TADANO

SPEC. SHEET No. TM-30Z-5-03117/TA-02
DATE June, 2010

TADANO CARGO CRANE

MODEL : TM-ZE306HRS

CRANE SPECIFICATIONS

CRANE CAPACITY	3,030 kg at 2.3 m (4-part lines)
BOOM	Six-sectioned, fully powered partly synchronized telescoping boom of pentagonal box construction Retracted length --------- 3.65 m Extended length ---------- 14.6 m Extending speed --------- 10.95 m / 19 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 ---------- 7.45 kN{760 kgf} Single line speed -------- 76 m/min (at 4th layer) Wire rope Diameter x length ------ 8 mm x 85 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

REAR OUTRIGGERS (Locally provided)
Full extension width ---- Not less than 2,800 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. 31 L

RADIO CONTROLLER
Model : RCS-F (Approved by NCC LP0002)
Control functions of boom telescoping, hoisting up and down, boom elevating, swing, acceleration, speed mode selection, Hook-in, Hook-out, horn and emergency stop
Frequency ---------- 5 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. 569 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
Load indicator
Emergency stop switch on radio controller
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. 1,460 kg (with standardized mounting parts included)

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	3.65 m / 5.87 m Boom Extension width of outriggers		Load Radius	8.07 m Boom Extension width of outriggers	Load Radius	10.2 m Boom Extension width of outriggers	Load Radius	12.4 m Boom Extension width of outriggers	Load Radius	14.6 m Boom Extension width of outriggers
	Full	Minimum		Full		Full		Full		Full
2.3 m and below	3,030	1,380	2.7 m and below	2,330	4.0 m and below	1,030	5.0 m and below	700	4.9 m and below	400
2.5 m	2,830	1,230	3.0 m	2,130	5.0 m	880	6.0 m	580	6.0 m	360
3.0 m	2,380	880	3.5 m	1,880	6.0 m	730	7.0 m	500	7.0 m	330
3.5 m	1,980	680	4.0 m	1,630	7.0 m	630	8.0 m	430	8.0 m	300
4.0 m	1,680	530	4.5 m	1,450	8.0 m	580	9.0 m	380	9.0 m	280
4.5 m	1,450	430	5.0 m	1,280	9.0 m	510	10.0 m	330	10.0m	260
5.0 m	1,280	330	5.5 m	1,130	10.05m	480	11.0 m	300	11.0m	240
5.67m	1,080	280	6.0 m	1,000			12.22m	280	12.0m	220
			6.5 m	880					13.0m	200
			7.0 m	800					14.4m	180
			7.87m	680						

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	3.65 m / 5.87 m Boom Extension width of outriggers		Load Radius	8.07 m Boom Extension width of outriggers	Load Radius	10.2 m Boom Extension width of outriggers	Load Radius	12.4 m Boom Extension width of outriggers	Load Radius	14.6 m Boom Extension width of outriggers
	Full	Minimum		Full		Full		Full		Full
2.3 m and below	3,030	1,280	2.7 m and below	2,230	3.9 m and below	1,030	5.0 m and below	630	4.9 m and below	330
2.5 m	2,780	1,130	3.0 m	1,830	5.0 m	650	6.0 m	480	6.0 m	280
3.0 m	1,880	780	3.5 m	1,330	6.0 m	480	7.0 m	330	7.0 m	250
3.5 m	1,330	580	4.0 m	980	7.0 m	330	8.0 m	280	8.0 m	230
4.0 m	980	480	4.5 m	830	8.0 m	280	9.0 m	230	9.0 m	180
4.5 m	830	380	5.0 m	680	9.0 m	230	10.0 m	180	10.0m	150
5.0 m	680	280	5.5 m	550	10.05m	180	11.0 m	130	11.0m	130
5.67m	580	230	6.0 m	480			12.22m	100	12.0m	100
			6.5 m	400					13.0m	80
			7.0 m	330					14.4m	50
			7.87m	280						

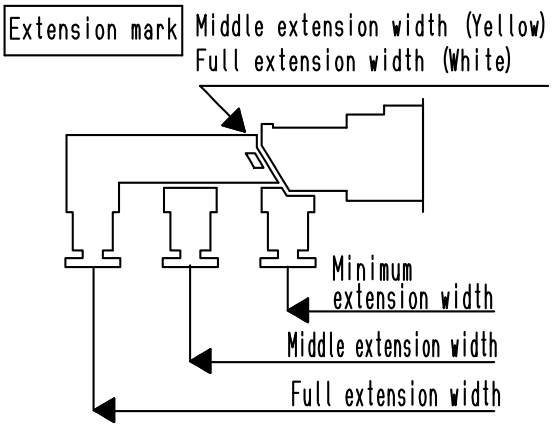
Table C

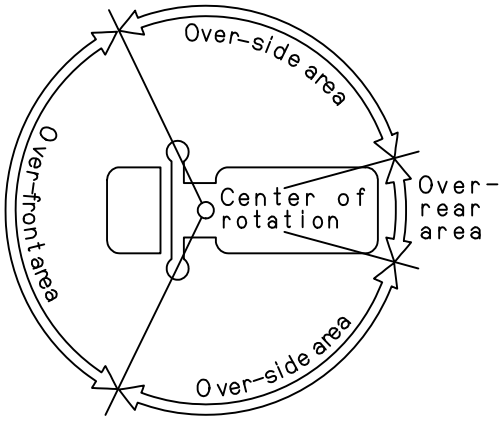
Load Radius	3.65 m / 5.87 m Boom Extension width of outriggers		Load Radius	8.07 m Boom Extension width of outriggers	Load Radius	10.2 m Boom Extension width of outriggers	Load Radius	12.4 m Boom Extension width of outriggers	Load Radius	14.6 m Boom Extension width of outriggers
	Full	Minimum		Full		Full		Full		Full
2.3 m and below	3,030	1,380	2.7 m and below	2,230	4.0 m and below	1,030	5.0 m and below	630	4.9 m and below	330
2.5 m	2,780	1,230	3.0 m	2,030	5.0 m	730	6.0 m	480	6.0 m	280
3.0 m	2,080	880	3.5 m	1,530	6.0 m	530	7.0 m	400	7.0 m	250
3.5 m	1,530	680	4.0 m	1,130	7.0 m	430	8.0 m	330	8.0 m	230
4.0 m	1,180	530	4.5 m	930	8.0 m	330	9.0 m	280	9.0 m	210
4.5 m	930	430	5.0 m	780	9.0 m	280	10.0 m	230	10.0m	190
5.0 m	780	330	5.5 m	630	10.05m	230	11.0 m	180	11.0m	170
5.67m	630	280	6.0 m	530			12.22m	130	12.0m	130
			6.5 m	480					13.0m	130
			7.0 m	430					14.4m	80
			7.87m	330						

Table D

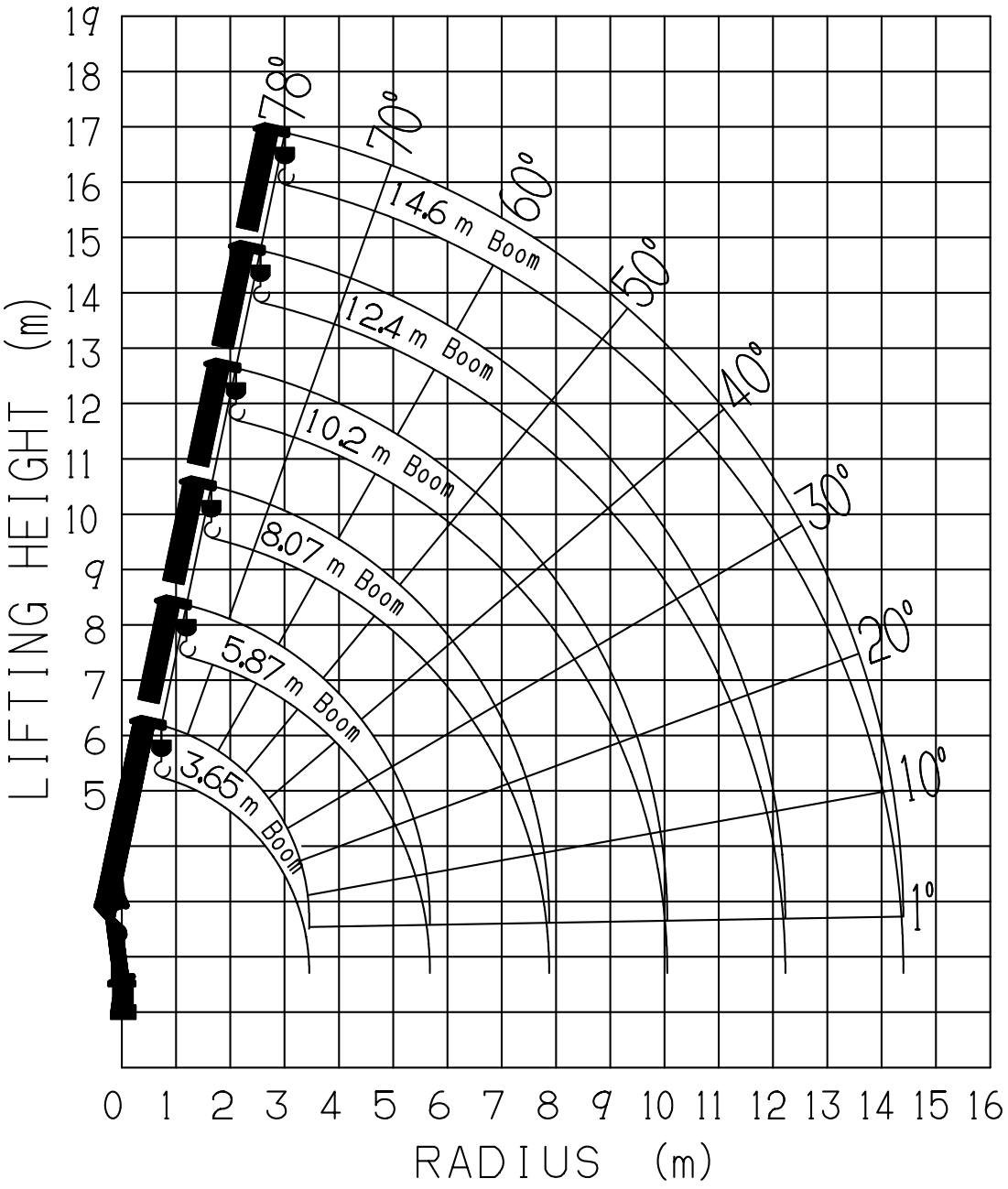
Load Radius	3.65 m / 5.87 m Boom		Load Radius	8.07 m Boom	Load Radius	10.2 m Boom	Load Radius	12.4 m Boom	Load Radius	14.6 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers		Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full		Full		Full
2.3 m and below	3,030	1,380	2.7 m and below	2,330	4.0 m and below	1,030	5.0 m and below	700	4.9 m and below	400
2.5 m	2,830	1,230	3.0 m	2,130	5.0 m	880	6.0 m	580	6.0 m	360
3.0 m	2,380	880	3.5 m	1,880	6.0 m	730	7.0 m	500	7.0 m	330
3.5 m	1,980	680	4.0 m	1,630	7.0 m	630	8.0 m	430	8.0 m	300
4.0 m	1,680	530	4.5 m	1,450	8.0 m	580	9.0 m	380	9.0 m	280
4.5 m	1,450	430	5.0 m	1,280	9.0 m	510	10.0 m	330	10.0m	260
5.0 m	1,280	330	5.5 m	1,130	10.05m	480	11.0 m	300	11.0m	240
5.67m	1,080	280	6.0 m	1,000			12.22m	280	12.0m	220
			6.5 m	880					13.0m	200
			7.0 m	800					14.4m	180
			7.87m	680						

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 hook block (30 kg), slings and all similarly used load handling devices must be added to the mass of 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. For boom lengths longer than 5.87m, extend outriggers to full extension width.
6. When the boom length is 10.2 m, a half of the first ▱ mark on lateral face of the 4th boom section is exposed out of the 3rd boom section.
7. When the boom length is 12.4 m, a half of the second ▱ mark on lateral face of the 4th boom section is exposed out of the 3rd boom section.
8. Empty Chassis Rated Capacities table A ,C and D depend on the types of chassis.
9. 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.





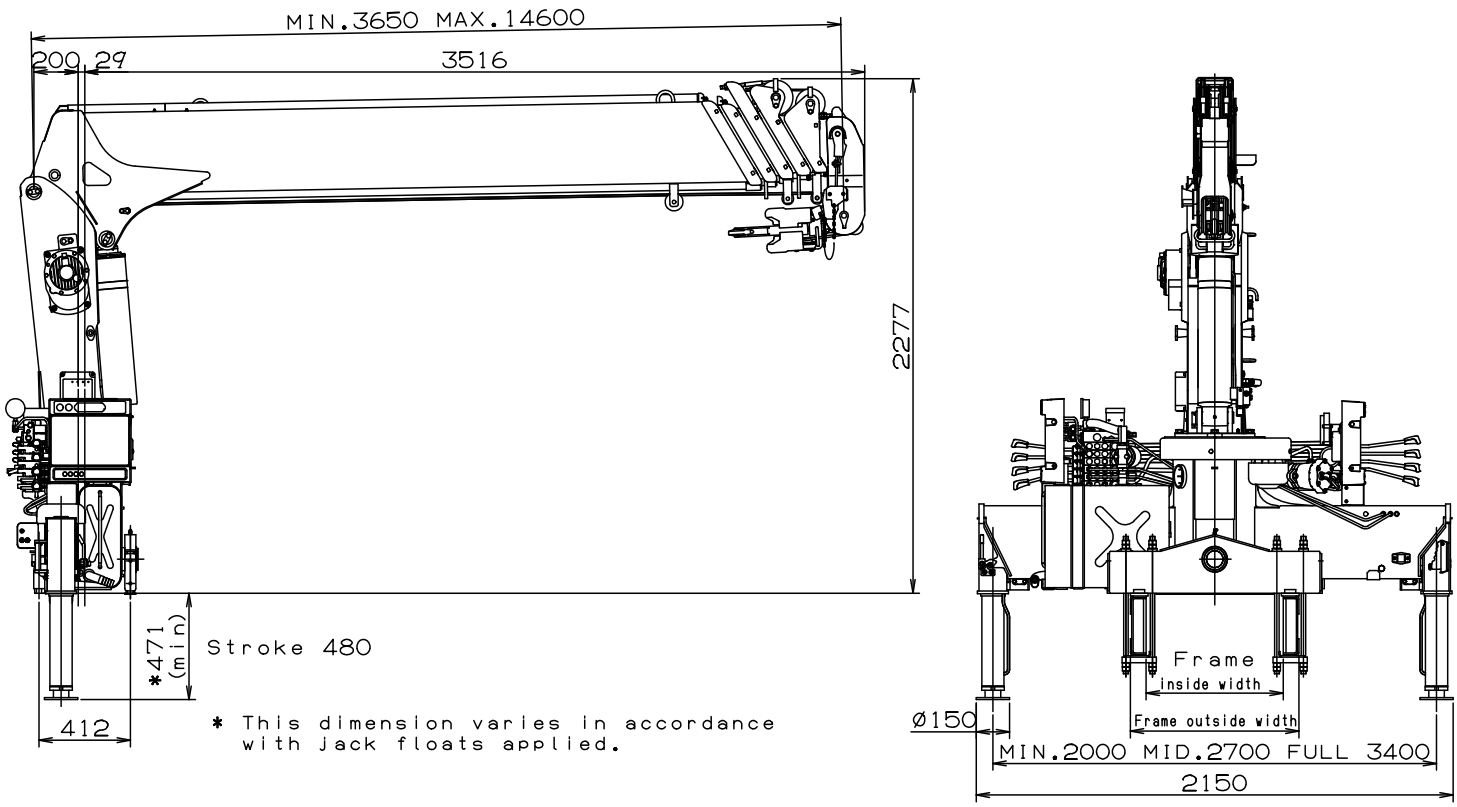
WORKING RANGE



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)