

SPEC. SHEET No. TM-29Z-5-03003/EX-02[TM-ZE293M]

TM-29Z-5-03063/EX-02[TM-ZE293MH]

DATE July, 2010

#### TADANO CARGO CRANE

# MODEL: TM-ZE293M TM-ZE293MH ----- with hook stowing device

#### CRANE SPECIFICATIONS

CRANE CAPACITY 3,030 kg at 1.5 m (4-part lines)

**BOOM** Three-sectioned, fully hydraulic telescoping boom of pentagonal

box construction

Retracted length ----- 2.85 m Extended length ----- 6.6 m

Extending speed ----- 3.75 m / 10.5 s

Elevation ----- Elevated by a double-acting

hydraulic cylinder

Elevating speed ----- 1° to 76° / 6 s Boom point ----- 2 sheaves

Hydraulic motor driven Spur gear speed reduction, provided with WINCH

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 -----  $7 \times 7 + 6 \times WS(26)$ 

Hook block ----- 2 sheaves

HOOK STOWING DEVICE [TM-ZE293MH only]

Mechanically stowed beneath boom top portion

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<u>SWING</u> Hydraulic motor driven Worm gear speed reduction

Continuous 360° full circle swing on ball bearing slew ring

Automatic swing lock

Swing speed ----- 2.5 min<sup>-1</sup> {rpm}

OUTRIGGERS Manually extended sliders and hydraulically extended jacks

Integral with crane frame Power up and down

Extension width ----- Min. 1,720 mm

Mid. 2,900 mm, 2,400 mm

Full 3,400 mm

<u>HYDRAULICS</u> Hydraulic pump ----- Single gear pump

Hydraulic motors ----- Axial piston type for winch

Axial piston type for swing

Control valves ----- Multiple control valves with integral safety

Valve

Oil tank capacity ----- approx. 22 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. 935 kg (includes standardized mounting parts)

NOTE: Operating speeds of the crane are guaranteed under the condition that the pump delivery is 53 L/min.

#### RATED LIFTING CAPACITIES IN KILOGRAMS

Crane Strength Rated Capacities

	2.85 m / 4.74 m Boom		Load Radius	6.6 m Boom
Load Radius	Extension width of outriggers			Extension width of outriggers
	Full	Minimum		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880
2.0 m	2,330	980	2.5 m	1,680
2.5 m	1,880	680	3.0 m	1,430
3.0 m	1,500	480	3.5 m	1,230
3.5 m	1,250	380	4.0 m	1,080
4.0 m	1,080	330	4.5 m	950
4.54m	980	280	5.0 m	830
			5.5 m	730
			6.0 m	650
			6.4 m	580

NOTES: 1. The mass of hook block (30kg), 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

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Load Radius	2.85 m / 4.74 m Boom			6.6 m Boom
	Extension width of outriggers		Load Radius	Extension width of outriggers
	Full	Minimum		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880
2.0 m	2,280	980	2.5 m	1,630
2.5 m	1,730	680	3.0 m	1,230
3.0 m	1,230	480	3.5 m	930
3.5 m	930	380	4.0 m	730
4.0 m	730	330	4.5 m	580
4.54m	630	280	5.0 m	480
			5.5 m	430
			6.0 m	380
			6.4 m	350

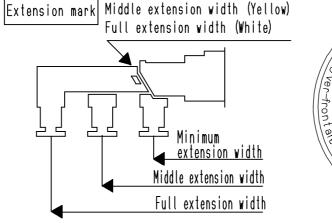
Table C

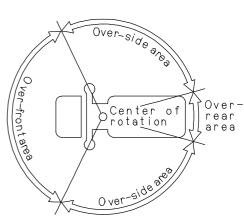
Load Radius	2.85 m / 4.74 m Boom			6.6 m Boom
	Extension width of outriggers		Load Radius	Extension width of outriggers
	Full	Minimum		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880
2.0 m	2,280	980	2.5 m	1,630
2.5 m	1,830	680	3.0 m	1,330
3.0 m	1,430	480	3.5 m	1,030
3.5 m	1,080	380	4.0 m	830
4.0 m	830	330	4.5 m	680
4.54m	730	280	5.0 m	580
			5.5 m	530
			6.0 m	480
			6.4 m	430

Table D

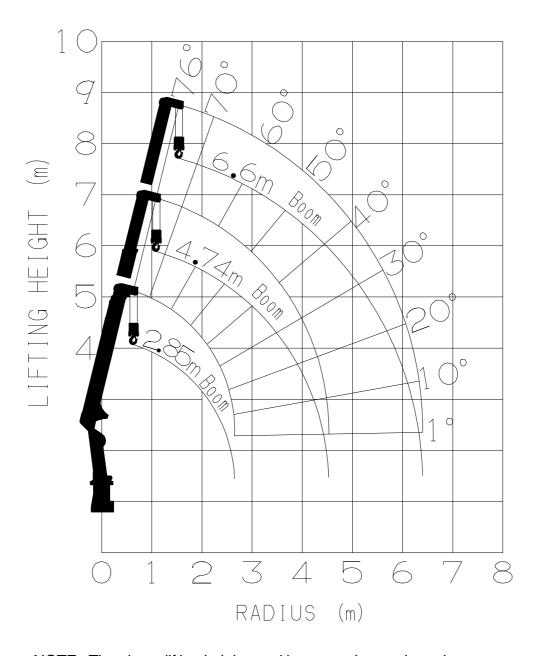
	2.85 m / 4.74 m Boom		Load Radius	6.6 m Boom
Load Radius	Extension width of outriggers			Extension width
				of outriggers
	Full	Minimum		Full
1.5 m and below	3,030	1,580	2.2 m and below	1,880
2.0 m	2,330	980	2.5 m	1,680
2.5 m	1,880	680	3.0 m	1,430
3.0 m	1,500	480	3.5 m	1,230
3.5 m	1,250	380	4.0 m	1,080
4.0 m	1,080	330	4.5 m	950
4.54m	980	280	5.0 m	830
			5.5 m	730
			6.0 m	650
			6.4 m	580

- 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 hook block (30 kg), slings and all similarly used load handling devices must be added to the mass of 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 4.74m, extend outriggers to full extension width.
  - 6. Empty Chassis Rated Capacities table A, 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 be lowered depending on the types of chassis.



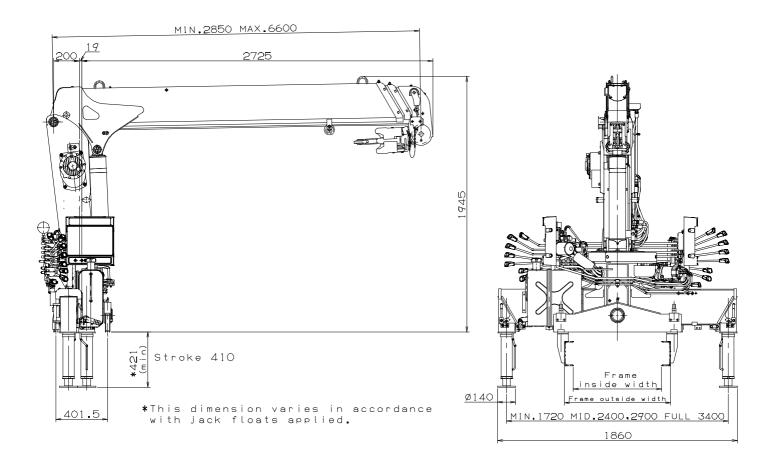


### **WORKING RANGE**



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-ZE293MH]



## GENERAL DATA FOR SUITABLE TRUCKS

Gross vehicle mass (including crane mass)	- 4,500 to 8,000 kg
P.T.O. torque	-140 N-m {14.3 kgf-m} min.
P.T.O. revolution	· Approx. 300 to 1,700 min <sup>-1</sup> {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 frame top)	Approx. 1,010 mm max.
	(Height of crane mounting base can be
	changed by combination of jack floats and
	crane bases)