

TADANO CARGO CRANE

MODEL : **TM-ZE554HRS**

CRANE SPECIFICATIONS

<u>CRANE CAPACITY</u>	5,050 kg at 2.5 m (5-part line)
<u>BOOM</u>	Four-sectioned, fully powered partly synchronized telescoping boom of heptagonal box construction Retracted length----- 3.55 m Extended length -----10.8 m Extending speed ----- 7.25 m / 21 s Elevation ----- Elevated by a double-acting hydraulic cylinder Elevating speed ----- 1° to 78° / 12 s Boom point ----- 3 sheaves
<u>WINCH</u>	Hydraulic motor driven Spur gear speed reduction, provided with mechanical brake Single line pull ----- 9.90 kN {1,010 kgf} Single line speed ----- 66 m/min (at 4th layer) Wire rope Diameter x length --- 8 mm x 82 m Breaking strength --- 50.1 kN {5.1 tf} Construction ----- 7 x 7 + 6 x WS(26) Hook block ----- 2 sheaves
<u>HOOK STOWING DEVICE</u>	Mechanically stowed beneath boom top portion
<u>SLEWING</u>	Hydraulic motor driven Worm gear speed reduction Continuous 360° full circle slewing on ball bearing slew ring Automatic slewing lock Slewing speed ----- 2.5 min ⁻¹ {rpm}
<u>OUTRIGGERS</u>	Manually extended sliders and hydraulically extended jacks Integral with crane frame Power up and down Extended width ----- Min. 2,200 mm Mid. 3,000 mm Max.3,800 mm

HYDRAULICS

Hydraulic pump ----- Single gear pump
 Hydraulic motors ----- Axial piston type for winch
 Axial piston type for slewing
 Control valves ----- Multiple control valves with integral
 safety valve
 Oil tank capacity ----- approx. 48 L

RADIO CONTROLLER

Model : RCS-F
 Control functions of boom telescoping, hoisting up and down,
 boom elevating, slewing, 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. 670 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 indicator
 Emergency stop switch on radio controller
 Over-unwinding prevention
 Terminal for emergency stop switch
 Over-winding alarm
 Anti-two-block device
 Jack interlock
 Hook safety latch
 Hydraulic safety valves, check valves and holding valves
 Level gauge

CRANE MASS

Approx. 1,860 kg (includes standardized mounting parts)

OPTIONAL EQUIPMENT

Limit warning lamp (three-color)
 Boom outrigger stowed warning
 Radius indicator
 Tiltable jack float
 Emergency stop switch
 Rear outrigger extension width detection
 Emergency hydraulic pump

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	3.55 m Boom		Load Radius	5.99 m Boom		Load Radius	8.39 m Boom		Load Radius	10.8 m Boom	
	Extension width of outriggers			Extension width of outriggers			Extension width of outriggers			Extension width of outriggers	
	Maximum	Minimum		Maximum	Minimum		Maximum	Minimum		Maximum	Minimum
2.5 m and below	5,050	3,380	2.5 m and below	4,050	3,380	2.5m and below	3,130	3,130	3.5 m and below	2,130	1,930
2.9 m	4,050	2,680	2.9 m	4,050	2,680	3.0 m	3,130	2,630	4.5 m	2,130	1,330
3.33m	3,550	2,230	3.7 m	3,130	1,870	3.7 m	3,130	1,870	5.0 m	2,030	1,080
			4.0 m	2,930	1,630	4.0 m	2,930	1,630	6.0 m	1,780	780
			4.5 m	2,580	1,380	4.5 m	2,580	1,380	7.0 m	1,530	730
			5.0 m	2,330	1,130	5.0 m	2,330	1,130	8.0m	1,380	550
			5.77m	2,030	930	5.5 m	2,080	930	9.0m	1,200	500
						6.0 m	1,930	830	10.0 m	1,050	430
						6.5 m	1,780	780	10.58m	1,000	380
						7.0 m	1,630	730			
						7.5 m	1,480	650			
						8.17m	1,380	550			

- NOTES : 1. The mass of hook block (45kg), slings and all similarly used load lifting 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	3.55 m Boom		Load Radius	5.99 m Boom		Load Radius	8.39 m Boom		Load Radius	10.8 m Boom	
	Extension width of outriggers			Extension width of outriggers			Extension width of outriggers			Extension width of outriggers	
	Maximum	Minimum		Maximum	Minimum		Maximum	Minimum		Maximum	Minimum
2.5 m and below	5,050	2,480	2.6 m and below	4,050	2,480	2.6m and below	3,130	2,480	3.5 m and below	2,130	1,480
2.8 m	4,050	2,130	2.8 m	4,050	2,130	3.0 m	3,130	1,880	4.0 m	2,130	1,180
3.33m	3,250	1,630	3.6 m	2,930	1,430	3.6 m	2,930	1,430	4.5 m	1,980	930
			4.0 m	2,430	1,180	4.0 m	2,430	1,180	5.0 m	1,630	780
			4.5 m	1,980	930	4.5 m	1,980	930	6.0 m	1,180	580
			5.0 m	1,680	830	5.0 m	1,680	830	7.0 m	1,000	450
			5.77m	1,330	680	5.5 m	1,430	680	8.0 m	800	380
						6.0 m	1,180	580	9.0 m	680	330
						6.5 m	1,130	550	10.0 m	580	280
						7.0 m	1,000	480	10.58m	550	250
						7.5 m	900	430			
						8.17m	780	380			

Table B


Load Radius	3.55 m Boom		Load Radius	5.99 m Boom		Load Radius	8.39 m Boom		Load Radius	10.8 m Boom	
	Extension width of outriggers			Extension width of outriggers			Extension width of outriggers			Extension width of outriggers	
	Maximum	Minimum		Maximum	Minimum		Maximum	Minimum		Maximum	Minimum
2.5 m and below	5,050	2,730	2.3 m and below	4,050	3,130	2.3m and below	3,130	3,130	3.5 m and below	2,130	1,730
2.9 m	4,050	2,380	2.9 m	4,050	2,380	3.0 m	3,130	2,280	4.0 m	2,130	1,430
3.33m	3,550	1,930	3.7 m	3,130	1,580	3.7 m	3,130	1,580	4.5 m	2,130	1,180
			4.0 m	2,930	1,430	4.0 m	2,930	1,430	5.0 m	1,980	930
			4.5 m	2,430	1,180	4.5 m	2,430	1,180	6.0 m	1,480	730
			5.0 m	2,030	980	5.0 m	2,030	980	7.0 m	1,180	580
			5.77m	1,630	780	5.5 m	1,730	830	8.0 m	950	480
						6.0 m	1,480	730	9.0 m	880	430
						6.5 m	1,380	680	10.0 m	730	350
						7.0 m	1,230	630	10.58m	680	330
						7.5 m	1,080	530			
						8.17m	980	480			

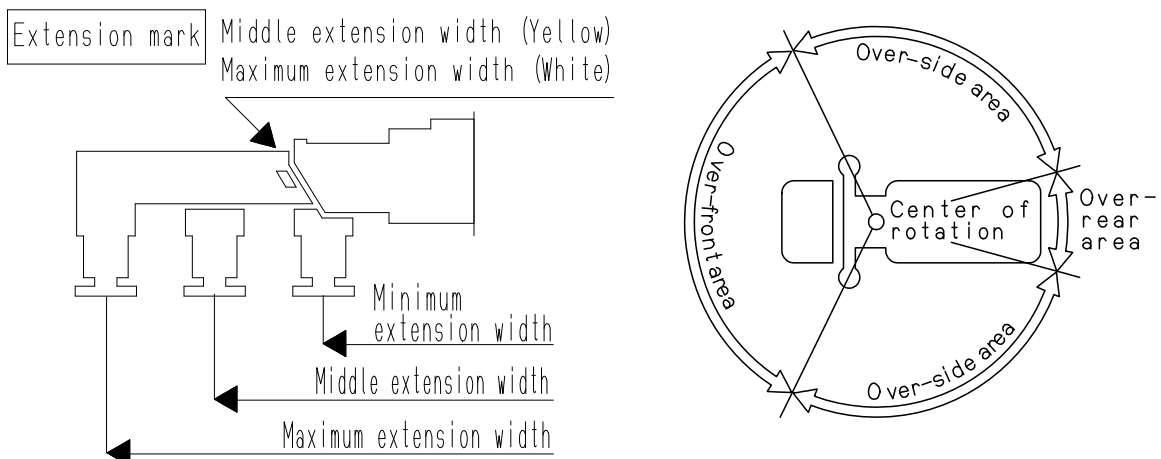
Table C

Load Radius	3.55 m Boom		Load Radius	5.99 m Boom		Load Radius	8.39 m Boom		Load Radius	10.8 m Boom	
	Extension width of outriggers			Extension width of outriggers			Extension width of outriggers			Extension width of outriggers	
	Maximum	Minimum		Maximum	Minimum		Maximum	Minimum		Maximum	Minimum
2.5 m and below	5,050	3,130	2.6 m and below	4,050	3,130	2.5m and below	3,130	3,130	3.5 m and below	2,130	1,930
2.9 m	4,050	2,680	2.9 m	4,050	2,680	3.0 m	3,130	2,630	4.5 m	2,130	1,330
3.33m	3,550	2,230	3.7 m	3,130	1,870	3.7 m	3,130	1,870	5.0 m	2,030	1,080
			4.0 m	2,930	1,630	4.0 m	2,930	1,630	6.0 m	1,780	780
			4.5 m	2,580	1,380	4.5 m	2,580	1,380	7.0 m	1,480	730
			5.0 m	2,330	1,130	5.0 m	2,330	1,130	8.0 m	1,200	550
			5.77m	2,030	930	5.5 m	2,030	930	9.0 m	1,030	500
						6.0 m	1,830	830	10.0 m	900	430
						6.5 m	1,650	780	10.58m	830	380
						7.0 m	1,480	730			
						7.5 m	1,350	650			
						8.17m	1,180	550			

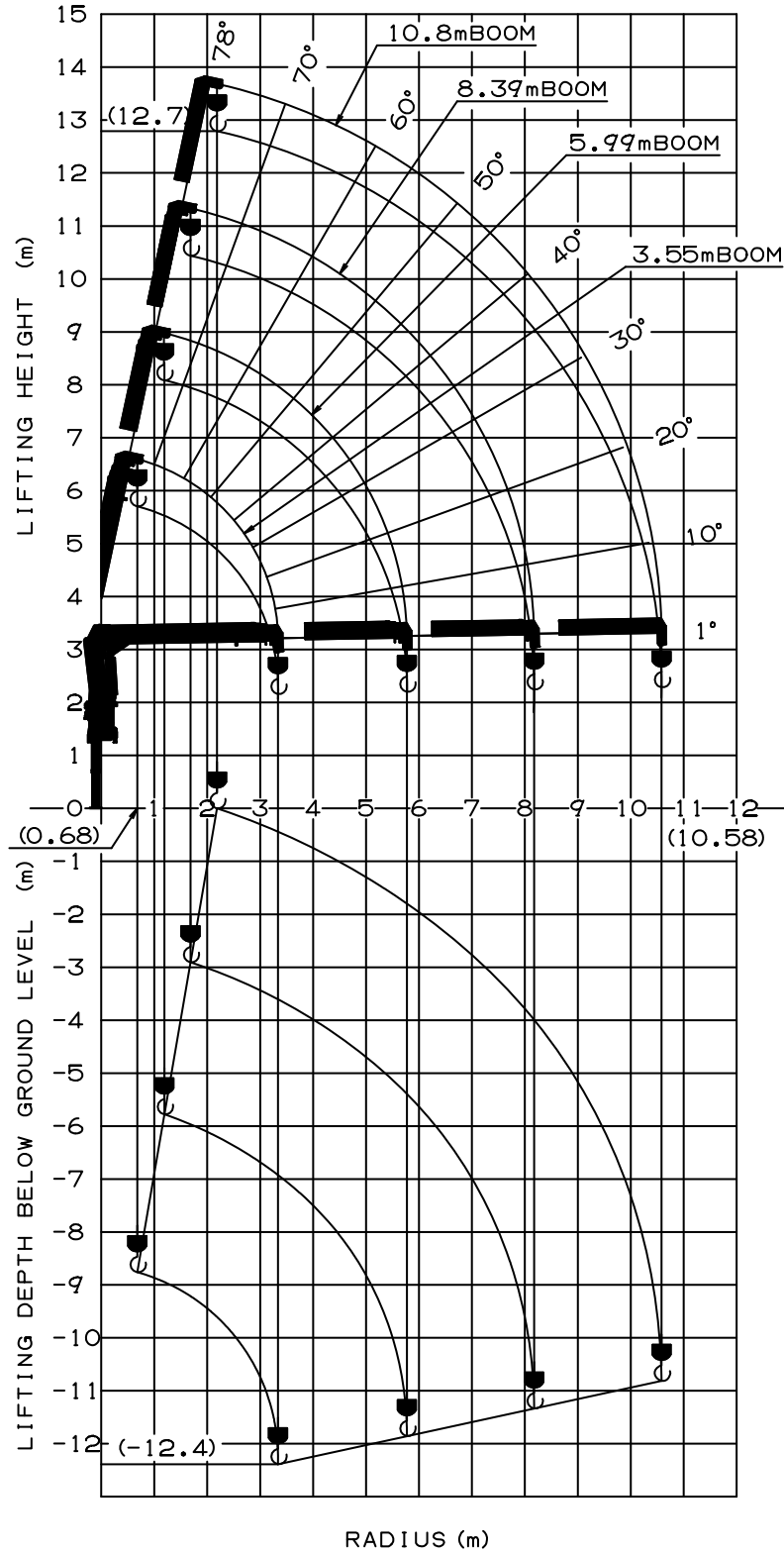
Table D

Load Radius	3.55 m Boom		Load Radius	5.99 m Boom		Load Radius	8.39 m Boom		Load Radius	10.8 m Boom	
	Extension width of outriggers			Extension width of outriggers			Extension width of outriggers			Extension width of outriggers	
	Maximum	Minimum		Maximum	Minimum		Maximum	Minimum		Maximum	Minimum
2.5 m and below	5,050	3,380	2.5 m and below	4,050	3,380	2.5m and below	3,130	3,130	3.5 m and below	2,130	1,930
2.9 m	4,050	2,680	2.9 m	4,050	2,680	3.0 m	3,130	2,630	4.5 m	2,130	1,330
3.33m	3,550	2,230	3.7 m	3,130	1,870	3.7 m	3,130	1,870	5.0 m	2,030	1,080
			4.0 m	2,930	1,630	4.0 m	2,930	1,630	6.0 m	1,780	780
			4.5 m	2,580	1,380	4.5 m	2,580	1,380	7.0 m	1,530	730
			5.0 m	2,330	1,130	5.0 m	2,330	1,130	8.0 m	1,380	550
			5.77m	2,030	930	5.5 m	2,080	930	9.0 m	1,200	500
						6.0 m	1,930	830	10.0m	1,050	430
						6.5 m	1,780	780	10.58m	1,000	380
						7.0 m	1,630	730			
						7.5 m	1,480	650			
						8.17m	1,380	550			

- 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 the hook (45 kg), slings and all similarly used load lifting devices must be added to the mass of the 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. 8.39m boom means  mark on 3rd boom section side plate is half seen.
 6. Empty Chassis Rated Capacities table A, B, C and D depend on the types of chassis.
 7. 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.



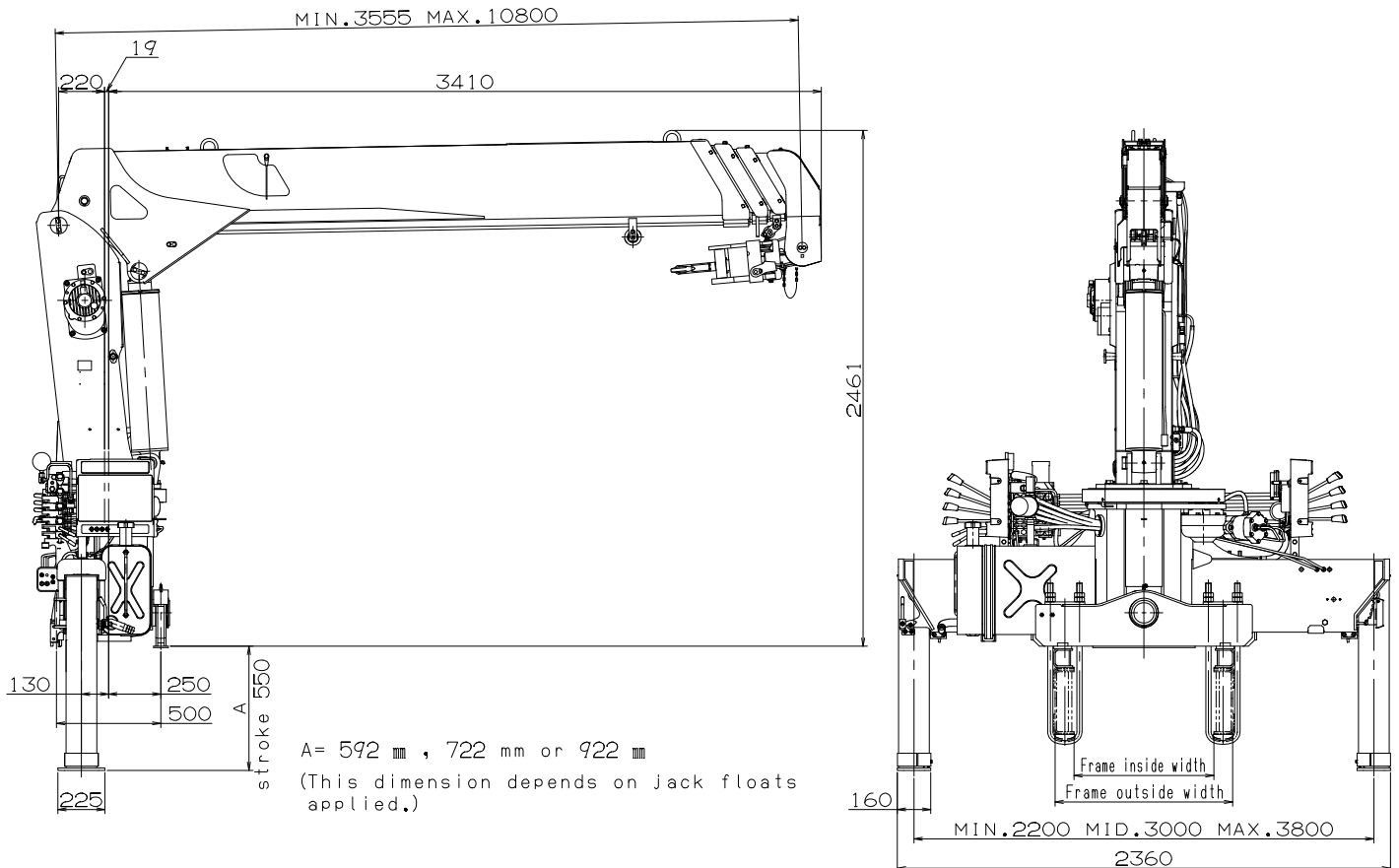
WORKING RANGE



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

[TM-ZE554HRS]



GENERAL DATA FOR SUITABLE TRUCKS

- Gross vehicle mass (including crane mass) ----- 15,000 to 25,000 kg
- P.T.O. torque ----- 157 N-m{16 kgf-m} min.
- P.T.O. revolution ----- Approx. 270 to 2,800 min⁻¹{rpm}
- Width for crane mounting ----- Approx. 750 mm min.
- Frame ----- Weight distribution and frame strength
should be calculated for each truck
- Frame width range (inside to outside) ----- Approx. 610 to 960 mm
- Frame height (ground to frame top) ----- Approx. 1,235 mm max.
(Height of crane mounting base can be changed
by combination of jack floats and crane bases)