

#### TADANO CARGO CRANE

# MODEL: TM-ZE294HRS

#### CRANE SPECIFICATIONS

CRANE CAPACITY 3,030 kg at 1.5 m (4-part lines)

BOOM Four-sectioned, fully powered partly synchronized telescoping

boom of pentagonal box construction

Retracted length ----- 3.17 m Extended length ----- 8.9 m

Extending speed ----- 5.73 m / 13 s

Elevation ----- Elevated by a double-acting

hydraulic cylinder

Elevating speed -----  $1^{\circ}$  to  $76^{\circ}$  / 6 s

Boom point ----- 2 sheaves

<u>WINCH</u> Hydraulic motor driven Spur gear speed reduction,

provided with mechanical brake

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 56 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<sup>-1</sup> {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

<u>HYDRAULICS</u> 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)

<u>SAFETY DEVICES</u> 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. 1,045 kg (includes standardized mounting parts)

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	3.17 m / 5.12 m Boom		- Load – Radius	7.01 m Boom	Load Radius	8.9 m Boom
Radius	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880	3.0 m and below	1,030
2.0 m	2,330	980	2.5 m	1,680	3.5 m	930
2.5 m	1,880	680	3.0 m	1,430	4.0 m	830
3.0 m	1,500	480	3.5 m	1,230	5.0 m	680
3.5 m	1,250	380	4.0 m	1,080	6.0 m	580
4.0 m	1,080	280	4.5 m	930	7.0 m	480
4.5 m	930	250	5.0 m	830	8.0 m	400
4.92m	850	230	5.5 m	730	8.7 m	350
			6.0 m	650		
			6.81m	580		

- 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	3.17 m / 5.12 m Boom		- Load Radius	7.01 m Boom	Load Radius	8.9 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880	3.0 m and below	980
2.0 m	2,280	980	2.5 m	1,630	3.5 m	830
2.5 m	1,730	680	3.0 m	1,150	4.0 m	680
3.0 m	1,180	480	3.5 m	880	5.0 m	450
3.5 m	880	380	4.0 m	680	6.0 m	350
4.0 m	680	280	4.5 m	580	7.0 m	280
4.5 m	580	250	5.0 m	480	8.0 m	230
4.92m	530	230	5.5 m	400	8.7 m	200
			6.0 m	350		
			6.81m	300		

Table C

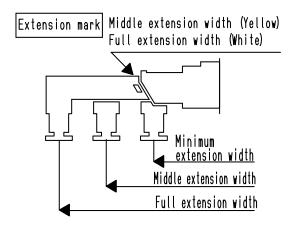
	ĺ					
Load Radius	3.17 m / 5.12 m Boom  Extension width of outriggers			7.01 m		8.9 m
			Load Radius	Boom	Load	Boom
				Extension width of outriggers	Radius	Extension width
					Naulus	of outriggers
	Full	Minimum		Full		Full
1.5 m	3,030	1,580	2.2 m	1,880	3.0 m	980
and below	3,030	1,560	and below	1,000	and below	900
2.0 m	2,280	980	2.5 m	1,630	3.5 m	880
2.5 m	1,830	680	3.0 m	1,330	4.0 m	780
3.0 m	1,380	480	3.5 m	1,030	5.0 m	550
3.5 m	1,030	380	4.0 m	800	6.0 m	430
4.0 m	830	280	4.5 m	680	7.0 m	330
4.5 m	680	250	5.0 m	580	8.0 m	280
4.92m	580	230	5.5 m	480	8.7 m	250
			6 0 m	420		

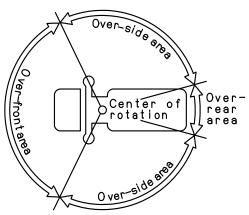
6.81m

Table D

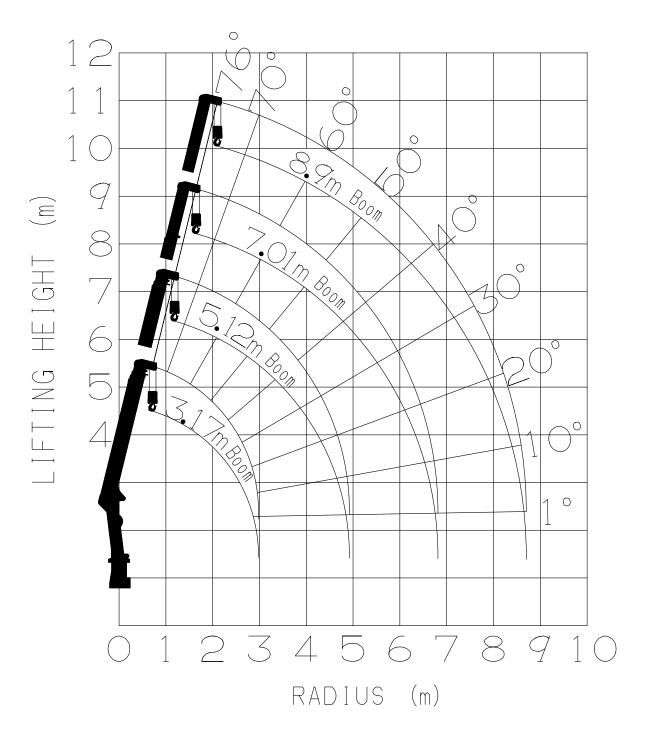
Load Radius	3.17 m / 5.12 m Boom		Load Radius  7.01 m Boom Extension width of outriggers	_	Load Radius	8.9 m Boom
	Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880	3.0 m and below	1,030
2.0 m	2,330	980	2.5 m	1,680	3.5 m	930
2.5 m	1,880	680	3.0 m	1,430	4.0 m	830
3.0 m	1,500	480	3.5 m	1,230	5.0 m	680
3.5 m	1,250	380	4.0 m	1,080	6.0 m	580
4.0 m	1,080	280	4.5 m	930	7.0 m	480
4.5 m	930	250	5.0 m	830	8.0 m	400
4.92m	850	230	5.5 m	730	8.7 m	350
			6.0 m	650		
			6.81m	580		

- 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 5.12m, extend outriggers to full extension width.
  - 6. When the boom length is 7.01 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 be lowered depending on the types of chassis.





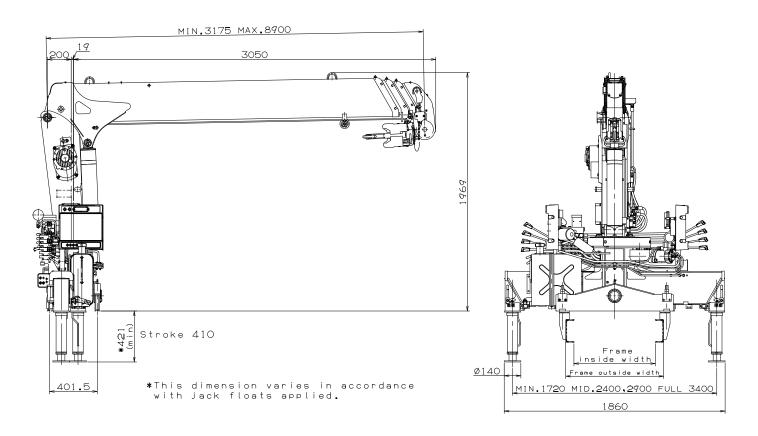
# **WORKING RANGE**



### 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

00 to 8,000 kg
N-m {14.3 kgf-m} min.
rox. 300 to 1,700 min <sup>-1</sup> {rpm}
rox. 605 mm min.
ght distribution and frame strength
uld be calculated for each truck
ox. 680 to 860 mm
rox. 1,010 mm max.
ght of crane mounting base can be
nged by combination of jack floats and
ne bases)
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