Radius	10.1 m Boom Extension width of outriggers	Load Radius	12.3 m Boom Extension width of outriggers
	Full	Minimum		Full		Full		Full
2.3 m and below	3,000	1,250	2.7 m and below	2,200	4.0 m and below	1,000	4.5 m and below	730
2.5 m	2,750	1,150	3.0 m	1,820	5.0 m	620	5.0 m	600
3.0 m	1,850	750	3.5 m	1,300	6.0 m	450	6.0 m	450
3.5 m	1,300	600	4.0 m	1,000	7.0 m	350	7.0 m	350
4.0 m	1,000	450	4.5 m	800	8.0 m	270	8.0 m	270
4.5 m	800	350	5.0 m	650	9.0 m	200	9.0 m	200
5.0 m	650	300	5.5 m	550	9.92m	170	10.0m	170
5.55m	550	250	6.0 m	450			11.0m	150
			6.5 m	400			12.1m	100
			7.0 m	350				
			7.75m	300				

Table C

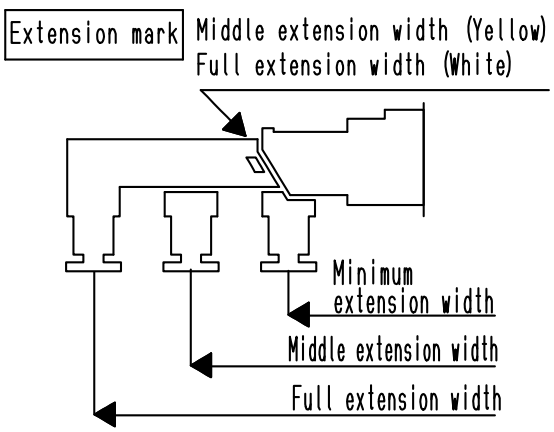
Load Radius	3.52 m / 5.75 m Boom Extension width of outriggers		Load Radius	7.95 m Boom Extension width of outriggers	Load Radius	10.1 m Boom Extension width of outriggers	Load Radius	12.3 m Boom Extension width of outriggers
	Full	Minimum		Full		Full		Full
2.3 m and below	3,000	1,350	2.7 m and below	2,200	4.0 m and below	1,000	4.5 m and below	730
2.5 m	2,750	1,200	3.0 m	2,000	5.0 m	750	5.0 m	600
3.0 m	2,050	850	3.5 m	1,500	6.0 m	550	6.0 m	450
3.5 m	1,500	650	4.0 m	1,150	7.0 m	400	7.0 m	370
4.0 m	1,150	500	4.5 m	950	8.0 m	320	8.0 m	320
4.5 m	950	400	5.0 m	750	9.0 m	270	9.0 m	250
5.0 m	800	350	5.5 m	650	9.92m	250	10.0m	220
5.55m	650	250	6.0 m	550			11.0m	200
			6.5 m	450			12.1m	170
			7.0 m	400				
			7.75m	350				

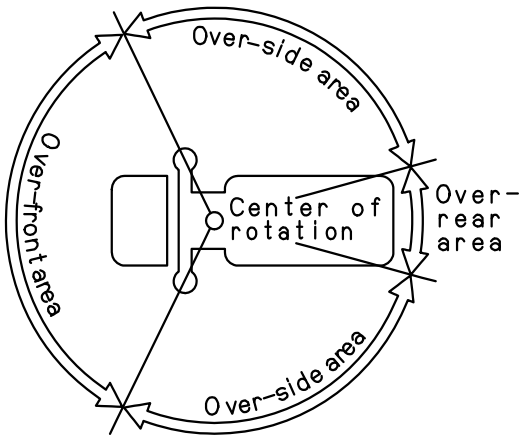
Table D

Load Radius	3.52 m / 5.75 m Boom Extension width of outriggers		Load Radius	7.95 m Boom Extension width of outriggers	Load Radius	10.1 m Boom Extension width of outriggers	Load Radius	12.3 m Boom Extension width of outriggers
	Full	Minimum		Full		Full		Full
2.3 m and below	3,000	1,350	2.7 m and below	2,300	4.0 m and below	1,000	4.5 m and below	730
2.5 m	2,800	1,200	3.0 m	2,100	5.0 m	850	5.0 m	670
3.0 m	2,400	850	3.5 m	1,800	6.0 m	700	6.0 m	550
3.5 m	2,000	650	4.0 m	1,600	7.0 m	600	7.0 m	470
4.0 m	1,700	500	4.5 m	1,450	8.0 m	550	8.0 m	400
4.5 m	1,450	400	5.0 m	1,300	9.0 m	480	9.0 m	350
5.0 m	1,300	350	5.5 m	1,120	9.92m	450	10.0m	300
5.55m	1,120	250	6.0 m	1,020			11.0m	270
			6.5 m	920			12.1m	250
			7.0 m	820				
			7.75m	700				

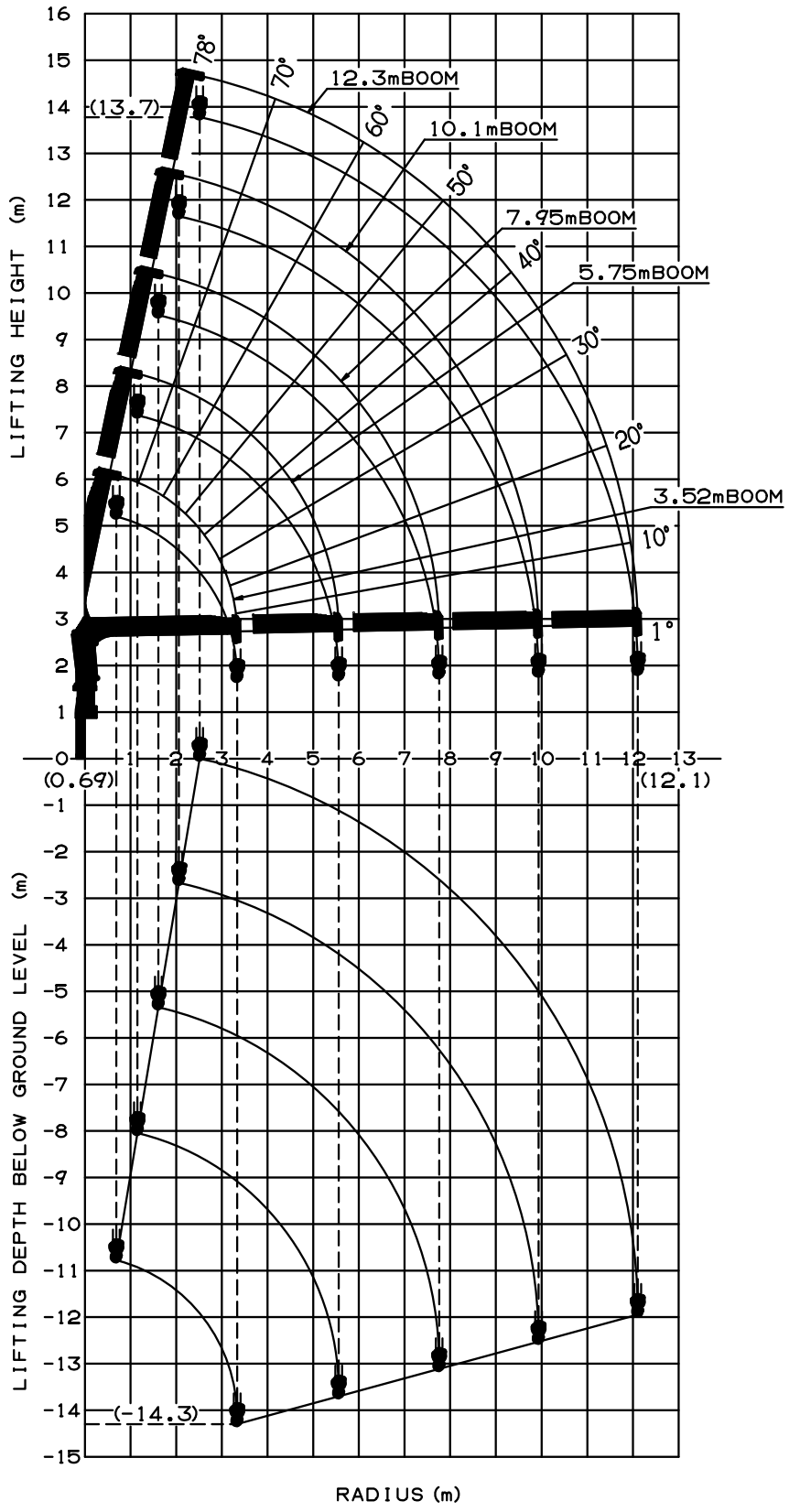
NOTES : 1. Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground.

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. For boom lengths longer than 5.75m, extend outriggers to full extension width.
6. When the boom length is 10.1 m, a half of the ▱ mark on lateral face of the 4th boom section is exposed out of the 3rd boom section.
7. Empty Chassis Rated Capacities table A ,C and D depend on the types of chassis.
8. 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.





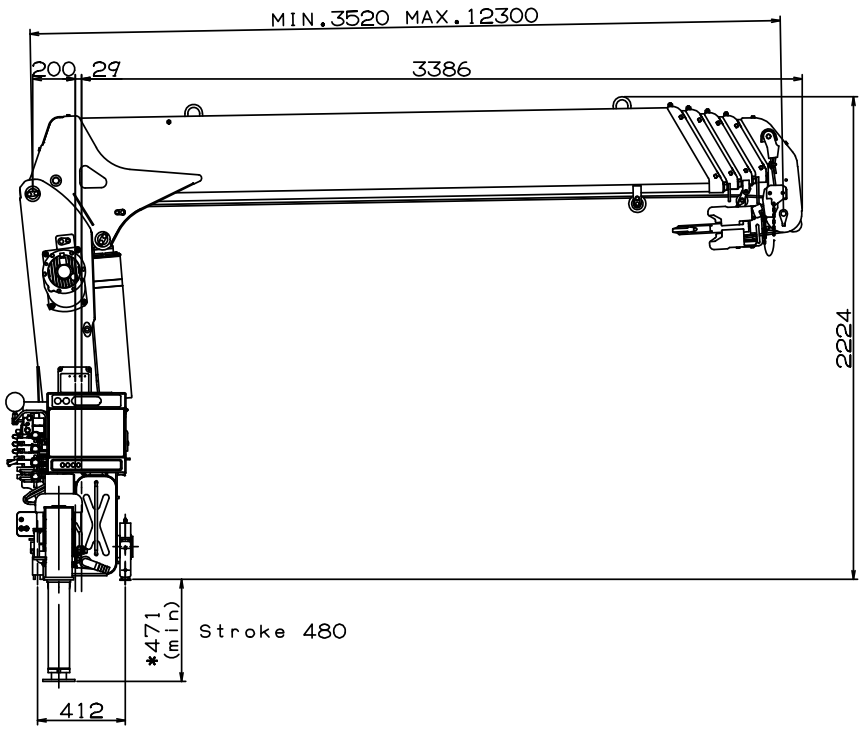
WORKING RANGE

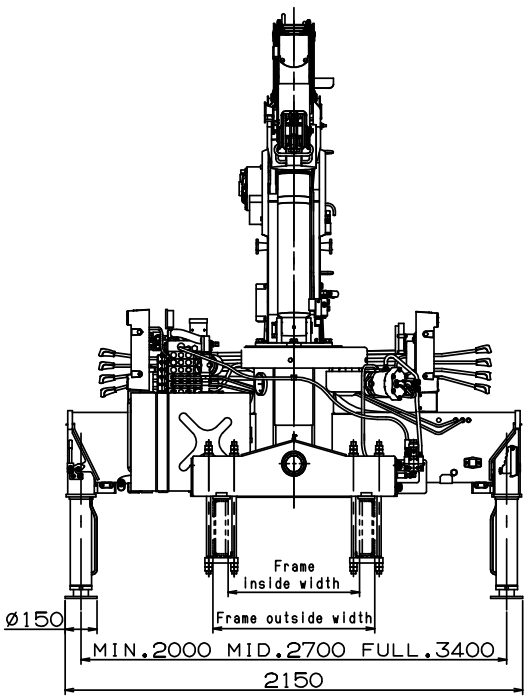


NOTE:

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) ----- 8,000 to 11,000 kg
P.T.O. torque ----------190 N-m{19.4 kgf-m} min.
P.T.O. revolution ---------- Approx. 300 to 1,900 min^{-1}{rpm}
Width for crane mounting ---------- Approx. 640 mm min.
Frame ---------- Weight distribution and frame strength should be calculated for each truck
Frame width range (inside to outside) ---------- Approx. 610 to 860 mm
Frame height (ground to frame top) ---------- Approx. 1,070 mm max.
(Height of crane mounting base can be changed by combination of jack floats and crane bases)