TADANO CARGO CRANE

MODEL : TM-ZE304HRS

CRANE SPECIFICATIONS

CRANE CAPACITY	3,030 kg at 2.5 m (4-part lines)
BOOM	Four-sectioned, fully powered partly synchronized telescoping boom of pentagonal box construction Retracted length -------- 3.34 m Extended length -------- 10.0 m Extending speed ------- 6.66 m / 14 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 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 63 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
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

RADIO CONTROLLER

Model : RCS-F
Control functions of boom telescoping, hoisting up and down, boom elevating, swing, acceleration, speed mode selection, working height limiting, Hook-in, Hook-out, horn and emergency stop
Frequency ---------- 40 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. 576 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
Radius indicator
Emergency stop switch on radio controller
Terminal for emergency stop switch
Over-winding alarm
Hoisting limiter
Jack interlock
P.T.O indicator lamp
Hook safety latch
Hydraulic safety valves, check valves and holding valves
Level gauge

CRANE MASS

Approx. 1,265 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	3.34 m / 5.57 m Boom		Load Radius	7.78 m Boom	Load Radius	10.0 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
2.3 m and below	3,030	1,430	2.7 m and below	2,330	4.0 m and below	1,030
2.5 m	3,030	1,200	3.2 m	2,030	5.0 m	880
3.0 m	2,480	930	3.5 m	1,830	6.0 m	750
3.5 m	2,080	680	4.0 m	1,630	7.0 m	650
4.0 m	1,780	580	4.5 m	1,480	8.0 m	580
4.5 m	1,580	480	5.0 m	1,330	9.0 m	510
5.0 m	1,380	380	5.5 m	1,230	9.8 m	480
5.37m	1,280	330	6.0 m	1,130		
			6.5 m	1,030		
			7.0 m	950		
			7.58m	880		

NOTES : 1. The mass of hook block (30kg), slings and all similarly used load handling devices must be added to the mass of 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	3.34 m / 5.57 m Boom		Load Radius	7.78 m Boom	Load Radius	10.0 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
2.3 m and below	3,030	1,330	2.7 m and below	2,330	4.0 m and below	1,030
2.6 m	2,580	1,080	3.2 m	1,650	5.0 m	730
3.0 m	1,880	830	3.5 m	1,380	6.0 m	530
3.5 m	1,380	630	4.0 m	1,080	7.0 m	430
4.0 m	1,080	530	4.5 m	880	8.0 m	330
4.5 m	880	430	5.0 m	730	9.0 m	280
5.0 m	730	330	5.5 m	630	9.8 m	250
5.37m	680	330	6.0 m	530		
			6.5 m	480		
			7.0 m	430		
			7.58m	380		

Table C

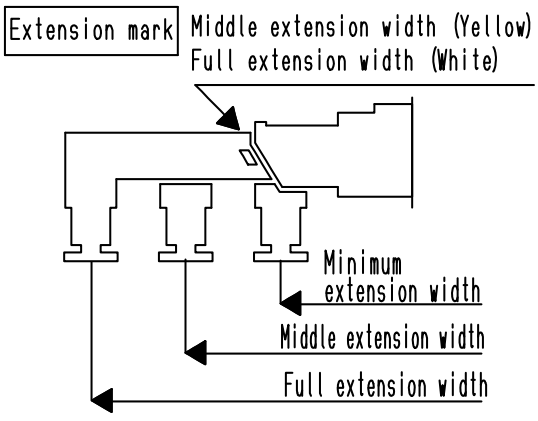
Load Radius	3.34 m / 5.57 m Boom		Load Radius	7.78 m Boom	Load Radius	10.0 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
2.3 m and below	3,030	1,430	2.7 m and below	2,330	4.0 m and below	1,030
2.5 m	3,030	1,200	3.2 m	1,830	5.0 m	830
3.0 m	2,080	930	3.5 m	1,580	6.0 m	630
3.5 m	1,580	680	4.0 m	1,230	7.0 m	480
4.0 m	1,230	580	4.5 m	980	8.0 m	400
4.5 m	980	480	5.0 m	830	9.0 m	350
5.0 m	830	380	5.5 m	730	9.8 m	330
5.37m	780	330	6.0 m	630		
			6.5 m	530		
			7.0 m	500		
			7.58m	450		

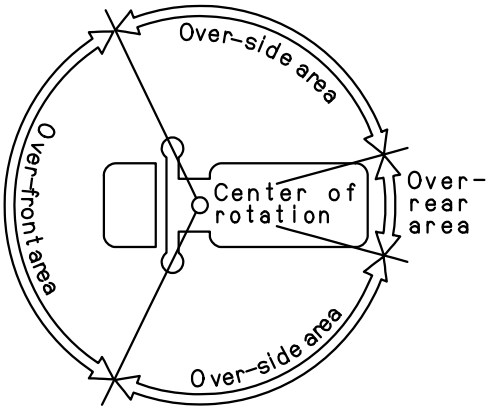
Table D

Load Radius	3.34 m / 5.57 m Boom		Load Radius	7.78 m Boom	Load Radius	10.0 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
2.3 m and below	3,030	1,430	2.7 m and below	2,330	4.0 m and below	1,030
2.5 m	3,030	1,200	3.2 m	2,030	5.0 m	880
3.0 m	2,480	930	3.5 m	1,830	6.0 m	750
3.5 m	2,080	680	4.0 m	1,630	7.0 m	650
4.0 m	1,780	580	4.5 m	1,480	8.0 m	580
4.5 m	1,580	480	5.0 m	1,330	9.0 m	510
5.0 m	1,380	380	5.5 m	1,230	9.8 m	480
5.37m	1,280	330	6.0 m	1,130		
			6.5 m	1,030		
			7.0 m	950		
			7.58m	880		

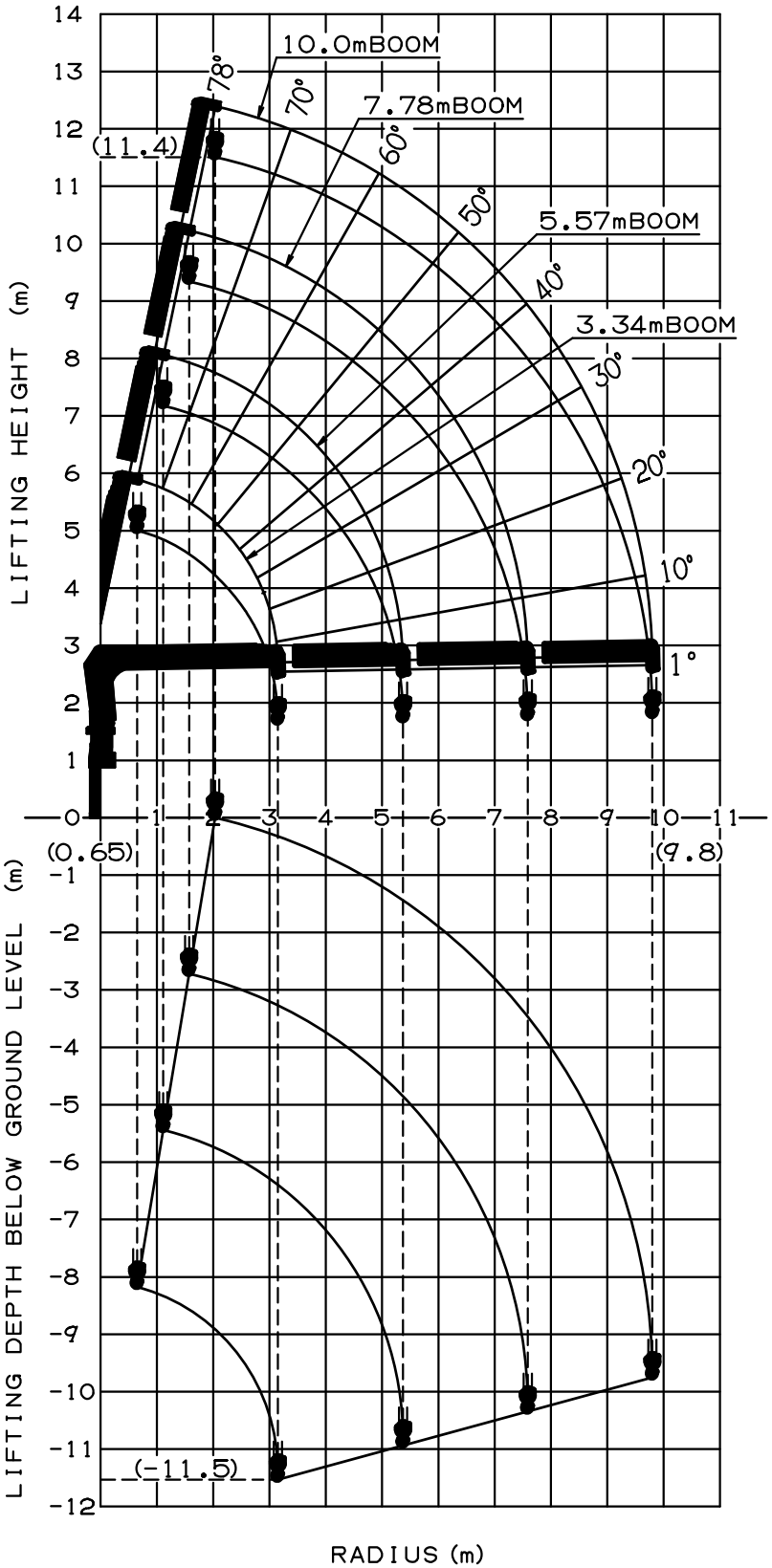
NOTES : 1. Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground.

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 5.57m, extend outriggers to full extension width.
6. When the boom length is 7.78 m, a half of the ▱ mark on lateral face of the 3rd boom section is exposed out of the 2nd 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.





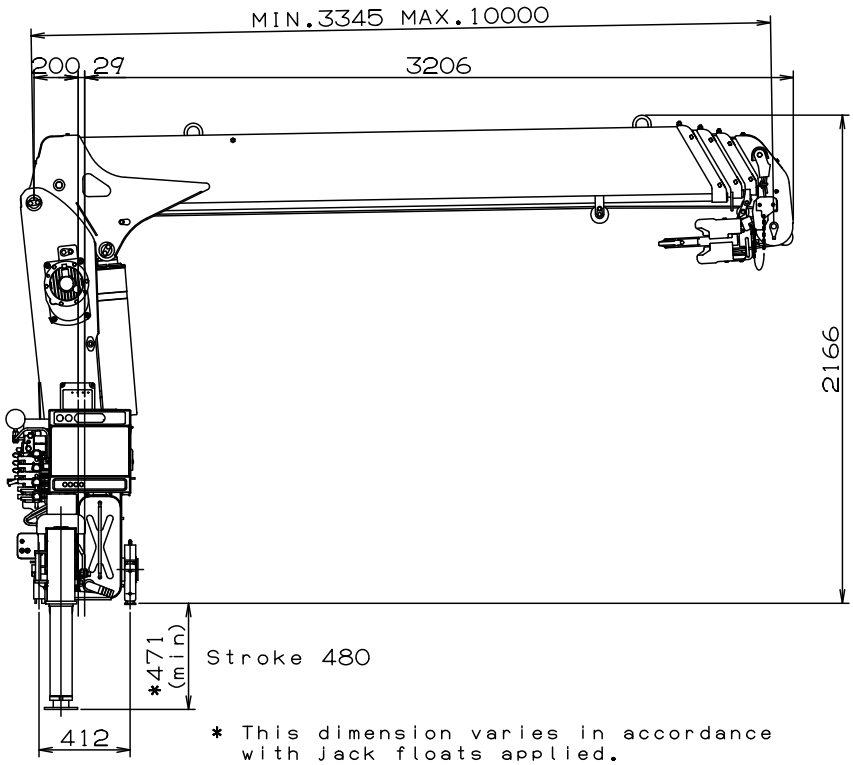
WORKING RANGE

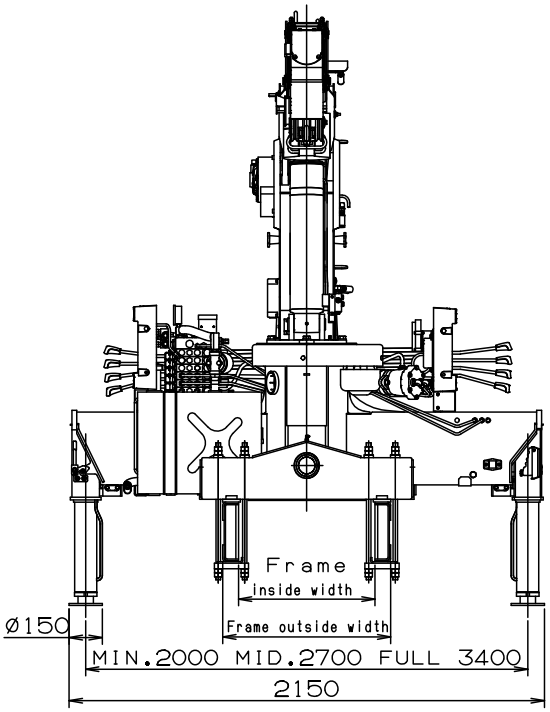


NOTE:

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)