TADANO CARGO CRANE

MODEL : TM-ZE555MH

CRANE SPECIFICATIONS

CRANE CAPACITY — 5,050 kg at 2.5 m (5-part line)

BOOM — 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^{o} to 78^{o} / 12 s
- Boom point ---------- 3 sheaves

WINCH — 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

HOOK STOWING DEVICE — Mechanically stowed beneath boom top portion

SLEWING

Hydraulic motor driven Worm gear speed reduction
Continuous 360^{o} full circle slewing on ball bearing slew ring
Automatic slewing lock
Slewing speed ---------- 2.5 min^{-1}{rpm}

OUTRIGGERS

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
Full 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

SAFETY DEVICES

Load meter
Load indicator
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. 2,025 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	3.77m 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
	Full	Minimum		Full	Minimum		Full	Minimum		Full		Full
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 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	3.77 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
	Full	Minimum		Full	Minimum		Full	Minimum		Full		Full
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
	Full	Minimum		Full	Minimum		Full	Minimum		Full		Full
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

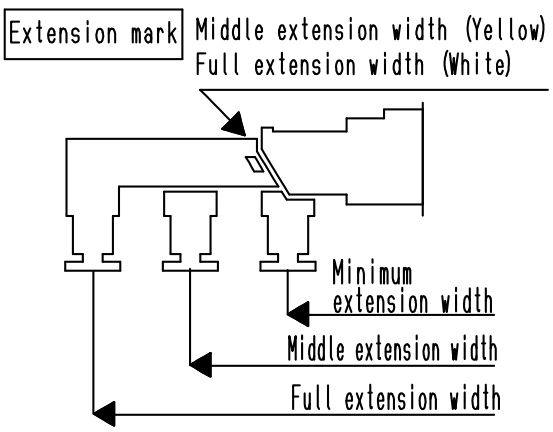
Load Radius	3.77m Boom		Load Radius	6.21 m Boom		Load Radius	8.59 m Boom		Load Radius	10.97 m Boom	Load Radius	13.34 m Boom
	Extension width of outriggers			Extension width of outriggers			Extension width of outriggers			Extension width of outriggers		Extension width of outriggers
	Full	Minimum		Full	Minimum		Full	Minimum		Full		Full
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				

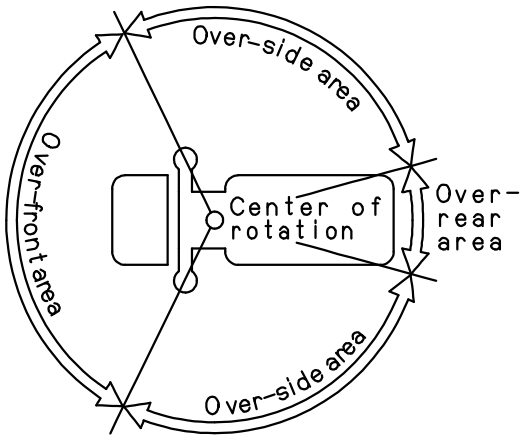
Table D

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
	Full	Minimum		Full	Minimum		Full	Minimum		Full		Full
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				

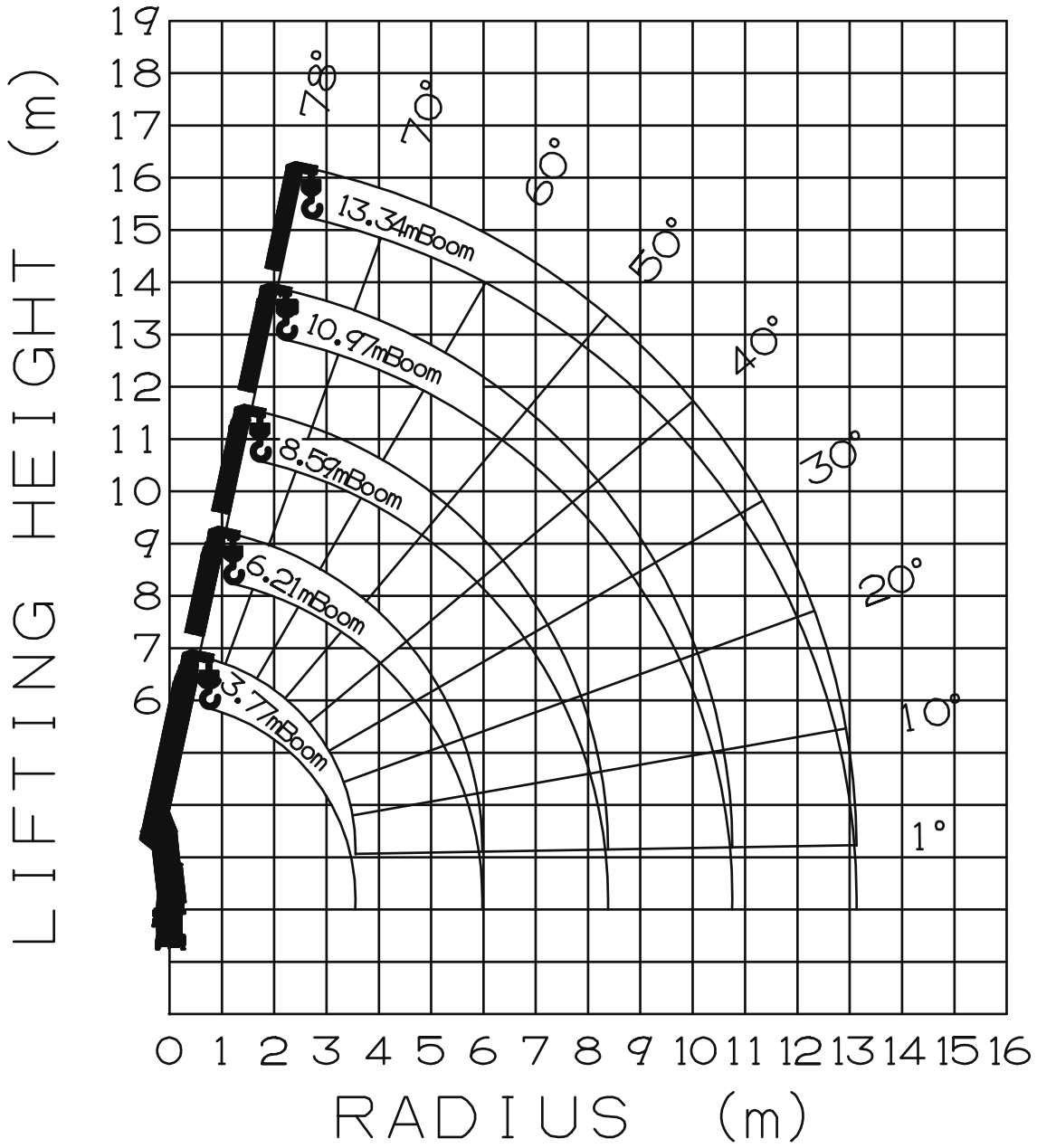
NOTES : 1. Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground.

2. The mass of the hook (45 kg), slings and all similarly used load handling 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 ▱ 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.





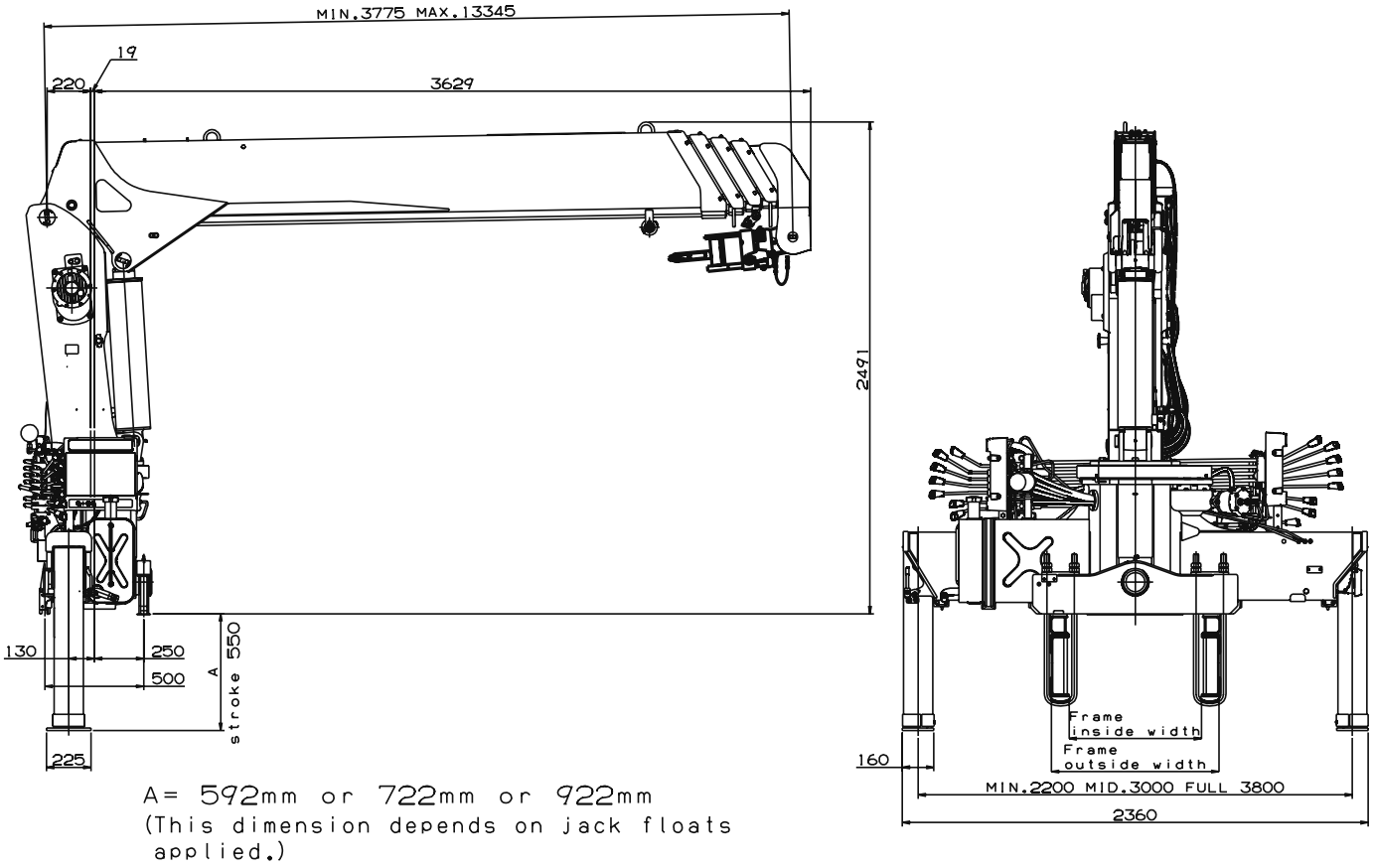
WORKING RANGE



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-ZE555MH]



A= 592mm or 722mm or 922mm
(This dimension depends on jack floats applied.)

GENERAL DATA FOR SUITABLE TRUCKS

Gross vehicle mass (including crane mass) -------- 12,000 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)