

## TADANO CARGO CRANE

**MODEL: TM-ZT825H**

## CRANE SPECIFICATIONS

MAXIMUM LIFTING CAPACITY 8,200 kg at 1.8 m (6-part line)

CRANE CAPACITY 4,900 kg at 3.1 m (4-part line)

BOOM Five-sectioned, fully powered partly synchronized telescoping boom of pentagonal box construction

Retracted length ----- 4.40 m

Extended length ----- 15.92 m

Extending speed ----- 11.5 m / 38 s

Elevation ----- Elevated by a double-acting  
Hydraulic cylinder

Elevating speed ----- 1° to 82° / 17 s

Boom point ----- 3 sheaves

WINCH Hydraulic motor driven Spur gear speed reduction, provided with mechanical brake and cable follower

Single line pull ----- 14.72 kN {1,500 kgf}

Single line speed ----- 44 m/min (at 4th layer)

Wire rope

Diameter x length ----- 10 mm x 95 m

Breaking strength ----- 73.5 kN {7,500 kgf}

Construction ----- 7 x 7 + 6 x Fi(29)

Hook block ----- 3 sheaves

HOOK STOWING DEVICE Mechanically stowed beneath boom top portion

<u>SLEWING</u>	<p>Hydraulic motor driven    Worm gear speed reduction</p> <p>Continuous 360° full circle slewing on ball bearing slew ring</p> <p>Automatic slewing lock</p> <p>Slewing speed ----- 2.2 min<sup>-1</sup> {rpm}</p>
<u>OUTRIGGERS</u>	<p>Manually extended sliders and hydraulically extended jacks</p> <p>Integral with crane frame    Power up and down</p> <p>Extended width ----- Min. 2,250 mm</p> <p style="padding-left: 150px;">Mid. 3,100 mm</p> <p style="padding-left: 150px;">Max.3,900 mm</p>
<u>HYDRAULICS</u>	<p>Hydraulic pump -----Single gear pump</p> <p>Hydraulic motors ----- Axial piston type for winch</p> <p style="padding-left: 150px;">Axial piston type for slewing</p> <p>Control valves----- Multiple control valves with integral safety valve</p> <p>Oil tank capacity -----approx. 90 L</p>
<u>OPTIONAL EQUIPMENT</u>	<p>Rear outriggers (outrigger beam extension type)</p> <p>Rear outriggers (outrigger beam non- extension type)</p> <p>Oil cooler</p>
<u>SAFETY DEVICES</u>	<p>Load meter</p> <p>Load indicator</p> <p>Over-winding alarm</p> <p>Anti-two-block device</p> <p>Hook safety latch</p> <p>Hydraulic safety valves, check valves and holding valves</p> <p>Level gauge</p>
<u>CRANE MASS</u>	<p>Approx. 2,880 kg (except mounting parts)</p>

NOTE : Each operating speeds of the crane are guaranteed under the condition that the pump delivery is 60 L/min. (Boom extending, Boom elevating, Hoisting up) and 37L/min (Slewing) with no load.

## RATED LIFTING CAPACITIES (x 1,000kg)

< over-side , over-rear area > ( over-front area : 25% of empty chassis rated lifting capacity)

Table A

4.40 m BOOM							
LOAD RADIUS(m)			1.8 and below	2.25	3.1	3.5	4.15
CRANE STRENGTH			8.20	6.00	4.90	4.20	3.55
EMPTY CHASSIS	Extension width of outriggers	Max.	8.20	6.00	4.90	4.20	3.00
		Min.	6.95	4.10	2.15	1.70	1.15

7.28 m BOOM										
LOAD RADIUS(m)			2.25 and below	3.1	3.5	4.0	4.5	5.0	6.0	7.03
CRANE STRENGTH			6.00	4.90	4.20	3.70	3.30	2.90	2.20	1.75
EMPTY CHASSIS	Extension width of outriggers	Max.	6.00	4.90	4.20	3.15	2.45	1.95	1.35	0.90
		Min.	3.95	2.05	1.60	1.20	0.90	0.70	0.40	0.20

10.16 m BOOM									
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	9.91
CRANE STRENGTH			3.00	2.70	2.20	1.80	1.40	1.15	1.00
EMPTY CHASSIS	Extension width of outriggers	Max.	2.45	1.95	1.35	0.90	0.60	0.45	0.35
		Min.	0.90	0.70	0.40	0.20	-	-	-

13.04 m BOOM												
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.00	12.7
CRANE STRENGTH			3.00	2.60	2.00	1.70	1.40	1.15	1.00	0.90	0.75	0.65
EMPTY CHASSIS	Extension width of outriggers	Max.	2.45	1.95	1.35	0.90	0.60	0.45	0.35	0.30	0.25	0.20

15.92 m BOOM													
LOAD RADIUS(m)			5.0 and below	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.00	14.0	15.67
CRANE STRENGTH			2.60	2.00	1.65	1.40	1.15	1.00	0.90	0.75	0.65	0.55	0.45
EMPTY CHASSIS	Extension width of outriggers	Max.	1.95	1.35	0.90	0.60	0.45	0.35	0.30	0.25	0.20	0.15	0.12

Table B

4.40 m BOOM							
LOAD RADIUS(m)			1.8 and below	2.25	3.1	3.5	4.15
CRANE STRENGTH			8.20	6.00	4.90	4.20	3.55
EMPTY CHASSIS	Extension width of outriggers	Max.	8.20	6.00	4.90	4.20	3.55
		Min.	8.20	5.25	2.85	2.25	1.60

7.28 m BOOM										
LOAD RADIUS(m)			2.25 and below	3.1	3.5	4.0	4.5	5.0	6.0	7.03
CRANE STRENGTH			6.00	4.90	4.20	3.70	3.30	2.90	2.20	1.75
EMPTY CHASSIS	Extension width of outriggers	Max.	6.00	4.90	4.20	3.70	3.10	2.60	1.85	1.30
		Min.	5.10	2.75	2.15	1.65	1.30	1.05	0.70	0.40

10.16 m BOOM									
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	9.91
CRANE STRENGTH			3.00	2.70	2.20	1.80	1.40	1.15	1.00
EMPTY CHASSIS	Extension width of outriggers	Max.	3.00	2.60	1.85	1.30	1.00	0.80	0.65
		Min.	1.30	1.05	0.70	0.40	0.25	0.15	-

13.04 m BOOM												
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.00	12.7
CRANE STRENGTH			3.00	2.60	2.00	1.70	1.40	1.15	1.00	0.90	0.75	0.65
EMPTY CHASSIS	Extension width of outriggers	Max.	3.00	2.60	1.85	1.30	1.00	0.80	0.65	0.50	0.40	0.35

15.92 m BOOM													
LOAD RADIUS(m)			5.0 and below	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.00	14.0	15.67
CRANE STRENGTH			2.60	2.00	1.65	1.40	1.15	1.00	0.90	0.75	0.65	0.55	0.45
EMPTY CHASSIS	Extension width of outriggers	Max.	2.60	1.85	1.30	1.00	0.80	0.65	0.50	0.40	0.35	0.30	0.25

Table C

4.40 m BOOM							
LOAD RADIUS(m)			1.8 and below	2.25	3.1	3.5	4.15
CRANE STRENGTH			8.20	6.00	4.90	4.20	3.55
EMPTY CHASSIS	Extension width of outriggers	Max.	8.20	6.00	4.90	4.20	3.55
		Min.	8.20	6.00	3.30	2.65	1.95

7.28 m BOOM										
LOAD RADIUS(m)			2.25 and below	3.1	3.5	4.0	4.5	5.0	6.0	7.03
CRANE STRENGTH			6.00	4.90	4.20	3.70	3.30	2.90	2.20	1.75
EMPTY CHASSIS	Extension width of outriggers	Max.	6.00	4.90	4.20	3.70	3.30	2.90	2.20	1.60
		Min.	5.90	3.20	2.55	2.00	1.60	1.30	0.90	0.60

10.16 m BOOM									
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	9.91
CRANE STRENGTH			3.00	2.70	2.20	1.80	1.40	1.15	1.00
EMPTY CHASSIS	Extension width of outriggers	Max.	3.00	2.70	2.20	1.60	1.30	1.05	0.85
		Min.	1.60	1.30	0.90	0.60	0.45	0.30	0.20

13.04 m BOOM												
LOAD RADIUS(m)			4.5 and below	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.00	12.7
CRANE STRENGTH			3.00	2.60	2.00	1.70	1.40	1.15	1.00	0.90	0.75	0.65
EMPTY CHASSIS	Extension width of outriggers	Max.	3.00	2.60	2.00	1.60	1.30	1.05	0.85	0.70	0.55	0.50

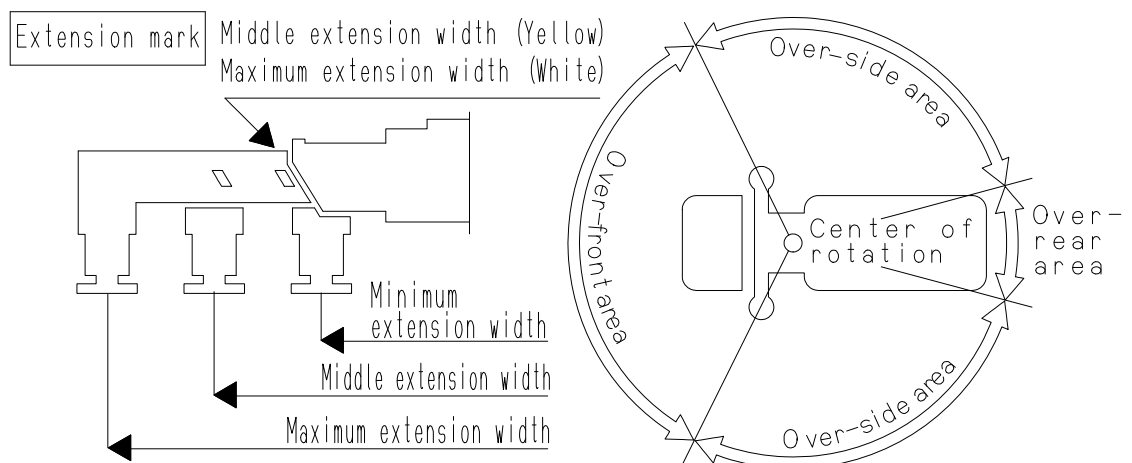
15.92 m BOOM													
LOAD RADIUS(m)			5.0 and below	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.00	14.0	15.67
CRANE STRENGTH			2.60	2.00	1.65	1.40	1.15	1.00	0.90	0.75	0.65	0.55	0.45
EMPTY CHASSIS	Extension width of outriggers	Max.	2.60	2.00	1.60	1.30	1.05	0.85	0.70	0.55	0.50	0.45	0.35

- NOTES :
- The crane strength rated lifting capacity are based on the crane strength only.  
The empty chassis rated lifting capacity are based on the crane strength and vehicle stability (no load on the truck bed) when the crane is set level on firm level ground.
  - The mass of the hook (90 kg), slings and all similarly used load lifting devices must be added to the mass of the load.
  - If the boom length of your machine exceeds the length listed in this table little, select the table corresponding to the next longer boom.
  - 13.04 m boom means  $\sphericalangle$  mark on 4th boom section side plate is half seen.
  - When the lifting load is heavier than 6,000kg, number of part lines must be 6. In case of 6,000kg or less, number of part lines must be 4. Load per line must not surpass 14.7kN{1,500kgf}.
  - When the outriggers are extended to the middle width, read the capacities rated for the minimum extension width.
  - This load radius shows actual load radius which includes boom deflection.
  - Empty Chassis Rated Capacities table A,B and C depend on the types of chassis.
  - 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.

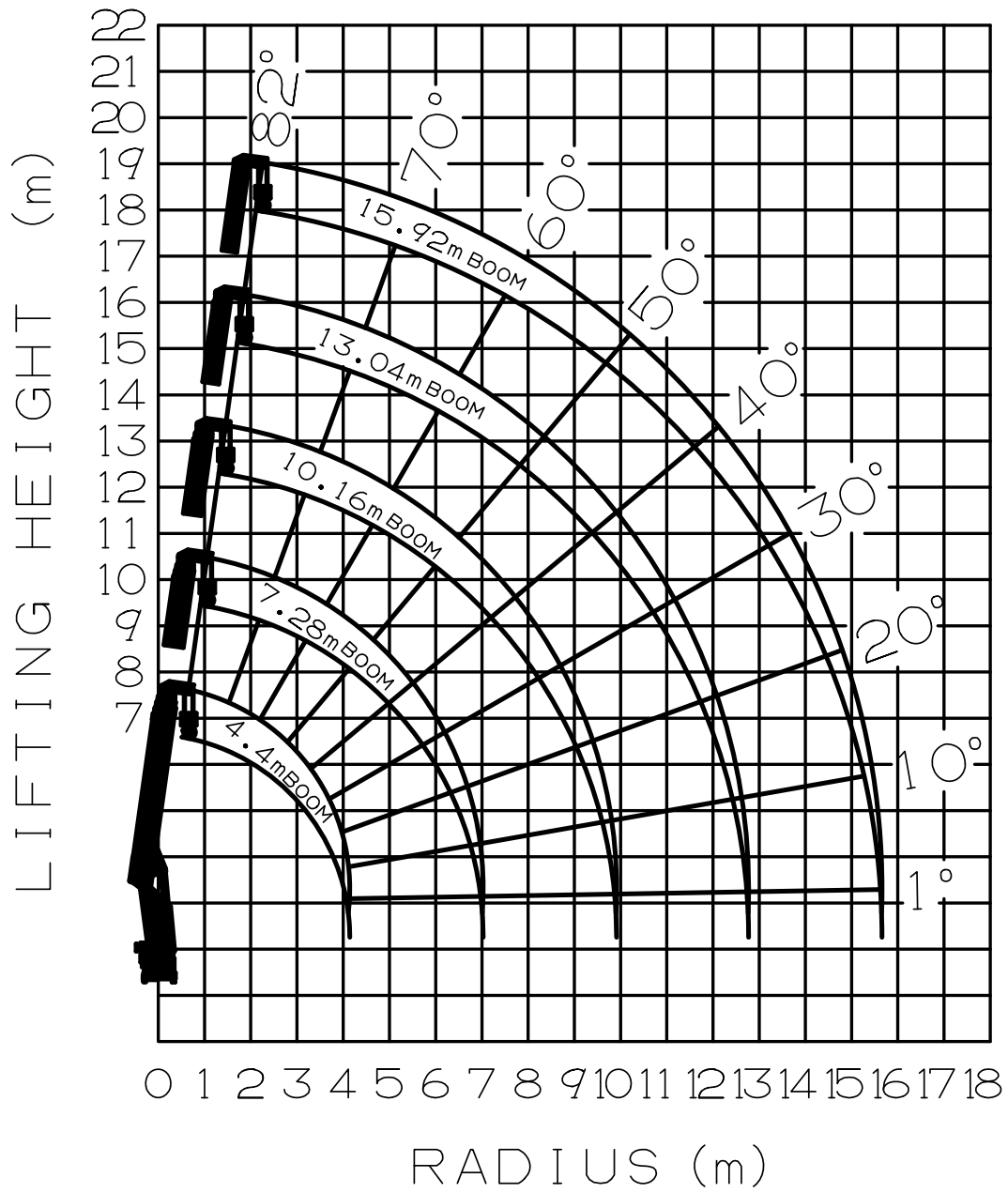
(The following table shows guidelines for bodywork vehicles that can achieve the rated lifting capacities tables A,B and C. Be sure to carry out a stability inspection to determine which performance to apply.)

A	WB : 5000mm over, GVW : 25t over, CAWf (*1) : 3.0t over
B	WB : 5000mm over, GVW : 25t over, CAWf (*1) : 4.0t over
C	WB : 5000mm over, GVW : 25t over, CAWf (*1) : 5.0t over

\*1 Chassis front axle weight (excluding crane mass)

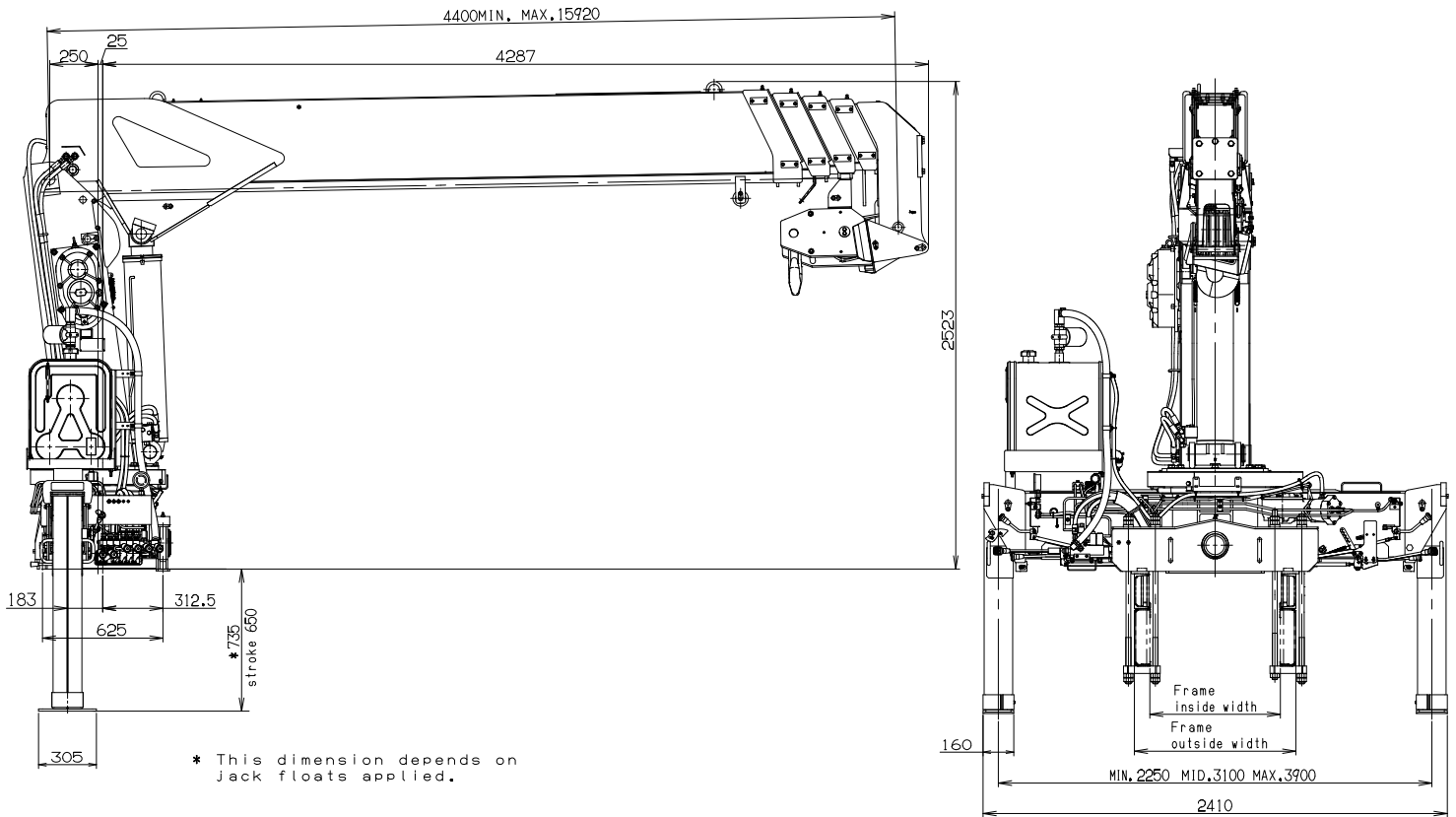


WORKING RANGE



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

Gross vehicle mass (including crane mass)	25,000 kg or more
Chassis front axle weight (excluding crane mass)	3,000 kg min.
Wheel base (from the center of the front axle to the center of 2 rear axes.)	5,000 mm min.
P.T.O. torque	200 N·m{20.4 kgf·m} min.
P.T.O. revolution	Approx. 1,200 min <sup>-1</sup> {rpm} max.
Width for crane mounting	Approx. 900 mm min.
Frame	Weight distribution and frame strength should be calculated for each truck
Frame width range (inside to outside)	Approx. 610 to 910 mm
Frame height (ground to frame top)	Approx. 1,280 mm max.(Height of crane mounting base can be changed by combination of jack floats and crane bases)