

TADANO CARGO CRANE

MODEL : **TM-ZE553MH**

CRANE SPECIFICATIONS

CRANE CAPACITY 5,050 kg at 2.5 m (5-part line)BOOM Three-sectioned, fully hydraulic telescoping boom of heptagonal box construction
Fully retracted length ----- 3.47 m
Fully extended length ----- 8.31 m
Extending speed ----- 4.84 m in 18 s
Elevation ----- Elevated by a double-acting hydraulic cylinder
Raising speed ----- 1° to 78° in 12 s
Boom point ----- 3 sheavesWINCH Hydraulic motor driven Spur gear speed reduction, provided with mechanical brake
Single line pull ----- 9.90 kN{1010 kgf}
Single line speed ----- 66 m/min (at 4th layer)
Wire rope
Diameter x length ----- 8 mm x 67 m
Breaking strength ----- 50.1 kN{5.1 tf}
Construction ----- 7 x 7 + 6 x WS(26)
Hook block ----- 2 sheavesHOOK BLOCK STOWING DEVICE

Hook-in (Mechanically stowed beneath boom top portion)

SLEWING 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 operated beams and hydraulically operated jacks Integral with crane frame
	Extended width ----- Min. 2,200 mm center to center (2,360 mm outer to outer)
	Mid. 3,000 mm center to center (3,160 mm outer to outer)
	Max. 3,800 mm center to center (3,960 mm outer to outer)
<u>HYDRAULIC SYSTEM</u>	Hydraulic pump ----- Single gear pump Hydraulic motors ----- Axial piston type for winch Control valves ----- Axial piston type for slewing Control valves ----- Multiple control valves with integral safety valve Oil tank capacity ----- Approx. 57.6L
<u>SAFETY DEVICES</u>	Anti-two-block device Boom angle indicator Load indicator Load meter Hook safety latch Spirit level Hydraulic safety valves, check valves and holding valves
<u>OPTIONAL EQUIPMENT</u>	Emergency hydraulic pump Outrigger pads Oil cooler Rear outriggers (outrigger beam non-extension type) Large capacity oil tank
<u>CRANE MASS</u>	Approx. 1,520 kg (Except crane options and mounting parts.)

NOTE : Each operating speeds show the value when there is no load conditions and the pump delivery is the following conditions.

- 36 L/min (Slewing speed)
- 60 L/min (BOOM : Extending speed, Raising speed WINCH : Single line speed)

RATED LIFTING CAPACITIES (kg)

Table A

LOAD RADIUS	3.47 m BOOM				LOAD RADIUS	5.91 m BOOM				LOAD RADIUS	8.31 m BOOM												
	CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH		CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH		EMPTY CHASSIS		CRANE STRENGTH	extension width of outriggers									
		extension width of outriggers					extension width of outriggers				extension width of outriggers			extension width of outriggers									
		MAX.	MIN.				MAX.	MIN.			MAX.			MAX.	MIN.								
2.5 m and below	5,050	5,050	2,480	2.6 m and below	4,050	4,050	2,380	2.6 m and below	3,130	3,130	2,380												
2.95 m	4,050	3,850	2,000	2.8 m	4,050	4,050	2,130	3.0 m	3,130	3,130	1,950												
3.25 m	3,700	3,280	1,780	2.95 m	4,050	3,850	2,000	3.4 m	3,130	3,130	1,530												
				3.8 m	3,130	2,680	1,330	3.8 m	3,130	2,680	1,330												
				4.1 m	2,930	2,430	1,180	4.1 m	2,930	2,430	1,180												
				4.5 m	2,630	2,030	980	4.5 m	2,630	2,030	980												
				5.0 m	2,380	1,730	880	5.0 m	2,380	1,730	880												
				5.5 m	2,180	1,430	730	5.5 m	2,180	1,430	730												
				5.69 m	2,080	1,380	680	6.0 m	1,980	1,330	630												
								6.5 m	1,830	1,180	580												
								7.0 m	1,680	1,030	530												
								7.5 m	1,530	930	480												
								8.09 m	1,430	830	430												

Table B

LOAD RADIUS	3.47 m BOOM				LOAD RADIUS	5.91 m BOOM				LOAD RADIUS	8.31 m BOOM												
	CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH		CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH		EMPTY CHASSIS		CRANE STRENGTH	extension width of outriggers									
		extension width of outriggers					extension width of outriggers				extension width of outriggers			extension width of outriggers									
		MAX.	MIN.				MAX.	MIN.			MAX.			MAX.	MIN.								
2.5 m and below	5,050	5,050	2,980	2.6 m and below	4,050	4,050	2,730	2.6 m and below	3,130	3,130	2,730												
2.95 m	4,050	4,050	2,330	2.8 m	4,050	4,050	2,500	3.0 m	3,130	3,130	2,280												
3.25 m	3,700	3,650	2,080	2.95 m	4,050	4,050	2,330	3.4 m	3,130	3,130	1,930												
				3.8 m	3,130	3,130	1,580	3.8 m	3,130	3,130	1,580												
				4.1 m	2,930	2,930	1,430	4.1 m	2,930	2,930	1,430												
				4.5 m	2,630	2,480	1,230	4.5 m	2,630	2,480	1,230												
				5.0 m	2,380	2,080	1,030	5.0 m	2,380	2,080	1,030												
				5.5 m	2,180	1,780	930	5.5 m	2,180	1,780	930												
				5.69 m	2,080	1,680	880	6.0 m	1,980	1,580	780												
								6.5 m	1,830	1,430	730												
								7.0 m	1,680	1,280	650												
								7.5 m	1,530	1,130	580												
								8.09 m	1,430	1,030	530												

Table C

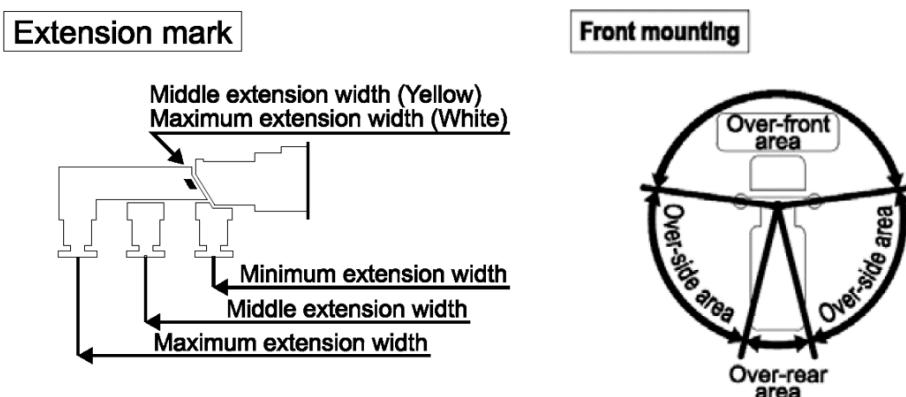
LOAD RADIUS	3.47 m BOOM				LOAD RADIUS	5.91 m BOOM				LOAD RADIUS	8.31 m BOOM									
	CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH		EMPTY CHASSIS		CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH						
		extension width of outriggers				extension width of outriggers			extension width of outriggers			extension width of outriggers								
		MAX.	MIN.			MAX.	MIN.		MAX.	MIN.		MAX.	MIN.							
2.5 m and below	5,050	5,050	3,230	2.6 m and below	4,050	4,050	3,130	2.6 m and below	3,130	3,130	3,130	3,130	3,130	3,130						
2.95 m	4,050	4,050	2,730	2.8 m	4,050	4,050	2,900	3.0 m	3,130	3,130	3,130	3,130	2,680							
3.25 m	3,700	3,700	2,430	2.95 m	4,050	4,050	2,730	3.4 m	3,130	3,130	3,130	3,130	2,230							
				3.8 m	3,130	3,130	1,830	3.8 m	3,130	3,130	3,130	3,130	1,830							
				4.1 m	2,930	2,930	1,630	4.1 m	2,930	2,930	2,930	2,930	1,630							
				4.5 m	2,630	2,630	1,430	4.5 m	2,630	2,630	2,630	2,630	1,430							
				5.0 m	2,380	2,380	1,180	5.0 m	2,380	2,380	2,380	2,380	1,180							
				5.5 m	2,180	2,130	1,030	5.5 m	2,180	2,130	2,130	2,130	1,030							
				5.69 m	2,080	2,030	980	6.0 m	1,980	1,880	1,880	1,880	930							
								6.5 m	1,830	1,730	1,730	1,730	850							
								7.0 m	1,680	1,530	1,530	1,530	780							
								7.5 m	1,530	1,380	1,380	1,380	700							
								8.09 m	1,430	1,230	1,230	1,230	600							

Table D

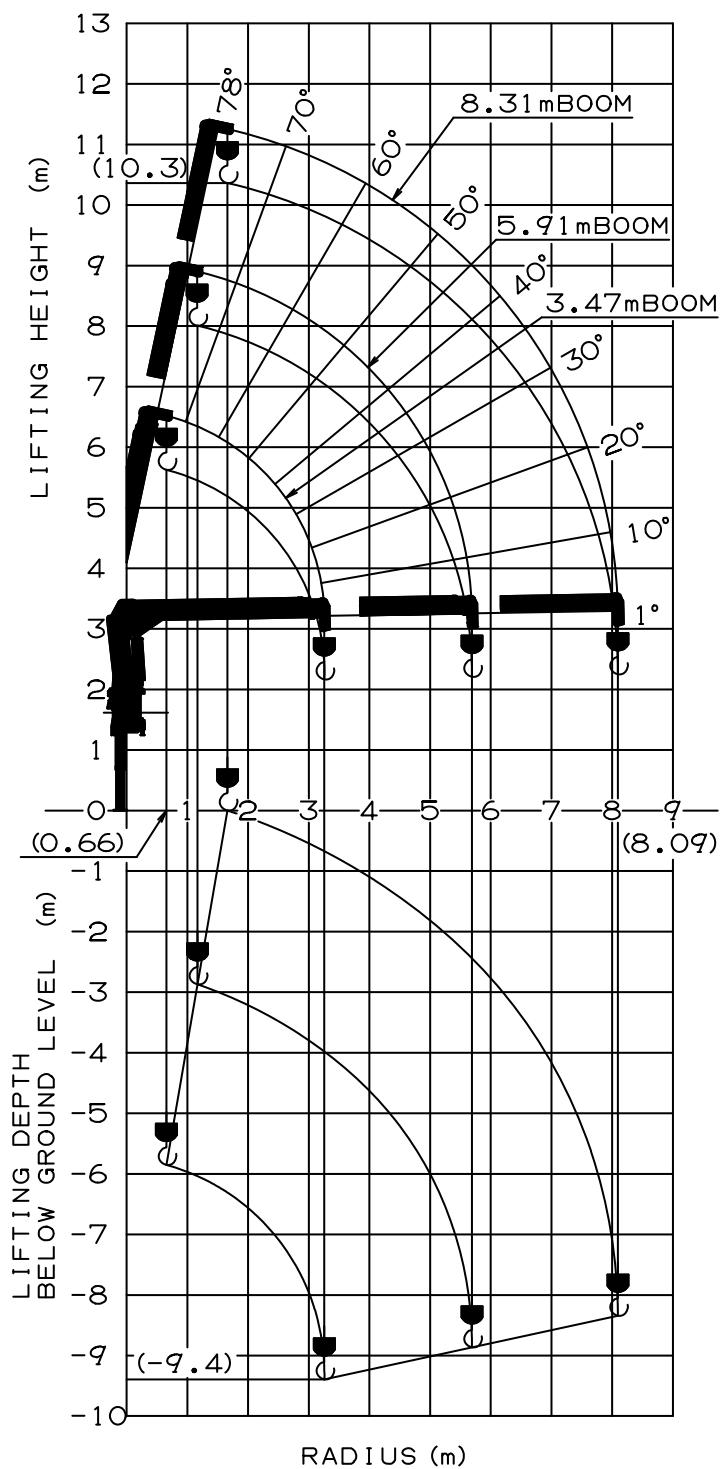
LOAD RADIUS	3.47 m BOOM				LOAD RADIUS	5.91 m BOOM				LOAD RADIUS	8.31 m BOOM									
	CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH		EMPTY CHASSIS		CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH	EMPTY CHASSIS		CRANE STRENGTH						
		extension width of outriggers				extension width of outriggers			extension width of outriggers			extension width of outriggers								
		MAX.	MIN.			MAX.	MIN.		MAX.	MIN.		MAX.	MIN.							
2.5 m and below	5,050	5,050	3,430	2.6 m and below	4,050	4,050	3,230	2.6 m and below	3,130	3,130	3,130	3,130	3,130	3,130						
2.95 m	4,050	4,050	2,730	2.8 m	4,050	4,050	2,900	3.0 m	3,130	3,130	3,130	3,130	2,680							
3.25 m	3,700	3,700	2,430	2.95 m	4,050	4,050	2,730	3.4 m	3,130	3,130	3,130	3,130	2,230							
				3.8 m	3,130	3,130	1,830	3.8 m	3,130	3,130	3,130	3,130	1,830							
				4.1 m	2,930	2,930	1,630	4.1 m	2,930	2,930	2,930	2,930	1,630							
				4.5 m	2,630	2,630	1,430	4.5 m	2,630	2,630	2,630	2,630	1,430							
				5.0 m	2,380	2,380	1,180	5.0 m	2,380	2,380	2,380	2,380	1,180							
				5.5 m	2,180	2,180	1,030	5.5 m	2,180	2,180	2,180	2,180	1,030							
				5.69 m	2,080	2,080	980	6.0 m	1,980	1,980	1,980	1,980	930							
								6.5 m	1,830	1,830	1,830	1,830	850							
								7.0 m	1,680	1,680	1,680	1,680	780							
								7.5 m	1,530	1,530	1,530	1,530	700							
								8.09 m	1,430	1,430	1,430	1,430	600							

A	$15 \text{ t} \leq \text{GVW}$,	$2.9 \text{ t} \leq \text{CAWf}$ (*1)
B	$25 \text{ t} \leq \text{GVW}$,	$3.8 \text{ t} \leq \text{CAWf}$ (*1)
C	$25 \text{ t} \leq \text{GVW}$,	$4.4 \text{ t} \leq \text{CAWf}$ (*1)
D	$25 \text{ t} \leq \text{GVW}$,	$4.7 \text{ t} \leq \text{CAWf}$ (*1)

*1 : Chassis front axle weight (excluding crane and mounting parts mass).

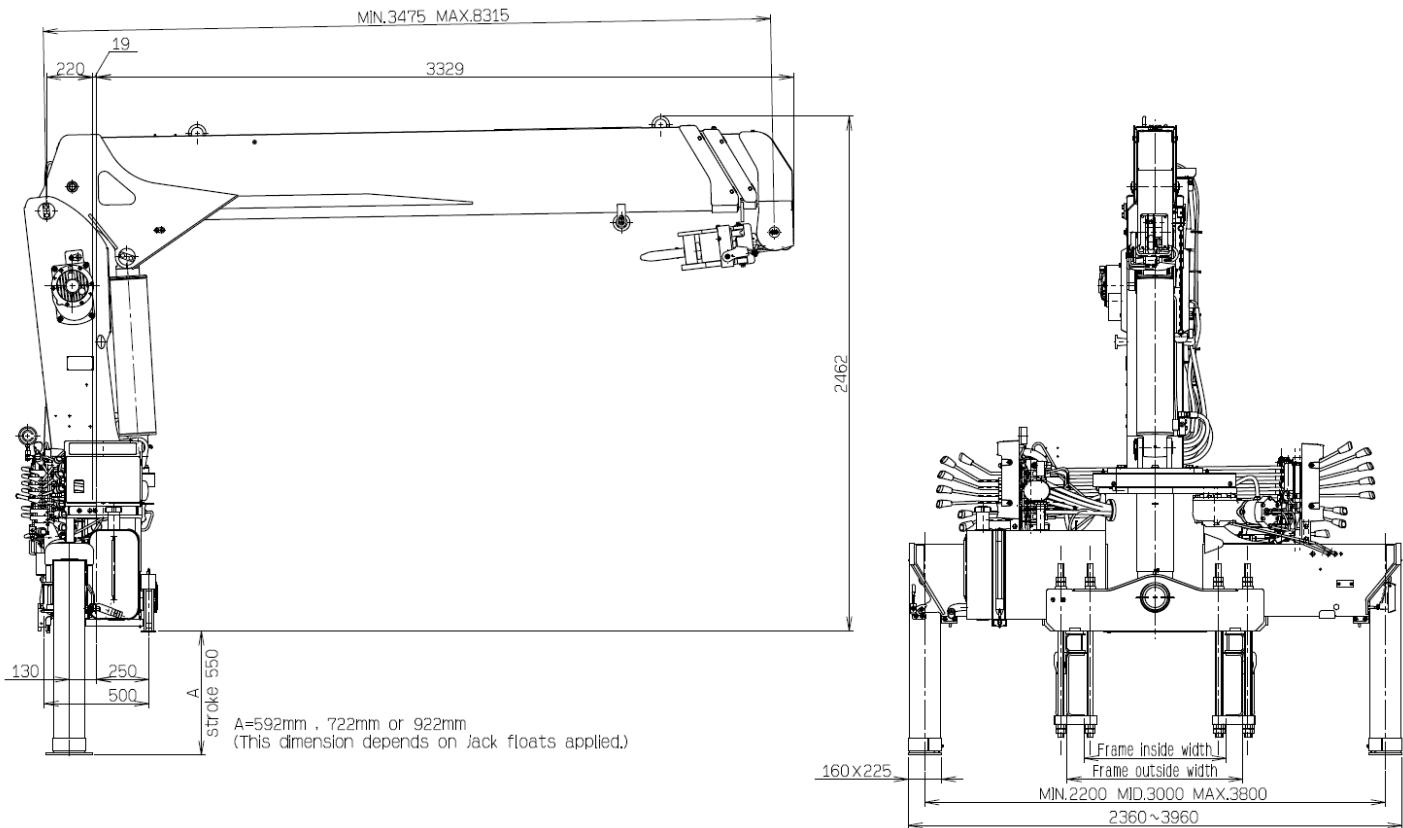


WORKING RANGE



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

Even within range of this data, bodywork may not be possible depending on the specifications of the truck.

Gross vehicle weight	15,000 kg min.
Chassis front axle weight (excluding crane and mounting parts mass)	2,900 kg min.
P.T.O. torque	190 N·m {19.4 kgf·m} min.
P.T.O. revolution range of use (min. to max.)	Approx. 350 to 1,300 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 chassis frame top) (**1)	Approx. 880 to 1,145 mm
Chassis frame section modulus (**2)	485 cm ³ min.

**1 Height of crane mounting surface is changed by crane bases.

**2 The chassis frame material must meet the following conditions at the crane mounting location.

- Yield point : 392 N/mm²
- Tensile strength : 540 N/mm²