

## TADANO CARGO CRANE

MODEL : **TM-ZE555HRS**

## CRANE SPECIFICATIONS

<u>CRANE CAPACITY</u>	5,050 kg at 2.5 m (5-part line)
<u>BOOM</u>	Five-sectioned, fully powered partly synchronized telescoping boom of heptagonal box construction Retracted length -----3.77 m Extended length -----13.34 m Extending speed ----- 9.57 m / 25 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 and cable follower 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 97 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 <sup>-1</sup> {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

Specifications are subject to change without notice.

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. 2,040 kg (includes standardized mounting parts)

OPTIONAL EQUIPMENT

Limit warning lamp (three-color)  
 Boom outrigger stowed warning  
 Radius indicator  
 Tilttable 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	3.77m Boom		Load Radius	6.21 m Boom		Load Radius	8.59 m Boom		Load Radius	10.97 m Boom	Load Radius	13.34 m Boom
	Extension width of outriggers			Extension width of outriggers			Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Maximum	Minimum		Maximum	Minimum		Maximum	Minimum		Maximum		Maximum
2.5 m and below	5,050	3,380	2.5 m and below	4,050	3,380	2.5 m and below	3,130	3,130	4.0 m and below	2,230	5.0 m and below	1,430
2.8 m	4,050	2,730	2.8 m	4,050	2,730	3.0 m	3,130	2,580	4.5 m	2,180	6.0 m	1,330
3.55m	3,150	1,880	3.6 m	3,130	1,880	3.6 m	3,130	1,880	5.0 m	2,030	7.0 m	1,230
			3.9 m	2,930	1,630	3.9 m	2,930	1,630	6.0 m	1,730	8.0 m	1,080
			4.5 m	2,530	1,330	4.5 m	2,530	1,330	7.0 m	1,430	9.0 m	980
			5.0 m	2,230	1,080	5.0 m	2,230	1,080	8.0 m	1,230	10.0 m	880
			5.5 m	1,980	930	5.5 m	1,980	930	9.0 m	1,080	11.0 m	800
			5.99m	1,780	780	6.0 m	1,780	780	10.0 m	980	12.0 m	730
						6.5 m	1,630	700	10.75m	900	13.12m	650
						7.0 m	1,480	630				
						7.5 m	1,380	550				
						8.37m	1,180	430				

- 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	3.77 m Boom		Load Radius	6.21 m Boom		Load Radius	8.59 m Boom		Load Radius	10.97 m Boom	Load Radius	13.34 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		Maximum
2.5 m and below	5,050	2,430	2.6 m and below	4,050	2,430	2.6 m and below	3,130	2,430	4.0 m and below	2,230	5.0 m and below	1,430
2.8 m	4,050	2,130	2.8 m	4,050	2,130	3.4 m	3,130	1,530	4.5 m	1,930	6.0 m	1,130
3.55m	2,950	1,380	3.6 m	2,930	1,380	3.6 m	2,930	1,380	5.0 m	1,580	7.0 m	900
			3.9 m	2,530	1,180	3.9 m	2,530	1,180	6.0 m	1,130	8.0 m	700
			4.5 m	1,930	930	4.5 m	1,930	930	7.0 m	900	9.0 m	550
			5.0 m	1,630	730	5.0 m	1,630	730	8.0 m	700	10.0m	500
			5.5 m	1,380	630	5.5 m	1,380	630	9.0 m	550	11.0m	430
			5.99m	1,130	500	6.0 m	1,130	500	10.0m	500	12.0m	400
						6.5 m	1,050	480	10.75m	450	13.12m	350
						7.0 m	930	400				
						7.5 m	830	350				
						8.37m	650	250				

Table B

Load Radius	3.77m Boom		Load Radius	6.21 m Boom		Load Radius	8.59 m Boom		Load Radius	10.97 m Boom	Load Radius	13.34 m Boom
	Extension width of outriggers			Extension width of outriggers			Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Maximum	Minimum		Maximum	Minimum		Maximum	Minimum		Maximum		Maximum
2.5 m and below	5,050	3,130	2.5 m and below	4,050	3,130	2.5 m and below	3,130	3,130	4.0 m and below	2,230	5.0 m and below	1,430
2.8 m	4,050	2,530	2.8 m	4,050	2,530	3.0 m	3,130	2,280	4.5 m	2,180	6.0 m	1,330
3.55m	3,150	1,680	3.6 m	3,130	1,680	3.6 m	3,130	1,680	5.0 m	1,930	7.0 m	1,130
			3.9 m	2,930	1,430	3.9 m	2,930	1,430	6.0 m	1,430	8.0 m	880
			4.5 m	2,430	1,130	4.5 m	2,430	1,130	7.0 m	1,130	9.0 m	730
			5.0 m	1,980	930	5.0 m	1,980	930	8.0 m	880	10.0m	650
			5.5 m	1,680	780	5.5 m	1,680	780	9.0 m	730	11.0m	550
			5.99m	1,430	650	6.0 m	1,430	650	10.0m	650	12.0m	500
						6.5 m	1,280	630	10.75m	580	13.12m	430
						7.0 m	1,130	530				
						7.5 m	1,030	480				
						8.37m	830	350				

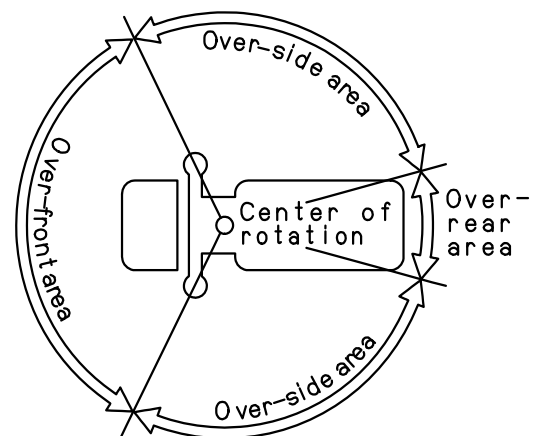
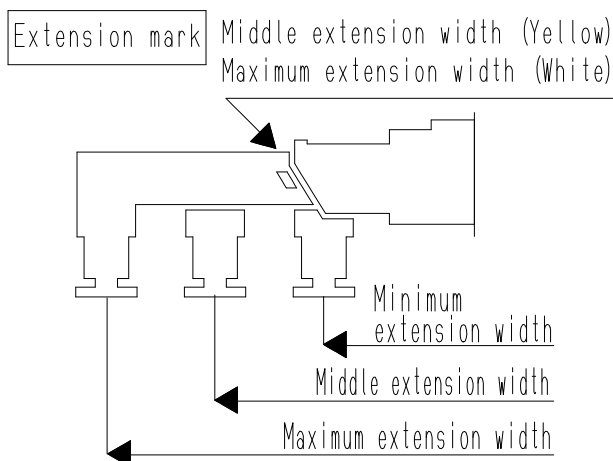
Table C

Load Radius	3.77m Boom		Load Radius	6.21 m Boom		Load Radius	8.59 m Boom		Load Radius	10.97 m Boom	Load Radius	13.34 m Boom
	Extension width of outriggers			Extension width of outriggers			Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Maximum	Minimum		Maximum	Minimum		Maximum	Minimum		Maximum		Maximum
2.5 m and below	5,050	3,130	2.5 m and below	4,050	3,130	2.5 m and below	3,130	3,130	4.0 m and below	2,230	5.0 m and below	1,430
2.8 m	4,050	2,730	2.8 m	4,050	2,730	3.0 m	3,130	2,580	4.5 m	2,180	6.0 m	1,330
3.55m	3,150	1,880	3.6 m	3,130	1,880	3.6 m	3,130	1,880	5.0 m	2,030	7.0 m	1,230
			3.9 m	2,930	1,630	3.9 m	2,930	1,630	6.0 m	1,730	8.0 m	1,080
			4.5 m	2,530	1,330	4.5 m	2,530	1,330	7.0 m	1,400	9.0 m	950
			5.0 m	2,230	1,080	5.0 m	2,230	1,080	8.0 m	1,100	10.0m	800
			5.5 m	1,980	930	5.5 m	1,980	930	9.0 m	950	11.0m	700
			5.99m	1,730	780	6.0 m	1,730	780	10.0m	800	12.0m	630
						6.5 m	1,580	700	10.75m	730	13.12m	530
						7.0 m	1,430	630				
						7.5 m	1,250	550				
						8.37m	1,050	430				

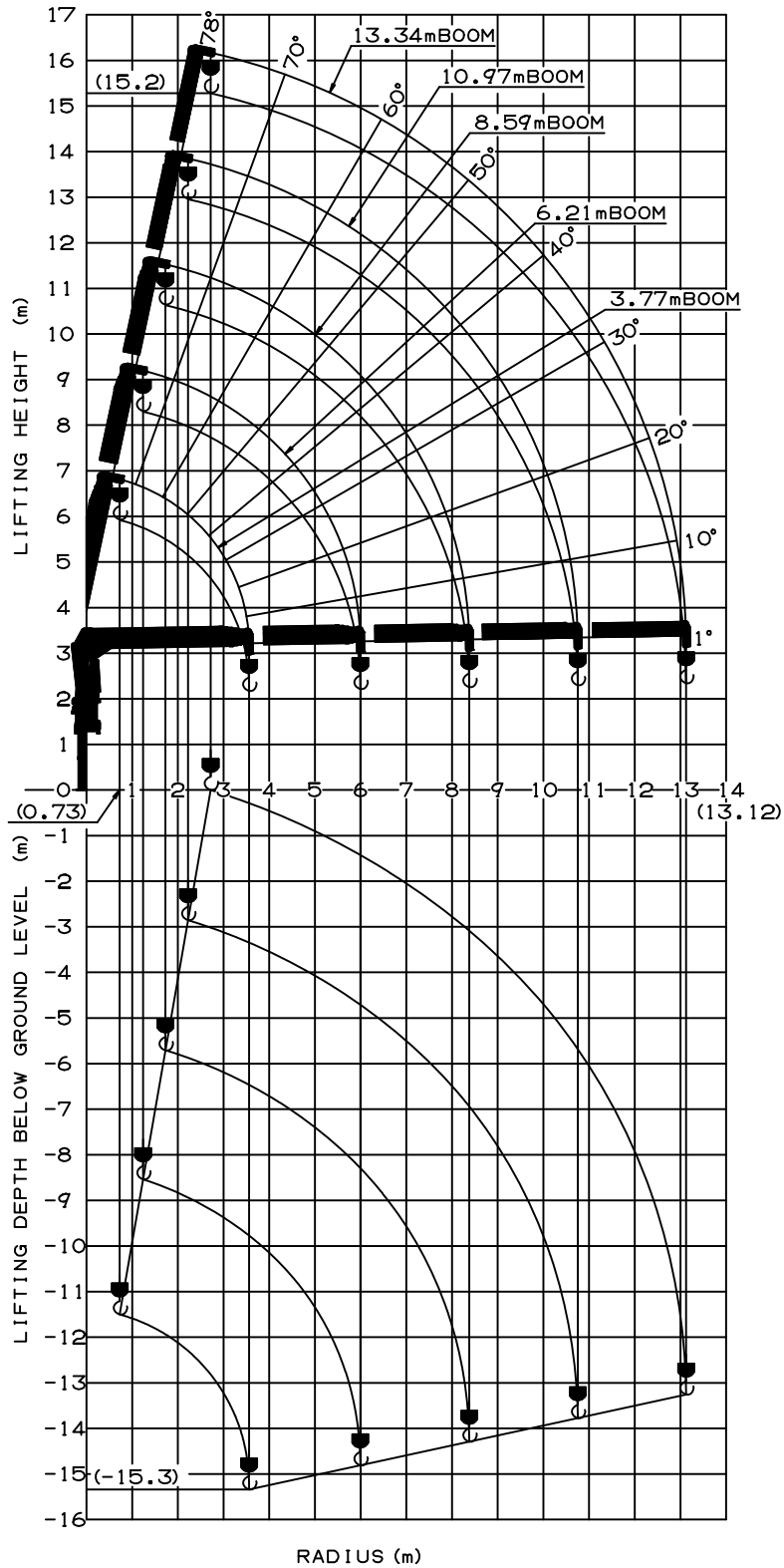
Table D

Load Radius	3.77 m Boom		Load Radius	6.21 m Boom		Load Radius	8.59 m Boom		Load Radius	10.97 m Boom	Load Radius	13.34 m Boom
	Extension width of outriggers			Extension width of outriggers			Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Maximum	Minimum		Maximum	Minimum		Maximum	Minimum		Maximum		Maximum
2.5 m and below	5,050	3,380	2.5 m and below	4,050	3,380	2.5 m and below	3,130	3,130	4.0 m and below	2,230	5.0 m and below	1,430
2.8 m	4,050	2,730	2.8 m	4,050	2,730	3.0 m	3,130	2,580	4.5 m	2,180	6.0 m	1,330
3.55m	3,150	1,880	3.6 m	3,130	1,880	3.6 m	3,130	1,880	5.0 m	2,030	7.0 m	1,230
			3.9 m	2,930	1,630	3.9 m	2,930	1,630	6.0 m	1,730	8.0 m	1,080
			4.5 m	2,530	1,330	4.5 m	2,530	1,330	7.0 m	1,430	9.0 m	980
			5.0 m	2,230	1,080	5.0 m	2,230	1,080	8.0 m	1,230	10.0m	880
			5.5 m	1,980	930	5.5 m	1,980	930	9.0 m	1,080	11.0m	800
			5.99 m	1,780	780	6.0 m	1,780	780	10.0m	980	12.0m	730
						6.5 m	1,630	700	10.75m	900	13.12m	650
						7.0 m	1,480	630				
						7.5 m	1,380	550				
						8.37m	1,180	430				

- 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. For boom lengths longer than 8.59m, extend outriggers to maximum.
6. 10.97m boom means  $\sphericalangle$  mark on 4th boom section side plate is half seen.
7. Empty Chassis Rated Capacities table A, B, 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.

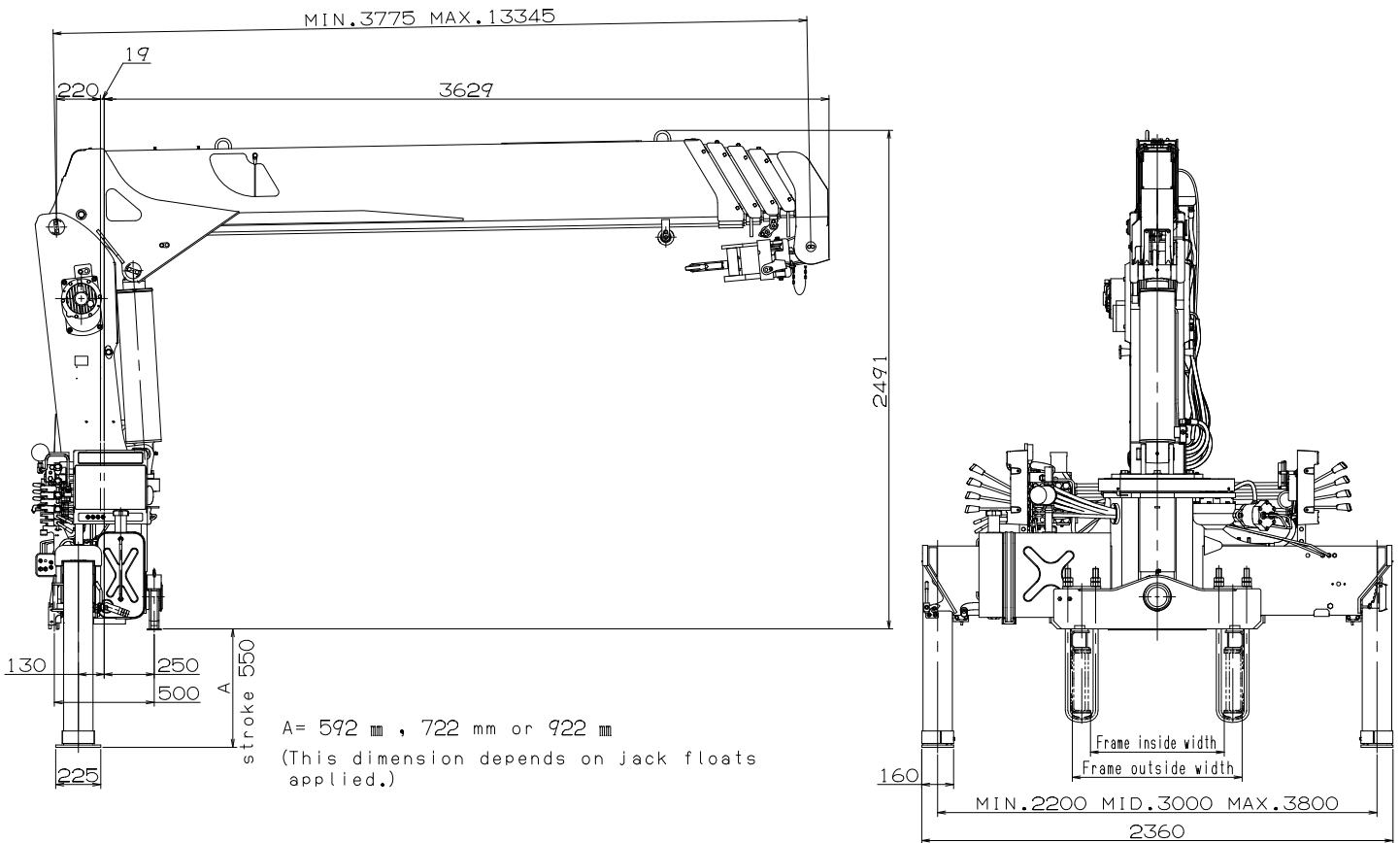


### WORKING RANGE



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 [TM-ZE555HRS]



## 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<sup>-1</sup>{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)