

TADANO CARGO CRANE

MODEL: TM-ZE293MH

CRANE SPECIFICATIONS

CRANE CAPACITY	3,030 kg at 1.6 m (4-part lines)				
BOOM	Three-sectioned, fully hydraulic telescoping boom of heptagonal box construction				
	Fully retracted length	2.85 m			
	Fully extended length	6.6 m			
	Extending speed	3.75 m in 10.5 s			
	Elevation	Elevated by a double-acting hydraulic cylinder			
	Raising speed	1º to 76º in 6 s			
	Boom point	2 sheaves			
WINCH	Hydraulic motor driven Spur ge	ar 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 45 m			
	Breaking strength	43.1 kN {4.39 tf}			
	Construction	7 x 7 + 6 x WS (26)			
	Hook block	2 sheaves			
HOOK BLOCK STOWING D	EVICE Hook in (Mechanically stowed ben				

Hook-in (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}

Specifications are subject to change without notice.

OUTRIGGERS	Manually operated beams and hydraulically operated jacks Integral with crane frame	
	Extension width	- Min. 1,720 mm center to center
		(1,860 mm outer to outer)
		Mid. 2,400 mm center to center
		(2,540 mm outer to outer)
		Mid. 2,900 mm center to center
		(3,040 mm outer to outer)
		Max. 3,400 mm center to center
		(3,540 mm outer to outer)
HYDRAULIC SYSTEM	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. 28.7 L
SAFETY DEVICES	Anti-two-block device	
	Boom angle indicator	
	Load indicator	
	Load meter	
	Hook safety latch	
	Spirit level	
	Hydraulic safety valves, check	valves and holding valves
OPTIONAL EQUIPMENT	Emergency hydraulic pump	
	Outrigger pads	
	Rear outriggers (outrigger bea	m extension type)
CRANE MASS	Approx. 860 kg	
	(Except crane options and mo	unting parts.)

- NOTE : Each operating speeds show the value when there is no load conditions and the pump delivery is the following conditions.
 - 32 L/min (Slewing speed)
 - 53 L/min (BOOM : Extending speed, Raising speed WINCH : Single line speed)

RATED LIFTING CAPACITIES (kg)

Table A

	2.85 m / 4.74 m BOOM				6.6 m BOOM	
LOAD RADIUS		EMPTY CHASSIS		LOAD RADIUS	CRANE STRENGTH	EMPTY CHASSIS
	CRANE STRENGTH	extension width of outriggers				extension width of outriggers
		MAX.	MIN.			MAX.
1.6 m and below	3,030	3,030	1,580	2.2 m and below	1,880	1,880
2.0 m	2,330	2,330	980	2.5 m	1,680	1,630
2.5 m	1,880	1,730	680	3.0 m	1,430	1,230
3.0 m	1,500	1,230	480	3.5 m	1,230	930
3.5 m	1,250	930	380	4.0 m	1,080	730
4.0 m	1,080	730	330	4.5 m	980	600
4.54 m	980	630	280	5.0 m	900	500
				5.5 m	800	430
				6.0 m	730	380
				6.4 m	680	350

Table C

2.85 m / 4.74 m BOOM			6.6		m BOOM	
LOAD RADIUS		EMPTY CHASSIS		LOAD RADIUS	CRANE STRENGTH	EMPTY CHASSIS
	CRANE STRENGTH	extension width of outriggers				extension width of outriggers
		MAX.	MIN.			MAX.
1.6 m and below	3,030	3,030	1,580	2.2 m and below	1,880	1,880
2.0 m	2,330	2,330	980	2.5 m	1,680	1,680
2.5 m	1,880	1,880	680	3.0 m	1,430	1,400
3.0 m	1,500	1,480	480	3.5 m	1,230	1,100
3.5 m	1,250	1,100	380	4.0 m	1,080	850
4.0 m	1,080	850	330	4.5 m	980	700
4.54 m	980	730	280	5.0 m	900	600
				5.5 m	800	530
				6.0 m	730	480
				6.4 m	680	430

Table D

	2.85 m / 4.74 m BOOM			6.6	6.6 m BOOM	
LOAD	CRANE STRENGTH	EMPTY CHASSIS		LOAD RADIUS	CRANE STRENGTH	EMPTY CHASSIS
RADIUS		extension width				extension width
10.0100		of outriggers				of outriggers
		MAX.	MIN.			MAX.
1.6 m	3,030	3.030	1,580	2.2 m	1,880	1,880
and below	3,030	3,030	1,500	and below	1,000	1,000
2.0 m	2,330	2,330	980	2.5 m	1,680	1,680
2.5 m	1,880	1,880	680	3.0 m	1,430	1,430
3.0 m	1,500	1,500	480	3.5 m	1,230	1,230
3.5 m	1,250	1,250	380	4.0 m	1,080	1,080
4.0 m	1,080	1,080	330	4.5 m	980	980
4.54 m	980	980	280	5.0 m	900	900
				5.5 m	800	800
				6.0 m	730	730
				6.4 m	680	680

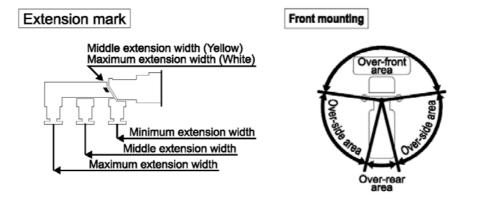
- NOTE : 1. Empty Chassis Rated Capacities in these tables depend on condition that crane is set level on firm level ground.
 - 2. This value includes the mass of lifting devices such as hook block (30kg).
 - 3. When the outriggers are extended to the middle width, read the capacities rated for the minimum extension width.
 - 4. Fully extend the front outriggers when working with a boom length exceeding 4.74m.
 - 5. This load radius shows actual load radius which includes boom deflection.
 - 6. If the boom length exceeds the table value even a little, the performance is limited to the performance of the next boom length.
 - 7. Empty chassis rated lifting capacity varies according to the working area.
 - Front mounting <over-side, over-rear area> : 100%

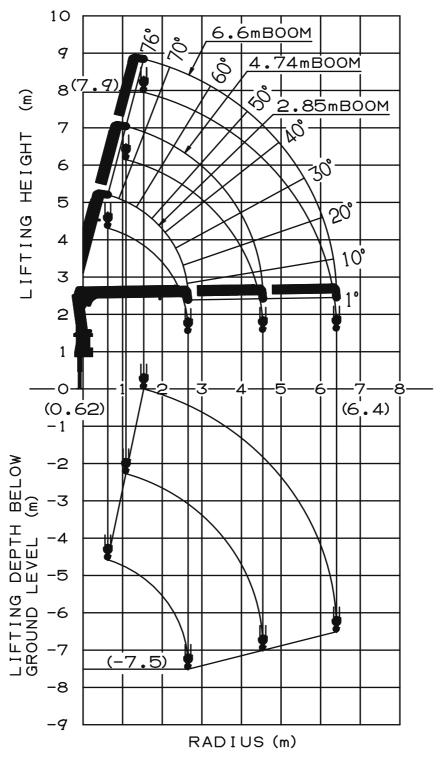
<over-front area> : 25%

8. Empty Chassis Rated Capacities table A,C and D depend on the types of chassis. (The following table shows guidelines for bodywork vehicles that can achieve the rated lifting capacity tables A and C for vehicles. The rated lifting capacity may not be applicable depending on vehicle specifications. Be sure to carry out a stability inspection to determine which rated lifting capacity tables to apply.)

Α	4.5 t ≤ GVW < 8.0 t,	2750 mm ≤ WB (*1)	
С	4.5 t ≤ GVW < 8.0 t,	3395 mm ≤ WB (*1),	1995 mm ≤ Vehicle width

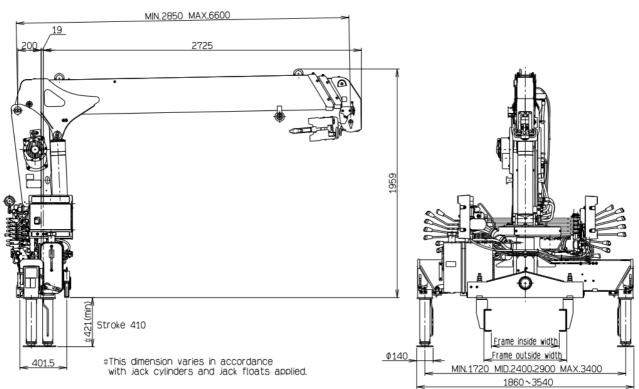
*1 : From the front axle to the farthest rear axle.





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	4,500 to 8,000 kg
Wheel base (**1)	2,750 mm min.
P.T.O. torque	140 N·m {14.3 kgf·m} min.
P.T.O. revolution range of use (min. to max.)	Approx. 350 to 1,360 min ⁻¹ {rpm}
Width for crane mounting	Approx. 605 mm min.
Frame	Weight distribution and frame strength should be calculated for each truck
Frame width range (inside to outside)	Approx. 680 to 860 mm
Frame height (ground to chassis frame top) (*2)	Approx. 640 to 760 mm
Chassis frame section modulus (*3)	70 cm ³ min.

*1 From the front axle to the farthest rear axle.

- *2 Height of crane mounting surface is changed by crane bases.
- *3 The chassis frame material must meet the following conditions at the crane mounting location.
 - -Yield point : 392 N/mm²
 - -Tensile strength : 540 N/mm²