TADANO

SPEC. SHEET No. TM-29Z-5-03117/TA-02
DATE June, 2010

TADANO CARGO CRANE

MODEL : TM-ZE296HRS

CRANE SPECIFICATIONS

CRANE CAPACITY	3,030 kg at 1.4 m (4-part lines)
BOOM	Six-sectioned, fully powered partly synchronized telescoping boom of pentagonal box construction Retracted length --------- 3.23 m Extended length ---------- 12.8 m Extending speed --------- 9.57 m / 17 s Elevation ---------- Elevated by a double-acting hydraulic cylinder Elevating speed ---------- 1^{o} to 76^{o} / 6 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 -------- 68 m/min (at 4th layer) Wire rope Diameter x length ------ 8 mm x 75 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. 1,720 mm
Mid. 2,900 mm, 2,400 mm
Full 3,400 mm

REAR OUTRIGGERS (Locally provided)
Full extension width ---- Not less than 2,400 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. 22 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. 1,200 kg (with standardized mounting parts included)

NOTE : Operating speeds of the crane are guaranteed under the condition that the pump delivery is 53 L/min.

RATED LIFTING CAPACITIES IN KILOGRAMS

Crane Strength Rated Capacities

Load Radius	3.23 m / 5.17 m Boom Extension width of outriggers		Load Radius	7.1 m Boom Extension width of outriggers	Load Radius	9.0 m Boom Extension width of outriggers	Load Radius	10.9 m Boom Extension width of outriggers	Load Radius	12.8 m Boom Extension width of outriggers
	Full	Minimum		Full		Full		Full		Full
1.45m and below	3,030	1,580	2.2 m and below	1,880	3.0 m and below	980	4.0 m and below	580	5.3 m and below	280
2.0 m	2,180	1,130	2.5 m	1,680	3.5 m	900	4.5 m	530	6.0 m	250
2.5 m	1,730	730	3.0 m	1,430	4.0 m	830	5.0 m	480	7.0 m	220
3.0 m	1,430	530	3.5 m	1,180	5.0 m	680	6.0 m	400	8.0 m	200
3.5 m	1,230	380	4.0 m	1,030	6.0 m	580	7.0 m	330	9.0 m	180
4.0 m	1,050	280	4.5 m	880	7.0 m	480	8.0 m	280	10.0m	160
4.5 m	900	230	5.0 m	780	8.0 m	380	9.0 m	250	11.0m	140
4.97m	800	180	5.5 m	680	8.8 m	330	10.0 m	230	12.6m	120
			6.0 m	600			10.7 m	210		
			6.9 m	500						

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

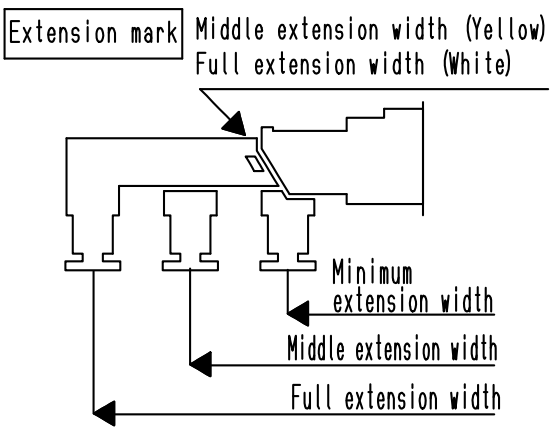
Table C

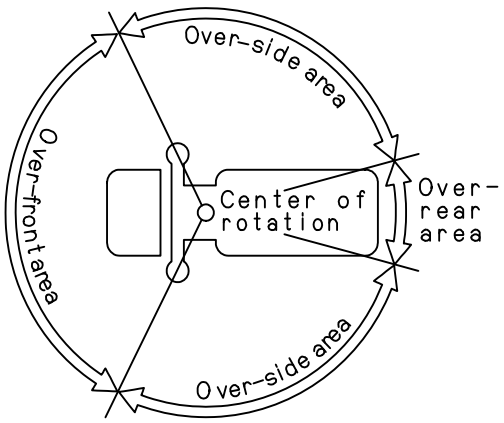
Load Radius	3.23 m / 5.17 m Boom Extension width of outriggers		Load Radius	7.1 m Boom Extension width of outriggers	Load Radius	9.0 m Boom Extension width of outriggers	Load Radius	10.9 m Boom Extension width of outriggers	Load Radius	12.8 m Boom Extension width of outriggers
	Full	Minimum		Full		Full		Full		Full
1.4 m and below	3,030	1,580	2.2 m and below	1,730	3.0 m and below	930	4.0 m and below	480	5.3 m and below	280
2.0 m	2,130	1,130	2.5 m	1,530	3.5 m	830	4.5 m	430	6.0 m	240
2.5 m	1,730	730	3.0 m	1,280	4.0 m	730	5.0 m	380	7.0 m	210
3.0 m	1,430	530	3.5 m	1,080	5.0 m	580	6.0 m	300	8.0 m	180
3.5 m	1,230	380	4.0 m	930	6.0 m	480	7.0 m	260	9.0 m	160
4.0 m	1,030	280	4.5 m	780	7.0 m	380	8.0 m	230	10.0m	140
4.5 m	830	230	5.0 m	680	8.0 m	280	9.0 m	200	11.0m	130
4.97m	680	180	5.5 m	580	8.8 m	230	10.0 m	180	12.6m	100
			6.0 m	480			10.7 m	150		
			6.9 m	380						

Table D

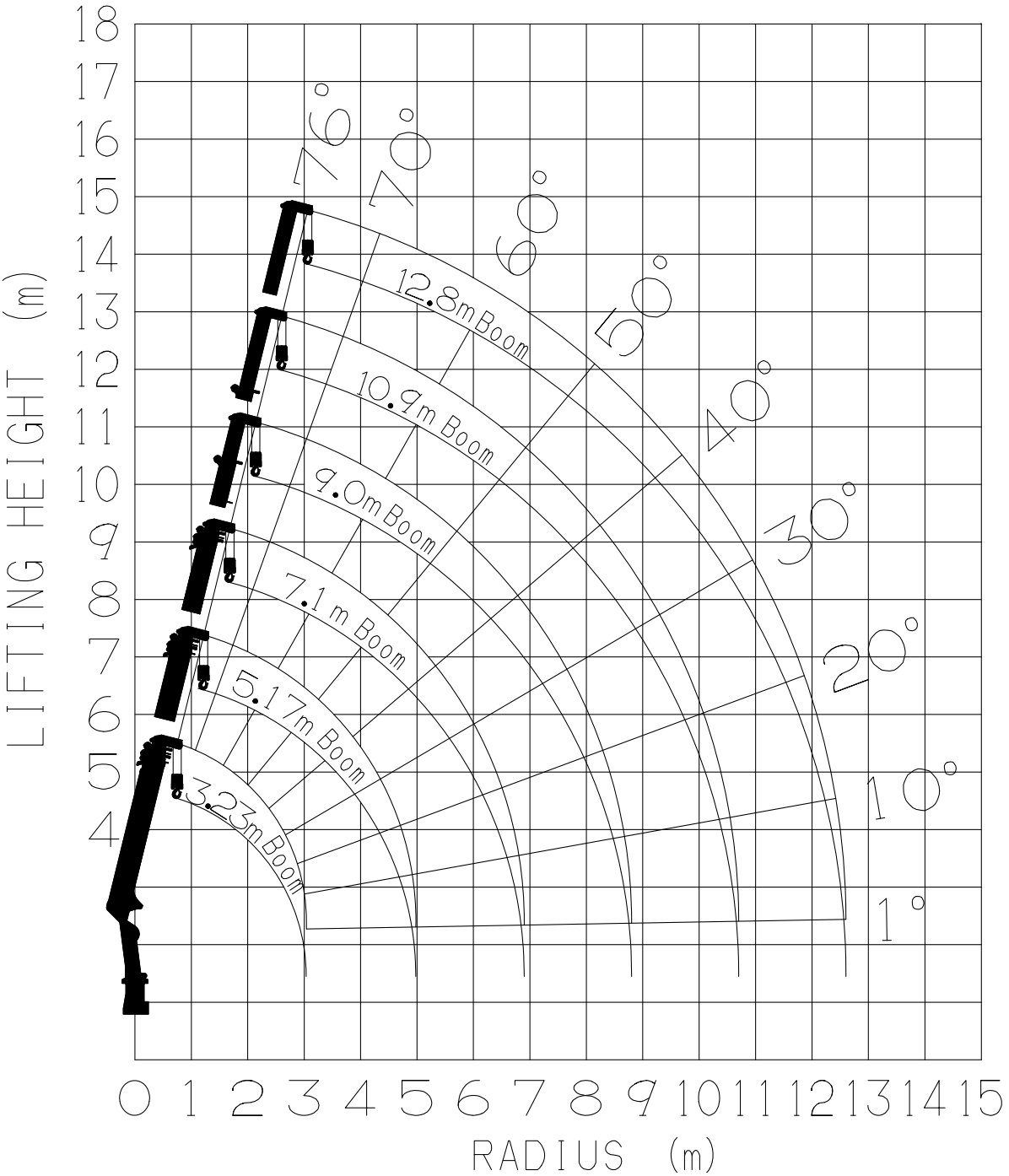
Load Radius	3.23 m / 5.17 m Boom		Load Radius	7.1 m Boom	Load Radius	9.0 m Boom	Load Radius	10.9 m Boom	Load Radius	12.8 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers		Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full		Full		Full
1.45m and below	3,030	1,580	2.2 m and below	1,880	3.0 m and below	980	4.0 m and below	580	5.3 m and below	280
2.0 m	2,180	1,130	2.5 m	1,680	3.5 m	900	4.5 m	530	6.0 m	250
2.5 m	1,730	730	3.0 m	1,430	4.0 m	830	5.0 m	480	7.0 m	220
3.0 m	1,430	530	3.5 m	1,180	5.0 m	680	6.0 m	400	8.0 m	200
3.5 m	1,230	380	4.0 m	1,030	6.0 m	580	7.0 m	330	9.0 m	180
4.0 m	1,050	280	4.5 m	880	7.0 m	480	8.0 m	280	10.0m	160
4.5 m	900	230	5.0 m	780	8.0 m	380	9.0 m	250	11.0m	140
4.97m	800	180	5.5 m	680	8.8 m	330	10.0 m	230	12.6m	120
			6.0 m	600			10.7 m	210		
			6.9 m	500						

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 front 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 5.17m, extend front outriggers and rear outriggers to full extension width.
6. When the boom length is 9.0 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 10.9 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 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 be lowered depending on the types of chassis.





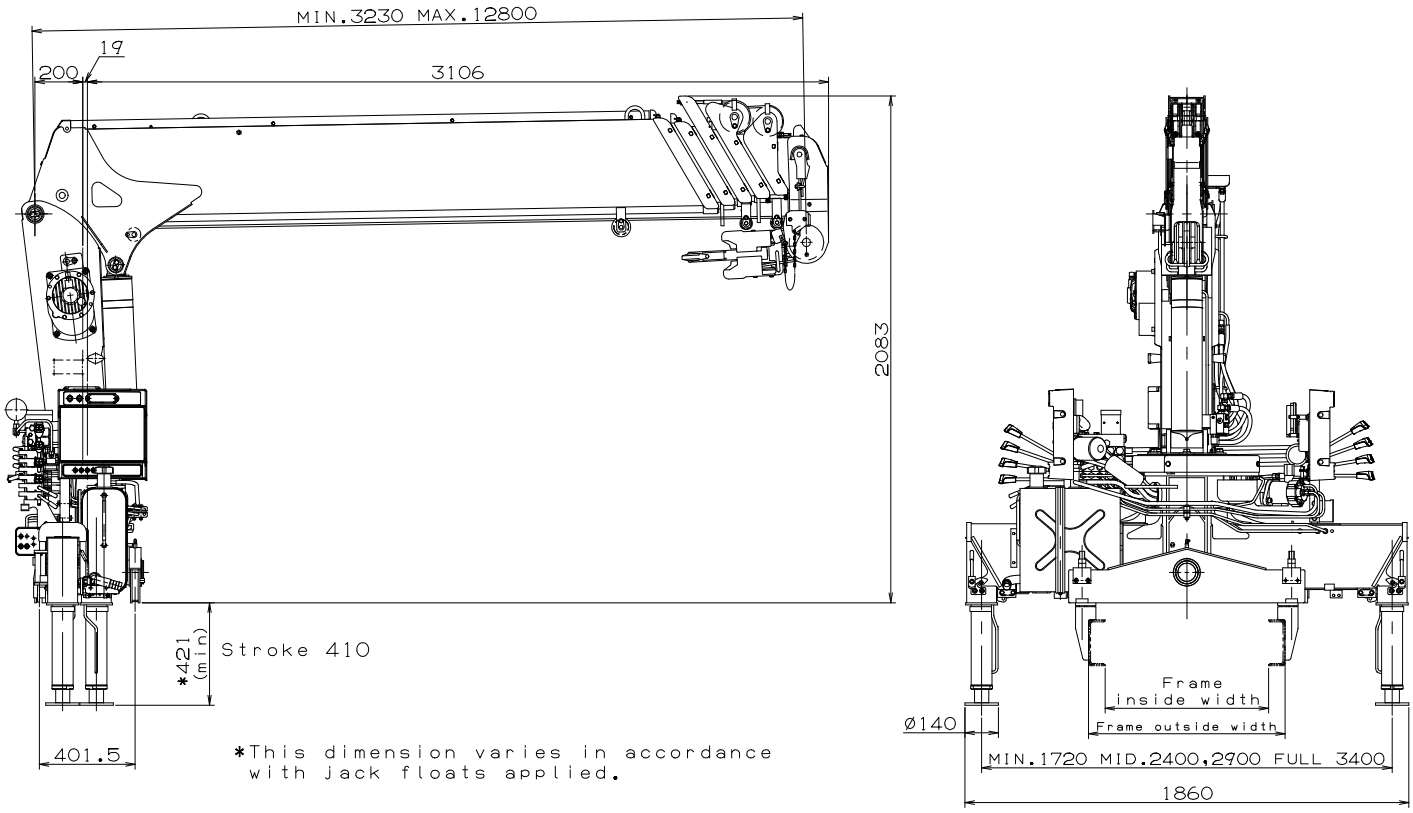
WORKING RANGE



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) ----- 4,500 to 8,000 kg
P.T.O. torque ----------140 N-m {14.3 kgf-m} min.
P.T.O. revolution ---------- Approx. 300 to 1,700 min^{-1} {rpm}
Width for crane mounting ---------- Approx. 605 mm min.
Frame ---------- Weight distribution and frame strength should be calculated for each truck
Frame width range (inside to outside) ---------- Approx. 680 to 860 mm
Frame height (ground to frame top) ---------- Approx. 1,010 mm max.
(Height of crane mounting base can be changed by combination of jack floats and crane bases)